



# **Peace AirShed Zone Association**

## **Ambient Air Monitoring Network Summary**

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

**Operations and Reporting**  
**FOCUS**  
AIR QUALITY MONITORING



P.O. Box 21135  
Grande Prairie, AB  
T8V 6W7  
Phone: (780) 539-2298

December 1, 2009

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

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

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

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

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

During the month of October the following events were noted:

**Henry Pirker Station:**

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

**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 October.

**Smoky Heights Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station.
- ◆ The PM<sub>2.5</sub>, temperature, wind speed and wind direction parameters at the Smoky Heights station had an operational uptime greater than 90% for the month of October; however, the SO<sub>2</sub> and TRS analyzers were less than 90% due to a failed intake manifold blower motor - **Alberta Environment Reference #221622**.

**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 October.

**Portable – Kinuso Station:**

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

**Valleyview Station:**

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

**Passive Monitoring - 43 Stations throughout the PASZA zone:**

There were four duplicate sites sampled in the month of October: Spirit River, Wembley, Grande Prairie I and Jean Cote. One of the SO<sub>2</sub> duplicate samples at Wembley was missing at time of collection; therefore there is no result for said sample. The NO<sub>2</sub> sample at the Poplar site fell apart at time of collection, sample result has been deemed invalid. 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 0.1 ppb to 0.3 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO<sub>2</sub> passives ranged from 0.3 ppb to 6.4 ppb, with a mean of 1.6 ppb.
- Monthly average concentrations for O<sub>3</sub> passives ranged from 15.6 ppb to 26.8 ppb, with a mean of 20.0 ppb.

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

On Behalf of the,  
Peace Airshed Zone Association

Shelly Pruden  
Program Manager



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



## PASZA Monthly Continuous Data Summary

Oct-2009 Peace Airshed Zone Association							Maximum Recorded Values				Operational Time (%)
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		Conc	Day	Conc	Day	
	1-hr	24-hr			1-hr	24-hr					
SO <sub>2</sub> (ppb)	172	57	Henry Pirker	0.2	0	0	4.9	Oct-15 18:00	1.0	Oct-15	100.0%
SO <sub>2</sub> (ppb)	172	57	Evergreen Park	0.3	0	0	13.3	Oct-24 11:00	1.5	Oct-27	100.0%
SO <sub>2</sub> (ppb)	172	57	Smoky Heights	0.2	0	0	2.2	Oct-15 16:00	0.5	Oct-15	6.7%
SO <sub>2</sub> (ppb)	172	57	Beaverlodge	0.3	0	0	1.7	Oct-12 01:00	0.6	Oct-03	100.0%
SO <sub>2</sub> (ppb)	172	57	Portable-Kinuso	0.1	0	0	5.1	Oct-03 13:00	0.7	Oct-03	99.9%
SO <sub>2</sub> (ppb)	172	57	Valleyview	0.2	0	0	3.9	Oct-06 07:00	0.6	Oct-06	100.0%
NO (ppb)			Henry Pirker	4.9	-	-	75.9	Oct-15 22:00	19.7	Oct-15	100.0%
NO <sub>2</sub> (ppb)	212	106	Henry Pirker	8.3	0	0	32.9	Oct-26 08:00	18.8	Oct-25	100.0%
NO <sub>x</sub> (ppb)			Henry Pirker	13.2	-	-	95.8	Oct-15 22:00	33.8	Oct-15	100.0%
NO (ppb)			Beaverlodge	0.3	-	-	10.5	Oct-16 08:00	2.3	Oct-16	100.0%
NO <sub>2</sub> (ppb)	212	106	Beaverlodge	2.2	0	0	13.7	Oct-29 21:00	5.4	Oct-29	100.0%
NO <sub>x</sub> (ppb)			Beaverlodge	2.6	-	-	17.1	Oct-16 08:00	6.2	Oct-16	100.0%
NO (ppb)			Portable-Kinuso	0.2	-	-	2.6	Oct-12 09:00	0.7	Oct-15	99.9%
NO <sub>2</sub> (ppb)	212	106	Portable-Kinuso	1.4	0	0	12.1	Oct-20 19:00	2.8	Oct-15	99.9%
NO <sub>x</sub> (ppb)			Portable-Kinuso	1.5	-	-	14.6	Oct-20 19:00	3.5	Oct-15	99.9%
O <sub>3</sub> (ppb)	82		Henry Pirker	15.7	0	-	35.3	Oct-31 17:00	25.9	Oct-08	100.0%
O <sub>3</sub> (ppb) - 8-hr			Henry Pirker		0				34.5	Oct-31	
O <sub>3</sub> (ppb)	82		Beaverlodge	20.6	0	-	37.0	Oct-17 14:00	33.3	Oct-17	100.0%
O <sub>3</sub> (ppb) - 8-hr			Beaverlodge		0				35.4	Oct-31	
O <sub>3</sub> (ppb)	82		Portable-Kinuso	18.7	0	-	35.5	Oct-17 05:00	28.2	Oct-17	99.9%
O <sub>3</sub> (ppb) - 8-hr			Portable-Kinuso		0				33.6	Oct-17	
CO (ppm)	13		Henry Pirker	0.17	0	-	0.9	Oct-15 22:00	0.3	Oct-25	100.0%
CO (ppm) - 8-hr		5	Henry Pirker		0				0.6	Oct-16	
THC (ppm)			Henry Pirker	2.15	-	-	3.4	Oct-16 03:00	2.5	Oct-15	99.6%
TRS (ppb)			Henry Pirker	0.2	-	-	0.9	Oct-22 06:00	0.5	Oct-18	100.0%
TRS (ppb)			Evergreen Park	0.5	-	-	1.8	Oct-06 09:00	0.6	Oct-23	100.0%
TRS (ppb)			Smoky Heights	0.3	-	-	5.2	Oct-18 02:00	1.0	Oct-18	6.7%
TRS (ppb)			Portable-Kinuso	0.4	-	-	0.5	Oct-03 11:00	0.4	Oct-30	99.9%
H <sub>2</sub> S (ppb)	10	3	Valleyview	0.1	0	0	0.4	Oct-29 09:00	0.2	Oct-06	100.0%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Henry Pirker	3.0	0	0	15.8	Oct-15 21:00	8.6	Oct-15	100.0%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Evergreen Park	2.9	0	0	27.0	Oct-06 09:00	7.2	Oct-15	100.0%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Smoky Heights	2.1	0	0	71.9	Oct-07 18:00	5.9	Oct-15	99.9%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	30	Beaverlodge	4.9	0	0	14.9	Oct-16 19:00	9.4	Oct-21	99.9%



# Continuous Network Equipment Summary

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## PASZA – Henry Pirker Station

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### General Station Issues

Routine monthly calibrations were performed on October 15<sup>th</sup> (SO<sub>2</sub>, NO<sub>x</sub> & O<sub>3</sub>) and October 17<sup>th</sup> (TRS, CO & THC).

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Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43C	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	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC	TEI	51-CLT	Three (3) hours were flagged for maintenance on October 17 <sup>th</sup> – changed out cylinder.
TRS	TEI	43C	No operational issues observed.
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	Twenty-one (21) hours were flagged invalid due to flatlining (due to freezing).
WD	Met One	020C	Twenty-one (21) hours were flagged invalid due to flatlining (due to freezing).

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**PASZA – Evergreen Park Station**

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**General Station Issues**

Routine monthly calibrations were performed on October 25<sup>th</sup> (SO<sub>2</sub>, TRS & PM<sub>2.5</sub> (filter replacement)).

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<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
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	No operational issues observed.
ET	Met One/Gill	083D	No operational issues observed.
RH	Met One/Gill		No operational issues observed.
WS	Met One/ Gill	010C	Five (5) hours were flagged invalid due to intermittent spiking of the ultrasonic – probable cause fog, snow and / or rain.
WD	Met One/ Gill	020C	Five (5) hours were flagged invalid due to intermittent spiking of the ultrasonic – probable cause fog, snow and / or rain.

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**PASZA – Smoky Heights Station**

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**General Station Issues**

Routine monthly calibrations were performed on October 29<sup>th</sup> (TRS & SO<sub>2</sub>).

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<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
SO <sub>2</sub>	TEI	43C	On October 1 <sup>st</sup> a small power failure caused the intake manifold blower motor to seize – it was noticed during calibrations on October 29 <sup>th</sup> and replaced on October 31 <sup>st</sup> ; resulting in six hundred and ninety-four (694) hours of invalid data. <b>AE Reference #221622</b>
TRS	TEI	43C	On October 1 <sup>st</sup> a small power failure caused the intake manifold blower motor to seize – it was noticed during calibrations on October 29 <sup>th</sup> and replaced on October 31 <sup>st</sup> ; resulting in six hundred and ninety-four (694) hours of invalid data. <b>AE Reference #221622</b>
PM <sub>2.5</sub>	R&P	1400AB	One (1) hour were flagged invalid due to baseline drift.
ET	Met One	083D	Seventeen (17) hours were flagged invalid – connection issue – rewired on October 31 <sup>st</sup> .
WS	Met One	010C	Fifty-nine (59) hours wer flagged invalid due to flatlining – due to freezing conditons..
WD	Met One	020C	Fifty-nine (59) hours wer flagged invalid due to flatlining – due to freezing conditons..

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**PASZA – Beaverlodge Station**

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**General Station Issues**

Routine monthly calibrations were performed on October 21<sup>st</sup> (SO<sub>2</sub>, O<sub>3</sub> & NO<sub>x</sub>).

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<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
SO <sub>2</sub>	TEI	43CTL	No operational issues observed.
NO <sub>x</sub> /NO/NO <sub>2</sub>	TEI	42C	Spans outside target range from October 16 <sup>th</sup> to 21 <sup>st</sup> – calibration performed to adjust spans.
O <sub>3</sub>	TEI	49C	No operational issues observed.
PM <sub>2.5</sub>	R&P	1400AB	One (1) hour was flagged invalid due to baseline drift.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS	Blue Sky	857	Five (5) hours were flagged invalid due to intermittent spiking of the ultrasonic – probable cause fog, snow and / or rain.
WD	Blue Sky	857	Five (5) hours were flagged invalid due to intermittent spiking of the ultrasonic – probable cause fog, snow and / or rain.

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**PASZA – Kinuso (Portable) Station**

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**General Station Issues**

Routine monthly calibrations were performed on October 23<sup>rd</sup> (SO<sub>2</sub>, TRS, NO<sub>x</sub> & O<sub>3</sub>).

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<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
SO <sub>2</sub>	TEI	43C	One hour was flagged invalid – data not captured – reason unknown. No other operational issues observed.
TRS	TEI	43C	One hour was flagged invalid – data not captured – reason unknown. No other operational issues observed.
NO <sub>x</sub> /NO/NO <sub>2</sub>	TEI	42I	One hour was flagged invalid – data not captured – reason unknown. No other operational issues observed.
O <sub>3</sub>	TEI	49C	One hour was flagged invalid – data not captured – reason unknown. No other operational issues observed.
ET	Met One		One hour was flagged invalid – data not captured – reason unknown. No other operational issues observed.
WS	Met One		One hour was flagged invalid – data not captured – reason unknown. Three (3) hours were flagged invalid for maintenance checking out & correcting declination (33 degrees) – data has been corrected accordingly. Six (6) hours were flagged invalid due to flatlining caused by freezing conditions.
WD	Met One		One hour was flagged invalid – data not captured – reason unknown. Three (3) hours were flagged invalid for maintenance checking out & correcting declination (33 degrees) – data has been corrected accordingly. Six (6) hours were flagged invalid due to flatlining caused by freezing conditions.

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**PASZA – Valleyview Station**

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**General Station Issues**

Routine monthly calibrations were performed on October 30<sup>th</sup> (SO<sub>2</sub> & H<sub>2</sub>S). ).

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<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
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	No operational issues observed.
WD	Gill	Met Pak 3	No operational issues observed.

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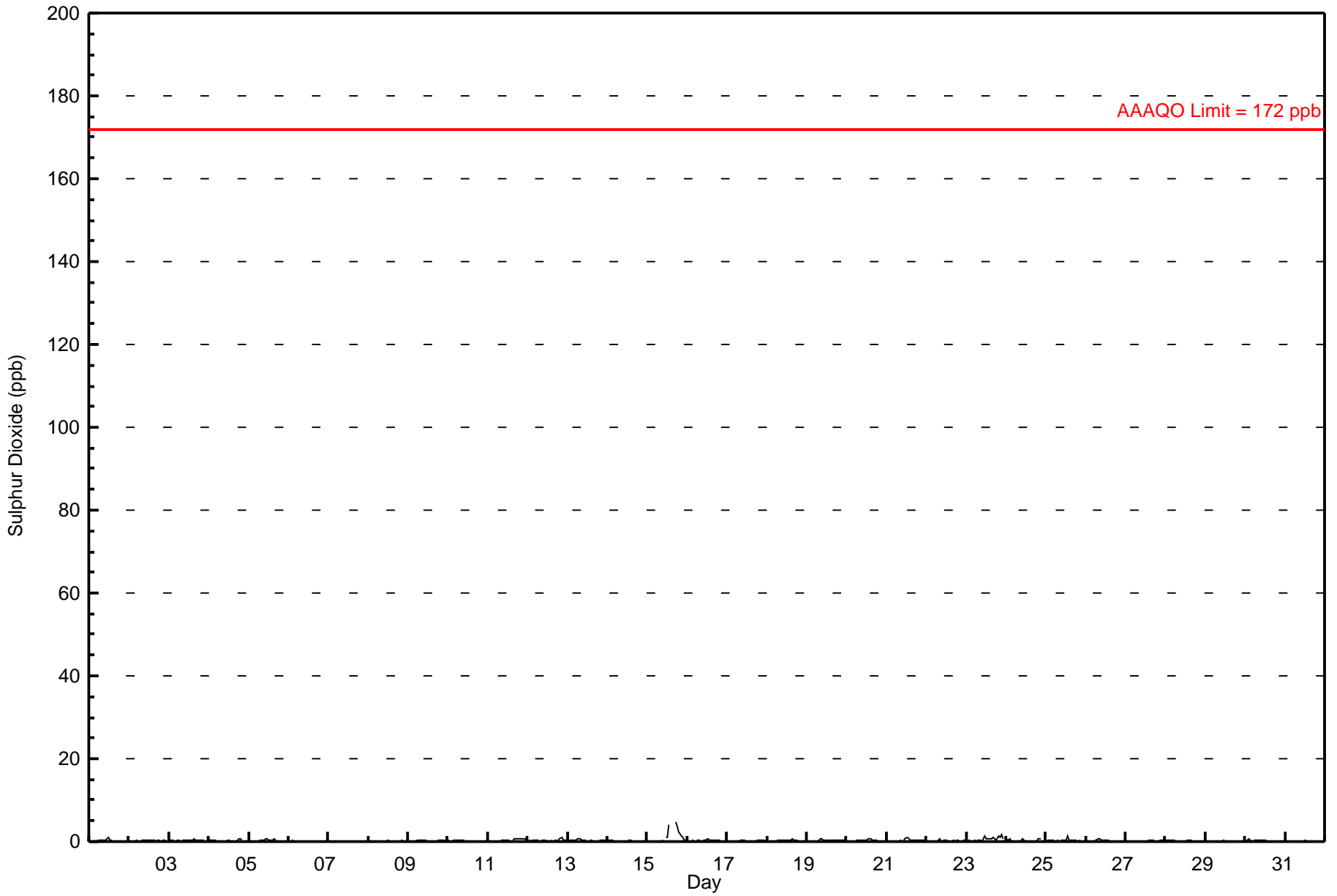
PASZA

Henry Pirker Station

Monthly Summary Tables, Graphs and  
Roses



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



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

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

Maximum Value: 6.4 ppb on Oct 15 14:00	Maximum Daily Average: 1.6 ppb on Oct 15	Hours in Service: 744
Minimum Value: 0 ppb on Oct 31 06:00	Minimum Daily Average: 0.4 ppb on Oct 29	Hours of Data: 708
Maximum Diurnal Average: 0.9 ppb at hour 14	Minimum Diurnal Average: 0.4 ppb at hour 4	Hours of Missing Data: 36
Monthly Average: 0.62 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.4 Median = 0.5 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 1.0 P <sub>99</sub> = 3.4	Hours of Calibration: 36
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	1	A	0	1	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0.6	1.3	
2-Oct	A	0	0	0	0	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	0.9	
3-Oct	0	0	0	0	0	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	A	2	0.7	1.9	
4-Oct	1	1	1	1	0	1	0	0	0	0	0	2	2	0	0	0	0	1	1	1	1	A	1	0	0.7	1.9	
5-Oct	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0.7	1.4	
6-Oct	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0.5	0.8	
7-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0.4	0.6	
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	1	0	0	1	0.4	0.6
9-Oct	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	A	1	0	0	0	0	1	1	0.5	0.9	
10-Oct	1	0	0	1	0	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.6	0.9	
11-Oct	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	1	1	1	1	1	1	1	1	1	0.7	1.4	
12-Oct	0	1	0	1	1	1	1	0	0	0	1	0	0	A	1	0	1	0	0	0	2	2	1	0	1	0.8	1.9
13-Oct	1	1	0	1	1	1	1	1	1	1	1	1	A	0	1	0	0	0	0	0	0	0	0	1	0.7	1.0	
14-Oct	0	0	1	0	0	0	0	0	0	0	0	A	1	1	1	0	0	0	1	0	0	0	0	0	0.4	0.7	
15-Oct	0	0	0	0	0	0	0	0	0	1	A	2	2	6	C	C	C	6	5	4	2	1	1	1	1.6	6.4	
16-Oct	0	0	0	0	0	A	1	1	0	0	1	1	2	0	1	1	1	1	0	0	0	0	0	0	0.6	1.6	
17-Oct	0	1	1	1	A	0	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1	2	2	1	0.6	1.5
18-Oct	1	1	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0.5	0.9
19-Oct	0	1	0	0	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.5	1.0
20-Oct	0	0	0	A	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.6	1.0
21-Oct	0	0	A	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0.6	1.0	
22-Oct	0	A	0	0	0	0	0	1	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	1.0
23-Oct	A	1	1	1	1	1	1	1	1	1	1	3	1	2	1	1	1	2	1	2	2	2	4	2	A	1.2	3.7
24-Oct	1	1	1	0	0	0	0	0	1	1	2	1	1	0	1	0	0	1	1	2	2	2	A	1	0.7	1.6	
25-Oct	1	1	1	1	1	1	1	1	1	1	1	2	1	5	2	1	1	1	1	1	1	A	1	1	0.8	4.5	
26-Oct	0	1	0	0	0	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0	A	0	0	0	0.6	1.0	
27-Oct	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.5	0.6	
28-Oct	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	A	1	1	0	0	0	0.5	0.6	
29-Oct	0	0	0	0	1	0	0	0	1	1	1	1	1	1	1	0	0	A	0	0	0	0	0	1	1	0.4	0.5
30-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	0	0.5	1.2
31-Oct	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.5

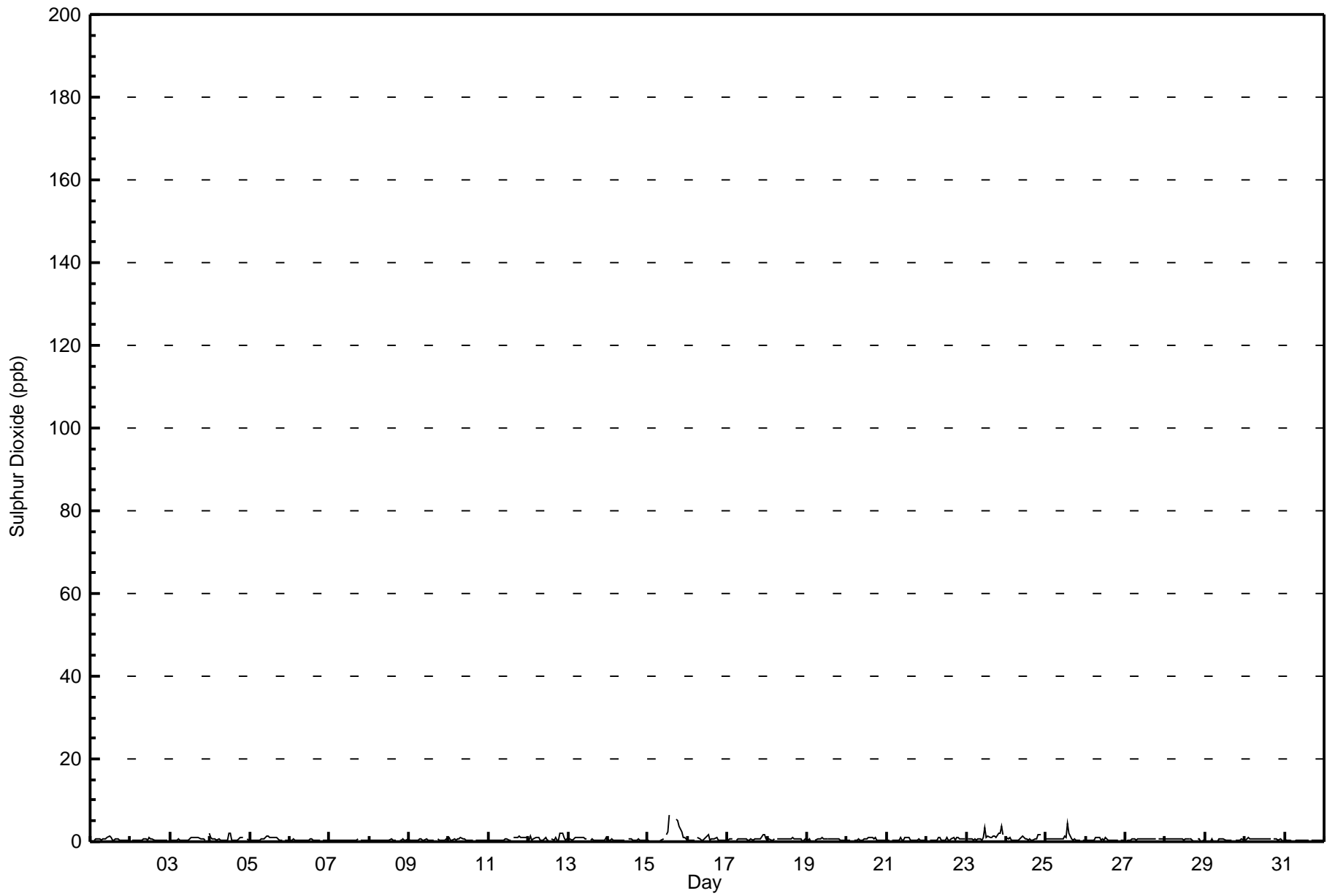
0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.8	0.8	0.9	0.6	0.6	0.6	0.8	0.7	0.8	0.7	0.7	0.6	0.6	Diurnal Average	
1.0	1.4	1.2	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.5	3.5	2.5	6.4	2.0	1.2	1.5	5.5	5.1	3.6	2.3	3.7	1.6	1.9	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

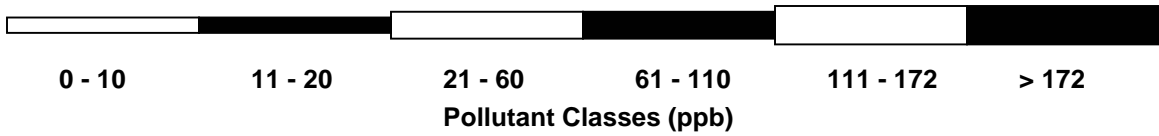
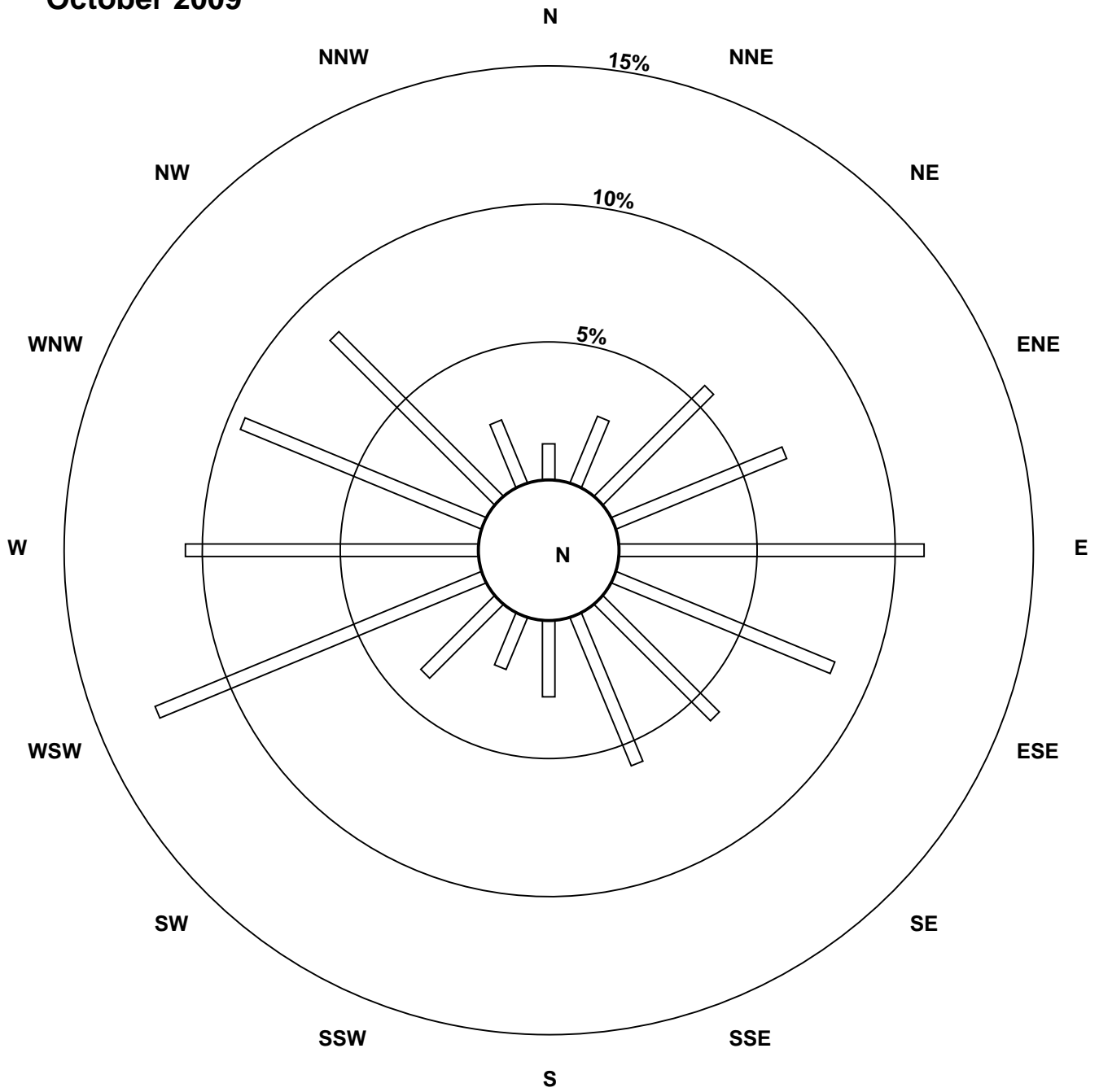


# Hourly Maximums for SO<sub>2</sub> at Henry Pirker

## October 2009



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



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

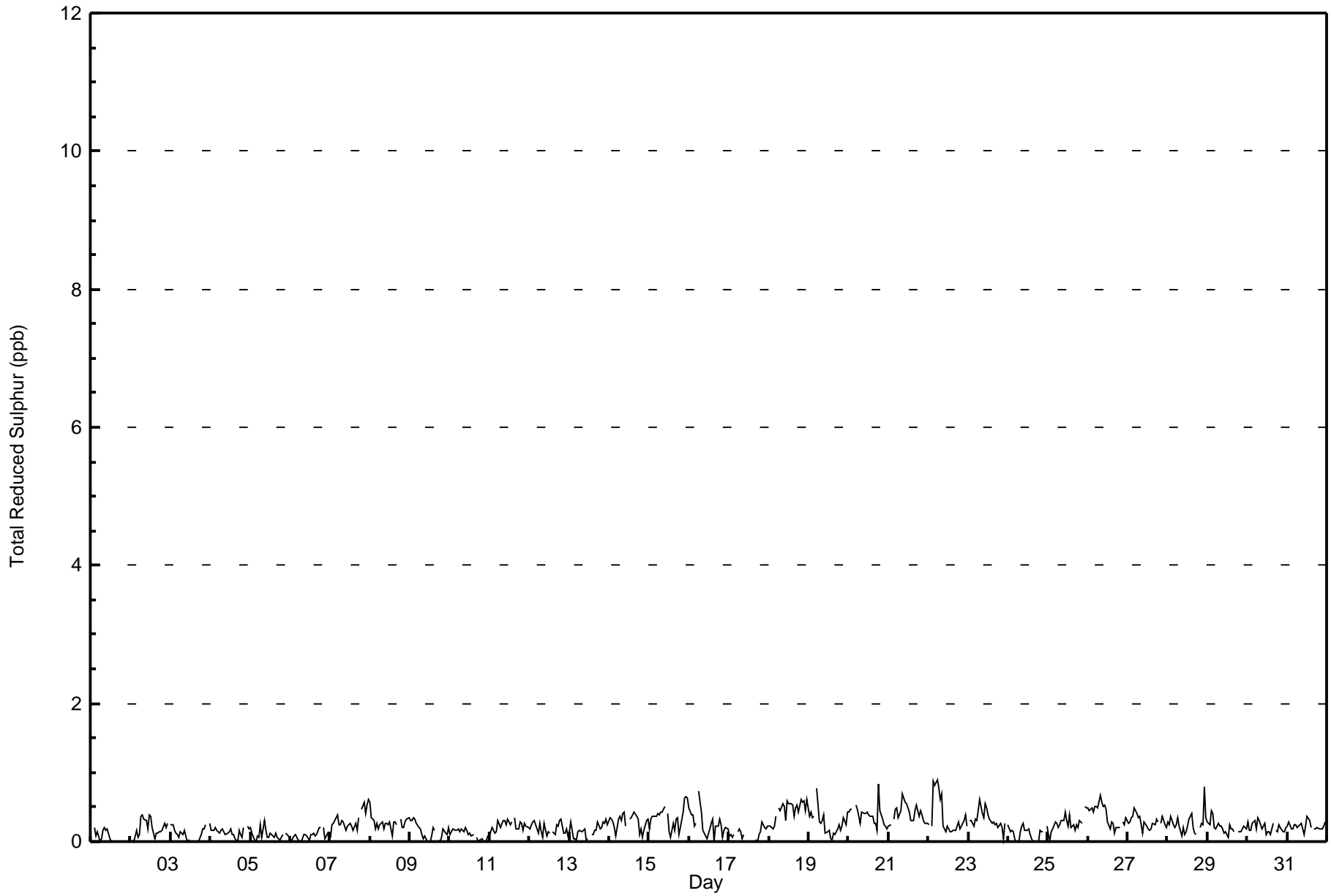
**Henry Pirker - Total Reduced Sulphur (TRS) - ppb  
October 1, 2009 to November 1, 2009**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 0.9 ppb on Oct 22 06:00	Maximum Daily Average: 0.5 ppb on Oct 18		Hours of Data:	707
Minimum Value: 0 ppb on Oct 1 13:00	Minimum Daily Average: 0.1 ppb on Oct 1		Hours of Missing Data:	37
Maximum Diurnal Average: 0.3 ppb at hour 7	Minimum Diurnal Average: 0.2 ppb at hour 17		Hours of Calibration:	37
Monthly Average: 0.23 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> = 0.3 P <sub>90</sub> = 0.4 P <sub>99</sub> = 0.8		Percent Operational Time:	100.0

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

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

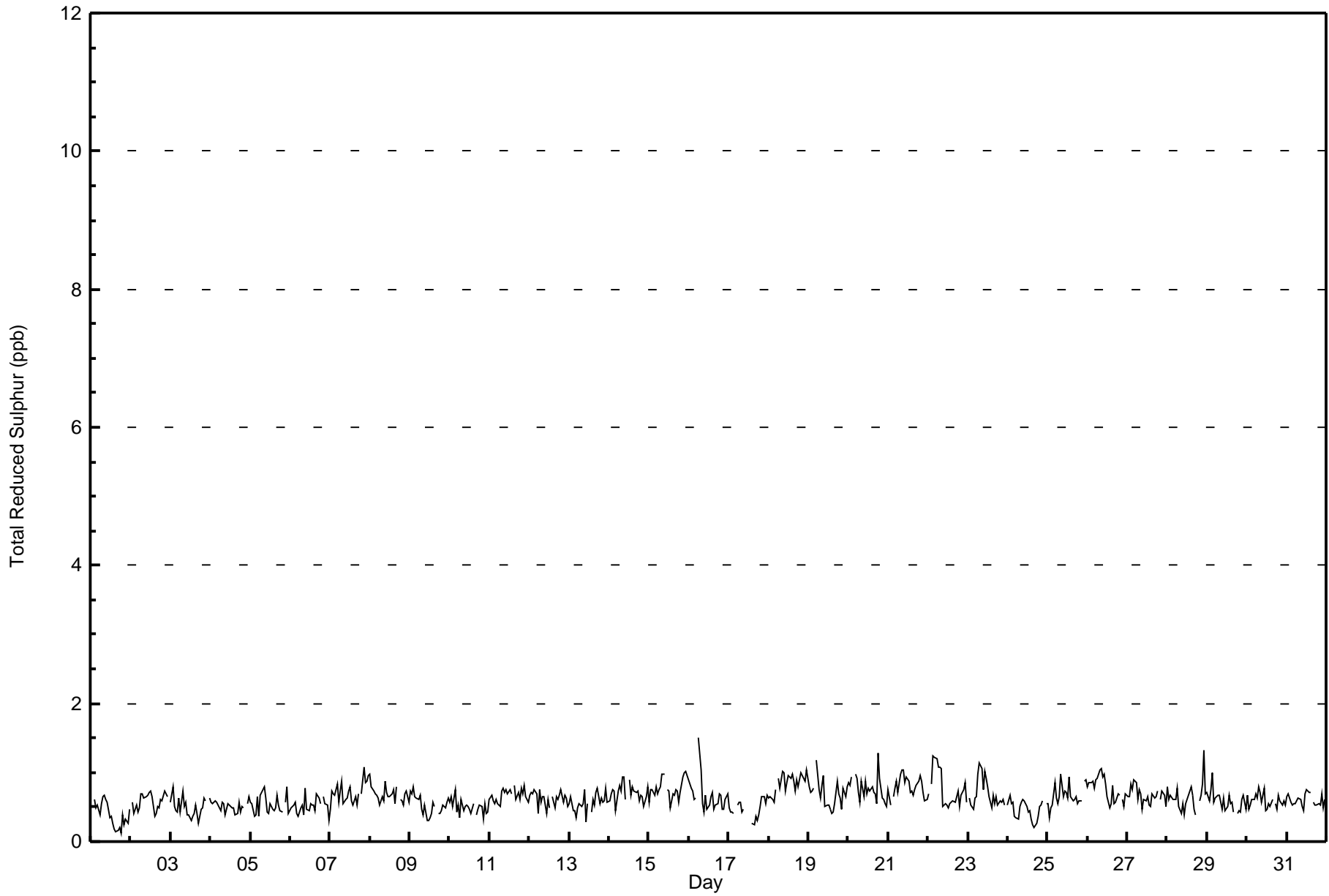
# Hourly Averages for TRS at Henry Pirker October 2009



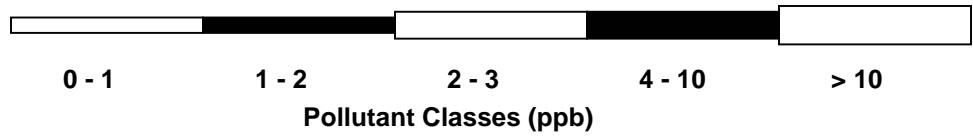
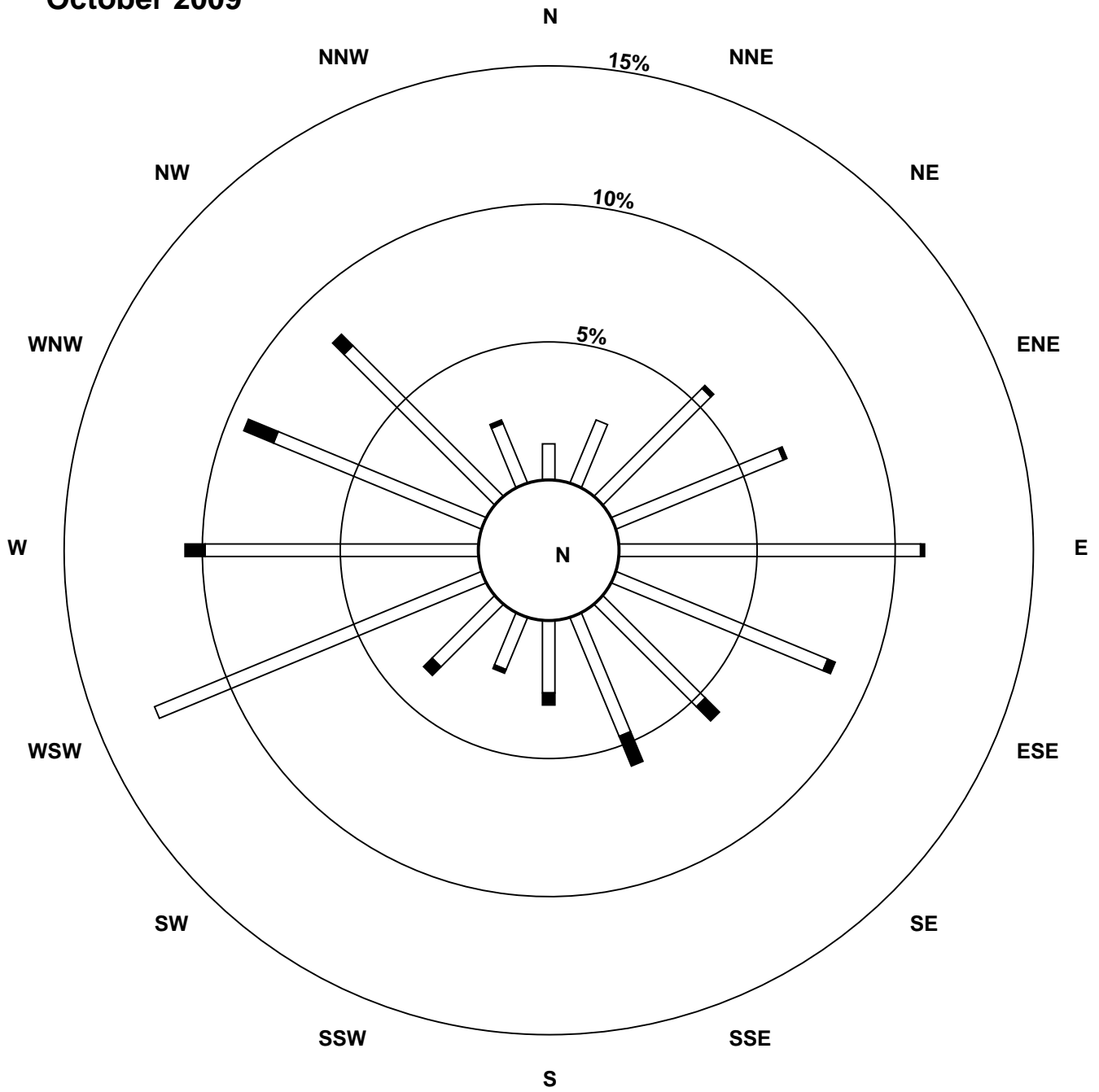


# Hourly Maximums for TRS at Henry Pirker

## October 2009



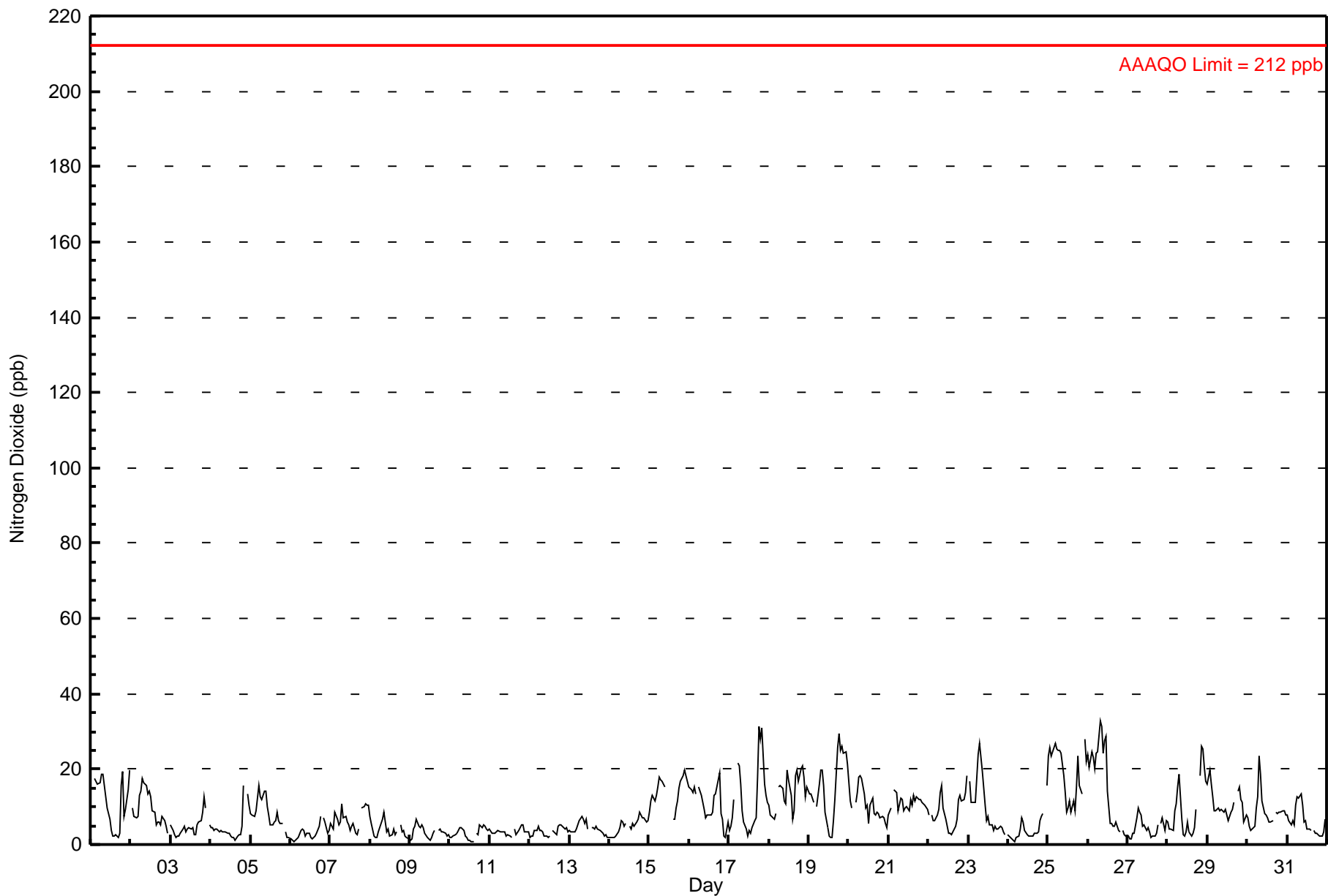
# Pollutant Rose for TRS at Henry Pirker October 2009







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



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

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

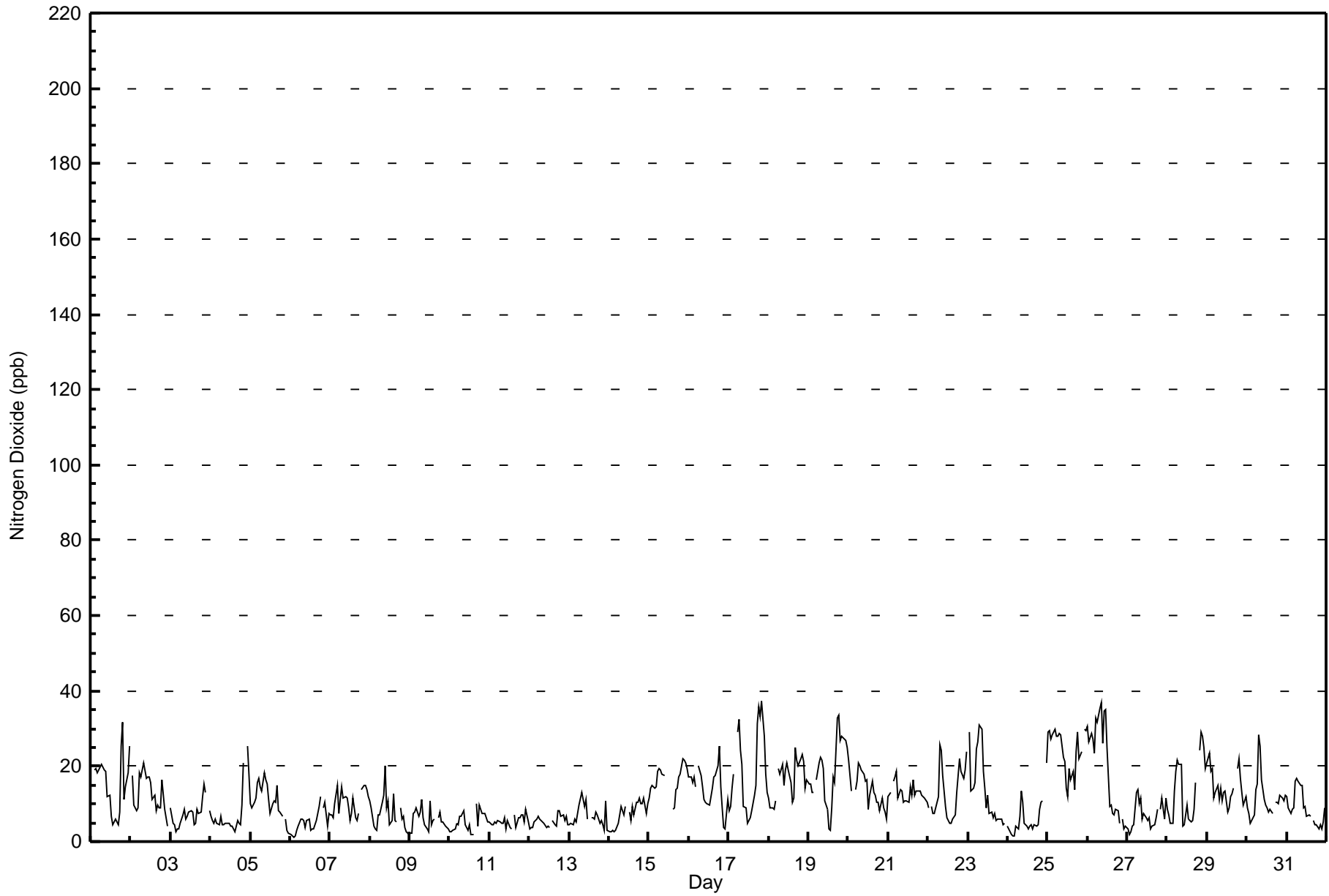
Maximum Value: 37.4 ppb on Oct 17 21:00	Maximum Daily Average: 24.0 ppb on Oct 25	Hours in Service: 744
Minimum Value: 1 ppb on Oct 6 03:00	Minimum Daily Average: 5.1 ppb on Oct 6	Hours of Data: 708
Maximum Diurnal Average: 15.9 ppb at hour 8	Minimum Diurnal Average: 7.6 ppb at hour 14	Hours of Missing Data: 36
Monthly Average: 11.44 ppb	Percentiles: P <sub>1</sub> = 1.9 P <sub>10</sub> = 3.9 Q <sub>1</sub> = 5.6 Median = 9.4 Q <sub>3</sub> = 15.5 P <sub>90</sub> = 21.8 P <sub>99</sub> = 32.6	Hours of Calibration: 36
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	17	A	19	19	18	20	21	20	19	19	12	12	7	5	5	6	5	8	25	32	11	15	18	25	15.6	31.7	
2-Oct	A	17	10	8	9	18	17	19	21	17	17	15	11	12	8	10	9	9	17	8	6	4	A	12.8	20.8		
3-Oct	9	5	4	2	3	3	5	7	8	6	7	8	8	8	4	5	8	8	12	15	13	A	8	7.2	15.5		
4-Oct	7	5	5	6	5	4	7	4	4	5	5	5	4	4	4	2	6	5	4	10	21	A	25	18	7.2	25.4	
5-Oct	10	9	10	11	16	17	15	13	18	17	15	11	7	10	11	11	15	8	8	7	A	6	3	2	10.9	18.4	
6-Oct	2	2	1	1	3	4	6	6	5	4	5	6	3	3	3	4	5	9	12	A	9	10	4	7	5.1	11.8	
7-Oct	7	7	6	10	15	7	11	14	11	12	11	9	6	7	11	6	5	7	A	14	15	15	14	12	10.3	15.0	
8-Oct	11	9	4	3	3	7	7	11	12	20	9	11	5	6	13	5	5	A	9	6	7	4	2	2	7.4	20.0	
9-Oct	2	2	7	8	9	7	8	11	6	4	3	2	11	4	6	6	A	6	8	5	5	4	4	3	5.8	11.3	
10-Oct	3	3	3	3	5	5	7	7	8	5	4	3	4	2	2	A	10	4	10	7	8	7	6	5	5.2	9.9	
11-Oct	5	4	5	5	5	6	5	5	5	6	3	5	4	3	A	7	4	6	6	7	7	5	9	5	5.4	8.7	
12-Oct	3	4	4	5	6	7	6	6	5	5	4	4	A	6	5	4	8	8	7	7	6	7	5	5	5.3	8.1	
13-Oct	5	5	5	6	5	8	10	13	11	9	11	6	A	6	6	6	8	7	5	6	5	3	11	3	6.9	13.0	
14-Oct	3	3	3	3	3	5	7	9	8	7	9	A	8	6	10	7	10	10	12	10	10	12	7	10	7.4	11.5	
15-Oct	12	14	15	14	15	19	20	19	18	17	C	C	C	C	8	9	14	14	17	18	22	22	21	19	16.3	21.8	
16-Oct	17	17	16	17	14	A	20	18	14	11	10	10	10	12	14	17	17	20	25	14	9	4	4	11	14.0	25.3	
17-Oct	8	9	14	18	A	29	32	24	20	9	9	5	6	6	8	12	15	31	36	33	37	28	18	13	18.4	37.4	
18-Oct	11	9	9	8	11	A	19	18	21	15	19	21	19	15	10	12	25	21	20	22	23	21	14	16	16.6	24.8	
19-Oct	15	15	13	13	A	16	21	22	21	19	11	8	3	3	9	17	16	33	33	27	28	27	27	25	18.5	33.4	
20-Oct	21	18	13	A	14	16	21	20	19	18	16	8	12	16	13	12	10	10	8	11	9	8	6	13.8	21.5		
21-Oct	12	13	A	16	17	19	11	14	14	10	11	11	10	14	12	16	12	13	13	13	12	12	11	10	13.0	18.6	
22-Oct	9	A	9	7	7	10	12	26	24	17	9	6	5	5	6	7	13	17	22	19	17	19	24	12.9	25.6		
23-Oct	A	29	13	14	16	24	26	31	30	18	14	9	12	7	8	6	7	5	6	6	6	4	5	A	13.6	31.1	
24-Oct	4	3	2	2	2	4	3	7	13	10	5	4	3	4	4	4	5	4	4	8	11	11	A	21	6.0	21.0	
25-Oct	29	29	27	28	30	28	28	29	28	22	21	14	12	19	16	18	14	24	29	22	24	A	30	29	24.0	30.0	
26-Oct	30	26	29	27	23	33	32	35	37	26	35	35	25	9	10	7	7	8	8	5	A	6	4	4	20.1	36.8	
27-Oct	4	2	2	4	5	13	14	10	11	6	7	6	6	6	4	4	5	6	9	A	8	12	6	12	7.0	13.9	
28-Oct	9	7	5	5	13	18	21	21	21	4	5	7	10	6	5	6	9	16	A	24	29	28	25	20	13.6	29.2	
29-Oct	21	24	18	20	12	13	15	11	14	11	13	13	8	9	12	13	14	A	19	22	17	13	10	12	14.5	23.5	
30-Oct	9	7	5	5	7	14	15	28	25	16	11	10	9	8	8	8	A	10	10	10	10	12	11	11	12	11.5	28.2
31-Oct	12	9	7	8	9	16	17	16	15	15	9	9	7	7	7	A	5	4	4	3	4	3	5	9	8.8	16.9	
	10.6	10.6	9.5	10.0	10.3	13.4	14.8	15.9	15.8	12.3	10.8	9.9	8.2	7.6	8.4	8.5	9.6	11.5	13.4	13.7	13.8	11.5	11.4	12.1	Diurnal Average		
	30.5	29.4	28.7	28.3	30.0	33.0	32.4	35.5	36.8	26.0	34.7	35.0	25.0	19.4	16.5	18.5	24.8	32.9	35.9	33.2	37.4	28.0	30.0	29.5	Diurnal Maximum		

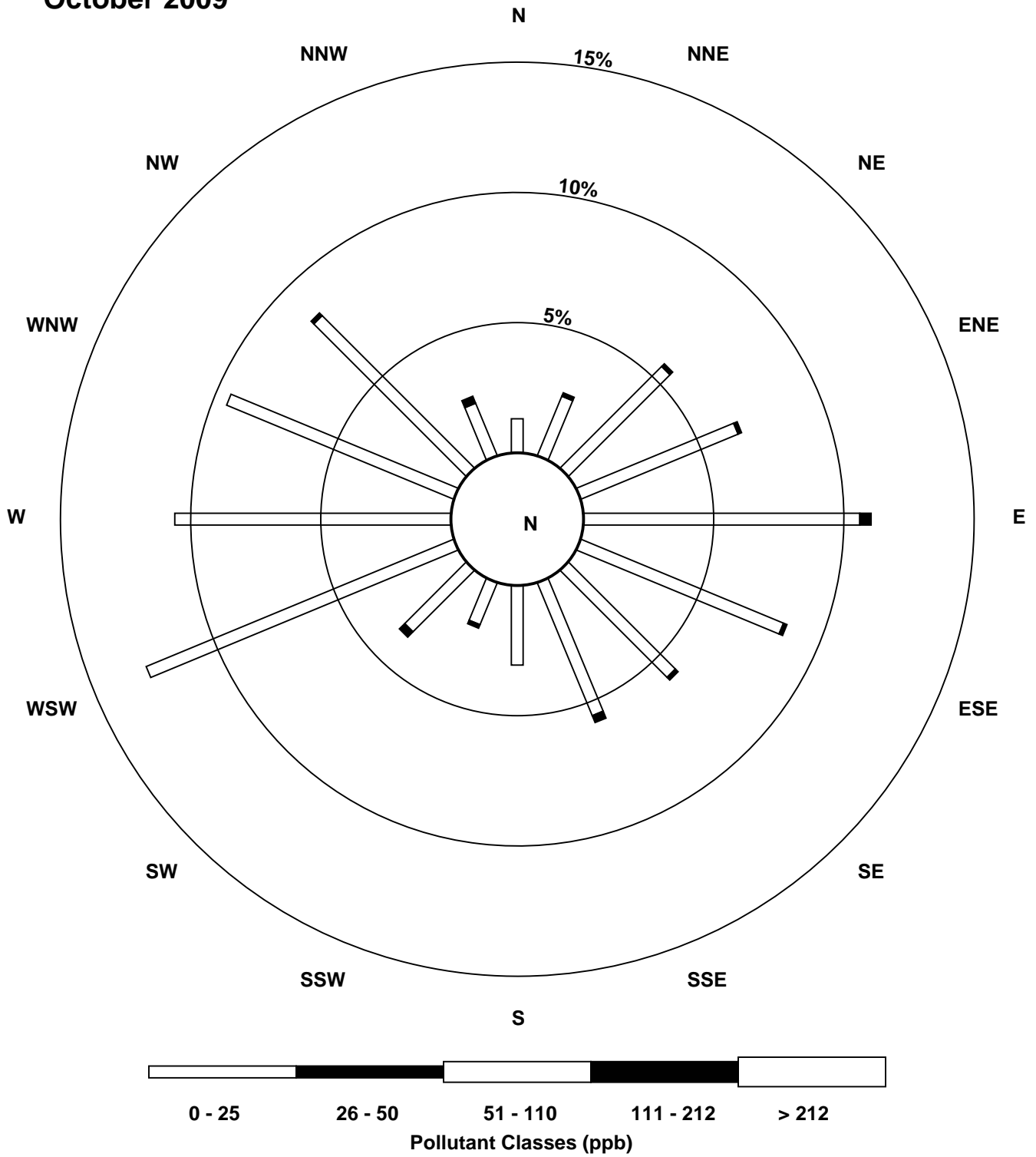
C - Calibration                      A - Automated Daily Zero Span

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

## October 2009

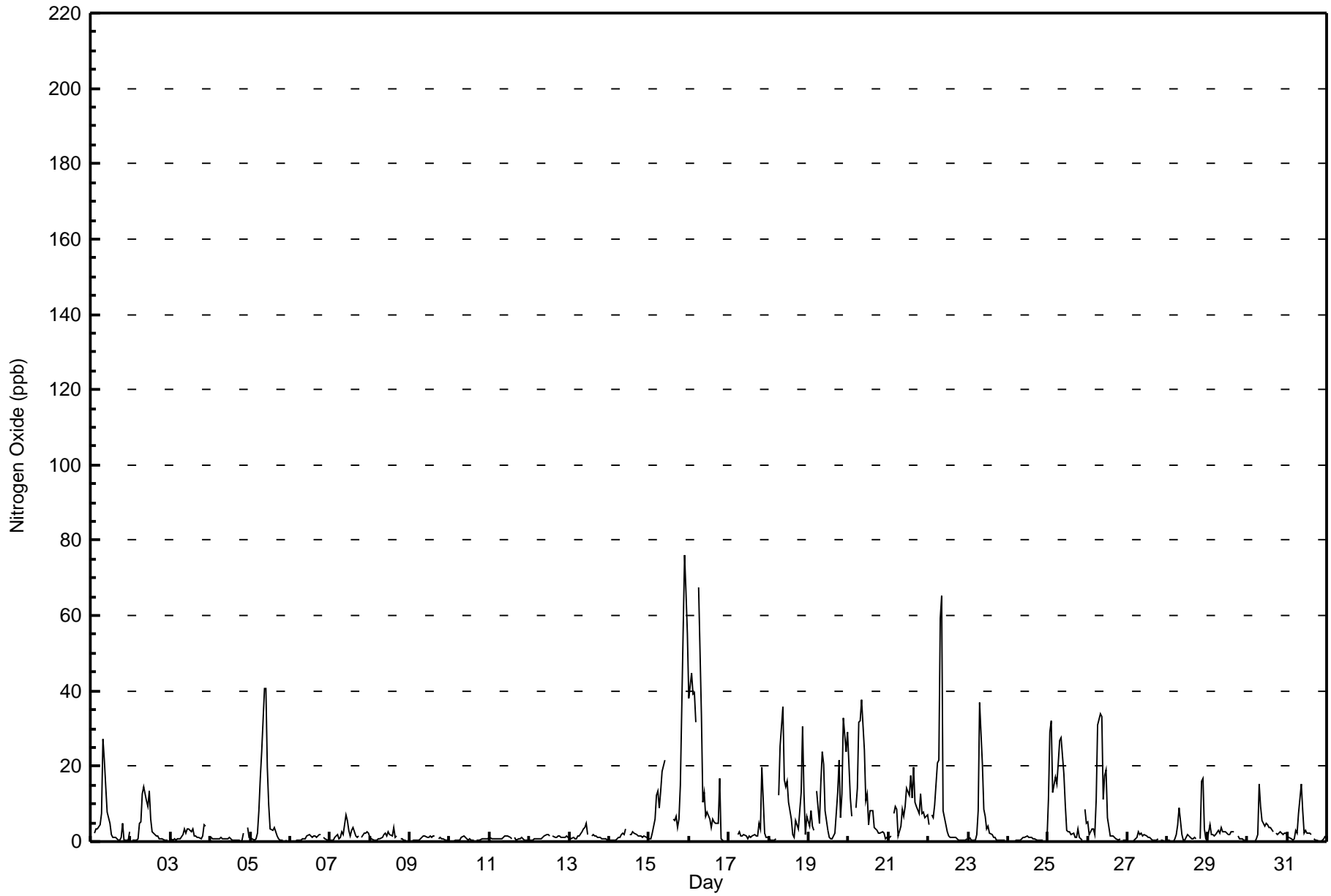


# Pollutant Rose for NO<sub>2</sub> at Henry Pirker October 2009





# Hourly Averages for NO at Henry Pirker October 2009



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

**Henry Pirker - Nitrogen Oxide (NO) - ppb  
October 1, 2009 to November 1, 2009**

Maximum Value: 143.8 ppb on Oct 22 08:00	Maximum Daily Average: 34.5 ppb on Oct 15	Hours in Service: 744
Minimum Value: 0 ppb on Oct 17 02:00	Minimum Daily Average: 1.3 ppb on Oct 24	Hours of Data: 708
Maximum Diurnal Average: 24.8 ppb at hour 9	Minimum Diurnal Average: 4.7 ppb at hour 17	Hours of Missing Data: 36
Monthly Average: 9.74 ppb	Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 1.8 Median = 3.7 Q <sub>3</sub> = 10.0 P <sub>90</sub> = 25.3 P <sub>99</sub> = 77.8	Hours of Calibration: 36
		Percent Operational Time: 100.0

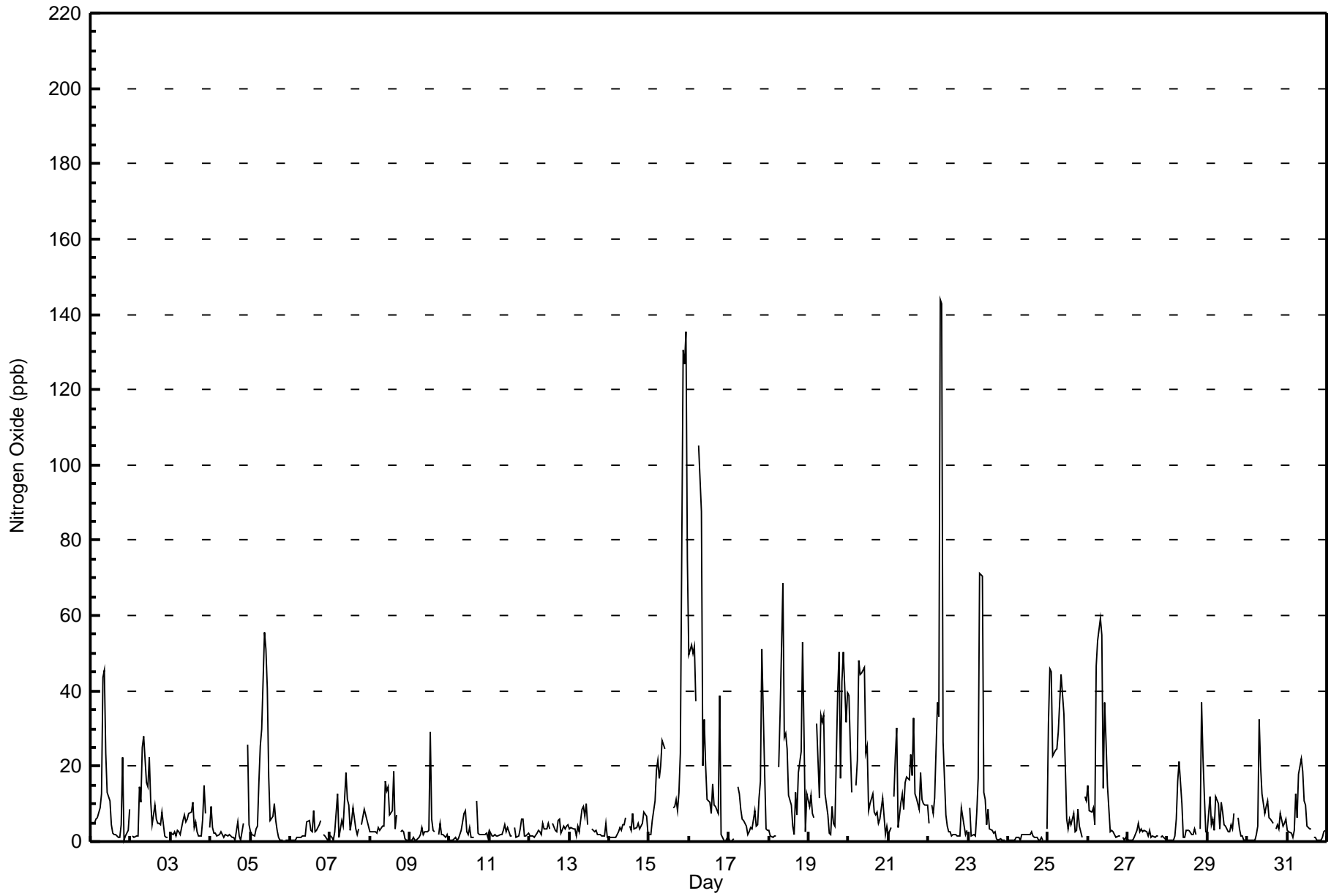
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	4	A	5	6	6	9	13	44	46	23	13	11	4	2	2	1	1	4	22	0	2	3	9	10.1	45.6	
2-Oct	A	2	1	1	1	15	10	25	28	16	14	23	11	4	10	6	5	5	4	8	1	1	1	A	8.7	28.1
3-Oct	2	2	3	1	3	2	2	5	7	5	6	8	8	10	4	5	3	1	1	6	15	7	A	4	4.9	15.0
4-Oct	9	4	2	2	2	2	3	2	1	2	2	2	1	1	1	1	5	2	0	2	5	A	26	4	3.5	25.6
5-Oct	2	2	1	3	4	15	26	30	56	51	41	17	5	7	10	5	3	1	0	0	A	0	0	0	12.3	55.6
6-Oct	0	0	0	0	1	1	1	1	1	2	5	6	3	2	8	2	3	5	6	A	2	2	1	1	2.4	8.3
7-Oct	2	1	1	3	13	1	3	6	4	18	11	10	3	5	9	4	2	3	A	5	9	7	6	4	5.5	18.3
8-Oct	3	2	2	2	2	4	3	4	4	16	14	14	7	8	19	3	7	A	3	3	2	1	1	1	5.5	18.5
9-Oct	1	1	1	1	1	1	2	4	2	2	2	3	29	6	3	3	A	2	5	2	2	1	2	1	3.2	29.1
10-Oct	1	1	1	1	1	1	2	3	8	8	2	2	4	1	1	A	11	2	2	2	2	2	2	1	2.6	10.9
11-Oct	3	1	1	2	2	1	2	2	3	4	3	4	2	1	A	4	1	2	3	6	6	1	1	2	2.5	5.9
12-Oct	1	1	1	1	2	3	2	2	5	3	3	5	3	A	5	3	3	6	6	2	4	3	4	5	3.3	5.8
13-Oct	3	4	3	3	1	4	3	8	9	7	10	4	A	3	3	2	3	2	2	2	1	1	5	1	3.8	10.1
14-Oct	1	1	1	1	1	2	4	3	5	4	6	A	4	3	7	3	4	5	3	4	5	8	7	2	3.7	7.9
15-Oct	2	2	5	11	19	21	17	20	27	25	C	C	C	C	9	9	11	8	13	24	131	127	135	75	34.5	135.3
16-Oct	50	52	50	52	37	A	105	88	20	33	20	11	10	8	15	10	9	8	39	2	1	0	0	2	27.0	105.1
17-Oct	0	0	0	1	A	14	13	9	6	5	4	2	2	4	3	8	4	4	11	16	51	18	3	3	8.0	51.1
18-Oct	3	1	1	1	1	A	20	34	68	28	29	25	12	10	4	2	13	7	18	24	53	29	3	13	17.4	68.4
19-Oct	9	12	8	7	A	31	12	34	32	33	13	7	2	2	10	5	4	40	50	17	42	50	32	40	21.3	50.4
20-Oct	39	25	13	A	15	22	48	44	45	46	24	25	8	10	13	8	7	8	5	6	11	7	2	4	18.9	47.9
21-Oct	2	4	A	12	22	30	4	11	13	9	16	17	17	23	18	33	13	12	9	18	11	10	10	10	13.9	32.8
22-Oct	5	A	10	8	12	37	33	144	143	27	7	4	3	2	2	2	2	2	2	2	9	4	2	3	20.1	143.8
23-Oct	A	9	1	2	1	8	17	71	70	13	11	5	9	4	3	2	2	1	1	1	1	1	1	A	10.6	71.2
24-Oct	0	0	0	0	0	1	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	1	A	3	1.3	3.4
25-Oct	31	46	45	23	24	25	29	37	45	34	20	6	4	6	4	7	2	3	8	4	1	A	12	11	18.6	46.0
26-Oct	15	8	8	9	5	47	53	59	55	14	37	26	15	3	3	2	2	1	2	1	A	1	1	1	16.0	59.2
27-Oct	1	0	1	0	1	3	5	3	4	3	3	3	2	3	1	1	1	2	1	A	1	2	1	1	1.7	4.9
28-Oct	1	1	1	1	2	6	16	21	10	1	1	3	3	3	2	2	3	2	A	4	37	23	12	2	6.7	36.9
29-Oct	2	12	5	6	3	12	10	4	10	8	5	4	3	3	4	4	7	A	6	4	1	2	1	1	5.0	12.0
30-Oct	1	1	0	0	1	2	4	32	20	13	7	9	11	6	6	5	A	3	4	3	7	4	5	6	6.6	32.5
31-Oct	3	2	2	1	3	13	6	18	22	19	11	10	4	3	4	A	1	1	1	1	1	1	2	3	5.7	22.1

6.8	6.8	5.8	5.4	6.4	11.5	15.1	24.8	24.8	15.3	11.4	9.2	6.6	5.0	6.1	5.1	4.7	4.7	7.3	6.6	14.3	10.9	9.6	7.3	Diurnal Average
49.6	52.2	50.1	51.7	37.1	46.7	105.1	143.8	142.9	51.1	40.5	26.3	29.1	23.1	18.5	32.8	13.0	39.9	50.4	24.0	130.6	126.6	135.3	74.9	Diurnal Maximum

C - Calibration                      A - Automated Daily Zero Span

# Hourly Maximums for NO at Henry Pirker

## October 2009





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

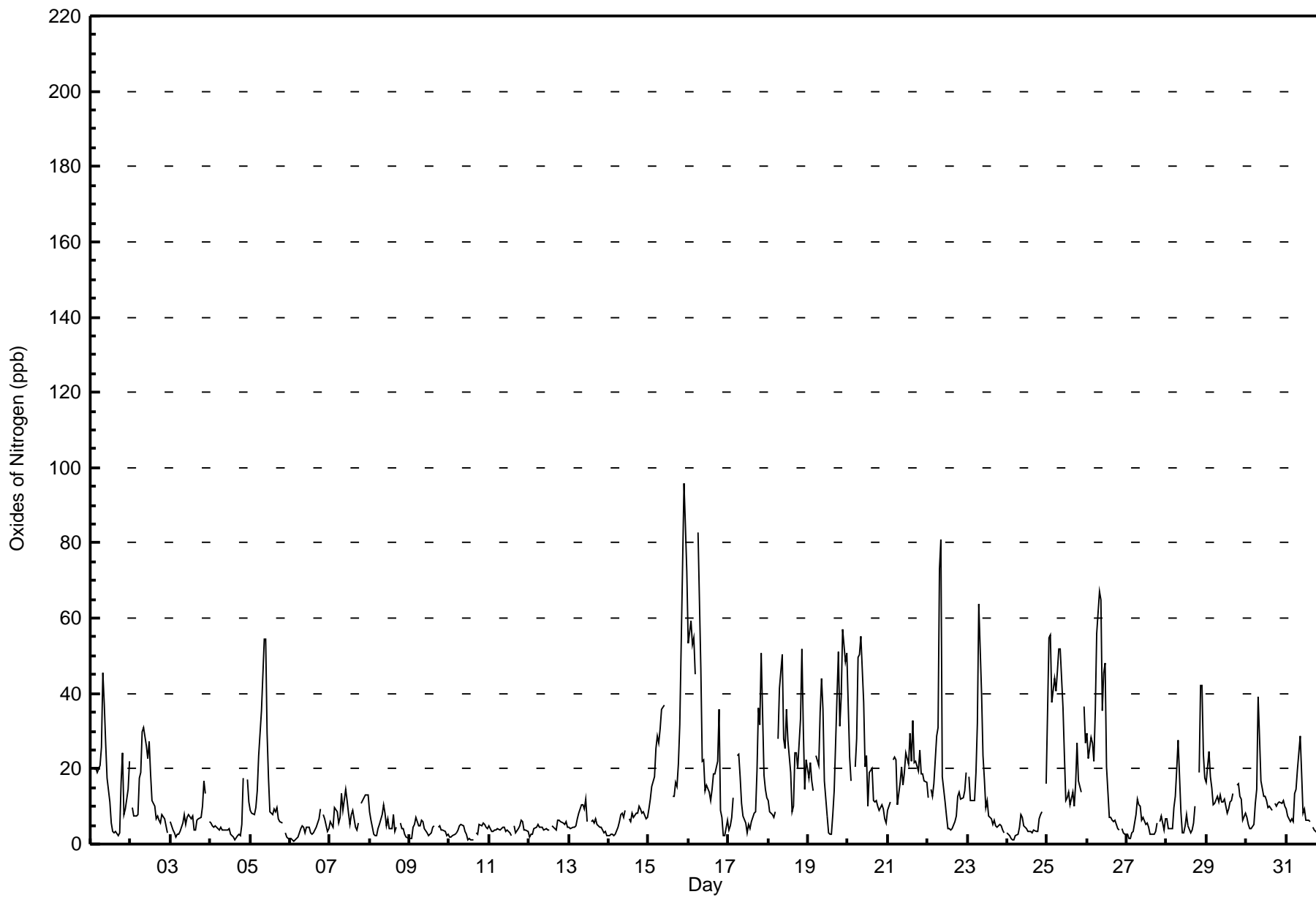
**Henry Pirker - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
October 1, 2009 to November 1, 2009**

Maximum Value: 95.8 ppb on Oct 15 22:00	Maximum Daily Average: 33.8 ppb on Oct 15	Hours in Service: 744
Minimum Value: 1 ppb on Oct 6 03:00	Minimum Daily Average: 3.3 ppb on Oct 10	Hours of Data: 708
Maximum Diurnal Average: 25.5 ppb at hour 8	Minimum Diurnal Average: 7.4 ppb at hour 15	Hours of Missing Data: 36
Monthly Average: 13.19 ppb	Percentiles: P <sub>1</sub> = 1.2 P <sub>10</sub> = 2.8 Q <sub>1</sub> = 4.3 Median = 7.8 Q <sub>3</sub> = 16.7 P <sub>90</sub> = 30.8 P <sub>99</sub> = 71.6	Hours of Calibration: 36
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	17	A	20	20	19	21	26	45	37	27	17	11	5	3	3	3	2	3	16	24	8	9	15	22	16.3	45.4
2-Oct	A	10	7	7	8	18	19	30	31	26	23	27	18	11	10	7	7	7	6	8	7	5	3	A	13.4	30.9
3-Oct	6	4	3	2	2	3	3	6	8	5	7	8	7	8	4	4	6	7	7	10	17	13	A	6	6.3	16.7
4-Oct	5	5	4	5	4	4	4	4	4	4	4	4	3	2	2	1	2	3	2	5	18	A	17	11	5.1	17.7
5-Oct	9	8	8	10	14	23	29	36	54	55	30	17	8	8	9	9	10	7	6	6	A	3	2	2	15.7	54.5
6-Oct	1	1	1	1	1	2	4	5	4	3	4	4	3	2	3	4	4	7	9	A	8	7	3	4	3.8	9.3
7-Oct	6	5	5	10	8	6	7	13	9	15	12	8	5	8	9	5	4	5	A	11	12	13	13	13	8.7	14.6
8-Oct	9	6	3	2	2	4	5	8	10	8	5	7	4	4	8	4	5	A	6	4	4	2	2	1	4.9	10.3
9-Oct	1	2	4	5	7	5	5	6	6	4	3	2	3	3	4	5	A	4	5	4	4	3	2	3	4.0	7.0
10-Oct	2	2	2	3	3	4	5	5	5	3	2	1	2	1	1	A	3	2	5	5	6	5	5	4	3.3	5.6
11-Oct	5	3	3	4	4	4	4	4	4	5	4	4	3	2	A	5	3	4	5	6	6	4	4	4	4.0	6.2
12-Oct	2	3	3	4	4	5	4	4	4	4	4	4	A	A	5	4	4	6	6	6	6	5	6	4	4.4	6.3
13-Oct	5	4	4	4	5	7	8	10	10	9	12	6	A	6	6	5	7	5	5	4	4	3	3	2	5.9	11.8
14-Oct	2	2	2	2	3	4	6	8	8	7	9	A	7	6	8	7	8	8	10	9	8	9	7	7	6.5	10.2
15-Oct	9	12	15	18	25	29	27	31	36	37	C	C	C	C	13	13	17	15	21	32	74	96	85	72	33.8	95.8
16-Oct	53	59	53	55	45	A	83	47	22	22	14	16	14	12	15	19	18	22	36	9	7	2	2	6	27.4	82.8
17-Oct	4	5	7	12	A	23	24	18	11	8	6	3	5	4	6	8	9	19	36	32	51	18	15	12	14.6	50.6
18-Oct	12	8	8	7	9	A	28	41	50	28	25	36	28	19	9	10	24	24	20	33	52	31	14	22	23.4	51.7
19-Oct	18	22	17	14	A	23	21	35	44	36	17	7	3	3	3	8	14	39	51	31	39	57	49	51	26.1	57.1
20-Oct	37	23	17	A	20	28	50	50	55	38	20	23	10	19	20	12	11	12	10	9	10	9	7	6	21.6	55.1
21-Oct	9	11	A	22	23	22	10	16	21	16	19	24	21	30	22	33	22	22	19	25	19	19	17	16	19.9	32.8
22-Oct	12	A	15	13	16	29	31	73	81	18	11	7	4	4	4	4	6	8	13	14	12	12	14	19	18.2	80.8
23-Oct	A	18	12	12	12	19	32	64	40	23	17	10	12	7	7	5	6	5	5	5	5	4	3	A	14.6	63.8
24-Oct	3	2	2	1	1	2	2	4	8	7	5	4	3	3	3	3	4	3	4	7	8	9	A	16	4.5	16.2
25-Oct	35	55	56	38	44	41	46	52	52	36	24	12	12	14	10	14	10	16	27	17	14	A	36	27	29.9	55.6
26-Oct	29	23	28	27	22	35	56	67	65	35	45	48	21	7	7	6	6	6	4	4	A	4	3	3	24.0	67.1
27-Oct	3	2	2	3	3	8	12	10	10	6	7	5	6	5	3	3	3	3	6	A	6	8	4	7	5.3	12.1
28-Oct	7	4	4	4	10	13	20	28	8	3	3	5	8	5	3	4	6	10	A	19	42	42	24	17	12.5	42.2
29-Oct	16	25	18	15	10	11	13	11	13	11	11	12	8	9	11	12	14	A	16	16	13	12	6	8	12.7	24.6
30-Oct	7	5	4	4	5	11	15	39	28	17	13	13	12	10	10	9	A	11	10	11	11	11	11	10	12.0	39.0
31-Oct	9	7	6	7	6	13	15	20	29	19	8	9	6	6	6	A	4	4	3	2	2	3	4	8	8.6	28.7
	11.5	11.6	11.0	11.0	11.7	14.4	19.8	25.5	24.8	17.3	12.7	11.7	8.4	7.6	7.4	7.7	8.2	10.0	12.7	12.7	16.2	14.4	12.9	13.3		Diurnal Average
	53.3	59.2	55.6	54.9	45.2	40.8	82.8	73.1	80.8	54.5	45.4	47.9	27.6	29.5	22.1	32.8	24.1	39.2	51.2	33.2	74.3	95.8	84.7	72.2		Diurnal Maximum

C - Calibration                      A - Automated Daily Zero Span

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



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

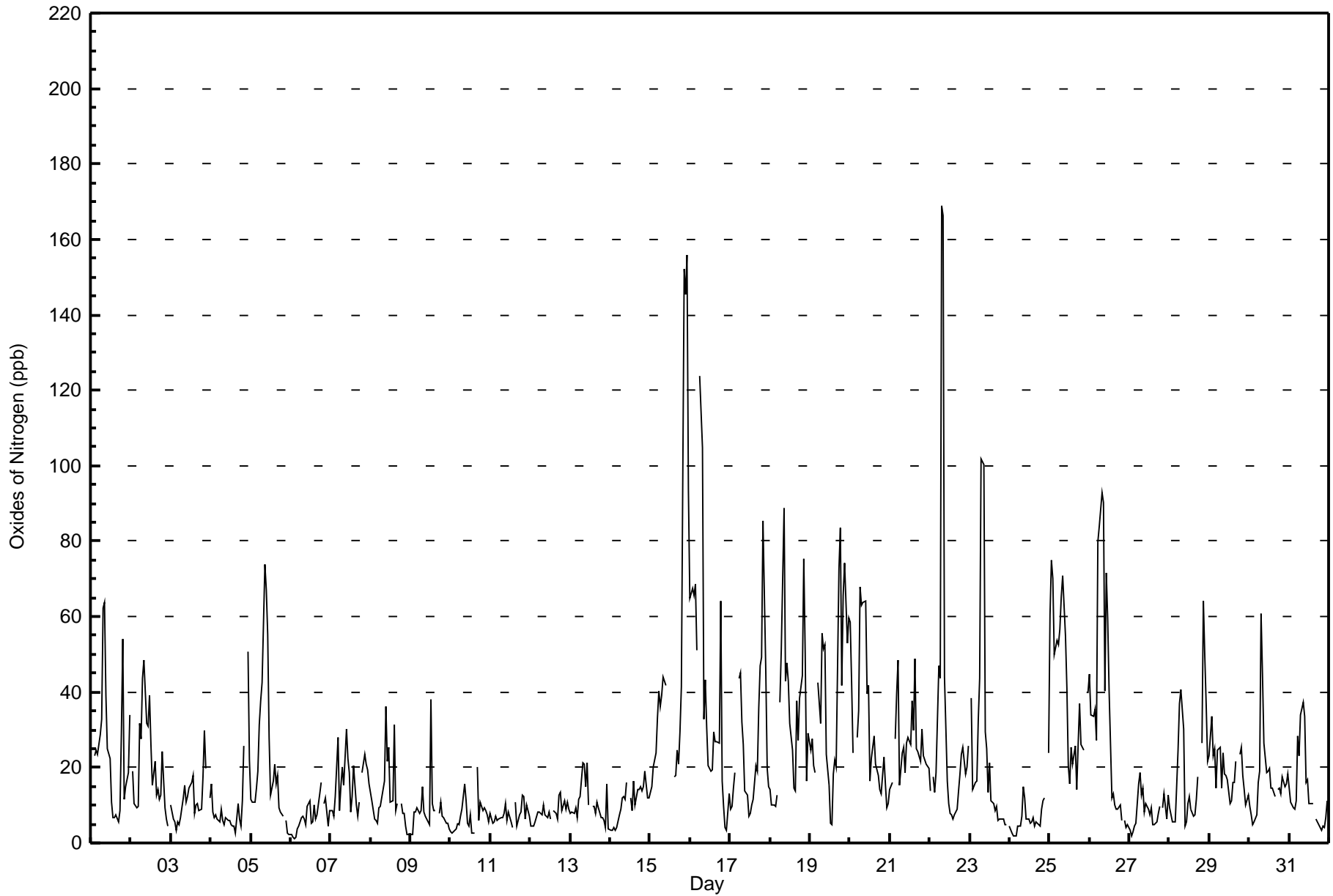
**Henry Pirker - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
October 1, 2009 to November 1, 2009**

Maximum Value: 168.8 ppb on Oct 22 08:00	Maximum Daily Average: 50.3 ppb on Oct 15	Hours in Service: 744
Minimum Value: 1 ppb on Oct 6 03:00	Minimum Daily Average: 7.0 ppb on Oct 6	Hours of Data: 708
Maximum Diurnal Average: 40.2 ppb at hour 8	Minimum Diurnal Average: 12.4 ppb at hour 14	Hours of Missing Data: 36
Monthly Average: 20.71 ppb	Percentiles: P <sub>1</sub> = 2.1 P <sub>10</sub> = 5.0 Q <sub>1</sub> = 7.6 Median = 13.4 Q <sub>3</sub> = 25.2 P <sub>90</sub> = 44.9 P <sub>99</sub> = 93.7	Hours of Calibration: 36
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	20	A	23	24	24	29	33	62	64	39	25	22	11	7	7	8	6	9	29	54	12	15	19	34	24.9	63.7
2-Oct	A	19	11	9	10	32	27	44	48	32	31	39	26	15	22	13	14	11	13	24	9	6	5	A	20.9	48.4
3-Oct	10	6	6	3	6	5	7	12	15	11	12	15	16	18	8	10	10	9	9	18	30	20	A	12	11.6	29.7
4-Oct	16	8	7	8	7	6	9	6	5	7	6	6	5	5	5	3	11	6	5	11	26	A	51	22	10.3	50.8
5-Oct	12	11	11	15	19	31	38	42	74	67	55	28	13	16	21	16	18	9	8	7	A	6	3	2	22.6	74.0
6-Oct	2	2	1	2	4	5	7	7	7	5	10	11	5	5	10	6	7	13	16	A	10	12	4	8	7.0	16.2
7-Oct	8	8	7	12	28	8	15	20	15	30	23	19	8	12	20	10	7	11	A	18	24	21	20	15	15.7	30.3
8-Oct	13	11	6	6	5	9	10	14	16	36	22	25	11	11	31	8	10	A	10	8	8	4	2	2	12.3	36.2
9-Oct	2	2	8	8	9	8	9	15	8	7	6	5	38	10	9	9	A	8	11	7	7	5	5	4	8.7	38.2
10-Oct	3	3	3	4	5	5	7	9	16	11	5	5	7	3	3	A	20	6	11	9	9	9	7	6	7.2	20.3
11-Oct	8	5	6	7	6	7	7	7	8	10	6	8	6	4	A	11	5	8	8	13	12	6	10	7	7.5	12.7
12-Oct	5	5	5	6	8	8	8	7	10	7	7	8	6	A	9	8	6	13	13	9	11	9	11	9	8.1	13.4
13-Oct	8	8	8	9	7	11	12	21	21	15	21	10	A	10	10	8	11	9	7	7	6	4	16	4	10.6	21.4
14-Oct	3	4	4	3	4	7	9	12	12	11	16	A	12	8	16	10	14	14	15	14	15	19	12	12	10.8	18.9
15-Oct	14	15	20	24	33	40	36	39	44	42	C	C	C	C	17	18	24	21	30	41	152	145	156	94	50.3	155.8
16-Oct	65	67	66	69	51	A	124	105	33	43	30	20	19	19	30	27	27	26	64	17	10	4	4	13	40.5	123.7
17-Oct	9	10	15	19	A	44	45	32	26	14	13	7	8	10	11	21	19	36	47	49	85	45	20	15	26.0	85.4
18-Oct	14	10	10	10	13	A	37	51	89	43	48	43	32	25	15	14	38	27	38	44	75	50	17	29	33.5	88.9
19-Oct	25	28	21	19	A	42	32	56	52	53	24	15	5	5	18	22	20	73	84	42	66	74	53	60	38.5	83.6
20-Oct	58	42	24	A	28	35	68	63	64	64	40	42	17	23	28	21	19	18	14	13	23	16	9	10	32.1	68.0
21-Oct	14	16	A	27	40	49	15	24	25	18	26	28	26	38	30	49	25	24	21	30	23	22	21	20	26.6	49.0
22-Oct	14	A	17	13	19	47	43	169	166	44	16	10	8	8	6	7	9	14	18	23	25	18	20	26	32.3	168.8
23-Oct	A	38	14	16	17	32	44	102	100	30	25	13	21	11	11	9	10	6	6	7	7	5	5	A	24.0	101.7
24-Oct	5	3	2	2	2	4	4	7	15	12	6	6	5	6	7	4	6	5	5	9	11	12	A	24	7.0	23.7
25-Oct	60	75	70	50	54	53	57	65	71	55	41	20	16	25	21	26	14	26	37	26	24	A	40	40	42.0	75.0
26-Oct	45	34	34	36	27	80	84	93	90	40	72	59	40	12	13	10	9	9	10	6	A	6	4	5	35.5	92.9
27-Oct	4	2	3	5	5	16	19	12	15	8	10	9	8	9	5	5	5	8	10	A	9	13	7	13	8.6	18.6
28-Oct	9	8	5	6	15	25	37	41	30	4	6	10	12	9	7	8	11	17	A	26	64	50	36	22	19.9	64.1
29-Oct	23	33	23	25	15	25	25	15	24	18	18	17	11	11	16	16	22	A	23	26	18	14	10	13	19.1	33.4
30-Oct	10	8	5	6	8	16	19	61	45	27	19	19	20	14	14	12	A	14	14	13	18	15	16	18	17.7	60.6
31-Oct	15	11	9	9	11	29	23	34	37	34	16	17	11	10	10	A	6	5	5	4	4	4	7	11	14.0	37.3
	17.0	16.9	14.7	15.0	16.4	24.4	29.3	40.2	40.2	27.0	21.8	18.6	14.5	12.4	14.3	13.3	13.9	15.7	20.0	19.8	27.3	21.7	20.3	18.9		Diurnal Average
	64.9	75.0	70.0	68.7	53.8	79.6	123.7	168.8	166.1	67.0	71.6	59.1	40.1	37.5	31.4	49.0	37.6	72.8	83.6	54.0	152.0	145.3	155.8	93.7		Diurnal Maximum

C - Calibration                      A - Automated Daily Zero Span

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



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

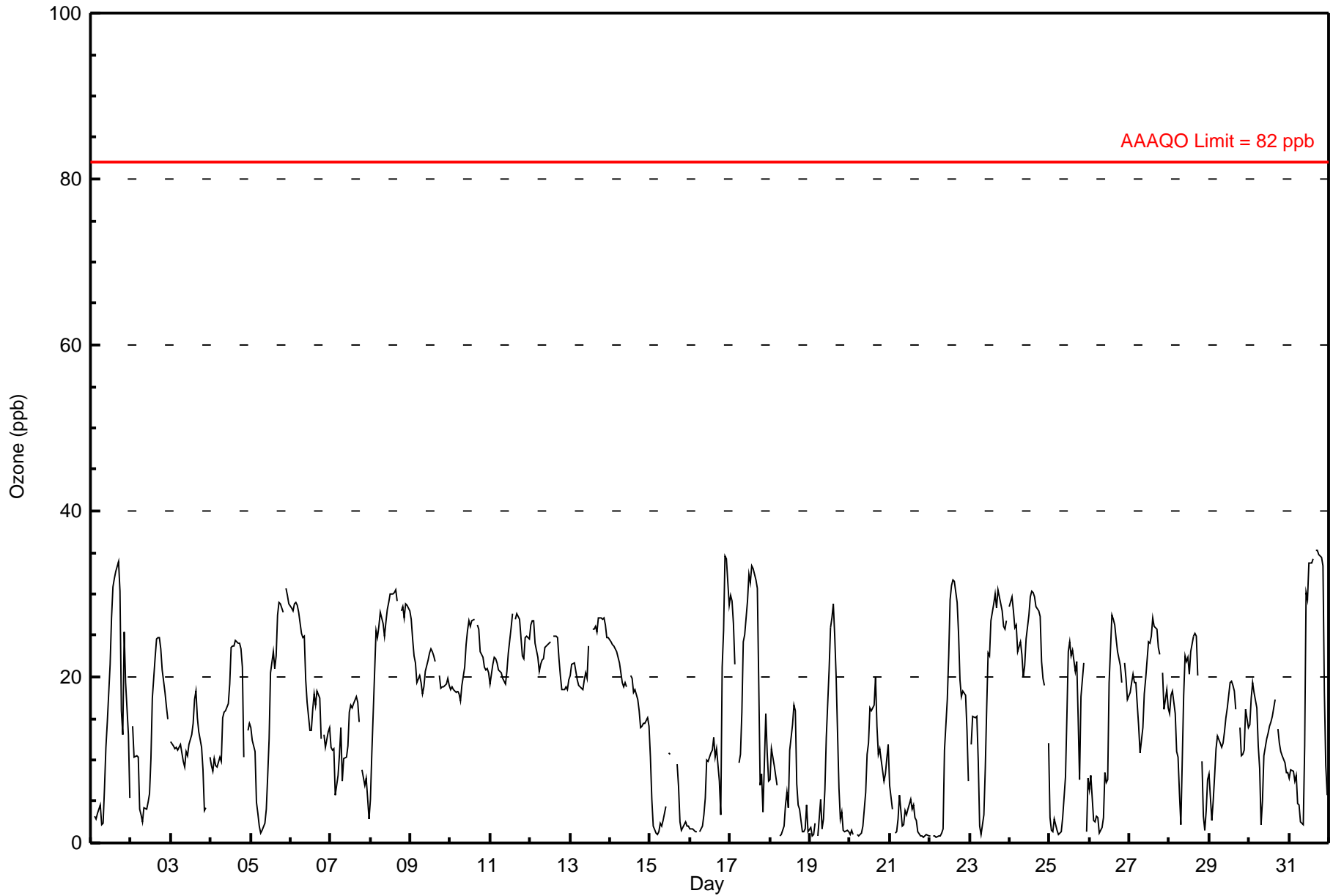
**Henry Pirker - Ozone (O<sub>3</sub>) - ppb  
October 1, 2009 to November 1, 2009**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 35.3 ppb on Oct 31 17:00	Maximum Daily Average: 25.9 ppb on Oct 8
Minimum Value: 1 ppb on Oct 21 21:00	Hours of Data: 708
Maximum Diurnal Average: 23.2 ppb at hour 15	Hours of Missing Data: 36
Monthly Average: 15.67 ppb	Hours of Calibration: 36
Minimum Daily Average: 2.8 ppb on Oct 21	Percent Operational Time: 100.0
Minimum Diurnal Average: 9.4 ppb at hour 8	
Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 2.1 Q <sub>1</sub> = 7.7 Median = 16.3 Q <sub>3</sub> = 23.3 P <sub>90</sub> = 27.8 P <sub>99</sub> = 34.1	

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-Oct	5	A	3	3	4	5	2	2	7	12	15	22	27	31	32	33	34	30	16	13	25	19	13	5	15.5	33.9
2-Oct	A	14	10	10	10	4	3	2	4	4	5	6	10	17	22	25	25	25	23	21	18	17	15	A	13.3	24.8
3-Oct	12	12	11	12	11	12	12	10	9	11	11	12	13	14	17	18	15	13	12	9	4	4	A	10	11.5	18.2
4-Oct	9	9	10	9	9	10	10	15	16	16	17	19	24	24	24	24	24	24	23	21	10	A	14	14	16.3	24.5
5-Oct	14	12	11	5	4	2	1	2	2	4	8	13	20	23	21	23	27	29	29	28	A	31	30	29	16.0	30.7
6-Oct	28	28	29	29	29	28	25	25	25	20	17	14	14	16	18	17	18	17	13	A	13	12	13	14	20.0	29.1
7-Oct	11	11	11	6	8	11	14	7	10	10	12	16	17	16	17	18	17	15	A	9	7	8	5	3	11.2	17.6
8-Oct	5	11	21	26	25	26	28	27	25	27	28	29	30	30	30	31	29	A	28	29	27	29	29	28	25.9	30.6
9-Oct	27	25	23	22	19	20	19	18	19	21	22	23	23	23	23	22	A	20	19	19	19	19	20	19	21.0	27.0
10-Oct	18	19	18	18	18	18	17	19	21	24	26	27	26	27	27	A	26	26	23	22	21	21	21	21	21.9	26.9
11-Oct	19	22	22	22	22	21	20	20	20	19	21	23	26	28	A	27	28	27	25	23	22	25	25	25	23.0	27.6
12-Oct	26	27	27	24	22	21	21	22	22	24	24	24	A	25	25	25	25	22	20	19	19	19	19	20	22.6	26.8
13-Oct	20	22	22	21	20	19	19	18	20	21	20	24	A	26	26	26	25	27	27	27	27	26	25	25	23.1	27.2
14-Oct	24	24	24	23	23	22	21	19	19	19	19	A	20	20	18	19	17	16	14	14	14	14	15	14	18.8	24.3
15-Oct	10	5	2	1	1	1	2	2	3	4	A	11	11	C	C	C	9	7	3	2	2	2	2	2	4.2	10.8
16-Oct	2	2	1	1	1	A	1	2	3	5	10	10	11	11	13	10	11	7	3	21	26	35	34	29	10.9	34.6
17-Oct	30	29	26	22	A	10	11	16	24	25	29	32	31	33	33	32	31	19	7	8	4	16	11	7	21.1	33.3
18-Oct	8	11	9	8	7	A	1	1	2	5	6	4	11	14	17	16	7	5	4	1	1	2	5	1	6.4	16.6
19-Oct	2	1	1	2	A	1	5	2	3	6	13	21	26	27	29	25	20	7	3	4	2	1	2	1	8.8	28.7
20-Oct	1	2	1	A	1	1	1	1	2	6	11	12	16	16	17	20	14	11	11	10	7	8	10	12	8.3	19.9
21-Oct	7	4	A	1	1	3	6	2	2	4	3	4	5	4	5	3	3	1	1	1	1	1	1	1	2.8	6.9
22-Oct	1	A	1	1	1	1	1	1	2	11	17	23	29	31	32	31	29	25	20	18	18	18	14	7	14.4	31.7
23-Oct	A	12	15	15	15	10	2	1	3	9	16	23	22	27	29	30	28	31	30	28	26	26	27	A	19.3	30.5
24-Oct	28	30	28	26	26	23	24	23	20	21	25	28	30	30	30	30	29	28	27	22	20	19	A	12	25.1	30.3
25-Oct	3	1	1	3	1	1	1	1	3	8	15	23	24	23	23	21	22	15	8	18	22	A	1	8	10.7	24.2
26-Oct	7	8	3	2	3	3	1	2	3	8	7	8	19	27	27	26	25	23	21	19	A	22	20	17	13.2	27.4
27-Oct	18	19	20	19	19	14	11	12	14	18	20	24	24	25	27	26	26	24	23	A	21	16	19	16	19.8	27.2
28-Oct	16	18	18	16	11	10	6	2	18	22	22	22	20	23	25	25	25	20	A	10	3	2	4	8	15.1	25.2
29-Oct	8	3	5	8	11	13	12	12	12	13	15	16	19	19	19	18	16	A	14	11	11	11	16	14	12.9	19.4
30-Oct	14	17	19	18	16	12	9	2	5	11	13	13	14	15	15	17	A	14	12	11	10	10	8	8	12.4	19.4
31-Oct	8	9	9	7	8	5	5	3	2	12	30	29	34	34	34	A	35	35	35	34	33	18	9	6	18.9	35.3
	13.2	14.0	13.5	12.7	12.0	11.2	10.1	9.4	11.0	13.6	16.5	18.4	20.8	22.6	23.2	22.7	22.1	19.4	17.0	16.2	15.0	15.5	14.6	13.0	Diurnal Average	
	29.9	29.7	28.8	29.1	28.7	27.8	27.7	26.5	24.9	26.7	30.1	32.3	33.7	33.7	34.3	32.8	35.3	35.2	34.7	34.4	33.5	34.6	34.2	28.9	Diurnal Maximum	

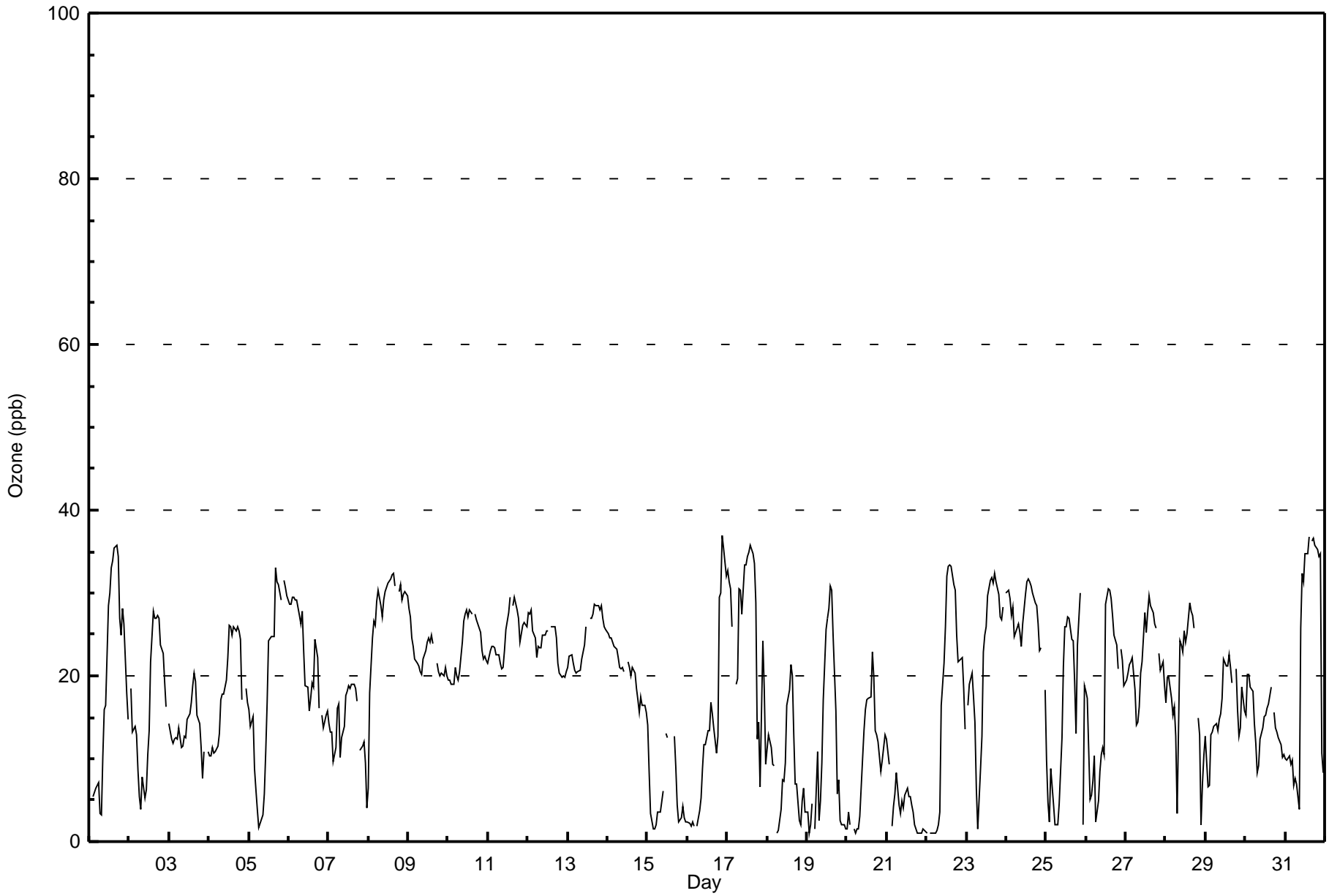
C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

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



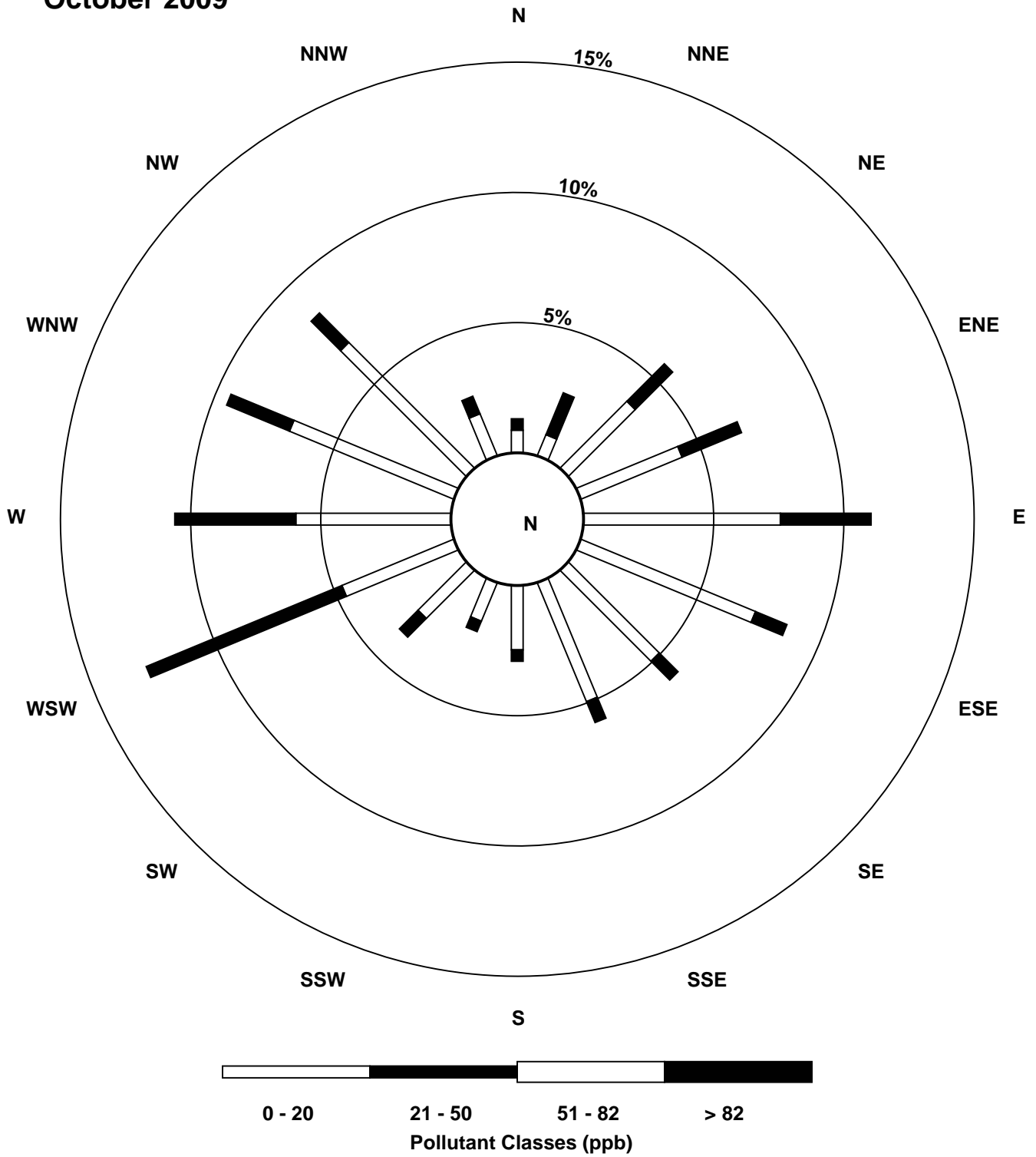


# Hourly Maximums for O<sub>3</sub> at Henry Pirker October 2009





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



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

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

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 34.5 ppb on Oct 31 20:00	Hours in Service: 744 Hours of Data: 737 Hours of Missing Data: 7 Hours of Calibration: 7 Percent Operational Time: 100.0
Minimum Value: 0.8 ppb on Oct 22 07:00	
Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 3.6 Q <sub>1</sub> = 9.4 Median = 15.8 Q <sub>3</sub> = 22.3 P <sub>90</sub> = 26.3 P <sub>99</sub> = 29.5	

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Oct	12	11	9	7	6	5	4	3	4	5	6	8	11	15	18	22	26	28	28	27	27	25	23	20	28.0
2-Oct	17	15	14	14	12	10	8	8	7	6	6	5	5	7	9	12	14	17	19	21	22	22	21	20	22.0
3-Oct	19	17	15	14	13	12	12	11	11	11	11	11	11	11	12	13	14	14	14	14	13	12	11	10	18.7
4-Oct	9	8	8	8	9	10	10	10	11	12	13	14	16	17	19	20	21	22	23	24	22	22	20	19	23.5
5-Oct	17	16	14	11	11	9	8	6	5	4	3	4	7	9	12	14	17	21	23	25	26	27	28	29	28.9
6-Oct	29	29	29	29	29	29	28	28	27	26	25	23	21	19	18	17	17	16	16	16	16	15	15	14	29.1
7-Oct	13	12	12	11	11	11	11	10	10	10	10	11	12	13	13	14	15	16	16	15	14	13	11	9	16.3
8-Oct	7	7	9	11	13	15	18	21	23	25	26	27	27	28	28	29	29	30	30	29	29	29	29	28	29.5
9-Oct	28	28	27	26	25	24	23	22	21	20	20	20	21	21	21	22	22	22	22	21	21	20	20	19	28.0
10-Oct	19	19	19	19	19	19	18	18	19	19	20	21	22	23	25	25	26	26	26	25	25	24	23	23	26.3
11-Oct	22	21	21	21	21	21	21	21	21	21	21	21	21	22	22	23	24	26	26	26	26	25	25	25	26.1
12-Oct	25	25	25	25	25	25	24	24	23	23	23	23	23	24	24	24	24	24	24	23	22	22	21	20	25.1
13-Oct	20	20	20	20	20	20	20	20	20	20	20	20	21	22	23	24	25	26	26	26	26	26	26	26	26.5
14-Oct	26	26	25	25	24	24	23	22	22	21	21	20	20	20	19	19	19	18	18	17	17	16	15	15	26.1
15-Oct	14	13	11	10	8	6	5	3	2	2	2	4	5	5	N	N	N	N	N	N	N	4	4	4	14.0
16-Oct	3	2	2	2	2	2	2	2	2	2	4	5	6	7	8	9	10	10	10	11	13	16	19	21	20.8
17-Oct	23	26	29	29	29	26	22	20	20	19	19	21	22	25	28	30	31	30	27	24	21	19	16	13	30.8
18-Oct	10	9	9	9	10	9	7	6	6	5	4	4	4	6	8	9	10	10	10	9	8	7	5	3	10.0
19-Oct	3	2	2	2	2	2	2	2	2	3	5	7	10	13	16	19	21	21	20	17	14	11	8	5	20.8
20-Oct	2	2	2	1	1	1	1	1	1	2	3	4	6	8	10	12	14	14	15	14	13	12	11	10	14.6
21-Oct	10	9	8	7	6	5	5	3	3	3	3	4	4	4	4	4	4	4	3	3	2	2	1	1	9.6
22-Oct	1	1	1	1	1	1	1	1	1	2	4	7	11	14	18	22	25	27	28	27	26	24	22	19	27.5
23-Oct	17	15	15	14	14	13	11	10	9	9	9	10	11	13	16	20	23	26	27	28	29	28	28	28	28.5
24-Oct	28	28	28	27	27	27	27	26	25	24	23	24	24	25	26	27	28	29	29	28	27	26	25	22	28.9
25-Oct	19	15	11	9	6	3	3	2	2	3	4	7	10	12	15	17	20	21	20	19	19	18	15	13	20.7
26-Oct	11	10	9	7	5	4	4	4	3	3	4	4	6	10	13	16	19	20	22	24	24	23	22	21	24.1
27-Oct	20	20	19	19	19	18	17	17	16	16	16	17	17	19	21	22	24	24	25	25	24	23	22	20	24.9
28-Oct	19	18	18	17	16	15	14	12	12	13	13	14	15	17	19	22	23	23	23	21	19	16	13	10	23.1
29-Oct	8	5	5	5	6	8	9	9	9	11	12	13	14	15	16	17	17	18	17	17	15	14	14	13	17.6
30-Oct	13	14	14	15	16	16	15	14	12	12	11	10	10	10	11	13	14	14	14	14	14	13	12	11	15.9
31-Oct	10	10	9	9	8	8	7	7	6	6	9	12	15	18	22	25	30	33	34	34	34	32	29	26	34.5
	29.0	28.9	28.9	29.1	29.2	28.7	28.1	27.6	27.2	26.1	26.3	26.7	27.4	27.9	28.2	30.0	30.8	33.1	33.7	34.5	34.4	32.2	28.7	28.9	
	Diurnal Maximums																								

N - Not Valid

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

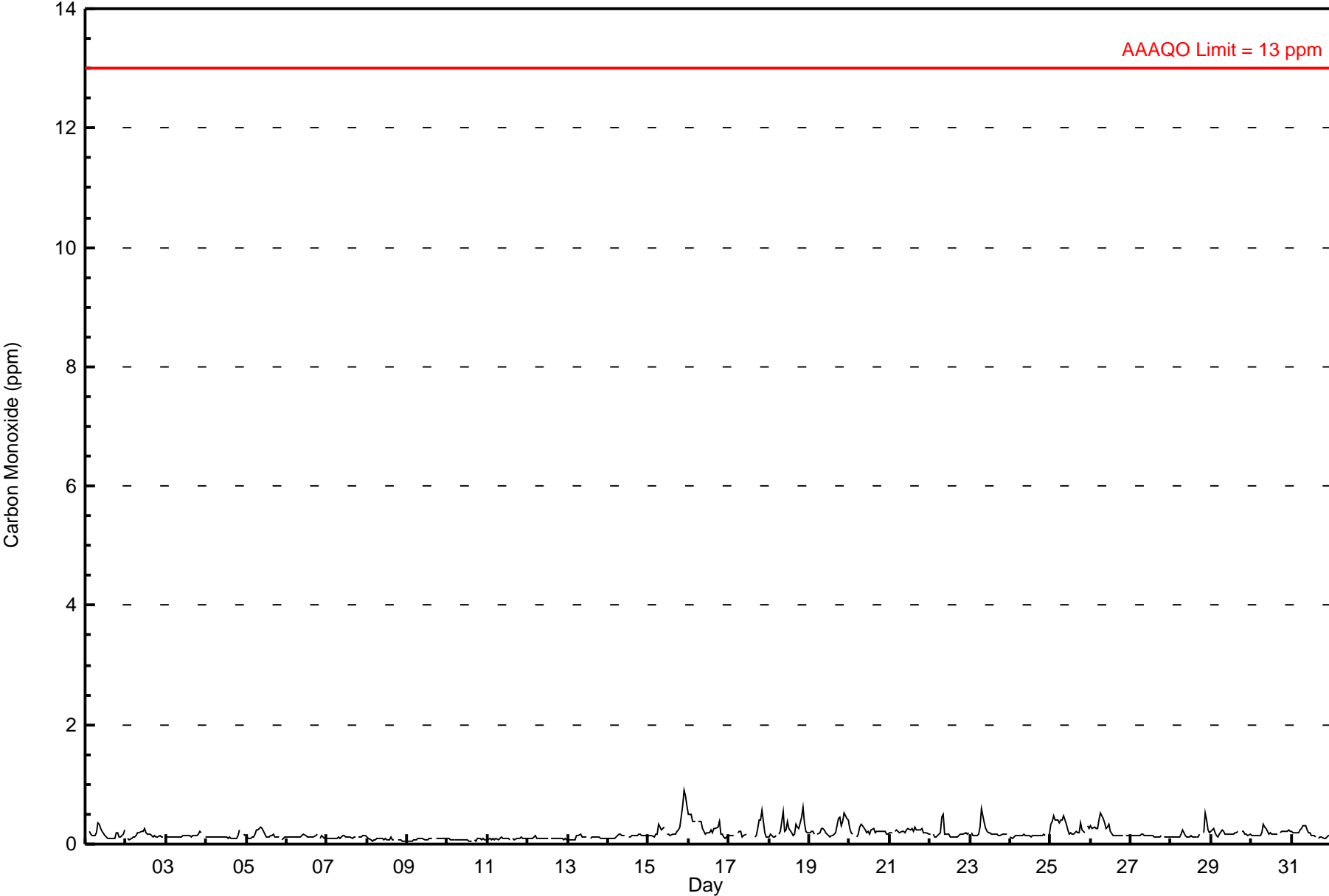
**Henry Pirker - Carbon Monoxide (CO) - ppm  
October 1, 2009 to November 1, 2009**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 0.90 ppm on Oct 15 22:00	Maximum Daily Average: 0.30 ppm on Oct 25		Hours of Data:	707
Minimum Value: 0.1 ppm on Oct 9 00:00	Minimum Daily Average: 0.07 ppm on Oct 10		Hours of Missing Data:	37
Maximum Diurnal Average: 0.23 ppm at hour 8	Minimum Diurnal Average: 0.14 ppm at hour 14		Hours of Calibration:	37
Monthly Average: 0.170 ppm	Percentiles: P <sub>1</sub> = 0.06 P <sub>10</sub> = 0.09 Q <sub>1</sub> = 0.11 Median = 0.14 Q <sub>3</sub> = 0.20 P <sub>90</sub> = 0.28 P <sub>99</sub> = 0.53		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-Oct	0.2	A	0.2	0.2	0.2	0.1	0.2	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.18	0.36
2-Oct	A	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	0.26
3-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	A	0.1	0.13	0.20
4-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.2	0.2	0.12	0.24
5-Oct	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.15	0.29
6-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.1	0.1	0.1	0.1	0.12	0.16
7-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.11	0.15
8-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.08	0.11
9-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.08	0.10
10-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.07	0.09
11-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.09	0.11
12-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.09	0.14
13-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.15
14-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.13	0.17
15-Oct	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.9	0.8	0.7	0.29	0.90
16-Oct	0.5	0.5	0.4	0.4	0.4	A	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.2	0.2	0.1	0.1	0.2	0.27	0.49
17-Oct	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.1	0.1	0.2	C	C	C	C	0.1	0.1	0.3	0.4	0.4	0.6	0.2	0.1	0.1	0.21	0.56
18-Oct	0.1	0.2	0.1	0.1	0.1	A	0.2	0.2	0.5	0.2	0.2	0.4	0.3	0.2	0.1	0.2	0.3	0.3	0.3	0.5	0.6	0.4	0.2	0.2	0.26	0.63
19-Oct	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.4	0.5	0.3	0.4	0.5	0.4	0.26	0.52
20-Oct	0.3	0.2	0.2	A	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.33
21-Oct	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.22	0.30
22-Oct	0.2	A	0.2	0.1	0.1	0.2	0.2	0.4	0.5	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.49
23-Oct	A	0.2	0.1	0.1	0.1	0.2	0.3	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.60
24-Oct	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	A	0.2	0.14	0.17
25-Oct	0.3	0.4	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	A	0.3	0.3	0.30	0.48
26-Oct	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	A	0.2	0.2	0.2	0.25	0.52
27-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.14	0.16
28-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	A	0.2	0.5	0.4	0.2	0.17	0.52
29-Oct	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.1	0.18	0.26
30-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.34
31-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.18	0.31
	0.16	0.16	0.15	0.14	0.15	0.15	0.20	0.23	0.22	0.18	0.16	0.16	0.14	0.14	0.14	0.14	0.15	0.16	0.19	0.18	0.21	0.19	0.18	0.17	Diurnal Average	
	0.49	0.49	0.47	0.40	0.40	0.39	0.52	0.60	0.54	0.33	0.28	0.37	0.27	0.26	0.26	0.30	0.32	0.43	0.45	0.46	0.63	0.90	0.81	0.65	Diurnal Maximum	

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

# Hourly Averages for CO at Henry Pirker October 2009



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

**Henry Pirker - Carbon Monoxide (CO) - ppm  
October 1, 2009 to November 1, 2009**

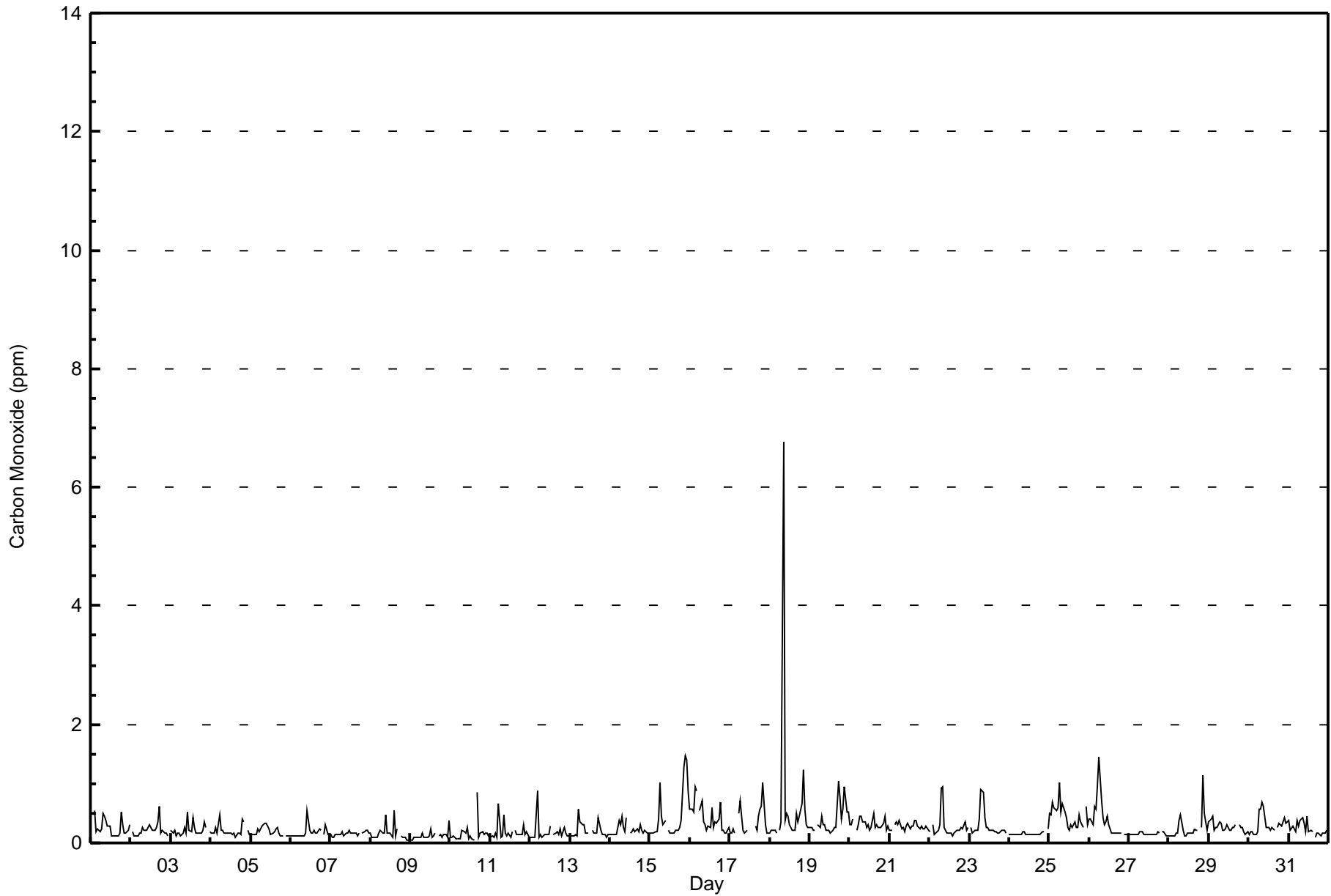
Maximum Value: 6.75 ppm on Oct 18 09:00	Maximum Daily Average: 0.65 ppm on Oct 18	Hours in Service: 744
Minimum Value: 0.1 ppm on Oct 9 00:00	Minimum Daily Average: 0.13 ppm on Oct 9	Hours of Data: 707
Maximum Diurnal Average: 0.54 ppm at hour 9	Minimum Diurnal Average: 0.19 ppm at hour 13	Hours of Missing Data: 37
Monthly Average: 0.268 ppm	Percentiles: P <sub>1</sub> = 0.07 P <sub>10</sub> = 0.12 Q <sub>1</sub> = 0.15 Median = 0.20 Q <sub>3</sub> = 0.30 P <sub>90</sub> = 0.47 P <sub>99</sub> = 1.09	Hours of Calibration: 37
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	0.3	A	0.6	0.2	0.2	0.2	0.2	0.5	0.4	0.4	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.5	0.3	0.2	0.2	0.2	0.3	0.26	0.55	
2-Oct	A	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.4	0.6	0.2	0.2	0.2	0.2	0.4	0.3	A	0.22	0.61	
3-Oct	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.3	0.2	0.3	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.3	A	0.2	0.22	0.52	
4-Oct	0.2	0.2	0.2	0.3	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.4	0.4	A	0.2	0.2	0.20	0.46	
5-Oct	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.1	A	0.1	0.1	0.1	0.20	0.34	
6-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.3	0.1	0.1	0.17	0.55	
7-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.22	
8-Oct	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.5	0.2	0.2	0.2	0.1	0.6	0.1	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.16	0.55	
9-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.13	0.39	
10-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.1	A	0.9	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.16	0.86	
11-Oct	0.1	0.1	0.1	0.2	0.1	0.7	0.1	0.1	0.5	0.2	0.1	0.2	0.1	0.2	A	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.18	0.66	
12-Oct	0.1	0.1	0.1	0.1	0.9	0.1	0.1	0.1	0.1	0.1	0.1	0.3	A	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.3	0.2	0.1	0.1	0.18	0.87	
13-Oct	0.1	0.1	0.1	0.1	0.1	0.6	0.4	0.3	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.1	0.2	0.20	0.57	
14-Oct	0.2	0.2	0.2	0.1	0.2	0.4	0.3	0.4	0.3	0.2	0.4	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.23	0.45	
15-Oct	0.2	0.2	0.2	0.2	0.2	0.4	1.0	0.4	0.3	0.4	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	1.3	1.5	1.4	0.9	0.46	1.46	
16-Oct	0.6	0.6	0.5	1.0	0.9	A	0.5	0.7	0.4	0.3	0.2	0.3	0.3	0.6	0.3	0.4	0.3	0.4	0.7	0.2	0.2	0.2	0.2	0.3	0.43	0.96	
17-Oct	0.2	0.2	0.2	0.2	A	0.5	0.7	0.5	0.2	0.2	0.2	C	C	C	C	0.3	0.2	0.5	0.6	0.6	1.0	0.3	0.2	0.2	0.35	1.02	
18-Oct	0.2	0.2	0.2	0.2	0.2	A	0.2	0.4	6.8	0.4	0.5	0.5	0.3	0.2	0.2	0.2	0.5	0.4	0.4	0.7	1.2	0.6	0.3	0.3	0.65	6.75	
19-Oct	0.3	0.3	0.2	0.2	A	0.3	0.3	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	1.1	0.7	0.4	0.6	1.0	0.5	0.5	0.38	1.05	
20-Oct	0.3	0.3	0.4	A	0.2	0.3	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.2	0.3	0.32	0.51	
21-Oct	0.2	0.2	A	0.3	0.4	0.3	0.4	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.28	0.39	
22-Oct	0.2	A	0.3	0.2	0.2	0.2	0.3	0.9	1.0	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.2	0.3	0.28	0.96
23-Oct	A	0.3	0.2	0.2	0.2	0.2	0.4	0.9	0.9	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.28	0.91	
24-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	A	0.2	0.16	0.24	
25-Oct	0.5	0.5	0.7	0.6	0.5	0.6	1.0	0.5	0.7	0.5	0.4	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.5	0.4	0.3	A	0.6	0.3	0.45	1.01	
26-Oct	0.4	0.4	0.3	0.6	0.6	1.0	1.4	0.7	0.4	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.38	1.44	
27-Oct	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.2	0.2	0.1	0.1	0.15	0.20	
28-Oct	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.5	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.3	1.1	0.5	0.4	0.2	0.26	1.14
29-Oct	0.4	0.4	0.5	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.2	0.1	0.2	0.27	0.46
30-Oct	0.1	0.2	0.2	0.1	0.1	0.2	0.6	0.6	0.7	0.6	0.3	0.3	0.3	0.2	0.3	0.2	A	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.31	0.69	
31-Oct	0.4	0.2	0.3	0.2	0.2	0.4	0.3	0.4	0.4	0.3	0.2	0.4	0.2	0.2	0.2	A	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.24	0.45	
	0.21	0.20	0.22	0.22	0.24	0.29	0.36	0.37	0.54	0.27	0.25	0.24	0.19	0.20	0.21	0.21	0.24	0.26	0.27	0.25	0.36	0.30	0.25	0.23	Diurnal Average		
	0.57	0.57	0.69	0.96	0.87	0.96	1.44	0.93	6.75	0.63	0.55	0.46	0.31	0.60	0.55	0.39	0.86	1.05	0.75	0.66	1.29	1.46	1.39	0.88	Diurnal Maximum		

C - Calibration                      A - Automated Daily Zero Span

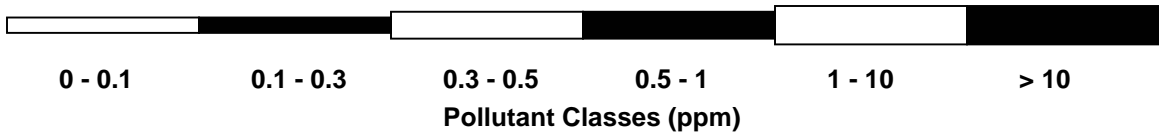
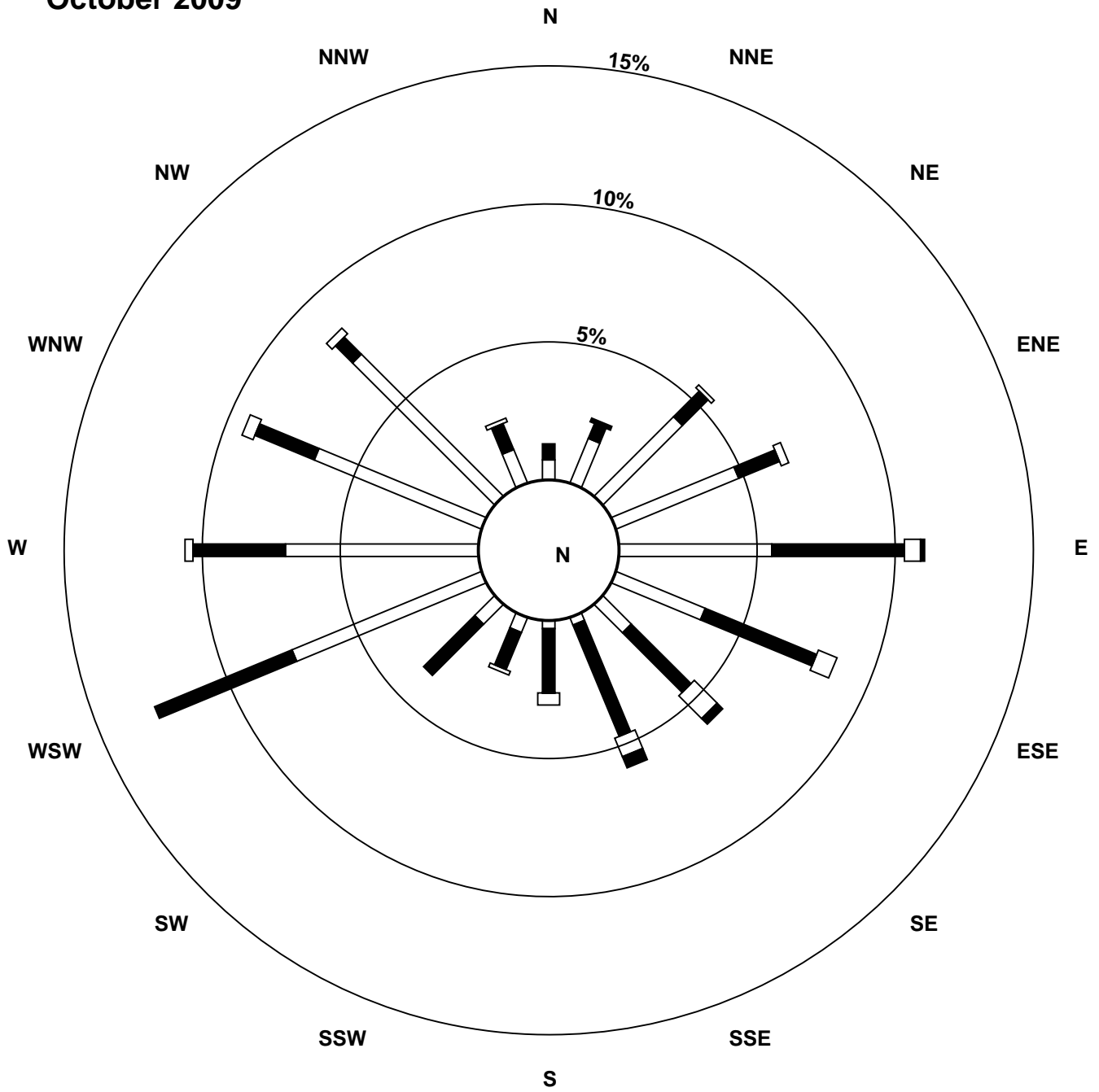
# Hourly Maximums for CO at Henry Pirker

## October 2009



# Pollutant Rose for CO at Henry Pirker

## October 2009



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

**Henry Pirker - Carbon Monoxide (CO) - ppm  
October 1, 2009 to November 1, 2009**

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.59 ppm on Oct 16 04:00																								Hours in Service: 744 Hours of Data: 737 Hours of Missing Data: 7 Hours of Calibration: 7 Percent Operational Time: 100.0		
Minimum Value: 0.06 ppm on Oct 9 04:00																										
Percentiles: P <sub>1</sub> = 0.06 P <sub>10</sub> = 0.09 Q <sub>1</sub> = 0.12 Median = 0.15 Q <sub>3</sub> = 0.21 P <sub>90</sub> = 0.27 P <sub>99</sub> = 0.46																										
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-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.23	
2-Oct	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.20	
3-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.16	
4-Oct	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	
5-Oct	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.21	
6-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	
7-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	
8-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	
9-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	
10-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.09	
11-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	
12-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	
13-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	
14-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	
15-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.49
16-Oct	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.59	
17-Oct	0.2	0.2	0.1	0.1	0.1	0.1	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	0.31
18-Oct	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	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	0.34	
19-Oct	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	0.3	0.3	0.4	0.4	0.39
20-Oct	0.4	0.4	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	0.40	
21-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25	
22-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.24	
23-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.28	
24-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	
25-Oct	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.41	
26-Oct	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.35	
27-Oct	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	
28-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.26	
29-Oct	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.29	
30-Oct	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	
31-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.24	
0.52 0.56 0.58 0.59 0.56 0.51 0.45 0.41 0.41 0.40 0.37 0.35 0.35 0.32 0.27 0.27 0.24 0.25 0.25 0.26 0.31 0.35 0.43 0.49 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  
October 1, 2009 to November 1, 2009**

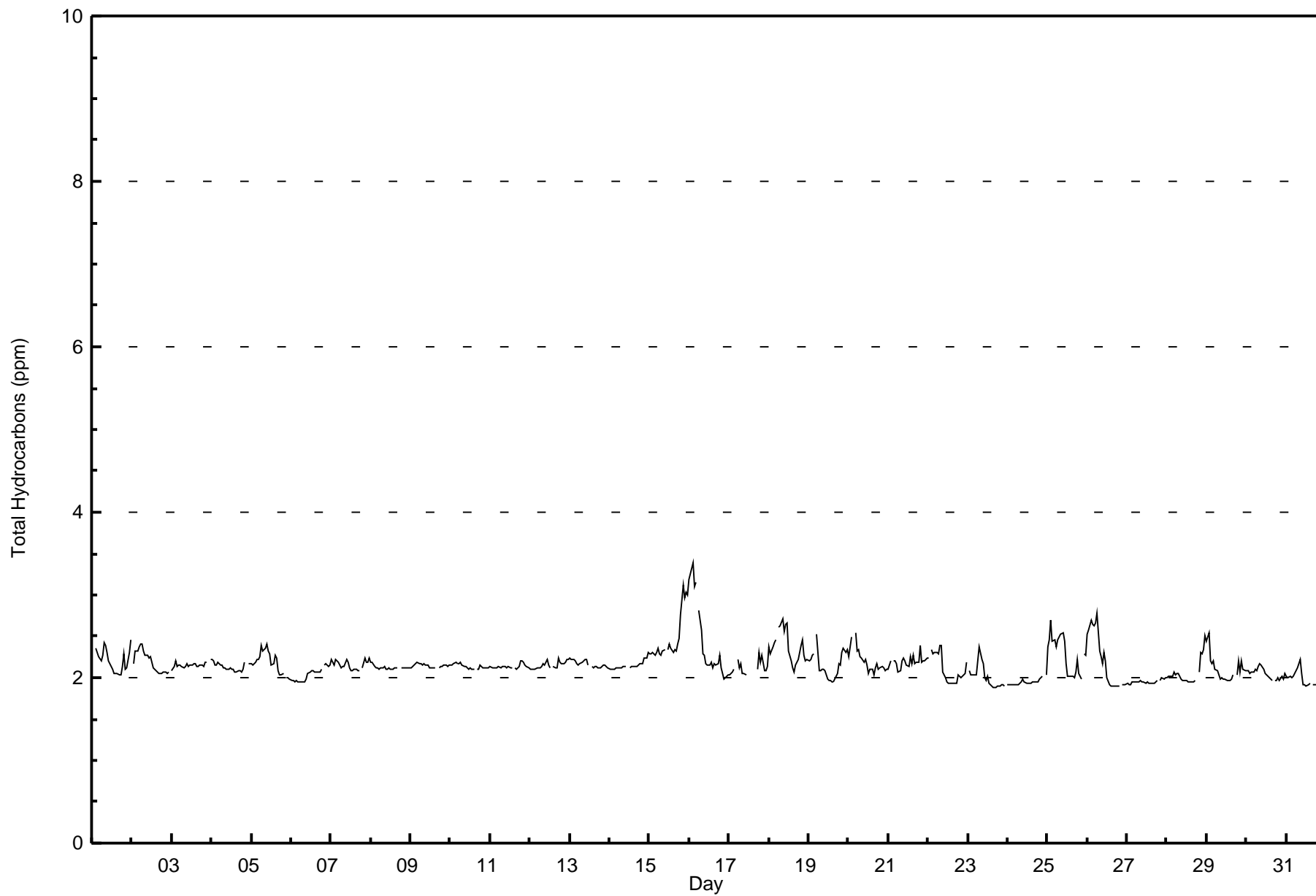
Maximum Value: 3.40 ppm on Oct 16 03:00	Maximum Daily Average: 2.47 ppm on Oct 15	Hours in Service: 744
Minimum Value: 1.9 ppm on Oct 23 17:00	Minimum Daily Average: 1.94 ppm on Oct 24	Hours of Data: 705
Maximum Diurnal Average: 2.24 ppm at hour 3	Minimum Diurnal Average: 2.06 ppm at hour 17	Hours of Missing Data: 39
Monthly Average: 2.153 ppm	Percentiles: P <sub>1</sub> = 1.90 P <sub>10</sub> = 1.95 Q <sub>1</sub> = 2.04 Median = 2.13 Q <sub>3</sub> = 2.21 P <sub>90</sub> = 2.35 P <sub>99</sub> = 2.99	Hours of Calibration: 36
		Percent Operational Time: 99.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	2.4	A	2.4	2.3	2.3	2.2	2.3	2.4	2.4	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.3	2.1	2.1	2.3	2.5	2.22	2.46
2-Oct	A	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.19	2.41
3-Oct	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.2	2.2	A	2.2	2.15	2.22
4-Oct	2.2	2.2	2.2	2.2	2.2	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	2.1	2.1	2.2	A	2.2	2.2	2.13	2.21
5-Oct	2.2	2.1	2.2	2.2	2.2	2.3	2.4	2.3	2.4	2.4	2.3	2.3	2.1	2.2	2.3	2.2	2.1	2.0	2.0	2.0	A	2.0	2.0	2.0	2.19	2.41
6-Oct	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	2.0	2.0	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	2.04	2.16
7-Oct	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.2	2.2	2.2	2.2	2.16	2.24
8-Oct	2.2	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	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.12	2.19
9-Oct	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.14	2.18
10-Oct	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	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	2.1	2.13	2.18
11-Oct	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	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.14	2.21
12-Oct	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	A	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.15	2.24
13-Oct	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.17	2.23
14-Oct	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	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.15	2.31
15-Oct	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	A	2.3	2.4	2.4	2.3	2.3	2.3	2.4	2.5	2.8	3.1	3.0	3.0	3.0	2.47	3.12
16-Oct	3.2	3.3	3.4	3.1	3.2	A	2.8	2.6	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.2	2.3	2.1	2.0	2.0	2.0	2.0	2.43	3.40
17-Oct	2.0	2.1	2.1	2.1	A	2.2	2.1	2.2	2.0	2.1	2.0	M	M	M	C	C	C	2.1	2.3	2.2	2.3	2.1	2.1	2.1	--	2.30
18-Oct	2.4	2.3	2.4	2.4	2.5	A	2.6	2.6	2.7	2.6	2.6	2.7	2.3	2.2	2.1	2.1	2.2	2.2	2.2	2.4	2.5	2.3	2.2	2.2	2.37	2.71
19-Oct	2.2	2.2	2.3	2.3	A	2.5	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	2.0	2.1	2.2	2.2	2.3	2.4	2.3	2.3	2.15	2.52
20-Oct	2.2	2.4	2.5	A	2.5	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.20	2.54
21-Oct	2.1	2.2	A	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.3	2.2	2.3	2.2	2.2	2.2	2.4	2.2	2.2	2.2	2.2	2.2	2.19	2.40
22-Oct	2.2	A	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.2	2.2	2.11	2.40
23-Oct	A	2.1	2.0	2.0	2.0	2.0	2.2	2.4	2.2	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.01	2.38
24-Oct	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A	2.0	1.94	2.04
25-Oct	2.4	2.5	2.7	2.4	2.5	2.4	2.5	2.5	2.5	2.5	2.4	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.0	2.0	A	2.3	2.3	2.28	2.69
26-Oct	2.5	2.6	2.7	2.6	2.6	2.7	2.8	2.3	2.3	2.2	2.3	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.21	2.78
27-Oct	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	2.0	2.0	2.0	1.95	2.01
28-Oct	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	A	2.1	2.3	2.3	2.3	2.5	2.06	2.52	
29-Oct	2.4	2.5	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.2	2.1	2.2	2.1	2.1	2.10	2.54
30-Oct	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.05	2.17
31-Oct	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.00	2.21

2.21	2.21	2.24	2.21	2.23	2.18	2.21	2.20	2.19	2.17	2.14	2.12	2.08	2.07	2.06	2.07	2.06	2.08	2.11	2.14	2.16	2.14	2.15	2.20	Diurnal Average	
3.18	3.31	3.40	3.10	3.16	2.67	2.82	2.63	2.71	2.55	2.65	2.67	2.41	2.35	2.31	2.34	2.32	2.41	2.48	2.76	3.12	2.96	3.03	3.01	Diurnal Maximum	

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

# Hourly Averages for THC at Henry Pirker October 2009



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

**Henry Pirker - Total Hydrocarbons (THC) - ppm  
October 1, 2009 to November 1, 2009**

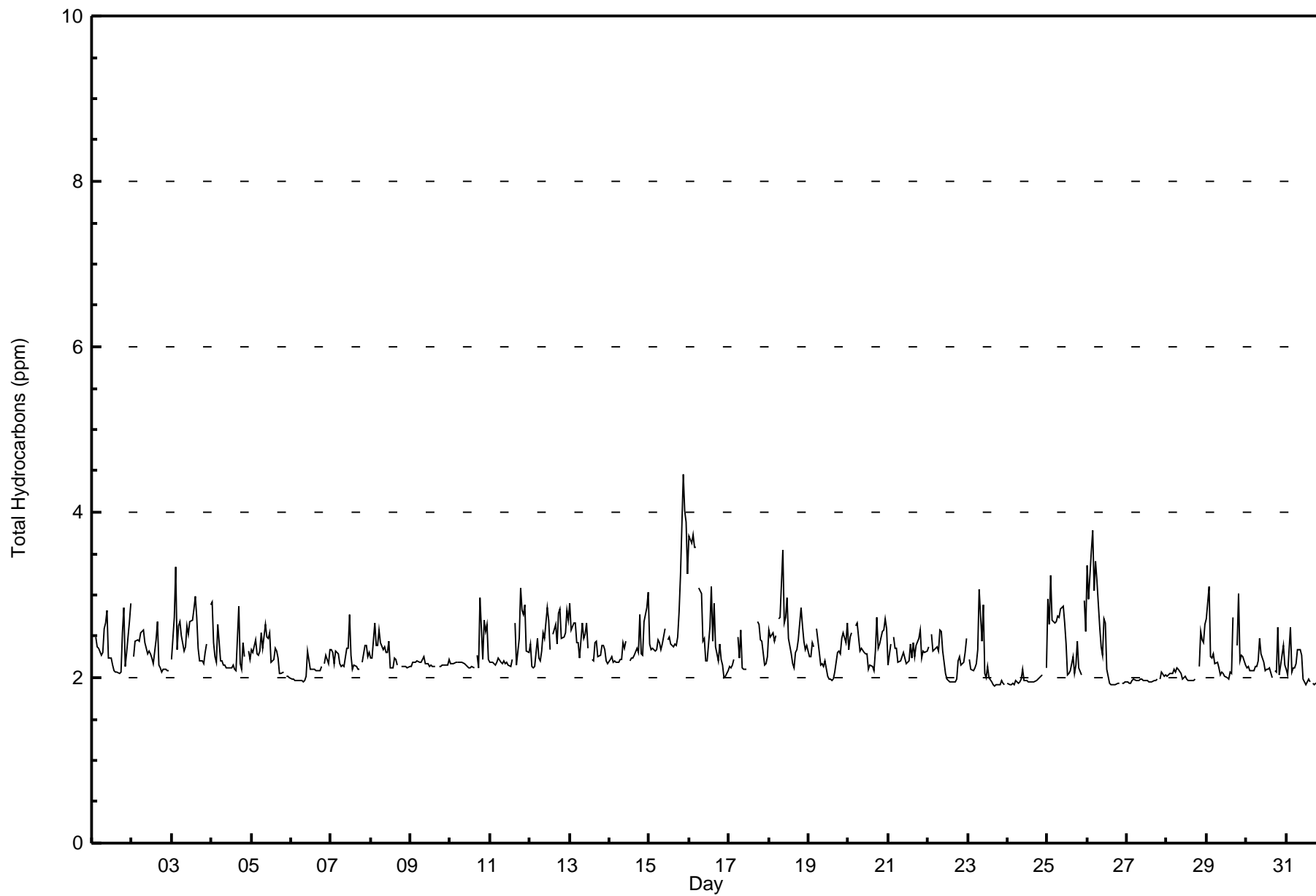
Maximum Value: 4.45 ppm on Oct 15 21:00	Maximum Daily Average: 2.73 ppm on Oct 15	Hours in Service: 744
Minimum Value: 1.9 ppm on Oct 23 17:00	Minimum Daily Average: 1.97 ppm on Oct 24	Hours of Data: 705
Maximum Diurnal Average: 2.44 ppm at hour 3	Minimum Diurnal Average: 2.17 ppm at hour 13	Hours of Missing Data: 39
Monthly Average: 2.313 ppm	Percentiles: P <sub>1</sub> = 1.92 P <sub>10</sub> = 1.97 Q <sub>1</sub> = 2.10 Median = 2.23 Q <sub>3</sub> = 2.44 P <sub>90</sub> = 2.70 P <sub>99</sub> = 3.57	Hours of Calibration: 36
		Percent Operational Time: 99.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	2.7	A	2.5	2.4	2.4	2.3	2.3	2.6	2.7	2.8	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.5	2.9	2.1	2.3	2.7	2.9	2.39	2.90
2-Oct	A	2.3	2.4	2.5	2.4	2.5	2.6	2.6	2.4	2.3	2.3	2.2	2.2	2.5	2.7	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.31	2.68
3-Oct	2.2	2.7	3.3	2.3	2.6	2.7	2.5	2.3	2.4	2.6	2.5	2.7	2.7	2.8	3.0	2.7	2.4	2.2	2.2	2.2	2.3	2.4	A	2.9	2.55	3.34
4-Oct	2.9	2.4	2.3	2.2	2.6	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.9	2.2	2.1	2.4	2.3	A	2.3	2.2	2.27	2.91
5-Oct	2.3	2.3	2.5	2.3	2.3	2.3	2.5	2.4	2.6	2.5	2.5	2.6	2.2	2.2	2.4	2.3	2.2	2.1	2.1	2.1	A	2.0	2.0	2.0	2.28	2.64
6-Oct	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.2	2.3	2.2	2.3	2.08	2.34
7-Oct	2.3	2.3	2.2	2.3	2.3	2.2	2.1	2.2	2.1	2.4	2.3	2.8	2.3	2.1	2.2	2.1	2.1	2.1	A	2.2	2.4	2.4	2.2	2.3	2.26	2.76
8-Oct	2.2	2.2	2.7	2.4	2.4	2.6	2.4	2.3	2.4	2.3	2.3	2.4	2.1	2.1	2.2	2.2	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.28	2.67
9-Oct	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.17	2.25
10-Oct	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	A	2.3	2.1	3.0	2.2	2.7	2.6	2.6	2.2	2.27	2.97
11-Oct	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	A	2.7	2.1	2.5	3.1	2.8	2.8	2.9	2.3	2.3	2.35	3.09
12-Oct	2.4	2.1	2.1	2.1	2.5	2.2	2.2	2.3	2.5	2.5	2.8	2.7	2.3	A	2.5	2.6	2.4	2.8	2.8	2.5	2.5	2.5	2.8	2.7	2.48	2.85
13-Oct	2.9	2.6	2.7	2.7	2.4	2.4	2.2	2.7	2.5	2.5	2.7	2.4	A	2.2	2.2	2.4	2.4	2.3	2.3	2.4	2.4	2.3	2.2	2.2	2.43	2.90
14-Oct	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.4	A	2.2	2.2	2.2	2.3	2.3	2.3	2.8	2.3	2.3	2.7	2.9	3.0	2.36	3.04
15-Oct	2.4	2.3	2.4	2.3	2.3	2.5	2.4	2.3	2.4	2.6	A	2.5	2.5	2.4	2.4	2.4	2.4	2.5	2.8	3.2	4.5	4.0	3.9	3.3	2.73	4.45
16-Oct	3.7	3.6	3.7	3.6	3.6	A	3.1	3.0	2.4	2.5	2.2	2.2	2.6	3.1	2.4	2.9	2.4	2.2	2.4	2.2	2.2	2.0	2.0	2.1	2.70	3.72
17-Oct	2.1	2.1	2.2	2.2	A	2.5	2.2	2.6	2.1	2.1	2.1	M	M	M	C	C	C	2.7	2.6	2.5	2.4	2.2	2.2	2.3	--	2.67
18-Oct	2.6	2.5	2.5	2.4	2.5	A	2.7	2.7	3.5	2.7	2.7	3.0	2.5	2.3	2.2	2.1	2.3	2.3	2.5	2.8	2.6	2.4	2.3	2.4	2.55	3.54
19-Oct	2.3	2.3	2.4	2.4	A	2.6	2.3	2.2	2.2	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.3	2.3	2.5	2.5	2.4	2.7	2.26	2.65
20-Oct	2.3	2.5	2.5	A	2.6	2.7	2.5	2.3	2.4	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.3	2.7	2.4	2.4	2.6	2.6	2.7	2.6	2.41	2.73
21-Oct	2.2	2.4	A	2.5	2.4	2.4	2.2	2.2	2.3	2.3	2.2	2.2	2.4	2.2	2.4	2.3	2.4	2.5	2.6	2.2	2.3	2.3	2.3	2.3	2.32	2.58
22-Oct	2.4	A	2.5	2.3	2.3	2.4	2.3	2.6	2.6	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.2	2.2	2.3	2.5	2.22	2.57	
23-Oct	A	2.2	2.1	2.1	2.1	2.2	2.3	3.1	2.4	2.9	2.1	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	A	2.13	3.06
24-Oct	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.1	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	1.97	2.12
25-Oct	3.0	2.6	3.2	2.7	2.7	2.7	2.8	2.7	2.8	2.9	2.7	2.4	2.0	2.1	2.1	2.3	2.1	2.2	2.4	2.1	2.0	A	2.9	2.6	2.52	3.24
26-Oct	3.4	3.0	3.5	3.8	3.0	3.4	3.2	2.6	2.4	2.3	2.7	2.7	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.49	3.78
27-Oct	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.0	1.97	2.07
28-Oct	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.6	2.5	2.4	2.11	2.64
29-Oct	2.7	3.1	2.3	2.2	2.3	2.2	2.2	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.7	A	2.4	3.0	2.2	2.3	2.2	2.2	2.2	2.28	3.10
30-Oct	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.5	2.3	2.2	2.1	2.1	2.1	2.1	2.0	A	2.1	2.1	2.6	2.0	2.3	2.4	2.1	2.17	2.62
31-Oct	2.1	2.0	2.6	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.0	2.0	1.9	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	2.1	2.1	2.2	2.09	2.60
	2.41	2.36	2.44	2.35	2.37	2.34	2.34	2.36	2.36	2.34	2.28	2.27	2.17	2.17	2.17	2.23	2.20	2.20	2.33	2.35	2.35	2.35	2.37	2.39		Diurnal Average
	3.71	3.62	3.72	3.78	3.58	3.40	3.17	3.06	3.54	2.88	2.85	2.97	2.70	3.11	2.99	2.89	2.86	2.77	3.09	3.23	4.45	4.02	3.88	3.26		Diurnal Maximum

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

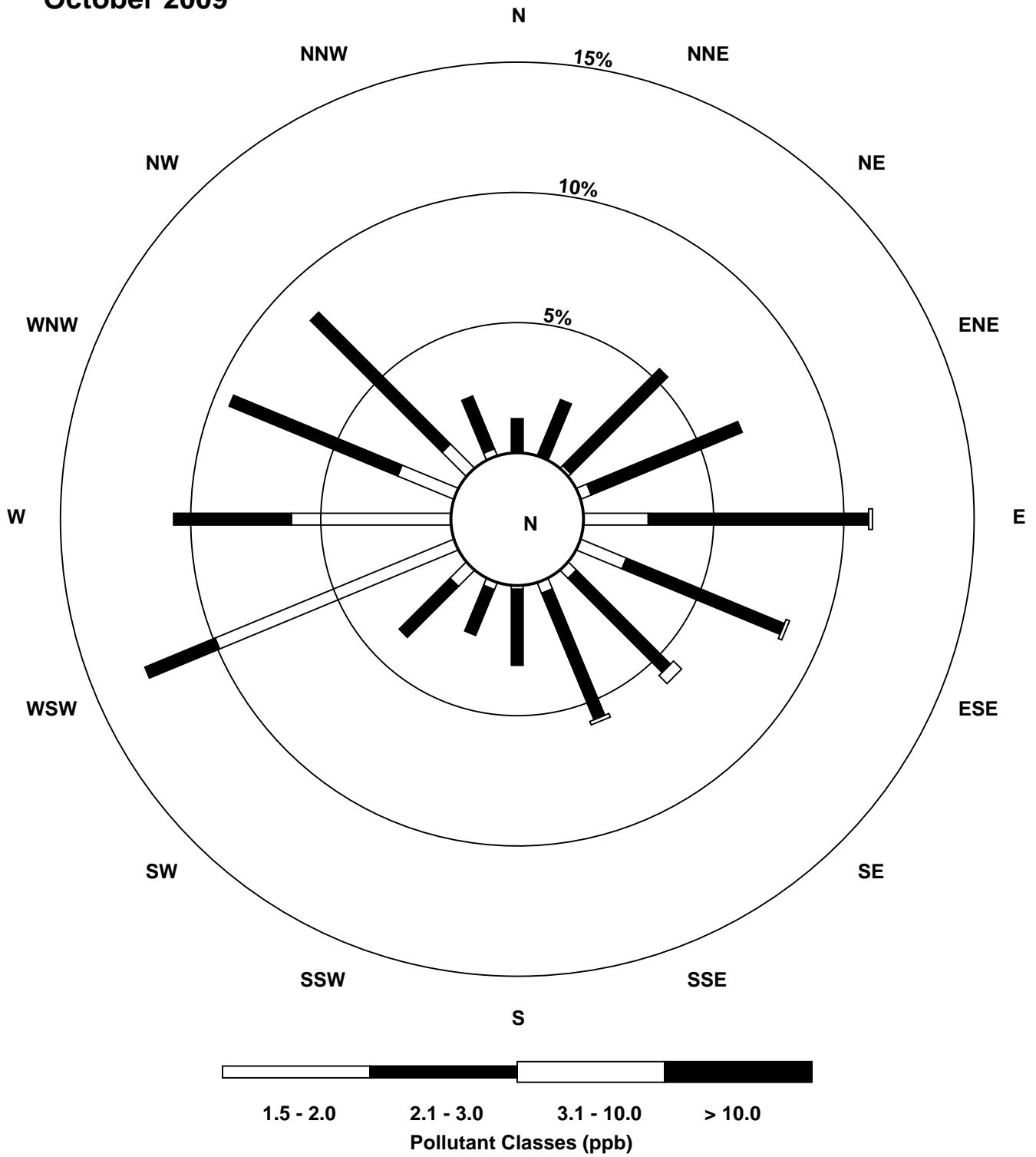
# Hourly Maximums for THC at Henry Pirker

## October 2009



# Pollutant Rose for THC at Henry Pirker

## October 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>  
October 1, 2009 to November 1, 2009**

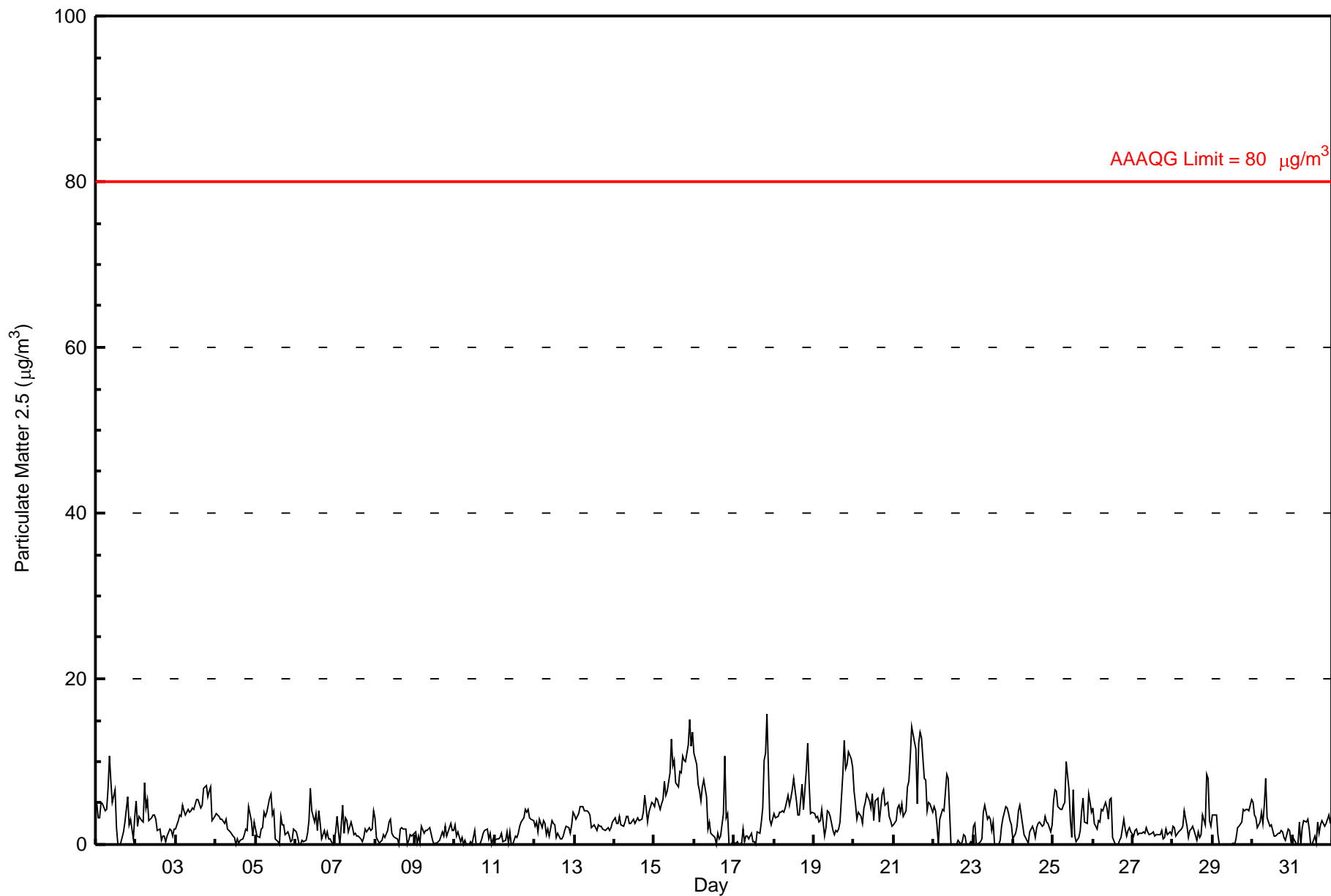
Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 15.8 µg/m <sup>3</sup> on Oct 17 21:00	Maximum Daily Average: 8.6 µg/m <sup>3</sup> on Oct 15
Minimum Value: 0 µg/m <sup>3</sup> on Oct 1 15:00	Hours of Data: 744
Minimum Daily Average: 0.8 µg/m <sup>3</sup> on Oct 10	Hours of Missing Data: 0
Maximum Diurnal Average: 4.1 µg/m <sup>3</sup> at hour 19	Hours of Calibration: 0
Monthly Average: 2.95 µg/m <sup>3</sup>	Percent Operational Time: 100.0
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 1.1 Median = 2.4 Q <sub>3</sub> = 4.0 P <sub>90</sub> = 6.1 P <sub>99</sub> = 12.4	

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-Oct	5	3	3	5	5	4	4	7	11	8	5	7	2	0	0	0	1	3	4	6	2	3	1	3	3.9	10.7
2-Oct	5	2	3	3	3	7	4	5	3	3	4	3	3	2	2	1	1	1	0	1	2	2	1	2	2.7	7.5
3-Oct	2	3	3	3	5	4	4	4	4	4	4	4	5	5	5	4	5	7	7	6	6	7	3	3	4.5	7.2
4-Oct	4	3	3	3	3	3	3	2	2	2	1	1	0	1	0	0	1	1	2	2	5	3	1	3	2.0	4.6
5-Oct	2	1	1	2	2	4	3	4	6	6	4	4	1	0	0	3	2	2	1	2	1	0	1	2	2.2	6.2
6-Oct	2	1	0	0	0	0	1	1	3	7	4	3	4	2	4	2	1	2	1	2	1	1	0	1	1.7	6.7
7-Oct	1	3	2	0	5	1	3	3	2	3	2	1	1	1	1	1	0	1	2	2	2	2	2	4	1.9	4.7
8-Oct	3	1	0	0	1	1	1	2	3	3	1	1	1	1	0	2	2	2	2	0	0	1	1	1	1.3	3.2
9-Oct	1	0	1	0	2	1	2	2	2	2	1	0	0	0	0	1	1	1	2	1	1	3	2	2	1.2	2.6
10-Oct	2	1	2	0	1	0	1	0	0	0	0	1	2	0	0	0	1	1	2	2	1	1	0	1	0.8	2.3
11-Oct	1	1	1	1	1	0	1	1	0	2	0	0	1	1	1	2	3	3	4	4	4	3	3	3	1.7	4.2
12-Oct	2	3	1	3	2	3	3	1	2	1	3	2	2	1	1	1	1	1	2	2	2	1	2	4	2.0	3.9
13-Oct	4	3	4	5	5	5	4	4	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2.9	4.7
14-Oct	3	2	3	3	2	2	3	3	3	3	2	3	3	3	3	3	3	4	6	4	3	4	5	5	3.3	6.0
15-Oct	5	6	5	4	5	5	8	6	7	9	13	10	10	7	7	9	9	11	10	10	12	15	12	14	8.6	15.1
16-Oct	11	10	7	6	5	7	8	6	2	3	1	1	1	0	1	1	1	4	11	3	4	0	0	0	3.9	11.1
17-Oct	0	0	0	0	0	2	0	1	1	1	1	0	0	0	2	1	3	4	10	11	16	3	2	3	2.6	15.8
18-Oct	4	3	3	4	4	4	4	4	6	5	6	7	8	5	3	4	5	7	4	9	12	7	4	4	5.3	12.3
19-Oct	4	3	3	3	3	4	1	2	4	4	3	2	1	2	2	2	3	8	13	9	10	11	10	9	4.8	12.5
20-Oct	6	5	3	4	3	3	4	5	6	5	4	6	3	5	6	3	4	6	7	5	5	3	3	2	4.5	6.6
21-Oct	2	3	4	5	4	5	3	4	7	8	10	14	12	11	5	12	14	13	8	8	4	5	5	4	7.1	14.3
22-Oct	5	4	2	0	3	4	4	6	8	8	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2.0	8.5
23-Oct	2	3	0	0	0	1	4	5	3	3	3	2	3	0	0	0	0	2	3	5	4	4	3	2	2.2	4.7
24-Oct	1	1	2	4	5	3	1	1	1	0	1	2	2	1	2	3	3	2	2	3	3	3	2	2	2.1	4.8
25-Oct	5	7	6	5	4	4	5	5	10	7	3	1	7	1	0	1	2	4	6	3	2	6	5	4	4.3	10.1
26-Oct	4	3	2	3	3	4	4	5	4	3	5	6	1	0	0	0	1	1	3	2	1	2	2	1	2.5	5.6
27-Oct	1	2	2	1	1	1	2	1	2	2	1	1	1	1	1	1	1	2	1	1	2	1	2	1	1.4	2.0
28-Oct	2	2	1	2	2	2	2	4	2	1	2	2	2	2	0	2	1	1	4	2	9	8	3	2	2.4	8.5
29-Oct	4	4	4	1	0	0	0	0	0	0	0	0	0	0	1	2	2	3	4	4	4	4	4	5	1.9	5.4
30-Oct	5	4	3	2	3	4	3	5	8	3	2	2	2	1	1	1	1	2	2	1	1	2	2	0	2.4	7.9
31-Oct	0	1	0	0	3	0	2	3	3	3	2	0	0	1	0	3	1	2	3	2	3	3	4	2	1.7	3.6

3.2	2.8	2.5	2.3	2.7	2.9	2.9	3.3	3.8	3.5	3.0	2.8	2.6	1.8	1.7	2.2	2.4	3.4	4.1	3.6	4.0	3.6	2.8	3.0	Diurnal Average	
11.1	9.6	7.3	6.5	5.2	7.5	7.8	6.8	10.7	8.6	12.6	14.3	12.4	11.5	7.0	12.1	13.5	12.9	12.5	11.0	15.8	15.1	11.8	13.6	Diurnal Maximum	

Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m<sup>3</sup> Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m<sup>3</sup>

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



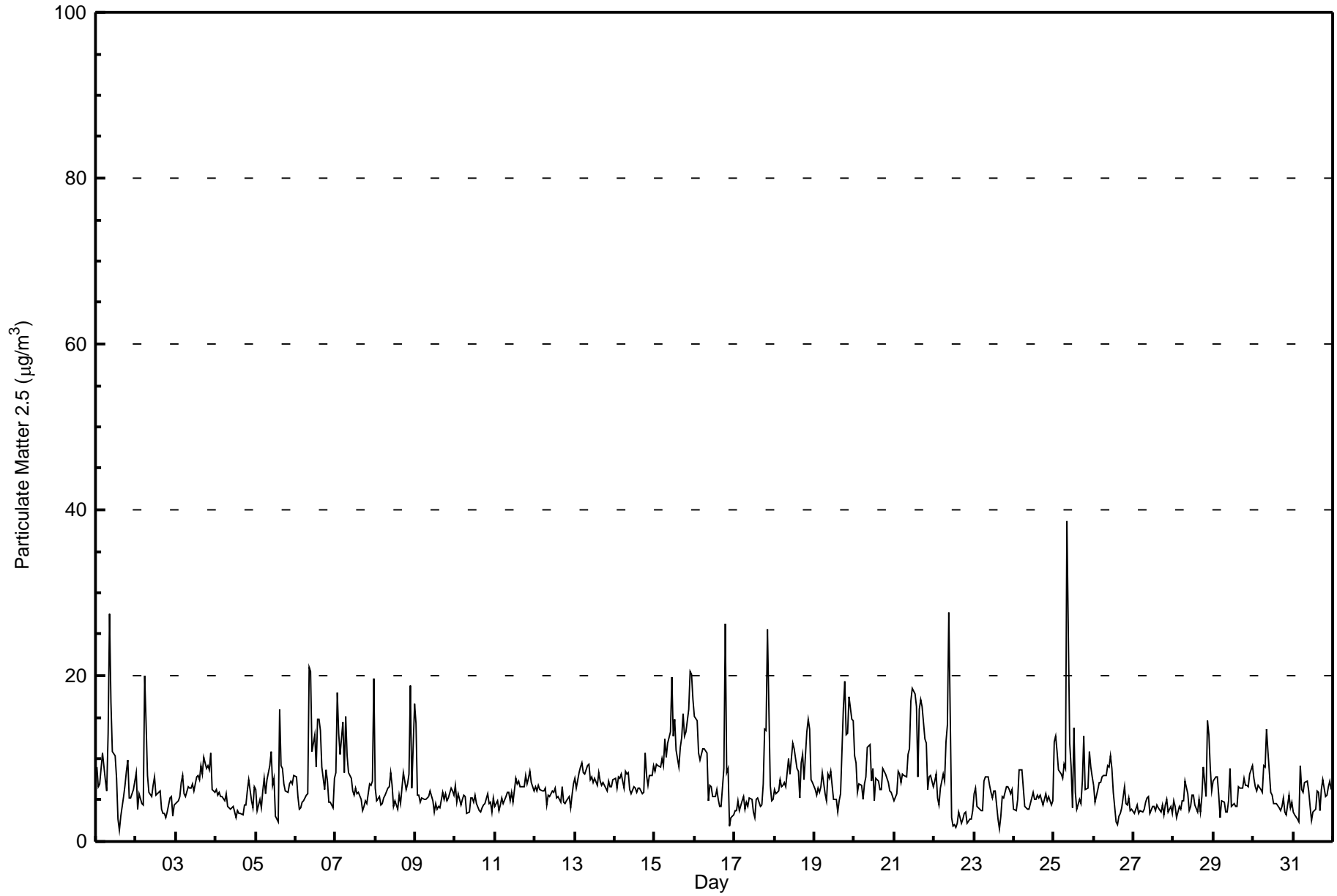
**Peace Airshed Zone Association  
Summary of Hourly Maximums**

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

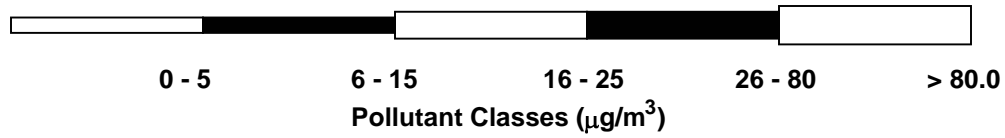
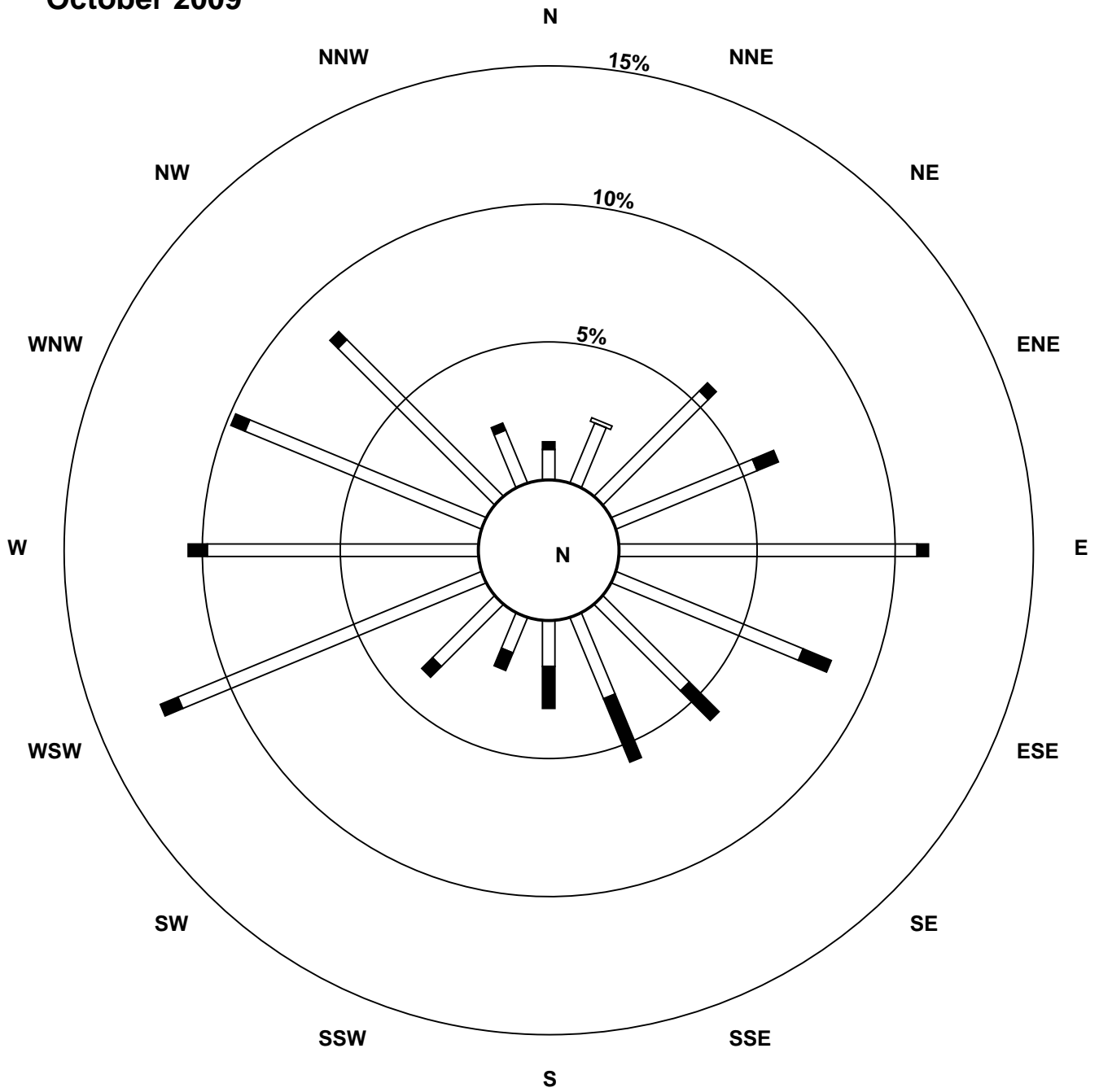
Maximum Value: 38.6 µg/m <sup>3</sup> on Oct 25 09:00		Maximum Daily Average: 12.9 µg/m <sup>3</sup> on Oct 15		Hours in Service: 744																							
Minimum Value: 1 µg/m <sup>3</sup> on Oct 1 15:00		Minimum Daily Average: 4.1 µg/m <sup>3</sup> on Oct 27		Hours of Data: 744																							
Maximum Diurnal Average: 9.6 µg/m <sup>3</sup> at hour 9		Minimum Diurnal Average: 5.8 µg/m <sup>3</sup> at hour 16		Hours of Missing Data: 0																							
Monthly Average: 7.03 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 2.2 P <sub>10</sub> = 3.7 Q <sub>1</sub> = 4.8 Median = 6.2 Q <sub>3</sub> = 8.1 P <sub>90</sub> = 11.0 P <sub>99</sub> = 20.1		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-Oct	9	7	7	9	11	8	6	13	28	17	11	10	8	3	1	3	5	7	8	10	5	5	6	7	8.5	27.5	
2-Oct	8	4	6	5	4	20	14	8	6	5	7	8	6	6	6	4	3	3	3	4	5	5	3	4	6.2	20.0	
3-Oct	5	5	5	7	8	6	5	7	7	6	7	6	8	8	7	9	8	10	9	9	9	11	6	6	7.2	10.6	
4-Oct	6	6	6	5	5	5	6	4	4	4	4	4	3	4	3	3	3	4	4	6	8	5	4	7	4.7	7.5	
5-Oct	6	4	5	4	6	8	6	7	9	11	7	8	3	2	16	9	9	7	6	6	7	7	7	8	7.0	15.9	
6-Oct	8	5	4	4	5	5	6	6	21	21	11	13	9	15	15	13	9	6	9	7	5	5	4	8	8.8	21.0	
7-Oct	8	18	13	10	14	8	15	10	8	8	6	6	7	6	6	5	4	4	5	5	7	7	7	20	8.6	19.7	
8-Oct	6	5	5	4	4	5	6	6	7	8	7	4	5	4	6	5	7	8	6	7	8	19	6	17	6.9	18.7	
9-Oct	14	6	6	5	5	5	5	5	5	6	5	4	5	4	4	4	6	5	6	5	5	6	6	6	5.5	14.2	
10-Oct	7	5	6	4	5	6	5	3	4	5	5	5	6	5	4	4	4	4	5	6	5	5	4	5	4.8	6.8	
11-Oct	4	5	4	4	5	5	5	6	6	5	6	5	8	7	7	7	7	8	7	8	8	8	7	6	6.1	8.4	
12-Oct	7	6	7	6	6	6	7	4	6	5	6	6	5	5	5	5	7	5	5	5	5	4	6	7	5.7	7.0	
13-Oct	8	7	8	9	9	8	8	9	9	8	8	7	8	7	8	7	7	7	6	6	7	7	7	8	7.6	9.4	
14-Oct	8	6	8	8	8	6	9	8	8	6	6	7	6	6	7	6	6	6	11	8	7	8	8	9	7.3	10.6	
15-Oct	8	9	9	9	10	9	12	10	12	13	20	13	15	11	9	11	13	15	13	13	16	20	20	17	12.9	20.4	
16-Oct	15	15	11	10	10	11	11	11	5	7	7	5	5	6	5	4	4	9	26	8	9	2	3	3	8.5	26.3	
17-Oct	4	4	5	4	5	5	4	5	4	5	5	4	3	5	5	4	4	7	14	13	26	7	5	5	6.3	25.6	
18-Oct	6	6	6	7	7	7	7	7	10	8	10	12	11	9	8	5	9	10	7	13	15	14	7	7	8.7	14.8	
19-Oct	6	6	6	6	7	8	6	5	8	8	8	5	5	5	4	5	6	16	19	13	13	17	15	15	8.8	19.2	
20-Oct	10	9	6	7	7	5	7	8	11	12	7	9	5	8	7	6	6	9	8	8	7	6	6	5	7.5	11.7	
21-Oct	5	6	9	8	7	8	8	8	10	11	17	18	18	16	8	16	17	16	12	12	6	8	8	7	10.8	18.4	
22-Oct	7	8	5	4	7	8	7	12	14	28	3	2	2	2	2	3	2	3	3	4	2	3	3	4	5.8	27.7	
23-Oct	6	6	4	4	4	4	7	8	8	7	6	5	6	6	3	2	3	5	5	7	7	6	6	6	5.4	7.9	
24-Oct	4	4	5	9	9	9	4	4	4	4	5	6	5	5	6	5	6	4	5	6	5	5	4	5	5.3	8.7	
25-Oct	12	13	11	9	8	8	9	9	39	12	9	4	14	6	4	5	5	7	13	6	6	11	9	8	9.8	38.6	
26-Oct	7	5	6	7	7	8	8	8	9	9	10	9	6	2	2	3	3	4	7	5	4	5	4	4	5.9	10.4	
27-Oct	3	4	4	3	4	4	4	5	5	5	3	4	4	4	4	4	4	4	3	4	5	4	4	3	4.1	5.3	
28-Oct	5	4	3	4	4	5	5	7	6	4	4	6	6	4	4	5	4	5	9	5	15	13	9	6	5.9	14.6	
29-Oct	7	8	8	6	3	5	5	4	4	5	9	4	5	4	4	7	6	6	8	7	7	7	8	9	6.0	9.1	
30-Oct	8	7	6	7	6	6	9	9	14	11	6	6	5	5	5	4	4	4	5	4	3	6	4	5	6.1	13.6	
31-Oct	3	3	3	2	9	6	6	7	7	6	4	3	4	4	6	6	4	6	7	5	6	7	7	6	5.3	9.1	
		7.1	6.5	6.3	6.2	6.8	7.0	7.2	7.2	9.6	8.7	7.4	6.6	6.5	5.9	5.9	5.8	5.9	7.0	8.3	7.2	7.8	7.8	6.6	7.5	Diurnal Average	
		15.1	18.0	13.1	10.5	14.3	20.0	15.0	13.0	38.6	27.7	19.8	18.4	17.7	16.3	15.9	15.9	17.0	16.2	26.3	13.4	25.6	20.4	20.2	19.7	Diurnal Maximum	



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



**Pollutant Rose for PM<sub>2.5</sub> at Henry Pirker  
October 2009**

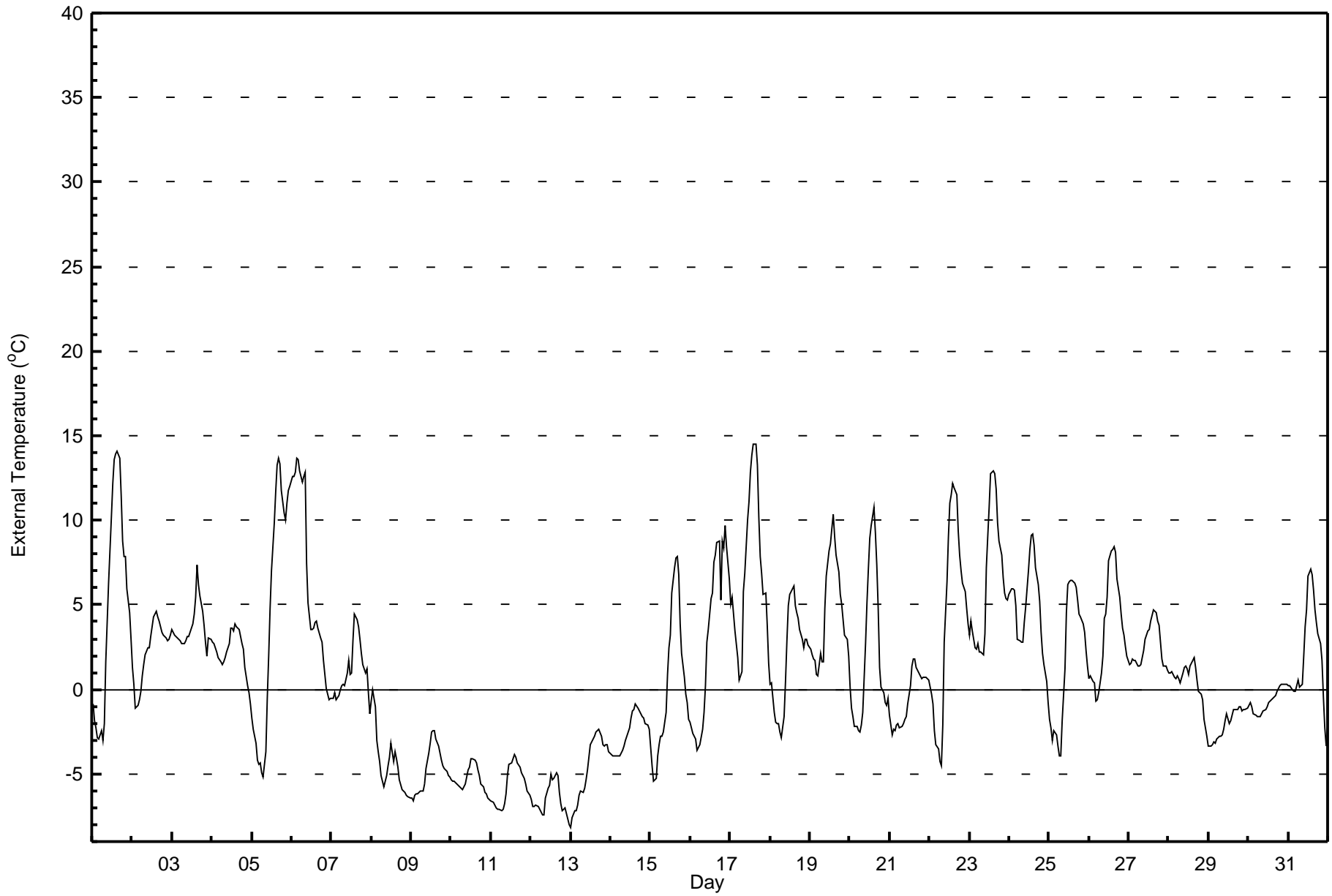


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Henry Pirker - External Temperature (ET) - °C  
October 1, 2009 to November 1, 2009**

Maximum Value: 14.5 °C on Oct 17 15:00		Maximum Daily Average: 6.9 °C on Oct 17		Hours in Service: 744																							
Minimum Value: -8 °C on Oct 13 01:00		Minimum Daily Average: -6.5 °C on Oct 12		Hours of Data: 744																							
Maximum Diurnal Average: 4.6 °C at hour 15		Minimum Diurnal Average: -1.5 °C at hour 7		Hours of Missing Data: 0																							
Monthly Average: 1.07 °C		Percentiles: P <sub>1</sub> = -7.3 P <sub>10</sub> = -5.3 Q <sub>1</sub> = -2.7 Median = 0.8 Q <sub>3</sub> = 3.9 P <sub>90</sub> = 8.0 P <sub>99</sub> = 13.7		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-Oct	-1	-2	-2	-3	-3	-2	-3	-2	2	4	6	10	12	14	14	14	14	11	9	8	8	6	5	3	5.0	14.1	
2-Oct	1	0	-1	-1	-1	0	1	1	2	2	2	3	4	4	5	4	4	4	3	3	3	3	3	3	2.3	4.6	
3-Oct	4	3	3	3	3	3	3	3	3	3	3	3	4	4	5	7	6	6	5	4	3	2	3	3	3.7	7.4	
4-Oct	3	3	2	2	2	2	1	2	2	2	3	4	4	3	4	4	4	3	3	2	1	0	0	-1	2.3	3.9	
5-Oct	-2	-2	-3	-4	-4	-4	-5	-5	-4	-1	2	5	7	10	12	13	14	13	12	10	10	11	12	12	4.5	13.7	
6-Oct	13	13	13	14	14	13	12	13	13	7	5	4	4	4	4	4	4	3	3	2	1	0	-1	0	6.6	13.7	
7-Oct	-1	-1	0	-1	0	0	0	0	0	1	2	1	1	3	4	4	4	3	2	1	1	1	0	-1	1.1	4.5	
8-Oct	-1	0	-1	-3	-4	-4	-5	-6	-5	-5	-5	-4	-3	-4	-4	-4	-5	-5	-6	-6	-6	-6	-6	-6	-4.4	-0.1	
9-Oct	-6	-7	-6	-6	-6	-6	-6	-6	-6	-5	-4	-3	-3	-2	-2	-3	-3	-4	-4	-4	-5	-5	-5	-5	-4.7	-2.5	
10-Oct	-5	-5	-5	-6	-6	-6	-6	-6	-6	-5	-5	-5	-4	-4	-4	-4	-5	-5	-6	-6	-6	-6	-6	-6	-5.3	-4.1	
11-Oct	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-5	-4	-4	-4	-4	-4	-4	-5	-5	-5	-5	-6	-6	-6	-5.7	-3.9	
12-Oct	-6	-7	-7	-7	-7	-7	-7	-7	-7	-6	-6	-6	-5	-5	-5	-5	-5	-6	-7	-7	-7	-7	-8	-8	-6.5	-4.9	
13-Oct	-8	-8	-7	-7	-7	-6	-6	-6	-6	-5	-5	-4	-3	-3	-3	-2	-2	-2	-3	-3	-3	-3	-4	-4	-4.6	-2.4	
14-Oct	-4	-4	-4	-4	-4	-4	-4	-4	-3	-3	-3	-2	-2	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-2	-2.5	-0.8	
15-Oct	-3	-5	-5	-5	-4	-3	-3	-3	-2	-1	1	2	3	6	7	8	8	7	4	2	1	0	-1	-2	0.4	7.9	
16-Oct	-2	-3	-3	-3	-4	-3	-3	-2	-1	0	3	4	5	6	8	8	9	9	5	9	8	10	8	7	3.1	9.7	
17-Oct	5	5	4	3	2	1	1	1	6	7	10	11	13	14	14	14	13	10	8	7	6	6	4	2	6.9	14.5	
18-Oct	0	0	-1	-2	-2	-2	-3	-3	-2	0	3	5	6	6	6	5	5	4	4	3	2	3	3	3	1.8	6.2	
19-Oct	2	2	2	2	1	1	2	2	2	5	7	8	9	10	10	9	8	7	6	5	4	3	3	2	4.6	10.3	
20-Oct	0	-1	-2	-2	-2	-2	-2	-2	-1	3	5	7	9	10	11	9	7	5	1	0	0	-1	-1	-1	2.1	10.8	
21-Oct	-2	-3	-2	-2	-2	-2	-2	-2	-2	-2	-2	-1	0	1	2	2	1	1	1	1	1	1	1	1	-0.5	1.8	
22-Oct	0	0	-1	-2	-3	-4	-4	-4	-2	3	6	9	11	12	12	12	12	9	8	7	6	6	5	4	4.2	12.2	
23-Oct	3	4	3	2	2	3	2	2	2	3	7	9	11	13	13	13	12	10	9	8	7	6	5	5	6.5	13.0	
24-Oct	6	6	6	6	5	3	3	3	3	4	5	7	8	9	9	8	7	6	5	3	2	1	0	-1	4.8	9.2	
25-Oct	-2	-2	-3	-2	-3	-3	-4	-4	-2	1	5	6	6	6	6	6	6	5	4	4	4	3	2	1	1.8	6.5	
26-Oct	1	1	0	0	-1	-1	0	1	2	4	4	5	8	8	8	8	8	7	5	4	4	3	3	2	3.6	8.5	
27-Oct	1	2	2	2	2	1	1	1	2	2	3	3	4	4	4	5	5	4	4	3	2	1	1	1	2.5	4.7	
28-Oct	1	1	1	1	1	1	1	0	1	1	1	1	1	1	2	2	1	1	0	0	-1	-2	-2	-3	0.5	1.9	
29-Oct	-3	-3	-3	-3	-3	-3	-3	-3	-3	-2	-2	-1	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-2.0	-1.0	
30-Oct	-1	-1	-1	-1	-2	-2	-2	-2	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0	-0.7	0.3	
31-Oct	0	0	0	0	0	0	1	0	0	2	4	5	7	7	7	6	5	4	3	3	2	0	-2	-3	2.0	7.1	
		-0.4	-0.6	-0.9	-1.2	-1.4	-1.5	-1.5	-1.4	-0.7	0.4	1.7	2.6	3.5	4.1	4.6	4.6	4.1	3.3	2.3	1.8	1.3	0.9	0.4	-0.1	Diurnal Average	
		12.6	12.6	12.9	13.7	13.6	12.9	12.3	12.6	12.8	7.4	10.0	11.1	12.9	13.8	14.5	14.5	13.7	13.3	11.7	10.5	10.0	11.0	11.8	12.1	Diurnal Maximum	

# Hourly Averages for External Temperature at Henry Pirker October 2009



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

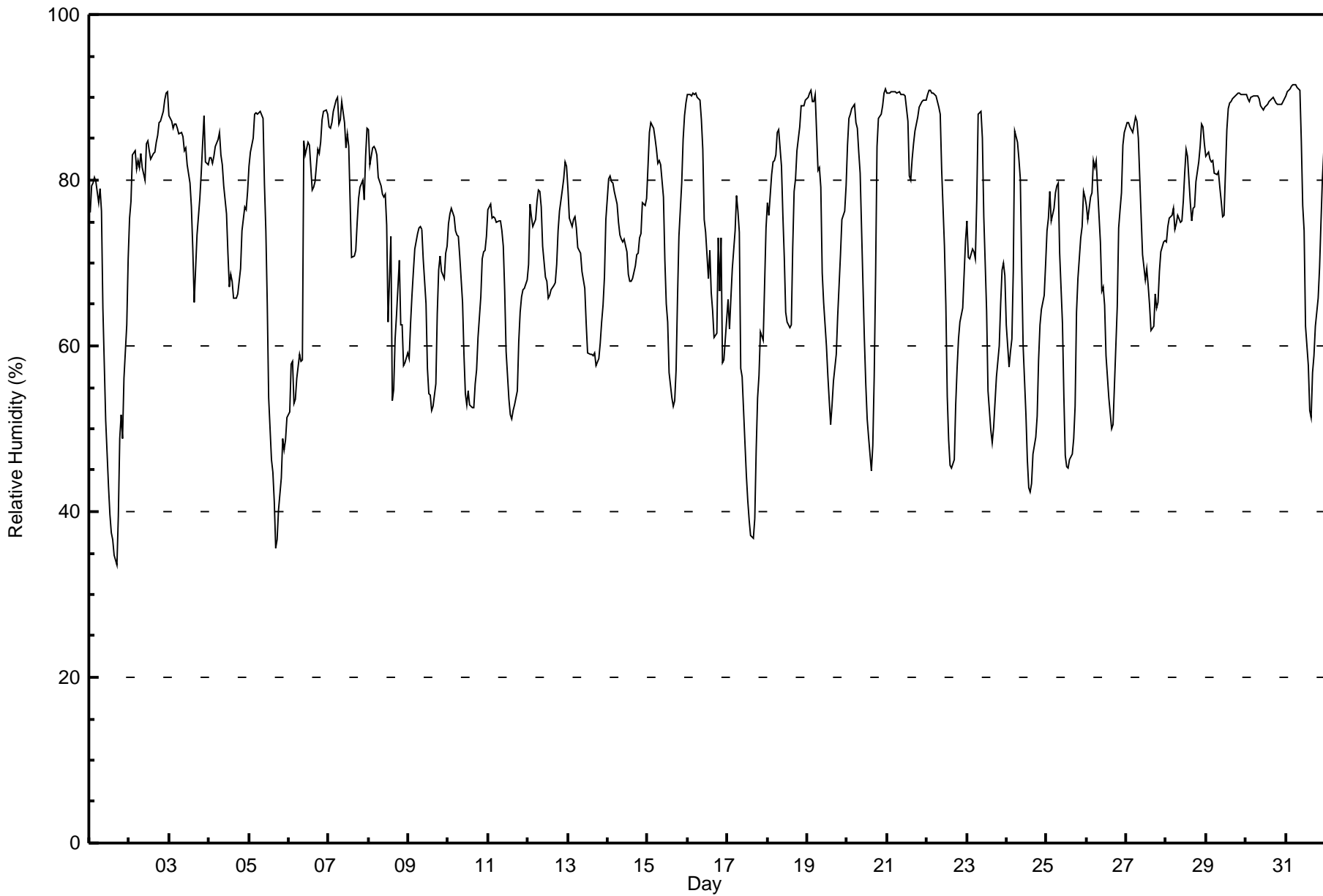
**Henry Pirker - Relative Humidity (RH) - %  
October 1, 2009 to November 1, 2009**

Maximum Value: 91.6 % on Oct 31 07:00	Maximum Daily Average: 89.6 % on Oct 30	Hours in Service: 744
Minimum Value: 34 % on Oct 1 17:00	Minimum Daily Average: 57.8 % on Oct 17	Hours of Data: 744
Maximum Diurnal Average: 81.7 % at hour 6	Minimum Diurnal Average: 59.9 % at hour 16	Hours of Missing Data: 0
Monthly Average: 73.08 %	Percentiles: P <sub>1</sub> = 37.4 P <sub>10</sub> = 52.9 Q <sub>1</sub> = 64.3 Median = 75.4 Q <sub>3</sub> = 84.1 P <sub>90</sub> = 89.5 P <sub>99</sub> = 90.9	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-Oct	76	79	80	80	80	77	79	76	64	58	51	43	40	37	37	35	34	40	49	52	49	56	63	71	58.5	80.4	
2-Oct	75	77	83	84	81	82	82	83	82	80	84	85	84	83	83	83	85	85	87	87	88	90	91	91	84.0	90.6	
3-Oct	88	87	86	87	87	86	86	86	85	84	84	82	80	77	72	65	69	73	78	81	84	88	82	82	81.6	87.9	
4-Oct	83	83	82	83	84	85	86	83	82	79	76	71	67	69	68	66	66	66	68	69	74	77	77	79	75.8	85.8	
5-Oct	82	83	85	88	88	88	88	88	88	79	74	65	54	46	45	41	36	37	40	44	49	47	49	51	64.0	88.3	
6-Oct	52	58	58	53	54	56	59	58	58	85	83	85	84	82	79	79	80	84	83	85	87	88	89	88	73.6	88.5	
7-Oct	86	86	87	88	90	90	87	87	90	87	84	86	84	77	71	71	72	75	78	79	80	78	83	86	82.5	90.0	
8-Oct	86	82	84	84	84	83	80	79	78	78	78	75	63	73	53	55	61	64	70	63	62	58	58	59	71.3	86.1	
9-Oct	58	63	66	69	72	74	74	74	74	71	65	57	54	54	52	53	55	64	69	71	69	68	71	72	65.4	74.4	
10-Oct	75	76	77	76	74	73	73	71	65	59	54	53	55	53	53	53	55	57	61	66	71	71	72	73	65.2	76.6	
11-Oct	77	77	75	76	75	75	75	75	74	72	67	59	54	52	51	52	53	55	60	64	66	67	67	68	66.1	77.1	
12-Oct	70	77	76	74	75	77	79	79	77	72	68	68	66	66	67	67	68	70	74	76	79	80	82	82	73.7	82.3	
13-Oct	79	75	74	75	76	74	72	71	69	68	67	63	59	59	59	59	59	58	58	60	63	65	68	75	66.9	78.9	
14-Oct	80	81	80	80	79	77	75	73	73	73	73	71	69	68	68	68	70	71	71	73	74	77	77	78	74.0	80.6	
15-Oct	82	86	87	86	85	84	82	82	82	78	70	65	63	57	54	53	53	57	66	73	80	85	88	89	74.4	89.3	
16-Oct	90	90	90	90	90	91	90	90	87	84	75	74	68	72	66	64	61	61	73	67	73	58	58	63	76.1	90.5	
17-Oct	66	62	66	69	74	78	76	74	57	56	48	44	41	39	37	37	39	48	54	56	62	61	67	74	57.8	78.1	
18-Oct	77	76	81	82	82	83	86	86	82	76	71	64	63	62	63	72	79	80	83	86	89	89	89	90	78.8	89.7	
19-Oct	90	90	91	90	90	90	81	81	79	69	65	60	56	53	50	53	56	59	64	67	71	75	76	79	72.4	90.9	
20-Oct	84	87	88	89	89	87	86	83	81	67	61	55	51	49	45	48	56	69	84	87	88	89	90	91	75.3	91.1	
21-Oct	91	90	91	91	91	91	91	91	90	90	90	87	80	80	83	84	86	88	89	89	89	90	90	90	90	88.4	90.7
22-Oct	90	91	91	91	90	90	90	89	88	81	72	65	54	49	46	45	46	53	57	61	63	65	69	73	71.1	90.9	
23-Oct	75	71	71	72	71	70	78	88	88	85	76	70	64	55	50	48	50	53	56	60	65	69	70	69	67.6	88.2	
24-Oct	62	57	59	61	69	86	85	83	80	69	60	52	46	43	42	43	47	49	52	58	63	64	66	70	61.1	85.9	
25-Oct	74	75	79	75	77	78	79	80	71	63	54	47	45	45	46	47	49	53	64	68	73	74	79	78	65.6	79.7	
26-Oct	77	75	78	79	82	82	82	76	73	67	67	65	59	54	52	50	51	55	65	74	76	79	84	86	70.2	85.8	
27-Oct	87	87	86	86	86	88	87	85	80	76	71	68	69	67	65	62	62	66	65	65	69	71	73	73	74.8	87.6	
28-Oct	73	74	75	76	77	74	75	76	75	75	77	81	84	83	77	75	77	77	80	82	84	87	87	84	78.5	86.8	
29-Oct	83	83	83	82	82	81	81	81	79	77	76	76	86	89	89	89	90	90	90	90	90	90	90	90	85.0	90.4	
30-Oct	90	90	89	90	90	90	90	90	90	89	88	89	89	89	89	90	90	90	89	89	89	89	89	90	89.6	90.3	
31-Oct	90	91	91	91	91	92	92	91	91	85	77	74	62	58	52	51	57	59	62	66	69	75	80	84	76.3	91.6	
	79.0	79.4	80.3	80.5	81.1	81.7	81.4	81.0	78.5	75.2	71.2	67.8	64.5	62.5	60.0	59.9	61.6	64.6	69.0	71.3	73.8	74.8	76.5	78.3	Diurnal Average		
	90.6	90.8	91.0	91.3	91.5	91.6	91.6	91.1	90.8	90.4	90.4	90.1	88.9	89.2	89.5	89.9	90.0	90.2	90.3	90.4	90.4	90.4	90.5	91.1	Diurnal Maximum		

# Hourly Averages for Relative Humidity at Henry Pirker

## October 2009



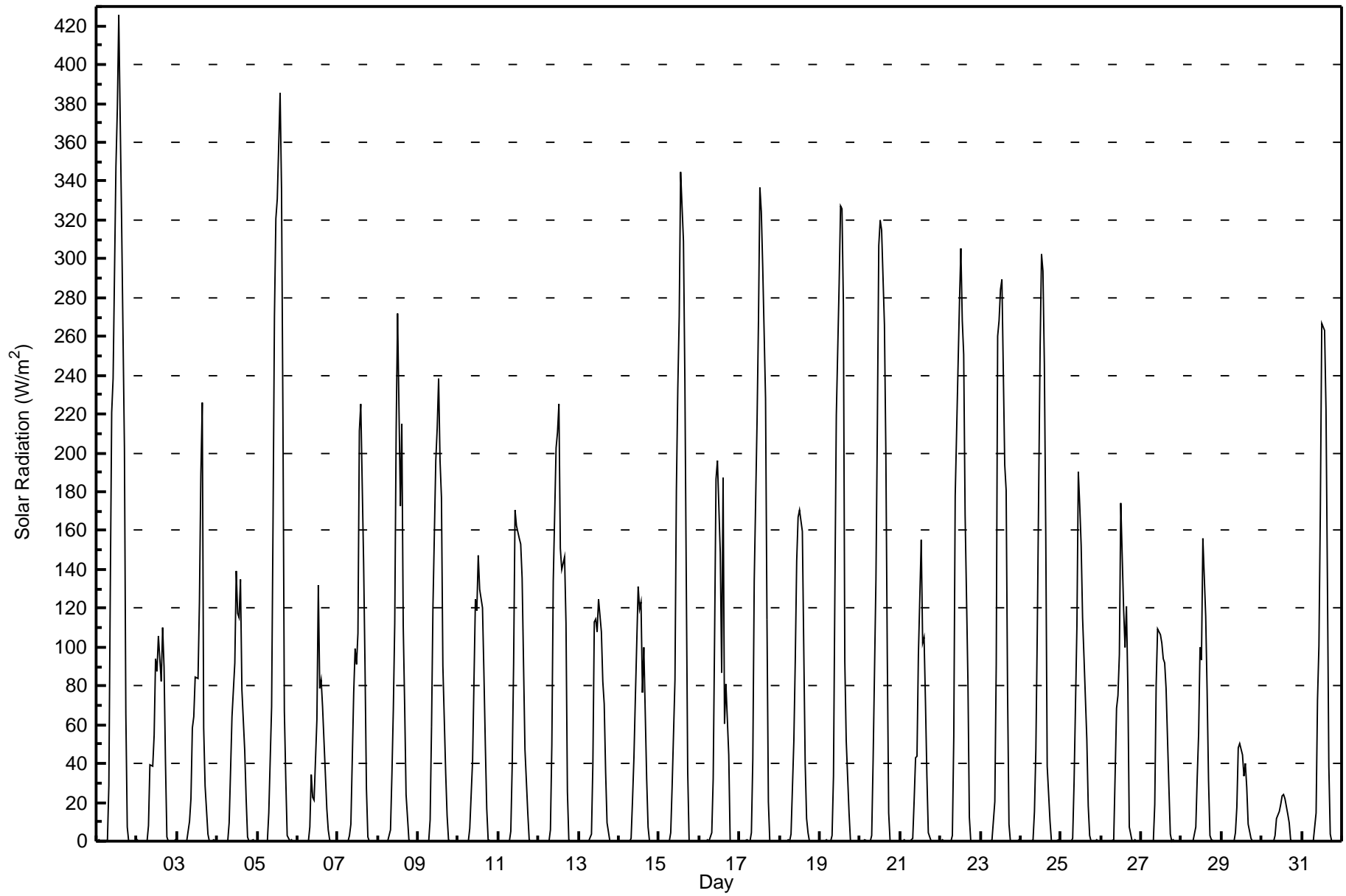
**Peace Airshed Zone Association**  
**Summary of Hourly Averages**

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

Maximum Value: 425.7 W/m <sup>2</sup> on Oct 1 14:00		Maximum Daily Average: 114.0 W/m <sup>2</sup> on Oct 1		Hours in Service: 744																						
Minimum Value: 0 W/m <sup>2</sup> on Oct 1 01:00		Minimum Daily Average: 5.9 W/m <sup>2</sup> on Oct 30		Hours of Data: 744																						
Maximum Diurnal Average: 193.4 W/m <sup>2</sup> at hour 13		Minimum Diurnal Average: 0.0 W/m <sup>2</sup> at hour 7		Hours of Missing Data: 0																						
Monthly Average: 49.67 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 = 0.2 Q <sub>3</sub> = 77.6 P <sub>90</sub> = 175.0 P <sub>99</sub> = 329.2		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-Oct	0	1	0	0	0	0	0	29	129	221	238	347	377	426	373	320	203	66	7	0	0	0	0	0	114.0	425.7
2-Oct	1	0	0	0	0	0	0	8	39	38	54	94	87	106	82	110	90	41	2	0	0	0	0	1	31.4	109.8
3-Oct	0	0	0	0	0	0	0	10	22	58	64	84	84	123	189	226	58	28	3	0	0	0	1	0	39.6	225.9
4-Oct	0	0	0	0	0	0	0	10	37	64	92	139	117	115	135	78	47	22	2	0	0	1	0	0	35.7	139.1
5-Oct	0	0	0	0	0	0	0	15	69	164	271	321	331	386	336	218	67	32	3	0	1	0	0	0	92.2	385.8
6-Oct	0	0	0	0	0	0	0	7	34	22	21	63	132	79	83	69	52	17	6	1	0	0	0	0	24.4	132.0
7-Oct	0	0	0	0	0	0	0	3	9	77	99	91	107	211	225	143	90	27	2	0	0	0	0	0	45.2	225.2
8-Oct	0	0	0	0	0	0	0	6	34	68	113	212	271	173	215	111	70	24	1	0	0	0	0	0	54.0	271.5
9-Oct	0	0	0	0	0	0	0	11	59	121	196	213	238	196	177	90	35	13	1	0	0	0	0	0	56.2	238.3
10-Oct	0	0	0	0	0	0	0	6	42	83	124	119	147	129	120	87	49	17	1	0	0	0	0	0	38.5	147.0
11-Oct	0	0	0	0	0	0	0	5	40	92	171	162	156	153	135	91	48	15	1	0	0	0	0	0	44.5	170.6
12-Oct	0	0	0	0	0	0	0	6	49	134	203	211	225	151	140	147	112	25	1	0	0	0	0	0	58.5	224.9
13-Oct	0	0	0	0	0	0	0	4	40	113	114	108	125	108	82	71	36	10	0	0	0	0	0	0	33.8	124.9
14-Oct	0	0	0	0	0	0	0	1	21	43	74	132	120	124	77	100	32	7	0	0	0	0	0	0	30.4	131.5
15-Oct	0	0	0	0	0	0	0	4	28	83	180	233	270	345	309	237	133	36	0	0	0	0	0	0	77.5	344.7
16-Oct	0	0	0	0	0	1	0	4	32	106	186	196	149	87	187	60	81	44	0	0	0	0	0	0	47.2	196.3
17-Oct	0	0	0	0	1	0	0	4	42	134	217	269	337	324	296	228	114	20	0	0	0	0	0	0	82.8	336.7
18-Oct	0	0	0	0	0	1	0	4	52	93	144	167	171	160	99	40	12	5	0	0	0	0	0	0	39.4	170.7
19-Oct	0	0	0	0	1	0	0	3	34	130	219	287	327	326	276	93	52	15	0	0	0	0	0	0	73.4	327.0
20-Oct	0	0	0	1	0	0	0	3	42	135	214	307	320	315	266	201	97	14	0	0	0	0	0	0	79.8	320.3
21-Oct	0	0	1	0	0	0	0	1	21	43	43	96	155	102	105	71	34	4	0	0	0	0	0	0	28.2	155.0
22-Oct	0	1	0	0	0	0	0	3	54	178	244	277	305	268	251	169	82	12	0	0	0	0	0	0	76.8	305.4
23-Oct	1	0	0	0	0	0	0	1	21	91	260	268	284	289	194	181	77	9	0	0	0	0	0	1	69.9	289.5
24-Oct	0	0	0	0	0	0	0	0	15	47	108	254	303	293	245	157	39	11	0	0	0	0	1	0	61.4	302.7
25-Oct	0	0	0	0	0	0	0	2	31	111	190	173	153	115	95	53	19	3	0	0	0	1	0	0	39.3	190.3
26-Oct	0	0	0	0	0	0	0	1	34	69	75	96	174	120	100	121	79	7	0	0	1	0	0	0	36.5	174.1
27-Oct	0	0	0	0	0	0	0	0	19	81	110	107	102	94	92	79	28	4	0	1	0	0	0	0	29.8	109.5
28-Oct	0	0	0	0	0	0	0	0	8	33	56	100	93	156	116	77	31	3	1	0	0	0	0	0	28.0	155.6
29-Oct	0	0	0	0	0	0	0	0	5	17	48	50	44	33	40	27	9	2	0	0	0	0	0	0	11.5	50.4
30-Oct	0	0	0	0	0	0	0	0	3	11	15	19	23	24	22	14	10	1	0	0	0	0	0	0	5.9	23.8
31-Oct	0	0	0	0	0	0	0	0	14	73	100	171	266	263	222	134	39	4	0	0	0	0	0	0	53.7	266.5
		0.0	0.0	0.0	0.0	0.0	0.0	4.9	34.8	88.2	136.9	173.1	193.4	186.9	170.5	122.6	62.0	17.3	1.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
		0.8	0.8	0.7	0.7	0.8	0.7	0.5	28.7	129.1	220.9	270.7	347.4	377.5	425.7	372.6	319.6	202.5	65.8	7.5	0.8	0.8	0.8	0.8	0.7	Diurnal Maximum

# Hourly Averages for Solar Radiation at Henry Pirker

## October 2009





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

Henry Pirker  
 October 1, 2009 to November 1, 2009  
 WS (km/h), WD (deg)

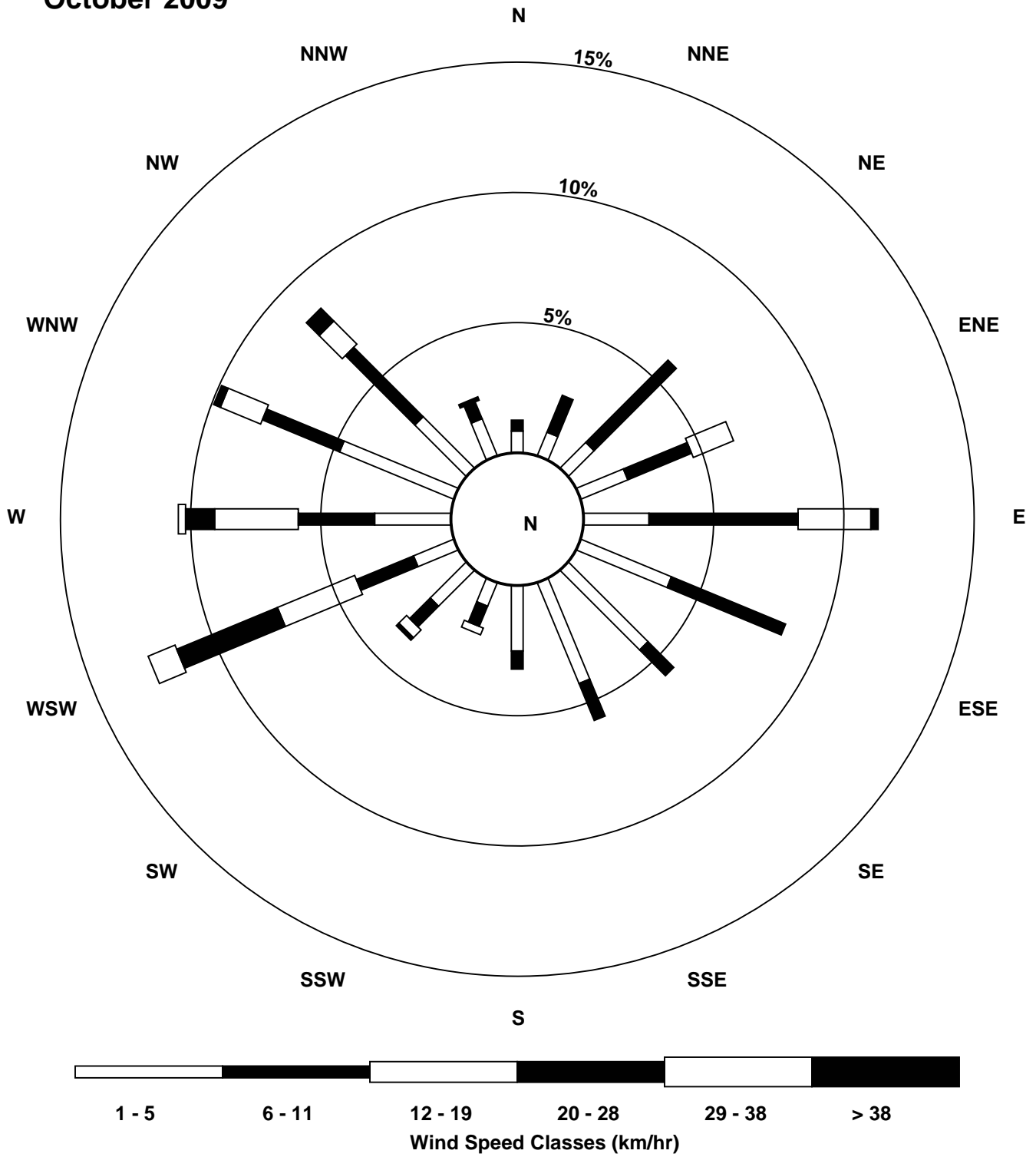
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1 Spd	4	4	4	3	5	5	3	2	4	5	6	7	9	13	14	13	14	10	4	7	10	5	1	2	3.5	14.3	
Dir	142	141	128	136	121	124	153	190	153	146	148	167	191	248	256	245	278	297	298	226	244	300	132	286	221.1	277.7	
2 Spd	4	8	5	5	6	4	4	4	4	5	3	4	2	4	3	7	7	6	5	5	5	5	8	4	3.3	7.7	
Dir	297	289	320	337	303	265	280	248	236	182	117	237	293	265	17	21	8	351	337	348	315	312	325	308	313.9	325.3	
3 Spd	7	6	7	8	7	7	8	7	8	8	8	8	8	7	6	5	3	6	6	5	1	3	8	7	4.6	8.4	
Dir	355	35	51	41	47	44	37	35	31	45	27	36	38	56	65	80	166	199	202	219	257	10	49	52	44.2	45.5	
4 Spd	7	6	7	6	6	8	6	6	5	7	7	7	8	9	6	6	6	6	6	6	5	4	6	7	5.7	8.7	
Dir	67	76	99	98	100	109	97	106	130	128	139	138	146	146	130	156	111	109	139	109	89	93	105	108	114.7	146.2	
5 Spd	6	5	3	2	4	4	4	3	2	2	5	5	7	8	8	7	13	16	17	14	17	30	31	24	7.2	30.9	
Dir	105	107	113	268	118	131	154	154	176	190	170	204	209	194	170	149	239	248	249	254	270	246	244	247	228.8	243.8	
6 Spd	24	27	38	31	30	28	21	26	28	24	20	20	22	22	19	14	10	9	11	10	8	8	7	8	17.4	37.7	
Dir	258	258	249	253	259	263	261	254	264	315	334	320	308	306	304	317	314	327	318	317	310	297	293	272	282.9	248.8	
7 Spd	6	5	5	3	4	6	7	6	5	6	7	8	6	2	4	7	10	10	6	7	7	7	4	3	4.3	10.0	
Dir	252	268	289	229	286	291	307	292	288	275	312	73	106	116	263	287	305	307	298	287	284	263	267	299	289.4	307.0	
8 Spd	4	7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	8	--	8.0
Dir	304	329	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	313	--	313.1
9 Spd	8	7	10	11	9	8	9	11	11	13	13	13	11	10	11	11	11	13	12	12	10	9	9	9	9.9	13.4	
Dir	319	291	264	263	260	270	293	283	284	287	286	292	298	276	267	260	271	297	307	307	308	313	304	311	287.5	286.3	
10 Spd	9	11	9	8	7	7	6	5	5	6	6	5	4	5	6	4	4	1	3	6	7	7	8	8	3.8	10.8	
Dir	308	308	309	311	315	324	323	4	353	340	341	311	343	303	306	317	316	70	71	75	79	82	80	85	343.8	307.7	
11 Spd	8	10	10	9	8	8	8	8	9	9	9	10	10	9	9	9	8	5	7	7	6	8	9	8	7.3	10.0	
Dir	92	101	98	97	100	95	103	102	104	107	113	128	134	123	104	103	104	59	58	59	46	40	38	32	92.9	133.7	
12 Spd	10	10	9	8	8	9	9	7	8	10	10	9	9	9	10	10	7	8	8	9	8	8	8	9	8.5	10.3	
Dir	29	13	12	14	26	25	26	35	46	42	50	61	41	46	44	42	39	52	47	43	49	50	59	61	39.5	12.9	
13 Spd	10	11	11	11	11	13	14	13	13	13	12	15	17	20	20	18	16	18	17	16	16	17	18	17	14.8	19.8	
Dir	63	62	64	66	71	78	82	76	74	66	61	78	84	81	82	75	78	81	76	77	80	77	80	79	75.8	81.9	
14 Spd	16	16	15	15	15	13	13	11	11	12	14	13	12	10	9	9	7	5	6	7	5	5	4	4	10.7	16.4	
Dir	82	81	82	79	82	83	83	90	83	80	81	82	88	84	88	86	85	95	92	80	75	56	64	63	82.3	81.7	
15 Spd	3	2	1	2	2	0	4	5	4	2	3	3	5	6	6	6	6	6	6	4	3	4	3	4	2.6	6.4	
Dir	63	5	349	320	278	214	105	127	120	140	121	195	212	217	201	177	190	162	165	168	148	156	124	149	165.4	189.7	
16 Spd	3	4	4	3	2	2	1	5	3	2	6	6	5	5	6	5	5	5	8	14	13	28	16	4	2.0	28.0	
Dir	134	129	136	113	89	47	303	90	90	108	115	121	89	78	104	78	97	108	279	225	230	246	256	258	192.6	245.9	
17 Spd	5	8	6	6	4	3	5	5	11	8	7	5	4	2	3	4	4	4	4	4	3	5	5	6	2.2	10.7	
Dir	277	216	257	234	162	267	295	283	273	299	307	284	223	19	44	19	53	53	59	99	30	30	325	311	298.1	272.8	
18 Spd	5	6	6	6	5	2	2	1	1	2	2	1	4	5	8	5	3	4	2	2	2	4	5	4	1.3	8.5	
Dir	323	328	299	322	298	287	235	240	286	296	253	273	264	227	223	237	83	191	204	79	128	111	116	121	258.6	222.8	
19 Spd	3	2	2	4	4	3	6	5	5	4	6	8	13	13	10	5	3	2	3	2	2	3	2	1	3.1	13.4	
Dir	131	150	228	272	292	268	252	263	264	254	242	259	311	306	305	291	274	314	54	61	161	126	152	181	277.9	311.2	
20 Spd	1	3	2	4	3	1	3	4	4	3	2	4	2	0	2	6	10	9	8	7	6	5	4	5	1.4	10.2	
Dir	303	284	345	292	272	273	215	196	154	309	247	240	232	139	343	107	82	62	47	55	55	52	45	55	55.3	81.8	
21 Spd	3	1	2	1	2	2	4	1	3	3	2	2	3	2	1	4	4	2	3	3	3	2	3	4	1.6	4.4	
Dir	124	96	353	350	27	83	127	183	158	160	179	137	164	261	179	114	112	171	169	247	180	162	211	221	156.4	113.7	
22 Spd	4	4	2	3	2	4	3	3	2	10	13	18	25	26	25	27	21	15	8	7	5	5	3	2	9.1	26.9	
Dir	169	170	262	284	292	314	305	321	286	254	253	250	253	258	257	264	260	270	253	251	231	262	337	158	258.7	263.7	

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

Henry Pirker  
October 1, 2009 to November 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	4	5	5	5	6	5	4	4	6	5	5	6	7	12	19	22	24	22	23	24	19	20	20	22	8.7	24.1
Dir	128	119	112	116	112	137	183	86	123	113	135	150	181	242	246	250	247	253	252	248	246	245	244	232.8	248.2	
24 Spd	22	25	25	24	26	17	18	17	11	15	22	26	30	26	27	30	25	26	22	13	11	10	7	3	19.5	29.7
Dir	244	244	251	257	284	288	264	251	242	247	253	264	269	266	254	249	256	253	253	242	238	232	228	225	255.6	249.0
25 Spd	3	1	3	4	4	3	4	2	5	5	6	6	6	6	8	7	7	4	4	6	6	3	3	3	3.4	7.9
Dir	41	329	164	129	101	124	117	137	145	152	167	156	155	120	106	84	101	215	58	93	128	178	339	149	125.4	106.1
26 Spd	4	1	2	2	3	2	5	7	4	4	3	6	8	17	18	18	20	17	15	18	15	17	17	17	8.4	20.4
Dir	144	129	149	334	163	135	176	206	168	166	226	235	244	265	267	265	255	258	279	272	262	263	268	278	256.4	254.7
27 Spd	16	18	18	16	14	10	13	15	16	19	17	22	19	19	21	18	19	16	16	15	11	9	8	7	14.9	22.1
Dir	281	289	285	278	261	241	242	245	247	253	259	265	259	276	284	288	284	281	260	252	267	277	281	246	268.1	265.0
28 Spd	7	11	9	7	5	7	6	5	11	14	13	16	14	15	17	15	12	5	3	3	2	5	6	5	7.1	17.2
Dir	239	247	251	283	252	265	265	295	283	289	285	277	264	273	283	304	324	317	290	245	103	166	161	156	274.0	283.0
29 Spd	3	4	4	5	7	9	10	10	11	9	10	9	11	10	9	8	6	5	3	2	5	6	6	5	4.9	11.2
Dir	140	105	110	103	97	93	103	100	108	103	110	108	102	104	105	94	82	95	55	301	284	281	280	299	101.0	107.8
30 Spd	3	6	6	5	4	3	2	3	3	5	8	9	10	11	14	15	14	10	8	7	7	7	6	7	5.2	14.5
Dir	310	303	295	294	300	320	6	19	63	83	87	86	87	83	78	86	86	84	80	75	82	85	90	95	73.7	86.3
31 Spd	5	6	3	2	10	3	4	5	3	7	18	14	19	20	31	35	34	27	26	27	20	15	10	5	11.8	34.6
Dir	86	98	71	303	274	151	184	139	205	243	208	208	224	234	246	242	241	240	246	249	257	307	307	304	242.2	242.3
Spd	1.0	1.6	1.9	2.1	1.7	0.7	0.8	0.9	1.0	1.3	1.2	1.9	2.9	3.7	4.2	3.6	3.5	3.4	3.1	3.0	2.5	2.9	2.1	1.3	Diurnal Average	
Dir	295.4	284.9	271.2	284.9	287.0	298.7	250.2	221.3	230.5	282.7	246.3	239.0	243.7	259.8	261.3	264.2	267.3	266.9	269.5	259.8	263.5	269.3	278.7	278.1		
Spd	24.4	27.0	37.7	30.9	29.7	28.1	20.7	25.7	27.6	24.4	22.1	26.2	29.6	26.2	30.6	34.6	34.1	26.7	26.5	26.5	20.3	29.5	30.9	23.9	Diurnal Maximum	
Dir	258.2	257.6	248.8	253.3	259.0	263.2	260.6	254.0	264.3	315.4	253.2	264.2	268.7	265.7	246.2	242.3	241.4	240.4	245.9	249.0	257.3	246.3	243.8	247.3		
Maximum Speed Value: 38 km/h on Oct 6 03:00																		Minimum Speed Value: 0 km/h on Oct 15 06:00						Hours in Service:		744
Maximum Daily Speed Average: 19.5 km/h on Oct 24																		Minimum Daily Speed Average: 1.3 km/h on Oct 21						Hours of Data:		723
Maximum Diurnal Speed Average: 4.2 km/h at hour 15																		Minimum Diurnal Speed Average: 0.7 km/h at hour 6						Hours of Missing Data:		21
Monthly Average Velocity: 2.11 km/h 265.30 deg																		Speed Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 2.5 Q <sub>1</sub> = 4.1 Median = 6.6 Q <sub>3</sub> = 10.8 P <sub>90</sub> = 18.1 P <sub>99</sub> = 29.1						Percent Operational Time:		97.2
All monthly, daily, and diurnal averages have been calculated using vector methods																										
N - Not Valid																										
Percentage Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	2.07	1.52	0.00	0.00	0.00	0.00	3.60																			
NorthEast	2.77	7.33	0.41	0.00	0.00	0.00	10.51																			
East	3.73	10.79	4.84	0.28	0.00	0.00	19.64																			
SouthEast	8.02	3.87	0.00	0.00	0.00	0.00	11.89																			
South	4.84	1.94	0.00	0.00	0.00	0.00	6.78																			
SouthWest	3.18	3.04	2.07	1.66	0.69	0.00	10.65																			
West	5.26	5.81	6.92	4.43	0.83	0.00	23.24																			
NorthWest	4.56	6.92	1.38	0.83	0.00	0.00	13.69																			
Total	34.44	41.22	15.63	7.19	1.52	0.00	100.00																			

# Wind Rose for WS at Henry Pirker October 2009



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

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

Maximum Speed: 38 km/h on Oct 6 03:00	Maximum Daily Speed Average: 20.2 km/h on Oct 24	Hours in Service: 744
Minimum Speed: 2 km/h on Oct 15 06:00	Minimum Daily Speed Average: 3.3 km/h on Oct 21	Hours of Data: 723
Maximum Diurnal Speed Average: 12.2 km/h at hour 15	Minimum Diurnal Speed Average: 7.2 km/h at hour 6	Hours of Missing Data: 21
Monthly Average Speed: 8.99 km/h	Percentiles: P <sub>1</sub> = 2.3 P <sub>10</sub> = 3.3 Q <sub>1</sub> = 4.6 Median = 6.9 Q <sub>3</sub> = 11.0 P <sub>90</sub> = 18.2 P <sub>99</sub> = 29.3	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-Oct	5	4	4	4	5	6	4	3	4	6	7	8	10	15	14	14	15	10	4	7	10	6	3	4	7.0	14.9
2-Oct	5	8	5	6	6	5	4	5	5	3	5	3	4	4	5	7	8	7	6	5	5	6	8	6	5.4	7.8
3-Oct	7	6	7	8	7	7	8	7	9	9	9	9	8	8	7	6	6	6	6	5	3	4	8	7	6.9	8.7
4-Oct	7	6	7	6	6	8	6	6	6	7	7	7	8	9	6	6	6	7	7	7	5	4	6	7	6.5	9.1
5-Oct	6	5	4	2	4	4	4	4	2	3	5	6	8	8	8	7	14	16	17	14	17	30	31	24	10.2	31.0
6-Oct	25	27	38	31	30	28	21	26	29	25	21	20	22	22	22	19	14	11	9	11	10	8	8	7	20.1	37.8
7-Oct	6	6	6	3	4	6	8	6	5	6	8	9	6	4	5	7	10	10	6	7	7	7	5	4	6.2	10.1
8-Oct	4	8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	8	--	8.1
9-Oct	8	7	10	11	9	9	9	11	11	13	14	13	11	11	12	12	12	13	12	12	10	9	9	9	10.6	13.5
10-Oct	9	11	9	8	7	7	6	5	6	7	6	6	5	6	6	5	5	3	4	7	7	8	8	8	6.6	10.9
11-Oct	8	10	10	9	8	8	8	8	9	9	9	10	11	9	10	9	8	6	7	7	6	8	9	8	8.5	10.7
12-Oct	10	10	9	8	9	9	9	7	8	10	10	10	9	10	10	10	10	7	8	8	9	8	8	9	9.0	10.5
13-Oct	10	11	11	11	11	13	14	14	14	13	12	16	17	20	20	18	16	18	17	16	17	17	18	17	15.0	19.9
14-Oct	17	16	15	15	16	15	14	13	11	11	12	14	13	12	10	10	9	7	6	6	7	5	5	4	10.9	16.5
15-Oct	3	2	2	2	2	2	4	5	4	3	4	5	6	7	6	6	7	6	6	4	4	4	3	5	4.2	6.8
16-Oct	4	4	4	4	3	3	3	6	4	3	6	6	5	5	6	5	5	5	9	14	14	28	16	7	7.0	28.1
17-Oct	5	9	7	6	6	6	6	7	11	9	8	6	4	4	4	5	4	4	4	4	4	5	5	6	5.8	11.1
18-Oct	5	6	6	6	5	3	2	2	3	3	3	3	5	6	9	6	4	5	3	3	3	5	5	4	4.3	8.9
19-Oct	3	3	3	4	4	3	6	5	5	4	6	9	14	13	10	6	4	2	4	2	2	4	3	3	5.2	13.6
20-Oct	3	4	2	4	3	3	3	5	4	4	3	4	4	4	3	6	10	9	8	7	6	5	4	5	4.7	10.3
21-Oct	4	2	2	2	3	3	4	2	4	4	3	3	4	3	2	5	5	3	3	4	3	3	4	4	3.3	4.8
22-Oct	4	4	3	4	2	4	4	3	3	10	13	19	25	26	25	27	21	15	9	7	5	5	4	3	10.3	27.1
23-Oct	5	6	6	5	6	6	4	4	6	5	6	7	8	13	19	23	24	22	23	24	19	20	20	22	12.6	24.2
24-Oct	22	25	25	24	27	18	19	17	11	16	22	26	30	26	27	30	25	26	22	13	11	10	7	3	20.2	29.8
25-Oct	3	3	4	4	4	3	4	3	5	5	6	6	6	6	8	7	8	7	5	6	6	4	3	4	5.1	8.0
26-Oct	4	4	3	4	4	4	5	7	4	4	4	6	8	17	18	18	21	18	15	18	15	17	17	17	10.5	20.5
27-Oct	16	18	18	16	14	10	13	15	16	19	17	22	19	20	21	18	19	16	16	15	11	10	8	7	15.6	22.2
28-Oct	7	11	9	7	6	8	6	5	11	14	13	16	14	15	17	15	12	6	3	3	3	5	6	5	9.0	17.3
29-Oct	3	4	4	5	7	9	10	10	11	9	10	9	11	10	9	8	6	5	3	2	5	6	6	5	6.9	11.3
30-Oct	4	6	6	5	4	3	3	3	3	5	8	9	10	11	14	15	15	10	8	7	7	7	6	7	7.4	14.6
31-Oct	5	6	4	4	11	5	5	6	5	8	18	14	19	20	31	35	34	27	27	27	22	15	10	5	15.1	34.7
	7.3	8.1	8.1	7.6	7.8	7.2	7.2	7.2	7.6	8.2	9.2	10.0	10.7	11.4	12.2	12.1	11.9	10.3	9.3	9.1	8.4	9.1	8.5	7.6	Diurnal Average	
	24.6	27.2	37.8	31.1	29.9	28.2	20.8	25.8	29.2	24.6	22.2	26.4	29.7	26.5	30.6	34.7	34.2	26.8	26.6	26.6	21.7	29.6	31.0	24.1	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**

**Henry Pirker - Wind Direction (WD) - deg  
October 1, 2009 to November 1, 2009**

Maximum Value: 97.1 deg on Oct 20 14:00																						Hours in Service:	744			
Minimum Value: 3.4 deg on Oct 27 03:00																						Hours of Data:	723			
Percentiles: P <sub>1</sub> = 4.1 P <sub>10</sub> = 6.1 Q <sub>1</sub> = 8.2 Median = 14.8 Q <sub>3</sub> = 25.1 P <sub>90</sub> = 47.5 P <sub>99</sub> = 80.9																						Hours of Missing Data:	21			
																						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-Oct	36	17	21	16	18	21	21	38	28	27	12	24	23	27	16	17	17	8	29	7	6	33	82	57	81.8	
2-Oct	33	10	22	24	17	20	13	19	17	30	20	52	28	45	79	23	14	15	13	10	18	16	6	58	79.4	
3-Oct	16	21	15	19	21	18	15	17	14	17	21	20	20	21	23	30	61	15	25	49	75	63	16	16	74.7	
4-Oct	11	15	15	13	14	10	16	17	18	16	17	23	21	18	27	32	27	24	21	24	11	10	5	5	32.2	
5-Oct	8	6	14	66	31	11	10	33	51	54	35	26	21	21	20	21	37	5	5	8	9	5	5	8	65.8	
6-Oct	7	7	4	5	5	5	6	5	17	7	10	14	5	5	5	10	12	20	8	6	5	6	9	15	19.7	
7-Oct	23	24	16	29	13	13	11	8	6	18	22	22	27	68	41	23	12	8	12	5	13	16	28	28	67.8	
8-Oct	19	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	9	19.1
9-Oct	17	12	10	8	8	8	13	6	4	7	9	11	12	15	14	10	16	10	6	6	9	10	7	6	16.6	
10-Oct	6	5	6	6	10	9	13	20	19	19	23	41	43	37	25	37	45	83	61	24	11	10	10	9	83.0	
11-Oct	12	10	9	10	11	12	9	9	9	11	14	20	21	20	19	24	16	20	10	15	24	13	13	15	24.0	
12-Oct	12	10	10	13	14	10	12	16	14	14	18	16	21	16	20	17	12	14	13	16	10	14	9	9	21.5	
13-Oct	7	7	7	7	8	8	6	7	8	10	10	8	9	8	7	8	9	6	7	6	6	6	6	6	10.3	
14-Oct	7	6	6	6	6	7	6	8	10	9	8	8	10	11	11	10	9	16	16	10	18	12	12	12	17.8	
15-Oct	15	32	64	27	26	91	14	11	18	33	41	43	26	23	25	16	18	6	7	19	17	12	34	20	91.4	
16-Oct	41	17	31	31	62	33	75	35	40	80	13	23	25	22	16	22	26	17	46	10	7	7	8	56	80.3	
17-Oct	31	23	29	24	72	60	41	67	15	21	24	44	38	69	58	29	19	10	15	21	38	13	25	7	71.6	
18-Oct	12	6	21	13	13	53	30	90	69	42	48	78	23	19	18	28	45	41	56	37	31	12	9	13	90.5	
19-Oct	20	69	52	17	17	24	15	24	16	29	29	22	11	11	14	18	19	18	58	35	39	32	50	70	70.0	
20-Oct	91	33	58	16	17	65	31	20	16	66	58	35	64	97	71	27	11	10	10	10	12	16	22	19	97.1	
21-Oct	35	63	39	87	39	38	21	67	40	23	31	44	34	58	77	29	28	44	10	27	37	37	21	17	87.3	
22-Oct	21	14	56	18	38	20	21	33	62	13	8	8	7	8	7	9	6	19	21	31	29	33	62	62	62.1	
23-Oct	46	24	19	15	11	40	28	32	20	24	32	25	23	18	10	7	6	5	5	5	4	3	4	4	45.6	
24-Oct	5	5	5	7	19	15	5	5	10	8	5	6	6	9	8	5	6	4	5	7	10	10	7	57	56.9	
25-Oct	36	73	41	22	31	26	27	46	20	23	14	13	13	24	10	11	14	67	46	21	25	61	57	27	73.3	
26-Oct	51	77	64	78	62	67	48	15	18	14	49	10	14	8	6	6	6	11	11	9	7	6	6	6	78.2	
27-Oct	8	4	3	4	9	9	7	6	5	7	6	6	7	7	5	5	6	5	9	8	13	8	6	20	19.6	
28-Oct	8	8	12	15	17	20	19	24	6	5	4	8	7	7	7	10	7	13	38	51	31	7	6	10	50.6	
29-Oct	16	10	13	13	12	8	6	7	7	7	11	16	11	7	8	10	13	16	29	57	13	6	8	16	56.9	
30-Oct	20	7	10	7	7	8	23	19	19	10	8	7	7	7	7	6	7	8	14	9	10	11	13	13	23.3	
31-Oct	15	14	48	74	34	68	75	37	59	26	5	8	8	9	4	5	5	5	5	4	24	9	7	16	74.6	
91.0 77.3 64.4 87.3 71.6 91.4 75.0 90.5 68.9 80.3 58.2 78.4 63.7 97.1 79.4 37.2 60.7 83.0 60.7 56.9 74.7 62.8 81.8 70.0																										
N - Not Valid																										

PASZA

Evergreen Park Station

Monthly Summary Tables, Graphs and  
Roses

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

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

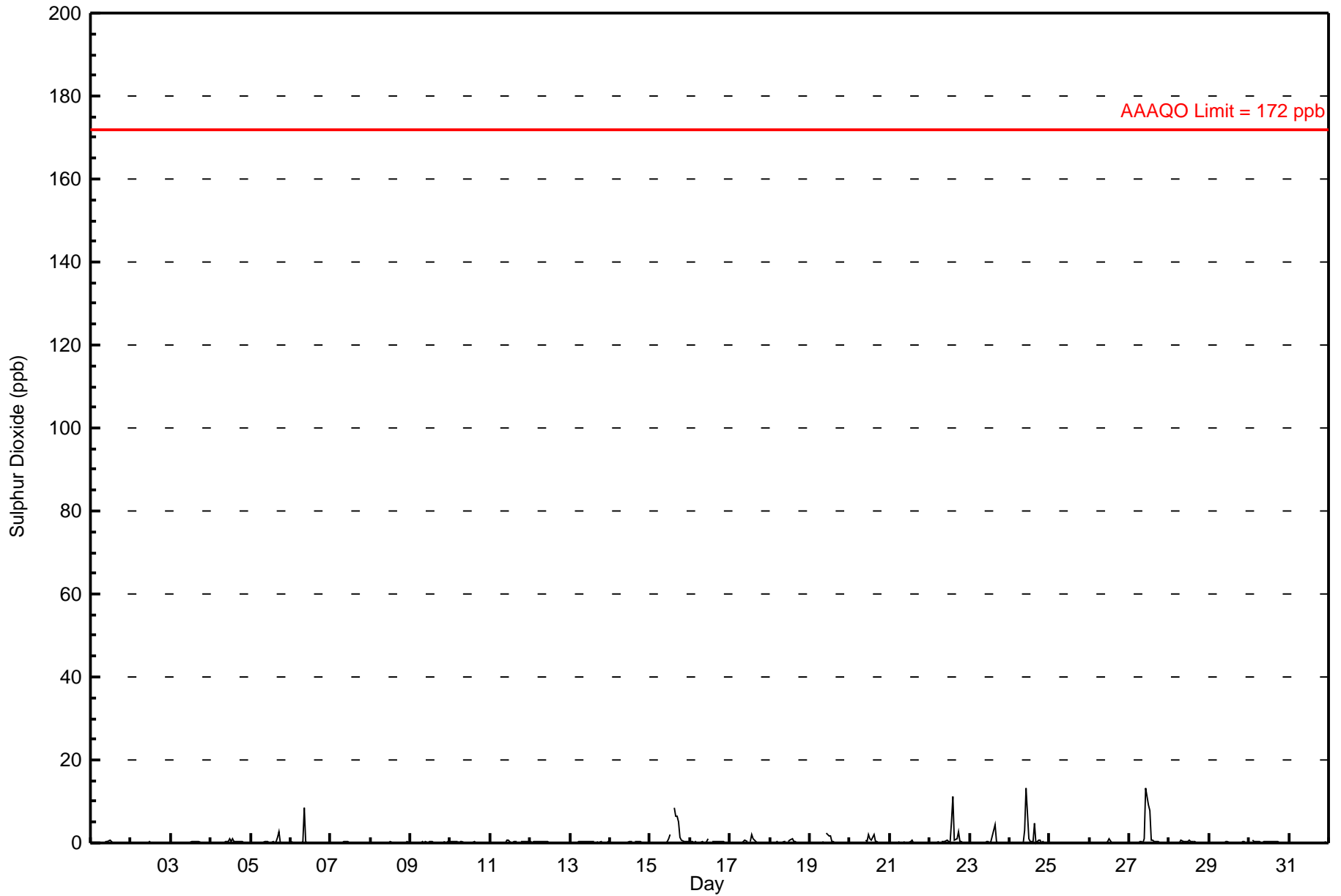
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 13.3 ppb on Oct 24 11:00	Maximum Daily Average: 1.5 ppb on Oct 27		Hours of Data:	708
Minimum Value: 0 ppb on Oct 1 21:00	Minimum Daily Average: 0.0 ppb on Oct 25		Hours of Missing Data:	36
Maximum Diurnal Average: 1.2 ppb at hour 11	Minimum Diurnal Average: 0.1 ppb at hour 4		Hours of Calibration:	36
Monthly Average: 0.33 ppb	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> = 0.4 P <sub>99</sub> = 7.3		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
2-Oct	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
3-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
4-Oct	0	A	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0.3	1.0
5-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	A	0.3	2.8
6-Oct	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.5	8.4
7-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.2
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
10-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4
11-Oct	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6
12-Oct	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	0.3
13-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3
14-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Oct	0	0	0	0	0	0	0	0	0	0	0	1	2	A	8	6	6	5	1	1	0	0	0	0	1.4	8.4
16-Oct	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
17-Oct	0	0	0	0	0	0	0	0	0	1	0	A	0	2	1	0	0	0	0	0	0	0	0	0	0.3	1.9
18-Oct	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.9
19-Oct	0	0	0	0	0	0	0	0	0	0	A	3	2	2	0	0	0	0	0	0	0	0	0	0	0.3	2.5
20-Oct	0	0	0	0	0	0	0	0	A	1	0	2	1	1	2	0	0	0	0	0	0	0	0	0	0.3	2.1
21-Oct	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
22-Oct	0	0	0	0	0	0	A	0	0	0	1	0	0	5	11	1	1	3	0	0	0	0	0	0	1.1	11.3
23-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	0	3	4	0	0	0	0	0	0	0	0	0.4	4.4
24-Oct	0	0	0	0	A	0	0	0	0	3	13	1	0	0	0	5	0	1	1	0	0	0	0	0	1.1	13.3
25-Oct	0	0	0	A	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0.0	0.2	
26-Oct	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9
27-Oct	0	0	0	0	A	0	0	0	0	1	13	9	8	1	1	0	0	0	0	0	0	0	0	0	1.5	13.2
28-Oct	0	0	0	A	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
29-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
30-Oct	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
31-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2

0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.3	1.2	0.8	0.6	0.5	1.0	0.7	0.4	0.5	0.2	0.1	0.1	0.1	0.1	0.1	Diurnal Average
0.3	0.4	0.6	0.4	0.3	0.2	0.4	0.5	8.4	2.9	13.3	9.2	7.7	5.1	11.3	6.4	6.4	5.2	1.3	0.6	0.3	0.4	0.2	0.2	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 October 2009





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

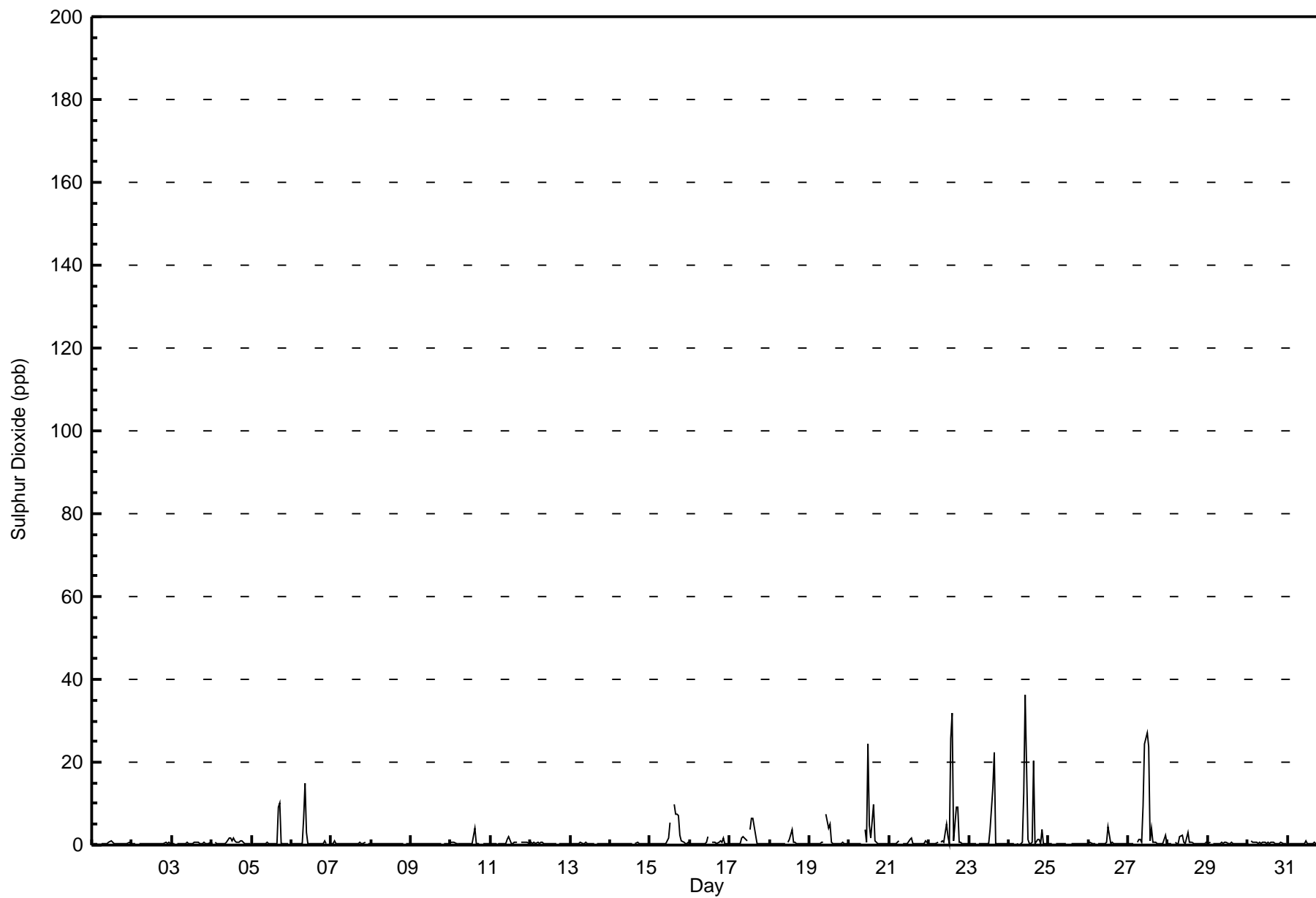
**Evergreen Park - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
October 1, 2009 to November 1, 2009**

Maximum Value: 36.2 ppb on Oct 24 11:00	Maximum Daily Average: 4.4 ppb on Oct 27	Hours in Service: 744
Minimum Value: 0 ppb on Oct 11 05:00	Minimum Daily Average: 0.3 ppb on Oct 25	Hours of Data: 708
Maximum Diurnal Average: 3.1 ppb at hour 15	Minimum Diurnal Average: 0.4 ppb at hour 4	Hours of Missing Data: 36
Monthly Average: 1.10 ppb	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> = 1.1 P <sub>99</sub> = 23.4	Hours of Calibration: 36
		Percent Operational Time: 100.0

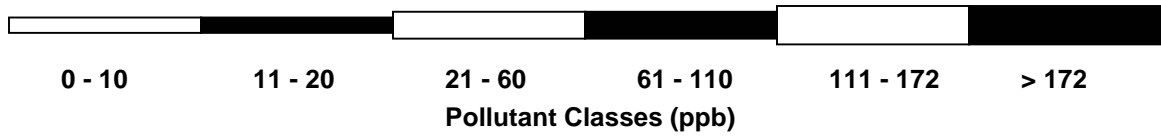
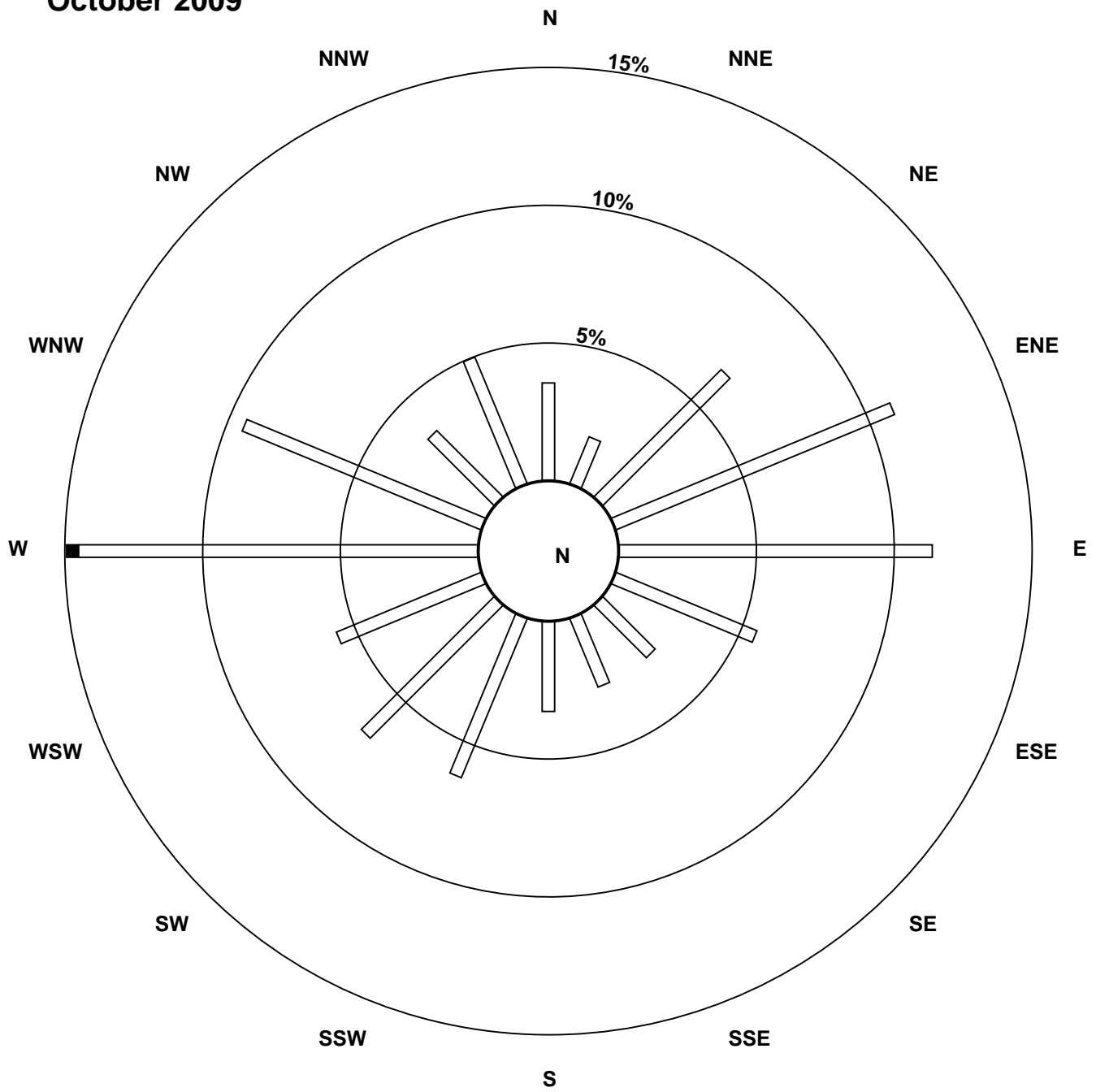
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0	0.4	1.1	
2-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.4	0.5
3-Oct	0	0	A	0	0	0	0	0	0	1	0	0	0	1	1	1	1	0	0	1	0	0	0	1	0.4	0.5
4-Oct	0	A	1	0	0	0	0	0	0	1	2	2	1	2	1	1	1	1	1	1	0	0	0	0	0.7	1.8
5-Oct	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	9	10	0	0	0	0	0	A	1.3	10.2
6-Oct	0	0	0	0	0	0	0	6	15	3	0	0	0	0	0	0	0	0	0	1	0	A	0	1.4	14.9	
7-Oct	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	A	0	0.4	1.1	
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0.4	0.5	
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.5	
10-Oct	1	1	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	A	0	0	0	0	0.6	4.2	
11-Oct	0	0	0	0	0	0	0	0	0	2	2	0	0	1	1	1	A	1	1	1	1	1	0	0.6	2.2	
12-Oct	1	0	1	0	1	0	1	1	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0.5	0.7	
13-Oct	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.6	
14-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0.4	0.6	
15-Oct	0	0	0	0	0	0	0	0	0	0	1	2	5	A	10	8	8	7	2	1	1	0	1	2.2	9.9	
16-Oct	0	0	0	0	0	0	0	0	0	0	1	2	A	1	1	1	0	1	1	1	2	0	0	0.6	2.0	
17-Oct	0	0	0	0	0	0	0	2	2	2	1	A	4	6	7	3	0	0	0	0	0	0	0	1.4	6.6	
18-Oct	0	0	0	0	0	0	0	0	0	0	A	1	1	4	1	1	0	0	0	0	0	0	0	0.6	3.7	
19-Oct	0	0	0	0	0	0	0	1	1	A	8	4	5	1	0	0	0	0	0	0	1	0	0	1.1	7.6	
20-Oct	0	0	0	0	0	0	0	0	A	4	1	24	5	2	10	1	1	0	0	0	0	0	0	2.2	24.3	
21-Oct	0	0	0	0	0	1	1	A	0	0	0	1	2	0	0	0	0	0	0	0	0	1	0	0.6	1.6	
22-Oct	0	0	0	0	0	1	A	1	1	1	5	2	0	26	32	1	9	9	1	1	0	0	0	4.0	32.0	
23-Oct	0	0	0	0	0	A	0	0	0	0	0	0	4	14	22	0	0	0	0	0	0	0	0	2.1	22.4	
24-Oct	0	0	0	0	A	0	0	0	1	13	36	1	0	0	1	20	0	1	1	0	4	0	0	3.6	36.2	
25-Oct	0	0	0	A	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.3	0.4	
26-Oct	0	1	0	0	0	A	0	0	0	0	0	1	4	0	1	0	0	0	0	0	0	0	0	0.5	4.4	
27-Oct	0	0	0	0	A	1	1	1	1	9	25	27	24	1	4	1	1	0	0	0	0	0	3	4.4	27.0	
28-Oct	0	0	0	A	1	0	0	2	2	1	0	2	3	1	1	0	0	0	0	1	0	0	1	0.8	3.2	
29-Oct	0	1	A	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	0	0	1	0	0.4	0.6	
30-Oct	0	A	1	1	1	1	1	0	1	0	1	1	0	1	1	1	0	0	0	0	1	0	0	0.5	0.9	
31-Oct	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0.4	0.9	
	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	1.1	1.4	3.0	2.7	2.1	1.9	3.1	2.2	1.3	1.3	0.5	0.4	0.6	0.4	0.5	0.4	Diurnal Average	
	0.8	0.8	1.1	0.8	0.7	0.8	1.4	6.4	14.9	12.6	36.2	27.0	23.7	25.6	32.0	22.4	9.3	10.2	2.2	1.0	3.7	0.7	2.5	0.7	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

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



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



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

**Evergreen Park - Total Reduced Sulphur (TRS) - ppb  
October 1, 2009 to November 1, 2009**

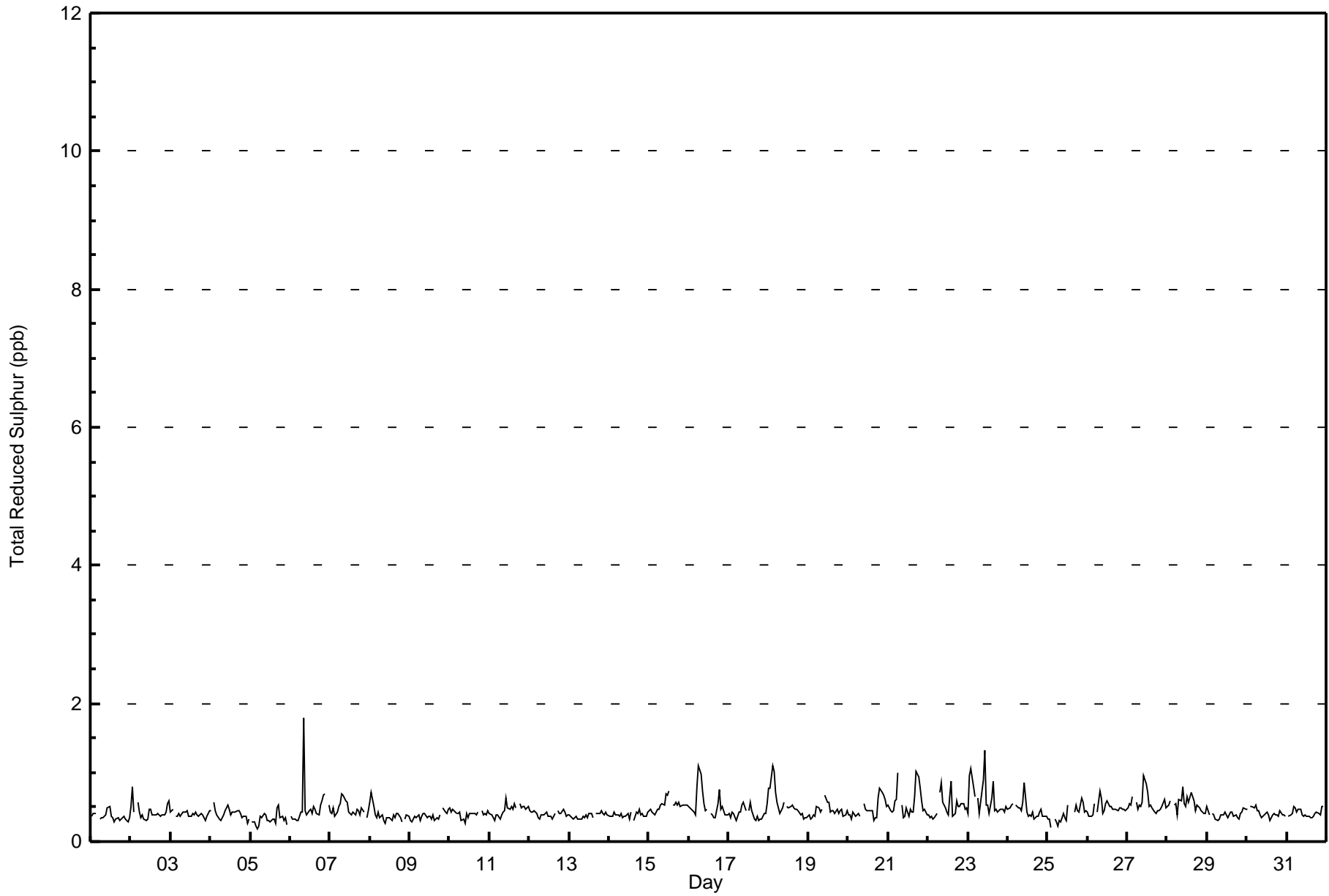
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 1.8 ppb on Oct 6 09:00	Maximum Daily Average: 0.6 ppb on Oct 23		Hours of Data:	708
Minimum Value: 0 ppb on Oct 5 05:00	Minimum Daily Average: 0.3 ppb on Oct 5		Hours of Missing Data:	36
Maximum Diurnal Average: 0.5 ppb at hour 9	Minimum Diurnal Average: 0.4 ppb at hour 23		Hours of Calibration:	36
Monthly Average: 0.45 ppb	Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.4 Median = 0.4 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 0.6 P <sub>99</sub> = 1.0		Percent Operational Time:	100.0

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

0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	Diurnal Average
0.8	1.0	1.1	1.0	0.7	0.8	1.1	1.0	1.8	0.9	1.3	0.8	0.7	0.7	0.9	0.9	0.6	1.0	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.6	Diurnal Maximum

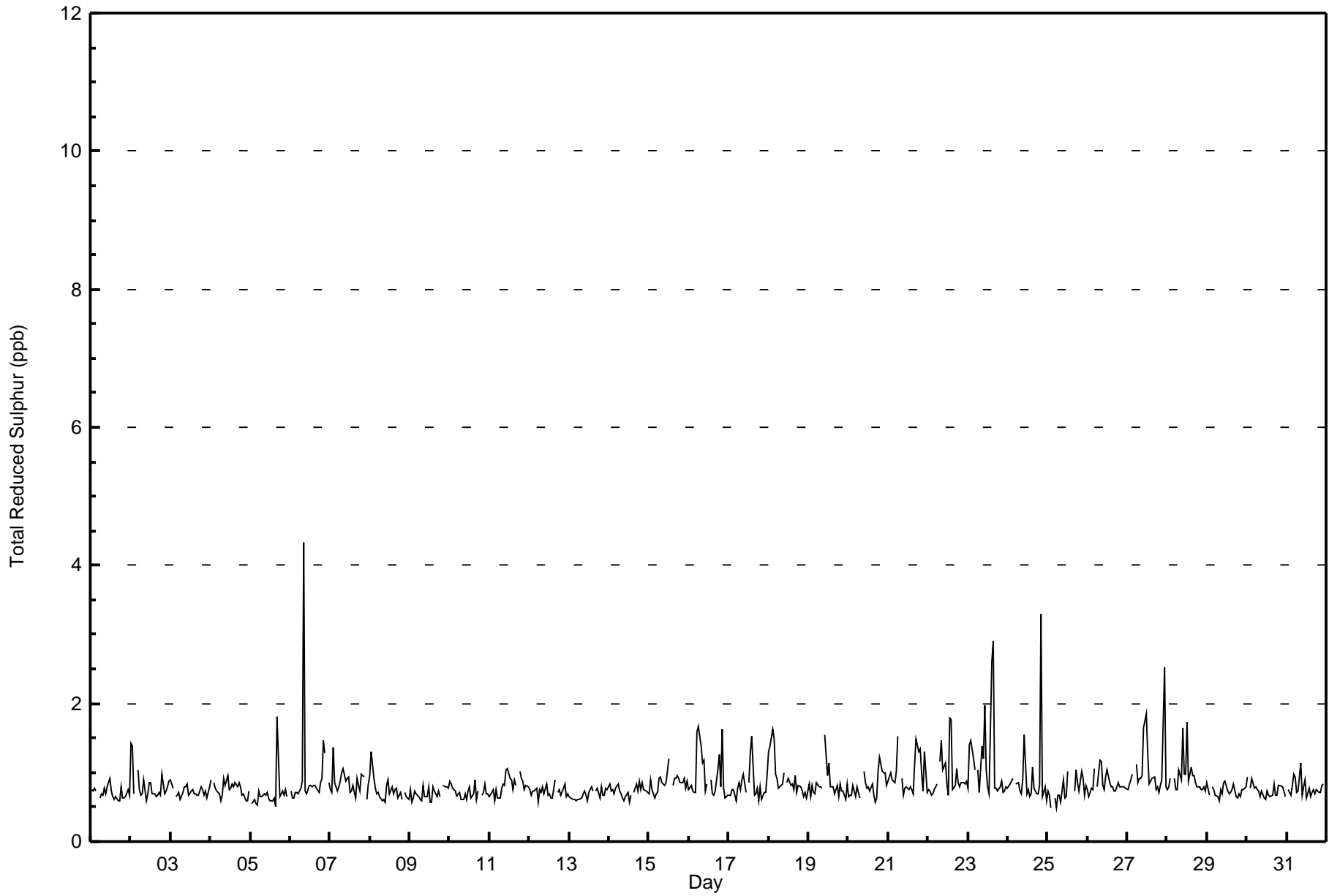
C - Calibration                      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb    24-hr 3 ppb

# Hourly Averages for TRS at Evergreen Park October 2009

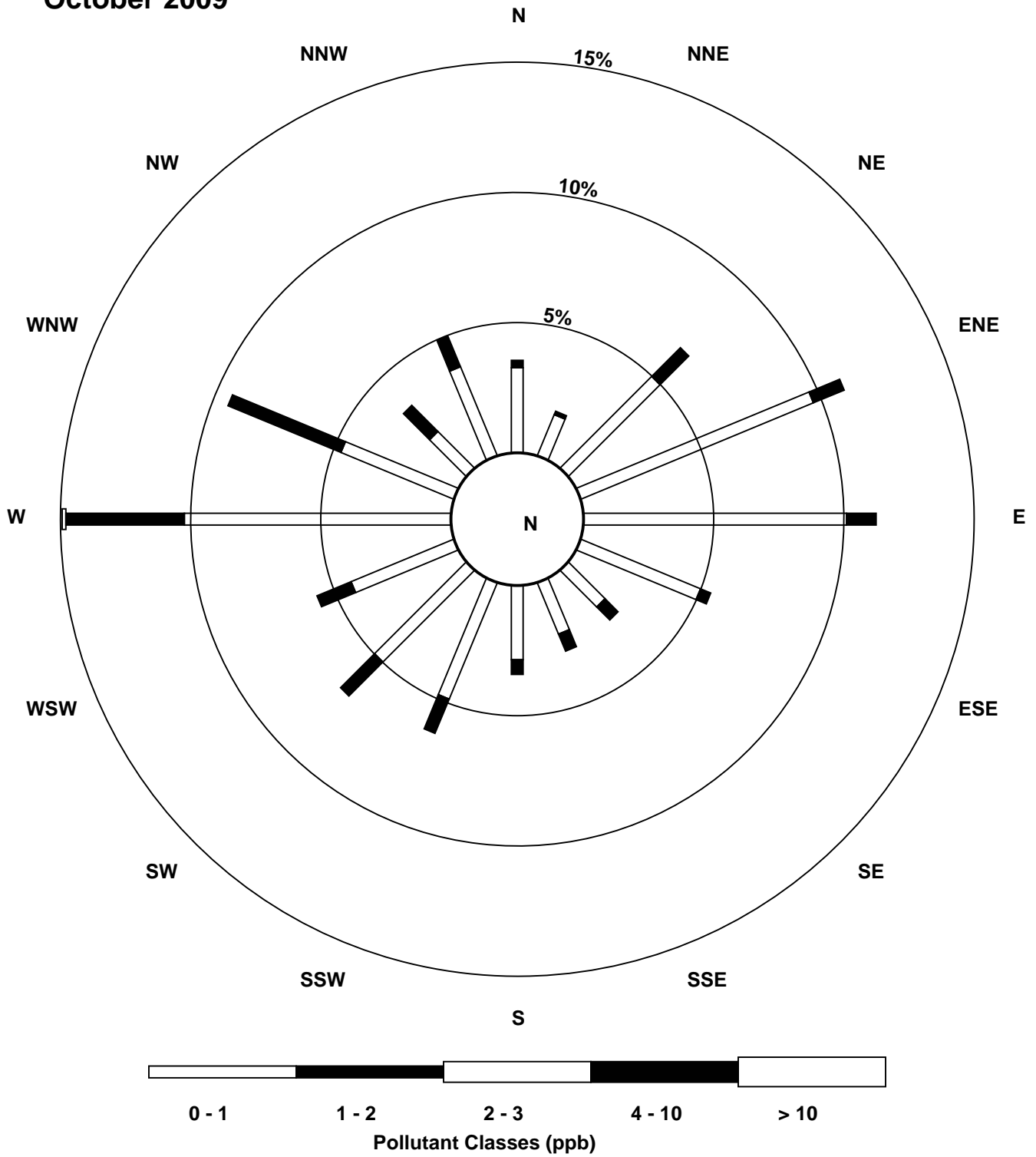




# Hourly Maximums for TRS at Evergreen Park October 2009



# Pollutant Rose for TRS at Evergreen Park October 2009





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

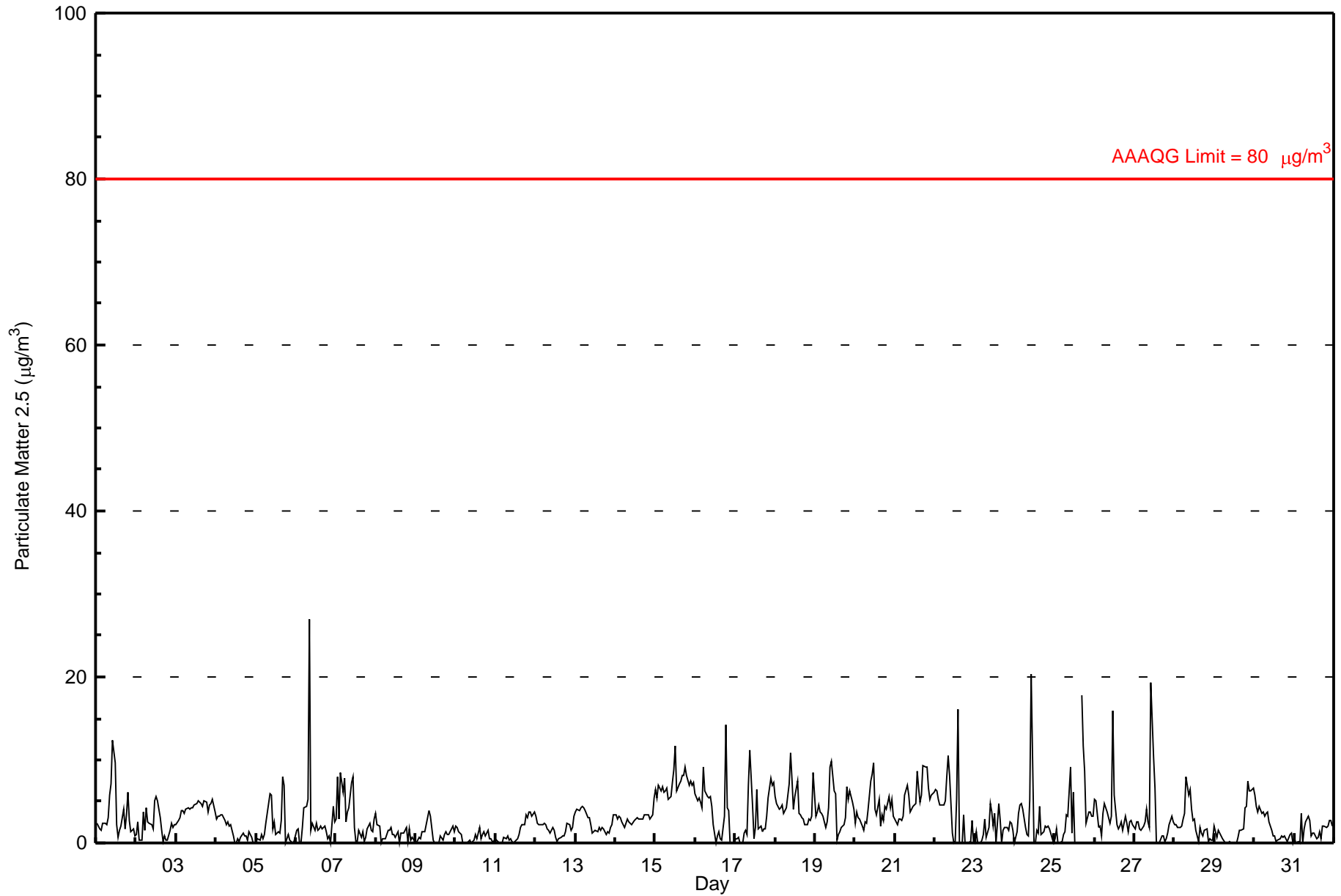
**Evergreen Park - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
October 1, 2009 to November 1, 2009**

Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 27.0 µg/m <sup>3</sup> on Oct 6 09:00	Maximum Daily Average: 7.2 µg/m <sup>3</sup> on Oct 15
Minimum Value: 0 µg/m <sup>3</sup> on Oct 4 13:00	Hours of Data: 743
Maximum Diurnal Average: 4.5 µg/m <sup>3</sup> at hour 11	Hours of Missing Data: 1
Monthly Average: 2.89 µg/m <sup>3</sup>	Hours of Calibration: 1
Minimum Daily Average: 0.7 µg/m <sup>3</sup> on Oct 10	Percent Operational Time: 100.0
Minimum Diurnal Average: 2.0 µg/m <sup>3</sup> at hour 16	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 1.0 Median = 2.2 Q <sub>3</sub> = 4.1 P <sub>90</sub> = 6.3 P <sub>99</sub> = 12.6	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	2	2	2	2	2	2	2	3	6	7	12	10	2	1	1	2	4	2	3	6	3	1	2	1	3.4	12.4
2-Oct	1	3	0	0	4	2	4	3	2	2	2	5	6	5	3	2	0	1	0	0	2	2	2	2	2.2	5.6
3-Oct	2	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	4	5	5	4	5	5	5	4	4.2	5.3
4-Oct	3	3	3	3	3	3	2	2	2	2	1	0	0	1	0	1	1	1	1	0	1	1	0	0	1.5	3.4
5-Oct	0	0	0	1	0	1	2	4	6	6	2	3	1	1	1	3	8	7	0	1	0	0	0	0	2.0	8.0
6-Oct	1	2	0	0	2	4	4	5	27	1	2	2	2	2	2	2	2	2	1	1	1	0	4	2	3.0	27.0
7-Oct	3	8	3	8	6	8	3	4	4	7	8	2	0	0	2	1	1	0	1	2	2	1	1	3	3.3	8.5
8-Oct	4	2	2	0	0	0	0	2	2	2	1	1	1	1	0	1	1	1	2	0	2	0	1	0	1.1	3.6
9-Oct	0	0	1	0	1	1	2	3	4	3	0	0	0	0	0	1	0	1	1	1	1	2	2	1	1.2	4.0
10-Oct	2	2	1	1	0	0	0	0	0	0	0	0	1	1	2	1	1	1	1	2	0	1	0	0	0.7	2.0
11-Oct	0	0	0	0	0	1	1	1	0	1	0	0	0	1	1	2	2	2	3	3	4	4	3	4	1.4	3.7
12-Oct	3	2	2	2	2	2	2	2	1	2	2	1	0	1	1	1	1	1	1	2	2	1	2	3	1.7	3.2
13-Oct	4	4	4	4	4	4	4	3	3	2	1	1	2	1	2	2	2	2	1	1	1	2	2	3	2.5	4.4
14-Oct	3	3	3	3	2	2	2	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	6	3.0	5.5
15-Oct	6	5	7	6	7	6	6	7	5	6	7	9	12	6	7	7	8	8	9	8	7	8	7	7	7.2	11.8
16-Oct	6	5	5	5	4	9	6	6	5	6	4	2	0	1	1	0	0	3	14	4	4	0	0	0	3.9	14.2
17-Oct	1	0	1	0	0	1	2	1	7	11	4	0	2	6	2	2	1	2	2	3	5	8	7	7	3.2	11.2
18-Oct	6	5	4	4	5	4	4	4	7	11	8	4	6	7	4	3	3	3	2	2	3	3	3	9	4.7	10.8
19-Oct	3	4	5	4	4	3	2	3	4	9	10	6	6	0	1	1	2	2	3	7	5	6	5	4	4.1	9.9
20-Oct	2	4	3	3	2	1	3	2	4	7	8	10	4	3	5	2	3	3	4	4	6	4	5	3	4.1	9.6
21-Oct	3	2	3	3	3	3	6	7	6	4	4	5	9	7	5	6	9	9	9	9	7	5	6	6	5.4	9.4
22-Oct	6	6	5	5	5	5	5	8	11	8	1	0	0	5	16	0	0	3	0	0	0	0	3	0	3.9	16.2
23-Oct	0	1	0	0	0	1	3	1	2	5	4	2	4	0	5	3	0	1	2	2	1	2	2	2	1.8	4.8
24-Oct	0	1	4	5	5	4	2	1	1	5	20	0	0	2	1	4	1	1	2	2	2	2	0	0	2.7	20.4
25-Oct	1	2	0	0	0	1	1	3	3	9	1	6	0	0	0	C	18	12	9	2	4	4	3	3	3.6	17.9
26-Oct	5	5	2	2	1	4	5	4	3	2	3	16	6	2	2	2	3	2	3	2	1	3	3	2	3.4	15.9
27-Oct	2	3	3	2	1	2	3	4	3	2	19	10	7	0	0	0	1	1	0	0	1	2	3	3	2.9	19.3
28-Oct	2	2	2	2	2	3	3	8	6	6	4	3	3	2	0	2	1	1	2	2	0	1	0	0	2.4	8.0
29-Oct	2	1	2	1	1	0	0	0	0	0	0	0	0	0	1	1	2	2	4	4	7	6	6	7	2.0	7.4
30-Oct	6	4	4	4	4	4	3	4	4	3	2	1	1	0	0	1	1	1	1	0	0	1	1	0	2.0	5.7
31-Oct	1	0	0	0	4	0	2	3	3	3	1	1	1	0	1	1	0	2	2	2	2	3	3	2	1.5	3.6
	2.6	2.8	2.3	2.4	2.5	2.8	2.9	3.3	4.5	4.5	4.5	3.5	2.5	2.1	2.4	2.0	2.6	2.7	3.0	2.6	2.7	2.6	2.8	2.7	Diurnal Average	
	6.4	8.0	6.9	8.5	6.8	9.2	6.3	8.0	27.0	11.2	20.4	15.9	11.8	8.6	16.2	7.5	17.9	11.7	14.2	9.1	7.4	7.8	7.0	8.5	Diurnal Maximum	

C - Calibration  
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m<sup>3</sup> Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m<sup>3</sup>

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

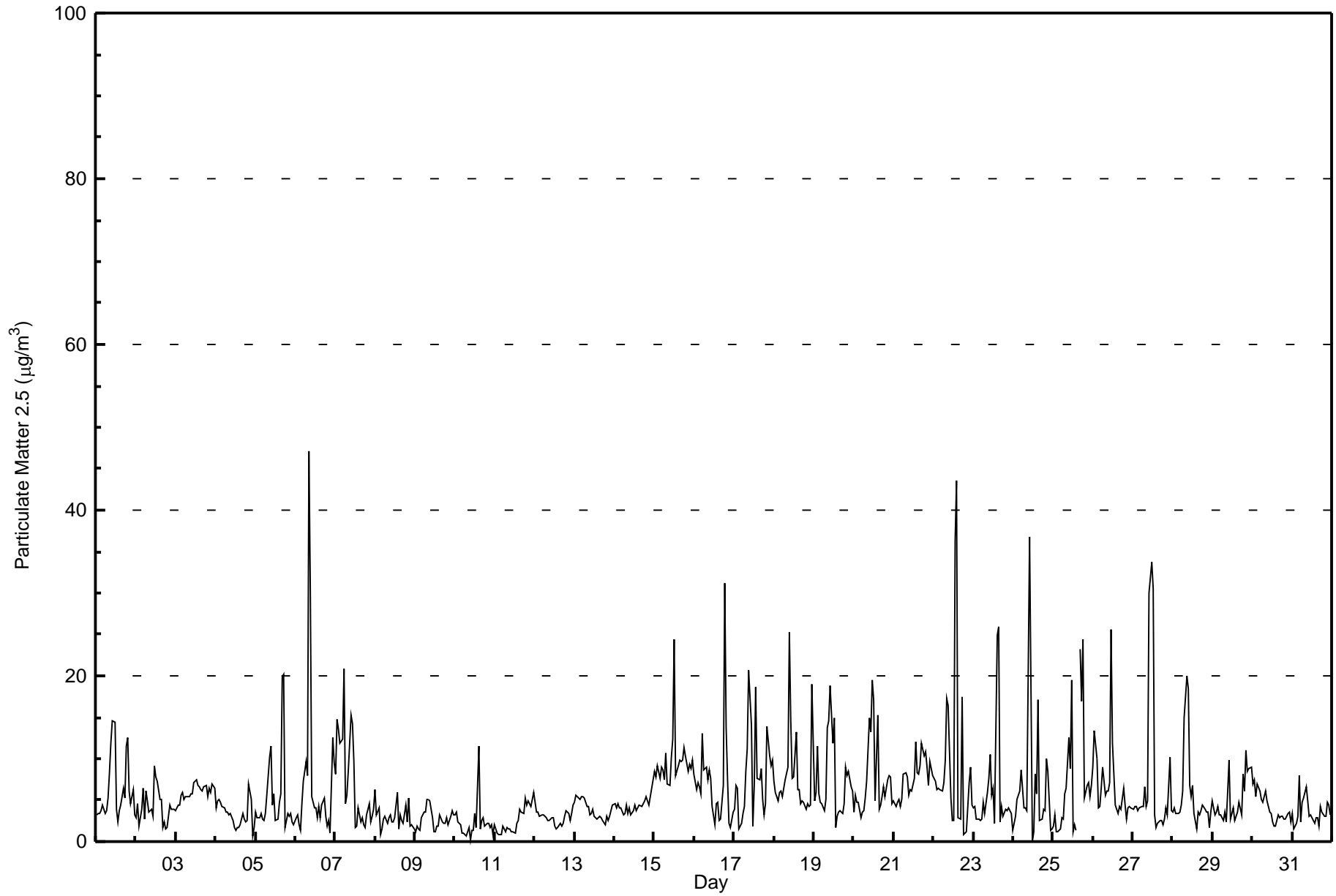


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

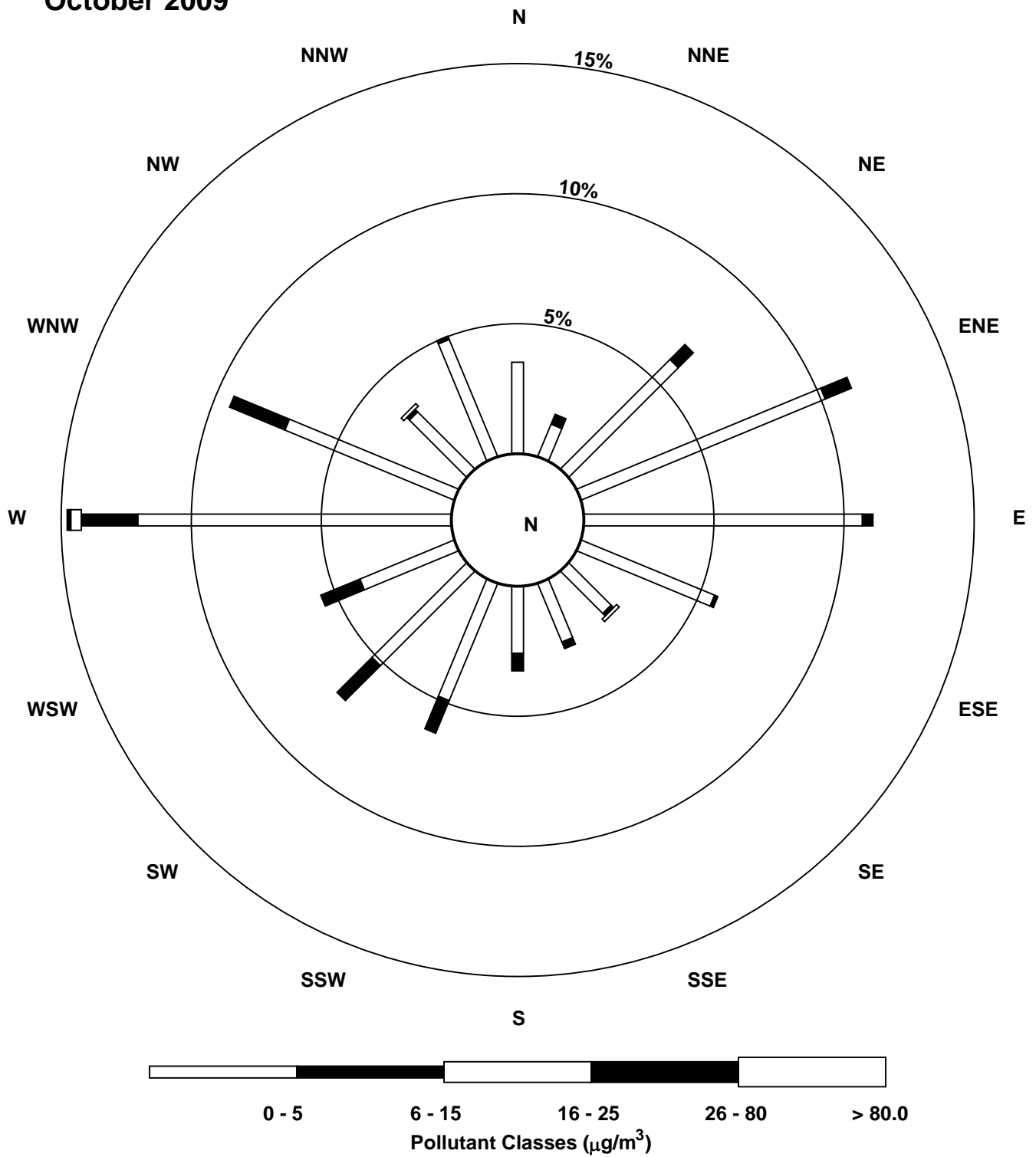
**Evergreen Park - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
October 1, 2009 to November 1, 2009**

Maximum Value: 47.1 µg/m <sup>3</sup> on Oct 6 09:00		Maximum Daily Average: 9.8 µg/m <sup>3</sup> on Oct 15		Hours in Service: 744																							
Minimum Value: 0 µg/m <sup>3</sup> on Oct 24 12:00		Minimum Daily Average: 2.2 µg/m <sup>3</sup> on Oct 10		Hours of Data: 743																							
Maximum Diurnal Average: 9.6 µg/m <sup>3</sup> at hour 10		Minimum Diurnal Average: 4.2 µg/m <sup>3</sup> at hour 4		Hours of Missing Data: 1																							
Monthly Average: 5.78 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 1.8 Q <sub>1</sub> = 2.9 Median = 4.3 Q <sub>3</sub> = 6.7 P <sub>90</sub> = 10.5 P <sub>99</sub> = 30.0		Hours of Calibration: 1																							
		Percent Operational Time: 100.0																									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	3	3	3	4	4	3	4	5	8	12	15	14	4	2	4	4	7	5	11	12	6	5	6	3	6.2	14.6	
2-Oct	3	5	2	4	7	3	6	5	3	4	3	9	8	7	5	5	2	2	2	2	4	4	4	4	4.2	9.2	
3-Oct	4	4	4	6	6	5	5	5	5	6	6	7	7	7	7	6	6	7	7	5	6	6	7	6	5.9	7.4	
4-Oct	4	5	5	5	4	4	4	4	3	3	2	2	1	2	2	2	3	3	2	3	7	5	1	2	3.2	6.9	
5-Oct	4	3	3	3	3	2	3	6	10	11	4	6	3	3	5	6	20	20	2	3	3	3	2	2	5.4	20.2	
6-Oct	3	3	2	1	5	7	10	8	47	30	5	4	4	3	4	3	4	5	3	2	3	1	12	9	7.5	47.1	
7-Oct	8	15	13	12	12	21	5	6	8	15	14	10	2	2	4	2	3	2	2	3	5	2	3	4	7.2	20.9	
8-Oct	6	3	4	1	1	3	3	2	3	3	2	2	3	6	2	3	3	2	4	2	5	2	2	1	2.9	6.3	
9-Oct	1	2	1	1	3	4	4	5	5	5	3	1	1	2	2	3	2	2	2	3	2	3	4	3	2.7	5.2	
10-Oct	3	4	2	2	1	1	1	1	2	0	1	1	3	2	12	2	2	3	2	2	2	2	1	1	2.2	11.5	
11-Oct	2	1	1	1	1	2	1	2	2	1	1	1	1	2	3	4	4	3	5	4	5	4	4	6	2.6	5.9	
12-Oct	5	4	4	3	3	3	3	3	2	3	3	2	1	2	2	2	2	3	4	3	3	3	3	4	2.9	4.7	
13-Oct	5	6	5	5	5	5	5	4	4	3	3	4	3	3	3	3	3	3	2	3	2	3	4	4	3.8	5.6	
14-Oct	5	4	5	4	4	3	3	4	3	4	3	4	4	4	4	4	4	5	5	5	5	4	6	7	4.4	7.5	
15-Oct	8	8	9	8	9	9	7	11	7	7	10	12	24	8	9	10	10	10	11	10	9	9	9	10	9.8	24.4	
16-Oct	8	6	7	7	6	13	9	9	7	9	8	4	2	5	5	3	3	7	31	14	7	2	2	4	7.3	31.1	
17-Oct	4	7	6	2	2	3	4	8	11	21	14	2	7	19	8	7	9	5	3	5	14	10	9	10	7.9	20.7	
18-Oct	7	6	5	6	6	5	6	7	9	25	15	8	8	13	6	6	5	5	5	4	4	4	4	19	7.9	25.3	
19-Oct	5	6	12	6	5	5	4	5	14	15	19	12	15	2	3	4	4	3	5	9	8	9	7	6	7.4	18.8	
20-Oct	4	6	5	5	3	4	4	5	7	15	13	19	17	5	15	4	4	5	7	5	7	8	8	5	7.5	19.5	
21-Oct	5	4	5	5	4	5	8	8	8	6	6	6	8	12	8	8	9	12	10	11	9	7	10	8	7.6	12.0	
22-Oct	8	7	6	6	6	6	7	10	17	16	5	3	2	36	44	3	3	17	1	1	1	7	9	4	9.5	43.5	
23-Oct	4	4	3	3	3	3	5	3	6	8	10	6	6	2	25	26	2	4	3	4	4	4	4	3	6.0	26.0	
24-Oct	1	3	5	6	6	9	4	4	4	20	37	0	1	8	6	17	3	3	4	4	10	9	1	2	6.9	36.7	
25-Oct	2	3	1	1	2	3	3	6	6	12	9	20	1	2	1	C	23	17	24	5	7	7	5	7	7.3	24.4	
26-Oct	9	13	10	4	4	6	9	6	6	6	7	26	12	4	4	3	4	4	6	4	3	4	4	4	6.8	25.6	
27-Oct	4	4	4	4	4	4	4	7	4	5	30	34	31	3	2	2	2	3	2	3	4	3	10	4	7.4	33.8	
28-Oct	4	4	3	3	4	4	6	15	20	18	7	5	7	3	1	4	3	4	4	4	4	4	2	4	5.7	20.0	
29-Oct	5	3	4	4	3	3	3	4	2	6	10	3	4	3	3	4	5	3	8	6	11	8	9	9	5.1	11.0	
30-Oct	7	7	5	7	6	5	5	5	6	5	4	3	2	2	2	3	3	3	3	3	3	3	4	2	4.1	7.4	
31-Oct	3	2	2	3	8	2	5	5	7	5	3	3	3	2	3	3	2	4	4	3	3	5	4	3	3.6	7.9	
		4.6	5.0	4.8	4.2	4.5	5.0	4.8	5.7	8.0	9.6	8.8	7.5	6.4	5.6	6.5	5.2	5.1	5.6	5.9	4.8	5.4	4.9	5.2	5.2	Diurnal Average	
		9.0	14.8	13.5	11.9	12.4	20.9	9.7	14.9	47.1	30.1	36.7	33.8	30.5	36.2	43.5	26.0	23.2	20.2	31.1	13.8	13.8	10.4	12.5	18.9	Diurnal Maximum	
C - Calibration																											

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



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



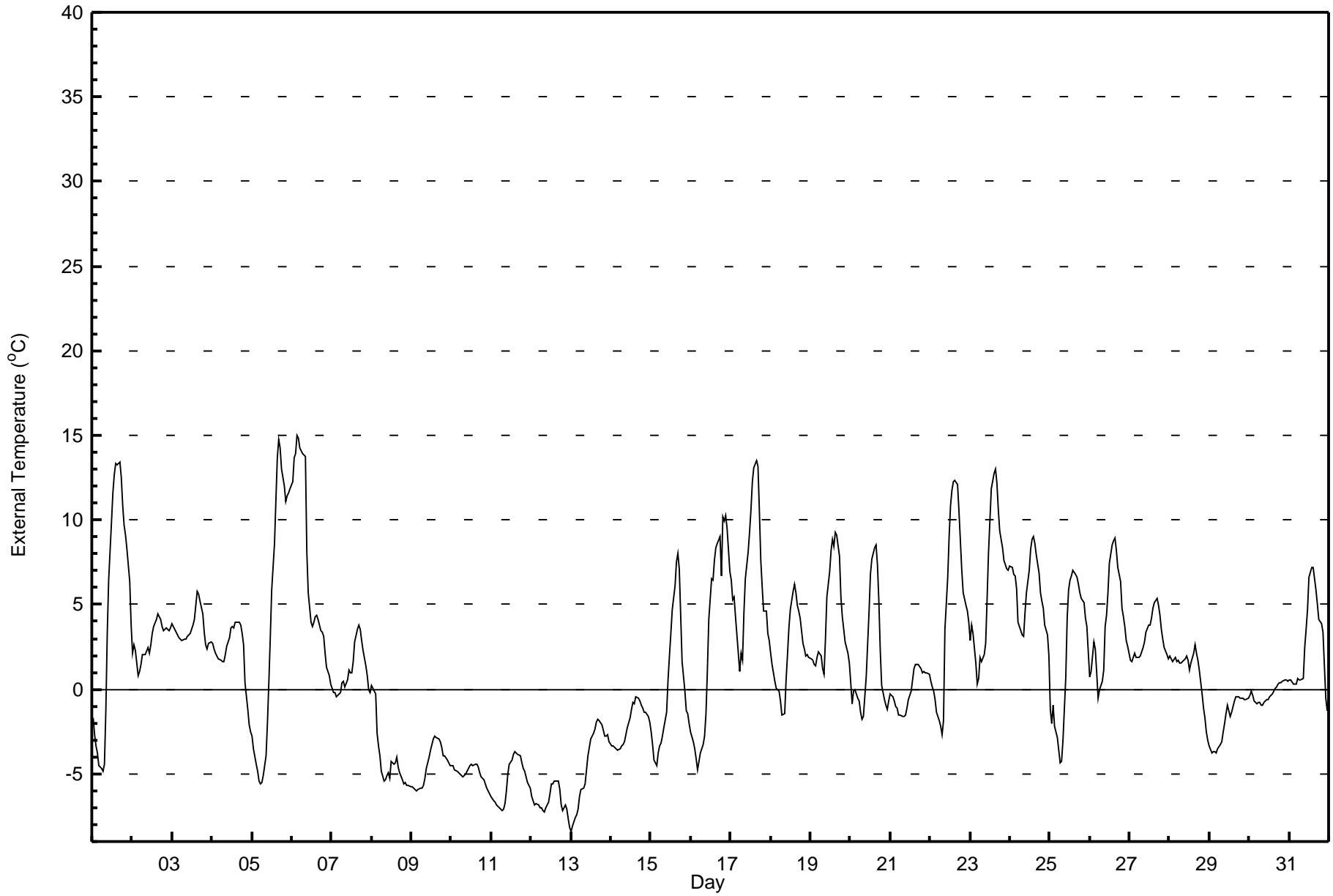
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Evergreen Park - External Temperature (ET) - °C  
October 1, 2009 to November 1, 2009**

Maximum Value: 15.0 °C on Oct 6 04:00	Maximum Daily Average: 7.4 °C on Oct 6	Hours in Service: 744
Minimum Value: -8 °C on Oct 13 01:00	Minimum Daily Average: -6.6 °C on Oct 12	Hours of Data: 744
Maximum Diurnal Average: 4.6 °C at hour 16	Minimum Diurnal Average: -1.2 °C at hour 8	Hours of Missing Data: 0
Monthly Average: 1.29 °C	Percentiles: P <sub>1</sub> = -7.2 P <sub>10</sub> = -5.1 Q <sub>1</sub> = -2.7 Median = 1.1 Q <sub>3</sub> = 4.2 P <sub>90</sub> = 8.2 P <sub>99</sub> = 13.9	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-Oct	-2	-3	-3	-4	-4	-5	-5	-4	-1	3	6	10	12	13	13	13	13	12	11	10	9	8	6	4	4.7	13.4
2-Oct	2	3	2	1	1	1	2	2	2	2	2	3	3	4	4	4	4	4	4	3	4	4	3	4	2.9	4.5
3-Oct	4	4	3	3	3	3	3	3	3	3	3	3	4	4	5	6	6	5	4	3	3	2	3	3	3.6	5.8
4-Oct	3	2	2	2	2	2	2	2	2	3	3	4	4	4	4	4	4	4	3	3	0	-1	-2	-3	2.1	4.0
5-Oct	-3	-4	-4	-5	-5	-6	-6	-5	-4	-2	0	3	6	9	11	14	15	14	13	12	11	11	12	12	4.2	14.8
6-Oct	12	14	14	15	15	14	14	14	14	8	6	4	4	4	4	4	4	3	3	3	2	1	1	0	7.4	15.0
7-Oct	0	0	0	0	0	0	0	0	0	1	1	1	1	2	3	4	4	4	3	2	1	1	0	0	1.1	3.8
8-Oct	0	0	0	-3	-3	-4	-5	-5	-5	-5	-5	-5	-4	-4	-4	-4	-5	-5	-5	-6	-6	-6	-6	-6	-4.2	0.2
9-Oct	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-4	-4	-3	-3	-3	-3	-3	-3	-3	-4	-4	-4	-4	-4	-4.4	-2.8
10-Oct	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-4	-4	-4	-4	-5	-5	-5	-5	-6	-6	-6	-6	-5.0	-4.4
11-Oct	-6	-7	-7	-7	-7	-7	-7	-7	-7	-6	-5	-4	-4	-4	-4	-4	-4	-4	-4	-5	-5	-5	-5	-6	-5.4	-3.7
12-Oct	-6	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-6	-6	-6	-5	-5	-5	-6	-7	-7	-7	-7	-8	-8	-6.6	-5.4
13-Oct	-8	-8	-8	-7	-7	-6	-6	-6	-6	-5	-4	-3	-3	-3	-2	-2	-2	-2	-2	-2	-3	-3	-3	-3	-4.3	-1.8
14-Oct	-3	-3	-3	-4	-4	-3	-3	-3	-3	-3	-2	-2	-1	-1	-1	0	-1	-1	-1	-1	-1	-1	-2	-2	-2.1	-0.4
15-Oct	-2	-3	-4	-4	-4	-3	-3	-3	-2	-1	1	2	3	5	6	8	8	7	4	2	0	-1	-1	-2	0.4	8.1
16-Oct	-3	-3	-3	-4	-5	-4	-4	-3	-3	-1	1	4	7	6	8	8	9	9	7	10	10	10	10	7	3.0	10.3
17-Oct	6	5	5	4	2	1	2	2	5	7	8	9	11	12	13	13	13	11	8	6	5	5	3	3	6.6	13.5
18-Oct	2	1	0	0	0	0	-1	-1	-1	1	2	4	5	6	6	6	5	5	4	3	2	2	2	2	2.2	6.2
19-Oct	2	2	1	1	2	2	2	1	1	3	5	7	8	9	8	9	9	8	5	4	4	3	2	2	4.2	9.2
20-Oct	0	-1	0	0	-1	-1	-1	-2	-2	1	3	4	7	8	8	9	7	5	2	0	-1	-1	-1	-1	1.8	8.5
21-Oct	0	0	-1	-1	-1	-2	-2	-2	-2	-2	-1	-1	0	1	1	1	1	1	1	1	1	1	1	1	0.0	1.4
22-Oct	0	0	0	-1	-1	-2	-2	-3	-2	4	7	9	11	12	12	12	12	10	9	7	6	5	5	4	4.7	12.4
23-Oct	3	4	3	2	0	1	2	2	2	3	5	8	10	12	13	13	12	11	9	8	8	7	7	7	6.3	13.0
24-Oct	7	7	7	7	6	4	3	3	3	5	6	7	8	9	9	9	8	7	6	5	5	4	3	2	5.8	9.1
25-Oct	-1	-2	-1	-2	-3	-4	-4	-4	-3	1	4	6	6	7	7	7	7	6	6	5	5	4	4	2	2.2	7.0
26-Oct	1	1	3	2	1	-1	0	0	1	4	4	6	7	9	9	9	8	7	6	5	4	4	3	3	4.0	8.9
27-Oct	2	2	2	2	2	2	2	2	2	3	3	4	4	4	5	5	5	5	4	4	3	2	2	2	3.0	5.3
28-Oct	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	3	2	2	1	0	-1	-2	-3	-3	1.0	2.6
29-Oct	-3	-4	-4	-4	-4	-4	-3	-3	-2	-2	-1	-1	-2	-1	-1	-1	0	0	-1	-1	-1	-1	-1	0	-1.8	-0.5
30-Oct	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0	1	1	0	-0.2	0.6
31-Oct	1	1	0	0	0	1	1	1	1	2	4	5	7	7	7	7	6	5	4	4	3	1	-1	-1	2.7	7.2
	-0.1	-0.3	-0.4	-0.7	-1.0	-1.2	-1.2	-1.2	-0.8	0.3	1.4	2.3	3.2	3.8	4.3	4.6	4.5	3.9	2.9	2.3	1.7	1.3	0.8	0.4	Diurnal Average	
	12.3	13.7	13.9	15.0	14.8	14.2	13.9	13.9	13.8	8.1	8.1	9.9	11.6	12.7	13.3	13.7	14.8	14.2	13.0	12.0	11.1	11.4	11.6	11.9	Diurnal Maximum	

# Hourly Averages for External Temperature at Evergreen Park October 2009



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

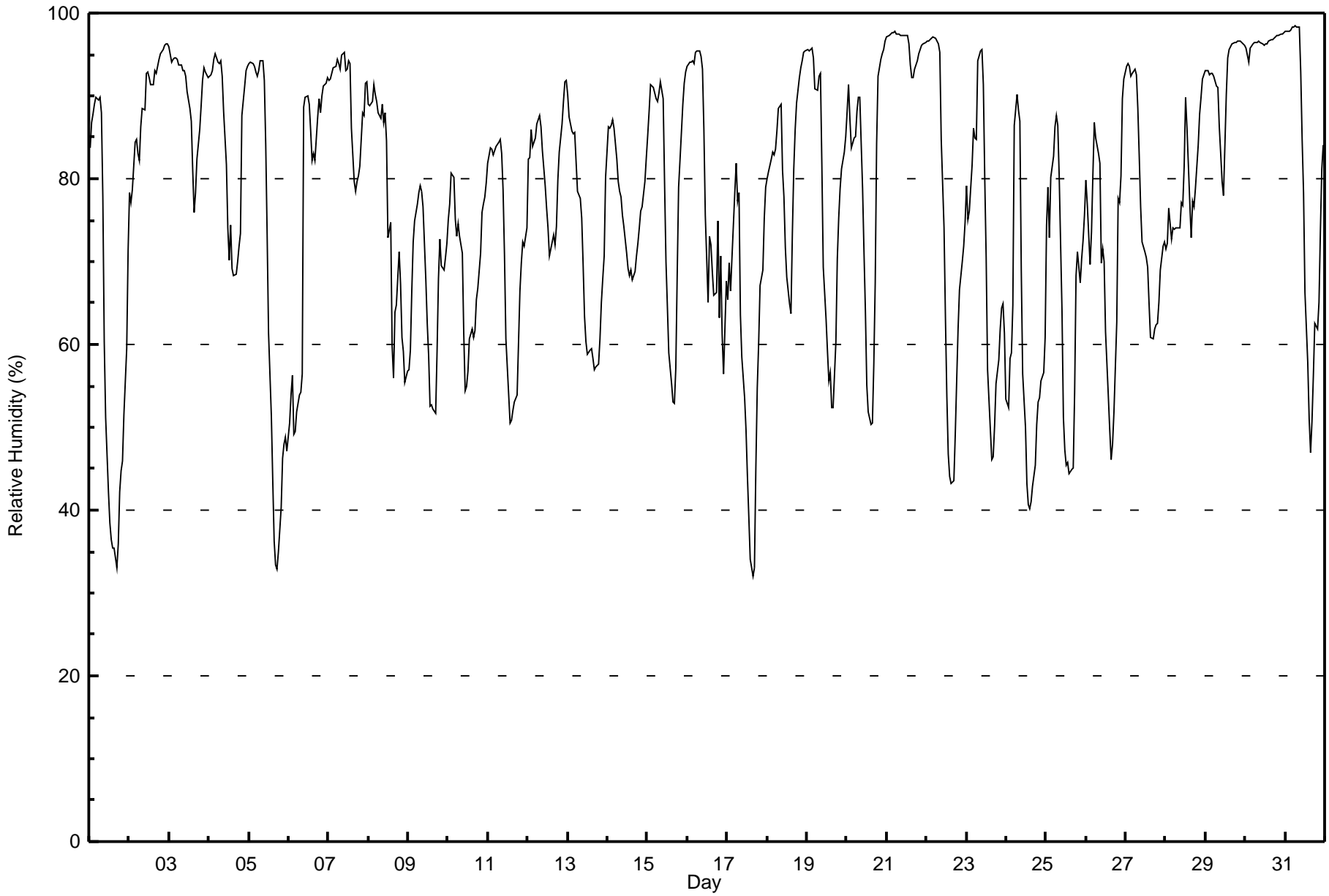
**Evergreen Park - Relative Humidity (RH) - %  
October 1, 2009 to November 1, 2009**

Maximum Value: 98.4 % on Oct 31 07:00	Maximum Daily Average: 96.5 % on Oct 30	Hours in Service: 744
Minimum Value: 32 % on Oct 17 16:00	Minimum Daily Average: 58.3 % on Oct 24	Hours of Data: 744
Maximum Diurnal Average: 87.1 % at hour 8	Minimum Diurnal Average: 61.6 % at hour 16	Hours of Missing Data: 0
Monthly Average: 77.02 %	Percentiles: P <sub>1</sub> = 35.4 P <sub>10</sub> = 52.4 Q <sub>1</sub> = 65.3 Median = 80.1 Q <sub>3</sub> = 91.9 P <sub>90</sub> = 95.6 P <sub>99</sub> = 97.8	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-Oct	84	87	88	89	90	90	90	88	78	60	51	42	39	36	35	35	33	36	42	45	46	52	59	71	61.1	89.8
2-Oct	78	77	79	84	85	83	82	86	88	88	93	93	92	91	91	93	93	94	94	95	96	96	96	96	89.4	96.3
3-Oct	96	94	94	95	95	94	94	94	93	93	92	91	89	87	81	76	78	82	86	89	92	93	93	92	90.1	95.9
4-Oct	92	93	93	94	95	94	94	94	92	88	82	74	70	74	69	68	69	70	72	73	88	91	93	94	84.0	95.0
5-Oct	94	94	94	94	93	92	93	94	94	92	84	73	61	51	43	36	33	33	35	40	46	48	49	47	67.3	94.3
6-Oct	50	54	56	49	49	52	54	54	56	89	90	90	89	86	82	83	82	87	90	88	90	91	92	92	74.8	92.2
7-Oct	92	92	93	93	93	94	94	93	95	95	93	93	94	94	86	80	79	80	80	81	88	88	92	92	89.8	95.3
8-Oct	89	89	89	91	90	89	88	87	89	87	88	85	73	75	60	56	64	65	71	67	61	59	55	57	76.0	91.4
9-Oct	57	59	66	72	75	77	78	79	78	77	68	63	59	53	53	52	52	59	68	73	70	69	71	72	66.6	79.1
10-Oct	75	77	81	80	75	73	75	73	71	61	54	55	57	61	62	61	62	65	67	71	76	77	78	80	69.4	80.7
11-Oct	82	84	84	83	83	84	84	85	83	79	71	61	54	50	51	52	53	54	60	66	70	72	72	74	70.4	84.7
12-Oct	82	83	86	84	85	87	87	88	86	83	79	76	74	71	71	73	72	74	80	83	87	89	92	92	81.8	91.8
13-Oct	90	87	86	85	86	82	78	78	75	70	63	60	59	59	60	58	57	57	58	61	65	68	71	80	70.6	90.2
14-Oct	86	86	86	87	86	82	80	78	78	76	74	71	69	68	69	68	69	71	72	74	76	77	80	83	76.9	87.1
15-Oct	85	88	91	91	90	90	89	90	92	90	79	70	65	59	55	53	53	57	68	79	86	89	92	93	78.9	92.9
16-Oct	94	94	94	94	94	95	95	95	95	93	86	76	65	73	72	69	66	66	75	63	71	61	56	68	79.6	95.4
17-Oct	65	70	66	71	78	82	77	78	64	58	53	50	44	39	34	32	33	45	55	60	67	69	75	79	60.2	81.9
18-Oct	80	81	82	83	83	83	86	88	89	81	78	72	68	65	64	73	81	86	89	92	93	94	95	95	82.6	95.4
19-Oct	96	95	96	96	95	91	91	92	93	82	69	63	59	56	57	52	52	60	70	75	79	81	83	85	77.8	95.8
20-Oct	88	91	87	84	85	85	88	90	90	79	71	64	55	52	50	51	58	68	84	92	94	95	96	97	78.9	96.7
21-Oct	97	97	97	98	98	98	97	97	97	97	97	97	97	96	94	92	92	93	94	95	96	96	96	96	96.2	97.8
22-Oct	97	97	97	97	97	97	97	96	95	85	74	63	54	47	44	43	44	49	56	62	67	70	72	75	73.8	97.1
23-Oct	79	75	76	82	86	85	85	94	95	96	91	80	70	57	50	46	46	50	55	58	62	64	65	61	71.2	95.6
24-Oct	53	52	58	59	65	86	90	88	87	69	56	50	43	41	40	41	43	45	50	53	53	56	57	61	58.3	90.2
25-Oct	74	79	73	80	83	86	88	86	80	64	51	47	45	46	44	45	45	54	68	71	67	70	73	76	66.6	87.6
26-Oct	80	77	70	74	80	87	85	83	82	70	72	70	62	54	50	46	48	52	63	78	77	80	90	92	71.6	92.1
27-Oct	94	94	94	92	93	93	93	88	83	77	72	71	70	69	65	61	61	62	62	63	65	69	72	72	76.4	94.0
28-Oct	72	72	76	73	74	74	74	74	74	77	77	82	90	86	77	73	77	77	79	84	88	90	92	93	79.3	92.6
29-Oct	93	93	93	93	93	92	91	91	86	83	80	78	90	95	96	96	96	96	96	97	97	97	96	96	92.2	96.7
30-Oct	96	95	94	96	96	96	96	96	96	96	96	96	96	96	96	97	97	97	97	97	97	97	98	98	96.5	97.6
31-Oct	98	98	98	98	98	98	98	98	98	93	85	78	66	58	51	47	51	56	63	62	65	74	81	84	79.0	98.4
	83.5	84.0	84.4	85.2	86.1	86.9	86.8	87.1	85.6	81.5	76.5	72.1	68.4	66.0	63.0	61.6	62.5	65.9	71.0	73.8	76.6	78.2	80.0	82.0	Diurnal Average	
	97.7	97.8	97.9	98.0	98.3	98.4	98.4	98.4	98.4	97.2	97.3	97.4	97.3	96.3	96.6	96.8	96.8	96.9	97.1	97.2	97.4	97.5	97.5	97.6	Diurnal Maximum	



# Hourly Averages for Relative Humidity at Evergreen Park October 2009



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

Evergreen Park  
 October 1, 2009 to November 1, 2009  
 WS (km/h), WD (deg)

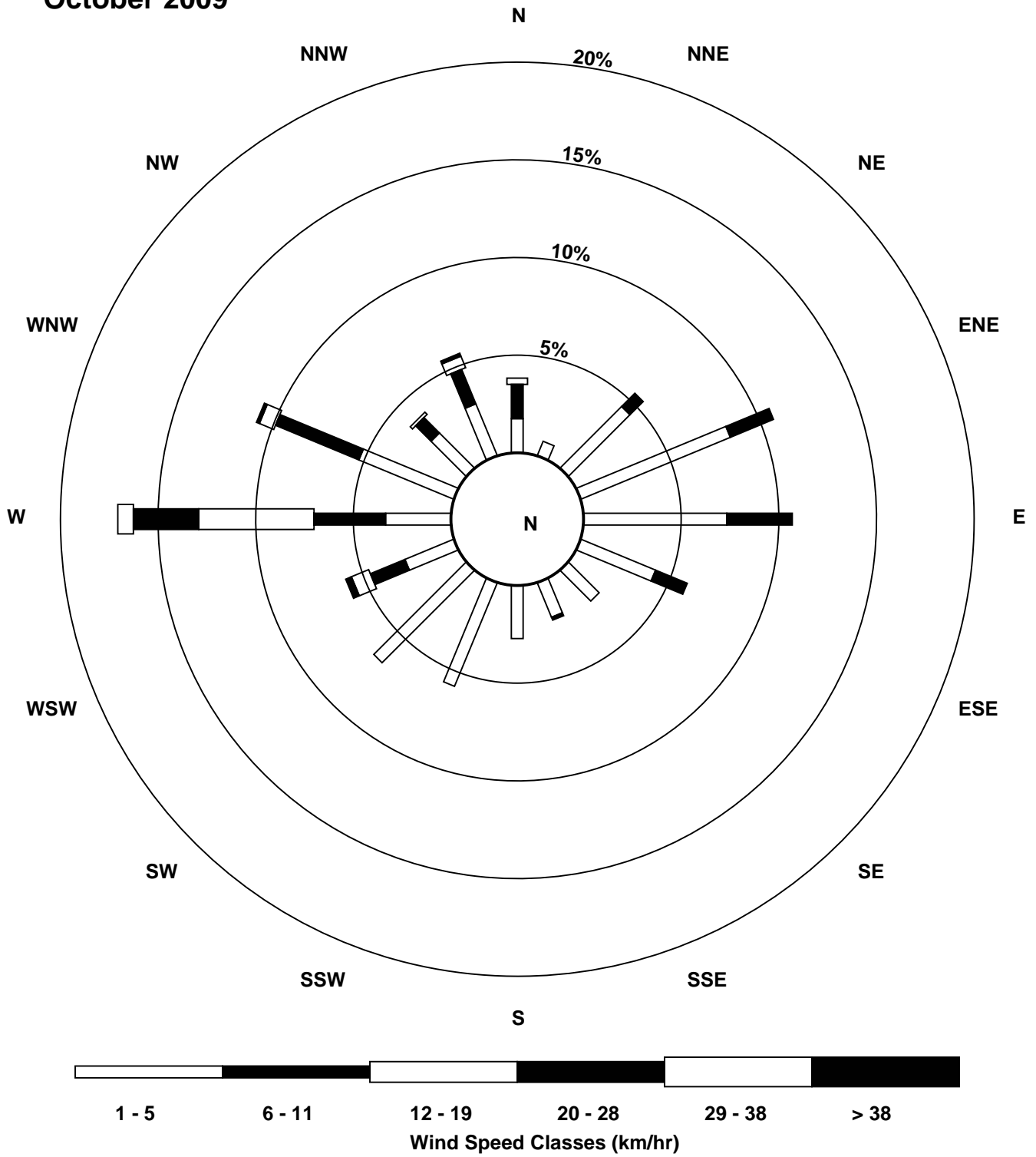
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	0	1	1	1	1	1	0	1	1	1	2	3	5	10	9	8	9	6	2	4	6	2	1	1	2.2	9.7
Dir	31	59	42	57	49	62	51	88	52	186	173	196	234	265	283	287	284	326	286	264	268	279	159	18	275.0	265.4
2 Spd	1	3	1	1	3	2	2	2	4	1	1	2	2	2	1	2	4	3	2	1	1	3	6	1	1.1	5.8
Dir	318	297	282	337	286	298	283	231	250	178	156	257	299	284	226	47	43	55	50	72	1	337	345	355	315.4	344.7
3 Spd	3	6	4	5	4	4	4	4	6	6	4	4	4	3	3	1	4	4	4	2	1	0	2	2	2.1	6.1
Dir	37	56	65	65	67	66	57	56	55	55	62	76	79	69	77	178	221	228	232	227	235	26	47	82	67.7	56.4
4 Spd	2	3	2	1	2	2	1	1	1	1	3	4	3	3	4	2	1	2	2	2	1	0	0	0	1.5	3.9
Dir	92	98	117	90	96	111	88	82	164	171	165	179	161	179	187	166	99	130	147	113	39	52	113	158	139.2	187.3
5 Spd	1	1	0	0	0	0	2	0	1	2	3	4	4	4	5	4	8	14	18	18	13	19	21	19	6.0	20.8
Dir	38	70	50	63	162	163	207	180	48	243	210	218	214	207	196	271	267	268	265	258	264	263	259	255.8	262.9	
6 Spd	14	24	29	32	30	25	25	25	22	21	12	14	16	16	14	10	5	4	4	4	6	4	5	6	13.1	31.8
Dir	257	269	266	273	274	279	277	275	278	343	1	352	342	341	337	342	347	355	317	314	325	309	277	269	296.9	272.7
7 Spd	6	4	4	4	3	3	3	2	5	4	3	2	2	1	2	3	3	5	2	2	1	3	2	2	2.2	5.9
Dir	286	280	289	280	286	289	282	289	274	274	276	82	103	76	345	322	315	338	345	254	237	223	235	305	290.4	285.8
8 Spd	2	1	5	10	7	7	10	7	3	4	5	6	6	8	8	7	7	4	7	8	6	8	6	6	5.3	10.4
Dir	289	331	41	61	70	59	54	52	34	19	43	54	2	11	9	355	359	9	345	1	354	343	348	350	19.1	53.8
9 Spd	6	3	6	7	7	7	6	4	5	7	6	6	6	8	8	9	6	6	6	9	6	8	6	4	5.7	8.6
Dir	344	309	282	277	285	278	267	282	288	289	322	319	306	282	296	285	296	314	325	342	341	350	342	334	305.9	284.9
10 Spd	5	5	5	3	4	4	2	2	2	4	3	3	4	3	3	2	2	3	2	2	2	3	2	3	2.2	5.3
Dir	337	343	336	330	347	346	1	10	44	19	3	11	5	68	69	75	14	55	78	87	102	97	94	91	19.2	343.2
11 Spd	3	3	3	3	2	2	2	2	2	4	4	6	5	4	4	4	3	3	3	2	3	5	5	5	2.9	5.9
Dir	103	99	98	103	93	99	101	98	109	126	140	159	158	164	127	128	117	78	76	67	69	57	55	52	106.5	159.2
12 Spd	5	6	5	4	3	4	4	5	6	7	8	6	6	7	8	8	8	5	4	5	5	5	5	6	5.6	8.4
Dir	46	49	43	46	43	50	53	50	57	59	65	71	59	74	64	64	63	64	56	63	67	66	74	74	60.1	63.6
13 Spd	5	6	5	5	5	6	7	6	6	7	8	10	10	10	9	9	10	9	9	10	9	10	9	9	7.7	10.3
Dir	74	79	83	83	85	94	95	84	82	87	99	102	103	98	94	96	103	99	94	93	93	95	93	93	93.3	103.4
14 Spd	9	7	7	7	7	8	8	8	7	6	6	7	6	5	5	3	4	3	2	1	1	1	2	1	5.0	9.1
Dir	93	90	91	92	96	102	106	107	107	107	109	106	109	114	108	112	115	120	99	82	71	83	70	75	101.5	92.8
15 Spd	0	1	0	1	0	1	1	1	1	1	1	1	3	5	5	4	5	3	3	2	1	2	0	1	1.2	4.7
Dir	15	42	225	62	73	78	77	139	76	38	27	239	248	227	224	231	218	186	207	211	210	216	80	215	214.6	223.8
16 Spd	1	0	0	0	1	2	1	1	1	1	1	1	2	1	1	2	1	1	5	12	10	16	8	2	1.4	16.1
Dir	152	101	11	88	68	68	71	83	49	46	92	153	95	65	91	63	70	230	286	256	258	260	256	139	257.1	260.1
17 Spd	5	1	5	1	1	4	1	1	6	5	5	5	6	3	6	6	4	3	1	1	1	1	1	2	2.2	6.1
Dir	235	182	236	246	139	215	2	235	258	269	232	224	261	264	274	256	286	67	67	159	32	21	333	251	252.1	257.6
18 Spd	1	2	3	2	3	2	1	1	1	1	1	2	3	4	7	1	2	2	0	1	1	1	1	1	0.9	7.5
Dir	303	308	321	304	299	288	255	27	261	303	258	55	267	253	256	304	130	205	205	63	93	105	130	59	276.4	255.6
19 Spd	0	0	0	1	2	2	2	1	1	4	7	7	6	7	4	4	2	0	1	1	1	0	1	1	1.4	6.9
Dir	120	64	245	208	231	237	206	213	209	282	283	285	294	349	354	337	351	207	72	223	169	147	64	212	296.8	283.0
20 Spd	0	2	2	4	3	3	3	1	3	4	4	4	1	3	3	3	5	4	5	3	1	2	2	3	0.5	5.3
Dir	229	214	207	225	229	214	220	195	211	249	252	251	231	263	325	48	82	76	66	68	49	54	51	76	206.4	81.8
21 Spd	3	2	1	1	0	2	2	1	1	1	1	0	1	2	0	2	1	1	1	1	1	1	2	1	0.6	2.5
Dir	92	96	132	182	219	101	226	210	199	215	193	254	276	288	225	131	114	217	171	281	205	164	232	212	177.6	92.3
22 Spd	1	1	2	1	2	1	1	1	1	9	12	18	18	20	18	17	14	8	2	1	1	1	1	1	5.7	20.2
Dir	214	197	210	245	225	242	227	54	246	259	259	260	270	279	278	280	279	283	315	143	85	50	185	110	270.0	279.1

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

Evergreen Park  
 October 1, 2009 to November 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	1	1	1	0	1	1	2	2	1	0	2	4	5	8	15	21	23	17	13	10	14	17	19	20	7.3	23.3	
Dir	186	174	118	79	81	34	213	109	90	340	162	201	214	252	268	271	271	275	261	253	259	268	262	267	261.9	270.7	
24 Spd	22	22	22	23	18	12	11	13	7	12	19	20	21	20	20	22	22	19	14	11	10	8	7	3	15.4	23.1	
Dir	267	267	271	275	288	315	275	266	255	265	270	279	287	281	278	275	275	276	269	265	260	243	236	229	273.2	274.5	
25 Spd	2	1	1	1	1	0	1	2	1	4	4	3	3	2	3	3	2	5	3	2	2	1	1	2	1.2	5.5	
Dir	69	130	199	109	101	82	61	215	187	211	199	174	167	121	110	87	129	228	91	145	199	218	224	93	161.2	228.3	
26 Spd	2	1	2	2	1	2	3	1	1	3	2	2	3	8	12	18	17	14	16	11	11	16	14	11	6.5	17.9	
Dir	202	201	192	232	226	63	204	187	146	208	223	308	265	280	277	277	272	275	285	276	281	276	276	287	272.5	276.8	
27 Spd	10	8	9	10	11	9	9	11	13	16	16	16	17	12	12	9	8	9	12	12	10	7	6	6	10.5	17.0	
Dir	291	297	290	287	278	265	259	262	262	272	278	284	276	282	293	296	301	293	280	273	277	296	275	262	279.7	276.4	
28 Spd	5	6	4	5	4	5	4	3	5	5	7	10	10	11	9	8	7	3	1	1	0	1	1	1	4.2	10.8	
Dir	265	280	279	284	286	263	267	277	288	287	283	291	290	291	303	329	354	351	212	197	191	197	187	170	290.0	291.3	
29 Spd	0	1	1	2	2	2	2	2	3	2	3	4	5	4	4	4	2	1	1	1	2	3	4	3	1.1	4.7	
Dir	170	80	73	73	75	88	99	91	120	106	140	111	124	116	122	94	85	62	36	318	284	287	271	283	106.2	124.1	
30 Spd	1	3	3	3	3	1	0	1	1	2	2	N	N	N	N	N	5	4	3	2	2	1	1	2	1.1	5.1	
Dir	308	313	303	330	339	331	83	73	85	95	102	N	N	N	N	N	98	79	72	68	85	82	97	112	58.7	97.9	
31 Spd	1	1	1	2	5	2	2	2	1	11	13	14	19	21	23	31	32	26	22	18	15	10	6	3	10.4	31.6	
Dir	56	81	57	341	295	182	196	198	207	240	238	240	250	255	265	268	262	255	259	270	274	343	342	279	262.2	262.3	
Spd	1.3	1.5	1.9	1.9	1.9	1.1	1.0	0.9	1.1	1.8	1.6	2.1	2.9	3.5	3.9	4.1	3.6	3.0	2.7	2.6	2.4	2.5	2.1	1.4	Diurnal Average		
Dir	290.0	295.4	281.8	292.7	293.0	300.8	272.9	273.9	268.4	287.0	265.6	268.5	275.9	281.6	286.3	288.9	287.6	282.9	282.3	276.7	279.0	291.6	283.3	282.6	Diurnal Maximum		
Spd	22.1	23.6	29.5	31.8	30.2	25.5	25.5	25.0	22.1	21.2	19.4	20.2	20.7	20.5	22.6	30.7	31.6	25.8	22.1	18.1	15.5	19.1	20.8	20.3	Diurnal Maximum		
Dir	267.5	268.7	265.7	272.7	274.3	279.2	277.1	274.5	278.4	342.6	270.4	279.4	286.7	254.5	264.7	268.5	262.3	255.1	258.9	269.6	274.1	263.9	262.9	267.3	Diurnal Maximum		
Maximum Speed Value: 32 km/h on Oct 6 04:00																		Minimum Speed Value: 0 km/h on Oct 16 03:00						Hours in Service:		744	
Maximum Daily Speed Average: 15.4 km/h on Oct 6																		Minimum Daily Speed Average: 0.5 km/h on Oct 21						Hours of Data:		739	
Maximum Diurnal Speed Average: 4.1 km/h at hour 16																		Minimum Diurnal Speed Average: 0.9 km/h at hour 8						Hours of Missing Data:		5	
Monthly Average Velocity: 2.18 km/h 283.36 deg																		Speed Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.7 Q <sub>1</sub> = 1.5 Median = 3.3 Q <sub>3</sub> = 6.5 P <sub>90</sub> = 12.8 P <sub>99</sub> = 25.2						Percent Operational Time:		99.3	
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	27	24	5	1	0	0	57																				
NorthEast	70	26	0	0	0	0	96																				
East	111	43	0	0	0	0	154																				
SouthEast	38	0	0	0	0	0	38																				
South	55	2	0	0	0	0	57																				
SouthWest	86	5	3	0	0	0	94																				
West	54	53	47	27	5	0	186																				
NorthWest	37	17	3	0	0	0	57																				
Total	478	170	58	28	5	0	739																				

# Wind Rose for WS at Evergreen Park October 2009



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

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

Maximum Speed: 32 km/h on Oct 6 04:00	Maximum Daily Speed Average: 16.0 km/h on Oct 6	Hours in Service: 744
Minimum Speed: 1 km/h on Oct 29 01:00	Minimum Daily Speed Average: 1.8 km/h on Oct 21	Hours of Data: 739
Maximum Diurnal Speed Average: 8.2 km/h at hour 16	Minimum Diurnal Speed Average: 4.1 km/h at hour 8	Hours of Missing Data: 5
Monthly Average Speed: 5.60 km/h	Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 1.3 Q <sub>1</sub> = 1.9 Median = 3.7 Q <sub>3</sub> = 6.8 P <sub>90</sub> = 12.9 P <sub>99</sub> = 25.4	Percent Operational Time: 99.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	1	1	1	1	1	1	1	2	2	3	4	6	10	10	9	10	7	2	4	6	3	2	1	3.8	10.4
2-Oct	2	4	2	2	3	3	2	3	4	2	2	2	3	2	2	3	4	3	2	1	1	4	6	3	2.6	5.9
3-Oct	4	6	4	5	4	4	4	4	6	6	5	4	4	4	3	2	4	4	4	2	1	1	2	2	3.7	6.2
4-Oct	2	3	2	1	2	2	1	1	1	2	3	4	4	4	4	3	2	2	3	2	1	1	1	1	2.3	4.5
5-Oct	1	1	1	1	1	1	2	1	1	2	3	4	4	5	6	5	9	14	18	18	13	19	21	19	7.0	20.9
6-Oct	15	24	30	32	30	26	26	25	23	21	12	15	16	16	16	14	11	6	5	4	6	4	5	6	16.0	31.9
7-Oct	6	5	4	4	3	4	3	2	5	4	3	4	3	2	3	4	4	5	3	3	2	3	2	2	3.4	6.1
8-Oct	3	2	6	10	7	7	11	7	3	4	5	6	6	9	9	7	8	5	7	8	6	9	7	6	6.6	10.6
9-Oct	6	4	7	7	7	7	6	5	5	7	6	7	7	9	8	9	6	7	7	9	6	9	6	5	6.7	8.9
10-Oct	5	5	5	4	4	4	2	2	2	4	4	3	4	3	4	2	3	3	2	2	2	3	2	3	3.2	5.4
11-Oct	3	3	3	3	3	2	2	2	3	5	5	7	6	5	5	5	4	3	3	2	3	5	5	5	3.8	6.5
12-Oct	5	6	5	5	5	4	4	5	6	7	8	6	7	7	9	9	8	5	4	6	5	6	5	6	5.9	8.6
13-Oct	6	6	5	5	5	6	7	6	6	7	8	10	10	11	10	10	11	9	9	10	9	10	10	9	8.1	10.7
14-Oct	9	7	7	8	7	8	9	8	7	6	7	7	7	5	6	4	4	3	2	1	1	2	2	1	5.4	9.4
15-Oct	1	1	1	1	1	1	1	1	1	1	2	2	3	5	5	5	5	3	3	2	2	2	2	2	2.2	5.0
16-Oct	1	1	1	1	2	2	2	2	1	1	2	2	2	2	2	2	2	2	6	13	11	16	8	4	3.7	16.2
17-Oct	5	2	7	3	2	5	4	3	6	6	5	5	7	4	7	6	5	3	2	1	1	1	1	2	3.9	7.1
18-Oct	1	2	3	3	3	2	2	1	2	2	2	2	3	5	8	2	2	2	1	1	2	1	1	1	2.3	7.6
19-Oct	1	1	1	1	2	2	2	1	1	4	7	7	7	7	4	4	3	1	2	2	2	1	1	1	2.7	7.2
20-Oct	1	2	2	4	4	3	3	1	3	4	4	4	2	4	3	4	6	4	5	3	1	2	2	3	3.2	5.5
21-Oct	3	2	2	2	1	3	2	2	2	2	1	2	2	2	2	2	2	2	1	2	1	1	2	1	1.8	2.7
22-Oct	1	1	2	1	2	2	1	1	2	9	12	18	19	20	18	17	14	9	2	2	2	2	1	2	6.7	20.5
23-Oct	2	2	2	1	1	2	3	3	2	1	2	4	5	9	15	21	23	17	13	10	14	17	19	20	8.7	23.5
24-Oct	22	22	22	23	18	12	11	13	7	12	20	21	21	20	21	22	22	19	14	12	10	8	7	5	16.0	23.3
25-Oct	2	3	2	1	1	1	1	3	2	4	4	3	3	2	3	3	2	6	4	3	3	1	2	3	2.6	6.0
26-Oct	3	3	3	3	3	2	4	3	1	3	2	2	3	8	12	18	17	14	16	11	12	16	14	11	7.7	18.1
27-Oct	10	8	9	10	11	9	9	11	13	16	16	16	17	12	13	9	8	9	12	12	10	7	6	6	10.9	17.1
28-Oct	5	6	4	5	4	5	4	3	5	5	7	10	10	11	9	8	7	3	2	2	1	1	1	1	5.1	11.1
29-Oct	1	1	1	2	2	2	2	2	3	2	4	4	5	4	4	4	2	1	1	1	2	3	4	4	2.6	5.0
30-Oct	2	3	3	3	3	1	1	1	2	2	3	N	N	N	N	N	5	4	3	2	3	2	1	2	2.4	5.4
31-Oct	1	1	2	2	5	3	2	3	2	11	13	14	19	21	23	31	32	26	22	18	16	11	6	4	12.0	31.8
	4.2	4.4	4.8	5.0	4.7	4.4	4.4	4.1	4.2	5.3	5.8	6.7	7.2	7.7	8.1	8.2	7.9	6.5	5.7	5.4	5.0	5.5	4.9	4.5	Diurnal Average	
	22.2	23.7	29.5	31.9	30.4	25.7	25.7	25.2	22.7	21.5	19.5	20.5	20.9	20.6	22.8	30.8	31.8	26.0	22.3	18.2	15.6	19.2	20.9	20.5	Diurnal Maximum	

N - Not Valid  
 All monthly, daily, and diurnal averages have been calculated using scalar methods

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

**Evergreen Park - Wind Direction (WD) - deg  
October 1, 2009 to November 1, 2009**

Maximum Value: 95.6 deg on Oct 15 05:00	Hours in Service: 744
Minimum Value: 4.5 deg on Oct 6 03:00	Hours of Data: 739
Percentiles: P <sub>1</sub> = 5.6 P <sub>10</sub> = 8.9 Q <sub>1</sub> = 14.6 Median = 23.5 Q <sub>3</sub> = 49.5 P <sub>90</sub> = 70.7 P <sub>99</sub> = 89.8	Hours of Missing Data: 5
	Hours of Calibration: 0
	Percent Operational Time: 99.3

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Oct	94	50	37	64	60	47	83	69	83	50	53	37	43	22	23	25	23	22	27	16	10	81	73	68	94.2
2-Oct	69	42	45	53	19	25	46	40	16	54	39	42	28	31	41	56	17	22	18	36	47	17	9	81	80.6
3-Oct	30	14	26	25	21	19	27	21	20	18	31	26	31	24	49	60	22	8	6	21	56	79	25	22	79.0
4-Oct	20	19	22	29	19	24	29	32	52	55	49	28	33	47	32	55	53	31	57	37	67	90	88	89	89.7
5-Oct	63	43	67	88	88	78	27	85	55	39	34	29	27	31	30	34	43	7	6	7	6	6	6	7	88.0
6-Oct	8	7	4	5	6	7	7	6	12	8	20	20	10	10	11	14	22	30	13	19	12	15	13	10	29.7
7-Oct	12	16	18	15	15	19	17	24	9	9	17	70	33	45	70	37	23	15	53	41	41	28	20	27	70.3
8-Oct	31	27	38	12	18	15	11	13	30	23	26	24	31	27	19	21	26	32	20	20	22	14	12	18	37.9
9-Oct	16	27	13	9	12	9	14	23	22	17	27	28	35	20	21	16	19	18	26	11	14	11	20	17	35.4
10-Oct	20	15	12	17	29	23	27	30	38	29	39	49	32	44	54	48	38	29	26	22	23	16	20	16	54.4
11-Oct	20	16	18	22	21	18	18	23	22	23	35	29	30	41	43	29	35	34	20	17	16	17	15	13	42.7
12-Oct	12	11	13	14	13	11	13	16	15	16	20	28	25	24	24	14	15	17	13	10	12	10	12	12	28.4
13-Oct	12	12	14	16	15	17	15	17	22	19	21	18	17	15	16	17	17	19	16	17	17	15	16	16	22.4
14-Oct	15	16	22	16	16	15	18	16	14	23	19	22	29	35	21	33	21	21	17	11	16	18	12	18	35.3
15-Oct	69	51	86	57	96	71	27	53	52	58	84	68	34	32	21	20	15	11	16	57	50	61	88	69	95.6
16-Oct	56	70	93	84	78	14	73	49	53	54	56	92	47	65	69	31	36	59	27	21	18	6	18	60	93.4
17-Oct	37	75	66	76	60	67	72	81	24	27	24	20	28	60	30	20	48	19	43	90	61	86	72	36	89.6
18-Oct	45	30	21	24	23	34	35	78	80	47	80	46	39	25	11	55	37	24	85	72	76	70	63	24	84.9
19-Oct	79	78	82	59	28	30	16	60	51	22	15	22	38	26	25	35	37	79	85	85	72	85	69	83	85.4
20-Oct	95	11	48	11	9	8	11	64	20	27	17	31	68	29	60	48	22	11	11	11	29	20	22	19	95.0
21-Oct	37	30	52	72	87	46	61	77	53	62	73	95	66	48	91	33	44	70	38	34	44	41	25	39	94.7
22-Oct	73	55	17	71	64	40	73	61	77	14	12	7	14	10	11	10	8	10	62	61	82	51	43	78	82.0
23-Oct	57	61	46	88	88	59	58	61	63	83	57	38	17	25	16	10	7	8	10	9	7	6	5	6	88.5
24-Oct	6	5	6	7	15	19	10	7	13	12	6	10	10	10	11	7	6	7	6	5	11	7	9	74	73.7
25-Oct	13	79	57	68	65	88	57	69	60	21	22	27	22	27	24	15	50	35	44	53	52	82	80	60	87.8
26-Oct	80	77	39	61	75	62	71	68	51	8	14	35	37	11	9	10	7	7	9	8	13	8	7	11	79.6
27-Oct	12	12	9	9	8	8	6	6	6	6	7	9	8	10	13	12	14	13	10	7	14	16	10	7	15.7
28-Oct	6	20	10	16	13	8	12	16	14	14	11	12	13	14	15	19	15	25	37	52	85	54	40	50	85.2
29-Oct	66	60	50	26	16	16	23	20	22	31	38	33	21	17	19	18	31	51	40	71	20	15	18	23	71.4
30-Oct	45	31	22	21	16	19	61	13	21	23	20	N	N	N	N	N	24	28	22	25	24	39	58	49	60.8
31-Oct	63	54	59	48	25	78	60	69	60	8	5	6	8	6	8	5	6	7	8	6	6	17	20	23	77.8
	95.0	79.0	93.4	88.5	95.6	87.8	83.2	84.8	83.1	82.6	84.2	94.7	67.7	64.7	90.7	60.5	53.3	78.6	85.1	89.6	85.2	89.7	88.2	89.5	

N - Not Valid

PASZA

Smoky Heights Station

Monthly Summary Tables, Graphs and  
Roses

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

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 0.2 ppb on Oct 1 02:00	Maximum Daily Average: -- ppb on Sep 30
Minimum Value: 0 ppb on Oct 31 23:00	Hours of Data: 15
Maximum Diurnal Average: 0.2 ppb at hour 2	Hours of Missing Data: 729
Monthly Average: 0.08 ppb	Hours of Calibration: 35
Minimum Daily Average: -- ppb on Sep 30	Percent Operational Time: 6.7
Minimum Diurnal Average: 0.0 ppb at hour 23	
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> = 0.1 P <sub>90</sub> = 0.2 P <sub>99</sub> = 0.2	

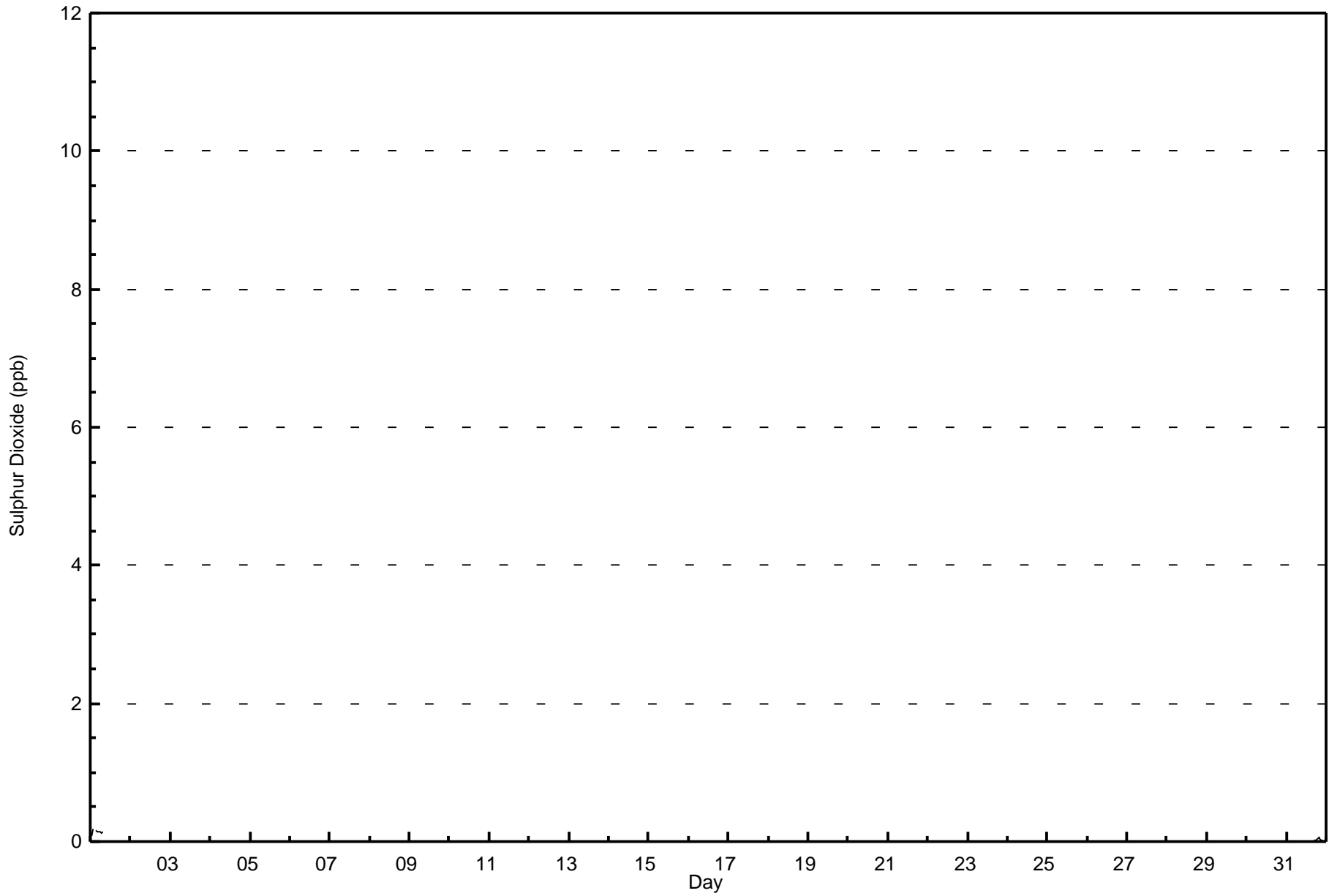
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																							
1-Oct	0	0	A	0	0	0	0	0	P	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.2																					
2-Oct	N	A	N	N	N	N	N	N	N	N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

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



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

## October 2009



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

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

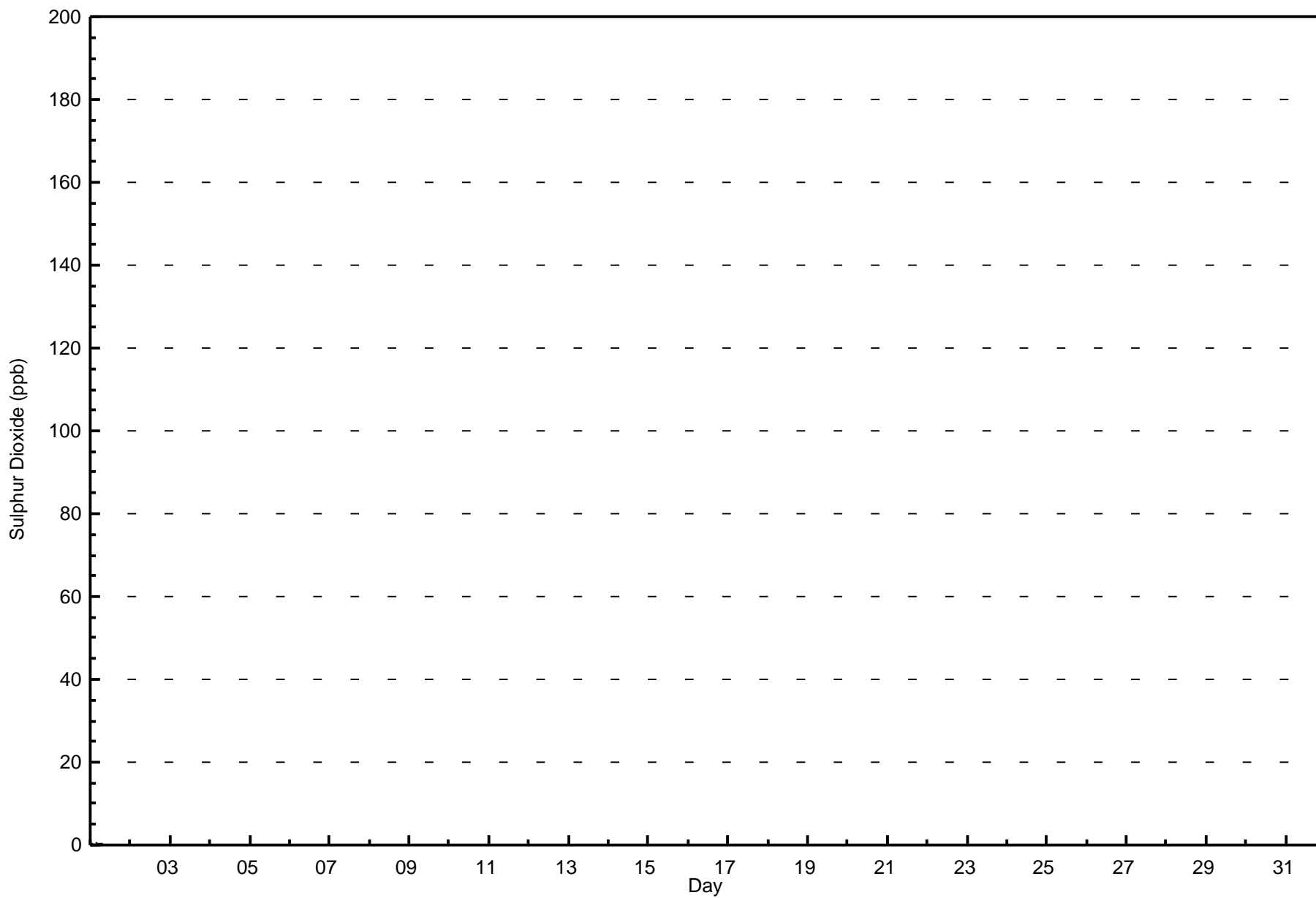
Maximum Value: 0.6 ppb on Oct 31 20:00	Maximum Daily Average: -- ppb on Sep 30	Hours in Service: 744
Minimum Value: 0 ppb on Oct 31 19:00	Minimum Daily Average: -- ppb on Sep 30	Hours of Data: 15
Maximum Diurnal Average: 0.6 ppb at hour 20	Minimum Diurnal Average: 0.0 ppb at hour 19	Hours of Missing Data: 729
Monthly Average: 0.31 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.4 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 0.5 P <sub>99</sub> = 0.6	Hours of Calibration: 35
		Percent Operational Time: 6.7

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-Oct	0	1	A	1	0	0	0	0	P	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.5	
2-Oct	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
3-Oct	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
4-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	--	--
5-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	--	--
6-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	--	--	
7-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	--	--	
8-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	--	--	
9-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	--	--	
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	--	--	
11-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	--	--	
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	--	--	
13-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	--	--	
14-Oct	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	--	--	
15-Oct	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
16-Oct	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
17-Oct	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
18-Oct	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
19-Oct	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
20-Oct	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
21-Oct	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
22-Oct	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
23-Oct	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
24-Oct	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
25-Oct	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
26-Oct	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	--	--	
27-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	--	--	
28-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	--	--	
29-Oct	N	N	N	N	N	N	N	N	N	N	N	C	C	C	N	N	N	N	N	N	N	N	N	N	--	--	
30-Oct	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
31-Oct	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	0	0	0	1	0	0	0	0	--	0.6	
	0.4	0.5	--	0.5	0.5	0.5	0.4	0.4	--	--	--	--	--	--	--	0.0	0.0	0.0	0.6	0.2	0.1	0.1	0.3		Diurnal Average		
	0.4	0.5	--	0.5	0.5	0.5	0.4	0.4	--	--	--	--	--	--	--	0.0	0.0	0.0	0.6	0.2	0.1	0.1	0.3		Diurnal Maximum		

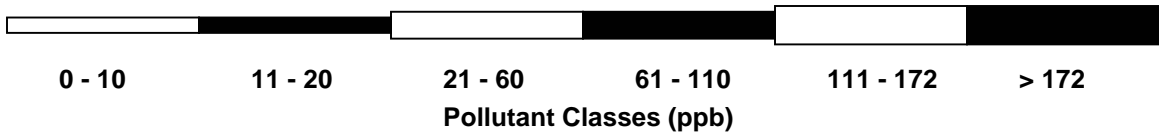
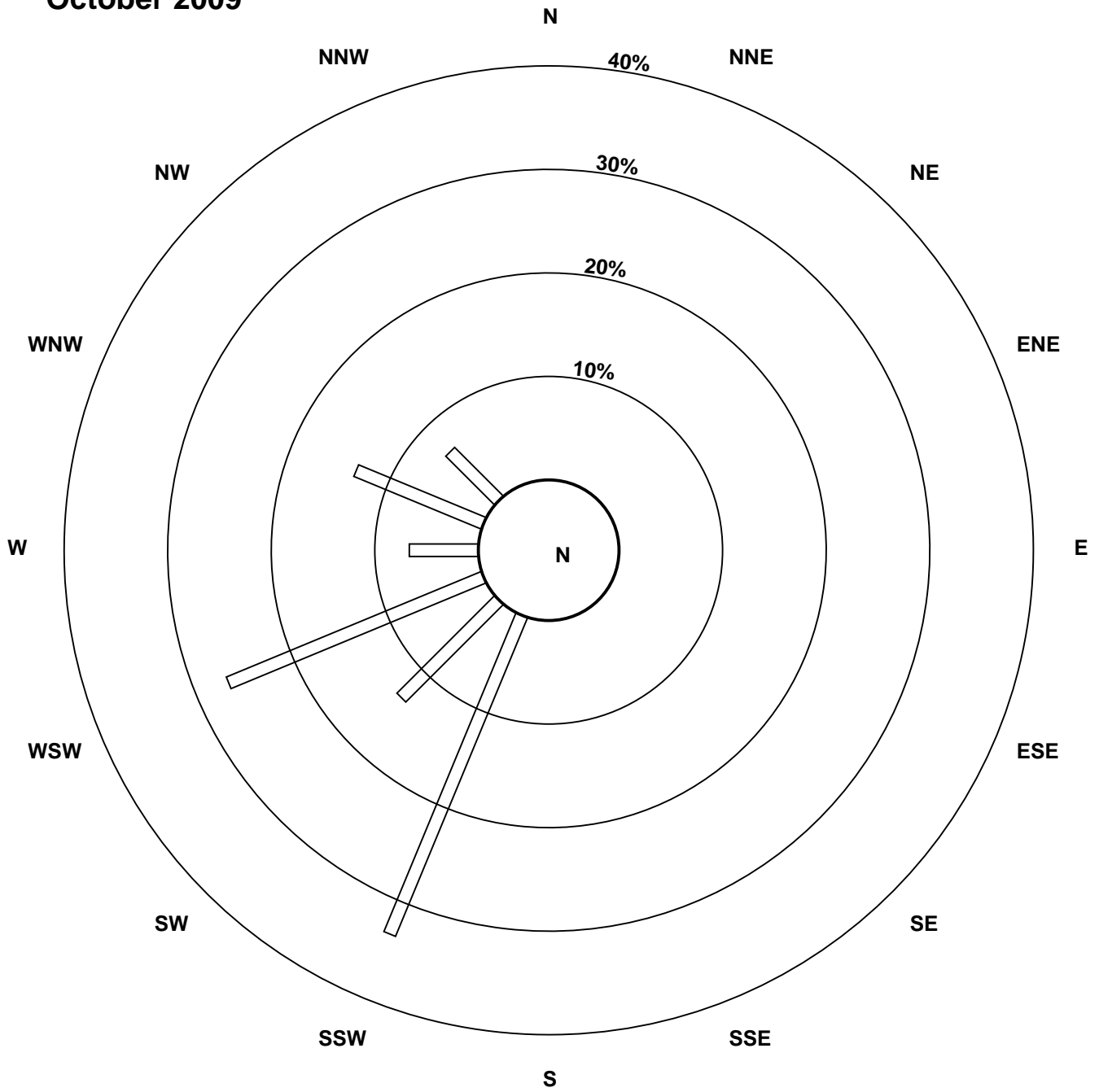
C - Calibration                      P - Power Failure                      N - Not Valid                      A - Automated Daily Zero Span

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

## October 2009



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



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

**Smoky Heights - Total Reduced Sulphur (TRS) - ppb  
October 1, 2009 to November 1, 2009**

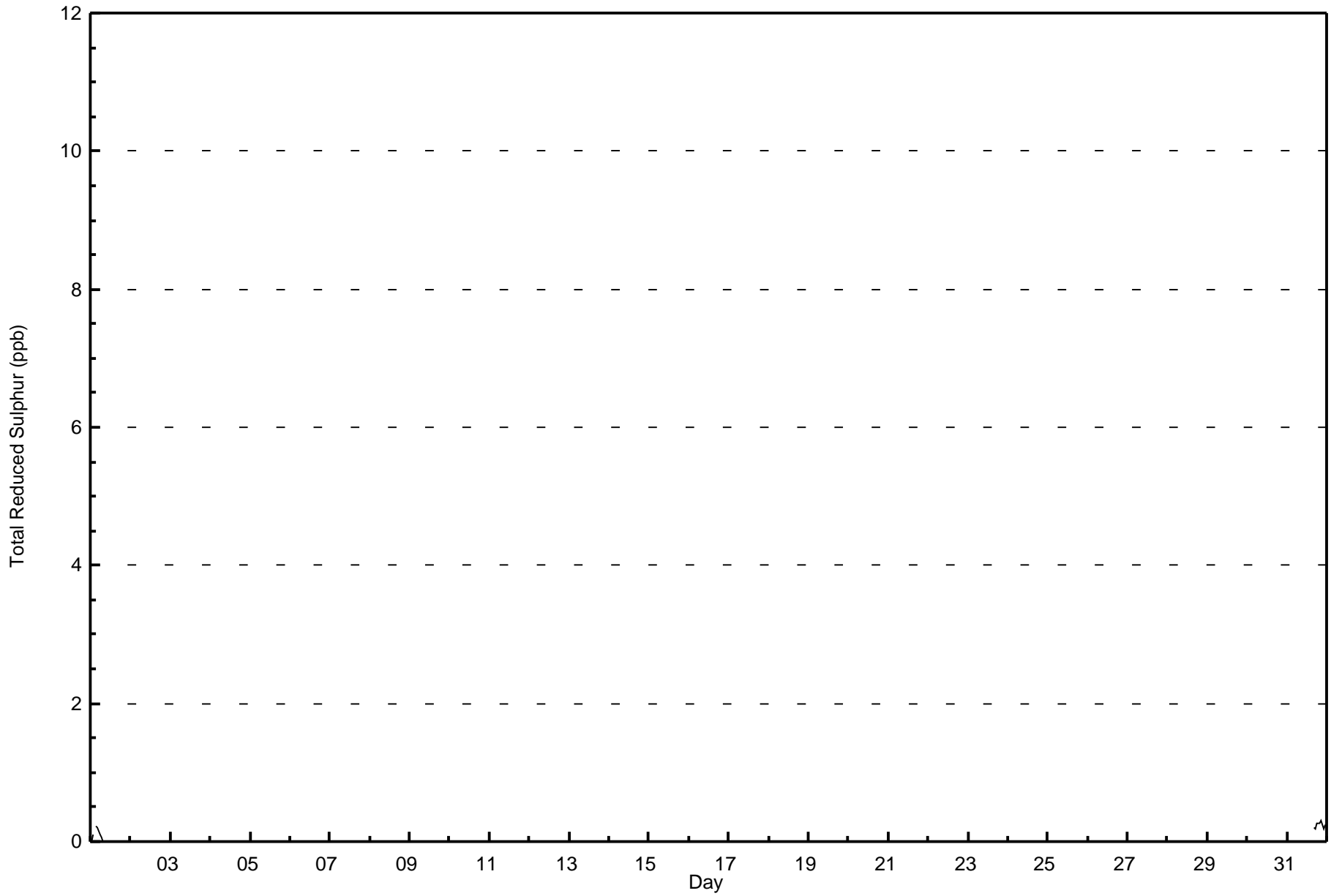
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 0.3 ppb on Oct 31 21:00	Maximum Daily Average: -- ppb on Sep 30		Hours of Data:	15
Minimum Value: 0 ppb on Oct 1 01:00	Minimum Daily Average: -- ppb on Sep 30		Hours of Missing Data:	729
Maximum Diurnal Average: 0.3 ppb at hour 21	Minimum Diurnal Average: 0.0 ppb at hour 1		Hours of Calibration:	35
Monthly Average: 0.17 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.2 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.3 P <sub>99</sub> = 0.3		Percent Operational Time:	6.7

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-Oct	0	0	A	0	0	0	0	0	P	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.2
2-Oct	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
3-Oct	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
4-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	--	--
5-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	--	--
6-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	--	--
7-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	--	--
8-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	--	--
9-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	--	--
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	--	--
11-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	--	--
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	--	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	--	--
14-Oct	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	--	--
15-Oct	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	--	--
16-Oct	N	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
17-Oct	N	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
18-Oct	N	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
19-Oct	N	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
20-Oct	N	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
21-Oct	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
22-Oct	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
23-Oct	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
24-Oct	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
25-Oct	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
26-Oct	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	--	--
27-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	--	--
28-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	A	N	N	N	--	--
29-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	C	N	N	N	N	N	N	N	N	--	--
30-Oct	N	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
31-Oct	N	N	N	N	A	N	N	N	N	N	N	N	N	N	N	0	0	0	0	0	0	0	0	0	--	0.3
	0.0	0.1	--	0.2	0.2	0.1	0.1	0.0	--	--	--	--	--	--	--	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2		Diurnal Average	
	0.0	0.1	--	0.2	0.2	0.1	0.1	0.0	--	--	--	--	--	--	--	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2		Diurnal Maximum	

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

# Hourly Averages for TRS at Smoky Heights

## October 2009



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

**Smoky Heights - Total Reduced Sulphur (TRS) - ppb  
October 1, 2009 to November 1, 2009**

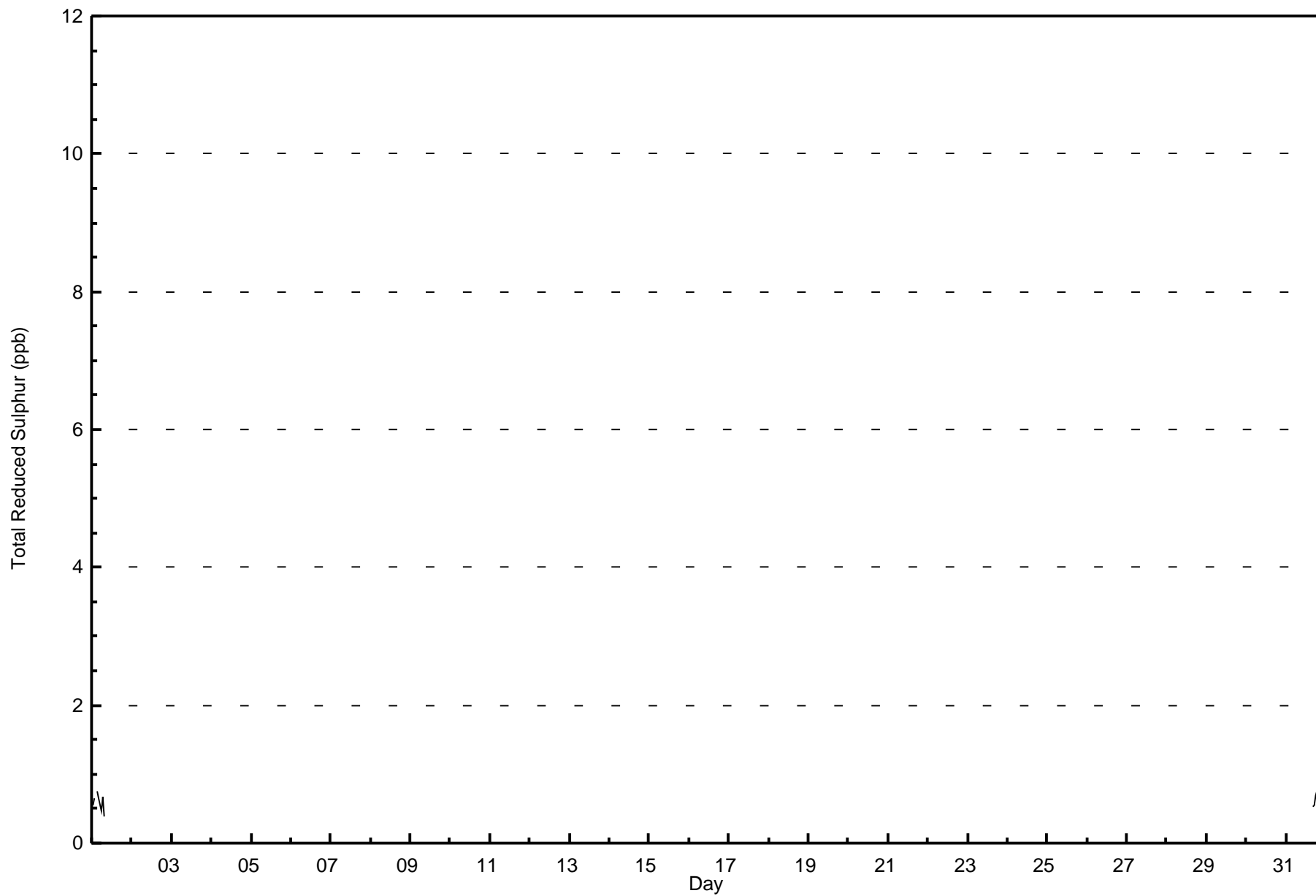
Maximum Value: 0.8 ppb on Oct 31 20:00	Maximum Daily Average: -- ppb on Sep 30	Hours in Service: 744
Minimum Value: 0 ppb on Oct 1 08:00	Minimum Daily Average: -- ppb on Sep 30	Hours of Data: 15
Maximum Diurnal Average: 0.8 ppb at hour 20	Minimum Diurnal Average: 0.4 ppb at hour 8	Hours of Missing Data: 729
Monthly Average: 0.61 ppb	Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.5 Median = 0.6 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 0.7 P <sub>99</sub> = 0.8	Hours of Calibration: 35
		Percent Operational Time: 6.7

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

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

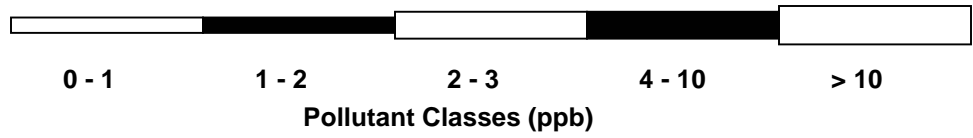
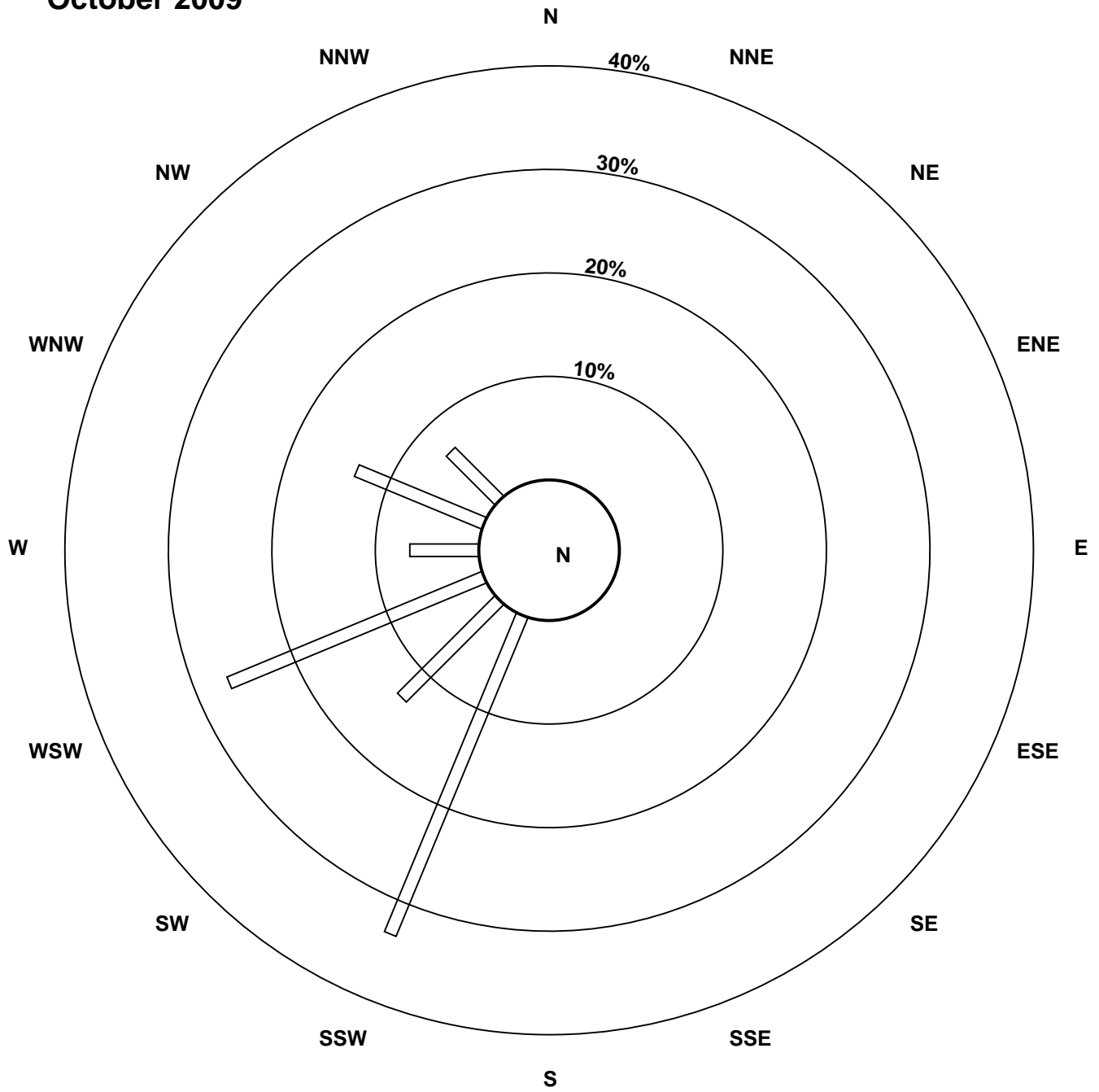
# Hourly Maximums for TRS at Smoky Heights

## October 2009





# Pollutant Rose for TRS at Smoky Heights October 2009



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

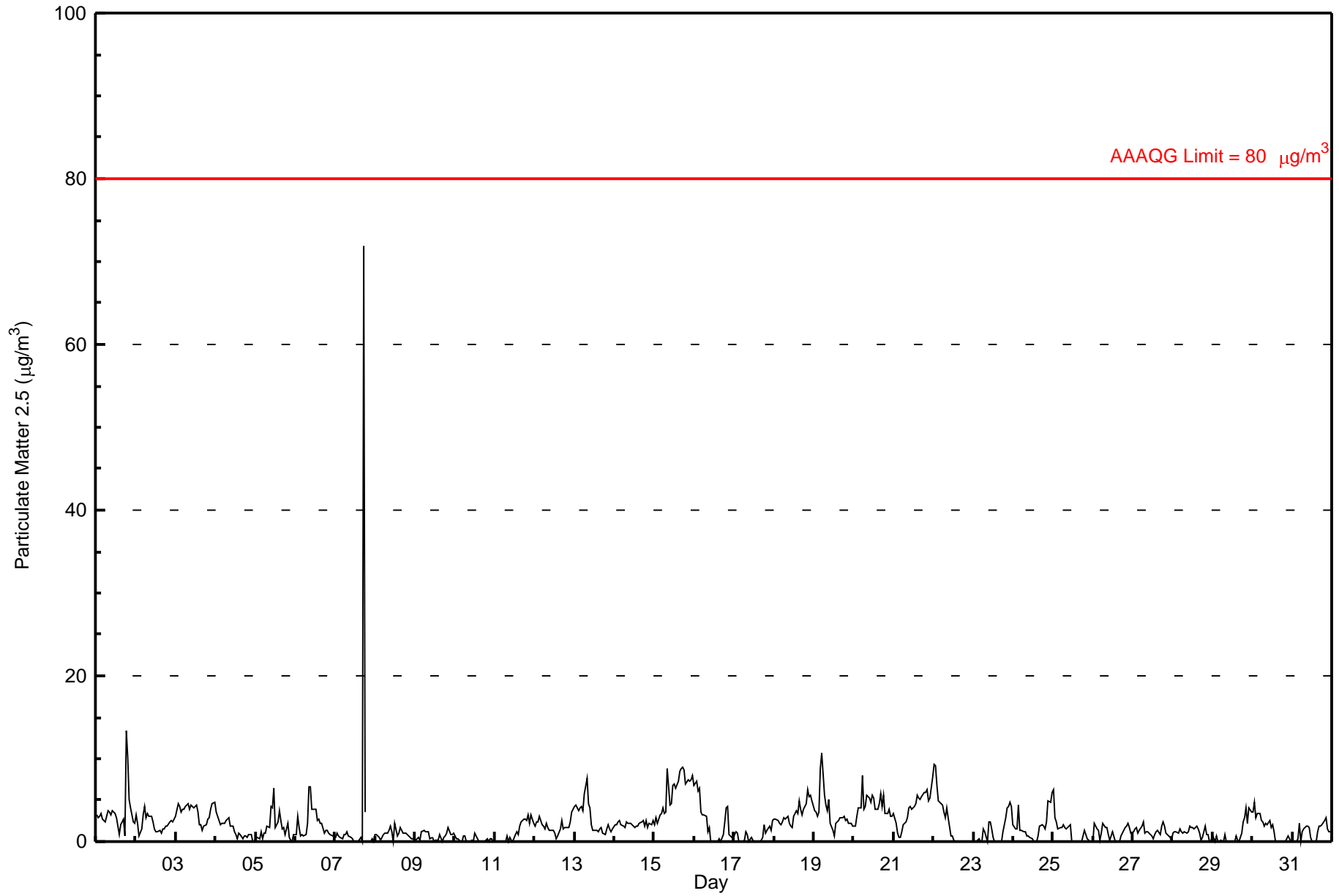
**Smoky Heights - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
October 1, 2009 to November 1, 2009**

Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 71.9 µg/m <sup>3</sup> on Oct 7 18:00	Maximum Daily Average: 5.9 µg/m <sup>3</sup> on Oct 15
Minimum Value: 0 µg/m <sup>3</sup> on Oct 4 23:00	Hours of Data: 740
Maximum Diurnal Average: 4.0 µg/m <sup>3</sup> at hour 18	Hours of Missing Data: 4
Monthly Average: 2.13 µg/m <sup>3</sup>	Hours of Calibration: 3
Minimum Daily Average: 0.2 µg/m <sup>3</sup> on Oct 10	Percent Operational Time: 99.9
Minimum Diurnal Average: 1.4 µg/m <sup>3</sup> at hour 14	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.6 Median = 1.6 Q <sub>3</sub> = 2.9 P <sub>90</sub> = 4.5 P <sub>99</sub> = 8.7	

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-Oct	3	3	3	3	3	2	3	4	4	3	4	3	3	2	1	2	3	1	13	10	5	4	2	2	3.6	13.4	
2-Oct	3	2	1	2	3	4	3	3	3	3	2	2	1	1	1	2	2	2	2	2	2	3	3	2	3	2.2	4.2
3-Oct	3	5	4	4	4	4	4	5	4	4	4	4	4	4	2	2	1	2	2	3	3	4	5	5	3.5	4.8	
4-Oct	4	3	2	2	2	2	3	3	3	2	2	1	1	0	1	1	0	1	1	0	1	1	0	0	1.5	3.5	
5-Oct	0	1	0	1	0	1	1	2	2	4	4	6	2	2	4	3	1	2	1	2	0	0	0	1	1.7	6.4	
6-Oct	1	3	2	1	1	1	1	2	7	7	4	4	4	2	3	2	2	1	1	1	1	1	1	1	2.2	6.7	
7-Oct	1	1	1	0	0	1	1	1	1	0	0	0	0	0	1	0	0	72	4	BD	0	0	0	0	3.6	71.9	
8-Oct	1	1	0	0	1	1	1	1	1	2	1	0	2	1	1	2	1	1	1	1	1	1	1	0	0.9	2.2	
9-Oct	0	0	1	0	1	1	1	1	1	0	0	0	0	0	0	1	0	1	1	1	1	2	1	1	0.7	1.7	
10-Oct	1	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.2	1.0	
11-Oct	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	2	2	3	3	3	3	3	2	3	1.1	3.3	
12-Oct	2	2	2	3	2	2	2	2	2	1	1	1	1	0	1	2	3	2	2	2	2	2	4	4	1.9	3.9	
13-Oct	4	4	4	4	4	4	6	8	4	4	2	1	1	1	1	1	2	1	1	2	2	1	1	1	2.8	7.6	
14-Oct	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	3	2.1	2.6	
15-Oct	2	3	2	3	3	4	3	4	9	4	5	7	7	6	7	8	9	9	9	7	7	7	8	8	5.9	8.9	
16-Oct	7	7	6	6	4	3	3	3	1	2	0	0	0	0	0	0	0	1	2	4	4	1	1	0	2.3	7.3	
17-Oct	1	1	1	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	2	1	1	2	1	3	0.7	2.5	
18-Oct	3	3	2	2	2	2	3	3	3	2	2	2	3	4	3	5	4	3	4	5	6	5	6	5	3.4	6.2	
19-Oct	4	4	3	4	9	11	6	4	4	5	2	1	1	2	2	3	3	3	3	2	3	2	2	2	3.5	10.7	
20-Oct	2	2	3	4	4	8	4	4	6	5	5	6	5	4	4	5	6	4	6	3	3	4	3	3	4.3	8.0	
21-Oct	3	2	1	0	1	1	2	2	3	4	4	4	4	5	6	5	5	5	6	6	6	5	5	8	3.9	7.7	
22-Oct	9	9	7	5	5	4	3	3	4	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2.2	9.3	
23-Oct	0	0	0	0	0	0	2	1	0	2	2	1	0	0	0	0	0	0	1	3	4	4	5	4	1.3	4.8	
24-Oct	2	1	1	4	1	1	1	1	1	1	1	0	0	0	0	1	2	2	2	2	2	5	5	6	1.8	5.9	
25-Oct	6	3	2	2	2	2	2	2	1	2	2	0	0	0	0	0	0	0	1	1	0	0	0	0	1.2	6.4	
26-Oct	0	2	1	1	0	1	2	2	2	1	0	1	1	0	0	0	0	1	1	2	2	2	2	1	1.1	2.2	
27-Oct	1	1	2	1	1	2	2	1	1	1	1	1	0	1	1	1	1	2	2	2	1	1	1	0	1.2	2.4	
28-Oct	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	0	1	2	1	1	0	0	1.1	1.8	
29-Oct	1	0	1	0	0	0	0	1	0	0	C	C	C	0	1	0	0	1	2	3	4	2	4	4	1.1	4.1	
30-Oct	4	5	3	3	3	3	2	2	2	2	3	2	2	1	0	0	0	0	0	0	0	1	0	0	1.6	4.7	
31-Oct	0	0	0	0	2	0	1	1	2	2	2	1	0	0	0	1	2	2	2	2	3	2	1	1	1.1	3.0	
	2.3	2.3	1.9	2.0	2.0	2.2	2.1	2.3	2.4	2.3	2.0	1.8	1.6	1.4	1.4	1.7	1.7	4.0	2.5	2.5	2.4	2.1	2.1	2.2	Diurnal Average		
	9.3	9.2	6.7	6.4	8.8	10.7	5.7	7.6	8.8	6.7	4.8	6.7	6.9	6.4	7.3	8.5	8.8	71.9	13.4	10.2	7.4	7.3	7.5	8.0	Diurnal Maximum		

C - Calibration      BD - Baseline Drift  
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m<sup>3</sup>      Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m<sup>3</sup>

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

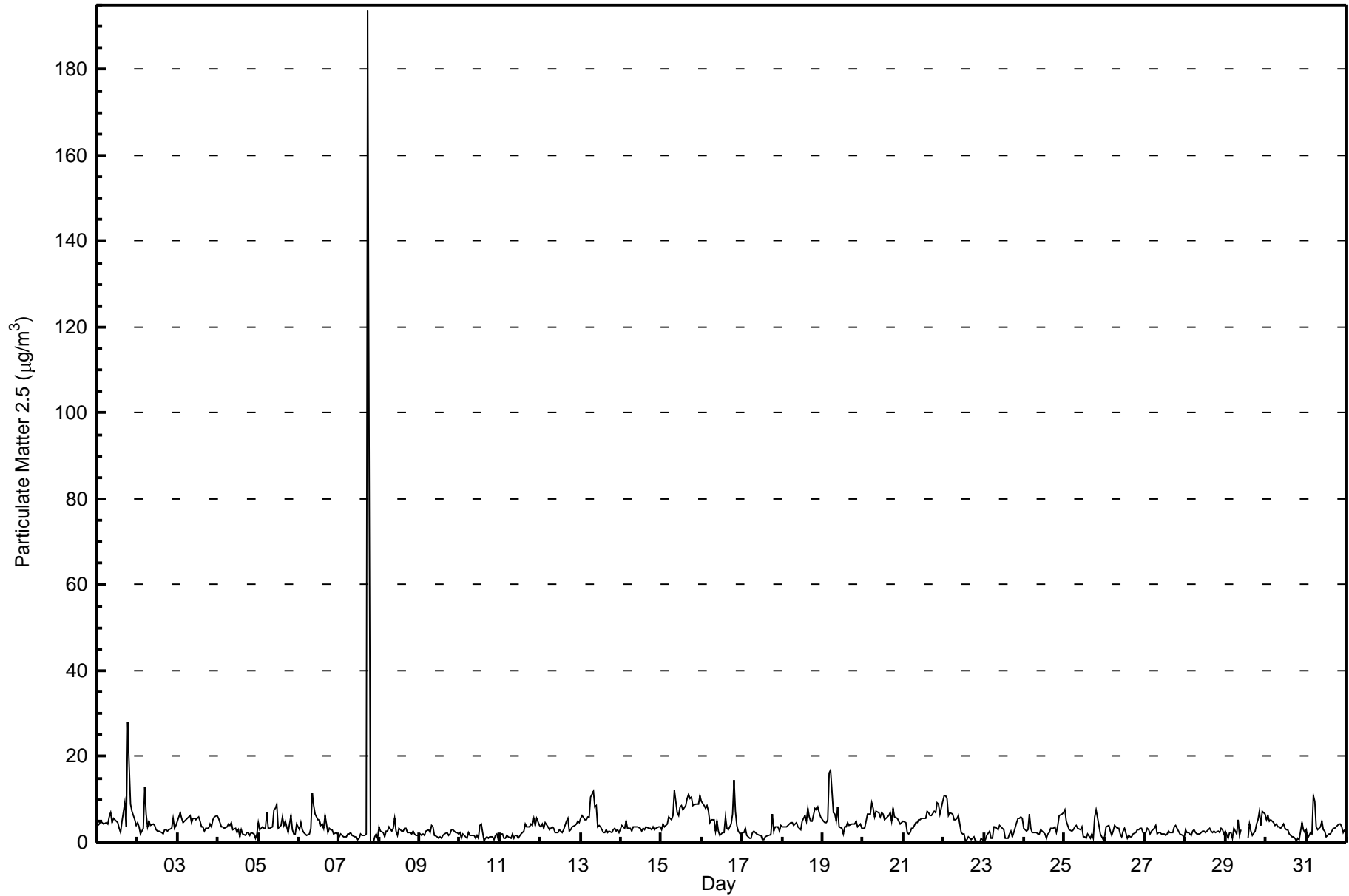


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

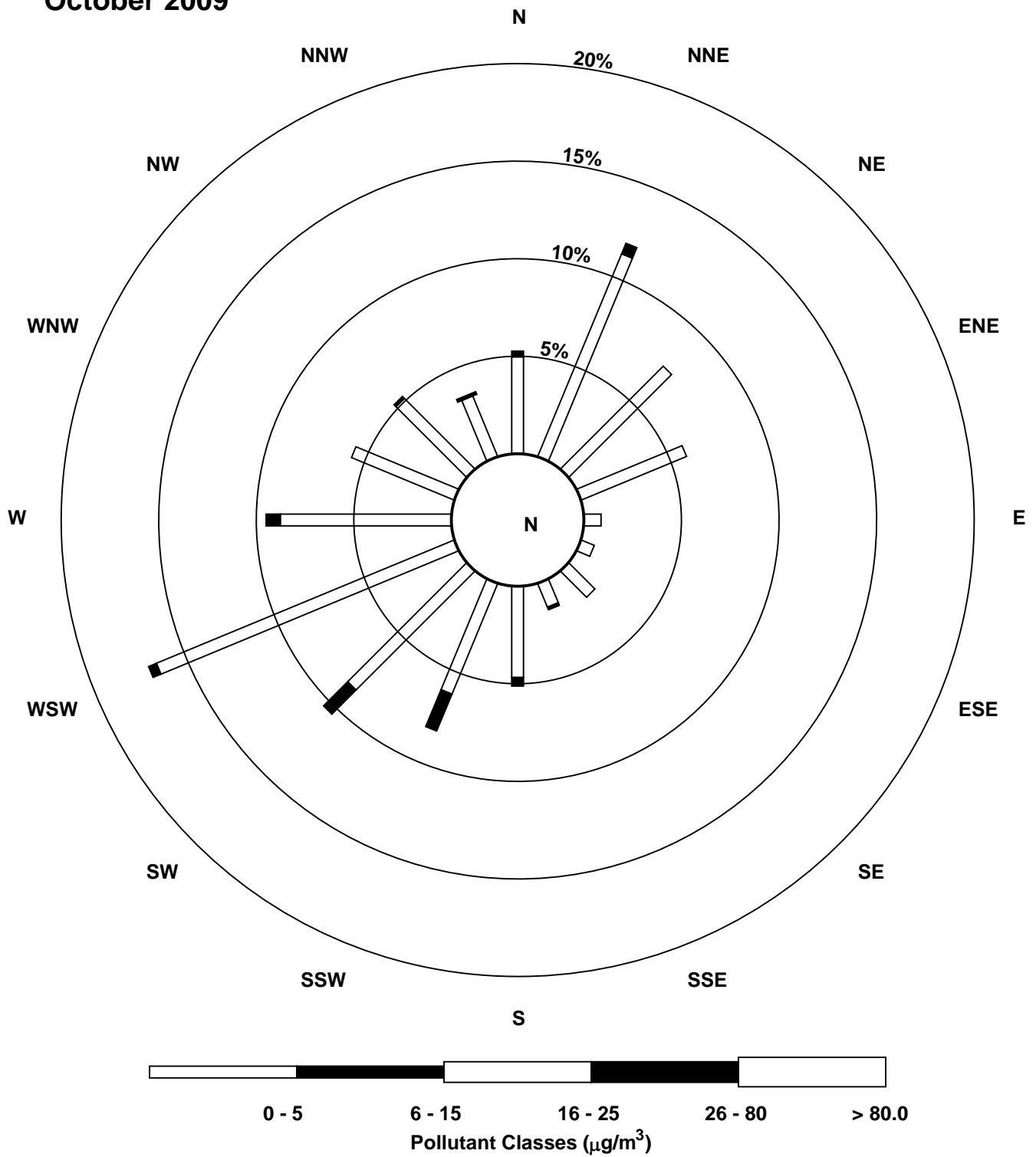
**Smoky Heights - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
October 1, 2009 to November 1, 2009**

Maximum Value: 193.7 µg/m <sup>3</sup> on Oct 7 18:00		Maximum Daily Average: 13.2 µg/m <sup>3</sup> on Oct 7		Hours in Service: 744																							
Minimum Value: 0 µg/m <sup>3</sup> on Oct 7 20:00		Minimum Daily Average: 1.6 µg/m <sup>3</sup> on Oct 10		Hours of Data: 741																							
Maximum Diurnal Average: 9.3 µg/m <sup>3</sup> at hour 18		Minimum Diurnal Average: 2.8 µg/m <sup>3</sup> at hour 14		Hours of Missing Data: 3																							
Monthly Average: 4.16 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 2.1 Median = 3.3 Q <sub>3</sub> = 4.8 P <sub>90</sub> = 6.8 P <sub>99</sub> = 13.1		Hours of Calibration: 3																							
		Percent Operational Time: 100.0																									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	4	4	5	5	4	5	4	6	7	5	6	5	5	3	2	5	9	4	28	18	9	7	5	4	6.6	28.0	
2-Oct	5	4	2	3	13	7	4	5	4	4	3	3	3	2	2	3	3	3	3	3	3	6	3	4	4.0	13.0	
3-Oct	5	7	6	5	5	5	5	6	5	5	5	6	5	4	4	3	3	3	3	4	4	5	6	6	4.9	6.9	
4-Oct	6	5	4	4	3	3	4	4	4	3	3	2	3	1	3	2	2	2	2	2	2	2	1	2	2.9	5.5	
5-Oct	5	3	3	3	3	7	3	3	4	8	8	9	3	4	6	4	5	3	2	6	3	2	2	4	4.4	9.0	
6-Oct	3	5	3	2	2	2	2	3	12	9	7	5	5	4	4	3	6	2	3	3	3	2	2	1	3.9	11.6	
7-Oct	1	2	2	1	1	2	2	2	2	1	1	1	1	2	2	2	2	194	92	0	0	1	2	1	13.2	193.7	
8-Oct	4	3	2	1	3	3	3	3	3	6	3	2	3	3	3	3	3	2	2	2	3	2	2	2	2.7	5.7	
9-Oct	2	2	2	2	2	3	2	4	3	2	1	1	1	1	2	2	2	2	2	3	3	2	2	2	2.1	3.9	
10-Oct	2	1	2	1	1	2	2	2	2	1	2	1	4	4	0	1	1	1	1	1	1	2	2	1	1.6	4.4	
11-Oct	2	2	1	1	2	1	1	2	1	2	2	1	2	2	2	4	4	3	4	4	6	4	6	4	2.6	5.8	
12-Oct	4	4	3	5	4	3	3	4	3	2	2	3	2	2	3	5	6	3	3	3	4	4	5	5	3.6	5.5	
13-Oct	6	6	5	5	6	6	11	12	8	9	4	4	4	2	2	3	2	3	2	3	3	3	2	2	4.8	11.9	
14-Oct	4	4	3	5	3	3	3	4	4	4	4	3	3	3	3	4	3	3	3	4	3	3	3	4	3.4	4.9	
15-Oct	3	4	4	4	6	6	5	6	12	7	6	8	9	8	9	10	11	10	10	8	9	9	9	11	7.7	12.2	
16-Oct	10	9	8	8	7	5	5	5	3	5	3	2	2	2	6	3	3	4	7	15	7	4	3	2	5.3	14.7	
17-Oct	2	2	3	1	1	1	2	3	2	2	2	2	1	0	1	2	2	2	7	3	4	4	3	4	2.3	6.6	
18-Oct	4	4	4	4	4	5	5	4	5	4	3	3	5	6	5	8	6	5	5	8	8	8	7	6	5.1	8.3	
19-Oct	5	5	4	5	16	17	7	7	5	8	3	3	2	4	4	5	4	4	4	4	5	4	4	3	5.5	16.9	
20-Oct	3	3	5	7	7	9	8	6	7	7	6	7	7	5	6	6	7	5	8	6	6	5	4	5	6.0	9.4	
21-Oct	5	5	2	2	2	3	3	5	5	5	5	6	6	6	7	7	6	6	7	7	9	9	7	9	5.6	9.4	
22-Oct	11	11	10	6	7	7	5	5	6	6	2	2	2	0	1	1	1	1	1	0	0	0	1	1	3.6	10.8	
23-Oct	0	1	2	3	1	1	4	3	3	4	4	3	3	1	1	2	3	1	2	5	6	6	6	6	2.9	6.1	
24-Oct	3	3	3	7	3	2	2	2	2	2	3	2	2	1	2	2	3	3	4	2	4	6	7	7	3.3	7.0	
25-Oct	8	5	4	3	3	3	4	4	3	3	4	1	1	1	2	1	2	1	6	7	4	2	1	1	3.1	7.7	
26-Oct	1	4	4	3	2	2	4	3	3	2	1	3	3	1	2	1	1	2	2	3	3	3	3	2	2.5	3.9	
27-Oct	2	3	3	2	3	3	4	2	2	2	2	2	2	2	3	2	2	4	4	3	3	2	2	1	2.5	4.1	
28-Oct	3	2	2	2	3	3	2	2	2	2	3	3	2	3	3	3	2	3	2	3	2	3	3	2	2.6	3.4	
29-Oct	3	1	2	2	1	3	2	5	2	3	C	C	C	1	4	3	2	3	4	5	7	4	7	7	3.4	7.4	
30-Oct	5	6	5	5	5	4	4	4	4	4	3	4	3	3	2	1	1	1	0	1	1	5	3	2	3.2	6.3	
31-Oct	3	1	2	2	11	10	4	3	4	5	3	3	1	2	2	3	3	3	4	4	4	4	2	3	3.6	10.9	
		3.9	3.9	3.6	3.5	4.3	4.4	3.9	4.2	4.2	4.2	3.5	3.3	3.2	2.8	3.1	3.4	3.6	9.3	7.4	4.6	4.1	4.0	3.8	3.7	Diurnal Average	
		10.8	10.8	10.3	8.4	16.3	16.9	10.6	11.9	12.2	8.7	7.8	9.0	8.6	7.6	8.7	10.2	11.4	193.7	92.4	18.2	9.3	9.0	9.0	11.0	Diurnal Maximum	
C - Calibration																											

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



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



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

**Smoky Heights - External Temperature (ET) - °C  
October 1, 2009 to November 1, 2009**

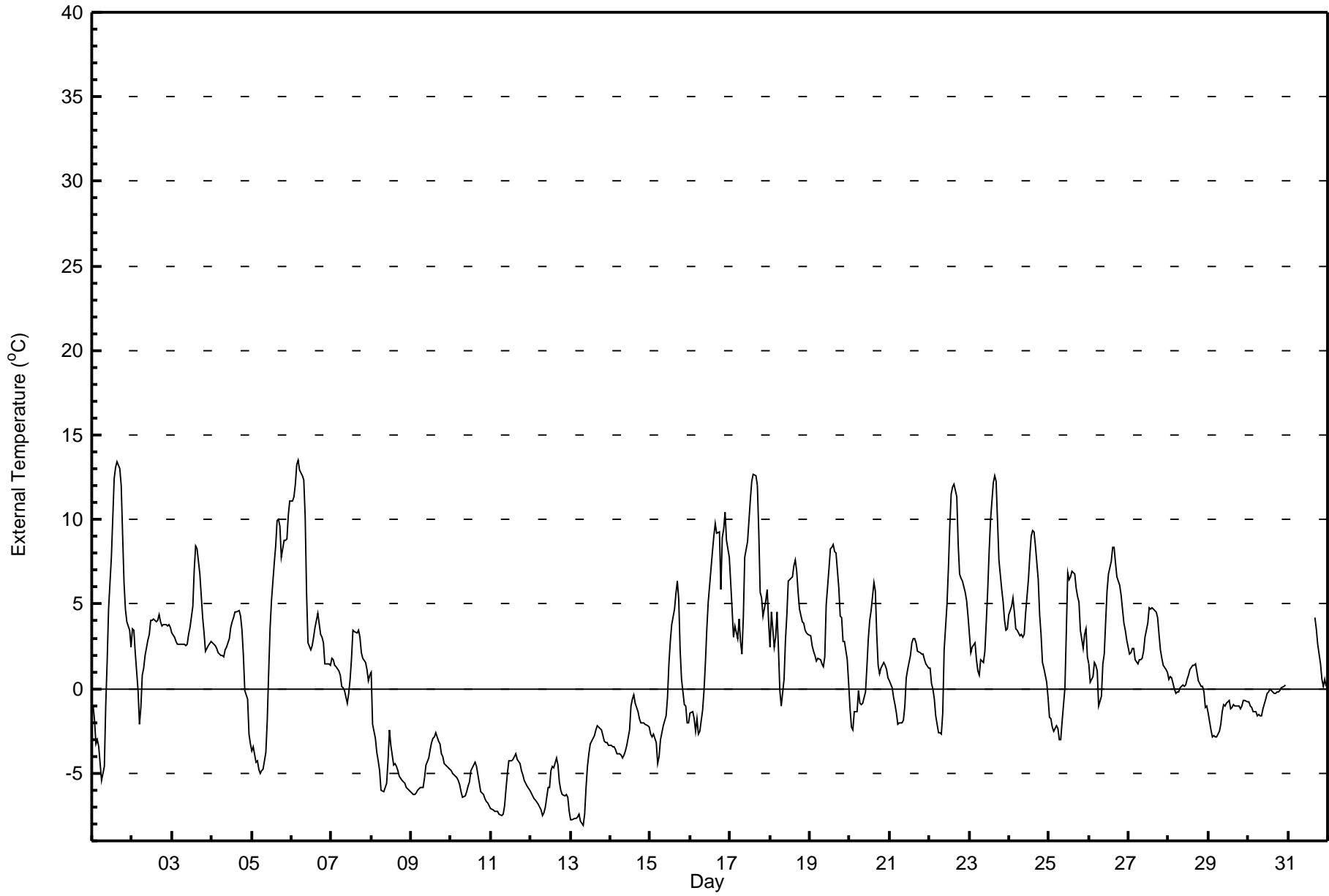
Maximum Value: 13.5 °C on Oct 6 05:00	Maximum Daily Average: 6.7 °C on Oct 17	Hours in Service: 744
Minimum Value: -8 °C on Oct 13 08:00	Minimum Daily Average: -6.1 °C on Oct 12	Hours of Data: 727
Maximum Diurnal Average: 4.4 °C at hour 16	Minimum Diurnal Average: -1.5 °C at hour 7	Hours of Missing Data: 17
Monthly Average: 1.02 °C	Percentiles: P <sub>1</sub> = -7.5 P <sub>10</sub> = -5.4 Q <sub>1</sub> = -2.6 Median = 1.2 Q <sub>3</sub> = 3.9 P <sub>90</sub> = 7.6 P <sub>99</sub> = 12.5	Hours of Calibration: 0
		Percent Operational Time: 97.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	-1	-2	-3	-3	-3	-5	-5	-5	-1	2	5	8	10	12	13	13	13	12	9	6	5	4	3	2	3.7	13.4
2-Oct	4	3	2	0	-2	-1	1	1	2	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	2.8	4.3
3-Oct	3	3	3	3	3	3	3	3	3	3	3	4	5	7	8	8	7	4	4	3	2	2	3	3	3.9	8.4
4-Oct	3	3	3	2	2	2	2	2	2	2	3	4	4	4	5	5	5	4	3	2	0	-1	-3	-3	2.3	4.6
5-Oct	-4	-3	-4	-4	-5	-5	-5	-5	-4	-2	1	4	5	7	8	10	10	10	8	9	9	9	10	11	2.9	11.1
6-Oct	11	11	12	13	14	13	13	12	10	6	3	2	3	3	4	4	4	3	3	3	1	1	1	1	6.4	13.5
7-Oct	2	2	1	1	1	1	0	0	0	-1	0	1	2	3	3	3	3	3	2	2	2	1	0	1	1.4	3.4
8-Oct	1	-2	-3	-4	-4	-5	-6	-6	-6	-6	-4	-2	-3	-5	-4	-5	-5	-5	-5	-6	-6	-6	-6	-6	-4.5	1.0
9-Oct	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-4	-4	-3	-3	-3	-3	-3	-3	-4	-4	-4	-5	-5	-5	-4.6	-2.6
10-Oct	-5	-5	-5	-5	-5	-6	-6	-6	-6	-6	-6	-6	-5	-5	-4	-5	-5	-6	-6	-6	-7	-7	-7	-7	-5.7	-4.3
11-Oct	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-5	-4	-4	-4	-4	-4	-4	-4	-5	-5	-5	-6	-6	-6	-5.8	-3.8
12-Oct	-6	-6	-7	-7	-7	-7	-7	-8	-7	-6	-6	-5	-5	-5	-5	-4	-5	-6	-6	-6	-6	-6	-6	-7	-6.1	-4.1
13-Oct	-8	-8	-8	-8	-8	-7	-8	-8	-7	-6	-5	-4	-3	-3	-3	-2	-2	-2	-2	-3	-3	-3	-3	-3	-4.9	-2.2
14-Oct	-3	-3	-3	-4	-4	-4	-4	-4	-4	-4	-3	-2	-1	-1	0	-1	-1	-2	-2	-2	-2	-2	-2	-2	-2.6	-0.4
15-Oct	-3	-3	-3	-3	-4	-4	-3	-3	-2	-2	-1	1	3	4	5	6	6	5	2	1	-1	-1	-2	-2	-0.1	6.4
16-Oct	-1	-1	-2	-2	-2	-3	-2	-1	0	2	4	5	7	8	9	10	9	9	6	9	9	10	9	8	4.1	10.4
17-Oct	6	5	3	4	3	4	3	2	4	8	9	10	11	12	13	13	12	9	6	5	4	5	6	4	6.7	12.7
18-Oct	2	5	2	3	5	2	0	-1	1	3	4	6	6	7	7	8	7	6	5	4	4	3	3	3	4.0	7.6
19-Oct	3	3	2	2	2	2	2	1	1	2	5	7	8	8	9	8	8	6	4	4	3	3	2	0	4.0	8.6
20-Oct	-1	-2	-2	-1	-1	0	-1	-1	-1	0	1	3	4	5	6	6	3	1	1	1	2	1	1	1	1.0	6.3
21-Oct	0	0	-1	-1	-1	-2	-2	-2	-2	-1	1	1	2	3	3	3	3	2	2	2	2	2	1	1	0.7	3.0
22-Oct	1	0	0	-1	-2	-3	-3	-3	-1	2	5	7	10	11	12	12	11	9	7	7	6	6	5	4	4.3	12.1
23-Oct	3	2	2	3	2	1	1	2	2	2	4	6	8	10	12	13	12	10	8	6	5	4	3	4	5.2	12.6
24-Oct	4	5	5	5	4	3	3	3	3	3	4	6	8	9	9	9	8	6	4	3	2	1	0	-1	4.6	9.4
25-Oct	-2	-2	-2	-3	-2	-2	-3	-3	-2	0	3	7	6	7	7	7	6	5	5	3	2	3	4	2	2.0	6.9
26-Oct	1	0	1	2	1	1	-1	0	1	2	4	6	7	7	8	8	7	7	6	6	5	4	3	3	3.7	8.4
27-Oct	2	2	2	2	2	1	2	2	2	2	3	4	5	5	5	5	5	4	3	2	2	1	1	1	2.7	4.8
28-Oct	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	-1	-1	0.3	1.5
29-Oct	-1	-2	-3	-3	-3	-3	-3	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1.5	-0.7
30-Oct	-1	-1	-1	-1	-1	-2	-2	-2	-2	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.7	0.2
31-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	4	4	3	1	1	0	1	0	--	4.2
	0.0	-0.4	-0.7	-0.8	-1.1	-1.3	-1.5	-1.5	-0.9	-0.2	1.0	2.2	3.1	3.8	4.2	4.4	4.0	3.2	2.1	1.6	1.1	1.0	0.7	0.3	Diurnal Average	
	11.1	11.4	12.1	13.3	13.5	12.9	12.6	12.4	10.2	7.7	8.6	10.0	11.2	12.4	13.1	13.4	13.0	12.0	9.1	8.9	9.4	10.4	10.3	11.1	Diurnal Maximum	

N - Not Valid

# Hourly Averages for External Temperature at Smoky Heights

## October 2009





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

Smoky Heights  
 October 1, 2009 to November 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	8	8	9	5	6	6	6	6	8	8	8	8	13	16	20	17	13	14	8	9	9	10	10	9	8.5	19.8	
Dir	229	229	211	211	202	211	206	193	186	182	174	166	166	225	248	240	249	248	266	264	229	238	227	271	224.4	247.6	
2 Spd	13	11	5	5	3	7	9	8	6	9	11	9	9	9	8	8	11	10	7	2	6	7	12	13	6.5	12.8	
Dir	271	272	276	286	300	253	266	262	266	263	280	305	309	321	327	343	343	335	341	331	9	358	358	12	309.7	271.2	
3 Spd	15	19	18	12	12	13	13	12	13	11	13	12	10	9	8	8	4	5	7	7	9	9	5	10.2	18.8		
Dir	18	26	29	26	22	24	24	25	19	28	25	20	17	18	28	32	58	10	317	8	21	2	6	21	21.7	25.6	
4 Spd	6	5	4	5	3	4	7	5	2	6	6	5	5	8	3	3	4	5	7	9	8	4	1	1	2.8	8.7	
Dir	63	77	62	85	103	225	249	248	185	136	175	187	167	217	137	122	176	184	181	187	213	235	245	194	178.6	186.9	
5 Spd	3	2	4	4	3	6	9	9	12	13	14	12	11	13	14	8	8	6	7	12	14	21	30	38	10.1	38.2	
Dir	188	216	249	237	192	225	204	190	193	207	213	194	181	206	196	169	157	176	212	232	230	233	248	249	217.0	249.1	
6 Spd	37	37	36	38	35	32	33	30	19	20	21	20	19	17	19	16	14	12	12	14	10	15	14	16	17.9	37.8	
Dir	243	250	248	253	255	253	253	259	317	355	340	324	315	305	318	329	342	341	328	314	276	268	291	295	281.8	252.8	
7 Spd	15	13	9	10	9	9	6	4	6	10	7	1	5	7	8	10	6	5	3	6	5	8	9	6	4.3	14.8	
Dir	314	314	298	304	329	348	44	27	43	56	52	36	245	252	270	249	296	335	261	265	216	239	244	263	301.3	314.1	
8 Spd	12	15	14	16	13	16	12	10	11	11	9	13	16	19	18	12	11	9	10	12	13	15	11	10	11.0	18.5	
Dir	10	33	35	34	32	24	27	355	346	13	354	0	346	337	347	353	360	340	315	307	305	308	308	304	353.3	336.6	
9 Spd	9	11	13	11	13	13	10	13	10	10	11	11	9	10	9	11	11	13	13	15	15	14	15	11	11.1	15.2	
Dir	270	264	268	284	286	282	279	282	294	300	276	281	267	265	270	307	321	323	306	305	305	302	305	307	291.0	304.9	
10 Spd	10	13	12	11	12	6	5	7	7	5	5	4	4	6	5	4	5	5	5	6	6	6	5	5	4.3	13.2	
Dir	314	314	323	314	324	352	44	59	60	78	63	123	18	23	44	36	46	46	63	53	63	64	71	88	19.9	314.3	
11 Spd	7	4	5	5	5	5	6	5	5	5	7	12	12	11	8	8	8	7	8	8	9	8	8	9	5.3	12.3	
Dir	83	57	39	31	41	37	37	41	51	75	128	131	136	123	129	116	95	80	54	32	25	28	7	358	71.3	131.2	
12 Spd	9	10	10	9	10	9	11	13	12	14	13	11	11	12	12	11	12	10	11	11	11	12	11	12	10.9	13.9	
Dir	357	357	359	11	18	19	20	26	26	32	25	16	34	29	32	27	24	28	25	25	26	41	33	30	23.3	32.2	
13 Spd	13	14	14	11	8	6	10	10	13	13	15	17	19	20	18	18	17	19	18	17	18	16	15	12	13.7	19.5	
Dir	51	38	26	26	20	13	12	8	23	43	62	71	66	74	70	67	68	71	69	67	63	70	72	66	55.9	74.0	
14 Spd	13	12	11	11	10	8	8	8	9	10	13	13	11	11	10	8	10	10	10	7	6	4	3	4	8.9	13.1	
Dir	72	66	55	60	55	46	49	34	42	38	44	49	68	60	47	36	33	37	51	61	70	48	14	7	50.1	49.0	
15 Spd	4	3	4	3	1	1	1	3	7	7	8	12	10	12	12	14	11	8	7	7	10	7	6	6	5.3	14.5	
Dir	18	0	7	3	331	300	159	181	171	186	195	193	205	222	219	219	215	223	201	235	226	232	244	217	215.4	218.9	
16 Spd	10	8	10	10	10	8	9	8	8	6	9	10	11	11	9	8	5	5	8	21	30	38	30	25	11.6	38.5	
Dir	213	197	205	217	216	235	253	245	239	210	177	171	175	176	167	172	190	196	242	236	224	232	238	241	218.7	231.8	
17 Spd	22	15	16	17	17	23	17	12	13	13	21	22	19	12	11	14	10	6	6	5	4	6	7	4	11.4	22.8	
Dir	250	245	226	224	231	235	261	265	242	240	246	241	250	247	239	242	226	240	268	331	351	360	351	358	247.7	235.0	
18 Spd	5	8	6	9	10	6	5	2	4	5	7	3	6	7	7	8	11	9	4	7	6	4	4	3	0.6	11.2	
Dir	354	344	357	0	359	33	44	61	28	39	44	59	175	188	215	194	236	225	244	188	211	182	196	221	260.7	236.1	
19 Spd	3	2	4	6	6	6	7	6	7	6	10	7	7	5	12	9	5	4	5	4	3	4	4	3	3.2	11.5	
Dir	226	232	218	206	195	194	195	199	193	217	233	220	213	300	304	305	4	13	359	337	294	275	273	299	247.2	304.1	
20 Spd	4	1	5	5	7	5	4	2	4	2	4	8	7	8	9	10	12	11	11	11	11	10	11	13	4.6	12.9	
Dir	285	302	229	240	191	167	80	141	179	158	63	27	33	46	41	26	23	19	23	32	36	37	30	27	34.1	26.9	
21 Spd	11	10	10	N	N	N	N	N	N	N	N	N	4	5	4	3	5	4	1	4	3	7	9	6	8	--	11.0
Dir	26	26	26	N	N	N	N	N	N	N	N	N	185	200	200	179	127	129	212	267	273	242	237	215	209	--	26.1
22 Spd	11	11	12	N	N	N	N	N	N	N	12	16	20	26	30	31	31	27	13	11	17	16	14	10	17.5	31.3	
Dir	213	221	218	N	N	N	N	N	N	N	234	233	239	253	261	260	254	253	243	247	246	250	254	259	220	246.6	260.5

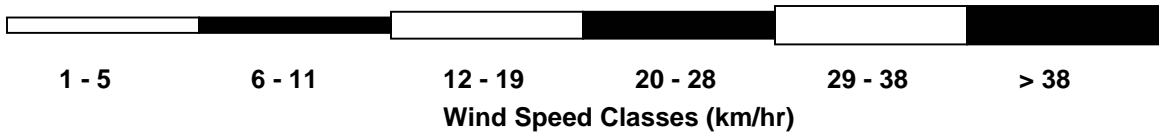
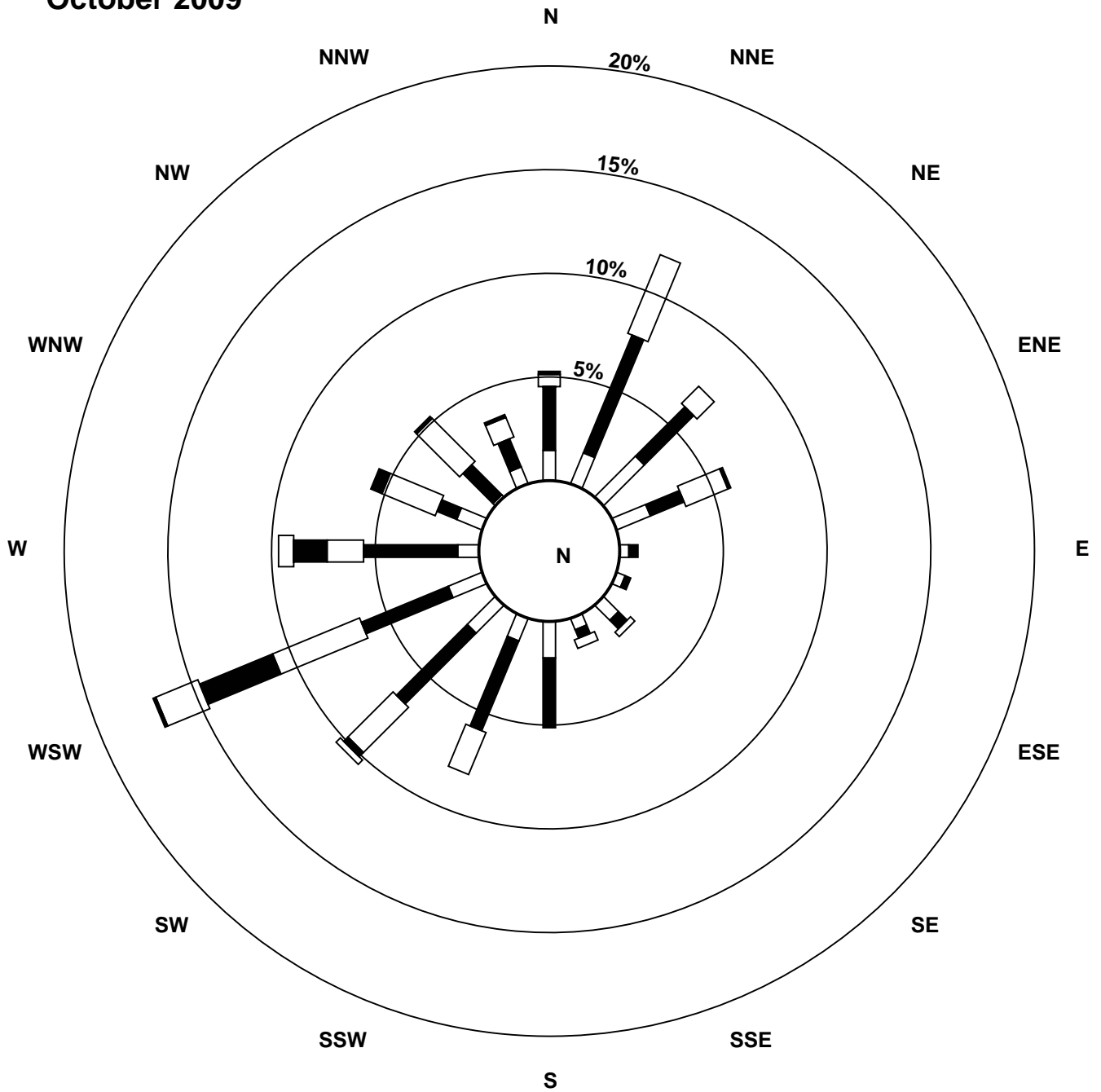
**Peace Airshed Zone Association**  
**Summary of Hourly Averages**

Smoky Heights  
 October 1, 2009 to November 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	5	4	5	6	5	7	9	4	4	7	7	12	12	20	26	27	21	17	17	18	19	21	23	11.4	27.3
Dir	219	192	237	217	229	254	248	218	124	228	213	181	166	195	239	244	250	243	242	241	248	254	257	263	237.0	250.0
24 Spd	21	21	23	24	22	21	27	27	24	23	24	32	30	27	26	27	27	20	17	20	17	17	17	14	22.6	31.8
Dir	252	256	258	281	266	259	260	262	249	246	253	264	267	272	273	261	259	252	249	250	259	256	247	245	259.2	264.3
25 Spd	12	11	12	13	14	12	13	12	11	12	13	14	12	10	6	4	4	3	13	2	1	8	3	2	7.3	13.7
Dir	266	255	249	232	230	240	222	225	206	213	222	200	168	175	144	126	76	130	211	237	285	184	171	263	215.4	200.4
26 Spd	10	11	11	14	15	5	9	10	9	6	4	11	13	16	18	19	10	9	12	12	13	14	11	13	10.1	18.8
Dir	216	207	211	210	207	224	269	242	225	233	229	233	233	252	258	265	272	274	300	273	267	267	280	298	249.8	264.7
27 Spd	12	14	18	17	14	11	15	17	18	21	23	22	23	24	26	24	22	18	16	10	12	14	10	5	16.1	26.2
Dir	295	285	294	297	282	258	258	252	250	252	253	255	283	292	280	285	283	284	299	320	299	287	285	250	277.7	280.0
28 Spd	8	8	8	9	9	7	N	N	8	6	6	8	9	10	11	10	7	6	6	N	N	N	N	N	--	11.3
Dir	235	240	250	263	274	263	N	N	253	258	263	260	254	253	245	250	261	254	247	N	N	N	N	N	--	245.5
29 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
30 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	3	3	2	2	2	2	2	4	7	7	--	6.9
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	56	49	50	47	39	30	34	31	25	33	--	32.7
31 Spd	6	6	7	5	5	8	3	12	17	13	13	19	18	29	37	39	35	34	27	17	17	17	16	12	13.6	39.5
Dir	21	28	22	31	335	205	241	200	217	241	214	210	229	238	239	243	246	249	244	249	320	302	289	264	248.1	243.4
Spd	4.5	4.3	4.5	4.8	4.6	4.5	4.5	4.6	3.1	2.5	3.5	4.1	4.4	5.8	6.4	6.1	4.8	4.0	4.3	4.6	4.7	5.9	6.0	5.3	Diurnal Average	
Dir	278.6	286.3	281.6	283.3	276.8	268.2	272.8	262.4	260.4	260.9	252.8	241.2	243.8	258.4	265.1	265.0	277.2	280.3	280.4	279.7	276.9	272.5	281.1	282.1	Diurnal Maximum	
Spd	36.6	37.1	36.1	37.8	35.3	31.9	33.0	30.1	24.4	23.0	24.3	31.8	29.9	30.4	37.3	39.5	34.6	34.5	26.9	21.3	29.7	38.5	30.4	38.2	Diurnal Maximum	
Dir	243.3	249.5	247.6	252.8	255.0	253.4	252.8	258.9	248.8	246.1	252.7	264.3	267.2	261.2	239.1	243.4	246.1	249.2	244.1	236.3	223.7	231.8	238.1	249.1	Diurnal Maximum	
Maximum Speed Value: 39 km/h on Oct 31 16:00		Minimum Speed Value: 1 km/h on Oct 7 12:00																		Hours in Service: 744						
Maximum Daily Speed Average: 22.6 km/h on Oct 24		Minimum Daily Speed Average: 0.6 km/h on Oct 4																		Hours of Data: 685						
Maximum Diurnal Speed Average: 6.4 km/h at hour 15		Minimum Diurnal Speed Average: 2.5 km/h at hour 10																		Hours of Missing Data: 59						
Monthly Average Velocity: 4.57 km/h 270.96 deg		Speed Percentiles: P <sub>1</sub> = 1.4 P <sub>10</sub> = 4.0 Q <sub>1</sub> = 6.2 Median = 9.8 Q <sub>3</sub> = 13.2 P <sub>90</sub> = 19.6 P <sub>99</sub> = 36.4																		Percent Operational Time: 92.1						
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	13	42	15	2	0	0	72																			
NorthEast	26	62	43	1	0	0	132																			
East	4	9	9	1	0	0	23																			
SouthEast	9	6	3	0	0	0	18																			
South	22	38	10	0	0	0	70																			
SouthWest	20	66	49	12	6	2	155																			
West	12	46	43	31	14	1	147																			
NorthWest	11	20	35	2	0	0	68																			
Total	117	289	207	49	20	3	685																			

# Wind Rose for WS at Smoky Heights

## October 2009



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

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

Maximum Speed: 40 km/h on Oct 31 16:00	Maximum Daily Speed Average: 23.0 km/h on Oct 24	Hours in Service: 744
Minimum Speed: 1 km/h on Oct 15 07:00	Minimum Daily Speed Average: 5.4 km/h on Oct 4	Hours of Data: 685
Maximum Diurnal Speed Average: 13.9 km/h at hour 15	Minimum Diurnal Speed Average: 9.9 km/h at hour 19	Hours of Missing Data: 59
Monthly Average Speed: 11.31 km/h	Percentiles: P <sub>1</sub> = 2.1 P <sub>10</sub> = 4.5 Q <sub>1</sub> = 6.6 Median = 10.0 Q <sub>3</sub> = 13.4 P <sub>90</sub> = 20.0 P <sub>99</sub> = 36.6	Percent Operational Time: 92.1

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-Oct	10	9	9	5	6	6	6	6	8	8	8	8	13	19	21	18	14	14	8	9	10	11	11	9	10.3	20.7	
2-Oct	13	11	6	5	4	7	9	8	6	9	11	9	10	9	9	8	11	10	7	4	6	8	13	13	8.6	12.9	
3-Oct	15	19	18	12	12	13	13	12	13	12	13	12	10	9	9	8	8	4	5	7	7	9	9	6	10.7	18.9	
4-Oct	6	5	4	5	4	4	8	5	4	6	6	5	7	8	7	4	4	6	8	9	8	4	2	2	5.4	8.7	
5-Oct	4	3	4	4	3	6	9	9	12	13	14	12	11	13	14	9	8	6	8	12	15	21	30	38	11.6	38.3	
6-Oct	37	37	36	38	35	32	33	30	22	20	22	20	19	17	19	16	14	12	12	14	11	15	14	16	22.6	37.9	
7-Oct	15	13	9	10	9	9	6	4	6	10	7	4	6	8	9	10	7	5	4	6	6	8	9	8	7.8	14.9	
8-Oct	14	15	14	16	14	16	12	10	11	11	9	13	17	19	19	12	11	9	10	12	13	15	11	10	13.1	18.8	
9-Oct	9	11	13	12	13	13	11	13	10	11	11	11	10	10	9	11	11	13	13	15	15	14	15	11	11.8	15.2	
10-Oct	10	13	12	11	12	7	5	7	7	6	6	4	5	6	5	5	5	5	5	6	6	6	5	5	6.8	13.3	
11-Oct	7	5	5	5	5	5	6	5	6	5	8	13	13	12	8	9	9	8	8	8	9	8	8	9	7.6	12.7	
12-Oct	9	10	10	9	10	9	11	13	12	14	13	12	11	12	12	11	12	10	11	11	11	12	11	12	11.2	14.0	
13-Oct	13	14	14	11	9	7	10	10	13	13	15	17	20	20	19	18	18	19	18	17	18	16	15	12	14.8	19.8	
14-Oct	13	13	12	11	10	8	8	8	9	10	13	13	12	11	10	9	10	10	10	8	6	4	3	4	9.3	13.2	
15-Oct	4	3	4	3	2	2	1	3	7	7	8	12	10	12	12	15	11	8	8	7	10	7	6	6	7.0	14.6	
16-Oct	10	9	10	10	10	8	9	8	9	7	9	11	11	11	10	8	5	5	9	22	30	39	30	25	13.1	38.6	
17-Oct	22	16	17	17	17	23	18	13	13	13	21	22	19	12	12	14	11	6	6	6	4	6	8	4	13.3	22.9	
18-Oct	5	8	7	9	10	6	5	3	4	5	7	5	6	7	7	8	11	9	6	8	6	4	5	4	6.4	11.3	
19-Oct	3	2	4	6	6	6	7	7	7	6	10	8	8	9	12	9	5	4	5	4	4	5	4	4	6.1	11.9	
20-Oct	5	2	6	5	7	6	4	3	4	3	5	9	8	8	9	10	12	11	11	11	11	10	11	13	7.6	12.9	
21-Oct	11	11	10	N	N	N	N	N	N	N	N	4	5	4	4	5	4	2	4	3	7	9	7	8	--	11.0	
22-Oct	11	11	12	N	N	N	N	N	N	N	12	16	20	27	31	31	31	27	13	11	17	16	14	10	18.2	31.5	
23-Oct	7	5	5	5	6	5	7	9	5	6	7	7	12	13	21	27	27	21	17	17	18	19	21	23	13.0	27.5	
24-Oct	21	22	23	25	22	21	27	27	25	23	24	32	30	27	26	27	28	20	17	20	17	17	17	14	23.0	31.9	
25-Oct	12	11	12	14	14	13	13	12	11	12	13	14	12	10	7	5	4	4	15	8	4	8	5	4	9.8	15.5	
26-Oct	11	11	11	14	15	9	10	11	9	7	4	11	14	16	19	19	11	9	12	12	13	14	12	13	11.9	19.0	
27-Oct	12	15	18	17	14	12	15	17	18	21	23	22	23	25	26	24	22	18	16	11	12	14	11	5	17.2	26.4	
28-Oct	9	8	8	10	9	7	N	N	8	6	6	8	9	10	11	10	7	7	6	N	N	N	N	N	--	11.4	
29-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
30-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	3	3	2	2	2	2	2	2	4	7	7	--	7.1
31-Oct	6	6	7	6	8	9	6	13	17	13	13	19	18	29	37	40	35	34	27	18	17	18	16	12	17.7	39.6	
	11.2	11.0	11.1	10.9	10.6	9.9	10.3	10.2	10.2	10.3	11.5	12.3	12.9	13.7	13.9	13.4	12.1	10.2	9.9	10.5	10.8	11.8	11.3	10.6	Diurnal Average		
	36.7	37.2	36.1	37.9	35.4	31.9	33.1	30.2	24.6	23.0	24.4	31.9	30.0	30.6	37.4	39.6	34.7	34.5	26.9	21.9	30.0	38.6	30.5	38.3	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**

**Smoky Heights - Wind Direction (WD) - deg  
October 1, 2009 to November 1, 2009**

Maximum Value: 92.8 deg on Oct 25 20:00																								Hours in Service:	744	
Minimum Value: 2.3 deg on Oct 24 21:00																								Hours of Data:	685	
Percentiles: P <sub>1</sub> = 2.8 P <sub>10</sub> = 4.9 Q <sub>1</sub> = 6.9 Median = 10.2 Q <sub>3</sub> = 16.6 P <sub>90</sub> = 28.0 P <sub>99</sub> = 62.8																								Hours of Missing Data:	59	
																								Hours of Calibration:	0	
																								Percent Operational Time:	92.1	
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-Oct	34	21	21	20	15	17	8	16	15	13	18	19	10	38	18	15	17	12	4	10	34	14	20	18	37.9	
2-Oct	6	5	22	32	51	20	5	15	23	11	12	10	7	9	11	22	11	13	12	76	16	27	11	5	76.1	
3-Oct	6	5	5	7	6	6	7	9	10	10	10	13	15	17	27	16	12	28	13	19	12	10	7	14	27.9	
4-Oct	14	15	8	15	40	35	18	20	56	16	21	24	64	20	63	52	44	37	29	7	8	24	39	46	64.2	
5-Oct	46	39	24	22	38	22	6	5	6	12	9	16	21	13	10	21	15	25	12	11	5	6	4	4	46.4	
6-Oct	4	3	3	3	4	3	3	5	28	13	11	6	9	8	7	9	10	14	12	8	13	12	4	6	28.4	
7-Oct	5	5	8	6	12	12	14	15	14	8	10	91	44	26	32	12	24	23	26	11	21	16	4	38	90.8	
8-Oct	29	9	6	6	6	8	11	10	10	16	16	15	12	9	12	16	14	14	10	9	7	7	6	18	28.6	
9-Oct	9	5	9	5	3	3	5	6	20	25	12	13	22	12	15	13	9	8	8	6	6	6	6	9	24.9	
10-Oct	13	9	6	9	5	33	12	13	10	16	24	26	47	13	16	23	20	12	8	6	9	10	17	14	46.9	
11-Oct	11	20	10	8	5	8	6	13	7	20	24	14	19	17	19	32	14	18	11	8	7	6	9	10	31.6	
12-Oct	8	8	9	8	5	6	6	5	6	9	10	7	18	9	12	14	7	8	5	5	5	10	8	7	17.6	
13-Oct	10	11	8	5	10	17	7	9	9	9	9	11	10	10	9	8	8	9	7	7	7	8	11	9	16.6	
14-Oct	11	10	8	11	10	9	10	7	5	5	5	7	15	14	9	8	6	8	6	8	7	10	10	10	15.2	
15-Oct	9	12	13	19	46	58	40	13	8	9	9	10	12	15	12	7	9	12	14	8	10	13	22	21	58.1	
16-Oct	10	9	7	7	4	10	7	13	10	25	17	12	10	10	17	12	34	22	29	13	8	5	3	12	33.7	
17-Oct	6	15	9	7	9	4	13	22	10	10	4	7	9	12	15	9	8	19	11	35	23	7	8	16	35.3	
18-Oct	10	11	15	10	7	22	7	44	15	10	13	54	20	16	15	18	10	19	41	30	12	30	33	43	54.1	
19-Oct	20	19	21	14	21	8	18	13	12	7	11	21	24	59	15	13	22	7	10	28	26	34	48	47	58.9	
20-Oct	49	57	18	22	10	20	31	42	16	42	33	16	15	14	16	14	8	5	8	6	5	9	12	4	57.1	
21-Oct	6	8	6	N	N	N	N	N	N	N	N	19	26	25	24	13	18	60	14	23	7	3	21	8	60.3	
22-Oct	3	6	5	N	N	N	N	N	N	5	4	7	9	6	6	5	4	12	11	5	4	6	9	20	19.7	
23-Oct	13	27	24	29	16	19	15	10	43	61	19	23	7	22	9	11	7	6	3	3	3	6	3	4	60.8	
24-Oct	6	5	4	9	8	3	2	4	5	4	5	6	6	8	7	5	4	9	6	4	2	5	3	5	9.0	
25-Oct	4	6	8	7	4	5	4	6	10	9	6	17	12	8	25	37	19	39	38	93	90	15	56	65	92.8	
26-Oct	14	11	14	9	7	74	19	21	12	35	20	11	7	11	6	8	5	8	9	13	9	5	15	5	74.3	
27-Oct	8	9	4	3	12	14	4	3	5	7	5	13	8	8	6	6	6	7	9	24	9	5	9	14	24.0	
28-Oct	14	7	10	9	12	18	N	N	4	8	5	6	6	4	5	8	11	16	13	N	N	N	N	N	18.1	
29-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	
30-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	6	4	5	7	4	4	6	6	10	15	15.1
31-Oct	20	9	8	42	44	25	73	11	12	12	8	10	7	6	4	3	5	3	3	27	9	11	6	10	73.1	
	49.4	57.1	24.0	41.9	50.6	74.3	73.1	43.6	55.5	60.8	33.5	90.8	64.2	58.9	62.7	51.9	43.9	60.3	41.1	92.8	89.7	34.3	55.5	65.4		
N - Not Valid																										

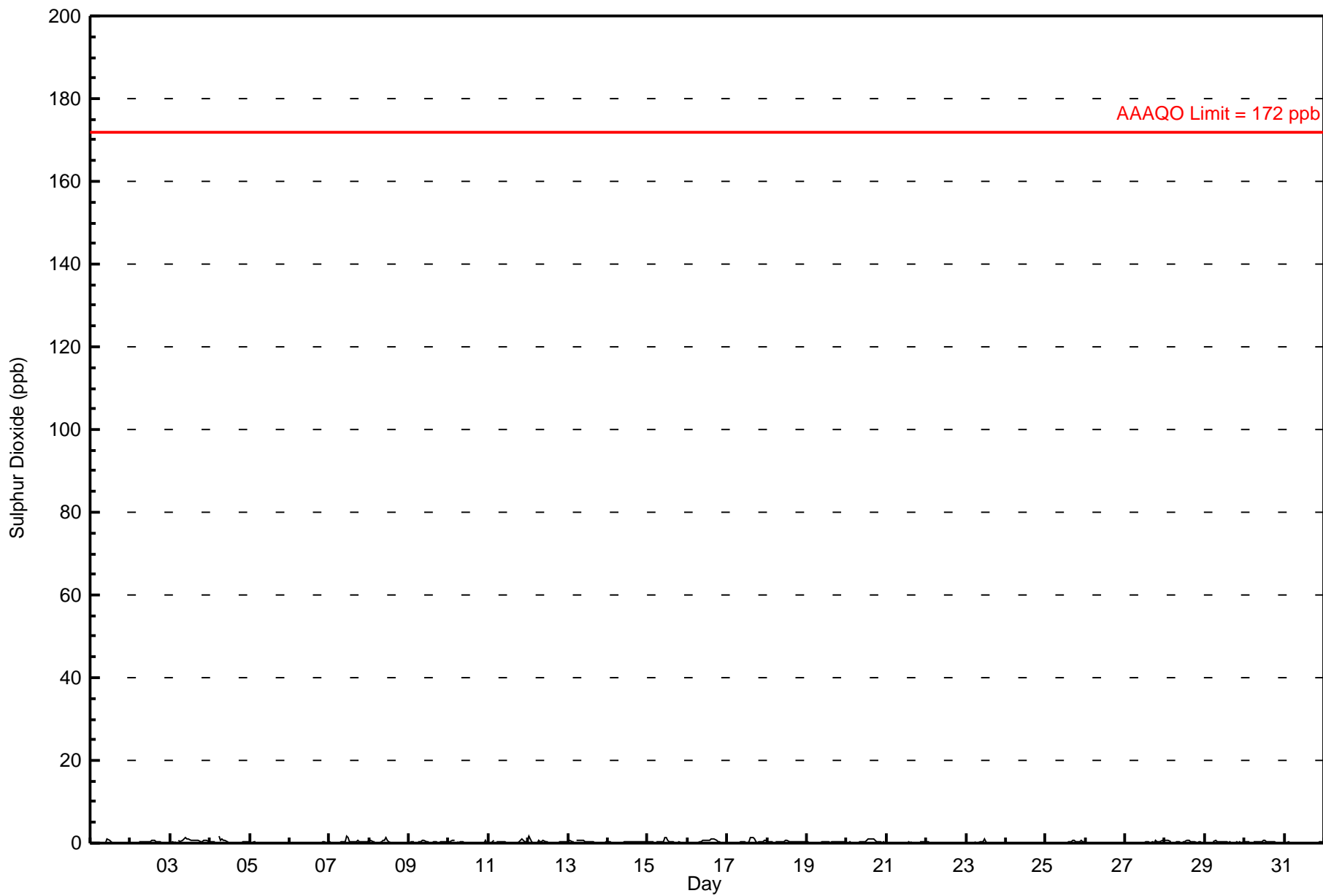
PASZA

Beaverlodge Station

Monthly Summary Tables, Graphs and  
Roses



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

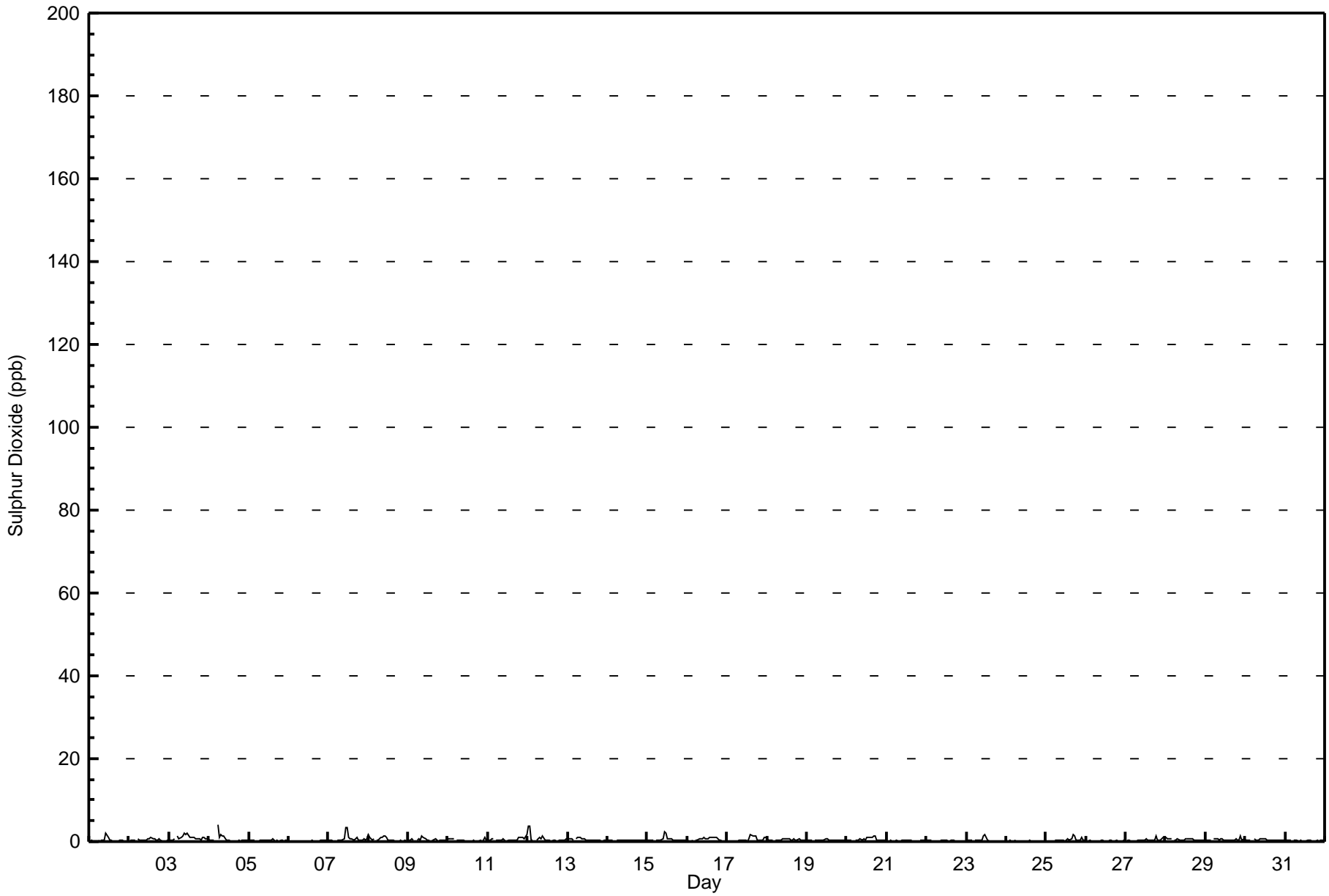




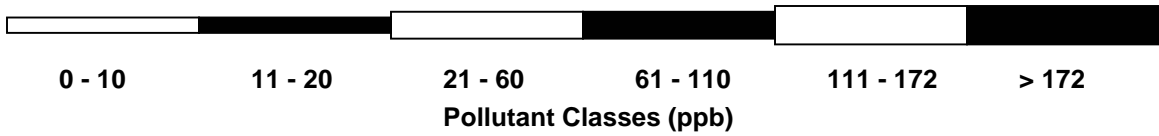
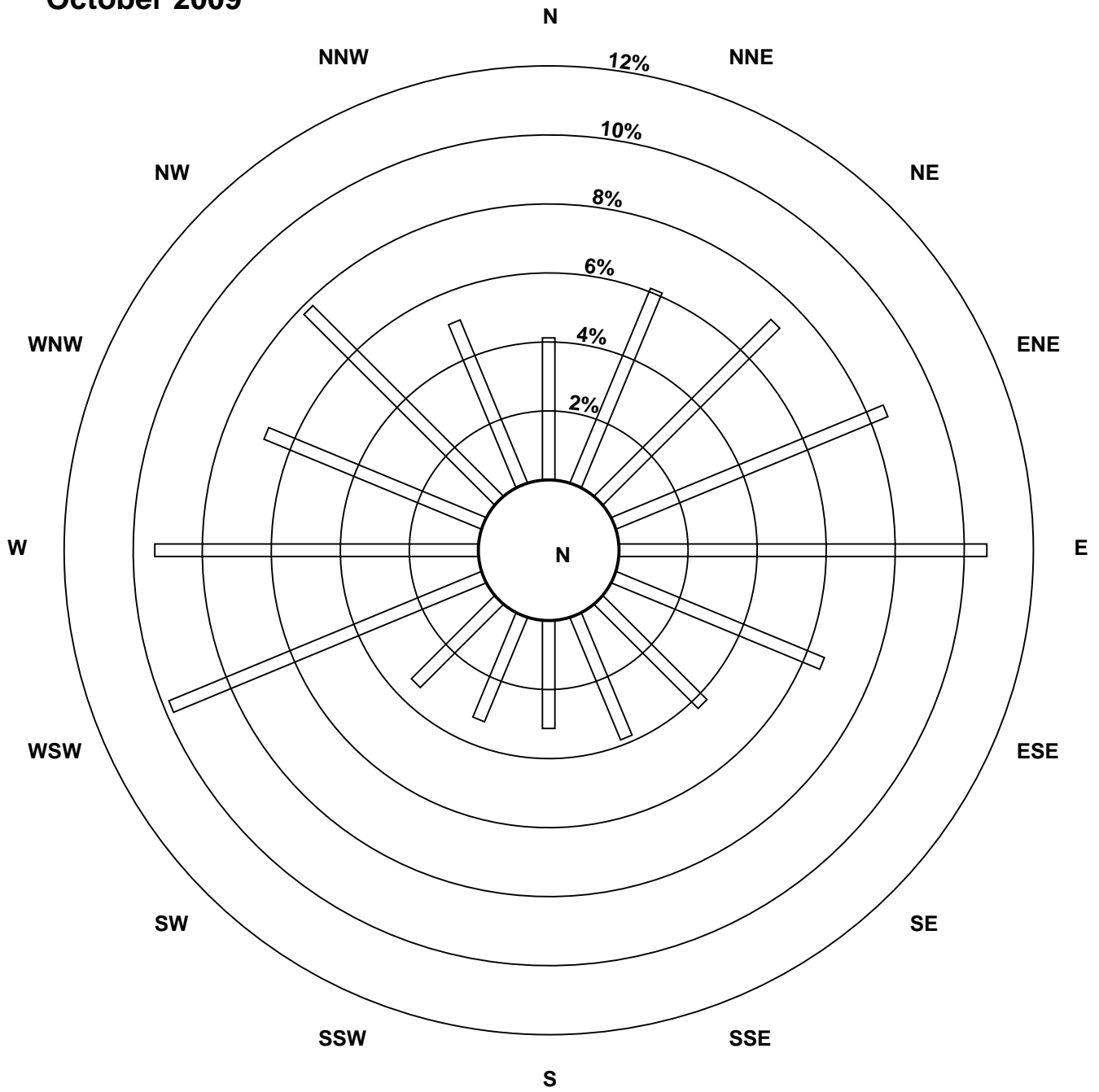


# Hourly Maximums for SO<sub>2</sub> at Beaverlodge

## October 2009



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



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

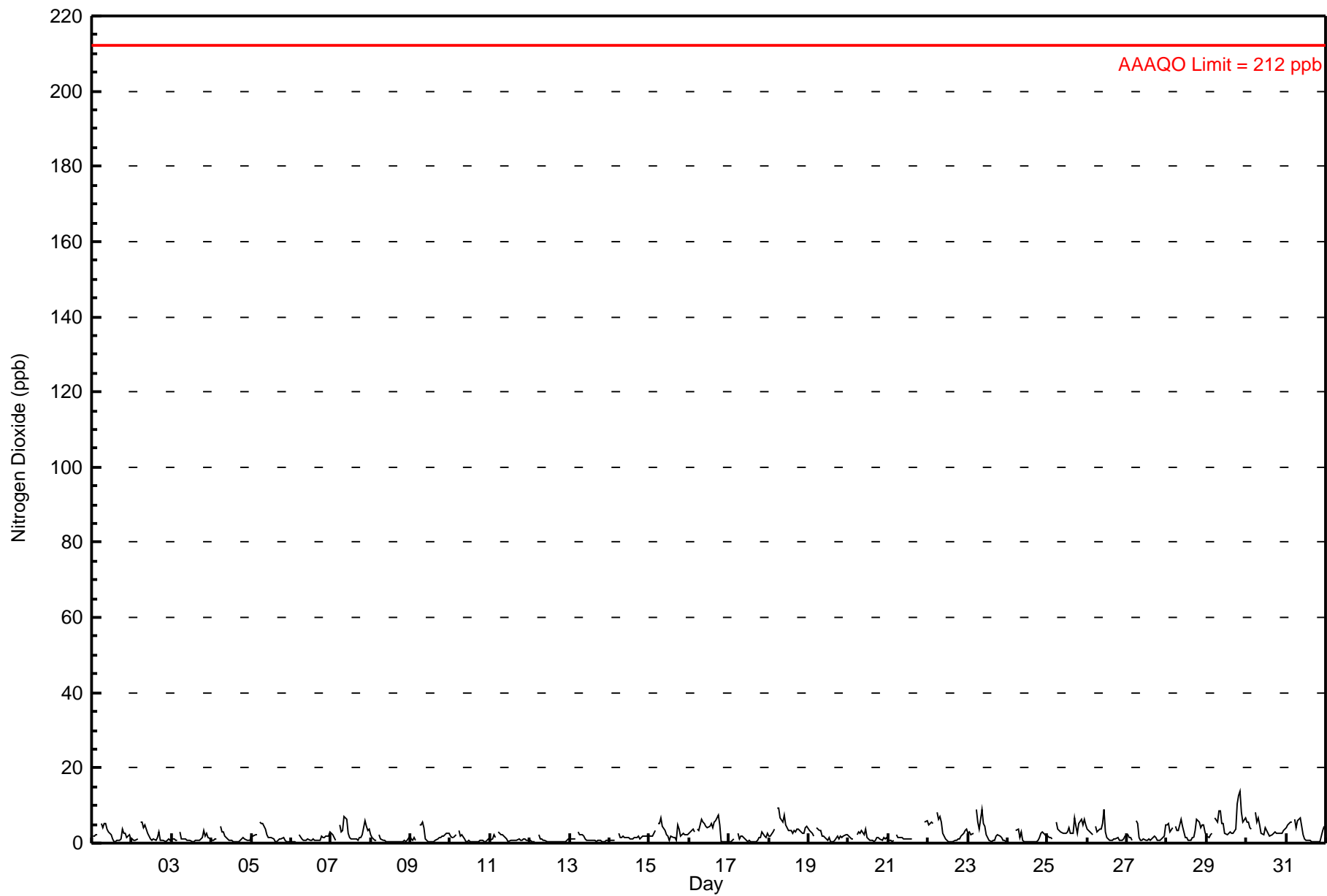
**Beaverlodge - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
October 1, 2009 to November 1, 2009**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 13.7 ppb on Oct 29 21:00	Maximum Daily Average: 5.4 ppb on Oct 29
Minimum Value: 0 ppb on Oct 24 03:00	Hours of Data: 706
Maximum Diurnal Average: 4.6 ppb at hour 6	Hours of Missing Data: 38
Monthly Average: 2.19 ppb	Hours of Calibration: 38
Minimum Daily Average: 0.6 ppb on Oct 12	Percent Operational Time: 100.0
Minimum Diurnal Average: 1.0 ppb at hour 15	
Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.8 Median = 1.5 Q <sub>3</sub> = 2.9 P <sub>90</sub> = 5.1 P <sub>99</sub> = 8.8	

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-Oct	2	2	2	2	A	5	4	5	5	4	3	2	1	0	1	1	1	4	3	2	2	2	1	2.4	5.1	
2-Oct	1	1	1	1	A	6	5	4	5	3	2	1	1	1	1	2	3	1	1	1	1	1	1	1.8	5.7	
3-Oct	1	1	1	1	A	3	1	1	1	1	1	0	1	1	1	1	1	1	3	2	3	1	1	1.2	3.4	
4-Oct	1	1	1	1	A	5	3	3	2	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1.2	4.6	
5-Oct	2	2	2	2	A	5	5	5	4	2	1	2	1	1	0	0	1	1	1	2	1	0	0	1.9	5.4	
6-Oct	0	0	0	0	A	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	1.1	2.9	
7-Oct	3	2	1	1	A	5	3	3	7	6	3	2	1	1	1	1	1	1	2	6	5	3	4	2.8	6.9	
8-Oct	2	2	1	1	A	2	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0.8	2.3	
9-Oct	1	1	1	1	A	5	5	6	4	1	0	0	0	0	0	1	1	2	1	2	2	3	2	3	1.8	5.7
10-Oct	2	2	2	2	A	3	2	2	1	1	0	1	0	0	0	0	0	1	1	1	1	0	1	1.0	3.4	
11-Oct	1	1	2	1	A	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	3.0	
12-Oct	1	0	0	1	A	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0.6	2.2	
13-Oct	1	1	1	1	A	3	2	2	2	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1.0	2.9	
14-Oct	1	1	1	1	A	3	2	2	2	2	2	1	1	1	1	2	2	1	1	2	2	2	2	1.5	2.6	
15-Oct	2	2	2	3	A	5	5	7	4	3	2	2	1	2	2	1	1	5	4	2	3	2	2	2.8	6.5	
16-Oct	2	3	4	3	A	4	3	6	5	5	4	4	5	5	4	5	6	7	5	0	0	0	0	3.7	7.4	
17-Oct	0	0	1	1	A	3	1	2	2	1	1	1	1	0	0	0	0	1	2	2	3	2	3	1.2	2.9	
18-Oct	2	2	3	4	A	9	9	7	6	7	5	4	4	3	3	3	3	4	4	3	3	3	4	4	4.2	9.2
19-Oct	4	3	3	2	A	4	3	3	2	2	1	1	1	0	0	0	1	2	1	2	2	2	2	1.9	4.0	
20-Oct	2	2	1	1	A	2	3	3	3	2	4	1	1	1	1	0	1	2	1	1	1	1	1	1.6	3.9	
21-Oct	1	1	1	1	A	2	1	1	1	1	1	1	1	1	C	C	C	C	C	C	C	C	6	6	--	6.1
22-Oct	5	5	6	5	A	8	6	7	6	2	1	1	0	0	0	1	1	1	1	1	2	3	3	4	3.0	8.2
23-Oct	3	3	2	3	A	9	5	4	9	5	4	2	2	1	0	1	1	2	2	2	2	1	1	0	2.7	8.9
24-Oct	0	0	0	0	A	4	4	1	3	1	0	0	0	0	0	0	0	0	1	1	3	3	2	1	1.2	3.5
25-Oct	2	1	2	1	A	6	4	3	3	2	3	2	3	4	3	3	7	4	3	5	6	5	6	5	3.6	6.5
26-Oct	4	3	2	2	A	5	3	4	4	5	9	3	2	1	1	1	1	1	2	1	1	1	1	2	2.4	8.8
27-Oct	2	1	1	1	A	6	5	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	2	5	1.7	5.8
28-Oct	5	5	3	4	A	5	3	3	6	4	3	2	1	1	1	1	2	3	6	6	4	5	5	3	3.5	6.5
29-Oct	2	2	2	3	A	7	6	9	9	5	5	3	2	3	3	2	2	4	10	13	14	8	6	7	5.4	13.7
30-Oct	5	6	4	4	A	8	5	7	5	3	2	4	3	3	2	2	3	3	3	3	3	3	3	4	3.7	8.1
31-Oct	4	5	6	6	A	6	4	6	7	4	2	1	1	1	1	1	1	0	1	1	0	2	3	5	2.8	6.5
	2.0	1.9	1.9	1.9	--	4.6	3.6	3.6	3.6	2.6	2.1	1.5	1.3	1.2	1.0	1.1	1.4	1.8	2.1	2.1	2.2	2.0	2.2	2.4	Diurnal Average	
	5.4	5.5	5.6	5.6	--	9.2	9.2	8.8	8.9	7.4	8.8	4.1	4.6	5.2	4.1	5.5	6.5	7.4	10.4	12.8	13.7	8.1	6.2	6.7	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 October 2009



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

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

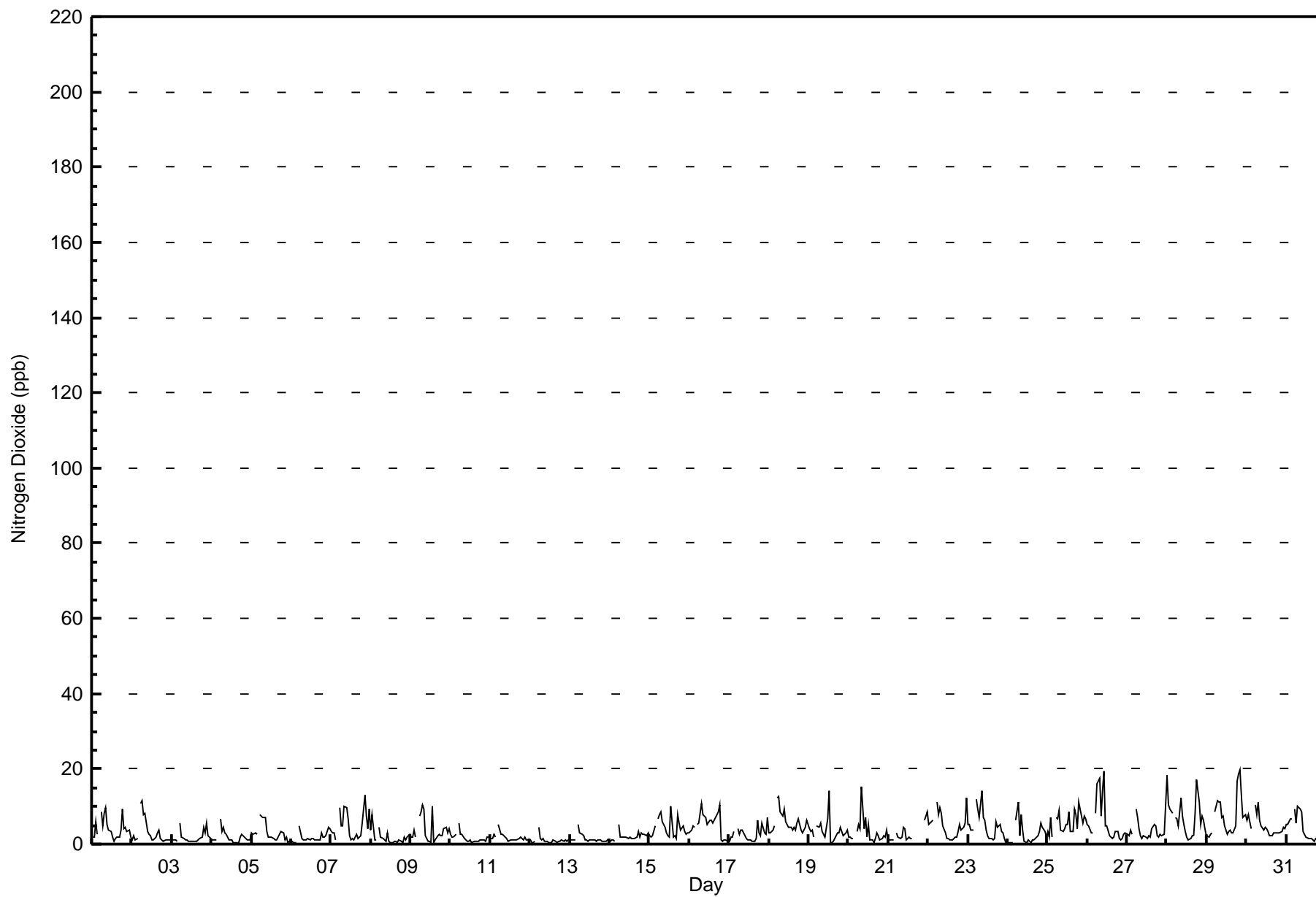
Maximum Value: 19.9 ppb on Oct 29 21:00	Maximum Daily Average: 7.7 ppb on Oct 29	Hours in Service: 744
Minimum Value: 0 ppb on Oct 19 15:00	Minimum Daily Average: 1.0 ppb on Oct 12	Hours of Data: 706
Maximum Diurnal Average: 7.1 ppb at hour 6	Minimum Diurnal Average: 1.5 ppb at hour 15	Hours of Missing Data: 38
Monthly Average: 3.61 ppb	Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.7 Q <sub>1</sub> = 1.2 Median = 2.5 Q <sub>3</sub> = 4.9 P <sub>90</sub> = 8.0 P <sub>99</sub> = 16.8	Hours of Calibration: 38
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	2	2	6	3	A	9	5	8	10	5	4	3	2	1	1	2	2	4	9	4	4	3	4	2	4.1	9.8	
2-Oct	1	2	1	1	A	11	12	8	8	3	3	2	1	1	2	3	4	1	1	1	1	1	1	1	3.1	11.6	
3-Oct	1	1	1	1	A	5	2	2	1	1	1	1	1	1	1	1	1	1	2	5	3	6	2	1	1.8	5.8	
4-Oct	1	1	1	1	A	7	3	5	3	3	1	1	1	0	0	0	0	2	3	2	2	1	1	1	1.8	6.8	
5-Oct	3	3	3	3	A	8	7	7	7	3	2	2	2	2	1	1	2	3	3	3	1	2	0	1	3.0	7.8	
6-Oct	1	0	0	0	A	5	1	1	1	1	1	1	1	2	1	1	1	1	3	2	2	2	5	4	1.7	4.9	
7-Oct	3	3	3	1	A	10	5	5	10	10	7	2	1	2	1	3	1	2	2	6	13	7	4	9	4.8	13.2	
8-Oct	4	8	1	1	A	5	2	1	1	1	3	1	0	0	1	1	0	1	1	0	2	1	2	3	1.7	8.0	
9-Oct	2	2	4	2	A	7	9	11	9	2	1	1	0	10	0	1	2	3	2	2	4	4	3	4	3.7	10.6	
10-Oct	3	2	2	3	A	5	3	3	2	1	1	1	1	0	1	1	1	1	1	1	1	1	2	2	1.5	5.4	
11-Oct	2	2	3	2	A	5	3	3	2	2	2	1	1	1	1	1	1	1	2	1	1	2	1	1	1.7	5.2	
12-Oct	1	0	0	1	A	4	1	1	1	1	1	0	0	0	1	1	0	1	1	1	1	1	1	1	1.0	4.3	
13-Oct	1	1	1	1	A	5	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	5.3	
14-Oct	1	1	1	1	A	5	2	2	2	2	2	2	2	2	2	2	2	3	2	3	3	3	2	3	2.0	5.1	
15-Oct	2	2	2	5	A	7	8	9	6	4	3	2	2	10	2	2	1	8	6	4	5	3	3	3	4.3	10.1	
16-Oct	3	4	5	5	A	5	5	11	8	8	7	5	6	6	6	6	7	9	10	1	1	1	1	1	5.2	10.8	
17-Oct	1	2	2	3	A	4	3	4	4	3	2	1	1	1	1	1	2	6	3	2	6	3	3	7	2.7	6.9	
18-Oct	3	3	4	5	A	12	13	9	8	9	6	5	4	4	4	4	4	5	7	4	3	4	5	6	5.6	12.5	
19-Oct	4	3	4	2	A	5	4	5	3	3	2	7	14	0	0	1	1	3	3	4	3	2	3	4	3.6	14.2	
20-Oct	2	2	1	2	A	3	5	4	15	4	7	2	5	1	1	0	2	3	2	1	1	2	2	4	3.2	15.4	
21-Oct	1	1	1	1	A	3	2	1	2	4	4	1	2	1	1	C	C	C	C	C	C	C	C	6	9	--	8.6
22-Oct	5	6	6	6	A	11	8	10	8	5	3	1	1	1	1	1	2	2	4	5	4	4	6	12	4.9	12.3	
23-Oct	5	5	4	4	A	12	9	7	14	7	6	4	2	2	1	1	2	6	5	5	3	3	2	0	4.7	14.3	
24-Oct	0	0	0	0	A	6	11	2	8	4	1	1	1	1	1	1	1	2	2	3	6	5	3	2	2.6	11.0	
25-Oct	4	2	7	2	A	7	7	9	4	3	4	5	5	9	3	3	9	8	4	11	7	6	7	7	5.8	11.3	
26-Oct	5	5	3	3	A	8	16	17	8	14	19	5	5	2	2	2	2	3	3	2	1	2	3	3	5.8	19.3	
27-Oct	3	2	4	3	A	9	7	4	2	2	2	2	2	2	2	4	5	5	2	2	3	2	3	10	3.5	10.3	
28-Oct	18	10	9	8	A	7	7	5	12	7	5	3	2	1	1	2	2	8	17	11	5	7	6	4	7.0	18.4	
29-Oct	2	2	3	3	A	8	12	11	11	7	7	5	3	3	4	3	3	5	17	19	20	13	7	8	7.7	19.9	
30-Oct	6	8	6	4	A	10	8	11	6	5	4	5	4	3	2	2	3	3	3	3	3	3	4	4	4.9	11.0	
31-Oct	5	5	7	7	A	9	6	10	9	9	3	3	2	1	1	1	1	1	2	2	1	3	6	6	4.3	10.0	

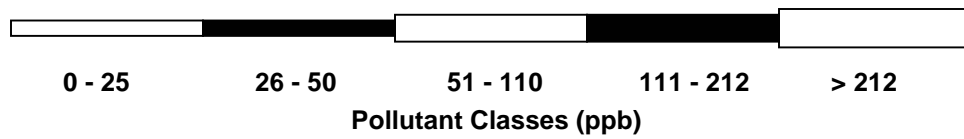
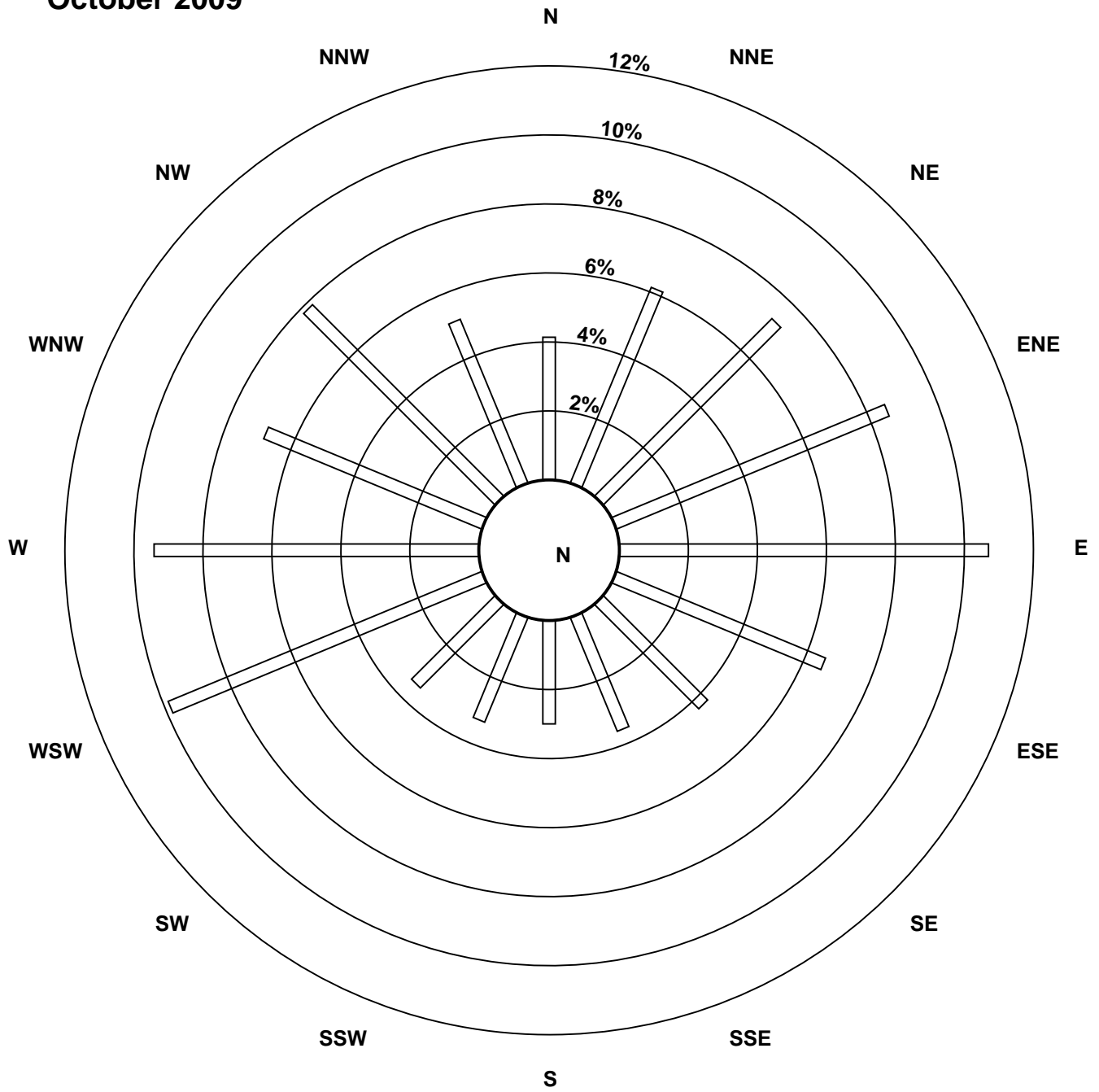
3.1	2.9	3.0	2.7	--	7.1	6.0	6.0	6.1	4.3	3.7	2.4	2.5	2.4	1.5	1.8	2.2	3.4	4.1	3.7	3.7	3.3	3.2	4.0	Diurnal Average	
18.4	10.4	9.2	8.2	--	12.5	16.1	17.5	15.4	14.2	19.3	6.7	14.2	10.1	5.7	6.3	9.2	8.6	17.0	18.7	19.9	13.1	7.4	12.3	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

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



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





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

**Beaverlodge - Nitrogen Oxide (NO) - ppb  
October 1, 2009 to November 1, 2009**

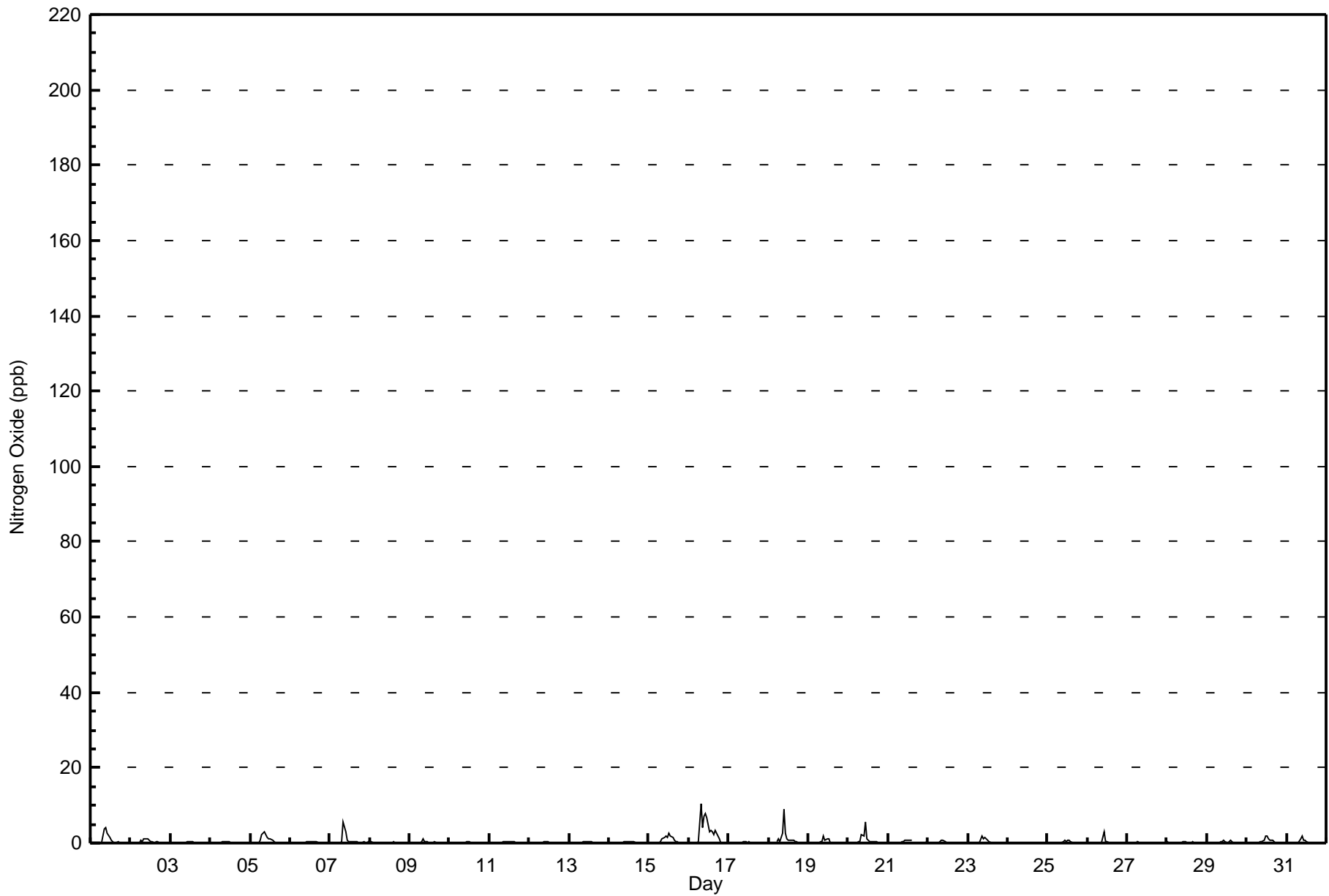
Maximum Value: 10.5 ppb on Oct 16 08:00	Maximum Daily Average: 2.3 ppb on Oct 16	Hours in Service: 744
Minimum Value: 0 ppb on Oct 1 01:00	Minimum Daily Average: 0.0 ppb on Oct 24	Hours of Data: 706
Maximum Diurnal Average: 1.4 ppb at hour 10	Minimum Diurnal Average: 0.0 ppb at hour 3	Hours of Missing Data: 38
Monthly Average: 0.32 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> = 0.2 P <sub>90</sub> = 0.8 P <sub>99</sub> = 5.4	Hours of Calibration: 38
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	A	0	0	2	4	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0.7	4.2
2-Oct	0	0	0	0	A	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
3-Oct	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
4-Oct	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
5-Oct	0	0	0	0	A	0	1	2	3	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.6	2.8
6-Oct	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
7-Oct	0	0	0	0	A	0	0	0	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	5.6
8-Oct	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
9-Oct	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0
10-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
11-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
12-Oct	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
13-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
15-Oct	0	0	0	0	A	0	0	0	1	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0.6	2.5
16-Oct	0	0	0	0	A	0	0	10	4	7	8	7	3	3	3	2	3	2	1	0	0	0	0	0	2.3	10.5
17-Oct	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
18-Oct	0	0	0	0	A	0	1	0	3	9	3	1	1	1	1	1	0	0	0	0	0	0	0	0	0.9	9.0
19-Oct	0	0	0	0	A	0	0	0	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.9
20-Oct	0	0	0	0	A	0	0	0	2	2	5	1	1	1	0	0	0	0	0	0	0	0	0	0	0.6	5.5
21-Oct	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	C	C	C	C	C	C	C	C	0	--	0.9
22-Oct	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9
23-Oct	0	0	0	0	A	0	0	0	2	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0
24-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
25-Oct	0	0	0	0	A	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.8
26-Oct	0	0	0	0	A	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.9
27-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
28-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
29-Oct	0	0	0	0	A	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0.1	0.7
30-Oct	0	0	0	0	A	0	0	0	0	0	1	2	2	1	1	1	0	0	0	0	0	0	0	0	0.4	2.0
31-Oct	0	0	0	0	A	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.8
	0.0	0.0	0.0	0.0	--	0.0	0.1	0.6	1.0	1.4	1.2	0.8	0.6	0.4	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0		Diurnal Average
	0.5	0.3	0.1	0.1	--	0.3	1.1	10.5	5.6	9.0	7.7	6.6	3.0	3.3	3.1	2.4	3.2	1.8	0.9	0.0	0.3	0.2	0.2	0.3		Diurnal Maximum

C - Calibration                      A - Automated Daily Zero Span

# Hourly Averages for NO at Beaverlodge

## October 2009



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

**Beaverlodge - Nitrogen Oxide (NO) - ppb  
October 1, 2009 to November 1, 2009**

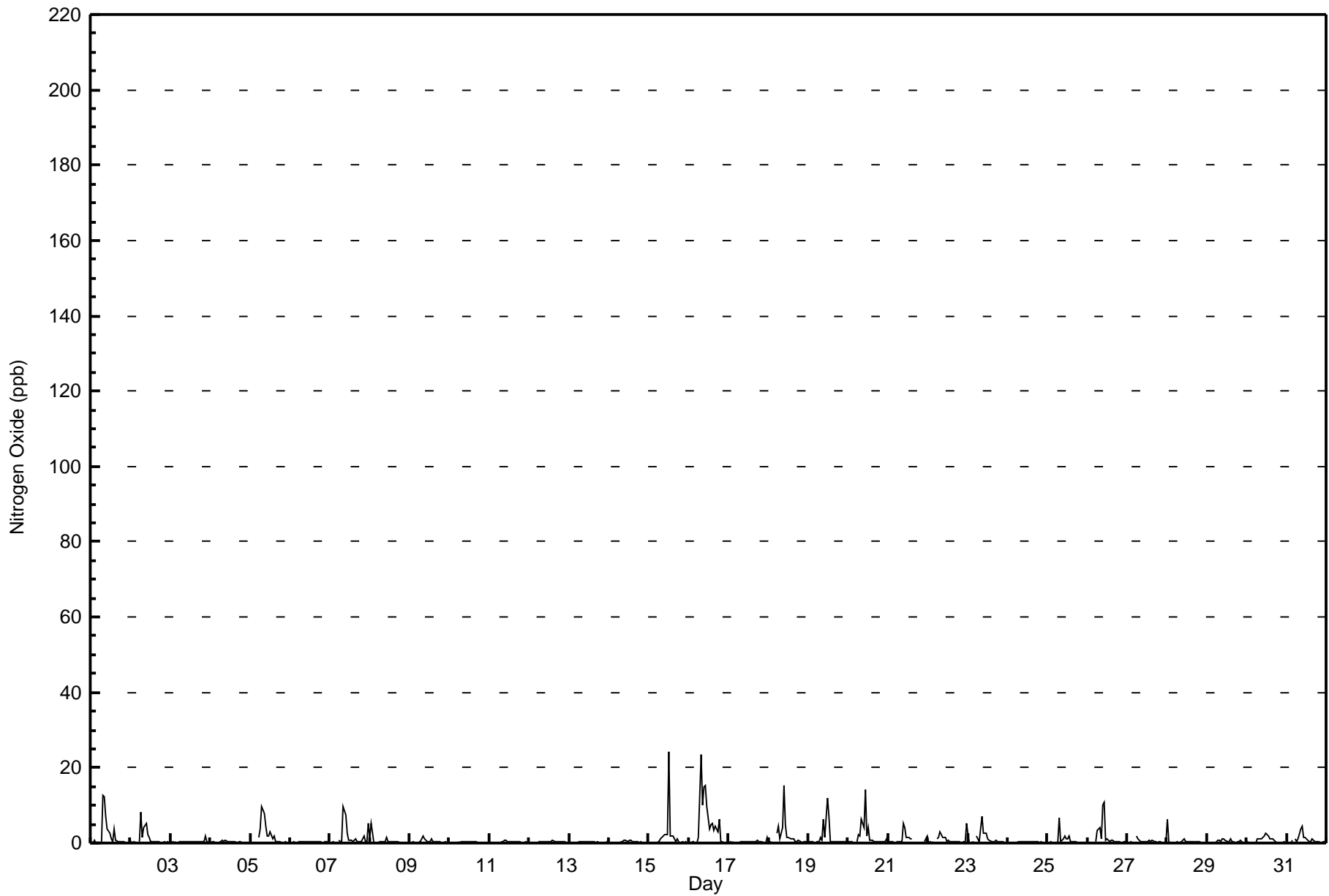
Maximum Value: 24.1 ppb on Oct 15 13:00	Maximum Daily Average: 4.7 ppb on Oct 16	Hours in Service: 744
Minimum Value: 0 ppb on Oct 1 01:00	Minimum Daily Average: 0.2 ppb on Oct 24	Hours of Data: 706
Maximum Diurnal Average: 3.3 ppb at hour 10	Minimum Diurnal Average: 0.1 ppb at hour 4	Hours of Missing Data: 38
Monthly Average: 0.95 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.3 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 2.0 P <sub>99</sub> = 11.6	Hours of Calibration: 38
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	1	0	A	0	0	12	12	7	4	3	1	0	4	1	0	0	0	0	0	0	0	0	2.0	12.5
2-Oct	0	0	0	0	A	0	8	1	4	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1.2	8.3
3-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0.3	2.0
4-Oct	0	0	0	0	A	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
5-Oct	0	0	0	0	A	1	4	10	8	5	2	2	3	1	2	0	0	0	0	0	0	0	0	0	1.7	9.8
6-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
7-Oct	0	0	0	0	A	1	0	0	10	7	2	1	1	1	0	1	0	0	0	0	2	0	0	5	1.5	9.6
8-Oct	1	5	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	5.3
9-Oct	0	0	0	0	A	0	0	1	2	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0.4	1.7
10-Oct	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
11-Oct	0	0	0	0	A	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
12-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.7
13-Oct	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
14-Oct	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.7
15-Oct	0	0	0	0	A	0	0	1	2	2	2	2	24	2	2	1	0	1	0	0	0	0	0	0	1.8	24.1
16-Oct	0	0	0	0	A	0	2	24	10	15	15	10	4	5	5	3	4	3	7	0	0	0	0	0	4.7	23.5
17-Oct	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.3	1.4
18-Oct	0	0	0	0	A	3	4	1	4	15	5	1	1	1	1	1	0	0	1	0	0	0	0	0	1.8	15.3
19-Oct	0	0	0	0	A	0	0	1	1	6	1	12	7	0	0	0	0	0	0	0	0	0	0	0	1.4	11.8
20-Oct	0	0	0	0	A	0	2	2	6	4	14	2	4	1	1	0	0	0	0	0	0	0	0	1	1.8	14.1
21-Oct	0	0	0	0	A	0	0	0	0	5	4	2	1	1	1	C	C	C	C	C	C	C	C	0	--	5.4
22-Oct	0	0	0	0	A	1	1	3	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	5	0.9	5.1
23-Oct	2	0	0	0	A	2	1	0	7	2	3	2	1	1	0	0	0	1	0	0	0	0	0	0	1.1	6.9
24-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
25-Oct	0	0	0	0	A	0	0	7	0	1	2	1	1	2	0	0	0	0	0	0	0	0	0	0	0.7	6.6
26-Oct	0	0	0	0	A	0	4	4	1	10	11	1	1	0	1	1	0	0	0	0	0	0	0	0	1.6	10.8
27-Oct	0	0	0	0	A	2	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0.4	1.7
28-Oct	6	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	6.2
29-Oct	0	0	0	0	A	0	1	1	0	1	1	1	0	1	1	1	0	0	0	0	1	0	0	0	0.4	1.0
30-Oct	0	0	0	0	A	0	1	1	1	1	2	3	2	2	1	1	1	0	0	0	0	0	0	0	0.7	2.8
31-Oct	0	0	0	1	A	1	0	1	4	4	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0.8	4.4
	0.4	0.3	0.1	0.1	--	0.4	1.1	2.4	2.6	3.3	2.6	1.7	2.0	0.8	0.9	0.6	0.5	0.4	0.4	0.2	0.2	0.2	0.1	0.5	Diurnal Average	
	6.2	5.3	0.6	0.7	--	2.7	8.3	23.5	12.4	15.3	15.4	11.8	24.1	4.9	5.2	3.3	4.4	3.0	6.5	0.5	2.0	2.0	0.5	5.3	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

# Hourly Maximums for NO at Beaverlodge

## October 2009



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

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

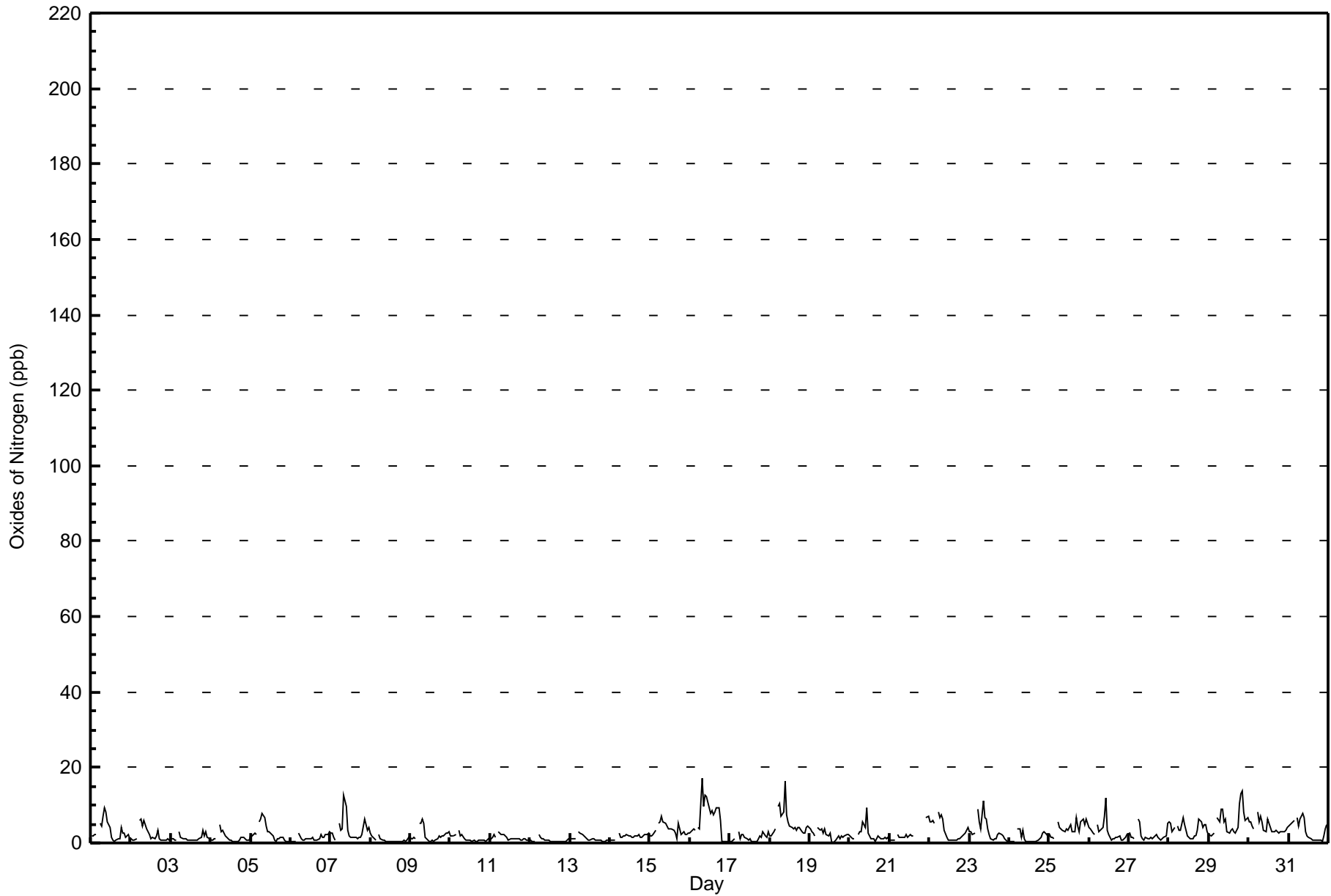
Maximum Value: 17.1 ppb on Oct 16 08:00	Maximum Daily Average: 6.2 ppb on Oct 16	Hours in Service: 744
Minimum Value: 0 ppb on Oct 19 15:00	Minimum Daily Average: 0.7 ppb on Oct 12	Hours of Data: 706
Maximum Diurnal Average: 4.8 ppb at hour 6	Minimum Diurnal Average: 1.5 ppb at hour 15	Hours of Missing Data: 38
Monthly Average: 2.61 ppb	Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.9 Median = 1.8 Q <sub>3</sub> = 3.5 P <sub>90</sub> = 5.8 P <sub>99</sub> = 12.2	Hours of Calibration: 38
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	2	2	2	2	A	5	4	7	9	8	6	4	2	1	0	1	1	1	4	3	3	2	2	1	3.1	9.2
2-Oct	1	1	1	1	A	6	7	5	6	4	3	2	1	1	1	2	3	1	1	1	1	1	1	1	2.2	6.5
3-Oct	1	1	1	1	A	3	1	1	1	1	1	1	1	1	1	1	1	1	4	2	3	2	1	1.3	3.5	
4-Oct	1	1	1	1	A	5	3	3	2	2	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1.4	4.7
5-Oct	2	2	2	2	A	6	6	8	7	4	3	3	3	2	1	1	1	1	1	2	1	0	0	0	2.5	7.6
6-Oct	0	0	0	0	A	3	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	1.2	3.0	
7-Oct	3	2	2	1	A	5	3	4	13	10	3	2	2	1	1	1	1	2	1	2	6	5	3	4	3.4	12.6
8-Oct	2	2	1	1	A	2	1	1	1	0	1	0	0	0	1	0	0	1	0	0	1	0	1	2	0.9	2.5
9-Oct	1	1	1	1	A	5	5	6	5	2	1	0	0	1	0	1	1	2	2	2	2	3	3	3	2.1	6.2
10-Oct	2	2	2	2	A	4	2	2	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1.2	3.5
11-Oct	1	1	2	1	A	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	3.1
12-Oct	1	0	0	1	A	2	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	1	1	1	0.7	2.3
13-Oct	1	1	1	1	A	3	2	2	2	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1.1	3.0
14-Oct	1	1	1	1	A	3	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	1.7	2.6
15-Oct	2	2	2	3	A	5	6	7	5	5	4	4	4	4	3	2	1	5	4	2	3	2	2	3	3.5	7.1
16-Oct	3	3	4	3	A	4	4	17	10	13	12	11	8	9	7	8	9	9	6	0	0	0	0	0	6.2	17.1
17-Oct	0	0	1	1	A	3	1	2	2	2	1	1	1	1	0	0	0	1	2	2	3	2	2	3	1.3	3.0
18-Oct	2	2	3	4	A	10	10	7	8	17	8	5	4	4	4	4	3	4	4	3	3	3	4	4	5.2	16.6
19-Oct	4	3	3	2	A	4	4	4	3	4	2	2	3	0	0	0	1	2	1	2	2	2	2	2	2.2	4.1
20-Oct	2	2	1	1	A	2	3	3	6	4	9	3	2	1	1	1	1	2	2	1	1	1	1	2	2.2	9.4
21-Oct	1	1	1	1	A	2	1	1	2	2	2	2	2	2	C	C	C	C	C	C	C	C	7	7	--	7.1
22-Oct	6	6	6	5	A	8	7	8	7	3	2	1	1	1	1	1	1	1	1	1	2	3	4	4	3.3	8.3
23-Oct	3	3	2	3	A	9	6	4	11	7	6	4	2	1	1	1	1	2	2	2	2	1	1	0	3.3	11.2
24-Oct	0	0	0	0	A	4	4	2	3	1	1	0	1	0	0	1	1	1	1	2	3	3	2	1	1.4	3.8
25-Oct	2	1	2	1	A	6	4	4	3	3	4	3	4	5	3	3	7	4	3	6	6	5	6	5	4.0	6.9
26-Oct	4	4	3	2	A	5	3	4	4	7	12	4	2	1	1	1	1	1	2	1	1	1	1	2	2.9	12.0
27-Oct	2	2	2	1	A	6	6	2	1	1	1	1	1	1	1	2	2	2	1	1	1	1	2	5	2.0	6.3
28-Oct	6	5	3	4	A	5	3	3	7	5	3	2	2	1	1	2	2	3	6	6	4	5	5	3	3.7	6.8
29-Oct	2	2	2	3	A	7	6	9	9	6	6	3	3	3	4	3	3	4	11	13	14	8	6	7	5.8	14.0
30-Oct	6	6	4	4	A	8	6	7	6	3	3	6	5	4	3	3	4	3	3	3	3	3	3	4	4.3	8.3
31-Oct	4	5	6	6	A	7	5	6	8	7	3	2	1	1	1	1	1	1	1	1	0	2	4	5	3.3	8.0

2.2	2.0	2.0	2.0	--	4.8	3.8	4.3	4.8	4.1	3.4	2.4	1.9	1.7	1.5	1.5	1.8	2.0	2.3	2.2	2.3	2.1	2.3	2.6	Diurnal Average	
5.7	5.7	5.8	5.9	--	9.6	10.4	17.1	12.6	16.6	12.3	10.8	7.8	8.6	7.4	8.1	9.4	9.3	10.6	13.0	14.0	8.3	6.6	7.1	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

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



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

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

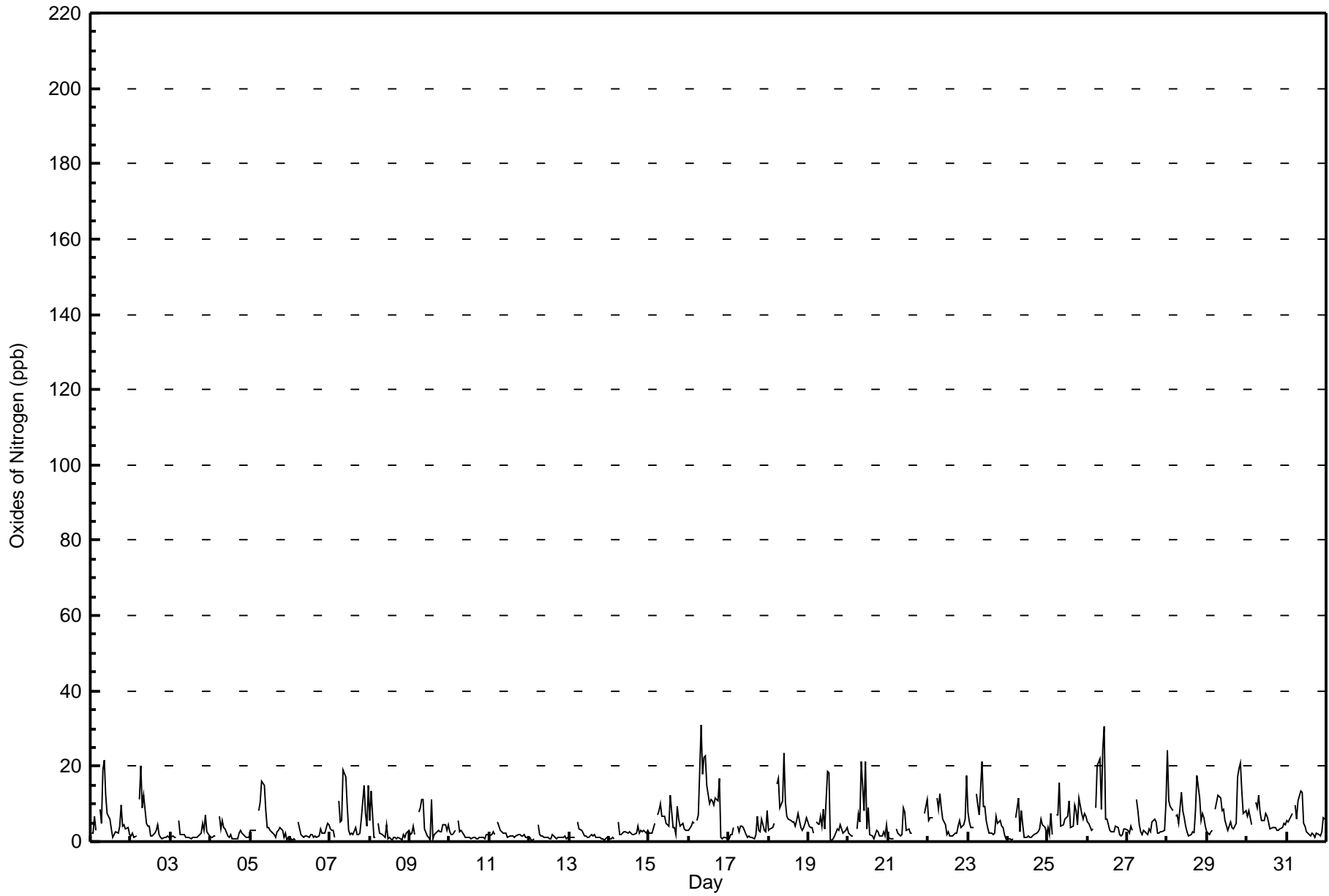
Maximum Value: 30.8 ppb on Oct 16 08:00	Maximum Daily Average: 9.7 ppb on Oct 16	Hours in Service: 744
Minimum Value: 0 ppb on Oct 6 02:00	Minimum Daily Average: 1.2 ppb on Oct 12	Hours of Data: 706
Maximum Diurnal Average: 8.5 ppb at hour 9	Minimum Diurnal Average: 2.3 ppb at hour 15	Hours of Missing Data: 38
Monthly Average: 4.53 ppb	Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 1.6 Median = 2.9 Q <sub>3</sub> = 5.7 P <sub>90</sub> = 10.4 P <sub>99</sub> = 22.4	Hours of Calibration: 38
		Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	2	2	7	3	A	9	5	19	21	12	8	6	3	1	2	3	2	4	10	4	5	3	4	2	5.9	21.5	
2-Oct	2	2	1	2	A	11	20	9	12	5	4	4	2	2	2	3	4	2	1	1	1	1	1	1	4.1	20.1	
3-Oct	1	1	1	1	A	6	2	2	2	1	1	1	1	1	1	1	1	2	2	5	3	7	3	1	2.0	7.2	
4-Oct	1	1	2	2	A	7	3	6	4	3	2	1	2	1	1	1	1	2	3	2	2	1	1	1	2.1	6.8	
5-Oct	3	3	3	3	A	8	10	16	15	8	4	4	3	2	2	1	3	3	4	3	1	2	0	1	4.4	16.2	
6-Oct	1	0	1	0	A	5	2	1	1	1	2	1	2	2	1	2	1	2	3	2	2	2	5	4	2.0	5.1	
7-Oct	3	3	3	1	A	11	5	6	19	17	9	3	2	2	2	4	2	2	2	6	15	8	4	15	6.3	19.1	
8-Oct	6	13	1	1	A	5	2	2	1	1	4	1	1	0	1	1	1	1	1	1	2	1	2	3	2.3	13.4	
9-Oct	2	2	4	2	A	8	9	11	11	3	2	1	0	11	1	2	3	3	3	3	4	5	3	4	4.2	11.2	
10-Oct	3	2	2	3	A	6	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.7	5.5	
11-Oct	2	2	3	2	A	5	3	3	2	2	2	1	2	2	1	1	2	2	2	2	1	2	1	1	2.0	5.2	
12-Oct	1	0	0	1	A	4	2	2	2	1	1	1	1	1	2	1	1	1	1	1	1	2	1	1	1.2	4.5	
13-Oct	1	1	1	1	A	5	3	3	2	2	2	1	1	2	2	2	1	1	1	1	1	1	1	1	1.6	5.2	
14-Oct	1	1	1	1	A	5	2	2	2	3	3	2	3	2	2	2	2	4	2	3	3	3	2	3	2.3	5.1	
15-Oct	2	2	2	5	A	7	8	10	7	7	5	5	4	12	4	4	2	9	6	4	5	3	3	3	5.2	12.3	
16-Oct	3	4	5	5	A	6	7	31	18	22	23	15	10	11	11	10	11	11	17	1	1	1	1	1	9.7	30.8	
17-Oct	1	2	2	4	A	4	3	4	4	4	2	1	2	1	1	1	2	7	3	3	6	3	3	8	3.0	8.1	
18-Oct	3	3	4	5	A	15	17	9	11	24	10	7	6	6	5	5	4	6	7	4	3	4	5	6	7.3	23.7	
19-Oct	4	4	4	2	A	5	5	7	4	9	3	18	18	1	0	1	1	3	3	5	3	2	3	4	4.7	18.5	
20-Oct	2	2	2	1	A	3	8	5	21	8	21	4	9	2	1	1	2	3	3	1	2	2	2	5	4.8	21.2	
21-Oct	1	1	1	1	A	4	2	1	2	9	8	3	3	2	2	C	C	C	C	C	C	C	C	7	11	--	11.1
22-Oct	6	6	6	6	A	11	9	13	9	6	5	2	3	2	2	2	2	2	4	6	4	5	6	18	5.8	17.6	
23-Oct	8	5	4	4	A	13	10	7	21	10	9	6	4	2	2	2	2	7	5	6	4	4	2	1	5.9	21.4	
24-Oct	1	1	0	1	A	7	11	3	8	4	1	1	1	1	1	1	2	2	2	3	6	5	4	2	3.0	11.5	
25-Oct	4	2	7	2	A	7	7	16	4	4	6	6	7	11	4	4	10	8	4	11	8	6	8	7	6.6	15.6	
26-Oct	5	5	3	3	A	9	20	22	9	25	30	6	6	3	3	3	3	4	4	2	2	2	3	3	7.6	30.4	
27-Oct	3	2	4	3	A	11	8	4	3	2	3	2	2	3	3	5	6	5	2	2	3	3	3	10	4.1	11.2	
28-Oct	24	11	9	8	A	7	7	5	13	8	6	4	3	2	2	3	2	8	18	11	5	7	6	4	7.6	24.3	
29-Oct	3	2	3	3	A	9	12	12	11	8	9	6	3	4	5	4	3	5	17	19	21	14	7	8	8.2	20.8	
30-Oct	7	8	6	4	A	10	9	12	8	6	6	8	7	5	3	4	4	4	3	3	3	4	5	4	5.8	12.3	
31-Oct	5	5	7	8	A	10	6	11	13	13	5	4	3	2	1	2	2	1	2	2	1	3	6	6	5.2	13.4	

3.5	3.2	3.2	2.8	--	7.5	7.1	8.2	8.5	7.4	6.3	4.1	3.6	3.2	2.3	2.5	2.7	3.8	4.5	3.9	3.9	3.5	3.3	4.6	Diurnal Average	
24.3	13.4	9.3	8.2	--	15.1	20.1	30.8	21.5	24.6	30.4	18.5	18.1	12.3	11.0	9.7	11.5	11.0	17.6	19.4	20.8	13.5	7.6	17.6	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

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





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

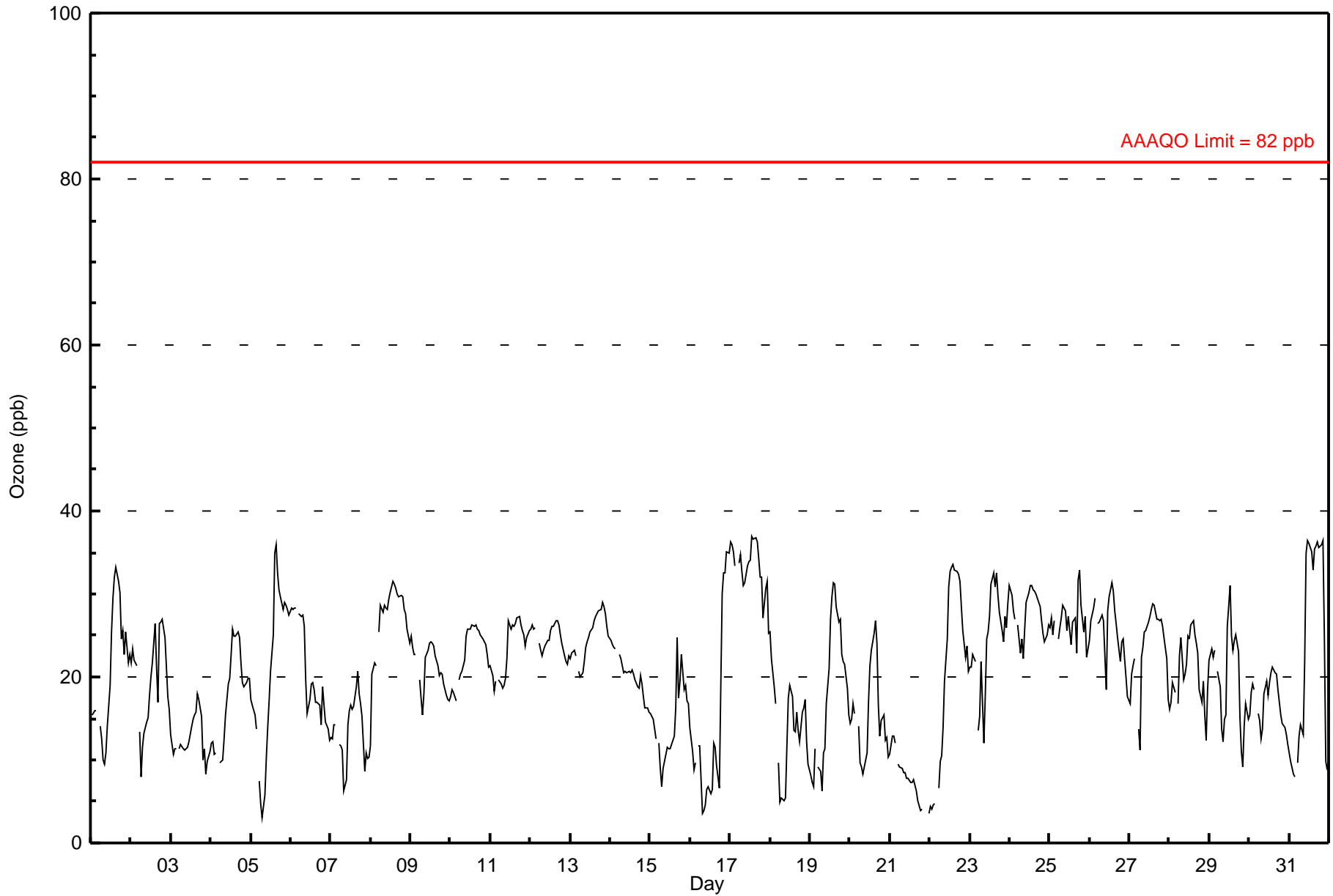
**Beaverlodge - Ozone (O<sub>3</sub>) - ppb  
October 1, 2009 to November 1, 2009**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 37.0 ppb on Oct 17 14:00	Maximum Daily Average: 33.3 ppb on Oct 17	Hours in Service: 744 Hours of Data: 710 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0
Minimum Value: 3 ppb on Oct 5 08:00 Maximum Diurnal Average: 25.0 ppb at hour 15 Monthly Average: 20.56 ppb	Minimum Daily Average: 8.0 ppb on Oct 21 Minimum Diurnal Average: 16.1 ppb at hour 9 Percentiles: P <sub>1</sub> = 4.3 P <sub>10</sub> = 9.9 Q <sub>1</sub> = 14.8 Median = 21.3 Q <sub>3</sub> = 26.2 P <sub>90</sub> = 30.2 P <sub>99</sub> = 36.3	

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-Oct	15	16	16	16	A	14	13	10	10	11	14	19	25	30	32	33	32	30	25	26	23	25	22	23	20.8	33.2	
2-Oct	22	23	22	21	A	13	8	12	13	15	15	18	20	22	26	21	17	26	27	27	25	21	18	16	19.5	26.9	
3-Oct	13	11	11	11	A	11	12	11	11	11	12	12	14	15	16	16	18	17	15	10	11	8	10	11	12.5	18.0	
4-Oct	12	12	11	11	A	10	10	10	13	15	19	20	23	26	25	25	25	25	22	19	19	19	20	20	17.8	25.8	
5-Oct	17	17	15	14	A	7	5	3	6	10	14	17	21	25	35	36	32	31	30	28	29	29	28	27	20.7	35.9	
6-Oct	28	28	28	28	A	28	27	28	26	20	16	17	19	19	18	17	17	17	14	19	17	15	14	12	20.5	28.4	
7-Oct	13	13	14	14	A	12	12	11	6	8	14	16	17	16	16	19	21	18	17	15	9	11	10	10	13.5	20.6	
8-Oct	12	20	22	21	A	25	29	28	29	28	28	29	30	32	31	31	30	30	30	30	28	28	26	24	27.0	31.5	
9-Oct	25	24	23	23	A	20	17	15	18	22	23	24	24	24	24	23	21	20	20	20	19	18	17	17	21.0	24.9	
10-Oct	18	18	18	17	A	20	20	21	22	25	26	26	26	26	26	26	26	26	25	25	24	24	23	21	22.9	26.3	
11-Oct	21	20	18	19	A	20	19	19	19	20	22	27	26	26	26	26	27	27	27	26	26	25	24	25	26	23.2	27.2
12-Oct	26	26	26	26	A	24	23	23	23	24	24	24	26	26	26	27	27	26	25	24	23	22	22	23	24.6	26.8	
13-Oct	22	23	23	23	A	21	20	21	22	23	24	25	25	26	27	27	28	28	28	29	28	28	26	25	24.9	28.9	
14-Oct	24	24	24	23	A	23	22	21	21	21	20	21	21	21	20	20	19	19	20	19	18	16	16	16	20.3	24.3	
15-Oct	16	15	15	13	A	12	9	7	9	11	12	11	11	12	13	16	25	18	19	23	19	19	17	17	14.7	24.8	
16-Oct	14	11	9	10	A	12	12	4	4	5	6	7	6	6	12	11	9	7	19	30	33	33	35	35	14.2	35.1	
17-Oct	36	36	35	33	A	34	35	33	31	31	33	34	34	37	37	37	36	34	32	32	27	31	32	25	33.3	37.0	
18-Oct	26	22	19	17	A	10	5	5	5	5	12	18	19	18	14	13	16	14	12	16	16	17	12	9	13.9	25.5	
19-Oct	8	7	7	11	A	9	9	6	11	11	17	21	27	30	31	31	29	27	27	23	22	22	19	15	18.2	31.3	
20-Oct	14	15	17	16	A	14	10	9	8	10	11	17	21	23	25	27	24	17	13	15	15	12	13	10	15.5	26.7	
21-Oct	11	13	13	12	A	9	9	9	8	8	8	8	7	7	8	7	6	5	4	4	C	C	C	4	8.0	12.9	
22-Oct	4	4	5	5	A	7	10	11	14	20	25	31	33	33	34	33	33	32	31	28	26	22	24	21	21.0	33.6	
23-Oct	21	21	23	22	A	14	15	22	12	18	25	25	27	31	32	31	33	30	28	26	24	27	26	29	24.4	32.6	
24-Oct	31	30	28	27	A	26	23	25	22	26	29	30	31	31	30	30	30	29	28	27	25	24	25	26	27.6	31.0	
25-Oct	26	27	25	27	A	24	26	27	29	28	26	27	26	24	27	27	23	32	33	29	25	27	22	23	26.5	32.8	
26-Oct	24	27	28	29	A	26	27	27	27	23	18	28	30	31	30	28	27	25	22	24	25	22	20	18	25.5	31.3	
27-Oct	17	20	21	22	A	14	11	22	24	25	26	27	27	28	29	29	27	27	27	27	26	25	22	17	23.5	28.9	
28-Oct	16	17	19	18	A	17	23	25	20	20	21	25	25	26	27	25	24	23	19	17	19	15	12	18	20.5	26.9	
29-Oct	22	23	22	23	A	21	19	14	12	15	15	26	31	25	23	24	25	23	15	11	9	14	17	15	19.4	31.0	
30-Oct	15	18	19	18	A	16	15	13	14	18	19	18	19	21	21	20	20	19	17	15	14	14	13	12	16.9	21.2	
31-Oct	11	10	8	8	A	10	13	14	13	22	35	36	36	35	33	35	36	36	36	36	36	25	10	9	23.6	36.5	
	18.8	19.1	18.9	18.7	--	16.8	16.3	16.3	16.1	17.7	19.7	22.0	23.4	24.3	25.0	24.9	24.6	23.7	22.8	22.5	22.0	21.2	19.8	18.5	Diurnal Average		
	36.3	35.9	35.0	33.4	--	33.8	34.8	32.8	31.0	31.4	34.9	36.4	36.0	37.0	36.6	36.7	36.4	36.3	35.7	36.0	36.5	32.6	35.1	34.9	Diurnal Maximum		

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

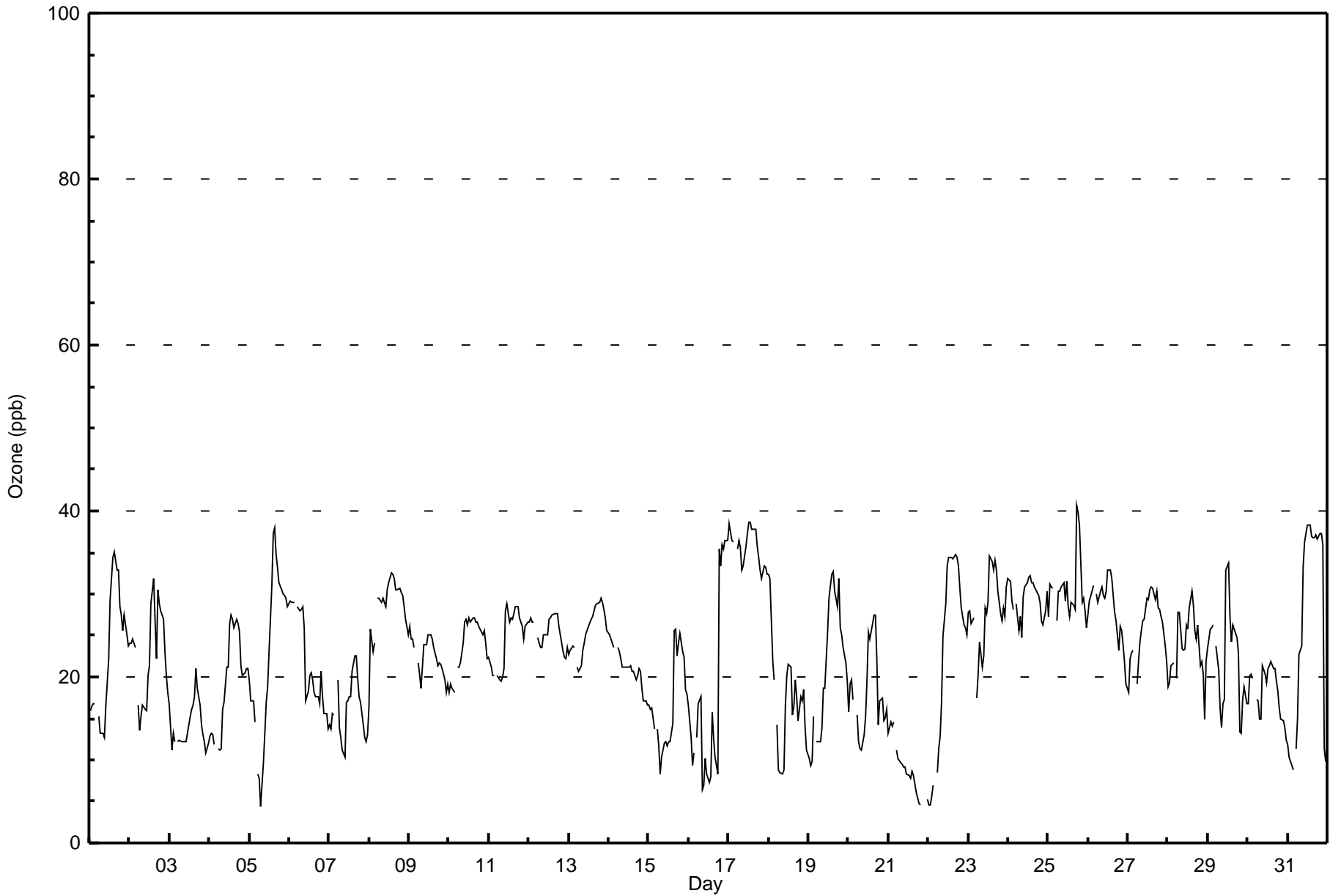
# Hourly Averages for O<sub>3</sub> at Beaverlodge October 2009



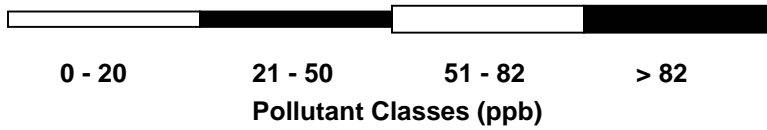
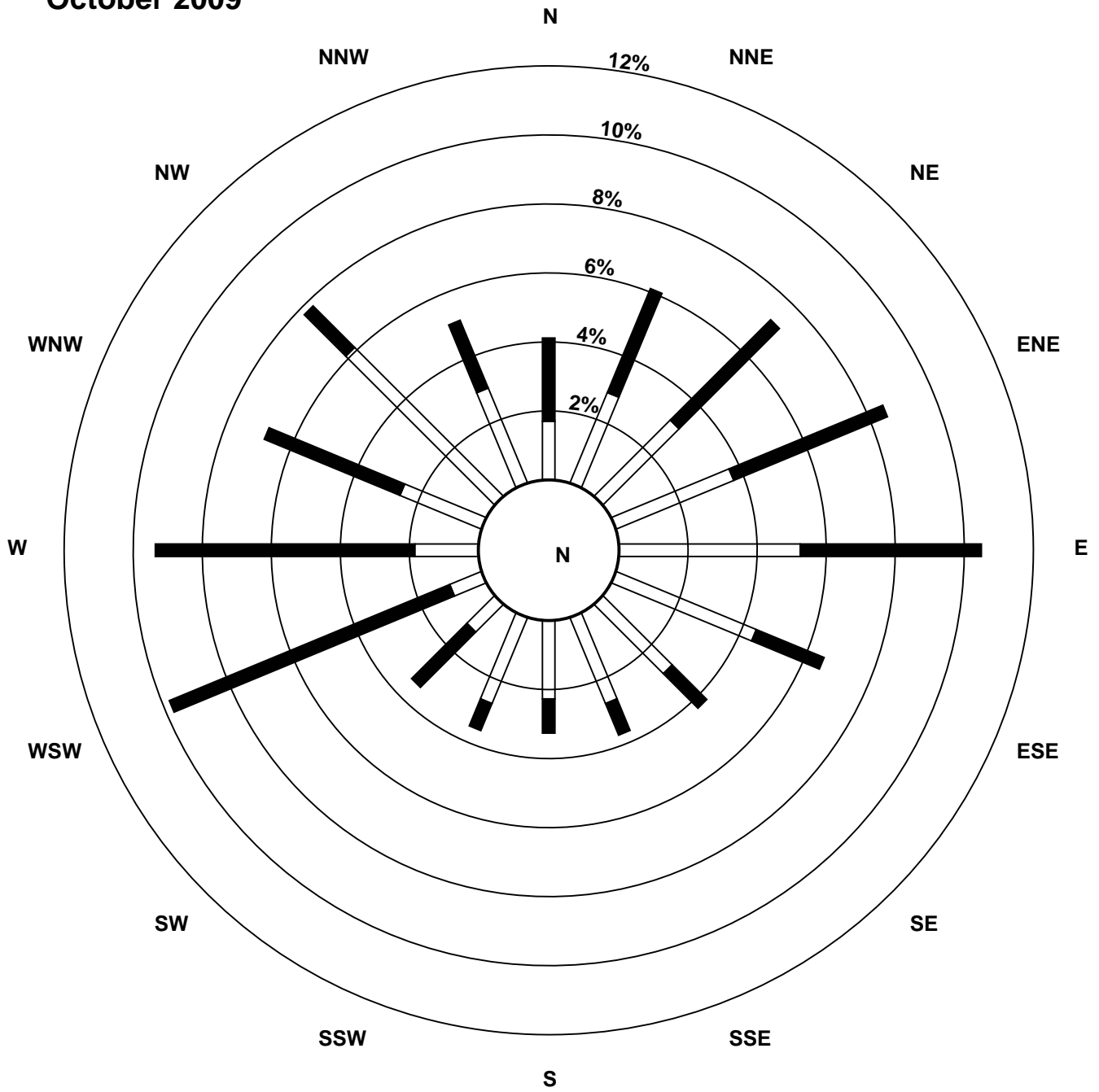


# Hourly Maximums for O<sub>3</sub> at Beaverlodge

## October 2009



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



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

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

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 35.4 ppb on Oct 31 21:00																						Hours in Service: 744			
Minimum Value: 4.7 ppb on Oct 22 06:00																						Hours of Data: 737			
Percentiles: P <sub>1</sub> = 6.4 P <sub>10</sub> = 11.2 Q <sub>1</sub> = 15.3 Median = 20.7 Q <sub>3</sub> = 25.9 P <sub>90</sub> = 28.3 P <sub>99</sub> = 34.8																						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-Oct	18	17	16	16	16	15	15	14	13	13	12	13	14	16	19	22	24	27	28	29	29	28	27	26	29.0
2-Oct	24	23	23	23	23	21	19	17	16	15	14	13	14	15	18	19	19	21	22	23	24	24	23	22	24.3
3-Oct	22	20	18	16	14	13	12	12	11	11	11	12	12	12	13	13	14	15	15	15	15	14	13	13	21.6
4-Oct	12	11	11	11	11	11	11	11	11	11	12	14	15	17	19	21	22	23	24	24	23	22	22	21	23.8
5-Oct	20	19	18	18	17	16	14	11	10	9	8	9	10	13	16	20	24	26	28	30	31	31	30	29	31.1
6-Oct	29	28	28	28	28	28	28	28	28	26	25	23	23	21	20	19	18	18	17	18	17	17	16	15	28.7
7-Oct	15	14	14	14	14	13	13	13	12	11	11	11	12	12	13	14	16	17	17	17	16	16	15	14	17.4
8-Oct	13	13	14	14	15	17	20	22	25	26	27	28	28	29	29	30	30	30	30	30	30	30	29	28	30.4
9-Oct	27	27	26	25	25	23	22	21	20	20	20	20	21	21	22	23	23	23	23	22	21	21	20	19	27.5
10-Oct	19	19	18	18	18	18	18	19	19	20	21	23	23	24	25	25	26	26	26	26	25	25	25	24	25.9
11-Oct	24	23	22	21	21	20	20	20	19	19	20	21	21	22	23	24	25	26	26	26	26	26	26	26	26.5
12-Oct	25	25	25	25	25	25	25	25	24	24	24	24	24	24	25	25	26	26	26	26	25	25	24	24	25.9
13-Oct	23	23	23	22	22	22	22	22	22	22	22	22	23	23	24	25	26	26	27	27	28	28	28	27	27.9
14-Oct	27	27	26	25	25	24	24	23	23	22	22	21	21	21	21	20	20	20	20	20	19	19	18	18	27.1
15-Oct	17	17	16	16	15	15	14	12	11	11	10	10	10	10	11	12	14	15	16	17	18	19	19	19	19.5
16-Oct	18	17	16	14	14	13	12	10	9	8	7	7	7	6	6	7	8	8	10	13	16	19	22	25	25.0
17-Oct	28	32	34	34	35	35	35	35	34	33	33	33	33	34	34	34	35	35	35	35	34	33	33	31	35.3
18-Oct	30	28	27	25	24	21	18	15	12	9	8	9	10	11	12	13	14	15	15	15	15	15	14	29.8	
19-Oct	13	12	12	11	10	9	9	8	9	9	11	12	14	16	19	22	25	26	28	28	27	26	25	23	28.0
20-Oct	21	20	18	17	17	16	14	14	13	12	11	11	13	14	16	18	20	21	21	21	20	18	17	15	21.0
21-Oct	13	13	13	12	12	12	11	11	11	10	9	9	8	8	8	7	7	7	7	6	6	6	N	N	13.2
22-Oct	N	N	N	N	N	5	5	6	8	10	13	17	19	22	25	28	30	32	33	32	31	30	29	27	32.5
23-Oct	26	24	23	22	22	21	19	20	18	18	18	19	20	22	24	25	28	29	30	30	29	29	28	28	29.7
24-Oct	28	28	28	28	28	28	28	27	26	25	25	26	27	27	28	29	30	30	30	30	29	28	27	27	30.1
25-Oct	26	26	26	26	26	26	26	26	26	27	27	27	27	26	27	27	26	26	27	27	27	28	27	27	27.8
26-Oct	27	26	26	26	26	26	26	27	27	27	25	25	26	26	27	27	27	27	28	27	26	25	24	23	27.5
27-Oct	21	21	21	21	20	19	18	18	19	20	21	21	22	24	26	27	27	27	27	28	27	27	26	25	27.5
28-Oct	23	22	21	20	19	18	18	19	20	20	21	21	22	23	24	24	24	25	24	23	23	21	19	19	24.5
29-Oct	18	18	19	20	20	20	21	21	19	18	17	17	19	20	20	22	23	24	24	22	19	18	17	16	24.1
30-Oct	15	14	15	16	17	17	17	16	16	16	16	16	16	17	18	19	20	20	19	19	18	18	17	16	19.7
31-Oct	14	13	12	11	11	10	10	11	11	13	16	20	22	26	28	31	34	35	35	35	35	34	31	28	35.4
29.8 32.0 34.1 34.5 34.8 34.9 34.9 34.6 33.8 33.2 32.9 33.0 33.1 33.5 33.7 34.2 34.9 35.3 35.4 35.4 35.4 34.1 32.6 31.2																									
Diurnal Maximums																									
N - Not Valid																									

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

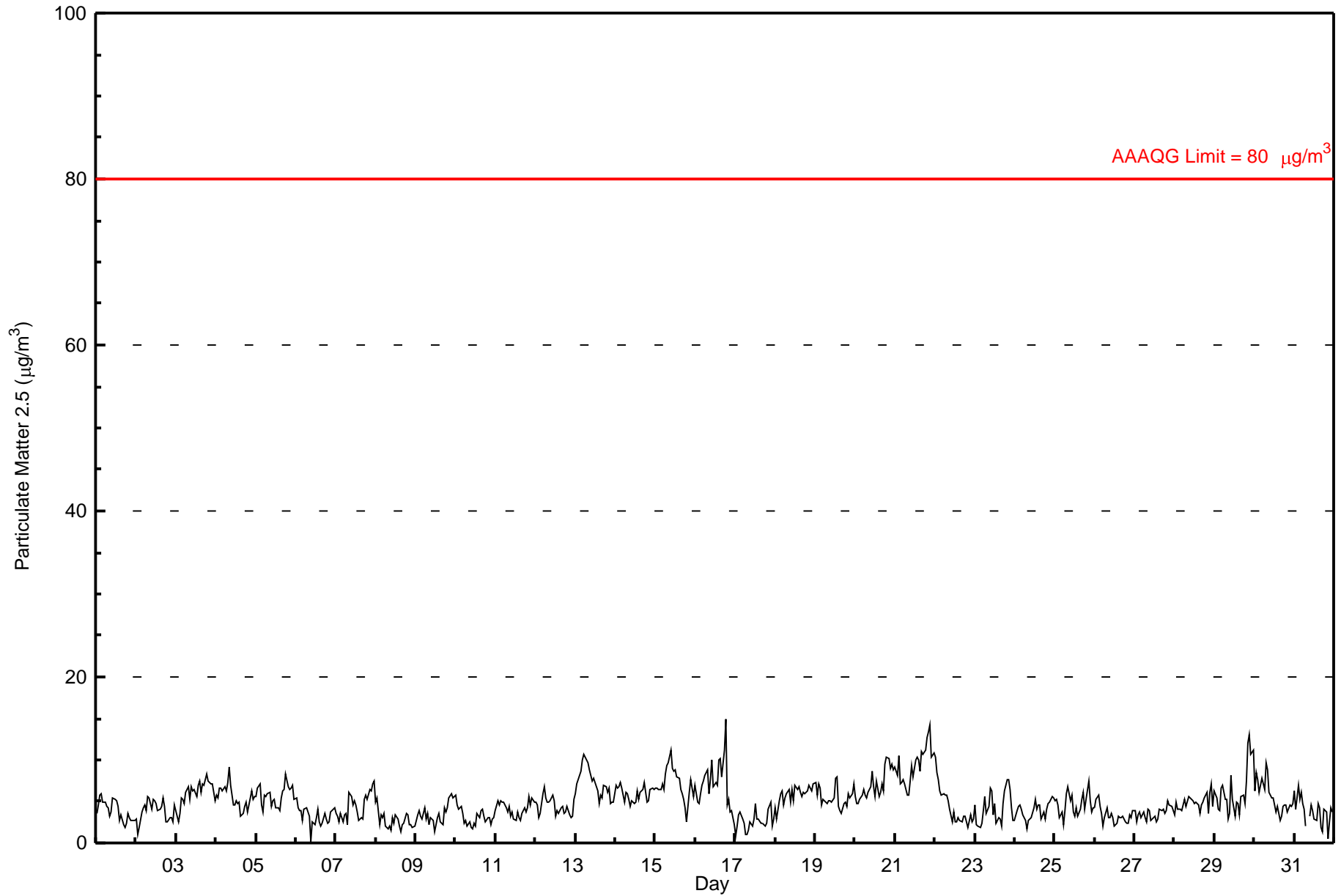
**Beaverlodge - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
October 1, 2009 to November 1, 2009**

Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 14.9 µg/m <sup>3</sup> on Oct 16 19:00	Maximum Daily Average: 9.4 µg/m <sup>3</sup> on Oct 21
Minimum Value: 0 µg/m <sup>3</sup> on Oct 6 10:00	Hours of Data: 743
Minimum Daily Average: 2.6 µg/m <sup>3</sup> on Oct 17	Hours of Missing Data: 1
Maximum Diurnal Average: 5.5 µg/m <sup>3</sup> at hour 22	Hours of Calibration: 0
Monthly Average: 4.93 µg/m <sup>3</sup>	Percent Operational Time: 99.9
Percentiles: P <sub>1</sub> = 1.3 P <sub>10</sub> = 2.5 Q <sub>1</sub> = 3.3 Median = 4.6 Q <sub>3</sub> = 6.1 P <sub>90</sub> = 7.5 P <sub>99</sub> = 10.5	

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-Oct	4	5	6	6	5	5	4	4	3	4	5	5	5	4	3	3	2	2	2	4	3	3	3	3	3.8	6.0																						
2-Oct	3	1	2	4	4	5	4	6	5	4	5	5	5	4	4	4	5	4	3	3	3	3	3	5	3.9	5.5																						
3-Oct	4	3	4	5	5	5	6	7	5	7	6	6	6	7	7	6	7	7	8	8	7	7	7	5	6.1	8.3																						
4-Oct	6	5	7	7	6	7	6	7	9	7	5	5	5	5	5	3	4	4	5	4	5	6	5	6	5.5	9.1																						
5-Oct	6	7	7	5	4	6	6	6	6	4	5	5	4	4	4	5	6	6	8	7	6	7	7	5	5.7	8.2																						
6-Oct	5	4	4	4	3	4	4	4	3	0	2	2	3	4	3	2	2	4	3	2	3	4	4	4	3.2	5.4																						
7-Oct	4	3	3	4	3	3	4	2	6	6	5	5	5	4	3	3	3	5	6	5	6	6	7	7	4.4	7.5																						
8-Oct	5	5	2	3	3	4	2	2	2	2	3	2	3	3	2	1	2	2	4	3	2	2	2	2	2.7	5.3																						
9-Oct	3	3	4	3	3	4	3	4	2	3	3	1	2	3	4	3	2	4	4	4	5	6	5	6	3.5	6.0																						
10-Oct	6	5	4	4	4	2	3	2	3	2	2	2	2	4	3	4	4	3	3	3	3	2	3	3	3.1	5.7																						
11-Oct	4	5	5	5	5	5	4	4	4	3	4	3	3	4	3	3	4	4	4	4	6	5	6	5	4.1	5.6																						
12-Oct	5	5	3	4	6	7	5	5	5	5	6	5	3	4	3	4	4	4	4	4	3	3	3	5	4.4	6.8																						
13-Oct	6	7	8	9	10	11	10	10	9	8	7	8	7	6	5	6	5	7	7	6	7	5	5	5	7.2	10.6																						
14-Oct	7	7	7	7	7	5	6	6	5	4	5	5	5	6	5	6	6	7	6	5	5	6	7	6	5.9	7.3																						
15-Oct	7	7	6	6	7	6	8	9	10	11	9	9	9	8	8	6	6	5	4	3	6	8	7	6	7.1	11.1																						
16-Oct	7	5	5	6	7	7	8	9	6	8	10	7	7	7	10	10	8	11	15	4	5	4	4	2	7.2	14.9																						
17-Oct	1	2	3	4	3	2	1	1	2	2	2	3	5	3	3	2	2	2	2	2	4	5	2	3	2.6	4.9																						
18-Oct	4	3	5	6	6	5	5	6	6	5	7	5	7	7	7	6	6	6	6	6	7	7	6	7	5.9	7.1																						
19-Oct	7	6	7	7	5	5	5	5	5	5	5	5	8	8	4	4	4	5	5	4	6	5	6	7	5.5	8.0																						
20-Oct	6	5	5	5	6	6	6	5	6	7	9	7	6	7	6	6	7	6	10	10	10	9	9	9	7.0	10.4																						
21-Oct	9	8	11	7	7	8	7	6	6	8	9	8	10	10	10	9	11	11	11	13	13	14	10	11	9.4	14.2																						
22-Oct	10	8	8	6	6	6	6	6	5	4	3	4	2	3	3	3	3	3	3	3	2	3	3	3	4.4	10.3																						
23-Oct	5	2	2	2	2	4	6	4	4	7	6	3	5	2	3	3	2	5	6	8	8	6	4	3	4.2	7.6																						
24-Oct	3	4	4	5	4	3	3	2	3	3	3	4	5	4	5	5	3	4	3	4	5	5	6	5	3.9	5.5																						
25-Oct	5	5	5	3	4	2	4	6	7	5	6	4	3	4	3	4	5	6	4	5	7	5	4	4	4.6	7.5																						
26-Oct	4	5	6	4	3	2	3	4	3	3	4	3	2	2	3	3	3	3	3	2	2	3	3	4	3.3	5.8																						
27-Oct	4	3	3	4	3	4	3	3	4	4	3	3	3	3	3	4	4	4	4	4	5	4	4	4	3.6	5.1																						
28-Oct	3	5	4	4	4	5	5	4	6	5	5	5	5	5	5	4	5	5	5	6	4	6	7	4	4.8	7.1																						
29-Oct	6	5	4	4	7	7	5	5	3	4	8	5	3	5	5	3	6	6	5	7	12	13	11	11	6.2	13.0																						
30-Oct	6	8	8	6	8	7	6	10	9	6	5	5	5	4	4	3	3	4	5	5	4	5	4	5	5.6	9.7																						
31-Oct	6	4	7	5	6	5	4	2	BD	3	5	4	3	3	5	4	2	1	4	4	1	3	4	4	3.8	7.0																						
																								5.1	4.8	5.1	4.9	5.0	5.0	4.9	4.9	5.1	4.8	5.2	4.7	4.7	4.7	4.5	4.3	4.4	4.9	5.2	4.9	5.3	5.5	5.2	5.1	Diurnal Average
																								10.3	8.5	10.5	8.6	9.9	10.6	10.4	9.7	9.6	11.1	10.1	8.7	10.0	10.3	10.0	10.1	11.0	11.3	14.9	12.7	13.3	14.2	10.6	11.1	Diurnal Maximum

BD - Baseline Drift  
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m<sup>3</sup> Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m<sup>3</sup>

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



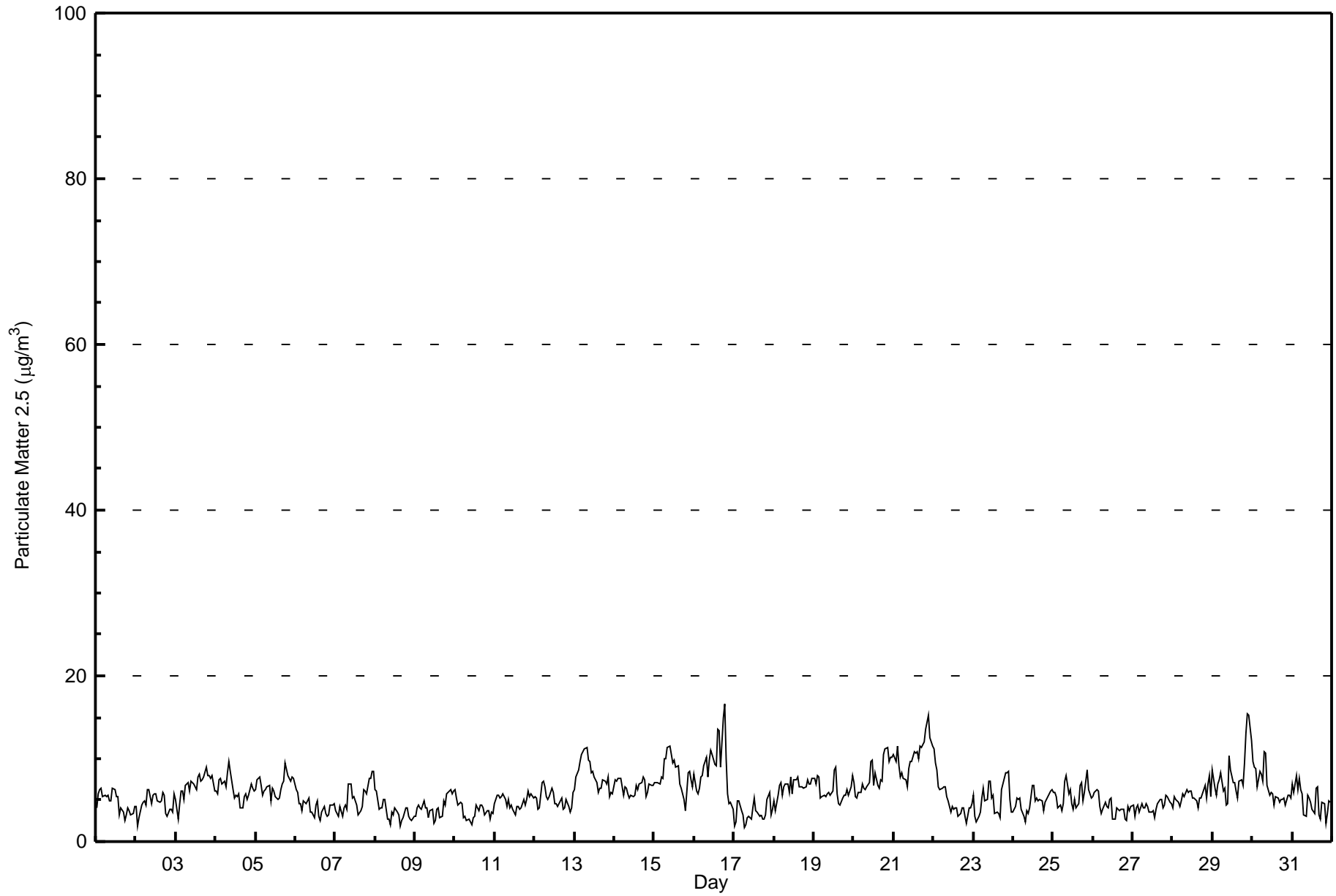


**Peace Airshed Zone Association  
Summary of Hourly Maximums**

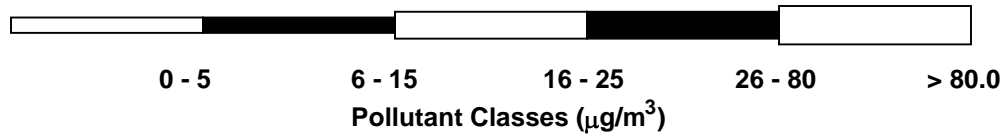
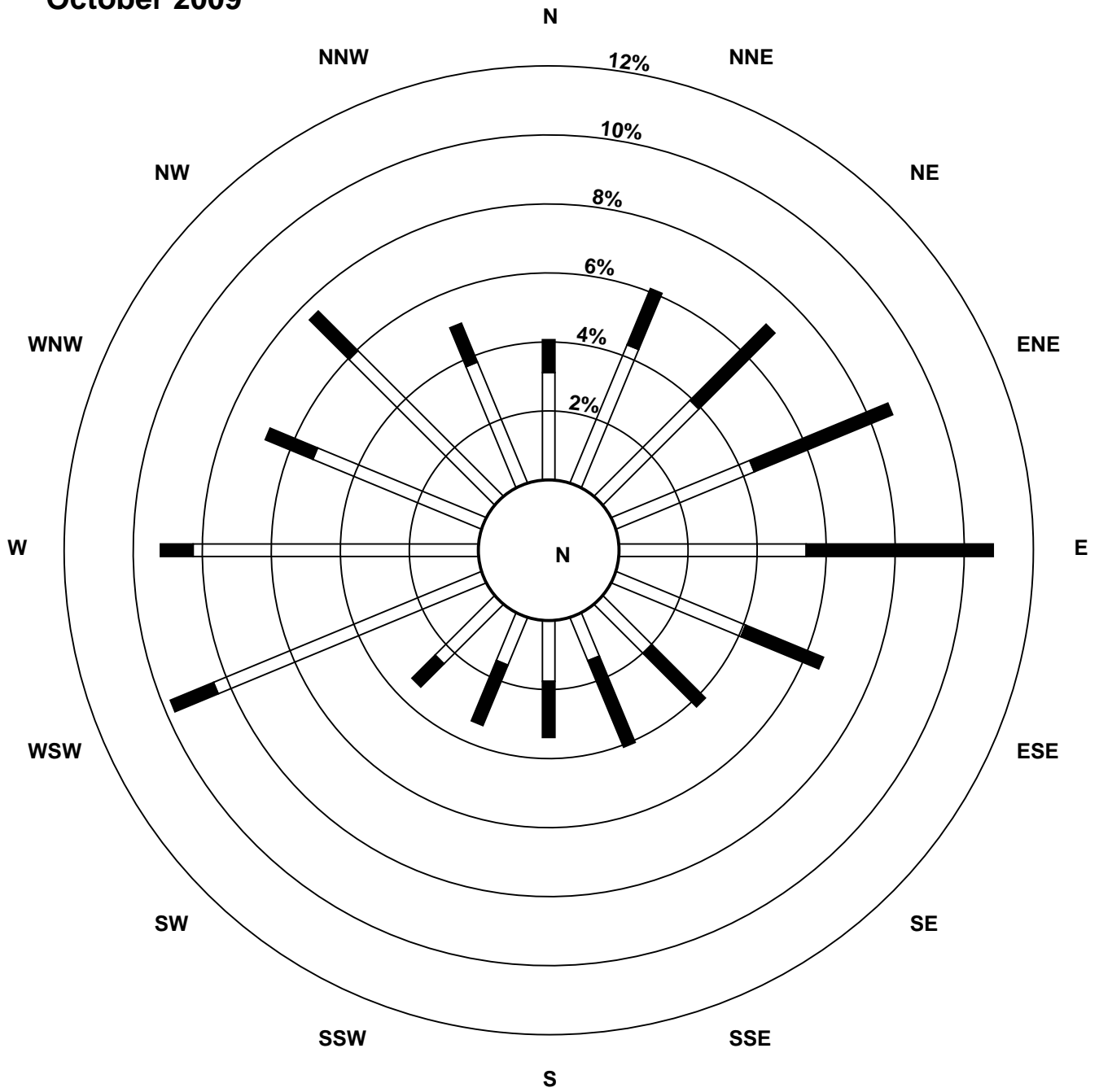
**Beaverlodge - Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
October 1, 2009 to November 1, 2009**

Maximum Value: 16.5 µg/m <sup>3</sup> on Oct 16 19:00		Maximum Daily Average: 10.5 µg/m <sup>3</sup> on Oct 21		Hours in Service: 744																							
Minimum Value: 2 µg/m <sup>3</sup> on Oct 17 07:00		Minimum Daily Average: 3.4 µg/m <sup>3</sup> on Oct 17		Hours of Data: 744																							
Maximum Diurnal Average: 6.3 µg/m <sup>3</sup> at hour 22		Minimum Diurnal Average: 5.2 µg/m <sup>3</sup> at hour 16		Hours of Missing Data: 0																							
Monthly Average: 5.83 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 2.2 P <sub>10</sub> = 3.3 Q <sub>1</sub> = 4.1 Median = 5.5 Q <sub>3</sub> = 7.0 P <sub>90</sub> = 8.7 P <sub>99</sub> = 12.9		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-Oct	4	6	6	7	5	6	5	6	5	5	6	6	5	5	3	4	4	2	3	4	4	3	3	4	4.7	6.5	
2-Oct	4	2	3	4	5	5	4	6	6	5	6	6	5	5	5	5	6	6	3	3	4	4	4	6	4.6	6.3	
3-Oct	5	3	4	6	6	5	7	7	6	7	7	6	8	8	7	7	8	9	8	8	8	8	6	6	6.8	9.0	
4-Oct	6	6	7	8	7	7	7	8	10	8	6	5	6	5	6	4	4	5	6	5	6	7	6	6	6.3	9.7	
5-Oct	6	7	8	7	6	6	6	7	7	5	6	6	5	5	5	6	7	7	9	8	8	7	8	8	6.7	9.5	
6-Oct	6	6	5	5	4	5	5	5	5	4	4	3	4	5	3	3	4	4	3	3	3	4	4	5	4.2	6.3	
7-Oct	4	3	3	4	3	4	4	4	7	7	5	5	5	4	3	4	4	6	6	6	8	8	9	8	5.2	8.5	
8-Oct	6	6	4	4	4	5	5	3	3	2	4	3	4	4	3	2	3	3	4	4	3	3	3	3	3.6	6.2	
9-Oct	3	4	4	4	4	5	4	4	3	4	4	2	3	4	4	3	3	5	4	6	6	6	6	6	4.2	6.4	
10-Oct	6	5	4	5	5	3	3	3	3	2	2	3	3	4	4	4	4	4	3	4	4	3	3	3	3.7	6.3	
11-Oct	5	6	6	5	5	6	5	4	5	4	4	3	4	4	4	4	4	5	4	5	6	5	6	5	4.8	6.1	
12-Oct	5	5	4	4	7	7	7	5	5	5	6	6	5	5	4	5	5	4	4	5	4	4	4	6	5.1	7.3	
13-Oct	6	8	9	10	10	11	11	11	10	10	8	8	8	7	6	6	6	7	7	7	8	5	6	6	8.0	11.3	
14-Oct	8	7	8	8	8	6	7	6	6	5	6	5	6	7	6	7	7	8	7	5	6	7	7	7	6.6	7.8	
15-Oct	7	7	7	7	8	8	10	10	11	12	10	10	10	9	9	7	7	6	5	4	8	9	7	7	8.1	11.6	
16-Oct	8	6	6	6	8	8	9	10	8	10	11	10	9	9	13	13	9	15	17	10	6	5	5	4	9.0	16.5	
17-Oct	2	2	5	5	4	3	2	2	3	3	3	4	5	4	3	3	3	3	3	3	5	6	3	4	3.4	5.9	
18-Oct	5	4	6	7	7	6	7	7	7	6	8	6	8	8	8	7	7	7	6	7	8	7	7	8	6.6	7.8	
19-Oct	8	7	8	8	5	5	6	5	6	6	6	6	9	9	6	5	4	5	6	6	6	6	7	8	6.3	9.0	
20-Oct	7	5	5	6	6	7	6	6	7	7	10	10	7	8	7	6	8	7	11	11	11	10	10	10	7.9	11.4	
21-Oct	10	10	12	9	8	8	8	7	7	9	10	10	11	11	11	10	12	11	12	14	14	15	13	12	10.5	15.3	
22-Oct	11	10	9	7	6	7	7	7	5	5	4	4	4	4	4	3	3	4	4	3	2	4	4	5	5.2	11.2	
23-Oct	6	3	2	3	4	5	6	5	5	7	7	5	6	3	4	3	3	6	7	8	8	8	5	4	5.2	8.5	
24-Oct	4	4	5	5	5	4	3	2	4	3	4	7	7	5	5	5	5	5	4	5	5	5	6	6	4.7	6.8	
25-Oct	6	6	5	4	4	4	5	7	8	6	6	5	4	5	4	5	7	7	5	6	9	6	6	5	5.6	8.6	
26-Oct	5	6	6	6	4	3	4	5	4	4	5	5	3	3	4	4	4	4	4	3	3	4	4	4	4.2	6.4	
27-Oct	4	3	4	4	4	4	4	4	5	4	3	4	4	3	4	5	5	5	4	4	6	5	5	5	4.3	5.6	
28-Oct	4	5	5	5	4	5	6	6	6	6	6	6	5	5	5	4	5	5	6	7	5	7	8	5	5.5	8.0	
29-Oct	9	6	6	7	7	8	6	6	4	5	10	9	7	7	6	5	7	7	7	9	13	15	15	12	8.2	15.4	
30-Oct	10	9	9	7	9	8	7	11	11	7	6	6	6	4	5	5	5	5	5	5	4	6	6	5	6.7	10.8	
31-Oct	7	6	8	6	8	6	6	3	3	6	5	5	4	3	7	7	3	3	5	5	2	3	5	5	5.0	8.0	
		6.1	5.6	5.9	5.8	5.8	5.8	5.9	5.9	5.7	6.1	5.8	5.6	5.6	5.5	5.2	5.3	5.8	5.9	5.9	6.2	6.3	6.2	6.0	Diurnal Average		
		11.2	9.6	11.6	9.7	10.5	10.9	11.2	11.3	11.3	11.6	11.0	10.5	10.8	10.7	13.5	13.4	11.6	14.9	16.5	13.6	14.3	15.4	15.3	12.3	Diurnal Maximum	

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



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



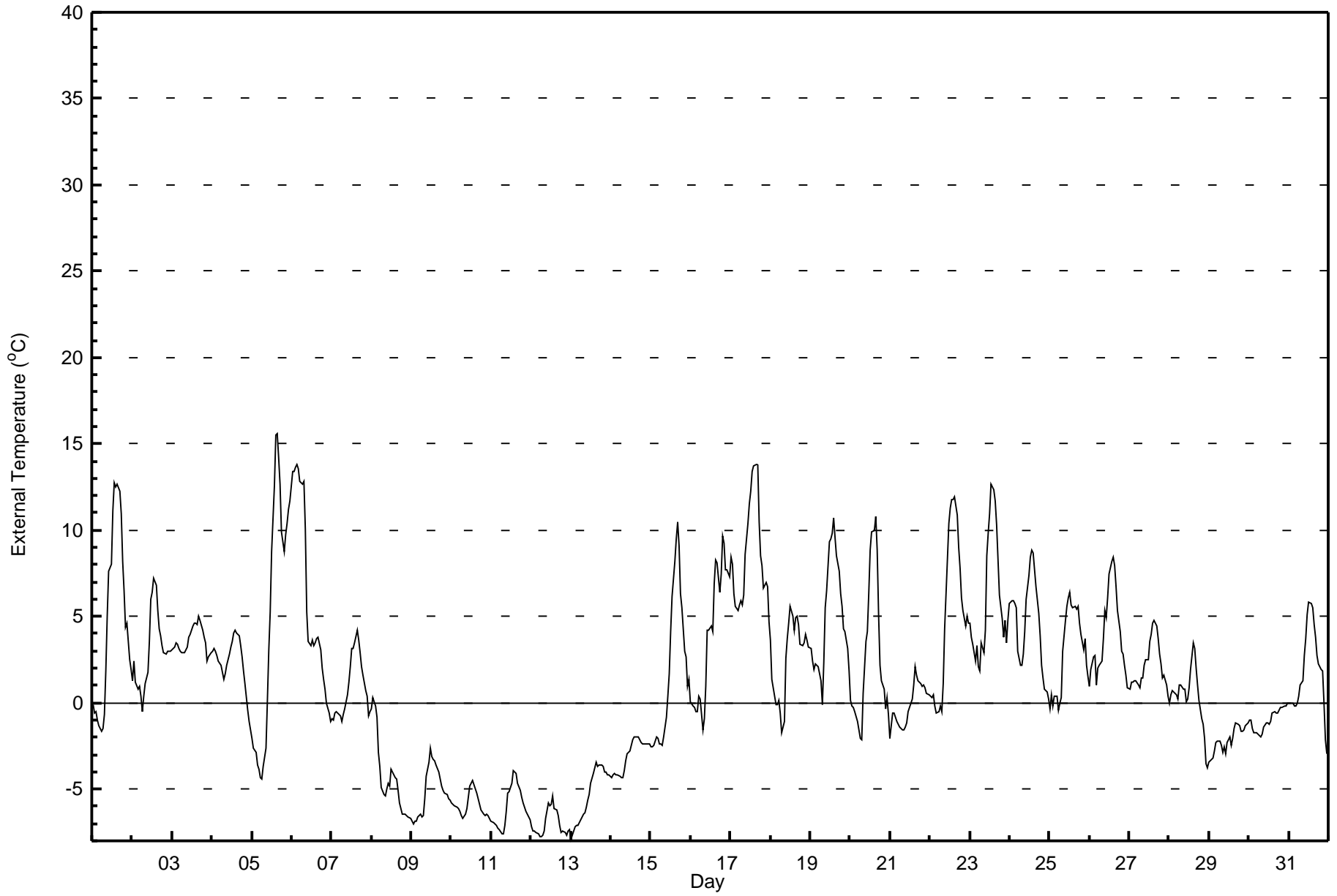
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Beaverlodge - External Temperature (ET) - °C  
October 1, 2009 to November 1, 2009**

Maximum Value: 15.6 °C on Oct 5 16:00		Maximum Daily Average: 8.6 °C on Oct 17		Hours in Service: 744																							
Minimum Value: -8 °C on Oct 13 01:00		Minimum Daily Average: -7.0 °C on Oct 12		Hours of Data: 744																							
Maximum Diurnal Average: 4.4 °C at hour 16		Minimum Diurnal Average: -1.0 °C at hour 7		Hours of Missing Data: 0																							
Monthly Average: 1.21 °C		Percentiles: P <sub>1</sub> = -7.6 P <sub>10</sub> = -5.9 Q <sub>1</sub> = -2.3 Median = 1.0 Q <sub>3</sub> = 4.2 P <sub>90</sub> = 8.3 P <sub>99</sub> = 13.7		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-Oct	0	-1	-1	-1	-1	-2	-1	-1	2	5	8	8	11	13	13	13	12	11	8	6	4	5	3	2	4.8	12.8	
2-Oct	1	2	1	1	1	0	-1	0	1	2	4	6	6	7	7	5	4	4	3	3	3	3	3	3	3.0	7.2	
3-Oct	3	3	3	3	3	3	3	3	3	3	4	4	4	5	5	5	5	4	4	4	3	2	3	3	3.6	5.0	
4-Oct	3	3	3	3	2	2	2	1	2	2	3	3	4	4	4	4	4	3	3	2	1	0	-1	-2	2.3	4.2	
5-Oct	-2	-3	-3	-4	-4	-4	-4	-4	-3	0	3	5	9	13	15	16	14	13	10	9	10	10	11	12	5.0	15.6	
6-Oct	13	13	14	14	14	13	13	13	10	5	4	3	4	3	3	4	4	3	2	1	1	0	-1	-1	6.3	13.8	
7-Oct	-1	-1	-1	-1	-1	-1	-1	-1	0	0	1	2	3	3	3	4	4	3	2	2	1	0	-1	0	0.9	4.2	
8-Oct	0	0	0	-1	-3	-4	-5	-5	-5	-5	-5	-5	-4	-4	-4	-4	-5	-6	-6	-6	-6	-7	-7	-7	-4.4	0.3	
9-Oct	-7	-7	-7	-7	-7	-6	-7	-7	-6	-4	-3	-3	-3	-3	-3	-4	-4	-4	-5	-5	-5	-5	-6	-6	-5.1	-2.7	
10-Oct	-6	-6	-6	-6	-6	-6	-7	-7	-6	-6	-6	-5	-5	-4	-5	-5	-6	-6	-6	-6	-7	-6	-7	-7	-5.9	-4.5	
11-Oct	-7	-7	-7	-7	-7	-7	-8	-8	-7	-6	-5	-5	-5	-4	-4	-4	-5	-5	-5	-6	-6	-6	-6	-7	-6.0	-3.9	
12-Oct	-7	-7	-7	-8	-8	-8	-8	-8	-7	-7	-6	-6	-6	-5	-5	-6	-6	-7	-7	-8	-7	-8	-7	-7	-7.0	-5.4	
13-Oct	-8	-8	-7	-7	-7	-7	-7	-6	-6	-6	-6	-5	-4	-4	-3	-4	-4	-4	-4	-4	-4	-4	-4	-4	-5.3	-3.4	
14-Oct	-4	-4	-4	-4	-4	-4	-4	-4	-4	-3	-3	-3	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-3.1	-2.0	
15-Oct	-3	-3	-2	-2	-2	-2	-2	-2	-2	-1	0	2	4	6	8	9	10	9	6	5	3	3	1	1	2.0	10.4	
16-Oct	0	0	0	-1	-1	0	0	-2	-1	1	4	4	4	4	7	8	8	6	7	10	9	8	8	7	3.9	9.7	
17-Oct	8	8	6	6	5	6	6	6	6	9	10	12	12	13	14	14	14	10	8	8	7	7	7	5	8.6	13.8	
18-Oct	4	1	0	0	0	0	-1	-2	-1	3	4	5	6	5	4	5	5	5	3	3	3	4	4	3	2.6	5.6	
19-Oct	3	2	2	2	2	2	1	0	2	6	6	9	9	10	11	10	9	8	6	6	4	4	3	2	5.0	10.7	
20-Oct	0	0	0	0	-1	-2	-2	-2	1	4	4	6	9	10	10	11	9	5	2	1	1	0	0	-1	2.7	10.8	
21-Oct	-2	-1	-1	-1	-1	-1	-1	-2	-2	-1	-1	-1	0	0	1	2	2	1	1	1	1	1	0	0	-0.1	2.1	
22-Oct	0	0	0	0	-1	-1	0	0	1	4	8	10	11	12	12	12	11	9	8	6	5	4	5	5	5.1	12.0	
23-Oct	5	4	3	2	3	2	2	3	3	4	9	10	11	13	12	12	10	8	6	5	4	5	3	5	6.0	12.6	
24-Oct	6	6	6	6	6	3	2	2	3	4	6	7	8	9	9	8	7	5	4	2	1	1	1	0	4.6	8.8	
25-Oct	0	0	0	0	0	0	0	0	3	5	6	6	6	6	6	6	5	6	5	4	3	4	2	2	3.0	6.4	
26-Oct	1	2	3	3	1	2	2	2	4	5	5	6	7	8	8	8	7	5	4	3	3	2	2	1	3.9	8.4	
27-Oct	1	1	1	1	1	1	1	1	1	2	2	3	4	4	5	5	4	4	3	2	1	2	1	0	2.2	4.8	
28-Oct	0	0	1	1	0	0	1	1	1	1	0	0	1	2	4	3	2	1	0	-1	-1	-2	-4	-4	0.3	3.5	
29-Oct	-3	-3	-3	-3	-2	-2	-2	-2	-3	-3	-3	-2	-2	-2	-2	-2	-1	-1	-1	-2	-2	-2	-1	-1	-2.2	-1.1	
30-Oct	-1	-1	-2	-2	-2	-2	-2	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	-1.0	-0.1	
31-Oct	0	0	0	0	0	0	0	1	1	3	4	5	6	6	5	5	4	3	2	2	2	0	-2	-3	1.8	5.8	
		-0.1	-0.1	-0.2	-0.4	-0.6	-0.8	-1.0	-0.9	-0.4	0.8	1.8	2.6	3.5	4.0	4.3	4.4	3.9	2.9	2.0	1.5	1.0	0.7	0.2	0.0	Diurnal Average	
		13.4	13.4	13.7	13.8	13.5	12.8	12.7	12.8	10.1	8.6	10.4	11.6	12.2	13.4	15.5	15.6	14.2	12.7	9.9	9.7	9.8	10.4	11.2	11.7	Diurnal Maximum	

# Hourly Averages for External Temperature at Beaverlodge

## October 2009



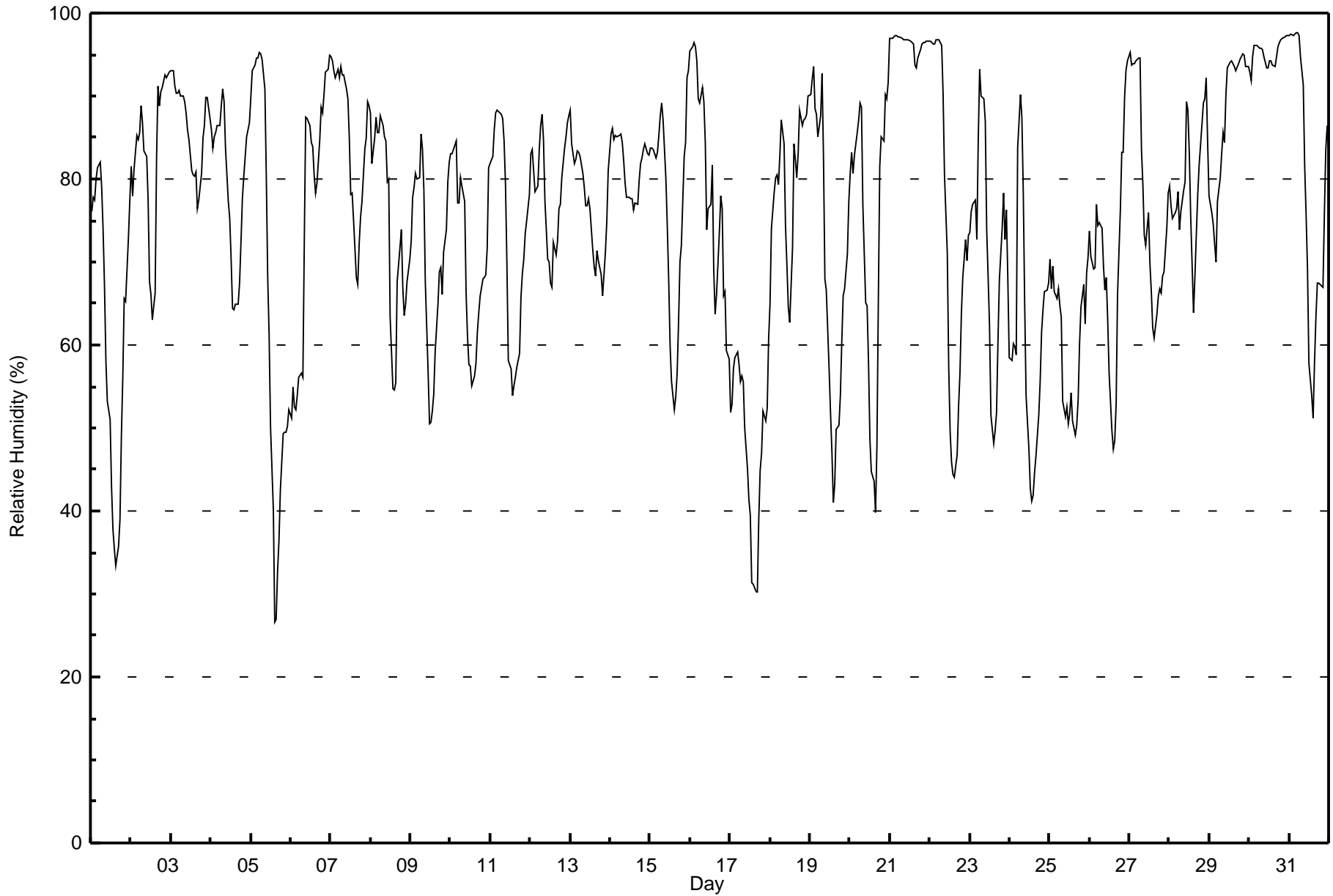
**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Beaverlodge - Relative Humidity (RH) - %  
October 1, 2009 to November 1, 2009**

Maximum Value: 97.6 % on Oct 31 05:00																				Maximum Daily Average: 96.4 % on Oct 21																				Hours in Service: 744	
Minimum Value: 27 % on Oct 5 15:00																				Minimum Daily Average: 47.9 % on Oct 17																				Hours of Data: 744	
Maximum Diurnal Average: 85.1 % at hour 7																				Minimum Diurnal Average: 60.7 % at hour 15																				Hours of Missing Data: 0	
Monthly Average: 75.38 %																				Percentiles: P <sub>1</sub> = 33.2 P <sub>10</sub> = 52.1 Q <sub>1</sub> = 65.9 Median = 78.1 Q <sub>3</sub> = 87.6 P <sub>90</sub> = 94.3 P <sub>99</sub> = 97.4																				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-Oct	76	78	77	80	81	82	79	74	67	58	53	51	43	38	35	33	36	39	49	56	66	65	73	77	61.2	82.0															
2-Oct	81	78	81	85	85	86	89	87	83	83	77	68	66	63	66	82	91	89	91	91	92	92	93	93	83.0	92.8															
3-Oct	93	93	91	90	90	91	90	90	89	88	86	85	81	80	80	81	76	77	81	85	86	90	90	87	86.3	93.1															
4-Oct	86	84	85	86	86	86	89	91	89	84	77	75	70	64	64	65	65	67	72	78	80	85	86	87	79.3	90.9															
5-Oct	90	93	94	95	94	95	95	94	91	80	68	61	50	40	27	27	33	36	43	49	49	49	50	52	64.9	95.2															
6-Oct	51	55	53	52	54	56	57	56	72	87	87	86	84	84	80	78	79	85	89	88	90	93	93	95	75.3	95.0															
7-Oct	95	94	93	92	93	92	93	93	93	91	90	85	78	78	75	68	67	72	75	77	84	85	89	89	85.1	94.8															
8-Oct	88	82	85	87	86	86	88	86	85	85	80	80	63	55	55	55	68	70	74	67	64	65	68	70	74.6	87.9															
9-Oct	73	78	79	81	80	80	85	84	79	68	57	50	51	52	54	59	65	69	69	66	71	74	80	82	70.2	85.4															
10-Oct	83	83	84	85	77	77	80	79	77	66	61	58	57	55	56	58	62	64	66	68	68	68	72	81	70.2	84.5															
11-Oct	82	83	86	88	88	88	88	87	85	79	70	58	57	54	55	56	57	59	66	69	70	73	75	78	73.0	88.2															
12-Oct	83	84	81	79	79	84	86	88	85	78	70	70	67	67	72	71	72	76	77	80	84	85	87	88	78.9	87.9															
13-Oct	88	84	82	82	83	83	83	81	79	77	77	78	76	72	69	68	71	70	68	66	68	71	75	81	76.4	88.4															
14-Oct	85	86	85	85	85	85	85	84	82	79	78	78	78	78	76	77	77	80	82	82	84	84	83	83	81.8	86.1															
15-Oct	84	84	84	82	83	85	88	89	87	80	74	68	60	56	52	54	57	63	70	72	83	84	92	93	76.0	93.0															
16-Oct	95	96	96	96	94	90	89	91	89	84	74	76	77	82	69	64	66	74	78	76	66	66	59	58	79.5	96.5															
17-Oct	52	53	57	58	59	58	56	56	56	50	45	41	40	31	31	30	30	39	45	47	52	51	52	61	47.9	60.6															
18-Oct	65	74	78	80	80	79	83	87	84	74	70	65	63	72	84	82	80	83	88	86	87	87	88	90	79.6	90.1															
19-Oct	90	92	94	89	88	85	88	93	83	68	67	57	52	47	41	43	50	50	54	60	66	67	71	77	69.6	93.6															
20-Oct	81	83	81	83	86	87	89	89	77	65	65	58	49	45	44	40	48	65	81	85	85	90	90	92	73.2	91.7															
21-Oct	97	97	97	97	97	97	97	97	97	97	97	97	97	96	96	94	93	95	96	96	96	96	97	97	96.4	97.3															
22-Oct	97	96	96	96	97	97	96	96	90	81	71	57	50	46	44	44	47	53	57	64	68	73	70	73	73.3	96.8															
23-Oct	74	76	77	78	73	85	93	90	90	87	74	68	62	52	48	50	52	60	68	74	78	73	76	68	71.9	93.3															
24-Oct	59	58	60	60	59	84	90	87	79	65	54	47	43	41	42	45	47	52	56	62	64	66	67	67	60.5	90.2															
25-Oct	70	67	69	66	66	67	65	63	53	51	53	51	52	54	51	49	50	53	60	65	67	63	69	70	60.2	70.5															
26-Oct	74	71	69	69	77	74	75	74	69	67	68	63	57	50	47	49	53	66	76	83	83	90	93	94	70.5	94.3															
27-Oct	95	94	94	94	94	95	95	84	79	73	72	76	70	66	62	61	64	66	67	66	68	69	74	78	77.3	95.2															
28-Oct	79	77	75	76	76	79	74	76	79	80	89	88	83	75	64	68	73	78	82	87	89	90	92	85	79.8	92.2															
29-Oct	78	76	75	72	70	77	80	83	86	84	90	93	94	94	94	93	93	94	94	95	95	95	94	94	87.2	95.0															
30-Oct	93	92	95	96	96	96	96	96	96	95	93	93	94	94	94	94	95	96	97	97	97	97	97	97	95.2	97.4															
31-Oct	97	97	97	97	98	98	97	95	91	82	76	69	58	54	51	58	63	67	68	67	67	76	84	86	78.9	97.6															
																								Diurnal Average																	
																								Diurnal Maximum																	

# Hourly Averages for Relative Humidity at Beaverlodge

## October 2009



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

Beaverlodge  
 October 1, 2009 to November 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	4	3	2	1	1	4	3	3	2	3	5	7	13	18	23	21	15	15	7	11	3	2	2	3	3.9	22.9
Dir	83	97	95	146	60	78	94	109	195	146	178	181	212	234	267	277	293	270	277	275	324	263	139	70	252.6	267.5
2 Spd	1	7	4	4	8	2	1	4	9	8	8	9	8	6	6	8	9	9	8	12	10	8	7	6	4.1	11.6
Dir	278	292	298	320	306	33	168	329	312	306	327	4	35	60	67	115	122	60	42	31	31	8	19	356	11.2	31.1
3 Spd	8	12	12	12	12	11	12	11	8	11	11	11	9	11	12	9	8	6	7	8	10	5	10	6	9.2	12.3
Dir	6	354	21	33	32	26	32	37	46	34	29	37	31	27	28	23	22	347	329	334	6	358	35	13	21.1	31.7
4 Spd	3	6	1	8	7	9	10	10	11	12	11	12	11	9	10	9	7	7	7	6	8	6	8	5	7.5	12.0
Dir	360	105	103	106	67	92	98	121	131	132	128	127	121	123	98	117	96	114	117	97	102	76	76	91	108.4	127.4
5 Spd	4	2	3	3	3	4	3	3	2	5	5	5	6	8	19	25	21	16	13	7	12	19	21	17	7.3	24.9
Dir	111	174	115	115	153	64	105	149	132	157	175	207	195	191	239	247	245	236	233	224	257	252	251	248	231.1	247.1
6 Spd	28	40	35	31	34	33	39	39	33	23	23	22	22	22	19	17	15	11	11	9	9	5	7	19.6	39.8	
Dir	260	259	253	253	258	260	261	265	284	320	321	327	321	321	324	317	321	321	316	326	314	326	309	282	286.1	258.7
7 Spd	5	4	7	10	10	9	7	6	6	5	7	10	9	8	6	10	11	6	6	4	2	6	3	3	6.2	10.7
Dir	304	317	334	328	334	329	320	320	291	303	306	309	321	346	352	315	314	343	354	329	290	283	39	31	323.8	314.5
8 Spd	4	10	10	14	16	16	15	14	10	11	13	16	16	19	15	15	14	12	11	10	7	9	7	6	10.9	18.6
Dir	29	14	3	28	59	52	42	36	39	17	15	16	360	351	344	344	347	341	352	347	340	337	334	317	8.5	351.1
9 Spd	7	8	8	8	9	8	7	7	8	10	8	7	7	8	8	8	8	10	10	8	6	7	7	7	7.0	10.3
Dir	285	273	283	273	293	301	296	279	295	296	321	269	245	232	238	301	314	334	338	330	325	310	327	313	295.6	333.7
10 Spd	8	7	5	6	6	6	7	6	6	8	6	5	5	4	6	5	8	8	8	6	5	3	6	10	4.4	9.6
Dir	309	316	318	316	354	344	349	358	8	347	341	317	320	333	302	356	21	25	36	53	49	78	101	117	358.4	116.9
11 Spd	8	9	10	10	9	8	8	8	10	11	11	14	9	10	10	12	10	8	11	9	10	11	13	13	8.6	13.7
Dir	106	99	103	107	101	99	107	101	97	114	126	147	131	117	97	95	86	73	65	62	47	36	38	35	91.3	146.5
12 Spd	13	14	9	6	5	7	9	10	11	15	16	15	13	14	17	18	17	13	13	15	17	23	23	24	13.4	23.8
Dir	28	26	18	4	20	0	6	20	39	37	45	40	52	56	49	48	50	49	47	52	57	62	65	70	45.3	69.6
13 Spd	20	21	21	22	21	22	23	23	23	24	24	26	27	27	29	28	30	29	26	29	29	29	28	29	25.3	30.2
Dir	71	75	75	79	83	81	84	85	76	79	78	78	77	80	85	81	76	76	77	77	76	74	75	77	78.2	76.3
14 Spd	28	28	28	29	27	24	24	22	20	21	21	21	17	15	15	12	10	9	9	7	6	4	4	4	16.7	28.6
Dir	79	85	86	86	85	85	83	86	87	88	92	90	90	85	88	86	80	73	66	66	74	65	53	68	83.8	86.2
15 Spd	4	4	4	3	4	5	5	5	4	3	6	6	8	6	6	10	20	5	7	3	2	5	3	3	2.8	20.3
Dir	64	61	101	136	144	155	129	133	143	177	204	191	209	188	159	224	272	261	228	256	152	200	60	69	192.2	272.4
16 Spd	2	2	5	4	4	3	5	8	1	1	1	3	1	5	6	1	6	4	24	31	32	18	18	16	5.9	31.8
Dir	85	112	69	108	102	192	52	264	317	352	266	194	147	153	178	218	164	210	239	237	240	243	258	247	231.8	240.2
17 Spd	24	20	8	9	14	10	11	11	11	8	11	11	13	17	10	8	4	7	9	7	1	8	5	3	7.2	24.1
Dir	252	261	262	229	257	283	295	301	292	263	273	239	213	283	295	285	298	18	27	31	282	5	26	352	279.1	252.0
18 Spd	3	1	1	1	1	2	6	2	4	4	5	4	2	6	4	2	2	3	5	5	4	2	1	2	0.4	6.3
Dir	23	15	48	164	160	306	320	340	43	267	267	294	15	195	135	161	193	119	76	86	87	96	116	156	84.6	194.5
19 Spd	3	1	2	1	2	3	2	2	2	2	5	1	10	12	10	7	5	7	8	6	3	3	2	4	1.1	11.7
Dir	157	157	88	139	85	184	197	140	68	104	172	204	303	293	319	351	21	353	12	26	90	216	100	184	341.2	293.4
20 Spd	2	2	1	4	1	1	1	4	2	1	6	7	5	4	3	3	5	9	11	13	6	2	6	3	2.1	12.6
Dir	196	63	206	267	51	99	8	49	43	23	303	305	327	329	314	40	86	84	72	60	55	249	76	257	37.3	59.9
21 Spd	8	2	6	6	5	7	4	3	2	1	2	1	1	2	3	2	5	4	4	5	4	4	3	3	2.4	7.7
Dir	280	262	97	137	116	144	165	173	186	122	170	143	175	194	81	154	206	191	198	190	158	187	90	102	162.0	280.2
22 Spd	3	1	2	1	3	4	4	4	2	4	12	27	33	33	35	30	32	23	19	14	6	3	3	3	10.0	35.1
Dir	64	31	59	147	66	52	62	50	61	243	241	260	265	261	256	257	258	259	250	241	232	75	170	31	257.3	255.8

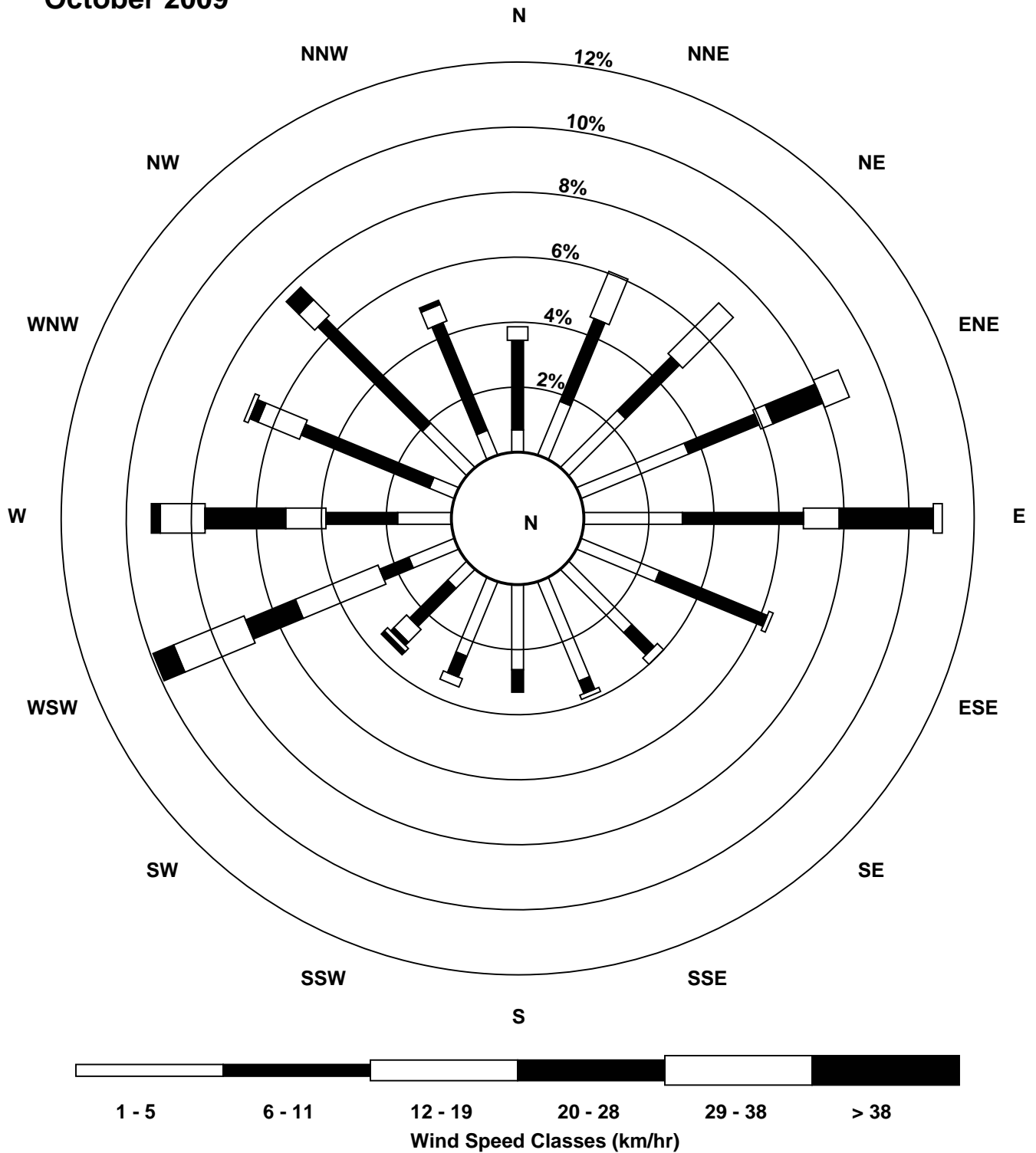


**Peace Airshed Zone Association**  
**Summary of Hourly Averages**

Beaverlodge  
 October 1, 2009 to November 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	5	1	5	4	2	3	9	5	3	1	5	7	11	25	30	28	33	19	12	13	15	17	11	21	9.0	33.1	
Dir	54	159	59	126	151	222	56	91	240	133	128	191	225	259	256	251	247	239	236	243	245	256	235	258	243.6	246.7	
24 Spd	31	32	33	36	25	16	10	12	10	19	32	36	34	32	34	33	34	26	17	13	11	7	4	1	21.8	36.0	
Dir	259	260	264	266	279	314	277	261	258	257	266	269	267	253	253	255	254	255	258	251	245	229	211	172	261.3	269.0	
25 Spd	2	4	2	1	1	3	4	2	2	4	3	2	3	8	9	8	3	4	5	5	3	2	4	3	2.3	8.5	
Dir	76	245	155	243	210	179	57	52	153	196	161	131	136	117	99	95	189	263	100	124	103	140	168	178	132.8	99.3	
26 Spd	4	6	2	1	3	1	2	4	2	1	1	5	15	25	31	28	20	20	20	21	20	19	16	7	9.8	31.3	
Dir	48	48	91	166	189	274	105	253	243	127	144	243	253	262	264	253	255	273	278	272	274	276	283	314	267.3	263.8	
27 Spd	12	13	12	11	7	4	6	13	16	22	21	20	21	20	19	20	16	19	18	19	13	7	6	6	13.7	22.3	
Dir	295	294	291	274	261	230	235	253	262	270	275	274	275	288	279	283	286	271	268	268	274	301	348	276	276.1	270.0	
28 Spd	5	5	5	6	5	2	9	10	7	10	12	11	10	14	9	8	5	4	1	2	5	3	2	4	4.5	13.8	
Dir	261	276	278	247	255	230	295	281	288	283	282	290	303	298	305	355	8	18	211	45	43	157	90	84	295.6	297.8	
29 Spd	4	4	3	7	7	7	8	7	9	7	13	N	N	N	11	11	9	6	3	6	6	7	8	9	3.5	13.4	
Dir	65	67	108	58	88	115	120	138	120	109	113	N	N	N	121	101	87	88	320	304	305	327	310	315	89.2	113.2	
30 Spd	7	5	7	7	7	6	3	5	7	7	11	N	N	N	19	20	20	19	16	11	7	7	7	5	6.3	20.3	
Dir	329	320	293	292	303	313	41	29	47	76	93	N	N	N	84	83	91	91	92	98	101	103	91	97	110	76.7	91.1
31 Spd	5	6	1	8	2	6	8	9	5	8	20	30	41	44	46	42	39	32	31	26	24	10	8	5	16.5	46.4	
Dir	121	115	34	301	224	166	220	238	197	217	227	232	235	244	245	241	237	239	248	256	268	343	342	324	242.8	244.6	
Spd	1.7	2.0	1.4	1.0	1.1	1.4	1.7	1.0	1.2	1.1	1.2	3.1	4.4	5.0	4.8	4.3	4.2	3.0	2.5	2.5	1.9	2.1	2.1	1.3	Diurnal Average		
Dir	326.5	316.2	338.2	312.6	1.8	38.3	33.2	344.9	5.2	350.3	298.1	274.5	269.0	270.9	271.1	273.1	275.6	293.2	299.7	301.5	306.9	330.4	22.4	9.4	Diurnal Maximum		
Spd	30.8	39.8	35.2	35.5	34.0	32.6	38.5	39.1	33.0	24.1	32.2	36.0	40.6	44.5	46.4	41.8	39.4	32.4	31.1	31.5	31.8	28.9	28.3	29.0	Diurnal Maximum		
Dir	258.6	258.7	253.5	266.2	257.8	259.8	260.9	265.3	284.1	78.8	265.8	269.0	234.7	243.7	244.6	240.8	237.1	238.8	247.6	237.5	240.2	73.6	74.6	77.4	Diurnal Maximum		
Maximum Speed Value: 46 km/h on Oct 31 15:00																		Minimum Speed Value: 1 km/h on Oct 16 10:00						Hours in Service: 744			
Maximum Daily Speed Average: 25.3 km/h on Oct 13																		Minimum Daily Speed Average: 0.4 km/h on Oct 18						Hours of Data: 739			
Maximum Diurnal Speed Average: 5.0 km/h at hour 14																		Minimum Diurnal Speed Average: 1.0 km/h at hour 8						Hours of Missing Data: 5			
Monthly Average Velocity: 1.83 km/h 302.32 deg																		Speed Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 2.2 Q <sub>1</sub> = 4.2 Median = 7.6 Q <sub>3</sub> = 13.1 P <sub>90</sub> = 23.2 P <sub>99</sub> = 39.0						Percent Operational Time: 99.3			
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	10	44	11	0	0	0	65																				
NorthEast	44	32	31	2	0	0	109																				
East	43	44	10	29	11	0	137																				
SouthEast	41	25	7	0	0	0	73																				
South	40	12	0	0	0	0	52																				
SouthWest	19	18	17	4	5	5	68																				
West	16	32	25	30	26	3	132																				
NorthWest	15	70	12	6	0	0	103																				
Total	228	277	113	71	42	8	739																				

# Wind Rose for WS at Beaverlodge October 2009



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

**Beaverlodge - Wind Speed (WS) - km/h**  
**October 1, 2009 to November 1, 2009**

Maximum Speed: 47 km/h on Oct 31 15:00	Maximum Daily Speed Average: 25.4 km/h on Oct 13	Hours in Service: 744
Minimum Speed: 1 km/h on Oct 20 07:00	Minimum Daily Speed Average: 3.8 km/h on Oct 18	Hours of Data: 739
Maximum Diurnal Speed Average: 16.1 km/h at hour 15	Minimum Diurnal Speed Average: 8.5 km/h at hour 23	Hours of Missing Data: 5
Monthly Average Speed: 10.79 km/h	Percentiles: P <sub>1</sub> = 1.8 P <sub>10</sub> = 3.2 Q <sub>1</sub> = 4.7 Median = 7.9 Q <sub>3</sub> = 13.4 P <sub>90</sub> = 23.3 P <sub>99</sub> = 39.1	Percent Operational Time: 99.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	4	3	2	1	1	4	4	4	3	3	5	7	14	18	23	21	15	15	8	11	6	4	5	4	7.7	23.2
2-Oct	4	7	5	5	8	2	2	5	9	8	8	10	9	6	8	8	10	9	8	12	10	8	7	6	7.2	11.7
3-Oct	8	12	12	12	12	11	12	11	8	11	11	11	10	11	12	10	9	6	7	9	10	7	10	7	9.9	12.5
4-Oct	5	6	3	9	7	9	10	10	11	12	11	12	11	10	11	9	7	8	7	6	8	7	8	5	8.4	12.1
5-Oct	4	2	3	4	3	4	4	3	3	5	5	5	6	8	19	25	21	17	13	7	12	19	21	18	9.6	25.4
6-Oct	28	40	35	32	34	33	39	39	37	23	23	22	22	23	19	18	17	15	11	11	9	9	7	7	23.0	39.9
7-Oct	5	5	7	10	10	9	7	7	6	5	8	10	9	9	7	10	11	6	6	4	3	6	4	4	7.0	11.0
8-Oct	4	10	10	15	16	16	15	14	10	11	13	17	16	19	15	16	14	12	12	10	7	10	7	6	12.4	19.0
9-Oct	7	8	8	8	9	8	7	8	8	10	8	8	8	9	9	9	9	10	10	8	7	7	7	7	8.3	10.5
10-Oct	8	7	5	6	6	6	7	6	7	8	7	5	6	6	7	6	8	8	8	6	5	3	6	10	6.5	9.6
11-Oct	9	9	10	10	9	8	8	8	10	11	11	14	10	11	10	13	11	9	11	9	10	11	13	13	10.2	14.4
12-Oct	13	14	9	6	5	7	9	10	11	15	16	15	14	14	17	18	17	13	13	15	17	23	23	24	14.1	23.9
13-Oct	20	21	21	22	22	22	23	23	23	24	24	26	27	27	29	28	30	29	26	29	29	29	28	29	25.4	30.3
14-Oct	28	28	29	29	27	24	24	22	20	21	21	21	17	15	15	12	10	9	9	7	6	4	4	4	16.9	28.6
15-Oct	4	4	4	3	4	5	5	5	4	4	6	6	9	7	7	12	20	6	7	4	3	5	4	3	5.9	20.5
16-Oct	3	3	5	5	4	3	6	8	4	4	3	4	3	6	6	2	7	5	24	32	32	18	18	16	9.3	32.1
17-Oct	24	21	10	10	14	12	11	12	12	8	11	14	13	17	10	8	4	8	9	7	4	8	5	4	10.7	24.2
18-Oct	3	2	3	3	3	3	7	3	4	5	6	4	3	7	7	3	3	3	5	5	5	2	2	3	3.8	6.7
19-Oct	3	3	2	2	2	3	2	3	2	3	5	4	11	12	11	7	5	7	9	6	4	3	4	6	4.8	12.0
20-Oct	2	3	2	4	2	2	1	4	3	3	7	7	6	5	5	4	6	9	12	13	8	3	7	9	5.2	12.7
21-Oct	8	3	7	6	5	7	4	3	3	3	2	2	2	2	4	3	5	4	4	5	4	4	3	3	4.1	7.7
22-Oct	3	3	2	3	3	4	4	4	3	7	12	28	33	33	35	30	32	23	19	14	7	4	3	3	13.0	35.3
23-Oct	7	3	5	5	4	6	9	6	4	3	6	7	11	25	30	29	33	19	13	13	15	17	11	21	12.6	33.3
24-Oct	31	32	33	36	25	16	10	12	10	19	32	36	35	32	35	33	35	26	17	13	11	7	4	3	22.6	36.1
25-Oct	4	5	3	4	4	4	4	3	3	4	4	3	3	8	9	9	5	6	6	6	4	3	4	4	4.5	8.7
26-Oct	6	6	4	3	4	4	4	5	4	4	2	5	15	25	31	28	21	20	20	21	20	20	16	13	12.6	31.5
27-Oct	13	13	12	11	7	5	6	13	16	22	21	20	21	20	19	20	16	19	18	19	13	10	6	7	14.5	22.4
28-Oct	5	6	5	6	5	2	9	10	8	10	13	12	12	14	10	8	5	4	3	3	5	3	3	4	6.9	13.9
29-Oct	4	4	4	7	7	8	8	7	9	7	14	N	N	N	13	11	9	6	4	6	6	7	8	9	7.4	13.6
30-Oct	8	5	7	7	7	6	3	5	7	7	11	N	N	19	20	20	19	16	11	7	8	7	7	6	9.7	20.4
31-Oct	5	6	3	8	7	7	8	10	5	9	20	30	41	45	47	42	39	32	31	26	25	10	8	6	19.6	46.5
	9.0	9.5	8.7	9.3	8.9	8.5	8.8	9.2	8.7	9.3	11.2	12.7	13.7	15.4	16.1	15.2	14.7	12.2	11.6	11.1	10.1	9.0	8.5	8.5	Diurnal Average	
	30.9	39.9	35.3	35.6	34.2	32.7	38.6	39.2	37.4	24.2	32.3	36.1	40.6	44.6	46.5	41.9	39.4	32.4	31.2	31.6	32.1	29.0	28.3	29.1	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**

**Beaverlodge - Wind Direction (WD) - deg**  
**October 1, 2009 to November 1, 2009**

Maximum Value: 95.7 deg on Oct 4 03:00																					Hours in Service:	744			
Minimum Value: 1.9 deg on Oct 31 17:00																					Hours of Data:	739			
Percentiles: P <sub>1</sub> = 3.2 P <sub>10</sub> = 4.8 Q <sub>1</sub> = 6.9 Median = 12.6 Q <sub>3</sub> = 28.9 P <sub>90</sub> = 59.8 P <sub>99</sub> = 88.5																					Hours of Missing Data:	5			
																					Hours of Calibration:	0			
																					Percent Operational Time:	99.3			
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Oct	14	14	47	35	64	12	35	49	38	18	13	9	19	12	10	11	9	6	9	8	62	82	69	67	82.1
2-Oct	91	7	58	49	24	40	72	27	7	9	15	19	21	19	37	11	14	14	11	5	6	8	12	17	90.8
3-Oct	18	11	19	9	5	6	4	9	8	9	13	13	11	8	10	10	20	12	10	17	6	62	9	13	62.1
4-Oct	62	17	96	16	8	10	7	14	6	7	7	10	15	20	15	15	18	25	16	12	10	9	5	13	95.7
5-Oct	23	27	22	38	28	32	25	27	30	20	22	31	26	21	12	12	8	8	8	11	9	7	5	7	37.5
6-Oct	5	5	5	7	5	5	3	4	30	6	6	6	8	8	7	7	8	7	5	5	6	5	50	19	50.3
7-Oct	18	19	7	4	8	20	9	15	12	11	11	8	12	31	27	21	12	14	7	15	57	30	60	36	60.3
8-Oct	27	17	10	21	7	9	7	5	13	12	7	14	16	12	11	10	8	10	10	9	12	16	13	11	27.5
9-Oct	13	6	6	7	10	6	9	10	7	10	14	24	26	19	15	29	25	11	9	8	20	12	11	7	29.1
10-Oct	6	7	10	12	12	12	7	10	11	15	24	34	41	37	27	40	16	10	9	6	8	26	11	6	40.6
11-Oct	7	5	7	5	6	6	7	7	7	15	19	28	15	16	14	18	20	7	6	8	4	4	4	8	27.7
12-Oct	6	5	7	9	8	8	6	8	6	8	10	9	14	14	8	5	7	6	4	6	7	3	4	3	14.1
13-Oct	4	4	3	4	5	4	4	4	5	5	5	4	5	7	5	6	5	4	5	4	4	4	4	4	7.1
14-Oct	4	4	4	4	4	4	4	4	4	4	5	5	7	7	8	6	7	10	5	4	8	18	12	11	17.7
15-Oct	13	15	11	15	8	8	10	9	17	27	19	22	20	34	20	31	6	34	14	31	43	20	51	27	51.5
16-Oct	44	36	20	23	23	32	69	43	80	84	89	41	74	39	19	75	40	49	11	5	8	9	7	7	88.9
17-Oct	6	13	42	20	9	38	13	20	15	29	21	40	21	10	18	27	25	7	4	4	73	20	23	77	77.0
18-Oct	29	83	86	81	89	65	41	70	55	61	36	24	37	32	55	42	62	33	13	11	9	27	39	28	88.6
19-Oct	21	69	44	50	43	14	42	57	64	51	14	79	17	14	24	23	8	11	22	60	40	22	58	45	79.1
20-Oct	52	70	66	35	65	44	84	45	21	67	12	12	28	43	54	54	36	11	6	7	47	72	50	86	85.8
21-Oct	9	79	23	31	31	21	33	46	29	69	56	63	67	38	36	30	9	12	12	7	17	17	21	18	78.6
22-Oct	22	81	25	64	9	14	13	16	71	89	11	10	6	8	5	8	6	6	6	5	27	64	27	55	88.7
23-Oct	75	69	40	36	56	76	8	49	42	75	32	18	14	12	6	5	5	3	8	16	7	9	11	4	76.1
24-Oct	3	4	4	4	11	12	15	9	14	10	5	5	6	9	6	4	4	4	3	7	6	43	47	69	68.8
25-Oct	64	67	55	88	84	49	45	82	48	18	48	71	28	16	7	13	60	63	24	41	38	49	34	45	87.7
26-Oct	61	13	69	90	67	92	64	48	82	90	80	20	18	7	6	5	5	12	6	4	4	4	5	63	91.7
27-Oct	5	5	5	7	12	33	14	4	5	4	4	7	6	8	8	7	7	8	5	5	4	46	21	30	46.5
28-Oct	23	24	22	10	14	45	44	12	14	7	33	43	42	8	19	18	11	7	85	85	14	41	45	12	85.4
29-Oct	15	14	26	6	15	20	14	10	9	23	11	N	N	N	40	11	12	17	42	7	11	15	6	11	42.3
30-Oct	14	10	12	9	5	8	21	6	6	13	4	N	N	5	8	5	4	5	6	12	9	13	7	16	21.0
31-Oct	14	17	65	18	87	20	16	28	26	27	4	3	2	4	4	3	2	2	3	5	10	19	11	13	87.4
90.8	82.8	95.7	90.4	88.6	91.7	83.9	82.2	82.2	90.1	88.9	79.1	73.9	43.2	54.5	74.6	62.1	63.4	85.4	85.4	73.2	82.1	68.9	85.8		
N - Not Valid																									

PASZA

Portable – Kinuso Station

Monthly Summary Tables, Graphs and  
Roses

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

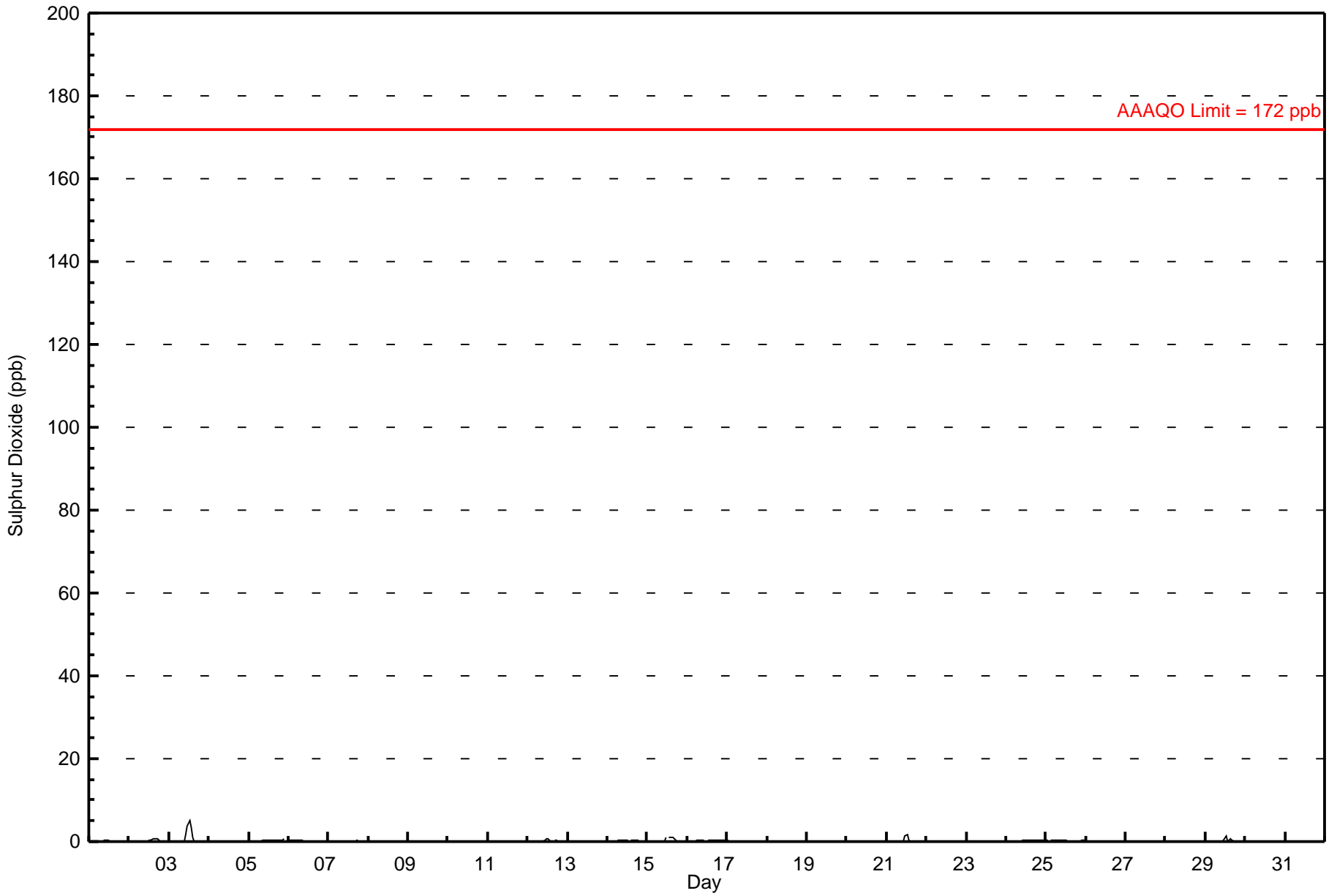
**Portable-Kinuso - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
October 1, 2009 to November 1, 2009**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 5.1 ppb on Oct 3 13:00	Maximum Daily Average: 0.7 ppb on Oct 3		Hours of Data:	706
Minimum Value: 0 ppb on Oct 4 02:00	Minimum Daily Average: 0.0 ppb on Oct 9		Hours of Missing Data:	38
Maximum Diurnal Average: 0.4 ppb at hour 13	Minimum Diurnal Average: 0.1 ppb at hour 3		Hours of Calibration:	37
Monthly Average: 0.12 ppb	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> = 0.1 P <sub>90</sub> = 0.2 P <sub>99</sub> = 1.2		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-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
2-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0.3	0.8
3-Oct	0	A	0	0	0	0	0	0	0	2	4	5	3	1	0	0	0	0	0	0	0	0	0	0	0.7	5.1
4-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.0
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0.2	0.6
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.4
7-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.1
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.0
10-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.1
11-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.1
12-Oct	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.7
13-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.1
14-Oct	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
15-Oct	0	0	0	0	0	0	0	0	0	0	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0.3	1.0
16-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
17-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
18-Oct	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
19-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
20-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
21-Oct	0	0	0	0	0	0	A	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.6
22-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
23-Oct	0	0	0	0	A	0	0	0	0	0	N	C	C	C	C	0	0	0	0	0	0	0	0	0	0.1	0.2
24-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
25-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
26-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
27-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
29-Oct	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	A	0	0.2	1.3
30-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.1
31-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.1

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

# Hourly Averages for SO<sub>2</sub> at Portable-Kinuso October 2009



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

**Portable-Kinuso - Sulphur Dioxide (SO<sub>2</sub>) - ppb  
October 1, 2009 to November 1, 2009**

Maximum Value: 6.6 ppb on Oct 3 13:00	Maximum Daily Average: 1.1 ppb on Oct 3	Hours in Service: 744
Minimum Value: 0 ppb on Oct 4 13:00	Minimum Daily Average: 0.0 ppb on Oct 9	Hours of Data: 706
Maximum Diurnal Average: 0.6 ppb at hour 12	Minimum Diurnal Average: 0.1 ppb at hour 7	Hours of Missing Data: 38
Monthly Average: 0.26 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.1 Median = 0.1 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.6 P <sub>99</sub> = 2.5	Hours of Calibration: 37
		Percent Operational Time: 99.9

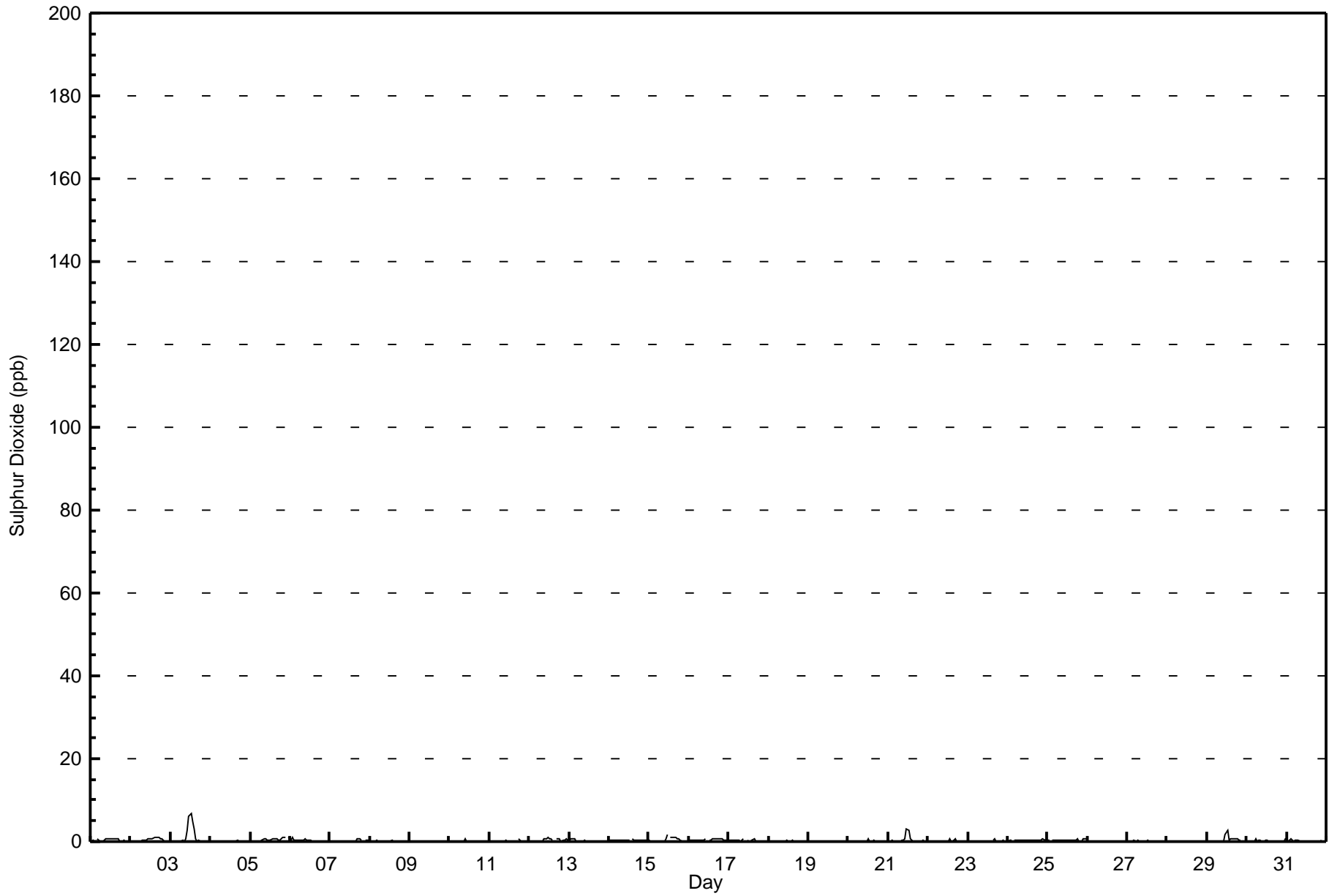
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	0	0	0	A	1	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.3	0.6	
2-Oct	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.5	1.2	
3-Oct	0	A	0	0	0	0	0	0	0	1	3	6	7	5	3	1	0	0	0	0	0	0	0	0	1.1	6.6	
4-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3	
5-Oct	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0	0	1	1	1	A	1	0.5	0.9	
6-Oct	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.9	
7-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	A	0	0	0	0.2	0.7	
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3	
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.1	
10-Oct	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.6	
11-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0.1	0.5	
12-Oct	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	A	0	1	1	1	0	0	1	1	0.4	1.2	
13-Oct	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.6	
14-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0.3	0.8	
15-Oct	0	0	0	0	0	0	0	0	0	0	1	2	A	1	1	1	1	1	1	1	0	0	0	0	0.4	1.5	
16-Oct	0	0	0	0	0	0	0	0	0	0	1	A	0	0	1	1	1	1	1	1	1	1	0	0	0.4	0.8	
17-Oct	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.6	
18-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
19-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
20-Oct	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6	
21-Oct	0	0	0	0	0	0	A	0	0	0	1	3	3	1	0	0	0	0	0	0	0	0	0	0	0.4	3.1	
22-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0.1	0.6	
23-Oct	0	0	0	0	A	0	0	0	0	0	N	C	C	C	C	1	1	0	0	0	0	1	0	0	0.2	0.5	
24-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.5	
25-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0.3	0.6	
26-Oct	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6	
27-Oct	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	
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.1
29-Oct	0	0	0	0	0	0	0	0	0	0	0	2	3	0	1	1	1	1	1	1	0	0	A	0	0	0.4	2.6
30-Oct	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0.2	0.6
31-Oct	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.6

0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.6	0.6	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average
0.6	0.9	0.6	0.6	0.6	0.6	0.4	0.5	0.7	0.7	2.6	6.1	6.6	4.6	3.1	1.1	1.2	1.2	0.7	0.9	0.9	0.9	0.7	0.9	0.9	Diurnal Maximum	

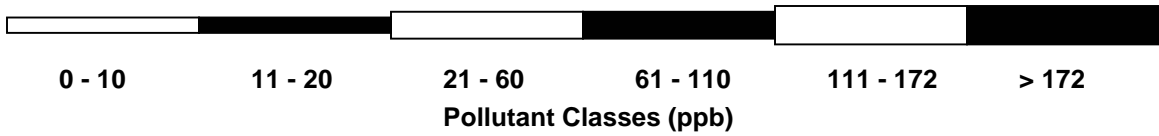
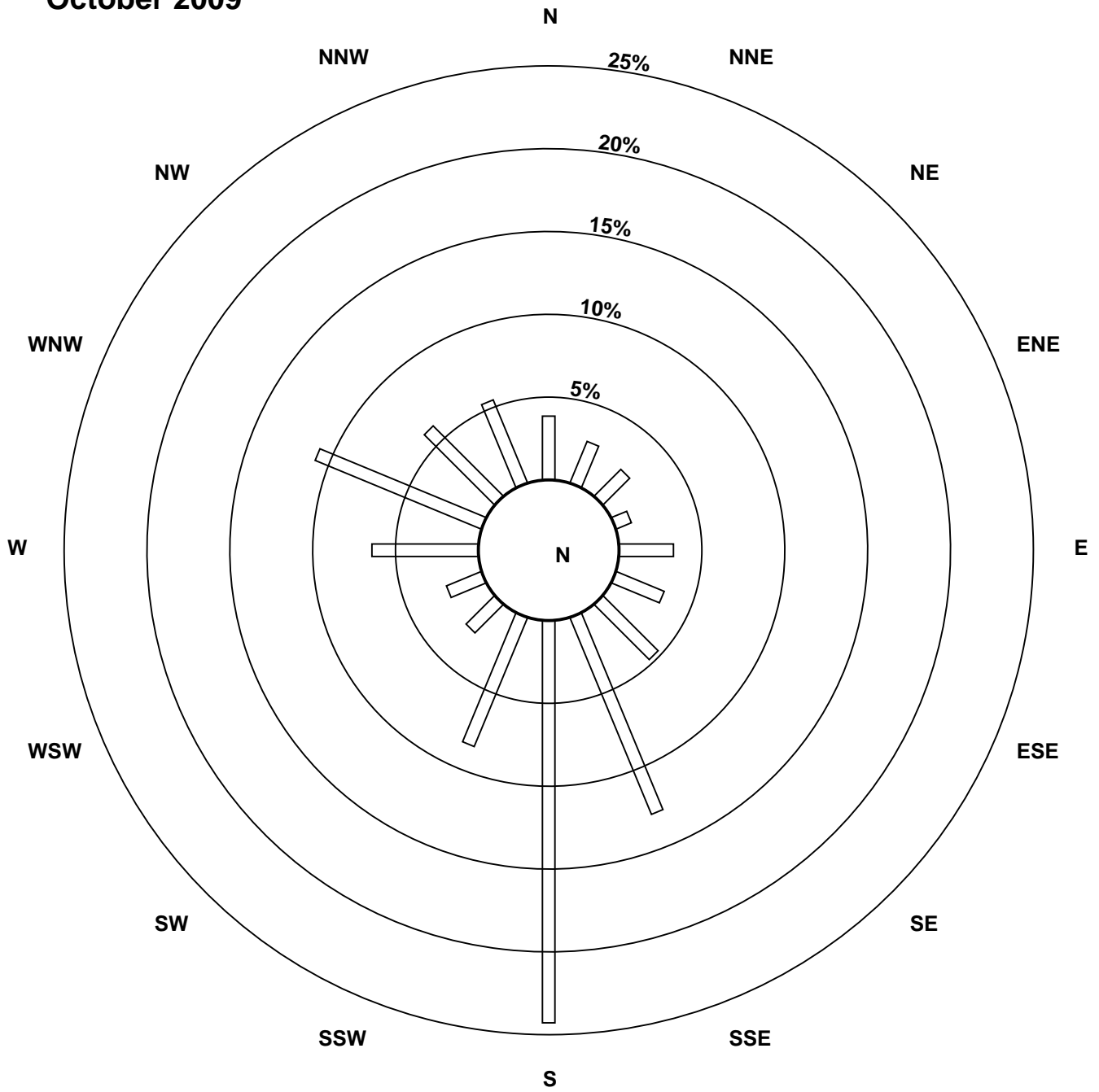
C - Calibration                      N - Not Valid                      A - Automated Daily Zero Span



# Hourly Maximums for SO<sub>2</sub> at Portable-Kinuso October 2009



# Pollutant Rose for SO<sub>2</sub> at Portable-Kinuso October 2009



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

**Portable-Kinuso - Total Reduced Sulphur (TRS) - ppb  
October 1, 2009 to November 1, 2009**

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 0.5 ppb on Oct 3 11:00	Maximum Daily Average: 0.4 ppb on Oct 30		Hours of Data:	706
Minimum Value: 0 ppb on Oct 3 04:00	Minimum Daily Average: 0.2 ppb on Oct 4		Hours of Missing Data:	38
Maximum Diurnal Average: 0.4 ppb at hour 11	Minimum Diurnal Average: 0.3 ppb at hour 7		Hours of Calibration:	37
Monthly Average: 0.35 ppb	Percentiles: P <sub>1</sub> = 0.2 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> = 0.4 P <sub>99</sub> = 0.5		Percent Operational Time:	99.9

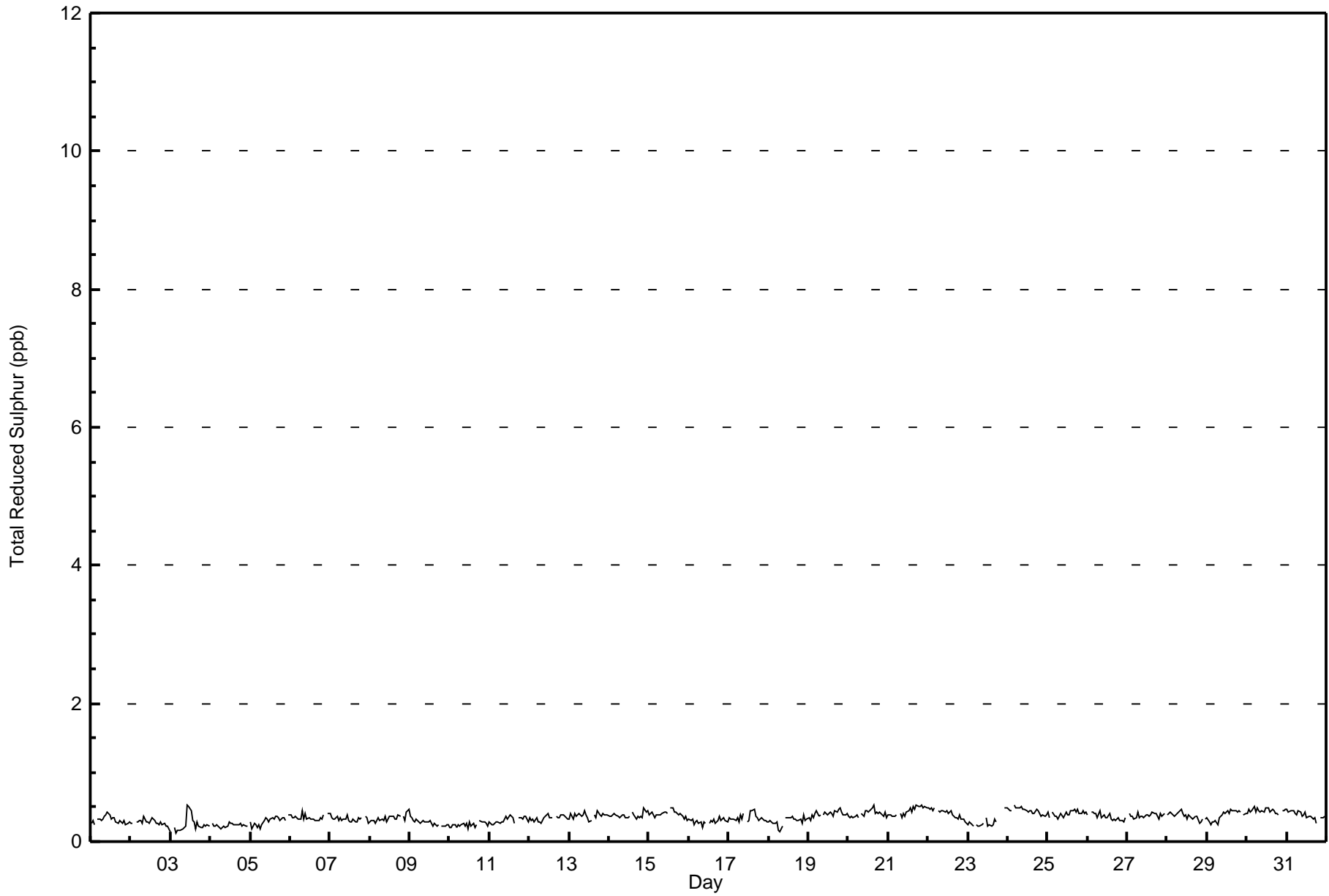
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
2-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
3-Oct	0	A	0	0	0	0	0	0	0	0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

0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average
0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Diurnal Maximum

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

# Hourly Averages for TRS at Portable-Kinuso

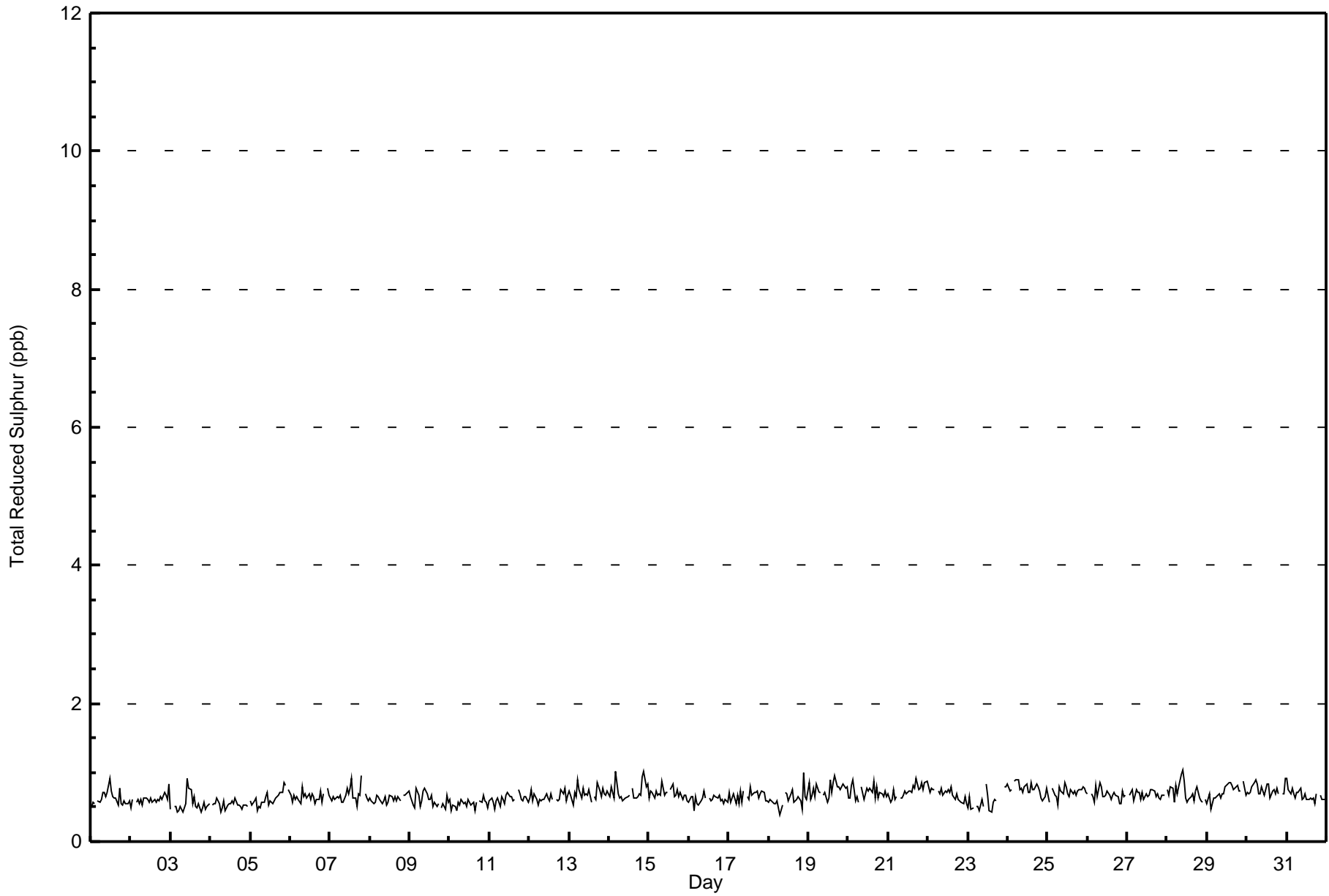
## October 2009



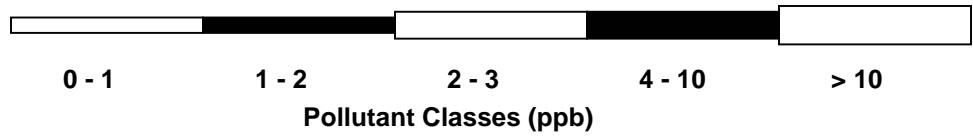
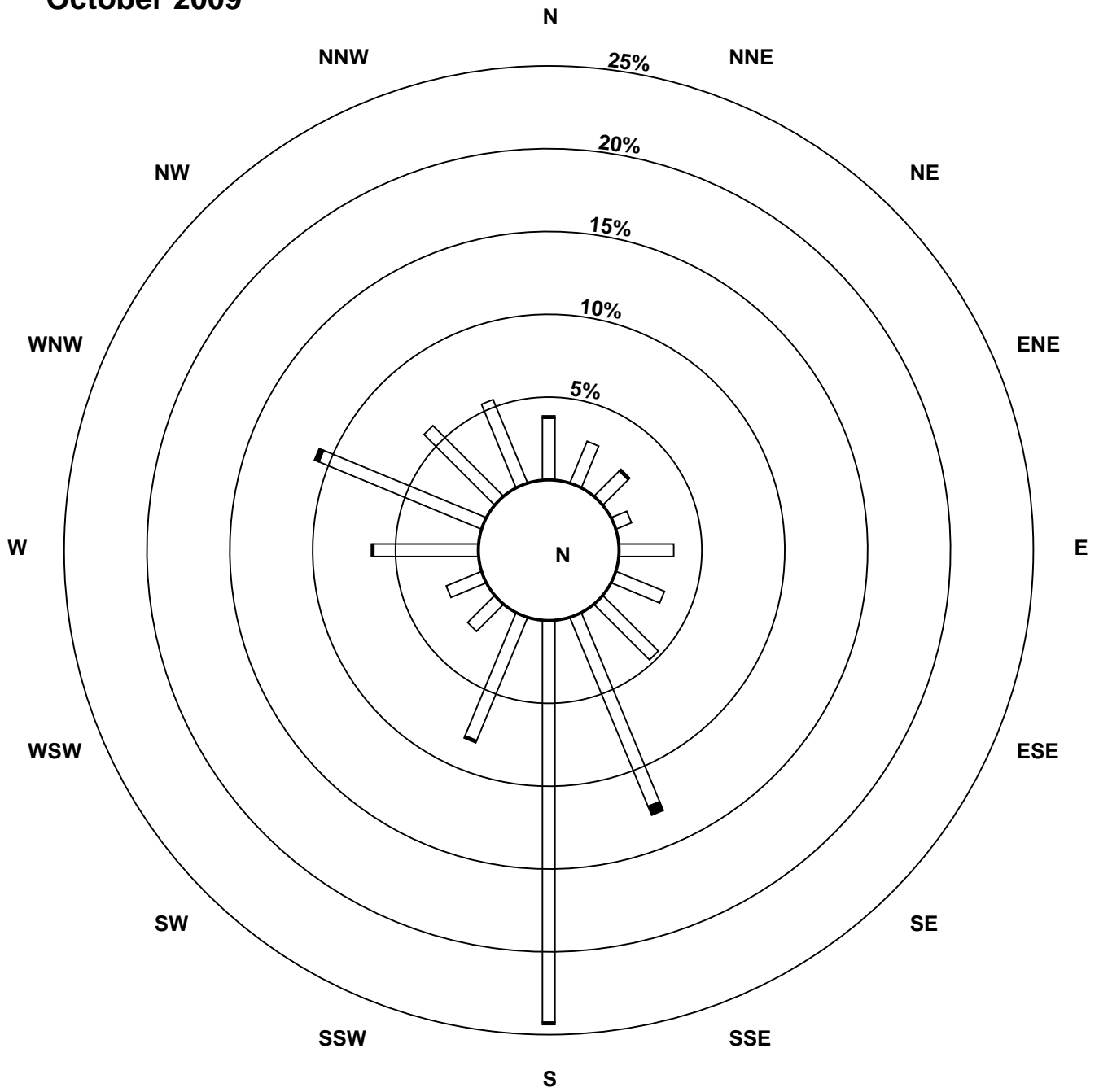


# Hourly Maximums for TRS at Portable-Kinuso

## October 2009



# Pollutant Rose for TRS at Portable-Kinuso October 2009



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

**Portable-Kinuso - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
October 1, 2009 to November 1, 2009**

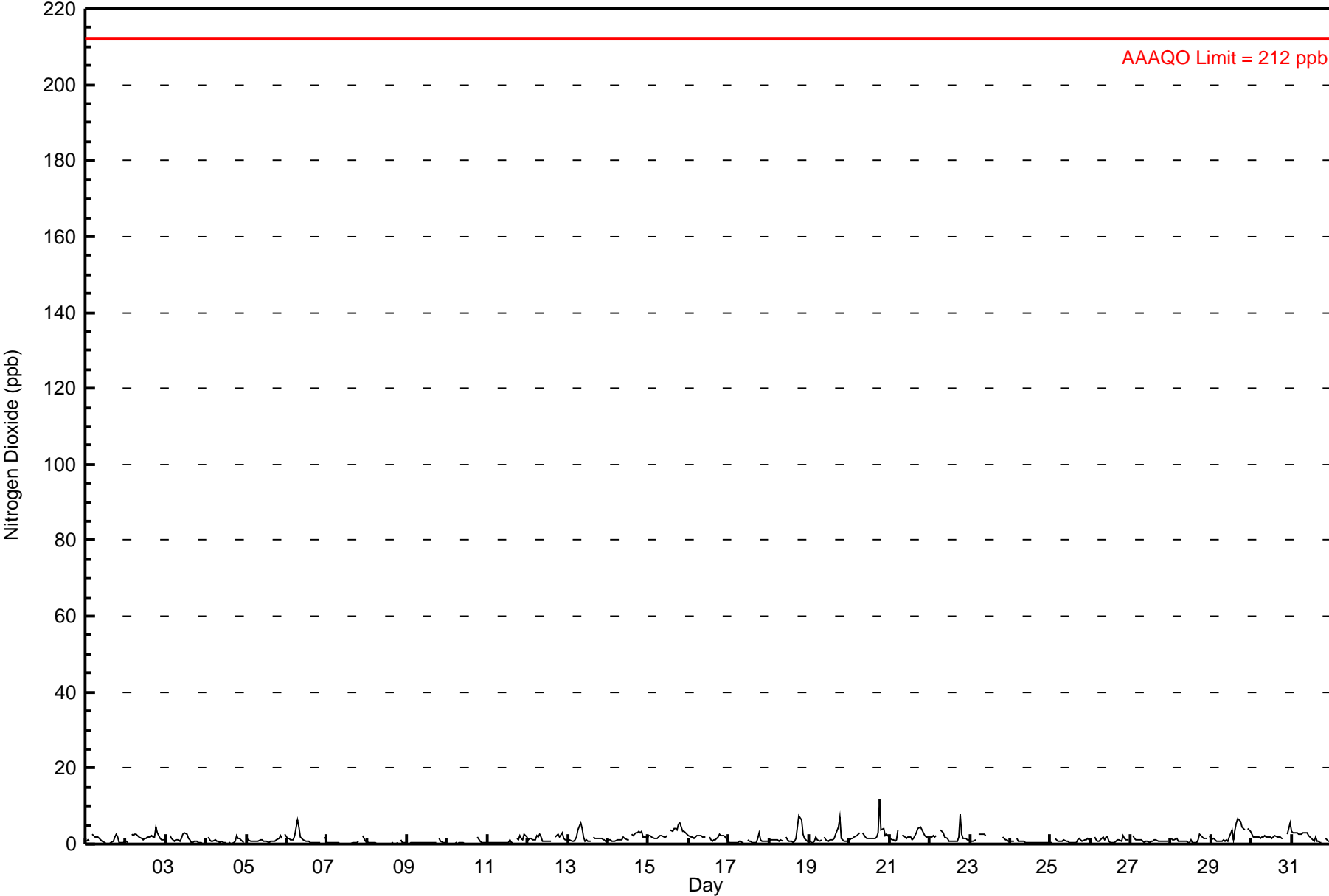
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 12.1 ppb on Oct 20 19:00	Maximum Daily Average: 2.8 ppb on Oct 15		Hours of Data:	702
Minimum Value: 0 ppb on Oct 1 14:00	Minimum Daily Average: 0.3 ppb on Oct 8		Hours of Missing Data:	42
Maximum Diurnal Average: 2.9 ppb at hour 19	Minimum Diurnal Average: 0.8 ppb at hour 14		Hours of Calibration:	41
Monthly Average: 1.37 ppb	Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.6 Median = 1.0 Q <sub>3</sub> = 1.8 P <sub>90</sub> = 2.8 P <sub>99</sub> = 6.1		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-Oct	1	1	1	A	3	2	2	2	2	1	1	0	0	0	0	0	1	2	3	2	1	1	0	1	1.1	2.8
2-Oct	1	0	A	3	2	3	3	2	2	1	1	1	2	2	2	2	2	2	5	3	2	1	1	1	1.9	4.5
3-Oct	1	A	2	2	1	1	1	1	1	1	3	3	2	1	1	0	0	1	1	0	0	0	0	0	1.1	3.1
4-Oct	A	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	2	2	2	1	0	A	0.8	2.1
5-Oct	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	3	1.0	2.8
6-Oct	2	1	1	1	1	2	6	5	2	1	1	1	1	0	0	0	0	0	0	0	0	A	2	1	1.3	6.2
7-Oct	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	2	1	1	0.4	2.1
8-Oct	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0.3	1.1
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	1	1	0	0	0	0.4	1.4
10-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2	1	1	0	0	0	0.3	1.8
11-Oct	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	A	2	1	2	1	1	3	2	2	0.8	2.8
12-Oct	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	A	2	2	3	2	3	1	1	1	1.5	3.0
13-Oct	1	1	1	1	1	2	4	6	4	2	1	1	1	1	A	2	2	1	1	1	1	1	1	1	1.6	5.7
14-Oct	1	1	1	1	1	1	1	1	1	2	2	1	1	A	2	2	3	3	3	3	4	2	2	2	1.8	3.5
15-Oct	2	2	2	2	1	2	2	2	2	2	2	A	4	3	4	4	4	5	5	5	3	3	3	3	2.8	5.5
16-Oct	2	2	2	2	2	2	2	2	2	2	A	2	1	1	1	1	2	2	2	2	2	2	1	1	1.8	2.4
17-Oct	0	0	0	0	0	0	1	1	0	0	A	1	1	1	1	0	0	1	3	1	1	1	1	1	0.7	3.1
18-Oct	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	2	4	7	6	2	2	1	1	1.7	7.4
19-Oct	1	1	0	1	2	1	1	1	A	2	1	1	1	1	1	2	3	4	7	2	1	1	1	1	1.5	7.1
20-Oct	1	1	2	2	2	3	A	3	2	1	2	1	1	2	2	2	3	3	12	4	4	2	3	2	2.6	12.1
21-Oct	1	1	1	1	1	4	A	2	2	2	1	2	2	1	1	2	3	4	4	4	3	2	2	2	2.2	4.3
22-Oct	2	2	2	2	2	A	4	3	3	2	1	1	1	1	1	1	1	2	8	3	2	1	1	1	2.0	7.9
23-Oct	1	1	1	1	A	3	2	3	3	2	N	C	C	C	C	C	C	C	C	2	2	1	1	1	--	2.8
24-Oct	1	1	1	A	2	1	1	1	1	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0	0.6	1.5
25-Oct	0	0	A	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	0.8	1.4
26-Oct	1	A	2	1	1	1	1	2	1	2	2	1	0	0	0	1	1	1	1	2	2	1	1	1	1.2	2.4
27-Oct	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.1
28-Oct	2	1	1	1	1	1	1	1	1	1	0	0	1	0	0	1	1	3	2	1	1	2	A	2	1.1	2.7
29-Oct	1	2	1	1	1	1	1	1	1	1	1	2	4	1	4	6	7	6	4	4	4	A	4	3	2.6	6.7
30-Oct	3	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	1	2	A	3	4	6	2.1	5.5
31-Oct	3	3	3	3	3	3	3	3	3	3	2	2	1	1	2	1	1	0	0	A	1	1	1	1	1.8	3.3

C - Calibration	N - Not Valid	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-Kinuso October 2009



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

**Portable-Kinuso - Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
October 1, 2009 to November 1, 2009**

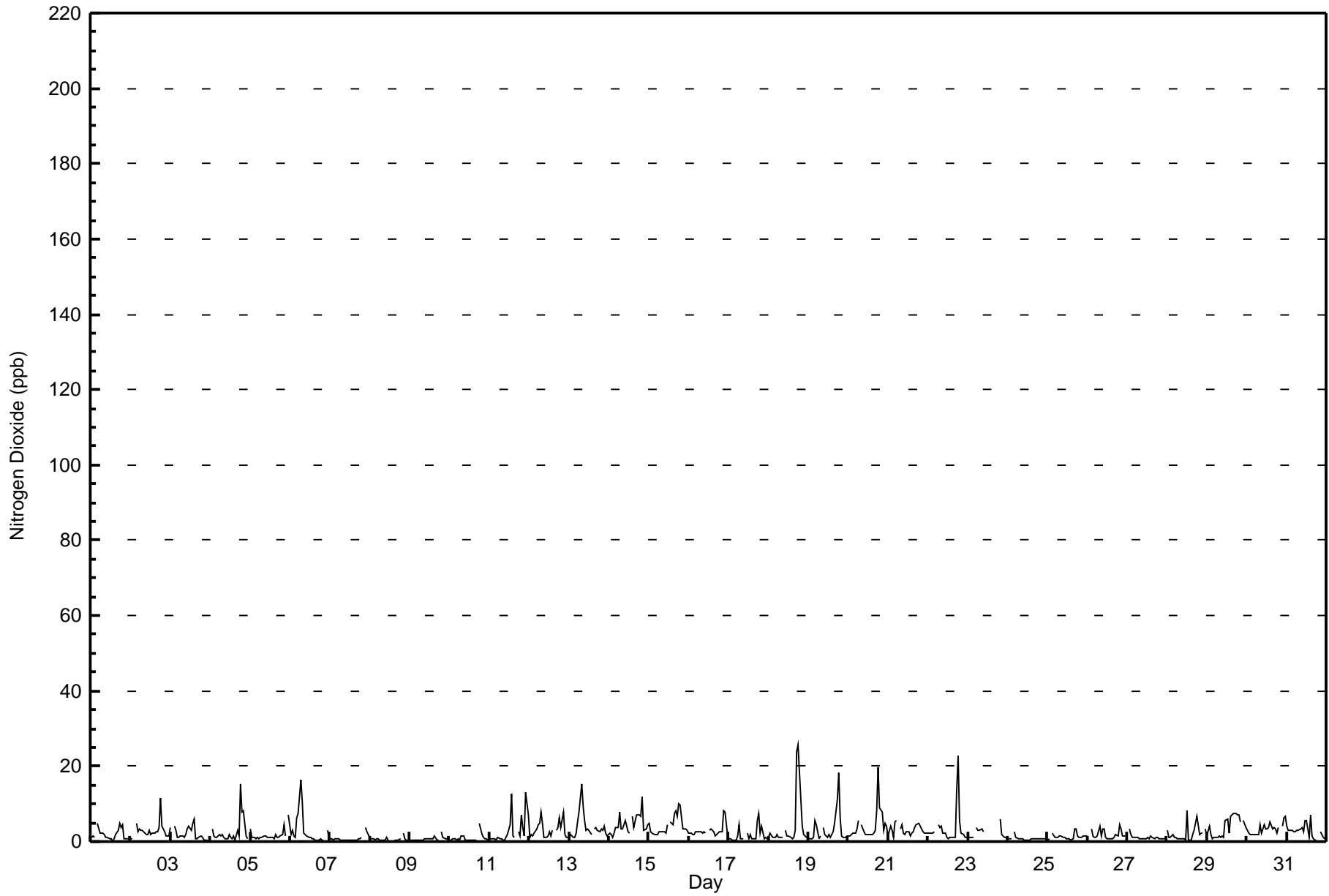
Maximum Value: 25.8 ppb on Oct 18 19:00	Maximum Daily Average: 4.5 ppb on Oct 14	Hours in Service: 744
Minimum Value: 0 ppb on Oct 8 15:00	Minimum Daily Average: 0.5 ppb on Oct 8	Hours of Data: 702
Maximum Diurnal Average: 6.5 ppb at hour 19	Minimum Diurnal Average: 1.5 ppb at hour 3	Hours of Missing Data: 42
Monthly Average: 2.50 ppb	Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.8 Median = 1.6 Q <sub>3</sub> = 3.1 P <sub>90</sub> = 5.4 P <sub>99</sub> = 14.6	Hours of Calibration: 41
		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-Oct	1	1	1	A	5	2	2	2	2	1	1	1	1	0	1	2	3	5	4	5	1	1	1	1	1.9	4.9	
2-Oct	1	1	A	5	2	3	3	3	3	2	2	3	2	2	2	2	3	4	11	4	2	2	1	1	2.8	11.4	
3-Oct	4	A	4	3	1	1	2	1	1	2	3	4	3	5	6	1	1	1	1	1	0	0	0	0	2.0	6.0	
4-Oct	A	4	1	1	1	2	1	2	1	1	1	2	1	1	2	0	3	2	15	8	8	1	1	A	2.7	15.2	
5-Oct	3	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	1	1	2	2	5	2	A	7	1.7	7.0	
6-Oct	2	3	2	1	6	7	17	11	2	2	1	1	1	1	0	0	0	0	1	0	0	A	3	1	2.8	16.6	
7-Oct	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	4	3	2	0.8	3.8	
8-Oct	1	1	1	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	1	A	2	1	0	0	0.5	2.1	
9-Oct	0	0	1	0	0	0	0	0	1	1	1	1	1	1	2	1	1	A	3	1	1	1	1	0	0.7	2.7	
10-Oct	0	0	1	1	0	1	1	2	2	1	0	0	0	0	0	0	0	A	5	2	1	1	1	0	0.8	4.9	
11-Oct	1	1	1	1	0	1	1	1	0	1	1	2	5	13	2	1	A	2	2	7	4	1	13	7	2.8	12.9	
12-Oct	1	2	2	2	3	4	5	8	5	1	1	3	2	3	A	3	4	6	4	8	2	1	1	1	3.1	8.0	
13-Oct	1	2	1	1	2	5	8	15	9	6	3	3	3	2	A	3	4	3	3	3	3	4	2	2	3.9	15.3	
14-Oct	2	2	1	2	4	4	8	3	3	4	5	2	2	A	7	4	7	7	7	7	7	12	3	3	4	4.5	11.8
15-Oct	5	3	2	2	2	2	2	3	2	2	2	4	A	5	4	7	8	7	10	10	4	4	3	3	4.2	10.1	
16-Oct	2	2	2	2	2	2	3	2	2	2	2	A	3	3	3	3	2	2	3	3	3	8	8	1	2.9	8.2	
17-Oct	1	1	0	0	0	1	4	1	1	1	A	2	1	2	1	1	1	6	7	2	4	1	1	1	1.7	7.3	
18-Oct	1	2	1	1	1	2	1	1	1	A	3	1	1	1	1	1	3	24	26	11	4	2	2	1	4.0	25.8	
19-Oct	1	1	1	1	5	5	1	2	A	4	2	1	2	1	2	2	5	11	18	6	1	1	1	1	3.2	18.4	
20-Oct	1	2	2	2	2	3	6	A	4	3	2	2	2	2	2	2	3	8	20	9	8	3	5	4	4.2	19.6	
21-Oct	2	4	3	1	5	6	A	3	4	2	2	3	3	2	2	3	4	4	5	4	4	3	2	2	3.1	5.6	
22-Oct	2	2	2	2	3	A	4	4	4	2	2	1	1	1	1	1	1	14	23	6	2	2	1	1	3.6	22.7	
23-Oct	1	1	1	1	A	4	3	3	3	3	N	C	C	C	C	C	C	C	C	6	2	1	1	1	--	5.8	
24-Oct	1	1	1	A	3	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.8	2.5	
25-Oct	0	1	A	2	1	1	1	1	2	1	1	1	1	1	1	1	3	4	1	1	1	1	1	1	1.3	3.5	
26-Oct	2	A	3	2	1	1	1	4	2	3	3	1	1	1	1	1	1	2	1	5	3	2	2	2	1.9	4.6	
27-Oct	A	3	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1.1	3.4	
28-Oct	3	1	1	2	1	1	1	1	1	1	1	1	8	0	1	2	3	5	7	2	2	2	A	3	2.1	8.3	
29-Oct	1	4	2	1	1	1	1	1	1	2	1	6	6	2	7	7	7	8	7	7	5	A	6	4	3.8	7.6	
30-Oct	3	2	2	2	2	2	2	2	5	2	5	3	3	4	5	4	4	3	2	4	A	4	6	7	3.4	6.6	
31-Oct	4	3	3	3	3	3	3	3	3	4	3	5	5	1	7	1	1	1	0	A	3	2	1	1	2.7	7.1	

1.7	1.7	1.5	1.6	2.1	2.3	2.8	2.8	2.3	1.8	1.8	1.9	2.1	1.9	2.2	1.9	2.5	4.5	6.5	4.2	3.3	2.0	2.5	2.1	Diurnal Average	
4.8	4.0	4.0	4.9	6.5	7.3	16.6	15.3	9.2	5.6	5.4	5.5	8.3	12.6	7.1	7.3	8.2	23.7	25.8	11.2	11.8	8.2	12.9	7.2	Diurnal Maximum	

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

# Hourly Maximums for NO<sub>2</sub> at Portable-Kinuso October 2009





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

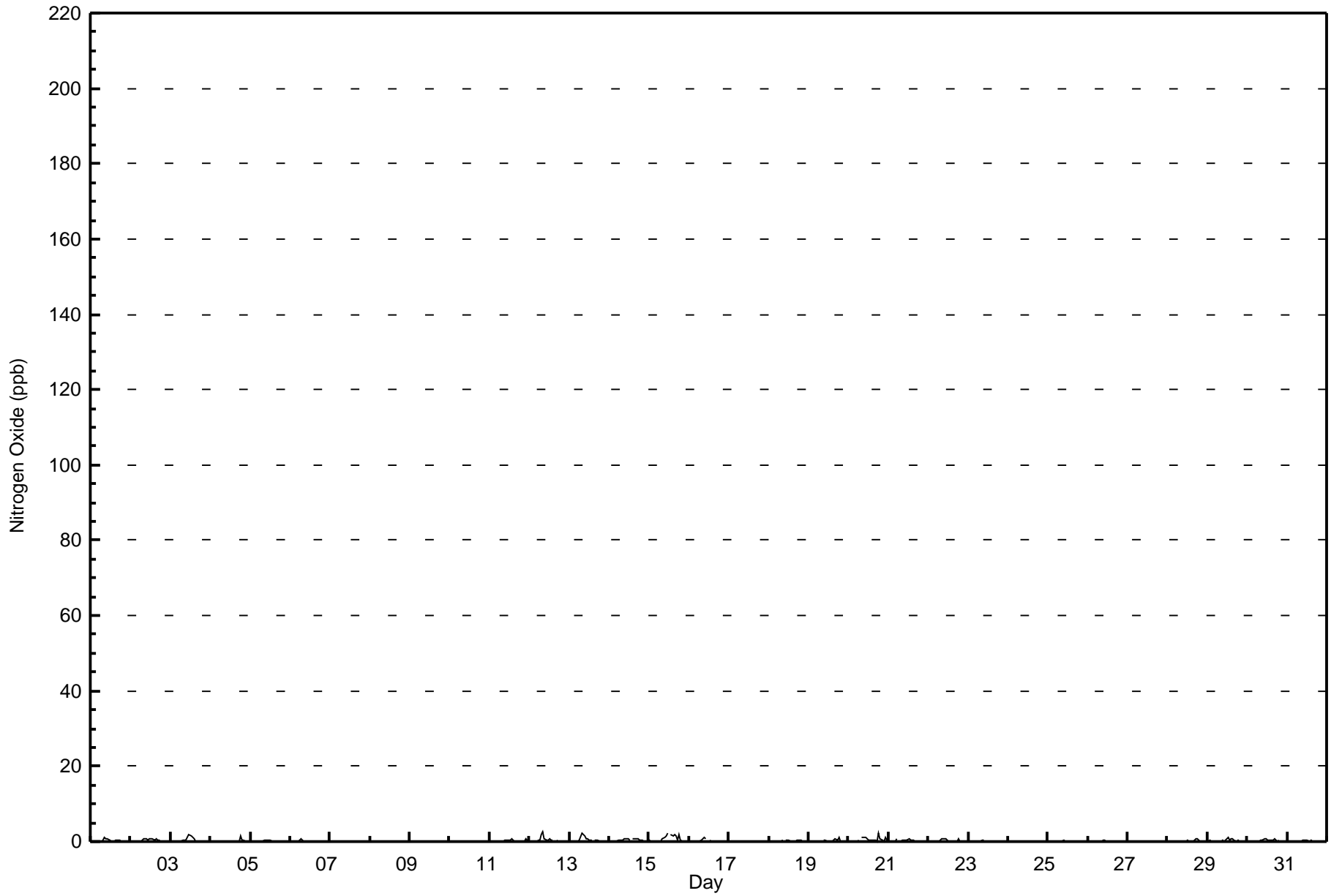
**Portable-Kinuso - Nitrogen Oxide (NO) - ppb  
October 1, 2009 to November 1, 2009**

Maximum Value: 2.6 ppb on Oct 12 09:00	Maximum Daily Average: 0.7 ppb on Oct 15	Hours in Service: 744
Minimum Value: 0 ppb on Oct 16 19:00	Minimum Daily Average: 0.0 ppb on Oct 24	Hours of Data: 702
Maximum Diurnal Average: 0.5 ppb at hour 11	Minimum Diurnal Average: 0.0 ppb at hour 24	Hours of Missing Data: 42
Monthly Average: 0.20 ppb	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> = 0.2 P <sub>90</sub> = 0.6 P <sub>99</sub> = 1.7	Hours of Calibration: 41
		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-Oct	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
2-Oct	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	0.8
3-Oct	0	A	0	0	0	0	0	0	1	0	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0.4	1.8
4-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0.1	1.4
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.5
6-Oct	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.8
7-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0.1	0.2
10-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.2
11-Oct	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	1	0	0.2	0.9
12-Oct	0	0	0	0	0	0	0	2	3	1	1	0	1	0	0	A	0	0	0	0	0	0	0	0	0.4	2.6
13-Oct	0	0	0	0	0	0	0	2	2	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0.4	2.1
14-Oct	0	0	0	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0.3	0.8
15-Oct	0	0	0	0	0	0	0	0	1	1	2	2	A	2	2	2	2	0	2	0	0	0	0	0	0.7	2.4
16-Oct	0	0	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
17-Oct	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
18-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
19-Oct	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
20-Oct	0	0	0	0	0	0	0	A	1	1	1	1	0	0	0	0	1	0	2	1	0	0	1	0	0.5	2.3
21-Oct	0	0	0	0	0	1	A	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
22-Oct	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	0.9
23-Oct	0	0	0	0	A	0	0	0	0	0	N	C	C	C	C	C	C	C	C	0	0	0	0	0	--	0.3
24-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
25-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
26-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
27-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	A	0.1	0.8
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	A	0	0	0.2	1.0
30-Oct	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	0	0	0	A	0	0	0	0.3	0.7
31-Oct	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.5
	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.0	Diurnal Average	
	0.2	0.3	0.2	0.1	0.2	0.6	0.8	2.1	2.6	1.3	1.6	2.4	1.7	1.8	1.6	1.9	1.6	0.8	2.3	0.7	0.4	0.2	1.2	0.2	Diurnal Maximum	

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

# Hourly Averages for NO at Portable-Kinuso October 2009



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

**Portable-Kinuso - Nitrogen Oxide (NO) - ppb  
October 1, 2009 to November 1, 2009**

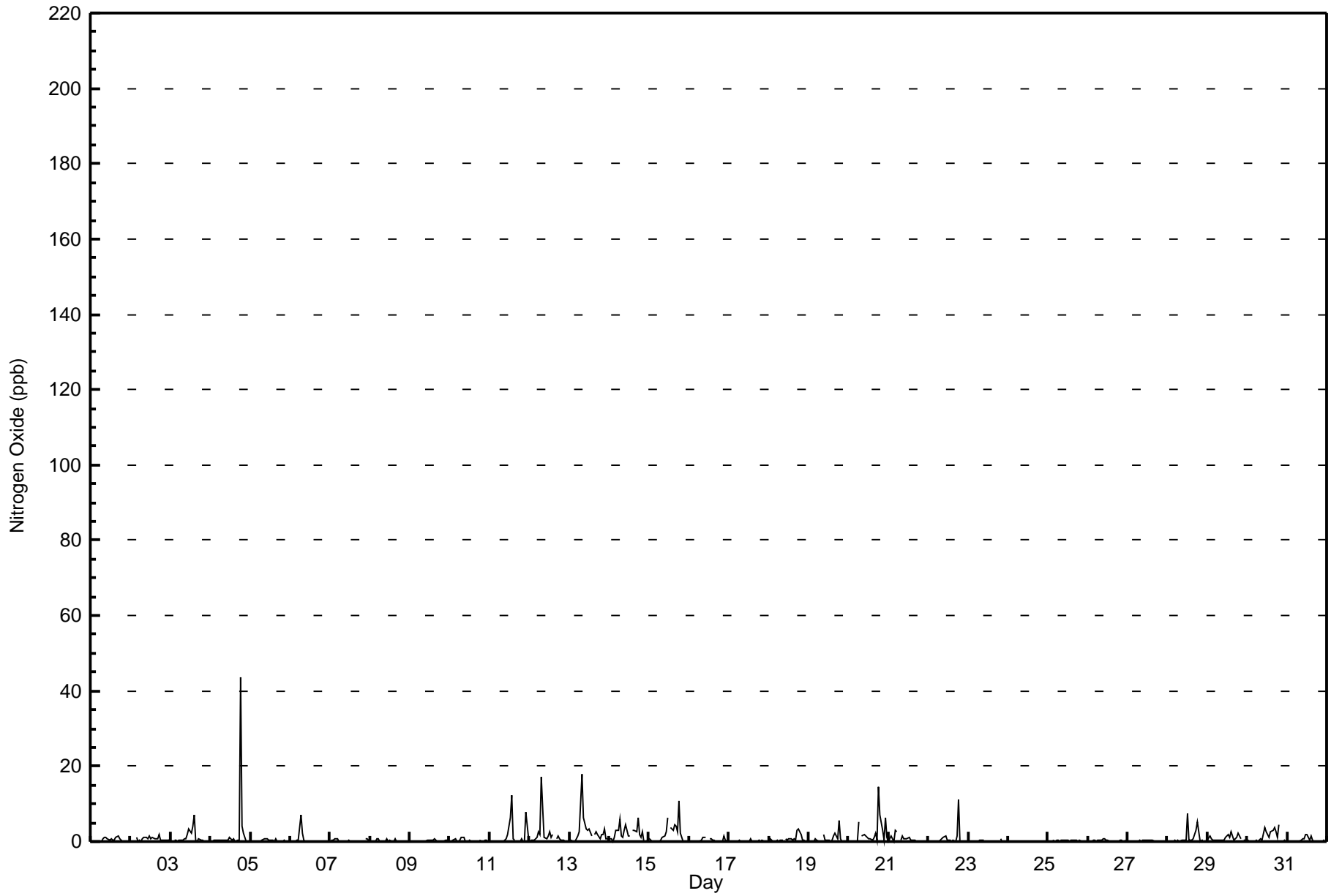
Maximum Value: 43.7 ppb on Oct 4 19:00	Maximum Daily Average: 2.7 ppb on Oct 13	Hours in Service: 744
Minimum Value: 0 ppb on Oct 16 20:00	Minimum Daily Average: 0.1 ppb on Oct 24	Hours of Data: 702
Maximum Diurnal Average: 3.6 ppb at hour 19	Minimum Diurnal Average: 0.2 ppb at hour 3	Hours of Missing Data: 42
Monthly Average: 0.89 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.2 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 1.9 P <sub>99</sub> = 10.7	Hours of Calibration: 41
		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-Oct	0	0	0	A	0	0	0	1	1	1	1	1	1	0	0	1	2	1	0	0	0	0	0	0	0.5	1.6
2-Oct	0	0	A	1	0	0	0	1	1	1	1	1	1	1	1	1	1	2	0	0	0	0	0	0	0.6	1.7
3-Oct	1	A	0	0	0	0	0	0	1	1	2	3	2	4	7	0	0	1	0	0	0	0	0	0	1.1	7.0
4-Oct	A	0	0	0	0	0	0	1	0	0	0	1	1	0	1	0	0	0	44	4	2	0	0	A	2.6	43.7
5-Oct	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	A	0	0.3	0.7
6-Oct	0	0	0	0	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.6	7.1
7-Oct	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0.3	0.9
8-Oct	0	0	0	0	1	1	0	0	0	0	1	0	0	0	1	0	0	0	A	0	0	0	0	0	0.3	0.8
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	A	0	0	0	0	0	0.3	0.8
10-Oct	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	1.2
11-Oct	0	0	0	0	0	0	0	0	0	1	2	6	12	1	0	A	0	0	0	1	0	0	8	1	1.5	12.4
12-Oct	0	0	0	0	1	3	2	17	9	1	1	3	1	2	A	2	1	1	1	0	0	0	0	0	2.0	17.2
13-Oct	0	0	0	0	1	1	3	18	6	5	3	3	3	1	A	2	3	2	1	2	2	3	1	1	2.7	17.8
14-Oct	1	1	0	1	3	3	6	1	1	3	4	2	2	A	3	3	2	6	2	1	3	0	0	1	2.2	6.4
15-Oct	1	0	0	0	0	0	0	0	1	1	3	6	A	4	3	5	4	3	11	2	0	0	0	0	2.0	10.9
16-Oct	0	0	0	0	0	0	0	0	1	1	1	A	1	1	0	0	0	0	0	0	0	1	1	0	0.4	1.4
17-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.7
18-Oct	0	1	0	0	0	1	0	0	0	A	1	0	1	1	0	1	0	3	3	2	0	0	0	0	0.7	3.3
19-Oct	0	0	0	0	1	0	0	0	A	2	0	0	0	0	0	1	2	1	5	1	0	0	0	0	0.7	5.5
20-Oct	0	0	0	0	0	0	5	A	2	2	1	1	1	1	0	1	2	0	15	7	3	0	6	1	2.2	14.6
21-Oct	0	2	1	0	3	3	A	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.7	3.0
22-Oct	0	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	1	11	0	0	0	0	0	0.9	11.3
23-Oct	0	0	0	0	A	0	0	0	0	0	N	C	C	C	C	C	C	C	C	1	0	0	0	0	--	0.9
24-Oct	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
25-Oct	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
26-Oct	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
27-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	1	2	3	5	0	0	0	A	0	0.9	7.5
29-Oct	0	2	1	0	0	0	0	0	0	0	1	2	1	3	1	0	1	2	2	2	1	A	0	0	0.8	2.7
30-Oct	0	0	0	0	0	0	0	0	1	0	4	3	2	1	3	3	4	3	1	4	A	0	0	0	1.3	4.3
31-Oct	0	0	0	0	0	0	0	0	0	1	1	2	2	0	2	0	0	0	0	A	0	0	0	0	0.4	2.0

0.2	0.3	0.2	0.3	0.5	0.5	0.9	1.6	1.1	0.8	1.0	1.1	1.3	1.1	1.0	0.9	0.9	1.0	3.6	1.0	0.5	0.3	0.7	0.3	Diurnal Average	
0.9	1.5	0.8	1.2	3.2	3.1	7.1	17.8	9.0	5.0	4.4	6.5	7.5	12.4	7.0	4.6	4.2	6.4	43.7	7.1	2.9	3.2	7.8	1.0	Diurnal Maximum	

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

# Hourly Maximums for NO at Portable-Kinuso October 2009





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

**Portable-Kinuso - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
October 1, 2009 to November 1, 2009**

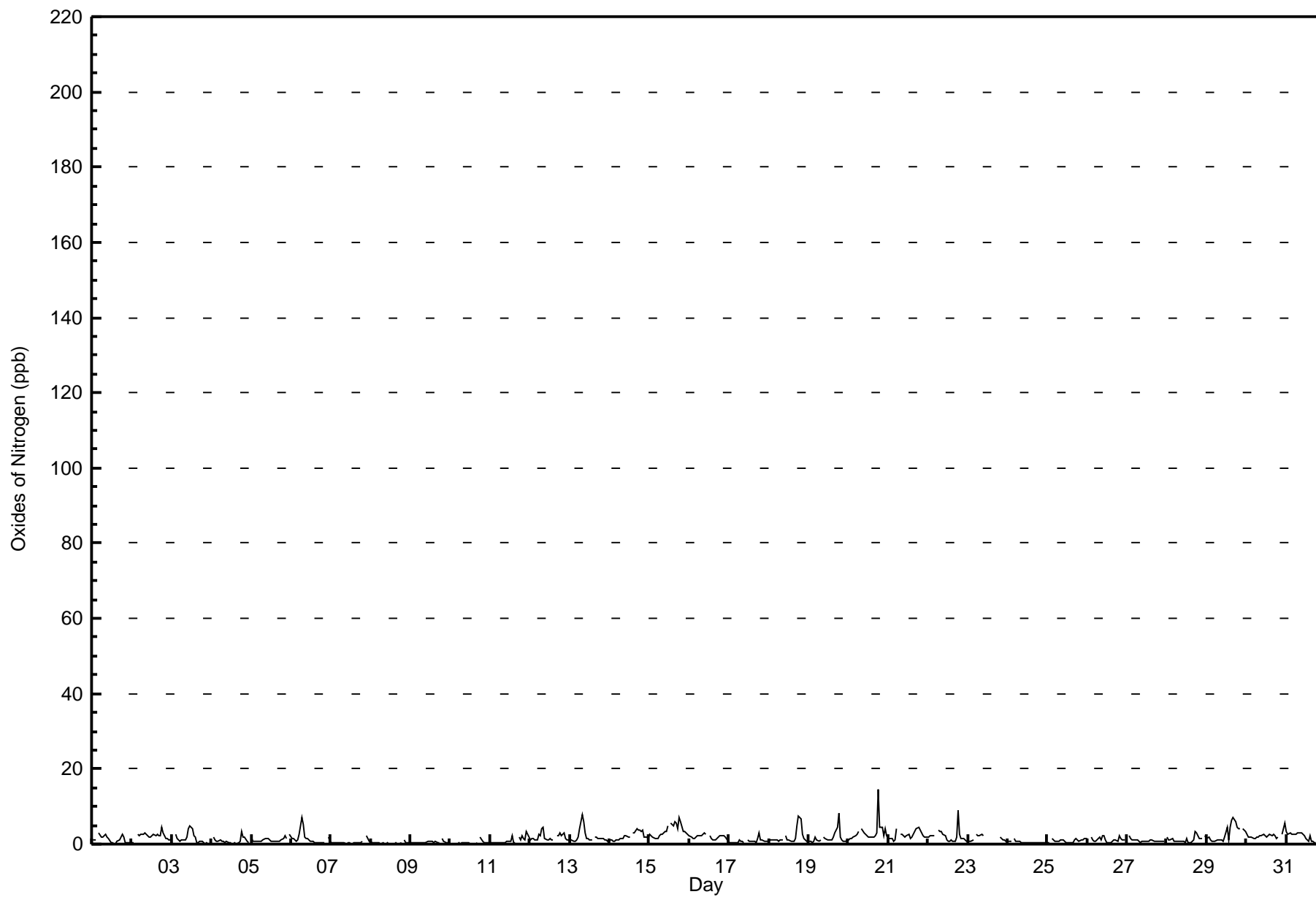
Maximum Value: 14.6 ppb on Oct 20 19:00	Maximum Daily Average: 3.5 ppb on Oct 15	Hours in Service: 744
Minimum Value: 0 ppb on Oct 1 14:00	Minimum Daily Average: 0.3 ppb on Oct 8	Hours of Data: 702
Maximum Diurnal Average: 3.2 ppb at hour 19	Minimum Diurnal Average: 1.1 ppb at hour 14	Hours of Missing Data: 42
Monthly Average: 1.54 ppb	Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.6 Median = 1.1 Q <sub>3</sub> = 2.1 P <sub>90</sub> = 3.1 P <sub>99</sub> = 7.0	Hours of Calibration: 41
		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-Oct	1	1	1	A	3	2	2	2	2	2	0	0	0	0	1	1	2	3	2	0	1	0	1	1.2	2.8	
2-Oct	1	0	A	3	2	3	3	3	3	2	2	2	3	2	3	2	2	5	3	2	1	1	1	2.1	4.6	
3-Oct	2	A	2	2	1	1	1	1	1	2	4	5	4	2	2	0	0	1	1	0	0	0	0	1.4	4.8	
4-Oct	A	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	3	2	2	1	0	0.9	3.5	
5-Oct	2	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	2	1	A	1.1	2.8	
6-Oct	2	1	1	1	1	3	7	5	2	2	1	1	1	0	0	0	0	0	0	0	0	A	2	1.4	7.0	
7-Oct	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	2	1	0.5	2.2	
8-Oct	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0.3	1.1	
9-Oct	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	A	1	1	0	0	0.5	1.4	
10-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2	1	1	0	0	0.3	1.8	
11-Oct	0	0	0	0	0	0	0	0	1	1	1	1	2	1	0	A	2	1	2	1	2	1	4	1.0	3.5	
12-Oct	1	1	1	1	1	3	2	4	4	1	1	1	1	1	1	A	2	2	3	2	3	1	1	1.9	4.5	
13-Oct	1	1	1	1	1	2	4	8	6	3	2	2	1	1	A	2	2	2	1	2	1	1	1	2.0	7.9	
14-Oct	1	1	1	1	1	1	2	2	1	2	2	2	2	A	3	3	4	4	4	3	4	2	2	2.1	3.9	
15-Oct	3	2	2	2	1	2	2	3	3	3	3	5	A	5	5	6	6	4	7	6	3	3	3	3.5	7.1	
16-Oct	2	2	2	2	2	2	2	3	3	3	A	2	1	1	1	1	2	2	2	2	2	2	1	1.9	3.0	
17-Oct	1	0	0	0	0	0	1	1	1	0	A	1	1	1	1	1	1	2	3	1	1	1	1	0.8	3.1	
18-Oct	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	2	5	8	7	3	2	1	1.8	7.6	
19-Oct	1	1	0	1	2	1	1	1	A	2	2	1	1	1	1	2	3	5	8	2	1	1	1	1.7	8.4	
20-Oct	1	1	2	2	2	3	3	A	4	3	3	2	2	2	2	2	3	15	4	4	2	4	2	3.1	14.6	
21-Oct	1	1	1	1	1	4	A	3	3	2	2	3	2	2	3	3	4	4	4	3	2	2	2	2.4	4.4	
22-Oct	2	2	2	2	2	A	4	3	3	3	2	1	1	1	1	1	2	9	3	2	1	1	1	2.2	8.9	
23-Oct	1	1	1	1	A	2	2	2	3	2	N	C	C	C	C	C	C	C	C	2	2	1	1	--	2.8	
24-Oct	1	1	1	A	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.5	
25-Oct	0	0	A	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	0.9	1.4	
26-Oct	1	A	2	1	1	1	1	2	1	2	2	1	0	0	0	1	1	1	1	2	2	1	1	1.2	2.4	
27-Oct	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.1	
28-Oct	2	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	3	3	1	2	2	A	2	1.2	3.4	
29-Oct	1	2	1	1	1	1	1	1	1	1	1	2	5	1	5	6	7	6	4	4	4	A	4	2.8	6.9	
30-Oct	3	2	2	2	2	2	2	2	2	2	3	2	2	2	3	2	2	2	2	2	A	3	4	2.3	5.6	
31-Oct	3	3	3	3	3	2	3	3	3	3	2	2	2	1	2	1	1	0	0	A	1	1	1	1.9	3.3	

1.2	1.2	1.1	1.1	1.2	1.4	1.6	1.8	1.8	1.6	1.5	1.4	1.2	1.1	1.3	1.4	1.6	2.0	3.2	2.2	1.7	1.3	1.4	1.3	Diurnal Average
3.3	2.8	2.8	2.8	2.8	4.3	7.0	7.9	5.8	3.2	4.0	4.8	4.6	5.5	4.8	6.4	6.9	5.9	14.6	6.6	4.5	3.2	4.2	5.6	Diurnal Maximum

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

# Hourly Averages for NO<sub>x</sub> at Portable-Kinuso October 2009



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

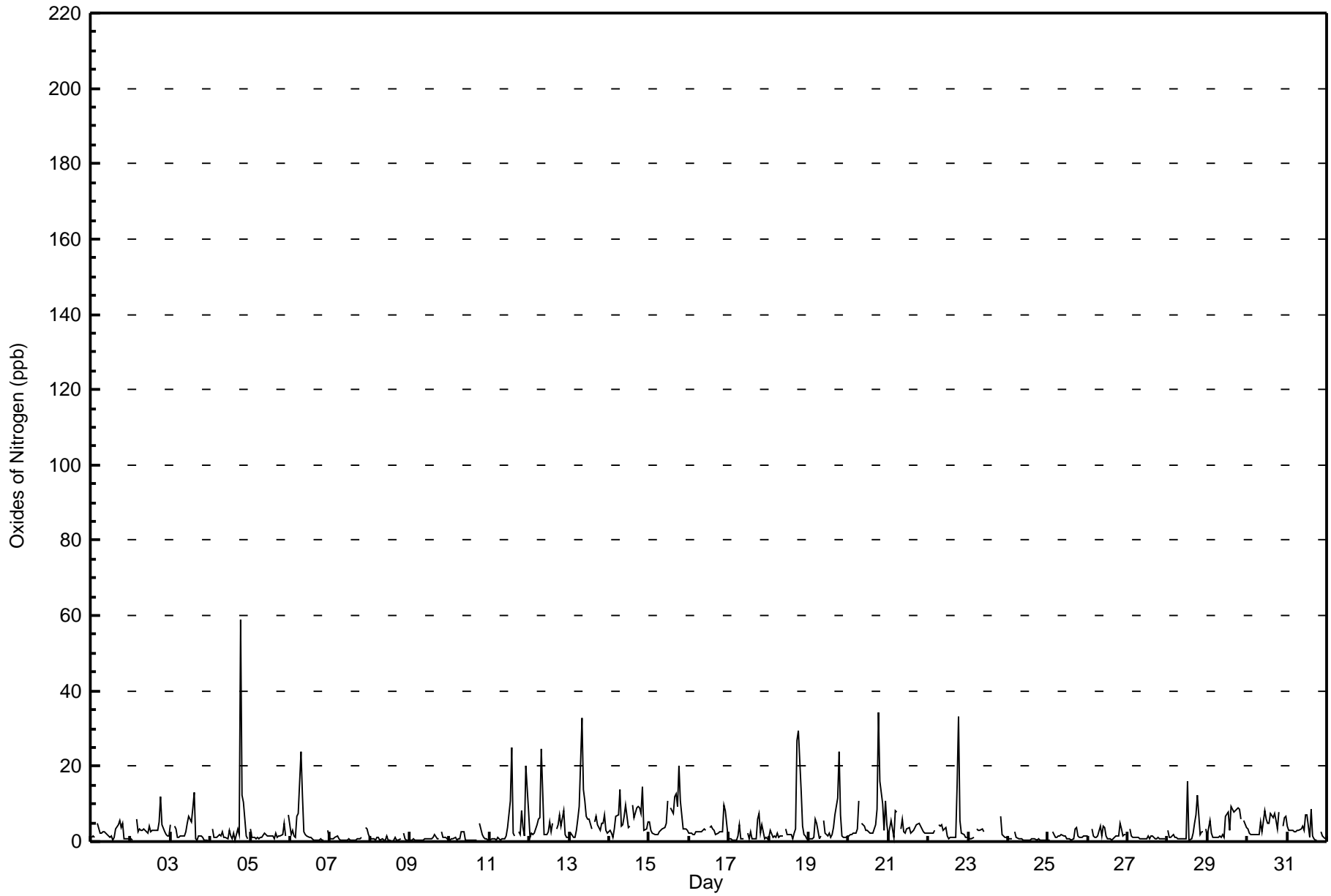
**Portable-Kinuso - Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
October 1, 2009 to November 1, 2009**

Maximum Value: 58.8 ppb on Oct 4 19:00	Maximum Daily Average: 6.4 ppb on Oct 14	Hours in Service: 744
Minimum Value: 0 ppb on Oct 4 00:00	Minimum Daily Average: 0.7 ppb on Oct 8	Hours of Data: 702
Maximum Diurnal Average: 10.0 ppb at hour 19	Minimum Diurnal Average: 1.6 ppb at hour 3	Hours of Missing Data: 42
Monthly Average: 3.23 ppb	Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.9 Median = 1.8 Q <sub>3</sub> = 3.5 P <sub>90</sub> = 7.1 P <sub>99</sub> = 24.1	Hours of Calibration: 41
		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-Oct	1	1	1	A	5	2	2	3	3	2	2	1	1	0	1	3	4	6	4	5	1	1	1	1	2.2	5.6
2-Oct	1	0	A	6	3	3	3	3	3	3	2	4	3	3	3	3	3	5	12	5	3	2	2	2	3.3	11.9
3-Oct	5	A	4	3	1	1	2	2	1	3	5	7	5	9	13	1	0	2	1	1	0	0	0	0	2.9	13.2
4-Oct	A	3	1	1	1	2	1	2	1	1	1	3	2	1	2	0	4	2	59	12	11	1	1	A	5.1	58.8
5-Oct	3	1	1	1	1	1	1	1	2	2	1	1	1	1	1	2	1	1	1	2	5	2	A	7	1.9	7.0
6-Oct	2	3	2	1	7	8	24	12	3	2	2	1	1	1	1	0	1	1	0	0	A	3	1	3.2	24.0	
7-Oct	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	1	1	1	1	A	4	3	2	0.9	3.9
8-Oct	1	1	1	0	1	1	0	1	0	0	2	0	0	0	0	1	0	0	1	A	2	1	0	0	0.7	2.2
9-Oct	0	0	1	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	A	3	1	1	1	0	0.8	2.7
10-Oct	0	1	1	1	0	1	1	2	3	1	0	0	0	0	0	0	0	A	5	2	1	1	1	0	1.0	5.0
11-Oct	1	1	1	1	0	1	1	1	1	1	1	4	11	25	2	1	A	2	2	8	4	2	20	8	4.2	25.1
12-Oct	1	2	2	2	4	6	6	24	13	2	2	2	5	3	5	A	3	5	7	4	8	2	1	1	4.9	24.5
13-Oct	1	2	1	1	3	6	9	33	14	11	7	6	6	3	A	5	7	4	3	5	5	7	3	2	6.3	33.0
14-Oct	3	2	1	3	7	7	14	4	4	7	10	4	4	A	10	6	9	9	9	8	14	3	3	5	6.4	14.4
15-Oct	5	3	2	2	2	2	3	3	3	4	5	11	A	9	7	12	13	9	20	11	3	3	3	3	6.0	20.3
16-Oct	2	2	2	2	2	2	3	3	3	3	3	A	4	4	3	3	2	2	3	3	3	10	8	1	3.2	9.5
17-Oct	1	1	0	0	0	2	5	1	1	1	A	2	1	3	1	1	1	6	8	2	4	1	1	1	1.8	7.5
18-Oct	1	3	1	1	1	2	1	1	1	A	3	2	2	2	1	2	3	27	29	13	4	2	2	1	4.6	29.4
19-Oct	1	1	1	1	6	5	1	2	A	6	2	1	2	1	2	4	7	12	24	7	2	1	1	1	3.9	23.8
20-Oct	1	2	2	2	2	3	11	A	5	4	3	3	3	2	2	3	5	9	34	16	10	3	11	5	6.1	34.4
21-Oct	2	6	3	1	8	8	A	3	6	3	2	4	4	2	3	3	4	4	5	4	3	3	2	2	3.7	8.4
22-Oct	2	2	2	2	3	A	5	4	5	3	4	2	1	1	1	1	1	15	33	6	2	2	1	1	4.3	33.3
23-Oct	1	1	1	1	A	3	3	3	3	3	N	C	C	C	C	C	C	C	C	7	2	1	1	1	--	6.7
24-Oct	1	1	1	A	3	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0.7	2.6
25-Oct	0	0	A	2	1	1	1	1	2	1	2	1	1	1	1	1	3	4	1	1	1	1	1	1	1.3	3.6
26-Oct	1	A	3	1	1	1	2	4	2	4	4	1	1	1	1	1	1	2	1	5	3	2	2	2	1.9	4.8
27-Oct	A	3	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1.1	3.4
28-Oct	3	1	1	2	1	1	1	1	1	1	1	1	16	1	1	2	5	7	12	2	2	3	A	3	2.9	15.9
29-Oct	1	5	2	1	1	1	1	1	1	2	1	7	8	3	9	8	8	9	9	9	6	A	6	4	4.5	9.2
30-Oct	3	2	2	2	2	2	2	2	5	3	8	6	5	5	8	6	8	6	3	8	A	4	6	7	4.5	8.4
31-Oct	4	3	3	3	3	3	3	3	3	4	3	7	7	1	8	2	1	1	0	A	3	2	1	1	2.9	8.5
	1.7	1.9	1.6	1.7	2.5	2.6	3.6	4.1	3.1	2.5	2.7	2.9	3.3	2.9	3.1	2.7	3.3	5.2	10.0	5.2	3.7	2.2	3.0	2.2	Diurnal Average	
	5.2	5.6	4.1	5.8	8.4	7.7	24.0	33.0	13.7	10.7	9.8	10.9	15.9	25.1	13.2	12.0	12.6	27.0	58.8	16.1	14.4	9.5	20.2	7.9	Diurnal Maximum	

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

# Hourly Maximums for NO<sub>x</sub> at Portable-Kinuso October 2009



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

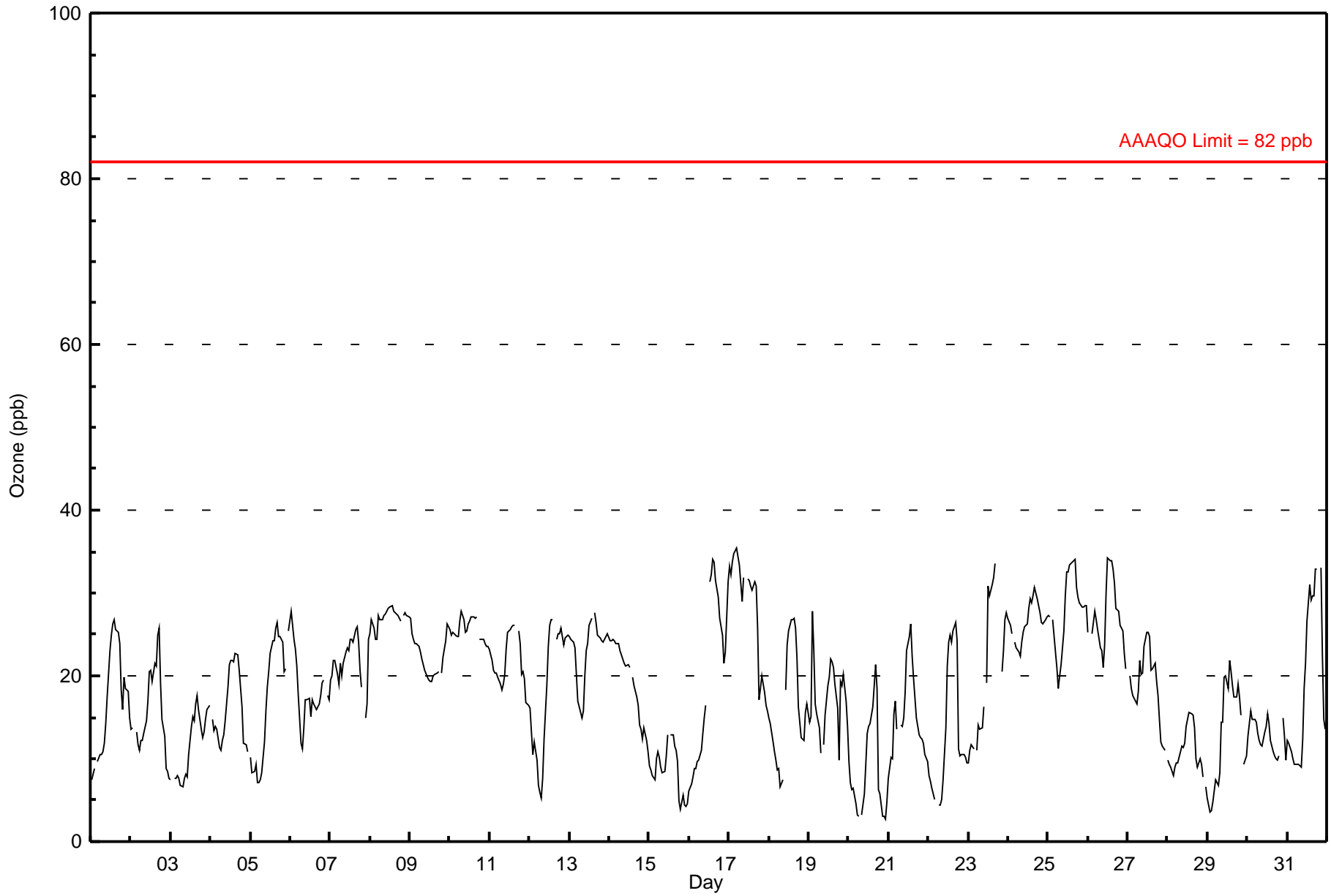
**Portable-Kinuso - Ozone (O<sub>3</sub>) - ppb  
October 1, 2009 to November 1, 2009**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 35.5 ppb on Oct 17 05:00	Maximum Daily Average: 28.2 ppb on Oct 17
Minimum Value: 3 ppb on Oct 20 23:00	Hours of Data: 707
Maximum Diurnal Average: 24.2 ppb at hour 14	Hours of Missing Data: 37
Monthly Average: 18.66 ppb	Hours of Calibration: 36
Minimum Daily Average: 8.6 ppb on Oct 15	Percent Operational Time: 99.9
Minimum Diurnal Average: 14.8 ppb at hour 7	
Percentiles: P <sub>1</sub> = 3.7 P <sub>10</sub> = 8.4 Q <sub>1</sub> = 12.1 Median = 19.1 Q <sub>3</sub> = 24.9 P <sub>90</sub> = 27.7 P <sub>99</sub> = 33.9	

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-Oct	8	8	9	A	10	10	11	11	12	14	17	23	25	26	27	26	25	24	18	16	20	19	18	15	17.0	26.8																							
2-Oct	14	14	A	13	12	11	12	12	13	15	17	21	21	19	22	21	25	26	19	15	13	9	8	8	15.6	25.8																							
3-Oct	7	A	8	8	8	8	7	7	8	8	8	11	14	15	15	17	18	16	14	13	13	15	16	16	11.6	17.6																							
4-Oct	A	15	13	14	14	11	11	12	13	15	19	21	22	22	22	23	22	21	18	16	12	12	11	A	16.3	22.7																							
5-Oct	10	8	9	9	7	7	7	8	12	16	19	20	23	24	24	26	26	25	25	24	20	21	A	25	17.3	26.5																							
6-Oct	28	26	24	23	21	18	12	11	14	17	17	17	15	17	17	16	16	17	18	19	20	A	18	17	18.2	27.7																							
7-Oct	19	20	22	22	20	19	22	20	22	23	23	23	24	24	24	26	26	24	21	19	A	15	17	24	21.7	25.9																							
8-Oct	25	27	26	24	24	27	27	27	27	27	28	28	28	28	28	28	27	27	27	A	27	28	27	27	27.0	28.4																							
9-Oct	27	25	24	24	24	24	23	22	21	21	20	19	19	19	20	20	20	20	A	20	22	24	26	26	22.3	27.0																							
10-Oct	26	25	25	25	25	25	27	28	27	25	25	26	27	27	27	27	27	A	24	24	24	24	24	24	25.6	27.8																							
11-Oct	23	22	21	20	20	20	19	18	19	20	23	25	26	26	26	26	A	25	24	20	21	20	17	16	21.6	26.1																							
12-Oct	16	13	10	12	10	7	6	5	8	12	19	23	26	27	27	A	24	25	25	26	24	25	25	25	18.3	26.9																							
13-Oct	25	24	24	23	20	17	16	15	16	20	23	24	26	27	A	28	26	25	25	24	24	24	25	25	22.9	27.6																							
14-Oct	24	24	24	24	24	24	23	22	22	21	21	21	21	A	20	19	17	17	14	14	12	14	12	11	19.4	24.5																							
15-Oct	9	9	8	7	10	11	10	9	8	8	10	13	A	13	13	12	11	10	5	4	6	4	4	5	8.6	12.9																							
16-Oct	6	7	8	9	9	10	10	11	13	15	16	A	31	32	34	34	32	30	27	26	25	22	23	31	20.0	34.0																							
17-Oct	33	32	34	35	35	34	33	31	29	32	A	32	32	31	30	31	31	26	17	19	20	18	16	16	28.2	35.5																							
18-Oct	15	14	12	11	10	9	9	7	7	A	18	24	25	27	27	27	26	22	16	13	12	12	16	17	16.3	26.9																							
19-Oct	14	15	28	23	17	15	14	11	A	12	15	19	20	22	22	21	19	16	10	19	19	20	17	14	17.5	27.8																							
20-Oct	10	7	6	6	5	3	A	3	6	9	13	14	14	16	19	21	18	6	6	3	3	3	5	8.7	21.3																								
21-Oct	8	10	10	15	17	14	A	14	14	15	18	23	25	26	22	20	17	15	13	12	12	12	11	10	15.3	26.3																							
22-Oct	8	7	6	6	5	A	4	4	5	7	14	21	24	25	24	25	27	24	11	10	11	11	10	10	13.0	26.5																							
23-Oct	9	11	12	11	A	11	14	14	14	16	N	19	31	30	31	32	34	C	C	C	21	23	27	28	20.3	33.6																							
24-Oct	27	26	25	A	24	23	23	22	24	25	26	26	28	29	29	30	31	29	28	28	26	26	27	27	26.6	30.6																							
25-Oct	27	27	A	27	23	21	19	20	21	25	30	33	33	33	34	34	34	31	30	29	28	28	28	28	27.9	34.0																							
26-Oct	25	A	25	27	28	27	26	23	23	21	24	30	34	34	34	33	31	28	28	26	26	25	23	21	27.0	34.3																							
27-Oct	A	20	18	18	17	17	18	22	20	20	24	25	25	25	21	21	21	19	18	15	12	12	11	A	19.0	25.3																							
28-Oct	10	9	9	8	9	9	10	10	11	11	12	14	15	16	15	15	14	10	9	10	9	8	A	7	10.9	15.5																							
29-Oct	5	3	4	5	6	7	7	8	14	14	20	20	18	22	21	19	17	17	19	17	15	A	9	10	13.0	21.9																							
30-Oct	13	14	16	15	15	14	13	12	12	12	13	14	15	14	12	11	10	10	10	10	A	15	13	10	12.7	15.7																							
31-Oct	12	12	11	10	9	9	9	9	9	12	19	21	27	31	29	30	30	33	33	A	33	23	15	14	19.1	33.1																							
																								16.7	16.4	16.2	16.4	15.9	15.4	14.8	14.9	15.4	16.9	18.9	21.7	23.8	24.2	23.7	23.8	23.6	21.7	19.0	17.6	18.3	17.6	17.1	17.6	Diurnal Average	
																								33.2	32.2	33.7	34.7	35.5	34.4	33.4	31.1	29.0	31.9	29.7	32.6	34.3	33.9	34.0	33.9	34.0	32.8	32.9	28.8	33.1	28.4	28.4	31.4	Diurnal Maximum	

C - Calibration                      N - Not Valid                      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-Kinuso October 2009



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

**Portable-Kinuso - Ozone (O<sub>3</sub>) - ppb  
October 1, 2009 to November 1, 2009**

Maximum Value: 37.0 ppb on Oct 17 05:00	Maximum Daily Average: 30.9 ppb on Oct 17	Hours in Service: 744
Minimum Value: 4 ppb on Oct 20 06:00	Minimum Daily Average: 10.5 ppb on Oct 15	Hours of Data: 707
Maximum Diurnal Average: 26.0 ppb at hour 13	Minimum Diurnal Average: 16.7 ppb at hour 7	Hours of Missing Data: 37
Monthly Average: 20.71 ppb	Percentiles: P <sub>1</sub> = 5.6 P <sub>10</sub> = 10.4 Q <sub>1</sub> = 14.2 Median = 21.7 Q <sub>3</sub> = 26.7 P <sub>90</sub> = 29.5 P <sub>99</sub> = 36.1	Hours of Calibration: 36
		Percent Operational Time: 99.9

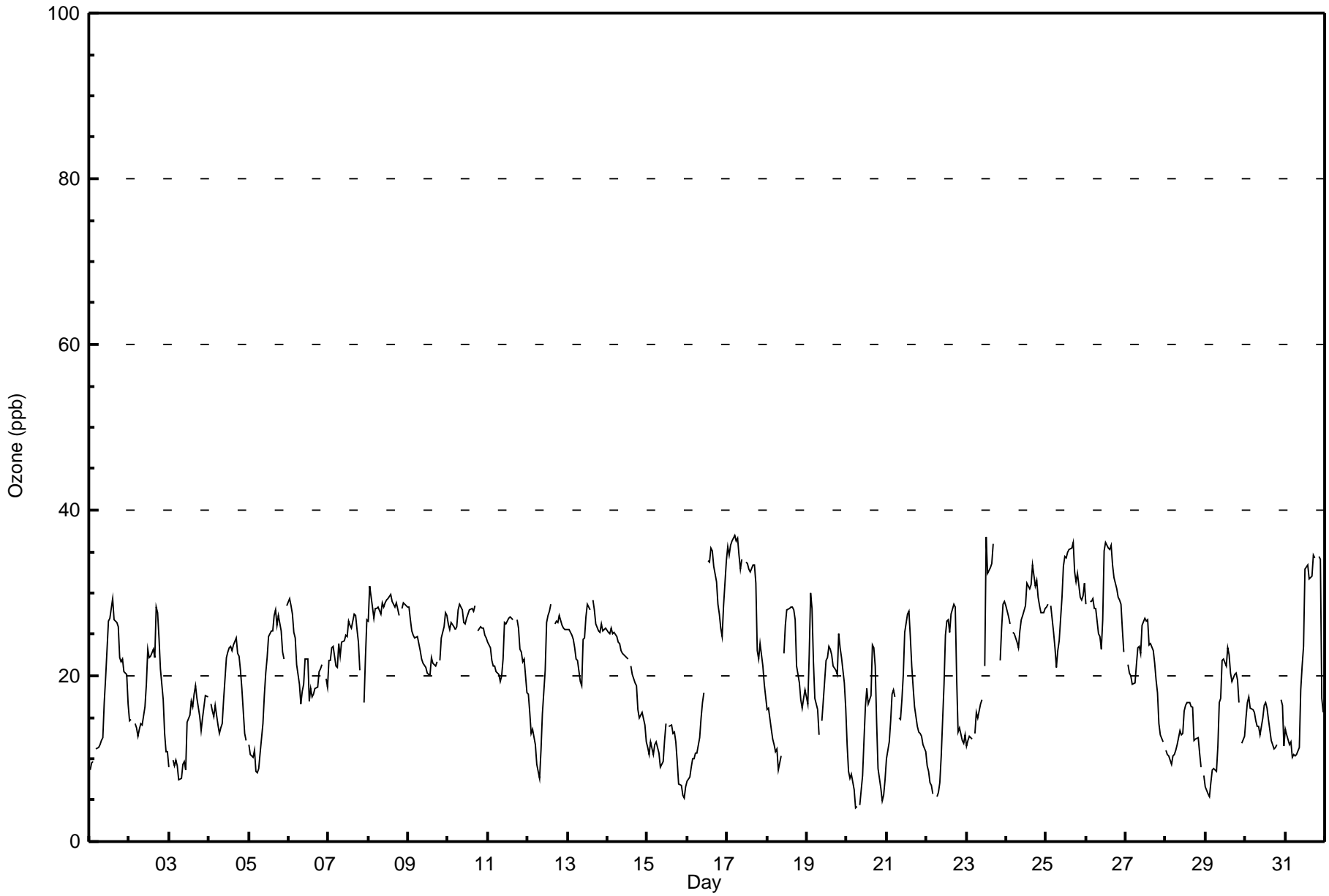
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	9	10	10	A	11	11	12	12	12	17	20	27	27	28	29	27	27	26	22	22	22	21	20	17	19.0	29.3
2-Oct	15	15	A	14	14	13	14	14	14	16	19	23	22	22	23	22	28	28	25	21	17	13	11	11	18.0	28.3
3-Oct	9	A	10	9	10	9	7	8	9	10	9	14	15	17	16	18	19	17	15	13	15	16	18	17	13.1	18.8
4-Oct	A	17	16	15	16	14	13	14	14	17	22	23	23	24	23	24	25	23	22	21	18	13	12	A	18.6	24.6
5-Oct	12	10	10	11	8	8	9	11	14	18	20	22	25	25	25	27	28	26	27	25	23	22	A	28	19.0	28.5
6-Oct	29	28	28	25	25	21	19	17	18	19	22	22	17	18	17	18	18	19	21	21	21	A	20	19	20.9	29.4
7-Oct	22	22	23	24	21	21	24	22	24	24	25	25	27	26	26	27	27	26	24	21	A	17	22	27	23.8	27.5
8-Oct	27	31	28	27	28	28	28	28	29	28	29	29	29	30	29	29	28	29	27	A	28	29	29	28	28.5	30.9
9-Oct	28	27	25	25	25	25	24	23	22	22	21	20	20	20	22	22	21	22	A	22	25	26	28	27	23.5	28.2
10-Oct	26	26	26	26	26	26	28	29	28	26	26	27	27	28	28	28	A	25	26	26	26	26	25	25	26.6	28.6
11-Oct	24	23	22	21	21	20	20	19	20	22	27	26	27	27	27	A	27	26	23	23	23	22	22	18	23.2	27.0
12-Oct	18	16	13	14	12	9	8	8	11	15	21	26	27	28	29	A	26	27	26	27	26	26	26	26	20.2	28.7
13-Oct	26	26	25	24	23	22	22	19	19	24	25	27	29	28	A	29	28	26	25	25	26	25	26	26	25.0	29.1
14-Oct	25	25	26	25	25	25	24	24	23	23	23	22	22	A	21	20	19	19	16	15	15	16	14	12	20.8	25.7
15-Oct	11	11	12	11	12	12	11	11	9	10	12	14	A	14	14	13	13	12	10	7	7	6	5	7	10.5	14.2
16-Oct	7	8	9	10	10	11	11	13	15	17	18	A	34	34	35	35	33	31	29	27	26	25	28	34	21.7	35.4
17-Oct	36	35	36	36	37	36	37	35	33	34	A	34	34	33	33	33	33	31	23	22	24	21	19	18	30.9	37.0
18-Oct	16	16	14	12	12	11	11	9	10	A	23	26	28	28	28	28	28	27	21	19	17	16	17	18	19.0	28.3
19-Oct	17	23	30	28	22	17	16	13	A	15	17	22	22	24	23	22	21	21	20	25	23	22	19	16	20.8	30.0
20-Oct	12	8	8	8	6	4	4	A	4	8	12	16	18	17	18	24	23	21	14	9	6	5	6	7	11.3	23.8
21-Oct	10	12	15	18	18	17	A	15	15	17	20	25	27	28	25	21	19	16	14	13	13	13	12	11	17.1	27.9
22-Oct	9	9	7	7	6	A	5	6	7	10	19	25	27	27	25	27	29	28	20	13	14	12	12	13	15.5	28.6
23-Oct	11	12	13	12	A	13	16	15	17	17	N	21	37	32	33	34	36	C	C	C	22	26	29	29	22.3	36.7
24-Oct	29	27	26	A	25	25	24	23	25	27	27	28	31	31	30	31	33	31	32	30	29	28	28	28	28.2	33.4
25-Oct	28	29	A	28	25	23	21	23	24	30	33	34	34	35	35	35	36	32	31	32	30	29	30	31	30.1	36.2
26-Oct	29	A	29	29	29	28	28	25	25	23	27	35	36	35	35	36	33	32	30	29	29	29	26	23	29.6	36.2
27-Oct	A	21	20	20	19	19	21	23	24	23	26	27	27	27	24	24	23	22	20	18	14	13	12	A	21.2	27.0
28-Oct	11	11	10	9	10	11	11	12	13	13	13	16	16	17	17	16	16	12	12	13	11	9	A	8	12.5	16.7
29-Oct	7	6	5	7	9	9	8	12	17	17	22	22	21	23	23	20	19	20	20	20	17	A	12	13	15.1	23.4
30-Oct	15	17	17	16	16	16	15	14	14	13	15	16	17	16	15	12	12	11	11	12	A	17	16	12	14.5	17.4
31-Oct	14	13	12	12	10	11	10	11	11	18	21	24	33	33	32	32	32	34	34	A	34	34	17	16	21.7	34.5

18.3	18.3	18.1	18.1	17.7	17.2	16.7	16.8	17.4	19.1	21.1	24.0	26.0	25.9	25.4	25.4	25.5	24.0	22.2	20.4	20.7	19.8	19.3	19.4		Diurnal Average
35.6	34.5	35.8	36.4	37.0	36.2	36.6	34.6	32.9	34.0	33.1	35.1	36.7	35.5	35.4	35.8	36.2	34.5	34.3	32.4	34.5	34.1	29.6	33.9		Diurnal Maximum

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

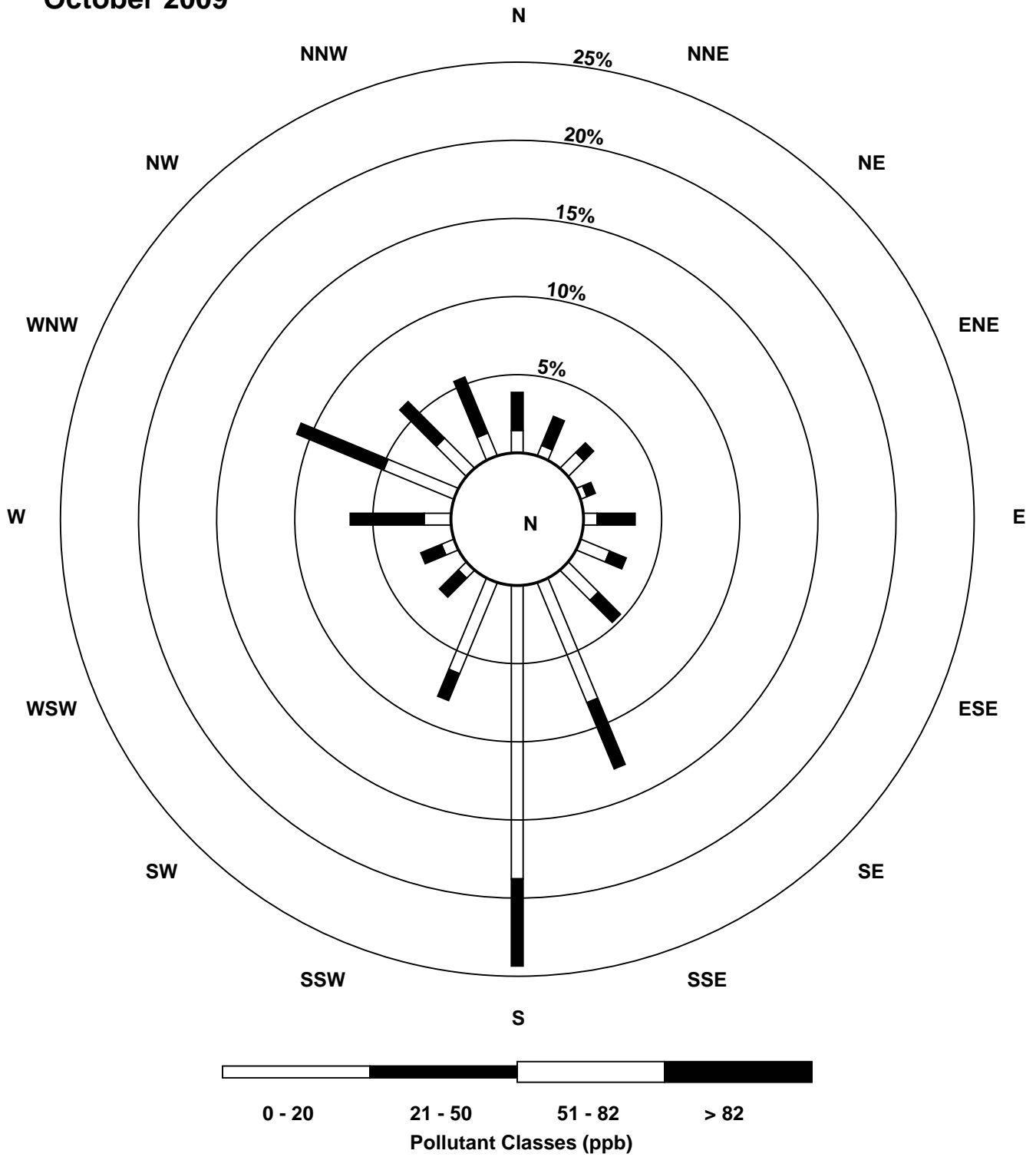
# Hourly Maximums for O<sub>3</sub> at Portable-Kinuso

## October 2009





# Pollutant Rose for O<sub>3</sub> at Portable-Kinuso October 2009



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

**Portable-Kinuso - Ozone (O<sub>3</sub>) - ppb  
October 1, 2009 to November 1, 2009**

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 33.6 ppb on Oct 17 07:00	Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 6 Percent Operational Time: 100.0
Minimum Value: 4.6 ppb on Oct 20 10:00	
Percentiles: P <sub>1</sub> = 5.4 P <sub>10</sub> = 9.3 Q <sub>1</sub> = 12.8 Median = 18.9 Q <sub>3</sub> = 24.3 P <sub>90</sub> = 27.4 P <sub>99</sub> = 32.5	

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Oct	6	6	6	7	8	8	9	9	10	11	12	14	15	17	19	21	23	24	24	23	23	22	21	19	24.3
2-Oct	18	17	16	16	15	14	13	13	12	13	13	14	15	16	17	18	20	21	22	21	20	19	17	15	21.6
3-Oct	13	11	10	9	8	8	8	7	7	7	7	8	9	10	11	12	13	14	15	15	15	15	15	15	15.0
4-Oct	15	14	14	15	15	14	13	13	13	13	14	14	15	17	18	19	21	21	21	21	20	18	17	16	21.4
5-Oct	14	13	11	10	9	9	8	8	9	9	11	12	14	16	18	20	22	23	24	25	24	24	24	24	24.6
6-Oct	24	24	24	24	24	24	22	20	19	18	17	16	15	15	16	16	17	17	17	17	17	17	18	18	24.2
7-Oct	18	19	19	20	20	20	20	20	21	21	21	21	22	23	23	24	24	24	24	23	23	22	21	21	24.3
8-Oct	21	21	22	23	23	24	26	26	26	26	27	27	27	28	28	28	28	28	28	28	28	27	27	27	27.9
9-Oct	27	27	27	26	26	25	25	24	23	23	22	22	21	21	20	20	20	20	20	20	20	21	22	23	27.2
10-Oct	24	24	24	25	25	25	25	26	26	26	26	26	26	27	27	26	27	27	27	26	26	26	25	25	26.7
11-Oct	24	24	23	23	22	22	21	20	20	20	21	21	21	22	23	24	25	25	25	25	24	23	22	20	25.5
12-Oct	20	18	17	16	14	13	11	10	9	9	10	11	13	16	18	20	23	25	25	26	25	25	25	25	25.7
13-Oct	25	25	25	24	24	23	22	21	19	19	19	19	20	21	22	23	25	26	26	26	26	25	25	25	25.9
14-Oct	25	24	24	24	24	24	24	24	24	23	23	22	22	22	21	21	20	19	18	17	16	16	15	14	24.6
15-Oct	13	12	11	10	10	10	9	9	9	9	9	10	10	10	11	11	11	12	11	10	9	8	7	6	12.8
16-Oct	5	5	5	6	6	7	8	9	9	11	12	12	15	18	22	25	28	30	31	31	30	29	27	27	31.3
17-Oct	27	27	28	29	31	32	34	34	33	33	33	32	32	31	31	31	31	30	29	27	26	24	22	20	33.6
18-Oct	18	17	16	15	14	13	12	11	10	9	10	12	14	17	19	22	25	24	24	23	21	19	18	17	24.8
19-Oct	15	14	16	17	18	18	18	17	18	17	15	15	15	16	17	19	19	19	19	19	18	18	18	17	19.2
20-Oct	16	14	14	12	11	8	7	6	5	5	5	6	7	9	11	12	14	16	15	14	13	12	10	8	15.7
21-Oct	6	5	6	7	9	10	11	13	13	14	15	16	17	19	20	20	21	21	20	19	17	15	14	13	20.8
22-Oct	12	11	10	9	8	8	7	6	5	5	7	9	11	13	16	18	21	23	23	21	20	18	16	14	23.0
23-Oct	12	10	10	11	11	11	11	12	12	13	13	15	17	20	22	25	27	29	29	N	N	N	N	N	29.3
24-Oct	N	25	25	25	26	26	25	24	24	24	24	24	25	26	26	27	28	29	29	29	29	28	28	28	29.0
25-Oct	27	27	27	27	26	26	24	23	23	22	23	24	25	27	29	30	32	33	33	32	32	31	30	30	32.6
26-Oct	28	28	28	27	27	27	26	26	25	25	25	25	26	27	28	29	30	31	31	31	30	29	27	26	31.5
27-Oct	25	24	23	22	20	19	18	19	19	19	19	20	21	22	23	23	23	23	22	21	19	17	16	15	25.2
28-Oct	14	12	11	10	10	9	9	9	9	10	10	11	12	12	13	14	14	14	13	13	12	11	11	9	14.0
29-Oct	8	7	7	6	5	5	5	6	7	8	10	12	14	16	17	19	19	19	19	19	18	18	16	15	19.3
30-Oct	14	14	14	13	13	13	14	14	14	14	13	13	13	13	13	13	13	13	12	12	11	11	11	11	14.5
31-Oct	11	12	12	12	11	11	10	10	10	10	11	12	14	17	20	22	25	27	29	30	31	30	28	26	31.2
28.5 28.2 28.3 29.3 30.6 32.3 33.6 33.5 33.0 33.0 32.9 32.4 31.9 31.4 31.0 31.0 31.9 32.6 32.5 32.1 31.5 30.9 30.2 29.6																									
Diurnal Maximums																									
N - Not Valid																									

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

**Portable-Kinuso - External Temperature (ET) - °C  
October 1, 2009 to November 1, 2009**

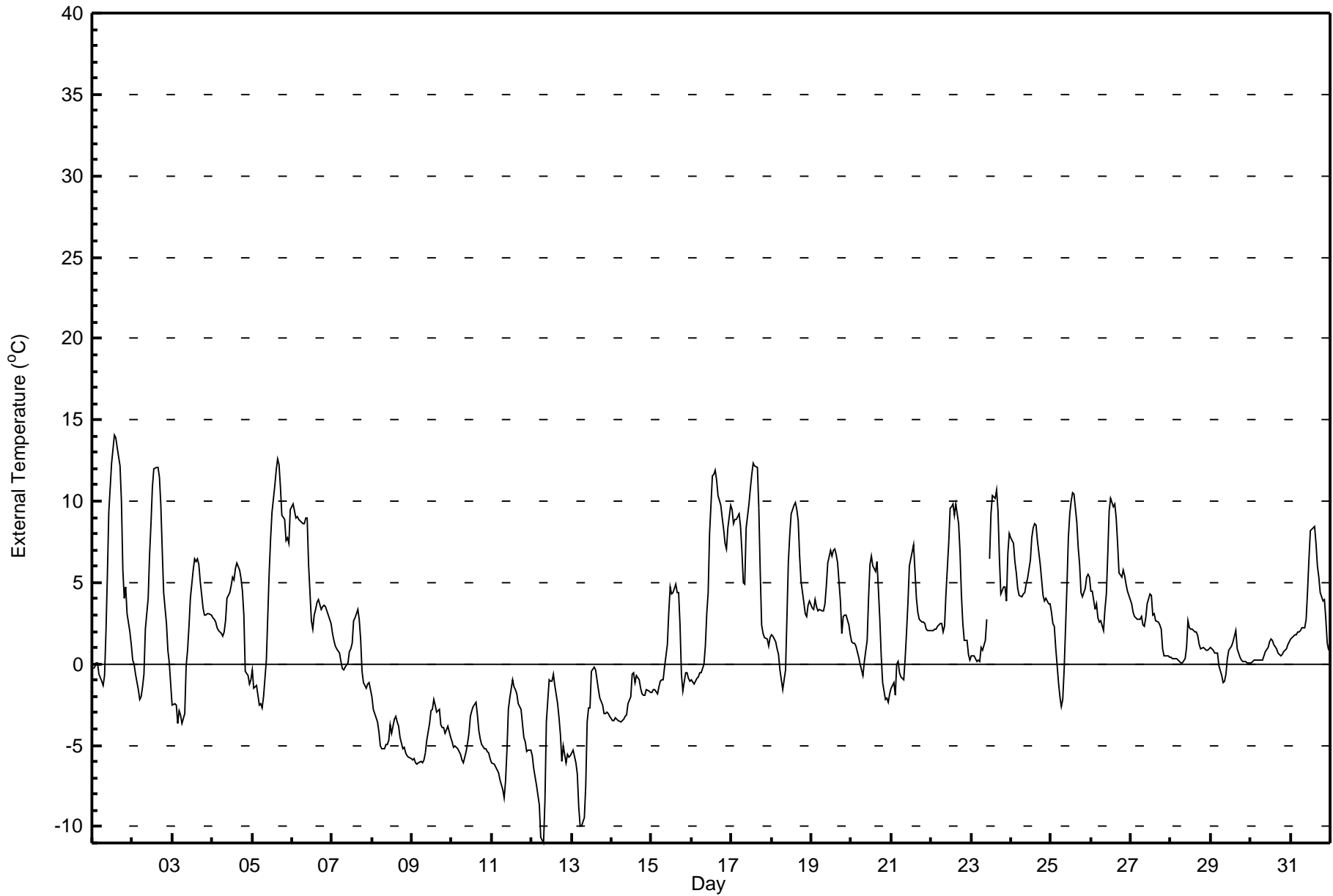
Maximum Value: 14.1 °C on Oct 1 14:00	Maximum Daily Average: 7.2 °C on Oct 17	Hours in Service: 744
Minimum Value: -11 °C on Oct 12 08:00	Minimum Daily Average: -5.4 °C on Oct 12	Hours of Data: 743
Maximum Diurnal Average: 5.4 °C at hour 14	Minimum Diurnal Average: -1.0 °C at hour 8	Hours of Missing Data: 1
Monthly Average: 1.70 °C	Percentiles: P <sub>1</sub> = -8.7 P <sub>10</sub> = -4.7 Q <sub>1</sub> = -1.5 Median = 1.4 Q <sub>3</sub> = 4.5 P <sub>90</sub> = 8.7 P <sub>99</sub> = 12.4	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-Oct	0	0	0	0	-1	-1	-1	-1	2	5	9	12	13	14	14	13	12	10	6	4	5	3	2	1	5.1	14.1
2-Oct	0	0	-1	-2	-2	-2	-1	-1	2	4	7	9	11	12	12	12	11	10	7	4	3	1	0	-1	4.0	12.1
3-Oct	-3	-2	-3	-4	-3	-3	-4	-3	0	1	2	4	6	6	6	6	5	3	3	3	3	3	3	3	1.6	6.5
4-Oct	3	3	3	2	2	2	2	2	3	4	4	5	5	5	6	6	6	5	4	3	0	-1	-1	-1	3.0	6.2
5-Oct	0	-1	-1	-2	-3	-2	-3	-2	0	3	6	8	9	11	12	13	12	11	9	9	8	8	7	9	5.0	12.6
6-Oct	10	9	9	9	9	9	9	9	9	9	6	3	2	3	3	4	4	3	3	4	3	3	3	2	5.7	9.9
7-Oct	2	1	1	1	1	0	0	0	0	0	1	1	1	3	3	3	3	2	0	-1	-2	-1	-1	-2	0.6	3.4
8-Oct	-2	-3	-3	-4	-4	-5	-5	-5	-5	-5	-5	-4	-4	-3	-3	-4	-4	-5	-5	-5	-5	-6	-6	-6	-4.4	-2.0
9-Oct	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-4	-3	-3	-2	-3	-3	-3	-4	-4	-4	-4	-4	-4	-5	-4.4	-2.2
10-Oct	-5	-5	-5	-5	-5	-6	-6	-6	-5	-5	-4	-3	-3	-3	-2	-3	-4	-5	-5	-5	-5	-5	-6	-6	-4.7	-2.4
11-Oct	-6	-6	-6	-7	-7	-7	-8	-8	-7	-5	-3	-2	-1	-1	-2	-2	-2	-3	-4	-4	-5	-5	-5	-5	-4.7	-1.0
12-Oct	-6	-6	-7	-7	-9	-11	-11	-11	-8	-4	-1	-1	-1	-1	-1	-2	-3	-4	-6	-5	-6	-6	-6	-6	-5.4	-0.7
13-Oct	-5	-5	-6	-7	-9	-10	-10	-9	-7	-4	-3	-3	0	0	0	-1	-2	-2	-3	-3	-3	-3	-3	-3	-4.2	-0.2
14-Oct	-3	-3	-3	-3	-3	-4	-3	-3	-3	-3	-2	-2	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-2	-2	-2.3	-0.6
15-Oct	-2	-2	-2	-2	-1	-1	-1	-1	0	1	3	5	4	4	5	4	4	2	-1	-2	-1	-1	-1	-1	0.7	4.9
16-Oct	-1	-1	-1	-1	-1	-1	-1	0	1	3	4	8	12	12	12	11	10	10	9	8	7	7	8	10	5.3	11.9
17-Oct	9	9	9	9	9	8	7	5	5	8	10	11	12	12	12	12	10	6	2	2	2	2	1	2	7.2	12.4
18-Oct	2	2	1	1	1	0	-1	-2	0	3	6	8	9	10	10	10	9	7	5	4	3	3	4	4	4.0	9.9
19-Oct	3	3	4	4	3	3	3	3	4	5	6	7	7	7	7	7	6	4	2	3	3	3	2	2	4.2	7.1
20-Oct	1	1	1	1	0	0	0	-1	0	1	4	6	7	6	6	6	5	3	1	-1	-2	-2	-2	-2	1.6	6.6
21-Oct	-1	-1	-2	0	0	-1	-1	-1	0	2	4	6	7	7	6	4	3	3	3	3	3	2	2	2	2.0	7.3
22-Oct	2	2	2	2	2	3	3	2	2	4	8	10	10	10	9	10	9	7	4	2	1	1	1	0	4.4	9.8
23-Oct	0	0	0	0	0	0	1	1	1	3	N	6	9	10	10	11	9	6	4	5	5	4	7	8	4.5	10.7
24-Oct	8	7	6	6	5	4	4	4	4	5	5	6	8	8	9	9	8	6	5	4	4	4	4	4	5.7	8.6
25-Oct	3	2	2	1	-1	-2	-3	-2	0	5	8	9	10	11	10	9	7	6	4	4	5	5	5	5	4.4	10.6
26-Oct	4	5	3	4	3	3	3	2	3	4	7	9	10	10	10	9	7	6	5	6	5	5	4	4	5.5	10.2
27-Oct	4	3	3	3	3	3	3	2	2	3	4	4	4	3	3	3	3	2	2	1	1	1	0	0	2.5	4.3
28-Oct	0	0	0	0	0	0	0	0	0	1	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1.0	2.6
29-Oct	1	1	1	1	1	0	-1	-1	-1	-1	0	1	1	1	1	2	2	1	0	0	0	0	0	0	0.4	2.0
30-Oct	0	0	0	0	0	0	0	0	0	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	0.7	1.5
31-Oct	2	2	2	2	2	2	2	2	2	3	4	6	8	8	8	7	6	5	4	4	4	3	1	1	3.8	8.5
	0.5	0.3	0.1	-0.1	-0.4	-0.8	-0.9	-1.0	-0.1	1.5	3.0	4.2	5.0	5.4	5.3	5.1	4.3	3.1	1.8	1.3	1.0	0.8	0.7	0.7	Diurnal Average	
	9.9	9.4	8.9	9.1	9.2	8.8	8.6	8.6	9.0	9.0	9.8	12.4	13.2	14.1	13.9	13.3	12.3	10.9	9.1	8.9	7.6	7.8	8.4	9.7	Diurnal Maximum	

N - Not Valid

# Hourly Averages for External Temperature at Portable-Kinuso

## October 2009



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

Portable-Kinuso  
 October 1, 2009 to November 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	11	10	9	10	9	9	10	10	10	9	7	6	4	2	2	10	9	5	1	3	6	6	7	9	5.3	11.0
Dir	174	173	178	174	181	176	186	185	180	176	164	155	122	183	11	27	53	51	204	196	182	183	179	184	168.9	173.8
2 Spd	9	10	5	5	3	4	8	6	6	6	1	4	5	4	4	3	8	7	0	1	3	3	2	2	1.7	9.6
Dir	185	184	172	149	163	178	188	168	160	176	206	26	7	322	316	302	29	41	330	226	237	245	222	200	179.0	184.3
3 Spd	1	1	1	2	3	2	3	4	3	2	2	5	5	7	7	8	5	7	8	7	3	2	3	4	1.8	8.2
Dir	183	205	194	162	185	182	183	188	176	289	205	49	35	6	358	2	345	354	359	356	315	302	334	344	353.0	359.3
4 Spd	1	1	1	1	1	1	2	2	1	1	5	7	5	8	5	2	3	4	1	1	2	7	5	5	0.6	8.0
Dir	286	217	206	198	197	193	216	176	210	44	35	25	22	9	15	311	30	54	88	162	131	184	184	173	62.7	9.3
5 Spd	8	7	7	7	5	8	8	9	9	10	10	10	9	7	6	6	6	5	4	5	6	7	2	3	6.7	10.5
Dir	170	192	172	187	183	171	167	171	159	166	162	161	164	163	170	162	181	189	187	177	157	175	161	235	171.4	165.7
6 Spd	3	2	2	2	1	1	1	1	1	1	11	8	5	7	7	7	6	6	4	4	5	5	4	3	2.8	10.7
Dir	193	159	180	182	168	165	148	156	224	319	355	340	310	319	320	322	320	337	306	305	312	327	317	310	319.9	354.8
7 Spd	5	3	4	4	3	1	4	3	5	4	4	4	5	4	4	5	4	3	2	2	3	2	7	9	2.8	9.5
Dir	323	339	343	357	351	301	348	339	337	342	326	329	325	295	310	280	275	260	233	207	191	162	25	18	328.0	17.6
8 Spd	6	9	6	4	9	9	4	4	5	7	12	9	7	6	7	6	5	3	3	7	8	6	4	4	5.9	12.4
Dir	354	357	350	339	357	357	332	333	342	350	3	336	338	324	331	350	311	304	302	329	336	335	326	324	340.9	3.3
9 Spd	4	2	3	2	4	4	5	4	4	4	4	3	3	5	3	4	4	4	4	4	3	5	6	4	3.5	6.0
Dir	330	286	259	285	276	276	273	269	278	280	278	279	300	284	299	318	285	276	275	283	284	341	345	346	292.9	344.7
10 Spd	6	3	4	5	4	3	4	4	2	2	2	3	3	3	3	3	3	2	1	2	1	2	2	3	1.8	6.0
Dir	347	328	340	339	328	317	336	1	344	293	241	240	269	306	312	313	339	15	209	119	214	216	190	181	317.3	347.5
11 Spd	3	3	5	5	4	5	6	6	6	5	5	4	4	4	5	4	2	2	1	2	3	3	2	2	3.4	6.3
Dir	176	171	163	164	170	168	174	163	172	172	150	96	93	126	128	100	127	186	186	118	137	129	154	204	152.2	172.2
12 Spd	2	1	1	1	2	1	2	2	2	2	2	7	10	8	6	6	6	7	4	7	4	6	7	6	3.8	9.6
Dir	190	174	112	179	190	186	201	190	131	171	173	136	130	115	101	91	143	148	135	129	158	162	156	138	140.2	129.5
13 Spd	6	6	4	3	1	1	4	3	1	7	10	11	14	14	12	12	10	10	12	11	12	13	12	12	7.8	14.1
Dir	124	133	147	157	270	255	91	35	88	111	100	110	128	133	125	104	86	103	97	96	103	107	91	84	108.1	133.5
14 Spd	8	10	11	11	11	9	6	6	6	6	7	7	7	7	6	5	4	3	4	2	2	2	3	3	5.7	11.0
Dir	86	86	92	98	85	94	93	78	73	53	55	57	67	101	63	73	80	56	38	74	40	36	13	51	75.8	85.3
15 Spd	2	1	2	2	4	4	4	4	4	4	3	3	3	2	2	2	3	3	1	4	8	9	9	10	3.3	9.8
Dir	85	128	175	200	180	176	175	183	171	166	142	114	109	106	110	104	115	182	142	198	184	184	185	182	167.7	181.6
16 Spd	11	9	9	13	13	12	11	15	14	11	9	9	15	16	16	11	14	13	12	9	9	4	4	5	10.6	16.2
Dir	181	180	187	177	174	178	175	166	170	170	190	160	151	153	160	166	157	158	155	168	162	169	213	226	168.8	152.9
17 Spd	6	5	7	7	8	3	4	5	3	5	4	5	5	4	3	3	2	3	2	3	3	4	3	9	3.6	8.7
Dir	234	253	268	265	270	221	178	192	231	239	258	265	258	245	223	206	209	186	182	188	182	194	194	187	228.7	186.7
18 Spd	7	4	4	3	3	3	4	3	3	4	2	2	5	4	2	4	5	2	1	1	2	3	7	6	1.5	7.2
Dir	186	189	207	208	195	192	200	195	189	182	151	17	10	7	349	12	26	33	207	155	199	185	188	177	185.0	187.9
19 Spd	5	5	8	1	2	3	5	3	4	2	3	4	1	2	2	5	4	1	2	3	4	7	7	7	2.7	8.4
Dir	181	180	150	139	124	168	181	178	192	140	157	187	147	244	343	14	19	138	194	158	143	167	166	181	166.0	150.2
20 Spd	8	7	5	6	4	4	5	3	7	7	6	1	3	3	2	3	6	3	1	2	2	5	4	6	2.6	7.6
Dir	176	176	188	181	200	202	187	182	182	179	173	193	325	298	302	3	5	15	29	198	181	187	171	168	186.7	176.4
21 Spd	5	6	4	11	9	6	8	6	9	10	11	14	14	14	14	19	16	12	10	10	9	7	5	4	9.6	19.0
Dir	186	159	158	158	150	140	171	176	158	162	157	159	159	158	156	161	166	161	164	161	166	159	182	185	161.6	161.5
22 Spd	4	4	5	6	6	4	5	4	3	3	4	4	6	6	5	4	4	3	2	3	5	5	5	6	2.8	5.9
Dir	202	184	171	170	164	174	177	175	184	174	178	272	283	316	317	300	281	175	176	201	197	194	195	197	205.0	315.8

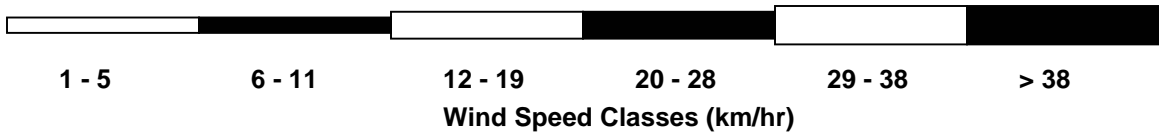
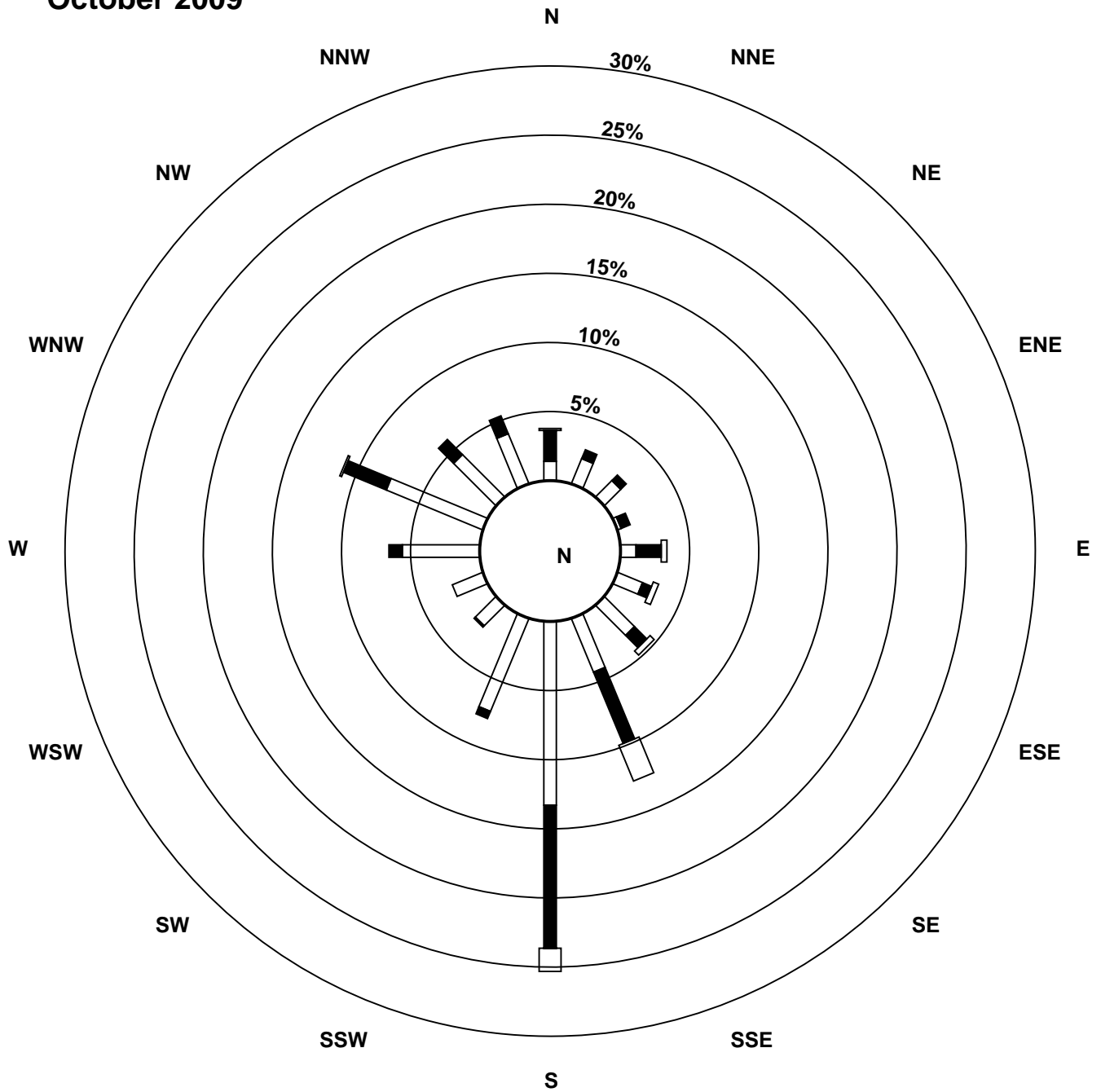
**Peace Airshed Zone Association**  
**Summary of Hourly Averages**

Portable-Kinuso  
 October 1, 2009 to November 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	9	9	10	12	12	12	12	13	11	9	N	M	M	M	1	2	1	1	1	3	3	1	2	4	6.1	13.4
Dir	189	191	185	182	173	182	168	179	171	178	N	M	M	M	170	182	185	199	198	187	192	231	269	281	183.4	179.2
24 Spd	3	3	3	4	4	6	7	8	9	9	8	9	9	11	8	9	8	6	5	4	5	6	6	6	6.4	11.1
Dir	281	288	291	288	278	278	286	292	296	295	299	298	298	299	305	302	305	301	290	287	285	285	282	284	293.3	298.9
25 Spd	4	4	3	2	3	2	3	2	3	5	4	4	5	4	3	2	4	7	4	4	6	7	6	6	3.1	7.4
Dir	285	279	276	211	163	185	197	181	174	180	236	285	280	268	250	201	175	174	187	199	189	184	192	189	208.4	183.7
26 Spd	5	4	5	8	8	9	6	9	10	6	5	4	5	4	4	4	2	2	3	2	2	2	1	3	3.1	10.2
Dir	204	178	186	186	185	188	188	177	182	178	184	229	295	305	301	311	286	248	277	15	276	258	272	281	210.1	181.5
27 Spd	5	4	4	5	4	4	6	6	4	5	7	7	8	7	5	6	5	5	6	5	2	3	3	3	4.8	7.6
Dir	287	292	290	291	295	292	296	296	285	290	292	301	298	307	309	307	295	294	313	316	286	288	294	291	297.3	298.0
28 Spd	3	3	2	1	1	2	2	2	2	1	2	3	3	2	3	2	3	2	2	4	3	3	5	3	1.0	5.1
Dir	292	288	292	282	285	287	278	281	270	267	281	297	9	328	334	326	82	116	179	192	189	184	180	196	258.2	179.7
29 Spd	2	1	3	2	5	N	N	N	N	N	N	10	17	15	15	12	9	7	4	3	2	1	1	1	5.7	16.8
Dir	205	156	149	178	176	N	N	N	N	N	N	164	156	149	148	159	151	142	122	128	123	351	253	242	153.8	155.6
30 Spd	1	2	2	2	2	2	2	1	1	2	4	4	3	1	2	5	6	5	3	5	5	7	9	11	2.6	11.0
Dir	339	282	289	281	282	270	272	245	192	176	156	137	136	113	137	129	122	120	130	132	153	169	172	170	158.3	170.1
31 Spd	15	18	19	14	15	11	10	6	8	9	4	5	6	6	3	5	5	8	6	8	11	13	9	7	5.2	19.4
Dir	166	172	175	174	169	168	164	198	180	169	171	199	283	297	269	279	273	281	276	271	283	303	297	301	210.6	175.4
Spd	2.8	2.8	2.9	3.1	2.8	3.0	3.3	3.1	3.2	2.8	1.3	0.9	0.6	0.4	0.2	0.4	0.7	1.0	0.9	1.5	2.1	2.3	1.9	2.2	Diurnal Average	
Dir	190.0	184.6	182.9	182.1	181.7	185.5	186.5	187.5	182.8	181.3	172.8	160.7	152.0	208.0	162.4	73.4	105.1	146.5	179.8	177.7	186.7	191.7	194.3	195.7	Diurnal Maximum	
Spd	15.3	18.1	19.4	14.0	14.6	12.2	12.5	14.8	13.8	11.1	12.4	14.1	16.8	16.2	15.6	19.0	16.5	13.0	12.1	11.2	12.2	13.1	11.9	12.1	Diurnal Maximum	
Dir	166.1	172.4	175.4	174.2	168.8	182.1	168.4	166.2	169.9	170.1	3.3	159.4	155.6	152.9	159.8	161.5	166.0	158.0	155.2	96.2	102.6	107.0	90.7	84.2	Diurnal Maximum	
Maximum Speed Value: 19 km/h on Oct 31 03:00		Minimum Speed Value: 0 km/h on Oct 2 19:00																Hours in Service: 744								
Maximum Daily Speed Average: 10.6 km/h on Oct 16		Minimum Daily Speed Average: 0.6 km/h on Oct 28																Hours of Data: 734								
Maximum Diurnal Speed Average: 3.3 km/h at hour 7		Minimum Diurnal Speed Average: 0.2 km/h at hour 15																Hours of Missing Data: 10								
Monthly Average Velocity: 1.86 km/h 182.45 deg		Speed Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 1.7 Q <sub>1</sub> = 2.7 Median = 4.4 Q <sub>3</sub> = 6.9 P <sub>90</sub> = 10.0 P <sub>99</sub> = 15.2																Percent Operational Time: 98.7								
All monthly, daily, and diurnal averages have been calculated using vector methods																										
M - Maintenance 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	35	24	1	0	0	0	60																			
NorthEast	15	13	0	0	0	0	28																			
East	15	18	7	0	0	0	40																			
SouthEast	44	23	11	0	0	0	78																			
South	142	115	28	2	0	0	287																			
SouthWest	42	2	0	0	0	0	44																			
West	82	20	0	0	0	0	102																			
NorthWest	58	35	2	0	0	0	95																			
Total	433	250	49	2	0	0	734																			

# Wind Rose for WS at Portable-Kinuso

## October 2009



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

**Portable-Kinuso - Wind Speed (WS) - km/h**  
**October 1, 2009 to November 1, 2009**

Maximum Speed: 20 km/h on Oct 31 03:00	Maximum Daily Speed Average: 11.2 km/h on Oct 16	Hours in Service: 744
Minimum Speed: 1 km/h on Oct 28 05:00	Minimum Daily Speed Average: 2.7 km/h on Oct 28	Hours of Data: 734
Maximum Diurnal Speed Average: 7.0 km/h at hour 13	Minimum Diurnal Speed Average: 4.2 km/h at hour 19	Hours of Missing Data: 10
Monthly Average Speed: 5.57 km/h	Percentiles: P <sub>1</sub> = 1.4 P <sub>10</sub> = 2.1 Q <sub>1</sub> = 3.2 Median = 4.8 Q <sub>3</sub> = 7.2 P <sub>90</sub> = 10.3 P <sub>99</sub> = 15.6	Percent Operational Time: 98.7

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-Oct	11	10	9	10	9	9	10	10	10	9	8	6	6	5	6	10	9	5	2	4	6	6	7	9	7.8	11.1
2-Oct	9	10	6	5	4	4	8	6	6	6	2	4	5	4	4	4	9	7	2	2	3	3	3	2	5.0	9.6
3-Oct	2	2	2	2	3	3	3	4	4	3	3	6	6	7	8	8	5	8	8	7	3	3	3	4	4.5	8.4
4-Oct	2	1	2	2	2	2	2	2	2	3	6	8	6	8	5	3	4	4	3	2	3	7	5	6	3.7	8.3
5-Oct	8	7	7	7	5	8	8	9	10	11	10	10	10	8	7	7	6	5	4	5	6	7	2	4	7.1	10.7
6-Oct	3	2	2	2	1	1	1	1	1	2	11	8	5	7	8	7	7	6	4	4	5	5	4	3	4.3	11.1
7-Oct	5	3	5	4	3	2	5	3	5	4	5	4	6	5	5	6	5	4	3	3	3	3	8	10	4.5	9.8
8-Oct	6	9	6	4	9	9	4	4	5	7	13	9	7	7	7	7	5	4	3	7	8	7	5	5	6.6	12.9
9-Oct	5	3	3	3	5	5	5	5	5	4	5	4	4	5	5	6	5	5	5	4	4	5	6	5	4.6	6.4
10-Oct	6	4	4	5	4	4	4	5	3	3	3	4	4	4	4	3	3	3	2	3	2	2	2	3	3.5	6.3
11-Oct	3	4	5	5	4	5	6	6	6	5	5	4	4	5	5	5	4	2	1	3	3	3	2	2	4.1	6.5
12-Oct	2	2	2	1	2	1	2	2	2	2	3	8	10	9	7	7	7	7	4	7	4	6	7	7	4.6	10.0
13-Oct	6	7	5	4	2	3	4	4	2	8	10	11	14	14	12	13	11	10	12	11	12	13	12	12	8.9	14.5
14-Oct	9	10	11	11	11	9	7	6	7	6	7	7	8	7	7	6	4	4	4	2	2	4	4	3	6.4	11.1
15-Oct	2	2	2	2	4	5	4	5	4	4	3	3	4	2	2	3	4	3	3	4	8	9	9	10	4.1	9.9
16-Oct	11	9	10	13	13	12	11	15	14	11	9	9	16	16	16	11	14	13	12	10	10	5	5	6	11.2	16.3
17-Oct	6	6	7	8	8	4	4	5	4	5	4	5	5	4	4	4	2	3	2	4	3	4	3	9	4.8	8.9
18-Oct	7	4	5	3	3	4	4	3	3	4	3	4	5	5	3	4	5	2	2	2	3	3	7	7	3.9	7.3
19-Oct	5	5	9	2	2	4	5	4	4	3	3	4	2	3	3	5	4	2	2	4	5	8	7	7	4.2	8.5
20-Oct	8	7	5	6	4	4	5	4	7	7	7	3	4	4	3	4	6	4	2	3	2	5	4	6	4.8	7.7
21-Oct	5	6	4	11	9	7	8	6	9	10	11	14	14	15	15	19	17	12	10	10	9	8	6	4	10.0	19.2
22-Oct	4	4	5	6	6	4	6	4	3	3	5	5	6	6	5	4	5	3	2	4	5	5	5	6	4.6	6.4
23-Oct	9	9	11	12	12	12	13	13	11	9	N	M	M	M	2	2	1	1	1	4	3	2	2	4	6.7	13.5
24-Oct	3	4	3	4	4	6	7	8	10	9	8	9	10	11	8	9	8	6	5	4	5	6	6	6	6.7	11.3
25-Oct	5	4	3	2	3	2	3	2	3	5	5	5	5	4	3	3	4	7	4	4	6	7	6	6	4.3	7.5
26-Oct	5	5	5	8	8	9	6	9	10	6	5	5	5	5	4	4	3	2	3	2	3	2	1	4	5.0	10.3
27-Oct	5	4	4	5	4	4	6	6	4	5	7	7	8	7	5	6	5	5	6	5	2	3	3	3	5.0	7.8
28-Oct	3	3	2	2	1	2	2	3	2	2	2	3	4	3	3	2	4	2	2	4	3	4	5	3	2.7	5.3
29-Oct	2	2	3	2	5	N	N	N	N	N	N	10	17	15	15	12	9	7	4	4	2	1	1	1	6.3	16.9
30-Oct	1	2	2	2	2	2	2	2	2	2	4	4	3	2	2	5	6	5	3	5	5	7	9	11	3.8	11.1
31-Oct	15	18	20	14	15	12	10	7	8	9	5	5	6	6	4	5	5	8	7	8	11	13	9	7	9.5	19.6

5.6	5.4	5.4	5.4	5.4	5.3	5.5	5.4	5.5	5.6	6.0	6.4	7.0	6.8	6.0	6.3	6.0	5.1	4.2	4.6	4.8	5.3	5.2	5.7	Diurnal Average
15.5	18.2	19.6	14.2	14.8	12.4	12.6	14.9	13.9	11.3	12.9	14.4	16.9	16.3	16.0	19.2	16.7	13.3	12.3	11.4	12.4	13.2	12.2	12.2	Diurnal Maximum

M - Maintenance      N - Not Valid  
 All monthly, daily, and diurnal averages have been calculated using scalar methods



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

**Portable-Kinuso - Wind Direction (WD) - deg**  
**October 1, 2009 to November 1, 2009**

Maximum Value: 94.1 deg on Oct 1 15:00	Hours in Service: 744
Minimum Value: 5.5 deg on Oct 2 00:00	Hours of Data: 734
Percentiles: P <sub>1</sub> = 7.0 P <sub>10</sub> = 9.8 Q <sub>1</sub> = 13.5 Median = 20.6 Q <sub>3</sub> = 33.7 P <sub>90</sub> = 46.9 P <sub>99</sub> = 79.7	Hours of Missing Data: 10
	Hours of Calibration: 0
	Percent Operational Time: 98.7

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-Oct	9	7	8	8	8	8	9	10	7	9	18	26	55	79	94	12	12	20	79	24	10	10	9	5	94.1
2-Oct	8	8	19	19	37	35	11	15	19	16	83	42	36	45	42	65	37	9	91	46	28	40	13	24	91.0
3-Oct	58	54	52	31	29	37	28	13	20	53	52	43	51	39	30	31	43	32	13	21	35	46	42	26	58.3
4-Oct	56	22	57	55	70	31	24	32	35	73	34	21	38	15	36	64	66	19	79	34	47	11	22	21	78.5
5-Oct	13	17	15	13	15	9	10	9	10	13	15	18	20	23	20	20	16	17	12	17	15	18	31	48	48.3
6-Oct	43	20	16	14	18	15	28	20	59	48	19	21	36	24	24	20	24	40	39	35	31	23	36	38	58.9
7-Oct	27	31	23	33	34	60	38	34	24	33	30	44	27	46	41	34	40	29	30	25	15	43	22	16	60.2
8-Oct	24	14	21	23	16	13	35	20	19	20	18	17	21	26	27	40	34	40	47	17	15	17	32	36	47.0
9-Oct	29	50	37	56	34	30	30	31	37	38	31	43	48	32	46	49	34	35	27	39	47	21	23	24	56.4
10-Oct	19	38	28	22	33	45	40	41	51	58	52	43	44	48	36	45	36	80	81	61	69	34	26	11	81.0
11-Oct	15	12	11	12	14	10	11	9	11	14	13	16	27	30	22	33	67	33	26	37	16	26	19	13	66.9
12-Oct	25	59	67	17	16	15	16	24	27	29	49	24	16	22	24	23	29	15	16	15	24	9	15	13	66.7
13-Oct	21	20	27	27	61	65	37	65	71	41	9	18	14	13	14	13	14	14	12	12	11	8	12	10	70.6
14-Oct	10	12	12	10	10	13	21	15	13	11	11	10	18	21	15	25	27	35	22	39	31	55	46	27	55.0
15-Oct	34	53	16	12	10	12	13	15	15	16	21	36	44	52	34	18	24	21	59	18	12	9	9	9	59.0
16-Oct	9	8	11	8	7	8	8	7	6	11	11	21	11	8	12	15	7	12	9	13	11	62	43	29	62.3
17-Oct	23	31	22	24	21	54	31	18	32	25	34	33	34	37	33	44	28	26	40	40	30	24	44	11	54.5
18-Oct	15	32	32	27	18	34	19	28	23	21	47	68	40	52	86	39	16	45	48	69	23	17	9	10	86.4
19-Oct	27	23	12	63	39	48	16	18	23	36	34	30	70	49	73	21	25	57	39	53	39	10	12	9	73.4
20-Oct	10	12	21	15	27	17	25	23	11	12	16	85	46	38	49	67	21	48	85	38	22	18	23	18	85.5
21-Oct	15	22	33	8	11	12	11	21	16	11	10	12	15	16	13	8	9	11	10	11	12	10	12	29	33.4
22-Oct	14	16	8	9	11	11	12	17	13	22	42	47	25	23	21	35	27	27	38	21	25	22	15	14	47.0
23-Oct	10	13	11	10	8	10	8	6	10	10	N	M	M	M	27	13	24	16	23	10	19	19	21	17	26.6
24-Oct	20	22	21	18	20	17	13	14	11	12	15	14	12	13	14	14	15	18	13	16	14	15	16	17	21.8
25-Oct	18	18	28	46	26	27	13	20	17	15	39	26	25	23	28	25	11	12	19	16	16	11	12	13	45.7
26-Oct	22	47	16	9	7	10	17	7	7	12	18	45	20	21	20	18	46	35	14	42	33	22	29	18	46.7
27-Oct	17	14	13	13	19	16	14	15	24	17	14	14	13	16	17	16	16	17	16	13	30	14	16	15	29.8
28-Oct	14	16	21	20	21	20	19	16	24	23	38	23	43	32	28	45	22	24	28	11	18	17	15	34	44.9
29-Oct	37	58	40	34	8	N	N	N	N	N	N	11	7	11	12	12	14	14	10	10	30	67	31	30	67.0
30-Oct	61	25	18	19	15	20	22	29	28	14	15	12	16	39	20	14	8	12	21	10	16	10	10	10	61.3
31-Oct	8	6	7	9	8	8	9	39	16	17	17	18	32	21	51	18	17	12	16	14	10	10	14	16	50.9
	61.3	59.0	66.7	63.2	69.8	64.9	39.7	65.4	70.6	73.2	82.6	85.5	69.9	79.3	94.1	66.9	66.9	80.2	91.0	68.5	68.8	67.0	46.0	48.3	

M - Maintenance      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  
October 1, 2009 to November 1, 2009**

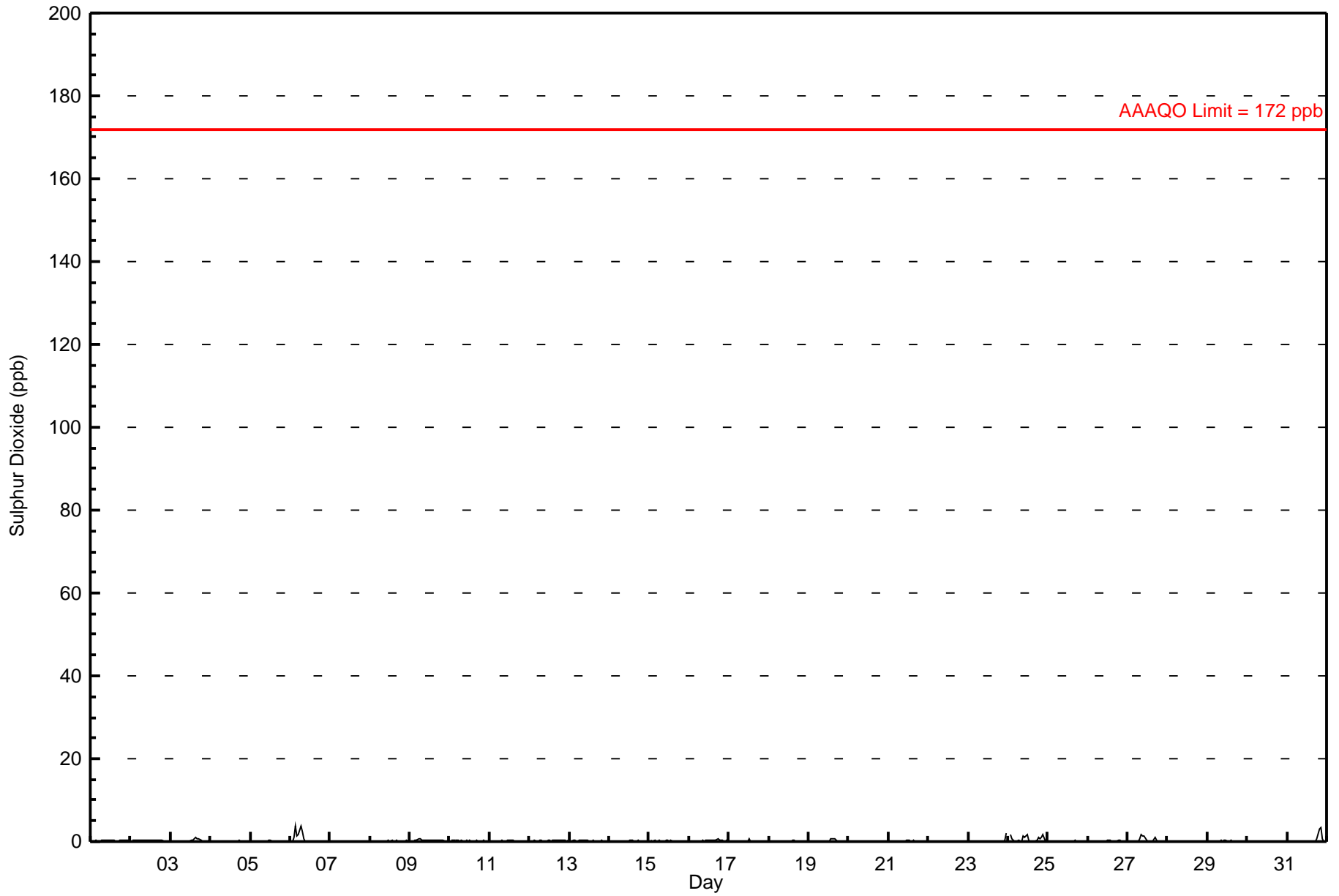
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 3.9 ppb on Oct 6 07:00	Maximum Daily Average: 0.6 ppb on Oct 6		Hours of Data:	708
Minimum Value: 0 ppb on Oct 1 02:00	Minimum Daily Average: 0.0 ppb on Oct 7		Hours of Missing Data:	36
Maximum Diurnal Average: 0.2 ppb at hour 21	Minimum Diurnal Average: 0.1 ppb at hour 23		Hours of Calibration:	36
Monthly Average: 0.15 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> = 0.2 P <sub>90</sub> = 0.3 P <sub>99</sub> = 1.7		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	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-Oct	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
3-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0.2	1.1
4-Oct	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
5-Oct	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
6-Oct	A	0	1	4	1	2	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.9
7-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
8-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
9-Oct	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
10-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
11-Oct	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
12-Oct	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
13-Oct	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
14-Oct	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
15-Oct	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
16-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2	0.6
17-Oct	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
18-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
19-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0.1	0.7
20-Oct	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
21-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
22-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
23-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	2.1
24-Oct	A	2	1	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	1	1	1	2	0	0	0.5	1.8
25-Oct	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
26-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
27-Oct	A	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.3	1.6
28-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
29-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
30-Oct	A	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0	0.2
31-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	1	0	0	0.4	3.5

--	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	Diurnal Average
--	1.5	0.9	3.8	1.4	1.8	3.9	2.3	1.6	1.3	1.2	1.8	0.6	0.5	0.6	1.1	1.0	0.6	1.1	3.1	3.5	1.8	0.4	2.1	Diurnal Maximum

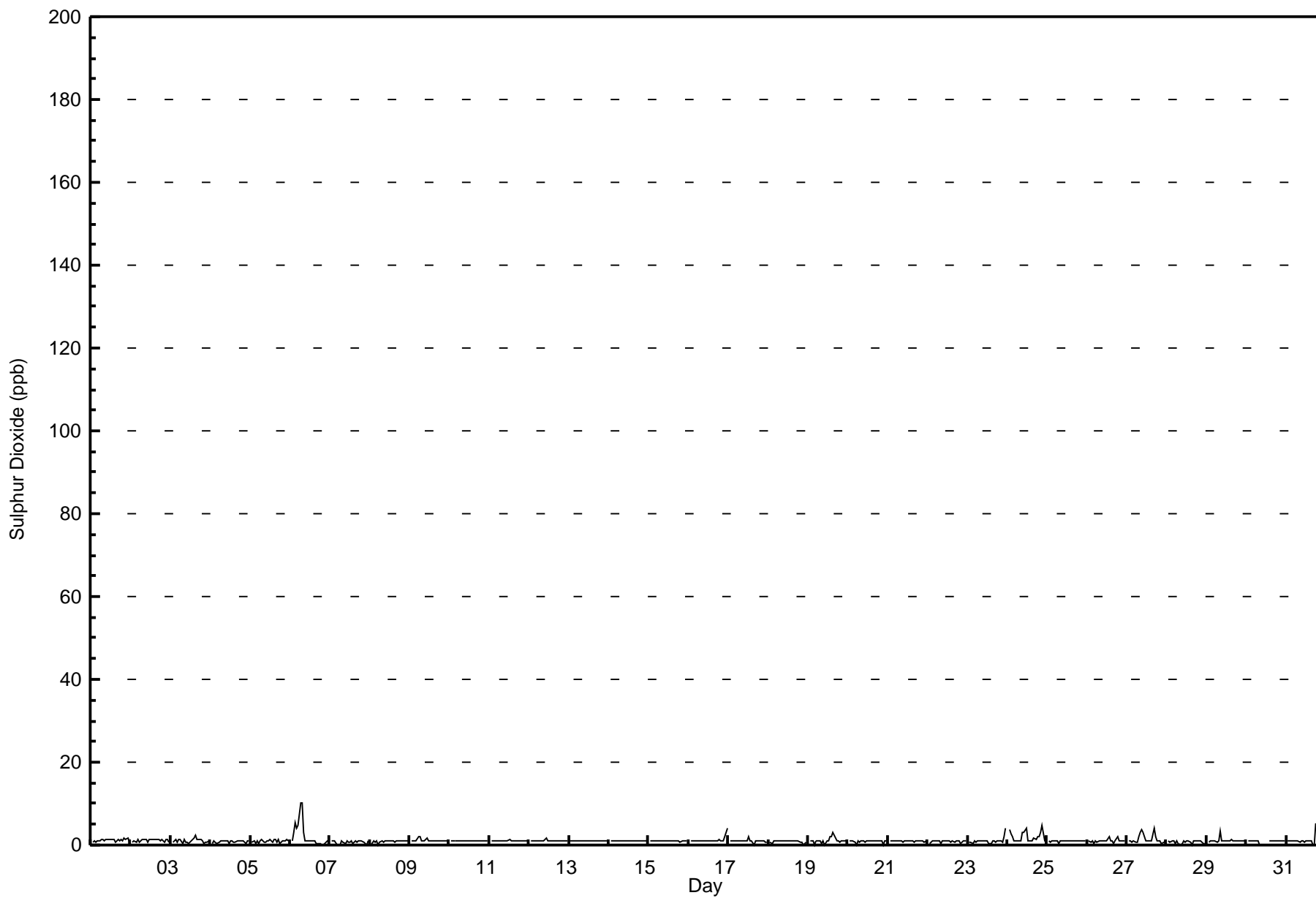
C - Calibration                      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 57 ppb

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

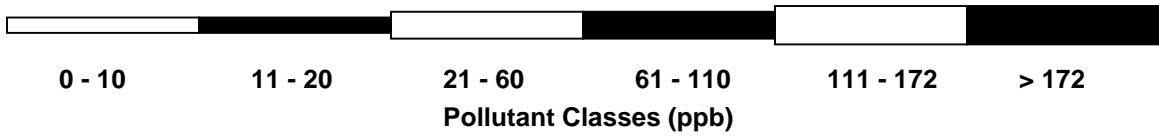
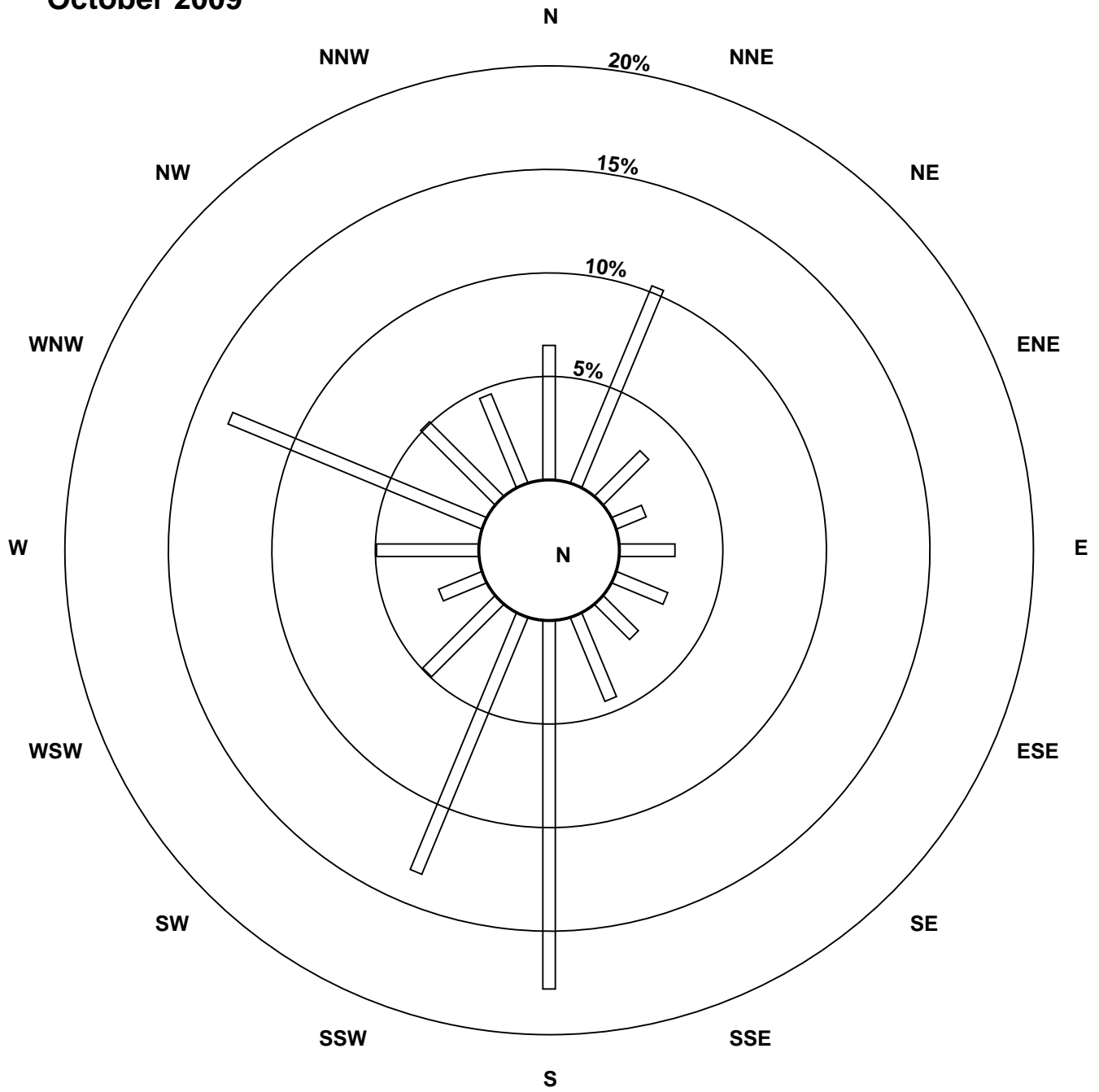




# Hourly Maximums for SO<sub>2</sub> at Valleyview October 2009



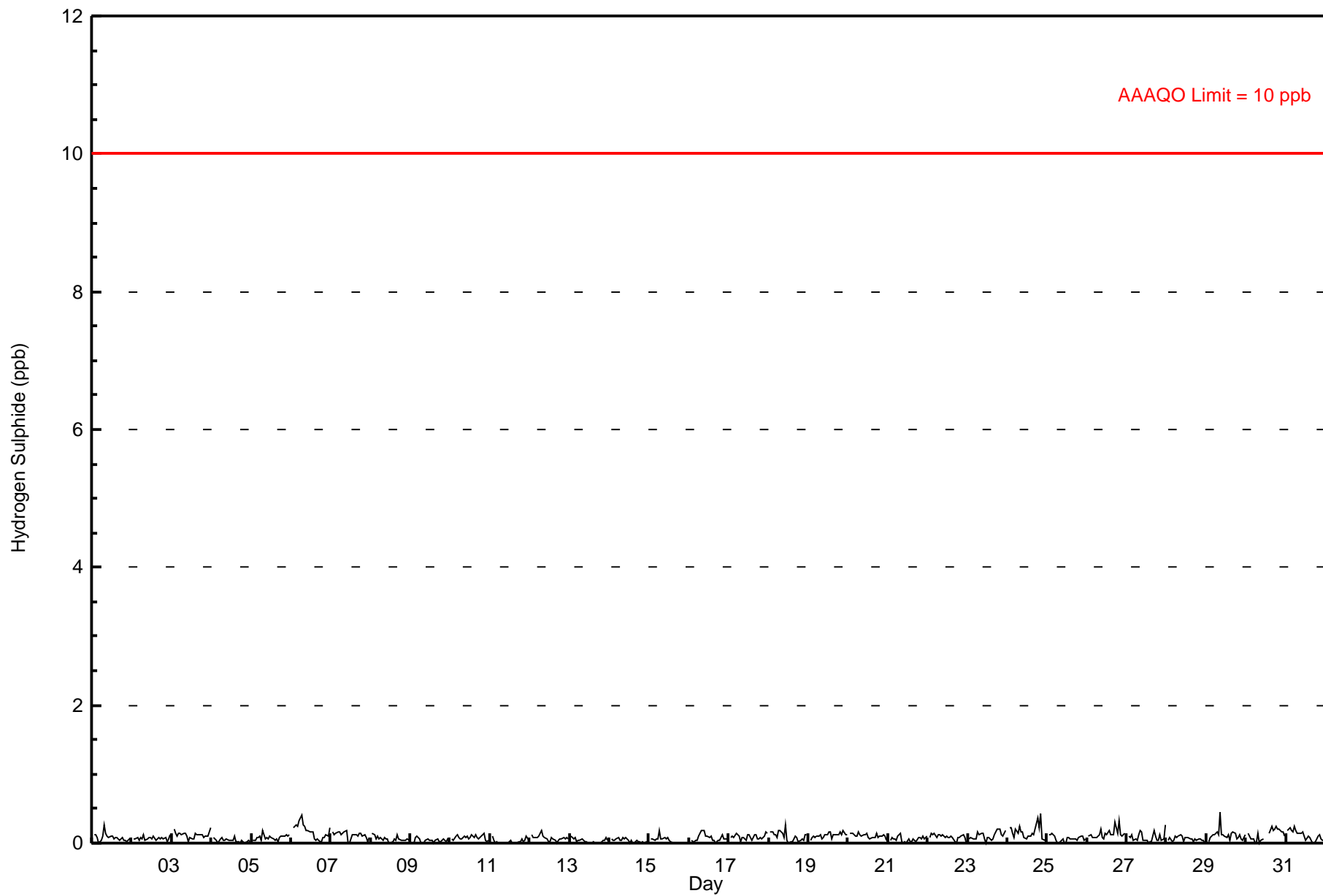
# Pollutant Rose for SO<sub>2</sub> at Valleyview October 2009





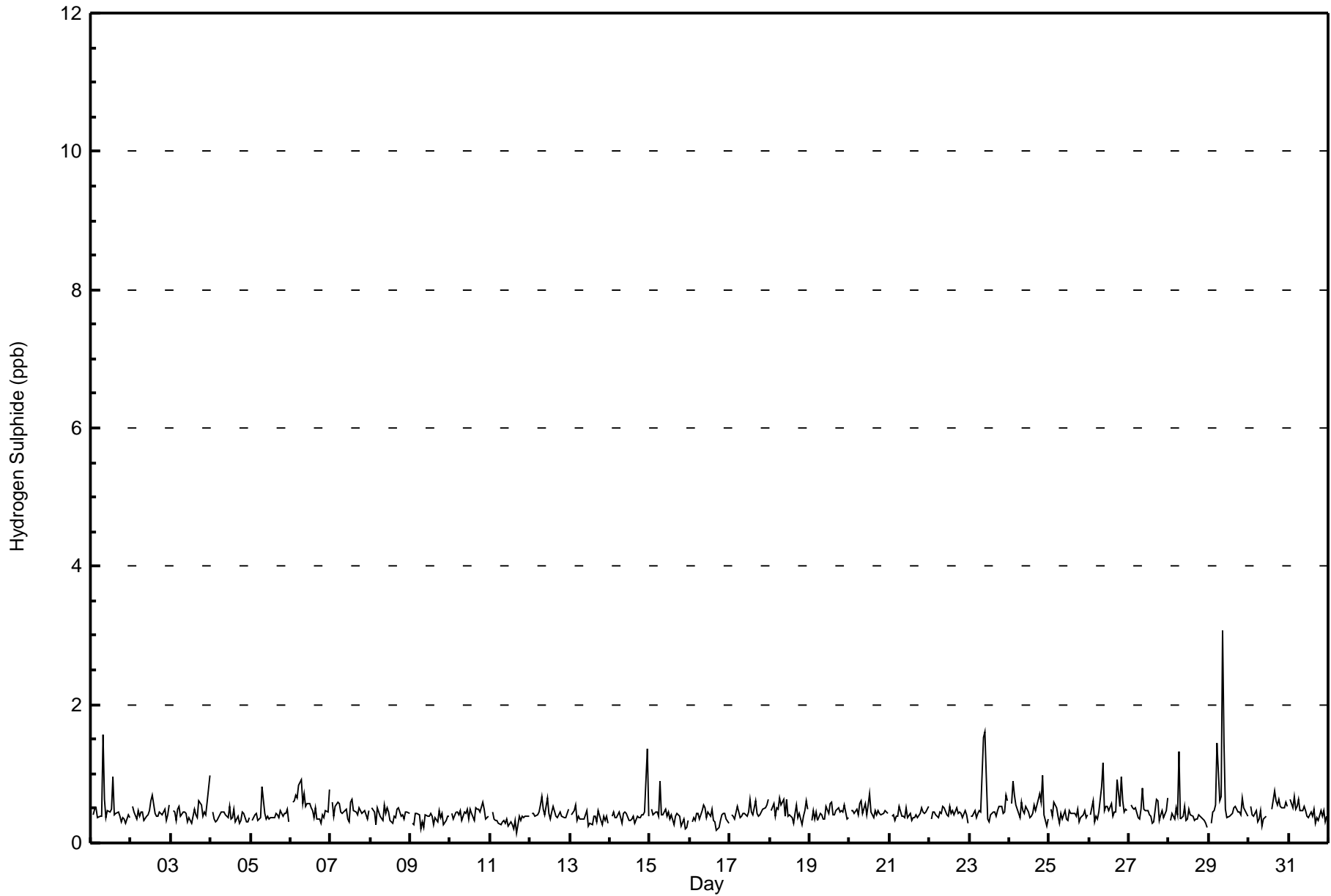


# Hourly Averages for H<sub>2</sub>S at Valleyview October 2009

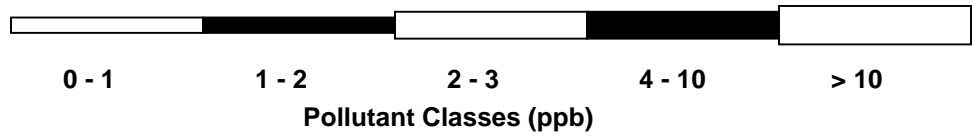
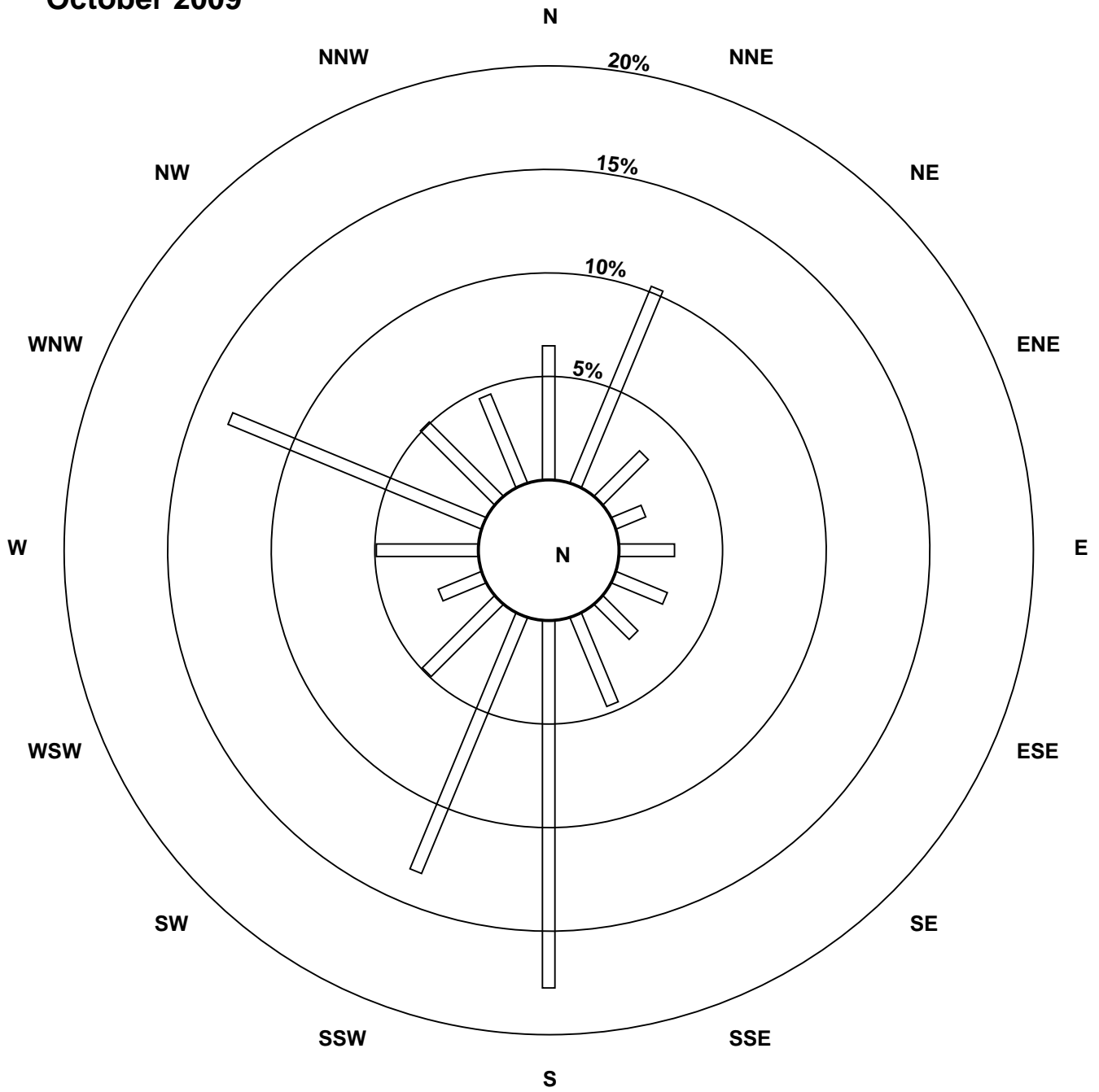




# Hourly Maximums for H<sub>2</sub>S at Valleyview October 2009



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

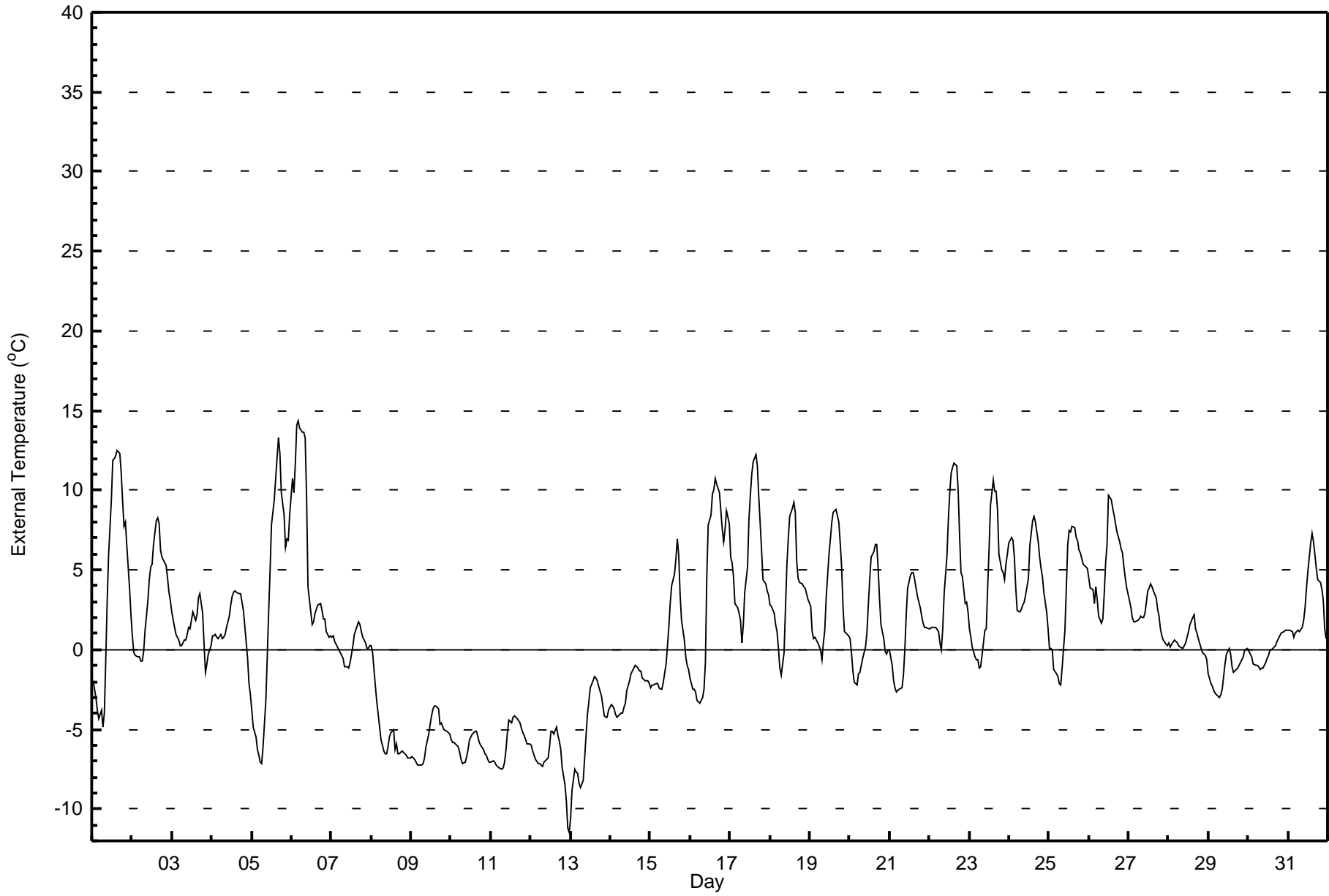


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Valleyview - External Temperature (ET) - °C  
October 1, 2009 to November 1, 2009**

Maximum Value: 14.4 °C on Oct 6 05:00		Maximum Daily Average: 6.4 °C on Oct 6		Hours in Service: 744																							
Minimum Value: -11 °C on Oct 13 00:00		Minimum Daily Average: -7.0 °C on Oct 12		Hours of Data: 744																							
Maximum Diurnal Average: 4.2 °C at hour 16		Minimum Diurnal Average: -1.7 °C at hour 7		Hours of Missing Data: 0																							
Monthly Average: 0.93 °C		Percentiles: P <sub>1</sub> = -8.4 P <sub>10</sub> = -6.1 Q <sub>1</sub> = -2.4 Median = 0.8 Q <sub>3</sub> = 4.0 P <sub>90</sub> = 7.9 P <sub>99</sub> = 13.3		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-Oct	-2	-2	-3	-4	-4	-4	-5	-4	-1	3	6	9	12	12	12	12	11	9	8	8	7	4	2	4.1	12.5		
2-Oct	1	0	0	0	0	-1	-1	0	1	3	4	5	5	7	8	8	6	6	6	5	4	4	3	3.4	8.3		
3-Oct	2	1	1	1	1	0	0	1	1	1	1	1	2	2	2	3	4	2	0	-1	-1	0	0	1.1	3.6		
4-Oct	1	1	1	1	1	1	1	1	1	1	2	3	3	4	4	4	3	4	3	2	1	-1	-2	-3	1.5	3.7	
5-Oct	-4	-5	-5	-6	-7	-7	-7	-6	-3	0	2	5	8	9	11	12	13	12	10	8	6	7	7	9	2.9	13.3	
6-Oct	11	10	12	14	14	14	14	14	13	10	4	2	2	2	3	3	3	2	2	2	1	1	1	6.4	14.4		
7-Oct	1	1	1	0	0	0	0	-1	-1	-1	-1	-1	0	0	1	1	2	2	1	1	0	0	0	0.2	1.7		
8-Oct	0	0	-2	-3	-4	-5	-6	-6	-7	-6	-6	-6	-5	-5	-6	-6	-7	-7	-6	-6	-7	-7	-7	-7	-5.3	0.3	
9-Oct	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-5	-5	-4	-4	-4	-4	-4	-5	-5	-5	-5	-5	-5	-5.5	-3.5		
10-Oct	-6	-6	-6	-6	-6	-6	-7	-7	-7	-7	-6	-6	-5	-5	-5	-5	-5	-6	-6	-6	-7	-7	-7	-7	-6.1	-5.1	
11-Oct	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-5	-4	-5	-4	-4	-4	-4	-5	-5	-5	-5	-6	-6	-6	-5.9	-4.2	
12-Oct	-6	-6	-7	-7	-7	-7	-7	-7	-7	-7	-6	-5	-5	-5	-5	-5	-5	-6	-6	-7	-8	-10	-11	-11	-7.0	-4.9	
13-Oct	-11	-9	-7	-8	-8	-8	-9	-8	-7	-5	-4	-3	-2	-2	-2	-2	-2	-3	-4	-4	-4	-4	-4	-4	-5.1	-1.6	
14-Oct	-3	-4	-4	-4	-4	-4	-4	-4	-4	-3	-3	-2	-2	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-2	-2.6	-1.0	
15-Oct	-2	-2	-2	-2	-2	-2	-3	-2	-2	-1	0	1	3	4	5	6	7	6	3	2	1	0	-1	-1	0.6	7.0	
16-Oct	-2	-3	-2	-3	-3	-3	-3	-3	-2	-1	5	8	8	10	10	11	10	10	9	8	7	8	9	8	3.9	10.7	
17-Oct	6	5	5	3	3	2	2	0	2	4	5	8	10	11	12	12	12	10	8	6	4	4	4	3	5.8	12.3	
18-Oct	3	3	2	2	1	0	-1	-2	0	3	5	7	8	9	9	9	6	4	4	4	4	4	4	3	3.8	9.3	
19-Oct	3	1	1	1	1	0	0	-1	0	1	3	6	7	8	9	9	9	8	7	5	3	1	1	1	3.5	8.8	
20-Oct	1	0	-1	-2	-2	-2	-1	-1	-1	0	1	3	4	6	6	7	7	5	3	2	1	0	0	0	1.4	6.6	
21-Oct	0	-1	-2	-2	-3	-3	-2	-2	-2	0	2	4	5	5	5	4	4	3	3	2	2	1	1	1	1.1	4.9	
22-Oct	1	1	1	1	1	1	0	0	1	4	6	8	10	11	11	12	12	10	7	5	5	3	3	2	4.9	11.7	
23-Oct	1	1	0	0	-1	-1	-1	-1	0	1	1	4	6	9	11	10	10	9	6	5	5	4	5	6	3.8	10.7	
24-Oct	7	7	7	6	4	2	2	3	3	3	3	4	7	7	8	8	8	7	6	5	5	4	2	1	5.0	8.3	
25-Oct	0	0	0	-1	-2	-2	-2	-2	-1	1	4	7	7	7	8	8	7	7	6	6	5	5	5	5	3.3	7.7	
26-Oct	5	4	4	3	4	3	2	2	2	4	5	7	10	9	9	8	8	7	7	6	6	5	4	4	5.3	9.7	
27-Oct	3	3	2	2	2	2	2	2	2	2	2	4	4	4	4	4	3	3	2	1	1	1	0	0	2.3	4.2	
28-Oct	0	0	0	1	0	0	0	0	0	0	0	1	1	2	2	2	1	1	1	0	0	0	0	-1	0.5	2.2	
29-Oct	-1	-2	-2	-3	-3	-3	-3	-3	-2	-2	-1	0	0	0	-1	-1	-1	-1	-1	-1	-1	0	0	0	-1.4	0.1	
30-Oct	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	1	1	1	1	1	1	-0.1	1.2	
31-Oct	1	1	1	1	1	1	1	1	1	2	3	4	5	7	7	7	6	5	4	4	4	3	1	1	3.0	7.3	
		-0.1	-0.5	-0.7	-1.1	-1.3	-1.5	-1.7	-1.7	-1.1	-0.2	0.9	2.2	3.2	3.8	4.1	4.2	4.0	3.4	2.5	1.7	1.1	0.7	0.3	0.2	Diurnal Average	
		10.7	9.9	11.7	14.0	14.4	13.9	13.6	13.7	13.3	9.6	5.9	9.4	11.9	12.0	12.2	12.5	13.3	12.4	9.8	8.4	8.0	7.6	8.7	8.6	Diurnal Maximum	

# Hourly Averages for External Temperature at Valleyview October 2009

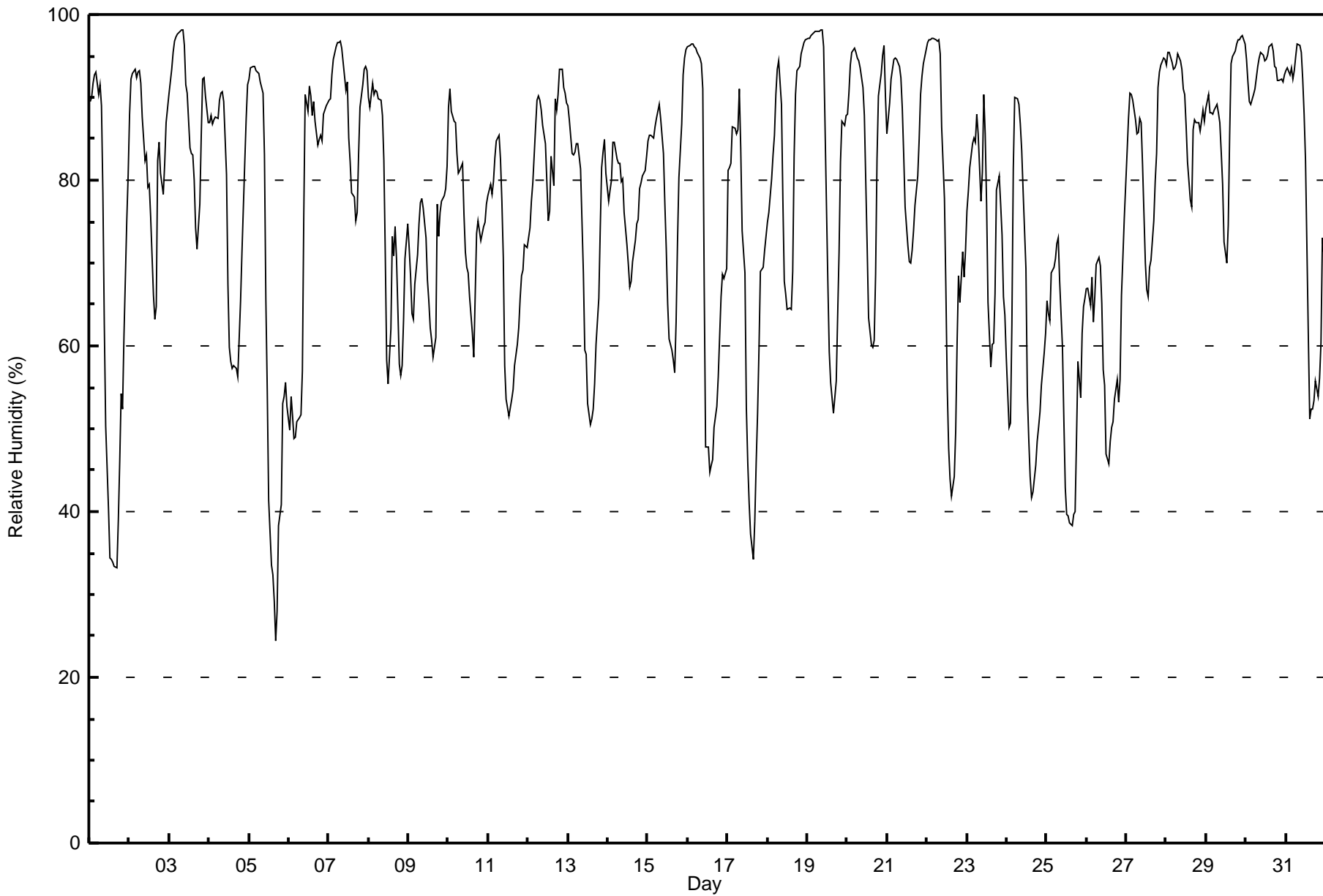


**Peace Airshed Zone Association  
Summary of Hourly Averages**

**Valleyview - Relative Humidity (RH) - %  
October 1, 2009 to November 1, 2009**

Maximum Value: 98.2 % on Oct 19 10:00		Maximum Daily Average: 93.3 % on Oct 30		Hours in Service: 744																							
Minimum Value: 24 % on Oct 5 17:00		Minimum Daily Average: 56.5 % on Oct 25		Hours of Data: 744																							
Maximum Diurnal Average: 87.9 % at hour 7		Minimum Diurnal Average: 61.0 % at hour 16		Hours of Missing Data: 0																							
Monthly Average: 76.80 %		Percentiles: P <sub>1</sub> = 33.9 P <sub>10</sub> = 52.4 Q <sub>1</sub> = 65.7 Median = 81.3 Q <sub>3</sub> = 90.4 P <sub>90</sub> = 94.8 P <sub>99</sub> = 97.9		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-Oct	90	90	92	93	93	90	91	89	78	63	50	40	34	34	34	33	33	39	46	54	52	61	75	81	64.1	93.0	
2-Oct	88	92	93	93	92	93	93	92	88	82	83	79	80	76	66	63	65	82	85	81	78	82	87	89	83.4	93.4	
3-Oct	90	93	95	97	97	98	98	98	98	96	92	90	84	83	83	80	74	72	77	85	92	92	90	87	89.3	98.1	
4-Oct	87	88	87	87	88	88	90	90	91	89	81	67	60	58	57	58	57	56	61	65	71	82	87	92	76.6	91.6	
5-Oct	92	94	94	94	93	93	93	92	91	83	66	55	41	33	32	29	24	28	38	41	53	54	56	53	63.4	93.7	
6-Oct	50	54	52	49	49	51	51	52	57	76	90	88	91	90	88	89	87	84	85	85	85	88	89	89	73.7	91.4	
7-Oct	90	90	93	95	96	97	97	97	96	93	91	92	85	82	78	78	75	76	83	89	92	93	94	93	89.3	96.8	
8-Oct	90	89	92	90	91	91	90	90	88	82	71	58	55	62	73	71	74	71	58	56	58	63	70	75	75.3	91.6	
9-Oct	72	69	64	63	67	71	75	77	78	77	73	68	65	62	61	59	61	77	73	76	77	78	79	82	71.0	81.6	
10-Oct	89	91	88	87	87	83	81	81	82	76	71	69	69	66	61	59	66	74	75	73	74	74	75	77	76.2	90.9	
11-Oct	78	80	78	80	83	85	85	83	78	71	58	54	52	52	54	55	58	60	62	66	68	69	72	72	68.8	85.4	
12-Oct	73	74	78	80	87	90	90	90	88	87	84	80	75	76	83	79	90	88	90	93	93	91	90	89	85.0	93.4	
13-Oct	89	87	83	83	83	84	84	81	75	69	60	59	53	50	51	52	55	60	66	74	81	83	85	81	72.2	88.9	
14-Oct	77	79	80	85	85	83	82	82	80	80	76	72	70	67	68	70	73	75	75	79	80	81	81	83	77.6	84.6	
15-Oct	85	85	85	85	86	87	88	89	87	83	77	72	65	61	60	58	57	63	73	80	87	93	95	96	79.1	95.7	
16-Oct	96	96	96	96	96	96	95	95	94	91	67	48	48	45	46	46	50	53	56	61	66	69	68	69	72.7	96.5	
17-Oct	81	82	82	86	86	86	86	91	84	74	69	53	46	41	37	34	39	46	52	60	69	70	71	73	66.6	91.0	
18-Oct	75	76	80	83	85	90	93	94	89	78	68	66	64	65	64	69	83	90	93	94	95	96	97	97	82.8	97.0	
19-Oct	97	97	97	98	98	98	98	98	98	98	96	77	68	59	56	54	52	56	64	71	82	87	87	88	82.2	98.2	
20-Oct	88	91	94	95	96	95	95	94	93	91	88	80	72	63	60	60	61	69	83	90	93	95	96	90	84.7	96.3	
21-Oct	86	89	92	93	95	95	95	94	92	89	83	77	72	70	70	72	74	77	80	85	90	93	94	96	85.5	95.8	
22-Oct	97	97	97	97	97	97	97	97	95	86	78	67	55	48	44	42	44	50	60	69	65	71	68	71	74.6	97.1	
23-Oct	76	79	82	84	85	85	88	86	77	81	90	86	77	65	57	60	60	66	79	81	77	73	66	64	76.0	90.3	
24-Oct	59	50	51	63	81	90	90	89	87	84	79	69	54	49	44	42	42	46	49	50	52	55	59	61	62.3	90.0	
25-Oct	65	64	63	69	70	71	72	73	68	60	51	43	40	40	39	38	40	40	49	58	54	62	65	66	56.5	73.0	
26-Oct	67	67	65	68	63	66	70	71	70	65	57	55	47	46	48	50	51	54	56	53	56	66	71	75	60.7	75.4	
27-Oct	83	88	91	90	90	87	86	86	87	87	82	70	67	66	69	70	75	80	83	91	93	94	95	95	83.5	94.7	
28-Oct	94	95	95	94	93	94	94	95	94	93	91	90	87	82	78	77	86	87	87	87	86	87	88	87	89.3	95.4	
29-Oct	89	90	88	88	88	88	89	88	87	83	79	73	70	75	85	94	95	96	96	97	97	97	97	97	88.6	97.4	
30-Oct	95	92	90	89	90	91	92	94	95	95	95	94	95	95	96	96	96	94	94	92	92	92	92	93	93.3	96.4	
31-Oct	93	94	93	93	92	93	95	96	96	95	92	88	82	61	51	52	52	53	56	54	56	60	73	71	76.9	96.5	
		83.2	83.9	84.2	85.4	86.6	87.2	87.9	87.8	85.9	82.5	77.0	70.3	65.3	62.1	61.1	61.0	62.9	66.5	70.4	73.9	76.3	79.1	81.1	81.6	Diurnal Average	
		97.2	97.1	97.4	97.7	97.8	97.9	97.9	98.1	98.1	98.2	96.1	94.4	94.6	95.1	96.1	96.4	95.6	95.6	96.5	96.9	97.0	97.3	97.4	97.0	Diurnal Maximum	

# Hourly Averages for Relative Humidity at Valleyview October 2009





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

Valleyview  
 October 1, 2009 to November 1, 2009  
 WS (km/h), WD (deg)

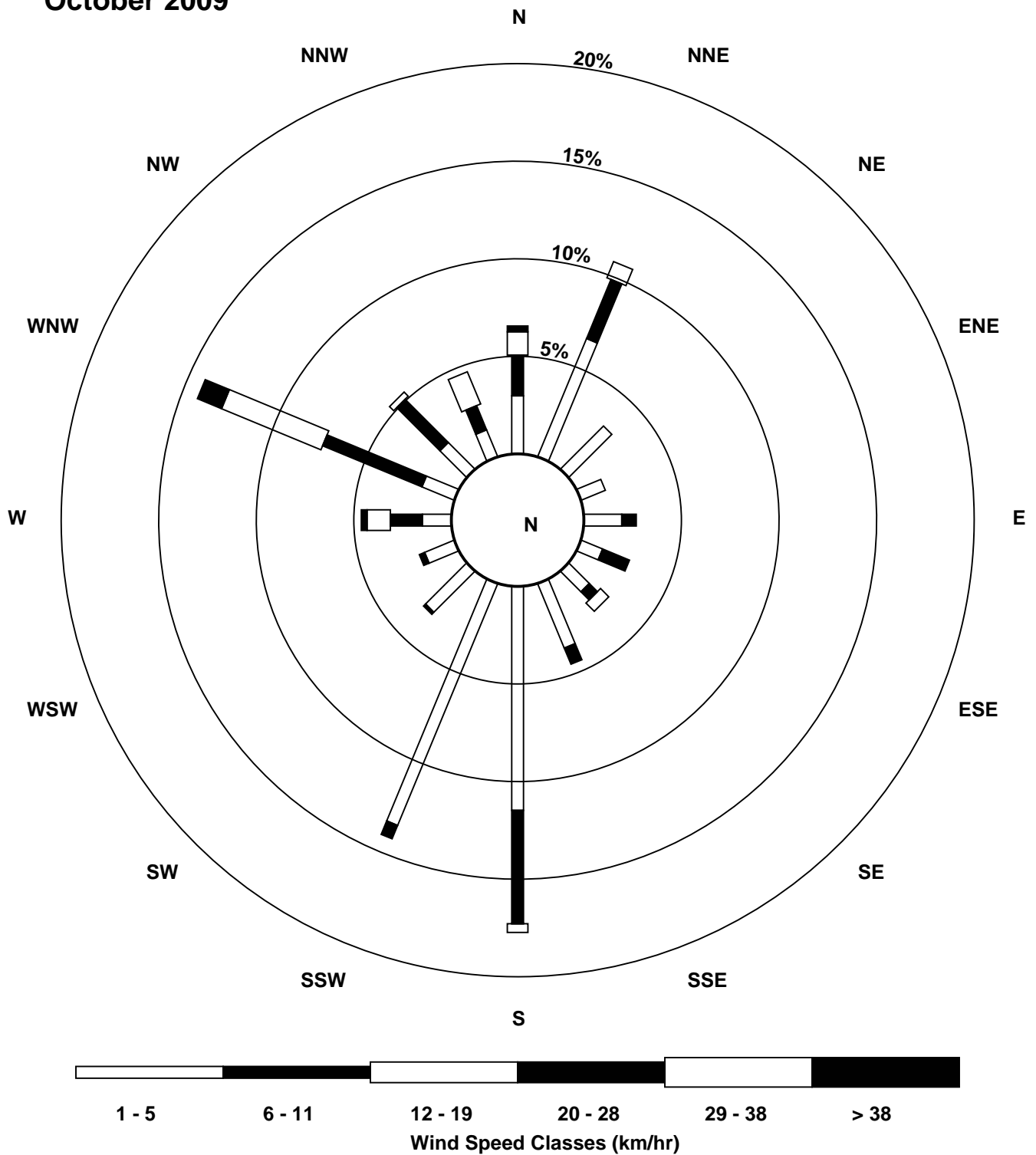
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	3	2	2	1	2	2	1	1	3	4	4	3	2	6	6	6	3	2	1	2	2	1	2	1	1.1	6.3
Dir	195	194	187	187	200	187	232	175	178	188	179	177	173	290	298	336	353	90	138	158	314	96	199	290	217.6	290.1
2 Spd	1	2	1	0	1	1	0	1	2	3	9	3	5	8	11	13	12	9	5	6	8	2	3	5	3.5	12.6
Dir	172	171	191	221	159	168	158	158	152	23	356	73	14	5	356	344	348	319	321	350	12	31	29	19	357.6	343.9
3 Spd	6	6	5	6	6	7	5	4	7	5	7	7	7	8	9	8	5	6	4	1	1	0	0	4	5.0	8.6
Dir	21	25	40	25	29	21	34	40	16	32	23	14	14	28	30	25	31	18	357	352	216	182	219	355	22.8	30.2
4 Spd	1	2	3	3	3	0	0	2	3	3	3	3	1	1	3	3	3	1	3	1	0	1	1	2	1.4	3.3
Dir	63	48	15	11	8	201	274	41	22	36	24	15	347	354	325	15	322	224	37	121	173	322	162	174	16.3	36.1
5 Spd	1	2	1	0	0	1	2	2	3	5	6	8	6	5	6	4	2	1	2	2	3	4	3	3	2.8	7.9
Dir	297	182	269	186	187	271	199	203	198	188	184	189	192	184	180	149	143	195	212	180	185	198	205	189.6	183.6	
6 Spd	5	3	6	15	16	11	12	16	22	19	23	16	18	19	15	16	16	12	10	9	6	7	6	6	11.4	23.4
Dir	256	170	264	282	289	288	285	290	291	342	7	349	340	336	338	340	342	347	347	338	337	298	293	285	322.6	6.6
7 Spd	6	6	5	3	2	5	6	8	8	7	6	5	3	4	4	3	4	4	1	2	2	2	1	2	3.1	8.0
Dir	301	316	310	341	12	15	354	13	9	10	3	352	344	314	313	308	288	298	219	186	203	200	189	288	335.5	13.3
8 Spd	5	10	12	12	12	14	16	12	10	14	13	14	13	10	16	15	13	12	14	11	7	6	6	7	10.7	15.7
Dir	299	352	18	18	16	13	12	29	14	7	10	2	5	359	6	359	0	357	346	334	338	313	303	309	0.0	12.5
9 Spd	8	7	7	9	10	10	8	9	9	8	8	9	9	10	12	11	10	9	8	11	7	7	6	4	8.3	12.3
Dir	313	318	308	292	293	288	299	298	297	301	301	306	308	314	314	316	321	349	307	295	298	297	306	345	306.9	314.5
10 Spd	0	2	4	4	5	4	5	4	5	4	3	2	3	4	3	4	5	3	2	2	3	2	2	2	2.8	4.9
Dir	302	261	342	359	19	39	19	25	18	37	12	350	354	340	339	357	11	53	45	31	19	54	32	52	13.2	18.7
11 Spd	1	1	1	1	0	1	1	0	2	3	3	4	8	6	6	6	5	4	3	2	2	2	3	2	1.9	7.9
Dir	34	167	179	198	108	335	266	173	130	154	134	160	182	160	179	160	155	133	113	98	65	36	19	58	145.5	182.3
12 Spd	3	3	4	5	5	4	5	6	5	8	9	9	7	8	8	8	5	4	3	3	4	4	6	5	5.4	9.3
Dir	26	15	24	31	31	31	22	26	25	19	9	4	14	12	14	16	51	33	45	35	34	30	0	353	19.8	4.0
13 Spd	2	3	6	6	5	3	4	5	6	6	10	8	14	14	13	12	8	9	9	6	6	7	6	5	6.8	14.5
Dir	333	106	108	95	85	77	65	79	94	118	126	117	131	130	130	124	118	121	120	110	101	94	94	108	112.4	130.4
14 Spd	6	6	6	5	5	4	4	5	4	5	5	7	5	7	5	3	3	2	1	2	2	2	1	1	3.4	7.3
Dir	118	113	109	88	71	83	77	85	89	92	94	127	129	134	117	91	76	81	15	351	18	38	14	16	96.9	127.2
15 Spd	2	1	2	1	0	0	0	1	3	5	5	3	2	2	4	4	3	3	3	3	2	2	2	2	1.7	4.9
Dir	6	4	355	359	69	295	328	170	183	185	183	177	198	199	194	192	193	188	184	190	197	206	206	205	191.4	185.0
16 Spd	1	1	2	2	1	0	1	1	1	1	7	9	10	8	7	8	9	10	9	5	4	4	7	5	4.4	10.4
Dir	194	212	201	204	199	218	185	247	195	212	181	185	183	186	185	186	186	190	190	195	227	221	261	226	196.1	189.9
17 Spd	4	4	3	3	3	3	1	2	3	2	3	4	5	4	3	4	3	3	1	1	1	2	1	0	1.7	4.8
Dir	192	174	199	184	181	167	214	191	196	183	158	284	270	262	247	275	234	187	35	221	174	19	322	5	214.5	269.7
18 Spd	2	0	1	1	1	1	0	1	2	0	0	0	1	2	2	4	9	4	1	1	0	1	1	1	0.8	9.5
Dir	41	270	216	45	346	195	220	133	168	72	116	247	35	288	248	267	289	346	170	266	74	222	197	201	275.1	289.3
19 Spd	1	1	1	1	1	2	1	2	1	2	3	3	6	6	6	7	6	4	2	1	2	2	2	1	2.0	7.1
Dir	212	201	185	206	209	197	216	195	200	201	181	253	277	282	276	270	269	299	321	296	200	183	180	183	250.0	270.3
20 Spd	3	1	1	1	1	1	0	1	1	1	2	1	1	2	4	5	4	5	5	4	3	2	3	2	1.0	4.8
Dir	183	210	353	168	200	229	172	202	196	175	175	194	17	32	12	13	34	17	15	19	20	345	358	122	22.8	15.2
21 Spd	2	2	1	2	2	2	1	2	3	5	8	10	7	6	6	4	4	6	8	7	6	5	3	3	4.2	10.1
Dir	165	208	247	218	201	219	242	227	188	185	184	186	188	197	193	198	193	185	183	187	187	182	191	186	190.6	186.1
22 Spd	3	3	2	3	2	2	1	2	1	2	2	5	13	18	20	17	8	1	1	3	2	4	4	2	3.0	19.8
Dir	178	190	194	189	193	185	196	192	196	169	166	293	290	298	303	295	302	320	169	175	177	166	179	172	267.9	302.5

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

Valleyview  
October 1, 2009 to November 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	2	1	1	1	1	1	1	2	3	1	1	3	3	3	4	5	4	1	2	3	3	3	7	12	2.2	11.6
Dir	155	174	287	247	238	256	235	228	196	220	169	189	191	199	196	185	190	214	177	197	230	244	270	274	221.8	274.1
24 Spd	19	19	19	22	20	16	19	17	18	20	19	16	20	23	20	17	17	14	12	13	12	11	6	3	16.1	22.7
Dir	286	287	289	297	296	288	289	288	289	284	285	281	296	299	298	303	293	286	284	290	284	274	256	221	289.2	298.6
25 Spd	3	4	5	5	5	5	4	5	5	4	5	4	6	6	4	5	5	5	4	3	6	4	3	5	4.3	6.1
Dir	200	208	199	195	188	187	206	187	195	183	189	189	186	177	166	149	151	185	212	213	168	201	196	186	186.6	177.2
26 Spd	4	6	5	4	2	2	1	2	2	2	6	5	3	6	9	10	8	6	7	8	11	14	13	13	4.4	14.2
Dir	184	185	193	203	197	199	103	203	217	201	203	197	233	298	300	324	299	279	271	287	298	297	296	294	273.0	297.3
27 Spd	13	13	11	12	11	10	10	13	12	12	13	17	20	18	17	16	14	12	7	10	8	7	7	7	12.3	20.0
Dir	293	302	311	313	320	316	304	286	280	284	277	298	296	296	295	292	286	293	298	296	292	301	293	287	295.8	296.2
28 Spd	4	2	4	3	4	2	2	2	1	2	5	7	7	7	9	10	8	3	2	2	2	2	2	2	3.3	10.1
Dir	317	350	299	304	304	299	199	216	220	252	268	273	295	290	296	299	333	295	243	229	242	205	213	212	285.6	299.0
29 Spd	2	3	4	4	4	3	2	2	5	6	7	12	11	12	12	9	9	8	6	6	5	4	3	8	5.2	12.3
Dir	206	186	193	184	178	164	190	191	165	166	165	177	171	170	176	171	173	183	191	195	202	212	281	344	181.2	170.2
30 Spd	7	6	7	7	4	2	1	1	1	2	2	3	4	3	3	2	5	6	2	6	9	9	10	8	1.6	9.6
Dir	313	308	332	340	322	274	223	181	156	158	154	124	134	114	92	119	133	133	140	167	176	183	184	181	176.2	184.0
31 Spd	10	8	9	9	10	8	3	5	5	6	5	4	4	8	17	16	16	20	18	20	18	14	14	10	7.8	20.0
Dir	185	186	187	186	185	217	223	179	200	199	207	208	191	255	270	267	261	264	274	280	281	295	337	303	252.9	264.1
Spd	1.8	1.3	1.5	1.7	1.6	1.4	1.7	1.3	1.4	1.0	0.7	1.5	2.0	2.9	3.7	3.6	2.9	1.9	1.7	2.0	1.9	1.8	2.0	1.8	Diurnal Average	
Dir	272.3	272.9	294.7	304.2	308.5	304.0	315.5	301.3	286.9	304.2	298.6	280.4	281.8	293.4	300.7	307.1	303.0	297.0	287.9	280.8	280.5	270.4	283.2	282.5		
Spd	19.1	19.0	19.3	21.7	19.9	16.5	19.0	17.4	21.7	19.5	23.4	22.6	20.0	22.7	19.9	17.0	16.8	20.0	18.5	19.9	18.3	14.5	14.4	13.4	Diurnal Maximum	
Dir	285.9	286.8	288.9	296.6	296.4	288.1	288.6	288.3	290.9	284.1	6.6	349.3	296.2	298.6	298.1	303.1	292.6	264.1	274.4	279.7	281.3	295.4	336.5	293.8		
Maximum Speed Value: 23 km/h on Oct 6 11:00																		Minimum Speed Value: 0 km/h on Oct 11 05:00						Hours in Service:		744
Maximum Daily Speed Average: 16.1 km/h on Oct 24																		Minimum Daily Speed Average: 0.8 km/h on Oct 18						Hours of Data:		744
Maximum Diurnal Speed Average: 3.7 km/h at hour 15																		Minimum Diurnal Speed Average: 0.7 km/h at hour 11						Hours of Missing Data:		0
Monthly Average Velocity: 1.83 km/h 292.91 deg																		Speed Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 2.0 Median = 4.1 Q <sub>3</sub> = 7.4 P <sub>90</sub> = 12.4 P <sub>99</sub> = 20.0						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	56	37	22	3	0	0	118																			
NorthEast	41	14	1	0	0	0	56																			
East	24	10	0	0	0	0	34																			
SouthEast	24	14	4	0	0	0	42																			
South	171	55	3	0	0	0	229																			
SouthWest	71	3	0	0	0	0	74																			
West	23	25	28	7	0	0	83																			
NorthWest	28	51	22	7	0	0	108																			
Total	438	209	80	17	0	0	744																			

# Wind Rose for WS at Valleyview October 2009



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

**Valleyview - Wind Speed (WS) - km/h**  
**October 1, 2009 to November 1, 2009**

Maximum Speed: 24 km/h on Oct 6 10:00	Maximum Daily Speed Average: 16.4 km/h on Oct 24	Hours in Service: 744
Minimum Speed: 1 km/h on Oct 15 07:00	Minimum Daily Speed Average: 2.1 km/h on Oct 18	Hours of Data: 744
Maximum Diurnal Speed Average: 9.0 km/h at hour 15	Minimum Diurnal Speed Average: 4.2 km/h at hour 7	Hours of Missing Data: 0
Monthly Average Speed: 5.81 km/h	Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 1.5 Q <sub>1</sub> = 2.3 Median = 4.4 Q <sub>3</sub> = 7.7 P <sub>90</sub> = 12.6 P <sub>99</sub> = 18.7	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	3	2	2	1	2	2	3	1	3	4	5	3	3	7	7	7	3	2	2	2	3	2	2	3	3.2	6.9
2-Oct	2	3	2	1	2	2	2	2	2	4	9	4	6	9	11	13	12	9	5	7	8	3	3	5	5.1	12.8
3-Oct	6	6	5	6	6	7	5	4	7	5	8	8	8	9	9	8	5	6	4	1	1	1	1	4	5.5	9.1
4-Oct	2	2	3	3	3	1	1	2	3	4	4	4	3	3	4	4	4	2	3	2	1	2	2	2	2.7	4.0
5-Oct	2	2	2	2	1	2	2	2	3	5	6	8	6	6	6	5	2	2	2	2	4	4	4	3	3.3	8.0
6-Oct	6	4	7	15	16	11	12	16	22	24	24	23	17	18	19	15	16	16	12	10	9	6	7	6	13.8	23.8
7-Oct	6	6	6	3	3	5	6	8	8	7	7	6	4	4	5	4	4	4	2	2	2	3	2	3	4.4	8.2
8-Oct	6	11	13	12	12	14	16	12	10	14	13	14	13	10	16	15	13	13	14	11	7	6	6	7	11.6	16.1
9-Oct	8	8	7	9	10	10	8	9	9	8	8	10	9	10	13	11	10	9	8	11	8	7	6	5	8.8	12.5
10-Oct	1	2	5	4	5	4	5	4	5	4	3	2	3	4	4	4	5	3	2	2	3	2	3	2	3.5	5.1
11-Oct	2	1	1	2	1	1	1	1	2	3	3	5	8	7	6	6	5	4	3	3	2	2	3	2	3.1	8.1
12-Oct	3	3	4	5	5	4	5	6	6	8	9	9	8	9	8	8	5	4	3	3	4	4	6	5	5.7	9.5
13-Oct	2	4	6	6	5	4	5	5	6	6	10	8	14	15	14	12	9	9	9	7	6	7	6	5	7.5	14.7
14-Oct	6	6	6	5	5	5	4	5	4	5	5	7	6	7	6	3	3	2	1	2	2	2	1	1	4.2	7.4
15-Oct	2	1	2	1	1	1	1	1	3	5	5	3	3	3	4	4	3	3	3	3	2	2	2	2	2.4	5.0
16-Oct	2	2	2	2	1	1	1	2	1	2	7	9	10	8	7	8	9	10	9	5	6	5	7	6	5.1	10.5
17-Oct	5	4	3	4	3	3	2	3	4	3	3	5	5	5	3	4	4	3	2	1	3	2	1	2	3.2	5.3
18-Oct	2	1	2	1	1	1	1	1	2	1	1	2	2	2	2	5	10	5	2	1	1	1	1	2	2.1	9.7
19-Oct	1	1	1	1	1	2	2	2	1	2	3	4	6	7	7	7	6	5	2	3	2	3	2	1	3.0	7.3
20-Oct	3	2	2	2	2	1	2	2	1	1	2	2	2	3	5	5	4	5	5	4	3	2	3	2	2.7	5.2
21-Oct	3	2	2	2	2	2	1	2	3	5	8	10	7	6	6	4	4	6	8	7	6	5	3	3	4.5	10.2
22-Oct	3	3	2	3	2	2	1	2	1	2	3	5	14	18	20	17	8	2	2	3	3	4	4	3	5.4	20.1
23-Oct	2	2	1	2	1	1	1	2	3	2	2	3	3	4	4	6	4	2	2	3	3	3	7	12	3.1	11.7
24-Oct	19	19	19	22	20	17	19	18	18	20	19	16	20	23	20	17	17	14	12	13	12	11	6	3	16.4	22.9
25-Oct	3	4	5	5	5	5	4	5	5	4	5	4	6	6	4	5	5	5	4	4	6	4	4	5	4.6	6.3
26-Oct	4	6	5	4	3	3	1	3	2	3	6	5	5	7	9	10	8	6	7	8	11	14	13	14	6.5	14.4
27-Oct	14	13	12	12	11	10	10	13	12	12	13	17	20	18	18	17	16	14	12	7	10	8	7	7	12.6	20.2
28-Oct	5	2	4	3	4	3	2	2	1	2	5	7	7	7	10	10	8	4	2	2	2	2	2	2	4.1	10.3
29-Oct	2	3	4	4	4	3	2	2	5	6	8	12	11	13	12	9	9	8	6	6	5	4	5	8	6.4	12.5
30-Oct	8	7	7	7	5	2	1	1	1	2	2	3	5	3	3	2	5	6	2	6	9	10	10	9	4.7	9.7
31-Oct	10	8	9	9	10	10	4	5	5	7	5	4	4	8	17	16	17	20	19	20	18	15	15	10	11.1	20.1
	4.6	4.5	4.9	5.1	4.8	4.5	4.2	4.6	5.1	5.8	6.7	7.2	7.7	8.3	9.0	8.4	7.5	6.5	5.5	5.2	5.2	4.7	4.6	4.6	Diurnal Average	
	19.2	19.2	19.5	22.0	20.1	16.6	19.1	17.5	21.8	23.8	23.5	22.9	20.2	22.9	20.1	17.1	17.0	20.1	18.7	20.1	18.5	14.7	14.7	13.6	Diurnal Maximum	

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  
October 1, 2009 to November 1, 2009**

Maximum Value: 93.9 deg on Oct 18 10:00																								Hours in Service:	744
Minimum Value: 3.8 deg on Oct 12 23:00																								Hours of Data:	744
Percentiles: P <sub>1</sub> = 5.3 P <sub>10</sub> = 8.1 Q <sub>1</sub> = 10.3 Median = 16.1 Q <sub>3</sub> = 31.6 P <sub>90</sub> = 62.5 P <sub>99</sub> = 87.9																								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-Oct	5	18	8	21	22	11	68	25	12	13	12	29	54	31	32	34	53	37	42	47	71	78	55	78	78.1
2-Oct	81	51	54	91	66	58	84	76	36	56	11	48	38	14	15	10	11	10	14	20	9	42	22	9	90.9
3-Oct	9	13	18	14	16	13	19	20	16	22	21	28	19	25	24	18	21	9	13	46	69	77	66	20	77.4
4-Oct	51	43	27	11	36	78	79	29	13	24	36	44	89	83	76	64	42	69	34	53	86	80	76	49	88.7
5-Oct	70	15	67	86	66	65	31	18	12	10	13	13	20	18	12	18	35	44	23	27	17	14	10	24	85.6
6-Oct	24	27	32	10	9	13	9	8	8	37	7	8	10	5	6	7	6	6	6	6	9	12	9	12	37.3
7-Oct	13	10	10	24	23	14	9	13	10	9	16	25	33	29	29	32	32	15	43	12	18	21	65	29	65.0
8-Oct	14	25	9	8	7	7	7	13	14	7	9	10	14	17	13	13	11	10	8	8	7	16	9	11	24.5
9-Oct	9	8	18	10	9	11	14	7	9	14	13	14	15	15	11	11	12	18	13	8	10	10	13	31	31.1
10-Oct	83	27	30	9	13	16	11	12	19	26	44	46	34	25	31	22	31	39	20	38	16	30	36	32	83.5
11-Oct	65	71	70	70	88	41	67	72	44	26	42	35	14	18	17	21	22	28	17	23	23	22	12	26	88.3
12-Oct	26	8	9	12	10	12	11	10	13	11	11	12	17	16	10	16	27	15	13	9	8	12	4	11	27.1
13-Oct	29	59	10	15	22	24	15	20	19	21	14	19	12	10	13	11	16	16	17	16	19	18	18	18	59.0
14-Oct	18	18	18	27	27	21	22	18	23	20	20	13	20	14	25	28	28	30	60	10	20	15	28	24	60.4
15-Oct	13	20	9	53	72	80	73	15	12	11	14	29	32	43	16	13	24	9	11	8	13	18	10	11	80.2
16-Oct	43	35	11	13	28	85	40	74	58	58	11	8	9	9	11	7	8	6	5	13	37	30	15	33	84.8
17-Oct	11	12	12	32	15	60	67	29	41	52	22	61	29	39	42	37	42	9	82	63	79	22	60	85	84.5
18-Oct	44	61	76	54	61	30	91	66	18	94	93	89	82	48	44	14	17	33	55	38	84	55	19	26	93.9
19-Oct	16	27	37	21	16	23	20	12	19	12	19	56	29	33	23	15	10	29	29	69	13	16	32	73	72.6
20-Oct	24	57	92	75	64	73	89	34	54	26	16	72	76	46	24	23	11	6	5	7	9	37	18	39	92.5
21-Oct	39	37	46	26	32	27	58	21	9	9	10	9	10	8	12	12	11	9	9	9	8	11	13	11	58.3
22-Oct	22	13	11	10	8	15	11	9	47	33	37	61	13	10	9	10	9	78	49	26	52	19	18	27	78.5
23-Oct	32	49	55	32	92	68	66	25	30	76	69	14	14	14	10	8	9	78	53	26	18	12	20	7	92.3
24-Oct	6	8	7	9	8	8	7	6	7	7	8	9	9	7	8	8	7	7	8	6	7	6	9	16	16.3
25-Oct	5	7	6	6	5	5	8	10	5	16	9	15	12	12	22	13	12	8	26	32	13	19	16	8	31.9
26-Oct	11	11	7	8	64	59	75	69	34	23	8	10	56	25	13	12	11	12	10	8	11	8	9	8	74.5
27-Oct	8	10	7	7	9	8	10	10	7	9	10	9	8	7	8	7	6	9	8	13	8	8	9	11	13.4
28-Oct	42	43	22	11	14	18	28	12	19	27	13	17	13	11	12	12	15	17	31	29	21	20	9	10	43.4
29-Oct	10	17	10	13	17	16	28	22	19	14	15	11	12	11	9	11	10	10	11	9	8	11	52	16	52.5
30-Oct	14	14	12	9	8	26	28	63	21	20	29	13	10	22	22	17	10	9	15	15	11	10	9	12	62.8
31-Oct	11	19	8	9	8	33	42	20	21	32	9	9	20	19	7	5	5	6	8	8	8	10	12	10	41.6
83.5	71.3	92.5	90.9	92.3	84.8	91.2	76.4	58.4	93.9	92.8	89.3	88.7	83.0	75.6	63.7	52.9	78.5	81.9	69.1	86.4	80.3	76.4	84.5		

# PASZA

## Monthly Passive Data Summary

## PASZA Passive Results for October 2009

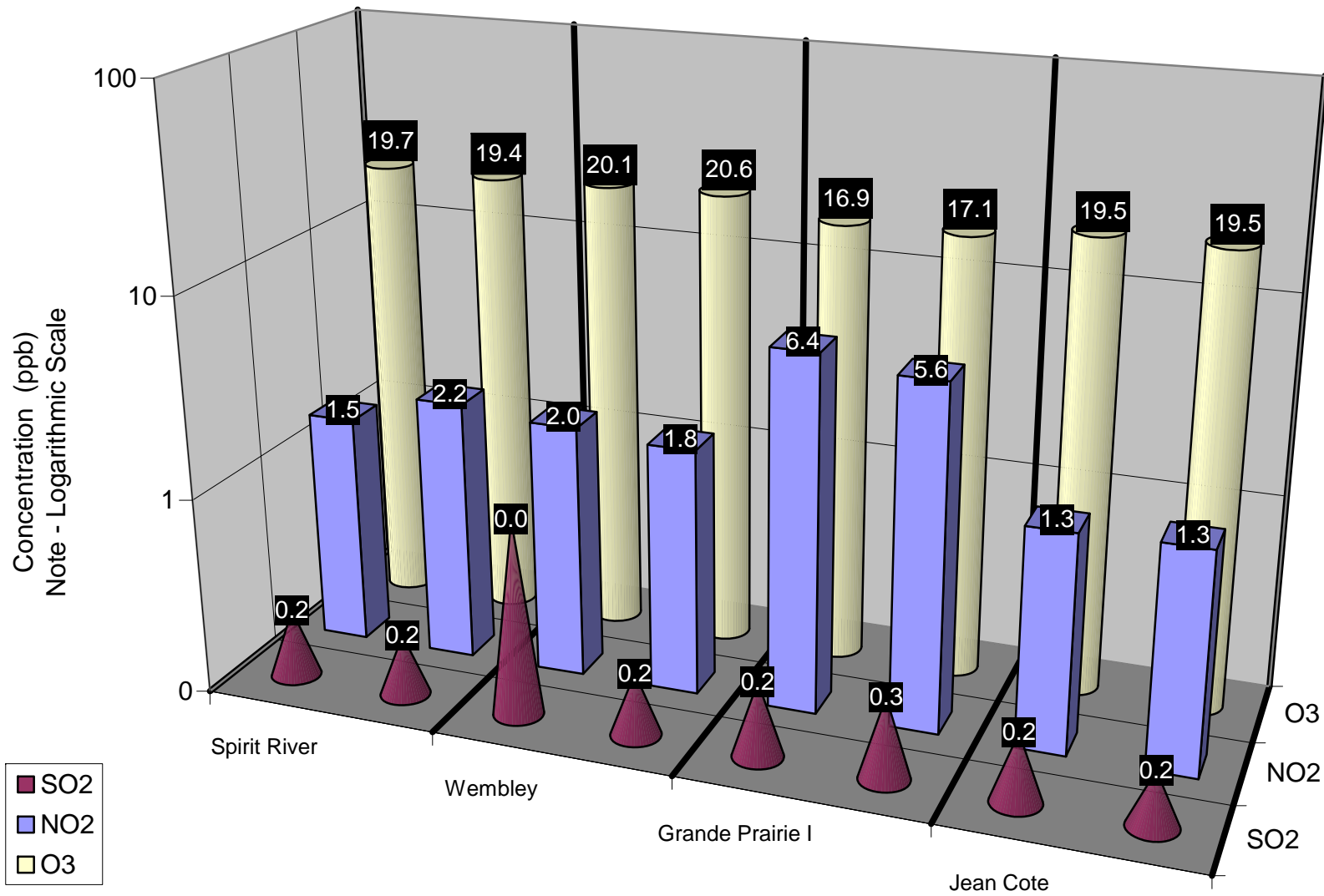
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
<b>Duplicates</b>					
9a	Spirit River	0.2	19.7	1.5	
9b	Spirit River	0.2	19.4	2.2	
24a	Wembley	N/A	20.1	2.0	
24b	Wembley	0.2	20.6	1.8	
27a	Grande Prairie I	0.2	16.9	6.4	
27b	Grande Prairie I	0.3	17.1	5.6	
35a	Jean Cote	0.2	19.5	1.3	
35b	Jean Cote	0.2	19.5	1.3	
1	Silver Valley	0.2	21.6	1.1	08-27-081-11 W6M
2	Bay Tree	0.2	22.5	0.9	13-16-078-13 W6M
3	Forth Creek	0.2	22.1	1.0	04-13-082-07 W6M
4	Gordondale	0.3	23.9	1.3	04-34-078-10 W6M
5	Boone Creek	0.1	16.4	1.6	01-23-076-11 W6M
7	Steeprock Creek	0.2	22.4	0.9	09-35-072-13 W6M
9	Spirit River	0.2	19.5	1.8	08-12-079-07 W6M
10	Woking	0.3	22.2	1.3	01-13-076-07 W6M
11	Webber Creek	0.3	19.8	1.5	09-36-074-09 W6M
12	Hythe	0.2	18.8	1.8	14-36-072-11 W6M
14	Sylvester	0.1	17.2	1.1	08-06-069-12 W6M
16	Beaverlodge	0.2	22.6	2.4	15-36-071-10 W6M
17	Poplar	0.2	19.0	1.8	13-06-073-08 W6M
18	Saddle Hills	0.3	20.3	1.1	04-25-074-07 W6M
19	Wanham	0.3	22.2	0.3	16-22-077-03 W6M
20	Shaftesbury	0.2	18.6	1.1	04-03-082-23 W5M
21	Eaglesham	0.1	16.1	1.1	16-21-079-25 W5M
23	Bear Lake	0.2	18.7	2.1	15-31-072-06 W6M

## PASZA Passive Results for October 2009 (Continued)

Station Number	Station Name	SO <sub>2</sub> ppb	O <sub>3</sub> ppb	NO <sub>2</sub> ppb	Site Legal
24	Wembley	0.2	19.7	2.1	12-31-070-08 W6M
25	Pinto Creek	0.1	19.4	1.3	04-24-069-11 W6M
26	Flyingshot	0.2	19.7	2.2	15-36-070-07 W6M
27	Grande Prairie I	0.2	17.0	6.0	08-15-071-06 W6M
28	Clairmont Lake	0.3	22.2	1.7	09-06-073-04 W6M
29	Smoky Heights	0.3	23.2	1.7	04-06-075-02 W6M
30	Fitzsimmons	0.2	17.9	1.4	15-36-072-03 W6M
32	Gold Creek	0.2	18.2	1.8	06-33-067-05 W6M
33	Wapiti	0.2	21.3	1.6	02-25-071-03 W6M
34	Puskaskau	0.1	17.7	0.6	15-35-074-25 W5M
35	Jean Cote	0.2	19.5	1.3	12-35-079-21 W5M
36	Guy	0.2	18.7	1.4	03-04-076-22 W5M
37	Crooked Creek	0.2	19.7	1.3	16-01-071-26 W5M
38	Karr Creek	0.1	17.9	1.0	10-16-065-02 W6M
39	Clouston Creek	0.2	20.9	1.2	12-01-073-22 W5M
40	McLennan	0.2	17.6	1.6	03-29-077-19 W5M
41	Valleyview	0.2	23.2	1.6	09-30-069-22 W5M
42	Sunset House	0.2	26.0	0.8	05-32-070-19 W5M
43	High Prairie	0.2	19.0	1.3	16-13-074-17 W5M
44	Peavine	0.1	17.1	0.6	03-05-079-15 W5M
45	Gift Lake	0.1	15.6	0.8	10-07-079-12 W5M
46	Little Smoky	0.2	19.3	2.2	12-01-065-21 W5M
47	Kinuso	0.1	18.1	0.7	12-10-073-10 W5M
48	Deer Mountain	0.1	26.8	0.8	15-22-068-09 W5M
49	Grande Prairie HP	0.3	18.8	6.4	17-26-071-06 W6M

\*BDL = Below Detection Level





Duplicate Summary Chart

## Passive Summary for October 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 October 2009 (PASZA Zone)			
Mean	0.2	20.0	1.6
Standard Deviation	0.1	2.5	1.1
Minimum	0.1	15.6	0.3
Minimum At	Sylvester (#14)	Gift Lake (#45)	Wanham (#19)
Maximum	0.3	26.8	6.4
Maximum At	Smoky Heights (#29)	Deer Mountain (#48)	Grande Prairie HP (#49)

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

	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PASZA Beaverlodge station	0.3	20.6	2.2
PASZA Beaverlodge passive	0.2	22.6	2.4

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

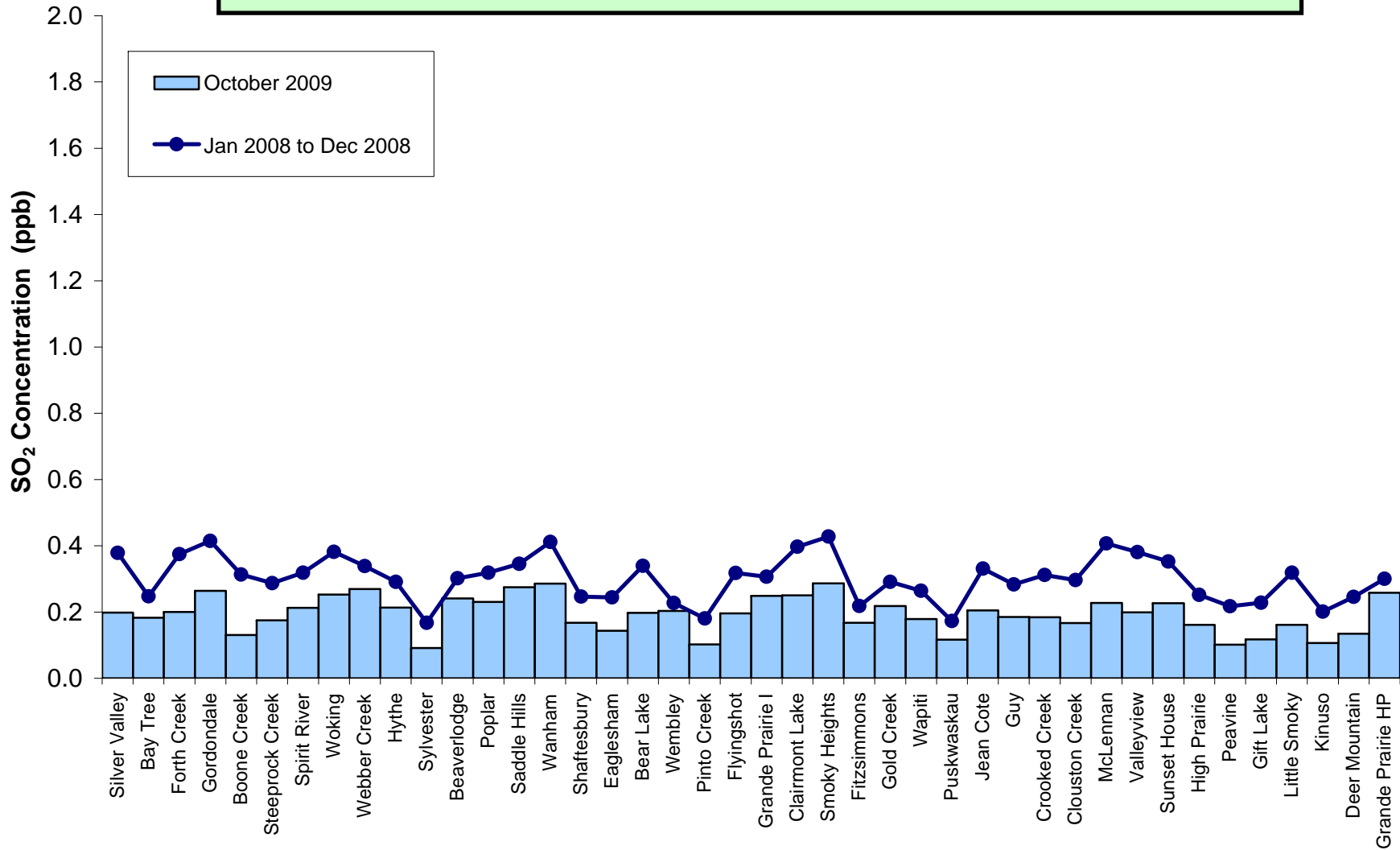
	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PASZA Henry Pirker station	0.2	15.7	8.3
PASZA Grande Prairie passive	0.3	18.8	6.4

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

	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PASZA Portable Kinuso station	0.1	18.7	1.4
PASZA Kinuso passive	0.1	18.1	0.7



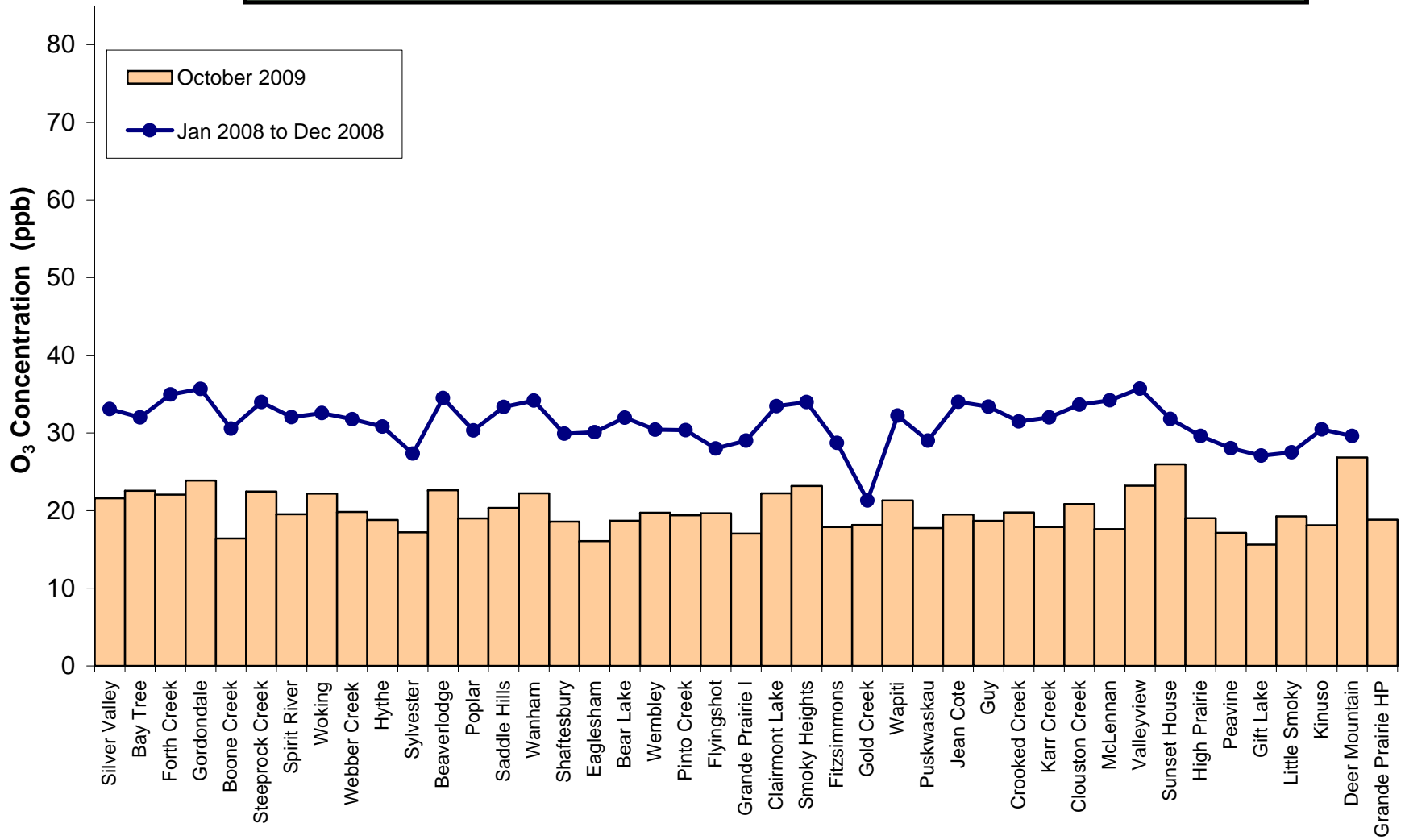
**Alberta Ambient Air Quality Objective - Annual SO<sub>2</sub> Objective is 11 ppb**



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



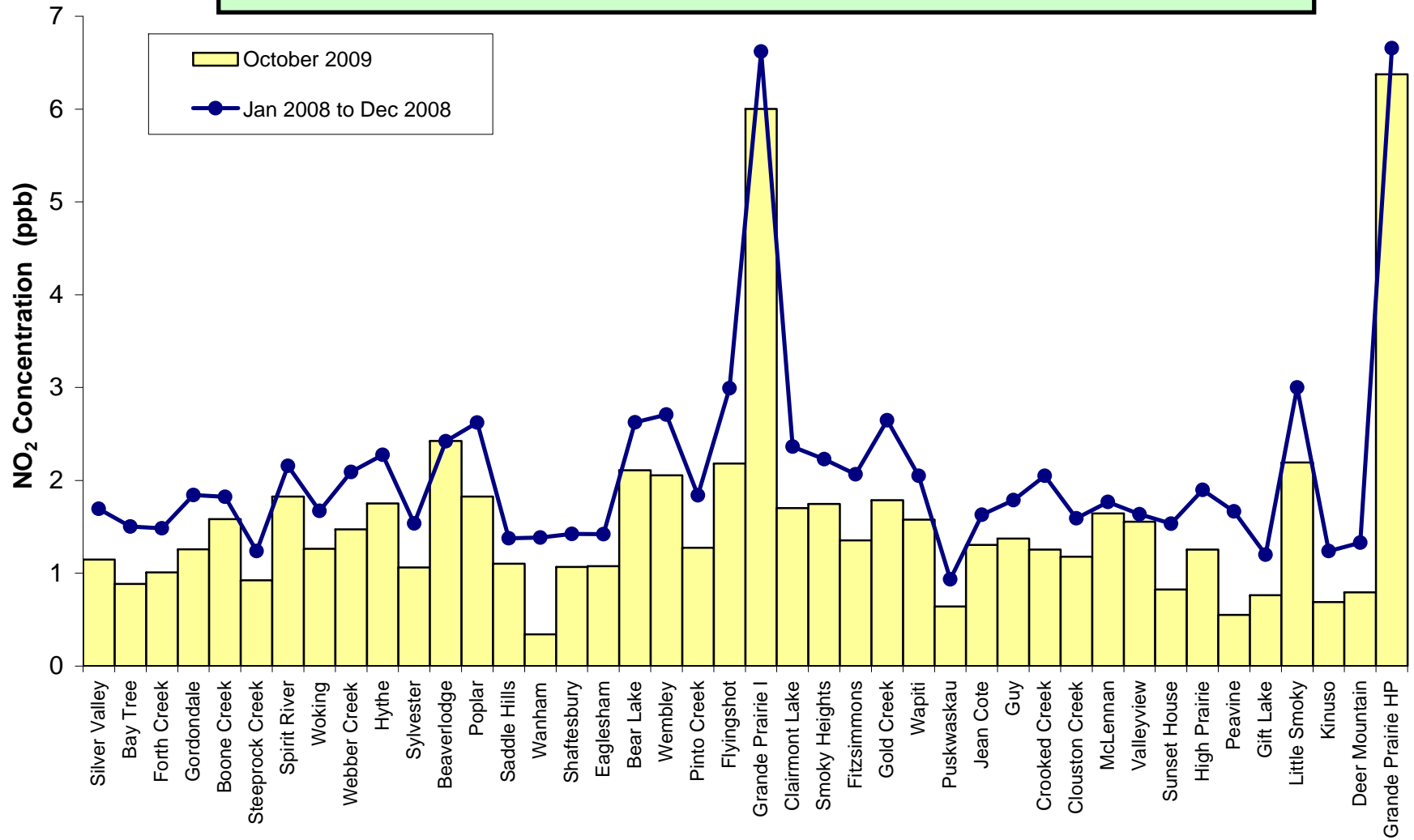
**Alberta Ambient Air Quality Objective - No Annual O<sub>3</sub> Objective**



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



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



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



**PASZA**

**Alberta Environment  
Incidence Reports**

**October 2009**

## *Air Monitoring Directive Non-Compliance Report*

Alberta Environment  
 Environmental Service Response Centre  
 111 Twin Atria Building  
 4999 – 98<sup>th</sup> Avenue  
 Edmonton, Alberta T6B 2X3  
 Phone: (780) 422-4505  
 Fax: (780) 427-1044

<b>Reference Number:</b>	221622	<b>Reported To (AENV Contact):</b>	Stephen
<b>Date &amp; Time Incident Reported to AENV:</b>	Dec. 1, 2009 (11:06)	<b>Reported By:</b>	Sharon Whiteley (FOCUS)
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	N/A
<b>Location(s) of Incident:</b>	Smoky Heights Air Monitoring Station		
<b>Start Date &amp; Time of Incident:</b>	Oct. 1, 2009 (09:00)	<b>End Date &amp; Time of Incident:</b>	Oct. 31, 2009 (15:35)
<b>Details of Non-Compliance:</b>			
<p>On October 1<sup>st</sup> a small power failure occurred at the Smoky Heights Station (currently located at (LSD 13-8-074-02 W6)), which caused the seizure of the intake manifold blower motor – this resulted in less than 90% operation of the TRS and SO<sub>2</sub> analyzers. The intake motor failure was noticed on October 29<sup>th</sup> (during routine calibrations) and the part was ordered and the motor was replaced on October 31<sup>st</sup>.</p>			
<b>Immediate Actions Taken:</b>			
Not Applicable			
<b>Follow-up Details:</b>			
Not Applicable			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Not Applicable			
<b>Additional Actions Required (if any):</b>			
Not applicable			
Report Completed By:	Sharon Whiteley	Date Report Submitted:	Dec. 1, 2009
<b>7-Day Letter Due Date:</b>	December 8, 2009		

# October 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**

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

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

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

**PASZA – Kinuso (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	October 15, 2009	Previous Calibration	September 24, 2009
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	14:40:00 PM	End Time (MST)	16:57
Barometric Pressure	0.934 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	50.6 ppb	Cal Gas Cert Date	13/3/2009
		Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	10
	<u>Before</u>		<u>After</u>
Calculated slope	0.997706	Calculated slope	0.999899
Calculated intercept	-1.970481	Calculated intercept	-1.975636
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.5		8.5	
Coefficient	.827		.827	
Pressure	650.8	mm Hg	650.9	mm Hg
Flow	0.491	lpm	0.492	lpm
Lamp Voltage	44257	Hz	44097	Hz

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4989	0.00	0.0	0.6	N/A
4991	39.85	400.8	401.9	0.9973
4991	19.91	201.1	204.4	0.9836
4991	9.95	100.7	103.6	0.9715
4989	0.00	0.0	0.0	As Found Zero
4991	39.85	400.8	402.0	As Found Span
Average Correction Factor				0.9842

Calculated value of As Found Response: 399.1 ppb      Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	311.6	ppb	256.0	ppb

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

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



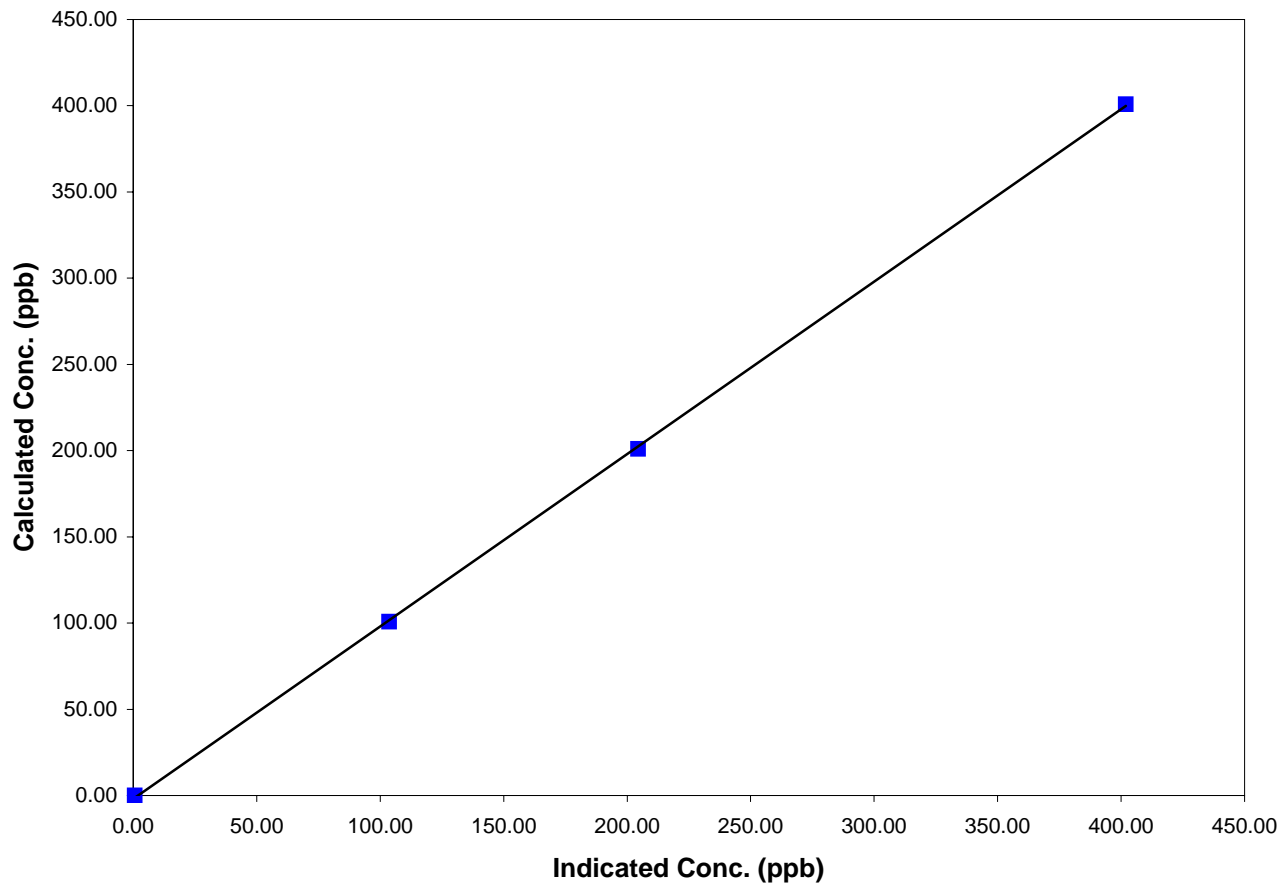
## Station Information

Calibration Date	<u>October 15, 2009</u>	Previous Calibration	<u>September 24, 2009</u>
Station Number	<u>1</u>	Station Location	<u>Henry Pirker</u>
Start Time (MST)	<u>14:40:00 PM</u>	End Time (MST)	<u></u>
Analyzer make/model	<u>TEI 43C</u>	Analyzer serial #	<u>610816292</u>

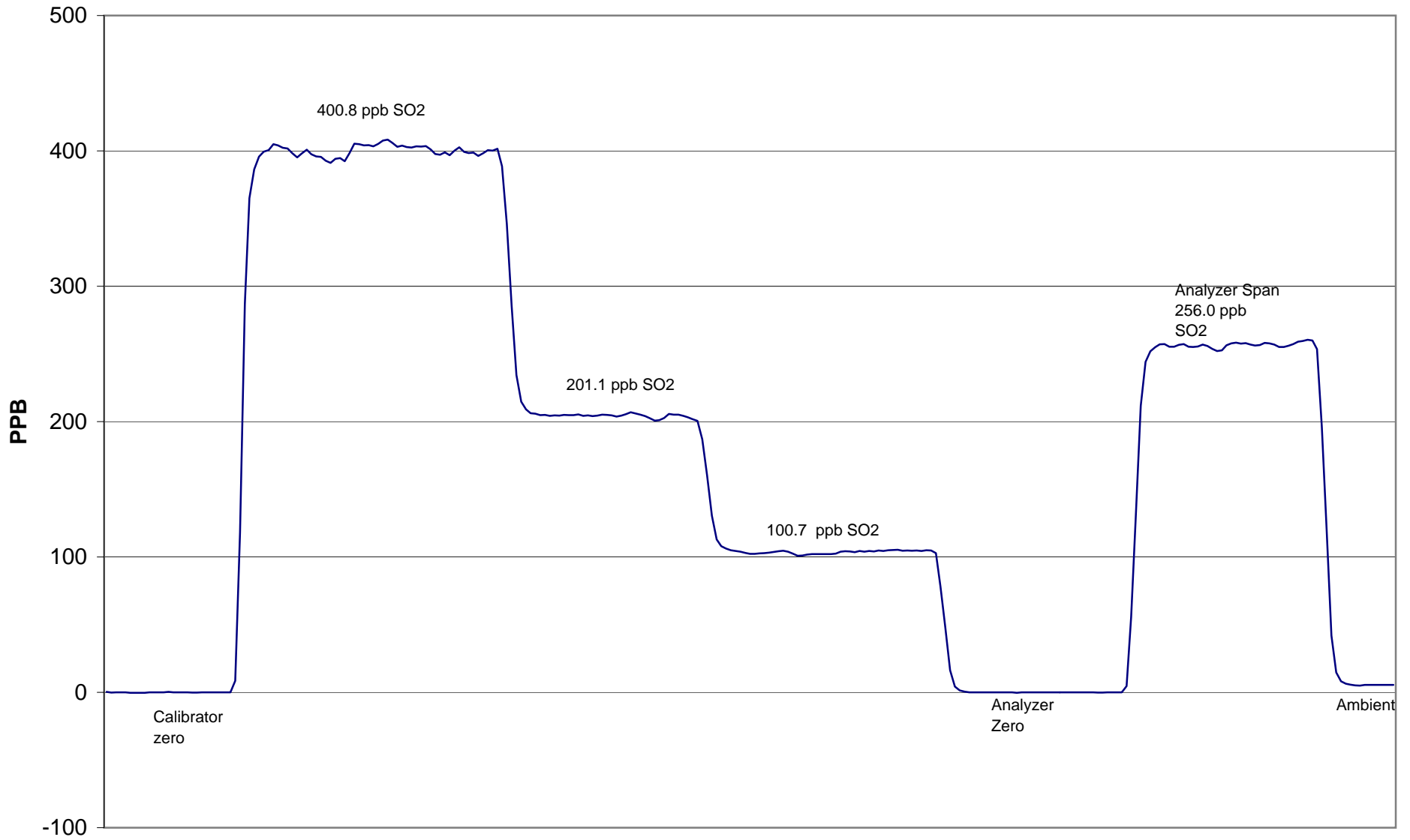
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A	Correlation Coefficient	0.999937
400.8	401.9	0.9973		
201.1	204.4	0.9836		
100.7	103.6	0.9715	Slope	0.999899
			Intercept	-1.975636

## SO2 Calibration Curve



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



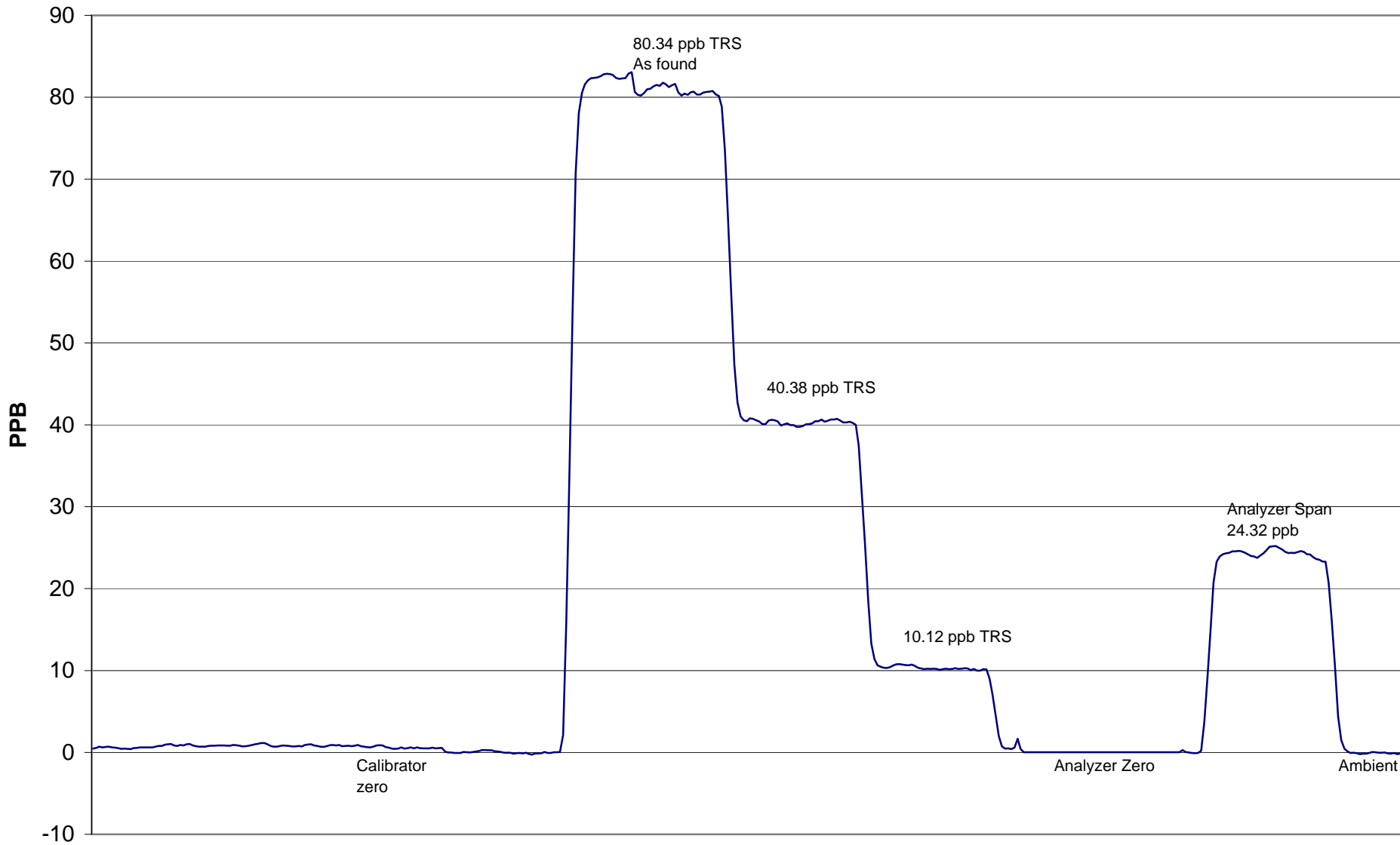
October 15, 2009







# Henry Pirker TRS Calibration



October 17, 2009

# Calibration Report

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



## Station Information

Calibration Date	October 15, 2009	Previous Calibration	September 26, 2009
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Installation	Removal
Other:			
Start Time (MST)	10:00	End Time (MST)	13:54
Barometric Pressure	0.928	Atm	Station Temperature
Calibrator	EnviroNics	Serial Number	3474
NO Cal Gas Conc	49.6	ppm	Cal Gas Expiry Date
NOx Cal Gas Conc	49.6	ppm	Cal Gas Serial #
			AAL 15377

## DACS Information

DACS make Focus AP1000 DACS serial No. \_\_\_\_\_

Parameter		NO2	NOx	NO
Before	Data Slope	0.999391	1.004443	1.003292
	Data Offset	0.147470	-2.923286	-2.925231
After	Data Slope	1.000314	1.003953	1.004884
	Data Offset	-0.138155	-2.526037	-2.626780
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

## Analyzer Information

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

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	8.9	mV	8.9	mV
NOx bkgnd	9.5	mV	9.2	mV
NO coefficient	0.699		0.692	
NOx coefficient	0.998		1.002	
NO2 conv temp	318.0	Deg C	318.0	Deg C
PMT Temp	-2.5	Deg C	-2.5	Deg C
PMT Volt	-787.0	mV	-787.0	mV
R Cell Press	168.0	in Hg	167.9	in Hg
Sample Flow	0.778	ccm	0.780	ccm

Notes:

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# Calibration Report

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



## Station Information

Calibration Date: **October 15, 2009** Station Location: **Henry Pirker**

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4989	0.00	0.0	0.0	0.0	0.1	0.0	0.1	N/A	N/A
1	4991	39.85	392.9	392.9	0.0	392.6	392.2	0.4	1.0008	1.0018
2	4991	19.87	196.7	196.7	0.0	199.7	199.8	0.0	0.9847	0.9845
3	4991	9.91	98.3	98.3	0.0	102.8	103.0	-0.2	0.9560	0.9543
AFZ	4991	0.00	0.0	0.0	0.0	0.1	0.0	0.0	0.0000	0.0000
AFS	4991	39.84	392.8	392.8	0.0	394.8	395.9	-1.1	0.9948	0.9920
Average Correction Factor									0.9805	0.9802

As Found Concentrations: **NO<sub>x</sub>= 391.8** **NO= 393.0** As Found Percent Change **NO<sub>x</sub>= -0.2%** **NO= 0.1%**

## GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.1	0.0	0.1	N/A	N/A	N/A	N/A
NO point	392.4	392.4	0.0	392.4	392.4	0.0	0.9999	1.0000	N/A	N/A
300	392.4	197.1	195.3	392.2	197.1	195.3	1.0004	1.0000	0.9998	100.0%
200	392.4	262.5	129.9	392.3	262.5	129.9	1.0002	1.0000	0.9994	100.1%
100	392.4	324.1	68.3	392.2	324.1	68.5	1.0003	1.0000	0.9964	100.4%
Average Correction Factor							1.0003	1.0000	0.9985	100.1%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	0.1	0.0	0.0	ppb
Auto span	154.9	153.6	1.2	ppb	165.7	164.6	1.0	ppb

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PASZA



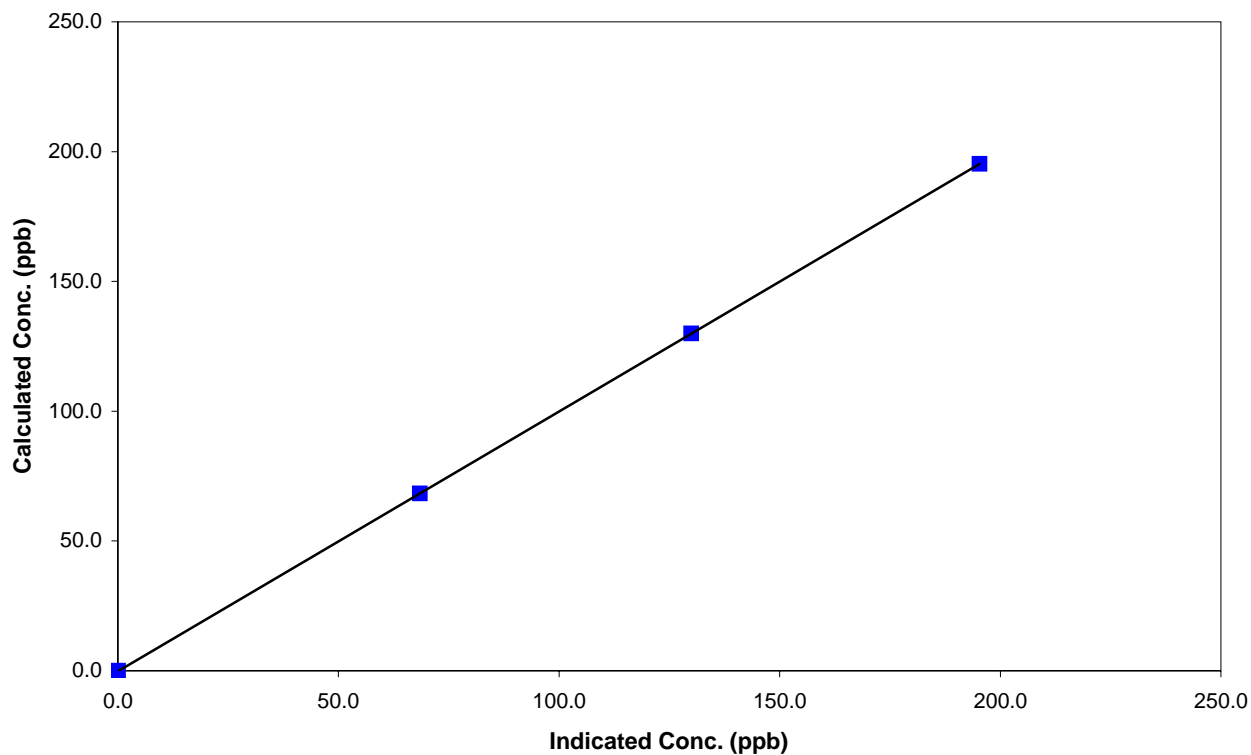
## Station Information

Calibration Date	October 15, 2009	Previous Calibration	September 26, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:00	End Time (MST)	13:54
Analyzer make	TEI 42C	Analyzer serial #	508011073

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999999
195.3	195.3	0.9998		
129.9	129.9	0.9994	Slope	1.000314
68.3	68.5	0.9964		
			Intercept	-0.138155

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



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PASZA



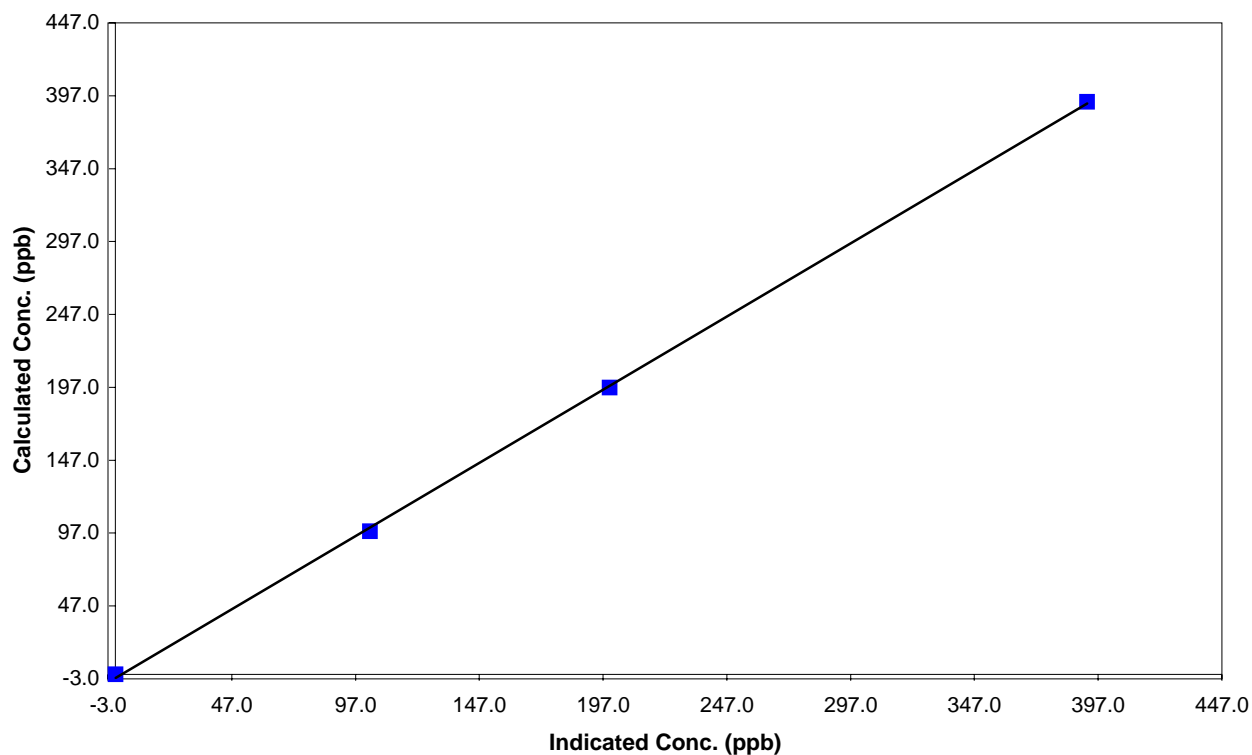
## Station Information

Calibration Date	October 15, 2009	Previous Calibration	September 26, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:00	End Time (MST)	13:54
Analyzer make	TEI 42C	Analyzer serial #	508011073

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999821
392.9	392.6	1.0008		
196.7	199.7	0.9847	Slope	1.003953
98.3	102.8	0.9560		

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



# Calibration Summary



Parameter NO

Air Monitoring Network PASZA

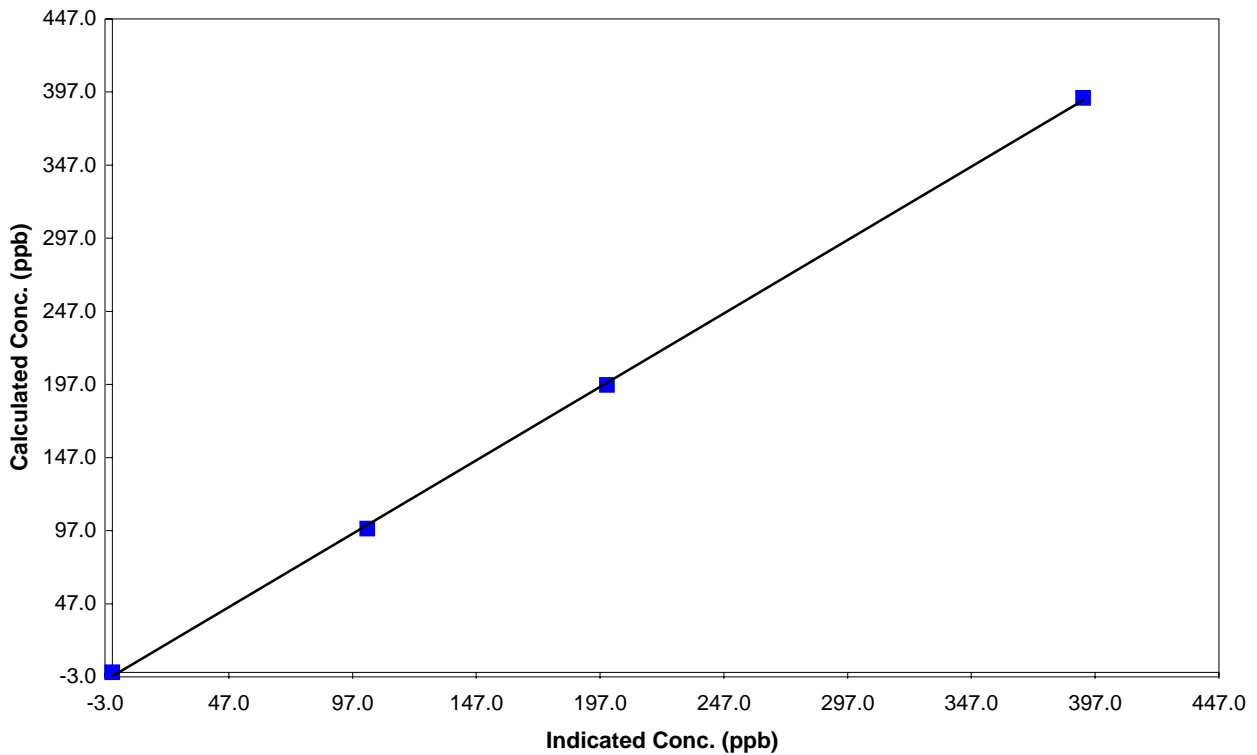
## Station Information

Calibration Date	October 15, 2009	Previous Calibration	September 26, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:00	End Time (MST)	13:54
Analyzer make	TEI 42C	Analyzer serial #	508011073

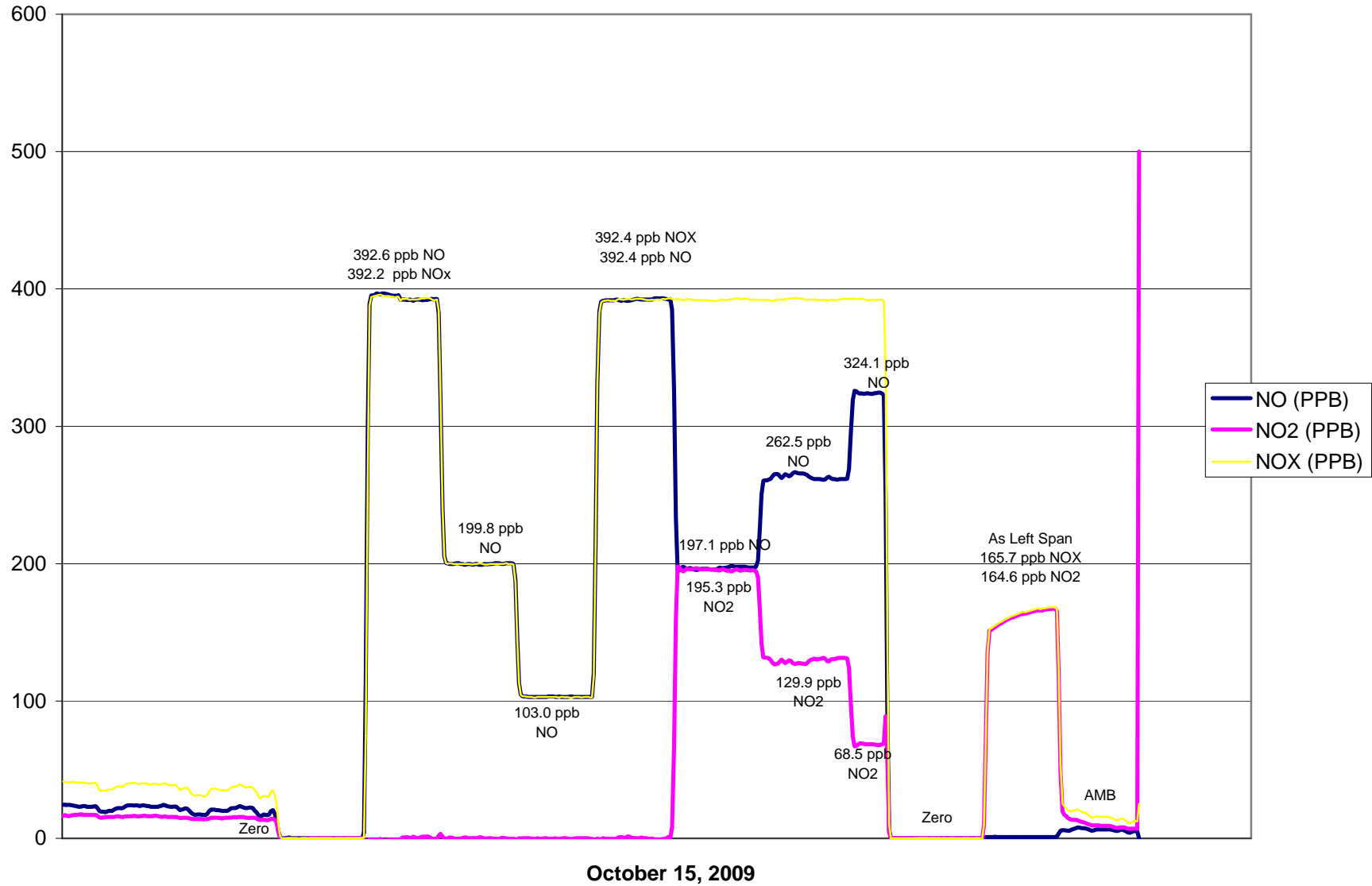
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999792
392.9	392.2	1.0018		
196.7	199.8	0.9845		
98.3	103.0	0.9543	Slope	1.004884
			Intercept	-2.626780

## NO Calibration Curve



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



# Calibration Report



Parameter 03  
Air Monitoring Network

PASZA

## Station Information

Calibration Date	October 15, 2009	Previous Calibration	September 26, 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)	12:51	End Time (MST)	15:23
Barometric Pressure	0.931 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	1.003709	Calculated slope	0.994874
Calculated intercept	-0.291419	Calculated intercept	0.505078
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-1.1	ppb	-1.3	ppb
slope	1.014		1.014	
O3 Lamp temp	71	Deg C	71	Deg C
Intensities	92038/76688	mV	90903/75527	mV
Pressure	700.9	inches Hg	661.2	inches Hg
Flow A	0.710	ccm	0.716	ccm
Flow B	0.731	Deg C	0.727	Deg C

## Calibration Data

Referenced concentration (ppb)	Dilution air flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
0	4991	0.0	0.1	N/A
300	4991	195.3	195.9	0.9969
200	4991	129.9	130.5	0.9956
100	4991	68.3	67.0	1.0192
0	4991	0.0	-0.1	As found zero
300	4991	195.3	195.9	As found span
Average Correction Factor				1.0039

Calculated value of As Found Response: 196.4 ppm      Percent Change of As Found: 0.6%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	155.6	ppb	155.6	ppb

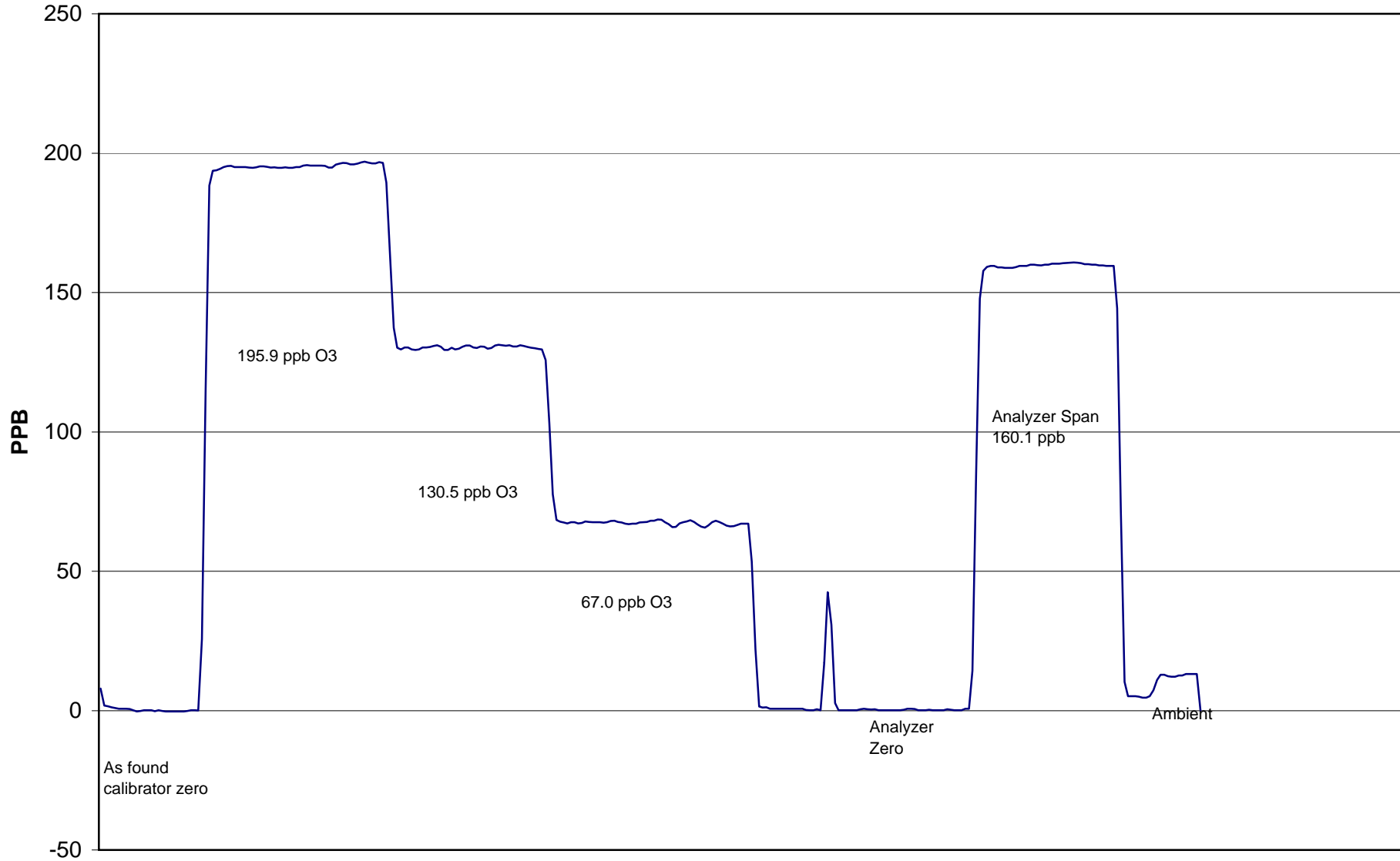
Notes: \_\_\_\_\_

Calibration Performed By: Grover Christiansen





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



October 15, 2009

# Calibration Report



Parameter CO

Air Monitoring Network PASZA

## Station Information

Calibration Date	October 17, 2009	Previous Calibration	September 24, 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)	11:20	End Time (MST)	14:25
Barometric Pressure	0.929 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	3000 ppm	Cal Gas Expiry Date	AUG 28/05
		Cal Gas Cylinder #	AAL20565
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
Calculated slope	1.026300	Calculated slope	1.016983
Calculated intercept	-0.345155	Calculated intercept	-0.142541
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.044		1.044	
CO zero setting	6.763		6.730	
Sample pressure	676.3	mm Hg	676.2	mm Hg
Sample Flow	1.127	LPM	1.126	LPM

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4991	0.00	0.00	0.05	N/A
4991	39.85	23.76	23.47	1.0127
4991	19.88	11.90	11.88	1.0021
4991	9.94	5.96	6.10	0.9778
4990	0.00	0.00	0.14	As Found Zero
4991	39.85	23.76	23.47	As Found Span
Average Correction Factor				0.9975

Calculated value of As Found Response: 23.593 ppm      Percent Change of As Found: 0.7%

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

Notes: No Adjustment

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Calibration Performed By: Grover Christiansen

# Calibration Summary



Parameter CO  
 Air Monitoring Network PASZA

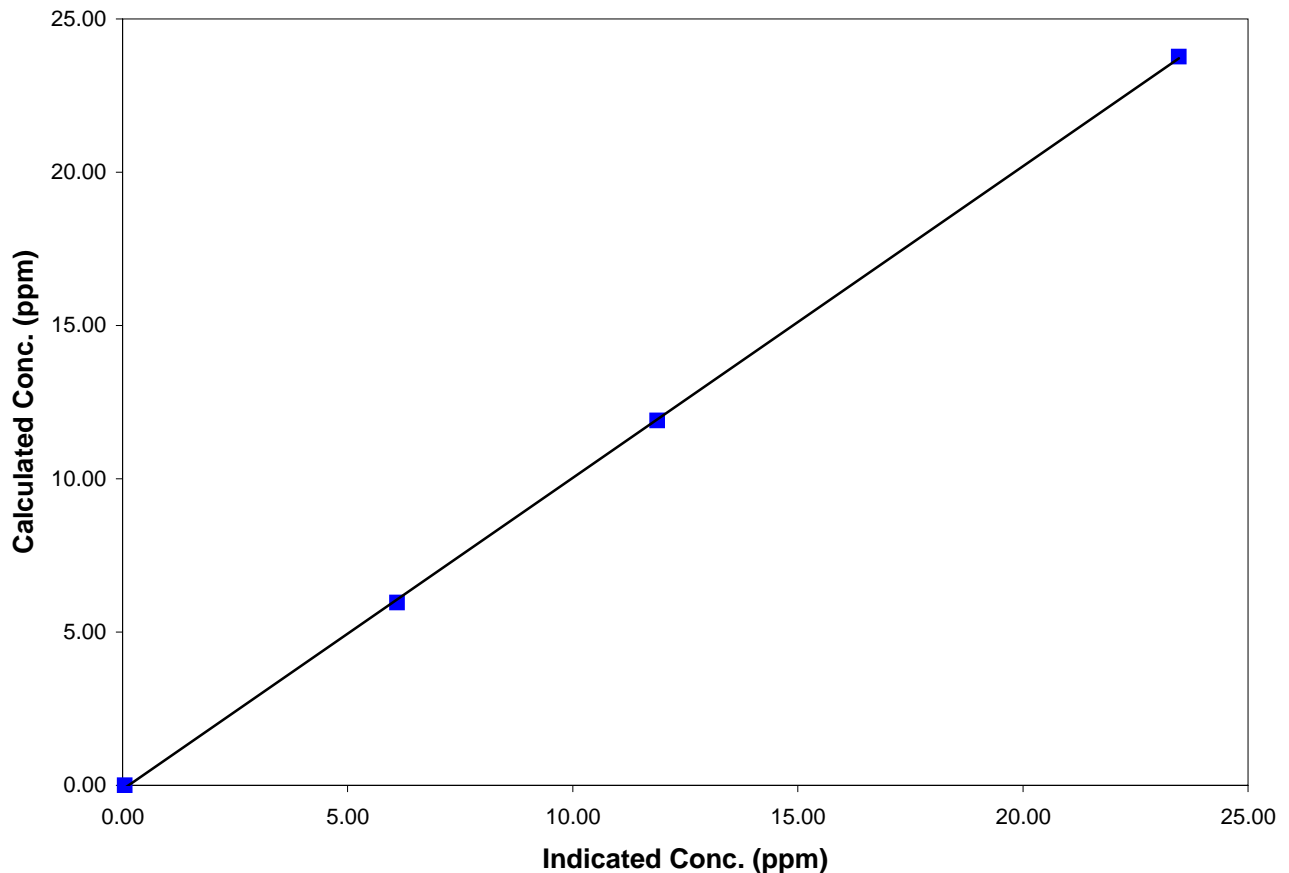
### Station Information

Calibration Date	October 17, 2009	Previous Calibration	September 24, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:20	End Time (MST)	14:25
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

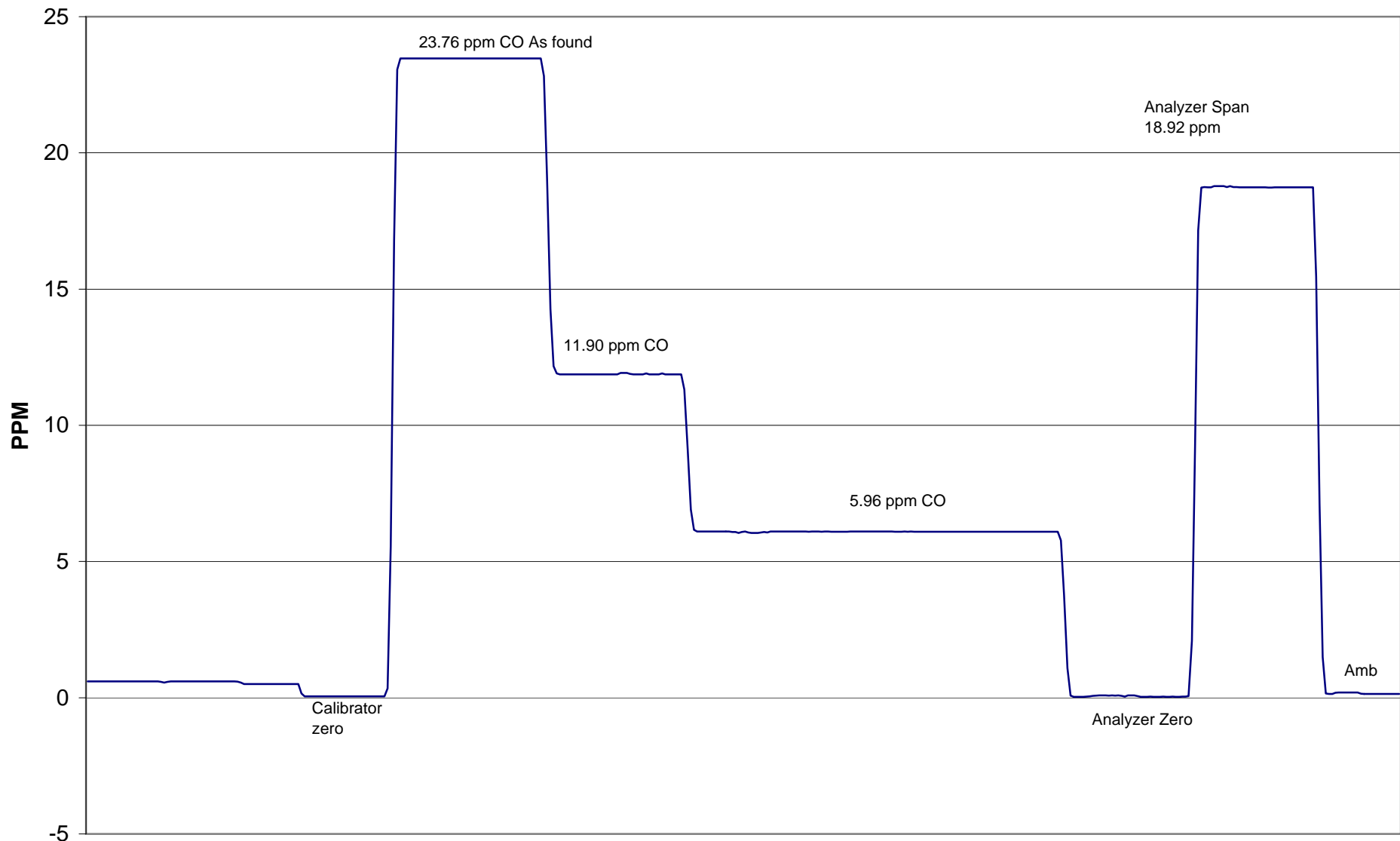
### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.053	N/A		
23.763	23.465	1.0127	Correlation Coefficient	0.999935
11.902	11.877	1.0021		
5.960	6.095	0.9778	Slope	1.016983
			Intercept	-0.142541

## CO Calibration Curve



# Henry Pirker CO Calibration



October 17, 2009

# Calibration Report



Parameter THC  
 Air Monitoring Network PASZA

## Station Information

Calibration Date	<u>October 17, 2009</u>	Previous Calibration	<u>September 24, 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:
Start Time (MST)	<u>14:00</u>	End Time (MST)	<u>16:18</u>
Barometric Pressure	<u>0.928</u> ATM	Station Temperature	<u>20.0</u> Deg C
Calibrator	<u>EnviroNics 6100</u>	Serial Number	<u>3474</u>
Cal Gas Concentration	<u>701 ppm CH4/ 299 ppm C3H8</u>	Cal Gas Expiry Date	<u>2/4/2010</u>
Cal Gas CH4 equiv	<u>1523.25</u> ppm	Cal Gas Cylinder #	<u>ALM 005412</u>
DACS make	<u>Focus AP1000</u>	DACS serial No.	<u>1</u>
DACS voltage range	<u>0 - 1 volt</u>	DACS channel #	<u>9</u>
	<u>Before</u>		<u>After</u>
Calculated slope	<u>1.017935</u>	Calculated slope	<u>1.009624</u>
Calculated intercept	<u>-0.086117</u>	Calculated intercept	<u>0.083386</u>
Analyzer make	<u>TEI Model 51C-LT</u>	Analyzer serial #	<u>51CLT-79009-390</u>

	before		after	
Concentration range	<u>0 - 25</u>	<u>ppm</u>	<u>0 - 25</u>	<u>ppm</u>
THC sample pressure	<u>6.50</u>	<u>psi</u>	<u>6.50</u>	<u>psi</u>
THC span counts	<u>7205</u>	<u>capture</u>	<u>7205</u>	<u>capture</u>
THC zero counts	<u>1131</u>	<u>capture</u>	<u>1166</u>	<u>capture</u>

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.00	0.07	N/A
4990	69.80	21.01	20.74	1.0131
4989	29.88	9.07	8.93	1.0153
4988	9.92	3.02	2.71	1.1148
4988	0.00	0.00	0.17	As Found Zero
4988	69.82	21.03	20.84	As Found Span
Average Correction Factor				1.0477

Calculated value of As Found Response: 20.954 ppm      Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	<u>-0.02</u>	<u>ppm</u>	<u>-0.13</u>	<u>ppm</u>
Auto span	<u>22.85</u>	<u>ppm</u>	<u>21.24</u>	<u>ppm</u>

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

Calibration Performed By: Grover Christiansen

# Calibration Summary



Parameter THC  
 Air Monitoring Network PASZA

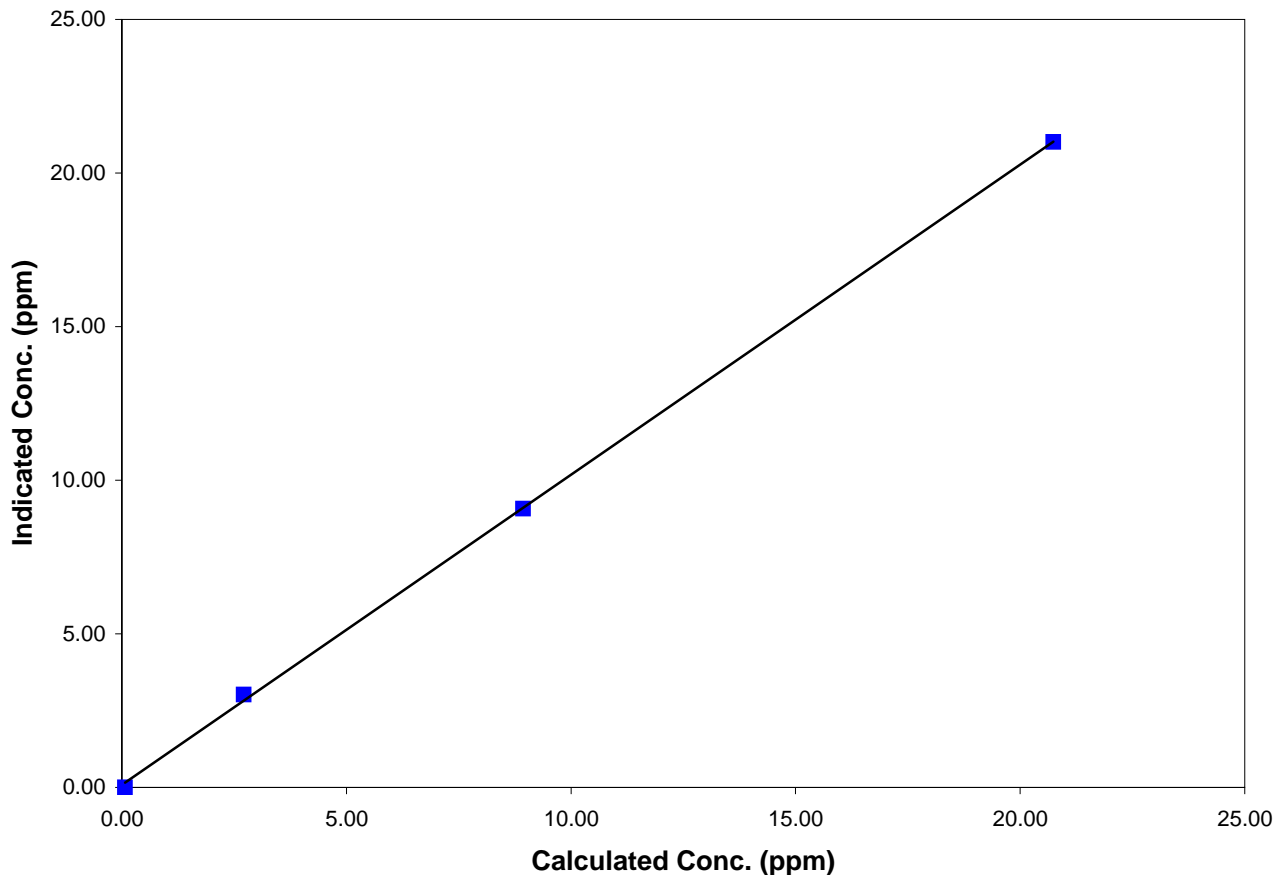
### Station Information

Calibration Date	October 17, 2009	Previous Calibration	September 24, 2009
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	14:00	End Time (MST)	16:18
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

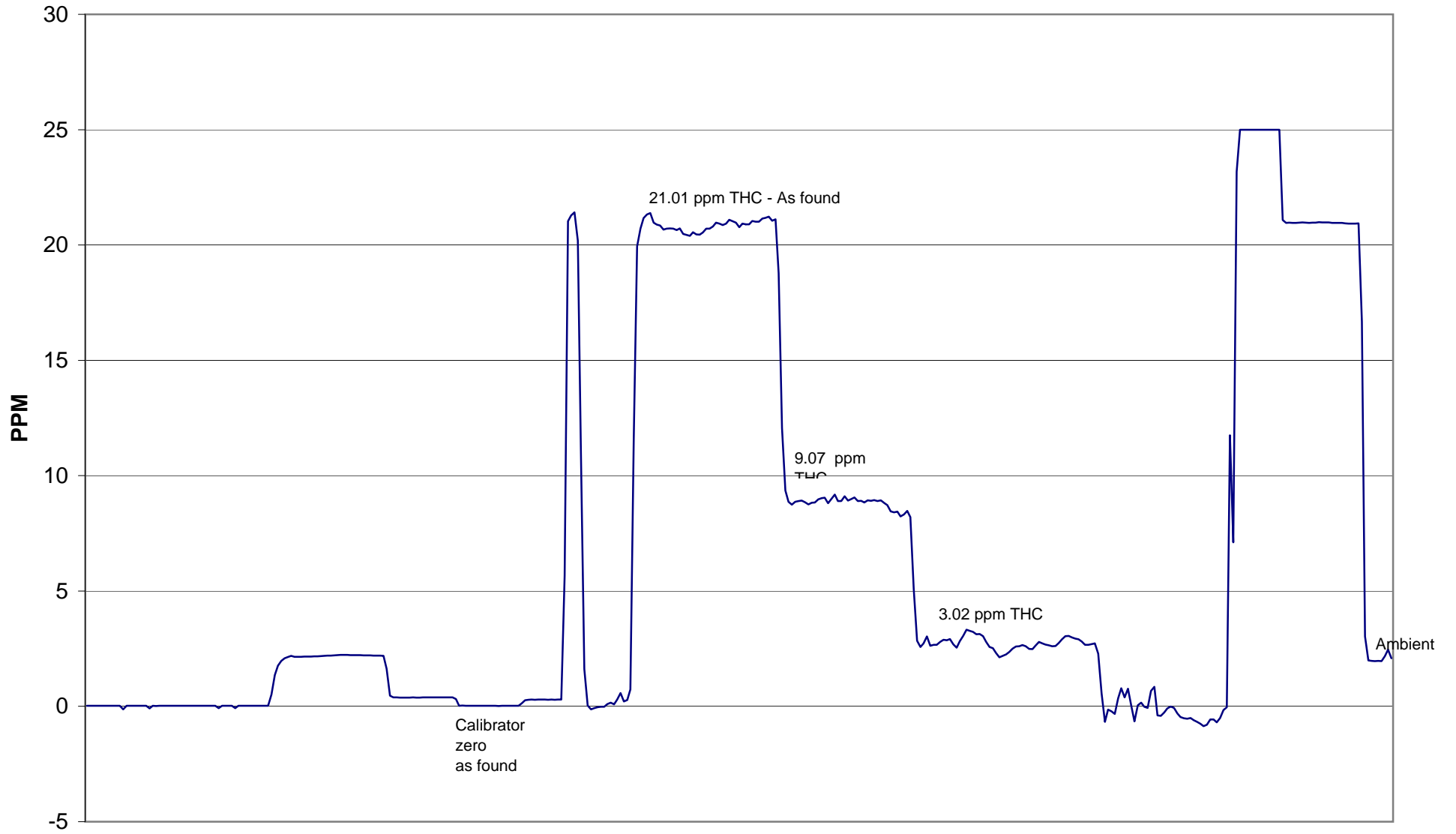
### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.073	N/A		
21.013	20.742	1.0131	Correlation Coefficient	0.999742
9.069	8.932	1.0153		
3.023	2.712	1.1148	Slope	1.009624
			Intercept	0.083386

## THC Calibration Curve



# Henry Pirker THC Calibration



October 17, 2009



# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PASZA

## Station Information

Calibration Date	October 25, 2009	Previous Calibration	September 11, 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)	14:00
Barometric Pressure	0.925 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Expiry Date	1/2/2009
Correction factor	0.031443	Cal Gas Cylinder #	LL16161
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	0.999772	Calculated slope	1.001658
Calculated intercept	-1.593223	Calculated intercept	-2.081025
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	10.2		10.5	
coefficient	1.018		1.034	
Lamp Voltage	830	volts	830	volts
Chamber Temp	45.2	Deg C	45.3	Deg C
Perm Gas Temp	45	Deg C	44.99	Deg C
Pressure	666.5	mm Hg	666.3	mm Hg
Sample Flow	449	ccm	450	ccm
Lamp Intensity	90	%	90	%

## Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.00	0.0	N/A
4989	39.85	400.97	401.2	0.9993
4989	19.88	200.83	203.9	0.9852
4989	9.93	100.51	104.3	0.9634
4990	0.0	0.00	0.8	As Found Zero
4988	39.82	400.75	395.0	As Found Span
Average Correction Factor				0.9826

Calculated value of As Found Response: 392.455 ppm      Percent Change of As Found: 2.1%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.8	ppm
Auto span	272.0	ppm	274.7	ppm

Notes:

Calibration Performed By: Grover Christiansen

# Calibration Summary



Parameter SO2  
 Air Monitoring Network PASZA

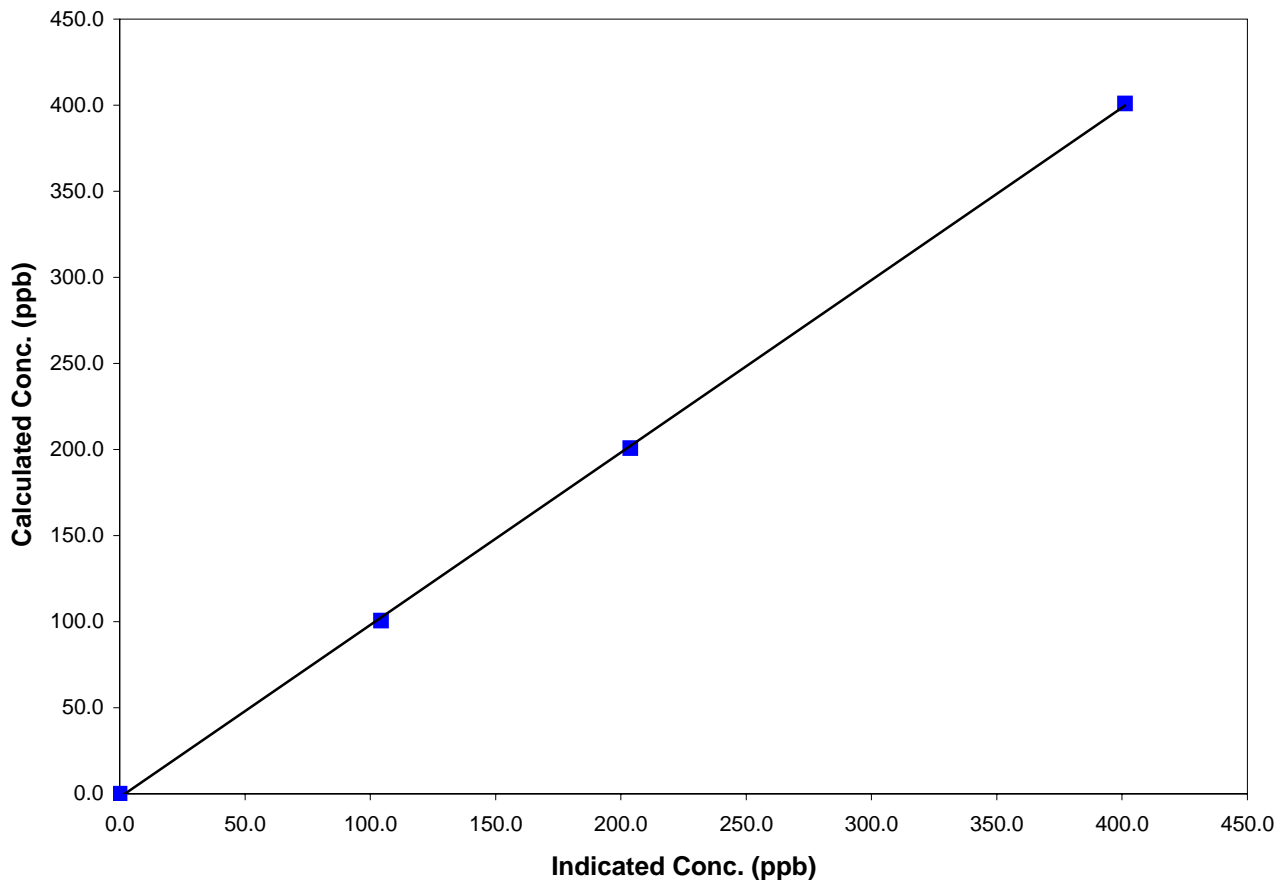
### Station Information

Calibration Date	October 25, 2009	Previous Calibration	September 11, 2009
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	11:00	End Time (MST)	14:00
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

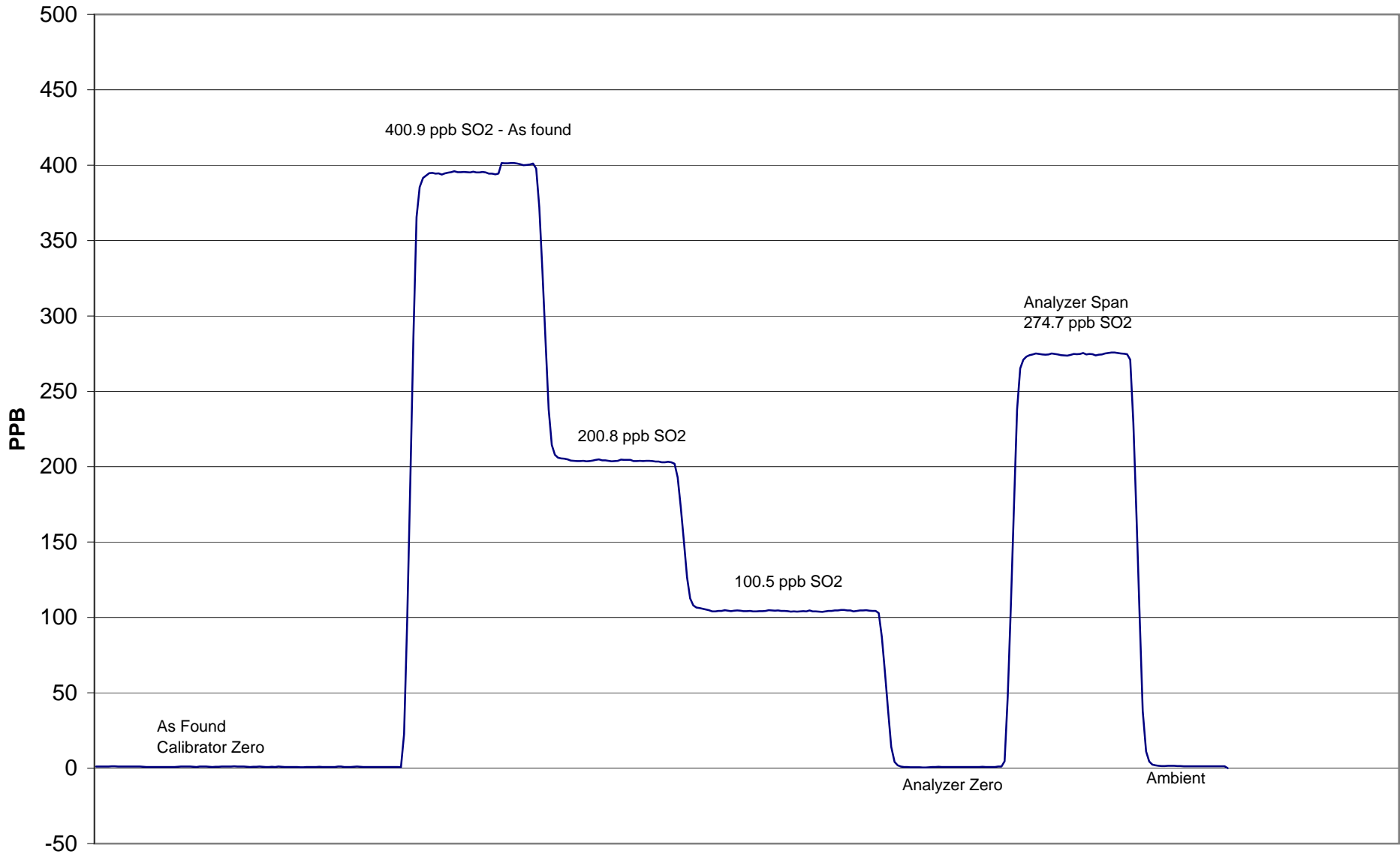
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
401.0	401.2	0.9993	Correlation Coefficient	0.999877
200.8	203.9	0.9852		
100.5	104.3	0.9634	Slope	1.001658
			Intercept	-2.081025

## SO2 Calibration Curve



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

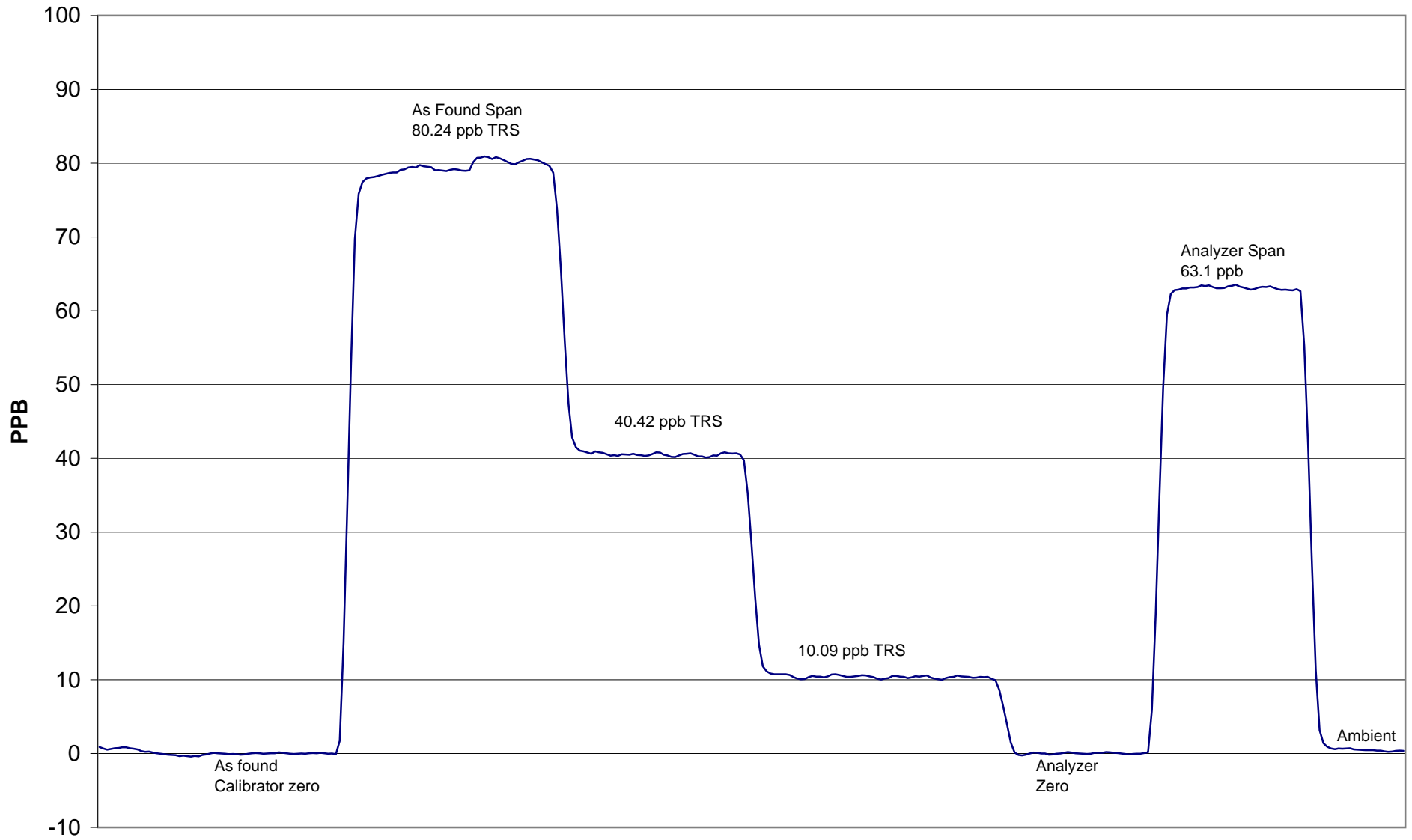


October 25, 2009





# Evergreen Park TRS Calibration



September 11, 2009

# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PASZA

## Station Information

Calibration Date	October 29, 2009	Previous Calibration	September 27, 2009
Station Number	3	Station Location	Smoky Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	10:30	End Time (MST)	13:46
Barometric Pressure	0.914 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	0.031069	Cal Gas Cylinder #	AAL 15377
DACS make	Focus AP1000	DACS serial No.	45272
DACS voltage range	0 - 10 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	0.999545	Calculated slope	1.004309
Calculated intercept	-2.360518	Calculated intercept	-1.812020
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	7.6		8.6	
coefficient	0.701		0.701	
Lamp Voltage	920	volts	919	volts
Chamber Temp	45.1	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	663	mm Hg	662.1	mm Hg
Sample Flow	438	ccm	440	ccm
Lamp Intensity	89	%	89	%

## Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.00	0.2	N/A
4990	39.85	400.89	400.2	1.0017
4990	19.95	201.49	203.0	0.9926
4990	9.95	100.70	103.9	0.9695
4990	0.0	0.00	0.3	As Found Zero
4990	39.85	400.89	400.2	As Found Span
Average Correction Factor				0.9879

Calculated value of As Found Response: 397.417 ppm      Percent Change of As Found: 0.9%

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

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

Calibration Performed By: Grover Christiansen

# Calibration Summary



Parameter SO2  
 Air Monitoring Network PASZA

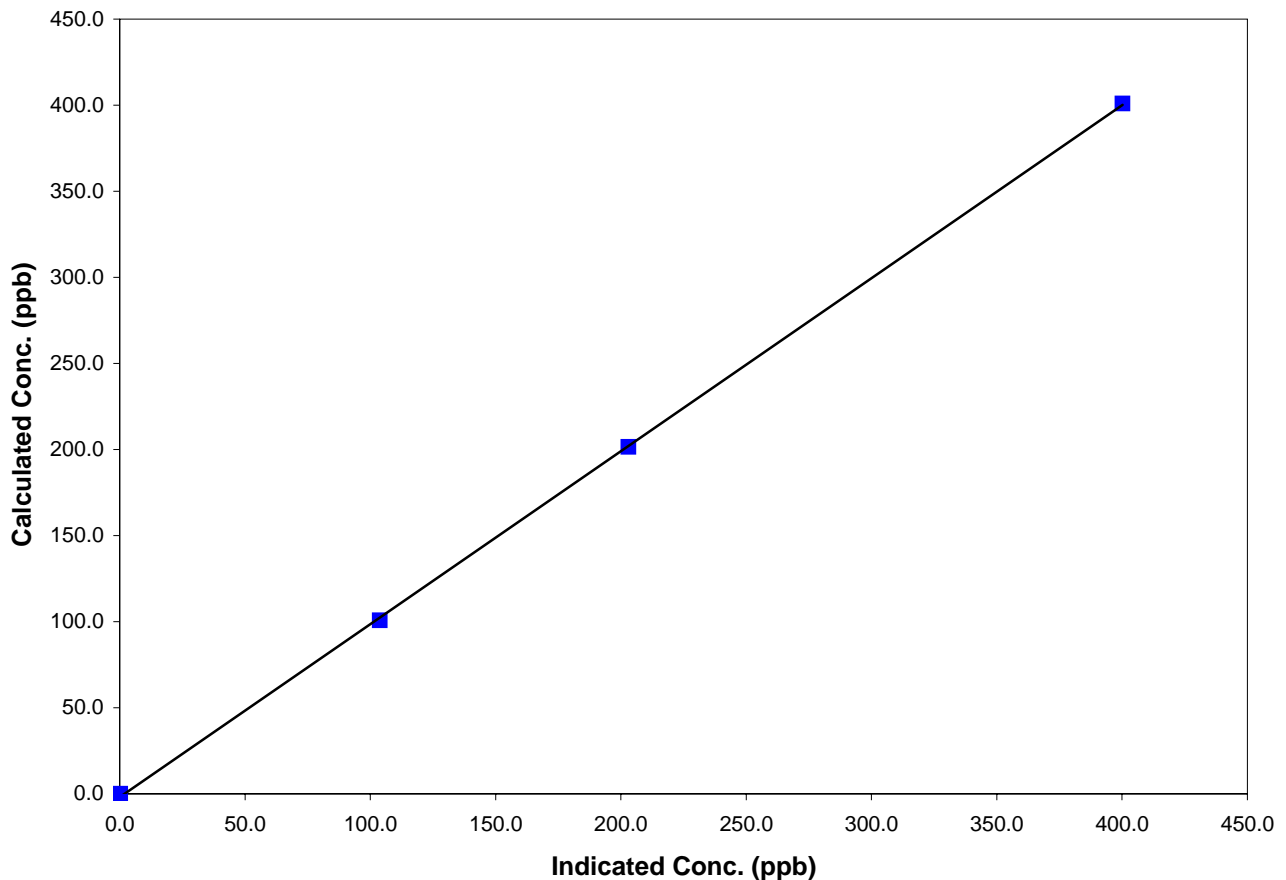
### Station Information

Calibration Date	October 29, 2009	Previous Calibration	September 27, 2009
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	10:30	End Time (MST)	13:46
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

### Calibration Data

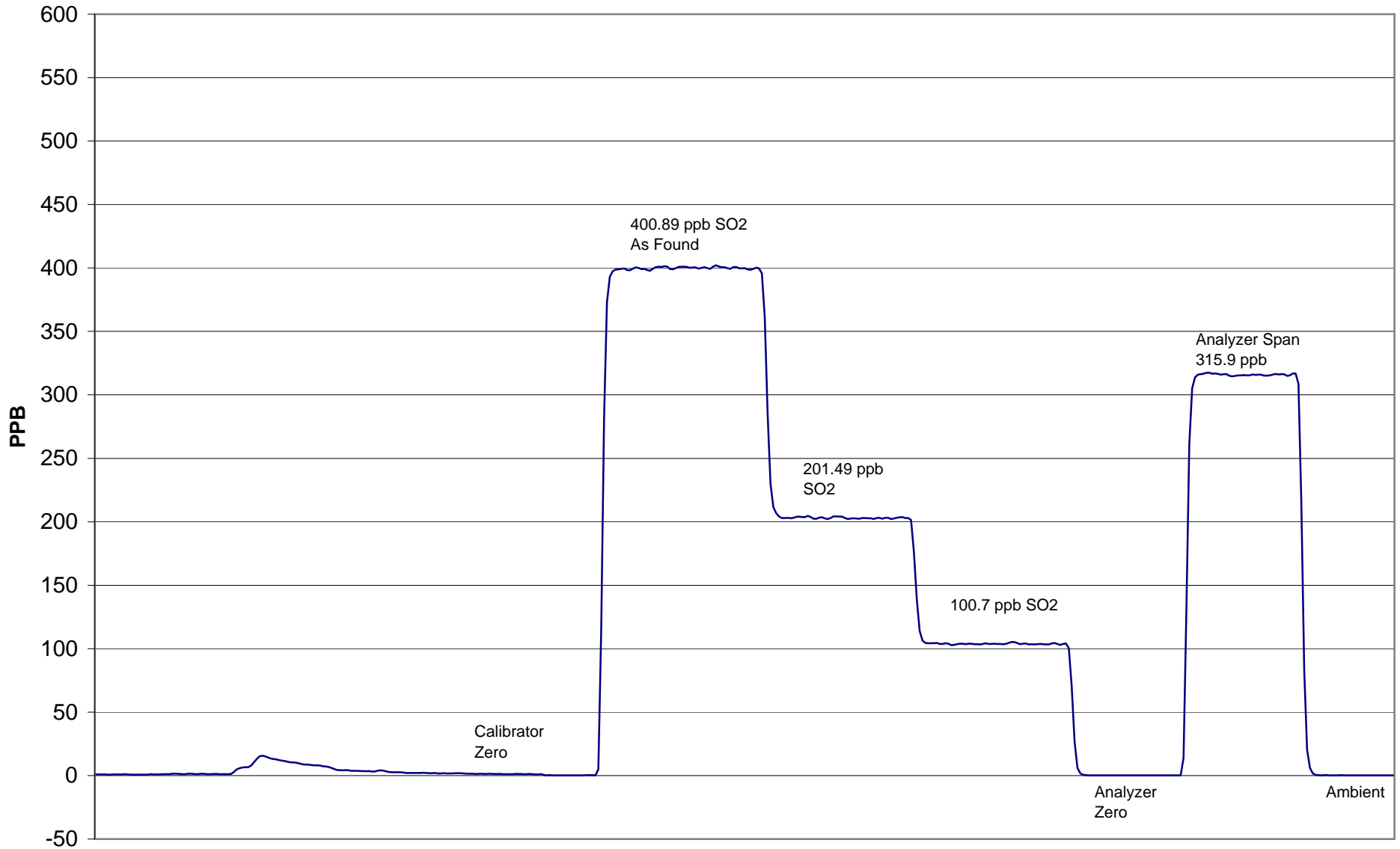
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
400.9	400.2	1.0017	Correlation Coefficient	0.999924
201.5	203.0	0.9926		
100.7	103.9	0.9695	Slope	1.004309
			Intercept	-1.812020

## SO2 Calibration Curve





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

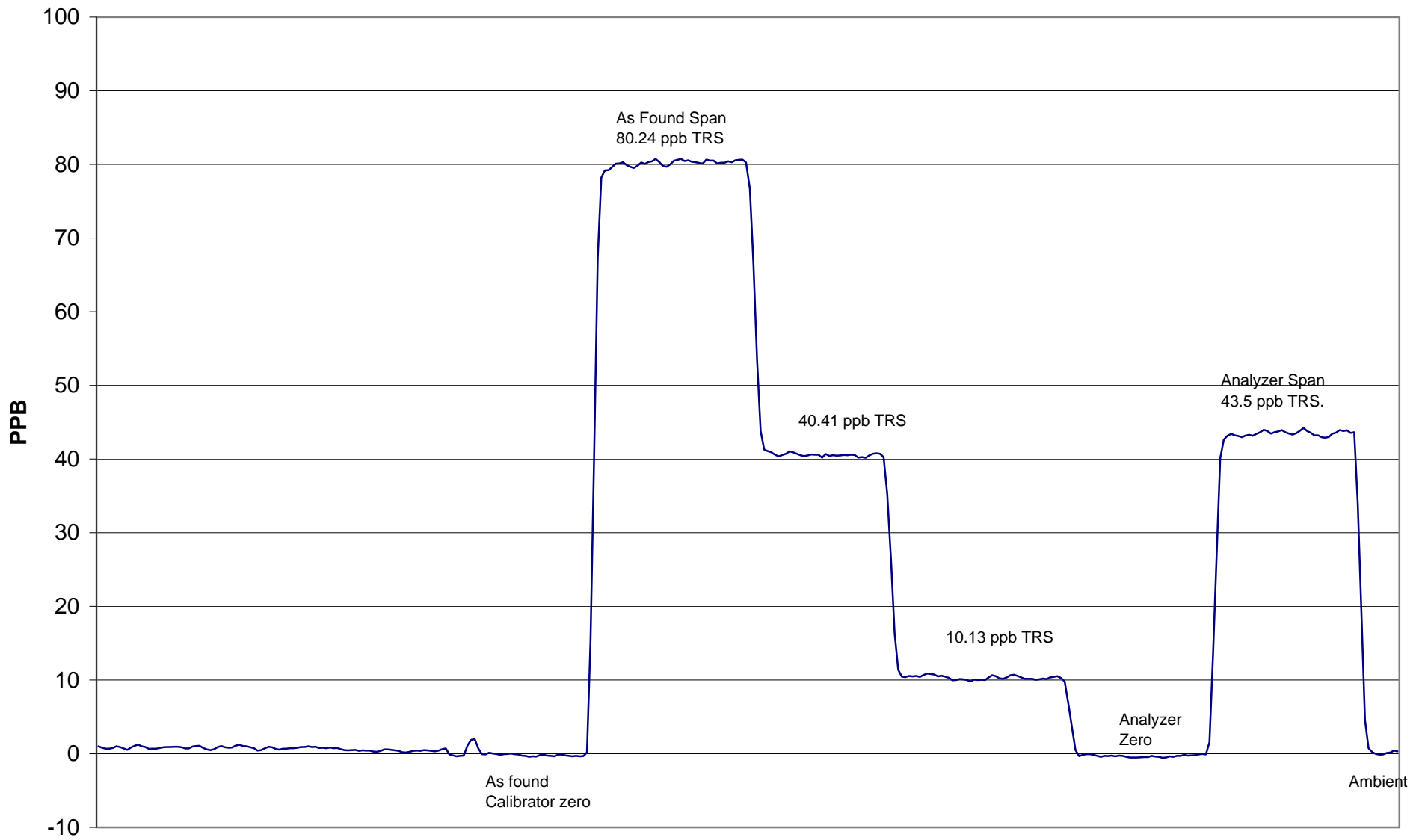


October 29, 2009





# Smoky Heights TRS Calibration



October 29, 2009

# Calibration Report



Parameter SO2

Air Monitoring Network PASZA

## Station Information

Calibration Date	October 21, 2009	Previous Calibration	September 7, 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)	16:30	End Time (MST)	20:01
Barometric Pressure	0.900 atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	10.06 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	CC 114395		
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 10 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.000090	Calculated slope	1.001985
Calculated intercept	-0.454321	Calculated intercept	-0.271499
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.33		2.48	
Coefficient	0.877		0.894	
PMT	-812.9	V	-812.9	V
UV Lamp Voltage	1062	V	1064	V
Chamber Temp	45.1	Deg C	45.1	Deg C
Pressure	661.9	mm Hg	661.3	mm Hg
Sample Flow	0.478	LPM	0.478	LPM
Lamp Intesity	85%	%	85%	%

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.0	N/A
4989	39.84	79.7	79.6	1.0007
4988	19.87	39.9	40.3	0.9905
4988	9.91	19.9	20.5	0.9745
4988	0.00	0.0	-0.3	As found zero
4988	39.90	79.8	79.6	As found span
Average Correction Factor				0.9886

Calculated value of As Found Response: 79.514 ppm      Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	-0.3	ppb	-0.2	ppb
Auto span	57.8	ppb	57.5	ppb

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

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



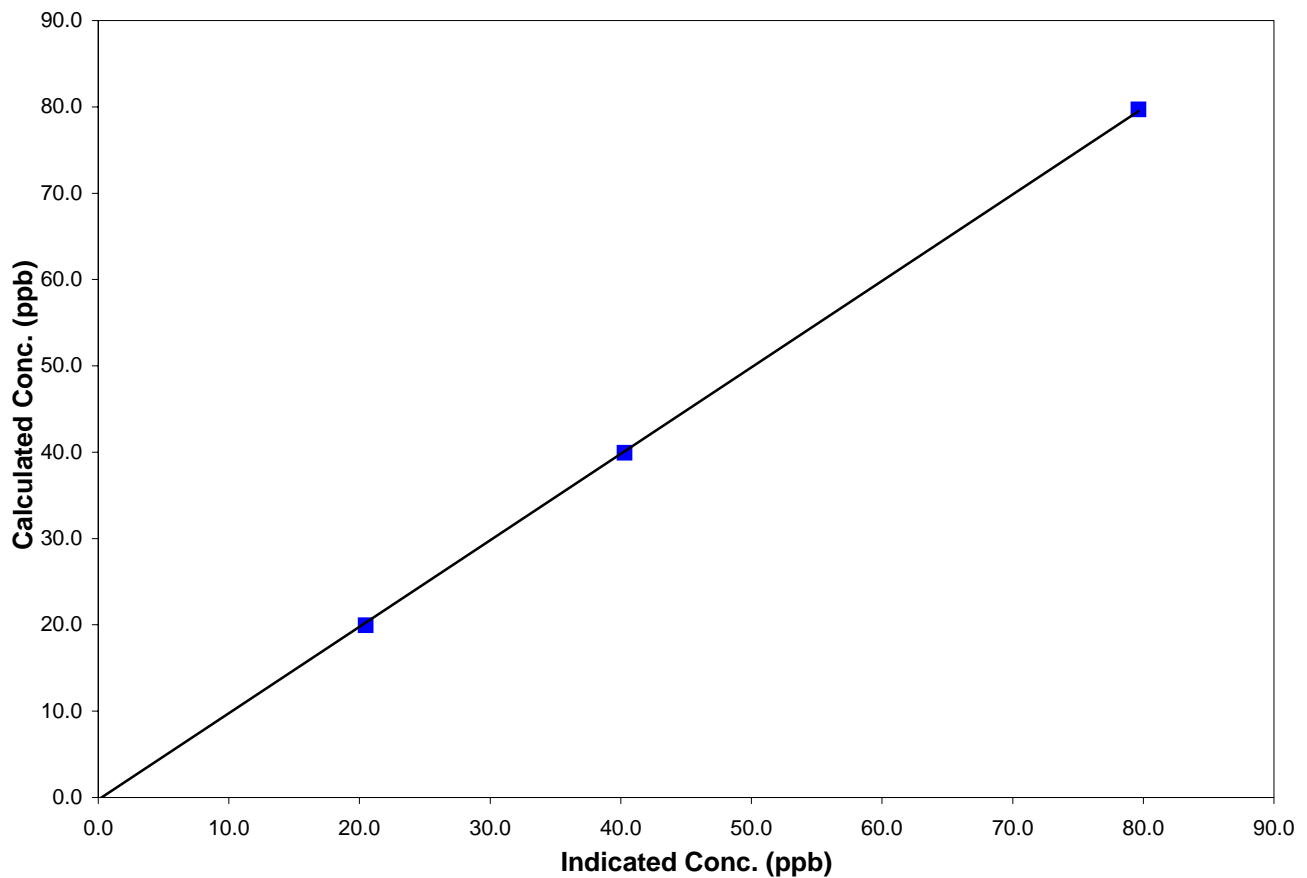
## Station Information

Calibration Date	<u>October 21, 2009</u>	Previous Calibration	<u>September 7, 2009</u>
Station Number	<u>4</u>	Station Location	<u>Beaverlodge</u>
Start Time (MST)	<u>16:30</u>	End Time (MST)	<u>20:01</u>
Analyzer make/model	<u>TEI Model 43i-TLE</u>	Analyzer serial #	<u>713021137</u>

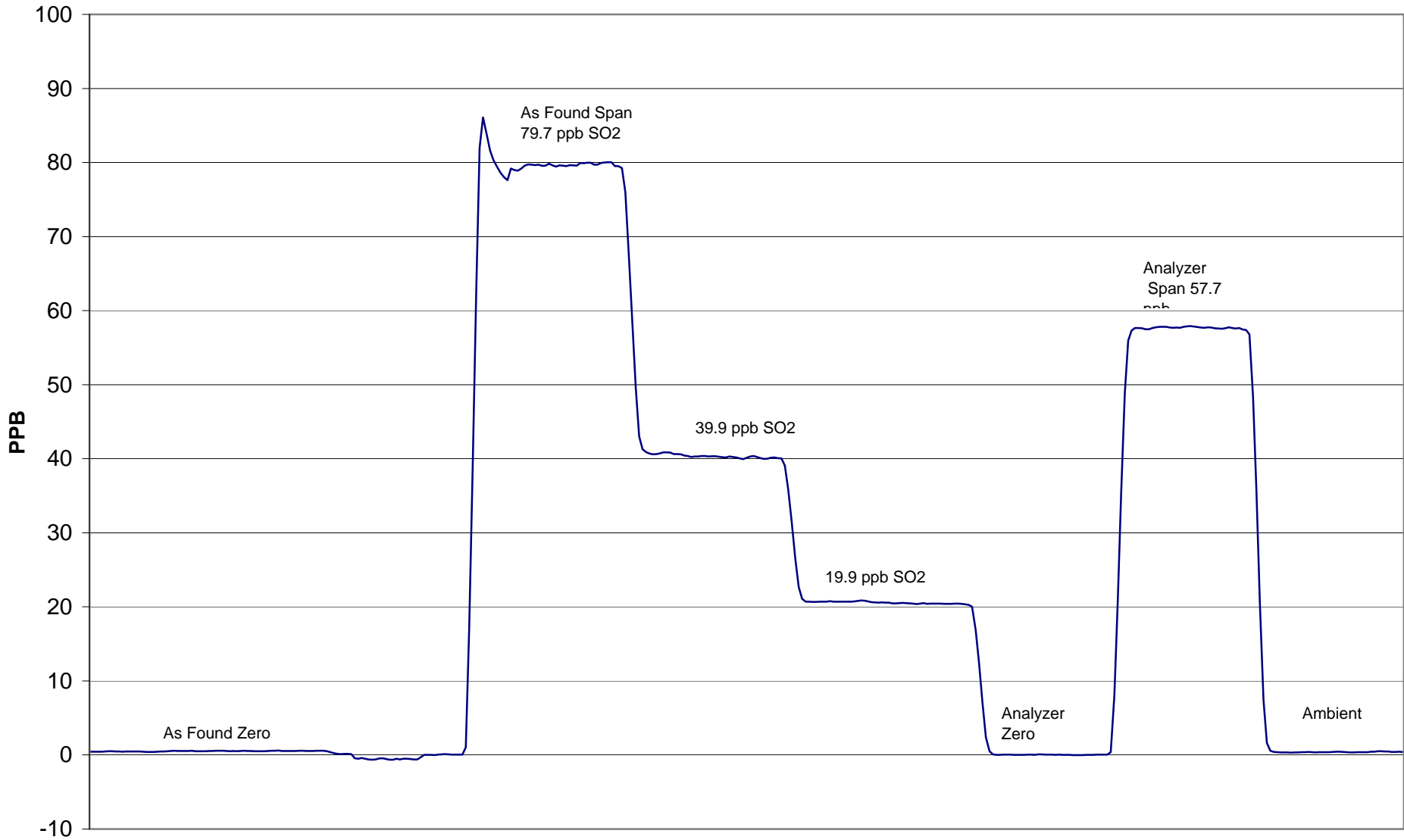
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
79.7	79.6	1.0007	Correlation Coefficient	0.999928
39.9	40.3	0.9905		
19.9	20.5	0.9745	Slope	1.001985
			Intercept	-0.271499

## SO2 Calibration Curve



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



October 21, 2009

# Calibration Report

Parameter

NO<sub>x</sub>-NO-NO<sub>2</sub>

Air Monitoring Network

PASZA



## Station Information

Calibration Date	October 21, 2009	Previous Calibration	September 7, 2009
Station Number	4	Station Location	BeaverLodge
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Installation	<input type="checkbox"/> Removal
Other:			
Start Time (MST)	15:00:00 PM	End Time (MST)	21:29
Barometric Pressure	0.900 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	2844
NO Cal Gas Conc	50.1 ppm	Cal Gas Expiry Date	
NOx Cal Gas Conc	50.2 ppm	Cal Gas Serial #	CC-114395

## DACS Information

DACS make AP1000 DACS serial No. \_\_\_\_\_

Parameter		NO2	NOx	NO
Before	Data Slope	0.991523	1.003777	1.002086
	Data Offset	-0.690035	-2.032202	-1.034788
After	Data Slope	0.999681	1.000136	1.002025
	Data Offset	0.450848	-1.300667	-0.479319
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

## Analyzer Information

Analyzer make/model TEI 42i Analyzer serial # 906535068

Test Point	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
NO offset	1.8	mV	2.4	mV
NOx bkgnd	2.1	mV	2.7	mV
NO coefficient	1.560		1.413	
NOx coefficient	0.991		0.991	
NO2 conv temp	325.5	Deg C	322.6	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-676.0	mV	-676.6	mV
R Cell Press	176.2	in Hg	176.2	in Hg
Sample Flow	0.400	ccm	0.760	ccm

Notes:

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# Calibration Report

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



## Station Information

Calibration Date: **October 21, 2009** Station Location: **BeaverLodge**

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4989	0.00	0.0	0.0	0.0	-0.4	-0.3	-0.2	N/A	N/A
1	4989	39.84	397.7	396.9	0.8	398.1	396.1	-0.2	0.9990	1.0021
2	4989	19.87	199.1	198.7	0.4	201.2	199.5	1.2	0.9896	0.9961
3	4989	9.91	99.5	99.3	0.2	102.5	100.2	1.8	0.9708	0.9908
AFZ	4988	0.00	0.0	0.0	0.0	-0.2	-0.4	-0.3	0.0000	0.0000
AFS	4988	39.84	397.8	397.0	0.8	133.9	135.0	-1.5	2.9708	2.9412
Average Correction Factor									0.9865	0.9963

As Found Concentrations: **NO<sub>x</sub>= 132.0** **NO= 134.3** As Found Percent Change **NO<sub>x</sub>= -66.8%** **NO= -66.2%**

## GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.4	-0.4	0.0	-0.4	-0.3	-0.2	N/A	N/A	N/A	N/A
NO point	397.2	397.2	0.0	397.6	397.2	-1.5	0.9991	1.0000	N/A	N/A
400	397.2	206.9	190.3	397.9	206.9	190.1	0.9982	1.0000	1.0014	99.9%
200	397.2	267.5	129.7	397.6	267.5	129.4	0.9991	1.0000	1.0028	99.7%
100	397.2	327.0	70.2	397.4	327.0	69.3	0.9995	1.0000	1.0129	98.7%
Average Correction Factor							0.9989	1.0000	1.0057	99.4%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	-0.3	-0.2	ppb	-0.1	-0.1	-0.1	ppb
Auto span	175.3	173.3	2.1	ppb	195.7	193.6	1.9	ppb

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PASZA



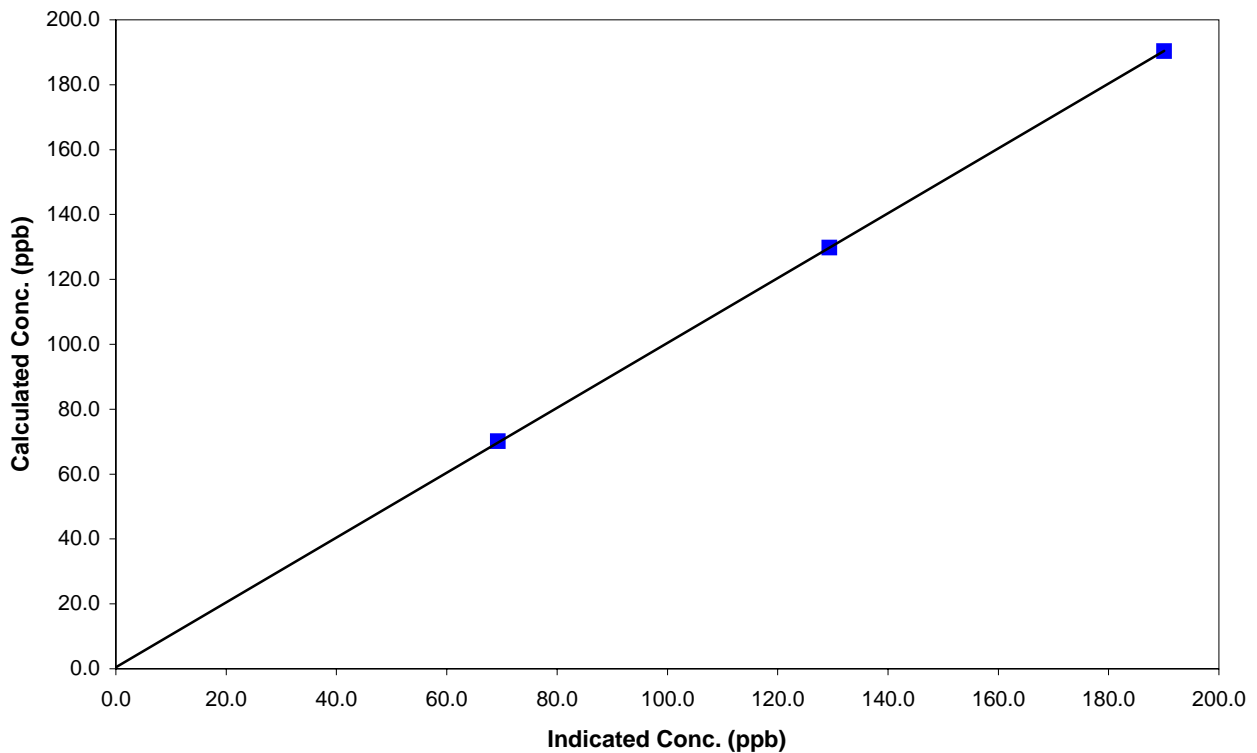
## Station Information

Calibration Date	October 21, 2009	Previous Calibration	September 7, 2009
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	15:00:00 PM	End Time (MST)	21:29
Analyzer make	TEI 42i	Analyzer serial #	906535068

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A	Correlation Coefficient	0.999984
190.3	190.1	1.0014		
129.7	129.4	1.0028		
70.2	69.3	1.0129	Slope	0.999681
			Intercept	0.450848

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



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PASZA



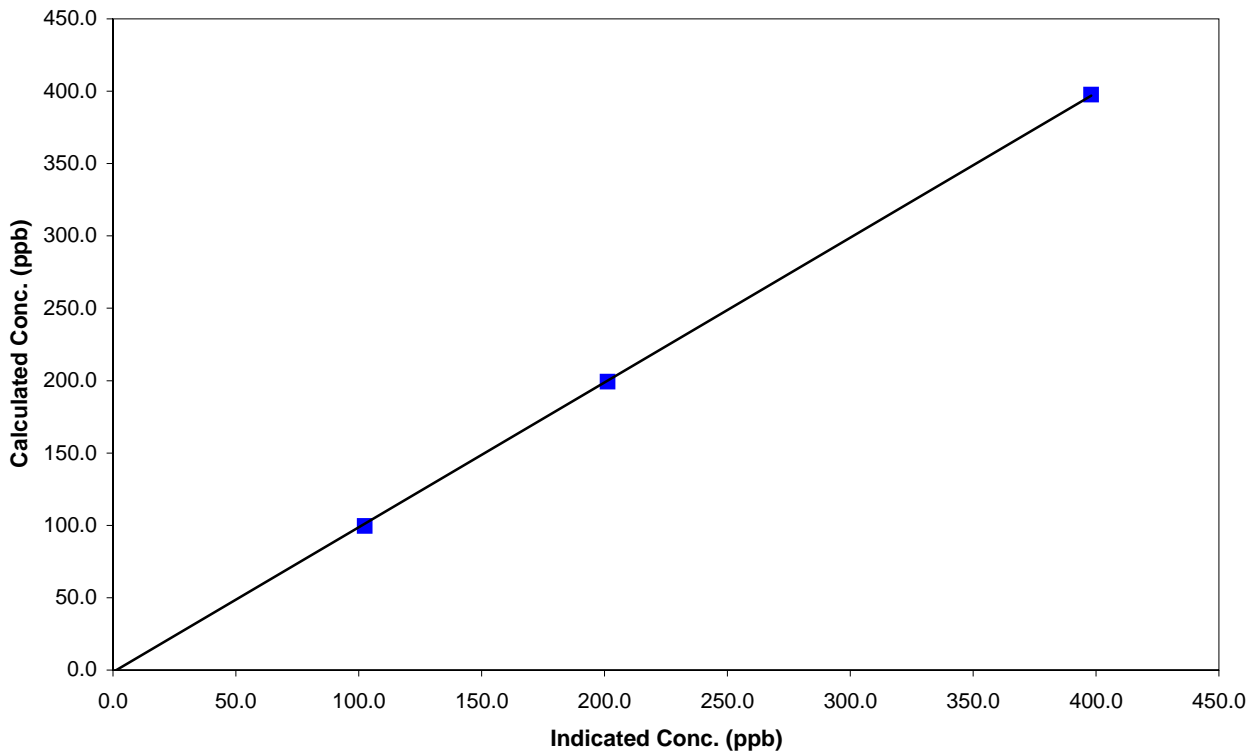
## Station Information

Calibration Date	October 21, 2009	Previous Calibration	September 7, 2009
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	15:00:00 PM	End Time (MST)	21:29
Analyzer make	TEI 42i	Analyzer serial #	906535068

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A	Correlation Coefficient	0.999918
397.7	398.1	0.9990		
199.1	201.2	0.9896		
99.5	102.5	0.9708	Slope	1.000136
			Intercept	-1.300667

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



# Calibration Summary

Parameter NO

Air Monitoring Network PASZA



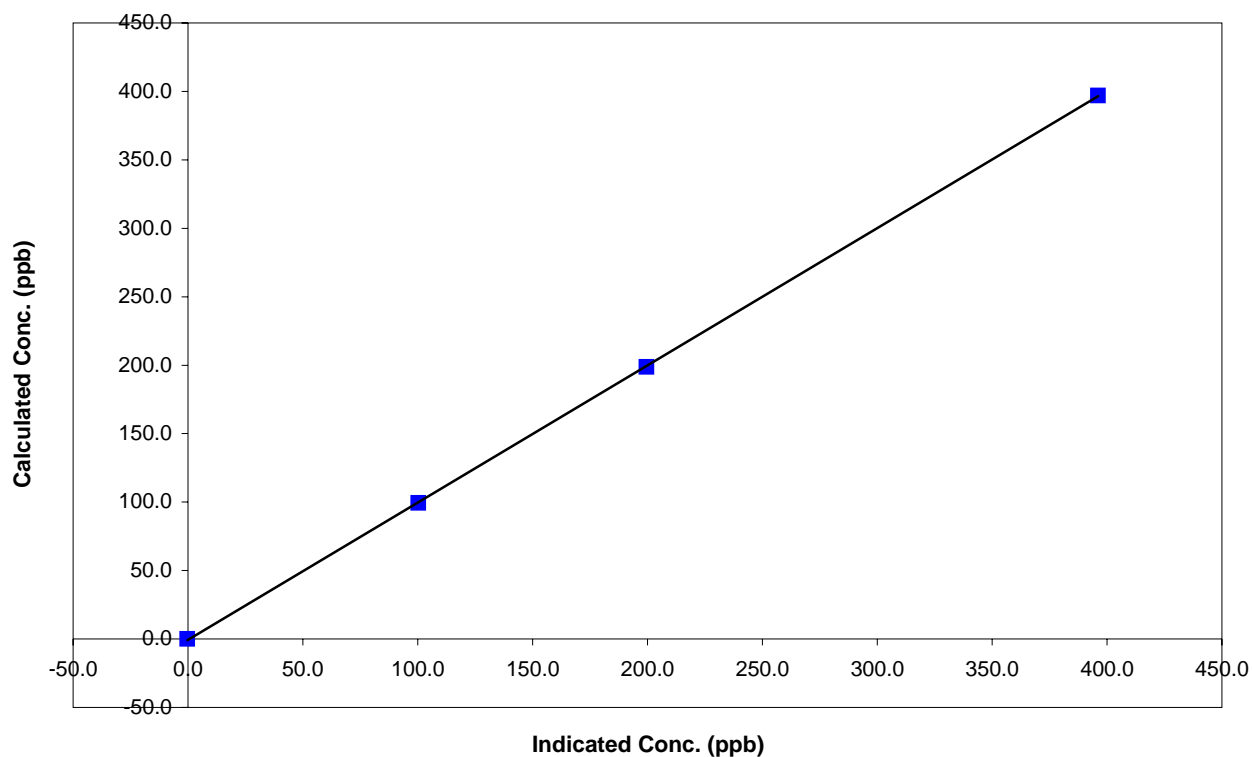
## Station Information

Calibration Date	October 21, 2009	Previous Calibration	September 7, 2009
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	15:00:00 PM	End Time (MST)	21:29
Analyzer make	TEI 42i	Analyzer serial #	906535068

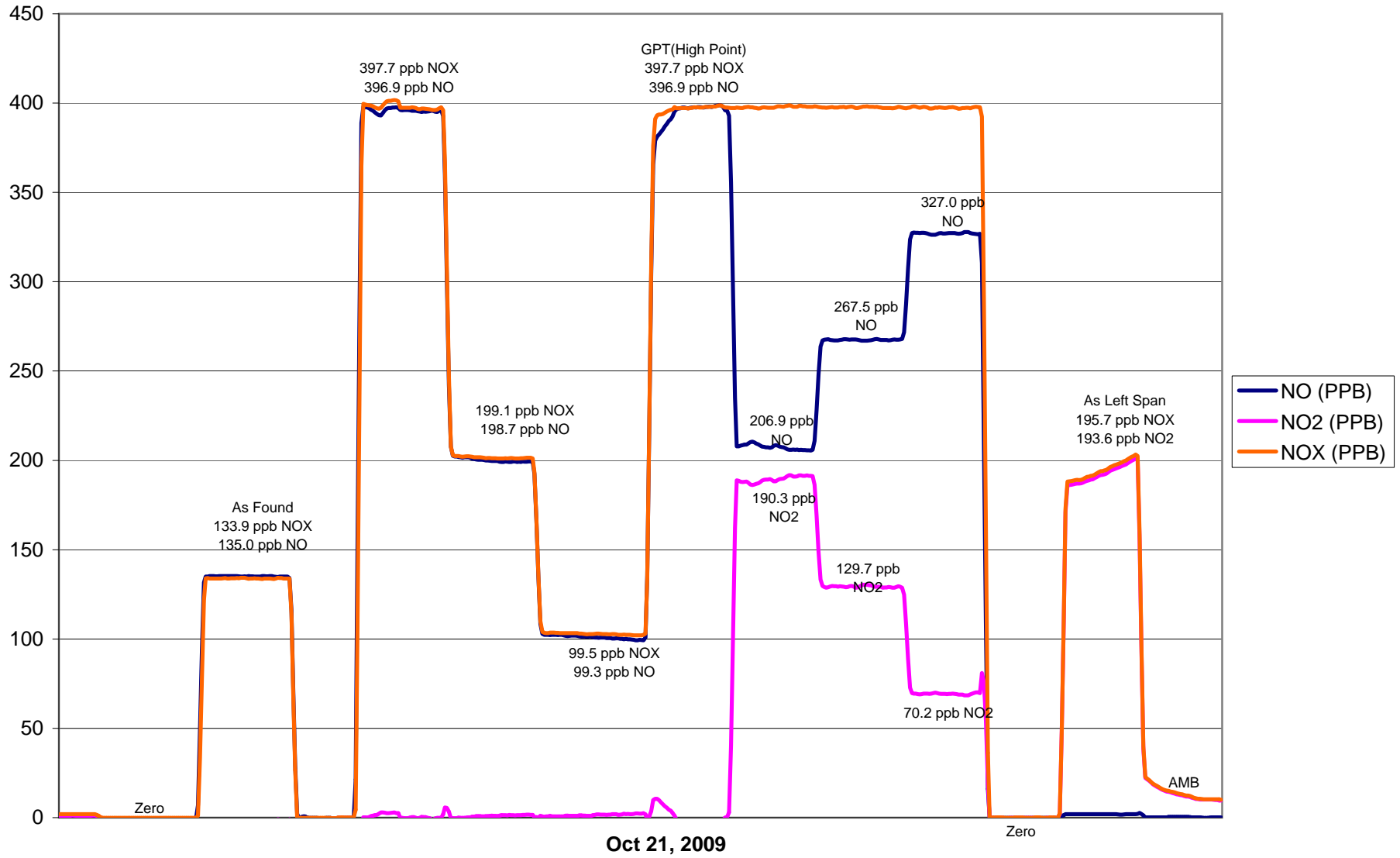
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A	Correlation Coefficient	0.999979
396.9	396.1	1.0021		
198.7	199.5	0.9961	Slope	1.002025
99.3	100.2	0.9908		

## NO Calibration Curve



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



# Calibration Report



Parameter 03

Air Monitoring Network PASZA

## Station Information

Calibration Date	<u>October 21, 2009</u>	Previous Calibration	<u>September 7, 2009</u>
Station Number	<u>4</u>	Station Location	<u>Beaverlodge</u>
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	<u>20:28</u>	End Time (MST)	<u>23:00</u>
Barometric Pressure	<u>0.900</u> atm	Station Temperature	<u>21.0</u> Deg C
Calibrator	<u>EnviroNics 6100</u>	Serial Number	<u>3474</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>9</u>
	<u>Before</u>		<u>After</u>
Calculated slope	<u>0.984118</u>	Calculated slope	<u>0.997237</u>
Calculated intercept	<u>0.185567</u>	Calculated intercept	<u>0.825292</u>
Analyzer make	<u>Teco 49C</u>	Analyzer serial #	<u>49C-76443-383</u>

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.80	ppb	-1.00	ppb
slope	1.027		1.027	
Lamp temp	56.4	mV	56.2	mV
Lamp Intensity A/B	70585 / 70550	mV	71405 / 70750	mV
Pressure	666.1	mm Hg	668	mm Hg
Flow A	688	ccm	689	ccm
Flow B	636	ccm	639	ccm

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.0	-0.4	N/A
4990	0.00	190.3	190.5	0.9992
4990	0.00	129.7	128.8	1.0072
4990	0.00	70.2	69.1	1.0152
4990	0.00	0.0	0.3	As found zero
4990	0.00	191.0	190.5	As found span
Average Correction Factor				1.0072

Calculated value of As Found Response: 187.4 ppm      Percent Change of As Found: -1.9%

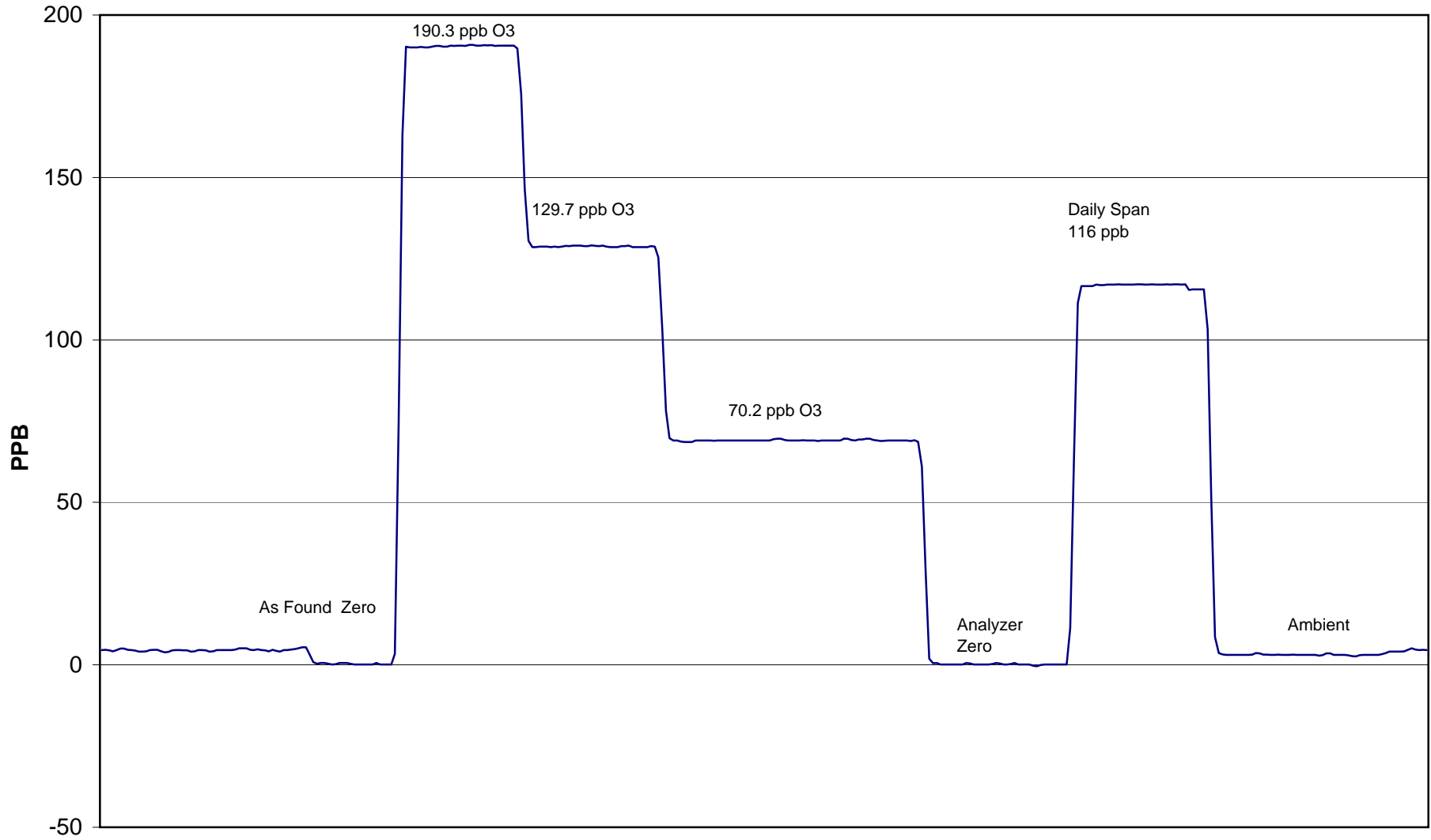
	before calibration		after calibration	
Auto zero	0.1	ppb	1.0	ppb
Auto span	114.3	ppb	117.3	ppb

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

Calibration Performed By: Grover Christiansen



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



October 21, 2009



# Calibration Report



Parameter SO2

Air Monitoring Network PASZA

## Station Information

Calibration Date	October 23, 2009	Previous Calibration	September 30, 2009
Station Number	9	Station Location	Rover - Kinuso
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	11:15	End Time (MST)	15:00
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	1.003179	Calculated slope	1.003400
Calculated intercept	-1.243188	Calculated intercept	-2.067565
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	9		9	
Coefficient	0.872		0.866	
UV Lamp Voltage	802	V	802	V
Chamber Temp	44.6	C	44.6	C
Perm Gas Temp	45	C	45	C
Pressure	669.7	mm Hg	670	mm Hg
Sample Flow	0.486	LPM	0.484	LPM
Lamp Intesity	47110	Hz	476486	Hz

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.4	N/A
4989	39.83	400.8	400.4	1.0009
4989	19.88	200.8	203.6	0.9866
4989	9.92	100.4	103.5	0.9699
4988	0.00	0.0	-0.1	As found zero
4990	39.89	401.3	401.8	As found span
Average Correction Factor				0.9858

Calculated value of As Found Response: 401.902 ppm      Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	258.2	ppm	263.2	ppm

Notes: Internal Pump Replaced

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



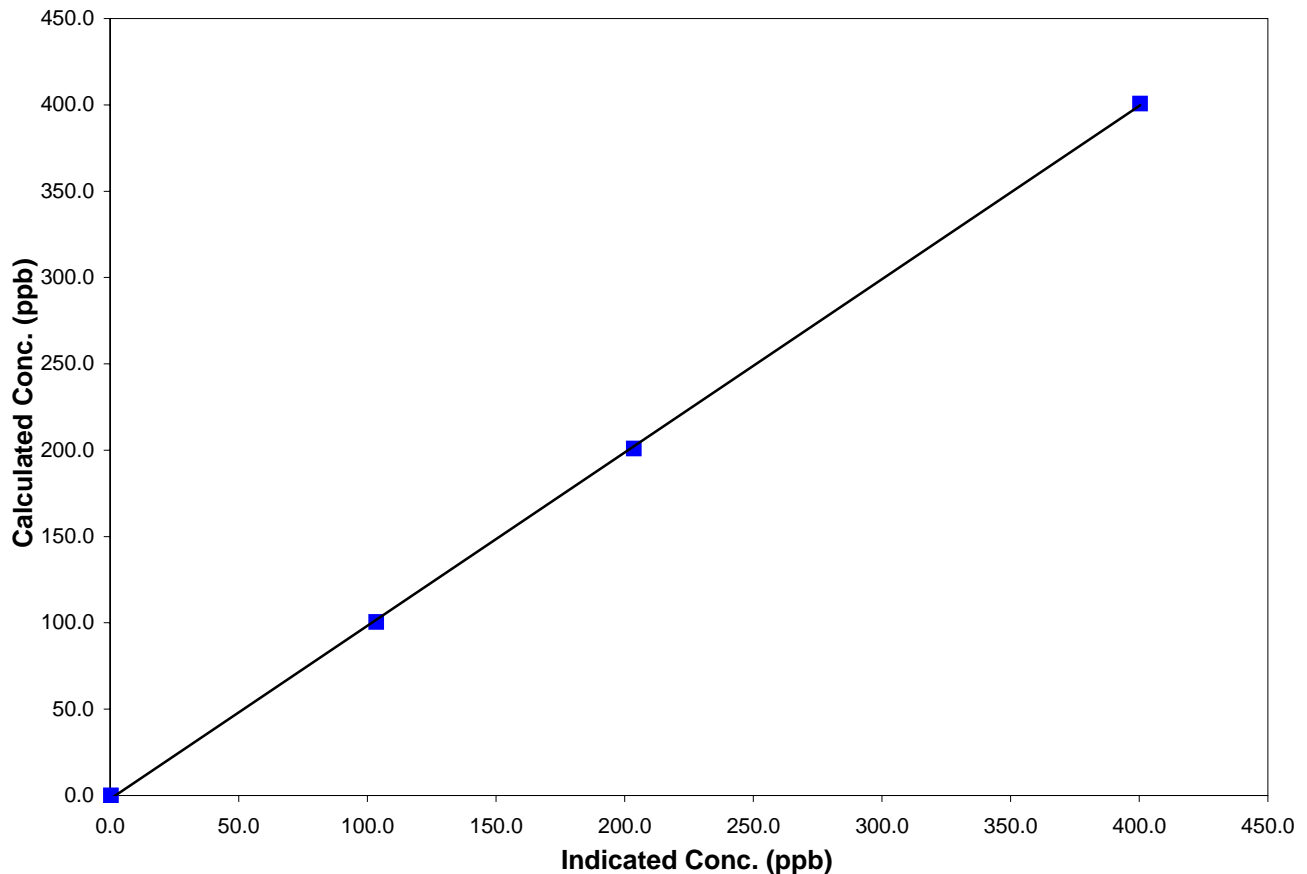
## Station Information

Calibration Date	October 23, 2009	Previous Calibration	September 30, 2009
Station Number	9	Station Location	Rover - Kinuso
Start Time (MST)	11:15	End Time (MST)	15:00
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

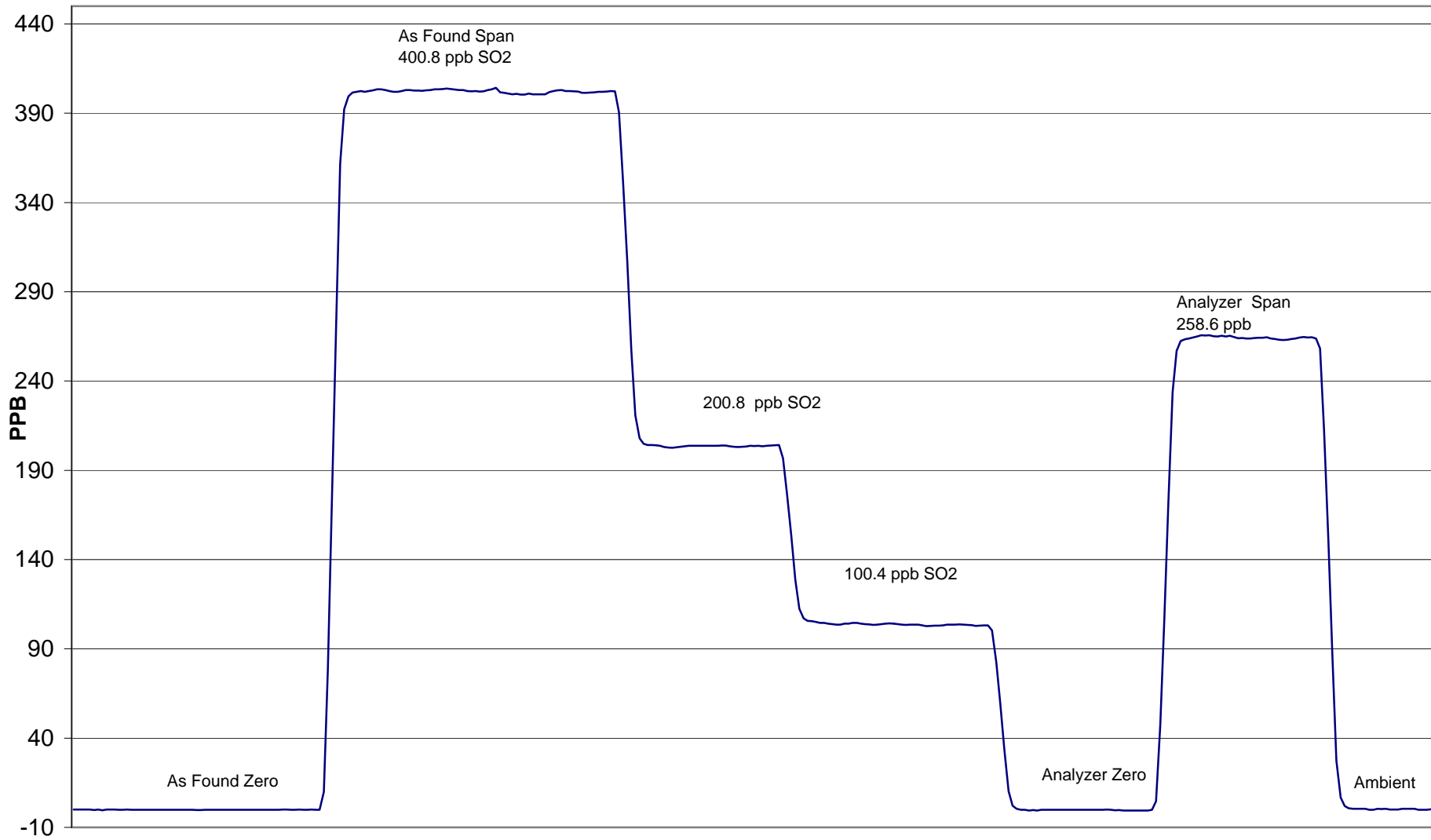
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
400.8	400.4	1.0009	Correlation Coefficient	0.999911
200.8	203.6	0.9866		
100.4	103.5	0.9699	Slope	1.003400
			Intercept	-2.067565

## SO2 Calibration Curve



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



October 23, 2009

# Calibration Report

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



## Station Information

Calibration Date	<u>                    </u> October 23, 2009	Previous Calibration	<u>                    </u> September 30, 2009
Station Number	<u>                    </u> 9	Station Location	<u>                    </u> Rover-Kinuso
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	<u>                    </u> 18:44:00 PM	End Time (MST)	<u>                    </u> 21:14
Barometric Pressure	<u>                    </u> 27.5 inches Hg	Station Temperature	<u>                    </u> 21.0 Deg C
Calibrator	<u>                    </u> Environics 6100	Serial Number	<u>                    </u> 3474
Cal Gas Concentration	<u>                    </u> 5.1 ppm	Cal Gas Expiry Date	<u>                    </u> 11/15/2005
Gas Cert Reference	<u>                    </u> ALM013295		
DACS make	<u>                    </u> Focus AP1000	DACS serial No.	<u>                    </u> 52662
DACS voltage range	<u>                    </u> 0 - 5 volt	DACS channel #	<u>                    </u> 8
	<u>                    </u> Before		<u>                    </u> After
DACS Scale High	<u>                    </u> 100	DACS slope	<u>                    </u> 100
DACS Scale Low	<u>                    </u> 0	DACS intercept	<u>                    </u> 0
Calculated slope	<u>                    </u> 0.996384	Calculated slope	<u>                    </u> 0.995988
Calculated intercept	<u>                    </u> 0.273999	Calculated intercept	<u>                    </u> 0.241565
Analyzer make	<u>                    </u> TEI 43C	Analyzer serial #	<u>                    </u> 609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	10.4	ppb	10.4	ppb
Coefficient	1.448		1.448	
Lamp Voltage	792	V	798	V
Chamber Temp	43.9	C	44.0	C
Perm gas Temp	45.	C	45	C
Pressure	654	mmHg	664	mmHg
Sample Flow	431	ccm	436	ccm
Lamp Intensity	39053.0	Hz	38687.0	Hz

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.0	0.0	0.3	N/A
4988	79.88	80.4	80.8	0.9953
4988	39.85	40.4	39.8	1.0157
4988	9.92	10.1	9.6	1.0517
4988	0.00	0.0	-0.6	As found zero
4988	79.88	80.4	79.7	As found span
Average Correction Factor				1.0209

Calculated value of As Found Response:                      80.32 ppm      Percent Change of As Found:                      0.1%

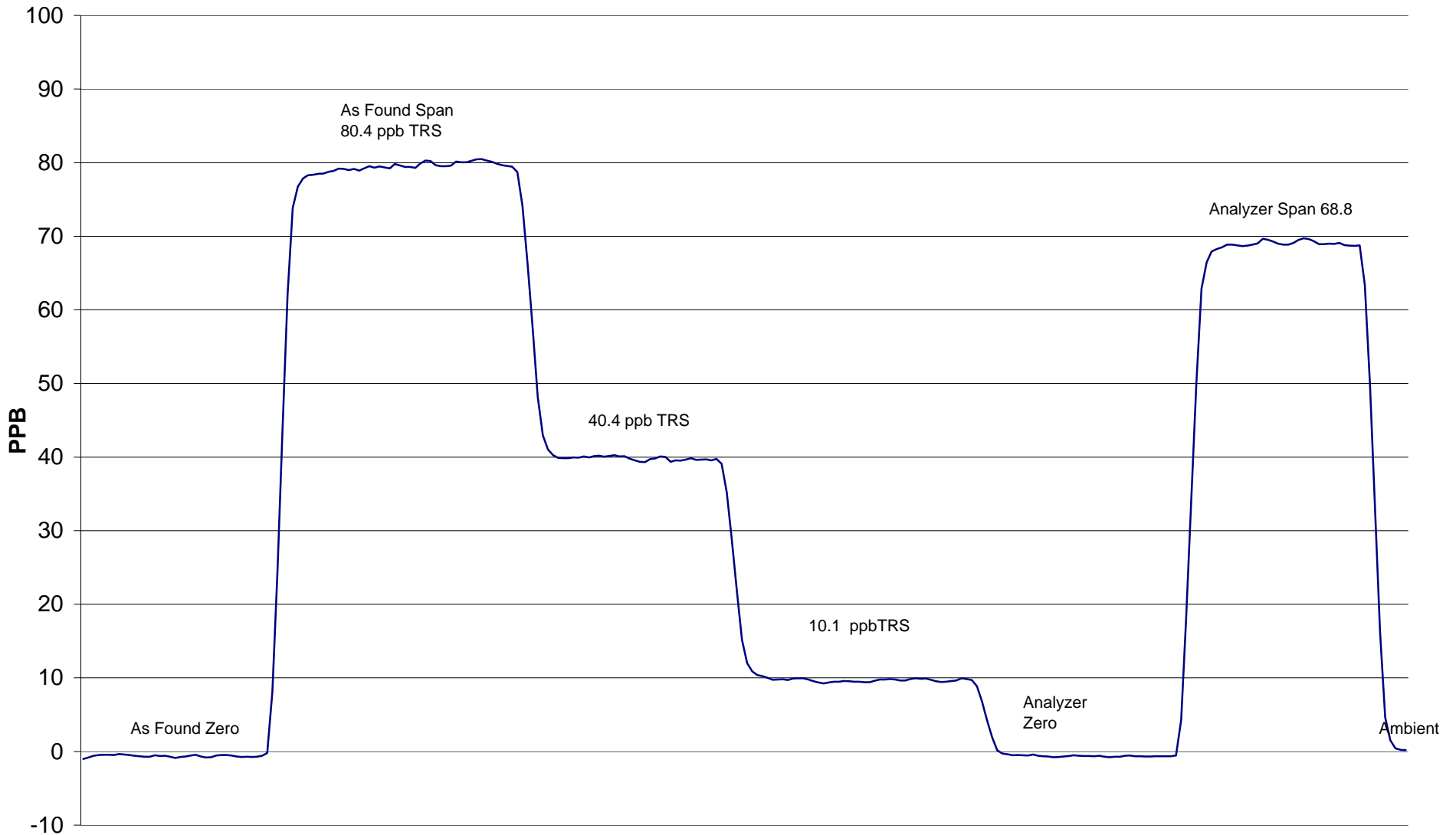
	before calibration		after calibration	
Auto zero	-0.4	ppm	-0.4	ppm
Auto span	66.6	ppm	68.8	ppm

Notes:                     

Calibration Performed By:                      Grover Christiansen



# Kinuso TRS Calibration



October 23, 2009

# Calibration Report

Parameter

NO<sub>x</sub>-NO-NO<sub>2</sub>

Air Monitoring Network

PASZA



## Station Information

Calibration Date	October 23, 2009	Previous Calibration	September 30, 2009
Station Number	9	Station Location	Rover Kinuso
Reason:	<b>Routine</b> Installation Removal Other:		
Start Time (MST)	11:15	End Time (MST)	18:17
Barometric Pressure	0.916 Atm	Station Temperature	25.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
NO Cal Gas Conc	49.6 ppm	Cal Gas Expiry Date	July 2, 2007
NOx Cal Gas Conc	49.6 ppm	Cal Gas Serial #	CC114395

## DACS Information

DACS make Focus AP1000 DACS serial No. 52662

Parameter		NO2	NOx	NO
Before	Data Slope	0.996011	1.001539	1.008049
	Data Offset	1.571318	-2.716151	-3.107281
After	Data Slope	1.006612	1.000569	1.004580
	Data Offset	0.906676	-2.654634	-3.023382
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

## Analyzer Information

Analyzer make/model TEI 42i Analyzer serial # 701120011

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	4.6	mV	4.4	mV
NOx bkgnd	5.2	mV	4.5	mV
NO coefficient	0.835		0.810	
NOx coefficient	0.999		0.997	
NO2 conv temp	326.0	Deg C	325.5	Deg C
PMT Temp	-3.1	Deg C	-3.1	Deg C
PMT Volt	-829.5	mV	-829.5	mV
R Cell Press	143.6	in Hg	145.4	in Hg
Sample Flow	0.542	ccm	0.549	ccm

Notes:

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# Calibration Report

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



## Station Information

Calibration Date: **October 23, 2009** Station Location: **Rover Kinuso**

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4990	0.00	0.0	0.0	0.0	0.2	0.5	-0.7	N/A	N/A
1	4990	39.85	393.0	393.0	0.0	394.0	392.9	-1.6	0.9973	1.0002
2	4990	19.87	196.7	196.7	0.0	200.7	200.1	-1.0	0.9800	0.9833
3	4990	9.91	98.3	98.3	0.0	103.3	103.5	-0.8	0.9521	0.9503
AFZ	4990	0.00	0.0	0.0	0.0	0.1	0.5	-0.8	0.0000	0.0000
AFS	4990	39.84	392.9	392.9	0.0	410.5	408.2	-0.7	0.9571	0.9624
Average Correction Factor									0.9765	0.9779

As Found Concentrations: **NO<sub>x</sub>= 407.6** **NO= 404.6** As Found Percent Change **NO<sub>x</sub>= 3.8%** **NO= 3.0%**

## GPT Calibration Data

Dilution Flow 4988 ccm Source Gas Flow 39.84 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.5	0.5	0.0	0.2	0.5	-0.7	N/A	N/A	N/A	N/A
NO point	393.3	393.3	0.0	394.6	393.3	-1.4	0.9966	1.0000	N/A	N/A
300	393.3	141.5	251.8	392.5	141.5	249.1	1.0022	1.0000	1.0108	98.9%
200	393.3	217.3	176.0	394.3	217.3	174.5	0.9975	1.0000	1.0089	99.1%
100	393.3	298.5	94.8	393.8	298.5	92.8	0.9987	1.0000	1.0225	97.8%
Average Correction Factor							0.9995	1.0000	1.0141	98.6%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.1	-1.0	0.6	ppb	0.4	-0.7	0.7	ppb
Auto span	305.0	300.2	3.0	ppb	313.9	309.1	3.1	ppb

Calibration Performed By: Grover Christiansen



# Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PASZA



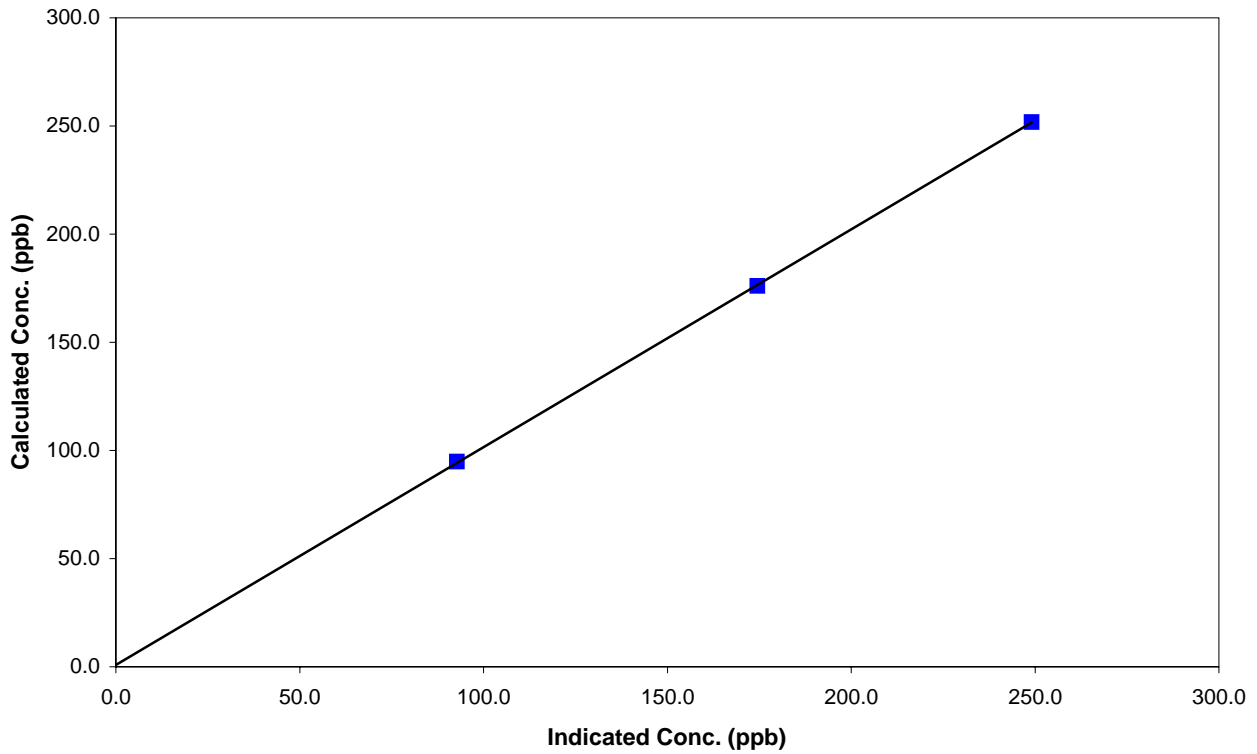
## Station Information

Calibration Date	October 23, 2009	Previous Calibration	September 30, 2009
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	11:15	End Time (MST)	18:17
Analyzer make	TEI 42i	Analyzer serial #	701120011

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.7	N/A	Correlation Coefficient	0.999982
251.8	249.1	1.0108		
176.0	174.5	1.0089	Slope	1.006612
94.8	92.8	1.0225		
			Intercept	0.906676

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



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PASZA



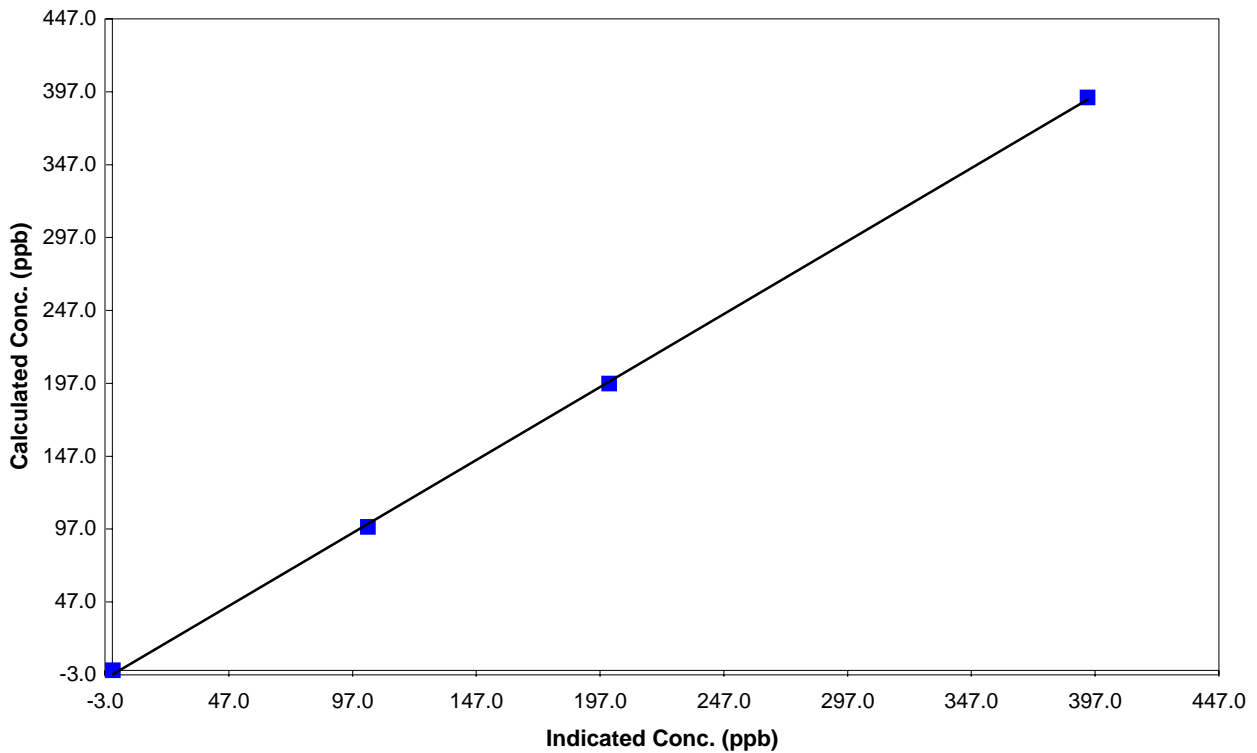
## Station Information

Calibration Date	October 23, 2009	Previous Calibration	September 30, 2009
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	11:15	End Time (MST)	18:17
Analyzer make	TEI 42i	Analyzer serial #	701120011

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999816
393.0	394.0	0.9973		
196.7	200.7	0.9800		
98.3	103.3	0.9521	Slope	1.000569
			Intercept	-2.654634

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



# Calibration Summary

Parameter NO

Air Monitoring Network PASZA



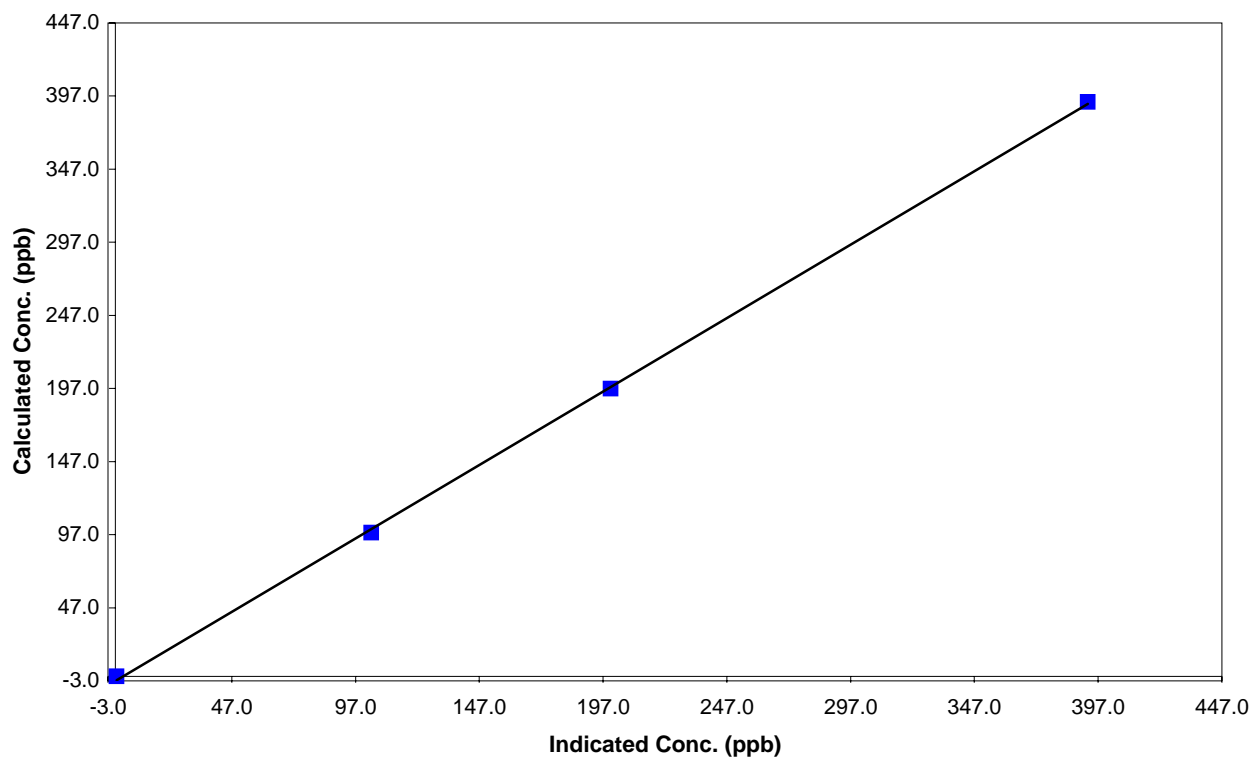
## Station Information

Calibration Date	October 23, 2009	Previous Calibration	September 30, 2009
Station Number	9	Station Location	Rover Kinuso
Start Time (MST)	11:15	End Time (MST)	18:17
Analyzer make	TEI 42i	Analyzer serial #	701120011

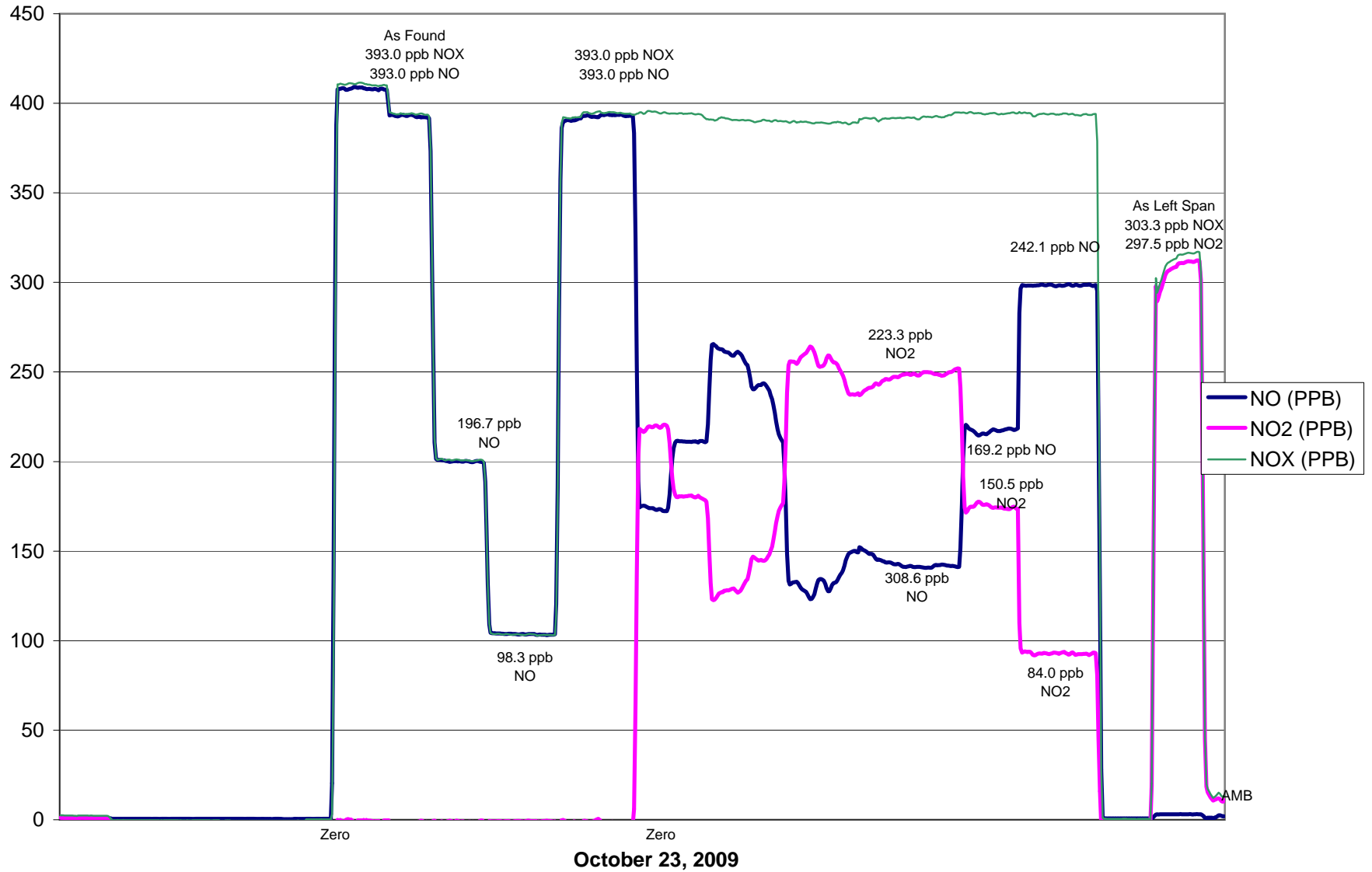
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999807
393.0	392.9	1.0002		
196.7	200.1	0.9833		
98.3	103.5	0.9503	Slope	1.004580
			Intercept	-3.023382

## NO Calibration Curve



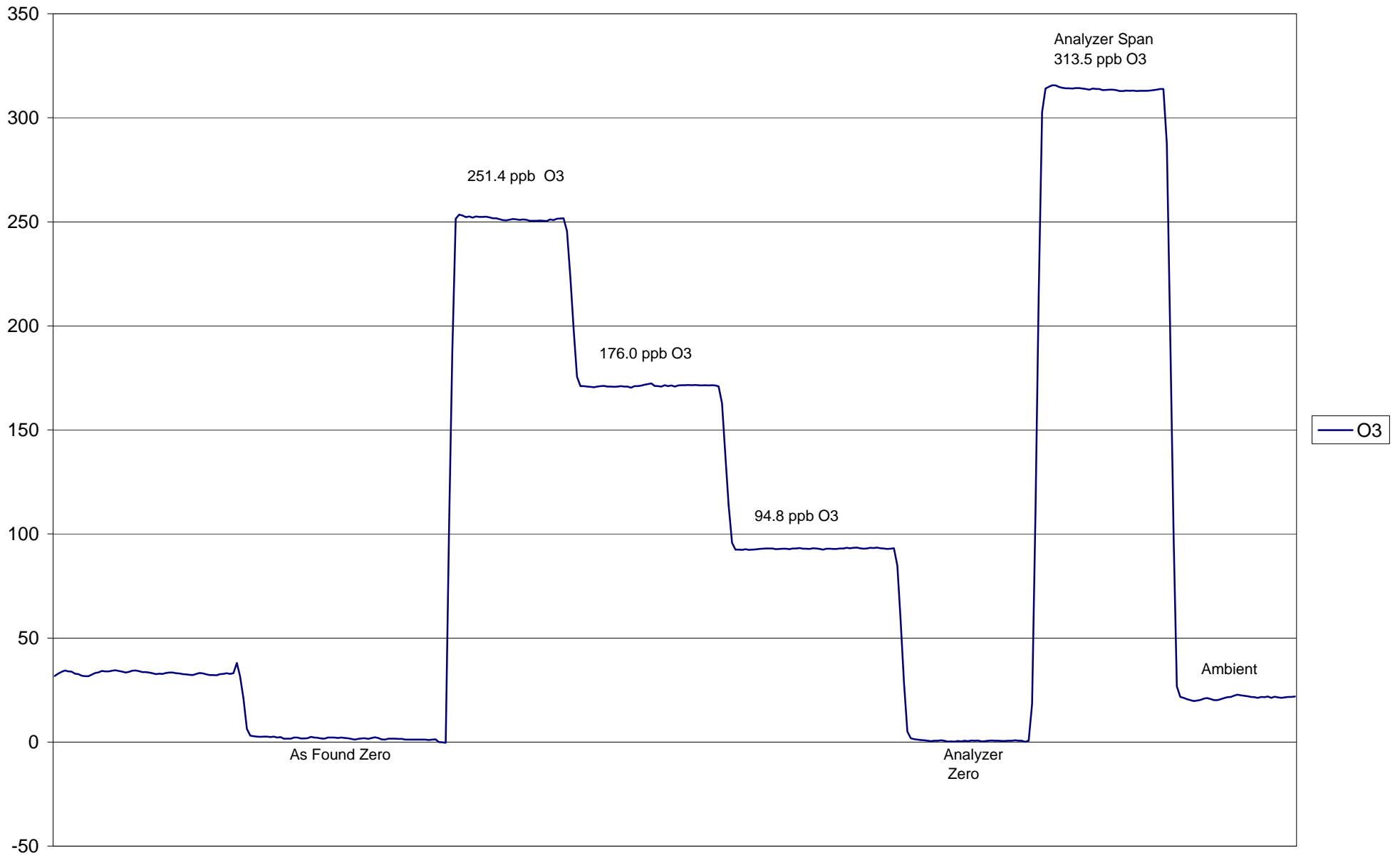
# Kinuso NO<sub>x</sub> Calibration







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



October 23, 2009

# Calibration Report



Parameter SO2

Air Monitoring Network PASZA

## Station Information

Calibration Date	October 30, 2009	Previous Calibration	September 28, 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)	9:40	End Time (MST)	12:29
Barometric Pressure	29.90 inches Hg	Station Temperature	25.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.6 ppm	Cal Gas Cert Date	12/3/2009
Gas Cert Reference	AAL 56996		
DACS make	Focus AP1000	DACS serial No.	45274
DACS voltage range	0 - 10 volt	DACS channel #	4
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.996394	Calculated slope	1.002069
Calculated intercept	-1.207253	Calculated intercept	-1.900716
Analyzer make	TEI 45C	Analyzer serial #	43C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	28.3		29.2	
Coefficient	0.714		0.717	
UV Lamp Voltage	697	LPM	697	LPM
Chamber Temp	44.2	V	44.2	V
Perm Gas Temp	35.1	C	35.1	C
Pressure	611	in Hg	611.4	in Hg
Sample Flow	0.465	LPM	0.468	LPM
Lamp Intesity	45865	Hz	45688	Hz

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.0	0.2	N/A
4990	39.85	400.9	401.1	0.9994
4990	19.92	201.2	203.4	0.9893
4990	9.90	100.2	103.8	0.9655
4990	0.00	0.0	0.6	As found zero
4990	39.88	401.2	401.0	As found span
Average Correction Factor				0.9848

Calculated value of As Found Response: 397.736 ppm      Percent Change of As Found: 0.9%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	167.3	ppm	167.0	ppm

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

Calibration Performed By: Grover Christiansen



# Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



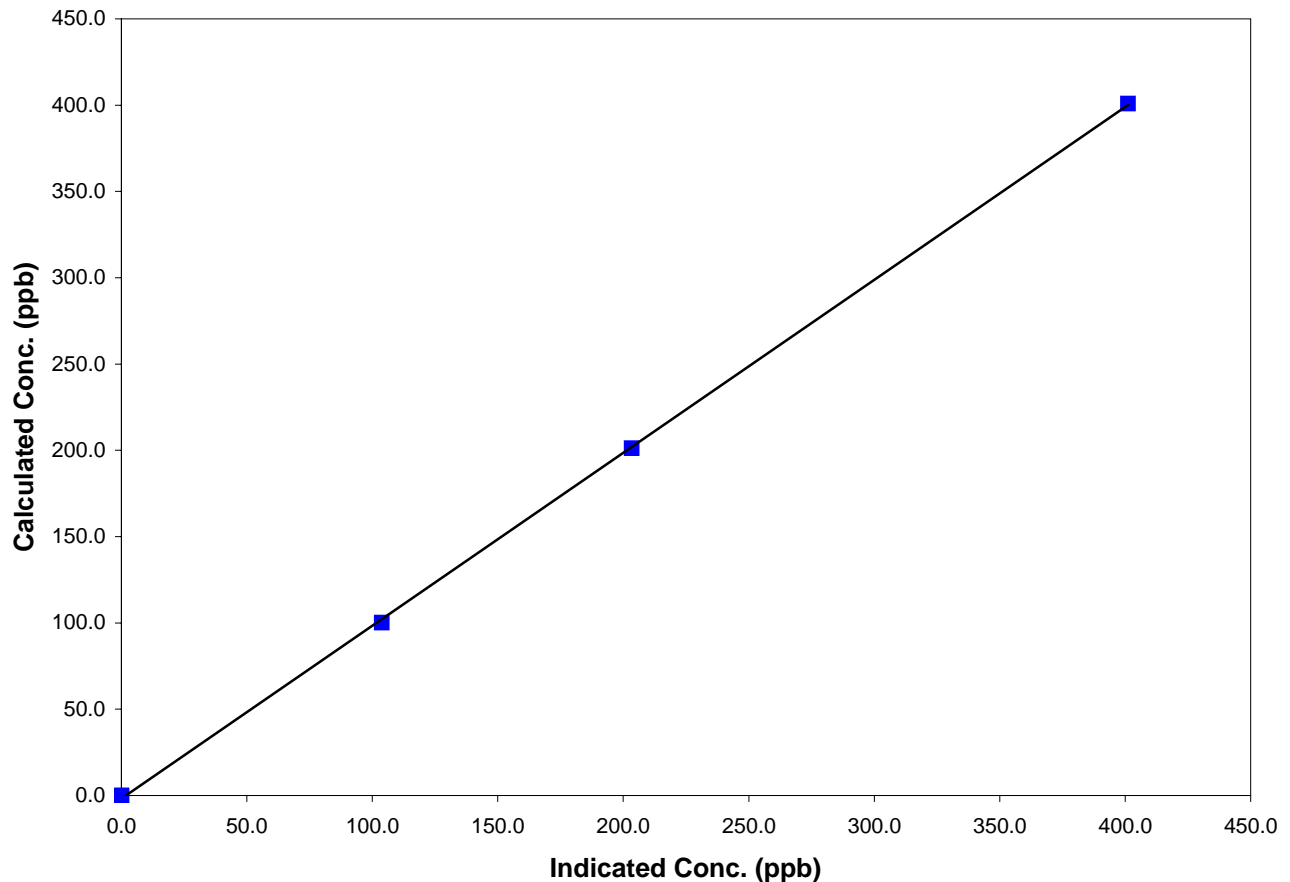
## Station Information

Calibration Date	October 30, 2009	Previous Calibration	September 28, 2009
Station Number	6	Station Location	Valleyview
Start Time (MST)	9:40	End Time (MST)	12:29
Analyzer make/model	TEI 45C	Analyzer serial #	43C-57531-313

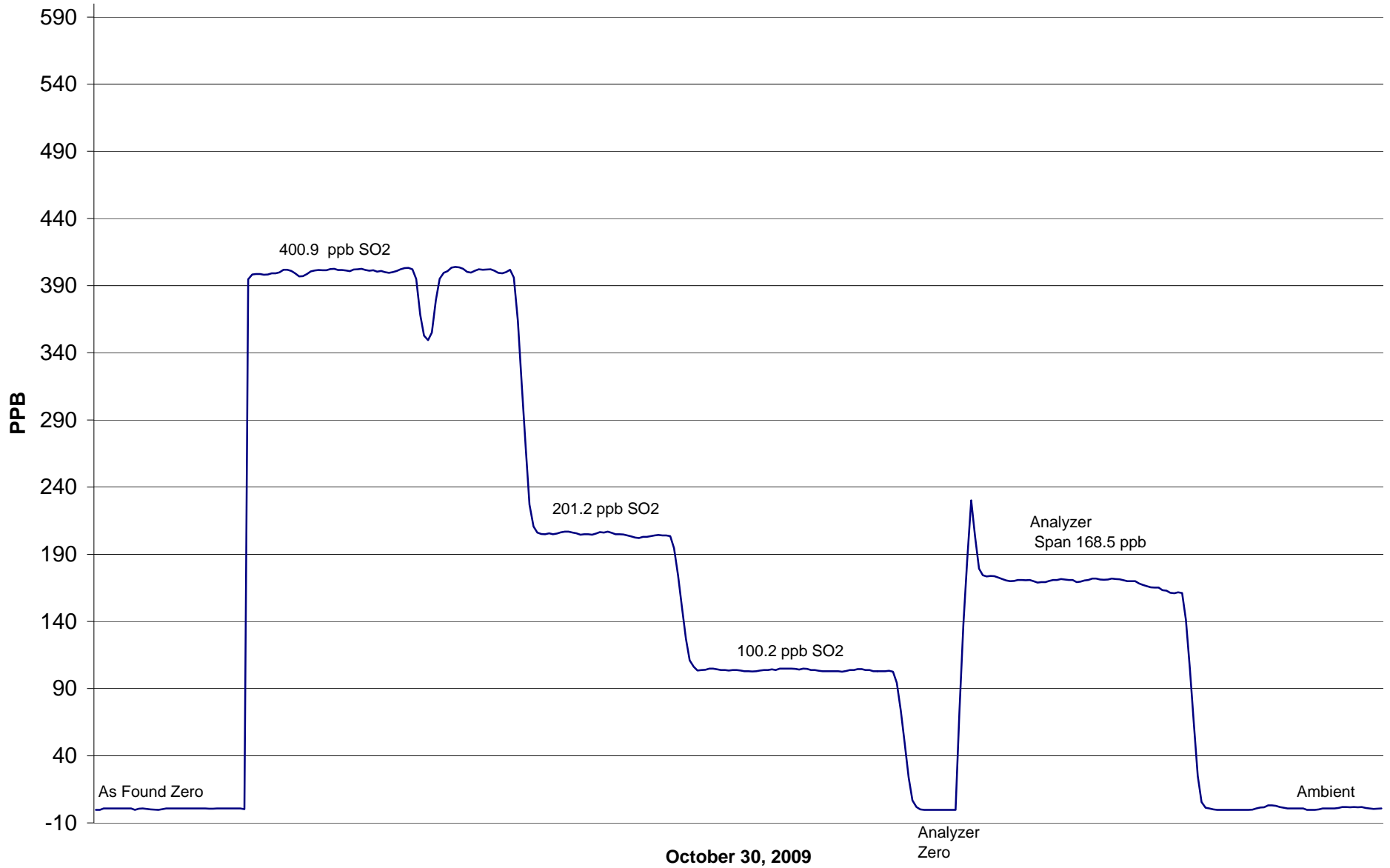
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
400.9	401.1	0.9994	Correlation Coefficient	0.999912
201.2	203.4	0.9893		
100.2	103.8	0.9655	Slope	1.002069
			Intercept	-1.900716

## SO2 Calibration Curve



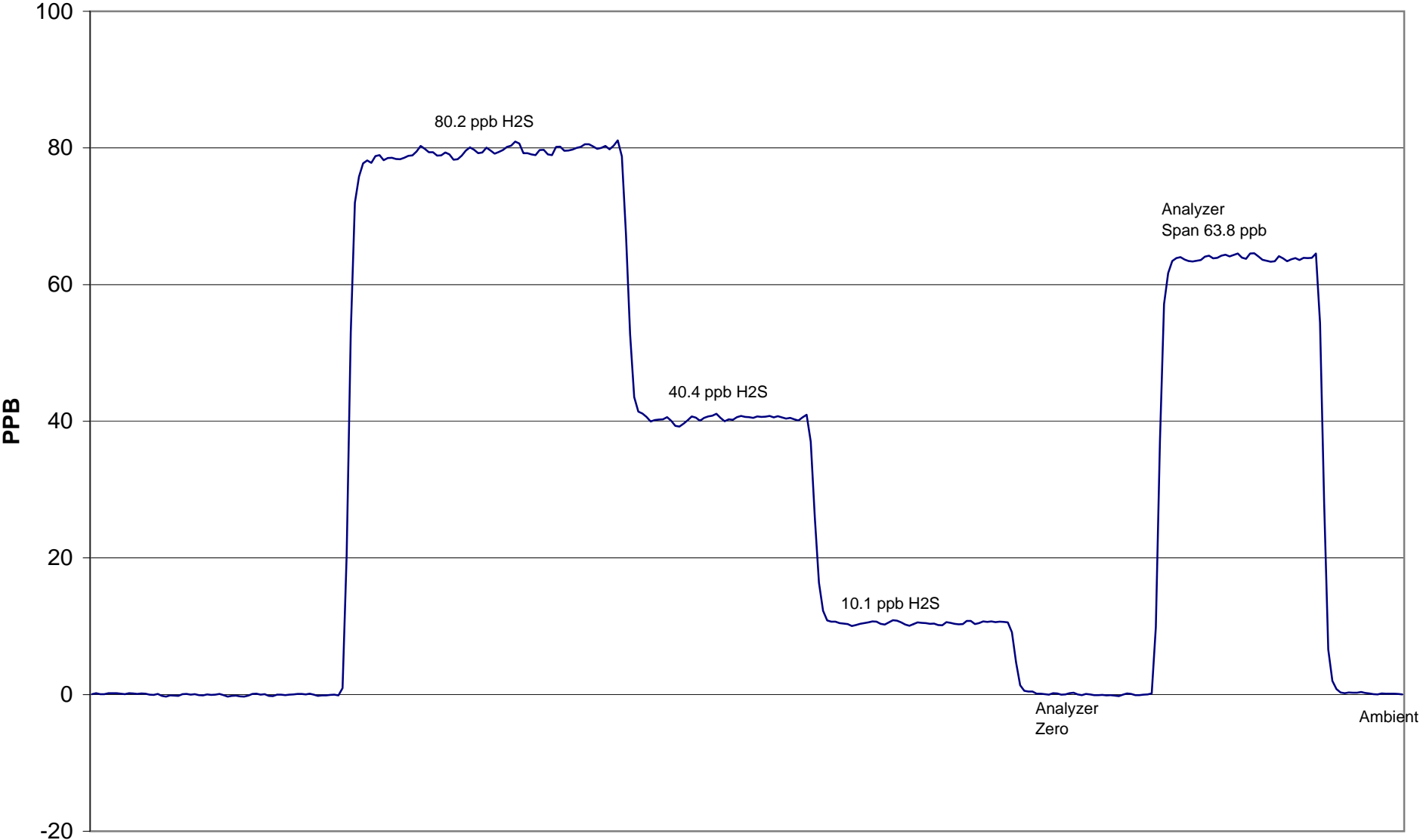
# Valleyview SO<sub>2</sub> Calibration







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



October 30, 2009