



# **Peace AirShed Zone Association**

## **Ambient Air Monitoring Network Summary**

**Continuous Ambient Air Quality Monitoring Program  
Monthly Report  
August 2010**

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



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October 14, 2010

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Edmonton Alberta T6B 2X3

**RE: Peace Airshed Zone Association (PASZA) – August 2010 Ambient Air Report**

Enclosed is the PASZA Ambient Monitoring Network Report for the month of **August 2010**.

**Continuous Monitoring: Six (6) Stations including Henry Pirker (Grande Prairie), Evergreen Park, Smoky Heights, Beaverlodge, Bonanza (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 July 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, with the exception of the PM<sub>2.5</sub> which had eight (8) 1-hour exceedences of the AAAQG and four (4) 24-hour exceedences of the AAAQO:
  - **Aug. 19 03:00 134 µg/m<sup>3</sup> Alberta Environment Reference #239315**
  - **Aug. 19 04:00 404 µg/m<sup>3</sup> Alberta Environment Reference #239315**
  - **Aug. 19 05:00 393 µg/m<sup>3</sup> Alberta Environment Reference #239315**
  - **Aug. 19 06:00 146 µg/m<sup>3</sup> Alberta Environment Reference #239315**
  - **Aug. 20 01:00 97 µg/m<sup>3</sup> Alberta Environment Reference #239315**
  - **Aug. 20 02:00 95 µg/m<sup>3</sup> Alberta Environment Reference #239315**
  - **Aug. 22 10:00 399 µg/m<sup>3</sup> Alberta Environment Reference #239315**
  - **Aug. 22 11:00 172 µg/m<sup>3</sup> Alberta Environment Reference #239315**
  - **Aug. 5 - 24-hour 38.7 µg/m<sup>3</sup> Alberta Environment Reference #238862**
  - **Aug. 6 - 24-hour 38.8 µg/m<sup>3</sup> Alberta Environment Reference #238910**
  - **Aug. 19 - 24-hour 70.1 µg/m<sup>3</sup> Alberta Environment Reference #239315**
  - **Aug. 22 - 24-hour 60.2 µg/m<sup>3</sup> Alberta Environment Reference #239315**
- ◆ All analyzers and sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of August.

**Evergreen Park Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Evergreen Park station, with the exception of the PM<sub>2.5</sub> which had eleven (11) 1-hour exceedences of the AAAQG and five (5) 24-hour exceedences of the AAAQO:
  - **Aug. 19 02:00 82 µg/m<sup>3</sup> Alberta Environment Reference #239314**
  - **Aug. 19 03:00 230 µg/m<sup>3</sup> Alberta Environment Reference #239314**
  - **Aug. 19 04:00 361 µg/m<sup>3</sup> Alberta Environment Reference #239314**
  - **Aug. 19 05:00 173 µg/m<sup>3</sup> Alberta Environment Reference #239314**

- Aug. 20 00:00 108 µg/m<sup>3</sup> Alberta Environment Reference #239314
  - Aug. 20 01:00 122 µg/m<sup>3</sup> Alberta Environment Reference #239314
  - Aug. 20 02:00 108 µg/m<sup>3</sup> Alberta Environment Reference #239314
  - Aug. 20 03:00 95 µg/m<sup>3</sup> Alberta Environment Reference #239314
  - Aug. 20 04:00 80µg/m<sup>3</sup> Alberta Environment Reference #239314
  - Aug. 20 05:00 85 µg/m<sup>3</sup> Alberta Environment Reference #239314
  - Aug. 20 06:00 85 µg/m<sup>3</sup> Alberta Environment Reference #239314
  - Aug. 5 - 24-hour 31.1 µg/m<sup>3</sup> Alberta Environment Reference #238861
  - Aug. 6 - 24-hour 34.4 µg/m<sup>3</sup> Alberta Environment Reference #238909
  - Aug. 19 - 24-hour 64.5 µg/m<sup>3</sup> Alberta Environment Reference #239314
  - Aug. 20 - 24-hour 37.5 µg/m<sup>3</sup> Alberta Environment Reference #239314
  - Aug. 22 - 24-hour 34.1 µg/m<sup>3</sup> Alberta Environment Reference #239314
- ◆ All analyzers / sensors at the Evergreen Park station had an operational uptime greater than 90% for the month of August.

#### Smoky Heights Station:

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station, with the exception of the PM<sub>2.5</sub> which had four (4) 1-hour exceedences of the AAAQG and four (4) 24-hour exceedences of the AAAQO:
- Aug. 4 23:00 86 µg/m<sup>3</sup> Alberta Environment Reference #238822
  - Aug. 19 03:00 89 µg/m<sup>3</sup> Alberta Environment Reference #239316
  - Aug. 19 04:00 272 µg/m<sup>3</sup> Alberta Environment Reference #239316
  - Aug. 19 05:00 188 µg/m<sup>3</sup> Alberta Environment Reference #239316
  - Aug. 5 - 24-hour 42.3 µg/m<sup>3</sup> Alberta Environment Reference #238863
  - Aug. 6 - 24-hour 30.2 µg/m<sup>3</sup> Alberta Environment Reference #238911
  - Aug. 19 - 24-hour 34.8 µg/m<sup>3</sup> Alberta Environment Reference #239316
  - Aug. 22 - 24-hour 33.9 µg/m<sup>3</sup> Alberta Environment Reference #239316
- ◆ All analyzers / sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of August.

#### Beaverlodge Station:

- ◆ The measured ambient air quality was within the AAAQO for the Beaverlodge station, with the exception of the PM<sub>2.5</sub> which had four (4) 1-hour exceedences of the AAAQG and five (5) 24-hour exceedences of the AAAQO:
- Aug. 19 02:00 92 µg/m<sup>3</sup> Alberta Environment Reference #239313
  - Aug. 19 03:00 284 µg/m<sup>3</sup> Alberta Environment Reference #239313
  - Aug. 19 04:00 322 µg/m<sup>3</sup> Alberta Environment Reference #239313
  - Aug. 19 05:00 138 µg/m<sup>3</sup> Alberta Environment Reference #239313
  - Aug. 5 - 24-hour 37.8 µg/m<sup>3</sup> Alberta Environment Reference #238860
  - Aug. 6 - 24-hour 41.0 µg/m<sup>3</sup> Alberta Environment Reference #238908
  - Aug. 19 - 24-hour 53.0 µg/m<sup>3</sup> Alberta Environment Reference #239313
  - Aug. 21 - 24-hour 31.1 µg/m<sup>3</sup> Alberta Environment Reference #239313
  - Aug. 22 - 24-hour 42.1 µg/m<sup>3</sup> Alberta Environment Reference #239313
- ◆ All analyzers / sensors at the Beaverlodge station had an operational uptime greater than 90% for the month of August.

#### Portable – Bonanza Station:

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

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

There were four duplicate sites sampled in the month of August: Gordondale, Wembley, Clairmont Lake and Kinuso. 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 0.5 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO<sub>2</sub> passives ranged from 0.2 ppb to 1.8 ppb, with a mean of 0.7 ppb.
- Monthly average concentrations for O<sub>3</sub> passives ranged from 13.6 ppb to 31.4 ppb, with a mean of 21.3 ppb.

If you have any questions or concerns, please contact Shelly Pruden, PASZA Program Manager at 780.833.4343 or 780.882.4071.

On Behalf of the,  
Peace Airshed Zone Association



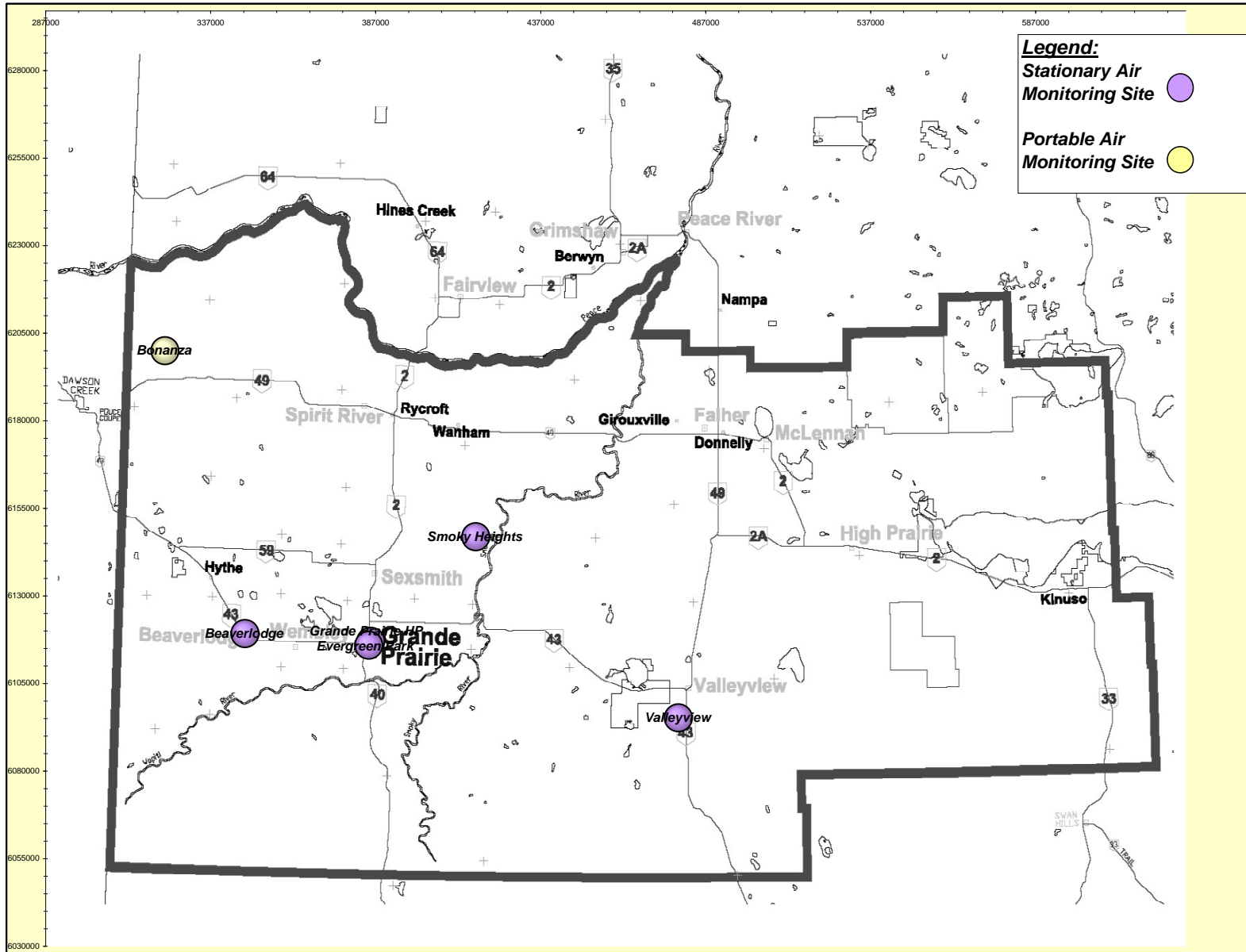
Shelly Pruden  
Program Manager



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

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# Location of PASZA Continuous Monitoring Stations



## PASZA Monthly Continuous Data Summary

Aug-2010 Peace Airshed Zone Association							Maximum Recorded Values				Operational Time (%)
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		1-hr		24-hr / 8-hr		
	1-hr	24-hr			1-hr	24-hr	Conc	Day	Conc	Day	
SO <sub>2</sub> (ppb)	172	57	Henry Pirker	0.1	0	0	1.3	Aug-03 12:00	0.4	Aug-05	100.0%
SO <sub>2</sub> (ppb)	172	57	Evergreen Park	0.3	0	0	10.4	Aug-19 13:00	1.4	Aug-19	99.7%
SO <sub>2</sub> (ppb)	172	57	Smoky Heights	0.2	0	0	4.4	Aug-12 02:00	0.7	Aug-23	100.0%
SO <sub>2</sub> (ppb)	172	57	Beaverlodge	0.4	0	0	4.0	Aug-19 15:00	1.9	Aug-05	96.5%
SO <sub>2</sub> (ppb)	172	57	Portable-Bonanza	0.3	0	0	2.5	Aug-03 09:00	0.5	Aug-11	100.0%
SO <sub>2</sub> (ppb)	172	57	Valleyview	1.2	0	0	27.8	Aug-27 18:00	12.9	Aug-27	100.0%
NO (ppb)			Henry Pirker	1.4	0	0	32.9	Aug-11 07:00	4.3	Aug-30	100.0%
NO <sub>2</sub> (ppb)	212	106	Henry Pirker	5.2	0	0	27.7	Aug-14 13:00	9.9	Aug-31	100.0%
NO <sub>x</sub> (ppb)			Henry Pirker	6.7	0	0	50.0	Aug-11 07:00	12.9	Aug-31	100.0%
NO (ppb)			Beaverlodge	0.4	0	0	14.2	Aug-05 08:00	1.2	Aug-29	96.5%
NO <sub>2</sub> (ppb)	212	106	Beaverlodge	2.3	0	0	12.1	Aug-05 08:00	3.6	Aug-18	96.5%
NO <sub>x</sub> (ppb)			Beaverlodge	2.7	0	0	26.9	Aug-05 08:00	14.7	Aug-18	96.5%
NO (ppb)			Portable-Bonanza	0.6	0	0	11.9	Aug-29 08:00	2.1	Aug-29	100.0%
NO <sub>2</sub> (ppb)	212	106	Portable-Bonanza	2.8	0	0	14.4	Aug-17 23:00	4.6	Aug-30	100.0%
NO <sub>x</sub> (ppb)			Portable-Bonanza	3.4	0	0	19.4	Aug-17 23:00	6.6	Aug-21	100.0%
O <sub>3</sub> (ppb)	82		Henry Pirker	22.6	0	-	53.5	Aug-05 18:00	33.8	Aug-19	100.0%
O <sub>3</sub> (ppb) - 8-hr			Henry Pirker		0				50.5	Aug-05	
O <sub>3</sub> (ppb)	82		Beaverlodge	24.6	0	-	51.2	Aug-05 18:00	36.9	Aug-05	96.5%
O <sub>3</sub> (ppb) - 8-hr			Beaverlodge		0				47.5	Aug-05	
O <sub>3</sub> (ppb)	82		Portable-Bonanza	20.9	0	-	61.3	Aug-05 17:00	32.5	Aug-05	100.0%
O <sub>3</sub> (ppb) - 8-hr			Portable-Bonanza		0				52.3	Aug-05	
CO (ppm)	13		Henry Pirker	0.15	0	-	2.0	Aug-19 04:00	0.3	Aug-06	100.0%
CO (ppm) - 8-hr		5	Henry Pirker		0				0.7	Aug-19	
THC (ppm)			Henry Pirker	2.00	-	-	3.2	Aug-04 22:00	2.2	Aug-04	100.0%
TRS (ppb)			Henry Pirker	0.2	-	-	0.8	Aug-31 03:00	0.3	Aug-31	100.0%
TRS (ppb)			Evergreen Park	0.5	-	-	2.0	Aug-18 18:00	0.7	Aug-19	99.7%
TRS (ppb)			Smoky Heights	0.4	-	-	1.3	Aug-06 05:00	0.5	Aug-22	100.0%
TRS (ppb)			Portable-Bonanza	0.4	-	-	1.1	Aug-18 05:00	0.6	Aug-16	100.0%
H <sub>2</sub> S (ppb)	10	3	Valleyview	0.1	0	0	0.8	Aug-21 06:00	0.2	Aug-15	100.0%

## PASZA Monthly Continuous Data Summary – continued

Aug-2010		Peace Airshed Zone Association					Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
PM2.5 (µg/m3)	80	30	Henry Pirker	14.3	8	4	403.6	Aug-19 04:00	70.1	Aug-19	100.0%
PM2.5 (µg/m3)	80	30	Evergreen Park	11.8	11	5	360.7	Aug-19 04:00	64.5	Aug-19	97.6%
PM2.5 (µg/m3)	80	30	Smoky Heights	9.5	4	4	272.2	Aug-19 04:00	42.3	Aug-05	100.0%
PM2.5 (µg/m3)	80	30	Beaverlodge	15.1	4	5	322.1	Aug-19 04:00	53.0	Aug-19	96.1%
RH (%)			Henry Pirker	63.2	-	-	92.9	Aug-25 07:00	83.5	Aug-26	100.0%
RH (%)			Evergreen Park	65.9	-	-	98.0	Aug-18 09:00	89.6	Aug-26	92.1%
RH (%)			Beaverlodge	61.5	-	-	96.2	Aug-18 08:00	84.9	Aug-26	96.4%
RH (%)			Valleyview	70.8	-	-	99.8	Aug-22 10:00	93.6	Aug-26	100.0%
SR (W/m <sup>2</sup> )			Henry Pirker	154.5	-	-	699.5	Aug-07 13:00	225.3	Aug-07	100.0%
Temp (°C)			Henry Pirker	15.4	-	-	29.5	Aug-18 15:00	20.3	Aug-07	100.0%
Temp (°C)			Evergreen Park	15.0	-	-	29.1	Aug-18 16:00	20.6	Aug-07	92.1%
Temp (°C)			Smoky Heights	14.8	-	-	28.8	Aug-18 16:00	20.2	Aug-07	100.0%
Temp (°C)			Beaverlodge	15.1	-	-	28.8	Aug-18 15:00	20.2	Aug-05	96.4%
Temp (°C)			Portable-Bonanza	15.4	-	-	28.8	Aug-05 15:00	21.1	Aug-06	100.0%
Temp (°C)			Valleyview	14.3	-	-	28.5	Aug-18 18:00	19.2	Aug-06	100.0%
WSPD s (km/hr)			Henry Pirker	9.8	-	-	31.0	Aug-19 15:00	23.3	Aug-19	99.2%
WSPD s (km/hr)			Evergreen Park	6.6	-	-	26.0	Aug-19 17:00	19.8	Aug-19	99.7%
WSPD s (km/hr)			Smoky Heights	12.2	-	-	40.0	Aug-19 17:00	29.6	Aug-19	94.8%
WSPD s (km/hr)			Beaverlodge	11.4	-	-	40.0	Aug-19 16:00	29.0	Aug-19	96.4%
WSPD s (km/hr)			Portable-Bonanza	12.1	-	-	40.0	Aug-19 15:00	22.9	Aug-19	100.0%
WSPD s (km/hr)			Valleyview	5.8	-	-	26.0	Aug-01 15:00	15.3	Aug-27	100.0%
WSPD v (km/hr)			Henry Pirker	5.2	-	-	31.0	Aug-19 15:00	22.8	Aug-19	99.2%
WSPD v (km/hr)			Evergreen Park	3.8	-	-	25.0	Aug-19 17:00	19.4	Aug-19	99.7%
WSPD v (km/hr)			Smoky Heights	6.8	-	-	39.0	Aug-19 17:00	29.0	Aug-19	94.8%
WSPD v (km/hr)			Beaverlodge	5.0	-	-	40.0	Aug-19 16:00	28.5	Aug-19	96.4%
WSPD v (km/hr)			Portable-Bonanza	5.2	-	-	39.0	Aug-19 15:00	21.0	Aug-19	100.0%
WSPD v (km/hr)			Valleyview	2.6	-	-	25.0	Aug-01 15:00	14.7	Aug-27	100.0%
WDIR			Henry Pirker	W	-	-	-	-	-	-	99.2%
WDIR			Evergreen Park	W	-	-	-	-	-	-	99.7%
WDIR			Smoky Heights	W	-	-	-	-	-	-	94.8%
WDIR			Beaverlodge	W	-	-	-	-	-	-	96.4%
WDIR			Portable-Bonanza	WSW	-	-	-	-	-	-	100.0%
WDIR			Valleyview	WNW	-	-	-	-	-	-	100.0%

# Continuous Network Equipment Summary

## PASZA – Henry Pirker Station

### General Station Issues

Routine monthly calibrations were performed on August 17<sup>th</sup> (CO & THC) and August 19<sup>th</sup> (SO<sub>2</sub>, TRS, NO<sub>x</sub>, O<sub>3</sub> & PM<sub>2.5</sub>).

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	No operational issues observed.
TRS	TEI	45C/43C	No operational issues observed.
PM <sub>2.5</sub>	R&P	1400AB	<p><b>No operational issues observed.</b></p> <p><b>Eight (8) 1-hour exceedences of the AAAQG and four (4) 24-hour exceedences of the AAAQO:</b></p> <ul style="list-style-type: none"> <li>○ Aug. 19      03:00    134 µg/m<sup>3</sup>      AENV Reference #239315</li> <li>○ Aug. 19      04:00    404 µg/m<sup>3</sup>      AENV Reference #239315</li> <li>○ Aug. 19      05:00    393 µg/m<sup>3</sup>      AENV Reference #239315</li> <li>○ Aug. 19      06:00    146 µg/m<sup>3</sup>      AENV Reference #239315</li> <li>○ Aug. 20      01:00    97 µg/m<sup>3</sup>        AENV Reference #239315</li> <li>○ Aug. 20      02:00    95 µg/m<sup>3</sup>        AENV Reference #239315</li> <li>○ Aug. 22      10:00    399 µg/m<sup>3</sup>      AENV Reference #239315</li> <li>○ Aug. 22      11:00    172 µg/m<sup>3</sup>      AENV Reference #239315</li> <li>○ Aug. 5 - 24-hour      38.7 µg/m<sup>3</sup>      AENV Reference #238862</li> <li>○ Aug. 6 - 24-hour      38.8 µg/m<sup>3</sup>      AENV Reference #238910</li> <li>○ Aug. 19 - 24-hour    70.1 µg/m<sup>3</sup>      AENV Reference #239315</li> <li>○ Aug. 22 - 24-hour    60.2 µg/m<sup>3</sup>      AENV Reference #239315</li> </ul>
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 / WD	Met One	010C/020C	Six (6) hours were flagged invalid due to flatlining – temperature dropped & suspect frost.



**PASZA – Evergreen Park Station**

**General Station Issues**

Routine monthly calibrations were performed on August 20<sup>th</sup> (SO<sub>2</sub> & TRS) and August 23<sup>rd</sup> (PM<sub>2.5</sub>). A DACS/Communication error occurred on July 30<sup>th</sup> to August 3<sup>rd</sup> which affected two channels (relative humidity & external temperature). A second DACS/Communication error occurred on August 3<sup>rd</sup> affecting all parameters – two (2) hours were flagged.

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43i	No operational issues observed other than above noted DACS error.
TRS	TEI	43C	Spans were outside the target August 8 <sup>th</sup> -10 <sup>th</sup> , 12 <sup>th</sup> – 14 <sup>th</sup> , 19 <sup>th</sup> – 20 <sup>th</sup> and 25 <sup>th</sup> & 26 <sup>th</sup> , perm tube to be replaced (was replaced in September). No operational issues observed other than above noted DACS error.
PM <sub>2.5</sub>	R&P	1400AB	<p><b>The maximum values were not captured in the DACS from August 1<sup>st</sup> to 3<sup>rd</sup> (related to errors that occurred with the other channels). Two (2) hours were flagged for above noted DACS error. A total of thirteen (13) hours were flagged for baseline drift. On August 23<sup>rd</sup> TEOM was flagged for calibration and filter change, however three (3) hours were flagged invalid after due to negative response, it was recalibrated immediately.</b></p> <p><b>Eleven (11) 1-hour exceedences of the AAAQG and five (5) 24-hour exceedences of the AAAQO:</b></p> <ul style="list-style-type: none"> <li>○ Aug. 19      02:00    82 µg/m<sup>3</sup>      AENV Reference #239314</li> <li>○ Aug. 19      03:00    230 µg/m<sup>3</sup>     AENV Reference #239314</li> <li>○ Aug. 19      04:00    361 µg/m<sup>3</sup>     AENV Reference #239314</li> <li>○ Aug. 19      05:00    173 µg/m<sup>3</sup>     AENV Reference #239314</li> <li>○ Aug. 20      00:00    108 µg/m<sup>3</sup>     AENV Reference #239314</li> <li>○ Aug. 20      01:00    122 µg/m<sup>3</sup>     AENV Reference #239314</li> <li>○ Aug. 20      02:00    108 µg/m<sup>3</sup>     AENV Reference #239314</li> <li>○ Aug. 20      03:00    95 µg/m<sup>3</sup>      AENV Reference #239314</li> <li>○ Aug. 20      04:00    80µg/m<sup>3</sup>      AENV Reference #239314</li> <li>○ Aug. 20      05:00    85 µg/m<sup>3</sup>      AENV Reference #239314</li> <li>○ Aug. 20      06:00    85 µg/m<sup>3</sup>      AENV Reference #239314</li> <li>○ Aug. 5 - 24-hour    31.1 µg/m<sup>3</sup>     AENV Reference #238861</li> <li>○ Aug. 6 - 24-hour    34.4 µg/m<sup>3</sup>     AENV Reference #238909</li> <li>○ Aug. 19 - 24-hour   64.5 µg/m<sup>3</sup>     AENV Reference #239314</li> <li>○ Aug. 20 - 24-hour   37.5 µg/m<sup>3</sup>     AENV Reference #239314</li> <li>○ Aug. 22 - 24-hour   34.1 µg/m<sup>3</sup>     AENV Reference #239314</li> </ul>
ET	Met One/Gill	083D	A total of fifty-eight (58) hours were flagged for above noted DACS errors. One (1) hour flagged for maintenance (reconfiguring DACS).
RH	Met One/Gill		A total of fifty-eight (58) hours were flagged for above noted DACS errors. One (1) hour flagged for maintenance (reconfiguring DACS).
WS / WD	Met One/ Gill		No operational issues observed other than above noted DACS error.

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**PASZA – Smoky Heights Station**

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**General Station Issues**

Routine monthly calibrations were performed on August 8<sup>th</sup> (TRS & SO<sub>2</sub>).

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM <sub>2.5</sub>	R&P	1400AB	<p><b>No operational issues observed.</b></p> <p><b>Four (4) 1-hour exceedences of the AAAQG and four (4) 24-hour exceedences of the AAAQO:</b></p> <ul style="list-style-type: none"> <li>○ <b>Aug. 4            23:00    86 µg/m<sup>3</sup>        AENV Reference #238822</b></li> <li>○ <b>Aug. 19          03:00    89 µg/m<sup>3</sup>        AENV Reference #239316</b></li> <li>○ <b>Aug. 19          04:00    272 µg/m<sup>3</sup>       AENV Reference #239316</b></li> <li>○ <b>Aug. 19          05:00    188 µg/m<sup>3</sup>       AENV Reference #239316</b></li> <li>○ <b>Aug. 5 - 24-hour    42.3 µg/m<sup>3</sup>      AENV Reference #238863</b></li> <li>○ <b>Aug. 6 - 24-hour    30.2 µg/m<sup>3</sup>      AENV Reference #238911</b></li> <li>○ <b>Aug. 19 - 24-hour   34.8 µg/m<sup>3</sup>      AENV Reference #239316</b></li> <li>○ <b>Aug. 22 - 24-hour   33.9 µg/m<sup>3</sup>      AENV Reference #239316</b></li> </ul>
ET	Met One	083D	No operational issues observed.
WS	Met One	010C	A total of thirty-nine (39) hours were flagged invalid due to animal activity chewing through the cables. Wiring was redone to on August 13 <sup>th</sup> to fix the issue.
WD	Met One	020C	A total of thirty-nine (39) hours were flagged invalid due to animal activity chewing through the cables. Wiring was redone to on August 13 <sup>th</sup> to fix the issue.

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**PASZA – Beaverlodge Station**

**General Station Issues**

Routine monthly calibrations were performed on August 6<sup>th</sup> (SO<sub>2</sub>, O<sub>3</sub> & NO<sub>x</sub> & PM<sub>2.5</sub>). A DACS / Communication error occurred on August 25<sup>th</sup> and 27<sup>th</sup> – a total of twenty-six (26) or twenty-seven (27) hours were flagged invalid for all parameters.

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43CTL	No operational issues observed other than above noted DACS error.
NOx/NO/NO <sub>2</sub>	TEI	42C	No operational issues observed other than above noted DACS error.
O <sub>3</sub>	TEI	49C	No operational issues observed other than above noted DACS error.
PM <sub>2.5</sub>	R&P	1400AB	<p><b>Two (2) hours were flagged invalid on August 15<sup>th</sup> due to a power bump. No other operational issues observed other than above noted DACS error.</b></p> <p><b>Four (4) 1-hour exceedences of the AAAQG and five (5) 24-hour exceedences of the AAAQO:</b></p> <ul style="list-style-type: none"> <li>○ Aug. 19      02:00    92 µg/m<sup>3</sup>      AENV Reference #239313</li> <li>○ Aug. 19      03:00    284 µg/m<sup>3</sup>     AENV Reference #239313</li> <li>○ Aug. 19      04:00    322 µg/m<sup>3</sup>     AENV Reference #239313</li> <li>○ Aug. 19      05:00    138 µg/m<sup>3</sup>     AENV Reference #239313</li> <li>○ Aug. 5 - 24-hour    37.8 µg/m<sup>3</sup>     AENV Reference #238860</li> <li>○ Aug. 6 - 24-hour    41.0 µg/m<sup>3</sup>     AENV Reference #238908</li> <li>○ Aug. 19 - 24-hour   53.0 µg/m<sup>3</sup>     AENV Reference #239313</li> <li>○ Aug. 21 - 24-hour   31.1 µg/m<sup>3</sup>     AENV Reference #239313</li> <li>○ Aug. 22 - 24-hour   42.1 µg/m<sup>3</sup>     AENV Reference #239313</li> </ul>
ET	n/a	n/a	No operational issues observed other than above noted DACS error.
RH	n/a	n/a	No operational issues observed other than above noted DACS error.
WS	Blue Sky	857	No operational issues observed other than above noted DACS error.
WD	Blue Sky	857	No operational issues observed other than above noted DACS error.

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**PASZA – Bonanza (Portable) Station**

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**General Station Issues**

Routine monthly calibrations were performed on August 10<sup>th</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	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
NO <sub>x</sub> /NO/NO <sub>2</sub>	TEI	42I	No operational issues observed.
O <sub>3</sub>	TEI	49C	No operational issues observed.
ET	Met One		No operational issues observed.
WS	Met One		No operational issues observed.
WD	Met One		No operational issues observed.

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**PASZA – Valleyview Station**

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**General Station Issues**

Routine monthly calibrations were performed on August 7<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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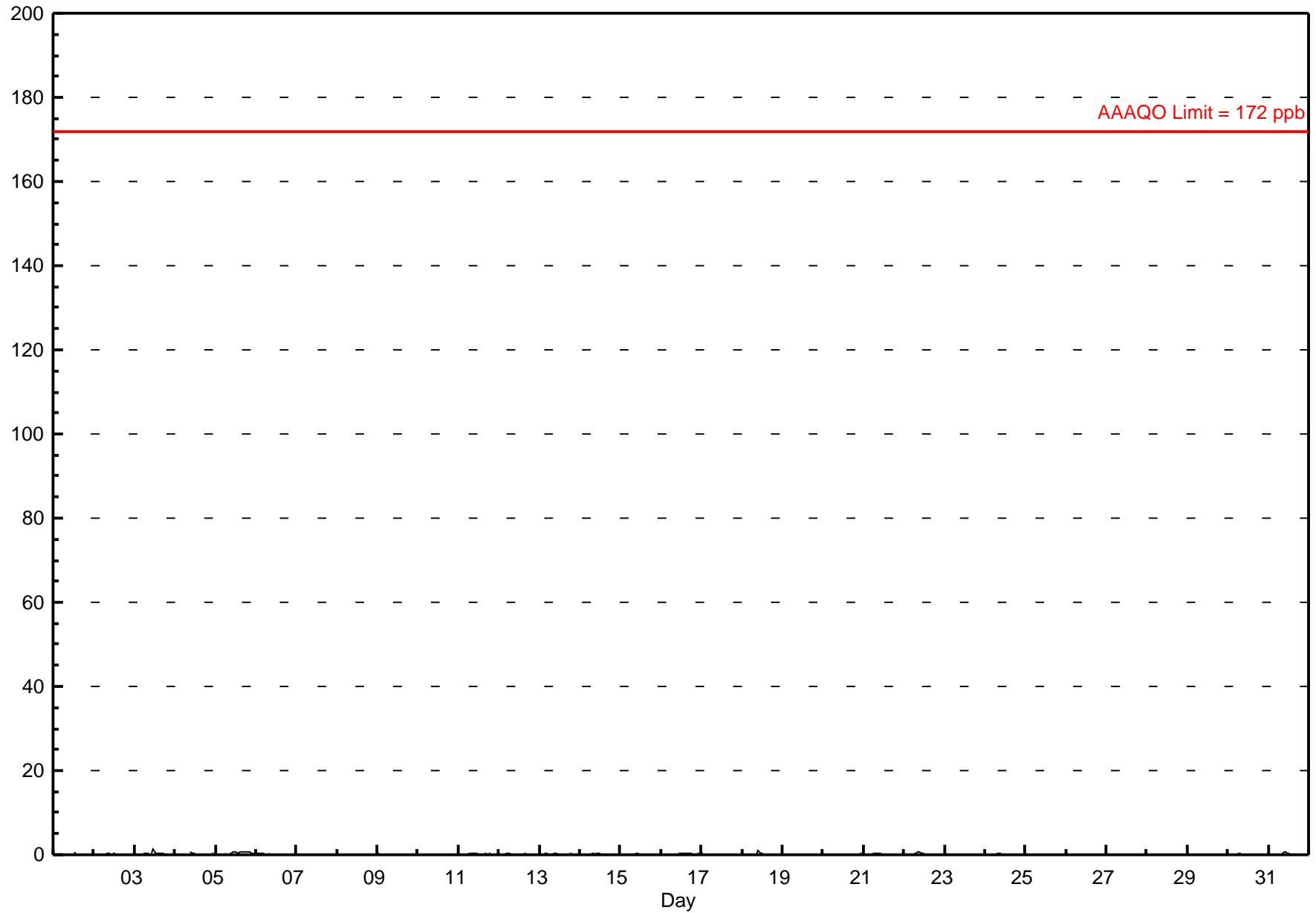
PASZA  
Henry Pirker Station  
Monthly Summary Tables, Graphs and  
Roses

# Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb

Henry Pirker - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.3 ppb on Aug 3 12:00      Maximum Daily Average: 0.4 ppb on Aug 5		Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0																								
Minimum Value: 0 ppb on Aug 1 01:00 Maximum Diurnal Average: 0.2 ppb at hour 10 Monthly Average: 0.07 ppb		Minimum Daily Average: 0.0 ppb on Aug 23 Minimum Diurnal Average: 0.0 ppb at hour 3 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> = 0.1 P <sub>90</sub> = 0.2 P <sub>99</sub> = 0.7																								
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-Aug	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0.0	0.5
2-Aug	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
3-Aug	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.3
4-Aug	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
5-Aug	0	0	0	0	0	0	0	A	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.4	0.7
6-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
7-Aug	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
8-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
9-Aug	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	0.4
10-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Aug	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
12-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.3
13-Aug	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
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
15-Aug	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	0.4
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.4
17-Aug	0	0	0	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
18-Aug	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.1
19-Aug	0	0	0	0	A	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
20-Aug	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	0.4
21-Aug	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
22-Aug	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
23-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
24-Aug	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	0.5
25-Aug	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
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.0
27-Aug	0	0	0	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
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1
29-Aug	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
30-Aug	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
31-Aug	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.8
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration      A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 57 ppb																										





# Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb

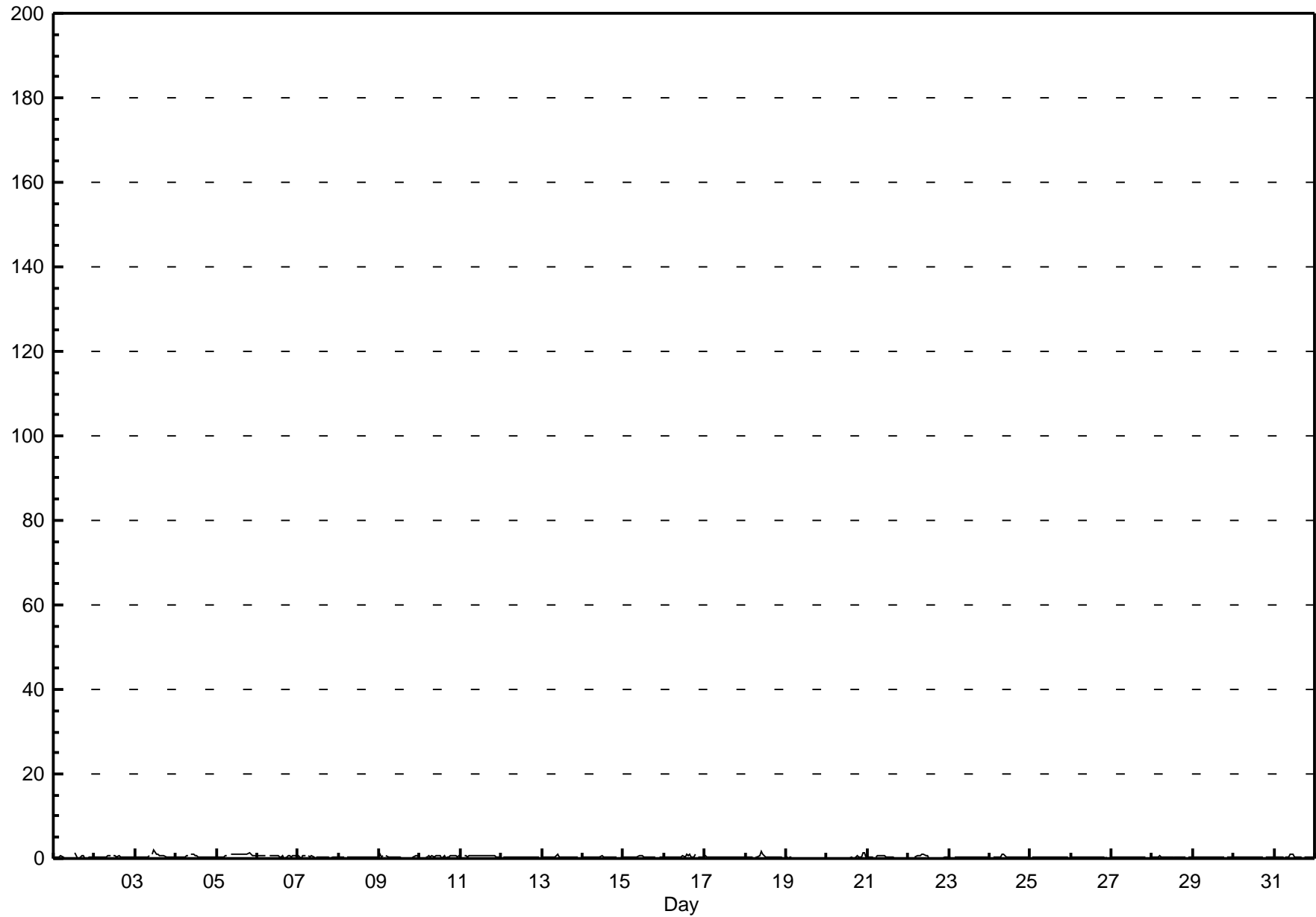
Henry Pirker - August 2010

Maximum Value: 1.9 ppb on Aug 3 12:00		Maximum Daily Average: 0.8 ppb on Aug 5		Hours in Service: 744																							
Minimum Value: 0 ppb on Aug 18 23:00		Minimum Daily Average: 0.1 ppb on Aug 19		Hours of Data: 708																							
Maximum Diurnal Average: 0.6 ppb at hour 10		Minimum Diurnal Average: 0.3 ppb at hour 2		Hours of Missing Data: 36																							
Monthly Average: 0.41 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.3 Median = 0.4 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 0.6 P <sub>99</sub> = 1.2		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-Aug	0	0	0	0	1	0	0	0	0	0	0	A	1	1	0	0	1	1	0	0	0	0	0	0	0.3	1.3	
2-Aug	0	0	0	0	0	0	0	0	1	1	A	1	1	0	1	0	0	0	0	0	0	0	0	0	0.4	0.8	
3-Aug	0	0	0	0	0	0	0	0	1	A	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0.6	1.9	
4-Aug	0	0	0	0	0	0	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2	
5-Aug	0	0	0	0	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2		
6-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	0	0	1	0	0	1	1	0	1	1	0	0.5	0.5	
7-Aug	1	0	0	1	1	A	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
8-Aug	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	
9-Aug	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.3	0.9	
10-Aug	0	0	A	0	0	1	0	1	0	1	1	1	0	1	0	0	0	0	1	1	1	1	0	1	0.4	0.6	
11-Aug	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.5	0.6	
12-Aug	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.5	0.5	
13-Aug	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	1	A	0	0.5	1.0	
14-Aug	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.5	
15-Aug	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.8	
16-Aug	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	1	A	0	0	0	0	0.5	0.9	
17-Aug	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
18-Aug	0	0	0	0	0	A	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.7	
19-Aug	0	0	0	0	A	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
20-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0.2	1.3	
21-Aug	0	0	0	0	A	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8	
22-Aug	0	0	0	A	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1	
23-Aug	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	
24-Aug	0	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9	
25-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.5	
26-Aug	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	
27-Aug	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	0.5	
28-Aug	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.6	
29-Aug	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	0.5	
30-Aug	0	0	1	0	0	0	1	1	0	1	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0.5	0.5	
31-Aug	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.5	1.2	
		0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
		0.9	0.5	0.5	0.6	0.7	0.6	0.8	0.9	1.0	1.7	1.2	1.9	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.0	1.3	1.3	0.7	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																									

# Hourly Maximums

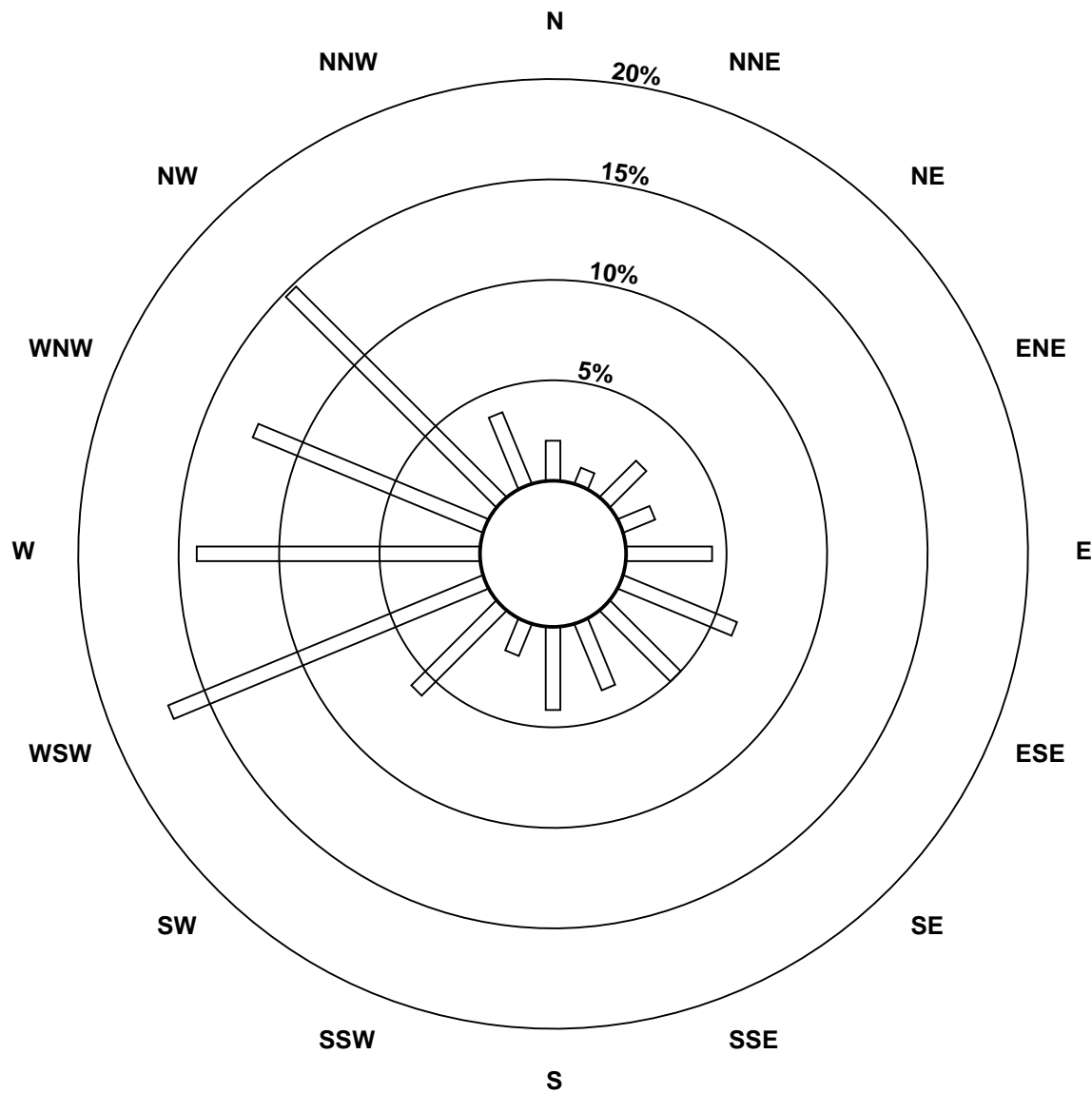
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Henry Pirker - August 2010

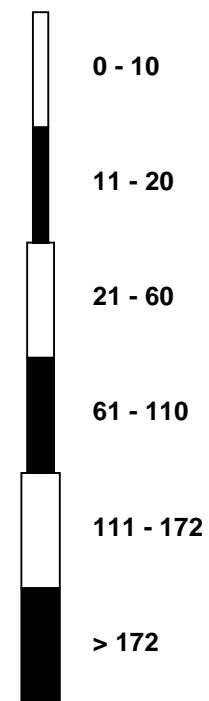


# Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Henry Pirker - August 2010



## Pollutant Classes (ppb)



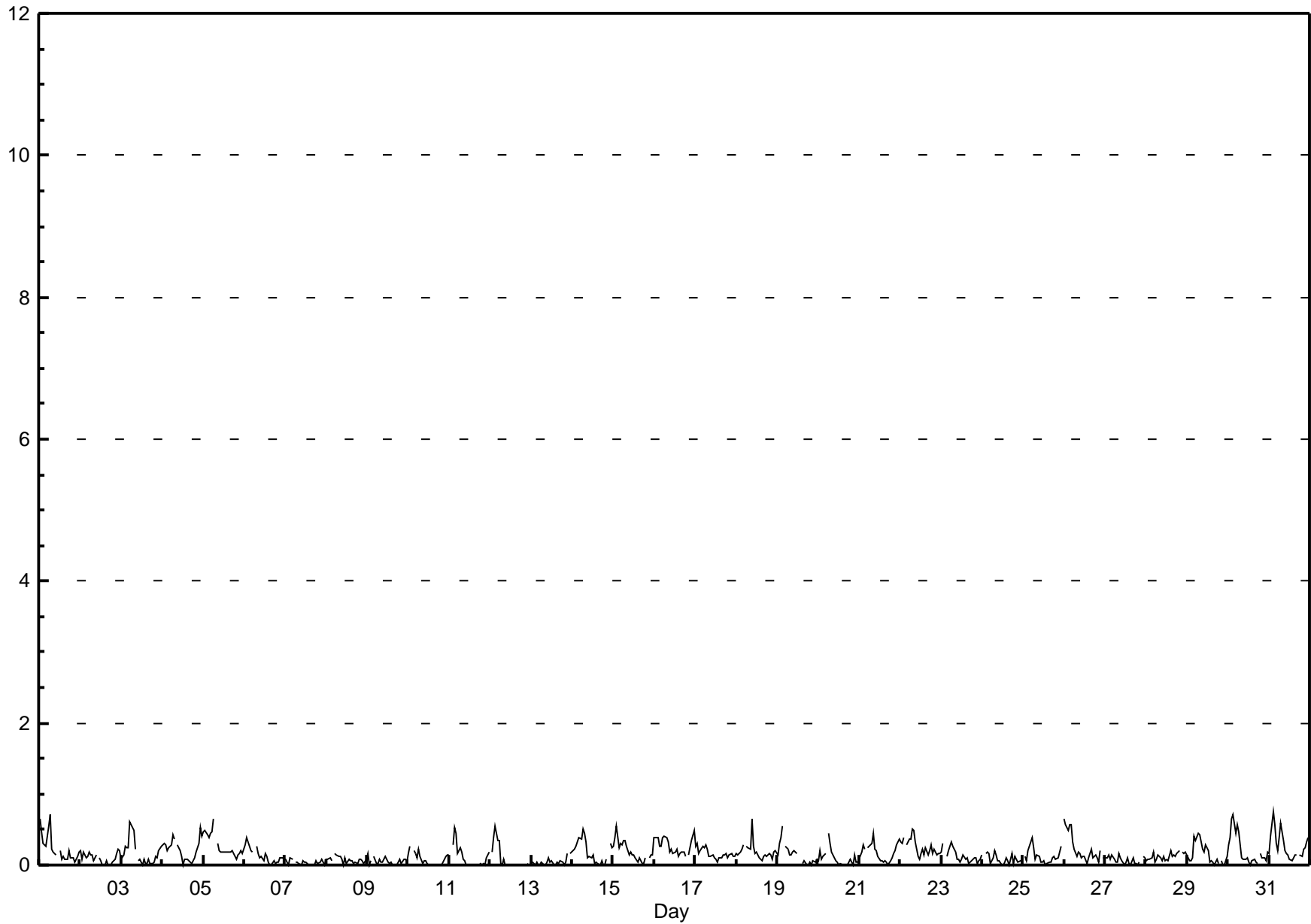
# Hourly Averages

## Total Reduced Sulphur (TRS) - ppb

### Henry Pirker - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.8 ppb on Aug 31 03:00      Maximum Daily Average: 0.3 ppb on Aug 31		Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0																									
Minimum Value: 0 ppb on Aug 2 14:00 Maximum Diurnal Average: 0.3 ppb at hour 7 Monthly Average: 0.15 ppb		Minimum Daily Average: 0.0 ppb on Aug 7 Minimum Diurnal Average: 0.1 ppb at hour 15 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> = 0.4 P <sub>99</sub> = 0.6																									
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-Aug	1	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
2-Aug	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	0.2
3-Aug	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
4-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.2	0.5	
5-Aug	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
6-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
7-Aug	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	
8-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
9-Aug	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	
10-Aug	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	
11-Aug	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
12-Aug	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.6	
13-Aug	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	0.2	
14-Aug	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.5	
15-Aug	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.6	
16-Aug	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	
17-Aug	0	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	
18-Aug	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7	
19-Aug	0	0	0	1	A	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
20-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
21-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
22-Aug	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	0.5	
23-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
24-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
25-Aug	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	0.4	
26-Aug	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.7	
27-Aug	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	
28-Aug	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	
29-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4	
30-Aug	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.7	
31-Aug	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.8	
																								Diurnal Average	Diurnal Maximum		
																								0.2	0.7		
																								0.2	0.6		
																								0.3	0.8		
																								0.3	0.7		
																								0.3	0.6		
																								0.3	0.6		
																								0.3	0.7		
																								0.2	0.6		
																								0.2	0.5		
																								0.1	0.7		
																								0.1	0.3		
																								0.1	0.3		
																								0.1	0.2		
																								0.1	0.2		
																								0.1	0.2		
																								0.1	0.2		
																								0.1	0.2		
																								0.1	0.3		
																								0.1	0.2		
																								0.1	0.2		
																								0.1	0.3		
																								0.2	0.5		
																								0.2	0.5		

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

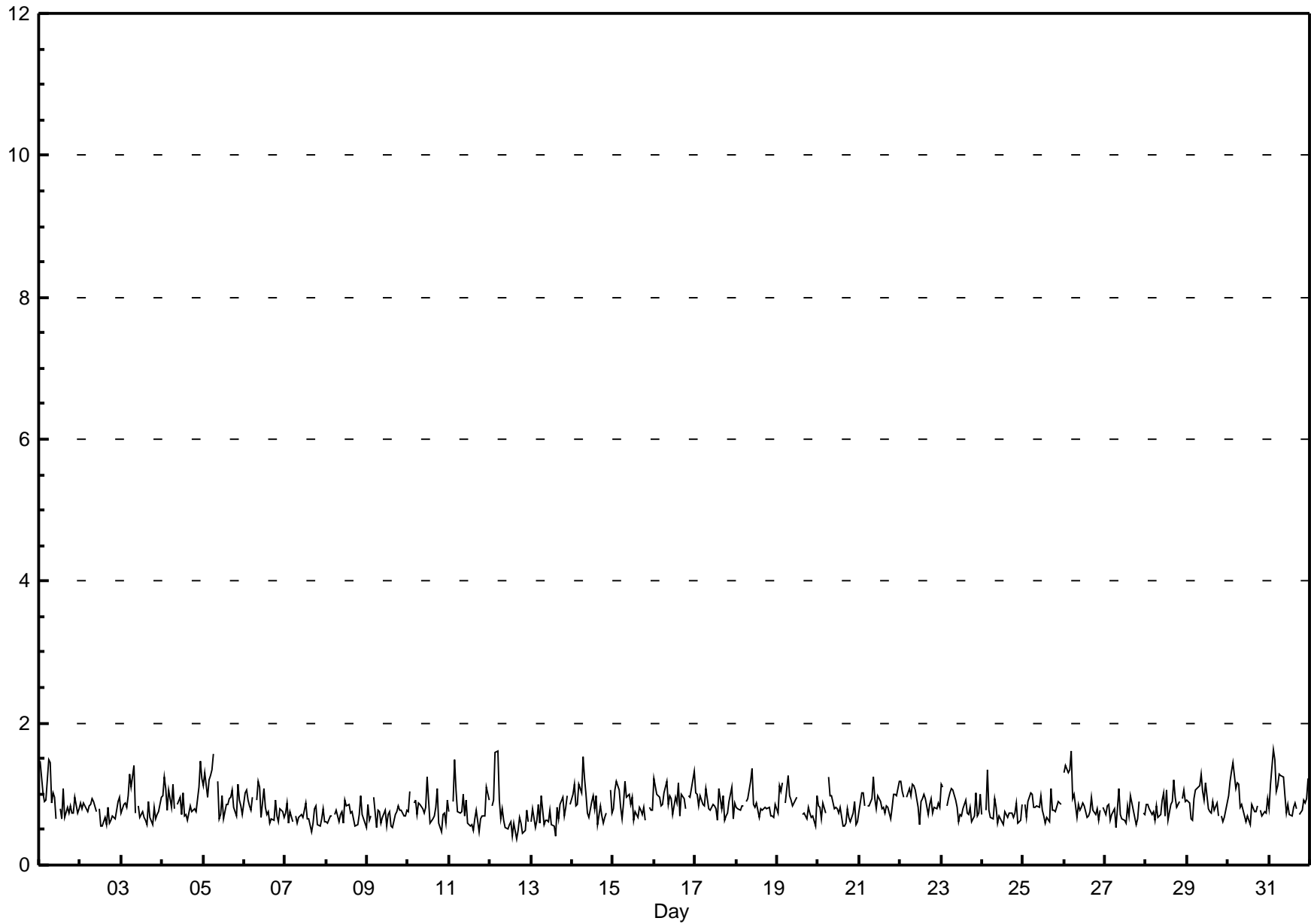


# Hourly Maximums

# Total Reduced Sulphur (TRS) - ppb

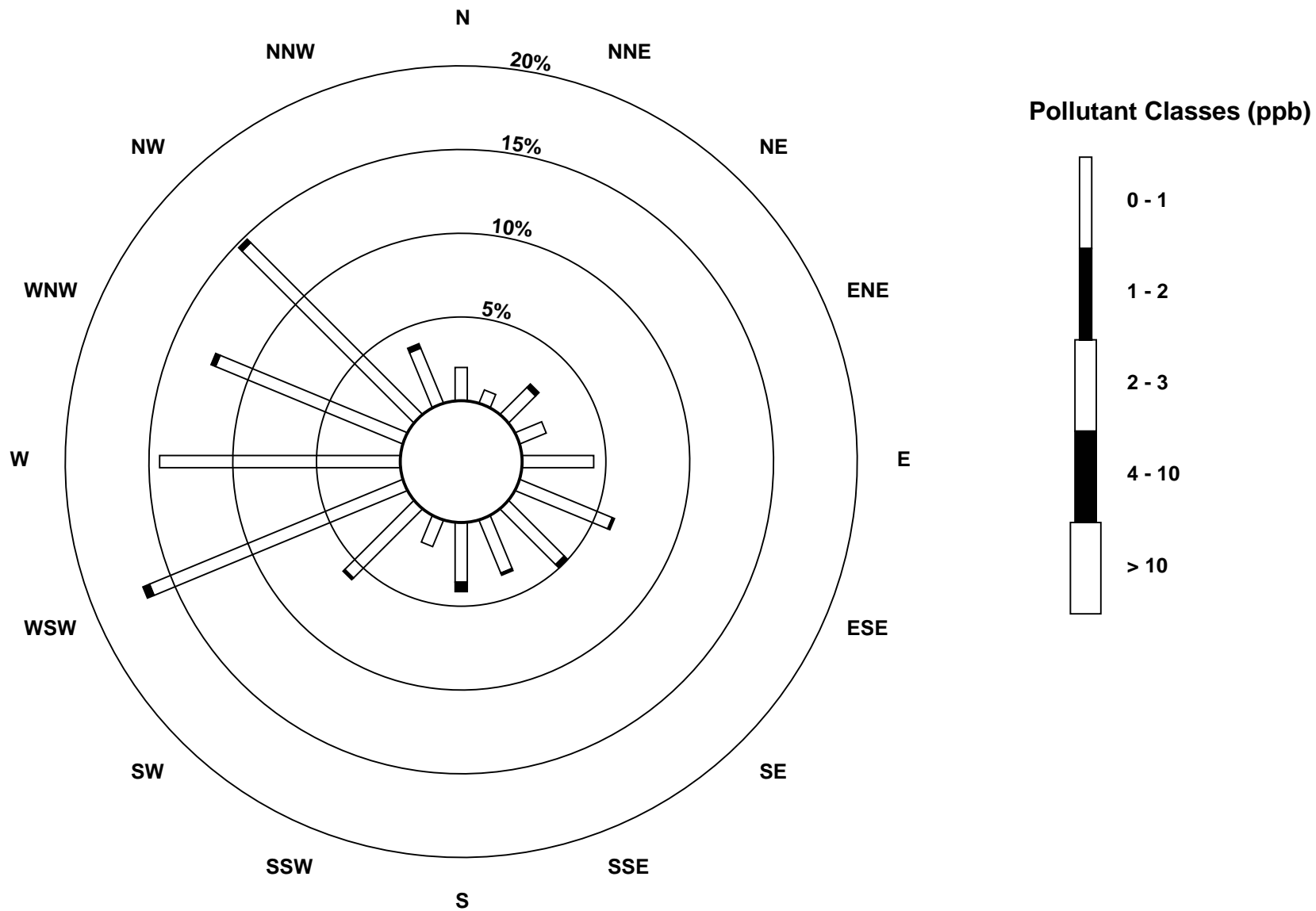
## Henry Pirker - August 2010

Maximum Value: 1.6 ppb on Aug 31 03:00		Maximum Daily Average: 1.0 ppb on Aug 31		Hours in Service: 744																						
Minimum Value: 0 ppb on Aug 12 16:00		Minimum Daily Average: 0.7 ppb on Aug 7		Hours of Data: 709																						
Maximum Diurnal Average: 1.0 ppb at hour 7		Minimum Diurnal Average: 0.7 ppb at hour 14		Hours of Missing Data: 35																						
Monthly Average: 0.83 ppb		Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.7 Median = 0.8 Q <sub>3</sub> = 0.9 P <sub>90</sub> = 1.1 P <sub>99</sub> = 1.5		Hours of Calibration: 35																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
2-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
3-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
4-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
5-Aug	1	1	1	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.6
6-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
7-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	0.9
8-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
9-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
10-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.8	1.2
11-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	0.8	1.5
12-Aug	A	1	1	2	2	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0	0	1	1	A	0.7	1.6
13-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	0.7	1.0
14-Aug	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.5
15-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.2
16-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.3
17-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
18-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
19-Aug	1	1	1	1	A	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	0.9	1.3
20-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
21-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
22-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
23-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
24-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
25-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.1
26-Aug	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.6
27-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
28-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.2
29-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.3
30-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	1.4
31-Aug	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.0	1.6
		0.9	1.0	0.9	1.0	1.0	0.9	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.8	0.8	0.8	0.9	Diurnal Average
		1.5	1.4	1.6	1.6	1.6	1.5	1.6	1.4	1.3	1.4	1.0	1.2	1.1	0.9	1.2	1.0	1.2	1.1	1.0	0.9	1.1	1.1	1.5	1.3	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								



# Pollutant Rose

Total Reduced Sulphur (TRS) - ppb  
Henry Pirker - August 2010





# Hourly Averages

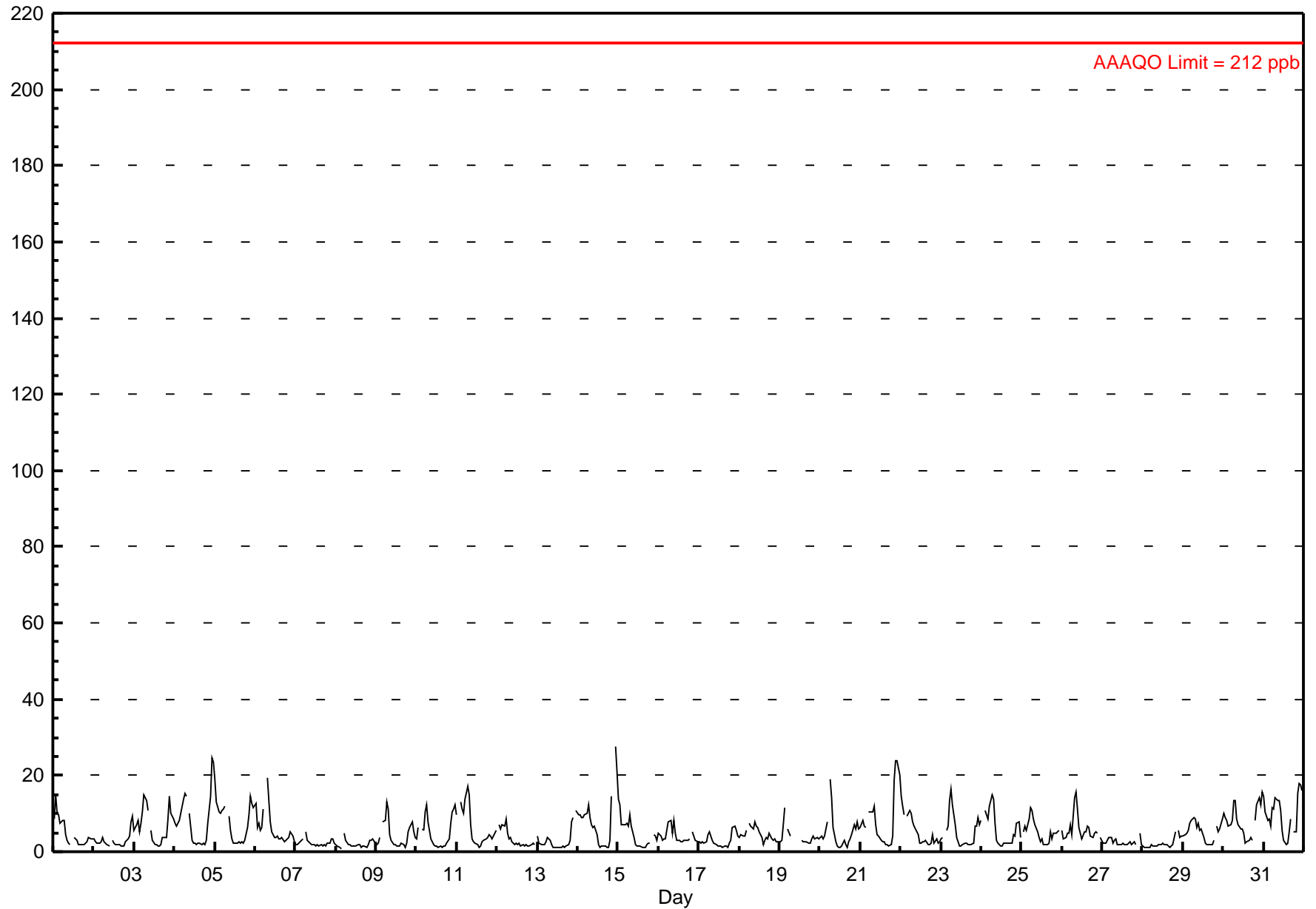
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Henry Pirker - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 27.7 ppb on Aug 14 23:00	Maximum Daily Average: 9.9 ppb on Aug 31
Minimum Value: 1 ppb on Aug 8 04:00	Hours of Data: 706
Maximum Diurnal Average: 9.3 ppb at hour 7	Hours of Missing Data: 38
Monthly Average: 5.16 ppb	Hours of Calibration: 38
Minimum Daily Average: 2.0 ppb on Aug 8	Percent Operational Time: 100.0
Minimum Diurnal Average: 2.1 ppb at hour 15	
Percentiles: P <sub>1</sub> = 1.1 P <sub>10</sub> = 1.6 Q <sub>1</sub> = 2.1 Median = 3.5 Q <sub>3</sub> = 7.1 P <sub>90</sub> = 11.1 P <sub>99</sub> = 19.8	

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-Aug	9	15	10	10	7	8	8	4	3	2	2	A	4	3	3	2	2	2	2	2	3	4	3	3	4.8	14.9																						
2-Aug	3	3	2	2	3	4	3	2	2	2	A	3	2	2	2	2	2	1	2	3	3	4	8	9	3.0	9.5																						
3-Aug	5	7	8	5	8	10	15	14	11	A	6	3	2	2	1	2	2	4	4	4	9	15	10	9	6.6	14.9																						
4-Aug	7	7	7	8	10	14	15	14	A	10	3	2	2	2	2	2	2	2	2	3	7	15	25	24	8.1	24.8																						
5-Aug	19	13	10	10	11	11	12	A	9	6	3	2	2	2	3	2	2	2	3	6	10	15	13	12	7.8	18.9																						
6-Aug	13	6	7	6	6	11	A	19	13	8	5	4	4	4	3	3	4	2	3	3	4	5	4	3	6.2	19.3																						
7-Aug	2	2	2	3	3	A	5	3	3	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2.4	5.2																						
8-Aug	2	1	1	1	A	5	3	2	2	2	1	1	1	2	2	1	1	1	1	2	3	3	3	2	2.0	4.8																						
9-Aug	2	2	4	A	8	8	13	11	4	3	2	2	1	1	1	2	2	1	2	5	6	8	5	4	4.3	13.2																						
10-Aug	3	6	A	6	5	10	12	8	3	3	2	2	1	1	2	1	2	2	2	3	7	11	11	12	5.1	12.5																						
11-Aug	10	A	13	11	10	14	17	15	7	3	2	2	2	1	2	3	3	3	4	5	4	3	4	6	6.2	17.1																						
12-Aug	A	7	6	7	7	9	5	3	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	A	3.4	8.6																						
13-Aug	4	2	2	2	2	2	4	3	2	1	1	1	1	1	1	1	1	1	2	3	8	9	A	11	2.9	10.8																						
14-Aug	10	10	9	9	10	10	12	9	7	6	7	4	2	1	1	2	1	1	1	3	15	A	28	21	7.7	27.7																						
15-Aug	14	12	7	7	7	7	7	10	7	4	2	2	2	1	1	1	1	2	2	2	A	4	4	3	4.7	13.6																						
16-Aug	5	4	3	3	3	6	8	8	5	8	5	3	3	2	3	3	3	3	3	A	5	4	3	3	4.2	8.3																						
17-Aug	3	2	2	2	3	5	5	4	3	2	2	2	2	1	1	1	1	1	2	3	6	7	6	4	2.9	6.6																						
18-Aug	4	4	4	4	6	A	7	7	6	8	7	6	5	4	2	3	4	3	5	3	3	3	3	3	4.5	7.8																						
19-Aug	3	3	7	11	A	6	4	C	C	C	C	C	C	3	2	3	3	2	2	3	4	3	4	4	--	11.5																						
20-Aug	4	4	3	4	8	A	19	14	6	3	1	1	1	2	3	2	1	3	3	5	7	6	8	6	4.9	19.0																						
21-Aug	6	8	7	6	A	11	10	11	12	7	5	4	3	3	2	2	2	2	2	4	19	24	24	20	8.4	24.0																						
22-Aug	15	12	10	A	9	11	10	8	7	6	5	2	2	2	3	3	2	2	2	5	2	3	2	3	5.5	14.7																						
23-Aug	3	4	A	6	7	14	16	12	7	4	3	2	1	2	2	2	2	2	2	2	7	7	9	7	5.3	16.3																						
24-Aug	8	A	11	10	9	12	15	14	8	3	2	2	1	2	2	2	2	2	2	5	4	7	8	4	5.8	14.7																						
25-Aug	A	5	7	5	9	12	11	8	7	5	4	3	3	2	2	2	2	5	3	5	5	5	6	A	5.3	11.6																						
26-Aug	5	4	4	5	5	7	5	14	16	11	6	5	3	5	5	7	6	4	4	5	5	5	A	4	6.1	15.8																						
27-Aug	2	2	2	3	4	4	2	3	4	2	2	2	2	2	2	2	3	2	2	3	2	A	5	2	2.5	4.8																						
28-Aug	1	1	1	1	1	2	1	2	2	2	2	2	2	2	2	2	1	2	2	5	A	6	4	4	2.1	5.7																						
29-Aug	4	5	5	5	8	8	9	9	7	7	6	6	4	2	2	2	2	2	3	A	7	5	6	9	5.3	8.8																						
30-Aug	10	9	8	7	7	8	14	13	8	7	6	6	5	2	3	3	4	3	A	8	12	14	12	16	8.1	15.7																						
31-Aug	15	10	8	9	7	12	11	14	14	14	11	5	3	2	2	5	9	A	5	5	15	18	18	16	9.9	17.8																						
																								6.6	5.9	5.9	5.8	6.4	8.6	9.3	8.9	6.4	4.9	3.6	2.9	2.4	2.2	2.1	2.3	2.4	2.2	2.5	3.8	6.4	7.5	8.3	7.7	Diurnal Average
																								18.9	14.9	13.0	11.5	10.9	14.0	19.0	19.3	15.8	13.5	10.7	6.4	5.2	5.2	5.3	6.8	8.6	5.3	5.0	8.4	18.8	24.0	27.7	23.6	Diurnal Maximum

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



# Hourly Maximums

Nitrogen Dioxide (NO<sub>2</sub>) - ppb

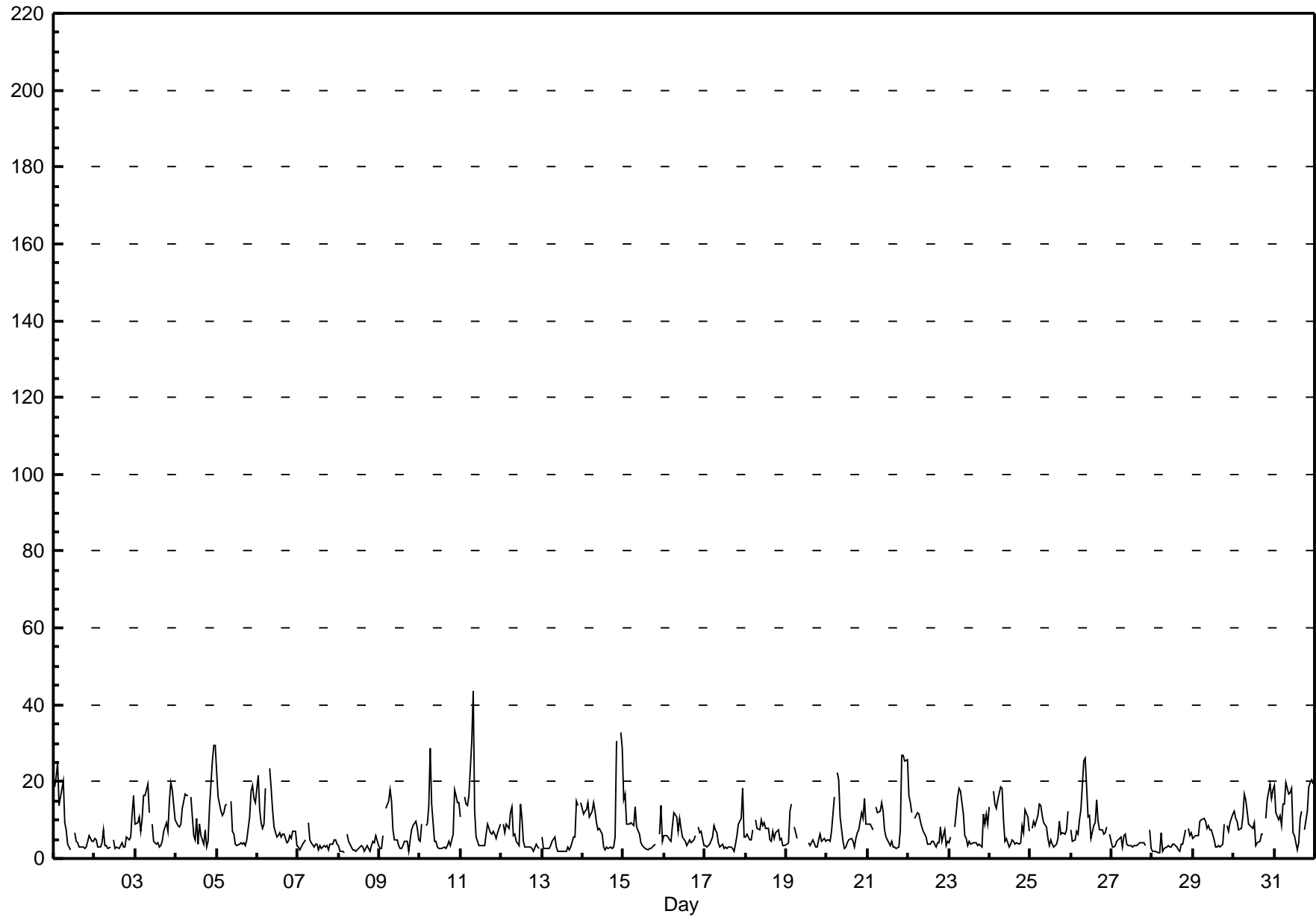
Henry Pirker - August 2010

Maximum Value: 43.7 ppb on Aug 11 08:00		Maximum Daily Average: 13.1 ppb on Aug 31		Hours in Service: 744																						
Minimum Value: 1 ppb on Aug 8 04:00		Minimum Daily Average: 3.1 ppb on Aug 8		Hours of Data: 706																						
Maximum Diurnal Average: 13.1 ppb at hour 8		Minimum Diurnal Average: 3.8 ppb at hour 14		Hours of Missing Data: 38																						
Monthly Average: 7.71 ppb		Percentiles: P <sub>1</sub> = 1.9 P <sub>10</sub> = 2.8 Q <sub>1</sub> = 3.5 Median = 5.9 Q <sub>3</sub> = 10.1 P <sub>90</sub> = 15.5 P <sub>99</sub> = 28.3		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-Aug	19	21	25	14	16	20	9	7	4	3	2	A	7	4	4	3	3	3	3	3	4	6	4	5	8.2	24.9
2-Aug	5	5	3	3	4	7	3	3	2	3	A	5	3	3	2	3	4	3	3	6	5	5	11	16	4.8	16.4
3-Aug	9	9	11	7	10	16	16	19	12	A	9	4	4	4	3	3	4	7	9	7	15	20	18	10	9.9	19.9
4-Aug	9	9	8	9	13	17	17	16	A	16	6	5	10	4	9	6	4	7	3	4	13	25	29	29	11.7	29.3
5-Aug	22	16	12	11	12	14	14	A	15	7	6	4	3	4	4	4	4	3	5	11	17	19	16	15	10.4	22.3
6-Aug	22	13	9	8	9	18	A	24	18	13	8	6	6	7	6	6	6	4	5	6	5	7	7	3	9.4	23.7
7-Aug	3	2	3	4	5	A	9	5	4	3	4	4	2	3	3	3	3	3	2	4	4	5	5	4	3.8	9.3
8-Aug	3	2	2	1	A	6	4	3	2	2	2	2	3	3	3	2	2	3	2	3	4	4	6	3	3.1	6.4
9-Aug	2	2	6	A	13	15	18	15	7	5	5	3	2	3	3	4	4	2	5	7	8	10	8	5	6.8	17.9
10-Aug	4	9	A	9	9	14	29	14	4	4	3	2	2	2	3	2	3	4	3	6	18	17	14	14	8.4	28.6
11-Aug	11	A	16	14	14	16	30	44	12	6	4	3	3	3	6	9	7	6	7	6	5	7	9	10.6	43.7	
12-Aug	A	9	7	9	8	12	14	6	6	4	3	14	11	4	3	3	3	3	2	2	4	3	2	A	6.0	14.2
13-Aug	5	2	2	2	2	3	4	5	3	2	2	2	2	2	2	3	2	3	6	5	15	14	A	14	4.6	14.8
14-Aug	11	12	13	14	11	12	14	12	9	7	8	6	3	2	3	3	3	2	3	5	31	A	33	29	10.8	32.8
15-Aug	15	17	9	9	9	9	9	13	8	6	4	3	3	2	2	3	2	3	3	4	A	6	14	4	7.0	16.9
16-Aug	6	6	5	5	4	8	12	11	7	10	8	5	4	3	4	5	4	5	6	A	8	7	7	3	6.3	11.9
17-Aug	3	3	3	4	5	9	7	7	4	3	4	2	3	2	3	3	2	2	4	6	9	10	18	5	5.1	18.1
18-Aug	5	6	5	5	7	A	10	8	7	10	8	9	8	8	5	4	7	5	7	8	5	5	3	3	6.5	10.2
19-Aug	4	4	12	14	A	8	5	C	C	C	C	C	C	4	3	4	5	3	3	5	6	4	5	4	--	14.2
20-Aug	5	5	4	7	16	A	22	20	11	4	3	3	4	5	5	4	3	5	7	7	12	10	16	9	8.2	22.4
21-Aug	9	9	8	8	A	14	12	12	15	12	8	6	4	3	5	3	3	3	3	7	27	27	25	26	10.8	27.0
22-Aug	17	15	12	A	11	12	12	10	8	7	6	4	4	4	5	5	3	4	4	8	4	7	3	5	7.3	16.5
23-Aug	4	6	A	8	12	16	18	18	11	6	5	3	4	4	4	4	4	3	4	3	11	9	12	9	7.8	18.4
24-Aug	14	A	17	14	13	15	19	18	10	5	5	3	4	5	5	4	4	4	4	9	7	13	11	7	9.0	18.6
25-Aug	A	8	10	9	11	14	14	11	9	8	5	3	5	4	3	4	5	10	6	7	6	7	12	A	7.8	14.2
26-Aug	7	4	5	7	6	10	13	25	26	19	11	11	5	9	9	15	10	7	7	6	7	8	A	6	10.3	26.0
27-Aug	3	3	3	4	5	6	3	6	6	4	3	3	3	3	3	3	4	4	4	4	3	A	7	2	4.0	7.4
28-Aug	2	2	2	1	1	7	2	2	3	3	3	3	4	4	3	2	2	4	4	7	A	8	6	7	3.6	7.9
29-Aug	5	6	6	6	10	10	10	10	8	9	7	7	5	3	3	3	3	4	9	A	8	7	9	11	7.0	11.4
30-Aug	12	10	10	7	8	11	17	15	12	9	8	8	9	3	4	4	6	6	A	10	15	19	16	18	10.4	19.3
31-Aug	19	12	10	11	9	14	14	20	17	17	18	7	6	2	4	10	12	A	7	12	19	20	21	19	13.1	20.7
		8.9	7.9	8.3	7.8	9.1	12.0	12.7	13.1	9.1	7.2	5.8	5.0	4.6	3.8	4.0	4.3	4.4	4.2	4.7	6.3	10.3	10.7	11.9	10.3	Diurnal Average
		22.3	21.2	24.9	14.4	16.1	20.1	30.4	43.7	26.0	18.7	18.3	14.2	10.5	8.6	9.3	15.3	12.3	9.6	9.2	12.3	30.6	27.0	32.8	29.3	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

# Hourly Maximums

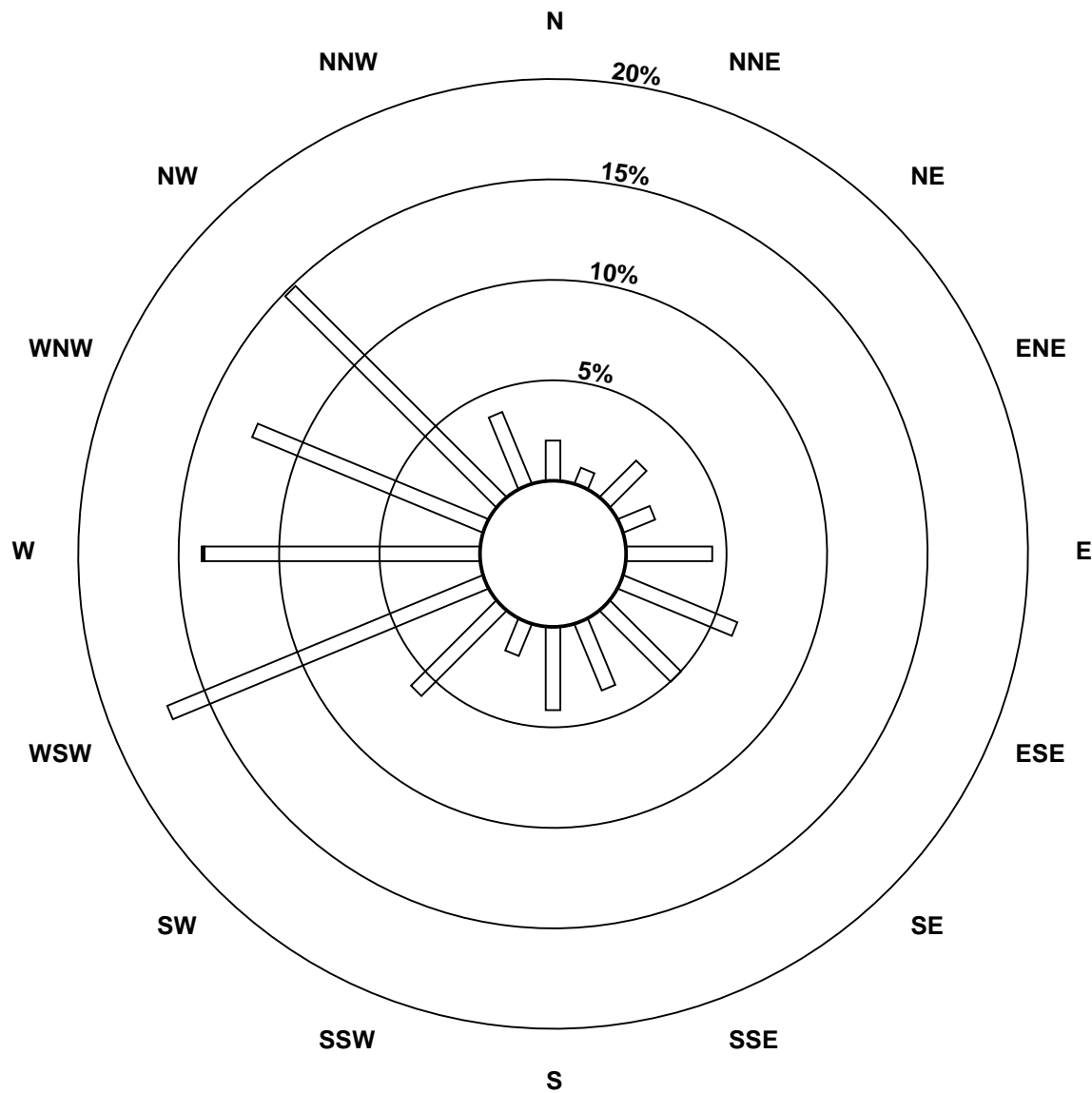
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Henry Pirker - August 2010

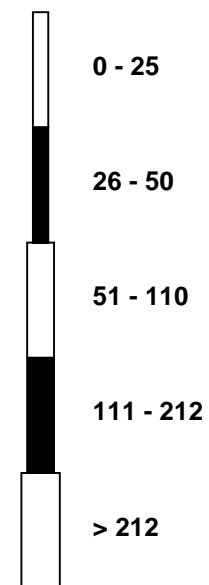


# Pollutant Rose

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Henry Pirker - August 2010



## Pollutant Classes (ppb)

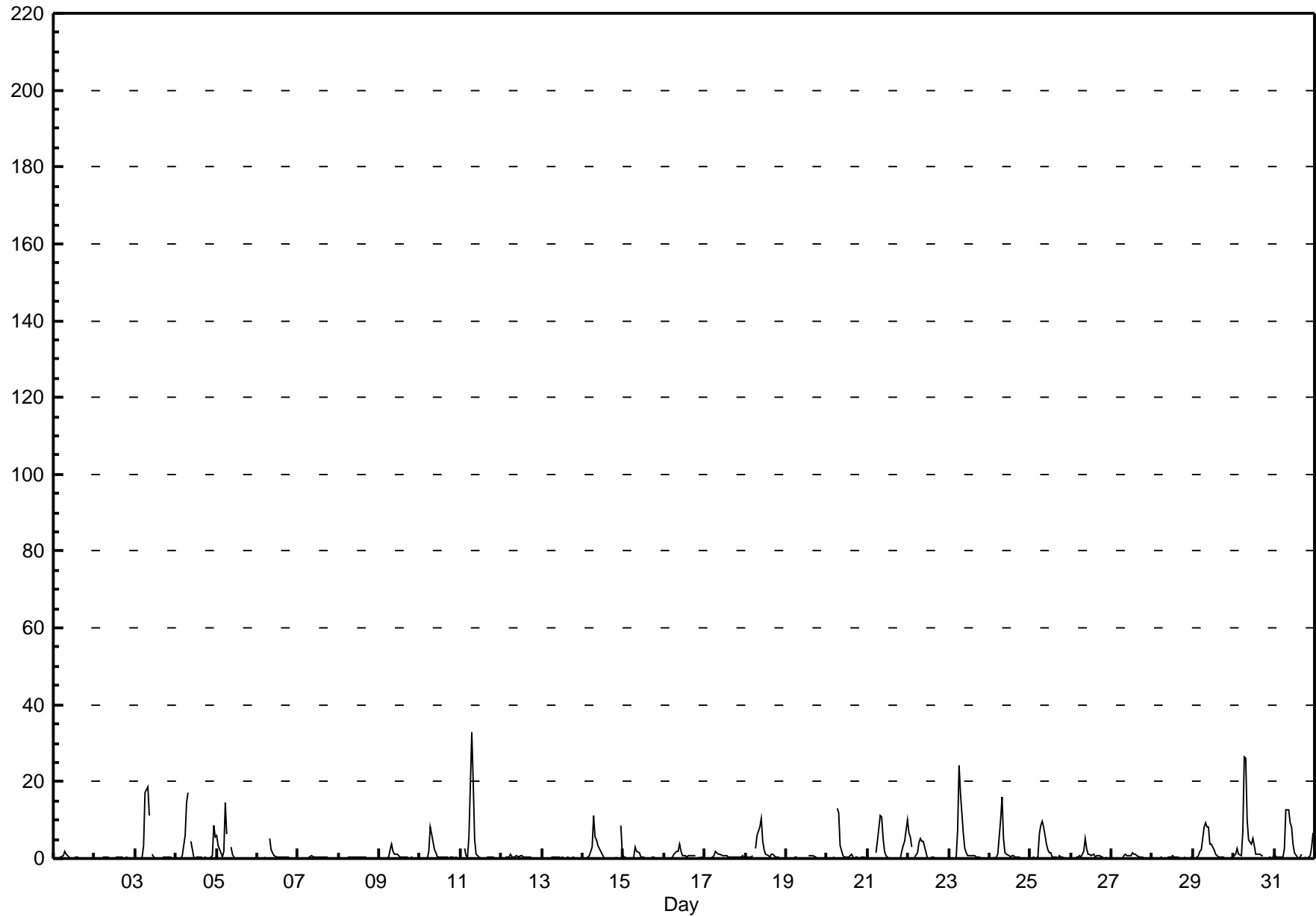


# Hourly Averages

**Nitrogen Oxide (NO) - ppb**

**Henry Pirker - August 2010**

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 32.9 ppb on Aug 11 07:00      Maximum Daily Average: 4.3 ppb on Aug 30		Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0																																														
Minimum Value: 0 ppb on Aug 2 21:00 Maximum Diurnal Average: 7.3 ppb at hour 8 Monthly Average: 1.37 ppb		Minimum Daily Average: 0.2 ppb on Aug 13 Minimum Diurnal Average: 0.1 ppb at hour 20 Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.3 Q <sub>3</sub> = 0.8 P <sub>90</sub> = 3.8 P <sub>99</sub> = 16.3																																														
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-Aug	0	0	0	0	0	1	2	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.9																						
2-Aug	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.5																						
3-Aug	0	0	0	0	1	3	17	19	11	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2.4	18.5																						
4-Aug	0	0	0	0	1	6	15	17	A	5	0	0	0	0	0	0	0	0	0	0	0	1	9	5	2.6	17.0																						
5-Aug	6	3	2	0	2	15	7	A	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7	14.7																						
6-Aug	0	0	0	0	0	0	A	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	5.3																						
7-Aug	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6																						
8-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5																						
9-Aug	0	0	0	A	0	0	2	4	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.7																						
10-Aug	0	0	A	0	0	2	8	6	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	8.2																						
11-Aug	0	A	3	1	0	6	33	20	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3.1	32.9																						
12-Aug	A	0	0	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2																						
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.4																						
14-Aug	0	0	0	1	1	3	11	6	5	3	3	1	0	0	0	0	0	0	0	0	1	A	8	1	1.9	11.2																						
15-Aug	0	0	0	0	0	0	1	3	2	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	2.9																						
16-Aug	0	0	0	0	0	0	1	2	2	4	2	1	1	0	1	1	1	1	1	A	1	0	0	0	0.7	3.6																						
17-Aug	0	0	0	0	0	1	2	2	1	1	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0.6	1.9																						
18-Aug	0	0	0	0	1	A	3	6	8	11	4	2	1	1	1	1	1	1	0	0	0	0	0	0	1.8	10.5																						
19-Aug	0	0	0	0	A	0	0	C	C	C	C	C	C	1	1	1	1	0	0	0	0	0	0	0	--	0.8																						
20-Aug	0	0	0	0	0	A	13	12	3	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1.5	13.0																						
21-Aug	0	0	0	0	A	1	4	11	11	5	2	1	0	0	0	0	0	0	0	0	2	3	4	10	2.4	11.2																						
22-Aug	7	6	3	A	0	2	4	5	5	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7	6.6																						
23-Aug	0	0	A	0	0	8	24	17	6	3	1	1	1	1	1	1	1	0	0	0	0	0	0	0	2.8	24.4																						
24-Aug	0	A	0	0	0	1	10	16	5	2	1	1	0	1	1	1	0	0	0	0	0	0	0	0	1.7	15.9																						
25-Aug	A	0	0	0	0	6	9	10	8	4	2	1	1	1	0	0	0	1	0	0	0	0	0	0	2.1	9.6																						
26-Aug	0	0	0	0	0	1	0	2	5	3	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0.8	5.1																						
27-Aug	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0.4	1.3																						
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0.2	0.6																						
29-Aug	0	0	0	1	2	2	8	9	8	8	4	4	2	1	1	0	0	0	1	A	0	0	0	0	2.3	9.5																						
30-Aug	1	1	3	1	1	7	26	26	10	5	4	5	4	1	1	1	1	1	A	0	0	0	0	0	4.3	26.5																						
31-Aug	1	0	0	1	0	1	3	13	13	9	8	4	1	0	0	0	1	A	0	0	0	1	3	7	2.9	12.6																						
																								0.6	0.4	0.4	0.2	0.4	2.5	6.9	7.3	4.2	2.7	1.5	1.0	0.6	0.4	0.4	0.4	0.4	0.3	0.2	0.1	0.2	0.2	0.9	0.9	Diurnal Average
																								6.6	5.7	3.1	1.1	2.0	14.7	32.9	26.3	12.5	10.5	8.1	5.4	3.5	1.1	1.2	1.1	1.1	0.7	0.8	0.4	1.8	3.2	8.6	9.9	Diurnal Maximum
C - Calibration      A - Automated Daily Zero Span																																																



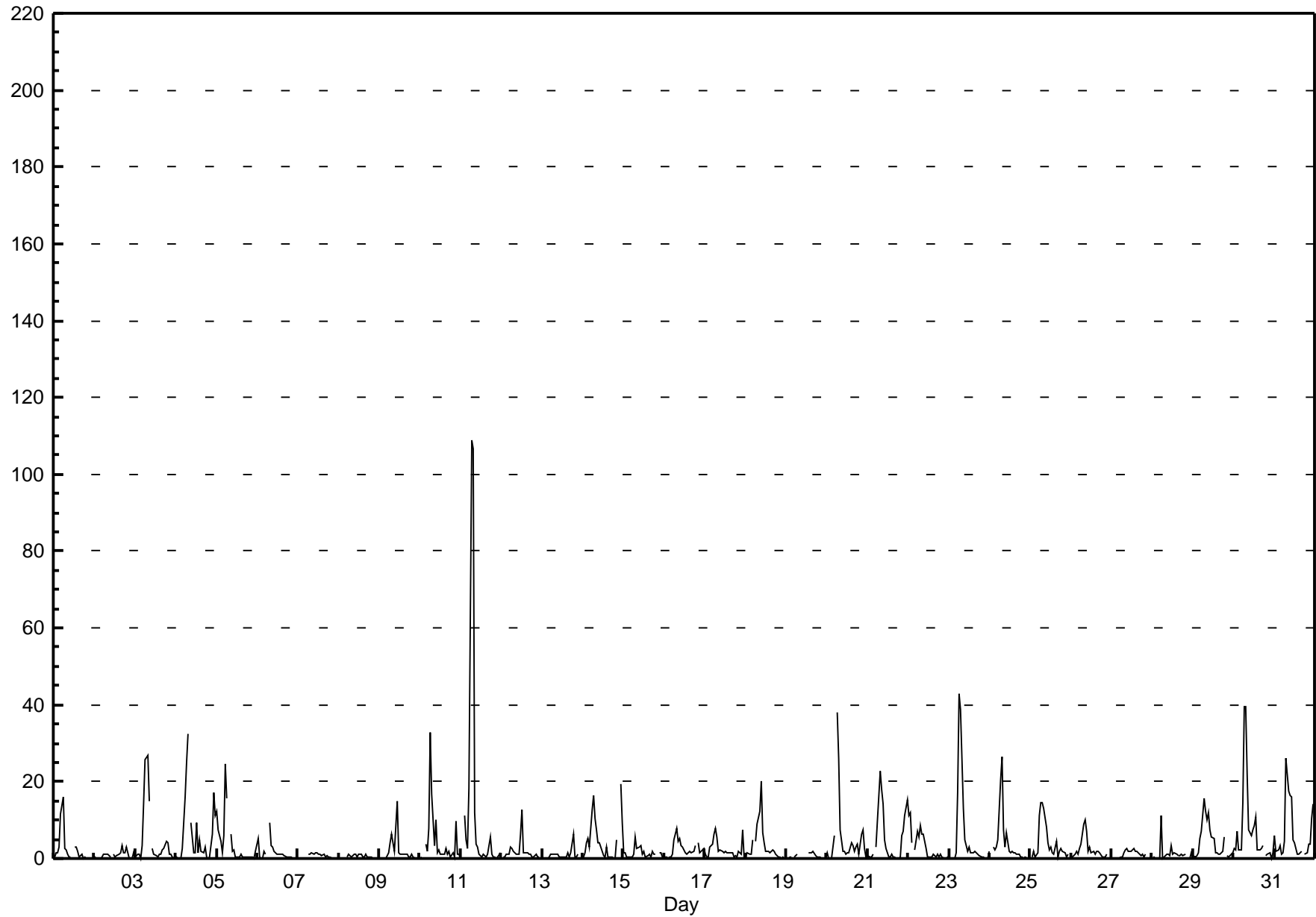
# Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - August 2010

Maximum Value: 108.7 ppb on Aug 11 07:00		Maximum Daily Average: 12.4 ppb on Aug 11		Hours in Service: 744																						
Minimum Value: 0 ppb on Aug 6 22:00		Minimum Daily Average: 0.5 ppb on Aug 8		Hours of Data: 706																						
Maximum Diurnal Average: 16.2 ppb at hour 8		Minimum Diurnal Average: 0.9 ppb at hour 20		Hours of Missing Data: 38																						
Monthly Average: 3.53 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.5 Median = 1.1 Q <sub>3</sub> = 3.0 P <sub>90</sub> = 9.5 P <sub>99</sub> = 37.8		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-Aug	1	1	1	3	12	16	3	2	1	1	1	A	3	3	2	1	1	0	1	0	0	0	0	0	2.2	16.2
2-Aug	1	0	0	0	0	1	1	1	1	1	A	1	1	1	1	1	3	2	1	3	0	0	0	1	0.9	3.3
3-Aug	0	1	1	0	3	14	26	27	15	A	2	1	1	1	1	2	3	4	4	1	1	1	0	4.8	26.8	
4-Aug	0	0	0	0	2	16	25	33	A	9	1	1	9	2	5	2	1	3	0	0	0	6	17	11	6.4	32.6
5-Aug	12	7	4	1	6	25	16	A	6	2	2	1	1	1	1	1	1	0	0	0	1	1	0	2	3.9	24.6
6-Aug	5	1	0	0	2	1	A	9	3	3	2	1	1	1	1	1	1	1	1	0	0	0	0	1.5	9.2	
7-Aug	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.6	1.5	
8-Aug	0	0	0	0	A	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.5	1.0	
9-Aug	0	0	0	A	0	1	4	6	4	2	15	1	1	1	1	1	1	1	1	1	1	0	0	1.8	14.8	
10-Aug	0	1	A	4	2	8	33	17	3	10	1	2	1	1	2	1	2	1	1	1	1	10	1	4.5	32.7	
11-Aug	0	A	11	5	2	18	109	107	12	4	3	1	1	1	1	1	5	1	1	0	0	0	1	12.4	108.7	
12-Aug	A	1	0	1	1	3	2	2	1	1	1	6	13	1	1	1	1	1	1	1	1	1	0	A	1.9	12.6
13-Aug	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	6	1	0	1	A	0	0.9	6.5	
14-Aug	1	1	4	5	3	13	16	10	7	4	4	2	1	0	3	1	1	1	0	0	5	A	19	9	4.8	19.3
15-Aug	1	1	1	1	0	1	1	5	3	3	3	1	2	1	1	1	2	1	1	A	1	1	0	1.4	5.5	
16-Aug	0	0	0	0	1	1	5	8	4	5	3	3	1	1	2	2	2	3	A	4	1	2	3	2.4	7.7	
17-Aug	1	1	1	3	4	6	8	6	2	2	2	1	2	1	1	1	1	1	1	2	1	8	1	2.4	7.8	
18-Aug	1	1	1	1	5	A	4	9	12	20	7	4	2	2	1	2	2	2	1	1	0	0	0	3.5	20.2	
19-Aug	0	0	0	0	A	0	1	C	C	C	C	C	C	1	1	2	2	1	1	1	0	0	0	--	2.0	
20-Aug	2	0	0	0	6	A	38	26	8	2	2	1	2	2	4	4	2	3	4	1	6	8	3	1	5.3	38.1
21-Aug	1	1	0	1	A	3	10	23	18	14	5	3	1	1	1	0	0	0	0	6	7	11	15	5.2	22.8	
22-Aug	11	12	4	A	2	7	6	9	6	7	3	1	1	1	1	1	1	1	1	1	0	0	1	3.2	11.8	
23-Aug	0	0	A	0	2	17	43	39	13	5	3	2	3	2	2	2	1	1	1	1	0	0	0	5.9	42.9	
24-Aug	2	A	3	2	3	5	21	26	7	3	7	2	2	2	2	2	1	1	1	0	1	0	0	4.0	26.4	
25-Aug	A	1	2	1	2	11	15	14	13	8	4	2	3	2	1	4	1	2	3	2	2	1	1	A	4.2	14.5
26-Aug	1	1	1	2	1	3	4	9	10	7	2	3	2	2	1	2	2	2	1	1	1	1	A	0	2.4	10.1
27-Aug	0	0	0	0	0	0	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	A	1	0	1.1	2.5
28-Aug	0	1	0	0	0	11	0	1	1	1	1	3	1	2	1	1	1	1	1	1	A	0	0	1	1.2	11.3
29-Aug	1	0	1	2	5	7	16	12	10	12	7	6	5	2	2	1	1	2	5	A	1	1	1	2	4.3	15.6
30-Aug	3	2	7	2	2	14	39	40	22	8	6	8	9	11	2	2	3	3	A	1	1	2	0	2	8.1	39.6
31-Aug	6	2	2	3	1	1	5	26	18	17	16	5	4	1	1	2	2	A	1	2	4	4	10	14	6.3	26.0
		1.7	1.2	1.6	1.3	2.4	7.4	15.0	16.2	7.2	5.3	3.7	2.3	2.5	1.6	1.5	1.5	1.3	1.5	1.4	0.9	1.3	1.6	2.7	2.3	Diurnal Average
		12.4	11.8	11.3	5.1	11.5	24.6	108.7	106.7	22.1	20.2	16.1	7.6	12.6	10.8	4.8	4.4	3.3	5.5	6.5	4.1	6.2	9.7	19.3	15.4	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								





# Hourly Averages

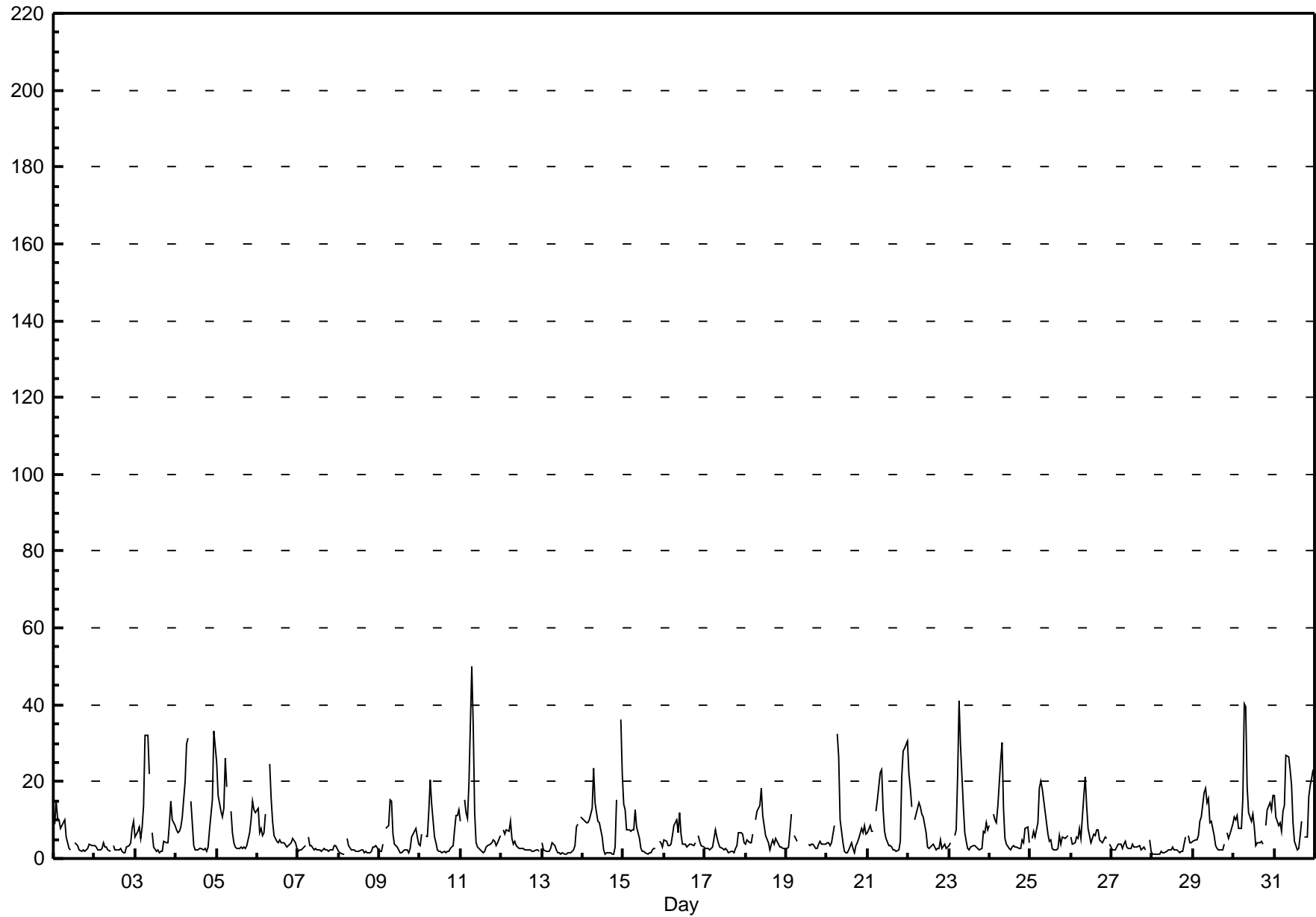
Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Henry Pirker - August 2010

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 50.0 ppb on Aug 11 07:00	Maximum Daily Average: 12.9 ppb on Aug 31		Hours of Data:	706
Minimum Value: 1 ppb on Aug 8 04:00	Minimum Daily Average: 2.2 ppb on Aug 8		Hours of Missing Data:	38
Maximum Diurnal Average: 16.4 ppb at hour 8	Minimum Diurnal Average: 2.7 ppb at hour 18		Hours of Calibration:	38
Monthly Average: 6.65 ppb	Percentiles: P <sub>1</sub> = 1.2 P <sub>10</sub> = 1.9 Q <sub>1</sub> = 2.5 Median = 4.0 Q <sub>3</sub> = 8.2 P <sub>90</sub> = 14.7 P <sub>99</sub> = 32.7		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-Aug	9	15	10	10	8	9	10	6	4	3	2	A	4	4	3	2	2	2	2	2	3	4	3	3	5.2	15.0	
2-Aug	4	3	2	2	3	4	3	3	2	2	A	3	2	2	2	3	2	2	2	3	3	4	8	10	3.2	9.6	
3-Aug	5	7	8	5	8	14	32	32	22	A	7	3	2	2	2	2	2	4	4	4	9	15	10	9	9.0	32.0	
4-Aug	7	7	7	8	11	20	30	31	A	15	3	2	2	2	3	3	2	3	2	3	8	15	33	29	10.8	33.3	
5-Aug	25	16	12	11	13	26	18	A	12	7	4	3	3	3	3	3	3	3	3	7	10	15	13	12	9.7	26.1	
6-Aug	13	7	8	6	7	12	A	25	16	10	6	5	4	5	4	4	4	3	3	4	4	5	4	3	7.0	24.8	
7-Aug	2	2	2	3	4	A	6	4	3	2	3	2	2	2	2	2	2	2	2	2	2	3	3	2	2.7	5.8	
8-Aug	2	1	1	1	A	5	4	2	2	2	2	2	2	2	2	2	2	1	2	3	3	3	3	2	2.2	5.0	
9-Aug	2	2	4	A	8	9	15	15	6	4	3	2	2	2	2	2	2	1	3	6	6	8	5	4	4.9	15.2	
10-Aug	3	6	A	6	6	12	21	14	6	4	2	2	2	2	1	2	2	2	3	7	11	11	13	6.1	20.6		
11-Aug	10	A	15	12	10	19	50	35	12	4	3	3	2	1	2	3	4	4	4	5	4	3	4	6	9.4	50.0	
12-Aug	A	7	6	7	7	10	5	4	4	3	2	3	3	3	2	2	2	2	2	2	2	2	2	A	3.8	9.8	
13-Aug	4	2	2	2	2	3	4	3	2	1	1	1	1	1	1	2	1	2	2	3	8	9	A	11	3.0	10.9	
14-Aug	10	10	9	9	10	13	23	15	12	10	9	5	2	1	1	2	2	1	1	3	15	A	36	22	9.7	36.1	
15-Aug	14	13	7	7	7	8	7	13	8	5	2	2	2	2	1	1	1	2	2	2	A	4	4	3	5.2	14.0	
16-Aug	5	4	3	3	4	6	9	10	7	12	6	4	4	3	3	4	4	3	4	A	6	4	3	3	5.0	12.0	
17-Aug	3	2	3	2	3	5	7	6	4	3	3	2	3	2	2	2	2	1	2	3	7	7	6	4	3.5	7.3	
18-Aug	4	5	4	4	6	A	10	12	14	18	11	9	6	4	2	4	5	4	5	4	3	3	3	2	6.2	18.2	
19-Aug	3	3	7	11	A	6	4	C	C	C	C	C	C	4	3	4	4	3	3	4	5	4	4	4	--	11.4	
20-Aug	4	4	3	4	8	A	32	26	10	4	2	2	2	2	4	3	2	3	4	5	8	7	8	6	6.7	32.4	
21-Aug	7	8	7	7	A	12	15	22	23	13	7	5	3	3	3	2	2	2	2	5	21	28	29	31	11.2	30.6	
22-Aug	22	18	13	A	10	13	15	13	12	11	7	3	3	3	3	4	2	3	3	5	2	4	3	3	7.5	21.8	
23-Aug	4	4	A	6	7	22	41	29	14	7	4	3	2	3	3	3	3	3	2	3	7	7	9	7	8.4	41.1	
24-Aug	9	A	12	10	9	14	25	30	13	5	4	3	2	3	3	3	3	3	3	5	4	8	8	4	7.9	30.4	
25-Aug	A	5	7	6	9	18	20	18	15	9	6	4	5	3	2	2	3	6	4	6	5	6	6	A	7.6	20.0	
26-Aug	6	4	4	5	5	8	5	16	21	14	8	6	4	6	6	8	7	5	4	5	5	5	A	4	7.0	21.2	
27-Aug	2	2	2	3	4	4	2	4	5	3	3	3	4	3	3	3	3	2	2	3	2	A	5	2	3.0	5.0	
28-Aug	1	1	1	1	1	2	2	2	2	2	2	3	2	2	2	2	1	2	2	2	6	A	6	4	4	2.3	5.8
29-Aug	4	5	5	6	10	11	17	18	15	16	9	10	6	3	2	2	2	2	4	A	7	5	6	9	7.6	18.3	
30-Aug	11	10	11	8	8	16	40	40	18	12	10	12	8	3	4	4	4	4	4	A	9	13	14	13	16	12.5	40.1
31-Aug	16	11	8	9	7	12	14	27	26	23	19	9	5	2	2	6	10	A	6	6	16	19	21	23	12.9	27.0	
	7.2	6.4	6.5	6.1	7.0	11.1	16.3	16.4	10.7	7.7	5.2	4.0	3.1	2.7	2.7	2.9	2.9	2.7	2.9	4.1	6.8	7.9	9.3	8.6	Diurnal Average		
	25.1	18.2	15.4	11.8	12.9	26.1	50.0	39.7	26.3	23.1	19.1	11.6	8.3	6.3	6.0	7.6	9.7	6.1	5.5	8.6	21.1	27.8	36.1	30.6	Diurnal Maximum		

C - Calibration                      A - Automated Daily Zero Span

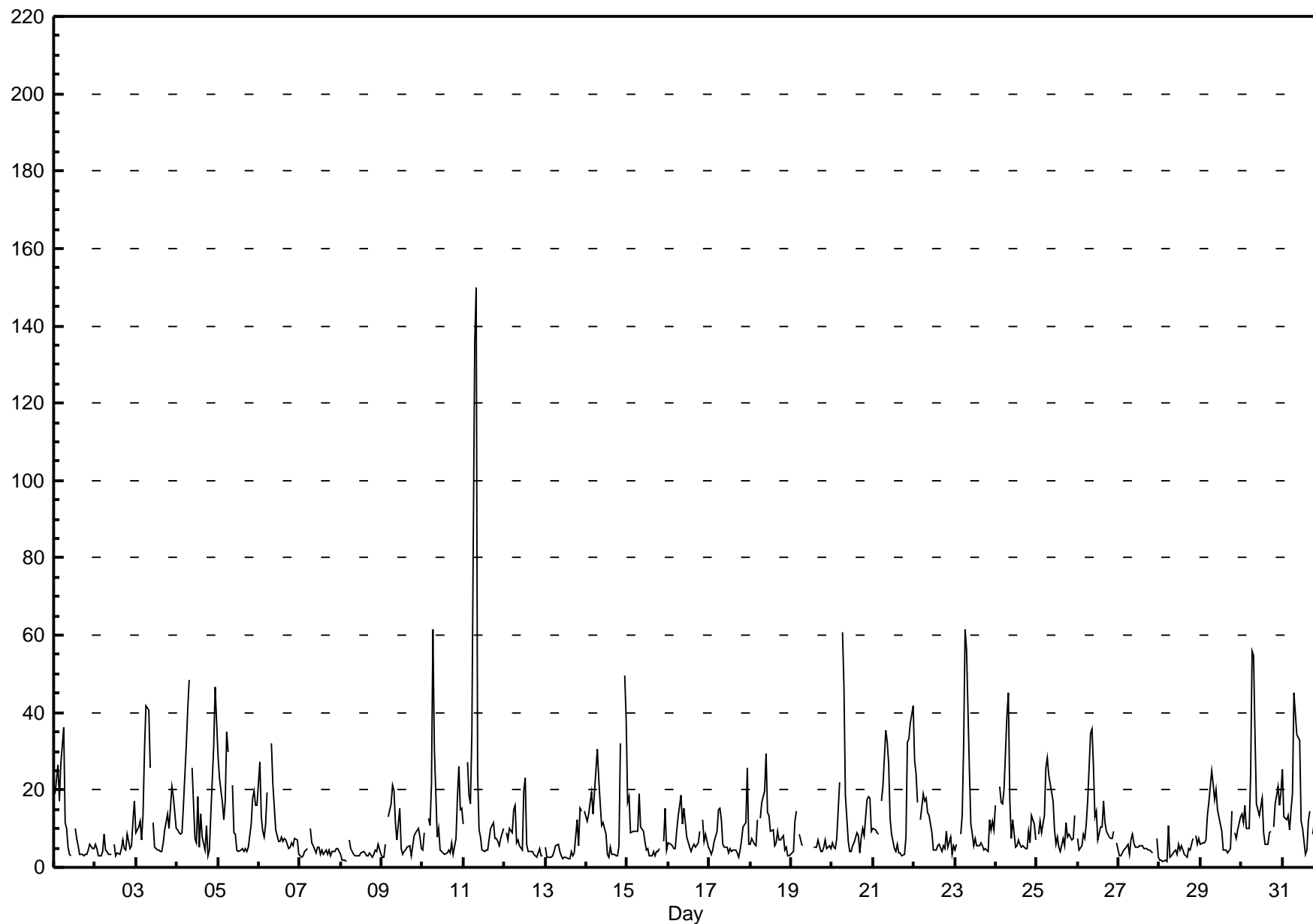


# Hourly Maximums

Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Henry Pirker - August 2010

Maximum Value: 150.0 ppb on Aug 11 08:00		Maximum Daily Average: 22.9 ppb on Aug 11		Hours in Service: 744																							
Minimum Value: 1 ppb on Aug 8 04:00		Minimum Daily Average: 3.5 ppb on Aug 8		Hours of Data: 706																							
Maximum Diurnal Average: 28.9 ppb at hour 8		Minimum Diurnal Average: 5.2 ppb at hour 14		Hours of Missing Data: 38																							
Monthly Average: 11.08 ppb		Percentiles: P <sub>1</sub> = 1.9 P <sub>10</sub> = 3.5 Q <sub>1</sub> = 4.5 Median = 7.3 Q <sub>3</sub> = 13.5 P <sub>90</sub> = 23.1 P <sub>99</sub> = 55.5		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-Aug	19	23	26	17	27	36	11	10	5	3	3	A	10	7	6	3	3	3	3	3	4	6	5	5	10.5	36.3	
2-Aug	6	5	3	3	4	8	4	4	3	3	A	6	3	4	3	5	7	5	4	9	5	5	12	17	5.6	17.2	
3-Aug	9	10	12	7	14	30	42	40	26	A	11	5	4	4	4	4	6	10	14	10	15	21	18	10	14.3	41.7	
4-Aug	10	9	8	9	16	32	41	49	A	26	8	7	18	5	14	8	5	11	3	4	14	31	47	38	17.8	48.6	
5-Aug	29	23	17	12	17	35	30	A	21	9	8	4	4	4	5	4	5	4	5	11	18	20	16	16	13.9	35.2	
6-Aug	27	13	9	8	11	19	A	32	22	16	10	7	7	8	7	7	7	5	5	6	5	7	7	3	10.9	32.0	
7-Aug	3	3	3	4	5	A	10	6	5	4	5	5	3	4	3	4	3	4	3	4	4	5	5	4	4.4	10.2	
8-Aug	3	2	2	1	A	7	5	3	3	3	3	3	4	4	4	3	3	4	2	3	4	4	6	3	3.5	6.9	
9-Aug	2	2	6	A	13	16	21	20	11	7	15	5	3	4	4	5	5	3	5	8	9	10	8	5	8.3	21.3	
10-Aug	4	9	A	13	11	22	61	31	8	10	4	4	4	3	4	5	4	6	3	8	18	26	15	15	12.5	61.4	
11-Aug	11	A	27	19	16	35	136	150	24	10	8	4	4	4	7	10	12	7	7	7	5	7	10	22.9	150.0		
12-Aug	A	9	7	10	9	15	16	6	7	5	4	20	23	6	4	4	4	3	3	2	5	3	3	A	7.7	23.1	
13-Aug	5	2	2	2	3	4	6	6	4	3	2	2	2	2	2	4	3	4	12	5	15	14	A	14	5.3	15.2	
14-Aug	12	14	17	19	14	25	31	23	17	11	11	8	3	2	5	3	3	3	3	5	32	A	50	38	15.3	49.6	
15-Aug	17	18	9	9	9	9	9	19	11	9	7	4	5	3	3	4	3	4	4	5	A	7	15	4	8.2	18.8	
16-Aug	6	6	5	5	5	9	13	19	11	15	11	8	5	4	5	6	5	6	9	A	12	7	8	5	8.2	18.5	
17-Aug	4	3	4	7	9	15	15	12	6	5	5	4	5	4	4	4	4	2	4	7	10	12	26	6	7.5	25.8	
18-Aug	6	7	6	5	12	A	13	17	20	30	14	13	9	10	6	6	9	7	7	8	5	5	3	3	9.6	29.6	
19-Aug	4	4	12	14	A	8	5	C	C	C	C	C	C	5	5	7	4	4	5	7	5	6	5	--	14.4	--	
20-Aug	6	5	5	7	22	A	61	47	19	7	4	4	6	6	9	8	4	8	10	8	18	18	18	9	13.4	60.8	
21-Aug	10	10	9	9	A	17	21	35	33	27	12	8	5	4	6	4	4	3	3	8	33	33	37	42	16.2	41.8	
22-Aug	28	24	17	A	12	19	17	18	14	13	9	4	4	4	5	6	4	5	5	10	5	8	4	5	10.5	27.5	
23-Aug	4	6	A	9	14	32	61	56	25	11	9	6	8	6	6	6	5	4	5	4	12	10	12	10	13.9	61.3	
24-Aug	16	A	21	17	16	20	39	45	18	8	12	5	6	7	6	5	5	5	5	9	7	14	11	7	13.2	45.1	
25-Aug	A	9	12	9	13	26	28	24	22	17	10	6	8	5	4	8	5	12	8	9	7	8	14	A	11.9	28.3	
26-Aug	8	5	6	9	8	11	17	35	36	26	13	15	7	11	10	17	12	9	8	7	7	10	A	6	12.6	35.9	
27-Aug	3	3	4	5	5	6	3	7	9	6	5	5	5	6	5	5	5	5	4	4	4	A	8	3	5.0	8.5	
28-Aug	2	2	2	2	2	11	2	3	4	4	4	6	5	5	3	3	2	5	5	8	A	8	6	8	4.4	10.9	
29-Aug	6	7	7	7	14	17	25	22	17	20	15	13	9	5	4	5	4	5	14	A	9	7	10	13	11.0	25.0	
30-Aug	14	12	16	10	10	24	56	55	35	16	14	16	18	9	6	6	9	9	A	11	17	21	16	19	18.1	55.8	
31-Aug	25	13	12	13	10	15	19	45	34	34	33	12	10	3	5	12	14	A	8	14	21	24	30	33	19.1	45.1	
		10.4	8.9	9.9	9.0	11.5	18.7	27.4	28.9	16.2	12.4	9.3	7.3	7.0	5.2	5.3	5.7	5.5	5.7	6.0	7.0	11.4	12.2	14.5	12.3	Diurnal Average	
		28.6	24.4	27.1	19.3	26.8	36.3	136.3	150.0	35.9	33.6	32.9	19.9	23.1	10.5	13.8	17.2	14.4	11.6	14.4	13.8	32.5	33.0	49.6	41.8	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



# Hourly Averages

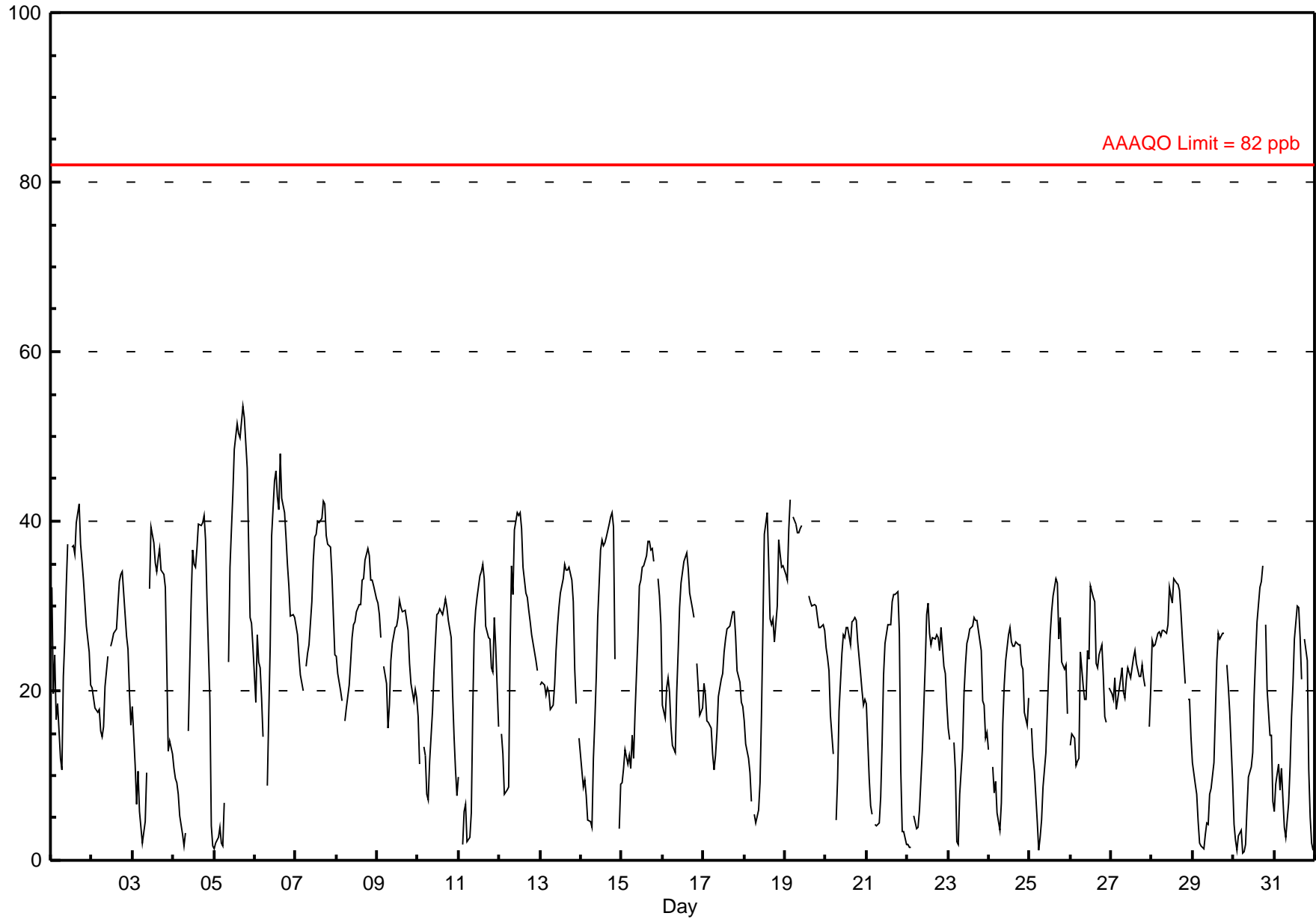
Ozone (O<sub>3</sub>) - ppb

Henry Pirker - August 2010

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 53.5 ppb on Aug 5 18:00	Maximum Daily Average: 33.8 ppb on Aug 19		Hours of Data:	709
Minimum Value: 1 ppb on Aug 30 06:00	Minimum Daily Average: 12.9 ppb on Aug 29		Hours of Missing Data:	35
Maximum Diurnal Average: 32.5 ppb at hour 16	Minimum Diurnal Average: 10.6 ppb at hour 6		Hours of Calibration:	35
Monthly Average: 22.62 ppb	Percentiles: P <sub>1</sub> = 1.5 P <sub>10</sub> = 5.7 Q <sub>1</sub> = 14.6 Median = 23.6 Q <sub>3</sub> = 30.2 P <sub>90</sub> = 36.8 P <sub>99</sub> = 47.6		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	32	20	24	17	19	12	11	22	26	32	37	A	37	37	36	40	42	37	35	33	30	28	25	21	28.3	42.0
2-Aug	20	19	18	17	18	15	15	16	21	24	A	25	26	27	27	30	33	34	34	31	26	25	20	16	23.4	34.0
3-Aug	18	11	7	10	6	4	2	5	10	A	32	39	38	35	34	36	37	34	34	32	23	13	14	13	21.1	39.3
4-Aug	11	10	9	8	5	3	2	3	A	15	31	37	35	35	37	40	40	40	41	38	31	19	4	2	21.4	40.7
5-Aug	1	2	3	4	2	2	7	A	23	35	39	43	48	51	50	50	52	53	52	46	37	29	28	25	29.7	53.5
6-Aug	19	27	23	23	19	15	A	9	17	25	38	45	46	43	41	48	43	41	38	35	32	29	29	29	31.0	48.0
7-Aug	28	27	24	22	20	A	23	24	25	30	35	38	38	40	40	40	42	42	38	37	37	34	29	24	32.1	42.3
8-Aug	24	22	20	19	A	16	18	21	23	26	28	28	29	30	30	33	33	35	37	36	33	33	32	31	27.8	36.8
9-Aug	30	29	26	A	23	21	16	18	24	26	27	28	29	31	30	29	30	28	27	23	21	19	20	19	24.9	30.6
10-Aug	17	11	A	13	12	8	7	12	18	22	26	29	29	30	29	30	31	30	28	26	19	15	11	8	20.0	30.8
11-Aug	10	A	2	6	7	2	3	6	18	27	30	31	33	34	35	33	28	26	26	23	22	29	25	16	20.4	35.0
12-Aug	A	15	12	8	8	9	25	35	31	39	41	41	41	39	34	32	31	30	28	27	25	24	22	A	27.1	41.1
13-Aug	21	21	21	20	20	20	18	18	21	25	28	30	32	33	35	34	34	35	33	31	22	19	A	14	25.3	34.9
14-Aug	10	9	10	8	5	5	4	12	16	22	29	37	38	37	37	38	40	40	41	39	24	A	4	9	22.3	41.0
15-Aug	9	11	13	11	12	11	15	12	17	26	32	33	34	35	36	38	38	37	37	35	A	33	31	28	25.5	37.7
16-Aug	18	17	20	22	20	16	14	13	20	24	30	33	35	36	36	34	32	30	29	A	23	20	17	18	24.2	36.2
17-Aug	21	19	16	16	16	13	11	12	15	19	21	22	25	26	27	28	29	29	29	26	22	21	19	18	20.9	29.4
18-Aug	16	14	12	10	7	A	6	4	6	9	17	28	39	41	35	28	28	28	26	30	38	36	35	35	22.9	41.0
19-Aug	34	33	39	43	A	41	40	39	39	39	39	C	C	C	31	31	30	30	29	27	28	28	27	33.8	42.5	
20-Aug	25	24	22	17	13	A	5	10	18	24	27	26	27	27	25	28	28	29	28	26	22	20	18	19	22.1	28.7
21-Aug	18	10	7	5	A	4	4	4	8	14	22	26	28	28	28	30	31	31	32	27	10	3	3	2	16.3	31.6
22-Aug	2	2	2	A	5	4	4	6	9	13	23	29	30	27	25	26	26	27	26	25	27	23	22	18	17.5	30.3
23-Aug	16	14	A	14	10	2	2	8	13	20	23	26	26	27	28	29	28	28	27	25	19	18	14	15	18.8	28.7
24-Aug	13	A	11	8	9	6	4	7	16	21	24	27	27	26	25	25	26	25	25	23	23	17	16	19	18.4	27.5
25-Aug	A	16	12	11	5	1	3	5	9	13	18	23	27	29	31	33	33	33	26	29	23	23	17	A	18.5	33.2
26-Aug	14	15	14	11	12	12	25	20	19	19	25	24	32	31	30	23	23	24	25	22	17	16	A	20	20.6	32.3
27-Aug	20	19	21	18	19	21	23	20	19	21	23	21	23	24	25	23	22	22	23	22	20	A	16	20	21.1	24.8
28-Aug	26	25	25	27	27	26	27	27	27	28	32	31	30	33	33	33	32	29	26	21	A	19	19	15	26.9	33.2
29-Aug	12	9	8	5	2	2	1	3	4	4	8	8	12	17	24	27	26	27	27	A	23	21	17	9	12.9	26.8
30-Aug	4	2	1	3	4	1	1	2	6	10	11	13	19	24	28	32	33	35	A	28	20	15	15	7	13.6	34.7
31-Aug	6	9	11	8	11	7	4	3	7	11	17	21	26	30	30	26	21	A	26	24	11	5	2	1	13.8	29.9
	17.1	15.9	15.0	13.9	12.0	10.6	11.1	13.1	17.5	22.1	27.1	29.0	31.3	32.1	32.1	32.5	32.2	32.1	31.3	29.0	24.5	21.8	19.0	17.2		Diurnal Average
	33.8	33.0	38.9	42.5	26.9	40.6	39.6	38.6	38.6	39.2	41.1	44.8	48.4	51.5	50.3	49.9	51.7	53.5	52.2	46.3	37.8	36.2	34.6	34.7		Diurnal Maximum

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



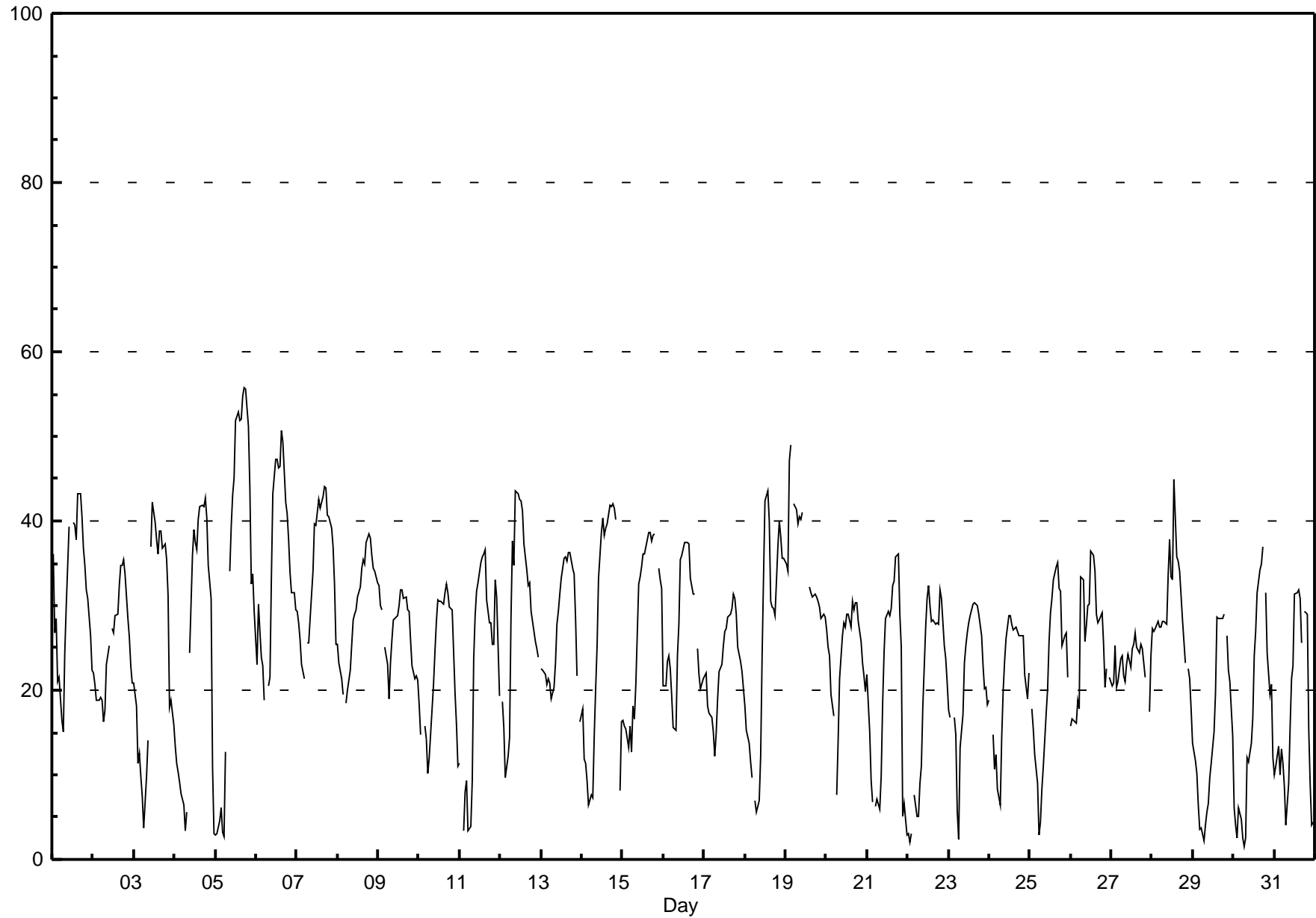
# Hourly Maximums

Ozone (O<sub>3</sub>) - ppb

Henry Pirker - August 2010

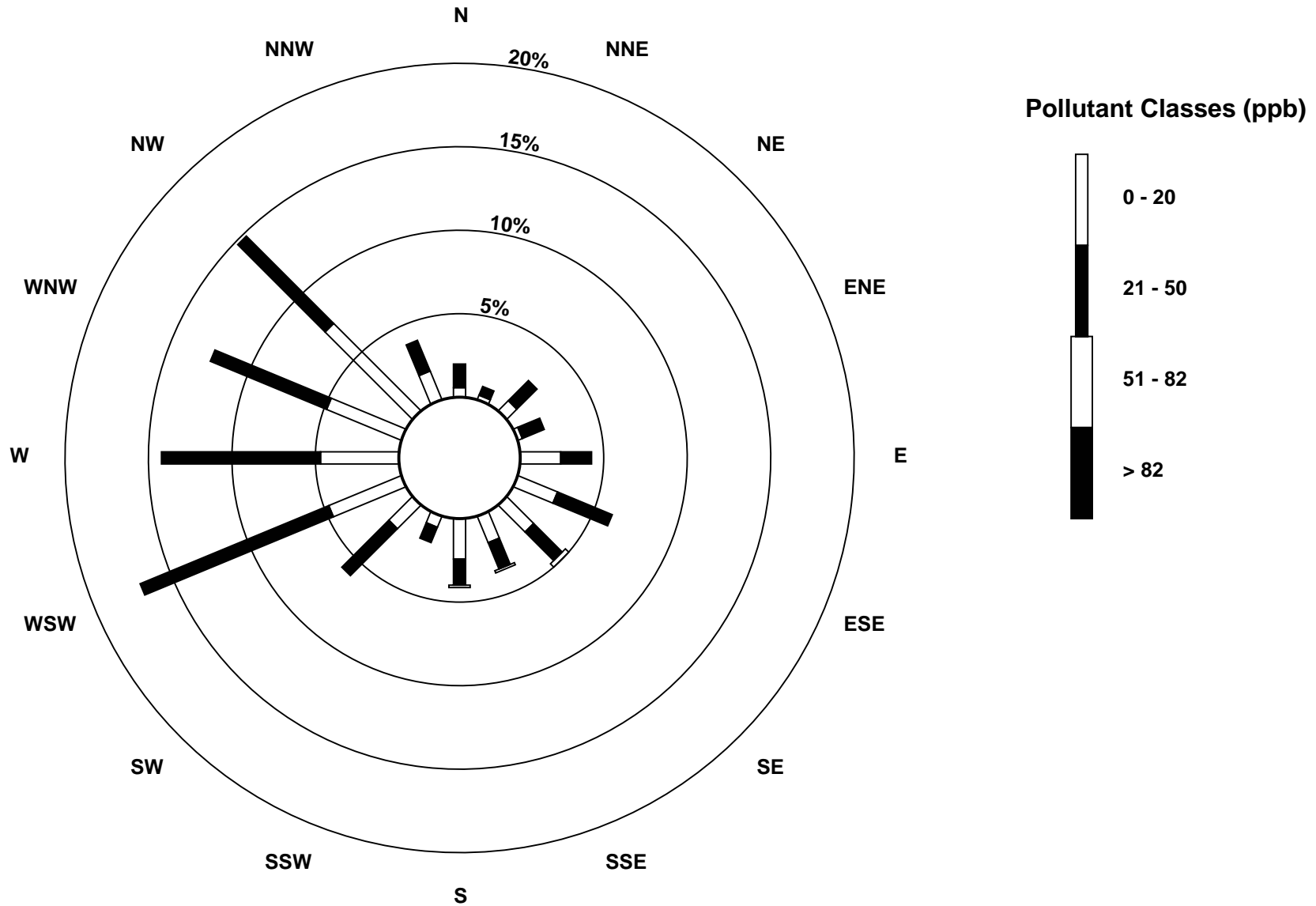
Maximum Value: 55.7 ppb on Aug 5 18:00		Maximum Daily Average: 35.7 ppb on Aug 19		Hours in Service: 744																							
Minimum Value: 2 ppb on Aug 30 07:00		Minimum Daily Average: 15.3 ppb on Aug 29		Hours of Data: 709																							
Maximum Diurnal Average: 34.8 ppb at hour 16		Minimum Diurnal Average: 13.3 ppb at hour 6		Hours of Missing Data: 35																							
Monthly Average: 25.38 ppb		Percentiles: P <sub>1</sub> = 2.6 P <sub>10</sub> = 9.3 Q <sub>1</sub> = 18.2 Median = 26.5 Q <sub>3</sub> = 32.8 P <sub>90</sub> = 39.0 P <sub>99</sub> = 51.9		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	36	27	29	21	22	16	15	24	30	35	39	A	40	39	38	43	43	40	37	35	32	31	26	22	31.3	43.3	
2-Aug	22	21	19	19	19	19	16	18	23	25	A	27	27	29	29	32	35	35	35	34	29	26	23	21	25.3	35.4	
3-Aug	21	18	11	13	10	7	4	10	14	A	37	42	40	38	36	39	39	37	37	35	31	18	19	16	24.9	42.2	
4-Aug	13	11	10	9	8	6	3	6	A	24	36	39	37	37	40	42	42	42	43	40	35	31	11	3	24.7	42.7	
5-Aug	3	3	5	6	3	3	13	A	34	39	43	45	52	53	52	52	55	56	56	51	44	32	34	29	33.1	55.7	
6-Aug	23	30	27	24	23	19	A	21	22	33	43	47	47	46	46	51	49	42	41	38	34	31	31	29	34.8	50.7	
7-Aug	29	28	26	23	21	A	26	26	28	34	40	39	41	43	41	43	44	44	41	40	39	37	33	25	34.4	44.1	
8-Aug	25	23	21	19	A	18	20	22	25	28	29	29	31	32	34	35	35	37	39	38	36	34	34	33	29.6	38.5	
9-Aug	32	30	29	A	25	23	19	23	26	28	29	29	30	32	32	31	31	29	29	26	23	21	22	21	27.0	32.4	
10-Aug	18	15	A	16	14	10	12	15	21	25	28	31	31	30	32	33	32	30	30	30	24	20	16	11	22.7	32.5	
11-Aug	11	A	3	8	9	3	4	9	24	29	32	33	35	36	36	37	31	28	28	25	25	33	31	19	23.1	36.7	
12-Aug	A	19	16	10	12	14	29	38	35	44	43	42	42	41	37	34	32	33	29	28	26	25	24	A	29.7	43.6	
13-Aug	23	22	22	21	21	21	19	20	23	28	29	31	33	36	36	35	36	36	34	34	29	22	A	16	27.3	36.2	
14-Aug	18	12	11	9	7	8	7	15	20	25	33	39	40	38	39	40	42	42	42	42	40	A	8	16	25.8	42.1	
15-Aug	16	16	15	13	16	13	18	17	21	33	33	35	36	36	38	39	39	38	38	39	A	34	33	32	28.1	38.6	
16-Aug	21	21	23	24	23	19	16	15	24	28	35	36	37	37	37	37	33	31	31	A	25	22	20	21	26.9	37.4	
17-Aug	22	22	18	17	17	15	12	15	19	22	23	25	27	27	29	29	30	31	31	29	25	23	22	20	23.0	31.3	
18-Aug	18	15	14	12	10	A	7	6	7	12	24	33	42	44	40	30	30	30	29	37	40	38	36	36	25.6	43.5	
19-Aug	35	34	47	49	A	42	41	40	41	40	41	C	C	C	32	32	31	31	31	31	30	28	29	29	35.7	49.0	
20-Aug	27	25	24	20	17	A	8	14	21	26	28	27	29	29	27	30	29	30	30	28	26	23	22	20	24.4	30.4	
21-Aug	22	15	9	7	A	6	7	6	10	18	24	29	29	29	30	32	33	36	36	29	25	5	7	3	19.4	36.1	
22-Aug	3	2	3	A	8	5	5	9	11	18	27	31	32	30	28	28	28	28	28	32	31	25	24	21	19.9	32.4	
23-Aug	18	17	A	17	15	6	2	13	17	23	25	27	28	29	30	30	30	30	29	26	23	20	20	18	21.5	30.3	
24-Aug	19	A	15	11	12	8	6	14	20	23	26	29	29	28	27	27	27	26	26	26	26	22	19	22	21.3	28.9	
25-Aug	A	18	15	12	9	3	4	8	11	17	20	26	29	31	33	35	35	32	32	25	27	27	22	A	21.4	35.1	
26-Aug	16	17	16	16	19	18	33	33	26	28	30	30	36	36	34	29	28	28	29	26	20	23	A	22	25.7	36.5	
27-Aug	21	21	25	20	21	24	24	22	21	23	24	23	25	25	27	25	24	25	25	23	21	A	17	24	23.1	26.7	
28-Aug	27	27	27	28	28	27	28	28	28	34	38	33	33	45	36	35	34	31	28	23	A	23	21	18	29.6	45.0	
29-Aug	14	12	10	6	4	4	2	4	6	7	10	11	15	20	29	29	28	29	29	A	26	22	21	15	15.3	29.0	
30-Aug	6	4	3	6	5	3	2	3	12	12	14	17	24	27	31	34	35	37	A	31	24	20	21	12	16.6	37.0	
31-Aug	10	11	13	10	13	11	9	4	9	16	21	23	31	31	32	31	26	A	29	15	9	4	4		17.1	31.9	
		19.6	18.4	17.6	16.1	14.6	13.3	13.7	16.5	20.9	25.9	30.2	31.3	33.7	34.5	34.4	34.8	34.4	34.2	33.5	32.1	28.7	25.0	22.4	20.0	Diurnal Average	
		36.1	34.0	47.2	49.0	27.5	42.0	41.4	39.6	40.6	43.6	43.2	47.4	51.9	52.9	51.9	52.1	54.8	55.7	55.6	51.2	43.8	38.2	35.6	35.6	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									





# Pollutant Rose

Ozone (O<sub>3</sub>) - ppb  
Henry Pirker - August 2010





# Eight Hour Running Averages

Ozone (O<sub>3</sub>) - ppb

Henry Pirker - August 2010

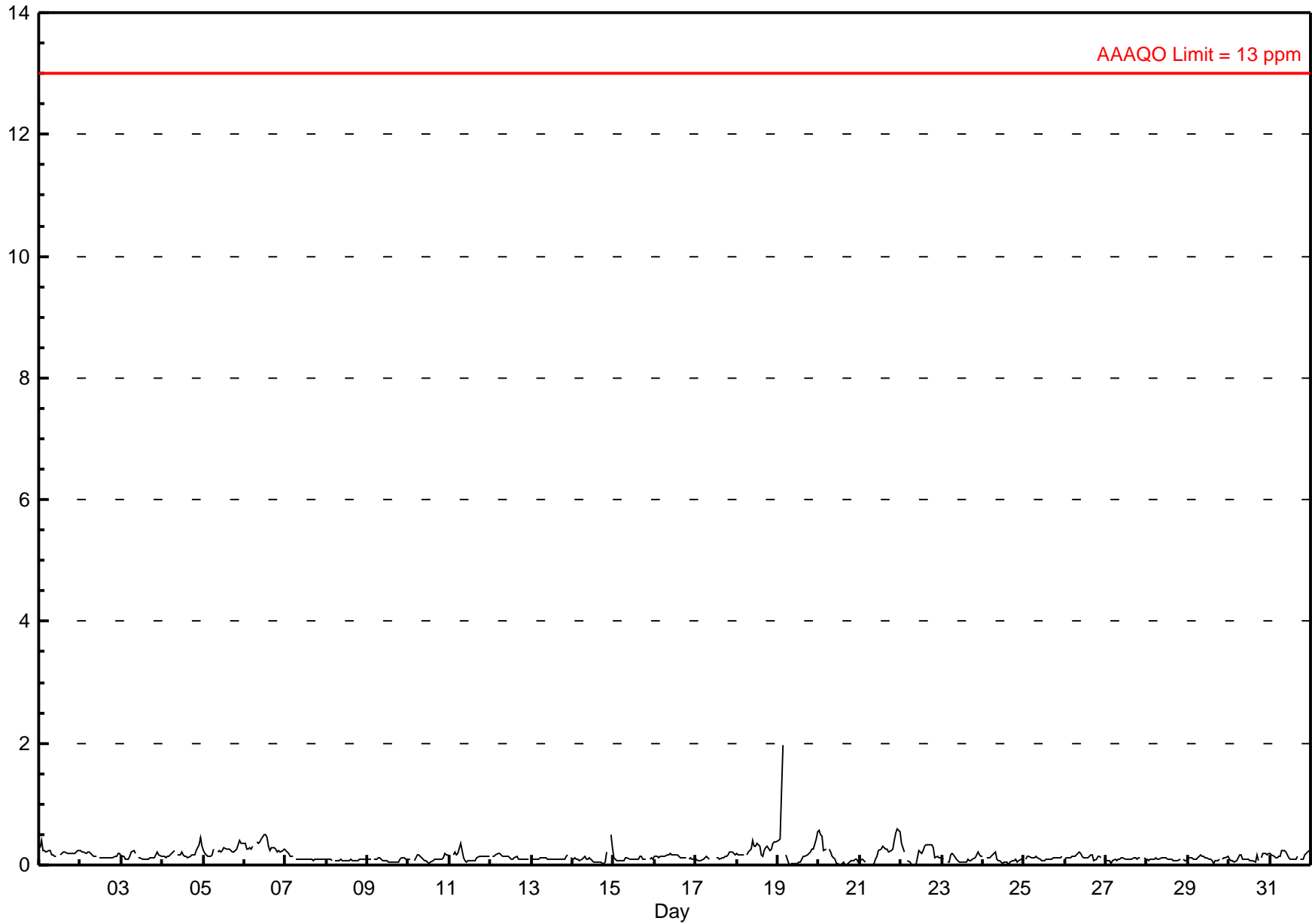
Maximum Value: 50.5 ppb on Aug 5 20:00																					Hours in Service:	744			
Minimum Value: 2.3 ppb on Aug 30 08:00																					Hours of Data:	738			
Percentiles: P <sub>1</sub> = 2.9 P <sub>10</sub> = 9.4 Q <sub>1</sub> = 16.4 Median = 22.8 Q <sub>3</sub> = 28.6 P <sub>90</sub> = 34.8 P <sub>99</sub> = 43.7																					Hours of Missing Data:	6			
																					Hours of Calibration:	6			
																					Percent Operational Time:	100.0			
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	45	41	37	32	28	24	21	19	19	20	22	23	25	29	32	35	37	38	38	37	36	35	34	31	44.8
2-Aug	29	26	24	22	21	19	18	17	17	18	18	19	20	22	24	26	28	29	30	30	30	30	29	27	30.4
3-Aug	26	23	19	17	14	12	9	8	7	6	10	14	19	23	28	32	36	36	36	35	33	30	28	25	35.8
4-Aug	22	19	16	12	10	9	7	6	6	6	10	14	18	22	27	33	34	37	38	38	37	36	31	27	38.0
5-Aug	22	17	12	8	5	2	3	3	6	11	16	22	28	35	42	43	46	48	50	50	49	46	43	40	50.5
6-Aug	36	33	29	26	24	22	21	19	19	19	21	24	28	32	33	38	41	43	43	42	40	38	37	34	43.1
7-Aug	33	31	29	27	26	25	25	24	24	24	26	28	31	32	34	36	38	40	40	40	40	39	37	35	39.9
8-Aug	33	31	28	26	24	22	21	20	20	21	22	23	24	25	27	29	30	31	32	33	33	34	34	34	34.1
9-Aug	33	33	31	31	29	27	25	23	22	22	22	23	23	25	26	28	29	29	29	28	27	26	25	23	33.5
10-Aug	22	20	19	17	16	14	13	12	12	13	15	17	19	22	24	27	28	29	29	29	28	26	24	21	29.5
11-Aug	18	17	13	10	8	6	5	5	6	9	12	15	19	23	27	30	31	31	31	30	28	28	27	24	31.3
12-Aug	24	22	20	18	16	13	13	16	18	21	25	29	33	37	38	37	37	36	34	33	31	29	27	27	37.7
13-Aug	25	24	23	22	21	21	20	20	20	20	21	22	24	25	28	30	31	33	33	33	32	30	30	27	33.3
14-Aug	23	20	16	13	11	9	8	8	8	10	12	16	20	24	29	32	35	37	39	39	37	37	32	28	38.9
15-Aug	24	20	16	12	10	10	11	12	13	15	17	20	23	26	28	32	34	35	36	36	36	36	36	34	36.4
16-Aug	31	29	26	24	24	21	19	17	18	19	20	21	23	25	28	31	33	33	33	33	31	29	26	24	33.2
17-Aug	23	21	19	19	18	17	16	16	15	15	15	16	17	19	21	23	25	26	27	27	27	26	25	24	27.4
18-Aug	23	21	19	17	15	14	12	10	8	8	11	15	19	22	25	28	30	32	32	32	31	31	31	32	31.9
19-Aug	33	33	35	36	36	37	38	38	39	40	40	39	39	N	N	N	N	N	N	30	30	29	29	29	39.8
20-Aug	28	27	26	25	23	22	19	16	15	15	16	17	20	21	23	25	27	27	27	27	27	26	25	24	28.0
21-Aug	23	20	17	15	14	12	10	8	6	7	9	12	14	17	20	23	26	28	29	29	27	24	21	18	29.4
22-Aug	14	10	6	3	3	3	3	3	4	6	9	12	15	18	20	23	25	27	27	27	26	26	25	24	27.1
23-Aug	23	21	21	19	17	14	11	9	9	10	12	13	15	18	21	24	26	27	27	27	26	25	24	22	27.4
24-Aug	20	19	16	14	13	11	9	8	9	10	12	14	16	19	22	24	25	26	26	25	25	24	23	22	25.9
25-Aug	21	20	18	16	14	11	9	7	8	7	8	9	12	16	19	23	26	27	29	29	28	28	26	25	28.9
26-Aug	22	20	18	17	15	14	15	15	16	17	18	19	22	24	25	25	26	27	27	26	24	23	21	21	26.6
27-Aug	21	20	19	19	19	20	20	20	20	20	21	21	22	22	22	22	23	23	23	23	23	22	21	21	22.9
28-Aug	21	22	22	23	24	24	25	26	26	27	28	28	29	29	30	31	31	32	31	30	30	28	26	23	31.7
29-Aug	20	17	15	12	11	9	7	5	4	4	4	4	5	7	10	13	16	19	21	23	24	25	24	21	24.8
30-Aug	18	15	11	10	8	5	3	2	3	3	5	6	8	11	14	18	21	24	26	28	29	27	25	22	28.6
31-Aug	18	14	14	11	10	9	8	7	8	8	8	10	12	15	18	21	23	24	26	26	24	20	16	13	26.2
44.8 40.5 36.7 36.4 36.2 36.9 37.6 38.2 38.8 39.7 39.8 39.4 39.4 36.5 41.5 42.6 46.1 48.4 50.1 50.5 49.1 46.2 43.4 40.3																									
Diurnal Maximums																									
N - Not Valid																									

# Hourly Averages

**Carbon Monoxide (CO) - ppm**

**Henry Pirker - August 2010**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.98 ppm on Aug 19 04:00 Maximum Daily Average: 0.32 ppm on Aug 6		Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0																																															
Minimum Value: 0.0 ppm on Aug 20 14:00 Maximum Diurnal Average: 0.20 ppm at hour 23 Monthly Average: 0.148 ppm		Minimum Daily Average: 0.08 ppm on Aug 8 Minimum Diurnal Average: 0.12 ppm at hour 16 Percentiles: P <sub>1</sub> = 0.00 P <sub>10</sub> = 0.06 Q <sub>1</sub> = 0.09 Median = 0.12 Q <sub>3</sub> = 0.18 P <sub>90</sub> = 0.26 P <sub>99</sub> = 0.52																																															
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-Aug	0.3	0.4	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.39																						
2-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16	0.24																						
3-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.14	0.23																						
4-Aug	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.19	0.44																							
5-Aug	0.2	0.2	0.2	0.1	0.1	0.2	0.3	A	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.25	0.41																							
6-Aug	0.4	0.3	0.3	0.3	0.3	0.3	A	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.32	0.50																							
7-Aug	0.2	0.2	0.2	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.24																							
8-Aug	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.08	0.10																							
9-Aug	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.08	0.13																							
10-Aug	0.1	0.1	A	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.10	0.19																							
11-Aug	0.1	A	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.34																							
12-Aug	A	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.19																							
13-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.1	0.10	0.16																							
14-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2	A	0.5	0.3	0.11	0.51																							
15-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.10	0.13																							
16-Aug	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	A	0.1	0.1	0.1	0.1	0.14	0.19																							
17-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.13	0.22																							
18-Aug	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.4	0.3	0.3	0.4	0.3	0.2	0.1	0.2	0.3	0.3	0.2	0.3	0.4	0.4	0.4	0.26	0.40																							
19-Aug	0.4	0.4	1.2	2.0	A	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.30	1.98																							
20-Aug	0.6	0.5	0.5	0.2	0.3	A	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.14	0.56																							
21-Aug	0.1	0.1	0.1	0.1	A	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.4	0.5	0.6	0.5	0.21	0.59																							
22-Aug	0.3	0.3	0.2	A	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.19	0.35																							
23-Aug	0.1	0.1	A	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.11	0.21																							
24-Aug	0.2	A	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.09	0.21																							
25-Aug	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.11	0.14																							
26-Aug	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	A	0.1	0.13	0.21																							
27-Aug	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.09	0.12																							
28-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.09	0.12																							
29-Aug	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	0.0	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.11	0.17																							
30-Aug	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	A	0.1	0.2	0.2	0.2	0.2	0.11	0.20																							
31-Aug	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.2	0.2	0.2	0.2	0.15	0.25																							
																								0.18	0.16	0.18	0.19	0.13	0.14	0.15	0.15	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.13	0.13	0.13	0.14	0.17	0.18	0.20	0.19	Diurnal Average	
																								0.56	0.49	1.21	1.98	0.27	0.30	0.34	0.37	0.35	0.40	0.43	0.50	0.50	0.44	0.31	0.34	0.34	0.34	0.33	0.29	0.41	0.53	0.59	0.54	Diurnal Maximum	
C - Calibration                      A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm    24-hr na																																																	

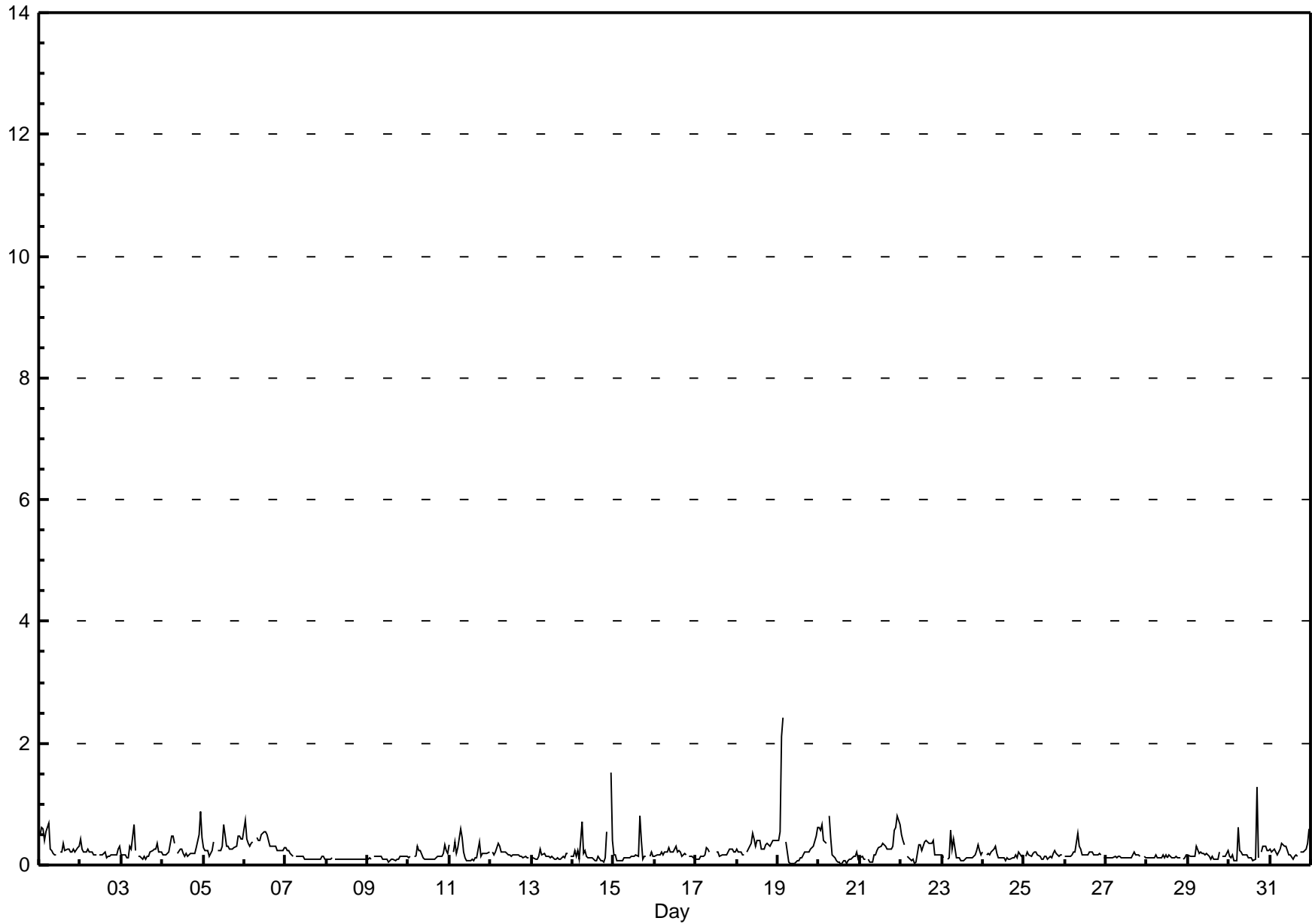


# Hourly Maximums

## Carbon Monoxide (CO) - ppm

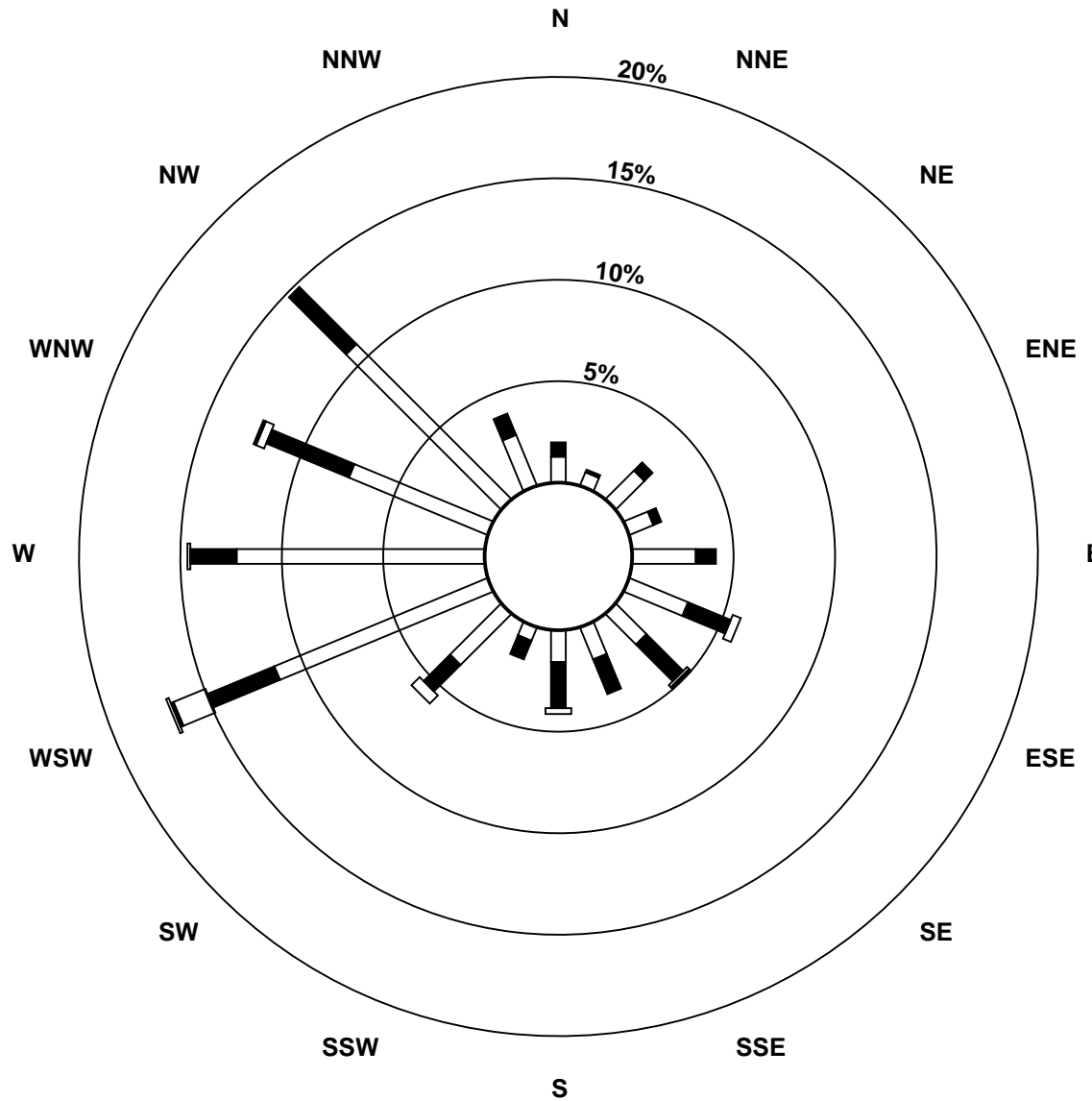
### Henry Pirker - August 2010

Maximum Value: 2.41 ppm on Aug 19 04:00		Maximum Daily Average: 0.40 ppm on Aug 19		Hours in Service: 744																						
Minimum Value: 0.0 ppm on Aug 20 14:00		Minimum Daily Average: 0.11 ppm on Aug 8		Hours of Data: 709																						
Maximum Diurnal Average: 0.31 ppm at hour 23		Minimum Diurnal Average: 0.16 ppm at hour 14		Hours of Missing Data: 35																						
Monthly Average: 0.214 ppm		Percentiles: P <sub>1</sub> = 0.03 P <sub>10</sub> = 0.10 Q <sub>1</sub> = 0.12 Median = 0.16 Q <sub>3</sub> = 0.25 P <sub>90</sub> = 0.39 P <sub>99</sub> = 0.80		Hours of Calibration: 35																						
		Percent Operational Time: 100.0																								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0.5	0.6	0.6	0.4	0.5	0.7	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.4	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.32	0.70
2-Aug	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.21	0.42
3-Aug	0.2	0.2	0.2	0.1	0.1	0.3	0.3	0.7	0.2	A	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.2	0.2	0.21	0.67
4-Aug	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.4	A	0.2	0.3	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.9	0.4	0.28	0.87
5-Aug	0.3	0.2	0.2	0.1	0.2	0.2	0.4	A	0.2	0.2	0.2	0.3	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.4	0.32	0.66
6-Aug	0.7	0.4	0.3	0.3	0.4	0.4	A	0.5	0.4	0.4	0.5	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.38	0.74
7-Aug	0.3	0.2	0.2	0.2	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.14	0.29
8-Aug	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.11
9-Aug	0.1	0.1	0.1	A	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.12	0.15
10-Aug	0.1	0.1	A	0.1	0.1	0.3	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	0.2	0.3	0.2	0.2	0.16	0.33
11-Aug	0.3	A	0.2	0.4	0.2	0.3	0.6	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.2	0.2	0.2	0.2	0.2	0.21	0.60
12-Aug	A	0.2	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	A	0.18	0.35
13-Aug	0.1	0.1	0.1	0.1	0.2	0.3	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	A	0.1	0.14	0.25
14-Aug	0.1	0.2	0.1	0.2	0.1	0.7	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	0.5	A	1.5	0.4	0.24	1.51
15-Aug	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	0.2	0.1	0.8	0.4	0.1	0.2	0.2	A	0.2	0.2	0.2	0.17	0.82
16-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.1	0.1	0.19	0.30
17-Aug	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.2	C	C	C	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.19	0.29
18-Aug	0.3	0.2	0.2	0.2	0.2	A	0.2	0.3	0.4	0.5	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.32	0.52
19-Aug	0.4	0.5	2.1	2.4	A	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.6	0.40	2.41
20-Aug	0.6	0.6	0.7	0.4	0.3	A	0.8	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.23	0.80
21-Aug	0.1	0.1	0.1	0.1	A	0.1	0.0	0.0	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.6	0.8	0.7	0.28	0.81
22-Aug	0.5	0.4	0.3	A	0.1	0.1	0.1	0.1	0.0	0.1	0.3	0.3	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.25	0.50
23-Aug	0.2	0.1	A	0.1	0.1	0.6	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.17	0.57
24-Aug	0.2	A	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.15	0.31
25-Aug	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	A	0.16	0.25
26-Aug	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.1	0.20	0.51
27-Aug	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	A	0.1	0.1	0.14	0.20
28-Aug	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.2	0.13	0.17
29-Aug	0.2	0.2	0.2	0.1	0.1	0.3	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	A	0.1	0.2	0.2	0.16	0.30
30-Aug	0.1	0.1	0.2	0.1	0.1	0.6	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	1.3	0.1	A	0.2	0.3	0.3	0.2	0.2	0.23	1.27
31-Aug	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.4	0.6	0.24	0.59
		0.25	0.22	0.27	0.26	0.18	0.29	0.23	0.26	0.19	0.17	0.17	0.17	0.18	0.16	0.17	0.18	0.21	0.18	0.18	0.19	0.23	0.24	0.31	0.26	Diurnal Average
		0.74	0.61	2.11	2.41	0.54	0.72	0.80	0.67	0.40	0.52	0.50	0.55	0.66	0.50	0.40	0.82	1.27	0.37	0.36	0.41	0.56	0.61	1.51	0.67	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

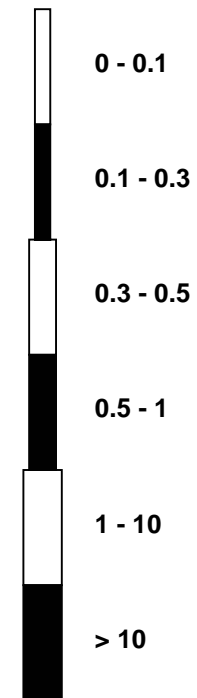


# Pollutant Rose

Carbon Monoxide (CO) - ppm  
Henry Pirker - August 2010



## Pollutant Classes (ppm)





# Eight Hour Running Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - August 2010

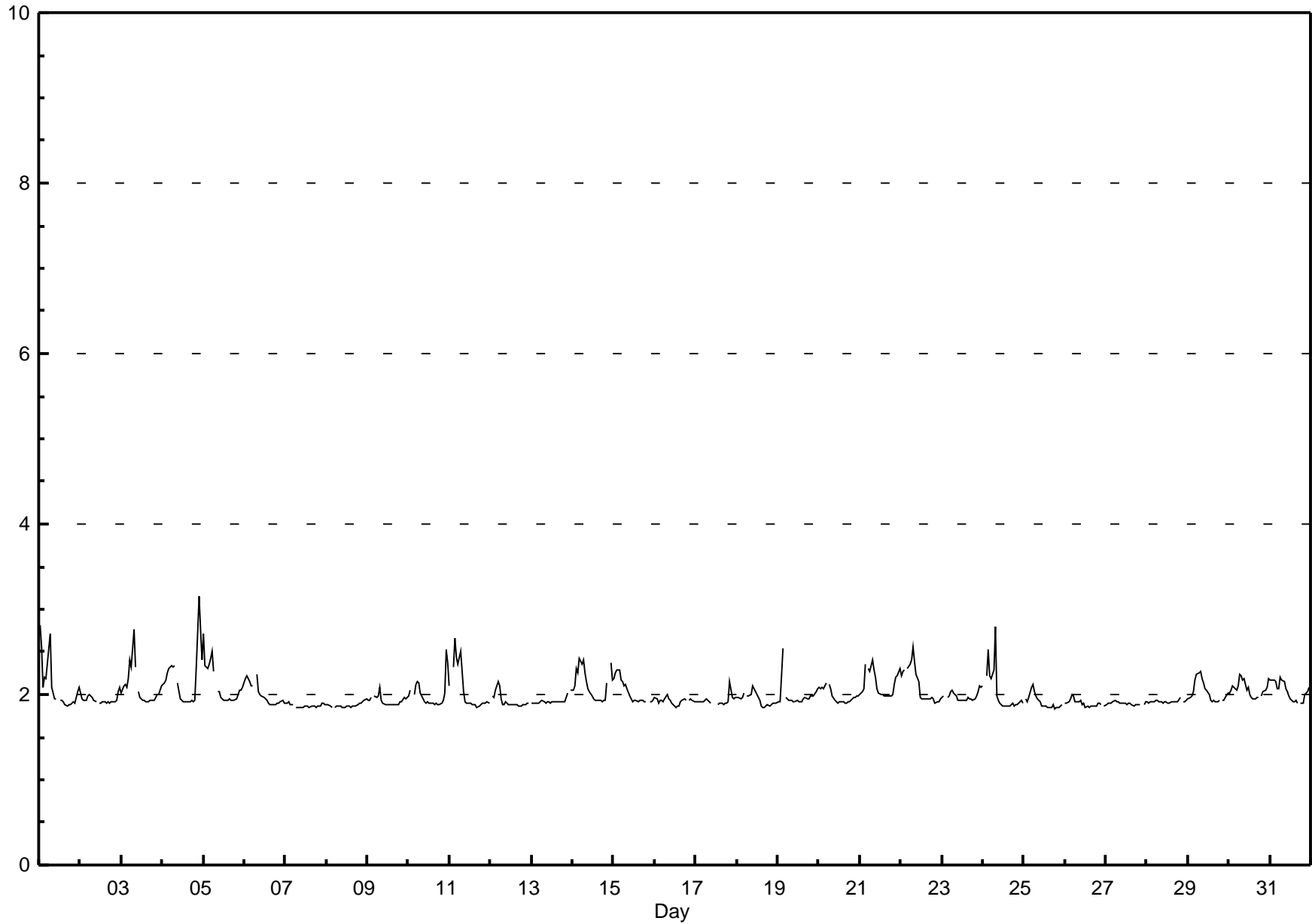
Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.73 ppm on Aug 19 05:00 Minimum Value: 0.01 ppm on Aug 20 18:00 Percentiles: P <sub>1</sub> = 0.03 P <sub>10</sub> = 0.07 Q <sub>1</sub> = 0.10 Median = 0.12 Q <sub>3</sub> = 0.17 P <sub>90</sub> = 0.26 P <sub>99</sub> = 0.44																				Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 6 Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	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	0.2	0.2	0.2	0.27
2-Aug	0.2	0.2	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	0.1	0.1	0.1	0.22
3-Aug	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
4-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.25
5-Aug	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	0.3	0.3	0.3	0.3	0.3	0.30
6-Aug	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.42
7-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.24
8-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10
9-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11
10-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13
11-Aug	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.20
12-Aug	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
13-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11
14-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.16
15-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.19
16-Aug	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	0.1	0.1	0.16
17-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	N	N	N	N	N	N	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.17
18-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.31
19-Aug	0.3	0.3	0.5	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.3	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.73
20-Aug	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.42
21-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.38
22-Aug	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.42
23-Aug	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.20
24-Aug	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.16
25-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13
26-Aug	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
27-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11
28-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11
29-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13
30-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.16
31-Aug	0.2	0.2	0.2	0.2	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	0.2	0.18
0.39 0.40 0.46 0.68 0.73 0.71 0.66 0.60 0.55 0.49 0.34 0.37 0.40 0.42 0.41 0.39 0.39 0.38 0.35 0.32 0.29 0.31 0.34 0.38 Diurnal Maximums																									
N - Not Valid Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

# Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 744																																															
Maximum Value: 3.15 ppm on Aug 4 22:00		Maximum Daily Average: 2.17 ppm on Aug 4																																															
Minimum Value: 1.8 ppm on Aug 25 19:00		Hours of Data: 709																																															
Maximum Diurnal Average: 2.14 ppm at hour 6		Hours of Missing Data: 35																																															
Monthly Average: 1.996 ppm		Hours of Calibration: 35																																															
Minimum Daily Average: 1.87 ppm on Aug 7		Percent Operational Time: 100.0																																															
Minimum Diurnal Average: 1.90 ppm at hour 15																																																	
Percentiles: P <sub>1</sub> = 1.85 P <sub>10</sub> = 1.87 Q <sub>1</sub> = 1.90 Median = 1.93 Q <sub>3</sub> = 2.04 P <sub>90</sub> = 2.21 P <sub>99</sub> = 2.71																																																	
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-Aug	2.8	2.6	2.1	2.2	2.2	2.5	2.7	2.1	2.0	1.9	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.10	2.82																							
2-Aug	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	1.95	2.08																							
3-Aug	2.0	2.1	2.1	2.1	2.2	2.4	2.3	2.8	2.3	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.08	2.77																							
4-Aug	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.3	A	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3	3.2	2.8	2.4	2.17	3.15																							
5-Aug	2.7	2.3	2.3	2.4	2.4	2.5	2.3	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.0	2.1	2.11	2.71																							
6-Aug	2.2	2.2	2.2	2.1	2.1	2.1	A	2.2	2.0	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	1.9	1.9	2.00	2.23																							
7-Aug	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.87	1.91																							
8-Aug	1.9	1.9	1.9	1.8	A	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.94																							
9-Aug	1.9	1.9	2.0	A	2.0	2.0	2.0	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.93	2.08																							
10-Aug	2.0	2.1	A	2.0	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.5	2.4	2.00	2.53																							
11-Aug	2.1	A	2.3	2.7	2.4	2.4	2.5	2.3	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.05	2.66																							
12-Aug	A	2.0	2.0	2.1	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.93	2.15																							
13-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	A	2.0	1.92	2.05																							
14-Aug	2.1	2.1	2.3	2.3	2.4	2.3	2.4	2.3	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	A	2.4	2.2	2.11	2.42																							
15-Aug	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.03	2.29																							
16-Aug	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	1.9	1.9	1.92	2.00																							
17-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.0	1.9	2.0	1.93	2.16																							
18-Aug	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.11																							
19-Aug	1.9	1.9	2.2	2.5	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.99	2.54																							
20-Aug	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.98	2.13																							
21-Aug	2.0	2.0	2.1	2.4	A	2.3	2.3	2.4	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.3	2.12	2.41																							
22-Aug	2.2	2.3	2.3	A	2.3	2.4	2.4	2.6	2.4	2.2	2.1	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.11	2.56																							
23-Aug	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	1.98	2.11																							
24-Aug	2.1	A	2.2	2.5	2.2	2.2	2.3	2.8	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.03	2.80																							
25-Aug	A	2.0	1.9	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.9	1.9	1.9	1.9	A	1.91	2.12																							
26-Aug	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.90	1.99																							
27-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.90	1.93																							
28-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.92	1.97																							
29-Aug	2.0	2.0	2.0	2.0	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.9	2.0	2.03	2.27																							
30-Aug	2.0	2.0	2.1	2.1	2.0	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	2.0	2.0	2.0	A	2.0	2.0	2.1	2.2	2.06	2.24																							
31-Aug	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	2.1	2.04	2.20																							
																								2.06	2.04	2.06	2.11	2.10	2.14	2.13	2.12	2.02	1.98	1.95	1.93	1.92	1.91	1.90	1.91	1.90	1.91	1.90	1.92	1.96	2.00	2.03	2.03	Diurnal Average	
																								2.82	2.55	2.33	2.66	2.45	2.54	2.71	2.80	2.39	2.24	2.15	2.08	2.01	1.99	1.99	1.98	1.98	1.98	1.97	2.00	2.30	3.15	2.77	2.40	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									

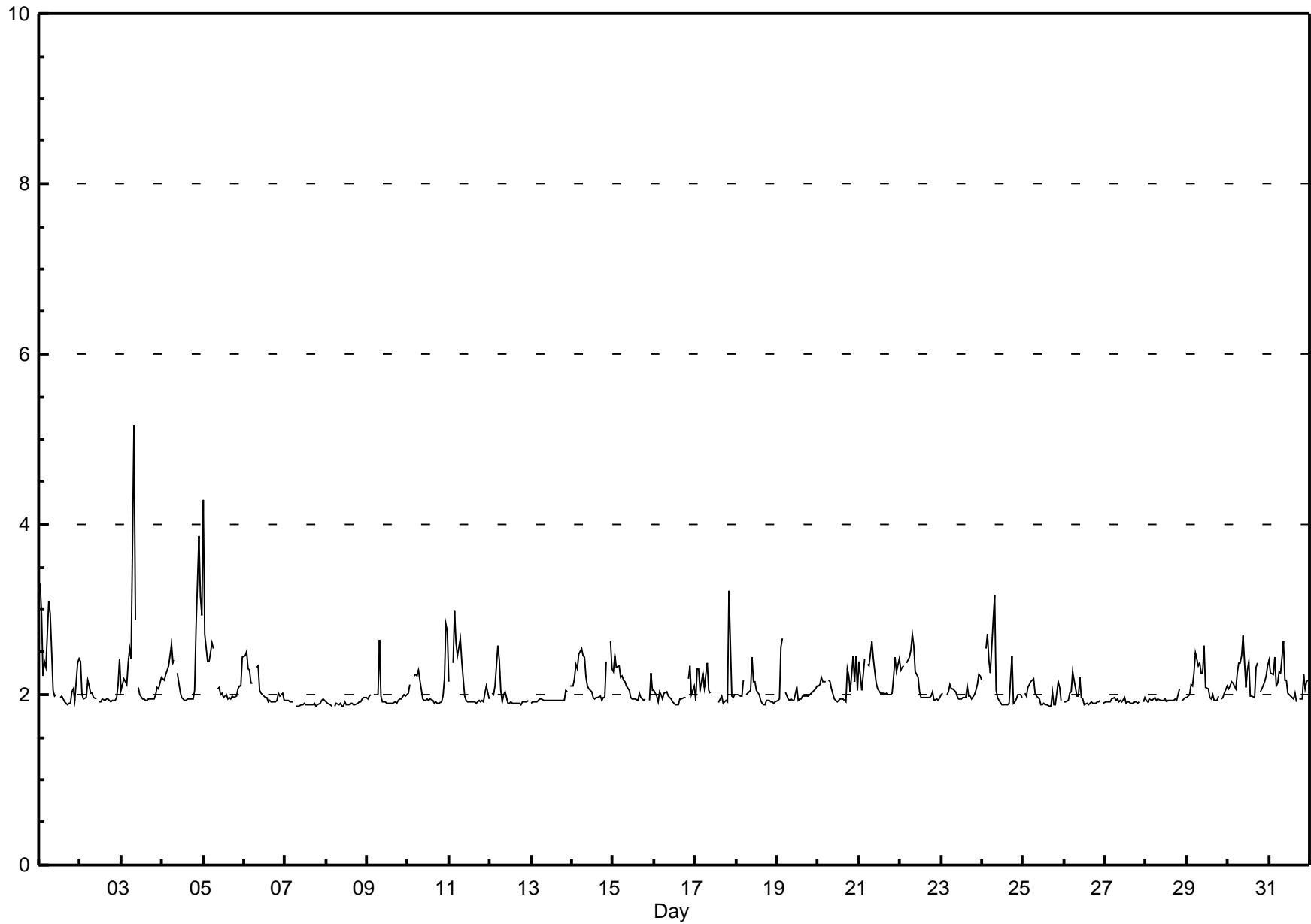


# Hourly Maximums

## Total Hydrocarbons (THC) - ppm

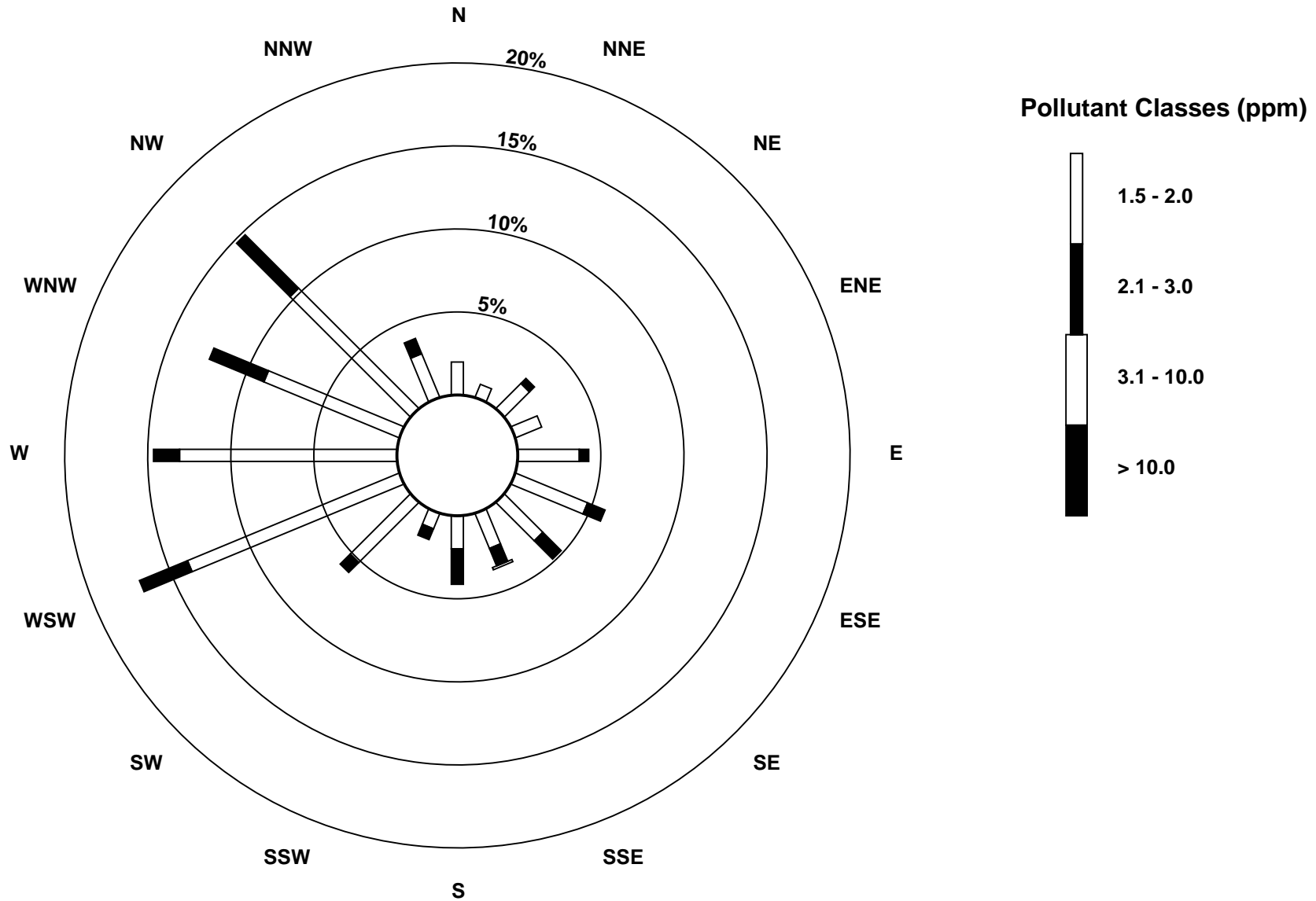
### Henry Pirker - August 2010

Maximum Value: 5.17 ppm on Aug 3 08:00		Maximum Daily Average: 2.31 ppm on Aug 4		Hours in Service: 744																																												
Minimum Value: 1.9 ppm on Aug 7 09:00		Minimum Daily Average: 1.90 ppm on Aug 7		Hours of Data: 709																																												
Maximum Diurnal Average: 2.33 ppm at hour 8		Minimum Diurnal Average: 1.93 ppm at hour 15		Hours of Missing Data: 35																																												
Monthly Average: 2.081 ppm		Percentiles: P <sub>1</sub> = 1.87 P <sub>10</sub> = 1.90 Q <sub>1</sub> = 1.93 Median = 1.98 Q <sub>3</sub> = 2.15 P <sub>90</sub> = 2.39 P <sub>99</sub> = 3.16		Hours of Calibration: 35																																												
				Percent Operational Time: 100.0																																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Aug	3.3	2.9	2.2	2.4	2.3	3.1	2.9	2.5	2.1	2.0	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.1	1.9	2.4	2.4	2.27	3.30																						
2-Aug	2.4	2.0	1.9	2.0	2.2	2.1	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.4	2.01	2.43																						
3-Aug	2.1	2.2	2.2	2.1	2.4	2.6	2.4	5.2	2.9	A	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.26	5.17																						
4-Aug	2.2	2.2	2.2	2.3	2.3	2.6	2.4	2.4	A	2.3	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.8	3.9	3.2	2.9	2.31	3.87																						
5-Aug	4.3	2.7	2.4	2.4	2.5	2.6	2.5	A	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.4	2.26	4.29																						
6-Aug	2.5	2.5	2.3	2.3	2.1	2.1	A	2.3	2.3	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.08	2.52																						
7-Aug	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.95																						
8-Aug	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.90	1.97																						
9-Aug	1.9	2.0	2.0	A	2.0	2.0	2.0	2.6	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.98	2.65																						
10-Aug	2.0	2.1	A	2.2	2.2	2.2	2.3	2.2	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.8	2.8	2.09	2.82																						
11-Aug	2.2	A	2.4	3.0	2.6	2.5	2.7	2.4	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.0	2.13	2.97																						
12-Aug	A	2.0	2.0	2.1	2.6	2.4	2.1	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.99	2.57																						
13-Aug	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	A	2.1	1.95	2.11																							
14-Aug	2.1	2.2	2.4	2.3	2.5	2.5	2.5	2.4	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.4	A	2.6	2.3	2.19	2.62																						
15-Aug	2.3	2.5	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	A	1.9	2.2	2.0	2.09	2.46																						
16-Aug	2.0	2.0	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	2.0	1.9	2.0	2.0	A	2.2	2.3	2.0	2.1	2.00	2.34																						
17-Aug	1.9	2.3	2.3	2.0	2.3	2.1	2.2	2.4	2.1	2.0	C	C	C	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	3.2	2.0	2.0	2.11	3.22																						
18-Aug	2.0	2.0	2.0	2.0	2.2	A	2.0	2.0	2.1	2.4	2.2	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.01	2.44																						
19-Aug	1.9	2.0	2.6	2.7	A	2.0	2.0	1.9	1.9	1.9	1.9	2.1	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.04	2.67																						
20-Aug	2.1	2.1	2.2	2.1	2.1	A	2.2	2.2	2.1	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.3	2.2	2.0	2.5	2.2	2.5	2.1	2.10	2.45																						
21-Aug	2.4	2.1	2.2	2.4	A	2.4	2.3	2.6	2.4	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.4	2.3	2.4	2.21	2.62																						
22-Aug	2.3	2.3	2.3	A	2.4	2.4	2.5	2.7	2.6	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.16	2.72																						
23-Aug	2.0	2.0	A	2.0	2.0	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.0	1.9	2.0	2.0	2.1	2.2	2.2	2.03	2.24																						
24-Aug	2.2	A	2.5	2.7	2.4	2.3	2.9	3.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.5	1.9	1.9	1.9	2.0	2.0	2.0	2.16	3.16																						
25-Aug	A	2.0	2.0	2.1	2.2	2.2	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.2	2.1	1.9	A	1.99	2.18																						
26-Aug	1.9	1.9	1.9	2.0	2.0	2.3	2.2	2.0	2.0	2.2	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	1.9	1.97	2.27																						
27-Aug	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.92	1.97																						
28-Aug	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	A	1.9	2.0	1.94	2.06																						
29-Aug	2.0	2.0	2.1	2.1	2.3	2.5	2.3	2.4	2.3	2.3	2.6	2.1	2.1	2.0	1.9	2.0	1.9	1.9	2.0	A	2.0	2.0	2.0	2.1	2.12	2.57																						
30-Aug	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2.4	2.5	2.7	2.1	2.3	2.4	2.0	2.0	2.0	2.3	2.4	A	2.0	2.1	2.1	2.2	2.3	2.21	2.69																						
31-Aug	2.4	2.3	2.2	2.4	2.1	2.1	2.3	2.3	2.6	2.2	2.2	2.0	2.0	1.9	2.0	1.9	A	1.9	2.0	2.2	2.1	2.2	2.2	2.2	2.15	2.62																						
																								2.21	2.13	2.15	2.20	2.20	2.26	2.23	2.33	2.13	2.07	2.01	1.98	1.96	1.94	1.93	1.94	1.94	1.98	1.94	1.96	2.10	2.10	2.15	2.16	Diurnal Average
																								4.29	2.94	2.55	2.97	2.61	3.10	2.94	5.17	2.89	2.69	2.57	2.29	2.39	2.02	2.01	2.11	2.33	2.45	2.21	2.06	3.22	3.87	3.16	2.94	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								



### Pollutant Rose

Total Hydrocarbons (THC) - ppm  
Henry Pirker - August 2010



# Hourly Averages

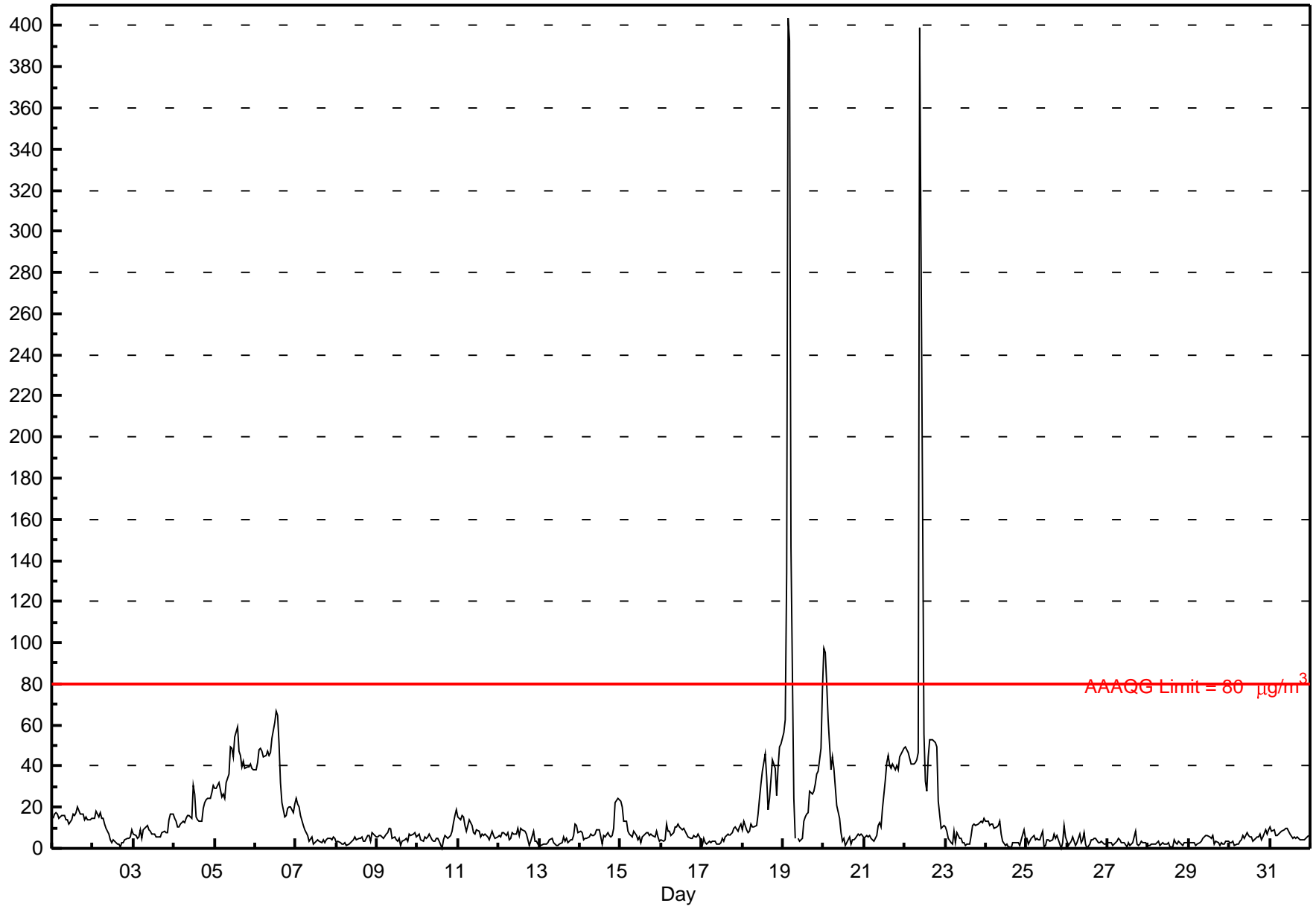
## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

### Henry Pirker - August 2010

Number of Exceedences: 1-hr: 8 24-hr: 4	Hours in Service: 744
Maximum Value: 403.6 µg/m <sup>3</sup> on Aug 19 04:00	Maximum Daily Average: 70.1 µg/m <sup>3</sup> on Aug 19
Minimum Value: 0 µg/m <sup>3</sup> on Aug 10 15:00	Hours of Data: 743
Maximum Diurnal Average: 24.8 µg/m <sup>3</sup> at hour 4	Hours of Missing Data: 1
Monthly Average: 14.30 µg/m <sup>3</sup>	Hours of Calibration: 1
Minimum Daily Average: 2.2 µg/m <sup>3</sup> on Aug 28	Percent Operational Time: 100.0
Minimum Diurnal Average: 11.2 µg/m <sup>3</sup> at hour 16	
Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 2.4 Q <sub>1</sub> = 3.8 Median = 6.3 Q <sub>3</sub> = 14.0 P <sub>90</sub> = 38.6 P <sub>99</sub> = 62.3	

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-Aug	15	17	17	16	14	16	16	16	14	14	12	14	17	16	18	20	17	17	17	14	15	14	14	14	15.6	20.1																						
2-Aug	15	15	18	15	17	15	14	12	9	7	4	2	4	4	2	2	0	3	3	4	5	5	5	9	7.9	18.0																						
3-Aug	7	6	5	6	9	5	9	11	11	9	8	7	7	5	6	6	5	8	8	8	8	14	17	16	8.3	16.5																						
4-Aug	14	13	11	10	12	13	13	14	16	16	14	31	26	15	14	13	13	19	23	24	25	25	27	31	18.0	30.7																						
5-Aug	29	29	32	28	25	26	24	32	36	50	48	44	54	59	47	45	39	43	39	40	39	41	39	38	38.7	59.2																						
6-Aug	38	42	48	49	47	45	45	47	45	47	53	61	67	64	51	32	22	15	16	20	20	20	17	22	38.8	66.8																						
7-Aug	24	21	20	16	11	9	7	6	4	5	2	3	4	4	3	3	4	3	4	5	5	4	5	5	7.5	24.2																						
8-Aug	3	3	3	2	2	3	1	2	2	4	4	6	4	5	5	5	4	3	6	6	4	7	7	6	4.1	7.4																						
9-Aug	6	6	6	6	5	7	8	10	9	5	6	4	4	5	1	4	4	5	3	7	6	7	8	6	5.7	10.0																						
10-Aug	6	7	4	3	6	5	5	7	4	3	4	5	5	3	0	4	6	6	5	6	8	13	16	19	6.3	19.1																						
11-Aug	15	14	16	15	11	8	14	13	11	7	7	9	9	5	7	6	7	5	4	6	9	6	5	6	9.0	16.2																						
12-Aug	6	6	8	8	6	8	4	5	8	7	7	10	6	10	9	9	7	4	1	4	8	4	3	2	6.2	10.1																						
13-Aug	1	1	2	2	2	2	4	5	2	2	1	1	2	3	5	4	5	3	4	4	6	12	11	7	4.0	11.9																						
14-Aug	8	8	4	5	5	6	7	7	6	7	9	9	6	2	6	6	7	6	6	6	10	22	24	24	8.6	24.2																						
15-Aug	23	20	13	13	9	7	6	6	8	6	4	5	3	5	7	8	8	7	7	6	6	8	6	3	8.1	23.2																						
16-Aug	4	4	4	12	8	9	6	8	10	10	12	11	9	10	8	7	6	5	5	6	5	6	7	4	7.3	12.0																						
17-Aug	1	5	3	2	4	3	4	3	4	2	2	3	5	4	6	7	6	7	7	10	10	9	11	12	5.3	11.7																						
18-Aug	9	13	9	8	9	12	10	11	11	17	24	31	38	46	35	19	24	33	43	39	26	40	49	51	25.2	51.0																						
19-Aug	56	63	134	404	393	146	24	5	C	5	3	5	13	15	17	17	28	27	28	31	36	38	48	77	70.1	403.6																						
20-Aug	97	95	80	62	38	44	39	30	21	15	8	4	5	2	4	6	2	4	5	5	7	6	7	6	24.6	97.0																						
21-Aug	5	6	5	6	5	4	3	6	11	12	10	19	33	42	45	40	39	41	38	40	38	44	46	49	24.6	48.9																						
22-Aug	49	48	46	44	41	41	42	43	46	399	172	56	33	28	44	53	53	52	52	49	23	10	10	11	60.2	399.1																						
23-Aug	10	8	5	3	2	8	3	8	5	5	3	3	1	2	2	6	11	12	11	12	13	13	12	14	7.2	14.4																						
24-Aug	13	14	11	12	12	10	11	11	13	7	4	2	2	1	1	0	3	3	3	3	1	4	9	5	6.4	13.5																						
25-Aug	5	2	3	5	6	4	5	4	4	9	1	1	4	4	4	4	7	5	6	4	0	3	11	6	4.5	11.2																						
26-Aug	4	1	3	5	3	1	3	7	3	4	8	2	0	2	4	5	5	5	2	3	4	3	2	2	3.3	7.7																						
27-Aug	3	3	2	1	2	3	5	4	3	3	3	1	3	2	2	3	9	2	1	2	4	3	3	1	2.8	8.6																						
28-Aug	2	1	2	2	2	3	3	2	3	2	2	2	2	1	1	4	3	2	4	2	1	3	3	3	2.2	3.8																						
29-Aug	3	3	3	3	2	2	3	3	3	5	5	6	6	5	6	2	4	2	2	3	2	2	4	4	3.5	6.4																						
30-Aug	3	3	4	1	2	2	4	4	6	5	8	6	5	6	3	5	5	6	7	4	6	9	7	9	5.0	9.0																						
31-Aug	10	9	9	6	6	7	7	8	9	10	10	9	7	5	5	5	5	5	4	5	4	5	6	6	6.8	10.2																						
																								15.6	15.6	17.1	24.8	23.1	15.3	11.3	11.2	11.4	22.6	14.8	11.9	12.4	12.3	11.9	11.2	11.5	11.5	11.7	12.2	11.4	12.8	14.2	15.1	Diurnal Average
																								97.0	95.0	134.4	403.6	392.7	146.3	44.9	46.9	46.4	399.1	172.4	61.0	66.8	64.4	50.5	53.1	52.8	52.0	51.5	49.3	39.3	44.2	49.1	77.2	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>



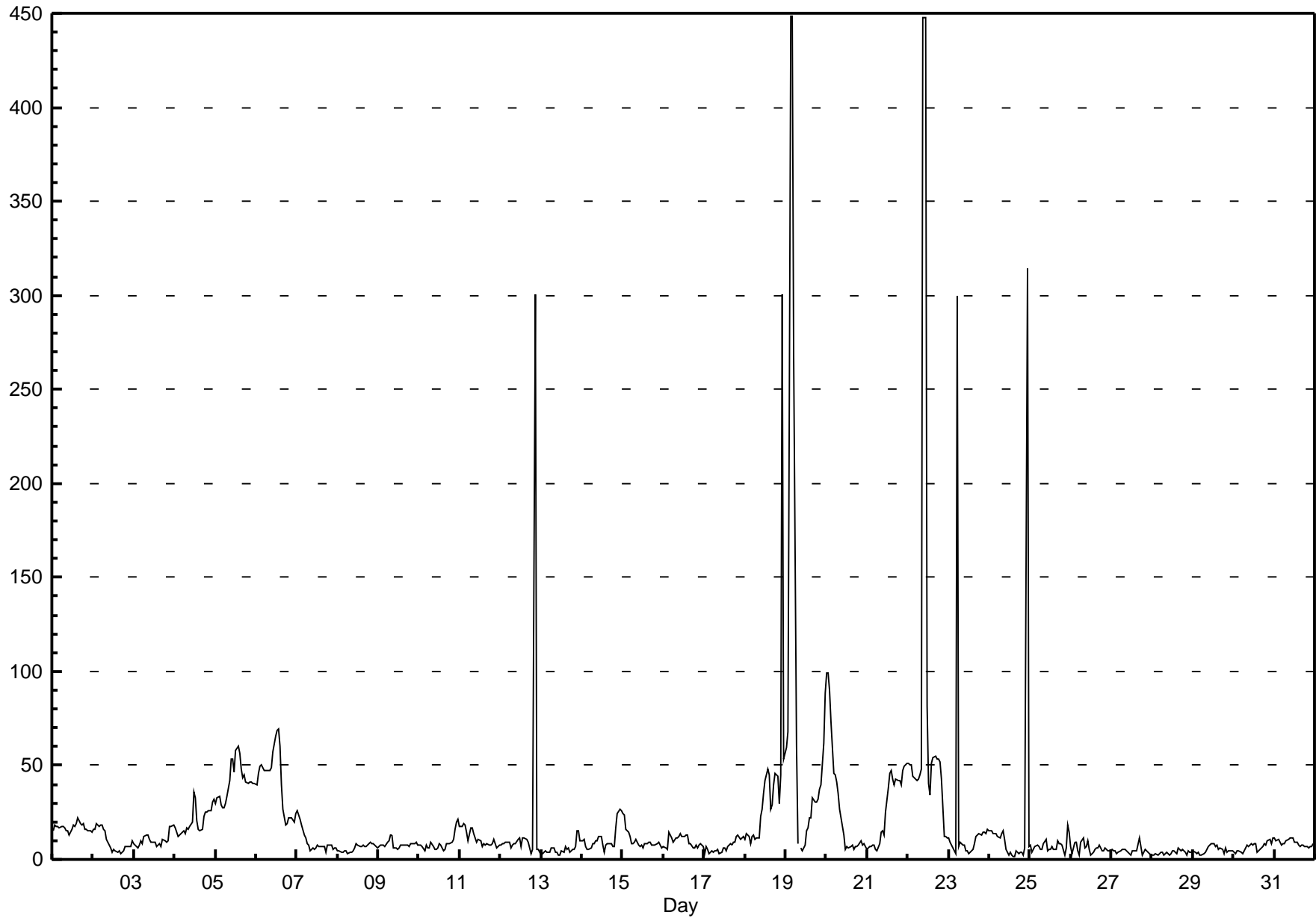


# Hourly Maximums

# Particulate Matter 2.5 (PM<sub>2.5</sub>) - μg/m<sup>3</sup>

## Henry Pirker - August 2010

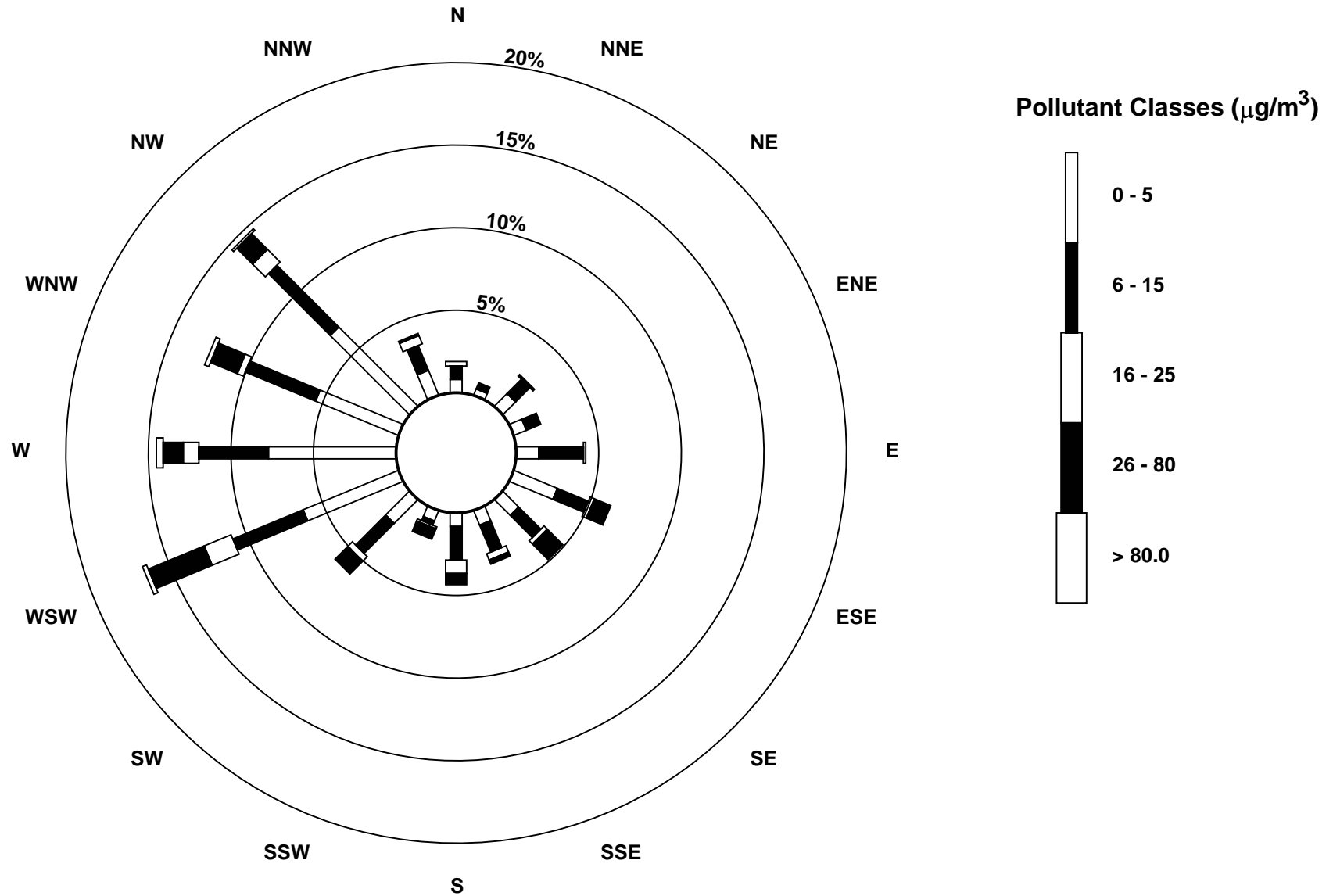
Maximum Value: 448.2 μg/m <sup>3</sup> on Aug 19 04:00		Maximum Daily Average: 89.3 μg/m <sup>3</sup> on Aug 19																				Hours in Service: 744 Hours of Data: 743				
Minimum Value: 1 μg/m <sup>3</sup> on Aug 24 15:00 Maximum Diurnal Average: 34.3 μg/m <sup>3</sup> at hour 23 Monthly Average: 19.04 μg/m <sup>3</sup>		Minimum Daily Average: 3.6 μg/m <sup>3</sup> on Aug 28 Minimum Diurnal Average: 13.4 μg/m <sup>3</sup> at hour 8 Percentiles: P <sub>1</sub> = 2.2 P <sub>10</sub> = 4.0 Q <sub>1</sub> = 5.9 Median = 8.4 Q <sub>3</sub> = 16.1 P <sub>90</sub> = 42.1 P <sub>99</sub> = 300.0																				Hours of Missing Data: 1 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-Aug	16	18	18	18	17	18	18	17	15	15	13	16	19	18	19	22	19	18	19	16	16	15	15	15	17.0	21.8
2-Aug	16	16	19	18	19	18	16	15	11	8	6	4	5	5	4	5	3	4	5	7	7	7	7	10	9.7	19.0
3-Aug	8	7	6	7	10	8	12	13	13	11	9	9	9	7	8	8	7	10	10	9	10	17	17	18	10.2	18.2
4-Aug	17	14	12	13	14	15	14	17	16	17	20	36	33	20	16	15	16	23	25	25	26	26	30	32	20.5	36.2
5-Aug	30	32	34	29	27	27	30	33	42	53	53	47	58	60	56	48	44	45	41	41	41	41	41	40	41.5	60.4
6-Aug	40	45	49	50	49	47	47	48	48	49	57	65	69	69	60	40	27	18	19	22	22	22	20	24	42.0	69.3
7-Aug	26	24	21	19	13	11	9	7	5	6	5	6	7	7	7	7	7	4	8	8	7	5	6	6	9.6	26.0
8-Aug	4	5	4	4	4	4	3	4	4	5	6	8	8	7	7	7	7	8	9	8	8	8	8	6	6.1	9.1
9-Aug	7	8	8	7	7	9	10	13	13	6	6	6	8	8	8	8	8	8	7	9	9	8	9	8	8.0	12.9
10-Aug	7	8	7	5	8	6	6	9	7	5	5	6	9	7	5	6	8	9	8	9	11	16	20	21	8.7	21.3
11-Aug	17	17	19	18	14	10	17	17	14	11	9	10	10	7	9	8	8	8	8	8	11	9	6	7	11.4	19.2
12-Aug	8	8	8	9	9	9	6	7	9	8	10	11	7	12	12	10	9	6	3	6	300	6	5	4	20.2	300.3
13-Aug	3	3	4	4	4	4	6	6	4	4	3	3	5	4	7	5	6	4	5	5	7	15	15	10	5.5	15.1
14-Aug	10	10	7	5	6	6	8	8	10	10	12	12	8	4	8	8	9	9	7	7	17	25	27	26	10.7	26.9
15-Aug	24	24	16	14	12	9	8	9	11	7	7	7	6	8	8	9	9	8	8	7	8	9	8	6	10.1	24.1
16-Aug	7	6	5	14	13	12	9	12	12	12	14	12	12	13	13	9	8	6	6	7	6	8	9	7	9.7	14.3
17-Aug	3	7	5	3	4	4	4	5	5	3	4	6	6	5	7	8	7	9	9	12	13	11	12	13	6.9	13.0
18-Aug	11	14	12	8	12	13	11	12	12	23	27	35	42	48	45	26	29	40	46	45	30	45	301	54	39.1	300.5
19-Aug	59	68	247	448	448	268	60	8	C	6	5	8	16	17	22	22	32	31	31	32	37	39	62	89	89.3	448.2
20-Aug	99	99	90	73	46	45	41	35	27	17	13	6	7	6	7	8	6	7	7	8	10	8	8	7	28.3	99.5
21-Aug	6	7	7	8	7	5	4	8	15	15	13	25	38	46	47	42	40	43	42	42	40	47	50	51	27.0	51.0
22-Aug	51	50	50	45	43	42	42	45	48	448	448	82	41	34	51	54	55	54	53	52	42	12	12	11	77.7	448.0
23-Aug	12	9	7	5	3	300	7	9	7	8	4	5	3	4	5	9	12	13	14	13	15	15	13	16	21.2	299.6
24-Aug	15	15	14	13	14	12	11	14	15	11	5	3	4	2	1	2	4	3	4	4	3	6	315	7	20.7	314.6
25-Aug	7	4	5	7	7	7	5	5	9	10	5	5	6	7	5	5	10	8	8	8	3	6	18	15	7.4	18.3
26-Aug	7	3	9	9	5	2	9	11	6	7	10	6	2	4	6	6	6	7	4	5	6	5	4	4	6.0	11.3
27-Aug	5	4	4	3	4	5	6	5	5	4	4	2	4	4	5	5	11	7	2	4	6	5	3	2	4.6	11.2
28-Aug	2	2	3	3	3	4	4	2	4	3	3	4	4	3	6	5	5	5	4	2	5	4	4	4	3.6	5.8
29-Aug	4	4	3	4	2	2	3	4	6	7	7	8	8	7	8	5	6	5	3	6	4	4	4	4	5.0	8.3
30-Aug	4	3	4	4	3	3	4	6	7	7	8	8	8	8	4	6	6	7	8	8	10	11	8	12	6.6	11.7
31-Aug	12	10	11	9	7	8	8	10	10	12	12	12	9	9	7	7	8	8	7	7	6	7	7	8	8.8	11.8
		17.3	17.7	22.9	28.3	26.9	30.1	14.2	13.4	13.6	26.1	25.9	15.2	15.1	14.9	15.1	13.7	14.0	14.0	13.9	14.3	23.6	15.0	34.3	17.3	Diurnal Average
		99.5	99.4	246.8	448.2	448.2	299.6	60.2	47.7	48.4	448.0	448.0	81.7	69.0	69.3	60.3	54.0	54.7	53.7	53.0	51.9	300.3	47.3	314.6	88.5	Diurnal Maximum
C - Calibration																										



### Pollutant Rose

Particulate Matter 2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$

Henry Pirker - August 2010





# Hourly Averages

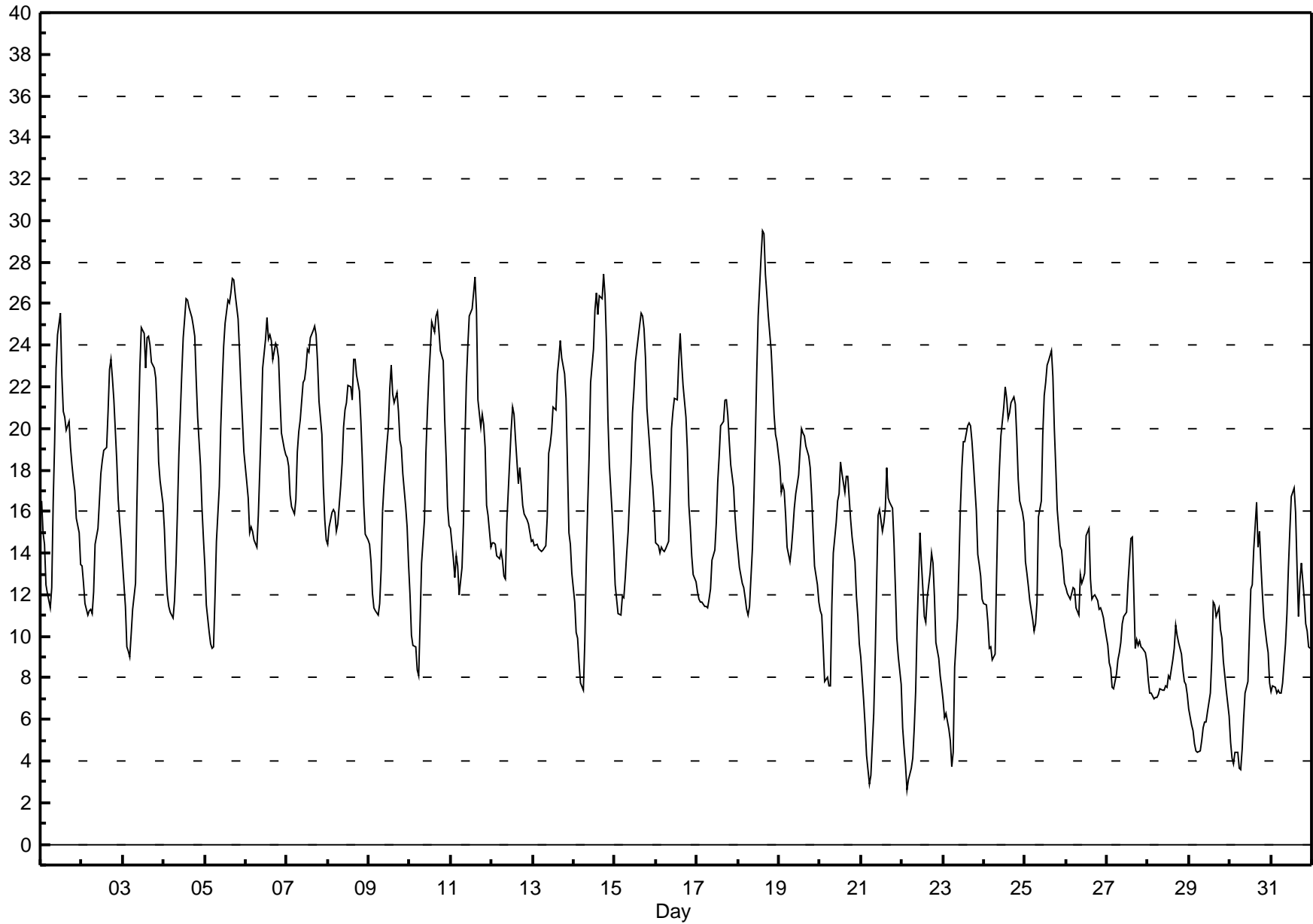
External Temperature (ET) - °C

Henry Pirker - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 29.5 °C on Aug 18 15:00	Maximum Daily Average: 20.3 °C on Aug 7
Minimum Value: 3 °C on Aug 22 04:00	Hours of Data: 744
Maximum Diurnal Average: 20.5 °C at hour 16	Hours of Missing Data: 0
Monthly Average: 15.42 °C	Hours of Calibration: 0
Minimum Daily Average: 7.4 °C on Aug 29	Percent Operational Time: 100.0
Minimum Diurnal Average: 10.0 °C at hour 6	
Percentiles: P <sub>1</sub> = 3.7 P <sub>10</sub> = 7.7 Q <sub>1</sub> = 11.3 Median = 15.0 Q <sub>3</sub> = 20.0 P <sub>90</sub> = 23.7 P <sub>99</sub> = 27.1	

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-Aug	17	15	14	12	12	11	12	16	19	23	24	26	23	21	21	20	20	19	18	18	17	16	15	13	17.6	25.6
2-Aug	13	13	12	11	11	11	11	12	14	15	16	18	18	19	19	21	23	23	22	21	18	17	16	15	16.3	23.4
3-Aug	14	11	9	9	9	10	11	13	16	20	23	25	25	23	24	24	24	23	23	22	21	18	17	16	18.0	24.9
4-Aug	15	13	12	11	11	11	12	13	16	19	23	24	25	26	26	26	25	25	24	22	21	18	16	15	18.8	26.2
5-Aug	13	11	10	10	9	10	12	15	17	20	22	24	25	26	26	26	27	27	26	25	24	22	20	19	19.5	27.2
6-Aug	17	17	15	15	15	15	14	16	18	20	23	24	25	24	25	24	23	24	24	23	21	20	19	19	20.1	25.3
7-Aug	19	18	17	16	16	17	19	20	20	22	22	23	24	24	24	25	25	25	23	21	20	17	16	15	20.3	24.9
8-Aug	14	15	16	16	16	15	15	17	18	20	21	21	22	22	21	23	23	23	22	20	18	16	15	15	18.6	23.3
9-Aug	14	14	12	11	11	11	12	13	16	17	19	20	22	23	22	21	22	21	19	19	18	16	15	13	16.8	23.1
10-Aug	12	10	10	9	8	8	11	13	16	19	21	22	24	25	25	25	26	25	24	23	20	19	16	15	17.8	25.6
11-Aug	15	14	13	14	13	12	13	15	19	22	24	25	26	27	27	26	21	20	21	20	19	16	16	14	18.9	27.3
12-Aug	15	14	14	14	14	14	14	13	13	15	18	20	21	21	20	17	18	17	16	16	16	15	15	15	16.0	21.0
13-Aug	15	14	14	14	14	14	14	14	16	19	19	20	21	21	23	23	24	23	23	21	18	15	14	13	17.8	24.2
14-Aug	12	10	10	9	8	7	10	14	16	19	22	24	26	27	25	26	26	27	26	24	20	18	16	14	18.2	27.4
15-Aug	12	12	11	11	12	12	13	14	15	18	21	22	23	24	25	26	25	25	23	21	19	18	17	16	18.1	25.6
16-Aug	15	14	14	14	14	14	14	15	17	20	21	21	21	23	25	23	22	21	19	16	15	14	13	13	17.4	24.6
17-Aug	12	12	12	12	11	11	11	12	12	14	14	15	17	19	20	20	21	21	21	19	18	17	16	15	15.6	21.4
18-Aug	14	13	13	12	12	11	11	11	14	17	19	23	25	28	30	29	27	26	25	24	22	21	20	19	19.5	29.5
19-Aug	18	17	17	17	16	14	14	14	15	16	17	18	19	20	20	20	19	19	18	17	15	13	12	12	16.5	20.0
20-Aug	11	11	9	8	8	8	8	12	14	15	17	17	18	18	17	18	18	17	16	15	14	12	11	10	13.3	18.4
21-Aug	9	7	6	4	4	3	3	6	9	13	16	16	15	15	16	18	17	16	16	14	12	10	9	8	11.0	18.1
22-Aug	6	5	4	3	3	4	4	6	7	10	15	14	12	11	11	12	13	14	14	12	10	9	8	8	8.8	15.0
23-Aug	7	6	6	6	5	4	4	9	11	14	16	18	19	19	20	20	20	19	18	16	14	13	13	12	12.9	20.2
24-Aug	12	12	11	9	9	9	9	13	16	18	20	21	22	21	20	21	21	22	21	20	18	17	16	15	16.3	22.0
25-Aug	14	13	12	12	11	10	11	12	16	17	20	22	22	23	23	24	22	20	18	16	14	14	13	13	16.3	23.7
26-Aug	12	12	12	12	12	12	11	11	13	13	13	13	15	15	13	12	12	12	12	11	11	11	11	10	12.2	15.2
27-Aug	10	9	8	8	7	8	9	9	10	11	11	11	13	14	15	15	9	10	10	10	9	9	9	9	10.1	14.8
28-Aug	8	7	7	7	7	7	7	8	7	7	8	8	8	8	9	9	11	10	10	9	8	8	8	7	8.0	10.5
29-Aug	6	6	5	5	4	4	4	5	6	6	6	6	6	7	9	12	12	11	11	10	10	9	8	7	7.4	11.6
30-Aug	5	4	4	4	4	4	4	5	6	7	8	10	12	12	14	16	14	15	13	12	11	10	9	8	8.9	16.4
31-Aug	7	8	8	7	7	7	7	8	10	11	13	15	17	17	16	13	11	13	14	12	11	10	9	9	10.8	17.1

12.3	11.5	10.9	10.4	10.2	10.0	10.5	12.0	14.0	16.0	17.8	18.9	19.8	20.2	20.4	20.5	20.1	19.8	19.0	17.8	16.2	14.8	13.8	12.9	Diurnal Average
18.6	18.2	17.3	17.0	16.0	16.6	18.9	19.8	20.4	22.9	24.5	25.6	25.8	28.3	29.5	29.4	27.4	27.4	26.5	25.3	23.7	21.9	20.4	19.3	Diurnal Maximum

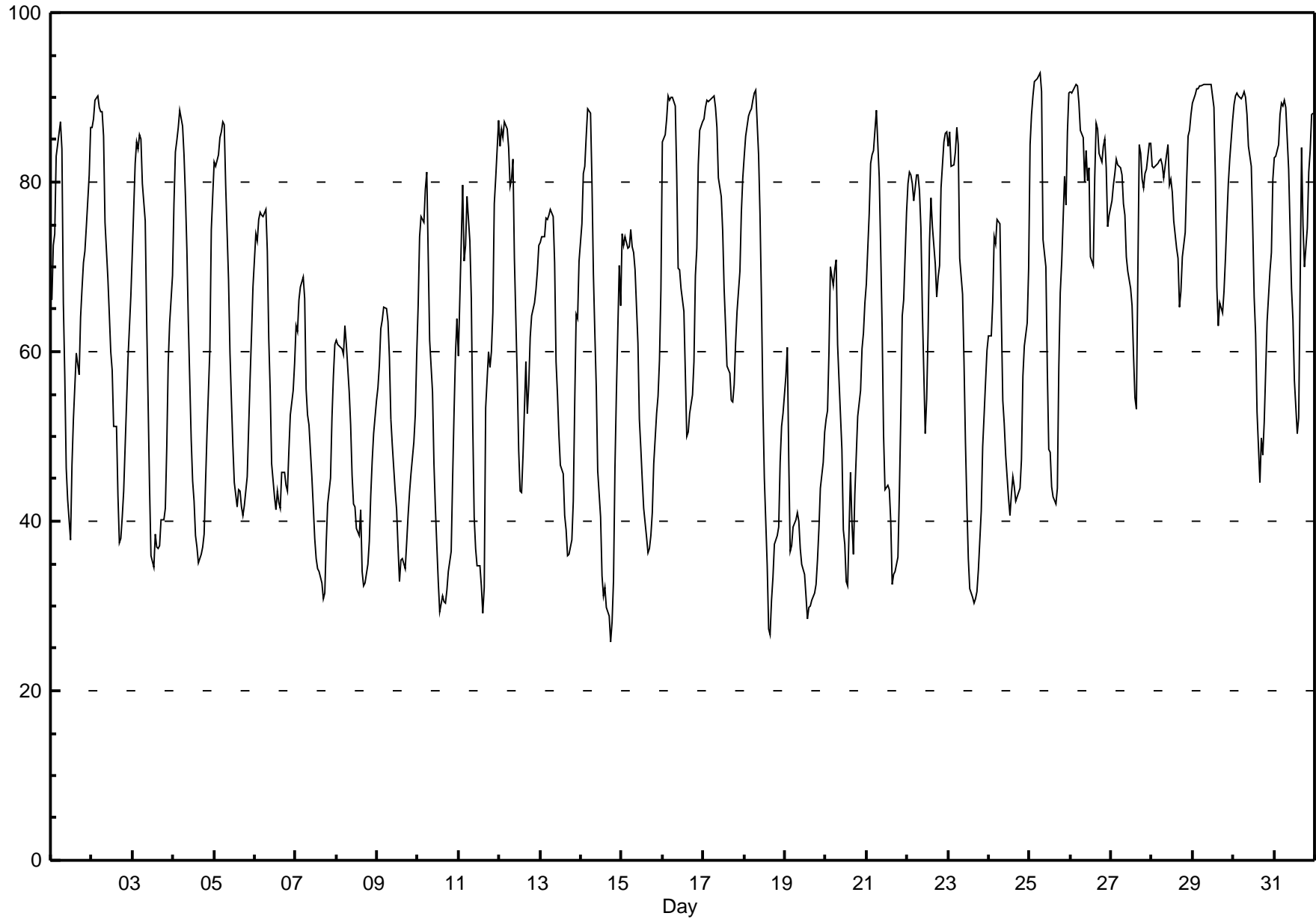


# Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - August 2010

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 92.9 % on Aug 25 07:00 Maximum Daily Average: 83.5 % on Aug 26																			Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 26 % on Aug 14 18:00 Minimum Daily Average: 38.9 % on Aug 19 Maximum Diurnal Average: 81.0 % at hour 6 Minimum Diurnal Average: 45.3 % at hour 16 Monthly Average: 63.17 % Percentiles: P <sub>1</sub> = 29.3 P <sub>10</sub> = 36.8 Q <sub>1</sub> = 45.7 Median = 64.5 Q <sub>3</sub> = 80.6 P <sub>90</sub> = 87.5 P <sub>99</sub> = 91.5																										
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-Aug	66	72	74	83	84	87	84	66	57	46	43	38	47	52	56	60	57	64	67	70	72	75	81	86	66.2	87.0
2-Aug	86	88	90	90	89	88	88	85	75	69	64	60	58	51	51	43	37	38	40	44	54	59	63	67	65.7	90.1
3-Aug	72	82	85	84	86	85	80	76	64	54	44	36	35	39	37	37	37	40	40	42	49	59	63	69	58.0	85.5
4-Aug	77	84	85	87	88	87	83	78	72	64	50	45	42	38	37	35	36	37	38	45	50	60	74	78	61.3	88.5
5-Aug	82	82	83	85	86	87	87	80	68	60	54	49	45	42	44	44	42	41	42	45	51	57	62	68	61.8	87.1
6-Aug	74	73	76	76	76	76	77	72	62	56	47	43	41	44	42	42	46	46	44	43	48	53	55	59	57.1	76.9
7-Aug	63	62	66	68	69	66	56	53	51	45	42	38	36	34	34	33	31	32	37	42	45	52	57	61	48.9	68.9
8-Aug	61	61	60	60	60	63	61	55	51	45	42	42	39	38	41	34	32	33	35	38	43	47	50	54	47.8	63.1
9-Aug	56	58	63	64	65	65	64	59	52	49	44	41	37	33	36	36	34	37	41	43	46	49	53	60	49.3	65.2
10-Aug	65	74	76	75	79	81	71	61	55	47	42	37	33	29	31	30	30	32	34	36	45	53	60	64	51.8	81.2
11-Aug	59	73	80	71	73	78	73	66	51	40	37	35	35	32	29	32	53	60	58	60	65	77	80	87	58.6	87.3
12-Aug	84	86	85	87	86	84	80	80	83	71	57	48	43	43	48	59	53	56	62	64	66	67	69	73	68.1	87.1
13-Aug	73	73	74	76	76	76	77	76	71	59	55	50	47	46	41	39	36	36	38	42	54	64	64	71	58.8	76.8
14-Aug	75	81	82	85	89	88	80	69	62	56	46	41	33	31	32	30	29	26	28	33	46	55	70	65	55.6	88.7
15-Aug	74	73	74	72	72	74	72	72	70	61	52	49	45	42	38	36	37	38	41	47	53	55	59	67	57.2	74.4
16-Aug	85	86	88	90	90	90	90	89	81	70	70	67	65	57	50	50	53	55	59	69	72	82	86	87	74.2	90.1
17-Aug	88	89	90	89	90	90	90	89	86	81	78	74	67	63	58	58	54	54	56	61	65	70	77	81	74.9	90.2
18-Aug	83	85	88	88	89	90	90	91	83	76	66	54	45	35	27	27	31	33	37	38	39	47	51	53	60.3	90.9
19-Aug	57	60	47	36	37	39	40	41	40	37	35	34	31	29	30	30	31	32	33	35	39	44	47	51	38.9	60.5
20-Aug	52	53	60	70	68	70	71	61	57	49	39	37	33	32	46	40	36	43	48	52	55	60	62	66	52.5	70.9
21-Aug	68	76	82	83	84	86	89	80	72	63	50	44	44	44	40	33	34	34	36	43	52	64	66	76	60.2	88.5
22-Aug	80	81	81	80	78	81	81	79	75	65	50	54	62	73	78	75	70	66	69	70	79	85	86	86	74.3	85.9
23-Aug	84	86	82	82	84	86	84	71	67	59	49	42	36	32	31	30	31	32	34	41	49	52	56	60	56.7	86.4
24-Aug	62	62	66	74	73	76	75	64	54	52	48	43	41	43	45	44	42	43	44	47	57	61	63	70	56.2	75.7
25-Aug	84	88	90	92	92	93	93	91	73	70	58	48	48	44	43	42	44	58	67	71	81	77	86	90	71.8	92.9
26-Aug	91	91	91	91	91	89	86	85	80	84	80	82	71	70	81	87	86	83	82	84	85	82	75	76	83.5	91.5
27-Aug	78	80	81	83	82	82	81	77	76	71	69	67	65	60	54	53	84	83	80	79	81	82	85	85	75.8	84.6
28-Aug	82	82	82	82	83	83	82	81	83	84	80	80	79	75	72	71	65	67	71	74	80	85	86	88	79.1	87.9
29-Aug	89	90	91	91	91	91	92	92	92	91	92	91	89	80	68	63	66	65	67	71	76	80	83	87	82.8	91.6
30-Aug	89	90	90	90	90	90	91	90	88	84	82	75	67	62	53	45	50	48	52	58	64	69	72	80	73.7	90.7
31-Aug	83	83	84	88	89	89	90	89	82	75	67	64	57	50	52	68	84	75	70	75	81	84	88	88	77.2	89.6
																								Diurnal Average		
																								Diurnal Maximum		



# Hourly Averages

**Solar Radiation (SR) - W/m<sup>2</sup>**

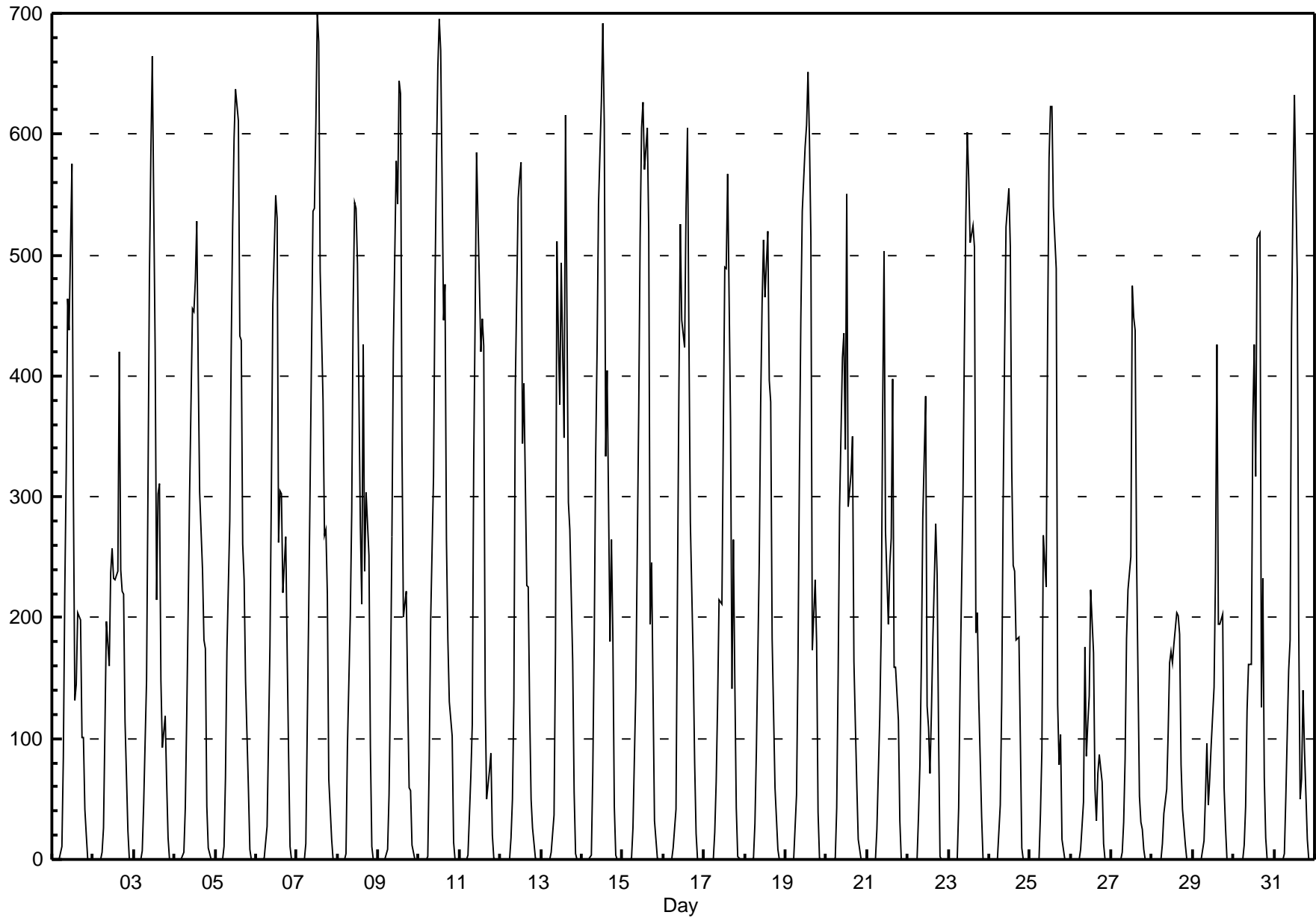
**Henry Pirker - August 2010**

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 699.5 W/m <sup>2</sup> on Aug 7 13:00	Maximum Daily Average: 225.3 W/m <sup>2</sup> on Aug 7		Hours of Data:	744
Minimum Value: 0 W/m <sup>2</sup> on Aug 1 01:00	Minimum Daily Average: 53.5 W/m <sup>2</sup> on Aug 26		Hours of Missing Data:	0
Maximum Diurnal Average: 468.9 W/m <sup>2</sup> at hour 13	Minimum Diurnal Average: 0.0 W/m <sup>2</sup> at hour 1		Hours of Calibration:	0
Monthly Average: 154.52 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 = 53.0 Q <sub>3</sub> = 264.2 P <sub>90</sub> = 485.3 P <sub>99</sub> = 646.2		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-Aug	0	0	0	0	0	11	84	221	320	464	438	575	305	132	144	204	198	101	100	42	20	0	0	0	139.9	575.0
2-Aug	0	0	0	0	0	6	27	109	197	160	237	258	232	231	238	419	239	222	220	114	23	0	0	0	122.2	419.5
3-Aug	0	0	0	0	0	7	47	148	309	483	584	665	421	215	302	311	148	92	118	64	17	0	0	0	163.8	664.6
4-Aug	0	0	0	0	0	6	43	119	207	302	456	453	479	528	406	304	239	181	175	44	10	0	0	0	164.7	527.8
5-Aug	0	0	0	0	0	11	68	172	280	422	524	597	638	611	433	430	261	231	147	58	8	0	0	0	203.9	637.6
6-Aug	0	0	0	0	0	1	27	99	177	308	460	549	530	262	306	303	220	267	173	87	11	0	0	0	157.5	548.7
7-Aug	0	0	0	0	0	13	110	205	311	537	538	609	699	676	486	380	268	273	219	66	17	0	0	0	225.3	699.5
8-Aug	0	0	0	0	0	5	93	201	288	458	544	538	493	276	211	426	238	303	252	93	10	0	0	0	184.6	543.9
9-Aug	0	0	0	0	0	9	53	143	266	424	577	543	645	634	346	200	222	135	60	57	12	0	0	0	180.2	644.5
10-Aug	0	0	0	0	0	3	82	197	317	471	575	655	695	670	446	476	264	182	131	102	14	0	0	0	220.1	694.8
11-Aug	0	0	0	0	0	4	68	111	328	448	585	529	420	447	425	136	50	74	87	20	1	0	0	0	155.6	584.9
12-Aug	0	0	0	0	0	0	18	50	131	390	547	564	576	344	394	226	225	123	50	26	1	0	0	0	152.7	576.1
13-Aug	0	0	0	0	0	0	5	37	175	511	432	376	494	348	615	450	295	273	164	56	4	0	0	0	176.5	615.3
14-Aug	0	0	0	0	0	3	72	181	334	422	543	628	692	608	333	404	181	264	182	44	3	0	0	0	204.0	691.6
15-Aug	0	0	0	0	0	1	26	84	141	369	515	605	626	571	605	520	194	246	138	32	1	0	0	0	194.8	626.2
16-Aug	0	0	0	0	0	0	9	41	219	386	526	446	423	539	605	432	279	164	80	22	0	0	0	0	173.8	604.6
17-Aug	0	0	0	0	0	0	23	64	129	214	211	359	490	489	567	363	141	264	146	43	2	0	0	0	146.1	566.7
18-Aug	0	0	0	0	0	1	30	90	246	377	460	513	465	520	396	378	182	121	60	9	0	0	0	0	160.3	519.9
19-Aug	0	0	0	0	0	0	54	161	319	448	536	589	608	651	597	515	173	232	179	39	1	0	0	0	212.6	650.8
20-Aug	0	0	0	0	0	1	43	153	291	415	436	339	550	292	320	351	164	111	62	17	0	0	0	0	147.7	550.3
21-Aug	0	0	0	0	0	0	25	117	189	368	503	271	194	243	265	397	159	159	116	32	0	0	0	0	126.6	503.2
22-Aug	0	0	0	0	0	0	35	78	163	283	384	127	109	71	120	181	277	235	103	2	0	0	0	0	90.4	383.8
23-Aug	0	0	0	0	0	0	43	144	300	427	531	602	563	510	525	506	187	204	133	35	0	0	0	0	196.3	602.1
24-Aug	0	0	0	0	0	0	45	130	294	417	523	555	506	323	243	239	182	184	98	9	0	0	0	0	156.3	555.2
25-Aug	0	0	0	0	0	0	38	90	269	226	437	580	623	623	540	489	128	78	103	17	0	0	0	0	176.7	623.2
26-Aug	0	0	0	0	0	0	9	47	176	85	113	135	223	171	58	32	72	87	65	14	0	0	0	0	53.5	223.0
27-Aug	0	0	0	0	0	0	5	31	84	183	223	250	474	449	437	249	52	31	25	8	0	0	0	0	104.2	474.4
28-Aug	0	0	0	0	0	0	14	37	58	105	163	172	162	178	205	202	186	79	42	12	0	0	0	0	67.2	204.7
29-Aug	0	0	0	0	0	0	15	52	96	45	67	94	143	237	426	194	195	203	60	27	0	0	0	0	77.2	425.6
30-Aug	0	0	0	0	0	0	12	44	124	161	161	362	426	317	514	518	126	233	67	18	0	0	0	0	128.5	518.5
31-Aug	0	0	0	0	0	0	5	51	156	182	440	547	633	481	192	49	67	140	91	16	0	0	0	0	127.1	632.9

0.0	0.0	0.0	0.0	0.0	0.0	2.6	39.6	109.9	222.4	338.4	428.0	454.4	468.9	407.9	377.5	331.8	187.5	177.1	117.6	39.5	5.1	0.0	0.0	0.0	Diurnal Average
0.0	0.0	0.0	0.0	0.0	0.0	12.7	110.3	220.8	333.9	536.6	584.9	664.6	699.5	675.9	615.3	519.9	295.5	303.3	251.6	114.3	23.4	0.0	0.0	0.0	Diurnal Maximum







# Hourly Averages

**Wind Speed (km/h)**  
**Wind Direction (deg)**  
**Henry Pirker - August 2010**

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	4	3	4	5	5	6	8	9	11	21	25	16	14	13	12	16	13	10	8	6	8	8	6.2	24.5
Dir	164	118	114	145	157	171	177	237	233	254	301	313	336	8	339	350	331	307	305	291	299	310	295	298	310.3	336.0
2 Spd	8	7	7	8	10	8	9	10	11	10	9	11	12	13	11	9	6	4	4	6	8	5	4	4	4.8	12.7
Dir	280	296	304	297	301	293	298	296	295	297	320	304	299	320	5	30	35	31	78	93	159	173	172	91	313.6	320.1
3 Spd	4	2	4	4	4	3	3	5	5	6	4	3	5	7	5	6	5	8	7	7	6	4	4	4	3.2	8.2
Dir	82	293	337	319	313	287	227	241	242	229	241	268	298	311	292	305	300	15	20	8	342	323	317	315	310.2	14.8
4 Spd	4	4	4	5	5	5	4	5	6	7	8	5	3	5	6	5	5	6	6	7	5	1	0	3	1.5	7.8
Dir	309	304	300	325	321	300	273	261	267	265	293	302	39	39	45	35	76	89	167	181	172	166	255	320	302.8	293.2
5 Spd	2	3	3	3	3	2	5	5	6	6	10	11	13	11	10	11	9	6	7	6	6	5	5	3	5.0	12.7
Dir	310	302	299	275	277	254	130	122	112	131	123	119	115	130	146	138	144	172	149	137	122	124	130	124	133.9	115.0
6 Spd	4	6	3	6	4	3	3	2	4	6	13	16	15	17	21	23	18	14	15	14	10	9	8	9	9.8	22.8
Dir	188	245	193	254	282	212	182	227	255	240	237	238	236	250	256	267	250	236	252	249	234	242	232	239	244.4	266.6
7 Spd	9	9	8	7	7	7	17	17	15	17	21	26	25	28	17	17	22	21	23	16	16	9	9	8	15.2	28.0
Dir	249	250	239	237	224	269	274	266	254	244	260	263	259	265	244	253	255	253	267	264	252	238	243	255	256.1	265.3
8 Spd	8	10	11	11	15	9	11	15	21	22	26	23	20	16	9	15	21	21	26	19	12	9	7	8	14.8	26.0
Dir	233	240	238	251	257	244	247	257	258	266	263	261	263	271	304	253	246	255	272	262	261	252	243	214	257.3	272.4
9 Spd	10	6	5	6	7	9	8	8	15	16	14	14	9	11	11	13	14	15	8	7	6	7	8	8	9.2	16.5
Dir	244	237	236	223	228	241	236	246	251	258	263	261	244	255	255	273	281	296	296	266	240	232	245	261	256.3	257.9
10 Spd	6	3	4	7	5	4	3	6	8	7	8	10	11	8	10	7	8	8	8	8	6	4	3	2	5.0	11.3
Dir	276	258	224	295	305	301	310	244	253	234	215	221	229	234	244	229	261	318	323	323	315	317	321	343	266.0	229.5
11 Spd	2	1	1	4	3	2	4	5	6	10	10	11	10	7	9	8	19	9	8	10	11	7	5	4	5.3	18.9
Dir	348	302	205	172	201	229	186	171	235	246	249	271	298	311	245	268	316	338	251	256	268	256	254	313	267.5	315.8
12 Spd	5	5	5	5	4	7	16	17	10	14	18	24	25	23	25	23	25	22	20	20	15	16	12	12	15.0	25.5
Dir	318	329	329	304	276	331	316	344	304	284	295	314	314	318	337	336	320	325	319	320	317	314	302	299	317.5	337.2
13 Spd	13	9	8	9	12	12	11	10	12	15	14	17	17	14	16	14	13	12	10	9	6	5	5	5	11.1	17.0
Dir	312	314	312	307	315	319	324	320	312	320	317	305	309	299	306	302	314	325	336	312	306	312	333	334	313.8	309.1
14 Spd	4	4	4	4	5	4	2	5	5	4	2	4	0	6	3	2	0	7	7	6	2	1	1	3	2.7	7.2
Dir	313	293	313	304	299	306	253	259	237	236	229	160	340	289	58	258	265	315	281	290	294	179	273	326	285.5	314.8
15 Spd	4	3	4	5	4	3	2	3	4	8	10	11	10	10	9	9	12	12	14	13	13	10	8	3	5.6	13.6
Dir	294	326	311	341	321	323	94	166	166	98	103	128	99	106	112	100	108	96	100	97	100	97	98	357	98.9	99.8
16 Spd	1	7	7	5	7	6	7	5	5	4	8	8	7	8	8	11	11	10	10	9	6	9	7	7	4.5	11.3
Dir	112	323	319	207	231	305	5	355	5	157	121	103	76	59	51	52	54	57	61	68	67	40	57	52	50.9	52.2
17 Spd	7	7	6	7	5	4	7	8	8	9	9	9	10	8	9	8	9	9	7	6	7	9	8	6	6.7	10.1
Dir	41	103	79	81	85	99	80	106	113	100	111	112	134	129	139	134	161	162	173	158	119	117	115	104	117.3	134.1
18 Spd	7	6	5	5	6	9	8	5	3	5	5	6	9	11	12	23	25	20	11	19	19	15	17	16	6.9	24.6
Dir	107	106	115	89	80	119	126	141	172	187	160	205	235	256	279	263	267	271	252	235	233	242	233	244	234.5	267.2
19 Spd	14	14	23	23	22	22	23	28	28	27	30	27	26	27	31	30	30	29	27	20	16	13	12	10	22.8	30.5
Dir	246	252	258	251	264	273	258	262	260	261	266	266	265	267	255	253	261	257	259	256	250	242	242	248	258.8	255.0
20 Spd	6	8	9	7	5	5	4	6	6	9	13	12	12	11	9	8	8	6	6	6	5	5	5	3	4.0	12.8
Dir	292	299	295	311	301	285	291	263	264	260	288	287	279	287	2	357	326	45	75	95	84	75	86	99	308.6	288.3
21 Spd	3	3	4	5	5	4	4	1	3	5	5	5	7	7	6	8	7	6	5	5	4	2	3	2	2.8	7.9
Dir	81	325	297	306	320	304	314	321	255	259	241	233	230	250	254	274	255	232	197	173	144	119	125	304	255.2	273.9
22 Spd	3	3	2	5	4	3	4	4	8	6	11	18	19	13	10	6	7	7	8	6	7	9	11	10	5.7	19.0
Dir	305	283	310	302	346	314	322	275	250	273	321	310	306	306	295	241	209	166	170	299	284	235	245	254	280.7	306.3

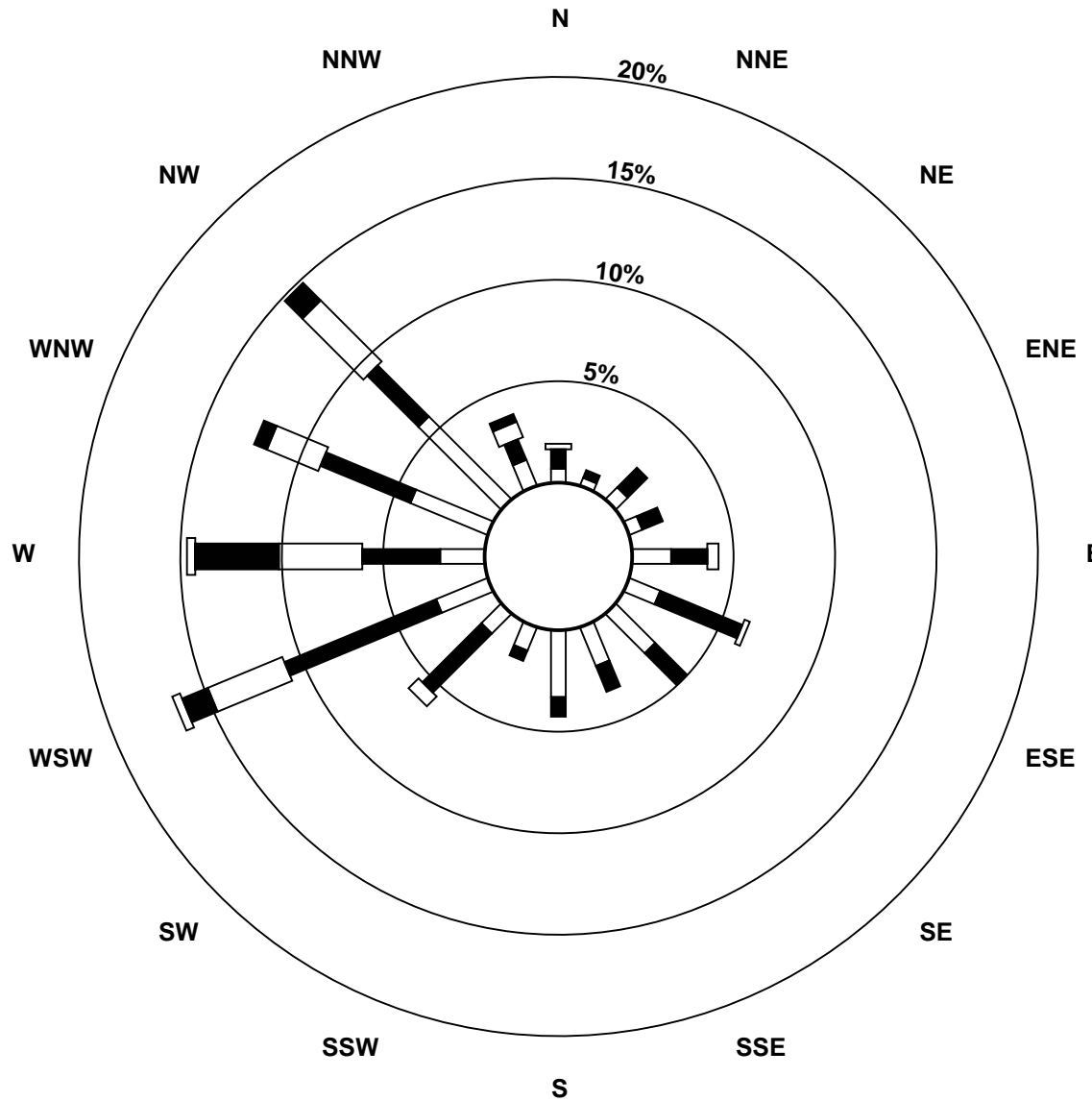
# Hourly Averages

**Wind Speed (km/h)**  
**Wind Direction (deg)**  
**Henry Pirker - August 2010**

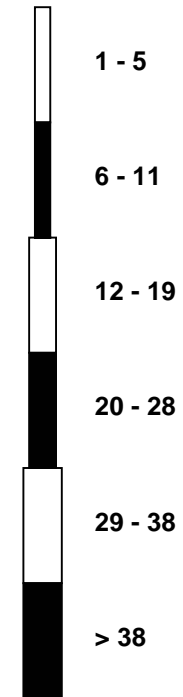
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	8	4	9	6	5	3	5	6	7	12	15	15	15	17	19	19	17	17	22	12	6	6	5	5	10.2	21.5
Dir	272	263	264	256	267	313	297	261	242	261	280	274	277	266	264	258	280	268	279	290	285	284	214	221	269.7	278.9
24 Spd	5	4	5	6	5	5	6	4	8	9	17	21	16	14	13	10	10	9	10	8	6	5	3	7	7.1	21.0
Dir	188	181	172	183	185	173	172	170	221	248	260	271	268	257	255	269	238	216	245	284	297	272	232	261	244.9	271.0
25 Spd	6	3	5	3	2	2	5	5	4	5	3	1	6	6	6	7	4	11	6	5	2	5	6	1.2	10.8	
Dir	203	139	151	159	301	197	211	251	288	261	255	178	150	175	126	151	149	196	360	42	45	137	294	348	181.9	359.6
26 Spd	7	7	3	4	1	3	11	4	2	7	4	9	5	6	11	10	6	12	10	8	11	11	14	15	5.9	15.4
Dir	343	332	305	309	55	159	300	26	141	225	188	269	275	209	261	280	286	252	235	232	262	276	258	263	266.2	262.6
27 Spd	15	16	13	13	15	14	17	18	20	27	28	27	27	28	24	29	13	21	20	22	18	19	16	18	19.3	28.9
Dir	264	262	269	258	261	280	293	284	277	283	285	284	263	279	275	271	309	308	286	263	279	274	279	317	279.3	271.2
28 Spd	15	14	17	18	17	19	19	20	19	16	19	17	15	13	14	15	13	11	10	8	6	10	7	13.2	19.6	
Dir	322	317	304	298	295	292	294	296	300	317	325	331	329	340	326	300	307	308	297	273	244	234	251	249	303.9	296.3
29 Spd	5	3	3	4	3	0	1	3	2	3	4	6	6	6	10	11	11	10	9	7	7	4	1	3.7	10.7	
Dir	243	245	267	309	340	45	289	127	162	108	126	132	107	122	131	120	117	115	108	110	116	121	106	30	119.8	116.6
30 Spd	3	1	N	N	N	N	N	N	5	7	7	4	4	5	5	3	4	4	2	6	5	3	4	3	1.8	7.0
Dir	349	337	N	N	N	N	N	N	257	250	229	238	190	171	180	272	61	95	130	122	122	127	140	128	176.1	250.4
31 Spd	3	1	2	3	3	3	2	2	2	3	4	5	5	6	7	10	7	6	6	5	2	2	1	3	0.9	10.0
Dir	92	80	121	128	113	152	297	44	46	166	154	131	140	126	121	223	275	285	353	353	143	288	83	311	142.9	222.6
Spd	3.3	3.5	3.9	4.2	4.3	3.9	4.4	4.9	6.4	7.3	7.4	8.1	7.3	6.9	6.0	6.9	6.6	5.9	5.6	4.6	3.7	3.2	3.4	3.7	Diurnal Average	
Dir	278.2	280.1	275.5	272.6	278.4	278.0	278.5	272.2	262.1	261.3	270.0	274.4	275.9	279.3	278.7	274.1	278.6	280.9	278.3	268.5	257.1	255.5	248.9	276.7	Diurnal Maximum	
Spd	15.0	16.2	23.4	23.1	21.6	22.1	23.0	28.1	27.9	27.2	29.7	27.1	27.2	28.0	30.5	30.0	29.5	29.5	26.9	21.9	19.3	18.9	16.7	18.1	Diurnal Maximum	
Dir	263.8	261.7	257.9	251.4	263.8	273.4	258.0	262.0	260.5	261.2	266.1	265.8	262.8	265.3	255.0	253.3	260.7	257.4	259.3	263.1	233.2	274.2	233.0	317.0	Diurnal Maximum	
Maximum Speed Value: 31 km/h on Aug 19 15:00																		Minimum Speed Value: 0 km/h on Aug 14 17:00						Hours in Service: 744		
Maximum Daily Speed Average: 22.8 km/h on Aug 19																		Minimum Daily Speed Average: 0.9 km/h on Aug 14						Hours of Data: 738		
Maximum Diurnal Speed Average: 8.1 km/h at hour 12																		Minimum Diurnal Speed Average: 3.2 km/h at hour 22						Hours of Missing Data: 6		
Monthly Average Velocity: 5.19 km/h 272.71 deg																		Speed Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 3.1 Q <sub>1</sub> = 4.7 Median = 7.3 Q <sub>3</sub> = 12.0 P <sub>90</sub> = 18.8 P <sub>99</sub> = 27.4						Percent Operational Time: 99.2		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
N - Not Valid																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	9	15	5	0	0	0	29																			
NorthEast	11	17	1	0	0	0	29																			
East	17	34	5	0	0	0	56																			
SouthEast	28	41	3	0	0	0	72																			
South	35	18	0	0	0	0	53																			
SouthWest	22	65	14	3	0	0	104																			
West	33	67	60	44	7	0	211																			
NorthWest	63	56	51	14	0	0	184																			
Total	218	313	139	61	7	0	738																			

# Wind Rose

Wind Speed (WS) (km/h)  
Henry Pirker - August 2010



## Wind Speed Classes (km/h)





# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - August 2010

Maximum Speed: 31 km/h on Aug 19 15:00		Maximum Daily Speed Average: 23.3 km/h on Aug 19																				Hours in Service: 744																											
Minimum Speed: 1 km/h on Aug 4 23:00		Minimum Daily Speed Average: 4.9 km/h on Aug 31																				Hours of Data: 738																											
Maximum Diurnal Speed Average: 13.6 km/h at hour 12		Minimum Diurnal Speed Average: 6.2 km/h at hour 2																				Hours of Missing Data: 6																											
Monthly Average Speed: 9.75 km/h		Percentiles: P <sub>1</sub> = 2.2 P <sub>10</sub> = 3.8 Q <sub>1</sub> = 5.1 Median = 7.9 Q <sub>3</sub> = 12.3 P <sub>90</sub> = 18.8 P <sub>99</sub> = 27.2																				Percent Operational Time: 99.2																											
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-Aug	5	3	4	3	4	5	6	6	8	10	12	21	26	16	14	14	13	16	13	10	9	7	8	8	10.0	25.5																							
2-Aug	8	7	7	8	10	8	9	10	12	11	10	11	12	13	12	10	7	6	5	7	8	5	5	5	8.4	13.0																							
3-Aug	4	3	4	4	5	4	3	5	5	6	5	6	7	7	6	7	6	9	8	7	6	4	4	4	5.4	9.0																							
4-Aug	4	4	4	5	5	5	4	5	6	7	8	7	5	7	7	6	6	7	7	7	5	2	1	3	5.3	8.3																							
5-Aug	2	4	4	3	3	3	5	5	7	7	11	12	13	13	11	12	10	7	7	7	7	5	5	3	6.9	13.3																							
6-Aug	4	6	5	7	6	4	4	4	5	7	13	16	16	18	22	23	19	15	16	15	10	9	8	9	10.8	23.2																							
7-Aug	9	9	8	7	7	7	17	17	16	17	22	27	25	28	18	17	23	22	24	17	16	9	9	8	15.8	28.4																							
8-Aug	8	11	12	11	15	9	11	16	21	23	26	24	21	18	11	17	21	21	26	19	12	10	7	8	15.7	26.3																							
9-Aug	10	6	5	6	7	9	8	9	15	17	15	14	10	11	13	13	15	15	8	7	7	7	8	8	10.1	16.9																							
10-Aug	7	4	4	7	5	4	3	6	9	8	9	11	12	10	10	9	11	9	8	8	6	4	3	3	7.1	12.4																							
11-Aug	3	2	2	4	3	2	4	5	7	11	11	12	11	8	10	9	20	10	8	10	12	10	6	5	7.8	19.6																							
12-Aug	6	5	5	6	6	9	16	18	10	15	18	24	25	24	26	23	25	22	21	20	15	16	12	12	15.8	26.2																							
13-Aug	13	9	8	9	12	12	11	10	12	15	15	17	17	14	17	15	14	13	11	9	6	5	5	5	11.5	17.4																							
14-Aug	5	4	5	4	5	4	3	5	5	5	4	6	7	8	6	7	6	8	8	6	4	2	3	4	5.1	8.5																							
15-Aug	4	4	5	5	5	4	3	3	5	9	11	11	10	11	10	9	12	13	14	13	13	10	9	7	8.3	13.8																							
16-Aug	6	8	7	6	8	8	7	6	5	5	8	9	8	9	9	12	11	11	11	10	6	9	8	7	8.0	11.8																							
17-Aug	8	7	6	7	5	4	7	8	8	9	10	10	11	10	10	10	10	9	8	7	7	9	9	7	8.1	10.9																							
18-Aug	8	7	6	5	6	9	8	5	4	6	6	7	10	12	13	23	25	20	11	20	20	16	17	16	11.6	24.9																							
19-Aug	14	14	23	23	22	22	23	28	28	28	30	28	26	28	31	30	30	30	27	20	16	13	12	10	23.3	30.9																							
20-Aug	8	9	9	7	6	5	5	6	7	9	14	12	13	12	12	10	9	7	7	6	6	5	5	4	8.0	13.7																							
21-Aug	5	4	5	5	5	4	4	3	4	5	5	5	7	8	7	9	7	7	6	5	4	2	3	2	5.0	8.5																							
22-Aug	3	4	3	5	4	4	4	5	8	6	11	18	19	14	11	7	8	7	8	10	9	9	11	10	8.3	19.1																							
23-Aug	9	4	9	7	5	4	5	6	7	13	15	15	16	17	20	19	17	18	22	12	6	6	5	5	10.9	21.8																							
24-Aug	5	4	5	6	5	5	6	4	8	9	17	22	16	15	13	10	11	10	11	8	7	6	4	8	8.9	21.7																							
25-Aug	7	4	5	4	2	3	5	5	5	6	4	5	8	7	9	8	8	6	11	6	9	6	9	6	6.2	11.2																							
26-Aug	7	7	4	5	4	5	12	4	5	9	5	10	6	6	11	11	9	12	10	8	11	11	14	15	8.5	15.5																							
27-Aug	15	16	14	14	15	14	17	18	20	27	28	27	27	28	25	31	13	22	21	22	19	19	16	18	20.3	30.7																							
28-Aug	15	14	17	18	17	19	19	20	19	17	19	17	15	16	13	14	15	13	12	10	8	6	10	7	14.5	19.7																							
29-Aug	5	3	4	4	4	2	2	3	3	4	4	6	6	6	7	10	11	11	10	10	7	7	5	2	5.7	11.0																							
30-Aug	3	2	N	N	N	N	N	N	5	7	7	5	5	5	6	5	5	5	3	6	5	4	5	4	5.0	7.3																							
31-Aug	4	2	2	5	4	4	3	3	3	3	5	6	7	7	8	12	8	7	6	5	3	3	2	4	4.9	12.3																							
																								6.8	6.2	6.7	7.0	6.9	6.7	7.8	8.3	9.1	10.6	12.3	13.6	13.5	13.1	12.8	13.4	13.0	12.4	11.8	10.6	9.0	7.6	7.3	7.0	Diurnal Average	
																								15.1	16.2	23.5	23.3	21.8	22.3	23.1	28.3	28.1	27.6	30.3	27.5	27.5	28.4	30.9	30.7	29.9	29.8	27.1	22.0	19.7	19.0	17.0	18.2	Diurnal Maximum	
N - Not Valid All monthly, daily, and diurnal averages have been calculated using scalar methods																																																	

# Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - August 2010

Maximum Value: 99.9 deg on Aug 14 17:00		Hours in Service: 744																								
Minimum Value: 3.6 deg on Aug 28 05:00		Hours of Data: 738																								
Percentiles: P <sub>1</sub> = 5.0 P <sub>10</sub> = 7.7 Q <sub>1</sub> = 10.9 Median = 16.9 Q <sub>3</sub> = 28.7 P <sub>90</sub> = 49.8 P <sub>99</sub> = 80.1		Hours of Missing Data: 6																								
		Hours of Calibration: 0																								
		Percent Operational Time: 99.2																								
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-Aug	12	56	16	20	9	6	7	18	14	26	19	13	16	9	19	18	16	8	9	10	13	11	5	8	56.1	
2-Aug	11	6	8	6	8	9	5	6	9	10	18	16	11	12	20	20	29	54	46	33	12	8	19	31	54.3	
3-Aug	24	48	18	29	11	30	20	14	19	23	52	67	63	41	46	36	27	28	12	17	18	21	14	14	67.3	
4-Aug	12	12	11	12	14	8	18	13	17	14	22	48	76	47	36	54	40	38	29	6	4	78	81	31	80.9	
5-Aug	42	14	45	15	23	52	12	13	18	24	20	17	17	26	20	25	28	35	27	16	15	9	11	21	52.1	
6-Aug	20	17	55	21	66	47	43	59	33	19	15	14	17	14	14	10	14	18	24	13	13	9	10	10	66.4	
7-Aug	11	14	10	12	13	35	7	8	15	14	16	12	13	10	17	13	13	13	12	17	12	8	10	17	35.1	
8-Aug	12	10	9	10	7	10	8	7	8	11	9	13	15	34	28	32	14	10	10	9	11	10	14	11	34.4	
9-Aug	8	12	12	11	16	9	11	16	12	13	16	17	28	23	29	21	20	12	8	18	15	8	8	14	28.9	
10-Aug	23	28	19	14	9	25	20	27	14	30	25	21	24	42	21	54	48	19	10	7	7	11	22	40	54.1	
11-Aug	41	82	73	9	24	34	15	11	32	17	28	24	19	37	37	31	16	35	19	14	21	60	44	53	82.0	
12-Aug	61	36	20	23	42	36	14	8	15	10	14	12	8	10	14	10	10	7	7	6	6	5	6	7	61.3	
13-Aug	6	8	10	9	6	7	7	8	10	18	20	11	12	14	16	15	19	20	17	10	7	6	14	9	20.1	
14-Aug	31	18	16	14	12	19	59	16	20	42	68	64	94	60	75	81	100	26	26	7	74	64	65	17	99.9	
15-Aug	28	42	46	24	23	33	63	25	32	16	19	21	17	18	26	19	19	13	12	7	6	15	13	76	75.8	
16-Aug	96	47	23	40	24	43	18	20	49	50	23	30	26	20	19	17	12	16	15	13	20	13	12	18	95.6	
17-Aug	16	15	20	13	18	29	11	20	15	16	16	17	23	32	25	33	22	21	23	24	6	6	9	10	33.2	
18-Aug	10	12	22	19	29	9	12	27	48	23	24	33	27	17	28	11	9	7	15	8	12	8	11	13	48.1	
19-Aug	10	7	5	9	9	8	6	6	7	10	11	10	11	14	9	10	9	8	6	7	8	8	8	10	13.8	
20-Aug	44	26	9	18	15	14	16	18	29	22	21	16	25	26	40	44	25	41	20	25	25	19	12	30	43.8	
21-Aug	53	26	19	14	15	37	15	65	43	25	29	30	20	18	26	23	21	23	24	10	24	20	11	67	67.0	
22-Aug	29	24	50	16	23	29	17	57	15	16	17	7	8	11	9	34	26	17	12	68	72	28	9	10	72.4	
23-Aug	17	24	10	15	14	32	15	16	15	14	11	13	16	16	14	13	12	12	10	5	8	8	28	18	31.8	
24-Aug	21	18	12	6	11	7	11	35	13	20	14	15	20	14	17	16	20	19	23	11	11	31	30	22	34.8	
25-Aug	34	32	11	60	51	53	16	16	17	32	48	88	39	49	51	57	27	62	17	30	53	75	74	21	88.2	
26-Aug	20	16	46	47	92	70	49	29	72	36	39	27	38	27	24	32	58	11	14	12	13	9	6	5	92.1	
27-Aug	6	6	13	6	6	16	5	6	5	6	8	9	8	12	14	21	10	9	14	6	16	5	9	7	20.6	
28-Aug	7	5	9	6	4	5	5	5	5	6	8	7	8	13	14	7	10	8	8	10	11	26	10	10	26.4	
29-Aug	14	27	33	20	46	84	82	48	57	47	33	22	22	29	33	19	14	14	10	12	9	7	31	54	84.1	
30-Aug	25	52	N	N	N	N	N	N	12	15	17	47	43	54	48	71	46	52	62	17	16	38	34	42	70.7	
31-Aug	17	51	38	60	41	35	65	54	54	58	36	43	45	37	26	37	28	21	22	23	72	51	56	51	71.8	
		95.6	82.0	72.7	59.8	92.1	84.1	81.5	65.5	72.2	57.6	68.5	88.2	94.3	60.3	75.3	81.3	99.9	61.8	62.1	68.1	73.6	77.8	80.9	75.8	
N - Not Valid																										

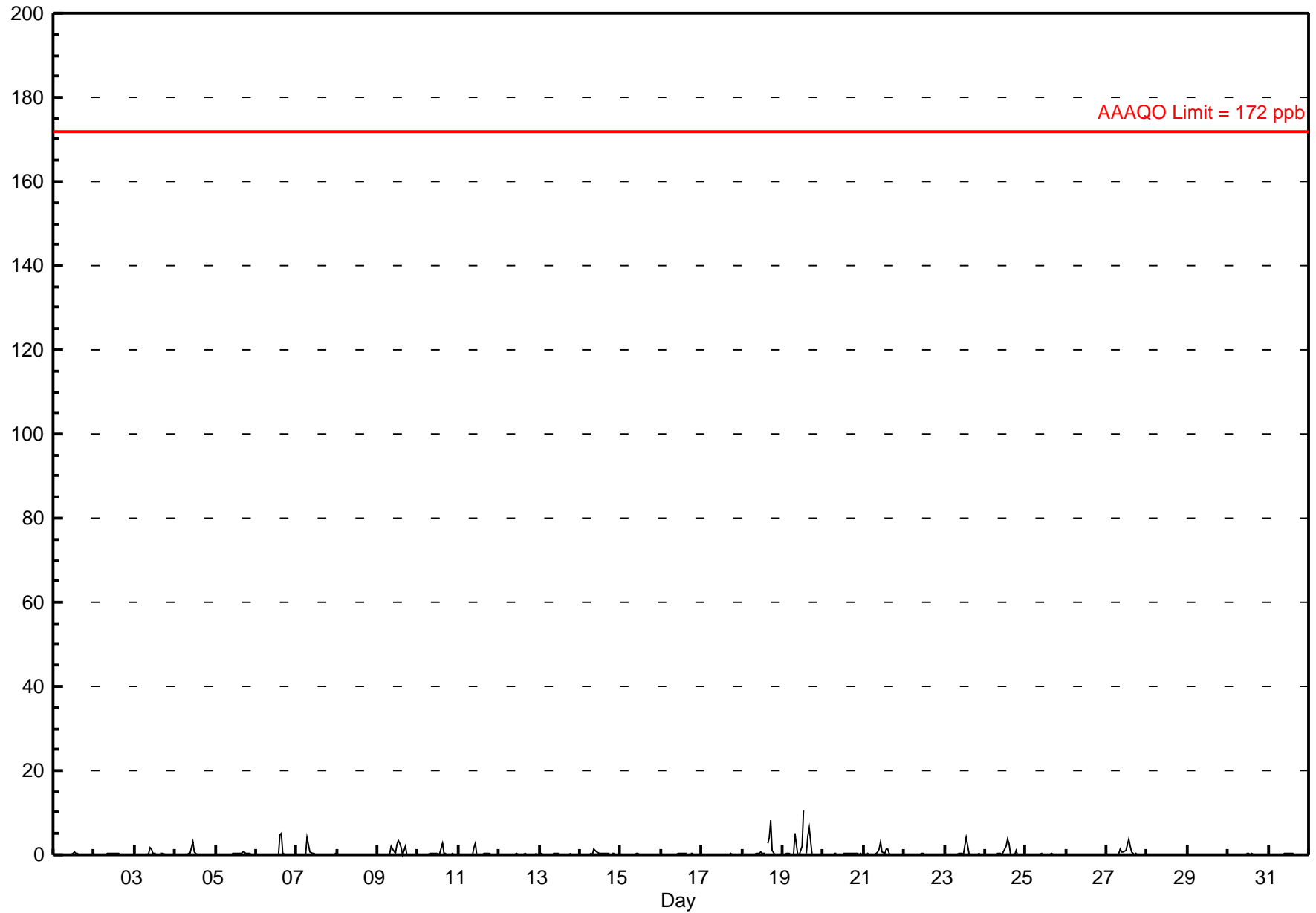
**PASZA**  
**Evergreen Park Station**  
**Monthly Summary Tables, Graphs and**  
**Roses**

# Hourly Averages

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Evergreen Park - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10.4 ppb on Aug 19 13:00 Maximum Daily Average: 1.4 ppb on Aug 19		Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 35 Percent Operational Time: 99.7																								
Minimum Value: 0 ppb on Aug 1 01:00 Maximum Diurnal Average: 0.8 ppb at hour 13 Monthly Average: 0.28 ppb		Minimum Daily Average: 0.0 ppb on Aug 29 Minimum Diurnal Average: 0.0 ppb at hour 1 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> = 0.4 P <sub>99</sub> = 4.1																								
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-Aug	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
2-Aug	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
3-Aug	0	A	0	0	0	0	0	0	0	2	1	0	0	D	D	0	0	0	0	0	0	0	0	0	0.3	1.6
4-Aug	0	0	0	0	0	A	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	3.1
5-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0.2	0.5
6-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0.5	5.2
7-Aug	0	0	A	0	0	0	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	4.0
8-Aug	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
9-Aug	A	0	0	0	0	0	0	0	0	2	1	0	2	3	3	2	0	2	0	0	0	0	0	0	0.8	3.4
10-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	A	A	0.2	2.6
11-Aug	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	A	A	0.3	2.6
12-Aug	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
13-Aug	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
14-Aug	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	A	0	0	0	0	0.3	1.4
15-Aug	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	0.3
16-Aug	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	0.5
17-Aug	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	0.2
18-Aug	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	3	4	8	1	0	0	0	0	0	0.8	8.2
19-Aug	0	0	0	0	0	0	0	5	3	0	0	2	10	A	0	4	6	0	0	0	0	0	0	0	1.4	10.4
20-Aug	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
21-Aug	0	0	0	0	0	A	0	0	1	1	3	1	0	1	1	0	0	0	0	0	0	0	0	0	0.5	3.2
22-Aug	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
23-Aug	0	0	0	A	0	0	0	0	1	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0.4	4.1
24-Aug	0	0	0	0	0	A	0	0	0	0	0	1	2	4	3	0	0	0	1	0	0	0	0	0	0.6	3.9
25-Aug	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
26-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
27-Aug	0	0	A	0	0	0	0	0	1	1	1	1	2	4	2	1	0	0	0	0	0	0	0	0	0.6	3.6
28-Aug	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
29-Aug	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
30-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0.1	0.2
31-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration      D - DAS Failure      A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb      24-hr 57 ppb																										





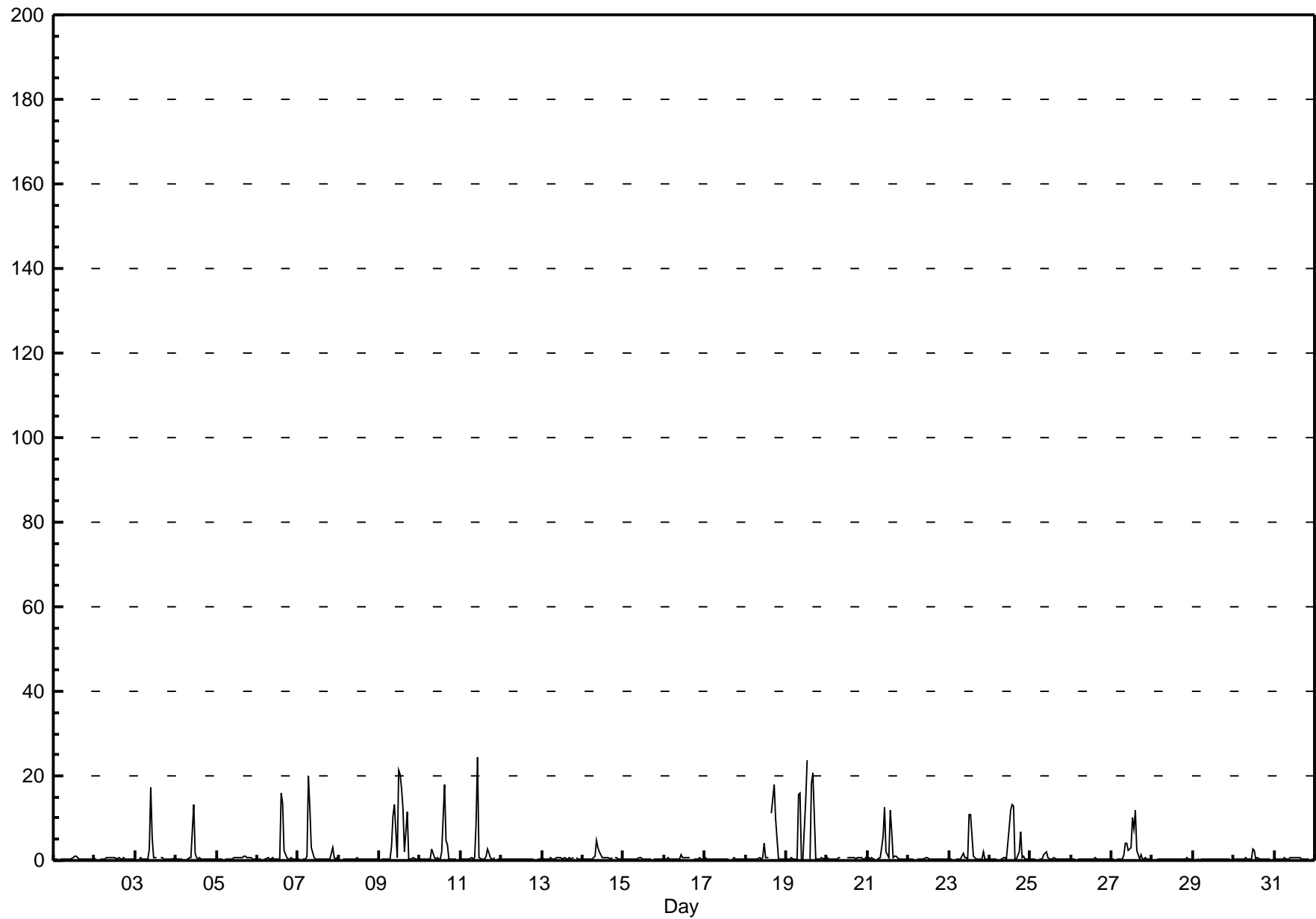
# Hourly Maximums

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Evergreen Park - August 2010

Maximum Value: 24.5 ppb on Aug 11 11:00		Maximum Daily Average: 5.3 ppb on Aug 9		Hours in Service: 744																						
Minimum Value: 0 ppb on Aug 28 03:00		Minimum Daily Average: 0.3 ppb on Aug 29		Hours of Data: 707																						
Maximum Diurnal Average: 3.1 ppb at hour 15		Minimum Diurnal Average: 0.3 ppb at hour 23		Hours of Missing Data: 37																						
Monthly Average: 1.29 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> = 1.4 P <sub>99</sub> = 17.3		Hours of Calibration: 35																						
				Percent Operational Time: 99.7																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0.4	1.2
2-Aug	0	0	A	0	0	0	0	1	1	1	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0.4	0.6
3-Aug	0	A	0	1	0	0	0	0	3	17	5	1	1	D	D	1	1	0	0	0	0	0	0	1	1.6	17.4
4-Aug	0	0	0	0	0	A	0	0	1	1	13	2	1	0	1	0	0	0	0	0	0	0	0	0	1.0	13.1
5-Aug	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0.5	1.0
6-Aug	0	0	0	A	0	0	1	0	0	1	1	0	0	0	16	14	2	1	0	0	1	0	0	0	1.8	16.0
7-Aug	0	0	A	0	0	1	20	13	3	1	0	0	0	0	0	0	0	0	0	0	3	1	0	1	2.0	20.2
8-Aug	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
9-Aug	A	0	0	0	0	0	0	4	11	13	1	21	20	17	12	2	11	0	0	0	1	0	0	A	5.3	21.5
10-Aug	0	0	0	0	0	0	0	3	1	1	1	0	0	2	18	5	4	0	0	0	1	1	A	0	1.7	17.9
11-Aug	0	0	0	0	0	1	1	0	1	9	24	1	0	0	0	1	3	1	0	0	1	A	0	0	2.0	24.5
12-Aug	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	0.5
13-Aug	1	0	0	0	0	1	0	0	1	1	1	1	0	1	0	0	1	0	1	A	1	0	0	0	0.5	0.6
14-Aug	1	0	0	0	0	0	1	1	5	3	2	1	1	1	1	1	0	1	A	1	1	0	0	0	0.9	4.9
15-Aug	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.6
16-Aug	0	0	1	0	0	0	0	0	0	1	1	1	1	1	1	1	A	0	1	0	0	1	0	0	0.5	1.4
17-Aug	1	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	0.7
18-Aug	0	0	0	0	0	0	0	0	1	1	4	1	1	1	A	11	15	18	10	0	0	0	0	0	2.8	18.1
19-Aug	0	0	0	1	0	0	0	16	16	0	0	14	24	A	0	18	21	0	0	0	0	1	0	0	5.0	23.9
20-Aug	1	0	0	0	0	0	0	1	1	C	C	C	1	1	1	1	1	0	1	1	1	0	0	1	0.5	0.8
21-Aug	1	0	1	0	0	A	0	1	3	6	13	2	1	12	7	1	1	1	0	0	0	0	0	0	2.2	12.5
22-Aug	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
23-Aug	0	0	0	A	0	0	0	0	2	1	1	0	11	11	1	1	0	0	0	0	2	0	0	0	1.5	10.9
24-Aug	0	0	0	0	0	A	0	0	1	1	0	8	12	13	13	0	0	2	7	1	1	0	0	0	2.7	13.2
25-Aug	0	0	0	0	A	0	0	0	1	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0.5	1.9
26-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.4	0.5
27-Aug	0	0	A	0	0	0	0	1	4	4	2	3	10	7	12	2	0	1	0	0	1	0	0	0	2.3	11.8
28-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.3	0.5
29-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
30-Aug	0	0	0	0	0	0	0	1	0	0	0	3	2	0	1	0	0	0	0	0	0	0	A	0	0.6	2.7
31-Aug	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	0	0	0	0	1	A	0	0	0.5	0.7
		0.4	0.4	0.4	0.4	0.4	0.4	1.0	1.5	1.8	2.2	2.4	2.3	3.0	2.5	3.1	2.1	2.2	1.1	0.9	0.4	0.6	0.4	0.3	0.4	Diurnal Average
		1.0	0.5	0.6	0.7	0.5	1.1	20.2	15.6	15.9	17.4	24.5	21.5	23.9	17.1	17.9	18.3	20.6	18.1	9.7	0.8	2.9	0.8	0.5	0.6	Diurnal Maximum
C - Calibration		D - DAS Failure				A - Automated Daily Zero Span																				

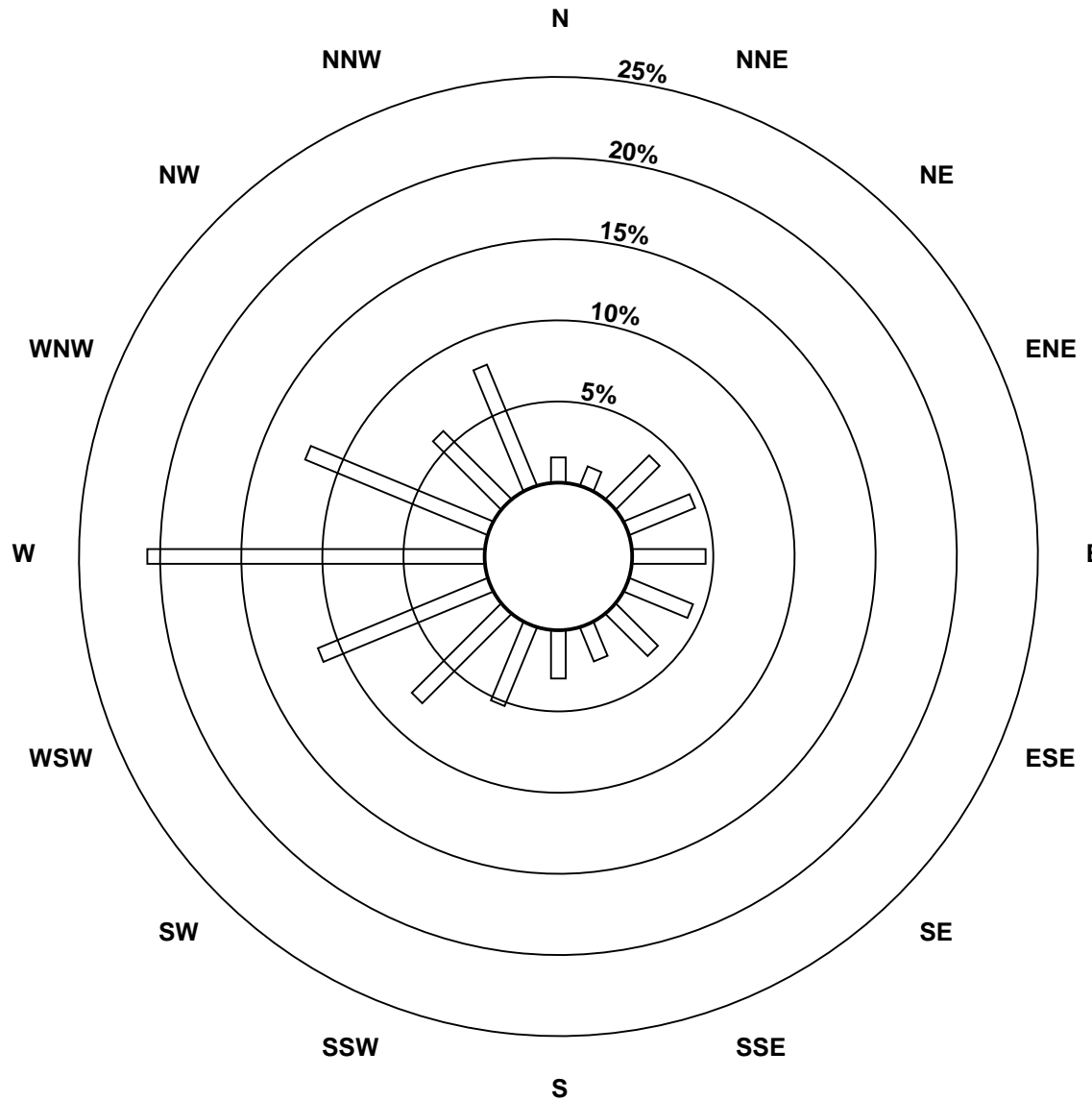
# Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Evergreen Park - August 2010

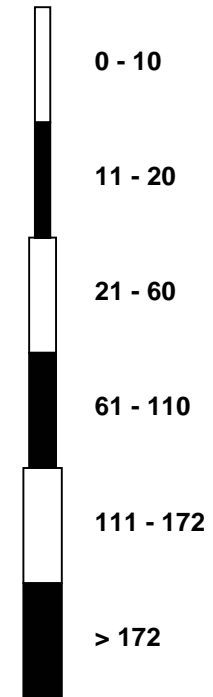


### Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Evergreen Park - August 2010



### Pollutant Classes (ppb)



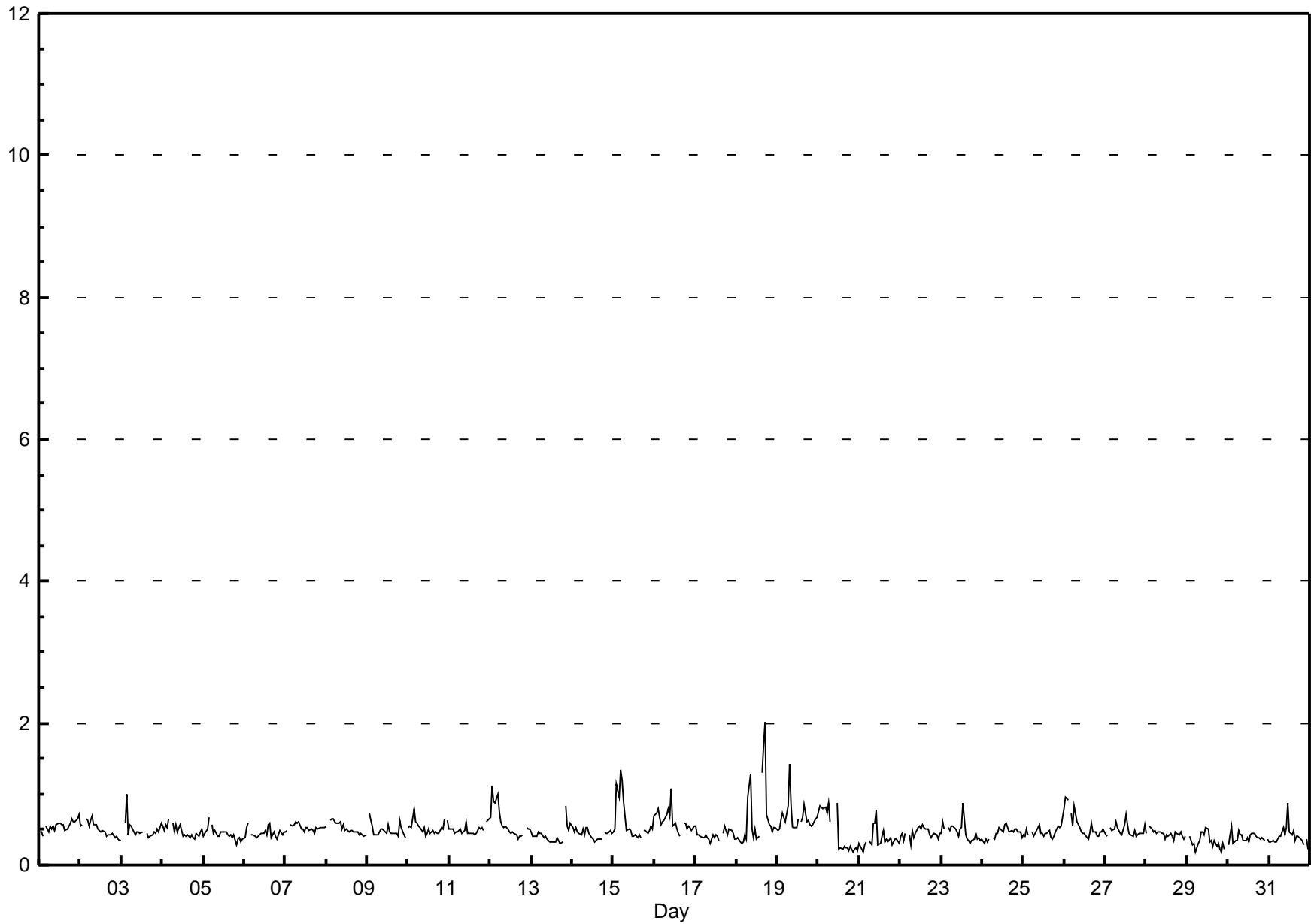
# Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.0 ppb on Aug 18 18:00 Maximum Daily Average: 0.7 ppb on Aug 19		Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 35 Percent Operational Time: 99.7																								
Minimum Value: 0 ppb on Aug 20 21:00 Maximum Diurnal Average: 0.6 ppb at hour 3 Monthly Average: 0.49 ppb		Minimum Daily Average: 0.3 ppb on Aug 29 Minimum Diurnal Average: 0.4 ppb at hour 20 Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.4 Median = 0.5 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 0.6 P <sub>99</sub> = 1.1																								
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-Aug	0	0	0	A	1	0	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.6	0.7
2-Aug	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.7
3-Aug	0	A	1	1	0	1	1	0	0	0	0	0	0	D	D	0	0	0	0	0	0	1	0	1	0.5	1.0
4-Aug	1	0	1	1	1	A	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.7
5-Aug	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
6-Aug	0	1	1	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.4	0.6
7-Aug	0	0	A	1	1	1	1	1	1	1	1	0	1	1	0	1	0	0	1	1	1	1	1	1	0.5	0.6
8-Aug	1	A	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.5	0.6
9-Aug	A	1	1	1	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	1	1	0	0	A	0.5	0.7
10-Aug	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0	0	0	0	0	1	1	1	A	1	0.5	0.8
11-Aug	1	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1	1	0	A	1	1	0.5	0.7
12-Aug	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	1	1	1	0.6	1.1
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	1	0.4	0.8
14-Aug	1	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.5
15-Aug	0	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0.6	1.3
16-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	1	1	0	1	1	0	1	0.6	1.1
17-Aug	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	1	0	0	0	0.4	0.6
18-Aug	0	0	0	0	0	0	0	1	1	0	1	0	0	0	A	1	2	2	1	1	1	0	1	1	0.7	2.0
19-Aug	0	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.4
20-Aug	1	1	1	1	1	1	1	1	C	C	C	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9
21-Aug	0	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
22-Aug	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.5	0.6
23-Aug	0	1	1	A	1	0	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	0.9
24-Aug	0	0	0	0	0	A	0	0	0	0	1	0	0	1	1	1	0	0	0	1	1	0	0	0	0.4	0.6
25-Aug	0	0	1	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.5	0.7
26-Aug	1	1	1	A	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.6	0.9
27-Aug	0	0	A	1	0	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0.5	0.7
28-Aug	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
29-Aug	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
30-Aug	0	0	1	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
31-Aug	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.9
																								Diurnal Average	Diurnal Maximum	
																								0.5	0.8	
																								0.5	1.1	
																								0.6	1.1	
																								0.6	1.0	
																								0.5	1.3	
																								0.5	1.2	
																								0.5	0.9	
																								0.5	1.4	
																								0.5	1.3	
																								0.5	0.7	
																								0.5	1.1	
																								0.5	0.9	
																								0.5	0.7	
																								0.4	0.6	
																								0.5	1.3	
																								0.5	1.7	
																								0.5	2.0	
																								0.4	0.7	
																								0.4	0.6	
																								0.5	0.8	
																								0.5	0.6	
																								0.4	0.6	
																								0.5	0.7	

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

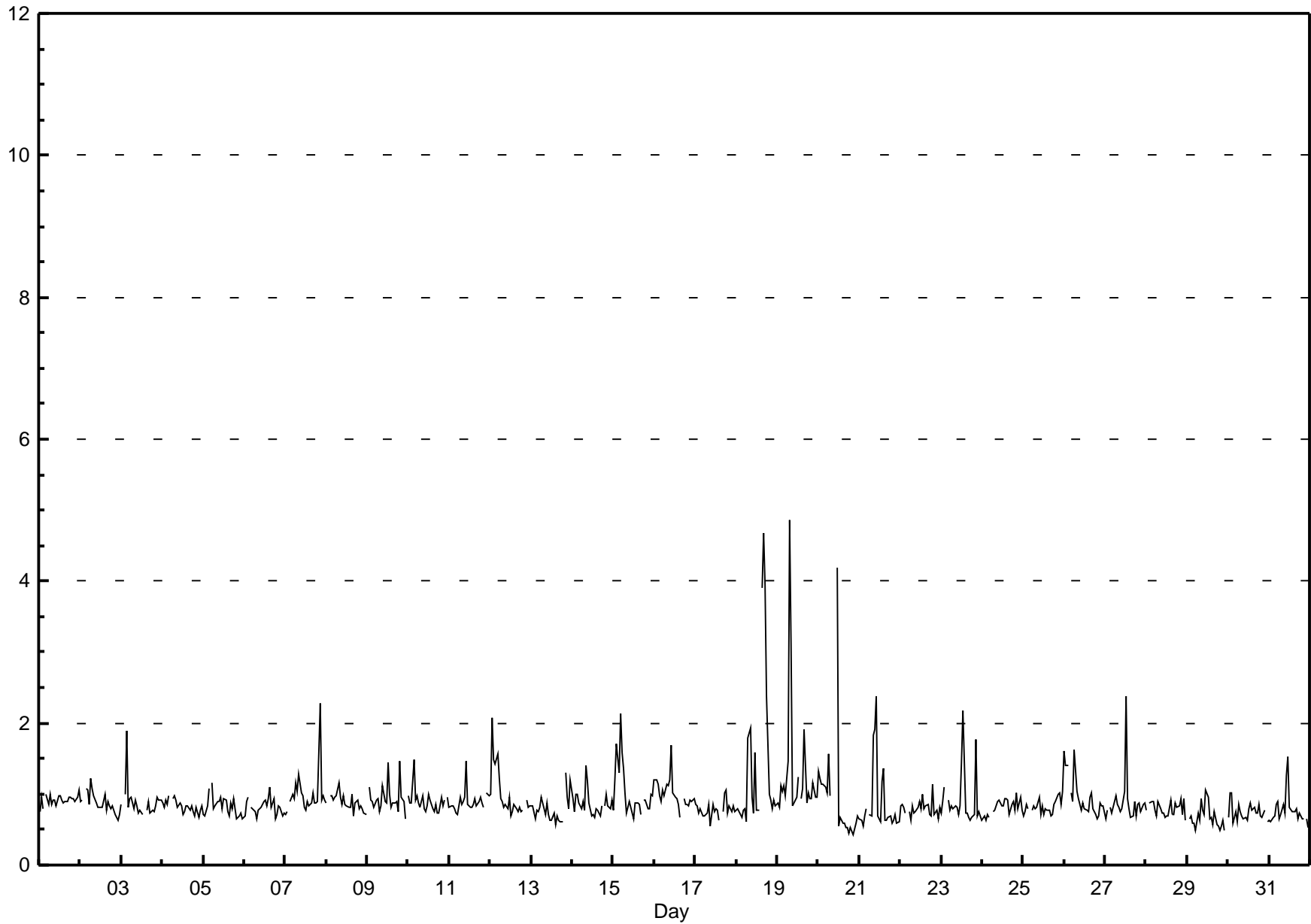


# Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - August 2010

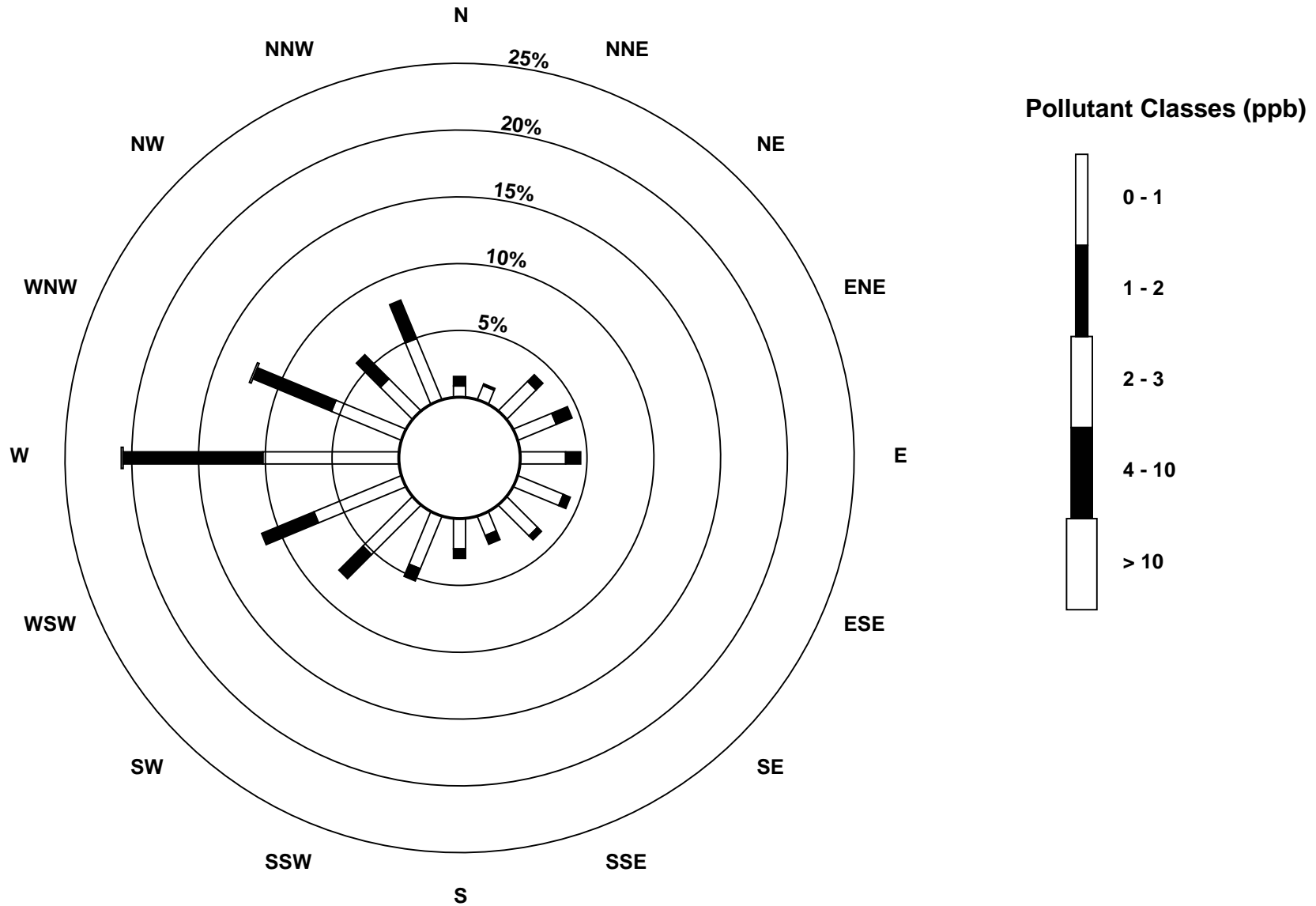
Maximum Value: 4.9 ppb on Aug 19 08:00		Maximum Daily Average: 1.4 ppb on Aug 18		Hours in Service: 744																							
Minimum Value: 0 ppb on Aug 20 21:00		Minimum Daily Average: 0.7 ppb on Aug 29		Hours of Data: 707																							
Maximum Diurnal Average: 1.0 ppb at hour 9		Minimum Diurnal Average: 0.8 ppb at hour 23		Hours of Missing Data: 37																							
Monthly Average: 0.90 ppb		Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 0.7 Q <sub>1</sub> = 0.7 Median = 0.8 Q <sub>3</sub> = 0.9 P <sub>90</sub> = 1.1 P <sub>99</sub> = 2.0		Hours of Calibration: 35																							
				Percent Operational Time: 99.7																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1	
2-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2	
3-Aug	1	A	1	2	1	1	1	1	1	1	1	1	D	D	1	1	1	1	1	1	1	1	1	1	0.9	1.9	
4-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0	
5-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2	
6-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1	
7-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.0	2.3	
8-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1	
9-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.5	
10-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.5	
11-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.5	
12-Aug	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	2.1	
13-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.3	
14-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.9	1.4	
15-Aug	1	1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	2.1	
16-Aug	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.0	1.7	
17-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.0	
18-Aug	1	1	1	1	1	1	1	2	2	1	2	1	1	A	4	5	4	2	1	1	1	1	1	1	1.4	4.7	
19-Aug	1	1	1	1	1	1	1	5	3	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1.3	4.9	
20-Aug	1	1	1	1	1	1	2	1	C	C	C	4	1	1	1	1	1	0	1	0	1	1	1	1	1.0	4.2	
21-Aug	1	1	1	1	1	A	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.4	
22-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1	
23-Aug	1	1	1	A	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	1	1	0.9	2.2	
24-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0	
25-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0	
26-Aug	2	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.6	
27-Aug	1	1	A	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.4	
28-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9	
29-Aug	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	A	1	0.7	1.1	
30-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.0	
31-Aug	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.5	
		0.8	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	0.9	0.9	1.0	0.9	0.9	0.8	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.8	Diurnal Average	
		1.6	2.1	1.7	1.9	2.1	1.6	1.6	4.9	3.1	1.9	2.4	4.2	2.4	2.2	1.4	3.9	4.7	3.9	2.4	1.5	2.3	1.2	1.0	1.2	Diurnal Maximum	
C - Calibration		D - DAS Failure				A - Automated Daily Zero Span																					





# Pollutant Rose

Total Reduced Sulphur (TRS) - ppb  
Evergreen Park - August 2010



# Hourly Averages

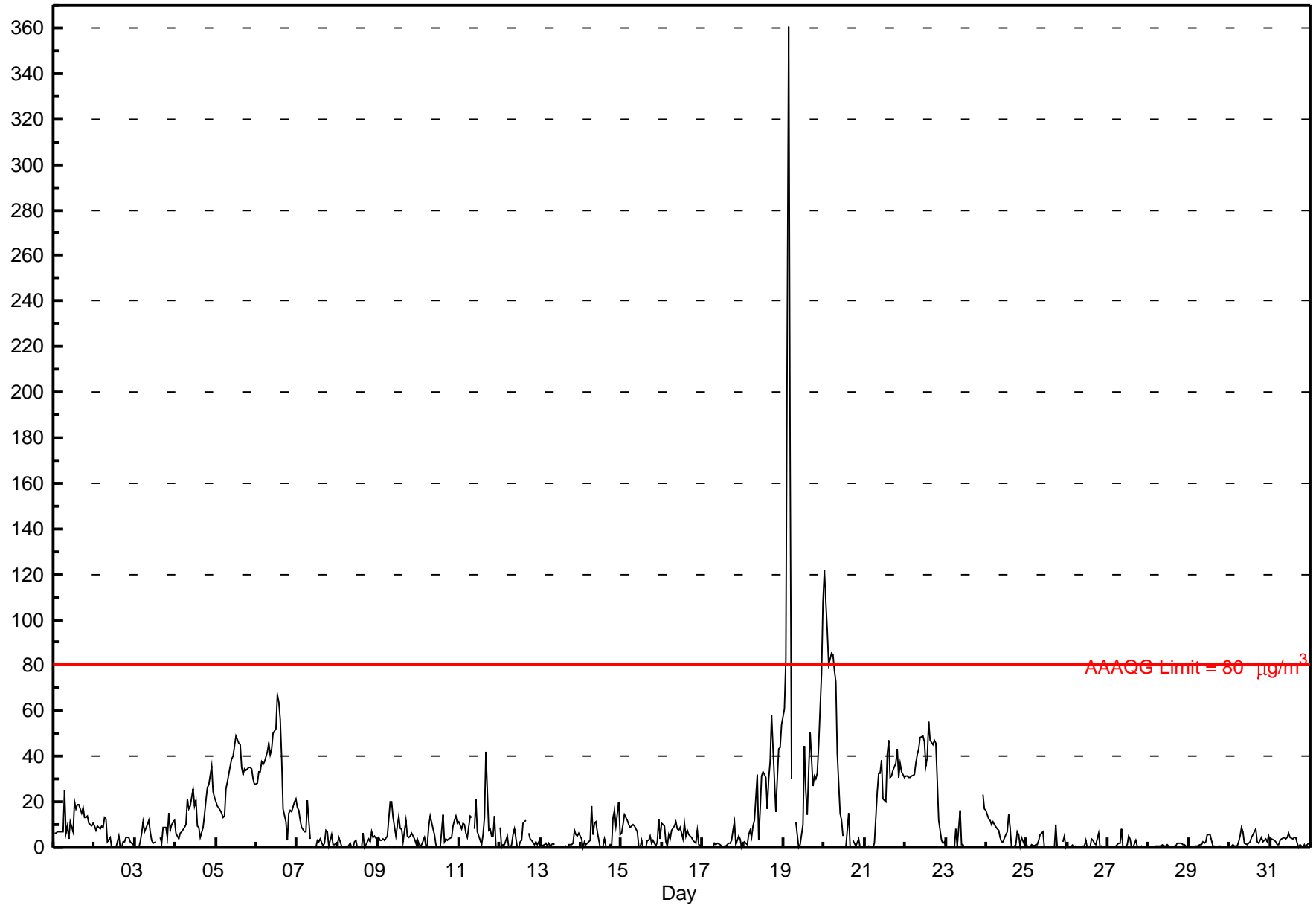
## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

### Evergreen Park - August 2010

Number of Exceedences: 1-hr: 11 24-hr: 5	Hours in Service: 744
Maximum Value: 360.7 µg/m <sup>3</sup> on Aug 19 04:00	Maximum Daily Average: 64.5 µg/m <sup>3</sup> on Aug 19
Minimum Value: 0 µg/m <sup>3</sup> on Aug 2 12:00	Hours of Data: 720
Maximum Diurnal Average: 19.8 µg/m <sup>3</sup> at hour 4	Hours of Missing Data: 24
Monthly Average: 11.83 µg/m <sup>3</sup>	Hours of Calibration: 6
Minimum Daily Average: 0.7 µg/m <sup>3</sup> on Aug 28	Percent Operational Time: 97.6
Minimum Diurnal Average: 9.4 µg/m <sup>3</sup> at hour 20	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 1.0 Median = 4.2 Q <sub>3</sub> = 12.6 P <sub>90</sub> = 34.0 P <sub>99</sub> = 86.7	

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-Aug	6	6	7	7	7	7	25	6	9	4	11	7	20	17	19	19	15	17	13	13	14	11	10	11	11.7	25.3
2-Aug	10	8	10	8	10	9	13	13	2	4	0	0	0	0	5	0	0	2	3	4	4	3	2	2	4.6	13.2
3-Aug	1	0	0	3	6	11	7	10	12	7	3	2	2	D	D	4	2	9	9	4	15	8	10	12	6.2	15.2
4-Aug	6	5	4	6	7	8	10	21	17	18	26	18	20	10	9	4	9	14	20	26	28	36	24	22	15.4	35.6
5-Aug	20	18	16	15	13	14	25	29	36	39	40	45	49	46	45	35	32	34	34	35	35	35	30	28	31.1	48.8
6-Aug	28	33	33	38	36	38	42	46	40	44	50	52	67	64	56	40	17	11	3	15	16	16	20	21	34.4	67.2
7-Aug	17	16	12	9	7	7	21	12	4	BD	1	0	3	3	4	1	2	8	7	1	6	1	1	2	6.2	20.6
8-Aug	1	4	0	0	0	0	0	2	0	0	2	3	0	0	0	6	0	1	4	2	7	4	5	3	1.9	7.0
9-Aug	5	3	3	4	3	5	13	20	20	13	5	9	14	8	8	3	12	5	5	5	6	4	2	3	7.4	20.4
10-Aug	2	0	1	4	1	1	9	14	8	6	1	0	0	0	14	3	4	3	4	4	10	12	14	11	5.2	14.3
11-Aug	11	8	11	10	6	5	14	13	BD	8	21	7	3	1	6	13	42	7	8	5	5	14	1	BD	10.0	41.8
12-Aug	9	0	1	1	5	0	0	1	6	8	0	0	2	3	11	12	BD	6	4	3	1	2	1	2	3.4	11.7
13-Aug	1	1	2	2	0	2	1	2	1	BD	0	BD	1	0	0	0	0	1	1	2	8	5	5	6	1.9	7.8
14-Aug	4	0	2	1	2	3	18	5	11	11	7	0	BD	0	4	1	0	1	1	13	16	9	20	6	5.9	19.8
15-Aug	6	10	14	12	10	9	9	10	10	7	1	0	3	0	0	3	3	5	2	3	1	3	13	4	5.7	14.3
16-Aug	11	9	3	1	6	4	7	9	11	8	8	9	4	10	5	7	6	4	3	3	2	7	1	0	5.8	11.5
17-Aug	0	BD	1	0	0	0	0	2	1	2	1	1	0	0	1	2	2	3	8	12	1	5	4	0	1.9	11.6
18-Aug	2	2	1	6	8	4	9	12	32	3	16	31	33	31	17	30	38	58	44	16	30	43	44	54	23.5	58.3
19-Aug	61	82	230	361	173	30	BD	11	5	0	1	10	44	24	15	34	51	27	31	30	33	45	76	108	64.5	360.7
20-Aug	122	108	95	80	85	85	78	73	41	15	12	5	BD	0	15	0	BD	3	2	1	3	0	0	0	37.5	121.9
21-Aug	0	0	1	0	0	0	2	24	33	32	38	21	20	40	47	31	31	34	37	43	31	37	33	31	23.7	47.3
22-Aug	32	31	30	31	31	32	37	41	43	49	49	47	36	40	55	47	45	47	46	29	12	3	2	3	34.1	54.9
23-Aug	0	0	0	0	BD	0	8	1	17	1	1	0	0	C	C	C	C	N	N	N	C	C	23	17	--	23.0
24-Aug	16	12	12	10	12	10	8	8	4	3	3	5	7	14	9	0	0	1	7	5	1	5	1	2	6.5	16.1
25-Aug	1	0	0	1	0	1	1	3	5	7	0	0	0	0	0	0	0	10	0	0	BD	3	5	0	1.7	10.0
26-Aug	1	0	0	1	0	0	0	0	0	1	1	3	0	0	4	3	2	1	6	0	1	0	0	0	1.0	6.1
27-Aug	0	0	0	0	0	1	2	2	8	0	0	1	5	4	0	0	3	1	0	0	1	0	0	1	1.2	7.9
28-Aug	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	2	2	2	2	1	0	0	0.7	2.0
29-Aug	0	0	0	0	1	0	1	1	2	2	2	6	6	3	1	0	0	0	1	0	0	0	0	0	1.2	5.8
30-Aug	0	1	1	1	1	3	5	9	7	2	1	2	3	5	6	8	3	2	3	4	2	3	3	5	3.2	8.7
31-Aug	2	4	3	3	1	1	3	3	4	4	4	6	4	4	4	5	2	0	1	0	1	0	1	2	2.7	6.3
12.1 12.1 15.9 19.8 14.4 9.4 12.3 13.1 13.0 10.2 9.9 9.7 12.0 11.3 12.4 10.4 11.4 10.7 10.3 9.4 10.1 10.5 11.3 11.8																								Diurnal Average		
121.9 108.0 230.1 360.7 173.1 84.8 77.9 73.0 43.1 48.5 50.1 51.8 67.2 63.9 56.4 47.0 50.6 58.3 45.9 43.0 34.9 44.9 76.2 107.7																								Diurnal Maximum		

C - Calibration      D - DAS Failure      N - Not Valid      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>

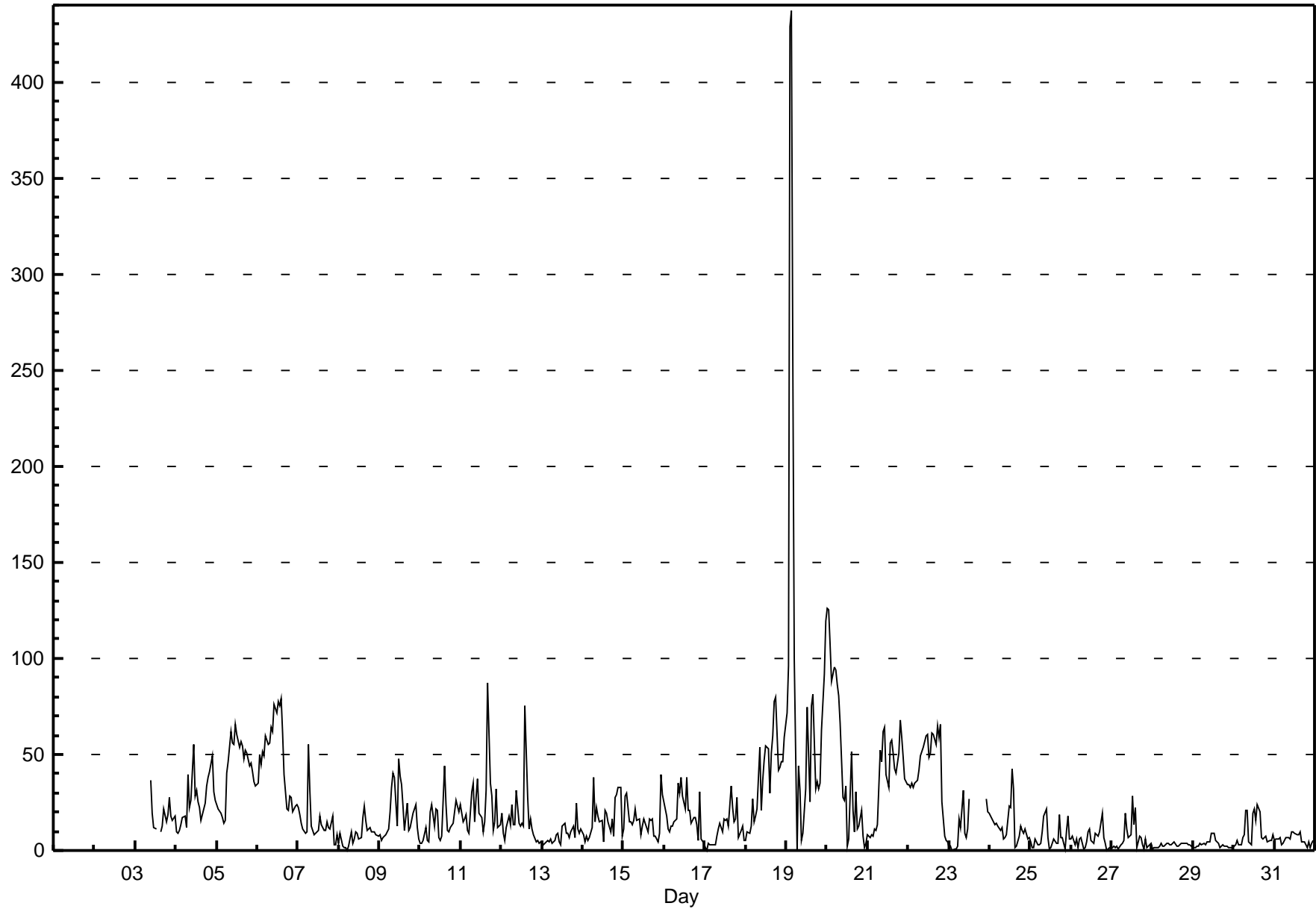


# Hourly Maximums

Particulate Matter 2.5 (PM<sub>2.5</sub>) - μg/m<sup>3</sup>

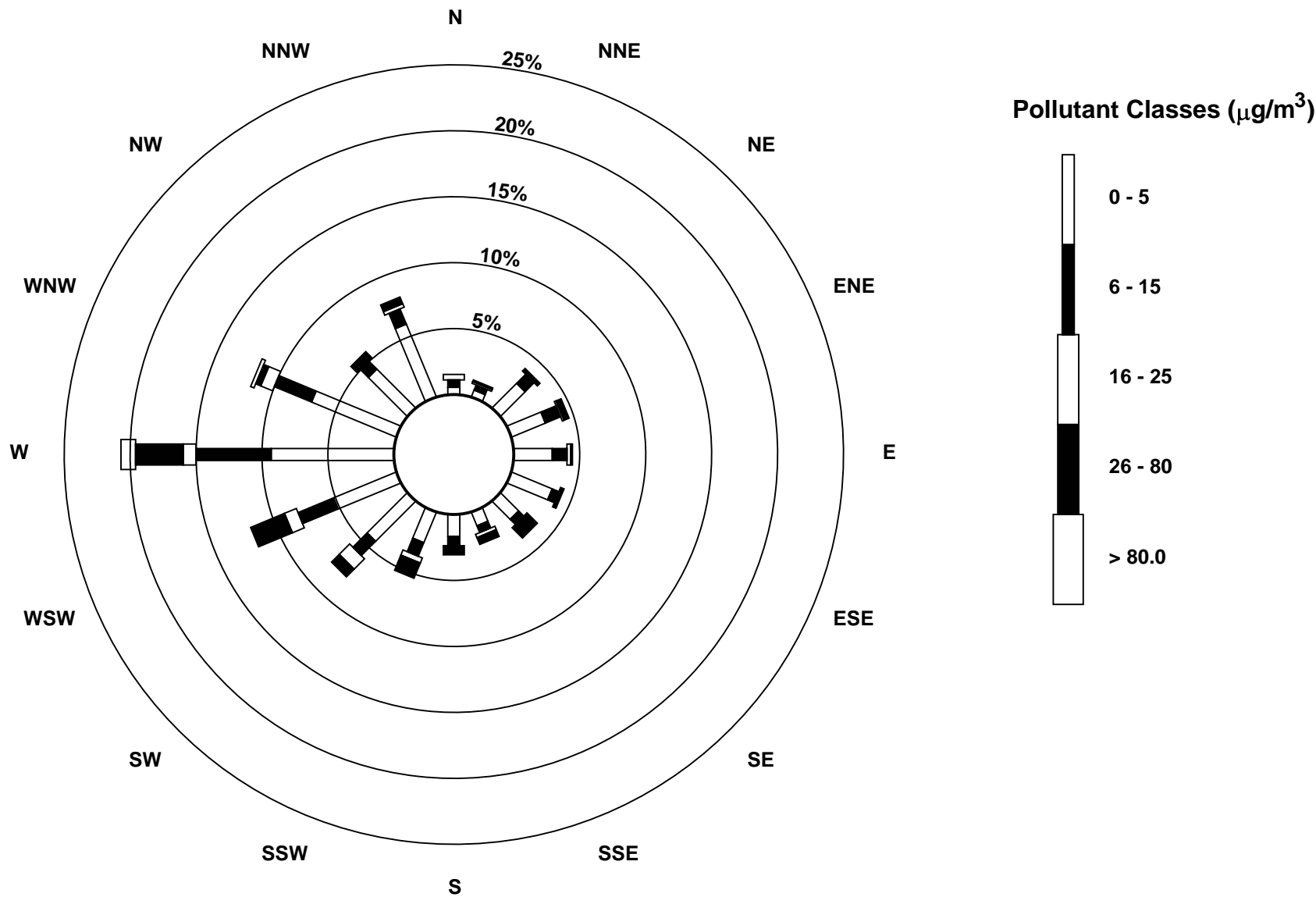
Evergreen Park - August 2010

Maximum Value: 436.7 μg/m <sup>3</sup> on Aug 19 04:00		Maximum Daily Average: 92.7 μg/m <sup>3</sup> on Aug 19		Hours in Service: 744																																													
Minimum Value: 0 μg/m <sup>3</sup> on Aug 17 02:00		Minimum Daily Average: 2.8 μg/m <sup>3</sup> on Aug 28		Hours of Data: 676																																													
Maximum Diurnal Average: 28.7 μg/m <sup>3</sup> at hour 3		Minimum Diurnal Average: 17.0 μg/m <sup>3</sup> at hour 24		Hours of Missing Data: 68																																													
Monthly Average: 21.82 μg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 2.9 Q <sub>1</sub> = 5.8 Median = 12.7 Q <sub>3</sub> = 27.7 P <sub>90</sub> = 51.9 P <sub>99</sub> = 103.8		Hours of Calibration: 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-Aug	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--																							
2-Aug	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--																							
3-Aug	D	D	D	D	D	D	D	D	D	36	20	12	11	D	D	10	12	22	15	18	27	18	16	18	--	36.4																							
4-Aug	9	9	10	13	17	18	12	39	22	26	55	28	31	25	22	16	22	24	34	38	41	50	31	26	25.8	55.4																							
5-Aug	24	22	19	17	14	15	40	46	62	56	55	65	60	54	57	55	48	53	51	44	46	41	36	33	42.2	65.4																							
6-Aug	35	50	44	52	49	60	56	56	64	62	76	71	78	75	79	61	39	22	21	28	28	20	23	24	48.9	78.7																							
7-Aug	22	18	14	11	9	10	55	31	13	8	9	9	10	18	13	11	11	15	12	11	18	3	3	8	14.3	55.3																							
8-Aug	4	9	3	2	1	0	2	10	3	6	10	9	6	7	17	23	16	11	12	10	10	10	8	7	8.2	23.4																							
9-Aug	8	6	6	8	8	11	20	33	40	38	13	48	39	34	23	10	24	10	12	15	19	24	12	6	19.6	47.7																							
10-Aug	4	4	5	12	5	4	20	24	12	22	21	7	5	8	44	24	11	10	12	14	20	26	23	20	14.8	43.9																							
11-Aug	24	15	16	19	11	9	31	35	15	28	37	19	17	9	15	31	87	35	28	10	15	32	12	14	23.5	87.1																							
12-Aug	20	9	5	12	18	14	24	14	13	31	14	13	14	12	75	27	11	16	11	8	4	5	4	5	15.8	75.1																							
13-Aug	4	3	5	5	4	6	4	5	8	9	5	3	12	14	9	9	7	10	13	7	24	11	9	11	8.2	24.5																							
14-Aug	8	5	7	5	7	12	38	15	22	18	15	15	4	21	20	15	10	16	7	28	29	33	33	8	16.3	37.8																							
15-Aug	11	29	30	15	15	14	16	22	16	16	8	13	17	14	10	17	16	17	8	7	5	9	39	29	16.3	39.4																							
16-Aug	25	18	11	10	13	13	15	16	35	30	38	28	22	38	21	21	14	17	17	13	5	31	6	4	19.2	38.1																							
17-Aug	1	0	4	3	3	3	3	7	11	15	10	16	16	17	13	33	22	15	16	28	7	10	13	5	11.3	33.5																							
18-Aug	6	10	9	13	27	15	18	22	54	21	37	47	55	53	30	51	59	78	80	41	43	46	46	59	38.2	80.1																							
19-Aug	71	96	429	437	254	100	0	44	31	5	9	32	75	50	26	75	81	32	36	32	35	63	91	119	92.7	436.7																							
20-Aug	126	125	107	88	96	94	86	80	66	27	26	33	2	6	51	21	10	30	11	13	21	7	2	4	47.2	125.7																							
21-Aug	8	7	8	8	11	11	14	52	46	62	64	40	33	56	57	50	42	41	51	68	59	49	37	34	37.8	67.6																							
22-Aug	34	32	35	33	35	36	42	49	51	54	59	60	49	51	61	60	55	65	59	66	25	8	5	5	42.9	65.9																							
23-Aug	2	2	0	1	1	2	17	12	31	9	7	11	27	C	C	C	C	N	N	N	C	C	27	20	--	31.5																							
24-Aug	19	16	15	13	14	13	10	12	6	7	8	23	22	43	32	2	3	7	12	11	9	11	6	7	13.4	42.6																							
25-Aug	5	1	1	6	3	3	4	10	18	22	7	1	1	4	6	4	3	18	7	6	1	10	18	6	6.9	21.9																							
26-Aug	6	7	3	6	1	6	7	1	1	4	10	11	6	4	9	8	8	10	19	7	4	0	1	1	5.8	19.2																							
27-Aug	1	2	1	2	1	3	3	5	19	11	7	9	28	13	22	2	7	7	3	1	6	2	3	4	6.8	28.3																							
28-Aug	1	1	2	1	2	4	2	3	4	4	3	3	3	4	2	2	3	4	4	4	4	3	3	2	2.8	4.1																							
29-Aug	1	2	2	2	4	3	3	3	5	4	4	9	9	5	5	4	1	3	2	3	2	1	2	1	3.4	9.1																							
30-Aug	3	3	5	3	3	6	8	21	21	5	3	20	22	16	24	20	7	6	7	7	5	5	5	8	9.7	24.0																							
31-Aug	5	6	6	7	3	4	6	6	7	6	10	10	9	8	8	10	4	4	4	1	4	1	4	5	5.8	10.0																							
																								17.4	18.1	28.7	28.6	22.5	17.5	19.8	24.1	25.0	22.1	22.0	23.0	23.6	24.4	27.8	24.0	22.7	21.3	20.1	19.3	18.4	18.9	17.8	17.0	Diurnal Average	
																								125.7	125.1	428.7	436.7	254.2	100.2	86.2	80.3	66.2	61.7	76.4	71.4	77.7	75.3	78.7	75.5	87.1	77.7	80.1	67.6	59.3	62.5	91.4	119.5	Diurnal Maximum	
C - Calibration																								D - DAS Failure				N - Not Valid																					



### Pollutant Rose

Particulate Matter 2.5 (PM<sub>2.5</sub>) - μg/m<sup>3</sup>  
Evergreen Park - August 2010



# Hourly Averages

External Temperature (ET) - °C

Evergreen Park - August 2010

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 29.1 °C on Aug 18 16:00	Maximum Daily Average: 20.6 °C on Aug 7		Hours of Data:	685
Minimum Value: 2 °C on Aug 30 06:00	Minimum Daily Average: 7.2 °C on Aug 29		Hours of Missing Data:	59
Maximum Diurnal Average: 19.8 °C at hour 16	Minimum Diurnal Average: 10.2 °C at hour 6		Hours of Calibration:	0
Monthly Average: 15.02 °C	Percentiles: P <sub>1</sub> = 3.6 P <sub>10</sub> = 7.6 Q <sub>1</sub> = 11.0 Median = 14.7 Q <sub>3</sub> = 19.4 P <sub>90</sub> = 22.9 P <sub>99</sub> = 26.7		Percent Operational Time:	92.1

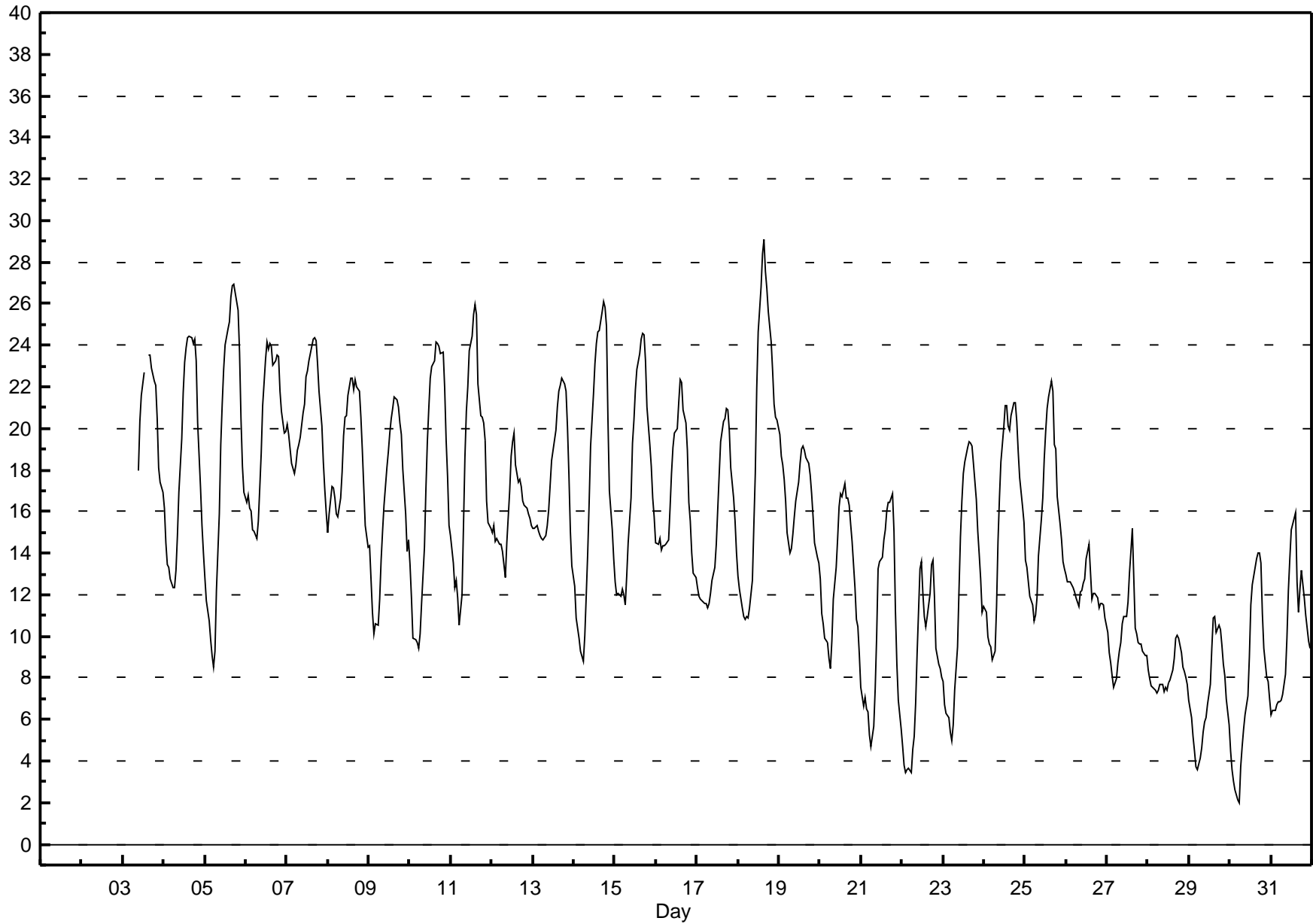
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Aug	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--																						
2-Aug	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--																						
3-Aug	D	D	D	D	D	D	D	D	M	18	20	22	23	D	D	24	24	23	22	22	20	18	17	17	--	23.5																						
4-Aug	16	14	13	13	13	12	12	13	15	17	20	22	23	24	24	24	24	24	24	23	20	17	15	14	18.3	24.4																						
5-Aug	13	12	11	10	9	8	9	12	16	19	21	23	24	25	25	26	27	27	27	26	24	20	18	17	18.7	26.9																						
6-Aug	16	17	16	16	15	15	15	16	17	19	21	23	24	24	24	24	23	23	23	23	22	21	20	20	19.9	24.1																						
7-Aug	20	20	19	18	18	18	19	19	20	21	21	22	23	23	24	24	24	24	23	22	20	18	17	16	20.6	24.4																						
8-Aug	15	16	17	17	17	16	16	17	18	20	21	21	22	22	22	22	22	22	22	21	19	17	15	14	18.7	22.4																						
9-Aug	14	13	11	10	11	11	12	14	15	16	18	19	20	20	21	22	21	21	20	20	18	16	14	15	16.3	21.5																						
10-Aug	13	12	10	10	10	9	10	12	14	17	19	21	22	23	23	24	24	24	24	24	22	19	18	15	17.5	24.2																						
11-Aug	15	14	12	13	12	11	12	15	19	21	22	24	24	25	26	25	22	21	21	20	19	17	15	15	18.3	26.0																						
12-Aug	15	15	15	15	14	14	14	13	13	15	17	19	19	20	18	17	18	17	17	16	16	16	16	15	16.0	19.8																						
13-Aug	15	15	15	15	15	15	15	15	15	16	17	18	19	20	21	22	22	22	22	22	20	18	15	13	17.6	22.4																						
14-Aug	12	11	10	10	9	9	10	12	14	16	19	22	23	24	25	25	26	26	26	25	20	17	15	14	17.5	26.1																						
15-Aug	13	12	12	12	12	12	11	13	14	17	19	20	22	23	24	24	25	24	23	21	19	18	17	16	17.7	24.6																						
16-Aug	15	14	15	14	14	14	14	15	16	18	19	20	20	21	22	22	21	20	19	16	16	14	13	13	16.9	22.4																						
17-Aug	12	12	12	12	12	12	11	12	12	13	13	14	16	18	19	20	20	21	21	20	18	17	16	14	15.3	21.0																						
18-Aug	13	12	11	11	11	11	11	11	13	15	18	22	25	27	28	29	28	27	26	24	23	21	21	20	19.0	29.1																						
19-Aug	20	19	18	18	17	15	14	14	15	16	17	17	18	19	19	19	19	18	18	17	16	14	14	13	16.8	19.7																						
20-Aug	13	11	11	10	10	9	8	10	12	13	15	16	17	17	17	17	17	16	15	15	12	11	10	9	12.9	17.4																						
21-Aug	8	7	7	7	6	5	5	6	7	10	13	14	14	15	15	16	16	16	17	15	11	9	7	6	10.4	16.8																						
22-Aug	5	4	3	4	4	3	5	5	7	9	13	14	12	11	10	11	12	13	14	12	9	9	8	8	8.6	13.7																						
23-Aug	8	7	6	6	5	5	6	7	9	12	15	16	18	18	19	19	19	19	18	17	15	14	13	11	12.7	19.4																						
24-Aug	11	11	10	10	9	9	9	11	15	17	18	20	21	21	20	20	21	21	21	20	19	18	16	15	16.0	21.2																						
25-Aug	14	13	13	12	11	11	11	12	14	16	17	18	20	21	22	22	22	19	19	17	15	15	14	13	15.8	22.3																						
26-Aug	13	13	13	12	12	12	12	11	12	12	13	13	14	14	13	12	12	12	12	11	12	12	12	11	12.3	14.4																						
27-Aug	10	9	9	8	8	8	9	9	10	11	11	11	12	13	14	15	10	10	10	10	10	9	9	9	10.1	15.2																						
28-Aug	8	8	8	8	7	7	7	8	8	7	8	8	8	8	9	10	10	10	10	9	9	8	8	8	8.2	10.0																						
29-Aug	7	6	5	4	4	4	4	5	5	6	6	7	8	9	11	11	10	11	10	10	9	8	7	6	7.2	11.0																						
30-Aug	4	4	3	3	2	2	4	5	6	6	7	9	11	13	13	14	14	14	14	11	9	8	8	7	7.9	14.0																						
31-Aug	6	6	6	7	7	7	7	7	8	10	12	14	15	16	16	13	11	12	13	12	11	10	10	9	10.3	16.0																						
																								12.3	11.6	11.1	10.8	10.5	10.2	10.4	11.4	12.8	14.5	16.2	17.5	18.5	19.1	19.5	19.8	19.5	19.3	19.0	17.9	16.3	14.8	13.7	12.9	Diurnal Average
																								20.2	19.7	19.0	18.3	17.8	18.2	19.0	19.2	19.6	20.8	22.0	23.7	24.7	26.8	28.4	29.1	27.5	26.9	26.5	25.7	23.7	21.2	20.5	20.4	Diurnal Maximum

D - DAS Failure      M - Maintenance

# Hourly Averages

External Temperature (ET) - °C

Evergreen Park - August 2010







# Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - August 2010

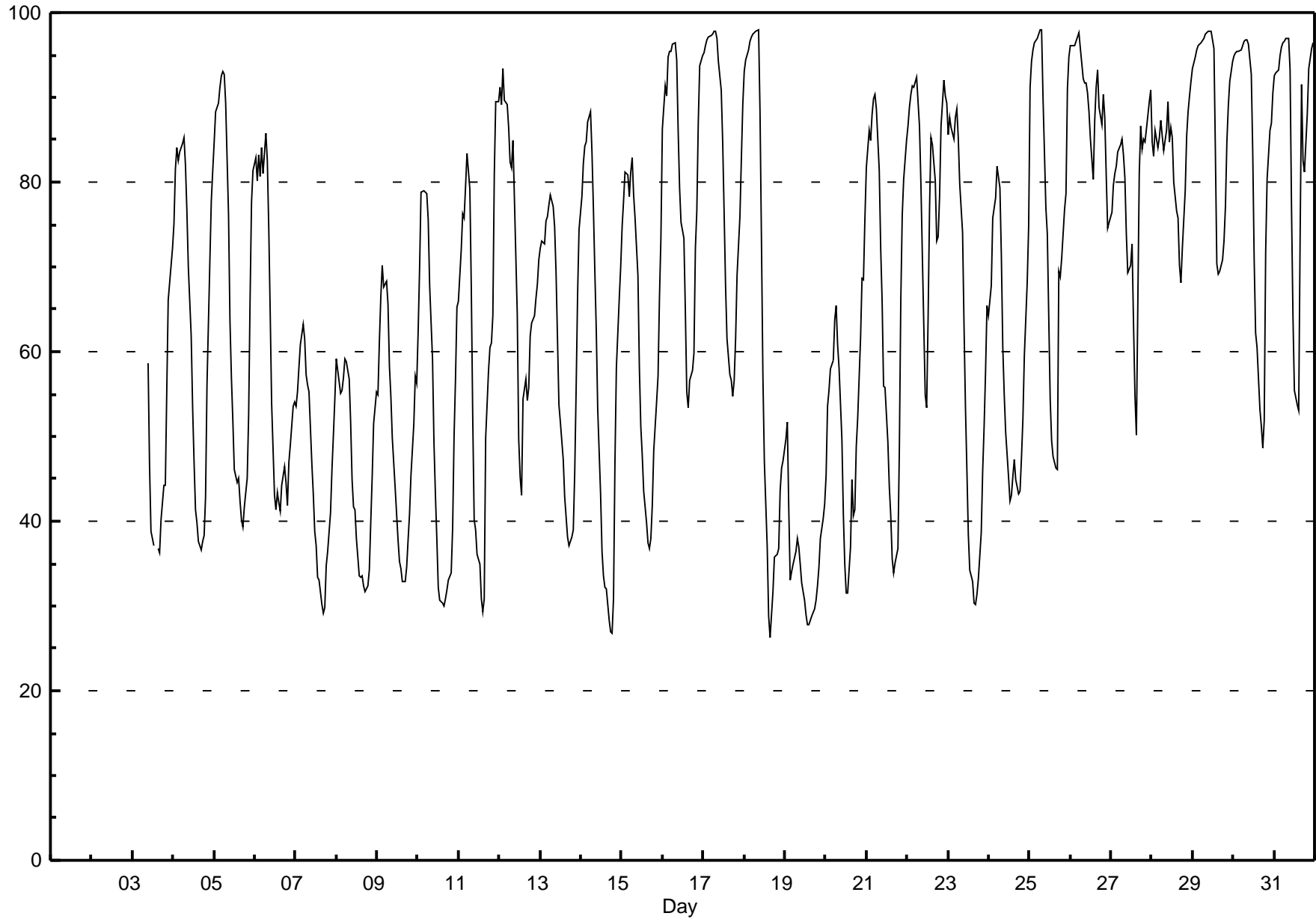
Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 98.0 % on Aug 18 09:00	Maximum Daily Average: 89.6 % on Aug 26		Hours of Data:	685
Minimum Value: 26 % on Aug 18 16:00	Minimum Daily Average: 35.1 % on Aug 19		Hours of Missing Data:	59
Maximum Diurnal Average: 83.6 % at hour 6	Minimum Diurnal Average: 46.5 % at hour 16		Hours of Calibration:	0
Monthly Average: 65.91 %	Percentiles: P <sub>1</sub> = 28.7 P <sub>10</sub> = 35.8 Q <sub>1</sub> = 46.1 Median = 68.1 Q <sub>3</sub> = 85.1 P <sub>90</sub> = 94.4 P <sub>99</sub> = 97.8		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-Aug	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--																						
2-Aug	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	--																						
3-Aug	D	D	D	D	D	D	D	D	M	59	47	39	37	D	D	37	36	40	44	44	56	66	68	72	--	72.3																						
4-Aug	75	82	84	82	84	85	85	82	77	70	62	53	47	41	40	38	37	38	38	43	56	71	78	81	63.7	85.3																						
5-Aug	85	88	89	91	93	93	93	89	76	64	57	52	46	45	45	42	40	39	42	45	53	66	78	81	66.3	93.1																						
6-Aug	83	80	83	81	84	81	86	82	75	64	54	43	41	43	42	41	44	47	45	42	47	49	54	54	60.2	85.8																						
7-Aug	54	55	58	61	63	61	57	56	55	47	43	39	37	33	33	30	29	30	35	36	41	46	50	54	46.1	63.2																						
8-Aug	59	58	55	55	57	59	59	57	52	45	42	41	38	34	33	34	32	32	34	40	45	51	55	55	45.8	59.1																						
9-Aug	55	61	66	70	68	68	66	58	55	50	44	41	38	35	34	33	33	35	38	41	45	51	57	56	49.9	70.1																						
10-Aug	62	70	79	79	79	79	76	68	59	49	43	38	32	31	30	30	31	32	33	34	39	50	57	65	51.9	79.0																						
11-Aug	66	72	76	76	79	83	79	67	52	40	39	36	35	31	29	31	50	58	60	61	64	81	90	90	60.3	89.6																						
12-Aug	91	89	93	90	89	86	82	82	85	78	64	50	45	43	54	57	54	56	62	63	64	66	68	71	70.2	93.4																						
13-Aug	72	73	73	75	76	77	79	77	75	69	62	54	52	47	43	41	38	37	38	39	46	56	67	74	60.0	78.6																						
14-Aug	78	82	84	85	87	88	84	77	69	62	53	43	36	34	32	32	28	27	27	31	47	58	66	70	57.6	88.3																						
15-Aug	75	78	81	81	78	81	83	78	76	69	58	51	48	44	40	38	37	38	42	48	54	57	66	73	61.4	82.9																						
16-Aug	86	91	90	95	95	95	96	96	94	86	79	75	73	65	55	53	57	58	60	72	77	87	94	95	80.3	96.5																						
17-Aug	95	96	97	97	97	97	98	98	97	94	91	85	76	68	62	57	57	55	57	62	69	76	83	89	81.3	97.8																						
18-Aug	93	94	96	97	97	97	98	98	98	88	73	57	47	37	29	26	29	32	36	36	37	44	46	47	63.8	98.0																						
19-Aug	50	52	42	33	34	35	36	38	37	35	33	31	29	28	28	28	29	30	31	32	35	38	40	42	35.1	51.6																						
20-Aug	45	54	55	58	59	64	65	61	58	50	41	35	32	32	37	45	41	41	49	52	62	69	69	76	52.0	75.6																						
21-Aug	82	86	85	88	90	90	89	81	72	66	56	56	49	44	41	36	34	35	37	49	66	76	80	85	65.5	90.3																						
22-Aug	87	89	90	91	91	92	90	87	80	71	55	53	64	77	85	84	80	73	74	78	87	92	90	89	81.2	92.3																						
23-Aug	86	88	86	85	88	89	85	80	74	63	54	46	38	34	33	30	30	31	33	39	46	51	58	65	58.9	88.6																						
24-Aug	64	68	76	77	78	82	79	71	60	55	50	45	42	43	45	47	45	43	44	47	52	59	68	75	59.1	81.9																						
25-Aug	91	94	96	97	97	97	98	98	90	77	74	64	54	50	48	46	46	70	69	71	77	79	91	95	77.8	98.0																						
26-Aug	96	96	96	97	97	98	96	92	92	92	91	88	85	80	87	91	93	89	87	90	88	81	74	75	89.6	97.6																						
27-Aug	76	80	81	82	84	84	85	83	81	74	69	70	73	63	55	50	81	87	84	85	85	86	90	91	78.3	90.8																						
28-Aug	85	83	86	84	85	87	85	84	86	89	85	87	85	80	77	76	70	68	72	79	85	88	90	92	82.9	91.9																						
29-Aug	93	95	96	96	96	97	97	97	98	98	98	98	98	96	84	70	69	69	71	73	77	85	89	92	94	88.6	97.9																					
30-Aug	95	95	95	96	96	96	97	97	97	96	93	84	71	62	61	53	51	49	52	72	80	86	87	91	81.2	96.9																						
31-Aug	93	93	93	95	96	96	97	97	97	93	77	64	55	54	53	74	91	83	81	88	93	95	96	96	85.4	96.9																						
																								77.6	80.1	81.5	81.9	82.8	83.6	82.8	79.7	75.6	68.8	61.6	55.8	51.9	48.6	47.2	46.5	48.1	49.0	50.8	54.9	61.2	67.6	72.3	75.7	Diurnal Average
																								96.1	96.2	96.8	97.2	97.3	97.6	98.0	97.9	98.0	97.8	97.9	97.8	95.8	83.6	87.2	91.2	93.2	88.8	86.8	90.4	93.4	94.6	95.7	96.4	Diurnal Maximum

D - DAS Failure      M - Maintenance

# Hourly Averages

Relative Humidity (RH) - %  
Evergreen Park - August 2010





# Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Evergreen Park - August 2010

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	2	1	0	1	1	2	2	3	8	7	13	15	9	8	8	7	10	10	6	5	3	5	5	4.1	15.3
Dir	223	50	42	159	285	181	218	200	206	263	310	333	351	32	356	351	352	327	326	312	293	298	300	296	327.4	350.7
2 Spd	5	5	4	4	5	5	4	4	7	8	6	7	8	8	7	6	5	3	3	3	3	2	0	2	2.8	8.1
Dir	280	278	279	276	281	288	291	309	291	294	328	339	326	332	20	51	44	59	67	145	189	212	12	72	318.4	325.7
3 Spd	1	0	0	1	1	3	4	6	4	5	4	5	6	D	D	3	5	4	4	3	1	1	1	1	1.7	5.6
Dir	42	284	283	228	236	263	271	264	250	265	275	274	284	D	D	319	352	24	54	50	12	218	238	264	289.1	263.5
4 Spd	1	0	1	2	2	3	4	5	6	6	6	5	2	4	3	3	3	4	2	2	1	0	0	1	1.2	6.1
Dir	247	325	240	297	293	286	280	287	284	284	267	258	344	29	47	47	61	90	159	200	185	238	284	81	294.3	284.4
5 Spd	0	0	0	0	1	1	1	2	2	2	6	6	7	7	6	5	5	4	4	2	2	1	1	1	2.3	7.2
Dir	267	80	216	220	70	75	77	58	75	113	141	129	108	138	133	148	167	166	132	137	136	69	47	31	130.2	108.5
6 Spd	1	3	3	3	2	2	1	0	1	2	6	13	12	15	17	15	17	12	11	10	9	8	9	6	7.1	17.1
Dir	217	209	246	256	223	227	146	196	171	257	257	263	263	259	263	270	260	245	251	252	235	243	236	240	252.9	259.9
7 Spd	8	9	9	9	6	7	6	10	9	16	13	15	15	16	11	18	18	19	17	17	13	6	9	6	11.6	18.6
Dir	256	254	253	253	248	268	283	259	255	260	259	260	262	287	275	259	265	267	271	259	258	251	238	236	261.6	267.1
8 Spd	4	7	12	12	8	9	10	9	15	18	16	15	17	15	14	19	16	16	15	15	8	7	6	8	11.8	18.8
Dir	225	249	258	260	249	246	240	246	261	267	269	271	265	259	276	250	257	271	283	268	262	244	224	226	259.4	250.0
9 Spd	7	3	2	2	2	3	2	6	12	13	13	12	10	10	10	10	10	9	5	3	3	1	2	5	6.1	13.1
Dir	227	212	217	216	219	228	247	258	260	258	270	269	264	264	266	278	286	292	302	290	233	222	237	272	263.8	258.2
10 Spd	3	1	0	2	2	2	2	5	6	6	5	8	10	9	7	3	6	5	4	5	3	1	1	0	3.1	9.9
Dir	297	325	268	329	321	294	289	259	278	283	217	213	234	235	273	295	319	321	330	327	336	236	257	161	275.0	234.1
11 Spd	0	0	0	0	1	1	0	2	5	10	9	8	6	6	7	7	15	8	6	6	6	5	3	1	4.0	15.3
Dir	201	264	66	132	254	244	299	216	256	267	263	287	310	266	278	257	340	339	267	273	287	274	234	286	283.6	340.2
12 Spd	2	2	3	3	2	3	9	12	8	10	11	18	19	20	17	20	19	19	17	18	13	13	9	9	10.9	20.1
Dir	354	317	239	305	316	296	328	1	328	285	299	334	339	341	346	353	342	346	339	340	339	337	327	323	335.3	340.9
13 Spd	10	10	11	9	12	8	7	9	7	7	7	10	10	9	12	11	11	10	6	7	4	2	1	1	7.7	12.3
Dir	334	342	346	341	344	336	336	344	326	316	337	332	316	320	296	328	331	324	347	334	313	294	262	337	330.0	343.7
14 Spd	1	1	1	2	2	2	4	6	6	4	3	3	3	2	3	3	4	3	5	3	1	1	1	1	2.2	6.1
Dir	238	215	302	251	252	244	269	274	266	263	244	281	283	318	327	43	323	290	296	270	168	214	215	208	274.4	266.0
15 Spd	2	1	1	1	1	0	1	1	1	4	4	6	5	6	6	6	6	7	6	5	6	4	2	2	2.9	7.3
Dir	227	54	282	331	289	124	68	175	107	94	104	134	111	101	131	112	105	123	112	94	99	93	86	329	109.4	122.5
16 Spd	1	3	3	5	5	1	2	1	1	4	4	5	6	6	8	9	9	6	8	7	3	6	3	4	2.9	9.2
Dir	189	320	301	223	244	341	42	111	105	185	141	97	83	76	58	72	70	64	58	70	65	51	65	58	72.1	69.7
17 Spd	4	3	3	4	3	2	4	4	5	4	4	5	5	6	4	5	4	4	5	2	2	3	3	2	3.0	5.5
Dir	53	109	84	77	83	103	84	111	112	104	115	110	121	130	153	158	145	161	199	148	118	120	116	73	118.8	130.0
18 Spd	2	1	0	2	2	3	1	1	1	3	4	3	6	10	12	17	15	12	8	17	19	13	15	15	6.5	19.1
Dir	90	69	88	68	83	122	126	132	204	221	225	233	238	259	263	264	283	278	253	251	250	246	241	246	252.7	249.8
19 Spd	14	16	21	23	19	17	14	18	23	23	23	22	21	25	25	25	25	24	21	18	15	12	13	12	19.4	25.2
Dir	246	261	262	260	266	279	270	267	267	263	265	273	270	263	261	265	271	269	262	263	254	246	251	260	264.0	271.1
20 Spd	8	2	3	5	6	4	4	6	5	7	10	12	12	12	6	5	3	3	3	2	2	2	2	1	3.4	12.4
Dir	273	304	293	267	270	276	261	272	279	275	269	271	259	255	319	37	47	51	88	127	94	77	84	43	277.4	255.2
21 Spd	1	1	1	2	3	2	1	2	5	4	2	5	5	6	6	5	3	4	1	1	0	0	0	1	2.0	6.0
Dir	206	21	217	279	294	288	270	291	272	280	248	211	218	261	272	307	247	326	202	191	129	213	99	38	265.3	261.4
22 Spd	1	1	1	1	1	2	1	4	7	5	8	10	10	8	5	6	5	5	3	4	5	7	7	4	3.3	9.8
Dir	205	338	181	261	209	223	237	249	265	316	334	328	313	317	282	248	220	195	174	294	274	235	250	262	276.0	327.8

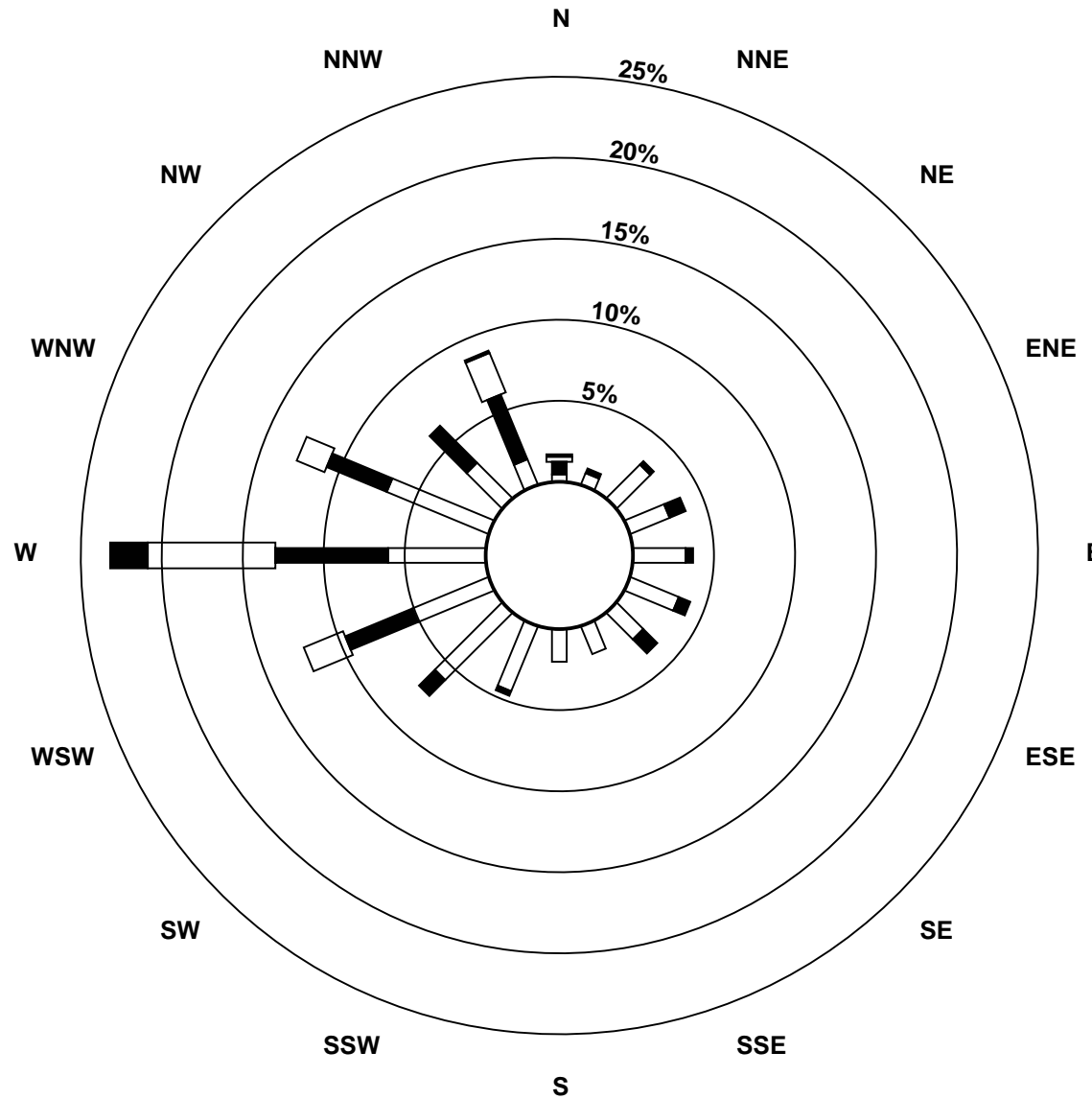
# Hourly Averages

**Wind Speed (km/h)**  
**Wind Direction (deg)**  
**Evergreen Park - August 2010**

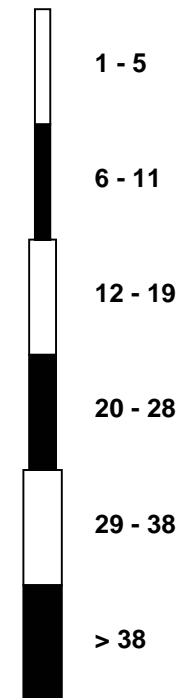
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	4	4	3	5	2	2	4	4	5	11	13	12	11	15	15	14	11	11	12	7	2	3	2	3	7.0	15.3
Dir	272	323	296	284	297	305	299	301	294	284	276	269	266	268	267	279	285	284	286	291	278	229	215	214	278.3	267.4
24 Spd	3	0	2	2	3	2	2	3	3	6	10	13	9	12	10	5	4	5	5	3	3	2	2	3	4.2	12.8
Dir	207	264	221	212	213	218	189	219	201	250	284	258	282	272	273	271	253	242	256	276	294	243	215	281	257.3	258.3
25 Spd	6	3	1	1	0	3	3	1	2	4	3	3	2	3	1	5	3	1	5	4	4	2	3	2	0.8	6.4
Dir	209	181	168	244	67	212	229	276	309	257	205	207	223	175	138	111	132	196	36	35	64	163	318	345	191.3	209.0
26 Spd	1	3	2	2	1	3	6	1	2	4	3	4	1	4	9	7	6	7	6	3	8	9	10	12	4.1	12.3
Dir	334	337	303	237	183	187	314	55	205	239	210	301	315	226	259	287	266	257	250	230	262	268	272	271	265.0	270.5
27 Spd	13	10	11	8	10	8	8	10	12	15	19	16	21	17	17	21	13	12	12	16	12	13	10	11	12.4	20.8
Dir	270	275	274	279	277	280	278	289	284	288	294	289	266	283	282	271	348	331	280	265	284	277	282	330	284.9	265.6
28 Spd	14	11	10	10	9	9	10	9	10	11	15	13	11	11	9	8	9	7	5	7	6	4	5	3	8.1	15.0
Dir	343	339	318	313	296	288	291	304	312	335	345	348	349	352	348	311	311	321	301	272	274	281	268	255	319.1	344.9
29 Spd	3	2	1	1	0	0	1	2	1	2	2	2	2	2	4	5	6	4	4	3	2	1	0	1	1.3	5.7
Dir	245	219	214	202	170	159	208	227	283	50	49	94	97	38	85	127	135	129	110	134	108	102	231	41	124.4	134.9
30 Spd	0	0	0	0	0	2	2	3	4	4	4	2	3	3	1	3	1	2	1	1	0	0	1	1	0.9	4.3
Dir	300	229	235	171	60	213	270	277	268	254	258	234	195	188	89	7	30	197	189	164	116	99	176	69	237.3	268.5
31 Spd	2	0	1	1	1	2	1	1	2	1	2	4	2	4	4	7	5	2	1	1	0	1	1	0	0.6	6.6
Dir	67	84	75	61	87	202	39	86	83	176	139	159	143	124	152	238	301	294	79	79	252	37	188	111	146.6	237.9
Spd	2.5	2.1	2.7	2.9	2.7	2.7	2.9	3.3	4.5	5.9	5.5	5.7	5.5	5.4	5.4	5.0	4.9	4.3	3.6	3.9	3.1	2.6	2.9	2.6	Diurnal Average	
Dir	271.3	285.6	276.1	273.6	275.5	268.9	281.6	278.9	273.0	273.0	277.4	282.4	283.0	281.1	284.8	283.3	299.0	292.5	286.7	276.3	270.1	261.3	255.7	273.0	Diurnal Maximum	
Spd	14.4	15.7	21.0	22.6	19.2	17.2	14.2	18.3	23.4	23.3	22.7	21.9	21.2	24.7	25.0	24.7	25.2	24.2	21.1	17.9	19.1	13.4	15.0	15.3	Diurnal Maximum	
Dir	343.3	261.1	262.5	260.0	266.4	279.0	270.3	266.7	266.6	262.6	265.0	273.3	269.8	263.4	261.3	265.0	271.1	268.7	261.9	339.7	249.8	337.5	241.4	245.9	Diurnal Maximum	
Maximum Speed Value: 25 km/h on Aug 19 17:00																		Minimum Speed Value: 0 km/h on Aug 30 05:00						Hours in Service: 744		
Maximum Daily Speed Average: 19.4 km/h on Aug 19																		Minimum Daily Speed Average: 0.6 km/h on Aug 30						Hours of Data: 742		
Maximum Diurnal Speed Average: 5.9 km/h at hour 10																		Minimum Diurnal Speed Average: 2.1 km/h at hour 2						Hours of Missing Data: 2		
Monthly Average Velocity: 3.80 km/h 278.90 deg																		Speed Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 2.1 Median = 4.4 Q <sub>3</sub> = 8.8 P <sub>90</sub> = 13.9 P <sub>99</sub> = 23.2						Percent Operational Time: 99.7		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
D - DAS Failure																										
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	13	16	3	0	0	42																			
NorthEast	44	6	0	0	0	0	50																			
East	56	14	0	0	0	0	70																			
SouthEast	31	11	0	0	0	0	42																			
South	48	0	0	0	0	0	48																			
SouthWest	90	23	6	0	0	0	119																			
West	71	97	73	17	0	0	258																			
NorthWest	61	43	9	0	0	0	113																			
Total	411	207	104	20	0	0	742																			

# Wind Rose

Wind Speed (WS) (km/h)  
Evergreen Park - August 2010



## Wind Speed Classes (km/h)





# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

## Evergreen Park - August 2010

Maximum Speed: 26 km/h on Aug 19 17:00	Maximum Daily Speed Average: 19.8 km/h on Aug 19	Hours in Service: 744
Minimum Speed: 1 km/h on Aug 5 06:00	Minimum Daily Speed Average: 2.6 km/h on Aug 29	Hours of Data: 742
Maximum Diurnal Speed Average: 10.1 km/h at hour 14	Minimum Diurnal Speed Average: 3.9 km/h at hour 2	Hours of Missing Data: 2
Monthly Average Speed: 6.55 km/h	Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 2.6 Median = 5.0 Q <sub>3</sub> = 9.1 P <sub>90</sub> = 14.5 P <sub>99</sub> = 23.5	Percent Operational Time: 99.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	2	1	1	1	1	2	2	3	9	8	14	16	9	8	8	7	10	10	7	5	3	5	5	5.8	15.9
2-Aug	5	5	4	4	6	6	4	4	8	8	7	7	9	8	8	6	6	5	4	4	3	3	1	2	5.3	8.6
3-Aug	1	1	1	1	1	3	4	6	5	5	5	6	6	D	D	5	5	4	4	3	1	1	1	1	3.3	6.4
4-Aug	1	1	1	3	3	3	4	5	6	6	6	5	4	5	4	4	4	4	3	2	1	1	1	1	3.3	6.3
5-Aug	1	1	1	1	1	1	1	2	3	3	7	7	8	8	8	7	6	5	4	2	2	1	1	1	3.4	8.0
6-Aug	2	3	3	3	4	4	2	2	2	3	6	14	12	15	17	16	17	13	11	11	9	8	9	6	7.9	17.4
7-Aug	8	9	10	9	6	7	7	10	9	17	13	16	16	17	12	18	19	19	17	17	13	6	9	6	12.1	19.0
8-Aug	4	7	12	12	8	9	10	10	15	18	17	16	18	16	15	19	17	16	15	15	8	7	6	8	12.5	19.3
9-Aug	7	3	2	2	3	3	3	7	12	13	14	13	11	11	10	11	11	10	5	4	3	2	2	5	6.9	13.5
10-Aug	4	1	1	2	2	2	3	6	6	7	6	9	11	10	9	6	7	5	5	5	3	1	1	1	4.7	10.8
11-Aug	1	1	1	1	1	1	1	2	6	10	10	9	8	7	8	7	16	9	6	7	6	7	3	3	5.4	15.7
12-Aug	3	2	4	4	3	5	9	12	8	10	12	19	19	20	18	20	19	19	17	18	13	14	10	9	12.0	20.5
13-Aug	10	10	11	10	12	8	8	9	7	7	8	11	10	10	13	12	11	11	7	7	4	3	1	1	8.4	13.1
14-Aug	2	2	2	2	2	3	4	6	6	5	4	4	6	6	5	4	6	4	5	3	2	1	1	1	3.6	6.4
15-Aug	2	2	2	2	2	1	1	2	2	4	5	8	6	7	7	7	7	8	7	5	6	5	3	4	4.3	7.8
16-Aug	4	5	4	6	5	3	2	2	1	4	5	6	6	7	9	9	10	7	8	7	3	6	4	4	5.3	9.6
17-Aug	4	3	3	4	3	2	4	4	5	4	4	6	6	6	6	6	5	5	5	3	2	3	3	2	4.1	6.2
18-Aug	2	1	2	2	3	3	2	2	3	3	4	4	7	11	13	18	15	12	8	18	19	13	15	15	8.1	19.5
19-Aug	14	16	21	23	20	17	14	18	24	24	23	23	22	25	26	25	26	24	21	18	15	12	13	12	19.8	25.6
20-Aug	8	3	4	5	6	4	4	6	6	8	11	13	13	13	11	6	3	4	3	2	2	2	2	1	5.8	13.4
21-Aug	1	2	2	2	3	2	2	3	5	5	3	5	6	6	6	6	4	4	2	1	1	1	1	1	3.1	6.4
22-Aug	1	1	2	1	1	2	2	5	7	5	8	10	10	8	6	6	5	5	3	6	6	7	7	4	5.0	10.3
23-Aug	4	4	3	5	3	2	4	4	5	11	13	12	12	15	16	15	12	11	12	7	2	3	2	3	7.6	15.7
24-Aug	3	1	2	3	3	2	2	3	4	7	11	13	10	12	11	5	5	6	6	3	3	3	2	3	5.1	13.3
25-Aug	7	3	2	2	1	4	3	2	3	5	4	4	5	5	5	6	3	3	5	4	5	4	5	3	3.8	6.9
26-Aug	2	4	2	3	2	3	8	2	4	5	4	5	3	5	9	8	7	7	6	3	8	9	10	12	5.4	12.4
27-Aug	13	10	11	8	10	8	8	10	12	15	19	17	21	18	18	21	13	12	13	16	12	13	10	11	13.5	21.2
28-Aug	15	11	10	11	9	10	10	10	10	12	15	13	11	11	9	8	10	7	6	7	6	4	6	3	9.3	15.2
29-Aug	3	2	1	1	1	1	1	2	2	2	3	3	3	3	4	6	6	5	4	3	2	1	1	1	2.6	5.9
30-Aug	1	1	1	1	1	2	2	3	5	5	4	3	5	5	4	5	3	3	1	1	1	2	2	2	2.7	4.9
31-Aug	2	1	2	3	2	2	2	2	2	1	3	5	4	5	5	8	5	3	2	1	1	1	1	2	2.7	7.7
	4.4	3.9	4.1	4.3	4.1	4.1	4.4	5.2	6.3	7.8	8.4	9.6	9.7	10.1	10.0	9.9	9.3	8.4	7.3	6.8	5.5	4.8	4.5	4.4	Diurnal Average	
	14.6	15.8	21.1	22.8	19.5	17.5	14.3	18.5	23.6	23.6	23.3	22.5	21.6	25.1	25.5	25.1	25.6	24.5	21.3	18.1	19.5	13.6	15.1	15.4	Diurnal Maximum	

D - DAS Failure  
 All monthly, daily, and diurnal averages have been calculated using scalar methods



# Hourly Standard Deviations

Wind Direction (WD) - deg  
Evergreen Park - August 2010

Maximum Value: 97.6 deg on Aug 29 23:00																		Hours in Service: 744							
Minimum Value: 5.1 deg on Aug 6 23:00																		Hours of Data: 742							
Percentiles: P <sub>1</sub> = 6.4 P <sub>10</sub> = 10.6 Q <sub>1</sub> = 14.7 Median = 23.8 Q <sub>3</sub> = 45.8 P <sub>90</sub> = 73.1 P <sub>99</sub> = 94.6																		Hours of Missing Data: 2							
																		Hours of Calibration: 0							
																		Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	87	12	38	67	49	57	15	27	22	33	27	20	19	17	28	24	25	16	19	21	13	15	15	12	87.5
2-Aug	10	12	12	16	16	12	17	24	18	17	24	24	20	17	27	21	40	54	38	44	23	73	93	33	93.4
3-Aug	82	78	87	66	41	20	13	14	16	25	48	38	35	D	D	66	33	32	13	17	26	78	46	40	86.8
4-Aug	34	90	36	13	20	15	16	17	14	16	22	33	77	48	59	39	33	21	51	13	58	82	80	80	89.7
5-Aug	92	92	86	74	62	42	66	46	49	52	30	36	24	36	40	44	39	43	27	20	21	64	54	62	92.1
6-Aug	75	23	18	18	72	77	91	93	72	65	19	16	19	11	12	15	11	15	17	12	8	14	5	11	93.2
7-Aug	9	9	9	10	17	15	18	15	13	14	15	17	15	18	30	11	16	12	12	8	9	11	6	49	49.1
8-Aug	23	14	7	7	15	8	8	17	10	11	17	13	13	14	28	14	17	12	17	9	10	11	10	11	28.5
9-Aug	6	11	69	38	21	24	71	14	11	12	20	20	23	33	20	39	22	20	18	29	52	49	19	15	70.8
10-Aug	19	42	87	12	33	45	35	20	21	29	36	28	27	36	36	73	37	21	19	20	20	40	80	72	87.4
11-Aug	80	78	86	85	40	58	67	24	38	13	21	30	35	36	34	23	19	38	25	16	28	50	73	70	86.4
12-Aug	37	70	40	24	32	67	14	15	21	14	23	21	13	12	19	11	12	9	11	9	10	10	14	12	69.6
13-Aug	11	10	9	11	9	17	19	13	18	23	18	19	18	26	24	22	18	25	24	17	7	28	17	56	56.3
14-Aug	57	61	53	38	24	20	15	17	19	30	39	70	61	89	74	55	62	50	32	29	76	63	32	17	88.8
15-Aug	50	87	63	56	63	82	97	59	58	30	42	41	37	41	36	36	31	25	19	16	12	26	41	75	96.7
16-Aug	94	67	52	39	28	85	39	58	56	32	31	36	24	29	20	23	19	24	14	19	24	15	33	19	93.7
17-Aug	23	37	28	22	27	54	22	25	24	27	25	24	32	37	51	44	41	43	20	36	11	11	15	20	53.5
18-Aug	23	64	87	30	39	26	49	59	75	40	21	43	40	13	13	10	12	10	13	10	11	7	6	6	87.0
19-Aug	7	6	6	7	12	10	7	9	8	8	13	14	11	11	12	10	9	10	8	8	7	7	7	10	13.7
20-Aug	15	42	30	10	13	13	16	13	23	24	22	25	23	17	59	31	48	54	21	12	36	12	17	51	58.9
21-Aug	64	53	93	41	17	51	43	51	25	28	62	21	20	21	26	28	40	34	44	49	88	95	86	63	94.9
22-Aug	76	58	88	59	67	29	60	15	18	24	23	18	16	12	19	18	24	24	26	87	60	11	10	14	88.4
23-Aug	27	20	19	17	22	16	15	22	24	16	14	14	19	18	13	19	17	17	12	13	39	17	19	14	39.2
24-Aug	12	73	38	21	11	32	40	14	31	35	20	16	28	17	20	32	26	20	20	22	22	46	41	36	73.2
25-Aug	22	39	59	82	83	50	20	58	44	42	41	63	90	70	95	34	42	90	20	26	39	72	95	73	95.3
26-Aug	58	30	41	66	67	29	44	56	58	39	41	28	84	26	15	32	69	16	20	10	11	7	8	7	83.6
27-Aug	6	9	9	12	10	11	9	13	11	13	12	14	8	16	15	12	15	14	23	6	22	9	15	18	22.7
28-Aug	9	13	14	13	12	11	10	18	13	17	10	10	10	13	22	15	20	16	17	14	10	19	16	12	22.2
29-Aug	12	10	30	60	81	72	46	15	70	49	39	43	58	54	39	36	16	21	29	15	13	41	98	38	97.6
30-Aug	74	95	86	89	96	48	26	33	22	23	24	64	59	60	79	66	67	63	39	77	88	83	58	81	95.7
31-Aug	57	78	71	71	58	41	76	42	23	69	79	55	63	43	39	42	22	82	44	81	85	74	69	92	91.6
93.7	95.4	93.5	88.6	95.7	85.2	96.7	93.2	75.3	69.1	79.4	70.2	90.3	88.8	95.3	73.4	69.0	89.7	51.2	86.9	88.1	94.9	97.6	91.6		
D - DAS Failure																									

PASZA  
Smoky Heights Station  
Monthly Summary Tables, Graphs and  
Roses



# Hourly Averages

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Smoky Heights - August 2010

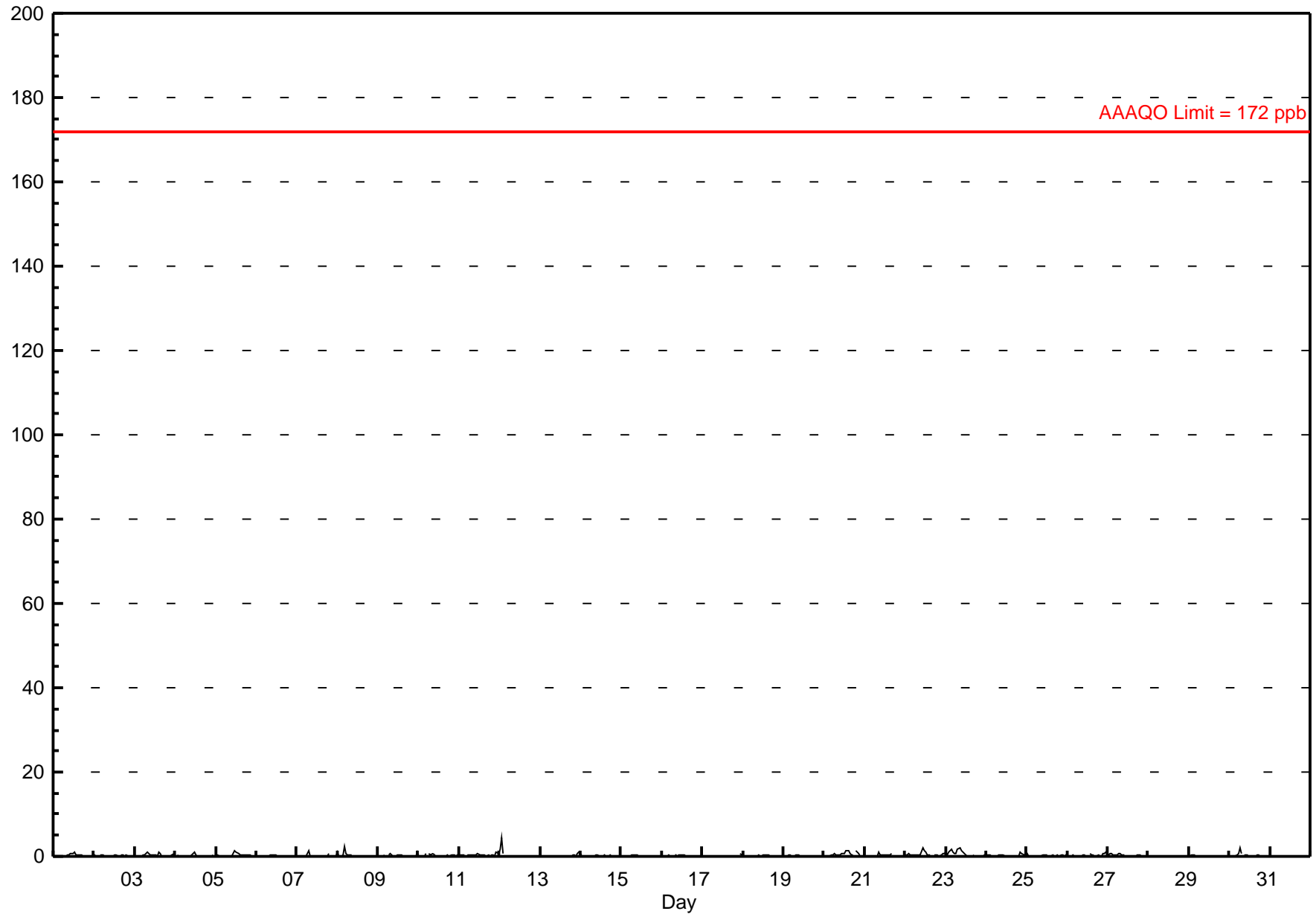
Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 4.4 ppb on Aug 12 02:00	Maximum Daily Average: 0.7 ppb on Aug 28
Minimum Value: 0 ppb on Aug 15 17:00	Hours of Data: 709
Maximum Diurnal Average: 0.3 ppb at hour 11	Hours of Missing Data: 35
Monthly Average: 0.22 ppb	Hours of Calibration: 35
Minimum Daily Average: 0.0 ppb on Aug 28	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.1 ppb at hour 19	
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> = 0.5 P <sub>99</sub> = 1.7	

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-Aug	0	0	0	A	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
2-Aug	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
3-Aug	0	A	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0.3	1.1
4-Aug	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.9
5-Aug	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0.3	1.3
6-Aug	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
7-Aug	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0.2	1.2
8-Aug	1	0	0	0	3	1	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.5
9-Aug	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	1.1
10-Aug	0	0	0	0	1	A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
11-Aug	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0.3	1.0
12-Aug	2	4	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	4.4
13-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2	1.1
14-Aug	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
15-Aug	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	0.5
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.4
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.1	0.6
18-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
19-Aug	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
20-Aug	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	1	0	0	A	1	1	0	0	0	0.4	1.5
21-Aug	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0.2	1.1
22-Aug	0	0	1	0	0	0	0	0	0	0	2	1	1	1	0	0	A	0	0	0	0	0	1	1	0.5	2.1
23-Aug	1	0	1	2	1	1	1	2	2	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0.7	2.1
24-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0.2	1.1
25-Aug	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.6
26-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	1	1	1	0.3	1.0
27-Aug	0	1	1	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
28-Aug	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
29-Aug	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
30-Aug	0	0	0	0	0	1	2	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0
31-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.3	Diurnal Average	
	1.8	4.4	1.1	1.6	2.5	0.7	2.0	1.8	2.1	1.5	2.1	1.4	1.2	1.5	1.4	0.6	0.7	0.5	0.4	1.3	1.1	0.6	1.0	1.1	Diurnal Maximum	

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

# Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Smoky Heights - August 2010



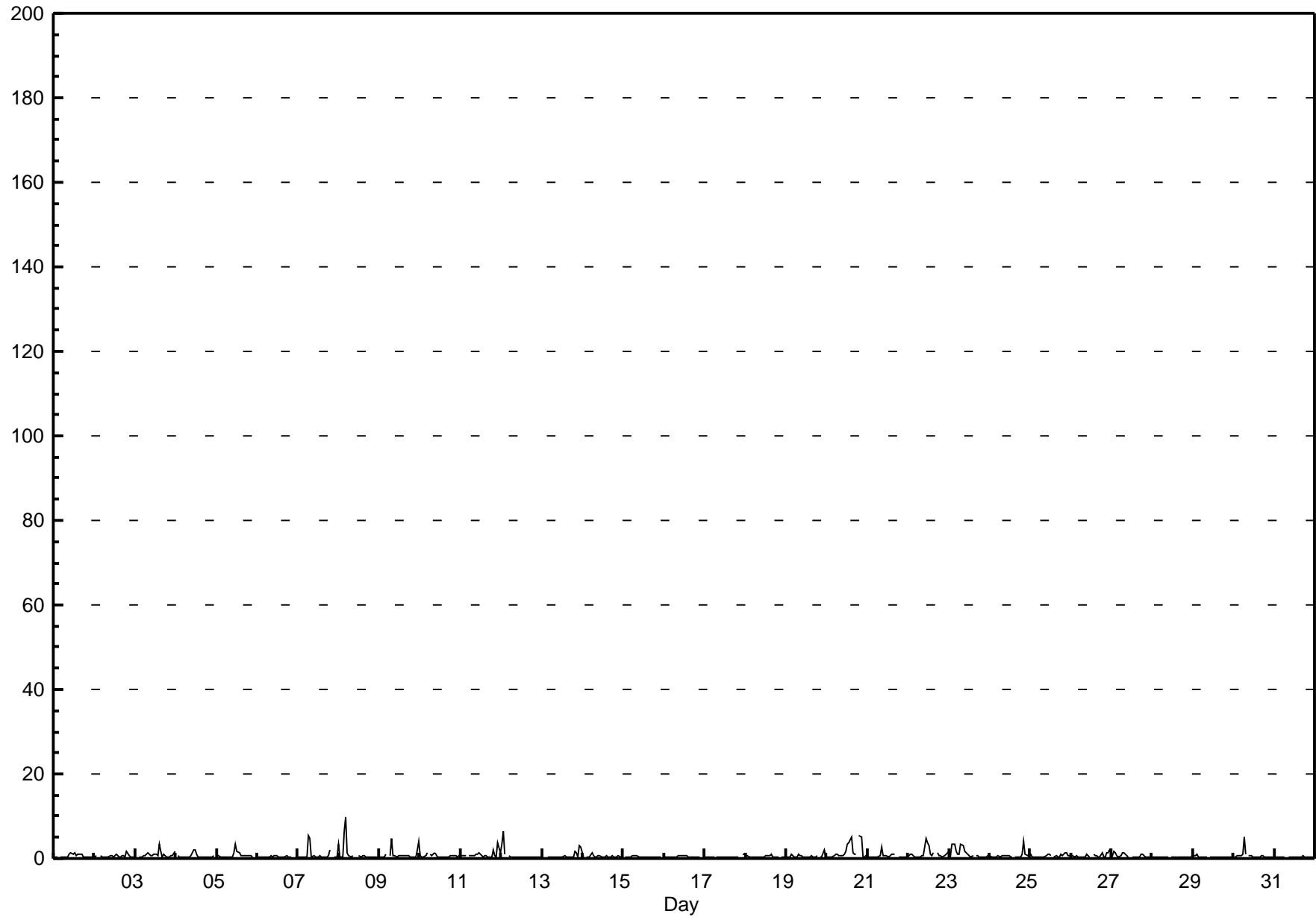
# Hourly Maximums

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Smoky Heights - August 2010

Maximum Value: 9.8 ppb on Aug 8 05:00		Maximum Daily Average: 1.6 ppb on Aug 20		Hours in Service: 744																							
Minimum Value: 0 ppb on Aug 17 07:00		Minimum Daily Average: 0.3 ppb on Aug 17		Hours of Data: 709																							
Maximum Diurnal Average: 1.0 ppb at hour 8		Minimum Diurnal Average: 0.5 ppb at hour 19		Hours of Missing Data: 35																							
Monthly Average: 0.71 ppb		Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.4 Median = 0.5 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 1.2 P <sub>99</sub> = 5.0		Hours of Calibration: 35																							
		Percent Operational Time: 100.0																									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0	0	0	A	0	0	0	1	0	1	1	1	2	1	1	1	1	0	0	0	0	0	1	0.6	1.5		
2-Aug	0	1	A	1	1	0	0	1	0	1	1	0	1	1	0	0	1	1	0	2	1	0	0	0	0.6	1.8	
3-Aug	0	A	0	0	0	1	1	2	1	1	1	1	1	1	3	2	0	1	0	0	0	1	1	2	0.9	3.5	
4-Aug	A	1	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	1	A	0.6	2.0	
5-Aug	1	1	0	0	0	0	0	0	0	1	1	3	2	1	1	1	1	1	1	1	1	0	A	0	0.8	3.3	
6-Aug	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	1	0	0	0	A	0	0	0.4	0.7	
7-Aug	0	0	0	0	0	0	5	5	0	1	0	0	0	1	0	0	0	0	1	2	A	0	0	0	0.8	5.4	
8-Aug	4	0	0	6	10	1	1	0	1	C	C	C	1	0	1	1	0	0	0	0	0	0	0	0	1.4	9.8	
9-Aug	0	0	0	0	1	A	1	5	1	1	0	1	1	1	1	1	1	1	0	0	0	0	2	4	0.9	4.7	
10-Aug	1	0	0	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0.6	1.4	
11-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	0	0	0	2	1	0	4	1	0.9	3.8	
12-Aug	3	6	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	6.4	
13-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	0	3	3	0.7	2.9	
14-Aug	1	A	0	0	0	1	1	0	0	1	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0.5	1.4	
15-Aug	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.8	
16-Aug	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0.5	0.8	
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0.3	1.0	
18-Aug	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	A	0	0	0	0.5	0.9	
19-Aug	0	0	0	1	1	0	0	1	1	1	0	0	0	0	1	0	0	1	A	0	0	0	2	0	0.6	1.9	
20-Aug	0	0	0	0	1	1	1	1	1	1	1	2	3	4	5	1	1	1	A	5	5	0	0	1	1.6	5.4	
21-Aug	0	0	0	0	0	0	0	1	3	1	1	1	0	1	1	1	1	A	0	0	0	0	1	0	0.6	2.7	
22-Aug	1	1	1	1	0	0	0	0	1	1	5	4	3	1	1	1	A	1	1	1	0	1	1	1	1.2	4.6	
23-Aug	2	1	4	3	2	1	1	4	3	2	1	1	1	0	1	A	1	1	1	0	0	0	0	1	1.3	3.5	
24-Aug	1	0	0	0	0	1	0	1	1	1	1	1	1	0	A	0	0	0	0	1	4	1	1	1	0.7	3.9	
25-Aug	1	0	0	0	0	0	0	0	0	1	1	1	1	A	0	1	0	0	1	1	1	1	1	1	0.6	1.4	
26-Aug	0	1	0	1	0	0	0	0	0	1	1	1	A	1	1	1	0	0	1	0	0	1	1	2	0.7	2.1	
27-Aug	1	2	1	1	0	1	2	1	1	1	0	A	0	0	0	0	0	1	1	1	0	0	0	0	0.7	1.7	
28-Aug	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	
29-Aug	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0	
30-Aug	0	0	1	1	1	1	5	1	A	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0.7	5.0	
31-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.4	0.7	
		0.7	0.7	0.6	0.8	0.8	0.6	0.8	1.0	0.7	0.6	0.8	0.9	0.8	0.7	0.8	0.6	0.5	0.5	0.5	0.8	0.8	0.5	0.8	0.8	Diurnal Average	
		3.5	6.4	3.5	6.3	9.8	1.5	5.4	4.7	3.0	1.8	4.6	3.7	3.2	3.6	5.1	1.7	1.1	1.3	1.5	5.4	5.0	1.5	3.8	4.1	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

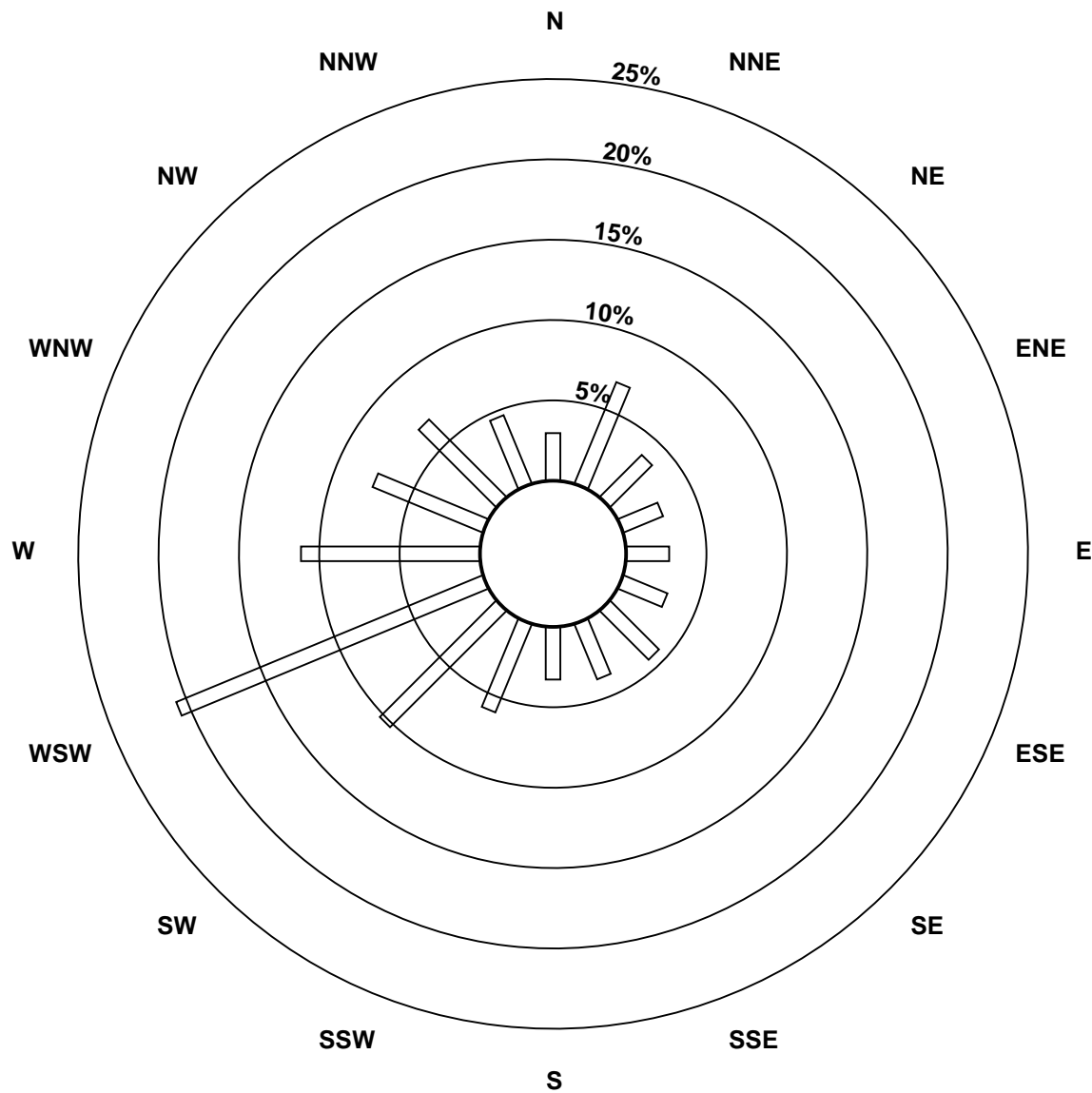
# Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Smoky Heights - August 2010

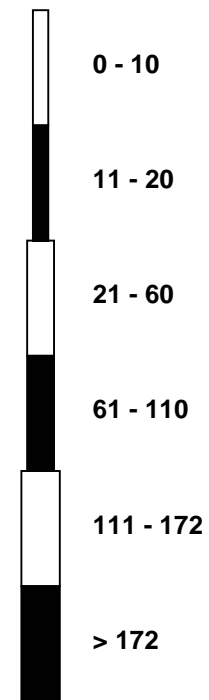


# Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Smoky Heights - August 2010



## Pollutant Classes (ppb)

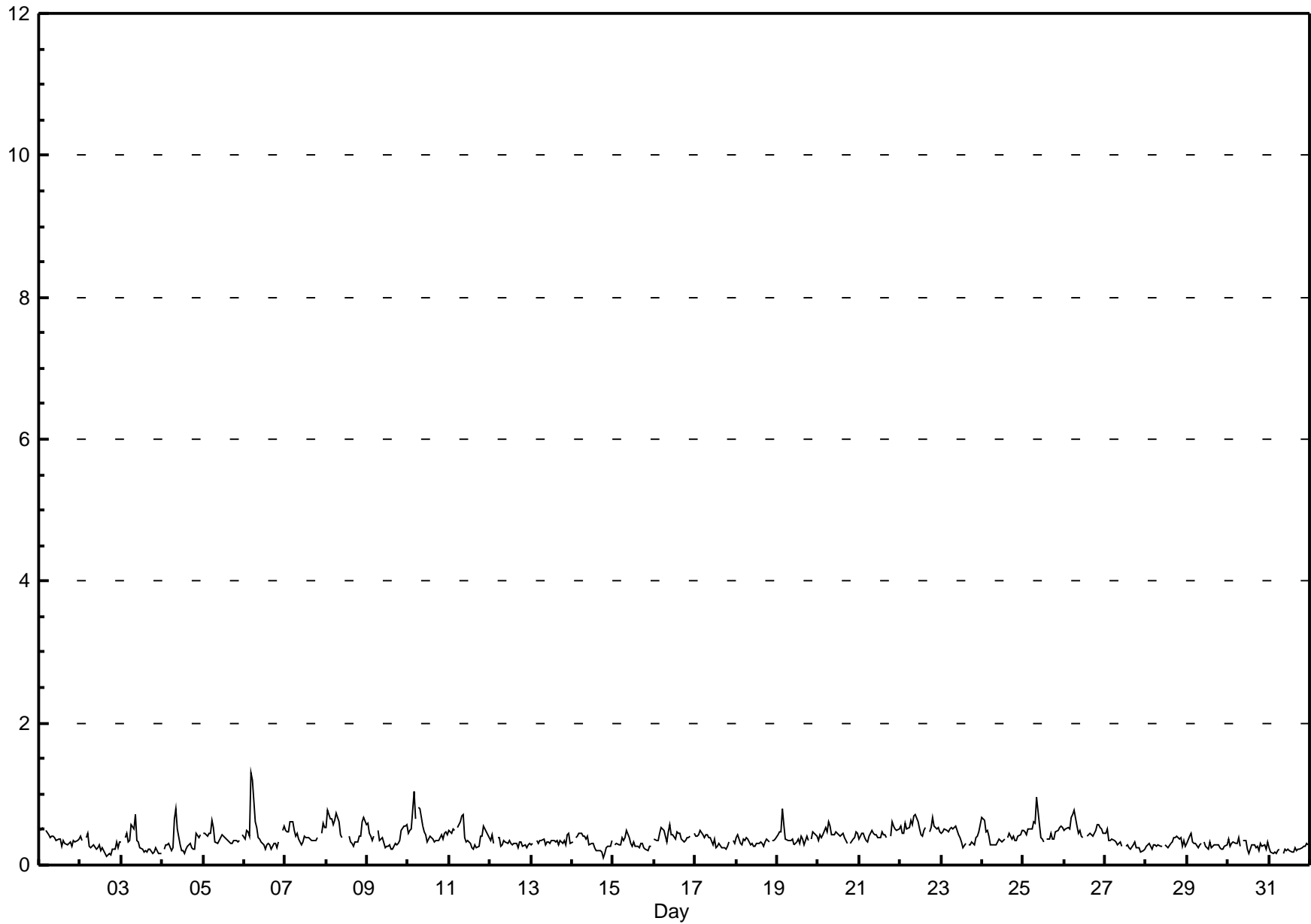


# Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.3 ppb on Aug 6 05:00 Maximum Daily Average: 0.5 ppb on Aug 22		Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0																																															
Minimum Value: 0 ppb on Aug 14 19:00 Maximum Diurnal Average: 0.5 ppb at hour 5 Monthly Average: 0.38 ppb		Minimum Daily Average: 0.2 ppb on Aug 31 Minimum Diurnal Average: 0.3 ppb at hour 17 Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.3 Median = 0.4 Q <sub>3</sub> = 0.4 P <sub>90</sub> = 0.5 P <sub>99</sub> = 0.8																																															
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Aug	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5																							
2-Aug	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-Aug	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7																							
4-Aug	A	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8																							
5-Aug	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.6																							
6-Aug	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0.4	1.3																							
7-Aug	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0.4	0.6																							
8-Aug	1	1	1	1	1	1	1	1	0	0	C	C	C	0	0	0	0	0	0	0	0	1	1	1	0.5	0.8																							
9-Aug	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.4	0.6																							
10-Aug	0	0	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.0																							
11-Aug	0	0	1	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.4	0.7																							
12-Aug	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																							
13-Aug	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																							
14-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5																							
15-Aug	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																							
16-Aug	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.6																							
17-Aug	0	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																							
18-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.4																							
19-Aug	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.8																							
20-Aug	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.6																							
21-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	0	1	0.4	0.6																							
22-Aug	1	0	0	1	1	1	1	1	1	1	1	0	0	0	1	A	0	0	1	1	1	1	1	0	0.5	0.7																							
23-Aug	0	0	1	0	0	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0.4	0.6																							
24-Aug	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.7																							
25-Aug	0	0	0	1	1	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	1	1	1	0.5	1.0																							
26-Aug	0	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	0	0.5	0.8																							
27-Aug	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5																							
28-Aug	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																							
29-Aug	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																							
30-Aug	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																							
31-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3																							
																								0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	Diurnal Average
																								0.7	0.8	0.6	1.0	1.3	1.2	0.8	0.8	1.0	0.7	0.6	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.7	0.6	0.6	0.7	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																																																	

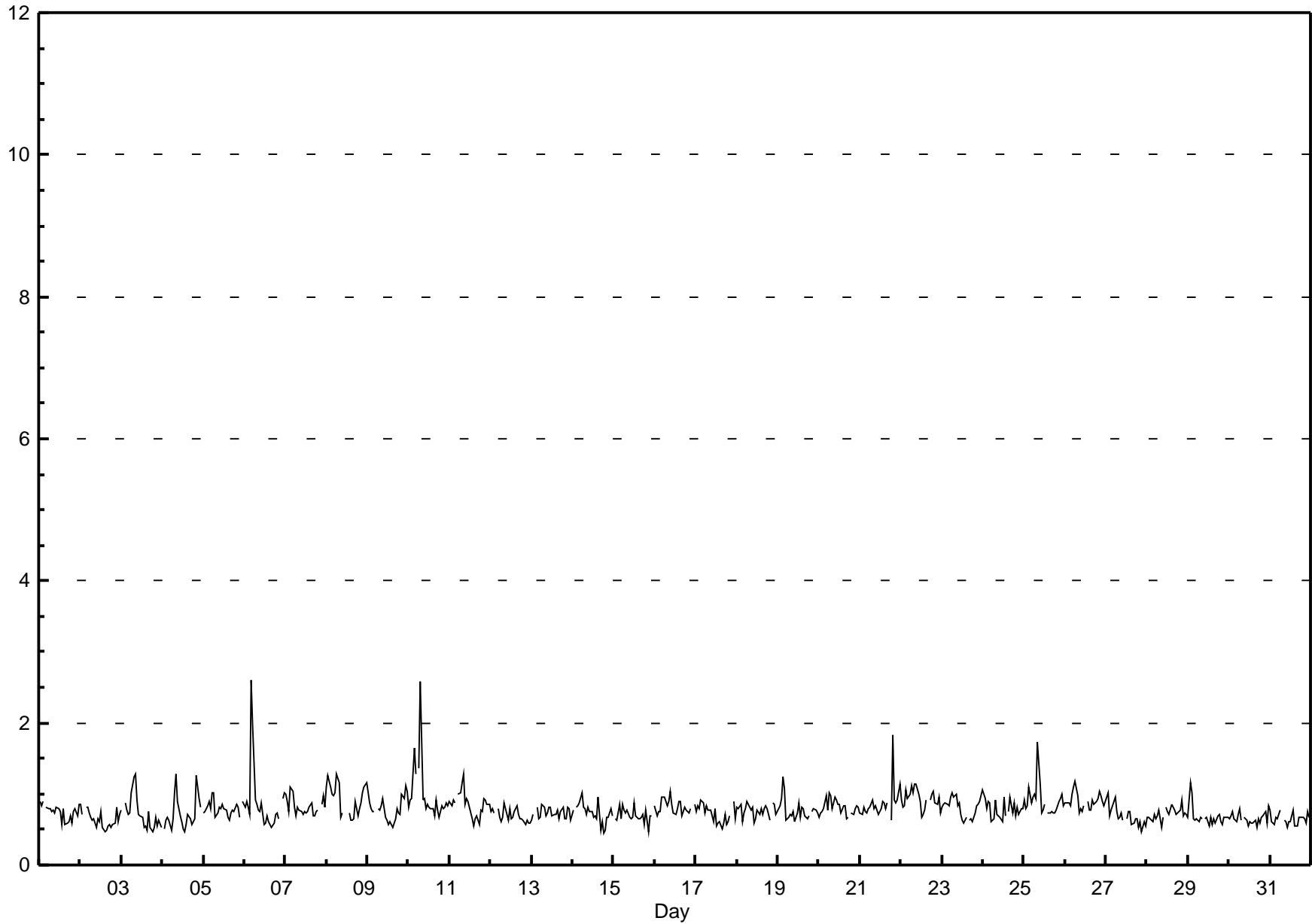


# Hourly Maximums

# Total Reduced Sulphur (TRS) - ppb Smoky Heights - August 2010

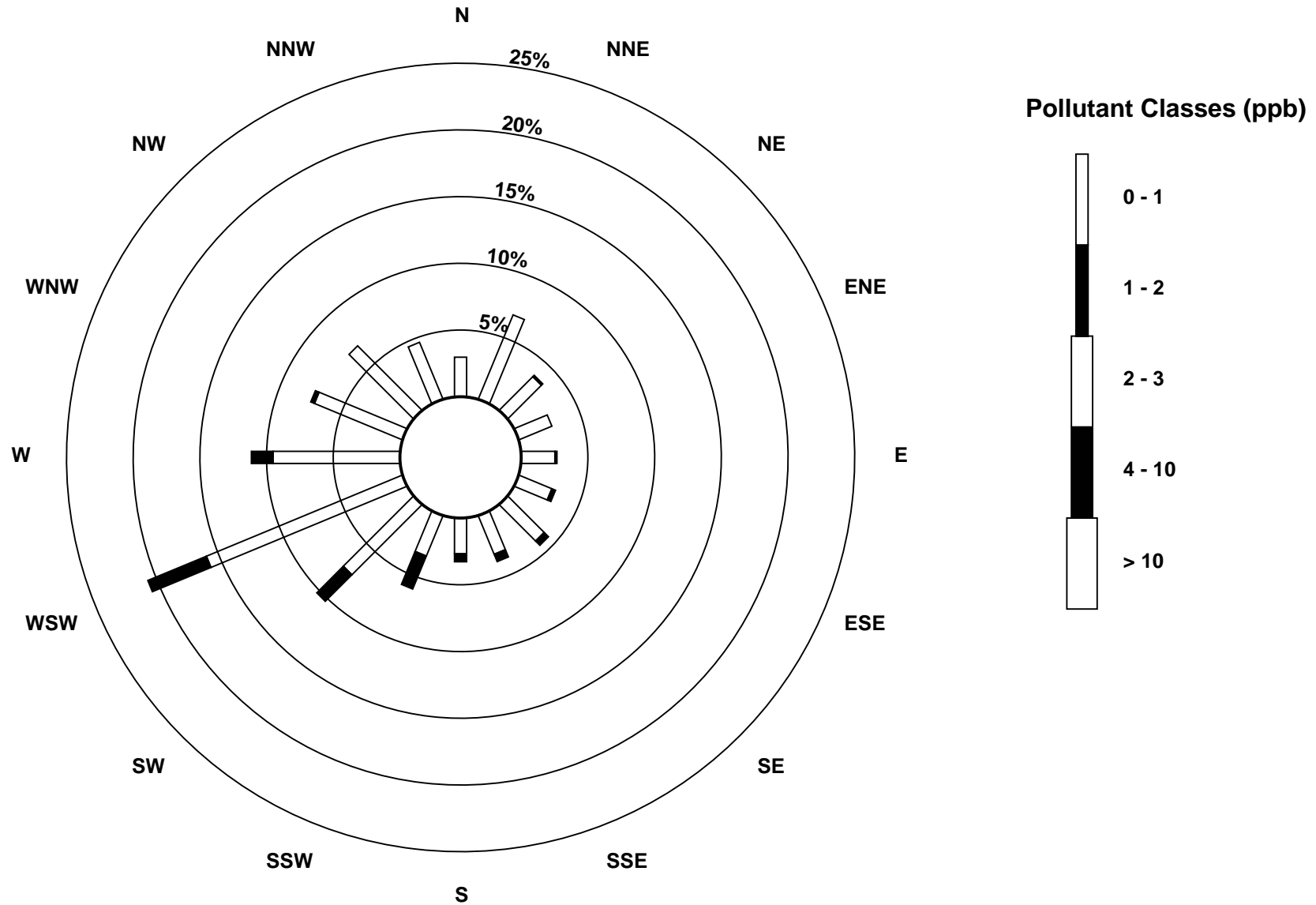
Maximum Value: 2.6 ppb on Aug 6 05:00		Maximum Daily Average: 1.0 ppb on Aug 10		Hours in Service: 744																							
Minimum Value: 0 ppb on Aug 14 19:00		Minimum Daily Average: 0.6 ppb on Aug 31		Hours of Data: 709																							
Maximum Diurnal Average: 0.9 ppb at hour 8		Minimum Diurnal Average: 0.7 ppb at hour 17		Hours of Missing Data: 35																							
Monthly Average: 0.78 ppb		Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.7 Median = 0.8 Q <sub>3</sub> = 0.9 P <sub>90</sub> = 1.0 P <sub>99</sub> = 1.2		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
2-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0.6	0.9	
3-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	0.7	1.3	
4-Aug	A	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3	
5-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.0	
6-Aug	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	2.6	
7-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.1	
8-Aug	1	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3	
9-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1	
10-Aug	1	1	1	2	1	A	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.6	
11-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3	
12-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
13-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
14-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	1	1	0.7	1.0	
15-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	0.7	0.9	
16-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.0	
17-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
18-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9	
19-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.2	
20-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.0	
21-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1	0.9	1.8	
22-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.1	
23-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.0	
24-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.1	
25-Aug	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	1.7	
26-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2	
27-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	0.7	1.0	
28-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
29-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2	
30-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8	
31-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8	
		0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	Diurnal Average	
		1.1	1.3	1.1	1.7	2.6	2.0	1.4	2.6	1.7	1.1	1.0	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	1.8	1.3	1.0	1.2	Diurnal Maximum		
C - Calibration		A - Automated Daily Zero Span																									





# Pollutant Rose

Total Reduced Sulphur (TRS) - ppb  
Smoky Heights - August 2010



# Hourly Averages

## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

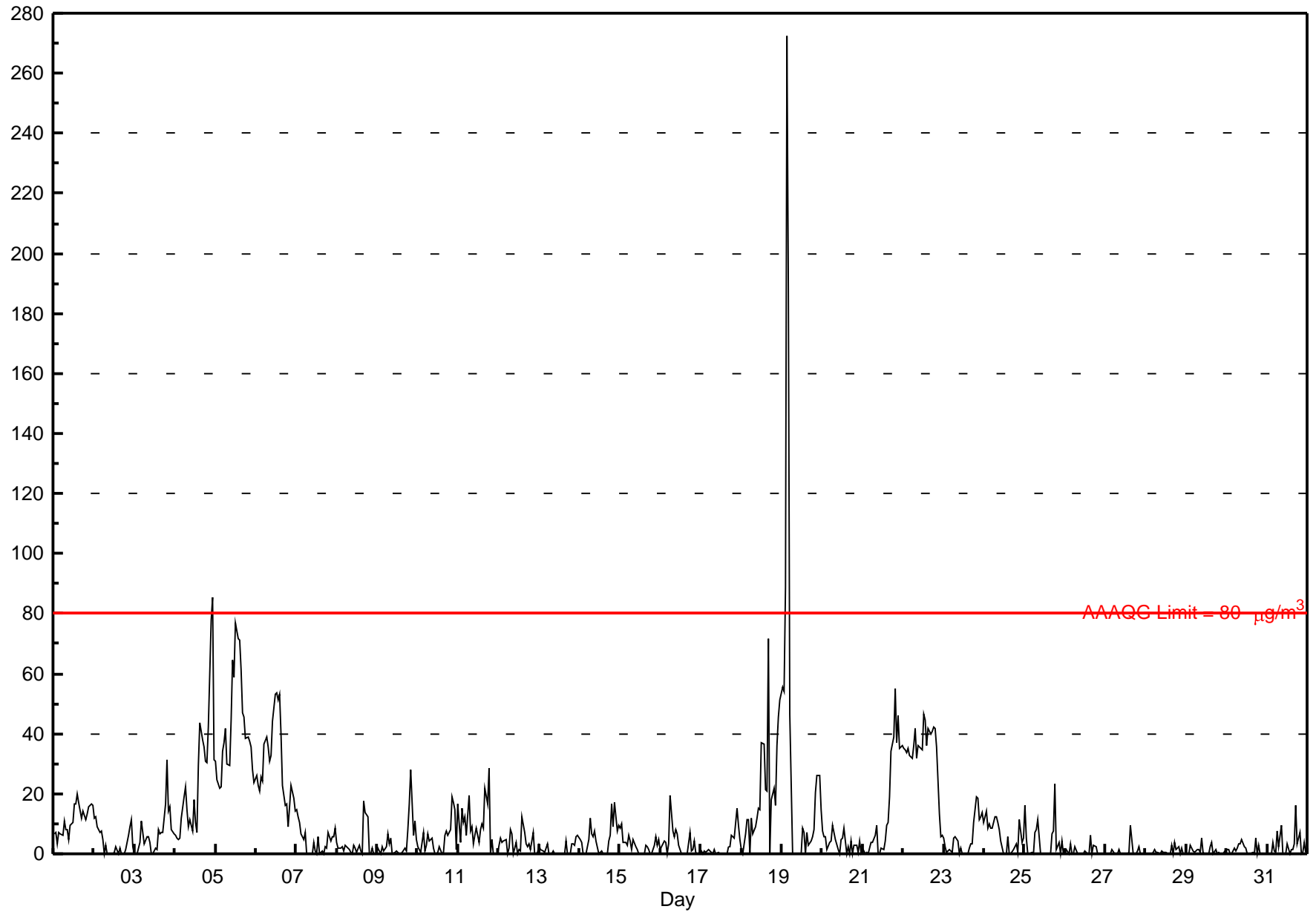
### Smoky Heights - August 2010

Number of Exceedences: 1-hr: 4 24-hr: 4	Hours in Service: 744
Maximum Value: 272.2 µg/m <sup>3</sup> on Aug 19 04:00	Maximum Daily Average: 42.3 µg/m <sup>3</sup> on Aug 5
Minimum Value: 0 µg/m <sup>3</sup> on Aug 2 07:00	Hours of Data: 744
Maximum Diurnal Average: 14.6 µg/m <sup>3</sup> at hour 4	Hours of Missing Data: 0
Monthly Average: 9.46 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 0.7 µg/m <sup>3</sup> on Aug 27	Percent Operational Time: 100.0
Minimum Diurnal Average: 6.1 µg/m <sup>3</sup> at hour 10	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 3.4 Q <sub>3</sub> = 10.2 P <sub>90</sub> = 31.3 P <sub>99</sub> = 66.8	

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-Aug	6	7	3	7	7	6	11	8	8	5	9	10	17	17	20	17	12	14	13	11	13	15	17	16	11.2	19.7
2-Aug	12	12	9	7	8	5	0	3	0	0	0	0	0	2	0	2	0	0	0	1	6	9	11	2	3.8	12.3
3-Aug	0	0	2	4	11	7	3	6	5	4	0	0	2	1	8	7	7	7	17	31	14	16	8	7	6.9	31.4
4-Aug	6	5	5	5	12	19	22	15	9	11	8	18	10	7	29	44	38	36	31	30	42	78	86	32	24.9	85.5
5-Aug	31	25	22	22	34	37	42	30	29	45	64	59	77	72	71	61	47	46	39	39	38	35	28	24	42.3	77.1
6-Aug	26	23	21	26	24	36	39	35	31	33	44	53	54	51	53	40	23	16	17	9	16	23	18	14	30.2	53.8
7-Aug	15	13	10	7	5	7	0	0	0	0	4	1	0	6	0	1	0	2	2	7	4	5	6	9	4.3	14.5
8-Aug	4	2	2	2	1	3	3	2	0	0	3	2	0	3	1	0	18	14	12	0	0	2	0	0	3.0	17.7
9-Aug	2	1	0	2	1	2	7	3	5	0	0	1	1	0	0	1	2	1	8	16	28	6	11	5	4.3	27.9
10-Aug	2	1	0	7	1	3	7	4	5	2	0	0	0	2	0	0	6	8	6	8	19	17	15	1	4.8	18.8
11-Aug	16	4	15	11	12	6	20	8	9	3	6	9	4	8	10	8	22	17	29	0	5	0	0	0	9.2	28.6
12-Aug	3	5	4	4	5	0	2	8	7	0	4	0	1	1	12	7	4	2	3	1	7	0	0	0	3.4	12.4
13-Aug	3	2	1	1	2	4	0	0	1	0	0	0	0	0	0	0	4	0	0	3	3	3	6	6	1.6	6.0
14-Aug	5	4	0	0	0	5	12	7	6	7	4	0	1	1	0	0	0	4	6	17	9	17	8	9	5.0	17.2
15-Aug	9	10	4	4	3	6	4	1	5	2	2	0	0	0	0	3	3	1	0	0	3	6	3	5	3.0	10.1
16-Aug	2	3	4	4	0	3	20	8	6	8	6	3	0	0	0	0	0	7	1	1	4	1	0	1	3.4	19.6
17-Aug	1	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	2	3	6	6	5	15	9	5	2.5	15.3
18-Aug	1	0	7	11	11	0	12	7	9	12	15	15	37	36	21	21	72	0	18	22	16	36	46	51	19.9	71.6
19-Aug	55	54	89	272	188	47	0	0	0	0	0	9	7	0	7	3	4	6	8	20	26	26	15	15	34.8	272.2
20-Aug	8	6	6	1	4	4	10	7	5	2	0	5	5	9	0	2	0	4	0	3	3	0	4	1	3.6	9.6
21-Aug	2	0	0	0	2	4	4	6	9	0	0	2	1	4	9	10	19	34	39	55	37	46	35	36	14.8	54.9
22-Aug	35	35	34	35	33	32	36	42	32	36	35	34	46	45	36	42	40	41	42	42	36	13	6	6	33.9	46.3
23-Aug	5	2	1	2	1	1	5	6	4	0	2	0	0	0	0	2	3	3	10	19	18	11	13	14	5.1	19.0
24-Aug	10	14	9	10	8	8	13	12	11	8	4	0	0	0	6	0	0	2	2	3	1	11	4	5	5.9	14.4
25-Aug	16	5	0	0	1	0	7	8	11	0	0	0	0	0	0	0	7	8	23	1	4	0	4	0	4.0	23.1
26-Aug	0	1	0	3	0	0	3	0	0	0	0	0	1	0	0	6	0	3	3	0	0	0	0	0	0.8	6.4
27-Aug	0	0	0	0	2	0	0	0	1	0	0	0	0	0	1	9	0	0	0	1	2	0	0	0	0.7	9.4
28-Aug	0	0	0	0	0	1	1	1	0	1	0	1	0	0	3	0	4	2	2	0	2	0	0	0	0.7	3.7
29-Aug	0	0	3	2	1	0	1	2	0	5	1	0	0	0	2	4	0	1	0	0	0	0	0	2	1.0	5.0
30-Aug	1	1	0	0	2	1	2	3	3	5	3	2	0	0	0	1	0	5	0	3	0	0	0	0	1.3	5.0
31-Aug	0	0	0	4	1	0	8	2	9	0	0	0	3	0	1	1	3	16	3	7	0	1	4	1	2.7	16.0

8.9	7.6	8.1	14.6	12.3	8.0	9.4	7.5	7.2	6.1	6.9	6.9	8.8	8.8	9.1	9.6	10.8	9.8	10.9	11.3	11.4	12.8	11.8	8.6	Diurnal Average
55.3	54.2	88.7	272.2	188.2	46.7	41.5	41.8	31.9	44.6	64.4	59.0	77.1	71.8	71.0	61.2	71.6	45.6	42.4	54.9	42.5	78.0	85.5	51.2	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>

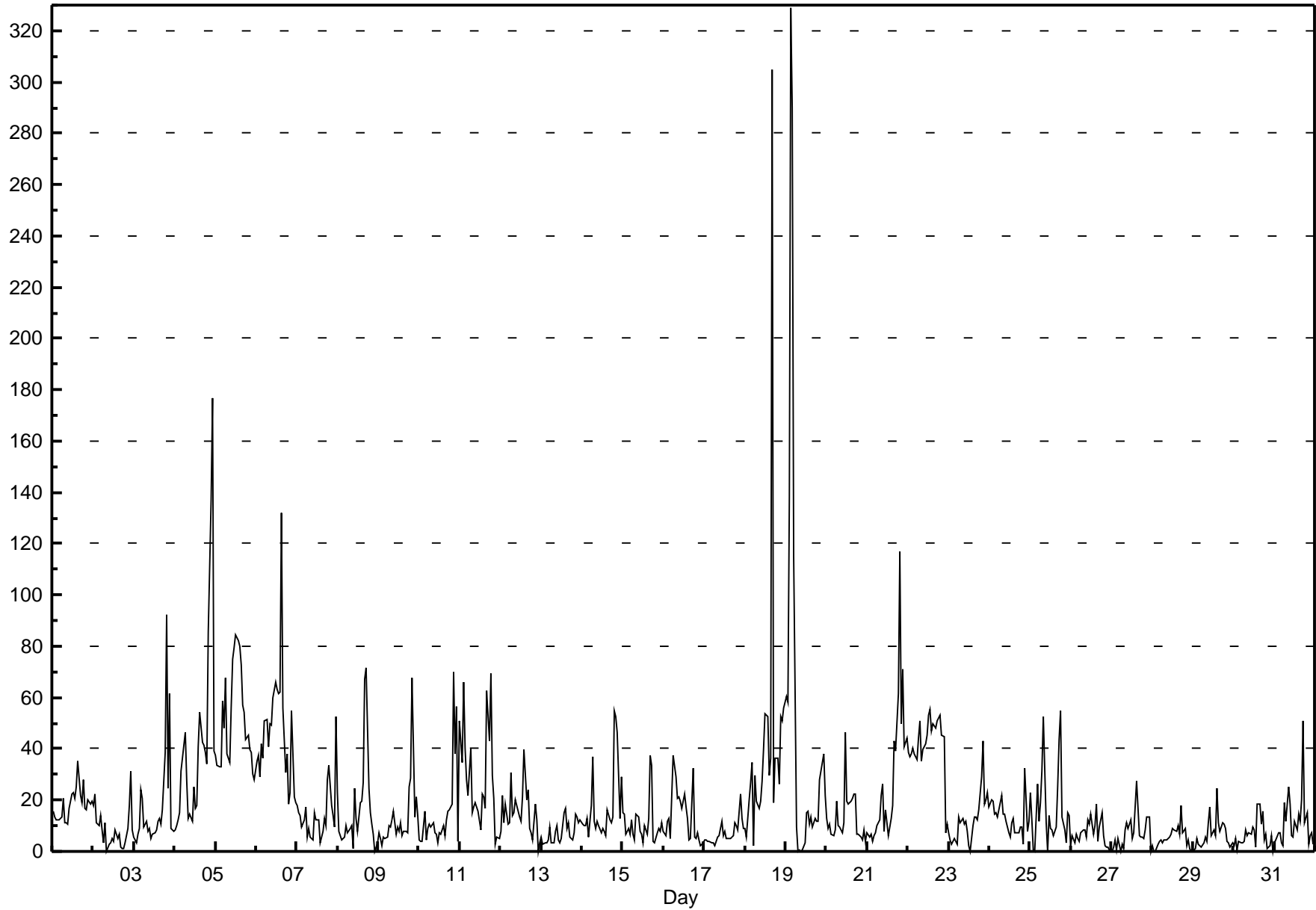


# Hourly Maximums

# Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

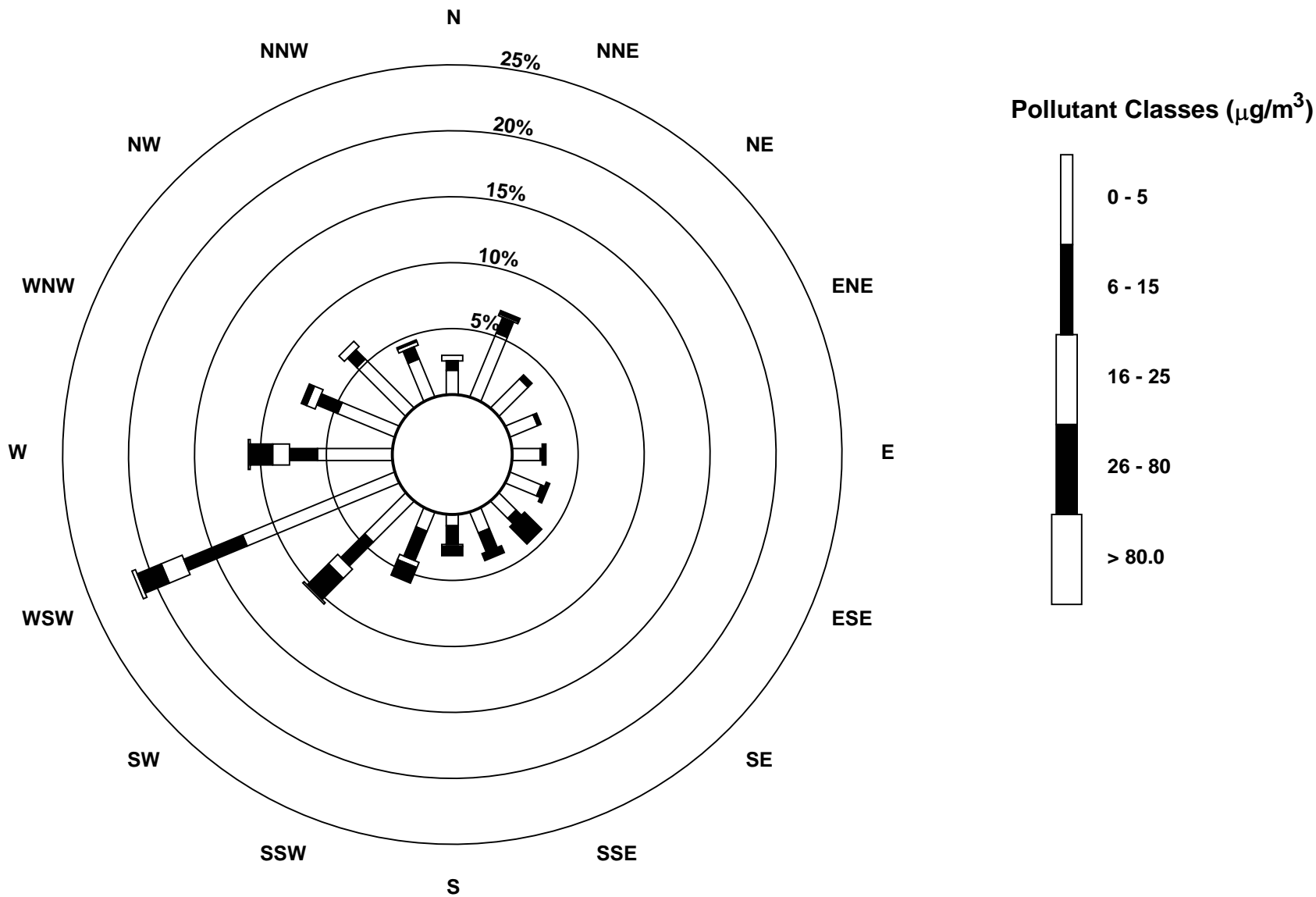
## Smoky Heights - August 2010

Maximum Value: 329.0 µg/m <sup>3</sup> on Aug 19 04:00		Maximum Daily Average: 52.1 µg/m <sup>3</sup> on Aug 5		Hours in Service: 744																																													
Minimum Value: 0 µg/m <sup>3</sup> on Aug 2 09:00		Minimum Daily Average: 5.3 µg/m <sup>3</sup> on Aug 28		Hours of Data: 744																																													
Maximum Diurnal Average: 31.5 µg/m <sup>3</sup> at hour 17		Minimum Diurnal Average: 13.4 µg/m <sup>3</sup> at hour 2		Hours of Missing Data: 0																																													
Monthly Average: 19.53 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 3.3 Q <sub>1</sub> = 6.2 Median = 11.4 Q <sub>3</sub> = 22.2 P <sub>90</sub> = 44.7 P <sub>99</sub> = 127.1		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-Aug	16	13	12	13	12	14	21	11	11	11	17	22	23	21	25	35	22	19	28	17	16	20	18	20	18.2	35.1																							
2-Aug	18	22	11	10	14	8	3	11	0	3	3	5	4	9	5	6	2	1	1	3	9	18	31	9	8.6	31.3																							
3-Aug	6	3	7	9	24	20	10	12	8	9	5	7	7	8	12	13	10	16	38	92	25	62	9	8	17.5	92.2																							
4-Aug	8	10	12	15	31	41	47	28	13	15	12	25	17	18	41	54	42	41	39	34	86	137	177	39	40.9	176.8																							
5-Aug	37	33	33	33	59	48	68	38	35	56	75	79	84	82	80	72	57	54	44	45	40	39	30	28	52.1	84.4																							
6-Aug	35	37	29	42	36	51	51	41	50	49	60	66	63	61	62	132	56	31	38	18	23	55	21	19	47.0	132.0																							
7-Aug	18	15	14	10	12	18	5	9	6	4	15	12	12	13	3	8	13	10	28	33	18	14	9	53	14.7	52.8																							
8-Aug	23	8	5	5	6	10	7	9	10	1	25	13	8	19	20	27	67	72	24	15	10	6	0	3	16.4	71.8																							
9-Aug	7	5	2	6	5	5	10	10	12	16	7	9	8	11	6	8	8	7	25	29	68	13	21	14	13.0	67.6																							
10-Aug	5	4	4	15	4	9	10	10	11	7	7	3	7	7	10	6	12	16	16	18	70	38	57	4	14.6	70.0																							
11-Aug	51	35	66	40	28	22	40	15	18	19	17	16	8	23	21	17	62	43	70	30	21	3	6	5	28.1	69.5																							
12-Aug	8	22	11	18	11	11	31	14	15	20	15	13	12	21	40	20	24	9	7	5	18	12	0	3	15.1	39.8																							
13-Aug	6	3	3	3	5	9	3	3	8	10	4	4	5	15	17	9	11	6	5	7	15	13	11	12	7.8	16.6																							
14-Aug	11	10	10	13	6	18	37	12	9	12	10	7	9	8	6	16	12	11	14	55	53	46	13	29	17.7	55.0																							
15-Aug	15	15	7	9	7	13	7	4	15	13	8	7	4	10	7	13	37	33	4	3	7	9	8	11	11.0	37.4																							
16-Aug	8	6	12	13	5	21	37	29	21	21	20	17	22	17	13	4	5	33	5	5	7	4	3	3	13.8	37.3																							
17-Aug	5	4	4	4	3	3	2	4	6	6	12	6	8	5	5	5	6	6	11	10	9	22	13	9	7.0	22.4																							
18-Aug	9	6	20	27	35	2	30	19	17	19	27	40	54	53	30	36	305	19	36	36	26	53	51	56	41.9	305.1																							
19-Aug	60	58	138	329	290	115	10	0	0	0	1	3	15	16	11	14	10	13	12	12	28	31	38	22	51.1	329.0																							
20-Aug	13	9	11	7	6	8	20	10	10	7	11	47	19	18	20	20	22	22	7	7	6	4	8	4	13.2	46.5																							
21-Aug	7	5	7	4	6	8	10	12	22	26	8	16	6	10	13	18	43	39	62	117	50	71	41	44	26.8	116.6																							
22-Aug	39	37	38	40	38	36	44	51	35	39	42	45	53	55	47	50	48	51	52	53	45	45	8	10	41.8	55.3																							
23-Aug	7	4	3	5	4	3	14	11	13	11	12	8	2	0	10	14	14	12	16	29	43	18	20	23	12.3	43.2																							
24-Aug	17	20	20	14	15	14	19	22	15	15	12	7	6	11	13	7	7	7	9	9	3	32	8	12	13.1	32.3																							
25-Aug	23	13	0	0	26	12	19	31	53	11	0	14	9	9	6	9	25	44	55	13	8	4	15	14	17.2	54.7																							
26-Aug	2	6	3	7	5	4	7	8	8	6	12	11	15	7	10	18	4	10	15	6	2	2	2	0	7.1	18.4																							
27-Aug	0	2	5	1	5	0	3	1	8	11	9	12	5	7	17	28	6	5	6	5	9	13	14	0	7.2	27.6																							
28-Aug	2	0	0	3	4	4	3	4	5	5	6	9	9	8	10	7	18	7	9	2	5	1	0	0	5.3	17.8																							
29-Aug	0	1	5	3	2	2	3	6	4	11	17	6	8	6	25	11	8	11	11	9	4	3	2	3	6.8	24.8																							
30-Aug	2	5	1	4	3	3	4	8	6	7	7	10	8	2	18	19	11	16	5	7	1	2	6	0	6.5	18.5																							
31-Aug	4	5	8	7	4	2	19	12	25	18	6	6	12	8	14	12	20	51	11	15	3	6	7	3	11.6	50.7																							
																								14.9	13.4	16.1	22.8	22.9	17.3	19.2	14.7	15.1	14.8	15.5	17.5	16.9	18.0	19.9	23.0	31.5	23.4	22.6	24.1	23.4	25.9	20.9	14.8	Diurnal Average	
																								60.2	58.0	138.1	329.0	289.7	115.4	67.7	51.1	52.7	56.5	74.8	79.4	84.4	82.1	80.1	132.0	305.1	71.8	69.5	116.6	85.7	137.1	176.8	55.9	Diurnal Maximum	



### Pollutant Rose

Particulate Matter 2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Smoky Heights - August 2010





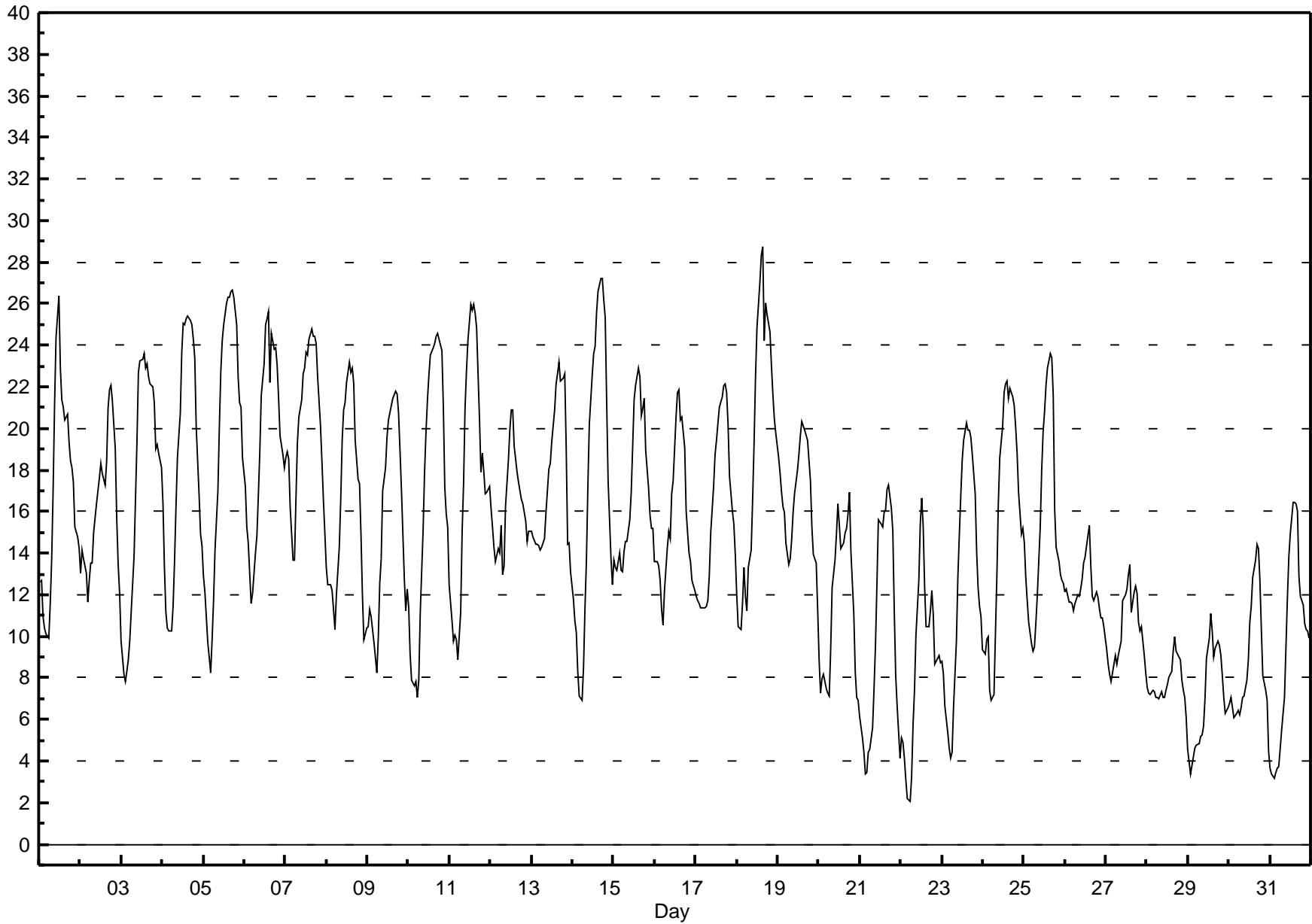
# Hourly Averages

External Temperature (ET) - °C

Smoky Heights - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.8 °C on Aug 18 16:00 Maximum Daily Average: 20.2 °C on Aug 7																	Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0									
Minimum Value: 2 °C on Aug 22 06:00 Minimum Daily Average: 7.0 °C on Aug 29 Maximum Diurnal Average: 20.1 °C at hour 15 Minimum Diurnal Average: 9.2 °C at hour 6 Monthly Average: 14.83 °C Percentiles: P <sub>1</sub> = 3.4 P <sub>10</sub> = 7.2 Q <sub>1</sub> = 10.4 Median = 14.3 Q <sub>3</sub> = 19.4 P <sub>90</sub> = 22.8 P <sub>99</sub> = 26.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	13	13	11	10	10	10	12	14	17	21	24	26	23	21	21	20	21	19	18	18	17	15	15	14	16.9	26.4
2-Aug	13	14	14	13	12	13	14	14	15	16	17	18	18	18	17	18	21	22	22	21	19	16	13	12	16.2	22.1
3-Aug	10	8	8	8	9	10	11	14	17	19	23	23	23	24	23	23	22	22	22	21	19	19	19	18	17.3	23.6
4-Aug	16	13	11	10	10	10	11	14	16	19	21	24	25	25	25	25	25	25	24	23	20	17	15	14	18.4	25.4
5-Aug	13	12	10	9	8	10	12	14	17	20	23	24	25	26	26	26	27	27	26	25	22	21	21	19	19.3	26.7
6-Aug	17	15	15	13	12	12	14	15	17	19	22	23	25	25	26	22	25	24	24	23	21	20	19	18	19.3	25.6
7-Aug	19	19	19	16	14	14	17	19	21	21	23	23	24	24	24	25	24	24	24	22	20	18	17	15	20.2	24.8
8-Aug	13	12	12	12	11	10	12	14	17	19	21	21	22	23	23	23	22	19	18	17	15	12	10	10	16.3	23.2
9-Aug	10	11	11	10	10	8	10	13	14	17	18	20	20	21	21	21	22	22	21	19	17	13	11	12	15.5	21.8
10-Aug	11	9	8	8	8	7	8	11	15	18	20	21	23	24	24	24	24	25	24	24	21	17	16	15	16.9	24.6
11-Aug	13	11	10	10	10	9	11	15	17	21	23	24	26	26	26	26	25	20	18	19	18	17	17	17	17.8	26.0
12-Aug	16	15	14	14	14	14	15	13	13	16	18	20	21	21	19	18	17	17	17	16	16	15	15	15	16.3	20.9
13-Aug	15	15	14	14	14	14	14	15	16	17	18	18	19	21	22	23	23	22	22	23	19	14	14	13	17.6	23.2
14-Aug	12	11	10	8	7	7	9	11	14	17	20	23	24	24	26	27	27	27	26	25	21	17	14	13	17.5	27.2
15-Aug	14	13	13	14	13	13	14	15	15	16	17	19	21	22	23	22	21	21	21	19	17	16	15	15	17.1	22.9
16-Aug	14	14	13	13	11	11	12	14	15	15	17	18	21	22	22	20	21	19	16	15	14	14	13	12	15.6	21.8
17-Aug	12	12	12	11	11	11	11	12	13	15	17	19	19	20	21	22	22	22	22	20	18	16	15	14	16.2	22.1
18-Aug	12	10	10	12	13	12	11	13	14	17	19	22	25	27	28	29	24	26	25	25	23	22	20	20	19.2	28.8
19-Aug	19	18	17	16	16	14	13	14	15	16	17	18	19	20	20	20	20	19	18	18	15	14	14	11	16.7	20.4
20-Aug	9	7	8	8	7	7	7	9	12	14	15	16	15	14	15	15	15	16	17	14	11	8	7	7	11.5	17.0
21-Aug	6	5	4	3	3	4	5	6	7	10	12	16	15	15	16	16	17	17	16	15	11	8	7	4	10.0	17.3
22-Aug	5	5	4	3	2	2	3	6	7	10	13	15	17	15	12	10	10	11	12	11	9	9	9	9	8.8	16.6
23-Aug	9	8	7	5	5	4	4	7	10	13	15	17	18	19	20	20	20	20	19	17	14	12	11	11	12.7	20.3
24-Aug	9	9	10	10	7	7	7	10	13	16	19	20	22	22	22	21	22	22	21	20	19	17	15	15	15.7	22.3
25-Aug	14	13	12	11	10	9	9	11	12	15	18	20	21	22	23	24	23	22	16	14	14	13	13	13	15.4	23.6
26-Aug	12	12	12	12	12	11	12	12	12	12	13	14	14	15	15	13	12	12	12	12	11	11	11	10	12.2	15.4
27-Aug	9	9	8	8	8	9	9	9	9	10	12	12	12	13	13	11	12	12	12	11	10	10	9	8	10.3	13.5
28-Aug	8	7	7	7	7	7	7	7	7	7	7	7	8	8	8	9	10	9	9	9	8	7	7	6	7.7	10.0
29-Aug	5	3	4	4	5	5	5	5	5	6	7	9	10	11	10	9	9	10	10	9	8	7	6	7	7.0	11.1
30-Aug	7	7	7	6	6	6	6	7	7	7	8	9	11	11	13	14	14	14	13	10	8	7	7	5	8.8	14.4
31-Aug	4	3	3	3	4	4	5	5	7	9	12	14	15	16	16	16	16	13	12	11	11	10	10	10	9.6	16.5
																								Diurnal Average		
																								Diurnal Maximum		







# Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Smoky Heights - August 2010

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	5	6	8	9	11	11	10	13	14	19	28	21	16	16	15	15	17	14	11	10	11	9	7.9	27.5
Dir	246	234	234	229	215	219	206	190	178	217	235	298	322	347	355	332	332	317	296	302	299	266	259	255	284.1	322.4
2 Spd	9	16	15	14	10	13	16	12	14	17	17	20	18	14	9	7	3	6	13	10	5	5	2	4	9.1	19.7
Dir	240	297	293	277	276	294	310	308	325	319	323	321	329	347	16	62	24	298	318	319	25	84	206	261	314.6	321.2
3 Spd	5	2	5	2	2	1	4	5	7	7	4	7	8	8	9	5	6	3	5	9	8	8	8	8	3.2	9.0
Dir	269	275	264	331	226	237	175	195	162	156	287	329	330	314	341	334	45	350	282	275	284	307	318	331	300.8	341.0
4 Spd	8	3	2	1	2	3	3	3	3	5	5	8	8	7	7	6	8	6	7	8	7	9	9	7	0.7	9.3
Dir	318	307	289	204	262	220	213	162	159	125	126	4	17	358	21	31	126	139	161	188	231	273	277	291	274.5	277.0
5 Spd	4	3	3	2	3	3	5	6	6	9	13	15	15	16	16	18	13	14	11	9	9	11	12	7	7.9	17.9
Dir	209	270	14	10	234	216	231	196	168	143	138	125	136	122	152	145	133	122	124	125	129	144	164	187	144.2	144.6
6 Spd	5	7	5	7	7	9	11	12	13	15	16	23	23	25	28	15	28	24	19	21	16	13	14	14	14.6	28.0
Dir	252	226	232	191	210	190	211	216	215	197	215	233	231	238	239	277	262	243	235	231	229	223	241	237	231.9	239.2
7 Spd	17	20	19	14	6	14	15	23	29	35	35	30	29	29	29	29	25	27	28	28	22	24	20	13	23.1	35.2
Dir	239	242	240	234	262	222	242	252	247	250	252	239	244	247	245	245	244	240	243	254	253	244	235	242	244.5	251.9
8 Spd	13	13	17	14	13	7	9	15	21	26	25	26	28	24	26	24	23	8	11	9	3	N	N	N	16.0	27.6
Dir	235	239	237	243	241	225	217	246	244	252	251	249	249	245	233	246	239	257	328	306	208	N	N	N	246.1	249.4
9 Spd	N	N	N	N	N	N	N	N	11	20	21	16	19	15	18	18	15	20	17	7	2	6	9	13	--	21.4
Dir	N	N	N	N	N	N	N	N	174	231	242	242	254	261	260	266	258	262	268	266	244	236	260	276	--	241.7
10 Spd	13	7	6	7	5	8	8	9	11	11	13	15	18	17	15	15	12	11	9	10	8	6	7	11	9.1	17.5
Dir	276	263	240	253	237	234	208	223	219	213	215	204	219	232	213	236	237	260	302	303	294	277	279	277	241.6	218.9
11 Spd	11	7	7	6	7	7	8	9	10	15	16	17	17	18	16	15	19	27	N	N	N	N	N	N	11.4	26.5
Dir	267	260	213	218	244	207	209	210	212	227	231	235	242	251	264	239	285	294	N	N	N	N	N	N	246.5	294.0
12 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	34	35	32	N	N	29	25	24	N	N	N	--	35.2
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	309	304	317	N	N	314	312	321	N	N	N	--	303.8
13 Spd	N	N	N	N	14	16	14	14	15	16	17	13	15	12	16	17	16	15	11	8	6	5	5	5	11.9	17.0
Dir	N	N	N	N	306	315	319	341	338	326	314	323	325	314	303	300	301	319	332	337	319	345	7	18	321.0	299.8
14 Spd	4	4	5	4	2	4	6	7	8	8	8	7	6	9	1	3	6	5	9	6	4	5	4	3	0.4	9.3
Dir	10	12	358	321	323	248	184	170	176	166	158	144	152	103	347	295	343	350	289	301	25	316	296	346	255.2	289.4
15 Spd	7	7	7	6	6	6	7	9	7	7	9	10	8	10	11	11	13	12	11	7	6	2	2	2	7.2	13.2
Dir	11	27	31	21	38	6	22	28	37	27	45	74	84	56	57	62	60	77	87	83	85	42	331	339	51.6	77.0
16 Spd	2	3	2	4	3	6	5	4	1	5	3	3	9	12	19	19	16	17	16	12	11	12	8	5	5.8	18.9
Dir	242	333	173	204	278	238	236	250	229	112	60	108	30	37	32	44	39	32	28	25	22	25	27	23	30.6	32.3
17 Spd	8	7	9	6	5	5	8	9	7	7	8	8	8	7	6	7	10	10	12	11	8	10	10	7	5.4	12.2
Dir	17	43	33	45	43	36	55	54	48	26	38	65	93	95	82	115	115	122	148	151	157	158	156	137	90.9	147.8
18 Spd	5	2	5	0	6	2	6	10	11	13	10	11	20	21	19	18	15	23	15	24	32	26	27	25	12.0	31.9
Dir	78	47	17	286	138	332	246	199	188	185	162	206	241	255	256	250	262	267	247	239	239	232	235	233	236.1	238.7
19 Spd	22	24	21	17	27	38	31	30	39	37	34	34	33	32	36	39	39	37	33	27	22	21	18	11	29.0	39.0
Dir	233	244	237	230	255	262	254	255	256	256	257	258	258	251	258	255	255	255	255	250	240	242	263	277	253.2	255.0
20 Spd	9	11	9	11	8	5	5	7	7	7	4	11	11	13	13	12	9	6	4	11	6	3	2	4	4.4	13.4
Dir	277	264	263	240	243	216	208	205	293	300	271	266	15	348	350	339	24	39	19	343	15	45	302	6	309.2	347.7
21 Spd	5	5	5	3	6	3	3	2	4	6	3	4	6	7	7	7	6	5	9	6	5	6	6	1	0.4	8.6
Dir	19	15	15	26	27	359	316	22	44	69	111	130	122	155	159	168	242	237	226	203	237	275	288	89	193.1	225.7
22 Spd	6	9	3	1	1	5	2	4	6	7	6	6	12	21	22	17	12	9	10	8	8	11	13	17	6.8	21.9
Dir	272	274	228	135	251	242	272	227	177	206	245	89	335	295	279	259	249	209	197	179	214	244	250	253	251.0	279.4

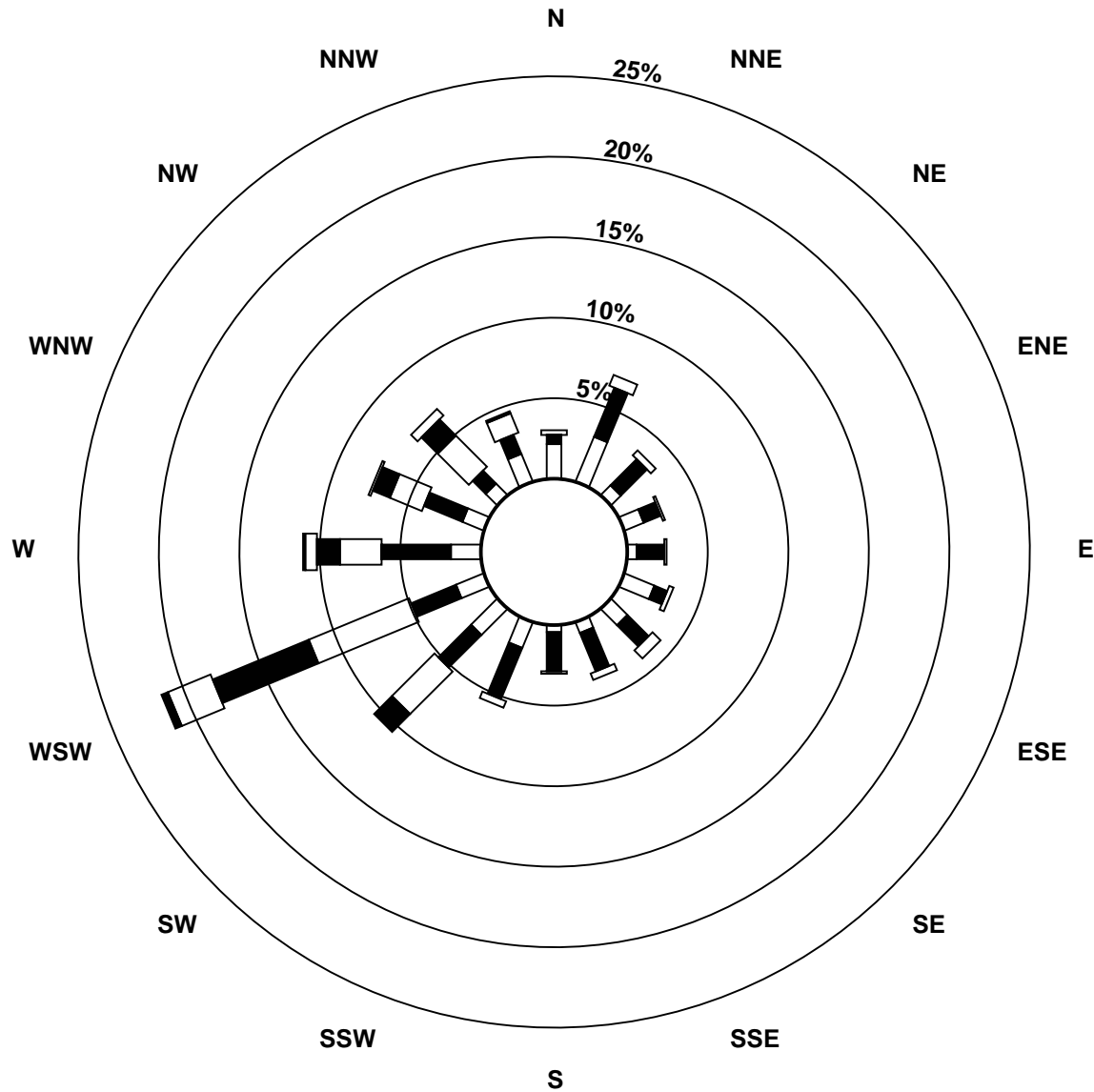
# Hourly Averages

**Wind Speed (km/h)**  
**Wind Direction (deg)**  
**Smoky Heights - August 2010**

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	17	17	13	12	15	14	14	14	12	12	14	16	21	23	24	24	25	22	23	20	15	11	7	4	15.9	25.0
Dir	250	244	256	255	264	262	258	258	237	239	230	226	246	255	244	253	252	245	252	264	265	251	249	212	250.1	252.3
24 Spd	3	5	8	5	9	7	7	7	7	9	20	22	27	33	28	26	22	20	17	14	11	7	9	13	13.0	33.0
Dir	259	229	204	230	192	211	183	176	178	195	246	244	247	265	253	248	236	244	226	232	249	251	229	228	236.9	265.2
25 Spd	18	7	7	6	7	10	11	9	10	10	12	14	12	9	13	7	8	8	13	9	3	7	5	9	6.5	18.0
Dir	249	216	214	234	238	258	241	229	237	208	243	251	221	233	229	225	127	148	311	23	303	50	244	274	238.9	248.8
26 Spd	4	7	2	5	3	3	4	10	3	5	1	6	8	4	4	4	11	5	13	17	16	12	17	19	5.2	18.6
Dir	284	298	152	134	230	104	204	288	70	75	188	280	290	113	147	311	283	263	239	240	250	257	249	254	254.0	254.1
27 Spd	17	16	18	16	17	18	16	12	20	26	35	39	36	30	32	26	26	29	26	27	23	21	20	19	22.8	38.7
Dir	258	253	257	259	263	267	257	258	262	261	270	261	264	275	285	270	257	258	260	250	257	289	305	313	266.8	261.0
28 Spd	19	17	19	23	21	21	25	23	26	24	21	20	20	20	16	15	15	9	11	8	6	7	5	6	16.2	25.9
Dir	317	297	287	291	283	279	288	292	296	306	311	311	306	304	294	299	303	310	285	275	285	277	279	281	296.0	296.3
29 Spd	2	2	3	1	2	2	4	4	5	3	1	3	2	3	9	8	4	6	8	6	5	2	2	4	2.4	8.5
Dir	283	339	15	153	140	193	169	126	116	114	144	246	207	94	96	94	76	103	94	90	95	64	360	350	100.1	96.2
30 Spd	4	4	4	4	4	4	3	3	1	6	5	8	10	10	2	5	6	8	7	5	5	6	7	2	2.6	9.9
Dir	16	359	24	5	9	3	58	85	107	142	141	148	154	173	188	14	50	40	60	38	23	25	28	343	62.1	172.5
31 Spd	2	1	3	3	0	2	4	1	4	2	5	6	5	1	5	6	5	19	8	3	5	2	1	3	0.5	18.6
Dir	17	110	320	292	144	345	29	135	115	113	113	131	137	203	102	83	102	277	281	72	63	260	352	335	62.5	277.2
Spd	6.2	5.8	5.0	4.8	5.3	6.2	5.9	5.8	6.0	7.1	8.3	8.6	9.0	9.4	9.2	8.3	7.4	7.8	7.9	6.9	5.9	5.4	6.4	6.1	Diurnal Average	
Dir	268.2	267.3	261.0	254.1	258.0	257.8	249.2	246.1	239.2	240.3	249.6	252.1	262.0	272.7	269.1	270.2	263.5	264.1	267.5	265.4	262.9	257.6	258.8	266.1	Diurnal Maximum	
Spd	21.9	23.8	21.3	23.2	27.3	38.0	31.3	29.7	38.8	36.8	35.2	38.7	36.4	33.6	36.1	39.0	39.0	37.4	33.2	28.2	31.9	25.6	27.0	24.6	Diurnal Maximum	
Dir	233.3	244.1	237.2	290.5	254.7	262.2	254.4	255.2	255.6	255.7	251.9	261.0	264.1	308.7	258.3	254.6	255.0	255.0	255.4	253.9	238.7	231.9	234.8	233.3	Diurnal Maximum	
Maximum Speed Value: 39 km/h on Aug 19 17:00																		Minimum Speed Value: 0 km/h on Aug 31 05:00						Hours in Service: 744		
Maximum Daily Speed Average: 29.0 km/h on Aug 19																		Minimum Daily Speed Average: 0.4 km/h on Aug 29						Hours of Data: 705		
Maximum Diurnal Speed Average: 9.4 km/h at hour 14																		Minimum Diurnal Speed Average: 4.8 km/h at hour 4						Hours of Missing Data: 39		
Monthly Average Velocity: 6.81 km/h 259.93 deg																		Speed Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 3.1 Q <sub>1</sub> = 5.4 Median = 9.1 Q <sub>3</sub> = 16.0 P <sub>90</sub> = 23.9 P <sub>99</sub> = 36.5						Percent Operational Time: 94.8		
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	29	22	7	1	0	0	59																			
NorthEast	14	39	9	0	0	0	62																			
East	16	18	2	0	0	0	36																			
SouthEast	17	29	10	0	0	0	56																			
South	9	30	4	0	0	0	43																			
SouthWest	30	54	54	37	8	0	183																			
West	21	45	47	36	20	4	173																			
NorthWest	16	23	36	14	4	0	93																			
Total	152	260	169	88	32	4	705																			

# Wind Rose

Wind Speed (WS) (km/h)  
Smoky Heights - August 2010



## Wind Speed Classes (km/h)





# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

## Smoky Heights - August 2010

Maximum Speed: 40 km/h on Aug 19 17:00		Maximum Daily Speed Average: 29.6 km/h on Aug 19		Hours in Service: 744																																													
Minimum Speed: 2 km/h on Aug 29 23:00		Minimum Daily Speed Average: 4.4 km/h on Aug 29		Hours of Data: 705																																													
Maximum Diurnal Speed Average: 17.4 km/h at hour 15		Minimum Diurnal Speed Average: 8.0 km/h at hour 4		Hours of Missing Data: 39																																													
Monthly Average Speed: 12.23 km/h		Percentiles: P <sub>1</sub> = 2.2 P <sub>10</sub> = 4.2 Q <sub>1</sub> = 6.2 Median = 9.5 Q <sub>3</sub> = 16.6 P <sub>90</sub> = 24.4 P <sub>99</sub> = 36.8		Percent Operational Time: 94.8																																													
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-Aug	5	4	5	6	8	9	11	11	10	14	14	20	28	22	17	16	16	15	17	14	11	10	11	10	12.7	27.8																							
2-Aug	9	16	15	14	11	13	16	12	14	17	18	20	18	14	9	8	7	9	13	10	5	5	4	4	11.8	20.2																							
3-Aug	5	3	5	3	2	2	5	5	7	8	9	8	9	9	9	6	6	4	5	9	8	8	8	8	6.3	9.4																							
4-Aug	8	4	2	3	3	3	4	3	3	5	7	9	9	9	9	8	9	7	7	8	7	9	9	7	6.4	9.4																							
5-Aug	5	4	3	2	3	3	5	6	6	10	14	16	16	17	17	18	14	14	12	9	9	11	12	8	9.8	18.5																							
6-Aug	5	7	5	7	7	9	12	12	13	15	16	23	24	25	29	18	29	25	19	21	16	14	14	14	15.8	28.8																							
7-Aug	17	20	19	14	7	14	16	23	29	35	36	31	30	30	30	29	25	27	28	28	23	24	20	13	23.6	35.7																							
8-Aug	13	13	17	14	13	8	9	15	21	26	26	27	28	25	27	24	26	12	11	9	4	N	N	N	17.5	28.1																							
9-Aug	N	N	N	N	N	N	N	N	N	11	21	22	17	19	16	18	19	16	21	17	8	3	6	9	13	--	21.9																						
10-Aug	13	7	6	8	6	9	8	9	11	12	13	16	19	19	17	17	14	13	10	10	8	6	7	11	11.2	18.7																							
11-Aug	11	7	8	7	7	8	8	9	10	16	17	17	18	19	16	15	20	27	N	N	N	N	N	N	13.3	27.1																							
12-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	34	36	32	N	N	29	26	24	N	N	N	--	35.8																							
13-Aug	N	N	N	N	14	16	14	14	15	17	17	14	16	13	17	18	17	15	11	9	6	5	5	5	12.9	17.7																							
14-Aug	4	5	5	4	3	5	6	7	8	8	8	9	8	11	6	8	9	7	10	6	6	6	5	5	6.6	10.5																							
15-Aug	7	7	7	6	6	6	7	9	7	8	10	10	9	11	11	11	11	13	12	11	8	6	3	4	8.4	13.4																							
16-Aug	5	5	4	6	5	7	6	6	6	6	4	5	10	12	19	19	16	17	16	12	11	12	8	5	9.3	19.3																							
17-Aug	8	7	9	6	5	5	8	9	7	8	8	9	9	8	8	8	12	12	13	11	8	10	10	8	8.6	12.5																							
18-Aug	5	3	6	10	9	3	7	10	11	13	10	12	20	22	20	19	17	24	15	24	32	26	27	25	15.4	32.0																							
19-Aug	22	24	21	17	27	38	31	30	39	37	34	35	34	33	36	39	40	38	34	27	22	21	19	11	29.6	39.6																							
20-Aug	10	11	10	11	8	5	5	7	7	8	7	15	13	14	14	13	9	7	4	11	7	4	3	4	8.6	15.0																							
21-Aug	5	5	5	3	6	6	4	3	4	6	4	5	6	8	7	7	7	6	9	6	6	6	7	4	5.7	8.7																							
22-Aug	6	9	6	2	3	5	3	4	7	8	7	8	12	22	22	17	12	10	11	8	8	12	13	17	9.6	22.2																							
23-Aug	17	17	13	12	15	14	14	14	12	13	14	16	21	24	25	24	25	23	24	20	15	11	7	5	16.4	25.4																							
24-Aug	4	5	8	6	9	8	8	7	7	10	21	23	28	34	28	26	22	20	18	14	11	7	9	13	14.4	33.5																							
25-Aug	18	7	7	7	7	10	11	10	10	10	13	15	13	10	14	9	10	10	18	10	6	9	8	12	10.5	18.2																							
26-Aug	6	8	5	6	6	4	13	11	5	5	3	6	8	5	5	9	12	7	14	17	17	12	17	19	9.2	18.7																							
27-Aug	17	16	18	16	17	19	16	12	20	26	35	39	37	31	32	27	26	29	26	27	23	22	20	19	23.7	38.9																							
28-Aug	19	17	19	23	21	21	25	23	26	24	22	20	20	20	16	15	15	9	11	9	6	7	5	6	16.6	26.0																							
29-Aug	3	4	3	2	3	2	4	4	5	4	4	4	3	4	9	8	4	6	8	6	5	2	2	4	4.4	9.4																							
30-Aug	4	4	4	4	5	5	3	3	4	6	6	9	10	11	5	6	8	9	7	5	5	6	7	3	5.7	10.5																							
31-Aug	3	2	5	4	3	3	4	4	5	3	5	7	6	5	6	7	7	19	9	4	5	4	3	4	5.4	18.9																							
																								9.1	8.6	8.6	8.0	8.2	9.0	9.8	10.0	11.4	13.2	14.2	15.5	16.8	17.2	17.4	16.2	15.4	15.2	14.6	12.9	10.9	10.0	9.7	9.3	Diurnal Average	
																								22.0	23.8	21.3	23.3	27.4	38.1	31.4	29.8	39.0	37.2	35.7	38.9	36.7	34.1	36.5	39.4	39.6	37.9	33.6	28.4	32.0	25.7	27.0	24.7	Diurnal Maximum	
N - Not Valid All monthly, daily, and diurnal averages have been calculated using scalar methods																																																	

# Hourly Standard Deviations

Wind Direction (WD) - deg  
Smoky Heights - August 2010

Maximum Value: 94.2 deg on Aug 16 09:00																		Hours in Service: 744								
Minimum Value: 2.7 deg on Aug 4 22:00																		Hours of Data: 705								
Percentiles: P <sub>1</sub> = 3.4 P <sub>10</sub> = 5.9 Q <sub>1</sub> = 8.8 Median = 14.6 Q <sub>3</sub> = 27.8 P <sub>90</sub> = 53.7 P <sub>99</sub> = 86.9																		Hours of Missing Data: 39								
																		Hours of Calibration: 0								
																		Percent Operational Time: 94.8								
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	19	12	8	7	9	6	7	6	7	27	16	17	8	14	20	15	16	14	7	9	7	10	7	22	26.8	
2-Aug	9	4	6	8	18	11	6	12	16	17	15	12	13	18	18	31	75	59	16	12	31	33	78	17	77.9	
3-Aug	13	56	16	44	59	82	27	16	16	17	87	42	29	36	18	31	14	45	14	12	4	14	5	6	86.9	
4-Aug	6	68	29	80	28	27	23	20	25	21	56	31	37	36	32	45	42	38	11	9	17	3	7	14	80.1	
5-Aug	28	42	36	38	35	24	16	10	16	15	21	20	22	25	14	15	18	18	11	13	5	6	6	32	42.1	
6-Aug	20	11	21	20	19	11	9	9	10	9	12	12	14	13	13	38	11	9	9	9	4	10	8	6	37.6	
7-Aug	3	4	7	5	22	6	11	5	6	9	10	15	16	15	13	10	11	8	10	6	5	6	3	8	22.5	
8-Aug	8	4	5	4	5	14	5	8	6	8	15	11	11	17	17	13	31	65	18	12	45	N	N	N	65.2	
9-Aug	N	N	N	N	N	N	N	N	8	14	12	19	18	23	16	16	15	11	7	6	56	21	19	9	55.9	
10-Aug	6	11	23	24	34	23	11	11	11	17	18	24	21	21	33	25	33	28	24	12	8	4	7	3	34.4	
11-Aug	6	22	21	23	21	23	17	13	14	21	15	14	22	17	16	14	14	13	N	N	N	N	N	N	23.0	
12-Aug	N	N	N	N	N	N	N	N	N	N	N	N	N	11	11	9	N	N	7	7	6	N	N	N	10.6	
13-Aug	N	N	N	N	9	9	8	10	11	18	13	21	20	21	22	17	19	14	11	12	24	13	10	8	23.9	
14-Aug	15	11	18	29	61	39	12	11	13	19	25	43	54	35	86	88	55	49	29	22	61	42	19	50	87.8	
15-Aug	10	13	13	10	12	15	8	7	10	14	14	16	27	28	20	21	12	10	11	6	6	28	61	68	68.2	
16-Aug	83	46	87	65	57	26	48	40	94	42	50	57	22	18	13	11	12	10	8	6	7	9	9	16	94.2	
17-Aug	21	13	10	12	13	13	8	13	16	23	24	36	33	36	52	48	27	35	14	9	9	6	6	15	51.9	
18-Aug	24	58	30	89	58	65	32	14	10	9	26	10	14	14	14	39	5	7	6	4	4	4	4	5	88.5	
19-Aug	7	4	5	7	5	4	4	5	7	8	9	12	10	11	8	8	10	9	9	7	3	3	19	16	19.3	
20-Aug	8	9	9	14	13	21	8	11	23	28	79	53	35	12	18	23	20	34	51	10	27	66	44	24	79.0	
21-Aug	10	21	10	29	8	66	54	54	24	21	59	60	29	18	30	21	52	46	8	6	26	7	14	82	81.9	
22-Aug	17	6	63	87	64	29	60	19	26	31	52	46	17	13	9	5	6	11	11	5	9	18	7	4	87.2	
23-Aug	4	4	5	3	4	6	4	6	7	11	14	17	15	13	14	11	10	11	9	6	3	4	9	21	21.2	
24-Aug	32	22	9	23	11	14	11	17	15	22	13	14	15	10	12	10	14	11	9	16	9	6	10	7	32.4	
25-Aug	9	12	14	19	15	11	6	11	10	11	20	17	27	37	26	49	40	30	44	18	59	42	74	48	74.0	
26-Aug	48	31	78	29	74	55	71	32	64	48	87	27	23	63	44	82	17	46	12	8	7	8	5	6	87.0	
27-Aug	8	5	8	5	5	8	5	10	6	8	7	6	7	8	8	16	6	7	5	3	5	16	10	8	16.4	
28-Aug	8	8	4	5	4	5	7	6	5	5	8	7	7	8	9	10	19	6	15	18	6	10	10	10	18.6	
29-Aug	66	61	29	87	13	34	33	21	31	39	77	54	73	63	28	18	23	16	8	11	15	44	34	21	86.8	
30-Aug	10	14	15	15	19	38	19	33	78	19	19	19	21	19	78	32	43	18	11	7	6	8	15	42	77.9	
31-Aug	67	59	57	46	89	55	28	78	39	59	37	24	42	86	58	38	50	11	29	36	13	71	76	41	89.0	
	83.1	68.0	86.5	88.5	89.0	82.4	70.8	78.4	94.2	59.3	87.0	59.9	73.2	85.9	85.7	87.8	75.3	65.2	51.2	36.3	61.4	71.2	77.9	81.9		
N - Not Valid																										

**PASZA**  
**Beaverlodge Station**  
**Monthly Summary Tables, Graphs and**  
**Roses**

# Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb

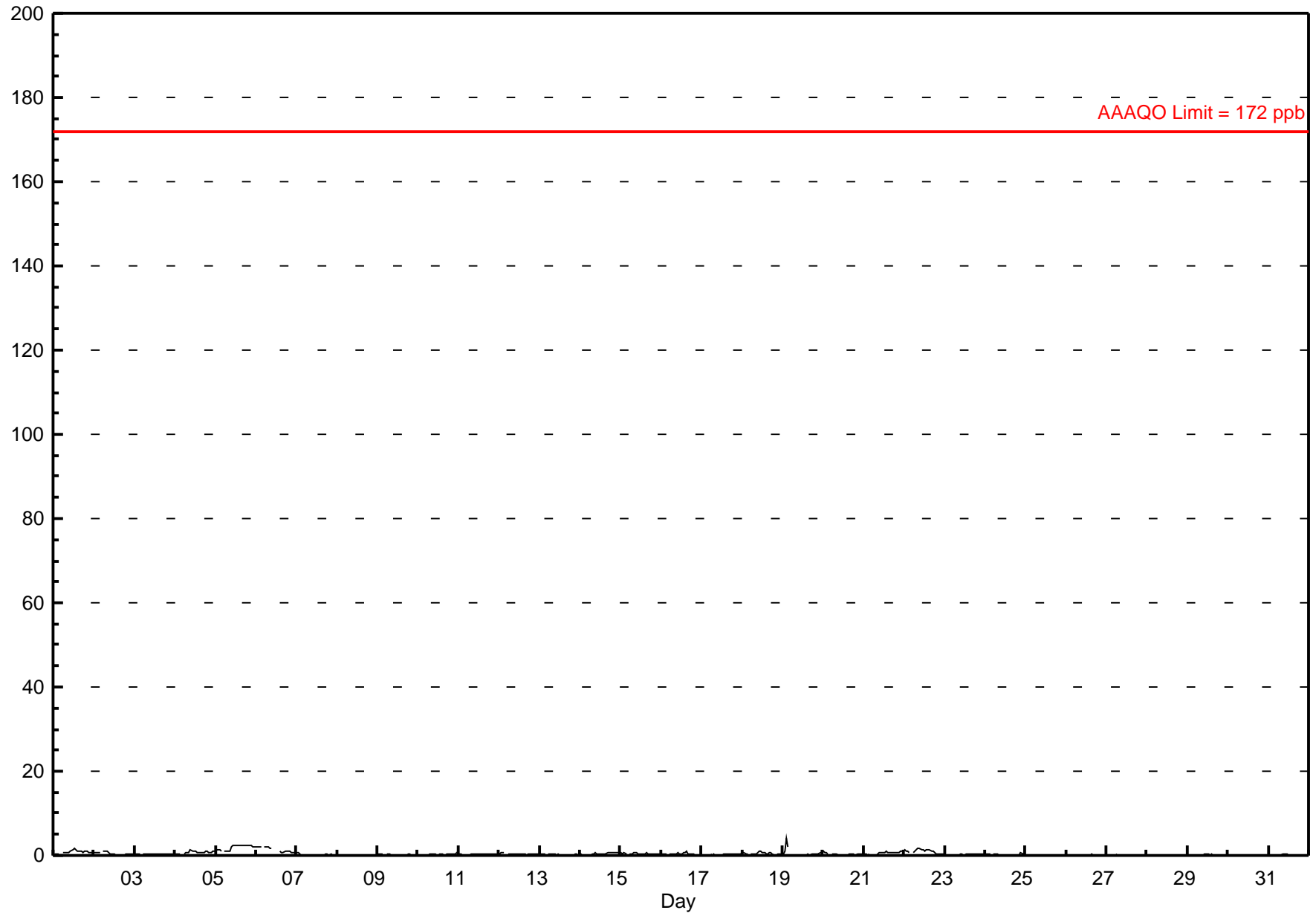
Beaverlodge - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0										Hours in Service: 744																
Maximum Value: 4.0 ppb on Aug 19 03:00										Maximum Daily Average: 1.9 ppb on Aug 5										Hours of Data: 683						
Minimum Value: 0 ppb on Aug 7 06:00										Minimum Daily Average: 0.0 ppb on Aug 30										Hours of Missing Data: 61						
Maximum Diurnal Average: 0.5 ppb at hour 3										Minimum Diurnal Average: 0.3 ppb at hour 6										Hours of Calibration: 35						
Monthly Average: 0.40 ppb										Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 0.9 P <sub>99</sub> = 2.4										Percent Operational Time: 96.5						
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-Aug	0	0	0	0	A	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0.8	1.8
2-Aug	1	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1
3-Aug	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.3	0.5
4-Aug	0	0	0	0	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
5-Aug	1	1	1	1	A	1	1	1	1	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	1.9	2.5
6-Aug	2	2	2	2	A	2	2	2	2	2	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1.4	2.1
7-Aug	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
8-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
9-Aug	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
10-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.5
11-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
12-Aug	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
13-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
14-Aug	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	0.4	0.6
15-Aug	1	0	1	0	A	0	0	0	1	1	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0.4	0.6
16-Aug	0	0	0	0	A	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0.4	0.9
17-Aug	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
18-Aug	1	1	0	0	A	0	0	0	0	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0.4	1.0
19-Aug	0	1	4	2	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.5	4.0
20-Aug	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
21-Aug	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1
22-Aug	1	1	1	1	A	1	1	1	2	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1.0	1.6
23-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
24-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	0.6
25-Aug	0	0	0	0	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	0.1
26-Aug	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
27-Aug	0	0	0	0	A	0	0	D	D	D	D	D	D	D	0	0	0	0	0	0	0	0	0	0	--	0.2
28-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
30-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
31-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
										0.4 0.4 0.5 0.4 -- 0.3 0.3 0.4 0.4 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4										Diurnal Average						
										2.1 2.0 4.0 2.1 -- 1.9 1.9 1.9 1.8 2.0 2.5 2.5 2.3 2.5 2.5 2.5 2.4 2.4 2.3 2.3 2.3 2.3 2.2 2.0										Diurnal Maximum						
C - Calibration      D - DAS Failure      A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb      24-hr 57 ppb																										



# Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Beaverlodge - August 2010



# Hourly Maximums

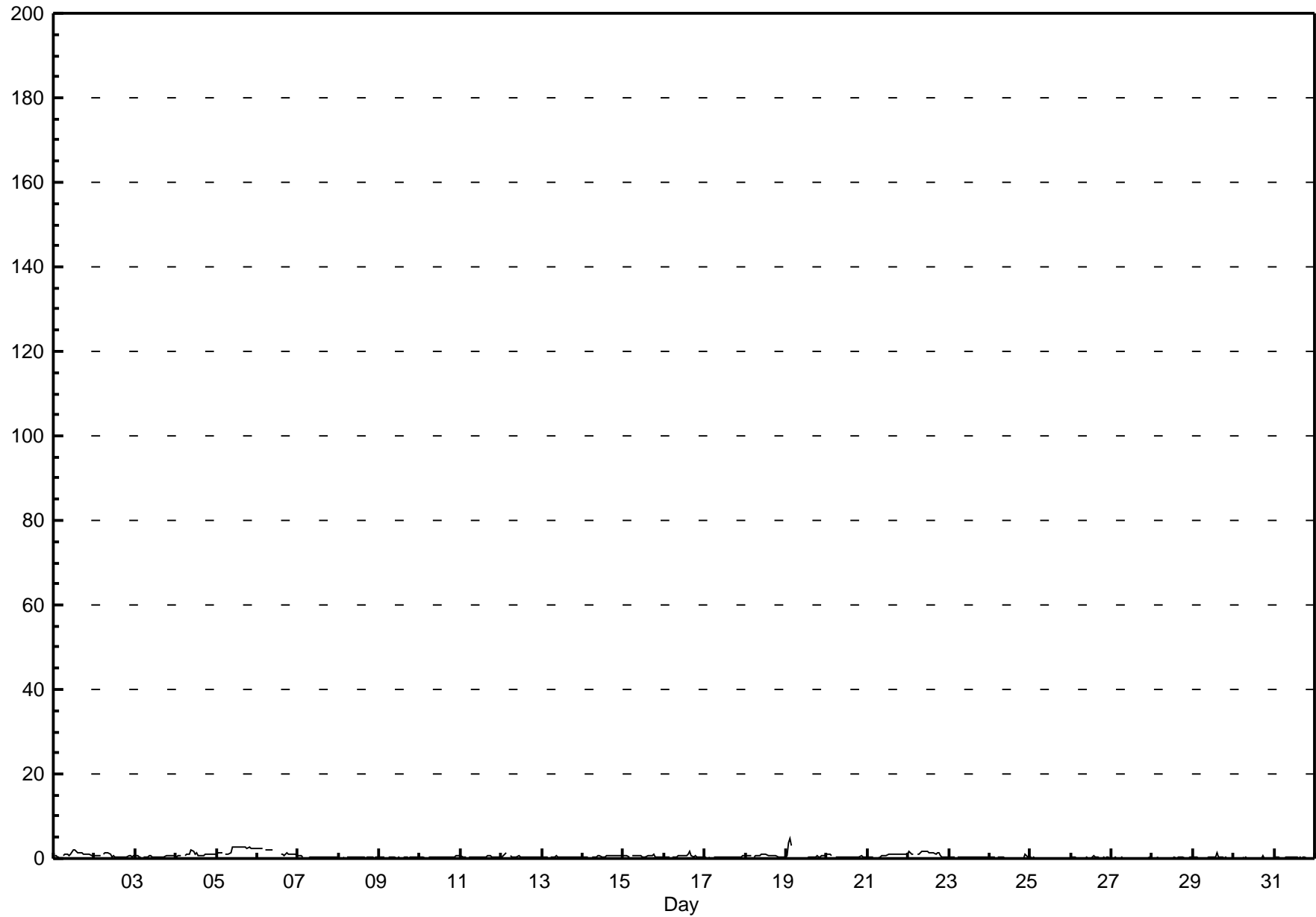
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Beaverlodge - August 2010

Maximum Value: 4.8 ppb on Aug 19 03:00		Maximum Daily Average: 2.1 ppb on Aug 5		Hours in Service: 744																						
Minimum Value: 0 ppb on Aug 19 07:00		Minimum Daily Average: 0.2 ppb on Aug 28		Hours of Data: 683																						
Maximum Diurnal Average: 0.6 ppb at hour 10		Minimum Diurnal Average: 0.4 ppb at hour 6		Hours of Missing Data: 61																						
Monthly Average: 0.54 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.3 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 1.1 P <sub>99</sub> = 2.7		Hours of Calibration: 35																						
				Percent Operational Time: 96.5																						
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-Aug	1	1	1	1	A	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1.0	2.1
2-Aug	1	1	1	1	A	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	1	1	1	0.6	1.3
3-Aug	1	1	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.5	0.7
4-Aug	1	1	1	1	A	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.1
5-Aug	1	1	1	1	A	1	1	1	1	3	3	3	3	3	3	3	3	3	2	3	2	2	2	2	2.1	2.8
6-Aug	2	2	2	2	A	2	2	2	2	2	C	C	C	C	1	1	1	1	1	1	1	1	1	1.6	2.3	
7-Aug	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
8-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
9-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
10-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	0.7
11-Aug	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0.4	0.6
12-Aug	0	1	1	1	A	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.4
13-Aug	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
14-Aug	0	0	0	0	A	0	0	0	0	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	0.5	0.8
15-Aug	1	1	1	1	A	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0	0	0	0	0	0.6	0.9
16-Aug	0	0	0	0	A	0	0	0	1	1	1	1	1	1	2	1	0	1	0	0	0	0	0	0	0.5	1.8
17-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	0.6
18-Aug	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.6	1.1
19-Aug	1	4	5	3	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0.8	4.8
20-Aug	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.4	0.9
21-Aug	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
22-Aug	2	2	1	1	A	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	0	0	0	0	1.2	1.8
23-Aug	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
24-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.3	1.1
25-Aug	0	0	0	0	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	0.2
26-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.6
27-Aug	0	0	0	0	A	0	0	D	D	D	D	D	D	D	0	0	0	0	0	0	0	0	0	0	--	0.3
28-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.3	1.3
30-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.7
31-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
		0.5	0.6	0.6	0.6	--	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	Diurnal Average
		2.3	3.9	4.8	3.1	--	2.2	2.1	2.1	2.0	2.8	2.7	2.7	2.6	2.7	2.8	2.7	2.6	2.6	2.5	2.6	2.5	2.5	2.5	2.3	Diurnal Maximum
C - Calibration					D - DAS Failure					A - Automated Daily Zero Span																

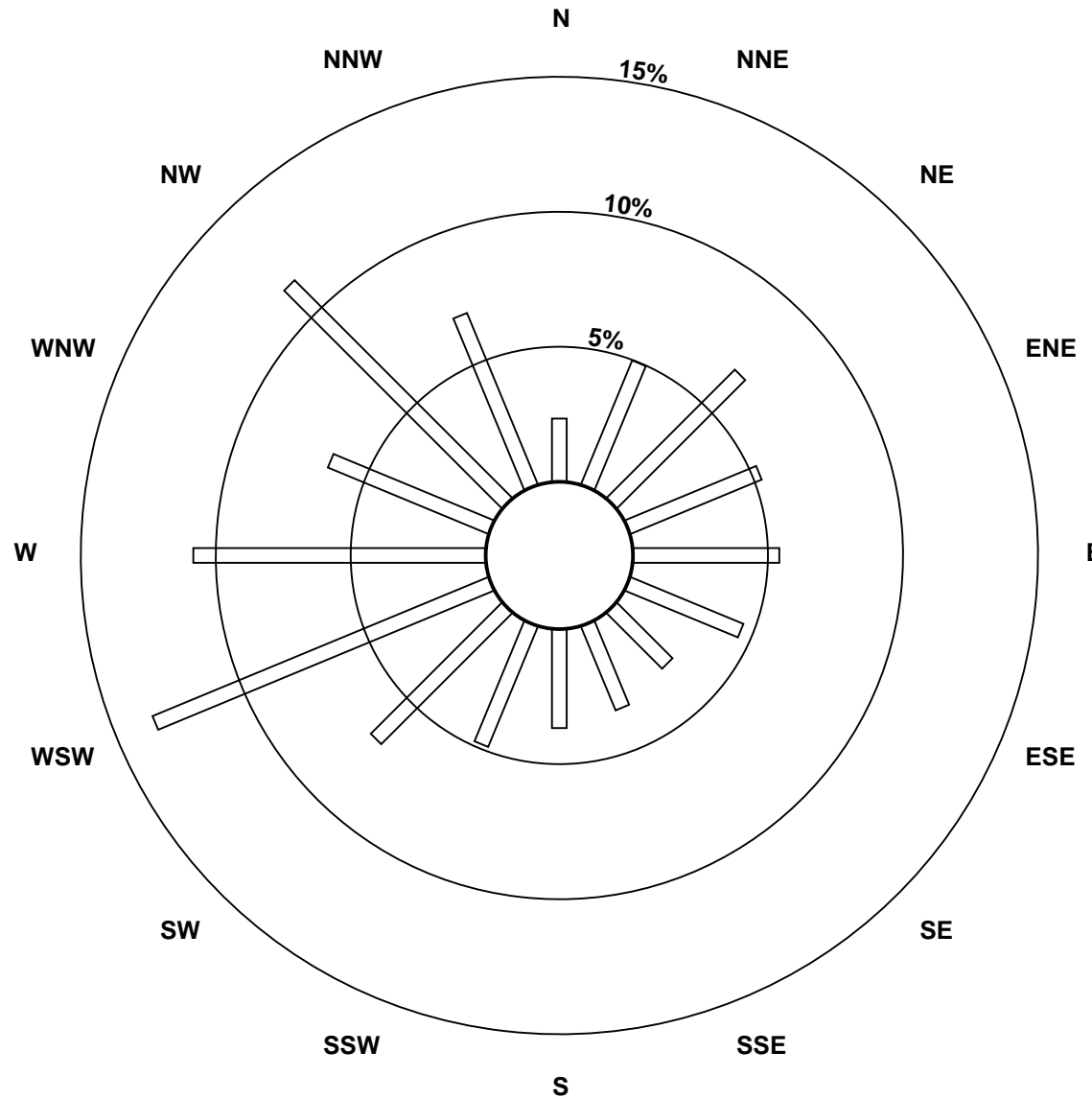
# Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Beaverlodge - August 2010

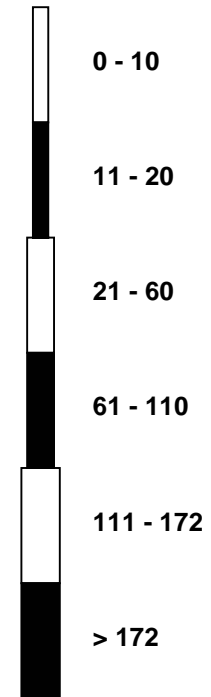


# Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Beaverlodge - August 2010



## Pollutant Classes (ppb)



# Hourly Averages

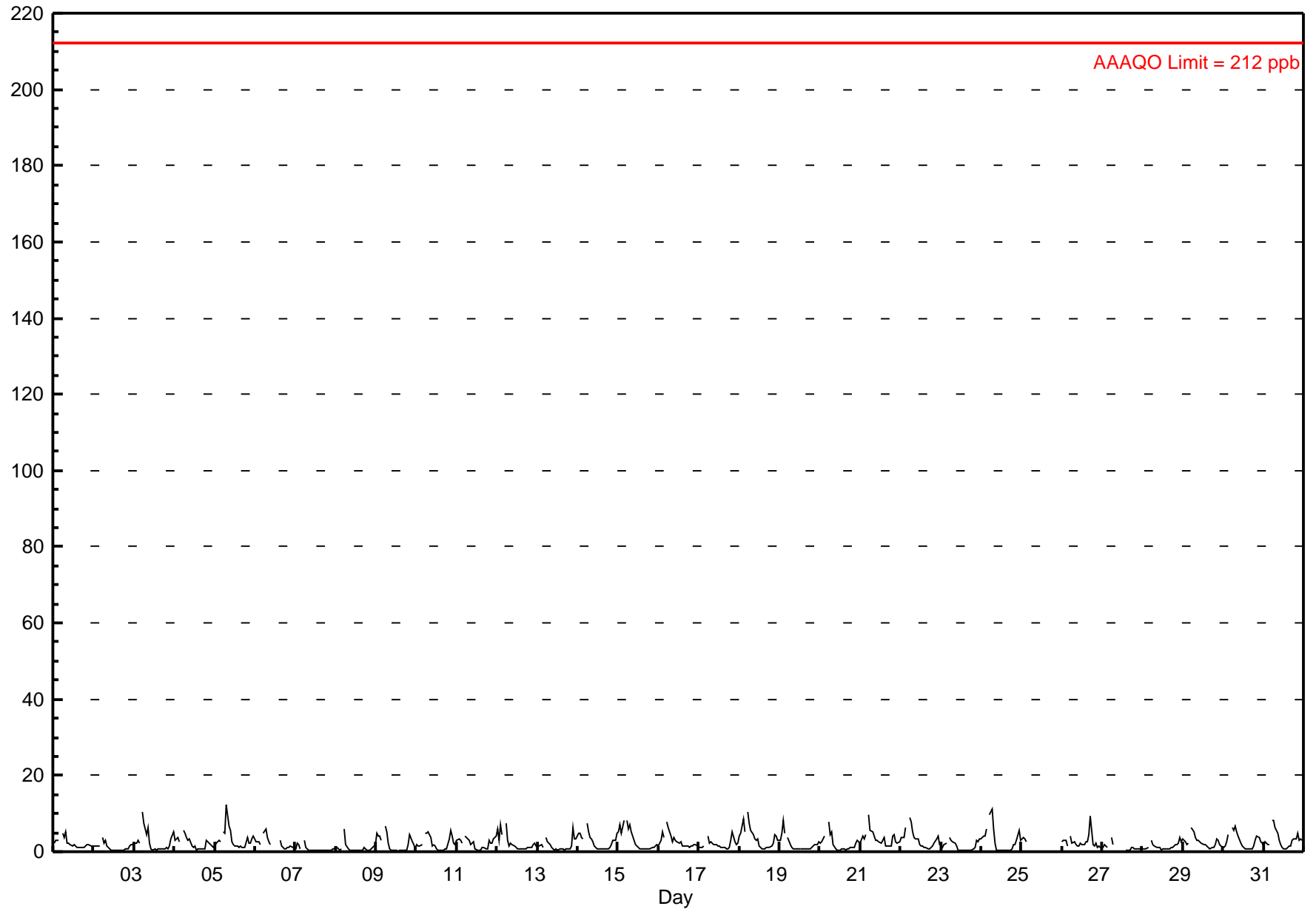
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Beaverlodge - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 12.1 ppb on Aug 5 08:00	Maximum Daily Average: 3.6 ppb on Aug 18
Minimum Value: 0 ppb on Aug 9 14:00	Hours of Data: 682
Maximum Diurnal Average: 6.1 ppb at hour 6	Hours of Missing Data: 62
Monthly Average: 2.28 ppb	Hours of Calibration: 36
Minimum Daily Average: 0.7 ppb on Aug 7	Percent Operational Time: 96.5
Minimum Diurnal Average: 0.9 ppb at hour 15	
Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.8 Median = 1.7 Q <sub>3</sub> = 3.1 P <sub>90</sub> = 4.9 P <sub>99</sub> = 9.1	

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-Aug	2	3	3	3	A	5	4	5	2	2	2	2	2	1	1	1	1	1	1	2	2	2	2	2	2.2	5.3																							
2-Aug	2	2	1	2	A	4	2	3	2	1	1	0	0	0	0	0	0	0	0	1	1	2	2	2	1.2	3.8																							
3-Aug	2	2	3	2	A	10	7	4	6	2	1	1	1	1	1	1	1	1	1	1	1	3	5	2.5	10.5																								
4-Aug	3	3	4	3	A	5	5	4	3	4	1	1	1	0	1	1	1	1	1	3	3	2	1	1	2.2	5.4																							
5-Aug	1	2	3	3	A	5	5	12	7	6	3	2	1	1	1	1	1	1	1	4	2	2	3	4	3.2	12.1																							
6-Aug	2	2	3	2	A	5	6	4	3	2	C	C	C	C	C	3	2	1	1	1	1	2	1	1	2.3	6.0																							
7-Aug	1	2	2	1	A	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0.7	2.9																							
8-Aug	1	1	1	1	A	6	2	1	1	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2	0.9	6.0																							
9-Aug	5	4	4	3	A	7	5	2	1	0	0	0	0	0	0	1	0	0	1	2	4	3	2	1	2.0	6.9																							
10-Aug	2	2	2	2	A	5	5	5	4	1	2	1	1	0	0	0	0	1	1	3	6	4	2	2	2.2	5.6																							
11-Aug	3	3	3	2	A	4	3	3	2	2	3	1	0	0	0	1	1	1	1	3	2	2	3	4	2.1	4.2																							
12-Aug	6	3	7	4	A	8	3	1	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2.3	7.5																							
13-Aug	2	1	2	1	A	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	6	3	3	1.6	6.3																							
14-Aug	5	5	4	3	A	7	5	4	3	3	2	1	1	1	1	1	1	1	1	1	2	3	3	5	2.6	7.4																							
15-Aug	5	7	5	8	A	8	6	7	5	3	2	2	1	1	1	1	1	1	1	1	1	1	1	2	3.1	8.4																							
16-Aug	2	3	5	4	A	8	6	4	3	4	3	3	2	3	2	1	1	1	1	1	2	2	2	1	2.8	7.7																							
17-Aug	1	1	1	1	A	4	2	2	2	2	2	2	1	1	1	1	1	1	1	3	5	3	2	2	1.9	5.2																							
18-Aug	4	5	8	5	A	10	7	6	4	4	3	3	1	1	1	1	1	1	1	1	2	4	4	3	3.6	10.4																							
19-Aug	3	5	8	5	A	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	1.9	8.0																							
20-Aug	2	3	3	4	A	8	5	5	2	1	0	0	0	1	1	1	1	1	1	1	1	2	3	2	2.1	8.0																							
21-Aug	2	4	3	5	A	10	6	5	4	3	3	3	2	3	4	1	1	1	2	4	5	3	2	3	3.4	9.6																							
22-Aug	4	4	4	6	A	9	8	5	4	3	3	2	2	1	1	1	1	1	1	2	2	4	4	2	3.2	8.9																							
23-Aug	2	1	2	2	A	4	3	3	2	1	1	0	0	0	0	1	0	0	1	1	1	3	3	3	1.5	3.9																							
24-Aug	3	4	4	6	A	10	11	6	2	1	0	0	0	0	0	0	0	0	1	2	2	3	5	3	2.9	11.1																							
25-Aug	3	4	3	3	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	3.6																							
26-Aug	3	3	3	2	A	4	2	3	2	1	2	2	2	2	3	3	5	9	2	1	2	1	1	1	2.5	9.2																							
27-Aug	1	2	1	1	A	4	2	D	D	D	D	D	D	D	1	0	0	1	1	1	1	1	1	1	--	3.6																							
28-Aug	1	1	1	1	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	4	3	1.4	3.8																							
29-Aug	3	3	2	2	A	6	5	4	3	3	3	2	2	2	1	1	1	1	1	2	3	3	2	1	2.5	6.3																							
30-Aug	1	2	3	4	A	6	6	7	5	4	2	1	1	1	1	1	1	1	1	3	4	4	3	2	2.8	6.7																							
31-Aug	2	3	2	2	A	8	8	6	5	3	2	1	1	1	1	1	1	3	3	3	5	3	3	3	3.1	8.1																							
																								2.6	2.9	3.2	3.0	--	6.1	4.5	4.1	2.8	2.1	1.6	1.2	1.0	0.9	0.9	0.9	0.9	1.2	1.0	1.8	2.2	2.4	2.4	2.3	Diurnal Average	
																								5.9	7.0	8.4	8.1	--	10.5	11.1	12.1	6.8	5.6	3.4	3.3	2.3	3.0	3.6	2.8	4.6	9.2	3.3	4.2	5.6	6.3	5.5	5.3	Diurnal Maximum	

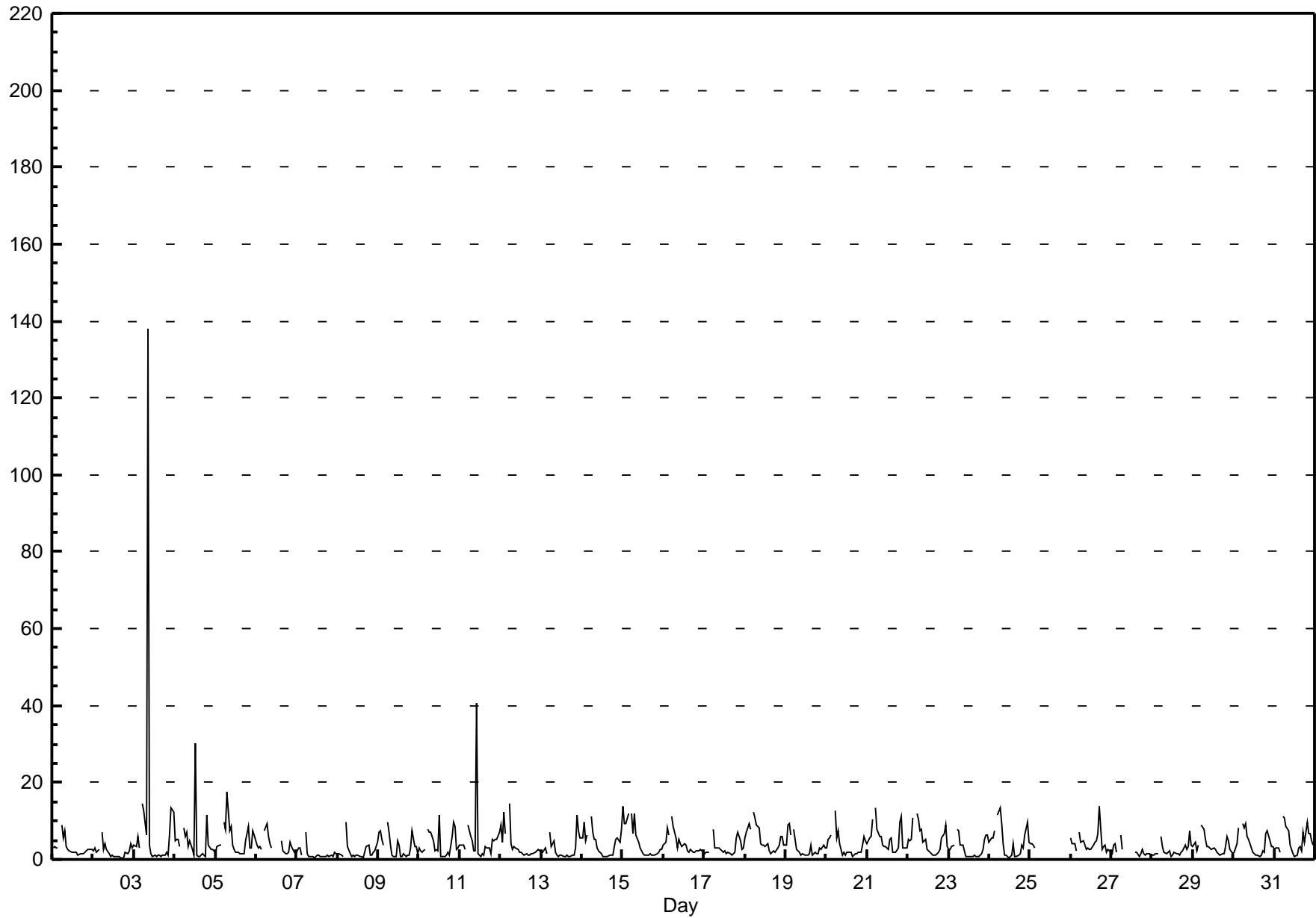
C - Calibration      D - DAS Failure      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 212 ppb      24-hr 106 ppb



# Hourly Maximums

## Nitrogen Dioxide (NO<sub>2</sub>) - ppb Beaverlodge - August 2010

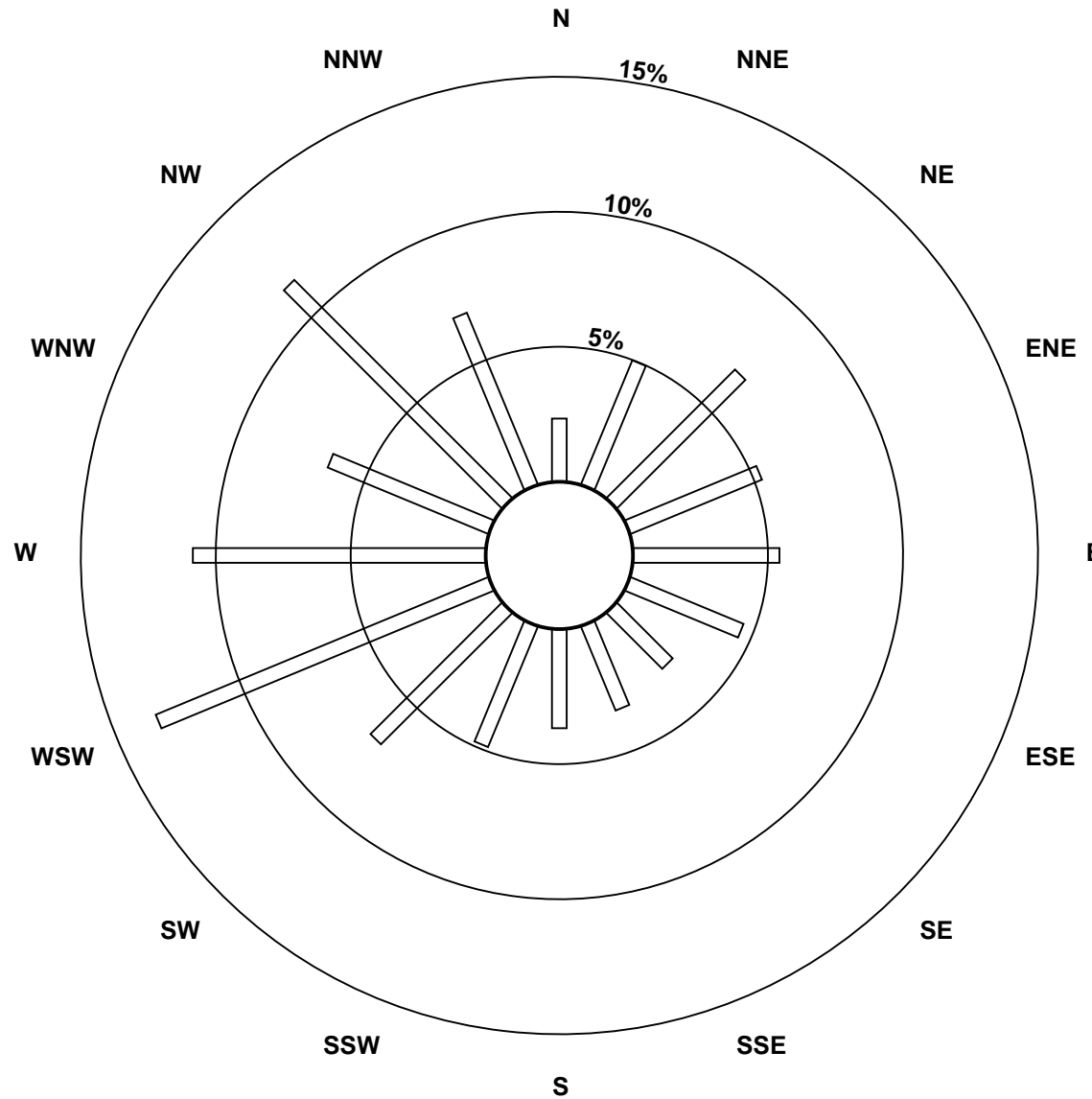
Maximum Value: 137.9 ppb on Aug 3 09:00		Maximum Daily Average: 10.2 ppb on Aug 3		Hours in Service: 744																									
Minimum Value: 0 ppb on Aug 8 16:00		Minimum Daily Average: 1.5 ppb on Aug 7		Hours of Data: 682																									
Maximum Diurnal Average: 9.6 ppb at hour 6		Minimum Diurnal Average: 1.5 ppb at hour 17		Hours of Missing Data: 62																									
Monthly Average: 3.94 ppb		Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 0.9 Q <sub>1</sub> = 1.5 Median = 2.7 Q <sub>3</sub> = 5.0 P <sub>90</sub> = 8.0 P <sub>99</sub> = 13.6		Hours of Calibration: 36																									
				Percent Operational Time: 96.5																									
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-Aug	3	3	3	3	A	9	6	7	3	3	2	2	2	2	2	1	2	2	2	2	2	2	3	3.0	8.9				
2-Aug	2	3	2	3	A	7	3	4	2	1	1	1	1	1	1	1	0	1	1	2	1	2	4	3	2.0	7.1			
3-Aug	4	3	6	3	A	14	13	6	138	4	1	1	1	1	1	1	1	1	2	1	6	14	12	10.2	137.9				
4-Aug	5	5	5	3	A	8	6	7	3	5	2	1	30	1	1	1	2	1	1	12	4	3	3	2	4.8	30.3			
5-Aug	2	3	4	4	A	10	8	17	7	9	4	3	2	2	1	1	1	1	5	9	3	3	7	6	4.9	17.4			
6-Aug	4	3	3	3	A	8	9	6	4	3	C	C	C	C	C	5	2	1	1	2	5	3	2	1	3.6	9.2			
7-Aug	2	3	3	1	A	7	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.5	7.0			
8-Aug	1	2	1	1	A	10	3	1	1	1	1	1	1	1	1	0	2	3	4	1	1	2	2	4	2.0	9.9			
9-Aug	7	7	5	4	A	10	7	4	1	1	1	5	4	1	1	2	1	1	1	3	8	3	3	1	3.5	9.6			
10-Aug	3	2	2	3	A	8	7	7	5	2	3	2	12	1	1	1	1	2	1	6	10	8	3	3	4.0	11.7			
11-Aug	4	4	4	3	A	9	6	5	2	2	41	1	1	1	1	3	3	3	2	5	5	5	5	7	5.3	40.7			
12-Aug	9	4	12	7	A	15	4	3	3	3	3	2	2	1	1	1	1	1	2	2	2	2	3	2	3.7	14.6			
13-Aug	2	2	3	2	A	7	3	5	2	1	1	1	1	1	1	1	1	1	1	1	3	12	8	6	2.8	11.5			
14-Aug	6	10	5	6	A	11	7	5	5	3	2	1	1	1	1	1	1	1	1	3	5	6	5	8	4.2	11.0			
15-Aug	14	9	9	12	A	12	7	12	6	4	3	2	1	1	1	1	1	1	1	1	1	2	3	3	4.7	13.8			
16-Aug	4	5	8	6	A	11	9	5	3	5	4	3	4	4	2	2	3	2	2	2	2	2	3	2	4.1	11.1			
17-Aug	1	2	2	2	A	8	3	3	3	3	2	2	2	2	2	1	1	1	2	6	7	5	3	3	2.8	7.7			
18-Aug	6	7	9	8	A	12	11	9	8	4	4	4	3	4	2	2	2	2	3	4	6	6	4	4	5.3	12.5			
19-Aug	4	9	9	6	A	8	3	2	2	1	1	1	1	1	1	4	1	2	2	1	2	3	4	3	3.2	9.4			
20-Aug	3	5	6	6	A	13	6	8	4	1	2	1	2	2	2	1	1	1	2	2	2	4	6	5	3.6	12.7			
21-Aug	4	6	6	10	A	13	8	6	6	4	3	3	3	5	6	2	2	2	3	10	11	3	3	3	5.3	13.4			
22-Aug	5	5	5	11	A	12	11	7	8	4	5	3	2	2	1	1	1	1	2	3	6	7	9	3	4.9	11.8			
23-Aug	3	3	3	4	A	8	7	4	4	2	1	1	1	1	1	1	1	1	1	1	3	5	6	6	2.9	7.7			
24-Aug	4	6	6	7	A	12	14	9	4	1	1	1	1	1	4	1	1	1	2	4	3	6	10	4	4.4	13.6			
25-Aug	4	4	4	3	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	4.3			
26-Aug	5	4	4	2	A	7	4	5	4	3	3	3	3	4	4	5	7	14	3	3	4	2	2	2	4.2	13.7			
27-Aug	2	4	4	2	A	6	3	D	D	D	D	D	D	D	2	2	1	2	3	1	1	2	2	1	--	6.3			
28-Aug	1	1	2	1	A	6	3	2	1	2	2	1	1	2	1	1	1	2	2	4	2	3	7	4	2.3	7.4			
29-Aug	4	4	2	4	A	9	8	5	3	3	3	3	3	3	2	2	1	2	2	3	6	5	3	2	3.5	8.8			
30-Aug	2	3	4	8	A	9	8	9	6	5	3	2	2	1	1	1	1	2	2	7	7	5	3	3	4.1	9.2			
31-Aug	3	3	3	2	A	11	11	9	7	4	3	2	1	1	3	3	2	7	5	10	7	7	5	4	4.8	11.1			
		3.9	4.3	4.7	4.5	--	9.6	6.6	6.0	8.6	2.9	3.6	1.9	3.1	1.7	1.6	1.7	1.5	2.1	1.9	3.7	4.0	4.2	4.5	3.8	Diurnal Average			
		13.8	9.7	12.5	11.9	--	14.6	13.6	17.4	137.9	8.5	40.7	4.8	30.3	5.3	5.5	4.9	6.8	13.7	4.8	11.5	11.3	11.5	13.5	12.3	Diurnal Maximum			
C - Calibration		D - DAS Failure				A - Automated Daily Zero Span																							



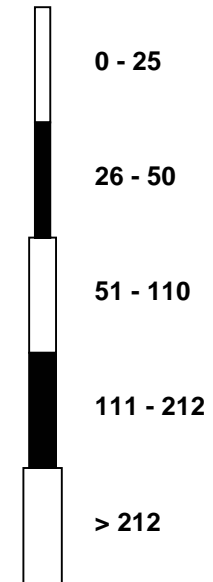


# Pollutant Rose

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Beaverlodge - August 2010



## Pollutant Classes (ppb)



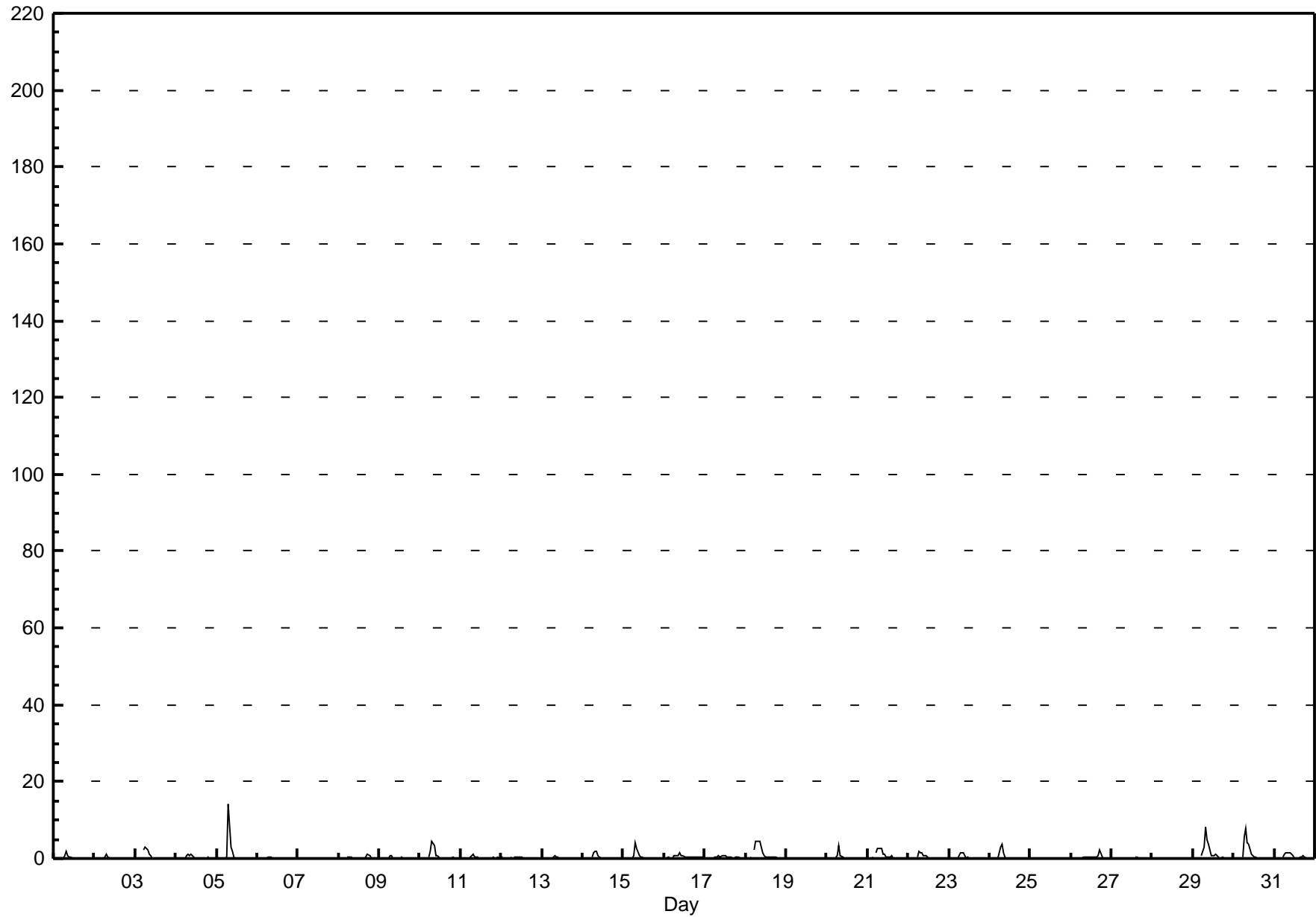
# Hourly Averages

## Nitrogen Oxide (NO) - ppb Beaverlodge - August 2010

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 14.2 ppb on Aug 5 08:00      Maximum Daily Average: 1.2 ppb on Aug 29		Hours in Service: 744 Hours of Data: 682 Hours of Missing Data: 62 Hours of Calibration: 36 Percent Operational Time: 96.5																									
Minimum Value: 0 ppb on Aug 1 04:00 Maximum Diurnal Average: 2.4 ppb at hour 8 Monthly Average: 0.37 ppb		Minimum Daily Average: 0.0 ppb on Aug 7 Minimum Diurnal Average: 0.0 ppb at hour 2 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> = 0.8 P <sub>99</sub> = 4.4																									
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-Aug	0	0	0	0	A	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.8	
2-Aug	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0	
3-Aug	0	0	0	0	A	2	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.9	
4-Aug	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.3	
5-Aug	0	0	0	0	A	0	0	14	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	14.2	
6-Aug	0	0	0	0	A	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.1	0.3	
7-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
8-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0.2	1.1	
9-Aug	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7	
10-Aug	0	0	0	0	A	0	2	4	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.4	
11-Aug	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1	
12-Aug	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
13-Aug	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6	
14-Aug	0	0	0	0	A	0	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8	
15-Aug	0	0	0	0	A	0	1	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	4.1	
16-Aug	0	0	0	0	A	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.5	
17-Aug	0	0	0	0	A	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7	
18-Aug	0	0	0	0	A	2	5	4	4	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1.0	4.5	
19-Aug	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	
20-Aug	0	0	0	0	A	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	3.5	
21-Aug	0	0	0	0	A	2	3	3	3	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0.6	2.8	
22-Aug	0	0	0	0	A	1	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8	
23-Aug	0	0	0	0	A	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5	
24-Aug	0	0	0	0	A	0	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.7	
25-Aug	0	0	0	0	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	0.1	
26-Aug	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	0	0	0.3	2.2	
27-Aug	0	0	0	0	A	0	0	D	D	D	D	D	D	D	0	0	0	0	0	0	0	0	0	0	--	0.3	
28-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
29-Aug	0	0	0	0	A	1	3	8	5	4	2	1	1	1	1	0	0	0	0	0	0	0	0	0	1.2	8.0	
30-Aug	0	0	0	0	A	0	5	8	4	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1.1	7.8	
31-Aug	0	0	0	0	A	1	1	2	2	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0.5	1.6	
		0.0	0.0	0.0	0.1	--	0.4	1.2	2.4	1.4	0.9	0.5	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.0	Diurnal Average	
		0.3	0.1	0.4	0.3	--	2.4	5.5	14.2	4.8	3.6	2.1	0.8	0.6	1.1	0.6	0.4	0.9	2.2	0.8	0.4	0.3	0.2	0.2	0.2	Diurnal Maximum	
C - Calibration		D - DAS Failure					A - Automated Daily Zero Span																				

# Hourly Averages

Nitrogen Oxide (NO) - ppb  
Beaverlodge - August 2010



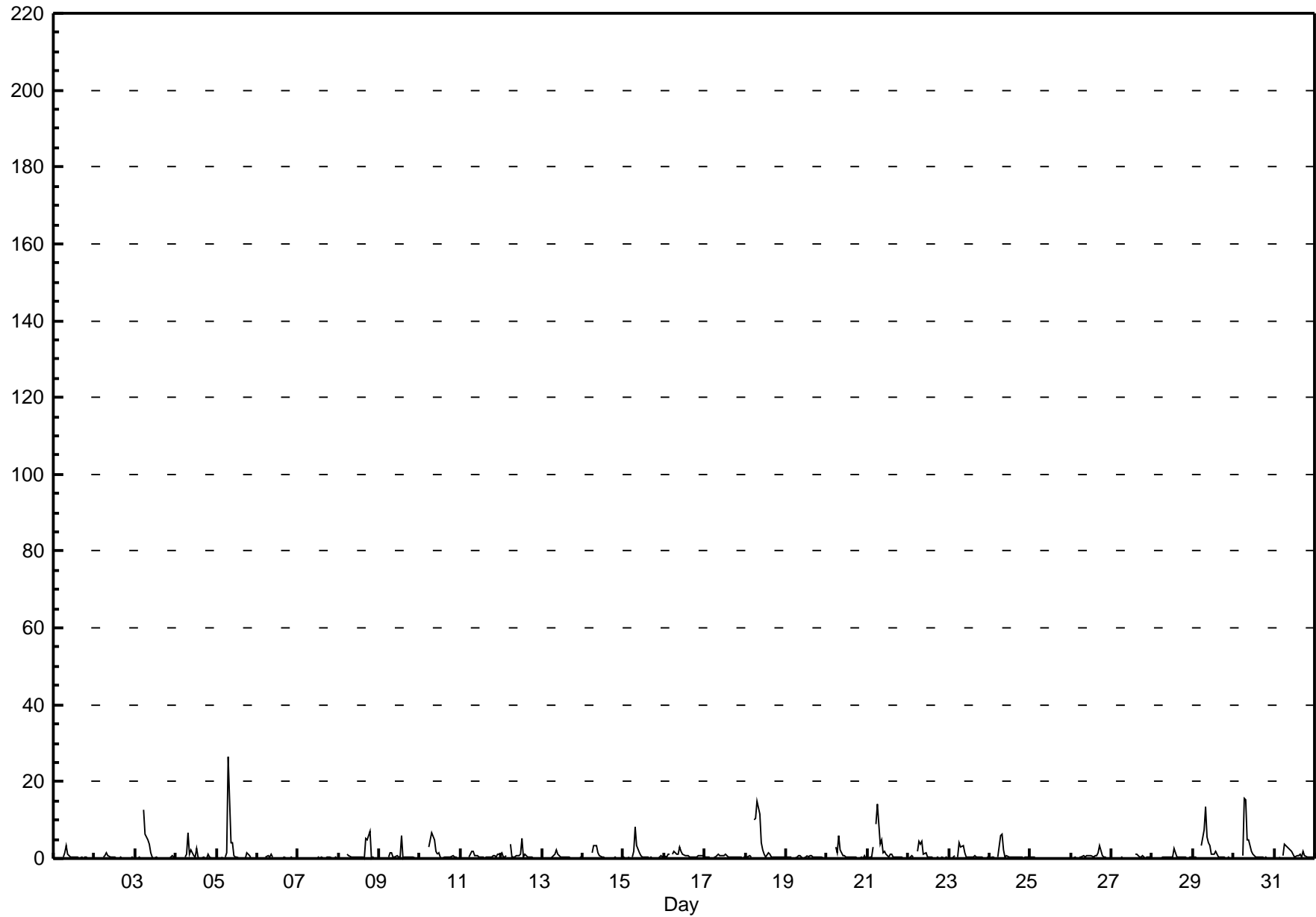
# Hourly Maximums

## Nitrogen Oxide (NO) - ppb Beaverlodge - August 2010

Maximum Value: 26.5 ppb on Aug 5 08:00		Maximum Daily Average: 2.7 ppb on Aug 18		Hours in Service: 744																							
Minimum Value: 0 ppb on Aug 30 00:00		Minimum Daily Average: 0.2 ppb on Aug 7		Hours of Data: 682																							
Maximum Diurnal Average: 4.9 ppb at hour 8		Minimum Diurnal Average: 0.1 ppb at hour 2		Hours of Missing Data: 62																							
Monthly Average: 0.92 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.1 Median = 0.3 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 2.0 P <sub>99</sub> = 12.4		Hours of Calibration: 36																							
				Percent Operational Time: 96.5																							
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-Aug	0	0	0	0	A	0	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.3	
2-Aug	0	0	0	0	A	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6	
3-Aug	0	0	0	0	A	13	6	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1.4	12.6	
4-Aug	0	0	0	0	A	1	1	7	1	2	1	0	3	0	0	0	0	0	0	1	0	0	0	0	0.8	6.7	
5-Aug	0	0	0	0	A	0	1	27	4	4	1	0	0	0	0	0	0	0	2	1	0	0	0	0	1.8	26.5	
6-Aug	0	0	0	0	A	0	1	1	1	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.3	1.1	
7-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
8-Aug	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	5	5	7	0	0	0	0	0	1.0	7.1	
9-Aug	0	0	0	0	A	0	1	2	0	0	1	0	0	6	0	0	0	0	0	0	0	0	0	0	0.6	6.0	
10-Aug	0	0	0	0	A	3	5	7	5	2	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1.2	6.7	
11-Aug	0	0	0	0	A	0	2	2	1	1	1	0	0	0	0	0	0	0	0	1	1	0	1	1	0.5	1.8	
12-Aug	1	0	0	1	A	4	0	0	0	1	1	1	5	0	1	0	0	0	0	0	0	0	0	0	0.8	5.4	
13-Aug	0	0	0	0	A	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.2	
14-Aug	0	0	0	0	A	1	3	4	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	3.5	
15-Aug	0	0	0	0	A	0	2	8	4	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0.9	8.3	
16-Aug	1	0	1	1	A	1	2	1	1	3	2	1	1	1	1	0	1	0	0	1	1	1	1	1	0.9	2.8	
17-Aug	0	0	0	0	A	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	1.2	
18-Aug	0	0	1	0	A	10	10	15	12	4	2	1	0	2	1	1	0	1	0	0	0	0	0	0	2.7	14.8	
19-Aug	0	0	0	0	A	0	0	1	1	0	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0.4	0.9	
20-Aug	0	0	0	0	A	3	2	6	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.8	6.0	
21-Aug	0	0	0	3	A	9	14	4	5	1	2	1	0	1	1	0	0	0	0	0	0	0	0	0	1.9	14.2	
22-Aug	0	0	1	0	A	2	4	4	5	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.9	4.5	
23-Aug	0	0	0	1	A	0	4	3	3	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.7	3.9	
24-Aug	0	0	0	0	A	1	6	6	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	6.4	
25-Aug	0	0	0	0	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	0.4	
26-Aug	0	0	0	0	A	0	0	1	0	1	1	1	1	0	1	1	2	3	1	0	0	0	0	0	0.6	3.3	
27-Aug	0	0	0	0	A	0	0	D	D	D	D	D	D	D	1	1	0	0	1	0	0	0	0	0	--	1.1	
28-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0.3	2.7	
29-Aug	0	0	0	0	A	4	7	13	6	4	3	1	1	2	1	0	0	0	0	0	0	0	0	0	2.0	13.3	
30-Aug	0	0	0	0	A	1	15	15	5	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	2.1	15.5	
31-Aug	0	0	0	0	A	1	4	3	3	2	2	1	0	1	1	1	0	2	1	0	0	0	0	0	1.1	3.9	
		0.2	0.1	0.2	0.3	--	1.9	3.2	4.9	2.5	1.5	0.9	0.6	0.7	0.7	0.4	0.3	0.5	0.6	0.5	0.3	0.2	0.2	0.3	0.2	Diurnal Average	
		1.5	0.4	1.0	2.8	--	12.6	15.5	26.5	11.7	4.7	3.4	1.4	5.4	6.0	1.1	1.2	5.3	4.9	7.1	1.0	0.6	0.6	1.0	1.2	Diurnal Maximum	
C - Calibration		D - DAS Failure				A - Automated Daily Zero Span																					

# Hourly Maximums

Nitrogen Oxide (NO) - ppb  
Beaverlodge - August 2010



# Hourly Averages

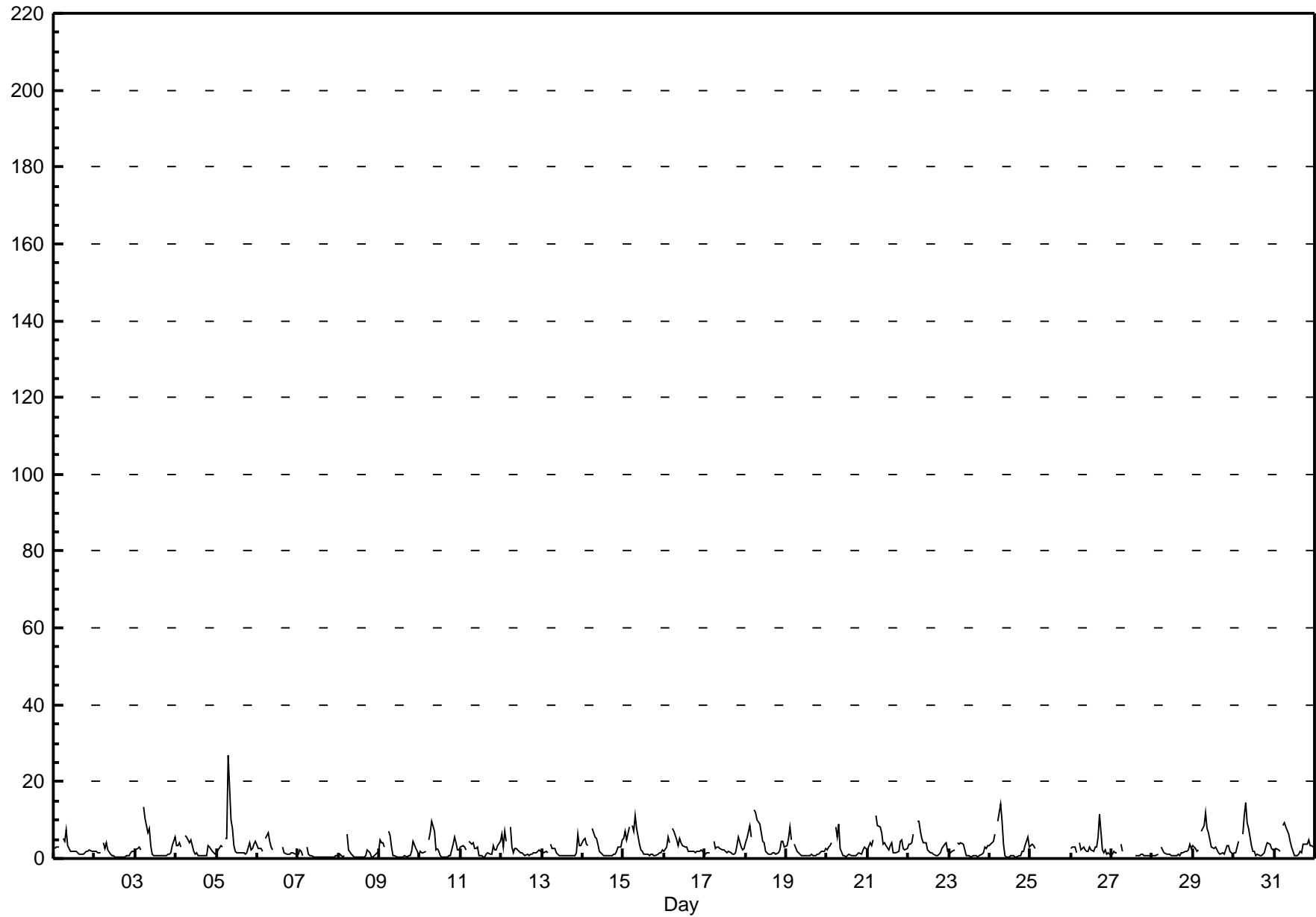
Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Beaverlodge - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 26.9 ppb on Aug 5 08:00	Maximum Daily Average: 4.7 ppb on Aug 18
Minimum Value: 0 ppb on Aug 8 16:00	Hours of Data: 682
Maximum Diurnal Average: 6.6 ppb at hour 8	Hours of Missing Data: 62
Monthly Average: 2.71 ppb	Hours of Calibration: 36
Minimum Daily Average: 0.8 ppb on Aug 7	Percent Operational Time: 96.5
Minimum Diurnal Average: 1.1 ppb at hour 16	
Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 1.0 Median = 1.9 Q <sub>3</sub> = 3.5 P <sub>90</sub> = 5.7 P <sub>99</sub> = 11.9	

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-Aug	3	3	3	3	A	5	5	7	3	3	2	2	2	2	1	1	1	1	1	2	2	2	2	2	2.5	7.3																							
2-Aug	2	2	2	2	A	4	3	4	2	1	1	1	0	0	0	1	0	0	0	1	1	2	2	2	1.4	4.0																							
3-Aug	2	3	3	2	A	13	11	7	8	3	1	1	1	1	1	1	1	1	1	1	1	2	3	6	3.1	13.3																							
4-Aug	3	3	4	3	A	6	6	5	4	5	2	1	2	1	1	1	1	1	1	3	3	2	2	1	2.5	5.8																							
5-Aug	1	2	3	3	A	5	5	27	10	8	3	2	2	2	1	1	1	1	1	4	2	2	4	4	4.2	26.9																							
6-Aug	3	3	3	2	A	5	7	4	3	2	C	C	C	C	C	3	2	1	1	1	1	2	1	1	2.5	6.6																							
7-Aug	1	2	2	1	A	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0.8	3.0																							
8-Aug	1	1	1	1	A	6	2	1	1	1	0	0	0	0	0	0	1	2	1	0	0	1	1	2	1.1	6.3																							
9-Aug	5	4	4	3	A	7	6	3	1	1	1	1	0	0	0	1	1	1	1	2	5	3	2	1	2.2	7.1																							
10-Aug	2	2	2	2	A	5	7	10	7	2	3	2	1	0	0	0	1	1	1	4	6	4	2	2	2.8	9.7																							
11-Aug	3	4	3	2	A	4	4	4	2	3	3	1	1	1	1	1	1	1	1	3	2	2	3	4	2.4	4.5																							
12-Aug	6	3	7	5	A	8	3	2	3	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	2.5	8.1																							
13-Aug	2	1	2	1	A	4	3	3	2	1	1	1	1	1	1	1	1	1	1	1	2	6	3	3	1.7	6.4																							
14-Aug	5	5	4	4	A	8	7	6	5	4	2	1	1	1	1	1	1	1	1	1	2	3	3	5	3.0	7.7																							
15-Aug	5	7	5	8	A	9	7	11	8	4	2	2	1	1	1	1	1	1	1	1	1	1	2	2	3.6	11.4																							
16-Aug	2	3	6	4	A	8	7	5	3	5	4	3	3	3	2	2	2	2	2	2	2	2	2	2	3.3	8.0																							
17-Aug	1	1	1	2	A	4	3	3	3	3	2	2	2	2	2	1	1	1	1	3	6	3	2	3	2.3	5.5																							
18-Aug	4	5	9	6	A	13	12	10	9	7	5	4	2	1	1	1	2	1	1	2	2	5	4	3	4.7	12.7																							
19-Aug	3	5	8	5	A	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	2.0	8.2																							
20-Aug	2	3	3	4	A	8	5	9	3	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3	2.4	8.9																							
21-Aug	2	4	3	5	A	11	8	8	7	4	4	3	2	4	4	2	2	2	2	4	5	3	2	3	4.1	11.2																							
22-Aug	4	4	4	6	A	10	10	7	5	4	4	2	2	1	1	1	1	1	1	2	2	4	4	2	3.6	9.7																							
23-Aug	2	1	2	2	A	4	4	4	4	2	1	1	1	1	1	1	1	1	1	1	1	3	3	3	1.8	4.0																							
24-Aug	4	4	4	6	A	10	14	10	4	1	1	1	1	1	1	1	1	1	1	2	2	3	6	3	3.4	14.2																							
25-Aug	4	4	3	3	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	3.7																							
26-Aug	3	3	3	2	A	4	2	3	2	2	2	3	2	2	3	3	6	11	2	1	2	1	1	1	2.8	11.5																							
27-Aug	1	2	2	1	A	4	2	D	D	D	D	D	D	D	D	1	1	1	1	1	1	1	1	1	--	3.7																							
28-Aug	1	1	1	1	A	3	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	4	3	1.5	3.9																							
29-Aug	3	3	2	2	A	7	9	12	8	7	5	3	2	3	2	1	1	1	1	2	3	3	2	1	3.7	12.0																							
30-Aug	1	2	3	4	A	7	11	15	9	8	3	2	2	1	1	1	1	1	1	3	4	4	3	2	3.8	14.6																							
31-Aug	2	3	2	2	A	9	9	8	7	5	3	2	1	1	1	2	2	4	4	4	5	3	3	3	3.6	9.4																							
																								2.6	3.0	3.3	3.1	--	6.6	5.8	6.6	4.3	3.1	2.1	1.5	1.2	1.2	1.1	1.1	1.1	1.5	1.2	1.9	2.3	2.5	2.5	2.4	Diurnal Average	
																								6.3	7.1	8.7	8.3	--	13.3	14.2	26.9	10.2	7.7	4.8	4.1	2.9	3.5	4.3	3.1	5.6	11.5	3.8	4.4	5.8	6.4	5.6	5.5	Diurnal Maximum	

C - Calibration      D - DAS Failure      A - Automated Daily Zero Span



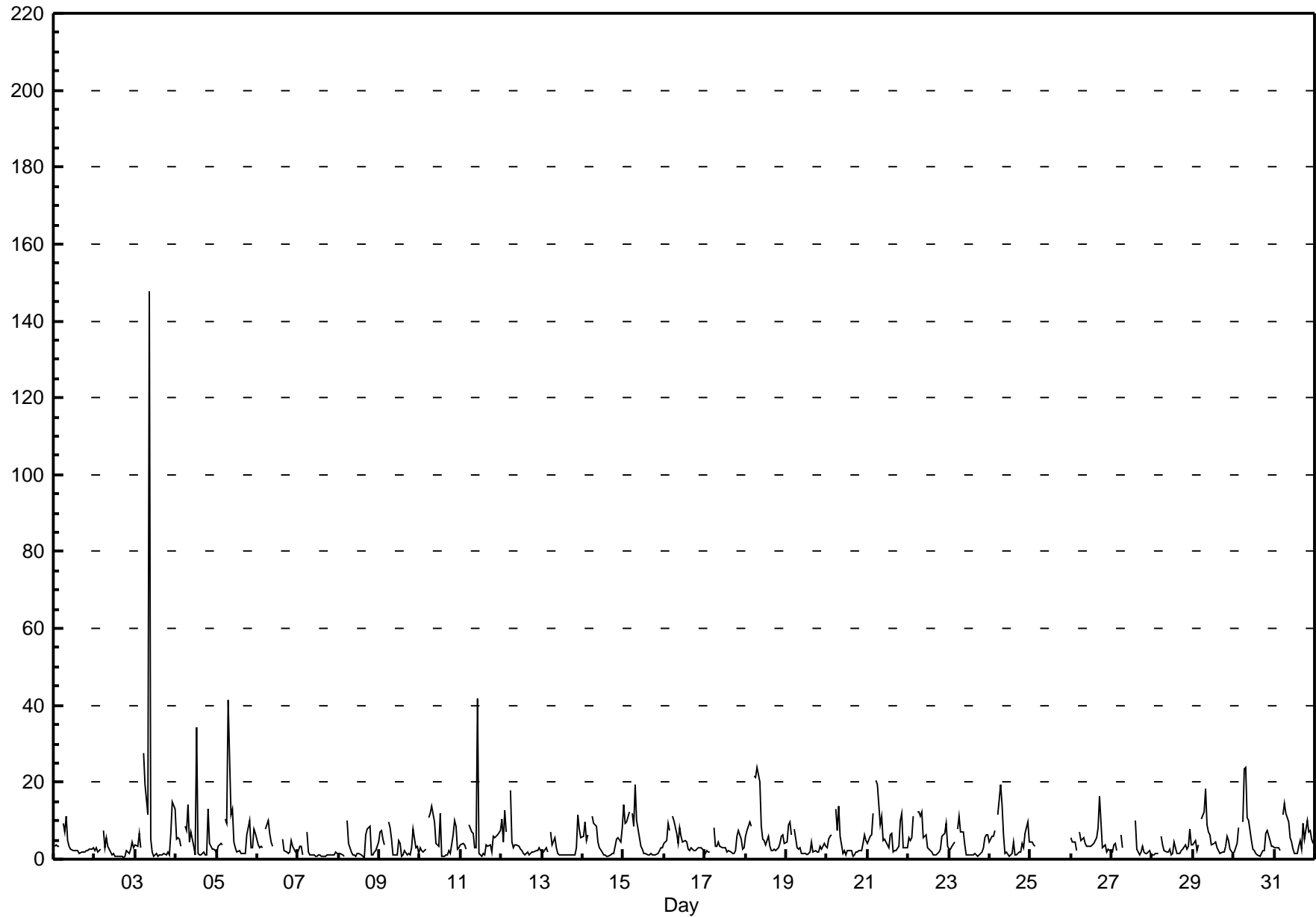
# Hourly Maximums

## Oxides of Nitrogen (NO<sub>x</sub>) - ppb

### Beaverlodge - August 2010

Maximum Value: 147.8 ppb on Aug 3 09:00		Maximum Daily Average: 12.0 ppb on Aug 3		Hours in Service: 744																						
Minimum Value: 1 ppb on Aug 8 16:00		Minimum Daily Average: 1.6 ppb on Aug 7		Hours of Data: 682																						
Maximum Diurnal Average: 11.3 ppb at hour 9		Minimum Diurnal Average: 2.0 ppb at hour 17		Hours of Missing Data: 62																						
Monthly Average: 4.80 ppb		Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 1.1 Q <sub>1</sub> = 1.7 Median = 3.1 Q <sub>3</sub> = 5.9 P <sub>90</sub> = 10.0 P <sub>99</sub> = 23.8		Hours of Calibration: 36																						
				Percent Operational Time: 96.5																						
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-Aug	3	4	3	3	A	9	7	11	5	3	3	2	2	2	1	2	2	2	2	2	2	3	3	3	3.5	11.1
2-Aug	2	3	2	3	A	7	3	6	3	2	1	1	1	1	1	1	1	1	1	2	1	2	5	3	2.3	7.4
3-Aug	4	4	7	3	A	28	20	11	148	5	2	1	1	1	1	1	1	1	2	1	7	15	13	12.0	147.8	
4-Aug	5	6	5	3	A	9	8	14	4	7	3	1	34	2	1	1	2	1	1	13	4	3	3	2	5.7	34.3
5-Aug	2	3	4	4	A	10	9	41	11	13	4	3	2	2	2	2	2	2	6	10	3	3	8	7	6.7	41.2
6-Aug	4	3	3	3	A	8	10	7	5	4	C	C	C	C	C	5	2	2	2	2	5	3	2	2	3.9	10.2
7-Aug	2	3	3	1	A	7	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.6	7.1
8-Aug	2	2	1	1	A	10	4	2	1	1	1	1	2	1	1	1	6	8	9	1	1	2	2	4	2.8	10.1
9-Aug	7	8	5	4	A	10	8	5	1	1	1	5	4	1	1	2	1	1	1	3	8	3	3	1	3.7	9.7
10-Aug	3	2	2	3	A	11	12	14	10	4	4	3	12	1	1	1	1	2	2	6	10	9	3	3	5.1	13.8
11-Aug	4	4	4	3	A	9	7	7	3	3	42	2	1	1	1	4	3	4	2	6	5	6	6	7	5.8	41.6
12-Aug	10	5	13	7	A	18	5	3	4	4	4	3	2	2	1	2	1	1	2	2	2	2	3	2	4.2	18.0
13-Aug	2	2	3	2	A	7	4	6	3	1	1	1	1	1	1	1	1	1	1	3	12	8	6	3.0	11.6	
14-Aug	6	10	5	6	A	11	9	9	9	4	3	2	1	1	1	1	1	1	1	3	5	6	5	8	4.7	11.2
15-Aug	14	9	10	12	A	12	9	19	10	6	3	3	2	1	1	1	2	1	1	1	1	2	3	3	5.5	19.3
16-Aug	4	5	9	7	A	11	10	7	4	8	6	4	5	4	3	2	3	2	2	3	3	3	3	2	4.9	11.3
17-Aug	2	2	2	2	A	8	3	4	4	3	3	3	3	2	2	2	1	2	2	6	7	5	3	3	3.3	8.1
18-Aug	6	7	10	8	A	22	21	24	20	8	5	5	4	6	3	2	2	3	2	3	4	6	6	4	8.0	23.9
19-Aug	4	9	10	6	A	8	3	3	3	1	1	2	1	1	2	4	2	2	2	2	3	3	4	3	3.5	9.7
20-Aug	3	5	6	6	A	13	7	14	6	1	2	1	2	2	2	1	1	2	2	2	2	4	6	5	4.2	13.6
21-Aug	4	6	6	12	A	21	19	9	11	5	5	4	3	6	7	2	2	2	3	10	12	3	3	3	6.9	20.7
22-Aug	6	5	6	11	A	12	12	11	12	5	6	3	3	2	2	1	1	2	2	3	6	7	9	3	5.7	12.4
23-Aug	3	3	3	4	A	8	11	7	7	4	1	1	1	1	1	2	1	1	1	2	3	5	6	6	3.6	11.3
24-Aug	4	6	6	7	A	12	20	14	6	2	2	1	1	2	5	1	1	2	2	4	3	7	10	5	5.2	19.5
25-Aug	5	4	4	3	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	4.6
26-Aug	6	4	4	2	A	7	5	6	4	3	3	3	3	4	5	6	8	16	3	3	4	2	3	2	4.7	16.5
27-Aug	2	4	4	2	A	6	3	D	D	D	D	D	D	D	10	3	1	2	3	2	1	2	1	1	--	10.1
28-Aug	1	1	2	2	A	6	4	2	2	2	3	1	1	4	2	2	1	2	3	4	3	3	8	4	2.7	7.8
29-Aug	4	5	2	4	A	10	12	18	9	7	6	4	4	5	3	2	1	2	2	3	6	5	3	2	5.2	18.4
30-Aug	2	3	4	8	A	10	24	24	11	10	5	3	2	1	1	1	2	2	2	7	8	5	3	3	6.1	24.0
31-Aug	3	3	3	2	A	12	14	12	10	6	5	3	1	2	3	5	3	9	5	10	7	7	5	4	5.8	14.5
		4.1	4.5	4.9	4.7	--	11.1	9.5	10.7	11.3	4.4	4.5	2.4	3.6	2.2	2.3	2.0	2.0	2.7	2.3	4.0	4.2	4.3	4.8	3.9	Diurnal Average
		14.2	9.8	12.9	12.2	--	27.6	23.6	41.2	147.8	13.0	41.6	5.0	34.3	6.4	10.1	5.7	8.3	16.5	8.7	13.0	11.8	11.6	14.8	12.9	Diurnal Maximum
C - Calibration		D - DAS Failure				A - Automated Daily Zero Span																				





# Hourly Averages

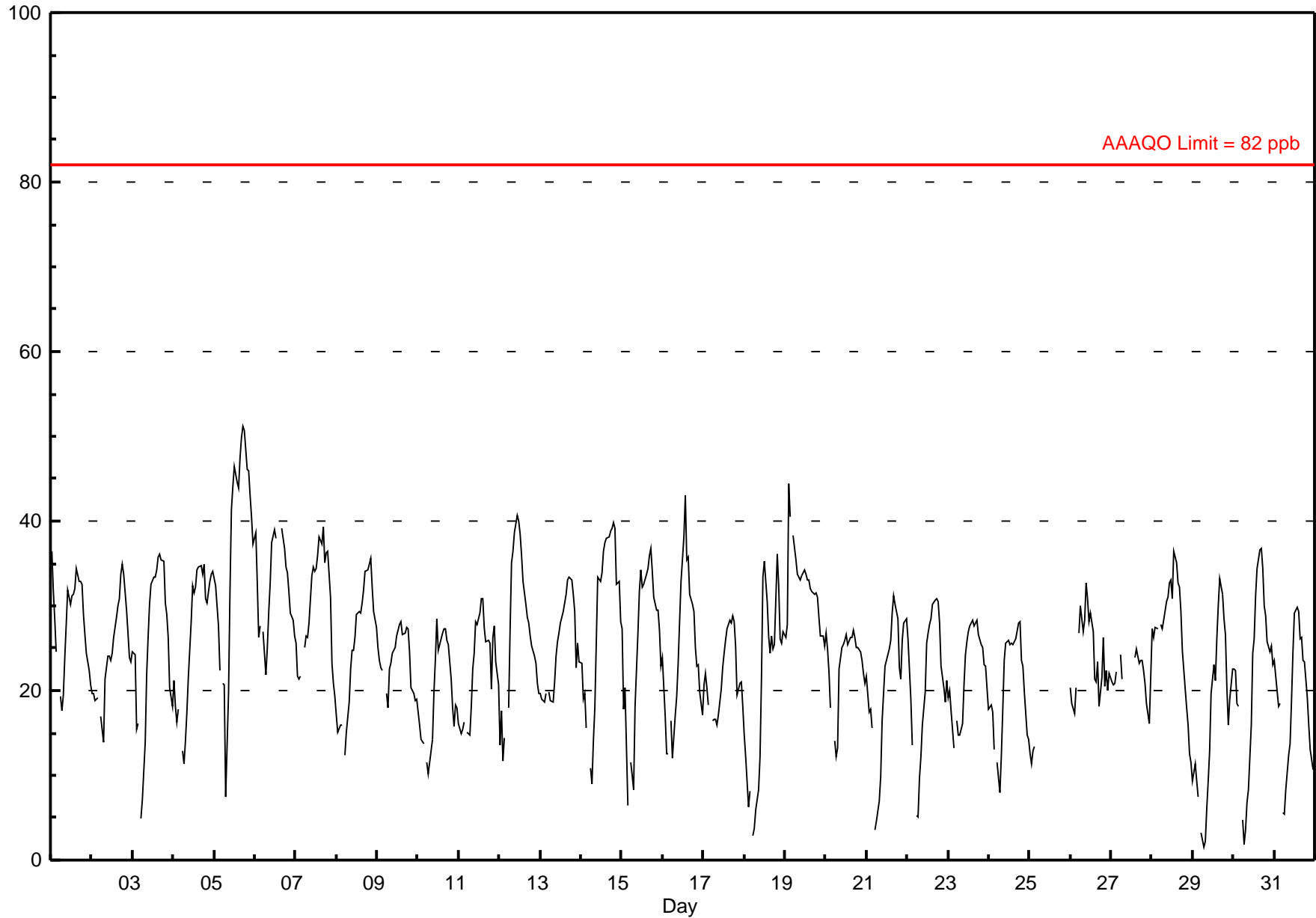
Ozone (O<sub>3</sub>) - ppb

Beaverlodge - August 2010

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 51.2 ppb on Aug 5 18:00	Maximum Daily Average: 36.9 ppb on Aug 5		Hours of Data:	684
Minimum Value: 1 ppb on Aug 29 07:00	Minimum Daily Average: 17.0 ppb on Aug 29		Hours of Missing Data:	60
Maximum Diurnal Average: 31.5 ppb at hour 17	Minimum Diurnal Average: 14.8 ppb at hour 7		Hours of Calibration:	34
Monthly Average: 24.56 ppb	Percentiles: P <sub>1</sub> = 3.3 P <sub>10</sub> = 13.2 Q <sub>1</sub> = 19.0 Median = 25.1 Q <sub>3</sub> = 30.3 P <sub>90</sub> = 34.5 P <sub>99</sub> = 45.9		Percent Operational Time:	96.5

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-Aug	36	32	29	25	A	19	18	19	24	28	32	30	31	31	32	34	33	33	33	29	27	24	22	21	27.9	36.4
2-Aug	20	20	19	19	A	17	16	14	21	24	24	23	24	26	29	30	31	34	35	34	30	27	24	23	24.5	34.9
3-Aug	25	24	15	16	A	5	7	14	22	26	30	33	33	33	34	36	36	35	35	30	29	26	20	18	25.4	36.0
4-Aug	21	18	16	18	A	13	11	14	18	22	28	32	32	34	35	35	34	35	31	30	33	34	34	34	26.5	35.0
5-Aug	33	32	28	22	A	21	21	7	20	32	41	44	46	45	44	48	50	51	51	46	46	43	40	37	36.9	51.2
6-Aug	39	33	26	28	A	27	22	25	29	33	37	39	38	C	C	C	39	37	35	34	32	29	28	26	31.8	39.2
7-Aug	26	22	21	22	A	25	26	26	28	34	35	34	34	36	38	37	39	35	36	36	31	23	21	19	29.8	39.3
8-Aug	17	15	16	16	A	12	15	19	22	25	25	26	29	29	29	30	32	34	34	35	36	32	29	28	25.5	35.7
9-Aug	25	24	23	22	A	20	18	23	23	24	25	27	27	28	28	27	27	27	27	25	20	20	19	19	23.8	28.2
10-Aug	17	16	14	14	A	12	10	12	14	20	24	28	25	25	27	27	27	26	25	21	18	16	18	18	19.8	28.5
11-Aug	16	15	15	16	A	15	15	18	23	24	28	28	29	31	31	27	26	26	26	20	26	28	23	21	22.9	30.9
12-Aug	13	18	12	14	A	18	27	35	36	39	41	40	39	36	33	30	29	28	26	25	24	23	21	20	27.2	40.7
13-Aug	20	19	19	20	A	20	19	19	21	24	26	27	28	29	30	31	33	33	33	31	29	23	26	23	25.3	33.4
14-Aug	23	19	20	16	A	11	9	14	18	26	33	33	34	36	37	38	38	39	39	40	39	33	33	28	28.5	39.8
15-Aug	27	18	20	6	A	12	10	8	18	27	32	34	32	33	34	34	36	37	34	31	30	30	27	23	25.8	36.7
16-Aug	24	17	13	13	A	16	12	17	19	23	28	33	38	43	35	36	31	30	29	25	23	23	20	17	24.6	43.1
17-Aug	21	22	20	18	A	17	17	17	16	17	20	23	24	26	27	28	28	29	28	25	20	21	21	18	21.9	28.9
18-Aug	15	12	6	8	A	3	4	6	8	12	21	33	35	31	26	24	26	25	25	36	32	26	26	27	20.4	36.2
19-Aug	26	28	44	41	A	38	35	34	33	33	34	34	34	33	33	32	32	31	31	31	29	26	27	25	32.4	44.4
20-Aug	27	25	22	18	A	14	12	13	23	25	25	26	27	25	26	26	27	26	25	25	25	23	22	21	23.0	27.1
21-Aug	22	17	18	16	A	4	5	7	10	16	20	23	24	25	26	29	31	30	29	23	21	26	28	29	20.7	31.1
22-Aug	26	22	19	14	A	5	5	10	12	16	20	26	27	28	28	30	31	31	31	28	23	20	19	21	21.3	30.8
23-Aug	19	20	18	13	A	16	15	15	16	21	24	26	27	28	28	28	28	28	27	25	25	23	23	20	22.3	28.2
24-Aug	18	18	17	13	A	12	8	12	18	24	26	26	25	26	26	26	26	28	28	24	23	20	15	14	20.5	28.1
25-Aug	12	11	13	13	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	13.5
26-Aug	20	19	17	20	A	27	30	27	28	33	31	28	29	27	21	21	23	18	22	26	20	22	20	22	24.0	32.6
27-Aug	21	21	21	22	A	24	21	D	D	D	D	D	D	D	24	25	23	24	24	22	21	18	16	22	--	24.8
28-Aug	27	26	27	27	A	28	27	28	31	31	33	33	31	36	35	33	32	29	25	20	18	16	13	12	26.9	36.4
29-Aug	9	11	9	7	A	3	1	2	6	9	13	20	23	21	26	30	33	31	28	27	20	16	19	23	17.0	33.2
30-Aug	23	22	18	18	A	5	2	4	7	8	16	24	26	31	34	37	37	34	30	29	26	25	25	23	21.9	36.8
31-Aug	24	22	18	19	A	6	5	8	12	14	19	25	29	30	29	26	26	24	23	19	16	13	12	11	18.7	29.8
	22.3	20.6	19.2	17.9	--	15.4	14.8	16.1	19.9	23.7	27.2	29.6	30.4	30.7	30.6	30.9	31.5	31.0	30.3	28.5	26.3	24.3	23.0	22.1	Diurnal Average	
	38.7	32.6	44.4	40.6	--	38.2	35.3	35.2	36.5	38.7	41.4	44.0	46.5	44.6	43.8	47.5	49.9	51.2	50.7	46.1	46.0	43.0	40.5	37.3	Diurnal Maximum	

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





# Hourly Maximums

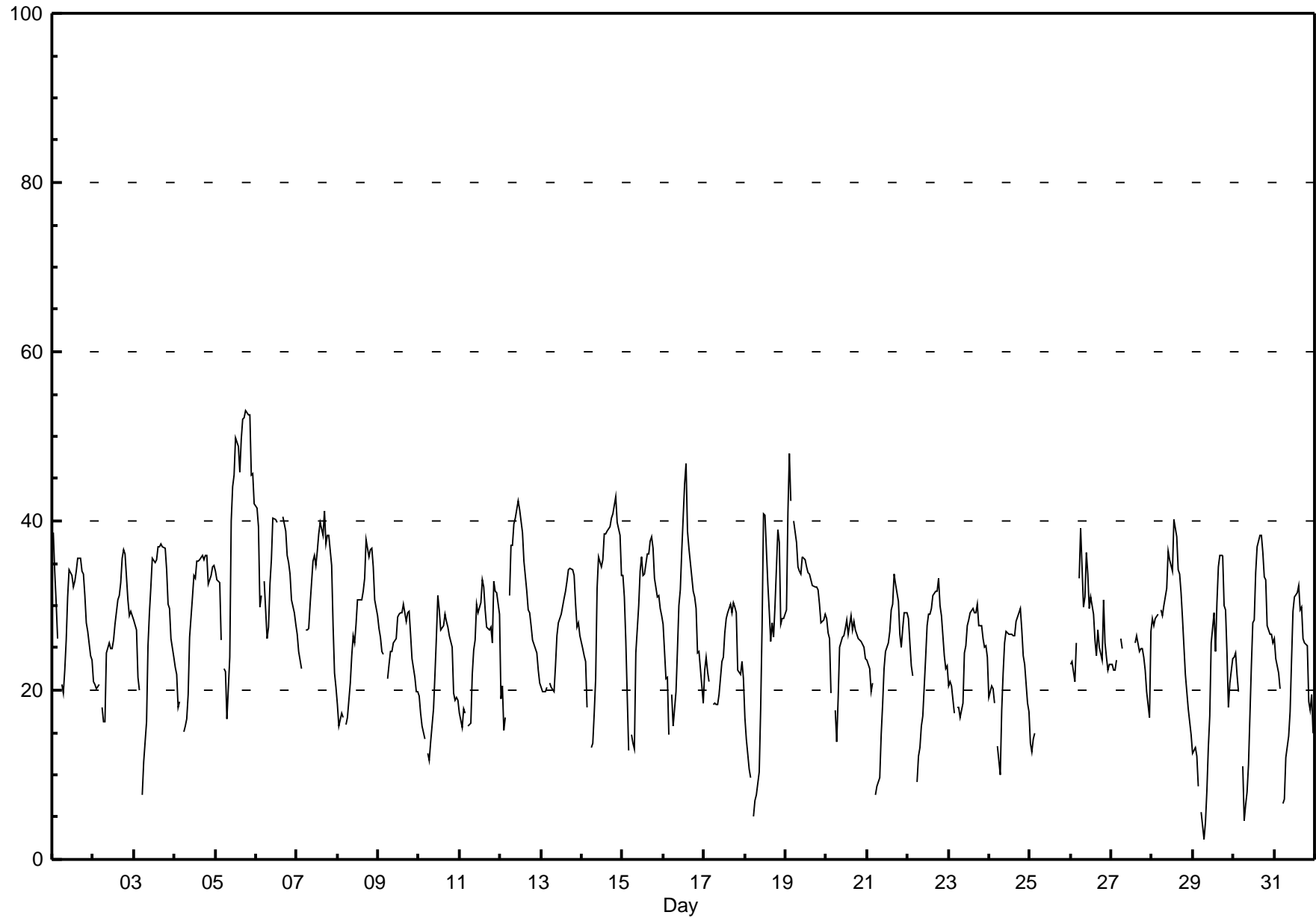
Ozone (O<sub>3</sub>) - ppb

Beaverlodge - August 2010

Maximum Value: 53.0 ppb on Aug 5 19:00		Maximum Daily Average: 40.4 ppb on Aug 5		Hours in Service: 744																							
Minimum Value: 2 ppb on Aug 29 07:00		Minimum Daily Average: 20.0 ppb on Aug 29		Hours of Data: 684																							
Maximum Diurnal Average: 33.3 ppb at hour 17		Minimum Diurnal Average: 18.0 ppb at hour 7		Hours of Missing Data: 60																							
Monthly Average: 27.10 ppb		Percentiles: P <sub>1</sub> = 6.9 P <sub>10</sub> = 16.2 Q <sub>1</sub> = 21.9 Median = 27.4 Q <sub>3</sub> = 32.6 P <sub>90</sub> = 37.1 P <sub>99</sub> = 49.6		Hours of Calibration: 34																							
				Percent Operational Time: 96.5																							
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-Aug	39	34	30	26	A	21	20	22	26	31	34	34	32	33	34	36	36	34	34	31	28	27	24	24	29.9	38.6	
2-Aug	21	21	20	21	A	18	16	16	24	26	25	25	26	28	31	31	33	36	37	36	31	29	29	29	26.4	36.5	
3-Aug	28	27	21	20	A	8	12	16	25	29	32	36	35	36	37	37	37	37	37	34	30	30	26	24	28.4	37.3	
4-Aug	23	22	18	19	A	15	16	17	19	26	31	34	33	35	35	35	36	35	36	36	33	34	35	35	28.6	36.0	
5-Aug	34	33	33	26	A	23	22	17	24	40	44	45	50	49	46	50	52	52	53	53	53	45	46	42	40.4	53.0	
6-Aug	42	39	30	31	A	33	26	27	33	35	40	40	40	C	C	C	41	39	36	35	34	31	29	28	34.4	41.5	
7-Aug	27	25	24	23	A	27	27	27	30	35	36	35	36	39	40	38	41	37	38	38	35	28	22	20	31.7	41.1	
8-Aug	18	16	17	17	A	16	17	21	24	26	26	28	31	31	31	32	33	38	36	37	37	35	31	29	27.1	37.7	
9-Aug	27	26	25	24	A	21	23	25	25	26	26	29	29	29	29	30	28	29	29	27	24	21	20	20	25.7	30.2	
10-Aug	19	17	16	14	A	12	12	14	18	22	26	31	30	27	28	29	28	28	27	25	20	19	19	19	21.7	31.2	
11-Aug	17	16	18	17	A	16	16	22	25	26	30	29	30	33	32	30	27	27	28	26	33	32	32	29	25.6	33.0	
12-Aug	19	20	15	17	A	31	37	37	40	40	42	41	40	39	35	32	29	29	28	26	25	24	22	21	30.1	42.5	
13-Aug	20	20	20	20	A	21	20	20	23	26	28	29	29	31	32	33	34	34	34	34	30	28	28	26	26.9	34.4	
14-Aug	25	24	23	18	A	13	14	17	21	32	36	35	35	38	38	39	39	40	41	42	43	40	38	34	31.6	42.9	
15-Aug	34	31	26	13	A	15	14	13	24	30	34	36	34	34	36	36	38	38	37	33	31	31	30	29	29.4	38.2	
16-Aug	28	21	21	15	A	19	16	20	25	30	32	36	44	47	39	37	35	32	31	30	24	25	22	19	28.2	46.7	
17-Aug	22	24	22	21	A	18	18	18	18	19	23	24	27	29	29	30	29	30	30	29	22	22	23	21	24.0	30.3	
18-Aug	17	14	11	10	A	5	7	8	10	18	28	41	41	33	29	26	28	26	30	39	37	28	28	28	23.5	40.9	
19-Aug	29	41	48	42	A	40	38	35	34	34	36	35	35	34	34	33	32	32	32	30	28	28	29	29	34.4	48.0	
20-Aug	28	27	26	20	A	18	14	19	25	26	26	27	28	27	29	27	28	27	27	26	26	25	25	24	25.0	28.8	
21-Aug	23	22	20	21	A	8	9	10	15	18	22	25	26	27	29	30	34	33	31	27	25	27	29	29	23.4	33.8	
22-Aug	28	26	23	22	A	9	12	13	16	17	24	28	29	29	30	31	32	32	33	30	29	24	22	23	24.4	33.2	
23-Aug	20	21	20	17	A	18	18	17	18	24	25	28	28	29	30	29	29	30	28	28	26	25	25	24	24.3	30.2	
24-Aug	19	20	20	18	A	13	10	18	22	26	27	27	27	27	26	27	28	29	30	27	24	23	19	17	22.8	29.7	
25-Aug	14	13	14	15	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	14.8	
26-Aug	23	23	21	26	A	33	39	30	31	36	34	30	31	29	26	24	27	25	24	31	26	24	22	23	27.7	39.1	
27-Aug	23	22	22	23	A	26	25	D	D	D	D	D	D	D	26	26	25	25	25	24	22	20	17	27	--	27.0	
28-Aug	28	28	28	29	A	30	29	30	32	36	35	35	34	40	38	34	34	31	28	22	20	18	16	15	29.2	40.1	
29-Aug	13	13	12	9	A	6	2	4	8	13	17	26	29	25	30	35	36	36	30	30	24	18	21	24	20.0	36.0	
30-Aug	24	24	22	20	A	11	5	6	8	11	23	28	28	34	37	38	38	36	33	33	28	27	27	26	24.6	38.4	
31-Aug	26	24	22	20	A	7	7	12	15	17	24	29	31	32	32	29	30	26	26	25	19	18	19	15	21.9	32.5	
		24.5	23.7	22.3	20.4	--	18.3	18.0	19.0	22.7	26.8	29.9	31.8	32.7	32.8	32.7	32.5	33.3	32.8	32.2	31.5	28.9	26.8	25.9	25.0	Diurnal Average	
		41.5	41.0	48.0	42.3	--	39.9	39.1	37.2	39.7	40.4	44.1	45.5	49.8	48.8	45.8	49.7	52.0	52.3	53.0	52.6	52.6	45.4	45.5	42.0	Diurnal Maximum	
C - Calibration		D - DAS Failure				A - Automated Daily Zero Span																					

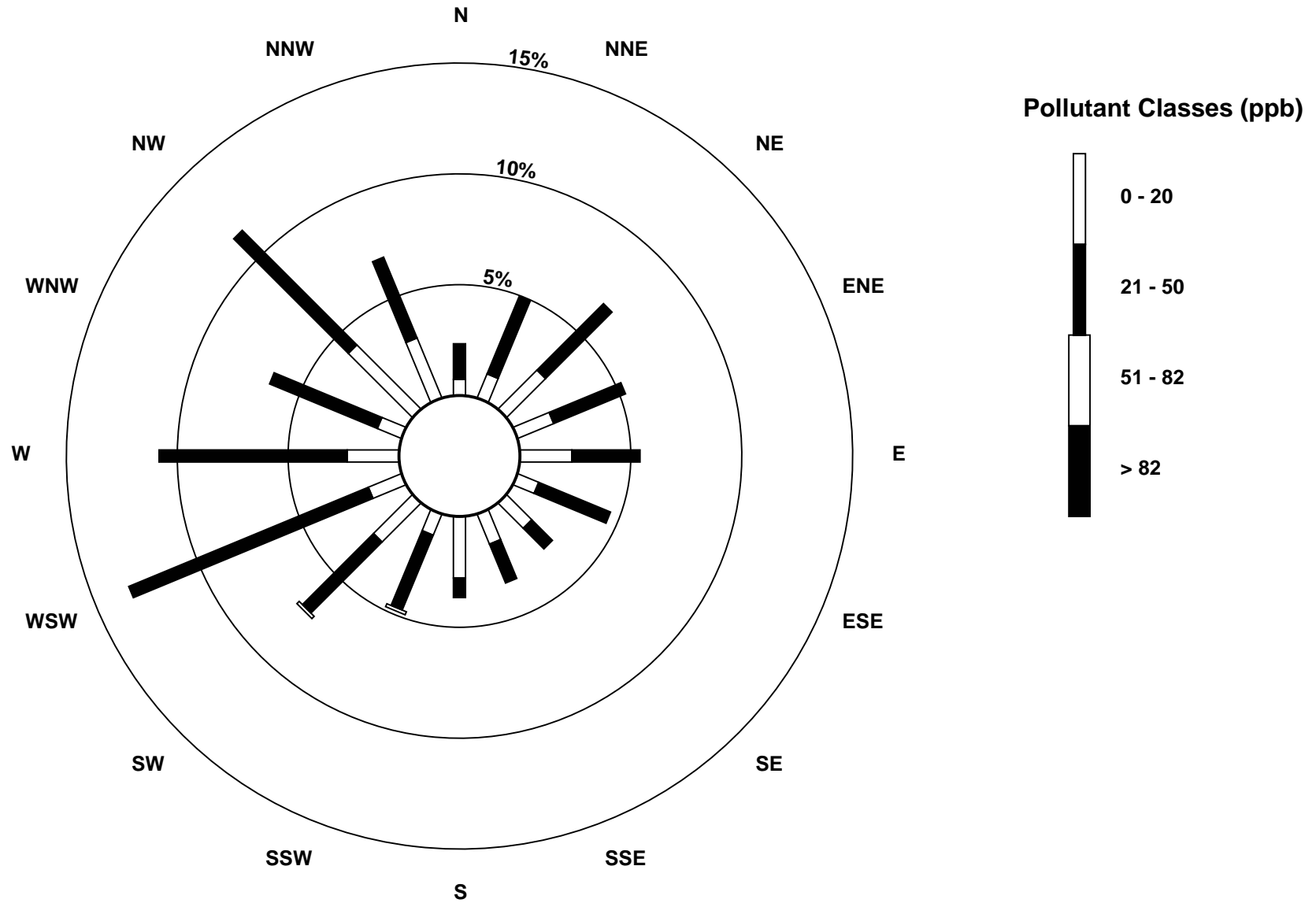
# Hourly Maximums

Ozone (O<sub>3</sub>) - ppb  
Beaverlodge - August 2010



# Pollutant Rose

Ozone (O<sub>3</sub>) - ppb  
Beaverlodge - August 2010



# Eight Hour Running Averages

Ozone (O<sub>3</sub>) - ppb

Beaverlodge - August 2010

Maximum Value: 47.5 ppb on Aug 5 20:00																					Hours in Service:	744			
Minimum Value: 5.6 ppb on Aug 29 10:00																					Hours of Data:	703			
Percentiles: P <sub>1</sub> = 7.7 P <sub>10</sub> = 15.4 Q <sub>1</sub> = 19.8 Median = 24.4 Q <sub>3</sub> = 29.1 P <sub>90</sub> = 33.2 P <sub>99</sub> = 45.3																					Hours of Missing Data:	41			
																					Hours of Calibration:	16			
																					Percent Operational Time:	96.6			
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-Aug	42	39	37	34	33	31	28	25	24	23	24	24	25	27	28	30	31	32	32	32	31	31	29	28	41.8
2-Aug	26	24	23	21	21	20	19	18	18	19	19	20	20	22	23	25	26	28	29	30	31	31	30	30	31.0
3-Aug	29	28	25	23	22	19	17	15	15	15	17	20	21	25	28	31	33	34	34	34	34	33	31	29	34.5
4-Aug	27	25	22	21	20	18	17	16	15	16	18	20	21	24	26	29	31	33	34	33	33	33	33	33	33.5
5-Aug	33	33	32	31	31	29	27	23	22	21	23	27	29	32	35	40	44	46	47	48	47	47	47	46	47.5
6-Aug	44	42	39	37	35	33	30	28	27	27	29	30	31	32	34	N	N	N	N	N	N	34	33	33	44.2
7-Aug	31	29	27	26	25	24	24	24	24	26	28	30	30	32	33	34	36	36	36	37	36	35	32	30	36.6
8-Aug	27	25	22	20	18	17	16	16	16	18	19	21	22	24	26	27	28	29	31	32	32	33	33	32	32.8
9-Aug	32	30	29	27	26	24	23	22	22	22	23	23	24	26	26	27	27	27	27	27	26	25	24	23	31.6
10-Aug	22	20	19	17	17	16	15	14	13	14	15	17	18	20	22	24	25	26	26	26	25	23	22	21	26.4
11-Aug	20	18	17	17	16	16	16	16	17	18	20	22	23	24	26	28	28	28	28	27	27	26	25	24	28.2
12-Aug	23	22	20	19	18	17	18	20	23	26	30	34	34	37	37	37	36	34	33	31	29	27	26	24	37.3
13-Aug	23	22	21	21	20	20	19	19	19	20	21	22	23	24	25	27	29	30	31	31	31	31	30	29	31.4
14-Aug	28	26	24	22	21	20	17	16	15	16	18	20	22	25	29	32	34	36	37	38	38	38	37	36	38.4
15-Aug	35	32	30	26	24	21	17	15	13	15	16	20	22	24	27	30	33	34	34	34	33	33	32	31	34.7
16-Aug	29	27	24	22	21	19	17	16	15	16	18	21	23	27	30	32	33	34	34	34	32	29	27	25	34.5
17-Aug	23	22	21	21	20	19	19	19	18	17	17	18	19	20	21	23	24	26	27	27	26	26	25	24	27.0
18-Aug	22	20	17	15	15	12	9	8	7	7	9	13	15	19	22	24	26	28	28	29	28	28	28	28	28.7
19-Aug	28	28	31	31	31	33	34	35	36	37	35	35	34	34	33	33	33	33	33	32	32	31	30	29	37.0
20-Aug	28	28	27	25	24	23	21	19	18	18	19	20	21	22	24	25	26	26	26	26	26	25	25	24	28.5
21-Aug	24	23	22	20	20	17	14	12	11	11	11	12	13	16	19	22	24	26	27	27	27	27	27	27	27.1
22-Aug	26	25	24	23	23	20	17	14	12	12	12	13	15	18	21	23	26	28	29	29	29	28	26	25	29.1
23-Aug	24	23	21	19	19	18	18	17	16	16	17	19	20	21	23	25	26	27	27	27	27	27	26	25	27.4
24-Aug	24	22	21	20	19	17	15	14	14	15	16	18	19	21	23	24	25	26	26	26	26	25	24	22	26.3
25-Aug	21	18	17	15	14	13	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	20.5
26-Aug	N	N	N	N	N	N	22	23	24	26	28	29	29	29	28	27	27	25	24	23	22	22	22	22	29.1
27-Aug	21	22	22	21	21	22	22	22	N	N	N	N	N	N	N	N	N	N	N	24	23	23	22	21	23.5
28-Aug	22	22	23	23	23	25	26	27	28	28	29	30	30	31	32	33	33	33	32	30	29	26	23	21	33.0
29-Aug	18	15	14	12	11	9	8	6	6	6	6	8	10	12	15	19	22	25	27	27	27	26	25	27.5	
30-Aug	23	22	21	20	20	18	16	13	11	9	8	9	11	15	19	23	27	30	32	32	32	31	30	29	32.3
31-Aug	27	25	24	23	22	19	17	14	13	12	12	13	15	18	21	23	25	26	27	26	24	22	20	18	27.0
44.2 41.9 38.8 36.5 35.1 32.9 34.2 35.2 36.2 37.0 35.4 34.5 34.4 36.6 37.3 39.9 43.7 46.1 47.3 47.5 47.5 47.3 46.9 45.6																									
Diurnal Maximums																									
N - Not Valid																									

# Hourly Averages

# Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

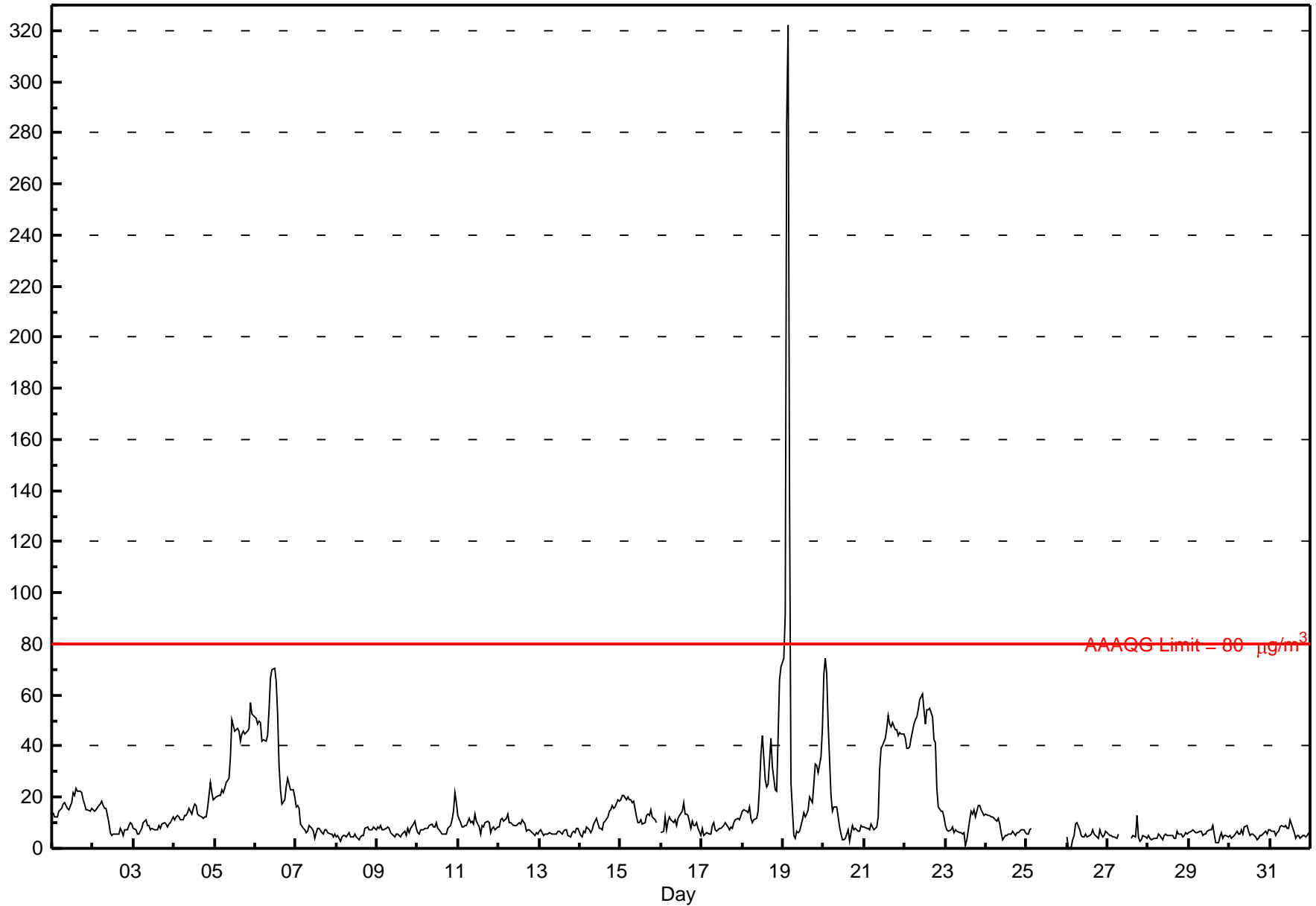
## Beaverlodge - August 2010

Number of Exceedences: 1-hr: 4 24-hr: 5	Hours in Service: 744
Maximum Value: 322.1 µg/m <sup>3</sup> on Aug 19 04:00	Maximum Daily Average: 53.0 µg/m <sup>3</sup> on Aug 19
Minimum Value: 0 µg/m <sup>3</sup> on Aug 26 02:00	Hours of Data: 715
Maximum Diurnal Average: 22.5 µg/m <sup>3</sup> at hour 4	Hours of Missing Data: 29
Monthly Average: 15.05 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 4.8 µg/m <sup>3</sup> on Aug 28	Percent Operational Time: 96.1
Minimum Diurnal Average: 12.4 µg/m <sup>3</sup> at hour 7	
Percentiles: P <sub>1</sub> = 2.9 P <sub>10</sub> = 4.8 Q <sub>1</sub> = 5.9 Median = 8.4 Q <sub>3</sub> = 15.0 P <sub>90</sub> = 40.4 P <sub>99</sub> = 69.0	

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-Aug	14	12	12	12	15	15	17	18	17	16	15	18	22	21	24	22	22	22	19	17	15	15	15	15	17.1	23.7
2-Aug	15	14	15	17	17	18	17	16	16	10	6	5	6	6	5	6	8	7	5	7	7	9	10	9	10.4	18.5
3-Aug	8	7	6	5	7	8	10	11	9	9	7	8	7	7	7	9	8	10	10	10	9	9	10	13	8.5	12.5
4-Aug	11	12	13	12	11	11	13	13	14	16	14	15	18	17	13	13	12	12	13	12	15	25	22	19	14.4	25.5
5-Aug	20	20	21	21	23	22	24	26	27	36	51	48	46	47	46	42	45	46	45	46	47	57	53	52	37.8	57.3
6-Aug	51	48	50	49	42	43	42	44	54	67	70	70	65	53	32	23	17	19	24	27	25	23	23	20	41.0	70.4
7-Aug	16	17	16	10	8	7	6	7	9	8	7	4	6	8	8	6	6	7	7	6	5	5	5	6	7.9	16.5
8-Aug	5	5	3	5	5	5	4	6	5	5	5	6	5	3	4	5	5	8	8	7	7	7	8	7	5.6	8.5
9-Aug	8	8	9	7	7	8	8	8	8	6	6	6	6	5	5	6	7	5	8	6	8	10	11	8	7.0	10.5
10-Aug	6	5	7	7	8	8	8	9	10	8	8	10	8	7	6	5	6	5	8	9	11	14	22	18	8.9	22.1
11-Aug	13	10	8	9	9	9	12	10	11	10	13	11	8	6	9	8	10	11	10	6	8	8	7	9	9.3	13.4
12-Aug	8	11	12	10	12	14	10	10	10	9	9	9	10	10	11	9	7	7	7	7	5	5	6	6	9.0	13.6
13-Aug	7	7	5	6	6	5	6	5	6	6	6	7	7	5	7	7	7	5	4	6	7	6	8	8	6.2	8.0
14-Aug	5	4	6	6	8	8	6	7	10	11	11	8	8	7	10	10	13	14	15	17	16	16	19	19	10.6	19.1
15-Aug	19	21	21	19	20	19	19	18	19	13	10	10	11	10	10	13	13	13	15	12	11	10	P	P	14.8	20.7
16-Aug	6	7	12	7	11	12	11	10	11	9	12	13	15	18	13	13	13	8	10	9	9	10	8	5	10.6	17.7
17-Aug	8	5	5	6	6	5	9	10	7	7	8	8	9	9	10	8	7	8	8	10	11	12	11	13	8.4	12.6
18-Aug	15	15	14	14	16	12	10	11	12	14	24	37	44	27	24	25	34	43	32	23	22	44	66	71	27.1	71.0
19-Aug	75	92	284	322	138	26	5	4	7	6	7	11	14	13	13	15	20	18	25	33	33	29	36	47	53.0	322.1
20-Aug	68	74	68	49	21	14	16	16	16	8	6	4	3	4	7	3	6	9	7	8	7	7	9	8	18.3	74.3
21-Aug	9	8	8	7	9	8	7	8	13	31	39	40	43	47	52	49	48	49	47	46	44	45	44	45	31.1	51.7
22-Aug	43	39	39	39	43	49	50	51	54	58	61	55	49	54	54	55	51	42	42	23	16	15	15	12	42.1	60.6
23-Aug	9	8	6	7	8	6	7	7	6	6	6	6	1	3	11	14	14	15	12	17	17	15	14	13	9.6	16.7
24-Aug	13	13	13	12	12	11	11	12	10	6	3	5	5	6	5	6	7	5	6	6	7	7	7	6	8.1	13.2
25-Aug	5	6	7	8	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	7.8
26-Aug	5	0	1	3	5	9	10	7	5	4	5	6	4	5	6	7	5	5	4	7	6	5	5	7	5.2	10.1
27-Aug	6	5	5	5	4	4	6	D	D	D	D	D	D	D	4	5	4	13	4	3	4	5	4	4	--	12.8
28-Aug	5	4	3	4	4	4	6	5	3	5	6	5	5	5	5	4	4	7	5	5	4	5	6	6	4.8	6.5
29-Aug	6	7	8	7	6	6	7	7	5	6	6	7	7	8	9	6	2	2	4	6	4	5	5	5	5.8	9.0
30-Aug	5	4	5	5	7	5	6	7	6	8	9	7	5	5	6	4	3	4	5	5	5	7	6	7	5.7	9.2
31-Aug	7	7	7	5	6	7	8	9	8	9	8	8	11	8	6	4	5	5	4	5	5	5	5	6	6.6	11.0
15.8 16.0 22.2 22.5 16.4 12.7 12.4 12.8 13.2 13.9 15.0 15.4 15.4 14.6 14.1 13.4 13.7 14.2 13.9 13.4 13.1 14.5 15.9 15.9																								Diurnal Average		
74.5 91.7 283.8 322.1 137.8 48.6 50.5 51.4 54.5 66.7 70.1 70.4 65.2 54.0 54.3 55.0 51.3 49.0 46.5 46.3 47.0 57.3 65.8 71.0																								Diurnal Maximum		

P - Power Failure D - DAS Failure  
 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>



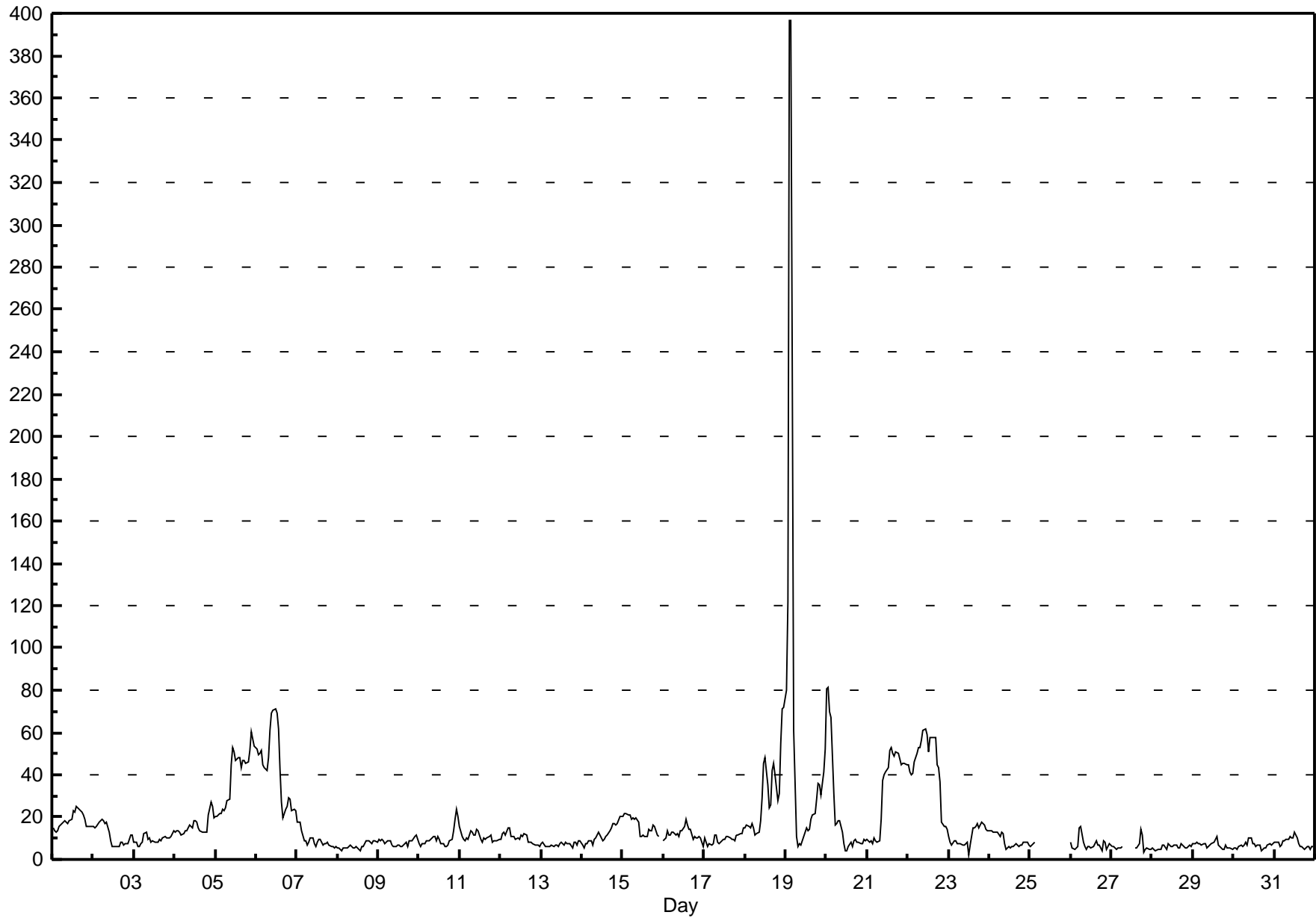


# Hourly Maximums

# Particulate Matter 2.5 (PM<sub>2.5</sub>) - μg/m<sup>3</sup>

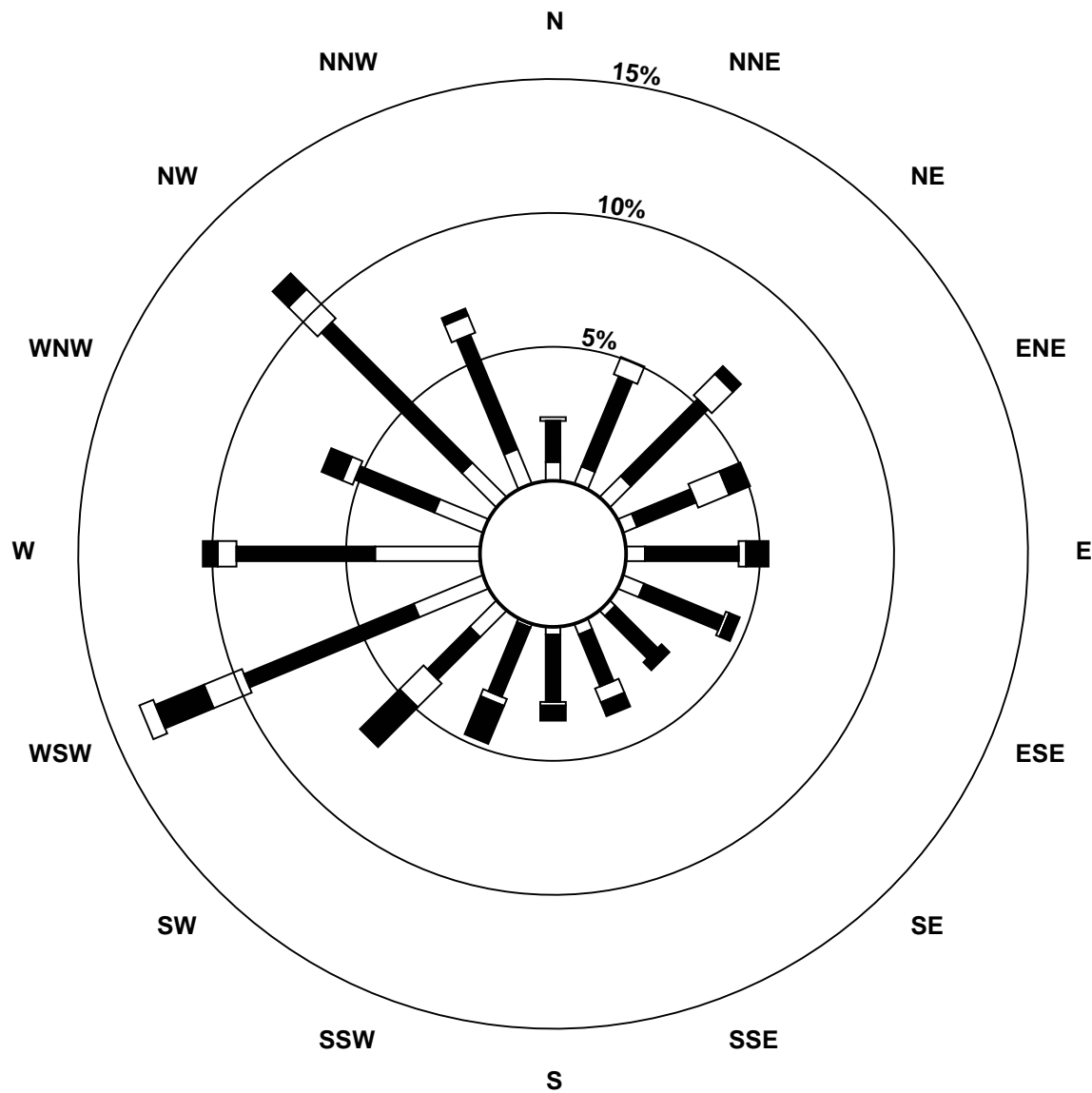
## Beaverlodge - August 2010

Maximum Value: 396.8 μg/m <sup>3</sup> on Aug 19 03:00		Maximum Daily Average: 69.8 μg/m <sup>3</sup> on Aug 19		Hours in Service: 744 Hours of Data: 715 Hours of Missing Data: 29 Hours of Calibration: 0 Percent Operational Time: 96.1																																												
Minimum Value: 2 μg/m <sup>3</sup> on Aug 23 13:00 Maximum Diurnal Average: 26.8 μg/m <sup>3</sup> at hour 3 Monthly Average: 17.04 μg/m <sup>3</sup>		Minimum Daily Average: 5.9 μg/m <sup>3</sup> on Aug 28 Minimum Diurnal Average: 13.7 μg/m <sup>3</sup> at hour 7 Percentiles: P <sub>1</sub> = 4.3 P <sub>10</sub> = 5.9 Q <sub>1</sub> = 7.1 Median = 9.7 Q <sub>3</sub> = 16.4 P <sub>90</sub> = 43.5 P <sub>99</sub> = 79.3																																														
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-Aug	15	13	13	14	15	17	18	19	18	17	18	19	23	22	25	24	23	22	21	19	16	16	15	16	18.2	24.8																						
2-Aug	15	15	16	18	18	19	18	17	17	13	8	6	6	6	6	6	8	8	7	8	8	9	12	12	11.5	18.9																						
3-Aug	8	8	6	6	8	8	12	13	10	10	8	9	8	8	8	10	9	10	11	10	10	10	11	13	9.3	13.4																						
4-Aug	13	14	14	13	12	12	13	14	15	16	15	18	19	17	15	13	13	13	13	13	21	27	25	20	15.8	27.1																						
5-Aug	20	20	22	21	24	23	25	28	28	45	53	51	47	48	48	43	47	47	45	46	51	60	57	53	39.7	60.1																						
6-Aug	53	50	50	52	45	44	42	48	61	69	71	71	69	61	42	27	19	24	25	29	29	23	23	23	43.8	71.4																						
7-Aug	17	17	17	14	9	9	7	8	10	10	7	6	8	9	9	7	7	8	8	7	6	6	5	6	9.2	17.5																						
8-Aug	6	5	4	5	5	5	5	7	6	5	5	6	6	4	6	6	8	9	9	8	8	8	9	8	6.4	9.1																						
9-Aug	9	9	9	9	8	8	9	9	9	7	6	6	7	7	6	6	7	8	6	9	9	11	11	9	8.0	11.2																						
10-Aug	8	6	8	8	9	8	9	9	11	11	9	11	10	8	7	6	6	7	8	9	13	19	24	21	10.2	23.9																						
11-Aug	16	11	9	9	10	10	14	13	11	11	14	14	9	8	10	9	10	11	11	8	9	9	9	9	10.6	15.8																						
12-Aug	10	12	13	12	15	15	11	11	11	10	10	10	11	11	12	12	8	8	8	7	7	7	7	6	10.1	15.2																						
13-Aug	8	8	6	6	6	6	7	6	7	7	6	8	8	7	8	8	7	7	5	8	8	7	9	9	7.1	9.1																						
14-Aug	7	5	7	7	9	9	7	10	10	11	13	10	9	10	11	11	14	15	17	17	16	17	20	20	11.8	20.5																						
15-Aug	20	21	22	21	21	19	20	19	20	18	11	11	12	11	11	14	14	14	16	16	12	11	P	P	16.0	21.8																						
16-Aug	9	10	14	11	12	13	13	11	12	11	14	14	16	19	16	14	14	10	11	10	10	11	10	6	12.1	19.0																						
17-Aug	10	8	6	7	7	7	11	11	8	8	9	9	9	11	11	10	10	9	8	11	12	12	12	15	9.8	14.9																						
18-Aug	15	16	16	15	17	15	12	12	13	18	29	45	48	36	25	26	42	45	40	28	32	55	71	72	30.9	71.7																						
19-Aug	80	122	397	397	236	61	11	6	7	7	9	13	15	14	14	19	21	22	29	36	35	31	41	52	69.8	396.8																						
20-Aug	81	81	70	67	31	16	17	18	18	13	8	4	4	6	8	6	9	10	8	8	8	8	10	9	21.6	81.4																						
21-Aug	9	8	9	8	10	9	8	9	19	37	40	42	43	51	53	50	49	51	50	47	45	46	45	45	32.6	52.8																						
22-Aug	44	41	40	41	46	50	53	53	56	61	61	59	51	58	58	58	58	45	43	37	18	16	16	14	44.8	61.4																						
23-Aug	11	8	7	9	9	8	8	7	7	6	8	8	2	7	15	15	15	17	15	17	17	16	14	14	10.8	17.4																						
24-Aug	14	14	13	13	13	13	11	13	12	8	4	6	6	6	6	7	7	6	7	7	8	8	8	7	8.9	13.8																						
25-Aug	6	7	8	8	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	8.2																						
26-Aug	8	5	5	5	6	15	16	8	6	5	6	6	5	6	7	9	7	7	4	9	8	5	6	7	7.2	15.8																						
27-Aug	6	6	6	5	5	5	6	D	D	D	D	D	D	D	6	6	7	14	12	3	5	5	5	5	--	14.1																						
28-Aug	5	5	4	5	5	5	7	7	5	7	6	6	7	6	5	6	7	7	6	6	6	6	7	6	5.9	7.3																						
29-Aug	7	7	8	7	7	7	7	7	6	6	7	7	8	10	11	7	6	5	5	6	6	6	5	5	6.8	10.9																						
30-Aug	5	5	5	6	7	6	7	8	7	10	10	7	7	6	7	7	4	5	5	6	7	8	7	7	6.7	9.9																						
31-Aug	8	8	8	6	7	8	9	10	9	11	10	10	13	10	7	6	6	5	5	6	6	5	6	6	7.8	13.0																						
																								17.5	18.3	26.8	26.6	21.0	15.0	13.7	14.1	14.7	16.0	16.4	17.0	16.7	16.6	15.8	14.9	15.4	15.5	15.5	15.1	14.7	15.9	17.3	17.1	Diurnal Average
																								80.9	122.0	396.8	396.7	236.4	61.0	52.6	52.9	61.3	69.0	70.7	71.4	69.4	61.5	57.6	57.7	57.6	50.6	50.2	47.2	51.4	60.1	71.4	71.7	Diurnal Maximum
P - Power Failure      D - DAS Failure																																																

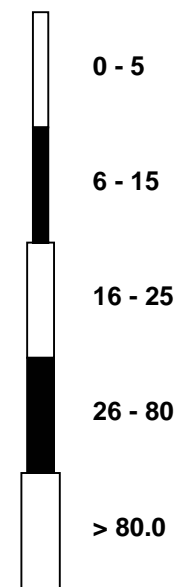


**Pollutant Rose**

**Particulate Matter 2.5 (PM<sub>2.5</sub>) - μg/m<sup>3</sup>**  
**Beaverlodge - August 2010**



**Pollutant Classes (μg/m<sup>3</sup>)**

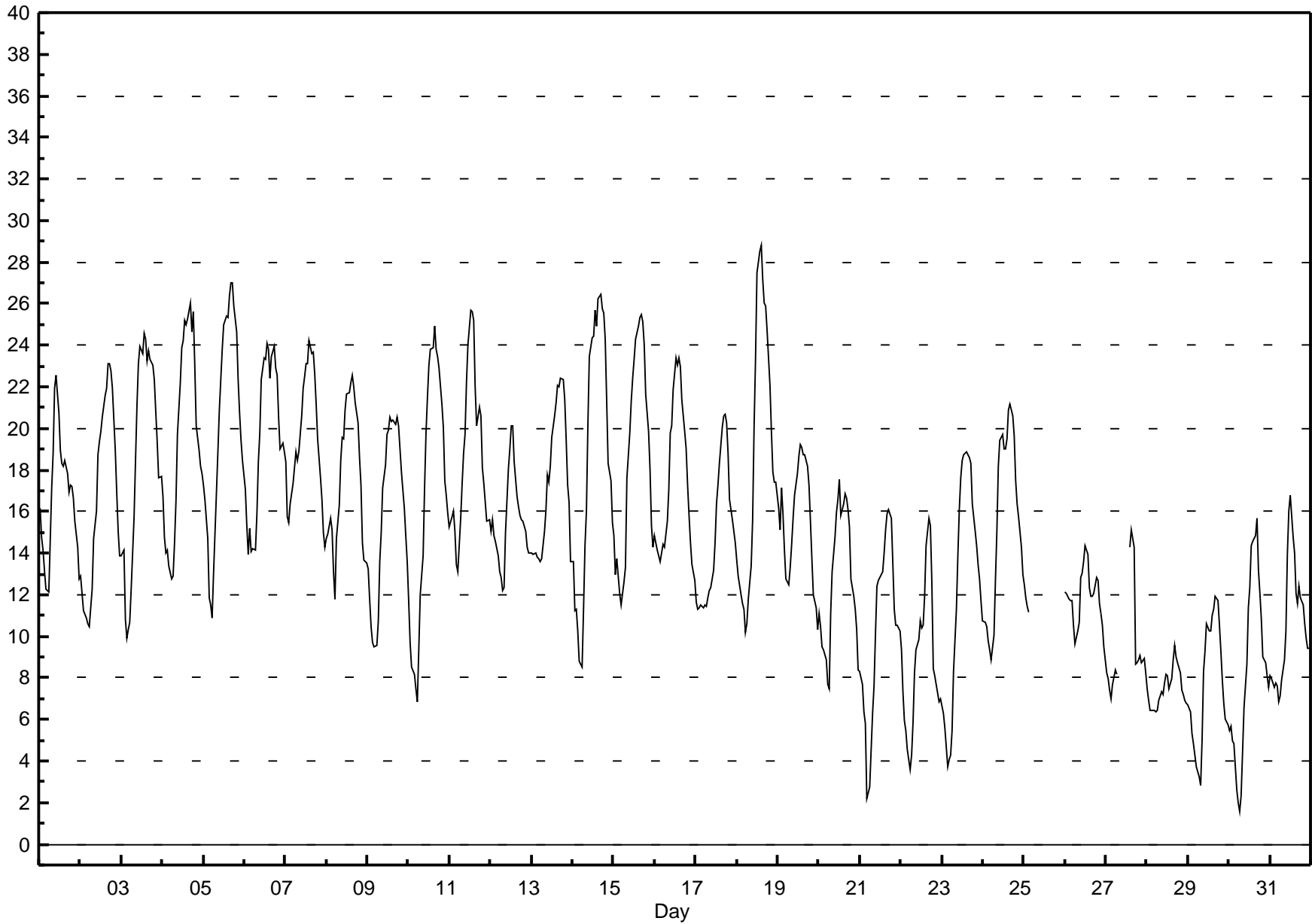


# Hourly Averages

External Temperature (ET) - °C

Beaverlodge - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.8 °C on Aug 18 15:00      Maximum Daily Average: 20.2 °C on Aug 5		Hours in Service: 744 Hours of Data: 717 Hours of Missing Data: 27 Hours of Calibration: 0 Percent Operational Time: 96.4																																														
Minimum Value: 2 °C on Aug 30 07:00 Maximum Diurnal Average: 19.7 °C at hour 17 Monthly Average: 15.11 °C		Minimum Daily Average: 7.5 °C on Aug 28 Minimum Diurnal Average: 9.7 °C at hour 6 Percentiles: P <sub>1</sub> = 2.7 P <sub>10</sub> = 7.7 Q <sub>1</sub> = 11.2 Median = 14.7 Q <sub>3</sub> = 19.3 P <sub>90</sub> = 23.1 P <sub>99</sub> = 26.1																																														
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-Aug	16	15	14	13	12	12	15	17	19	22	23	21	19	18	18	18	18	17	17	17	17	16	14	13	16.7	22.6																						
2-Aug	13	12	11	11	11	10	11	12	15	16	19	19	20	21	22	22	23	23	23	22	19	17	15	14	16.7	23.1																						
3-Aug	14	14	11	10	10	11	12	16	18	21	23	24	24	25	24	23	24	23	23	22	21	19	18	18	18.7	24.6																						
4-Aug	17	15	14	14	13	13	13	15	17	20	22	24	24	25	25	25	26	25	26	23	20	19	18	18	19.6	26.0																						
5-Aug	17	17	15	12	11	11	13	15	19	21	22	24	25	25	25	26	27	27	26	25	22	21	19	18	20.2	27.0																						
6-Aug	17	15	14	15	14	14	14	16	18	20	22	23	23	24	24	22	23	24	23	23	21	19	19	19	19.5	24.1																						
7-Aug	18	16	15	16	17	18	19	18	19	21	22	22	23	23	24	24	24	23	21	19	18	17	15	14	19.5	24.2																						
8-Aug	15	15	16	15	13	12	15	16	18	20	19	21	22	22	22	23	22	21	20	19	17	14	14	14	17.7	22.5																						
9-Aug	13	12	10	10	9	10	11	14	15	17	18	20	20	21	20	20	20	21	20	19	18	16	15	14	15.9	20.5																						
10-Aug	12	10	9	8	8	7	9	12	14	17	20	22	23	24	24	25	24	23	23	21	20	18	17	16	16.8	24.9																						
11-Aug	15	16	16	15	13	13	16	17	19	20	22	24	26	26	25	22	20	21	21	18	17	16	16	16	18.7	25.7																						
12-Aug	15	16	15	15	14	13	13	12	12	15	18	19	20	20	18	17	16	16	16	16	15	14	14	14	15.5	20.1																						
13-Aug	14	14	14	14	14	14	14	15	16	18	17	18	20	21	21	22	22	22	22	21	19	17	16	14	17.5	22.4																						
14-Aug	14	11	11	10	9	9	11	14	16	20	23	24	24	26	25	26	26	26	26	24	21	18	17	15	18.7	26.4																						
15-Aug	15	13	14	12	11	12	13	13	18	20	21	22	23	24	25	25	26	25	24	22	20	18	15	14	18.6	25.5																						
16-Aug	15	14	14	14	14	14	14	16	17	20	20	22	23	23	23	23	21	20	19	17	16	15	13	13	17.5	23.4																						
17-Aug	12	11	11	12	11	12	11	12	12	12	13	15	16	17	18	20	21	21	20	19	17	16	15	14	14.9	20.7																						
18-Aug	14	13	12	12	11	10	11	12	13	16	20	23	27	29	29	27	26	26	25	22	20	18	17	17	18.7	28.8																						
19-Aug	16	15	17	16	14	13	13	13	14	16	17	18	19	19	19	19	19	18	17	16	14	12	11	10	15.6	19.2																						
20-Aug	11	10	10	9	9	8	8	11	13	15	16	17	18	16	16	17	17	16	15	13	12	11	10	8	12.7	17.6																						
21-Aug	8	8	6	6	2	2	3	6	8	10	12	13	13	14	15	16	16	16	14	11	11	11	10	10.2	16.1																							
22-Aug	9	7	6	5	5	4	4	6	8	9	10	11	10	11	12	14	16	15	13	8	8	7	7	7	8.9	15.7																						
23-Aug	7	6	6	4	4	4	5	8	11	14	16	18	18	19	19	19	19	18	16	15	14	13	13	12	12.4	18.9																						
24-Aug	11	11	10	10	9	9	10	13	15	18	19	20	19	19	19	21	21	21	20	18	16	16	14	13	15.5	21.2																						
25-Aug	12	12	11	11	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	12.4																						
26-Aug	12	12	12	12	12	11	10	10	11	13	13	14	14	14	12	12	12	12	13	13	12	11	11	9	11.9	14.4																						
27-Aug	8	8	7	7	8	8	8	D	D	D	D	D	D	D	14	15	14	9	9	9	9	9	9	8	--	15.1																						
28-Aug	7	7	6	6	6	6	6	7	7	7	8	8	8	7	8	9	10	9	9	8	7	7	7	7	7.5	9.5																						
29-Aug	7	6	5	5	4	4	3	3	5	8	9	11	10	10	11	11	12	12	11	9	8	7	6	6	7.6	11.9																						
30-Aug	5	6	5	5	3	2	2	2	4	7	9	11	12	14	15	15	16	13	12	11	9	9	8	8	8.4	15.7																						
31-Aug	8	8	8	8	8	7	7	8	9	10	14	16	17	15	14	12	12	12	12	12	11	10	9	9	10.6	16.8																						
																								12.5	11.7	11.2	10.7	10.0	9.7	10.4	12.1	13.9	15.9	17.6	18.7	19.4	19.6	19.6	19.7	19.7	19.2	18.5	17.1	15.6	14.3	13.5	12.7	Diurnal Average
																								18.4	16.6	17.1	16.4	17.3	18.1	18.9	18.5	18.9	21.9	23.5	24.4	27.5	28.5	28.8	27.1	27.0	27.0	25.9	24.6	22.4	20.8	19.4	18.8	Diurnal Maximum
D - DAS Failure																																																





# Hourly Averages

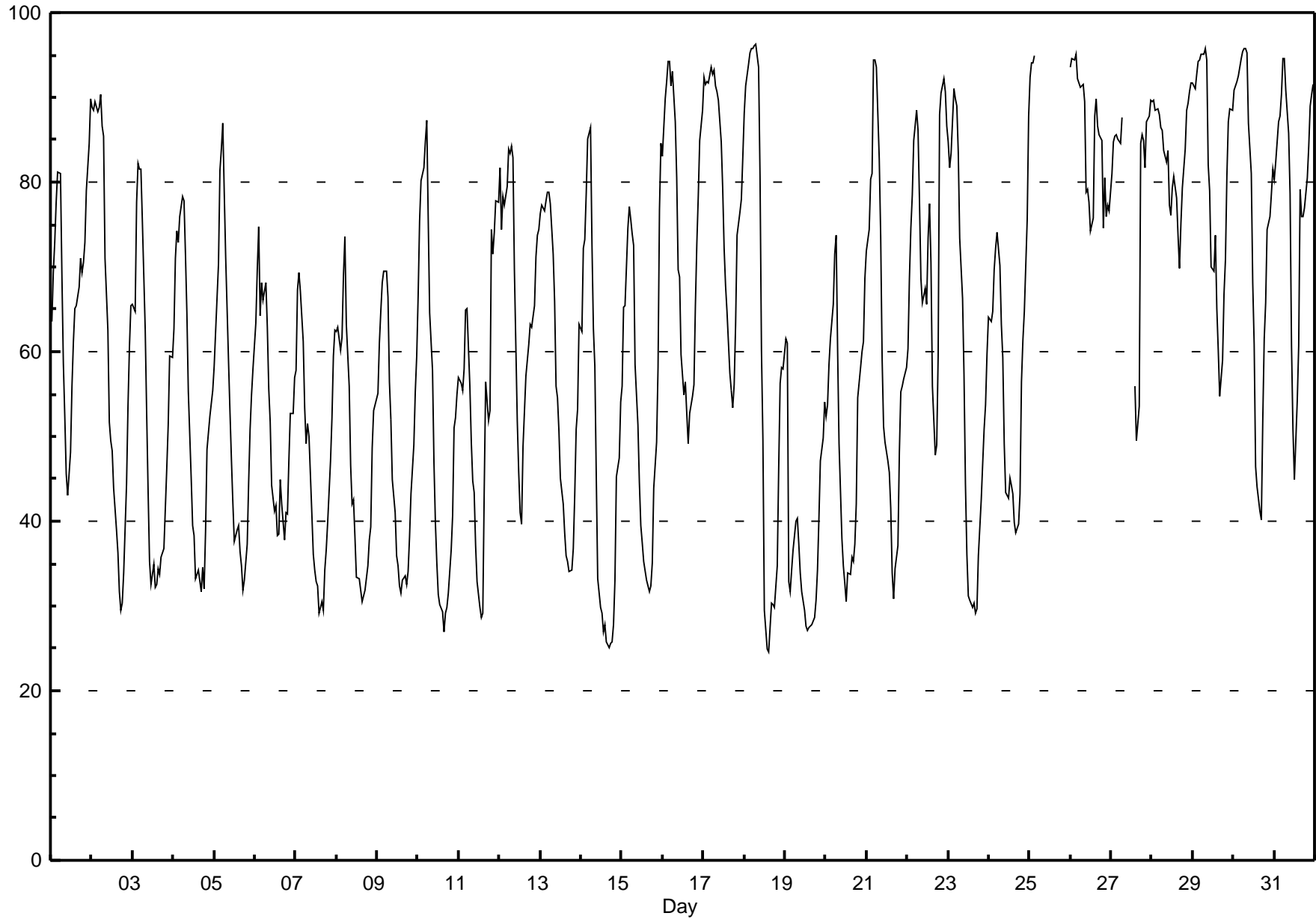
Relative Humidity (RH) - %

Beaverlodge - August 2010

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 96.2 % on Aug 18 08:00 Maximum Daily Average: 84.9 % on Aug 26																			Hours in Service: 744 Hours of Data: 717 Hours of Missing Data: 27 Hours of Calibration: 0 Percent Operational Time: 96.4																									
Minimum Value: 25 % on Aug 18 15:00 Minimum Daily Average: 37.2 % on Aug 19 Maximum Diurnal Average: 81.3 % at hour 6 Minimum Diurnal Average: 43.4 % at hour 17 Monthly Average: 61.53 % Percentiles: P <sub>1</sub> = 26.9 P <sub>10</sub> = 33.0 Q <sub>1</sub> = 43.2 Median = 61.2 Q <sub>3</sub> = 79.0 P <sub>90</sub> = 89.7 P <sub>99</sub> = 95.7																																												
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-Aug	64	69	73	78	81	81	69	59	52	46	43	48	56	61	65	65	68	71	69	71	73	79	85	90	67.3	89.9																		
2-Aug	89	88	89	88	89	90	87	85	71	62	52	49	48	44	39	36	32	30	30	34	44	54	61	65	60.7	90.3																		
3-Aug	66	65	78	82	82	82	75	63	53	44	35	32	35	32	33	34	34	36	37	42	46	51	60	59	52.3	82.2																		
4-Aug	63	71	74	73	76	78	78	72	65	55	45	39	38	33	34	34	32	35	32	39	48	52	54	55	53.2	78.3																		
5-Aug	58	62	70	81	84	87	79	71	59	53	47	42	38	39	39	37	35	32	33	37	45	51	55	58	53.8	87.0																		
6-Aug	63	70	75	64	68	66	68	63	56	52	44	41	42	38	39	45	42	38	41	41	47	53	53	57	52.7	74.8																		
7-Aug	58	67	69	67	61	53	49	51	50	41	36	34	33	32	29	31	29	34	37	40	47	52	59	63	46.9	69.3																		
8-Aug	62	63	60	62	69	74	63	56	47	42	43	38	33	33	32	31	31	32	35	38	39	49	53	54	47.4	73.6																		
9-Aug	55	61	65	68	69	69	66	56	52	45	41	36	35	32	32	33	33	33	34	38	43	49	55	60	48.4	69.4																		
10-Aug	67	75	80	82	85	87	76	65	58	47	40	35	31	30	29	27	29	30	32	37	41	51	52	55	51.7	87.3																		
11-Aug	57	56	55	58	65	65	56	49	45	43	37	33	30	29	29	44	57	52	53	74	72	74	78	78	53.7	77.7																		
12-Aug	82	74	78	77	80	84	83	84	83	70	52	46	41	40	49	57	59	61	63	63	65	71	74	74	67.1	84.2																		
13-Aug	76	77	77	78	79	79	77	72	66	56	55	51	45	42	39	36	35	34	34	37	43	51	53	63	56.4	78.7																		
14-Aug	62	72	73	79	85	86	73	63	58	45	33	30	29	27	28	26	25	26	26	28	33	45	47	54	48.1	86.4																		
15-Aug	56	65	66	75	77	76	74	73	58	51	45	40	37	35	33	32	32	32	35	44	49	58	77	85	54.4	84.6																		
16-Aug	83	90	92	94	94	91	93	87	81	70	69	60	55	56	53	49	53	55	56	65	73	78	85	88	73.7	94.3																		
17-Aug	92	91	92	92	94	93	93	91	91	90	85	79	72	68	65	57	55	53	56	63	74	77	78	83	78.5	93.6																		
18-Aug	88	91	94	95	96	96	96	96	94	81	60	50	30	25	25	27	30	30	30	35	46	56	58	58	61.9	96.2																		
19-Aug	62	61	33	32	34	37	40	40	37	34	32	29	28	27	27	28	28	29	31	34	40	47	50	54	37.2	61.6																		
20-Aug	52	54	58	62	66	72	74	60	49	38	35	33	30	34	34	36	35	37	42	55	58	60	61	69	50.1	73.8																		
21-Aug	72	74	80	81	94	94	93	83	74	59	51	49	47	46	41	34	31	34	37	48	55	56	57	58	60.4	94.4																		
22-Aug	60	69	75	78	85	88	86	78	69	66	67	66	73	78	71	56	48	49	59	88	90	92	91	87	73.7	92.1																		
23-Aug	85	82	83	91	90	89	84	73	66	57	44	36	31	31	30	30	29	30	36	43	47	51	54	60	56.3	91.1																		
24-Aug	64	64	65	70	72	74	70	63	59	49	43	43	45	44	43	40	39	40	43	56	61	65	76	88	57.3	87.8																		
25-Aug	92	94	94	95	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	95.0																		
26-Aug	94	95	94	95	92	92	91	92	90	79	79	78	74	76	88	90	87	86	85	74	80	76	77	77	84.9	95.1																		
27-Aug	81	85	85	86	85	85	88	D	D	D	D	D	D	D	56	50	54	85	86	85	82	87	88	90	--	89.7																		
28-Aug	89	90	88	89	88	86	86	84	82	84	77	76	79	81	78	74	70	75	79	84	89	89	91	92	83.3	91.7																		
29-Aug	92	91	93	94	94	95	95	96	94	82	79	70	70	74	65	60	55	59	67	71	81	87	89	89	80.8	95.8																		
30-Aug	91	91	92	93	95	95	96	96	95	87	81	68	61	46	44	41	40	52	61	66	74	76	79	82	75.1	95.8																		
31-Aug	80	82	87	88	90	95	95	91	86	79	61	51	45	54	61	79	76	76	77	80	84	89	90	91	78.6	94.6																		
																			72.7	75.5	77.1	78.9	80.6	81.3	78.5	72.8	66.9	58.8	52.1	47.6	45.3	44.4	44.3	44.0	43.4	45.4	47.9	53.6	59.1	64.2	67.9	71.1	Diurnal Average	
																			93.5	94.5	94.4	95.3	95.7	95.8	96.2	96.2	95.3	89.7	84.8	79.3	79.4	80.7	87.8	89.8	86.7	85.5	85.6	87.9	90.5	92.1	90.6	91.7	Diurnal Maximum	
D - DAS Failure																																												

# Hourly Averages

Relative Humidity (RH) - %  
Beaverlodge - August 2010





# Hourly Averages

**Wind Speed (km/h)**  
**Wind Direction (deg)**  
**Beaverlodge - August 2010**

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	3	3	2	5	6	2	13	19	19	17	14	11	14	14	13	13	12	10	5	4	6.1	19.3
Dir	98	95	120	136	109	68	100	153	198	311	329	326	342	333	343	336	325	308	307	298	302	303	309	351	326	326
2 Spd	9	9	8	7	7	8	9	7	9	9	10	12	12	11	12	11	8	8	11	7	4	4	4	2	6.5	12.4
Dir	308	313	314	319	306	311	307	279	295	305	314	1	14	20	359	30	11	357	29	32	52	52	45	39	346	20
3 Spd	4	5	5	3	1	5	3	4	5	5	3	6	6	5	6	6	5	5	7	7	4	5	2	6	3.8	7.1
Dir	22	13	48	41	337	333	342	310	299	275	0	25	50	26	356	332	335	16	46	31	3	25	33	317	3	46
4 Spd	12	6	7	14	13	5	1	6	6	7	9	6	7	9	8	6	2	10	6	6	4	5	6	5	4.5	13.9
Dir	319	358	333	323	324	332	306	299	314	298	300	337	14	24	26	50	29	56	82	129	95	65	59	55	357	323
5 Spd	4	4	3	3	1	3	3	2	3	11	16	18	17	14	16	10	6	5	7	4	2	5	2	1	4.7	18.5
Dir	58	46	47	59	152	58	51	184	89	131	118	108	116	132	153	149	151	201	234	250	52	57	80	239	122	108
6 Spd	3	1	2	7	1	8	6	5	7	13	19	24	24	32	32	28	26	34	24	22	15	11	15	11	14.3	33.7
Dir	65	47	75	235	87	214	178	195	219	223	224	244	230	257	254	247	229	246	247	242	250	230	231	230	239	246
7 Spd	12	3	2	9	17	20	24	22	25	35	34	36	35	30	29	28	30	37	34	29	21	24	14	12	23.2	36.5
Dir	233	209	242	240	254	258	259	247	247	246	243	246	247	254	242	246	245	245	253	246	240	244	242	231	246	245
8 Spd	12	9	14	15	9	9	7	11	24	27	28	27	26	23	30	30	31	36	30	24	25	12	8	7	19.5	35.7
Dir	229	234	237	239	229	232	223	233	252	254	244	248	264	259	251	247	248	248	249	253	252	242	232	220	247	248
9 Spd	8	8	7	4	4	4	4	10	22	19	18	15	20	13	19	21	19	17	13	8	4	4	9	9	10.6	22.2
Dir	212	211	222	195	202	216	206	228	239	257	262	264	270	262	260	270	276	275	285	287	235	247	293	302	258	239
10 Spd	2	2	5	4	4	1	3	5	8	8	10	12	11	7	10	10	10	14	11	5	4	2	4	3	2.9	14.3
Dir	224	131	58	46	55	94	79	176	180	210	208	201	245	270	276	270	292	290	305	295	288	30	61	72	257	290
11 Spd	4	3	1	4	2	2	2	7	8	7	6	14	10	11	15	17	9	12	13	6	4	3	3	2	4.0	17.4
Dir	76	82	159	178	160	87	137	201	195	209	239	274	293	276	248	309	329	242	256	243	312	52	39	339	263	309
12 Spd	2	8	11	8	8	11	13	16	12	9	19	22	21	24	25	23	27	21	22	18	16	14	11	11	14.9	26.6
Dir	356	346	340	343	311	316	347	347	289	265	308	315	325	326	337	331	326	330	317	319	311	305	312	311	322	326
13 Spd	12	13	14	11	12	15	13	13	14	14	15	15	14	13	16	13	14	10	9	7	5	4	5	3	11.1	15.6
Dir	317	323	328	326	328	330	330	331	322	331	324	317	308	300	300	311	308	332	326	354	332	335	323	45	322	300
14 Spd	4	1	4	5	2	2	1	1	3	3	2	4	5	4	6	4	6	5	6	4	4	4	2	3	2.3	6.1
Dir	358	49	337	316	357	267	323	175	192	208	312	286	306	318	268	351	340	308	306	15	25	43	328	41	324	340
15 Spd	2	1	5	4	4	2	1	3	5	14	17	18	20	20	18	18	18	19	15	17	15	17	11	7	9.7	19.9
Dir	40	225	21	272	34	360	95	231	161	122	111	123	97	102	108	101	108	95	101	82	87	74	80	25	97	97
16 Spd	8	7	3	9	9	5	6	10	12	7	10	10	12	14	19	20	22	20	17	18	13	12	7	13	8.0	21.6
Dir	58	314	268	217	237	251	37	26	34	161	159	128	85	64	58	51	54	51	56	62	62	57	79	54	62	54
17 Spd	14	7	6	8	5	8	9	10	12	12	14	14	14	13	9	9	8	9	11	8	6	6	7	7	8.0	13.9
Dir	45	119	61	63	82	83	93	99	99	104	90	100	116	130	102	148	144	147	154	161	114	64	70	81	104	45
18 Spd	4	4	4	4	4	5	5	17	6	2	6	10	26	26	33	34	26	28	35	35	22	17	18	21	12.7	34.8
Dir	122	141	160	102	104	150	126	6	189	326	185	205	261	265	254	253	249	250	234	229	222	212	226	233	237	234
19 Spd	19	17	31	39	32	31	25	29	36	36	33	34	38	36	38	40	37	35	31	26	18	13	10	3	28.5	39.9
Dir	232	243	255	248	258	255	259	251	255	248	249	257	254	254	254	252	256	258	249	243	242	241	231	275	252	252
20 Spd	4	6	6	7	8	7	2	0	6	18	16	17	14	14	12	12	8	5	6	13	10	5	3	3	6.1	18.2
Dir	302	252	273	313	318	307	71	160	248	271	280	278	285	303	305	319	310	307	23	32	30	26	22	81	307	271
21 Spd	0	3	5	2	1	1	1	2	4	3	4	5	6	7	8	8	8	9	10	7	6	7	6	4	2.5	9.6
Dir	198	328	41	34	12	32	183	71	189	182	192	208	202	201	195	203	211	187	163	135	87	79	73	81	164	163
22 Spd	3	1	3	4	4	6	5	8	4	9	12	12	13	11	5	7	6	9	9	7	5	6	7	5	4.9	13.4
Dir	80	78	48	348	319	321	345	301	324	312	301	307	291	282	253	228	215	215	294	318	270	232	232	266	287	291

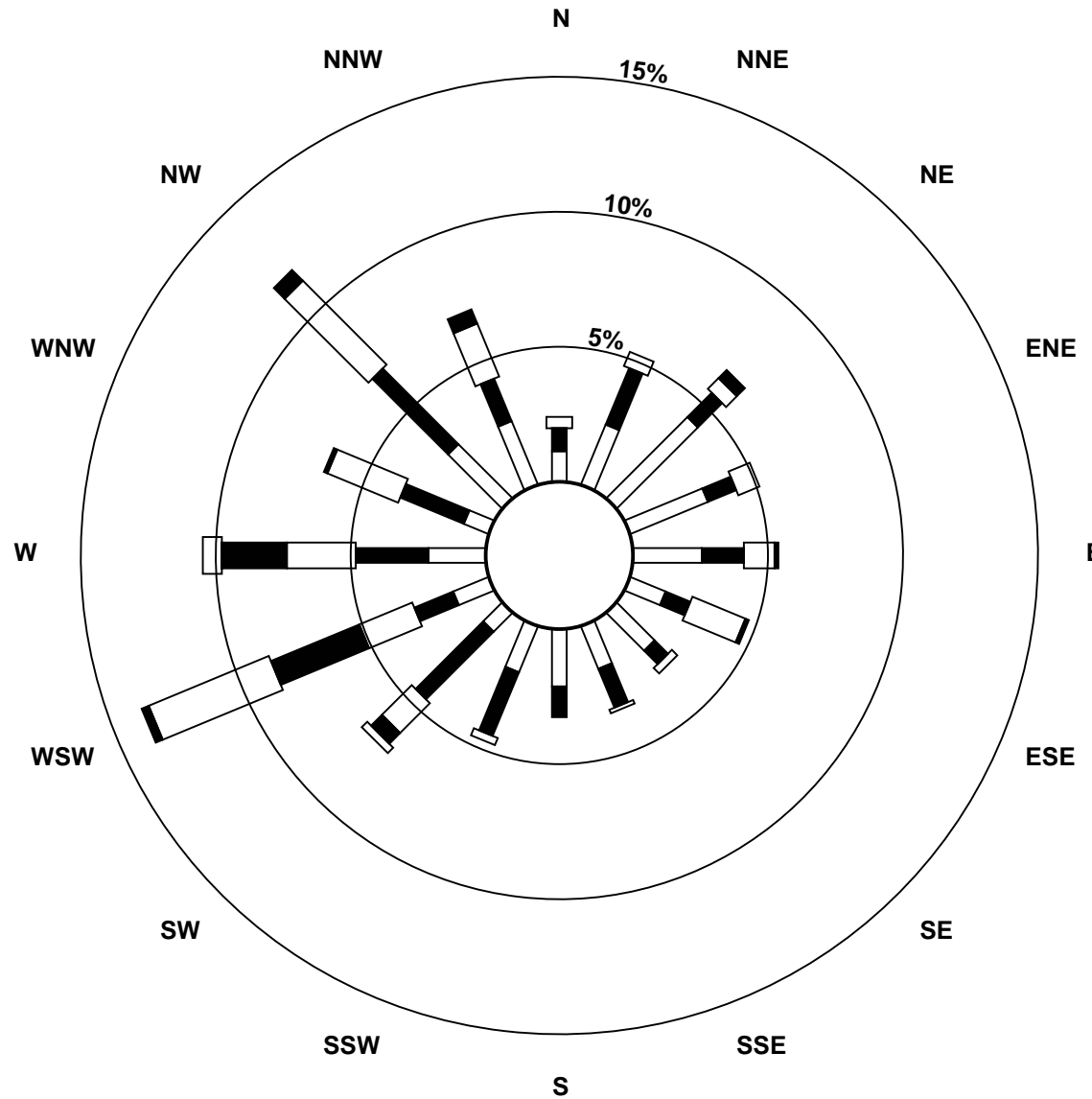
# Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Beaverlodge - August 2010

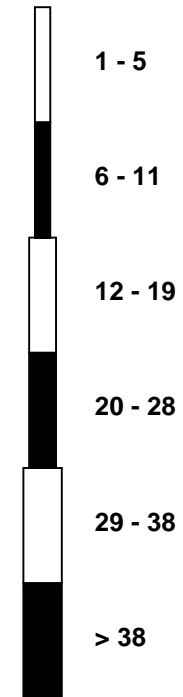
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	5	7	5	3	2	3	3	2	3	11	23	21	25	26	27	24	25	30	23	16	12	8	4	5	11.8	30.5
Dir	291	271	270	43	32	59	48	135	147	260	269	282	266	254	257	263	262	262	266	273	280	284	255	247	266	262
24 Spd	2	2	2	4	2	3	3	3	10	25	31	30	23	17	14	17	21	25	23	12	7	4	6	6	10.5	31.5
Dir	169	156	202	188	136	133	148	140	219	248	259	266	267	253	238	230	245	259	265	284	307	275	206	178	249	259
25 Spd	6	4	2	2	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	6.0
Dir	158	125	146	48	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	158
26 Spd	9	6	1	5	8	11	6	1	7	5	8	4	3	9	10	8	12	9	12	11	9	11	8	9	5.0	12.4
Dir	356	41	268	332	19	301	45	205	232	220	258	222	296	297	276	207	228	228	227	269	251	275	292	261	269	227
27 Spd	8	8	12	9	11	16	18	D	D	D	D	D	D	D	32	37	28	18	20	19	19	17	16	13	--	37.0
Dir	261	276	259	274	287	293	279	D	D	D	D	D	D	D	262	261	272	311	275	262	274	272	281	315	--	261
28 Spd	15	13	14	15	15	17	17	19	19	16	17	12	15	11	12	13	12	10	8	7	5	3	2	2	11.3	18.6
Dir	319	312	305	296	290	294	291	294	297	311	328	346	335	351	336	313	310	291	269	252	254	273	238	275	306	311
29 Spd	1	6	4	5	5	2	2	5	1	1	2	1	10	13	10	10	10	13	13	12	8	4	4	6	3.8	13.3
Dir	313	319	340	326	330	11	270	279	58	187	183	108	116	115	105	80	99	109	106	121	116	96	88	49	95	106
30 Spd	5	6	8	8	4	2	3	6	2	2	3	5	4	3	3	3	8	6	8	4	3	3	5	5	1.7	8.4
Dir	42	18	29	28	239	336	71	267	272	215	188	183	151	129	102	72	73	91	101	188	114	76	84	76	88	91
31 Spd	2	3	3	5	2	5	3	3	4	3	4	5	6	7	7	10	5	3	5	1	3	6	5	2	1.6	9.7
Dir	116	52	45	47	168	170	115	127	187	175	146	164	184	209	195	159	206	324	309	169	315	42	250	330	172	159
Spd	1.7	2.0	2.7	3.4	3.6	4.1	2.5	3.6	5.9	7.6	7.8	7.6	7.4	7.4	9.0	8.6	8.5	8.6	7.9	5.5	3.9	2.2	2.1	1.7	Diurnal Average	
Dir	309	305	302	289	289	286	291	274	250	251	259	267	271	275	266	266	267	266	264	261	270	283	267	299	Diurnal Maximum	
Spd	19.4	17.5	31.1	38.9	31.9	30.8	24.6	28.5	35.9	36.3	33.8	36.2	38.3	36.0	38.4	39.9	36.8	36.5	34.8	34.6	25.0	23.9	17.8	21.0	Diurnal Maximum	
Dir	232	243	255	248	258	255	259	251	255	248	243	246	254	254	254	252	256	245	234	229	252	244	226	233	Diurnal Maximum	
Maximum Speed Value: 40 km/h on Aug 19 16:00																		Minimum Speed Value: 0 km/h on Aug 21 01:00						Hours in Service: 744		
Maximum Daily Speed Average: 28.5 km/h on Aug 19																		Minimum Daily Speed Average: 1.6 km/h on Aug 14						Hours of Data: 717		
Maximum Diurnal Speed Average: 9.0 km/h at hour 15																		Minimum Diurnal Speed Average: 1.7 km/h at hour 24						Hours of Missing Data: 27		
Monthly Average Velocity: 5.04 km/h 270.1 deg																		Speed Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 2.5 Q <sub>1</sub> = 4.4 Median = 8.0 Q <sub>3</sub> = 14.0 P <sub>90</sub> = 23.9 P <sub>99</sub> = 36.3						Percent Operational Time: 96.4		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
D - DAS Failure																										
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	20	15	10	0	0	0	45																			
NorthEast	46	30	12	3	0	0	91																			
East	35	18	16	3	0	0	72																			
SouthEast	25	15	10	0	0	0	50																			
South	30	23	1	0	0	0	54																			
SouthWest	17	42	22	15	15	0	111																			
West	19	31	34	33	27	4	148																			
NorthWest	29	53	55	9	0	0	146																			
Total	221	227	160	63	42	4	717																			

# Wind Rose

Wind Speed (WS) (km/h)  
Beaverlodge - August 2010



## Wind Speed Classes (km/h)





# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - August 2010

Maximum Speed: 40 km/h on Aug 19 16:00		Maximum Daily Speed Average: 29.0 km/h on Aug 19																				Hours in Service: 744					
Minimum Speed: 2 km/h on Aug 5 05:00		Minimum Daily Speed Average: 4.7 km/h on Aug 14																				Hours of Data: 717					
Maximum Diurnal Speed Average: 17.3 km/h at hour 15		Minimum Diurnal Speed Average: 6.4 km/h at hour 2																				Hours of Missing Data: 27					
Monthly Average Speed: 11.35 km/h		Percentiles: P <sub>1</sub> = 1.9 P <sub>10</sub> = 3.4 Q <sub>1</sub> = 5.0 Median = 8.7 Q <sub>3</sub> = 14.8 P <sub>90</sub> = 24.1 P <sub>99</sub> = 36.4																				Percent Operational Time: 96.4					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	5	4	5	4	3	3	2	5	6	9	13	20	19	17	15	11	14	14	13	13	12	10	6	5	9.4	19.5	
2-Aug	9	9	8	7	7	8	9	7	9	9	11	13	13	13	13	14	11	9	11	7	5	4	4	2	8.9	13.8	
3-Aug	4	5	6	3	2	5	4	5	5	5	7	8	9	7	8	6	6	5	7	7	5	5	4	7	5.6	8.8	
4-Aug	12	7	7	14	13	6	2	7	7	7	9	8	9	11	10	7	5	11	6	6	5	5	6	5	7.7	13.9	
5-Aug	4	4	3	3	2	3	3	2	3	11	16	19	18	14	16	11	8	6	7	4	4	5	3	2	7.2	19.0	
6-Aug	4	3	3	7	5	8	7	5	8	13	19	24	25	33	33	28	27	34	24	23	15	11	15	11	16.0	34.0	
7-Aug	12	4	4	9	17	20	24	22	25	35	34	37	35	31	30	29	30	37	34	29	21	24	15	12	23.8	36.8	
8-Aug	12	9	14	16	9	9	7	11	24	27	28	28	27	24	31	31	31	36	30	24	25	12	8	7	20.1	36.1	
9-Aug	8	8	7	5	5	5	5	11	22	19	18	15	21	14	19	22	20	17	14	8	5	5	9	9	12.1	22.3	
10-Aug	3	3	5	4	4	2	3	5	8	9	11	13	13	9	11	11	11	15	11	5	4	4	4	4	7.1	15.0	
11-Aug	4	3	3	4	2	2	3	7	8	7	7	15	11	12	15	18	10	12	13	6	6	3	3	4	7.4	17.7	
12-Aug	4	9	11	8	9	11	13	16	13	9	19	22	22	25	26	24	27	21	22	18	16	14	12	12	16.0	26.9	
13-Aug	12	13	14	11	12	15	13	14	14	15	16	16	14	15	16	14	14	11	10	7	5	5	5	3	11.9	16.3	
14-Aug	5	2	4	6	2	3	2	2	4	3	4	6	7	8	9	7	8	6	6	4	4	5	3	3	4.7	8.6	
15-Aug	2	4	6	4	4	3	2	4	6	14	18	19	20	21	19	19	19	20	16	17	15	17	14	13	12.2	20.5	
16-Aug	12	7	5	9	9	6	6	10	12	8	10	11	13	15	19	20	22	20	17	18	14	13	8	14	12.4	21.9	
17-Aug	14	7	7	8	5	8	9	11	12	13	14	14	14	13	9	9	9	10	11	8	7	6	7	7	9.7	14.3	
18-Aug	4	4	4	5	4	5	8	18	10	8	6	10	27	27	33	34	26	28	35	35	23	17	18	21	17.1	34.9	
19-Aug	19	18	31	39	33	31	25	29	36	37	34	34	39	36	39	40	37	36	31	26	18	13	11	5	29.0	40.3	
20-Aug	5	7	7	8	8	7	2	3	6	19	16	18	15	14	13	13	9	5	7	13	10	5	4	3	9.1	18.5	
21-Aug	2	6	5	5	4	4	2	2	4	4	4	5	6	7	8	8	8	10	10	7	7	7	6	5	5.7	9.8	
22-Aug	4	2	4	5	5	8	6	9	6	9	12	12	13	11	6	8	7	10	13	8	7	6	7	5	7.7	13.5	
23-Aug	6	7	6	4	4	3	3	3	3	12	23	21	25	27	28	25	25	31	23	16	13	8	4	6	13.5	30.7	
24-Aug	3	3	3	4	3	4	3	4	11	26	32	30	23	17	15	18	22	25	23	12	7	5	6	6	12.7	31.9	
25-Aug	6	4	2	2	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	--	6.1	
26-Aug	10	10	8	7	9	15	9	6	8	7	9	4	5	9	11	9	12	9	12	11	10	12	8	9	9.1	15.3	
27-Aug	9	9	12	9	11	16	18	D	D	D	D	D	D	D	33	37	30	19	21	20	20	17	17	13	--	37.3	
28-Aug	15	13	14	15	15	15	17	17	19	19	17	17	12	15	12	12	13	12	10	8	7	5	3	2	12.6	19.2	
29-Aug	2	6	5	5	6	3	3	5	3	2	2	2	11	13	11	11	10	14	13	12	8	4	5	6	6.7	13.5	
30-Aug	6	6	8	8	4	4	4	6	3	3	3	5	5	5	5	5	4	9	6	9	5	3	3	5	5.1	8.9	
31-Aug	3	3	4	5	3	5	3	3	4	4	4	6	7	8	8	11	6	5	6	3	4	6	5	5	5.0	11.4	
		7.1	6.4	7.2	7.8	7.4	7.9	7.3	8.5	10.3	12.4	14.4	15.7	16.5	16.2	17.3	17.1	16.1	16.5	15.4	12.8	10.1	8.5	7.4	7.0	Diurnal Average	
		19.5	17.7	31.2	39.0	32.7	30.9	24.7	28.6	36.0	36.6	34.2	36.8	38.7	36.5	39.0	40.3	37.3	36.8	34.9	34.7	25.0	24.0	17.9	21.1	Diurnal Maximum	
D - DAS Failure All monthly, daily, and diurnal averages have been calculated using scalar methods																											

# Hourly Standard Deviations

Wind Direction (WD) - deg  
Beaverlodge - August 2010

Maximum Value: 94.6 deg on Aug 21 01:00		Hours in Service: 744																								
Minimum Value: 2.4 deg on Aug 4 04:00		Hours of Data: 717																								
Percentiles: P <sub>1</sub> = 2.9 P <sub>10</sub> = 6.1 Q <sub>1</sub> = 9.1 Median = 15.9 Q <sub>3</sub> = 32.6 P <sub>90</sub> = 56.1 P <sub>99</sub> = 85.5		Hours of Missing Data: 27																								
		Hours of Calibration: 0																								
		Percent Operational Time: 96.4																								
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	13	10	22	24	9	9	26	26	15	77	19	9	8	11	13	16	14	7	9	7	5	6	17	34	76.8	
2-Aug	5	6	7	9	11	7	5	12	13	18	23	27	24	22	33	31	49	27	11	15	26	34	16	65	64.6	
3-Aug	33	41	34	34	74	21	52	35	14	35	65	58	51	63	43	23	28	25	13	13	10	12	71	19	73.7	
4-Aug	3	31	16	2	3	50	76	41	14	17	18	41	48	33	32	48	76	14	41	11	20	6	4	3	75.9	
5-Aug	8	9	20	24	80	18	17	19	37	17	11	13	20	19	16	26	55	47	18	9	82	13	75	93	92.7	
6-Aug	56	85	64	30	75	13	23	17	26	14	12	11	8	10	12	10	14	7	8	6	6	10	7	12	85.1	
7-Aug	8	51	91	5	8	5	6	7	6	7	8	10	8	16	12	11	11	6	8	6	6	3	4	5	91.5	
8-Aug	6	6	7	4	8	6	14	9	9	8	7	14	20	24	10	13	10	8	6	5	4	3	11	7	24.0	
9-Aug	9	11	8	43	52	25	41	14	7	11	14	18	17	20	12	18	14	15	17	6	27	30	5	4	51.6	
10-Aug	62	39	12	7	8	48	31	18	17	22	21	25	38	53	28	33	32	18	13	18	15	63	6	9	62.7	
11-Aug	8	11	60	16	15	23	43	10	16	14	35	17	28	32	19	10	28	11	15	26	50	43	54	56	59.8	
12-Aug	78	14	6	24	24	16	17	12	25	21	11	12	12	13	13	12	8	10	7	7	10	6	10	7	78.3	
13-Aug	6	7	6	8	8	6	7	8	10	19	12	16	20	24	16	23	18	28	20	11	7	30	25	20	30.1	
14-Aug	41	90	31	41	66	56	75	59	29	50	72	69	66	80	63	65	44	32	26	7	13	61	57	36	89.5	
15-Aug	75	82	41	38	12	55	52	43	33	11	13	12	11	16	16	15	13	11	13	6	5	12	40	53	82.5	
16-Aug	64	34	68	15	11	48	11	4	7	41	16	23	22	17	13	11	10	6	6	10	5	20	24	14	67.6	
17-Aug	17	20	25	23	20	10	19	11	8	8	12	10	16	20	24	22	26	23	11	7	34	9	9	8	34.2	
18-Aug	12	12	11	15	33	13	39	22	76	84	21	21	18	14	7	4	5	8	5	4	5	4	6	3	84.2	
19-Aug	4	8	5	3	12	5	4	5	6	7	9	11	9	10	10	8	9	9	7	2	3	3	11	58	58.2	
20-Aug	40	32	25	6	7	18	54	89	17	12	17	17	28	14	25	18	25	27	32	6	8	10	48	30	89.4	
21-Aug	95	56	12	80	76	77	75	42	12	38	36	15	11	13	14	17	17	17	10	13	17	4	7	18	94.6	
22-Aug	19	86	79	47	61	56	52	25	49	15	8	9	9	9	30	32	39	20	58	40	48	18	9	15	86.0	
23-Aug	16	8	27	51	69	17	16	38	20	33	11	12	11	13	9	13	12	7	7	7	8	6	28	38	68.9	
24-Aug	37	38	54	13	56	49	14	47	10	9	10	10	8	14	20	17	12	8	6	11	13	51	23	17	55.9	
25-Aug	10	29	26	35	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	34.8	
26-Aug	31	49	78	72	27	44	45	86	37	48	24	49	49	19	16	30	8	10	5	17	16	14	12	7	85.7	
27-Aug	12	12	8	7	6	5	8	D	D	D	D	D	D	D	8	7	35	15	11	5	13	7	7	7	34.5	
28-Aug	6	5	6	6	5	5	5	6	5	14	14	12	13	10	15	13	11	13	9	5	7	8	19	41	41.4	
29-Aug	66	9	32	14	36	66	41	15	72	65	68	81	23	10	16	18	16	19	9	7	12	10	18	4	81.1	
30-Aug	6	7	4	4	32	63	59	18	54	29	42	39	57	65	60	65	65	16	7	29	28	22	28	13	65.2	
31-Aug	53	23	40	20	39	27	32	20	19	34	38	51	54	27	51	29	48	59	28	74	50	11	38	67	73.7	
		94.6	89.5	91.5	80.4	80.4	77.3	75.9	89.4	75.9	84.2	72.0	81.1	66.5	80.4	62.8	65.0	75.8	58.8	57.6	73.7	81.8	62.7	74.6	92.7	
D - DAS Failure																										

PASZA

Portable – Bonanza Station

Monthly Summary Tables, Graphs and  
Roses

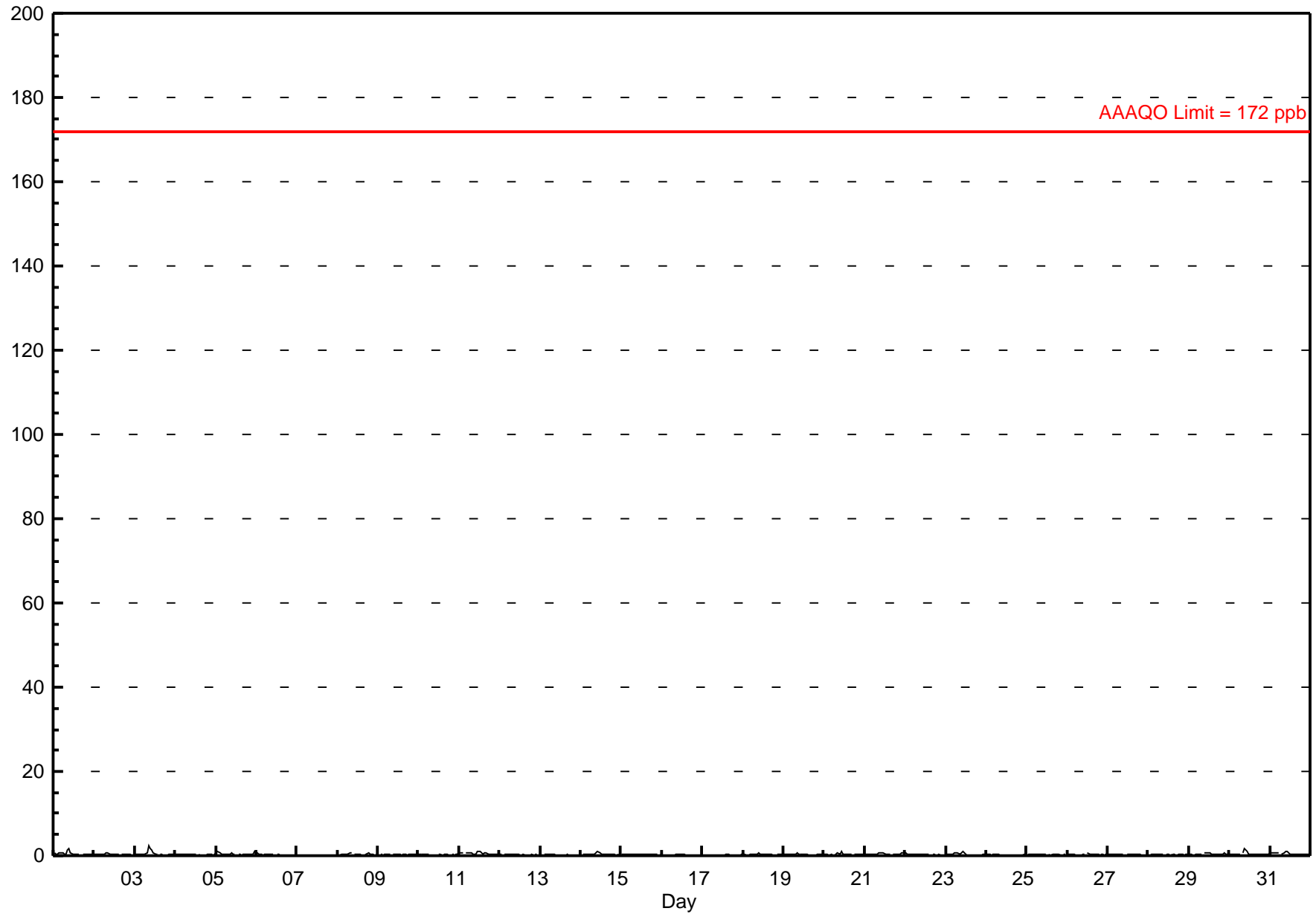
# Hourly Averages

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Portable-Bonanza - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 2.5 ppb on Aug 3 09:00	Maximum Daily Average: 0.5 ppb on Aug 11
Minimum Value: 0 ppb on Aug 3 20:00	Hours of Data: 709
Maximum Diurnal Average: 0.5 ppb at hour 10	Hours of Missing Data: 35
Monthly Average: 0.30 ppb	Hours of Calibration: 35
Minimum Daily Average: 0.0 ppb on Aug 7	Percent Operational Time: 100.0
Minimum Diurnal Average: 0.2 ppb at hour 20	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.3 Q <sub>3</sub> = 0.4 P <sub>90</sub> = 0.5 P <sub>99</sub> = 0.9	

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-Aug	1	0	0	1	1	1	0	0	1	2	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0.5	1.6
2-Aug	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.7
3-Aug	0	0	0	0	0	0	0	1	3	2	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0.5	2.5
4-Aug	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	0.5
5-Aug	1	1	1	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0.4	1.1
6-Aug	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
7-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
8-Aug	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.7
9-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
10-Aug	0	0	0	0	0	0	0	A	1	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
11-Aug	1	1	1	A	1	1	1	1	0	0	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0.5	0.9
12-Aug	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	0.5
13-Aug	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
14-Aug	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0.3	1.0
15-Aug	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
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3
17-Aug	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
18-Aug	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
19-Aug	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.5
20-Aug	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.9
21-Aug	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	1	0.4	0.8
22-Aug	1	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	0.7
23-Aug	0	0	0	0	0	1	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.9
24-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3
25-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
26-Aug	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
27-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
28-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
29-Aug	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0.4	0.8
30-Aug	0	0	0	0	0	0	0	A	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.8
31-Aug	1	1	1	1	1	1	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	Diurnal Average	
	0.8	1.1	0.7	0.8	0.8	0.8	0.8	0.8	2.5	1.8	1.4	0.9	0.9	0.7	0.4	0.7	0.8	0.4	0.5	0.5	0.5	0.6	0.8	0.9	Diurnal Maximum	

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





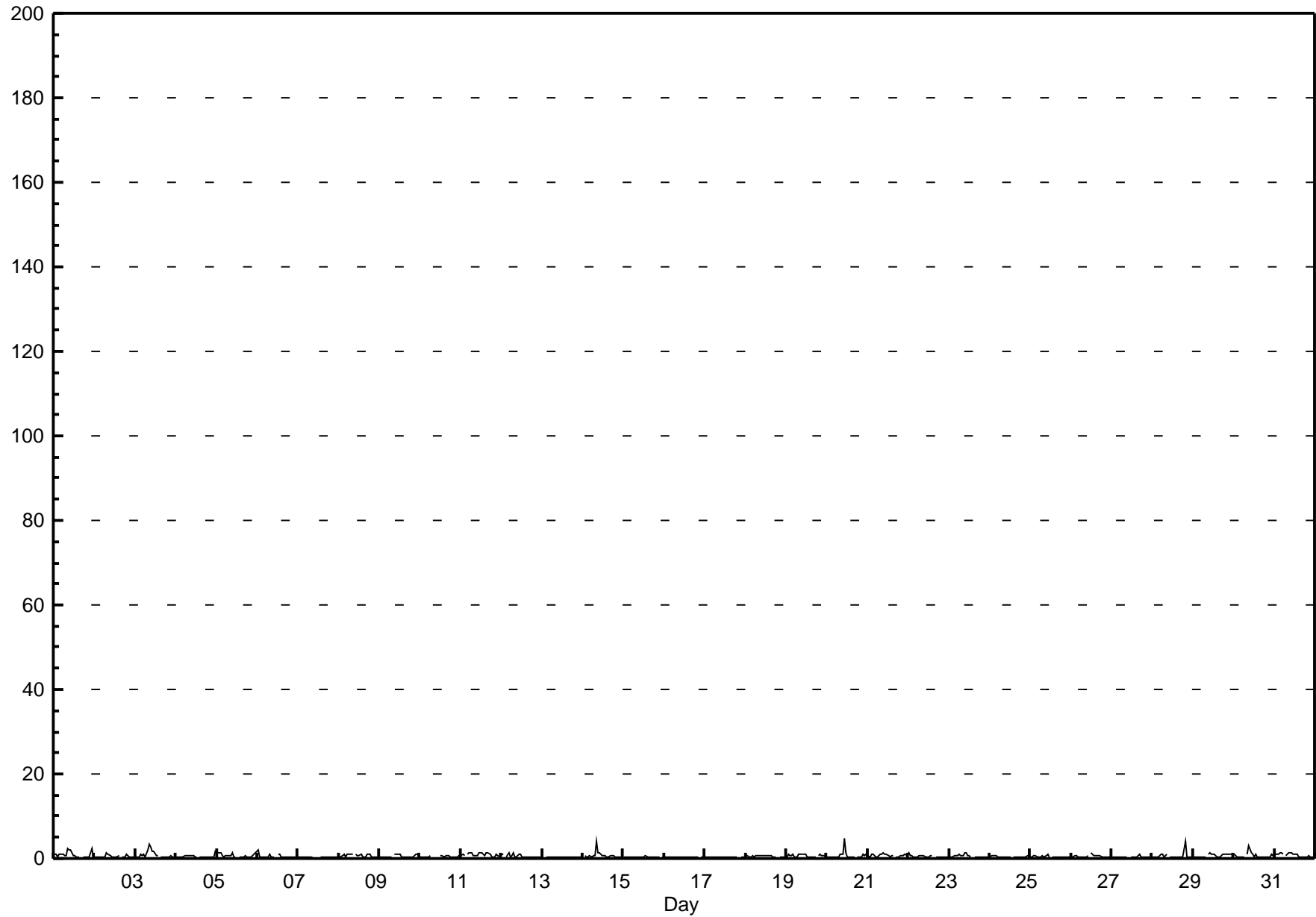
# Hourly Maximums

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Portable-Bonanza - August 2010

Maximum Value: 4.9 ppb on Aug 20 11:00		Maximum Daily Average: 0.9 ppb on Aug 3		Hours in Service: 744																						
Minimum Value: 0 ppb on Aug 7 12:00		Minimum Daily Average: 0.2 ppb on Aug 7		Hours of Data: 709																						
Maximum Diurnal Average: 1.0 ppb at hour 9		Minimum Diurnal Average: 0.4 ppb at hour 19		Hours of Missing Data: 35																						
Monthly Average: 0.58 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> = 0.8 P <sub>90</sub> = 0.9 P <sub>99</sub> = 2.2		Hours of Calibration: 35																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	1	0	1	1	1	1	1	2	2	2	1	1	0	0	0	A	0	0	0	0	0	2	0	0.9	2.4
2-Aug	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	A	0	0	0	1	0	0	0	0	0.6	1.5
3-Aug	0	0	0	1	1	1	0	2	3	3	2	2	1	1	A	1	0	0	0	0	0	1	0	0	0.9	3.4
4-Aug	0	0	0	0	0	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	2	0.5	1.8
5-Aug	1	1	1	1	0	1	1	1	1	1	0	0	A	0	0	0	0	1	0	0	0	1	1	1	0.7	1.4
6-Aug	2	0	0	0	0	0	0	1	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0.5	1.9
7-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
8-Aug	0	0	1	1	0	1	1	1	1	A	1	1	1	1	0	0	0	1	1	0	0	0	0	0	0.6	0.9
9-Aug	0	0	0	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0.6	0.9
10-Aug	0	0	0	0	0	0	1	A	2	C	C	C	1	1	0	1	1	1	0	0	0	0	0	1	0.5	1.8
11-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0.9	1.3
12-Aug	1	1	A	0	1	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.4
13-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
14-Aug	A	1	0	0	1	0	1	1	4	1	1	1	1	1	0	0	1	1	1	0	0	0	0	A	0.8	4.2
15-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	A	0	0.4	0.8
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.4
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.3
18-Aug	0	1	0	0	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0.6	0.8
19-Aug	0	1	1	1	1	0	0	1	1	1	1	1	0	0	0	0	0	0	A	1	1	1	1	0	0.6	1.1
20-Aug	0	0	0	0	0	0	0	0	1	1	5	1	0	0	0	0	0	A	0	0	0	1	1	1	0.7	4.9
21-Aug	1	0	1	1	1	0	0	1	1	1	1	1	0	1	1	A	0	0	0	1	1	1	1	1	0.7	1.4
22-Aug	1	1	1	0	0	0	1	1	1	1	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0.5	1.2
23-Aug	0	0	0	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0.5	1.3
24-Aug	0	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0.4	0.8
25-Aug	0	0	1	1	0	0	0	1	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
26-Aug	0	0	1	1	0	0	0	0	0	0	1	A	1	1	1	1	1	0	0	0	0	0	0	0	0.5	1.3
27-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0.4	0.9
28-Aug	0	0	0	0	1	1	0	1	0	1	A	0	0	0	0	0	0	0	0	4	0	0	0	0	0.6	4.1
29-Aug	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	0.7	1.4
30-Aug	1	1	0	0	0	0	0	A	1	3	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0.7	2.9
31-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0.8	1.4
		0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.7	1.0	0.9	1.0	0.7	0.6	0.6	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.5	0.6	0.5	Diurnal Average
		1.9	1.3	1.3	1.3	1.4	1.3	1.2	1.9	4.2	2.9	4.9	1.5	1.3	1.0	0.8	1.3	1.3	1.0	1.0	4.1	1.0	1.0	2.4	1.8	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

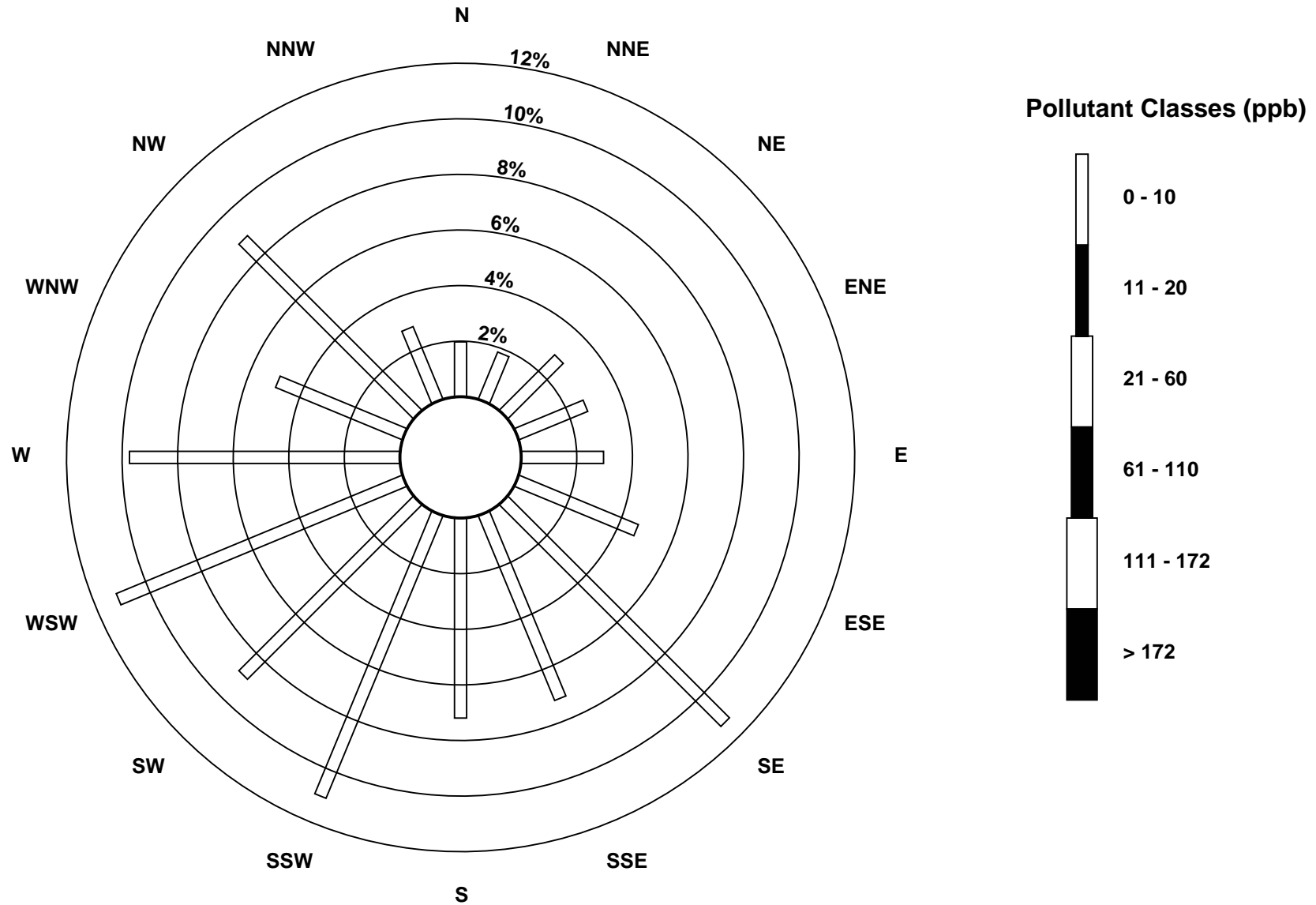
# Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Portable-Bonanza - August 2010



### Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Portable-Bonanza - August 2010



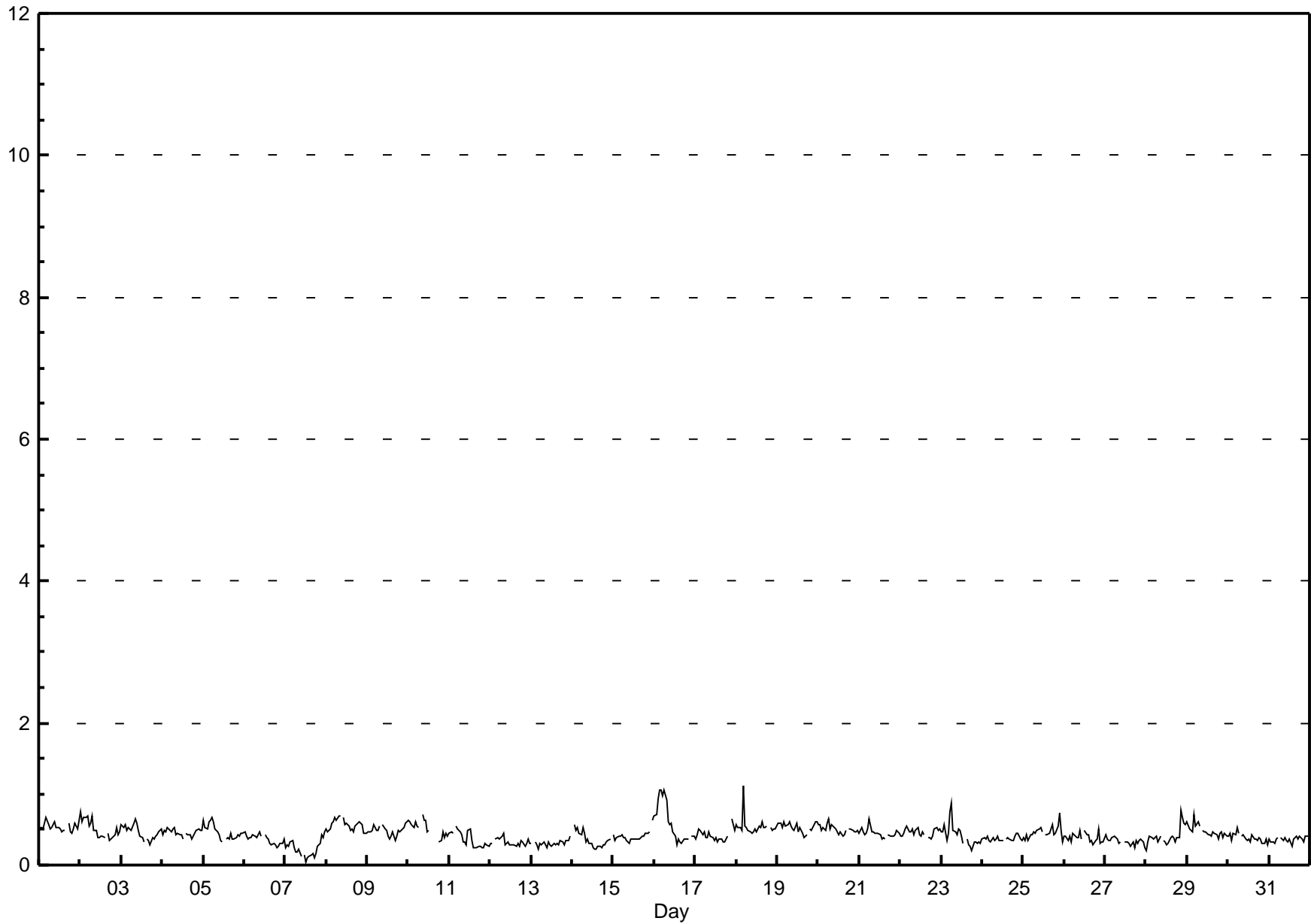
# Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable-Bonanza - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.1 ppb on Aug 18 05:00 Maximum Daily Average: 0.6 ppb on Aug 16		Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0																								
Minimum Value: 0 ppb on Aug 7 13:00 Maximum Diurnal Average: 0.5 ppb at hour 5 Monthly Average: 0.43 ppb		Minimum Daily Average: 0.2 ppb on Aug 7 Minimum Diurnal Average: 0.4 ppb at hour 18 Percentiles: P <sub>1</sub> = 0.2 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> = 0.9																								
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-Aug	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0	A	1	0	0	1	1	1	1	0.5	0.7	
2-Aug	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0.5	0.7	
3-Aug	1	1	1	0	1	1	0	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	1	0.5	0.7	
4-Aug	0	0	0	1	1	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0.5	0.5	
5-Aug	1	1	1	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.5	0.7	
6-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
7-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
8-Aug	1	0	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	1	1	1	1	1	0	0.6	0.7	
9-Aug	0	0	0	0	1	0	0	1	A	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0.5	0.6	
10-Aug	1	1	1	1	1	1	1	A	1	1	1	0	C	C	C	C	C	0	0	0	0	0	0	0.5	0.7	
11-Aug	0	0	0	A	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
12-Aug	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	0.5	
13-Aug	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	
14-Aug	A	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.6	
15-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.4	0.6	
16-Aug	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0.6	1.1	
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0.4	0.6	
18-Aug	1	1	1	0	1	1	1	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0.5	1.1	
19-Aug	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	A	1	0	1	1	0.5	0.6
20-Aug	1	1	0	1	0	1	1	1	1	1	1	0	0	0	0	0	A	1	1	1	0	0	0	0.5	0.7	
21-Aug	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.7	
22-Aug	0	0	0	1	1	0	0	1	0	0	1	0	0	0	A	0	0	0	0	0	1	1	0	0.5	0.5	
23-Aug	0	0	1	0	0	1	1	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.9	
24-Aug	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	0.4	
25-Aug	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	1	1	0	0	1	1	0	0.5	0.7	
26-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
27-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
28-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.4	0.8	
29-Aug	1	1	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.7	
30-Aug	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
31-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4	
																								Diurnal Average	Diurnal Maximum	
																								0.5	0.7	
																								0.5	0.7	
																								0.5	0.9	
																								0.5	1.1	
																								0.5	1.1	
																								0.5	1.0	
																								0.5	1.1	
																								0.5	0.9	
																								0.5	0.7	
																								0.4	0.6	
																								0.4	0.7	
																								0.4	0.6	
																								0.4	0.6	
																								0.4	0.6	
																								0.4	0.5	
																								0.4	0.6	
																								0.4	0.5	
																								0.4	0.6	
																								0.4	0.6	
																								0.4	0.6	
																								0.4	0.6	
																								0.4	0.8	
																								0.4	0.7	
																								0.4	0.6	
																								0.4	0.6	

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

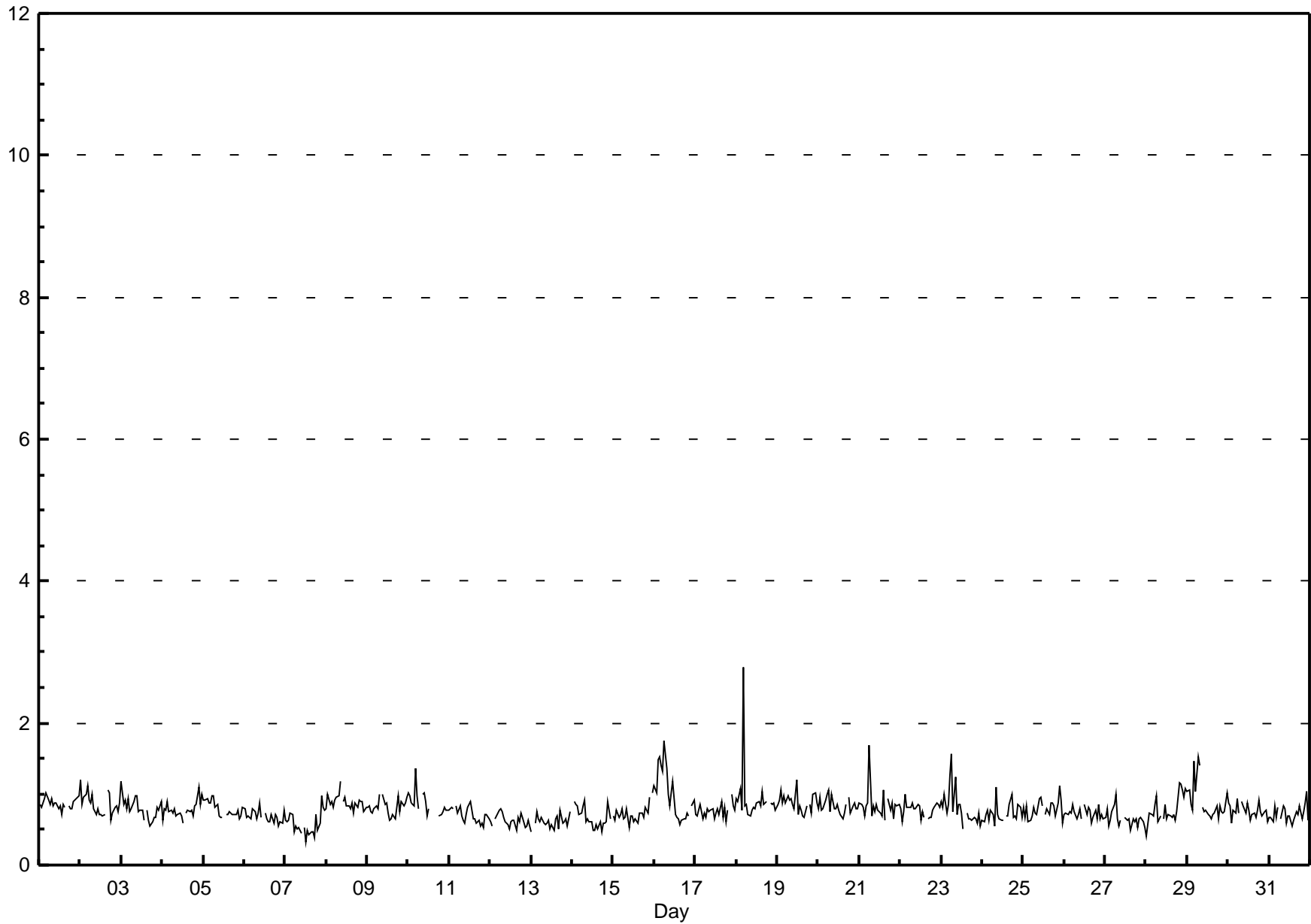


# Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

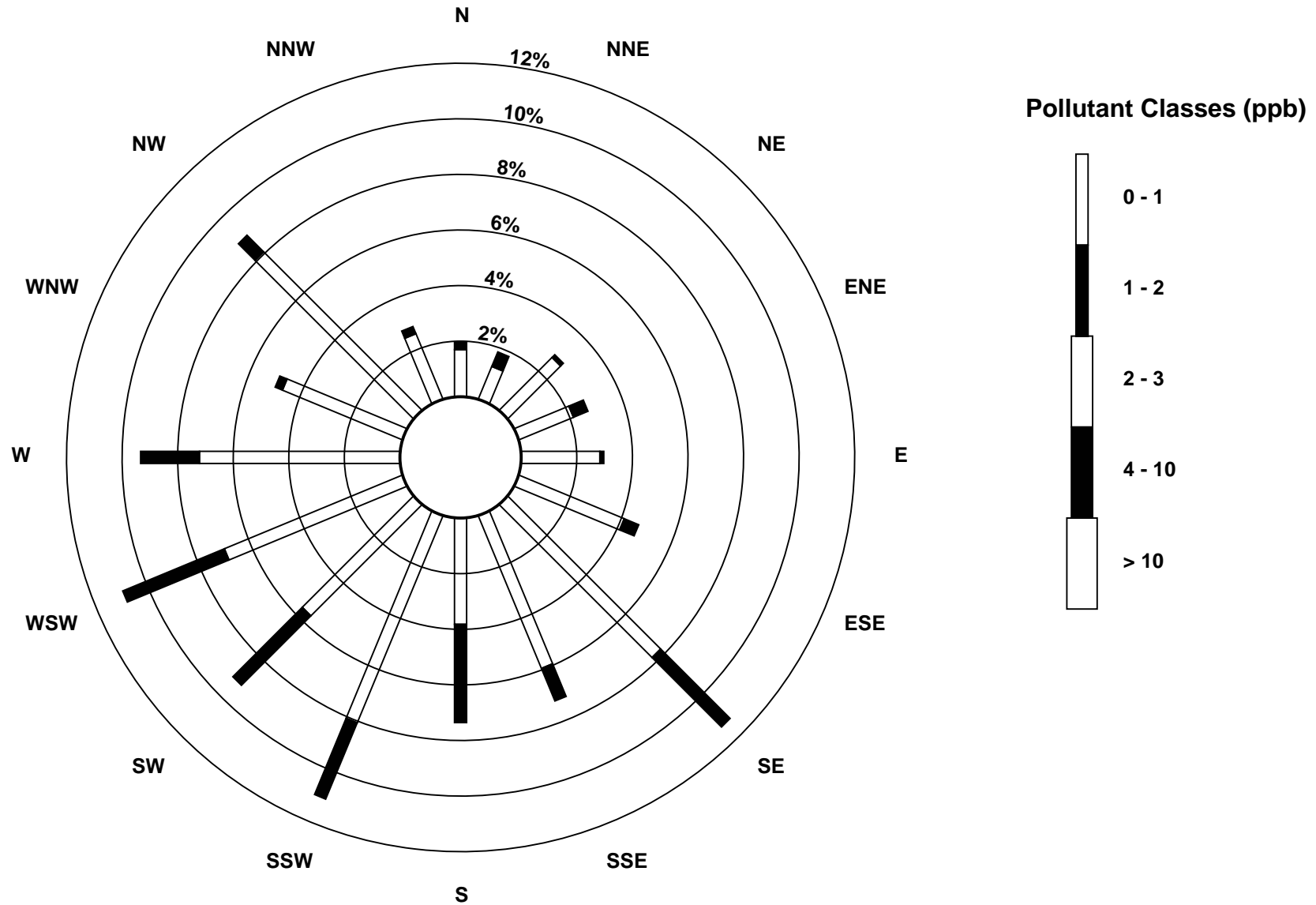
Portable-Bonanza - August 2010

Maximum Value: 2.8 ppb on Aug 18 05:00 Minimum Value: 0 ppb on Aug 7 13:00 Maximum Diurnal Average: 0.9 ppb at hour 7 Monthly Average: 0.78 ppb		Maximum Daily Average: 1.0 ppb on Aug 16 Minimum Daily Average: 0.6 ppb on Aug 7 Minimum Diurnal Average: 0.7 ppb at hour 14 Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.7 Median = 0.8 Q <sub>3</sub> = 0.9 P <sub>90</sub> = 1.0 P <sub>99</sub> = 1.5		Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.0
2-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.2
3-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.2
4-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.1
5-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
6-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
7-Aug	1	1	1	1	1	0	1	1	1	0	A	1	0	0	0	0	0	0	1	0	1	1	1	1	0.6	1.0
8-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
9-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
10-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	C	C	C	C	C	1	1	1	1	1	1	0.9	1.4
11-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
12-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.6	0.8
13-Aug	0	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	0.8
14-Aug	A	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0	1	1	1	1	1	A	0.7	0.9
15-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.0
16-Aug	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.7
17-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.0
18-Aug	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.8
19-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.2
20-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.1
21-Aug	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.7
22-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.0
23-Aug	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.6
24-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.1
25-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
26-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
27-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.0
28-Aug	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
29-Aug	1	1	1	1	1	1	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
30-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	0.9
31-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	Diurnal Average	
	1.2	1.1	1.5	1.5	2.8	1.3	1.7	1.4	1.2	1.0	1.0	1.2	0.9	0.9	1.1	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.0	1.1	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span		



# Pollutant Rose

Total Reduced Sulphur (TRS) - ppb  
Portable-Bonanza - August 2010





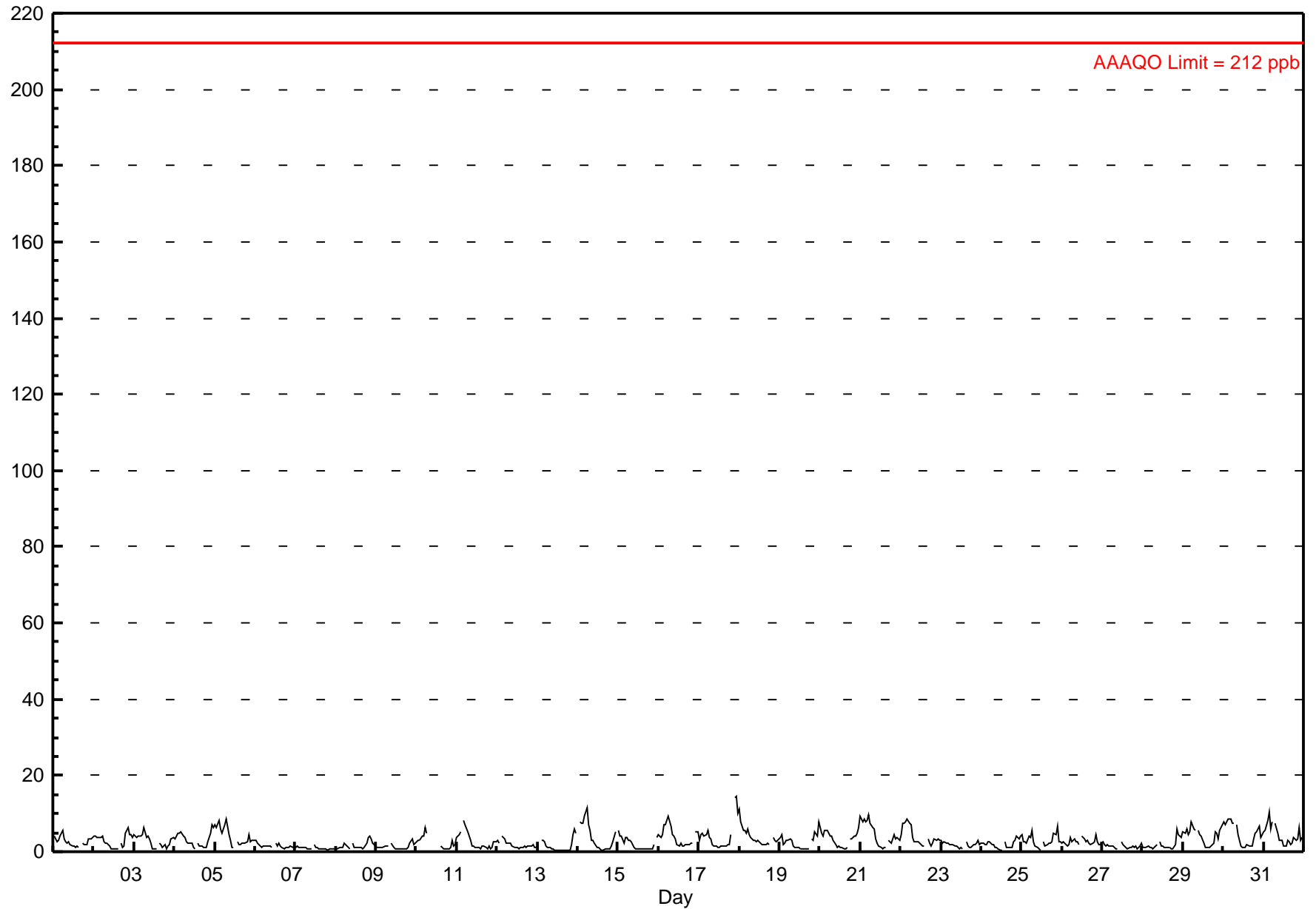
# Hourly Averages

## Nitrogen Dioxide (NO<sub>2</sub>) - ppb Portable-Bonanza - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 14.4 ppb on Aug 17 23:00	Maximum Daily Average: 4.6 ppb on Aug 30
Minimum Value: 0 ppb on Aug 13 18:00	Hours of Data: 707
Maximum Diurnal Average: 4.7 ppb at hour 6	Hours of Missing Data: 37
Monthly Average: 2.81 ppb	Hours of Calibration: 37
Minimum Daily Average: 1.0 ppb on Aug 7	Percent Operational Time: 100.0
Minimum Diurnal Average: 1.3 ppb at hour 14	
Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 1.2 Median = 2.2 Q <sub>3</sub> = 3.8 P <sub>90</sub> = 5.7 P <sub>99</sub> = 9.2	

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-Aug	4	3	3	3	4	6	3	3	2	2	2	2	1	2	1	A	2	2	2	2	3	3	4	2.7	5.8																							
2-Aug	4	4	4	4	4	4	3	2	2	1	1	1	1	1	A	2	1	1	5	6	5	4	4	2.8	6.3																							
3-Aug	4	4	4	4	4	5	6	4	4	3	2	1	1	1	A	2	2	1	2	1	2	2	3	4	2.8	6.4																						
4-Aug	3	4	5	5	5	4	4	3	2	2	2	1	1	A	2	1	1	1	1	1	3	5	7	6	3.1	7.0																						
5-Aug	7	6	8	6	5	6	7	9	4	3	1	1	A	3	2	2	2	2	2	3	5	3	3	3	4.1	8.7																						
6-Aug	3	2	2	2	1	1	1	2	2	1	1	A	2	2	2	2	1	1	1	1	1	1	1	1	1.5	2.9																						
7-Aug	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1.0	1.9																						
8-Aug	1	1	1	1	1	2	2	1	1	A	2	1	1	1	1	1	1	1	2	4	4	3	2	1	1.6	4.2																						
9-Aug	1	1	1	1	1	2	1	1	A	2	1	1	1	1	1	1	1	1	1	1	2	4	2	2	1.3	3.5																						
10-Aug	3	3	3	4	4	6	5	A	4	C	C	C	C	C	2	1	1	1	1	1	1	3	2	2	2.6	6.2																						
11-Aug	4	5	5	A	8	7	5	4	3	1	1	1	1	1	1	1	1	1	1	2	1	1	3	2	2.7	8.2																						
12-Aug	3	2	A	4	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1.7	4.1																						
13-Aug	1	A	3	3	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	2	5	6	5	1.6	6.0																						
14-Aug	A	8	8	7	9	12	7	6	3	3	2	1	1	1	1	0	1	1	1	1	2	3	5	A	3.7	11.5																						
15-Aug	6	4	4	2	4	4	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	2	A	4	2.0	5.7																						
16-Aug	4	4	5	7	7	8	9	7	5	4	3	2	1	2	2	1	2	2	2	2	2	A	5	5	4.0	9.5																						
17-Aug	3	4	5	4	4	6	4	3	2	1	2	1	1	1	2	2	2	2	2	4	A	14	14	10	4.1	14.4																						
18-Aug	11	8	5	6	5	6	5	4	3	3	2	3	3	2	2	2	2	2	2	A	4	3	3	3	3.8	11.3																						
19-Aug	4	5	2	2	3	3	3	3	1	1	1	1	1	1	1	1	1	1	A	3	3	5	4	8	2.5	7.8																						
20-Aug	6	5	4	5	5	5	4	4	3	2	1	1	1	1	1	1	1	A	3	3	4	4	5	6	3.4	6.3																						
21-Aug	9	8	9	8	8	10	8	6	6	3	2	2	1	1	1	1	A	3	2	3	5	3	4	3	4.6	9.6																						
22-Aug	4	7	7	8	9	7	7	4	3	3	3	2	2	2	1	A	3	2	1	2	3	3	3	3	3.9	8.7																						
23-Aug	3	2	2	2	2	2	2	2	2	2	1	1	1	1	A	3	1	1	1	2	2	2	3	2	1.8	2.8																						
24-Aug	2	2	2	2	3	3	2	2	1	1	1	1	0	A	3	1	1	1	1	3	3	4	3	4	1.9	4.3																						
25-Aug	4	3	3	2	4	4	6	3	1	1	1	0	A	3	2	2	2	2	3	5	5	7	3	3	2.9	6.6																						
26-Aug	2	2	2	2	2	4	3	3	3	3	2	A	4	3	3	3	2	2	2	3	4	3	2	2	2.6	4.3																						
27-Aug	3	2	2	2	2	1	1	1	1	1	1	A	3	2	1	1	1	1	1	1	2	1	2	2	1.5	2.7																						
28-Aug	1	1	1	1	1	1	1	1	1	2	A	3	1	1	1	1	1	1	1	2	6	4	4	4	1.8	6.0																						
29-Aug	5	5	6	4	5	8	6	5	A	6	5	4	2	1	1	1	1	2	2	5	5	3	6	7	4.2	7.9																						
30-Aug	8	7	8	9	9	8	8	A	7	4	2	1	1	1	2	1	1	2	3	5	5	7	4	4	4.6	8.6																						
31-Aug	5	6	8	10	6	8	A	7	5	3	3	3	2	1	3	2	2	2	4	3	3	6	3	4	4.4	10.5																						
																								4.1	4.0	4.1	4.1	4.3	4.7	4.0	3.3	2.7	2.2	1.8	1.5	1.3	1.3	1.4	1.3	1.4	1.4	1.6	2.3	2.9	3.7	3.7	3.7	Diurnal Average
																								11.3	8.0	8.8	10.5	9.2	11.5	9.5	8.7	7.2	5.6	4.6	4.3	4.0	3.4	2.9	2.9	3.4	2.9	3.9	5.2	6.3	14.3	14.4	10.2	Diurnal Maximum

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



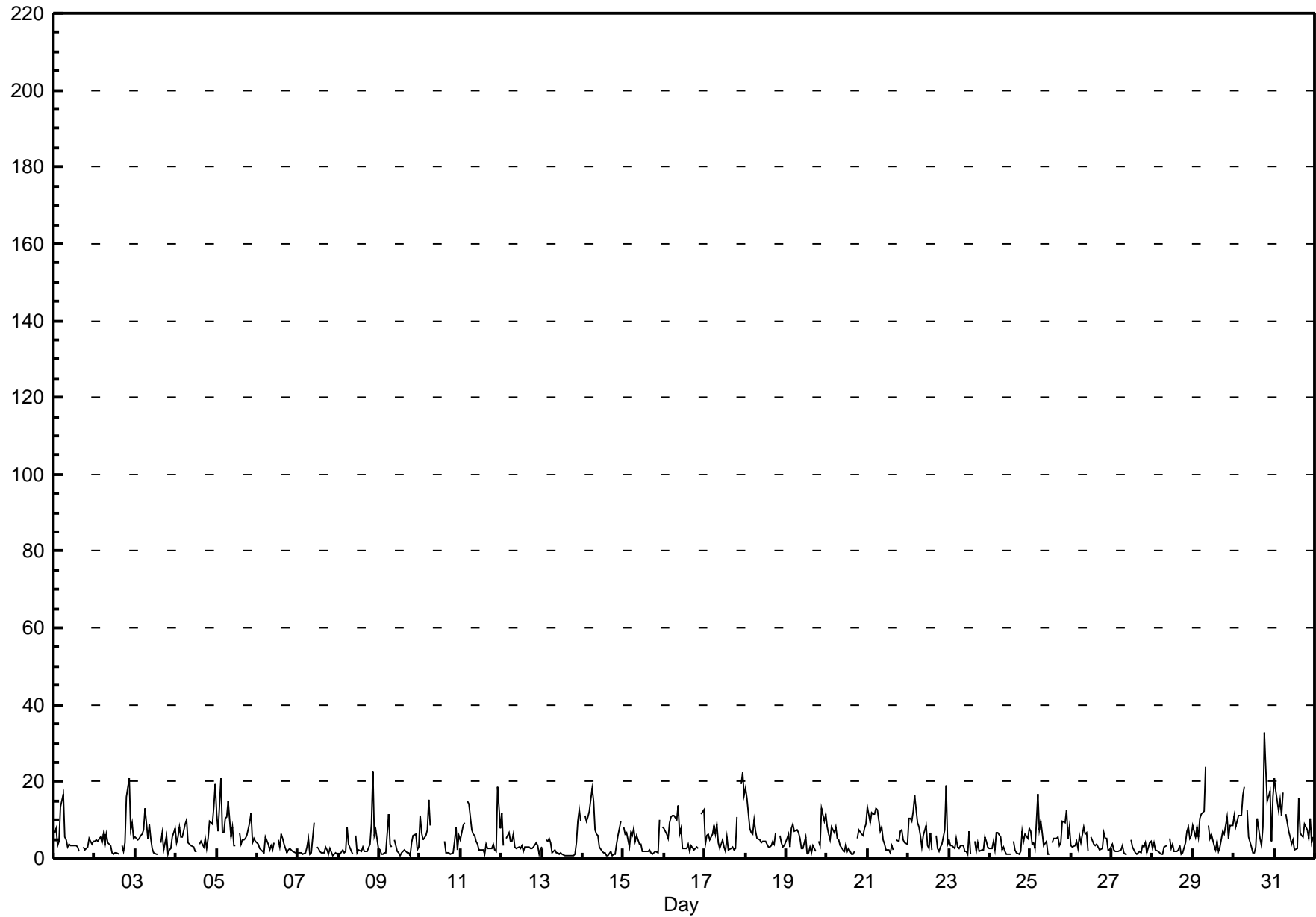
# Hourly Maximums

## Nitrogen Dioxide (NO<sub>2</sub>) - ppb Portable-Bonanza - August 2010

Maximum Value: 32.8 ppb on Aug 30 19:00		Maximum Daily Average: 10.9 ppb on Aug 30		Hours in Service: 744																						
Minimum Value: 1 ppb on Aug 13 16:00		Minimum Daily Average: 2.2 ppb on Aug 7		Hours of Data: 707																						
Maximum Diurnal Average: 9.0 ppb at hour 6		Minimum Diurnal Average: 2.6 ppb at hour 13		Hours of Missing Data: 37																						
Monthly Average: 5.27 ppb		Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 2.3 Median = 4.0 Q <sub>3</sub> = 6.8 P <sub>90</sub> = 10.9 P <sub>99</sub> = 20.8		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-Aug	7	8	3	4	13	17	6	5	3	4	3	3	3	3	3	2	A	3	2	3	3	5	4	4	4.8	16.8
2-Aug	5	5	4	6	4	6	3	6	4	3	1	1	1	1	1	A	3	2	4	16	21	7	9	5	5.3	20.9
3-Aug	6	5	5	6	6	7	13	5	9	5	3	2	1	1	A	4	7	2	6	1	2	2	6	8	4.9	13.2
4-Aug	4	6	8	6	6	9	10	4	4	3	3	2	2	A	4	5	3	5	3	5	10	9	13	19	6.2	19.4
5-Aug	11	7	21	7	7	10	11	15	6	8	3	3	A	7	4	5	5	5	6	9	12	4	5	4	7.6	20.7
6-Aug	4	3	2	2	1	5	4	2	3	2	4	A	5	3	6	5	4	1	2	3	2	2	1	1	3.0	6.3
7-Aug	1	2	2	1	2	3	5	1	1	9	A	3	3	2	1	2	3	2	1	2	1	1	1	1	2.2	9.5
8-Aug	1	1	2	1	2	8	4	2	1	A	6	2	2	2	3	2	2	2	4	9	23	6	7	2	4.0	22.6
9-Aug	2	1	1	1	2	11	4	3	A	5	2	1	1	2	2	2	1	2	1	4	6	6	2	3	2.9	11.4
10-Aug	11	7	5	6	8	15	9	A	6	C	C	C	C	C	5	2	1	2	1	2	5	8	2	6	5.5	15.4
11-Aug	5	9	9	A	15	14	8	6	6	4	4	2	2	2	1	4	3	3	2	4	2	2	18	8	5.8	18.5
12-Aug	12	3	A	5	7	4	5	6	3	3	3	3	3	2	3	3	3	3	3	3	4	3	1	2	3.8	11.9
13-Aug	3	A	5	5	5	4	1	2	1	2	1	1	1	1	1	1	1	1	1	1	4	10	13	10	3.2	12.8
14-Aug	A	11	10	11	12	18	15	7	6	6	3	2	2	1	1	1	2	1	1	1	4	6	10	A	6.0	18.3
15-Aug	8	6	7	3	7	6	8	4	6	4	4	2	2	2	2	2	1	1	2	2	1	10	A	8	4.3	10.1
16-Aug	8	6	5	9	11	11	11	10	14	6	8	3	3	3	4	2	3	2	3	3	3	A	11	13	6.6	13.7
17-Aug	4	6	6	5	6	8	6	9	4	3	5	3	2	6	2	3	3	2	3	11	A	19	22	16	6.7	22.3
18-Aug	18	16	8	7	6	10	7	5	5	4	4	5	4	3	3	4	4	4	7	A	6	4	3	3	6.0	18.4
19-Aug	5	6	3	8	9	7	8	7	5	3	3	5	1	1	3	1	3	2	A	4	4	13	10	12	5.3	13.0
20-Aug	8	6	5	8	7	8	5	5	3	2	2	4	2	3	1	1	2	A	5	7	6	6	8	9	5.0	9.1
21-Aug	13	9	12	12	11	13	13	7	8	5	4	2	2	2	3	2	A	5	5	7	8	5	4	4	6.8	13.5
22-Aug	10	10	10	12	16	9	8	6	3	6	8	3	3	7	2	A	6	3	2	3	4	7	19	4	7.0	19.1
23-Aug	5	3	3	3	5	3	3	3	3	2	2	1	7	1	A	4	2	4	2	2	2	6	5	3	3.2	7.1
24-Aug	3	3	4	2	7	7	6	2	3	2	1	1	1	A	4	2	1	1	2	7	5	6	5	8	3.6	7.7
25-Aug	7	4	4	2	17	8	10	7	3	4	1	1	A	4	5	5	6	3	4	10	9	13	5	8	6.1	16.8
26-Aug	3	3	3	4	2	6	4	8	6	7	2	A	5	4	3	4	3	2	3	7	5	5	2	2	4.1	8.3
27-Aug	4	2	2	2	2	2	3	2	1	1	A	5	3	2	2	1	2	1	3	3	4	2	4	4	2.5	4.8
28-Aug	3	4	2	2	1	1	1	3	3	A	5	3	4	2	2	2	3	1	1	4	7	8	5	6	3.3	8.2
29-Aug	9	6	8	6	10	12	12	24	A	8	5	6	3	2	4	2	3	7	6	8	11	5	8	8	7.6	24.0
30-Aug	11	8	10	11	11	16	18	A	13	6	3	1	1	3	10	5	3	8	33	23	15	17	4	16	10.9	32.8
31-Aug	21	17	12	15	11	17	A	12	7	5	4	5	2	3	16	7	6	6	9	7	5	11	4	6	9.0	21.0
		7.1	6.1	6.1	5.7	7.4	9.0	7.3	6.2	4.9	4.4	3.5	2.7	2.6	2.6	3.5	2.9	3.1	2.9	4.2	5.7	6.4	7.0	7.2	6.8	Diurnal Average
		21.0	17.5	20.7	15.4	16.8	18.3	18.5	24.0	13.7	9.5	8.4	6.2	7.1	6.8	15.5	6.8	6.8	8.1	32.8	23.5	22.6	19.2	22.3	19.4	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

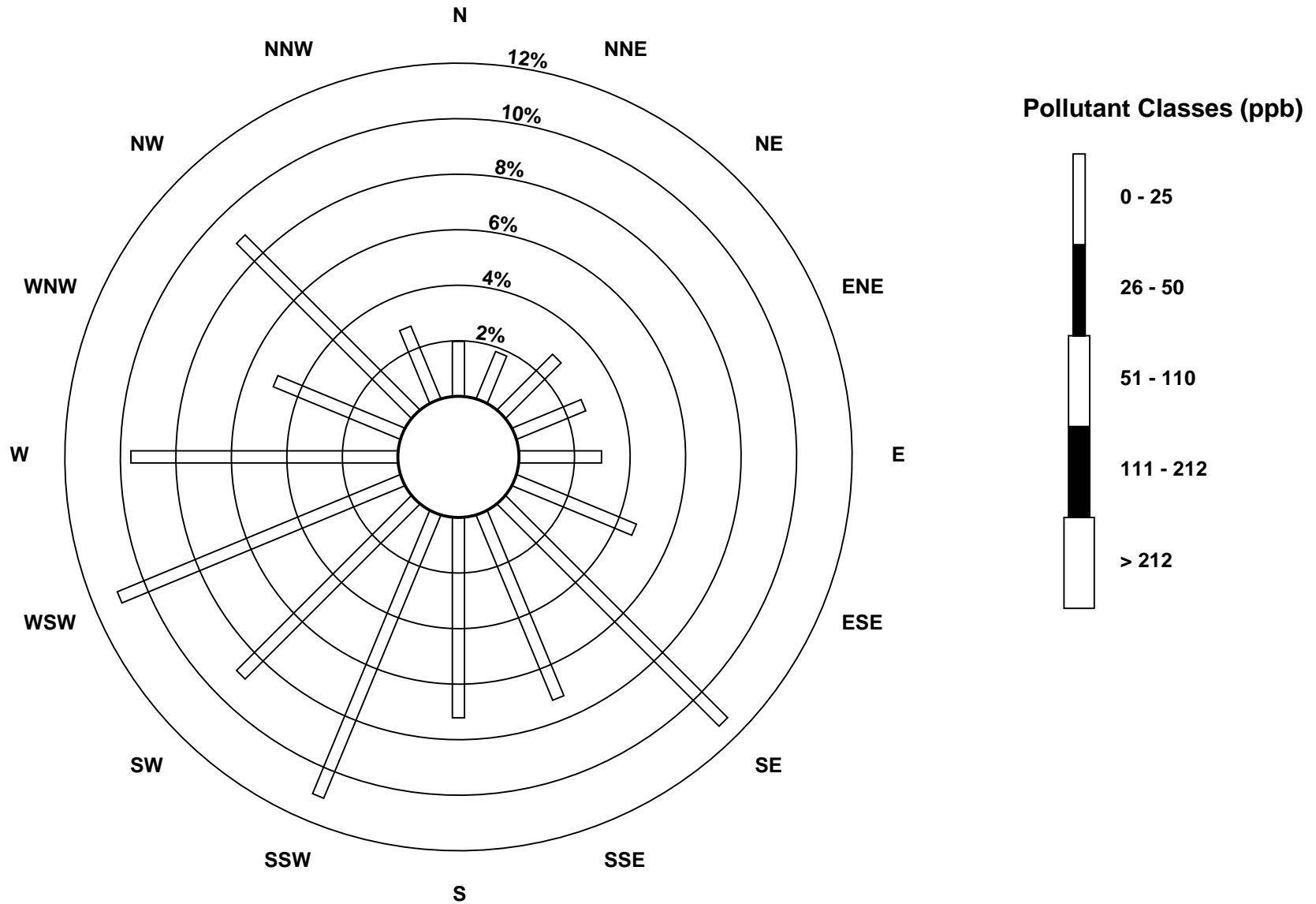
# Hourly Maximums

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Portable-Bonanza - August 2010



# Pollutant Rose

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Portable-Bonanza - August 2010



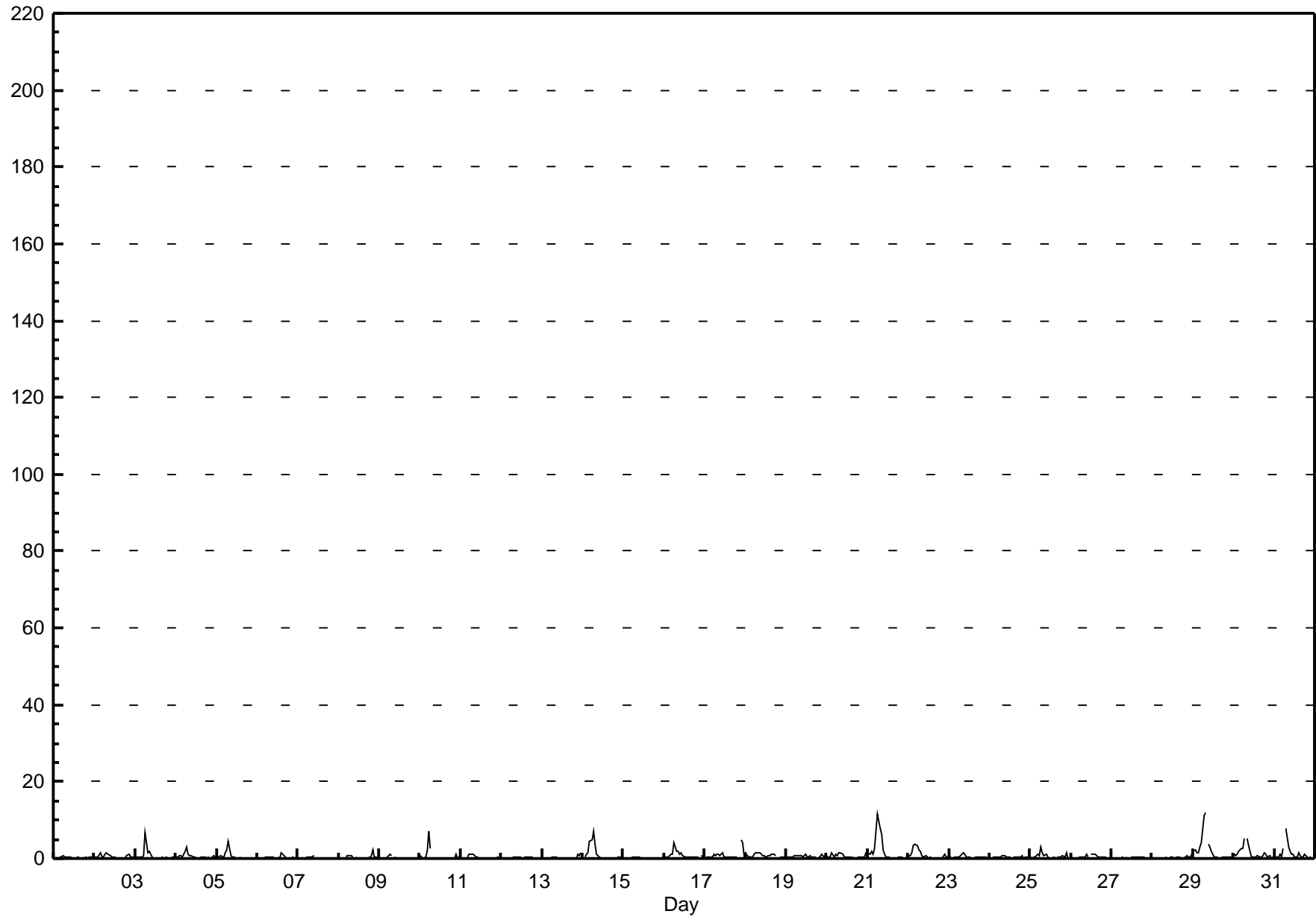
# Hourly Averages

## Nitrogen Oxide (NO) - ppb Portable-Bonanza - August 2010

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 11.9 ppb on Aug 29 08:00	Maximum Daily Average: 2.1 ppb on Aug 29		Hours of Data:	707
Minimum Value: 0 ppb on Aug 8 12:00	Minimum Daily Average: 0.2 ppb on Aug 7		Hours of Missing Data:	37
Maximum Diurnal Average: 2.4 ppb at hour 7	Minimum Diurnal Average: 0.2 ppb at hour 14		Hours of Calibration:	37
Monthly Average: 0.64 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.1 Median = 0.3 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 1.4 P <sub>99</sub> = 6.8		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-Aug	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.7
2-Aug	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0.5	1.3
3-Aug	0	0	0	0	0	1	7	2	2	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.7	6.7
4-Aug	0	0	1	1	0	2	3	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0.6	3.1
5-Aug	0	0	1	0	0	1	2	4	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.6	4.4
6-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	2	1	1	0	0	0	0	0	0	0	0.3	1.6
7-Aug	0	0	0	0	0	1	1	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
8-Aug	0	0	0	0	0	1	1	1	1	0	A	0	0	0	0	0	0	0	0	1	2	0	1	0	0.4	2.2
9-Aug	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
10-Aug	1	0	0	0	2	7	3	A	1	C	C	C	C	C	0	0	0	0	0	0	0	1	0	0	0.9	7.0
11-Aug	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
12-Aug	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	0.5
13-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.2	1.4
14-Aug	A	0	1	2	4	5	7	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1.1	7.0
15-Aug	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.6
16-Aug	0	0	0	1	1	1	4	2	2	1	1	1	0	0	0	0	0	1	0	0	0	A	1	0	0.8	4.1
17-Aug	0	0	1	0	0	1	1	1	1	1	2	0	0	0	0	0	0	0	1	A	5	4	1	0	0.9	4.8
18-Aug	1	1	0	0	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	0	0	0	0	0.8	1.6
19-Aug	0	0	0	0	1	1	1	1	1	1	0	1	0	0	1	0	0	0	A	0	1	0	1	0	0.6	1.3
20-Aug	0	0	0	1	0	1	1	2	2	1	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0.6	1.7
21-Aug	1	1	2	1	2	7	11	8	6	2	1	0	0	0	0	0	A	0	0	0	0	0	0	0	2.0	11.5
22-Aug	1	1	2	3	4	3	2	2	1	1	1	0	0	0	0	A	0	0	0	0	0	1	0	0	1.0	3.8
23-Aug	0	0	0	0	0	0	1	1	1	1	1	0	0	0	A	0	0	1	0	0	0	0	0	0	0.4	1.3
24-Aug	0	0	0	0	0	0	0	1	1	1	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0.3	0.8
25-Aug	0	0	0	0	1	1	3	1	1	1	0	0	A	0	0	0	0	0	0	1	0	1	0	0	0.6	2.9
26-Aug	0	0	0	0	0	0	0	0	1	1	1	A	1	1	1	1	0	0	0	0	1	0	0	0	0.4	1.1
27-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
28-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	1	0.2	0.9
29-Aug	2	2	1	1	3	4	11	12	A	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	2.1	11.9
30-Aug	1	1	1	2	3	3	5	A	5	3	1	0	0	0	1	0	0	1	1	1	0	1	0	0	1.4	5.3
31-Aug	0	0	0	1	0	3	A	8	3	2	1	1	0	0	2	1	0	0	1	0	0	0	0	0	1.1	7.8
	0.4	0.3	0.4	0.6	0.9	1.6	2.4	2.0	1.2	0.9	0.6	0.3	0.3	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.3	Diurnal Average
	1.8	2.1	1.7	3.4	4.3	7.2	11.5	11.9	6.3	3.8	3.1	1.7	1.1	1.0	1.7	1.1	1.1	1.2	1.4	1.3	2.2	4.8	4.0	1.4	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span



# Hourly Maximums

Nitrogen Oxide (NO) - ppb

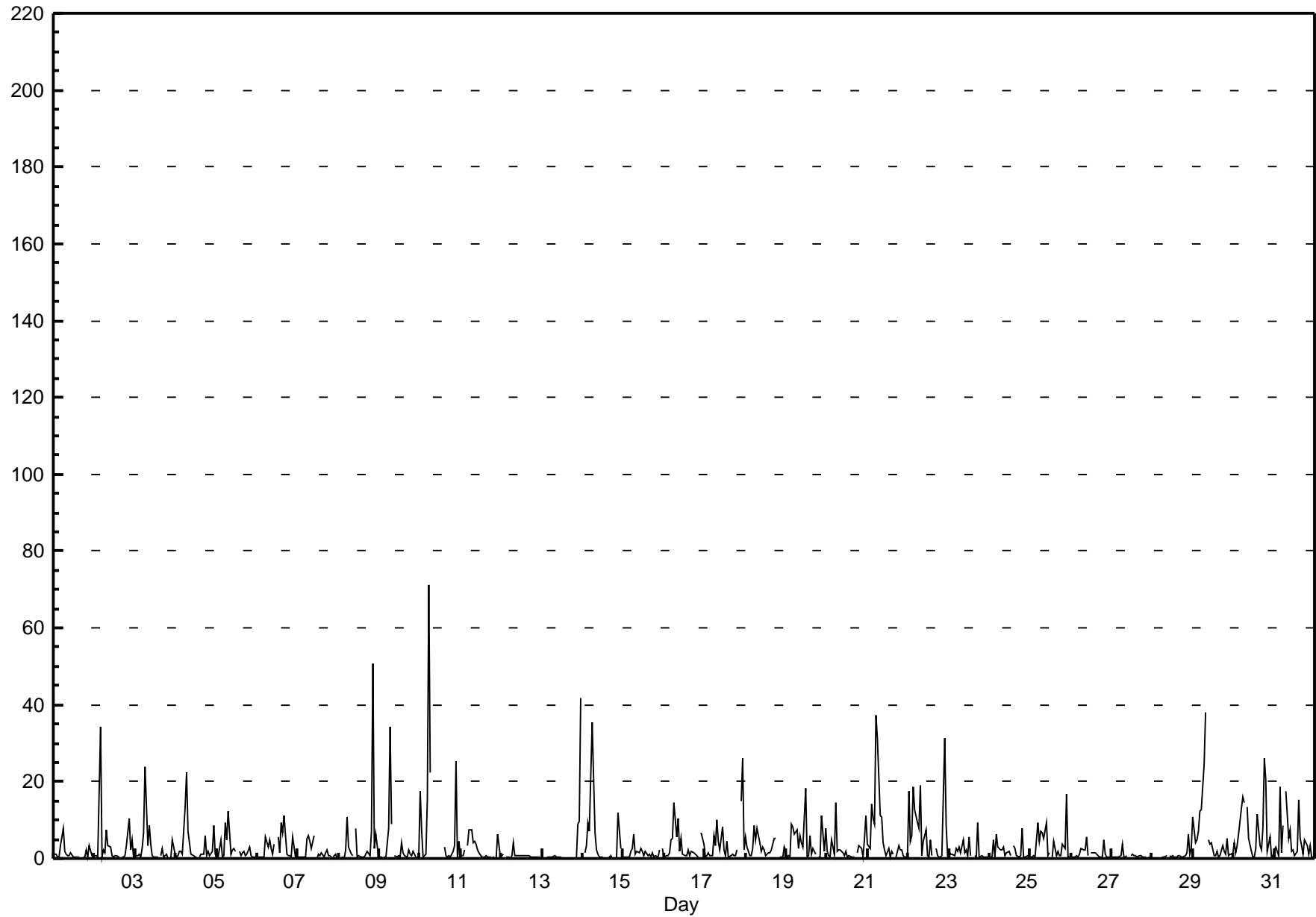
Portable-Bonanza - August 2010

Maximum Value: 71.3 ppb on Aug 10 06:00		Maximum Daily Average: 9.9 ppb on Aug 10		Hours in Service: 744																						
Minimum Value: 0 ppb on Aug 14 15:00		Minimum Daily Average: 0.6 ppb on Aug 27		Hours of Data: 707																						
Maximum Diurnal Average: 10.4 ppb at hour 6		Minimum Diurnal Average: 1.1 ppb at hour 13		Hours of Missing Data: 37																						
Monthly Average: 3.37 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.4 Median = 1.0 Q <sub>3</sub> = 3.5 P <sub>90</sub> = 8.6 P <sub>99</sub> = 33.7		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-Aug	1	1	0	0	3	8	2	1	1	1	2	0	0	0	0	0	A	0	0	2	0	3	1	1	1.3	7.8
2-Aug	1	1	0	34	0	2	2	8	4	3	1	0	1	1	0	A	0	0	1	3	11	2	5	0	3.5	34.2
3-Aug	1	1	1	0	2	7	24	4	9	4	1	0	0	0	A	1	3	0	1	0	0	0	5	1	2.8	24.0
4-Aug	0	1	2	2	1	13	22	7	4	1	1	0	0	A	1	1	1	6	1	2	1	2	9	1	3.4	22.2
5-Aug	0	0	5	0	1	9	5	12	1	2	3	2	A	2	1	2	2	1	1	3	1	0	0	0	2.3	12.4
6-Aug	0	0	0	0	0	6	3	5	2	1	4	A	5	2	9	7	11	1	1	1	0	6	0	0	2.9	11.2
7-Aug	0	0	0	0	1	5	6	4	3	6	A	0	1	1	1	1	2	2	1	1	0	1	1	0	1.6	5.9
8-Aug	0	0	0	0	2	11	3	1	1	A	8	0	1	0	1	0	1	2	1	7	51	3	6	1	4.3	50.7
9-Aug	0	0	0	0	0	8	34	9	A	1	0	1	0	4	1	1	0	2	1	1	2	0	0	1	2.9	34.3
10-Aug	17	8	1	1	16	71	22	A	1	C	C	C	C	C	3	1	0	1	0	2	4	25	0	4	9.9	71.3
11-Aug	1	1	2	A	4	8	7	4	5	4	2	1	0	0	0	1	0	0	0	0	0	0	6	0	2.1	7.6
12-Aug	1	1	A	0	0	0	1	4	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.7	4.2
13-Aug	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9	10	42	2.9	41.6
14-Aug	A	2	3	9	7	35	21	7	2	1	0	0	0	0	0	0	1	0	0	0	0	12	3	A	4.7	35.3
15-Aug	0	0	0	0	2	2	6	1	2	2	3	2	1	2	1	1	0	1	0	1	0	2	A	3	1.4	6.3
16-Aug	0	1	1	2	5	5	15	6	11	2	5	1	1	1	2	1	2	1	1	1	0	A	7	4	3.2	14.6
17-Aug	0	1	1	1	1	6	3	10	5	2	8	2	1	4	0	1	1	1	1	2	A	15	26	2	4.1	26.1
18-Aug	5	3	1	1	3	9	5	8	4	2	3	2	1	2	1	2	4	5	5	A	0	0	0	3	3.0	8.7
19-Aug	0	1	0	9	8	7	8	3	6	4	3	18	0	1	6	1	2	1	A	0	0	11	2	8	4.4	18.4
20-Aug	2	1	1	5	1	14	2	2	2	1	1	2	1	1	0	0	0	A	1	3	3	0	5	11	2.7	14.4
21-Aug	4	3	14	10	9	37	31	11	11	4	2	1	3	0	2	1	A	0	3	2	2	1	0	0	6.7	37.2
22-Aug	18	4	6	19	13	9	8	19	1	4	7	1	0	5	1	A	3	1	0	1	1	31	9	1	7.0	31.1
23-Aug	2	1	1	1	3	2	3	2	5	1	2	1	6	1	A	1	1	9	0	1	0	0	0	0	1.8	9.3
24-Aug	0	0	5	0	6	3	2	2	3	1	2	2	1	A	3	2	1	0	1	8	0	0	1	0	2.0	7.8
25-Aug	0	0	1	0	9	4	7	7	5	9	1	2	A	0	4	1	2	1	1	4	3	17	0	0	3.4	16.7
26-Aug	0	0	0	1	0	1	2	2	2	5	1	A	2	2	1	1	1	0	0	5	1	0	0	0	1.3	5.5
27-Aug	0	0	0	0	0	1	4	0	0	1	A	1	1	1	1	0	1	1	0	0	0	0	0	0	0.6	3.6
28-Aug	0	0	0	0	0	0	0	0	0	1	A	1	1	0	0	1	1	0	0	1	2	6	1	3	0.8	6.5
29-Aug	11	4	5	7	12	13	25	38	A	5	4	4	1	1	2	0	1	3	2	1	5	1	1	1	6.4	38.0
30-Aug	4	2	3	6	13	16	14	A	13	5	2	0	0	3	12	3	2	8	26	21	2	6	0	1	7.1	26.1
31-Aug	2	3	1	19	2	9	A	18	5	8	2	2	1	2	15	5	3	1	5	3	1	3	0	0	4.8	18.8
		2.5	1.3	1.9	4.3	4.0	10.4	9.6	6.8	3.8	2.9	2.4	1.7	1.1	1.3	2.5	1.3	1.6	1.7	1.9	2.5	3.1	5.3	3.4	3.0	Diurnal Average
		17.7	7.6	14.3	34.2	15.7	71.3	34.3	38.0	13.4	9.4	8.3	18.4	5.5	4.8	15.4	6.8	11.2	9.3	26.1	20.6	50.7	31.1	26.1	41.6	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								



# Hourly Maximums

Nitrogen Oxide (NO) - ppb  
Portable-Bonanza - August 2010



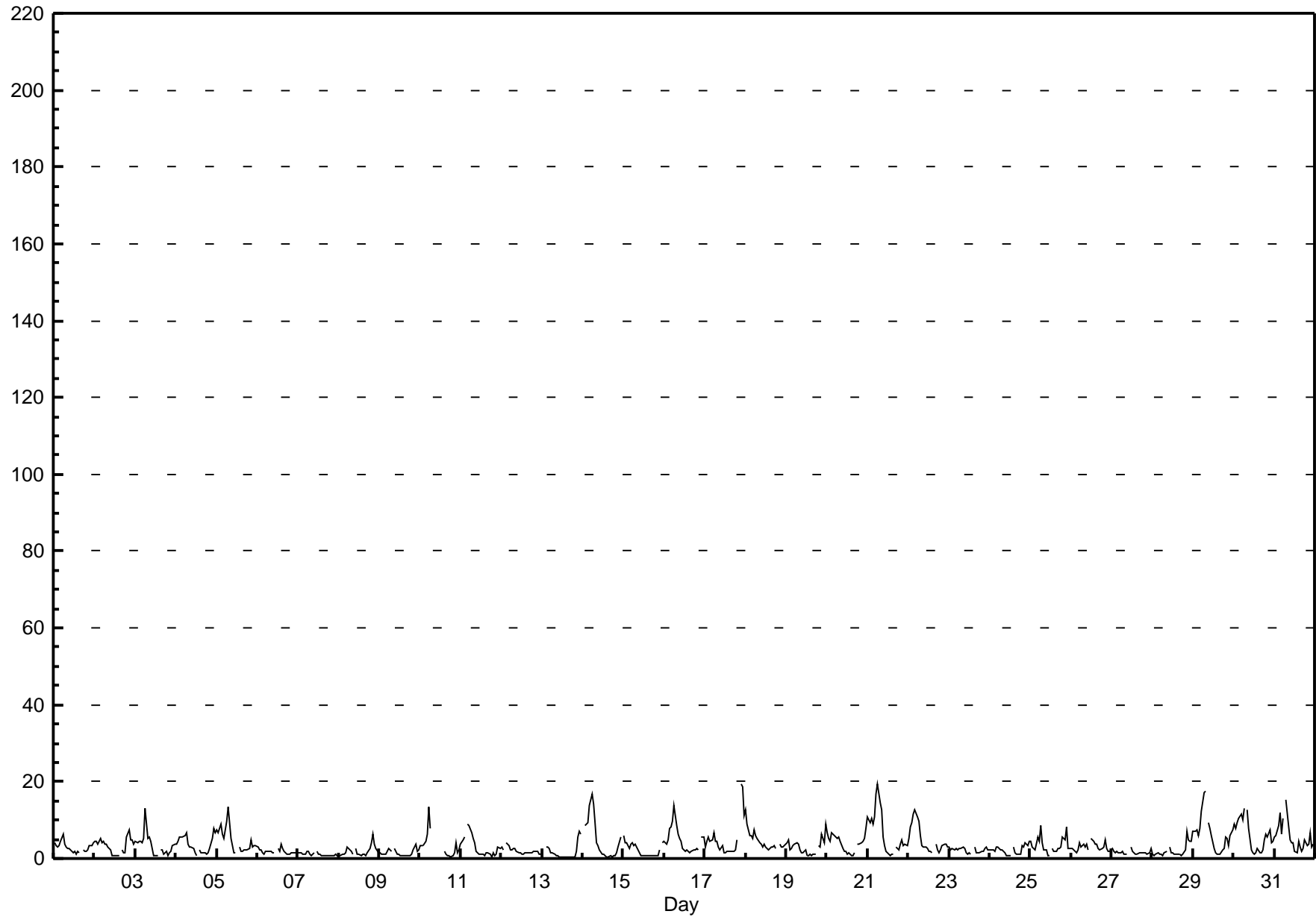
# Hourly Averages

## Oxides of Nitrogen (NO<sub>x</sub>) - ppb Portable-Bonanza - August 2010

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 19.4 ppb on Aug 17 22:00	Maximum Daily Average: 6.6 ppb on Aug 21		Hours of Data:	707
Minimum Value: 0 ppb on Aug 13 18:00	Minimum Daily Average: 1.1 ppb on Aug 7		Hours of Missing Data:	37
Maximum Diurnal Average: 6.4 ppb at hour 7	Minimum Diurnal Average: 1.5 ppb at hour 14		Hours of Calibration:	37
Monthly Average: 3.43 ppb	Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.9 Q <sub>1</sub> = 1.4 Median = 2.5 Q <sub>3</sub> = 4.4 P <sub>90</sub> = 7.3 P <sub>99</sub> = 16.4		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	4	3	3	3	4	6	4	3	3	3	2	2	2	1	2	1	A	2	2	2	2	4	3	4	2.9	6.5
2-Aug	5	4	4	5	4	4	4	4	3	2	1	1	1	1	1	A	2	1	2	6	7	5	5	4	3.2	7.4
3-Aug	5	4	4	4	4	5	13	5	6	4	3	1	1	1	A	2	2	1	2	1	2	2	4	4	3.5	13.2
4-Aug	4	4	5	6	5	6	7	4	3	3	3	1	1	A	2	2	2	2	1	1	3	5	8	7	3.6	8.0
5-Aug	7	7	9	6	5	7	10	13	5	3	2	2	A	3	2	2	2	2	2	3	5	3	3	3	4.7	13.3
6-Aug	3	2	2	2	1	2	2	2	2	2	1	A	2	2	4	3	2	1	1	1	1	2	1	1	1.8	3.7
7-Aug	1	1	1	1	1	2	2	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.9
8-Aug	1	1	1	1	1	3	2	2	2	1	A	2	1	1	1	1	1	1	2	4	6	4	3	1	1.9	6.3
9-Aug	1	1	1	1	1	2	2	2	A	3	1	1	1	1	1	1	1	1	1	1	2	4	2	2	1.4	3.6
10-Aug	3	3	3	4	6	13	8	A	5	C	C	C	C	C	2	1	1	1	1	1	1	4	2	2	3.4	13.3
11-Aug	4	5	5	A	9	8	7	5	4	2	2	1	1	1	1	2	2	1	1	2	1	1	3	3	3.0	8.8
12-Aug	3	2	A	4	3	2	2	3	3	2	2	1	1	1	1	2	2	1	2	2	2	2	1	1	1.9	4.2
13-Aug	2	A	3	3	3	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	2	6	7	6	1.8	6.9
14-Aug	A	8	9	9	14	17	14	9	4	3	2	1	1	1	0	0	1	0	1	1	2	3	6	A	4.8	16.6
15-Aug	6	4	4	2	4	4	3	4	3	1	1	1	1	1	1	1	1	1	1	1	1	2	A	4	2.2	5.8
16-Aug	5	4	5	8	8	10	14	9	6	5	5	3	2	2	2	2	2	2	2	3	2	A	6	6	4.8	13.7
17-Aug	3	5	6	5	5	7	5	4	3	2	3	1	1	2	2	2	2	2	2	5	A	19	19	11	5.0	19.4
18-Aug	13	9	6	6	5	7	6	5	4	4	3	4	3	2	2	3	3	3	3	A	4	3	3	3	4.6	12.8
19-Aug	4	5	2	3	3	4	4	4	2	1	1	2	1	1	1	1	1	1	A	3	3	6	4	9	3.0	9.1
20-Aug	7	5	4	7	6	6	5	6	5	3	2	2	1	1	1	1	1	A	4	4	4	4	5	8	3.9	7.8
21-Aug	11	9	11	9	11	17	19	14	13	5	3	2	1	1	1	1	A	3	2	4	5	3	4	3	6.6	19.2
22-Aug	5	8	9	11	13	11	10	6	3	3	3	2	2	2	2	A	4	2	1	2	3	4	4	3	5.0	12.7
23-Aug	3	2	3	2	3	2	2	3	3	2	2	1	1	1	A	3	2	2	1	2	2	3	3	2	2.2	3.2
24-Aug	2	2	2	2	3	3	2	2	2	2	1	1	1	A	3	2	1	1	1	3	3	4	3	5	2.2	4.5
25-Aug	5	3	3	2	5	4	9	4	2	2	1	1	A	3	2	2	3	3	3	6	5	8	3	3	3.5	8.7
26-Aug	3	3	2	2	2	4	3	4	3	4	2	A	5	4	4	4	3	2	2	3	5	3	2	2	3.0	5.1
27-Aug	3	2	2	2	2	2	2	1	1	1	A	3	2	2	1	1	2	1	2	1	2	1	2	2	1.6	2.9
28-Aug	1	1	1	1	1	1	1	1	1	2	A	3	2	2	1	1	1	1	1	2	7	5	4	4	2.0	7.0
29-Aug	7	7	8	6	8	12	17	18	A	9	8	6	3	1	1	1	1	2	3	6	5	4	6	7	6.4	17.5
30-Aug	9	8	9	11	11	10	13	A	13	8	2	1	1	2	3	2	2	2	5	6	5	8	4	4	6.0	12.9
31-Aug	6	6	8	12	6	10	A	15	8	5	4	4	2	2	4	3	2	2	5	3	4	7	3	4	5.5	15.2
	4.4	4.3	4.5	4.7	5.1	6.3	6.4	5.3	3.9	3.1	2.3	1.8	1.5	1.5	1.7	1.6	1.6	1.6	1.9	2.6	3.2	4.3	4.1	4.0	Diurnal Average	
	12.8	9.3	10.6	11.9	13.7	16.9	19.2	17.5	12.6	9.4	7.7	6.0	5.1	4.4	4.5	3.7	3.6	3.3	4.8	6.3	7.4	19.4	18.6	11.3	Diurnal Maximum	

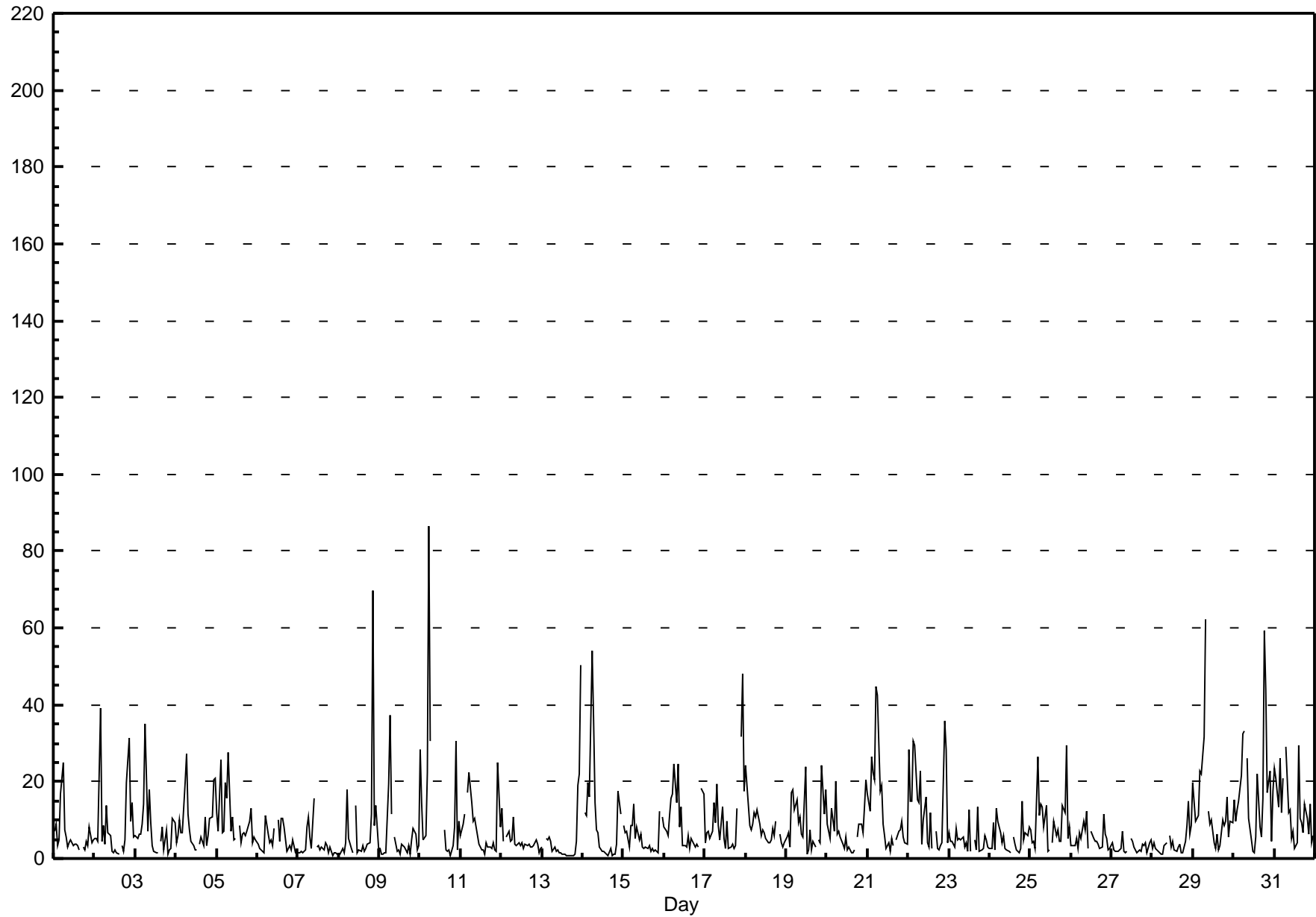
C - Calibration                      A - Automated Daily Zero Span



# Hourly Maximums

## Oxides of Nitrogen (NO<sub>x</sub>) - ppb Portable-Bonanza - August 2010

Maximum Value: 86.4 ppb on Aug 10 06:00		Maximum Daily Average: 17.7 ppb on Aug 30		Hours in Service: 744																						
Minimum Value: 1 ppb on Aug 13 18:00		Minimum Daily Average: 3.0 ppb on Aug 27		Hours of Data: 707																						
Maximum Diurnal Average: 18.4 ppb at hour 6		Minimum Diurnal Average: 3.5 ppb at hour 13		Hours of Missing Data: 37																						
Monthly Average: 8.32 ppb		Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 1.7 Q <sub>1</sub> = 2.9 Median = 5.2 Q <sub>3</sub> = 10.2 P <sub>90</sub> = 19.0 P <sub>99</sub> = 46.9		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-Aug	7	9	3	5	17	25	8	6	3	4	5	4	4	3	2	A	3	2	5	3	8	4	5	6.0	25.0	
2-Aug	5	5	4	39	4	9	4	14	7	6	2	2	2	1	A	3	2	5	20	31	10	14	5	8.6	39.3	
3-Aug	6	5	7	6	9	14	35	7	18	9	3	2	1	1	A	5	8	2	7	1	2	2	10	9	7.5	35.2
4-Aug	4	6	10	7	7	20	27	12	8	4	3	2	2	A	4	6	4	11	3	6	10	11	21	21	9.0	27.3
5-Aug	12	7	26	7	7	20	16	27	7	11	5	5	A	9	4	6	7	6	7	10	13	4	5	5	9.8	27.4
6-Aug	4	3	2	2	1	11	7	4	5	3	8	A	10	4	11	10	8	2	3	3	2	5	2	2	4.9	11.0
7-Aug	2	2	2	1	2	8	11	5	3	16	A	3	3	2	3	2	4	3	1	3	1	2	2	1	3.5	15.6
8-Aug	1	1	2	1	4	18	5	3	2	A	14	2	2	2	3	2	3	4	4	11	70	9	14	2	7.8	69.7
9-Aug	2	1	1	1	2	19	37	11	A	6	2	2	1	4	3	3	2	3	1	5	8	7	2	3	5.6	37.4
10-Aug	29	14	5	6	23	86	30	A	7	C	C	C	C	C	7	2	2	2	1	4	8	31	2	10	15.0	86.4
11-Aug	6	9	12	A	17	22	15	10	11	8	6	4	2	2	1	4	3	3	3	4	2	2	25	8	7.8	25.2
12-Aug	13	5	A	5	7	5	5	11	4	3	4	3	4	3	4	4	4	3	3	3	5	4	1	3	4.5	13.0
13-Aug	3	A	5	5	6	4	2	3	2	2	2	1	1	1	1	1	1	1	1	1	4	19	22	50	6.0	50.3
14-Aug	A	12	11	20	16	54	36	14	8	7	3	2	2	1	1	1	3	1	1	1	4	18	12	A	10.3	54.0
15-Aug	8	7	7	3	9	8	14	5	8	5	6	3	3	3	3	3	2	2	2	2	2	12	A	11	5.6	14.2
16-Aug	8	7	6	11	16	17	25	14	24	8	13	4	3	3	6	3	5	4	3	4	3	A	18	17	9.7	24.7
17-Aug	4	7	7	5	7	15	9	19	9	5	13	5	3	10	2	3	4	3	3	13	A	32	48	18	10.6	48.1
18-Aug	24	19	9	7	9	12	11	13	9	6	7	7	5	4	4	5	8	6	10	A	6	4	3	4	8.4	24.1
19-Aug	5	7	3	17	18	13	15	9	11	6	6	24	1	2	7	2	5	3	A	5	4	24	12	18	9.4	24.4
20-Aug	9	7	5	13	7	20	6	7	6	4	2	5	2	3	1	2	2	A	6	9	9	7	14	20	7.3	20.4
21-Aug	17	12	26	22	20	45	43	18	19	9	6	3	4	2	5	3	A	5	7	7	10	6	4	4	12.9	44.8
22-Aug	28	15	15	31	29	15	15	23	4	10	16	4	3	12	3	A	7	3	2	3	4	36	28	4	13.5	35.6
23-Aug	7	5	4	3	8	5	5	5	6	3	4	2	13	2	A	5	2	13	2	2	3	6	5	3	4.9	13.5
24-Aug	3	3	9	2	13	10	7	4	6	3	2	2	1	A	6	4	2	2	2	15	5	7	6	8	5.3	15.0
25-Aug	7	4	5	3	26	11	14	13	8	14	2	2	A	4	10	6	7	4	5	14	12	29	5	8	9.3	29.3
26-Aug	3	3	4	5	2	7	5	10	8	12	3	A	7	5	5	5	4	2	3	11	6	5	2	2	5.2	12.2
27-Aug	4	2	2	2	2	3	7	2	1	2	A	5	4	3	2	1	2	2	4	3	4	2	4	5	3.0	7.1
28-Aug	3	4	2	2	1	1	1	3	4	A	6	3	4	2	2	3	4	1	1	5	8	15	6	9	4.0	14.8
29-Aug	20	10	10	11	23	22	32	62	A	12	9	10	4	2	6	2	3	10	8	10	16	6	10	9	13.4	62.1
30-Aug	15	10	13	15	22	33	33	A	26	10	5	2	2	6	22	8	6	16	59	44	17	23	5	17	17.7	59.3
31-Aug	24	21	13	26	12	21	A	29	12	13	5	7	3	4	30	11	9	7	14	10	6	14	4	6	13.1	29.5
		9.5	7.4	7.8	9.5	11.2	18.4	16.0	12.6	8.3	7.2	5.8	4.2	3.5	3.7	5.6	3.9	4.2	4.3	5.8	7.9	9.3	11.9	10.4	9.6	Diurnal Average
		28.5	20.9	26.4	39.3	29.4	86.4	42.7	62.1	26.1	15.6	16.2	23.8	12.8	11.9	29.5	10.6	9.2	15.6	59.3	43.9	69.7	35.6	48.1	50.3	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								



# Hourly Averages

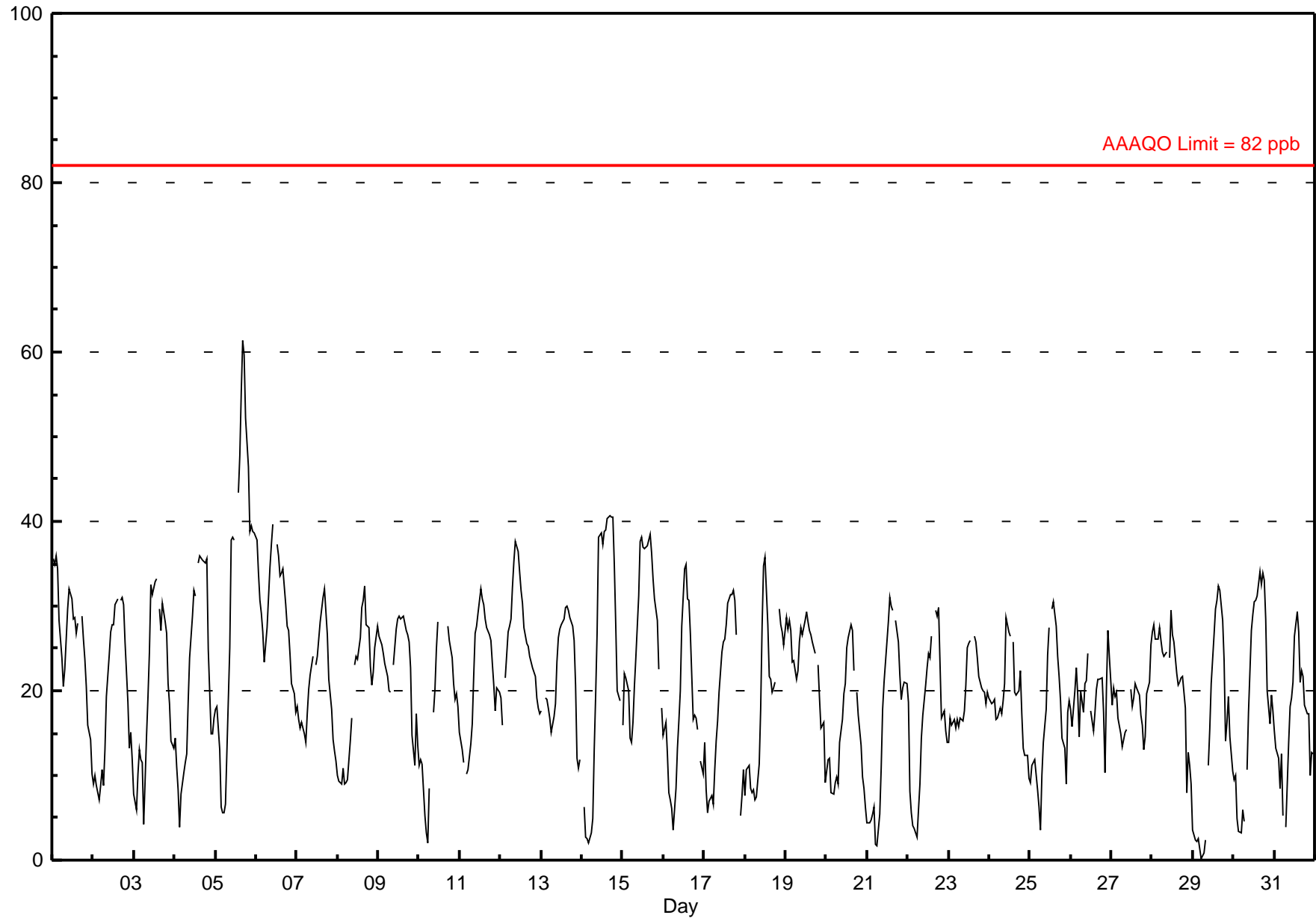
Ozone (O<sub>3</sub>) - ppb

Portable-Bonanza - August 2010

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 61.3 ppb on Aug 5 17:00	Maximum Daily Average: 32.5 ppb on Aug 5		Hours of Data:	707
Minimum Value: 0 ppb on Aug 29 06:00	Minimum Daily Average: 14.8 ppb on Aug 29		Hours of Missing Data:	37
Maximum Diurnal Average: 29.4 ppb at hour 16	Minimum Diurnal Average: 11.9 ppb at hour 6		Hours of Calibration:	37
Monthly Average: 20.85 ppb	Percentiles: P <sub>1</sub> = 2.2 P <sub>10</sub> = 8.3 Q <sub>1</sub> = 13.9 Median = 20.6 Q <sub>3</sub> = 27.5 P <sub>90</sub> = 32.1 P <sub>99</sub> = 41.7		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-Aug	36	35	36	34	28	24	21	23	26	30	32	31	29	29	27	28	A	29	26	24	21	16	14	10	26.4	35.9																						
2-Aug	9	10	9	7	9	11	9	13	19	24	27	28	28	30	31	A	31	31	30	26	19	13	15	12	19.1	30.9																						
3-Aug	8	6	10	13	12	12	4	15	19	25	32	31	33	33	A	30	27	30	28	27	21	18	14	13	20.1	33.3																						
4-Aug	14	11	8	4	8	10	12	13	19	24	29	32	31	A	35	36	35	35	35	36	25	15	15	17	21.6	36.0																						
5-Aug	18	18	13	6	6	6	7	13	25	38	38	38	A	43	48	55	61	60	52	46	39	39	39	39	32.5	61.3																						
6-Aug	38	34	31	29	27	23	27	31	35	37	40	A	37	36	34	34	34	30	28	27	24	21	20	17	30.2	39.7																						
7-Aug	18	17	16	16	15	14	17	20	22	24	A	23	24	26	28	31	32	29	27	21	18	14	13	12	20.7	32.0																						
8-Aug	10	9	9	11	9	9	10	14	17	A	23	24	24	26	30	31	32	28	27	23	21	22	25	28	20.1	32.3																						
9-Aug	27	26	25	24	23	22	20	20	A	23	27	29	29	28	29	29	27	27	26	23	15	11	17	14	23.5	28.9																						
10-Aug	11	12	11	5	3	2	9	A	17	20	25	28	C	C	C	C	C	28	26	24	21	19	20	18	16.6	28.2																						
11-Aug	15	13	12	A	10	11	14	16	22	27	28	29	32	31	30	28	27	27	26	23	21	18	20	20	21.7	32.0																						
12-Aug	19	16	A	21	27	28	29	32	35	38	36	34	32	30	27	26	25	24	23	23	22	19	18	17	26.2	37.7																						
13-Aug	18	A	19	19	18	17	15	17	18	23	26	27	28	29	30	30	30	29	28	26	21	12	11	12	21.8	30.0																						
14-Aug	A	6	3	2	2	3	5	13	19	27	38	39	37	39	39	40	41	41	41	35	28	20	19	A	24.4	40.6																						
15-Aug	16	22	22	20	14	14	16	21	24	31	38	38	37	37	37	38	38	36	33	31	28	23	A	18	27.5	38.4																						
16-Aug	15	16	13	8	7	6	4	9	13	16	20	28	34	35	31	31	27	17	17	17	15	A	12	10	17.4	35.0																						
17-Aug	14	8	6	7	8	7	11	14	16	20	25	26	26	28	30	31	31	32	31	27	A	5	8	11	18.3	31.8																						
18-Aug	8	11	11	8	8	8	7	7	11	18	28	35	36	28	22	21	20	20	21	A	30	28	27	25	19.1	35.7																						
19-Aug	29	27	28	27	23	24	21	22	26	27	27	28	29	28	27	27	26	24	A	23	19	16	16	9	24.1	29.3																						
20-Aug	10	12	12	8	8	9	10	9	14	17	20	21	25	26	28	27	22	A	20	17	14	10	9	6	15.4	27.7																						
21-Aug	4	4	5	5	6	2	2	5	11	18	21	23	28	31	30	29	A	28	26	22	19	20	21	21	16.7	31.0																						
22-Aug	19	8	6	4	4	3	6	9	14	17	21	23	24	24	26	A	30	29	30	23	17	18	15	14	16.6	29.8																						
23-Aug	14	17	16	17	16	17	16	17	17	18	21	25	26	26	A	26	26	24	22	20	20	20	18	20	19.8	26.4																						
24-Aug	19	19	19	19	17	17	18	17	19	21	29	27	26	A	26	20	19	20	22	17	13	12	12	10	19.0	28.6																						
25-Aug	9	11	11	12	8	6	4	10	14	18	24	27	A	30	31	28	24	22	19	14	13	9	17	19	16.6	30.5																						
26-Aug	18	16	20	23	19	15	20	17	21	21	24	A	18	15	17	20	21	21	22	17	10	20	27	24	19.5	27.1																						
27-Aug	18	20	19	20	17	15	13	14	15	15	A	20	18	19	21	20	19	17	16	13	15	20	21	25	18.0	25.4																						
28-Aug	27	28	26	26	27	26	25	24	25	A	24	29	27	26	22	21	21	21	22	18	8	13	11	9	22.0	29.4																						
29-Aug	4	2	2	3	1	0	1	2	A	11	15	21	27	30	31	32	32	28	24	14	16	19	14	11	14.8	32.4																						
30-Aug	9	10	5	3	3	6	5	A	11	17	27	29	31	31	31	34	33	34	33	28	20	16	19	18	19.7	34.0																						
31-Aug	15	13	12	8	13	5	A	4	14	18	19	21	26	29	27	21	22	22	18	17	17	10	13	12	16.5	29.3																						
																								16.3	15.3	14.5	13.7	12.8	11.9	12.5	15.2	19.2	22.9	27.0	28.1	28.6	29.4	29.4	29.4	29.1	28.1	26.6	23.4	19.6	17.2	17.4	16.3	Diurnal Average
																								37.8	35.0	35.9	34.4	28.2	27.6	28.5	32.1	35.2	37.8	39.7	38.6	37.3	43.5	47.9	55.2	61.3	59.7	52.3	46.5	38.9	39.5	38.9	38.7	Diurnal Maximum

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



# Hourly Maximums

Ozone (O<sub>3</sub>) - ppb

## Portable-Bonanza - August 2010

Maximum Value: 64.4 ppb on Aug 5 17:00	Maximum Daily Average: 36.6 ppb on Aug 5	Hours in Service: 744
Minimum Value: 3 ppb on Aug 29 06:00	Minimum Daily Average: 18.8 ppb on Aug 20	Hours of Data: 707
Maximum Diurnal Average: 32.4 ppb at hour 16	Minimum Diurnal Average: 15.8 ppb at hour 6	Hours of Missing Data: 37
Monthly Average: 24.30 ppb	Percentiles: P <sub>1</sub> = 5.1 P <sub>10</sub> = 12.1 Q <sub>1</sub> = 18.0 Median = 24.0 Q <sub>3</sub> = 30.6 P <sub>90</sub> = 35.9 P <sub>99</sub> = 43.9	Hours of Calibration: 37
		Percent Operational Time: 100.0

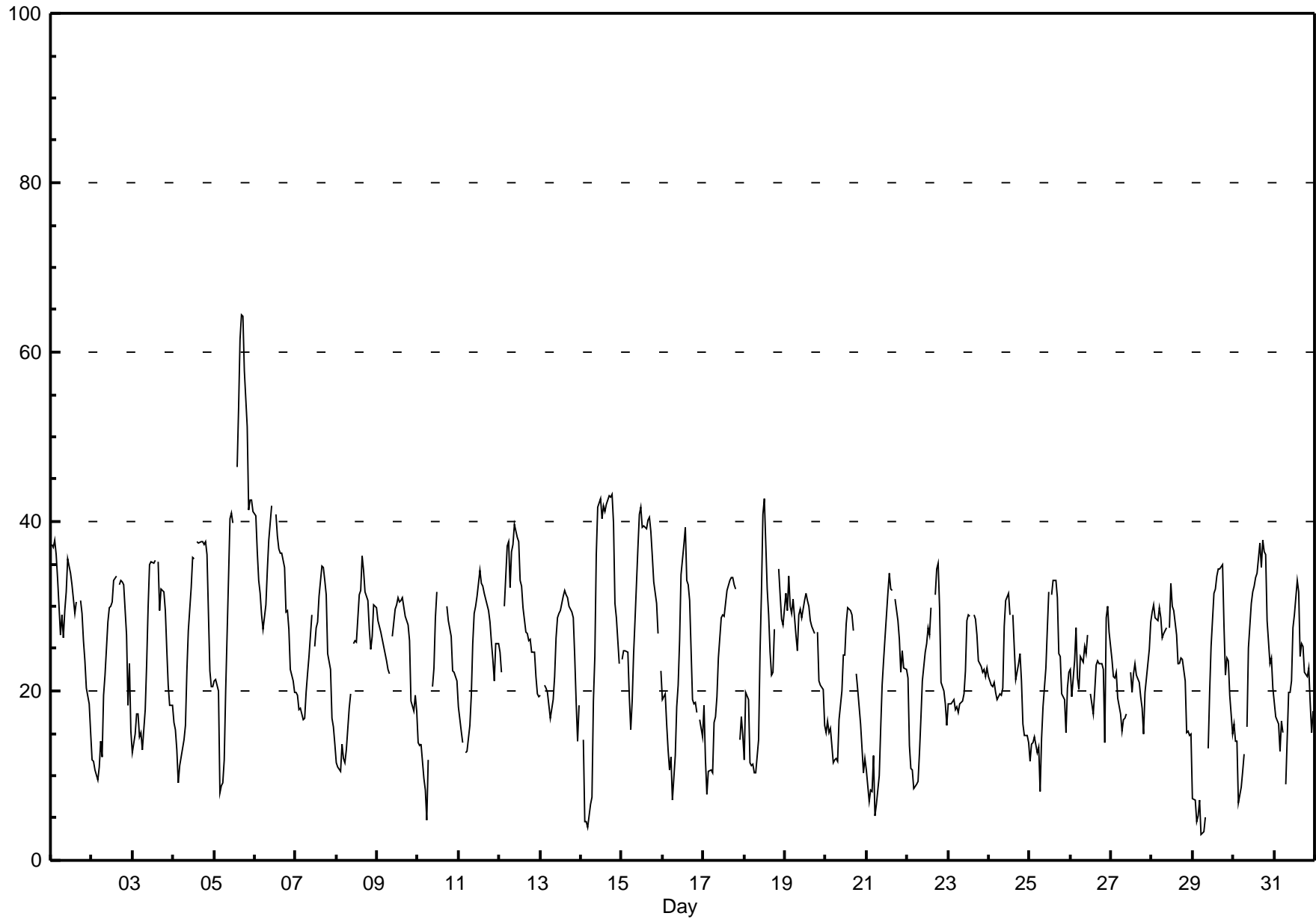
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Aug	37	37	38	36	33	27	29	26	29	32	36	34	33	31	29	31	A	31	29	26	23	20	19	15	29.6	37.9																						
2-Aug	12	12	11	9	11	14	12	19	22	28	30	30	31	33	34	A	33	33	33	33	27	18	23	15	22.7	33.6																						
3-Aug	13	15	17	17	15	15	13	18	23	30	35	35	35	35	A	35	30	32	32	30	25	21	18	18	24.2	35.5																						
4-Aug	16	15	13	9	11	13	14	16	22	27	32	36	36	A	38	38	38	38	37	38	36	22	21	21	25.5	37.7																						
5-Aug	21	21	20	8	9	9	12	20	33	40	41	40	A	47	53	62	64	64	58	51	41	43	42	41	36.6	64.4																						
6-Aug	41	36	33	31	29	27	30	34	38	40	42	A	41	38	37	36	36	35	29	30	27	23	21	20	32.8	41.8																						
7-Aug	20	20	18	18	17	17	20	22	24	29	A	25	27	28	31	35	35	33	31	24	23	17	16	14	23.6	34.7																						
8-Aug	12	11	11	14	12	11	13	18	20	A	26	26	26	31	32	36	34	32	31	27	25	26	30	30	23.2	35.9																						
9-Aug	28	28	27	26	25	24	23	22	A	26	30	30	31	30	31	31	29	28	28	26	19	18	19	18	25.9	31.1																						
10-Aug	14	14	14	10	8	5	12	A	21	23	29	32	C	C	C	C	C	30	28	26	22	22	22	21	19.5	31.7																						
11-Aug	18	15	14	A	13	13	16	20	26	29	30	31	34	33	32	32	31	30	28	26	24	21	26	26	24.6	34.2																						
12-Aug	24	22	A	30	37	38	32	36	37	40	38	38	33	32	30	27	27	26	26	25	25	22	20	19	29.7	39.7																						
13-Aug	19	A	21	20	20	18	17	19	22	26	29	29	30	31	32	31	31	30	29	29	24	19	14	18	24.3	31.9																						
14-Aug	A	14	5	5	4	7	7	19	24	36	42	43	40	42	41	42	43	43	43	40	30	29	23	A	28.2	43.2																						
15-Aug	24	25	25	25	19	15	19	24	29	37	41	42	39	39	39	40	40	39	36	33	30	27	A	22	30.9	41.7																						
16-Aug	19	20	16	13	11	12	7	12	18	21	26	34	37	39	33	33	31	19	18	19	17	A	17	15	21.1	39.4																						
17-Aug	18	12	8	11	11	10	16	17	19	24	29	29	29	30	32	33	33	33	33	32	A	14	17	15	22.0	33.4																						
18-Aug	12	20	19	11	11	10	10	10	14	25	32	41	43	32	29	25	22	22	27	A	34	31	28	28	23.4	42.8																						
19-Aug	31	29	34	30	29	31	27	25	29	30	29	31	32	31	30	28	28	27	A	27	21	21	20	16	27.6	33.5																						
20-Aug	15	16	15	16	11	12	12	12	17	20	24	24	28	30	30	29	27	A	22	20	16	13	10	12	18.8	29.9																						
21-Aug	11	7	8	8	12	5	7	10	16	21	24	26	32	34	32	32	A	31	28	26	22	25	23	23	20.1	33.9																						
22-Aug	21	14	11	11	8	9	9	13	17	21	25	26	27	27	30	A	31	34	35	30	21	20	19	16	20.6	35.0																						
23-Aug	18	19	18	19	18	18	17	18	19	20	22	28	29	29	A	29	29	27	24	23	22	23	22	23	22.3	29.0																						
24-Aug	22	21	20	21	20	19	20	20	20	28	31	32	29	A	29	25	21	23	24	21	16	15	15	14	21.9	31.6																						
25-Aug	12	14	14	15	13	13	8	14	18	23	27	32	A	31	33	33	31	24	24	20	19	15	20	22	20.7	33.1																						
26-Aug	23	19	23	27	21	20	24	23	25	24	27	A	20	17	20	23	24	23	23	23	14	29	30	27	23.1	30.0																						
27-Aug	24	22	22	22	19	17	15	17	17	17	A	22	20	22	23	22	21	19	18	15	20	21	25	28	20.4	28.2																						
28-Aug	29	30	29	28	30	29	26	27	28	A	28	33	30	30	27	23	23	24	24	21	15	15	15	15	25.1	32.7																						
29-Aug	7	7	5	5	7	3	3	5	A	13	20	25	32	32	34	34	34	35	28	22	24	24	20	15	18.9	34.9																						
30-Aug	16	14	14	7	9	10	13	A	16	25	30	32	32	33	34	38	35	38	36	36	28	23	24	20	24.5	37.8																						
31-Aug	19	17	16	13	16	15	A	9	20	20	21	27	29	33	32	24	26	25	22	22	23	19	15	18	20.9	33.1																						
																								19.9	18.8	17.9	17.2	16.4	15.8	16.1	18.8	22.8	26.7	30.1	31.4	31.5	32.2	32.3	32.4	31.6	30.9	29.5	27.3	23.8	21.8	21.1	20.1	Diurnal Average
																								40.7	37.0	37.9	36.1	37.2	37.6	32.1	36.4	37.8	40.3	41.8	42.7	42.8	46.5	53.3	61.6	64.4	64.2	57.7	51.1	41.4	42.6	42.5	41.2	Diurnal Maximum

C - Calibration                      A - Automated Daily Zero Span



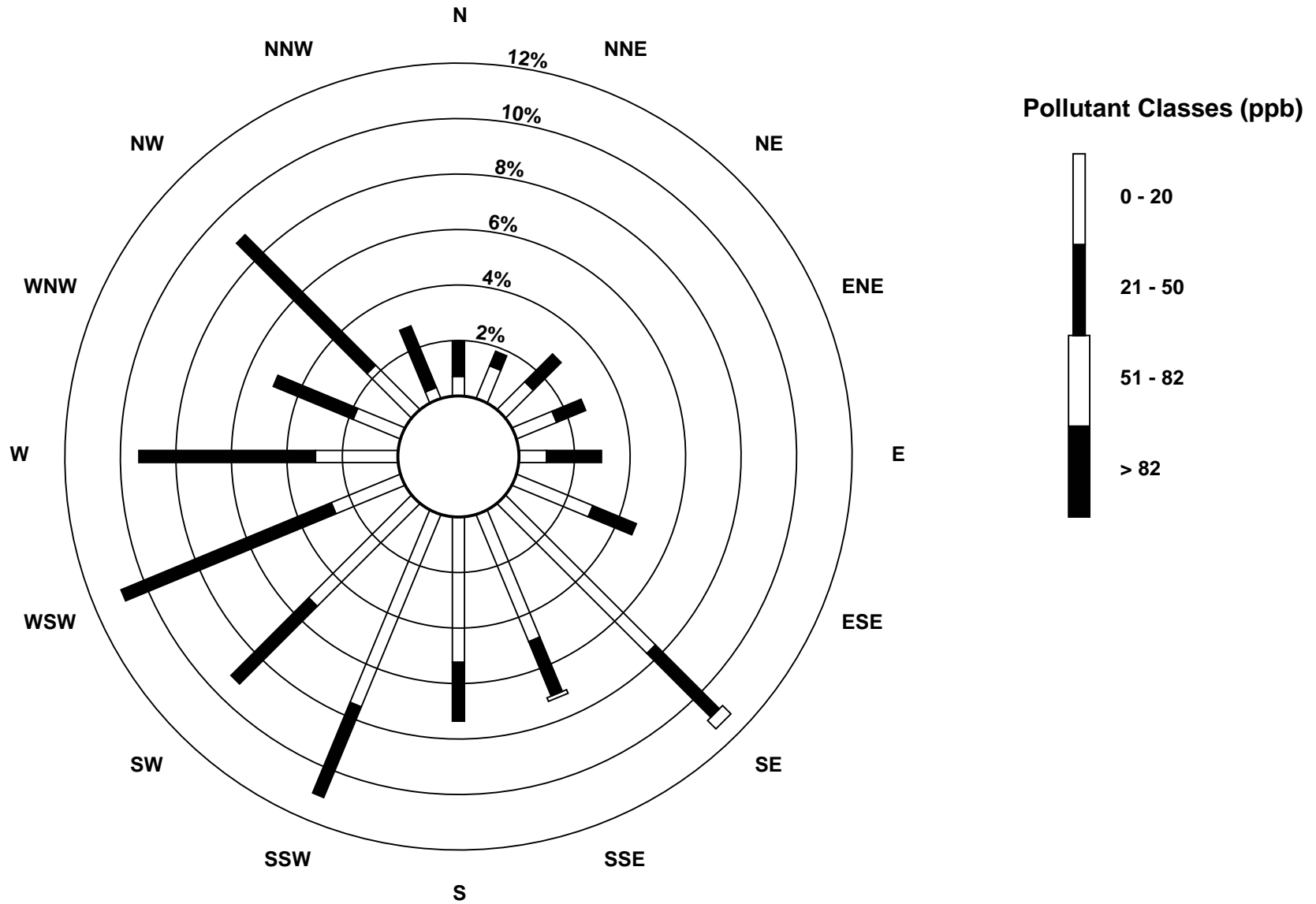
# Hourly Maximums

Ozone (O<sub>3</sub>) - ppb  
Portable-Bonanza - August 2010



# Pollutant Rose

Ozone (O<sub>3</sub>) - ppb  
Portable-Bonanza - August 2010



# Eight Hour Running Averages

Ozone (O<sub>3</sub>) - ppb

Portable-Bonanza - August 2010

Maximum Value: 52.3 ppb on Aug 5 20:00																					Hours in Service:	744				
Minimum Value: 1.7 ppb on Aug 29 09:00																					Hours of Data:	735				
Percentiles: P <sub>1</sub> = 4.8 P <sub>10</sub> = 10.1 Q <sub>1</sub> = 15.7 Median = 20.8 Q <sub>3</sub> = 26.2 P <sub>90</sub> = 30.2 P <sub>99</sub> = 45.2																					Hours of Missing Data:	9				
																					Hours of Calibration:	9				
																					Percent Operational Time:	100.0				
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	40	39	37	35	34	33	31	30	28	28	27	27	27	27	28	29	29	29	28	27	26	24	22	20	39.7	
2-Aug	19	16	14	12	11	10	9	10	11	13	15	17	20	22	25	27	28	29	30	29	28	26	24	22	29.8	
3-Aug	19	16	14	12	11	11	10	10	11	14	16	19	21	24	27	29	30	31	30	30	28	26	24	22	31.0	
4-Aug	21	18	16	13	11	10	10	10	11	12	15	18	21	23	26	29	32	33	34	35	34	32	29	27	34.8	
5-Aug	24	22	20	16	13	12	11	11	12	14	17	21	23	29	35	41	46	49	51	52	51	50	49	47	52.3	
6-Aug	44	41	38	36	34	32	31	30	30	30	31	31	33	35	36	36	36	35	33	33	31	29	27	25	44.0	
7-Aug	23	21	20	19	17	17	16	17	17	18	18	19	21	22	24	25	27	28	28	27	27	25	23	21	27.7	
8-Aug	18	15	13	12	11	10	10	10	11	11	13	15	17	20	23	25	27	27	28	28	27	27	26	26	27.8	
9-Aug	25	25	25	25	25	25	24	23	23	23	24	25	25	26	28	28	28	28	28	27	25	23	22	20	28.0	
10-Aug	18	16	14	12	11	9	8	8	9	10	12	15	17	N	N	N	N	N	N	N	N	N	23	22	22.8	
11-Aug	21	19	18	17	15	14	13	13	14	16	18	20	22	25	27	28	29	29	29	28	27	25	24	23	29.1	
12-Aug	22	20	20	19	20	22	23	25	27	30	31	32	33	33	33	32	31	29	28	26	25	24	23	21	33.3	
13-Aug	21	20	19	19	18	18	18	18	18	18	19	20	22	23	25	26	28	28	29	28	28	26	23	21	28.7	
14-Aug	20	16	13	10	7	6	5	5	7	9	14	18	23	27	31	35	37	39	39	39	38	35	33	32	39.5	
15-Aug	28	26	23	21	19	18	18	18	19	20	22	24	27	30	33	35	37	37	37	36	35	33	32	30	37.4	
16-Aug	26	23	20	17	14	12	11	10	9	9	10	13	16	20	23	26	28	28	27	26	24	22	19	16	27.8	
17-Aug	15	13	12	10	9	9	9	9	10	11	13	16	18	21	23	25	27	29	29	30	30	27	24	21	30.0	
18-Aug	17	14	11	9	9	9	9	9	10	12	15	19	21	23	25	26	26	26	25	24	23	23	24	24	26.2	
19-Aug	26	27	28	28	27	26	26	25	25	25	25	26	26	27	27	27	27	27	27	26	25	23	22	19	27.7	
20-Aug	17	15	15	13	11	11	10	10	10	11	12	13	16	18	20	22	23	24	24	24	22	20	17	14	24.2	
21-Aug	11	11	9	7	6	5	4	4	5	7	9	11	14	17	21	24	26	27	28	28	26	25	24	22	28.0	
22-Aug	22	19	17	15	13	11	9	7	7	8	10	12	15	17	20	21	24	25	27	27	26	25	23	22	26.6	
23-Aug	20	18	17	16	16	16	16	16	16	16	17	18	19	20	21	23	24	25	25	24	23	23	22	21	24.9	
24-Aug	20	20	19	19	19	18	18	18	18	18	19	20	22	22	24	24	24	24	24	23	22	20	19	17	16	24.0
25-Aug	15	13	12	11	11	10	9	9	10	10	12	14	15	18	22	24	26	26	26	24	23	20	18	17	26.5	
26-Aug	16	16	16	17	18	18	19	18	19	20	20	20	19	20	19	20	20	20	19	19	18	19	20	20	20.4	
27-Aug	20	20	20	20	21	20	18	17	17	16	16	16	16	17	18	18	19	19	19	18	18	18	18	18	20.8	
28-Aug	19	21	22	23	25	26	26	26	26	26	25	26	26	26	25	25	24	24	24	22	20	18	17	15	26.3	
29-Aug	13	11	8	6	6	4	3	2	2	3	5	7	11	15	20	24	25	27	28	27	26	25	23	20	28.0	
30-Aug	17	15	12	11	9	8	6	6	6	7	10	14	18	21	25	26	29	31	32	32	30	29	27	25	31.9	
31-Aug	23	20	18	15	14	13	12	10	10	11	12	13	15	19	20	22	23	23	23	23	22	19	18	17	23.5	
Diurnal Maximums																										
N - Not Valid																										



# Hourly Averages

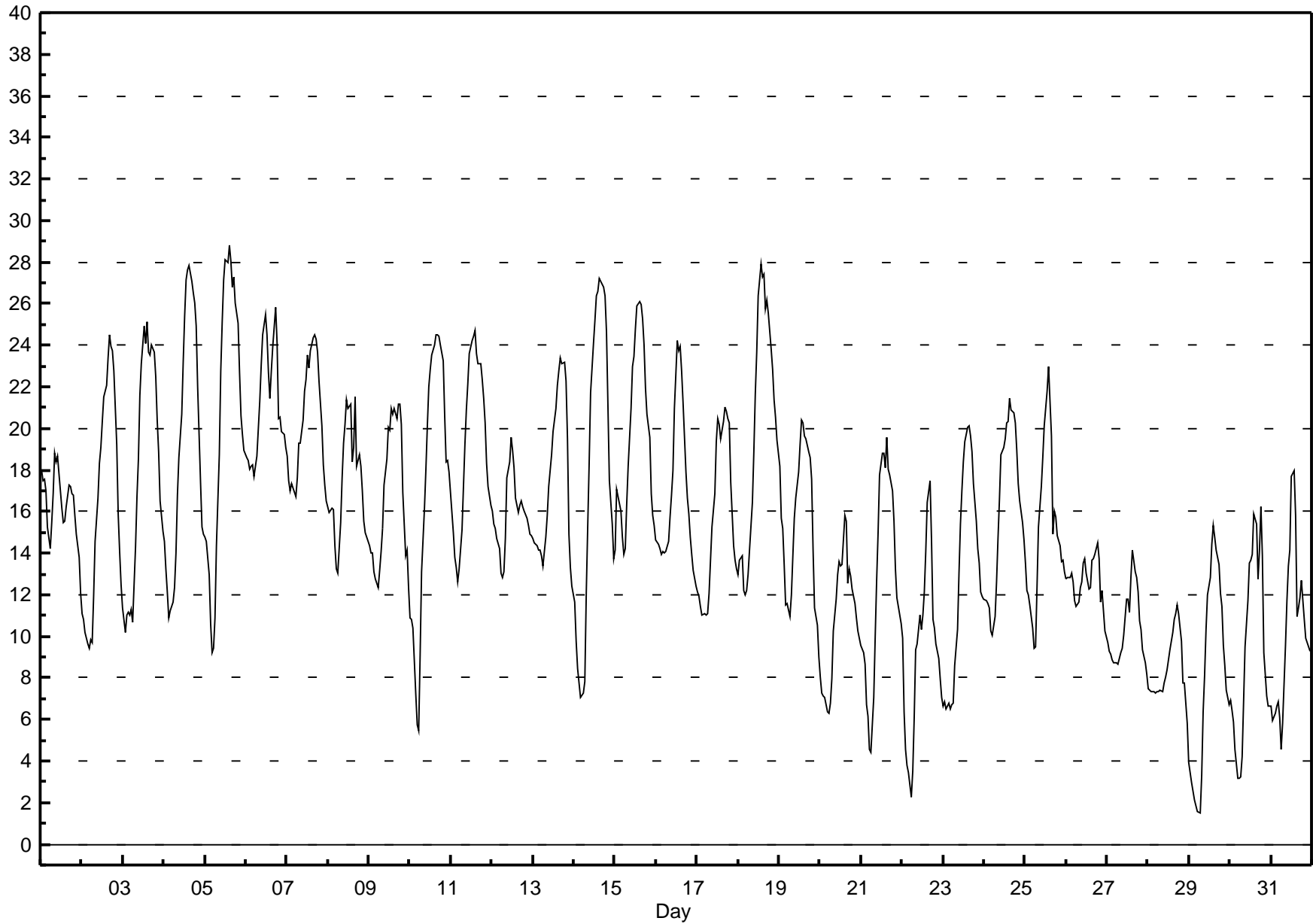
External Temperature (ET) - °C

Portable-Bonanza - August 2010

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 28.8 °C on Aug 5 15:00	Maximum Daily Average: 21.1 °C on Aug 6		Hours of Data:	744
Minimum Value: 2 °C on Aug 29 07:00	Minimum Daily Average: 8.2 °C on Aug 29		Hours of Missing Data:	0
Maximum Diurnal Average: 20.3 °C at hour 16	Minimum Diurnal Average: 10.0 °C at hour 6		Hours of Calibration:	0
Monthly Average: 15.41 °C	Percentiles: P <sub>1</sub> = 3.1 P <sub>10</sub> = 7.8 Q <sub>1</sub> = 11.4 Median = 14.9 Q <sub>3</sub> = 19.5 P <sub>90</sub> = 23.5 P <sub>99</sub> = 27.4		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	18	17	18	17	15	14	15	17	19	18	19	17	16	15	16	16	17	17	17	17	16	15	14	12	16.4	18.8
2-Aug	11	11	10	10	9	10	10	12	15	17	18	19	20	22	22	23	24	24	24	23	19	16	14	12	16.5	24.5
3-Aug	11	10	11	11	11	11	11	14	17	19	22	23	25	24	25	24	24	24	24	22	20	19	17	15	18.1	25.1
4-Aug	15	13	12	11	11	12	12	14	17	19	21	23	25	27	28	28	27	26	26	25	22	17	15	15	19.2	27.8
5-Aug	15	15	13	11	9	9	11	14	19	23	25	27	28	28	29	28	27	27	26	25	23	21	20	19	20.5	28.8
6-Aug	19	18	18	18	18	18	19	20	21	23	25	25	24	23	21	23	24	26	24	20	21	20	20	19	21.1	25.8
7-Aug	19	18	17	17	17	17	18	19	19	20	22	22	24	23	24	24	24	24	22	20	18	17	16	16	20.3	24.5
8-Aug	16	16	16	16	14	13	13	15	18	19	20	21	21	21	18	19	22	18	19	18	17	16	15	15	17.4	21.5
9-Aug	14	14	14	13	13	12	13	14	15	17	19	20	20	21	21	21	20	21	21	20	17	14	14	12	16.7	21.2
10-Aug	11	11	10	7	6	5	9	13	16	18	20	22	23	24	24	24	24	24	24	23	21	18	18	18	17.3	24.5
11-Aug	17	15	14	13	13	13	15	17	19	21	22	24	24	24	25	24	23	23	22	21	20	18	17	16	19.3	24.7
12-Aug	16	15	15	15	14	13	13	13	15	18	18	20	19	18	17	16	16	17	16	16	16	15	15	15	15.8	19.6
13-Aug	15	15	14	14	14	14	13	15	16	17	18	19	20	21	22	23	23	23	23	22	20	15	13	12	17.6	23.4
14-Aug	12	10	8	8	7	7	8	12	15	18	22	24	25	26	27	27	27	27	26	25	21	17	15	14	17.9	27.2
15-Aug	14	17	17	16	15	14	14	16	18	21	23	23	25	26	26	26	25	24	22	21	20	17	16	15	19.6	26.1
16-Aug	15	14	14	14	14	14	14	15	16	17	18	21	24	24	24	23	21	18	17	16	15	14	13	12	16.9	24.2
17-Aug	12	12	11	11	11	11	11	12	14	15	17	19	20	20	19	20	21	21	20	20	17	14	14	13	15.8	21.0
18-Aug	13	14	14	12	12	12	13	14	16	19	22	24	26	28	27	27	26	26	26	24	23	21	21	19	20.0	27.9
19-Aug	18	16	15	13	12	12	11	12	14	16	17	18	19	20	20	20	19	19	19	18	14	11	11	9	15.5	20.4
20-Aug	8	7	7	7	6	6	7	8	10	12	13	14	13	13	16	16	13	13	13	12	12	11	10	10	10.7	15.8
21-Aug	10	9	9	7	6	5	4	7	10	13	15	18	19	19	18	20	18	18	17	16	13	12	11	11	12.6	19.5
22-Aug	10	6	5	4	3	2	4	6	9	10	11	10	11	12	14	16	17	15	11	10	10	9	8	7	9.2	17.5
23-Aug	7	7	6	7	7	7	7	9	10	13	15	17	18	19	20	20	20	19	17	16	14	14	12	12	13.0	20.2
24-Aug	12	12	12	11	10	10	11	13	15	17	19	19	19	20	20	21	21	21	20	19	17	17	15	15	16.1	21.4
25-Aug	14	12	12	11	10	9	9	12	15	17	19	20	21	22	23	20	15	16	16	15	14	14	14	13	15.2	23.0
26-Aug	13	13	13	13	13	12	11	12	12	13	14	14	13	12	12	14	14	14	14	14	12	12	11	10	12.6	14.5
27-Aug	10	9	9	9	9	9	9	9	9	9	10	12	12	11	13	14	13	13	12	11	10	9	9	8	10.3	14.1
28-Aug	7	7	7	7	7	7	7	7	7	8	8	8	9	9	10	11	11	12	11	10	8	8	7	6	8.4	11.5
29-Aug	4	3	3	2	2	2	2	3	6	8	10	12	13	14	15	15	14	13	12	11	10	9	7	7	8.2	15.3
30-Aug	7	6	6	5	3	3	3	4	7	9	12	14	14	14	16	15	13	14	16	14	9	7	7	7	9.4	16.2
31-Aug	7	6	6	7	7	6	5	6	10	12	13	14	18	18	16	11	11	12	13	11	10	10	10	9	10.2	18.0

12.5	11.9	11.5	10.9	10.3	10.0	10.4	12.1	14.2	16.0	17.6	18.8	19.7	20.0	20.3	20.3	19.9	19.6	19.1	18.0	16.1	14.4	13.5	12.7	Diurnal Average	
18.7	18.5	18.0	18.2	18.2	17.7	18.6	20.0	21.3	23.1	25.1	27.1	28.1	28.0	28.8	28.0	27.1	27.3	26.4	25.1	22.8	21.4	20.5	19.5	Diurnal Maximum	



# Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Portable-Bonanza - August 2010

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	11	11	11	8	9	3	9	13	14	23	13	14	17	14	13	16	16	15	14	11	6	9	8	6.2	22.8
Dir	141	138	144	142	138	137	207	280	264	315	324	345	282	333	298	277	269	271	273	266	257	264	225	232	271	324
2 Spd	8	7	7	4	6	6	6	7	12	11	15	15	15	14	10	8	9	13	9	10	6	5	3	1	5.4	14.8
Dir	233	233	232	213	244	211	219	245	284	301	330	328	328	328	314	348	353	334	338	15	19	75	139	174	311	330
3 Spd	3	3	5	6	8	5	2	7	6	7	8	8	6	13	10	16	16	13	13	9	6	5	4	6	3.5	16.4
Dir	188	186	185	179	185	172	201	216	240	258	302	325	342	318	320	354	360	359	358	338	320	301	201	172	313	354
4 Spd	6	5	3	4	5	6	6	8	6	6	6	6	8	8	8	8	7	7	8	9	4	4	6	7	2.3	9.3
Dir	185	181	176	190	193	197	195	203	241	273	274	311	0	23	42	80	106	161	165	195	221	126	137	123	174	195
5 Spd	6	5	4	1	2	2	2	3	2	9	14	14	16	12	12	12	10	8	10	8	7	9	9	9	6.9	16.0
Dir	127	132	142	175	264	330	23	9	69	140	138	124	115	135	134	144	153	140	139	139	139	139	140	145	135	115
6 Spd	10	9	8	9	9	11	14	17	19	23	24	30	34	29	19	21	17	24	25	21	16	16	16	16	16.5	34.0
Dir	151	163	153	173	189	203	198	203	209	222	235	250	249	245	206	196	191	229	214	207	198	198	203	210	213	249
7 Spd	17	14	13	15	15	13	18	22	21	24	30	32	32	34	26	24	25	25	25	27	20	16	16	16	21.0	33.7
Dir	206	211	206	201	209	205	207	217	212	225	243	235	240	242	246	241	239	225	227	219	216	209	202	206	224	242
8 Spd	16	17	15	11	8	8	9	14	19	24	22	21	18	22	21	15	7	10	3	5	7	7	10	10	10.9	23.7
Dir	218	218	232	259	235	212	241	254	245	257	266	246	275	271	325	286	243	251	245	180	171	179	182	180	246	257
9 Spd	11	10	9	9	9	9	9	9	17	19	16	19	17	17	16	15	16	17	16	14	10	7	8	5	10.7	19.3
Dir	194	181	192	196	177	168	170	199	221	241	252	248	271	250	268	240	271	256	251	251	233	217	170	224	232	241
10 Spd	5	8	7	4	3	2	8	8	6	9	6	4	8	14	14	17	15	16	15	10	8	8	9	8	6.2	16.7
Dir	202	179	172	161	155	118	131	153	187	234	189	225	251	262	263	254	268	249	235	218	193	150	146	134	216	254
11 Spd	9	8	9	10	10	11	11	9	5	10	13	13	10	12	19	23	19	18	17	12	8	8	9	5	3.8	23.0
Dir	132	122	128	131	135	138	141	139	176	224	228	259	311	309	280	309	312	303	304	319	331	337	14	317	285	309
12 Spd	4	5	6	2	12	16	15	11	16	24	27	33	34	33	37	30	27	30	27	21	23	18	12	16	18.2	37.1
Dir	9	196	281	193	299	292	246	218	259	299	301	316	313	320	318	312	317	312	318	316	319	316	302	305	306	318
13 Spd	18	16	18	18	16	14	12	15	16	21	19	18	17	14	12	15	14	15	14	13	5	4	6	4	12.7	20.9
Dir	321	314	310	315	312	307	305	308	300	309	317	327	321	315	314	297	315	306	309	304	273	161	162	158	310	309
14 Spd	5	2	2	2	2	6	4	5	7	5	2	3	4	6	7	9	7	10	10	11	5	2	5	4	2.5	11.0
Dir	181	154	149	175	182	125	211	198	219	261	254	275	305	331	304	330	264	307	295	301	301	202	145	140	268	301
15 Spd	4	9	4	4	5	6	2	6	5	13	12	14	13	13	17	18	18	18	12	14	10	4	14	6	9.0	18.1
Dir	88	122	95	62	35	50	90	121	100	108	84	94	80	84	71	73	87	90	80	92	80	62	148	318	87	73
16 Spd	7	5	3	3	4	1	2	6	2	4	12	13	12	18	19	16	16	20	14	11	16	12	6	5	7.5	20.0
Dir	238	166	196	303	14	93	239	146	78	24	28	44	38	40	45	44	39	36	45	35	39	47	33	75	42	36
17 Spd	6	4	5	4	1	5	5	5	10	14	12	8	6	3	6	4	5	8	7	3	4	6	6	6	2.7	13.8
Dir	47	27	68	45	54	58	86	74	89	112	104	104	71	99	261	259	259	271	276	273	123	120	125	139	96	112
18 Spd	7	7	5	9	8	15	10	7	8	9	9	14	14	21	23	20	28	19	22	15	25	23	24	25	11.1	28.2
Dir	126	126	43	67	105	127	135	148	163	169	199	235	247	261	258	218	229	227	208	216	198	197	201	206	205	229
19 Spd	23	20	24	18	18	9	10	12	25	29	32	31	31	33	39	38	37	27	28	19	14	7	4	5	20.8	39.5
Dir	215	243	253	252	261	256	215	241	238	243	240	254	252	252	244	252	254	255	248	270	343	358	267	236	250	244
20 Spd	8	7	7	4	6	7	7	6	5	7	12	12	16	7	6	10	13	13	6	6	6	7	7	7	2.3	16.0
Dir	235	209	207	189	228	209	207	211	276	304	308	349	337	340	295	324	249	125	153	143	142	141	137	135	237	337
21 Spd	7	7	7	7	7	2	1	3	3	2	1	3	3	6	3	5	13	11	10	7	8	8	13	12	4.9	13.2
Dir	117	130	125	122	135	129	77	283	357	356	306	123	180	197	259	139	162	179	163	143	135	152	145	141	148	162
22 Spd	9	3	1	2	2	3	5	8	11	5	6	8	9	12	12	10	5	17	22	7	8	8	11	9	6.8	22.3
Dir	151	165	219	139	166	231	190	208	217	210	162	148	152	158	143	136	161	227	220	180	231	189	205	209	188	220

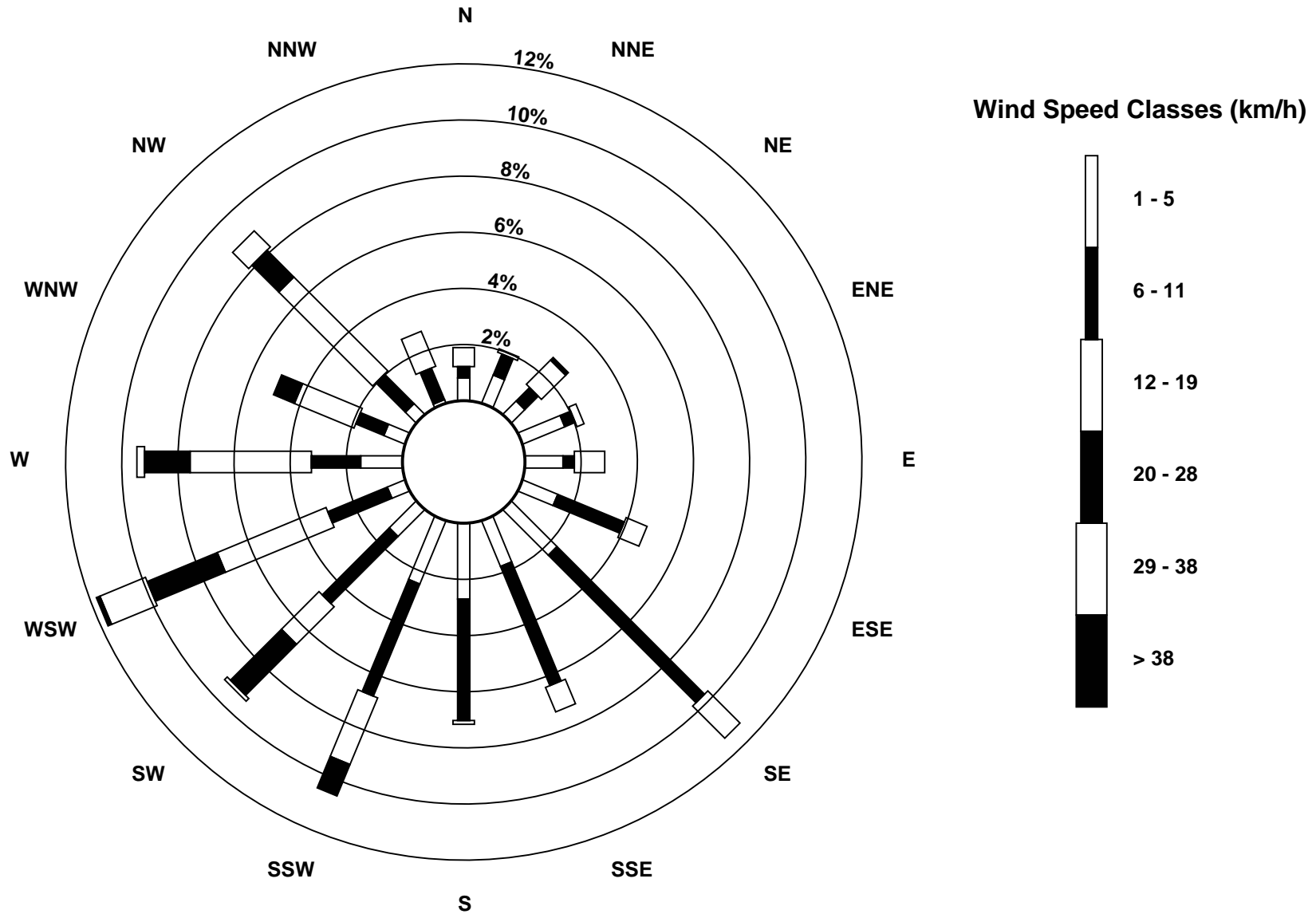
# Hourly Averages

**Wind Speed (km/h)**  
**Wind Direction (deg)**  
**Portable-Bonanza - August 2010**

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	10	11	10	11	11	8	9	8	10	13	15	17	19	20	20	23	25	27	24	17	13	7	8	9	13.0	26.6
Dir	206	194	190	197	194	194	185	193	202	228	250	248	241	247	235	232	244	239	224	218	211	167	157	164	221	239
24 Spd	10	10	11	10	9	10	8	7	13	20	25	28	28	21	16	25	20	19	18	12	8	8	6	8	12.5	28.4
Dir	168	163	176	179	147	145	173	187	226	241	245	236	236	237	224	228	212	245	255	246	208	191	159	168	218	236
25 Spd	7	7	8	7	6	3	4	6	11	14	17	15	14	12	6	11	9	5	5	4	4	9	13	14	6.1	16.7
Dir	172	152	153	181	168	211	179	204	229	246	255	249	242	251	225	267	273	63	155	146	178	225	166	146	213	255
26 Spd	16	12	13	12	9	7	10	6	8	8	10	12	14	15	11	6	13	12	12	13	11	14	14	13	6.7	16.0
Dir	133	153	149	164	165	239	202	160	214	279	257	294	309	304	288	286	261	267	276	252	249	282	276	262	249	133
27 Spd	14	18	18	18	16	17	17	20	18	25	28	29	29	23	26	27	25	24	20	22	23	19	19	20	20.5	29.3
Dir	247	261	271	264	261	261	257	274	273	258	253	263	263	274	277	276	262	260	278	299	298	304	313	315	273	263
28 Spd	19	22	20	18	19	20	19	22	19	16	18	17	19	14	18	18	20	18	14	9	8	6	6	5	14.4	22.1
Dir	302	299	280	277	278	275	274	292	308	310	319	319	320	320	301	301	308	301	301	280	246	216	175	172	295	299
29 Spd	5	4	4	5	4	4	2	3	2	4	2	4	2	6	5	5	6	12	7	3	8	6	4	3	2.5	11.8
Dir	155	163	145	124	139	123	145	223	226	299	279	355	353	32	30	14	77	107	117	118	136	126	103	111	111	107
30 Spd	2	6	1	5	6	6	1	2	4	5	4	2	2	11	13	2	11	3	5	6	6	7	7	11	3.4	12.5
Dir	93	129	223	121	121	131	57	241	198	214	198	317	252	118	111	53	257	84	77	147	129	120	116	128	134	111
31 Spd	9	8	8	4	6	2	3	4	2	4	2	1	3	3	4	8	8	7	9	7	7	4	4	3	3.5	9.1
Dir	136	120	103	121	110	134	32	283	135	201	202	344	45	140	124	155	56	114	128	143	143	18	64	94	118	128
Spd	5.0	4.8	4.3	3.7	3.7	3.6	4.8	5.6	7.3	8.5	8.8	8.5	9.1	8.6	8.0	7.7	8.2	7.7	7.3	5.3	3.6	3.0	4.9	4.5	Diurnal Average	
Dir	190	191	203	201	207	205	209	225	237	252	263	271	277	278	275	269	262	260	251	247	229	202	180	189	Diurnal Maximum	
Spd	22.9	22.1	24.1	18.3	18.6	19.5	19.4	21.8	24.9	29.2	32.1	33.3	34.0	33.7	39.5	38.4	37.0	29.8	28.4	26.6	24.7	22.7	24.4	25.2	Diurnal Maximum	
Dir	215	299	253	315	278	275	274	217	238	243	240	316	249	242	244	252	254	312	248	219	198	197	201	206	Diurnal Maximum	
Maximum Speed Value: 39 km/h on Aug 19 15:00																		Minimum Speed Value: 1 km/h on Aug 21 07:00						Hours in Service: 744		
Maximum Daily Speed Average: 21.0 km/h on Aug 19																		Minimum Daily Speed Average: 2.3 km/h on Aug 29						Hours of Data: 744		
Maximum Diurnal Speed Average: 9.1 km/h at hour 13																		Minimum Diurnal Speed Average: 3.0 km/h at hour 22						Hours of Missing Data: 0		
Monthly Average Velocity: 5.21 km/h 242.5 deg																		Speed Percentiles: P <sub>1</sub> = 1.3 P <sub>10</sub> = 3.6 Q <sub>1</sub> = 6.0 Median = 9.5 Q <sub>3</sub> = 15.9 P <sub>90</sub> = 21.6 P <sub>99</sub> = 33.4						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	9	11	7	0	0	0	27																			
NorthEast	15	11	10	1	0	0	37																			
East	18	12	15	0	0	0	45																			
SouthEast	29	83	20	0	0	0	132																			
South	35	71	11	4	0	0	121																			
SouthWest	16	49	40	36	10	1	152																			
West	14	20	59	20	10	1	124																			
NorthWest	7	21	54	18	6	0	106																			
Total	143	278	216	79	26	2	744																			

# Wind Rose

Wind Speed (WS) (km/h)  
Portable-Bonanza - August 2010







# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

## Portable-Bonanza - August 2010

Maximum Speed: 40 km/h on Aug 19 15:00		Maximum Daily Speed Average: 22.9 km/h on Aug 19		Hours in Service: 744																							
Minimum Speed: 2 km/h on Aug 30 08:00		Minimum Daily Speed Average: 5.3 km/h on Aug 29		Hours of Data: 744																							
Maximum Diurnal Speed Average: 16.7 km/h at hour 14		Minimum Diurnal Speed Average: 8.1 km/h at hour 7		Hours of Missing Data: 0																							
Monthly Average Speed: 12.11 km/h		Percentiles: P <sub>1</sub> = 2.7 P <sub>10</sub> = 4.7 Q <sub>1</sub> = 6.7 Median = 10.1 Q <sub>3</sub> = 16.2 P <sub>90</sub> = 22.5 P <sub>99</sub> = 34.2		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-Aug	11	11	12	11	8	9	5	10	14	14	23	14	14	17	14	13	17	16	16	14	12	7	9	8	12.4	23.2	
2-Aug	8	7	7	4	6	6	6	8	13	12	16	16	16	16	12	9	10	13	10	10	7	6	3	2	9.3	15.9	
3-Aug	4	4	6	6	8	5	3	7	7	8	8	9	9	14	11	17	16	14	13	9	6	5	4	6	8.3	17.2	
4-Aug	6	5	4	4	5	6	6	8	7	7	6	8	10	10	10	10	8	9	8	9	4	5	6	7	7.0	10.3	
5-Aug	6	5	6	3	3	3	2	3	4	9	14	15	17	13	13	13	11	8	10	8	7	9	9	9	8.3	16.6	
6-Aug	10	9	8	10	10	11	14	17	19	23	24	30	35	30	19	21	18	25	25	21	16	16	16	16	18.4	34.5	
7-Aug	17	14	13	15	15	13	18	22	21	25	30	32	33	34	28	25	26	26	26	27	20	17	16	16	22.1	34.4	
8-Aug	16	17	15	11	9	8	9	14	19	24	22	22	20	25	21	16	9	14	4	6	7	8	10	10	14.1	25.4	
9-Aug	11	10	9	9	9	9	9	10	18	20	16	20	17	18	17	15	17	18	17	14	10	8	8	6	13.1	19.8	
10-Aug	5	8	7	4	4	3	8	8	7	9	8	7	11	16	15	18	16	16	16	11	8	8	9	9	9.6	17.7	
11-Aug	9	8	9	10	10	11	11	9	6	10	14	14	11	13	20	24	19	19	17	12	8	8	10	7	12.0	23.7	
12-Aug	5	6	10	9	15	17	15	11	16	24	27	34	35	34	37	30	27	30	28	21	23	18	12	16	20.9	37.4	
13-Aug	18	16	18	18	16	14	12	16	16	21	20	19	18	15	13	16	16	16	15	13	5	5	6	5	14.5	21.5	
14-Aug	5	4	3	3	3	6	5	5	7	5	4	6	8	8	8	10	9	10	10	11	5	3	5	4	6.1	11.1	
15-Aug	7	10	6	6	5	6	5	7	7	13	13	15	14	14	17	19	19	18	12	14	11	10	16	10	11.4	19.0	
16-Aug	8	8	7	6	5	6	3	6	4	5	12	13	12	18	19	16	17	20	14	11	16	12	7	6	10.4	20.0	
17-Aug	6	4	5	5	3	5	6	6	11	14	13	9	7	6	7	6	8	8	8	3	4	6	6	6	6.7	14.3	
18-Aug	7	12	8	9	9	15	11	7	9	9	10	15	16	21	23	20	28	19	23	16	25	23	24	25	16.0	28.5	
19-Aug	23	20	24	18	20	13	10	13	25	29	32	31	31	33	40	39	38	28	29	21	15	7	4	5	22.9	40.2	
20-Aug	8	7	7	5	6	7	7	6	6	7	13	14	17	9	8	11	16	13	7	6	6	7	7	7	8.6	16.7	
21-Aug	7	7	7	7	7	3	2	3	4	4	4	6	7	8	9	7	14	11	10	7	8	8	13	12	7.3	13.6	
22-Aug	10	4	3	3	3	4	6	8	11	6	7	9	9	12	13	10	7	17	23	8	8	8	11	9	8.7	22.9	
23-Aug	10	11	10	11	11	8	9	8	10	13	16	17	20	21	21	24	25	27	24	17	13	8	8	9	14.7	27.0	
24-Aug	11	10	11	10	9	10	9	7	13	21	26	29	28	21	17	26	20	21	18	12	8	8	7	8	15.0	28.7	
25-Aug	7	7	9	7	7	5	4	6	11	14	17	16	16	13	8	13	14	6	5	6	5	9	15	15	9.8	17.3	
26-Aug	16	13	13	13	10	9	10	6	8	9	10	13	14	15	12	7	13	13	12	13	11	14	14	13	11.7	16.1	
27-Aug	14	19	18	18	16	17	18	20	18	25	28	30	29	24	26	27	25	24	21	22	23	20	19	21	21.7	30.0	
28-Aug	19	22	20	18	19	20	20	22	19	16	18	18	19	14	19	19	21	18	14	9	8	6	6	5	16.2	22.5	
29-Aug	5	5	5	5	4	5	3	4	3	4	4	6	5	7	7	6	8	12	7	3	8	7	4	4	5.3	12.4	
30-Aug	4	6	4	5	6	6	5	2	5	6	5	7	4	13	13	9	13	6	7	6	6	7	7	11	6.8	13.4	
31-Aug	9	8	8	5	7	4	4	4	5	5	4	4	5	5	12	9	9	7	9	7	7	5	5	3	6.2	11.8	
		9.8	9.5	9.4	8.6	8.6	8.5	8.1	9.2	11.0	13.3	15.0	16.0	16.2	16.7	16.4	16.3	16.5	16.2	14.7	11.9	10.4	9.2	9.6	9.4	Diurnal Average	
		23.1	22.2	24.4	18.3	20.2	19.6	19.6	22.5	25.0	29.4	32.4	33.7	34.5	34.4	40.2	39.0	37.7	30.0	28.6	26.7	24.8	22.7	24.5	25.2	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

# Hourly Standard Deviations

Wind Direction (WD) - deg

Portable-Bonanza - August 2010

Maximum Value: 98.8 deg on Aug 21 07:00																								Hours in Service:	744
Minimum Value: 2.6 deg on Aug 6 22:00																								Hours of Data:	744
Percentiles: P <sub>1</sub> = 3.3 P <sub>10</sub> = 5.5 Q <sub>1</sub> = 8.5 Median = 14.2 Q <sub>3</sub> = 27.9 P <sub>90</sub> = 52.4 P <sub>99</sub> = 82.0																								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-Aug	4	4	7	4	4	4	52	25	21	11	11	26	11	12	10	11	11	10	10	11	9	32	12	12	52.3
2-Aug	9	6	15	37	20	9	10	22	14	15	18	22	22	26	36	28	23	21	27	7	11	26	40	64	64.3
3-Aug	41	43	23	15	10	14	32	14	20	27	31	41	64	33	30	18	11	13	16	6	12	13	18	15	63.9
4-Aug	9	22	35	13	8	13	6	9	26	24	27	37	40	42	37	38	37	43	21	6	11	56	11	8	56.4
5-Aug	6	53	53	69	61	50	40	38	56	36	17	17	17	30	35	24	18	26	12	7	4	4	6	6	69.2
6-Aug	9	7	7	8	16	7	4	5	7	7	10	11	10	8	11	7	9	18	7	9	3	3	4	4	18.1
7-Aug	4	4	6	7	3	4	4	8	8	15	10	13	12	11	18	14	16	13	15	6	6	3	4	4	18.1
8-Aug	4	3	8	8	21	16	13	10	11	13	17	17	24	28	12	21	66	49	46	35	23	25	14	10	65.8
9-Aug	6	6	6	7	5	6	8	21	8	14	14	20	16	23	18	15	18	20	15	10	6	24	15	38	37.7
10-Aug	22	12	14	28	41	56	5	10	35	22	44	61	47	26	26	19	21	15	13	11	16	7	6	8	61.0
11-Aug	5	9	5	4	3	3	6	8	28	16	12	21	25	28	17	14	7	10	6	6	8	4	26	56	56.4
12-Aug	49	41	62	78	51	29	10	20	14	12	8	9	10	10	8	8	6	6	6	5	5	9	7	6	78.0
13-Aug	5	5	5	5	4	5	3	8	9	13	17	21	19	22	32	17	24	20	13	9	28	23	12	30	32.0
14-Aug	21	62	52	50	51	11	42	20	16	25	63	66	67	57	48	37	56	25	19	7	22	48	17	28	67.4
15-Aug	66	15	64	46	46	12	67	32	54	14	18	22	20	22	18	17	16	12	10	10	20	72	32	69	71.7
16-Aug	41	56	67	76	45	82	47	33	70	53	12	9	14	8	13	10	10	5	10	7	8	10	24	38	82.3
17-Aug	24	38	24	48	83	11	43	35	21	17	15	24	35	78	39	58	71	26	18	32	21	5	8	6	82.6
18-Aug	10	77	67	15	25	3	7	10	12	13	17	18	25	12	11	17	7	8	15	22	3	4	4	4	76.6
19-Aug	8	11	8	8	27	39	9	19	6	7	7	9	11	13	11	10	11	6	6	31	10	18	34	18	38.9
20-Aug	10	17	15	40	10	5	6	6	30	25	23	33	17	36	58	27	47	10	12	7	7	4	5	10	57.7
21-Aug	10	4	8	7	11	48	99	33	30	69	90	70	80	59	72	60	14	19	10	7	5	23	5	4	98.8
22-Aug	39	45	78	61	48	53	21	7	7	20	29	13	9	10	10	12	53	32	14	26	24	11	3	4	77.7
23-Aug	7	7	7	5	5	8	5	6	9	12	14	11	16	16	18	14	10	10	6	5	5	23	9	14	23.2
24-Aug	14	13	15	11	13	8	12	13	16	9	10	9	10	15	16	11	13	19	9	7	7	10	10	11	19.3
25-Aug	13	10	9	15	12	59	41	16	10	11	16	20	24	31	59	36	75	45	20	46	31	14	30	15	75.2
26-Aug	6	16	10	14	22	34	12	27	24	26	19	18	11	7	17	37	17	9	6	11	9	9	13	9	37.1
27-Aug	8	6	7	4	6	10	6	11	10	5	5	13	7	10	9	10	7	6	14	8	7	5	10	5	14.1
28-Aug	5	5	6	6	5	7	6	16	7	7	9	13	13	14	13	9	8	5	11	6	18	12	17	17	18.2
29-Aug	21	19	18	23	35	27	62	20	47	29	54	53	78	52	43	42	44	26	4	11	10	19	23	47	77.6
30-Aug	71	9	65	32	10	26	83	30	28	34	38	89	62	48	23	78	29	74	41	9	11	8	9	4	88.9
31-Aug	5	25	29	29	39	75	54	17	89	40	70	89	67	77	78	36	14	20	7	7	10	43	23	51	89.2
70.6	76.6	77.7	78.0	82.6	82.3	98.8	37.9	89.2	68.9	89.8	88.9	80.1	78.3	77.8	77.7	75.2	73.5	46.4	45.9	30.8	71.7	40.2	69.2		

**PASZA**  
**Valleyview Station**  
**Monthly Summary Tables, Graphs and**  
**Roses**

# Hourly Averages

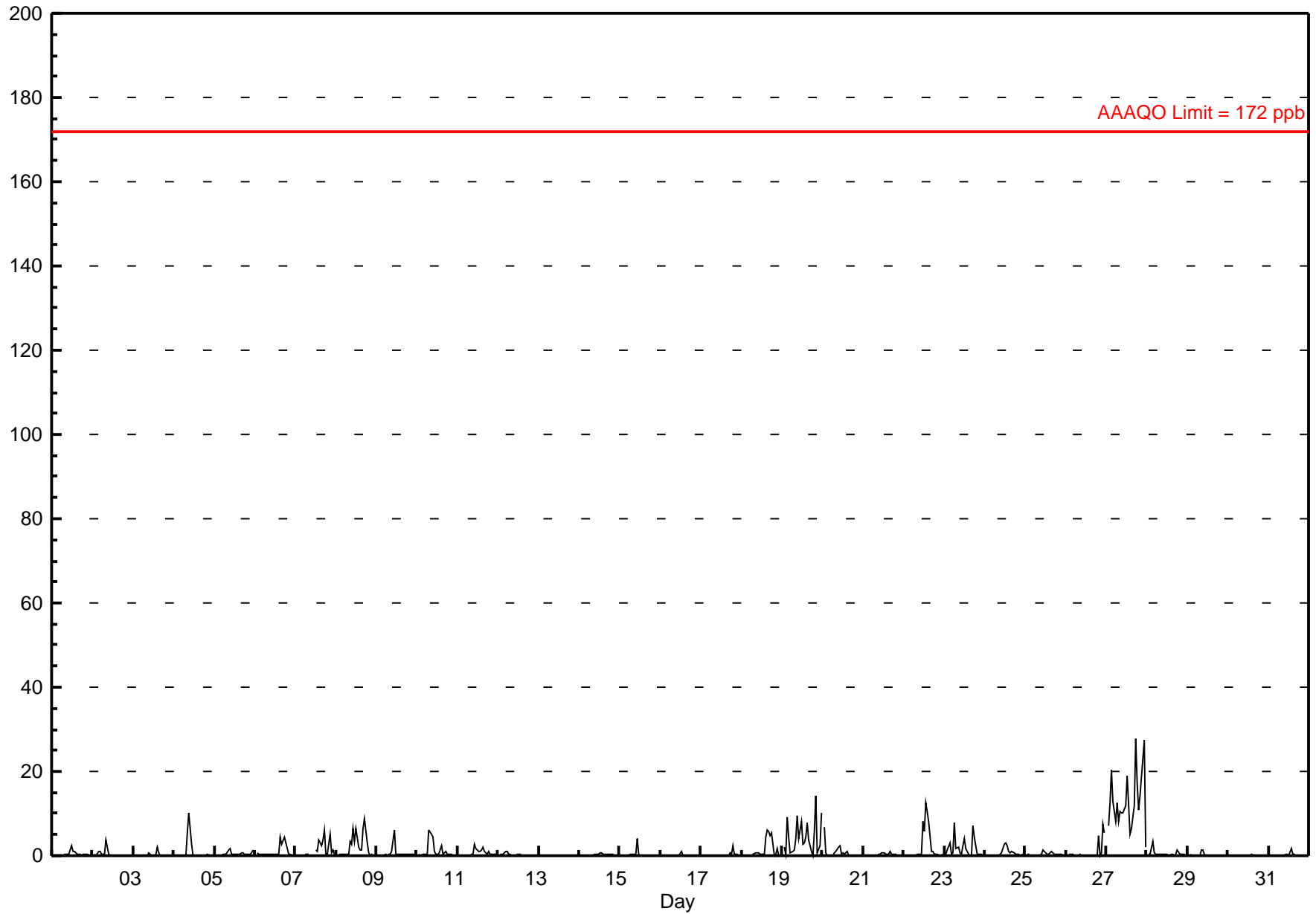
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Valleyview - August 2010

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 27.8 ppb on Aug 27 18:00	Maximum Daily Average: 12.9 ppb on Aug 27		Hours of Data:	710
Minimum Value: 0 ppb on Aug 2 17:00	Minimum Daily Average: 0.0 ppb on Aug 13		Hours of Missing Data:	34
Maximum Diurnal Average: 2.2 ppb at hour 18	Minimum Diurnal Average: 0.5 ppb at hour 6		Hours of Calibration:	34
Monthly Average: 1.17 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> = 0.5 P <sub>90</sub> = 3.3 P <sub>99</sub> = 12.7		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-Aug	A	0	0	0	0	0	0	0	0	0	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0.4	2.4	
2-Aug	A	0	0	1	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.6	
3-Aug	A	0	0	0	0	0	0	0	0	1	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0.2	2.1	
4-Aug	A	0	0	0	0	0	0	0	6	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	10.1	
5-Aug	A	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	1	1	0	0	0	0	1	1	0.5	1.9	
6-Aug	A	1	0	0	0	0	0	0	0	0	0	0	0	0	5	3	4	3	2	0	0	0	0	0	1.0	4.5	
7-Aug	A	0	0	0	0	0	0	0	0	0	C	C	C	1	1	4	2	4	6	0	0	5	1	1	0	1.3	6.0
8-Aug	A	0	0	0	0	0	0	0	3	3	6	3	7	2	1	1	6	9	3	1	0	0	0	0	2.1	8.9	
9-Aug	A	0	0	0	0	0	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	6.1	
10-Aug	A	0	0	0	0	0	0	6	5	4	1	0	0	0	2	0	1	1	0	0	0	0	0	0	1.1	6.0	
11-Aug	A	0	0	0	0	0	0	0	0	0	3	2	1	1	1	2	1	0	1	0	0	0	0	0	0.7	2.7	
12-Aug	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1	
13-Aug	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	
14-Aug	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.7	
15-Aug	A	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	4.2	
16-Aug	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	1.0	
17-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0.2	2.2	
18-Aug	A	0	0	0	0	0	0	0	1	1	1	0	0	0	5	6	6	5	5	0	0	2	0	0	1.4	6.1	
19-Aug	A	2	0	9	4	1	1	1	4	9	4	8	3	3	4	8	4	1	0	6	14	1	2	10	4.3	14.2	
20-Aug	A	7	1	0	0	0	0	1	1	2	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0.7	6.6	
21-Aug	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0.2	0.9	
22-Aug	A	0	0	0	0	0	0	0	0	0	0	8	6	13	11	8	1	1	0	0	0	0	0	0	2.2	12.7	
23-Aug	A	0	1	3	0	1	8	2	2	1	0	2	4	2	1	0	0	7	4	0	0	0	0	0	1.7	7.7	
24-Aug	A	0	0	0	0	0	0	0	0	0	1	3	3	2	1	1	1	1	0	0	0	0	0	0	0.7	3.0	
25-Aug	A	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0.4	1.4	
26-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	1	7	5	0.9	7.4	
27-Aug	A	7	12	20	13	8	13	8	10	10	10	12	19	12	5	6	12	28	17	11	14	19	27	2	12.9	27.8	
28-Aug	A	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.4	3.3	
29-Aug	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4	
30-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.5	
31-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0.2	1.8	
	--	0.6	0.6	1.3	0.7	0.5	0.8	0.7	1.3	1.6	1.5	1.6	1.6	1.4	1.4	1.4	1.3	2.2	1.3	1.0	1.2	0.8	1.3	0.7	Diurnal Average		
	--	7.0	12.5	20.2	12.7	8.1	12.6	8.0	10.4	10.1	10.3	11.9	19.0	12.7	10.5	8.2	11.8	27.8	17.2	10.7	14.4	18.7	27.3	10.1	Diurnal Maximum		

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

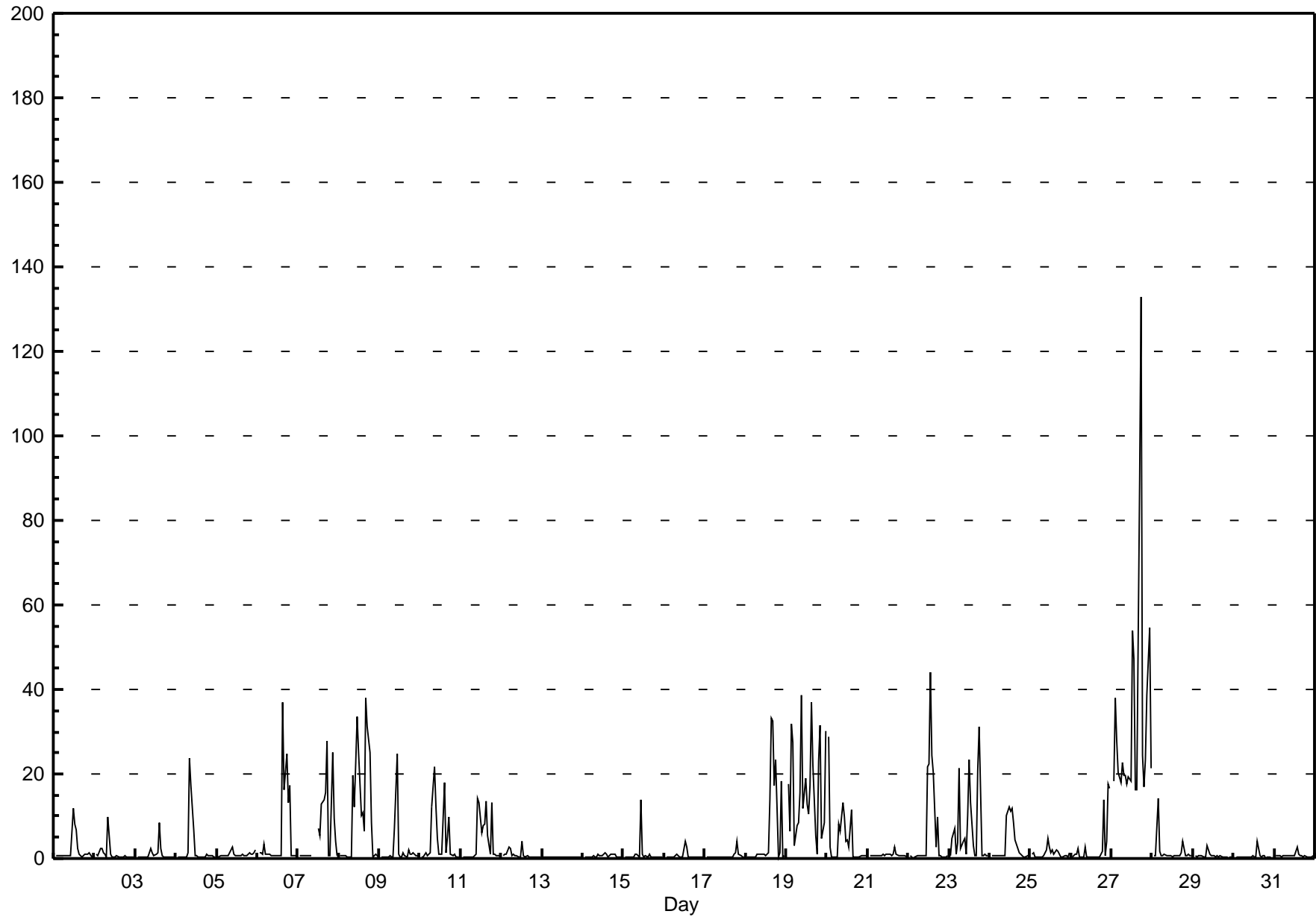


# Hourly Maximums

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**

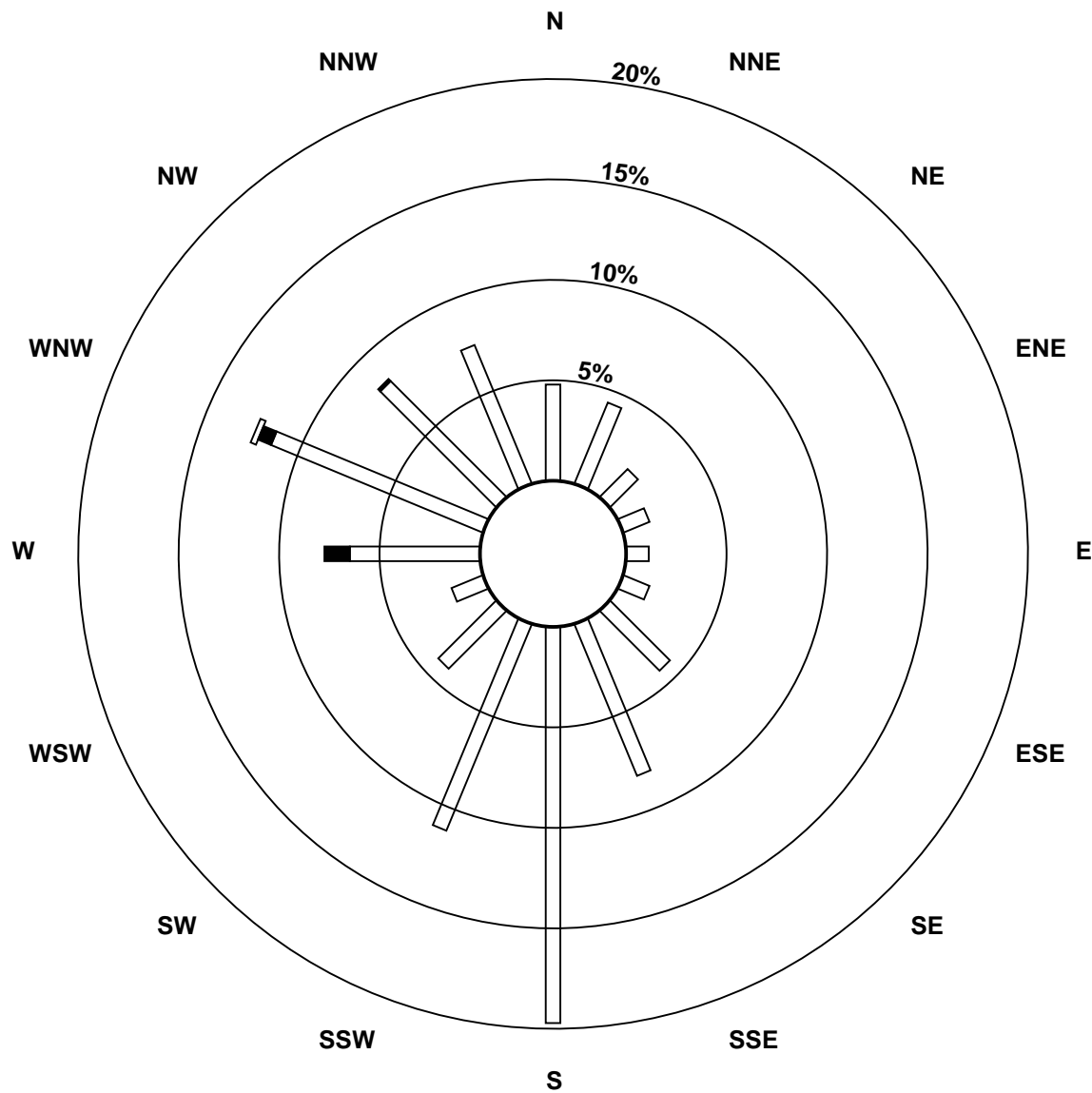
**Valleyview - August 2010**

Maximum Value: 133.0 ppb on Aug 27 18:00		Maximum Daily Average: 33.7 ppb on Aug 27		Hours in Service: 744																							
Minimum Value: 0 ppb on Aug 29 22:00		Minimum Daily Average: 0.4 ppb on Aug 13		Hours of Data: 710																							
Maximum Diurnal Average: 9.5 ppb at hour 18		Minimum Diurnal Average: 1.4 ppb at hour 6		Hours of Missing Data: 34																							
Monthly Average: 4.23 ppb		Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.6 Q <sub>3</sub> = 1.5 P <sub>90</sub> = 15.6 P <sub>99</sub> = 35.7		Hours of Calibration: 34																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	1	1	1	1	1	1	1	1	1	1	12	8	7	3	1	0	1	1	1	1	1	0	0	1.9	11.9	
2-Aug	A	1	1	2	2	1	1	0	10	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1.2	10.0	
3-Aug	A	0	0	0	0	0	0	0	1	2	1	1	1	1	9	3	1	0	0	0	0	0	0	0	1.1	8.6	
4-Aug	A	0	0	0	0	0	0	1	24	17	7	1	1	0	0	0	0	0	1	1	1	1	0	0	2.5	23.8	
5-Aug	A	0	1	1	1	1	1	1	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	2.6	
6-Aug	A	1	1	1	3	1	1	1	1	1	1	1	1	1	37	16	25	13	17	1	1	1	1	1	5.5	36.9	
7-Aug	A	1	1	1	1	1	1	1	1	C	C	C	7	6	13	14	16	28	1	1	25	9	4	1	6.4	27.7	
8-Aug	A	1	1	1	1	1	1	1	20	12	22	34	25	10	11	6	38	31	25	8	0	1	1	0	10.9	38.0	
9-Aug	A	0	0	0	0	0	1	0	0	7	25	1	0	0	1	1	0	2	1	1	1	1	1	0	2.0	24.8	
10-Aug	A	0	0	1	1	1	1	12	22	12	5	1	1	1	18	1	5	10	1	1	1	0	0	0	4.2	21.6	
11-Aug	A	0	0	0	0	0	0	1	1	1	14	13	6	8	8	13	5	1	13	1	1	1	1	1	4.0	14.3	
12-Aug	A	1	1	1	3	2	1	1	1	1	0	0	4	1	0	1	0	0	0	0	0	0	0	0	0.9	4.0	
13-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
14-Aug	A	0	0	0	0	0	1	0	0	1	1	1	1	1	1	0	1	1	1	1	1	0	0	0	0.6	1.5	
15-Aug	A	0	0	0	0	0	0	1	1	0	14	1	0	1	0	1	0	0	0	0	0	0	0	0	1.1	14.0	
16-Aug	A	0	0	0	0	0	0	1	1	0	0	0	4	3	0	0	0	0	0	0	0	0	0	0	0.7	3.9	
17-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	4	1	1	0	0	0.7	4.0	
18-Aug	A	0	0	0	0	0	0	1	1	1	1	1	1	1	14	33	33	17	23	0	1	18	0	1	6.5	33.1	
19-Aug	A	18	7	32	27	3	8	9	16	39	12	19	13	11	17	37	22	6	1	23	31	5	9	30	17.1	38.8	
20-Aug	A	29	3	0	0	0	0	8	6	13	10	4	4	3	12	0	0	0	1	0	1	1	1	1	4.3	28.9	
21-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	0	0.8	2.6	
22-Aug	A	1	0	0	0	1	1	1	1	1	1	22	22	44	25	20	3	10	1	1	0	0	0	1	6.7	44.0	
23-Aug	A	1	5	7	1	4	21	2	4	5	1	10	23	13	3	1	1	21	31	1	1	1	1	1	6.8	31.1	
24-Aug	A	1	1	1	1	1	1	1	1	1	10	12	11	12	8	5	3	1	1	1	0	0	1	1	3.1	12.2	
25-Aug	A	1	1	0	0	0	0	0	1	2	5	3	1	2	1	2	2	1	0	0	1	1	0	1	1.2	4.7	
26-Aug	A	0	1	1	2	0	0	0	3	0	0	0	0	0	0	0	0	0	2	14	1	4	18	17	2.9	17.8	
27-Aug	A	18	38	28	20	18	23	20	20	18	19	18	54	47	16	16	90	133	24	17	23	39	55	21	33.7	133.0	
28-Aug	A	1	1	14	2	1	1	1	1	1	1	1	0	1	1	1	1	4	1	1	1	1	1	1	1.6	14.4	
29-Aug	A	1	0	1	1	1	0	0	3	2	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0.7	3.1	
30-Aug	A	0	0	0	0	0	0	0	0	0	0	1	0	0	4	1	0	1	1	0	0	0	0	0	0.5	4.0	
31-Aug	A	1	1	1	0	1	1	1	1	1	1	1	1	3	1	1	1	0	1	0	0	0	0	1	0.6	2.7	
--		2.6	2.2	3.2	2.3	1.4	2.2	2.2	4.6	4.8	5.2	5.4	6.3	5.8	5.5	6.4	7.9	9.5	4.9	3.2	3.2	2.9	3.2	2.7	Diurnal Average		
--		28.9	37.9	32.0	27.5	18.1	22.8	19.6	23.8	38.8	24.8	33.7	54.0	47.3	24.5	36.9	89.5	133.0	31.1	23.0	31.5	38.7	54.6	30.3	Diurnal Maximum		
C - Calibration		A - Automated Daily Zero Span																									

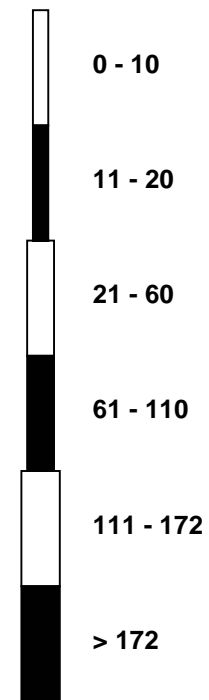


# Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Valleyview - August 2010



## Pollutant Classes (ppb)





# Hourly Averages

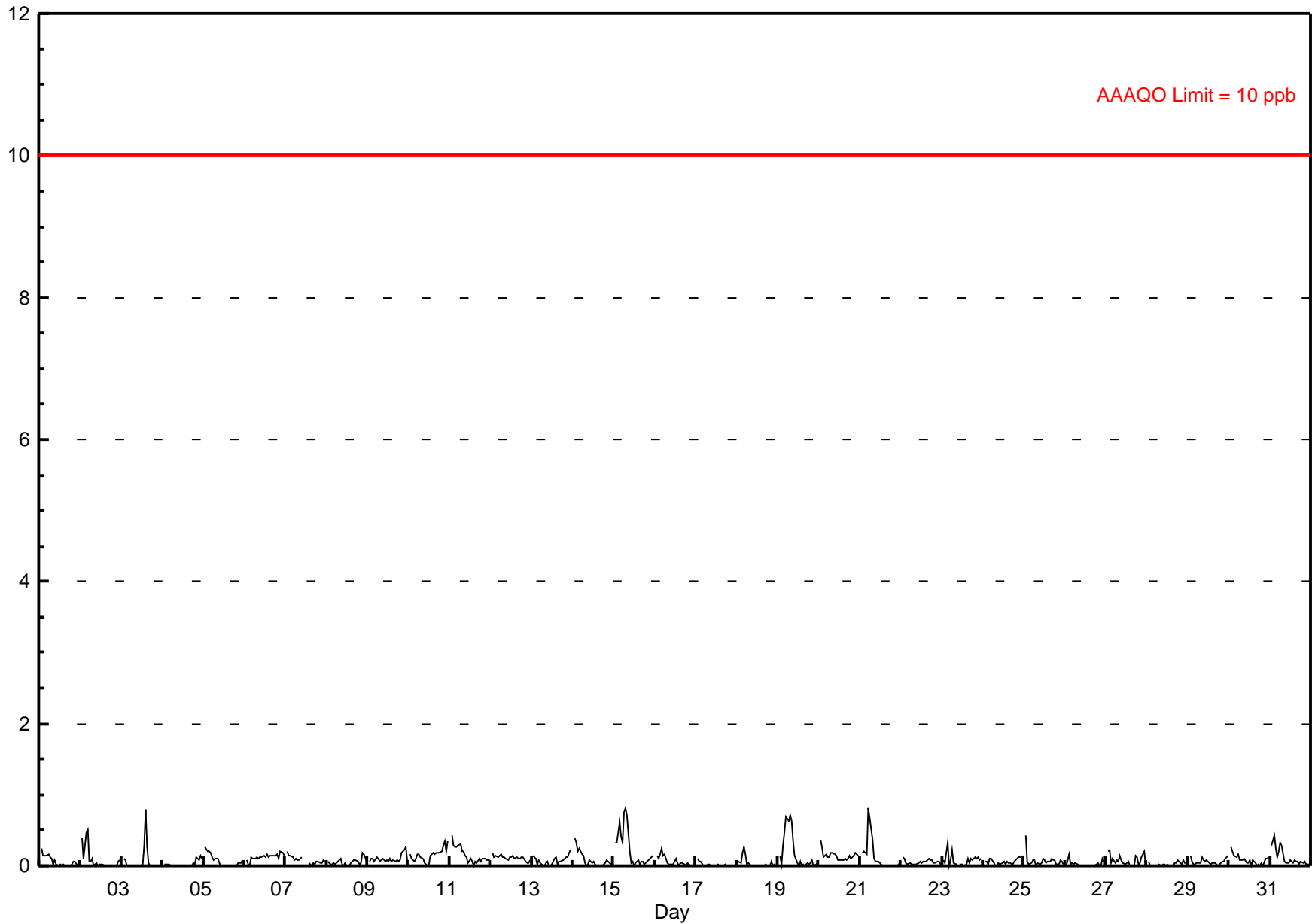
## Hydrogen Sulphide (H<sub>2</sub>S) - ppb

### Valleyview - August 2010

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 0.8 ppb on Aug 21 06:00	Maximum Daily Average: 0.2 ppb on Aug 15		Hours of Data:	709
Minimum Value: 0 ppb on Aug 1 12:00	Minimum Daily Average: 0.0 ppb on Aug 17		Hours of Missing Data:	35
Maximum Diurnal Average: 0.2 ppb at hour 2	Minimum Diurnal Average: 0.0 ppb at hour 12		Hours of Calibration:	35
Monthly Average: 0.09 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> = 0.7		Percent Operational Time:	100.0

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

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

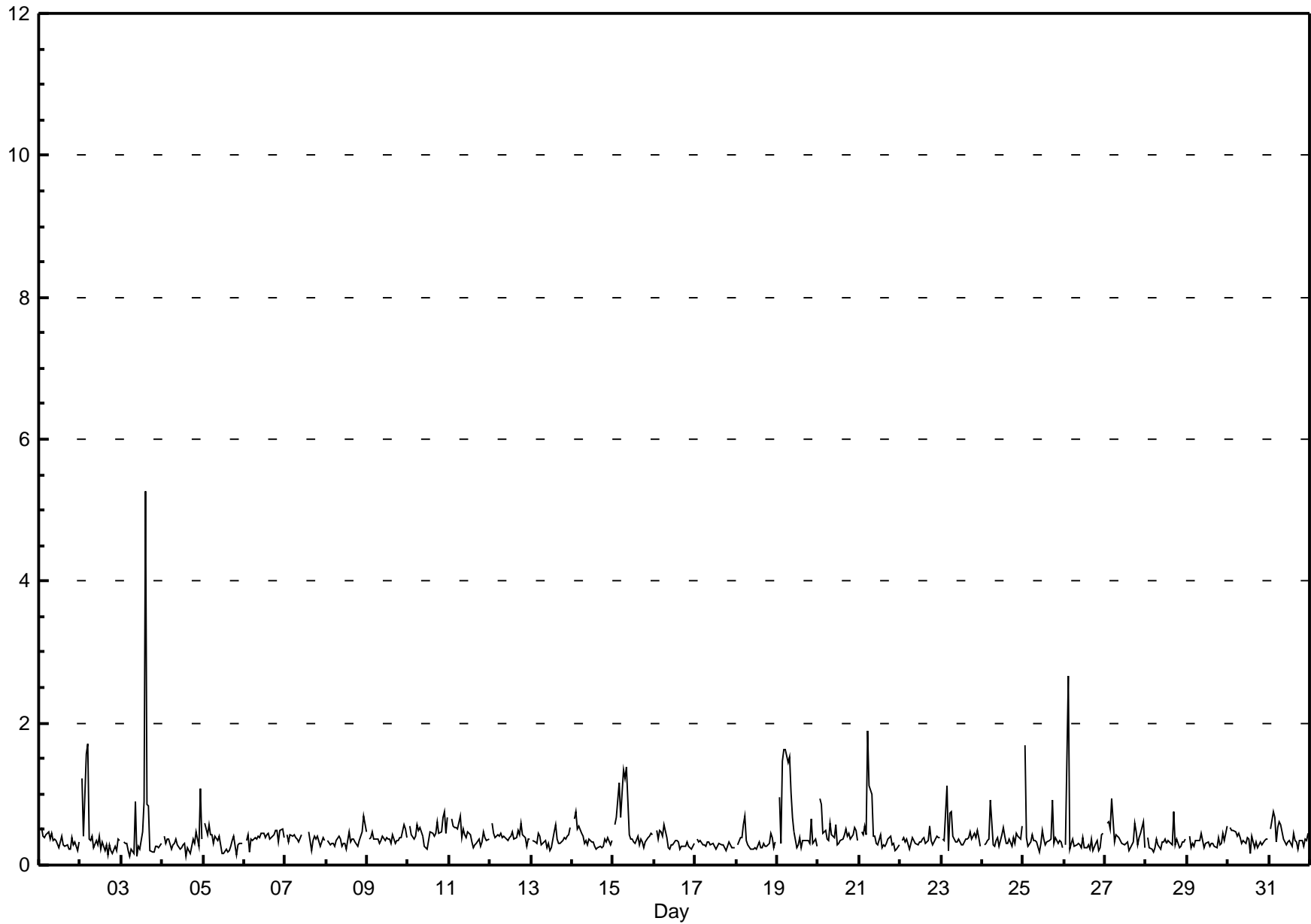


# Hourly Maximums

## Hydrogen Sulphide (H<sub>2</sub>S) - ppb

### Valleyview - August 2010

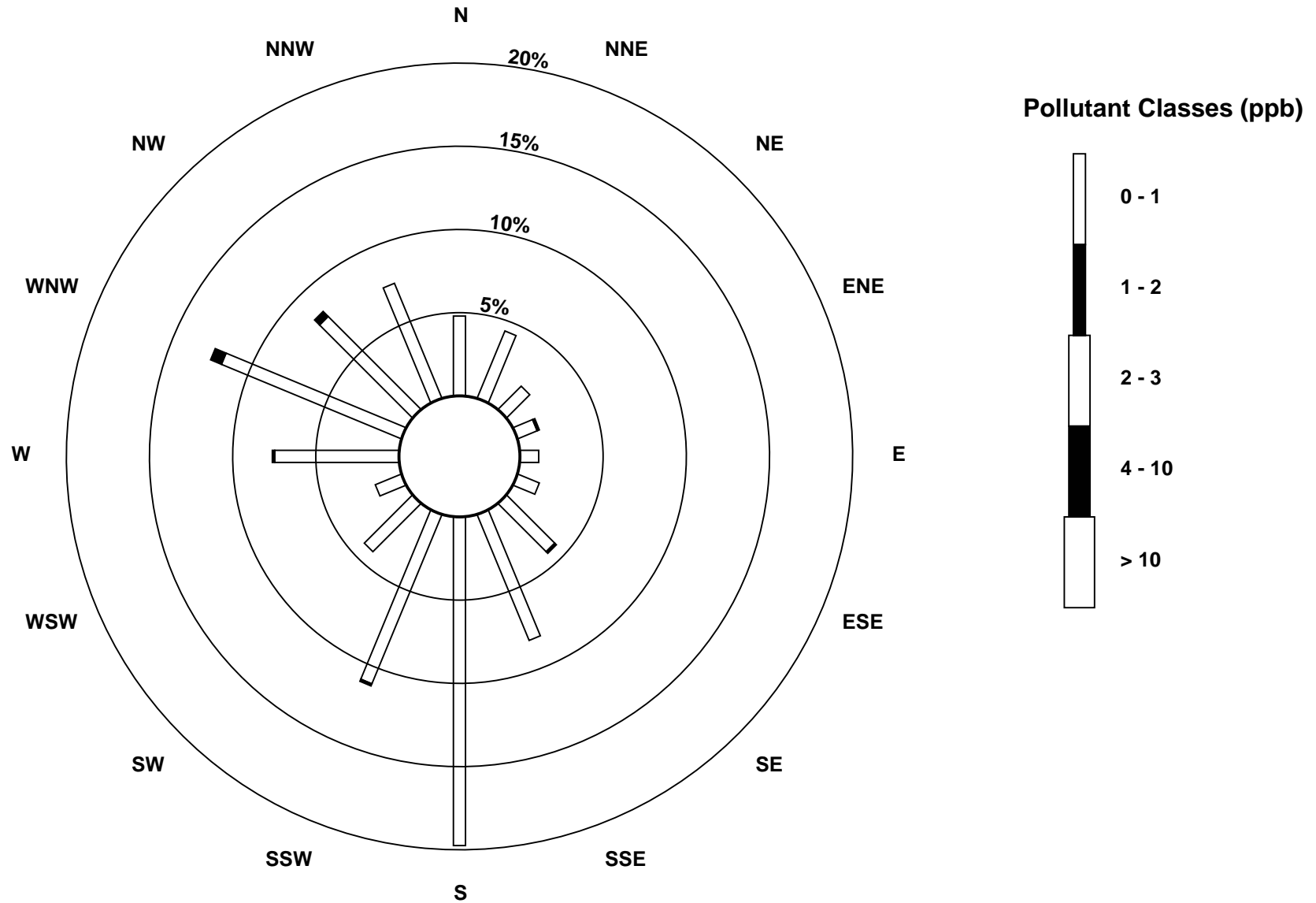
Maximum Value: 5.3 ppb on Aug 3 15:00		Maximum Daily Average: 0.7 ppb on Aug 19		Hours in Service: 744																							
Minimum Value: 0 ppb on Aug 4 15:00		Minimum Daily Average: 0.3 ppb on Aug 17		Hours of Data: 709																							
Maximum Diurnal Average: 0.5 ppb at hour 2		Minimum Diurnal Average: 0.3 ppb at hour 16		Hours of Missing Data: 35																							
Monthly Average: 0.40 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> = 0.6 P <sub>99</sub> = 1.6		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
2-Aug	A	1	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.7	
3-Aug	A	0	0	0	0	0	0	0	1	0	0	0	1	5	1	1	0	0	0	0	0	0	0	0	0.6	5.3	
4-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	1.1	
5-Aug	A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
6-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.5	
7-Aug	A	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
8-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.7	
9-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.4	0.6	
10-Aug	A	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0.5	0.8	
11-Aug	A	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7	
12-Aug	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.4	0.6	
13-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.4	0.6	
14-Aug	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8	
15-Aug	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.4	
16-Aug	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
17-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
18-Aug	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7	
19-Aug	A	1	0	1	2	2	1	2	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.7	1.6	
20-Aug	A	1	1	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0.5	0.9	
21-Aug	A	0	0	1	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.9	
22-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.3	0.6	
23-Aug	A	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1	
24-Aug	A	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.4	0.9	
25-Aug	A	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.4	1.7	
26-Aug	A	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.7	
27-Aug	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0.4	0.9	
28-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.3	0.7	
29-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.5	
30-Aug	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
31-Aug	A	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8	
		--	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.4	Diurnal Average		
		--	1.7	2.7	1.6	1.7	1.9	1.4	1.5	1.4	0.7	0.6	0.5	0.5	0.9	5.3	0.8	0.8	0.9	0.6	0.5	0.7	0.8	1.1	0.7	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



### Pollutant Rose

Hydrogen Sulphide (H<sub>2</sub>S) - ppb

Valleyview - August 2010



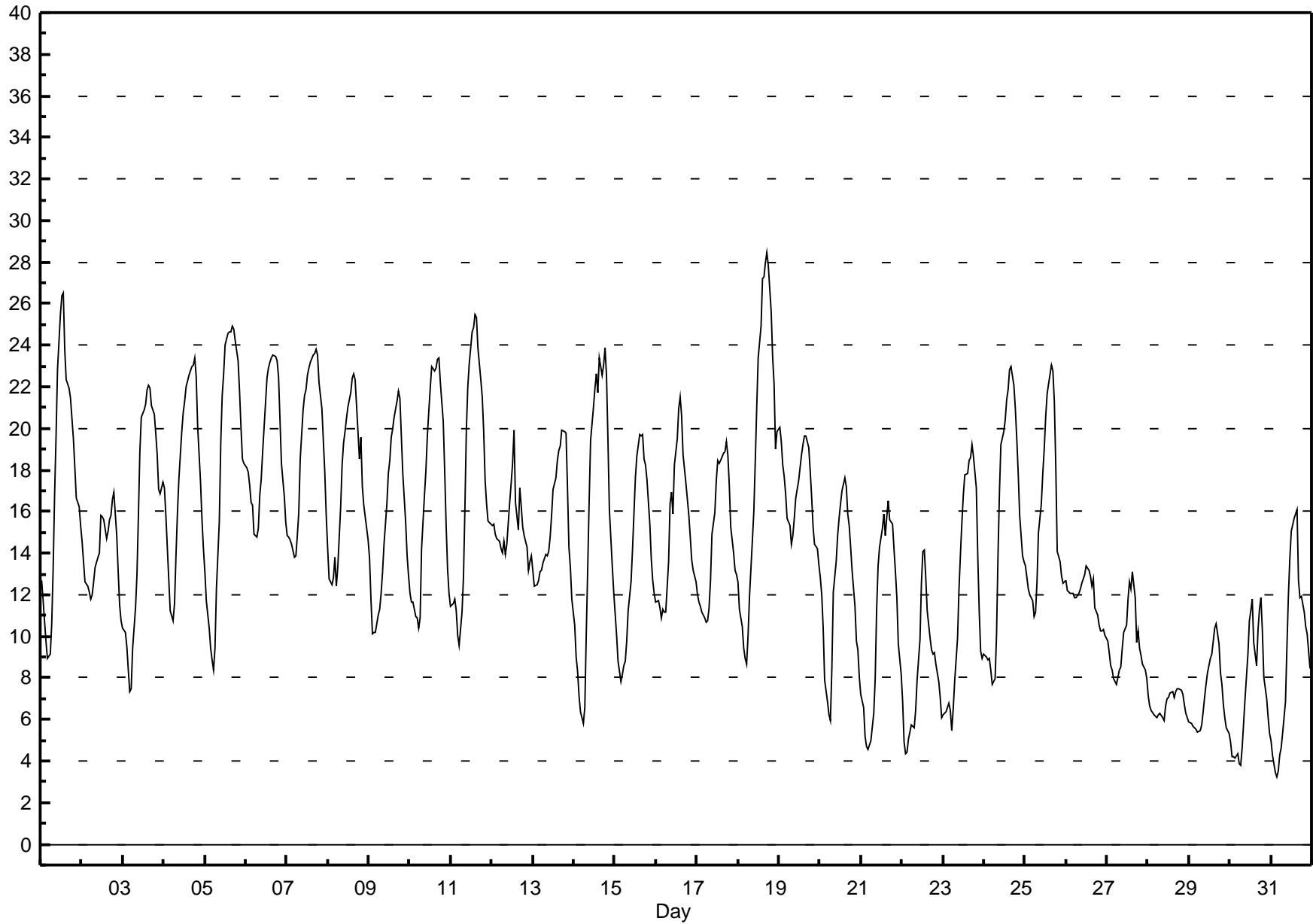


# Hourly Averages

External Temperature (ET) - °C

Valleyview - August 2010

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.5 °C on Aug 18 18:00 Maximum Daily Average: 19.2 °C on Aug 6																	Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0									
Minimum Value: 3 °C on Aug 31 04:00 Minimum Daily Average: 6.7 °C on Aug 28 Maximum Diurnal Average: 18.9 °C at hour 16 Minimum Diurnal Average: 9.3 °C at hour 6 Monthly Average: 14.28 °C Percentiles: P <sub>1</sub> = 4.2 P <sub>10</sub> = 6.8 Q <sub>1</sub> = 10.2 Median = 13.9 Q <sub>3</sub> = 18.4 P <sub>90</sub> = 22.1 P <sub>99</sub> = 26.3																										
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-Aug	13	12	11	10	9	9	11	13	17	20	23	25	26	27	24	22	22	21	20	19	18	17	16	15	17.5	26.5
2-Aug	15	14	13	12	12	12	12	13	13	14	14	16	16	16	15	15	16	16	17	17	15	13	11	11	14.0	16.9
3-Aug	10	10	10	8	7	8	9	11	13	16	19	21	21	21	22	22	22	21	21	20	19	17	17	17	15.9	22.1
4-Aug	17	16	14	13	11	11	12	14	16	18	20	21	21	22	22	23	23	23	23	23	20	17	16	14	17.9	23.4
5-Aug	13	12	10	9	9	8	9	12	16	19	22	23	24	25	25	25	25	24	23	22	20	19	18	18.2	24.9	
6-Aug	18	18	17	16	16	15	15	15	17	18	19	21	22	23	23	23	24	23	23	23	20	18	17	16	19.2	23.5
7-Aug	15	15	15	14	14	14	15	16	19	21	22	22	23	23	23	24	24	24	24	22	21	19	18	16	19.1	23.8
8-Aug	14	13	13	13	14	12	13	16	18	19	20	20	21	22	22	23	22	21	19	20	17	16	16	15	17.5	22.6
9-Aug	14	12	10	10	10	11	11	12	13	14	16	18	18	20	20	21	21	22	21	20	18	15	14	13	15.6	21.8
10-Aug	12	12	12	11	11	10	11	14	17	18	20	21	22	23	23	23	23	23	22	20	18	15	13	12	16.9	23.4
11-Aug	11	12	12	11	10	10	11	13	16	20	22	23	25	25	25	25	24	22	22	20	18	16	16	15	17.7	25.4
12-Aug	15	15	15	15	15	14	14	15	14	14	16	17	18	20	16	15	17	16	15	15	14	13	14	14	15.3	19.9
13-Aug	13	12	12	13	13	13	13	14	14	14	15	16	17	18	18	19	19	20	20	20	17	14	13	12	15.4	19.9
14-Aug	11	9	8	7	6	6	7	10	13	17	19	21	22	23	22	23	23	23	24	23	19	16	13	12	15.7	23.9
15-Aug	11	10	9	8	8	9	9	10	11	13	14	16	18	19	20	20	20	19	18	18	15	14	13	12	13.8	19.7
16-Aug	12	12	11	11	11	11	11	14	16	17	16	18	19	21	22	21	19	17	17	16	15	14	13	13	15.2	21.5
17-Aug	12	12	11	11	11	11	11	11	13	15	16	17	18	18	18	19	19	19	19	17	15	14	13	13	14.8	19.4
18-Aug	13	11	10	9	9	9	10	12	15	16	18	21	23	25	27	27	28	28	28	26	23	22	19	20	18.8	28.5
19-Aug	20	19	18	18	17	16	15	14	15	16	17	17	18	19	19	20	20	19	18	17	15	14	14	13	17.0	20.1
20-Aug	13	12	10	8	7	6	6	8	12	14	15	16	16	17	18	17	16	15	14	13	11	10	9	8	12.2	17.7
21-Aug	7	7	5	5	5	5	5	6	8	11	13	14	15	16	15	16	17	16	15	14	13	12	10	8	10.7	16.5
22-Aug	7	5	4	4	5	6	6	6	6	8	10	13	14	14	13	11	10	9	9	9	9	8	7	6	8.3	14.2
23-Aug	6	6	6	7	6	5	6	8	10	12	14	15	17	18	18	18	19	19	19	17	14	11	9	9	12.1	19.2
24-Aug	9	9	9	9	8	8	8	10	14	17	19	20	20	21	22	23	23	22	21	19	18	16	14	14	15.5	23.0
25-Aug	13	13	12	12	12	11	11	13	15	16	18	19	21	22	22	23	23	21	18	14	14	13	13	13	15.8	23.0
26-Aug	13	12	12	12	12	12	12	12	12	13	13	13	13	13	13	12	13	11	11	11	10	10	10	10	11.9	13.4
27-Aug	10	9	9	8	8	8	8	8	9	9	10	11	12	13	12	13	12	10	10	9	9	9	8	8	9.7	13.1
28-Aug	7	7	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	6	6	6.7	7.5
29-Aug	6	6	6	6	6	5	5	6	6	7	8	8	9	9	10	10	10	11	10	8	8	7	6	5	7.2	10.6
30-Aug	5	4	4	4	4	4	4	5	6	7	9	11	11	12	10	9	10	11	12	10	8	7	6	5	7.4	11.9
31-Aug	5	4	3	3	4	4	5	5	7	10	12	14	15	16	16	16	13	12	12	11	10	10	9	8	9.4	16.1
																								Diurnal Average		
																								Diurnal Maximum		





# Hourly Averages

Relative Humidity (RH) - %

Valleyview - August 2010

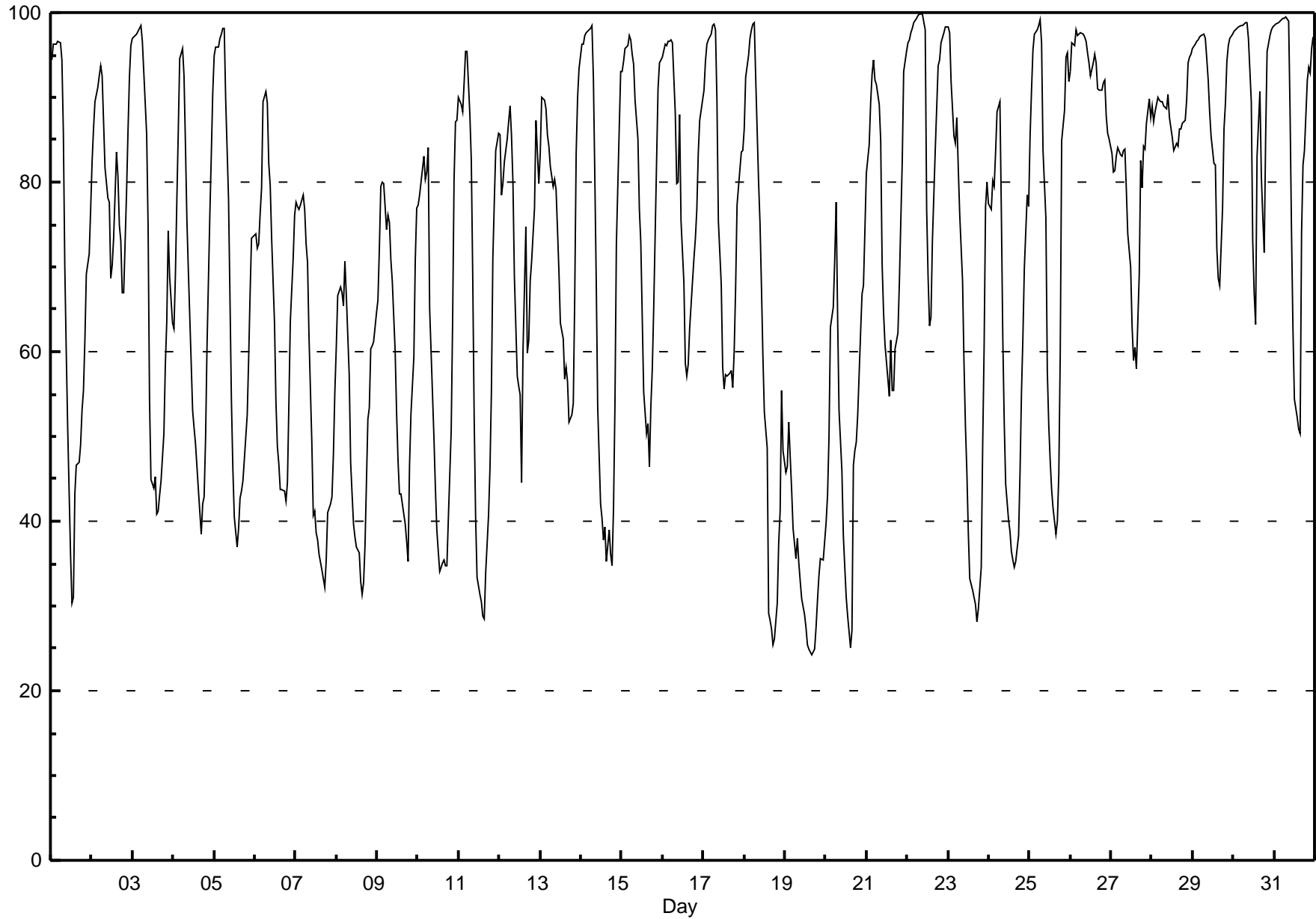
Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 99.8 % on Aug 22 10:00      Maximum Daily Average: 93.6 % on Aug 26		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																								
Minimum Value: 24 % on Aug 19 17:00 Maximum Diurnal Average: 89.4 % at hour 6 Monthly Average: 70.78 %		Minimum Daily Average: 34.5 % on Aug 19 Minimum Diurnal Average: 50.0 % at hour 14 Percentiles: P <sub>1</sub> = 26.1 P <sub>10</sub> = 37.9 Q <sub>1</sub> = 52.6 Median = 75.8 Q <sub>3</sub> = 89.9 P <sub>90</sub> = 97.0 P <sub>99</sub> = 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-Aug	94	96	96	96	97	96	94	86	70	60	51	36	30	31	43	47	47	49	53	55	61	69	72	77	67.0	96.6
2-Aug	82	86	89	91	93	94	93	87	82	78	78	69	70	73	84	81	75	73	67	67	79	86	92	96	81.8	96.1
3-Aug	97	97	98	98	98	98	97	89	86	75	54	45	44	45	41	41	43	45	50	58	63	74	69	63	69.6	98.5
4-Aug	63	69	78	86	95	96	93	84	76	70	59	53	51	49	47	44	38	42	43	50	61	76	83	90	66.4	95.8
5-Aug	95	96	96	97	97	98	98	90	78	66	54	46	40	37	39	43	44	45	47	53	59	67	73	74	68.0	98.2
6-Aug	74	72	73	76	79	89	91	89	82	80	73	63	54	49	47	44	44	44	42	45	54	64	71	76	65.6	90.6
7-Aug	78	77	77	77	78	77	73	70	62	49	41	41	39	38	36	34	33	32	35	41	42	43	48	55	53.2	78.5
8-Aug	60	67	68	67	65	71	67	57	47	43	40	38	37	36	33	31	33	37	52	53	60	61	61	65	52.0	70.7
9-Aug	66	72	80	80	80	74	76	75	71	68	60	53	47	43	43	42	40	38	35	47	53	59	71	77	60.4	80.0
10-Aug	77	78	80	83	80	81	84	65	55	50	44	39	36	34	35	35	35	35	40	51	64	80	87	87	59.9	87.3
11-Aug	90	89	88	92	95	96	88	82	69	52	40	33	31	31	29	28	34	41	46	55	71	78	84	86	63.7	95.5
12-Aug	86	78	80	82	85	87	89	85	80	69	57	56	55	45	60	75	60	61	68	71	77	87	84	80	73.2	89.0
13-Aug	83	90	90	89	86	84	82	79	80	79	74	69	63	62	57	58	57	52	52	54	66	83	90	93	73.9	93.4
14-Aug	96	96	97	98	98	98	98	92	80	68	53	42	40	38	39	35	39	36	35	42	54	73	86	93	67.8	98.5
15-Aug	93	94	96	96	97	97	95	94	90	85	77	73	64	55	50	52	46	53	58	65	83	91	94	94	78.9	97.2
16-Aug	95	96	96	97	97	97	96	88	80	80	88	75	68	59	57	58	63	68	71	73	77	83	87	90	80.8	96.8
17-Aug	91	94	96	97	97	98	99	98	90	75	68	58	56	57	57	57	58	56	60	68	77	82	83	84	77.3	98.7
18-Aug	86	92	95	97	98	99	99	92	80	75	68	60	53	49	29	28	27	25	26	30	37	41	55	48	62.1	98.8
19-Aug	46	46	52	48	44	39	36	38	35	33	31	29	27	25	25	25	24	25	27	31	34	36	35	38	34.5	51.7
20-Aug	40	43	50	63	65	71	78	64	53	46	38	35	31	29	25	27	47	48	49	53	62	67	68	74	51.0	77.6
21-Aug	81	84	89	93	94	92	92	89	85	70	65	61	57	55	61	55	55	60	62	68	75	82	93	95	75.7	95.5
22-Aug	96	97	98	98	99	99	100	100	100	100	98	77	69	63	64	73	84	89	94	94	97	98	98	98	90.9	99.8
23-Aug	98	98	92	86	85	88	82	76	68	59	51	46	39	33	32	31	30	28	30	35	49	60	77	80	60.5	98.3
24-Aug	77	77	80	80	84	88	89	76	62	52	44	40	39	36	35	35	35	38	46	55	62	70	79	77	60.7	89.4
25-Aug	85	91	96	97	98	99	99	97	84	76	58	51	47	44	41	38	40	46	60	85	89	95	95	92	75.1	99.1
26-Aug	93	96	96	98	97	97	98	98	97	97	95	94	93	94	95	94	91	91	91	92	92	88	86	85	93.6	97.9
27-Aug	83	81	81	83	84	83	83	84	84	79	74	70	63	59	61	58	69	83	79	84	84	87	90	88	78.1	89.8
28-Aug	89	87	88	90	90	89	89	89	89	90	88	86	85	84	85	84	86	86	87	87	90	94	95	95	88.5	95.1
29-Aug	96	96	97	97	97	97	97	97	97	95	92	88	85	82	82	72	69	68	77	86	89	94	96	97	89.4	97.5
30-Aug	98	98	98	98	98	98	99	99	99	99	97	89	73	67	63	83	91	81	76	72	85	95	97	98	89.6	98.8
31-Aug	99	99	99	99	99	99	99	99	99	88	74	63	54	52	51	50	74	82	84	92	94	93	96	97	84.8	99.4
		83.5	85.0	86.7	88.0	88.7	89.4	88.7	84.2	77.6	71.0	63.7	56.8	52.7	50.0	50.2	50.5	51.6	53.6	56.4	62.2	69.5	76.1	80.6	82.1	Diurnal Average
		98.6	98.7	98.8	98.9	99.1	99.3	99.7	99.8	99.8	99.8	98.0	94.0	92.6	94.1	95.1	94.1	91.0	90.8	93.8	94.4	96.5	97.6	98.3	98.4	Diurnal Maximum



# Hourly Averages

Relative Humidity (RH) - %

Valleyview - August 2010



# Hourly Averages

**Wind Speed (km/h)**  
**Wind Direction (deg)**  
**Valleyview - August 2010**

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	1	1	1	1	1	1	2	4	4	4	4	6	13	15	25	18	9	10	12	12	10	6	6	5	4.9	25.3
Dir	187	189	200	216	209	215	196	190	190	187	183	288	303	326	1	1	13	1	330	332	337	325	308	301	332	1
2 Spd	4	3	3	5	5	5	6	8	12	12	12	12	15	12	10	12	14	11	8	3	1	2	1	1	6.4	15.3
Dir	296	282	267	285	294	305	313	313	332	325	320	335	307	345	346	349	345	355	20	69	153	250	212	166	328	307
3 Spd	2	2	1	1	1	1	3	2	3	1	8	9	10	10	5	8	4	8	1	1	2	2	2	3	2.0	9.8
Dir	209	187	199	192	208	192	172	180	169	154	315	305	335	318	318	307	2	11	44	263	235	204	221	307	309	335
4 Spd	4	3	1	0	2	2	2	2	2	2	2	3	5	4	7	7	8	4	1	2	2	2	2	1	1.0	7.6
Dir	314	322	299	265	181	198	189	181	172	157	12	5	16	7	19	22	19	21	95	184	189	190	188	196	12	19
5 Spd	2	0	1	0	1	0	1	1	3	2	6	9	7	9	8	7	7	7	7	4	2	4	4	7	4.0	9.2
Dir	177	219	233	238	200	299	213	190	184	156	138	150	145	149	180	157	148	147	146	148	141	185	176	168	158	149
6 Spd	3	2	3	3	2	3	3	4	3	3	3	4	3	5	6	10	11	10	7	8	2	3	3	3	3.4	10.7
Dir	165	212	203	177	189	170	197	187	190	189	189	193	206	209	225	264	269	299	289	264	200	190	196	191	228	269
7 Spd	3	3	4	3	3	4	4	3	4	11	16	13	12	8	8	10	7	9	3	2	6	7	3	3	4.9	15.8
Dir	191	188	183	174	181	181	184	188	193	272	286	280	279	275	293	279	283	270	227	213	279	268	258	206	259	286
8 Spd	3	3	3	3	3	3	4	2	10	13	13	13	14	11	11	9	9	14	6	2	1	5	3	3	5.8	14.1
Dir	203	201	203	218	210	198	196	217	275	296	280	286	284	278	266	267	284	282	310	229	207	260	239	195	268	282
9 Spd	2	2	3	2	3	3	1	2	2	1	2	4	6	4	3	4	4	1	2	1	1	1	1	2	2.0	5.5
Dir	200	190	182	177	193	189	145	184	190	231	169	183	167	184	228	203	190	285	331	187	273	254	183	191	193	167
10 Spd	2	2	2	2	1	1	1	2	3	3	2	3	5	2	4	2	2	1	2	1	0	1	2	1	1.5	4.9
Dir	197	205	170	190	296	211	155	160	230	258	266	171	177	191	272	224	222	355	154	125	67	182	192	208	203	177
11 Spd	1	1	2	1	1	2	1	2	3	3	3	4	5	5	7	5	8	2	4	11	2	3	3	3	1.7	11.4
Dir	193	233	179	202	193	190	199	180	185	180	267	277	269	321	305	306	346	111	270	320	250	179	187	184	270	320
12 Spd	1	3	3	2	3	2	2	5	11	12	16	18	17	18	15	7	17	20	17	12	16	13	13	13	9.8	19.9
Dir	216	269	300	272	280	299	213	306	314	315	307	319	308	325	15	24	347	341	346	329	333	338	336	336	329	341
13 Spd	14	12	12	13	15	14	13	15	15	14	14	14	12	9	10	7	6	7	4	1	1	1	0	0	8.9	15.4
Dir	339	337	339	340	338	336	338	343	343	346	357	358	348	349	338	10	25	24	28	5	229	143	165	164	347	338
14 Spd	1	1	1	1	1	2	2	2	3	2	3	3	4	2	2	0	1	3	2	2	1	1	2	1	1.5	3.8
Dir	232	186	187	206	196	194	184	179	157	145	146	138	175	142	62	249	114	129	157	170	147	213	180	142	160	175
15 Spd	1	0	1	2	1	1	0	1	0	1	1	2	3	3	4	5	4	5	3	1	0	0	1	1	1.2	4.7
Dir	358	225	327	199	86	332	320	60	137	171	27	76	127	103	107	96	107	130	134	128	161	159	233	98	112	96
16 Spd	1	1	2	1	3	0	2	2	2	4	4	2	0	5	9	11	9	11	8	5	3	5	5	6	2.5	11.1
Dir	222	134	340	337	172	134	208	181	184	198	194	213	3	355	29	34	54	37	47	53	35	29	28	34	41	37
17 Spd	4	3	2	5	3	3	1	3	2	3	2	4	5	4	6	5	7	6	8	6	3	4	6	7	2.4	7.7
Dir	12	360	70	38	19	19	345	73	114	151	71	154	189	177	158	163	158	165	187	186	163	177	183	181	156	187
18 Spd	3	2	1	1	1	2	3	5	7	7	8	6	5	6	11	8	10	11	9	5	3	11	3	4	3.5	11.5
Dir	175	150	226	327	308	26	183	188	189	190	186	189	184	180	289	272	283	279	300	303	291	262	207	245	243	262
19 Spd	4	6	2	9	9	7	15	15	18	20	20	19	18	18	18	18	18	19	17	15	11	12	12	12	13.5	20.2
Dir	237	272	205	289	290	292	297	293	291	284	289	286	290	284	283	289	292	296	301	290	277	273	275	277	287	284
20 Spd	10	4	3	2	3	1	2	2	8	9	11	12	11	11	12	11	13	11	8	2	0	3	2	2	4.5	13.2
Dir	281	291	272	201	219	171	150	147	312	294	297	314	302	310	293	325	25	28	31	55	330	2	348	355	320	25
21 Spd	2	1	1	1	1	0	1	1	3	3	4	3	2	3	7	5	5	6	6	4	3	1	1	0	2.2	6.6
Dir	348	254	18	181	225	273	324	174	179	184	183	197	193	185	150	158	157	161	178	174	170	198	197	210	174	150
22 Spd	1	1	1	1	2	3	4	4	3	3	1	2	4	9	11	14	11	4	2	2	2	2	2	2	2.5	14.3
Dir	203	351	213	240	202	171	170	193	182	187	173	336	298	274	277	283	299	293	212	188	195	219	194	201	255	283

# Hourly Averages

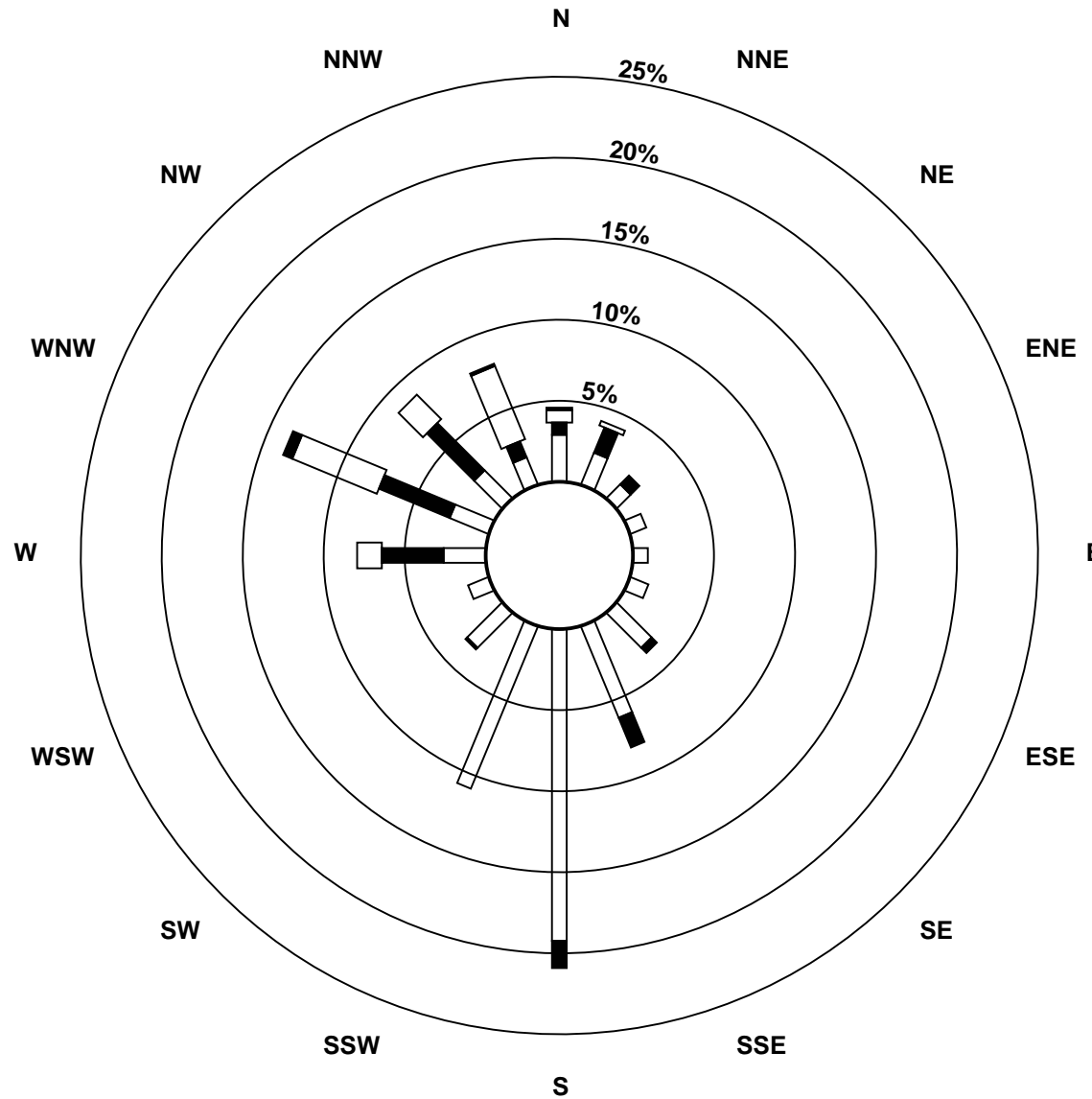
**Wind Speed (km/h)**  
**Wind Direction (deg)**  
**Valleyview - August 2010**

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	2	2	5	5	3	4	10	10	9	9	10	9	11	12	10	11	10	12	10	4	2	1	3	3	6.1	12.2
Dir	179	189	265	288	305	275	284	295	292	306	318	297	295	316	309	318	310	286	298	302	206	229	164	186	295	286
24 Spd	2	2	2	1	1	1	2	3	3	4	4	10	11	9	7	2	1	2	2	1	2	1	1	7	1.8	10.6
Dir	195	197	187	185	354	179	186	184	185	186	207	292	294	292	308	277	173	138	186	204	52	11	352	305	263	294
25 Spd	4	3	2	3	1	1	2	3	4	3	4	3	1	2	2	1	2	3	12	3	0	1	4	5	0.1	12.1
Dir	26	264	158	187	139	190	191	191	191	195	311	322	227	212	149	26	67	50	7	105	345	160	168	328	283	7
26 Spd	2	2	4	3	1	5	3	3	5	4	5	4	3	5	4	8	8	11	4	10	4	6	10	7	3.2	11.1
Dir	8	148	307	319	329	143	149	169	323	7	28	14	351	341	350	321	320	306	320	276	246	266	285	285	309	306
27 Spd	12	12	14	13	8	8	9	12	13	15	18	18	23	21	19	18	18	14	13	17	18	16	17	16	14.7	23.4
Dir	287	288	285	278	277	270	279	287	284	283	282	282	283	286	287	283	312	300	278	279	281	282	287	325	287	283
28 Spd	13	12	9	11	14	14	14	15	13	11	13	16	15	14	12	11	7	8	9	4	1	2	2	2	9.1	16.3
Dir	342	336	315	296	300	301	299	305	336	347	331	346	343	331	332	336	309	299	294	300	265	184	217	199	320	346
29 Spd	2	2	2	1	1	1	1	2	1	1	2	1	2	3	7	5	4	4	3	2	2	0	0	1	1.5	7.0
Dir	206	178	169	181	193	188	202	185	153	155	148	133	158	134	136	137	123	98	82	26	5	61	353	197	141	136
30 Spd	0	1	1	1	1	1	2	1	3	2	2	3	4	4	5	4	3	3	1	1	1	0	0	1	1.3	5.0
Dir	164	223	195	210	182	184	175	181	183	194	147	153	147	168	268	155	160	169	154	128	21	119	26	331	174	268
31 Spd	1	1	1	2	1	1	1	1	3	2	2	3	2	2	1	1	2	4	0	2	2	3	1	2	0.5	3.5
Dir	201	7	8	4	298	306	30	119	175	193	172	188	180	90	52	133	231	360	37	145	87	141	180	183	151	360
Spd	1.5	1.5	1.5	1.7	1.7	1.4	1.8	2.0	2.7	3.2	4.0	4.3	4.9	4.6	4.6	4.2	3.8	3.8	2.8	2.3	1.7	2.1	1.9	1.7	Diurnal Average	
Dir	286	278	273	278	280	272	263	264	277	281	293	298	292	301	312	311	325	323	321	290	285	268	260	275		
Spd	13.6	12.1	13.5	13.1	15.4	13.9	14.5	14.9	17.7	20.2	19.5	18.7	23.4	20.5	25.3	18.4	18.1	19.9	17.1	16.6	17.6	16.1	17.3	16.3	Diurnal Maximum	
Dir	339	337	285	340	338	336	297	293	291	284	289	286	283	286	1	1	292	341	346	279	281	282	287	325		
Maximum Speed Value: 25 ppb on Aug 1 15:00																		Minimum Speed Value: 0 ppb on Aug 29 22:00						Hours in Service: 744		
Maximum Daily Speed Average: 14.7 ppb on Aug 27																		Minimum Daily Speed Average: 0.1 ppb on Aug 31						Hours of Data: 744		
Maximum Diurnal Speed Average: 4.9 ppb at hour 13																		Minimum Diurnal Speed Average: 1.4 ppb at hour 6						Hours of Missing Data: 0		
Monthly Average Velocity: 2.59 ppb 293.5 deg																		Speed Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 1.7 Median = 3.2 Q <sub>3</sub> = 8.3 P <sub>90</sub> = 12.8 P <sub>99</sub> = 18.3						Percent Operational Time: 100.0		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (ppb)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	40	14	23	2	0	0	79																			
NorthEast	23	11	3	0	0	0	37																			
East	18	0	0	0	0	0	18																			
SouthEast	59	11	0	0	0	0	70																			
South	201	20	0	0	0	0	221																			
SouthWest	73	2	0	0	0	0	75																			
West	33	40	39	4	0	0	116																			
NorthWest	36	45	47	0	0	0	128																			
Total	483	143	112	6	0	0	744																			

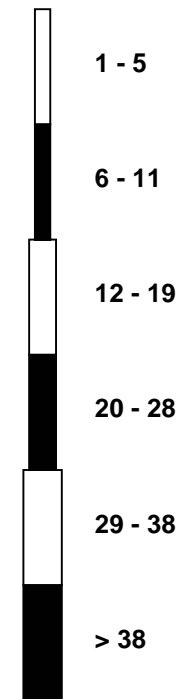
# Wind Rose

Wind Speed (WS) (km/h)

Valleyview - August 2010



## Wind Speed Classes (km/h)





# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - August 2010

Maximum Speed: 26 km/h on Aug 1 15:00		Maximum Daily Speed Average: 15.3 km/h on Aug 27																				Hours in Service: 744					
Minimum Speed: 1 km/h on Aug 29 22:00		Minimum Daily Speed Average: 2.2 km/h on Aug 30																				Hours of Data: 744					
Maximum Diurnal Speed Average: 9.3 km/h at hour 15		Minimum Diurnal Speed Average: 3.3 km/h at hour 3																				Hours of Missing Data: 0					
Monthly Average Speed: 5.76 km/h		Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 2.1 Median = 3.7 Q <sub>3</sub> = 8.7 P <sub>90</sub> = 13.1 P <sub>99</sub> = 19.7																				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-Aug	1	1	1	1	1	1	2	4	4	5	4	8	13	16	26	19	9	10	12	12	10	6	6	5	7.4	25.7	
2-Aug	4	3	3	5	6	5	6	9	12	13	13	12	16	13	11	12	14	11	9	3	2	2	2	2	7.8	15.6	
3-Aug	2	2	1	1	1	1	3	2	3	4	9	10	11	10	6	9	4	8	2	1	2	2	2	3	4.0	10.8	
4-Aug	4	3	1	1	2	2	2	2	2	2	3	4	6	6	7	8	8	5	2	2	2	2	2	1	3.3	8.1	
5-Aug	2	1	1	1	1	1	1	2	3	3	6	10	8	10	9	8	8	8	7	4	3	4	4	7	4.5	9.6	
6-Aug	4	4	5	4	4	4	3	4	3	3	3	4	4	6	7	11	11	11	8	8	3	3	3	3	5.1	11.1	
7-Aug	3	3	4	3	3	4	4	4	4	12	16	13	13	9	9	11	8	9	3	3	7	7	3	3	6.6	16.4	
8-Aug	3	3	3	3	4	3	4	3	10	13	14	14	14	12	10	10	14	7	2	2	5	3	3	3	7.1	14.4	
9-Aug	2	2	3	2	3	3	2	2	2	2	2	4	6	5	4	5	5	3	3	1	1	1	2	2	2.9	5.9	
10-Aug	2	2	2	2	2	2	1	2	4	4	4	5	6	4	5	4	4	3	2	1	1	2	2	1	2.9	5.7	
11-Aug	2	2	2	1	2	2	1	2	4	3	5	6	6	6	8	6	10	2	5	12	3	3	3	3	4.2	11.7	
12-Aug	2	3	3	3	4	2	2	6	11	13	16	18	18	19	15	8	18	20	17	13	17	13	13	13	11.1	20.0	
13-Aug	14	12	13	13	15	14	14	15	15	14	14	14	13	9	10	8	7	7	4	2	1	1	1	1	9.7	15.5	
14-Aug	1	2	1	1	1	2	2	2	3	3	3	3	5	4	3	2	2	3	2	2	2	1	2	2	2.3	4.5	
15-Aug	2	1	2	2	2	2	2	1	1	2	2	2	4	4	4	5	5	5	3	2	1	1	1	1	2.4	5.4	
16-Aug	2	2	3	3	3	2	2	2	3	4	4	3	3	7	9	11	10	11	9	6	3	6	5	6	4.9	11.3	
17-Aug	5	3	3	5	3	3	2	3	2	3	4	5	5	5	7	5	7	7	8	6	3	4	6	7	4.7	7.8	
18-Aug	3	2	1	2	2	4	3	5	7	7	8	6	6	7	11	9	10	11	9	5	3	12	3	5	5.9	11.9	
19-Aug	4	6	2	9	9	8	15	15	18	20	20	19	18	18	19	19	19	19	17	16	11	12	12	12	14.1	20.5	
20-Aug	10	4	3	2	3	2	2	3	9	10	12	13	12	12	13	12	13	11	9	2	1	3	2	3	6.9	13.5	
21-Aug	2	1	1	1	2	1	1	1	3	3	4	3	3	3	7	5	5	6	6	4	3	1	1	1	3.0	6.8	
22-Aug	1	1	1	1	2	3	4	4	3	3	2	3	4	9	12	15	11	5	2	2	2	2	3	3	4.1	14.5	
23-Aug	2	2	5	5	3	4	10	10	9	10	10	10	12	13	11	12	11	13	10	4	2	2	3	3	7.3	12.9	
24-Aug	2	2	2	2	2	1	2	3	3	4	5	11	11	10	8	4	2	2	2	2	3	3	2	7	3.9	11.2	
25-Aug	5	4	3	3	1	1	2	4	4	3	5	4	4	4	4	4	3	3	13	5	3	3	5	8	4.1	13.1	
26-Aug	3	3	6	5	4	5	3	3	6	4	5	4	4	5	5	9	8	11	5	10	4	6	10	7	5.8	11.3	
27-Aug	12	12	14	13	8	8	9	12	13	15	18	18	24	21	19	18	20	14	13	17	18	16	18	17	15.3	23.8	
28-Aug	13	12	9	11	14	14	14	15	13	11	14	16	15	14	13	12	8	8	9	5	2	2	2	2	10.3	16.5	
29-Aug	2	2	2	1	1	2	1	2	1	1	2	2	2	3	7	5	5	4	3	2	2	1	1	1	2.3	7.2	
30-Aug	1	1	1	1	1	1	2	2	3	2	2	4	4	4	6	5	4	3	2	1	1	1	1	2	2.2	5.7	
31-Aug	1	2	2	3	2	2	2	2	3	3	3	3	3	4	2	2	4	4	2	2	3	3	1	3	2.4	3.8	
		3.7	3.4	3.3	3.6	3.6	3.5	4.0	4.7	5.9	6.4	7.5	8.2	8.7	8.8	9.3	8.7	8.5	8.2	6.6	5.1	3.9	4.2	4.0	4.5	Diurnal Average	
		13.7	12.1	13.6	13.1	15.5	14.0	14.8	15.2	18.1	20.5	19.9	19.1	23.8	21.0	25.7	18.9	20.0	20.0	17.3	16.7	17.7	16.2	17.5	17.2	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

# Hourly Standard Deviations

Wind Direction (WD) - deg

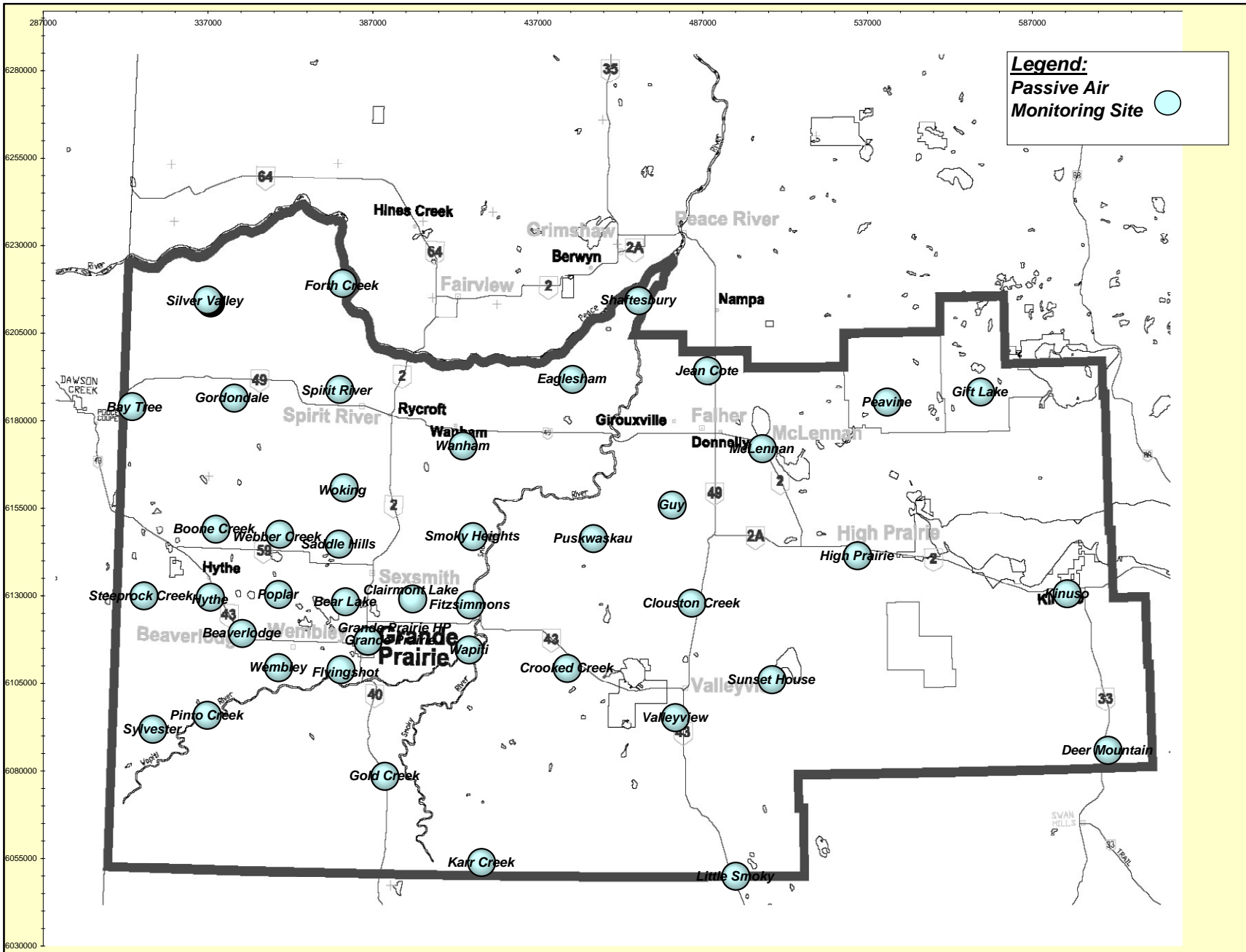
Valleyview - August 2010

Maximum Value: 99.1 deg on Aug 14 00:00		Hours in Service: 744																							
Minimum Value: 4.0 deg on Aug 7 01:00		Hours of Data: 744																							
Percentiles: P <sub>1</sub> = 6.0 P <sub>10</sub> = 9.9 Q <sub>1</sub> = 14.0 Median = 23.9 Q <sub>3</sub> = 47.6 P <sub>90</sub> = 70.2 P <sub>99</sub> = 95.1		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-Aug	83	37	47	60	38	40	14	9	11	17	20	54	18	20	11	12	17	16	11	12	8	12	12	11	83.0
2-Aug	14	21	23	16	12	15	18	15	15	15	12	16	12	22	18	11	10	9	19	32	50	23	67	37	67.0
3-Aug	15	12	44	33	18	64	13	54	23	79	26	24	25	15	43	19	54	15	75	59	21	17	30	36	78.6
4-Aug	11	10	57	76	14	11	15	19	25	24	71	64	52	65	32	24	27	32	60	15	6	11	25	17	76.4
5-Aug	16	81	70	72	16	65	39	27	27	37	21	17	20	18	16	20	16	16	12	12	15	12	14	9	81.5
6-Aug	66	54	51	37	79	35	20	19	14	13	13	15	24	22	29	29	15	26	25	15	19	6	7	6	78.6
7-Aug	4	7	8	13	14	9	8	11	11	41	16	14	28	28	24	25	20	17	32	26	18	9	30	25	41.1
8-Aug	13	14	11	21	27	10	14	40	19	16	14	19	15	27	30	25	36	12	66	27	14	16	36	9	66.1
9-Aug	10	19	15	23	12	18	72	25	21	62	65	22	23	57	53	42	35	79	56	70	83	58	53	24	83.4
10-Aug	18	31	24	45	89	43	24	49	53	47	78	63	39	71	63	59	57	87	12	40	93	61	15	20	92.6
11-Aug	13	64	32	34	53	25	35	23	19	22	57	52	54	48	39	27	47	43	50	12	51	14	26	28	63.9
12-Aug	55	26	33	38	34	28	27	57	11	11	12	14	18	13	16	22	22	7	9	10	9	7	6	8	57.4
13-Aug	6	7	6	6	6	7	7	7	8	8	9	12	13	18	12	40	13	23	20	56	31	52	80	99	99.1
14-Aug	27	29	19	36	40	15	22	22	20	43	49	50	40	72	57	94	58	28	62	14	62	61	25	51	93.6
15-Aug	78	78	49	26	68	78	86	79	87	57	80	58	38	36	35	34	32	18	27	32	91	63	68	87	91.3
16-Aug	54	66	82	76	29	95	28	33	50	22	12	57	95	49	18	19	21	11	16	26	19	10	12	14	95.5
17-Aug	14	33	49	16	15	18	60	32	53	36	70	54	22	23	23	22	18	26	8	10	11	11	8	8	70.4
18-Aug	31	14	53	67	51	71	33	10	9	10	13	17	26	35	26	20	15	17	10	43	17	23	28	28	71.0
19-Aug	24	23	27	16	12	15	12	12	11	9	11	13	15	16	14	15	13	11	9	8	9	7	7	8	26.9
20-Aug	11	29	43	27	11	48	20	70	29	19	19	25	22	20	26	23	12	15	13	38	91	56	20	46	91.2
21-Aug	46	66	74	55	67	93	73	54	16	20	19	26	47	33	14	22	31	18	13	9	15	40	60	84	92.5
22-Aug	59	83	59	50	20	18	19	12	19	25	63	54	34	12	12	9	12	54	30	13	17	36	25	28	82.9
23-Aug	16	33	18	14	19	20	11	11	12	21	20	22	23	26	20	20	13	15	15	12	26	67	9	8	66.7
24-Aug	5	8	15	54	85	68	11	11	19	20	37	33	21	38	36	78	60	29	29	47	72	84	74	53	85.2
25-Aug	44	59	66	13	59	43	29	14	14	32	46	71	88	72	78	97	50	25	33	72	95	89	33	79	97.1
26-Aug	85	54	69	80	89	23	39	26	37	38	14	41	49	29	72	19	12	12	39	10	35	10	11	13	89.2
27-Aug	8	10	8	7	11	10	13	10	10	10	9	8	10	12	10	10	28	14	8	7	6	8	9	19	27.8
28-Aug	8	8	14	9	9	8	8	12	12	10	13	9	9	11	11	14	15	12	10	26	80	35	21	15	79.8
29-Aug	26	11	15	29	23	17	32	19	58	58	28	47	61	40	14	20	30	29	32	22	20	96	86	63	95.7
30-Aug	73	46	34	44	52	47	14	22	16	51	57	32	34	28	41	41	19	30	47	47	85	88	97	75	97.2
31-Aug	44	73	65	25	41	77	64	74	29	46	69	59	66	69	59	76	68	25	82	18	56	16	72	18	81.8
	84.7	82.9	81.8	80.1	89.2	95.3	85.9	78.8	87.4	78.6	80.1	71.1	95.5	71.9	77.5	97.1	68.0	87.2	81.8	71.9	95.5	95.7	97.2	99.1	

# PASZA

## Monthly Passive Data Summary

# Location of PASZA Passive Monitoring Stations





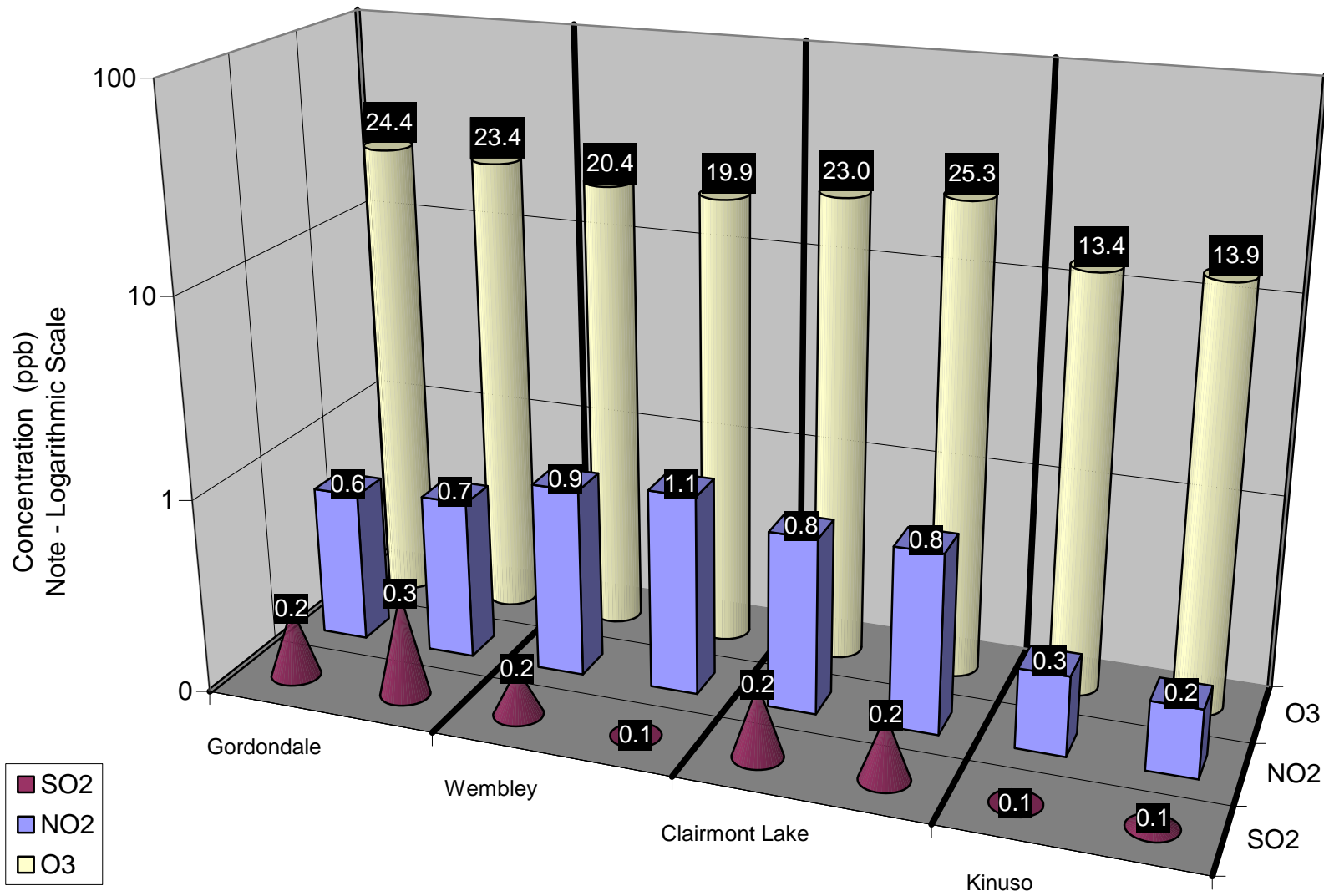
## PASZA Passive Results for August 2010

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
<b>Duplicates</b>					
4a	Gordondale	0.2	24.4	0.6	
4b	Gordondale	0.3	23.4	0.7	
24a	Wembley	0.2	20.4	0.9	
24b	Wembley	0.1	19.9	1.1	
28a	Clairmont Lake	0.2	23.0	0.8	
28b	Clairmont Lake	0.2	25.3	0.8	
47a	Kinuso	0.1	13.4	0.3	
47b	Kinuso	0.1	13.9	0.2	
1	Silver Valley	0.3	20.5	0.8	08-27-081-11 W6M
2	Bay Tree	0.3	20.0	0.4	13-16-078-13 W6M
3	Fourth Creek	0.2	26.8	0.5	04-13-082-07 W6M
4	Gordondale	0.3	23.9	0.6	04-34-078-10 W6M
5	Boone Creek	0.3	21.7	0.6	16-36-074-11 W6M
7	Steeprock Creek	0.2	25.2	0.4	09-35-072-13 W6M
9	Spirit River	0.2	22.0	1.0	08-12-079-07 W6M
10	Woking	0.2	20.3	0.6	01-13-076-07 W6M
11	Webber Creek	0.2	21.7	0.8	09-36-074-09 W6M
12	Hythe	0.2	20.1	0.8	14-36-072-11 W6M
14	Sylvester	0.1	21.3	0.6	08-06-069-12 W6M
16	Beaverlodge	0.2	31.4	0.8	15-36-071-10 W6M
17	Poplar	0.2	21.4	1.2	13-06-073-08 W6M
18	Saddle Hills	0.2	22.5	0.5	04-25-074-07 W6M
19	Wanham	0.2	26.1	0.4	16-22-077-03 W6M
20	Shaftesbury	0.2	25.2	0.6	04-03-082-23 W5M
21	Eaglesham	0.5	17.4	1.1	16-21-079-25 W5M
23	Bear Lake	0.2	22.1	0.9	15-31-072-06 W6M

## PASZA Passive Results for August 2010 (Continued)

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
24	Wembley	0.1	20.1	1.0	12-31-070-08 W6M
25	Pinto Creek	0.1	21.4	0.6	04-24-069-11 W6M
26	Flyingshot	0.2	22.1	0.6	15-36-070-07 W6M
27	Grande Prairie I	0.3	24.9	1.6	08-15-071-06 W6M
28	Clairmont Lake	0.2	24.2	0.8	09-06-073-04 W6M
29	Smoky Heights	0.2	26.3	0.9	04-06-075-02 W6M
30	Fitzsimmons	0.3	17.4	0.9	15-36-072-03 W6M
32	Gold Creek	0.2	16.9	0.7	06-33-067-05 W6M
33	Wapiti	0.2	21.0	0.6	02-25-071-03 W6M
34	Puskaskau	0.1	17.1	0.2	15-35-074-25 W5M
35	Jean Cote	0.2	21.1	1.1	12-35-079-21 W5M
36	Guy	0.1	21.9	0.6	03-04-076-22 W5M
37	Crooked Creek	0.2	22.2	0.7	16-01-071-26 W5M
38	Karr Creek	0.1	16.6	0.3	10-16-065-02 W6M
39	Clouston Creek	0.2	23.0	0.6	12-01-073-22 W5M
40	McLennan	0.3	20.2	1.0	03-29-077-19 W5M
41	Valleyview	0.2	23.4	0.4	09-30-069-22 W5M
42	Sunset House	0.2	28.0	0.4	05-32-070-19 W5M
43	High Prairie	0.2	18.5	0.4	16-13-074-17 W5M
44	Peavine	0.2	18.3	0.2	03-05-079-15 W5M
45	Gift Lake	0.2	13.7	0.4	10-07-079-12 W5M
46	Little Smoky	0.1	16.1	0.7	12-01-065-21 W5M
47	Kinuso	0.1	13.6	0.2	12-10-073-10 W5M
48	Deer Mountain	0.1	15.2	0.4	15-22-068-09 W5M
49	Grande Prairie HP	0.2	25.5	1.8	17-26-071-06 W6M

\*BDL = Below Detection Level



Duplicate Summary Chart

## Passive Summary for August 2010

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

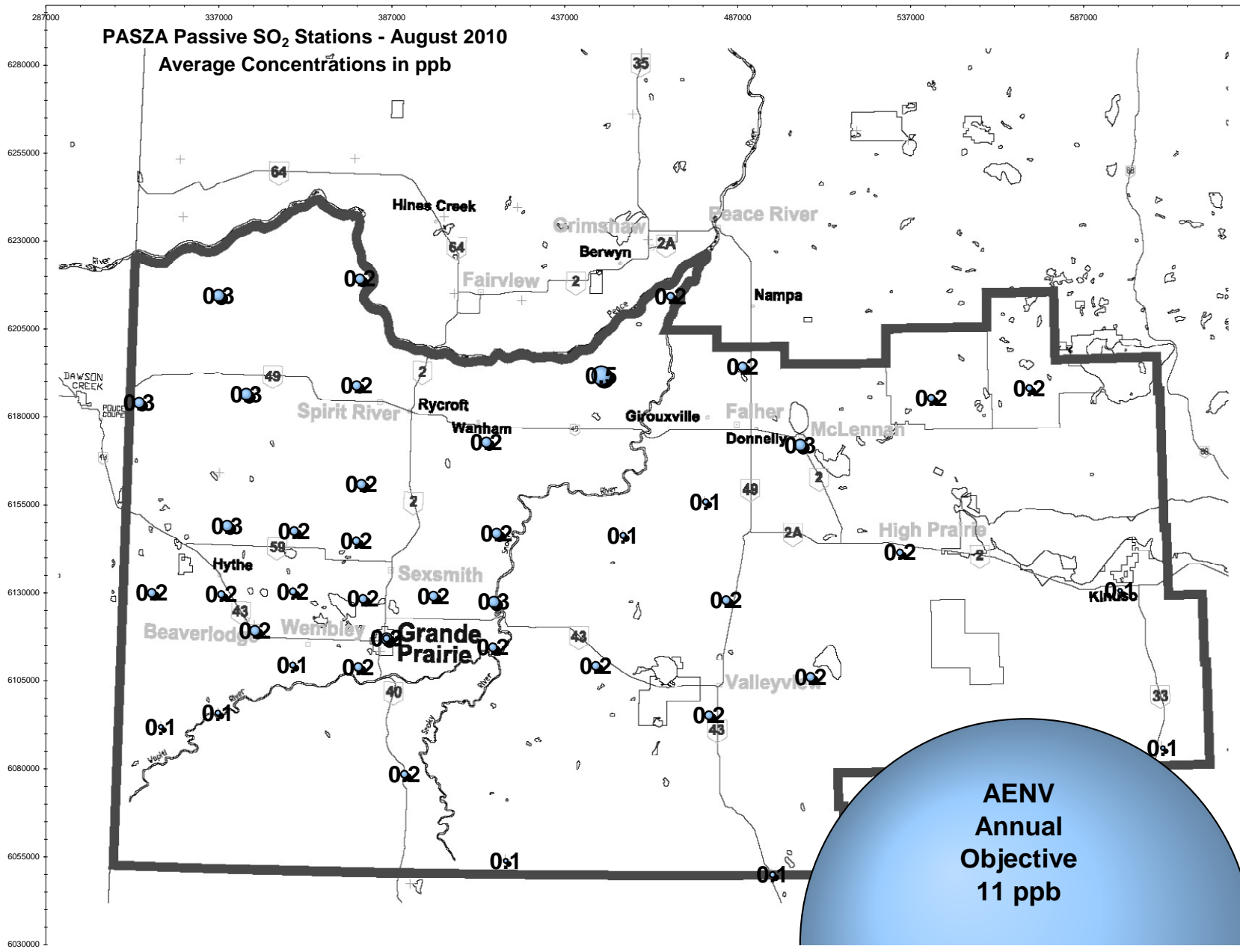
Passive Summary for August 2010 (PASZA Zone)			
<b>Mean</b>	<b>0.2</b>	<b>21.3</b>	<b>0.7</b>
<b>Standard Deviation</b>	<b>0.1</b>	<b>3.8</b>	<b>0.3</b>
<b>Minimum</b>	<b>0.1</b>	<b>13.6</b>	<b>0.2</b>
<b>Minimum At</b>	<b>Kinuso (#47)</b>	<b>Kinuso (#47)</b>	<b>Puskwaskau (#34)</b>
<b>Maximum</b>	<b>0.5</b>	<b>31.4</b>	<b>1.8</b>
<b>Maximum At</b>	<b>Eaglesham (#21)</b>	<b>Beaverlodge (#16)</b>	<b>Grande Prairie HP (#49)</b>

### 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	<b>0.7</b>	<b>22.6</b>	<b>5.2</b>
PASZA Beaverlodge passive	<b>0.2</b>	<b>31.4</b>	<b>0.8</b>

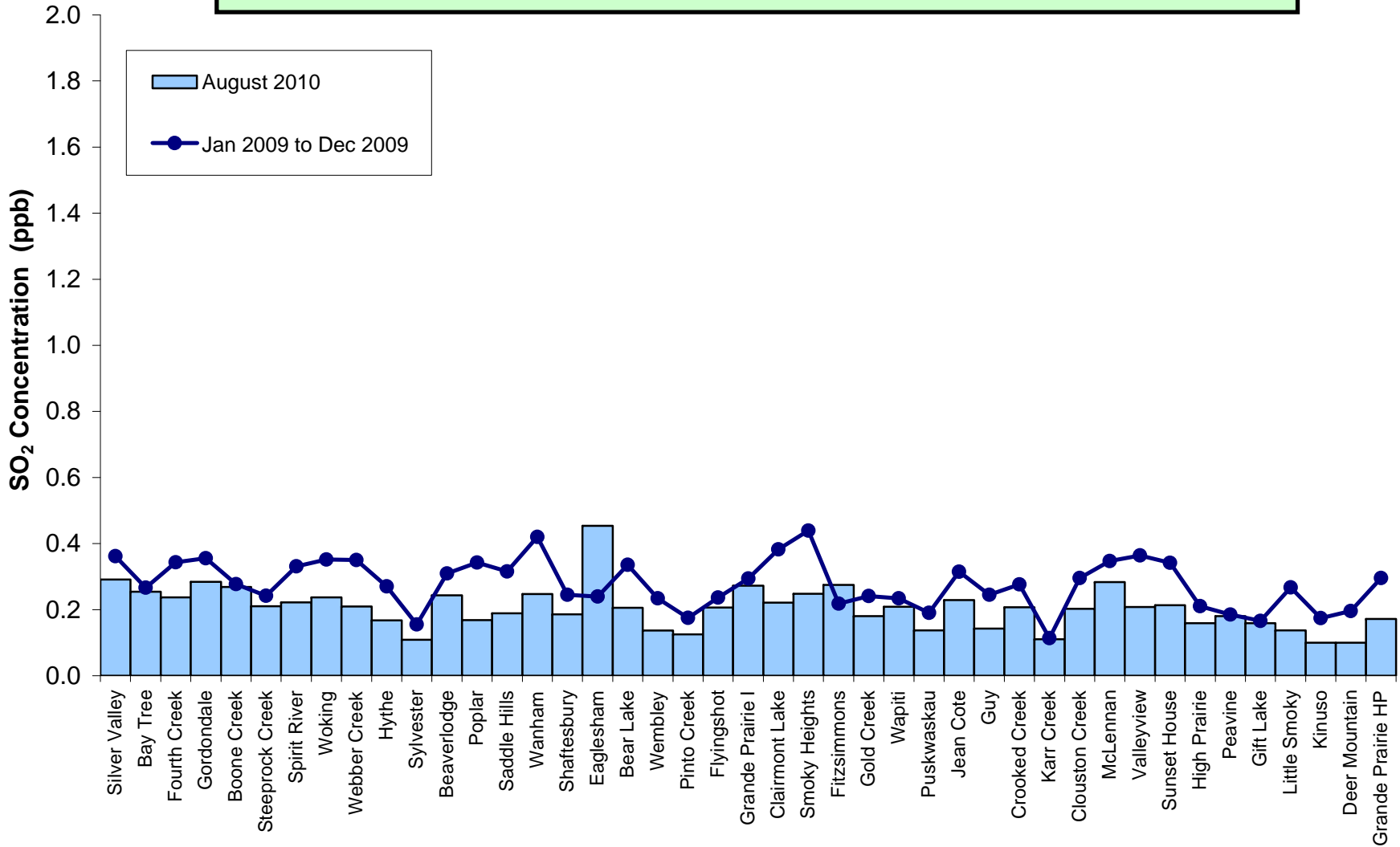
### Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PASZA Henry Pirker station	<b>0.4</b>	<b>24.6</b>	<b>2.3</b>
PASZA Grande Prairie passive	<b>0.2</b>	<b>25.5</b>	<b>1.8</b>

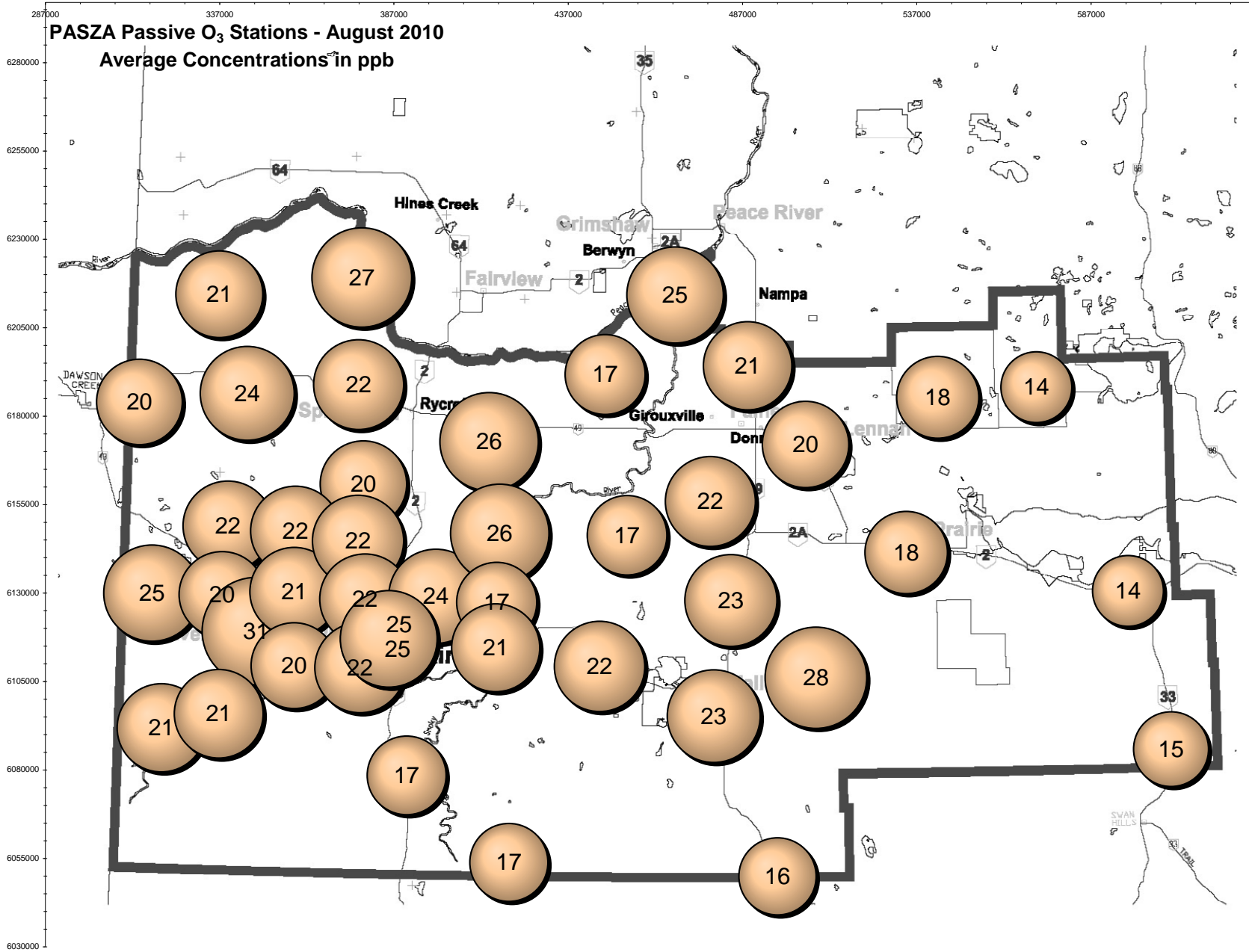


SO<sub>2</sub> Bubble Chart

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

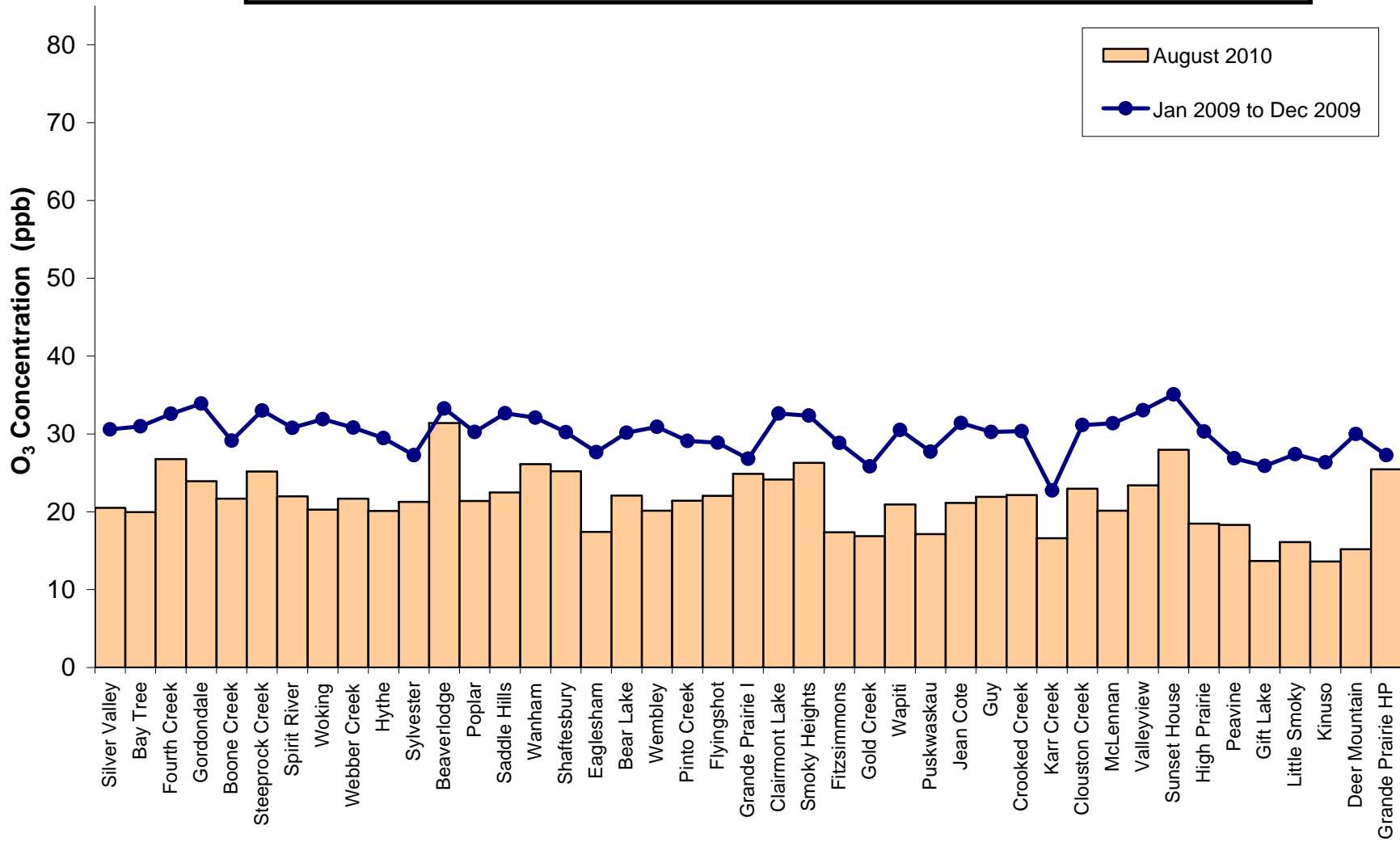


**SO<sub>2</sub> Summary Chart**



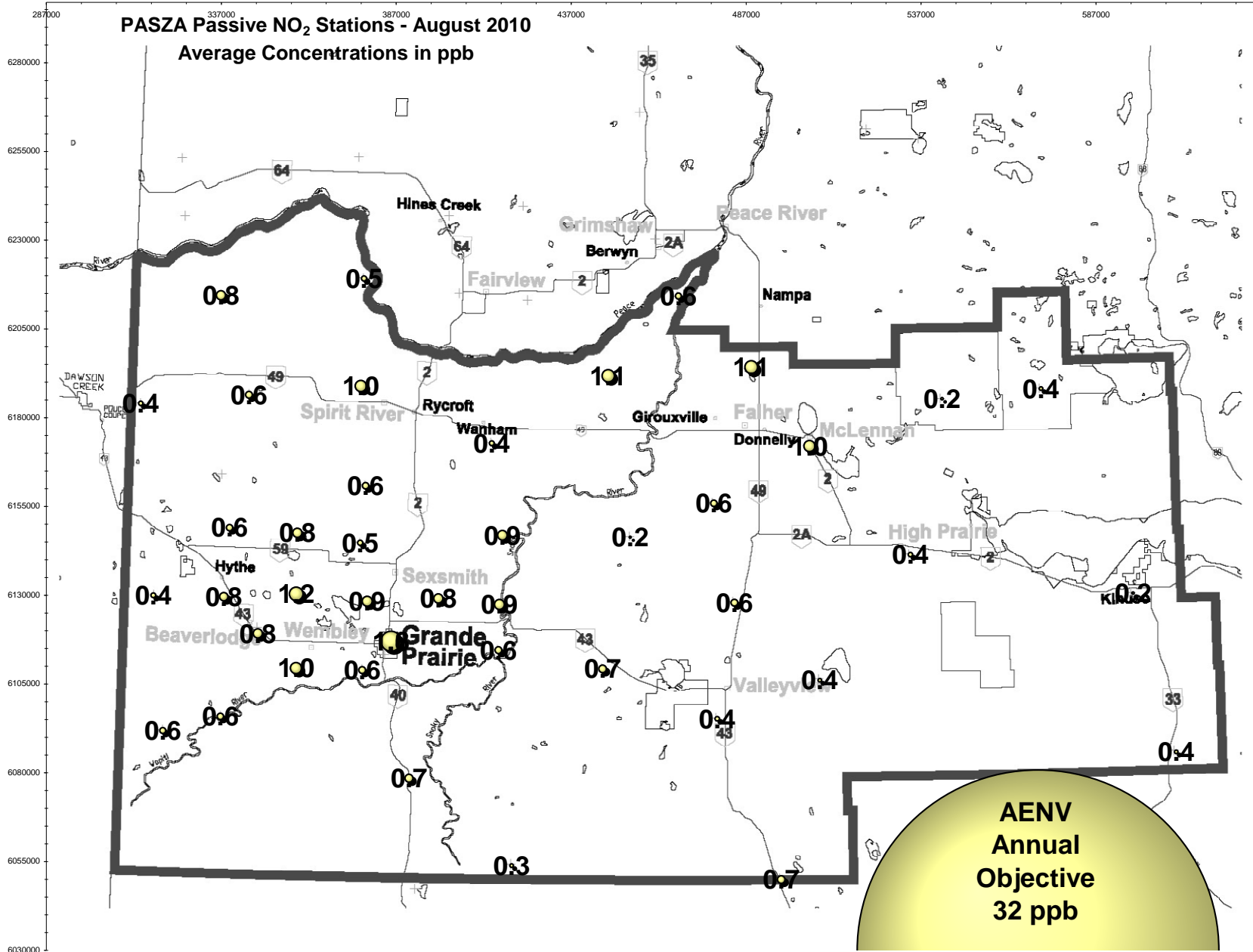
**O<sub>3</sub> Bubble Chart**

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



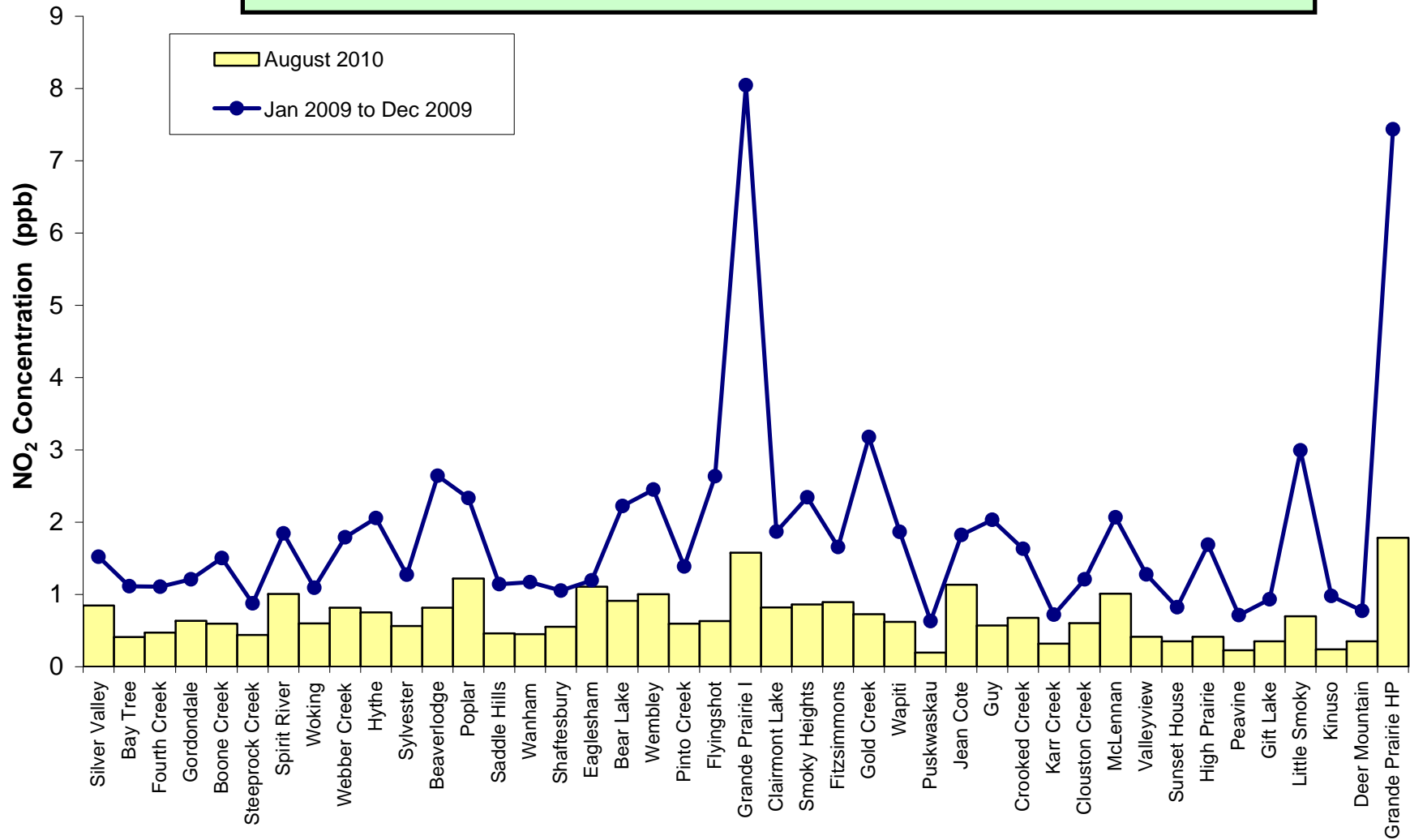
**O<sub>3</sub> Summary Chart**





NO<sub>2</sub> Bubble Chart

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



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

# PASZA

## ALBERTA ENVIRONMENT INCIDENCE REPORTS

### August 2010

## Air Monitoring Directive Guideline Exceedence 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>	<b>238822</b>	<b>Reported To (AENV Contact):</b>	Laura
<b>Date &amp; Time Incident Reported to AENV:</b>	Aug 04, 2010 @ 23:00 MST	<b>Reported By:</b>	Kelly Baragar
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	Smoky Heights Air Quality station		
<b>Start Date &amp; Time of Incident:</b>	Aug 04 @ 22:00 MST	<b>End Date &amp; Time of Incident:</b>	Aug 04 @ 23:00 MST
<b>Reason or Nature of Incident:</b>			
The PM <sub>2.5</sub> analyzer (TEOM) within the Smoky Heights station, currently located ENE of Grande Prairie at LSD 13-8-074-02 W6, exceeded the AENV hourly average PM <sub>2.5</sub> hourly guideline (80 µg/m <sup>3</sup> ) as detailed below:  Aug 04 22:00 – 23:00 MST    PM <sub>2.5</sub> = 85.5 µg/m <sup>3</sup> WS= 9.3 km/h    WD=277 deg (W)			
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operation of the PM <sub>2.5</sub> analyzer appear normal during the time of this report.			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Not applicable			
<b>Additional Actions Required (if any):</b>			
Not applicable			
Report Completed By:	Kelly Baragar	Date Report Submitted:	Aug 05, 2010
<b>7-Day Letter Due Date:</b>	August 12, 2010		

## Air Monitoring Directive Exceedence 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>	238862	<b>Reported To (AENV Contact):</b>	Jasmina
<b>Date &amp; Time Incident Reported to AENV:</b>	Aug 6, 2010	<b>Reported By:</b>	Grover Christiansen
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	Henry Pirker Air Quality station (107 Ave & 104 St, Grande Prairie)		
<b>Start Date &amp; Time of Incident:</b>	Aug 05 @ 00:00 MST	<b>End Date &amp; Time of Incident:</b>	Aug 06 @ 00:00 MST
<b>Reason or Nature of Incident:</b>			
<p>The PM<sub>2.5</sub> analyzer (TEOM) within the Henry Pirker station, currently located at 107 Avenue and 104 Street, Grande Prairie, exceeded the AENV 24 hour average PM<sub>2.5</sub> hourly guideline (30 µg/m<sup>3</sup>) as detailed below:</p> <p>Aug 05, 2010      PM<sub>2.5</sub>= 38.7 µg/m<sup>3</sup>      WS= 6.4 km/h      WD=170 deg (S)                      All averages are displayed as 24-hour averages.</p>			
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operations of the PM <sub>2.5</sub> analyzer appear normal during the incident. Subsequent station visits indicated normal diagnostics on the TEOM. Known wildfires both locally and trans-boundary are known to be occurring.			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Not applicable			
<b>Additional Actions Required (if any):</b>			
Not applicable			
<b>Report Completed By:</b>	Grover Christiansen	<b>Date Report Submitted:</b>	Aug 6, 2010
<b>7-Day Letter Due Date:</b>	Aug 12, 2010		

## Air Monitoring Directive Exceedence 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>	238861	<b>Reported To (AENV Contact):</b>	Jasmina
<b>Date &amp; Time Incident Reported to AENV:</b>	Aug 6, 2010	<b>Reported By:</b>	Grover Christiansen
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	Evergreen Park / South Grande Prairie Area		
<b>Start Date &amp; Time of Incident:</b>	Aug 05 @ 00:00 MST	<b>End Date &amp; Time of Incident:</b>	Aug 06 @ 00:00 MST
<b>Reason or Nature of Incident:</b>			
<p>The PM<sub>2.5</sub> analyzer (TEOM) within the Evergreen Park station, currently located South of Grande Prairie at LSD 5-6-071-05 W6, exceeded the AENV 24 hour average PM<sub>2.5</sub> hourly guideline (30 µg/m<sup>3</sup>) as detailed below:</p> <p>Aug 05, 2010      PM<sub>2.5</sub>= 31.1 µg/m<sup>3</sup>      WS= 2.7 km/h      WD=122 deg (SE)                      All averages are displayed as 24-hour averages.</p>			
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operations of the PM <sub>2.5</sub> analyzer appear normal during the incident. Wildfires both locally and trans-boundary are known to be occurring.			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Not applicable			
<b>Additional Actions Required (if any):</b>			
Not applicable			
<b>Report Completed By:</b>	Grover Christiansen	<b>Date Report Submitted:</b>	Aug 6, 2010
<b>7-Day Letter Due Date:</b>	Aug 12, 2010		

## Air Monitoring Directive Exceedence 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>	238863	<b>Reported To (AENV Contact):</b>	Jasmina
<b>Date &amp; Time Incident Reported to AENV:</b>	Aug 6, 2010	<b>Reported By:</b>	Grover Christiansen
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	Smoky Heights station at (LSD 13-8-074-02 W6)		
<b>Start Date &amp; Time of Incident:</b>	Aug 05 @ 00:00 MST	<b>End Date &amp; Time of Incident:</b>	Aug 06 @ 00:00 MST
<b>Reason or Nature of Incident:</b>			
<p>The PM<sub>2.5</sub> analyzer (TEOM) within the Smoky Heights station, currently located at (LSD 13-8-074-02 W6), exceeded the AENV 24 hour average PM<sub>2.5</sub> hourly guideline (30 µg/m<sup>3</sup>) as detailed below:</p> <p>Aug 05, 2010      PM<sub>2.5</sub>= 42.3 µg/m<sup>3</sup>      WS= 9.3 km/h      WD=151 deg (SE)                      All averages are displayed as 24-hour averages.</p>			
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operations of the PM <sub>2.5</sub> analyzer appear normal during the incident. Wildfires both locally and trans-boundary are known to be occurring.			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Not applicable			
<b>Additional Actions Required (if any):</b>			
Not applicable			
<b>Report Completed By:</b>	Grover Christiansen	<b>Date Report Submitted:</b>	Aug 6, 2010
<b>7-Day Letter Due Date:</b>	Aug 12, 2010		

## Air Monitoring Directive Exceedence 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>	238860	<b>Reported To (AENV Contact):</b>	Jasmina
<b>Date &amp; Time Incident Reported to AENV:</b>	Aug 6, 2010	<b>Reported By:</b>	Grover Christiansen
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	BeaverLodge AQM trailer (agriculture & agri food 1 Research Rd)		
<b>Start Date &amp; Time of Incident:</b>	Aug 05 @ 00:00 MST	<b>End Date &amp; Time of Incident:</b>	Aug 06 @ 00:00 MST
<b>Reason or Nature of Incident:</b>			
<p>The PM<sub>2.5</sub> analyzer (TEOM) within the Beaverlodge station located 2 km West from the town of Beaverlodge (near Agricultural research center), exceeded the AENV 24 hour average PM<sub>2.5</sub> hourly guideline (30 µg/m<sup>3</sup>) as detailed below:</p> <p>Aug 05, 2010      PM<sub>2.5</sub>= 37.8 µg/m<sup>3</sup>      WS= 6.7 km/h      WD=121 deg (ESE)                      All averages are displayed as 24-hour averages.</p>			
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operations of the PM <sub>2.5</sub> analyzer appear normal during the incident. Wildfires both locally and trans-boundary are known to be occurring.			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Not applicable			
<b>Additional Actions Required (if any):</b>			
Not applicable			
<b>Report Completed By:</b>	Grover Christiansen	<b>Date Report Submitted:</b>	Aug 6, 2010
<b>7-Day Letter Due Date:</b>	Aug 12, 2010		



## Air Monitoring Directive Exceedence 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>	238910	<b>Reported To (AENV Contact):</b>	Karla
<b>Date &amp; Time Incident Reported to AENV:</b>	Aug 7, 2010	<b>Reported By:</b>	Grover Christiansen
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	Henry Pirker Air Quality station (107 Ave & 104 St, Grande Prairie)		
<b>Start Date &amp; Time of Incident:</b>	Aug 06 @ 00:00 MST	<b>End Date &amp; Time of Incident:</b>	Aug 07 @ 00:00 MST
<b>Reason or Nature of Incident:</b>			
<p>The PM<sub>2.5</sub> analyzer (TEOM) within the Henry Pirker station, currently located at 107 Avenue and 104 Street, Grande Prairie, exceeded the AENV 24 hour average PM<sub>2.5</sub> hourly guideline (30 µg/m<sup>3</sup>) as detailed below:</p> <p>Aug 06, 2010      PM<sub>2.5</sub>= 38.3 µg/m<sup>3</sup>      WS= 10.2 km/h      WD=237 deg (SW)                      All averages are displayed as 24-hour averages.</p>			
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operations of the PM <sub>2.5</sub> analyzer appear normal during the incident. Subsequent station visits indicated normal diagnostics on the TEOM. Known wildfires both locally and trans-boundary are known to be occurring.			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Not applicable			
<b>Additional Actions Required (if any):</b>			
Not applicable			
<b>Report Completed By:</b>	Grover Christiansen	<b>Date Report Submitted:</b>	Aug 10, 2010
<b>7-Day Letter Due Date:</b>	Aug 13, 2010		

## Air Monitoring Directive Exceedence 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>	238909	<b>Reported To (AENV Contact):</b>	Karla
<b>Date &amp; Time Incident Reported to AENV:</b>	Aug 7, 2010	<b>Reported By:</b>	Grover Christiansen
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	Evergreen Park / South Grande Prairie Area		
<b>Start Date &amp; Time of Incident:</b>	Aug 06 @ 00:00 MST	<b>End Date &amp; Time of Incident:</b>	Aug 07 @ 00:00 MST
<b>Reason or Nature of Incident:</b>			
<p>The PM<sub>2.5</sub> analyzer (TEOM) within the Evergreen Park station, currently located South of Grande Prairie at LSD 5-6-071-05 W6, exceeded the AENV 24 hour average PM<sub>2.5</sub> hourly guideline (30 µg/m<sup>3</sup>) as detailed below:</p> <p>Aug 06, 2010      PM<sub>2.5</sub>= 34.4 µg/m<sup>3</sup>      WS= 7.3 km/h      WD=237 deg (SW)                      All averages are displayed as 24-hour averages.</p>			
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operations of the PM <sub>2.5</sub> analyzer appear normal during the incident. Wildfires both locally and trans-boundary are known to be occurring.			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Not applicable			
<b>Additional Actions Required (if any):</b>			
Not applicable			
<b>Report Completed By:</b>	Grover Christiansen	<b>Date Report Submitted:</b>	Aug 10, 2010
<b>7-Day Letter Due Date:</b>	Aug 13, 2010		

## Air Monitoring Directive Exceedence Report

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 Fax: (780) 427-1044

<b>Reference Number:</b>	238911	<b>Reported To (AENV Contact):</b>	Karla
<b>Date &amp; Time Incident Reported to AENV:</b>	Aug 7, 2010	<b>Reported By:</b>	Grover Christiansen
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	Smoky Heights station at (LSD 13-8-074-02 W6)		
<b>Start Date &amp; Time of Incident:</b>	Aug 06 @ 00:00 MST	<b>End Date &amp; Time of Incident:</b>	Aug 07 @ 00:00 MST
<b>Reason or Nature of Incident:</b>			
<p>The PM<sub>2.5</sub> analyzer (TEOM) within the Smoky Heights station, currently located at (LSD 13-8-074-02 W6), exceeded the AENV 24 hour average PM<sub>2.5</sub> hourly guideline (30 µg/m<sup>3</sup>) as detailed below:</p> <p>Aug 06, 2010      PM<sub>2.5</sub>= 30.2 µg/m<sup>3</sup>      WS= 15.4 km/h      WD=228 deg (SW)                      All averages are displayed as 24-hour averages.</p>			
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operations of the PM <sub>2.5</sub> analyzer appear normal during the incident. Wildfires both locally and trans-boundary are known to be occurring.			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Not applicable			
<b>Additional Actions Required (if any):</b>			
Not applicable			
<b>Report Completed By:</b>	Grover Christiansen	<b>Date Report Submitted:</b>	Aug 10, 2010
<b>7-Day Letter Due Date:</b>	Aug 13, 2010		

## Air Monitoring Directive Exceedence Report

Alberta Environment  
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 Fax: (780) 427-1044

<b>Reference Number:</b>	238908	<b>Reported To (AENV Contact):</b>	Karla
<b>Date &amp; Time Incident Reported to AENV:</b>	Aug 7, 2010	<b>Reported By:</b>	Grover Christiansen
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	BeaverLodge AQM trailer (agriculture & agri food 1 Research Rd)		
<b>Start Date &amp; Time of Incident:</b>	Aug 06 @ 00:00 MST	<b>End Date &amp; Time of Incident:</b>	Aug 07 @ 00:00 MST
<b>Reason or Nature of Incident:</b>			
<p>The PM<sub>2.5</sub> analyzer (TEOM) within the Beaverlodge station located 2 km West from the town of Beaverlodge (near Agricultural research center), exceeded the AENV 24 hour average PM<sub>2.5</sub> hourly guideline (30 µg/m<sup>3</sup>) as detailed below:</p> <p>Aug 06, 2010      PM<sub>2.5</sub>= 41.0 µg/m<sup>3</sup>      WS= 15.4 km/h      WD=204 deg (SSW)                      All averages are displayed as 24-hour averages.</p>			
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operations of the PM2.5 analyzer appear normal during the incident. Wildfires both locally and trans-boundary are known to be occurring.			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Not applicable			
<b>Additional Actions Required (if any):</b>			
Not applicable			
<b>Report Completed By:</b>	Grover Christiansen	<b>Date Report Submitted:</b>	Aug 10, 2010
<b>7-Day Letter Due Date:</b>	Aug 13, 2010		

## *Air Monitoring Directive Exceedence Report*

Alberta Environment  
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 4999 – 98<sup>th</sup> Avenue  
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 Fax: (780) 427-1044

<b>Reference Number:</b>	239315	<b>Reported To (AENV Contact):</b>	Carla
<b>Date &amp; Time Incident Reported to AENV:</b>	August 19, 2010	<b>Reported By:</b>	Focus - Brad Moyles
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	
<b>Location(s) of Incident:</b>	PASZA – Henry Pirker		
<b>Start Date &amp; Time of Incident:</b>	August 19, 2010 @ 02:00MST.	<b>End Date &amp; Time of Incident:</b>	August 19, 2010 @ 06:00MST.
The PM <sub>2.5</sub> analyzer (TEOM) within the Henry Pirker station, currently located at 107 Avenue and 104 Street, Grande Prairie, exceeded the AENV hourly average PM <sub>2.5</sub> hourly guideline (80 µg/m <sup>3</sup> ) as detailed below:			
August 19, 2010	02:00-03:00	PM <sub>2.5</sub> = 134.4 µg/m <sup>3</sup>	WS= 23.4 km/h      WD=257.9 deg
August 19, 2010	03:00-04:00	PM <sub>2.5</sub> = 403.6 µg/m <sup>3</sup>	WS= 23.1 km/h      WD=251.4 deg
August 19, 2010	04:00-05:00	PM <sub>2.5</sub> = 392.7 µg/m <sup>3</sup>	WS= 21.6 km/h      WD=263.8 deg
August 19, 2010	05:00-06:00	PM <sub>2.5</sub> = 146.3 µg/m <sup>3</sup>	WS= 22.1 km/h      WD=273.4 deg
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operations of the PM <sub>2.5</sub> analyzer appear normal during the incident. Cause likely due to smoke from forest fires in BC.			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Not applicable			
<b>Additional Actions Required (if any):</b>			
Not applicable			
<b>Report Completed By:</b>	Brad Moyles	<b>Date Report Submitted:</b>	August 19, 2010
<b>7-Day Letter Due Date:</b>	August 26, 2010		

## Air Monitoring Directive Exceedence Report

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<b>Reference Number:</b>	239314	<b>Reported To (AENV Contact):</b>	Carla
<b>Date &amp; Time Incident Reported to AENV:</b>	August 19, 2010	<b>Reported By:</b>	Focus-Brad Moyles
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b> Evergreen Park / South Grande Prairie Area			
<b>Start Date &amp; Time of Incident:</b>	August 19, 2010 @ 01:00 MST.	<b>End Date &amp; Time of Incident:</b>	August 19, 2010 @ 05:00 MST.
<b>Reason or Nature of Incident:</b>			
The PM <sub>2.5</sub> analyzer (TEOM) within the Evergreen Park station, currently located South of Grande Prairie at LSD 5-6-071-05 W6, exceeded the AENV hourly average PM <sub>2.5</sub> hourly guideline (80 µg/m <sup>3</sup> ) as detailed below:			
August 19, 2010 01:00–02:00 MST	PM <sub>2.5</sub> = 82.2µg/m <sup>3</sup>	WS= 15.7 km/h	WD=261.1 deg
August 19, 2010 02:00–03:00 MST	PM <sub>2.5</sub> = 230.1µg/m <sup>3</sup>	WS= 21.0 km/h	WD=262.5 deg
August 19, 2010 03:00–04:00 MST	PM <sub>2.5</sub> = 360.7µg/m <sup>3</sup>	WS= 22.6 km/h	WD=260.0 deg
August 19, 2010 04:00–05:00 MST	PM <sub>2.5</sub> = 173.1µg/m <sup>3</sup>	WS=19.2 km/h	WD=266.4 deg
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operation of the PM <sub>2.5</sub> analyzer appear normal during the time of this report. Cause likely due to smoke from forest fires in BC.			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Not applicable			
<b>Additional Actions Required (if any):</b>			
Not applicable			
<b>Report Completed By:</b>	Brad Moyles	<b>Date Report Submitted:</b>	August 19, 2010
<b>7-Day Letter Due Date:</b>	August 19, 2010		

## Air Monitoring Directive Exceedence Report

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 Environmental Service Response Centre  
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 Fax: (780) 427-1044

<b>Reference Number:</b>	239316	<b>Reported To (AENV Contact):</b>	Carla												
<b>Date &amp; Time Incident Reported to AENV:</b>	Feb 19, 2010	<b>Reported By:</b>	Focus-Brad Moyles												
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	Not applicable												
<b>Location(s) of Incident:</b>	Smokey Heights Air Quality station														
<b>Start Date &amp; Time of Incident:</b>	August 19, 2010 @ 01:00	<b>End Date &amp; Time of Incident:</b>	August 19, 2010 @ 05:00 MST												
<b>Reason or Nature of Incident:</b>															
<p>The PM<sub>2.5</sub> analyzer (TEOM) within the Smokey Heights station, currently located east, North East of Grande Prairie, exceeded the AENV hourly average PM<sub>2.5</sub> hourly guideline (80 µg/m<sup>3</sup>) as detailed below:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">August 19, 2010 01:00–02:00 MST</td> <td style="width: 25%;">PM<sub>2.5</sub>= 88.71 µg/m<sup>3</sup></td> <td style="width: 25%;">WS= 21.3 km/h</td> <td style="width: 25%;">WD=237.2 deg</td> </tr> <tr> <td>August 19, 2010 02:00–03:00 MST</td> <td>PM<sub>2.5</sub>= 272.2 µg/m<sup>3</sup></td> <td>WS= 16.9 km/h</td> <td>WD=229.7 deg</td> </tr> <tr> <td>August 19, 2010 03:00–04:00 MST</td> <td>PM<sub>2.5</sub>= 188.2 µg/m<sup>3</sup></td> <td>WS= 27.3 km/h</td> <td>WD=254.7 deg</td> </tr> </table>				August 19, 2010 01:00–02:00 MST	PM <sub>2.5</sub> = 88.71 µg/m <sup>3</sup>	WS= 21.3 km/h	WD=237.2 deg	August 19, 2010 02:00–03:00 MST	PM <sub>2.5</sub> = 272.2 µg/m <sup>3</sup>	WS= 16.9 km/h	WD=229.7 deg	August 19, 2010 03:00–04:00 MST	PM <sub>2.5</sub> = 188.2 µg/m <sup>3</sup>	WS= 27.3 km/h	WD=254.7 deg
August 19, 2010 01:00–02:00 MST	PM <sub>2.5</sub> = 88.71 µg/m <sup>3</sup>	WS= 21.3 km/h	WD=237.2 deg												
August 19, 2010 02:00–03:00 MST	PM <sub>2.5</sub> = 272.2 µg/m <sup>3</sup>	WS= 16.9 km/h	WD=229.7 deg												
August 19, 2010 03:00–04:00 MST	PM <sub>2.5</sub> = 188.2 µg/m <sup>3</sup>	WS= 27.3 km/h	WD=254.7 deg												
<b>Immediate Actions Taken:</b>															
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.															
<b>Investigation Details:</b>															
Operation of the PM <sub>2.5</sub> analyzer appear normal during the time of this report. Cause likely due to smoke coming from forest fires in BC.															
<b>Actions Taken to Prevent Reoccurrence (if any):</b>															
Not applicable															
<b>Additional Actions Required (if any):</b>															
Not applicable															
<b>Report Completed By:</b>	Brad Moyles	<b>Date Report Submitted:</b>	August 19, 2010												
<b>7-Day Letter Due Date:</b>	February 26, 2010														

## Air Monitoring Directive Exceedence Report

Alberta Environment  
 Environmental Service Response Centre  
 111 Twin Atria Building  
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 Fax: (780) 427-1044

<b>Reference Number:</b>	239313	<b>Reported To (AENV Contact):</b>	Carla																
<b>Date &amp; Time Incident Reported to AENV:</b>	Aug 19, 2010	<b>Reported By:</b>	Focus-Brad Moyles																
<b>Reported on Behalf of:</b>	PASZA	<b>Approval Number (if applicable):</b>	Not applicable																
<b>Location(s) of Incident:</b>	BeaverLodge AQM trailer (agriculture & agri food 1 Research Rd)																		
<b>Start Date &amp; Time of Incident:</b>	Aug 19, 2010 @ 01:00 MST	<b>End Date &amp; Time of Incident:</b>	Aug 19, 2010 @ 02:00 MST																
<b>Reason or Nature of Incident:</b>																			
<p>The PM<sub>2.5</sub> analyzer (TEOM) within the Beaverlodge station located 2 km East from the town of Beaverlodge (near Agricultural research center), exceeded the AENV hourly average PM<sub>2.5</sub> hourly guideline (80 µg/m<sup>3</sup>) as detailed below:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">Aug 19, 2010 01:00-02:00</td> <td style="width: 25%;">PM<sub>2.5</sub>= 91.7 µg/m<sup>3</sup></td> <td style="width: 25%;">WS= 17.5 km/h</td> <td style="width: 25%;">WD=243 deg</td> </tr> <tr> <td>Aug 19, 2010 02:00-03:00</td> <td>PM<sub>2.5</sub>= 283.8 µg/m<sup>3</sup></td> <td>WS= 31.1 km/h</td> <td>WD=255.2 deg</td> </tr> <tr> <td>Aug 19, 2010 03:00-04:00</td> <td>PM<sub>2.5</sub>= 322.1 µg/m<sup>3</sup></td> <td>WS= 38.9 km/h</td> <td>WD=247.9 deg</td> </tr> <tr> <td>Aug 19, 2010 04:00-05:00</td> <td>PM<sub>2.5</sub>= 137.8 µg/m<sup>3</sup></td> <td>WS= 31.9 km/h</td> <td>WD=258.4 deg</td> </tr> </table>				Aug 19, 2010 01:00-02:00	PM <sub>2.5</sub> = 91.7 µg/m <sup>3</sup>	WS= 17.5 km/h	WD=243 deg	Aug 19, 2010 02:00-03:00	PM <sub>2.5</sub> = 283.8 µg/m <sup>3</sup>	WS= 31.1 km/h	WD=255.2 deg	Aug 19, 2010 03:00-04:00	PM <sub>2.5</sub> = 322.1 µg/m <sup>3</sup>	WS= 38.9 km/h	WD=247.9 deg	Aug 19, 2010 04:00-05:00	PM <sub>2.5</sub> = 137.8 µg/m <sup>3</sup>	WS= 31.9 km/h	WD=258.4 deg
Aug 19, 2010 01:00-02:00	PM <sub>2.5</sub> = 91.7 µg/m <sup>3</sup>	WS= 17.5 km/h	WD=243 deg																
Aug 19, 2010 02:00-03:00	PM <sub>2.5</sub> = 283.8 µg/m <sup>3</sup>	WS= 31.1 km/h	WD=255.2 deg																
Aug 19, 2010 03:00-04:00	PM <sub>2.5</sub> = 322.1 µg/m <sup>3</sup>	WS= 38.9 km/h	WD=247.9 deg																
Aug 19, 2010 04:00-05:00	PM <sub>2.5</sub> = 137.8 µg/m <sup>3</sup>	WS= 31.9 km/h	WD=258.4 deg																
<b>Immediate Actions Taken:</b>																			
Confirmed validity of data and reported ASAP to AENV Environmental Service Response Centre.																			
<b>Investigation Details:</b>																			
Operations of the PM <sub>2.5</sub> analyzer appear normal during the incident. Cause likely due to smoke coming from forest fires in BC.																			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>																			
Not applicable																			
<b>Additional Actions Required (if any):</b>																			
Not applicable																			
<b>Report Completed By:</b>	Brad Moyles	<b>Date Report Submitted:</b>	Aug 19, 2010																
<b>7-Day Letter Due Date:</b>	Aug 26, 2010																		



# August 2010 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	August 19, 2010	Previous Calibration	July 13, 2010
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)	7:35	End Time (MST)	10:46
Barometric Pressure	0.918 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	51.5 ppb	Cal Gas Cert Date	4/6/2012
		Cal Gas Cylinder #	SGAL3245
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.995169	Calculated slope	1.020950
Calculated intercept	-1.521890	Calculated intercept	-2.835923
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.6		8.6	
Coefficient	.799		.779	
Pressure	639.4	mm Hg	636.6	mm Hg
Flow	0.481	lpm	0.479	lpm
Lamp Voltage	43686	Hz	43541	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)
4991	0.00	0.0	0.4	N/A
4991	39.83	407.7	400.5	1.0181
4991	19.89	204.4	205.4	0.9953
4991	9.93	102.3	104.6	0.9776
4991	0.00	0.0	0.4	As Found Zero
4991	39.83	407.7	400.5	As Found Span
Average Correction Factor				0.9970

Calculated value of As Found Response: 396.7 ppb      Percent Change of As Found: 2.7%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	239.8	ppb	242.2	ppb

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

Calibration Performed By: Courtney Thompson

# Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



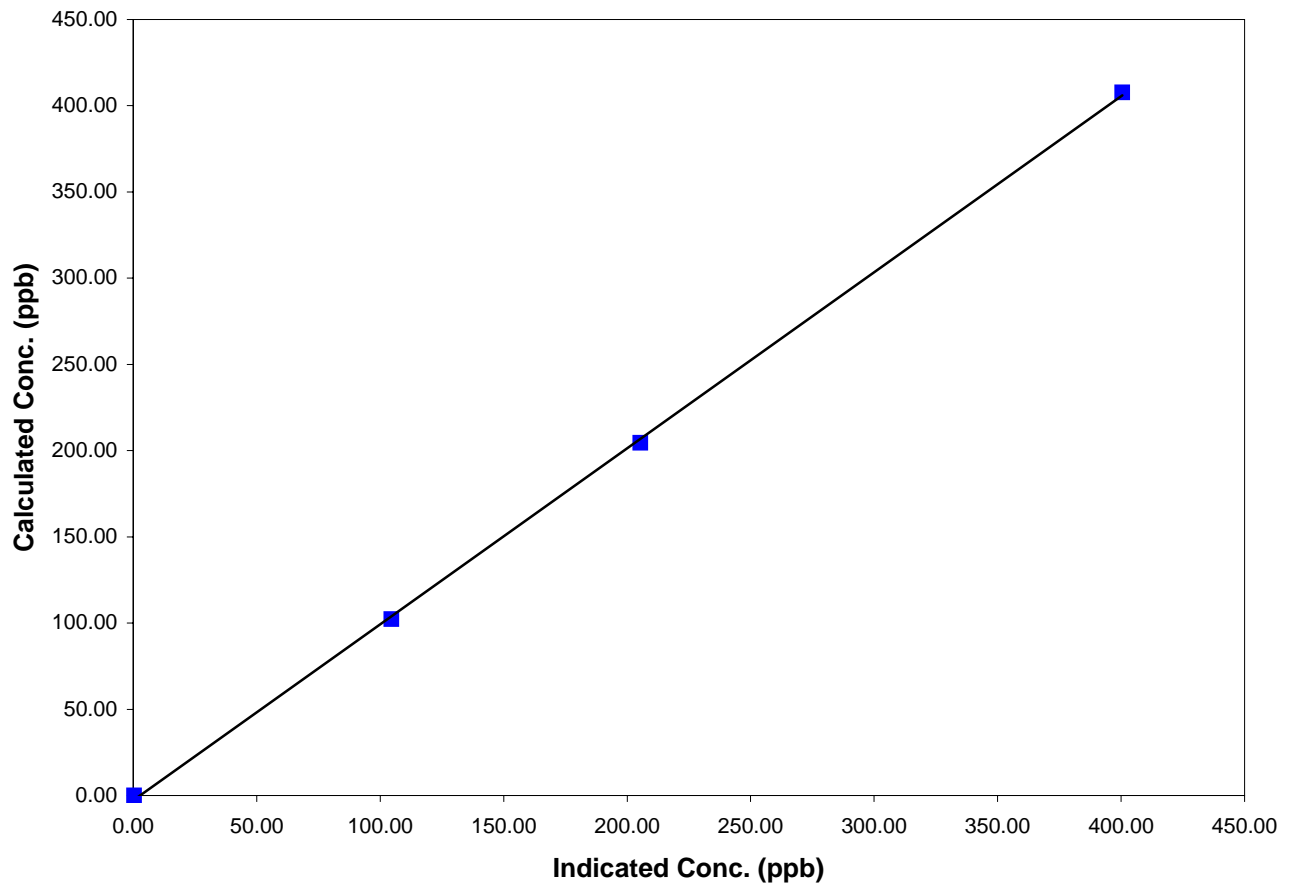
## Station Information

Calibration Date	August 19, 2010	Previous Calibration	July 13, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:35	End Time (MST)	10:46
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

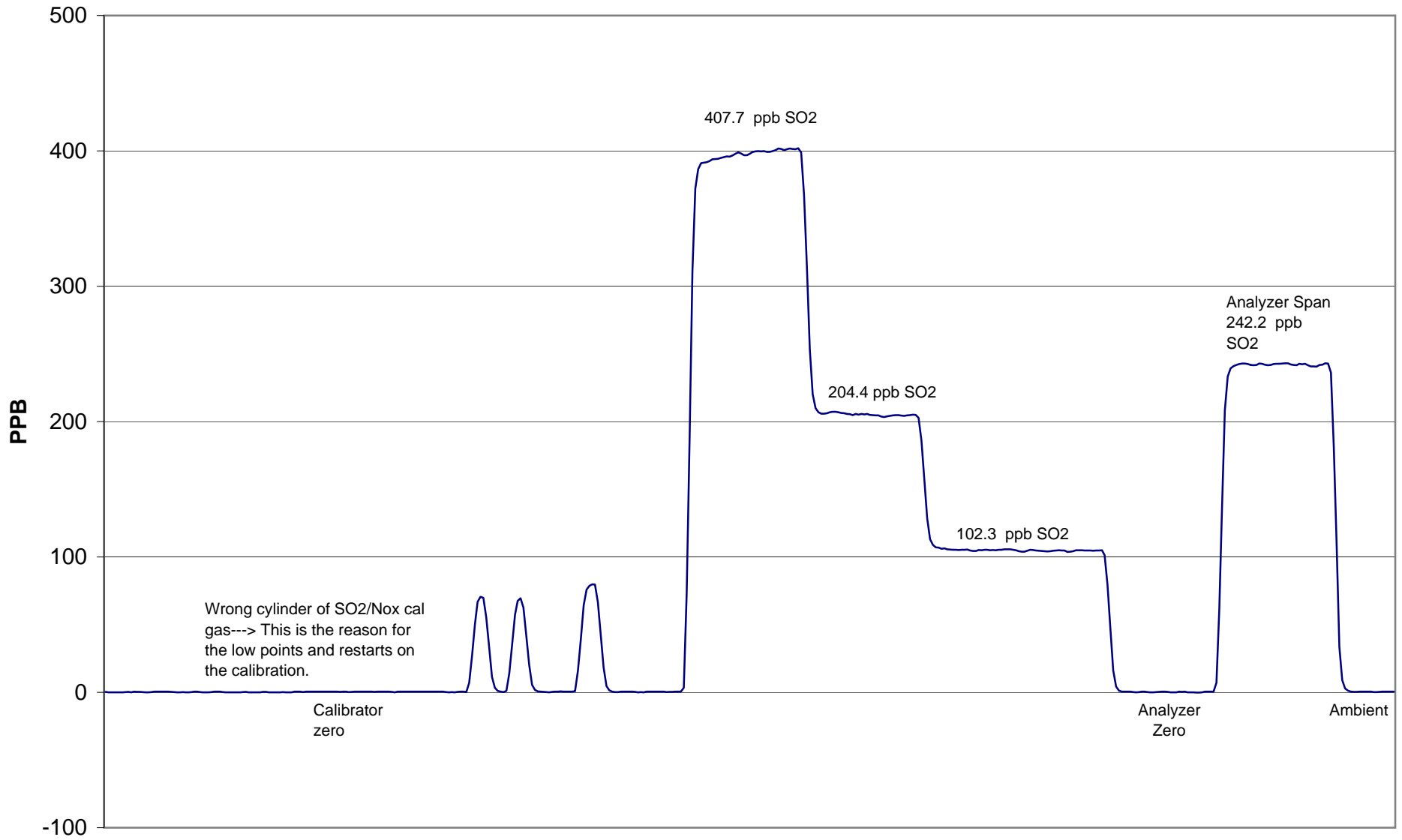
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
407.7	400.5	1.0181	Correlation Coefficient	0.999807
204.4	205.4	0.9953		
102.3	104.6	0.9776	Slope	1.020950
			Intercept	-2.835923

## SO2 Calibration Curve



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



August 19, 2010



# Calibration Summary

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



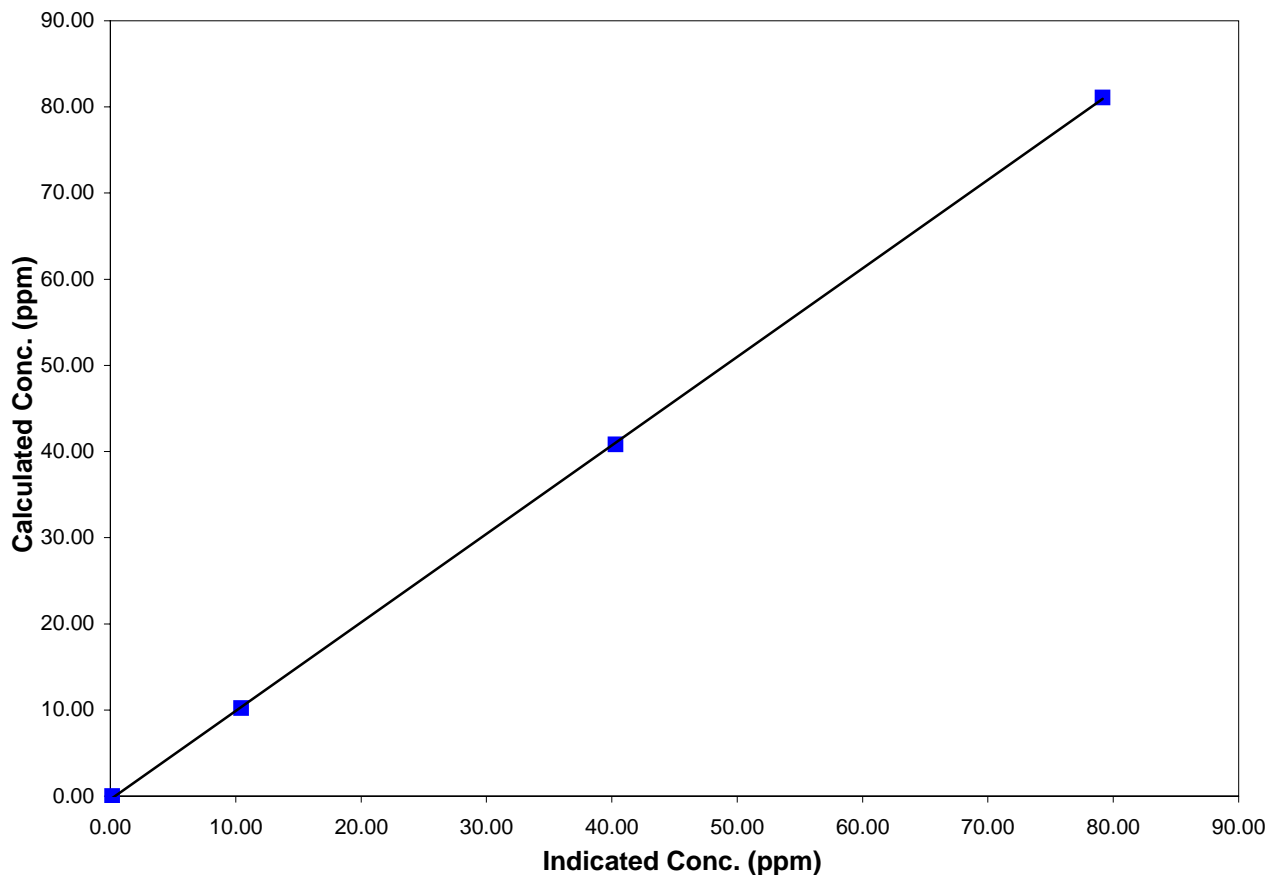
### Station Information

Calibration Date	<u>                    </u> August 19, 2010	Previous Calibration	<u>                    </u> July 14, 2010
Station Number	<u>                    </u> 1	Station Location	<u>                    </u> Henry Pirker
Start Time (MST)	<u>                    </u> 12:15	End Time (MST)	<u>                    </u> 14:45
Analyzer make/model	<u>                    </u> TEI 43C	Analyzer serial #	<u>                    </u> 3.199E+13

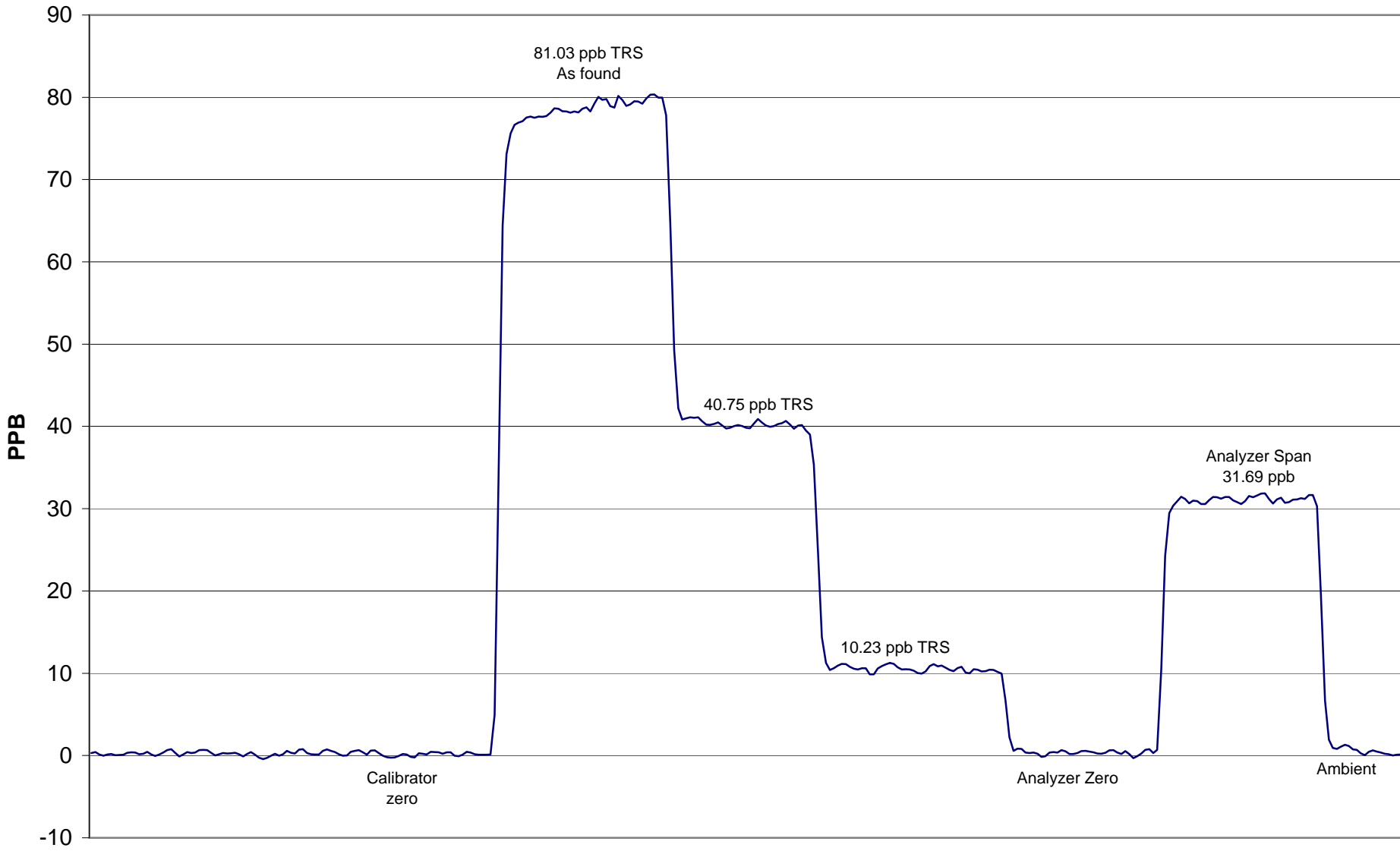
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.162	N/A		
81.068	79.144	1.0243	Correlation Coefficient	0.999970
40.830	40.307	1.0130		
10.230	10.447	0.9792	Slope	1.027547
			Intercept	-0.378477

## TRS Calibration Curve



# Henry Pirker TRS Calibration



August 19, 2010

# Calibration Report

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



## Station Information

Calibration Date	August 19, 2010	Previous Calibration	July 13, 2010
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Installation	<input type="checkbox"/> Removal
Start Time (MST)	7:35	End Time (MST)	12:19
Barometric Pressure	0.918 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
NO Cal Gas Conc	50.8 ppm	Cal Gas Expiry Date	April 6, 2012
NOx Cal Gas Conc	50.8 ppm	Cal Gas Serial #	SGAL3245

## DACS Information

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

Parameter		NO2	NOx	NO
Before	Data Slope	0.997466	0.993406	0.993996
	Data Offset	0.096288	-2.172831	-2.468315
After	Data Slope	0.996055	1.004274	1.003781
	Data Offset	-0.548906	-2.346133	-2.801321
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	10.3	mV	10.4	mV
NOx bkgnd	10.9	mV	12.0	mV
NO coefficient	0.776		0.776	
NOx coefficient	1.000		1.000	
NO2 conv temp	318.0	Deg C	318.0	Deg C
PMT Temp	-2.5	Deg C	-2.5	Deg C
PMT Volt	-786.0	mV	-786.0	mV
R Cell Press	167.3	in Hg	168.1	in Hg
Sample Flow	0.766	ccm	0.771	ccm

Notes:

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# Calibration Report

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



## Station Information

Calibration Date: **August 19, 2010** 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	4991	0.00	0.0	0.0	0.0	0.1	0.0	0.0	N/A	N/A	
1	4991	39.83	402.2	402.2	0.0	401.6	401.9	-0.3	1.0015	1.0007	
2	4991	19.89	201.6	201.6	0.0	204.4	205.4	-0.9	0.9863	0.9817	
3	4991	9.93	100.9	100.9	0.0	104.9	105.9	-1.1	0.9617	0.9524	
AFZ	4991	0.00	0.0	0.0	0.0	1.1	0.0	1.1	0.0000	0.0000	
AFS	4991	39.83	402.2	402.2	0.0	401.6	401.9	-0.3	1.0015	1.0007	
									Average Correction Factor	0.9832	0.9783

As Found Concentrations: **NO<sub>x</sub>= 398.3** **NO= 399.4** As Found Percent Change **NO<sub>x</sub>= -1.0%** **NO= -0.7%**

## GPT Calibration Data

Dilution Flow 4989 ccm Source Gas Flow 39.85 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	0.0	N/A	N/A	N/A	N/A	
NO point	401.5	401.5	0.0	400.5	401.5	-1.0	1.0024	1.0000	N/A	N/A	
300	401.5	102.5	298.9	402.5	102.5	300.2	0.9975	1.0000	0.9957	100.4%	
200	401.5	192.4	209.0	402.8	192.4	210.6	0.9966	1.0000	0.9925	100.8%	
100	401.5	282.1	119.4	403.0	282.1	121.2	0.9961	1.0000	0.9853	101.5%	
							Average Correction Factor	0.9967	1.0000	0.9912	100.9%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	-0.9	-0.8	0.0	ppb
Auto span	168.4	169.5	1.2	ppb	162.5	161.3	1.1	ppb

Calibration Performed By: Courtney Thompson

# Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PASZA



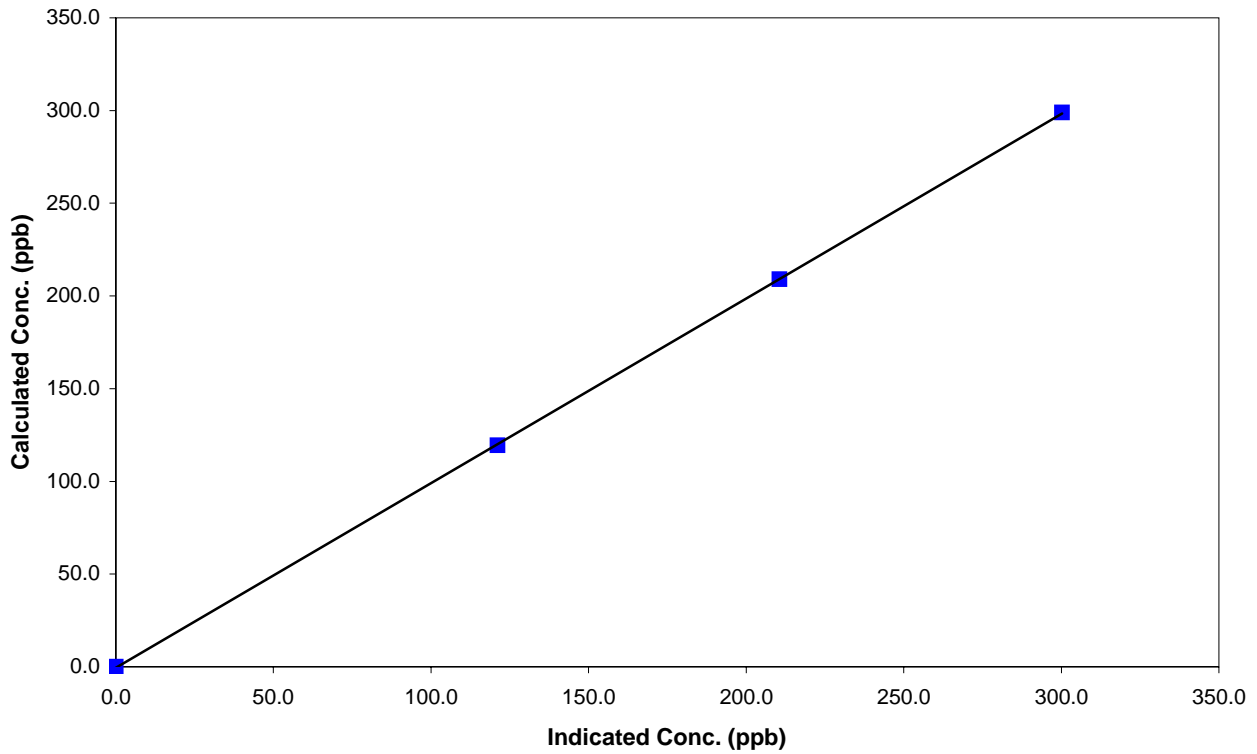
## Station Information

Calibration Date	August 19, 2010	Previous Calibration	July 13, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:35	End Time (MST)	12:19
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		
298.9	300.2	0.9957	Correlation Coefficient	0.999978
209.0	210.6	0.9925		
119.4	121.2	0.9853	Slope	0.996055
			Intercept	-0.548906

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



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PASZA



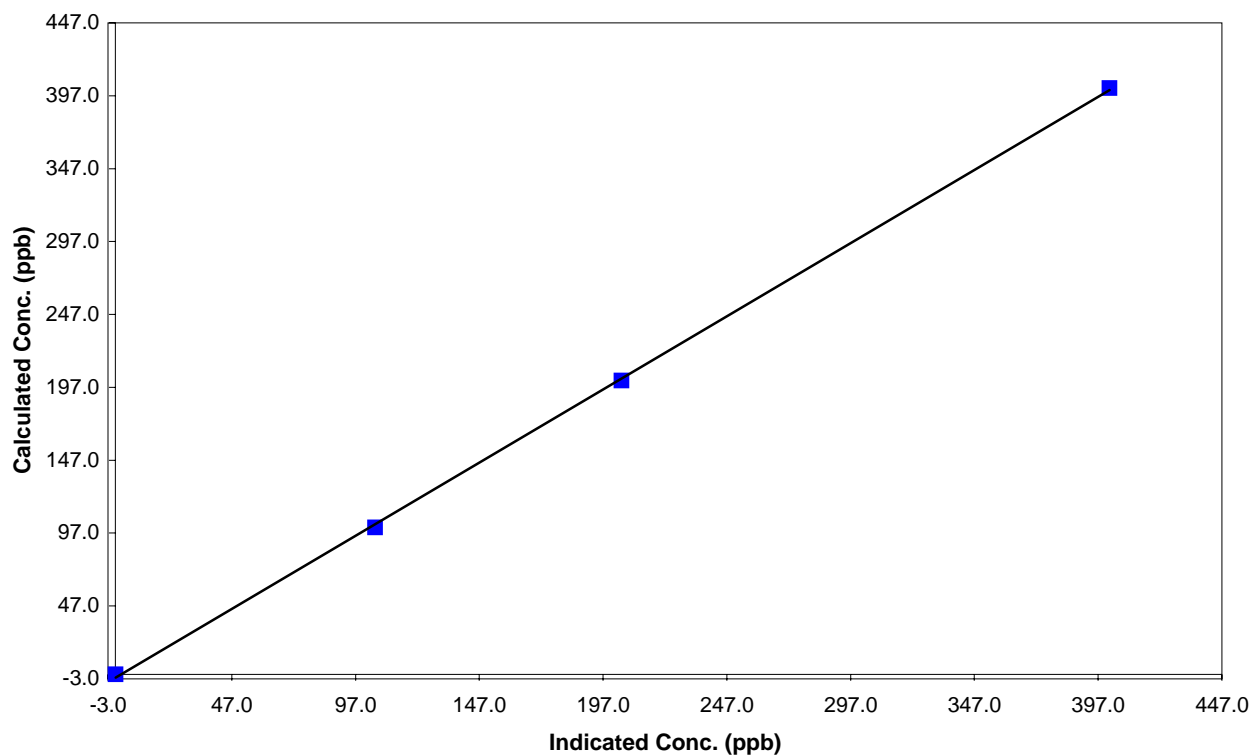
## Station Information

Calibration Date	August 19, 2010	Previous Calibration	July 13, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:35	End Time (MST)	12:19
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	0.999857
402.2	401.6	1.0015		
201.6	204.4	0.9863		
100.9	104.9	0.9617	Slope	1.004274
			Intercept	-2.346133

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



# Calibration Summary

Parameter NO

Air Monitoring Network PASZA



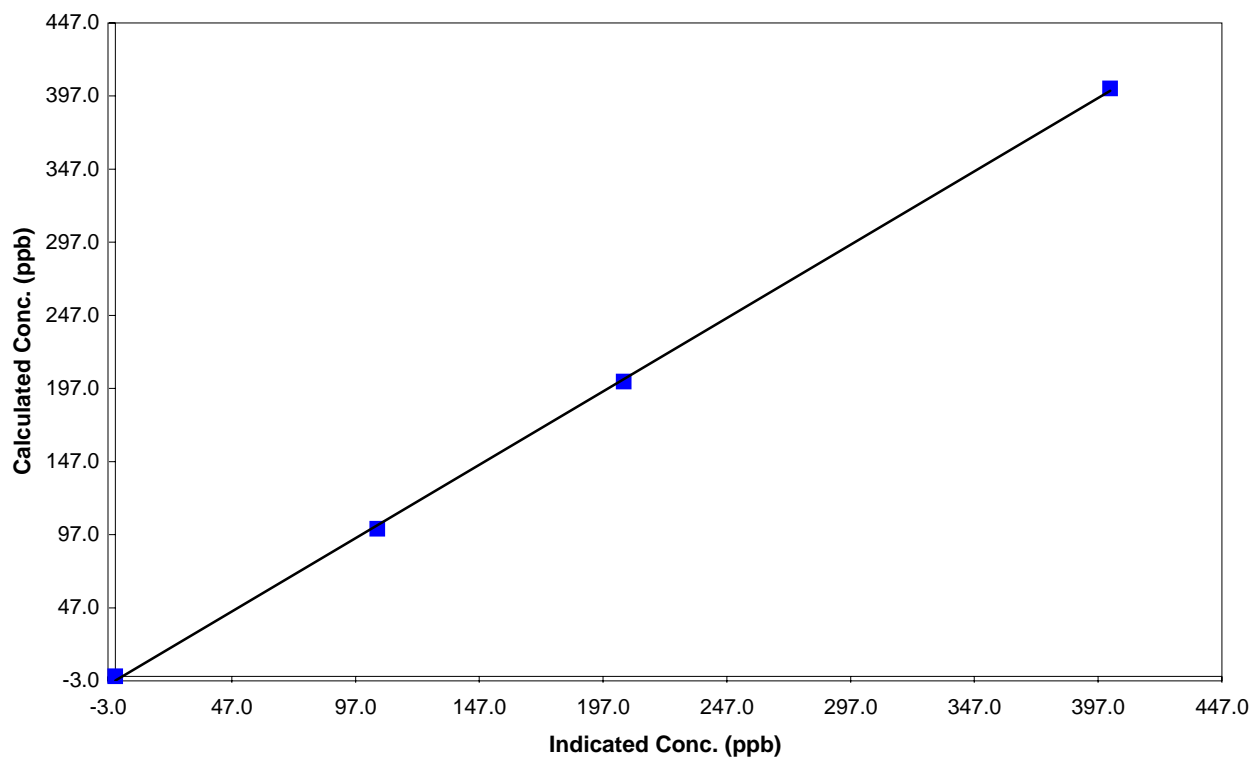
## Station Information

Calibration Date	August 19, 2010	Previous Calibration	July 13, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:35	End Time (MST)	12:19
Analyzer make	TEI 42C	Analyzer serial #	508011073

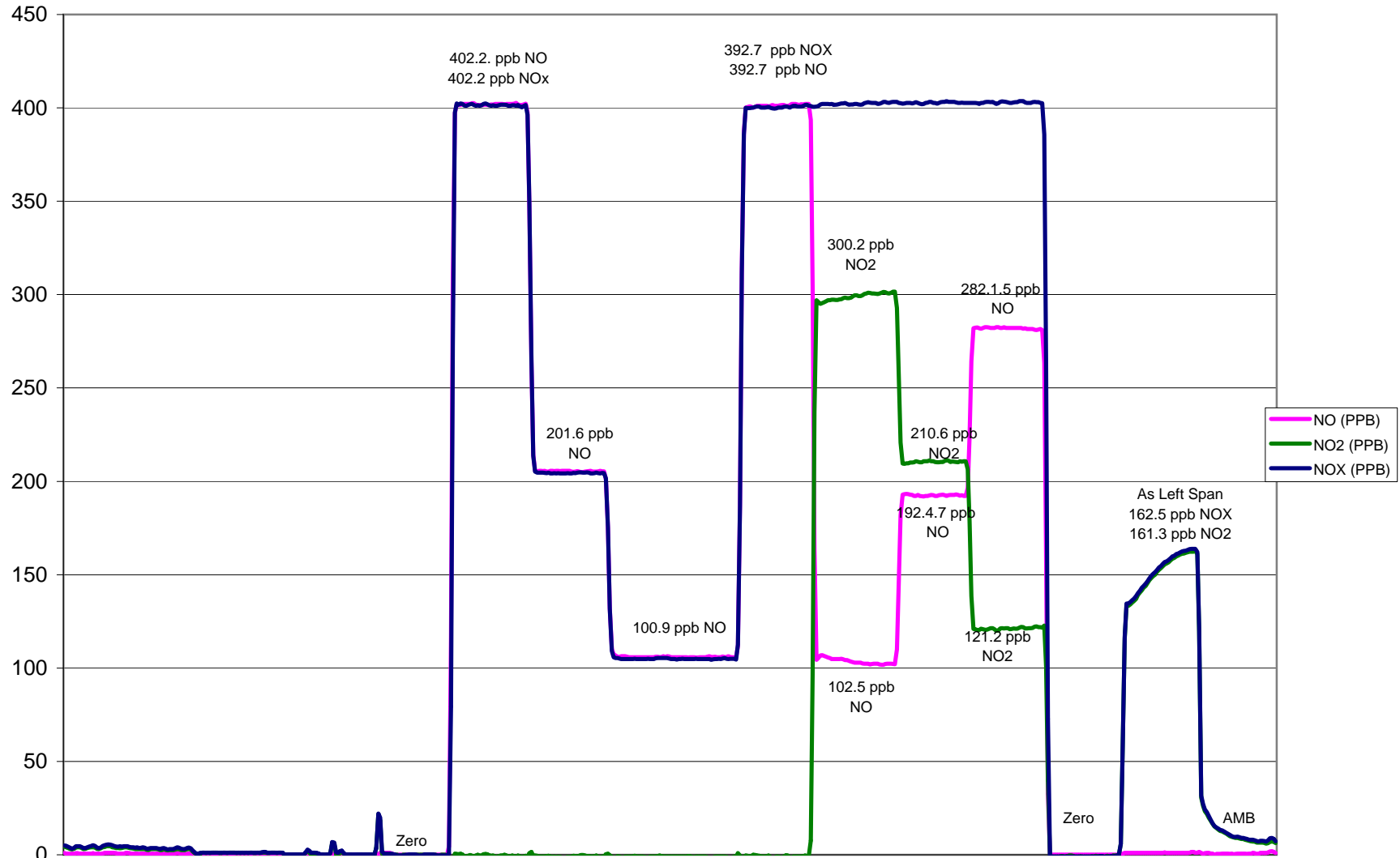
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999772
402.2	401.9	1.0007		
201.6	205.4	0.9817		
100.9	105.9	0.9524	Slope	1.003781
			Intercept	-2.801321

## NO Calibration Curve



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



August 19, 2010

# Calibration Report



Parameter 03

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 19, 2010	Previous Calibration	July 13, 2010
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)	11:00	End Time (MST)	13:37
Barometric Pressure	0.918 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
Calculated slope	0.991776	Calculated slope	0.998725
Calculated intercept	0.207748	Calculated intercept	0.589144
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.7	ppb	-0.6	ppb
slope	1.078		1.03	
O3 Lamp temp	71.1	Deg C	71	Deg C
Intensities	85170/73805	mV	85319/73915	mV
Pressure	680.7	inches Hg	691.4	inches Hg
Flow A	0.716	ccm	0.723	ccm
Flow B	0.731	ccm	0.737	ccm

## 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	-0.4	N/A
300	4991	300.2	300.5	0.9991
200	4991	210.6	209.6	1.0048
100	4991	121.2	120.8	1.0035
0	4991	0.0	-0.4	As found zero
300	4991	300.2	313.3	As found span
Average Correction Factor				1.0025

Calculated value of As Found Response: 311.3 ppm      Percent Change of As Found: 3.7%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	153.0	ppb	151.5	ppb

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

Calibration Performed By: Courtney Thompson

# Calibration Summary

Parameter           03          

Air Monitoring Network                           PASZA                          



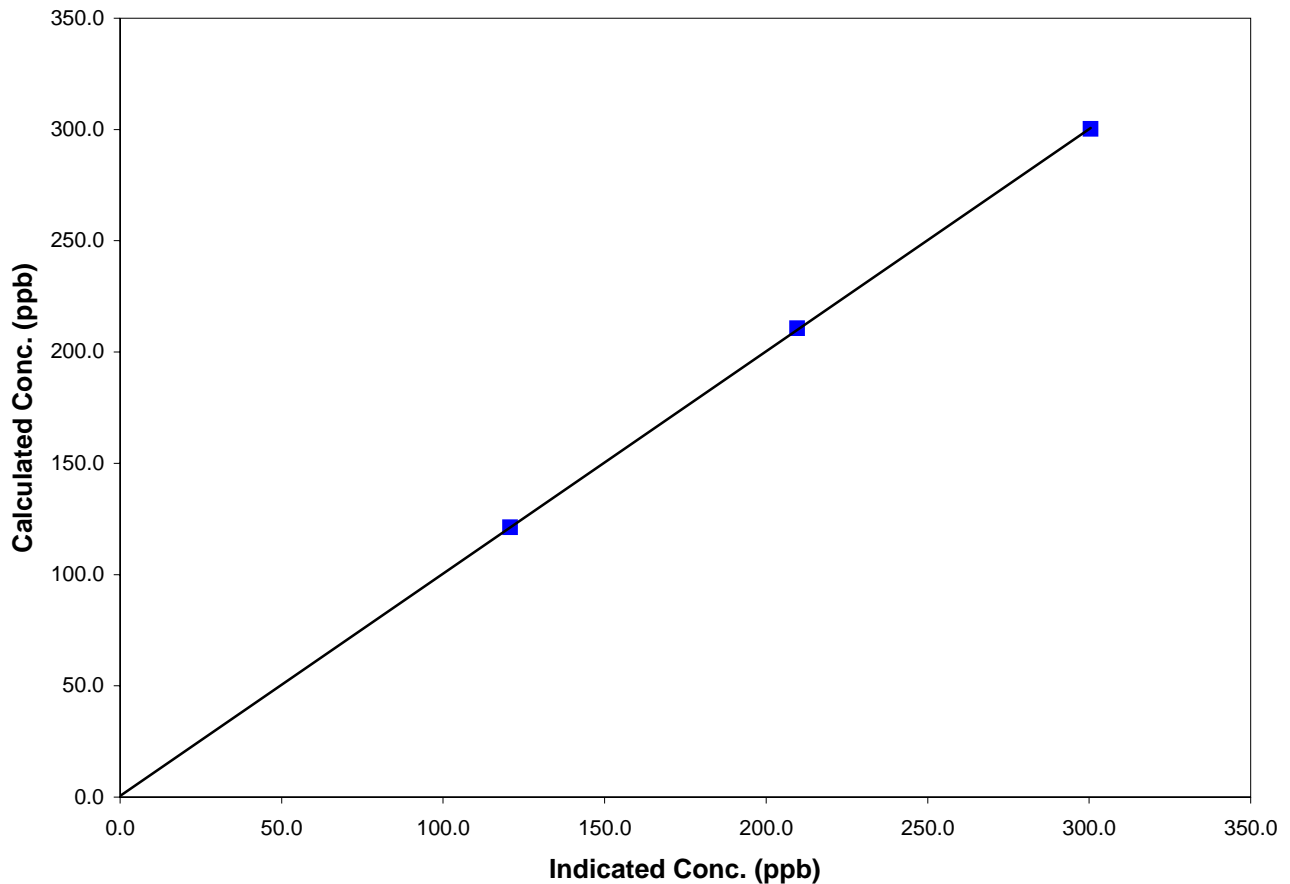
## Station Information

Calibration Date	August 19, 2010	Previous Calibration	July 13, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:00	End Time (MST)	13:37
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

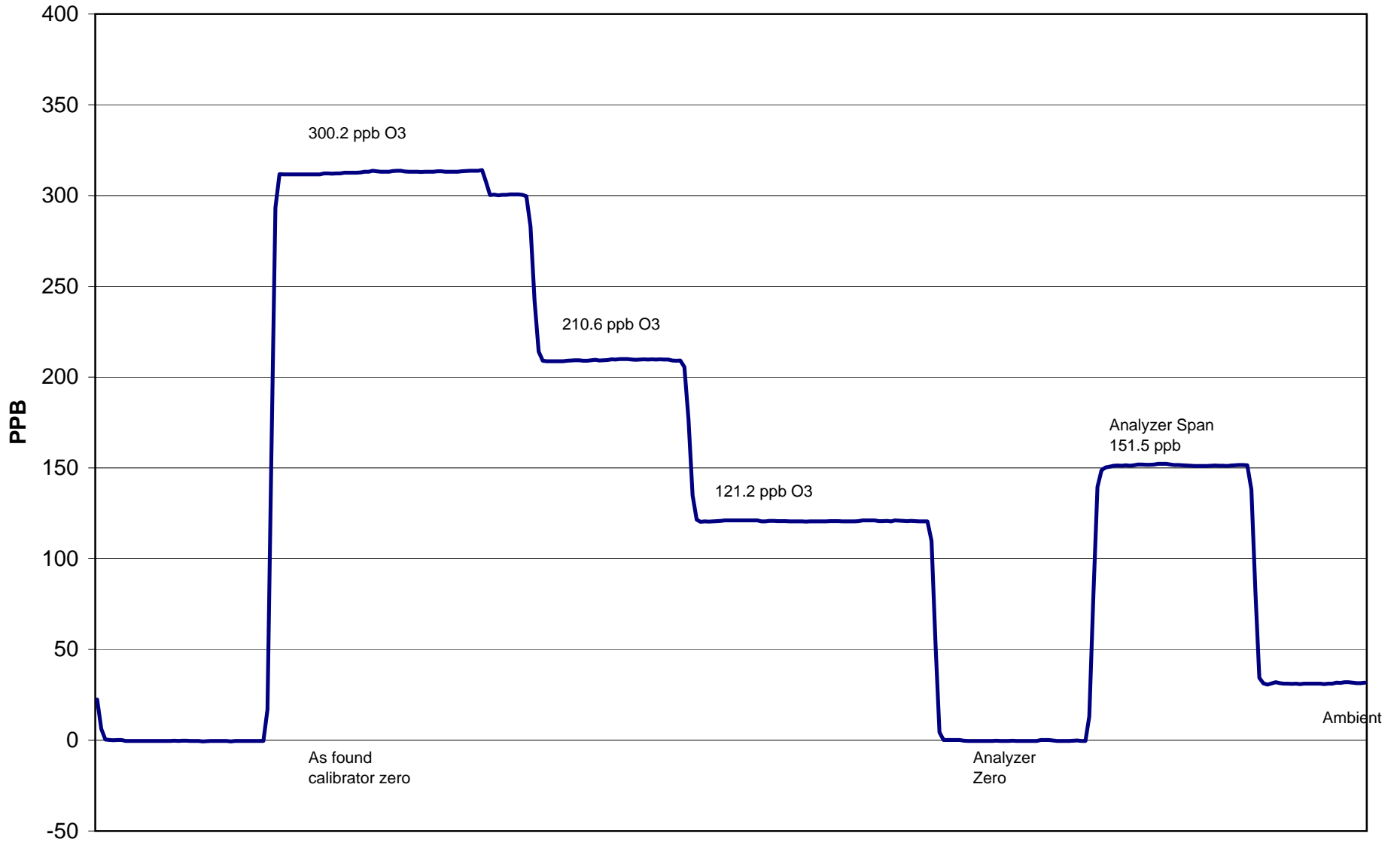
## Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	NA	Correlation Coefficient	0.999985
300.2	300.5	0.9991		
210.6	209.6	1.0048	Slope	0.998725
121.2	120.8	1.0035		

## O3 Calibration Curve



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



August 19, 2010



# Calibration Report



Parameter CO

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 17, 2010	Previous Calibration	July 14, 2010
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	9:05	End Time (MST)	11:25
Barometric Pressure	0.924 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	3000 ppm	Cal Gas Expiry Date	AUG 28/05
		Cal Gas Cylinder #	AAL20565
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.010206	Calculated slope	1.018502
Calculated intercept	-0.156745	Calculated intercept	-0.072281
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.062		1.062	
CO zero setting	9.671		9.769	
Sample pressure	690	mm Hg	680	mm Hg
Sample Flow	1.148	LPM	1.139	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	0.01	N/A
4991	39.84	23.76	23.37	1.0166
4991	19.90	11.91	11.79	1.0102
4991	9.95	5.97	5.99	0.9962
4991	0.00	0.00	0.01	As Found Zero
4991	39.84	23.76	23.37	As Found Span
Average Correction Factor				1.0077

Calculated value of As Found Response: 23.437 ppm      Percent Change of As Found: 1.4%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.43	ppm	19.46	ppm

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

Calibration Performed By: Courtney Thompson

# Calibration Summary



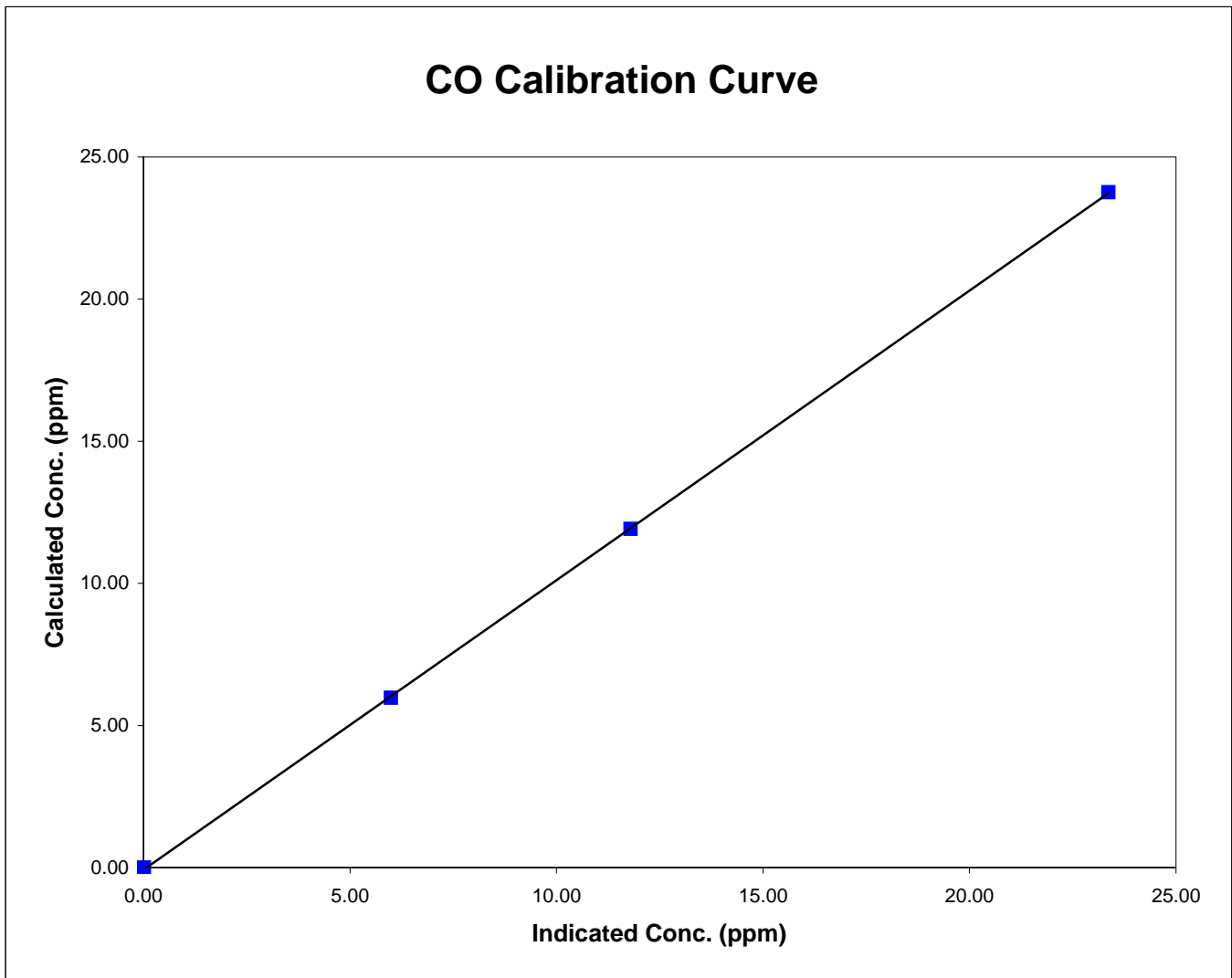
Parameter CO  
 Air Monitoring Network PASZA

### Station Information

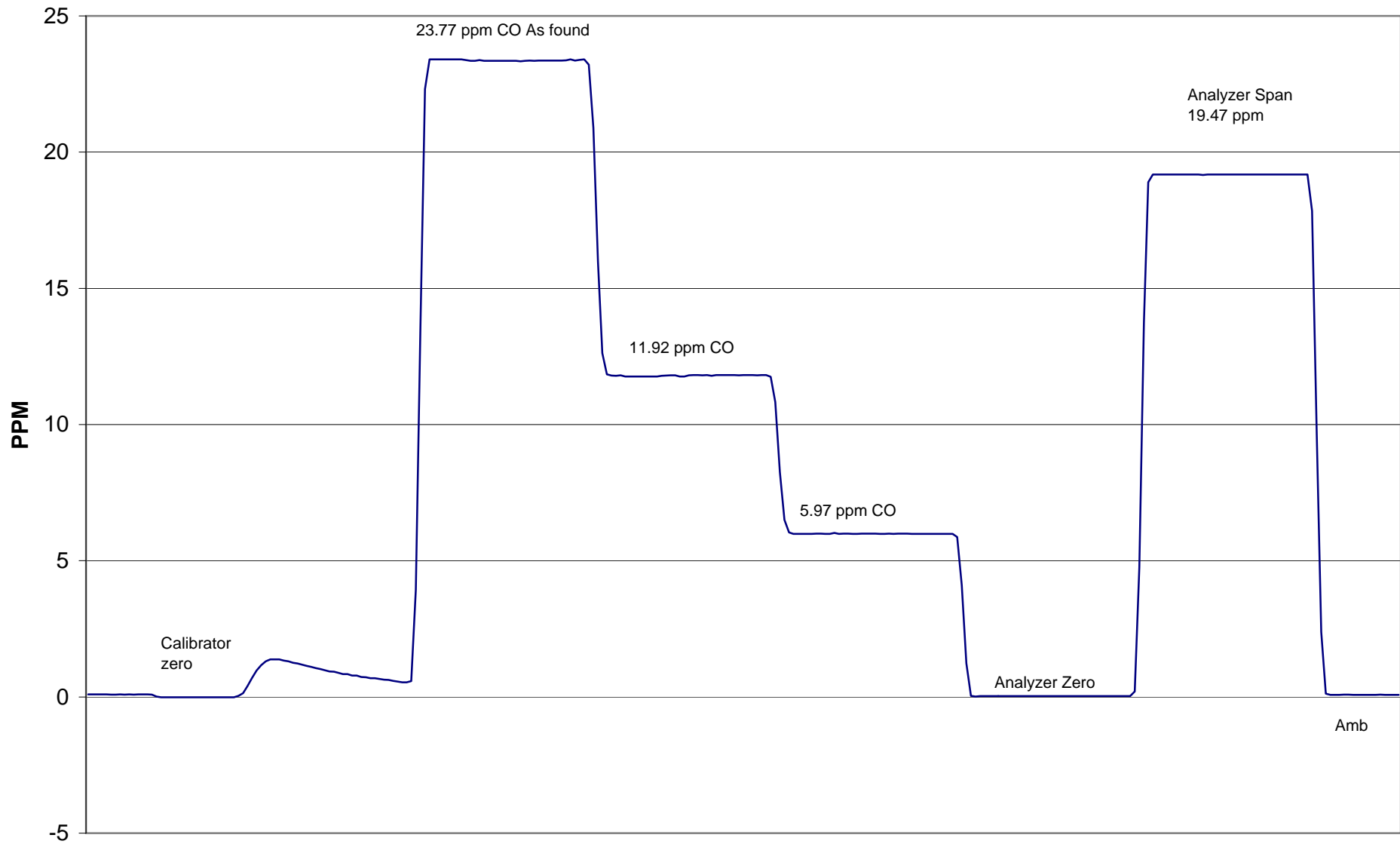
Calibration Date	August 17, 2010	Previous Calibration	July 14, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:05	End Time (MST)	11:25
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.014	N/A		
23.757	23.369	1.0166	Correlation Coefficient	0.999972
11.914	11.794	1.0102		
5.969	5.991	0.9962	Slope	1.018502
			Intercept	-0.072281



# Henry Pirker CO Calibration



August 17, 2010

# Calibration Report



Parameter THC  
 Air Monitoring Network PASZA

## Station Information

Calibration Date	August 17, 2010	Previous Calibration	July 14, 2010
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	10:45	End Time (MST)	13:03
Barometric Pressure	0.924 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	701 ppm CH4/ 299 ppm C3H8	Cal Gas Expiry Date	2/4/2010
Cal Gas CH4 equiv	1523.25 ppm	Cal Gas Cylinder #	ALM 004476
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
Calculated slope	1.011351	Calculated slope	1.005432
Calculated intercept	0.051047	Calculated intercept	0.127320
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.50	psi	6.50	psi
THC span counts	9613	capture	9611	capture
THC zero counts	442	capture	449	capture

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.00	-0.13	N/A
4991	69.73	20.99	20.77	1.0104
4991	29.90	9.07	8.82	1.0284
4991	9.92	3.02	2.94	1.0289
4989	0.00	0.00	-0.13	As Found Zero
4989	69.50	21.01	20.77	As Found Span
Average Correction Factor				1.0226

Calculated value of As Found Response: 21.193 ppm      Percent Change of As Found: -0.9%

	before calibration		after calibration	
Auto zero	0.10	ppm	-0.02	ppm
Auto span	25.45	ppm	23.29	ppm

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

Calibration Performed By: Grover Christiansen/Courtney Thompson

# Calibration Summary



Parameter THC  
 Air Monitoring Network PASZA

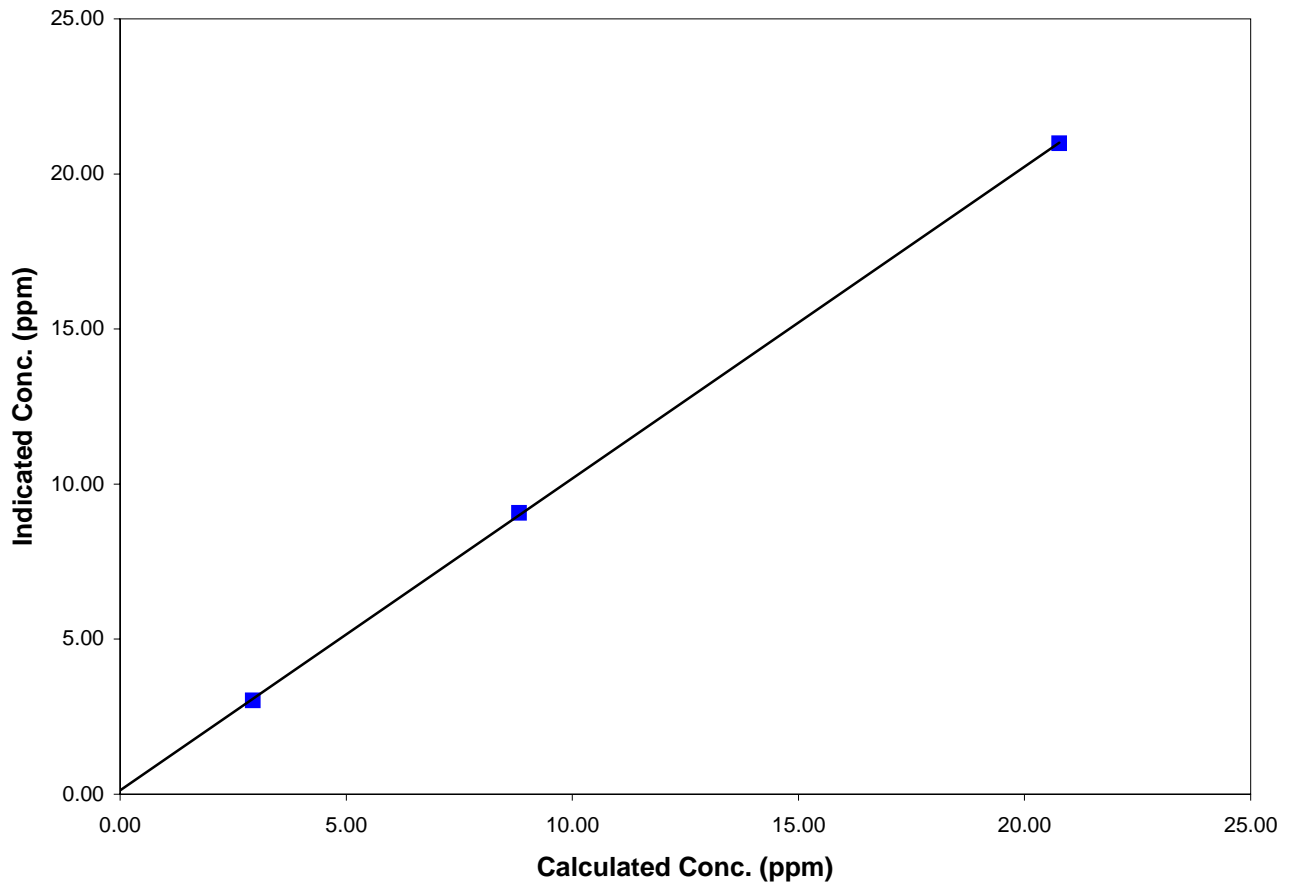
### Station Information

Calibration Date	August 17, 2010	Previous Calibration	July 14, 2010
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:45	End Time (MST)	13:03
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

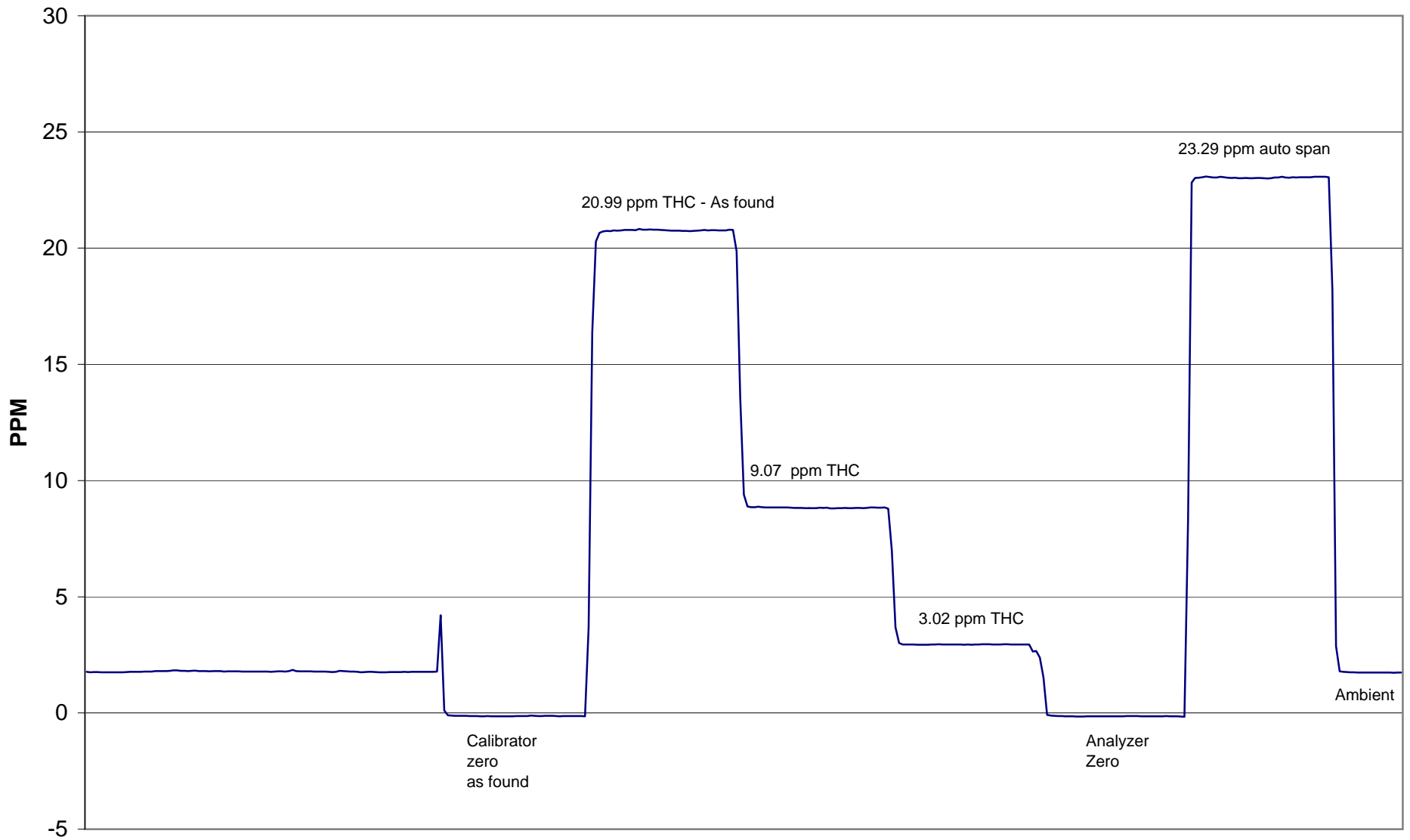
### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.133	N/A	Correlation Coefficient	0.999963
20.988	20.772	1.0104		
9.071	8.821	1.0284	Slope	1.005432
3.022	2.937	1.0289		
			Intercept	0.127320

## THC Calibration Curve



# Henry Pirker THC Calibration



August 17, 2010

# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 20, 2010	Previous Calibration	July 1, 2010
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)	9:00	End Time (MST)	11:47
Barometric Pressure	0.918 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	4/6/2012
Correction factor	0.031205	Cal Gas Cylinder #	SGAL3245
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.011732	Calculated slope	0.994377
Calculated intercept	-2.489173	Calculated intercept	-2.880386
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	11		11	
coefficient	1.051		1.051	
Lamp Voltage	824	volts	826	volts
Chamber Temp	45.1	Deg C	45.3	Deg C
Perm Gas Temp	45.00	Deg C	44.99	Deg C
Pressure	662.5	mm Hg	664.1	mm Hg
Sample Flow	0.448	ccm	0.449	ccm
Lamp Intensity	89	%	91	%

## 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	0.1	N/A
4991	39.85	407.94	411.8	0.9907
4991	19.91	204.63	209.8	0.9753
4991	9.96	102.57	109.1	0.9401
4991	0.0	0.00	0.1	As Found Zero
4991	39.85	407.94	411.8	As Found Span
Average Correction Factor				0.9687

Calculated value of As Found Response: 414.004 ppm      Percent Change of As Found: -1.5%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.1	ppm
Auto span	286.9	ppm	292.0	ppm

Notes:

Calibration Performed By: Courtney Thompson

# Calibration Summary



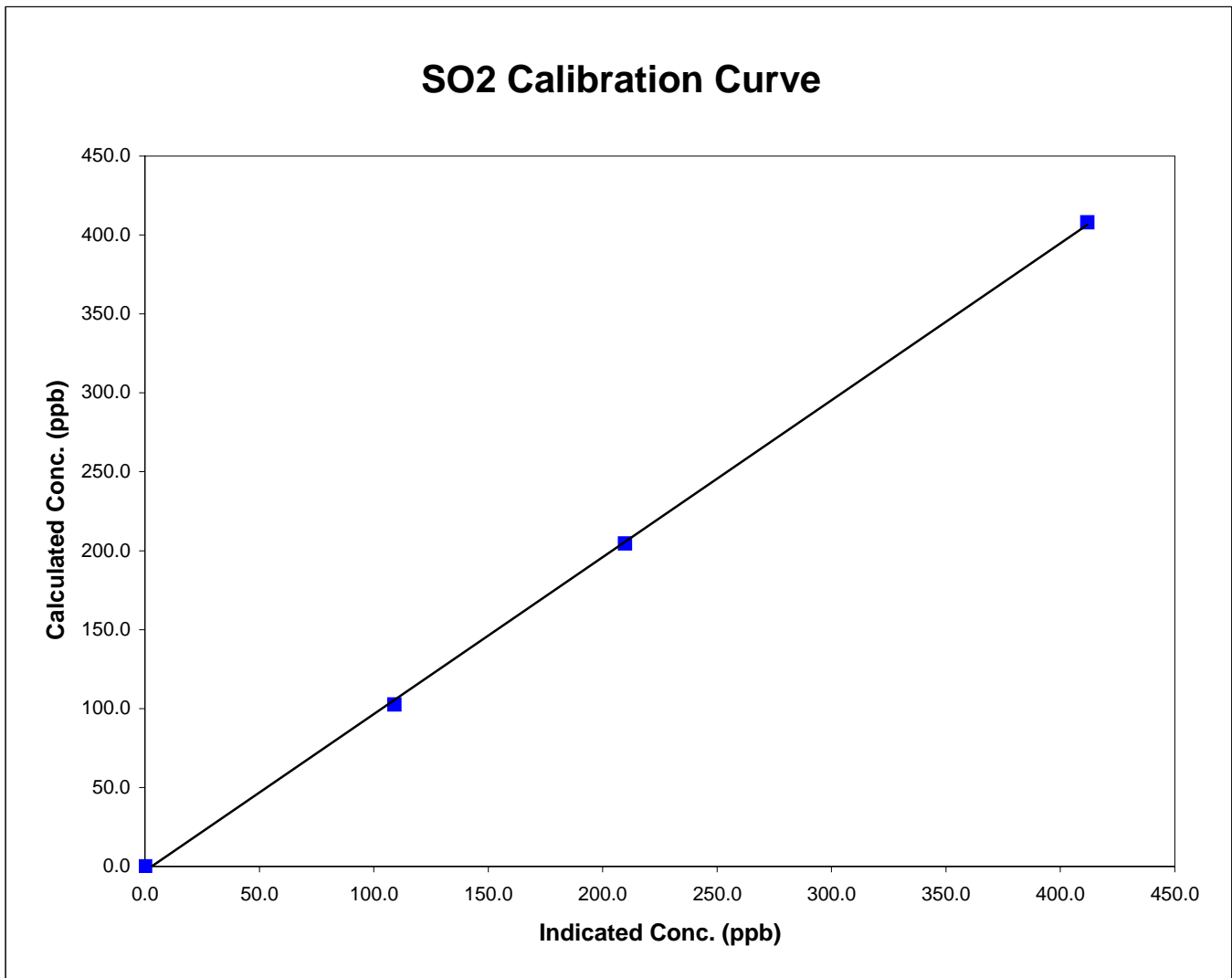
Parameter SO2  
 Air Monitoring Network PASZA

### Station Information

Calibration Date	August 20, 2010	Previous Calibration	July 1, 2010
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:00	End Time (MST)	11:47
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

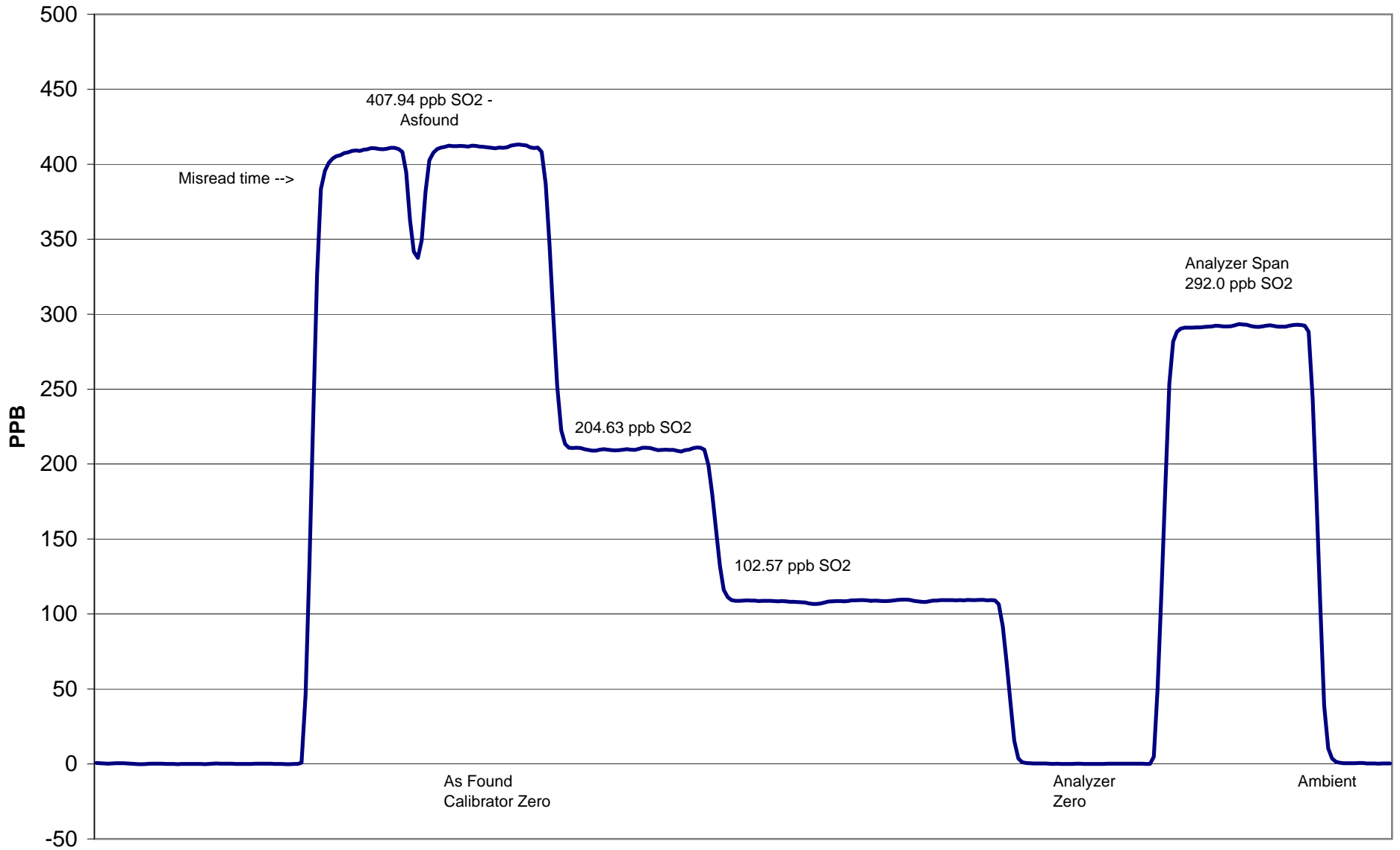
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999778
407.9	411.8	0.9907		
204.6	209.8	0.9753		
102.6	109.1	0.9401	Slope	0.994377
			Intercept	-2.880386





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



August 20, 2010



## Calibration Summary

Parameter           TRS          

Air Monitoring Network                                   PASZA                                  



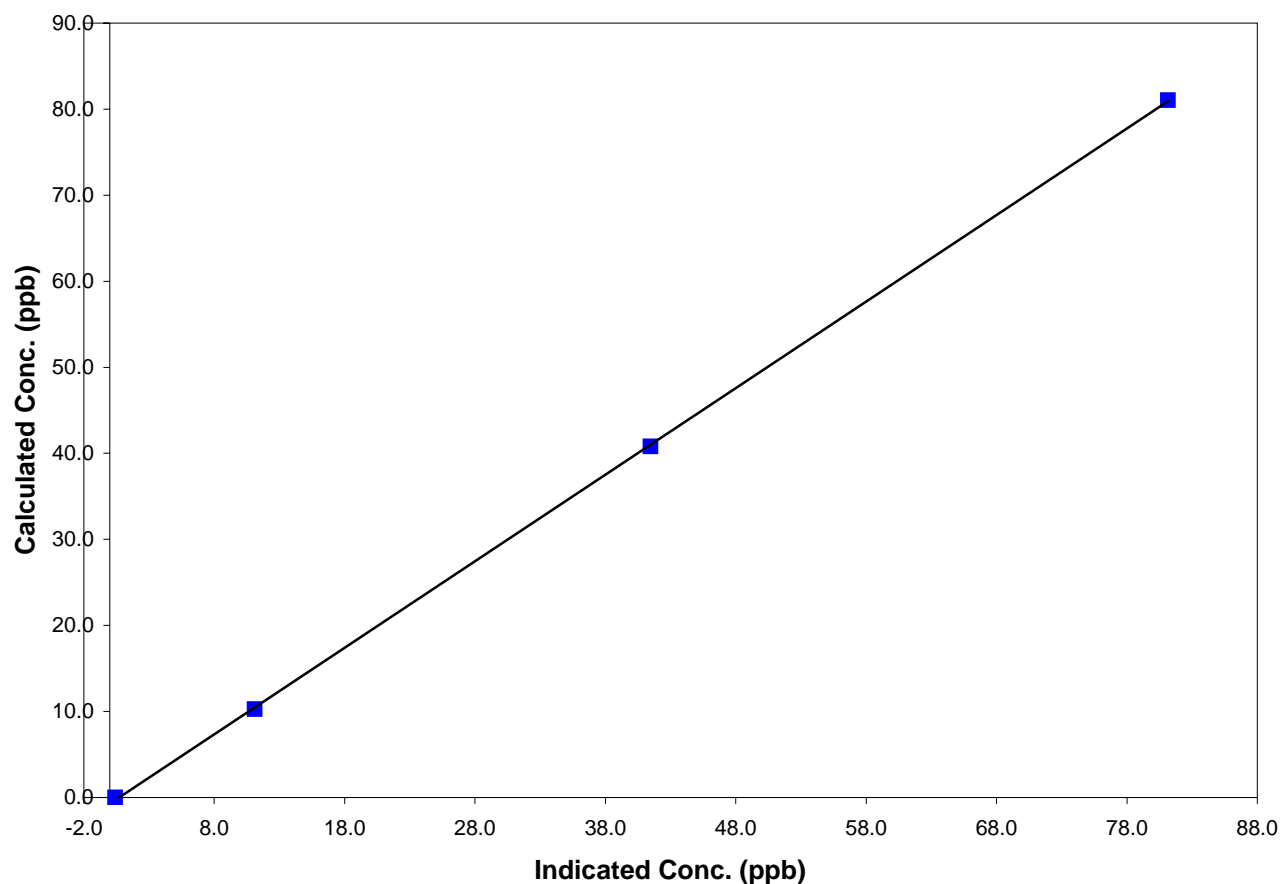
### Station Information

Calibration Date	August 20, 2010	Previous Calibration	July 12, 2010
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	7:53	End Time (MST)	10:18
Analyzer make/model	TEI Model 43C	Analyzer serial #	436610005

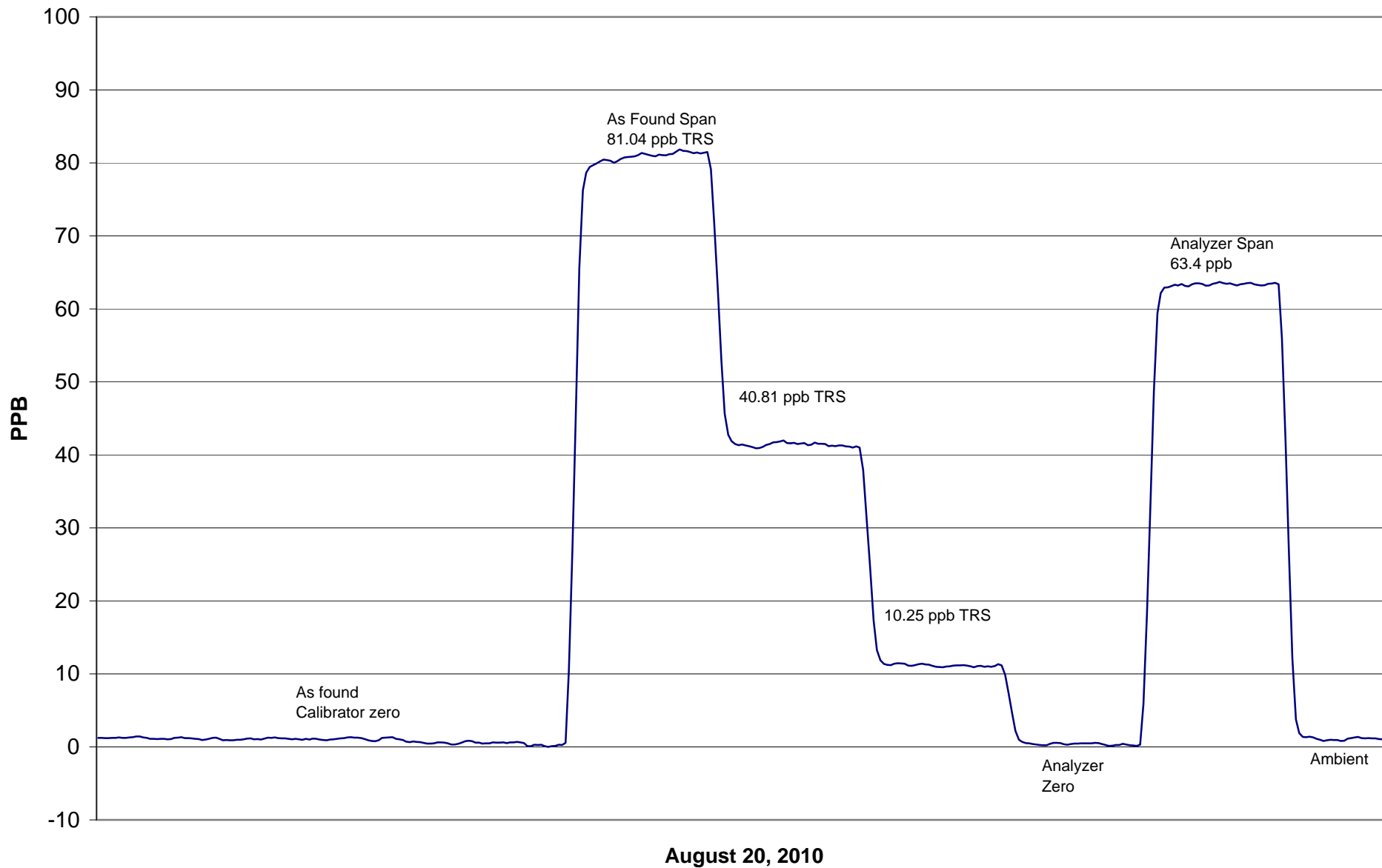
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999954
81.0	81.2	0.9986		
40.8	41.5	0.9844		
10.2	11.1	0.9222	Slope	1.005684
			Intercept	-0.701182

### TRS Calibration Curve



# Evergreen Park TRS Calibration



# Calibration Report



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

## Station Information

Calibration Date	August 8, 2010	Previous Calibration	July 16, 2010
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)	9:10	End Time (MST)	11:35
Barometric Pressure	0.923 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Cert Date	7/23/2010
Correction factor	0.031375	Cal Gas Cylinder #	SGAL 3245
DACS make	Focus AP1000	DACS serial No.	45272
DACS voltage range	0 - 10 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.005020	Calculated slope	1.007220
Calculated intercept	-2.419343	Calculated intercept	-3.173965
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.9		8.6	
coefficient	0.698		0.676	
Lamp Voltage	919	volts	919	volts
Chamber Temp	45.2	Deg C	45.1	Deg C
Perm Gas Temp	45	Deg C	45.01	Deg C
Pressure	664.2	mm Hg	661.1	mm Hg
Sample Flow	0.440	ccm	0.437	ccm
Lamp Intensity	88	%	88	%

## Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.0	0.00	0.3	N/A
4989	39.84	408.00	406.6	1.0034
4989	19.91	204.71	208.1	0.9836
4989	9.95	102.51	107.7	0.9522
4989	0.0	0.00	0.3	As Found Zero
4989	39.84	408.00	420.4	As Found Span
Average Correction Factor				0.9797

Calculated value of As Found Response: 419.7 ppm      Percent Change of As Found: -2.9%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.3	ppb
Auto span	311.6	ppb	304.7	ppb

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

Calibration Performed By: Courtney Thompson

# Calibration Summary



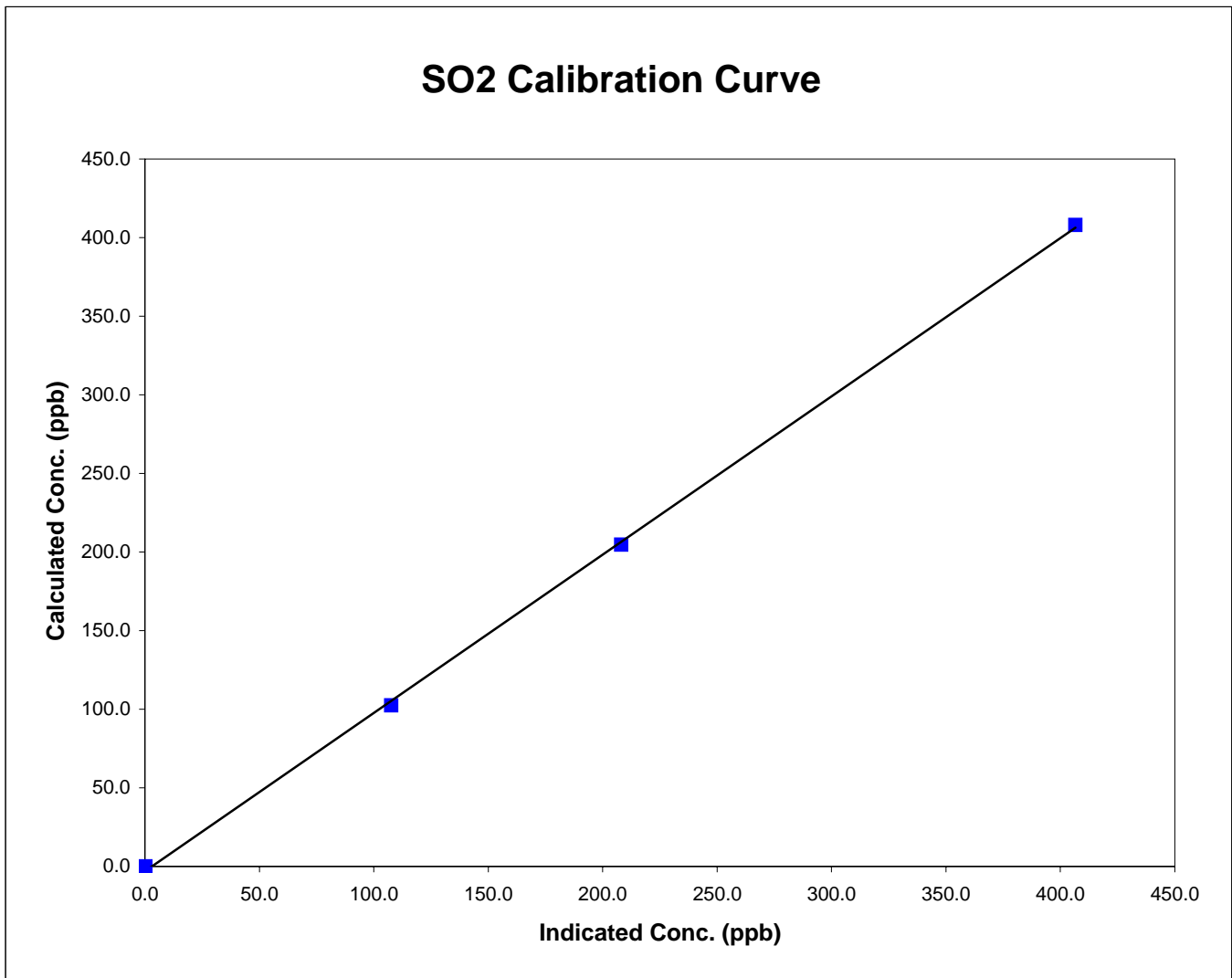
Parameter SO2  
 Air Monitoring Network PASZA

### Station Information

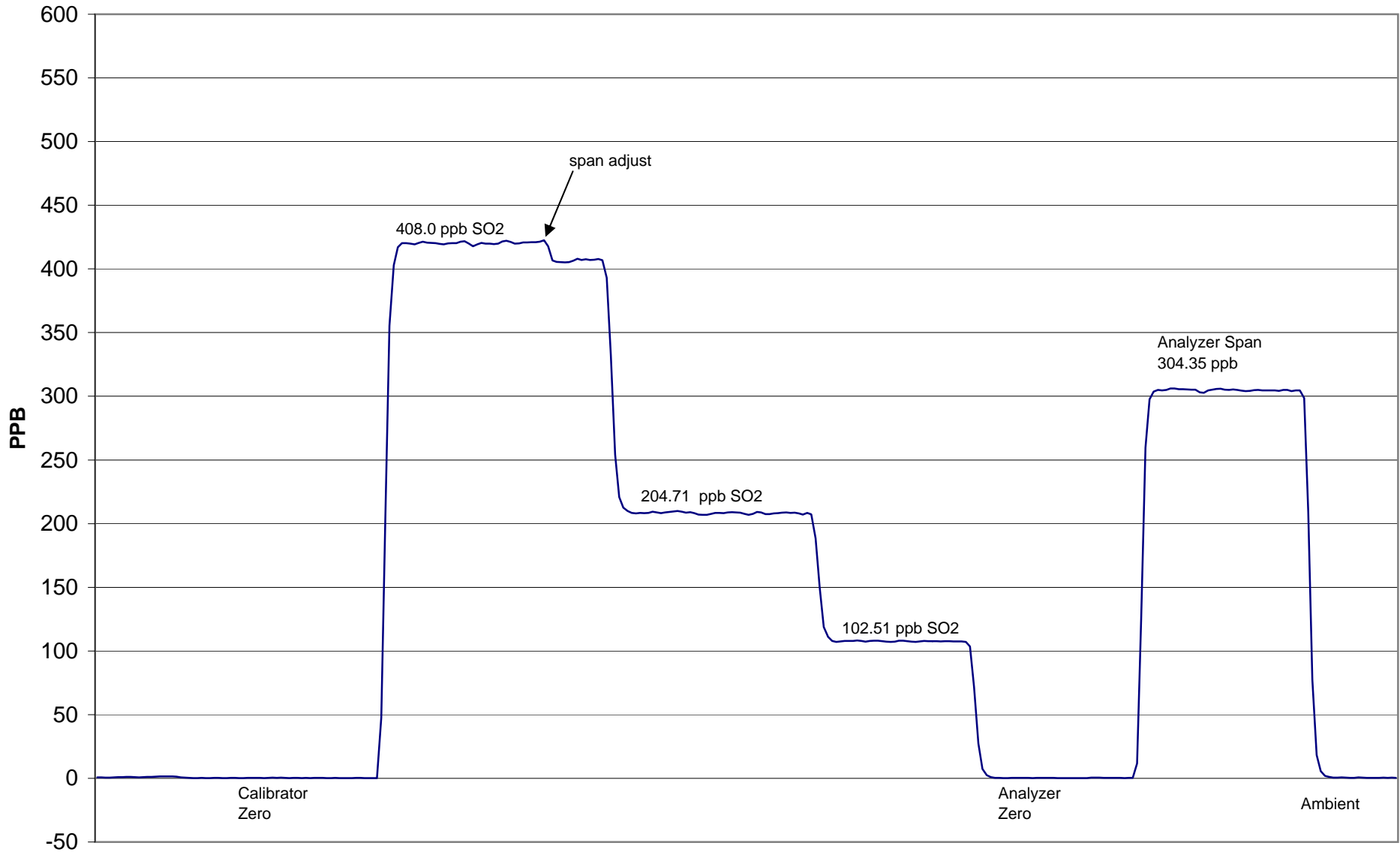
Calibration Date	August 8, 2010	Previous Calibration	July 16, 2010
Station Number	3	Station Location	Smoky Heights
Start Time (MST)	9:10	End Time (MST)	11:35
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
408.0	406.6	1.0034	Correlation Coefficient	0.999765
204.7	208.1	0.9836		
102.5	107.7	0.9522	Slope	1.007220
			Intercept	-3.173965



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



August 8, 2010

# Calibration Report



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

## Station Information

Calibration Date	August 8, 2010	Previous Calibration	July 16, 2010
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)		End Time (MST)	
Barometric Pressure	0.923 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	5.15 ppm	Cal Gas Expiry Date	4/2/2009
Correction factor	0.031375	Cal Gas Cylinder #	ALM013295
DACS make	Focus AP1000	DACS serial No.	52620
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	1.009022	Calculated slope	1.025244
Calculated intercept	-0.104999	Calculated intercept	-0.338848
Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	14.1	ppb	13.7	ppb
coefficient	0.995		0.995	
Lamp Voltage	761	volts	762	volts
Chamber Temp	43.7	Deg C	43.6	Deg C
Perm Gas Temp	45	Deg C	45.01	Deg C
Pressure	481.3	mm Hg	506.2	mm Hg
Sample Flow	0.708	ccm	0.740	ccm
Lamp Intensity	32,512	mv	32,442	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.0	0.00	0.0	N/A
4990	79.77	81.03	79.3	1.0221
4990	39.85	40.80	40.2	1.0142
4990	9.94	10.24	10.6	0.9658
4990	0.0	0.00	0.0	As Found Zero
4990	79.77	81.03	79.3	As Found Span
Average Correction Factor				1.0007

Calculated value of As Found Response: 79.85 ppm      Percent Change of As Found: 1.5%

	before calibration		after calibration	
Auto zero	0.0	ppm	-0.1	ppm
Auto span	40.8	ppm	42.0	ppm

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

Calibration Performed By:                  Courtney Thompson



# Calibration Summary



Parameter          **TRS**                 

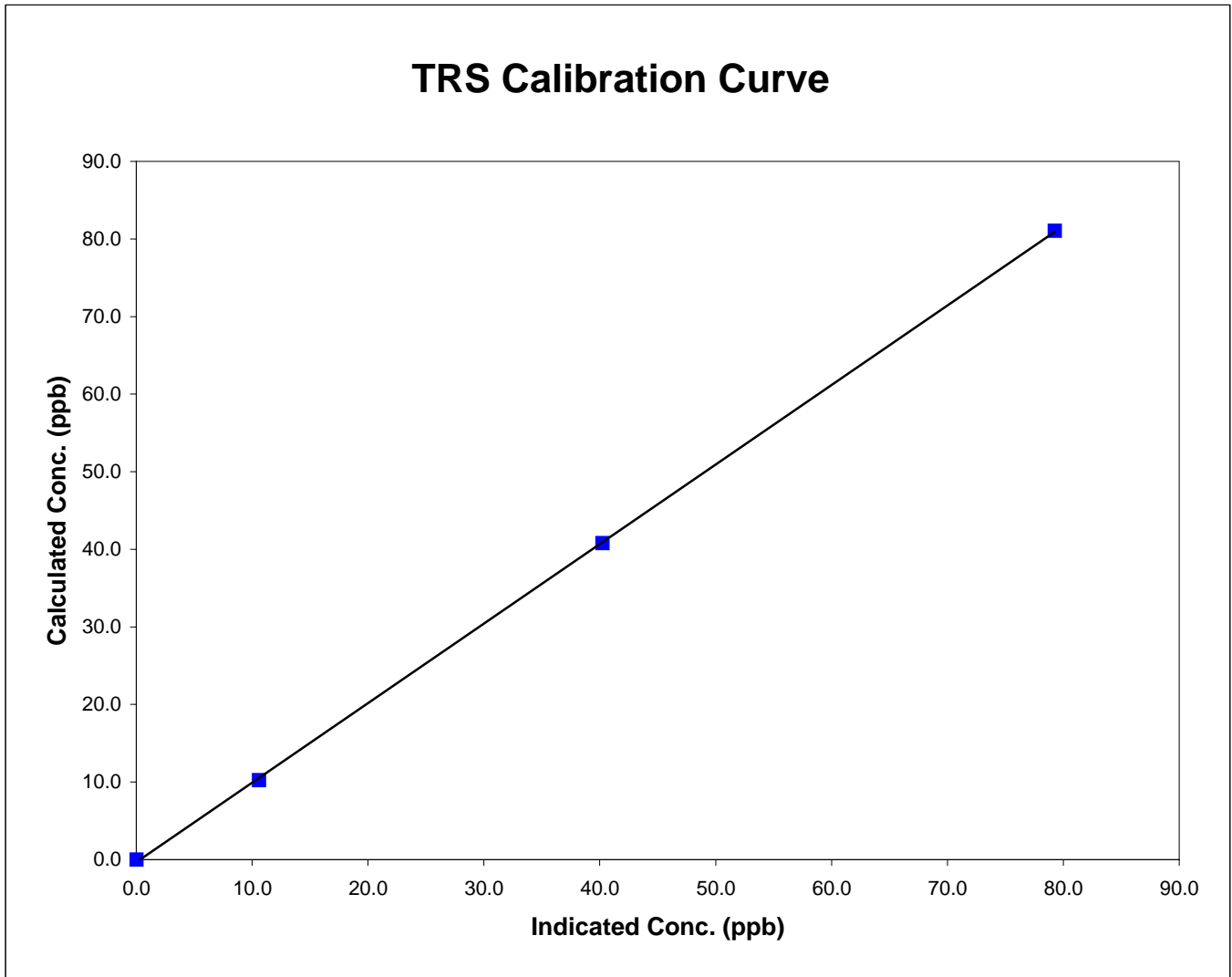
Air Monitoring Network                                  **PASZA**                                 

## Station Information

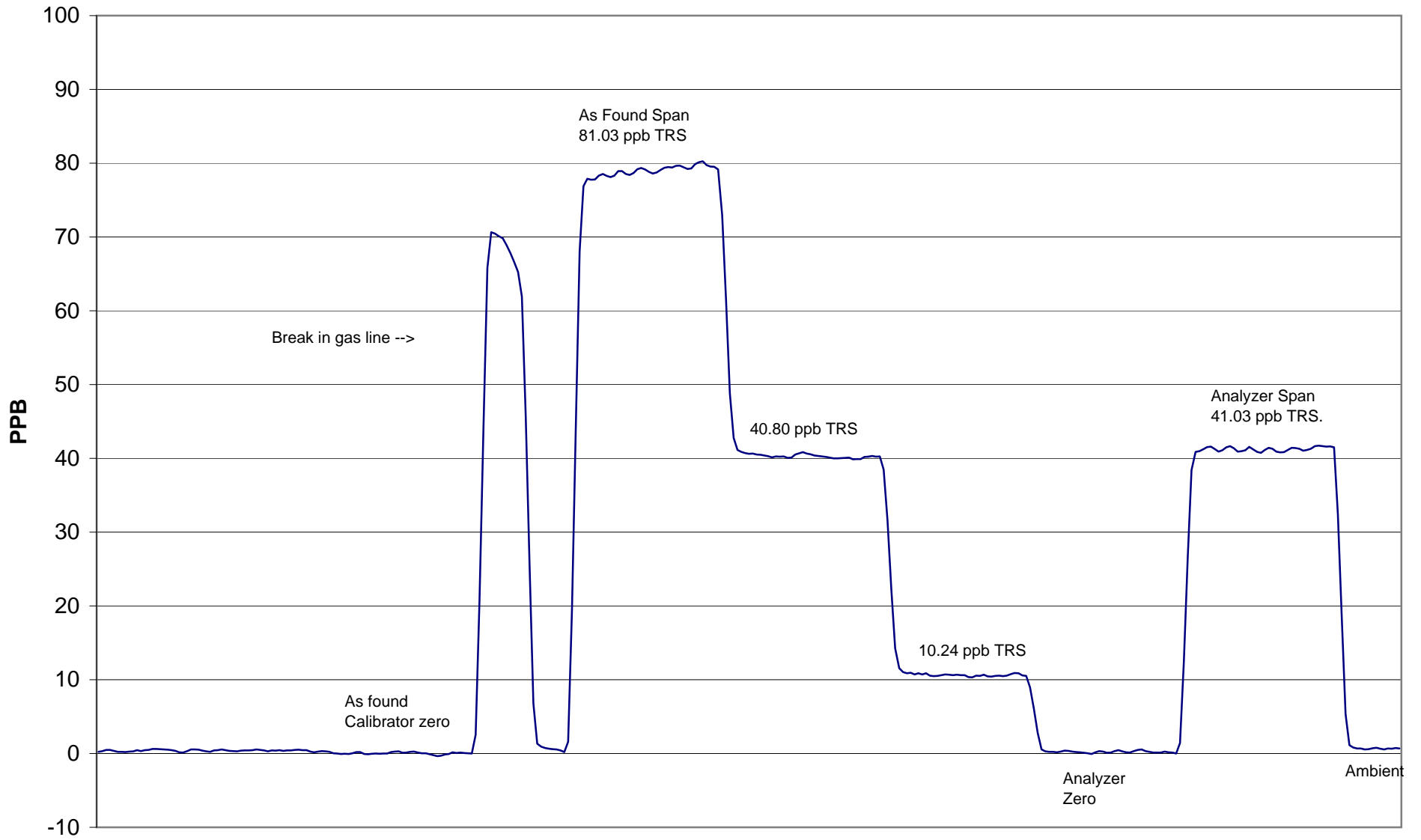
Calibration Date	<u>        </u> August 8, 2010 <u>        </u>	Previous Calibration	<u>        </u> July 16, 2010 <u>        </u>
Station Number	<u>        </u> 3 <u>        </u>	Station Location	<u>        </u> Smoky Heights <u>        </u>
Start Time (MST)	<u>        </u> 0:00 <u>        </u>	End Time (MST)	<u>        </u> 0:00 <u>        </u>
Analyzer make/model	<u>        </u> TEI Model 43C <u>        </u>	Analyzer serial #	<u>        </u> 0436610005 <u>        </u>

## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
			Correlation Coefficient	
0.0	0.0	N/A	Correlation Coefficient	0.999951
81.0	79.3	1.0221		
40.8	40.2	1.0142		
10.2	10.6	0.9658	Slope	1.025244
			Intercept	-0.338848



# Smoky Heights TRS Calibration



August 8, 2010

# Calibration Report



Parameter SO2

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 6, 2010	Previous Calibration	July 15, 2010
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)	9:45	End Time (MST)	13:16
Barometric Pressure	0.904 atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	10.06 ppm	Cal Gas Expiry Date	7/27/2009
Gas Cert Reference	CC 114395		
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 10 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.997466	Calculated slope	1.011316
Calculated intercept	-0.461042	Calculated intercept	-0.255174
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.5		2.51	
Coefficient	0.904		0.904	
PMT	-813.3	V	-813.3	V
UV Lamp Voltage	1097	V	1092	V
Chamber Temp	44.9	Deg C	45.4	Deg C
Pressure	660.1	mm Hg	655.9	mm Hg
Sample Flow	0.498	LPM	0.495	LPM
Lamp Intesity	86%	%	86%	%

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.0	N/A
4988	39.82	79.7	78.6	1.0139
4988	19.90	40.0	40.8	0.9804
4988	9.93	20.0	19.8	1.0115
4988	0.00	0.0	0.0	As found zero
4988	39.82	79.7	78.6	As found span
Average Correction Factor				1.0019

Calculated value of As Found Response: 77.953 ppm      Percent Change of As Found: 2.2%

	before calibration		after calibration	
Auto zero	-0.3	ppb	-0.3	ppb
Auto span	59.7	ppb	57.7	ppb

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

Calibration Performed By: Courtney Thompson

# Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



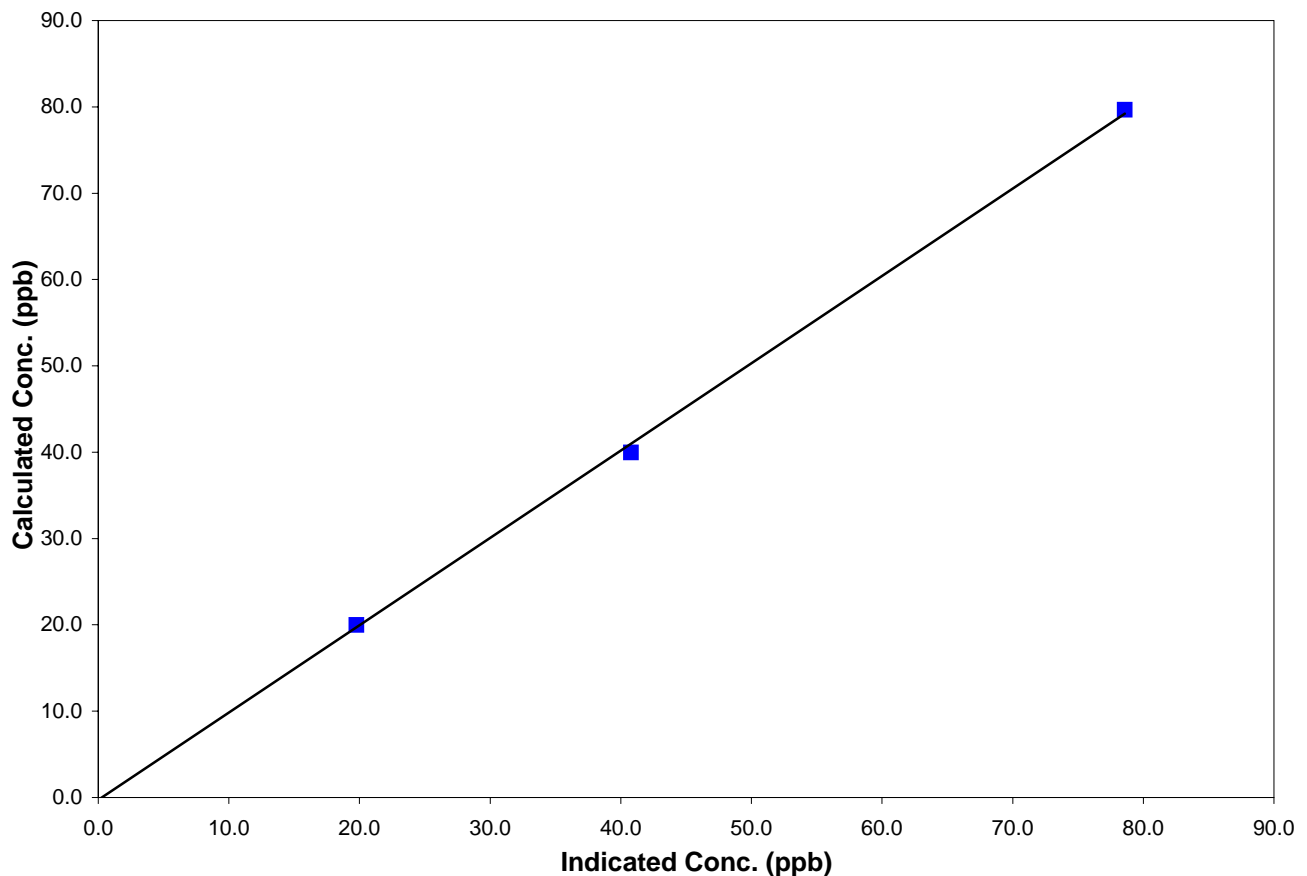
## Station Information

Calibration Date	August 6, 2010	Previous Calibration	July 15, 2010
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:45	End Time (MST)	13:16
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

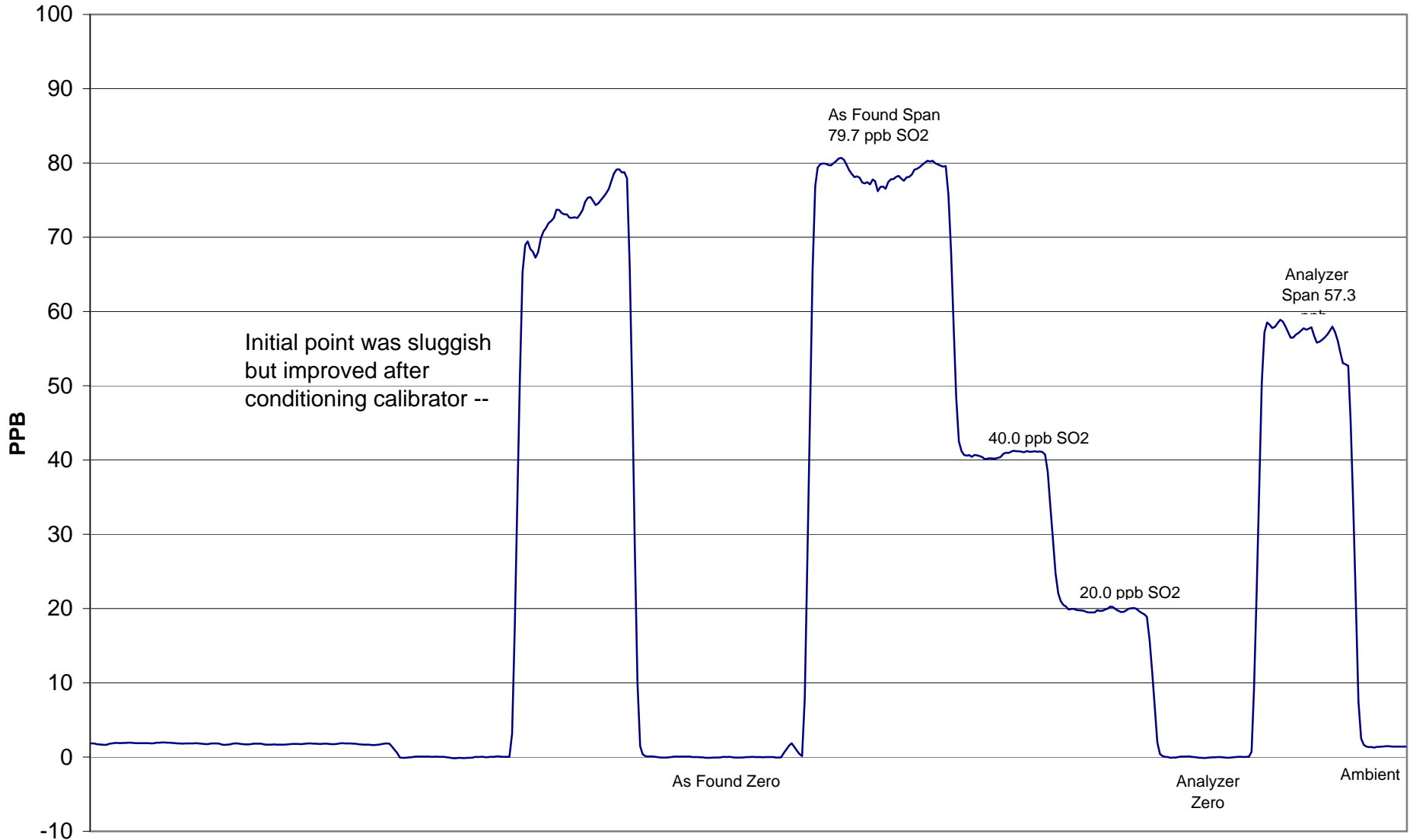
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
79.7	78.6	1.0139	Correlation Coefficient	0.999605
40.0	40.8	0.9804		
20.0	19.8	1.0115	Slope	1.011316
			Intercept	-0.255174

## SO2 Calibration Curve



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



August 6, 2010

# Calibration Report

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



## Station Information

Calibration Date	August 6, 2010	Previous Calibration	July 5, 2010
Station Number	4	Station Location	BeaverLodge
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Installation	<input type="checkbox"/> Removal
Start Time (MST)	9:45	End Time (MST)	14:46
Barometric Pressure	0.904 Atm	Station Temperature	23.0 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	0.996963	1.042544	1.041132
	Data Offset	0.092437	-2.271972	-1.261478
After	Data Slope	0.996918	1.006108	1.003460
	Data Offset	0.949432	-2.513441	-1.829574
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	0-500	ppb	0-500	ppb
NO offset	2.3	mV	2.6	mV
NOx bkgnd	2.6	mV	2.9	mV
NO coefficient	1.405		1.591	
NOx coefficient	0.994		0.993	
NO2 conv temp	322.1	Deg C	325.0	Deg C
PMT Temp	-3.1	Deg C	-3.1	Deg C
PMT Volt	-676.7	mV	-676.7	mV
R Cell Press	193.0	in Hg	190.6	in Hg
Sample Flow	0.718	ccm	0.703	ccm

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# Calibration Report

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



## Station Information

Calibration Date: August 6, 2010 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	0.0	0.0	-0.1	N/A	N/A
1	4988	39.82	397.6	396.8	0.8	396.2	396.3	-0.4	1.0034	1.0013
2	4988	19.90	199.5	199.1	0.4	202.4	201.2	0.5	0.9856	0.9897
3	4988	9.93	99.7	99.5	0.2	103.9	102.9	0.7	0.9597	0.9674
AFZ	4988	0.00	0.0	0.0	0.0	0.0	0.0	-0.1	0.0000	0.0000
AFS	4988	39.84	397.8	397.0	0.8	350.2	349.9	0.0	1.1360	1.1346
Average Correction Factor									0.9829	0.9861

As Found Concentrations: NO<sub>x</sub>= 347.9 NO= 348.7 As Found Percent Change NO<sub>x</sub>= -12.5% NO= -12.2%

## 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	0.0	0.0	0.0	0.0	0.0	-0.1	N/A	N/A	N/A	N/A
NO point	397.8	397.8	0.0	398.4	397.8	0.3	0.9985	1.0000	N/A	N/A
300	397.8	141.5	256.3	398.8	141.5	257.1	0.9975	1.0000	0.9972	100.3%
200	397.8	222.9	174.9	396.9	222.9	173.6	1.0022	1.0000	1.0075	99.3%
100	397.8	305.6	92.2	396.4	305.6	90.7	1.0035	1.0000	1.0163	98.4%
Average Correction Factor							1.0011	1.0000	1.0070	99.3%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	-0.3	-0.2	ppb	0.0	-0.2	0.0	ppb
Auto span	202.3	192.5	1.9	ppb	218.7	216.0	1.9	ppb

Calibration Performed By: Courtney Thompson

# Calibration Summary



Parameter NO<sub>2</sub>

Air Monitoring Network PASZA

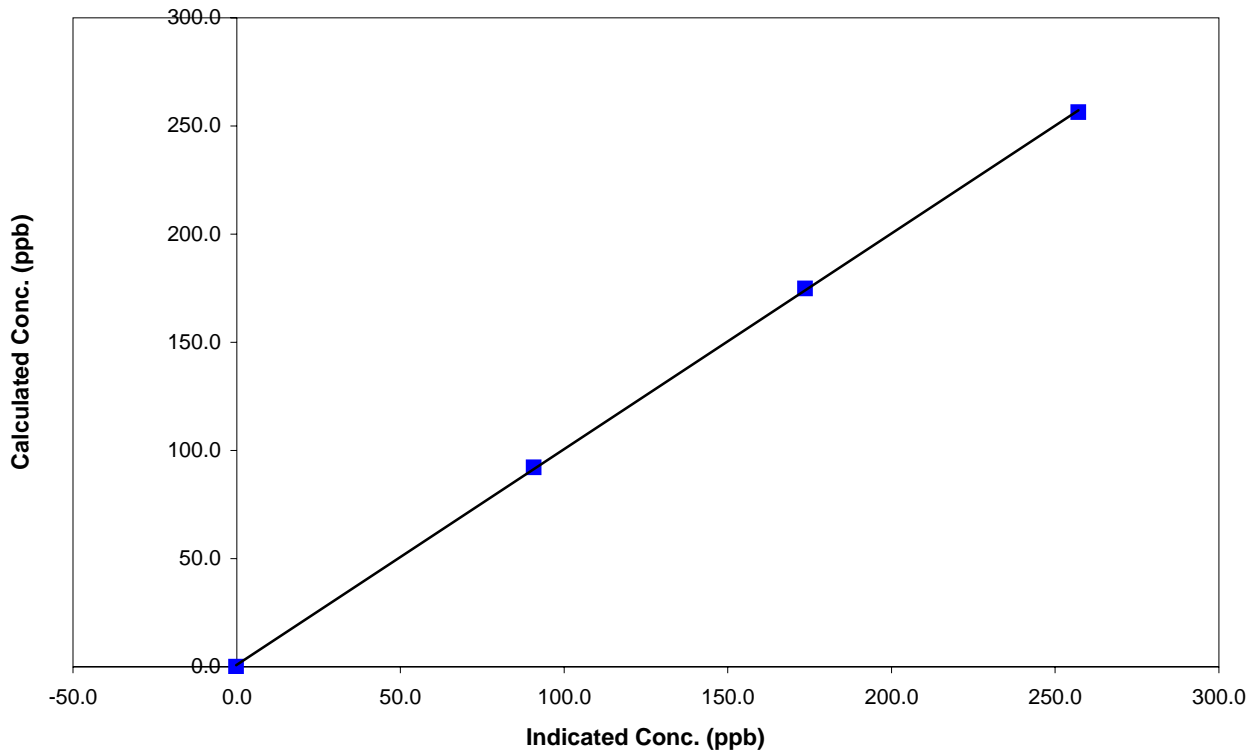
## Station Information

Calibration Date	August 6, 2010	Previous Calibration	July 5, 2010
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	9:45	End Time (MST)	14:46
Analyzer make	TEI 42i	Analyzer serial #	906535068

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999921
256.3	257.1	0.9972		
174.9	173.6	1.0075		
92.2	90.7	1.0163		
			Slope	0.996918
			Intercept	0.949432

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





# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PASZA



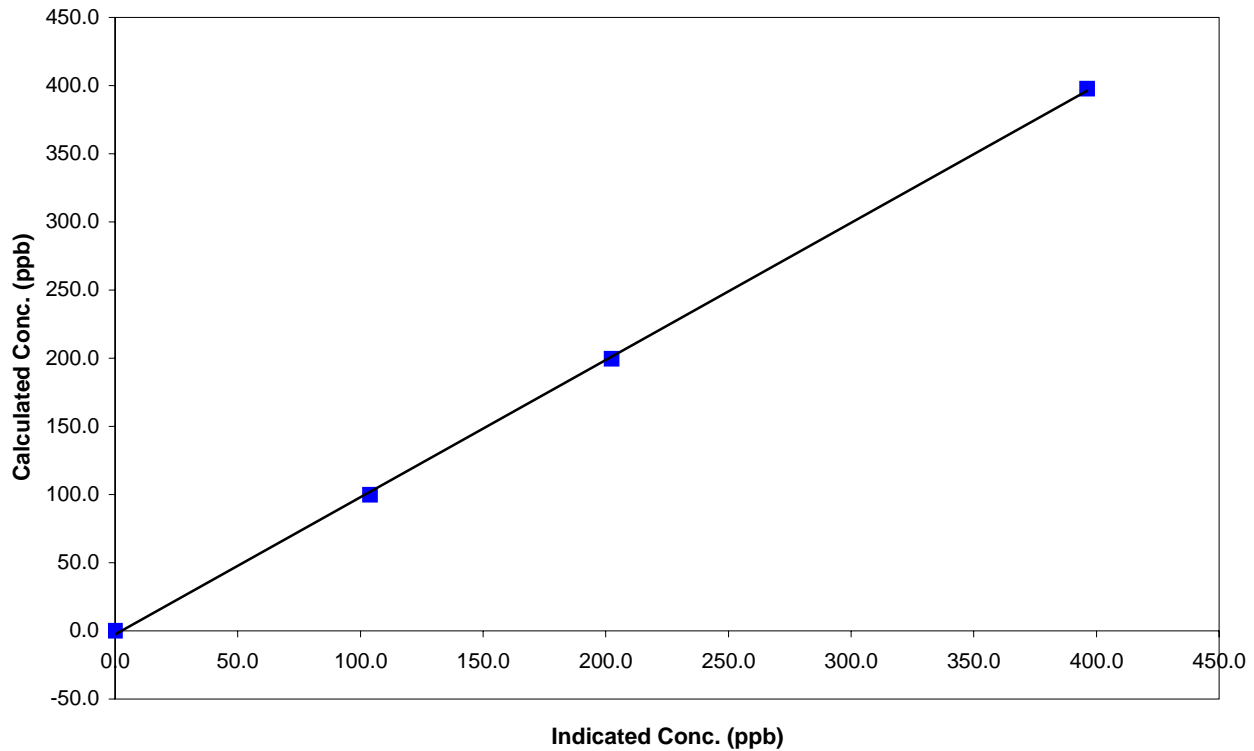
## Station Information

Calibration Date	August 6, 2010	Previous Calibration	July 5, 2010
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	9:45	End Time (MST)	14:46
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	0.0	N/A	Correlation Coefficient	0.999812
397.6	396.2	1.0034		
199.5	202.4	0.9856		
99.7	103.9	0.9597		
			Slope	1.006108
			Intercept	-2.513441

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



# Calibration Summary

Parameter NO

Air Monitoring Network PASZA



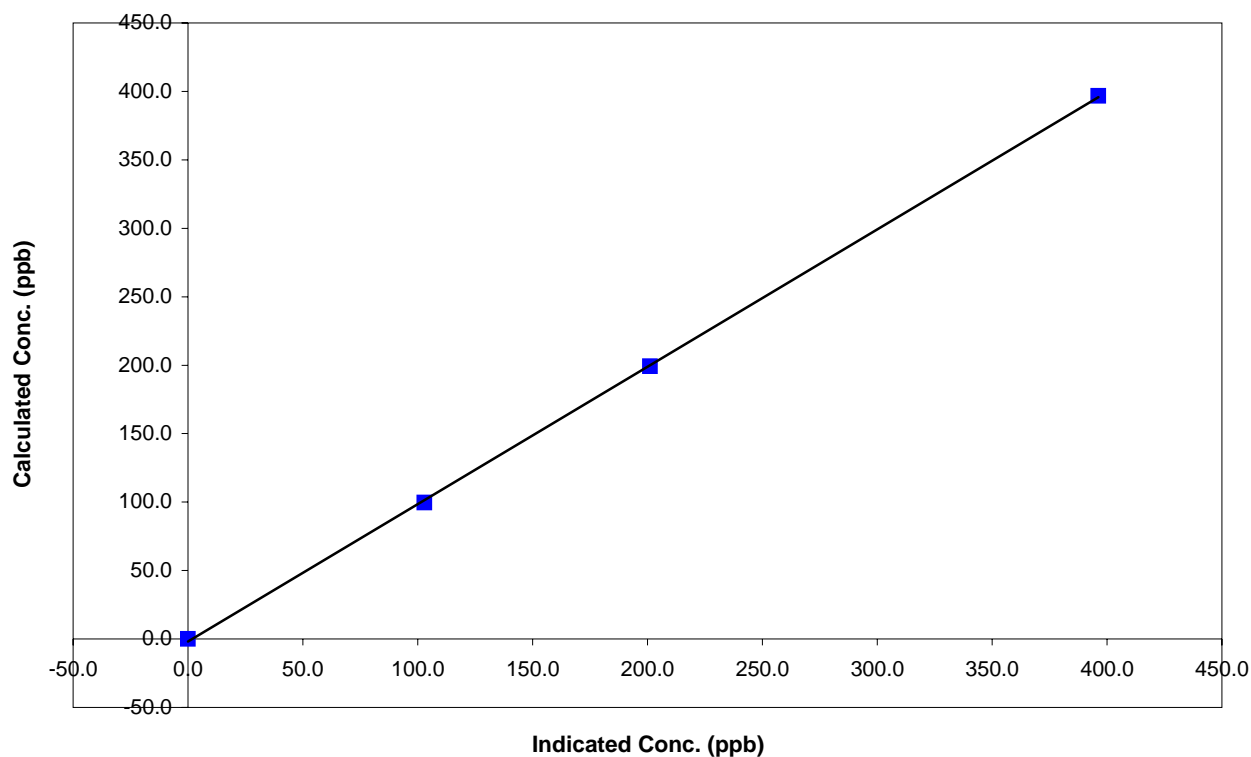
## Station Information

Calibration Date	August 6, 2010	Previous Calibration	July 5, 2010
Station Number	4	Station Location	BeaverLodge
Start Time (MST)	9:45	End Time (MST)	14:46
Analyzer make	TEI 42i	Analyzer serial #	906535068

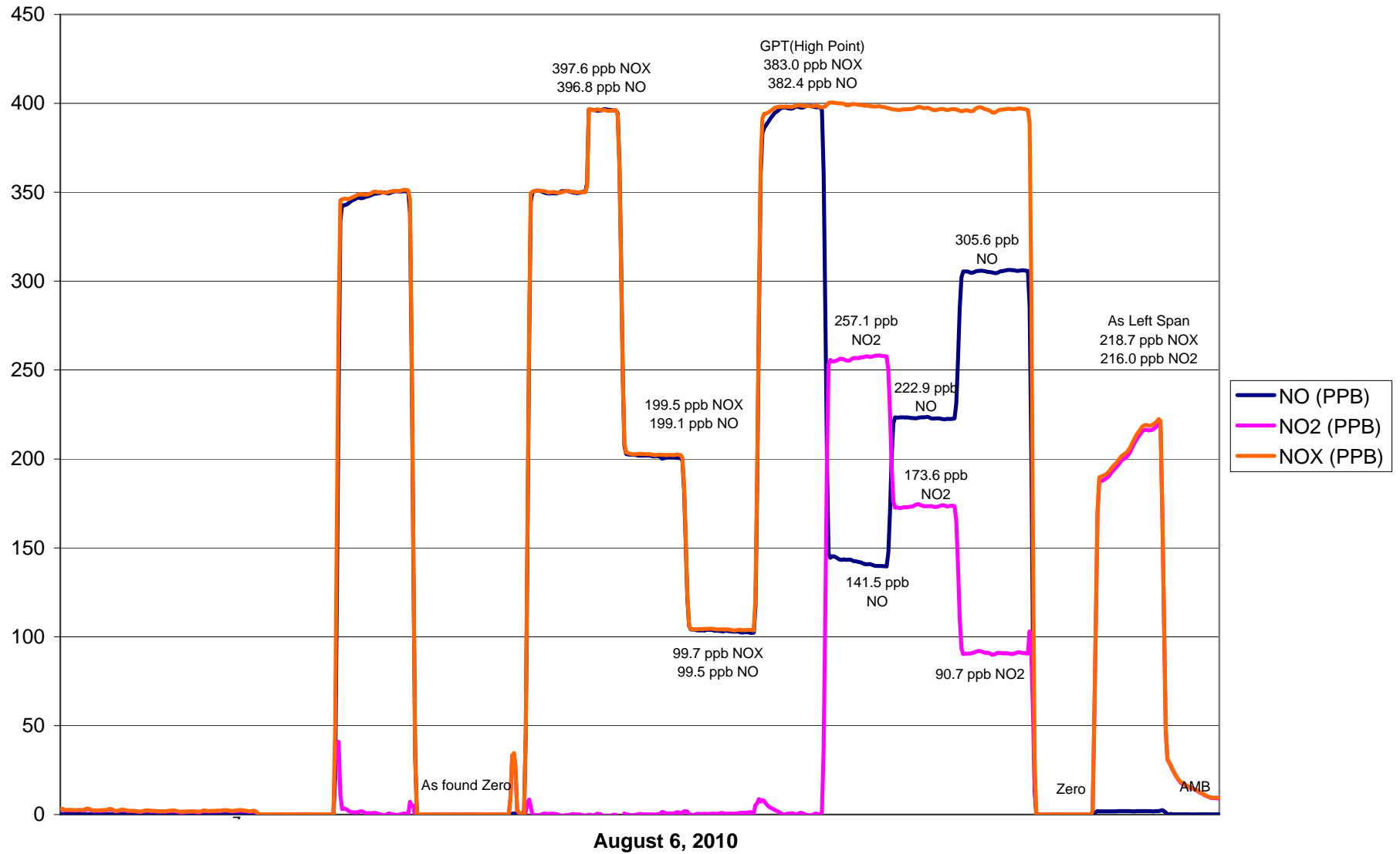
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999898
396.8	396.3	1.0013		
199.1	201.2	0.9897		
99.5	102.9	0.9674		
			Slope	1.003460
			Intercept	-1.829574

## NO Calibration Curve



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



# Calibration Report



Parameter 03

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 6, 2010	Previous Calibration	July 5, 2010
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)	12:00	End Time (MST)	15:41
Barometric Pressure	0.904 atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.964840	Calculated slope	1.025936
Calculated intercept	0.216343	Calculated intercept	1.208428
Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.70	ppb	-0.70	ppb
slope	1.008		1.008	
Lamp temp	56.5	mV	56.5	mV
Lamp Intensity A/B	66425/67172	mV	68823/68075	mV
Pressure	655.2	mm Hg	665.4	mm Hg
Flow A	0.688	ccm	0.693	ccm
Flow B	0.633	ccm	0.639	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	256.3	249.6	1.0269
4990	0.00	174.9	168.3	1.0395
4990	0.00	92.2	88.0	1.0477
4990	0.00	0.0	-0.4	As found zero
4990	0.00	256.3	249.6	As found span
Average Correction Factor				1.0380

Calculated value of As Found Response: 241.4 ppm      Percent Change of As Found: -5.8%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.9	ppb
Auto span	114.3	ppb	126.2	ppb

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

Calibration Performed By: Courtney Thompson

# Calibration Summary



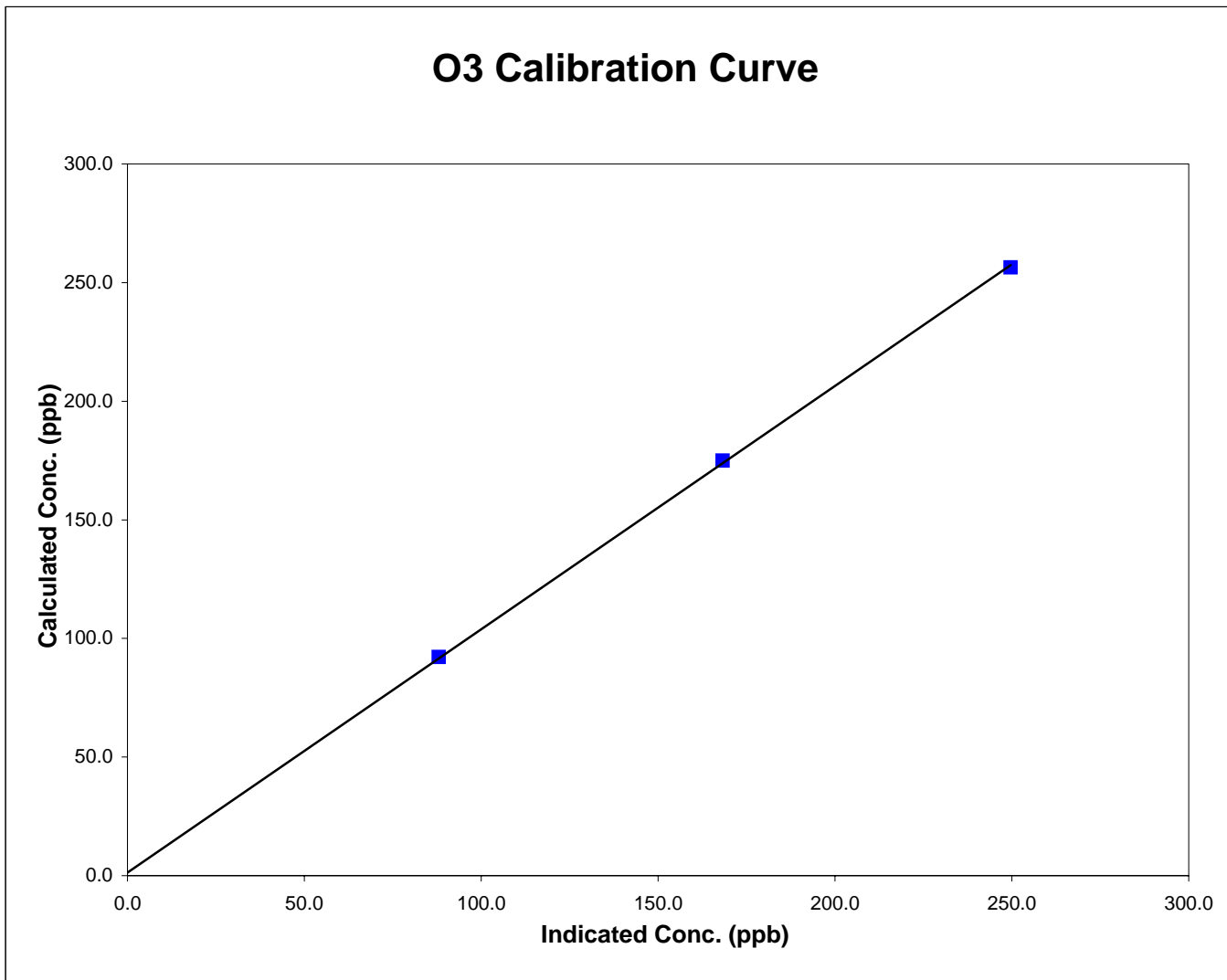
Parameter           03            
 Air Monitoring Network                           PASZA                          

### Station Information

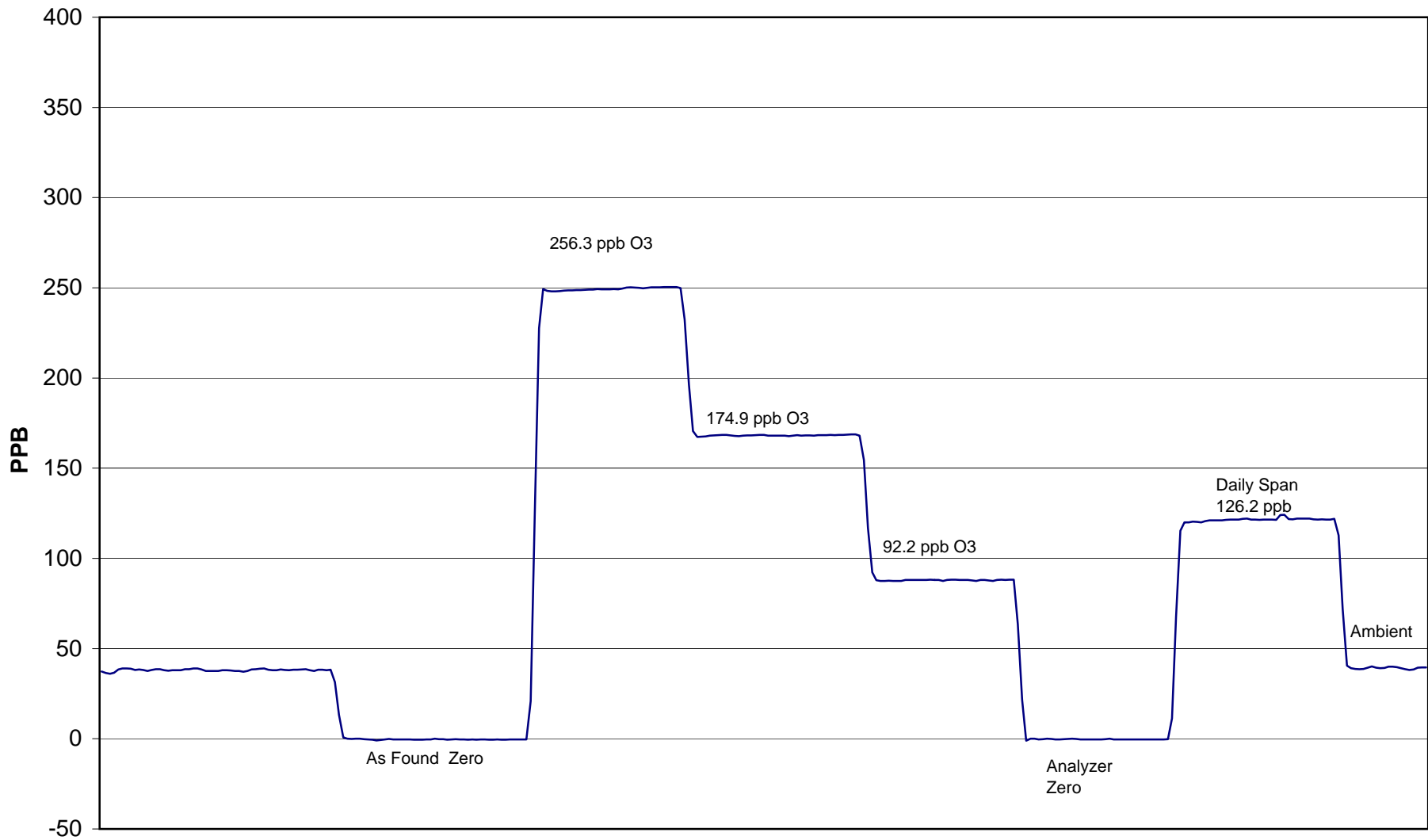
Calibration Date	<u>          August 6, 2010          </u>	Previous Calibration	<u>          July 5, 2010          </u>
Station Number	<u>          4          </u>	Station Location	<u>          Beaverlodge          </u>
Start Time (MST)	<u>          12:00          </u>	End Time (MST)	<u>          15:41          </u>
Analyzer make/model	<u>          Teco 49C          </u>	Analyzer serial #	<u>          49C-76443-383          </u>

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	NA		
256.3	249.6	1.0269	Correlation Coefficient	0.999910
174.9	168.3	1.0395		
92.2	88.0	1.0477	Slope	1.025936
			Intercept	1.208428



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



August 6, 2010

# Calibration Report

Parameter SO2

Air Monitoring Network PASZA



## Station Information

Calibration Date	August 10, 2010	Previous Calibration	July 20, 2010
Station Number	9	Station Location	Rover - Bonanza
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	9:45	End Time (MST)	11:56
Barometric Pressure	27.66 inches Hg	Station Temperature	15.7 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	4/6/2012
Gas Cert Reference	SGAL3245		
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	1.019954	Calculated slope	1.002573
Calculated intercept	-1.817668	Calculated intercept	-1.606929
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	9.5		9.5	
Coefficient	0.994		0.994	
UV Lamp Voltage	793	V	793	V
Chamber Temp	44.4	C	44.3	C
Perm Gas Temp	45	C	45	C
Pressure	674.7	mm Hg	671.3	mm Hg
Sample Flow	0.489	LPM	0.487	LPM
Lamp Intesity	47703	Hz	47530	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)
4989	0.00	0.0	-0.4	N/A
4991	39.84	407.8	407.3	1.0012
4991	19.90	204.5	206.7	0.9896
4991	9.93	102.3	105.6	0.9685
4991	0.00	0.0	-0.4	As found zero
4991	39.84	407.8	407.3	As found span
Average Correction Factor				0.9864

Calculated value of As Found Response: 414.044 ppm      Percent Change of As Found: -1.5%

	before calibration		after calibration	
Auto zero	0.3	ppm	-2.0	ppm
Auto span	256.9	ppm	257.2	ppm

Notes:

Calibration Performed By: Courtney Thompson

# Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



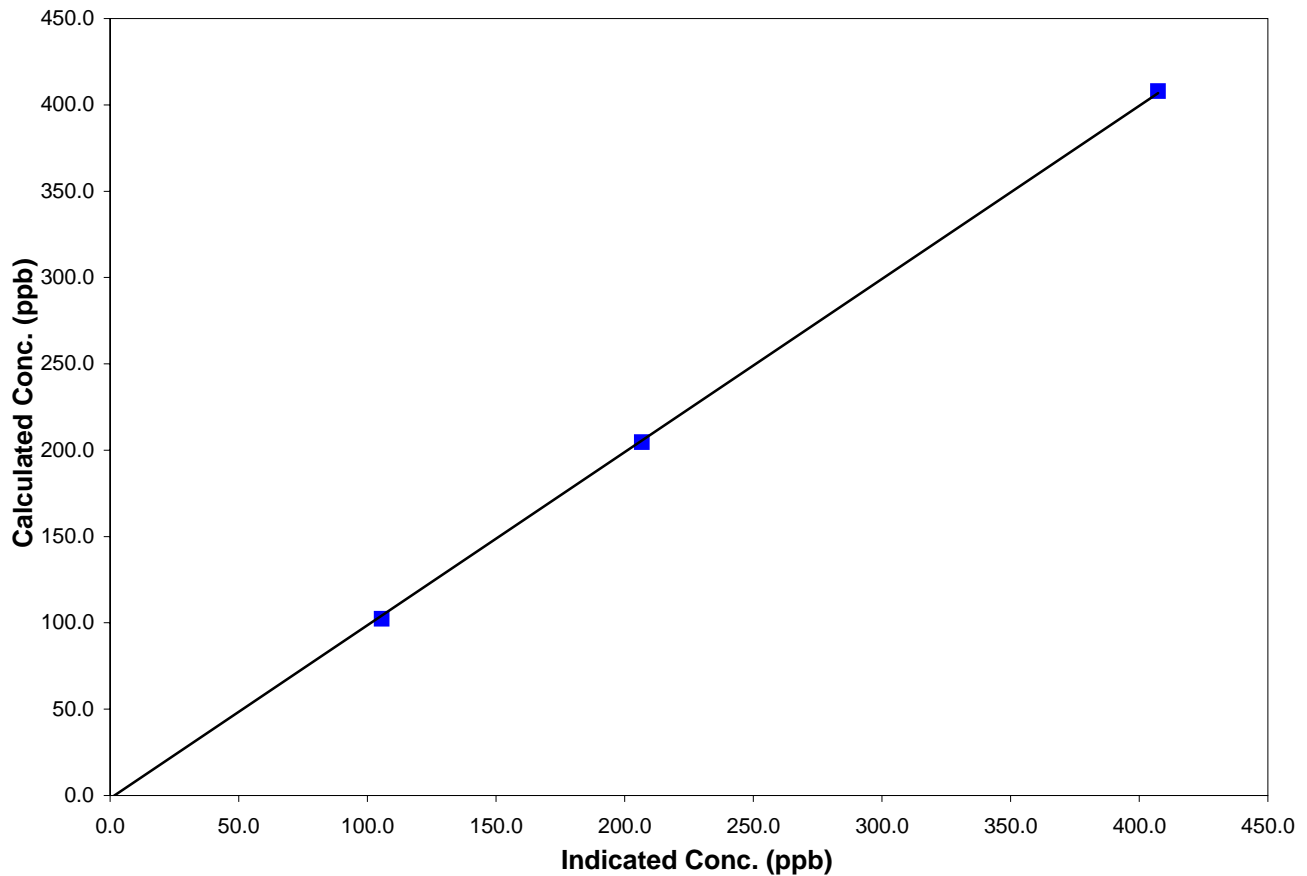
## Station Information

Calibration Date	August 10, 2010	Previous Calibration	July 20, 2010
Station Number	9	Station Location	Rover - Bonanza
Start Time (MST)	9:45	End Time (MST)	11:56
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

## Calibration Data

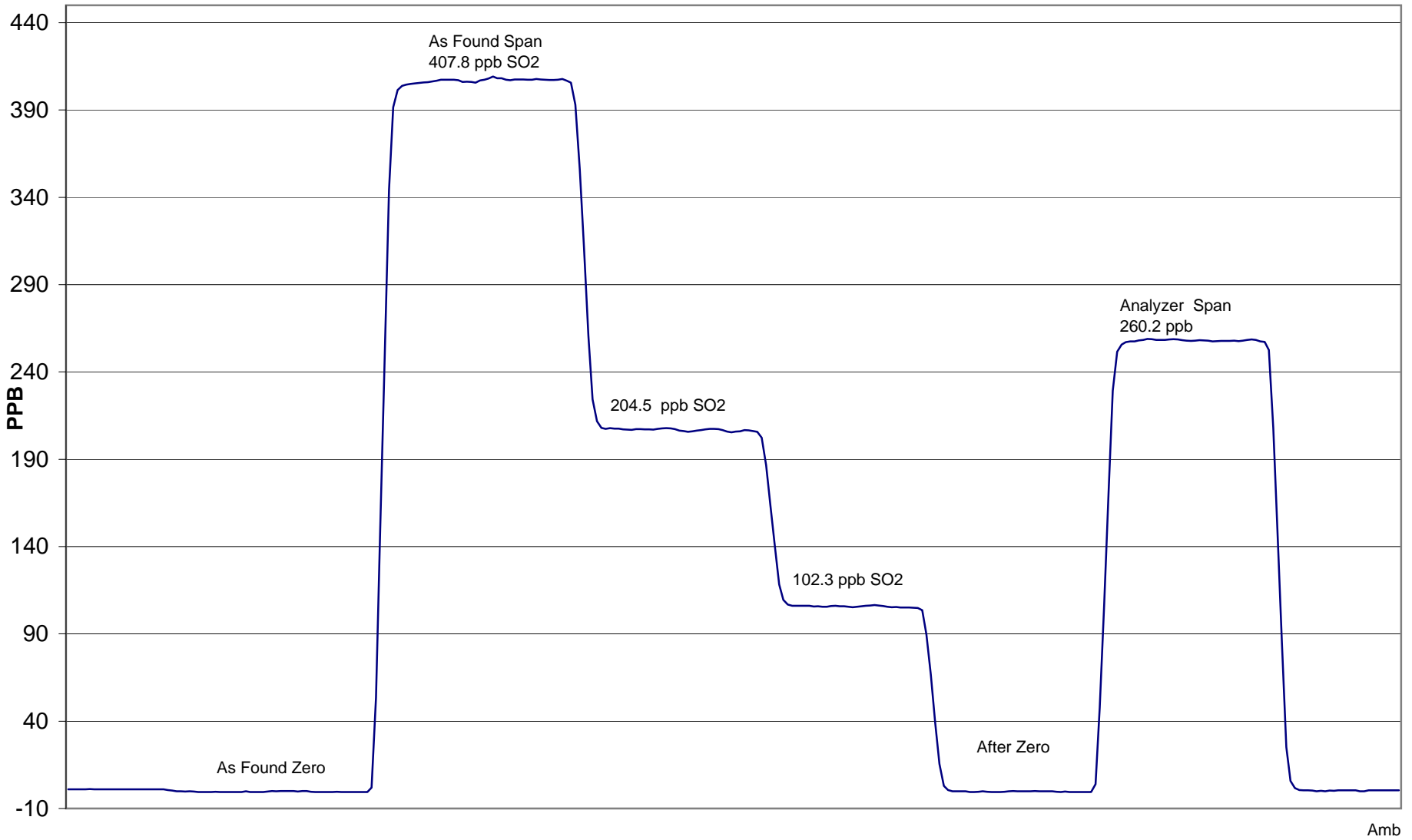
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A		
407.8	407.3	1.0012	Correlation Coefficient	0.999887
204.5	206.7	0.9896		
102.3	105.6	0.9685	Slope	1.002573
			Intercept	-1.606929

## SO2 Calibration Curve





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



August 10, 2010

# Calibration Report



Parameter TRS  
 Air Monitoring Network PASZA

## Station Information

Calibration Date	<u>August 10, 2010</u>	Previous Calibration	<u>July 20, 2010</u>
Station Number	<u>9</u>	Station Location	<u>Rover-Bonanza</u>
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	<u>13:40</u>	End Time (MST)	<u>16:22</u>
Barometric Pressure	<u>27.5</u> inches Hg	Station Temperature	<u>15.7</u> Deg C
Calibrator	<u>EnviroNics 6100</u>	Serial Number	<u>3474</u>
Cal Gas Concentration	<u>5.15</u> ppm	Cal Gas Expiry Date	<u>11/15/2005</u>
Gas Cert Reference	<u>ALM013295</u>		
DACS make	<u>Focus AP1000</u>	DACS serial No.	<u>52662</u>
DACS voltage range	<u>0 - 5 volt</u>	DACS channel #	<u>8</u>
	<u>Before</u>		<u>After</u>
DACS Scale High	<u>100</u>	DACS slope	<u>100</u>
DACS Scale Low	<u>0</u>	DACS intercept	<u>0</u>
Calculated slope	<u>1.006421</u>	Calculated slope	<u>1.016186</u>
Calculated intercept	<u>-0.053281</u>	Calculated intercept	<u>0.328666</u>
Analyzer make	<u>TEI 43C</u>	Analyzer serial #	<u>609716238</u>

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	9.8	ppb	10.8	ppb
Coefficient	1.397		1.397	
Lamp Voltage	788	V	787	V
Chamber Temp	43.8	C	43.9	C
Perm gas Temp	45.00	C	45	C
Pressure	662.3	mmHg	657.0	mmHg
Sample Flow	.441	ccm	.438	ccm
Lamp Intensity	39292.0	Hz	39322.0	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)
4989	0.0	0.0	-0.3	N/A
4991	79.74	81.0	79.3	1.0218
4991	39.80	40.7	40.0	1.0176
4991	9.93	10.2	9.5	1.0713
4991	0.00	0.0	-0.3	As found zero
4991	79.74	81.0	79.3	As found span
Average Correction Factor				1.0369

Calculated value of As Found Response: 80.00 ppm      Percent Change of As Found: 1.2%

	before calibration		after calibration	
Auto zero	-0.6	ppm	-0.6	ppm
Auto span	64.8	ppm	64.6	ppm

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

Calibration Performed By: Courtney Thompson

# Calibration Summary

Parameter                  TRS  
 Air Monitoring Network                                  PASZA



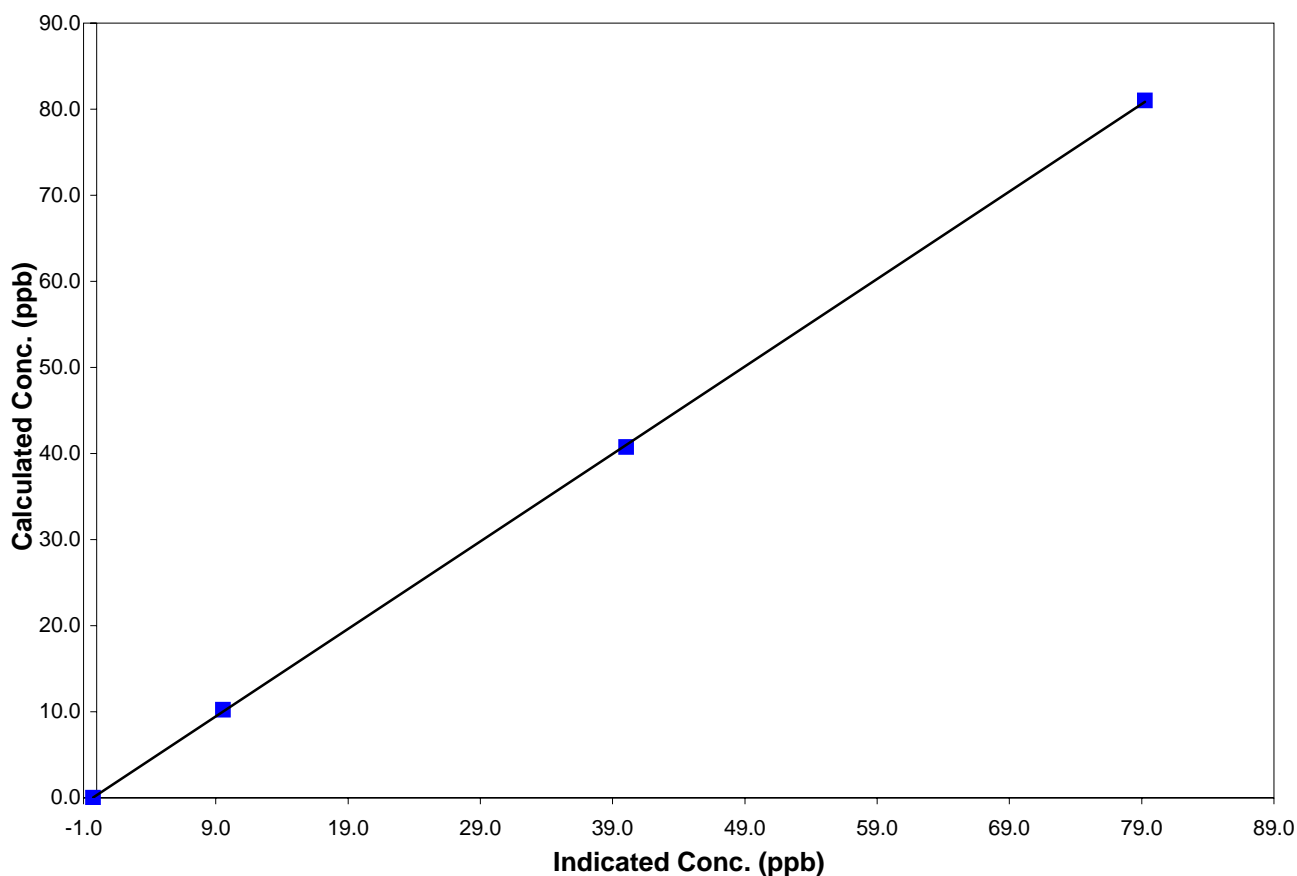
## Station Information

Calibration Date	<u>                </u> August 10, 2010	Previous Calibration	<u>                </u> July 20, 2010
Station Number	<u>                </u> 9	Station Location	<u>                </u> Rover-Bonanza
Start Time (MST)	<u>                </u> 13:40	End Time (MST)	<u>                </u> 16:22
Analyzer make/model	<u>                </u> TEI 43C	Analyzer serial #	<u>                </u> 609716238

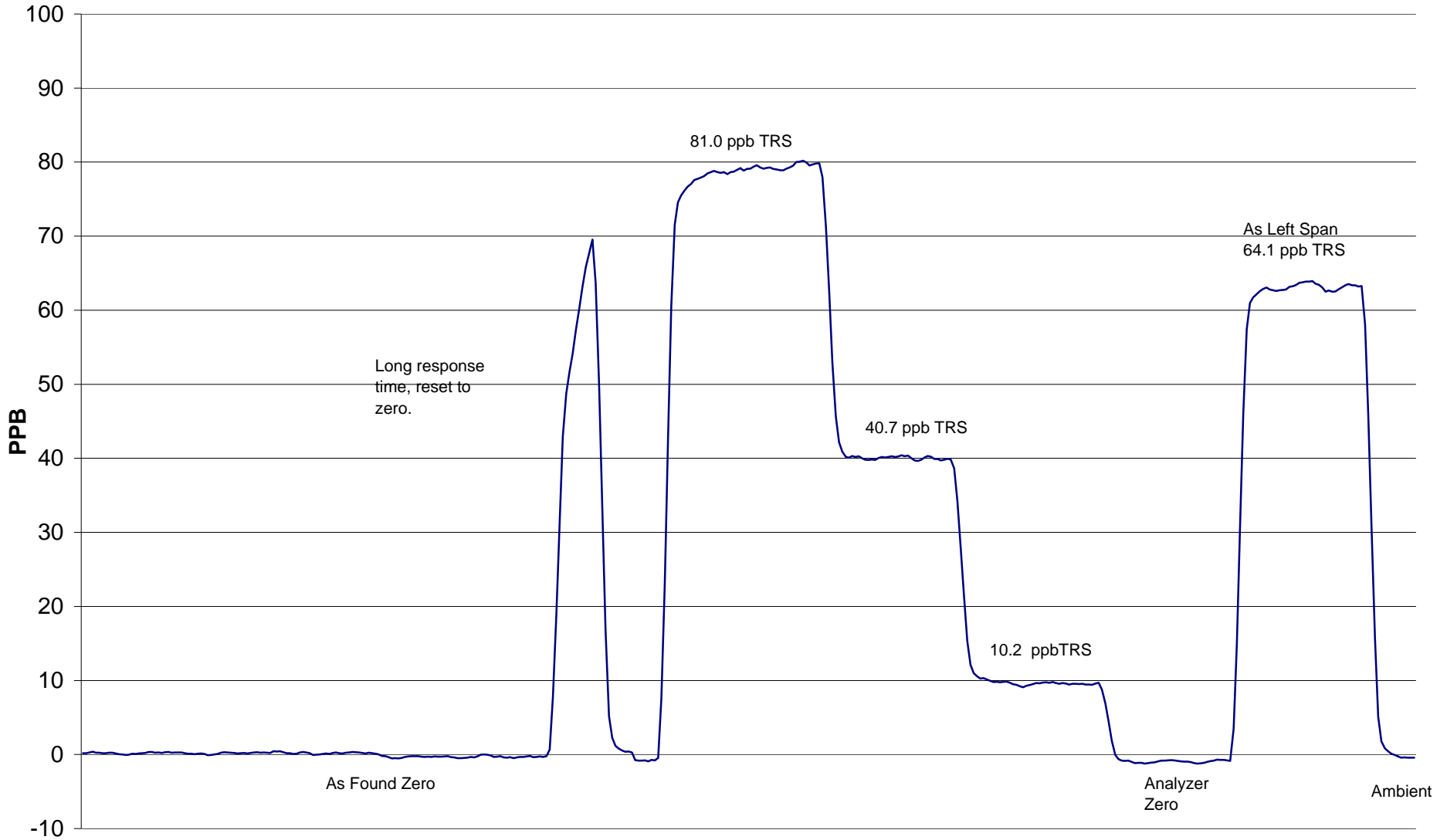
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A		
81.0	79.3	1.0218	Correlation Coefficient	0.999968
40.7	40.0	1.0176		
10.2	9.5	1.0713	Slope	1.016186
			Intercept	0.328666

TRS Calibration Curve



# Bonanza TRS Calibration



August 10, 2010

# Calibration Report

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



## Station Information

Calibration Date	August 10, 2010	Previous Calibration	July 21, 2010
Station Number	9	Station Location	Rover Bonanza
Reason:	<b>Routine</b>	Installation	Removal
Start Time (MST)	9:45	End Time (MST)	13:15
Barometric Pressure	0.927 Atm	Station Temperature	15.7 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
NO Cal Gas Conc	50.8 ppm	Cal Gas Expiry Date	April 6, 2012
NOx Cal Gas Conc	50.8 ppm	Cal Gas Serial #	SGAL 3245

## DACS Information

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

Parameter		NO2	NOx	NO
Before	Data Slope	0.992741	1.011611	1.018679
	Data Offset	1.297815	-2.716154	-3.592849
After	Data Slope	0.994882	1.004256	1.008797
	Data Offset	-0.076064	-3.210647	-3.562769
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	5.2	mV	5.2	mV
NOx bkgnd	5.6	mV	5.6	mV
NO coefficient	0.956		0.956	
NOx coefficient	0.997		0.997	
NO2 conv temp	323.4	Deg C	324.2	Deg C
PMT Temp	-2.9	Deg C	-3.1	Deg C
PMT Volt	-829.9	mV	-829.9	mV
R Cell Press	164.5	in Hg	163.9	in Hg
Sample Flow	0.477	ccm	0.473	ccm

Notes:

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# Calibration Report

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



Calibration Date: **August 10, 2010** Station Location: **Rover Bonanza**

	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	0.5	0.5	-1.1	N/A	N/A	
1	4989	39.84	402.5	402.5	0.0	402.5	400.9	-1.4	0.9998	1.0040	
2	4989	19.91	201.9	201.9	0.0	205.7	205.2	-1.2	0.9817	0.9841	
3	4989	9.96	101.2	101.2	0.0	106.6	107.0	-1.2	0.9492	0.9456	
AFZ	4989	0.00	0.0	0.0	0.0	0.5	0.5	-0.4	0.0000	0.0000	
AFS	4989	39.85	402.6	402.6	0.0	402.5	400.9	-1.4	1.0001	1.0042	
									Average Correction Factor	0.9769	0.9779

As Found Concentrations: **NO<sub>x</sub>= 399.2** **NO= 396.8** As Found Percent Change **NO<sub>x</sub>= -0.8%** **NO= -1.4%**

## 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	0.5	0.5	-1.1	N/A	N/A	N/A	N/A	
NO point	401.0	401.0	0.0	402.3	401.0	-1.7	0.9968	1.0000	N/A	N/A	
300	401.0	124.6	276.4	403.6	124.6	277.1	0.9936	1.0000	0.9974	100.3%	
200	401.0	214.3	186.7	404.8	214.3	188.0	0.9906	1.0000	0.9930	100.7%	
100	401.0	303.3	97.7	405.8	303.3	99.9	0.9882	1.0000	0.9779	102.3%	
							Average Correction Factor	0.9908	1.0000	0.9894	101.1%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.4	-0.9	0.7	ppb	0.2	-0.7	0.4	ppb
Auto span	275.6	274.9	2.9	ppb	291.4	286.7	3.1	ppb

Calibration Performed By: Courtney Thompson

# Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PASZA



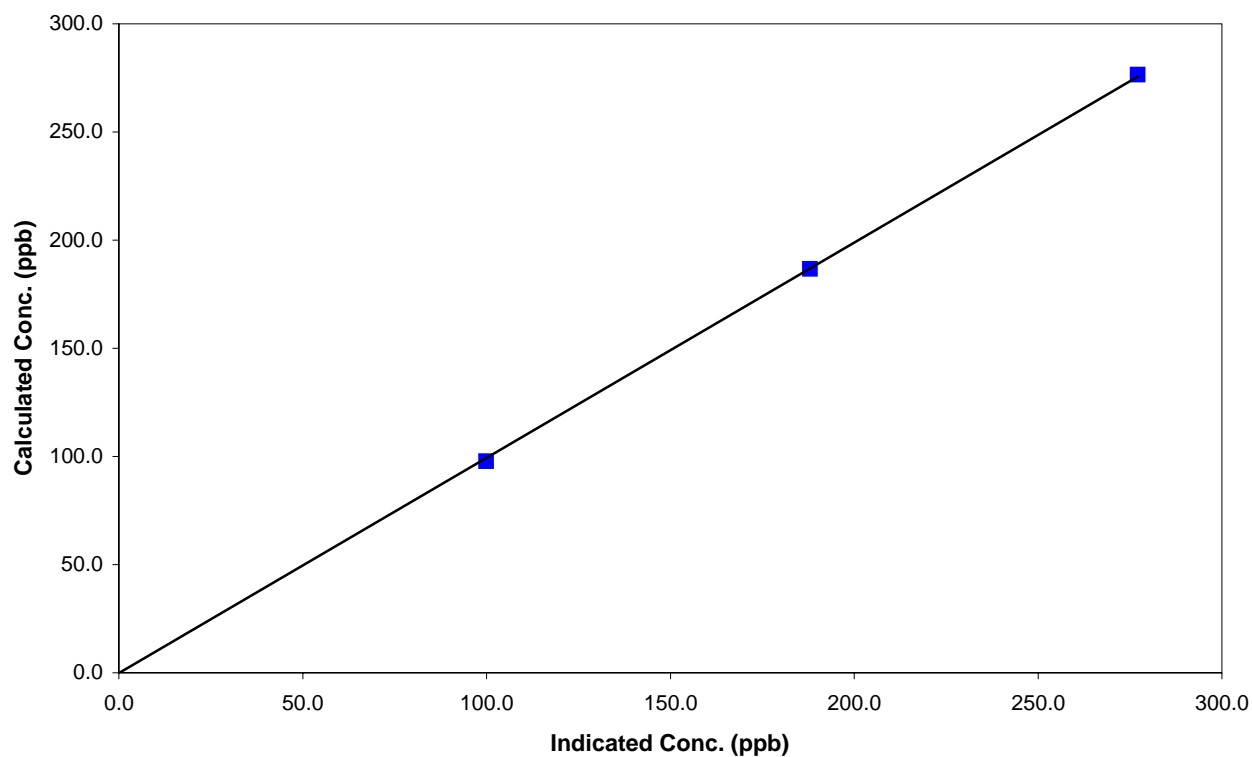
## Station Information

Calibration Date	August 10, 2010	Previous Calibration	July 21, 2010
Station Number	9	Station Location	Rover Bonanza
Start Time (MST)	9:45	End Time (MST)	13:12
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	-1.1	N/A	Correlation Coefficient	0.999891
276.4	277.1	0.9974		
186.7	188.0	0.9930		
97.7	99.9	0.9779		
			Slope	0.994882
			Intercept	-0.076064

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



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PASZA



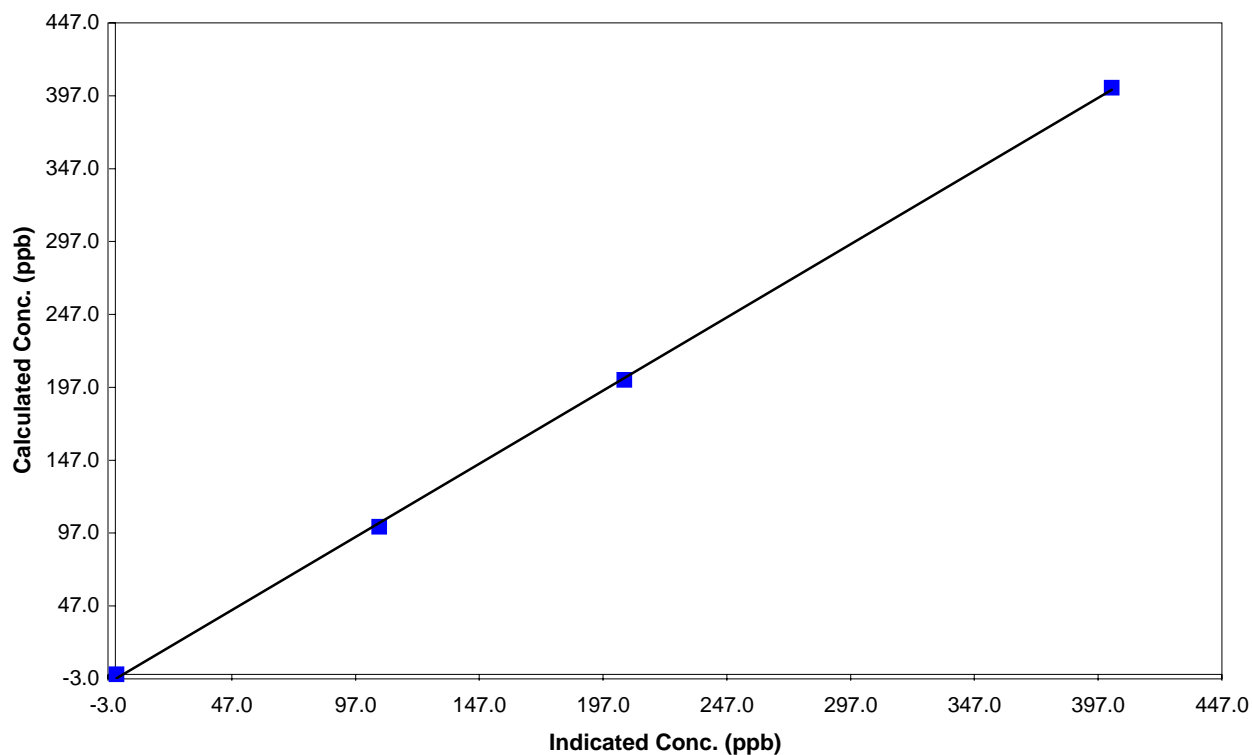
## Station Information

Calibration Date	August 10, 2010	Previous Calibration	July 21, 2010
Station Number	9	Station Location	Rover Bonanza
Start Time (MST)	9:45	End Time (MST)	13:12
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	0.999794
402.5	402.5	0.9998		
201.9	205.7	0.9817	Slope	1.004256
101.2	106.6	0.9492		
			Intercept	-3.210647

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





# Calibration Summary



Parameter NO

Air Monitoring Network PASZA

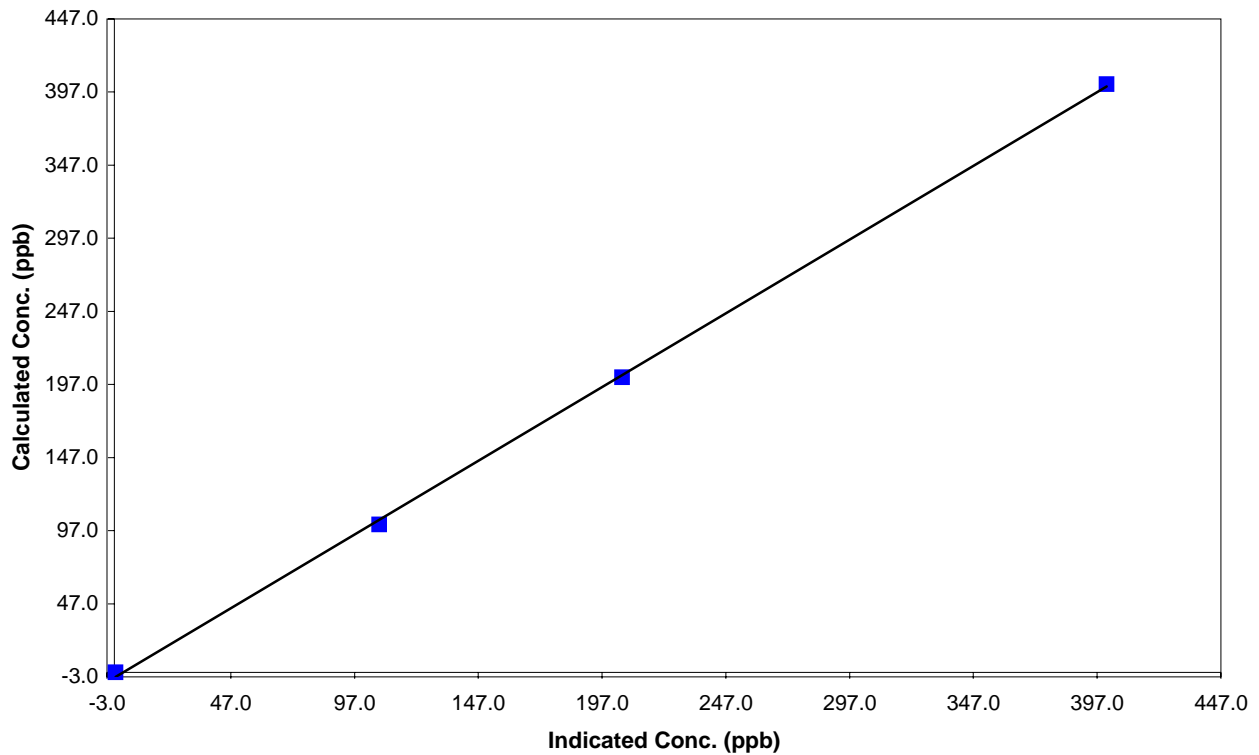
## Station Information

Calibration Date	August 10, 2010	Previous Calibration	July 21, 2010
Station Number	9	Station Location	Rover Bonanza
Start Time (MST)	9:45	End Time (MST)	13:12
Analyzer make	TEI 42i	Analyzer serial #	701120011

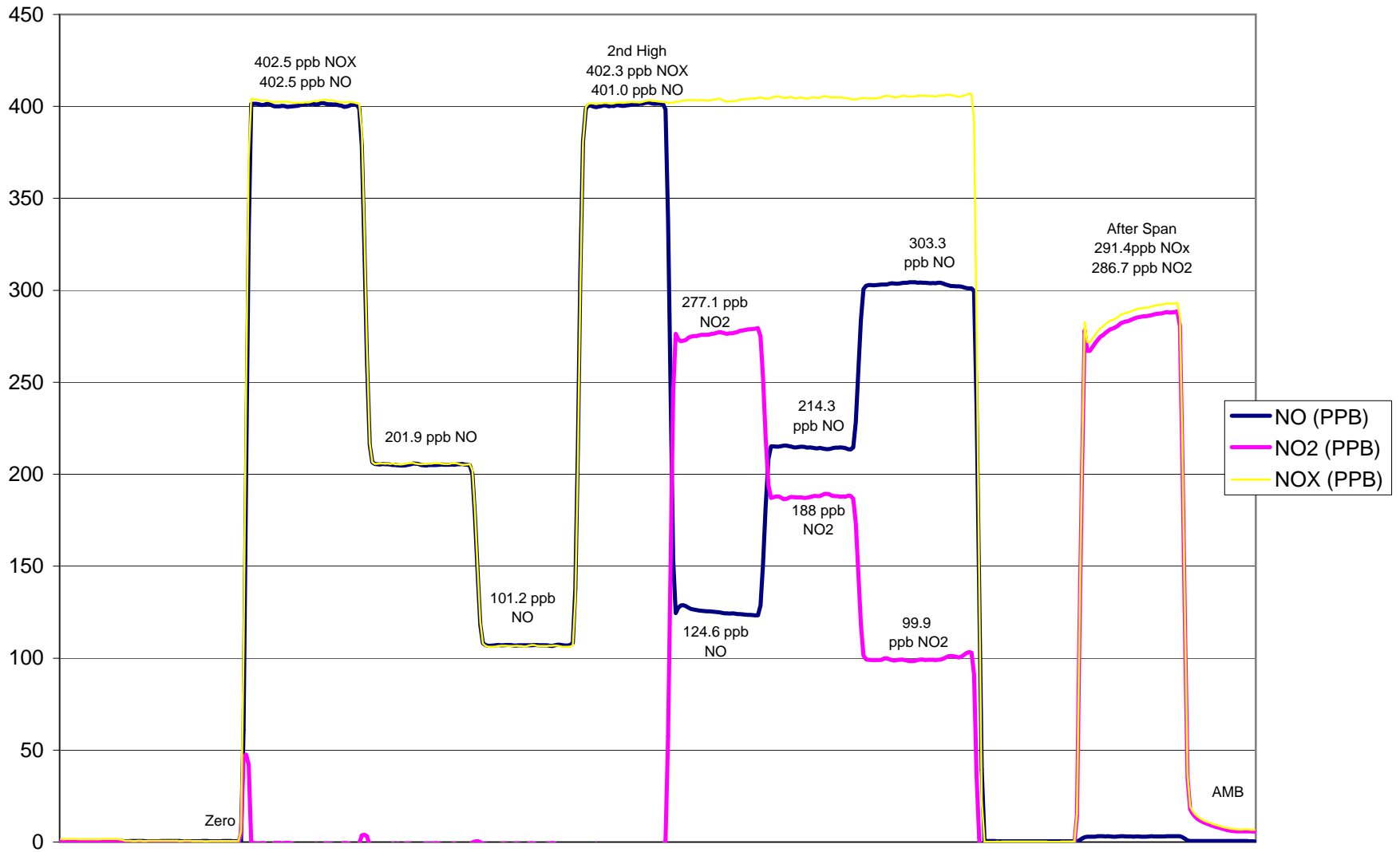
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999721
402.5	400.9	1.0040		
201.9	205.2	0.9841	Slope	1.008797
101.2	107.0	0.9456		
			Intercept	-3.562769

## NO Calibration Curve



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



August 10, 2010

# Calibration Report



Parameter 03  
Air Monitoring Network PASZA

## Station Information

Calibration Date	August 10, 2010	Previous Calibration	July 21, 2010
Station Number	12:00	Station Location	Rover - Bonanza
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal remove
		<input type="checkbox"/> Other:	
Start Time (MST)	12:08	End Time (MST)	14:59
Barometric Pressure	0.927 atm	Station Temperature	15.7 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
DACS make	Focus AP1000	DACS serial No.	52662
DACS voltage range	0-5	DACS channel #	7
	Before		After
Calculated slope	0.993532	Calculated slope	0.993292
Calculated intercept	0.251780	Calculated intercept	-2.146401
Analyzer make	TEI Model 49C	Analyzer serial #	609-716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-14.1	ppb	-13.6	ppb
Span	1.478		1.460	
Cell A intensity	73779	Hz	74130	Hz
Cell B intensity	89237	Hz	89763	Hz
Pressure	696.60	in Hg	693.20	in Hg
CellA Flow	0.723	ccm	0.586	ccm
Cell B Flow	0.687	cmm	0.710	cmm

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.4	N/A
4990	0.30	276.4	279.0	0.9908
4990	0.20	186.7	190.9	0.9776
4990	0.10	97.7	102.9	0.9491
4990	0.00	0.0	1.8	As found zero
4990	0.30	276.4	282.1	As found span
Average Correction Factor				0.9725

Calculated value of As Found Response: 282.7 ppm      Percent Change of As Found: 2.3%

	before calibration		after calibration	
Auto zero	2.1	ppb	-1.7	ppb
Auto span	297.1	ppb	285.3	ppb

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

Calibration Performed By: Courtney Thompson

# Calibration Summary



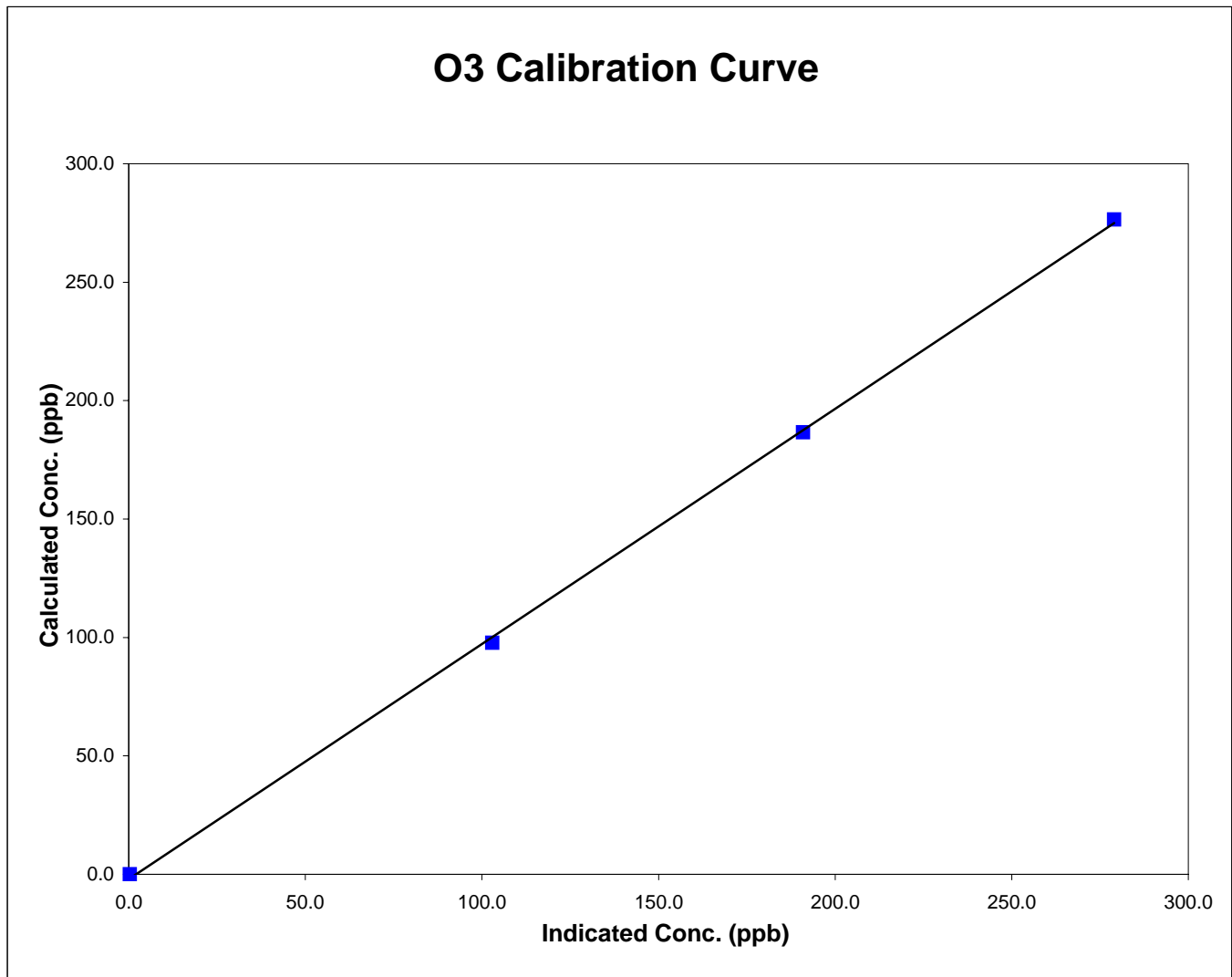
Parameter           O3            
 Air Monitoring Network                           PASZA                          

## Station Information

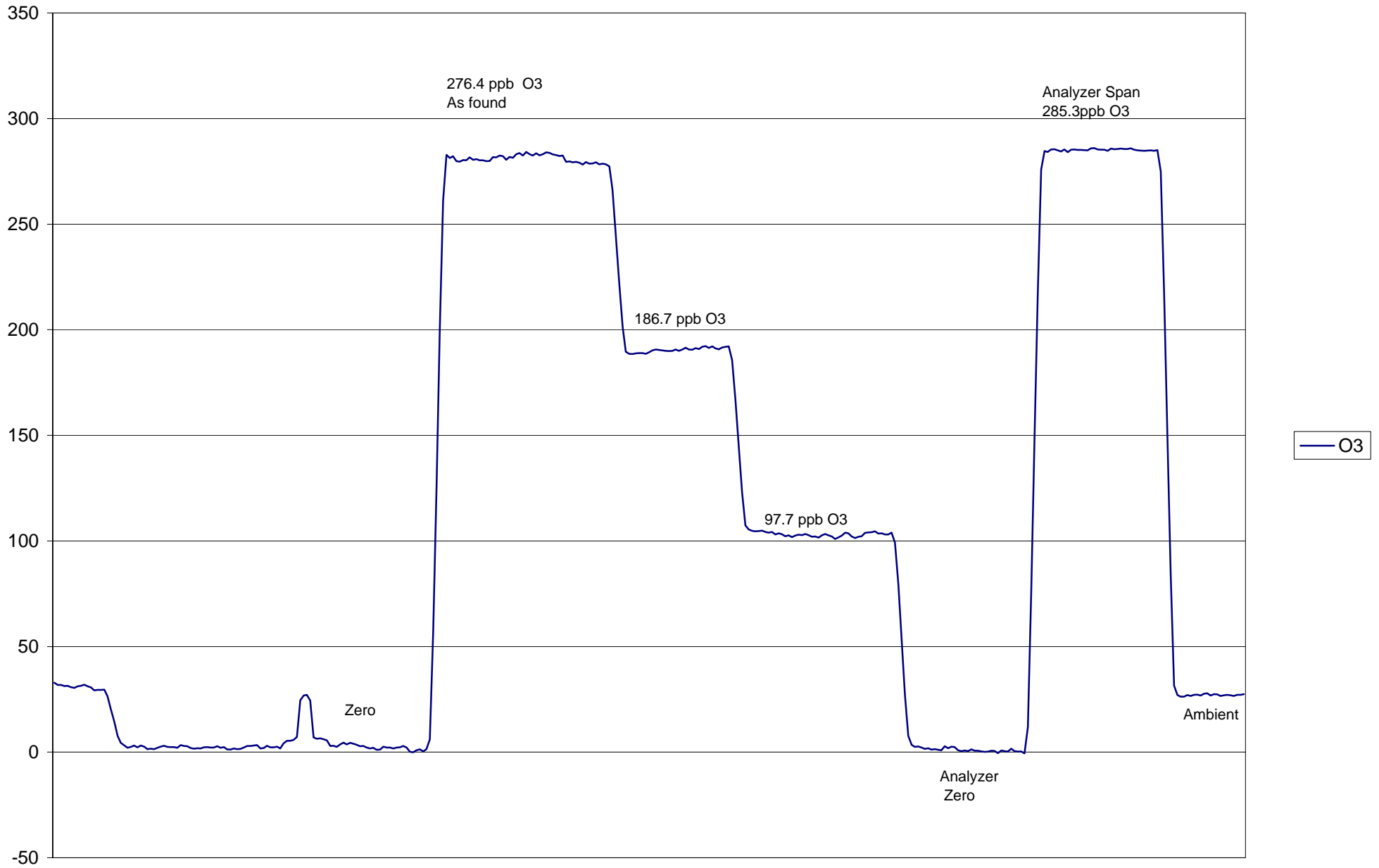
Calibration Date	<u>          August 10, 2010          </u>	Previous Calibration	<u>          July 21, 2010          </u>
Station Number	<u>          0.5          </u>	Station Location	<u>          Rover - Bonanza          </u>
Start Time (MST)	<u>          12:08          </u>	End Time (MST)	<u>          14:59          </u>
Analyzer make/model	<u>          TEI Model 49C          </u>	Analyzer serial #	<u>          609-716240          </u>

## Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	NA		
276.4	279.0	0.9908	Correlation Coefficient	0.999720
186.7	190.9	0.9776		
97.7	102.9	0.9491	Slope	0.993292
			Intercept	-2.146401



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



August 10, 2010

# Calibration Report



Parameter SO2

Air Monitoring Network PASZA

## Station Information

Calibration Date	August 7, 2010	Previous Calibration	July 8, 2010
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)	11:51
Barometric Pressure	702.00 mm	Station Temperature	14.7 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	0.998736	Calculated slope	1.004247
Calculated intercept	-2.736664	Calculated intercept	-2.555537
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	24.3		24.2	
Coefficient	0.861		0.851	
UV Lamp Voltage	926	LPM	929	LPM
Chamber Temp	44.1	V	44.1	V
Perm Gas Temp	34	C	34	C
Pressure	612.1	in Hg	606.5	in Hg
Sample Flow	0.469	LPM	0.467	LPM
Lamp Intensity	48698	Hz	48282	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)
4991	0.00	0.0	0.5	N/A
4991	39.85	400.8	400.5	1.0008
4991	19.89	200.8	203.9	0.9851
4991	9.94	100.6	104.6	0.9612
4989	0.00	0.0	0.5	As found zero
4989	39.88	401.3	403.4	As found span
Average Correction Factor				0.9824

Calculated value of As Found Response: 399.7 ppm      Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	155.5	ppm	162.2	ppm

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

Calibration Performed By: Courtney Thompson

# Calibration Summary

Parameter SO2

Air Monitoring Network PASZA



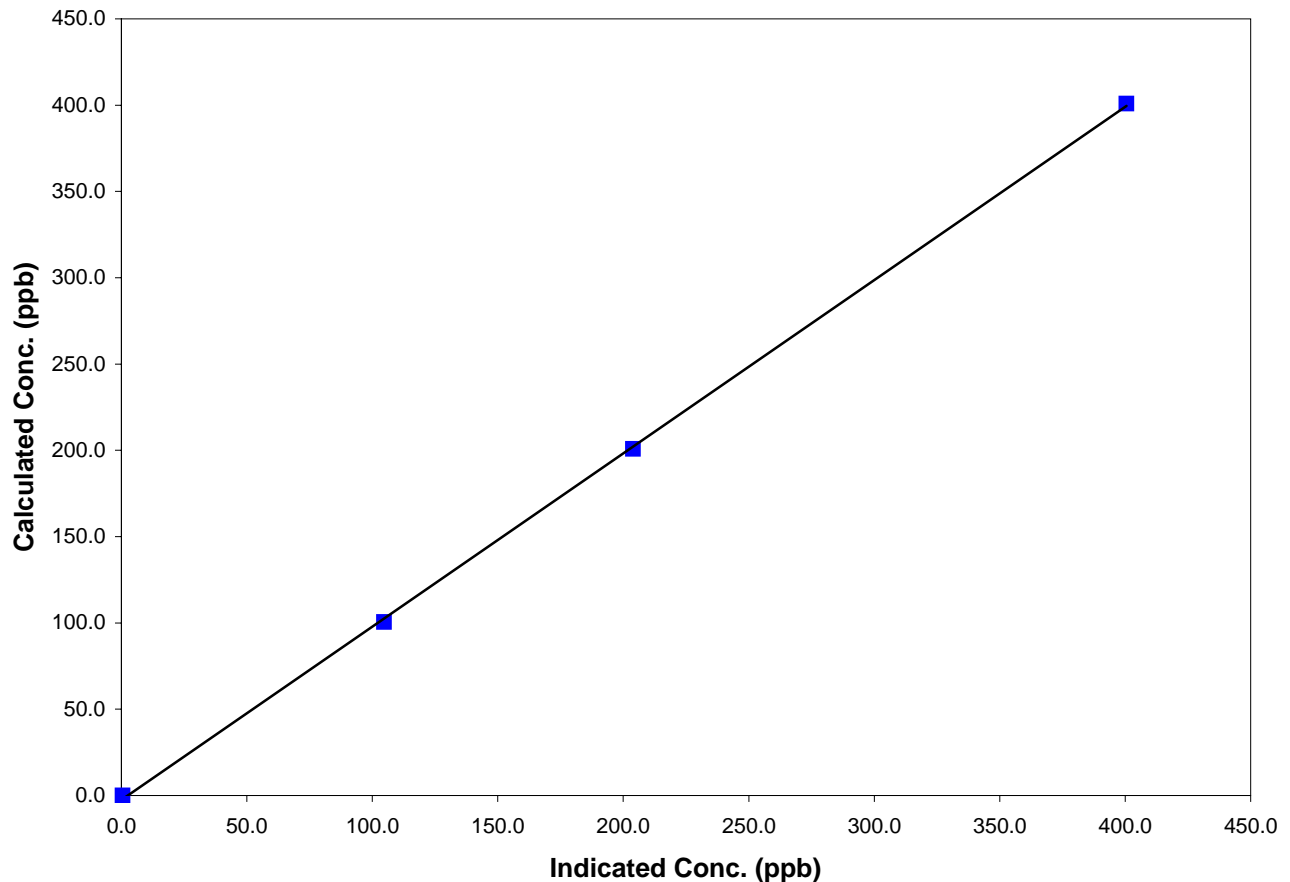
## Station Information

Calibration Date	August 7, 2010	Previous Calibration	July 8, 2010
Station Number	6	Station Location	Valleyview
Start Time (MST)	9:40	End Time (MST)	14:42
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

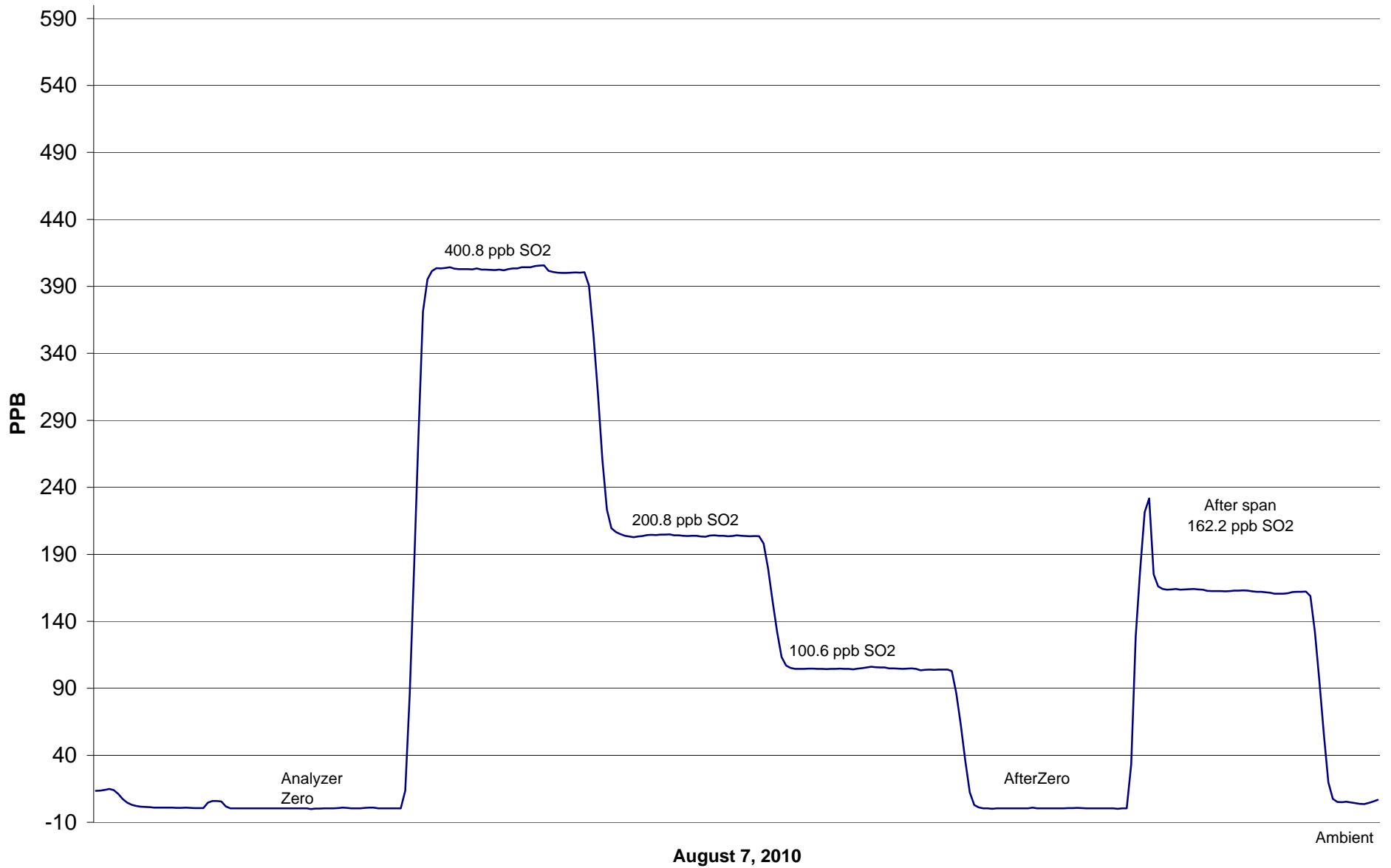
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999870
400.8	400.5	1.0008		
200.8	203.9	0.9851	Slope	1.004247
100.6	104.6	0.9612		
			Intercept	-2.555537

## SO2 Calibration Curve



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





# Calibration Report



Parameter          **H2S**  
Air Monitoring Network         

**PASZA**

## Station Information

Calibration Date	August 7, 2010	Previous Calibration	July 8, 2010
Station Number	5	Station Location	Valleyview
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
Start Time (MST)	10:45	End Time (MST)	13:22
Barometric Pressure	702.00 mm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	5.15 ppm	Cal Gas Expiry Date	4/4/2009
Gas Cert Reference	ALM013295		
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 10 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.008581	Calculated slope	1.018204
Calculated intercept	-0.263147	Calculated intercept	-0.123175
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	4.8	ppb	4.7	ppb
Coefficient	1.056		1.056	
Lamp Voltage	782	V	785	V
Chamber Temp	44.9	c	45.3	c
Perm Oven Temp	44.99	c	45.0	c
Pressure	643	mm Hg	644	mm Hg
Sample Flow	.320	ccm	.322	ccm
Lamp Intensity	91.0	%	92.0	%

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4988	0.00	0.0	0.2	N/A
4988	79.75	81.0	79.8	1.0159
4988	39.83	40.8	40.1	1.0184
4988	9.93	10.2	10.2	1.0021
4989	0.00	0.0	0.2	As found zero
4989	79.75	81.0	79.8	As found span
Average Correction Factor				1.0121

Calculated value of As Found Response: 80.05 ppm      Percent Change of As Found: 1.2%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.1	ppm
Auto span	70.6	ppm	73.6	ppm

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

Calibration Performed By:          Courtney Thompson

# Calibration Summary

Parameter                     H2S                      
 Air Monitoring Network   PASZA  



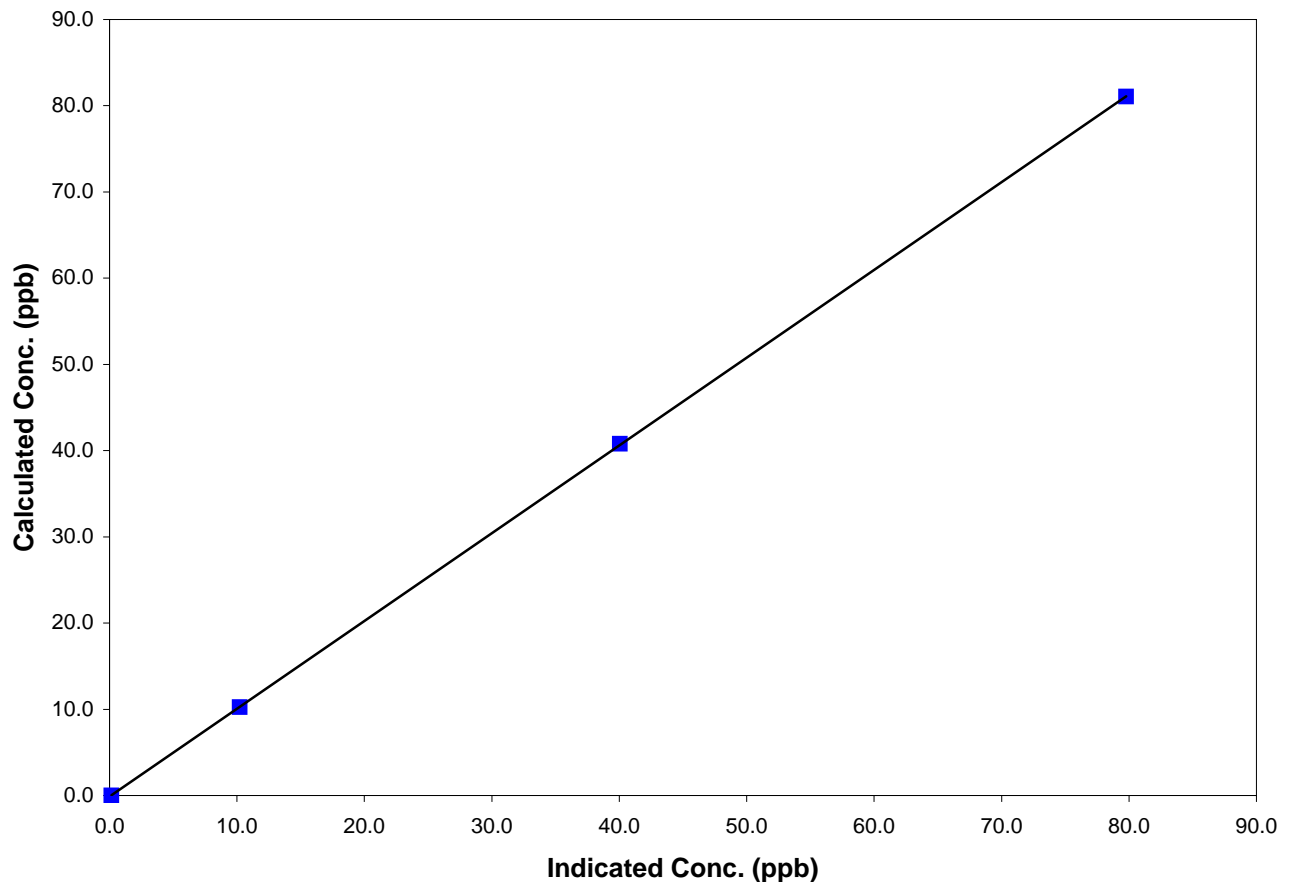
## Station Information

Calibration Date	<u>                    August 7, 2010                    </u>	Previous Calibration	<u>                    July 8, 2010                    </u>
Station Number	<u>                    5                    </u>	Station Location	<u>                    Valleyview                    </u>
Start Time (MST)	<u>                    10:45                    </u>	End Time (MST)	<u>                    13:22                    </u>
Analyzer make/model	<u>                    TEI Model 43i - APSCB                    </u>	Analyzer serial #	<u>                    701120010                    </u>

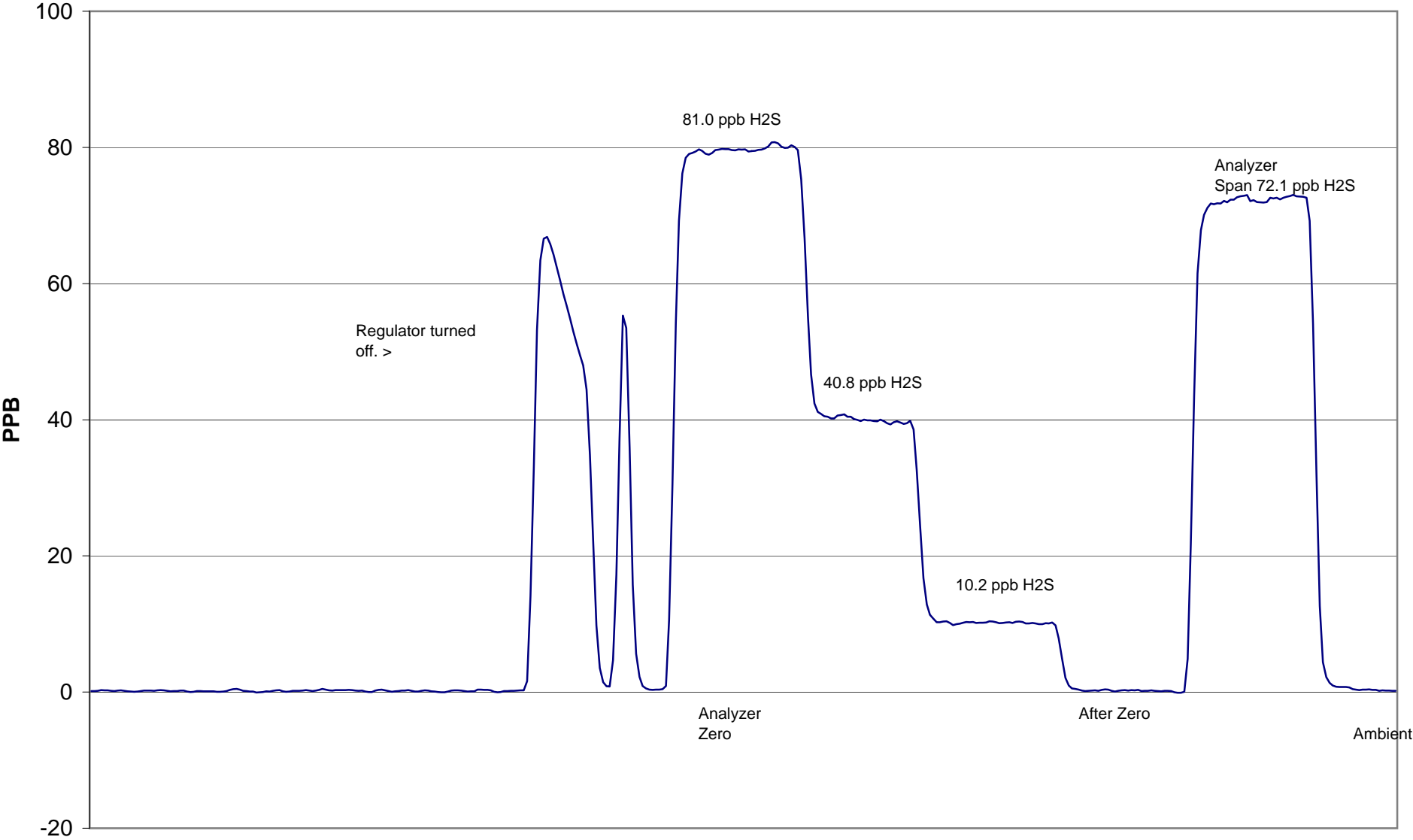
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999994
81.0	79.8	1.0159		
40.8	40.1	1.0184		
10.2	10.2	1.0021		
			Slope	1.018204
			Intercept	-0.123175

## H2S Calibration Curve



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



August 7, 2010