



# **Peace Airshed Zone Association**

## **Ambient Air Monitoring Network Summary**

**Continuous Ambient Air Quality Monitoring Program  
Monthly Report  
October 2012**

**Operations and Reporting**

**FOCUS**  
**AIR QUALITY MONITORING**

November 27<sup>th</sup>, 2012

**Alberta Environment**  
 11<sup>th</sup> Floor, Oxbridge Place  
 9820-106 Street  
 Edmonton Alberta T5K 2J6

**RE: Peace Airshed Zone Association (PAZA) – October 2012 Ambient Air Report**

Enclosed is the PAZA Ambient Monitoring Network Report for the month of **October 2012**.

This report is submitted by PAZA on behalf of the industrial member companies to satisfy the requirements of the following facility Operating Approvals:

<b>Company</b>	<b>Facility</b>	<b>LSD</b>	<b>AENV Approval Number</b>
Advantage Oil & Gas Ltd.	Glacier	05-02-076-13-W6	262479-00-00
AltaGas Ltd.	Pouce Coupe	03-03-081-13-W6	247673-00-00
	Ante Creek	02-26-068-25-W5	266694-00-00
	Gordondale	16-31-78-11-W6M	287474-00-00
Barrick Energy Inc.	Sturgeon/Valleyview	02-02-069-22-W5	1633-02-00
Birchcliff Energy Ltd.	Pouce Coupe	03-22-078-12-W6	252529-00-00
Canadian Natural Resources Limited	Bonanza	11-25-081-11-W6	29-01-01
	Progress/Gordondale	01-01-077-10-W6	10036-02-00
	Gold Creek	13-26-067-05-W6	10446-02-00
	Teepee Creek	SE-2-074-04-W6	1635-02-02
Conocophillips Canada Energy Partnership	Wembley	06-19-073-08-W6	212-01-00
Devon Canada	Tangent	16-20-080-24-W5	11346-02-00
	NW Belloy (Dunvegan)	16-36-079-03-W6	9810-02-00

	Eaglesham (South)	02-14-077-25-W5	47669-01-00
	Puskwaskau	03-26-074-01-W6	17524-01-00
	North Normanville	03-36-079-23-W5	47455-01-00
	West Culp	05-34-078-25-W6	136284-00-00
	Cecil	08-15-084-08-W6	10032-02-00
EnCana Corporation	Sexsmith	04-08-075-07-W6	10002-01-00
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	238762-00-02
Long Run Exploration	Eaglesham	01-25-076-01-W6	241532-00-00
	Kakut	14-12-075-03-W6	248469-00-01
	Donnelly	06-01-077-21-W5	87-02-00
Longview Oil Corp.	Sunset House	06-22-70-20-W5	138884-01-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	1746-02-01
	Pouce Coupe	16-07-078-11-W6	614-01-00
Petrus Resources	Rycroft	08-25-077-06-W6	11351-02-00
	Spirit River	08-34-077-06-W6	11096-02-00
Spectra Energy Midstream Corporation	Fourth Creek	16-11-082-09-W6	263-01-00
Suncor Energy Inc.	Progress	07-22-078-09-W6	11428-02-00
Taqa North Ltd.	Valhalla	13-21-076-09-W6	17620-01-01
Veresen Energy Infrastructure Inc.	Hythe Brainard	11-18-074-12-W6	10910-02-02
Weyerhaeuser Canada	Grande Prairie Pulp and Wood Plant	01-14-070-05-W6	113-02-00

can be found on the “Monthly Continuous Data Summary” and “Continuous Network Equipment Summary” pages of the report.

**Continuous Monitoring: Six (6) Stations including Henry Pirker (Grande Prairie), Evergreen Park, Smoky Heights, Beaverlodge, Valleyview, and Portable-Sunset House.**

During the month of **October** the following events were noted:

**Henry Pirker Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Henry Pirker station except for PM<sub>2.5</sub>, which had twelve (12) 1-hour exceedences and two (2) 24-hour exceedences of the AAAQO guideline:
  - October 07 16:00 102.7 µg/m<sup>3</sup> Alberta Environment Reference # 263881
  - October 07 18:00 125.7 µg/m<sup>3</sup> Alberta Environment Reference # 263881
  - October 07 19:00 125.6 µg/m<sup>3</sup> Alberta Environment Reference # 263881
  - October 07 21:00 81.3 µg/m<sup>3</sup> Alberta Environment Reference # 263881
  - October 07 24h 42.6 µg/m<sup>3</sup> Alberta Environment Reference # 263881
  - October 08 01:00 82.8 µg/m<sup>3</sup> Alberta Environment Reference # 263886
  - October 08 02:00 94.8 µg/m<sup>3</sup> Alberta Environment Reference # 263886
  - October 08 03:00 92.6 µg/m<sup>3</sup> Alberta Environment Reference # 263886
  - October 08 04:00 90.9 µg/m<sup>3</sup> Alberta Environment Reference # 263886
  - October 08 05:00 95.2 µg/m<sup>3</sup> Alberta Environment Reference # 263886
  - October 08 06:00 99.2 µg/m<sup>3</sup> Alberta Environment Reference # 263886
  - October 08 07:00 93.6 µg/m<sup>3</sup> Alberta Environment Reference # 263886
  - October 08 08:00 86.0 µg/m<sup>3</sup> Alberta Environment Reference # 263886
  - October 08 24h 65.7 µg/m<sup>3</sup> Alberta Environment Reference # 263886
- ◆ All analyzers and sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of October.

**Evergreen Park Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Evergreen Park station except for PM<sub>2.5</sub>, which had four (4) 1-hour exceedences and two (2) 24-hour exceedences of the AAAQO guideline:
  - October 07 18:00 87.1 µg/m<sup>3</sup> Alberta Environment Reference # 263882
  - October 07 19:00 98.3 µg/m<sup>3</sup> Alberta Environment Reference # 263882
  - October 07 24h 33.9 µg/m<sup>3</sup> Alberta Environment Reference # 263882
  - October 08 01:00 85.5 µg/m<sup>3</sup> Alberta Environment Reference # 263887
  - October 08 02:00 86.2 µg/m<sup>3</sup> Alberta Environment Reference # 263887
  - October 08 24h 58.0 µg/m<sup>3</sup> Alberta Environment Reference # 263887
- ◆ All analyzers and sensors at the Evergreen Park station had an operational uptime greater than 90% for the month of October.

**Smoky Heights Station:**

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station except for PM<sub>2.5</sub>, which had seven (7) 1-hour exceedences and one (1) 24-hour exceedences of the AAAQO guideline:
  - October 07 22:00 102.8 µg/m<sup>3</sup> Alberta Environment Reference # 263883

- October 07 23:00 113.7  $\mu\text{g}/\text{m}^3$  Alberta Environment Reference # 263883
  - October 07 24:00 108.4  $\mu\text{g}/\text{m}^3$  Alberta Environment Reference # 263883
  - October 08 01:00 109.0  $\mu\text{g}/\text{m}^3$  Alberta Environment Reference # 263888
  - October 08 02:00 103.9  $\mu\text{g}/\text{m}^3$  Alberta Environment Reference # 263888
  - October 08 03:00 98.6  $\mu\text{g}/\text{m}^3$  Alberta Environment Reference # 263888
  - October 08 04:00 86.0  $\mu\text{g}/\text{m}^3$  Alberta Environment Reference # 263888
  - October 08 24h 46.8  $\mu\text{g}/\text{m}^3$  Alberta Environment Reference # 263888
- ◆ The station was returned to service on October 3<sup>rd</sup> after trailer shelter replacement.
  - ◆ After station restart, the PM<sub>2.5</sub> analyzer experienced equipment problems, and did not meet the 90% uptime for October. **Reference #265317**
  - ◆ All other analyzers and sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of October.

#### Beaverlodge Station:

- ◆ The measured ambient air quality was within the AAAQO for the Beaverlodge station except for PM<sub>2.5</sub>, which had one (1) 1-hour of the AAAQO guideline:
  - October 07 15:00 84.3  $\mu\text{g}/\text{m}^3$  Alberta Environment Reference # 263880
- ◆ All analyzers and sensors at the Beaverlodge station had an operational uptime greater than 90% for the month of October.

#### Valleyview Station:

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station except for H<sub>2</sub>S, which had one (1) 1-hour exceedence and one (1) 24-hour exceedences of the AAAQO guideline:
  - October 21 05:00 11.1 ppb Alberta Environment Reference # 264299
  - October 21 24h 4.1 ppb Alberta Environment Reference # 264299
- ◆ All analyzers and sensors at the Valleyview station had an operational uptime greater than 90% for the month of October.

#### Sunset House Station:

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

**Passive Monitoring - 46 Stations throughout the PAZA zone:**

There were five duplicate sites sampled in the month of October: Silver Valley, Bear Lake, Webley, Clouston Creek, and Girouxville 4. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO<sub>2</sub> passives ranged from 0.1 ppb to 0.3 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO<sub>2</sub> passives ranged from 0.3 ppb to 5.3 ppb, with a mean of 0.9 ppb.
- Monthly average concentrations for O<sub>3</sub> passives ranged from 21.0 ppb to 34.2 ppb, with a mean of 27.5 ppb.
- Monthly average concentrations for H<sub>2</sub>S passives ranged from 0.1 ppb to 0.2 ppb, with a mean of 0.1 ppb.

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

On Behalf of the  
Peace Airshed Zone Association



Shelly Pruden  
Executive Director

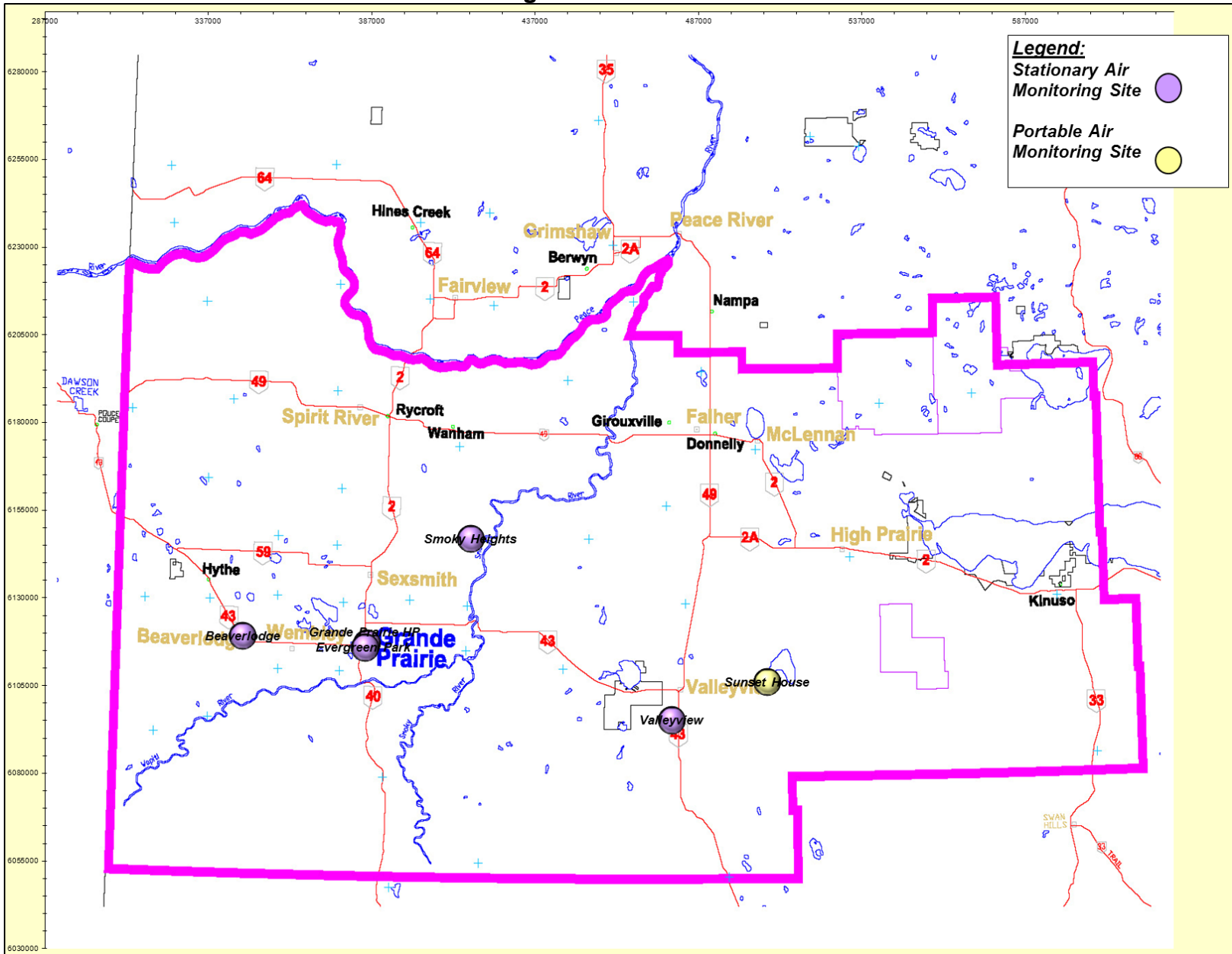


Patrick Andersen, B.Sc.  
FOCUS AQM Data Specialist



Jeff Cooper, C.Tech.  
AQM Operations Manager

# Location of PAZA Continuous Monitoring Stations



## PAZA Monthly Continuous Data Summary

Oct-2012 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	48	Henry Pirker	0.2	0	0	5.2	Oct-07 15:00	0.8	Oct-07	100%
SO <sub>2</sub> (ppb)	172	48	Evergreen Park	0.2	0	0	2.5	Oct-07 20:00	0.6	Oct-07	100%
SO <sub>2</sub> (ppb)	172	48	Smoky Heights	0.5	0	0	13.3	Oct-30 01:00	1.6	Oct-28	100%
SO <sub>2</sub> (ppb)	172	48	Beaverlodge	0.3	0	0	5.9	Oct-23 15:00	0.9	Oct-23	100%
SO <sub>2</sub> (ppb)	172	48	Valleyview	0.7	0	0	11.4	Oct-21 12:00	4.0	Oct-21	100%
SO <sub>2</sub> (ppb)	172	48	Sunset House	0.2	0	0	3.3	Oct-31 12:00	1.0	Oct-31	100%
NO (ppb)			Henry Pirker	4.3	0	0	108.5	Oct-30 09:00	30.2	Oct-30	100%
NO <sub>2</sub> (ppb)	159	106	Henry Pirker	7.9	0	0	42.0	Oct-30 20:00	23.8	Oct-31	100%
NO <sub>x</sub> (ppb)			Henry Pirker	12.2	0	0	147.6	Oct-30 09:00	52.4	Oct-30	100%
NO (ppb)			Beaverlodge	0.6	0	0	19.2	Oct-31 09:00	5.6	Oct-31	100%
NO <sub>2</sub> (ppb)	159	106	Beaverlodge	3.0	0	0	22.7	Oct-31 09:00	13.3	Oct-31	100%
NO <sub>x</sub> (ppb)			Beaverlodge	3.7	0	0	41.7	Oct-31 09:00	18.8	Oct-31	100%
NO (ppb)			Sunset House	0.2	0	0	4.8	Oct-31 12:00	1.0	Oct-31	100%
NO <sub>2</sub> (ppb)	159	106	Sunset House	1.3	0	0	6.8	Oct-31 12:00	3.8	Oct-31	100%
NO <sub>x</sub> (ppb)			Sunset House	1.4	0	0	11.8	Oct-31 12:00	4.7	Oct-31	100%
O <sub>3</sub> (ppb)	82		Henry Pirker	18.3	0	-	37.8	Oct-08 14:00	28.9	Oct-17	100%
O <sub>3</sub> (ppb) - 8-hr			Henry Pirker		0				35.7	Oct-17	
O <sub>3</sub> (ppb)	82		Beaverlodge	23.1	0	-	39.3	Oct-13 15:00	31.2	Oct-17	100%
O <sub>3</sub> (ppb) - 8-hr			Beaverlodge		0				37.5	Oct-17	
O <sub>3</sub> (ppb)	82		Sunset House	24.6	0	-	40.5	Oct-15 22:00	35.2	Oct-15	100%
O <sub>3</sub> (ppb) - 8-hr			Sunset House		0				37.7	Oct-16	
CO (ppm)	13		Henry Pirker	0.19	0	-	1.2	Oct-10 00:00	0.5	Oct-08	100%
CO (ppm) - 8-hr		5	Henry Pirker		0				0.6	Oct-08	
THC (ppm)			Henry Pirker	2.26	-	-	3.7	Oct-05 07:00	2.8	Oct-31	100%
TRS (ppb)			Henry Pirker	0.3	-	-	1.0	Oct-01 01:00	0.5	Oct-01	100%
TRS (ppb)			Evergreen Park	0.3	-	-	0.9	Oct-25 07:00	0.5	Oct-31	100%
TRS (ppb)			Smoky Heights	0.1	-	-	0.5	Oct-08 02:00	0.3	Oct-08	100%
TRS (ppb)			Sunset House	0.1	-	-	0.5	Oct-08 02:00	0.3	Oct-08	100%
H <sub>2</sub> S (ppb)	10	3	Valleyview	0.2	1	1	11.0	Oct-21 05:00	4.2	Oct-21	100%
PM2.5 (µg/m3)	80	30	Henry Pirker	8.1	12	2	125.7	Oct-07 18:00	65.0	Oct-08	100%
PM2.5 (µg/m3)	80	30	Evergreen Park	6.4	4	2	98.3	Oct-07 19:00	58.0	Oct-08	96%
PM2.5 (µg/m3)	80	30	Smoky Heights	4.9	7	1	113.7	Oct-07 23:00	46.8	Oct-08	85%
PM2.5 (µg/m3)	80	30	Beaverlodge	7.5	1	0	84.3	Oct-07 15:00	29.2	Oct-07	99%
PM2.5 (µg/m3)	80	30	Sunset House	3.1	0	0	75.5	Oct-08 12:00	25.0	Oct-08	98%



## PAZA Monthly Continuous Data Summary – continued

Oct-2012		Peace Airshed Zone Association				Maximum Recorded Values					
						1-hr		24-hr / 8-hr			
RH (%)		Henry Pirker	70.5	-	-	90.2	Oct-01 07:00	83.7	Oct-12	100%	
RH (%)		Evergreen Park	76.0	-	-	97.2	Oct-19 07:00	92.8	Oct-12	100%	
RH (%)		Beaverlodge	83.7	-	-	100.0	Oct-01 06:00	100.0	Oct-12	99%	
RH (%)		Valleyview	78.0	-	-	97.8	Oct-19 05:00	93.8	Oct-12	90%	
SR (W/m <sup>2</sup> )		Henry Pirker	54.2	-	-	519.9	Oct-04 14:00	134.9	Oct-04	100%	
Temp (°C)		Henry Pirker	-0.3	-	-	21.1	Oct-06 18:00	11.5	Oct-06	100%	
Temp (°C)		Evergreen Park	-0.3	-	-	21.2	Oct-06 18:00	12.5	Oct-07	100%	
Temp (°C)		Smoky Heights	-1.4	-	-	19.2	Oct-06 17:00	11.9	Oct-07	93%	
Temp (°C)		Beaverlodge	-0.5	-	-	20.8	Oct-06 17:00	11.4	Oct-07	99%	
Temp (°C)		Valleyview	-0.1	-	-	19.2	Oct-06 17:00	12.4	Oct-07	90%	
Temp (°C)		Sunset House	-0.1	-	-	16.1	Oct-06 16:00	9.8	Oct-07	100%	
WSPD s (km/hr)		Henry Pirker	10.0	-	-	42.0	Oct-16 13:00	22.1	Oct-20	100%	
WSPD s (km/hr)		Evergreen Park	12.7	-	-	63.0	Oct-16 14:00	32.7	Oct-16	100%	
WSPD s (km/hr)		Smoky Heights	12.3	-	-	47.0	Oct-16 12:00	26.7	Oct-16	94%	
WSPD s (km/hr)		Beaverlodge	11.1	-	-	50.0	Oct-16 13:00	28.9	Oct-16	100%	
WSPD s (km/hr)		Valleyview	6.3	-	-	21.0	Oct-17 11:00	13.1	Oct-20	90%	
WSPD s (km/hr)		Sunset House	11.5	-	-	32.0	Oct-14 11:00	19.3	Oct-14	91%	
WSPD v (km/hr)		Henry Pirker	4.6	-	-	42.0	Oct-16 13:00	21.9	Oct-20	100%	
WSPD v (km/hr)		Evergreen Park	6.3	-	-	62.0	Oct-16 14:00	30.6	Oct-16	100%	
WSPD v (km/hr)		Smoky Heights	4.7	-	-	47.0	Oct-16 12:00	24.3	Oct-16	94%	
WSPD v (km/hr)		Beaverlodge	5.0	-	-	50.0	Oct-16 13:00	25.9	Oct-16	100%	
WSPD v (km/hr)		Valleyview	2.7	-	-	21.0	Oct-17 11:00	12.7	Oct-20	90%	
WSPD v (km/hr)		Sunset House	2.8	-	-	32.0	Oct-14 11:00	18.4	Oct-14	91%	
WDIR		Henry Pirker	WNW	-	-	-	-	-	-	100%	
WDIR		Evergreen Park	WNW	-	-	-	-	-	-	100%	
WDIR		Smoky Heights	WNW	-	-	-	-	-	-	94%	
WDIR		Beaverlodge	NW	-	-	-	-	-	-	100%	
WDIR		Valleyview	NW	-	-	-	-	-	-	90%	
WDIR		Sunset House	SSW	-	-	-	-	-	-	91%	

# Continuous Network Equipment Summary

## PAZA – Henry Pirker Station

### General Station Issues

Routine monthly calibrations were performed on October 10<sup>th</sup> (THC), October 11<sup>th</sup> (CO, TRS) and October 12<sup>th</sup> (SO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</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>	Sharp	5030	Twelve (12) 1-hour and two (2) 24-hour exceedences were recorded. <b>AE Reference #263881, 263886</b>
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	No operational issues observed.

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**PAZA – Evergreen Park Station**

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**General Station Issues**

Routine monthly calibration performed on October 25<sup>th</sup> (SO<sub>2</sub> and TRS).

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<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
SO <sub>2</sub>	TEI	43i	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM <sub>2.5</sub>	R&P	1400AB	Analyzer instability caused loss of data during the month. Repaired on October 31 <sup>st</sup> . Four (4) 1-hour and two (2) 24-hour exceedences were recorded. <b>AE Reference #263882, 263887</b>
ET	Met One/Gill	083D	No operational issues observed.
RH	Met One/Gill		No operational issues observed.
WS / WD	Met One/ Gill		No operational issues observed.

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**PAZA – Smoky Heights Station**

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**General Station Issues**

Trailer returned to service on October 3<sup>rd</sup> and all analyzers calibrated.

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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.
PM <sub>2.5</sub>	R&P	1400AB	The analyzer mass transducer was full of water after station reinstallation and maintenance was performed on October 9 <sup>th</sup> and 19 <sup>th</sup> to correct ongoing issues. This resulted in an analyzer uptime of 84.7% for October. <b>AE Reference #265217.</b> Seven (7) 1-hour and one (1) 24-hour exceedences were recorded. <b>AE Reference #263883, 263888</b>
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

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**PAZA – Beaverlodge Station**

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**General Station Issues**

Routine monthly calibrations performed on October 15<sup>th</sup> (SO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>).

<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
SO <sub>2</sub>	TEI	43CTL	No operational issues observed.
NO <sub>x</sub> /NO/NO <sub>2</sub>	TEI	42C	No operational issues observed.
O <sub>3</sub>	TEI	49C	No operational issues observed.
PM <sub>2.5</sub>	R&P	1400AB	One (1) 1-hour exceedence was recorded. <b>AE Reference #263880</b>
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS / WD	Blue Sky	857	No operational issues observed.

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**PAZA – Valleyview Station**

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**General Station Issues**

Routine monthly calibrations were performed on October 17<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	One (1) 1-hour and one (1) 24-hour exceedences were recorded. <b>AE Reference #264299</b>
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

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**PAZA – Portable-Sunset House Station**

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**General Station Issues**

Routine monthly calibrations were performed on October 18<sup>th</sup> (SO<sub>2</sub>, O<sub>3</sub>, NO<sub>x</sub>, TRS).

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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.
O <sub>3</sub>	TEI	49C	No operational issues observed.
TRS	TEI	39C	No operational issues observed.
PM <sub>2.5</sub>	R&P	1400AB	Twelve (12) hours flagged invalid due to negative readings.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

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PAZA

Henry Pirker Station

Monthly Summary Tables, Graphs and  
Roses



## Hourly Averages

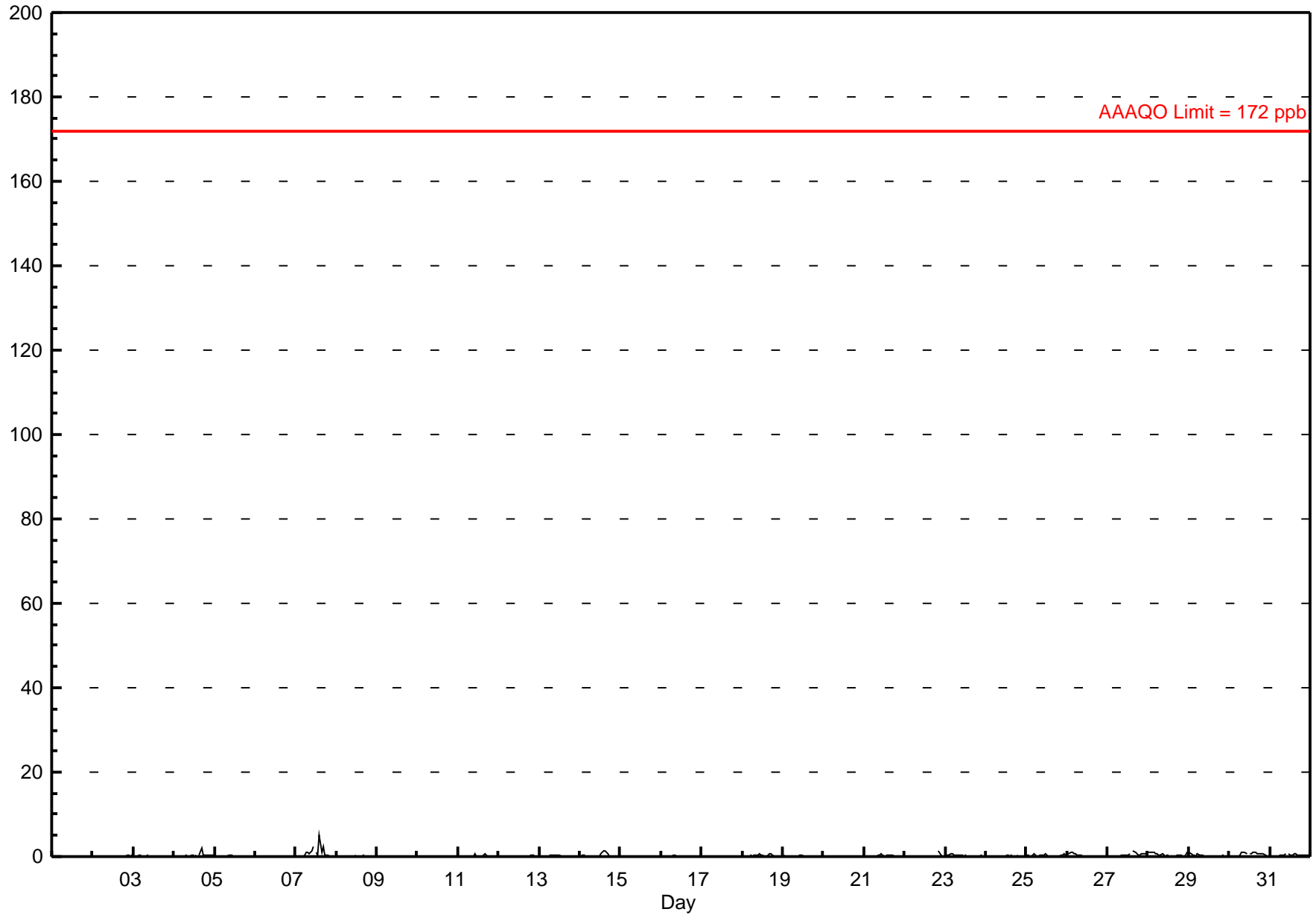
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Henry Pirker - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 5.2 ppb on Oct 7 15:00	Maximum Daily Average: 0.8 ppb on Oct 7		Hours of Data:	708
Minimum Value: 0 ppb on Oct 1 03:00	Minimum Daily Average: 0.0 ppb on Oct 15		Hours of Missing Data:	36
Maximum Diurnal Average: 0.3 ppb at hour 15	Minimum Diurnal Average: 0.1 ppb at hour 23		Hours of Calibration:	36
Monthly Average: 0.18 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.5 P <sub>99</sub> = 1.3		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.1
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.3
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	2	0	0	0	0	0	0	0	0.3	1.9
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
7-Oct	0	0	0	0	0	0	1	1	1	2	2	A	1	0	5	1	2	0	0	0	0	0	0	0	0.8	5.2
8-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
9-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
10-Oct	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Oct	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	0.6
12-Oct	0	0	0	0	0	0	A	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
13-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0.3	1.5
15-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
16-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4
17-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
18-Oct	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0.2	0.7
19-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
20-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1
21-Oct	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.6
22-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0.1	1.4
23-Oct	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.6
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.4
25-Oct	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	1	0.3	0.6
26-Oct	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	1.0
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	1	1	0	0	1	1	1	1	0.4	1.3
28-Oct	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	1.1
29-Oct	1	1	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
30-Oct	0	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0.5	1.0
31-Oct	0	0	0	0	0	0	0	0	0	1	A	1	0	0	1	1	0	0	0	0	0	0	0	0	0.3	0.6
	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.1	Diurnal Average	
	1.1	1.1	1.1	0.9	0.7	0.8	1.2	0.9	1.0	1.5	2.2	0.6	0.9	0.9	5.2	1.5	2.2	0.7	0.8	0.8	1.4	0.8	0.8	1.0	Diurnal Maximum	

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 48 ppb    30-day 11 ppb



## Hourly Maximums

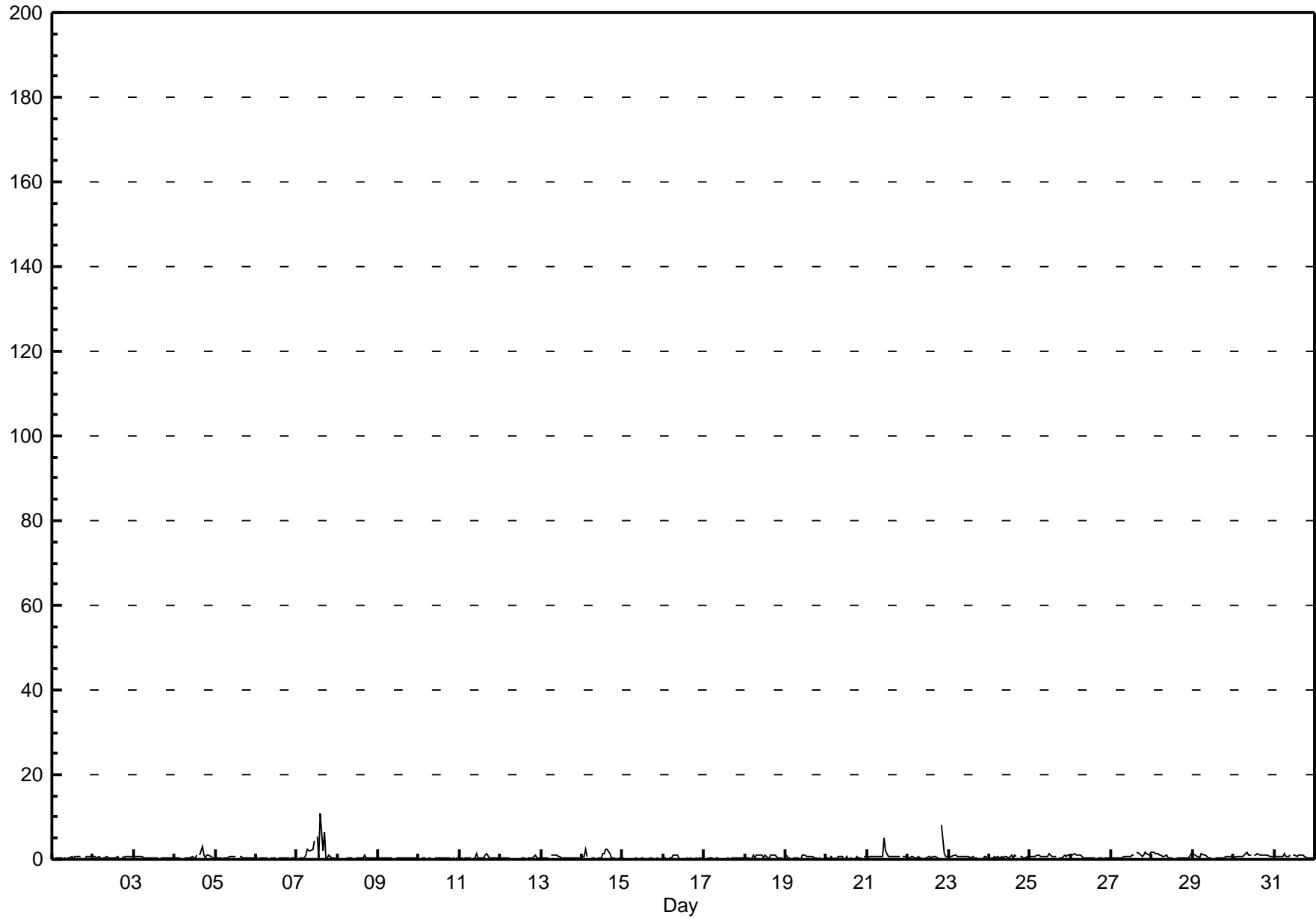
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Henry Pirker - October 2012

Maximum Value: 10.9 ppb on Oct 7 15:00		Maximum Daily Average: 1.9 ppb on Oct 7		Hours in Service: 744																						
Minimum Value: 0 ppb on Oct 8 00:00		Minimum Daily Average: 0.2 ppb on Oct 15		Hours of Data: 708																						
Maximum Diurnal Average: 0.9 ppb at hour 15		Minimum Diurnal Average: 0.4 ppb at hour 19		Hours of Missing Data: 36																						
Monthly Average: 0.57 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.3 Median = 0.5 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 1.0 P <sub>99</sub> = 2.1		Hours of Calibration: 36																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	A	0	0	1	1	1	1	0.4	0.5
2-Oct	1	1	0	1	0	0	0	0	1	0	0	0	0	0	1	0	A	1	0	1	1	1	1	1	0.4	0.7
3-Oct	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.5
4-Oct	0	0	0	0	0	0	0	0	0	0	1	0	0	1	A	1	3	1	0	1	1	1	0	0	0.7	3.0
5-Oct	0	0	0	0	0	0	1	1	1	1	1	1	1	A	1	1	0	1	1	0	1	0	0	0	0.4	0.5
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
7-Oct	0	0	0	0	0	1	2	2	2	2	4	A	5	1	11	2	6	0	0	1	0	0	0	0	1.9	10.9
8-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0.3	0.9
9-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
10-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
11-Oct	0	0	0	0	0	0	0	A	1	0	1	1	0	0	1	1	1	1	0	0	0	0	0	1	0.5	1.5
12-Oct	0	0	1	0	0	0	A	0	C	C	C	C	0	0	0	0	0	0	0	0	1	0	0	0	0.4	0.9
13-Oct	0	0	0	0	0	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.5	1.0
14-Oct	1	1	2	1	A	0	0	0	0	0	0	0	1	1	2	2	1	0	0	0	0	0	0	0	0.8	2.5
15-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
16-Oct	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
17-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
18-Oct	A	0	0	0	0	1	0	1	1	1	1	1	0	1	0	1	1	1	1	0	0	0	0	0	0.7	1.0
19-Oct	1	0	0	0	0	0	1	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	A	0	0.4	1.0
20-Oct	0	0	0	1	0	0	0	1	1	1	0	0	1	0	0	0	0	0	1	0	0	A	1	1	0.3	0.5
21-Oct	0	1	1	1	1	1	1	1	1	1	5	2	1	1	1	1	1	1	1	1	1	A	1	1	0.8	5.1
22-Oct	0	1	1	1	0	0	1	0	0	0	0	0	1	1	0	1	1	1	0	A	8	2	1	1	0.8	8.2
23-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	A	0	0	1	1	0	0.5	1.0
24-Oct	0	0	0	1	0	1	0	1	0	1	1	0	1	1	0	1	1	A	1	1	0	0	1	0	0.5	1.0
25-Oct	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.5
26-Oct	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.6	1.5
27-Oct	0	0	0	0	1	1	0	1	1	1	1	1	1	1	A	2	1	1	1	1	1	2	1	2	0.8	1.5
28-Oct	2	2	2	2	1	1	1	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	1	1	0.8	1.5
29-Oct	1	1	1	1	0	1	1	1	1	1	0	0	0	A	0	0	0	0	1	1	1	1	1	1	0.7	1.5
30-Oct	0	1	1	1	1	1	1	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6
31-Oct	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0.7	1.4
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration																								A - Automated Daily Zero Span		

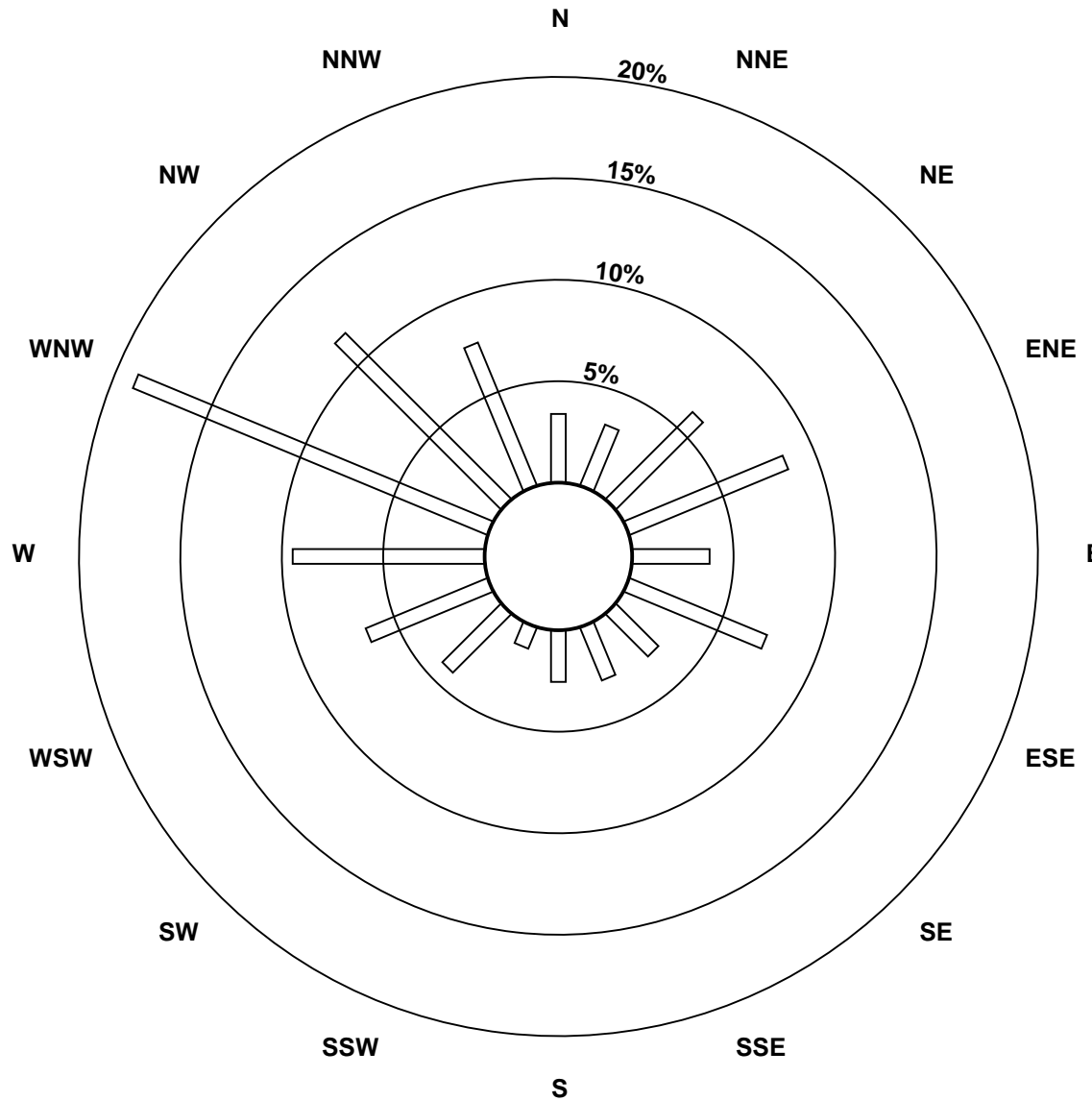
### Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Henry Pirker - October 2012

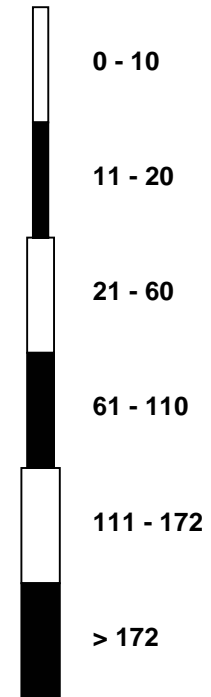


**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Henry Pirker - October 2012**

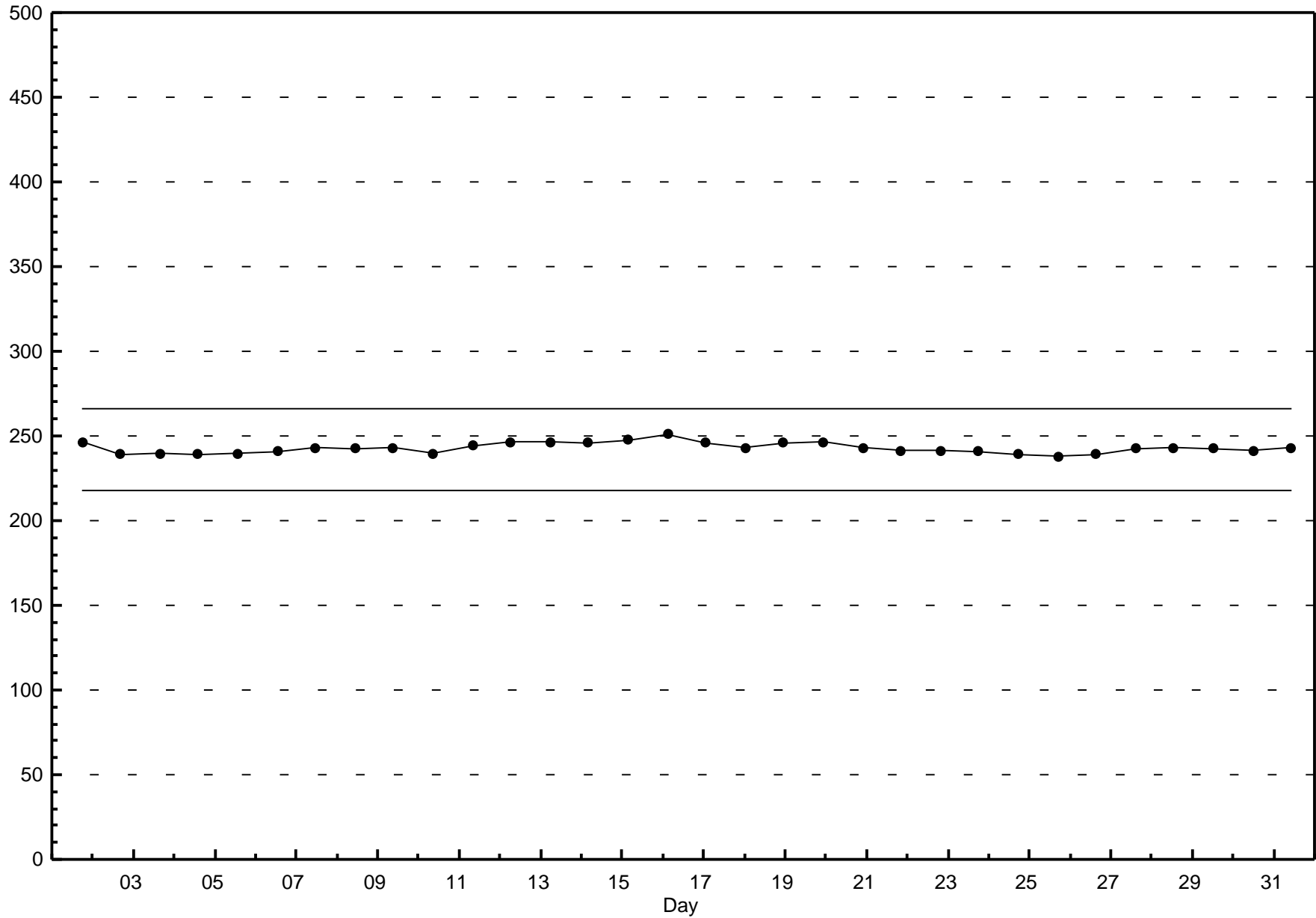


**Pollutant Classes (ppb)**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Henry Pirker - October 2012



## Hourly Averages

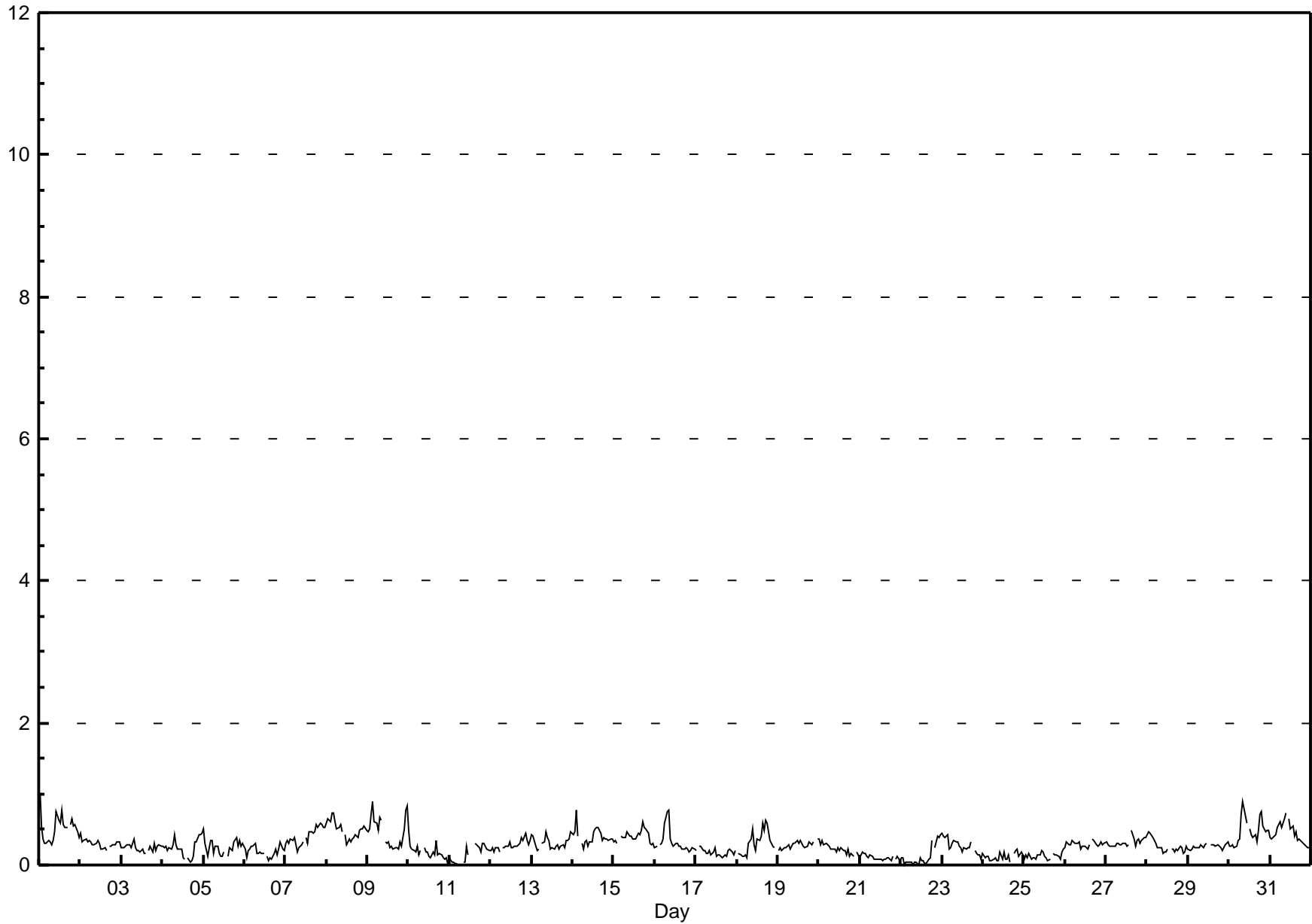
## Total Reduced Sulphur (TRS) - ppb

### Henry Pirker - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 1.0 ppb on Oct 1 01:00	Maximum Daily Average: 0.5 ppb on Oct 1		Hours of Data:	709
Minimum Value: 0 ppb on Oct 11 06:00	Minimum Daily Average: 0.1 ppb on Oct 21		Hours of Missing Data:	35
Maximum Diurnal Average: 0.3 ppb at hour 1	Minimum Diurnal Average: 0.3 ppb at hour 15		Hours of Calibration:	35
Monthly Average: 0.29 ppb	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> = 0.8		Percent Operational Time:	100.0

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

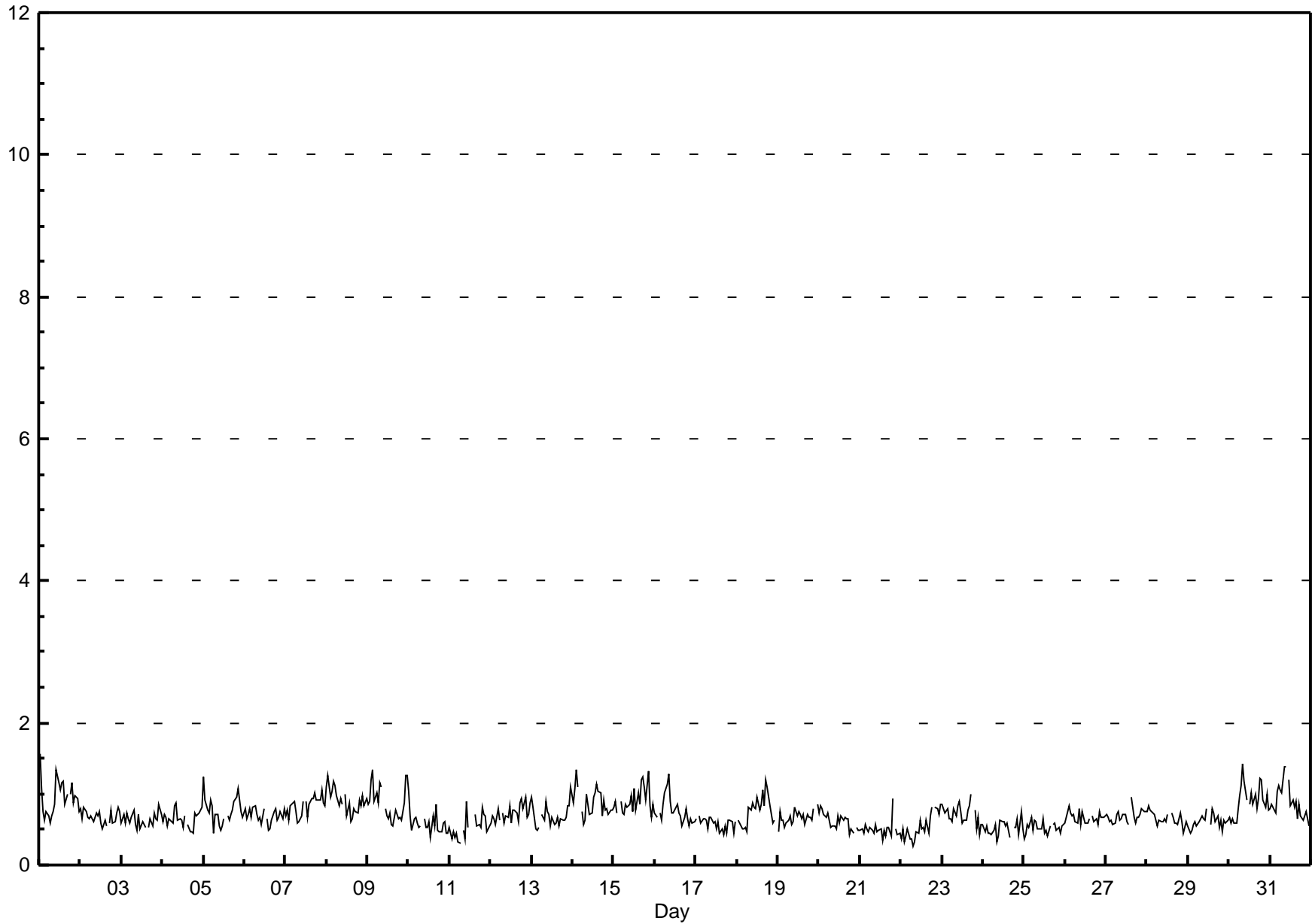
Total Reduced Sulphur (TRS) - ppb

Henry Pirker - October 2012

Maximum Value: 1.6 ppb on Oct 1 01:00		Maximum Daily Average: 1.0 ppb on Oct 1		Hours in Service: 744																							
Minimum Value: 0 ppb on Oct 22 08:00		Minimum Daily Average: 0.5 ppb on Oct 21		Hours of Data: 709																							
Maximum Diurnal Average: 0.7 ppb at hour 1		Minimum Diurnal Average: 0.7 ppb at hour 7		Hours of Missing Data: 35																							
Monthly Average: 0.71 ppb		Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.6 Median = 0.7 Q <sub>3</sub> = 0.8 P <sub>90</sub> = 1.0 P <sub>99</sub> = 1.3		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-Oct	2	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	1.6	
2-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	0.8	
3-Oct	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.6	0.9	
4-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	0	1	1	1	1	1	0.6	0.9	
5-Oct	1	1	1	1	1	1	0	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.2	
6-Oct	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	0.7	0.8	
7-Oct	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1	
8-Oct	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3	
9-Oct	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3	
10-Oct	1	1	0	1	1	1	1	1	A	1	1	1	1	0	1	1	1	0	0	0	1	1	0	0	0.6	1.0	
11-Oct	1	0	0	0	0	0	0	A	1	0	0	1	1	C	C	C	1	1	1	1	1	1	1	1	0.5	0.9	
12-Oct	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	
13-Oct	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1	
14-Oct	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	
15-Oct	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	1.3	
16-Oct	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3	
17-Oct	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	1	0	1	0.6	0.7	
18-Oct	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2	
19-Oct	0	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	
20-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	A	1	0	0.6	0.8	
21-Oct	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	0	1	1	0	1	1	A	1	0	0.5	0.9	
22-Oct	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1	0	1	0	1	1	A	1	1	1	0.5	0.8	
23-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	0.7	1.0	
24-Oct	1	0	1	0	0	0	0	1	0	0	1	1	1	1	0	0	A	1	1	1	1	0	1	0	0.5	0.8	
25-Oct	0	0	1	1	1	0	1	1	1	1	1	0	0	0	1	A	1	1	0	1	0	1	0	1	0.5	0.7	
26-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	0.8	
27-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.9	
28-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.6	0.8	
29-Oct	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.6	0.8	
30-Oct	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	1.4	
31-Oct	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4	
		0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	Diurnal Average		
		1.6	1.3	1.3	1.3	1.2	1.1	1.0	1.2	1.4	1.4	1.3	1.2	1.1	1.2	1.2	1.1	1.2	1.2	1.2	1.2	1.2	1.3	1.1	1.3	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

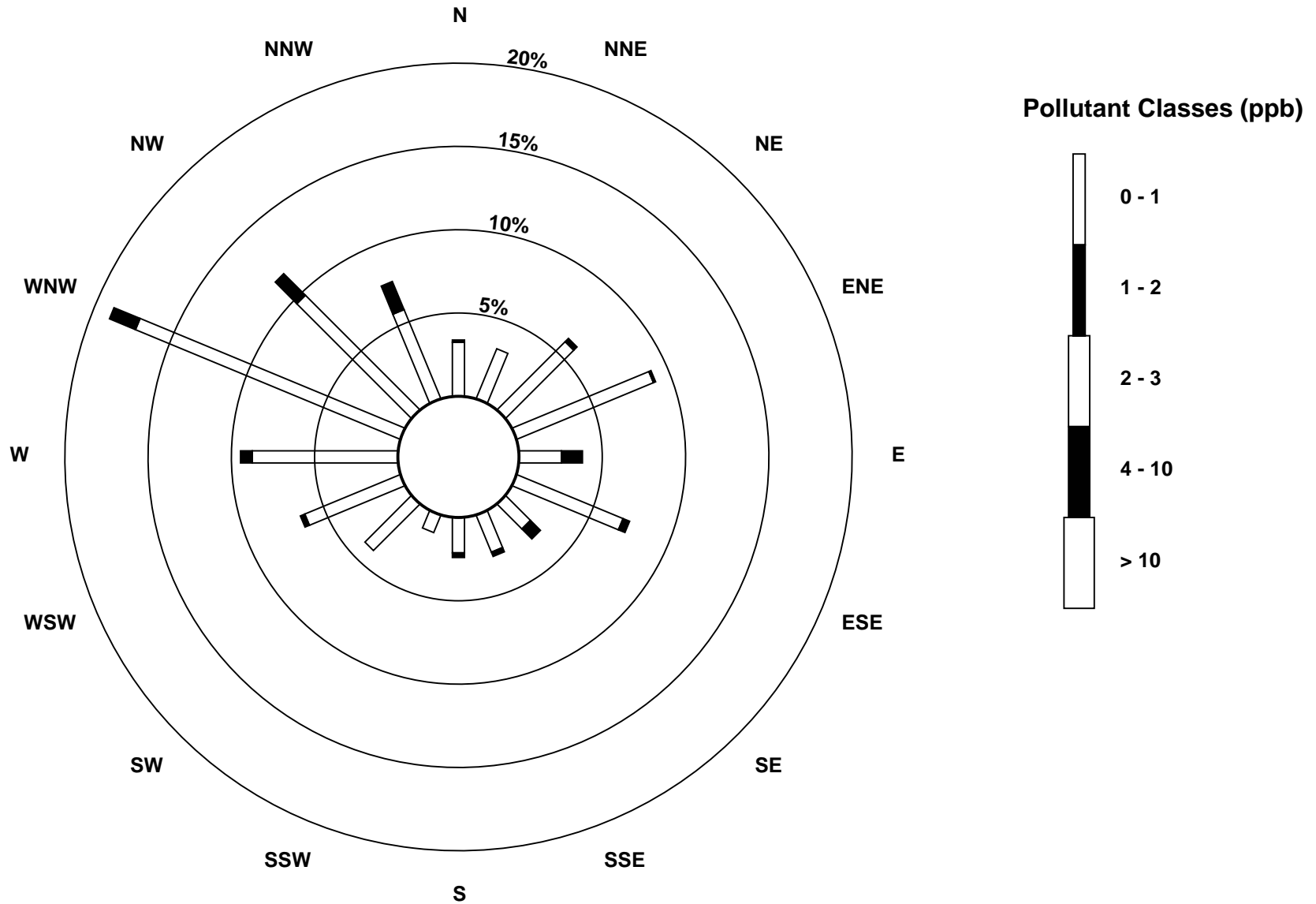
**Hourly Maximums**

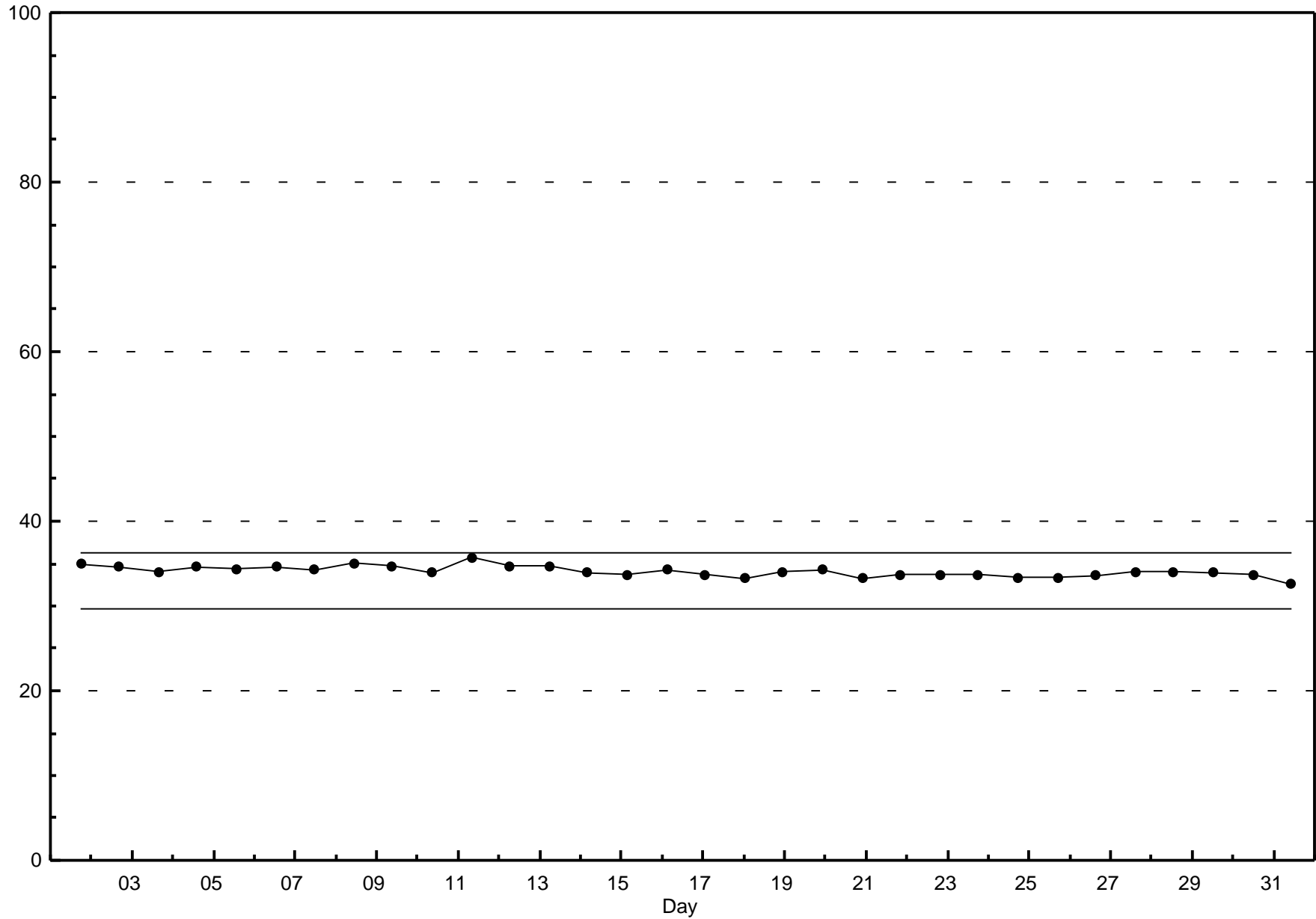
**Total Reduced Sulphur (TRS) - ppb**  
**Henry Pirker - October 2012**



**Pollutant Rose**

**Total Reduced Sulphur (TRS) - ppb**  
**Henry Pirker - October 2012**





## Hourly Averages

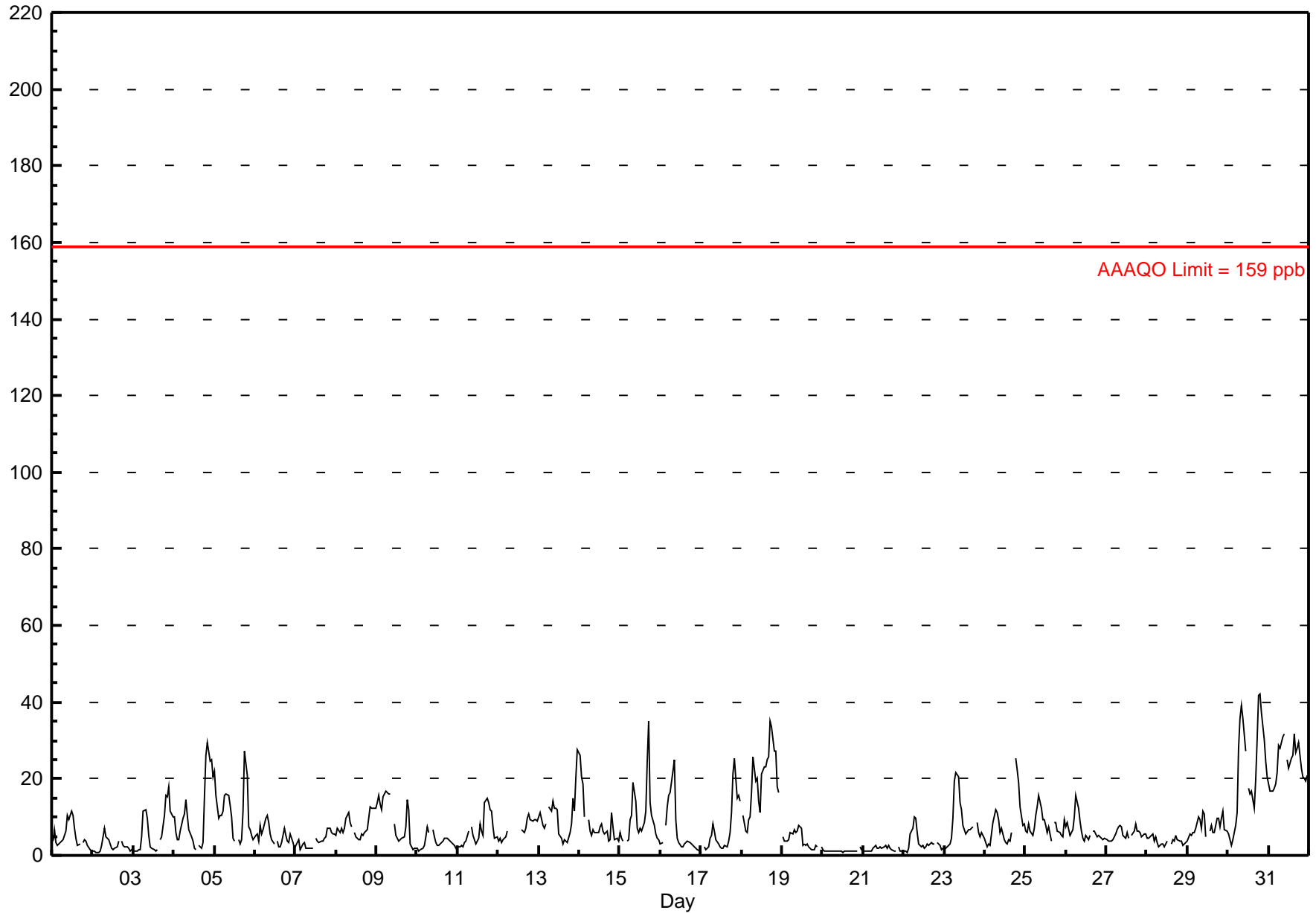
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Henry Pirker - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 42.0 ppb on Oct 30 20:00	Maximum Daily Average: 23.8 ppb on Oct 31		Hours of Data:	706
Minimum Value: 1 ppb on Oct 2 04:00	Minimum Daily Average: 1.1 ppb on Oct 20		Hours of Missing Data:	38
Maximum Diurnal Average: 11.8 ppb at hour 8	Minimum Diurnal Average: 5.0 ppb at hour 4		Hours of Calibration:	38
Monthly Average: 7.86 ppb	Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 1.7 Q <sub>1</sub> = 3.1 Median = 5.4 Q <sub>3</sub> = 9.8 P <sub>90</sub> = 18.5 P <sub>99</sub> = 34.6		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-Oct	4	7	3	2	3	4	4	5	6	11	9	12	10	7	5	3	3	A	3	4	4	3	2	1	5.0	11.7	
2-Oct	1	1	1	1	1	3	5	7	5	4	3	2	1	2	2	4	A	4	3	2	2	2	1	1	2.5	6.9	
3-Oct	1	1	1	1	2	5	12	12	10	5	2	2	1	1	2	A	4	5	11	16	15	18	11	10	6.4	18.1	
4-Oct	10	6	4	4	6	10	11	14	10	7	5	4	2	2	A	3	2	3	15	26	29	25	25	20	10.6	29.3	
5-Oct	22	16	10	10	10	12	16	16	16	13	10	4	4	A	4	3	4	12	27	21	8	7	5	4	11.0	27.1	
6-Oct	5	5	4	8	5	7	10	11	8	5	4	3	A	4	2	2	3	7	5	4	3	5	3	2	5.1	10.6	
7-Oct	3	3	4	2	3	3	2	2	2	2	2	A	4	4	3	4	4	4	5	7	7	6	5	5	3.7	7.0	
8-Oct	5	7	6	7	6	7	10	11	9	8	A	6	5	4	4	6	5	6	7	10	13	12	12	12	7.7	12.7	
9-Oct	14	16	13	12	15	17	16	16	16	A	8	5	4	4	4	5	5	8	15	12	3	2	2	2	9.2	16.9	
10-Oct	2	1	1	2	3	5	7	6	A	7	5	3	3	3	3	4	5	4	4	4	3	3	3	2	3.6	7.3	
11-Oct	2	2	2	2	3	4	6	A	7	5	4	3	4	8	6	5	14	15	14	12	11	7	4	5	6.5	15.1	
12-Oct	4	5	3	4	5	6	A	9	C	C	C	C	C	C	7	6	7	10	11	9	9	9	9	9	--	10.7	
13-Oct	10	11	8	7	8	A	13	12	14	12	12	12	6	4	3	4	4	3	6	8	15	11	20	27	10.1	27.5	
14-Oct	26	21	18	10	A	9	6	5	7	6	6	6	7	8	6	6	6	4	4	11	7	4	4	4	8.4	26.2	
15-Oct	6	4	4	A	4	4	9	10	19	14	7	6	7	7	9	12	25	35	14	10	8	6	4	4	9.9	35.0	
16-Oct	3	3	A	8	13	16	16	22	25	9	4	3	2	2	3	4	4	3	3	3	2	2	2	1	6.6	25.1	
17-Oct	1	A	2	2	2	4	5	8	6	4	3	2	2	2	3	2	4	6	11	21	25	15	16	14	7.0	25.4	
18-Oct	A	10	6	6	9	10	17	26	19	20	14	11	21	23	23	25	26	35	33	27	27	18	17	A	19.3	34.9	
19-Oct	5	4	4	4	4	6	6	7	6	7	8	7	3	3	2	3	2	2	2	1	2	2	A	2	4.0	8.0	
20-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1.1	2.1	
21-Oct	1	1	1	1	1	1	2	3	2	2	2	2	3	2	2	2	2	1	1	1	A	2	1	1	1.7	2.8	
22-Oct	1	1	1	2	5	7	10	10	6	3	2	3	2	2	3	3	3	3	3	3	A	3	2	1	2	3.4	10.1
23-Oct	2	2	2	3	5	10	19	22	21	14	12	8	7	5	7	7	7	8	A	8	6	5	6	5	8.2	21.7	
24-Oct	4	2	3	3	6	9	12	11	9	6	7	4	3	3	4	4	6	A	25	23	19	13	8	8	8.3	25.3	
25-Oct	6	6	8	6	5	7	10	13	16	12	9	9	8	6	8	4	A	9	9	6	6	5	5	9	8.0	15.6	
26-Oct	8	8	5	6	7	10	16	12	9	6	4	4	5	4	5	A	6	6	5	5	5	5	4	4	6.5	15.6	
27-Oct	4	4	4	4	4	5	7	8	8	7	5	5	6	4	A	5	6	8	6	6	6	5	6	6	5.6	8.1	
28-Oct	4	5	5	5	4	5	3	2	3	3	2	3	4	A	3	4	4	5	4	4	4	3	3	3	3.7	5.4	
29-Oct	4	5	5	6	6	7	10	9	7	11	11	5	A	6	8	6	6	10	10	7	10	12	7	7	7.6	11.7	
30-Oct	6	4	2	4	8	11	28	36	39	36	27	A	18	16	17	12	20	30	42	42	37	30	25	20	22.2	42.0	
31-Oct	18	17	17	17	19	22	29	28	31	32	A	25	23	25	26	32	27	28	29	23	21	20	20	21	23.8	31.7	
	6.1	6.0	5.0	5.0	5.8	7.5	10.6	11.8	11.6	9.4	6.8	5.7	5.9	5.8	6.0	6.1	7.4	9.5	10.9	11.2	10.4	8.6	7.8	7.2	Diurnal Average		
	26.2	20.5	18.5	17.4	18.5	21.8	28.9	36.0	39.0	35.8	27.3	25.1	22.6	25.5	25.9	31.7	26.8	35.0	41.7	42.0	37.4	30.4	25.1	27.5	Diurnal Maximum		

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb    24-hr 106 ppb



## Hourly Maximums

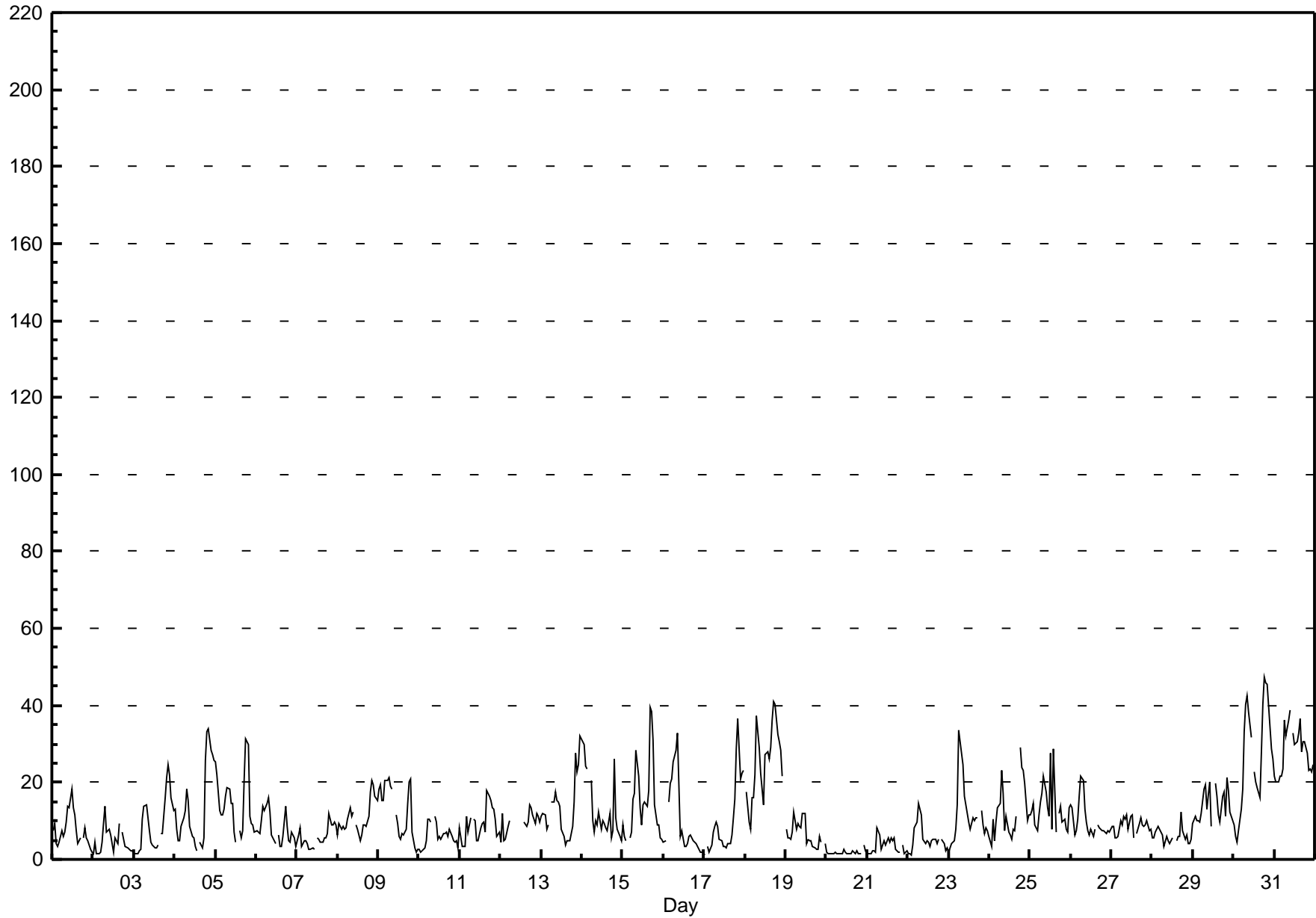
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Henry Pirker - October 2012

Maximum Value: 47.2 ppb on Oct 30 19:00		Maximum Daily Average: 28.1 ppb on Oct 31		Hours in Service: 744																							
Minimum Value: 1 ppb on Oct 17 01:00		Minimum Daily Average: 1.8 ppb on Oct 20		Hours of Data: 706																							
Maximum Diurnal Average: 16.2 ppb at hour 8		Minimum Diurnal Average: 7.3 ppb at hour 3		Hours of Missing Data: 38																							
Monthly Average: 11.19 ppb		Percentiles: P <sub>1</sub> = 1.5 P <sub>10</sub> = 2.9 Q <sub>1</sub> = 5.0 Median = 8.4 Q <sub>3</sub> = 14.2 P <sub>90</sub> = 24.2 P <sub>99</sub> = 40.2		Hours of Calibration: 38																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	7	9	4	3	4	8	6	7	10	14	14	18	13	12	7	4	5	A	5	8	5	5	3	2	7.6	18.4	
2-Oct	2	4	2	2	2	5	9	14	7	8	7	4	2	6	4	9	A	7	5	3	3	3	2	2	4.8	14.0	
3-Oct	2	2	2	2	3	10	14	14	11	8	4	4	3	3	4	A	7	7	16	21	24	22	16	13	9.1	24.4	
4-Oct	13	8	5	5	8	11	13	18	15	9	6	5	3	2	A	4	3	6	26	33	34	28	27	26	13.5	34.0	
5-Oct	25	22	13	11	11	13	16	19	18	14	14	7	5	A	7	6	7	20	31	30	11	9	9	7	14.3	31.4	
6-Oct	7	7	7	10	14	13	15	16	12	7	6	4	A	7	4	4	6	14	8	5	5	7	6	4	8.0	16.0	
7-Oct	5	7	8	3	5	5	4	2	2	3	2	A	5	5	4	4	5	5	7	12	9	9	10	9	5.8	11.9	
8-Oct	6	9	8	8	8	8	10	13	11	12	A	9	8	5	6	9	9	8	11	17	20	19	16	15	10.8	20.3	
9-Oct	18	19	15	15	20	21	21	19	18	A	12	9	6	5	7	6	8	15	20	21	7	3	2	2	12.7	21.3	
10-Oct	2	2	2	3	5	10	10	10	A	11	10	5	6	5	7	7	7	6	8	6	5	4	5	3	6.1	11.1	
11-Oct	8	3	4	3	11	7	11	A	10	10	5	5	8	9	10	7	18	16	15	13	13	10	6	7	9.2	17.9	
12-Oct	4	12	5	5	8	10	A	13	C	C	C	C	C	C	10	9	10	14	14	12	9	12	11	10	--	14.2	
13-Oct	11	12	11	8	9	A	15	15	17	15	15	14	8	6	4	5	5	5	8	15	28	23	25	32	13.3	32.0	
14-Oct	30	30	24	23	A	20	10	7	10	9	12	8	10	9	8	7	12	5	7	26	11	8	6	5	13.1	30.5	
15-Oct	9	6	5	A	5	7	16	17	28	22	13	9	14	15	14	18	40	39	31	14	9	9	6	5	15.2	39.7	
16-Oct	4	5	A	15	20	21	26	28	33	20	6	7	4	3	4	6	6	5	4	4	3	3	2	2	10.0	32.7	
17-Oct	1	A	4	2	4	7	9	10	8	5	5	4	4	3	4	4	6	11	16	29	37	21	22	23	10.3	36.7	
18-Oct	A	17	10	8	16	16	22	37	29	23	18	14	27	28	26	29	36	41	40	32	30	28	21	A	25.0	40.9	
19-Oct	8	5	5	5	7	12	8	9	9	8	12	12	4	5	5	5	4	3	3	3	6	5	A	4	6.4	12.3	
20-Oct	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	A	4	2	1.8	3.6	
21-Oct	2	2	2	2	2	2	8	6	3	4	5	4	5	5	6	5	6	3	2	2	A	4	2	2	3.5	8.2	
22-Oct	2	2	1	4	8	10	14	13	12	5	4	5	5	4	5	5	5	4	5	A	5	4	2	3	5.5	14.5	
23-Oct	2	3	4	5	8	14	33	30	25	17	14	12	10	8	11	10	11	11	A	13	9	7	8	8	11.8	33.5	
24-Oct	6	4	11	5	10	14	15	23	17	8	11	7	6	5	8	7	11	A	29	24	23	20	10	12	12.3	29.0	
25-Oct	12	13	15	9	8	12	15	17	22	17	14	11	27	8	29	7	A	12	14	10	11	8	7	14	13.4	28.6	
26-Oct	14	14	6	7	10	17	22	20	13	10	8	6	8	6	8	A	9	8	7	7	7	7	7	7	9.9	21.5	
27-Oct	8	9	5	5	6	10	9	11	10	11	8	11	12	5	A	7	9	11	9	8	9	10	7	8	8.7	11.7	
28-Oct	5	5	7	8	8	7	6	3	6	5	4	5	6	A	5	6	6	12	8	5	6	4	4	5	6.0	12.2	
29-Oct	9	11	10	10	10	12	18	19	13	17	20	9	A	20	16	12	10	16	18	11	21	18	12	10	14.0	21.1	
30-Oct	9	6	5	8	13	18	33	40	42	38	32	A	23	20	19	16	28	40	47	46	45	34	29	26	26.9	47.2	
31-Oct	22	20	20	22	22	24	36	32	36	39	A	33	30	31	33	37	28	31	31	28	23	23	23	25	28.1	38.9	
		8.6	9.0	7.3	7.4	8.9	11.5	14.9	16.2	15.5	12.7	10.1	8.7	9.4	8.6	9.5	8.9	11.0	13.0	14.9	15.3	14.4	12.2	10.4	9.7	Diurnal Average	
		30.5	30.0	24.3	23.5	21.6	23.6	36.3	40.2	42.5	38.9	31.5	32.7	29.8	30.7	32.8	36.7	39.7	40.9	47.2	45.9	45.3	34.1	28.9	32.0	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

### Hourly Maximums

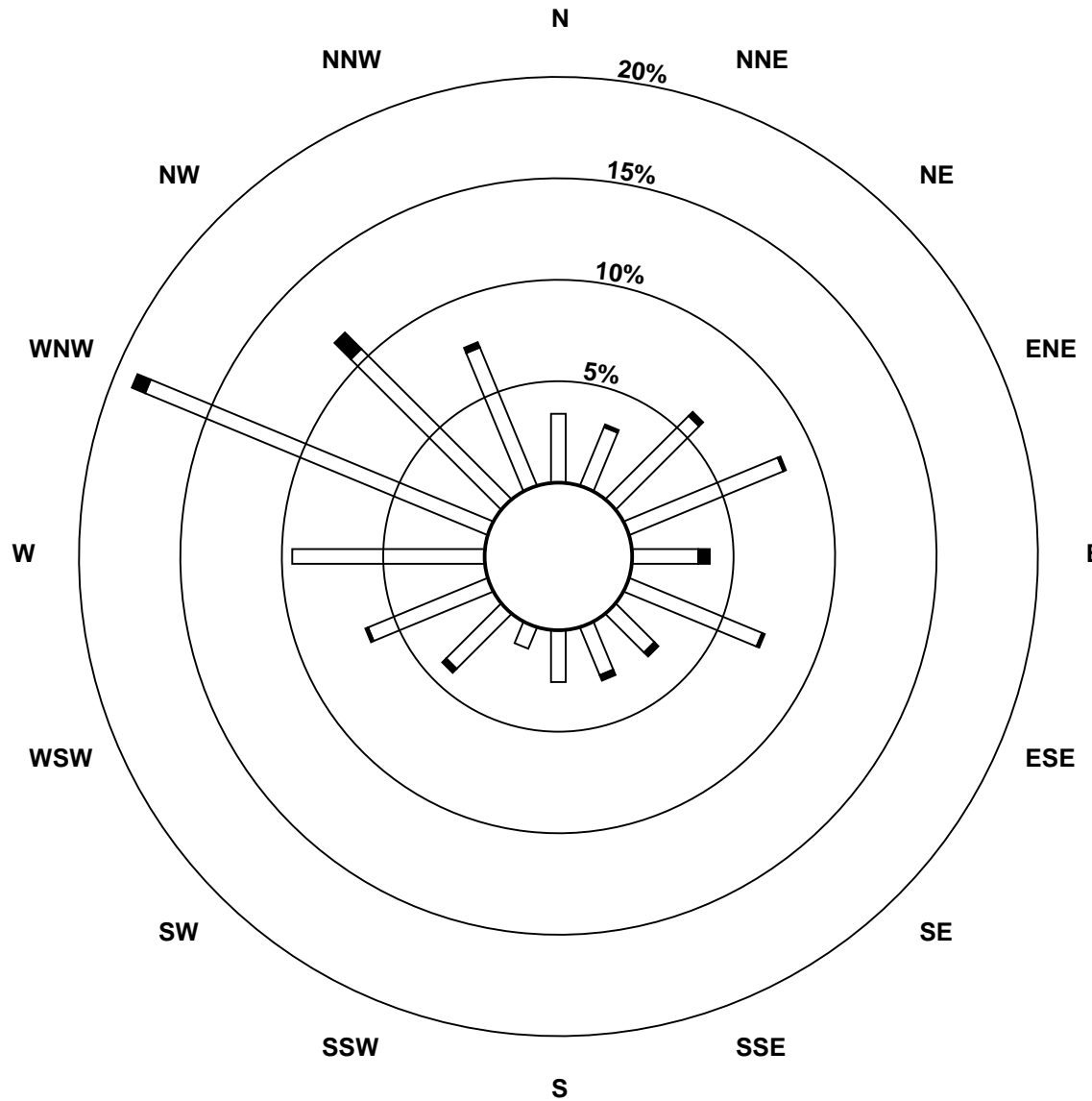
Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Henry Pirker - October 2012



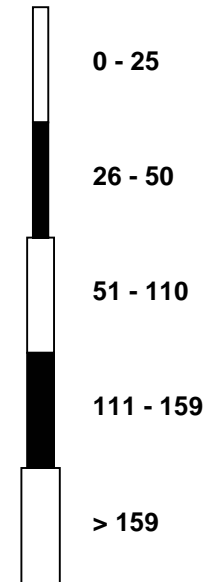


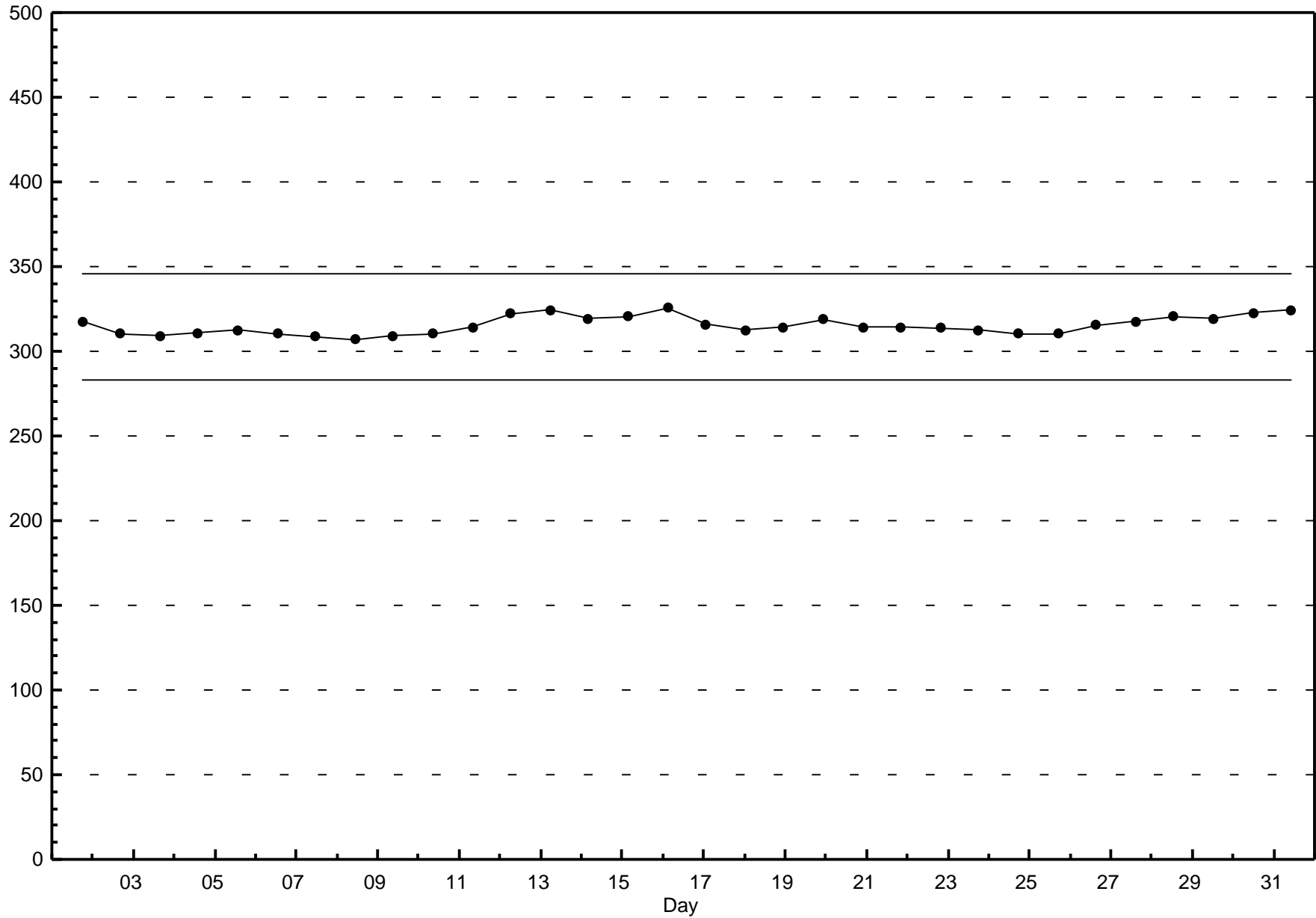
**Pollutant Rose**

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Henry Pirker - October 2012**



**Pollutant Classes (ppb)**





## Hourly Averages

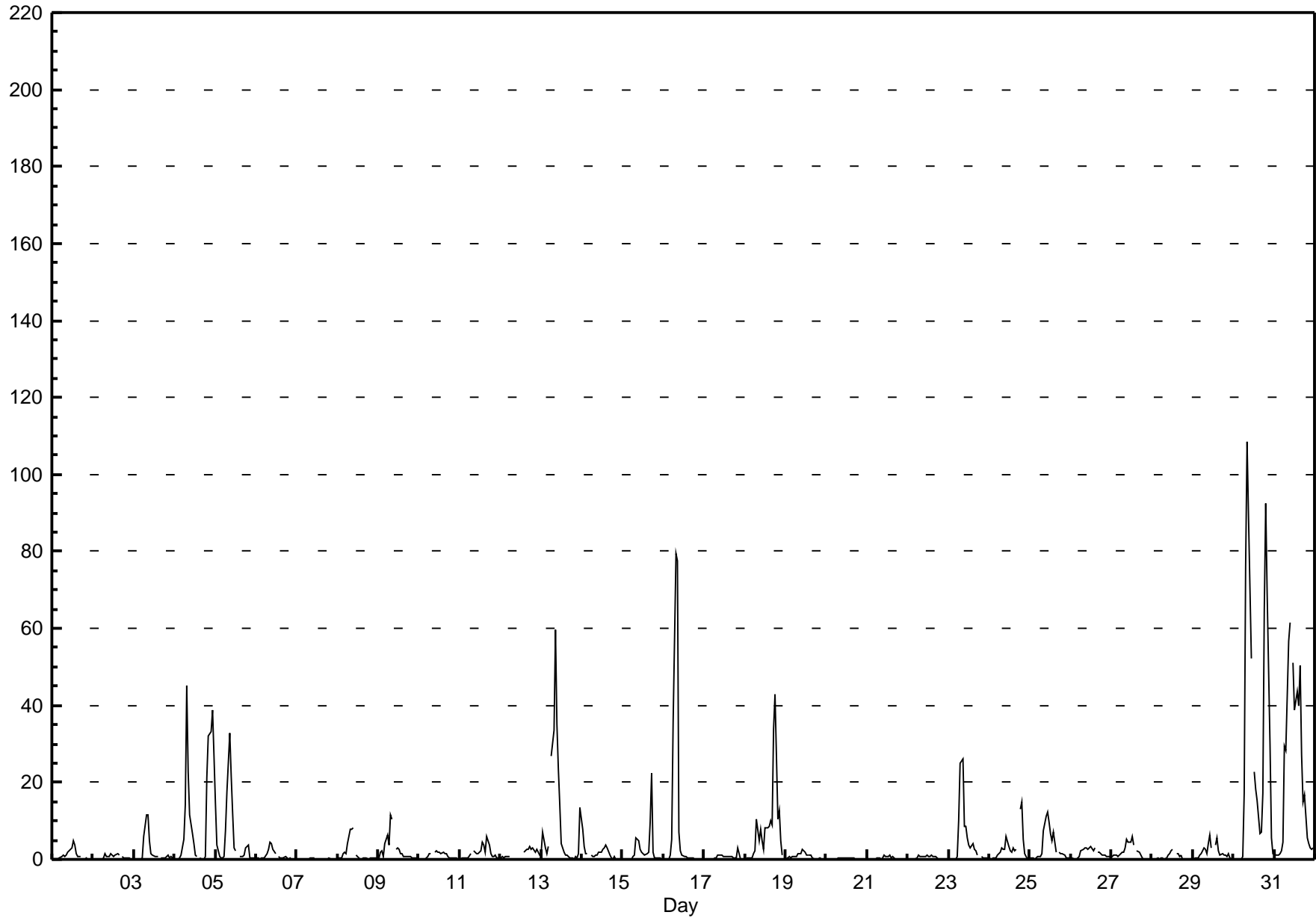
Nitrogen Oxide (NO) - ppb

Henry Pirker - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 108.5 ppb on Oct 30 09:00	Maximum Daily Average: 30.2 ppb on Oct 30		Hours of Data:	706
Minimum Value: 0 ppb on Oct 2 03:00	Minimum Daily Average: 0.1 ppb on Oct 7		Hours of Missing Data:	38
Maximum Diurnal Average: 15.7 ppb at hour 9	Minimum Diurnal Average: 0.4 ppb at hour 4		Hours of Calibration:	38
Monthly Average: 4.29 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.2 Median = 0.8 Q <sub>3</sub> = 2.5 P <sub>90</sub> = 8.6 P <sub>99</sub> = 65.3		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	0	1	1	1	1	2	2	3	5	4	2	1	1	A	0	0	0	0	0	0	1.0	4.8
2-Oct	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	A	1	0	1	1	0	0	0	0.6	1.5
3-Oct	0	0	0	0	0	0	6	11	12	5	1	1	1	1	1	A	0	0	0	1	1	1	1	0	1.9	11.7
4-Oct	0	0	0	0	1	5	14	45	23	12	7	4	1	1	A	0	0	0	1	21	32	33	39	27	11.6	45.1
5-Oct	15	4	1	0	0	1	7	17	33	21	12	3	2	A	1	1	1	1	3	4	0	0	0	0	5.5	32.7
6-Oct	0	0	0	0	0	0	2	3	4	4	3	2	A	1	0	0	0	1	0	0	0	0	0	0	1.0	4.4
7-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
8-Oct	0	0	0	1	2	1	4	8	8	8	A	1	1	0	0	0	0	0	0	0	0	0	0	0	1.7	8.2
9-Oct	0	2	2	1	4	6	4	11	10	A	3	3	3	2	2	1	1	1	1	1	0	0	0	0	2.5	11.4
10-Oct	0	0	0	0	0	1	1	1	A	2	2	2	2	2	2	2	1	1	1	0	0	0	0	0	0.9	2.2
11-Oct	0	0	0	0	0	1	2	A	2	2	2	1	2	4	4	2	6	4	1	1	1	1	0	0	1.6	6.0
12-Oct	0	1	0	1	1	1	A	2	C	C	C	C	C	C	2	3	2	3	3	3	2	3	2	1	--	3.3
13-Oct	2	7	3	1	3	A	27	33	60	35	23	14	4	2	1	1	1	0	0	0	1	0	1	13	10.2	59.8
14-Oct	8	3	2	1	A	1	1	1	1	1	2	2	3	3	4	3	1	0	0	1	0	0	0	0	1.6	7.9
15-Oct	0	0	0	A	0	0	1	1	6	5	3	2	1	1	2	2	10	22	2	1	0	0	0	0	2.5	22.2
16-Oct	0	0	A	0	1	5	36	79	78	7	2	1	1	1	1	1	0	0	0	0	0	0	0	0	9.3	79.3
17-Oct	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	3	0	0	0	0.5	2.9
18-Oct	A	0	0	0	0	1	2	10	5	8	5	2	8	8	9	10	9	34	43	10	13	5	1	A	8.4	43.0
19-Oct	0	0	1	1	1	1	1	1	2	2	2	2	1	1	1	1	0	0	0	0	0	0	A	0	0.8	2.5
20-Oct	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.5
21-Oct	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0.3	1.0
22-Oct	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0	0.4	1.0
23-Oct	0	0	0	0	0	1	10	25	26	9	9	6	4	3	4	2	2	1	A	1	1	0	0	0	4.5	26.1
24-Oct	0	0	0	0	1	1	2	3	3	3	6	3	2	2	3	2	3	A	13	15	5	1	0	0	3.0	14.9
25-Oct	0	0	0	0	1	1	1	1	8	11	12	10	7	5	7	2	A	2	1	1	1	0	0	0	3.2	12.4
26-Oct	0	0	0	0	0	1	2	3	3	3	3	3	3	2	3	A	2	2	1	1	1	1	1	1	1.6	3.5
27-Oct	1	1	1	1	1	2	2	2	3	5	5	5	6	4	A	2	2	1	0	0	0	0	0	0	1.8	5.8
28-Oct	0	0	0	0	0	0	0	0	0	1	2	2	3	A	1	2	1	1	0	0	0	0	0	0	0.6	2.6
29-Oct	0	0	0	0	1	2	3	3	1	4	6	3	A	4	6	2	1	2	1	1	1	1	0	0	1.9	6.3
30-Oct	0	0	0	0	0	1	17	76	108	89	52	A	23	18	15	7	7	17	65	92	69	30	5	1	30.2	108.5
31-Oct	2	1	1	1	2	4	30	28	57	62	A	51	39	44	40	50	27	15	17	5	4	3	3	3	21.3	61.6
	1.0	0.7	0.4	0.4	0.7	1.3	5.9	12.4	15.7	10.5	6.0	4.7	4.4	4.1	3.9	3.5	2.8	3.8	5.1	5.4	4.6	2.7	1.9	1.6	Diurnal Average	
	14.5	6.9	2.8	1.5	4.1	6.4	35.8	79.3	108.5	89.2	52.3	51.1	38.7	43.6	39.7	50.2	27.1	34.0	65.0	92.3	69.2	33.2	38.9	26.8	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span



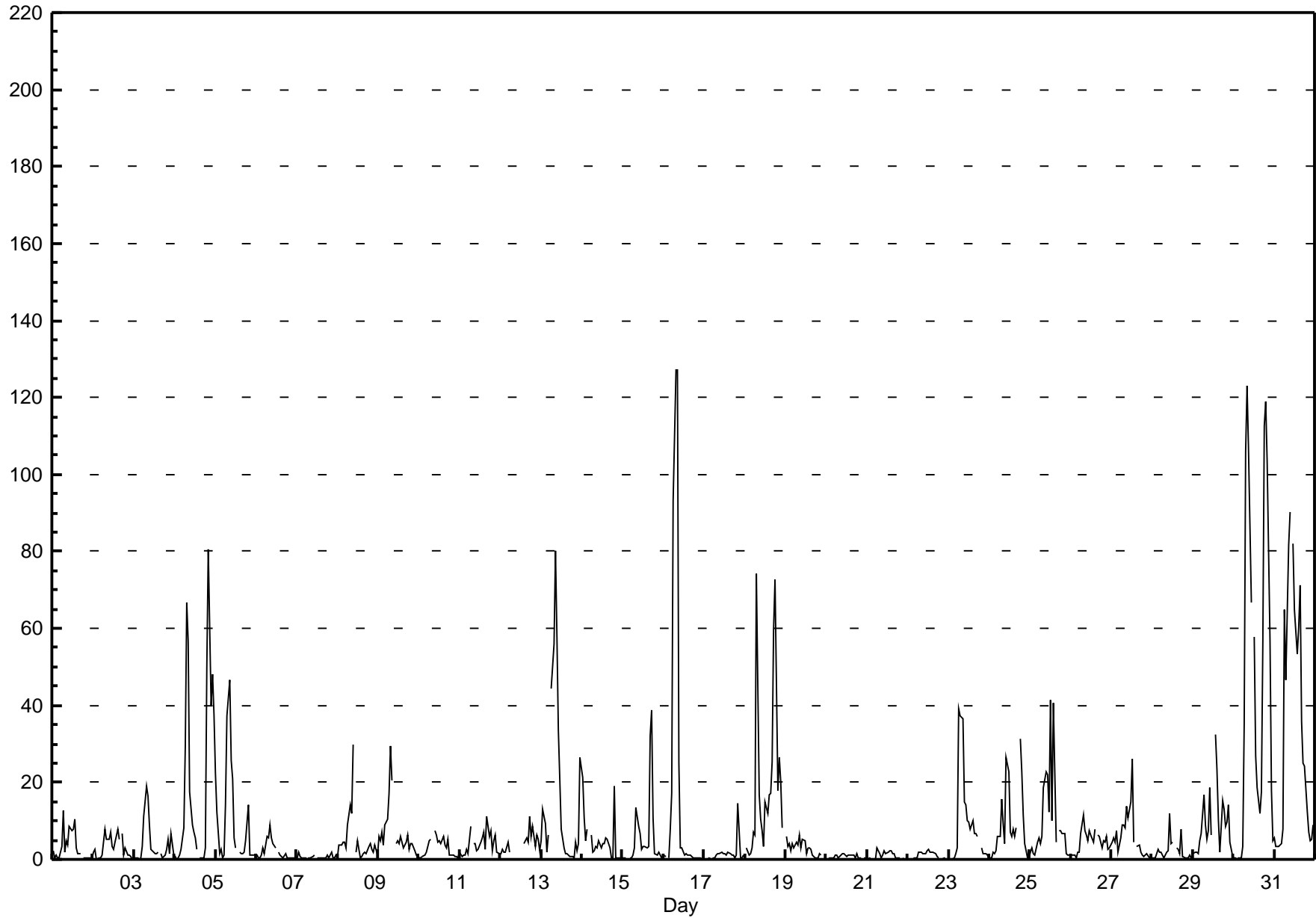
## Hourly Maximums

**Nitrogen Oxide (NO) - ppb**  
**Henry Pirker - October 2012**

Maximum Value: 127.1 ppb on Oct 16 09:00		Maximum Daily Average: 45.5 ppb on Oct 30		Hours in Service: 744																						
Minimum Value: 0 ppb on Oct 30 03:00		Minimum Daily Average: 0.7 ppb on Oct 7		Hours of Data: 706																						
Maximum Diurnal Average: 24.8 ppb at hour 9		Minimum Diurnal Average: 1.7 ppb at hour 4		Hours of Missing Data: 38																						
Monthly Average: 8.67 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 1.0 Median = 2.5 Q <sub>3</sub> = 7.0 P <sub>90</sub> = 21.0 P <sub>99</sub> = 105.3		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-Oct	2	0	1	0	1	3	13	2	5	4	9	7	8	11	3	1	1	A	0	1	1	1	0	1	3.3	12.8
2-Oct	2	2	0	0	0	1	5	8	5	5	7	3	2	4	8	5	A	7	1	3	1	1	1	0	3.2	7.9
3-Oct	0	0	0	0	0	3	11	19	17	9	3	2	2	2	2	A	2	1	1	3	5	1	7	1	4.0	19.0
4-Oct	1	0	1	1	2	8	29	67	57	18	9	7	6	2	A	1	0	1	3	50	81	40	48	38	20.3	80.6
5-Oct	22	12	2	2	0	1	14	37	47	26	21	5	3	A	2	1	1	2	5	14	1	1	1	1	9.7	46.5
6-Oct	1	1	0	1	3	2	6	5	9	6	4	3	A	2	1	1	1	1	1	0	1	0	1	0	2.1	8.8
7-Oct	1	2	1	0	0	1	0	0	1	1	1	A	0	1	0	0	0	0	1	1	2	1	0	1	0.7	2.0
8-Oct	0	4	4	4	4	3	9	14	12	30	A	2	5	0	1	1	2	1	3	4	2	2	4	1	5.0	30.0
9-Oct	6	5	7	4	9	11	17	29	21	A	4	5	4	6	4	3	4	7	2	4	4	2	1	1	7.0	29.4
10-Oct	1	0	1	1	2	3	5	5	A	7	6	4	5	4	6	4	3	5	1	1	1	1	1	1	3.0	7.5
11-Oct	2	1	1	1	2	1	9	A	4	4	2	2	4	5	7	3	11	6	7	2	5	6	2	1	3.9	11.0
12-Oct	1	2	2	2	4	2	A	6	C	C	C	C	C	C	4	6	4	11	6	9	3	6	5	2	--	11.1
13-Oct	5	13	9	2	6	A	44	56	80	58	33	21	8	3	1	1	1	1	1	1	4	2	4	26	16.6	80.1
14-Oct	21	11	5	8	A	6	2	2	3	3	5	3	4	4	5	5	3	1	0	19	1	0	0	0	4.9	21.2
15-Oct	0	0	0	A	0	1	1	3	13	8	7	2	3	3	3	3	32	39	11	2	1	2	1	1	6.0	38.6
16-Oct	1	1	A	0	8	17	93	127	127	25	3	3	1	1	1	1	1	1	1	0	0	0	0	0	18.0	127.1
17-Oct	0	A	0	0	0	1	1	1	1	1	2	2	1	1	2	1	1	1	1	1	15	0	1	1	1.6	14.6
18-Oct	A	3	1	1	3	7	6	74	17	10	7	3	15	12	17	17	25	60	73	18	27	20	8	A	19.4	74.2
19-Oct	6	3	4	2	4	3	5	4	6	3	5	5	2	3	3	2	1	0	1	1	1	1	A	0	2.9	6.3
20-Oct	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0	0	A	1	0	0.8	1.6
21-Oct	0	0	0	0	0	0	3	1	1	1	2	2	2	2	2	1	2	1	0	0	A	0	0	0	1.0	2.8
22-Oct	0	0	0	0	1	1	2	2	2	1	1	2	2	2	2	2	1	1	0	A	0	0	0	0	1.0	2.5
23-Oct	0	0	0	0	1	3	39	37	37	15	14	10	10	8	10	7	7	6	A	3	1	1	1	1	9.3	39.0
24-Oct	1	0	2	1	2	6	6	15	9	4	26	23	7	6	8	6	8	A	31	23	11	4	0	0	8.8	31.5
25-Oct	2	3	1	1	5	5	4	6	18	23	22	12	42	10	41	5	A	7	8	7	7	1	1	1	10.1	41.5
26-Oct	1	1	1	1	2	2	7	11	7	6	5	7	6	4	8	A	6	6	3	5	4	6	2	3	4.6	11.4
27-Oct	4	6	4	7	2	5	9	9	8	14	11	15	26	5	A	3	4	2	1	1	1	1	0	1	6.1	26.0
28-Oct	0	0	0	2	2	2	1	0	2	2	12	4	5	A	3	3	1	8	1	1	1	0	1	1	2.3	11.8
29-Oct	1	2	2	1	5	7	17	9	5	7	19	6	A	33	23	11	2	15	13	9	10	14	4	1	9.4	32.6
30-Oct	0	0	0	0	0	3	35	106	123	107	67	A	58	27	19	12	18	56	113	119	103	57	18	5	45.5	123.1
31-Oct	6	3	3	4	4	8	65	46	82	90	A	82	65	53	61	71	36	25	24	12	7	5	5	9	33.3	90.1
		3.0	2.6	1.8	1.7	2.5	3.9	15.2	23.5	24.8	16.9	11.1	8.8	10.6	7.8	8.6	6.2	6.2	9.4	10.5	10.4	10.1	6.0	4.0	3.3	Diurnal Average
		22.4	12.9	9.1	8.0	8.8	17.0	93.3	127.1	127.1	106.6	66.8	82.0	64.9	53.4	60.6	71.1	35.7	59.8	112.7	118.9	103.1	56.7	48.0	37.7	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

### Hourly Maximums

Nitrogen Oxide (NO) - ppb  
Henry Pirker - October 2012



## Hourly Averages

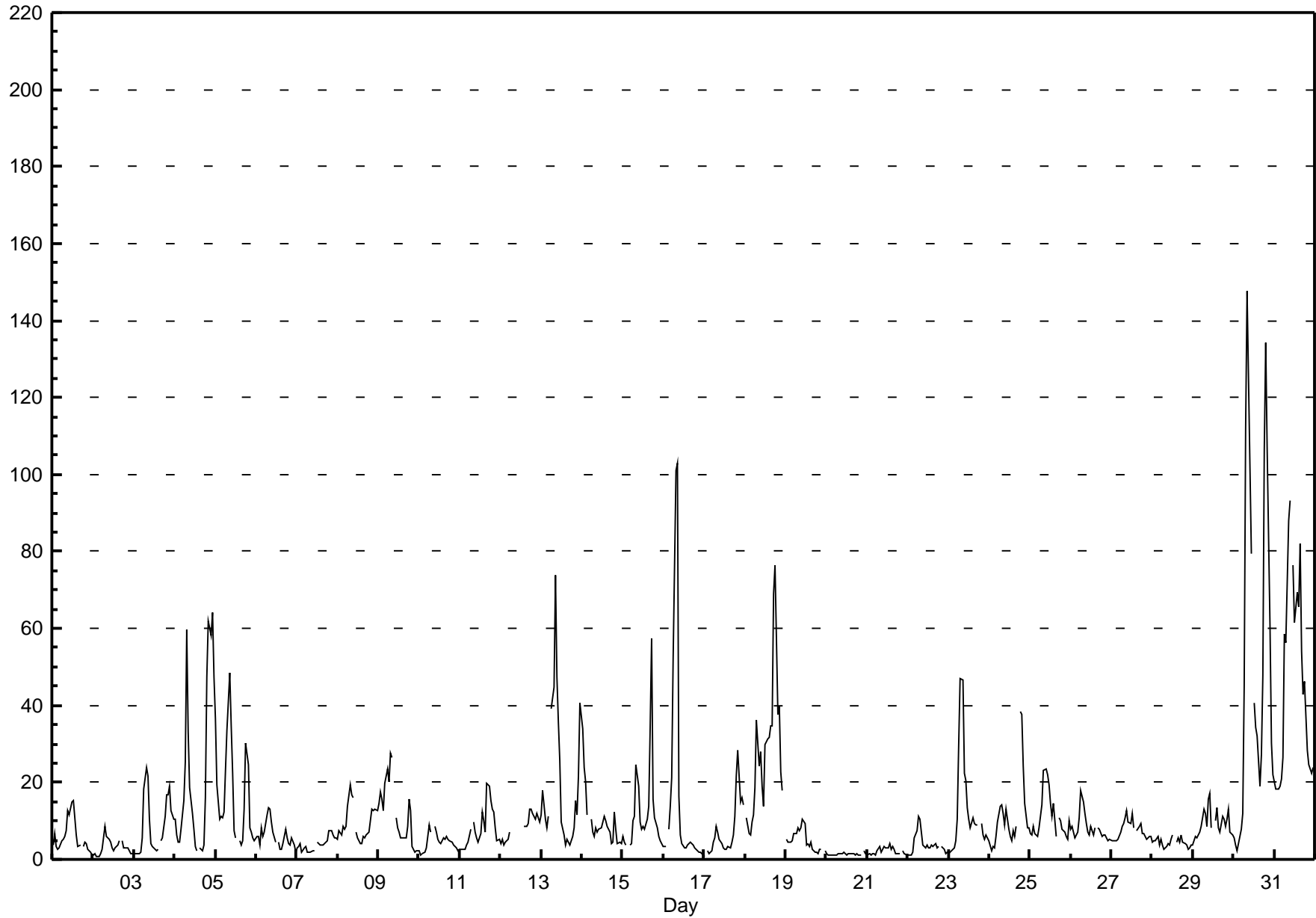
## Oxides of Nitrogen (NO<sub>x</sub>) - ppb

### Henry Pirker - October 2012

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 147.6 ppb on Oct 30 09:00	Maximum Daily Average: 52.4 ppb on Oct 30
Minimum Value: 1 ppb on Oct 17 01:00	Hours of Data: 706
Maximum Diurnal Average: 27.4 ppb at hour 9	Hours of Missing Data: 38
Monthly Average: 12.22 ppb	Hours of Calibration: 38
Minimum Daily Average: 1.4 ppb on Oct 20	Percent Operational Time: 100.0
Minimum Diurnal Average: 5.5 ppb at hour 4	
Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 2.0 Q <sub>1</sub> = 3.7 Median = 6.5 Q <sub>3</sub> = 12.2 P <sub>90</sub> = 26.5 P <sub>99</sub> = 100.6	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	4	7	3	3	3	5	5	6	7	13	12	15	15	11	6	4	4	A	4	4	4	3	2	1	6.1	15.3	
2-Oct	1	1	1	1	1	3	6	9	6	5	5	3	2	3	4	5	A	5	3	3	3	2	2	2	3.2	8.5	
3-Oct	1	1	2	2	2	5	18	24	22	10	4	3	3	2	3	A	5	6	11	17	17	19	13	11	8.7	23.8	
4-Oct	10	6	4	5	8	15	25	60	33	19	12	8	3	2	A	3	2	4	16	47	62	58	64	47	22.4	64.2	
5-Oct	37	19	10	11	11	12	23	34	49	35	22	7	6	A	5	4	5	13	30	25	8	7	6	5	16.7	48.5	
6-Oct	6	6	4	8	6	7	11	13	13	10	7	4	A	4	3	3	4	8	6	4	4	6	4	2	6.2	13.3	
7-Oct	3	3	4	2	3	4	2	2	2	2	2	A	5	4	4	4	4	4	5	7	7	6	6	6	3.9	7.4	
8-Oct	5	8	7	9	8	9	14	19	17	16	A	7	6	4	4	6	6	6	7	10	13	13	13	13	9.5	19.2	
9-Oct	15	17	16	13	20	23	20	28	27	A	11	8	7	5	6	5	6	8	15	13	3	2	2	2	11.8	27.6	
10-Oct	2	1	2	2	3	6	9	7	A	9	7	5	5	4	6	5	6	5	5	4	4	3	3	2	4.6	8.8	
11-Oct	3	2	3	3	4	4	8	A	10	7	6	5	7	12	10	7	20	19	15	13	12	8	5	5	8.1	19.9	
12-Oct	4	5	4	5	5	7	A	11	C	C	C	C	C	C	8	9	9	13	13	12	10	12	11	10	--	13.2	
13-Oct	12	18	10	8	11	A	39	45	74	47	36	26	10	6	4	5	4	4	6	8	15	12	22	41	20.1	73.8	
14-Oct	34	24	20	11	A	10	7	6	8	7	8	8	10	11	10	9	7	4	4	12	8	4	4	4	10.1	34.1	
15-Oct	6	5	4	A	4	4	10	11	25	19	10	8	8	8	10	14	34	57	16	11	8	6	5	4	12.4	57.3	
16-Oct	3	3	A	8	14	21	52	101	103	16	6	4	3	3	4	4	4	4	3	3	2	2	2	1	16.0	102.8	
17-Oct	1	A	2	2	2	5	5	9	7	5	4	3	2	3	3	3	4	6	11	22	28	15	16	14	7.5	28.3	
18-Oct	A	11	7	6	10	12	19	36	24	28	19	14	30	31	32	35	35	69	77	38	40	23	18	A	27.8	76.5	
19-Oct	5	4	5	4	5	7	7	8	8	8	10	9	4	4	4	4	3	2	2	2	3	2	A	2	4.8	10.5	
20-Oct	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	2	1	1	1	1	1	A	2	2	1.4	2.2
21-Oct	1	1	1	1	1	1	2	3	2	2	3	3	3	4	2	3	3	2	1	1	A	2	1	1	2.1	3.9	
22-Oct	1	1	1	2	6	7	11	11	7	4	3	4	3	3	4	3	4	3	3	A	3	3	1	2	3.9	11.1	
23-Oct	1	2	2	3	5	10	29	47	47	22	21	13	10	8	11	9	9	9	A	9	6	5	6	6	12.7	46.8	
24-Oct	5	2	3	3	6	10	14	14	12	9	13	8	6	5	7	6	9	A	38	38	24	14	8	8	11.4	38.3	
25-Oct	7	6	8	7	6	8	11	14	23	24	22	19	15	11	15	6	A	11	10	8	7	6	5	10	11.3	23.6	
26-Oct	8	9	6	6	7	11	18	15	12	9	7	7	9	6	8	A	8	8	6	6	6	6	5	5	8.2	18.0	
27-Oct	5	5	5	5	5	7	9	9	11	13	10	9	12	8	A	8	8	9	7	7	6	5	6	6	7.6	12.6	
28-Oct	4	5	5	6	4	5	4	3	3	4	4	5	6	A	5	6	4	6	5	4	4	3	3	4	4.4	6.3	
29-Oct	4	6	5	6	7	9	13	12	9	16	17	8	A	10	13	8	7	11	11	8	11	13	7	6	9.5	17.0	
30-Oct	5	4	2	4	8	12	45	112	148	125	80	A	40	34	32	19	27	48	107	134	107	60	30	22	52.4	147.6	
31-Oct	20	18	18	19	21	26	59	56	88	93	A	76	61	69	66	82	54	43	46	28	25	23	22	24	45.2	93.4	
	7.2	6.8	5.5	5.5	6.5	8.9	16.6	24.2	27.4	19.9	12.9	10.4	10.4	10.0	10.0	9.6	10.2	13.4	16.1	16.7	15.1	11.5	9.8	8.9	Diurnal Average		
	36.7	23.8	20.1	18.9	20.7	26.3	58.6	112.1	147.6	125.0	79.6	76.3	61.5	69.2	65.8	82.0	54.0	69.0	106.7	134.4	106.7	60.3	64.2	47.4	Diurnal Maximum		

C - Calibration                      A - Automated Daily Zero Span





## Hourly Maximums

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

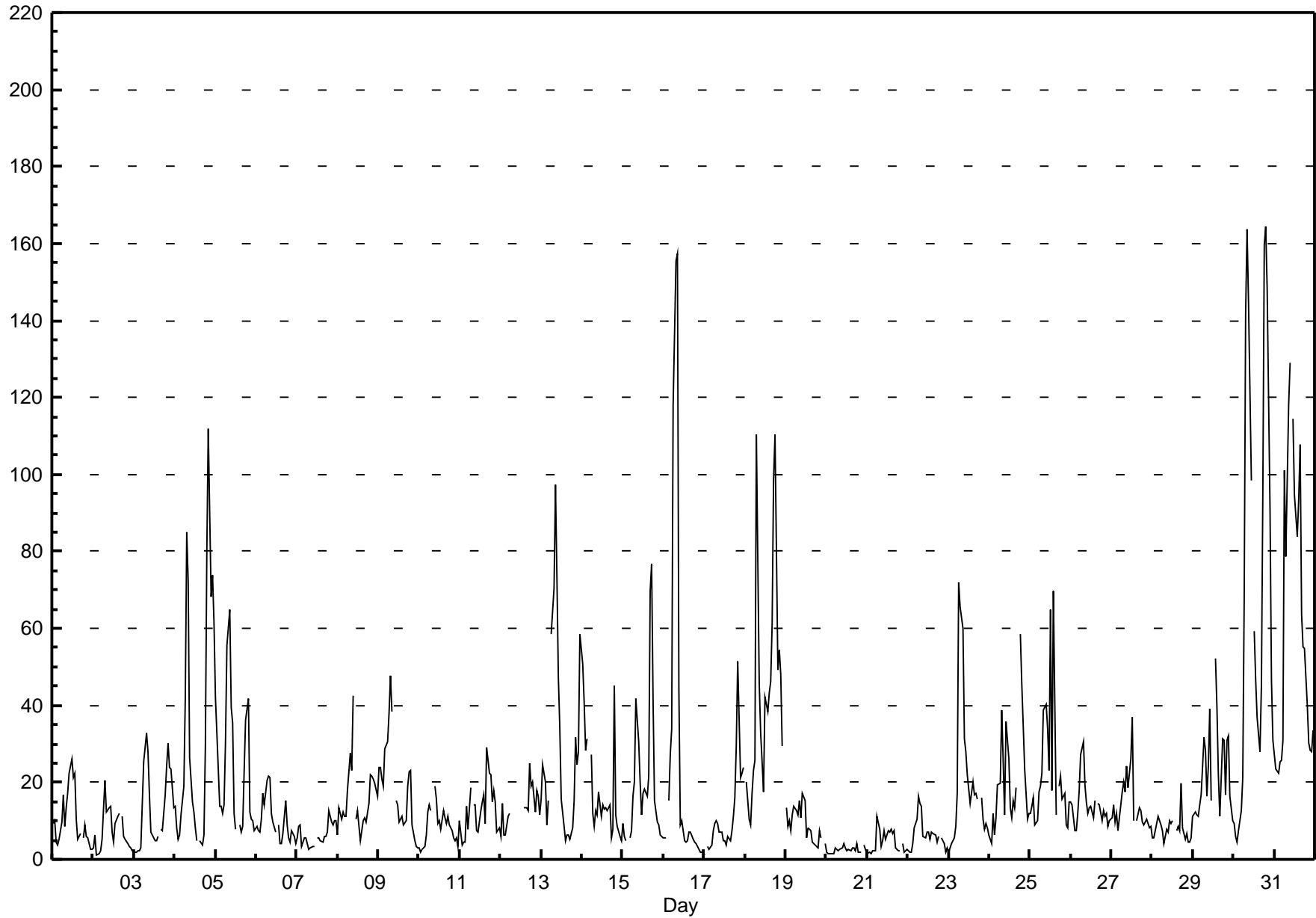
Henry Pirker - October 2012

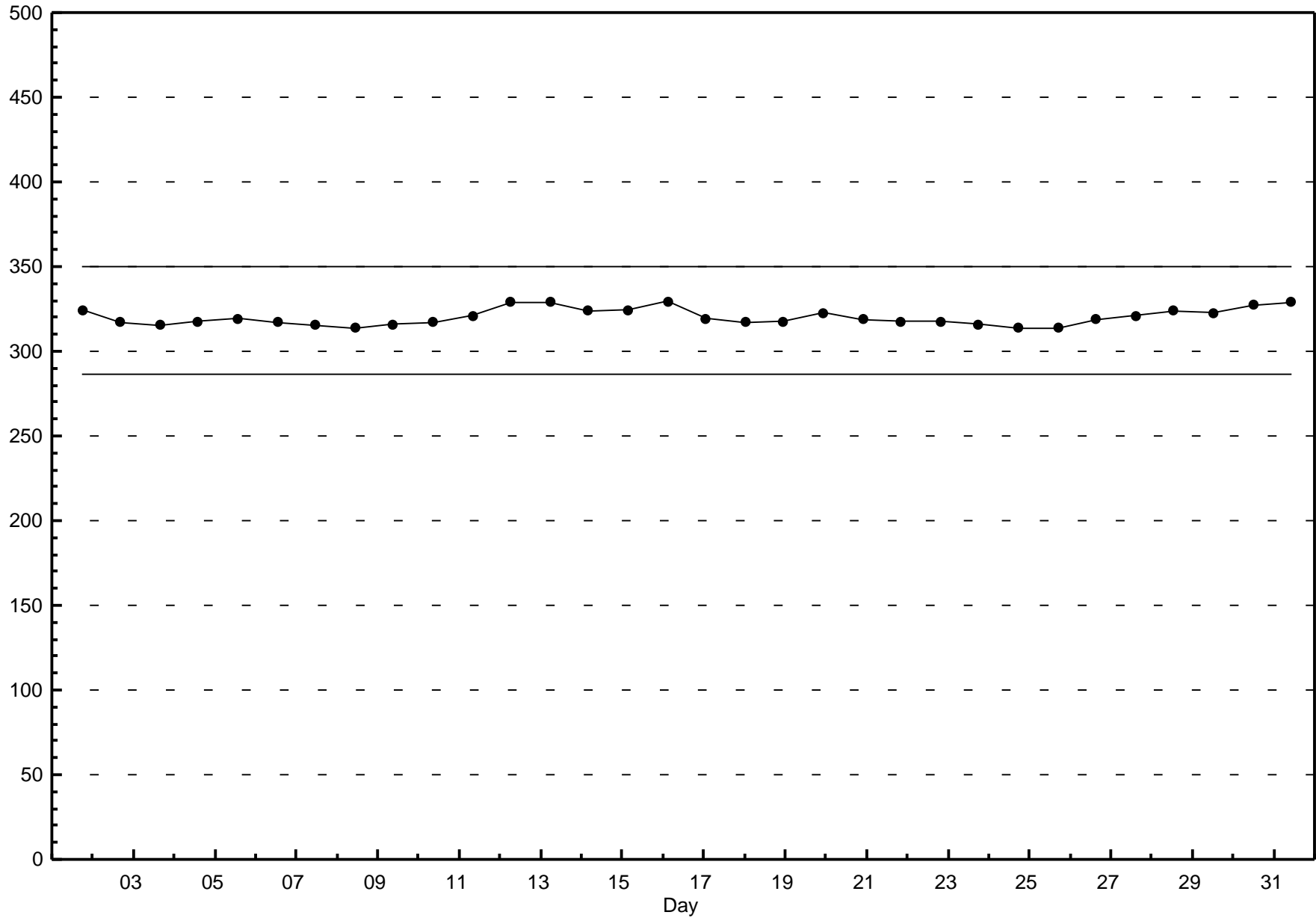
Maximum Value: 164.3 ppb on Oct 30 20:00		Maximum Daily Average: 70.9 ppb on Oct 30		Hours in Service: 744																							
Minimum Value: 1 ppb on Oct 17 01:00		Minimum Daily Average: 2.5 ppb on Oct 20		Hours of Data: 706																							
Maximum Diurnal Average: 40.0 ppb at hour 9		Minimum Diurnal Average: 8.8 ppb at hour 4		Hours of Missing Data: 38																							
Monthly Average: 19.49 ppb		Percentiles: P <sub>1</sub> = 1.6 P <sub>10</sub> = 3.5 Q <sub>1</sub> = 6.3 Median = 11.3 Q <sub>3</sub> = 21.5 P <sub>90</sub> = 42.1 P <sub>99</sub> = 142.9		Hours of Calibration: 38																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	9	10	5	4	5	10	17	9	14	17	22	26	21	22	10	5	7	A	5	9	6	6	3	3	10.6	26.0	
2-Oct	3	6	1	2	2	5	13	20	12	13	14	7	4	9	11	12	A	11	6	5	4	3	3	2	7.4	20.4	
3-Oct	2	2	2	2	3	14	25	33	28	17	7	6	5	5	6	A	8	7	17	24	30	24	23	13	13.3	32.9	
4-Oct	14	8	5	6	12	19	42	85	72	26	15	12	8	5	A	5	4	6	29	80	112	68	74	62	33.5	112.0	
5-Oct	42	33	14	14	12	14	30	56	65	40	36	12	8	A	9	7	9	23	36	42	12	11	10	8	23.5	65.0	
6-Oct	9	8	7	11	17	14	20	22	21	12	10	7	A	9	4	4	7	15	9	6	5	8	6	4	10.1	21.6	
7-Oct	6	8	9	4	6	6	4	3	3	4	4	A	6	6	5	5	6	6	7	13	10	9	10	10	6.3	12.5	
8-Oct	7	13	10	12	11	11	18	28	23	43	A	11	13	5	7	10	11	10	15	22	22	21	20	16	15.5	42.5	
9-Oct	24	24	21	19	29	31	38	48	39	A	15	14	10	10	11	9	10	19	23	23	9	5	3	3	19.0	47.9	
10-Oct	3	2	2	3	6	12	14	13	A	19	16	9	10	8	13	11	9	11	9	7	6	5	5	3	8.7	19.0	
11-Oct	10	4	4	4	14	8	19	A	14	14	7	7	13	15	17	9	29	23	22	15	18	15	7	8	12.9	28.9	
12-Oct	6	14	6	6	11	12	A	16	C	C	C	C	C	C	13	13	13	25	19	20	12	18	16	11	--	24.8	
13-Oct	16	24	20	9	15	A	58	71	97	73	47	34	16	9	5	6	6	5	8	15	32	25	28	58	29.5	97.2	
14-Oct	51	41	28	31	A	27	12	8	13	11	18	11	14	13	13	12	14	5	8	45	11	8	6	5	17.7	50.8	
15-Oct	9	6	5	A	5	7	17	20	42	30	20	11	17	18	16	21	70	77	42	15	10	9	6	6	21.0	76.7	
16-Oct	5	5	A	15	27	34	118	155	157	45	9	10	5	5	5	7	7	5	5	4	3	2	2	2	27.6	157.4	
17-Oct	1	A	3	2	4	7	9	10	9	7	7	5	5	4	6	5	7	11	16	29	51	21	22	24	11.7	51.4	
18-Oct	A	20	10	9	17	23	26	110	46	33	26	17	42	39	43	46	61	99	111	49	55	48	29	A	43.6	110.5	
19-Oct	13	8	10	8	11	14	13	11	15	11	17	15	5	8	8	7	4	4	3	3	7	5	A	4	9.0	17.2	
20-Oct	2	2	2	2	2	3	3	2	3	3	4	3	2	3	2	3	3	2	4	2	2	A	4	3	2.5	4.0	
21-Oct	2	2	2	2	2	2	11	8	4	5	7	5	8	7	8	7	8	3	2	2	A	4	2	3	4.6	11.0	
22-Oct	2	2	2	4	8	10	17	15	14	6	5	7	7	5	7	7	7	4	6	A	5	4	2	3	6.5	16.5	
23-Oct	2	3	4	6	9	17	72	66	60	31	28	22	18	15	20	17	17	16	A	16	11	8	9	8	20.6	72.0	
24-Oct	6	4	12	6	11	19	20	39	26	12	36	26	14	11	15	13	19	A	59	46	35	24	11	12	20.6	58.6	
25-Oct	12	14	16	9	10	17	19	22	39	40	34	23	65	18	70	11	A	19	21	16	17	9	8	15	22.8	69.6	
26-Oct	15	14	7	8	12	18	27	31	19	15	12	13	14	11	15	A	14	14	10	13	11	12	8	10	14.1	30.6	
27-Oct	11	14	10	12	7	14	18	20	18	24	18	26	37	10	A	10	13	13	10	9	10	11	8	9	14.4	37.1	
28-Oct	6	6	8	11	10	9	8	4	8	7	10	9	10	A	8	8	8	20	8	5	7	5	5	6	7.9	19.7	
29-Oct	11	12	12	11	14	17	32	28	17	24	39	15	A	52	40	22	11	31	31	17	31	32	16	10	22.8	52.3	
30-Oct	9	6	4	7	13	21	68	142	164	145	98	A	59	46	37	28	45	96	159	164	149	91	46	31	70.9	164.3	
31-Oct	27	23	22	25	26	31	101	79	118	129	A	115	95	84	94	108	64	55	55	40	30	28	28	34	61.3	128.8	
		11.1	11.3	8.8	8.8	11.1	14.9	29.6	39.1	40.0	29.5	20.8	17.2	19.0	16.1	17.9	14.8	16.9	21.9	25.2	25.2	24.1	17.9	14.1	12.9	Diurnal Average	
		50.8	40.6	28.2	31.5	28.7	34.1	118.3	155.4	163.8	144.9	98.4	114.6	94.8	84.0	93.6	107.7	69.8	98.9	159.5	164.3	148.6	91.0	73.9	61.7	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

### Hourly Maximums

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

Henry Pirker - October 2012





## Hourly Averages

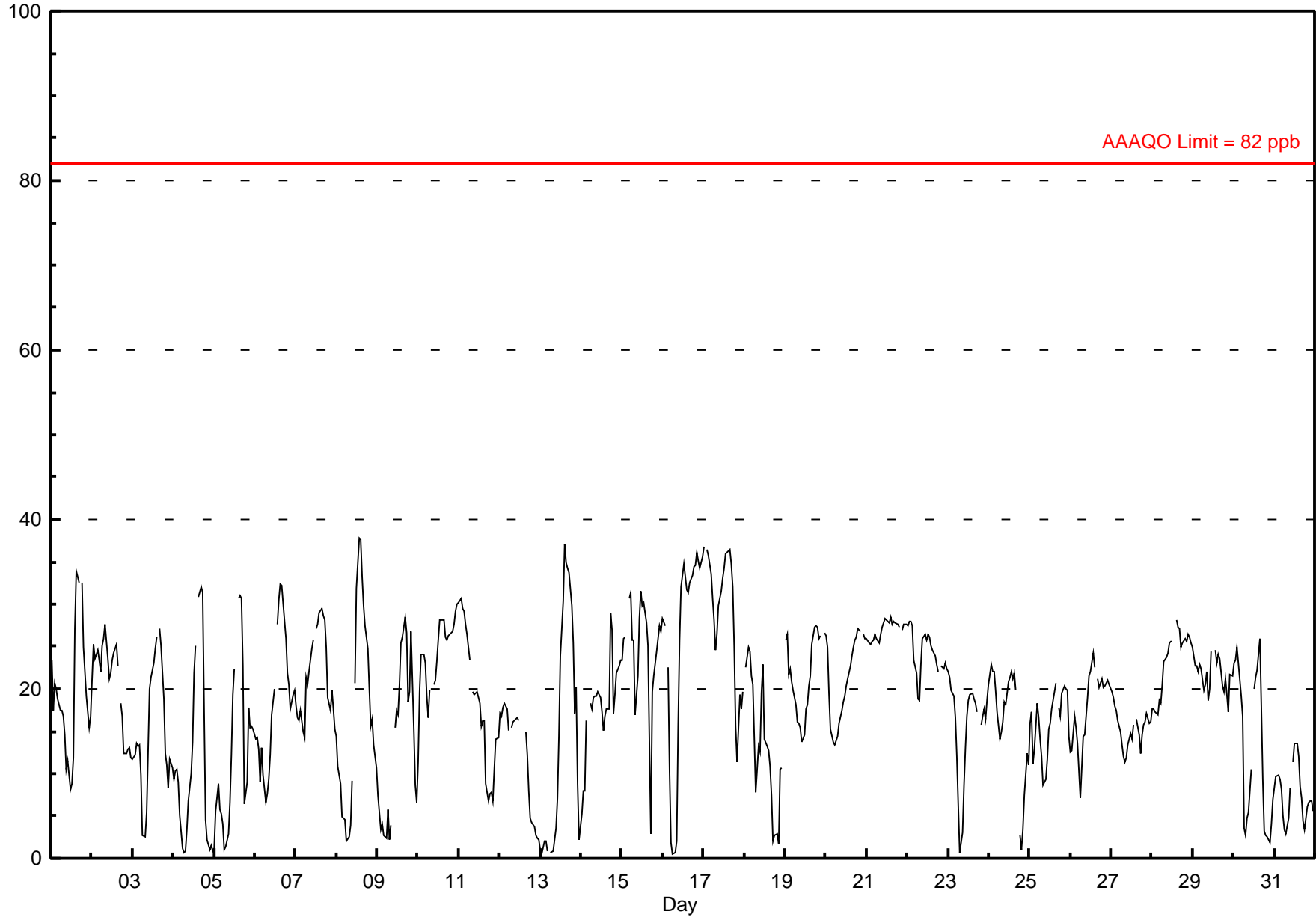
Ozone (O<sub>3</sub>) - ppb

Henry Pirker - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 37.8 ppb on Oct 8 14:00	Maximum Daily Average: 28.9 ppb on Oct 17		Hours of Data:	709
Minimum Value: 0 ppb on Oct 16 07:00	Minimum Daily Average: 7.6 ppb on Oct 31		Hours of Missing Data:	35
Maximum Diurnal Average: 25.1 ppb at hour 15	Minimum Diurnal Average: 12.4 ppb at hour 8		Hours of Calibration:	35
Monthly Average: 18.30 ppb	Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 5.0 Q <sub>1</sub> = 12.4 Median = 19.1 Q <sub>3</sub> = 25.1 P <sub>90</sub> = 28.2 P <sub>99</sub> = 35.9		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	23	17	21	20	19	17	17	17	15	10	12	8	9	12	27	34	33	A	33	25	22	19	15	17	19.2	33.9
2-Oct	21	25	24	25	23	22	25	26	28	24	21	22	23	24	25	23	A	18	17	12	12	13	13	12	20.8	27.7
3-Oct	12	12	14	13	13	10	3	3	5	13	20	21	23	25	26	A	27	25	19	12	11	8	12	11	14.7	27.2
4-Oct	9	10	11	9	5	1	1	1	3	7	10	14	22	25	A	31	32	31	18	5	2	1	1	1	10.9	32.1
5-Oct	1	6	9	6	5	4	1	1	3	7	12	19	22	A	31	31	31	23	6	9	18	15	16	15	12.6	31.1
6-Oct	14	14	13	9	13	10	7	8	9	12	17	20	A	28	31	32	32	28	26	22	20	18	19	20	18.3	32.4
7-Oct	18	17	16	17	15	14	21	20	22	25	26	A	27	28	29	29	29	28	25	19	18	20	18	15	21.6	29.5
8-Oct	14	11	9	5	5	5	2	2	4	9	A	21	32	38	38	33	30	27	25	20	16	16	13	11	16.8	37.8
9-Oct	7	5	3	4	3	2	6	2	4	A	15	17	17	21	25	26	28	27	18	20	27	15	9	7	13.4	28.5
10-Oct	11	20	24	24	23	19	17	20	A	21	21	23	26	28	28	28	26	26	26	27	27	28	29	30	24.0	30.1
11-Oct	30	31	29	29	28	26	23	A	20	19	19	20	18	16	16	16	9	7	8	8	7	11	14	14	18.2	30.6
12-Oct	17	17	18	18	18	15	A	16	16	16	17	16	C	C	C	15	12	8	5	4	4	3	2	2	11.9	18.2
13-Oct	1	1	2	2	1	A	1	1	2	4	7	14	24	30	37	35	34	34	30	25	17	20	9	2	14.5	37.1
14-Oct	5	8	8	16	A	18	18	19	19	19	20	19	17	15	17	18	18	29	27	17	19	22	23	23	18.0	29.0
15-Oct	23	26	26	A	31	31	26	26	17	22	28	32	30	30	28	25	14	3	20	22	24	26	27	27	24.5	31.6
16-Oct	28	28	A	23	10	2	0	1	2	16	26	32	35	33	32	31	33	33	34	35	36	35	34	36	25.0	36.1
17-Oct	37	A	36	36	34	31	28	25	26	30	31	33	34	36	36	37	35	32	25	16	11	19	18	20	28.9	36.8
18-Oct	A	23	25	24	21	21	14	8	13	12	19	23	14	13	13	11	8	2	3	3	2	10	11	A	13.3	24.8
19-Oct	26	26	22	22	21	20	18	16	16	15	14	15	18	18	20	21	25	27	27	27	26	26	A	27	21.5	27.4
20-Oct	26	25	19	15	14	13	14	14	16	17	19	19	20	21	23	24	25	26	26	27	27	A	26	26	21.0	27.1
21-Oct	26	25	25	26	26	26	26	25	26	27	28	28	28	28	29	28	28	28	28	27	A	27	28	28	27.0	28.5
22-Oct	27	28	28	27	23	22	19	19	23	26	26	26	26	26	25	25	24	23	22	A	23	22	23	22	24.2	28.0
23-Oct	22	21	20	19	17	12	6	1	3	9	13	17	19	19	19	19	18	17	A	16	17	18	16	19	15.5	22.1
24-Oct	20	23	22	22	20	17	14	15	16	18	18	21	21	22	21	22	20	A	3	1	3	7	12	11	16.1	22.9
25-Oct	16	17	11	13	18	17	14	12	9	9	12	15	16	18	19	21	A	18	17	20	20	20	20	14	15.9	20.6
26-Oct	12	13	17	15	14	10	7	14	15	17	19	22	22	24	23	A	21	20	21	20	20	21	21	20	17.8	24.3
27-Oct	20	19	18	17	16	15	13	12	11	12	13	15	14	16	A	16	15	12	15	16	16	17	16	16	15.2	19.6
28-Oct	18	18	17	17	19	18	21	23	24	24	25	26	26	A	28	27	27	25	25	26	26	26	26	25	23.3	28.1
29-Oct	25	23	23	22	23	22	20	20	22	19	20	24	A	25	23	24	24	20	20	21	19	17	22	21	21.7	24.9
30-Oct	23	23	25	23	19	17	4	3	5	5	11	A	20	21	22	26	18	9	3	3	3	2	4	7	12.8	25.9
31-Oct	8	10	10	9	8	5	3	3	5	8	A	11	13	14	12	8	7	4	3	6	7	7	7	6	7.6	13.5
	18.1	18.0	18.1	17.7	16.8	15.5	13.0	12.4	13.3	15.8	18.6	20.4	22.0	23.3	25.1	24.7	23.5	21.1	19.1	17.0	16.6	17.0	16.8	16.8		Diurnal Average
	36.8	30.6	36.5	35.7	33.6	31.4	28.1	25.9	27.7	29.8	31.5	33.0	34.7	37.8	37.7	36.5	34.8	33.6	34.3	34.6	36.1	35.0	34.2	35.6		Diurnal Maximum

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



## Hourly Maximums

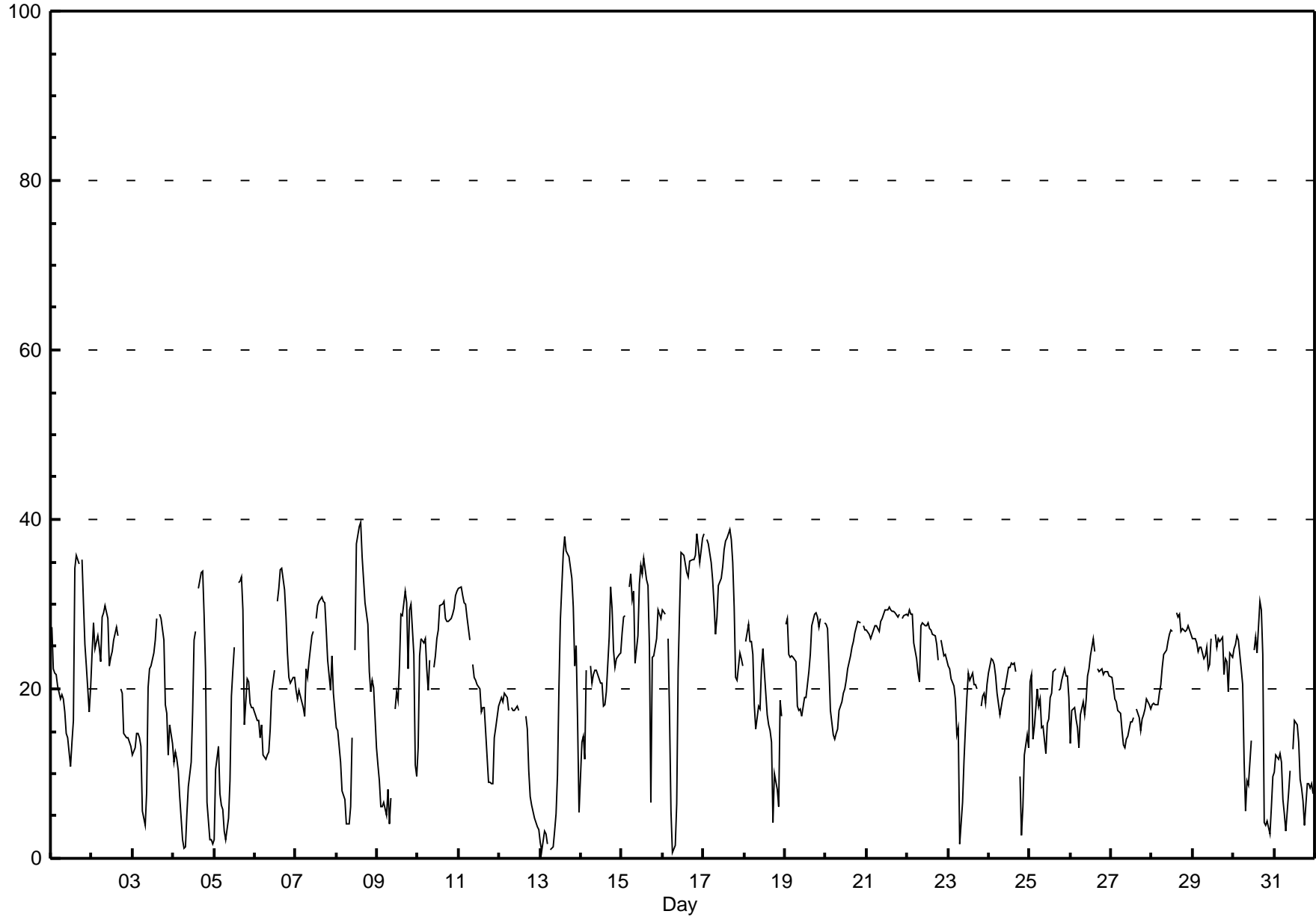
Ozone (O<sub>3</sub>) - ppb

Henry Pirker - October 2012

Maximum Value: 39.6 ppb on Oct 8 15:00		Maximum Daily Average: 31.8 ppb on Oct 17		Hours in Service: 744																								
Minimum Value: 1 ppb on Oct 16 07:00		Minimum Daily Average: 9.6 ppb on Oct 31		Hours of Data: 709																								
Maximum Diurnal Average: 27.2 ppb at hour 15		Minimum Diurnal Average: 14.7 ppb at hour 8		Hours of Missing Data: 35																								
Monthly Average: 20.85 ppb		Percentiles: P <sub>1</sub> = 1.6 P <sub>10</sub> = 8.1 Q <sub>1</sub> = 15.8 Median = 21.8 Q <sub>3</sub> = 26.9 P <sub>90</sub> = 30.4 P <sub>99</sub> = 37.8		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-Oct	27	22	22	22	20	19	19	19	17	15	14	11	11	14	16	34	36	35	A	35	30	25	23	17	20	22.3	35.8	
2-Oct	24	28	25	26	25	23	28	29	30	28	23	24	24	26	27	26	A	A	20	19	15	14	14	14	13	22.9	29.8	
3-Oct	12	13	15	15	14	13	6	4	8	20	22	23	24	26	28	A	A	29	28	26	18	17	12	16	14	17.5	28.8	
4-Oct	11	13	12	10	7	2	1	1	5	9	11	17	26	27	A	A	32	34	34	29	22	7	2	2	2	13.7	33.8	
5-Oct	2	10	13	8	6	6	3	2	5	9	19	22	25	A	A	33	33	33	29	16	21	21	18	18	18	16.1	33.3	
6-Oct	17	16	16	14	16	12	12	12	13	15	20	22	A	A	30	32	34	34	32	28	24	21	21	21	21	21.1	34.3	
7-Oct	20	19	20	19	18	17	22	21	23	26	27	A	A	28	30	30	31	30	30	27	23	20	24	19	17	23.6	30.9	
8-Oct	15	15	11	8	7	7	4	4	4	6	14	A	A	25	37	39	40	36	33	30	28	22	20	21	20	13	19.8	39.6
9-Oct	11	9	6	6	7	5	8	4	7	A	A	18	20	19	23	29	29	32	30	22	29	30	24	11	10	16.8	31.6	
10-Oct	13	24	26	25	26	22	20	23	A	A	23	24	26	27	30	30	30	28	28	28	28	29	29	31	32	26.2	31.6	
11-Oct	32	32	31	30	30	28	26	A	A	23	21	21	20	20	17	18	18	15	9	9	9	9	14	15	18	20.2	32.0	
12-Oct	18	19	18	19	19	17	A	A	18	17	17	18	17	C	C	C	17	15	10	7	6	5	4	4	3	13.6	19.5	
13-Oct	2	1	3	3	2	A	A	1	1	3	5	10	20	28	36	38	36	36	36	33	30	23	25	16	5	17.1	38.0	
14-Oct	14	14	12	22	A	A	23	21	22	22	22	22	21	21	18	18	20	26	32	29	25	22	24	24	24	21.6	32.1	
15-Oct	27	28	29	A	A	32	33	30	32	23	26	32	35	34	35	33	32	25	7	24	24	26	29	29	28	28.4	35.4	
16-Oct	29	29	A	A	26	17	6	1	2	6	22	29	36	36	35	34	33	35	35	35	36	38	37	35	38	27.4	38.3	
17-Oct	38	A	A	38	37	35	33	30	26	28	32	33	34	36	37	38	39	38	35	30	21	21	24	24	23	31.8	38.9	
18-Oct	A	26	28	26	26	24	18	15	18	18	23	25	22	17	16	15	14	4	10	8	6	19	17	A	17.9	27.6		
19-Oct	28	28	24	24	24	24	23	18	17	18	17	19	19	21	22	24	27	29	29	28	27	28	A	A	28	23.7	28.9	
20-Oct	28	27	22	18	15	14	15	15	17	18	19	20	21	22	24	25	26	27	27	28	28	A	A	27	27	22.2	27.9	
21-Oct	27	26	26	26	27	27	27	27	28	28	29	29	29	29	30	29	29	29	29	28	29	A	A	28	29	28.1	29.6	
22-Oct	29	29	29	29	25	24	22	21	27	28	28	28	28	27	27	26	26	26	25	23	A	A	26	24	24	23	26.0	29.4
23-Oct	23	22	21	20	19	15	15	2	7	12	15	19	22	21	22	20	20	20	A	A	18	19	19	18	20	17.8	22.8	
24-Oct	22	24	23	23	21	19	17	18	19	19	20	22	22	23	23	23	22	A	A	10	3	6	12	15	13	18.3	23.5	
25-Oct	21	22	14	16	20	18	19	15	16	12	16	17	19	19	22	22	A	A	20	20	21	22	21	21	19	18.8	22.4	
26-Oct	14	17	18	17	15	13	17	18	17	19	21	22	24	26	24	A	A	22	22	22	22	22	22	22	21	20.0	25.9	
27-Oct	21	20	19	19	18	17	15	13	13	14	14	16	16	17	A	A	18	17	15	16	17	18	19	18	18	16.8	21.3	
28-Oct	18	18	18	18	19	20	23	24	25	26	26	27	27	A	A	29	29	29	27	27	27	27	27	27	26	24.5	29.1	
29-Oct	26	26	25	24	25	25	23	24	25	22	23	26	A	A	26	25	26	26	26	22	24	23	20	24	24	24.4	26.4	
30-Oct	25	25	26	26	22	21	12	6	9	9	14	A	A	25	26	24	30	29	24	4	4	4	3	6	10	16.7	30.3	
31-Oct	10	12	12	12	11	7	5	3	8	10	A	A	13	16	16	14	9	8	7	4	9	9	8	9	8	9.6	16.3	
20.1		20.6	20.1	19.6	19.0	17.8	16.1	14.7	16.1	18.6	21.0	22.6	24.6	25.6	27.2	26.8	26.7	24.1	22.3	20.7	19.5	19.9	19.1	18.8	Diurnal Average			
38.3		32.0	37.7	37.2	35.0	33.5	30.4	31.5	29.8	32.1	33.0	36.1	37.1	39.1	39.6	38.9	37.6	35.5	35.3	35.8	38.3	36.8	34.8	37.8	Diurnal Maximum			
C - Calibration		A - Automated Daily Zero Span																										

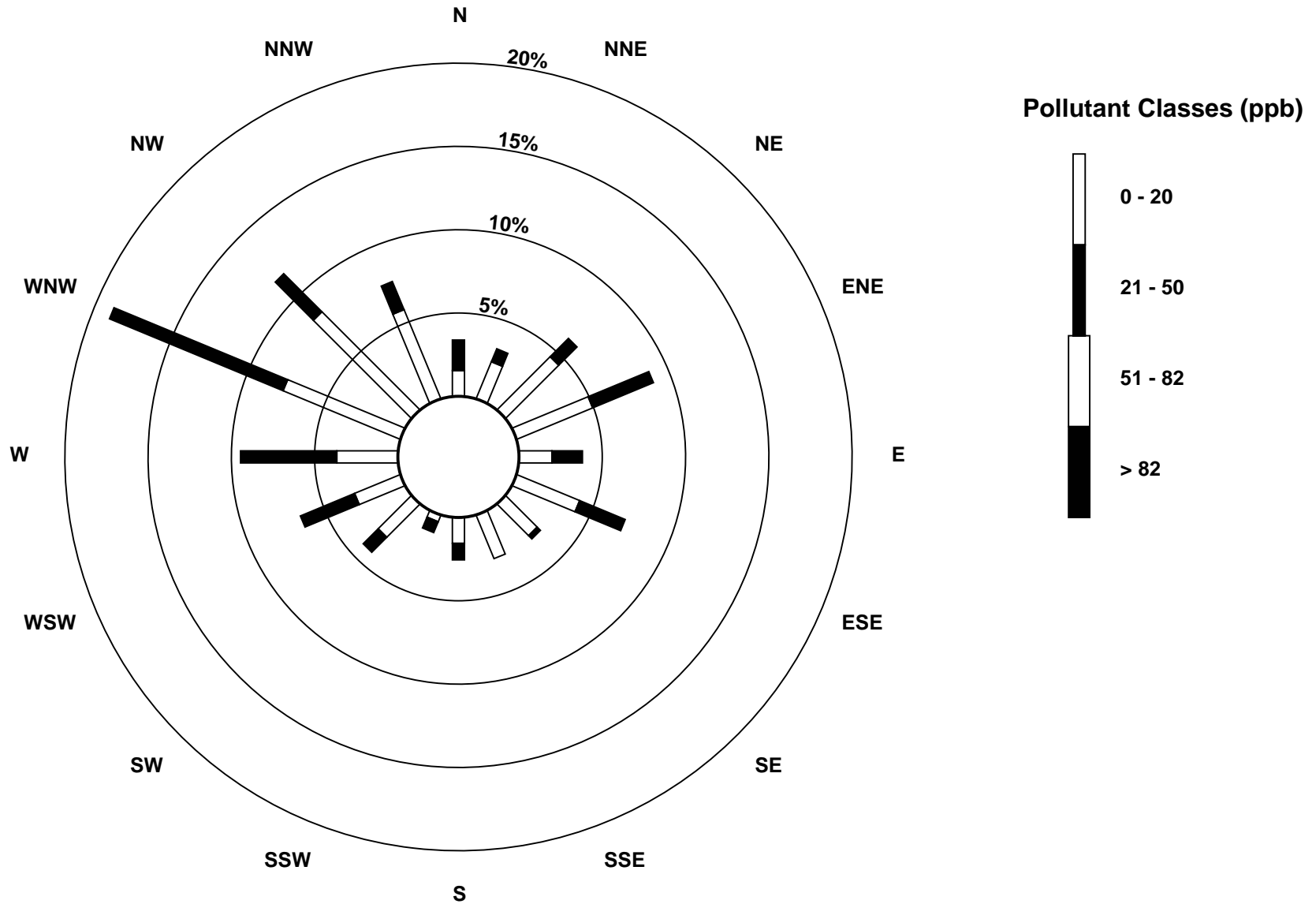
# Hourly Maximums

Ozone (O<sub>3</sub>) - ppb  
Henry Pirker - October 2012



**Pollutant Rose**

Ozone (O<sub>3</sub>) - ppb  
Henry Pirker - October 2012





# Eight Hour Running Averages

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

Henry Pirker - October 2012

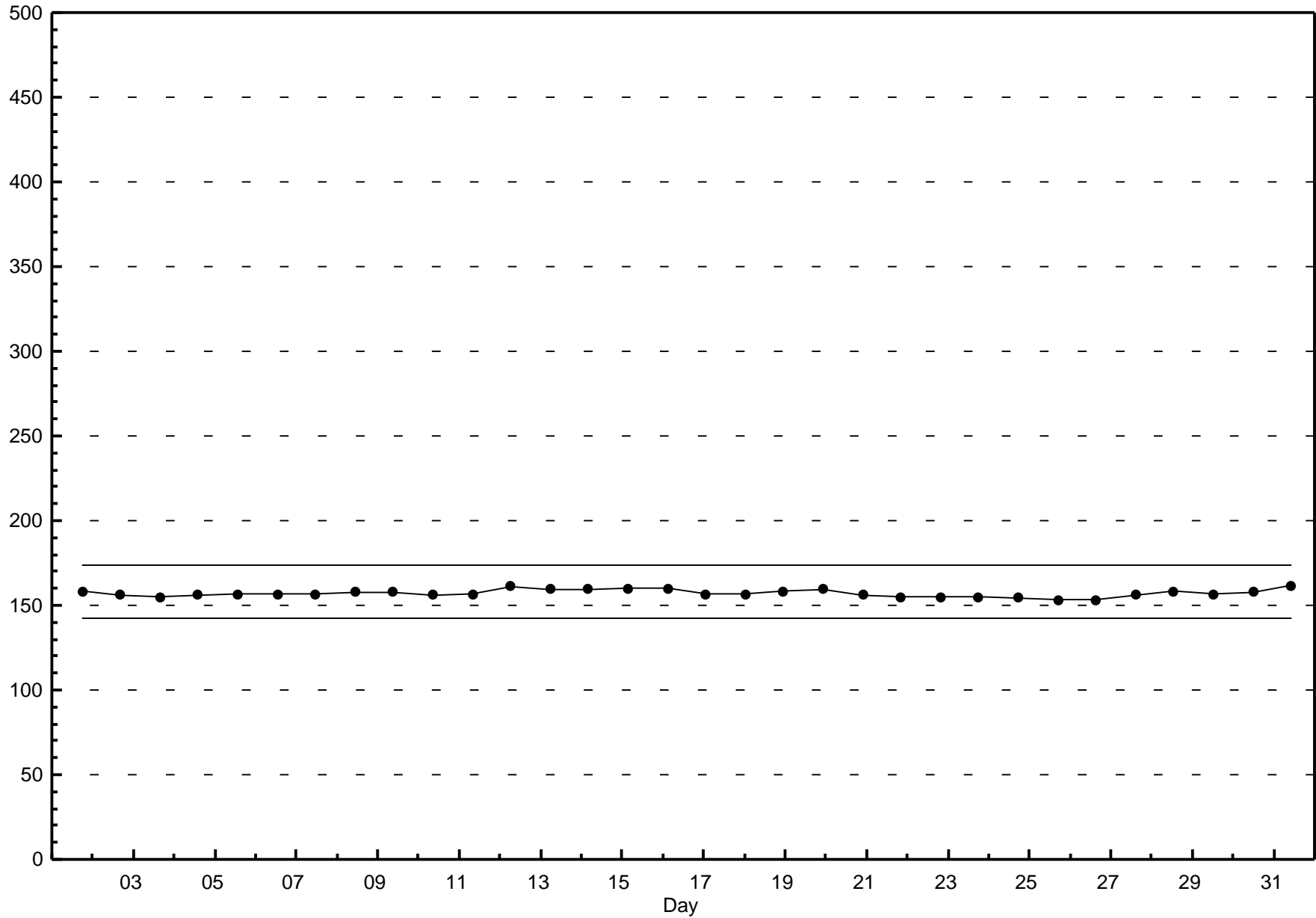
Maximum Value: 35.7 ppb on Oct 17 04:00	Hours in Service: 744
Minimum Value: 1.1 ppb on Oct 13 08:00	Hours of Data: 737
Percentiles: P <sub>1</sub> = 2.3 P <sub>10</sub> = 8.2 Q <sub>1</sub> = 13.6 Median = 18.9 Q <sub>3</sub> = 23.7 P <sub>90</sub> = 26.9 P <sub>99</sub> = 34.3	Hours of Missing Data: 7
	Hours of Calibration: 7
	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Oct	23	22	21	21	20	20	20	19	18	17	16	14	13	12	14	16	18	19	22	25	26	27	26	23	27.5
2-Oct	22	22	21	21	21	22	23	24	25	25	24	24	24	24	24	24	23	22	22	20	19	17	15	14	24.7
3-Oct	14	13	12	13	13	12	11	10	9	9	10	11	12	14	17	19	22	24	24	22	21	18	16	16	23.9
4-Oct	13	12	11	10	9	8	7	6	5	5	5	5	7	10	12	16	20	24	25	23	21	17	15	11	24.6
5-Oct	8	4	3	3	4	4	4	4	4	4	4	5	7	9	9	14	18	22	24	23	22	21	20	19	24.1
6-Oct	15	13	14	14	14	13	12	11	10	10	11	12	12	14	18	21	25	27	28	28	27	26	25	23	28.4
7-Oct	21	20	19	18	17	17	17	17	18	19	20	21	22	24	25	27	27	28	28	27	26	25	23	21	28.0
8-Oct	20	17	15	14	12	10	8	7	5	5	5	7	11	15	21	25	29	31	30	30	28	26	23	20	31.2
9-Oct	17	14	12	10	8	6	5	4	4	3	5	7	9	12	15	18	21	22	22	23	24	23	21	19	24.0
10-Oct	17	16	17	17	17	17	18	20	21	21	21	20	21	22	24	25	25	26	26	27	27	27	27	27	27.3
11-Oct	28	28	29	29	29	29	28	28	27	25	24	22	21	19	18	18	17	15	14	12	11	10	10	10	29.2
12-Oct	11	12	13	14	16	16	17	17	17	17	16	16	16	N	N	N	N	N	N	N	8	7	7	5	16.9
13-Oct	4	3	2	2	2	2	1	1	1	2	2	4	8	10	15	19	23	27	30	31	30	29	26	21	31.2
14-Oct	18	15	12	11	10	10	11	13	15	17	18	19	19	18	18	18	18	19	20	20	20	21	22	22	22.2
15-Oct	23	23	22	23	25	26	27	27	26	25	26	27	26	26	27	26	26	24	23	21	21	20	20	20	27.0
16-Oct	22	25	26	26	24	21	17	13	9	8	10	11	14	18	22	26	30	32	33	33	33	34	34	34	34.5
17-Oct	35	35	36	36	35	35	34	32	31	31	30	30	30	30	31	33	34	34	33	31	28	26	24	22	35.7
18-Oct	20	19	19	20	21	22	21	19	19	17	17	16	16	15	14	15	14	13	11	8	7	6	6	5	21.6
19-Oct	8	12	14	17	20	21	22	21	20	19	18	17	16	16	16	17	18	20	22	23	24	25	26	27	26.6
20-Oct	27	26	25	24	22	20	19	18	16	15	15	16	17	18	19	20	21	22	23	24	25	25	26	26	26.8
21-Oct	26	26	26	26	26	26	26	26	26	26	26	27	27	27	27	28	28	28	28	28	28	28	28	28	28.0
22-Oct	27	27	28	28	27	26	25	24	24	23	23	23	23	24	25	25	26	25	25	24	24	23	23	23	27.6
23-Oct	23	22	22	22	21	20	17	15	12	11	10	10	10	11	12	15	17	18	18	18	18	18	17	17	22.5
24-Oct	18	18	19	20	20	20	20	19	19	18	18	17	18	18	19	20	20	21	19	16	13	11	10	8	20.8
25-Oct	8	9	10	11	13	14	15	15	14	13	13	13	13	13	14	15	16	17	17	18	19	19	19	18	19.3
26-Oct	18	17	17	17	16	14	13	13	13	14	14	15	16	17	19	20	21	22	22	22	21	21	21	21	21.9
27-Oct	20	20	20	20	19	18	17	16	15	14	14	13	13	13	13	14	14	14	15	15	15	15	15	15	20.5
28-Oct	16	16	17	17	17	17	18	19	20	20	21	22	23	24	25	26	26	26	26	26	26	26	26	26	26.3
29-Oct	26	25	25	24	24	24	23	22	22	21	21	21	21	21	22	22	23	23	23	22	22	21	21	21	25.6
30-Oct	21	21	22	22	22	22	19	17	15	13	11	9	9	10	12	16	18	18	17	15	13	11	8	6	21.8
31-Oct	5	5	6	7	7	8	8	7	7	6	6	6	7	8	9	10	11	10	9	9	8	7	6	6	10.6
	35.0	35.2	35.5	35.7	35.4	34.7	33.9	32.3	30.8	30.7	30.1	29.7	29.8	30.4	31.4	32.9	34.0	34.2	33.5	33.2	33.4	33.6	33.9	34.5	
	Diurnal Maximums																								

N - Not Valid

### Span Responses

Ozone (O<sub>3</sub>)  
Henry Pirker - October 2012



## Hourly Averages

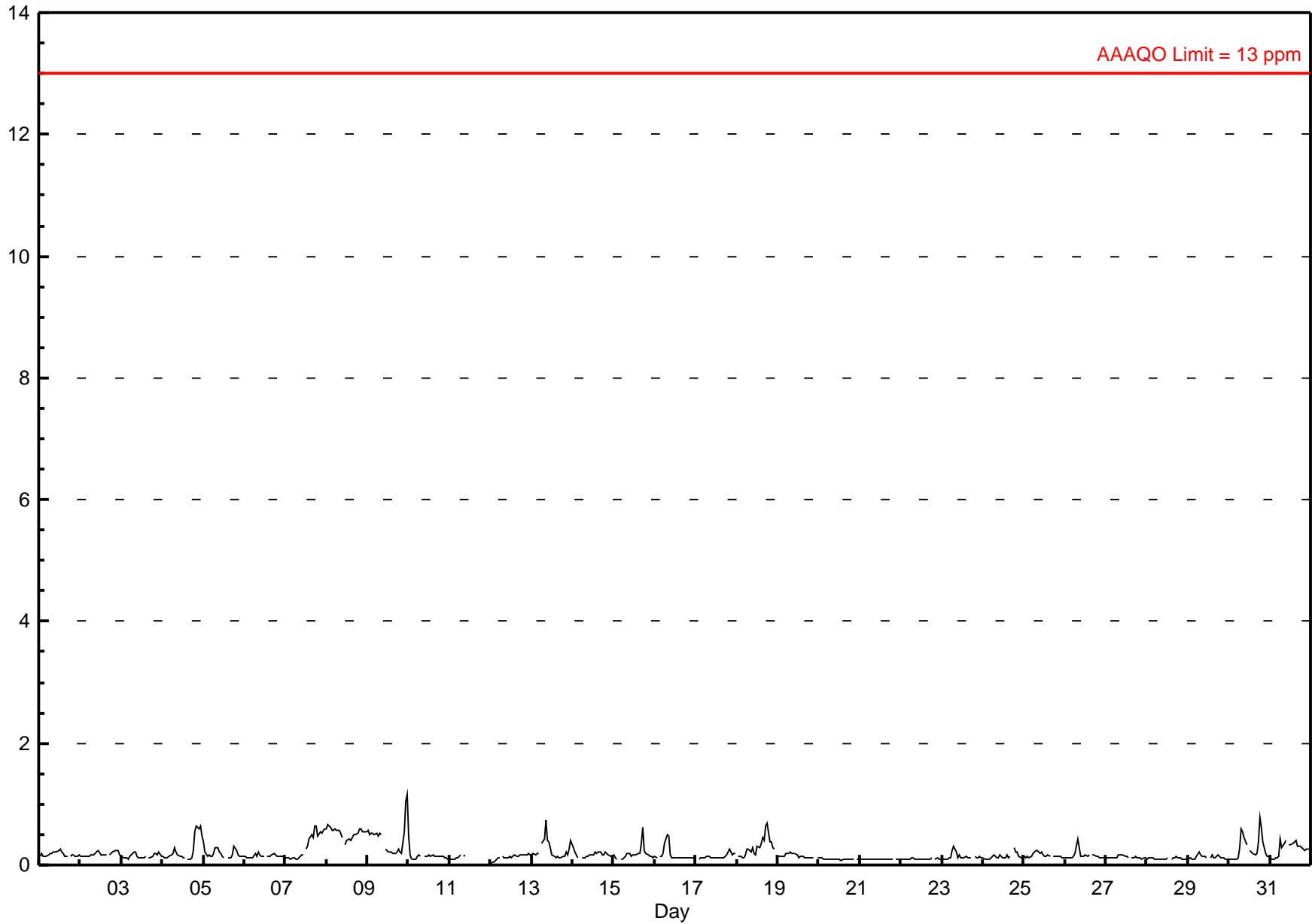
Carbon Monoxide (CO) - ppm

Henry Pirker - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 1.16 ppm on Oct 10 00:00	Maximum Daily Average: 0.53 ppm on Oct 8		Hours of Data:	709
Minimum Value: 0.0 ppm on Oct 11 14:00	Minimum Daily Average: 0.05 ppm on Oct 11		Hours of Missing Data:	35
Maximum Diurnal Average: 0.25 ppm at hour 8	Minimum Diurnal Average: 0.15 ppm at hour 3		Hours of Calibration:	35
Monthly Average: 0.189 ppm	Percentiles: P <sub>1</sub> = 0.00 P <sub>10</sub> = 0.10 Q <sub>1</sub> = 0.11 Median = 0.14 Q <sub>3</sub> = 0.19 P <sub>90</sub> = 0.39 P <sub>99</sub> = 0.64		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.27
2-Oct	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	A	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.25
3-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.15	0.22	
4-Oct	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	0.5	0.6	0.6	0.6	0.5	0.25	0.65	
5-Oct	0.4	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	A	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.19	0.38	
6-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	A	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.14	0.21	
7-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.5	0.6	0.5	0.6	0.32	0.65	
8-Oct	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	A	A	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.53	0.67	
9-Oct	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	A	A	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.5	1.0	0.42	1.16	
10-Oct	0.5	0.2	0.1	0.1	0.1	0.1	0.2	0.1	A	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	0.47	
11-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	A	0.1	0.2	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.17	
12-Oct	0.0	0.0	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.13	0.18	
13-Oct	0.2	0.2	0.2	0.2	0.2	A	0.4	0.4	0.7	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.24	0.73	
14-Oct	0.3	0.2	0.2	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.17	0.28	
15-Oct	0.2	0.1	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.6	0.2	0.2	0.2	0.1	0.1	0.1	0.18	0.61	
16-Oct	0.1	0.1	A	0.1	0.1	0.2	0.4	0.5	0.5	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	0.17	0.51	
17-Oct	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	0.2	0.2	0.3	0.2	0.2	0.14	0.26	
18-Oct	A	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.6	0.7	0.4	0.4	0.3	0.2	A	0.29	0.69	
19-Oct	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	A	0.1	0.15	0.20	
20-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.10	0.11	
21-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.10	0.10	
22-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.10	0.12	
23-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.14	0.30	
24-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	A	0.3	0.2	0.2	0.1	0.1	0.1	0.14	0.28	
25-Oct	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	A	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.16	0.24	
26-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.3	0.2	0.1	0.1	0.2	0.2	0.2	A	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.16	0.44	
27-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.17	
28-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.13	
29-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	A	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.20	
30-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.6	0.6	0.5	0.3	A	0.2	0.2	0.2	0.2	0.2	0.4	0.8	0.6	0.4	0.2	0.1	0.1	0.28	0.78	
31-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.4	0.4	A	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.27	0.43	
	0.18	0.16	0.15	0.15	0.15	0.16	0.21	0.25	0.24	0.19	0.17	0.16	0.17	0.17	0.18	0.18	0.18	0.21	0.23	0.22	0.21	0.20	0.22	0.21	Diurnal Average		
	0.60	0.67	0.61	0.57	0.56	0.60	0.58	0.60	0.73	0.46	0.38	0.34	0.39	0.43	0.42	0.51	0.51	0.65	0.78	0.61	0.64	0.60	1.04	1.16	Diurnal Maximum		

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



## Hourly Maximums

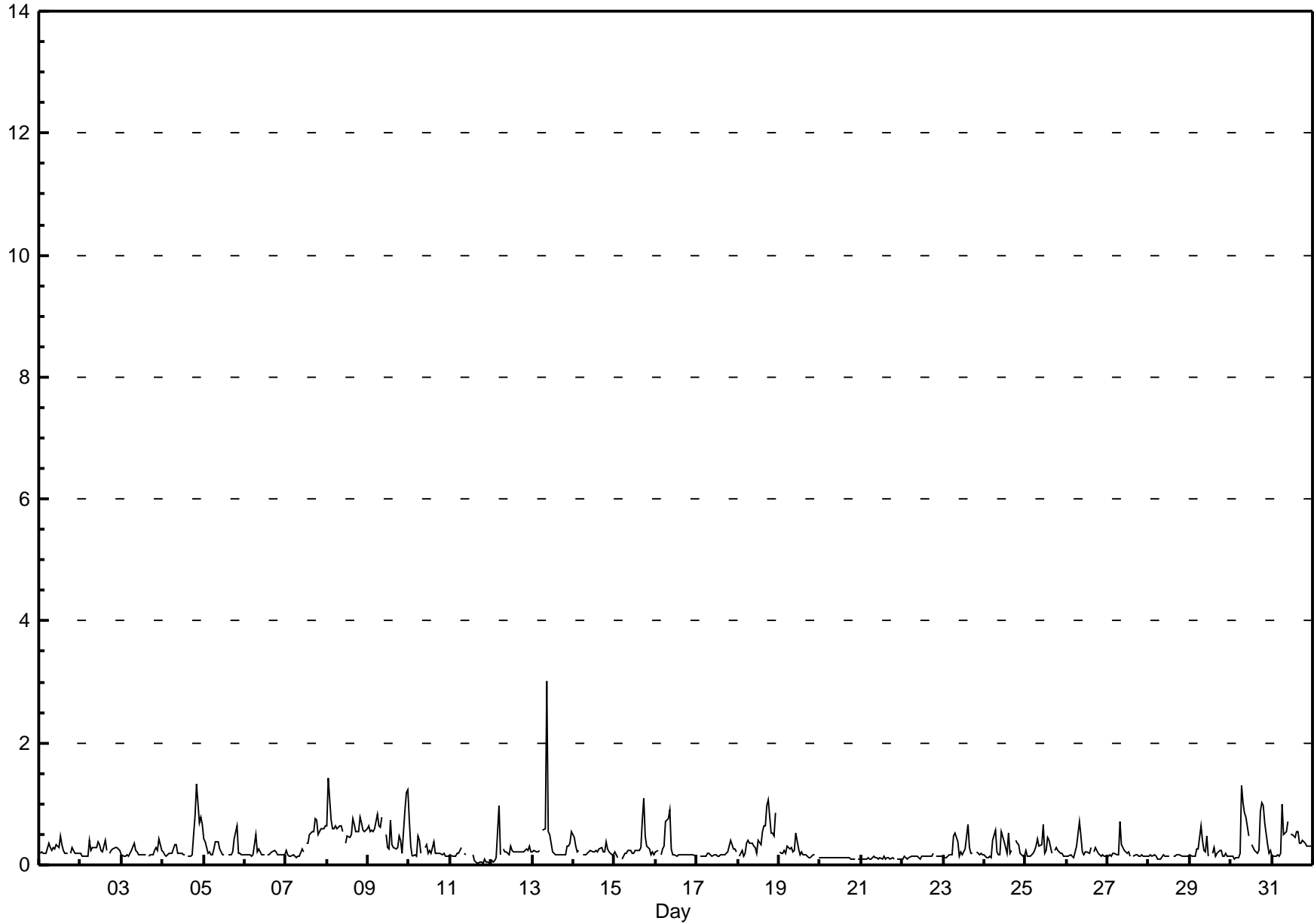
Carbon Monoxide (CO) - ppm

Henry Pirker - October 2012

Maximum Value: 3.02 ppm on Oct 13 09:00		Maximum Daily Average: 0.63 ppm on Oct 8		Hours in Service: 744																						
Minimum Value: 0.0 ppm on Oct 11 20:00		Minimum Daily Average: 0.11 ppm on Oct 11		Hours of Data: 709																						
Maximum Diurnal Average: 0.42 ppm at hour 9		Minimum Diurnal Average: 0.18 ppm at hour 3		Hours of Missing Data: 35																						
Monthly Average: 0.275 ppm		Percentiles: P <sub>1</sub> = 0.05 P <sub>10</sub> = 0.12 Q <sub>1</sub> = 0.15 Median = 0.19 Q <sub>3</sub> = 0.30 P <sub>90</sub> = 0.56 P <sub>99</sub> = 1.03		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-Oct	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.5	0.3	0.2	0.2	0.2	A	0.2	0.3	0.2	0.2	0.2	0.2	0.25	0.48
2-Oct	0.2	0.1	0.1	0.1	0.1	0.4	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.4	0.2	A	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.25	0.41
3-Oct	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.1	0.2	0.2	0.2	0.3	0.2	0.4	0.2	0.21	0.43
4-Oct	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	A	0.1	0.1	0.2	0.5	0.8	1.3	0.7	0.8	0.7	0.35	1.34
5-Oct	0.4	0.4	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.4	0.6	0.2	0.2	0.2	0.2	0.26	0.65
6-Oct	0.2	0.2	0.2	0.2	0.1	0.2	0.5	0.2	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.49
7-Oct	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.2	A	0.3	0.3	0.5	0.6	0.5	0.8	0.7	0.5	0.6	0.6	0.6	0.6	0.37	0.75
8-Oct	0.6	1.4	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	A	0.4	0.5	0.5	0.5	0.8	0.7	0.6	0.6	0.8	0.7	0.6	0.6	0.6	0.63	1.43
9-Oct	0.6	0.5	0.6	0.5	0.6	0.8	0.6	0.6	0.6	0.8	A	0.5	0.3	0.3	0.7	0.3	0.3	0.3	0.5	0.4	0.2	0.9	1.2	1.2	0.57	1.24
10-Oct	0.7	0.3	0.1	0.2	0.1	0.5	0.4	0.2	A	0.3	0.3	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.25	0.74
11-Oct	0.2	0.1	0.1	0.1	0.2	0.2	0.3	A	0.2	0.2	C	C	C	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.11	0.28	
12-Oct	0.1	0.1	0.1	0.1	1.0	0.2	A	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.23	0.96
13-Oct	0.2	0.2	0.2	0.2	0.2	A	0.6	0.6	3.0	0.6	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.6	0.42	3.02
14-Oct	0.5	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.23	0.46
15-Oct	0.2	0.2	0.1	A	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.7	1.1	0.5	0.3	0.3	0.2	0.2	0.2	0.28	1.09
16-Oct	0.2	0.2	A	0.2	0.3	0.3	0.7	0.8	0.9	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26	0.91
17-Oct	0.1	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.19	0.40
18-Oct	A	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.4	0.3	0.2	0.3	0.2	0.4	0.3	0.5	0.6	0.6	1.0	1.1	0.5	0.5	0.9	A	0.45	1.07
19-Oct	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	A	0.1	0.21	0.52
20-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.11	0.12
21-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.11	0.14
22-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.1	0.1	0.1	0.1	0.13	0.18
23-Oct	0.1	0.1	0.1	0.2	0.2	0.2	0.5	0.5	0.4	0.1	0.2	0.2	0.2	0.3	0.7	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.24	0.66
24-Oct	0.2	0.1	0.1	0.1	0.1	0.4	0.6	0.2	0.2	0.2	0.5	0.4	0.3	0.2	0.5	0.2	0.2	A	0.4	0.3	0.3	0.2	0.2	0.2	0.26	0.57
25-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.7	0.2	0.2	0.4	0.4	0.2	A	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.26	0.66
26-Oct	0.1	0.1	0.2	0.1	0.1	0.2	0.3	0.7	0.5	0.2	0.2	0.2	0.2	0.2	0.3	A	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.23	0.72
27-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.3	0.3	0.2	0.2	0.2	0.2	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.72
28-Oct	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.14	0.16
29-Oct	0.2	0.1	0.1	0.1	0.3	0.3	0.6	0.4	0.2	0.2	0.5	0.2	A	0.2	0.3	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.23	0.63
30-Oct	0.1	0.1	0.1	0.1	0.1	0.2	1.3	1.0	0.9	0.8	0.5	A	0.3	0.3	0.2	0.2	0.2	0.9	1.0	1.0	0.7	0.3	0.2	0.2	0.47	1.29
31-Oct	0.1	0.1	0.1	0.2	0.1	0.2	1.0	0.5	0.5	0.7	A	0.5	0.4	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.39	0.99
		0.23	0.22	0.18	0.19	0.22	0.25	0.38	0.37	0.42	0.27	0.28	0.22	0.24	0.25	0.28	0.24	0.25	0.30	0.32	0.31	0.31	0.27	0.29	0.26	Diurnal Average
		0.74	1.43	0.73	0.60	0.96	0.83	1.29	1.02	3.02	0.78	0.66	0.50	0.50	0.73	0.66	0.76	0.73	1.09	1.07	0.97	1.34	0.91	1.19	1.24	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

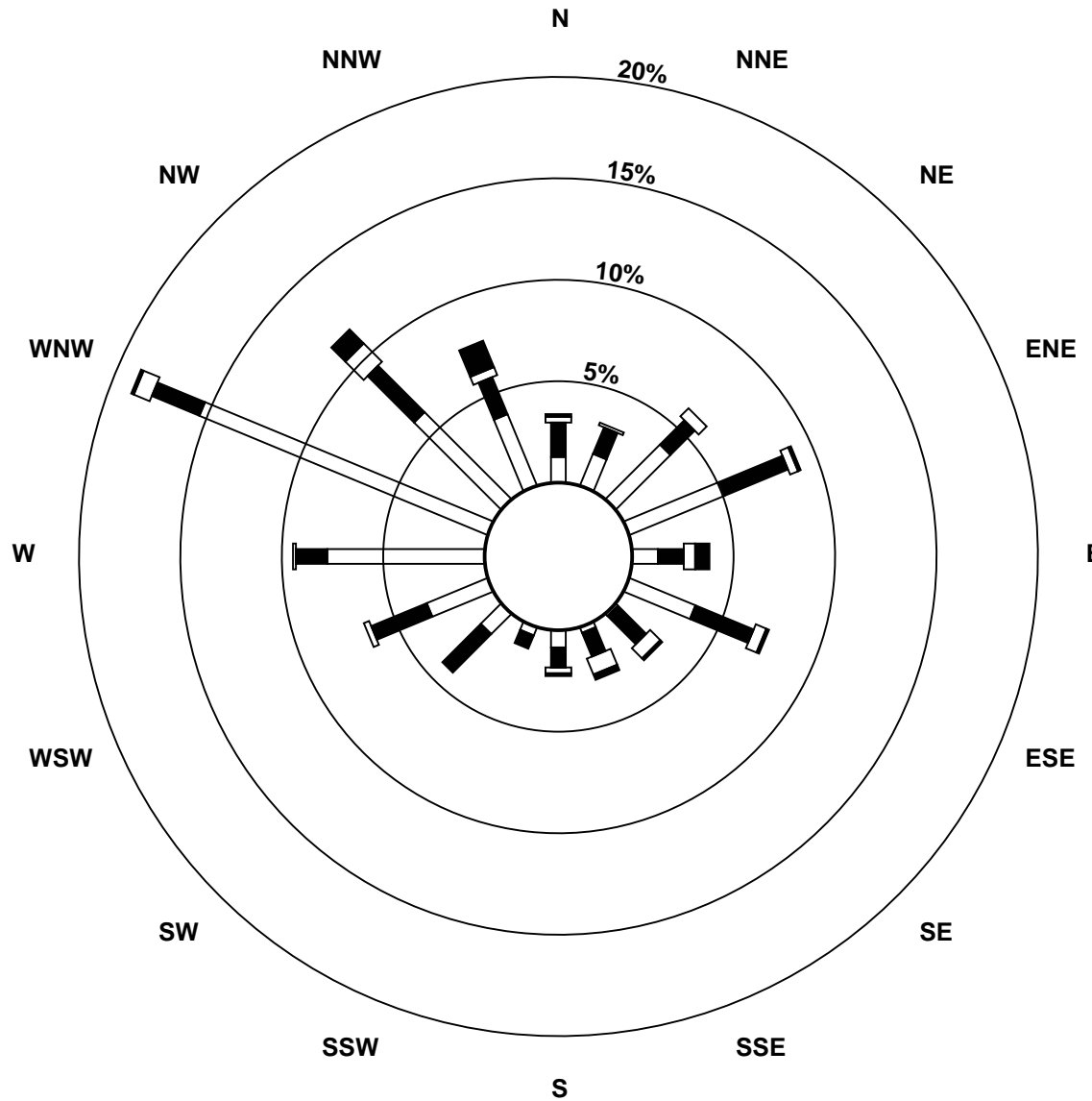
### Hourly Maximums

**Carbon Monoxide (CO) - ppm**  
**Henry Pirker - October 2012**

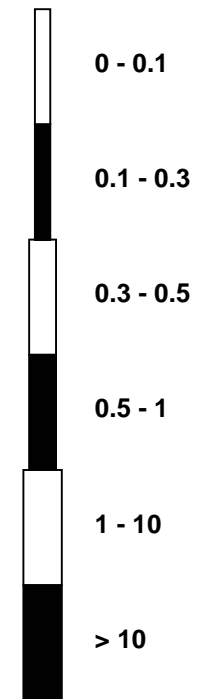


**Pollutant Rose**

**Carbon Monoxide (CO) - ppm**  
**Henry Pirker - October 2012**



**Pollutant Classes (ppm)**



## Eight Hour Running Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - October 2012

Number of Exceedences (AAAQO): 8-hr: 0	Hours in Service: 744
Maximum Value: 0.60 ppm on Oct 8 07:00	Hours of Data: 737
Minimum Value: 0.00 ppm on Oct 11 19:00	Hours of Missing Data: 7
	Hours of Calibration: 7
	Percent Operational Time: 100.0
Percentiles: P <sub>1</sub> = 0.00 P <sub>10</sub> = 0.10 Q <sub>1</sub> = 0.12 Median = 0.15 Q <sub>3</sub> = 0.20 P <sub>90</sub> = 0.36 P <sub>99</sub> = 0.57	

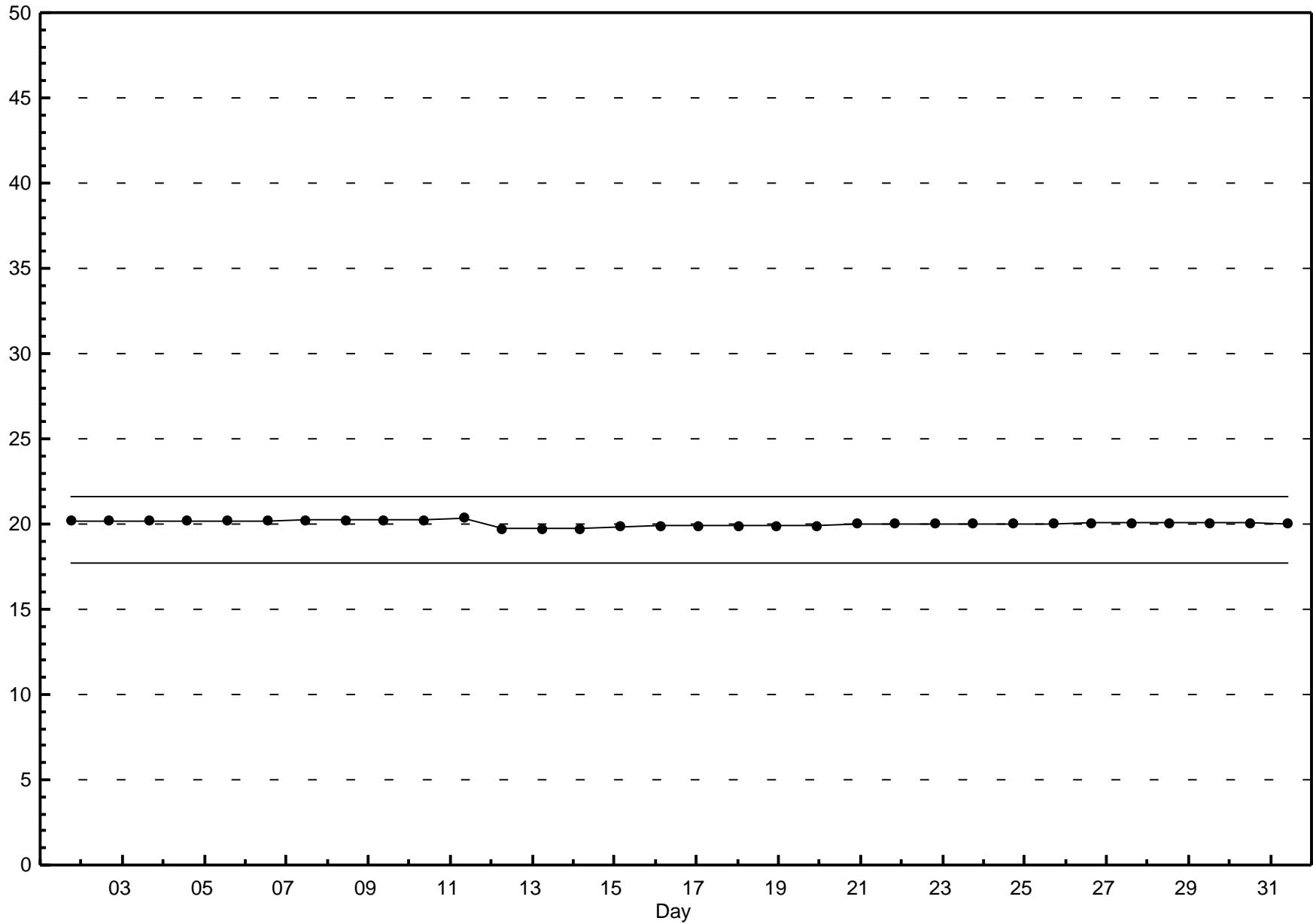
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
2-Oct	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
3-Oct	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.20
4-Oct	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.4	0.42
5-Oct	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	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.47
6-Oct	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.18
7-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.56
8-Oct	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.60
9-Oct	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.55
10-Oct	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.51
11-Oct	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	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13
12-Oct	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.16
13-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.40
14-Oct	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
15-Oct	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.26
16-Oct	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.28
17-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.18
18-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.45
19-Oct	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.40
20-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12
21-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10
22-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10
23-Oct	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.17
24-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18
25-Oct	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.19
26-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.21
27-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
28-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12
29-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
30-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.38
31-Oct	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.37
0.57 0.58 0.57 0.59 0.59 0.60 0.60 0.60 0.59 0.56 0.55 0.52 0.49 0.47 0.44 0.43 0.43 0.43 0.43 0.46 0.48 0.50 0.53 0.55 0.56																										
Diurnal Maximums																										

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



### Span Responses

**Carbon Monoxide (CO)**  
**Henry Pirker - October 2012**



## Hourly Averages

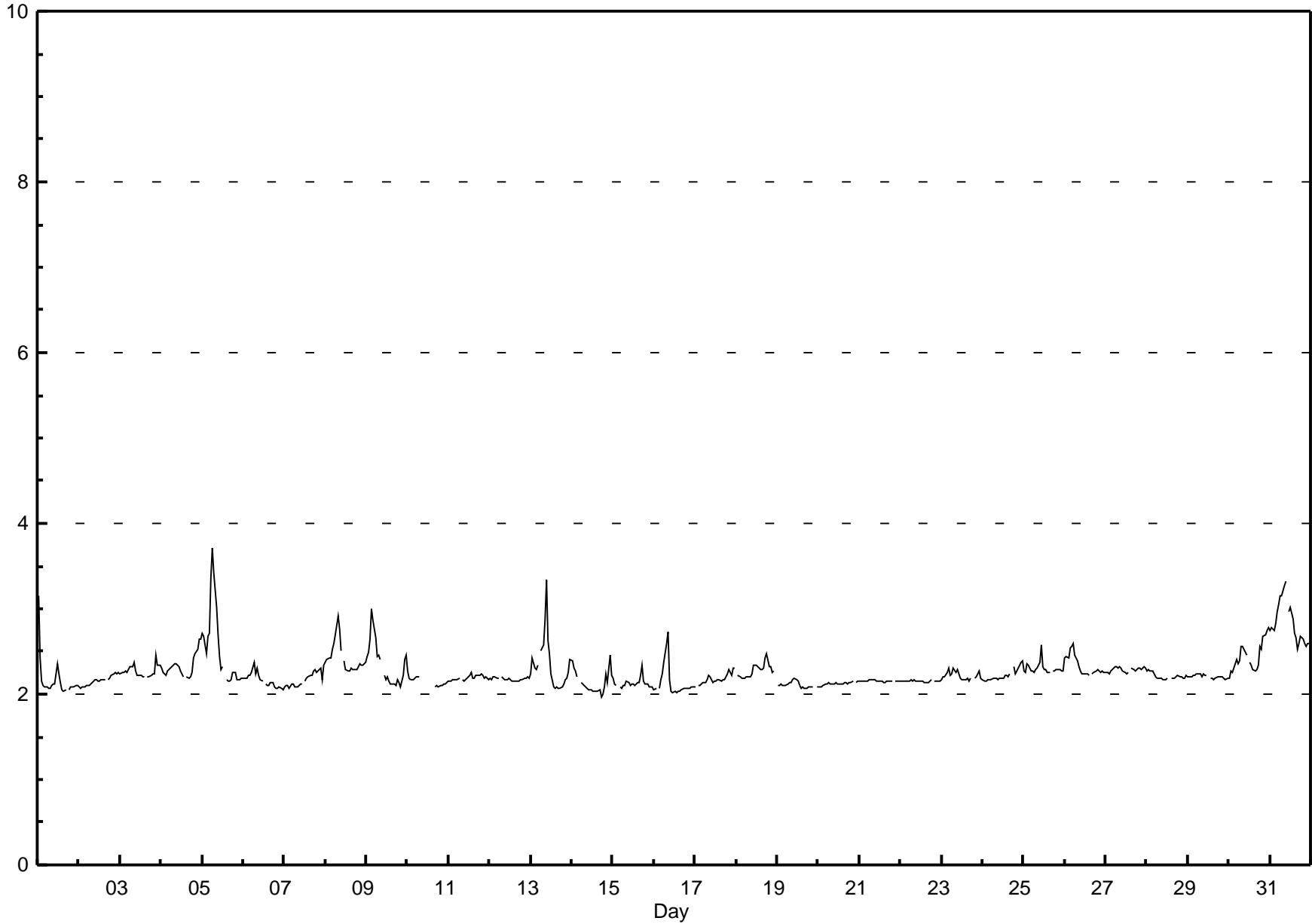
Total Hydrocarbons (THC) - ppm

Henry Pirker - October 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 744																																														
Maximum Value: 3.72 ppm on Oct 5 07:00		Maximum Daily Average: 2.83 ppm on Oct 31																																														
Minimum Value: 2.0 ppm on Oct 14 18:00		Hours of Data: 706																																														
Maximum Diurnal Average: 2.35 ppm at hour 9		Hours of Missing Data: 38																																														
Monthly Average: 2.255 ppm		Hours of Calibration: 38																																														
Minimum Daily Average: 2.11 ppm on Oct 19		Percent Operational Time: 100.0																																														
Minimum Diurnal Average: 2.18 ppm at hour 15																																																
Percentiles: P <sub>1</sub> = 2.03 P <sub>10</sub> = 2.09 Q <sub>1</sub> = 2.15 Median = 2.20 Q <sub>3</sub> = 2.29 P <sub>90</sub> = 2.47 P <sub>99</sub> = 3.10																																																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Oct	3.1	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.2	2.1	2.0	2.0	2.0	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.17	3.15																					
2-Oct	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.16	2.25																					
3-Oct	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.5	2.3	2.3	2.27	2.45																						
4-Oct	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.2	2.2	A	2.2	2.2	2.2	2.3	2.4	2.5	2.5	2.6	2.6	2.33	2.65																						
5-Oct	2.7	2.7	2.5	2.7	2.7	3.4	3.7	3.4	3.0	2.7	2.4	2.3	2.3	A	2.2	2.2	2.1	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.54	3.72																						
6-Oct	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.2	2.3	2.2	2.2	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.16	2.37																						
7-Oct	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.17	2.33																						
8-Oct	2.4	2.4	2.4	2.4	2.5	2.6	2.7	2.9	2.8	2.5	A	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.42	2.92																						
9-Oct	2.4	2.5	2.6	3.0	2.9	2.7	2.4	2.5	2.4	A	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.4	2.5	2.5	2.35	3.00																						
10-Oct	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.3	C	C	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	--	2.28																						
11-Oct	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.19	2.26																						
12-Oct	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.18	2.21																						
13-Oct	2.2	2.4	2.3	2.3	2.3	A	2.5	2.6	2.9	3.3	2.6	2.5	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.4	2.34	3.34																						
14-Oct	2.4	2.3	2.3	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.4	2.2	2.13	2.45																						
15-Oct	2.2	2.1	2.1	A	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.13	2.34																						
16-Oct	2.1	2.1	A	2.1	2.2	2.2	2.4	2.6	2.7	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.14	2.74																						
17-Oct	2.1	A	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.3	2.18	2.31																						
18-Oct	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.3	2.3	2.2	2.3	A	2.28	2.47																						
19-Oct	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.11	2.18																						
20-Oct	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.2	2.12	2.16																						
21-Oct	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	A	2.1	2.1	2.2	2.16	2.17																						
22-Oct	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	A	2.2	2.2	2.1	2.2	2.15	2.17																						
23-Oct	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.3	2.2	2.22	2.31																						
24-Oct	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.3	2.2	2.3	2.3	2.4	2.4	2.22	2.39																						
25-Oct	2.3	2.2	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.6	2.3	2.3	2.3	2.3	2.3	A	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.30	2.57																						
26-Oct	2.4	2.4	2.4	2.5	2.6	2.6	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	A	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.33	2.60																						
27-Oct	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	A	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.29	2.33																						
28-Oct	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.21	2.28																						
29-Oct	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.21	2.24																						
30-Oct	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.6	2.6	2.5	2.5	A	2.4	2.3	2.3	2.3	2.3	2.3	2.6	2.5	2.7	2.7	2.8	2.8	2.44	2.79																						
31-Oct	2.7	2.8	2.8	2.8	3.0	3.0	3.2	3.2	3.3	3.3	A	3.0	3.0	2.9	2.7	2.7	2.5	2.6	2.7	2.6	2.6	2.6	2.6	2.6	2.83	3.33																						
																								2.28	2.26	2.25	2.27	2.28	2.30	2.33	2.34	2.35	2.32	2.23	2.24	2.23	2.20	2.18	2.18	2.18	2.20	2.22	2.22	2.24	2.24	2.27	2.27	Diurnal Average
																								3.15	2.77	2.75	3.00	2.97	3.36	3.72	3.42	3.27	3.34	2.63	2.97	3.02	2.89	2.71	2.65	2.52	2.59	2.67	2.64	2.67	2.69	2.75	2.79	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								

**Hourly Averages**

**Total Hydrocarbons (THC) - ppm**  
**Henry Pirker - October 2012**



## Hourly Maximums

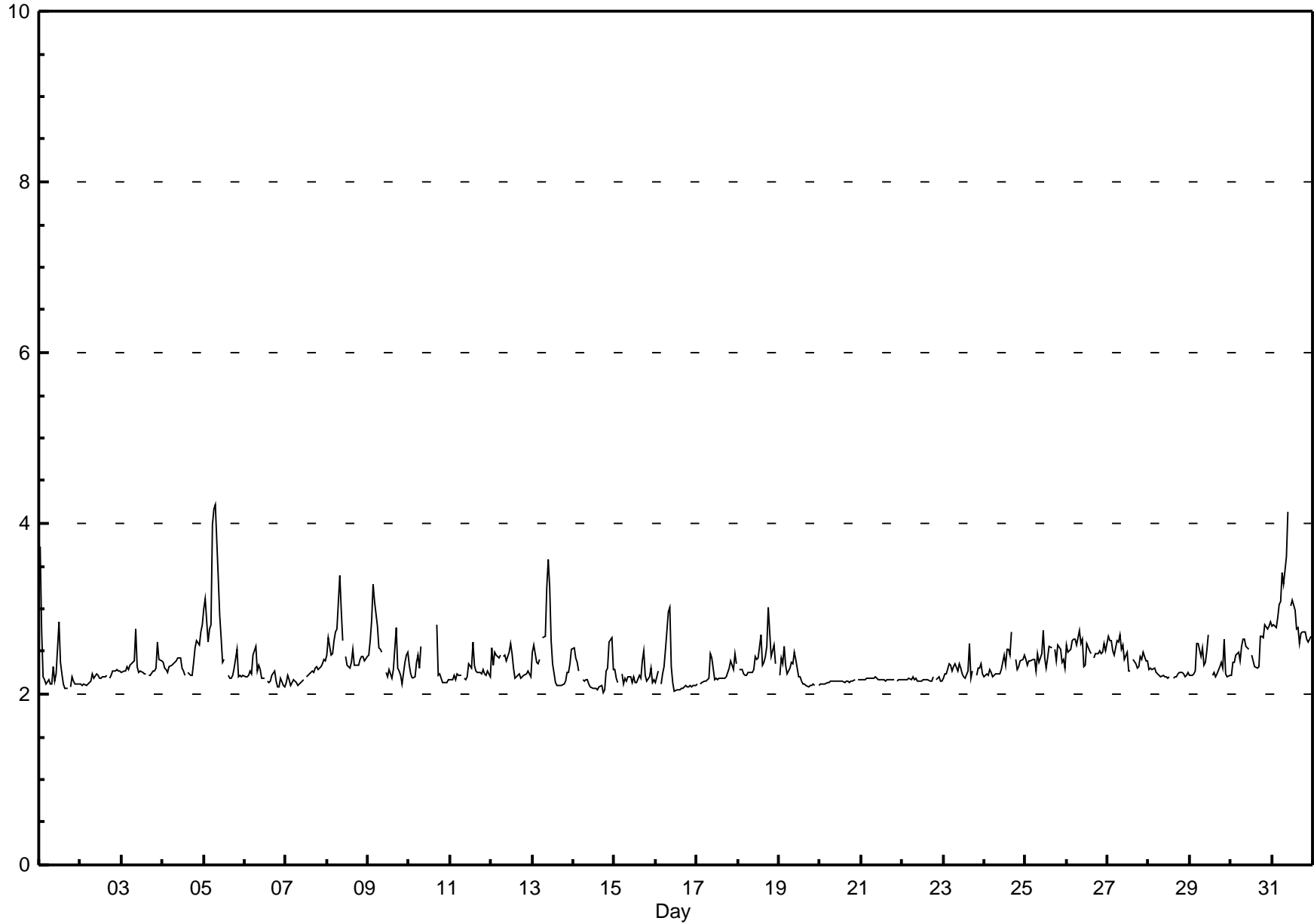
Total Hydrocarbons (THC) - ppm

Henry Pirker - October 2012

Maximum Value: 4.22 ppm on Oct 5 08:00		Maximum Daily Average: 2.95 ppm on Oct 31		Hours in Service: 744																																												
Minimum Value: 2.0 ppm on Oct 14 18:00		Minimum Daily Average: 2.14 ppm on Oct 20		Hours of Data: 706																																												
Maximum Diurnal Average: 2.50 ppm at hour 8		Minimum Diurnal Average: 2.25 ppm at hour 15		Hours of Missing Data: 38																																												
Monthly Average: 2.354 ppm		Percentiles: P <sub>1</sub> = 2.06 P <sub>10</sub> = 2.13 Q <sub>1</sub> = 2.18 Median = 2.27 Q <sub>3</sub> = 2.45 P <sub>90</sub> = 2.64 P <sub>99</sub> = 3.55		Hours of Calibration: 38																																												
Percent Operational Time: 100.0																										Daily Average	Daily Maximum																					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Oct	3.7	2.7	2.2	2.2	2.1	2.2	2.1	2.1	2.3	2.1	2.2	2.9	2.4	2.2	2.1	2.1	2.1	A	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.29	3.72																					
2-Oct	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.20	2.28																					
3-Oct	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.8	2.3	2.3	2.3	2.3	2.2	2.2	A	2.2	2.2	2.3	2.3	2.3	2.6	2.4	2.4	2.33	2.77																						
4-Oct	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.2	A	2.2	2.2	2.2	2.4	2.6	2.6	2.6	2.7	2.8	2.39	2.82																						
5-Oct	3.0	3.1	2.6	2.8	2.8	4.0	4.2	4.2	3.4	2.9	2.7	2.4	2.4	A	2.2	2.2	2.2	2.2	2.3	2.5	2.2	2.2	2.2	2.2	2.74	4.22																						
6-Oct	2.2	2.2	2.2	2.3	2.2	2.4	2.6	2.3	2.3	2.3	2.2	2.2	A	2.2	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.2	2.1	2.1	2.22	2.55																						
7-Oct	2.1	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.2	A	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.23	2.41																						
8-Oct	2.5	2.7	2.5	2.5	2.6	2.7	2.8	3.4	3.0	2.6	A	2.4	2.3	2.3	2.4	2.5	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.53	3.39																						
9-Oct	2.5	2.6	2.9	3.3	3.1	2.8	2.5	2.5	2.5	A	2.3	2.2	2.3	2.2	2.2	2.3	2.8	2.3	2.3	2.2	2.1	2.4	2.5	2.5	2.49	3.29																						
10-Oct	2.3	2.2	2.2	2.2	2.4	2.5	2.3	2.6	A	2.6	C	C	C	C	C	C	2.8	2.2	2.2	2.1	2.1	2.1	2.1	2.2	--	2.81																						
11-Oct	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.4	2.3	2.6	2.3	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.2	2.25	2.61																						
12-Oct	2.5	2.3	2.5	2.5	2.4	2.5	A	2.4	2.5	2.4	2.5	2.6	2.5	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.35	2.59																						
13-Oct	2.5	2.6	2.4	2.4	2.4	A	2.7	2.7	3.3	3.6	3.3	2.6	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.4	2.5	2.47	3.58																						
14-Oct	2.5	2.4	2.4	2.3	A	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.3	2.3	2.6	2.7	2.3	2.22	2.65																						
15-Oct	2.3	2.2	2.1	A	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.2	2.2	2.4	2.5	2.2	2.2	2.2	2.3	2.1	2.2	2.21	2.50																						
16-Oct	2.1	2.3	A	2.1	2.2	2.3	2.5	3.0	3.0	2.3	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.22	3.01																						
17-Oct	2.1	A	2.1	2.1	2.1	2.2	2.2	2.2	2.5	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.5	2.3	2.24	2.48																						
18-Oct	A	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.7	2.3	2.4	2.4	2.6	3.0	2.4	2.5	2.6	2.4	A	2.40	3.01																						
19-Oct	2.2	2.4	2.4	2.6	2.3	2.2	2.3	2.4	2.4	2.5	2.4	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.24	2.56																						
20-Oct	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.2	A	2.2	2.2	2.14	2.17																						
21-Oct	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.17	2.20																						
22-Oct	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.17	2.21																						
23-Oct	2.2	2.2	2.2	2.4	2.3	2.3	2.3	2.4	2.3	2.4	2.3	2.2	2.2	2.2	2.3	2.6	2.2	2.3	A	2.2	2.3	2.3	2.3	2.2	2.29	2.59																						
24-Oct	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.5	2.3	2.5	2.5	2.5	2.7	A	2.4	2.3	2.3	2.4	2.4	2.5	2.35	2.73																						
25-Oct	2.4	2.3	2.4	2.4	2.4	2.4	2.3	2.5	2.4	2.5	2.8	2.4	2.3	2.4	2.6	2.5	A	2.5	2.4	2.6	2.5	2.4	2.4	2.3	2.44	2.75																						
26-Oct	2.6	2.5	2.5	2.6	2.6	2.6	2.6	2.8	2.6	2.6	2.3	2.3	2.6	2.5	2.5	A	2.4	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.53	2.75																						
27-Oct	2.7	2.6	2.6	2.5	2.5	2.6	2.6	2.7	2.5	2.6	2.4	2.5	2.3	2.3	A	2.4	2.4	2.3	2.3	2.4	2.4	2.5	2.4	2.4	2.47	2.69																						
28-Oct	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.2	2.23	2.31																						
29-Oct	2.2	2.2	2.2	2.3	2.6	2.6	2.4	2.5	2.3	2.4	2.5	2.7	A	2.2	2.3	2.2	2.2	2.3	2.4	2.3	2.6	2.2	2.2	2.2	2.36	2.70																						
30-Oct	2.2	2.4	2.4	2.5	2.5	2.4	2.6	2.6	2.6	2.6	2.5	A	2.5	2.4	2.3	2.3	2.3	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.53	2.84																						
31-Oct	2.8	2.8	2.8	2.9	3.1	3.1	3.4	3.3	3.6	4.1	A	3.0	3.1	3.0	2.8	2.8	2.6	2.7	2.7	2.7	2.6	2.6	2.6	2.7	2.95	4.13																						
																								2.39	2.38	2.33	2.36	2.38	2.41	2.44	2.50	2.49	2.46	2.34	2.35	2.30	2.29	2.25	2.27	2.29	2.29	2.30	2.31	2.32	2.34	2.34	2.33	Diurnal Average
																								3.72	3.12	2.87	3.29	3.09	3.98	4.17	4.22	3.62	4.13	3.25	3.03	3.11	2.98	2.77	2.78	2.81	2.72	3.01	2.73	2.81	2.77	2.79	2.84	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								

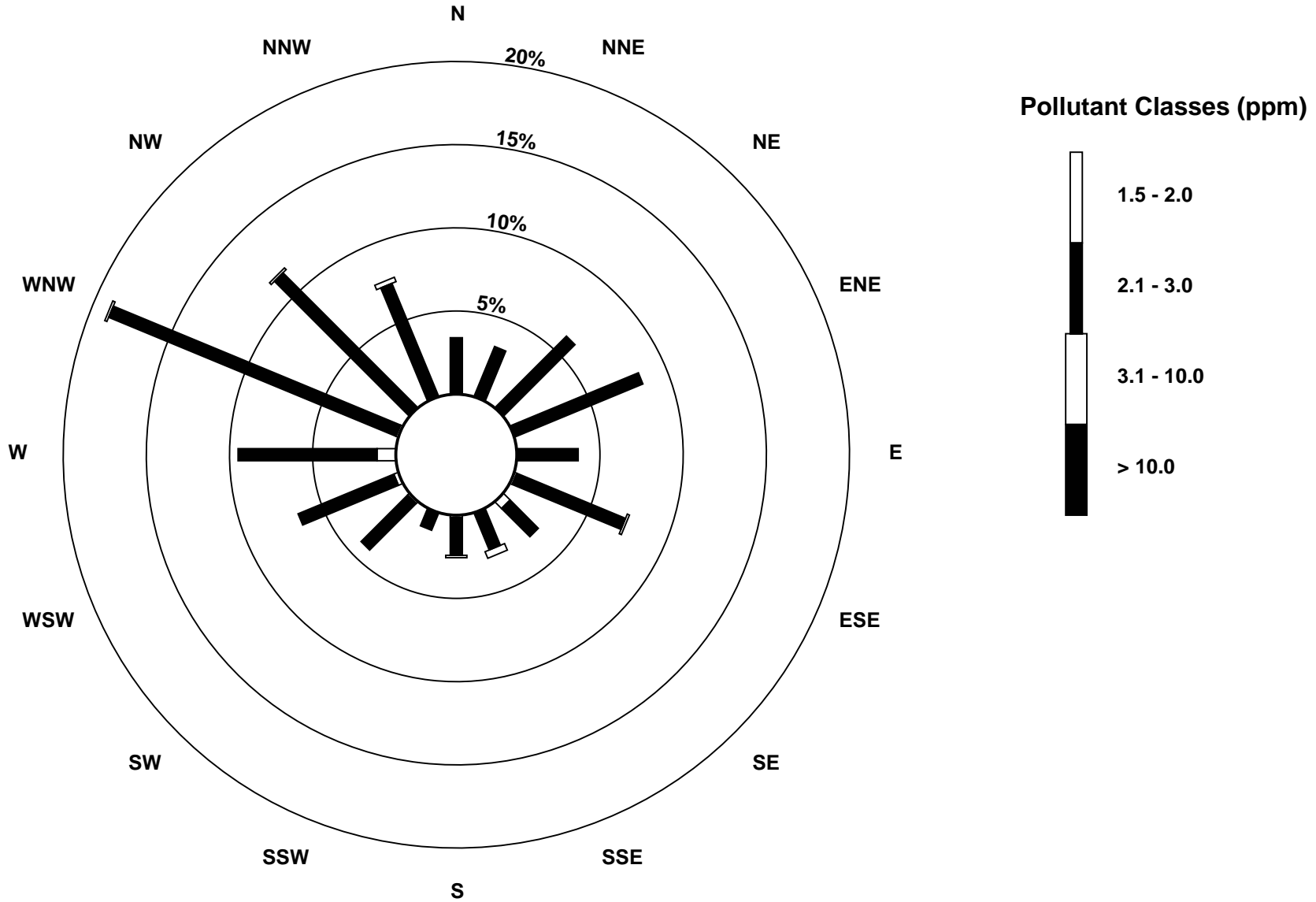
**Hourly Maximums**

**Total Hydrocarbons (THC) - ppm**  
**Henry Pirker - October 2012**



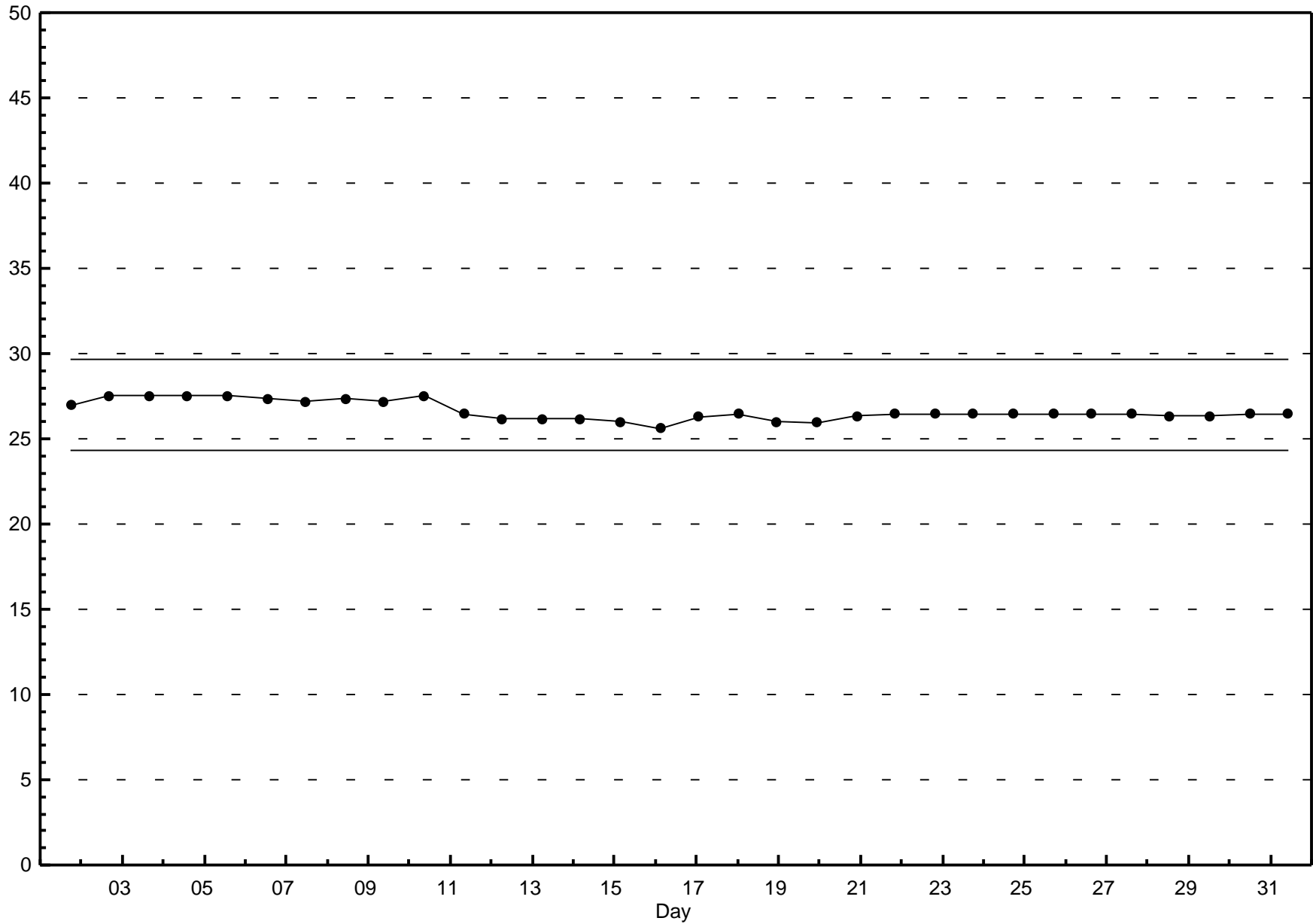
**Pollutant Rose**

**Total Hydrocarbons (THC) - ppm**  
**Henry Pirker - October 2012**



### Span Responses

Total Hydrocarbons (THC)  
Henry Pirker - October 2012



## Hourly Averages

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

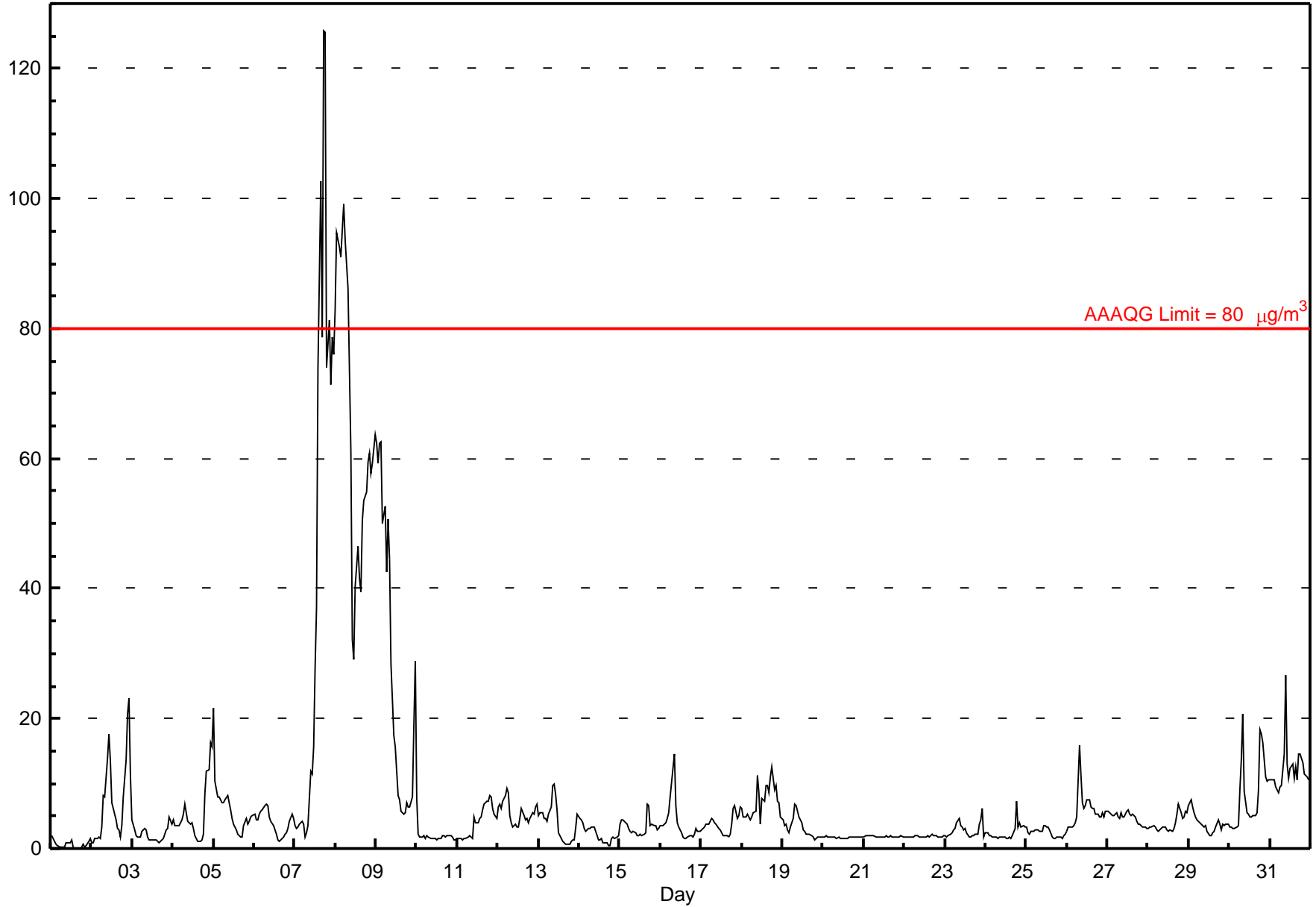
### Henry Pirker - October 2012

Number of Exceedences: 1-hr: 12 24-hr: 2	Hours in Service: 744
Maximum Value: 125.7 µg/m <sup>3</sup> on Oct 7 18:00	Maximum Daily Average: 65.0 µg/m <sup>3</sup> on Oct 8
Minimum Value: 0 µg/m <sup>3</sup> on Oct 1 15:00	Hours of Data: 744
Maximum Diurnal Average: 9.9 µg/m <sup>3</sup> at hour 19	Hours of Missing Data: 0
Monthly Average: 8.14 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 0.6 µg/m <sup>3</sup> on Oct 1	Percent Operational Time: 100.0
Minimum Diurnal Average: 5.4 µg/m <sup>3</sup> at hour 12	
Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 1.6 Q <sub>1</sub> = 1.9 Median = 3.5 Q <sub>3</sub> = 6.1 P <sub>90</sub> = 12.8 P <sub>99</sub> = 92.4	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	2	2	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	0	0	1	2	0.6	1.9
2-Oct	1	1	2	2	2	2	3	8	8	14	18	13	7	6	4	3	3	2	3	8	14	21	23	11	7.4	23.1
3-Oct	4	3	2	2	2	2	3	3	3	2	1	1	1	1	1	1	1	1	2	3	3	5	4	2.2	4.9	
4-Oct	4	4	4	3	4	5	5	7	6	4	4	4	3	2	1	1	1	1	2	8	12	12	16	16	5.4	16.3
5-Oct	22	10	8	8	8	7	7	7	8	7	6	5	4	3	2	2	2	2	4	5	4	4	5	5	5.9	21.7
6-Oct	5	4	4	5	6	6	7	7	7	5	4	4	3	2	1	1	1	2	2	3	3	4	5	5	4.0	6.8
7-Oct	4	3	3	4	4	4	2	2	3	12	12	16	28	37	74	103	79	126	126	74	81	71	79	76	42.6	125.7
8-Oct	83	95	93	91	95	99	94	86	74	61	32	29	40	47	42	40	51	54	55	59	61	58	59	64	65.0	99.2
9-Oct	62	59	62	63	50	53	43	51	44	28	17	16	12	8	8	6	5	6	7	6	6	8	19	29	27.9	62.6
10-Oct	8	2	2	2	2	2	2	2	2	2	1	1	1	1	2	2	2	2	2	2	2	2	1	1	2.0	7.7
11-Oct	2	1	2	1	2	2	2	2	2	2	5	4	4	5	5	6	7	7	7	8	8	6	5	5	4.1	8.1
12-Oct	6	7	6	7	8	9	9	5	4	3	4	3	3	5	6	5	4	5	4	5	6	5	6	7	5.5	9.2
13-Oct	5	5	6	5	5	4	5	6	10	10	8	6	2	2	1	1	1	1	1	1	1	1	3	5	4.0	9.8
14-Oct	5	4	4	3	3	3	3	3	3	3	3	1	1	1	1	1	1	0	0	2	2	2	2	2	2.3	4.7
15-Oct	4	4	4	4	4	3	3	2	3	2	2	2	2	2	2	3	7	7	4	4	3	3	3	3	3.3	6.9
16-Oct	3	3	4	4	5	5	8	12	15	7	4	3	2	2	2	1	2	2	2	2	2	3	3	3	4.1	14.5
17-Oct	3	3	3	4	4	4	5	4	4	4	3	3	2	2	2	2	2	2	4	6	7	5	5	6	3.7	6.5
18-Oct	6	5	5	5	5	4	5	5	6	11	9	4	8	7	10	10	8	11	13	9	10	7	7	5	7.3	12.7
19-Oct	5	4	4	3	2	3	5	7	7	6	5	4	3	3	2	2	2	2	2	1	2	2	2	2	3.2	6.9
20-Oct	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.7	1.9
21-Oct	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.9	2.1
22-Oct	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.9	2.1
23-Oct	2	2	2	2	2	3	3	4	5	4	3	3	3	2	2	2	2	2	2	2	4	4	6	2	2.8	6.3
24-Oct	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	7	3	4	3	4	3	2.5	7.3
25-Oct	3	2	2	3	3	3	3	3	3	3	3	4	3	3	3	2	2	2	2	2	2	2	2	2	2.5	3.6
26-Oct	3	3	3	3	3	4	5	16	11	7	6	7	8	7	6	6	6	5	5	5	5	5	6	6	5.9	15.8
27-Oct	6	5	5	5	5	5	5	5	6	5	5	6	6	5	5	5	5	4	4	4	4	3	3	3	4.8	5.9
28-Oct	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	5	7	5	5	5	6	6	3.8	6.9
29-Oct	7	7	6	6	5	4	4	4	4	3	4	3	2	2	2	3	3	4	4	3	4	4	4	4	3.9	7.5
30-Oct	3	3	3	3	3	4	9	14	21	9	6	5	5	5	5	5	5	9	18	18	16	11	10	10	8.4	20.8
31-Oct	11	11	10	9	9	9	9	10	15	27	13	11	12	13	11	13	11	14	15	13	12	11	11	11	12.0	26.6
	9.0	8.6	8.4	8.3	8.1	8.4	8.3	9.2	9.0	8.1	6.1	5.4	5.7	5.9	6.8	7.6	7.2	9.2	9.9	8.6	9.2	8.8	9.9	9.7	Diurnal Average	
	82.8	94.8	92.6	90.9	95.2	99.2	93.6	86.0	73.6	61.0	32.2	29.0	40.3	46.6	73.9	102.7	78.7	125.7	125.6	74.0	81.3	71.5	78.7	76.1	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>



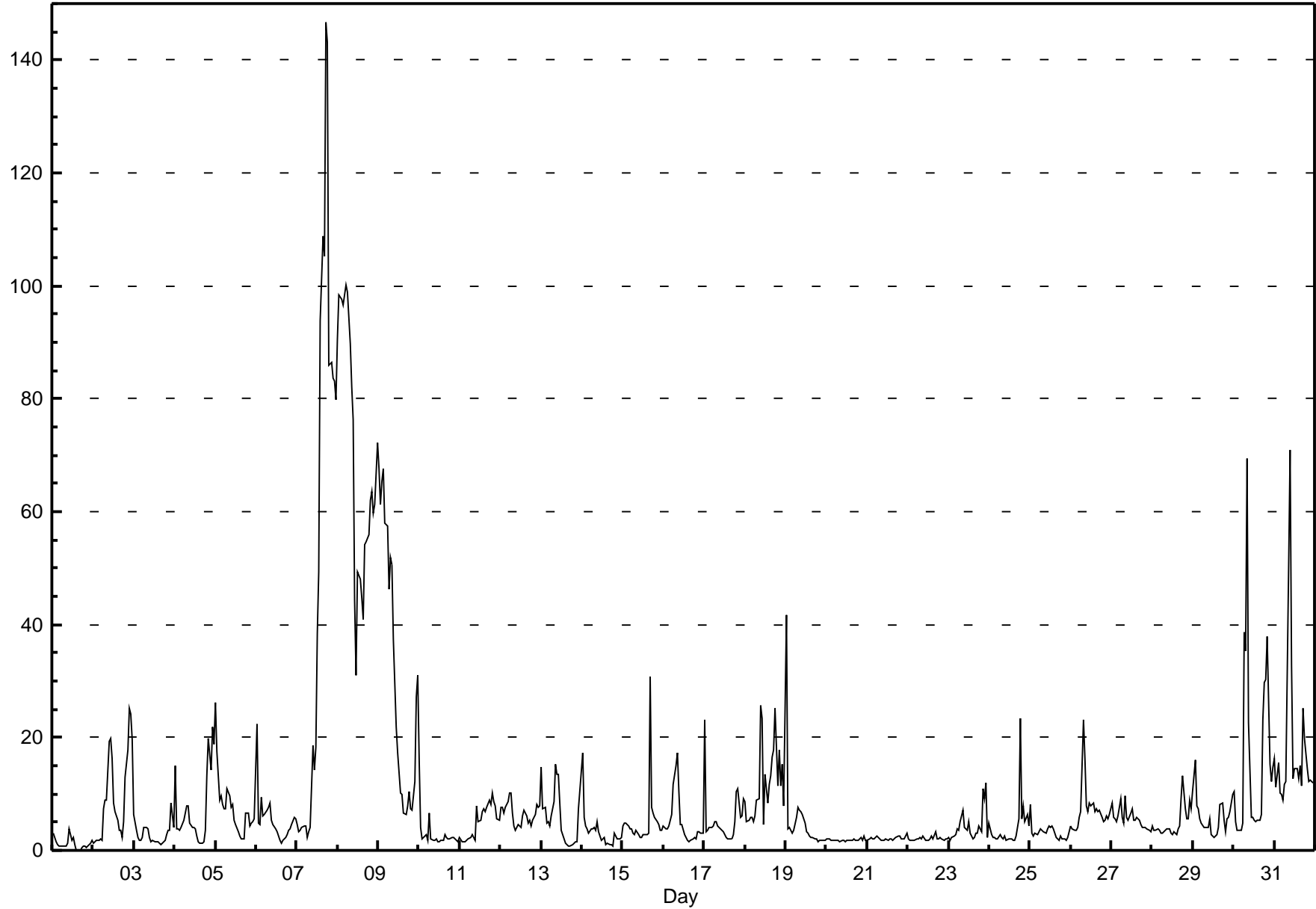


# Hourly Maximums

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

## Henry Pirker - October 2012

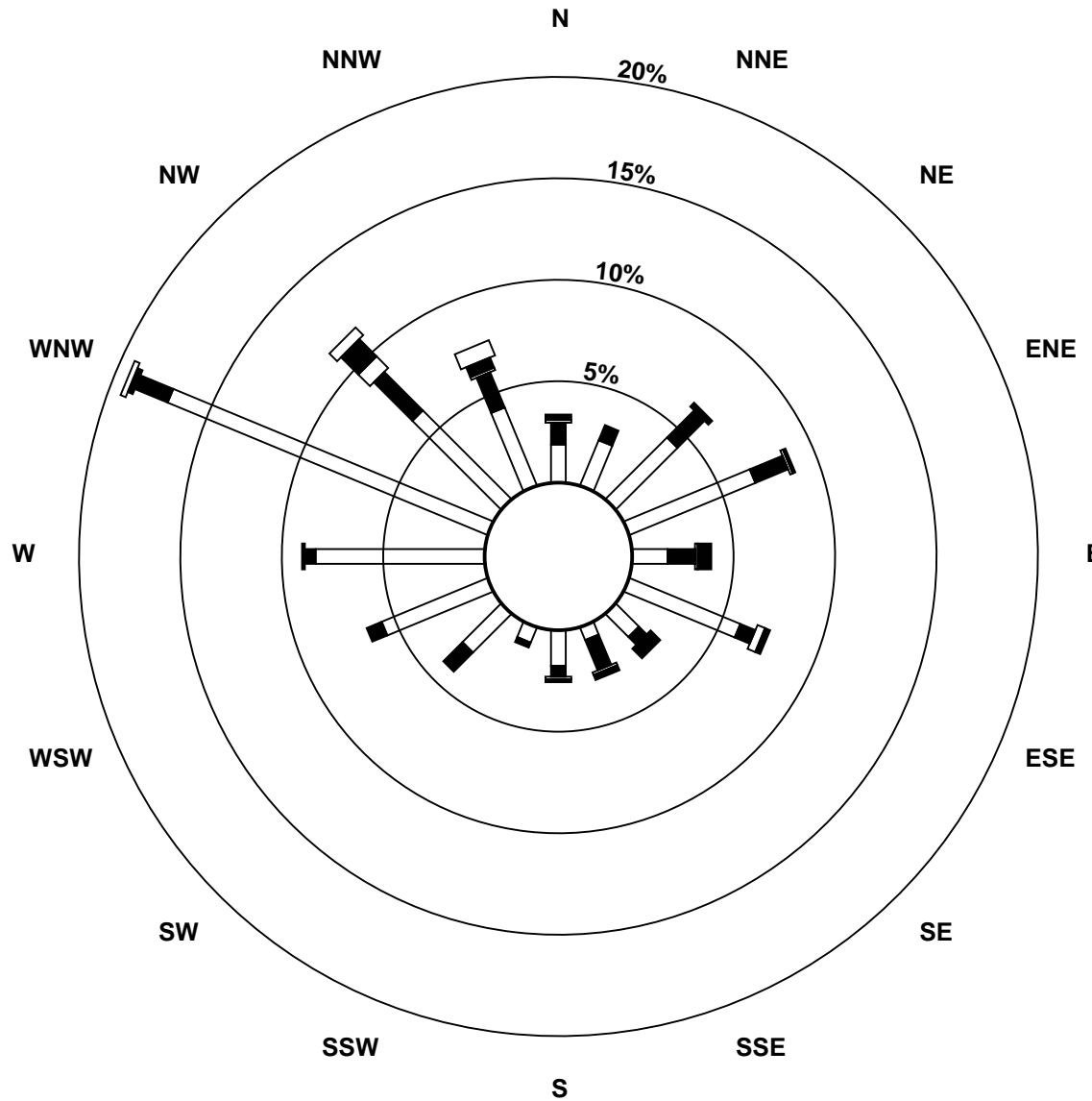
<b>Maximum Value: 146.8 µg/m<sup>3</sup> on Oct 7 18:00</b>																	<b>Maximum Daily Average: 69.6 µg/m<sup>3</sup> on Oct 8</b>																	Hours in Service: 744 Hours of Data: 744																																
<b>Minimum Value: 0 µg/m<sup>3</sup> on Oct 1 15:00</b>																	<b>Minimum Daily Average: 1.2 µg/m<sup>3</sup> on Oct 1</b>																	Hours of Missing Data: 0 Hours of Calibration: 0																																
<b>Maximum Diurnal Average: 14.6 µg/m<sup>3</sup> at hour 1</b>																	<b>Minimum Diurnal Average: 6.3 µg/m<sup>3</sup> at hour 12</b>																	<b>Percent Operational Time: 100.0</b>																																
<b>Monthly Average: 10.21 µg/m<sup>3</sup></b>																	<b>Percentiles: P<sub>1</sub> = 0.7 P<sub>10</sub> = 1.8 Q<sub>1</sub> = 2.2 Median = 4.1 Q<sub>3</sub> = 8.1 P<sub>90</sub> = 21.9 P<sub>99</sub> = 98.0</b>																																																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																																										
1-Oct	3	2	2	1	1	1	1	1	1	1	4	2	2	1	0	0	0	1	1	1	0	1	1	2																																										
2-Oct	1	2	2	2	2	2	7	9	9	19	20	16	8	7	5	4	4	2	5	13	18	25	24	20																																										
3-Oct	6	3	2	2	2	2	4	4	4	2	2	2	1	1	2	1	1	1	2	3	4	3	8	4																																										
4-Oct	15	4	4	4	4	5	7	8	8	5	4	4	4	3	2	1	1	2	3	13	20	14	22	19																																										
5-Oct	26	18	9	10	8	7	7	11	10	8	8	5	5	3	2	2	2	2	7	7	4	5	5	6																																										
6-Oct	22	5	5	9	6	6	7	8	8	5	5	4	3	3	2	1	2	2	3	4	4	5	6	6																																										
7-Oct	4	3	4	4	4	4	2	3	4	19	14	18	38	49	94	109	105	147	143	86	87	84	83	80																																										
8-Oct	91	99	98	97	98	100	99	90	82	76	44	31	49	48	45	41	54	55	56	62	63	60	61	72																																										
9-Oct	68	61	65	68	58	57	46	52	51	37	22	17	14	10	10	7	6	8	10	7	7	12	27	31																																										
10-Oct	16	4	2	3	3	2	7	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2																																										
11-Oct	2	2	2	2	2	2	2	3	2	2	8	5	5	7	7	7	8	9	8	10	9	8	6	5																																										
12-Oct	8	8	7	8	9	10	10	7	4	3	5	4	4	6	7	6	5	5	4	5	6	8	8	8																																										
13-Oct	15	7	8	5	5	4	6	9	15	14	13	8	3	2	1	1	1	1	1	1	2	2	7	11																																										
14-Oct	17	6	4	4	3	4	4	4	3	5	3	2	2	2	1	1	1	1	1	3	3	2	2	2																																										
15-Oct	4	5	5	4	4	4	3	3	3	3	2	2	3	3	3	3	31	8	7	6	5	5	3	4																																										
16-Oct	4	4	4	4	5	6	12	15	17	11	5	5	3	2	2	2	2	2	2	2	3	3	3	3																																										
17-Oct	23	3	3	4	4	4	5	5	4	4	3	3	3	2	2	2	3	5	10	11	6	6	9																																											
18-Oct	9	5	5	6	6	5	6	9	9	26	23	5	13	8	12	13	16	18	25	12	18	11	15	8																																										
19-Oct	42	4	4	3	3	3	6	8	7	7	6	5	3	3	3	2	2	2	2	2	2	2	2	2																																										
20-Oct	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2																																										
21-Oct	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	2	3	3																																										
22-Oct	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	3	2	2	2	2	2	2	2	2																																										
23-Oct	2	2	2	2	3	4	4	5	7	4	4	3	5	3	2	2	3	3	4	3	11	9	12	2																																										
24-Oct	5	3	2	2	2	2	3	2	2	2	2	2	2	2	2	3	6	23	6	8	5	6	4																																											
25-Oct	8	3	2	3	3	3	4	4	3	3	4	4	4	4	2	2	2	2	2	2	2	2	3																																											
26-Oct	4	4	3	3	4	6	7	23	16	8	7	8	8	8	7	7	7	7	6	5	5	6	6	6																																										
27-Oct	8	6	6	5	6	9	6	5	10	6	5	7	7	5	5	6	5	5	4	4	4	4	3																																											
28-Oct	4	3	3	4	3	3	3	3	4	4	4	3	3	3	4	4	9	13	7	6	6	9	7																																											
29-Oct	10	16	8	7	6	5	4	4	4	4	6	3	2	3	3	4	8	8	5	3	6	6	7	10																																										
30-Oct	10	5	3	3	3	5	39	35	69	23	6	6	5	5	5	5	6	23	30	30	38	15	12	15																																										
31-Oct	16	11	15	10	10	9	12	12	51	71	33	13	15	15	13	15	11	25	20	15	12	12	12	12																																										
																	14.6		9.8		9.2		9.2		8.8		9.1		10.6		11.2		13.4		12.3		8.7		6.3		7.2		7.0		8.1		8.4		9.8		11.8		13.0		10.7		11.8		10.6		11.9		11.7		Diurnal Average	
																	90.5		98.5		97.6		96.6		98.3		100.1		99.0		89.7		82.0		76.3		44.3		31.1		49.4		49.3		93.7		108.9		105.3		146.8		143.1		85.9		86.5		83.7		83.2		79.7		Diurnal Maximum	



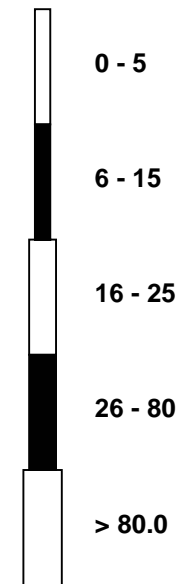
**Pollutant Rose**

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

**Henry Pirker - October 2012**



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

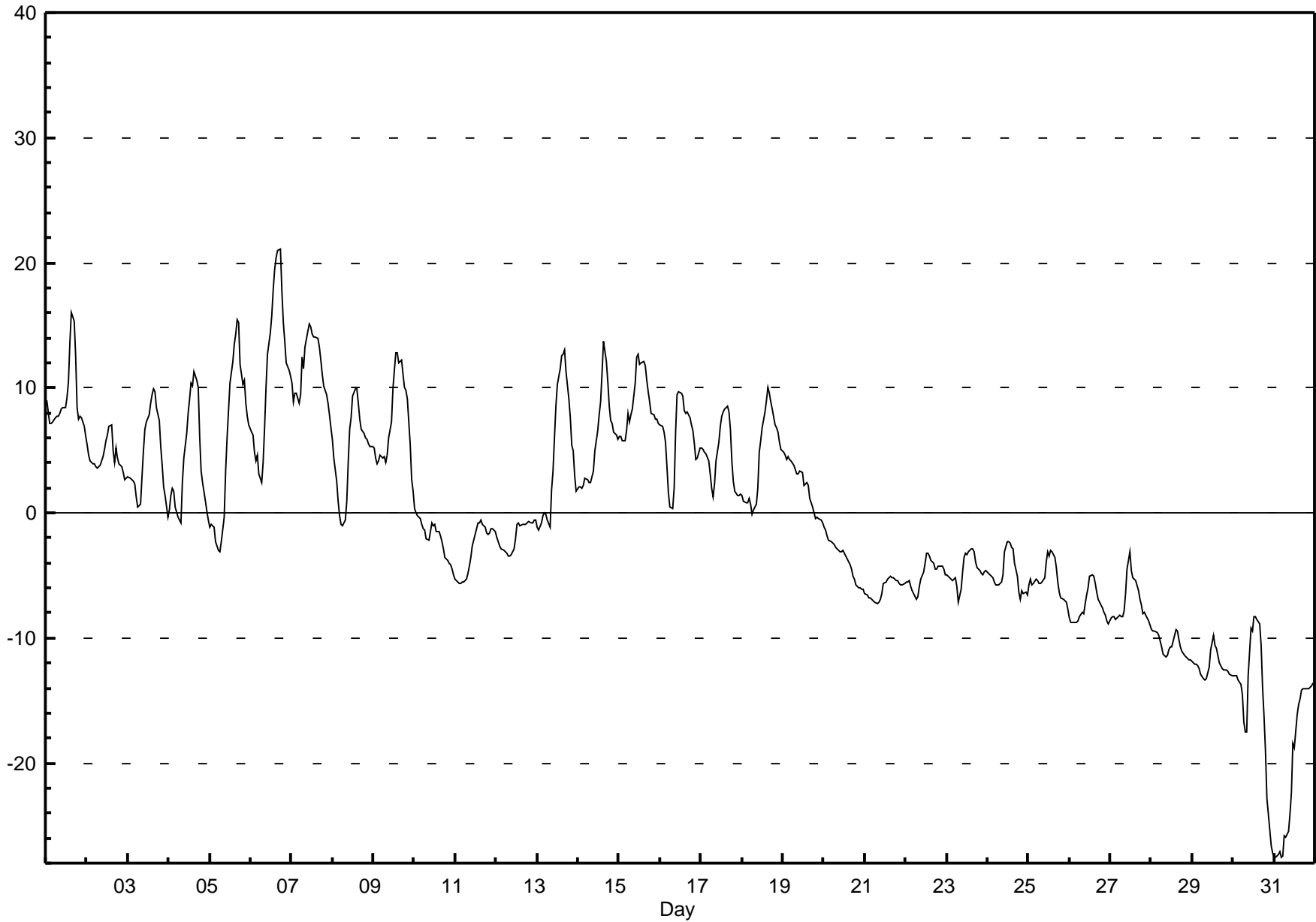


## Hourly Averages

External Temperature (ET) - °C

Henry Pirker - October 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 21.1 °C on Oct 6 18:00 Maximum Daily Average: 11.5 °C on Oct 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: -28 °C on Oct 31 02:00 Maximum Diurnal Average: 3.1 °C at hour 16 Monthly Average: -0.27 °C		Minimum Daily Average: -20.1 °C on Oct 31 Minimum Diurnal Average: -2.8 °C at hour 8 Percentiles: P <sub>1</sub> = -26.6 P <sub>10</sub> = -10.8 Q <sub>1</sub> = -5.6 Median = -0.6 Q <sub>3</sub> = 6.3 P <sub>90</sub> = 10.0 P <sub>99</sub> = 14.4																																														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Oct	9	8	7	7	7	8	8	8	8	8	8	8	9	10	14	16	15	13	8	8	8	8	7	6	9.0	16.0																						
2-Oct	5	5	4	4	4	4	4	4	4	4	4	5	6	6	7	7	5	4	5	4	4	4	3	3	4.5	7.0																						
3-Oct	3	3	3	3	2	1	0	1	3	5	7	7	8	9	9	10	10	8	7	5	4	2	1	0	4.6	9.9																						
4-Oct	0	1	2	2	1	0	-1	-1	2	4	6	8	9	10	10	11	11	10	6	3	2	1	0	-1	4.1	11.3																						
5-Oct	-1	-1	-1	-2	-3	-3	-3	-2	0	3	6	8	10	12	13	14	15	15	12	10	11	9	8	7	5.8	15.5																						
6-Oct	6	6	5	4	5	3	2	4	7	10	13	14	16	18	19	20	21	21	18	15	14	12	11	11	11.5	21.1																						
7-Oct	10	9	10	10	9	9	12	12	13	15	15	15	14	14	14	14	13	12	11	10	9	9	8	7	11.4	15.1																						
8-Oct	6	4	3	1	0	-1	-1	-1	1	4	7	8	9	10	10	9	7	7	6	6	6	6	5	5	4.9	10.0																						
9-Oct	5	4	4	4	5	4	5	4	5	6	7	10	11	13	13	12	12	11	10	10	9	5	3	2	7.3	12.8																						
10-Oct	0	0	0	0	-1	-1	-1	-2	-2	-1	-1	-1	-1	-1	-1	-2	-2	-3	-4	-4	-4	-4	-5	-5	-2.0	0.4																						
11-Oct	-5	-6	-6	-6	-6	-5	-5	-5	-4	-4	-3	-2	-1	-1	-1	-1	-1	-1	-2	-2	-2	-1	-1	-2	-2.9	-0.6																						
12-Oct	-2	-2	-3	-3	-3	-3	-3	-3	-4	-3	-3	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1.8	-0.6																						
13-Oct	-1	-1	-1	0	0	0	-1	-1	2	3	6	9	10	11	13	13	13	11	9	8	5	5	3	2	4.9	13.1																						
14-Oct	2	2	2	2	3	3	2	2	3	3	5	7	8	9	11	14	12	10	9	7	7	6	6	6	5.9	13.8																						
15-Oct	6	6	6	6	7	8	7	8	8	10	12	13	12	12	12	12	11	10	9	8	8	7	8	7	8.8	12.6																						
16-Oct	7	7	6	6	4	2	0	0	2	7	9	10	10	9	8	8	8	8	7	7	6	4	4	5	6.0	9.7																						
17-Oct	5	5	5	5	4	3	2	1	2	4	6	7	8	8	8	9	8	7	4	3	2	1	1	2	4.6	8.5																						
18-Oct	1	1	1	1	1	1	0	0	1	2	5	6	7	8	9	10	10	9	8	7	7	6	6	5	4.6	10.1																						
19-Oct	5	5	4	5	4	4	4	3	3	3	3	2	2	2	2	2	1	0	0	0	0	0	-1	-1	2.3	4.8																						
20-Oct	-1	-1	-2	-2	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-4	-4	-4	-5	-5	-6	-6	-6	-6	-6	-3.7	-1.1																						
21-Oct	-6	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-6	-6	-5	-5	-5	-5	-5	-5	-5	-6	-6	-6	-6	-6.1	-5.0																						
22-Oct	-6	-6	-5	-6	-6	-7	-7	-7	-6	-5	-5	-4	-3	-3	-3	-4	-4	-4	-5	-4	-4	-4	-5	-5	-4.9	-3.2																						
23-Oct	-5	-5	-5	-5	-5	-5	-6	-7	-6	-5	-4	-3	-3	-3	-3	-3	-3	-4	-4	-5	-5	-5	-5	-5	-4.5	-2.8																						
24-Oct	-5	-5	-5	-5	-5	-6	-6	-6	-6	-5	-3	-2	-2	-2	-3	-3	-4	-5	-6	-7	-6	-6	-6	-7	-4.9	-2.3																						
25-Oct	-6	-5	-6	-6	-5	-5	-6	-6	-6	-5	-4	-3	-3	-3	-3	-4	-4	-6	-6	-7	-7	-7	-7	-8	-5.3	-3.0																						
26-Oct	-8	-9	-9	-9	-9	-9	-8	-8	-8	-7	-7	-6	-5	-5	-5	-6	-6	-7	-7	-8	-8	-8	-9	-9	-7.4	-5.0																						
27-Oct	-8	-8	-8	-9	-8	-8	-8	-8	-8	-6	-4	-3	-5	-5	-5	-5	-6	-7	-7	-8	-8	-8	-9	-9	-7.1	-3.1																						
28-Oct	-9	-9	-9	-10	-10	-10	-11	-11	-11	-11	-11	-11	-11	-10	-9	-10	-11	-11	-11	-11	-12	-12	-12	-12	-10.6	-9.3																						
29-Oct	-12	-12	-12	-12	-12	-13	-13	-13	-13	-13	-12	-11	-10	-11	-11	-11	-11	-12	-12	-13	-13	-13	-13	-13	-12.2	-9.8																						
30-Oct	-13	-13	-13	-13	-14	-15	-17	-18	-18	-13	-9	-9	-8	-8	-8	-9	-11	-14	-16	-19	-23	-25	-27	-27	-15.0	-8.2																						
31-Oct	-27	-28	-27	-27	-27	-27	-26	-26	-26	-24	-22	-18	-19	-16	-15	-15	-14	-14	-14	-14	-14	-14	-14	-14	-20.1	-13.6																						
																								-1.4	-1.7	-1.9	-2.1	-2.3	-2.6	-2.7	-2.8	-2.0	-0.7	0.8	1.7	2.2	2.7	3.1	3.1	2.7	1.9	0.7	-0.1	-0.5	-1.2	-1.6	-2.0	Diurnal Average
																								10.4	8.9	9.5	9.5	8.8	9.5	12.5	11.5	13.3	14.5	15.1	14.9	15.8	17.8	19.5	20.4	21.0	21.1	17.7	15.2	13.7	11.9	11.4	10.9	Diurnal Maximum



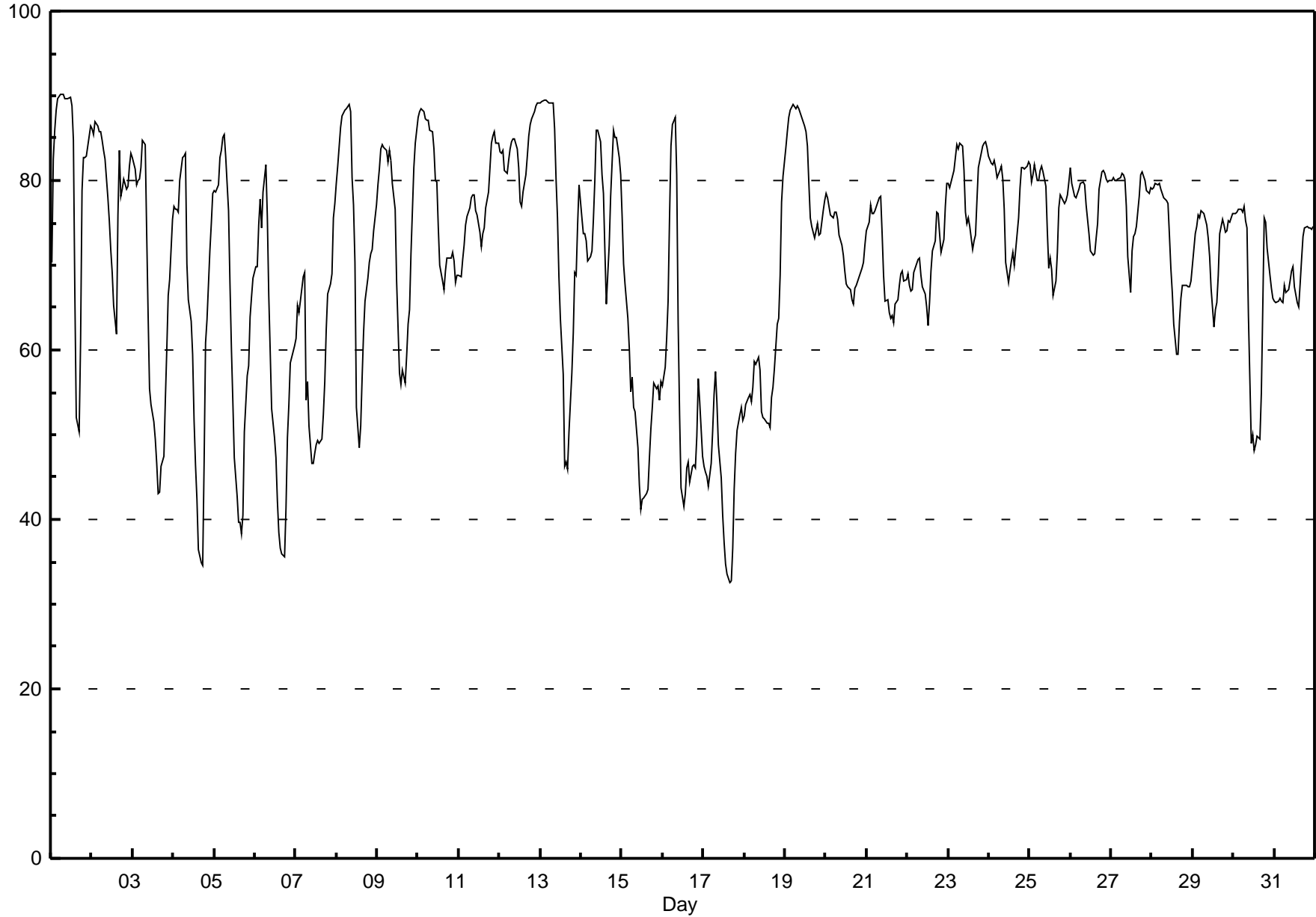
# Hourly Averages

Relative Humidity (RH) - %  
Henry Pirker - October 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 90.2 % on Oct 1 07:00      Maximum Daily Average: 83.7 % on Oct 12		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																								
Minimum Value: 33 % on Oct 17 16:00 Maximum Diurnal Average: 78.0 % at hour 7 Monthly Average: 70.51 %		Minimum Daily Average: 45.2 % on Oct 17 Minimum Diurnal Average: 59.3 % at hour 16 Percentiles: P <sub>1</sub> = 35.8 P <sub>10</sub> = 49.6 Q <sub>1</sub> = 64.0 Median = 73.8 Q <sub>3</sub> = 80.1 P <sub>90</sub> = 85.0 P <sub>99</sub> = 89.6																								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	70	83	86	88	90	90	90	90	90	90	90	89	85	67	52	50	61	79	83	83	83	85	87	81.2	90.2	
2-Oct	86	85	87	86	86	86	85	84	82	78	75	72	69	65	62	76	84	78	79	80	79	79	82	83	79.5	86.9
3-Oct	83	81	80	80	80	81	85	84	74	64	55	54	52	50	47	43	43	46	47	54	60	66	68	75	64.7	84.7
4-Oct	77	77	77	76	80	83	83	83	70	66	63	60	52	47	42	36	35	35	47	61	64	72	75	79	64.0	83.2
5-Oct	79	79	80	83	84	85	85	83	76	68	60	54	47	43	40	40	38	41	50	57	58	64	66	68	63.6	85.4
6-Oct	70	70	75	78	74	79	82	76	66	60	53	50	47	42	39	37	36	36	41	50	54	58	60	61	58.0	81.9
7-Oct	61	65	64	66	69	69	54	56	51	47	47	48	49	49	49	50	52	56	62	67	68	69	76	77	59.2	77.4
8-Oct	80	82	86	88	88	88	88	89	88	80	77	70	53	49	51	57	62	66	69	70	71	72	74	77	74.0	88.9
9-Oct	79	81	84	84	84	84	82	84	82	80	77	68	63	57	56	58	56	59	63	65	71	81	84	86	73.7	85.9
10-Oct	87	88	88	88	87	87	87	86	86	84	80	80	75	70	68	67	69	71	71	71	72	70	68	69	77.9	88.5
11-Oct	69	69	71	72	75	76	77	78	78	78	77	76	74	72	74	74	77	79	81	84	85	86	84	84	77.1	85.7
12-Oct	83	83	83	81	81	82	84	85	85	85	84	82	77	77	79	81	83	85	87	87	88	89	89	89	83.7	89.2
13-Oct	89	89	89	89	89	89	89	89	86	80	76	69	64	57	46	47	46	50	57	62	69	69	75	79	72.8	89.5
14-Oct	76	74	74	73	70	71	72	75	80	86	86	85	81	79	72	65	72	78	82	86	85	85	83	81	77.9	86.0
15-Oct	76	70	68	64	60	55	57	53	53	48	44	41	42	42	43	44	47	51	53	56	55	56	54	56	53.7	75.7
16-Oct	56	58	61	66	76	84	87	87	81	63	52	44	41	43	46	47	44	46	46	46	50	57	54	47	57.6	87.4
17-Oct	46	46	45	44	47	50	55	57	54	49	45	41	37	35	33	33	33	37	44	48	51	52	53	52	45.2	57.5
18-Oct	52	54	54	55	54	56	59	58	59	58	53	52	52	51	51	54	56	58	63	64	69	78	81	57.9	80.5	
19-Oct	84	86	87	88	89	89	88	89	88	88	88	86	86	84	80	76	75	73	74	75	74	74	76	78	82.2	88.9
20-Oct	79	78	77	76	76	76	76	75	74	72	71	69	68	67	67	66	65	67	68	68	69	70	70	72	71.6	78.5
21-Oct	74	75	77	76	76	76	77	78	78	74	69	66	66	64	64	64	63	65	66	68	69	69	68	68	70.5	78.2
22-Oct	69	68	67	67	69	70	71	71	69	67	67	65	63	66	69	72	73	76	76	74	71	73	77	80	70.4	79.6
23-Oct	80	79	80	81	83	84	84	84	84	81	76	75	76	75	72	73	74	78	81	83	84	84	85	84	80.0	84.5
24-Oct	83	82	82	82	81	80	81	82	80	77	70	68	69	71	72	70	72	76	79	82	82	81	82	82	77.7	82.8
25-Oct	82	80	81	82	80	80	81	82	81	79	74	70	71	70	66	68	71	77	78	78	77	78	78	80	76.8	81.9
26-Oct	82	80	78	78	79	79	80	80	79	77	75	74	72	71	71	73	75	79	81	81	81	80	80	80	77.7	81.6
27-Oct	80	80	80	80	80	80	81	81	80	77	71	67	72	73	74	74	78	81	81	80	80	79	79	79	77.8	80.9
28-Oct	79	79	80	79	80	79	78	78	78	77	74	70	67	63	60	59	63	66	68	68	68	67	67	68	71.5	79.7
29-Oct	70	74	75	76	76	77	76	75	75	73	71	67	63	65	66	69	74	75	75	74	74	75	75	76	72.7	76.5
30-Oct	76	76	76	77	77	76	77	75	74	64	49	50	48	49	50	50	55	65	76	75	72	69	67	66	66.2	77.0
31-Oct	66	66	66	66	66	66	68	67	67	68	69	70	67	66	65	68	71	73	74	75	74	74	75	75	69.2	74.6
		74.9	75.3	76.0	76.5	76.9	77.7	78.0	77.9	75.8	72.2	68.3	65.5	62.9	61.1	59.3	59.3	61.0	63.9	67.5	70.0	71.0	72.6	73.8	74.8	Diurnal Average
		89.2	89.3	89.5	89.5	89.6	90.2	90.2	90.1	89.7	89.6	89.7	89.8	88.8	84.7	79.7	80.8	83.6	85.2	86.6	87.4	88.1	88.8	89.1	89.2	Diurnal Maximum

**Hourly Averages**

**Relative Humidity (RH) - %**  
**Henry Pirker - October 2012**



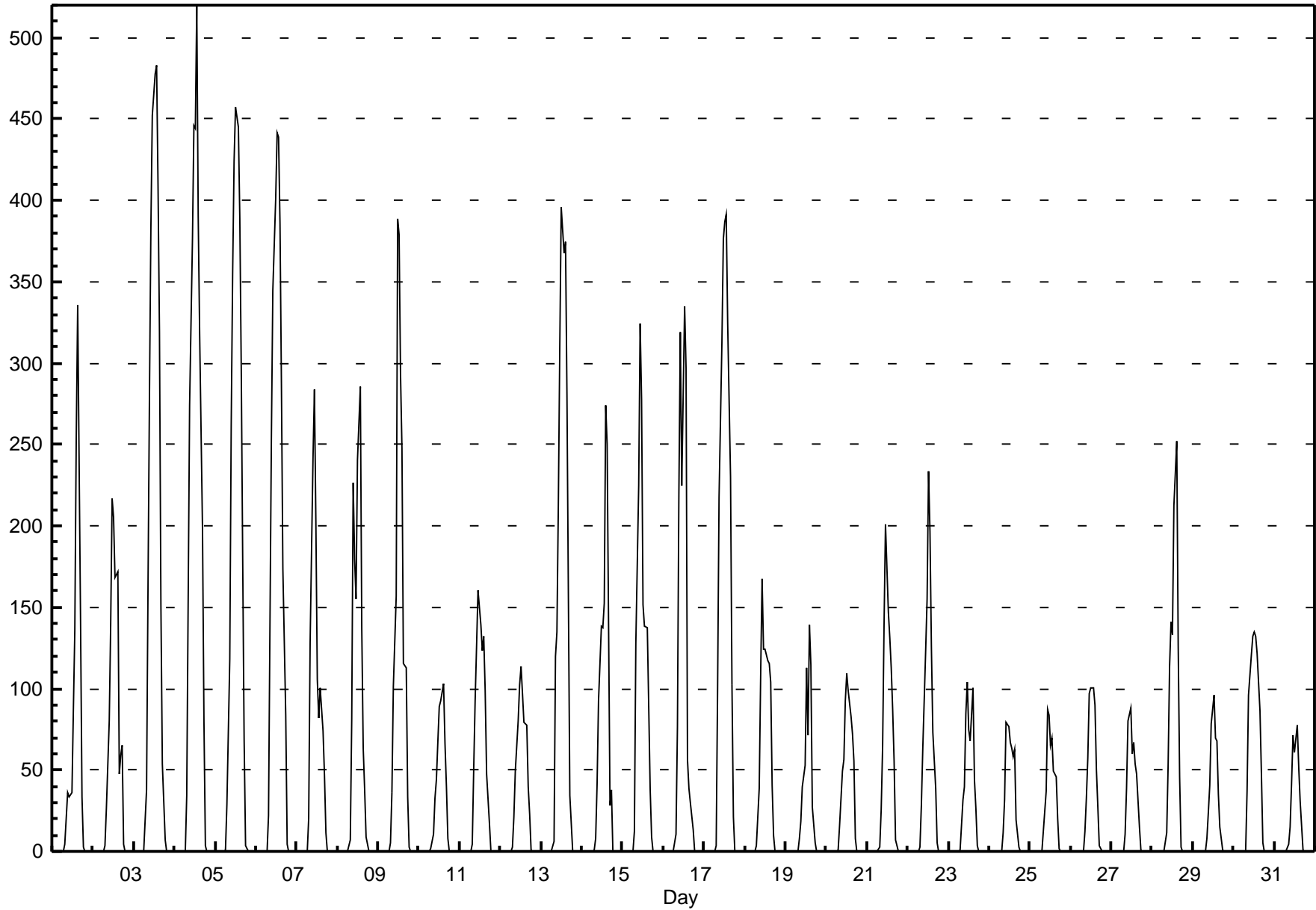


## Hourly Averages

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

Henry Pirker - October 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 519.9 W/m <sup>2</sup> on Oct 4 14:00      Maximum Daily Average: 134.9 W/m <sup>2</sup> on Oct 4		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																								
Minimum Value: 0 W/m <sup>2</sup> on Oct 1 01:00 Maximum Diurnal Average: 197.0 W/m <sup>2</sup> at hour 13 Monthly Average: 54.21 W/m <sup>2</sup>		Minimum Daily Average: 15.4 W/m <sup>2</sup> on Oct 31 Minimum Diurnal Average: 0.0 W/m <sup>2</sup> at hour 1 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> = 68.6 P <sub>90</sub> = 168.2 P <sub>99</sub> = 443.7																								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	0	0	0	5	20	36	33	36	88	136	254	336	141	33	3	0	0	0	0	0	46.7	336.2
2-Oct	0	0	0	0	0	0	0	3	27	81	139	216	206	168	172	48	59	65	5	0	0	0	0	0	49.5	216.4
3-Oct	0	0	0	0	0	0	0	38	160	278	381	452	478	483	409	319	151	54	7	0	0	0	0	0	133.8	483.4
4-Oct	0	0	0	0	0	0	0	34	154	274	376	446	444	520	391	318	198	80	3	0	0	0	0	0	134.9	519.9
5-Oct	0	0	0	0	0	0	1	29	118	262	356	424	458	445	389	296	180	69	4	0	0	0	0	0	126.2	457.7
6-Oct	0	0	0	0	0	0	0	22	139	253	345	401	441	439	386	286	174	83	5	0	0	0	0	0	123.9	441.4
7-Oct	0	0	0	0	0	0	0	20	129	242	284	203	106	82	100	74	46	12	0	0	0	0	0	0	54.1	284.2
8-Oct	0	0	0	0	0	0	0	7	81	227	180	155	240	285	137	63	38	9	0	0	0	0	0	0	59.3	285.2
9-Oct	0	0	0	0	0	0	0	6	36	101	157	389	379	293	247	116	113	33	3	0	0	0	0	0	78.0	388.9
10-Oct	0	0	0	0	0	0	0	1	11	33	44	67	89	93	103	66	39	8	0	0	0	0	0	0	23.1	102.8
11-Oct	0	0	0	0	0	0	0	4	50	93	126	160	139	123	132	99	47	17	0	0	0	0	0	0	41.3	160.1
12-Oct	0	0	0	0	0	0	0	2	21	50	81	102	114	97	79	77	40	23	0	0	0	0	0	0	28.6	113.8
13-Oct	0	0	0	0	0	0	0	6	120	135	213	310	396	367	374	281	156	34	0	0	0	0	0	0	99.6	395.6
14-Oct	0	0	0	0	0	0	0	1	8	42	92	138	138	152	274	250	28	38	0	0	0	0	0	0	48.4	274.5
15-Oct	0	0	0	0	0	0	0	12	128	225	325	278	151	139	137	88	38	9	0	0	0	0	0	0	63.7	324.5
16-Oct	0	0	0	0	0	0	0	10	76	219	319	225	335	297	57	39	30	13	0	0	0	0	0	0	67.5	334.6
17-Oct	0	0	0	0	0	0	0	4	102	218	313	376	387	392	325	230	102	21	0	0	0	0	0	0	102.9	391.7
18-Oct	0	0	0	0	0	0	0	4	39	108	168	125	124	117	115	104	41	10	0	0	0	0	0	0	39.7	167.7
19-Oct	0	0	0	0	0	0	0	0	8	19	40	53	113	71	140	114	28	5	0	0	0	0	0	0	24.6	139.6
20-Oct	0	0	0	0	0	0	0	1	16	50	57	93	110	99	83	72	55	8	0	0	0	0	0	0	26.8	109.6
21-Oct	0	0	0	0	0	0	0	2	26	65	139	201	147	131	113	87	55	7	0	0	0	0	0	0	40.5	200.6
22-Oct	0	0	0	0	0	0	0	2	28	63	123	155	233	197	125	74	39	5	0	0	0	0	0	0	43.5	233.2
23-Oct	0	0	0	0	0	0	0	1	32	40	85	104	75	68	100	44	26	3	0	0	0	0	0	0	24.1	104.3
24-Oct	0	0	0	0	0	0	0	0	11	32	79	76	67	63	59	62	19	2	0	0	0	0	0	0	19.6	79.0
25-Oct	0	0	0	0	0	0	0	0	12	37	87	83	65	69	50	46	21	2	0	0	0	0	0	0	19.7	87.2
26-Oct	0	0	0	0	0	0	0	0	12	33	58	97	100	101	90	50	28	4	0	0	0	0	0	0	23.8	100.6
27-Oct	0	0	0	0	0	0	0	0	10	39	80	88	60	67	54	48	15	1	0	0	0	0	0	0	19.3	87.9
28-Oct	0	0	0	0	0	0	0	0	11	54	114	141	133	212	252	127	46	2	0	0	0	0	0	0	45.5	252.2
29-Oct	0	0	0	0	0	0	0	0	8	24	41	79	96	70	68	35	15	1	0	0	0	0	0	0	18.1	95.9
30-Oct	0	0	0	0	0	0	0	0	37	96	121	132	135	132	122	86	47	6	0	0	0	0	0	0	38.1	135.2
31-Oct	0	0	0	0	0	0	0	0	4	15	41	72	61	77	52	31	15	1	0	0	0	0	0	0	15.4	77.3
																								Diurnal Average		
																								Diurnal Maximum		



## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Henry Pirker - October 2012

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	5	8	10	11	11	13	12	4	4	2	7	2	6	16	26	27	27	19	10	10	12	14	14	4.0	27.4
Dir	109	96	115	113	118	106	103	118	73	325	47	164	344	321	265	264	264	282	314	288	284	290	309	319	283.1	281.8
2 Spd	10	11	9	10	11	9	11	16	15	14	16	20	21	17	20	16	8	13	16	14	11	11	12	13	12.8	21.4
Dir	332	347	318	323	328	343	19	17	14	358	358	351	355	349	351	1	331	334	320	322	325	323	316	317	343.6	354.6
3 Spd	11	10	10	9	9	6	6	5	8	7	7	8	9	9	8	8	7	5	8	6	5	4	3	3	5.4	10.7
Dir	317	314	317	297	295	282	239	248	244	234	230	212	191	187	201	221	246	235	261	248	249	232	324	235	252.9	316.7
4 Spd	3	4	7	9	6	4	5	5	5	6	6	7	8	6	7	4	6	6	2	3	2	1	3	3	3.4	8.7
Dir	280	291	266	259	264	262	267	276	247	250	247	237	250	323	315	304	322	330	330	131	87	181	103	160	271.9	259.5
5 Spd	3	4	5	5	6	5	6	4	5	4	5	8	8	9	11	10	9	7	4	5	12	10	11	10	5.1	11.9
Dir	175	213	216	164	158	163	169	158	157	175	222	219	219	244	255	279	270	266	231	285	271	280	267	277	238.9	270.8
6 Spd	10	10	5	5	8	6	5	7	3	6	7	6	8	8	8	8	8	8	16	18	17	8	10	12	7.5	17.9
Dir	279	275	293	263	277	301	273	285	324	292	254	212	190	216	219	216	200	238	256	261	257	265	270	290	257.8	260.7
7 Spd	10	7	8	9	6	8	17	14	15	21	22	21	18	15	17	16	15	14	12	9	6	8	7	6	12.2	21.7
Dir	285	279	255	285	308	303	308	309	306	310	311	306	310	304	298	299	310	315	314	310	327	314	330	329	305.7	311.2
8 Spd	4	4	3	3	4	4	3	4	3	6	8	6	3	2	2	4	9	7	5	2	3	4	2	3	1.4	8.8
Dir	348	335	337	329	297	312	307	338	305	314	310	323	34	303	8	64	99	119	139	155	97	129	281	360	353.3	98.6
9 Spd	2	3	2	1	3	4	4	4	2	5	6	8	6	5	7	6	5	4	4	8	14	24	19	12	3.7	23.9
Dir	131	158	190	133	35	86	110	132	92	83	112	115	110	77	73	76	73	72	48	14	2	351	341	331	39.4	350.6
10 Spd	8	11	11	9	8	6	7	8	6	5	6	10	11	13	12	10	8	10	10	10	9	9	11	11	7.1	12.6
Dir	331	345	4	14	40	48	40	53	77	77	60	71	71	72	80	73	85	90	103	110	110	113	115	111	69.3	72.0
11 Spd	10	10	10	11	11	11	11	12	10	8	5	6	3	1	1	4	3	4	7	7	6	5	6	8	4.0	11.7
Dir	113	108	96	104	103	100	108	112	119	141	178	179	165	179	215	182	295	313	338	342	337	12	38	31	99.4	112.2
12 Spd	6	5	5	5	5	5	5	7	9	8	7	5	4	4	5	5	5	6	5	5	5	3	3	4	4.2	8.7
Dir	34	49	50	56	49	46	55	66	72	69	76	66	68	102	108	119	113	127	140	128	123	121	346	328	76.7	72.5
13 Spd	4	3	3	2	2	1	1	3	2	4	2	5	11	15	24	22	19	23	16	10	6	6	1	4	6.5	24.1
Dir	282	289	252	222	229	282	64	155	150	166	156	195	199	234	263	257	267	271	263	257	254	246	358	118	250.0	263.3
14 Spd	5	6	6	8	10	9	11	12	12	12	12	11	10	8	6	8	11	8	7	10	9	8	9	9	7.0	12.2
Dir	153	135	134	112	116	122	121	115	120	115	118	129	136	137	136	120	286	232	175	173	189	174	178	186	143.1	114.9
15 Spd	9	10	13	16	20	22	17	16	12	11	12	14	9	8	6	6	3	5	9	9	10	11	11	7	6.0	21.8
Dir	209	241	246	246	258	254	232	244	237	254	257	255	264	262	237	218	66	99	96	95	104	90	103	109	233.0	254.5
16 Spd	8	7	5	2	2	0	4	2	4	14	20	30	42	41	36	33	30	29	28	26	30	26	24	33	17.8	42.0
Dir	91	98	93	71	333	230	299	258	258	252	243	258	263	261	262	262	265	257	261	261	260	257	263	279	261.1	263.0
17 Spd	37	35	33	27	23	21	19	18	20	23	24	28	30	28	24	24	23	18	9	5	6	5	6	5	19.3	37.1
Dir	283	283	279	270	261	262	257	258	258	261	270	275	278	274	268	279	262	253	240	225	231	241	154	142	267.5	282.7
18 Spd	7	9	9	9	8	9	8	8	7	7	7	5	4	2	1	3	2	3	3	2	2	3	6	8	4.3	9.2
Dir	120	122	114	117	128	111	117	130	121	160	166	169	132	128	76	105	52	99	91	158	35	63	359	33	115.1	110.7
19 Spd	10	7	8	7	7	6	9	9	8	7	6	8	17	20	25	27	24	23	22	22	19	19	22	23	9.7	26.6
Dir	50	65	61	74	59	53	51	54	56	57	52	324	302	292	290	286	296	297	297	293	285	281	296	300	311.4	286.5
20 Spd	21	24	22	21	21	22	21	22	25	24	23	23	26	24	25	23	24	23	21	20	21	19	17	16	21.9	25.5
Dir	302	300	306	303	303	298	300	298	301	301	306	306	301	300	303	309	303	301	302	300	297	298	300	303	301.6	300.9
21 Spd	16	14	14	16	15	17	19	16	17	19	21	20	22	22	22	23	21	20	19	17	18	18	19	17	18.5	22.7
Dir	298	298	290	285	291	293	292	289	290	293	296	299	293	298	301	298	299	293	297	296	296	298	296	296	295.0	297.7
22 Spd	18	18	18	15	14	14	15	15	17	20	21	19	20	20	19	17	16	13	12	12	9	10	11	10	15.2	20.6
Dir	291	288	287	277	264	264	267	271	270	289	292	284	288	291	296	294	298	297	291	291	293	287	294	293	285.7	292.0

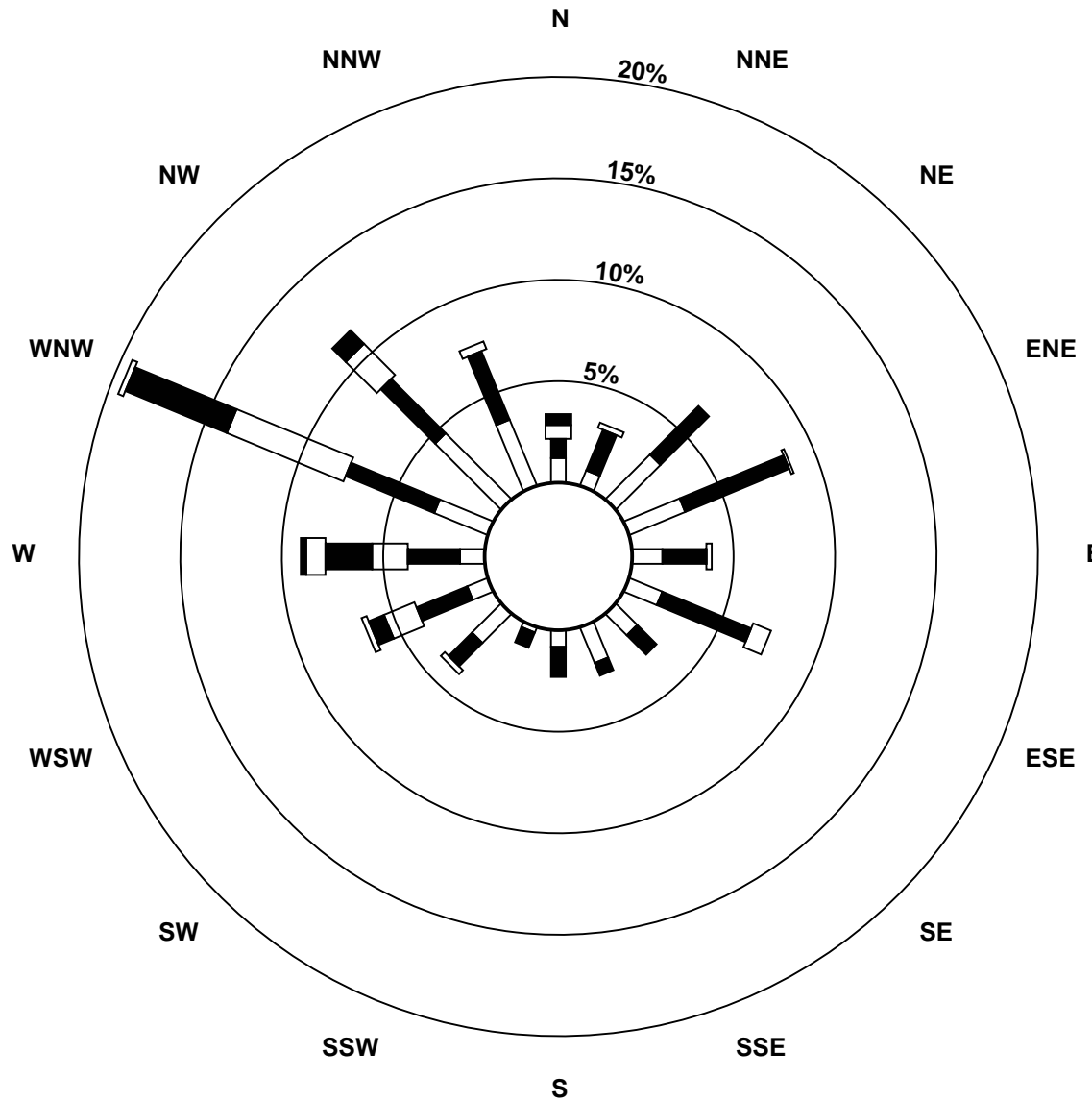
## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Henry Pirker - October 2012

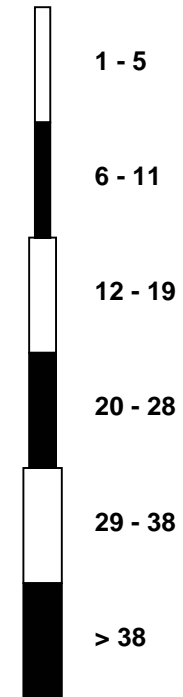
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	10	8	7	6	3	4	4	3	3	2	3	6	5	6	8	6	7	8	6	6	6	6	5	6	5.0	9.9
Dir	299	301	309	326	347	355	344	323	322	287	332	327	1	356	347	19	37	23	359	334	322	332	338	12	340.3	299.3
24 Spd	7	7	6	6	8	7	6	8	6	6	5	6	6	8	8	8	7	5	4	4	4	4	3	0	5.0	8.4
Dir	21	39	41	41	38	30	31	31	36	40	32	43	45	69	67	65	68	52	340	322	328	309	322	159	35.6	65.4
25 Spd	3	2	3	2	4	4	4	3	2	4	4	5	6	6	5	6	5	5	7	6	6	4	4	4	3.1	7.2
Dir	75	110	310	0	71	76	121	85	340	328	328	314	351	28	41	60	56	55	46	59	75	65	41	354	38.8	46.4
26 Spd	5	6	6	6	5	4	2	6	7	7	10	12	10	11	10	9	11	10	10	9	8	6	7	6	5.8	11.6
Dir	324	328	340	338	328	338	20	93	87	85	95	89	94	81	73	55	68	69	64	72	71	62	63	75	63.2	88.6
27 Spd	6	7	7	7	6	7	5	5	4	3	2	2	7	9	9	8	9	8	9	8	7	9	11	9	3.3	10.9
Dir	71	65	64	67	78	71	63	53	73	60	58	48	289	286	292	301	296	296	294	301	310	301	311	304	335.2	311.5
28 Spd	9	9	8	9	11	13	15	18	19	18	20	19	19	16	19	14	13	13	12	11	9	9	9	8	12.9	19.9
Dir	296	288	282	277	288	290	290	293	289	289	291	286	280	286	292	293	302	311	318	301	317	328	340	294.3	291.1	
29 Spd	6	6	5	5	5	6	6	6	5	6	8	7	7	7	7	7	5	4	4	3	5	6	3	4.8	7.9	
Dir	343	347	353	13	50	71	68	56	44	34	29	45	39	26	350	332	327	5	43	64	43	13	350	335	19.6	29.2
30 Spd	5	5	5	6	5	6	4	2	3	2	3	5	6	6	5	4	2	1	2	1	4	4	5	5	3.7	5.8
Dir	339	325	311	312	308	306	301	320	309	284	290	296	294	296	290	286	281	11	69	325	318	320	316	315	309.0	295.8
31 Spd	5	4	4	4	5	3	3	3	3	5	4	2	6	4	4	5	5	5	3	6	4	5	5	4	3.4	6.0
Dir	313	314	310	325	311	303	328	301	312	343	328	276	299	297	305	305	283	257	228	232	232	219	234	222	287.1	299.4
Spd	4.5	4.2	3.9	3.3	2.8	2.6	2.1	2.0	2.6	3.9	4.5	5.0	5.9	6.4	7.4	6.9	6.9	6.3	5.3	4.8	4.8	4.8	5.3	5.1	Diurnal Average	
Dir	309.0	308.9	305.2	301.3	303.1	307.3	304.8	312.9	304.0	296.9	295.0	285.6	287.6	290.1	290.8	289.9	291.7	291.1	295.7	292.4	291.1	298.9	308.8	309.0	Diurnal Maximum	
Spd	37.1	35.2	32.7	27.3	22.7	21.8	21.3	22.0	25.0	23.9	24.1	29.7	42.0	40.6	35.7	32.5	30.4	29.3	27.9	25.9	29.5	26.3	24.3	32.9	Diurnal Maximum	
Dir	282.7	282.6	279.4	270.1	261.5	254.5	300.2	298.4	300.5	301.0	270.1	257.7	263.0	261.4	261.5	261.7	265.0	257.2	260.7	261.2	260.2	257.4	262.8	278.8	Diurnal Maximum	
Maximum Speed Value: 42 km/h on Oct 16 13:00		Minimum Speed Value: 0 km/h on Oct 25 00:00										Hours in Service: 744														
Maximum Daily Speed Average: 21.9 km/h on Oct 20		Minimum Daily Speed Average: 1.4 km/h on Oct 30										Hours of Data: 744														
Maximum Diurnal Speed Average: 7.4 km/h at hour 15		Minimum Diurnal Speed Average: 2.0 km/h at hour 8										Hours of Missing Data: 0														
Monthly Average Velocity: 4.60 km/h 296.99 deg		Speed Percentiles: P <sub>1</sub> = 1.3 P <sub>10</sub> = 3.2 Q <sub>1</sub> = 4.8 Median = 7.5 Q <sub>3</sub> = 11.7 P <sub>90</sub> = 20.5 P <sub>99</sub> = 32.5										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	20	27	10	5	0	0	62																			
NorthEast	24	62	0	0	0	0	86																			
East	29	53	10	0	0	0	92																			
SouthEast	19	33	6	0	0	0	58																			
South	17	18	1	0	0	0	36																			
SouthWest	14	31	6	1	0	0	52																			
West	20	49	40	33	13	2	157																			
NorthWest	54	66	40	41	0	0	201																			
Total	197	339	113	80	13	2	744																			

**Wind Rose**

**Wind Speed (WS) (km/h)**  
**Henry Pirker - October 2012**



**Wind Speed Classes (km/h)**



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - October 2012

Maximum Speed: 42 km/h on Oct 16 13:00	Maximum Daily Speed Average: 22.1 km/h on Oct 20	Hours in Service: 744
Minimum Speed: 2 km/h on Oct 30 18:00	Minimum Daily Speed Average: 4.2 km/h on Oct 30	Hours of Data: 744
Maximum Diurnal Speed Average: 12.7 km/h at hour 15	Minimum Diurnal Speed Average: 8.5 km/h at hour 6	Hours of Missing Data: 0
Monthly Average Speed: 9.98 km/h	Percentiles: P <sub>1</sub> = 2.5 P <sub>10</sub> = 3.8 Q <sub>1</sub> = 5.1 Median = 7.8 Q <sub>3</sub> = 11.9 P <sub>90</sub> = 20.6 P <sub>99</sub> = 32.6	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-Oct	3	5	8	10	11	11	13	12	5	6	6	7	5	7	17	26	27	30	19	10	11	13	14	14	12.1	29.9
2-Oct	11	11	9	10	11	9	12	16	16	14	16	21	22	17	20	17	8	13	16	14	11	11	13	13	13.8	21.7
3-Oct	11	10	10	9	9	6	6	6	8	8	7	9	10	10	9	10	8	6	8	7	5	4	4	3	7.6	10.9
4-Oct	4	4	7	9	6	4	5	5	5	6	7	7	9	8	8	6	7	6	2	3	3	2	3	4	5.4	8.8
5-Oct	3	4	5	5	6	5	6	4	5	4	6	9	8	10	11	11	10	7	4	7	12	10	11	10	7.3	12.0
6-Oct	10	10	5	5	8	6	5	7	3	6	7	6	8	9	9	9	8	9	16	18	17	8	11	12	8.8	17.9
7-Oct	10	7	8	9	7	8	17	14	15	21	22	21	18	15	17	16	16	14	12	9	6	8	7	6	12.7	21.8
8-Oct	4	4	3	4	4	4	3	5	3	6	8	7	4	5	4	4	9	7	6	3	3	5	3	4	4.7	9.0
9-Oct	3	4	3	3	3	5	5	5	3	5	7	9	7	6	7	6	5	4	4	9	14	24	20	12	7.1	24.4
10-Oct	8	12	11	10	8	6	8	9	7	5	7	10	11	13	13	10	8	10	10	10	9	10	11	11	9.4	12.9
11-Oct	10	10	11	11	11	12	11	12	11	8	5	7	4	3	5	4	4	4	7	7	6	6	6	8	7.7	11.9
12-Oct	6	5	6	5	6	5	6	7	9	8	7	5	5	4	5	6	5	6	5	6	5	4	4	4	5.6	8.8
13-Oct	4	3	5	3	3	3	3	3	3	4	4	5	12	15	24	23	20	23	16	10	7	6	4	5	8.7	24.2
14-Oct	5	7	6	8	10	9	11	12	12	12	12	11	10	8	8	6	10	13	8	8	10	9	8	9	9.2	12.5
15-Oct	9	11	13	16	20	22	18	17	12	11	12	14	9	8	6	6	3	5	9	9	10	11	11	7	11.3	22.1
16-Oct	8	7	5	4	3	2	4	4	5	14	21	30	42	41	36	33	31	29	28	26	30	26	24	33	20.3	42.4
17-Oct	37	35	33	27	23	21	19	18	20	23	24	28	30	29	25	24	24	18	9	6	6	5	6	5	20.7	37.3
18-Oct	7	9	9	9	8	9	8	8	7	7	7	5	4	3	2	3	4	3	4	4	4	5	6	8	6.1	9.5
19-Oct	10	8	8	7	7	7	9	9	9	7	6	9	17	20	26	27	24	24	22	22	19	19	22	23	15.0	26.7
20-Oct	21	24	22	21	21	22	21	22	25	24	23	26	25	25	23	24	23	21	20	21	19	17	16	22.1	25.7	
21-Oct	16	14	14	16	15	17	20	16	17	19	21	20	22	22	22	23	21	20	19	17	18	19	19	17	18.6	22.8
22-Oct	18	18	18	15	14	14	15	15	17	20	21	19	20	20	19	17	16	13	12	12	10	10	11	10	15.6	20.7
23-Oct	10	8	7	6	3	4	4	3	3	2	4	6	6	7	8	7	7	8	6	6	6	6	5	6	5.9	10.0
24-Oct	7	8	7	6	8	8	6	8	6	6	5	6	6	8	8	9	7	5	4	4	4	4	4	2	6.1	8.6
25-Oct	3	4	4	3	4	5	4	3	4	4	4	5	6	6	5	6	5	6	7	7	6	4	4	5	4.7	7.4
26-Oct	5	6	6	6	5	4	4	6	7	7	11	12	10	11	10	9	11	10	10	9	8	7	7	6	7.8	11.9
27-Oct	6	7	7	8	6	7	5	5	4	4	3	3	7	9	9	8	9	8	9	8	7	9	11	10	7.0	11.0
28-Oct	9	9	8	9	11	13	15	18	20	18	20	19	19	16	20	14	13	13	12	11	9	9	9	8	13.3	19.9
29-Oct	7	6	5	5	5	6	6	6	5	6	8	7	7	7	8	8	7	6	5	4	4	5	6	4	6.0	8.1
30-Oct	5	5	5	6	5	6	4	3	3	3	3	5	6	6	5	4	2	2	3	3	5	4	5	5	4.2	5.8
31-Oct	5	4	5	4	5	4	4	4	3	5	4	2	6	4	4	5	6	5	4	6	5	5	5	4	4.6	6.0
	8.9	9.0	8.8	8.8	8.6	8.5	8.9	9.1	8.8	9.5	10.2	11.2	12.1	12.1	12.7	12.2	11.6	11.3	10.3	9.5	9.4	9.3	9.4	9.2	Diurnal Average	
	37.3	35.3	32.9	27.5	22.8	22.1	21.4	22.1	25.1	24.1	24.4	30.3	42.4	40.9	36.0	32.8	30.7	29.9	28.1	26.0	29.7	26.4	24.5	33.2	Diurnal Maximum	

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

# Hourly Standard Deviations

Wind Direction (WD) - deg  
Henry Pirker - October 2012

Maximum Value: 90.9 deg on Oct 11 14:00		Hours in Service: 744																							
Minimum Value: 4.3 deg on Oct 30 14:00		Hours of Data: 744																							
Percentiles: P <sub>1</sub> = 4.9 P <sub>10</sub> = 6.2 Q <sub>1</sub> = 7.9 Median = 13.0 Q <sub>3</sub> = 21.0 P <sub>90</sub> = 33.5 P <sub>99</sub> = 80.8		Hours of Missing Data: 0																							
		Hours of Calibration: 0																							
		Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Oct	64	23	7	7	9	7	9	10	33	64	68	19	83	27	11	8	8	23	7	9	8	8	8	5	82.8
2-Oct	16	11	10	10	10	11	15	9	9	14	11	9	10	9	10	17	11	7	7	7	8	10	6	6	17.2
3-Oct	9	7	9	12	5	23	13	24	12	13	25	25	21	23	25	32	19	17	8	13	17	14	23	26	32.3
4-Oct	25	22	12	8	10	15	16	9	15	16	21	24	22	55	34	75	29	16	47	24	44	75	32	36	75.2
5-Oct	18	16	11	17	6	7	7	12	9	28	36	23	19	23	16	17	16	13	16	44	8	8	7	7	44.3
6-Oct	6	10	12	14	10	8	21	13	18	11	18	28	19	20	19	18	15	21	8	5	6	12	14	9	28.1
7-Oct	12	10	16	8	21	10	6	7	6	6	6	7	8	5	7	7	7	6	6	8	10	8	15	16	20.7
8-Oct	24	19	48	43	26	25	25	31	45	17	15	31	62	76	80	22	12	15	21	41	33	18	64	36	80.2
9-Oct	37	44	55	81	27	36	30	39	69	35	18	18	23	34	21	28	23	24	23	17	10	11	7	9	80.9
10-Oct	11	18	12	15	20	16	18	16	15	18	17	14	13	12	11	14	13	10	11	10	12	12	10	10	19.7
11-Oct	12	11	9	10	10	9	10	9	15	18	16	16	39	91	73	28	43	15	13	10	12	31	17	15	90.9
12-Oct	20	22	22	19	17	17	20	12	10	12	13	16	25	26	17	17	15	17	23	20	16	35	26	33	35.3
13-Oct	19	38	48	55	61	83	72	15	64	28	67	18	15	16	6	7	8	8	7	11	23	26	86	23	85.8
14-Oct	20	17	15	9	9	11	9	10	10	7	7	9	10	11	14	32	67	30	16	25	6	8	9	6	67.4
15-Oct	12	15	10	8	7	10	18	21	13	12	13	11	15	17	28	15	53	13	6	7	9	11	7	14	53.1
16-Oct	8	15	16	67	66	87	35	55	26	19	9	11	8	7	7	7	8	6	7	6	7	6	7	7	87.2
17-Oct	6	6	6	7	6	5	5	5	6	7	9	8	10	10	13	9	11	11	19	30	27	18	20	24	30.1
18-Oct	8	6	6	9	15	12	12	15	20	11	16	16	20	46	60	20	53	32	55	81	66	59	9	11	81.1
19-Oct	13	15	11	12	16	16	16	11	13	16	22	28	7	8	6	7	7	7	6	5	7	8	6	6	28.2
20-Oct	6	6	6	5	7	6	6	5	6	6	6	8	6	8	7	7	6	6	6	5	6	5	6	6	7.7
21-Oct	6	8	7	6	7	5	4	6	6	6	6	6	7	7	7	7	8	6	6	7	7	7	6	6	8.1
22-Oct	6	6	7	7	5	7	7	6	9	10	6	8	8	9	7	6	7	6	6	7	6	9	5	6	9.8
23-Oct	6	8	15	13	21	17	17	13	22	21	21	10	25	16	11	31	18	13	14	10	7	8	9	20	31.2
24-Oct	14	18	20	25	13	25	18	13	18	18	24	24	22	15	15	13	13	21	32	13	20	11	19	79	78.9
25-Oct	53	58	27	43	17	22	13	21	66	10	12	11	26	24	29	16	30	16	14	17	13	24	25	26	66.3
26-Oct	11	11	10	10	11	25	61	17	11	17	10	12	13	17	13	15	12	12	13	12	12	20	18	16	61.4
27-Oct	18	14	13	11	15	15	25	21	24	32	37	72	22	7	6	8	9	6	5	8	9	8	6	7	72.1
28-Oct	7	5	10	7	6	4	5	5	6	5	5	7	6	7	6	6	6	6	7	12	10	9	11	8	11.7
29-Oct	15	15	20	26	16	13	17	17	23	15	19	22	24	19	15	10	10	35	19	31	31	13	19	33	35.4
30-Oct	17	12	13	10	17	7	17	20	21	22	27	5	5	4	10	13	27	43	37	66	24	12	16	9	66.2
31-Oct	15	17	27	17	21	24	43	38	33	13	15	34	7	10	11	10	26	26	26	17	16	19	16	16	43.0
	63.5	58.0	55.0	80.9	66.0	87.2	71.5	54.7	68.7	63.9	67.6	72.1	82.8	90.9	80.2	75.2	67.4	43.2	54.8	81.1	65.9	75.1	85.8	78.9	

PAZA

Evergreen Park Station

Monthly Summary Tables, Graphs and  
Roses



## Hourly Averages

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Evergreen Park - October 2012

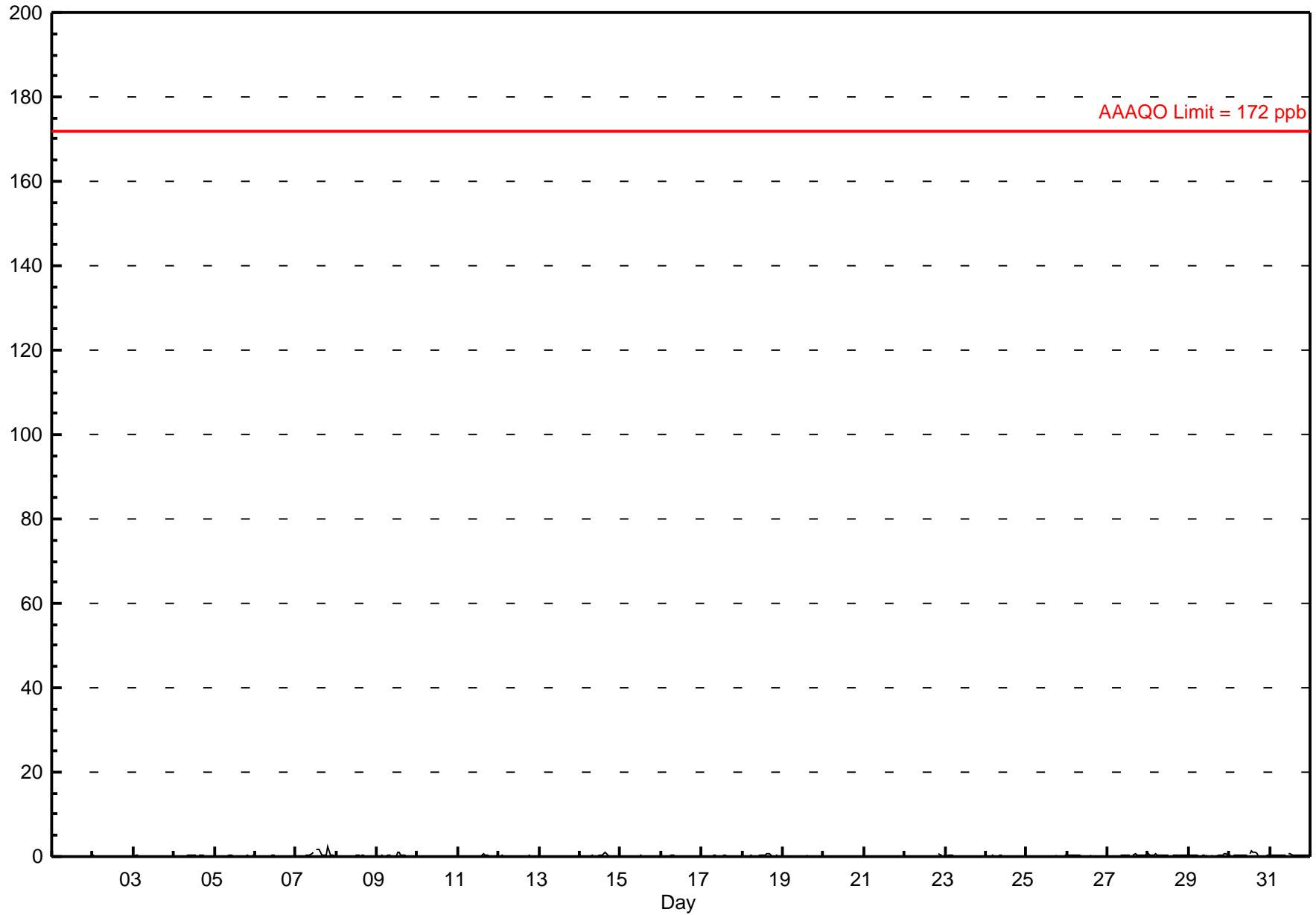
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 2.5 ppb on Oct 7 20:00	Maximum Daily Average: 0.6 ppb on Oct 7		Hours of Data:	706
Minimum Value: 0 ppb on Oct 1 02:00	Minimum Daily Average: 0.0 ppb on Oct 10		Hours of Missing Data:	38
Maximum Diurnal Average: 0.3 ppb at hour 14	Minimum Diurnal Average: 0.1 ppb at hour 2		Hours of Calibration:	36
Monthly Average: 0.15 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.4 P <sub>99</sub> = 1.2		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-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.1
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.3
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.4
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
7-Oct	0	0	0	0	0	0	0	0	0	1	1	A	2	2	2	0	0	0	0	0	2	0	0	0	0.6	2.5
8-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
9-Oct	0	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	1.0
10-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.1	0.7
12-Oct	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	0.2
13-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.2	1.2
15-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
16-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
17-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
18-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0.2	0.7
19-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
20-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2
21-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1
22-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0.1	0.6
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.5
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3
25-Oct	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	A	0	0	0	0	0	0	0	0.0	0.2
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.4
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	1	0.3	0.6
28-Oct	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0.3	0.6
30-Oct	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.5
31-Oct	0	0	0	0	0	0	0	0	0	0	A	1	1	0	1	0	0	0	0	0	0	0	0	0	0.4	0.6
	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	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	Diurnal Average	
	0.7	0.5	0.5	0.5	0.6	0.5	0.4	0.5	0.5	0.5	1.0	0.6	1.6	1.6	1.6	1.2	0.6	0.5	0.4	2.5	0.6	0.6	0.6	0.6	Diurnal Maximum	

C - Calibration      N - Not Valid      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 48 ppb    30-day 11 ppb

### Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Evergreen Park - October 2012



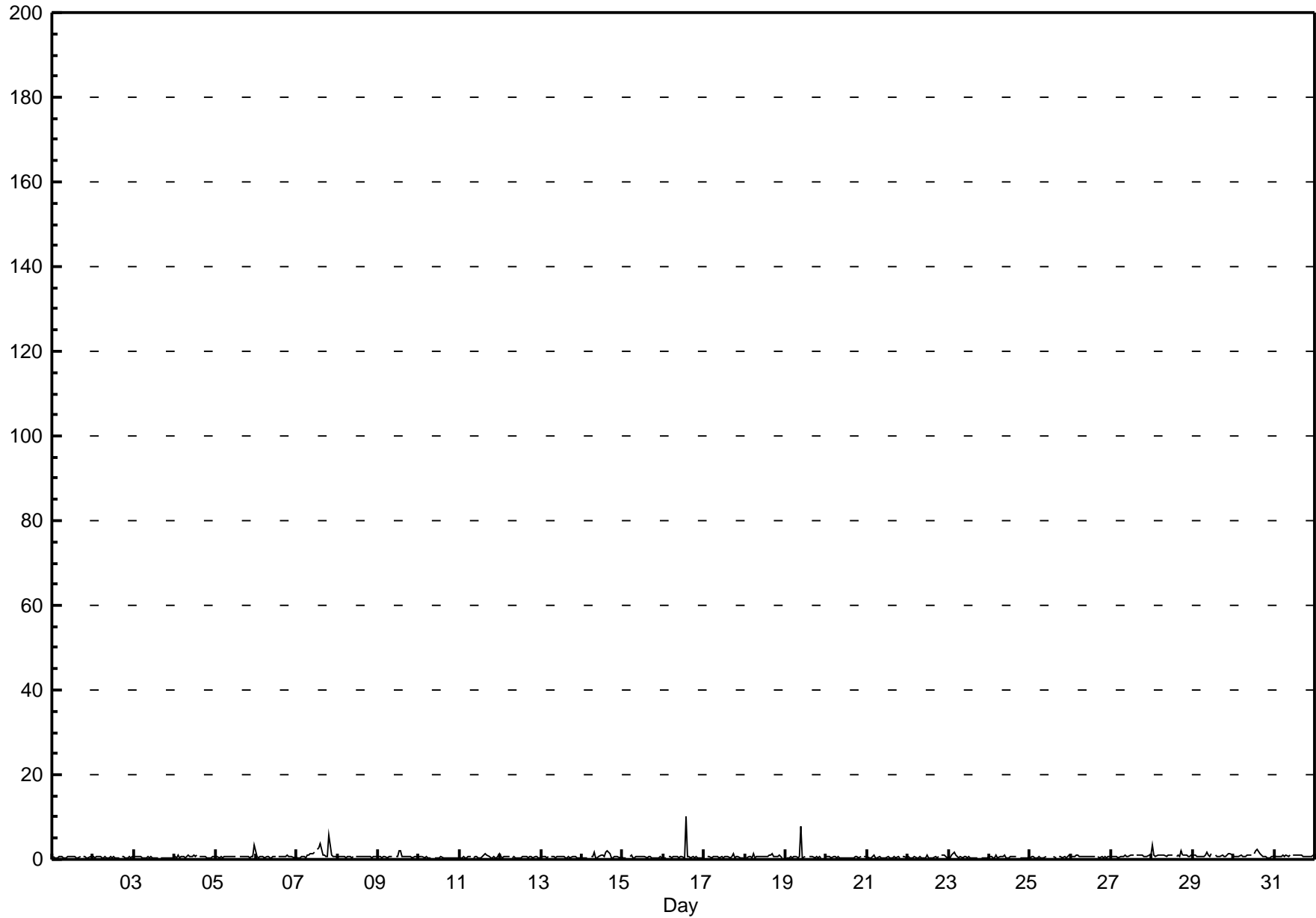
## Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Evergreen Park - October 2012

Maximum Value: 10.1 ppb on Oct 16 14:00		Maximum Daily Average: 1.3 ppb on Oct 7		Hours in Service: 744																								
Minimum Value: 0 ppb on Oct 10 08:00		Minimum Daily Average: 0.4 ppb on Oct 10		Hours of Data: 706																								
Maximum Diurnal Average: 1.2 ppb at hour 14		Minimum Diurnal Average: 0.5 ppb at hour 2		Hours of Missing Data: 38																								
Monthly Average: 0.68 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.6 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 1.0 P <sub>99</sub> = 2.5		Hours of Calibration: 36																								
				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-Oct	1	0	0	0	1	1	1	0	0	1	1	1	1	1	0	0	1	A	1	1	0	0	1	0	0.5	0.7		
2-Oct	1	0	1	1	1	0	0	1	0	0	1	0	1	0	0	0	A	1	1	0	0	1	0	1	0.5	0.8		
3-Oct	1	1	1	1	1	0	0	0	1	0	1	0	1	0	0	A	0	0	0	0	0	0	0	0	0.5	0.8		
4-Oct	1	0	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	0	1	0.7	1.1		
5-Oct	0	1	0	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	0.7	3.5		
6-Oct	1	0	1	1	1	0	1	1	0	0	1	1	A	1	1	1	1	1	1	1	1	1	0	1	0.6	0.9		
7-Oct	0	0	0	1	1	1	1	1	1	2	2	A	2	3	4	1	1	1	1	1	6	1	1	1	1.3	5.8		
8-Oct	0	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	0.6	0.8		
9-Oct	1	1	1	1	1	0	1	1	1	1	A	1	1	2	2	1	1	1	1	1	1	0	1	1	0.7	2.2		
10-Oct	1	1	1	0	1	0	0	0	A	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0.4	0.7		
11-Oct	0	0	1	0	0	1	1	A	0	1	1	0	1	1	1	1	1	1	0	0	1	0	0	1	0.6	1.4		
12-Oct	1	0	1	1	1	1	A	0	1	0	0	0	0	1	1	1	0	1	1	0	1	1	1	0	0.5	0.7		
13-Oct	1	1	1	0	1	A	1	1	0	1	1	1	1	1	0	0	1	0	1	1	1	0	0	0	0.6	0.8		
14-Oct	0	0	0	0	A	1	1	2	0	0	1	1	1	1	2	2	1	0	0	1	1	1	0	1	0.8	1.9		
15-Oct	0	0	0	A	1	1	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0.5	0.9		
16-Oct	0	0	A	1	1	0	1	1	1	1	1	1	0	10	1	1	0	1	0	1	0	0	0	0	0.9	10.1		
17-Oct	0	A	1	1	0	1	1	1	1	0	1	1	1	1	1	0	1	1	1	0	1	1	0	0	0.6	1.4		
18-Oct	A	0	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.7	1.3		
19-Oct	0	0	0	1	0	1	1	0	1	8	0	1	N	N	1	1	1	1	1	0	1	0	1	1	0.9	7.7		
20-Oct	1	1	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0	1	1	0	1	A	1	1	0.5	0.7		
21-Oct	1	0	0	1	1	0	0	1	0	0	0	0	1	0	0	0	1	0	1	1	A	1	1	0	0.5	1.0		
22-Oct	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	1	0	1	A	1	1	1	0	0.5	1.2		
23-Oct	1	0	1	2	1	1	0	1	0	1	1	0	1	0	0	0	0	0	A	0	0	0	0	0	0.6	1.7		
24-Oct	1	1	0	0	1	0	1	1	1	1	0	0	1	1	1	1	1	A	0	0	1	0	0	1	0.6	1.0		
25-Oct	0	1	1	0	0	1	0	0	0	1	C	C	C	C	1	0	A	1	1	0	1	0	1	1	0.5	0.9		
26-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	0	1	1	0.7	1.1		
27-Oct	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.1		
28-Oct	3	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	1.1	3.4		
29-Oct	1	1	1	1	1	1	1	1	1	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	1.7		
30-Oct	1	1	1	1	1	1	1	1	1	1	1	A	1	2	2	1	1	1	1	1	1	0	0	1	0.9	2.3		
31-Oct	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	1.2		
	0.7	0.5	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.9	0.6	0.7	0.8	1.2	0.8	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.7	Diurnal Average			
	3.4	1.1	1.1	1.7	1.2	1.3	1.1	1.7	1.7	7.7	1.5	1.3	2.3	10.1	3.7	1.9	1.3	1.9	1.0	5.8	1.1	1.3	1.3	3.5	Diurnal Maximum			
C - Calibration		N - Not Valid					A - Automated Daily Zero Span																					

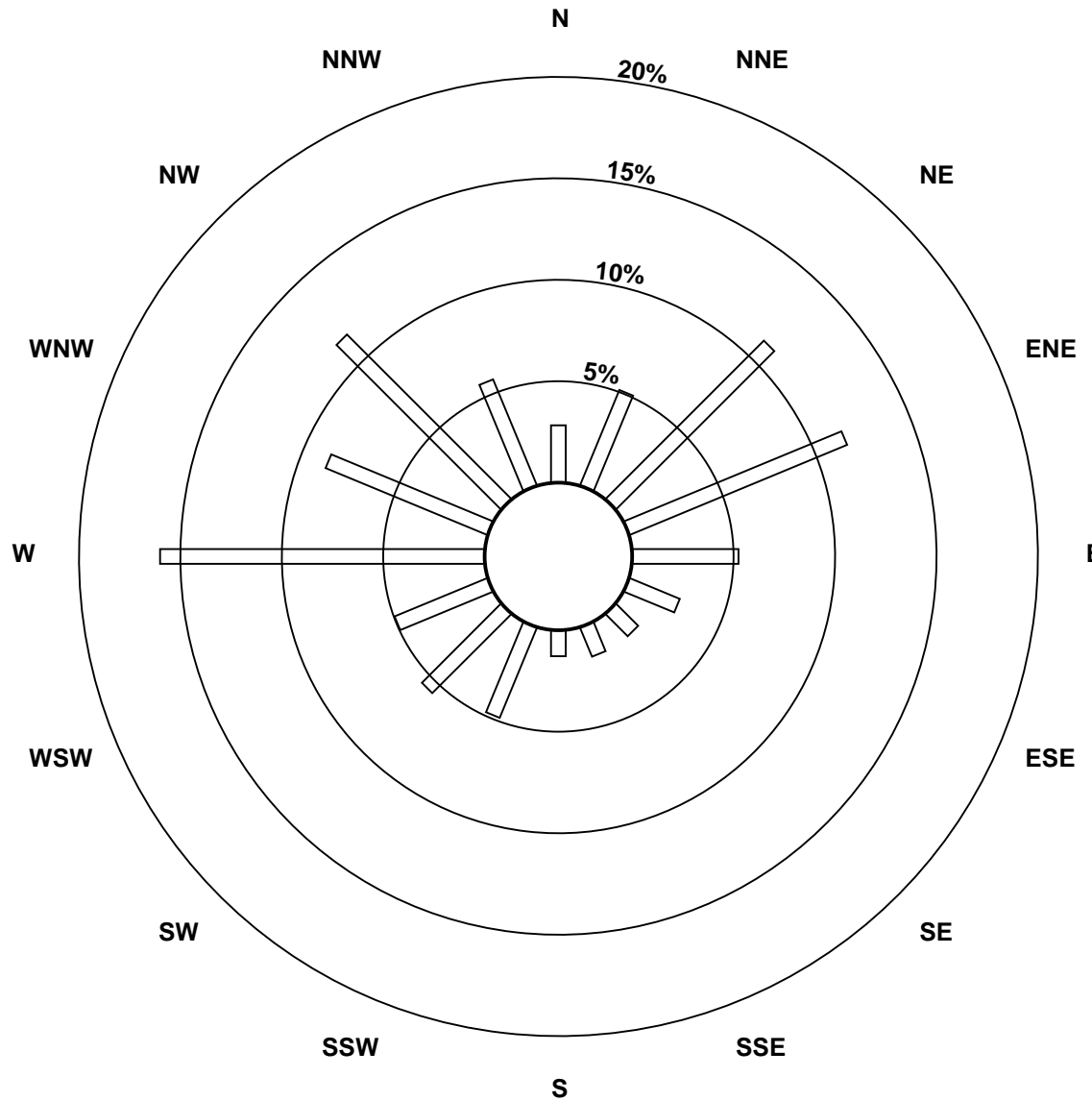
### Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Evergreen Park - October 2012

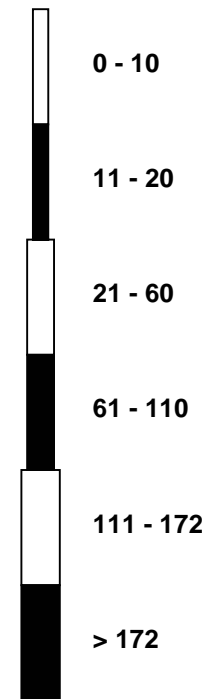


**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Evergreen Park - October 2012**

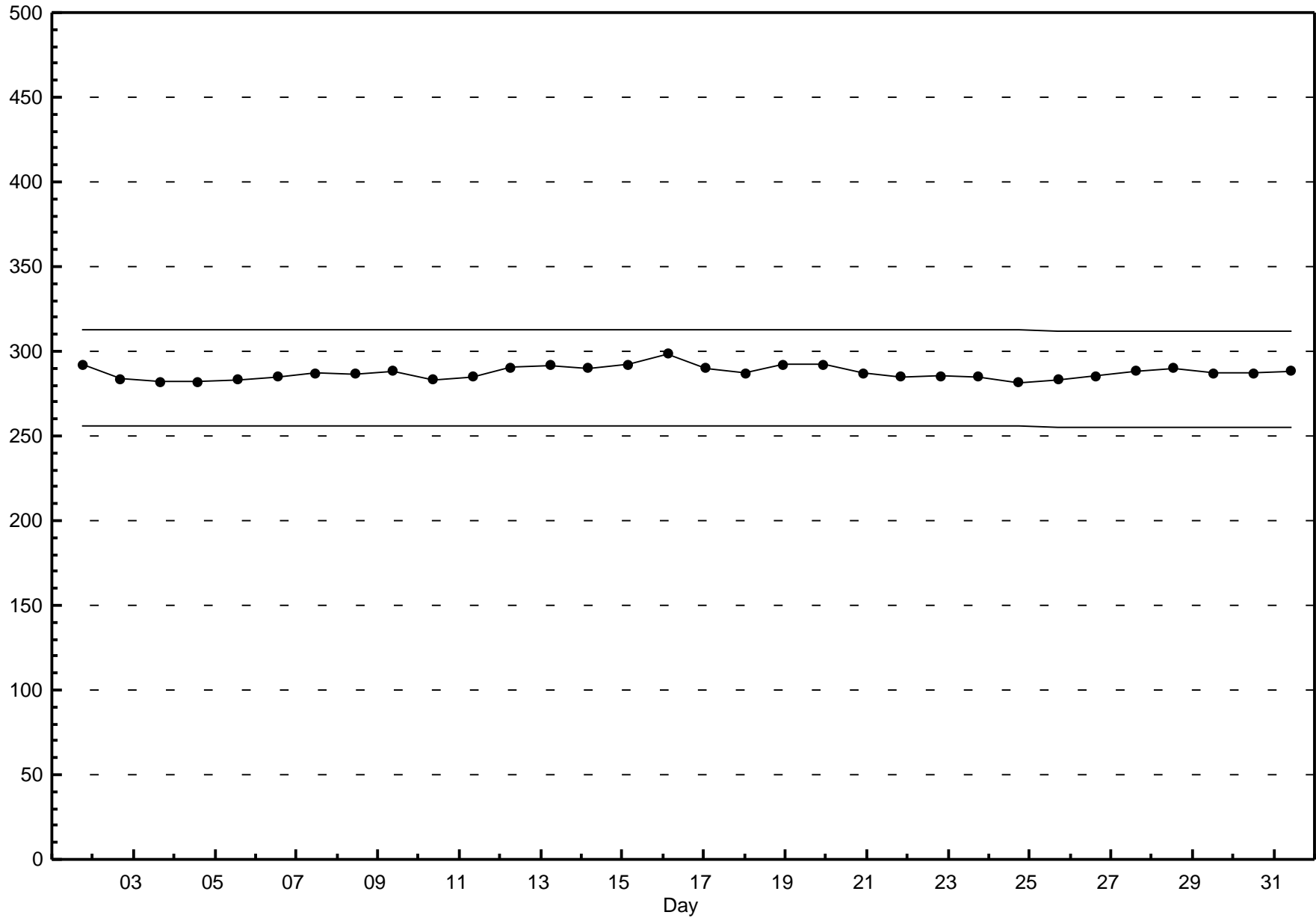


**Pollutant Classes (ppb)**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Evergreen Park - October 2012

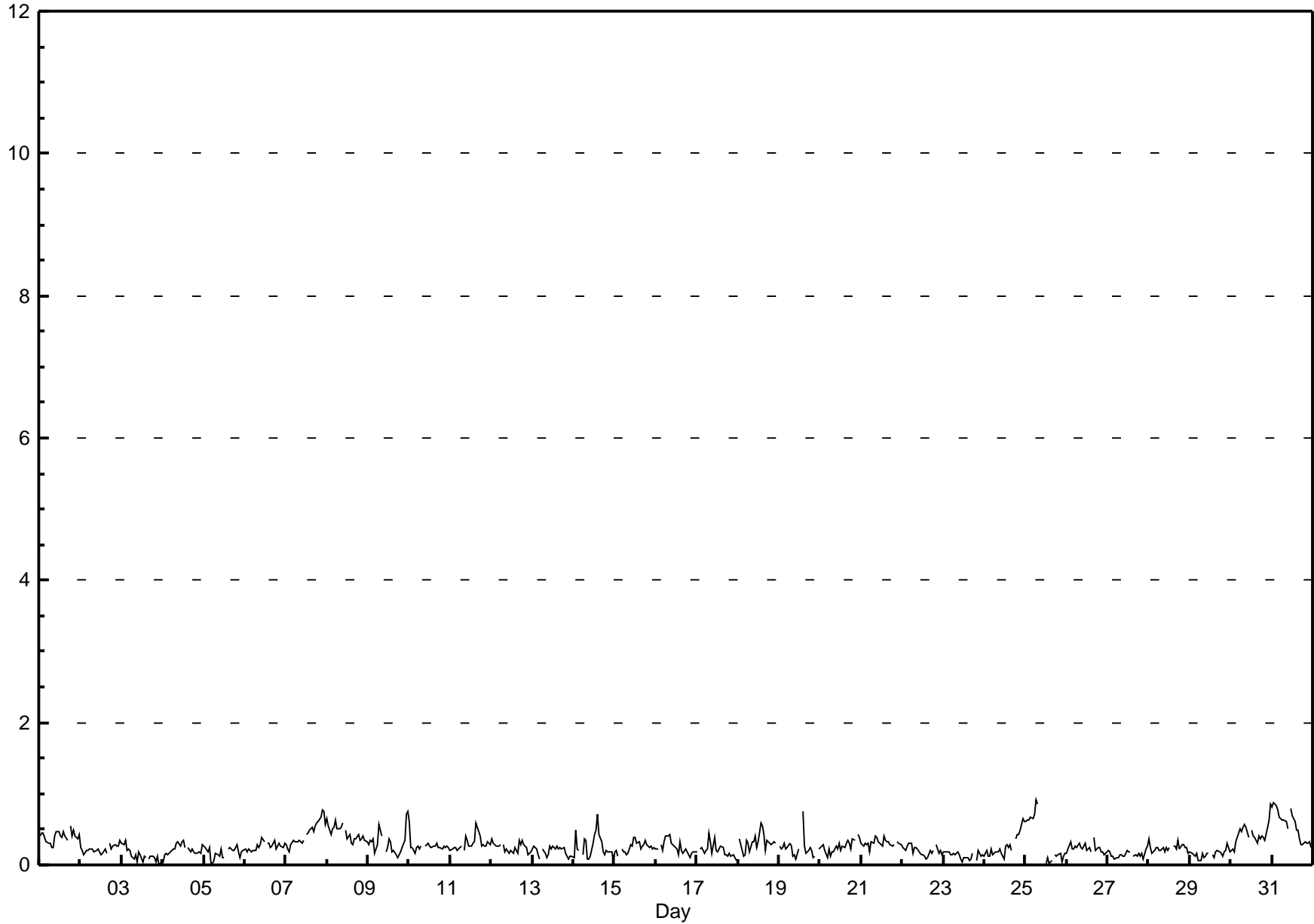


## Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - October 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 744																																														
Maximum Value: 0.9 ppb on Oct 25 07:00		Maximum Daily Average: 0.5 ppb on Oct 31																																														
Minimum Value: 0 ppb on Oct 3 23:00		Hours of Data: 706																																														
Maximum Diurnal Average: 0.3 ppb at hour 15		Hours of Missing Data: 38																																														
Monthly Average: 0.27 ppb		Hours of Calibration: 36																																														
Minimum Daily Average: 0.1 ppb on Oct 23		Percent Operational Time: 99.7																																														
Minimum Diurnal Average: 0.2 ppb at hour 5																																																
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.2 Q <sub>3</sub> = 0.3 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-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0.4	0.5																						
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.3																						
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.3																						
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.3																						
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.3																						
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4																						
7-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8																						
8-Oct	1	1	0	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6																						
9-Oct	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	0.7																						
10-Oct	1	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	0.6																						
11-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0.3	0.6																						
12-Oct	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4																						
13-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3																						
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.3	0.7																						
15-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4																						
16-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4																						
17-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4																						
18-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.3	0.6																						
19-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8																						
20-Oct	0	0	0	0	0	0	0	0	0	0	0	0	N	N	0	0	0	0	0	0	0	0	A	0	0.3	0.4																						
21-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.4																						
22-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3																						
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.2																						
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0.3	0.6																						
25-Oct	1	1	1	1	1	1	1	1	C	C	C	C	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.9																						
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.4																						
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.3																						
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.4																						
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3																						
30-Oct	0	0	0	0	0	1	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.9																						
31-Oct	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	0.9																						
																								0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average
																								0.8	0.9	0.8	0.8	0.7	0.7	0.9	0.9	0.6	0.6	0.5	0.8	0.7	0.6	0.8	0.6	0.5	0.5	0.6	0.6	0.7	0.8	0.8	0.9	Diurnal Maximum
C - Calibration N - Not Valid A - Automated Daily Zero Span																																																
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																																																



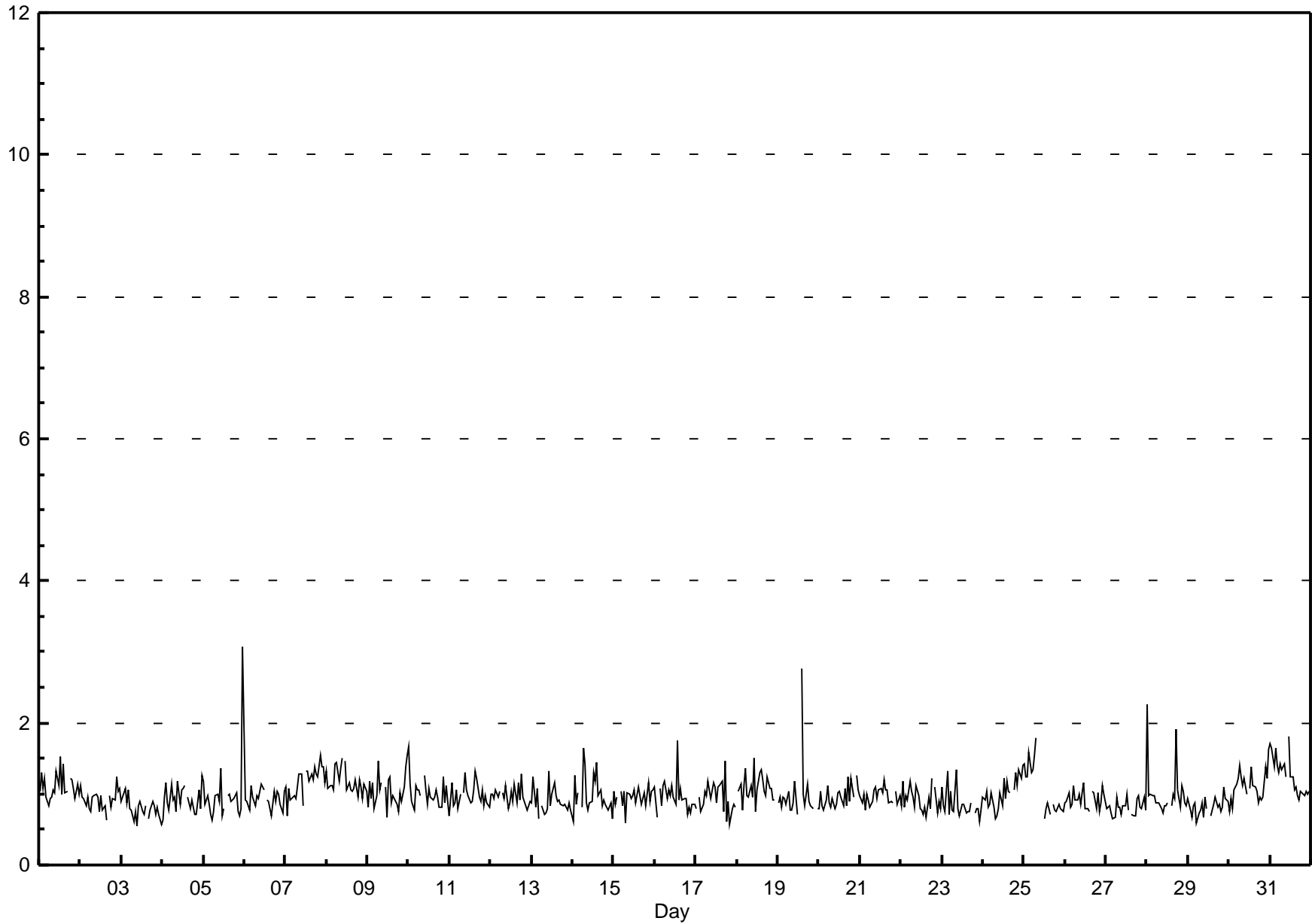


## Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

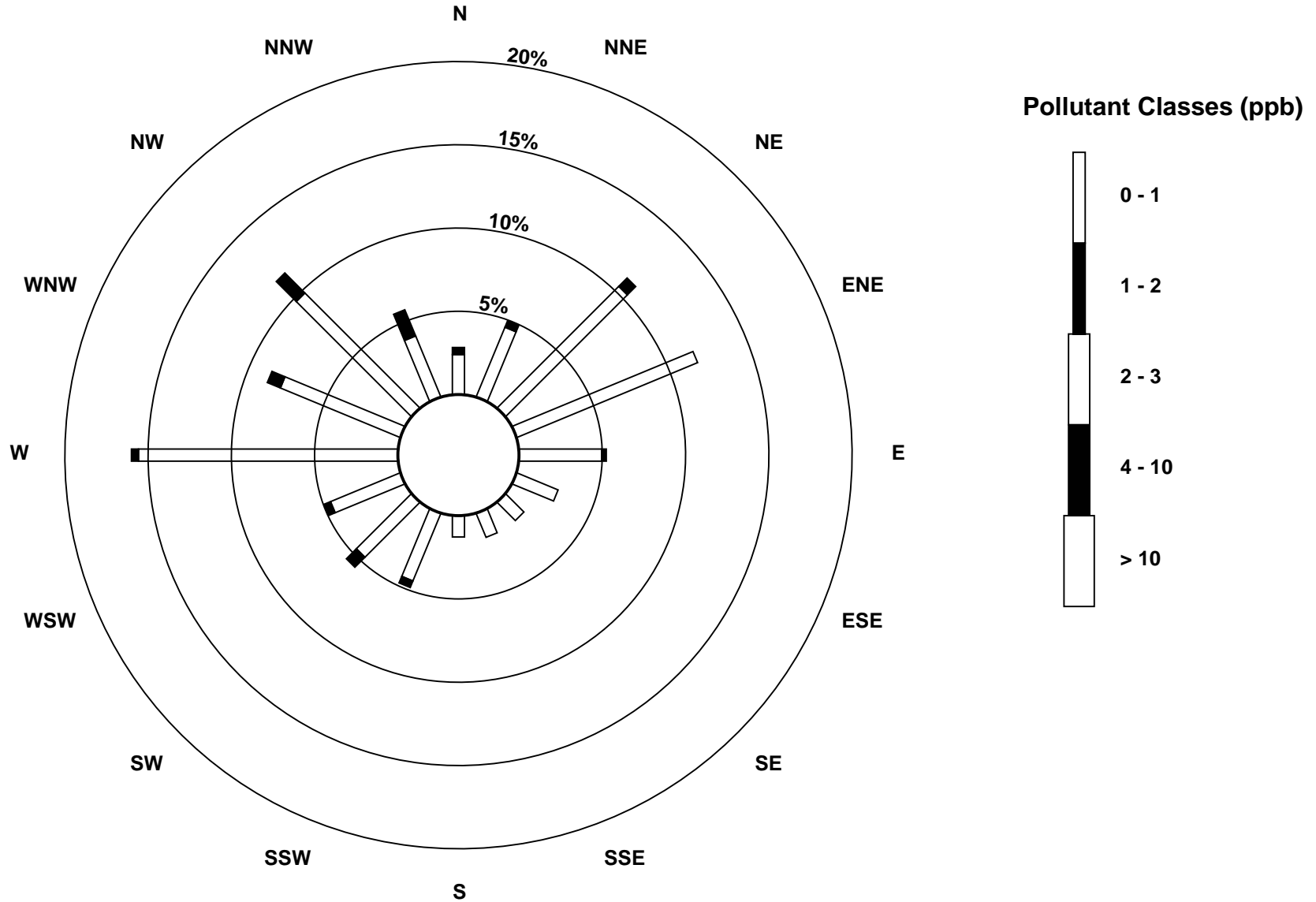
Evergreen Park - October 2012

Maximum Value: 3.1 ppb on Oct 6 00:00		Maximum Daily Average: 1.3 ppb on Oct 31		Hours in Service: 744																							
Minimum Value: 1 ppb on Oct 3 10:00		Minimum Daily Average: 0.8 ppb on Oct 3		Hours of Data: 706																							
Maximum Diurnal Average: 1.1 ppb at hour 15		Minimum Diurnal Average: 0.9 ppb at hour 21		Hours of Missing Data: 38																							
Monthly Average: 0.99 ppb		Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 0.8 Median = 1.0 Q <sub>3</sub> = 1.1 P <sub>90</sub> = 1.3 P <sub>99</sub> = 1.7		Hours of Calibration: 36																							
				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-Oct	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1.1	1.5	
2-Oct	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	1.2	
3-Oct	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	
4-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.3	
5-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	3	1.0	3.1	
6-Oct	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	1.1	
7-Oct	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	1	1	1	1.2	1.5	
8-Oct	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.5	
9-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	1.5	
10-Oct	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.7	
11-Oct	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3	
12-Oct	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3	
13-Oct	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3	
14-Oct	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.7	
15-Oct	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2	
16-Oct	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1.0	1.7	
17-Oct	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	1.5	
18-Oct	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5	
19-Oct	1	1	1	1	1	1	1	1	1	1	1	1	N	N	3	1	1	1	1	1	1	1	1	1	1.0	2.8	
20-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.3	
21-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.2	
22-Oct	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	
23-Oct	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	
24-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	1.4	
25-Oct	1	1	1	2	1	1	2	2	C	C	C	C	1	1	1	1	A	1	1	1	1	1	1	1	1.1	1.8	
26-Oct	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	
27-Oct	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	
28-Oct	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1.0	2.3	
29-Oct	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	
30-Oct	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1.1	1.6	
31-Oct	2	2	1	2	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1.3	1.8	
		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	1.1	1.0	0.9	1.0	0.9	0.9	0.9	0.9	1.0	1.0	Diurnal Average		
		2.3	1.6	1.4	1.7	1.4	1.4	1.7	1.8	1.4	1.5	1.5	1.8	1.5	1.7	2.8	1.3	1.2	1.9	1.3	1.3	1.5	1.4	1.4	3.1	Diurnal Maximum	
C - Calibration		N - Not Valid						A - Automated Daily Zero Span																			



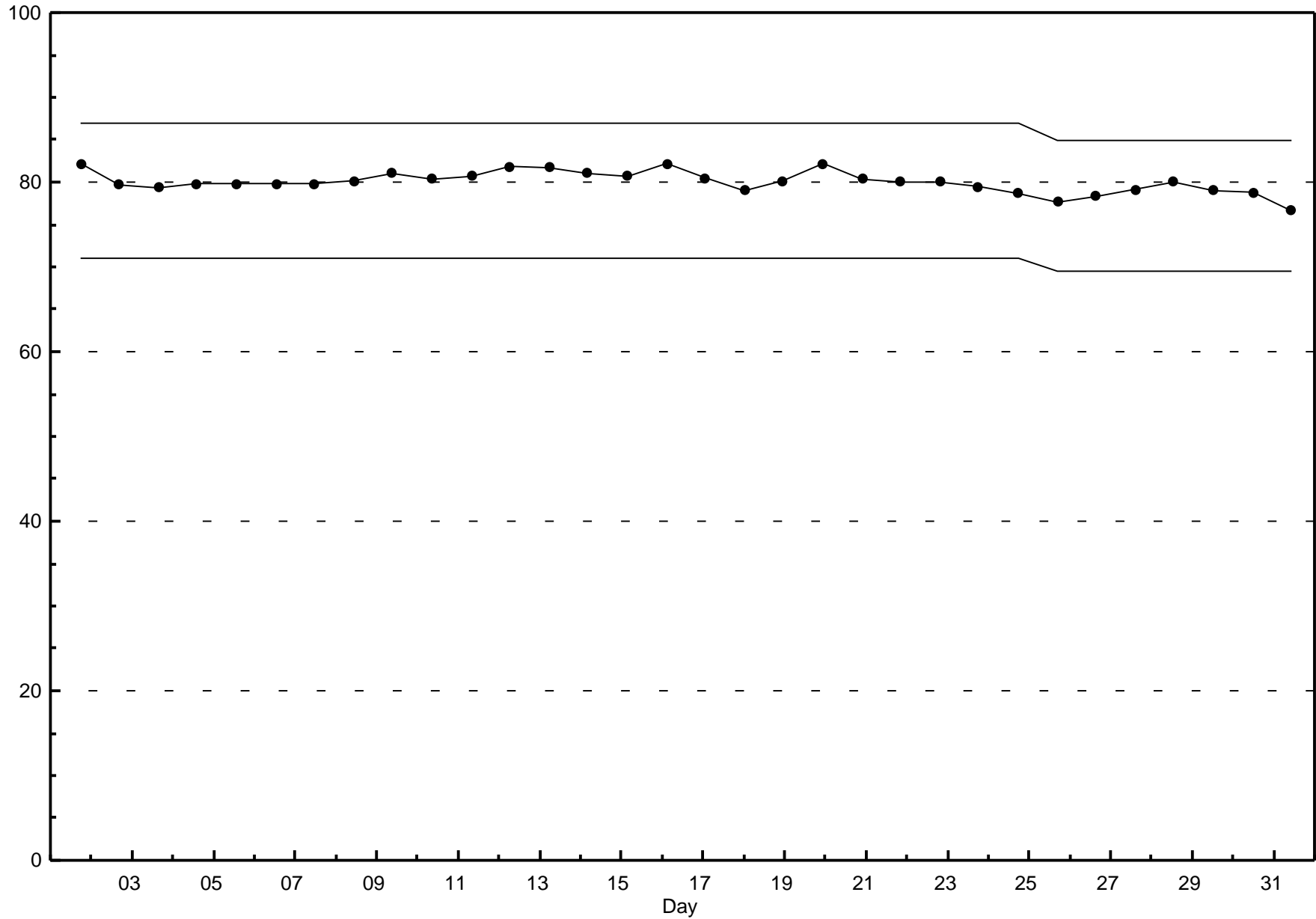
**Pollutant Rose**

**Total Reduced Sulphur (TRS) - ppb**  
**Evergreen Park - October 2012**



**Span Responses**

**Total Reduced Sulphur (TRS)  
Evergreen Park - October 2012**



## Hourly Averages

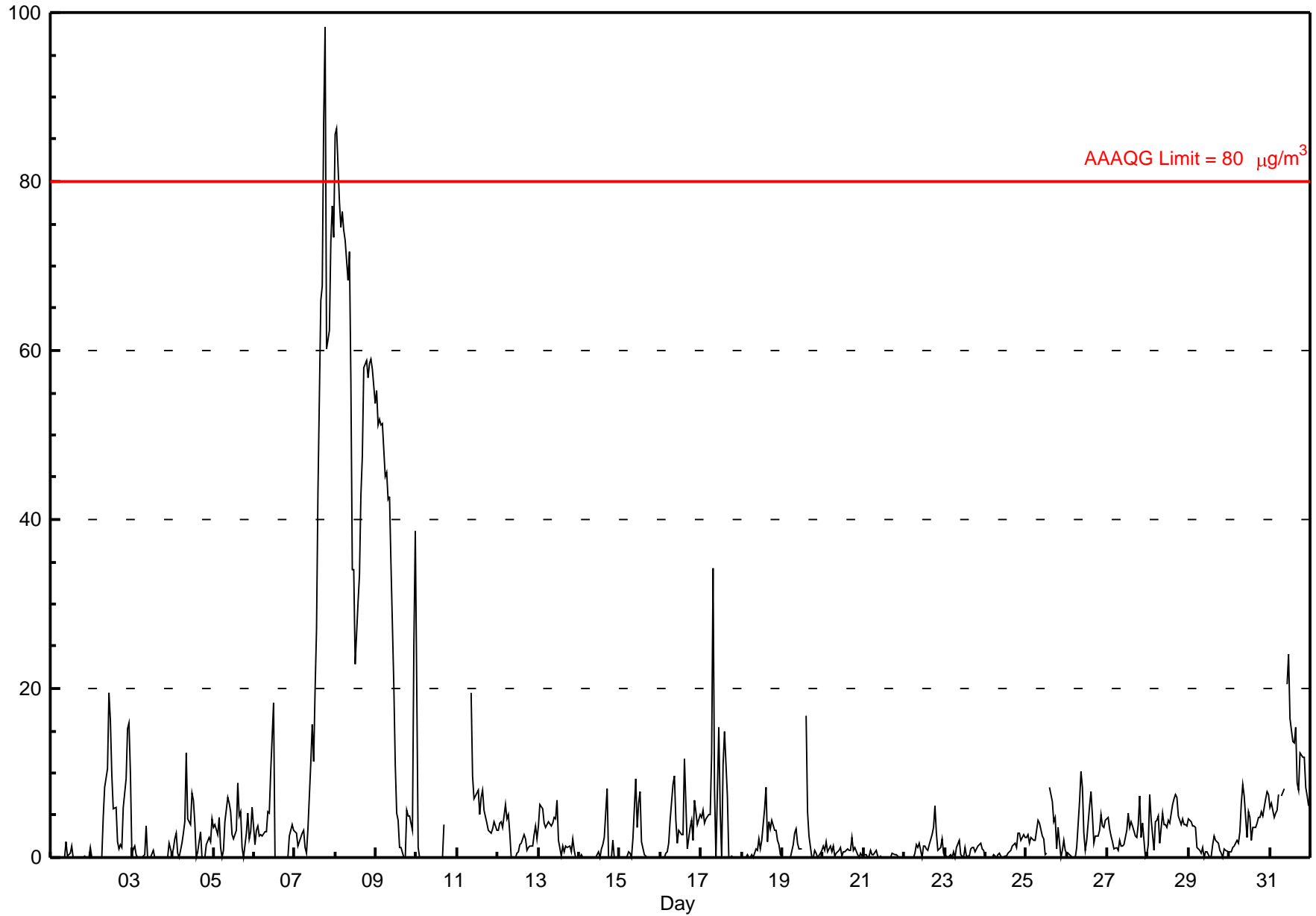
## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

### Evergreen Park - October 2012

Number of Exceedences: 1-hr: 4 24-hr: 2	Hours in Service: 744
Maximum Value: 98.3 µg/m <sup>3</sup> on Oct 7 19:00	Maximum Daily Average: 58.0 µg/m <sup>3</sup> on Oct 8
Minimum Value: 0 µg/m <sup>3</sup> on Oct 1 01:00	Hours of Data: 717
Maximum Diurnal Average: 8.2 µg/m <sup>3</sup> at hour 9	Hours of Missing Data: 27
Monthly Average: 6.38 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 0.2 µg/m <sup>3</sup> on Oct 21	Percent Operational Time: 96.4
Minimum Diurnal Average: 4.3 µg/m <sup>3</sup> at hour 13	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.2 Median = 1.8 Q <sub>3</sub> = 4.8 P <sub>90</sub> = 11.8 P <sub>99</sub> = 76.0	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Oct	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.2	1.9																						
2-Oct	0	0	0	0	0	0	0	5	8	11	19	16	10	6	6	2	1	2	1	6	9	15	16	10	5.9	19.4																						
3-Oct	1	1	0	0	0	0	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0.4	3.7																						
4-Oct	1	2	3	1	0	2	3	4	12	5	4	8	7	4	0	1	3	0	0	0	2	2	2	5	2.9	12.3																						
5-Oct	4	4	3	5	1	0	1	4	7	6	5	3	2	3	9	5	5	1	0	3	5	2	3	6	3.7	8.9																						
6-Oct	1	3	4	3	3	3	3	3	5	5	10	18	0	0	0	0	0	0	0	0	0	3	4	3	3.0	18.3																						
7-Oct	3	3	1	2	3	3	1	0	3	11	16	11	20	27	43	66	68	87	98	60	62	73	77	73	33.9	98.3																						
8-Oct	86	86	78	75	76	74	73	68	72	56	34	34	23	30	33	43	47	58	59	57	58	59	58	54	58.0	86.2																						
9-Oct	55	51	52	51	51	45	46	42	43	35	20	11	5	4	1	1	0	0	6	5	5	3	25	39	24.9	55.3																						
10-Oct	20	1	0	0	N	N	N	N	N	N	N	N	0	0	0	0	4	N	N	N	N	N	N	N	--	20.3																						
11-Oct	N	N	N	N	N	N	N	N	19	10	7	7	8	5	7	8	6	4	3	3	3	3	4	3	--	19.4																						
12-Oct	3	4	4	3	6	4	5	3	0	0	0	1	1	1	2	3	2	1	1	1	1	3	4	2	2.4	6.3																						
13-Oct	4	6	6	4	4	4	4	4	4	5	5	7	2	0	1	1	1	1	1	1	2	1	0	0	2.8	6.7																						
14-Oct	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2	8	0	0	0	2	0	0	0	0.7	8.1																						
15-Oct	0	0	0	0	0	1	1	0	2	9	4	6	8	2	0	0	0	0	0	0	0	0	0	0	1.4	9.3																						
16-Oct	0	0	0	1	1	2	4	9	10	4	2	3	3	3	12	6	1	4	4	2	7	5	4	5	3.8	11.7																						
17-Oct	5	6	4	5	5	5	12	34	8	0	15	5	0	11	15	7	0	0	0	0	0	0	0	0	5.8	34.3																						
18-Oct	0	0	0	0	0	0	0	0	1	1	2	1	2	6	8	2	4	3	4	3	3	2	2	0	1.9	8.4																						
19-Oct	0	0	0	0	0	0	1	3	3	2	1	1	N	N	17	5	3	0	0	1	0	0	1	1	1.8	16.7																						
20-Oct	1	1	2	1	1	1	1	0	0	1	1	0	1	1	1	1	1	2	1	1	0	0	0	0	0.9	2.4																						
21-Oct	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.9																						
22-Oct	0	0	0	0	0	0	1	1	1	2	0	1	1	1	1	2	3	4	6	3	1	1	2	1	1.3	6.1																						
23-Oct	0	0	0	0	0	1	0	1	2	0	0	0	1	0	0	1	1	1	1	1	1	2	1	1	0.7	2.0																						
24-Oct	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	1	2	1	3	3	2	3	2	0.9	3.0																						
25-Oct	2	3	2	2	2	2	3	4	4	3	2	0	0	M	8	7	4	5	1	4	0	1	2	1	2.7	8.2																						
26-Oct	0	0	0	0	0	0	1	7	10	8	3	1	2	6	8	5	2	3	3	3	5	4	4	4	3.3	10.2																						
27-Oct	5	3	2	2	1	1	1	2	1	1	1	3	5	4	4	4	3	2	4	7	2	4	0	0	2.7	7.2																						
28-Oct	2	7	5	1	4	4	5	2	5	4	4	4	4	4	6	7	7	7	5	4	5	4	4	4	4.5	7.5																						
29-Oct	5	4	4	4	4	1	1	1	1	0	1	1	0	0	1	3	2	2	1	1	0	1	1	1	1.5	4.6																						
30-Oct	1	1	1	1	2	2	3	6	9	7	2	5	5	2	4	4	4	5	5	5	5	7	8	7	4.2	8.7																						
31-Oct	6	6	5	5	6	8	N	7	8	M	20	24	17	14	14	15	9	8	12	12	12	8	7	6	10.4	24.1																						
																								6.8	6.5	5.8	5.5	5.9	5.6	6.1	7.4	8.2	6.5	6.0	5.6	4.3	4.7	6.6	6.5	6.1	6.7	7.3	6.2	6.5	6.9	7.7	7.7	Diurnal Average
																								85.5	86.2	77.5	74.6	76.4	74.3	73.0	68.4	71.7	56.4	34.0	34.1	22.9	30.2	43.2	65.9	67.7	87.1	98.3	60.2	62.4	72.9	77.2	73.4	Diurnal Maximum

M - Maintenance N - Not Valid  
 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

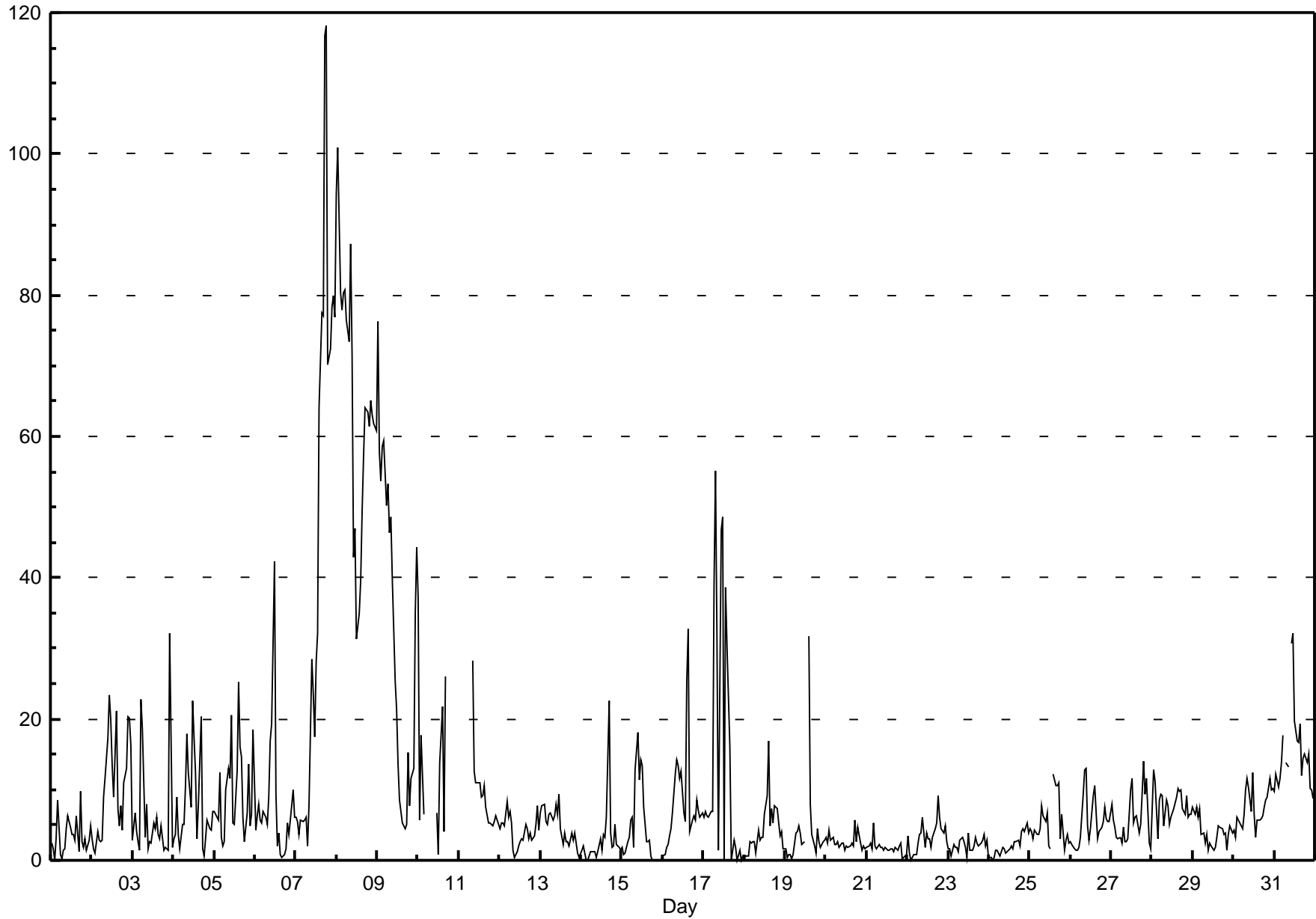
## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

### Evergreen Park - October 2012

Maximum Value: 118.2 µg/m <sup>3</sup> on Oct 7 19:00	Maximum Daily Average: 65.2 µg/m <sup>3</sup> on Oct 8	Hours in Service: 744
Minimum Value: 0 µg/m <sup>3</sup> on Oct 1 03:00	Minimum Daily Average: 1.8 µg/m <sup>3</sup> on Oct 21	Hours of Data: 717
Maximum Diurnal Average: 12.7 µg/m <sup>3</sup> at hour 9	Minimum Diurnal Average: 7.9 µg/m <sup>3</sup> at hour 13	Hours of Missing Data: 27
Monthly Average: 10.22 µg/m <sup>3</sup>	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 2.4 Median = 4.8 Q <sub>3</sub> = 9.1 P <sub>90</sub> = 22.5 P <sub>99</sub> = 80.1	Hours of Calibration: 0
		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-Oct	2	2	0	3	8	1	0	1	2	5	6	5	4	4	3	6	1	10	3	2	3	1	3	5	3.3	9.7																						
2-Oct	3	2	1	4	3	3	3	9	12	17	23	20	13	9	21	7	5	8	4	11	13	20	20	16	10.3	23.3																						
3-Oct	3	7	4	3	1	23	19	3	8	2	3	2	5	5	6	4	3	5	1	2	2	1	32	2	6.0	32.1																						
4-Oct	3	4	9	4	2	5	5	10	18	12	7	23	17	12	3	8	20	2	1	3	6	5	4	7	7.9	22.5																						
5-Oct	7	7	6	12	3	2	3	10	13	12	21	5	5	13	25	16	15	6	3	7	14	5	6	18	9.7	25.3																						
6-Oct	4	6	8	6	5	7	6	5	9	17	19	42	9	2	4	1	0	1	2	5	4	6	10	6	7.7	42.4																						
7-Oct	6	5	4	6	5	6	6	2	8	28	24	17	28	32	64	77	77	117	118	70	72	78	80	77	42.0	118.2																						
8-Oct	94	101	80	78	80	81	76	73	87	72	43	47	31	35	40	49	57	64	63	61	65	63	62	61	65.2	100.9																						
9-Oct	76	58	54	59	59	50	53	46	49	40	26	21	14	8	7	5	5	5	15	8	12	13	35	44	31.8	76.3																						
10-Oct	37	6	18	6	N	N	N	N	N	N	N	7	1	14	22	4	26	N	N	N	N	N	N	N	--	37.2																						
11-Oct	N	N	N	N	N	N	N	N	28	13	11	11	11	9	9	11	7	5	5	5	5	6	6	5	--	28.2																						
12-Oct	5	5	5	5	8	6	7	5	1	0	1	2	3	3	3	5	4	3	4	3	4	5	8	4	4.2	8.4																						
13-Oct	7	8	8	6	5	6	7	6	6	8	6	9	5	2	4	3	3	2	4	3	4	2	1	0	4.8	9.4																						
14-Oct	1	2	1	0	0	1	1	1	1	0	1	3	1	4	3	6	23	4	2	2	5	2	2	1	2.9	22.6																						
15-Oct	2	1	1	3	3	6	6	2	13	18	11	14	13	7	3	3	3	1	0	0	0	0	0	0	4.6	18.2																						
16-Oct	1	1	2	2	4	4	7	12	14	13	12	13	7	6	26	33	4	6	6	6	9	7	6	7	8.6	32.8																						
17-Oct	6	7	6	6	7	7	39	55	32	1	47	49	0	39	30	16	0	1	3	2	0	2	0	1	14.8	55.0																						
18-Oct	0	1	1	3	2	3	3	1	4	3	3	6	9	17	5	7	5	8	7	5	4	4	2	2	4.4	17.0																						
19-Oct	2	0	1	1	0	1	4	4	5	4	2	3	N	N	32	8	4	2	1	5	3	2	3	3	4.0	31.7																						
20-Oct	3	2	4	3	3	2	2	3	2	2	2	2	1	2	2	2	2	6	3	5	2	1	2	2	2.6	5.8																						
21-Oct	2	2	2	2	5	2	2	2	2	2	1	2	1	1	2	2	1	2	1	2	2	0	0	1	1.8	5.2																						
22-Oct	4	1	0	0	1	1	2	4	4	6	2	4	3	3	2	3	5	5	9	6	5	4	5	3	3.3	9.2																						
23-Oct	2	2	1	2	2	2	1	3	3	3	2	0	4	1	1	2	3	2	2	2	3	4	2	3	2.2	3.8																						
24-Oct	0	0	0	0	1	1	1	1	2	2	1	1	2	2	2	3	3	3	2	4	5	4	5	4	2.0	5.3																						
25-Oct	5	4	3	4	4	4	4	8	6	6	7	2	2	M	12	11	11	11	3	6	1	3	4	2	5.3	12.1																						
26-Oct	3	2	2	1	1	2	3	9	13	13	5	3	5	9	11	7	3	4	5	6	7	6	6	6	5.4	13.1																						
27-Oct	8	6	5	3	3	3	3	5	3	3	3	10	12	5	6	6	4	5	9	14	9	12	2	2	5.8	14.1																						
28-Oct	7	13	11	3	9	9	9	5	8	8	5	6	7	7	9	10	10	10	7	6	9	6	7	7	7.8	12.9																						
29-Oct	7	7	7	6	7	4	4	2	4	1	2	2	1	2	3	5	5	5	4	4	1	4	5	4	4.0	7.5																						
30-Oct	4	3	6	6	5	5	7	10	12	10	7	12	6	3	6	6	6	6	7	8	9	12	10	10	7.4	12.4																						
31-Oct	10	12	10	12	14	18	N	14	13	M	31	32	20	17	17	19	12	14	15	14	15	10	10	9	15.3	32.1																						
																								10.5	9.2	8.7	8.3	8.7	9.1	10.1	10.8	12.7	11.1	11.2	12.0	7.9	9.2	12.7	11.1	10.6	10.6	10.4	9.3	9.8	9.6	11.3	10.3	Diurnal Average
																								94.3	100.9	80.4	77.9	80.3	80.8	76.4	73.4	87.2	71.6	46.8	48.7	31.4	38.7	64.1	77.5	77.0	116.8	118.2	70.2	72.4	78.3	79.9	76.8	Diurnal Maximum

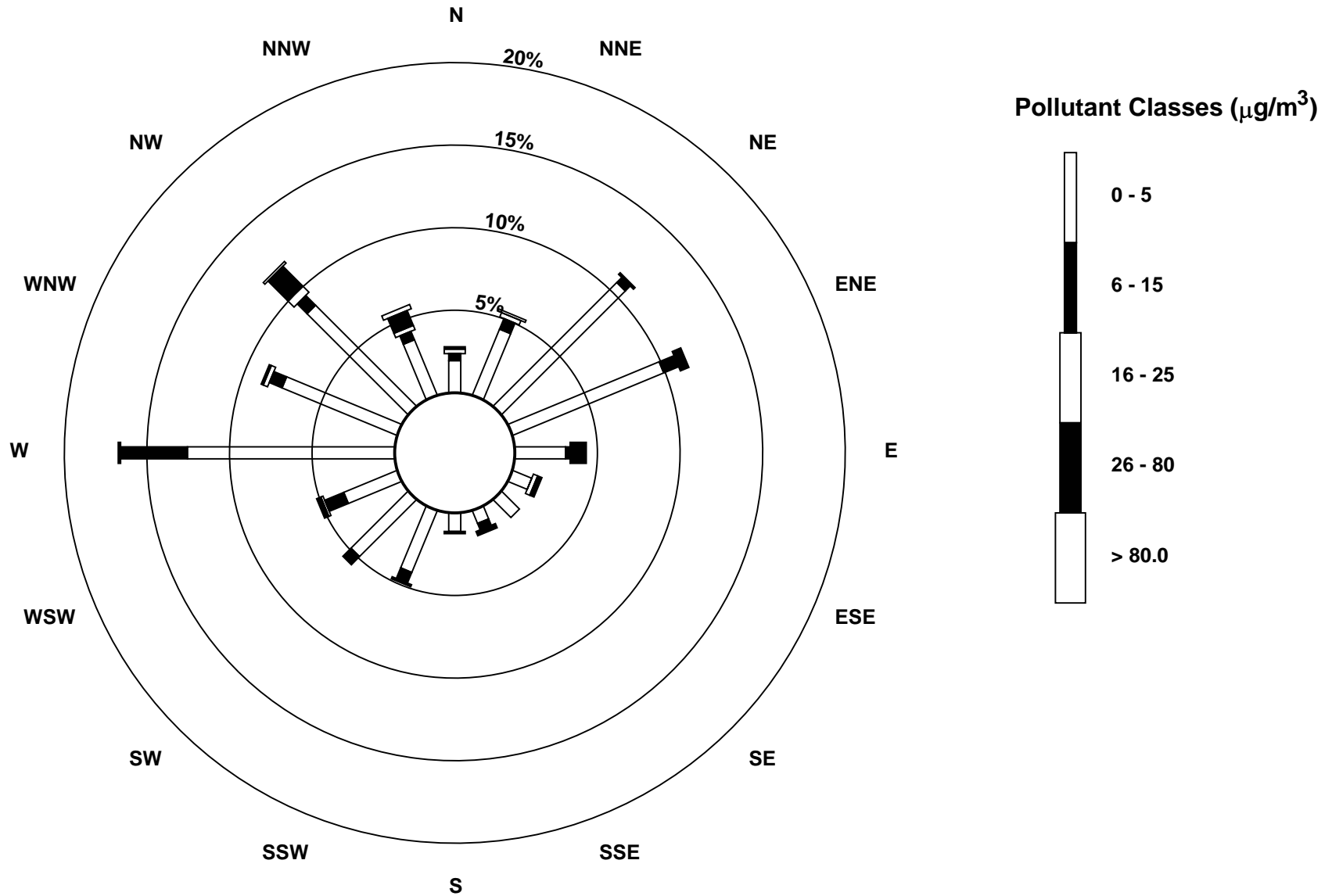
M - Maintenance      N - Not Valid





**Pollutant Rose**

**Particulate Matter 2.5 (PM<sub>2.5</sub>) - μg/m<sup>3</sup>**  
**Evergreen Park - October 2012**



## Hourly Averages

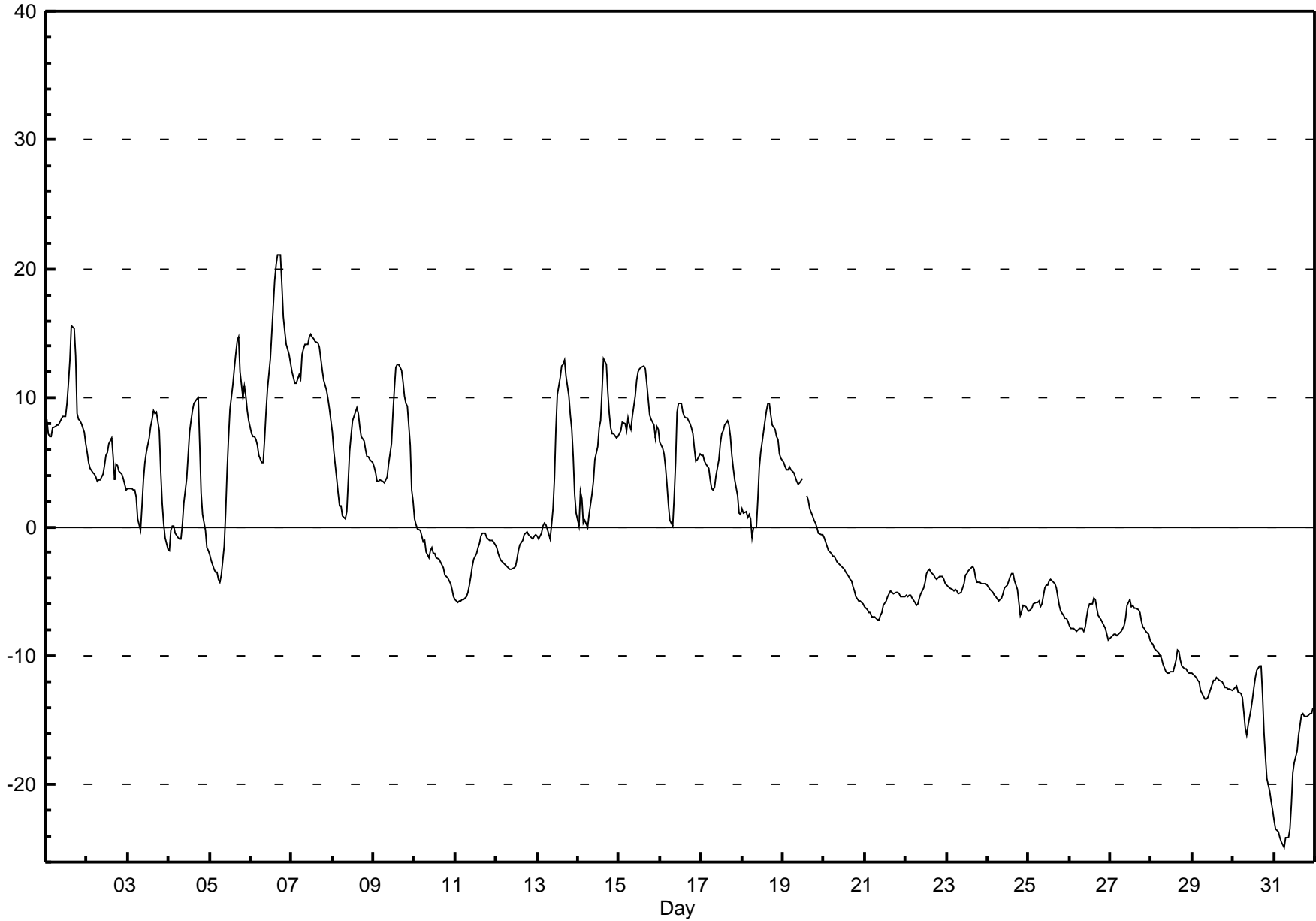
External Temperature (ET) - °C

Evergreen Park - October 2012

Number of Exceedences (AAAQO):		1-hr: 0		24-hr: 0		Hours in Service:		744																																								
Maximum Value: 21.1 °C on Oct 6 18:00		Maximum Daily Average: 12.5 °C on Oct 7				Hours of Data:		742																																								
Minimum Value: -25 °C on Oct 31 07:00		Minimum Daily Average: -19.3 °C on Oct 31				Hours of Missing Data:		2																																								
Maximum Diurnal Average: 2.8 °C at hour 16		Minimum Diurnal Average: -2.5 °C at hour 8				Hours of Calibration:		0																																								
Monthly Average: -0.27 °C		Percentiles: P <sub>1</sub> = -23.4 P <sub>10</sub> = -11.2 Q <sub>1</sub> = -5.7 Median = -0.6 Q <sub>3</sub> = 6.5 P <sub>90</sub> = 10.1 P <sub>99</sub> = 15.5				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-Oct	8	7	7	7	8	8	8	8	8	8	9	9	10	11	13	16	15	13	9	8	8	8	7	6	9.1	15.6																						
2-Oct	6	5	5	4	4	4	4	4	4	4	5	6	6	6	7	5	4	5	5	4	4	4	3	3	4.5	6.8																						
3-Oct	3	3	3	3	3	2	1	0	2	4	5	6	7	8	8	9	9	9	7	4	2	0	-1	-2	3.9	9.0																						
4-Oct	-2	0	0	0	-1	-1	-1	-1	0	2	4	6	7	8	9	10	10	10	6	3	1	0	-2	-2	2.8	10.0																						
5-Oct	-2	-3	-3	-3	-4	-4	-4	-4	-2	1	4	7	9	11	12	13	14	15	12	10	11	10	9	8	4.9	14.7																						
6-Oct	7	7	7	7	6	6	5	5	7	9	11	13	15	17	19	20	21	21	19	16	15	14	13	13	12.2	21.1																						
7-Oct	12	12	11	11	12	11	13	14	14	14	15	15	15	15	14	14	14	13	12	11	11	10	9	8	12.5	14.9																						
8-Oct	7	6	4	3	2	2	1	1	1	4	6	7	8	9	9	9	8	7	7	6	5	5	5	5	5.2	9.2																						
9-Oct	5	4	3	4	4	3	3	4	4	5	6	9	11	12	13	13	12	11	10	10	9	6	3	2	6.9	12.6																						
10-Oct	1	0	0	0	-1	-1	-1	-2	-2	-2	-2	-2	-2	-2	-3	-3	-3	-3	-4	-4	-4	-4	-5	-5	-2.3	0.7																						
11-Oct	-6	-6	-6	-6	-6	-6	-5	-5	-5	-4	-3	-2	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-3.0	-0.5																						
12-Oct	-2	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-2	-1	-1	-1	0	0	-1	-1	-1	-1	-1	-1.9	-0.4																						
13-Oct	-1	-1	0	0	0	0	0	-1	0	1	4	8	10	12	12	13	13	12	10	9	8	5	3	1	4.9	13.0																						
14-Oct	0	3	2	0	0	0	1	2	3	3	5	6	8	8	11	13	13	10	9	8	7	7	7	7	5.6	13.0																						
15-Oct	7	7	8	8	7	8	8	8	9	10	11	12	12	12	12	12	11	10	9	8	8	7	8	8	9.2	12.5																						
16-Oct	6	6	6	5	3	2	1	0	2	5	9	10	10	9	9	8	8	8	8	7	6	5	5	6	6.0	9.6																						
17-Oct	6	6	5	5	5	4	3	3	3	4	5	6	7	7	8	8	8	7	6	5	4	2	1	1	4.9	8.2																						
18-Oct	1	1	1	1	1	1	-1	0	0	2	5	6	7	8	9	10	10	9	8	8	7	7	6	5	4.6	9.5																						
19-Oct	5	5	4	4	5	4	4	4	4	3	3	4	N	N	2	2	1	1	1	0	0	0	-1	-1	2.5	5.0																						
20-Oct	-1	-1	-2	-2	-2	-2	-2	-2	-3	-3	-3	-3	-3	-4	-4	-4	-4	-5	-5	-5	-6	-6	-6	-6	-3.5	-0.9																						
21-Oct	-6	-6	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-6	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-6.0	-5.0																						
22-Oct	-5	-5	-5	-5	-6	-6	-6	-6	-6	-5	-5	-4	-4	-3	-3	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4.6	-3.3																						
23-Oct	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-4	-4	-4	-3	-3	-3	-3	-4	-4	-4	-4	-4	-4	-4	-4.3	-3.0																						
24-Oct	-5	-5	-5	-5	-5	-5	-6	-6	-6	-5	-5	-5	-4	-4	-4	-4	-4	-5	-6	-7	-7	-6	-6	-6	-5.2	-3.6																						
25-Oct	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-4	-4	-4	-4	-4	-5	-5	-6	-7	-7	-7	-7	-7	-5.7	-4.0																						
26-Oct	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-7	-6	-6	-6	-6	-6	-6	-7	-7	-7	-8	-8	-8	-9	-7.3	-5.5																						
27-Oct	-9	-8	-8	-8	-8	-8	-8	-8	-8	-7	-6	-6	-6	-6	-6	-6	-6	-7	-7	-8	-8	-8	-8	-9	-7.5	-5.6																						
28-Oct	-9	-9	-9	-10	-10	-10	-10	-11	-11	-11	-11	-11	-11	-11	-10	-10	-10	-10	-11	-11	-11	-11	-11	-11	-10.5	-9.0																						
29-Oct	-11	-12	-12	-12	-12	-13	-13	-13	-13	-13	-13	-13	-12	-12	-12	-12	-12	-12	-12	-12	-13	-13	-13	-13	-12.3	-11.4																						
30-Oct	-13	-13	-12	-13	-13	-13	-14	-16	-16	-15	-14	-13	-13	-12	-11	-11	-11	-11	-13	-16	-18	-19	-21	-21	-14.7	-10.8																						
31-Oct	-23	-23	-24	-24	-24	-25	-25	-24	-24	-23	-21	-19	-18	-17	-16	-15	-15	-15	-15	-15	-15	-15	-15	-14	-19.3	-14.0																						
																								-1.2	-1.4	-1.6	-1.8	-1.9	-2.2	-2.4	-2.5	-2.1	-1.2	-0.1	0.8	1.5	2.0	2.5	2.8	2.7	2.1	1.1	0.3	-0.2	-0.7	-1.3	-1.6	Diurnal Average
																								12.0	11.5	11.2	11.2	11.8	11.4	13.4	13.8	14.2	14.1	14.8	14.9	15.0	17.1	19.0	20.3	21.1	21.1	18.7	16.3	15.1	14.2	13.4	12.7	Diurnal Maximum
N - Not Valid																																																

**Hourly Averages**

**External Temperature (ET) - °C**  
**Evergreen Park - October 2012**



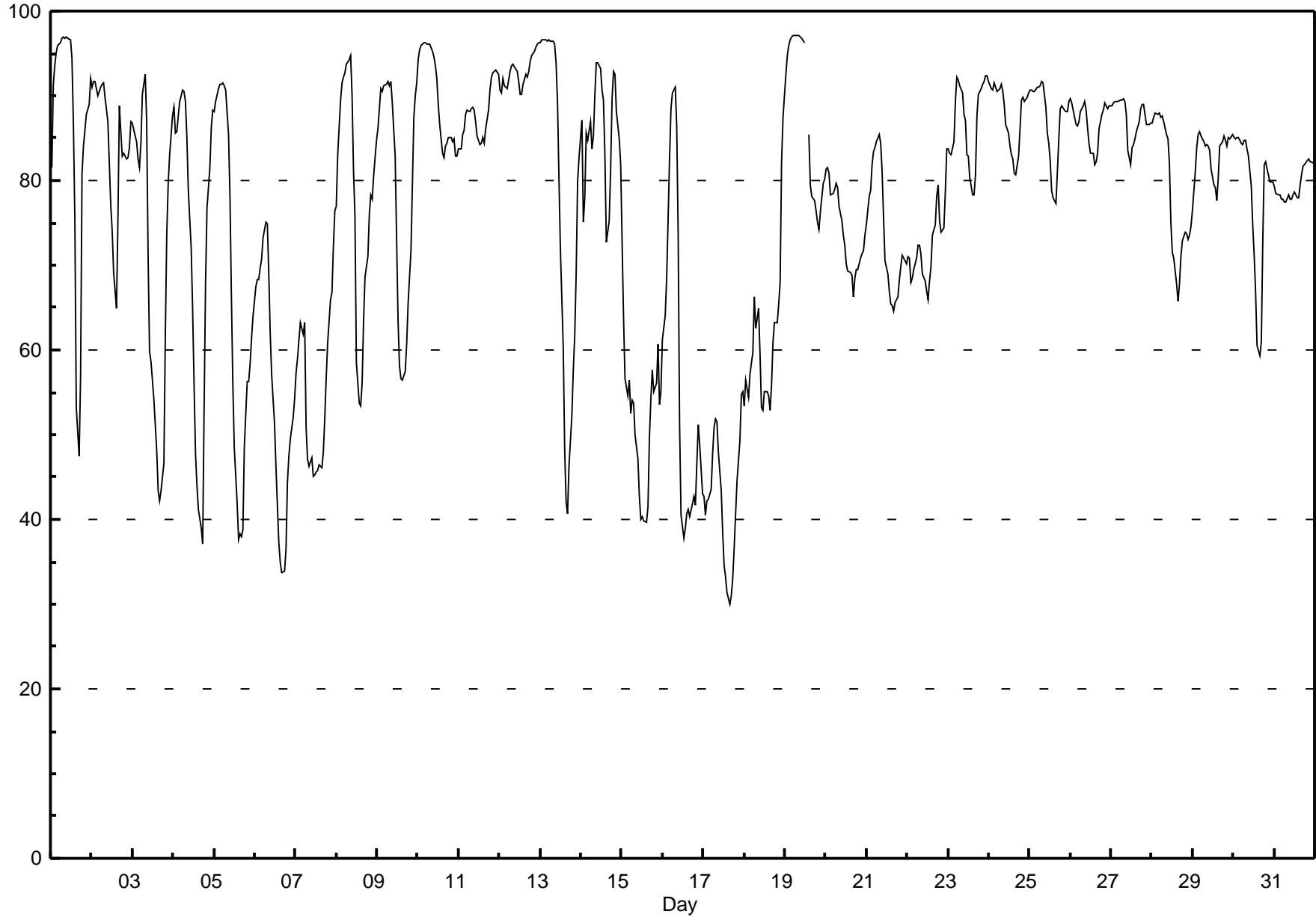
## Hourly Averages

Relative Humidity (RH) - %  
Evergreen Park - October 2012

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0		Hours in Service: 744																			Daily Average		Daily Maximum			
Maximum Value: 97.2 % on Oct 19 07:00		Maximum Daily Average: 92.8 % on Oct 12																			Hours of Data: 742		Daily Maximum			
Minimum Value: 30 % on Oct 17 16:00		Minimum Daily Average: 42.4 % on Oct 17																			Hours of Missing Data: 2		Daily Maximum			
Maximum Diurnal Average: 84.2 % at hour 7		Minimum Diurnal Average: 63.3 % at hour 16																			Hours of Calibration: 0		Daily Maximum			
Monthly Average: 75.97 %		Percentiles: P <sub>1</sub> = 34.6 P <sub>10</sub> = 48.2 Q <sub>1</sub> = 66.3 Median = 82.0 Q <sub>3</sub> = 88.8 P <sub>90</sub> = 92.2 P <sub>99</sub> = 96.9																			Percent Operational Time: 99.7		Daily Maximum			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	81	91	94	95	96	96	97	97	97	97	97	97	94	87	76	53	47	57	81	84	86	88	89	92	86.2	97.0
2-Oct	91	92	92	90	91	91	91	92	90	87	82	77	74	69	65	75	89	86	83	83	82	83	84	87	84.4	91.6
3-Oct	87	85	85	82	82	84	90	92	87	71	60	59	54	51	48	43	42	43	47	62	74	80	83	88	70.0	92.5
4-Oct	89	86	86	88	89	91	91	89	85	79	72	65	56	48	44	41	39	37	53	68	77	82	86	88	72.0	90.7
5-Oct	88	89	91	91	91	92	91	91	85	78	66	56	49	42	38	38	38	39	49	56	56	58	61	64	66.6	91.5
6-Oct	68	68	68	70	71	73	75	75	69	62	57	51	46	42	37	35	34	34	36	44	47	50	52	54	55.0	75.2
7-Oct	57	59	61	63	62	63	51	47	46	47	45	45	46	46	46	46	48	52	57	61	66	67	72	76	55.4	76.4
8-Oct	77	83	90	92	92	93	94	94	95	90	81	76	58	54	53	56	63	69	71	76	78	78	80	85	78.2	94.8
9-Oct	86	88	91	91	91	91	92	91	92	89	83	73	63	58	57	56	57	61	65	69	72	87	90	92	78.6	91.7
10-Oct	94	95	96	96	96	96	96	96	95	95	93	92	89	87	83	83	84	84	85	85	85	85	83	83	89.9	96.3
11-Oct	84	84	85	86	88	88	88	88	89	88	87	85	84	84	85	84	86	88	91	92	93	93	93	93	87.8	93.1
12-Oct	91	90	92	91	91	92	93	94	94	93	93	92	90	90	91	92	92	93	94	95	95	96	96	96	92.8	96.2
13-Oct	96	97	97	97	97	97	96	96	96	94	89	81	72	60	48	42	41	46	52	58	62	69	80	83	76.9	96.7
14-Oct	87	75	78	86	85	87	84	85	90	94	94	93	91	90	83	73	75	81	90	93	93	88	85	82	85.9	94.0
15-Oct	73	64	57	55	56	52	54	54	50	47	43	40	40	40	40	42	50	54	58	55	56	61	54	55	52.0	72.5
16-Oct	61	64	68	75	83	88	90	91	87	74	51	41	38	39	41	41	40	42	43	42	47	51	49	43	57.9	91.0
17-Oct	43	41	42	42	44	48	51	52	52	48	43	38	35	33	31	30	31	33	37	41	44	49	55	55	42.4	55.0
18-Oct	53	56	54	57	58	60	66	63	65	60	53	53	55	55	54	53	56	61	63	63	65	68	82	87	60.9	87.4
19-Oct	93	95	96	97	97	97	97	97	97	97	96	N	N	86	80	78	78	77	75	74	76	80	80	80	88.1	97.2
20-Oct	81	81	81	78	78	79	80	79	77	75	74	72	70	69	69	69	66	68	69	70	71	71	72	74	74.0	81.5
21-Oct	75	78	79	82	83	84	85	85	84	81	76	71	69	67	65	65	65	66	66	68	70	71	71	70	74.0	85.5
22-Oct	71	71	68	68	69	71	72	72	71	69	68	67	66	68	70	74	75	78	79	75	74	74	79	84	72.3	83.6
23-Oct	84	83	83	85	89	92	92	91	90	88	87	83	83	80	78	78	81	88	90	91	91	92	92	92	86.8	92.4
24-Oct	92	91	91	91	91	91	91	91	91	89	87	86	84	83	83	81	81	83	86	89	90	89	90	90	87.9	91.7
25-Oct	91	91	90	91	91	91	91	92	92	89	86	84	82	79	78	77	81	85	88	89	88	88	88	89	87.1	91.7
26-Oct	90	89	87	87	86	87	88	89	89	88	86	84	83	83	82	82	83	86	88	88	89	89	89	89	86.8	89.7
27-Oct	89	89	89	89	89	89	90	90	89	88	84	82	84	84	85	86	87	88	89	89	88	87	87	87	87.4	89.6
28-Oct	87	87	88	88	88	88	88	87	85	85	82	75	72	71	68	66	68	71	73	74	74	73	74	75	78.5	88.0
29-Oct	76	81	84	85	86	85	85	84	84	84	81	79	79	78	80	84	85	85	85	84	85	85	85	85	83.1	85.7
30-Oct	85	85	85	85	84	84	85	85	84	83	79	75	71	67	61	59	61	73	82	82	81	80	80	80	78.2	85.1
31-Oct	79	78	78	78	78	78	77	78	78	78	78	78	79	78	78	79	81	82	82	82	83	82	82	82	79.5	82.5
		80.6	80.9	81.5	82.3	83.0	83.8	84.2	84.1	83.1	80.2	76.0	72.5	68.6	66.1	64.5	63.3	64.6	67.4	71.3	73.7	75.3	77.1	78.7	80.0	Diurnal Average
		96.3	96.5	96.7	96.6	97.0	97.1	97.2	97.1	97.1	97.0	96.8	96.6	94.5	90.2	91.3	92.5	92.1	92.9	94.0	94.8	95.3	95.8	96.1	96.2	Diurnal Maximum
N - Not Valid																										

**Hourly Averages**

**Relative Humidity (RH) - %**  
**Evergreen Park - October 2012**



## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Evergreen Park - October 2012

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	2	5	4	6	10	8	10	10	4	4	4	10	4	10	13	31	45	39	28	11	12	13	17	19	7.2	45.3
Dir	36	82	83	100	117	91	93	119	45	337	336	201	312	313	267	269	267	280	329	264	269	282	321	321	289.8	266.7
2 Spd	16	12	13	15	12	9	13	16	20	14	15	18	20	21	21	16	16	22	23	28	22	18	14	14	15.4	23.5
Dir	331	358	333	333	334	9	30	37	33	18	12	12	19	360	356	11	337	332	335	338	340	339	324	316	353.4	337.7
3 Spd	16	13	12	12	10	7	3	7	6	10	7	12	13	13	12	14	15	10	6	3	3	2	2	1	6.4	16.1
Dir	326	314	309	304	297	258	197	207	241	221	215	219	222	212	218	213	242	231	248	201	206	193	215	44	247.3	325.6
4 Spd	1	4	7	6	7	5	5	6	9	13	13	14	12	12	11	11	4	2	0	1	3	1	1	3	5.6	13.6
Dir	201	203	213	215	216	230	237	264	260	260	265	274	264	270	262	273	300	302	78	200	209	194	64	220	253.6	273.5
5 Spd	3	1	1	4	2	2	1	2	1	5	4	8	12	14	19	14	15	10	5	3	15	18	18	15	7.0	18.6
Dir	214	182	169	204	206	216	184	1	212	202	215	214	221	262	267	283	261	254	206	257	267	269	271	281	255.3	267.5
6 Spd	11	13	10	10	11	7	9	11	8	13	14	5	12	14	12	14	13	14	27	26	23	18	18	18	13.0	27.2
Dir	280	277	296	277	278	276	272	264	281	272	267	255	216	216	243	232	227	240	265	267	263	266	270	283	261.8	264.7
7 Spd	16	18	12	9	13	12	19	19	20	17	25	23	22	18	18	19	22	24	20	14	9	9	11	9	16.0	25.5
Dir	284	291	286	310	310	272	316	309	305	297	329	320	318	324	309	306	320	332	330	321	319	323	341	338	313.9	329.3
8 Spd	3	2	2	1	1	3	1	1	3	6	8	9	6	6	6	6	8	4	2	2	3	1	2	2	1.8	9.3
Dir	306	12	345	300	311	252	249	345	333	318	334	323	1	309	352	84	85	115	167	83	72	167	310	88	354.0	322.6
9 Spd	2	3	1	1	4	3	3	3	3	6	6	5	6	5	9	7	7	4	4	5	13	22	26	22	4.7	26.3
Dir	78	213	98	111	63	96	88	179	54	62	124	150	138	75	50	53	47	47	28	22	31	9	358	340	32.8	358.0
10 Spd	11	12	13	12	13	11	7	14	10	5	6	12	12	12	13	9	8	10	10	7	8	8	9	9	8.5	14.2
Dir	343	352	33	32	41	53	48	59	65	59	68	69	69	70	72	81	84	92	97	101	107	103	112	111	64.8	59.2
11 Spd	8	10	8	10	10	9	10	11	9	6	5	4	5	1	2	1	1	2	4	4	5	7	9	10	4.6	11.3
Dir	103	91	96	103	92	97	108	109	121	150	205	221	214	125	87	205	55	62	47	40	39	44	43	46	92.8	109.5
12 Spd	10	10	8	7	6	7	6	9	10	11	10	9	8	3	4	4	4	5	3	3	3	2	3	1	5.7	10.8
Dir	43	50	57	69	62	57	55	62	69	66	63	57	55	60	19	74	138	131	127	88	75	84	24	161	63.9	65.7
13 Spd	3	4	5	2	1	2	1	1	2	3	1	2	9	30	28	36	33	26	24	15	8	4	3	2	8.9	36.4
Dir	216	236	239	195	41	249	50	182	165	53	63	148	218	246	266	266	266	267	263	258	262	222	87	168	256.4	265.9
14 Spd	4	7	2	5	3	2	3	7	5	8	9	7	5	5	4	4	14	18	9	7	12	8	14	17	4.2	18.5
Dir	198	181	161	66	79	69	127	107	126	119	137	130	125	79	100	80	279	248	197	186	204	195	202	200	177.4	248.4
15 Spd	15	21	20	28	25	23	25	24	16	15	12	19	19	7	5	5	2	4	8	6	5	8	6	5	9.4	27.8
Dir	217	222	234	245	255	247	221	221	247	251	266	260	260	272	242	204	101	87	79	85	84	72	93	77	237.1	245.1
16 Spd	5	3	3	2	1	3	2	4	9	25	35	47	53	62	60	55	54	55	51	45	54	46	42	47	30.6	62.1
Dir	60	77	28	216	23	201	239	225	265	248	253	252	271	266	267	268	265	261	261	261	262	263	266	278	263.5	266.2
17 Spd	46	46	38	40	41	36	31	33	36	39	42	44	39	44	39	33	35	25	15	15	14	3	2	3	30.0	46.1
Dir	279	280	273	265	266	263	262	262	262	264	272	276	274	268	265	271	263	258	235	237	233	209	155	147	266.2	280.0
18 Spd	2	2	4	3	3	3	4	3	3	6	10	3	3	2	5	5	3	3	2	1	1	4	6	10	2.0	10.0
Dir	110	124	98	64	105	102	77	132	116	190	209	174	50	49	41	45	33	65	76	69	74	353	21	43	78.5	208.9
19 Spd	8	9	8	8	7	9	12	9	11	6	3	8	N	N	26	28	23	23	18	22	22	22	22	22	8.8	28.3
Dir	61	68	67	69	56	57	54	61	58	55	21	325	N	N	287	285	291	300	305	293	282	277	305	307	315.6	284.6
20 Spd	25	26	26	24	23	25	24	26	28	30	31	30	31	30	30	28	27	27	23	25	25	24	22	22	26.3	31.1
Dir	314	312	311	312	312	310	309	313	311	318	317	316	318	321	318	317	312	319	316	316	316	318	311	308	314.7	317.5
21 Spd	23	20	20	16	19	20	20	18	20	21	21	25	26	27	26	25	24	22	22	19	20	22	20	20	21.1	26.8
Dir	309	302	299	282	282	278	279	280	281	300	315	300	303	316	311	313	304	289	306	302	298	305	299	297	298.8	315.9
22 Spd	20	22	23	23	25	25	23	23	24	28	26	29	28	27	23	20	18	13	11	11	11	12	11	10	19.8	29.4
Dir	287	285	284	273	269	268	270	274	278	287	286	279	274	284	292	309	316	300	295	303	294	272	290	290	283.8	279.0

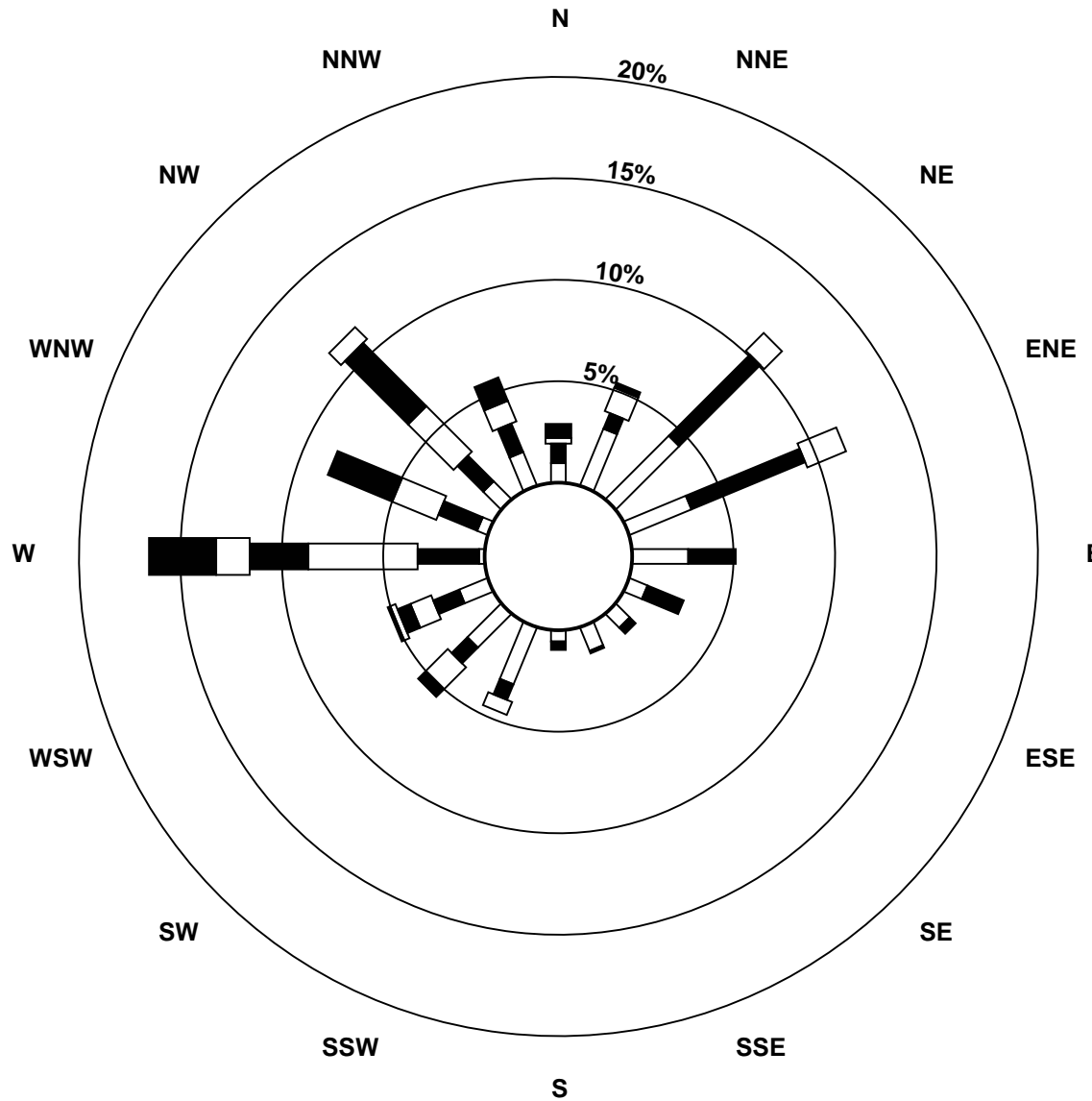
## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Evergreen Park - October 2012

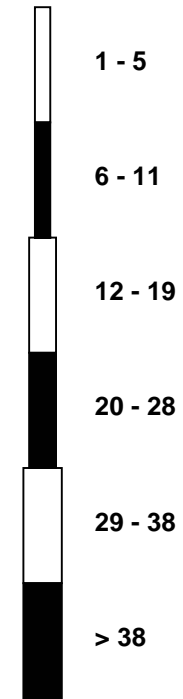
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	10	10	11	11	6	4	5	3	3	4	6	8	9	8	11	9	12	12	7	5	9	8	7	9	6.5	12.2
Dir	302	306	321	332	331	358	28	29	45	39	9	22	31	36	42	38	37	36	26	12	341	349	352	32	8.0	35.8
24 Spd	10	12	8	10	12	9	11	10	9	7	9	10	11	12	11	15	12	5	3	1	2	1	2	3	7.4	15.2
Dir	36	45	47	47	47	42	43	44	52	52	50	51	59	68	66	58	53	38	20	297	341	308	222	212	49.4	58.1
25 Spd	3	2	1	1	2	1	1	1	2	2	6	5	7	10	9	10	9	8	11	7	6	4	3	5	3.9	10.7
Dir	222	228	267	41	227	34	342	11	14	40	357	22	36	59	59	60	61	56	53	55	73	43	32	36	47.6	53.3
26 Spd	3	6	5	3	6	2	3	3	5	8	8	11	10	12	11	13	16	15	13	13	13	12	11	8	8.0	15.8
Dir	25	340	1	343	328	16	81	99	70	66	74	73	58	63	64	69	70	61	61	68	64	62	58	64	59.2	69.8
27 Spd	7	8	8	8	8	6	5	2	2	4	4	6	12	13	14	12	11	10	12	9	9	13	12	10	4.7	14.3
Dir	57	60	64	70	74	75	77	43	357	338	332	299	278	269	276	289	311	288	276	273	276	265	307	299	305.3	276.5
28 Spd	10	11	12	16	13	14	14	16	21	22	24	28	30	25	23	18	14	15	20	16	12	13	14	8	15.7	30.3
Dir	300	278	263	266	268	278	278	287	283	283	279	281	278	279	278	293	312	324	327	324	314	325	341	0	291.7	277.5
29 Spd	5	4	4	4	6	9	9	11	10	11	10	13	10	12	12	8	8	5	5	7	6	6	7	5	7.6	12.7
Dir	19	39	65	46	56	63	60	56	42	35	36	50	35	27	30	34	43	64	43	64	56	41	17	36	43.2	49.7
30 Spd	4	2	2	8	4	6	5	3	6	11	14	13	13	12	10	8	5	2	2	1	3	2	2	2	4.6	14.5
Dir	35	22	327	321	310	310	241	273	248	271	280	269	286	295	292	331	340	50	38	59	41	33	349	325	298.8	280.5
31 Spd	3	2	1	1	0	3	1	2	6	4	2	1	8	7	8	9	12	12	10	11	11	9	11	9	5.2	12.2
Dir	315	339	297	310	289	227	341	199	216	352	322	305	285	295	280	280	270	283	262	257	258	257	245	246	268.8	269.6
Spd	5.7	5.2	4.8	4.6	4.5	3.7	2.8	2.7	4.3	5.9	7.1	7.6	8.4	9.3	9.9	9.2	9.7	8.5	7.2	6.2	6.6	6.3	6.6	6.3	Diurnal Average	
Dir	310.2	305.0	304.3	297.7	299.5	291.2	301.1	297.3	300.4	293.1	296.3	290.1	290.8	292.3	294.0	296.1	292.6	291.8	301.1	294.2	291.2	299.9	310.7	309.3	Diurnal Maximum	
Spd	45.9	46.1	38.1	39.7	41.1	35.9	31.1	33.1	36.1	39.2	42.0	46.7	53.0	62.1	59.9	55.1	54.2	55.2	51.1	45.5	54.3	46.3	42.4	46.5	Diurnal Maximum	
Dir	279.2	280.0	273.3	265.1	265.6	263.0	262.1	261.8	261.9	264.5	272.3	251.9	270.6	266.2	267.2	267.8	264.9	260.8	261.2	260.7	262.5	263.2	266.2	277.7	Diurnal Maximum	
Maximum Speed Value: 62 km/h on Oct 16 14:00		Minimum Speed Value: 0 km/h on Oct 31 05:00										Hours in Service: 744														
Maximum Daily Speed Average: 30.6 km/h on Oct 16		Minimum Daily Speed Average: 1.8 km/h on Oct 8										Hours of Data: 742														
Maximum Diurnal Speed Average: 9.9 km/h at hour 15		Minimum Diurnal Speed Average: 2.7 km/h at hour 8										Hours of Missing Data: 2														
Monthly Average Velocity: 6.34 km/h 297.21 deg		Speed Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 2.1 Q <sub>1</sub> = 4.5 Median = 9.5 Q <sub>3</sub> = 15.7 P <sub>90</sub> = 25.3 P <sub>99</sub> = 51.9										Percent Operational Time: 99.7														
All monthly, daily, and diurnal averages have been calculated using vector methods																										
N - Not Valid																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	25	18	8	9	0	0	60																			
NorthEast	51	76	27	1	0	0	155																			
East	38	39	9	0	0	0	86																			
SouthEast	13	11	0	0	0	0	24																			
South	23	6	2	0	0	0	31																			
SouthWest	33	17	19	6	1	0	76																			
West	8	30	57	36	15	26	172																			
NorthWest	21	23	36	51	7	0	138																			
Total	212	220	158	103	23	26	742																			

**Wind Rose**

**Wind Speed (WS) (km/h)**  
**Evergreen Park - October 2012**



**Wind Speed Classes (km/h)**





# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - October 2012

Maximum Speed: 63 km/h on Oct 16 14:00	Maximum Daily Speed Average: 32.7 km/h on Oct 16	Hours in Service: 744
Minimum Speed: 1 km/h on Oct 24 22:00	Minimum Daily Speed Average: 4.9 km/h on Oct 8	Hours of Data: 742
Maximum Diurnal Speed Average: 17.0 km/h at hour 15	Minimum Diurnal Speed Average: 9.8 km/h at hour 6	Hours of Missing Data: 2
Monthly Average Speed: 12.70 km/h	Percentiles: P <sub>1</sub> = 1.7 P <sub>10</sub> = 3.2 Q <sub>1</sub> = 5.2 Median = 10.1 Q <sub>3</sub> = 16.1 P <sub>90</sub> = 25.9 P <sub>99</sub> = 53.5	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-Oct	3	5	4	7	10	8	10	11	5	6	8	10	8	10	14	32	46	43	29	11	13	14	18	19	14.3	45.7
2-Oct	17	13	13	15	12	10	13	16	20	14	16	19	21	22	22	22	16	17	22	24	22	18	14	14	17.3	23.8
3-Oct	16	14	12	12	10	7	3	7	7	10	8	14	14	15	13	16	16	11	7	3	3	2	2	2	9.3	16.4
4-Oct	2	5	7	6	7	5	5	7	9	14	14	15	13	14	13	12	6	4	1	2	4	3	1	3	7.2	14.6
5-Oct	3	1	1	4	2	2	2	2	2	5	5	9	13	15	20	15	16	11	5	5	15	18	18	15	8.5	19.5
6-Oct	11	13	11	11	11	8	9	11	8	14	15	7	13	15	13	14	14	15	27	26	23	19	18	20	14.4	27.4
7-Oct	18	18	12	10	15	12	21	20	21	19	26	25	22	19	19	19	23	25	21	15	10	9	12	9	17.4	26.4
8-Oct	4	3	2	2	2	4	3	4	5	7	9	10	7	9	9	7	8	5	4	4	3	3	3	4	4.9	10.2
9-Oct	3	4	3	3	4	4	4	6	4	6	6	7	8	7	10	8	7	5	5	5	14	23	27	23	8.2	27.4
10-Oct	12	13	14	12	14	12	7	15	11	5	7	12	12	13	13	10	8	11	10	7	8	8	9	9	10.5	14.7
11-Oct	8	10	8	10	10	10	10	12	10	8	6	5	6	4	5	3	2	2	5	4	5	7	9	11	7.2	11.6
12-Oct	11	10	9	8	6	7	6	10	11	11	10	10	9	5	6	5	5	5	5	4	4	3	4	4	6.9	11.2
13-Oct	4	5	6	4	2	5	3	3	3	5	3	4	10	31	29	37	34	26	24	15	9	5	5	4	11.5	36.7
14-Oct	4	7	3	5	3	4	4	7	6	8	9	8	6	5	5	6	16	20	12	9	12	8	15	17	8.3	20.2
15-Oct	15	22	20	28	26	23	25	24	16	15	13	19	19	8	6	5	4	4	8	7	5	9	7	6	13.9	28.4
16-Oct	5	4	4	3	5	4	4	5	10	25	35	47	54	63	61	56	55	56	51	46	55	47	43	47	32.7	62.7
17-Oct	46	47	39	40	41	36	31	33	36	39	43	44	40	45	40	34	35	25	15	16	14	5	2	3	31.3	46.6
18-Oct	3	3	5	4	5	5	6	4	6	7	10	4	4	3	5	6	3	4	4	3	7	5	6	10	5.0	10.2
19-Oct	8	10	8	8	7	9	12	10	11	6	5	9	N	N	26	29	24	24	19	23	23	23	23	23	15.4	28.9
20-Oct	26	27	27	25	24	26	25	27	29	31	32	31	32	31	31	29	28	28	24	25	26	24	23	23	27.2	32.1
21-Oct	23	20	21	17	19	20	20	18	21	23	22	26	27	28	27	26	25	23	24	20	21	23	21	21	22.4	27.8
22-Oct	21	22	24	23	25	25	23	23	24	28	27	30	29	28	24	21	19	13	12	12	12	13	11	10	20.8	30.4
23-Oct	10	11	12	11	6	5	6	4	4	5	7	8	10	8	12	10	12	13	7	5	9	8	7	9	8.2	12.5
24-Oct	10	12	8	10	12	9	11	10	9	8	9	10	11	12	12	16	13	6	3	2	2	1	2	3	8.5	15.7
25-Oct	3	2	2	2	3	2	2	2	2	3	6	6	7	11	9	11	9	8	11	7	6	4	4	5	5.3	10.9
26-Oct	3	7	5	4	6	3	4	4	5	8	9	11	11	13	12	13	16	15	14	14	13	13	12	8	9.3	16.3
27-Oct	8	8	8	8	8	6	5	3	3	4	5	9	12	13	15	12	12	11	12	9	9	13	12	11	9.1	14.5
28-Oct	10	11	13	16	13	15	14	17	21	22	25	28	31	26	24	19	15	15	20	16	13	13	15	8	17.5	30.8
29-Oct	6	4	4	5	6	9	10	11	10	12	11	13	11	12	13	9	8	6	5	8	6	6	8	5	8.3	13.5
30-Oct	4	3	3	8	6	6	5	4	6	12	15	14	13	13	11	8	5	3	3	2	4	2	2	3	6.5	14.7
31-Oct	4	2	3	3	3	4	5	4	6	4	3	3	9	8	8	10	13	12	10	11	11	9	11	9	6.9	12.6
	10.4	10.9	10.0	10.5	10.4	9.8	9.9	10.7	11.0	12.4	13.5	15.1	16.1	16.9	17.0	16.8	16.5	15.0	13.4	11.6	12.3	11.6	11.8	11.5	Diurnal Average	
	46.4	46.6	38.6	40.0	41.4	36.2	31.2	33.3	36.3	39.5	42.6	47.2	54.1	62.7	60.6	55.7	54.6	55.6	51.5	45.8	54.7	46.6	42.7	47.2	Diurnal Maximum	

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

## Hourly Standard Deviations

Wind Direction (WD) - deg  
Evergreen Park - October 2012

Maximum Value: 95.1 deg on Oct 11 16:00		Hours in Service: 744																									
Minimum Value: 5.3 deg on Oct 13 20:00		Hours of Data: 742																									
Percentiles: P <sub>1</sub> = 6.1 P <sub>10</sub> = 10.4 Q <sub>1</sub> = 14.4 Median = 19.0 Q <sub>3</sub> = 32.7 P <sub>90</sub> = 60.3 P <sub>99</sub> = 88.4		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-Oct	50	24	18	17	17	19	18	28	30	67	76	28	65	23	22	13	7	27	16	16	15	17	15	12	75.9		
2-Oct	16	21	16	12	13	27	17	13	11	17	20	19	17	22	22	20	14	20	10	9	8	12	18	12	27.3		
3-Oct	11	14	13	13	15	20	39	16	25	21	32	38	28	33	33	28	16	25	27	25	11	16	38	44	44.3		
4-Oct	73	48	27	14	6	14	33	32	16	17	20	22	30	38	33	46	80	68	86	78	54	85	77	36	85.6		
5-Oct	24	82	81	20	36	28	47	73	85	22	31	34	26	21	17	26	19	20	19	79	8	8	9	10	85.3		
6-Oct	12	9	15	15	13	22	16	10	30	20	16	54	32	22	23	18	12	16	6	7	7	7	13	31	53.5		
7-Oct	26	18	16	16	22	22	26	15	19	24	16	17	16	15	15	17	10	11	16	23	16	24	16	16	26.0		
8-Oct	40	70	30	87	52	59	75	79	65	35	23	27	41	61	55	24	18	35	53	65	26	82	59	59	86.9		
9-Oct	52	59	86	77	17	41	46	67	51	23	39	64	50	67	31	28	19	21	24	20	12	20	17	12	86.1		
10-Oct	17	22	16	13	13	16	18	17	21	29	25	19	20	20	19	17	15	16	15	17	16	20	14	17	29.3		
11-Oct	18	13	20	14	19	19	18	13	28	44	43	37	35	89	75	95	67	26	27	21	23	15	12	11	95.1		
12-Oct	18	15	23	17	17	19	16	15	18	17	19	18	23	46	38	45	37	41	56	47	47	35	41	92	91.8		
13-Oct	58	41	59	69	75	73	79	91	63	62	77	77	24	8	9	7	8	7	6	5	31	65	68	57	91.2		
14-Oct	62	12	49	12	48	73	41	21	29	14	15	24	32	28	38	53	59	24	65	42	12	12	12	9	73.2		
15-Oct	10	11	7	12	13	11	8	8	7	8	19	15	16	28	38	24	60	35	10	15	38	15	34	29	59.8		
16-Oct	27	56	43	62	82	82	65	86	25	16	9	8	11	8	9	8	7	6	7	7	6	6	7	10	85.8		
17-Oct	9	8	9	7	6	7	6	6	6	7	10	12	12	12	11	13	8	10	12	12	13	73	40	62	72.8		
18-Oct	47	57	23	42	71	66	63	45	61	34	14	51	36	52	20	22	34	33	68	92	82	31	23	9	91.9		
19-Oct	15	16	16	15	14	13	12	18	14	19	60	32	N	N	13	12	15	15	14	16	12	11	16	18	60.4		
20-Oct	13	13	13	13	17	13	13	14	14	14	14	14	15	14	16	16	16	16	16	16	14	14	14	15	16.5		
21-Oct	14	16	16	14	10	11	9	9	9	20	17	18	18	16	17	16	17	15	19	16	17	18	15	16	19.5		
22-Oct	14	12	13	11	9	7	8	10	9	13	13	15	13	17	16	18	18	18	18	17	17	14	16	21	21.4		
23-Oct	17	15	17	14	19	32	17	20	27	30	26	28	22	26	15	22	13	14	18	23	17	15	17	18	31.8		
24-Oct	10	12	20	16	13	17	12	15	19	20	30	24	17	21	34	15	14	24	16	58	47	57	44	18	57.6		
25-Oct	23	33	60	75	48	38	75	61	21	52	30	31	26	18	19	20	14	18	11	15	21	27	20	15	75.2		
26-Oct	37	27	45	59	23	64	37	34	26	22	27	23	19	20	21	17	15	16	14	16	16	18	19	17	64.1		
27-Oct	23	15	18	22	20	28	25	32	40	21	38	43	12	13	11	22	21	23	10	12	16	11	19	19	43.4		
28-Oct	22	12	15	9	11	11	14	15	12	13	10	11	10	10	11	20	21	15	13	17	22	15	14	27	27.1		
29-Oct	33	23	31	22	28	18	19	14	14	17	20	25	27	21	27	22	19	29	30	22	22	27	28	33	33.2		
30-Oct	31	56	58	20	41	17	26	44	17	16	11	15	17	24	21	26	16	61	50	82	43	47	42	39	82.0		
31-Oct	40	47	66	77	90	51	74	89	35	32	61	72	48	33	25	17	17	12	17	11	10	15	9	12	89.7		
		72.7	81.6	86.1	86.9	89.7	82.0	78.5	91.2	85.3	67.5	77.5	76.9	65.1	88.9	74.8	95.1	80.0	68.0	85.6	91.9	81.8	84.6	76.8	91.8		
N - Not Valid																											

PAZA

## Smoky Heights Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Smoky Heights - October 2012

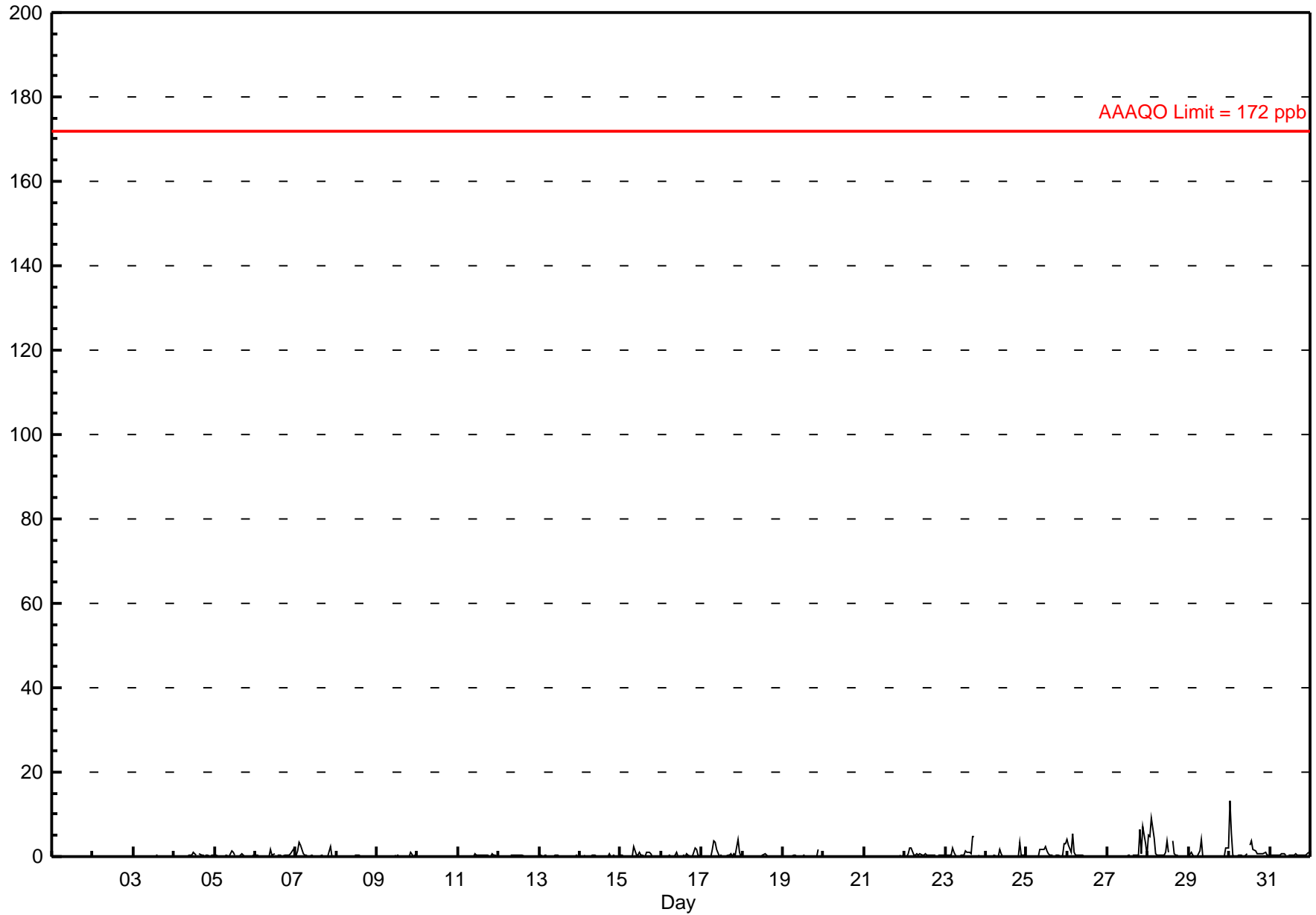
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	687
Maximum Value: 13.3 ppb on Oct 30 01:00	Maximum Daily Average: 1.6 ppb on Oct 28		Hours of Data:	653
Minimum Value: 0 ppb on Oct 19 14:00	Minimum Daily Average: 0.1 ppb on Oct 20		Hours of Missing Data:	34
Maximum Diurnal Average: 0.9 ppb at hour 1	Minimum Diurnal Average: 0.2 ppb at hour 19		Hours of Calibration:	34
Monthly Average: 0.45 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.1 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 1.0 P <sub>99</sub> = 4.9		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	0	0	A	0	0	0	0	0	0	0	0	--	0.4
4-Oct	0	0	0	0	0	0	0	0	0	0	0	1	1	0	A	1	0	0	0	0	0	0	0	0	0.2	1.0
5-Oct	0	0	0	0	0	0	0	0	0	1	1	1	0	A	0	0	1	0	0	0	0	0	0	0	0.3	1.5
6-Oct	0	0	0	0	0	0	0	0	0	2	0	1	A	0	0	0	0	0	0	0	0	1	2	1	0.4	1.7
7-Oct	0	1	3	3	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	2	0	0	0	0.6	3.4
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0.1	0.9
10-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
11-Oct	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.8
12-Oct	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	0.3
13-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.1	0.7
15-Oct	0	0	0	A	0	0	0	0	2	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	0.4	2.2
16-Oct	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	2	2	0	0	0.4	2.2
17-Oct	0	A	0	0	0	0	2	4	3	2	0	0	0	0	0	0	0	1	0	1	0	4	1	0	0.8	4.0
18-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.8
19-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	A	0	0.2	1.5
20-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.1
21-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.4
22-Oct	0	0	1	2	2	0	0	1	0	1	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0.5	2.1
23-Oct	0	0	0	0	2	1	0	0	0	0	0	1	1	1	1	1	5	5	A	0	0	0	0	0	0.9	4.8
24-Oct	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	A	0	0	4	0	0	0	0.4	3.5
25-Oct	0	0	0	0	0	0	0	0	2	2	2	2	1	1	0	0	A	0	0	0	0	0	3	3	0.8	3.2
26-Oct	4	3	1	5	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.7	5.4
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	7	1	7	3	0	0.9	7.0
28-Oct	5	5	9	4	1	0	0	0	0	1	4	1	A	A	4	1	0	0	0	0	0	0	0	0	1.6	9.2
29-Oct	0	1	0	0	0	0	1	4	0	0	0	0	A	0	0	0	0	0	0	0	0	2	2	0	0.5	3.9
30-Oct	13	5	0	0	0	0	0	0	0	0	1	A	3	4	2	1	1	1	1	1	1	1	1	0	1.6	13.3
31-Oct	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	1	0	0	0	0	0	0	1	1	0.4	0.9
	0.9	0.7	0.6	0.6	0.3	0.2	0.2	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.2	0.4	0.5	0.7	0.5	0.4	Diurnal Average	
	13.3	5.3	9.2	5.4	2.1	1.0	1.6	3.9	3.4	1.7	1.8	3.8	2.9	3.8	3.7	1.4	4.7	4.8	0.7	6.5	3.5	7.0	3.2	3.1	Diurnal Maximum	

C - Calibration      NS - Not in service      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb      24-hr 48 ppb      30-day 11 ppb

### Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Smoky Heights - October 2012



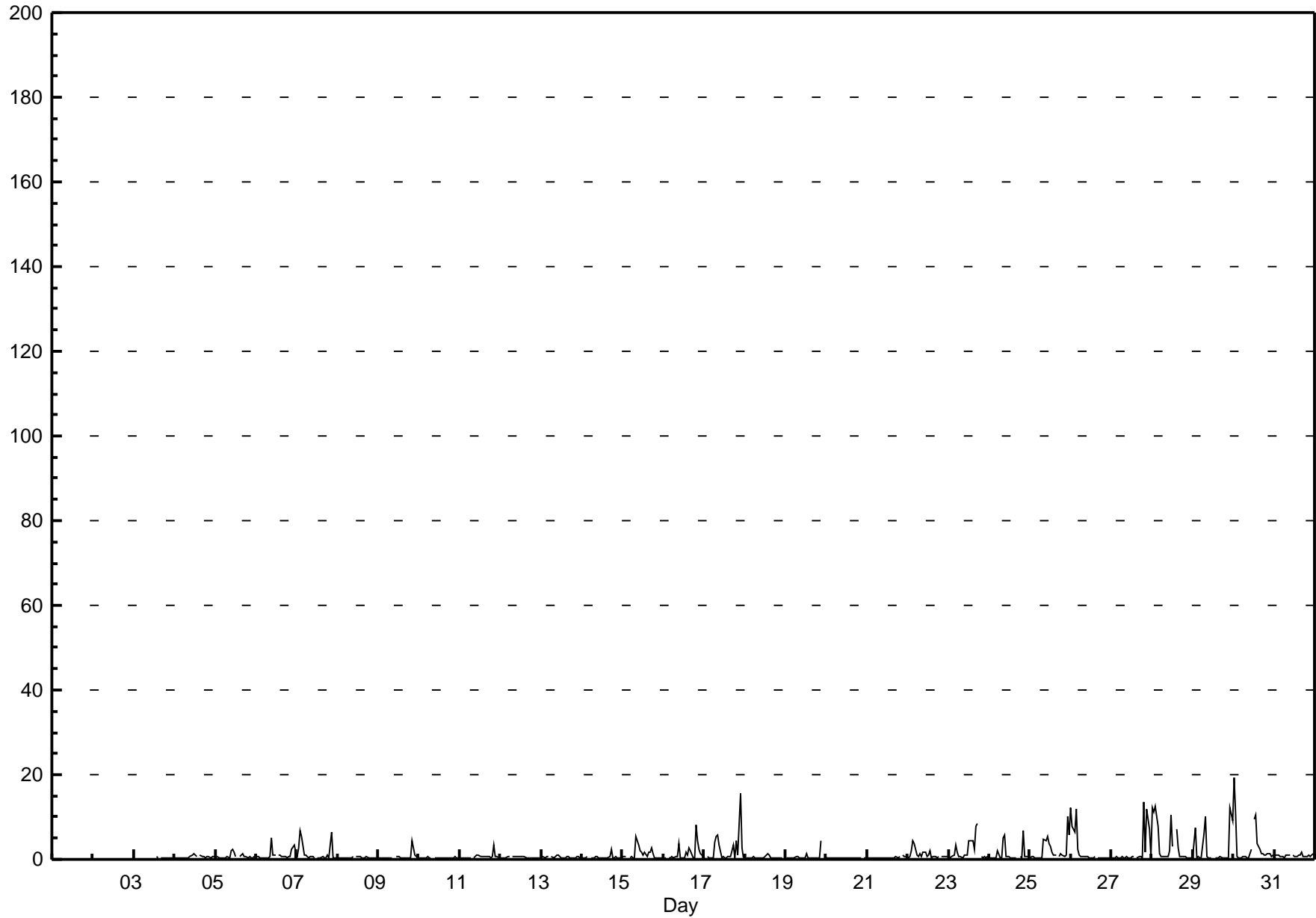
## Hourly Maximums

## Sulphur Dioxide (SO<sub>2</sub>) - ppb Smoky Heights - October 2012

Maximum Value: 19.3 ppb on Oct 30 01:00		Maximum Daily Average: 3.4 ppb on Oct 28		Hours in Service: 687																							
Minimum Value: 0 ppb on Oct 19 14:00		Minimum Daily Average: 0.4 ppb on Oct 20		Hours of Data: 653																							
Maximum Diurnal Average: 2.0 ppb at hour 1		Minimum Diurnal Average: 0.6 ppb at hour 19		Hours of Missing Data: 34																							
Monthly Average: 1.24 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.4 Median = 0.5 Q <sub>3</sub> = 0.8 P <sub>90</sub> = 2.5 P <sub>99</sub> = 12.1		Hours of Calibration: 34																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
2-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
3-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	1	0	A	0	0	1	0	0	0	0	0	--	0.8	
4-Oct	0	0	0	0	0	0	0	0	0	1	1	1	1	1	A	1	1	1	0	1	1	0	1	1	0.6	1.3	
5-Oct	0	1	0	0	0	0	0	1	0	2	2	2	1	A	1	1	1	1	1	0	1	0	0	1	0.8	2.3	
6-Oct	1	1	0	0	0	0	0	0	1	5	1	1	A	1	1	1	1	1	1	1	1	1	2	4	2	1.1	5.1
7-Oct	1	3	7	6	1	1	1	0	1	1	0	A	0	0	0	1	0	0	1	0	6	0	0	0	1.4	6.7	
8-Oct	0	0	0	0	0	0	0	0	0	0	1	A	1	1	1	0	0	1	0	0	1	0	0	0	0.4	0.8	
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	4	1	1	0	0.6	4.3	
10-Oct	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	0.5	
11-Oct	0	0	0	0	0	0	0	A	0	1	1	1	1	1	1	1	1	1	0	1	3	1	1	0	0.7	3.4	
12-Oct	0	0	0	0	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.5	0.7	
13-Oct	0	1	0	1	1	A	1	0	1	1	1	1	0	0	1	1	0	0	0	0	0	1	1	0	0.5	1.0	
14-Oct	0	0	0	1	A	0	0	0	1	1	0	0	0	0	0	1	2	0	0	1	0	0	0	0	0.6	2.5	
15-Oct	1	1	1	A	0	1	0	0	6	3	2	2	1	2	1	2	2	3	1	0	0	0	0	0	1.3	5.6	
16-Oct	0	0	A	0	0	1	0	1	1	4	0	0	0	2	1	3	2	0	0	8	5	3	1	1	1.5	8.2	
17-Oct	0	A	1	0	0	0	4	6	6	3	0	1	0	0	1	1	2	3	0	4	1	15	3	0	2.3	15.5	
18-Oct	A	0	0	0	0	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.5	1.4	
19-Oct	1	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	4	A	1	0.6	4.4	
20-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.5	
21-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	A	1	1	1	0.4	0.9	
22-Oct	0	1	2	4	4	1	1	1	1	2	2	1	1	2	0	1	1	0	1	A	1	1	1	1	1.2	4.5	
23-Oct	1	0	1	1	3	2	1	1	0	1	1	1	4	4	4	2	8	8	A	1	0	1	0	1	2.0	8.4	
24-Oct	0	0	0	0	0	2	0	0	5	6	1	1	0	0	0	0	0	A	1	0	7	1	1	1	1.2	6.9	
25-Oct	0	1	1	0	0	0	0	0	5	4	6	4	3	2	1	1	A	1	1	1	1	1	10	6	2.2	10.3	
26-Oct	12	8	6	12	2	1	1	1	1	1	1	0	0	0	1	A	0	0	0	0	0	0	0	0	2.2	12.2	
27-Oct	0	0	0	1	0	0	1	0	0	1	0	1	1	1	A	0	1	1	0	14	2	12	7	1	1.9	13.6	
28-Oct	12	11	13	8	1	1	1	1	1	1	2	11	3	A	7	3	1	1	1	1	0	0	0	0	3.4	12.7	
29-Oct	0	8	1	1	0	0	6	10	1	0	0	0	A	0	0	0	1	0	0	0	0	1	12	9	2.3	12.1	
30-Oct	19	11	1	0	0	1	1	1	0	0	2	A	10	11	4	2	1	1	1	1	1	1	1	1	3.1	19.3	
31-Oct	1	1	1	1	1	1	0	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	0.9	1.9	
		2.0	1.9	1.4	1.5	0.8	0.6	0.8	1.1	1.2	1.5	1.0	1.2	1.3	1.2	1.1	0.9	1.0	1.1	0.6	1.4	1.4	1.8	1.7	1.1	Diurnal Average	
		19.3	11.4	12.7	11.9	3.9	1.9	6.0	10.2	5.7	5.6	5.6	10.5	9.6	10.7	7.2	2.9	7.8	8.4	1.5	13.6	6.9	15.5	12.1	9.2	Diurnal Maximum	
C - Calibration		NS - Not in service						A - Automated Daily Zero Span																			

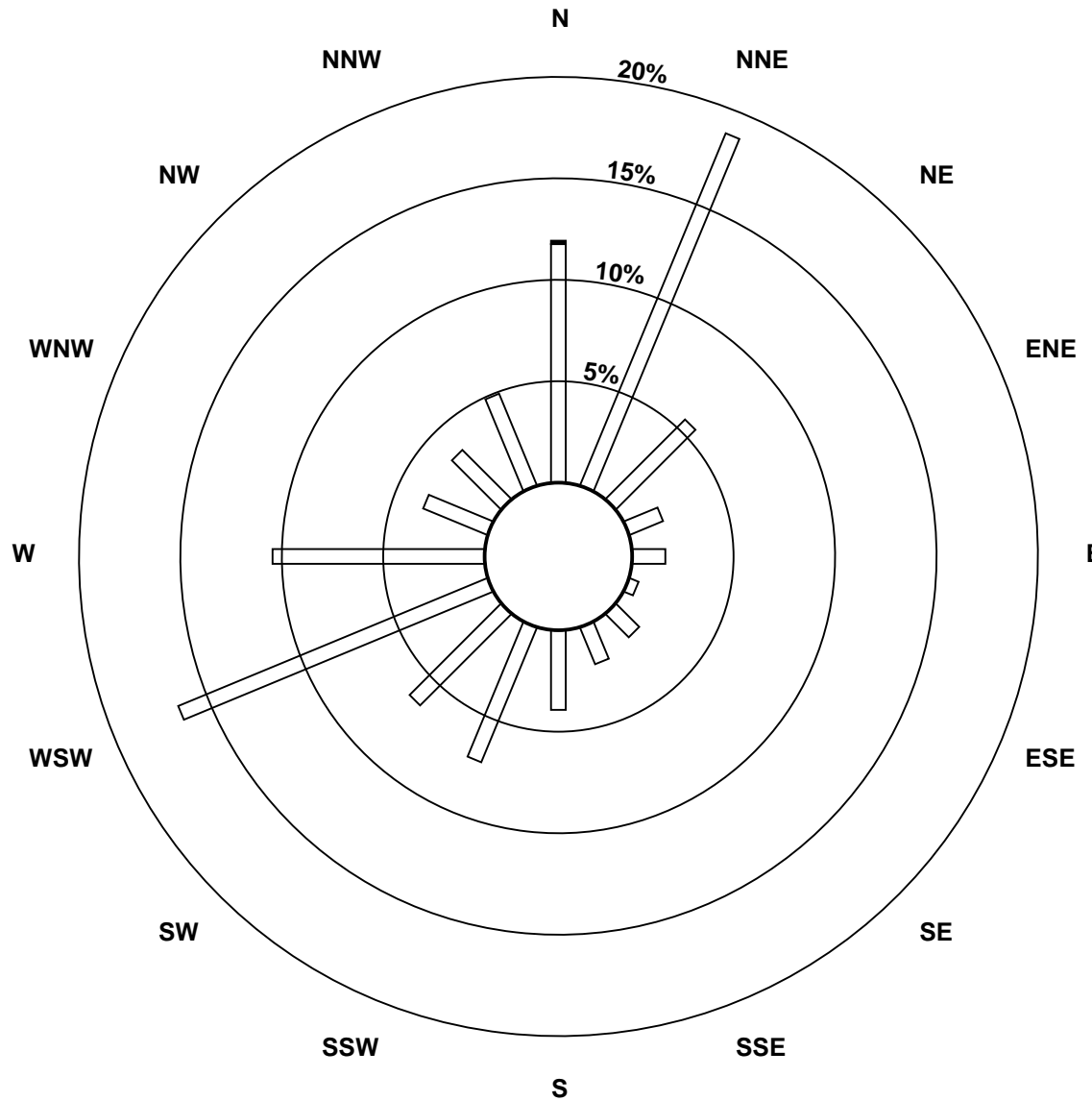
### Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Smoky Heights - October 2012

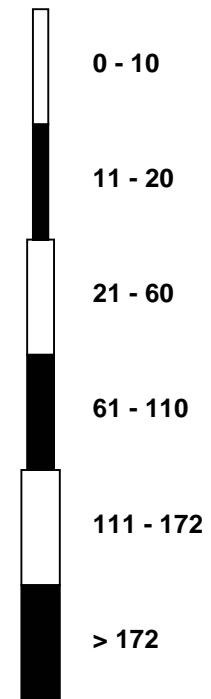


**Pollutant Rose**

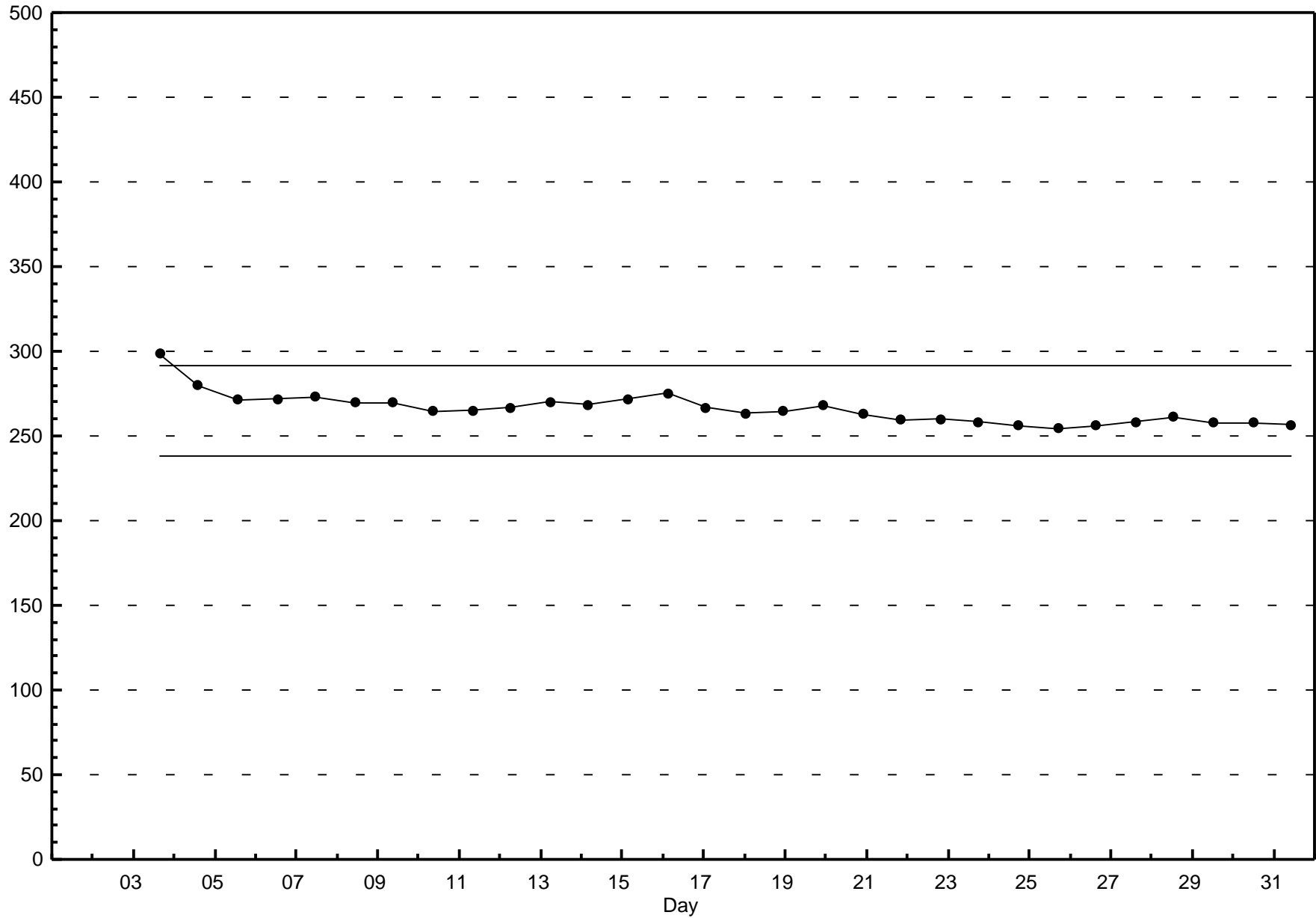
**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Smoky Heights - October 2012**



**Pollutant Classes (ppb)**







## Hourly Averages

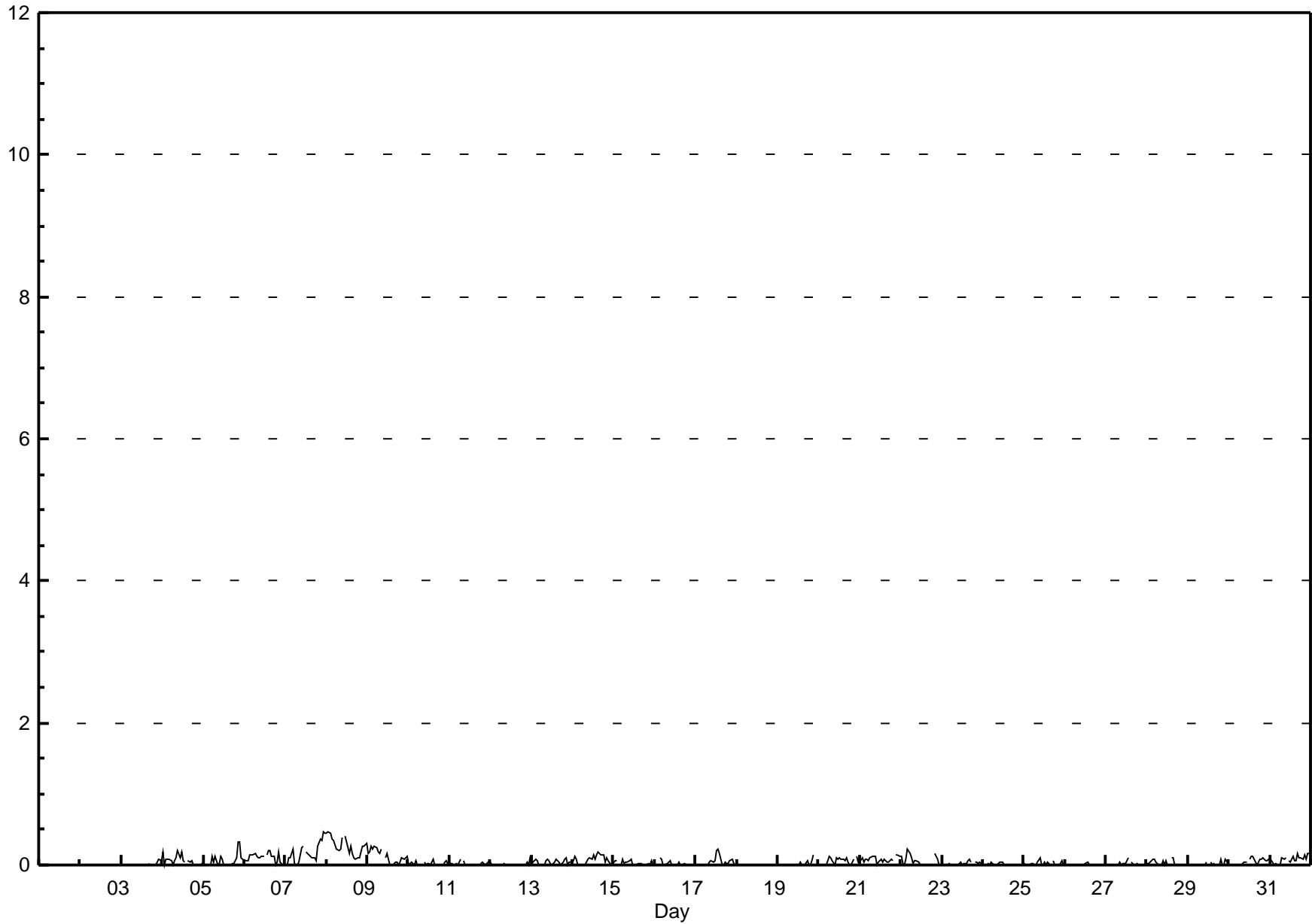
## Total Reduced Sulphur (TRS) - ppb

## Smoky Heights - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	685
Maximum Value: 0.5 ppb on Oct 8 02:00	Maximum Daily Average: 0.3 ppb on Oct 8		Hours of Data:	652
Minimum Value: 0 ppb on Oct 3 19:00	Minimum Daily Average: 0.0 ppb on Oct 18		Hours of Missing Data:	33
Maximum Diurnal Average: 0.1 ppb at hour 21	Minimum Diurnal Average: 0.0 ppb at hour 19		Hours of Calibration:	33
Monthly Average: 0.05 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.0 Q <sub>3</sub> = 0.1 P <sub>90</sub> = 0.1 P <sub>99</sub> = 0.4		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-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	0	A	0	0	0	0	0	0	0	0	--	0.1
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
7-Oct	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
8-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
10-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
12-Oct	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
13-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
16-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
17-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
18-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
19-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
20-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0.1	0.1
21-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.1
22-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.2
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.1
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.0
25-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.1
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.0
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.0	0.1
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.1
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1
30-Oct	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
31-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	Diurnal Average
	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.4	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.3	0.4	0.4	0.5	0.4	Diurnal Maximum	

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



## Hourly Maximums

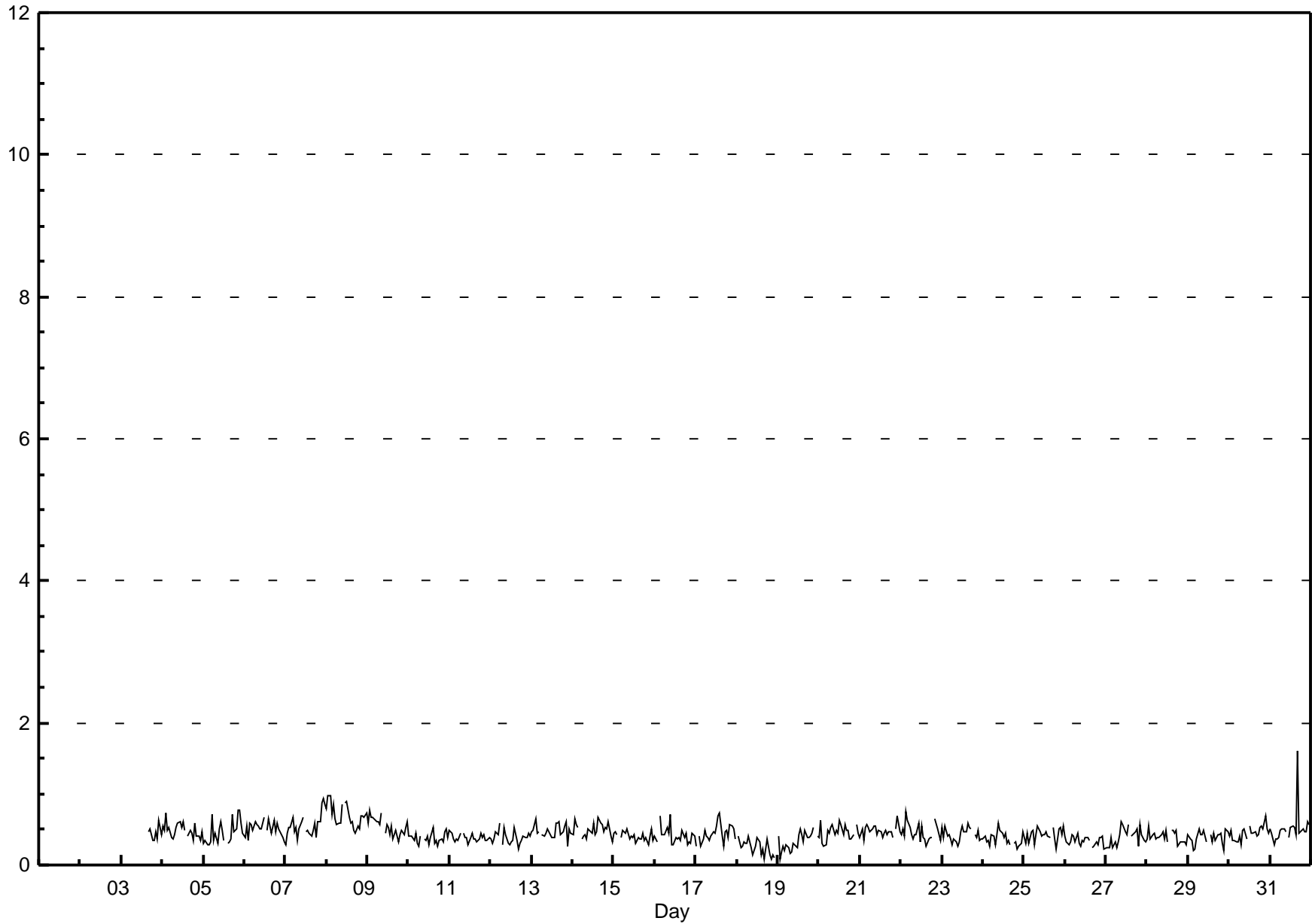
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - October 2012

Maximum Value: 1.6 ppb on Oct 31 17:00		Maximum Daily Average: 0.7 ppb on Oct 8		Hours in Service: 685																						
Minimum Value: 0 ppb on Oct 18 17:00		Minimum Daily Average: 0.2 ppb on Oct 18		Hours of Data: 652																						
Maximum Diurnal Average: 0.5 ppb at hour 23		Minimum Diurnal Average: 0.4 ppb at hour 19		Hours of Missing Data: 33																						
Monthly Average: 0.44 ppb		Percentiles: P <sub>1</sub> = 0.1 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		Hours of Calibration: 33																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	0	A	0	0	1	0	0	0	0	0	1	0	0.6
4-Oct	1	0	1	0	1	0	0	0	1	1	1	1	1	0	A	0	0	0	0	1	0	0	0	0	0.5	0.7
5-Oct	0	0	0	0	0	1	0	0	0	1	1	0	0	A	0	0	0	1	0	1	1	1	1	0	0.5	0.8
6-Oct	0	1	0	1	1	0	1	1	1	1	1	1	A	0	1	1	0	1	0	1	1	0	0	0	0.5	0.7
7-Oct	0	0	1	1	1	0	1	0	1	1	1	1	A	0	0	0	0	1	0	1	1	1	1	1	0.6	0.9
8-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0.7	1.0
9-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	1	1	0.5	0.8
10-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0.4	0.5
11-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
12-Oct	0	0	0	0	0	1	A	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.4	0.6
13-Oct	0	0	1	0	0	A	0	0	0	1	0	0	0	0	1	1	1	0	0	1	1	0	1	0	0.5	0.6
14-Oct	0	1	1	1	A	0	0	0	0	1	0	0	1	0	0	1	1	1	0	1	1	1	0	0	0.5	0.7
15-Oct	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.5
16-Oct	0	0	A	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
17-Oct	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	0.4	0.7
18-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
19-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	A	0	0.3	0.5
20-Oct	0	1	0	0	0	0	0	1	1	0	0	0	1	1	0	1	0	0	0	0	0	A	1	0	0.5	0.6
21-Oct	0	1	0	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0.5	0.7
22-Oct	0	1	0	1	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	A	1	1	0	0	0.5	0.8
23-Oct	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	A	0	0	0	0	0	0.4	0.6
24-Oct	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0.4	0.6
25-Oct	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	1	0	0	0	1	1	0	1	0.4	0.5
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.4
27-Oct	0	0	0	0	0	0	0	0	0	1	1	0	0	1	A	0	0	0	1	0	1	0	0	0	0.4	0.6
28-Oct	0	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	0.6
29-Oct	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.5
30-Oct	0	0	0	0	0	0	0	0	0	1	0	A	1	0	0	0	0	0	1	1	1	1	1	0	0.4	0.7
31-Oct	1	0	0	0	0	0	0	1	1	0	A	0	1	1	1	0	2	0	0	1	0	0	1	1	0.5	1.6
		0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	Diurnal Average	
		0.8	1.0	1.0	0.8	0.9	0.7	0.6	0.6	0.7	0.9	0.7	0.9	0.9	0.7	0.7	1.6	0.7	0.6	0.6	0.8	0.9	0.9	0.9	Diurnal Maximum	
C - Calibration		NS - Not in service						A - Automated Daily Zero Span																		

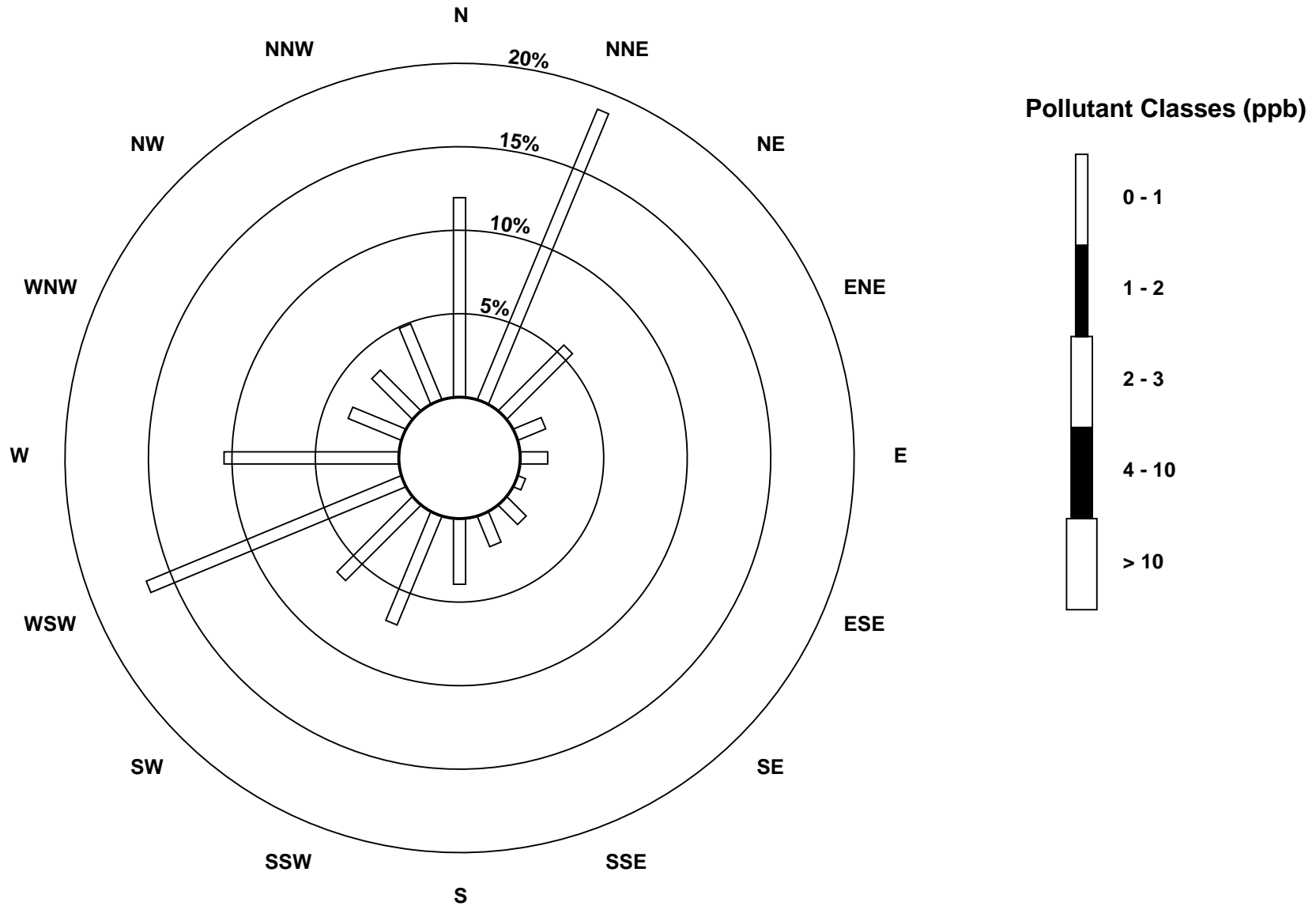
**Hourly Maximums**

**Total Reduced Sulphur (TRS) - ppb  
Smoky Heights - October 2012**



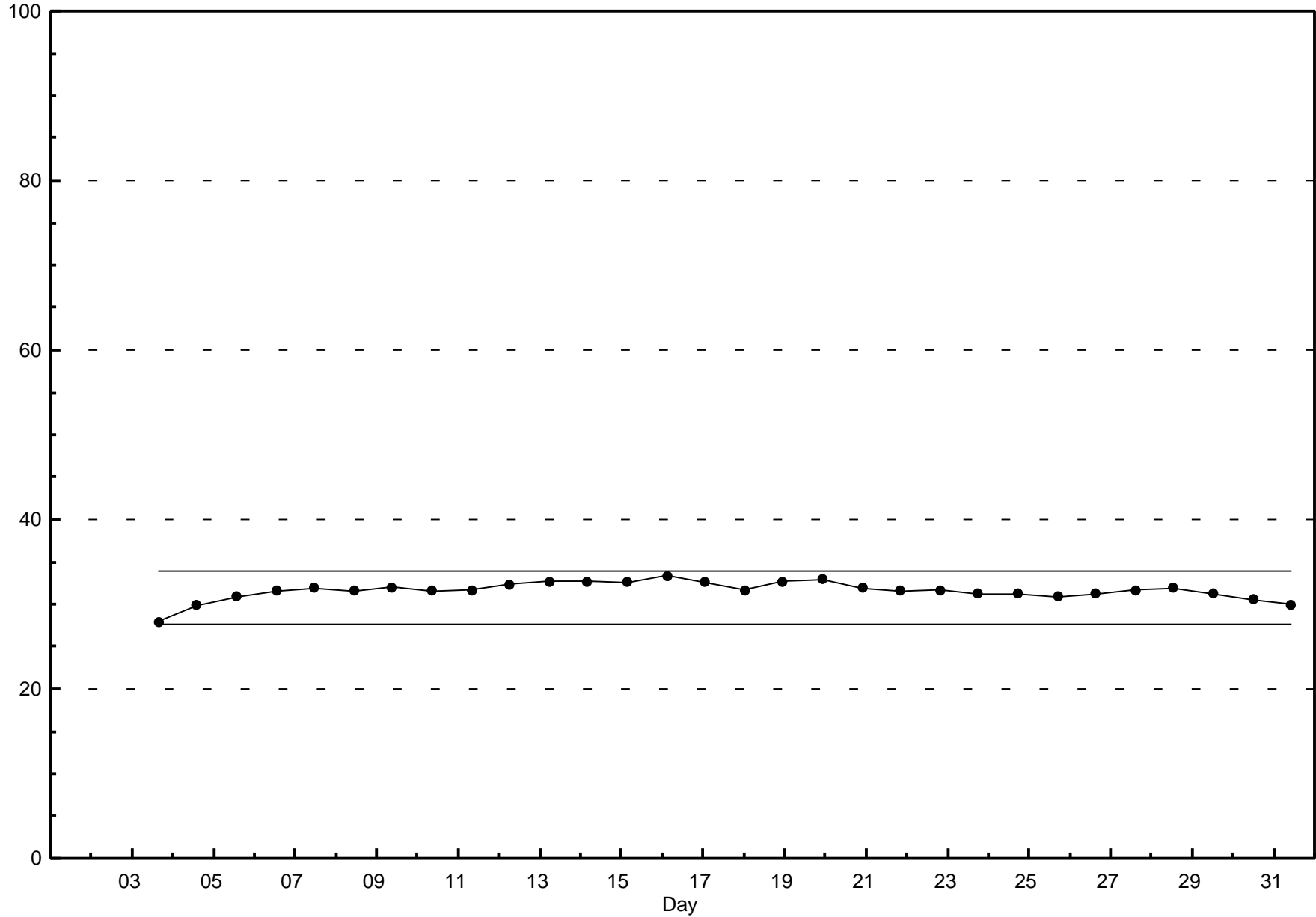
**Pollutant Rose**

**Total Reduced Sulphur (TRS) - ppb**  
**Smoky Heights - October 2012**



### Span Responses

Total Reduced Sulphur (TRS)  
Smoky Heights - October 2012



## Hourly Averages

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

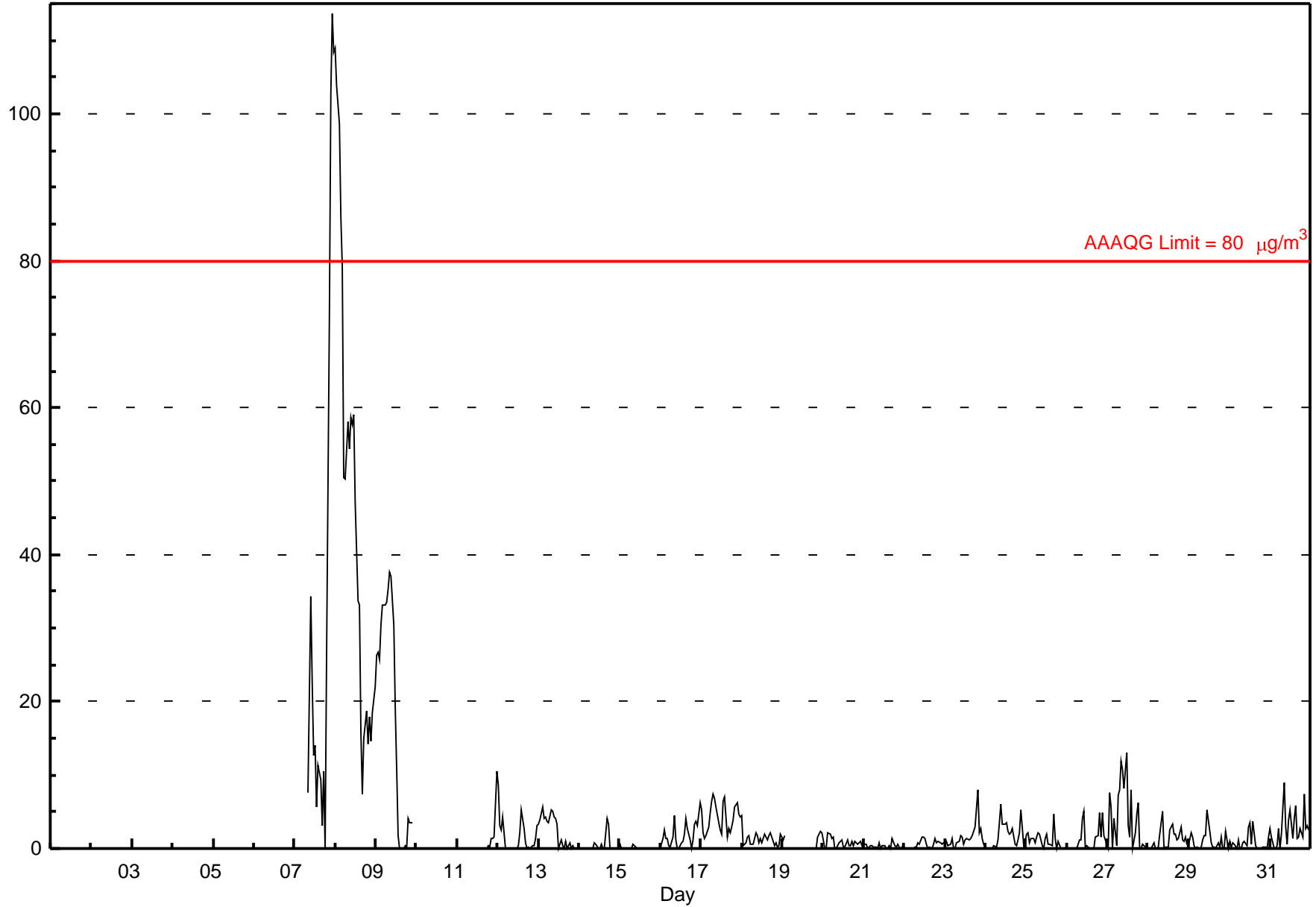
### Smoky Heights - October 2012

Number of Exceedences: 1-hr: 7 24-hr: 1	Hours in Service: 687
Maximum Value: 113.7 µg/m <sup>3</sup> on Oct 7 23:00	Maximum Daily Average: 46.8 µg/m <sup>3</sup> on Oct 8
Minimum Value: 0 µg/m <sup>3</sup> on Oct 7 19:00	Hours of Data: 576
Maximum Diurnal Average: 7.3 µg/m <sup>3</sup> at hour 1	Hours of Missing Data: 111
Monthly Average: 4.86 µg/m <sup>3</sup>	Hours of Calibration: 6
Minimum Daily Average: 0.0 µg/m <sup>3</sup> on Oct 10	Percent Operational Time: 84.7
Minimum Diurnal Average: 1.7 µg/m <sup>3</sup> at hour 19	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.8 Q <sub>3</sub> = 2.8 P <sub>90</sub> = 8.0 P <sub>99</sub> = 97.5	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	--	--
4-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
5-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	M	14	N	N	N	N	N	N	N	--	14.0
6-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
7-Oct	N	N	N	N	N	N	N	N	8	34	22	13	14	6	11	9	3	10	0	26	73	103	114	108	--	113.7
8-Oct	109	104	99	86	79	51	50	58	54	59	58	59	47	34	33	16	7	15	19	14	18	15	19	22	46.8	109.0
9-Oct	26	27	26	30	33	33	33	35	38	37	30	19	11	2	0	0	0	0	4	4	4	M	M	17.9	37.7	
10-Oct	M	M	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
11-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	11	0.6	10.6
12-Oct	9	3	3	4	0	0	0	0	0	0	0	0	0	2	5	3	1	0	0	0	0	0	1	3	1.5	8.6
13-Oct	3	4	6	4	4	4	3	5	5	4	4	3	0	1	0	0	1	0	1	0	0	0	0	0	2.2	5.6
14-Oct	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	4	3	0	0	0	0	0	0	0.4	4.1
15-Oct	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
16-Oct	0	1	3	1	1	0	0	2	5	1	0	0	1	1	2	4	3	1	0	1	3	4	3	6	1.8	6.2
17-Oct	5	2	1	2	3	5	6	7	7	6	3	2	2	6	7	2	3	2	3	4	6	6	5	4	4.2	7.4
18-Oct	5	0	1	2	2	1	1	1	2	2	1	1	1	2	2	1	2	2	0	1	0	0	2	2	1.3	4.6
19-Oct	1	2	M	M	M	M	M	M	M	M	M	M	M	M	A	0	0	0	0	0	0	2	2	2	--	2.4
20-Oct	1	0	0	2	2	1	2	0	0	1	1	1	0	0	1	0	0	1	0	1	1	1	1	0	0.8	2.2
21-Oct	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0.3	1.3
22-Oct	0	0	0	0	0	0	0	0	1	1	2	2	1	0	0	0	0	1	1	1	1	1	1	1	0.5	1.6
23-Oct	1	1	0	1	1	0	0	1	1	2	2	1	1	1	1	1	2	2	3	8	2	3	1	1	1.5	8.1
24-Oct	0	0	0	0	0	0	0	1	4	6	3	3	4	2	2	2	3	1	0	1	2	5	0	1	1.8	6.0
25-Oct	2	2	1	1	1	1	1	2	2	0	0	1	2	1	1	0	5	1	0	1	0	0	0	0	1.1	4.7
26-Oct	0	0	0	0	0	0	0	1	1	4	5	0	0	0	0	0	0	2	2	5	2	5	2	1	1.2	5.0
27-Oct	0	8	6	0	4	0	7	8	12	11	8	13	3	2	8	0	2	5	6	0	0	1	0	0	4.3	13.0
28-Oct	0	0	0	1	0	0	0	2	5	0	0	0	0	2	3	2	2	1	1	3	1	1	2	1	1.2	5.1
29-Oct	0	2	2	0	0	0	0	0	1	2	2	5	2	1	0	0	0	1	0	2	0	0	2	0	1.0	5.3
30-Oct	1	0	1	1	0	1	0	0	1	1	0	3	4	1	4	0	0	0	0	0	0	0	0	2	0.8	3.7
31-Oct	3	2	0	0	0	3	0	2	9	3	1	4	5	1	4	6	1	1	3	1	7	3	3	3	2.7	9.0
	7.3	6.9	6.4	5.9	5.7	4.4	4.6	5.5	6.5	7.3	6.0	5.5	4.1	2.8	3.5	1.9	2.0	2.1	1.7	2.9	4.9	6.1	6.6	7.0	Diurnal Average	
	109.0	103.9	98.6	86.0	79.2	50.6	50.4	58.1	54.4	58.6	57.7	59.0	47.3	33.7	33.0	15.7	14.0	15.0	18.8	25.6	72.7	102.8	113.7	108.4	Diurnal Maximum	

C - Calibration      M - Maintenance      N - Not Valid      NS - Not in service      A - Automated Daily Zero Span  
 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>

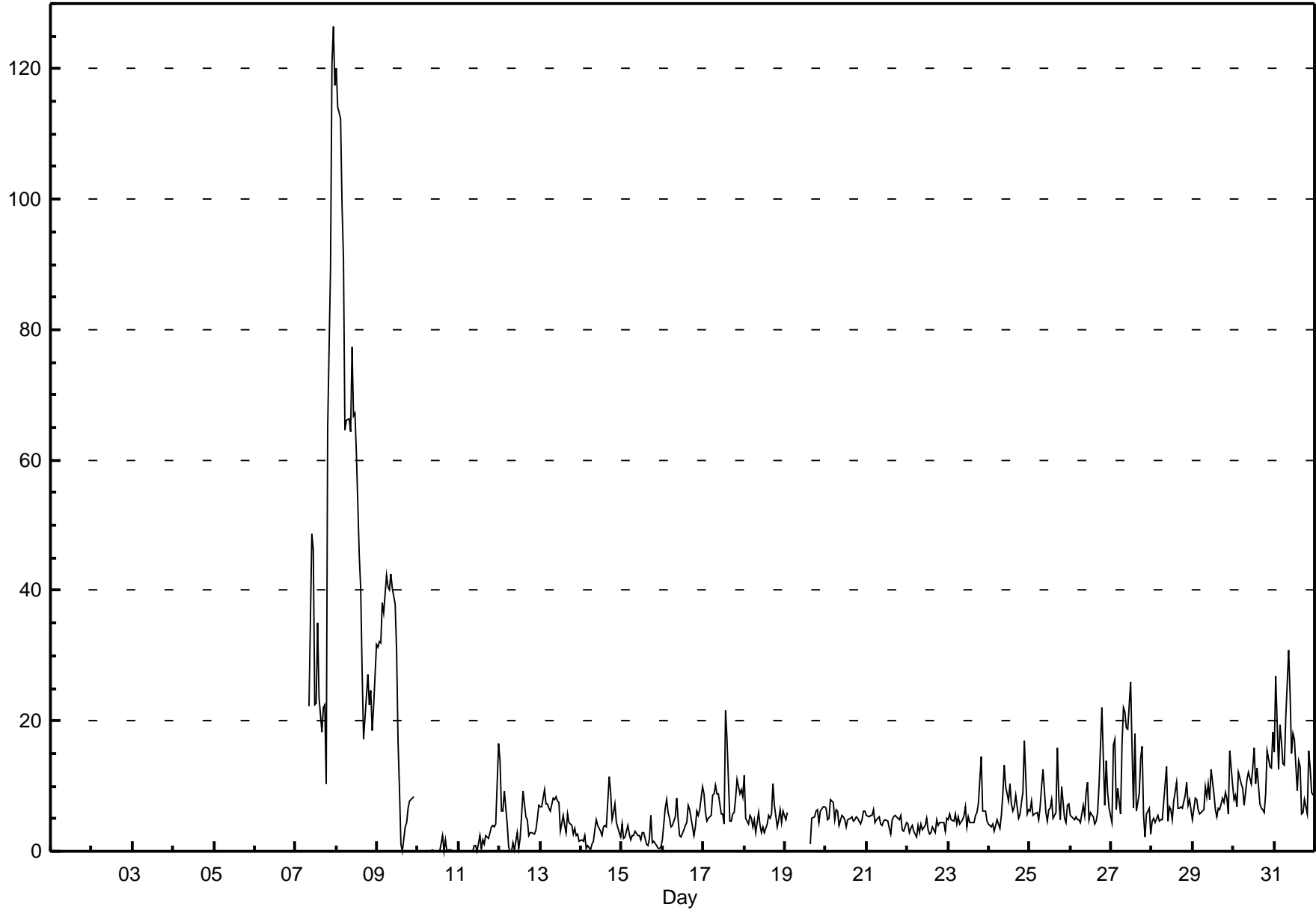
### Smoky Heights - October 2012

Maximum Value: 126.5 µg/m <sup>3</sup> on Oct 7 23:00	Maximum Daily Average: 57.0 µg/m <sup>3</sup> on Oct 8	Hours in Service: 687
Minimum Value: 0 µg/m <sup>3</sup> on Oct 9 16:00	Minimum Daily Average: 0.2 µg/m <sup>3</sup> on Oct 10	Hours of Data: 576
Maximum Diurnal Average: 13.2 µg/m <sup>3</sup> at hour 10	Minimum Diurnal Average: 6.1 µg/m <sup>3</sup> at hour 16	Hours of Missing Data: 111
Monthly Average: 10.22 µg/m <sup>3</sup>	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 1.7 Q <sub>1</sub> = 3.9 Median = 5.6 Q <sub>3</sub> = 8.8 P <sub>90</sub> = 20.4 P <sub>99</sub> = 111.8	Hours of Calibration: 6
		Percent Operational Time: 84.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	--	--
4-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
5-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	M	33	N	N	N	N	N	N	N	--	33.0
6-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
7-Oct	N	N	N	N	N	N	N	N	22	49	46	23	23	35	24	18	22	22	10	65	90	121	127	118	--	126.5
8-Oct	120	114	112	99	91	65	66	66	64	77	67	67	61	45	40	28	17	21	27	23	25	19	22	32	57.0	120.0
9-Oct	31	32	32	38	37	42	41	40	43	40	38	31	17	10	1	0	4	4	7	8	8	8	M	M	23.2	42.5
10-Oct	M	M	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0.2	2.5
11-Oct	0	0	0	0	0	0	0	0	0	1	1	0	2	0	2	1	2	2	3	4	4	4	4	17	2.0	16.6
12-Oct	14	6	6	9	4	1	0	0	1	0	3	1	2	5	9	5	5	3	3	3	3	3	5	7	4.1	14.0
13-Oct	7	7	10	7	7	7	6	8	8	8	8	8	3	6	4	3	6	4	4	3	3	2	3	1	5.5	9.5
14-Oct	2	1	2	0	1	0	1	1	3	5	4	3	2	4	4	4	12	9	5	6	7	4	3	2	3.6	11.5
15-Oct	4	2	2	4	3	2	3	3	3	3	2	2	3	3	1	1	2	6	1	1	1	0	1	1	2.2	5.6
16-Oct	2	7	8	6	5	4	4	5	8	5	3	2	3	4	4	7	6	4	2	4	6	6	6	10	5.1	10.0
17-Oct	9	6	5	5	5	9	9	10	9	9	6	6	4	22	17	5	5	6	6	8	11	9	10	8	8.2	21.5
18-Oct	12	5	4	5	5	4	5	3	6	4	3	4	3	4	6	5	6	10	7	4	5	6	4	6	5.2	11.6
19-Oct	5	6	M	M	M	M	M	M	M	M	M	M	M	M	A	1	5	5	6	6	4	6	7	7	--	6.9
20-Oct	7	5	5	8	7	5	6	6	4	5	5	5	4	5	5	5	5	5	5	5	4	5	6	6	5.4	7.8
21-Oct	5	5	6	5	6	4	5	5	4	4	5	5	5	3	3	5	5	5	5	5	5	3	3	4	4.7	6.4
22-Oct	4	3	3	4	3	2	4	3	4	3	4	5	3	3	3	4	3	5	4	4	4	4	3	5	3.7	5.1
23-Oct	5	6	5	5	6	4	5	4	5	6	7	4	5	4	4	4	5	6	7	15	6	6	6	5	5.6	14.7
24-Oct	4	4	4	3	4	5	3	5	9	13	10	8	10	7	6	7	9	5	6	8	9	17	6	6	7.0	16.9
25-Oct	6	8	6	6	6	5	7	10	12	6	5	6	7	8	5	6	16	8	5	10	5	4	7	7	7.1	16.0
26-Oct	5	5	5	5	5	5	4	7	6	9	11	5	6	5	4	5	6	10	22	14	7	14	9	7	7.5	22.0
27-Oct	4	16	17	6	10	6	16	22	21	19	19	26	16	7	18	6	9	14	16	6	2	6	7	3	12.2	26.0
28-Oct	5	5	4	5	5	5	5	8	13	5	7	6	5	8	11	7	7	7	7	9	11	7	8	6	6.8	13.1
29-Oct	5	8	8	6	6	6	6	10	8	10	8	12	9	6	5	7	6	8	8	9	8	6	15	10	8.0	15.5
30-Oct	8	9	7	12	10	10	7	9	11	12	10	13	16	10	13	7	7	6	6	9	15	13	13	18	10.5	18.3
31-Oct	15	27	12	19	17	14	13	20	31	24	15	18	17	9	14	13	6	6	8	6	15	13	9	9	14.6	30.8

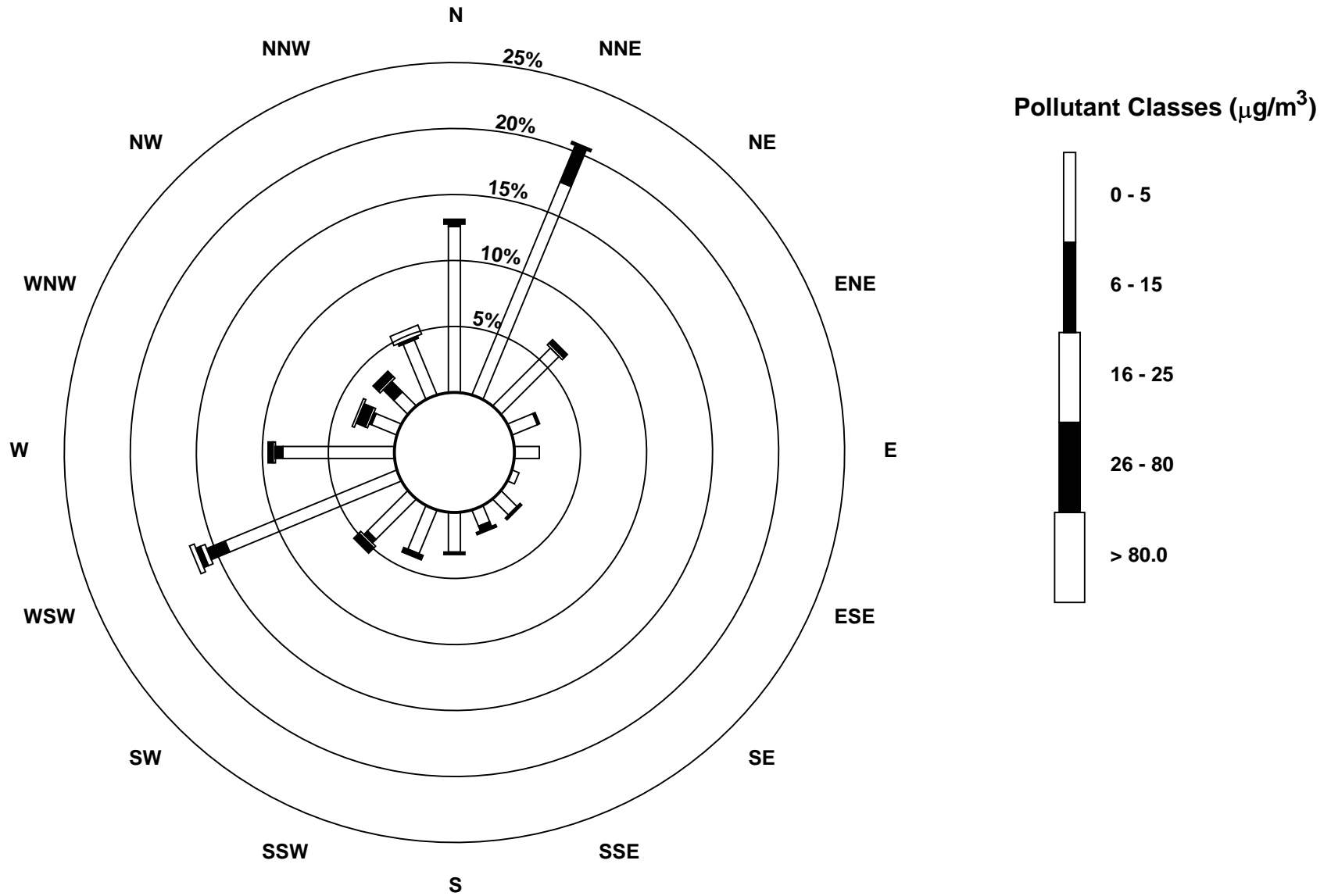
12.1	12.5	11.5	11.3	10.6	8.8	9.4	10.7	12.3	13.2	11.9	10.8	9.4	8.9	8.6	6.1	8.0	7.3	7.2	9.3	10.4	11.5	11.8	12.3	Diurnal Average
120.0	114.1	112.3	99.2	91.0	64.7	66.2	66.3	64.2	77.3	66.7	67.2	61.1	45.3	40.3	27.6	33.0	22.5	27.1	64.7	89.5	120.7	126.5	117.5	Diurnal Maximum

C - Calibration      M - Maintenance      N - Not Valid      NS - Not in service      A - Automated Daily Zero Span



**Pollutant Rose**

**Particulate Matter 2.5 (PM<sub>2.5</sub>) - μg/m<sup>3</sup>**  
**Smoky Heights - October 2012**



## Hourly Averages

External Temperature (ET) - °C

Smoky Heights - October 2012

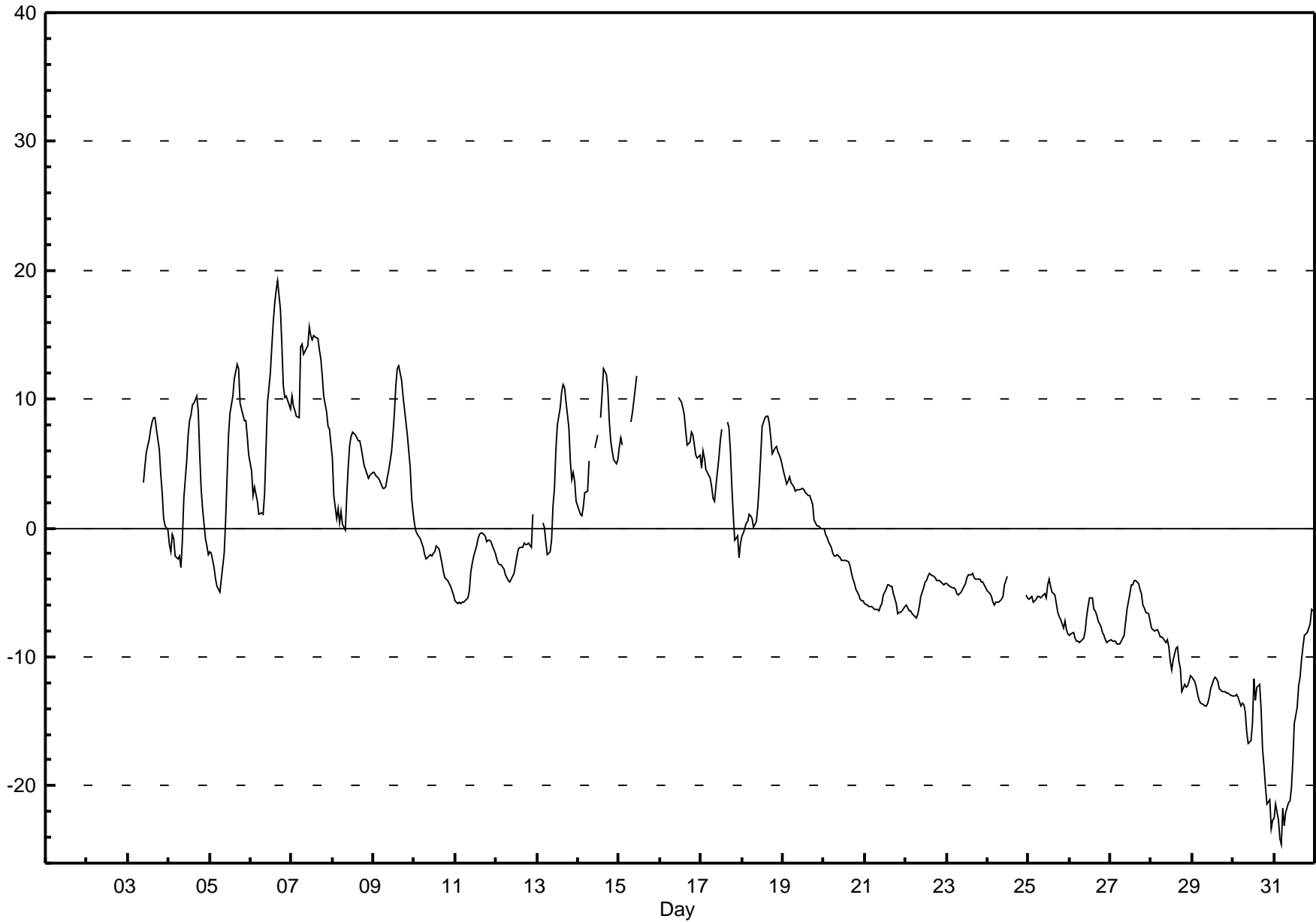
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	687
Maximum Value: 19.2 °C on Oct 6 17:00	Maximum Daily Average: 11.9 °C on Oct 7		Hours of Data:	640
Minimum Value: -25 °C on Oct 31 05:00	Minimum Daily Average: -15.8 °C on Oct 31		Hours of Missing Data:	47
Maximum Diurnal Average: 2.0 °C at hour 16	Minimum Diurnal Average: -3.8 °C at hour 5		Hours of Calibration:	0
Monthly Average: -1.37 °C	Percentiles: P <sub>1</sub> = -22.6 P <sub>10</sub> = -11.8 Q <sub>1</sub> = -6.0 Median = -2.1 Q <sub>3</sub> = 4.6 P <sub>90</sub> = 8.9 P <sub>99</sub> = 15.2		Percent Operational Time:	93.2

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--																						
2-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--																						
3-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	5	6	7	8	8	9	9	8	6	4	3	1	0	0	--	8.6																						
4-Oct	-1	-2	0	-1	-2	-2	-2	-3	-1	2	5	7	8	9	10	10	10	9	6	3	2	-1	-1	-2	2.6	10.2																						
5-Oct	-2	-2	-3	-4	-4	-5	-5	-4	-2	1	4	7	9	10	12	12	13	12	10	9	8	8	7	6	4.0	12.7																						
6-Oct	4	3	3	3	2	1	1	1	3	6	10	12	14	16	17	18	19	17	14	11	10	10	10	9	9.0	19.2																						
7-Oct	10	9	9	9	9	14	14	13	14	14	16	15	15	15	15	15	14	13	12	10	9	8	8	7	11.9	15.6																						
8-Oct	5	3	1	2	0	1	0	0	3	5	6	7	7	7	7	7	7	6	5	5	4	4	4	4	4.2	7.5																						
9-Oct	4	4	4	4	4	3	3	3	4	4	6	7	9	11	12	13	11	10	9	8	7	5	2	1	6.2	12.6																						
10-Oct	0	0	0	-1	-1	-1	-2	-2	-2	-2	-2	-2	-2	-1	-2	-2	-3	-3	-4	-4	-4	-5	-5	-5	-2.4	0.3																						
11-Oct	-6	-6	-6	-6	-6	-6	-6	-5	-5	-3	-3	-2	-1	-1	0	0	0	-1	-1	-1	-1	-1	-1	-2	-2.9	-0.4																						
12-Oct	-2	-3	-3	-3	-3	-4	-4	-4	-4	-4	-4	-3	-2	-2	-1	-1	-1	-1	-1	-1	-1	1	N	0	-2.3	1.0																						
13-Oct	N	N	N	0	0	-1	-2	-2	-1	2	3	6	8	9	11	11	11	10	8	5	4	4	4	2	4.4	11.1																						
14-Oct	1	1	1	2	3	3	5	N	5	N	6	7	N	9	10	12	12	11	8	7	6	5	5	5	5.9	12.3																						
15-Oct	6	7	6	N	N	N	N	8	9	11	12	N	N	N	N	N	N	N	N	N	N	N	N	N	--	11.8																						
16-Oct	N	N	N	N	N	N	N	N	N	N	N	10	10	9	9	8	6	7	7	7	6	6	5	6	--	10.2																						
17-Oct	5	6	5	5	4	4	3	2	2	3	5	7	8	N	N	8	8	6	3	1	-1	-1	-2	-1	3.7	8.2																						
18-Oct	-1	0	0	1	1	1	1	0	1	2	3	6	8	9	9	9	8	7	6	6	6	6	5	5	4.1	8.7																						
19-Oct	4	4	3	4	4	4	3	3	3	3	3	3	3	3	3	3	3	2	1	0	0	0	0	0	2.4	4.3																						
20-Oct	0	0	-1	-1	-1	-2	-2	-2	-2	-2	-2	-3	-2	-3	-3	-3	-4	-4	-4	-5	-5	-5	-6	-6	-2.9	-0.1																						
21-Oct	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-4	-4	-4	-5	-5	-6	-7	-7	-7	-6	-6	-5.8	-4.4																						
22-Oct	-6	-6	-6	-6	-7	-7	-7	-7	-6	-5	-5	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-5.0	-3.5																						
23-Oct	-4	-4	-4	-5	-5	-5	-5	-5	-5	-5	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-5	-4.3	-3.5																						
24-Oct	-5	-5	-5	-6	-6	-6	-6	-6	-6	-5	-4	-4	N	N	N	N	N	N	N	N	N	N	N	-5	--	-3.7																						
25-Oct	-6	-5	-5	-6	-6	-5	-5	-5	-5	-5	-5	-4	-4	-5	-5	-5	-6	-7	-7	-7	-8	-7	-8	-8	-5.8	-3.9																						
26-Oct	-8	-8	-8	-9	-9	-9	-9	-9	-9	-8	-7	-6	-5	-5	-6	-6	-7	-7	-8	-8	-8	-9	-9	-9	-7.7	-5.4																						
27-Oct	-9	-9	-9	-9	-9	-9	-9	-9	-9	-8	-7	-6	-5	-4	-4	-4	-4	-5	-5	-6	-6	-7	-7	-7	-6.7	-4.1																						
28-Oct	-8	-8	-8	-8	-8	-8	-8	-8	-9	-9	-10	-11	-10	-9	-9	-10	-11	-11	-13	-12	-12	-12	-11	-11	-9.8	-7.7																						
29-Oct	-12	-12	-12	-13	-13	-14	-14	-14	-14	-14	-13	-13	-12	-12	-12	-12	-12	-13	-13	-13	-13	-13	-13	-13	-12.7	-11.5																						
30-Oct	-13	-13	-13	-13	-14	-14	-14	-14	-14	-16	-17	-16	-15	-12	-13	-12	-12	-14	-17	-18	-20	-21	-21	-23	-23	-15.8	-11.6																					
31-Oct	-23	-21	-23	-24	-25	-22	-23	-22	-21	-21	-20	-18	-15	-14	-12	-12	-10	-9	-8	-8	-8	-7	-6	-6	-15.8	-6.3																						
																								-2.6	-2.9	-3.1	-3.5	-3.8	-3.6	-3.7	-3.7	-3.0	-2.1	-0.8	0.1	0.8	1.3	1.7	2.0	1.7	1.0	-0.1	-0.9	-1.4	-1.7	-2.3	-2.5	Diurnal Average
																								10.3	9.4	9.1	8.7	8.6	14.0	14.2	13.5	13.7	14.1	15.6	14.9	14.6	16.0	17.4	18.5	19.2	17.0	14.2	11.0	10.1	10.3	9.6	9.2	Diurnal Maximum

N - Not Valid      NS - Not in service

**Hourly Averages**

**External Temperature (ET) - °C**  
**Smoky Heights - October 2012**



## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Smoky Heights - October 2012

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Dir	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2 Spd	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Dir	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3 Spd	NS	NS	NS	NS	NS	NS	NS	NS	NS	18	20	17	15	13	14	15	13	9	7	4	5	5	7	5	--	20.2
Dir	NS	NS	NS	NS	NS	NS	NS	NS	NS	236	239	227	222	206	211	207	187	190	160	165	255	233	220	247	--	239.2
4 Spd	11	9	9	13	13	7	6	5	6	10	22	21	13	16	12	7	3	6	4	19	5	2	3	3	5.5	22.4
Dir	268	198	200	192	179	201	208	197	197	203	181	200	238	241	218	250	295	14	350	11	4	1	316	255	218.1	180.8
5 Spd	6	6	8	9	8	8	9	8	10	10	9	13	17	25	33	35	34	29	25	27	23	14	16	16	15.5	35.0
Dir	217	200	194	206	205	205	211	228	200	211	206	202	226	226	234	236	233	226	234	258	267	269	269	264	232.8	236.3
6 Spd	6	6	8	12	13	11	9	7	8	8	8	7	10	26	23	27	28	22	11	27	32	23	21	21	14.3	31.5
Dir	270	219	246	268	267	244	239	217	218	201	185	171	190	208	202	209	203	178	267	260	259	254	246	249	227.0	258.6
7 Spd	20	16	22	21	17	25	24	23	26	26	31	40	34	33	39	26	23	21	14	11	8	11	13	11	20.1	40.2
Dir	257	260	260	263	262	300	308	314	319	318	322	320	325	316	299	318	315	313	8	351	340	339	343	341	309.7	320.5
8 Spd	6	7	8	9	7	8	6	5	5	3	2	3	6	6	6	4	2	4	8	5	8	6	7	5	4.5	9.0
Dir	344	248	246	290	302	303	289	253	222	290	5	267	281	304	310	289	148	157	233	247	257	257	262	240	271.2	289.8
9 Spd	5	4	0	2	1	4	6	2	4	6	5	4	3	6	7	3	10	10	8	7	13	24	22	16	3.8	23.8
Dir	210	187	204	132	216	220	250	157	54	32	44	50	76	145	144	60	31	27	19	6	340	338	348	3	7.5	337.8
10 Spd	15	17	15	14	13	16	15	11	10	14	15	17	16	14	13	11	10	11	9	8	5	9	12	12	11.2	17.4
Dir	6	4	8	1	17	18	21	31	35	37	39	34	35	38	33	47	56	61	67	99	68	95	94	95	37.9	33.9
11 Spd	13	9	11	11	10	10	9	8	7	13	17	16	11	10	7	5	4	3	4	4	5	7	8	13	5.6	17.4
Dir	103	87	85	93	91	62	61	65	89	131	138	142	146	160	138	169	174	218	264	5	13	14	11	13	99.4	137.8
12 Spd	13	10	9	9	11	10	11	11	12	12	11	10	8	8	6	5	3	6	6	6	8	9	10	11	4.5	12.9
Dir	17	10	8	26	31	28	32	31	31	29	26	29	22	22	21	18	53	180	186	203	228	233	242	233	17.4	16.8
13 Spd	12	11	10	12	13	9	8	9	10	12	11	10	17	19	22	25	18	17	16	12	14	17	15	13	13.3	24.9
Dir	200	208	222	226	217	210	226	217	244	236	234	239	237	240	242	242	243	249	247	257	247	247	254	265	238.0	242.5
14 Spd	14	7	7	7	6	1	7	17	15	14	16	16	19	11	8	6	7	13	8	9	9	13	12	12	8.5	18.6
Dir	256	245	236	242	205	322	131	164	164	160	152	157	171	176	186	233	262	235	182	219	209	201	214	202	193.5	170.6
15 Spd	20	18	17	7	13	24	30	32	27	28	32	32	31	20	15	19	10	2	3	3	7	6	9	9	13.7	32.0
Dir	218	204	213	221	231	242	243	249	257	244	250	257	256	249	240	247	240	194	102	73	44	89	78	52	241.6	256.7
16 Spd	8	2	3	6	4	5	3	6	11	22	38	47	45	43	40	43	46	46	41	31	32	37	36	36	24.3	46.5
Dir	43	220	338	32	337	27	8	260	250	248	246	251	246	251	252	254	259	267	271	261	253	255	256	277	258.5	250.8
17 Spd	32	29	27	29	23	27	26	26	26	27	33	31	30	28	25	27	22	15	15	11	7	8	8	5	21.9	32.7
Dir	277	276	269	268	267	260	251	254	254	256	261	259	262	265	257	252	253	249	239	263	258	263	210	214	259.6	261.2
18 Spd	3	3	6	6	6	13	8	13	11	9	12	10	13	10	4	4	5	3	2	5	2	2	7	8	4.4	13.2
Dir	196	170	176	187	208	173	174	178	185	214	202	204	220	213	169	157	196	254	319	42	53	347	15	28	191.7	177.7
19 Spd	8	10	12	10	14	13	13	13	13	12	11	10	12	12	14	18	19	17	18	18	23	21	N	N	8.1	22.9
Dir	26	25	28	21	30	30	23	26	29	23	17	7	333	305	286	294	285	265	255	271	264	254	N	N	325.5	263.8
20 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
21 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	14	11	10	13	13	13	16	--	16.0
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	282	261	246	248	249	251	260	--	259.8
22 Spd	17	17	16	16	18	20	21	18	20	22	20	18	17	13	14	13	11	12	10	11	11	8	8	6	14.5	21.5
Dir	260	254	255	251	252	248	249	245	243	252	259	261	260	273	282	285	286	287	266	253	268	259	257	267	259.3	252.1

## Hourly Averages

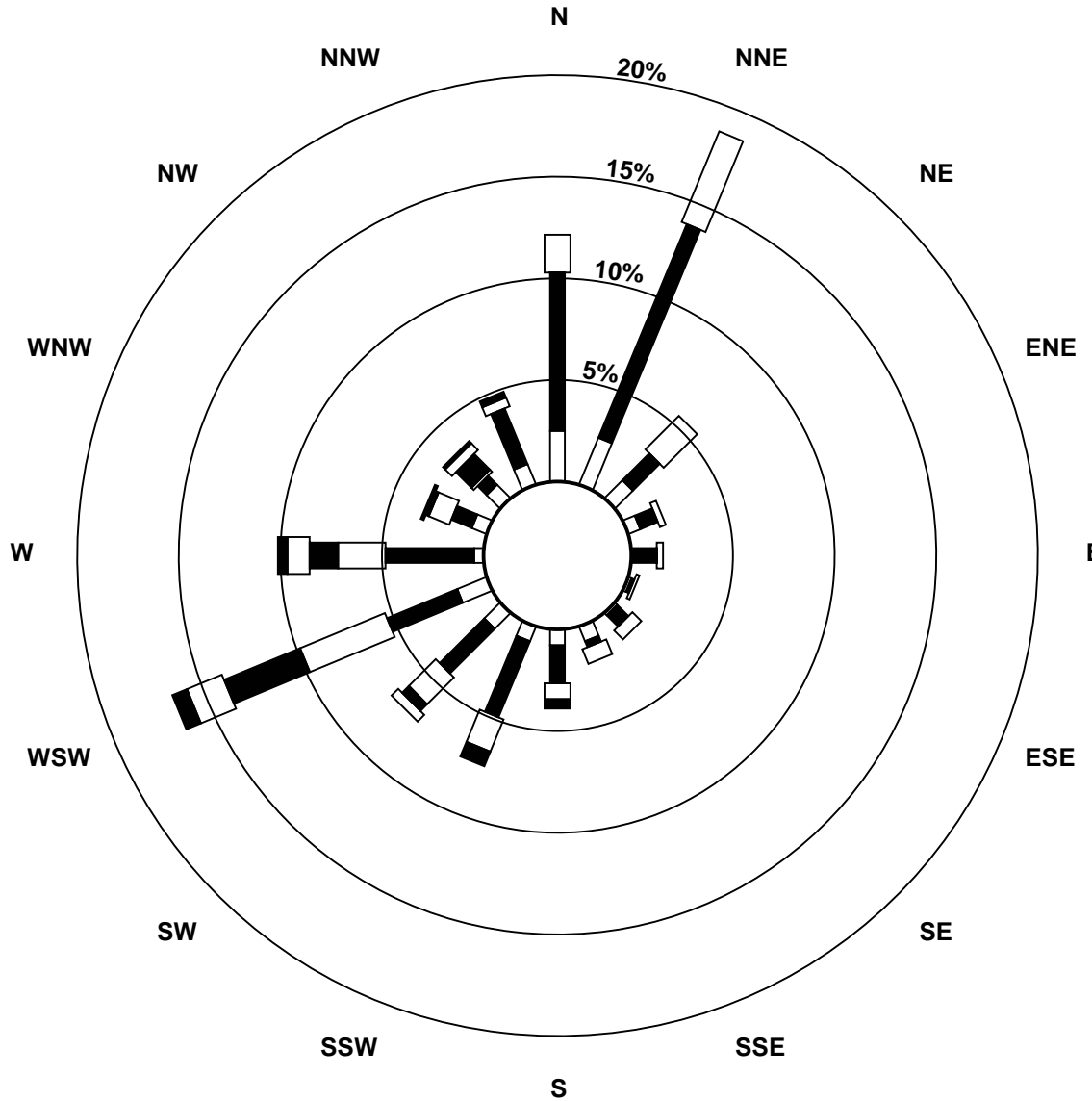
Wind Speed (km/h)  
Wind Direction (deg)  
Smoky Heights - October 2012

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	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	3	5	9	9	8	9	10	11	10	10	7	9	9	10	10	11	11	11	11	10	9	11	12	14	9.3	13.8
Dir	303	343	342	346	347	346	350	351	349	348	347	352	349	358	355	354	345	343	354	13	14	18	12	17	354.8	16.8
24 Spd	15	14	11	11	11	12	12	11	13	13	12	10	9	10	9	10	9	9	10	9	9	9	8	7	10.3	15.2
Dir	22	20	16	8	11	3	357	4	7	7	9	6	14	33	30	28	7	355	349	346	359	16	29	25	10.8	21.9
25 Spd	7	5	6	4	3	6	4	4	3	7	9	8	8	11	10	10	9	9	7	5	4	8	6	5	6.4	10.6
Dir	16	9	17	33	9	38	20	349	350	354	344	354	14	28	26	16	9	4	345	1	336	350	27	3	7.9	28.4
26 Spd	5	5	5	7	6	6	6	6	7	7	7	12	13	14	16	16	16	14	16	13	14	15	14	16	10.4	16.5
Dir	15	14	17	28	27	43	33	32	39	32	33	56	54	55	58	40	43	37	36	32	32	31	32	36	38.3	40.1
27 Spd	16	14	15	15	12	14	11	13	11	10	10	9	6	7	7	8	5	5	7	9	8	8	9	11	9.8	16.1
Dir	43	31	31	33	32	35	27	31	26	27	27	27	35	27	27	35	33	26	20	13	3	12	355	352	25.6	43.1
28 Spd	10	10	11	7	3	5	5	3	3	9	11	14	16	18	13	11	9	7	9	10	11	10	7	7	6.5	17.9
Dir	8	7	10	8	357	356	321	23	341	279	237	243	250	252	253	261	263	306	291	270	278	267	280	326	285.8	251.7
29 Spd	9	8	10	11	9	8	8	8	8	9	10	9	9	10	11	10	9	8	7	8	7	7	7	7	8.5	10.8
Dir	337	8	16	24	14	356	348	5	5	11	11	14	10	8	1	355	353	1	355	15	10	13	349	351	4.2	1.4
30 Spd	7	6	6	5	4	3	7	7	9	9	11	9	4	8	5	4	8	6	6	6	7	7	4	3	5.2	11.4
Dir	350	342	337	299	322	243	279	257	274	260	251	257	254	259	276	255	231	232	274	269	265	282	307	45	274.2	251.0
31 Spd	3	5	3	2	1	5	1	5	4	4	6	6	8	10	13	15	15	14	11	10	8	7	11	13	6.3	15.3
Dir	2	25	331	350	52	21	56	23	19	28	31	31	29	31	32	25	32	34	30	31	20	50	112	131	37.2	32.2
Spd	4.0	3.0	3.4	3.4	2.9	3.6	4.1	3.2	3.5	4.7	5.3	5.8	6.8	6.8	6.7	7.1	6.1	5.3	5.0	5.4	6.4	5.6	4.4	4.2	Diurnal Average	
Dir	307.3	302.2	302.1	302.5	298.7	304.6	297.2	285.5	288.3	274.2	262.2	265.4	261.5	264.4	263.9	270.7	270.6	276.5	283.9	293.2	286.3	286.9	294.6	307.9	Diurnal Maximum	
Spd	32.3	29.2	27.5	29.0	23.4	26.8	29.8	31.7	27.5	28.5	38.4	46.5	45.0	42.6	40.4	43.3	46.0	46.1	41.1	30.8	32.2	37.2	35.7	35.9	Diurnal Maximum	
Dir	276.7	275.6	268.6	268.0	266.6	260.4	242.8	248.7	256.8	244.2	246.4	250.8	245.5	251.3	251.9	253.9	259.2	267.0	270.6	261.3	253.5	254.8	256.1	276.7	Diurnal Maximum	
Maximum Speed Value: 47 km/h on Oct 16 12:00																		Minimum Speed Value: 0 km/h on Oct 9 03:00						Hours in Service: 687		
Maximum Daily Speed Average: 24.3 km/h on Oct 16																		Minimum Daily Speed Average: 3.8 km/h on Oct 8						Hours of Data: 644		
Maximum Diurnal Speed Average: 7.1 km/h at hour 16																		Minimum Diurnal Speed Average: 2.9 km/h at hour 5						Hours of Missing Data: 43		
Monthly Average Velocity: 4.71 km/h 281.98 deg																		Speed Percentiles: P <sub>1</sub> = 1.8 P <sub>10</sub> = 4.3 Q <sub>1</sub> = 7.0 Median = 10.1 Q <sub>3</sub> = 14.4 P <sub>90</sub> = 23.3 P <sub>99</sub> = 41.9						Percent Operational Time: 93.7		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
N - Not Valid NS - Not in service																										
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	23	93	31	3	0	0	150																			
NorthEast	15	61	41	0	0	0	117																			
East	3	9	5	0	0	0	17																			
SouthEast	5	4	7	0	0	0	16																			
South	8	23	15	5	0	0	51																			
SouthWest	8	53	30	11	8	2	112																			
West	10	37	47	27	17	7	145																			
NorthWest	10	10	3	8	3	2	36																			
Total	82	290	179	54	28	11	644																			

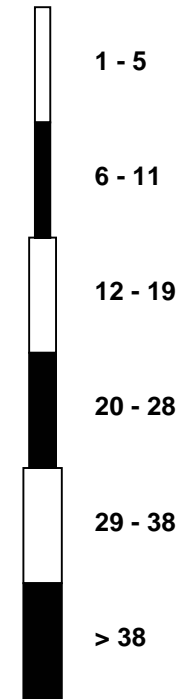


**Wind Rose**

**Wind Speed (WS) (km/h)**  
**Smoky Heights - October 2012**



**Wind Speed Classes (km/h)**



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

## Smoky Heights - October 2012

Maximum Speed: 47 km/h on Oct 16 12:00	Maximum Daily Speed Average: 26.7 km/h on Oct 16	Hours in Service: 687
Minimum Speed: 2 km/h on Oct 9 03:00	Minimum Daily Speed Average: 6.5 km/h on Oct 30	Hours of Data: 644
Maximum Diurnal Speed Average: 15.7 km/h at hour 13	Minimum Diurnal Speed Average: 9.8 km/h at hour 5	Hours of Missing Data: 43
Monthly Average Speed: 12.34 km/h	Percentiles: P <sub>1</sub> = 2.9 P <sub>10</sub> = 4.9 Q <sub>1</sub> = 7.2 Median = 10.2 Q <sub>3</sub> = 14.7 P <sub>90</sub> = 23.5 P <sub>99</sub> = 42.3	Percent Operational Time: 93.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
3-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	18	21	18	16	14	15	15	13	9	7	4	5	5	7	5	--	20.6
4-Oct	11	9	9	13	13	7	6	5	6	12	23	22	14	17	17	9	7	7	4	20	6	3	3	4	10.3	23.4
5-Oct	6	6	8	9	8	8	9	8	10	10	10	14	18	26	34	36	35	29	25	27	23	14	16	16	16.9	35.6
6-Oct	8	7	8	12	13	11	9	8	8	8	7	10	26	24	28	29	29	22	15	29	32	24	21	21	17.1	31.8
7-Oct	20	16	22	21	17	25	25	24	27	26	32	41	35	33	39	27	23	21	15	11	9	11	13	11	22.6	40.6
8-Oct	8	7	8	9	7	9	7	5	5	6	5	7	7	7	5	4	5	8	5	8	6	7	6	6	6.6	9.3
9-Oct	5	4	2	3	2	5	6	3	4	6	5	4	4	6	8	5	10	10	8	7	13	24	22	17	7.6	24.0
10-Oct	15	17	15	14	13	16	15	11	10	14	15	18	16	14	13	11	10	11	9	8	6	9	12	13	12.7	17.5
11-Oct	13	9	11	11	10	10	9	9	8	13	18	16	12	10	7	6	5	4	5	5	5	7	9	13	9.3	17.5
12-Oct	13	10	9	9	11	10	11	11	12	12	11	10	8	8	6	5	4	6	6	6	8	9	10	11	9.0	13.0
13-Oct	12	11	10	13	13	9	8	9	10	13	11	11	17	19	22	25	18	18	16	12	14	17	15	13	13.9	25.0
14-Oct	14	7	7	8	6	3	8	17	15	14	16	16	19	11	9	6	10	13	9	9	10	13	12	12	11.0	18.6
15-Oct	20	18	17	9	14	24	30	32	28	29	32	32	31	20	15	19	10	3	4	3	7	7	9	10	17.6	32.2
16-Oct	8	4	4	6	4	5	4	7	12	22	39	47	45	43	41	43	46	46	41	31	32	37	36	36	26.7	46.7
17-Oct	32	29	28	29	23	27	26	26	26	27	33	31	30	29	25	27	22	15	15	11	8	8	8	6	22.6	32.8
18-Oct	4	4	7	7	6	13	8	13	11	9	12	10	13	10	5	5	4	5	6	5	5	7	9	9	7.6	13.2
19-Oct	8	10	12	10	15	13	14	13	13	12	11	10	12	12	14	18	19	17	18	18	23	22	N	N	14.3	23.0
20-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
21-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	15	11	10	13	13	13	16	--	16.1
22-Oct	17	17	16	16	18	20	21	18	20	22	20	19	17	13	14	13	11	12	10	11	11	8	8	6	14.9	21.6
23-Oct	4	5	9	9	8	9	10	11	11	10	7	9	10	10	10	11	11	11	11	10	9	11	12	14	9.7	13.9
24-Oct	15	14	11	11	12	12	12	11	13	13	12	11	9	10	9	10	9	9	10	9	9	9	8	7	10.6	15.3
25-Oct	7	5	7	4	4	6	4	4	3	7	9	8	8	11	10	10	9	10	7	5	4	8	6	5	6.9	10.7
26-Oct	5	5	5	7	6	6	6	7	7	7	7	12	13	14	16	17	16	15	16	13	14	15	14	16	10.7	16.7
27-Oct	16	14	15	15	12	14	11	13	11	10	10	9	6	7	7	8	5	5	7	9	8	8	9	11	10.1	16.2
28-Oct	10	10	11	8	4	5	5	3	5	9	11	15	16	18	13	12	10	7	9	10	12	10	8	7	9.6	17.9
29-Oct	9	9	11	11	9	8	8	8	8	9	10	9	10	10	10	11	10	9	8	8	7	7	7	7	8.8	11.0
30-Oct	7	7	6	6	4	3	7	7	9	9	12	9	5	8	5	4	8	6	6	6	7	7	4	3	6.5	11.6
31-Oct	3	5	3	3	2	5	2	5	4	4	6	6	8	10	13	15	15	14	11	10	8	8	12	13	7.7	15.3
	11.2	10.1	10.4	10.5	9.8	11.0	10.8	11.0	11.3	13.0	15.0	15.7	15.7	15.4	15.4	14.9	13.9	12.5	11.3	11.2	11.3	11.6	11.5	11.5	Diurnal Average	
	32.4	29.3	27.8	29.0	23.5	26.8	29.8	31.8	27.8	28.6	38.6	46.7	45.2	42.9	40.5	43.5	46.5	46.3	41.3	31.2	32.3	37.3	35.9	36.2	Diurnal Maximum	

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

## Hourly Standard Deviations

Wind Direction (WD) - deg  
Smoky Heights - October 2012

Maximum Value: 89.2 deg on Oct 9 03:00	Hours in Service: 687
Minimum Value: 2.5 deg on Oct 6 00:00	Hours of Data: 644
Percentiles: P <sub>1</sub> = 3.5 P <sub>10</sub> = 4.8 Q <sub>1</sub> = 6.6 Median = 9.6 Q <sub>3</sub> = 14.3 P <sub>90</sub> = 28.0 P <sub>99</sub> = 76.3	Hours of Missing Data: 43
	Hours of Calibration: 0
	Percent Operational Time: 93.7

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
2-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
3-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	8	12	20	22	22	19	12	11	9	4	39	31	22	10	19	38.6
4-Oct	9	12	9	13	10	5	7	7	9	28	17	23	26	30	48	41	72	11	19	20	10	36	34	29	72.2
5-Oct	8	18	9	7	6	5	5	12	8	8	14	16	12	14	13	11	10	4	11	6	9	3	3	2	18.0
6-Oct	56	34	11	5	3	17	25	13	14	11	16	12	12	14	13	9	16	6	50	20	7	8	4	3	55.6
7-Oct	5	4	3	5	4	12	6	8	6	6	11	8	10	9	8	11	9	9	17	14	9	8	8	8	17.1
8-Oct	58	12	8	14	20	11	28	22	10	61	85	74	41	36	31	65	69	24	11	13	14	7	5	20	85.3
9-Oct	17	33	89	48	86	33	19	68	27	15	18	26	61	27	31	54	6	8	7	16	11	8	11	10	89.2
10-Oct	10	10	8	10	10	6	7	5	5	8	6	7	5	8	8	8	7	8	11	8	18	7	5	7	17.7
11-Oct	8	11	7	7	16	8	11	10	10	10	7	7	10	13	18	28	23	18	39	22	11	9	10	9	38.6
12-Oct	7	10	11	9	5	6	5	4	5	5	6	6	8	8	9	12	46	10	11	12	12	10	10	10	46.5
13-Oct	10	9	5	12	5	11	13	16	19	13	10	19	6	5	6	5	8	12	8	5	6	4	6	9	19.0
14-Oct	7	28	12	11	13	73	33	10	6	10	5	7	4	9	16	20	46	22	43	13	17	7	15	16	72.9
15-Oct	7	4	11	52	18	3	3	5	9	5	6	6	7	12	9	8	6	61	30	26	13	18	14	18	61.3
16-Oct	12	85	68	20	22	21	48	28	6	6	5	5	6	6	4	5	8	6	6	9	5	4	6	8	85.1
17-Oct	5	5	8	4	5	3	4	4	3	5	5	7	8	9	10	9	7	6	6	7	22	16	25	30	29.6
18-Oct	57	27	14	25	15	7	14	5	14	12	6	9	10	11	25	55	27	40	72	32	62	75	29	30	74.8
19-Oct	8	5	6	8	8	7	6	5	5	6	6	10	11	15	6	6	7	9	7	7	5	5	N	N	15.3
20-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
21-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	12	5	4	4	4	4	4	11.9
22-Oct	4	5	4	4	4	4	4	4	5	6	7	8	9	10	8	8	15	9	11	7	5	6	8	22	21.8
23-Oct	30	28	8	10	9	8	9	8	9	11	12	12	11	12	11	11	7	8	12	7	7	7	7	6	29.6
24-Oct	4	5	6	7	9	9	10	9	10	8	9	12	15	15	12	13	10	9	7	8	11	7	6	7	14.5
25-Oct	9	11	19	15	14	9	18	24	18	13	12	20	14	7	8	14	9	14	12	11	19	8	21	9	24.0
26-Oct	13	12	14	7	6	12	10	8	5	7	11	8	10	10	8	9	7	8	4	6	5	5	4	5	13.5
27-Oct	7	6	6	4	5	5	6	5	6	5	6	5	10	10	6	5	7	5	8	8	10	11	10	7	11.2
28-Oct	11	11	8	33	52	20	26	17	57	6	9	8	7	5	9	23	30	14	13	11	17	9	16	14	57.0
29-Oct	14	16	8	8	12	12	10	10	10	7	8	9	9	11	11	11	10	10	11	9	9	9	13	13	15.7
30-Oct	13	11	13	29	23	45	10	6	4	16	10	8	48	11	15	19	7	16	7	6	8	14	15	26	47.6
31-Oct	33	10	39	67	78	7	80	11	21	10	6	10	6	5	6	5	4	4	5	5	10	26	17	9	80.1
	57.7	85.1	89.2	67.4	86.2	72.9	80.1	67.9	57.0	61.3	85.3	74.0	61.4	35.8	48.1	65.5	72.2	61.3	71.9	38.6	61.5	74.8	34.3	29.7	

N - Not Valid      NS - Not in service

PAZA

Beaverlodge Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

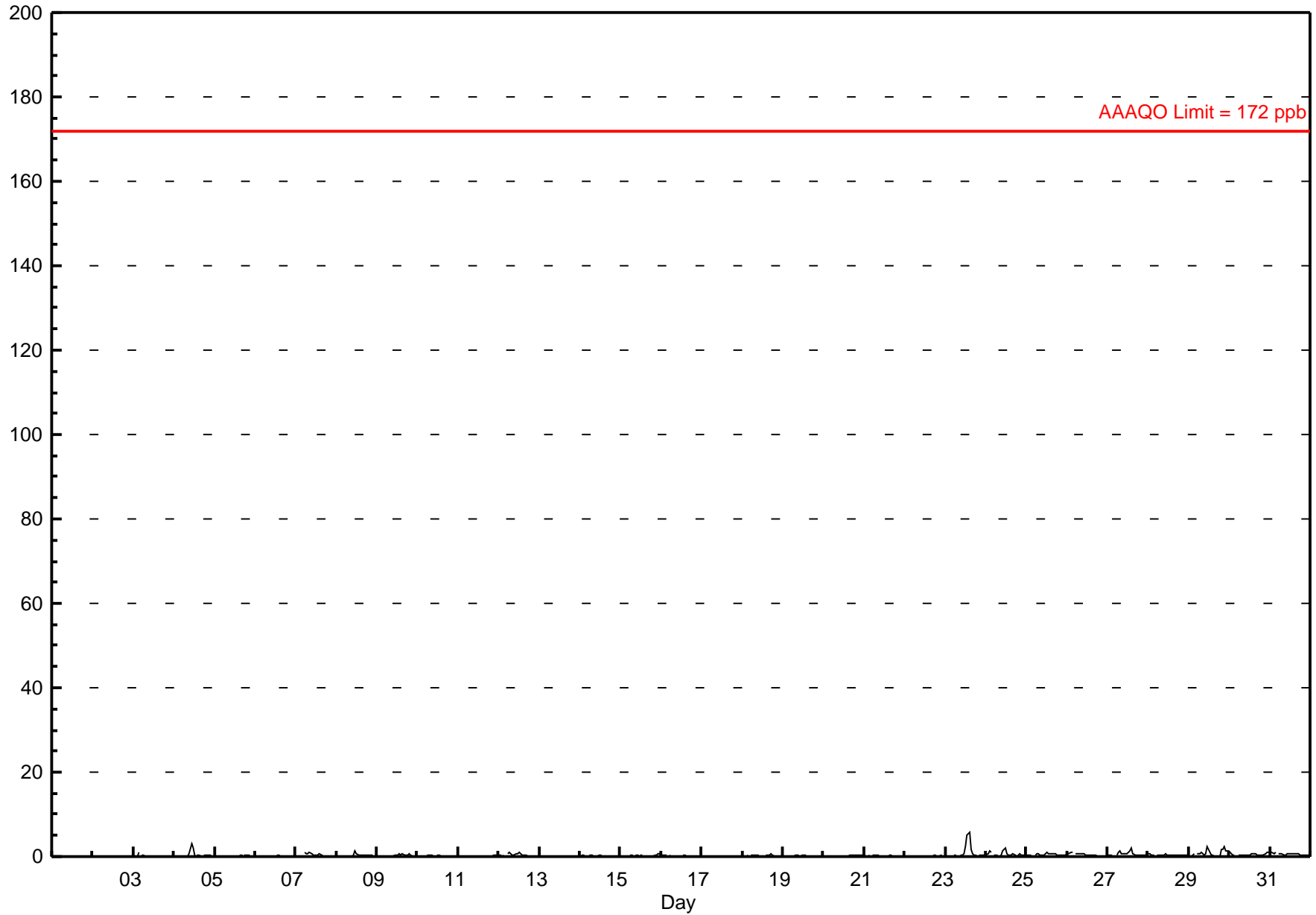
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Beaverlodge - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 5.9 ppb on Oct 23 15:00	Maximum Daily Average: 0.9 ppb on Oct 23		Hours of Data:	710
Minimum Value: 0 ppb on Oct 15 03:00	Minimum Daily Average: 0.0 ppb on Oct 17		Hours of Missing Data:	34
Maximum Diurnal Average: 0.5 ppb at hour 12	Minimum Diurnal Average: 0.2 ppb at hour 19		Hours of Calibration:	34
Monthly Average: 0.28 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.7 P <sub>99</sub> = 2.1		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	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	
2-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
3-Oct	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9	
4-Oct	0	0	0	0	A	0	0	0	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.0	
5-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
6-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
7-Oct	0	0	0	0	A	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.3	1.1	
8-Oct	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2	
9-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0.3	0.7	
10-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
11-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
12-Oct	0	0	0	0	A	1	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.9	
13-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
15-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	1	1	0.2	0.6
16-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
17-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
18-Oct	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	0.8	
19-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
20-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
21-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	
22-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
23-Oct	0	0	0	0	A	0	0	0	0	0	0	1	3	5	6	2	1	0	0	0	0	0	0	0	0.9	5.9	
24-Oct	0	1	1	1	A	0	0	0	0	0	1	2	1	0	0	0	1	0	0	0	1	0	0	0	0.6	1.9	
25-Oct	0	0	0	0	A	0	1	1	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0.5	0.9	
26-Oct	1	1	1	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2	
27-Oct	0	0	0	0	A	0	1	1	1	1	1	1	1	1	2	1	0	0	0	0	0	0	0	1	0.6	2.0	
28-Oct	1	1	0	0	A	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.4	0.6	
29-Oct	0	0	0	1	A	1	1	1	1	0	1	3	1	0	0	0	0	0	0	2	2	2	1	1	0.8	2.5	
30-Oct	1	1	0	0	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0.5	1.0	
31-Oct	1	1	1	1	A	1	1	1	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.6	1.0	
	0.2	0.2	0.2	0.2	--	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average		
	1.0	0.9	1.3	1.2	--	1.0	0.9	1.3	1.1	0.7	3.0	2.5	2.5	5.0	5.9	1.8	0.8	0.8	0.4	1.6	1.6	2.3	1.5	1.2	Diurnal Maximum		

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 48 ppb    30-day 11 ppb



## Hourly Maximums

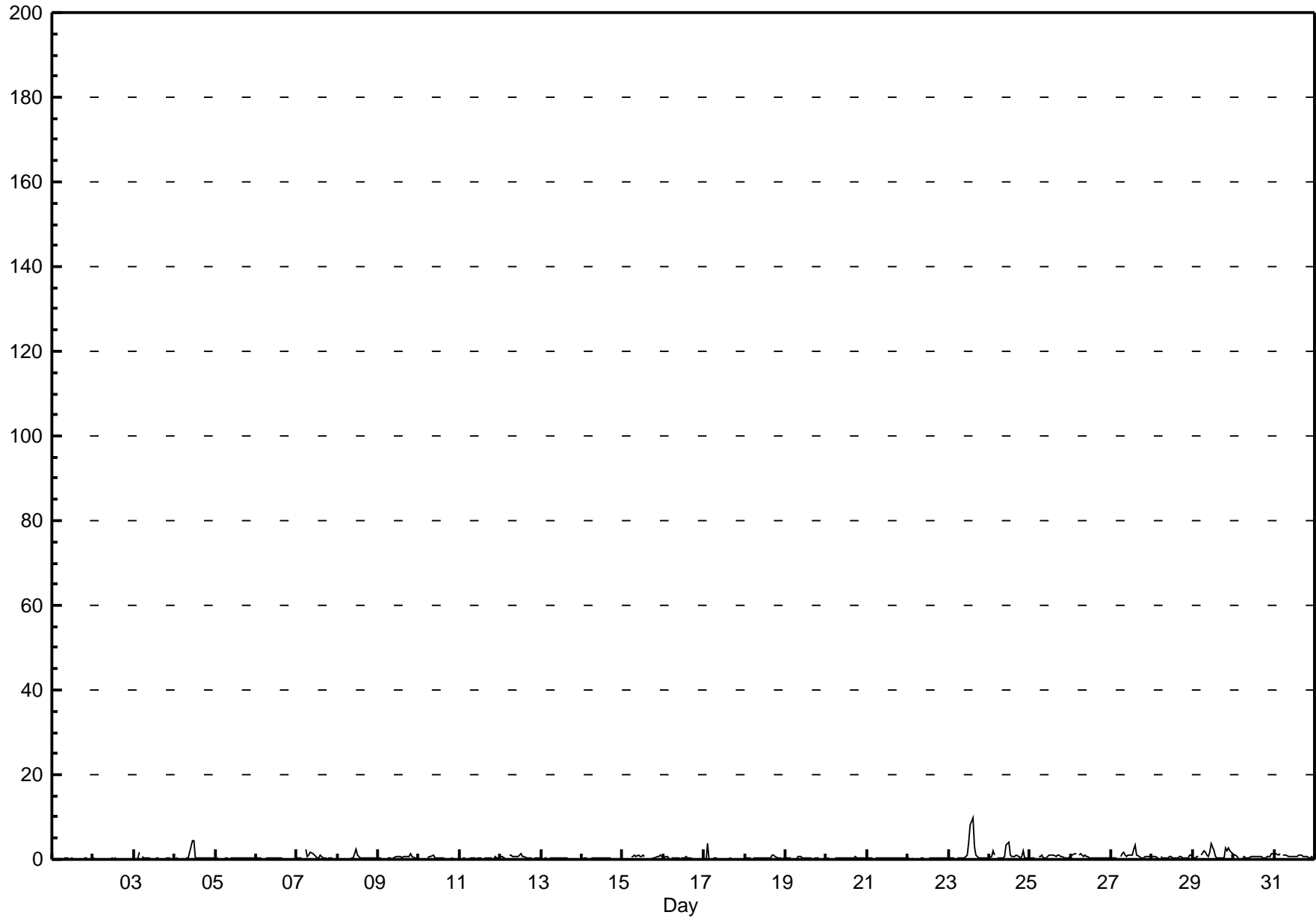
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Beaverlodge - October 2012

Maximum Value: 9.9 ppb on Oct 23 15:00		Maximum Daily Average: 1.4 ppb on Oct 23		Hours in Service: 744																						
Minimum Value: 0 ppb on Oct 17 04:00		Minimum Daily Average: 0.1 ppb on Oct 2		Hours of Data: 710																						
Maximum Diurnal Average: 0.8 ppb at hour 12		Minimum Diurnal Average: 0.3 ppb at hour 19		Hours of Missing Data: 34																						
Monthly Average: 0.48 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> = 0.5 P <sub>90</sub> = 1.0 P <sub>99</sub> = 3.3		Hours of Calibration: 34																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
2-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
3-Oct	0	0	0	2	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
4-Oct	0	0	0	0	A	0	0	0	0	2	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0.7	4.4
5-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
6-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
7-Oct	0	0	0	0	A	2	1	1	2	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0.6	2.4
8-Oct	0	0	0	0	A	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0.4	2.3
9-Oct	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.4	1.5
10-Oct	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
11-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.5
12-Oct	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.5	1.2
13-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
15-Oct	0	0	0	0	A	1	1	1	1	1	1	1	1	C	C	C	0	0	0	0	1	1	1	1	0.5	1.2
16-Oct	1	1	1	0	A	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0.3	0.6
17-Oct	0	0	4	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	3.6
18-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0.4	1.0
19-Oct	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
20-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.3	0.6
21-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3
22-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
23-Oct	0	0	0	0	A	0	0	0	0	0	1	1	4	8	10	3	1	1	0	0	0	0	0	0	1.4	9.9
24-Oct	0	1	2	1	A	0	0	0	0	1	4	4	1	1	1	1	1	1	0	1	2	0	0	0	1.0	4.2
25-Oct	0	0	0	0	A	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.7	1.1
26-Oct	1	1	1	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.5
27-Oct	0	0	0	0	A	1	1	2	1	1	1	1	1	3	3	1	1	0	0	0	1	1	1	1	0.9	3.3
28-Oct	1	1	1	0	A	1	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	1	1	1	0.5	1.0
29-Oct	0	0	1	1	A	1	2	2	1	1	2	4	2	1	0	0	0	0	0	3	2	3	2	1	1.2	3.6
30-Oct	1	1	1	0	A	0	1	0	0	0	1	1	1	1	1	1	1	0	0	0	1	1	1	1	0.7	1.4
31-Oct	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0.8	1.4
		0.3	0.3	0.5	0.4	--	0.5	0.5	0.5	0.4	0.5	0.7	0.8	0.6	0.7	0.8	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	Diurnal Average
		1.2	1.3	3.6	1.6	--	2.4	2.1	1.8	1.8	1.7	4.3	4.4	4.1	8.2	9.9	3.1	1.1	1.0	0.8	2.6	2.1	2.8	1.9	1.5	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

### Hourly Maximums

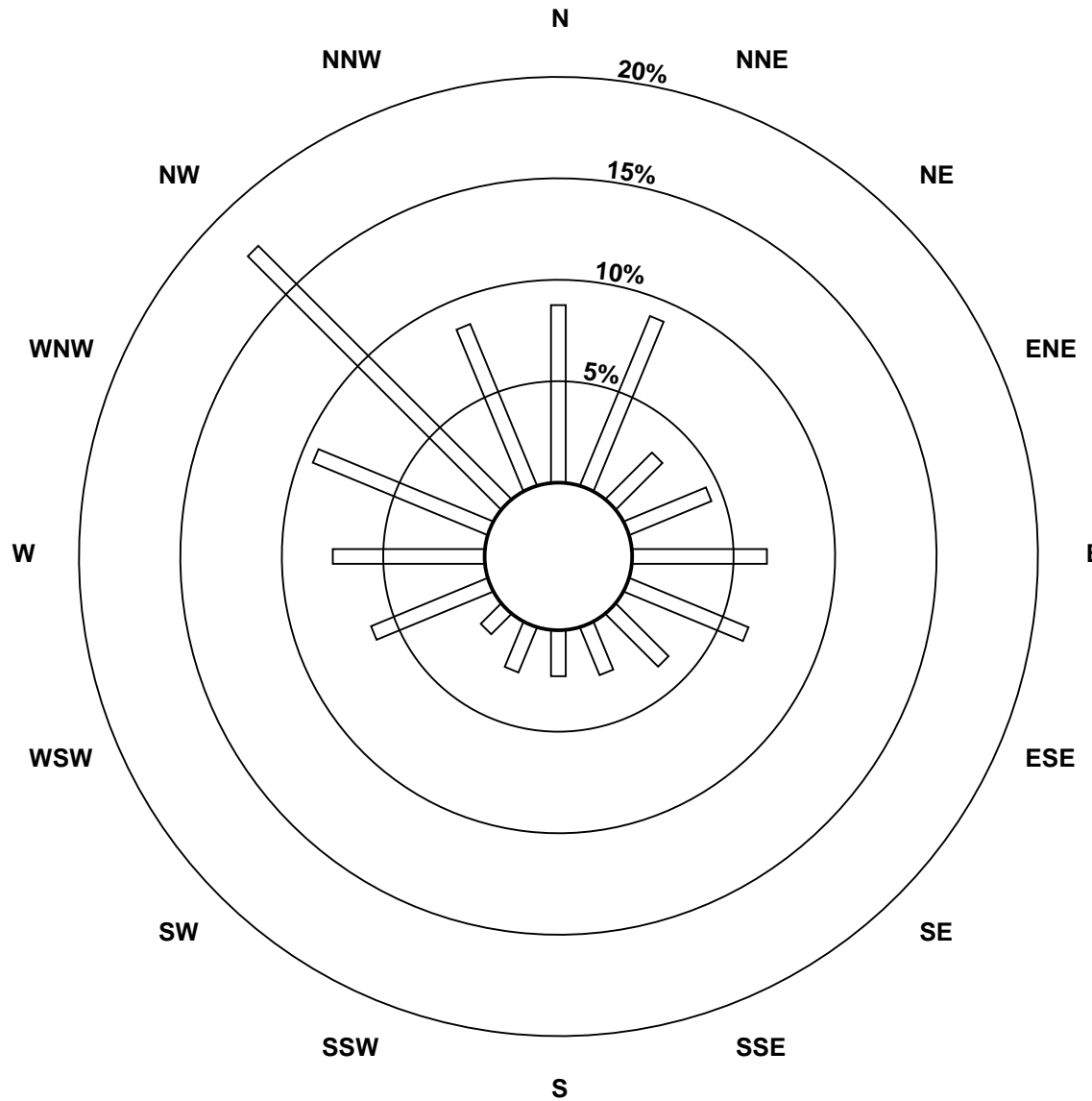
**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Beaverlodge - October 2012**



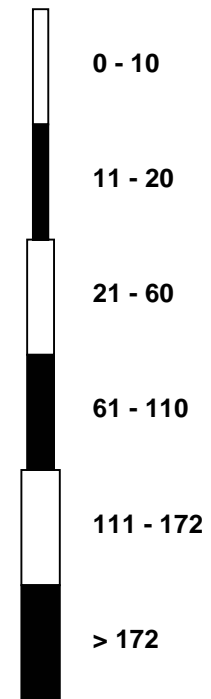


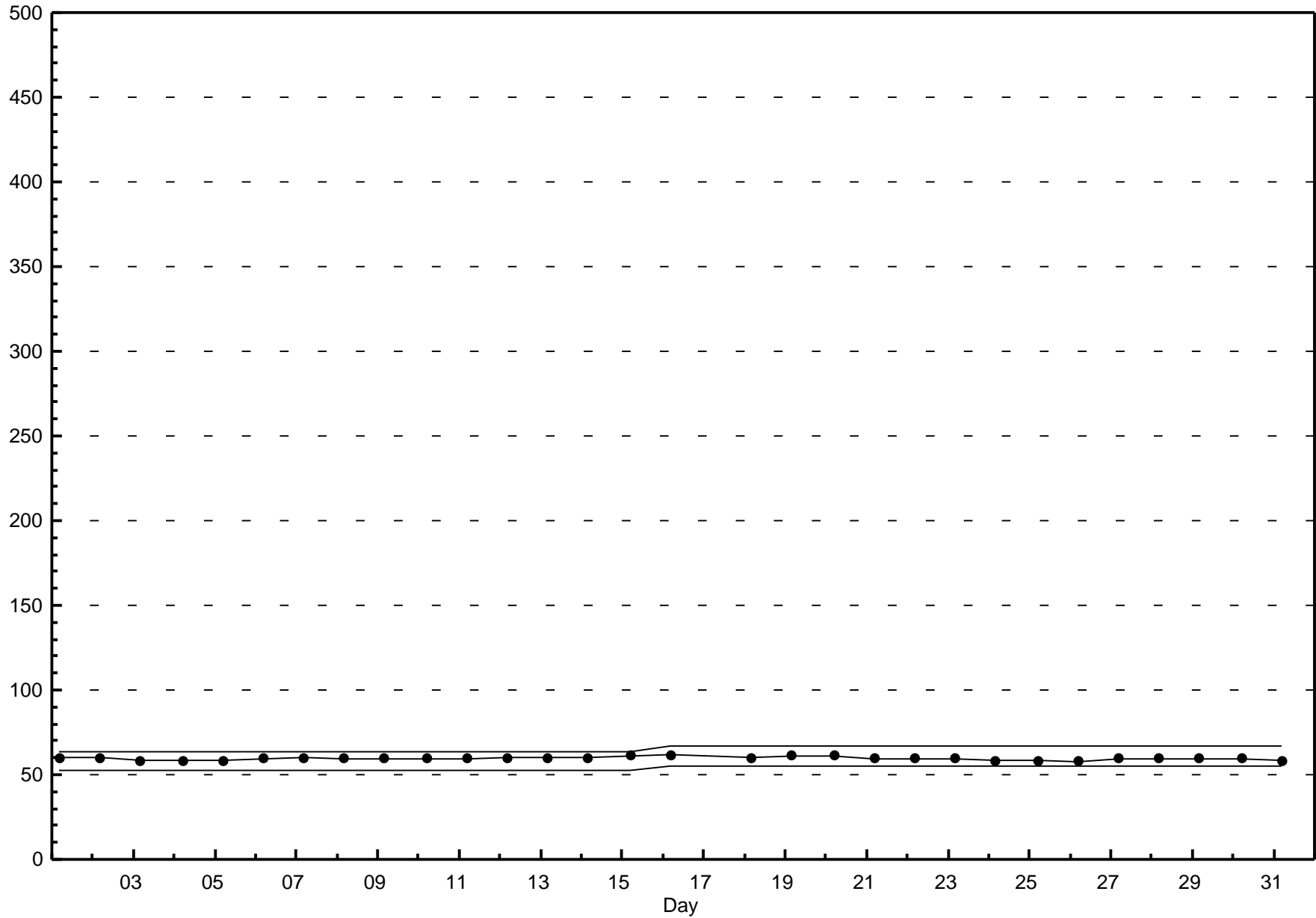
**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Beaverlodge - October 2012**



**Pollutant Classes (ppb)**





## Hourly Averages

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

### Beaverlodge - October 2012

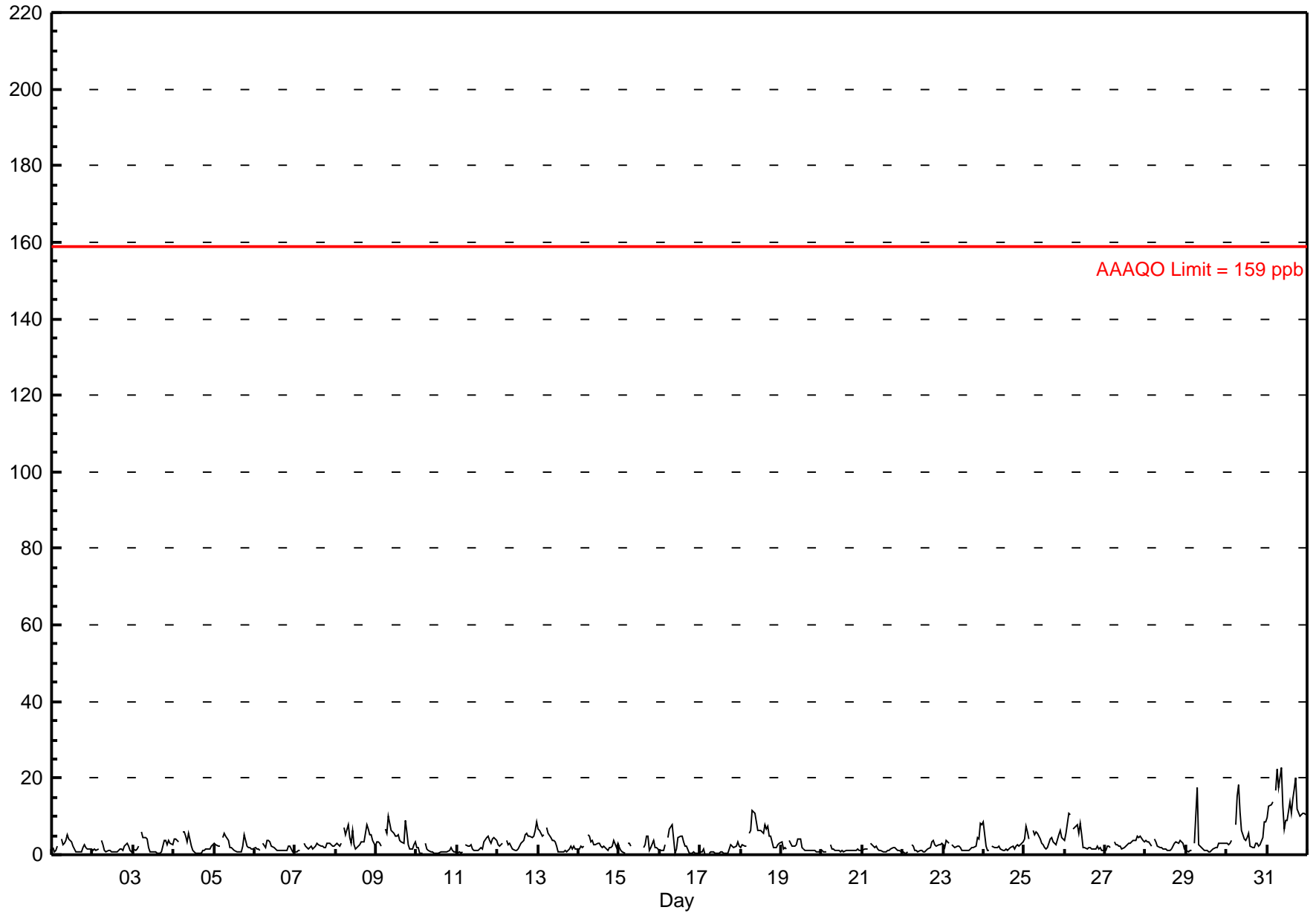
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 22.7 ppb on Oct 31 09:00	Maximum Daily Average: 13.3 ppb on Oct 31		Hours of Data:	707
Minimum Value: 0 ppb on Oct 17 04:00	Minimum Daily Average: 1.0 ppb on Oct 10		Hours of Missing Data:	37
Maximum Diurnal Average: 5.0 ppb at hour 7	Minimum Diurnal Average: 2.0 ppb at hour 15		Hours of Calibration:	37
Monthly Average: 2.99 ppb	Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 1.2 Median = 2.1 Q <sub>3</sub> = 3.6 P <sub>90</sub> = 6.1 P <sub>99</sub> = 16.8		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Oct	2	1	1	2	A	4	3	3	4	5	4	4	2	2	1	1	1	1	2	3	2	2	2	1	2.1	5.4																							
2-Oct	1	2	1	1	A	4	3	1	1	1	1	1	1	1	1	1	2	1	1	2	3	2	1	1	1.4	3.9																							
3-Oct	1	1	1	2	A	6	4	5	4	2	1	1	1	1	0	0	0	1	4	4	3	4	3	2	2.2	6.0																							
4-Oct	4	4	4	3	A	6	6	5	3	6	2	1	1	0	0	0	1	1	1	1	1	1	2	3	2.5	6.1																							
5-Oct	3	3	2	2	A	5	6	5	4	2	2	1	1	1	1	1	1	2	5	2	2	2	2	2	2.4	5.8																							
6-Oct	2	1	2	1	A	3	2	4	4	4	2	2	1	1	1	1	1	1	1	1	2	2	1	1	1.8	3.8																							
7-Oct	1	1	1	1	A	3	2	2	2	2	2	2	2	3	3	2	2	2	2	3	3	3	2	2	2.1	3.1																							
8-Oct	3	3	2	3	A	7	5	8	4	3	6	3	2	2	3	3	3	3	8	7	5	5	4	2	4.1	7.9																							
9-Oct	3	3	3	2	A	7	6	10	8	6	6	5	5	5	4	3	3	9	6	3	1	1	3	3	4.6	10.0																							
10-Oct	2	2	0	0	A	3	2	1	1	1	1	1	0	1	1	1	1	1	1	1	2	1	1	1	1.0	2.9																							
11-Oct	0	1	1	1	A	3	2	2	2	1	1	1	1	1	2	2	3	4	5	4	3	4	4	4	2.3	5.0																							
12-Oct	3	2	3	3	A	4	3	3	2	1	1	1	2	2	3	4	5	6	5	5	5	5	6	9	3.5	8.6																							
13-Oct	7	6	5	5	A	7	5	4	4	4	3	2	1	1	1	1	1	1	1	2	1	2	1	1	2.9	7.0																							
14-Oct	2	2	2	2	A	5	5	3	4	3	3	3	3	2	2	2	1	1	2	2	2	4	2	3	2.6	5.2																							
15-Oct	2	1	1	0	A	3	3	2	C	C	C	C	C	C	2	3	5	5	1	2	4	2	2	2	--	4.9																							
16-Oct	1	1	1	2	A	4	7	8	4	0	1	4	5	5	3	2	2	0	0	1	1	0	0	0	2.4	8.0																							
17-Oct	1	1	2	0	A	0	1	1	1	0	0	0	1	1	0	0	0	1	3	2	2	2	3	2	1.1	3.3																							
18-Oct	2	2	2	2	A	5	6	12	11	9	6	6	6	6	8	7	8	5	5	2	2	2	3	3	5.2	11.5																							
19-Oct	3	2	2	2	A	4	2	2	2	3	4	4	2	2	1	1	1	1	1	1	1	1	1	1	1.9	4.0																							
20-Oct	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.5																							
21-Oct	1	1	2	2	A	3	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1.4	3.1																							
22-Oct	1	0	1	1	A	3	2	1	1	1	1	1	1	1	1	2	2	3	4	3	2	2	3	3	1.7	3.9																							
23-Oct	3	2	4	3	A	3	2	2	2	2	2	1	1	1	1	1	1	2	2	2	4	4	8	8	2.7	8.1																							
24-Oct	8	2	1	1	A	2	2	2	2	2	2	1	1	1	1	1	2	2	2	2	3	2	3	3	2.2	8.5																							
25-Oct	4	7	6	4	A	6	5	6	5	4	3	3	2	1	2	4	5	3	3	3	5	6	4	4	4.2	7.4																							
26-Oct	4	5	11	10	A	7	7	8	5	8	5	2	2	1	2	2	1	2	1	2	1	2	1	1	4.0	10.9																							
27-Oct	1	2	2	2	A	3	3	3	2	2	2	2	2	3	3	3	4	4	4	5	5	5	4	3	2.9	4.9																							
28-Oct	4	4	3	2	A	4	4	2	2	2	1	1	2	1	1	2	2	3	3	3	4	3	3	1	2.5	4.1																							
29-Oct	1	1	1	1	A	3	18	3	2	2	1	1	1	1	1	1	1	2	2	3	3	3	3	3	2.5	17.6																							
30-Oct	3	3	3	4	A	8	15	18	11	6	4	4	4	6	2	2	2	3	3	2	3	4	9	9	5.6	18.4																							
31-Oct	10	13	13	14	A	17	22	17	23	13	7	9	9	14	11	15	17	20	12	10	10	11	11	10	13.3	22.7																							
																								2.7	2.6	2.6	2.6	--	4.6	5.0	4.7	4.1	3.3	2.6	2.3	2.1	2.3	2.0	2.2	2.6	3.0	3.0	2.7	2.8	2.9	3.0	2.9	Diurnal Average	
																								9.7	12.5	13.2	13.7	--	16.7	22.4	18.4	22.7	12.7	6.8	9.1	9.0	13.7	10.7	14.7	17.0	20.0	12.1	10.0	10.4	10.7	10.8	10.3	Diurnal Maximum	

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb    24-hr 106 ppb

### Hourly Averages

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Beaverlodge - October 2012



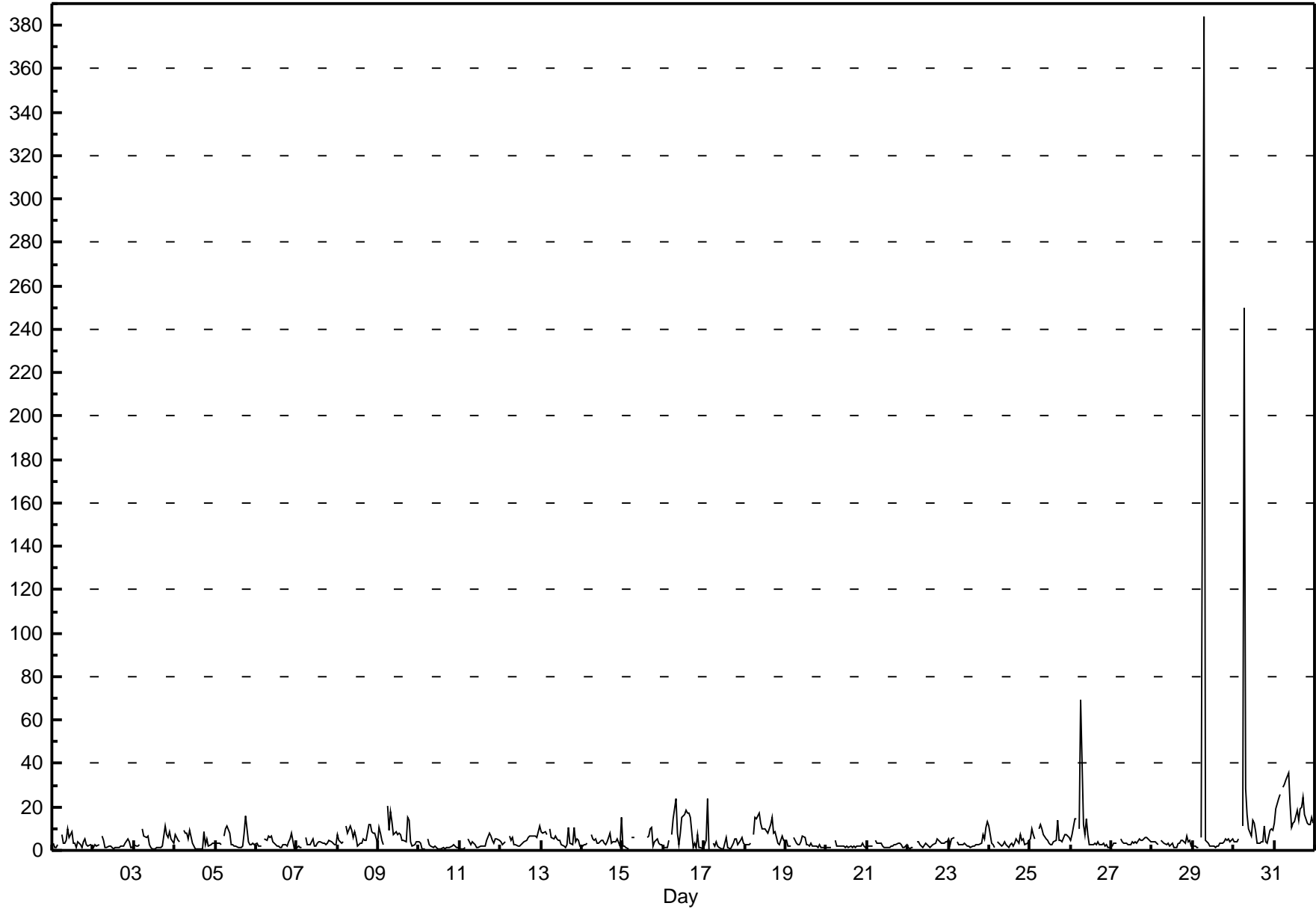
## Hourly Maximums

## Nitrogen Dioxide (NO<sub>2</sub>) - ppb Beaverlodge - October 2012

Maximum Value: 384.3 ppb on Oct 29 07:00		Maximum Daily Average: 19.8 ppb on Oct 29		Hours in Service: 744																							
Minimum Value: 0 ppb on Oct 17 04:00		Minimum Daily Average: 1.7 ppb on Oct 10		Hours of Data: 707																							
Maximum Diurnal Average: 28.6 ppb at hour 7		Minimum Diurnal Average: 3.5 ppb at hour 15		Hours of Missing Data: 37																							
Monthly Average: 5.90 ppb		Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 2.1 Median = 3.5 Q <sub>3</sub> = 5.9 P <sub>90</sub> = 10.6 P <sub>99</sub> = 28.4		Hours of Calibration: 37																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	3	2	1	3	A	8	3	3	5	10	6	8	3	3	1	4	3	1	4	5	3	2	3	2	3.8	9.9	
2-Oct	2	3	2	2	A	7	4	1	2	2	2	1	1	1	1	2	2	2	2	3	5	4	2	1	2.3	6.8	
3-Oct	3	2	2	3	A	10	7	6	7	3	2	1	1	1	1	1	2	2	11	7	6	8	5	4	4.0	11.1	
4-Oct	7	6	4	4	A	9	8	8	5	9	3	2	1	1	1	1	1	9	2	5	2	3	3	3	4.3	9.3	
5-Oct	3	3	3	2	A	7	10	11	8	3	3	2	2	1	1	1	2	8	16	4	2	3	4	3	4.4	15.7	
6-Oct	4	2	2	2	A	5	5	6	6	7	4	2	2	2	1	2	3	2	2	4	6	8	1	1	3.4	7.6	
7-Oct	1	2	2	2	A	6	2	3	2	5	2	2	3	4	4	4	3	2	3	4	4	3	3	3	3.1	6.1	
8-Oct	7	5	3	4	A	11	8	11	9	6	8	6	2	3	4	5	5	12	12	9	8	8	4	4	6.7	11.7	
9-Oct	11	8	5	3	A	21	9	18	13	7	9	7	8	7	5	4	4	15	14	4	2	3	4	4	8.1	20.6	
10-Oct	4	3	1	0	A	5	3	2	1	2	1	1	1	1	1	1	1	1	1	2	3	2	1	1	1.7	5.1	
11-Oct	1	1	1	1	A	5	3	4	3	2	1	1	2	2	2	2	5	8	7	4	3	5	5	4	3.2	7.6	
12-Oct	4	3	4	4	A	7	5	6	3	3	2	2	2	3	4	5	6	6	6	7	7	6	9	11	4.9	11.0	
13-Oct	8	8	8	7	A	10	6	6	6	6	4	5	3	2	2	3	11	3	3	10	4	5	5	2	5.5	10.7	
14-Oct	2	3	2	3	A	7	5	5	5	3	3	5	5	3	2	4	8	4	4	4	4	5	2	15	4.5	15.1	
15-Oct	2	2	1	1	A	6	6	6	C	C	C	C	C	C	6	6	10	10	2	4	5	3	3	3	--	10.4	
16-Oct	1	1	2	4	A	7	15	24	8	2	8	15	17	18	17	17	16	1	3	2	7	1	1	1	8.2	23.9	
17-Oct	3	5	24	0	A	4	2	4	2	1	1	1	3	6	1	1	2	3	5	5	3	4	6	3	3.8	23.8	
18-Oct	3	3	3	3	A	8	15	15	17	13	10	10	10	8	10	12	15	8	9	3	3	5	6	5	8.3	17.0	
19-Oct	4	2	2	2	A	6	3	3	3	4	7	6	2	3	2	3	2	2	2	1	2	2	1	1	2.8	6.8	
20-Oct	1	1	1	1	A	4	2	2	2	2	2	1	2	1	2	2	2	1	2	2	2	3	2	2	1.8	4.5	
21-Oct	2	2	2	2	A	4	3	3	3	2	1	1	1	1	2	2	3	2	4	3	3	1	2	2	2.3	4.4	
22-Oct	1	1	1	1	A	4	4	2	2	2	3	3	2	2	2	3	3	5	5	4	3	4	4	4	2.8	5.0	
23-Oct	5	3	5	6	A	4	3	3	3	3	2	2	2	2	2	2	2	3	2	4	7	5	11	13	4.1	12.9	
24-Oct	11	3	3	1	A	4	3	2	2	4	3	2	2	3	2	3	6	3	8	5	6	3	4	5	3.7	11.2	
25-Oct	5	10	7	5	A	10	12	10	7	5	5	3	3	2	4	5	14	5	4	4	7	7	7	6	6.4	13.7	
26-Oct	4	7	15	14	A	10	69	12	7	14	7	3	3	3	3	3	4	3	2	3	2	3	2	2	8.5	69.3	
27-Oct	2	3	3	4	A	5	4	3	3	3	2	2	4	3	4	3	5	5	5	6	6	6	4	4	4.0	6.0	
28-Oct	4	4	4	3	A	5	4	3	3	3	2	3	3	2	2	3	3	5	5	4	7	4	4	2	3.5	6.5	
29-Oct	2	2	1	1	A	6	384	5	4	3	2	2	2	1	2	2	4	3	4	5	5	5	4	5	19.8	384.3	
30-Oct	4	4	4	5	A	11	250	28	17	10	6	14	12	9	3	4	4	4	11	4	3	9	10	10	18.9	249.7	
31-Oct	13	19	24	26	A	29	30	33	35	21	10	13	13	18	14	19	20	24	17	13	12	12	15	13	19.3	35.4	
		4.2	3.9	4.6	3.9	--	7.9	28.6	8.0	6.5	5.4	4.2	4.2	3.9	3.9	3.5	4.1	5.4	5.1	5.7	4.8	4.5	4.6	4.5	4.4	Diurnal Average	
		12.9	19.0	24.1	25.6	--	29.1	384.3	32.7	35.4	21.4	10.4	15.0	16.8	18.4	16.9	19.0	19.8	24.4	16.7	12.6	12.0	11.6	15.4	15.1	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

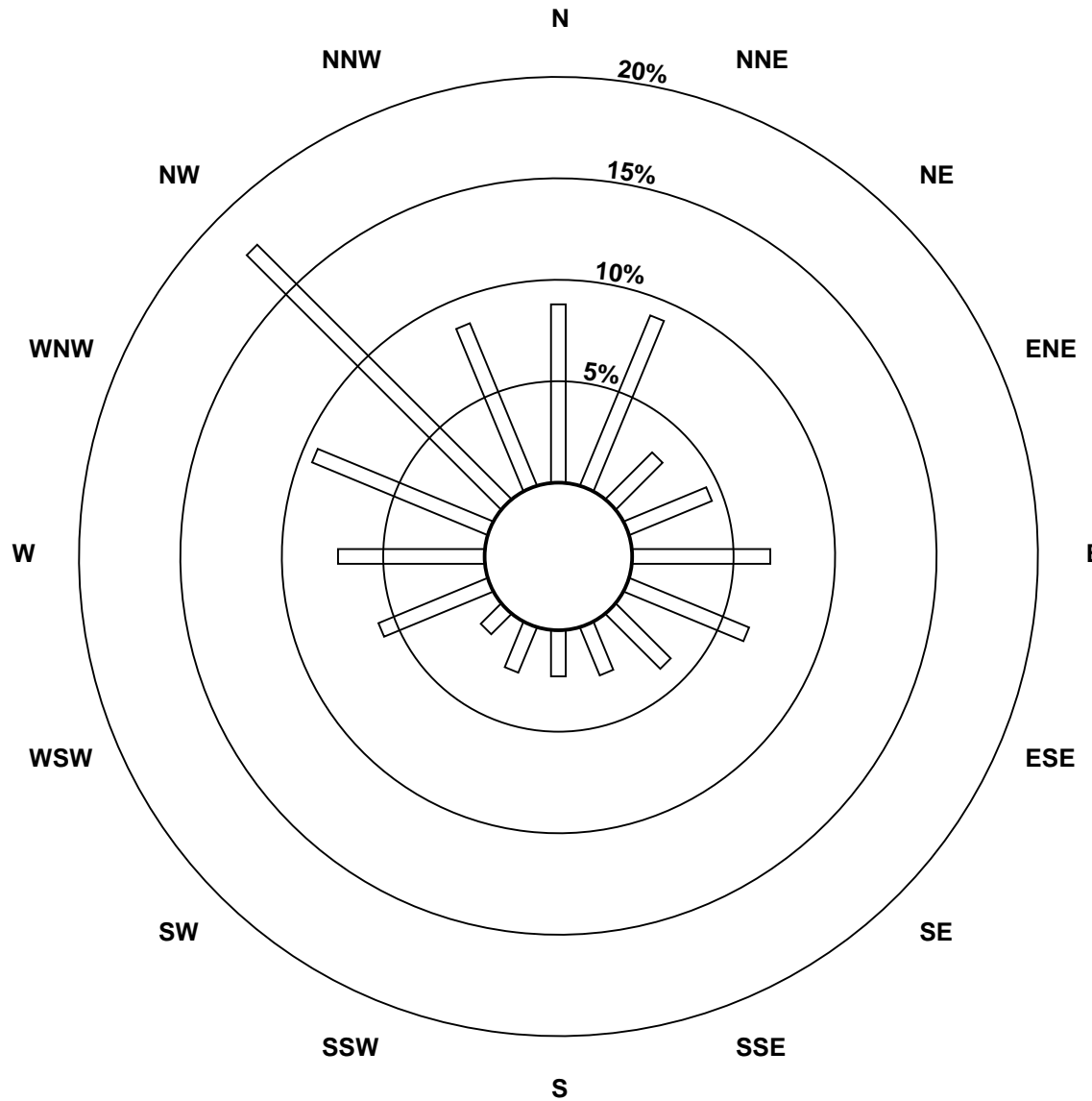
### Hourly Maximums

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Beaverlodge - October 2012**

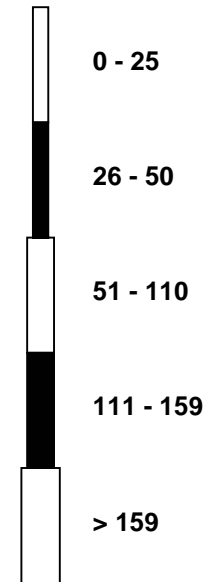


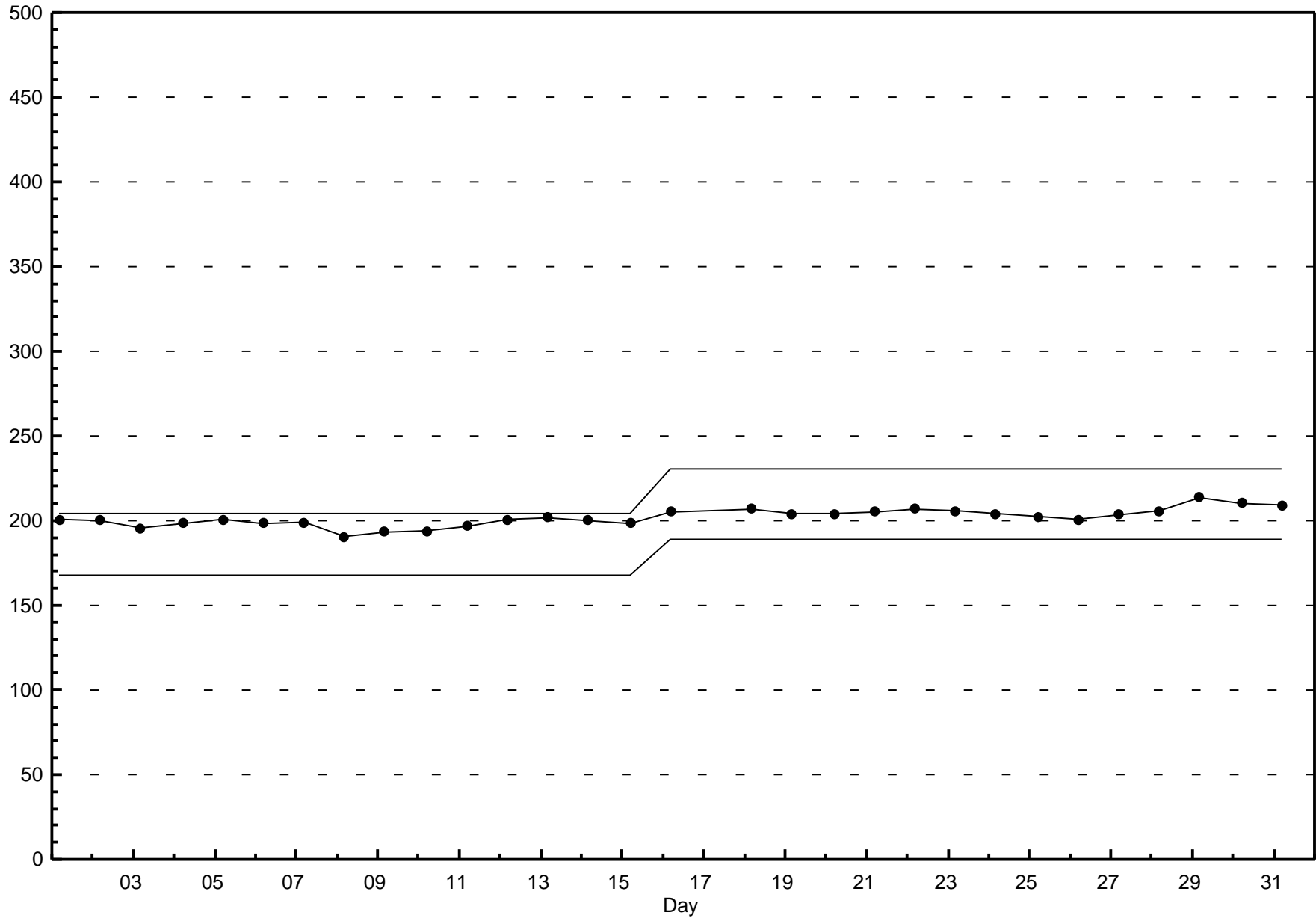
**Pollutant Rose**

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Beaverlodge - October 2012**



**Pollutant Classes (ppb)**







## Hourly Averages

## Nitrogen Oxide (NO) - ppb Beaverlodge - October 2012

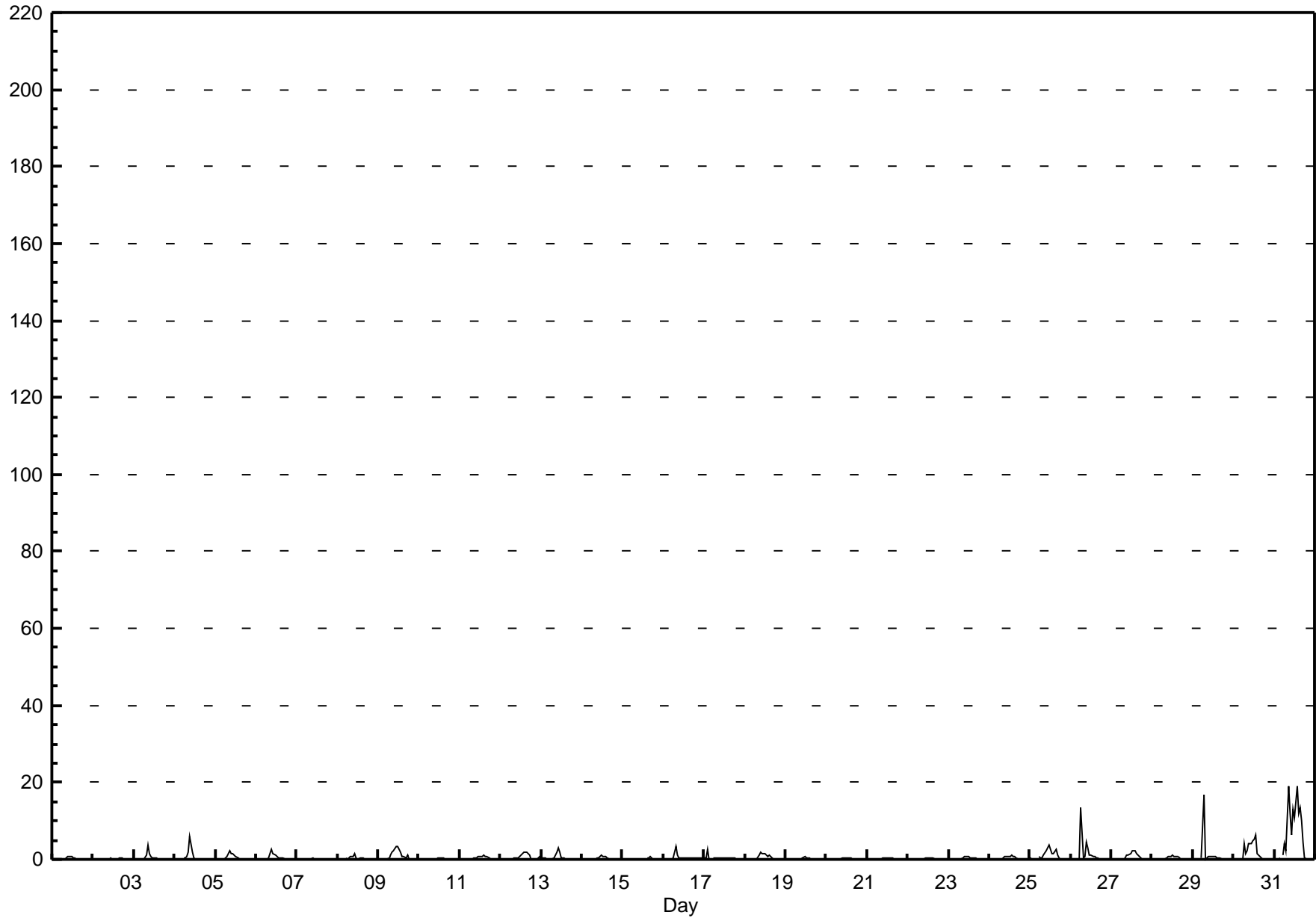
Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 19.2 ppb on Oct 31 09:00	Maximum Daily Average: 5.6 ppb on Oct 31		Hours of Data:	707
Minimum Value: 0 ppb on Oct 4 20:00	Minimum Daily Average: 0.1 ppb on Oct 7		Hours of Missing Data:	37
Maximum Diurnal Average: 1.6 ppb at hour 10	Minimum Diurnal Average: 0.0 ppb at hour 21		Hours of Calibration:	37
Monthly Average: 0.60 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> = 0.4 P <sub>90</sub> = 1.2 P <sub>99</sub> = 11.1		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
2-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
3-Oct	0	0	0	0	A	0	0	1	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.6
4-Oct	0	0	0	0	A	0	0	1	2	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	5.9
5-Oct	0	0	0	0	A	0	0	1	2	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	2.2
6-Oct	0	0	0	0	A	0	0	0	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	2.5
7-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
8-Oct	0	0	0	0	A	0	0	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
9-Oct	0	0	0	0	A	0	0	1	2	2	3	3	3	2	1	1	0	1	0	0	0	0	0	0	0.9	3.5
10-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
11-Oct	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0.3	1.0
12-Oct	0	0	0	0	A	0	0	0	0	1	1	1	1	2	2	2	2	1	0	0	0	0	0	1	0.6	2.0
13-Oct	0	0	0	0	A	0	0	0	1	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.1
14-Oct	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.2	1.0
15-Oct	0	0	0	0	A	0	0	0	C	C	C	C	C	C	0	1	1	0	0	0	0	0	0	0	--	0.6
16-Oct	0	0	0	0	A	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.2
17-Oct	0	0	2	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.4
18-Oct	0	0	0	0	A	0	0	0	1	2	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0.5	2.0
19-Oct	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9
20-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
21-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
22-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
23-Oct	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.9
24-Oct	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.3	1.1
25-Oct	0	0	0	0	A	1	0	0	1	2	3	4	3	2	1	2	1	0	0	0	0	0	0	0	1.0	3.7
26-Oct	0	0	0	0	A	0	13	0	1	4	3	1	1	1	1	1	0	0	0	0	0	0	0	1.2	13.3	
27-Oct	0	0	0	0	A	0	0	0	0	1	1	2	2	2	2	1	1	0	0	0	0	0	0	0.6	2.3	
28-Oct	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.3	1.2	
29-Oct	0	0	0	0	A	0	17	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1.0	16.7	
30-Oct	0	0	0	0	A	0	4	2	2	4	4	5	5	6	1	1	0	0	0	0	0	0	0	1.6	6.5	
31-Oct	0	0	0	0	A	1	4	2	19	12	6	13	11	19	12	13	10	4	0	0	0	0	0	5.6	19.2	
	0.1	0.0	0.1	0.0	--	0.1	1.3	0.5	1.4	1.6	1.3	1.5	1.3	1.4	0.9	0.9	0.7	0.3	0.1	0.1	0.0	0.1	0.1	0.1	Diurnal Average	
	0.3	0.3	2.4	0.4	--	1.1	16.7	3.2	19.2	11.8	6.2	13.1	10.7	19.1	11.8	13.3	10.0	4.4	0.3	0.3	0.3	0.3	0.3	0.8	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

**Hourly Averages**

**Nitrogen Oxide (NO) - ppb**  
**Beaverlodge - October 2012**



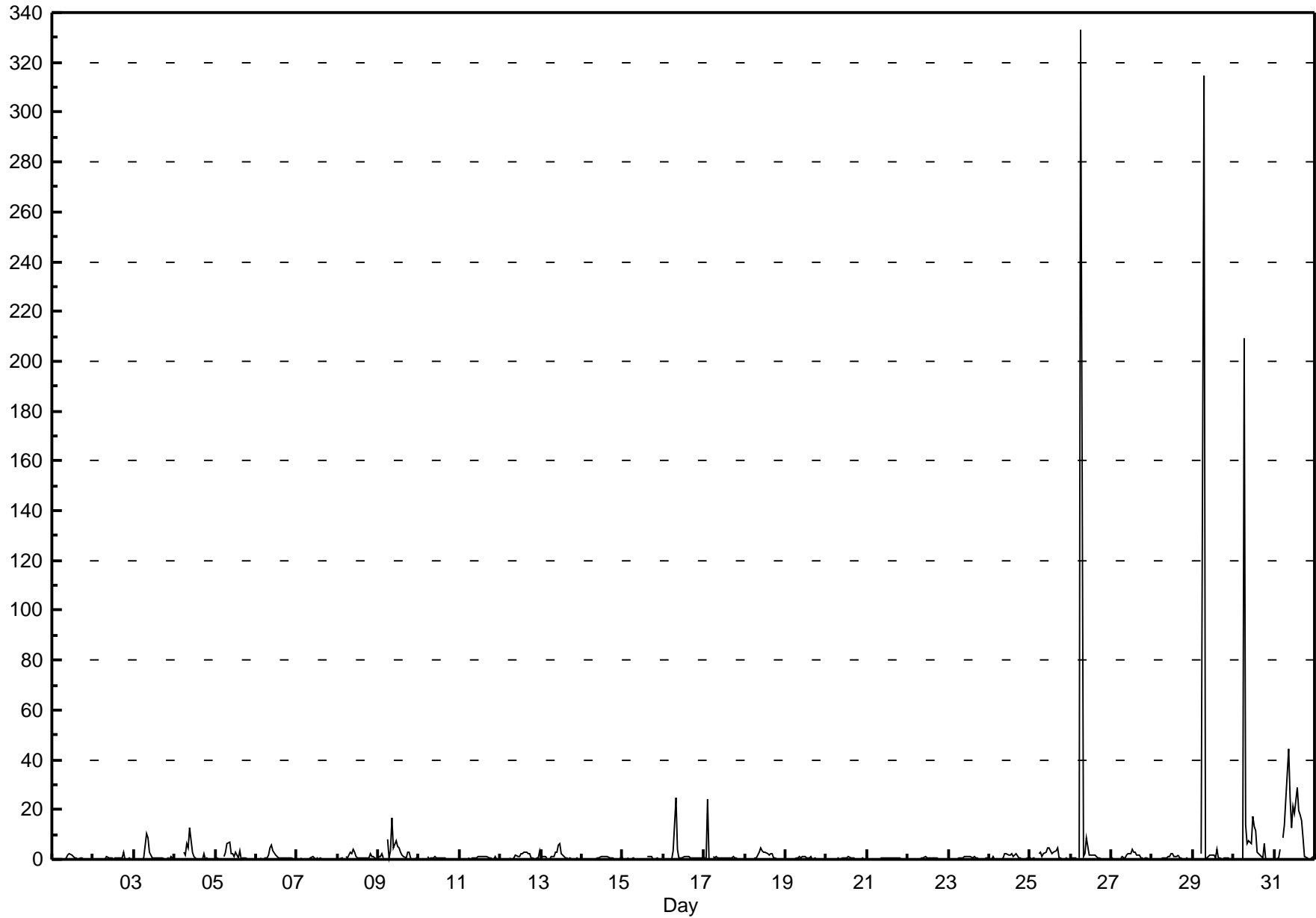
## Hourly Maximums

## Nitrogen Oxide (NO) - ppb Beaverlodge - October 2012

Maximum Value: 332.8 ppb on Oct 26 07:00		Maximum Daily Average: 15.8 ppb on Oct 26		Hours in Service: 744																						
Minimum Value: 0 ppb on Oct 17 04:00		Minimum Daily Average: 0.2 ppb on Oct 7		Hours of Data: 707																						
Maximum Diurnal Average: 28.7 ppb at hour 7		Minimum Diurnal Average: 0.2 ppb at hour 2		Hours of Missing Data: 37																						
Monthly Average: 2.64 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.4 Q <sub>3</sub> = 1.1 P <sub>90</sub> = 3.0 P <sub>99</sub> = 24.6		Hours of Calibration: 37																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	A	0	0	0	0	2	2	2	1	1	0	0	1	0	0	0	0	0	0	0	0.5	2.4
2-Oct	0	0	0	0	A	0	0	0	1	1	1	0	0	1	0	1	1	1	3	0	0	0	0	0	0.5	3.0
3-Oct	0	0	0	0	A	0	1	11	9	3	2	1	1	1	1	0	1	0	0	0	0	0	1	0	1.4	10.6
4-Oct	0	0	0	0	A	3	2	6	5	13	3	1	0	0	0	0	0	2	0	0	0	0	0	0	1.7	12.5
5-Oct	0	0	0	0	A	1	3	6	7	2	3	1	3	1	3	0	0	0	1	0	0	0	0	0	1.4	6.7
6-Oct	0	0	0	0	A	0	0	2	5	6	3	2	1	1	0	0	1	1	0	0	0	0	0	0	1.1	5.8
7-Oct	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
8-Oct	0	0	0	0	A	1	1	3	2	4	3	1	0	1	0	1	0	0	1	2	1	1	1	0	1.1	4.1
9-Oct	1	1	2	1	A	8	0	4	17	5	7	5	4	3	2	1	1	3	3	0	0	0	1	0	3.0	16.8
10-Oct	0	0	0	0	A	1	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0.4	1.2
11-Oct	0	0	0	0	A	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0.6	1.3
12-Oct	0	0	0	0	A	0	0	0	1	2	1	1	2	2	3	3	2	2	1	1	0	0	1	4	1.2	3.6
13-Oct	0	1	1	0	A	0	1	1	3	3	6	7	2	1	0	0	0	1	0	0	0	1	0	0	1.3	6.6
14-Oct	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	2	0.5	1.7
15-Oct	0	0	0	0	A	0	0	1	C	C	C	C	C	C	1	1	1	1	0	0	1	0	0	--	1.2	
16-Oct	0	0	0	0	A	0	4	25	4	1	1	1	1	1	1	1	1	0	1	1	1	1	0	2.0	25.1	
17-Oct	0	0	24	0	A	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1.5	24.2	
18-Oct	0	0	0	0	A	0	0	1	3	4	3	3	3	2	1	2	3	0	0	0	0	0	0	0	1.2	4.4
19-Oct	0	0	0	0	A	0	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.3
20-Oct	0	0	0	0	A	0	0	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.0
21-Oct	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	0.7
22-Oct	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	0.9
23-Oct	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0.6	1.4
24-Oct	1	0	1	0	A	0	0	0	1	2	2	1	2	2	1	2	3	0	1	0	0	0	0	0	0.9	2.5
25-Oct	0	0	0	1	A	2	3	1	2	3	4	4	3	2	3	4	5	1	0	0	0	0	0	0	1.8	4.7
26-Oct	0	0	0	0	A	1	333	1	2	9	5	2	2	1	2	1	1	0	0	0	0	0	0	15.8	332.8	
27-Oct	0	0	0	0	A	0	1	0	1	2	2	2	4	3	3	2	2	1	0	0	0	1	0	1.1	3.9	
28-Oct	0	0	0	0	A	0	0	0	1	1	1	2	2	1	1	2	1	0	0	0	0	0	0	0	0.7	2.3
29-Oct	0	0	0	0	A	2	315	1	1	1	2	2	2	1	4	1	1	0	0	1	1	0	0	14.5	314.5	
30-Oct	0	0	0	0	A	0	209	14	6	8	7	17	13	11	3	2	1	0	6	0	0	0	0	13.0	209.2	
31-Oct	0	0	0	4	A	9	14	24	44	25	13	21	18	29	19	18	16	9	1	0	0	0	1	11.6	44.4	
		0.3	0.2	1.1	0.3	--	1.1	28.7	3.4	4.0	3.4	2.6	2.8	2.5	2.4	1.9	1.6	1.4	0.9	0.7	0.3	0.3	0.3	0.3	0.4	Diurnal Average
		1.4	1.0	24.2	3.9	--	8.9	332.8	25.1	44.4	24.8	12.9	21.2	18.2	28.6	19.3	17.6	15.5	8.7	6.1	2.1	1.3	1.2	1.0	3.6	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

### Hourly Maximums

Nitrogen Oxide (NO) - ppb  
Beaverlodge - October 2012



## Hourly Averages

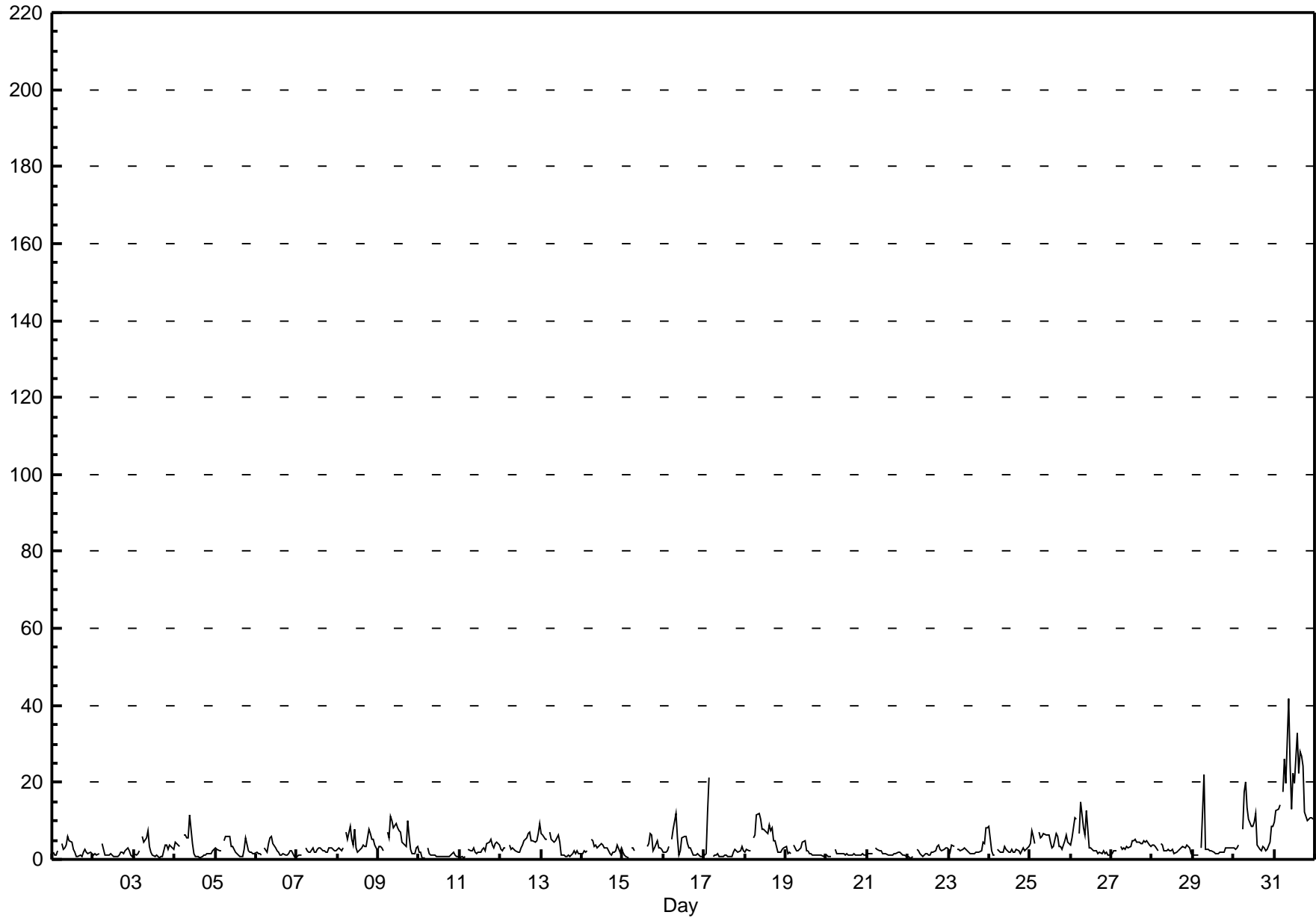
## Oxides of Nitrogen (NO<sub>x</sub>) - ppb

### Beaverlodge - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 41.7 ppb on Oct 31 09:00	Maximum Daily Average: 18.8 ppb on Oct 31		Hours of Data:	707
Minimum Value: 0 ppb on Oct 10 04:00	Minimum Daily Average: 1.1 ppb on Oct 10		Hours of Missing Data:	37
Maximum Diurnal Average: 5.7 ppb at hour 7	Minimum Diurnal Average: 2.7 ppb at hour 2		Hours of Calibration:	37
Monthly Average: 3.65 ppb	Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 1.5 Median = 2.5 Q <sub>3</sub> = 4.1 P <sub>90</sub> = 7.4 P <sub>99</sub> = 24.1		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	2	1	1	2	A	4	3	3	4	6	5	4	3	2	1	1	1	1	2	3	2	2	2	1	2.3	6.0
2-Oct	1	2	1	2	A	4	3	1	1	1	1	1	1	1	1	1	2	2	1	2	3	2	1	1	1.6	3.9
3-Oct	1	1	2	2	A	6	4	6	8	3	2	1	1	1	1	0	1	1	4	4	3	4	3	3	2.6	7.6
4-Oct	4	4	4	3	A	6	6	6	5	12	4	2	1	1	1	0	1	1	1	2	1	1	2	3	3.1	11.5
5-Oct	3	3	2	2	A	5	6	6	6	3	3	2	2	1	1	1	1	3	5	2	2	2	2	2	2.8	6.1
6-Oct	2	1	2	1	A	3	2	4	6	6	4	3	2	2	1	1	1	1	1	1	2	2	1	1	2.2	6.1
7-Oct	1	1	1	1	A	3	2	2	2	3	2	2	3	3	3	2	2	2	2	3	3	3	2	2	2.1	3.1
8-Oct	3	3	2	3	A	7	5	9	5	4	8	3	2	2	3	4	3	3	8	7	5	5	4	2	4.4	8.5
9-Oct	3	3	3	2	A	7	6	11	10	8	9	8	8	7	4	4	3	10	6	3	1	1	3	3	5.5	11.3
10-Oct	2	2	0	0	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.1	3.0
11-Oct	0	1	1	1	A	3	2	2	3	2	2	2	2	2	3	2	4	5	5	4	3	4	5	4	2.6	5.0
12-Oct	3	2	3	3	A	4	3	3	2	2	2	2	3	4	5	6	7	7	5	5	5	5	7	9	4.1	9.4
13-Oct	7	6	5	5	A	7	5	5	5	6	6	4	1	1	1	1	1	1	1	2	1	2	1	1	3.4	7.0
14-Oct	2	2	2	2	A	5	5	3	4	3	3	4	4	3	3	3	2	1	2	2	2	4	2	3	2.8	5.2
15-Oct	2	1	1	0	A	3	3	2	C	C	C	C	C	C	3	4	7	6	2	3	5	3	3	3	--	6.6
16-Oct	2	2	2	3	A	5	8	12	6	1	2	5	6	6	4	3	3	1	1	1	1	1	1	1	3.4	11.9
17-Oct	1	1	12	21	A	1	1	1	1	1	1	1	1	1	1	1	1	2	3	2	2	2	3	2	2.8	21.4
18-Oct	2	3	2	2	A	5	6	12	12	11	8	8	8	7	9	7	8	5	5	2	2	2	3	3	5.7	11.9
19-Oct	3	2	2	2	A	4	2	2	3	3	5	5	2	2	2	1	1	1	1	1	1	1	1	1	2.1	4.9
20-Oct	1	1	1	1	A	3	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.6
21-Oct	1	1	2	2	A	3	2	2	2	2	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1.6	3.1
22-Oct	1	0	1	1	A	3	2	1	1	1	1	2	1	1	2	2	2	3	4	3	2	3	3	3	1.8	3.9
23-Oct	3	2	4	3	A	3	2	2	3	3	3	2	2	2	2	2	2	2	2	2	5	4	8	8	3.0	8.2
24-Oct	9	2	1	1	A	2	2	2	2	3	3	2	2	3	2	2	2	2	2	2	3	2	3	3	2.5	8.6
25-Oct	4	7	6	4	A	7	6	6	7	6	6	6	5	3	3	7	6	3	3	3	5	6	5	4	5.2	7.4
26-Oct	4	5	11	10	A	7	15	8	6	13	8	3	3	2	2	2	2	2	2	2	1	2	1	1	4.9	15.0
27-Oct	1	2	2	2	A	3	3	3	3	3	3	3	3	5	5	4	4	4	4	5	5	5	4	3	3.6	5.3
28-Oct	4	4	3	2	A	4	4	2	2	3	2	2	3	2	2	2	3	3	3	3	4	3	3	2	2.8	4.1
29-Oct	1	1	1	1	A	3	22	3	3	3	2	2	2	1	1	1	2	2	2	3	3	3	3	3	3.0	22.1
30-Oct	3	3	3	4	A	8	18	20	14	10	8	9	10	12	4	3	2	3	3	2	3	4	9	9	7.0	20.0
31-Oct	10	13	13	14	A	18	26	20	42	24	13	22	20	33	23	28	27	24	12	10	10	11	11	10	18.8	41.7
	2.8	2.7	3.0	3.4	--	4.8	5.7	5.2	5.6	4.9	4.0	3.8	3.4	3.8	3.0	3.2	3.3	3.4	3.1	2.8	2.9	3.0	3.1	3.0		Diurnal Average
	9.7	12.5	13.2	21.4	--	17.7	26.2	20.0	41.7	24.5	13.1	22.2	19.7	32.8	22.6	27.9	26.9	24.2	12.3	10.0	10.4	10.7	10.8	10.3		Diurnal Maximum

C - Calibration                      A - Automated Daily Zero Span



## Hourly Maximums

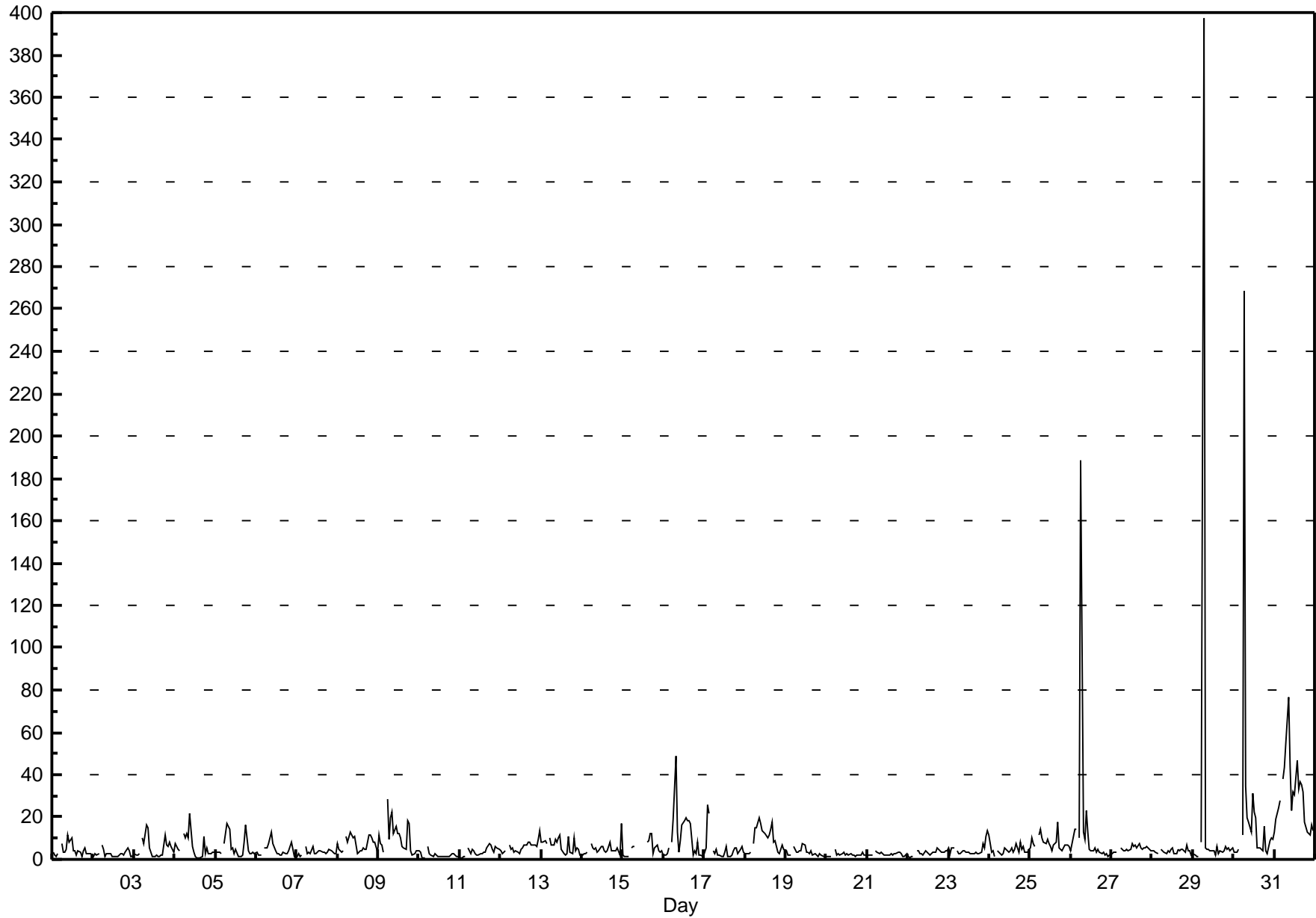
Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Beaverlodge - October 2012

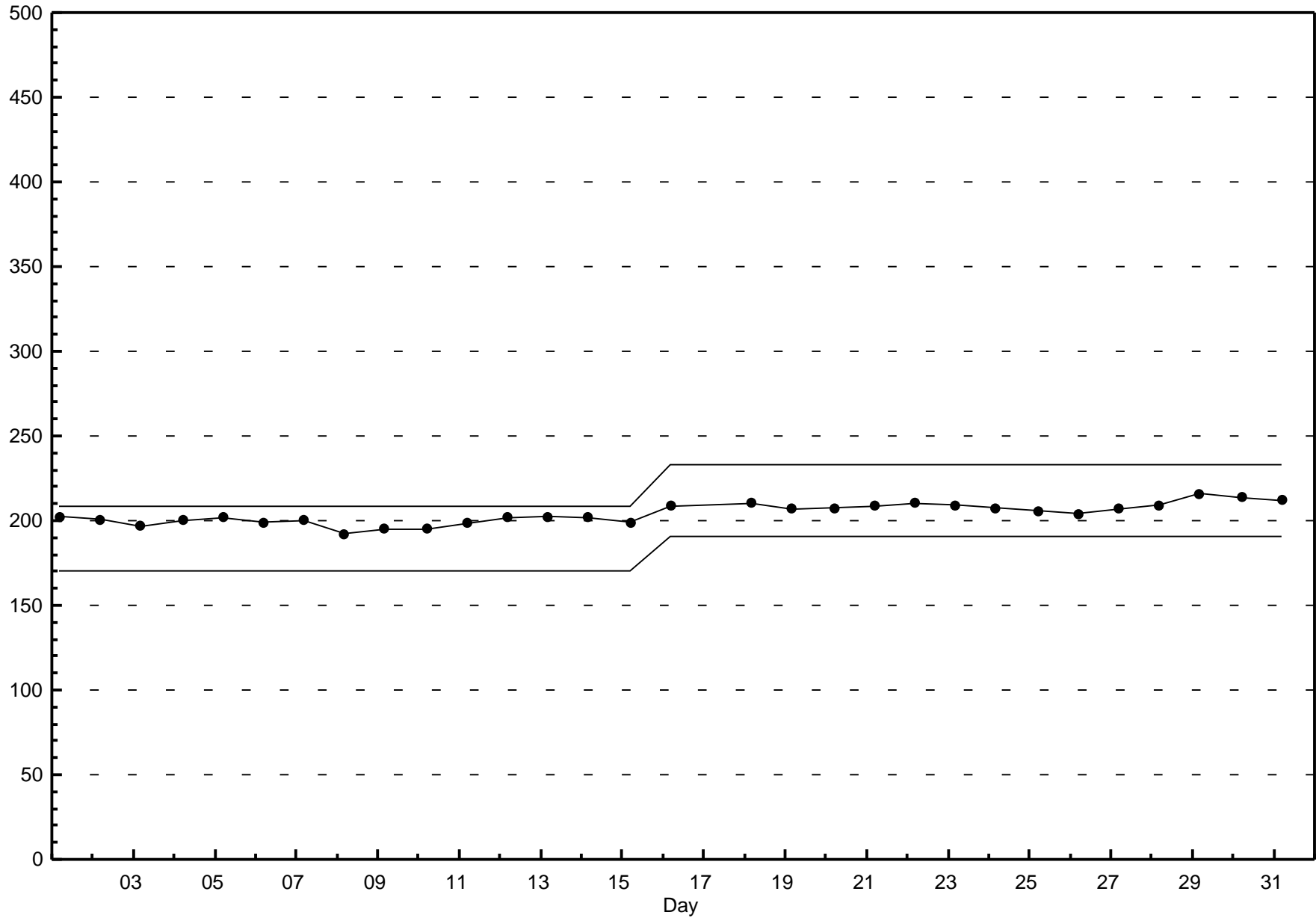
Maximum Value: 397.0 ppb on Oct 29 07:00		Maximum Daily Average: 30.2 ppb on Oct 31		Hours in Service: 744																							
Minimum Value: 1 ppb on Oct 10 04:00		Minimum Daily Average: 2.0 ppb on Oct 10		Hours of Data: 707																							
Maximum Diurnal Average: 34.5 ppb at hour 7		Minimum Diurnal Average: 4.0 ppb at hour 2		Hours of Missing Data: 37																							
Monthly Average: 7.40 ppb		Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 1.7 Q <sub>1</sub> = 2.6 Median = 4.0 Q <sub>3</sub> = 7.0 P <sub>90</sub> = 12.8 P <sub>99</sub> = 45.3		Hours of Calibration: 37																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	3	2	2	3	A	8	3	3	5	11	8	10	4	4	2	4	3	2	4	5	3	2	3	2	4.2	11.3	
2-Oct	2	3	2	2	A	7	5	1	3	2	3	1	1	2	2	2	3	3	2	3	5	4	2	1	2.6	6.8	
3-Oct	3	2	2	3	A	10	8	16	15	5	3	2	2	2	1	2	2	2	11	7	6	8	6	4	5.3	16.1	
4-Oct	7	6	5	4	A	12	10	12	10	22	6	3	1	1	1	1	1	11	3	5	2	3	3	3	5.8	21.7	
5-Oct	4	4	3	2	A	7	12	17	14	4	5	3	5	2	1	1	2	8	16	4	2	3	4	3	5.6	17.1	
6-Oct	4	2	2	2	A	5	5	7	10	13	8	4	3	3	2	2	4	3	2	4	6	8	1	1	4.4	12.6	
7-Oct	1	2	2	2	A	6	3	3	3	6	3	3	3	4	4	4	3	3	3	4	4	3	3	3	3.3	6.4	
8-Oct	7	5	3	4	A	11	8	13	11	10	11	7	2	4	4	6	5	5	12	12	10	8	8	4	7.3	12.8	
9-Oct	12	8	7	3	A	28	9	20	23	12	15	12	12	10	6	5	5	18	17	4	2	3	4	4	10.5	28.4	
10-Oct	4	3	1	1	A	6	3	2	2	3	2	1	1	1	2	1	1	1	2	2	3	2	1	1	2.0	5.9	
11-Oct	1	1	1	1	A	5	3	5	4	3	2	2	3	3	4	4	5	8	7	5	3	6	5	4	3.7	7.8	
12-Oct	4	3	4	4	A	7	5	6	4	4	3	3	4	6	7	7	8	8	7	7	7	6	9	13	5.9	13.5	
13-Oct	8	8	9	7	A	10	7	7	9	8	10	11	5	3	2	3	11	3	3	10	4	5	5	2	6.5	11.3	
14-Oct	2	3	2	3	A	7	5	5	5	3	4	6	6	4	4	4	8	4	4	4	4	6	2	17	4.9	16.6	
15-Oct	2	2	1	1	A	6	6	6	C	C	C	C	C	C	8	9	12	12	3	5	7	4	3	4	--	12.5	
16-Oct	2	2	2	5	A	8	19	49	13	3	9	16	19	20	18	19	17	2	4	3	8	2	2	1	10.6	49.1	
17-Oct	3	5	26	22	A	4	2	5	2	2	1	2	3	6	2	2	2	4	5	6	3	4	6	3	5.3	25.8	
18-Oct	3	3	3	3	A	8	15	15	20	17	13	13	12	10	11	14	18	8	9	3	3	5	7	5	9.4	19.8	
19-Oct	4	2	2	2	A	6	3	3	4	4	8	7	3	3	3	4	2	2	2	2	3	2	1	1	3.2	7.7	
20-Oct	1	1	1	1	A	5	2	3	2	3	3	2	3	2	3	2	2	2	2	2	2	3	2	2	2.2	4.6	
21-Oct	2	2	2	2	A	4	3	3	3	2	2	2	2	2	2	2	3	3	4	3	3	1	2	3	2.5	4.4	
22-Oct	1	1	1	1	A	4	4	3	3	2	4	4	3	2	3	4	3	5	5	4	4	4	4	4	3.1	5.3	
23-Oct	5	3	5	6	A	4	3	3	4	4	3	4	3	3	3	3	3	3	3	4	7	5	11	14	4.6	13.6	
24-Oct	11	4	4	2	A	4	3	2	3	5	5	3	4	5	3	5	8	3	8	5	6	3	4	5	4.5	11.4	
25-Oct	6	10	8	6	A	12	14	10	8	8	9	7	6	4	7	8	18	5	5	4	7	7	7	6	7.9	17.6	
26-Oct	4	7	15	14	A	10	189	13	10	23	13	5	4	4	5	4	5	3	3	4	2	3	2	2	14.8	188.6	
27-Oct	3	3	3	4	A	5	5	4	4	5	4	5	8	6	7	5	7	5	5	6	6	6	5	4	4.9	7.8	
28-Oct	4	4	4	3	A	5	4	3	3	4	3	5	5	3	2	5	4	5	5	4	7	4	4	2	4.0	6.9	
29-Oct	2	2	2	2	A	8	397	6	5	5	4	4	4	2	6	2	4	3	4	6	5	5	4	5	21.2	397.0	
30-Oct	4	4	4	5	A	11	269	34	19	17	13	31	23	20	6	5	5	4	16	4	3	9	10	10	22.8	268.7	
31-Oct	13	19	24	28	A	38	43	55	77	44	23	32	31	47	33	37	35	32	18	13	12	12	16	14	30.2	76.9	
		4.3	4.0	4.9	4.8	--	8.8	34.5	10.8	9.9	8.5	6.7	7.0	6.2	6.2	5.3	5.6	6.8	5.9	6.2	4.9	4.8	4.7	4.7	4.7	Diurnal Average	
		12.9	19.0	25.8	27.6	--	37.7	397.0	55.0	76.9	43.9	23.1	31.8	30.8	46.7	33.1	36.6	35.4	32.0	17.6	12.9	11.9	11.7	16.1	16.6	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

### Hourly Maximums

Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
Beaverlodge - October 2012





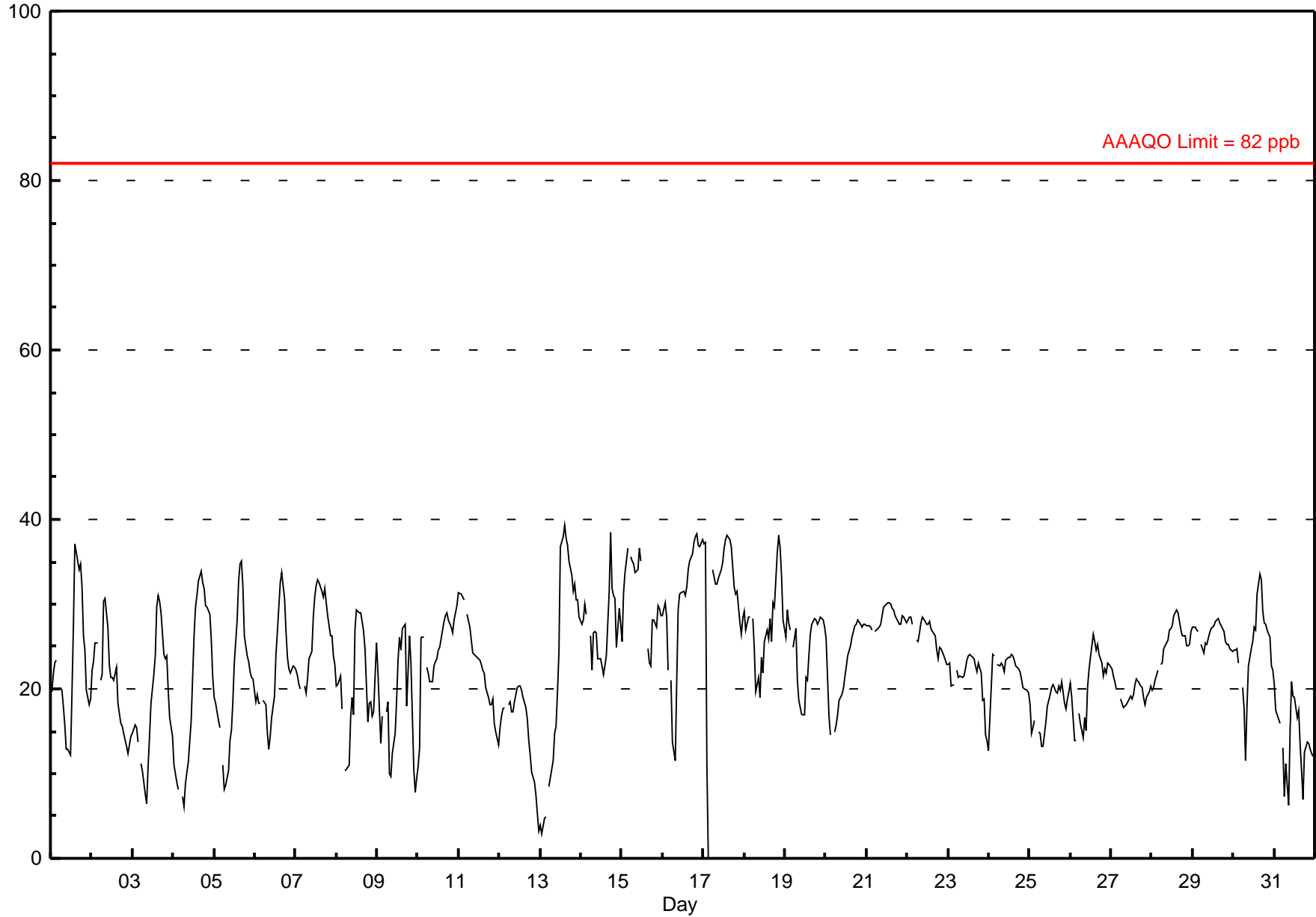


## Hourly Averages

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

Beaverlodge - October 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 39.3 ppb on Oct 13 15:00 Maximum Daily Average: 31.2 ppb on Oct 17																	Hours in Service: 744 Hours of Data: 710 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0																									
Minimum Value: 0 ppb on Oct 17 04:00 Minimum Daily Average: 14.1 ppb on Oct 31 Maximum Diurnal Average: 27.5 ppb at hour 16 Minimum Diurnal Average: 18.9 ppb at hour 8 Monthly Average: 23.11 ppb Percentiles: P <sub>1</sub> = 6.0 P <sub>10</sub> = 13.8 Q <sub>1</sub> = 18.6 Median = 23.4 Q <sub>3</sub> = 27.8 P <sub>90</sub> = 31.5 P <sub>99</sub> = 37.9																																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																		
1-Oct	20	22	23	23	A	20	20	18	16	13	13	12	20	27	37	36	34	35	32	26	25	20	18	19	23.0	37.2																
2-Oct	22	23	25	25	A	21	22	30	31	27	23	21	21	23	18	17	16	16	15	13	12	13	14	20.5	30.7																	
3-Oct	15	16	15	14	A	11	10	8	6	11	14	18	22	24	30	31	30	29	24	24	24	20	17	14	18.5	31.1																
4-Oct	11	10	9	8	A	7	6	9	10	11	16	21	26	30	31	33	34	33	32	30	30	29	26	21	20.6	33.9																
5-Oct	19	18	16	15	A	11	8	9	10	14	15	18	23	28	33	35	35	32	26	24	23	22	21	21	20.8	35.0																
6-Oct	19	19	18	18	A	19	18	15	13	14	17	19	24	27	30	33	34	31	27	24	22	22	23	23	22.0	33.7																
7-Oct	22	22	21	20	A	20	20	21	24	24	29	31	32	33	33	32	31	32	30	29	26	26	24	23	26.2	32.8																
8-Oct	20	20	22	18	A	10	10	11	17	19	17	27	29	29	29	28	27	25	16	18	18	17	17	25	20.5	29.4																
9-Oct	22	18	14	17	A	17	18	10	10	12	15	19	23	26	25	27	28	18	22	26	23	10	8	9	18.1	27.7																
10-Oct	11	13	26	26	A	23	22	21	21	23	23	24	25	25	27	28	29	29	28	27	27	28	29	30	24.5	29.8																
11-Oct	31	31	31	31	A	29	27	26	24	24	24	24	23	23	22	22	20	19	18	18	19	16	15	13	23.1	31.4																
12-Oct	15	17	18	18	A	18	19	17	17	18	20	20	20	20	19	18	16	14	12	10	9	7	5	3	15.3	20.3																
13-Oct	4	3	5	5	A	8	9	11	15	16	20	24	37	38	39	38	37	35	33	31	32	30	31	28	23.1	39.3																
14-Oct	28	28	30	29	A	26	22	27	27	27	24	24	23	22	23	24	32	38	32	31	31	25	30	28	27.2	38.5																
15-Oct	26	31	34	37	A	36	35	35	34	34	37	35	C	C	C	25	23	23	28	28	27	30	29	29	30.7	36.6																
16-Oct	29	30	28	22	A	21	14	11	21	29	31	31	32	31	32	34	35	36	37	38	38	37	37	38	30.2	38.4																
17-Oct	37	37	11	0	A	34	33	32	32	33	34	35	37	38	38	38	37	34	32	31	32	28	26	28	31.2	38.2																
18-Oct	29	27	29	28	A	28	25	20	21	19	24	22	26	27	26	28	26	30	30	36	38	37	33	28	27.6	38.2																
19-Oct	26	29	28	27	A	25	27	21	19	18	17	17	21	21	24	26	28	28	28	28	28	28	28	27	24.8	29.4																
20-Oct	26	21	17	15	A	15	16	17	19	19	20	21	23	24	25	26	27	28	28	28	28	27	28	28	22.8	28.2																
21-Oct	28	27	27	27	A	27	27	27	28	29	30	30	30	30	30	30	29	29	28	28	28	29	28	28	28.3	30.2																
22-Oct	28	28	28	28	A	26	26	27	28	28	28	28	28	28	27	27	26	25	24	25	25	24	23	23	26.4	28.5																
23-Oct	23	23	20	21	A	22	21	22	21	22	22	23	24	24	24	23	23	22	23	22	19	19	15	14	21.4	24.0																
24-Oct	13	20	24	24	A	23	23	23	23	22	23	24	24	24	24	23	23	22	22	21	20	20	20	20	21.9	24.1																
25-Oct	18	15	15	16	A	15	15	13	13	16	18	19	19	20	20	20	20	20	20	21	18	18	19	20	17.7	20.8																
26-Oct	21	19	14	14	A	17	16	14	17	15	20	22	24	26	26	25	25	24	23	21	22	22	23	23	20.6	26.4																
27-Oct	22	22	21	20	A	19	18	18	18	18	19	19	19	19	21	21	21	20	20	19	18	19	20	20	19.6	22.4																
28-Oct	20	20	21	22	A	23	23	25	25	26	27	27	27	29	29	29	28	27	26	26	25	25	25	27	25.4	29.3																
29-Oct	27	27	27	27	A	25	24	25	25	26	27	27	28	28	28	28	28	28	27	27	26	25	25	24	26.4	28.3																
30-Oct	25	25	25	23	A	20	18	11	18	23	25	26	27	27	31	34	33	29	28	28	27	26	23	22	24.9	33.6																
31-Oct	21	17	16	16	A	13	7	11	6	15	21	19	19	17	17	13	10	7	13	14	14	13	12	12	14.1	20.8																
																	21.8	22.0	21.2	20.4	--	20.3	19.3	18.9	19.6	20.8	22.3	23.5	25.2	26.2	27.4	27.5	27.2	26.3	25.3	24.9	24.3	22.9	22.3	22.0	Diurnal Average	
																	37.2	37.3	33.7	36.6	--	35.6	35.1	34.8	33.7	34.0	36.5	35.1	36.8	38.0	39.3	37.8	36.9	38.5	37.4	38.0	38.4	37.0	36.8	37.6	Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																																										



# Hourly Maximums

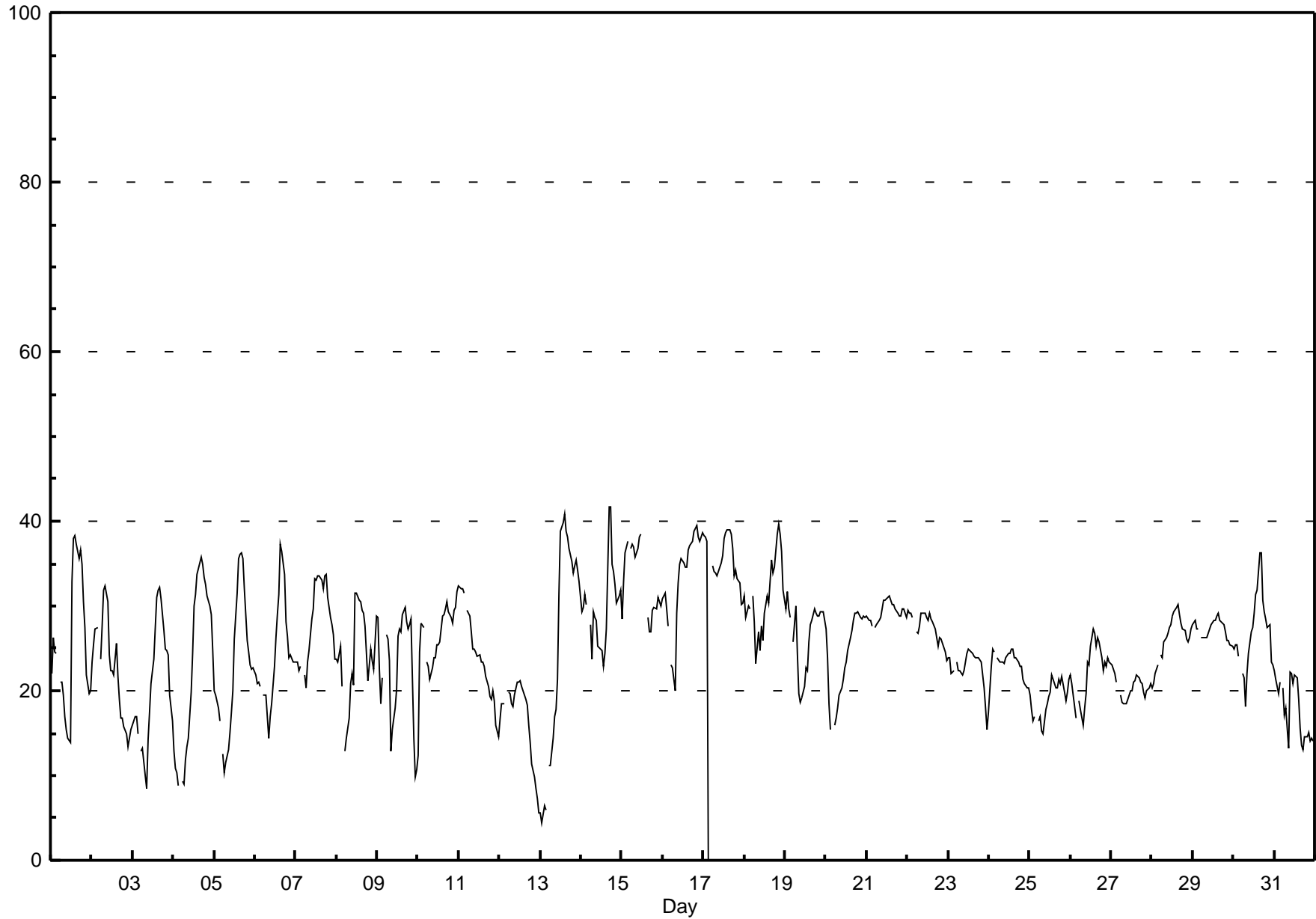
Ozone (O<sub>3</sub>) - ppb

Beaverlodge - October 2012

Maximum Value: 41.7 ppb on Oct 14 18:00		Maximum Daily Average: 33.9 ppb on Oct 17		Hours in Service: 744																						
Minimum Value: 0 ppb on Oct 17 04:00		Minimum Daily Average: 16.5 ppb on Oct 12		Hours of Data: 710																						
Maximum Diurnal Average: 29.4 ppb at hour 17		Minimum Diurnal Average: 21.7 ppb at hour 8		Hours of Missing Data: 34																						
Monthly Average: 25.12 ppb		Percentiles: P <sub>1</sub> = 8.4 P <sub>10</sub> = 16.4 Q <sub>1</sub> = 20.7 Median = 25.0 Q <sub>3</sub> = 29.5 P <sub>90</sub> = 34.2 P <sub>99</sub> = 39.0		Hours of Calibration: 34																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	22	26	25	24	A	21	21	19	17	15	14	14	33	38	37	36	37	35	30	28	22	20	20	25.8	38.4	
2-Oct	23	25	27	27	A	24	28	32	32	30	24	22	22	22	26	22	19	17	17	16	15	13	14	15	22.4	32.4
3-Oct	16	17	17	15	A	13	13	10	8	14	17	21	24	27	31	32	32	31	27	25	25	24	19	16	20.7	32.2
4-Oct	13	11	10	9	A	9	9	12	13	14	20	24	30	31	34	34	36	35	33	33	31	30	29	25	22.9	35.8
5-Oct	20	19	18	17	A	13	10	12	13	15	17	20	26	31	36	36	36	36	32	26	25	23	23	23	22.8	36.3
6-Oct	22	21	21	21	A	19	19	17	14	17	18	23	26	29	31	37	36	34	28	26	24	24	23	23	24.2	37.4
7-Oct	23	23	22	23	A	22	20	23	25	28	30	33	33	34	34	33	32	34	34	31	29	28	27	24	28.0	33.7
8-Oct	24	23	25	21	A	13	14	17	21	22	21	31	32	31	31	30	29	28	21	23	25	24	23	29	24.1	31.6
9-Oct	29	23	19	22	A	27	26	23	13	15	18	20	26	27	27	29	30	28	27	28	28	14	10	11	22.6	29.9
10-Oct	12	25	28	27	A	23	23	21	23	24	24	25	25	26	29	29	30	30	29	29	28	29	30	32	26.2	31.8
11-Oct	32	32	32	31	A	29	29	27	25	25	25	24	24	23	23	23	22	20	19	19	20	19	16	15	24.2	32.4
12-Oct	17	18	18	18	A	20	20	18	18	19	21	21	21	20	20	19	18	16	14	11	10	8	7	6	16.5	21.1
13-Oct	6	4	6	6	A	11	11	14	17	18	21	31	39	40	41	39	38	37	35	34	35	35	34	33	25.5	40.9
14-Oct	29	30	31	30	A	28	24	29	29	28	25	25	25	23	24	27	42	42	35	34	33	30	31	32	29.8	41.7
15-Oct	28	33	36	38	A	37	37	37	36	37	38	38	C	C	C	29	27	27	29	30	30	31	31	30	32.9	38.5
16-Oct	31	31	30	28	A	23	23	20	29	33	35	36	35	35	35	37	37	38	39	39	40	38	38	39	33.3	39.5
17-Oct	38	38	38	0	A	35	34	34	34	34	35	36	38	39	39	39	38	37	34	34	33	33	30	30	33.9	39.0
18-Oct	31	29	30	30	A	31	28	23	27	25	28	26	29	31	30	33	35	34	35	39	40	38	36	32	31.3	39.7
19-Oct	30	32	30	29	A	26	30	24	20	19	19	21	23	22	26	28	28	30	29	29	29	29	29	28	26.4	31.6
20-Oct	27	24	18	15	A	16	17	18	19	20	21	23	23	25	26	27	28	29	29	29	29	28	29	29	24.0	29.2
21-Oct	29	28	28	28	A	27	28	28	29	30	31	31	31	31	31	30	30	30	29	29	29	30	30	29	29.3	31.1
22-Oct	30	29	29	29	A	27	27	28	29	29	29	29	28	29	28	28	27	26	25	26	26	25	25	24	27.5	29.5
23-Oct	24	24	22	22	A	23	22	22	22	22	23	24	25	25	24	24	24	24	24	23	22	20	18	15	22.7	24.9
24-Oct	17	23	25	25	A	24	23	23	23	23	24	24	24	25	25	24	24	23	23	23	21	21	20	20	23.0	24.9
25-Oct	19	18	17	17	A	17	17	15	15	18	18	19	20	22	21	20	20	21	21	22	20	19	20	21	19.0	21.8
26-Oct	22	21	18	17	A	19	18	16	18	20	23	23	25	27	27	25	26	26	24	22	23	23	24	23	22.2	27.3
27-Oct	23	22	22	21	A	20	19	19	19	19	19	20	20	21	21	22	22	21	21	20	19	20	20	21	20.4	23.1
28-Oct	20	21	22	23	A	24	24	26	26	27	27	28	29	29	30	30	29	28	27	27	26	26	26	27	26.2	30.2
29-Oct	28	28	27	27	A	26	26	26	26	27	27	28	28	28	29	29	28	28	28	27	26	26	25	25	27.2	29.2
30-Oct	25	25	25	24	A	22	22	18	22	24	27	27	29	31	32	36	36	31	29	28	27	28	23	23	26.8	36.3
31-Oct	22	21	20	21	A	20	17	18	13	22	22	21	22	21	19	16	14	13	15	15	15	14	14	14	17.8	22.4
		23.7	24.1	23.8	22.1	--	22.2	21.9	21.7	21.8	23.1	24.0	25.5	27.2	28.2	28.9	29.2	29.4	28.7	27.4	26.7	26.1	25.0	24.0	23.7	Diurnal Average
		38.4	38.2	37.6	37.7	--	36.8	37.3	37.0	35.7	36.8	38.1	38.5	38.8	39.8	40.9	38.9	41.6	41.7	38.8	39.2	39.7	38.5	37.6	38.7	Diurnal Maximum
C - Calibration					A - Automated Daily Zero Span																					

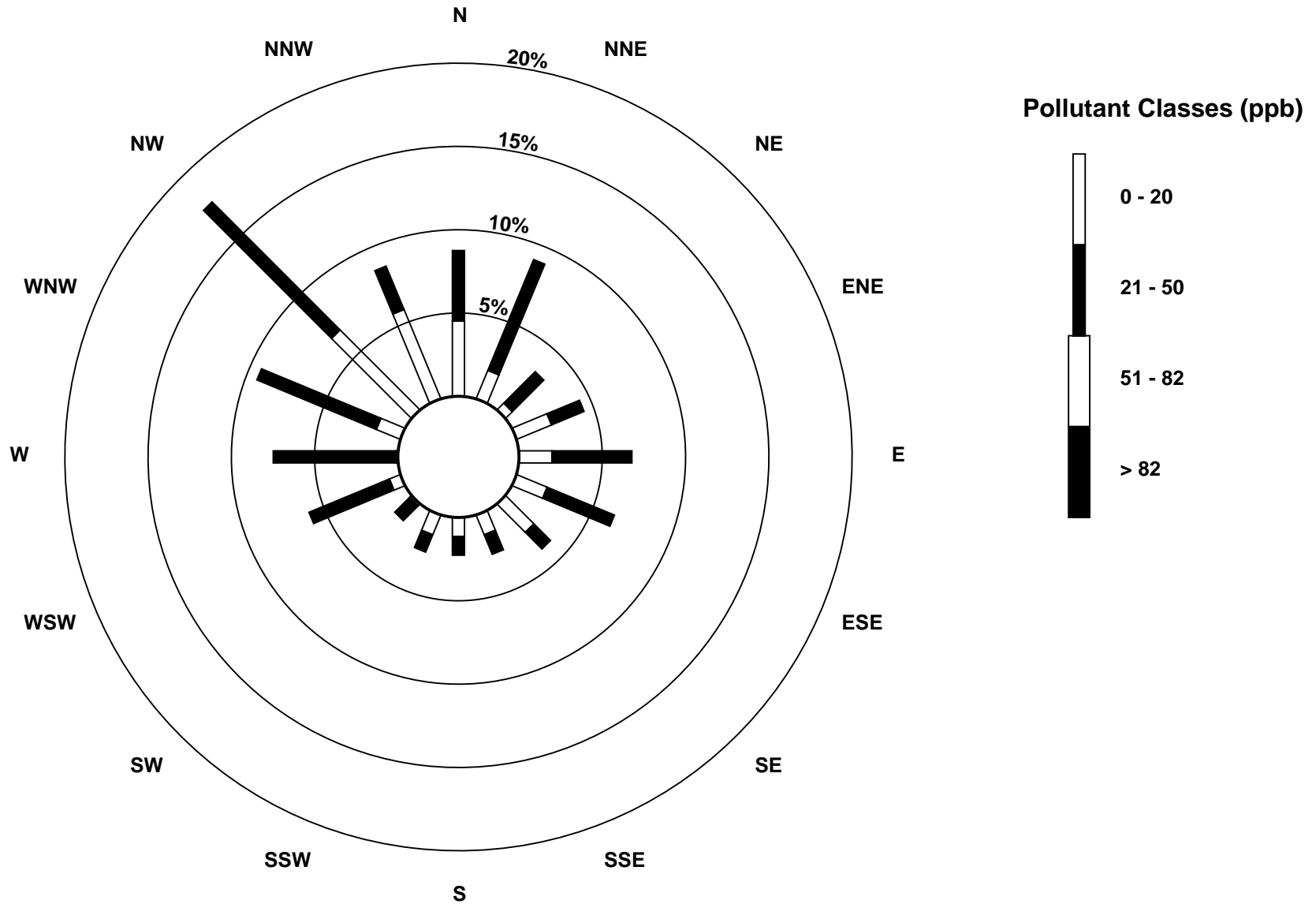
### Hourly Maximums

Ozone (O<sub>3</sub>) - ppb  
Beaverlodge - October 2012



**Pollutant Rose**

Ozone (O<sub>3</sub>) - ppb  
Beaverlodge - October 2012



# Eight Hour Running Averages

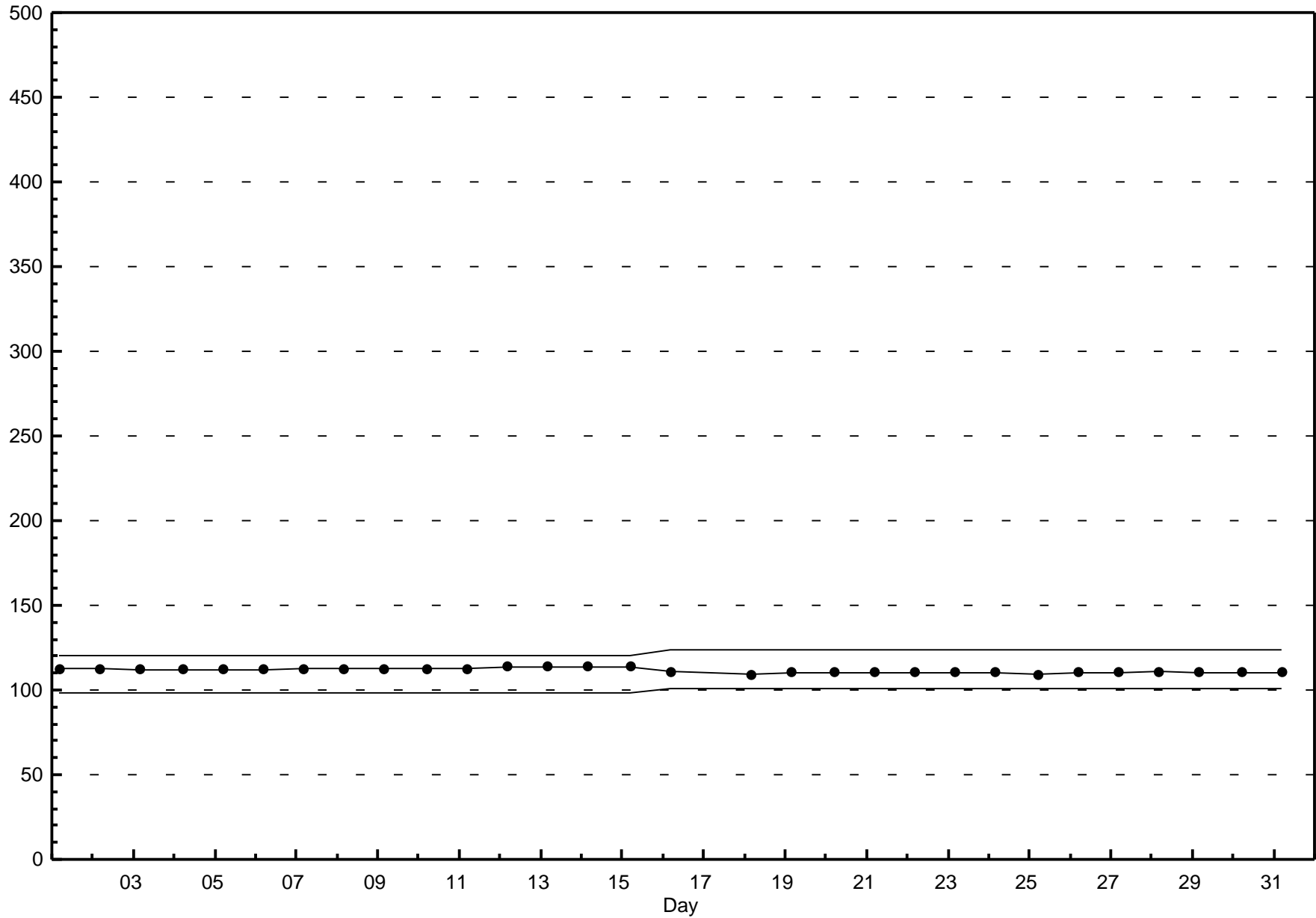
Ozone (O<sub>3</sub>) - ppb

Beaverlodge - October 2012

Maximum Value: 37.5 ppb on Oct 17 02:00																					Hours in Service:	744			
Minimum Value: 4.6 ppb on Oct 13 05:00																					Hours of Data:	738			
Percentiles: P <sub>1</sub> = 8.1 P <sub>10</sub> = 15.4 Q <sub>1</sub> = 19.0 Median = 23.2 Q <sub>3</sub> = 27.3 P <sub>90</sub> = 29.9 P <sub>99</sub> = 36.1																					Hours of Missing Data:	6			
																					Hours of Calibration:	6			
																					Percent Operational Time:	100.0			
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Oct	27	25	24	24	23	22	21	21	20	19	18	16	16	17	20	22	24	27	29	31	32	31	28	26	31.6
2-Oct	25	23	22	22	22	22	23	24	25	26	26	25	25	25	23	21	20	19	18	17	16	15	15	15	26.0
3-Oct	14	14	14	14	14	14	14	13	11	11	11	11	13	14	17	20	23	25	26	27	27	26	25	23	26.9
4-Oct	20	18	16	14	13	11	9	9	8	9	10	12	13	16	19	22	25	28	30	31	31	31	31	29	31.4
5-Oct	27	26	24	22	21	18	16	14	13	12	12	12	14	16	19	22	25	27	29	29	30	29	27	26	29.5
6-Oct	24	22	21	20	20	19	19	18	17	17	16	16	17	18	20	22	25	27	28	29	28	28	27	26	28.5
7-Oct	24	23	22	22	22	21	21	21	21	21	23	24	25	27	28	30	30	31	32	31	31	30	29	28	31.6
8-Oct	26	25	24	22	22	20	18	16	15	15	15	16	18	20	22	24	26	26	25	24	22	21	20	20	26.3
9-Oct	20	19	19	19	19	19	19	17	15	14	14	14	16	17	17	20	22	23	23	24	24	22	20	18	24.4
10-Oct	16	15	16	16	15	17	19	20	22	23	23	22	23	23	23	24	25	26	27	27	27	28	28	28	28.3
11-Oct	29	29	29	30	30	30	30	29	28	27	26	25	25	24	24	23	23	22	21	21	20	19	18	17	30.2
12-Oct	17	16	16	16	16	16	17	17	18	18	18	19	19	19	19	19	19	18	17	16	15	13	12	10	19.1
13-Oct	8	7	6	5	5	5	5	7	8	10	12	15	18	21	25	28	31	33	35	36	36	35	33	32	36.1
14-Oct	31	30	30	30	29	29	27	27	27	27	26	25	25	24	24	24	25	26	27	28	29	29	30	31	31.2
15-Oct	30	29	29	30	30	31	32	33	34	35	35	35	35	35	N	N	N	N	N	N	26	26	27	27	35.2
16-Oct	28	29	29	28	28	27	25	22	21	21	21	23	24	25	27	30	32	33	34	34	35	36	37	37	37.0
17-Oct	37	37	34	28	26	26	25	24	24	23	26	33	34	34	35	36	36	36	36	36	35	34	32	31	37.5
18-Oct	30	29	29	28	28	28	28	27	25	24	23	23	23	23	24	25	26	27	29	30	31	32	32	32	32.2
19-Oct	32	32	32	31	30	28	27	26	25	23	22	20	21	20	20	20	22	23	24	26	26	27	28	28	32.2
20-Oct	28	27	25	24	23	21	20	18	17	17	17	18	19	20	21	22	23	24	25	26	27	27	27	28	27.7
21-Oct	28	28	28	27	27	27	27	27	27	27	28	28	28	29	29	29	30	30	29	29	29	29	28	28	29.7
22-Oct	28	28	28	28	28	28	27	27	27	27	27	27	27	27	28	28	27	27	26	26	26	25	25	24	28.2
23-Oct	24	24	23	23	22	22	22	22	21	21	22	22	22	22	23	23	23	23	23	23	22	22	21	19	23.9
24-Oct	18	18	18	18	18	19	20	21	23	23	23	23	23	23	23	23	23	23	23	23	22	22	21	21	23.4
25-Oct	20	19	19	18	18	17	16	15	15	15	15	16	16	17	17	18	19	20	20	20	20	19	19	19	20.4
26-Oct	20	19	19	18	18	18	17	16	16	15	16	17	18	19	21	22	23	24	24	24	24	24	23	23	24.3
27-Oct	23	22	22	22	22	21	21	20	19	19	19	18	18	18	19	19	20	20	20	20	20	20	20	20	22.7
28-Oct	20	20	20	20	20	21	21	22	23	24	24	25	25	26	27	27	28	28	28	28	27	27	26	26	27.9
29-Oct	26	26	26	26	27	27	26	26	26	26	26	26	26	26	27	27	27	28	28	27	27	27	26	26	27.6
30-Oct	25	25	25	25	24	24	23	21	20	20	20	20	21	22	23	26	28	29	29	30	30	29	28	27	29.6
31-Oct	25	24	22	21	20	18	16	15	13	12	13	13	14	14	16	16	16	15	14	14	13	13	12	12	25.4
37.3 37.5 34.2 30.8 30.1 31.4 32.2 33.3 34.4 34.8 35.2 35.0 35.0 34.9 34.9 35.6 36.1 36.3 36.0 36.1 35.5 36.0 36.6 37.0 Diurnal Maximums																									
N - Not Valid																									

### Span Responses

Ozone (O<sub>3</sub>)  
Beaverlodge - October 2012





## Hourly Averages

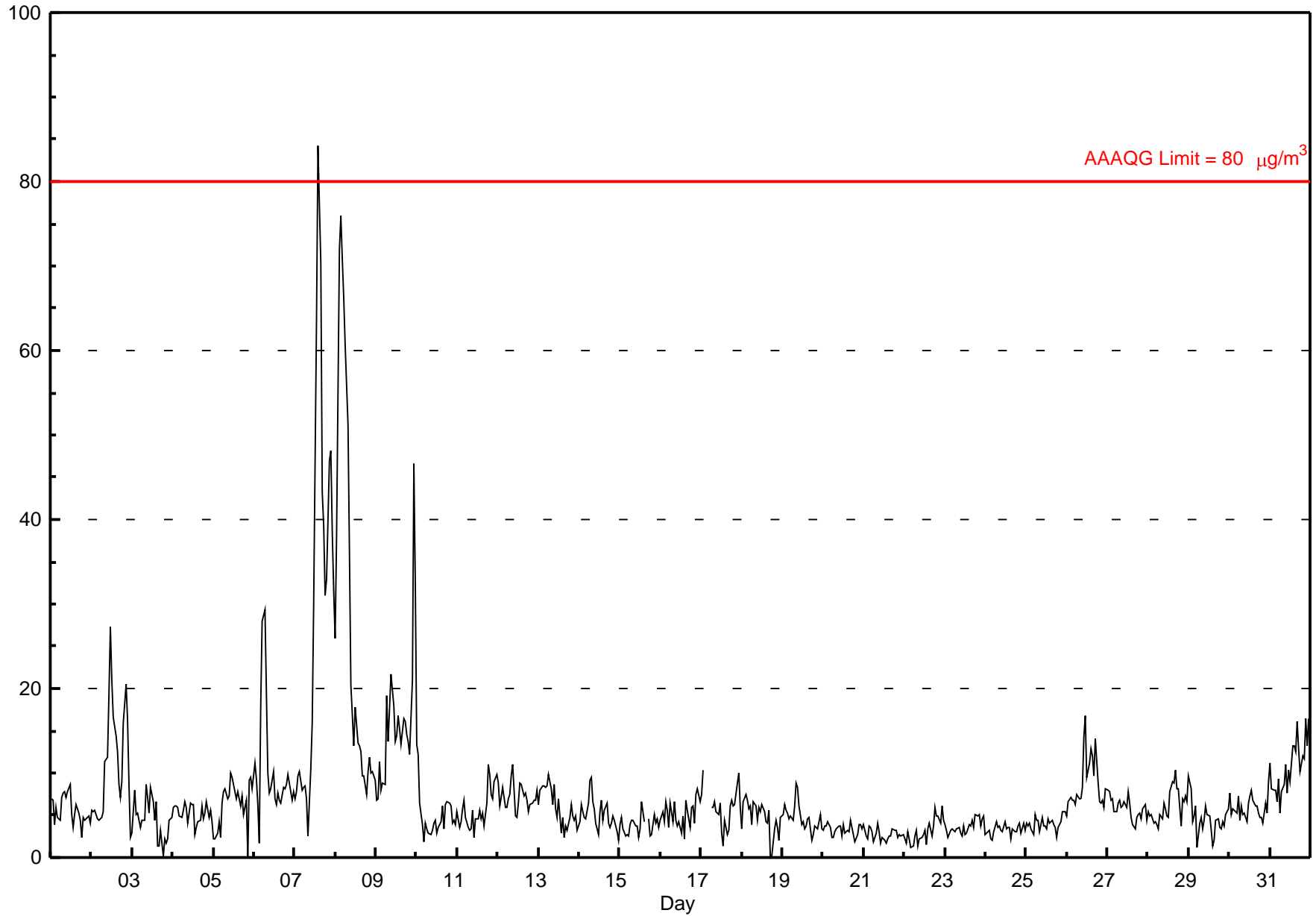
## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

### Beaverlodge - October 2012

Number of Exceedences: 1-hr: 1 24-hr: 0	Hours in Service: 744
Maximum Value: 84.3 µg/m <sup>3</sup> on Oct 7 15:00	Maximum Daily Average: 29.2 µg/m <sup>3</sup> on Oct 7
Minimum Value: 0 µg/m <sup>3</sup> on Oct 5 21:00	Hours of Data: 738
Maximum Diurnal Average: 8.8 µg/m <sup>3</sup> at hour 15	Hours of Missing Data: 6
Monthly Average: 7.51 µg/m <sup>3</sup>	Hours of Calibration: 0
Minimum Daily Average: 2.8 µg/m <sup>3</sup> on Oct 21	Percent Operational Time: 99.2
Minimum Diurnal Average: 6.3 µg/m <sup>3</sup> at hour 19	
Percentiles: P <sub>1</sub> = 1.3 P <sub>10</sub> = 2.7 Q <sub>1</sub> = 3.8 Median = 5.3 Q <sub>3</sub> = 7.7 P <sub>90</sub> = 12.2 P <sub>99</sub> = 61.6	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Oct	7	7	4	6	5	4	7	8	8	7	8	9	5	4	5	6	5	4	2	5	4	5	5	4	5.6	8.6																						
2-Oct	6	5	6	5	4	5	5	5	11	12	19	27	21	17	14	13	9	7	9	16	20	16	9	2	11.0	27.4																						
3-Oct	3	8	5	5	4	3	4	4	9	7	5	8	7	4	7	1	1	3	0	2	2	2	4	5	4.4	8.6																						
4-Oct	6	6	6	6	5	5	6	7	6	4	6	6	6	3	4	4	4	6	5	5	7	5	6	4	5.3	6.7																						
5-Oct	2	2	3	4	2	6	8	8	7	7	10	9	9	7	8	7	6	7	5	7	0	9	9	8	6.4	10.0																						
6-Oct	11	9	6	2	18	28	29	19	10	8	8	10	7	6	8	7	6	8	8	9	10	9	7	8	10.5	29.4																						
7-Oct	7	8	10	10	8	8	8	7	3	11	16	30	47	64	84	70	43	39	31	33	47	48	38	31	29.2	84.3																						
8-Oct	26	38	72	76	71	66	61	51	36	20	17	13	18	14	13	13	10	10	7	10	12	10	10	9	28.4	75.9																						
9-Oct	7	7	11	8	9	9	19	14	18	22	18	14	14	17	15	13	16	16	15	14	12	21	47	32	16.1	46.6																						
10-Oct	13	12	6	4	2	4	3	3	3	3	4	4	3	4	4	6	3	6	7	6	6	4	4	4	5.0	13.3																						
11-Oct	5	4	4	6	7	5	4	3	3	6	2	5	5	6	5	5	4	6	11	10	8	7	9	10	5.7	11.0																						
12-Oct	9	6	7	8	6	6	7	7	10	11	5	5	6	9	9	7	8	7	5	6	6	7	7	8	7.2	11.1																						
13-Oct	6	8	9	9	8	9	10	8	6	9	6	5	7	3	5	2	4	3	5	6	5	4	5	3	6.0	9.9																						
14-Oct	4	6	6	5	5	6	9	10	7	6	4	3	5	7	4	6	6	4	4	4	5	4	3	2	5.2	9.6																						
15-Oct	4	5	3	3	3	3	4	4	4	4	4	2	3	7	4	M	M	5	3	3	5	4	5	4	3.8	6.7																						
16-Oct	4	5	4	7	6	4	6	4	7	4	4	4	3	5	2	7	6	4	6	6	4	7	8	7	5.2	8.1																						
17-Oct	7	10	N	N	N	N	6	6	7	5	5	6	3	1	4	3	3	6	7	6	6	9	10	6	5.9	10.4																						
18-Oct	3	7	8	7	6	6	4	7	6	4	6	5	6	5	4	4	6	0	0	3	4	4	2	5	4.7	7.5																						
19-Oct	5	6	6	5	5	5	4	6	9	8	6	4	3	4	5	5	2	3	4	3	3	5	3	3	4.7	8.9																						
20-Oct	3	4	4	4	4	2	2	3	3	4	4	3	4	3	3	3	4	4	3	2	3	4	4	3	3.3	4.4																						
21-Oct	4	3	2	4	4	3	2	3	4	3	2	2	2	2	2	3	3	3	3	3	2	3	3	3	2.8	4.1																						
22-Oct	2	2	3	2	1	1	2	3	1	2	2	3	3	2	3	4	3	4	6	5	5	4	6	4	3.1	6.1																						
23-Oct	4	3	2	3	3	3	3	3	4	3	3	4	3	3	4	4	4	3	5	5	5	4	5	5	3.7	5.0																						
24-Oct	3	3	3	2	2	3	4	4	4	3	3	4	3	4	4	2	3	3	3	4	4	3	4	3	3.3	4.2																						
25-Oct	4	4	4	3	3	5	4	4	3	5	4	4	3	5	4	4	4	4	2	4	4	5	5	5	4.1	5.5																						
26-Oct	5	7	7	7	7	6	7	7	7	8	14	17	9	11	13	12	10	14	9	7	6	7	6	8	8.8	16.7																						
27-Oct	8	8	7	7	5	5	7	7	6	6	7	6	8	6	5	4	3	5	5	5	5	6	6	4	5.9	8.0																						
28-Oct	6	5	5	4	4	4	3	5	5	6	6	5	5	8	9	9	10	8	8	4	7	7	7	7	6.1	10.4																						
29-Oct	10	8	4	5	6	1	4	5	3	4	6	5	5	3	1	2	4	5	4	3	4	4	5	6	4.5	9.7																						
30-Oct	8	5	6	6	5	7	4	6	5	5	4	6	7	8	7	6	6	5	5	5	4	6	5	9	5.9	8.9																						
31-Oct	11	8	8	8	7	9	5	8	9	11	8	10	9	13	13	13	16	13	10	12	12	16	13	17	10.8	16.5																						
																								6.6	7.0	7.7	7.7	7.4	7.8	8.2	7.7	7.2	7.1	7.0	7.7	7.8	8.1	8.8	8.2	7.2	6.9	6.3	6.9	7.4	8.0	8.5	7.4	Diurnal Average
																								25.9	38.0	72.1	75.9	70.9	66.3	60.6	51.2	36.1	21.7	19.4	29.9	46.8	63.8	84.3	70.3	43.3	39.3	31.0	32.9	46.9	48.2	46.6	32.3	Diurnal Maximum

M - Maintenance N - Not Valid  
 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>

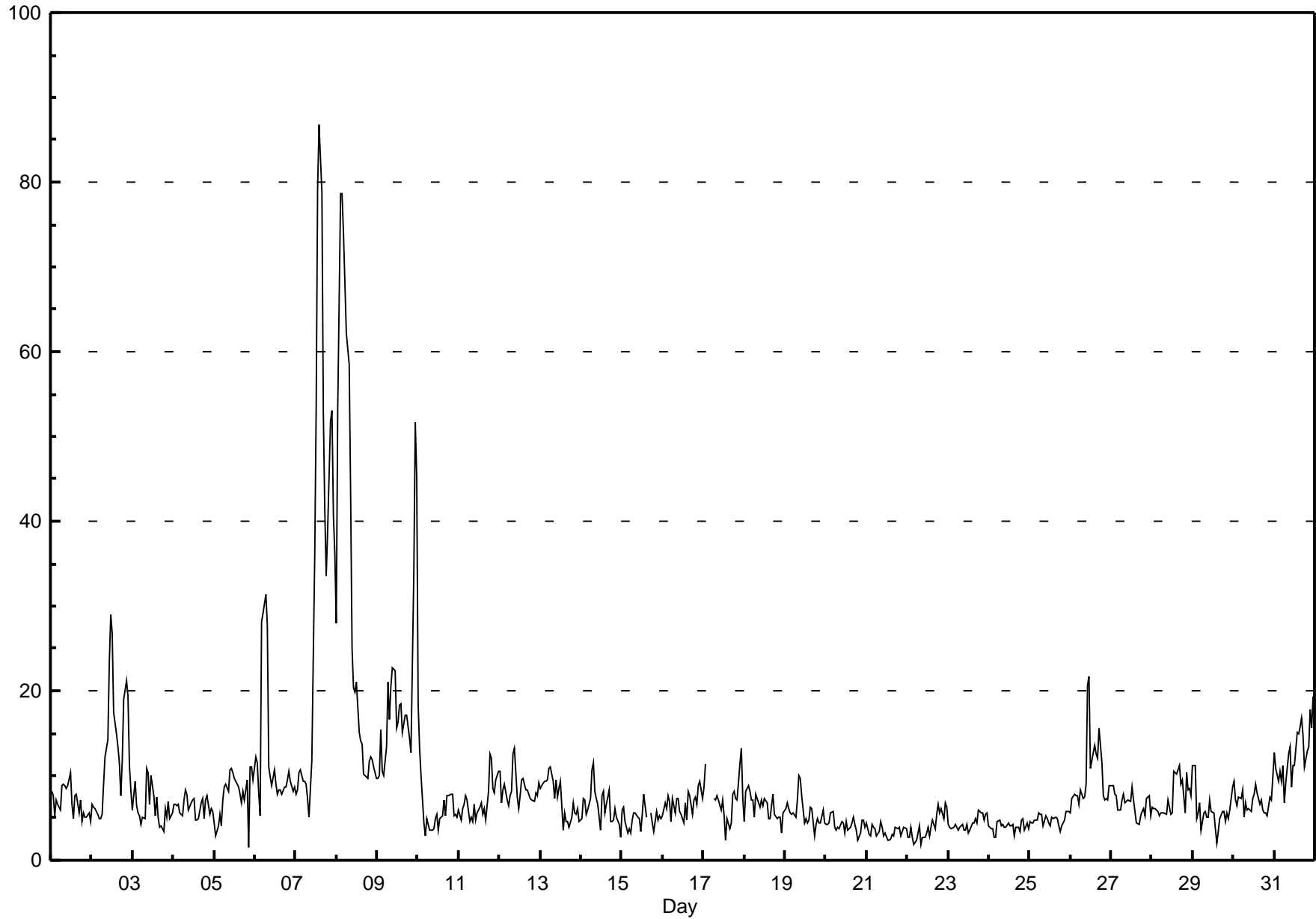


## Hourly Maximums

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

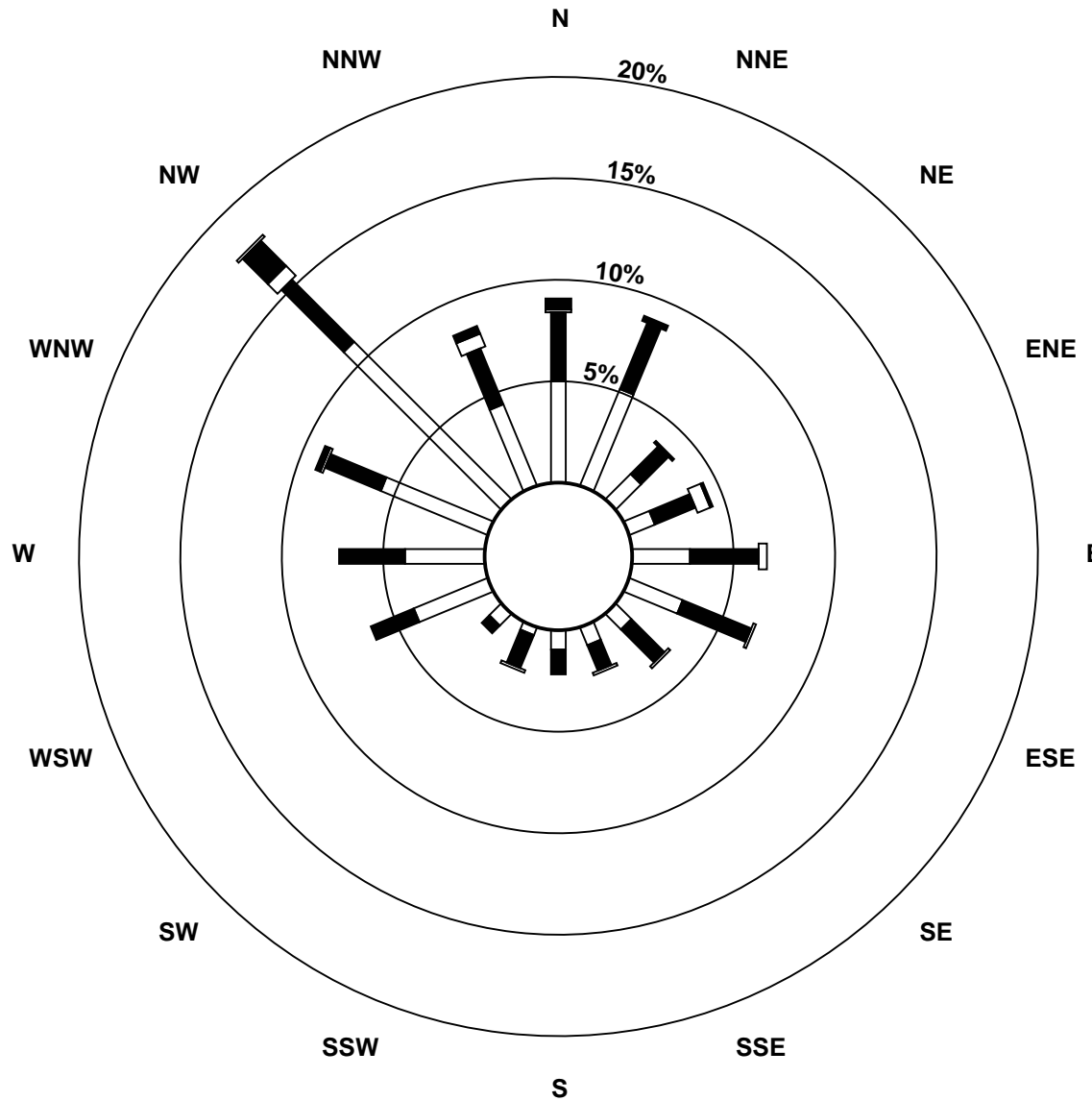
### Beaverlodge - October 2012

Maximum Value: 86.8 µg/m <sup>3</sup> on Oct 7 15:00 Minimum Value: 2 µg/m <sup>3</sup> on Oct 5 21:00 Maximum Diurnal Average: 9.9 µg/m <sup>3</sup> at hour 15 Monthly Average: 8.96 µg/m <sup>3</sup>		Maximum Daily Average: 33.1 µg/m <sup>3</sup> on Oct 7 Minimum Daily Average: 3.4 µg/m <sup>3</sup> on Oct 21 Minimum Diurnal Average: 7.8 µg/m <sup>3</sup> at hour 19 Percentiles: P <sub>1</sub> = 2.4 P <sub>10</sub> = 3.9 Q <sub>1</sub> = 4.8 Median = 6.6 Q <sub>3</sub> = 8.9 P <sub>90</sub> = 13.6 P <sub>99</sub> = 63.0		Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 0 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-Oct	8	8	5	7	7	6	9	9	9	8	9	10	7	5	8	8	6	7	5	6	5	5	6	5	6.9	10.3	
2-Oct	7	6	6	5	5	5	5	9	12	14	23	29	27	17	15	13	11	8	12	19	21	19	11	8	12.9	29.0	
3-Oct	6	9	6	6	5	4	5	5	11	10	7	10	8	5	8	5	4	4	3	6	5	7	5	6	6.3	10.8	
4-Oct	7	7	6	7	6	5	7	8	8	6	7	7	7	5	5	5	7	7	5	7	8	5	6	6	6.4	8.3	
5-Oct	4	3	4	5	4	7	9	9	8	11	11	10	10	9	9	8	7	8	7	10	2	11	11	10	7.7	11.0	
6-Oct	12	12	8	5	28	29	31	28	11	10	9	11	9	8	8	8	8	9	9	10	11	9	8	9	12.4	31.4	
7-Oct	8	8	10	11	9	9	9	7	5	12	24	36	53	79	87	79	53	41	34	39	52	53	41	36	33.1	86.8	
8-Oct	28	53	79	79	74	68	62	58	43	25	20	20	21	15	14	14	10	10	10	12	12	12	11	10	31.7	78.7	
9-Oct	10	10	15	11	10	13	21	17	21	23	22	16	16	18	19	15	17	17	16	14	13	34	52	45	19.3	51.7	
10-Oct	18	13	10	4	3	5	4	4	4	4	5	5	4	5	5	7	5	8	8	8	8	5	5	5	6.3	18.5	
11-Oct	6	5	6	7	8	7	5	5	5	7	5	6	6	7	5	6	5	8	13	12	8	8	10	10	7.0	12.5	
12-Oct	10	7	8	9	7	6	8	8	13	13	7	6	8	9	10	8	8	8	7	7	7	8	8	9	8.4	13.2	
13-Oct	8	9	9	9	10	11	11	9	7	9	7	8	9	4	6	5	5	4	5	7	6	5	6	5	7.3	11.0	
14-Oct	5	7	7	5	6	7	11	12	8	7	7	4	8	8	6	7	8	5	5	5	6	5	4	3	6.4	11.5	
15-Oct	6	6	5	3	4	3	5	6	6	5	5	3	5	8	5	M	M	6	4	3	6	5	5	5	4.9	7.8	
16-Oct	5	7	6	8	7	5	7	6	7	7	6	5	4	7	5	8	8	5	7	7	7	9	9	7	6.6	9.3	
17-Oct	9	11	N	N	N	N	7	7	8	7	6	7	5	2	5	4	4	8	8	7	7	11	13	7	7.3	13.2	
18-Oct	5	8	9	8	7	7	5	8	7	6	7	6	7	7	5	5	6	8	5	5	5	5	3	6	6.3	8.8	
19-Oct	6	7	6	6	5	6	5	7	10	10	8	4	5	4	5	6	6	3	4	5	4	4	6	4	5.7	10.0	
20-Oct	4	4	4	6	6	4	4	4	4	5	4	3	5	4	4	4	5	4	4	2	3	5	5	4	4.2	5.8	
21-Oct	4	3	3	4	4	4	3	3	5	4	3	3	2	2	3	3	3	4	4	4	3	3	4	4	3.4	4.7	
22-Oct	3	3	4	3	2	2	3	4	2	3	3	3	4	3	4	5	4	5	7	6	6	5	7	6	4.0	6.8	
23-Oct	4	4	4	4	4	4	3	4	4	4	4	4	3	4	4	4	5	4	6	6	6	5	5	6	4.4	5.9	
24-Oct	4	4	4	3	3	5	5	4	4	4	4	4	4	4	4	3	4	4	3	5	5	4	4	4	3.9	4.9	
25-Oct	5	4	4	5	5	6	5	5	4	5	5	4	4	5	5	5	5	4	3	4	5	6	6	6	4.8	5.8	
26-Oct	6	7	8	8	8	7	8	7	7	9	21	22	11	13	14	13	12	16	11	8	7	7	7	9	10.1	21.7	
27-Oct	9	9	8	8	6	6	7	8	7	7	7	7	9	7	6	4	4	5	6	6	5	7	8	5	6.7	8.8	
28-Oct	6	6	6	6	5	6	6	6	5	7	6	5	6	11	10	11	11	9	9	6	10	8	9	8	7.4	11.2	
29-Oct	11	11	5	6	7	4	6	6	5	5	7	6	6	4	2	3	5	6	6	5	6	5	6	9	5.8	11.2	
30-Oct	9	7	6	7	7	8	5	7	6	6	6	7	8	9	8	7	7	6	6	6	5	8	7	10	7.0	9.9	
31-Oct	13	11	9	11	9	11	7	9	12	13	9	11	11	15	15	16	17	15	11	13	13	18	16	19	12.7	19.3	
		7.9	8.7	9.1	8.8	9.0	9.0	9.3	9.3	8.6	8.6	8.8	9.2	9.4	9.8	9.9	9.6	8.7	8.2	7.8	8.3	8.6	9.7	9.8	9.2	Diurnal Average	
		28.0	53.1	78.7	78.7	74.1	68.2	62.2	58.5	43.1	25.0	24.1	35.8	53.1	79.2	86.8	78.8	52.8	41.4	33.6	38.9	51.8	53.0	51.7	45.3	Diurnal Maximum	
M - Maintenance		N - Not Valid																									

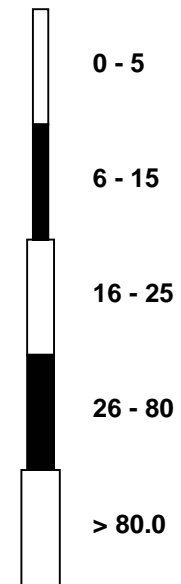


**Pollutant Rose**

**Particulate Matter 2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$**   
**Beaverlodge - October 2012**



**Pollutant Classes ( $\mu\text{g}/\text{m}^3$ )**



## Hourly Averages

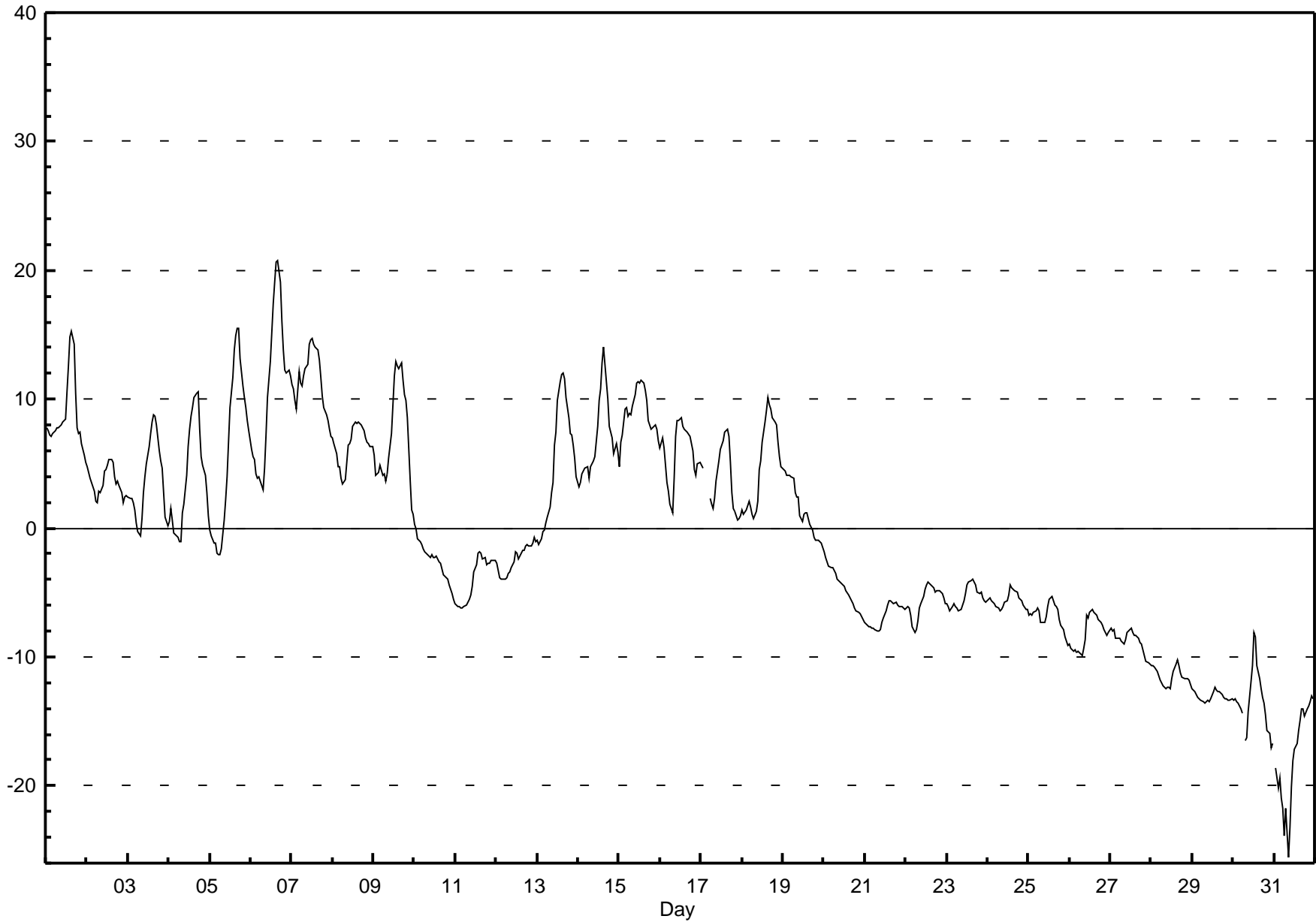
External Temperature (ET) - °C

Beaverlodge - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 20.8 °C on Oct 6 17:00	Maximum Daily Average: 11.4 °C on Oct 7		Hours of Data:	739
Minimum Value: -26 °C on Oct 31 09:00	Minimum Daily Average: -17.7 °C on Oct 31		Hours of Missing Data:	5
Maximum Diurnal Average: 2.3 °C at hour 16	Minimum Diurnal Average: -2.6 °C at hour 8		Hours of Calibration:	0
Monthly Average: -0.54 °C	Percentiles: P <sub>1</sub> = -20.2 P <sub>10</sub> = -11.7 Q <sub>1</sub> = -6.3 Median = -0.9 Q <sub>3</sub> = 6.4 P <sub>90</sub> = 9.9 P <sub>99</sub> = 15.1		Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	8	8	7	7	7	8	8	8	8	8	8	8	11	13	15	15	14	10	8	7	7	7	6	5	8.8	15.3
2-Oct	5	4	4	3	3	2	2	3	3	3	4	5	5	5	5	5	4	3	4	3	3	2	2	2	3.6	5.4
3-Oct	2	2	2	2	1	0	0	-1	1	3	4	5	6	7	8	9	9	8	6	5	5	3	1	0	3.7	8.8
4-Oct	0	1	1	0	0	-1	-1	-1	1	2	4	6	8	9	9	10	11	11	8	6	5	4	3	1	4.0	10.6
5-Oct	0	-1	-1	-1	-2	-2	-2	-2	1	2	4	7	9	12	14	15	16	15	13	11	10	9	8	8	6.0	15.5
6-Oct	6	6	5	4	4	4	3	3	5	7	10	13	15	17	19	21	21	19	16	14	12	12	12	12	10.9	20.8
7-Oct	11	11	10	9	12	11	11	12	12	13	14	15	15	14	14	14	13	12	10	9	9	8	8	7	11.4	14.7
8-Oct	7	7	6	5	5	4	3	4	5	6	7	7	8	8	8	8	8	8	7	7	7	7	6	6	6.4	8.3
9-Oct	6	4	4	4	5	4	4	4	4	5	7	10	12	13	13	12	13	11	10	10	9	4	1	1	7.1	13.0
10-Oct	0	0	-1	-1	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-3	-3	-3	-4	-4	-4	-4	-5	-5	-5	-2.5	0.3
11-Oct	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-4	-3	-3	-2	-2	-2	-2	-2	-3	-3	-3	-3	-3	-2	-4.0	-1.8
12-Oct	-3	-3	-4	-4	-4	-4	-4	-4	-3	-3	-3	-2	-2	-2	-2	-2	-2	-1	-1	-1	-1	-1	-1	-1	-2.4	-0.8
13-Oct	-1	-1	-1	0	0	0	1	2	3	4	6	7	10	11	12	12	12	10	9	7	7	6	5	4	5.2	12.0
14-Oct	3	3	4	4	5	5	4	5	5	5	6	8	10	11	13	14	11	10	8	7	7	6	7	6	6.9	14.1
15-Oct	5	7	7	9	9	9	9	9	9	10	11	11	11	11	11	11	10	8	8	8	8	8	7	7	9.0	11.4
16-Oct	6	7	6	5	4	3	2	1	4	7	8	8	9	8	8	8	7	7	7	6	4	4	5	5	5.8	8.6
17-Oct	5	5	N	N	N	2	2	2	2	4	5	6	6	7	7	8	7	5	3	2	1	1	1	1	3.9	7.6
18-Oct	1	1	1	2	2	2	1	1	1	2	4	5	7	8	9	10	10	9	8	8	7	6	5	5	5.0	10.1
19-Oct	4	4	4	4	4	4	4	3	2	2	1	1	1	1	1	0	0	-1	-1	-1	-1	-1	-1	-1	1.5	4.5
20-Oct	-2	-2	-3	-3	-3	-3	-3	-4	-4	-4	-4	-4	-5	-5	-5	-5	-6	-6	-6	-6	-7	-7	-7	-7	-4.6	-1.9
21-Oct	-7	-8	-8	-8	-8	-8	-8	-8	-8	-8	-7	-7	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6.8	-5.6
22-Oct	-6	-6	-6	-7	-8	-8	-8	-7	-6	-6	-5	-5	-4	-4	-4	-4	-5	-5	-5	-5	-5	-5	-5	-6	-5.7	-4.2
23-Oct	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-4	-4	-4	-4	-4	-4	-5	-5	-5	-5	-6	-6	-5.4	-4.0
24-Oct	-6	-5	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-4	-5	-5	-5	-5	-5	-6	-6	-6	-6	-6	-5.6	-4.5
25-Oct	-7	-7	-7	-7	-6	-6	-6	-7	-7	-7	-7	-6	-6	-5	-5	-6	-6	-6	-7	-8	-8	-8	-9	-9	-6.8	-5.4
26-Oct	-9	-9	-10	-9	-10	-10	-10	-10	-9	-9	-7	-7	-7	-6	-7	-7	-7	-7	-7	-8	-8	-8	-8	-8	-8.1	-6.3
27-Oct	-8	-8	-8	-9	-9	-9	-9	-9	-9	-9	-8	-8	-8	-8	-8	-8	-9	-9	-9	-9	-10	-10	-11	-11	-8.8	-7.8
28-Oct	-11	-11	-11	-11	-11	-12	-12	-12	-12	-12	-12	-12	-12	-11	-11	-10	-11	-11	-12	-12	-12	-12	-12	-12	-11.5	-10.3
29-Oct	-12	-13	-13	-13	-13	-13	-13	-13	-14	-14	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13.1	-12.4
30-Oct	-13	-13	-14	-14	-14	-14	N	-17	-16	-14	-12	-11	-8	-8	-11	-12	-12	-13	-14	-14	-16	-16	-17	-17	-13.5	-8.1
31-Oct	N	-19	-20	-19	-21	-22	-24	-22	-26	-23	-20	-18	-17	-17	-16	-15	-14	-14	-15	-14	-14	-13	-13	-13	-17.7	-13.0
	-0.9	-1.6	-2.0	-2.2	-2.2	-2.4	-2.2	-2.6	-2.2	-1.4	-0.4	0.4	1.3	1.9	2.2	2.3	2.0	1.3	0.4	-0.1	-0.5	-1.1	-1.4	-1.8	Diurnal Average	
	11.2	10.8	9.9	9.3	12.2	11.3	11.0	11.9	12.4	12.7	14.3	14.7	15.2	17.4	19.1	20.6	20.8	19.1	16.1	13.8	12.3	12.1	12.3	11.8	Diurnal Maximum	

N - Not Valid



# Hourly Averages

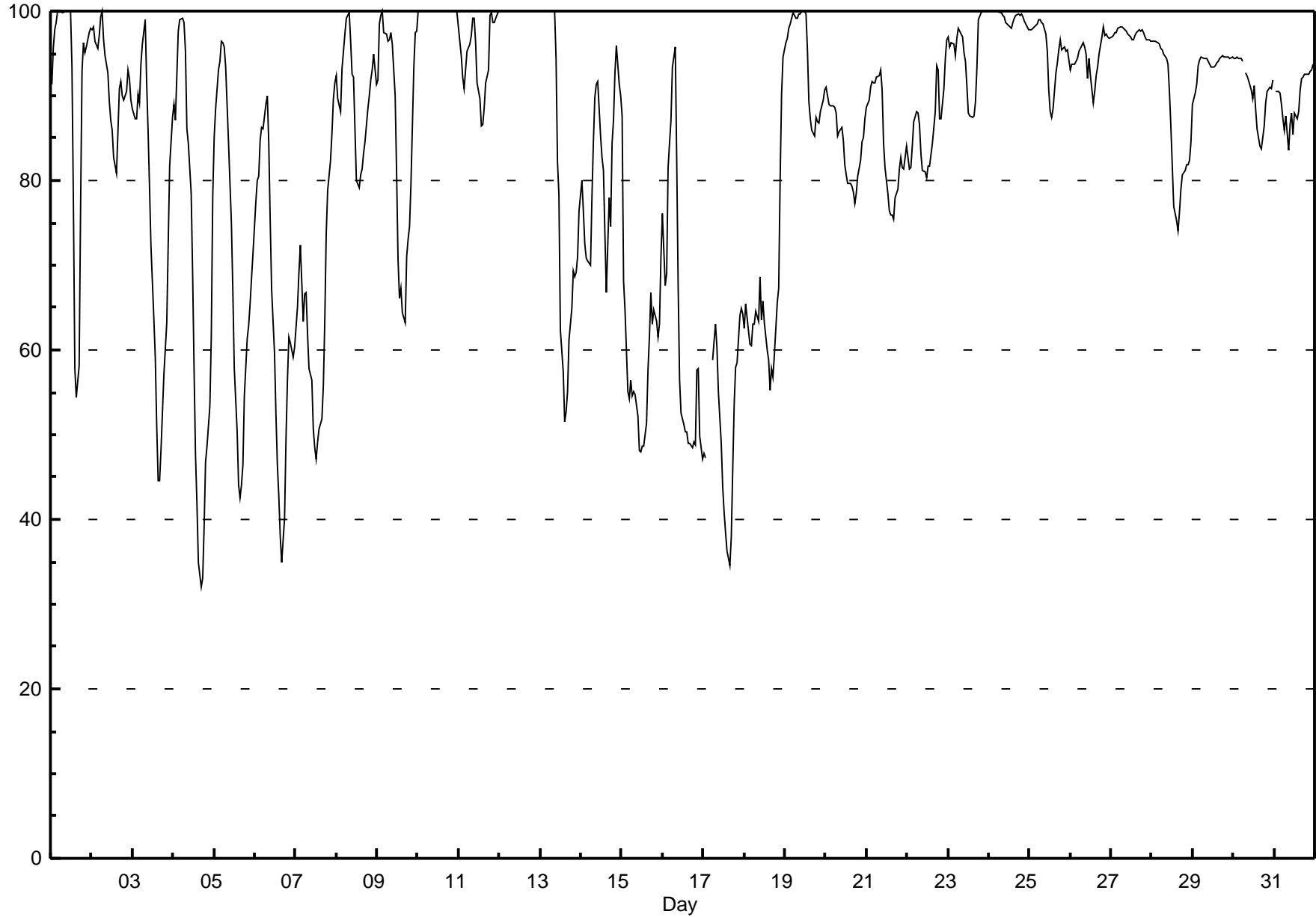
Relative Humidity (RH) - %  
Beaverlodge - October 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100.0 % on Oct 1 06:00 Maximum Daily Average: 100.0 % on Oct 12		Hours in Service: 744 Hours of Data: 739 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3																																														
Minimum Value: 32 % on Oct 4 17:00 Maximum Diurnal Average: 90.8 % at hour 8 Monthly Average: 83.70 %		Minimum Daily Average: 51.6 % on Oct 17 Minimum Diurnal Average: 72.3 % at hour 16 Percentiles: P <sub>1</sub> = 38.0 P <sub>10</sub> = 56.5 Q <sub>1</sub> = 75.8 Median = 90.0 Q <sub>3</sub> = 96.6 P <sub>90</sub> = 100.0 P <sub>99</sub> = 100.0																																														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Oct	91	96	98	99	100	100	100	100	100	100	100	100	93	77	58	54	58	77	93	96	95	96	97	98	90.7	100.0																						
2-Oct	98	98	97	96	97	99	100	97	95	93	89	87	86	83	81	86	91	92	90	89	90	93	92	89	92.0	100.0																						
3-Oct	88	87	87	90	89	94	96	99	92	86	79	72	64	59	51	45	45	48	57	60	63	73	82	87	74.7	98.9																						
4-Oct	89	87	92	98	99	99	99	95	86	84	78	69	58	48	42	35	32	33	39	47	49	53	62	78	68.8	99.2																						
5-Oct	85	88	93	94	97	96	96	93	84	80	75	67	58	50	44	43	44	46	55	61	63	65	69	71	71.6	96.5																						
6-Oct	77	80	80	85	86	86	89	90	84	75	67	60	52	46	43	38	35	40	49	56	62	61	59	60	65.1	89.9																						
7-Oct	63	65	69	72	63	67	67	62	58	57	51	49	47	49	51	52	56	63	74	79	82	86	90	92	65.1	91.5																						
8-Oct	92	90	88	93	95	97	99	100	96	92	86	80	79	81	81	83	85	89	90	92	93	95	91	91	90.0	99.8																						
9-Oct	92	99	99	100	97	97	96	97	96	90	81	71	66	67	64	63	71	73	75	80	93	97	98	98	85.9	100.0																						
10-Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.0	100.0																						
11-Oct	98	95	92	91	93	95	96	97	99	99	96	91	90	87	87	89	92	93	99	100	99	99	99	100	94.8	100.0																						
12-Oct	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.0	100.0																						
13-Oct	100	100	100	100	100	100	100	100	100	94	82	78	62	57	52	53	55	61	65	69	69	69	71	76	79.8	100.0																						
14-Oct	80	77	73	71	71	70	78	85	90	91	92	85	83	81	74	67	78	75	84	87	93	96	91	90	81.7	95.9																						
15-Oct	88	68	65	55	54	56	55	55	55	52	48	48	49	49	51	58	62	67	63	65	63	61	63	71	59.2	87.6																						
16-Oct	76	68	69	82	84	87	93	96	82	68	57	53	51	50	50	49	49	48	49	49	58	58	50	47	63.5	95.7																						
17-Oct	48	47	N	N	N	59	61	63	60	55	49	44	41	39	36	35	38	46	54	58	59	64	65	64	51.6	64.9																						
18-Oct	63	65	62	61	61	63	63	65	63	69	64	66	63	60	59	55	58	57	60	66	67	80	90	95	65.5	94.6																						
19-Oct	96	97	98	98	99	100	99	99	100	100	100	100	100	95	89	87	86	85	87	87	87	88	89	91	94.1	100.0																						
20-Oct	91	90	89	89	89	89	88	85	86	86	85	82	81	80	80	79	79	77	79	80	82	85	85	87	84.2	91.1																						
21-Oct	89	89	91	92	92	92	92	92	93	91	84	81	79	76	76	76	76	78	79	81	83	81	81	84	84.5	93.0																						
22-Oct	83	81	82	84	87	88	88	87	83	81	81	80	82	82	83	84	88	94	93	87	87	91	94	97	86.1	96.7																						
23-Oct	97	96	96	96	95	97	98	98	97	95	94	91	88	88	88	88	89	93	99	100	100	100	100	100	95.1	100.0																						
24-Oct	100	100	100	100	100	100	100	100	100	99	99	98	98	98	99	99	99	100	100	100	99	99	98	98	99.2	100.0																						
25-Oct	98	98	98	98	98	99	99	99	98	97	95	91	88	88	88	93	94	96	97	95	96	95	95	94	95.3	99.0																						
26-Oct	93	94	94	94	94	95	96	96	96	95	92	94	92	89	91	92	93	95	97	98	97	97	97	97	94.6	98.2																						
27-Oct	97	97	97	97	98	98	98	98	98	98	97	97	97	97	97	97	98	98	98	97	97	97	97	96	97.3	98.1																						
28-Oct	96	97	97	96	96	96	95	95	94	94	91	86	82	77	75	74	76	79	81	81	82	82	85	85	87.0	96.5																						
29-Oct	89	90	91	94	94	95	94	94	94	94	94	93	93	94	94	94	94	95	95	94	95	94	95	95	93.7	94.7																						
30-Oct	94	94	94	94	94	94	N	93	92	92	91	90	91	89	86	84	84	85	86	89	91	91	91	92	90.5	94.5																						
31-Oct	N	91	90	90	89	87	86	88	84	87	88	85	88	87	88	91	92	92	92	92	93	93	93	94	89.6	93.7																						
																								88.4	87.9	89.4	90.3	90.4	90.2	90.7	90.8	89.0	87.1	83.9	80.8	77.6	74.8	72.9	72.3	73.8	76.4	79.8	81.7	82.9	85.0	86.1	87.6	Diurnal Average
																								100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Diurnal Maximum
N - Not Valid																																																



**Hourly Averages**

**Relative Humidity (RH) - %**  
**Beaverlodge - October 2012**



## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Beaverlodge - October 2012

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	5	5	10	17	18	17	19	14	3	5	3	7	6	15	38	40	32	23	10	8	10	14	13	14	4.2	40.4
Dir	64	82	109	107	113	99	103	111	118	328	92	175	252	275	261	264	262	299	319	276	282	309	328	307	274	264
2 Spd	13	10	10	11	10	10	7	19	18	13	18	16	17	20	16	18	17	16	16	14	13	9	12	11	13.0	19.5
Dir	308	312	335	332	319	300	343	29	13	340	346	352	343	340	349	323	330	328	323	328	326	321	318	327	336	340
3 Spd	10	6	9	10	7	2	1	3	3	3	9	12	12	9	13	16	16	16	9	7	6	1	2	3	4.9	16.5
Dir	335	339	312	301	314	238	241	185	81	141	182	201	214	215	219	227	252	248	262	283	293	228	109	138	247	227
4 Spd	3	1	1	2	2	2	2	2	1	6	9	7	8	8	8	7	6	2	5	4	3	3	3	4	1.8	8.6
Dir	134	158	113	71	46	3	301	326	292	298	302	280	265	295	286	297	288	13	52	57	90	70	127	192	305	302
5 Spd	2	3	3	4	3	4	4	3	3	5	6	6	7	8	9	11	11	7	9	10	11	11	6	3	2.9	11.4
Dir	164	79	71	78	82	79	105	73	131	193	188	201	207	223	254	294	270	271	258	281	291	295	306	318	260	294
6 Spd	1	0	1	1	3	3	4	3	2	4	4	5	8	9	10	15	22	25	20	17	9	10	9	11	5.9	25.1
Dir	11	17	243	63	57	59	56	64	78	188	185	164	196	189	198	213	234	243	255	255	260	253	277	270	235	243
7 Spd	5	4	2	3	9	12	9	11	13	15	18	16	15	15	16	15	13	14	8	8	8	6	7	7	10.1	17.8
Dir	288	298	31	40	320	322	313	307	308	304	313	318	321	324	308	312	314	313	318	297	318	321	311	307	314	313
8 Spd	8	8	7	3	1	2	3	3	5	5	7	8	3	3	5	4	4	3	1	1	2	1	5	5	3.2	8.0
Dir	345	353	18	357	291	314	29	10	334	312	316	304	349	32	316	286	282	293	166	71	53	344	30	30	341	353
9 Spd	3	2	2	2	3	3	6	5	2	2	7	8	4	3	6	8	5	4	8	9	16	22	19	16	3.4	22.3
Dir	29	86	133	103	50	194	82	181	166	117	143	137	110	75	18	54	62	88	28	11	349	339	334	326	19	339
10 Spd	11	10	18	12	10	14	9	10	12	10	10	13	14	12	16	15	13	13	11	13	13	13	16	16	9.7	18.1
Dir	316	344	29	24	27	34	33	30	45	56	61	45	45	50	101	96	93	88	77	104	105	113	116	120	65	29
11 Spd	19	20	16	17	17	14	13	12	14	9	5	4	2	2	3	3	4	2	4	6	7	9	9	8	6.7	19.8
Dir	112	109	103	115	115	105	109	108	128	150	159	171	179	97	137	163	123	99	30	12	23	11	3	354	103	109
12 Spd	10	11	9	7	6	7	3	3	4	7	7	7	6	8	7	7	9	10	10	9	7	5	2	4	3.3	10.7
Dir	354	352	340	348	358	25	23	70	70	82	82	91	129	145	130	134	133	132	130	131	122	101	294	321	83	352
13 Spd	1	3	4	3	2	2	3	3	3	4	3	9	27	31	38	37	39	19	11	10	4	10	2	3	8.8	39.4
Dir	344	77	138	112	114	161	114	75	94	69	146	213	247	251	258	259	256	248	272	268	278	276	253	126	251	256
14 Spd	5	8	9	12	19	16	11	21	21	22	18	11	8	5	6	9	36	22	12	2	4	7	3	2	6.7	36.0
Dir	98	80	83	94	104	111	105	109	122	115	121	135	148	184	172	265	257	229	212	126	178	154	163	155	140	257
15 Spd	2	7	20	31	28	19	26	20	16	24	22	24	17	16	5	3	5	10	9	12	15	18	16	12	8.0	31.3
Dir	235	239	242	256	255	251	252	266	268	260	253	251	247	253	248	145	101	106	87	93	95	97	107	100	241	256
16 Spd	6	6	5	5	3	2	1	2	16	41	44	49	50	49	49	50	43	36	38	41	36	31	33	42	25.9	50.0
Dir	86	68	101	276	40	80	151	12	246	232	243	249	252	255	256	260	256	257	257	259	259	259	265	275	255	252
17 Spd	42	39	N	N	N	23	21	19	25	29	32	37	43	37	30	33	22	19	14	11	11	0	5	5	22.6	42.6
Dir	271	273	N	N	N	264	262	260	263	266	268	268	266	266	270	267	255	240	244	240	250	274	110	88	264	266
18 Spd	7	8	6	7	9	8	7	5	5	3	3	4	4	3	3	1	3	0	6	9	6	9	8	9	2.8	9.0
Dir	95	104	115	98	89	127	107	123	162	177	159	123	116	109	104	88	186	131	25	349	311	342	11	14	83	14
19 Spd	9	15	17	15	11	14	15	17	14	7	11	16	20	22	23	24	21	20	19	18	16	18	20	20	11.9	24.0
Dir	30	30	34	41	45	43	45	32	30	345	317	305	307	295	293	289	296	305	303	299	284	292	299	307	326	289
20 Spd	20	19	19	19	20	21	21	21	22	23	21	22	23	22	19	19	17	17	14	15	16	15	18	18	19.2	23.5
Dir	313	314	312	312	309	316	310	307	307	305	310	312	307	310	314	317	314	318	321	317	309	306	307	305	311	307
21 Spd	17	17	16	16	16	16	15	14	15	17	18	20	20	22	18	20	17	14	14	14	14	15	15	14	16.4	21.7
Dir	306	309	307	303	305	304	304	297	304	307	307	307	305	303	309	305	308	299	300	299	300	311	303	281	304	303
22 Spd	15	15	13	12	11	11	11	13	16	19	17	16	16	15	17	14	14	10	8	8	8	10	10	8	12.4	18.6
Dir	279	277	279	274	268	270	267	260	269	279	287	291	295	297	307	305	304	302	302	324	314	294	297	303	288	279

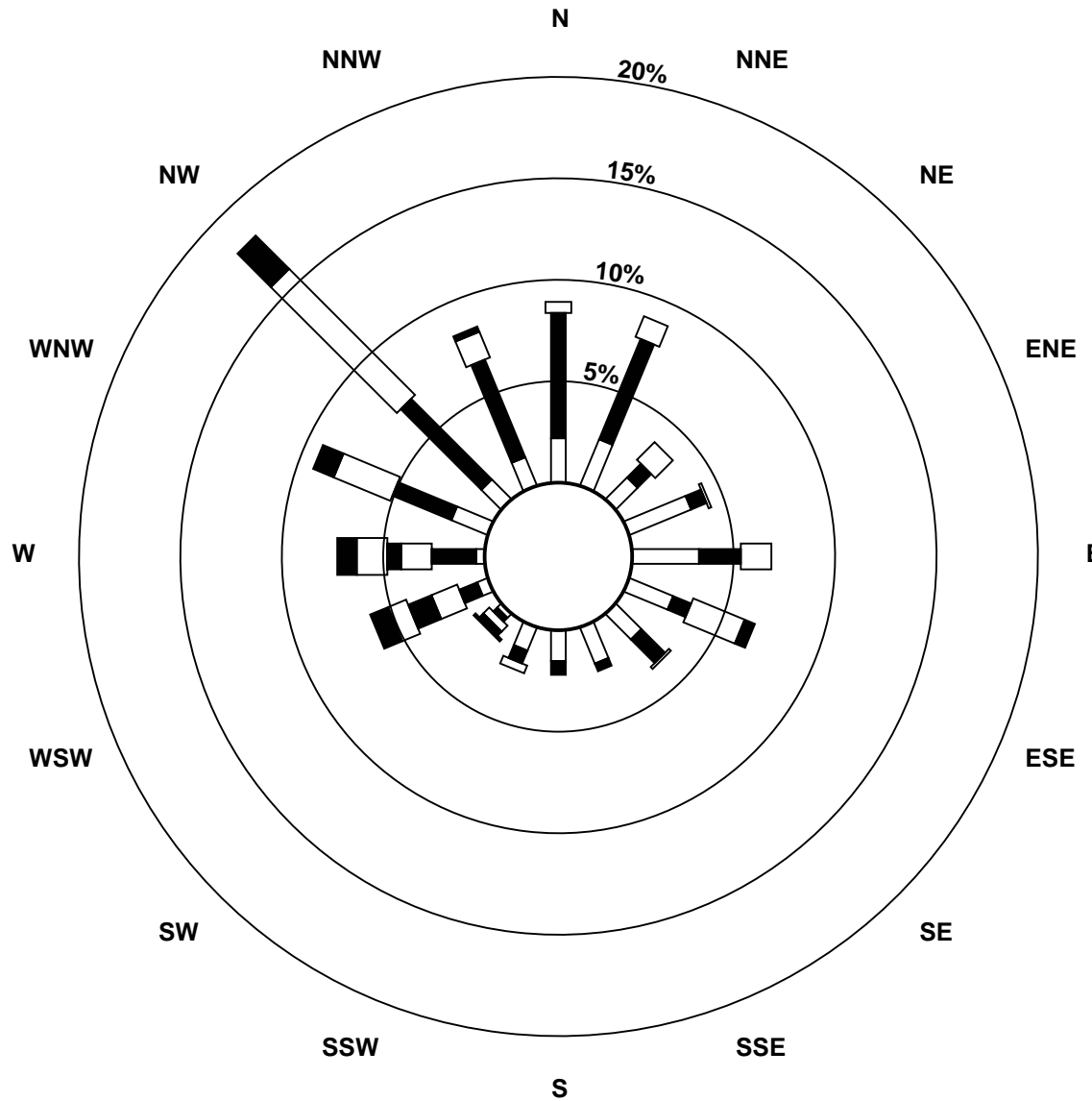
## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Beaverlodge - October 2012

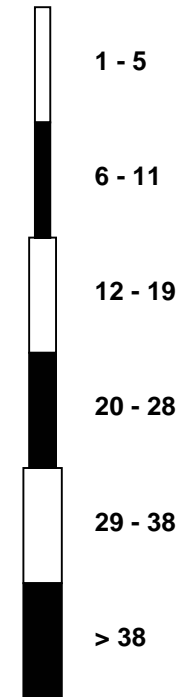
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	8	7	8	10	12	11	11	10	10	10	8	8	9	9	8	10	9	9	12	6	6	9	10	8	8.5	11.9
Dir	318	328	338	345	358	347	335	338	335	345	344	356	357	6	14	6	2	15	34	12	329	330	325	323	349	358
24 Spd	7	9	11	11	8	10	6	8	7	9	10	10	10	10	10	10	8	6	4	4	7	8	11	11	8.2	10.9
Dir	337	7	14	13	7	4	1	4	357	341	7	6	10	13	16	14	12	31	77	354	353	354	357	348	5	357
25 Spd	11	8	8	7	7	5	5	9	10	10	10	10	8	9	7	9	8	7	8	8	7	8	6	5	7.6	11.1
Dir	336	323	351	3	14	11	1	333	323	317	320	335	334	360	349	314	317	351	0	350	320	337	343	342	339	336
26 Spd	4	6	8	8	8	7	5	5	5	3	4	9	11	10	12	12	11	11	8	3	6	3	7	7	5.0	12.2
Dir	342	339	344	328	344	357	1	331	20	346	114	101	91	91	86	76	77	71	65	25	83	26	51	56	49	86
27 Spd	5	4	1	6	5	5	6	8	8	8	7	8	10	12	12	13	13	12	9	9	11	14	13	13	8.0	14.3
Dir	56	15	42	21	8	3	3	7	354	7	352	317	318	313	308	311	309	315	327	327	320	316	321	325	332	316
28 Spd	12	12	12	14	17	17	18	19	21	19	19	17	16	19	18	15	14	13	8	9	7	4	6	8	13.5	21.0
Dir	326	330	318	313	314	312	311	308	303	297	298	293	297	299	306	309	310	313	324	319	304	324	353	10	310	303
29 Spd	5	5	10	8	8	7	7	8	7	7	10	10	9	8	8	7	5	4	6	7	7	6	5	3	6.8	10.0
Dir	7	10	3	7	357	6	3	29	30	25	29	19	15	12	13	18	17	24	31	30	22	17	15	10	16	19
30 Spd	4	3	7	5	5	5	5	3	2	2	1	3	2	3	4	5	6	6	5	3	4	1	3	2	1.8	6.7
Dir	358	341	321	326	316	315	302	309	322	292	28	91	131	81	80	72	53	51	64	91	91	181	64	195	18	321
31 Spd	0	2	1	2	3	0	1	2	4	5	7	2	2	3	7	7	8	1	4	3	1	3	2	5	1.6	7.8
Dir	39	210	353	348	44	238	355	285	292	352	308	44	289	274	305	310	299	159	208	201	196	62	167	210	294	299
Spd	4.7	4.4	4.1	3.9	3.6	3.4	3.1	3.5	3.9	5.3	5.6	5.9	7.3	8.0	8.3	9.2	9.2	6.0	4.6	4.9	4.8	5.3	5.1	5.2	Diurnal Average	
Dir	325	334	354	347	353	341	339	343	320	293	293	286	284	288	286	286	281	288	304	306	307	316	323	316	Diurnal Maximum	
Spd	42.0	39.4	19.8	31.3	27.6	23.4	26.2	21.1	25.3	41.2	44.1	49.5	50.0	49.4	48.7	49.8	43.0	35.9	38.3	40.6	36.3	30.9	33.1	41.8	Diurnal Maximum	
Dir	271	273	242	256	255	264	252	109	263	232	243	249	252	255	256	260	256	257	257	259	259	259	265	275	Diurnal Maximum	
Maximum Speed Value: 50 km/h on Oct 16 13:00		Minimum Speed Value: 0 km/h on Oct 18 18:00										Hours in Service: 744														
Maximum Daily Speed Average: 25.9 km/h on Oct 16		Minimum Daily Speed Average: 1.6 km/h on Oct 31										Hours of Data: 741														
Maximum Diurnal Speed Average: 9.2 km/h at hour 16		Minimum Diurnal Speed Average: 3.1 km/h at hour 7										Hours of Missing Data: 3														
Monthly Average Velocity: 4.97 km/h 306.0 deg		Speed Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 2.6 Q <sub>1</sub> = 5.0 Median = 8.7 Q <sub>3</sub> = 14.6 P <sub>90</sub> = 19.7 P <sub>99</sub> = 42.0										Percent Operational Time: 99.6														
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	23	97	8	2	0	0	130																			
NorthEast	33	24	17	0	0	0	74																			
East	43	26	26	3	0	0	98																			
SouthEast	26	16	9	2	0	0	53																			
South	28	10	1	0	0	0	39																			
SouthWest	8	6	10	5	0	2	31																			
West	12	25	25	13	15	16	106																			
NorthWest	12	79	89	30	0	0	210																			
Total	185	283	185	55	15	18	741																			

**Wind Rose**

**Wind Speed (WS) (km/h)**  
**Beaverlodge - October 2012**



**Wind Speed Classes (km/h)**



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - October 2012

Maximum Speed: 50 km/h on Oct 16 13:00	Maximum Daily Speed Average: 28.9 km/h on Oct 16	Hours in Service: 744
Minimum Speed: 1 km/h on Oct 4 03:00	Minimum Daily Speed Average: 4.1 km/h on Oct 30	Hours of Data: 741
Maximum Diurnal Speed Average: 15.0 km/h at hour 16	Minimum Diurnal Speed Average: 9.2 km/h at hour 3	Hours of Missing Data: 3
Monthly Average Speed: 11.14 km/h	Percentiles: P <sub>1</sub> = 2.0 P <sub>10</sub> = 3.5 Q <sub>1</sub> = 5.4 Median = 8.9 Q <sub>3</sub> = 14.8 P <sub>90</sub> = 20.0 P <sub>99</sub> = 42.2	Percent Operational Time: 99.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	5	6	10	17	18	17	19	14	6	6	5	7	9	17	38	41	32	27	10	8	10	14	14	14	15.1	40.5
2-Oct	13	10	10	11	10	10	9	19	18	13	18	17	17	20	16	19	17	16	16	14	13	9	12	11	14.1	19.9
3-Oct	10	7	9	10	7	2	3	4	3	4	9	12	12	10	14	17	16	16	9	7	7	4	3	4	8.2	16.9
4-Oct	3	1	1	2	2	3	4	2	2	6	9	8	8	8	9	8	6	3	5	4	4	3	3	4	4.6	8.8
5-Oct	2	3	3	4	4	4	4	4	3	5	6	7	8	9	10	12	11	7	9	10	11	11	6	4	6.5	11.8
6-Oct	4	3	3	2	3	3	4	3	2	4	5	6	8	9	11	16	22	25	20	17	9	10	9	11	8.7	25.2
7-Oct	5	5	5	5	9	12	9	11	13	15	18	17	15	15	16	15	13	14	8	8	8	7	7	7	10.7	17.9
8-Oct	8	8	8	5	2	3	4	4	6	6	7	8	3	4	6	4	4	3	2	1	3	3	5	5	4.7	8.4
9-Oct	5	3	2	3	3	5	6	5	3	3	7	8	5	4	7	8	5	4	8	9	16	22	19	16	7.3	22.5
10-Oct	11	12	18	12	10	14	9	10	13	10	10	13	14	13	16	15	13	13	11	13	13	13	16	16	12.8	18.2
11-Oct	19	20	16	17	17	14	13	12	14	9	5	4	3	2	4	4	5	3	4	6	7	9	9	8	9.4	19.8
12-Oct	10	11	9	7	6	7	3	3	4	7	7	7	7	8	7	7	9	10	10	9	8	6	4	5	7.1	10.7
13-Oct	2	3	4	4	3	3	4	3	5	4	4	9	27	32	39	37	40	19	12	11	5	12	6	6	12.2	39.7
14-Oct	6	8	10	12	19	16	12	21	21	22	18	12	9	6	6	10	37	22	12	4	4	7	3	3	12.5	37.0
15-Oct	5	7	20	31	28	19	26	20	17	24	23	24	17	16	6	4	5	11	9	12	15	18	16	12	16.1	31.5
16-Oct	7	6	5	6	4	4	4	5	17	41	44	50	50	50	49	50	43	36	38	41	36	31	33	42	28.9	50.3
17-Oct	42	40	N	N	N	23	21	19	25	29	33	37	43	37	31	33	23	19	14	12	11	4	5	6	24.2	42.9
18-Oct	7	8	6	7	9	9	8	5	6	4	3	5	5	3	4	2	4	1	6	9	6	9	8	9	6.0	9.0
19-Oct	10	15	17	15	11	14	15	17	14	8	12	16	20	22	23	24	21	20	20	18	17	18	20	20	16.9	24.2
20-Oct	20	19	19	19	20	21	21	21	23	23	22	22	24	23	19	19	17	17	14	15	16	15	18	18	19.4	23.7
21-Oct	17	17	16	16	16	16	15	14	15	17	18	20	21	22	19	21	18	14	14	14	14	16	15	14	16.5	21.9
22-Oct	16	15	13	12	11	11	11	13	16	19	18	17	16	15	17	15	14	10	8	8	8	10	10	8	12.9	18.8
23-Oct	8	7	8	10	12	11	11	10	10	10	8	8	9	9	8	10	9	9	12	6	6	9	10	8	9.1	12.0
24-Oct	7	9	11	11	8	10	6	8	7	9	11	10	10	10	10	10	8	7	5	4	7	8	11	11	8.6	11.0
25-Oct	11	8	8	7	7	5	5	9	10	10	10	9	10	7	9	8	7	9	8	7	8	6	6	6	8.1	11.1
26-Oct	4	6	8	8	9	7	6	5	5	5	4	9	11	11	12	12	11	11	8	4	6	4	7	7	7.5	12.3
27-Oct	6	5	3	6	5	5	6	8	8	8	7	8	10	12	12	13	13	12	10	9	11	14	13	13	9.0	14.3
28-Oct	12	12	12	14	17	17	19	20	21	19	19	17	16	20	18	15	14	13	8	10	7	4	6	8	14.0	21.1
29-Oct	5	6	10	8	8	7	7	8	7	7	10	10	9	8	8	7	5	4	6	7	7	6	5	4	7.0	10.0
30-Oct	4	4	7	6	5	5	5	4	4	3	2	3	3	3	4	5	6	6	5	4	4	3	3	2	4.1	6.8
31-Oct	2	3	2	4	4	3	5	3	7	6	8	4	2	3	7	7	8	4	5	3	2	3	4	5	4.3	7.8
	9.2	9.2	9.2	9.8	9.6	9.7	9.5	9.8	10.5	11.5	12.3	13.0	13.6	13.8	14.6	15.0	14.8	12.3	10.5	9.9	9.5	10.1	9.8	9.9	Diurnal Average	
	42.2	39.6	20.3	31.5	27.7	23.4	26.3	21.3	25.3	41.3	44.4	49.6	50.3	49.6	48.9	50.1	43.2	36.0	38.4	40.7	36.4	30.9	33.2	42.1	Diurnal Maximum	

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

# Hourly Standard Deviations

Wind Direction (WD) - deg  
Beaverlodge - October 2012

Maximum Value: 92.0 deg on Oct 27 03:00																		Hours in Service: 744							
Minimum Value: 2.6 deg on Oct 17 19:00																		Hours of Data: 741							
Percentiles: P <sub>1</sub> = 3.2 P <sub>10</sub> = 4.7 Q <sub>1</sub> = 6.2 Median = 9.6 Q <sub>3</sub> = 21.8 P <sub>90</sub> = 49.2 P <sub>99</sub> = 86.7																		Hours of Missing Data: 3							
																		Hours of Calibration: 0							
																		Percent Operational Time: 99.6							
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-Oct	22	25	8	3	6	4	6	9	71	42	62	15	75	51	6	5	5	31	14	12	7	6	10	6	75.3
2-Oct	5	11	16	8	8	9	43	7	5	14	8	10	9	11	15	8	6	6	7	7	5	6	8	11	42.6
3-Oct	9	21	17	5	23	27	81	42	21	42	17	13	18	20	17	14	12	10	15	8	11	68	32	19	81.1
4-Oct	36	41	44	18	11	60	55	59	83	12	13	19	26	27	28	39	23	48	13	17	24	13	28	34	83.5
5-Oct	38	15	11	11	15	9	24	21	23	20	20	23	27	22	27	15	13	8	14	9	5	4	8	36	38.2
6-Oct	75	82	68	89	16	8	9	22	24	20	30	23	20	15	14	17	6	5	6	7	8	10	7	5	88.6
7-Oct	14	48	72	56	13	4	8	9	6	7	7	8	10	7	6	9	11	6	17	10	13	13	5	7	71.8
8-Oct	26	7	10	64	50	84	45	58	15	28	11	11	40	52	15	31	20	15	68	74	62	62	16	13	84.1
9-Oct	73	61	61	43	21	62	26	25	23	58	11	13	51	40	34	10	15	12	10	11	10	6	7	7	73.5
10-Oct	5	26	4	4	7	4	6	5	11	8	6	7	6	23	7	6	5	8	6	8	7	7	4	5	26.3
11-Oct	5	3	4	6	7	7	5	8	8	11	27	35	57	55	38	37	22	40	16	16	5	11	8	9	56.6
12-Oct	8	7	8	9	9	7	13	11	8	10	8	7	20	12	12	14	7	6	6	11	16	37	87	20	87.2
13-Oct	87	38	27	19	58	31	47	30	51	48	52	12	6	5	5	6	7	7	12	22	58	66	83	55	87.3
14-Oct	33	4	9	12	3	8	16	9	6	5	6	11	20	28	22	23	14	11	10	60	16	6	50	61	61.2
15-Oct	82	32	32	7	5	3	6	11	16	6	10	6	7	10	31	43	35	21	9	6	10	8	10	12	82.3
16-Oct	46	13	14	36	39	52	71	63	45	3	6	4	6	5	5	6	5	5	4	5	4	4	5	6	70.6
17-Oct	6	5	N	N	N	3	4	3	3	4	6	7	7	7	9	7	16	3	3	11	10	82	43	26	82.3
18-Oct	15	9	11	13	20	25	17	32	41	58	48	30	29	31	48	64	59	86	20	12	7	10	6	5	85.7
19-Oct	9	4	3	5	6	4	8	4	5	25	9	4	5	6	5	6	5	6	5	7	7	7	6	5	24.8
20-Oct	6	7	6	6	6	7	8	5	6	5	8	8	8	8	10	9	6	7	7	6	6	7	5	6	9.6
21-Oct	6	4	5	4	4	4	5	6	6	4	6	7	8	8	9	6	7	6	6	6	7	9	8	7	8.9
22-Oct	7	4	5	5	3	4	4	4	4	5	8	7	9	8	10	6	7	6	6	14	11	11	6	4	13.5
23-Oct	14	8	6	7	6	8	4	4	6	10	11	16	13	15	11	10	10	14	3	18	10	4	6	12	18.2
24-Oct	8	7	4	5	11	6	26	8	10	8	9	7	9	7	5	3	4	31	36	7	15	7	4	9	36.5
25-Oct	3	6	21	7	5	6	10	5	8	5	6	8	9	19	23	5	7	18	10	8	12	7	7	10	22.7
26-Oct	15	11	12	14	26	28	25	16	16	71	19	8	7	8	6	6	9	5	12	36	20	48	14	18	70.5
27-Oct	35	41	92	7	12	21	9	5	8	7	15	13	9	6	5	5	4	4	7	6	7	4	4	4	92.0
28-Oct	5	6	8	5	4	4	5	4	4	4	4	5	10	7	5	5	9	8	17	11	11	15	16	11	17.3
29-Oct	15	17	7	11	8	13	16	6	4	6	5	3	6	7	9	4	7	7	7	7	5	6	12	27	26.8
30-Oct	27	19	8	12	7	6	12	27	55	49	52	18	24	28	12	11	6	6	7	29	19	66	37	39	66.4
31-Oct	89	53	84	70	64	84	87	55	68	23	33	89	49	39	47	32	6	82	11	44	52	54	69	9	89.1
89.1	82.5	92.0	88.6	64.4	84.1	86.9	63.2	83.5	70.5	62.2	89.0	75.3	54.8	47.7	64.2	59.4	85.7	68.2	74.1	62.1	82.3	87.2	61.2		
N - Not Valid																									

PAZA

## Valleyview Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

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

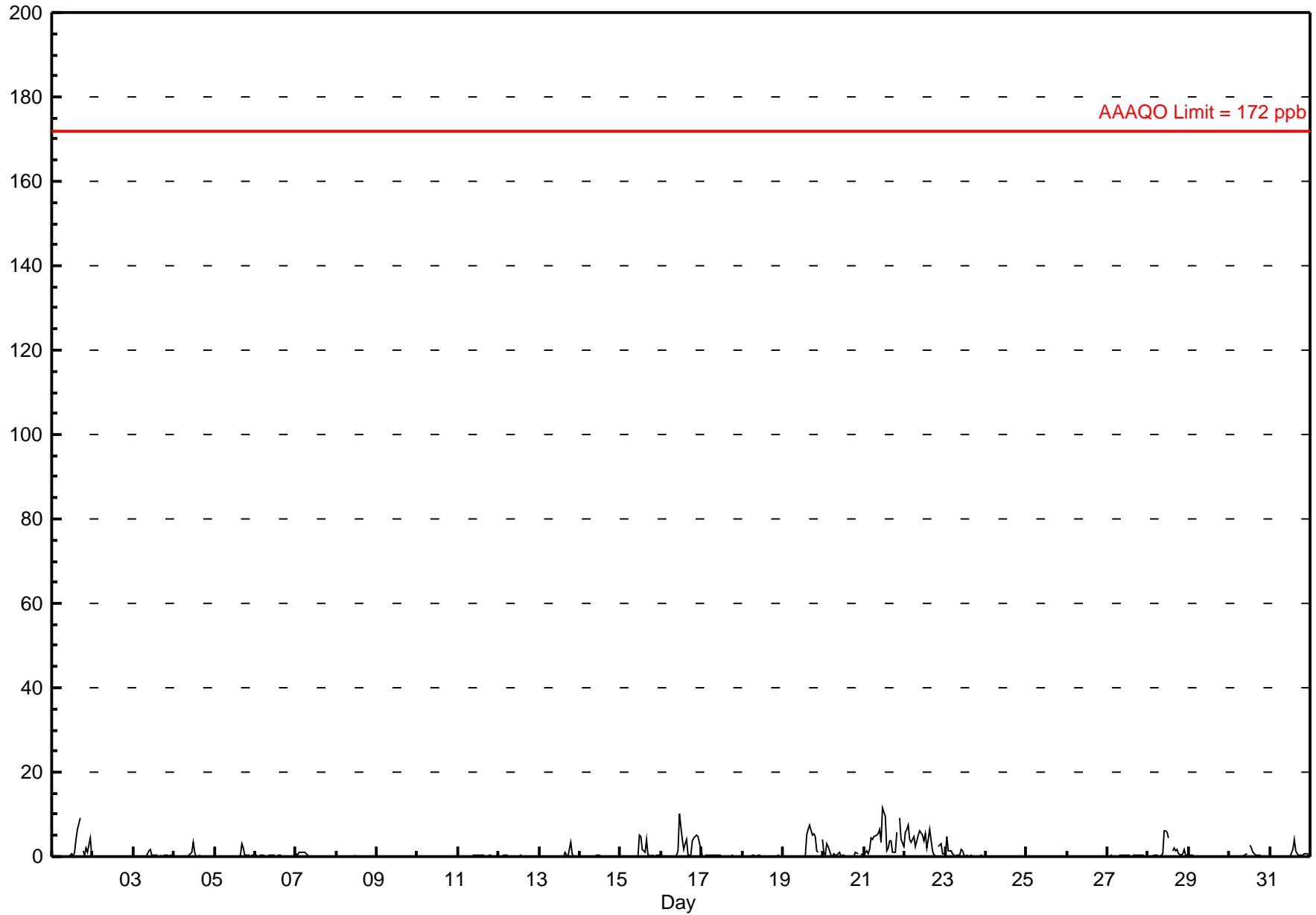
Valleyview - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 11.4 ppb on Oct 21 12:00	Maximum Daily Average: 4.0 ppb on Oct 21		Hours of Data:	709
Minimum Value: 0 ppb on Oct 1 03:00	Minimum Daily Average: 0.0 ppb on Oct 2		Hours of Missing Data:	35
Maximum Diurnal Average: 1.5 ppb at hour 12	Minimum Diurnal Average: 0.3 ppb at hour 7		Hours of Calibration:	35
Monthly Average: 0.66 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> = 0.3 P <sub>90</sub> = 2.0 P <sub>99</sub> = 7.3		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4	7	9	A	1	0	2	1	5	0	1.4	9.0
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.0
3-Oct	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	1.6
4-Oct	0	0	0	0	0	0	0	0	0	0	1	4	1	0	A	0	0	0	0	0	0	0	0	0	0.3	3.5
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	3	2	0	0	0	0	0	0	0.3	2.9
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
7-Oct	1	0	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.5
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.0	0.1
10-Oct	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
12-Oct	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	0.3
13-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	3	1	0	0	0	0	0.3	3.3
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
15-Oct	0	0	0	A	0	0	0	0	0	0	0	5	5	2	1	4	0	0	0	0	0	0	0	0	0.8	5.2
16-Oct	0	0	A	0	0	0	0	0	0	0	2	10	4	2	3	4	0	0	4	4	5	5	5	2	2.2	10.2
17-Oct	0	A	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.2	0.5
18-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.3
19-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	6	7	5	5	5	1	1	A	4	1.7	7.3
20-Oct	1	0	3	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0.6	3.1
21-Oct	0	1	1	2	4	4	5	5	6	6	3	11	9	1	2	4	4	1	1	6	A	9	4	2	4.0	11.4
22-Oct	6	6	7	4	3	5	2	4	5	6	5	4	5	2	4	6	1	0	0	A	2	3	1	1	3.6	7.4
23-Oct	0	5	1	1	1	0	0	0	0	2	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0.6	4.8
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.2
25-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.4
28-Oct	0	0	0	0	0	0	0	0	1	6	6	6	5	A	2	2	1	2	1	0	1	2	0	0	1.5	6.0
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3
30-Oct	0	0	0	0	0	0	0	0	0	0	1	A	3	2	1	0	0	0	0	0	0	0	0	0	0.4	2.6
31-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	2	4	1	1	0	0	0	1	1	1	0	0.5	4.0
	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.5	0.9	0.8	1.5	1.2	0.5	1.0	1.3	1.0	0.4	0.6	0.6	0.5	0.8	0.6	0.4	Diurnal Average	
	5.9	6.5	7.4	3.9	4.3	4.8	4.8	5.0	5.5	6.4	6.0	11.4	9.3	2.1	5.1	6.5	9.0	4.9	5.3	5.9	4.9	9.2	4.7	4.1	Diurnal Maximum	

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 48 ppb    30-day 11 ppb





## Hourly Maximums

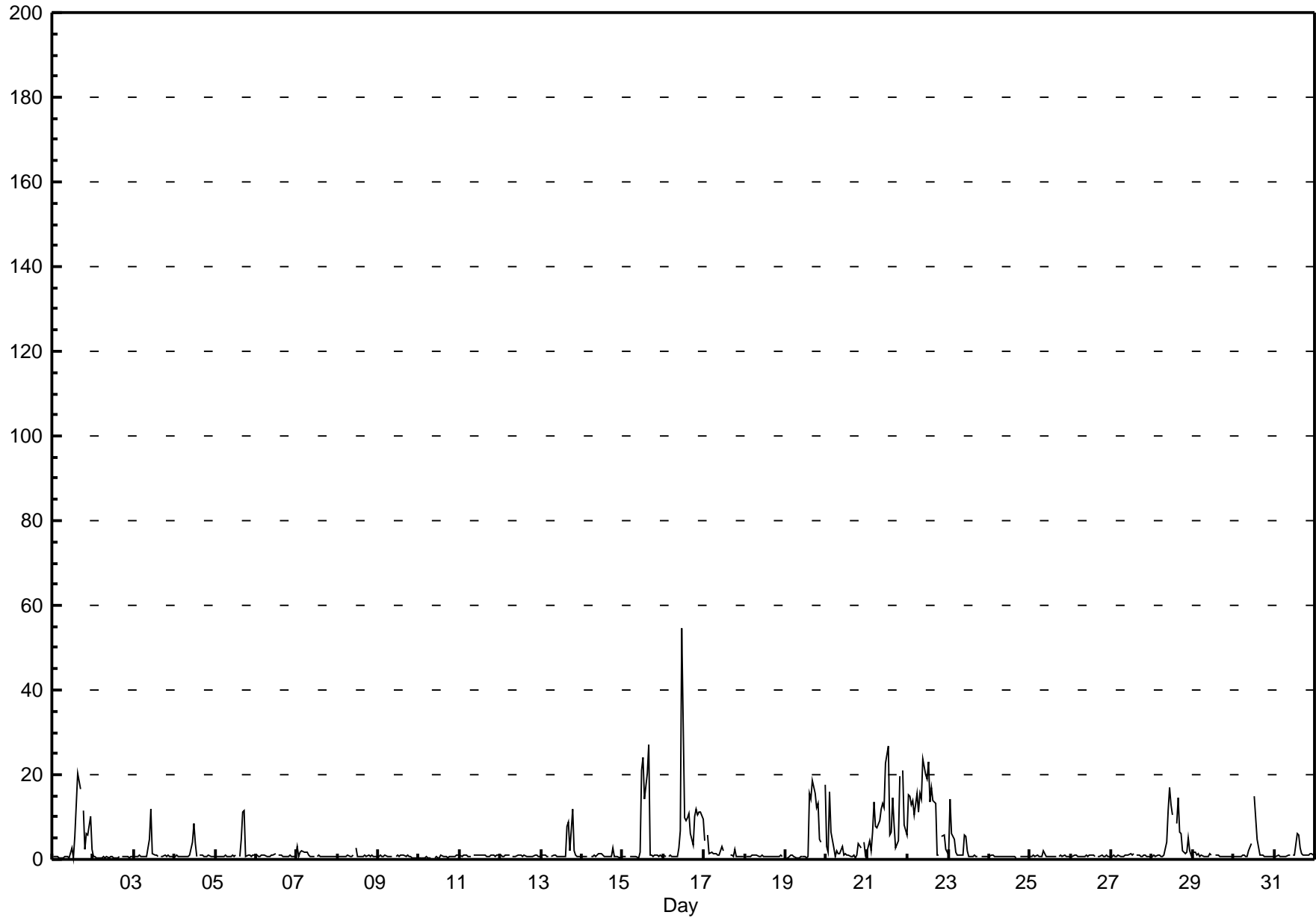
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Valleyview - October 2012

Maximum Value: 54.5 ppb on Oct 16 12:00		Maximum Daily Average: 12.3 ppb on Oct 22		Hours in Service: 744																							
Minimum Value: 0 ppb on Oct 2 06:00		Minimum Daily Average: 0.5 ppb on Oct 2		Hours of Data: 709																							
Maximum Diurnal Average: 5.7 ppb at hour 12		Minimum Diurnal Average: 1.4 ppb at hour 7		Hours of Missing Data: 35																							
Monthly Average: 2.56 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.6 Median = 0.8 Q <sub>3</sub> = 1.2 P <sub>90</sub> = 8.4 P <sub>99</sub> = 22.6		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-Oct	1	1	1	1	1	0	0	1	1	1	0	3	0	5	13	20	17	A	11	2	6	6	10	2	4.5	20.2	
2-Oct	1	1	0	0	0	0	1	0	1	0	1	1	0	0	0	1	A	1	1	1	1	0	1	1	0.5	0.8	
3-Oct	1	1	1	1	1	1	1	1	3	5	12	1	1	1	1	A	1	1	1	1	1	1	1	1	1.6	11.7	
4-Oct	1	1	1	1	1	1	1	1	1	1	4	8	4	1	A	1	1	1	1	1	1	1	1	1	1.4	8.4	
5-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	5	11	12	1	1	1	1	1	1	1.9	11.5	
6-Oct	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2	
7-Oct	3	1	2	2	2	2	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.0	3.1	
8-Oct	1	1	1	1	1	1	1	1	1	1	1	A	3	1	1	1	1	1	1	1	1	1	1	1	0.8	2.6	
9-Oct	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0.7	1.1	
10-Oct	0	0	0	0	1	0	0	0	A	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0	
11-Oct	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1	
12-Oct	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	1.0	
13-Oct	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	8	9	2	12	2	1	1	1	1	2.0	12.0	
14-Oct	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	0	1	0.8	2.7	
15-Oct	1	1	1	A	1	1	1	1	1	0	2	21	24	14	20	27	1	1	1	1	1	1	1	1	5.2	27.3	
16-Oct	1	1	A	1	1	1	1	1	1	3	7	54	10	9	10	11	6	3	10	12	11	11	11	10	8.0	54.5	
17-Oct	4	A	6	1	2	1	1	1	1	1	3	2	C	C	C	1	1	1	2	1	1	1	1	1	1.6	5.9	
18-Oct	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.0	
19-Oct	1	0	1	1	1	1	0	0	1	1	1	0	1	16	14	19	16	12	13	5	4	A	18	5.4	18.6		
20-Oct	3	2	16	6	3	1	2	1	1	3	1	1	1	1	1	1	0	1	4	3	A	4	1	2.5	15.8		
21-Oct	2	4	2	6	14	8	7	9	12	13	12	23	27	6	6	14	8	3	4	20	A	21	8	6	10.2	26.7	
22-Oct	15	15	13	14	11	16	11	15	14	24	20	19	23	13	17	14	13	1	1	A	5	6	2	2	12.3	23.8	
23-Oct	1	14	6	5	2	1	1	1	1	6	6	2	1	1	1	1	1	1	A	1	1	1	1	1	2.3	14.3	
24-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.1	
25-Oct	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	2.2	
26-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.1	
27-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.2	
28-Oct	1	1	1	1	1	1	1	1	4	12	17	13	11	A	8	14	6	6	2	1	2	5	2	1	4.9	16.9	
29-Oct	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.7	
30-Oct	1	1	1	1	1	1	1	1	1	2	4	A	15	10	5	1	1	1	1	1	1	1	1	1	2.1	14.8	
31-Oct	1	1	1	1	1	1	1	1	1	1	A	1	1	6	6	3	1	1	1	1	1	1	1	1	1.5	5.9	
		1.5	1.8	2.1	1.8	1.7	1.5	1.4	1.5	1.8	2.8	3.5	5.7	4.6	2.9	4.1	5.1	3.7	2.0	2.5	2.4	1.7	2.3	1.9	1.9	Diurnal Average	
		15.2	14.7	15.8	14.1	13.7	15.6	11.1	15.5	14.1	23.8	20.0	54.5	26.7	14.3	20.3	27.3	18.6	15.8	12.2	19.7	10.6	21.0	11.3	17.5	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

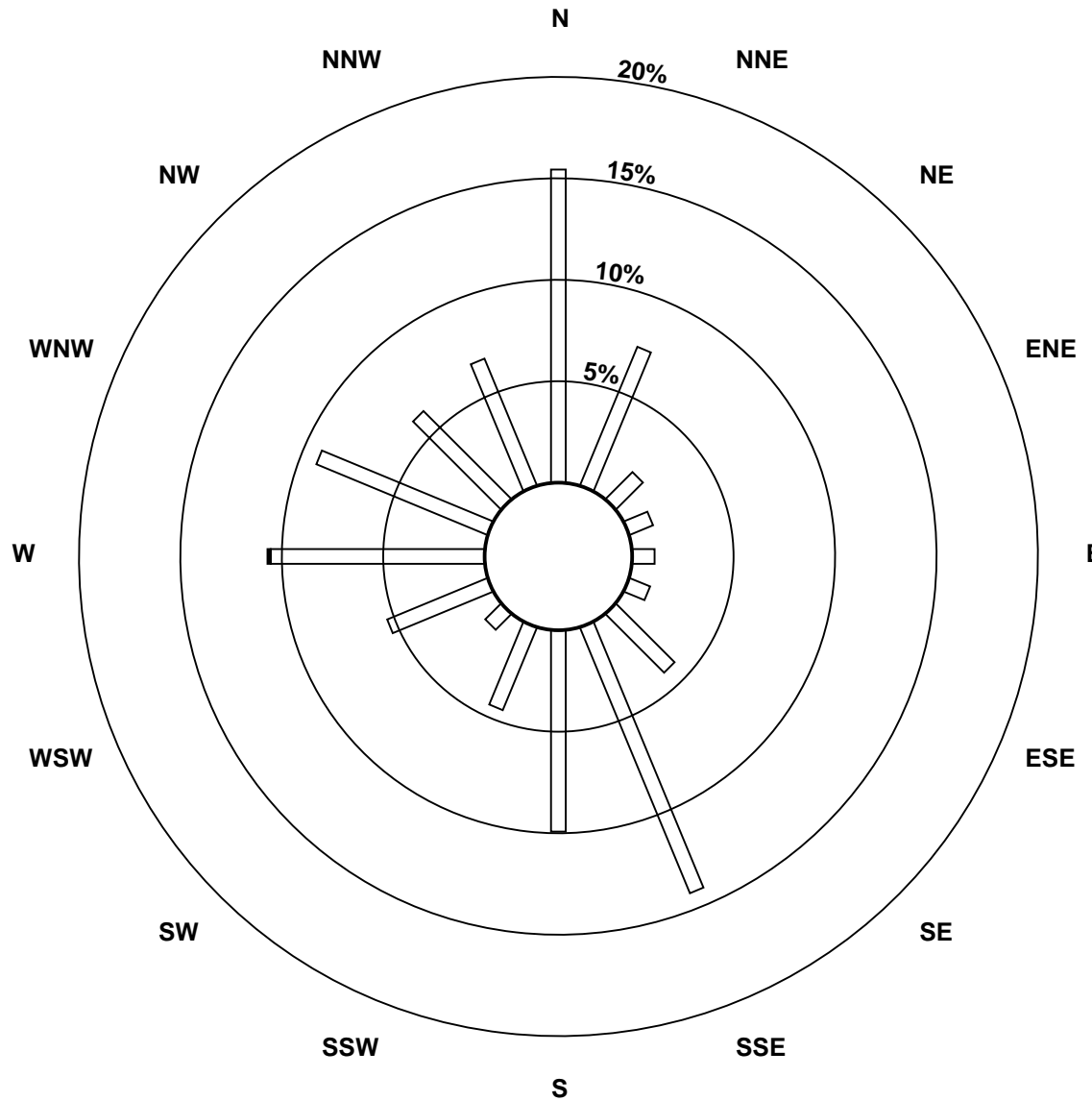
### Hourly Maximums

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Valleyview - October 2012**

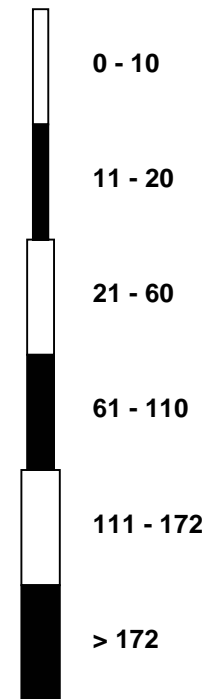


**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Valleyview - October 2012**

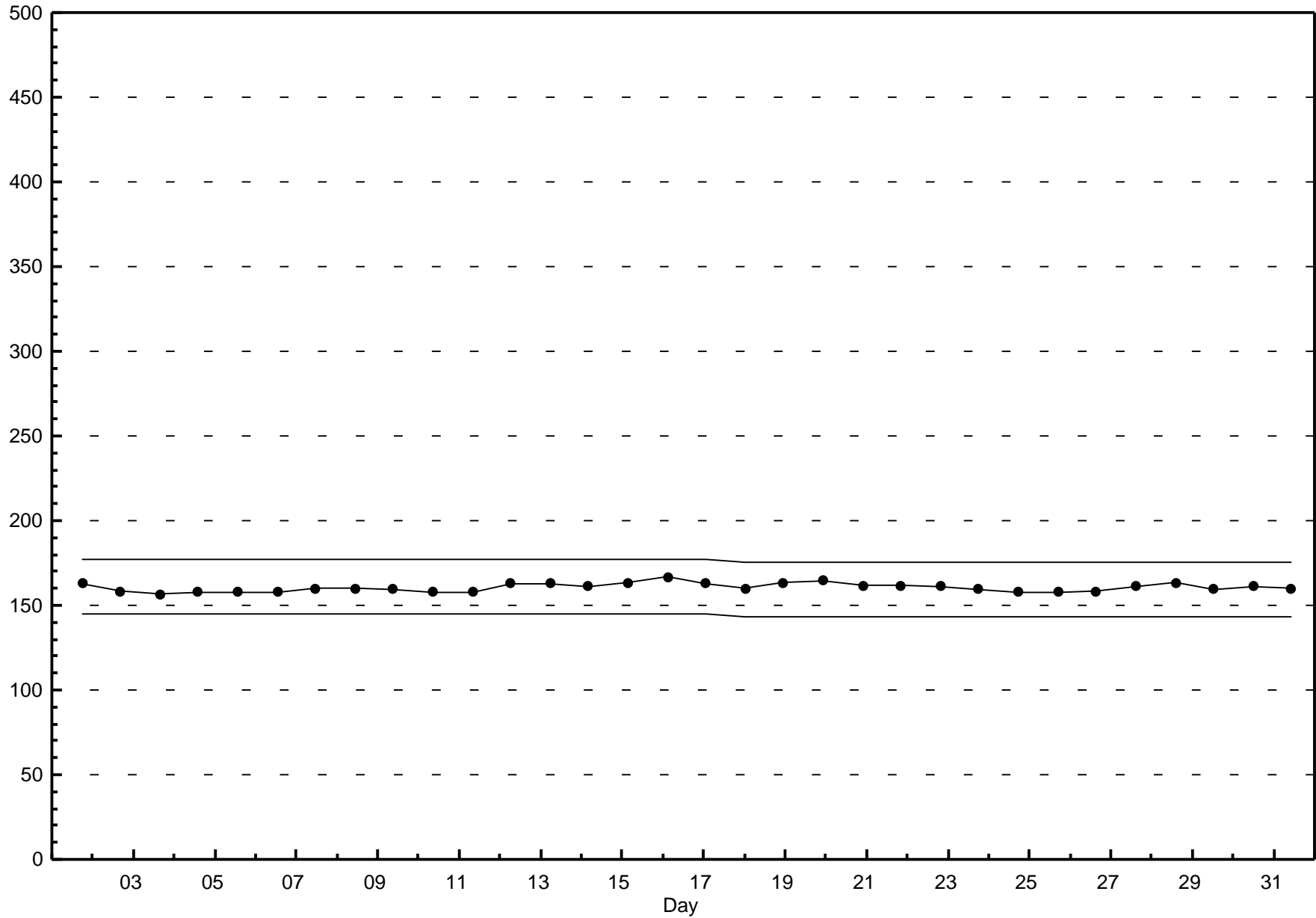


**Pollutant Classes (ppb)**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Valleyview - October 2012



## Hourly Averages

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

### Valleyview - October 2012

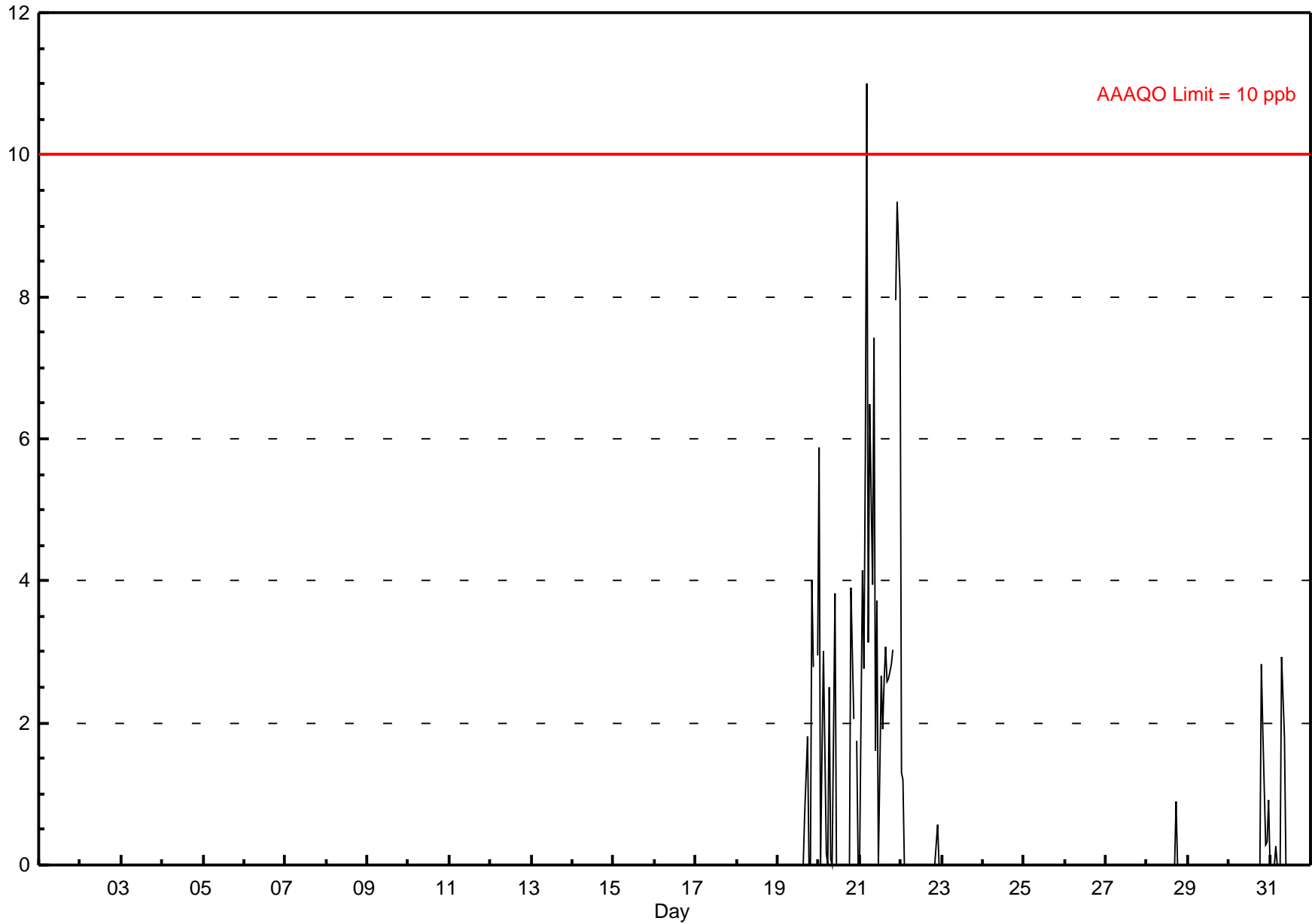
Number of Exceedences (AAAQO):	1-hr: 1	24-hr: 1	Hours in Service:	744
Maximum Value: 11.0 ppb on Oct 21 05:00	Maximum Daily Average: 4.2 ppb on Oct 21		Hours of Data:	708
Minimum Value: 0 ppb on Oct 1 01:00	Minimum Daily Average: 0.0 ppb on Oct 1		Hours of Missing Data:	36
Maximum Diurnal Average: 0.4 ppb at hour 24	Minimum Diurnal Average: 0.0 ppb at hour 12		Hours of Calibration:	36
Monthly Average: 0.21 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.0 Q <sub>3</sub> = 0.0 P <sub>90</sub> = 0.0 P <sub>99</sub> = 5.5		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.0
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.0
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.0
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.0	0.0
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.0
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
7-Oct	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
8-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
9-Oct	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
10-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
11-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
12-Oct	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
13-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
15-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
16-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
17-Oct	0	A	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
18-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
19-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	4	3	A	3	0.5	4.0
20-Oct	6	0	2	3	0	0	3	0	0	4	0	0	0	0	0	0	0	0	0	4	2	A	2	0	1.1	5.9
21-Oct	0	4	3	6	11	3	6	4	7	2	4	0	3	2	3	3	3	3	3	3	A	8	9	8	4.2	11.0
22-Oct	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0.1	1.3
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.0
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.0
25-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.0
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.0
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.0
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.0	0.9
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
30-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	3	2	0	0	1	0.3	2.8
31-Oct	0	0	0	0	0	0	0	3	2	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2.9
	0.2	0.2	0.1	0.3	0.4	0.1	0.3	0.2	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.3	0.4	0.4	0.4	Diurnal Average	
	5.9	4.1	2.8	5.8	11.0	3.1	6.5	3.9	7.4	3.8	3.7	0.0	2.7	1.9	2.6	3.1	2.6	2.6	2.8	3.9	4.0	8.0	9.3	8.1	Diurnal Maximum	

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

**Hourly Averages**

**Hydrogen Sulphide (H<sub>2</sub>S) - ppb**  
**Valleyview - October 2012**



## Hourly Maximums

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

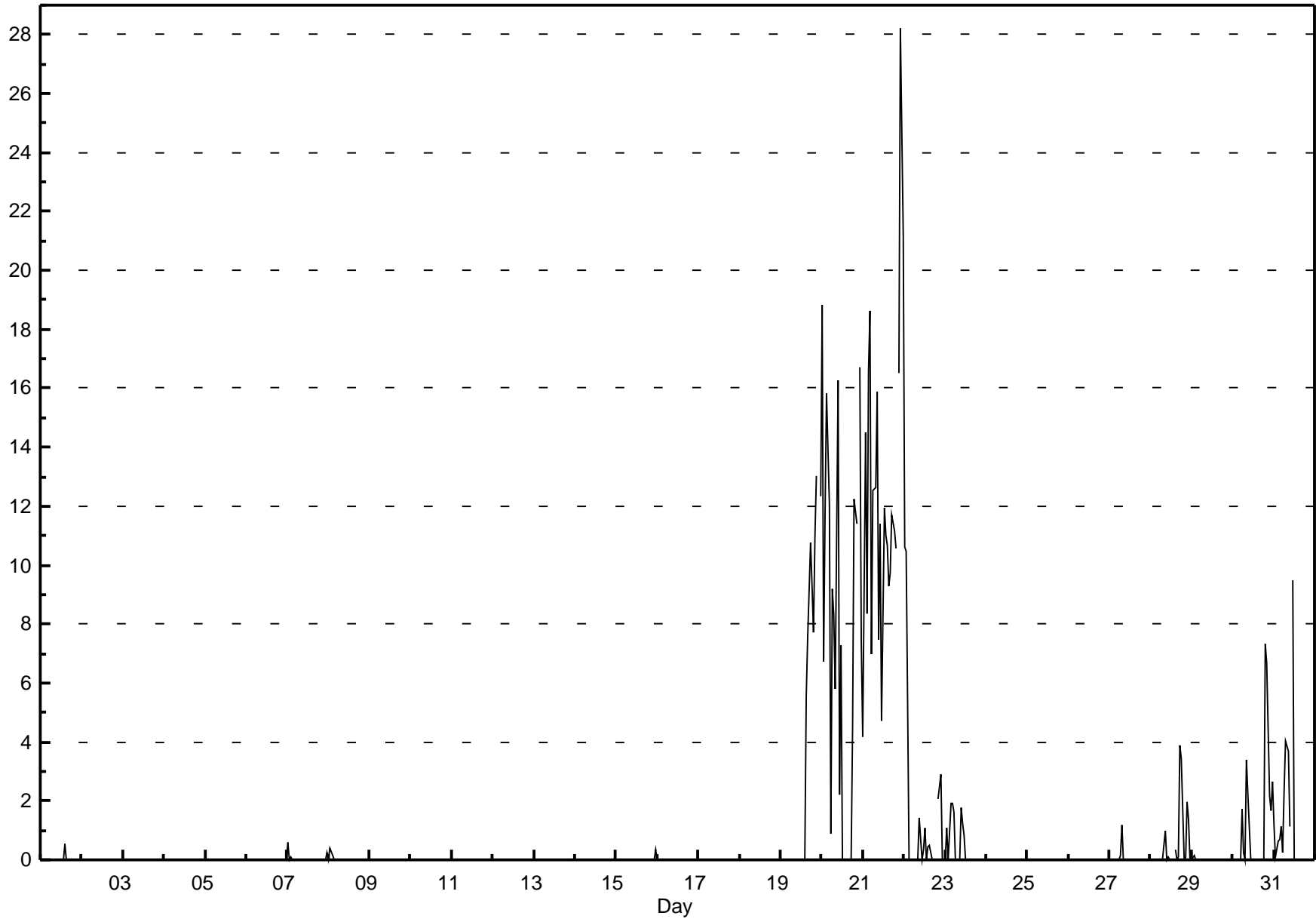
### Valleyview - October 2012

Maximum Value: 28.2 ppb on Oct 21 23:00		Maximum Daily Average: 12.4 ppb on Oct 21		Hours in Service: 744																							
Minimum Value: 0 ppb on Oct 1 01:00		Minimum Daily Average: 0.0 ppb on Oct 2		Hours of Data: 708																							
Maximum Diurnal Average: 1.6 ppb at hour 23		Minimum Diurnal Average: 0.4 ppb at hour 14		Hours of Missing Data: 36																							
Monthly Average: 0.91 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.0 Q <sub>3</sub> = 0.0 P <sub>90</sub> = 1.6 P <sub>99</sub> = 16.5		Hours of Calibration: 36																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0.0	0.5	
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.0	
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.0	
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.0	0.0	
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
7-Oct	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.6	
8-Oct	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4	
9-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
10-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
11-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
12-Oct	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
13-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
15-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4	
16-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
17-Oct	0	A	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
18-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.0	
19-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	8	11	9	8	11	13	A	12	3.4	13.0	
20-Oct	19	7	12	16	12	1	9	8	6	16	2	7	0	0	0	0	0	0	4	12	11	A	17	7	7.3	18.8	
21-Oct	4	15	8	17	19	7	13	13	16	7	11	5	12	11	11	9	10	12	11	11	A	17	28	21	12.4	28.2	
22-Oct	11	10	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	A	2	3	0	0	1.5	10.6	
23-Oct	0	1	0	2	2	2	0	0	0	2	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0.5	1.9	
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.0	
25-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.0	
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.0	
27-Oct	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	1.2	
28-Oct	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	4	3	0	0	2	1	0	0.5	3.9
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.2	
30-Oct	0	0	0	0	0	2	0	0	3	2	0	A	0	0	0	0	0	0	0	7	7	2	2	3	1.2	7.3	
31-Oct	1	0	1	1	1	0	2	4	4	1	A	9	0	0	0	0	0	0	0	0	0	0	0	0	1.1	9.5	
		1.2	1.1	0.9	1.2	1.1	0.4	0.8	0.9	1.0	1.0	0.5	0.8	0.5	0.4	0.4	0.5	0.6	0.9	0.9	1.3	1.0	1.2	1.6	1.5	Diurnal Average	
		18.8	14.5	11.8	16.6	18.6	7.0	12.5	12.6	15.9	16.3	11.4	9.5	11.9	11.0	10.7	9.3	9.7	11.7	11.2	12.3	11.4	16.5	28.2	21.2	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



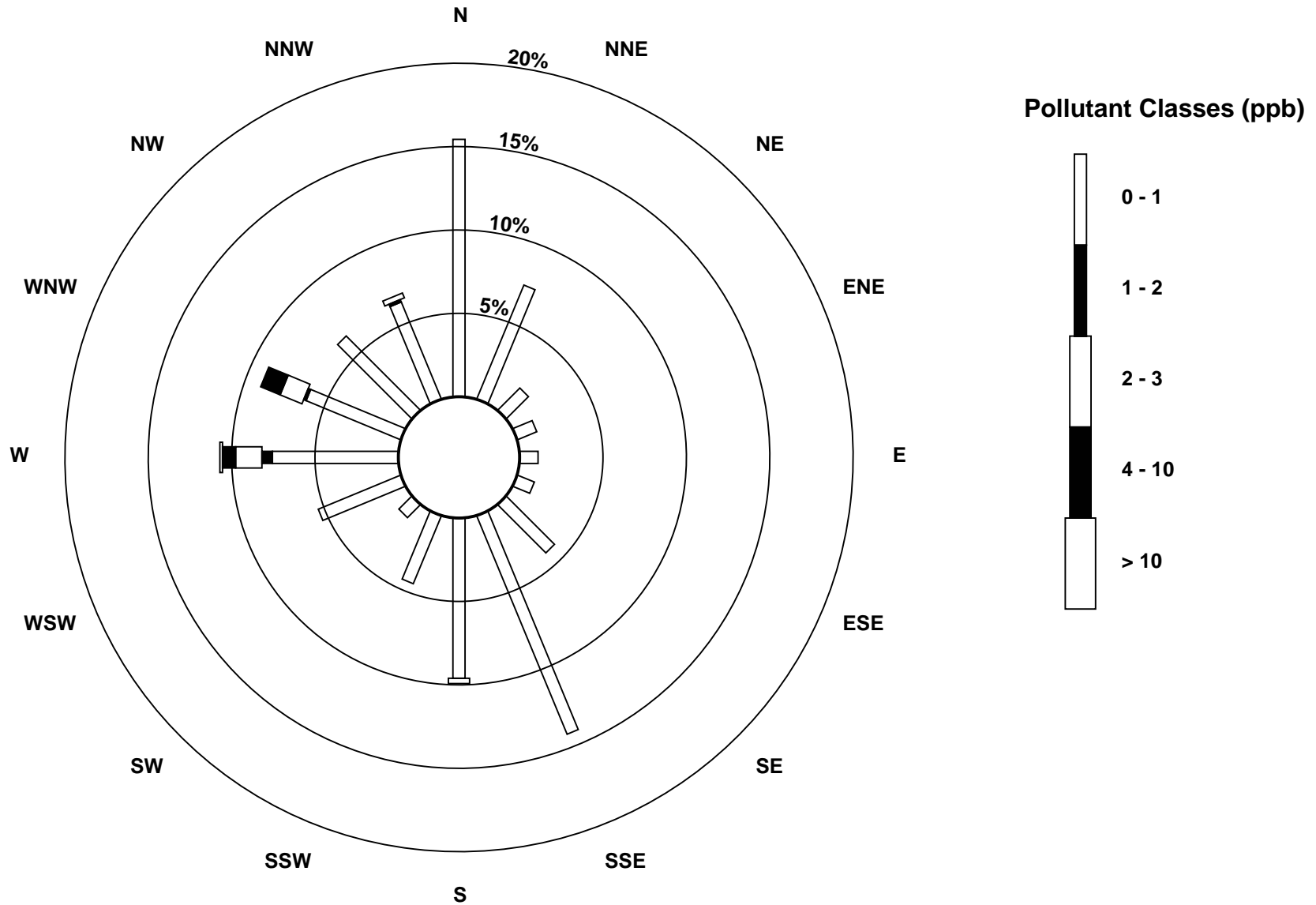
**Hourly Maximums**

**Hydrogen Sulphide (H<sub>2</sub>S) - ppb**  
**Valleyview - October 2012**



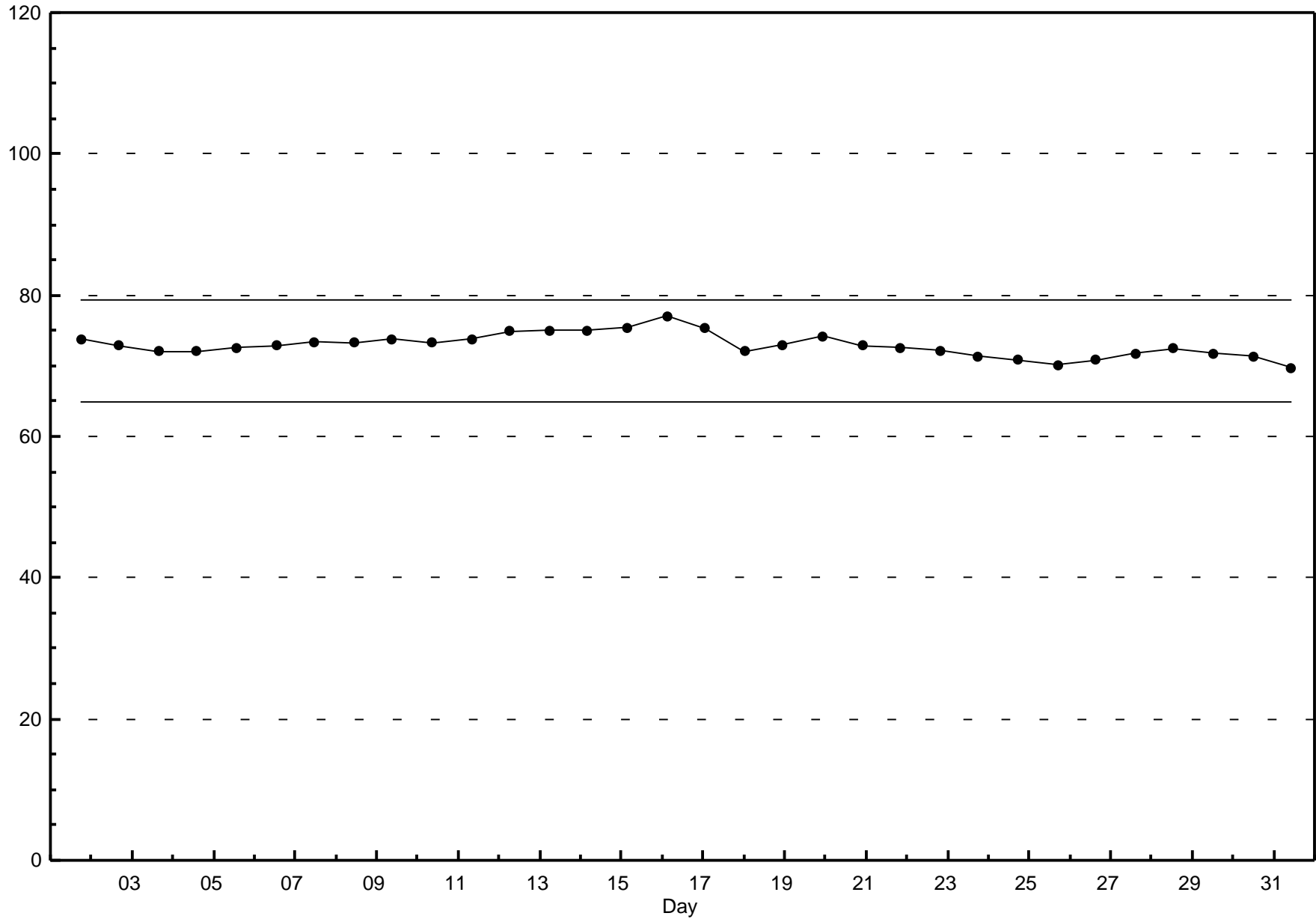
**Pollutant Rose**

**Hydrogen Sulphide (H<sub>2</sub>S) - ppb**  
**Valleyview - October 2012**



### Span Responses

Hydrogen Sulphide (H<sub>2</sub>S)  
Valleyview - October 2012



## Hourly Averages

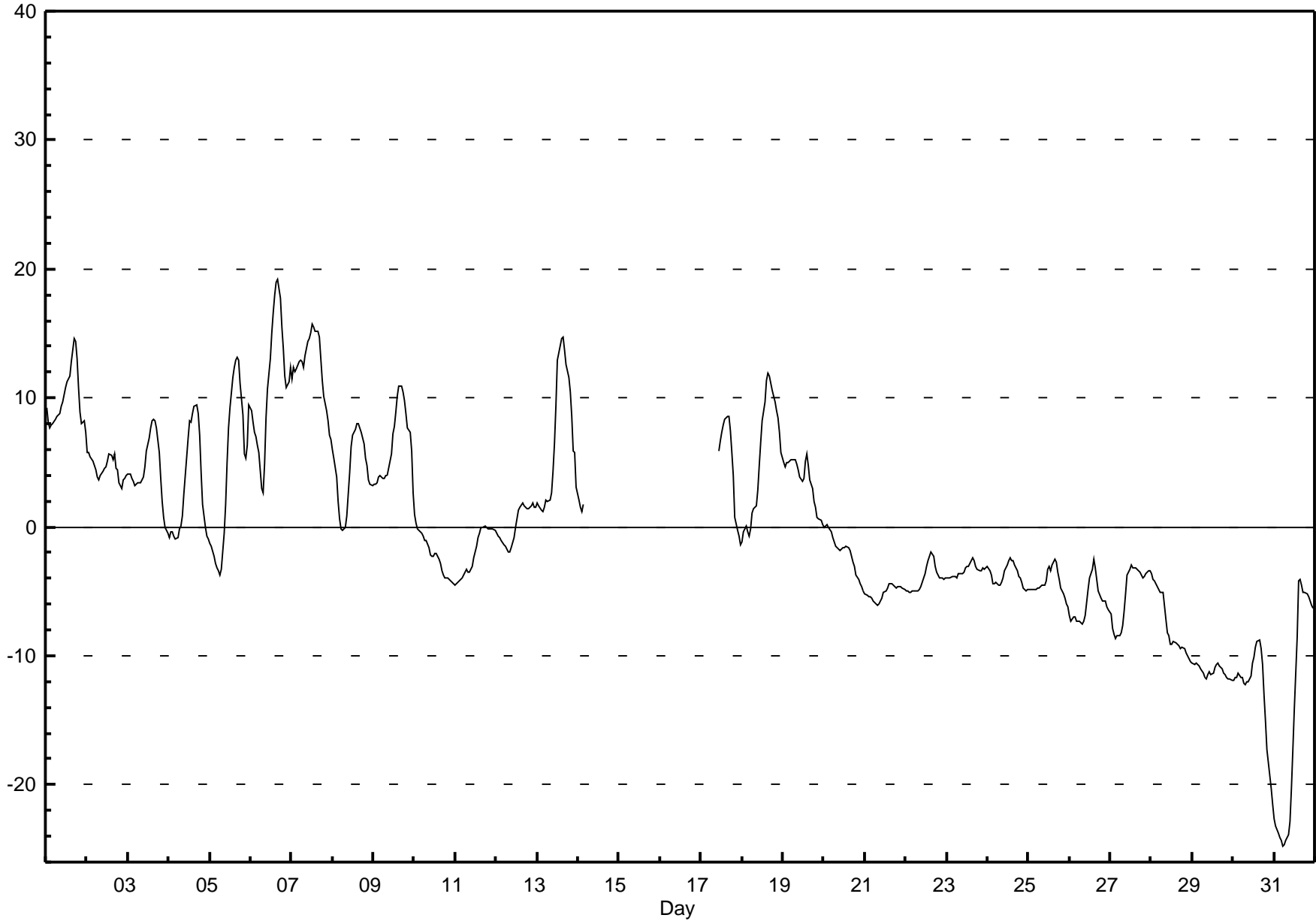
External Temperature (ET) - °C

Valleyview - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 19.2 °C on Oct 6 17:00	Maximum Daily Average: 12.4 °C on Oct 7		Hours of Data:	666
Minimum Value: -25 °C on Oct 31 06:00	Minimum Daily Average: -14.6 °C on Oct 31		Hours of Missing Data:	78
Maximum Diurnal Average: 3.1 °C at hour 16	Minimum Diurnal Average: -2.2 °C at hour 7		Hours of Calibration:	0
Monthly Average: -0.13 °C	Percentiles: P <sub>1</sub> = -23.4 P <sub>10</sub> = -9.1 Q <sub>1</sub> = -4.6 Median = -0.9 Q <sub>3</sub> = 5.2 P <sub>90</sub> = 9.8 P <sub>99</sub> = 15.5		Percent Operational Time:	89.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Oct	9	8	8	8	8	8	9	9	9	9	10	11	11	11	12	13	15	14	13	11	9	8	8	7	9.9	14.6																						
2-Oct	6	6	5	5	5	4	4	4	4	4	5	5	5	6	6	5	6	5	4	3	3	4	4	4	4.6	5.8																						
3-Oct	4	4	4	4	3	3	3	3	4	4	5	6	7	8	8	8	8	8	6	4	2	1	0	-1	4.4	8.4																						
4-Oct	-1	0	0	-1	-1	-1	0	0	1	3	5	7	8	8	9	9	9	9	7	4	2	0	-1	-1	3.2	9.4																						
5-Oct	-1	-2	-2	-3	-3	-3	-4	-3	-1	2	5	8	9	12	12	13	13	13	11	9	6	5	6	9	4.6	13.2																						
6-Oct	9	8	7	7	6	6	3	3	5	8	11	13	15	17	18	19	19	18	16	14	12	11	11	12	11.1	19.2																						
7-Oct	11	12	12	12	13	13	13	12	13	14	15	15	16	16	15	15	15	13	11	10	9	8	7	7	12.4	15.8																						
8-Oct	6	5	4	2	1	0	0	0	1	2	4	6	7	8	8	8	7	6	5	5	4	3	3	3	4.3	8.0																						
9-Oct	3	3	3	4	4	4	4	4	4	5	6	7	8	9	10	11	11	10	10	9	8	7	6	3	6.3	10.9																						
10-Oct	1	0	0	0	-1	-1	-1	-1	-2	-2	-2	-2	-2	-2	-3	-3	-3	-4	-4	-4	-4	-4	-4	-4	-2.2	1.0																						
11-Oct	-5	-4	-4	-4	-4	-4	-3	-4	-4	-4	-3	-3	-2	-1	-1	0	0	0	0	0	0	0	0	0	-2.0	0.0																						
12-Oct	0	-1	-1	-1	-1	-1	-2	-2	-2	-2	-2	-1	0	1	1	2	2	2	2	1	1	2	2	1	2	0.2	1.9																					
13-Oct	2	2	1	1	2	2	2	2	3	4	6	9	13	14	15	15	14	13	12	10	9	6	6	3	6.8	14.7																						
14-Oct	2	2	1	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	2.1																						
15-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
16-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
17-Oct	N	N	N	N	N	N	N	N	N	N	6	7	7	8	8	9	9	7	6	4	1	0	-1	-1	--	8.6																						
18-Oct	-1	0	0	0	-1	0	1	1	2	3	5	7	8	10	11	12	12	11	11	10	9	8	7	6	5.4	11.9																						
19-Oct	5	5	5	5	5	5	5	5	5	4	4	4	4	5	6	5	4	3	2	2	1	1	0	0	3.7	5.7																						
20-Oct	0	0	0	0	0	-1	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-3	-3	-4	-4	-4	-5	-5	-1.9	0.2																						
21-Oct	-5	-5	-5	-5	-6	-6	-6	-6	-6	-6	-6	-5	-5	-5	-4	-4	-4	-5	-5	-5	-5	-5	-5	-5	-5.1	-4.4																						
22-Oct	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-4	-4	-3	-3	-2	-2	-2	-3	-3	-4	-4	-4	-4	-4	-4.0	-2.0																						
23-Oct	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-3	-3	-3	-3	-3	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3.4	-2.4																						
24-Oct	-3	-3	-4	-4	-4	-4	-4	-4	-4	-4	-3	-3	-3	-2	-3	-3	-3	-3	-4	-4	-4	-5	-5	-5	-3.8	-2.4																						
25-Oct	-5	-5	-5	-5	-5	-5	-5	-5	-5	-4	-4	-3	-3	-3	-3	-2	-3	-4	-4	-5	-5	-5	-6	-6	-4.4	-2.5																						
26-Oct	-7	-7	-7	-7	-7	-7	-7	-8	-7	-7	-6	-5	-4	-3	-3	-3	-4	-5	-6	-6	-6	-6	-6	-6	-5.8	-2.5																						
27-Oct	-7	-8	-8	-9	-8	-8	-8	-8	-7	-5	-4	-3	-3	-3	-3	-3	-4	-4	-4	-4	-4	-3	-3	-3	-5.2	-3.0																						
28-Oct	-4	-4	-4	-5	-5	-5	-5	-5	-7	-8	-8	-9	-9	-9	-9	-9	-9	-9	-9	-10	-10	-10	-10	-10	-7.7	-3.7																						
29-Oct	-11	-11	-11	-11	-11	-11	-11	-11	-12	-12	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-12	-12	-12	-12	-11.2	-10.6																						
30-Oct	-12	-12	-12	-11	-12	-12	-12	-12	-12	-12	-12	-11	-10	-9	-9	-9	-9	-11	-13	-15	-17	-19	-20	-21	-12.7	-8.8																						
31-Oct	-23	-23	-24	-24	-24	-25	-25	-24	-24	-23	-20	-17	-14	-9	-4	-4	-5	-5	-5	-5	-5	-6	-6	-6	-14.6	-4.1																						
																								-1.2	-1.4	-1.6	-1.8	-2.1	-2.1	-2.2	-2.2	-1.9	-1.3	-0.2	0.8	1.6	2.4	2.9	3.1	2.9	2.3	1.5	0.6	-0.3	-0.8	-1.1	-1.4	Diurnal Average
																								11.5	12.4	12.0	12.3	12.8	12.9	12.8	12.3	13.3	14.3	14.6	15.1	15.8	16.6	18.0	19.0	19.2	17.8	15.5	13.8	11.7	10.8	11.2	12.3	Diurnal Maximum

N - Not Valid



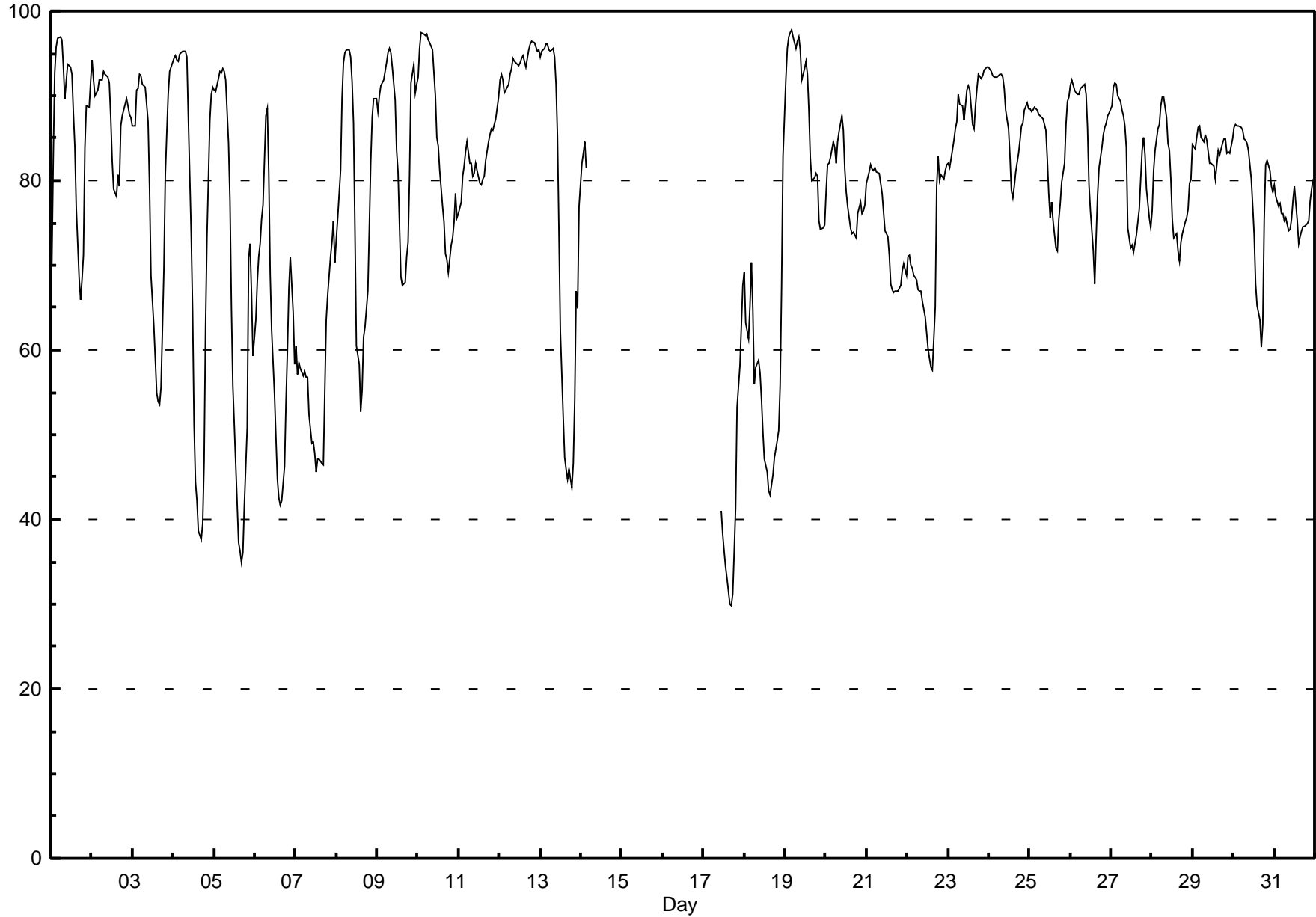
## Hourly Averages

Relative Humidity (RH) - %  
Valleyview - October 2012

Number of Exceedences (AAQO):		1-hr: 0		24-hr: 0		Hours in Service:		744																			
Maximum Value: 97.8 % on Oct 19 05:00		Maximum Daily Average: 93.8 % on Oct 12		Minimum Value: 30 % on Oct 17 17:00		Minimum Daily Average: 56.3 % on Oct 18		Hours of Data: 666																			
Maximum Diurnal Average: 86.7 % at hour 6		Minimum Diurnal Average: 65.1 % at hour 16		Hours of Missing Data: 78		Hours of Calibration: 0		Percent Operational Time: 89.5																			
Monthly Average: 78.02 %		Percentiles: P <sub>1</sub> = 35.9 P <sub>10</sub> = 55.0 Q <sub>1</sub> = 71.0 Median = 81.6 Q <sub>3</sub> = 89.8 P <sub>90</sub> = 93.7 P <sub>99</sub> = 97.0																									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	70	83	93	96	97	97	97	94	90	92	94	93	88	84	77	69	66	68	71	84	89	89	92	85.9	97.0		
2-Oct	94	92	90	91	92	92	92	93	93	92	92	88	82	79	78	81	79	86	88	88	90	89	88	88	88.1	94.3	
3-Oct	86	86	91	91	93	92	91	91	89	87	79	69	63	59	55	54	53	56	70	81	86	90	93	94	79.1	93.9	
4-Oct	94	95	94	94	95	95	95	95	95	88	74	65	51	44	42	39	38	40	47	63	73	87	90	91	74.3	95.2	
5-Oct	91	91	92	93	93	93	93	92	84	78	65	56	51	42	37	36	35	36	42	51	71	73	67	59	67.5	93.2	
6-Oct	64	68	71	72	75	77	88	88	81	69	62	55	50	45	43	42	42	46	54	60	67	71	64	58	63.0	88.4	
7-Oct	61	57	58	58	57	57	57	57	52	49	49	48	46	47	47	46	55	63	66	71	73	75	70	70	57.0	75.2	
8-Oct	73	76	81	90	94	95	95	95	95	92	87	74	60	58	53	55	62	63	67	74	82	87	90	90	78.7	95.5	
9-Oct	88	90	91	92	92	94	95	96	95	93	89	84	81	75	69	68	68	71	73	80	92	94	90	91	85.4	95.6	
10-Oct	92	96	97	97	97	97	97	96	95	93	90	85	84	81	77	75	71	71	69	72	73	75	79	76	84.8	97.4	
11-Oct	76	77	80	82	83	85	82	82	81	81	82	81	80	79	80	81	82	85	85	86	86	87	87	90	82.5	89.8	
12-Oct	92	93	92	90	91	91	92	93	94	94	94	93	94	94	95	93	94	95	96	96	96	96	95	95	93.8	96.5	
13-Oct	95	95	96	96	96	95	95	96	95	91	85	74	62	52	47	46	45	46	44	47	54	67	65	77	73.3	96.1	
14-Oct	82	83	85	82	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	84.6	
15-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
16-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
17-Oct	N	N	N	N	N	N	N	N	N	N	41	38	36	34	33	30	30	31	36	41	53	58	63	68	--	67.7	
18-Oct	69	63	61	65	70	65	56	58	59	57	54	50	47	46	43	43	44	45	47	49	51	56	67	83	56.3	82.8	
19-Oct	92	96	97	97	98	97	96	96	97	95	92	93	94	93	88	83	80	80	81	81	75	74	74	75	88.5	97.8	
20-Oct	79	82	82	83	85	84	82	84	86	88	86	81	79	77	74	74	74	74	73	76	77	76	76	77	79.5	87.7	
21-Oct	80	81	82	81	81	82	81	81	80	78	76	74	73	71	68	67	67	67	67	67	68	69	70	69	74.2	81.8	
22-Oct	71	71	70	70	69	68	67	67	67	66	64	62	60	59	58	58	65	79	83	80	81	80	81	82	69.9	82.8	
23-Oct	82	82	83	85	86	87	90	89	89	87	89	91	91	91	87	86	89	91	93	92	92	93	93	93	88.7	93.3	
24-Oct	93	93	92	92	92	92	93	93	92	91	88	86	83	79	78	79	81	83	85	86	87	88	89	88	87.7	93.4	
25-Oct	88	88	88	89	88	88	88	87	87	86	82	78	76	77	75	72	72	75	77	80	82	87	89	90	83.0	89.9	
26-Oct	91	92	91	90	90	90	91	91	91	90	86	79	76	72	68	73	78	82	84	85	86	87	88	88	85.0	91.8	
27-Oct	89	91	91	91	90	89	88	88	86	84	74	72	72	71	73	74	77	80	84	85	83	79	76	74	81.8	91.5	
28-Oct	76	81	84	86	87	89	90	90	88	84	84	80	75	73	74	72	71	73	74	75	76	77	80	80	79.8	89.8	
29-Oct	84	84	85	86	86	85	85	85	85	83	82	82	82	80	82	84	83	84	85	85	83	83	83	85	83.9	86.4	
30-Oct	86	87	86	86	86	86	85	85	84	84	80	77	74	68	65	64	60	63	75	82	82	81	79	79	78.5	86.7	
31-Oct	79	78	77	77	76	76	75	76	74	74	75	78	79	75	73	73	74	74	75	75	75	78	79	80	76.1	80.2	
		82.8	83.9	85.0	85.8	86.7	86.7	86.5	86.6	85.3	83.2	78.5	74.5	71.3	68.2	65.9	65.1	65.3	67.8	70.8	74.2	77.7	80.1	80.7	81.5	Diurnal Average	
		94.6	95.6	97.4	97.5	97.8	97.2	96.6	96.4	97.0	95.4	93.7	93.5	94.0	94.4	94.7	93.4	94.5	95.5	96.1	96.5	96.2	95.8	95.3	95.4	Diurnal Maximum	
N - Not Valid																											

**Hourly Averages**

**Relative Humidity (RH) - %**  
**Valleyview - October 2012**



## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Valleyview - October 2012

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	2	2	2	3	2	3	4	6	2	1	4	3	6	8	11	12	8	9	18	9	9	11	9	4.4	18.2
Dir	163	163	148	150	161	155	147	153	165	167	232	251	217	261	265	261	265	249	257	288	276	258	267	325	255	288
2 Spd	12	10	13	11	10	10	8	8	11	13	12	13	15	17	18	15	12	11	9	7	5	7	9	7	10.6	17.7
Dir	356	342	347	342	333	349	10	6	15	12	5	0	1	356	355	355	349	351	335	326	324	325	329	330	351	355
3 Spd	7	9	6	8	4	5	3	3	3	5	3	2	4	4	5	5	5	4	1	0	1	0	0	0	1.4	8.8
Dir	320	318	315	328	318	289	303	276	280	279	252	168	161	155	166	158	164	156	158	192	188	186	182	269	270	318
4 Spd	1	1	1	1	1	1	1	1	2	2	1	2	3	4	6	6	5	4	1	1	1	1	1	1	0.9	6.5
Dir	174	236	203	209	158	163	176	164	166	161	209	338	339	322	330	322	311	338	344	193	177	180	183	179	304	330
5 Spd	1	1	0	0	1	0	0	1	2	3	4	3	4	4	6	5	6	5	1	1	1	1	1	8	1.8	8.1
Dir	179	185	193	213	240	201	216	175	166	161	170	168	161	184	247	242	254	257	230	195	169	186	206	288	220	288
6 Spd	11	8	6	4	3	3	2	3	2	2	2	3	3	3	2	2	2	2	2	1	2	1	3	4	1.9	11.1
Dir	290	297	294	287	255	266	155	156	150	167	171	175	180	201	203	205	180	162	164	173	209	197	247	271	236	290
7 Spd	4	7	7	14	15	13	10	9	11	13	16	16	15	17	12	13	15	13	13	11	7	5	1	3	9.6	17.0
Dir	268	286	282	278	278	281	282	296	299	311	326	323	316	323	313	315	323	356	5	3	355	349	268	319	314	323
8 Spd	2	2	1	1	1	1	1	1	0	1	1	4	8	8	10	7	6	3	2	1	1	1	0	1	1.8	10.0
Dir	304	309	313	186	163	160	165	159	119	173	196	310	340	322	329	313	306	298	241	207	163	157	170	184	310	329
9 Spd	1	1	2	2	1	1	1	1	1	2	2	2	3	4	5	3	3	2	3	4	3	7	19	20	1.5	20.1
Dir	165	166	163	166	31	159	166	148	100	108	127	136	149	137	134	143	107	69	25	19	327	309	2	3	36	3
10 Spd	16	17	16	14	14	13	12	11	13	15	15	15	12	14	14	14	12	10	9	6	7	4	5	5	11.6	16.7
Dir	359	354	357	359	1	3	9	5	353	4	7	10	5	6	11	11	5	12	9	354	5	27	51	62	6	354
11 Spd	3	3	2	3	3	4	8	9	9	10	11	11	10	9	8	7	6	5	4	4	3	3	1	2	5.1	11.3
Dir	95	88	77	79	95	118	147	149	155	162	162	161	158	162	161	164	160	158	162	163	166	157	56	34	150	162
12 Spd	4	6	7	6	8	6	6	6	5	5	3	3	2	1	0	1	2	2	2	5	3	3	3	3	1.9	7.7
Dir	23	31	29	25	9	358	1	12	26	28	53	59	38	4	105	166	160	165	169	167	171	170	174	176	38	9
13 Spd	2	2	2	2	3	3	3	2	1	2	3	3	5	14	16	15	14	8	10	6	1	2	2	2	4.3	15.7
Dir	180	184	194	183	175	181	182	183	214	175	168	179	222	246	247	257	251	255	261	250	182	169	209	190	232	247
14 Spd	3	3	2	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	2.7
Dir	197	191	194	175	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	191
15 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
16 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
17 Spd	N	N	N	N	N	N	N	N	N	N	21	20	18	17	17	16	10	8	1	1	1	2	1	1	--	20.7
Dir	N	N	N	N	N	N	N	N	N	N	286	297	296	299	304	296	296	285	199	198	197	194	173	198	--	286
18 Spd	1	2	1	1	1	3	5	7	7	5	6	6	5	4	5	3	2	2	1	4	5	4	1	3	3.2	7.2
Dir	159	163	175	247	208	165	171	175	174	179	171	173	170	159	165	145	131	138	166	168	170	128	17	168	175	
19 Spd	4	4	2	5	4	4	2	1	2	4	4	4	3	2	11	15	15	11	8	9	14	13	11	9	4.8	15.0
Dir	5	17	357	353	340	327	17	154	168	175	171	177	183	182	268	269	271	274	261	268	282	291	288	278	277	269
20 Spd	9	7	10	11	10	14	15	13	13	13	13	13	14	15	16	15	14	14	14	14	13	12	12	12	12.7	15.8
Dir	286	294	279	282	292	294	285	288	289	285	290	291	295	304	310	314	296	296	291	284	286	289	285	289	292	310
21 Spd	11	10	10	10	11	12	11	10	11	11	14	16	14	13	13	15	14	14	13	10	10	9	10	11	11.8	15.7
Dir	287	284	285	283	281	276	278	274	278	272	277	271	274	289	279	279	276	285	286	273	275	275	282	282	279	271
22 Spd	12	11	11	10	11	10	10	10	10	13	14	15	13	11	12	10	8	5	3	4	5	5	4	3	9.0	14.9
Dir	270	274	270	258	261	259	257	259	258	268	270	270	265	269	270	269	299	309	310	283	262	274	255	253	269	270



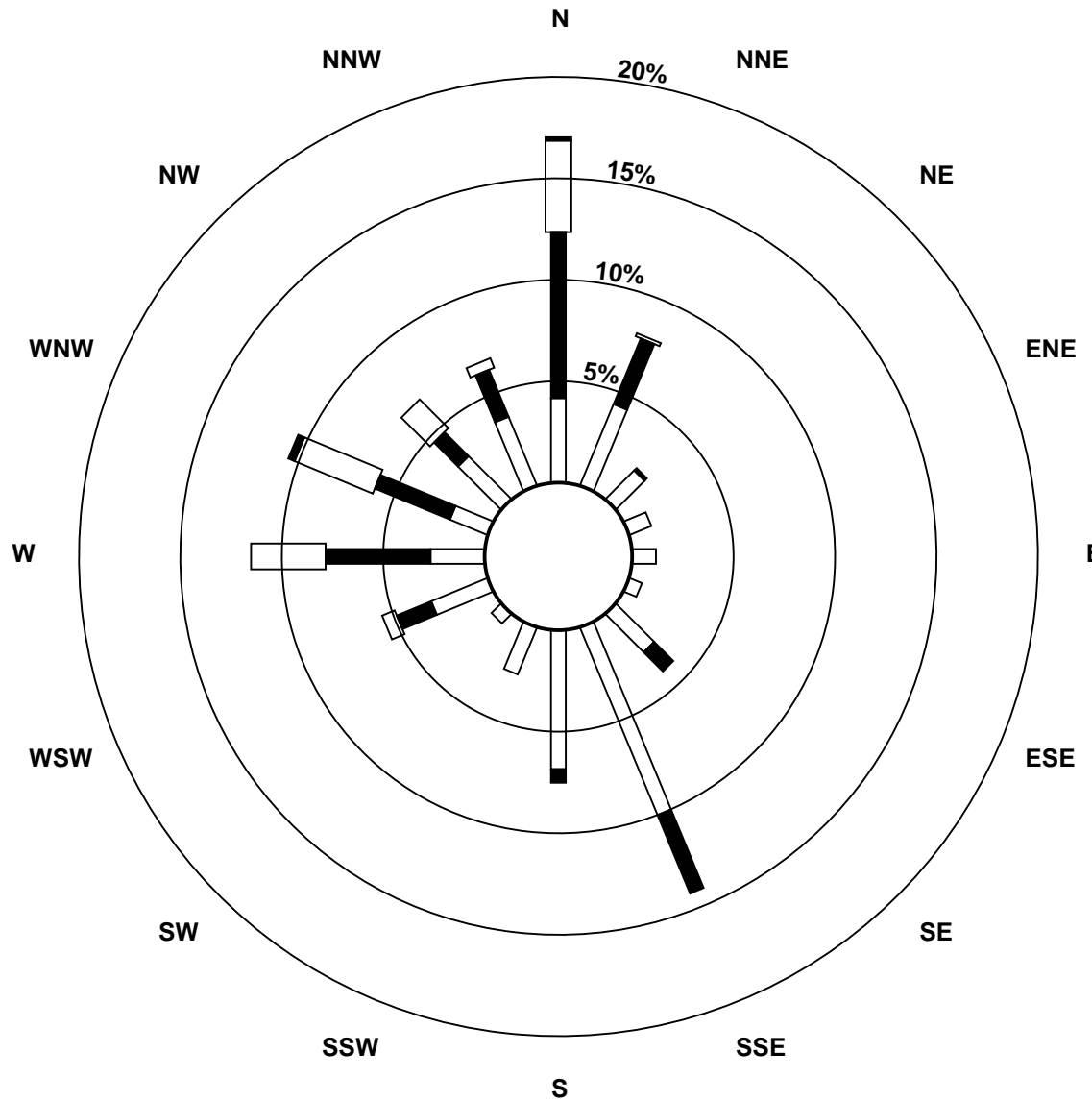
## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Valleyview - October 2012

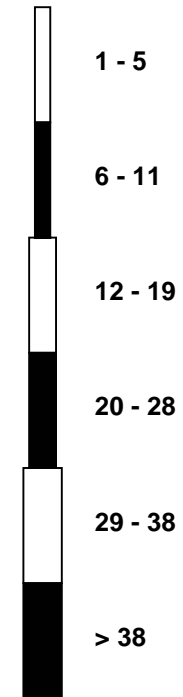
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	4	5	5	3	3	4	3	1	2	4	4	5	7	7	6	4	7	8	6	5	5	6	7	8	3.7	7.8
Dir	241	270	245	272	272	319	332	198	272	286	271	319	7	1	16	16	8	5	354	340	337	352	4	8	337	5
24 Spd	7	8	8	9	9	9	8	8	8	8	7	8	8	10	10	11	9	11	10	6	7	8	4	6	8.1	11.1
Dir	11	14	14	8	5	11	13	4	4	13	6	352	351	352	350	2	15	7	11	25	22	8	354	3	6	2
25 Spd	6	6	5	6	5	4	5	3	4	5	4	2	2	3	3	1	2	3	3	3	3	3	4	2	3.2	6.2
Dir	4	8	359	7	359	350	11	14	346	3	10	17	6	29	44	46	67	88	83	47	22	355	9	17	15	4
26 Spd	3	2	0	1	0	0	2	3	4	4	3	3	4	5	5	7	9	9	8	6	5	4	4	3	3.6	9.4
Dir	339	354	118	118	71	325	34	45	32	47	74	61	2	20	40	42	16	18	18	22	9	15	360	27	25	18
27 Spd	4	5	3	2	0	1	0	1	1	4	9	9	8	9	8	7	7	4	4	3	4	6	7	8	3.4	9.1
Dir	2	5	339	339	191	244	76	329	144	135	149	160	163	169	165	158	146	147	136	141	146	147	152	153	151	169
28 Spd	7	4	2	5	5	4	2	2	8	8	9	10	12	14	12	10	9	3	2	3	4	5	4	5	3.9	13.9
Dir	152	140	121	128	129	131	137	191	274	265	266	265	269	276	277	286	281	285	237	243	253	272	304	319	262	276
29 Spd	3	3	3	3	4	4	4	6	6	6	8	10	12	11	11	12	11	11	9	5	8	6	6	8	6.9	11.7
Dir	284	301	321	340	351	9	19	7	11	360	355	346	341	338	340	345	354	358	359	3	8	7	7	352	352	341
30 Spd	6	5	3	1	2	2	4	1	2	4	5	5	5	3	2	3	4	3	2	1	0	1	0	0	1.7	5.8
Dir	356	359	5	31	347	297	321	317	290	280	242	247	294	255	29	355	13	16	330	183	179	340	218	345	321	356
31 Spd	1	0	1	0	0	1	1	1	1	2	2	3	6	3	7	7	7	10	8	7	9	8	9	9	2.9	9.8
Dir	345	178	178	180	348	169	4	347	343	341	1	344	347	150	161	162	143	138	142	142	142	143	146	152	142	138
Spd	2.8	3.0	2.7	2.6	2.7	2.6	1.8	1.3	1.9	2.1	2.7	3.3	3.6	4.2	4.4	4.5	4.1	3.0	2.3	2.1	1.8	2.0	2.1	2.6	Diurnal Average	
Dir	320	324	320	317	316	312	316	307	307	307	294	298	305	304	301	301	306	322	320	302	298	297	313	324	Diurnal Maximum	
Spd	15.8	16.7	16.2	14.3	14.9	13.5	14.7	12.9	13.1	15.5	20.7	20.3	18.4	17.5	17.7	15.6	15.2	14.3	14.2	18.2	13.6	13.4	18.9	20.1	Diurnal Maximum	
Dir	359	354	357	359	278	294	285	288	353	4	286	297	296	299	355	296	323	296	291	288	282	289	2	3	Diurnal Maximum	
Maximum Speed Value: 21 km/h on Oct 17 11:00		Minimum Speed Value: 0 km/h on Oct 27 05:00										Hours in Service: 744														
Maximum Daily Speed Average: 12.7 km/h on Oct 20		Minimum Daily Speed Average: 0.9 km/h on Oct 4										Hours of Data: 666														
Maximum Diurnal Speed Average: 4.5 km/h at hour 16		Minimum Diurnal Speed Average: 1.3 km/h at hour 8										Hours of Missing Data: 78														
Monthly Average Velocity: 2.74 km/h 309.2 deg		Speed Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 1.1 Q <sub>1</sub> = 2.3 Median = 4.6 Q <sub>3</sub> = 9.3 P <sub>90</sub> = 13.1 P <sub>99</sub> = 17.7										Percent Operational Time: 89.5														
All monthly, daily, and diurnal averages have been calculated using vector methods																										
N - Not Valid																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	59	71	37	1	0	0	168																			
NorthEast	26	6	0	0	0	0	32																			
East	15	0	0	0	0	0	15																			
SouthEast	41	17	0	0	0	0	58																			
South	128	22	1	0	0	0	151																			
SouthWest	29	3	2	0	0	0	34																			
West	30	47	55	1	0	0	133																			
NorthWest	26	28	20	1	0	0	75																			
Total	354	194	115	3	0	0	666																			

**Wind Rose**

**Wind Speed (WS) (km/h)**  
**Valleyview - October 2012**



**Wind Speed Classes (km/h)**



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - October 2012

Maximum Speed: 21 km/h on Oct 17 11:00	Maximum Daily Speed Average: 13.1 km/h on Oct 20	Hours in Service: 744
Minimum Speed: 1 km/h on Oct 8 23:00	Minimum Daily Speed Average: 2.4 km/h on Oct 4	Hours of Data: 666
Maximum Diurnal Speed Average: 9.3 km/h at hour 15	Minimum Diurnal Speed Average: 4.8 km/h at hour 8	Hours of Missing Data: 78
Monthly Average Speed: 6.27 km/h	Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 1.3 Q <sub>1</sub> = 2.6 Median = 4.8 Q <sub>3</sub> = 9.4 P <sub>90</sub> = 13.5 P <sub>99</sub> = 18.1	Percent Operational Time: 89.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	2	2	2	3	2	3	4	6	2	2	5	3	6	9	11	12	9	9	19	9	9	12	12	6.4	18.5
2-Oct	12	10	13	11	10	10	8	8	11	13	12	13	15	18	18	15	13	11	9	7	5	7	9	7	11.1	17.9
3-Oct	7	9	6	8	4	5	3	3	3	5	4	3	4	5	5	5	5	4	1	1	1	1	1	1	3.8	8.9
4-Oct	1	2	2	1	1	1	1	1	2	2	3	3	4	5	8	7	6	4	1	1	1	1	1	1	2.4	7.8
5-Oct	1	1	1	1	1	1	1	1	2	3	4	3	4	5	7	6	6	5	2	1	1	1	2	8	2.7	8.2
6-Oct	11	9	6	4	3	3	2	3	2	3	3	3	4	4	4	3	2	2	2	1	3	2	3	4	3.6	11.2
7-Oct	5	7	7	14	15	13	10	9	12	13	16	16	15	17	13	13	15	14	13	11	7	5	2	3	11.1	17.1
8-Oct	2	2	2	1	1	1	1	1	1	1	1	4	8	8	10	7	6	4	2	1	1	1	1	1	2.9	10.2
9-Oct	1	1	2	2	1	1	1	2	2	2	2	2	3	4	5	3	3	2	3	4	3	7	19	20	4.1	20.3
10-Oct	16	17	16	14	14	14	12	11	13	16	15	15	12	14	14	14	12	11	9	6	7	4	5	5	11.9	16.8
11-Oct	4	3	3	3	3	4	8	9	9	10	11	11	10	9	8	7	6	5	4	4	3	4	2	2	5.9	11.4
12-Oct	4	6	7	6	8	7	6	6	5	5	3	3	2	1	2	2	2	2	2	5	3	3	3	4	4.0	8.0
13-Oct	2	2	2	2	3	3	3	2	1	3	3	3	6	14	16	15	14	8	10	6	2	2	2	3	5.3	15.9
14-Oct	3	3	2	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	2.7
15-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
16-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
17-Oct	N	N	N	N	N	N	N	N	N	N	21	21	19	18	17	16	10	8	2	2	2	2	1	1	--	21.0
18-Oct	1	2	1	1	2	3	5	7	7	5	6	6	5	4	5	3	2	2	1	4	5	4	1	3	3.7	7.3
19-Oct	4	4	3	5	5	4	2	1	2	4	4	4	3	2	12	15	15	11	8	9	14	14	11	10	6.9	15.1
20-Oct	10	7	10	12	11	14	15	13	13	13	14	14	14	15	16	16	15	15	14	14	13	14	12	12	13.1	16.1
21-Oct	11	10	10	10	12	12	11	10	11	12	14	16	14	14	14	16	14	14	14	10	10	9	11	12	12.1	16.0
22-Oct	12	11	11	11	11	10	11	10	11	13	14	15	13	12	12	10	9	5	3	4	5	5	4	3	9.4	15.4
23-Oct	4	6	5	4	3	4	4	1	2	4	4	5	7	7	6	5	8	8	7	5	5	6	7	8	5.1	7.8
24-Oct	7	8	8	9	9	9	8	8	8	8	7	8	9	10	10	11	9	11	10	6	7	8	5	6	8.3	11.3
25-Oct	6	6	6	6	5	4	5	3	4	5	4	2	2	4	3	2	2	4	3	3	3	3	4	2	3.7	6.3
26-Oct	3	2	1	1	1	1	2	3	4	4	3	4	4	5	5	7	9	9	8	6	5	4	4	3	4.1	9.4
27-Oct	4	5	3	3	1	2	1	1	1	4	9	9	8	9	9	7	8	4	4	3	4	6	7	8	5.0	9.3
28-Oct	7	4	2	5	5	4	2	2	8	9	9	11	12	14	12	10	9	3	2	3	4	6	4	5	6.3	14.2
29-Oct	3	3	3	3	4	5	4	6	6	7	8	10	12	11	11	12	11	11	9	5	8	6	7	8	7.3	11.8
30-Oct	6	5	4	1	3	2	4	2	3	4	5	5	5	4	3	4	4	3	2	1	1	1	1	1	3.0	6.1
31-Oct	1	1	1	1	1	1	1	1	1	2	2	3	6	6	7	7	7	10	9	7	9	8	9	9	4.6	9.9
	5.4	5.3	4.9	5.0	5.1	5.1	4.9	4.8	5.6	6.3	7.3	7.8	8.0	8.7	9.3	8.9	8.4	7.0	5.9	5.3	5.0	5.1	5.2	5.8	Diurnal Average	
	15.9	16.8	16.3	14.5	15.0	13.7	14.8	13.1	13.3	15.7	21.0	20.7	18.8	18.1	17.9	16.1	15.3	14.6	14.4	18.5	13.8	13.7	19.2	20.3	Diurnal Maximum	

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

## Hourly Standard Deviations

Wind Direction (WD) - deg  
Valleyview - October 2012

Maximum Value: 98.2 deg on Oct 30 22:00																								Hours in Service: 744	
Minimum Value: 4.3 deg on Oct 29 13:00																								Hours of Data: 666	
Percentiles: P <sub>1</sub> = 6.0 P <sub>10</sub> = 8.4 Q <sub>1</sub> = 10.4 Median = 13.7 Q <sub>3</sub> = 22.9 P <sub>90</sub> = 45.1 P <sub>99</sub> = 87.2																								Hours of Missing Data: 78	
																								Hours of Calibration: 0	
																								Percent Operational Time: 89.5	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Oct	38	20	11	13	13	17	17	23	9	27	58	38	37	16	15	9	11	23	18	11	9	8	9	41	58.2
2-Oct	10	8	8	7	10	10	11	8	10	15	9	10	9	8	10	13	11	6	6	6	6	6	6	7	15.1
3-Oct	8	8	9	7	21	12	14	10	15	16	45	34	20	23	24	19	14	9	15	39	28	65	58	79	78.8
4-Oct	54	57	42	39	37	56	35	11	9	16	67	68	56	46	42	45	20	15	29	25	22	16	16	11	68.3
5-Oct	13	43	58	59	29	43	65	33	14	11	12	24	18	35	33	32	18	12	30	19	21	23	57	12	65.1
6-Oct	9	19	23	26	23	21	18	9	9	14	24	30	33	45	39	41	24	10	5	17	33	31	23	36	45.1
7-Oct	51	11	11	7	8	9	9	10	9	11	9	12	11	8	10	9	7	20	8	8	13	15	86	26	85.6
8-Oct	32	49	49	50	17	23	13	22	72	42	41	16	16	12	17	15	18	20	35	37	43	59	49	49	72.1
9-Oct	29	17	23	13	56	36	12	34	35	33	15	21	15	20	18	19	24	24	27	13	24	18	12	8	55.9
10-Oct	7	7	7	8	7	7	9	9	8	8	7	8	9	8	10	10	11	13	13	9	12	16	14	16	16.0
11-Oct	24	23	21	26	24	17	11	11	10	9	9	9	10	11	12	11	11	12	12	13	11	12	46	22	46.5
12-Oct	11	10	12	12	14	12	9	9	11	9	16	21	32	61	73	15	11	12	9	9	8	8	13	22	72.8
13-Oct	14	14	14	16	22	7	11	12	45	11	19	14	25	13	10	12	9	9	9	12	59	21	15	14	59.3
14-Oct	16	5	11	14	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	15.6
15-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
16-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
17-Oct	N	N	N	N	N	N	N	N	N	N	10	12	12	15	14	14	13	18	32	61	30	17	19	20	61.4
18-Oct	67	16	52	75	49	19	9	6	8	13	10	9	10	15	11	12	16	17	23	13	11	7	59	23	75.0
19-Oct	20	55	46	11	16	21	52	25	10	12	13	13	11	21	21	9	10	14	14	16	9	13	11	13	55.5
20-Oct	13	14	12	12	13	10	8	8	9	9	10	11	10	10	10	9	9	11	10	9	9	8	9	9	14.5
21-Oct	9	8	8	9	9	8	8	10	10	15	11	12	12	13	10	11	10	10	14	13	12	11	10	10	15.2
22-Oct	11	11	11	11	12	11	11	12	12	14	14	14	14	18	13	14	20	14	16	16	18	14	14	21	21.2
23-Oct	14	13	11	20	16	18	28	37	54	18	18	21	22	15	16	16	11	7	7	8	6	10	7	7	54.1
24-Oct	9	8	8	7	6	7	8	6	7	9	11	10	11	10	9	11	10	9	11	9	10	7	13	14	14.5
25-Oct	11	10	10	13	11	13	15	17	13	12	24	45	34	21	45	58	28	20	22	24	11	23	13	19	57.7
26-Oct	5	21	60	41	75	68	12	24	12	20	22	25	26	32	30	17	12	8	11	19	31	22	22	15	75.0
27-Oct	14	16	38	37	95	65	89	49	47	20	14	10	13	11	10	14	12	11	11	15	10	10	12	11	95.4
28-Oct	10	11	15	10	9	11	23	29	20	12	16	12	13	11	13	15	19	23	32	19	27	19	17	18	32.4
29-Oct	19	22	16	15	18	15	12	14	10	10	11	11	4	5	6	7	13	8	15	13	10	12	12	11	22.0
30-Oct	18	14	32	49	59	37	13	63	50	18	15	21	25	27	60	34	11	19	39	42	73	98	48	90	98.2
31-Oct	81	88	39	69	92	60	51	83	39	24	31	13	10	87	13	15	10	9	11	12	9	11	11	12	92.0
81.5 87.8 59.7 75.0 95.4 67.9 89.2 82.9 72.1 42.3 66.9 68.3 56.1 87.3 72.8 57.7 27.7 23.5 39.2 61.4 72.6 98.2 85.6 90.3																									
N - Not Valid																									

PAZA

Portable – Sunset House Station  
Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

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

Sunset House - October 2012

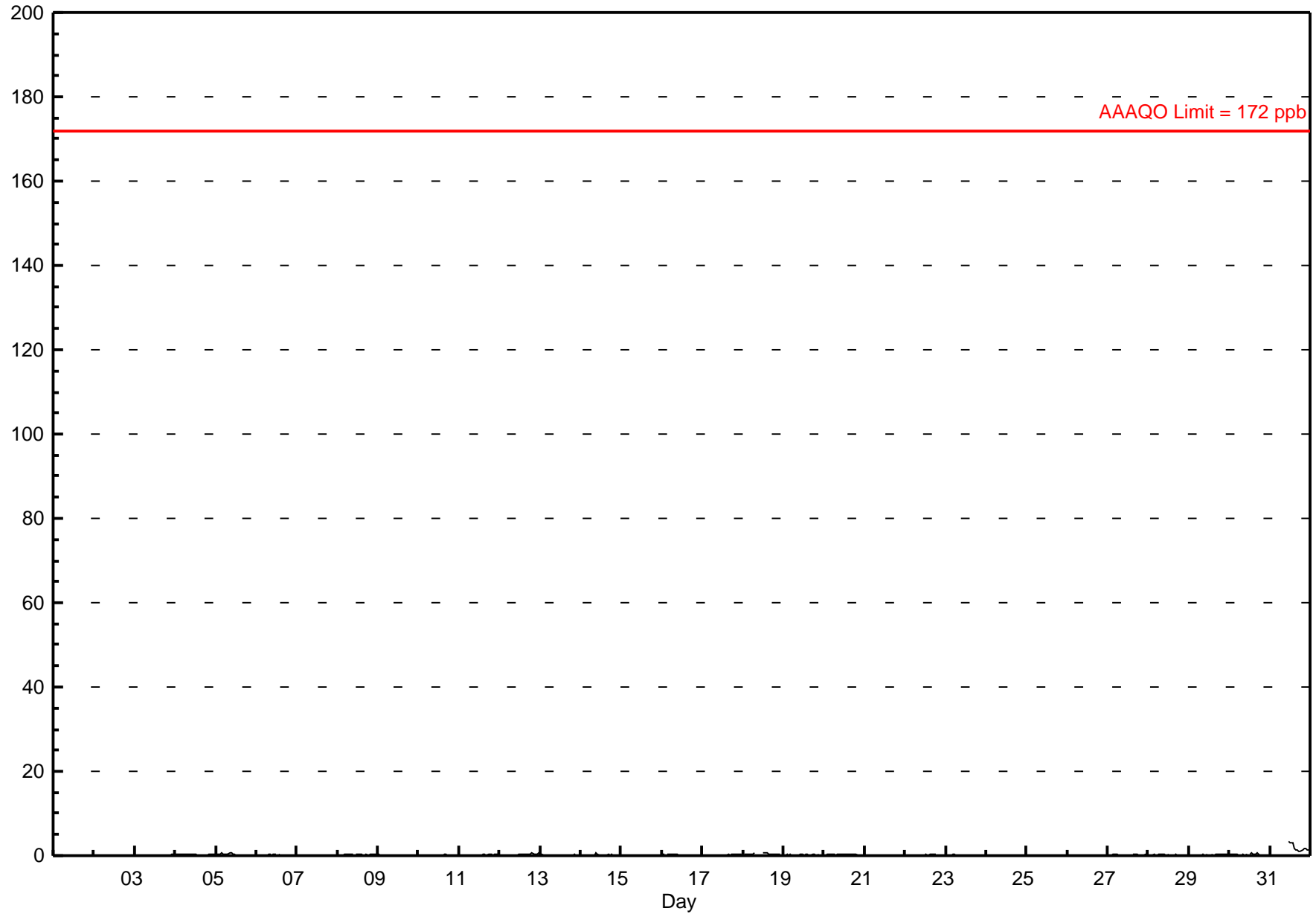
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 3.3 ppb on Oct 31 12:00	Maximum Daily Average: 1.0 ppb on Oct 31		Hours of Data:	708
Minimum Value: 0 ppb on Oct 1 01:00	Minimum Daily Average: 0.0 ppb on Oct 2		Hours of Missing Data:	36
Maximum Diurnal Average: 0.2 ppb at hour 14	Minimum Diurnal Average: 0.1 ppb at hour 1		Hours of Calibration:	36
Monthly Average: 0.16 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.4 P <sub>99</sub> = 1.5		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.1	
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.0	
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.4	
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.5	
5-Oct	0	0	0	1	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
7-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
10-Oct	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
11-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
12-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.3	0.5	
13-Oct	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	0.3	
14-Oct	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7	
15-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
16-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
17-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
18-Oct	A	0	0	0	0	0	0	0	1	C	C	C	C	1	1	1	0	0	0	0	0	0	0	0	0.4	0.8	
19-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
20-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3	
21-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1	
22-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3	
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2	
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.1	
25-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1	
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.1	
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.4	
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.3	
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3	
30-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0.2	0.6	
31-Oct	0	0	0	0	0	0	0	0	0	0	A	3	3	3	2	1	1	1	1	1	1	2	2	2	1	1.0	3.3
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average		
	0.3	0.4	0.4	0.6	0.4	0.5	0.5	0.5	0.6	0.7	0.4	3.3	3.1	3.1	1.8	1.2	1.3	1.1	1.1	1.3	1.5	1.7	1.5	1.4	Diurnal Maximum		

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb    24-hr 48 ppb    30-day 11 ppb

### Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Sunset House - October 2012



## Hourly Maximums

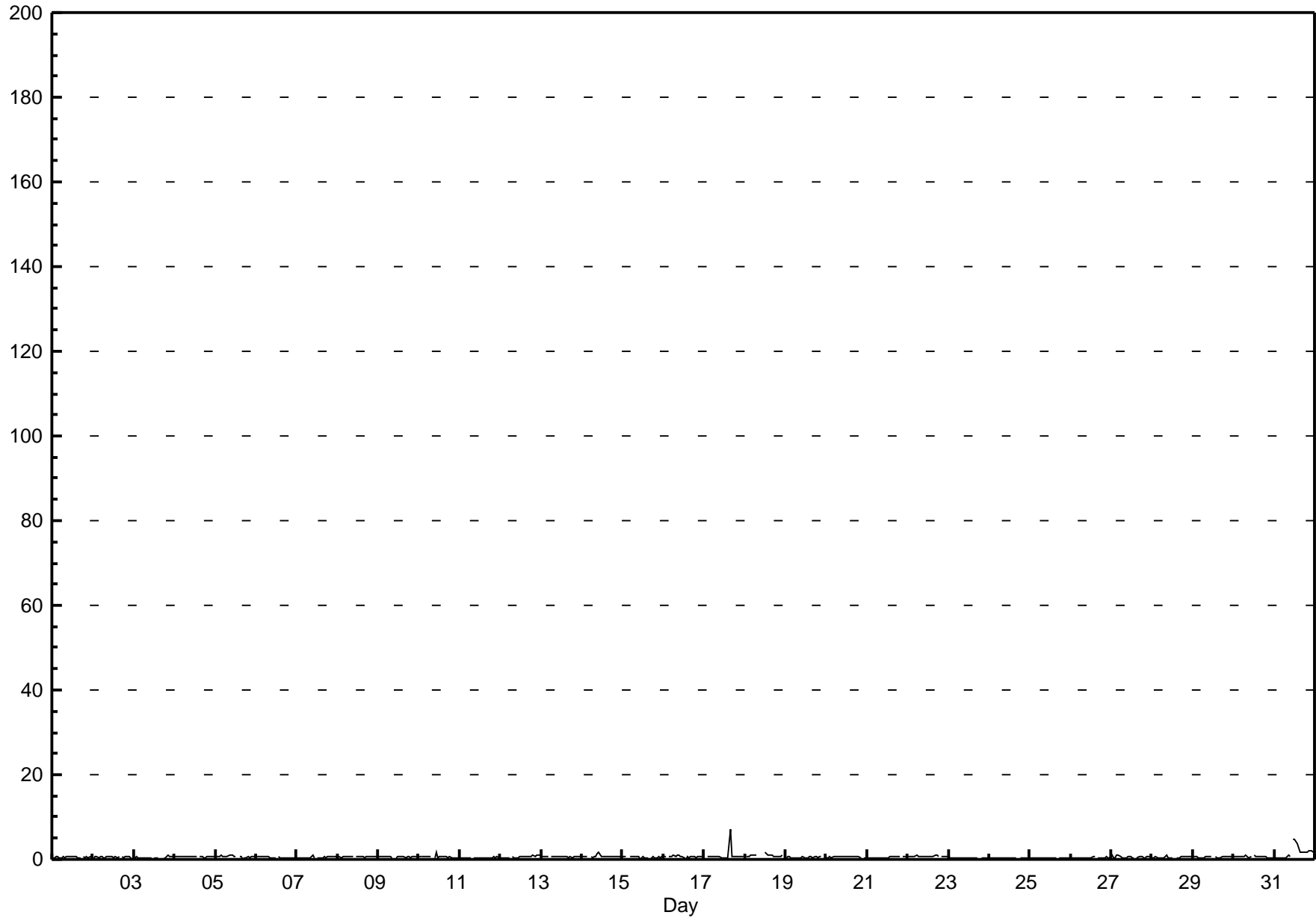
## Sulphur Dioxide (SO<sub>2</sub>) - ppb Sunset House - October 2012

Maximum Value: 7.0 ppb on Oct 17 16:00		Maximum Daily Average: 1.6 ppb on Oct 31		Hours in Service: 744																																												
Minimum Value: 0 ppb on Oct 3 17:00		Minimum Daily Average: 0.4 ppb on Oct 3		Hours of Data: 708																																												
Maximum Diurnal Average: 0.8 ppb at hour 16		Minimum Diurnal Average: 0.5 ppb at hour 1		Hours of Missing Data: 36																																												
Monthly Average: 0.59 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.5 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 0.8 P <sub>99</sub> = 2.2		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-Oct	0	0	1	1	0	0	1	0	1	1	1	1	1	1	1	0	0	A	1	0	1	0	1	0	0.4	0.6																						
2-Oct	0	1	1	0	1	1	0	0	1	1	1	1	0	1	0	1	A	1	0	1	1	1	0	0	0.4	0.5																						
3-Oct	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	1	1	1	0.4	0.9																						
4-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	1	1	1	1	1	0.6	0.8																						
5-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	0	1	0	1	1	1	0.6	1.1																						
6-Oct	1	1	1	1	1	1	1	1	1	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0.5	0.6																						
7-Oct	0	0	0	0	0	0	0	0	0	1	0	A	0	0	1	1	1	0	1	1	1	1	1	1	0.5	0.9																						
8-Oct	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	0.7	0.8																						
9-Oct	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	0	1	1	1	0.5	0.6																						
10-Oct	1	1	1	1	1	1	1	1	A	0	2	0	1	1	1	1	1	0	1	0	0	0	0	0	0.6	1.6																						
11-Oct	0	0	0	0	0	0	0	A	0	1	1	1	1	1	0	0	0	0	0	0	1	0	1	0	0.5	0.6																						
12-Oct	0	0	0	0	0	0	A	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2																						
13-Oct	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0.5	0.6																						
14-Oct	1	1	1	1	A	1	0	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0.7	1.6																						
15-Oct	1	1	1	A	1	1	1	1	1	1	0	0	1	0	0	0	0	0	1	0	0	1	0	1	0.5	0.7																						
16-Oct	1	1	A	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1	0.7	1.1																						
17-Oct	1	A	1	1	1	1	1	1	1	1	0	0	0	0	7	1	1	1	1	1	1	1	1	1	0.9	7.0																						
18-Oct	A	1	1	1	1	1	1	1	C	C	C	C	2	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6																						
19-Oct	1	1	1	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	1	0	1	1	1	1	0.5	0.8																						
20-Oct	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0	0.6	0.8																						
21-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	1	0.5	0.6																						
22-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.6	1.1																						
23-Oct	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.5																						
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.5																						
25-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.5																						
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	1	0	0	0	0	0	1	0	0.5	0.6																						
27-Oct	1	0	0	1	1	1	0	0	0	0	1	1	0	0	A	0	1	1	1	1	0	0	1	1	0.6	0.9																						
28-Oct	0	0	1	0	0	0	0	0	1	0	0	0	0	0	A	0	0	1	1	1	1	1	1	1	0.5	0.9																						
29-Oct	1	1	1	0	0	0	0	1	1	1	1	1	A	1	0	0	0	0	1	1	1	1	1	1	0.6	0.8																						
30-Oct	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0.7	1.0																						
31-Oct	0	0	0	0	0	0	0	0	1	1	A	5	5	4	3	2	2	2	2	2	2	2	2	2	1.6	4.7																						
																								0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.8	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	Diurnal Average
																								0.9	0.8	0.8	1.1	0.9	1.0	1.1	1.0	1.1	1.4	1.6	4.7	4.7	3.7	2.7	7.0	1.7	1.7	1.7	1.7	2.2	2.2	2.2	1.7	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								



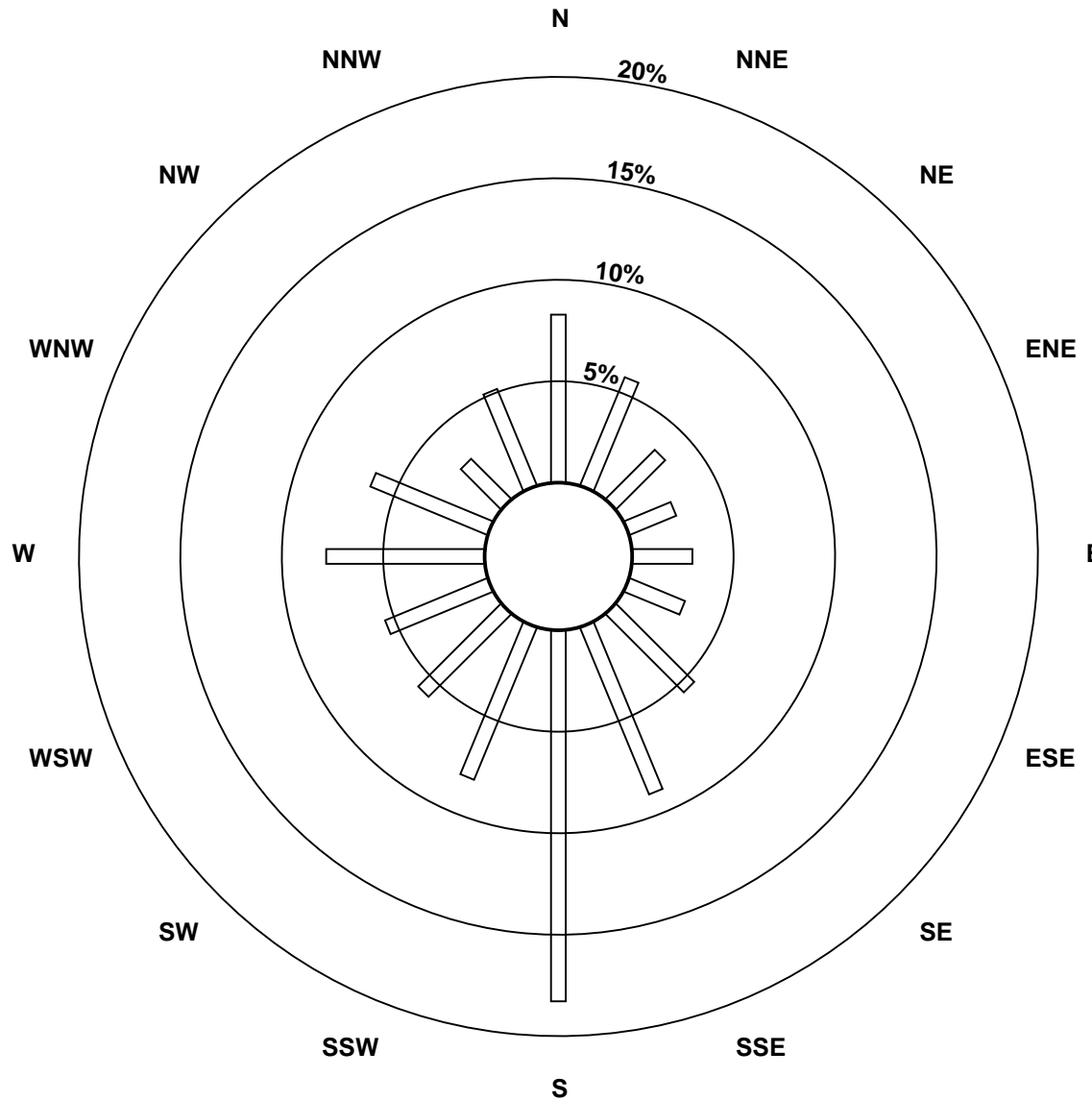
### Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Sunset House - October 2012

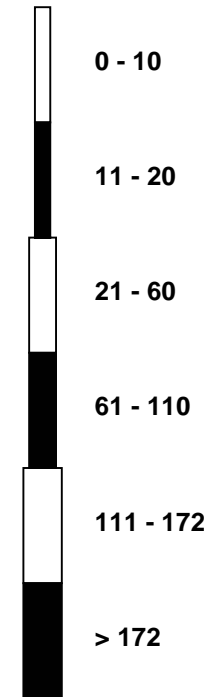


**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Sunset House - October 2012**

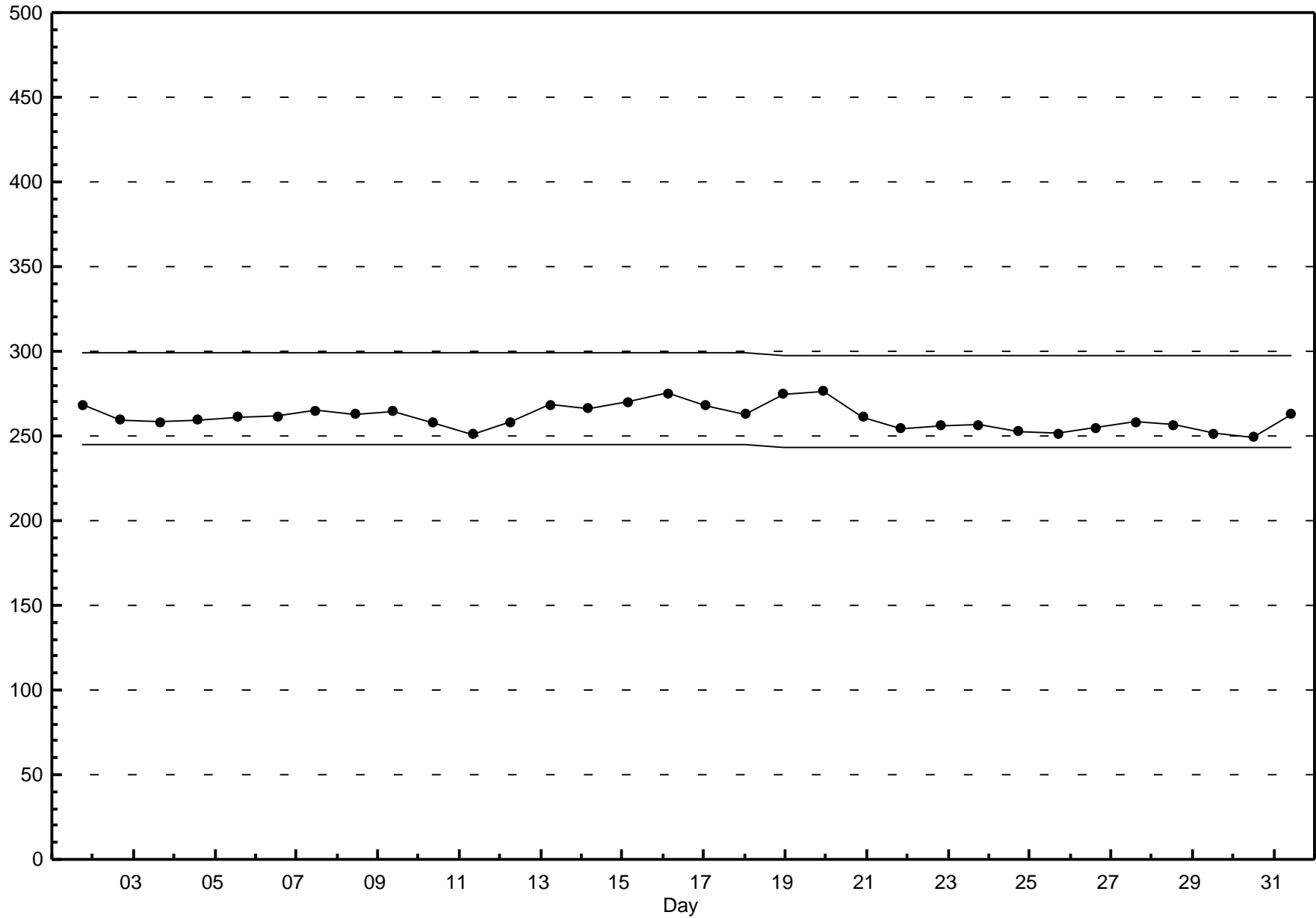


**Pollutant Classes (ppb)**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Sunset House - October 2012



## Hourly Averages

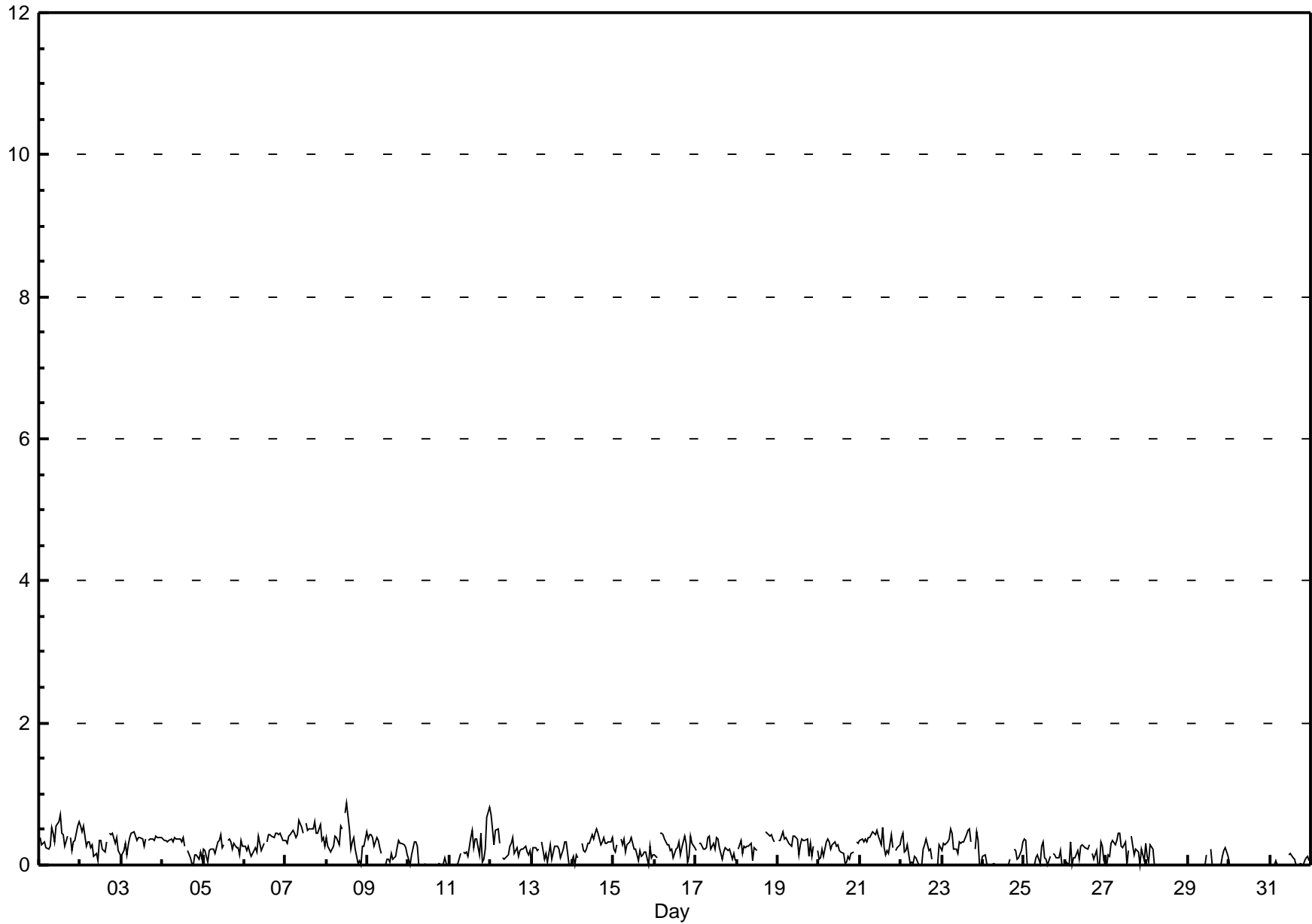
## Total Reduced Sulphur (TRS) - ppb

### Sunset House - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 0.9 ppb on Oct 8 13:00	Maximum Daily Average: 0.5 ppb on Oct 7		Hours of Data:	708
Minimum Value: 0 ppb on Oct 4 19:00	Minimum Daily Average: 0.0 ppb on Oct 30		Hours of Missing Data:	36
Maximum Diurnal Average: 0.3 ppb at hour 14	Minimum Diurnal Average: 0.2 ppb at hour 21		Hours of Calibration:	36
Monthly Average: 0.22 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.4 P <sub>99</sub> = 0.6		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-Oct	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	A	0	0	0	0	1	1	0.4	0.7
2-Oct	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.6
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.5
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.4
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.4
6-Oct	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
7-Oct	0	0	0	0	0	0	0	0	1	1	A	1	0	1	1	1	1	1	0	0	1	0	0	0	0.5	0.6
8-Oct	0	0	0	0	0	0	0	0	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.9
9-Oct	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
10-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
11-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2	0.8
12-Oct	1	1	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
13-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.3	0.5
15-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
16-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
17-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
18-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0.3	0.5
19-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
20-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0.2	0.4
21-Oct	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0.3	0.5
22-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4
23-Oct	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0.3	0.5
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0.1	0.3
25-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.4
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.4
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.3
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.2
30-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
31-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.7	0.9	0.5	0.5	0.5	0.5	0.6	0.5	0.4	0.6	0.4	0.7	Diurnal Maximum	

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



## Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

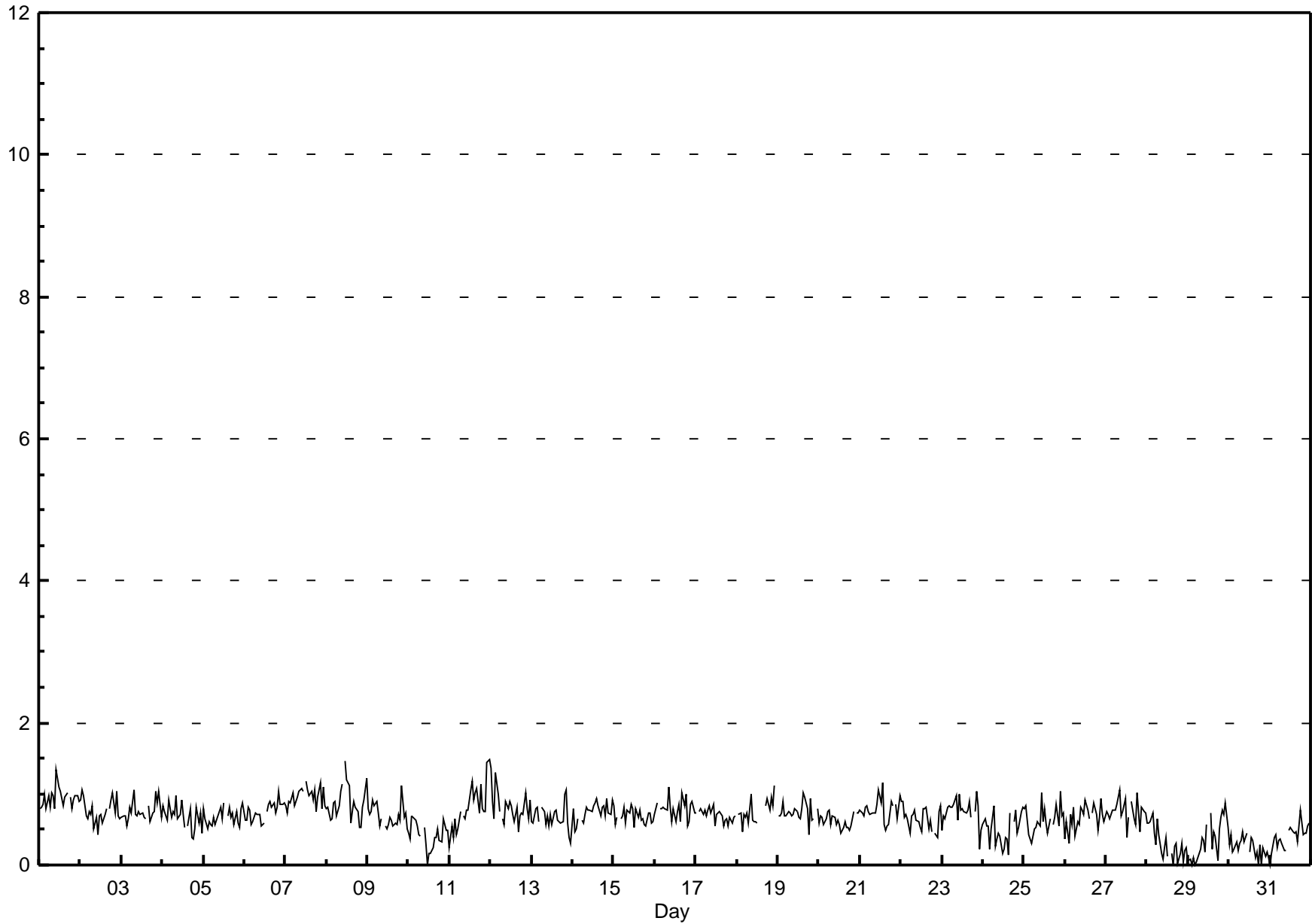
Sunset House - October 2012

Maximum Value: 1.5 ppb on Oct 12 00:00		Maximum Daily Average: 1.0 ppb on Oct 7		Hours in Service: 744																						
Minimum Value: 0 ppb on Oct 10 12:00		Minimum Daily Average: 0.2 ppb on Oct 30		Hours of Data: 708																						
Maximum Diurnal Average: 0.7 ppb at hour 21		Minimum Diurnal Average: 0.6 ppb at hour 3		Hours of Missing Data: 36																						
Monthly Average: 0.67 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.6 Median = 0.7 Q <sub>3</sub> = 0.8 P <sub>90</sub> = 0.9 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-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.4
2-Oct	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.0
3-Oct	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
4-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	1	1	1	1	0	0.7	1.0
5-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	0.9
6-Oct	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
7-Oct	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
8-Oct	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	1.5
9-Oct	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
10-Oct	0	0	1	1	1	1	0	0	A	1	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0.4	0.7
11-Oct	0	1	0	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5
12-Oct	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.8	1.4
13-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.7	1.1
14-Oct	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
15-Oct	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
16-Oct	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
17-Oct	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
18-Oct	A	1	1	0	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	0.8	1.1
19-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	0.7	1.0
20-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	A	1	1	0.6	0.8
21-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	0.8	1.2
22-Oct	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	0	A	0	0	1	1	0.7	0.9
23-Oct	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	0.8	1.0
24-Oct	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	1	A	1	1	1	0	1	1	1	0.5	0.8
25-Oct	1	1	1	0	0	0	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	0.6	1.0
26-Oct	0	1	0	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	1	0.7	0.9
27-Oct	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	0	1	1	1	0.8	1.1
28-Oct	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	0	0	1	1	1	1	1	0.4	0.9
30-Oct	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
31-Oct	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	1	1	0	0	0	1	1	0.4	0.8
																								Diurnal Average	Diurnal Maximum	
																								0.7	1.4	
																								0.7	1.0	
																								0.6	1.0	
																								0.7	1.3	
																								0.6	1.0	
																								0.6	1.0	
																								0.7	0.9	
																								0.7	1.1	
																								0.7	1.1	
																								0.7	1.1	
																								0.7	1.4	
																								0.7	1.5	
																								0.7	1.2	
																								0.7	1.2	
																								0.6	1.0	
																								0.7	1.0	
																								0.7	1.1	
																								0.6	1.1	
																								0.7	1.1	
																								0.7	1.1	
																								0.6	1.0	
																								0.7	1.0	
																								0.7	1.2	
																								0.7	1.0	
																								0.7	1.5	
																								0.7	1.5	

C - Calibration                      A - Automated Daily Zero Span

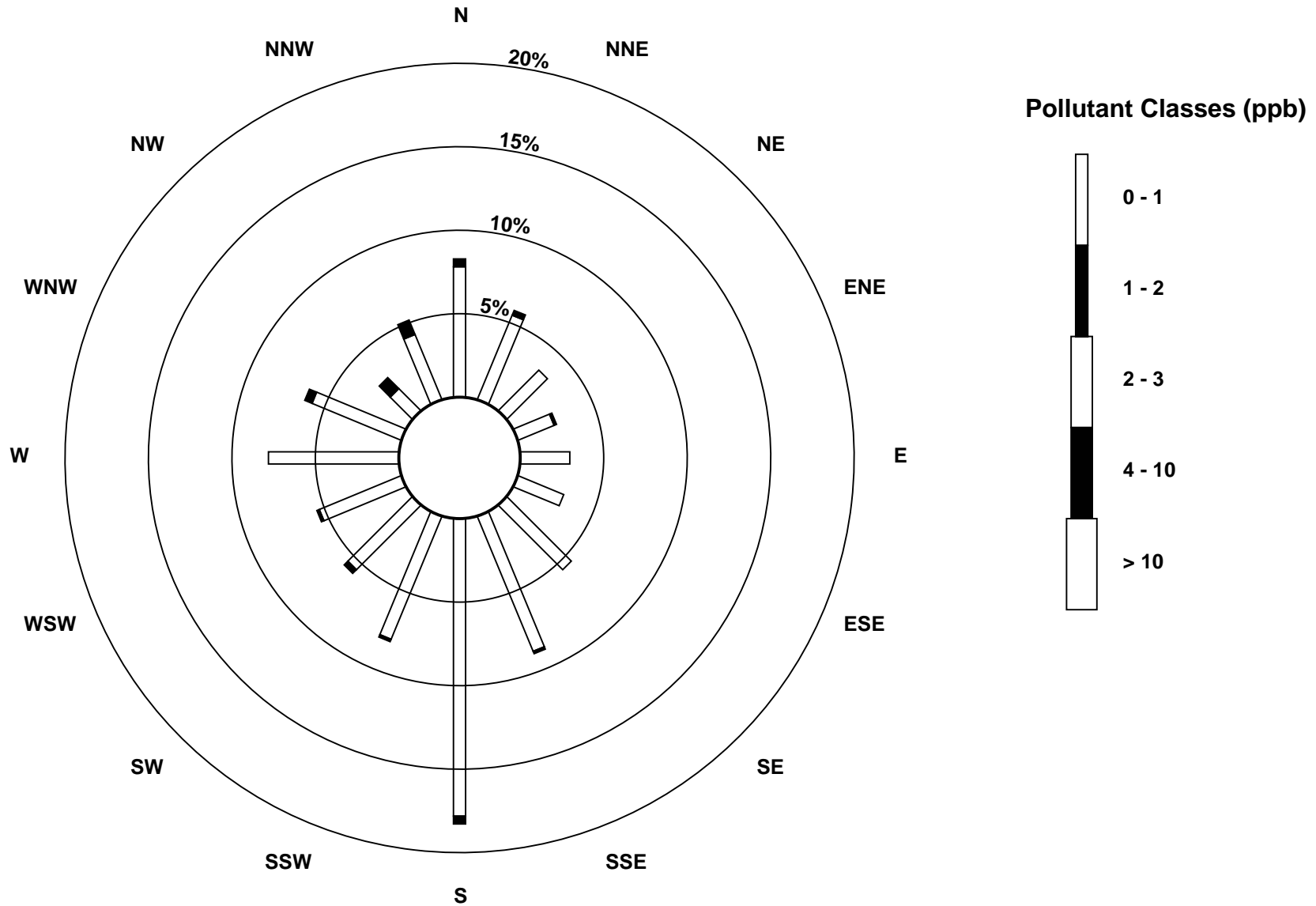
**Hourly Maximums**

**Total Reduced Sulphur (TRS) - ppb**  
**Sunset House - October 2012**



**Pollutant Rose**

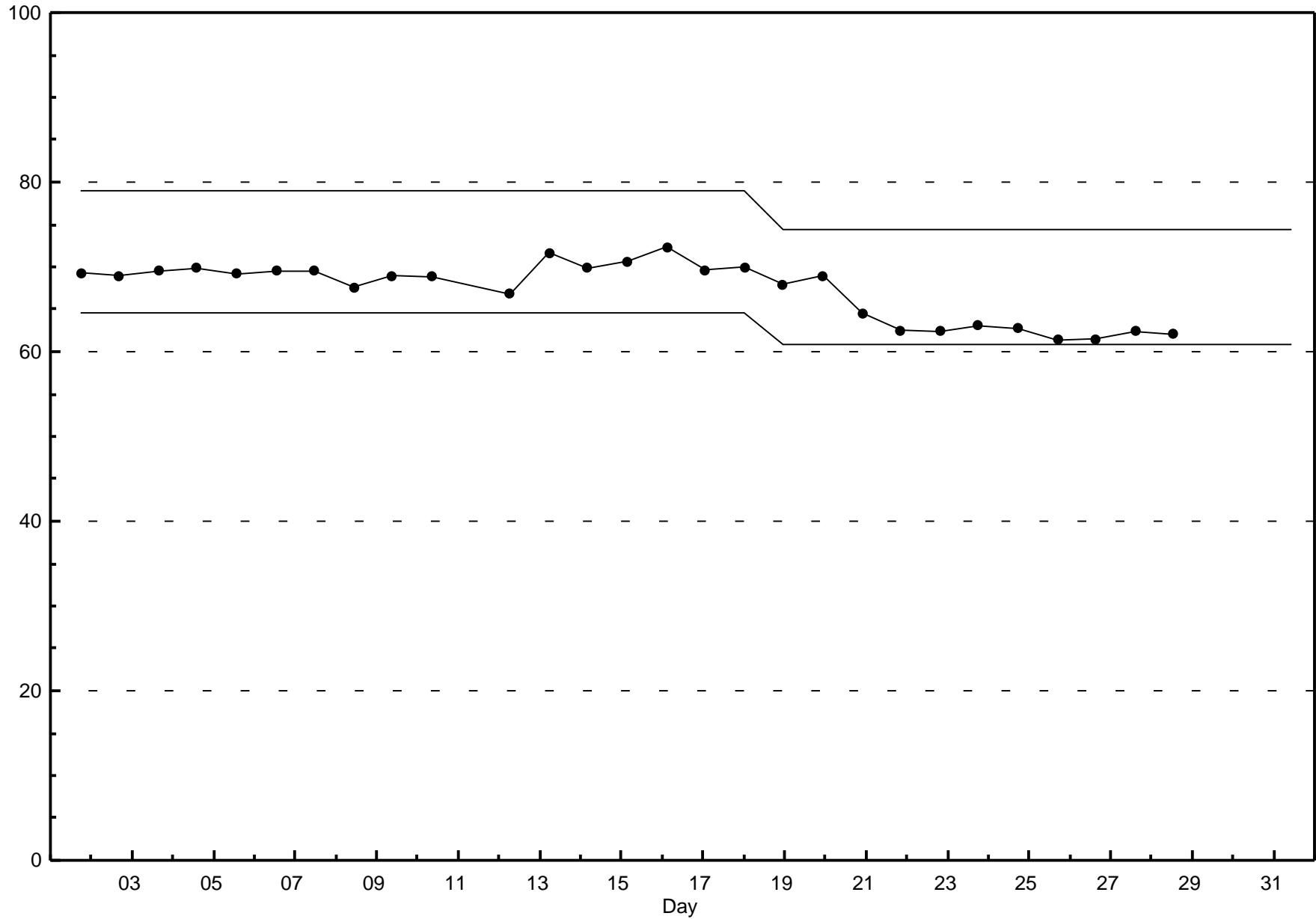
**Total Reduced Sulphur (TRS) - ppb**  
**Sunset House - October 2012**





**Span Responses**

**Total Reduced Sulphur (TRS)  
Sunset House - October 2012**



## Hourly Averages

## Nitrogen Dioxide (NO<sub>2</sub>) - ppb Sunset House - October 2012

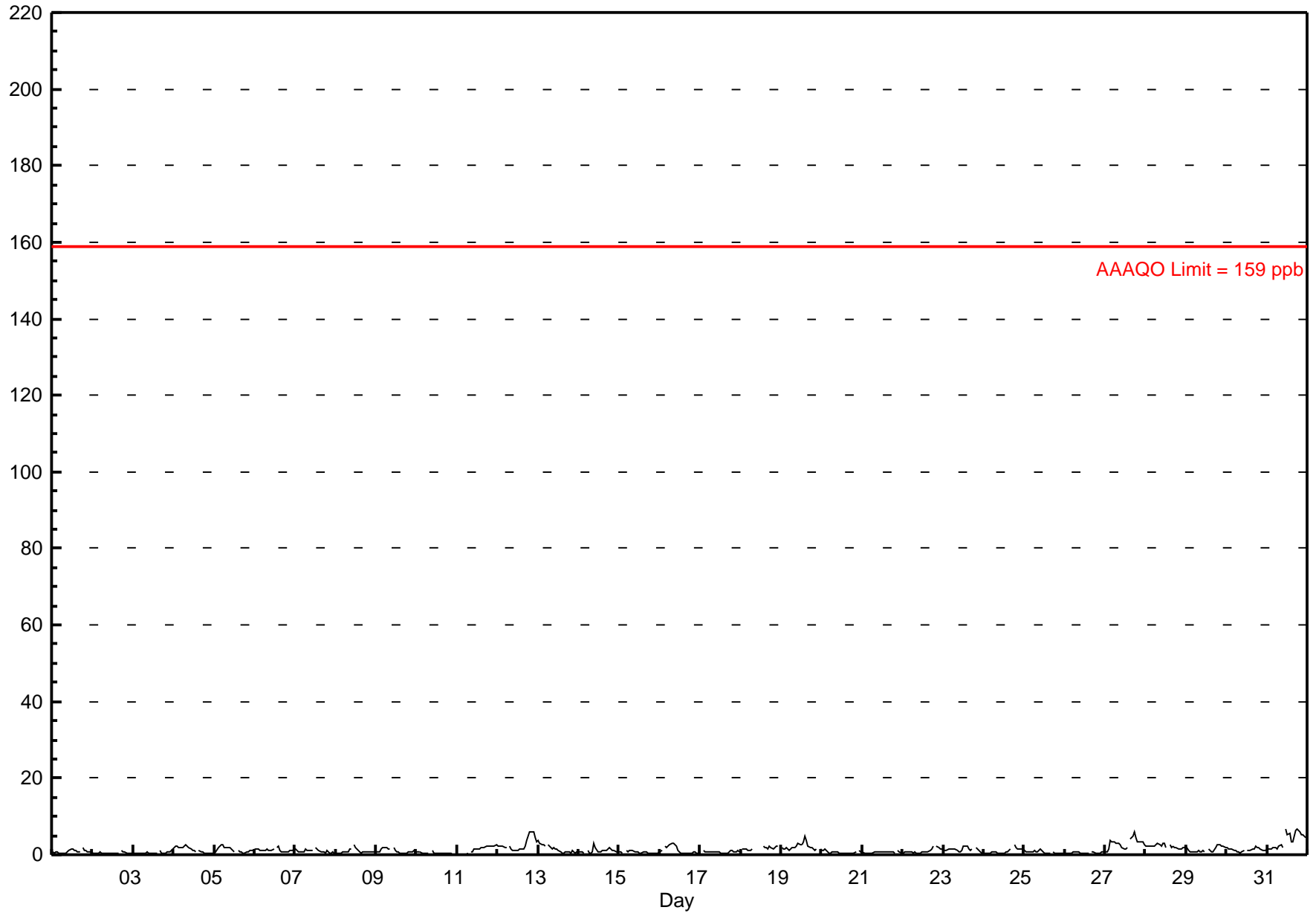
Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 6.8 ppb on Oct 31 12:00	Maximum Daily Average: 3.8 ppb on Oct 31		Hours of Data:	707
Minimum Value: 0 ppb on Oct 11 03:00	Minimum Daily Average: 0.4 ppb on Oct 10		Hours of Missing Data:	37
Maximum Diurnal Average: 1.6 ppb at hour 19	Minimum Diurnal Average: 1.1 ppb at hour 3		Hours of Calibration:	37
Monthly Average: 1.26 ppb	Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.9 Q <sub>3</sub> = 1.7 P <sub>90</sub> = 2.4 P <sub>99</sub> = 5.8		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	0.9	1.7
2-Oct	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	0.5	1.2
3-Oct	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	1	1	0	0	1	1	1	1	0.5	1.4
4-Oct	2	2	2	2	2	2	2	3	2	2	2	1	1	1	A	1	1	1	0	1	0	0	0	0	1.3	2.6
5-Oct	0	1	2	2	3	3	2	2	2	2	2	1	1	A	1	1	1	0	0	1	1	1	1	1	1.3	2.6
6-Oct	1	2	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1.2	2.4
7-Oct	2	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	1.8
8-Oct	0	0	0	0	1	1	1	1	1	1	A	3	2	1	1	1	1	1	1	1	1	1	1	1	0.9	2.7
9-Oct	1	1	1	1	2	2	2	1	1	A	2	1	1	1	1	0	0	0	1	1	1	1	1	1	1.0	2.0
10-Oct	1	1	1	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
11-Oct	0	0	0	0	0	0	0	A	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	1.3	2.6
12-Oct	2	2	2	2	2	2	A	2	2	1	1	1	1	2	1	2	2	4	5	6	6	6	5	3	2.7	5.9
13-Oct	4	3	3	3	2	A	2	2	2	2	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1.5	3.7
14-Oct	1	1	1	1	A	1	0	1	1	3	2	1	1	1	1	1	1	1	2	2	1	1	1	1	1.0	3.2
15-Oct	1	1	1	A	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0.6	1.3
16-Oct	1	1	A	2	2	2	3	3	3	3	2	1	0	0	0	0	0	1	1	0	1	1	1	1	1.3	3.1
17-Oct	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	0.7	1.3
18-Oct	A	1	1	1	1	1	1	1	C	C	C	C	C	2	2	2	2	2	2	1	2	2	2	A	--	2.3
19-Oct	2	2	2	2	2	1	2	2	2	2	3	3	3	3	5	4	2	2	2	1	1	1	A	2	2.1	4.7
20-Oct	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	A	1	1	0.7	1.4
21-Oct	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.0
22-Oct	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	2	2	A	2	2	2	1	1.0	2.2
23-Oct	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	A	2	1	1	1	0	1.3	2.4
24-Oct	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	2	A	3	2	2	2	1	1	0.9	2.6
25-Oct	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	1	0	0	0	0	0	0	0	0.7	1.3
26-Oct	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	A	1	1	1	0	0	0	1	1	0.5	0.8
27-Oct	1	1	1	4	3	3	3	3	3	3	2	2	2	2	A	4	5	6	4	3	3	3	3	3	2.9	6.0
28-Oct	2	2	2	2	2	2	3	3	3	2	3	3	2	A	2	2	2	2	2	2	2	2	2	2	2.2	3.1
29-Oct	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	3	3	2	2	2	2	1.4	2.8
30-Oct	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	2	2	2	1	1	1	1	1.3	2.2
31-Oct	2	1	1	2	2	2	2	2	3	2	A	7	5	6	4	3	5	6	7	6	5	5	5	5	3.8	6.8
	1.1	1.1	1.1	1.2	1.2	1.1	1.2	1.3	1.2	1.3	1.2	1.3	1.2	1.2	1.2	1.2	1.3	1.5	1.6	1.4	1.4	1.4	1.3	1.2	Diurnal Average	
	3.7	3.1	2.8	3.6	3.4	3.2	2.9	3.1	3.1	3.2	3.0	6.8	5.2	5.5	4.7	4.0	4.9	6.3	6.7	6.1	5.8	5.8	4.7	4.5	Diurnal Maximum	

C - Calibration      A - Automated Daily Zero Span  
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb    24-hr 106 ppb

### Hourly Averages

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Sunset House - October 2012



## Hourly Maximums

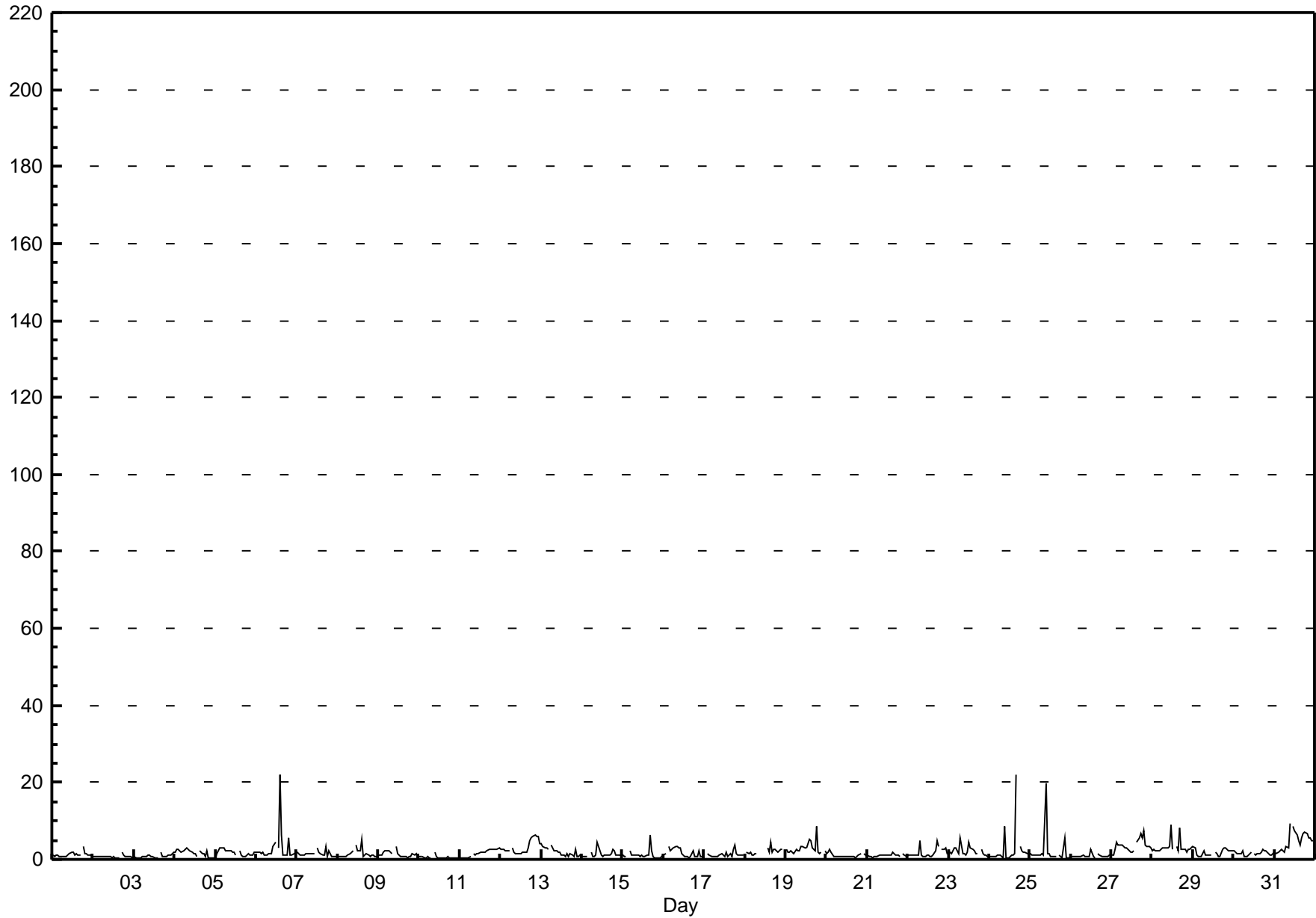
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Sunset House - October 2012

Maximum Value: 22.2 ppb on Oct 24 17:00		Maximum Daily Average: 4.7 ppb on Oct 31		Hours in Service: 744																						
Minimum Value: 0 ppb on Oct 11 01:00		Minimum Daily Average: 0.6 ppb on Oct 10		Hours of Data: 707																						
Maximum Diurnal Average: 2.8 ppb at hour 10		Minimum Diurnal Average: 1.4 ppb at hour 1		Hours of Missing Data: 37																						
Monthly Average: 1.85 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.8 Median = 1.3 Q <sub>3</sub> = 2.3 P <sub>90</sub> = 3.4 P <sub>99</sub> = 8.6		Hours of Calibration: 37																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	A	3	1	1	1	1	1		
2-Oct	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	A	2	1	1	1	1	1	1		
3-Oct	1	1	1	0	1	1	1	1	1	1	1	1	0	0	0	A	2	1	1	1	1	1	1	2		
4-Oct	2	2	3	2	2	2	3	3	3	2	2	2	1	1	A	2	2	2	1	2	0	0	0	0		
5-Oct	0	2	3	3	3	3	2	2	2	2	2	2	1	A	2	1	1	1	1	2	1	1	1	2		
6-Oct	2	2	2	2	2	1	1	2	1	1	3	5	A	3	22	6	1	1	1	6	1	1	1	2		
7-Oct	2	2	1	1	1	2	2	2	1	1	1	A	3	2	1	1	1	4	1	2	1	1	1	1		
8-Oct	1	1	1	1	1	1	1	1	1	2	2	A	4	2	2	5	1	1	2	1	1	1	1	1		
9-Oct	1	1	1	2	2	2	2	2	2	2	A	3	2	1	1	1	1	1	1	1	2	1	1	1		
10-Oct	1	1	1	1	1	1	1	1	A	2	1	1	1	1	0	0	0	1	0	0	0	0	0	0		
11-Oct	0	0	0	0	0	0	1	A	2	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3		
12-Oct	3	3	3	2	2	2	A	3	2	2	1	1	2	2	2	2	3	5	6	6	6	6	6	4		
13-Oct	4	3	3	3	3	A	4	2	2	2	2	2	1	1	1	1	1	1	1	3	1	1	1	1		
14-Oct	1	1	1	1	A	2	1	1	1	1	4	3	1	1	1	1	1	2	3	2	1	1	1	1		
15-Oct	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	6	2	1	0	1	0	0	1		
16-Oct	1	2	A	3	2	3	3	3	4	3	3	2	1	1	1	1	2	1	1	1	2	1	1	1		
17-Oct	1	A	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	3	4	2	1	1	1	1		
18-Oct	A	2	2	2	1	1	1	2	C	C	C	C	C	3	2	4	2	3	2	2	2	3	3	A		
19-Oct	3	2	2	2	2	1	2	2	2	2	3	3	3	3	4	5	5	3	2	9	2	2	2	2		
20-Oct	2	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	A	2		
21-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	A	1	1		
22-Oct	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1	1	2	5	3	A	3	3	3	2		
23-Oct	1	2	2	3	3	2	2	5	1	1	1	2	4	3	3	2	1	2	A	3	2	1	1	1		
24-Oct	1	1	1	1	1	1	1	1	1	9	0	0	1	1	1	1	1	22	A	3	2	2	2	1		
25-Oct	1	1	1	1	1	1	1	1	1	20	2	1	1	1	1	1	A	1	1	1	5	0	1	1		
26-Oct	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	A	2	1	1	1	1	1	1	1		
27-Oct	1	1	3	4	4	4	4	3	3	3	3	2	2	2	A	5	5	7	6	8	4	3	3	3		
28-Oct	2	2	2	2	2	3	3	3	3	3	3	9	2	A	3	2	8	3	3	3	2	3	2	3		
29-Oct	3	3	1	1	1	1	2	1	1	1	1	1	1	A	2	1	1	1	3	3	3	2	2	2		
30-Oct	2	2	2	2	2	2	1	1	1	1	2	A	2	1	2	2	2	3	2	2	2	1	1	1		
31-Oct	2	2	2	2	3	2	2	3	3	9	A	8	7	6	5	4	5	7	7	7	6	5	5	5		
		1.4	1.5	1.5	1.6	1.6	1.5	1.5	1.9	1.6	2.8	1.7	2.0	1.7	1.6	2.4	1.9	2.8	2.3	2.3	2.1	1.9	1.7	1.6	1.5	Diurnal Average
		4.2	3.3	3.2	4.3	3.7	3.7	3.6	5.4	3.5	19.7	3.4	8.9	7.3	6.3	22.1	6.4	22.2	6.8	8.7	7.6	6.2	6.1	6.0	4.8	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

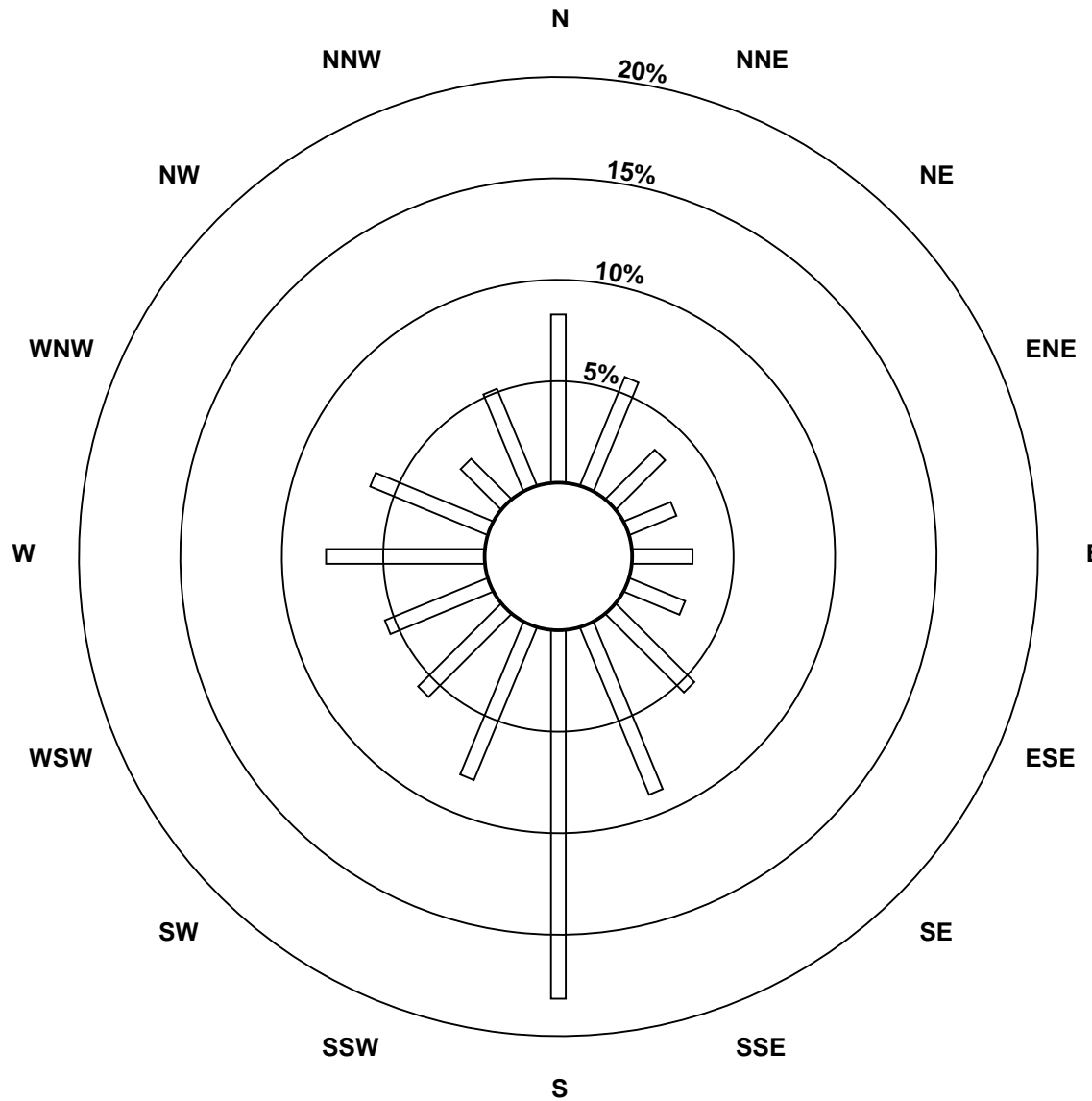
### Hourly Maximums

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Sunset House - October 2012

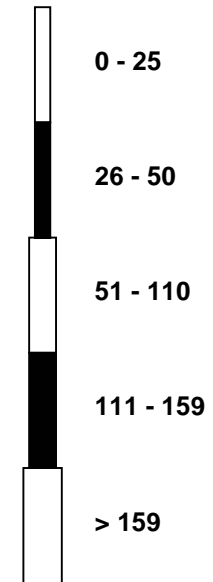


**Pollutant Rose**

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Sunset House - October 2012**

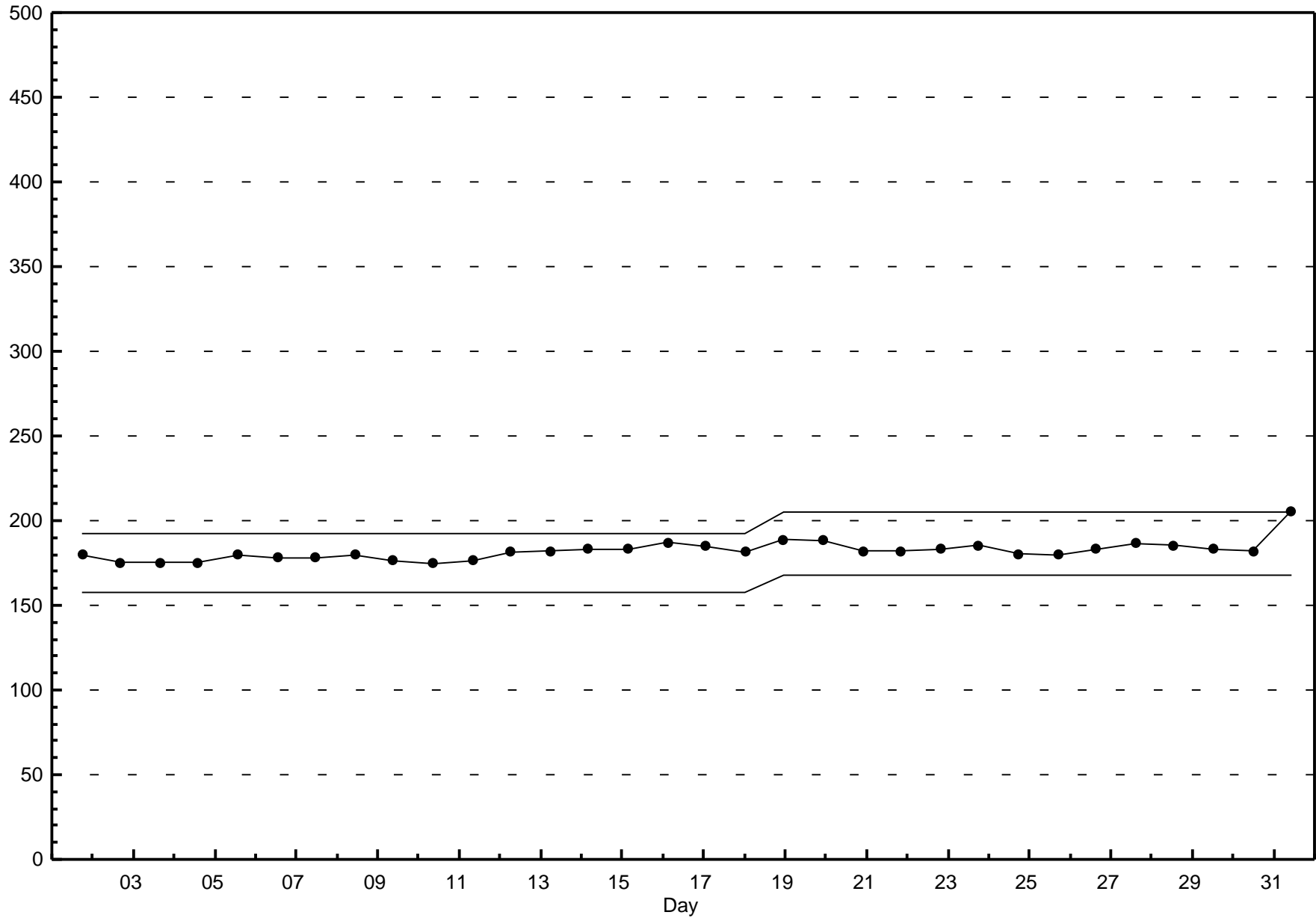


**Pollutant Classes (ppb)**



**Span Responses**

**Nitrogen Dioxide (NO<sub>2</sub>)**  
**Sunset House - October 2012**



## Hourly Averages

Nitrogen Oxide (NO) - ppb

Sunset House - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 4.8 ppb on Oct 31 12:00	Maximum Daily Average: 1.0 ppb on Oct 31		Hours of Data:	707
Minimum Value: 0 ppb on Oct 10 21:00	Minimum Daily Average: 0.0 ppb on Oct 14		Hours of Missing Data:	37
Maximum Diurnal Average: 0.6 ppb at hour 12	Minimum Diurnal Average: 0.0 ppb at hour 1		Hours of Calibration:	37
Monthly Average: 0.19 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.5 P <sub>99</sub> = 1.8		Percent Operational Time:	100.0

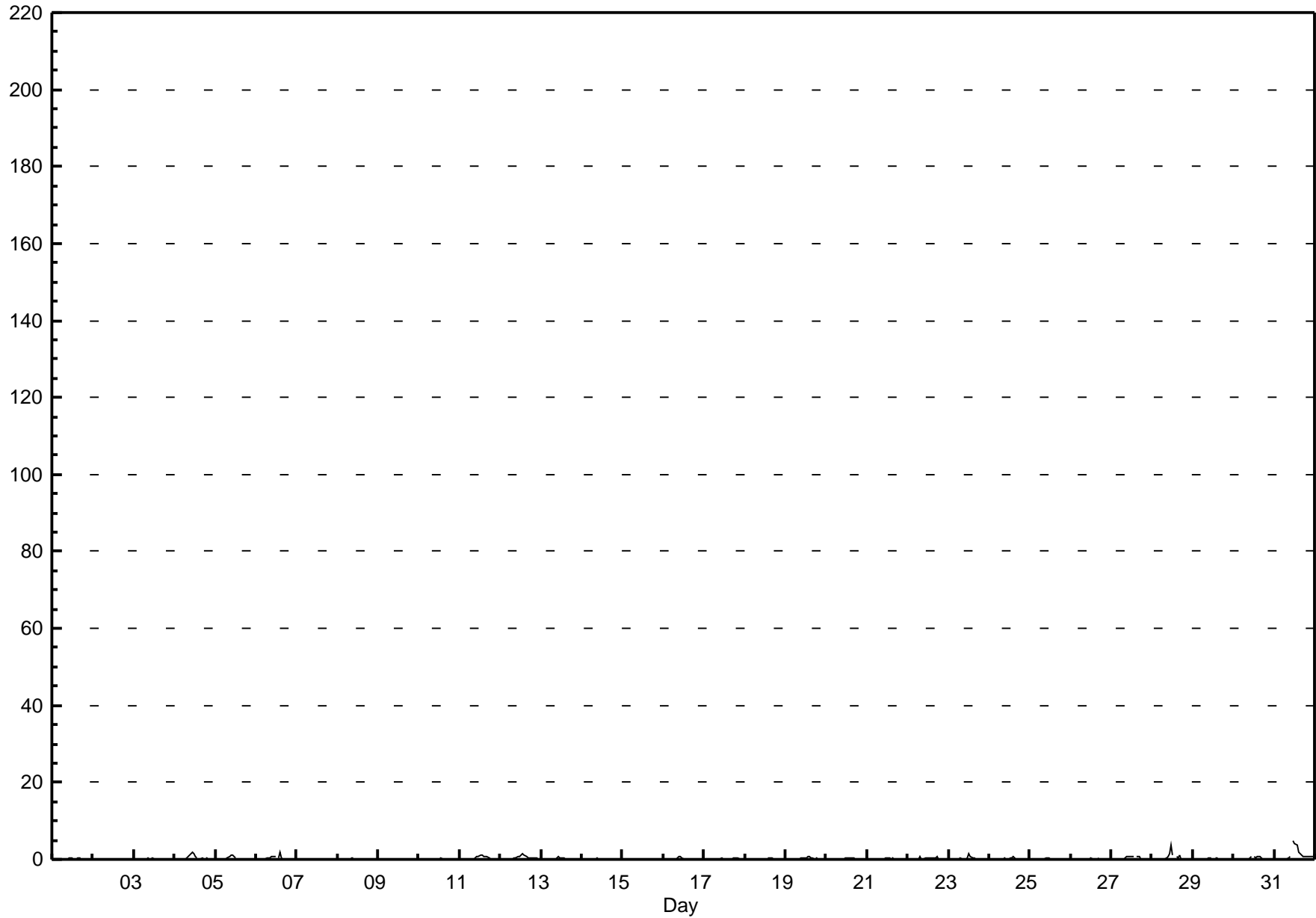
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.1
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
4-Oct	0	0	0	0	0	0	0	0	1	1	2	1	1	0	A	0	0	0	0	0	0	0	0	0	0.4	1.8
5-Oct	0	0	0	0	0	0	0	0	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0.2	1.1
6-Oct	0	0	0	0	0	0	0	0	0	1	1	1	A	0	2	1	0	0	0	0	0	0	0	0	0.3	2.0
7-Oct	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
8-Oct	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
9-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
10-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
11-Oct	0	0	0	0	0	0	0	A	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.3	0.9
12-Oct	0	0	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.4
13-Oct	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
15-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
16-Oct	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9
17-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
18-Oct	A	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	--	0.5
19-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.2	0.8
20-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
21-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
22-Oct	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0.2	0.9
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	A	0	0	0	0	0	0.2	1.7
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0.1	0.6
25-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.4
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.3
27-Oct	0	0	0	0	0	0	0	0	0	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0.2	0.9
28-Oct	0	0	0	0	0	0	0	0	0	1	1	4	1	A	1	0	1	0	0	0	0	0	0	0	0.4	3.7
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
30-Oct	0	0	0	0	0	0	0	0	0	0	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0.2	0.9
31-Oct	0	0	0	0	0	0	0	0	0	1	A	5	4	4	2	1	1	1	1	1	1	1	1	1	1.0	4.8
	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.4	0.5	0.6	0.5	0.5	0.4	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.9	0.7	1.3	1.8	4.8	4.1	3.9	2.0	1.4	1.3	0.7	0.6	0.6	0.6	0.6	0.6	0.6	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span



### Hourly Averages

**Nitrogen Oxide (NO) - ppb**  
**Sunset House - October 2012**



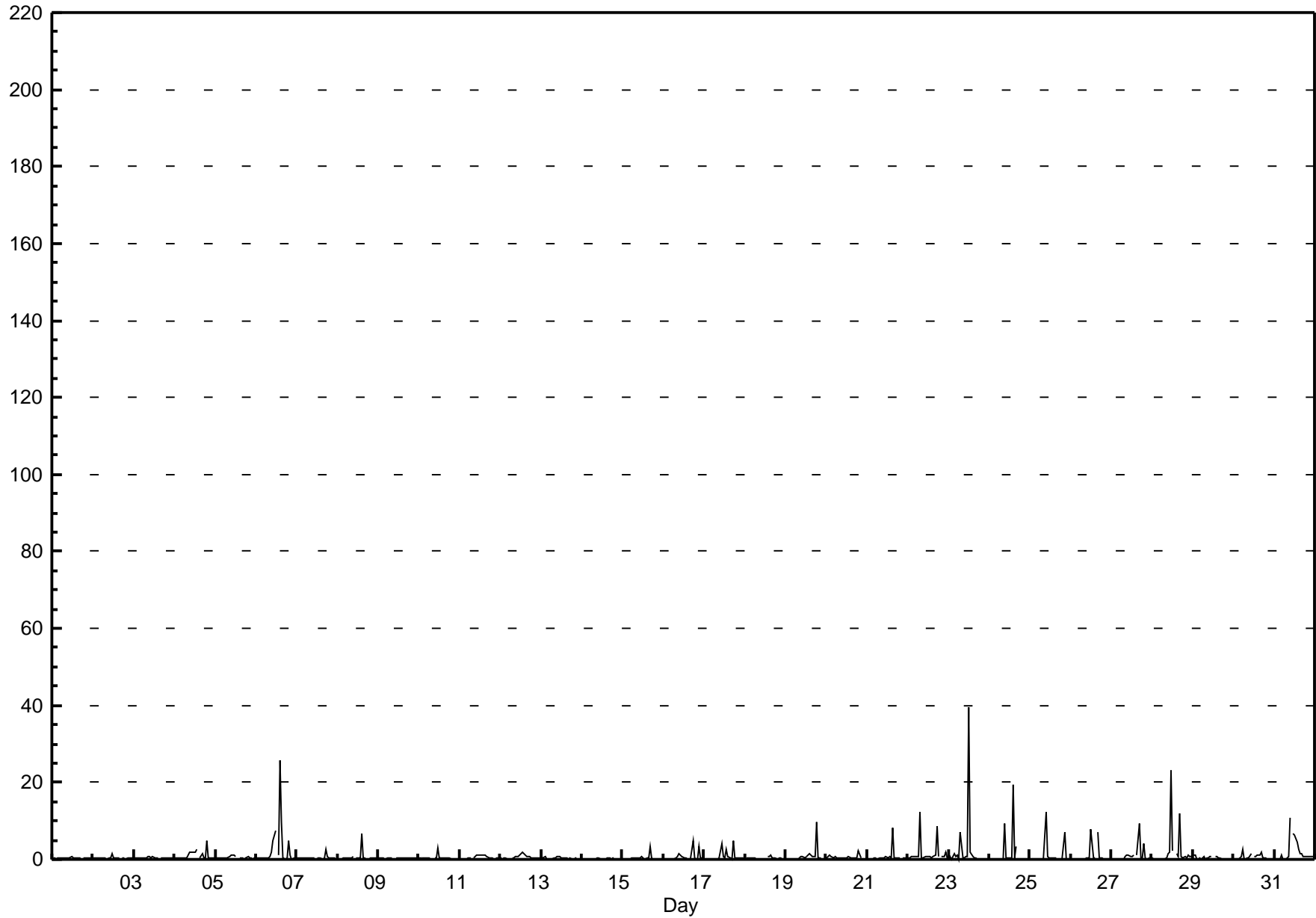
## Hourly Maximums

## Nitrogen Oxide (NO) - ppb Sunset House - October 2012

Maximum Value: 39.5 ppb on Oct 23 13:00		Maximum Daily Average: 2.6 ppb on Oct 6		Hours in Service: 744																							
Minimum Value: 0 ppb on Oct 31 03:00		Minimum Daily Average: 0.2 ppb on Oct 14		Hours of Data: 707																							
Maximum Diurnal Average: 2.5 ppb at hour 13		Minimum Diurnal Average: 0.2 ppb at hour 7		Hours of Missing Data: 37																							
Monthly Average: 0.83 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.2 Median = 0.2 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 1.2 P <sub>99</sub> = 11.8		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-Oct	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.6	
2-Oct	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0.3	1.5	
3-Oct	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.8	
4-Oct	0	0	0	0	0	0	0	1	1	2	2	2	2	3	A	0	2	0	0	5	0	0	0	0	1.0	4.8	
5-Oct	0	0	0	0	0	0	0	0	1	1	1	1	1	A	0	0	0	0	0	1	0	0	0	0	0.4	1.2	
6-Oct	0	0	0	0	0	0	0	1	1	2	5	7	A	1	26	10	0	0	0	5	1	0	0	0	2.6	25.8	
7-Oct	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	3	1	0	0	0	0	0	0.4	2.8	
8-Oct	0	0	0	0	0	0	0	0	0	0	1	A	0	1	0	7	0	0	0	0	0	0	0	0	0.6	6.8	
9-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
10-Oct	0	0	0	0	0	0	0	0	A	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.9	
11-Oct	0	0	0	0	0	0	0	A	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.5	1.2	
12-Oct	0	0	0	0	0	0	A	0	0	1	1	1	1	2	1	1	1	1	0	0	0	0	0	0	0.6	1.8	
13-Oct	0	0	1	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
15-Oct	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0.4	3.2	
16-Oct	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	0	0	5	0	0	0	3	0	0	0.7	4.9	
17-Oct	0	A	0	0	0	0	0	0	0	0	4	1	0	3	1	0	0	5	0	0	0	0	0	0	0.8	4.8	
18-Oct	A	0	0	0	0	0	0	0	C	C	C	C	C	1	1	1	0	0	0	0	0	0	0	A	--	1.1	
19-Oct	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	10	0	0	0	A	0	0.9	9.7	
20-Oct	0	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	A	0	0	0.5	2.2	
21-Oct	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	8	0	0	0	0	A	0	0	0	0.6	8.2	
22-Oct	1	0	1	1	1	1	1	12	0	0	1	1	1	1	1	1	1	9	1	A	1	1	2	0	1.5	12.3	
23-Oct	0	1	0	2	1	1	0	7	0	0	1	1	39	2	1	0	0	0	A	0	0	0	0	0	2.5	39.5	
24-Oct	0	0	0	0	0	0	0	0	0	9	0	0	0	0	20	0	3	A	0	0	0	0	0	0	1.6	19.5	
25-Oct	0	0	0	0	0	0	0	0	0	12	1	0	0	0	0	0	A	0	0	0	0	7	0	0	1.1	12.2	
26-Oct	0	0	0	0	0	0	0	0	0	0	0	8	0	0	A	7	0	0	0	0	0	0	0	0	0.8	7.7	
27-Oct	0	0	0	0	0	0	0	0	1	1	1	1	1	1	A	1	9	0	0	4	0	0	0	0	1.0	9.2	
28-Oct	0	0	0	0	0	0	0	0	0	1	2	23	2	A	1	1	12	1	0	1	0	1	1	1	2.2	23.1	
29-Oct	1	1	0	0	0	0	1	0	0	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0.4	1.1	
30-Oct	0	0	0	0	1	3	0	0	0	1	2	A	1	1	1	1	2	0	0	0	0	0	0	0	0.6	2.7	
31-Oct	0	0	0	0	1	0	0	0	1	11	A	7	6	5	3	2	2	1	1	1	1	1	1	1	1.8	10.8	
		0.2	0.3	0.2	0.3	0.3	0.4	0.2	0.9	0.4	1.7	1.0	2.0	2.5	0.9	2.4	1.1	1.6	1.0	0.6	0.8	0.5	0.4	0.3	0.3	Diurnal Average	
		1.0	1.1	1.2	1.5	1.1	2.7	0.9	12.3	1.1	12.2	4.8	23.1	39.5	4.5	25.8	9.7	11.9	8.5	9.7	4.8	7.2	3.3	1.7	0.9	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

# Hourly Maximums

Nitrogen Oxide (NO) - ppb  
Sunset House - October 2012



## Hourly Averages

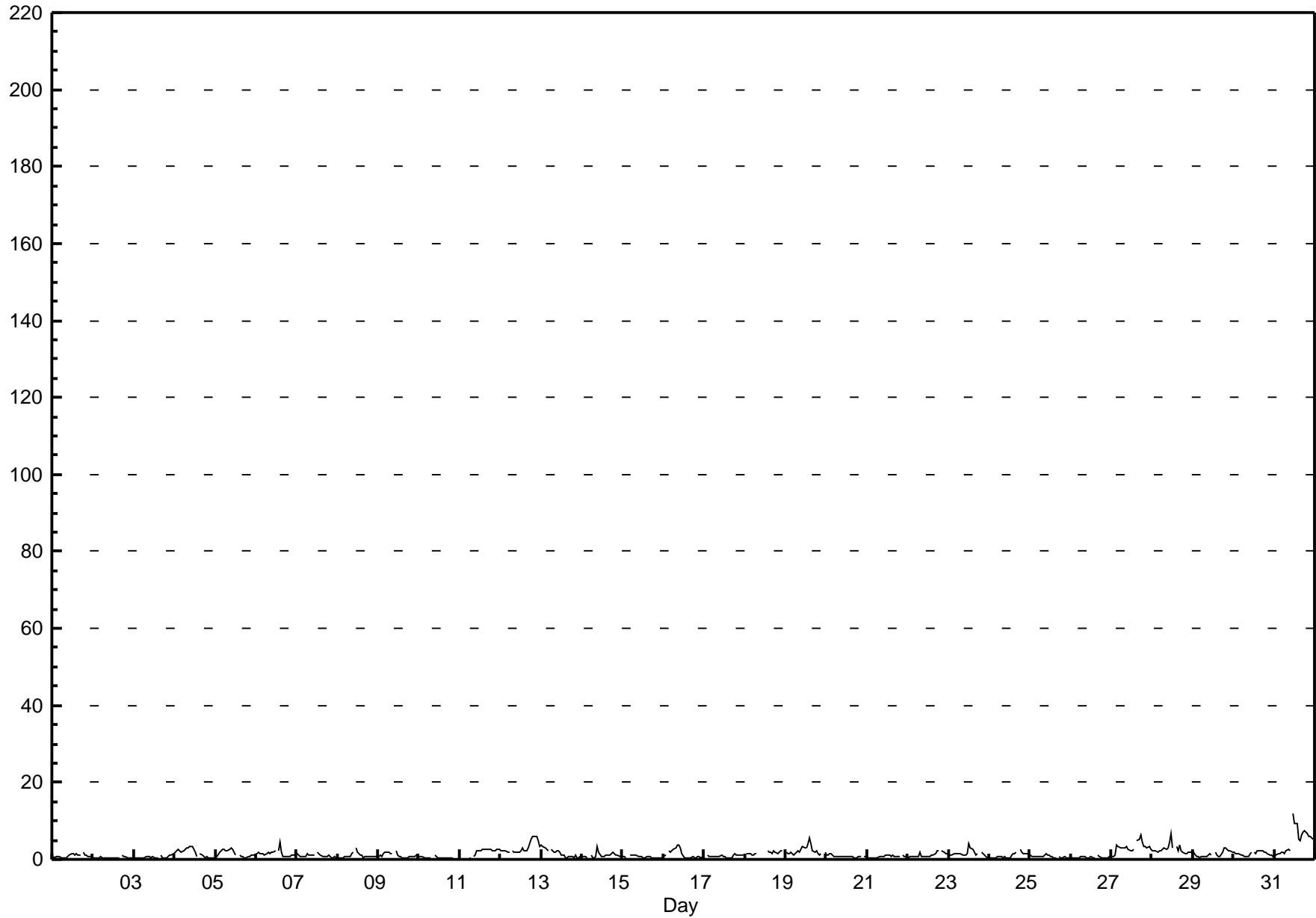
## Oxides of Nitrogen (NO<sub>x</sub>) - ppb

### Sunset House - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 11.8 ppb on Oct 31 12:00	Maximum Daily Average: 4.7 ppb on Oct 31		Hours of Data:	707
Minimum Value: 0 ppb on Oct 11 01:00	Minimum Daily Average: 0.4 ppb on Oct 10		Hours of Missing Data:	37
Maximum Diurnal Average: 1.9 ppb at hour 12	Minimum Diurnal Average: 1.1 ppb at hour 3		Hours of Calibration:	37
Monthly Average: 1.42 ppb	Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.6 Median = 1.0 Q <sub>3</sub> = 1.9 P <sub>90</sub> = 2.8 P <sub>99</sub> = 6.7		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	A	2	1	1	1	1	1	0.9	1.8
2-Oct	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	0.5	1.2
3-Oct	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	A	1	1	0	0	1	1	1	1	0.6	1.5
4-Oct	2	2	2	2	2	2	2	3	3	3	3	3	2	1	A	1	1	1	1	1	0	0	0	0	1.7	3.3
5-Oct	0	1	2	2	3	3	2	2	2	3	3	2	1	A	1	1	1	0	0	1	1	1	1	1	1.5	2.8
6-Oct	2	2	1	1	1	1	1	2	2	2	2	2	A	2	4	2	1	1	1	1	1	1	1	1	1.5	4.4
7-Oct	2	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-Oct	0	0	0	1	1	1	1	1	1	2	2	A	3	2	1	1	1	1	1	1	1	1	1	1	1.0	2.8
9-Oct	1	1	1	1	2	2	2	2	2	1	A	2	1	1	1	1	0	0	0	1	1	1	1	1	1.0	2.1
10-Oct	1	1	1	0	0	1	0	0	A	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0.4	1.1
11-Oct	0	0	0	0	0	0	0	A	1	1	2	2	2	2	3	3	3	3	3	2	2	2	2	3	1.6	2.7
12-Oct	2	2	2	2	2	2	A	2	2	2	2	2	2	3	2	2	3	4	5	6	6	6	5	4	3.1	6.1
13-Oct	4	3	3	3	2	A	2	2	2	2	2	2	1	1	1	1	1	1	1	0	1	1	0	1	1.6	3.8
14-Oct	1	1	1	0	A	1	0	0	1	3	2	1	1	1	1	1	1	1	2	2	1	1	1	1	1.1	3.3
15-Oct	1	1	1	A	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0.7	1.3
16-Oct	1	1	A	2	2	2	3	3	4	4	3	1	0	0	0	0	0	1	0	0	1	1	1	1	1.4	3.6
17-Oct	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	0.8	1.5
18-Oct	A	2	2	2	1	1	1	2	C	C	C	C	C	2	2	2	2	2	2	1	2	2	2	A	--	2.3
19-Oct	2	2	2	2	2	1	2	2	2	3	3	3	3	4	5	4	2	2	2	2	1	1	A	2	2.4	5.5
20-Oct	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.6
21-Oct	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.1
22-Oct	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	2	A	2	2	2	1	1.2	2.4
23-Oct	1	1	1	1	1	1	1	2	1	1	1	1	4	3	3	2	1	1	A	2	1	1	1	0	1.5	4.0
24-Oct	0	0	1	1	1	1	1	1	0	1	0	0	1	1	1	1	2	A	3	2	2	2	1	1	1.0	2.6
25-Oct	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0	A	1	0	0	1	0	0	0	0.7	1.6
26-Oct	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	0	1	1	0.5	1.0
27-Oct	1	1	1	4	3	3	3	3	3	3	3	3	2	2	A	5	5	6	4	3	3	3	3	3	3.1	6.2
28-Oct	2	2	2	2	2	2	3	3	3	3	4	7	3	A	3	2	4	2	2	2	2	2	2	2	2.6	6.7
29-Oct	2	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	2	3	3	2	2	2	2	1.4	2.9
30-Oct	2	1	1	1	1	1	1	1	1	1	2	A	2	2	2	2	2	2	2	2	2	1	1	1	1.5	2.4
31-Oct	1	1	1	2	2	2	1	2	3	2	A	12	9	9	5	5	6	7	7	7	6	6	5	5	4.7	11.8
	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.4	1.4	1.6	1.6	1.9	1.7	1.6	1.6	1.5	1.5	1.6	1.6	1.5	1.5	1.4	1.3	1.2	Diurnal Average	
	3.8	3.2	2.8	3.6	3.4	3.2	2.9	3.1	3.6	3.6	4.4	11.8	9.4	9.4	5.5	4.7	6.2	7.1	7.4	6.8	6.0	6.0	5.4	5.2	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span



## Hourly Maximums

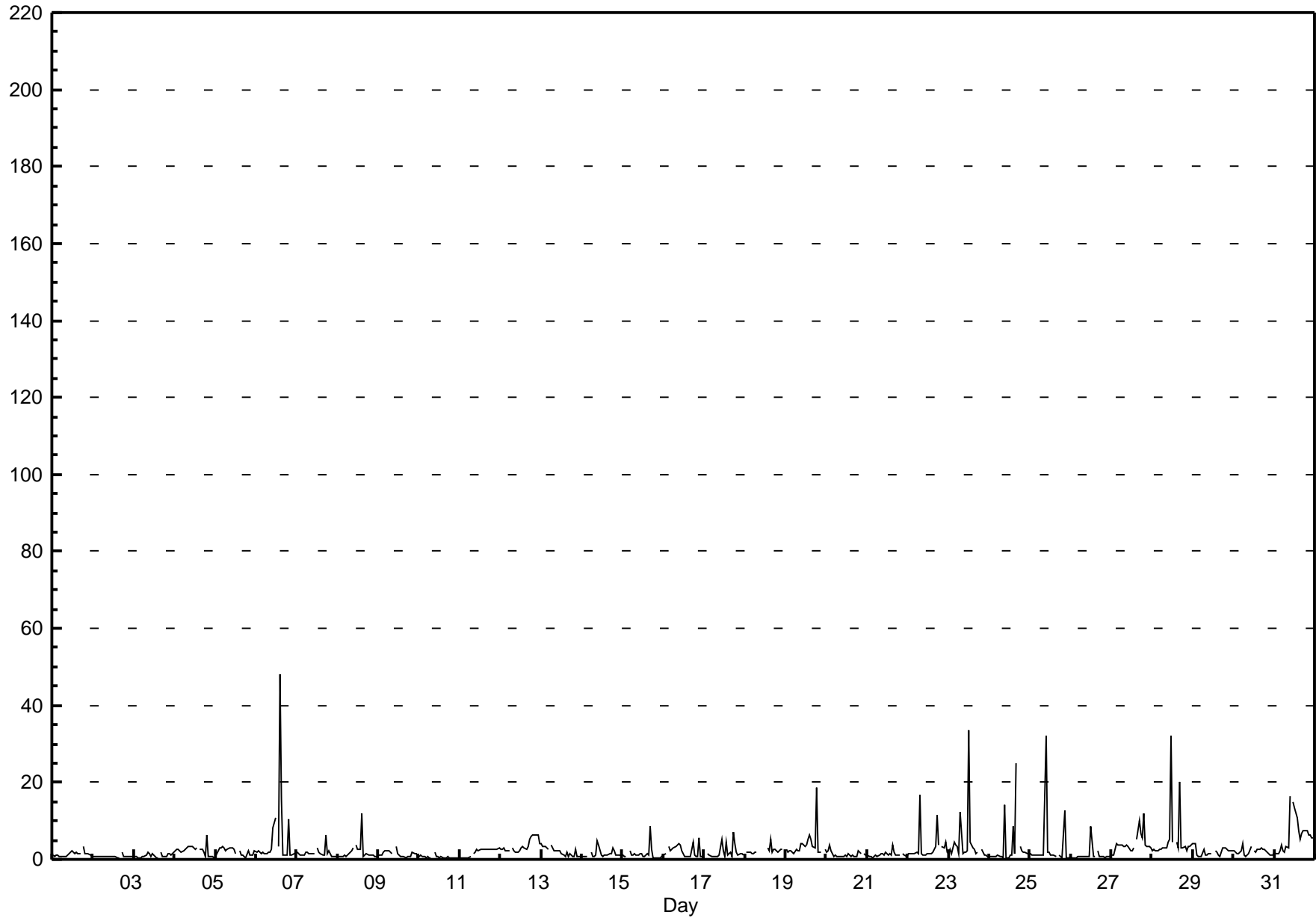
Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Sunset House - October 2012

Maximum Value: 47.9 ppb on Oct 6 15:00		Maximum Daily Average: 6.2 ppb on Oct 31		Hours in Service: 744																							
Minimum Value: 0 ppb on Oct 10 23:00		Minimum Daily Average: 0.6 ppb on Oct 10		Hours of Data: 707																							
Maximum Diurnal Average: 4.2 ppb at hour 15		Minimum Diurnal Average: 1.5 ppb at hour 1		Hours of Missing Data: 37																							
Monthly Average: 2.40 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.8 Median = 1.5 Q <sub>3</sub> = 2.6 P <sub>90</sub> = 4.0 P <sub>99</sub> = 17.5		Hours of Calibration: 37																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	A	3	1	1	1	1	1	1.3	3.3	
2-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	2	1	1	1	1	1	1	1	0.7	2.0	
3-Oct	1	1	1	0	0	1	1	1	2	2	1	1	1	0	0	A	2	1	1	1	1	1	1	2	0.9	1.9	
4-Oct	2	3	3	2	2	2	3	3	3	3	3	3	3	3	A	2	3	2	1	6	1	1	1	0	2.4	6.2	
5-Oct	1	2	3	3	3	3	2	2	3	3	3	3	2	A	2	1	1	1	1	2	1	1	1	2	2.0	3.2	
6-Oct	2	2	2	2	2	1	2	2	2	2	3	8	11	A	3	48	16	1	1	1	11	1	1	2	5.4	47.9	
7-Oct	2	2	1	1	1	2	2	1	2	1	1	A	3	2	1	1	1	6	1	2	1	1	1	1	1.6	6.2	
8-Oct	1	1	1	1	1	1	1	1	2	2	2	3	A	4	3	2	12	1	1	2	1	1	1	1	1.9	12.0	
9-Oct	1	1	1	2	2	2	2	2	2	2	A	3	2	1	1	1	1	1	1	1	2	1	2	1	1.4	3.5	
10-Oct	1	1	1	1	1	1	0	0	A	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.6	1.9	
11-Oct	0	0	0	0	0	0	1	A	2	2	2	2	3	3	3	3	3	3	3	3	2	3	3	3	1.9	2.9	
12-Oct	3	3	3	2	2	2	A	3	2	2	2	2	3	4	3	3	3	5	6	6	6	6	6	4	3.5	6.4	
13-Oct	4	3	4	3	3	A	4	2	2	2	2	2	1	1	1	2	1	1	1	1	3	1	1	1	2.0	4.2	
14-Oct	1	1	1	1	A	2	1	1	1	1	5	4	1	1	1	1	1	2	3	2	1	1	1	1	1.4	4.8	
15-Oct	1	1	1	A	2	1	1	1	1	1	1	1	1	1	2	1	9	2	1	0	0	0	0	1	1.3	8.6	
16-Oct	1	2	A	3	2	3	3	3	4	4	4	2	1	1	1	1	1	4	1	1	1	6	1	1	2.1	5.6	
17-Oct	1	A	2	1	1	1	1	1	1	1	5	2	1	4	1	2	1	7	4	2	1	1	1	1	1.9	7.2	
18-Oct	A	2	2	2	2	1	2	2	C	C	C	C	C	3	2	5	2	3	2	2	2	3	2	A	--	5.3	
19-Oct	3	2	2	2	2	1	3	2	2	2	4	4	3	4	5	6	5	3	3	18	2	2	2	A	3.7	18.5	
20-Oct	2	2	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	2	1	1.3	3.6	
21-Oct	1	1	1	0	1	1	1	1	1	1	1	2	1	1	1	4	2	1	1	1	A	1	1	1	1.2	3.8	
22-Oct	1	1	1	1	2	2	1	17	1	1	1	1	2	1	1	2	3	12	4	A	3	3	4	2	3.0	16.7	
23-Oct	1	3	1	4	4	3	2	12	1	2	2	2	33	4	3	2	2	2	A	3	2	1	1	1	4.0	33.4	
24-Oct	1	1	1	1	1	1	1	1	0	14	0	0	1	1	9	2	25	A	3	2	2	2	1	1	3.1	25.1	
25-Oct	1	1	1	1	1	1	1	1	1	32	2	2	1	1	1	1	A	1	1	1	13	0	0	0	2.9	32.1	
26-Oct	1	1	1	1	1	1	1	1	1	1	1	1	8	1	1	A	2	1	1	1	1	1	1	1	1.1	8.4	
27-Oct	1	1	3	4	4	4	4	3	3	4	3	2	2	3	A	5	10	7	6	12	4	3	3	3	4.1	11.9	
28-Oct	2	2	2	2	2	3	3	3	3	4	5	32	5	A	5	3	20	3	3	3	2	4	3	4	5.2	31.9	
29-Oct	4	4	1	1	1	1	3	1	1	1	2	1	A	2	2	1	1	3	3	3	3	2	2	2	2.0	4.2	
30-Oct	2	2	2	2	2	4	1	1	1	1	3	A	2	2	3	2	3	3	2	2	2	1	1	1	2.0	3.9	
31-Oct	2	1	2	2	4	2	2	3	3	16	A	15	14	11	8	5	7	8	8	7	6	6	6	5	6.2	16.3	
		1.5	1.5	1.5	1.7	1.7	1.6	1.6	2.6	1.7	4.1	2.5	3.7	3.5	2.3	4.2	2.6	3.8	3.0	2.7	2.7	2.3	1.9	1.7	1.6	Diurnal Average	
		4.2	4.0	3.6	4.4	3.7	3.9	3.6	16.7	3.8	32.1	8.2	31.9	33.4	10.9	47.9	15.6	25.1	11.5	18.5	11.9	12.7	6.3	6.2	5.4	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

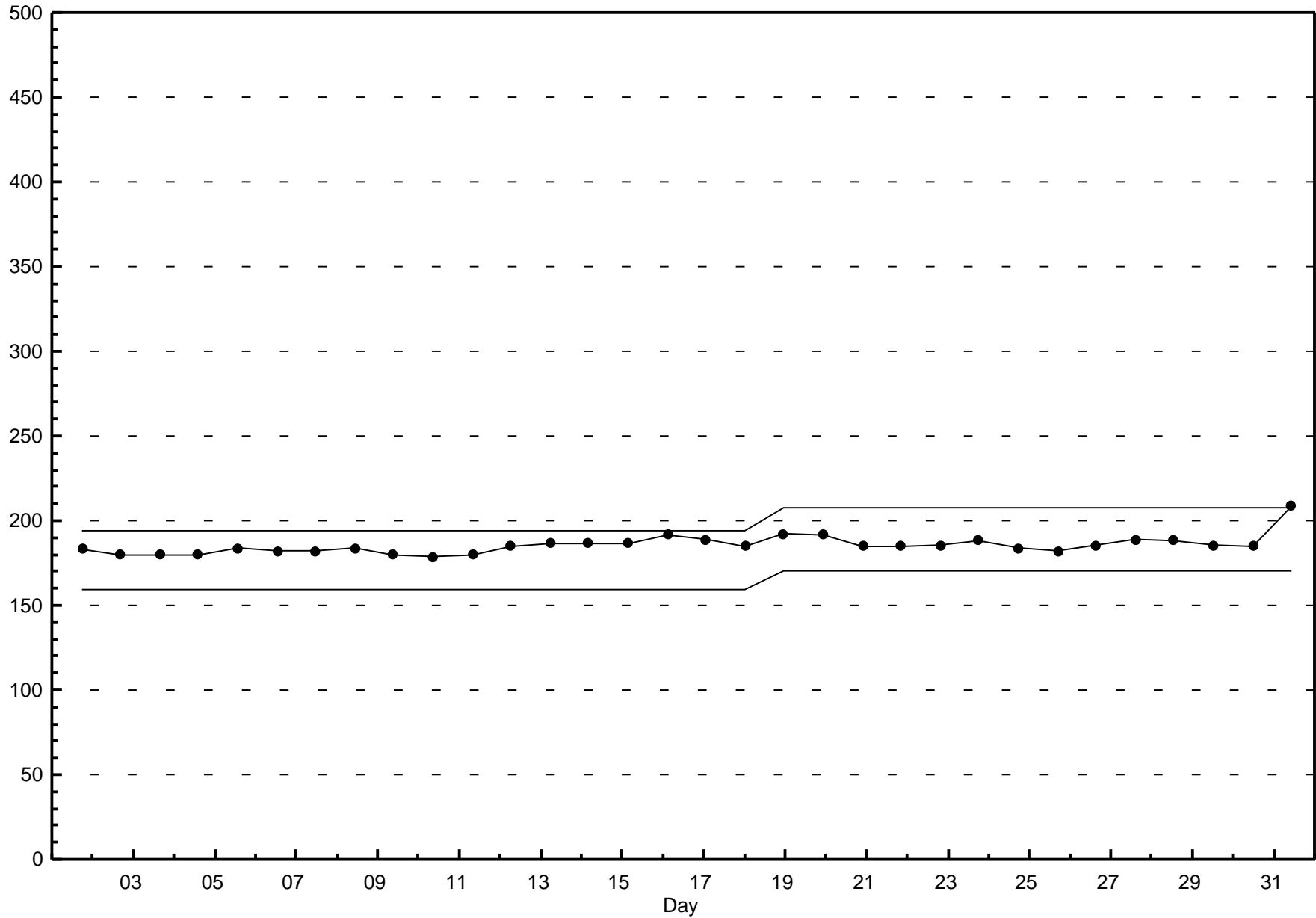
### Hourly Maximums

Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
Sunset House - October 2012



**Span Responses**

**Oxides of Nitrogen (NO<sub>x</sub>)**  
**Sunset House - October 2012**





## Hourly Averages

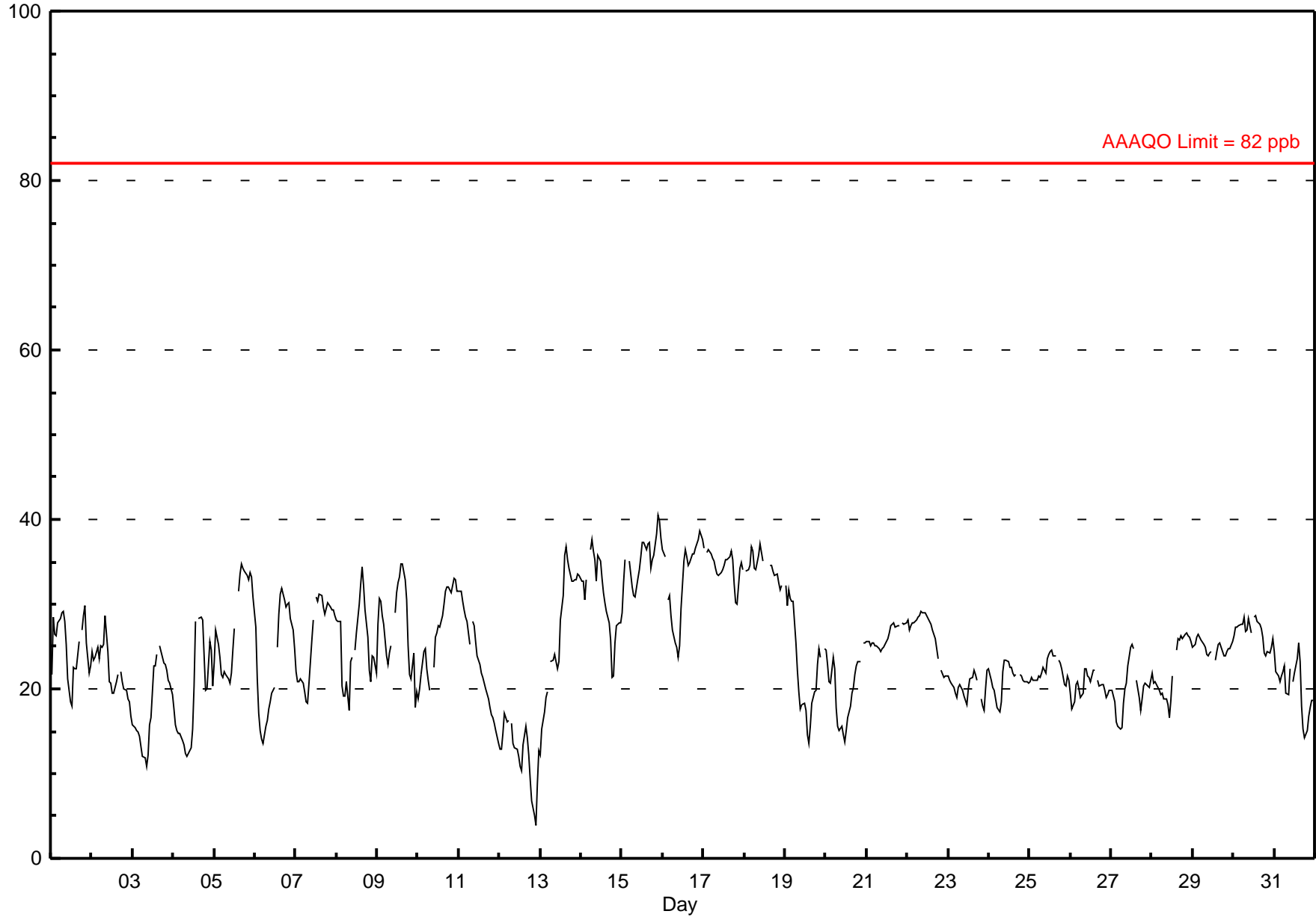
Ozone (O<sub>3</sub>) - ppb

Sunset House - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 40.5 ppb on Oct 15 22:00	Maximum Daily Average: 35.2 ppb on Oct 15		Hours of Data:	709
Minimum Value: 4 ppb on Oct 12 22:00	Minimum Daily Average: 12.2 ppb on Oct 12		Hours of Missing Data:	35
Maximum Diurnal Average: 27.3 ppb at hour 16	Minimum Diurnal Average: 22.6 ppb at hour 8		Hours of Calibration:	35
Monthly Average: 24.57 ppb	Percentiles: P <sub>1</sub> = 10.5 P <sub>10</sub> = 16.6 Q <sub>1</sub> = 20.3 Median = 24.1 Q <sub>3</sub> = 28.7 P <sub>90</sub> = 34.1 P <sub>99</sub> = 37.6		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-Oct	22	28	26	26	28	28	29	29	28	25	21	18	18	23	22	22	26	A	27	29	30	25	22	23	25.0	29.8
2-Oct	24	23	24	25	23	25	25	25	29	24	21	21	20	19	21	22	A	22	21	20	20	19	18	17	22.1	28.6
3-Oct	16	15	15	15	14	13	12	12	11	12	16	17	23	23	24	A	25	24	23	23	22	21	21	19	18.1	25.0
4-Oct	18	16	15	15	15	14	13	12	12	12	13	15	20	28	A	28	29	28	24	20	20	26	25	20	19.1	28.5
5-Oct	23	27	25	24	22	21	22	22	21	21	22	25	27	A	32	34	35	34	34	33	33	34	33	31	27.5	34.8
6-Oct	27	21	17	15	14	14	16	16	18	18	20	20	A	25	29	31	32	31	30	30	30	28	27	25	23.2	31.9
7-Oct	22	21	21	21	21	20	18	18	21	26	28	A	31	30	31	31	30	29	30	30	30	29	29	29	25.9	31.2
8-Oct	28	28	28	20	19	21	17	23	24	A	25	27	30	32	34	32	29	26	22	21	24	24	22	22	25.1	34.4
9-Oct	28	31	30	29	28	24	23	24	25	A	29	31	33	33	35	35	33	31	25	22	21	24	18	20	27.4	34.7
10-Oct	19	20	22	24	25	22	21	20	A	23	26	27	27	27	29	30	32	32	32	31	32	33	33	32	26.9	33.1
11-Oct	32	31	30	29	29	28	25	A	28	27	26	24	23	22	21	21	20	19	18	17	17	16	15	14	23.1	31.6
12-Oct	13	13	15	17	16	16	A	16	14	13	13	12	11	10	13	16	14	12	9	7	5	4	9	13	12.2	17.1
13-Oct	12	15	17	19	20	A	23	23	24	23	22	23	28	31	36	37	35	34	33	33	33	33	34	33	27.1	36.8
14-Oct	33	33	31	33	A	36	38	36	35	33	36	35	33	31	30	29	28	26	21	21	25	27	28	28	30.7	37.7
15-Oct	29	33	35	A	35	34	32	31	31	33	34	36	37	37	37	37	37	34	35	36	38	41	40	38	35.2	40.5
16-Oct	36	36	A	31	31	29	27	25	25	24	25	29	35	36	36	35	35	36	36	37	37	38	39	38	32.8	38.6
17-Oct	37	A	36	36	36	35	35	34	34	33	34	34	35	35	35	36	36	35	32	30	30	34	35	34	34.5	36.6
18-Oct	A	34	34	35	37	36	34	34	36	37	36	35	C	C	C	35	35	34	33	34	33	32	32	A	34.4	37.2
19-Oct	32	30	32	31	30	30	25	22	20	18	18	17	15	14	16	18	20	20	23	25	24	A	25	25	22.7	32.1
20-Oct	25	23	21	21	24	22	18	16	15	16	15	14	15	17	18	19	20	22	23	23	23	A	25	25	19.9	25.4
21-Oct	26	26	25	25	25	25	25	25	24	25	25	25	26	27	28	28	28	27	28	27	A	28	28	28	26.2	27.8
22-Oct	28	27	27	28	28	28	29	29	29	29	29	29	28	28	28	27	26	25	24	A	22	21	22	22	26.6	29.1
23-Oct	21	21	21	20	19	19	20	20	20	19	19	18	20	21	21	22	22	21	A	19	18	18	20	22	20.1	22.2
24-Oct	22	21	20	20	19	18	17	18	22	23	23	23	22	23	22	22	22	A	22	22	21	21	21	21	21.1	23.4
25-Oct	21	21	21	21	21	22	21	22	23	22	24	24	24	25	24	24	A	23	23	22	21	20	22	21	22.2	24.5
26-Oct	19	18	18	20	21	20	19	19	22	22	22	21	21	22	22	A	21	20	20	21	20	19	19	20	20.4	22.4
27-Oct	20	19	18	16	16	15	15	18	20	21	23	25	25	25	A	21	19	17	19	20	21	21	20	21	19.8	25.3
28-Oct	22	21	21	20	20	19	20	19	19	18	17	19	22	A	25	26	26	26	26	27	27	26	26	26	22.4	26.5
29-Oct	25	25	26	26	26	26	25	25	24	24	24	24	A	23	24	25	25	24	24	24	24	25	25	26	24.9	26.4
30-Oct	26	27	27	27	28	28	28	27	27	28	27	A	29	29	28	28	27	26	24	24	24	24	25	26	26.7	28.7
31-Oct	24	22	22	21	22	22	23	19	19	22	A	21	22	23	25	23	18	15	14	15	17	18	19	19	20.2	25.5
	24.3	24.2	24.0	23.7	23.7	23.6	23.4	22.6	23.3	23.2	23.6	23.7	25.0	25.7	26.5	27.3	27.0	26.1	25.2	24.7	24.6	25.1	25.0	24.5	Diurnal Average	
	36.6	35.5	36.1	36.5	36.8	36.5	37.7	36.3	35.7	37.2	36.1	35.6	37.3	37.3	36.5	37.1	37.4	36.0	35.9	36.6	38.3	40.5	39.7	37.9	Diurnal Maximum	

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



# Hourly Maximums

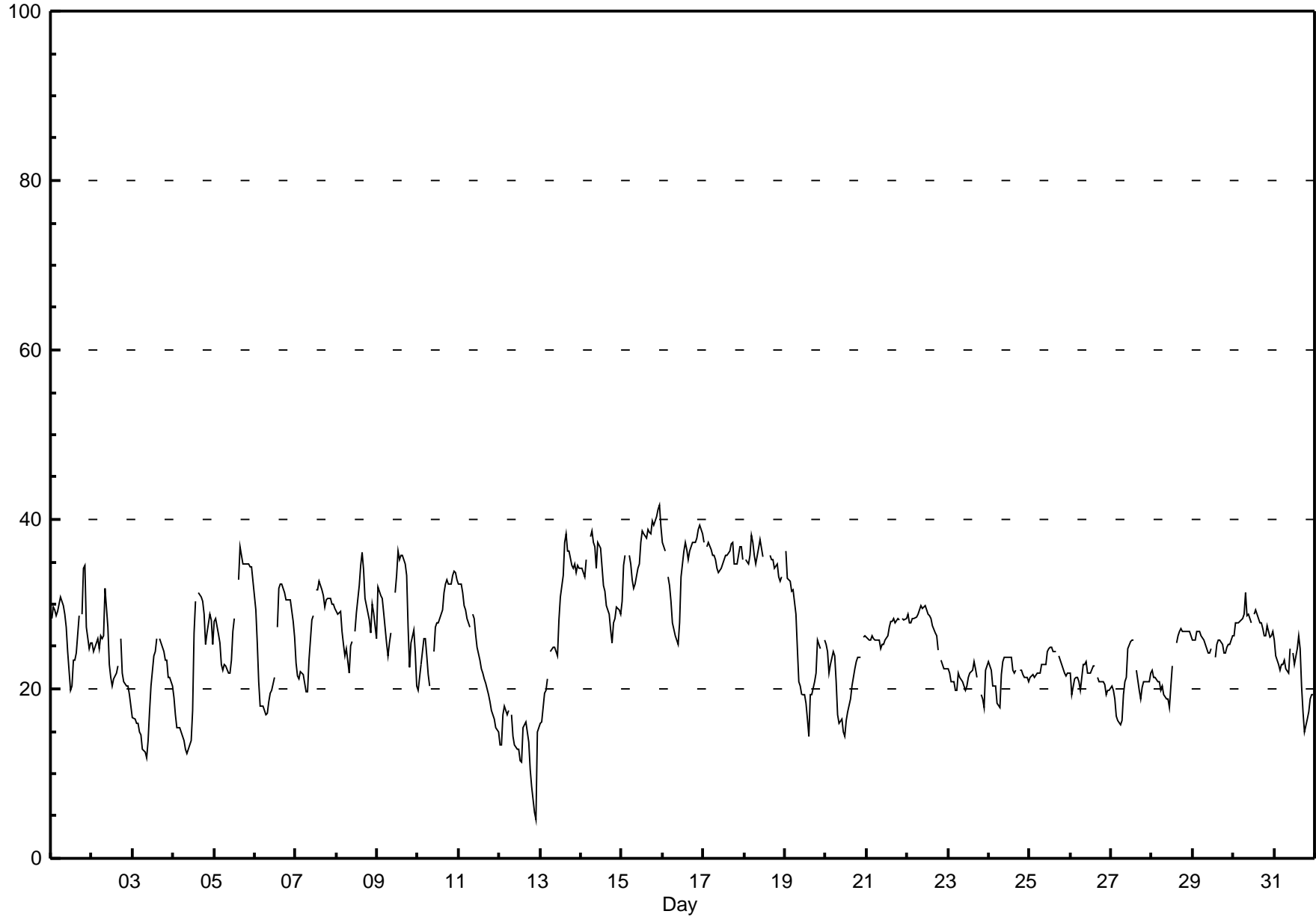
Ozone (O<sub>3</sub>) - ppb

Sunset House - October 2012

Maximum Value: 41.7 ppb on Oct 15 23:00		Maximum Daily Average: 36.8 ppb on Oct 15		Hours in Service: 744																							
Minimum Value: 4 ppb on Oct 12 22:00		Minimum Daily Average: 13.4 ppb on Oct 12		Hours of Data: 709																							
Maximum Diurnal Average: 28.5 ppb at hour 16		Minimum Diurnal Average: 24.0 ppb at hour 8		Hours of Missing Data: 35																							
Monthly Average: 25.87 ppb		Percentiles: P <sub>1</sub> = 12.4 P <sub>10</sub> = 17.8 Q <sub>1</sub> = 21.3 Median = 25.4 Q <sub>3</sub> = 30.2 P <sub>90</sub> = 35.3 P <sub>99</sub> = 39.2		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-Oct	28	30	29	29	29	31	30	30	29	27	24	20	20	23	23	24	29	A	29	34	35	27	25	25	27.5	34.6	
2-Oct	25	24	25	26	25	26	26	26	32	27	23	21	20	21	22	23	A	26	22	21	20	20	19	18	23.5	31.8	
3-Oct	17	16	16	16	15	15	13	13	12	14	17	20	24	24	26	A	26	25	24	23	23	21	21	20	19.3	25.9	
4-Oct	19	17	15	15	15	14	14	13	12	13	14	17	27	30	A	31	31	30	29	25	27	29	28	25	21.4	31.3	
5-Oct	28	28	26	25	23	22	23	23	22	22	23	27	28	A	33	37	36	35	35	35	35	34	34	33	29.0	36.8	
6-Oct	29	25	21	18	18	18	17	17	18	19	20	21	A	27	32	32	32	31	30	30	30	30	28	26	25.0	32.4	
7-Oct	23	22	21	22	22	21	20	20	23	28	29	A	32	32	33	32	31	30	31	31	31	30	30	30	26.9	32.7	
8-Oct	29	29	29	27	25	24	25	22	25	26	A	27	29	32	35	36	34	31	29	28	27	30	29	26	28.4	36.1	
9-Oct	32	31	31	31	29	25	24	25	27	A	31	33	36	35	36	36	35	33	27	23	25	27	24	20	29.5	36.3	
10-Oct	20	21	23	26	26	24	22	20	A	24	27	28	28	28	29	31	32	33	32	32	33	34	34	33	27.9	33.8	
11-Oct	32	32	31	30	29	28	27	A	29	28	26	25	23	22	22	21	21	19	18	17	17	16	15	15	23.8	32.3	
12-Oct	13	13	17	18	17	17	A	17	14	13	13	13	11	11	15	16	15	14	10	8	6	4	15	15	13.4	17.9	
13-Oct	16	16	19	20	21	A	24	25	25	24	24	28	31	33	37	38	36	36	35	34	35	34	35	34	28.8	38.3	
14-Oct	34	34	33	35	A	38	39	37	37	34	37	37	34	32	32	30	29	27	25	28	28	30	29	29	32.5	38.7	
15-Oct	30	35	36	A	36	35	33	32	32	34	35	37	39	38	38	39	38	38	40	39	40	41	42	39	36.8	41.7	
16-Oct	37	36	A	33	32	30	28	26	26	25	28	33	36	37	36	35	36	37	37	37	38	39	39	38	34.0	39.3	
17-Oct	37	A	37	37	36	36	36	35	34	34	34	35	35	36	36	36	37	37	35	35	35	37	37	35	35.8	37.3	
18-Oct	A	35	35	36	38	37	36	35	37	38	37	36	C	C	C	36	35	35	34	35	33	33	33	A	35.4	38.2	
19-Oct	36	33	33	33	32	32	29	25	21	20	19	19	18	16	14	19	19	21	22	26	25	25	A	26	24.5	36.2	
20-Oct	25	24	22	23	24	24	21	17	16	16	15	14	16	17	19	20	21	22	23	24	24	A	26	26	20.9	26.3	
21-Oct	26	26	26	26	26	26	26	26	25	25	25	26	26	27	28	28	28	28	28	28	28	A	28	28	26.7	28.2	
22-Oct	29	28	28	28	28	28	29	29	30	29	30	29	29	29	28	27	27	26	25	A	23	22	22	22	27.2	29.8	
23-Oct	22	22	21	21	20	20	22	21	21	20	20	20	21	22	22	23	22	21	A	19	19	18	22	23	21.0	23.3	
24-Oct	23	22	20	20	20	18	18	22	23	24	24	24	24	24	22	22	22	A	22	22	22	21	21	21	21.8	23.8	
25-Oct	21	21	22	21	22	22	22	23	23	23	24	25	25	25	24	24	A	24	23	23	22	22	22	22	22.8	24.8	
26-Oct	22	19	21	21	21	21	20	23	23	23	22	22	22	23	23	A	21	21	21	21	20	19	20	20	21.3	23.3	
27-Oct	20	20	19	17	16	16	16	19	21	21	25	26	26	26	A	22	20	19	20	21	21	21	21	22	20.6	25.8	
28-Oct	22	21	21	21	21	20	20	19	19	19	18	20	23	A	25	26	27	27	27	27	27	27	27	26	23.0	27.1	
29-Oct	26	26	27	27	27	26	26	25	25	24	24	25	A	24	25	26	26	25	24	24	25	25	25	26	25.4	26.8	
30-Oct	26	28	28	28	28	28	29	31	29	29	28	A	29	29	29	28	28	27	26	26	27	26	26	27	27.8	31.4	
31-Oct	26	24	23	22	23	23	23	22	22	25	A	24	23	25	26	25	20	17	15	16	17	19	19	19	21.7	26.3	
		25.9	25.3	25.2	25.1	24.8	24.9	24.5	24.0	24.3	24.4	24.7	25.3	26.3	26.8	27.5	28.5	28.1	27.5	26.7	26.5	26.3	26.4	26.6	25.7	Diurnal Average	
		37.3	36.3	36.8	37.3	38.2	38.0	38.7	37.2	36.7	37.7	37.3	37.3	38.7	38.3	37.8	38.8	38.5	38.2	39.8	39.2	40.4	41.2	41.7	39.2	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

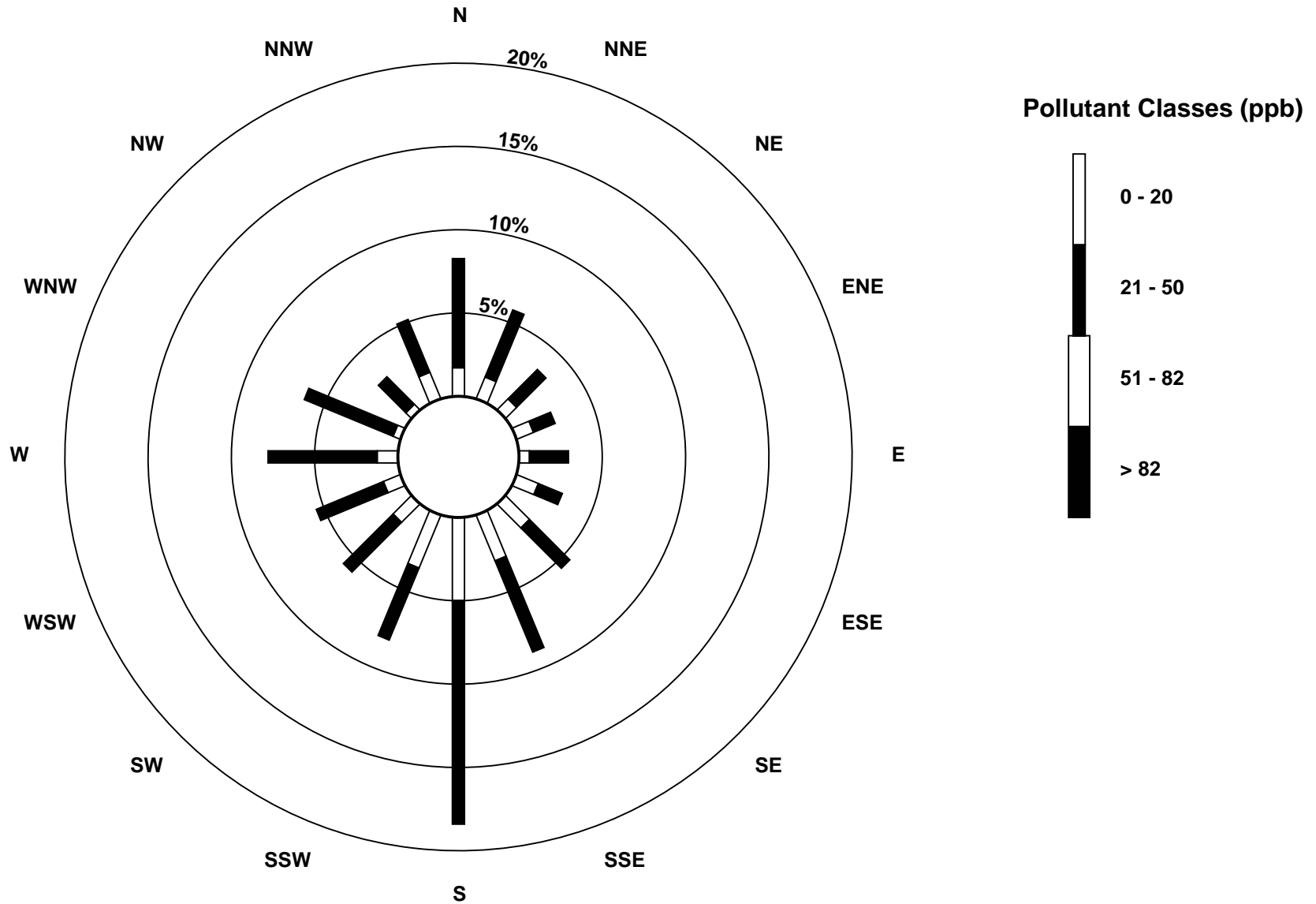
**Hourly Maximums**

**Ozone (O<sub>3</sub>) - ppb**  
**Sunset House - October 2012**



**Pollutant Rose**

Ozone (O<sub>3</sub>) - ppb  
Sunset House - October 2012



# Eight Hour Running Averages

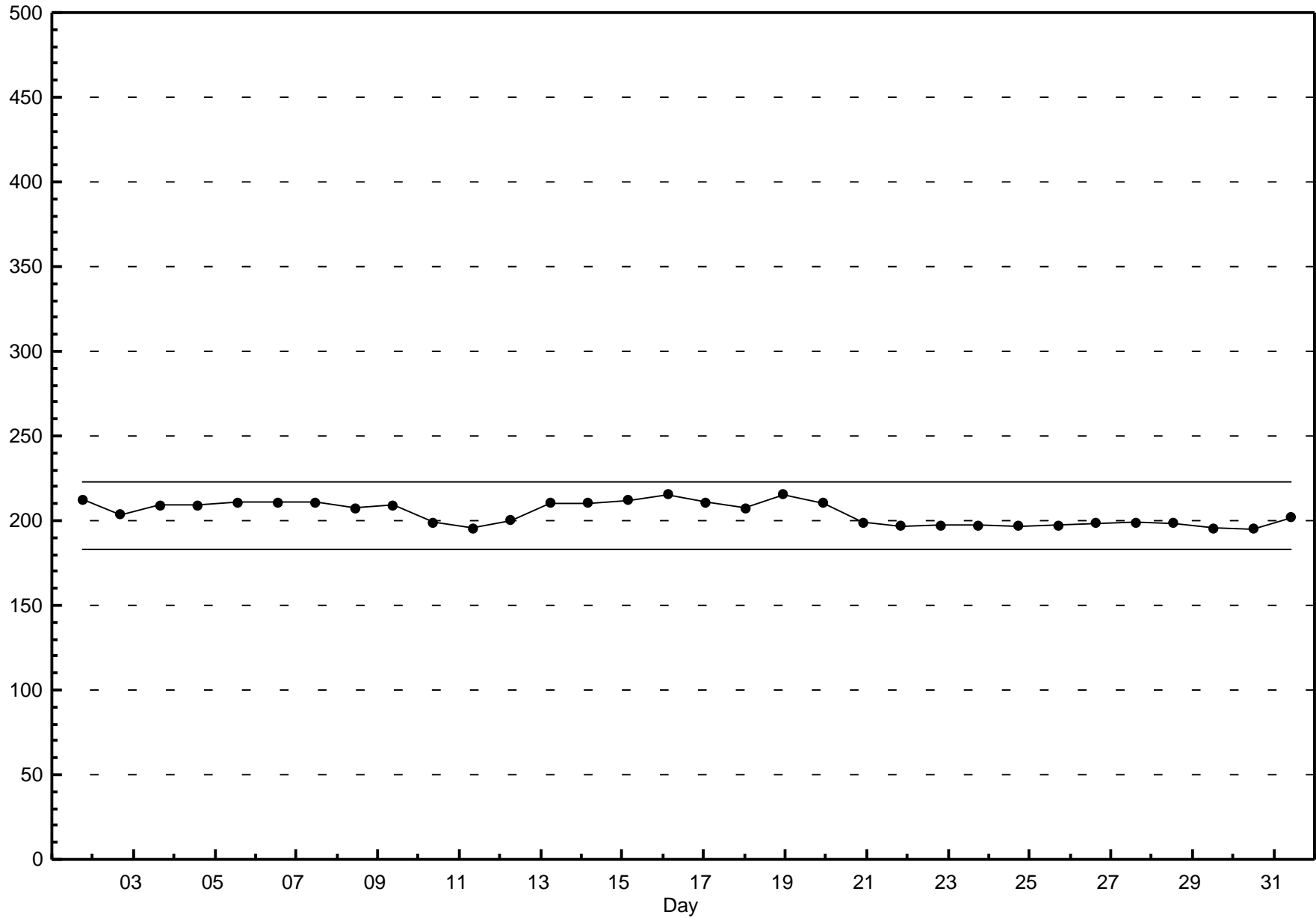
Ozone (O<sub>3</sub>) - ppb

Sunset House - October 2012

Maximum Value: 37.7 ppb on Oct 16 03:00																					Hours in Service:	744			
Minimum Value: 8.9 ppb on Oct 13 01:00																					Hours of Data:	738			
Percentiles: P <sub>1</sub> = 11.6 P <sub>10</sub> = 17.4 Q <sub>1</sub> = 20.6 Median = 24.1 Q <sub>3</sub> = 28.3 P <sub>90</sub> = 33.5 P <sub>99</sub> = 37.1																					Hours of Missing Data:	6			
																					Hours of Calibration:	6			
																					Percent Operational Time:	100.0			
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Oct	30	29	28	27	27	27	27	27	28	28	27	26	25	24	23	22	22	21	22	24	25	26	26	26	29.9
2-Oct	26	25	25	24	24	24	24	24	25	25	25	24	24	23	22	22	21	21	21	21	21	21	20	20	25.7
3-Oct	19	18	18	17	16	16	15	14	13	13	13	13	14	16	17	18	20	22	23	24	23	23	23	22	23.5
4-Oct	21	20	19	18	17	17	16	15	14	14	13	13	14	16	16	18	21	23	25	25	25	25	25	24	25.3
5-Oct	23	23	23	24	24	23	23	23	23	22	22	22	23	23	24	26	28	30	31	33	33	33	34	33	33.7
6-Oct	32	31	29	26	24	22	19	18	16	16	16	17	17	19	21	23	25	27	28	30	30	30	30	29	32.4
7-Oct	28	27	25	24	23	22	21	20	20	21	22	22	23	25	26	28	30	30	30	30	30	30	30	29	30.2
8-Oct	29	29	29	28	26	25	24	23	22	21	21	22	24	25	28	29	30	29	29	28	28	27	25	29.9	
9-Oct	24	25	25	26	27	27	27	27	27	26	26	26	27	28	30	32	33	32	32	31	29	28	26	24	32.6
10-Oct	22	21	21	21	21	21	22	22	22	22	23	23	24	24	26	27	28	29	29	30	31	31	32	32	32.1
11-Oct	32	32	32	32	31	30	30	29	29	28	27	27	26	25	24	24	23	22	21	20	19	19	18	17	32.1
12-Oct	16	15	15	15	15	15	15	15	15	15	15	14	14	13	13	13	13	13	12	12	11	10	9	9	16.0
13-Oct	9	9	10	12	14	15	17	19	20	21	22	23	24	25	26	28	29	31	32	33	34	34	34	33	34.2
14-Oct	33	33	33	33	33	33	34	34	35	35	35	36	35	35	34	33	32	31	29	28	27	26	26	26	35.6
15-Oct	26	27	28	29	31	32	32	33	33	33	33	33	34	34	35	36	36	36	36	36	36	37	37	37	37.4
16-Oct	37	37	38	37	36	34	32	31	29	27	27	27	28	29	31	32	33	35	36	36	36	36	36	37	37.7
17-Oct	37	37	37	37	37	37	36	36	35	35	35	34	34	34	34	35	35	35	34	34	34	34	34	33	37.2
18-Oct	33	33	33	34	35	35	35	35	35	36	36	35	35	N	N	N	N	N	N	34	33	33	33	33	35.7
19-Oct	33	32	32	32	31	31	30	29	28	26	24	23	21	19	18	17	17	17	17	18	19	20	21	22	32.8
20-Oct	23	23	24	23	23	23	22	21	20	19	18	17	16	16	16	16	17	17	18	20	21	21	22	23	23.5
21-Oct	24	24	25	25	25	25	25	25	25	25	25	25	25	26	26	26	27	27	27	27	28	28	28	28	27.6
22-Oct	28	28	28	28	28	28	28	28	28	28	29	29	29	29	29	28	28	27	27	26	26	25	24	23	28.7
23-Oct	22	22	21	21	21	21	20	20	20	20	20	19	19	20	20	20	20	20	21	21	21	20	20	20	22.3
24-Oct	20	20	20	20	20	20	20	19	19	20	20	21	21	22	22	23	23	22	22	22	22	21	21	21	22.6
25-Oct	21	21	21	21	21	21	21	21	21	22	22	22	23	23	23	24	24	24	24	24	23	22	22	22	24.0
26-Oct	21	21	20	20	20	20	20	19	20	20	21	21	21	22	22	22	21	21	21	21	20	20	20	20	21.9
27-Oct	20	20	19	19	18	18	17	17	17	18	18	19	20	22	22	23	23	22	22	21	20	20	20	20	22.8
28-Oct	20	21	21	21	21	20	20	20	20	19	19	19	19	20	21	22	23	24	25	26	26	26	26	26	26.2
29-Oct	26	26	26	26	26	26	26	26	26	25	25	25	25	24	24	24	24	24	24	24	24	25	25	25	26.0
30-Oct	25	25	26	26	26	27	27	27	27	28	27	27	28	28	28	28	28	27	27	26	26	25	25	25	27.8
31-Oct	25	24	24	24	23	23	23	22	21	21	21	21	21	22	22	22	21	20	20	19	18	17	17	17	24.8
37.3 37.4 37.7 37.2 37.0 36.7 36.2 35.7 35.3 35.4 35.6 35.7 35.5 35.4 34.5 35.2 36.0 36.2 36.3 36.4 36.5 36.9 37.3 37.4																									
Diurnal Maximums																									
N - Not Valid																									

### Span Responses

Ozone (O<sub>3</sub>)  
Sunset House - October 2012



## Hourly Averages

PM2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Sunset House - October 2012

Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 744
Maximum Value: 75.5 µg/m <sup>3</sup> on Oct 8 12:00	Maximum Daily Average: 25.0 µg/m <sup>3</sup> on Oct 8
Minimum Value: 0 µg/m <sup>3</sup> on Oct 1 05:00	Hours of Data: 728
Maximum Diurnal Average: 5.9 µg/m <sup>3</sup> at hour 11	Hours of Missing Data: 16
Monthly Average: 3.14 µg/m <sup>3</sup>	Hours of Calibration: 2
Minimum Daily Average: 0.0 µg/m <sup>3</sup> on Oct 15	Percent Operational Time: 98.1
Minimum Diurnal Average: 1.6 µg/m <sup>3</sup> at hour 1	
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 1.1 Q <sub>3</sub> = 3.0 P <sub>90</sub> = 6.0 P <sub>99</sub> = 34.6	

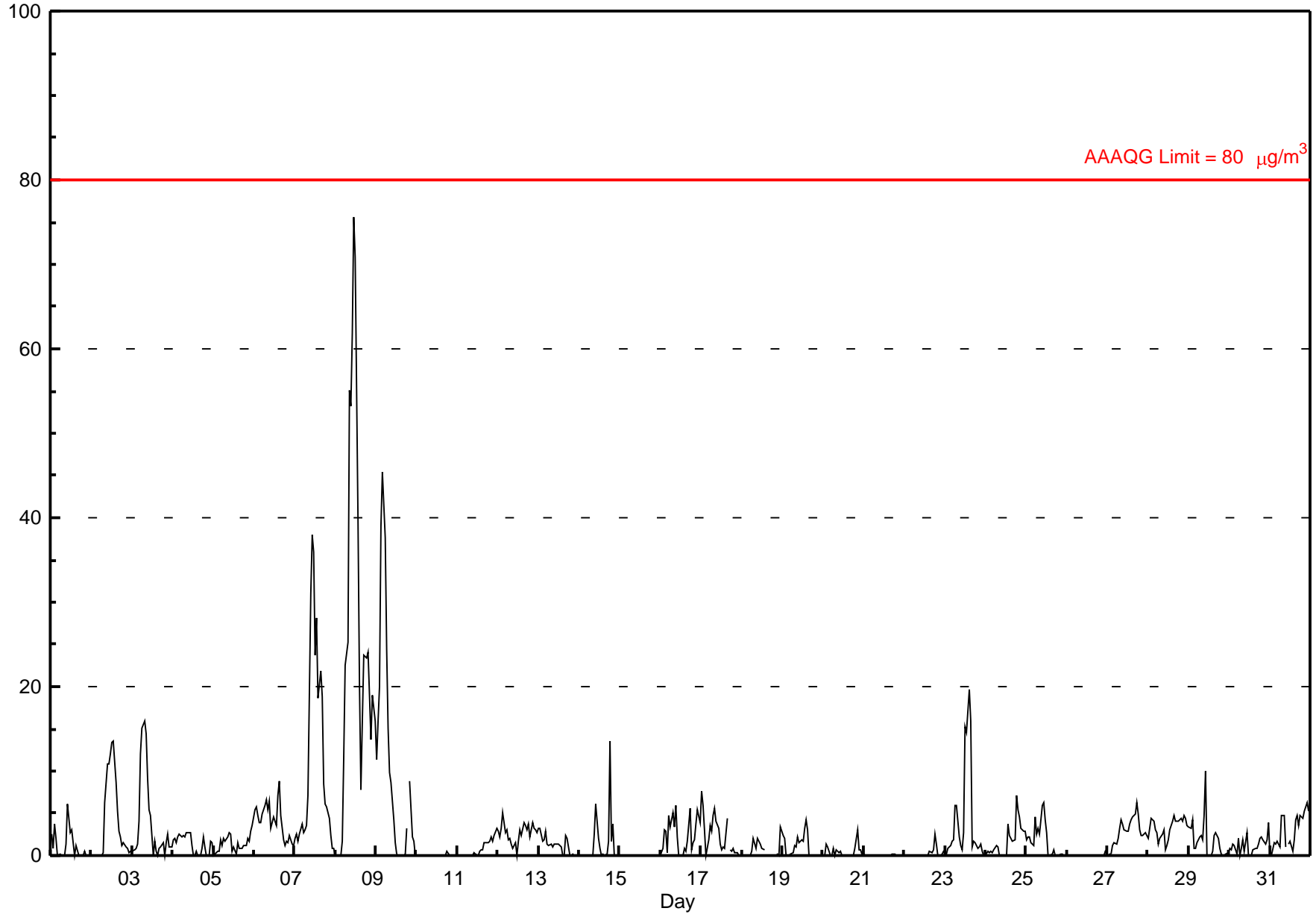
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	3	1	4	2	0	0	0	N	0	1	6	3	3	1	0	1	0	N	0	0	0	0	0	0	1.2	6.1
2-Oct	0	0	0	0	0	0	0	0	6	11	11	12	13	13	9	5	3	2	1	2	1	1	0	1	3.8	13.5
3-Oct	1	1	1	1	4	12	15	16	14	9	5	5	0	2	0	0	1	1	2	0	2	2	1	1	4.0	16.0
4-Oct	2	2	2	2	3	2	2	2	3	3	3	1	0	0	0	0	0	1	2	1	0	0	2	2	1.4	2.8
5-Oct	0	0	1	0	2	1	2	2	2	3	3	1	1	0	2	1	1	1	1	1	2	2	3	4	1.4	3.5
6-Oct	5	6	5	4	4	5	6	7	5	6	3	5	4	4	7	9	5	2	1	2	1	2	1	1	4.2	8.8
7-Oct	2	2	2	3	4	3	3	3	7	31	38	36	24	28	19	22	19	8	6	6	4	2	1	1	11.4	37.9
8-Oct	0	0	0	0	2	12	23	25	55	53	62	76	71	39	20	8	16	24	23	24	19	14	19	16	25.0	75.5
9-Oct	11	16	20	39	45	38	24	15	10	9	4	1	0	0	0	0	0	0	3	N	9	2	2	0	10.8	45.4
10-Oct	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	0	0	0	0	0	0	0	0.0	0.5
11-Oct	0	0	N	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	2	2	2	2	2	3	0.8	3.3
12-Oct	3	2	3	5	3	3	2	2	1	1	2	0	2	3	2	4	4	3	4	2	4	3	3	3	2.6	5.1
13-Oct	3	3	2	2	3	1	1	1	1	1	1	1	1	1	0	0	2	2	0	0	0	0	0	0	1.2	3.2
14-Oct	0	0	0	0	0	N	0	0	0	3	6	2	1	0	0	0	0	2	14	2	4	0	0	0	1.4	13.6
15-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	N	N	0	0	0.0	0.0
16-Oct	0	1	3	3	0	5	3	5	3	6	2	0	N	0	1	1	2	6	1	1	2	4	5	4	2.5	6.0
17-Oct	8	6	3	0	2	4	3	5	6	4	3	1	1	1	1	4	N	1	0	1	0	0	0	0	2.3	7.6
18-Oct	0	0	0	0	0	0	1	2	1	2	2	1	1	1	C	C	0	0	0	0	0	0	0	3	0.6	3.3
19-Oct	2	2	0	0	0	0	0	1	1	2	2	2	2	3	4	3	0	0	0	0	0	0	0	0	1.0	4.2
20-Oct	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	3	1	1	0	0.4	3.1
21-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
22-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0.3	2.5
23-Oct	0	0	1	1	2	2	6	6	2	1	1	3	15	15	20	16	1	2	2	1	1	1	0	0	4.1	19.6
24-Oct	0	0	0	1	0	1	1	1	0	0	0	0	0	4	2	2	2	2	7	5	4	3	3	3	1.8	7.2
25-Oct	2	2	2	2	1	5	3	3	2	6	6	4	3	0	0	0	1	0	0	0	0	0	0	0	1.8	6.3
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4
27-Oct	0	0	0	1	2	1	2	3	4	4	3	3	3	4	4	5	5	6	5	3	2	2	3	2	2.8	6.2
28-Oct	2	3	4	4	3	3	1	2	3	3	1	1	2	3	4	5	4	4	4	4	4	5	4	4	3.2	4.8
29-Oct	3	3	4	1	1	1	2	2	2	5	10	0	N	0	1	2	3	2	1	0	0	0	0	0	1.9	10.0
30-Oct	1	1	1	1	0	2	0	1	2	1	3	0	0	0	1	1	1	1	2	2	2	1	2	4	1.2	3.9
31-Oct	0	0	1	1	2	1	1	5	5	1	N	1	2	0	2	4	5	3	5	4	5	6	6	5	2.9	6.3
	1.6	1.7	2.0	2.4	2.6	3.4	3.3	3.7	4.4	5.4	5.9	5.1	5.1	4.0	3.3	3.2	2.5	2.5	3.0	2.2	2.4	1.8	1.9	1.8	Diurnal Average	
	11.3	16.0	20.0	39.0	45.4	37.6	24.4	25.3	55.1	53.2	61.8	75.5	70.9	39.4	20.4	21.9	18.8	23.7	23.5	24.1	19.0	13.7	18.9	16.0	Diurnal Maximum	

C - Calibration N - Not Valid  
 Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m<sup>3</sup> Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m<sup>3</sup>



**Hourly Averages**

**PM2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$**   
**Sunset House - October 2012**



## Hourly Maximums

PM2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Sunset House - October 2012

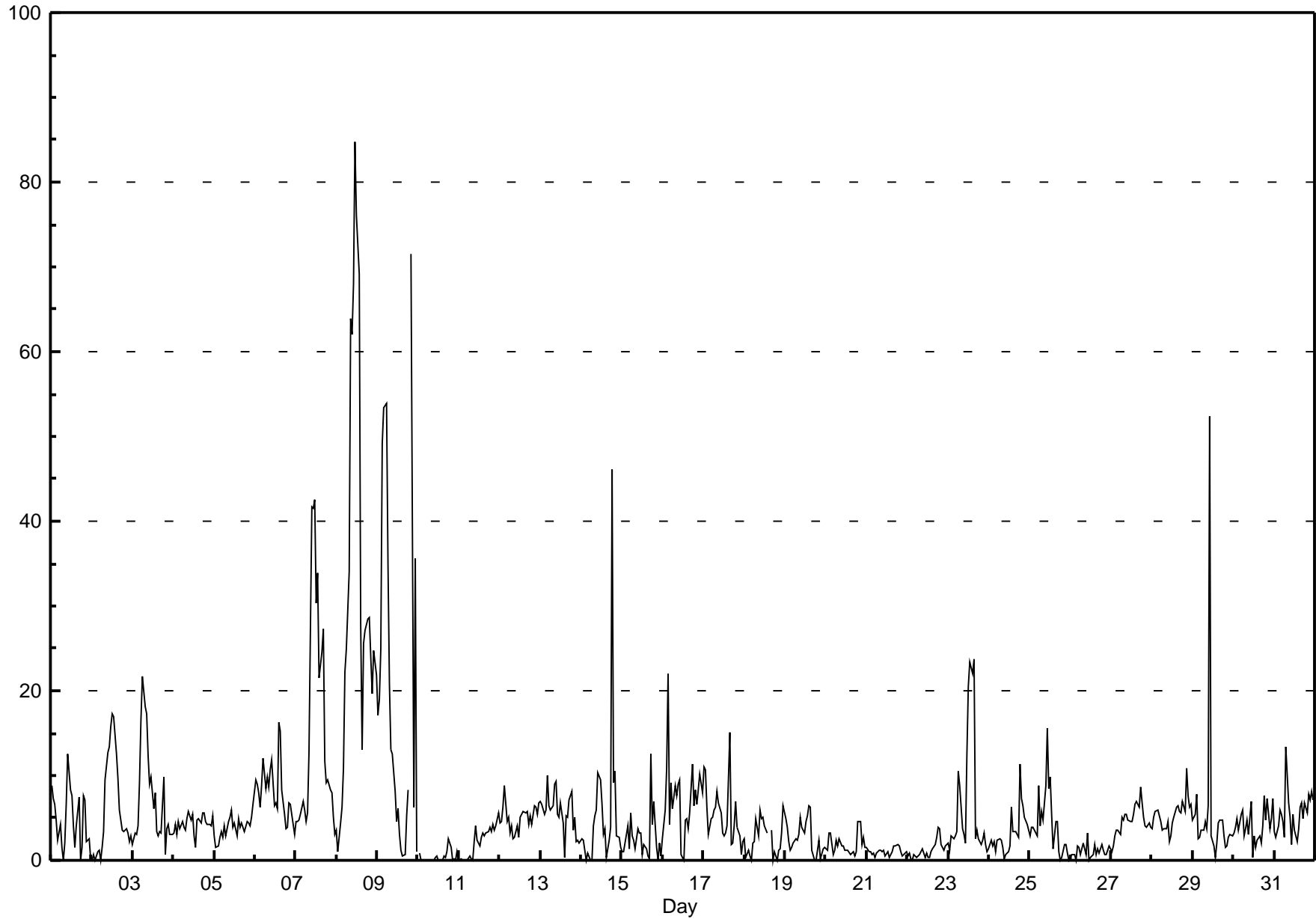
Maximum Value: 84.8 µg/m <sup>3</sup> on Oct 8 12:00	Maximum Daily Average: 32.2 µg/m <sup>3</sup> on Oct 8	Hours in Service: 744
Minimum Value: 0 µg/m <sup>3</sup> on Oct 1 08:00	Minimum Daily Average: 0.4 µg/m <sup>3</sup> on Oct 10	Hours of Data: 740
Maximum Diurnal Average: 10.3 µg/m <sup>3</sup> at hour 11	Minimum Diurnal Average: 3.8 µg/m <sup>3</sup> at hour 2	Hours of Missing Data: 4
Monthly Average: 6.00 µg/m <sup>3</sup>	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 1.7 Median = 3.8 Q <sub>3</sub> = 6.2 P <sub>90</sub> = 10.9 P <sub>99</sub> = 60.3	Hours of Calibration: 2
		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-Oct	9	7	7	5	2	4	1	0	2	7	12	8	8	4	2	4	7	0	2	8	7	2	3	0	4.6	12.5
2-Oct	0	1	0	1	1	0	1	3	9	13	13	16	17	17	13	10	6	5	4	3	4	3	2	3	6.1	17.4
3-Oct	2	3	3	4	9	16	22	18	17	12	9	10	6	8	3	3	3	3	10	1	4	4	3	3	7.4	21.7
4-Oct	3	4	3	5	4	5	4	4	5	6	5	5	3	2	5	5	4	6	6	5	4	4	4	5	4.3	5.7
5-Oct	3	2	2	3	3	3	4	3	5	5	6	4	4	3	5	4	4	4	3	5	4	4	5	7	3.9	6.6
6-Oct	9	9	8	6	9	12	8	10	9	11	12	6	7	6	16	15	8	5	4	4	7	7	4	3	8.2	16.3
7-Oct	5	5	5	5	7	6	5	6	13	42	42	43	30	34	22	25	27	12	9	10	8	8	5	3	15.5	42.6
8-Oct	4	1	4	6	11	22	25	34	64	62	68	85	76	69	28	13	26	27	28	29	24	20	25	22	32.2	84.8
9-Oct	17	19	25	49	53	54	35	21	13	13	8	5	6	3	1	1	1	5	8	N	72	6	36	1	19.6	71.5
10-Oct	N	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	1	0	0	0	1	0.4	2.6
11-Oct	0	0	0	0	0	0	0	0	0	2	4	2	2	3	3	3	3	3	4	3	4	4	4	6	2.1	5.6
12-Oct	4	5	6	9	5	5	3	4	3	3	4	3	5	5	6	6	6	4	5	4	6	6	5	7	5.0	8.8
13-Oct	7	7	5	6	10	6	6	6	9	9	5	5	7	4	0	5	5	7	8	4	5	2	2	2	5.6	10.0
14-Oct	3	2	1	0	1	0	0	4	5	6	10	10	7	3	4	0	2	4	46	9	10	3	3	1	5.6	46.1
15-Oct	1	1	2	4	1	6	3	2	1	4	3	3	1	2	1	1	0	13	4	7	2	0	2	1	2.7	12.5
16-Oct	2	6	11	22	4	9	6	9	8	9	10	1	0	5	5	4	6	11	6	8	7	8	10	8	7.3	22.0
17-Oct	11	11	6	3	5	5	6	6	8	7	6	3	3	3	4	15	2	2	4	7	4	3	1	2	5.3	15.0
18-Oct	2	0	1	1	0	2	2	5	3	6	5	5	4	3	C	C	4	0	1	0	1	1	3	6	2.6	6.4
19-Oct	5	4	2	1	2	2	3	2	3	5	4	3	5	5	6	6	1	0	0	1	2	0	1	2	2.8	6.4
20-Oct	1	1	3	3	1	1	2	2	3	2	2	1	1	1	1	1	1	1	1	5	5	2	3	1	1.8	4.6
21-Oct	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	2	2	2	2	1	0	1	1	1.0	1.9
22-Oct	0	1	0	0	1	0	0	1	1	1	1	0	0	1	1	2	3	4	4	4	2	1	2	2	1.2	3.9
23-Oct	2	1	3	3	3	3	10	9	4	3	2	12	20	23	22	24	3	4	3	2	2	3	2	1	6.8	23.7
24-Oct	1	2	2	2	1	2	3	2	1	0	1	1	2	6	3	3	3	3	11	7	6	5	4	4	3.3	11.4
25-Oct	3	4	4	4	3	9	4	6	5	9	16	8	10	5	1	5	5	1	0	0	2	2	1	0	4.4	15.7
26-Oct	0	1	1	0	2	2	1	2	1	1	3	0	0	1	2	1	1	1	2	1	1	1	1	2	1.1	3.2
27-Oct	1	2	3	4	4	3	5	5	5	5	5	5	5	5	7	7	6	9	7	5	4	4	4	4	4.7	8.6
28-Oct	4	5	6	6	5	5	4	4	4	5	2	3	4	5	6	6	6	6	7	6	11	8	6	7	5.4	10.9
29-Oct	5	5	8	3	3	4	4	5	4	6	52	3	2	0	2	4	5	5	3	1	2	3	3	3	5.5	52.4
30-Oct	3	4	5	4	6	6	3	4	5	3	7	0	3	1	2	3	2	4	8	5	7	4	5	7	4.2	7.7
31-Oct	3	3	4	6	5	5	3	13	7	5	2	5	4	2	4	6	7	5	7	6	8	7	8	7	5.5	13.4
	3.8	3.8	4.2	5.3	5.2	6.4	5.6	6.1	7.0	8.4	10.3	8.3	7.8	7.5	5.9	6.1	5.1	4.9	6.7	5.1	7.3	4.1	5.1	3.9	Diurnal Average	
	17.2	18.9	25.0	49.1	53.4	54.0	34.8	34.2	63.8	62.0	68.0	84.8	76.2	69.2	27.8	24.6	27.3	27.1	46.1	28.7	71.5	19.7	35.6	21.9	Diurnal Maximum	

C - Calibration N - Not Valid

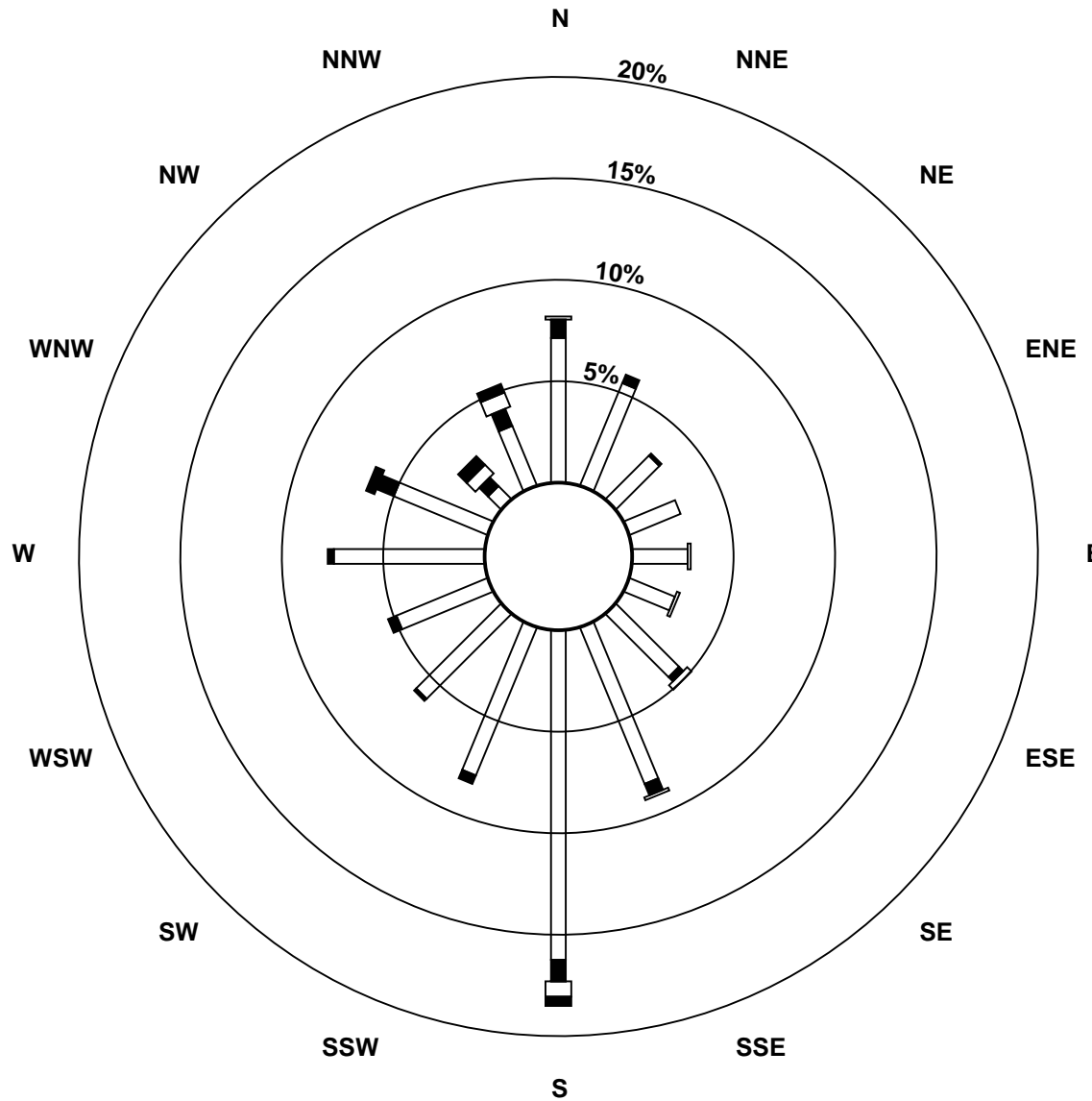
# Hourly Maximums

PM2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Sunset House - October 2012

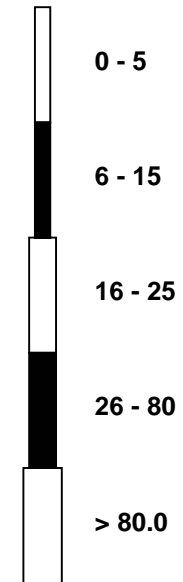


**Pollutant Rose**

**PM<sub>2.5</sub> (PM<sub>2.5</sub>) - μg/m<sup>3</sup>**  
**Sunset House - October 2012**



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





Peace Airshed Zone Association

# Hourly Averages

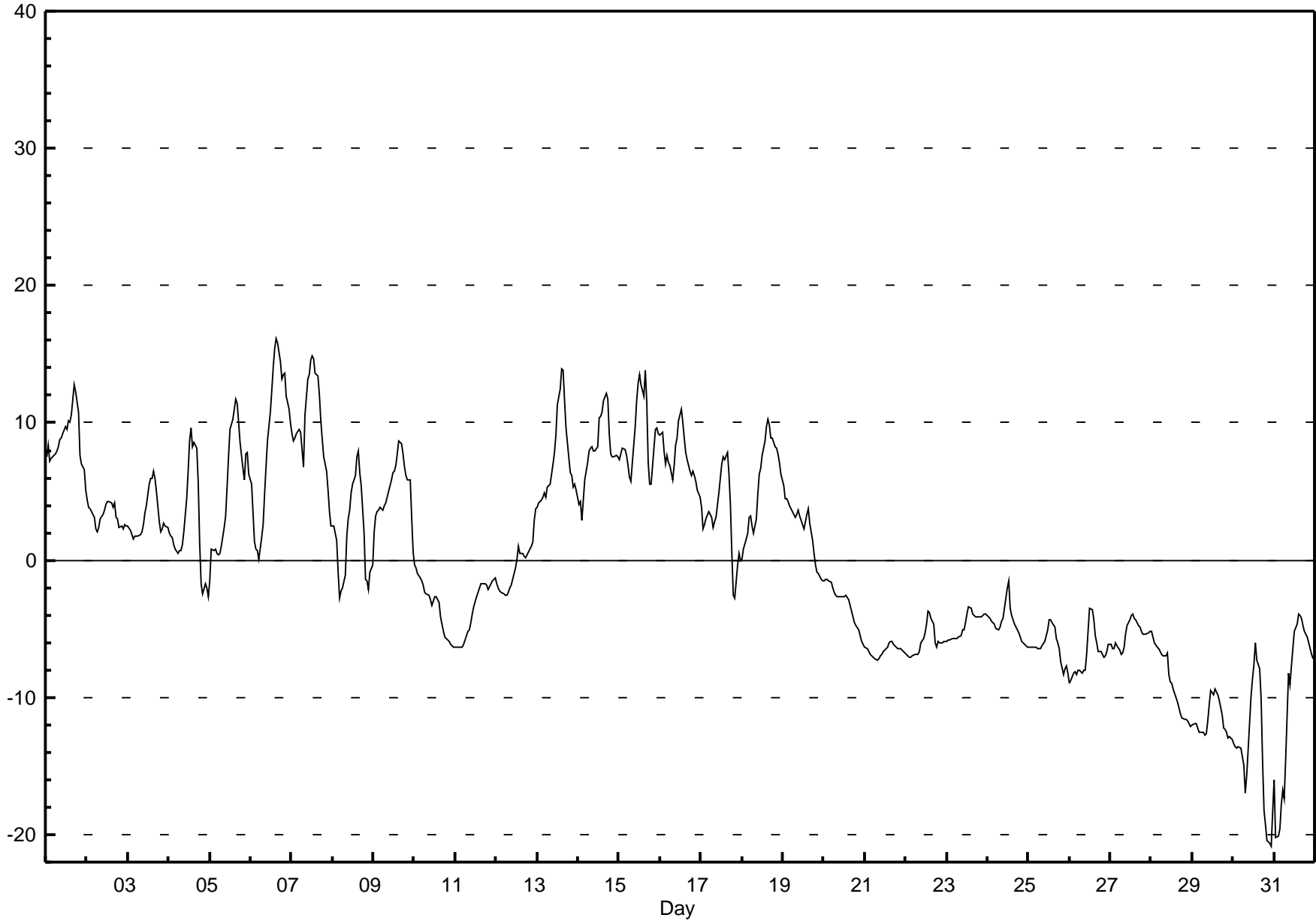
External Temperature (ET) - °C

Sunset House - October 2012

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	744
Maximum Value: 16.1 °C on Oct 6 16:00	Maximum Daily Average: 9.8 °C on Oct 7		Hours of Data:	744
Minimum Value: -21 °C on Oct 30 23:00	Minimum Daily Average: -13.9 °C on Oct 30		Hours of Missing Data:	0
Maximum Diurnal Average: 2.7 °C at hour 16	Minimum Diurnal Average: -1.7 °C at hour 7		Hours of Calibration:	0
Monthly Average: -0.11 °C	Percentiles: P <sub>1</sub> = -18.3 P <sub>10</sub> = -8.2 Q <sub>1</sub> = -5.9 Median = -0.1 Q <sub>3</sub> = 5.9 P <sub>90</sub> = 9.2 P <sub>99</sub> = 14.3		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	8	8	7	7	8	8	8	8	9	9	9	10	10	10	10	11	13	12	12	11	8	7	7	5	8.9	12.8
2-Oct	4	4	4	3	3	2	2	2	3	3	4	4	4	4	4	4	4	3	3	2	3	2	3	3	3.3	4.3
3-Oct	2	2	2	2	2	2	2	2	2	3	3	4	6	6	6	6	6	5	3	2	2	3	3	2	3.2	6.4
4-Oct	2	2	2	1	1	1	1	1	1	2	5	6	9	10	8	9	8	6	1	-2	-3	-2	-2	-3	2.6	9.7
5-Oct	-1	1	1	1	0	0	0	1	2	3	5	8	9	10	11	12	11	10	9	7	6	8	8	6	5.4	11.8
6-Oct	6	3	1	1	1	0	2	3	5	7	9	11	12	14	15	16	16	14	13	13	14	12	11	10	8.7	16.1
7-Oct	9	9	9	9	9	9	8	7	11	13	14	15	15	15	14	13	12	10	9	8	7	5	4	2	9.8	14.9
8-Oct	2	2	1	-1	-3	-2	-2	-1	2	3	4	5	5	6	8	8	6	5	2	-1	-2	-2	-1	0	1.9	7.9
9-Oct	2	3	3	4	4	4	4	4	5	5	6	6	6	7	8	9	8	8	7	6	6	6	3	1	5.2	8.7
10-Oct	0	-1	-1	-1	-2	-2	-2	-2	-3	-3	-3	-3	-3	-3	-3	-4	-5	-5	-6	-6	-6	-6	-6	-6	-3.4	-0.3
11-Oct	-6	-6	-6	-6	-6	-6	-6	-5	-5	-5	-4	-3	-3	-2	-2	-2	-2	-2	-2	-2	-2	-2	-1	-1	-3.7	-1.3
12-Oct	-2	-2	-2	-2	-2	-3	-3	-2	-2	-2	-1	-1	0	1	0	1	0	0	0	1	1	1	3	4	-0.5	3.7
13-Oct	4	4	4	5	5	5	5	6	6	7	8	9	11	13	14	14	12	10	7	6	6	5	5	5	7.3	13.9
14-Oct	4	4	3	4	6	7	8	8	8	8	8	8	10	10	11	12	12	12	9	8	8	8	8	7	8.0	12.1
15-Oct	7	8	8	8	8	7	6	6	7	10	12	13	14	13	12	14	12	7	6	6	8	9	10	9	9.1	13.8
16-Oct	9	9	8	7	8	7	7	6	7	8	9	10	11	10	9	8	7	6	6	6	6	6	5	5	7.5	11.0
17-Oct	4	2	3	3	4	3	3	2	3	3	5	6	7	7	7	8	6	4	1	-3	-3	0	1	0	3.2	7.8
18-Oct	0	1	2	2	3	3	3	2	3	5	6	7	8	9	10	10	10	9	9	8	8	8	7	6	5.7	10.2
19-Oct	5	4	4	4	4	4	3	3	3	4	3	3	2	3	3	4	3	1	0	0	-1	-1	-1	-1	2.4	5.4
20-Oct	-1	-1	-1	-1	-2	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3	-4	-4	-5	-5	-5	-6	-6	-6	-3.2	-1.4
21-Oct	-6	-6	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-7	-7	-6.6	-5.9
22-Oct	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-6	-5	-5	-4	-4	-4	-5	-6	-6	-6	-6	-6	-6	-6	-5.9	-3.7
23-Oct	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-5	-5	-4	-3	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4.7	-3.4
24-Oct	-4	-4	-4	-5	-5	-5	-5	-5	-4	-4	-3	-2	-2	-4	-4	-4	-5	-5	-5	-6	-6	-6	-6	-6	-4.6	-1.5
25-Oct	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-5	-4	-4	-5	-5	-6	-6	-6	-7	-8	-8	-8	-8	-6.2	-4.3
26-Oct	-9	-9	-8	-8	-8	-8	-8	-8	-8	-8	-7	-5	-4	-4	-4	-5	-6	-7	-7	-7	-7	-7	-7	-6	-6.9	-3.5
27-Oct	-6	-6	-6	-6	-6	-7	-7	-7	-6	-5	-5	-4	-4	-4	-4	-4	-5	-5	-5	-5	-5	-5	-5	-5	-5.4	-3.9
28-Oct	-5	-6	-6	-6	-6	-7	-7	-7	-7	-7	-8	-9	-9	-9	-10	-10	-11	-11	-11	-11	-12	-12	-12	-12	-8.8	-5.2
29-Oct	-12	-12	-12	-12	-12	-13	-13	-13	-13	-12	-11	-10	-10	-9	-10	-10	-10	-10	-11	-12	-12	-13	-13	-13	-11.6	-9.4
30-Oct	-13	-14	-14	-14	-14	-14	-15	-17	-16	-14	-10	-9	-8	-6	-7	-8	-10	-15	-18	-19	-20	-21	-21	-18	-13.9	-6.0
31-Oct	-16	-20	-20	-20	-18	-17	-17	-15	-8	-9	-8	-6	-5	-5	-4	-4	-4	-5	-5	-6	-6	-6	-7	-7	-9.9	-3.9

-1.1	-1.3	-1.5	-1.5	-1.5	-1.6	-1.7	-1.6	-0.8	-0.1	0.7	1.5	2.3	2.6	2.6	2.7	2.1	1.0	-0.1	-0.8	-1.1	-1.1	-1.2	-1.5	Diurnal Average
9.2	9.3	8.9	9.2	9.5	9.3	8.1	8.2	10.6	13.2	13.6	14.6	14.9	14.7	15.4	16.1	15.9	14.4	13.2	13.5	13.7	12.0	11.0	10.0	Diurnal Maximum



## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Sunset House - October 2012

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	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	7	11	12	9	12	16	21	24	24	19	10	10	14	11	10	9	8	8	11	14	7	8	9	13	8.0	24.0
Dir	171	179	171	153	155	172	169	163	173	185	214	227	204	227	233	246	254	256	243	289	302	274	320	343	203.8	162.5
2 Spd	15	15	15	15	12	16	14	16	19	20	16	17	18	16	19	18	19	16	14	10	12	11	12	9	14.8	19.8
Dir	345	342	343	353	0	17	13	19	29	19	11	1	353	345	348	356	1	6	1	360	354	353	356	344	0.3	18.7
3 Spd	10	10	10	9	8	7	7	5	5	6	5	6	7	11	10	12	11	11	9	11	12	14	14	15	3.8	15.4
Dir	344	336	335	333	333	321	311	309	284	289	270	254	213	208	191	191	183	184	165	162	166	172	173	172	216.6	172.5
4 Spd	15	15	14	13	12	11	11	11	10	9	8	7	6	7	4	5	5	4	3	5	6	8	8	8	5.7	15.0
Dir	177	180	182	187	185	186	192	191	196	212	225	235	263	300	290	334	326	357	97	116	122	125	134	164	188.2	177.1
5 Spd	9	12	11	11	12	12	12	15	16	15	15	13	14	14	12	10	8	6	6	7	7	7	5	5	10.0	15.6
Dir	185	181	180	185	182	184	190	185	187	186	194	204	211	221	224	240	253	245	214	206	197	201	211	209	199.9	187.0
6 Spd	4	3	6	5	5	7	9	10	12	12	11	10	12	9	9	10	11	9	13	15	17	13	8	7	9.1	17.1
Dir	212	191	150	154	186	183	180	184	190	201	197	203	208	212	212	209	212	199	180	175	177	199	213	243	194.5	177.1
7 Spd	6	6	9	9	8	7	5	4	8	13	18	16	16	17	14	15	17	17	17	14	12	9	10	9	7.5	18.3
Dir	243	225	213	220	231	224	223	202	304	325	338	328	328	325	318	318	345	4	8	2	7	21	25	33	329.9	337.8
8 Spd	10	9	6	5	6	4	3	2	5	5	6	8	10	11	12	11	9	4	4	6	5	6	6	6	1.6	11.8
Dir	32	30	28	178	136	142	170	89	342	315	287	294	304	306	315	336	336	349	140	130	118	129	147	174	344.5	315.1
9 Spd	9	11	11	12	11	11	10	9	8	6	7	8	9	10	10	9	6	4	8	5	2	11	26	21	3.5	25.7
Dir	181	186	183	181	186	186	180	187	176	157	140	127	146	141	132	147	148	85	42	53	247	316	350	348	160.1	349.8
10 Spd	19	17	17	16	14	15	17	15	13	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	19.0
Dir	357	358	1	11	5	8	13	11	1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	357.1
11 Spd	N	N	N	N	N	N	N	N	N	24	23	19	18	17	16	15	17	18	19	16	15	14	12	3	--	24.1
Dir	N	N	N	N	N	N	N	N	N	164	166	182	180	184	189	185	195	194	190	190	189	186	185	186	--	164.2
12 Spd	6	9	14	12	13	12	8	5	7	5	3	4	2	3	8	8	7	10	14	20	17	21	22	20	4.5	22.3
Dir	13	30	33	51	59	64	65	65	58	86	129	107	116	221	187	201	211	195	200	187	195	186	177	184	153.6	176.5
13 Spd	18	16	15	15	13	16	14	16	16	15	15	14	13	14	15	16	13	6	6	5	7	6	7	7	10.7	17.7
Dir	183	188	183	184	194	179	183	183	188	191	199	204	229	239	256	273	277	249	229	217	252	222	214	203	208.2	183.4
14 Spd	11	12	11	13	15	15	24	32	32	31	32	31	24	23	23	22	20	17	7	6	8	11	16	17	18.4	32.2
Dir	188	179	171	171	165	140	154	162	167	164	163	162	178	187	180	175	177	186	239	190	180	187	190	188	172.6	163.2
15 Spd	17	18	20	17	14	13	13	11	11	11	11	13	17	14	10	9	5	6	9	10	11	16	19	21	7.2	21.4
Dir	190	195	200	204	220	229	223	222	217	240	250	271	283	287	275	282	236	137	131	130	121	117	107	106	203.4	105.6
16 Spd	23	13	2	6	13	14	14	12	10	9	13	19	24	27	25	28	26	23	22	21	19	23	28	26	12.8	28.4
Dir	111	124	208	164	190	185	188	192	214	249	277	278	279	282	280	283	281	281	290	286	278	278	283	278	265.7	282.6
17 Spd	29	24	26	27	25	25	23	22	21	24	24	23	22	24	20	19	15	8	4	6	8	11	10	10	16.2	29.2
Dir	287	285	282	286	289	289	287	289	290	290	292	292	298	297	296	289	287	282	184	181	179	184	188	177	282.7	286.7
18 Spd	9	12	13	16	16	20	23	23	22	24	21	17	16	14	13	11	8	8	10	10	14	13	14	10	14.6	24.0
Dir	171	164	164	170	162	167	175	181	181	187	190	185	182	181	190	187	171	154	154	164	172	174	175	163	175.3	187.4
19 Spd	9	13	14	15	18	17	9	3	4	6	8	5	8	10	10	11	12	13	14	14	12	10	10	11	1.5	17.9
Dir	54	68	87	89	76	61	65	86	112	195	192	213	207	212	227	258	256	276	277	275	253	269	269	271	240.7	76.1
20 Spd	10	8	7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	9.9
Dir	273	267	270	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	273.3
21 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
22 Spd	N	N	11	10	11	10	11	12	12	13	16	14	13	13	13	10	9	7	6	5	5	3	4	5	9.3	15.8
Dir	N	N	259	259	263	257	255	259	257	268	267	271	265	274	283	281	281	265	260	236	236	246	233	213	263.1	266.8

## Hourly Averages

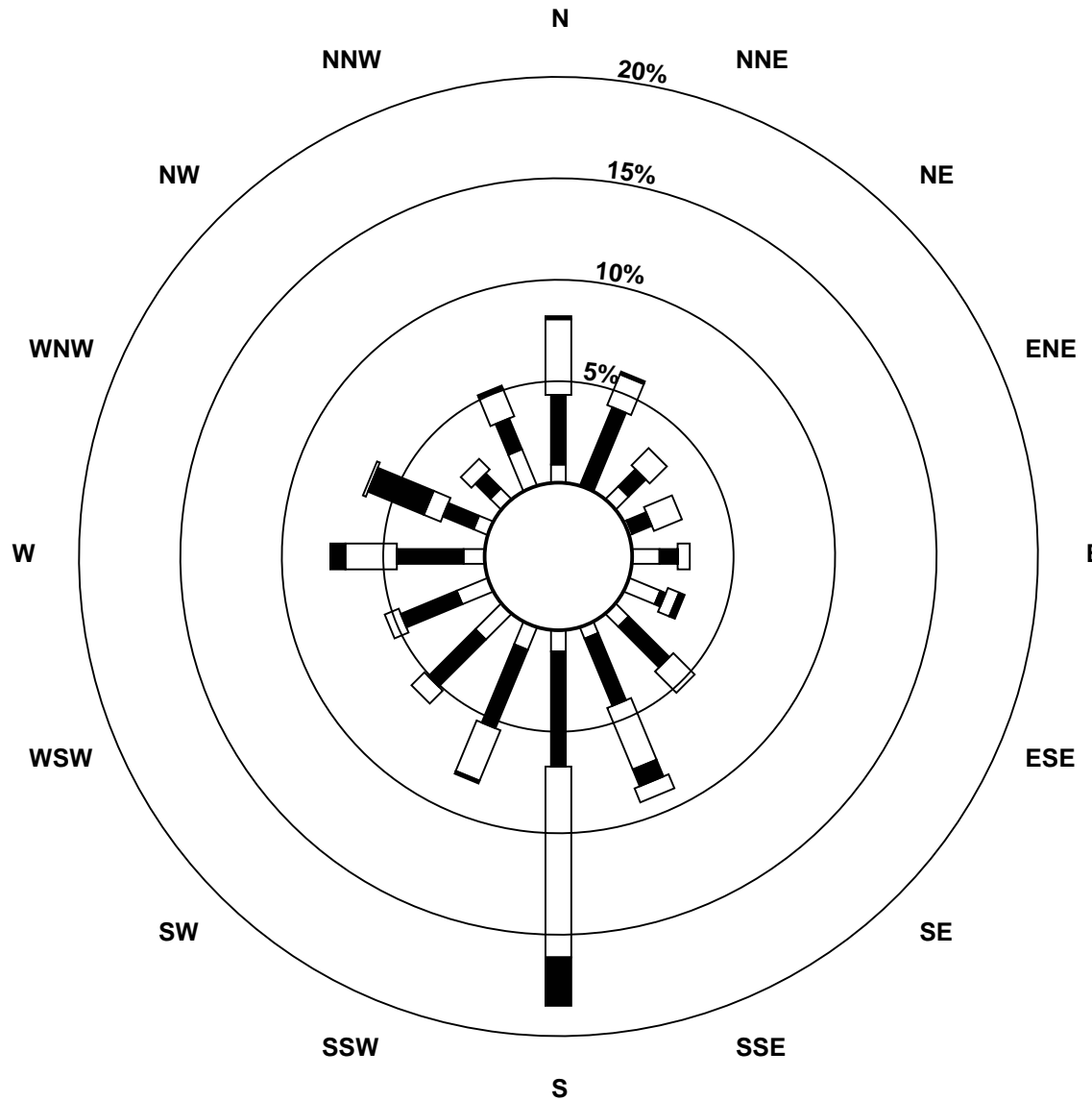
Wind Speed (km/h)  
Wind Direction (deg)  
Sunset House - October 2012

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	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	5	6	5	4	3	4	4	4	4	4	4	6	7	6	7	10	9	5	5	6	10	10	12	3.2	12.2
Dir	220	216	214	230	226	254	327	270	228	254	241	288	327	323	336	348	0	5	349	344	2	3	23	35	329.9	35.2
24 Spd	14	12	12	11	10	9	10	9	13	15	14	12	10	13	13	10	8	7	11	9	9	10	9	10.2	14.7	
Dir	41	29	27	35	30	18	24	39	50	58	58	36	5	354	2	3	14	26	14	359	2	3	5	9	23.2	58.0
25 Spd	7	6	6	5	4	4	5	5	5	4	5	5	6	6	7	8	10	7	5	7	8	6	6	6	4.0	9.6
Dir	9	16	10	357	340	335	337	2	347	332	317	308	302	306	301	5	30	39	79	84	75	78	79	82	11.4	30.3
26 Spd	1	1	3	5	5	5	6	8	8	10	7	4	9	11	13	14	12	13	13	13	8	13	13	12	7.1	14.0
Dir	260	158	42	46	54	37	33	58	80	78	81	81	7	28	42	60	68	72	89	94	98	123	138	134	75.8	60.2
27 Spd	15	12	16	17	12	4	4	15	14	11	19	21	17	15	12	16	12	10	10	9	10	9	9	11	12.0	20.6
Dir	135	120	124	135	125	117	135	156	145	151	170	161	156	171	153	157	165	170	171	156	155	148	154	160	151.1	161.3
28 Spd	11	10	7	5	8	7	10	10	6	7	9	10	10	12	13	11	10	8	7	7	6	7	5	4	4.7	12.9
Dir	156	137	135	102	129	135	150	163	196	239	269	262	265	276	278	271	266	267	234	229	236	234	240	251	223.7	277.6
29 Spd	2	2	4	6	8	7	2	7	12	12	11	11	13	12	11	11	9	10	12	8	8	8	9	8	7.9	12.5
Dir	268	274	350	8	11	22	351	10	47	52	48	36	26	32	37	31	23	359	11	29	25	27	28	359	25.0	25.5
30 Spd	7	8	6	3	3	5	4	3	3	3	4	5	5	5	5	5	5	1	4	4	5	4	4	8	0.8	7.8
Dir	9	359	19	348	331	282	322	166	188	264	244	230	250	283	272	257	268	183	113	118	129	100	126	149	271.6	358.8
31 Spd	7	4	3	4	1	5	2	4	13	10	12	12	7	14	16	16	14	15	16	16	18	19	17	18	10.2	19.5
Dir	145	115	87	116	306	53	212	158	175	195	170	159	132	139	148	161	165	152	154	158	159	162	166	164	157.1	162.3
Spd	1.5	1.7	1.7	2.3	2.3	2.2	3.4	4.5	4.4	4.7	4.8	4.6	5.1	5.5	4.9	4.3	3.5	1.8	2.0	2.7	3.4	3.7	2.7	2.7	Diurnal Average	
Dir	176.3	173.0	185.0	172.4	174.1	175.8	186.2	179.1	183.1	198.8	210.2	226.6	247.3	256.8	255.6	259.1	264.2	244.5	199.8	183.6	181.5	184.1	180.2	180.2	Diurnal Maximum	
Spd	29.2	23.6	26.2	27.1	25.3	25.0	24.0	31.9	31.9	31.3	32.2	30.9	24.3	26.8	24.7	28.4	25.7	23.4	22.4	20.7	18.8	23.1	27.6	26.4	Diurnal Maximum	
Dir	286.7	284.9	282.2	286.1	288.5	288.5	153.9	161.8	166.6	163.7	163.2	161.7	278.7	282.1	279.9	282.6	281.3	280.8	289.7	285.7	278.3	278.4	283.2	278.4	Diurnal Maximum	
Maximum Speed Value: 32 km/h on Oct 14 11:00		Minimum Speed Value: 1 km/h on Oct 30 18:00																Hours in Service: 744								
Maximum Daily Speed Average: 18.4 km/h on Oct 14		Minimum Daily Speed Average: 0.8 km/h on Oct 30																Hours of Data: 673								
Maximum Diurnal Speed Average: 5.5 km/h at hour 14		Minimum Diurnal Speed Average: 1.5 km/h at hour 1																Hours of Missing Data: 71								
Monthly Average Velocity: 2.81 km/h 208.59 deg		Speed Percentiles: P <sub>1</sub> = 1.7 P <sub>10</sub> = 4.6 Q <sub>1</sub> = 6.8 Median = 10.4 Q <sub>3</sub> = 14.3 P <sub>90</sub> = 18.8 P <sub>99</sub> = 28.2																Percent Operational Time: 90.5								
All monthly, daily, and diurnal averages have been calculated using vector methods																										
N - Not Valid																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	11	35	38	4	0	0	88																			
NorthEast	3	31	24	0	0	0	58																			
East	12	9	8	3	0	0	32																			
SouthEast	14	36	23	1	0	0	74																			
South	12	47	98	24	5	0	186																			
SouthWest	19	51	15	0	0	0	85																			
West	14	40	27	22	2	0	105																			
NorthWest	10	23	9	3	0	0	45																			
Total	95	272	242	57	7	0	673																			

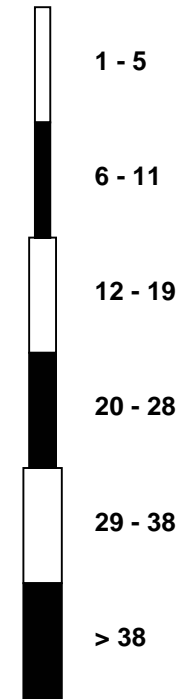


**Wind Rose**

**Wind Speed (WS) (km/h)**  
**Sunset House - October 2012**



**Wind Speed Classes (km/h)**



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Sunset House - October 2012

Maximum Speed: 32 km/h on Oct 14 11:00	Maximum Daily Speed Average: 19.3 km/h on Oct 14	Hours in Service: 744
Minimum Speed: 2 km/h on Oct 26 02:00	Minimum Daily Speed Average: 5.0 km/h on Oct 30	Hours of Data: 673
Maximum Diurnal Speed Average: 13.2 km/h at hour 14	Minimum Diurnal Speed Average: 10.0 km/h at hour 21	Hours of Missing Data: 71
Monthly Average Speed: 11.46 km/h	Percentiles: P <sub>1</sub> = 2.8 P <sub>10</sub> = 5.0 Q <sub>1</sub> = 7.1 Median = 10.7 Q <sub>3</sub> = 14.6 P <sub>90</sub> = 19.2 P <sub>99</sub> = 28.4	Percent Operational Time: 90.5

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Oct	7	11	12	9	12	16	21	24	24	19	11	11	14	11	11	9	8	9	11	15	9	8	11	13	12.8	24.2																						
2-Oct	16	16	15	15	12	16	14	17	19	20	16	18	18	16	19	19	20	16	14	11	12	11	12	9	15.4	19.9																						
3-Oct	10	10	10	10	8	7	7	5	5	6	6	7	8	11	11	13	11	11	9	11	12	14	14	15	9.6	15.4																						
4-Oct	15	15	14	13	12	11	12	11	10	9	8	7	7	9	6	7	6	4	4	5	6	8	8	8	9.0	15.1																						
5-Oct	9	12	11	12	12	12	12	15	16	16	15	14	15	14	12	11	9	6	6	7	7	7	5	5	10.8	15.7																						
6-Oct	4	4	6	5	5	8	9	10	12	12	12	11	13	10	10	11	11	9	13	15	17	13	9	7	9.8	17.2																						
7-Oct	6	7	9	10	8	8	6	5	8	14	19	17	16	17	15	15	19	18	17	14	12	9	10	10	11.9	18.9																						
8-Oct	10	10	6	5	6	4	4	2	5	6	6	8	10	11	12	12	9	5	4	6	5	6	6	6	6.9	12.4																						
9-Oct	9	11	11	12	11	11	10	9	8	6	7	8	10	10	10	9	6	4	8	5	3	12	26	21	9.9	25.9																						
10-Oct	19	17	17	17	14	15	17	15	13	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	19.1																						
11-Oct	N	N	N	N	N	N	N	N	N	24	23	19	18	17	16	16	17	18	19	16	15	14	12	4	--	24.3																						
12-Oct	6	9	14	12	13	12	8	6	7	5	4	4	3	4	8	9	7	10	14	20	18	21	22	21	10.7	22.3																						
13-Oct	18	16	15	15	14	16	14	17	16	15	16	14	13	14	16	16	13	7	6	6	7	6	7	8	12.7	17.8																						
14-Oct	11	12	11	13	15	15	24	32	32	31	32	31	24	23	24	22	20	18	12	7	9	11	16	17	19.3	32.4																						
15-Oct	18	18	20	17	15	14	13	12	11	12	11	14	17	14	10	9	6	7	9	10	11	16	19	22	13.6	21.6																						
16-Oct	23	16	3	7	13	14	14	12	10	9	13	20	25	27	25	29	26	24	23	21	19	24	28	27	18.8	28.6																						
17-Oct	29	24	27	27	25	25	24	22	21	24	25	23	23	24	21	19	15	8	4	6	8	11	10	10	19.0	29.5																						
18-Oct	9	12	13	16	16	20	23	23	22	24	21	18	16	15	13	11	8	8	10	10	15	14	14	10	15.0	24.2																						
19-Oct	10	14	14	15	18	17	10	5	5	7	8	5	9	10	10	11	12	13	14	15	12	11	10	11	11.1	18.1																						
20-Oct	10	8	8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	10.1																						
21-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																						
22-Oct	N	N	11	10	11	10	11	12	13	14	16	14	13	14	13	11	9	7	6	5	5	4	4	5	9.9	16.1																						
23-Oct	5	5	6	5	4	3	4	4	4	5	4	4	7	7	6	8	10	9	5	5	6	10	11	12	6.2	12.2																						
24-Oct	14	12	12	11	10	9	10	10	13	15	14	12	12	14	13	10	10	8	7	11	9	9	10	9	11.0	14.8																						
25-Oct	7	7	6	5	4	4	5	5	5	4	5	6	6	7	7	10	10	7	5	7	8	6	6	6	6.1	9.9																						
26-Oct	2	2	3	5	5	5	6	8	8	10	8	5	9	11	13	14	12	13	13	13	9	13	13	12	8.9	14.2																						
27-Oct	15	12	16	17	12	5	7	15	14	12	19	21	17	15	12	17	12	10	10	9	10	9	9	11	12.8	21.0																						
28-Oct	11	10	7	5	8	8	10	10	7	7	9	10	10	12	13	11	10	8	7	7	6	7	6	4	8.5	13.1																						
29-Oct	2	2	4	6	8	7	2	7	12	12	11	11	13	12	12	11	9	11	12	8	8	8	9	8	8.6	12.6																						
30-Oct	7	8	7	4	4	5	4	3	4	4	4	5	6	5	6	5	5	3	4	4	5	4	4	8	5.0	8.1																						
31-Oct	7	4	3	4	3	5	3	6	13	10	13	13	10	14	16	17	15	16	16	16	18	20	18	18	11.5	19.8																						
																								11.1	10.8	10.8	10.8	10.7	10.8	10.9	11.5	12.1	12.5	12.7	12.5	12.9	13.2	12.9	12.9	11.6	10.1	10.1	10.2	10.0	10.9	11.8	11.4	Diurnal Average
																								29.5	23.9	26.5	27.4	25.5	25.2	24.3	32.1	32.2	31.5	32.4	31.1	24.7	27.0	25.0	28.6	26.1	23.8	22.7	20.9	19.2	23.5	27.9	26.7	Diurnal Maximum

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

## Hourly Standard Deviations

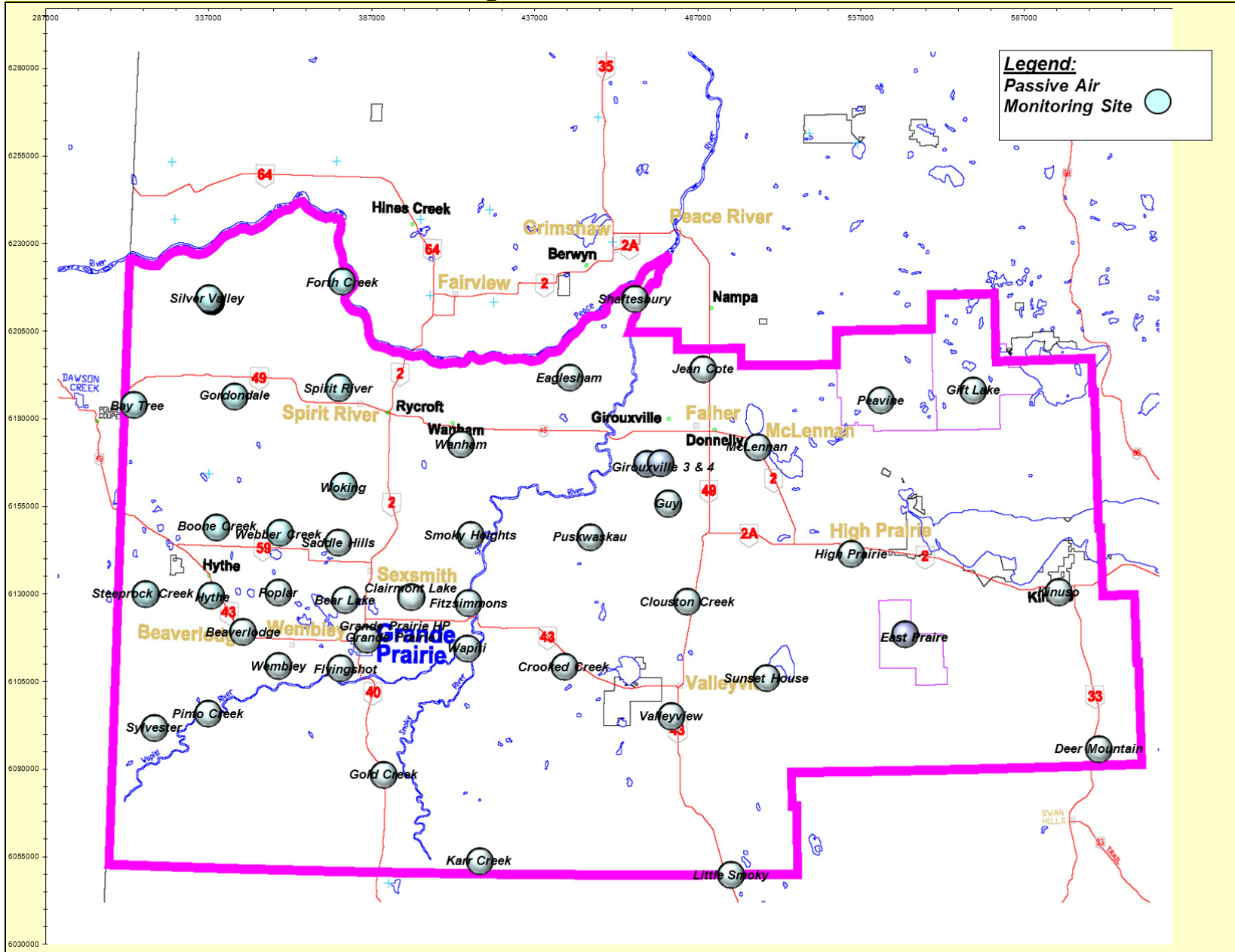
Wind Direction (WD) - deg  
Sunset House - October 2012

Maximum Value: 82.8 deg on Oct 31 05:00		Hours in Service: 744																								
Minimum Value: 3.0 deg on Oct 4 22:00		Hours of Data: 673																								
Percentiles: P <sub>1</sub> = 3.9 P <sub>10</sub> = 5.9 Q <sub>1</sub> = 7.8 Median = 10.7 Q <sub>3</sub> = 15.7 P <sub>90</sub> = 26.1 P <sub>99</sub> = 67.8		Hours of Missing Data: 71																								
		Hours of Calibration: 0																								
		Percent Operational Time: 90.5																								
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	10	8	17	4	5	8	6	5	8	11	24	19	13	10	13	23	19	20	19	24	34	16	36	11	35.6	
2-Oct	9	11	10	9	7	6	7	7	10	6	9	8	10	10	10	10	9	8	10	9	8	9	8	12	12.3	
3-Oct	10	11	11	12	13	11	13	18	20	14	24	24	30	18	29	20	15	9	6	3	4	5	5	5	30.2	
4-Oct	7	6	9	6	5	5	8	6	7	11	20	24	44	44	45	67	23	32	31	9	5	3	6	17	67.1	
5-Oct	11	4	3	6	3	4	4	4	6	8	12	16	15	19	18	28	20	19	11	8	9	10	13	15	27.7	
6-Oct	18	32	10	22	28	6	4	6	6	10	10	18	15	18	21	19	13	12	4	5	8	11	12	23	32.3	
7-Oct	14	14	10	11	15	13	16	26	21	14	11	15	15	15	12	11	23	8	8	10	8	13	6	7	26.2	
8-Oct	5	4	8	43	7	19	29	43	30	34	27	12	13	11	18	16	20	42	16	6	7	13	6	8	43.4	
9-Oct	7	5	7	10	7	7	7	7	10	7	12	9	19	11	20	16	26	21	12	15	61	18	7	10	60.9	
10-Oct	6	7	5	6	7	5	7	5	7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	7.4	
11-Oct	N	N	N	N	N	N	N	N	N	7	8	10	10	10	10	10	9	7	7	6	7	7	6	65	64.6	
12-Oct	12	11	7	10	6	10	11	15	9	26	34	13	64	35	14	15	11	9	6	9	7	6	4	8	63.6	
13-Oct	7	8	19	5	18	7	8	7	8	9	10	10	12	12	13	11	11	27	19	15	20	16	10	12	26.9	
14-Oct	9	6	4	5	9	6	9	6	8	7	6	6	12	7	9	7	8	10	67	26	21	5	5	6	66.8	
15-Oct	5	5	6	6	12	9	10	15	10	12	14	14	11	10	13	17	32	18	13	12	9	4	8	8	32.1	
16-Oct	7	71	64	45	7	8	6	7	15	15	14	10	11	8	9	8	10	10	10	8	12	12	9	9	70.6	
17-Oct	8	8	9	9	7	8	8	6	7	7	8	9	10	9	11	11	9	22	29	13	7	8	11	7	29.4	
18-Oct	11	4	4	5	7	6	5	6	7	6	7	8	8	7	9	10	7	7	8	11	12	6	4	17	16.6	
19-Oct	27	14	8	5	9	7	57	72	27	14	14	22	12	11	13	14	15	10	9	10	17	11	12	11	72.2	
20-Oct	12	13	12	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	13.3
21-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
22-Oct	N	N	13	13	11	14	13	12	12	11	10	11	12	13	13	11	10	14	15	15	19	22	17	12	22.3	
23-Oct	14	13	11	14	14	26	37	27	33	25	30	33	20	18	17	18	8	10	19	12	6	4	12	6	37.1	
24-Oct	10	8	5	5	7	7	9	11	9	7	10	15	27	9	8	9	13	18	16	8	8	10	11	7	27.0	
25-Oct	11	14	13	11	15	18	15	15	23	17	15	16	21	17	17	31	15	11	11	7	6	5	7	13	30.9	
26-Oct	68	60	24	12	6	7	10	16	13	10	14	20	11	9	16	10	12	8	7	7	14	6	7	5	68.2	
27-Oct	6	9	7	6	10	36	58	11	7	9	11	11	11	13	14	10	10	12	10	10	9	8	12	11	58.0	
28-Oct	16	9	14	15	22	17	8	12	17	23	14	14	14	11	10	10	11	12	20	12	15	12	20	19	23.4	
29-Oct	51	32	21	13	11	7	70	8	9	7	8	12	6	10	10	8	12	10	8	9	8	11	8	14	69.8	
30-Oct	25	16	28	46	44	27	44	31	31	28	24	22	24	12	22	28	18	80	14	13	11	25	24	8	80.3	
31-Oct	11	8	34	23	83	66	74	62	8	20	18	17	63	14	11	10	14	13	12	10	10	10	8	9	82.8	
	68.2	70.6	64.4	46.0	82.8	65.8	74.4	72.2	32.6	33.9	33.7	33.1	63.6	43.9	45.1	67.1	32.1	80.3	66.8	26.3	60.9	25.4	35.6	64.6		
N - Not Valid																										

# PAZA

## Monthly Passive Data Summary

# Location of PAZA Passive Monitoring Stations



## PAZA Passive Results for October 2012

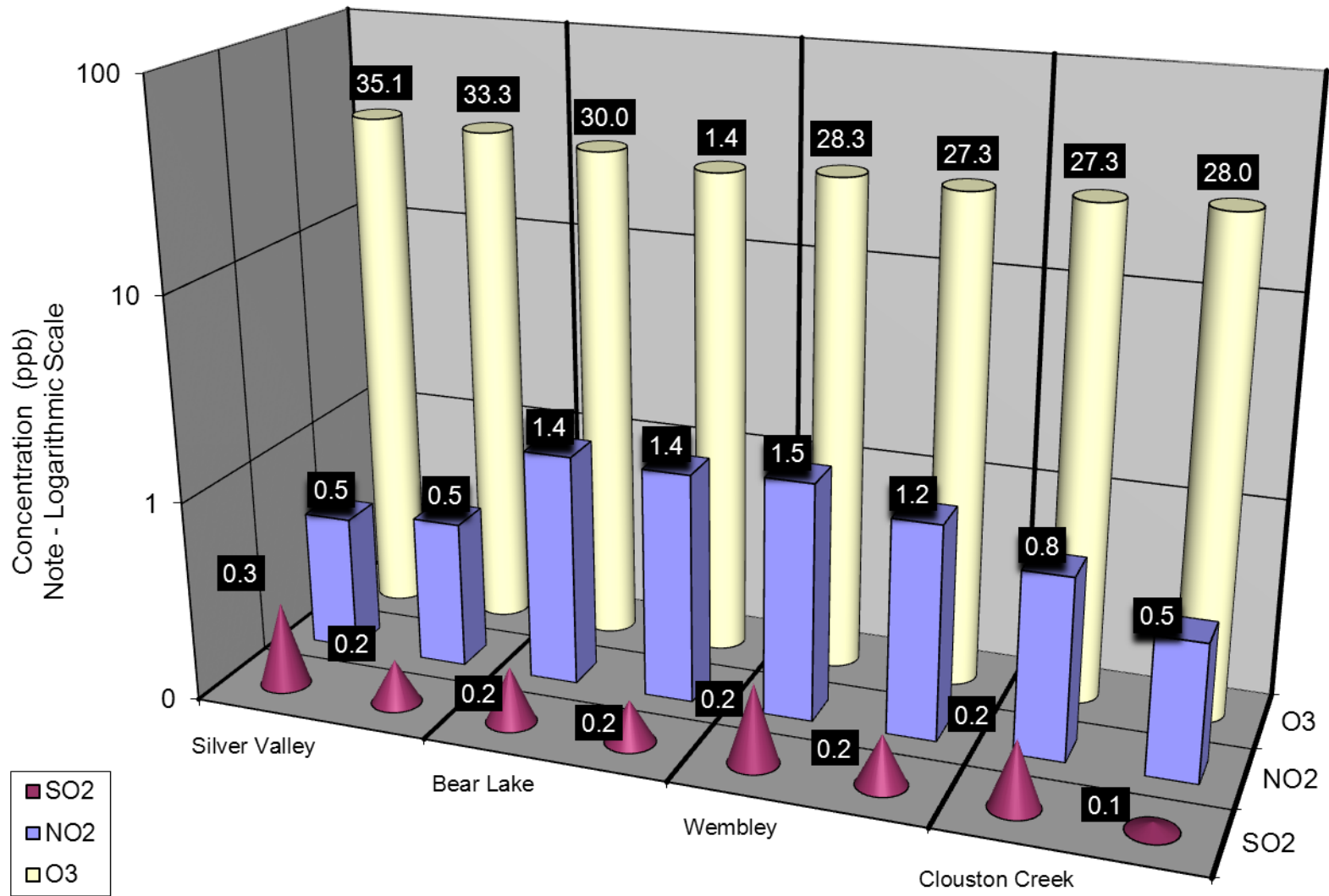
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
<b>Duplicates</b>						
1a	Silver Valley	0.3	35.1	0.5		
1b	Silver Valley	0.2	33.3	0.5		
23a	Bear Lake	0.2	30.0	1.4		
23b	Bear Lake	0.2	26.5	1.4		
24a	Wembley	0.2	28.3	1.5		
24b	Wembley	0.2	27.3	1.2		
39a	Clouston Creek	0.2	27.3	0.8		
39b	Clouston Creek	0.1	28.0	0.5		
64a	Girouxville 4				0.2	
64b	Girouxville 4				0.2	
1	Silver Valley	0.2	34.2	0.5		08-27-081-11 W6M
2	Bay Tree	0.2	31.4	0.7		13-16-078-13 W6M
3	Fourth Creek	0.1	28.3	0.4		04-13-082-07 W6M
4	Gordondale	0.3	32.7	0.7		04-34-078-10 W6M
5	Boone Creek	0.2	28.2	0.8		16-36-074-11 W6M
7	Steeprock Creek	0.1	33.7	0.6		09-35-072-13 W6M
9	Spirit River	0.1	32.7	0.4		08-12-079-07 W6M
10	Woking	0.2	28.1	0.5		01-13-076-07 W6M
11	Webber Creek	0.3	25.9	0.9		09-36-074-09 W6M
12	Hythe	0.2	31.5	0.8		14-36-072-11 W6M
14	Sylvester	0.1	22.7	0.6		08-06-069-12 W6M
16	Beaverlodge	0.2	28.5	1.5		15-36-071-10 W6M
17	Poplar	0.2	27.1	0.8		13-06-073-08 W6M
18	Saddle Hills	0.2	29.6	1.0		04-25-074-07 W6M
19	Wanham	0.2	31.1	0.5		16-22-077-03 W6M
20	Shaftesbury	0.1	25.8	0.5		04-03-082-23 W5M
21	Eaglesham	0.1	25.0	0.4		16-21-079-25 W5M
23	Bear Lake	0.2	28.2	1.4		15-31-072-06 W6M

## PAZA Passive Results for October 2012 (Continued)

24	Wembley	0.2	27.8	1.4		12-31-070-08 W6M
25	Pinto Creek	0.2	30.6	0.7		04-24-069-11 W6M
26	Flyingshot	0.2	26.0	1.4		15-36-070-07 W6M
27	Grande Prairie I	0.2	23.4	5.3		08-15-071-06 W6M
28	Clairmont Lake	0.3	31.8	1.1		09-06-073-04 W6M
29	Smoky Heights	0.3	29.7	1.0		04-06-075-02 W6M
30	Fitzsimmons	N/S	N/S	N/S		15-36-072-03 W6M
32	Gold Creek	0.2	22.0	1.5		06-33-067-05 W6M
33	Wapiti	0.2	29.4	0.7		02-25-071-03 W6M
34	Puskwaskau	0.1	21.9	0.3		15-35-074-25 W5M
35	Jean Cote	0.2	28.5	0.7		12-35-079-21 W5M
36	Guy	0.1	28.1	0.6		03-04-076-22 W5M
37	Crooked Creek	N/S	N/S	N/S		16-01-071-26 W5M
38	Karr Creek	BDL	21.0	0.8		10-16-065-02 W6M
39	Clouston Creek	0.2	27.6	0.6		12-01-073-22 W5M
40	McLennan	0.3	30.8	0.8		03-29-077-19 W5M
41	Valleyview	0.2	29.6	0.8		09-30-069-22 W5M
42	Sunset House	0.1	31.2	0.6		05-32-070-19 W5M
43	High Prairie	0.1	27.7	0.7		16-13-074-17 W5M
44	Peavine	0.1	22.6	0.5		03-05-079-15 W5M
45	Gift Lake	0.1	21.4	0.5	0.1	10-07-079-12 W5M
46	Little Smoky	0.1	21.0	1.3		12-01-065-21 W5M
47	Kinuso	0.1	26.6	0.5		12-10-073-10 W5M
48	Deer Mountain	0.1	24.6	0.4		15-22-068-09 W5M
49	Grande Prairie HP	0.2	23.1	3.7		17-26-071-06 W6M
62	East Prairie	0.1	23.8	0.3		13-02-072-15 W5M
63	Girouxville 3				0.1	14-02-077-23 W5M
64	Girouxville 4				0.2	4-08-077-22 W5M

\*BDL = Below Detection Level

\*N/S - No sample



Duplicate Summary Chart



## Passive Summary for October 2012

Stats	Sulphur Dioxide SO <sub>2</sub>	Ozone O <sub>3</sub>	Nitrogen Dioxide NO <sub>2</sub>	Hydrogen Sulphide H <sub>2</sub> S
	ppb	ppb	ppb	ppb

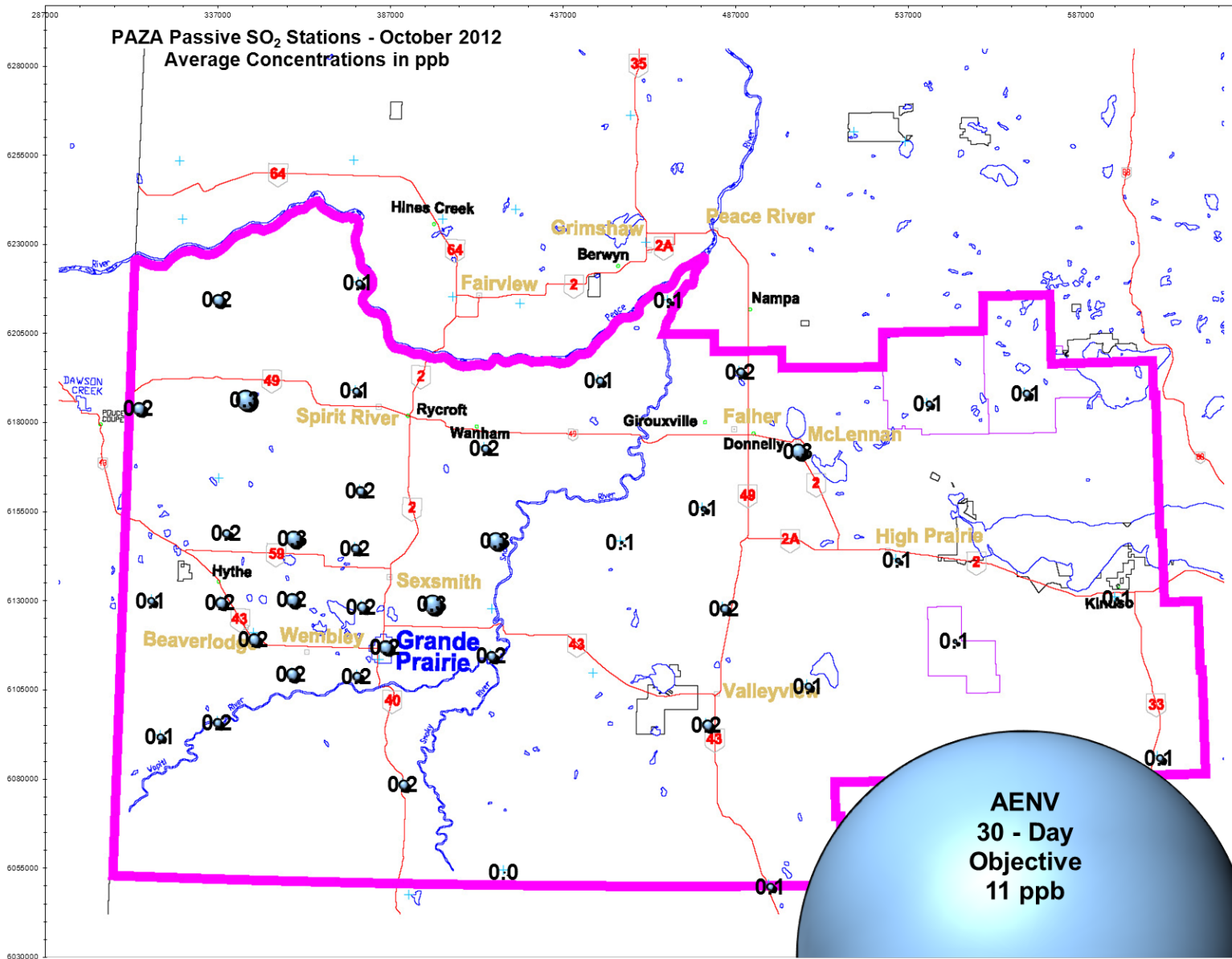
Passive Summary for October 2012 (PAZA Zone)				
Mean	0.2	27.5	0.9	0.1
Standard Deviation	0.1	3.7	0.9	0.1
Minimum	0.1	21.0	0.3	0.1
Minimum At	Puskwaskau (#34)	Little Smoky (#46)	Puskwaskau (#34)	Gift Lake (#45)
Maximum	0.3	34.2	5.3	0.2
Maximum At	Gordondale (#4)	Silver Valley (#1)	Grande Prairie I (#27)	Girouxville 4

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

	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PAZA Beaverlodge station	0.3	23.1	3.0
PAZA Beaverlodge passive	0.2	28.5	1.5

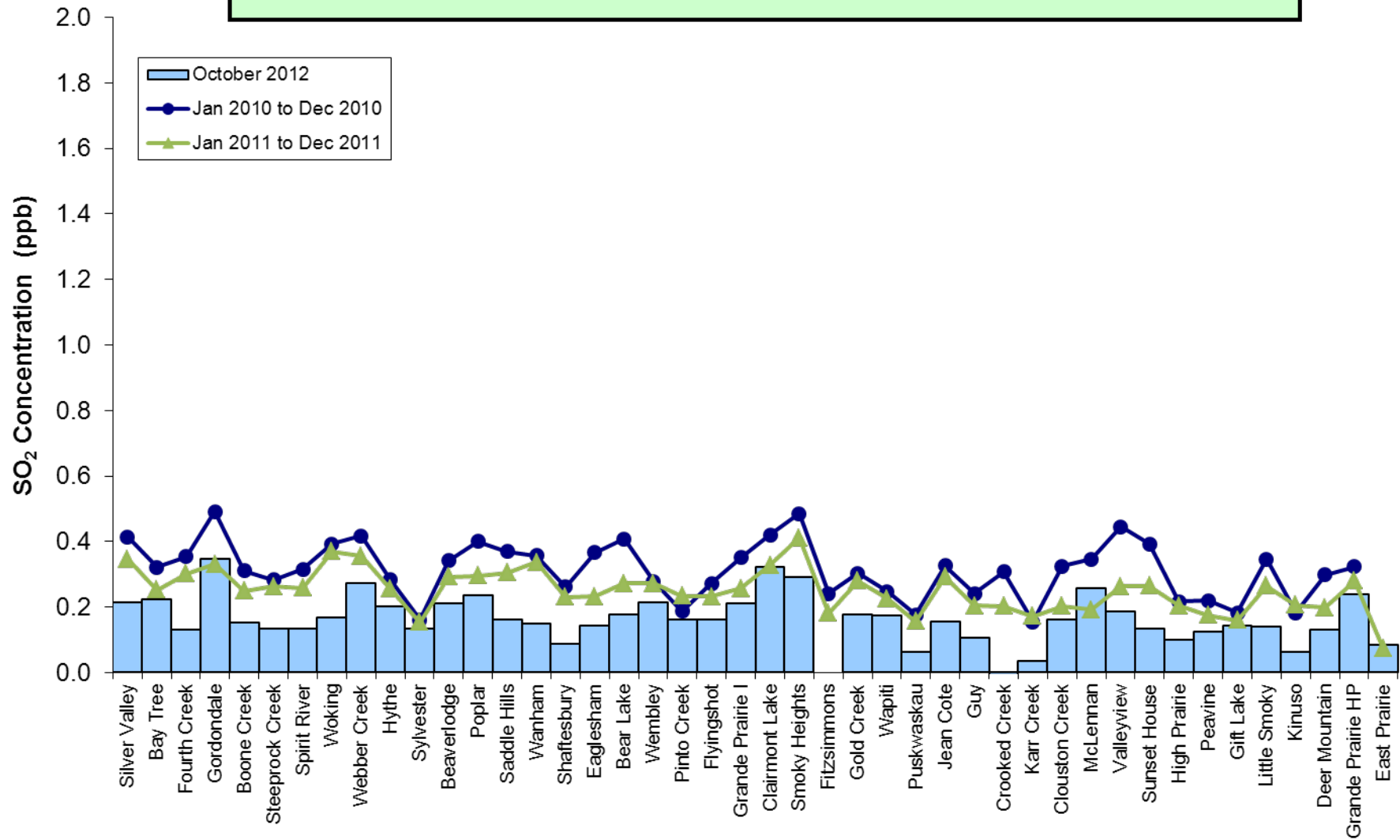
### Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PAZA Henry Pirker station	0.2	22.3	7.8
PAZA Grande Prairie passive	0.2	23.1	3.7

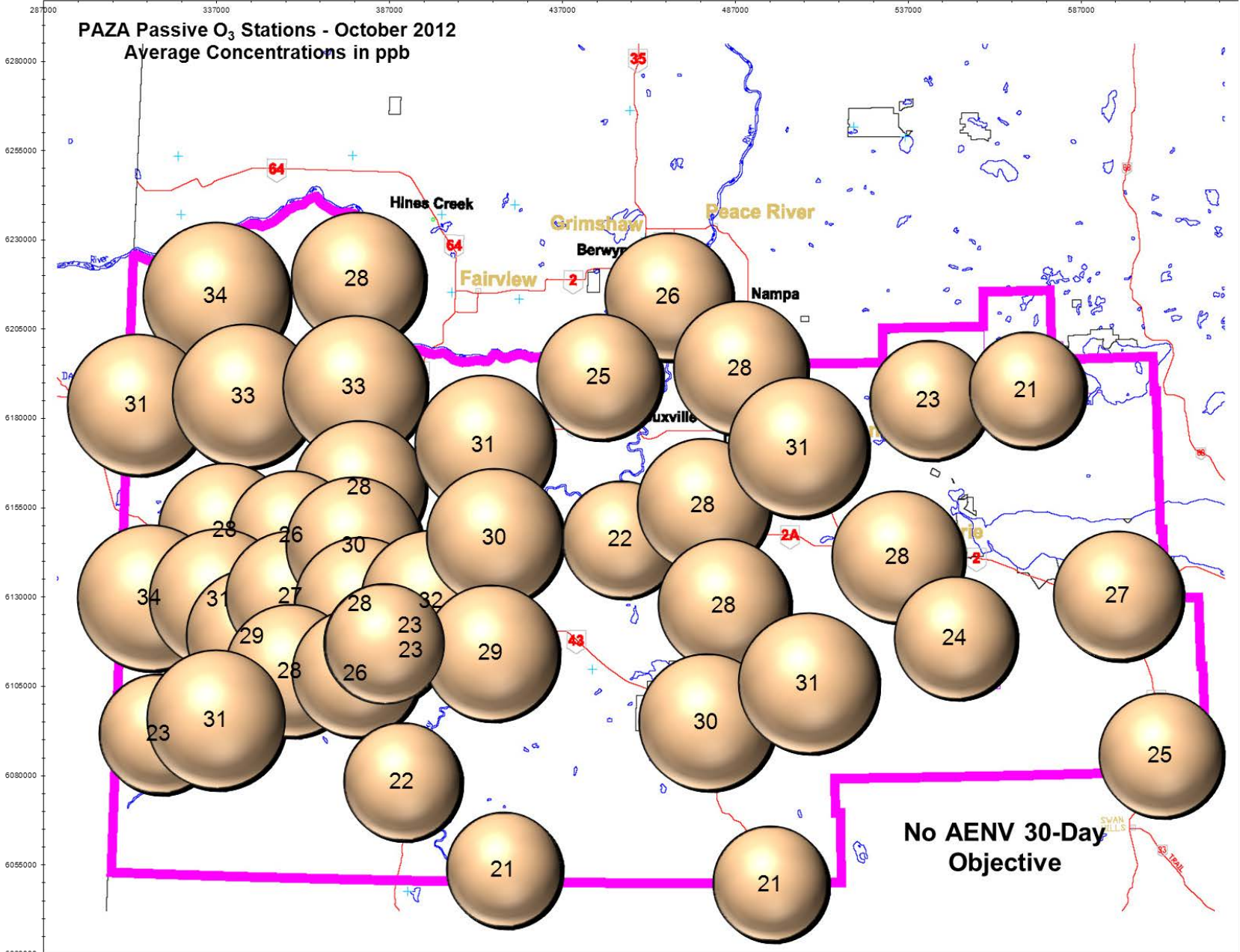


SO<sub>2</sub> Bubble Chart

**Alberta Ambient Air Quality Objective - 30-day Objective is 11 ppb**

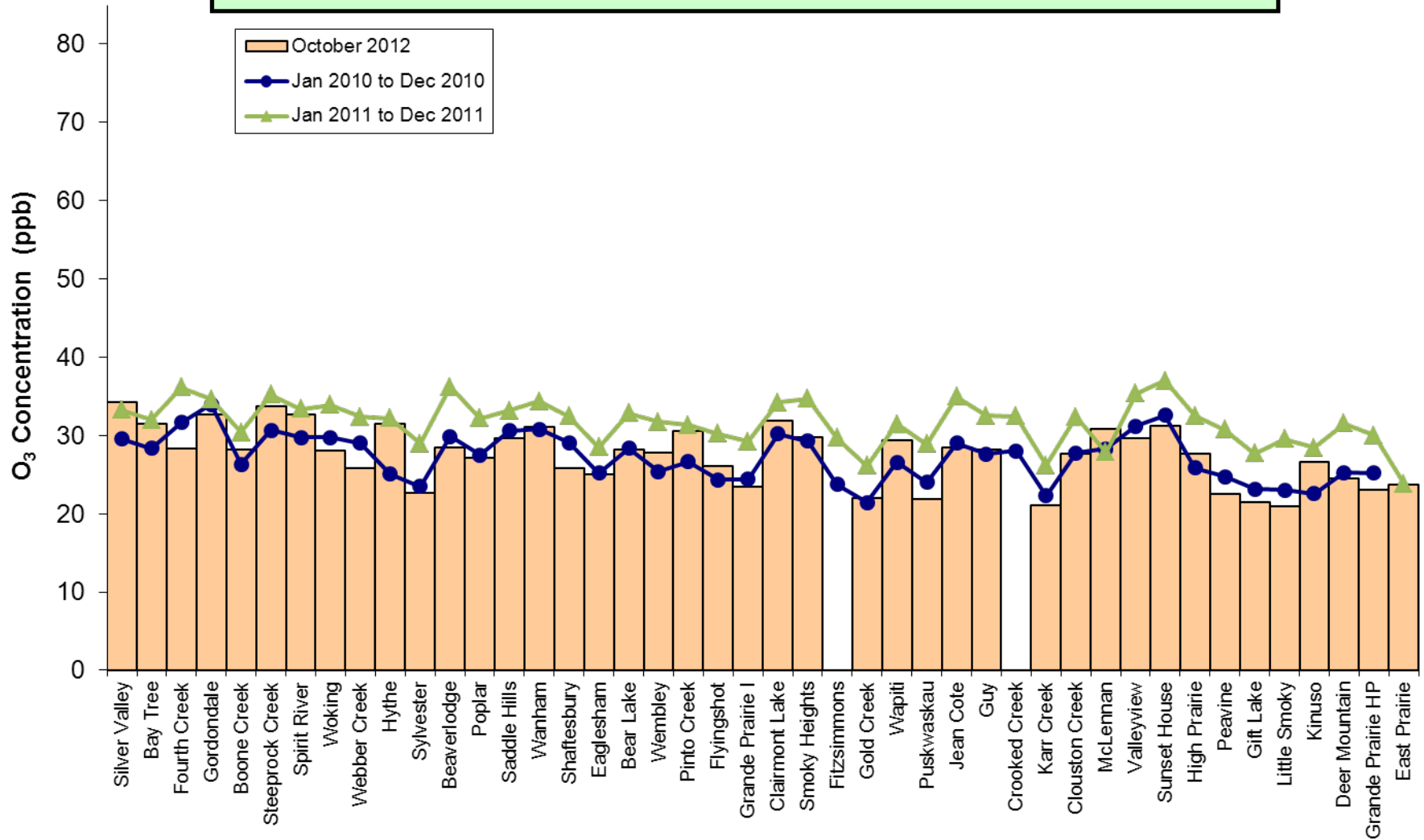


**SO<sub>2</sub> Summary Chart**



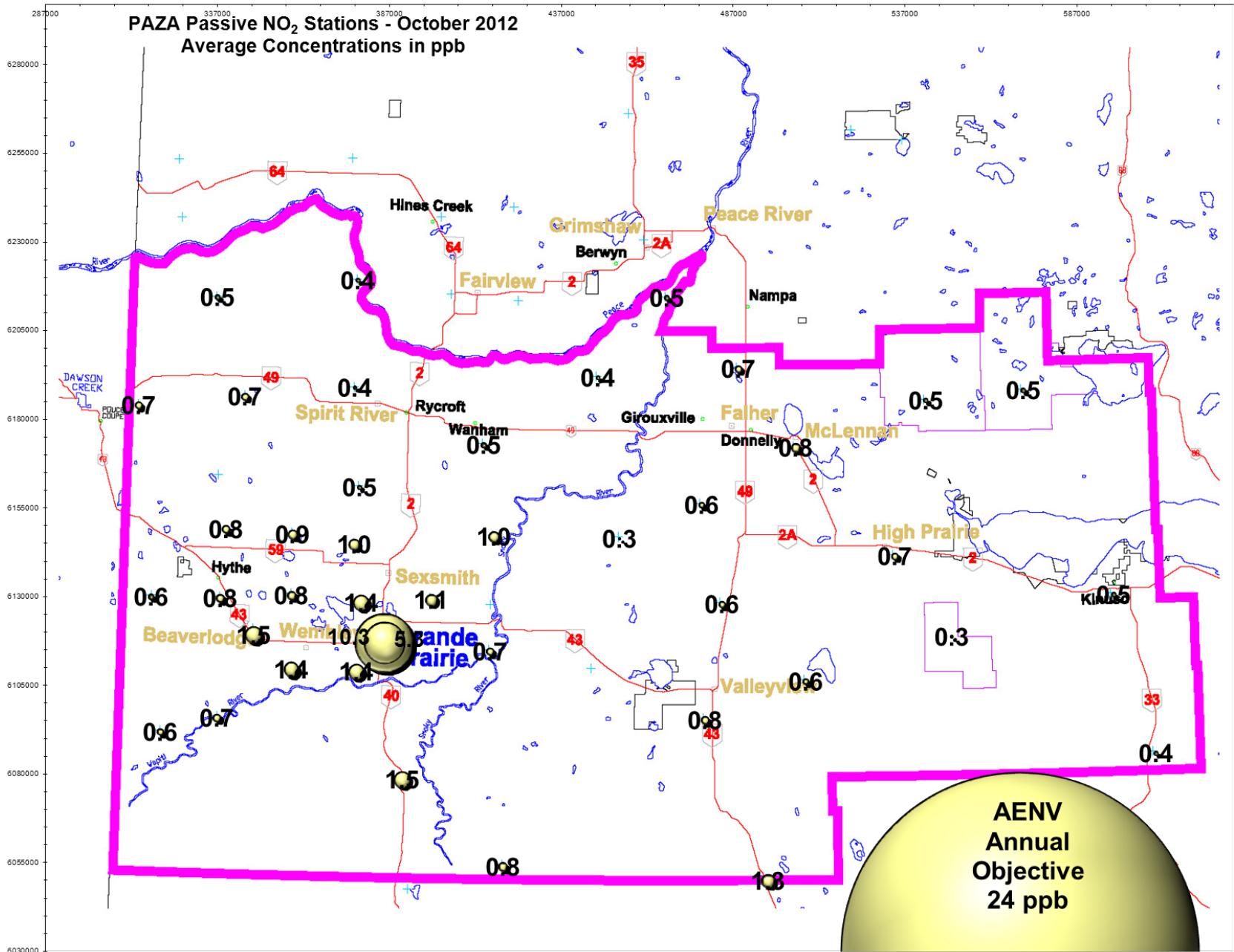
**O<sub>3</sub> Bubble Chart**

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



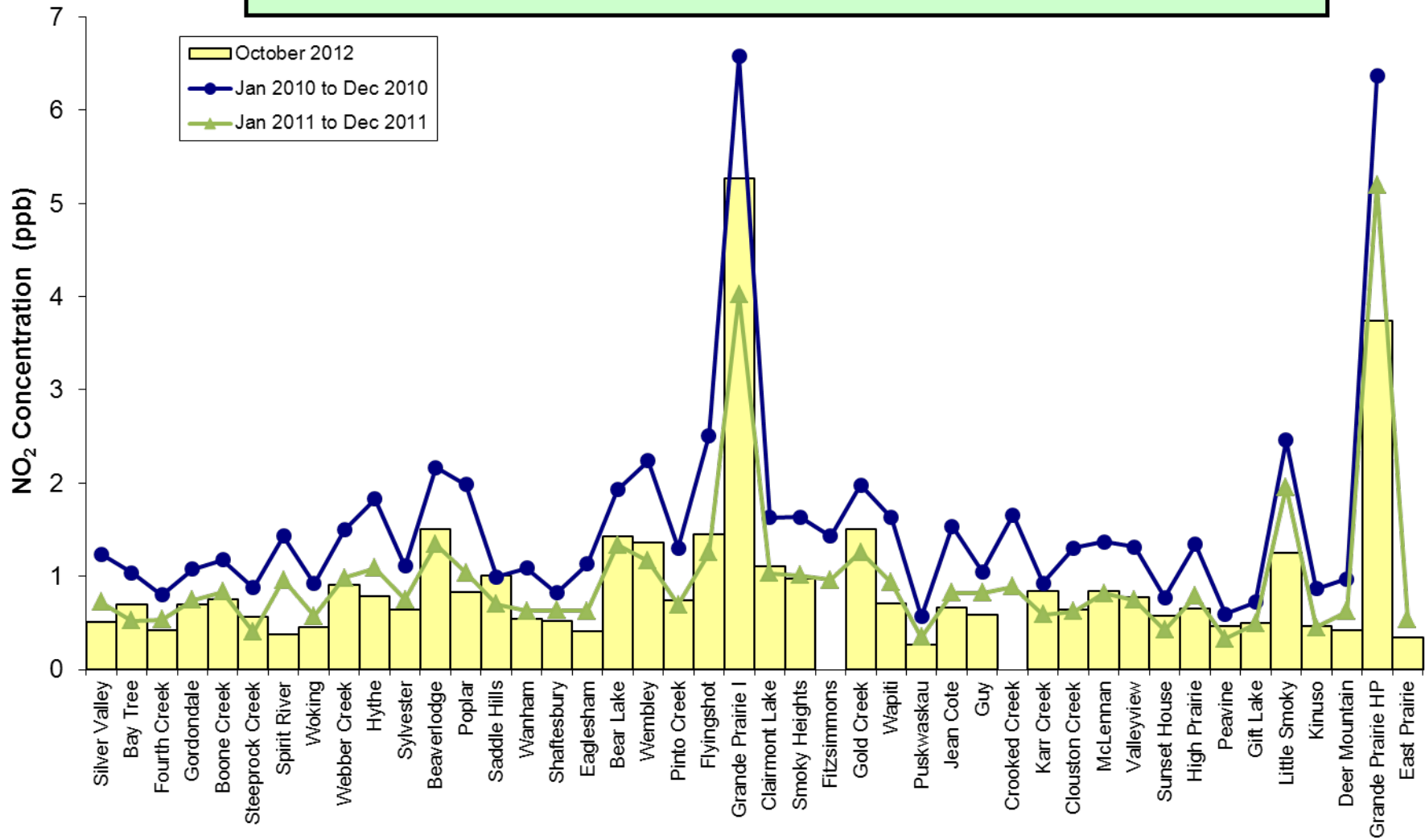
**O<sub>3</sub> Summary Chart**



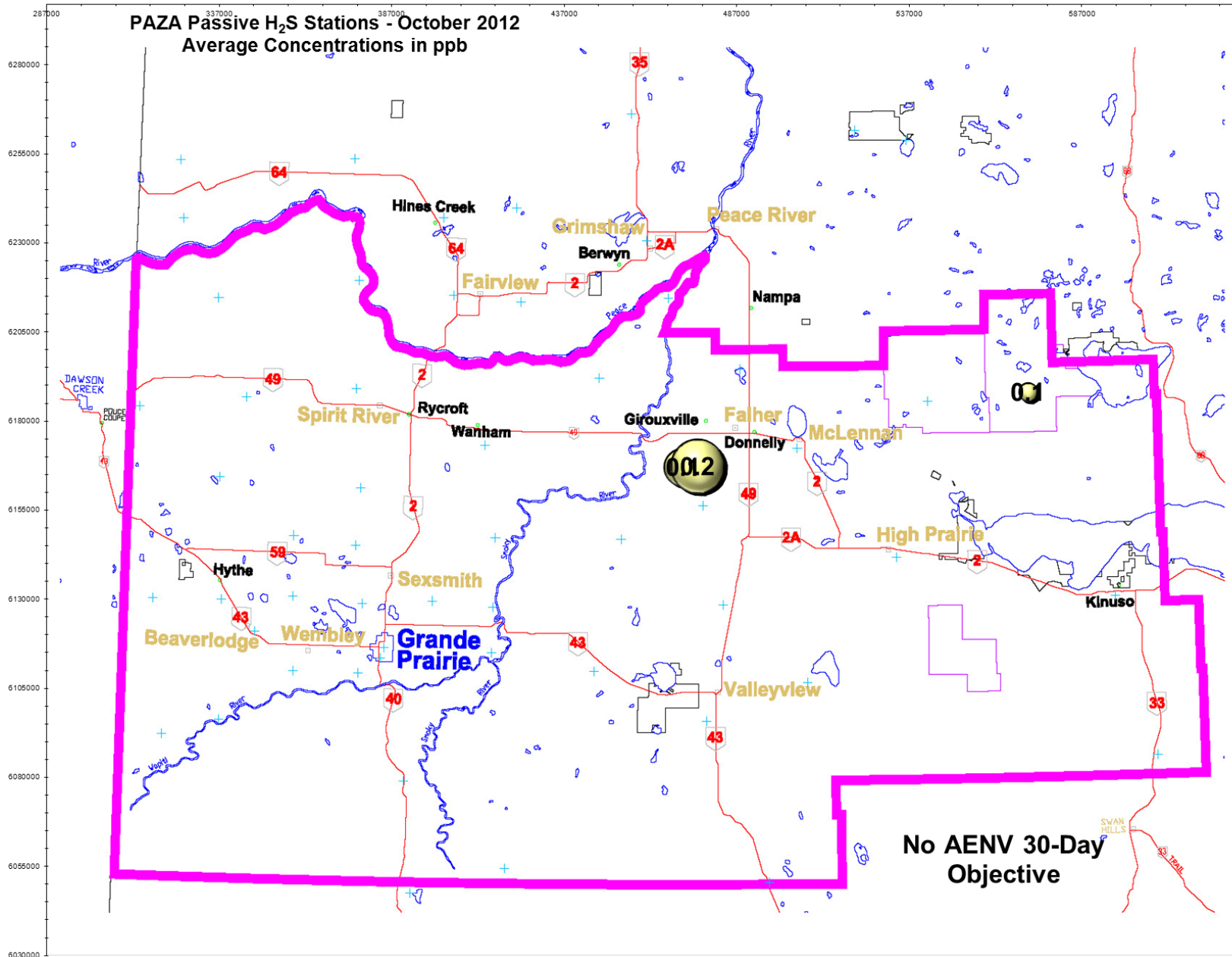


NO<sub>2</sub> Bubble Chart

**Alberta Ambient Air Quality Objective - Annual NO<sub>2</sub> Objective is 24 ppb**



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



H<sub>2</sub>S Bubble Chart



# PAZA

## **ALBERTA ENVIRONMENT AND SUSTAINABLE RESOURCES INCIDENCE REPORT**

### **October 2012**

## Air Monitoring Directive Exceedence Report

Alberta Environment and Sustainable Resource Development  
 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>263880</b>	<b>Reported To (AENV Contact):</b>	Karla
<b>Date &amp; Time Incident Reported to AENV:</b>	October 7, 2012 16:50 MST	<b>Reported By:</b>	Focus-Lee Loran
<b>Reported on Behalf of:</b>	PAZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	Beaverlodge Air Quality Station		
<b>Start Date &amp; Time of Incident:</b>	October 7, 2012 14:00 MST	<b>End Date &amp; Time of Incident:</b>	October 7, 2012 15:00 MST
<b>Reason or Nature of Incident:</b>			
<p>The PM<sub>2.5</sub> analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 1-hour average of PM<sub>2.5</sub> which is 80 µg/m<sup>3</sup>.</p> <p>October 7, 2012 14:00–15:00 MST    PM<sub>2.5</sub> = 84.3 µg/m<sup>3</sup>    WS = 15.5 km/h    WD = 307.8 deg</p>			
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported to AESRD Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operation of the PM <sub>2.5</sub> analyzer appeared to be normal during the time of this report. Local technician confirmed there was smoke in the Grande Prairie area from forest fires burning in northwestern Alberta.			
<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>	Lee Loran	<b>Date Report Submitted:</b>	October 10, 2012
<b>7-Day Letter Due Date:</b>	October 13, 2012		

## Air Monitoring Directive Exceedence Report

Alberta Environment and Sustainable Resource Development  
 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>263881</b>	<b>Reported To (AENV Contact):</b>	Karla / Carsten
<b>Date &amp; Time Incident Reported to AENV:</b>	October 7, 2012 multiple reporting times	<b>Reported By:</b>	Focus-Lee Loran
<b>Reported on Behalf of:</b>	PAZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	Henry Pirker Air Quality Station		
<b>Start Date &amp; Time of Incident:</b>	October 7, 2012 15:00 MST	<b>End Date &amp; Time of Incident:</b>	October 7, 2012 21:00 MST
<b>Reason or Nature of Incident:</b>			
The PM <sub>2.5</sub> analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 1-hour average of PM <sub>2.5</sub> which is 80 µg/m <sup>3</sup> .			
October 7, 2012 15:00–16:00 MST	PM <sub>2.5</sub> = 102.7 µg/m <sup>3</sup>	WS = 15.9 km/h	WD = 299.2 deg
October 7, 2012 17:00–18:00 MST	PM <sub>2.5</sub> = 125.7 µg/m <sup>3</sup>	WS = 13.8 km/h	WD = 314.7 deg
October 7, 2012 18:00–19:00 MST	PM <sub>2.5</sub> = 125.6 µg/m <sup>3</sup>	WS = 11.7 km/h	WD = 314.4 deg
October 7, 2012 20:00–21:00 MST	PM <sub>2.5</sub> = 81.3 µg/m <sup>3</sup>	WS = 6.0 km/h	WD = 327.0 deg
The PM <sub>2.5</sub> analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 24-hour average of PM <sub>2.5</sub> which is 30 µg/m <sup>3</sup> .			
October 7, 2012 00:00–24:00 MST	PM <sub>2.5</sub> = 42.6 µg/m <sup>3</sup>	WS = 12.5 km/h	WD = 305.2 deg
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported to AESRD Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operation of the PM <sub>2.5</sub> analyzer appeared to be normal during the time of this report. Local technician confirmed there was smoke in the Grande Prairie area from forest fires burning in northwestern Alberta.			
<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>	Lee Loran	<b>Date Report Submitted:</b>	October 10, 2012
<b>7-Day Letter Due Date:</b>	October 13, 2012		

## Air Monitoring Directive Exceedence Report

Alberta Environment and Sustainable Resource Development  
 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>	263882	<b>Reported To (AENV Contact):</b>	Carsten
<b>Date &amp; Time Incident Reported to AENV:</b>	October 7, 2012 multiple reporting times	<b>Reported By:</b>	Focus-Lee Loran
<b>Reported on Behalf of:</b>	PAZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	Evergreen Park Air Quality Station		
<b>Start Date &amp; Time of Incident:</b>	October 7, 2012 17:00 MST	<b>End Date &amp; Time of Incident:</b>	October 7, 2012 19:00 MST
<b>Reason or Nature of Incident:</b>			
<p>The PM<sub>2.5</sub> analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 1-hour average of PM<sub>2.5</sub> which is 80 µg/m<sup>3</sup>.</p> <p>October 7, 2012 17:00–18:00 MST    PM<sub>2.5</sub> = 87.1 µg/m<sup>3</sup>    WS = 24.3 km/h    WD = 332.0 deg                  October 7, 2012 18:00–19:00 MST    PM<sub>2.5</sub> = 98.3 µg/m<sup>3</sup>    WS = 20.3 km/h    WD = 330.3 deg</p> <p>The PM<sub>2.5</sub> analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 24-hour average of PM<sub>2.5</sub> which is 30 µg/m<sup>3</sup>.</p> <p>October 7, 2012 00:00–24:00 MST    PM<sub>2.5</sub> = 33.9 µg/m<sup>3</sup>    WS = 16.6 km/h    WD = 313.0 deg</p>			
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported to AESRD Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operation of the PM <sub>2.5</sub> analyzer appeared to be normal during the time of this report. Local technician confirmed there was smoke in the Grande Prairie area from forest fires burning in northwestern Alberta.			
<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>	Lee Loran	<b>Date Report Submitted:</b>	October 10, 2012
<b>7-Day Letter Due Date:</b>	October 13, 2012		

## Air Monitoring Directive Exceedence Report

Alberta Environment and Sustainable Resource Development  
 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>	263883	<b>Reported To (AENV Contact):</b>	Carsten												
<b>Date &amp; Time Incident Reported to AENV:</b>	October 7, 2012 multiple reporting times	<b>Reported By:</b>	Focus-Lee Loran												
<b>Reported on Behalf of:</b>	PAZA	<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>	October 7, 2012 21:00 MST	<b>End Date &amp; Time of Incident:</b>	October 7, 2012 24:00 MST												
<b>Reason or Nature of Incident:</b>															
<p>The PM<sub>2.5</sub> analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 1-hour average of PM<sub>2.5</sub> which is 80 µg/m<sup>3</sup>.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">October 7, 2012 21:00–22:00 MST</td> <td style="width: 25%;">PM<sub>2.5</sub> = 102.8 µg/m<sup>3</sup></td> <td style="width: 25%;">WS = 11.3 km/h</td> <td style="width: 25%;">WD = 339.2 deg</td> </tr> <tr> <td>October 7, 2012 22:00–23:00 MST</td> <td>PM<sub>2.5</sub> = 113.7 µg/m<sup>3</sup></td> <td>WS = 13.1 km/h</td> <td>WD = 343.0 deg</td> </tr> <tr> <td>October 7, 2012 23:00–24:00 MST</td> <td>PM<sub>2.5</sub> = 108.4 µg/m<sup>3</sup></td> <td>WS = 11.1 km/h</td> <td>WD = 341.1 deg</td> </tr> </table>				October 7, 2012 21:00–22:00 MST	PM <sub>2.5</sub> = 102.8 µg/m <sup>3</sup>	WS = 11.3 km/h	WD = 339.2 deg	October 7, 2012 22:00–23:00 MST	PM <sub>2.5</sub> = 113.7 µg/m <sup>3</sup>	WS = 13.1 km/h	WD = 343.0 deg	October 7, 2012 23:00–24:00 MST	PM <sub>2.5</sub> = 108.4 µg/m <sup>3</sup>	WS = 11.1 km/h	WD = 341.1 deg
October 7, 2012 21:00–22:00 MST	PM <sub>2.5</sub> = 102.8 µg/m <sup>3</sup>	WS = 11.3 km/h	WD = 339.2 deg												
October 7, 2012 22:00–23:00 MST	PM <sub>2.5</sub> = 113.7 µg/m <sup>3</sup>	WS = 13.1 km/h	WD = 343.0 deg												
October 7, 2012 23:00–24:00 MST	PM <sub>2.5</sub> = 108.4 µg/m <sup>3</sup>	WS = 11.1 km/h	WD = 341.1 deg												
<b>Immediate Actions Taken:</b>															
Confirmed validity of data and reported to AESRD Environmental Service Response Centre.															
<b>Investigation Details:</b>															
Operation of the PM <sub>2.5</sub> analyzer appeared to be normal during the time of this report. Local technician confirmed there was smoke in the Grande Prairie area from forest fires burning in northwestern Alberta.															
<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>	Lee Loran	<b>Date Report Submitted:</b>	October 10, 2012												
<b>7-Day Letter Due Date:</b>	October 13, 2012														

## Air Monitoring Directive Exceedence Report

Alberta Environment and Sustainable Resource Development  
 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>263886 / 263892</b>	<b>Reported To (AENV Contact):</b>	Karla / Carsten / Laura / Steven
<b>Date &amp; Time Incident Reported to AENV:</b>	October 8, 2012 multiple reporting times	<b>Reported By:</b>	Focus-Lee Loran / Lenin Flores
<b>Reported on Behalf of:</b>	PAZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	Henry Pirker Air Quality Station		
<b>Start Date &amp; Time of Incident:</b>	October 8, 2012 00:00 MST	<b>End Date &amp; Time of Incident:</b>	October 8, 2012 06:00 MST
<b>Reason or Nature of Incident:</b>			
The PM <sub>2.5</sub> analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 1-hour average of PM <sub>2.5</sub> which is 80 µg/m <sup>3</sup> .			
October 8, 2012 00:00–01:00 MST	PM <sub>2.5</sub> = 82.8 µg/m <sup>3</sup>	WS = 3.8 km/h	WD = 348.2 deg
October 8, 2012 01:00–02:00 MST	PM <sub>2.5</sub> = 94.8 µg/m <sup>3</sup>	WS = 3.7 km/h	WD = 335.0 deg
October 8, 2012 02:00–03:00 MST	PM <sub>2.5</sub> = 92.6 µg/m <sup>3</sup>	WS = 2.8 km/h	WD = 337.3 deg
October 8, 2012 03:00–04:00 MST	PM <sub>2.5</sub> = 90.9 µg/m <sup>3</sup>	WS = 3.1 km/h	WD = 328.5 deg
October 8, 2012 04:00–05:00 MST	PM <sub>2.5</sub> = 95.2 µg/m <sup>3</sup>	WS = 3.9 km/h	WD = 296.6 deg
October 8, 2012 05:00–06:00 MST	PM <sub>2.5</sub> = 99.2 µg/m <sup>3</sup>	WS = 3.8 km/h	WD = 311.9 deg
October 8, 2012 06:00–07:00 MST	PM <sub>2.5</sub> = 93.6 µg/m <sup>3</sup>	WS = 3.1 km/h	WD = 307.4 deg
October 8, 2012 07:00–08:00 MST	PM <sub>2.5</sub> = 86.0 µg/m <sup>3</sup>	WS = 4.2 km/h	WD = 338.3 deg
The PM <sub>2.5</sub> analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 24-hour average of PM <sub>2.5</sub> which is 30 µg/m <sup>3</sup> .			
October 8, 2012 00:00–24:00 MST	PM <sub>2.5</sub> = 65.7 µg/m <sup>3</sup>	WS = 4.1 km/h	WD = 235.2 deg
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported to AESRD Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operation of the PM <sub>2.5</sub> analyzer appeared to be normal during the time of this report. Local technician confirmed there was smoke in the Grande Prairie area from forest fires burning in northwestern Alberta.			
<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>	Lee Loran	<b>Date Report Submitted:</b>	October 10, 2012
<b>7-Day Letter Due Date:</b>	October 14, 2012		

## Air Monitoring Directive Exceedence Report

Alberta Environment and Sustainable Resource Development  
 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>	263887	<b>Reported To (AENV Contact):</b>	Carsten / Laura
<b>Date &amp; Time Incident Reported to AENV:</b>	October 8, 2012 multiple reporting times	<b>Reported By:</b>	Focus-Lee Loran / Lenin Flores
<b>Reported on Behalf of:</b>	PAZA	<b>Approval Number (if applicable):</b>	Not applicable
<b>Location(s) of Incident:</b>	Evergreen Park Air Quality Station		
<b>Start Date &amp; Time of Incident:</b>	October 8, 2012 00:00 MST	<b>End Date &amp; Time of Incident:</b>	October 8, 2012 02:00 MST
<b>Reason or Nature of Incident:</b>			
<p>The PM<sub>2.5</sub> analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 1-hour average of PM<sub>2.5</sub> which is 80 µg/m<sup>3</sup>.</p> <p>October 8, 2012 00:00–01:00 MST    PM<sub>2.5</sub> = 85.5 µg/m<sup>3</sup>    WS = 3.0 km/h    WD = 306.1 deg                  October 8, 2012 01:00–02:00 MST    PM<sub>2.5</sub> = 86.2 µg/m<sup>3</sup>    WS = 1.8 km/h    WD = 12.1 deg</p> <p>The PM<sub>2.5</sub> analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 24-hour average of PM<sub>2.5</sub> which is 30 µg/m<sup>3</sup>.</p> <p>October 8, 2012 00:00–24:00 MST    PM<sub>2.5</sub> = 58.0 µg/m<sup>3</sup>    WS = 3.7 km/h    WD = 219.1 deg</p>			
<b>Immediate Actions Taken:</b>			
Confirmed validity of data and reported to AESRD Environmental Service Response Centre.			
<b>Investigation Details:</b>			
Operation of the PM <sub>2.5</sub> analyzer appeared to be normal during the time of this report. Local technician confirmed there was smoke in the Grande Prairie area from forest fires burning in northwestern Alberta.			
<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>	Lee Loran	<b>Date Report Submitted:</b>	October 10, 2012
<b>7-Day Letter Due Date:</b>	October 14, 2012		

## Air Monitoring Directive Exceedence Report

Alberta Environment and Sustainable Resource Development  
 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>	263888	<b>Reported To (AENV Contact):</b>	Carsten / Laura																				
<b>Date &amp; Time Incident Reported to AENV:</b>	October 8, 2012 multiple reporting times	<b>Reported By:</b>	Focus-Lee Loran / Lenin Flores																				
<b>Reported on Behalf of:</b>	PAZA	<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>	October 8, 2012 00:00 MST	<b>End Date &amp; Time of Incident:</b>	October 8, 2012 04:00 MST																				
<b>Reason or Nature of Incident:</b>																							
<p>The PM<sub>2.5</sub> analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 1-hour average of PM<sub>2.5</sub> which is 80 µg/m<sup>3</sup>.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">October 8, 2012 00:00–01:00 MST</td> <td style="width: 25%;">PM<sub>2.5</sub> = 109.0 µg/m<sup>3</sup></td> <td style="width: 25%;">WS = 6.5 km/h</td> <td style="width: 25%;">WD = 344.3 deg</td> </tr> <tr> <td>October 8, 2012 01:00–02:00 MST</td> <td>PM<sub>2.5</sub> = 103.9 µg/m<sup>3</sup></td> <td>WS = 7.3 km/h</td> <td>WD = 248.3 deg</td> </tr> <tr> <td>October 8, 2012 02:00–03:00 MST</td> <td>PM<sub>2.5</sub> = 98.6 µg/m<sup>3</sup></td> <td>WS = 7.6 km/h</td> <td>WD = 246.4 deg</td> </tr> <tr> <td>October 8, 2012 03:00–04:00 MST</td> <td>PM<sub>2.5</sub> = 86.0 µg/m<sup>3</sup></td> <td>WS = 9.0 km/h</td> <td>WD = 289.8 deg</td> </tr> </table> <p>The PM<sub>2.5</sub> analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 24-hour average of PM<sub>2.5</sub> which is 30 µg/m<sup>3</sup>.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">October 8, 2012 00:00–24:00 MST</td> <td style="width: 25%;">PM<sub>2.5</sub> = 46.8 µg/m<sup>3</sup></td> <td style="width: 25%;">WS = 5.7 km/h</td> <td style="width: 25%;">WD = 251.8 deg</td> </tr> </table>				October 8, 2012 00:00–01:00 MST	PM <sub>2.5</sub> = 109.0 µg/m <sup>3</sup>	WS = 6.5 km/h	WD = 344.3 deg	October 8, 2012 01:00–02:00 MST	PM <sub>2.5</sub> = 103.9 µg/m <sup>3</sup>	WS = 7.3 km/h	WD = 248.3 deg	October 8, 2012 02:00–03:00 MST	PM <sub>2.5</sub> = 98.6 µg/m <sup>3</sup>	WS = 7.6 km/h	WD = 246.4 deg	October 8, 2012 03:00–04:00 MST	PM <sub>2.5</sub> = 86.0 µg/m <sup>3</sup>	WS = 9.0 km/h	WD = 289.8 deg	October 8, 2012 00:00–24:00 MST	PM <sub>2.5</sub> = 46.8 µg/m <sup>3</sup>	WS = 5.7 km/h	WD = 251.8 deg
October 8, 2012 00:00–01:00 MST	PM <sub>2.5</sub> = 109.0 µg/m <sup>3</sup>	WS = 6.5 km/h	WD = 344.3 deg																				
October 8, 2012 01:00–02:00 MST	PM <sub>2.5</sub> = 103.9 µg/m <sup>3</sup>	WS = 7.3 km/h	WD = 248.3 deg																				
October 8, 2012 02:00–03:00 MST	PM <sub>2.5</sub> = 98.6 µg/m <sup>3</sup>	WS = 7.6 km/h	WD = 246.4 deg																				
October 8, 2012 03:00–04:00 MST	PM <sub>2.5</sub> = 86.0 µg/m <sup>3</sup>	WS = 9.0 km/h	WD = 289.8 deg																				
October 8, 2012 00:00–24:00 MST	PM <sub>2.5</sub> = 46.8 µg/m <sup>3</sup>	WS = 5.7 km/h	WD = 251.8 deg																				
<b>Immediate Actions Taken:</b>																							
Confirmed validity of data and reported to AESRD Environmental Service Response Centre.																							
<b>Investigation Details:</b>																							
Operation of the PM <sub>2.5</sub> analyzer appeared to be normal during the time of this report. Local technician confirmed there was smoke in the Grande Prairie area from forest fires burning in northwestern Alberta.																							
<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>	Lee Loran	<b>Date Report Submitted:</b>	October 10, 2012																				
<b>7-Day Letter Due Date:</b>	October 14, 2012																						



## Air Monitoring Directive Notification 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>264299</b>	Reported To (AENV Contact):	Taryn
Date & Time Incident Reported to AENV:	Oct 21, 2012 06:10MST	Reported By:	Tosh Hayashi
Reported on Behalf of:	PAZA	Approval Number (if applicable):	Not Applicable
Location(s) of Incident:	Valleyview		
Start Date & Time of Incident:	Oct 21, 2012 04:00MST	End Date & Time of Incident:	Oct 21, 2012 24:00MST
<b>Reason or Nature of Incident:</b>			
04:00 – 05:00 MST H2S 11.1 ppb 11.5 km/hr 280.8 deg Also, the 24hr Average for the day was over limit: 24Hr Avg H2S 4.1 ppb 11.9 km/h 279.2 degrees			
<b>Immediate Actions Taken:</b>			
A review of the data showed no evidence of false readings. Called Alberta environment to report the exceedances and notified the client. The 24 hr average exceedance was added to the original reference number 264299 at approximately 5:30 am MST on Oct 22 <sup>nd</sup> .			
<b>Investigation Details:</b>			
I spoke with the control room staff at Barrick Energy who notified me that they were awaiting parts to repair a leaky thief hatch and had also detected elevated H2S readings as a result of the faulty hatch.			
<b>Actions Taken to Prevent Reoccurrence (if any):</b>			
Barrick Energy contacted me around mid-day on Monday oct 22 <sup>nd</sup> and notified me that repairs on the thief hatch were completed. Data from the station confirmed that H2S levels had dropped off.			
<b>Additional Actions Required (if any):</b>			
None			
Report Completed By:	Tosh Hayashi	Date Report Submitted:	Oct 23, 2012
<b>7-Day Letter Due Date:</b>	Oct 28, 2012		

# October 2012 Calibration Reports

**PAZA - 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**

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

**PAZA – Smoky Heights Station with the following calibrations:  
SO<sub>2</sub>, TRS, PM<sub>2.5</sub>**

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

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

**PAZA – Sunset House Station with the following calibrations:  
SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, TRS**

# Calibration Report



Parameter SO2  
 Air Monitoring Network PAZA

## Station Information

Calibration Date	October 12, 2012	Previous Calibration	September 5, 2012
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)	8:40	End Time (MST)	12:03
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Conc	50.8 ppm	Cal Gas Cert Date	March 12, 2014
		Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.992151	Calculated slope	0.997549
Calculated intercept	1.912744	Calculated intercept	1.636753
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	9.1		9.0	
Coefficient	0.794		0.788	
Pressure	637.7	mm Hg	638.9	mm Hg
Flow	0.500	lpm	0.500	lpm
Lamp Voltage	44168	Hz	44110	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)
4995	0.00	0.0	0.0	N/A
4995	39.94	403.0	403.1	0.9997
4995	19.96	202.2	200.3	1.0096
4995	9.94	100.9	97.9	1.0307
4995	0.00	0.0	0.0	As Found Zero
4995	39.94	403.0	402.5	As Found Span
Average Correction Factor				1.0133

Calculated value of As Found Response: 401.3 ppb      Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	235.4	ppb	247.1	ppb

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

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



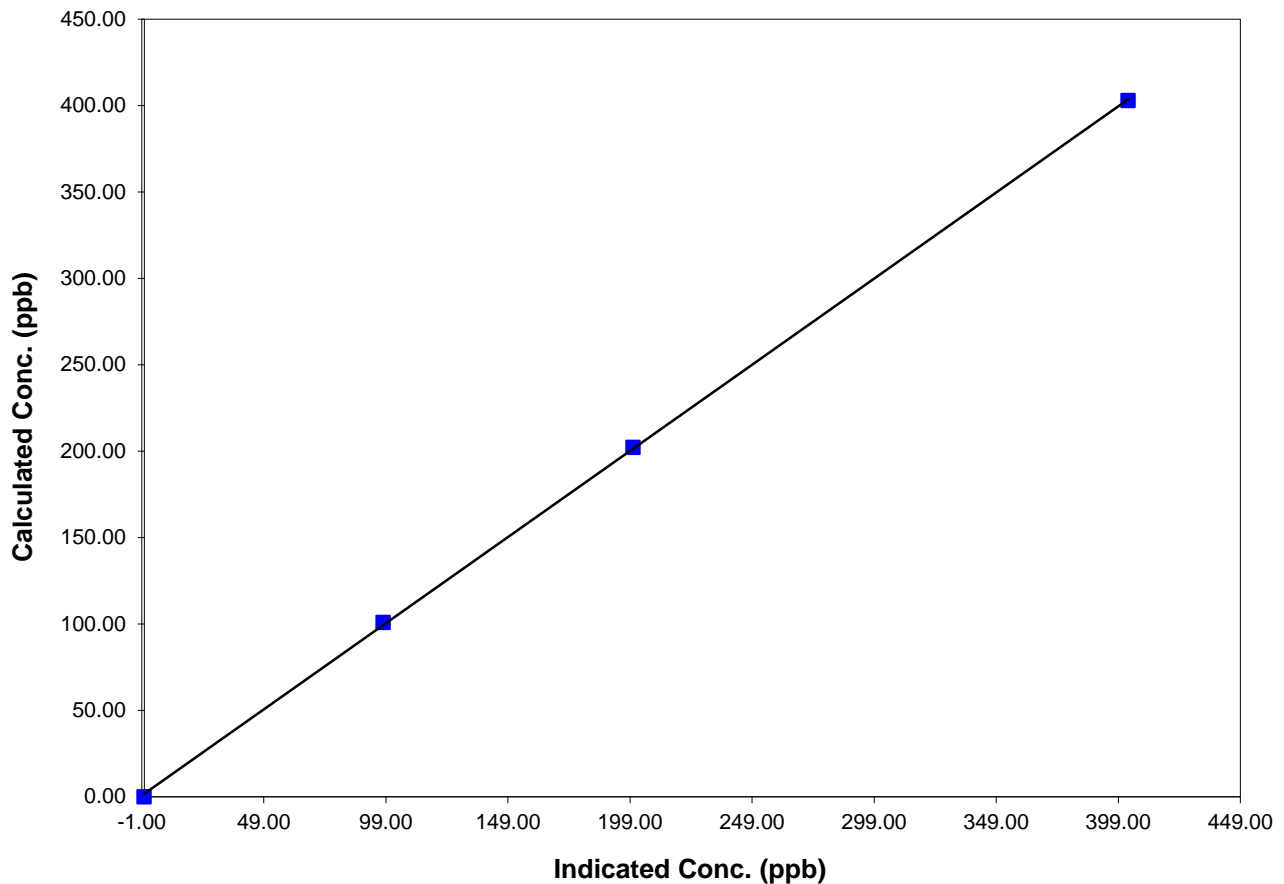
## Station Information

Calibration Date	October 12, 2012	Previous Calibration	September 5, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:40	End Time (MST)	12:03
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

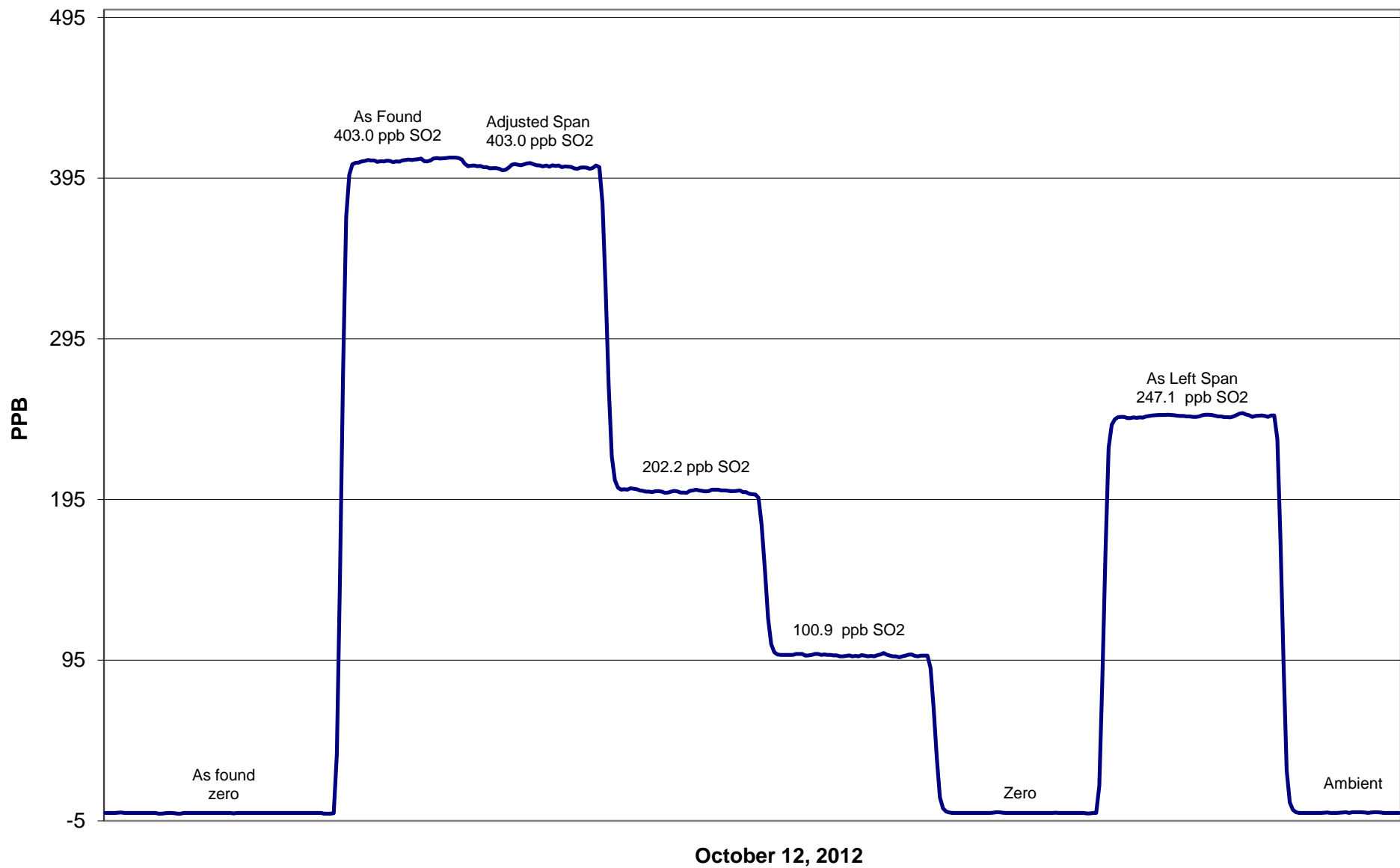
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
403.0	403.1	0.9997	Correlation Coefficient	0.999928
202.2	200.3	1.0096		
100.9	97.9	1.0307	Slope	0.997549
			Intercept	1.636753

### SO2 Calibration Curve



# SO2 Calibration



# Calibration Report

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



## Station Information

Calibration Date	October 12, 2012	Previous Calibration	September 5, 2012
Station Number	1	Station Location	Henry Pirker
Reason:	Routine   Installation   Removal	Other:	
Start Time (MST)	8:40	End Time (MST)	13:57
Barometric Pressure	0.922   Atm	Station Temperature	20.0   Deg C
Calibrator	EnviroNics	Serial Number	3474
NO Cal Gas Conc	51.2   ppm	Cal Gas Expiry Date	March 12, 2014
NOx Cal Gas Conc	51.2   ppm	Cal Gas Serial #	LL107272

## DACS Information

DACS make	CR3000	DACS serial No.	5408	
	<b>Before</b>	<b>NO2</b>	<b>NOx</b>	<b>NO</b>
	Data Slope	0.994522	1.001840	1.002994
	Data Offset	-0.058617	2.415921	1.863206
	<b>After</b>	<b>NO2</b>	<b>NOx</b>	<b>NO</b>
	Data Slope	1.000216	1.000874	0.999861
	Data Offset	-0.150835	1.638387	1.346596
	Channel #	8	6	7
	Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

## Analyzer Information

Analyzer make/model	TEI 42C	Analyzer serial #	508011073	
<b>Test Point</b>	<b>before</b>		<b>after</b>	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	12.9	mV	12.8	mV
NOx bkgnd	15.2	mV	14.2	mV
NO coefficient	1.106		1.090	
NOx coefficient	1.003		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	-768.0	mV	-768.0	mV
R Cell Press	178.1	in Hg	176.2	in Hg

# Calibration Report

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



Calibration Date: **October 12, 2012** Station Location: **Henry Pirker**

	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	4995	0.00	0.0	0.0	0.0	0.3	0.0	0.2	N/A	N/A	
1	4995	39.94	406.1	406.1	0.0	405.1	405.6	-0.5	1.0025	1.0015	
2	4995	19.96	203.8	203.8	0.0	200.9	201.7	-0.9	1.0145	1.0105	
3	4995	9.94	101.7	101.7	0.0	98.2	99.1	-1.0	1.0356	1.0259	
AFZ	4995	0.00	0.0	0.0	0.0	0.3	0.0	0.2	0.0000	0.0000	
AFS	4995	39.94	406.1	406.1	0.0	411.9	410.4	1.3	0.9861	0.9897	
									Average Correction Factor	1.0175	1.0126

As Found Concentrations: **NO<sub>x</sub>= 414.0** **NO= 412.2** As Found Percent Change **NO<sub>x</sub>= 1.9%** **NO= 1.5%**

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency	
0	0.0	0.0	0.0	0.3	0.0	0.2	N/A	N/A	N/A	N/A	
NO point	405.6	405.6	0.0	404.6	405.6	-1.1	1.0024	1.0000	N/A	N/A	
300	405.6	100.4	305.2	405.4	100.4	305.3	1.0005	1.0000	0.9997	100.0%	
200	405.6	198.4	207.2	405.6	198.4	207.3	1.0000	1.0000	0.9993	100.1%	
100	405.6	297.9	107.7	405.5	297.9	107.7	1.0002	1.0000	1.0000	100.0%	
							Average Correction Factor	1.0002	1.0000	0.9996	100.0%

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	-0.7	-0.7	0.0	ppb
Auto span	168.4	169.5	1.2	ppb	325.3	323.3	2.3	ppb

Calibration Performed By: Stephanie Tandy

# Calibration Summary



Parameter NO<sub>2</sub>

Air Monitoring Network PAZA

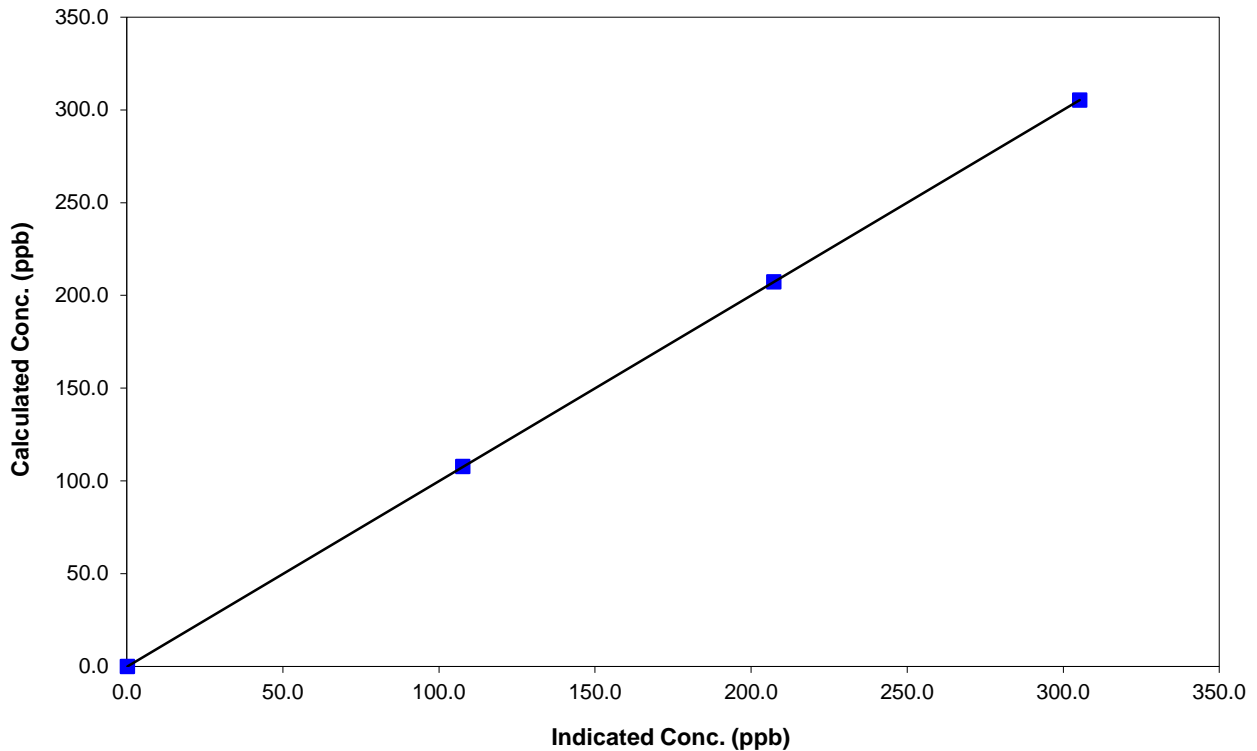
## Station Information

Calibration Date	October 12, 2012	Previous Calibration	September 5, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:40	End Time (MST)	13:57
Analyzer make	TEI 42C	Analyzer serial #	508011073

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	1.000000
305.2	305.3	0.9997		
207.2	207.3	0.9993		
107.7	107.7	1.0000	Slope	1.000216
			Intercept	-0.150835

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





# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PAZA



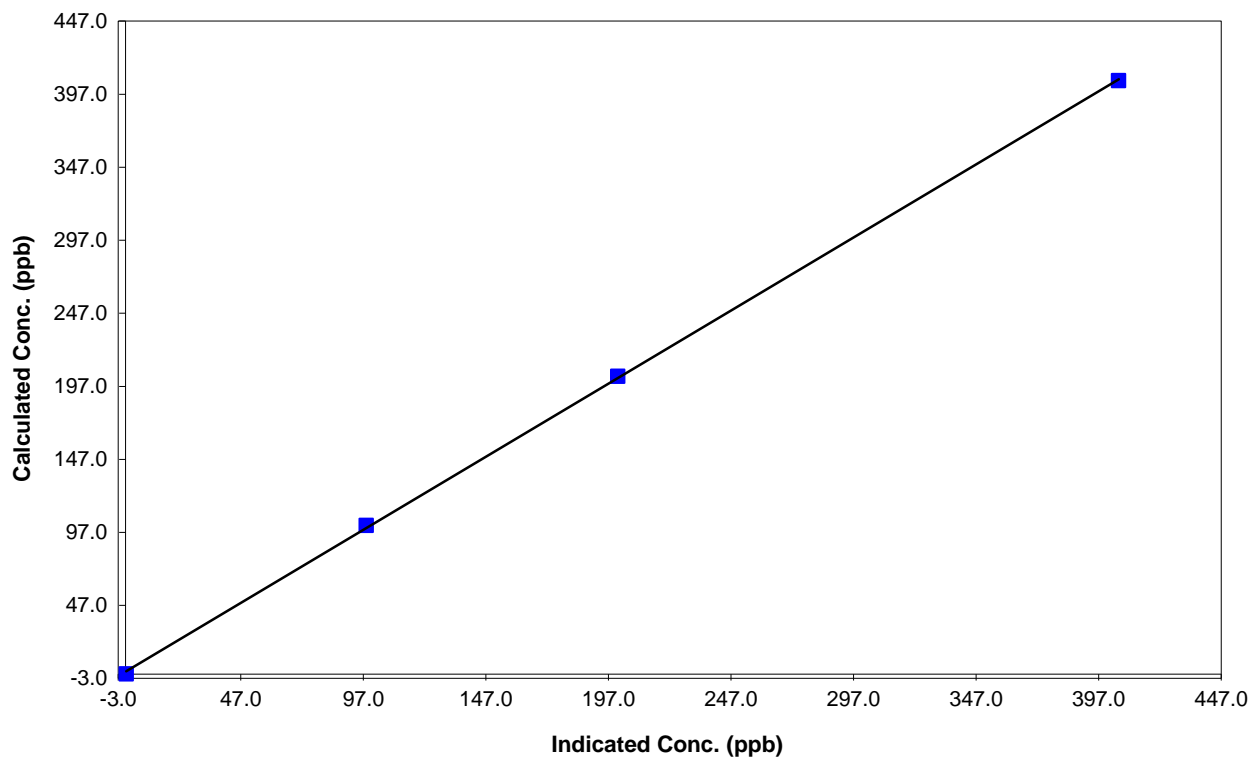
## Station Information

Calibration Date	October 12, 2012	Previous Calibration	September 5, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:40	End Time (MST)	13:57
Analyzer make	TEI 42C	Analyzer serial #	508011073

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999901
406.1	405.1	1.0025		
203.8	200.9	1.0145	Slope	1.000874
101.7	98.2	1.0356		
			Intercept	1.638387

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



# Calibration Summary



Parameter NO

Air Monitoring Network PAZA

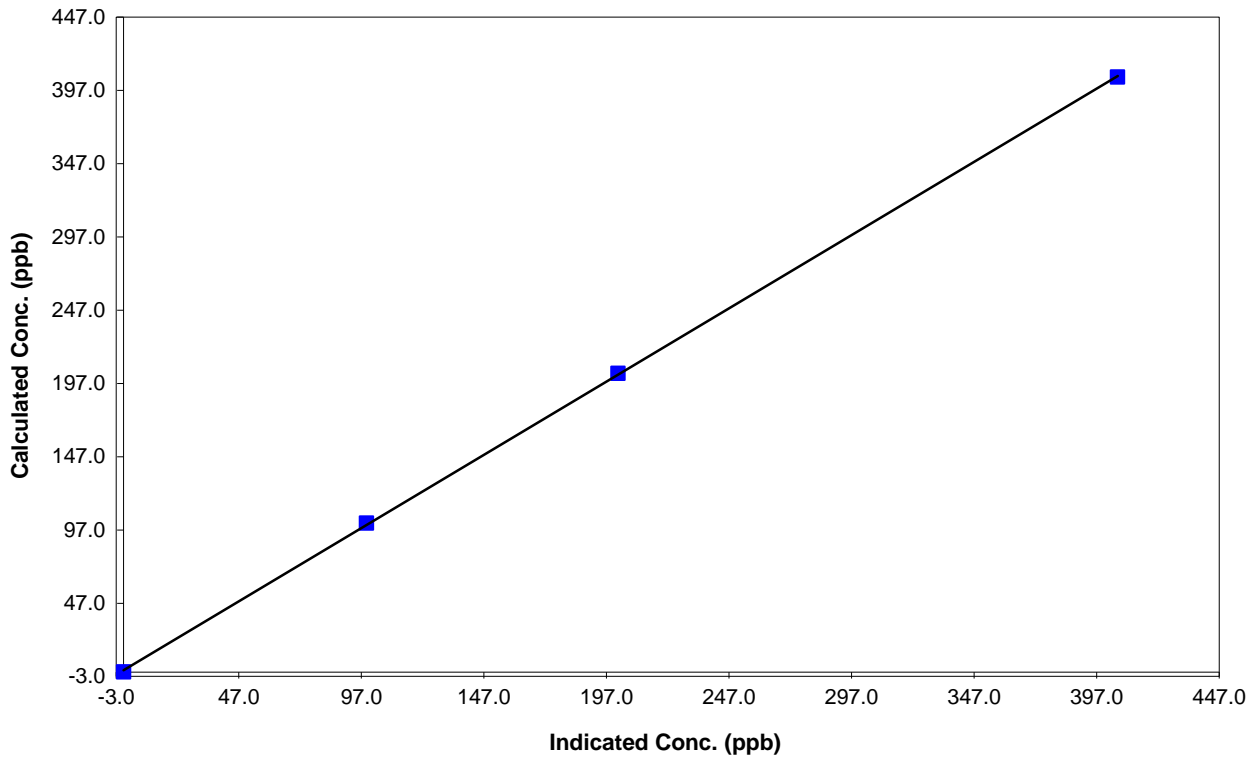
## Station Information

Calibration Date	October 12, 2012	Previous Calibration	September 5, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:40	End Time (MST)	13:57
Analyzer make	TEI 42C	Analyzer serial #	508011073

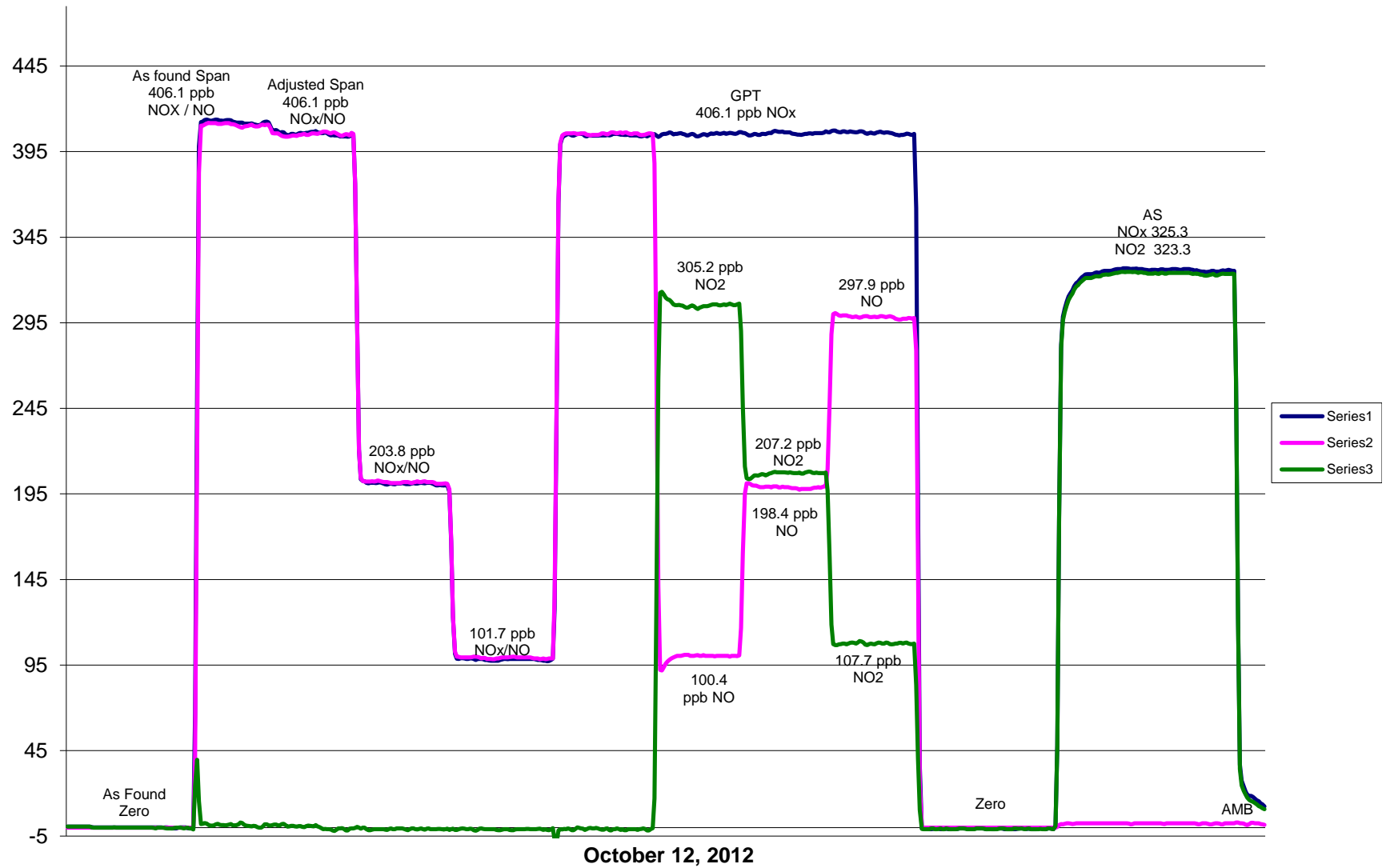
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999951
406.1	405.6	1.0015		
203.8	201.7	1.0105		
101.7	99.1	1.0259	Slope	0.999861
			Intercept	1.346596

## NO Calibration Curve



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



# Calibration Report

Parameter

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

Air Monitoring Network

PAZA



## Station Information

Calibration Date	October 12, 2012	Previous Calibration	September 5, 2012		
Station Number	1	Station Location	Henry Pirker		
Reason:	Routine	Installation	Removal	Other:	
Start Time (MST)	8:40	End Time (MST)	13:57		
Barometric Pressure	0.922	Atm	Station Temperature	20.0	Deg C
Calibrator	EnviroNics		Serial Number	3474	
NO Cal Gas Conc	51.2	ppm	Cal Gas Expiry Date	March 12, 2014	
NO <sub>x</sub> Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL107272	

## DACS Information

DACS make	CR3000	DACS serial No.	5408	
Parameter	NO <sub>2</sub>	NO <sub>x</sub>	NO	
Before	Data Slope	0.994522	1.001840	1.002994
	Data Offset	-0.058617	2.415921	1.863206
After	Data Slope	1.000216	1.000874	0.999861
	Data Offset	-0.150835	1.638387	1.346596
Channel #	8	6	7	
Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 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	12.9	mV	12.8	mV
NO <sub>x</sub> bkgnd	15.2	mV	14.2	mV
NO coefficient	1.106		1.090	
NO <sub>x</sub> coefficient	1.003		1.000	
NO <sub>2</sub> conv temp	318.0	Deg C	318.0	Deg C
PMT Temp	-2.5	Deg C	-2.5	Deg C
PMT Volt	-768.0	mV	-768.0	mV
R Cell Press	178.1	in Hg	176.2	in Hg

# Calibration Report

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



Calibration Date: **October 12, 2012** Station Location: **Henry Pirker**

	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	4995	0.00	0.0	0.0	0.0	0.3	0.0	0.2	N/A	N/A	
1	4995	39.94	406.1	406.1	0.0	405.1	405.6	-0.5	1.0025	1.0015	
2	4995	19.96	203.8	203.8	0.0	200.9	201.7	-0.9	1.0145	1.0105	
3	4995	9.94	101.7	101.7	0.0	98.2	99.1	-1.0	1.0356	1.0259	
AFZ	4995	0.00	0.0	0.0	0.0	0.3	0.0	0.2	0.0000	0.0000	
AFS	4995	39.94	406.1	406.1	0.0	411.9	410.4	1.3	0.9861	0.9897	
									Average Correction Factor	1.0175	1.0126

As Found Concentrations: **NO<sub>x</sub>= 414.0** **NO= 412.2** As Found Percent Change **NO<sub>x</sub>= 1.9%** **NO= 1.5%**

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency	
0	0.0	0.0	0.0	0.3	0.0	0.2	N/A	N/A	N/A	N/A	
NO point	405.6	405.6	0.0	404.6	405.6	-1.1	1.0024	1.0000	N/A	N/A	
300	405.6	100.4	305.2	405.4	100.4	305.3	1.0005	1.0000	0.9997	100.0%	
200	405.6	198.4	207.2	405.6	198.4	207.3	1.0000	1.0000	0.9993	100.1%	
100	405.6	297.9	107.7	405.5	297.9	107.7	1.0002	1.0000	1.0000	100.0%	
							Average Correction Factor	1.0002	1.0000	0.9996	100.0%

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	-0.7	-0.7	0.0	ppb
Auto span	168.4	169.5	1.2	ppb	325.3	323.3	2.3	ppb

Calibration Performed By: Stephanie Tandy

# Calibration Summary



Parameter NO<sub>2</sub>

Air Monitoring Network PAZA

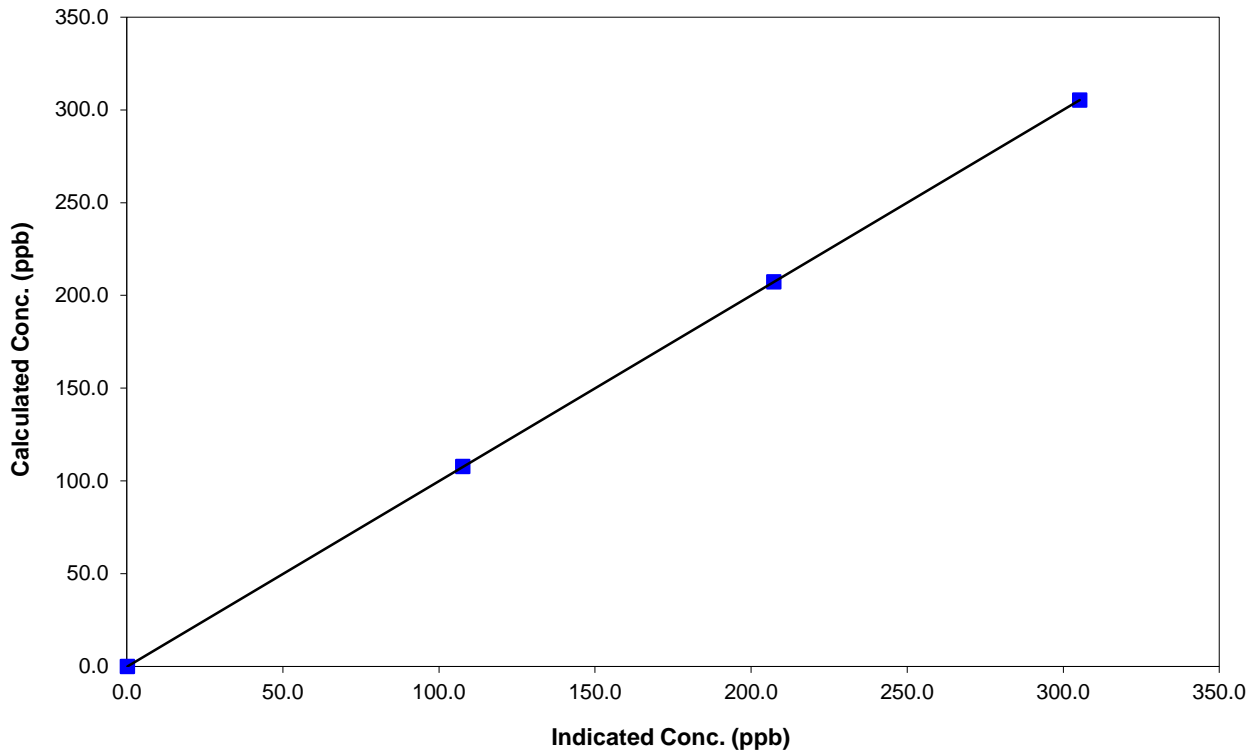
## Station Information

Calibration Date	October 12, 2012	Previous Calibration	September 5, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:40	End Time (MST)	13:57
Analyzer make	TEI 42C	Analyzer serial #	508011073

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	1.000000
305.2	305.3	0.9997		
207.2	207.3	0.9993	Slope	1.000216
107.7	107.7	1.0000		
			Intercept	-0.150835

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



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PAZA



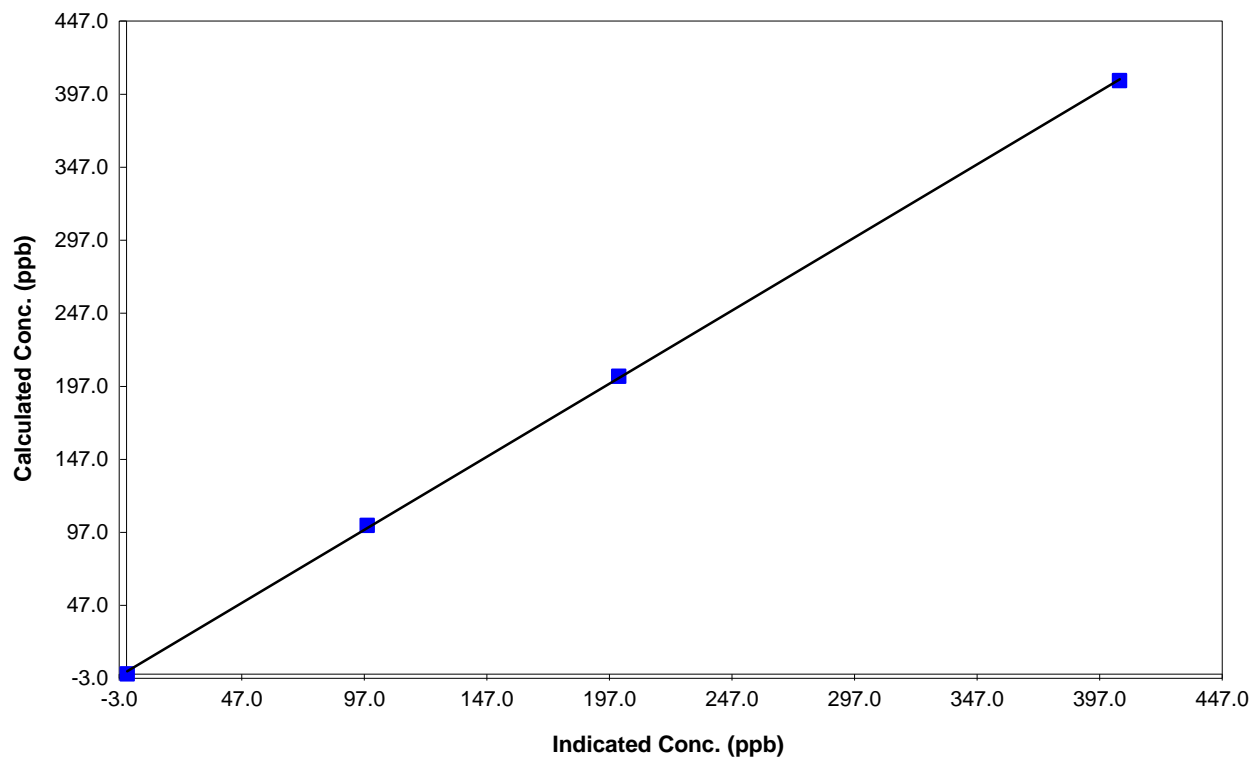
## Station Information

Calibration Date	October 12, 2012	Previous Calibration	September 5, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:40	End Time (MST)	13:57
Analyzer make	TEI 42C	Analyzer serial #	508011073

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999901
406.1	405.1	1.0025		
203.8	200.9	1.0145	Slope	1.000874
101.7	98.2	1.0356		
			Intercept	1.638387

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



# Calibration Summary

Parameter NO

Air Monitoring Network PAZA



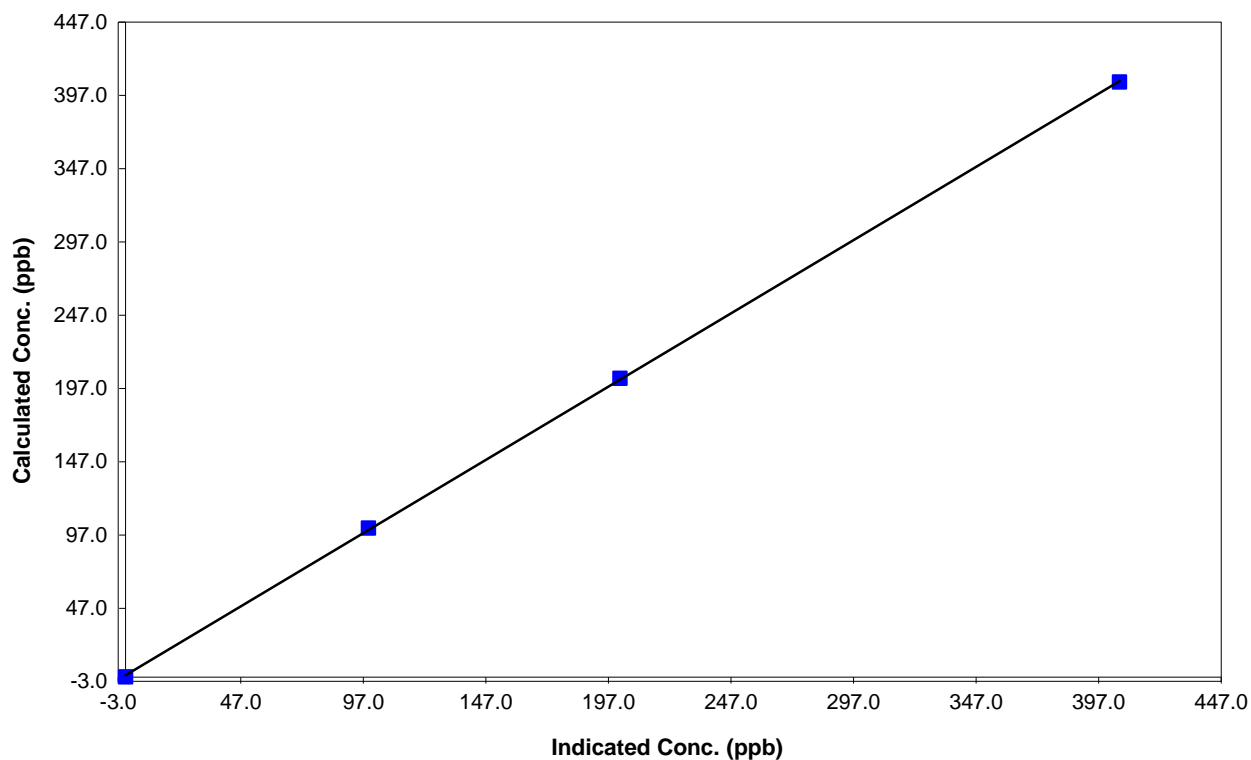
## Station Information

Calibration Date	October 12, 2012	Previous Calibration	September 5, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:40	End Time (MST)	13:57
Analyzer make	TEI 42C	Analyzer serial #	508011073

## Calibration Data

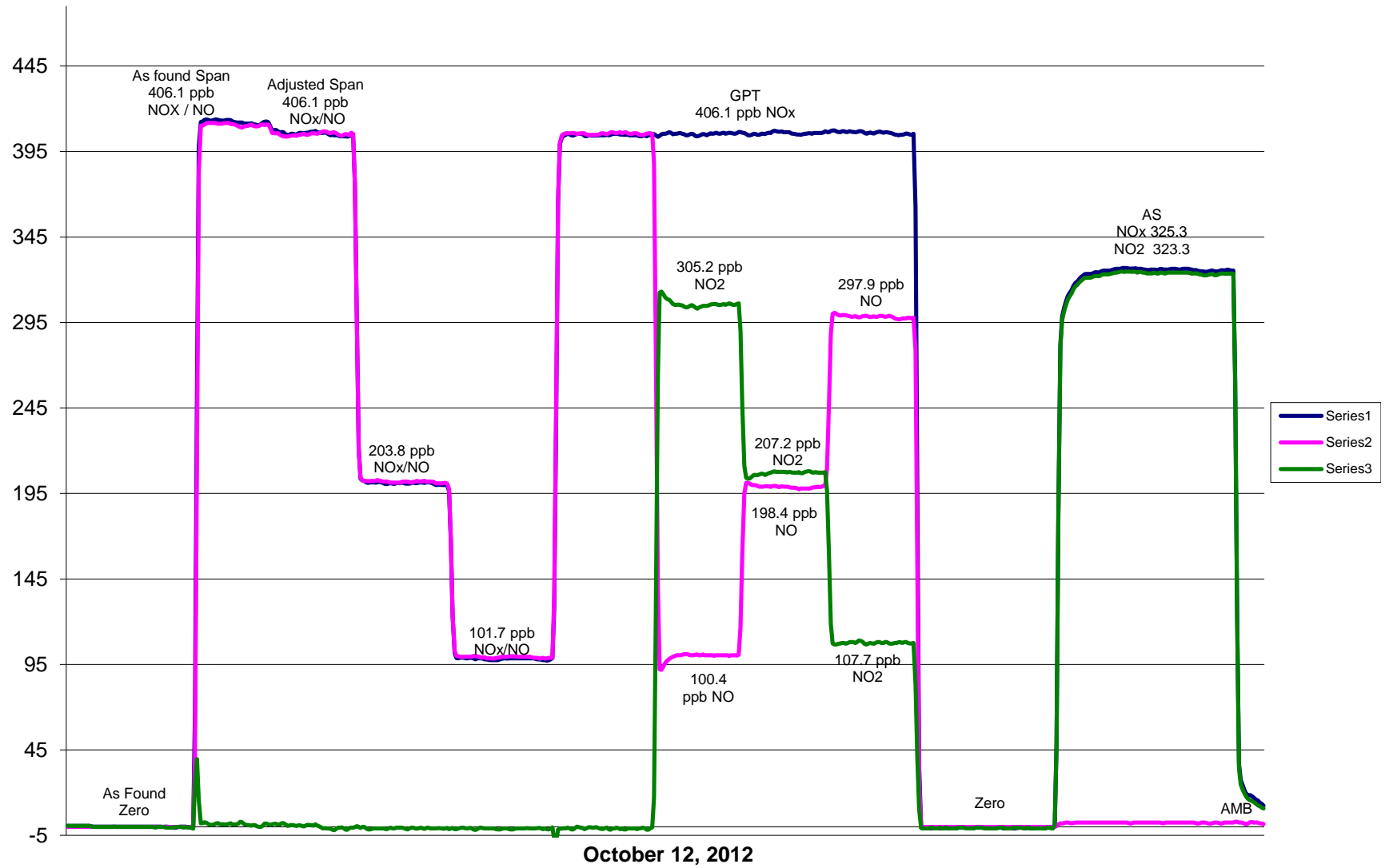
Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999951
406.1	405.6	1.0015		
203.8	201.7	1.0105		
101.7	99.1	1.0259	Slope	0.999861
			Intercept	1.346596

## NO Calibration Curve





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



# Calibration Report



Parameter 03

Air Monitoring Network PAZA

## Station Information

Calibration Date	October 12, 2012	Previous Calibration	September 5, 2012
Station Number	1	Station Location	Henry Pirker
Reason:	<b>Routine</b>	Install	Removal
		Other:	
Start Time (MST)	12:15	End Time (MST)	15:04
Barometric Pressure	0.922 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
Calculated slope	1.002527	Calculated slope	0.990218
Calculated intercept	-0.131778	Calculated intercept	-0.098026
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.7	ppb	-0.7	ppb
slope	1.177		1.177	
O3 Lamp temp	71.1	Deg C	71.1	Deg C
Intensities	77540/68410	mV	77540/68410	mV
Pressure	689.5	inches Hg	692.1	inches Hg
Flow A	0.722	ccm	0.725	ccm
Flow B	0.737	ccm	0.738	ccm

## Calibration Data

Dilution air flow rate (cc/min)	Referenced concentration (ppb)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5036	0	0.0	0.3	N/A
5036	300	305.2	308.7	0.9886
5036	200	207.2	208.7	0.9927
5036	100	107.7	108.9	0.9890
5036	0	0.0	0.3	As found zero
5036	300	305.2	308.7	As found span
Average Correction Factor				0.9901

Calculated value of As Found Response: 309.1 ppm      Percent Change of As Found: 1.3%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	154.9	ppb	161.3	ppb

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

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter                   O3                    
 Air Monitoring Network   PAZA  

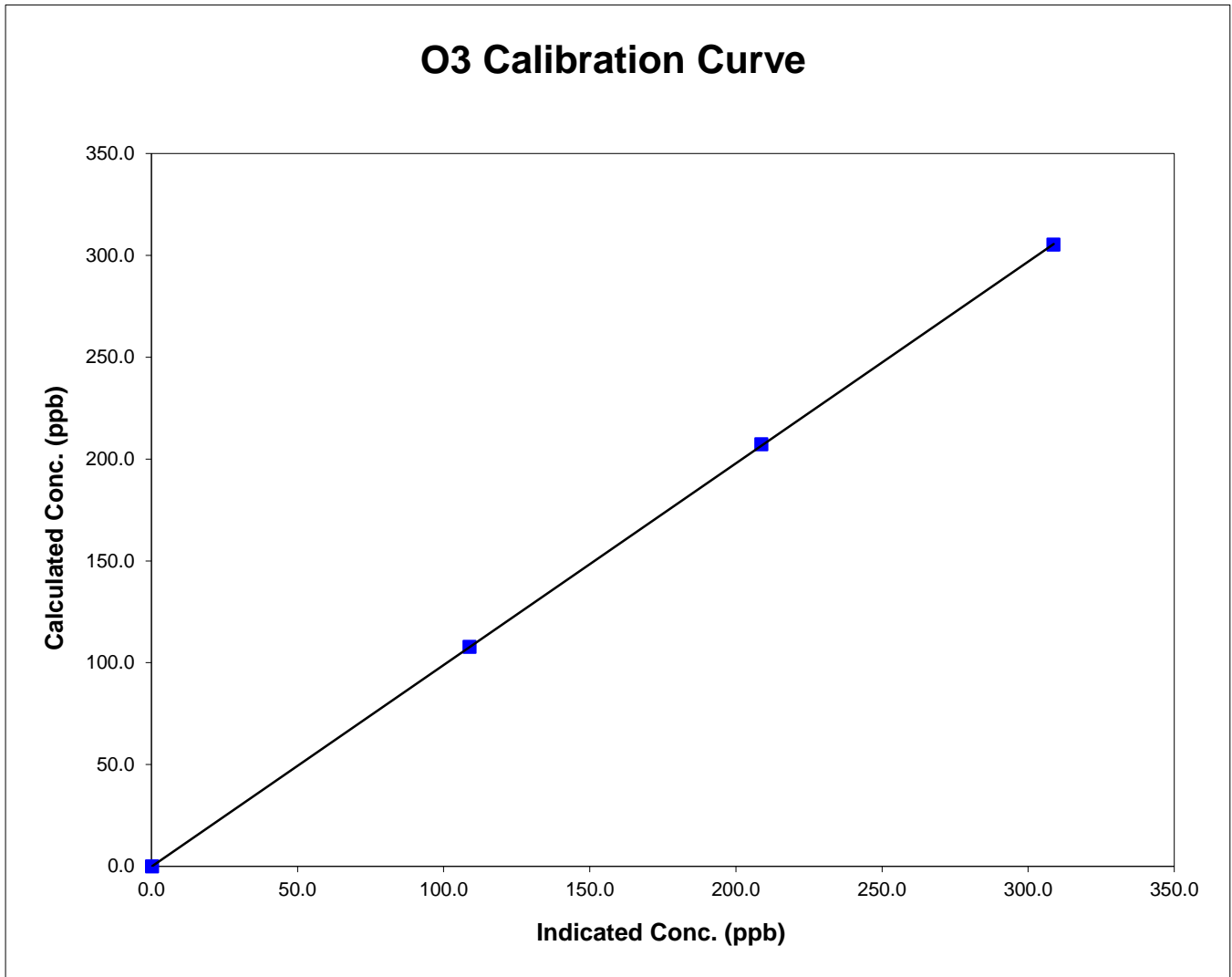


### Station Information

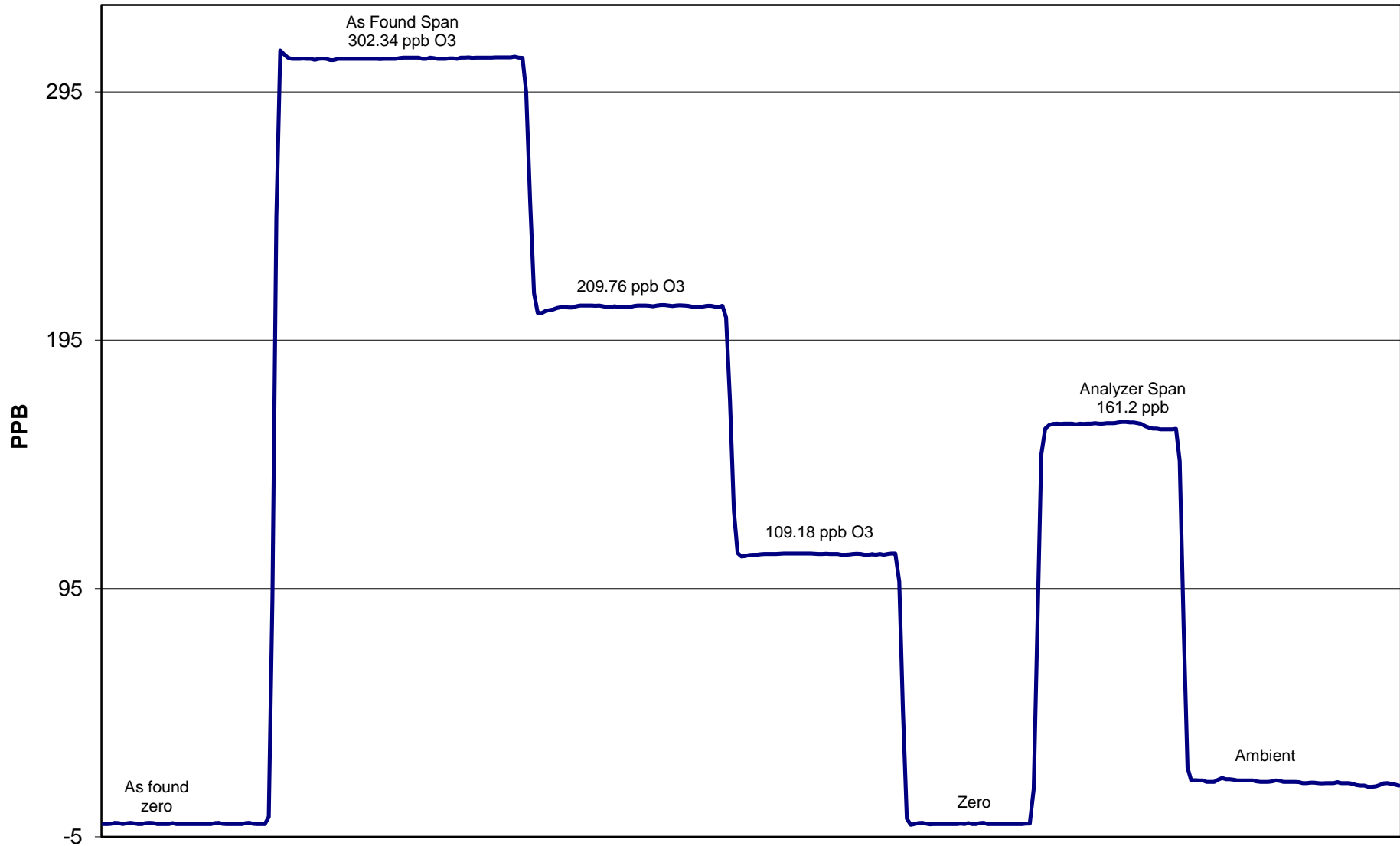
Calibration Date	October 12, 2012	Previous Calibration	September 5, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:15	End Time (MST)	15:04
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	NA	Slope	0.990218
305.2	308.7	0.9886		
207.2	208.7	0.9927	Intercept	-0.098026
107.7	108.9	0.9890		



# O3 Calibration



October 12, 2012

# Calibration Report



Parameter CO

Air Monitoring Network PAZA

## Station Information

Calibration Date	October 11, 2012	Previous Calibration	September 4, 2012
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)	9:50	End Time (MST)	13:18
Barometric Pressure	0.922 ATM	Station Temperature	21.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Conc	2898 ppm	Cal Gas Expiry Date	2/4/2013
		Cal Gas Cylinder #	LL83909
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.994595	Calculated slope	0.998030
Calculated intercept	-0.296085	Calculated intercept	-0.240614
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.110		1.110	
CO zero setting	3.446		3.481	
Sample pressure	687.9	mm Hg	687.8	mm Hg
Sample Flow	1.131	LPM	1.121	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)
4995	0.00	0.00	0.35	N/A
4995	69.94	40.02	40.39	0.9907
4995	34.95	20.14	20.37	0.9884
4995	18.95	10.95	11.09	0.9874
4995	0.00	0.00	0.35	As Found Zero
4995	69.95	40.02	40.39	As Found Span
Average Correction Factor				0.9888

Calculated value of As Found Response: 39.526 ppm      Percent Change of As Found: 1.2%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.56	ppm	19.72	ppm

Notes: DAS reading 0.4 ppb above analyzer reading. Slight zero adjust.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter CO

Air Monitoring Network PAZA



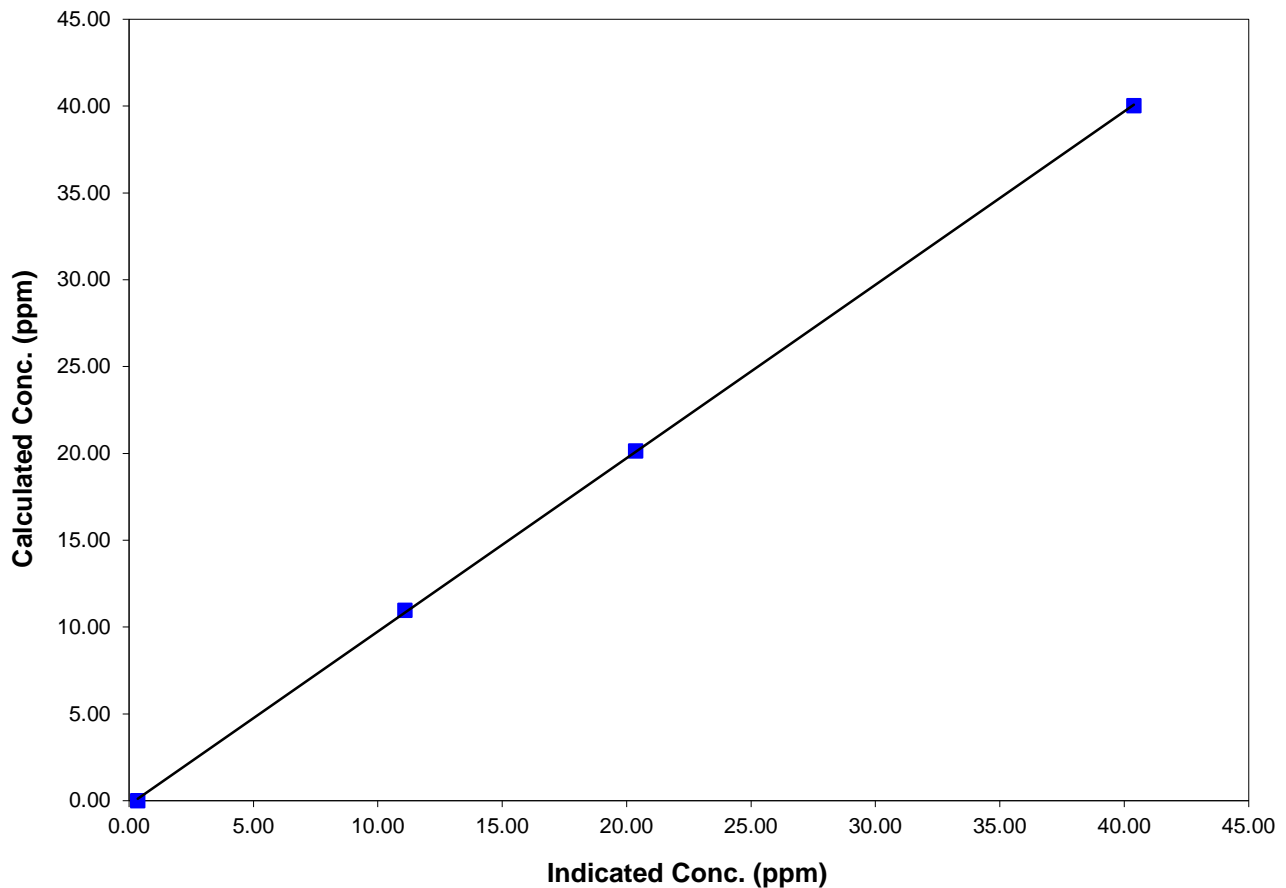
## Station Information

Calibration Date	October 11, 2012	Previous Calibration	September 4, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:50	End Time (MST)	13:18
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

## Calibration Data

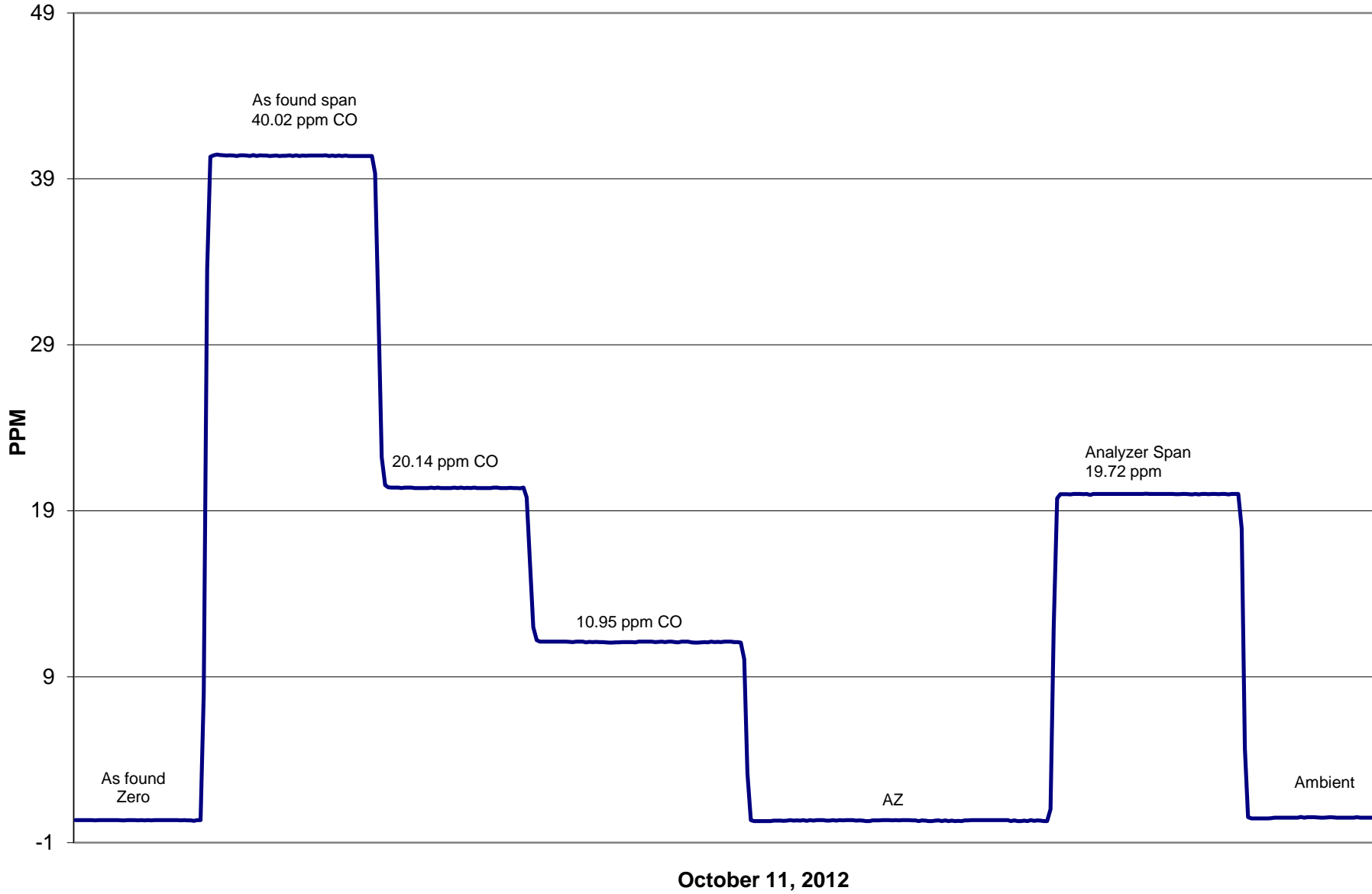
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.353	N/A	Correlation Coefficient	0.999962
40.017	40.393	0.9907		
20.136	20.372	0.9884	Slope	0.998030
10.953	11.093	0.9874		
			Intercept	-0.240614

### CO Calibration Curve



11.15 ppm CO

# CO Calibration



# Calibration Report



Parameter THC  
 Air Monitoring Network PAZA

## Station Information

Calibration Date	October 10, 2012	Previous Calibration	September 24, 2012
Station Number	1	Station Location	Henry Pirker
Reason:	<input type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input checked="" type="checkbox"/> Other:	Maintenance
Start Time (MST)	10:20	End Time (MST)	15:32
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	404 ppm CH4/ 201 ppm C3H8	Cal Gas Expiry Date	2/4/2010
Cal Gas CH4 equiv	956.75 ppm	Cal Gas Cylinder #	ALM 004476
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
Calculated slope	1.059039	Calculated slope	1.023724
Calculated intercept	0.057365	Calculated intercept	-0.125765
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	11511	capture	11511	capture
THC zero counts	1782	capture	1782	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)
2995	0.00	0.00	0.24	N/A
2995	69.95	21.84	21.50	1.0158
2995	29.96	9.48	9.31	1.0182
2995	9.98	3.18	3.14	1.0130
2995	0.00	0.00	0.24	As Found Zero
2995	69.95	21.84	21.50	As Found Span
Average Correction Factor				1.0157

Calculated value of As Found Response: 22.569 ppm      Percent Change of As Found: -3.4%

	before calibration		after calibration	
Auto zero	0.08	ppm	0.12	ppm
Auto span	22.47	ppm	22.56	ppm

Notes: Following as found span, Dacs 2 was calibrated so that das & analyzer were matched. Was out about a ppm & a half. Values matching now.

Calibration Performed By: Grover Christiansen



# Calibration Summary



Parameter THC  
 Air Monitoring Network PAZA

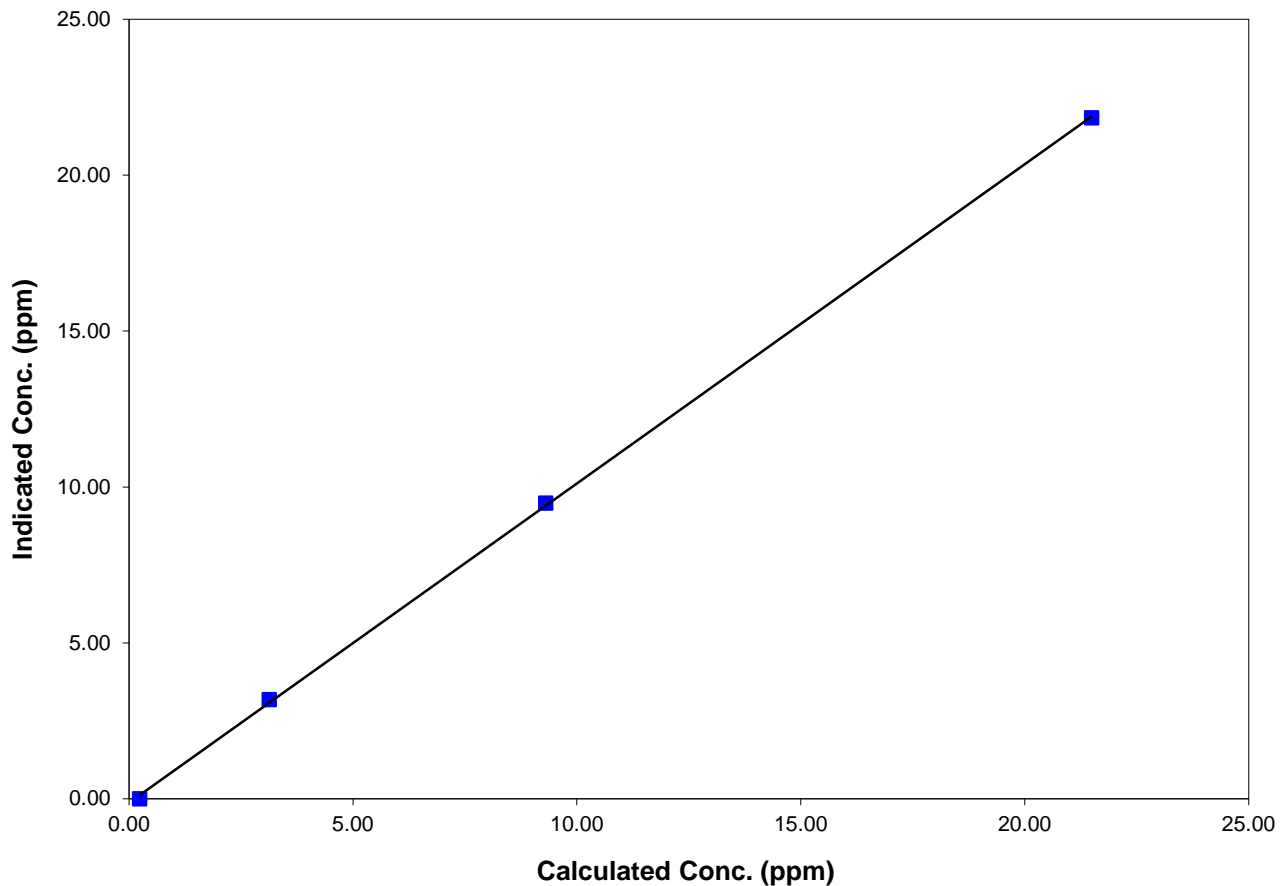
### Station Information

Calibration Date	October 10, 2012	Previous Calibration	September 24, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:20	End Time (MST)	15:32
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

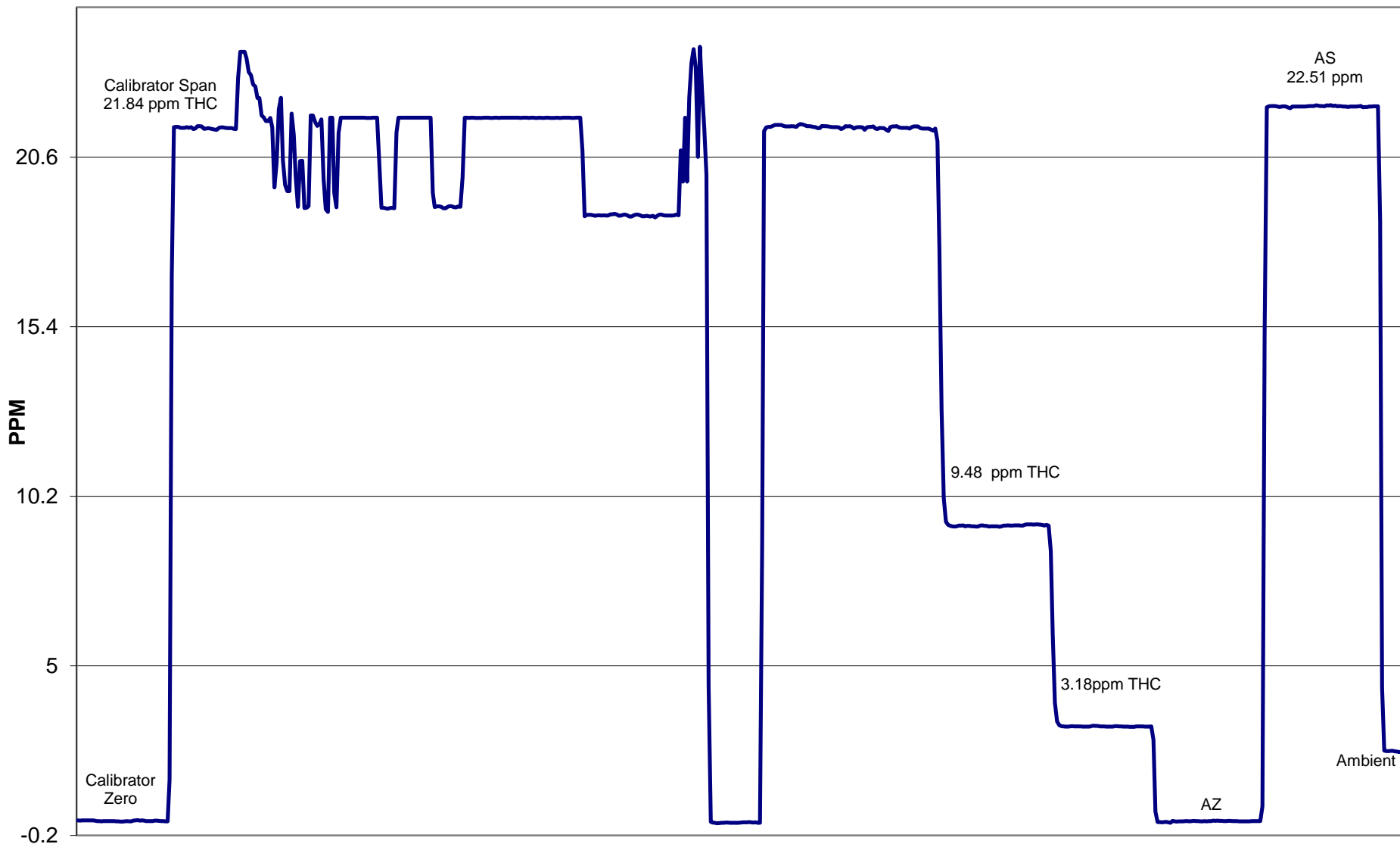
### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.242	N/A		
21.835	21.495	1.0158	Correlation Coefficient	0.999890
9.476	9.307	1.0182		
3.178	3.137	1.0130	Slope	1.023724
			Intercept	-0.125765

## THC Calibration Curve



# THC Calibration



October 10, 2012

# Calibration Report

Parameter TR3  
 Air Monitoring Network PAZA



## Station Information

Calibration Date	October 11,2012	Previous Calibration	September 05,2012
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	12:11	End Time (MST)	15:11
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	Envionics 6100	Serial Number	3474
Cal Gas Conc	10.1 ppb	Cal Gas Expiry Date	11/5/2013
		Cal Gas Cylinder #	LL160692
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.023160	Calculated slope	0.981694
Calculated intercept	0.211845	Calculated intercept	0.234833
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.132		1.132	
Background	11.4		11.4	
Pressure	664.9	mm Hg	665.0	mm Hg
Flow	0.454	ccm	0.457	ccm
Lamp Voltage	822	V	822	V

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)		Correction factor (Cc/lc)
4995	0.00	0.00	-0.09	N/A
4995	39.93	80.10	81.46	0.9833
4995	19.95	40.18	40.49	0.9922
8995	8.94	10.03	9.92	1.0112
4995	0.00	0.00	-0.09	As Found Zero
4995	39.93	80.10	81.46	As Found Span
Average Correction Factor				0.9956

Calculated value of As Found Response: 83.6 ppb      Percent Change of As Found: -4.4%

	before calibration		after calibration	
Auto zero	-0.29	ppb	0.42	ppb
Auto span	33.10	ppb	34.82	ppb

Notes: Sox scrubber checked. No adjustment made.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter         TRS          
 Air Monitoring Network                     PAZA                    



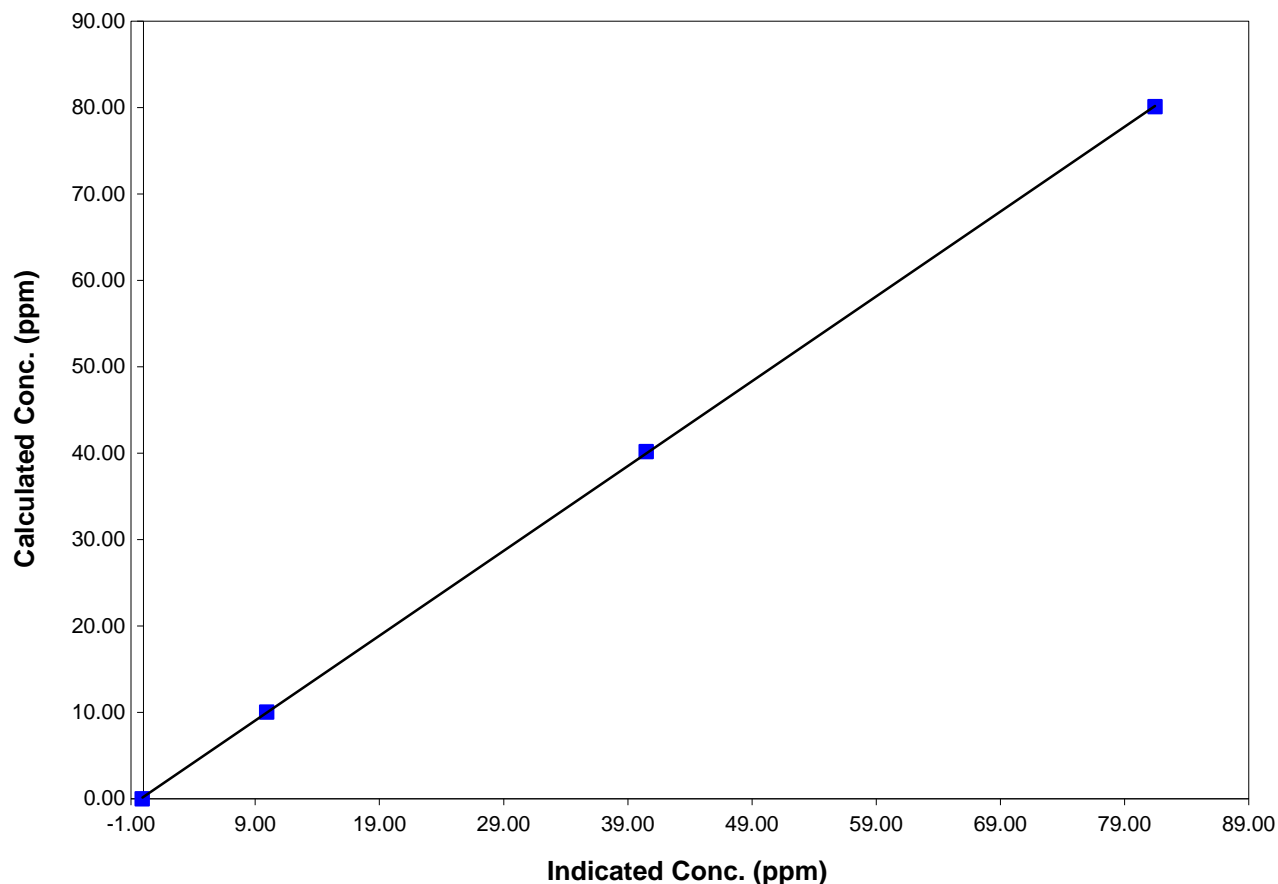
### Station Information

Calibration Date	<u>October 11,2012</u>	Previous Calibration	<u>September 05,2012</u>
Station Number	<u>1</u>	Station Location	<u>Henry Pirker</u>
Start Time (MST)	<u>12:11</u>	End Time (MST)	<u>15:11</u>
Analyzer make/model	<u>TEI 45C</u>	Analyzer serial #	<u>630718528</u>

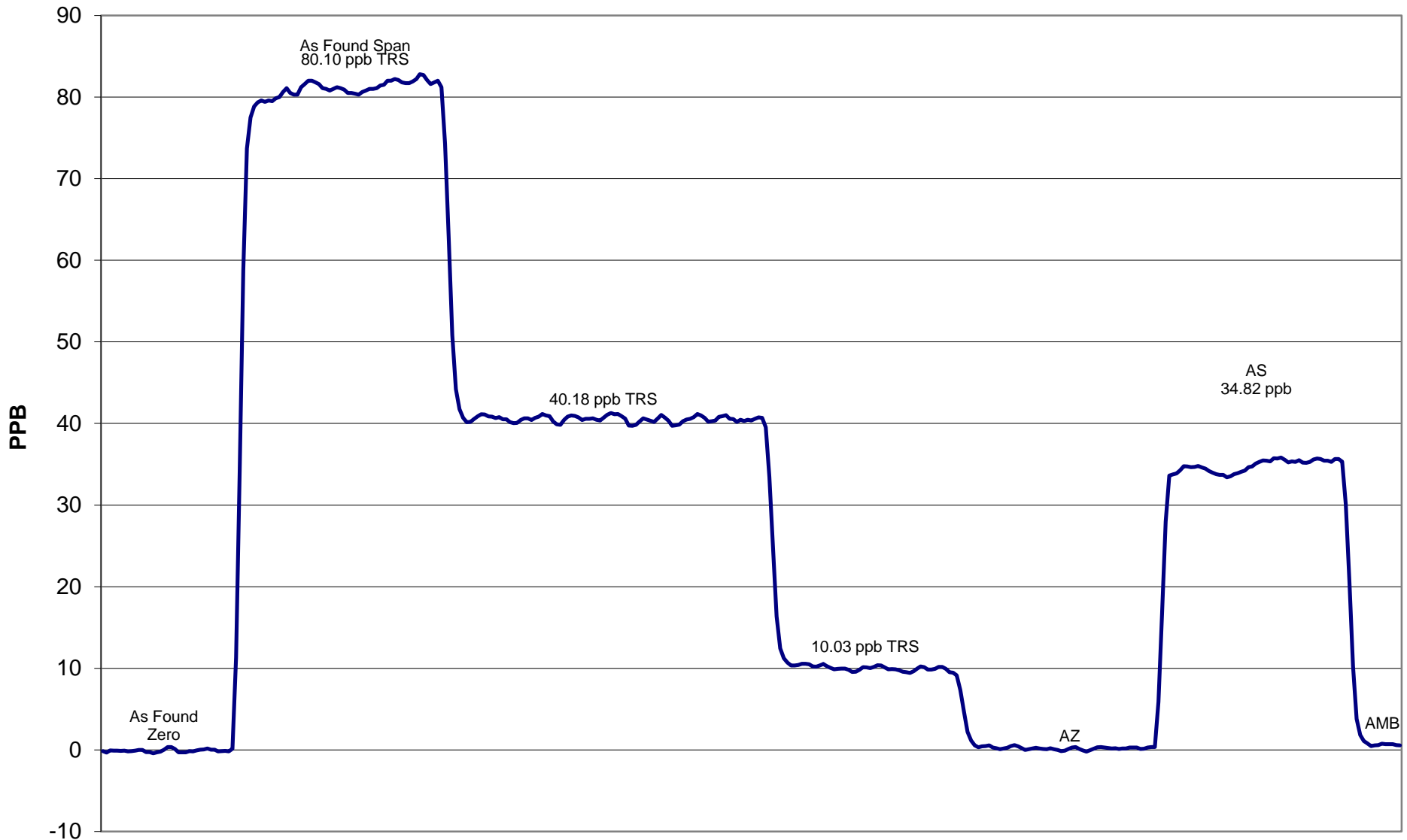
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.090	N/A	Correlation Coefficient	0.999982
80.099	81.458	0.9833		
40.179	40.494	0.9922	Slope	0.981694
10.028	9.918	1.0112		
			Intercept	0.234833

**TRS Calibration Curve**



# TRS Calibration



October 11, 2012

# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PAZA

## Station Information

Calibration Date	October 25, 2012	Previous Calibration	September 14, 2012
Station Number	2	Station Location	Evergreen Park
Reason:	<b>Routine</b>	Install	Removal
		Other:	
Start Time (MST)	10:30	End Time (MST)	14:08
Barometric Pressure	0.920 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Concentration	50.8 ppm	Cal Gas Expiry Date	12/03/2014
Correction factor	0.031273	Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.995192	Calculated slope	0.993685
Calculated intercept	2.098470	Calculated intercept	2.160997
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.1		11.2	
coefficient	1.200		1.213	
Lamp Voltage	826	volts	826	volts
Chamber Temp	44.8	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	682.5	mm Hg	683.7	mm Hg
Sample Flow	0.459	ccm	0.461	ccm
Lamp Intensity	89	%	90	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.3	N/A
4995	39.93	402.9	404.6	0.9956
4995	19.97	202.3	199.6	1.0136
4995	9.97	101.2	97.7	1.0361
4995	0.0	0.0	0.3	As Found Zero
4995	39.93	402.9	398.9	As Found Span
Average Correction Factor				1.0151

Calculated value of As Found Response: 398.775 ppm      Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.2	ppm
Auto span	287.4	ppm	283.2	ppm

Notes: Slight adjust up on 80% point.

Calibration Performed By: Grover Christiansen

# Calibration Summary



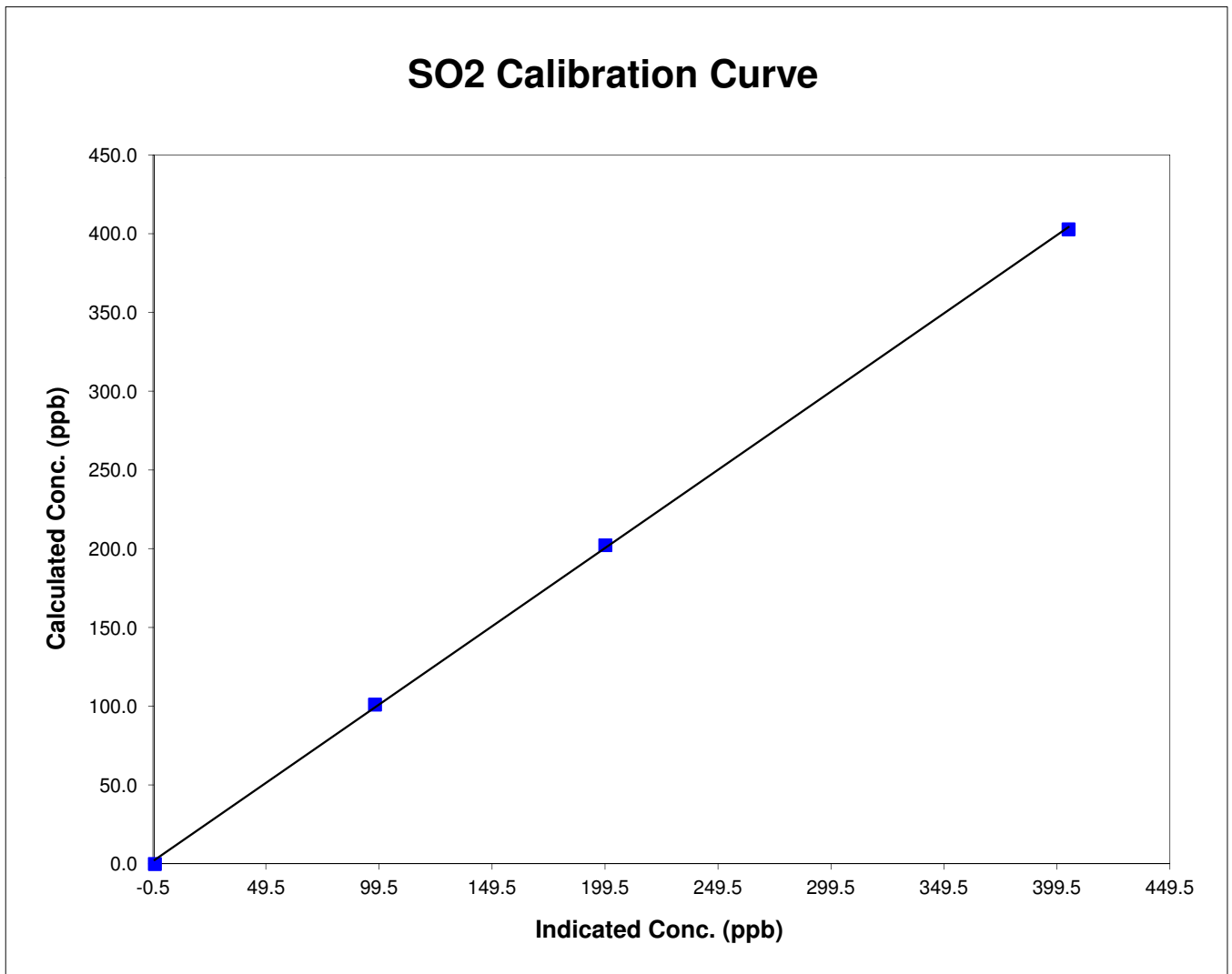
Parameter SO2  
 Air Monitoring Network PAZA

### Station Information

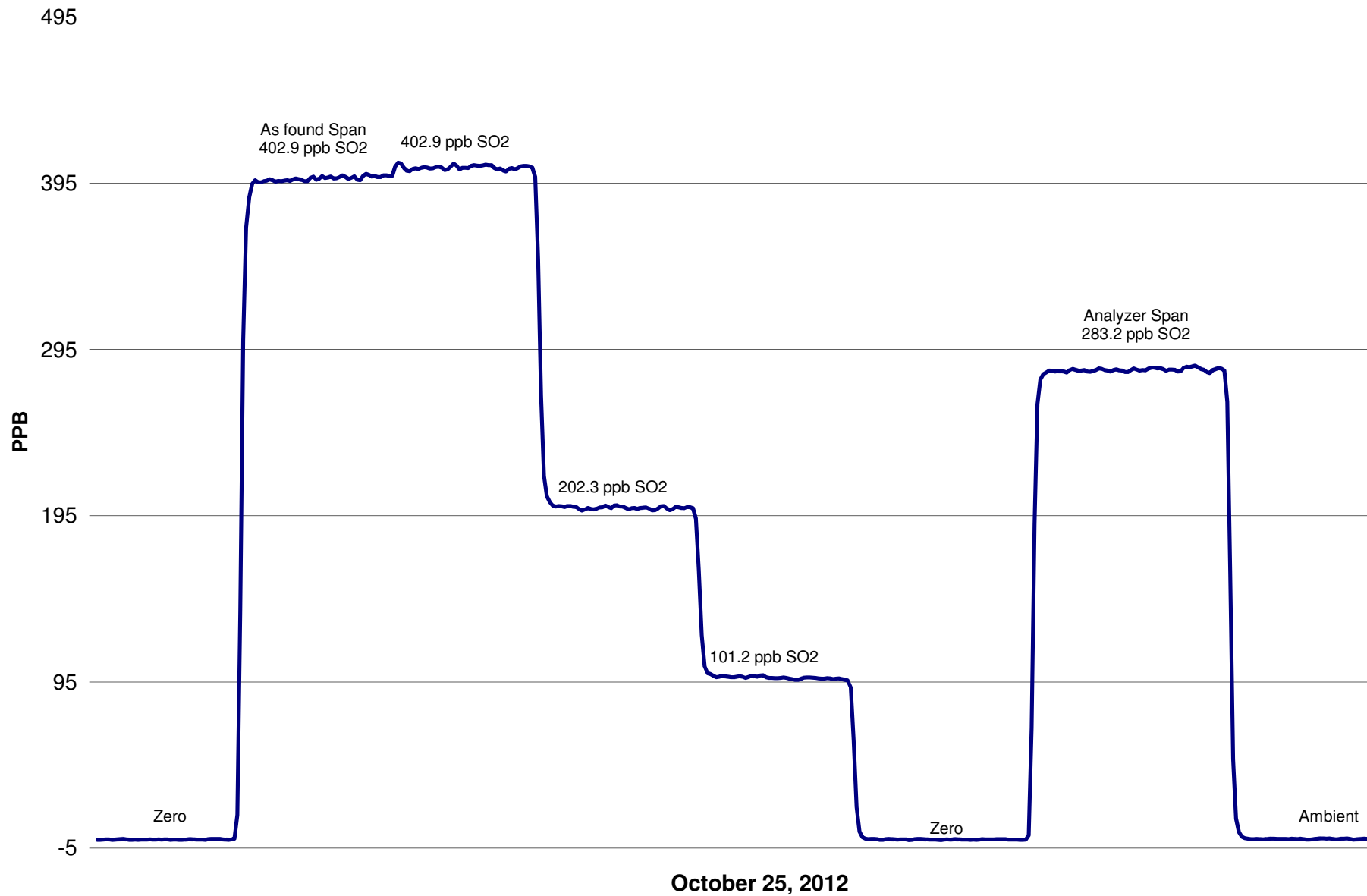
Calibration Date	October 25, 2012	Previous Calibration	September 14, 2012
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:30	End Time (MST)	14:08
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
402.9	404.6	0.9956	Correlation Coefficient	0.999832
202.3	199.6	1.0136		
101.2	97.7	1.0361	Slope	0.993685
			Intercept	2.160997



### SO2 Calibration





# Calibration Report

Parameter TRS

Air Monitoring Network PAZA



## Station Information

Calibration Date	October 25, 2012	Previous Calibration	September 14, 2012
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)	8:40	End Time (MST)	11:49
Barometric Pressure	0.941 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Conc	10.1 ppm	Cal Gas Expiry Date	11/05/2013
Correction factor	0.031987	Cal Gas Cylinder #	LL160692
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	0.999710	Calculated slope	1.010210
Calculated intercept	-0.251029	Calculated intercept	-0.800254

Analyzer make	TEI Model 43C	Analyzer serial #	3.199E+13
---------------	---------------	-------------------	-----------

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	32.1	ppb	32.7	ppb
coefficient	1.035		1.035	
Lamp Voltage	1018	volts	1018	volts
Chamber Temp	44.1	Deg C	44.1	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	652.9	mm Hg	653.5	mm Hg
Sample Flow	0.625	ccm	0.651	ccm
Lamp Intensity	32,033	mv	32,171	mv

## Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.9	N/A
4995	39.93	80.10	80.2	0.9988
4995	19.96	40.20	40.4	0.9959
8995	8.97	10.06	10.7	0.9370
4995	0.00	0.00	0.9	As Found Zero
4995	39.95	80.14	80.2	As Found Span
Average Correction Factor				0.9773

Calculated value of As Found Response: 79.02 ppm      Percent Change of As Found: 1.4%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.2	ppm
Auto span	81.6	ppm	77.2	ppm

Notes: **No adjustment.**

Calibration Performed By: Grover Christiansen

## Calibration Summary



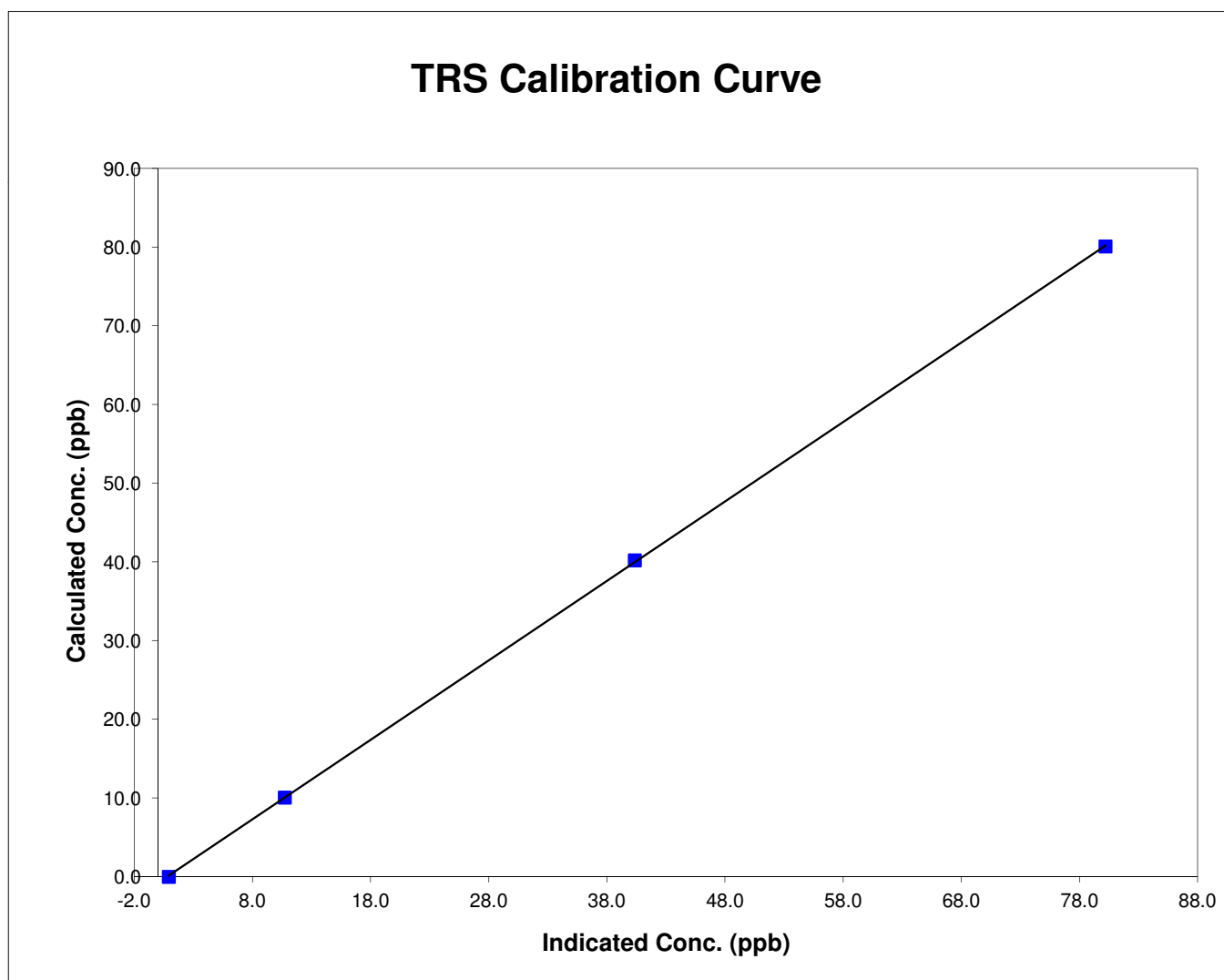
Parameter        **TRS**                       
 Air Monitoring Network                              **PAZA**                     

### Station Information

Calibration Date	October 25, 2012	Previous Calibration	September 14, 2012
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	8:40	End Time (MST)	11:49
Analyzer make/model	TEI Model 43C	Analyzer serial #	3199000000491

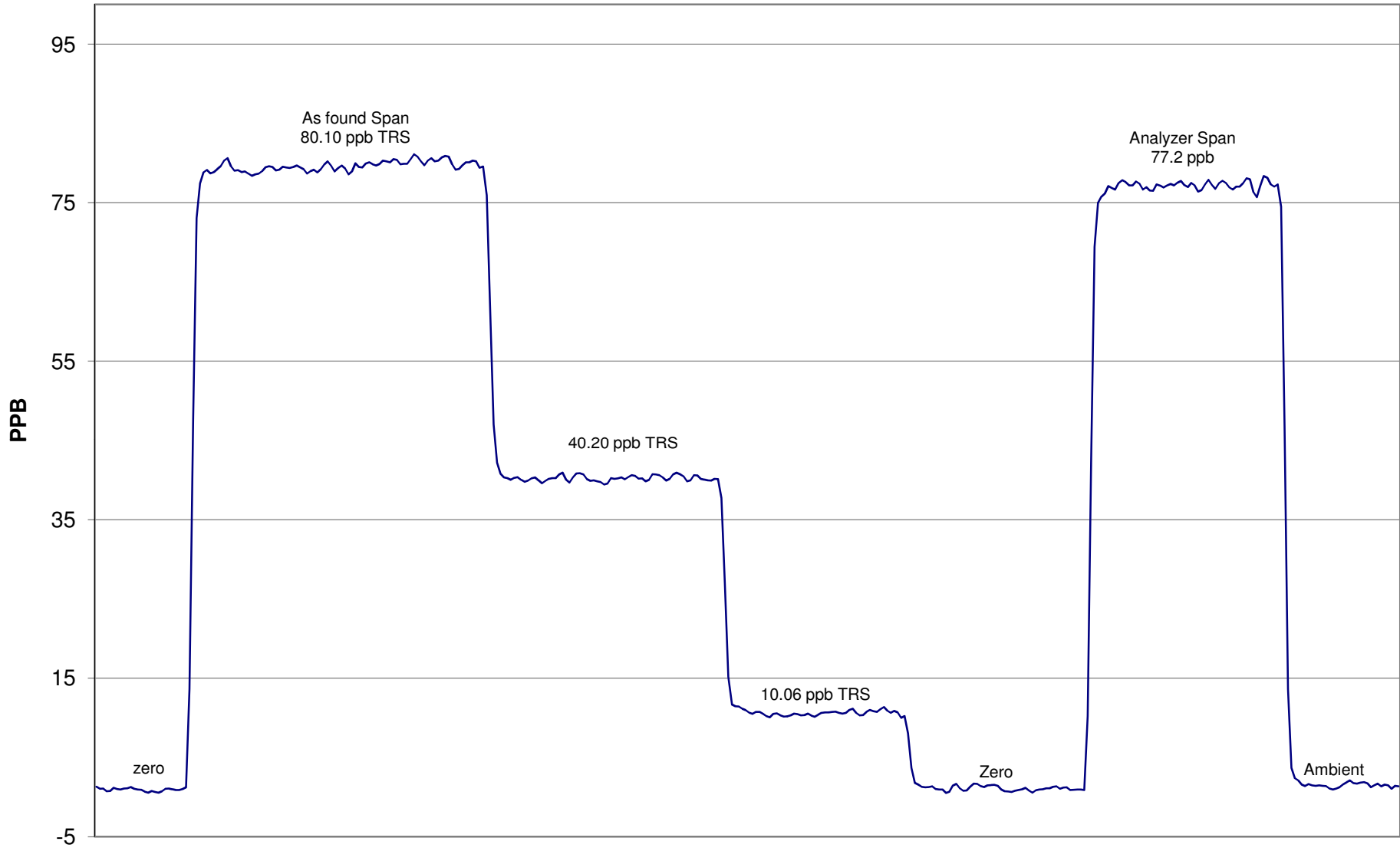
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.9	N/A	Correlation Coefficient	0.999980
80.1	80.2	0.9988		
40.2	40.4	0.9959	Slope	1.010210
10.1	10.7	0.9370		
			Intercept	-0.800254



As found Span  
80.10 ppb TRS

### TRS Calibration



# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PAZA

## Station Information

Calibration Date	October 3, 2012	Previous Calibration	September 25, 2012
Station Number	3	Station Location	Smokey Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	8:50	End Time (MST)	12:39
Barometric Pressure	0.944 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.8 ppm	Cal Gas Cert Date	3/12/2014
Correction factor	0.032089	Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	0.997730	Calculated slope	0.997421
Calculated intercept	2.055317	Calculated intercept	2.639700
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	10.8		10.5	
coefficient	0.975		0.950	
Lamp Voltage	922	volts	923	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	682.4	mm Hg	683.4	mm Hg
Sample Flow	0.449	ccm	0.455	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)
4995	0.0	0.00	0.2	N/A
4995	39.93	402.87	402.8	1.0002
4995	19.97	202.29	198.3	1.0202
4995	9.97	101.19	96.3	1.0505
4995	0.0	0.00	0.2	As Found Zero
4995	39.93	402.87	412.1	As Found Span
Average Correction Factor				1.0236

Calculated value of As Found Response: 412.945 ppm      Percent Change of As Found: -2.5%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.2	ppb
Auto span	304.5	ppb	300.9	ppb

Notes: Re install cal following trailer replacement & power up.  
Slight span adjust.

Calibration Performed By: Grover Christiansen

# Calibration Summary



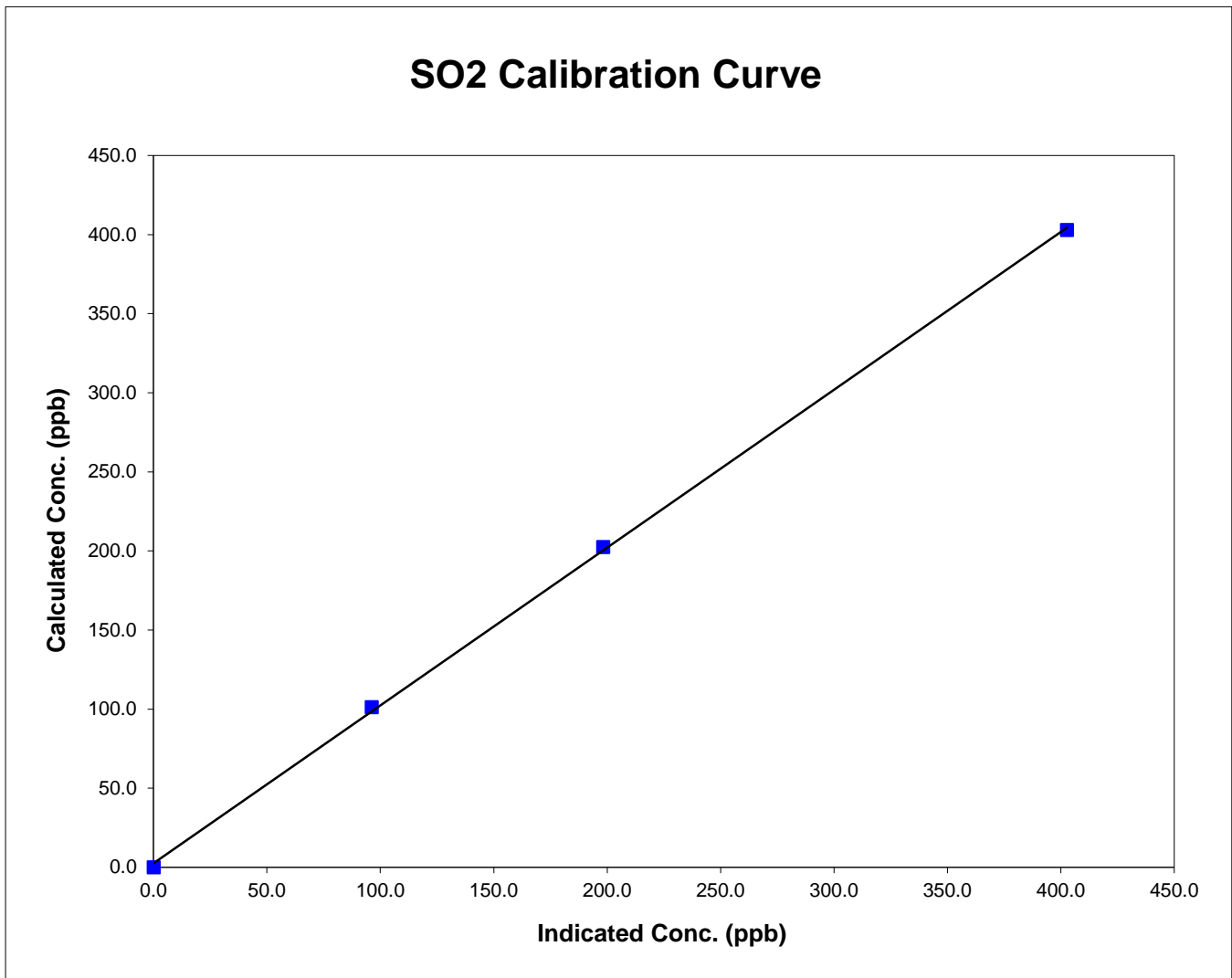
Parameter SO2  
 Air Monitoring Network PAZA

### Station Information

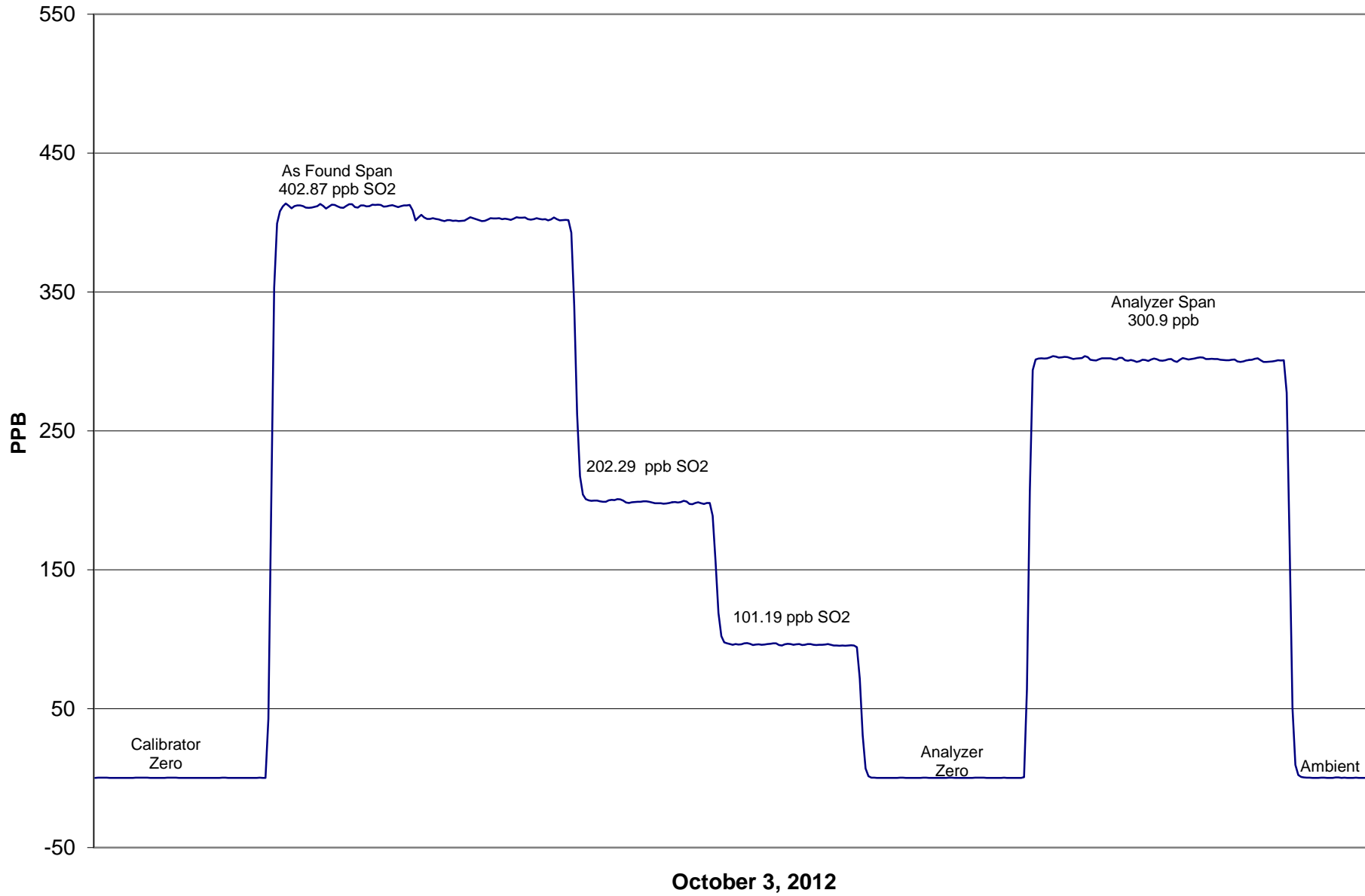
Calibration Date	October 3, 2012	Previous Calibration	September 25, 2012
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	8:50	End Time (MST)	12:39
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
402.9	402.8	1.0002	Correlation Coefficient	0.999775
202.3	198.3	1.0202		
101.2	96.3	1.0505	Slope	0.997421
			Intercept	2.639700



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

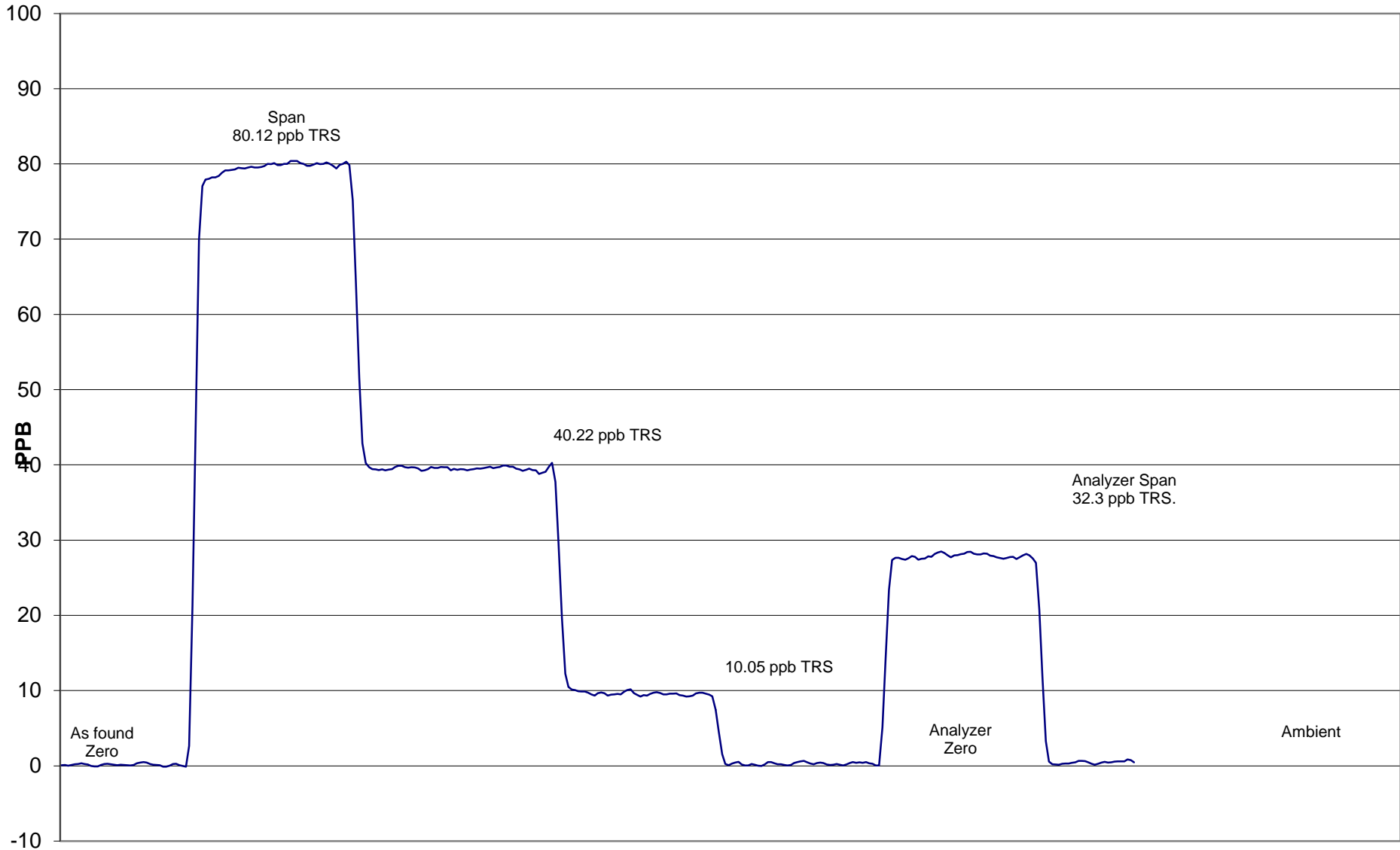








# Smokey Heights TRS Calibration



October 3, 2012

# AB TEOM PM2.5 Calibration



STATION: Smokey Heights  
 LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christansen  
 DATE: 3-Oct-12

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	24634
Site Number	3
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	0.995
T-Case Indicated / Set Point	40/40
T-Air Indicated / Set Point	40/40
T-Cap Indicated / Set Point	40/40
Splitter Assembly Alignment (cm)	15.5

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

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	25-Sep-12
Previous Calibration	NA

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

\* capacity test or pump on timed test utilized to verify pump integrity  
 "FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.080	0.550
PUMP OFF	0.010	-0.020
NET	0.070	0.570
<b>LIMITS</b>	<b>&lt;0.15</b>	<b>&lt;0.60</b>

	Ambient Temp. (°C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
SET POINT ( S )	na	na	12122	13.67	3.000
INDICATED ( I )	9.9	0.944	<del>12122</del>	13.69	3.000
MEASURED ( AF )	9.7	0.943	<del>12122</del>	13.65	3.005
MEASURED ( M )	9.7	0.943	12060	13.65	3.005
DIFFERENCE (M-I)	-0.2	-0.001	-0.5%	-0.15	0.00
<b>LIMITS</b>	<b>± 2 ° C</b>	<b>± 0.005 atm</b>	<b>± 2.5 %</b>	<b>± 1.0 L/min</b>	<b>± 0.2 L/min</b>

As Found Data  
 Adjusted Data

Ko Audit Filter data      Weight: 0.11477      Serial #: CVK 3532

COMMENTS:      PASS

Oct 2nd: Power up trailer. Checked TEOM filter & found water leaking from the plate surrounding mass transducer. Removed plate & dried surfaces. Took a few pictures of mass transducer well & water. Let it run at 40 deg C overnight with no sample filter installed.  
 Perform monthly audit following trailer replacement & reinstall. Showing negative numbers following mass transducer drying. Will watch ov

Sample Head Inspection/Cleaning:      Large In Line Filter Inspection & Or Replacement:

# Calibration Report



Parameter SO2

Air Monitoring Network PAZA

## Station Information

Calibration Date	October 15, 2012	Previous Calibration	September 6, 2012
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)	13:55	End Time (MST)	17:13
Barometric Pressure	0.901 atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	10.8 ppm	Cal Gas Expiry Date	9/28/2012
Gas Cert Reference	FF14871		
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.003875	Calculated slope	1.001269
Calculated intercept	-0.010095	Calculated intercept	-0.016105
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.43		2.43	
Coefficient	1.071		1.071	
PMT	-767.6	V	-767.6	V
UV Lamp Voltage	1052	V	1052	V
Chamber Temp	45.2	Deg C	45.2	Deg C
Pressure	654	mm Hg	656.5	mm Hg
Sample Flow	0.476	LPM	0.478	LPM
Lamp Intesity	96%	%	96%	%

## 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)
4995	0.00	0.0	0.2	N/A
4995	39.93	85.7	85.7	1.0000
4995	19.97	43.0	42.9	1.0024
4995	9.97	21.5	21.3	1.0123
4995	0.00	0.0	0.2	As found zero
4995	39.93	85.7	85.7	As found span
Average Correction Factor				1.0049

Calculated value of As Found Response: 85.735 ppm      Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.2	ppb
Auto span	58.5	ppb	61.1	ppb

Notes: No adjustments made.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PAZA



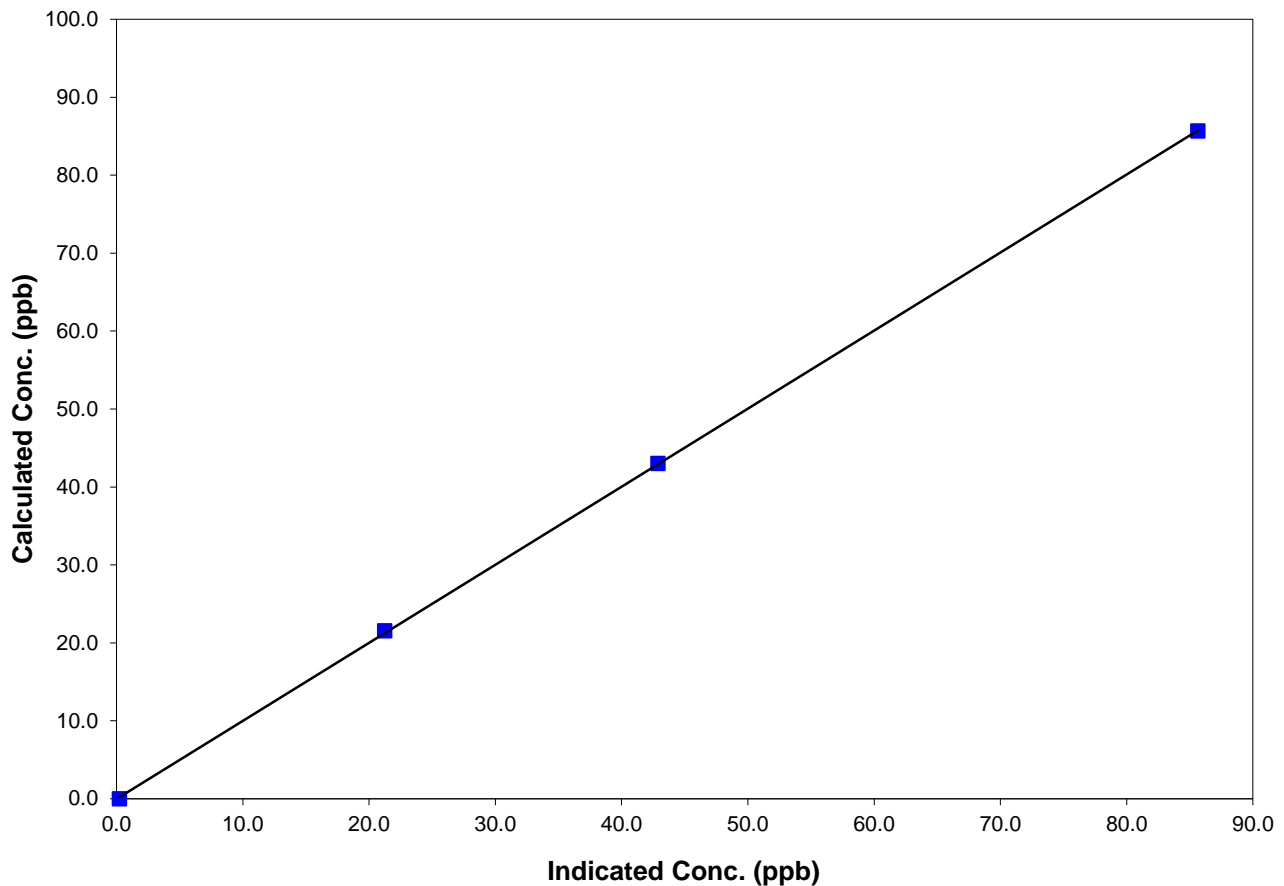
## Station Information

Calibration Date	October 15, 2012	Previous Calibration	September 6, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:55	End Time (MST)	17:13
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

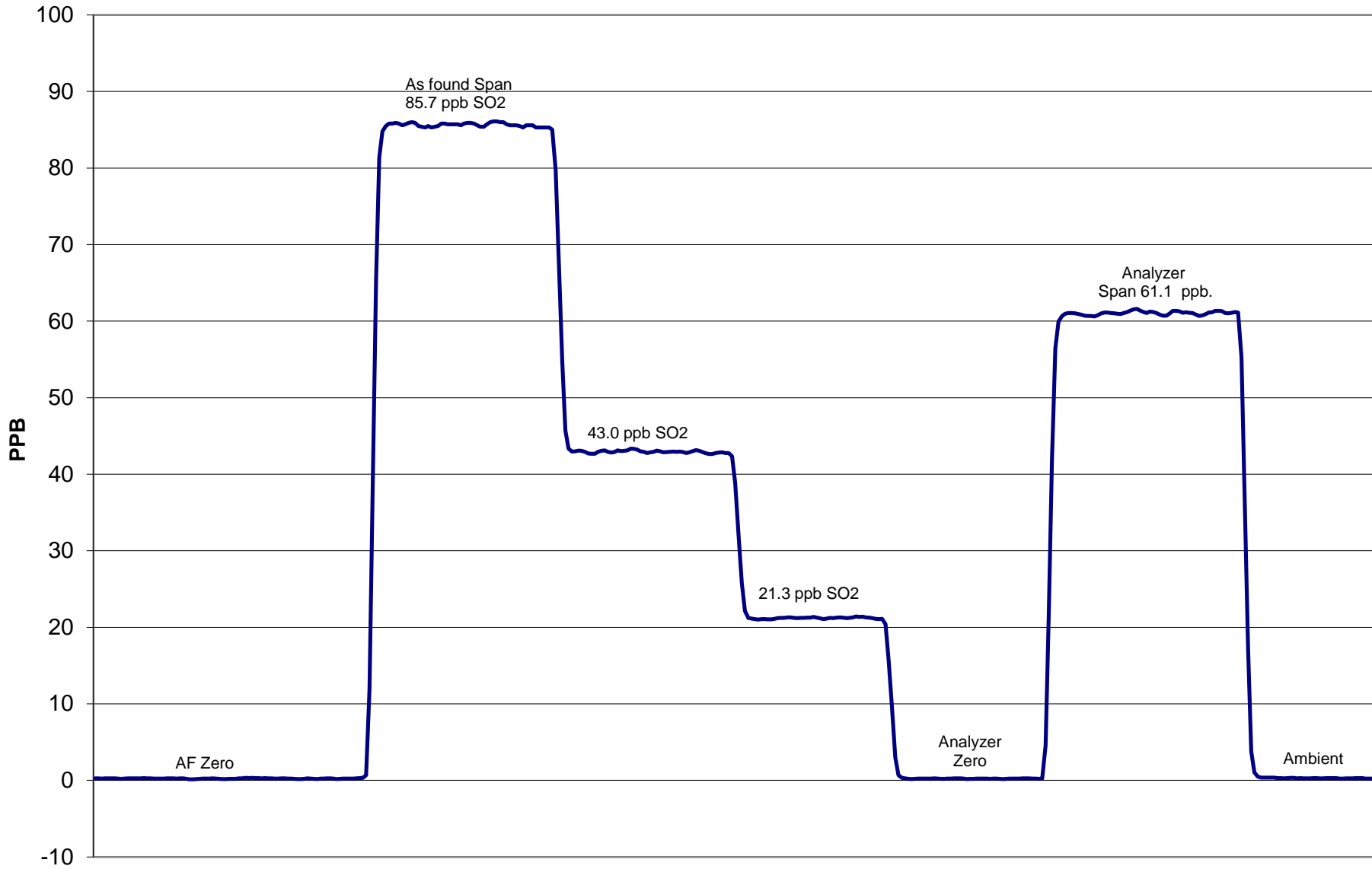
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999969
85.7	85.7	1.0000		
43.0	42.9	1.0024	Slope	1.001269
21.5	21.3	1.0123		
			Intercept	-0.016105

### SO2 Calibration Curve



# SO2 Calibration



October 15, 2012

# Calibration Report

Parameter

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

Air Monitoring Network

PAZA



## Station Information

Calibration Date	October 15, 2012	Previous Calibration	September 6, 2012
Station Number	4	Station Location	Beaverlodge
Reason:	<b>Routine</b> Installation Removal Other:		
Start Time (MST)	8:15	End Time (MST)	13:30
Barometric Pressure	0.901 Atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics	Serial Number	2844
NO Cal Gas Conc	51.2 ppm	Cal Gas Expiry Date	March 12, 2014
NOx Cal Gas Conc	51.2 ppm	Cal Gas Serial #	LL107272

## DACS Information

DACS make	CR3000	DACS serial No.	5237
Parameter	NO2	NOx	NO
Before	Data Slope	1.003083	0.995540
	Data Offset	1.010524	1.865759
After	Data Slope	1.003988	0.998839
	Data Offset	-0.298583	2.017913
Channel #	8	6	7
Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 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	2.1	mV	2.1	mV
NOx bkgnd	2.6	mV	2.6	mV
NO coefficient	1.396		1.410	
NOx coefficient	0.997		0.998	
NO2 conv temp	326.0	Deg C	326.0	Deg C
PMT Temp	-2.8	Deg C	-2.8	Deg C
PMT Volt	-671.9	mV	-671.9	mV
R Cell Press	168.7	in Hg	168.7	in Hg
Sample Flow	0.794	ccm	0.794	ccm

Notes: Slight span adjust 80% point.

# Calibration Report

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



## Station Information

Calibration Date: **October 15, 2012** 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	4995	0.00	0.0	0.0	0.0	-0.1	-0.1	-0.2	N/A	N/A
1	4995	39.94	406.1	406.1	0.0	405.5	406.2	-1.5	1.0016	0.9999
2	4995	19.97	203.9	203.9	0.0	201.2	201.0	-0.7	1.0133	1.0141
3	4995	9.97	102.0	102.0	0.0	98.2	98.6	-0.5	1.0388	1.0345
AFZ	4995	0.00	0.0	0.0	0.0	-0.1	-0.1	-0.2	0.0000	0.0000
AFS	4995	39.94	406.1	406.1	0.8	402.2	402.8	-1.4	1.0099	1.0082
Average Correction Factor									1.0179	1.0162

As Found Concentrations: **NO<sub>x</sub>= 404.1** **NO= 404.7** As Found Percent Change **NO<sub>x</sub>= -0.5%** **NO= -0.4%**

## GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.1	-0.1	0.0	-0.1	-0.1	-0.2	N/A	N/A	N/A	N/A
NO point	403.4	403.4	0.0	402.6	403.4	-1.5	1.0020	1.0000	N/A	N/A
300	403.4	108.5	294.9	402.7	108.5	293.5	1.0018	1.0000	1.0045	99.5%
200	403.4	202.7	200.7	404.2	202.7	200.6	0.9981	1.0000	1.0005	99.9%
100	403.4	299.2	104.3	404.4	299.2	104.7	0.9976	1.0000	0.9960	100.4%
Average Correction Factor							0.9992	1.0000	1.0004	100.0%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	-0.1	0.0	ppb	-0.2	-0.3	-0.1	ppb
Auto span	205.5	203.2	1.6	ppb	212.0	209.9	1.3	ppb

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PAZA



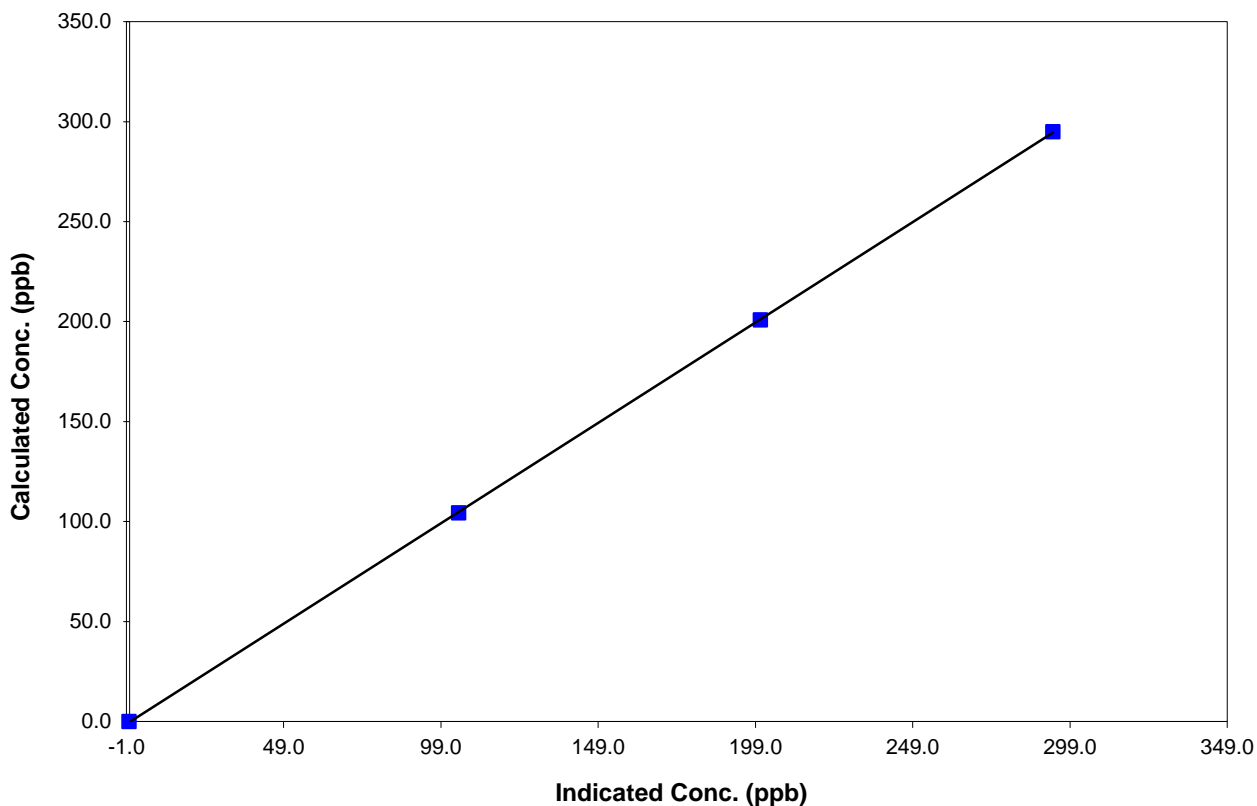
## Station Information

Calibration Date	October 15, 2012	Previous Calibration	September 6, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:15	End Time (MST)	13:30
Analyzer make	TEI 42i	Analyzer serial #	906535068

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A	Correlation Coefficient	0.999982
294.9	293.5	1.0045		
200.7	200.6	1.0005	Slope	1.003988
104.3	104.7	0.9960		
			Intercept	-0.298583

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





# Calibration Summary



Parameter NO<sub>x</sub>

Air Monitoring Network PAZA

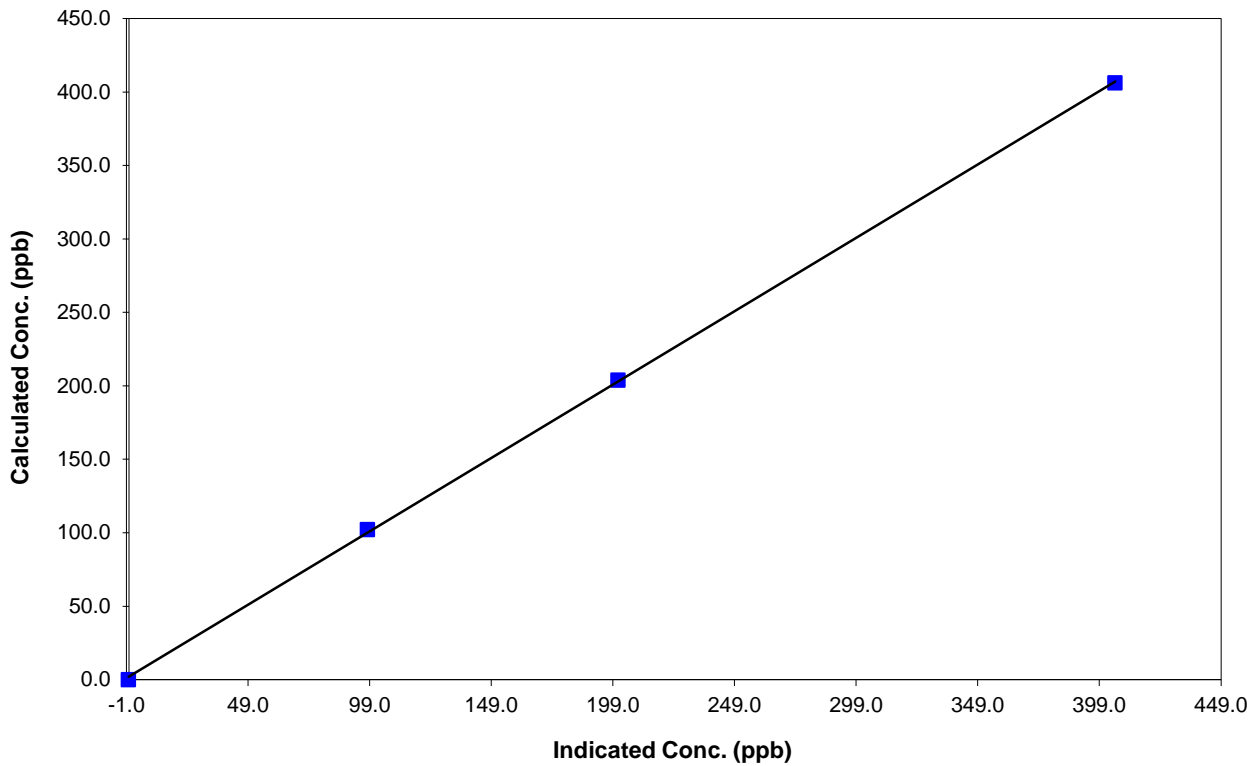
## Station Information

Calibration Date	October 15, 2012	Previous Calibration	September 6, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:15	End Time (MST)	13:30
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	0.999902
406.1	405.5	1.0016		
203.9	201.2	1.0133	Slope	0.998839
102.0	98.2	1.0388		
			Intercept	2.017913

## NOx Calibration Curve



# Calibration Summary



Parameter NO

Air Monitoring Network PAZA

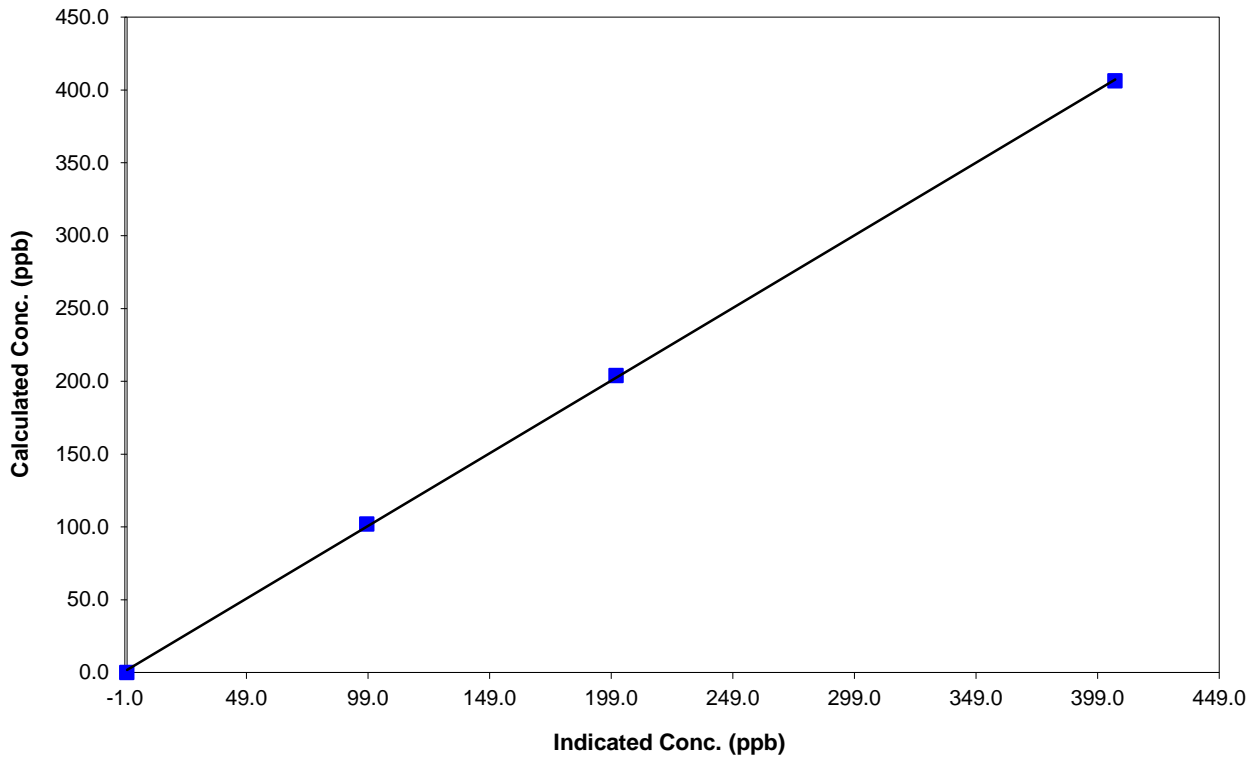
## Station Information

Calibration Date	October 15, 2012	Previous Calibration	September 6, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:15	End Time (MST)	13:30
Analyzer make	TEI 42i	Analyzer serial #	906535068

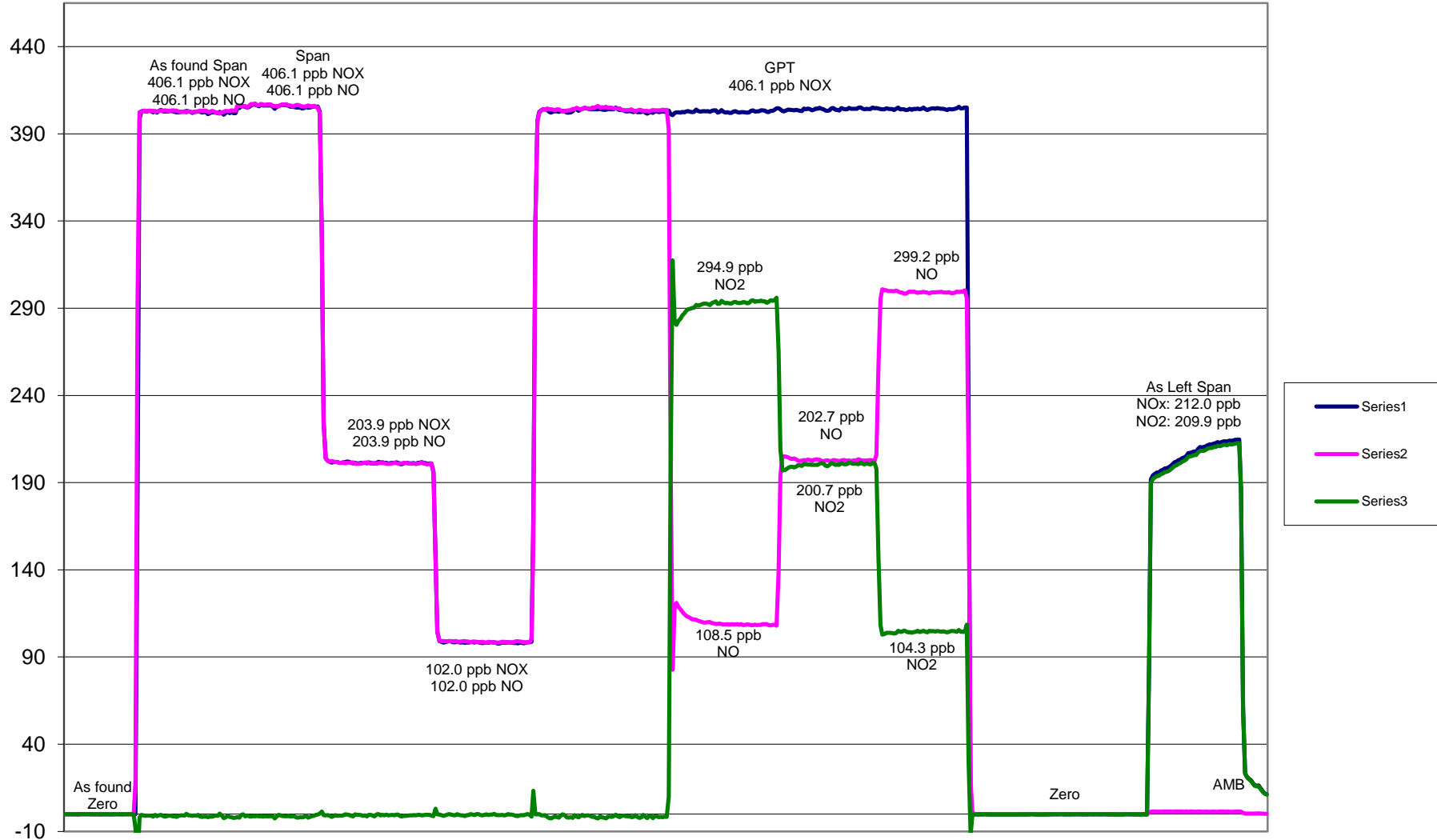
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999898
406.1	406.2	0.9999		
203.9	201.0	1.0141	Slope	0.997601
102.0	98.6	1.0345		
			Intercept	2.000443

## NO Calibration Curve



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



October 15, 2012

# Calibration Report



Parameter 03

Air Monitoring Network PAZA

## Station Information

Calibration Date	October 15, 2012	Previous Calibration	September 6, 2012
Station Number	4	Station Location	Beaverlodge
Reason:	<b>Routine</b>	Install	Removal
		Other:	
Start Time (MST)	12:10	End Time (MST)	15:19
Barometric Pressure	0.901 atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	2844
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	1.000168	Calculated slope	0.982647
Calculated intercept	0.868903	Calculated intercept	0.056672
Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.50	ppb	-1.50	ppb
slope	1.036		1.036	
Lamp temp	56.4	mV	56.4	mV
Lamp Intensity A/B	53980/58000	mV	53980/58000	mV
Pressure	682.7	mm Hg	685.6	mm Hg
Flow A	0.76	ccm	0.762	ccm
Flow B	0.710	ccm	0.712	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)
5035	0.0	0.0	0.0	N/A
5035	0.3	294.9	300.5	0.9814
5035	0.2	200.7	203.4	0.9867
5035	0.1	104.3	106.3	0.9808
5035	0.0	0.0	0.0	As found zero
5035	0.3	294.9	300.5	As found span
Average Correction Factor				0.9830

Calculated value of As Found Response: 301.4 ppm      Percent Change of As Found: 2.2%

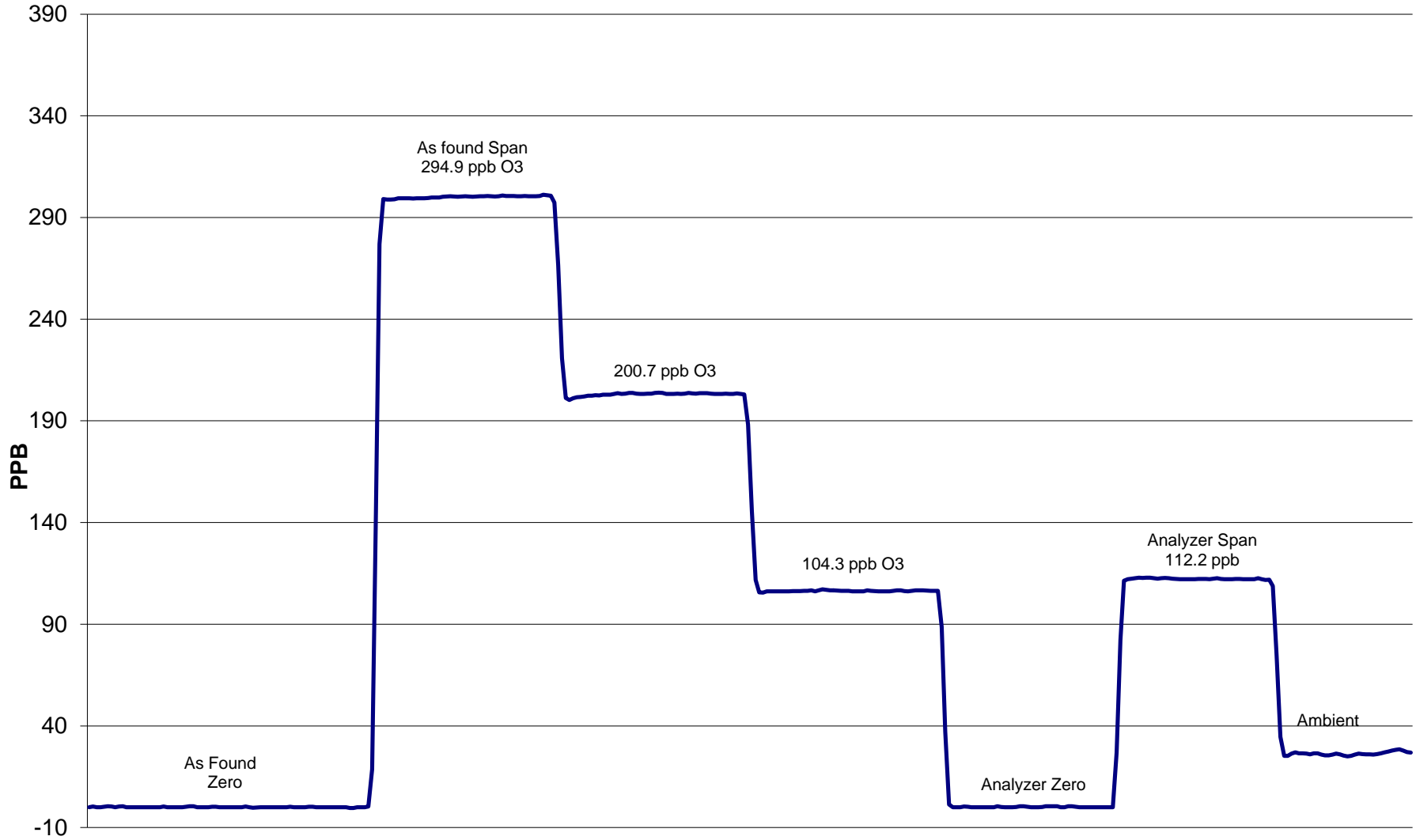
	before calibration		after calibration	
Auto zero	0.4	ppb	0.3	ppb
Auto span	110.0	ppb	112.2	ppb

Notes: No adjust

Calibration Performed By: Grover Christiansen



# O3 Calibration



October 15, 2012

# Calibration Report

Parameter SO2  
 Air Monitoring Network PAZA



## Station Information

Calibration Date	October 17, 2012	Previous Calibration	September 19, 2012
Station Number	6	Station Location	Valleyview
Reason:	<b>Routine</b>	Install	Removal
		Other:	
Start Time (MST)	12:00	End Time (MST)	14:46
Barometric Pressure	702.00 mmHg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Concentration	50.8 ppm	Cal Gas Cert Date	12/03/2013
Gas Cylinder Num.	LL107272	Cal gas Exp. Date	12/03/2014
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 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	0.995775	Calculated slope	0.998637
Calculated intercept	2.283586	Calculated intercept	2.027365
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	32.8		32.6	
Coefficient	0.882		0.882	
UV Lamp Voltage	973	LPM	972	LPM
Chamber Temp	43.9	V	43.9	V
Perm Gas Temp	32.3	C	32.3	C
Pressure	602.3	in Hg	605.7	in Hg
Sample Flow	0.557	LPM	0.561	LPM
Lamp Intensity	48427	Hz	48354	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)
4995	0.00	0.0	0.5	N/A
4995	39.94	403.0	402.7	1.0008
4995	19.97	202.3	199.5	1.0142
4995	9.94	100.9	96.4	1.0470
4995	0.00	0.0	0.5	As found zero
4995	39.94	403.0	402.7	As found span
Average Correction Factor				1.0207

Calculated value of As Found Response: 402.7 ppm      Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	160.1	ppm	159.1	ppm

Notes: No adjustment.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PAZA

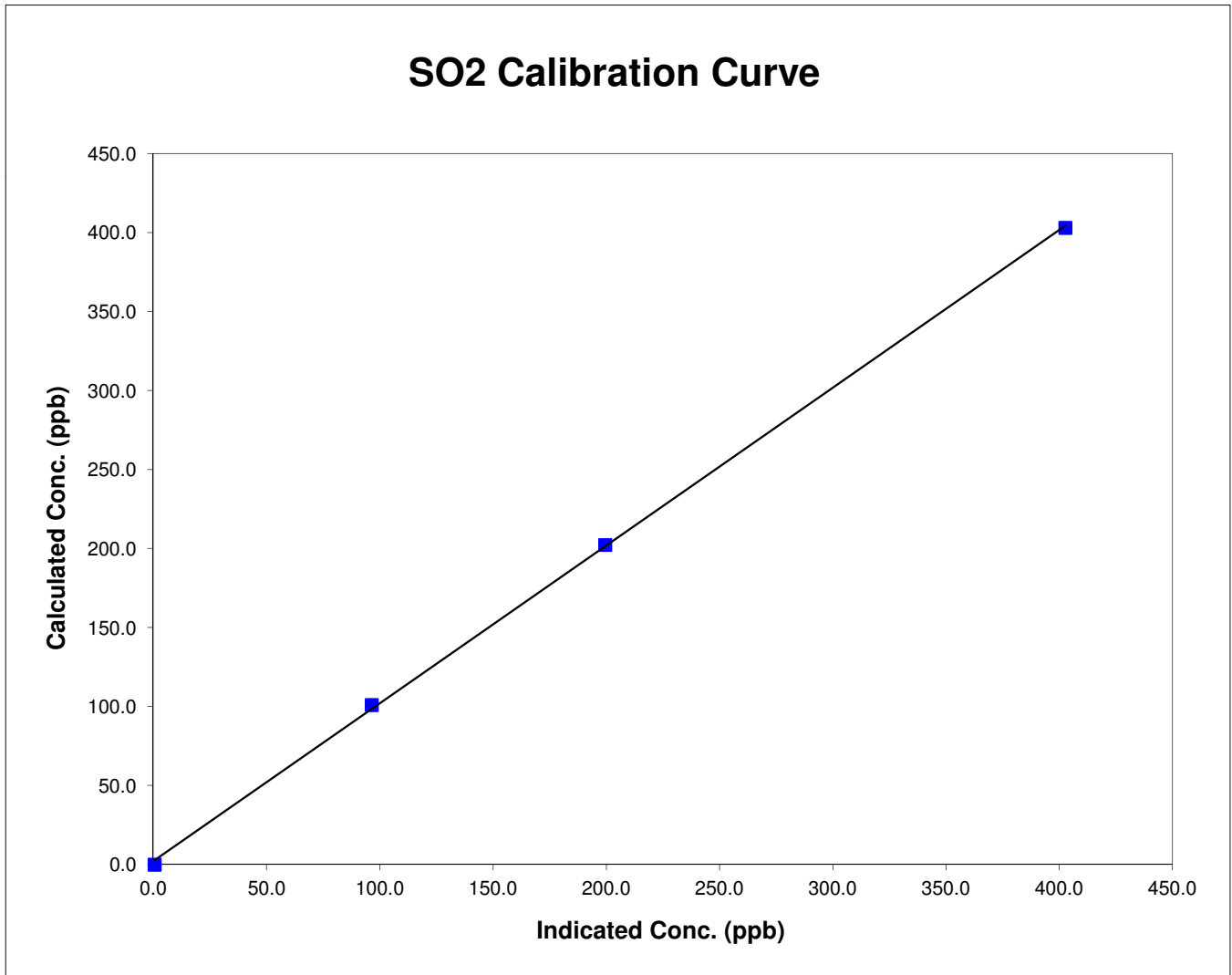


### Station Information

Calibration Date	October 17, 2012	Previous Calibration	September 19, 2012
Station Number	6	Station Location	Valleyview
Start Time (MST)	12:00	End Time (MST)	14:42
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

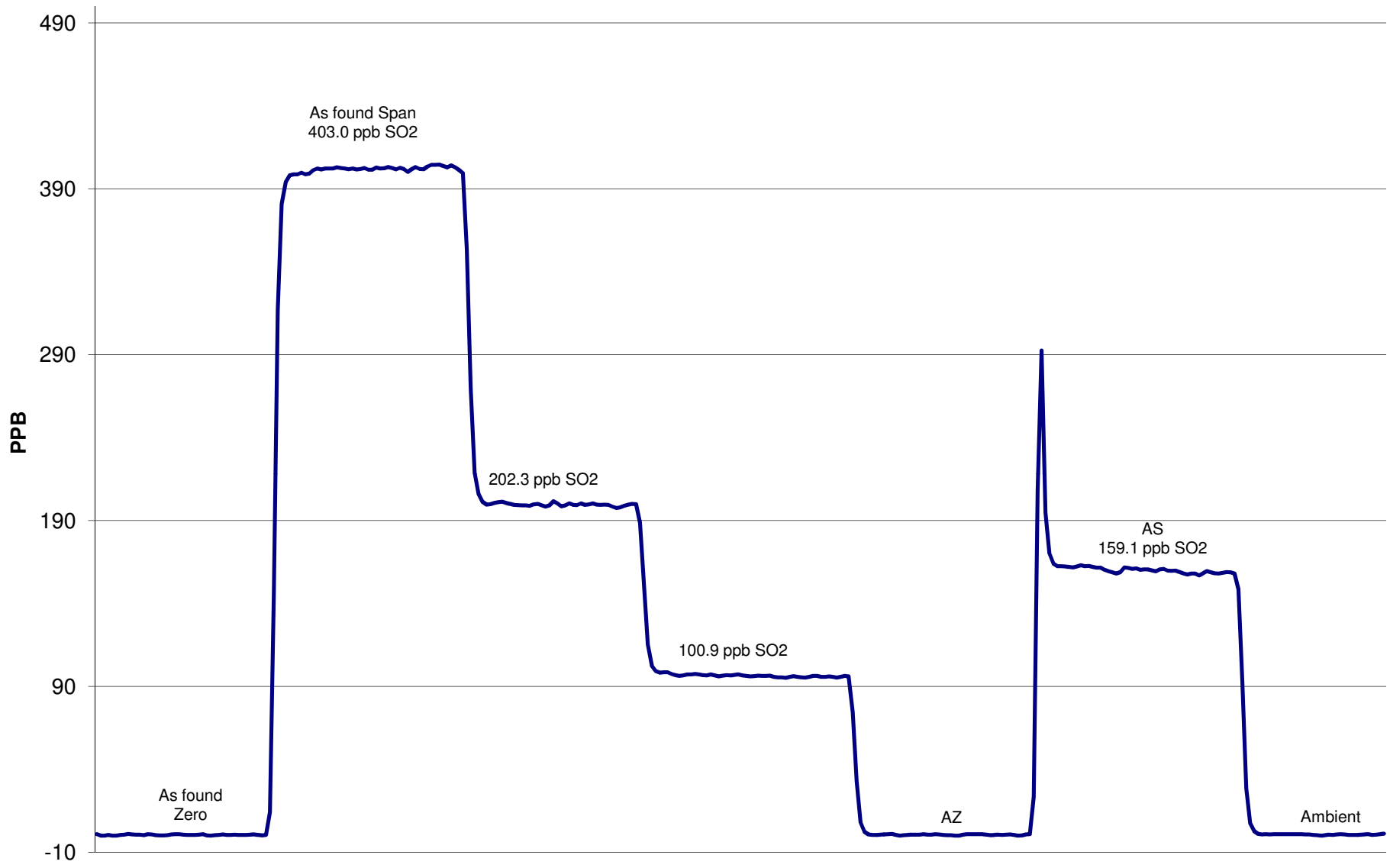
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
403.0	402.7	1.0008	Correlation Coefficient	0.999821
202.3	199.5	1.0142		
100.9	96.4	1.0470	Slope	0.998637
			Intercept	2.027365





# SO2 Calibration



October 17, 2012

# Calibration Report



Parameter H2S

Air Monitoring Network PAZA

### Station Information

Calibration Date	<u>October 17, 2012</u>	Previous Calibration	<u>September 19, 2012</u>
Station Number	<u>6</u>	Station Location	<u>Valleyview</u>
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	<u>9:30</u>	End Time (MST)	<u>13:16</u>
Barometric Pressure	<u>702.00</u> mm	Station Temperature	<u>21.0</u> Deg C
Calibrator	<u>Enviroics 6100</u>	Serial Number	<u>LL160692</u>
Cal Gas Concentration	<u>10.1</u> ppm	Cal Gas Expiry Date	<u>11/05/2013</u>
Gas Cert Reference	<u>15/05/2012</u>		
DACS make	<u>CR3000</u>	DACS serial No.	<u>5409</u>
DACS voltage range	<u>0 - 5 volt</u>	DACS channel #	<u>9</u>
	<u>Before</u>		<u>After</u>
DACS Scale High	<u>100</u>	DACS slope	<u>100</u>
DACS Scale Low	<u>0</u>	DACS intercept	<u>0</u>
Calculated slope	<u>0.994420</u>	Calculated slope	<u>0.996613</u>
Calculated intercept	<u>0.504731</u>	Calculated intercept	<u>0.351984</u>
Analyzer make	<u>TEI Model 43i - APSCB</u>	Analyzer serial #	<u>701120010</u>

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	8.0	ppb	7.7	ppb
Coefficient	1.073		1.040	
Lamp Voltage	784	V	784	V
Chamber Temp	45.1	c	45.1	c
Perm Oven Temp	44.33	c	44.33	c
Pressure	613.10	mm Hg	615.80	mm Hg
Sample Flow	0.415	ccm	0.417	ccm
Lamp Intensity	91.0	%	91.0	%

### 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)
4995	0.00	0.0	-0.1	N/A
4995	39.95	80.1	80.2	0.9991
4995	19.97	40.2	39.7	1.0123
8979	8.97	10.1	9.6	1.0529
4995	0.00	0.0	-0.1	As found zero
4995	39.95	80.1	83.5	As found span
Average Correction Factor				1.0214

Calculated value of As Found Response: 83.60 ppm      Percent Change of As Found: -4.3%

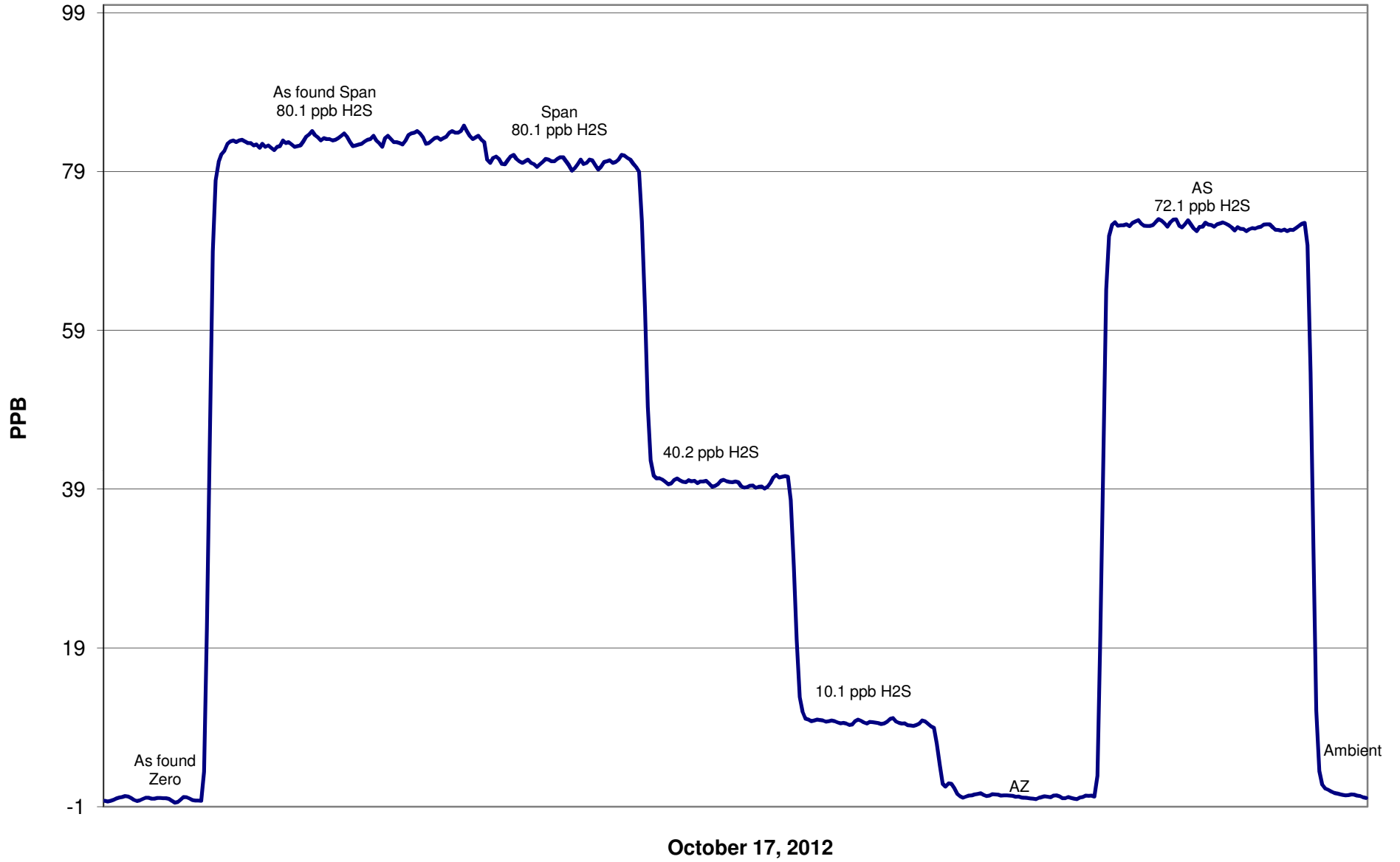
	before calibration		after calibration	
Auto zero	0.0	ppm	0.5	ppm
Auto span	70.6	ppm	72.1	ppm

Notes: Slight adjust 80% point.

Calibration Performed By: Grover Christiansen



# H2S Calibration



# Calibration Report



Parameter SO2

Air Monitoring Network PAZA

## Station Information

Calibration Date	<u>October 18, 2012</u>	Previous Calibration	<u>September 20, 2012</u>
Station Number	<u>9</u>	Station Location	<u>Sunset House</u>
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	<u>8:10</u>	End Time (MST)	<u>11:30</u>
Barometric Pressure	<u>31.70</u> inches Hg	Station Temperature	<u>19.7</u> Deg C
Calibrator	<u>EnviroNics 6100</u>	Serial Number	<u>3016</u>
Cal Gas Concentration	<u>50.8</u> ppm	Cal Gas Expiry Date	<u>06/04/2012</u>
Gas Cert Reference	<u>LL85275</u>		
DACS make	<u>CR3000</u>	DACS serial No.	<u>5407</u>
DACS voltage range	<u>0 - 5 Volt</u>	DACS channel #	<u>2</u>
	<u>Before</u>		<u>After</u>
DACS Scale High	<u>500</u>	DACS slope	<u>500</u>
DACS Scale Low	<u>0</u>	DACS intercept	<u>0</u>
Calculated slope	<u>1.000623</u>	Calculated slope	<u>0.997380</u>
Calculated intercept	<u>1.287437</u>	Calculated intercept	<u>2.211021</u>
Analyzer make	<u>TEI 43C</u>	Analyzer serial #	<u>609716238</u>

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	17.2		17.5	
Coefficient	0.983		0.997	
UV Lamp Voltage	831	V	831	V
Chamber Temp	44.9	C	44.9	C
Perm Gas Temp	45	C	45	C
Pressure	660.8	mm Hg	658.9	mm Hg
Sample Flow	0.481	LPM	0.48	LPM
Lamp Intesity	37056	Hz	37097	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)
4995	0.00	0.0	-0.1	N/A
4995	39.93	402.9	402.8	1.0001
4995	19.97	202.3	199.3	1.0151
4995	9.96	101.1	97.2	1.0397
4995	0.00	0.0	-0.1	As found zero
4995	39.93	402.9	397.6	As found span
Average Correction Factor				1.0183

Calculated value of As Found Response: 399.217 ppm      Percent Change of As Found: 0.9%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	264.0	ppm	270.7	ppm

Notes: Slight span adjust.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



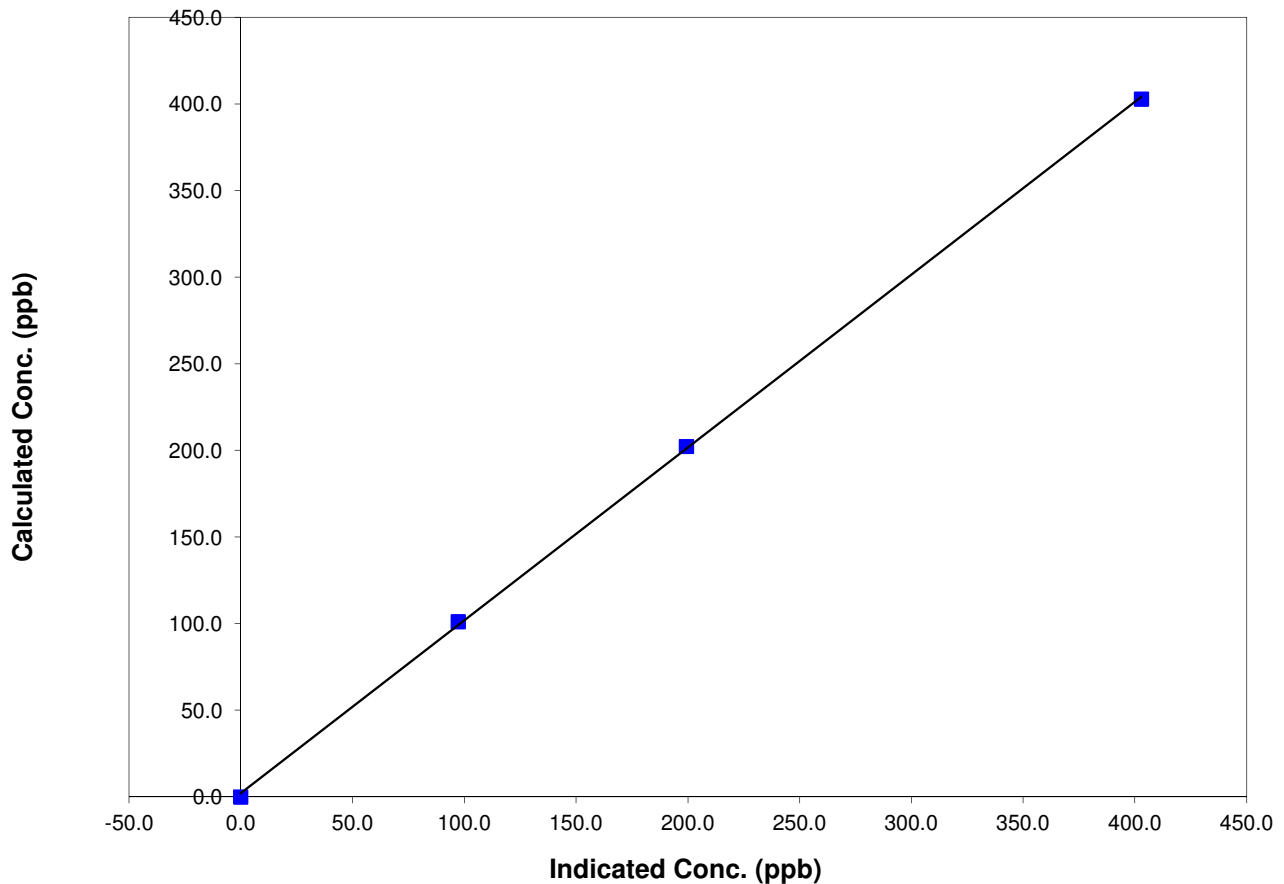
## Station Information

Calibration Date	October 18, 2012	Previous Calibration	September 20, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	8:10	End Time (MST)	11:30
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

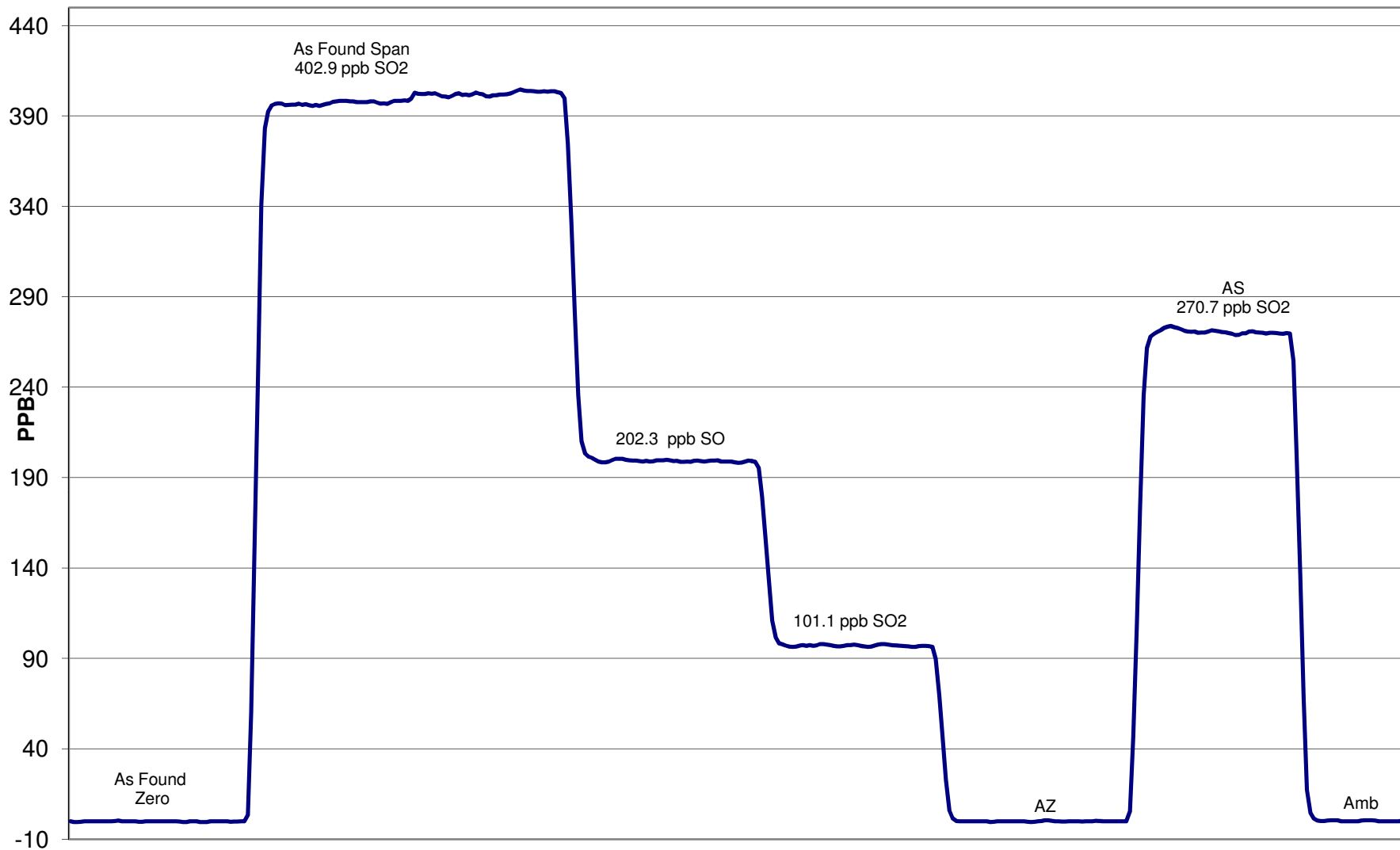
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
402.9	402.8	1.0001	Correlation Coefficient	0.999875
202.3	199.3	1.0151		
101.1	97.2	1.0397	Slope	0.997380
			Intercept	2.211021

### SO2 Calibration Curve



# SO2 Calibration



October 18, 2012

# Calibration Report

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



## Station Information

Calibration Date	October 18, 2012	Previous Calibration	September 20, 2012
Station Number	9	Station Location	Sunset House
Reason:	<b>Routine</b> Install    Removal    Other:		
Start Time (MST)	8:10	End Time (MST)	12:53
Barometric Pressure	0.909    Atm	Station Temperature	20.0    Deg C
Calibrator	EnviroNics	Serial Number	3016
NO Cal Gas Conc	51.2    ppm	Cal Gas Expiry Date	March 12, 2014
NO <sub>x</sub> Cal Gas Conc	51.2    ppm	Cal Gas Serial #	LL107272

## DACS Information

DACS make	CR3000	DACS serial No.	5407	
Parameter		NO <sub>2</sub>	NO <sub>x</sub>	NO
Before	Data Slope	0.998644	1.000775	1.006582
	Data Offset	-0.147830	0.718673	0.224606
After	Data Slope	0.997406	0.995483	0.999584
	Data Offset	0.081802	0.777580	0.803215
Channel #		5	3	4
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

## Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	0701120011	
Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	5.0	mV	5.0	mV
NO <sub>x</sub> bkgnd	5.4	mV	5.4	mV
NO coefficient	1.099		1.109	
NO <sub>x</sub> coefficient	1.000		1.003	
NO <sub>2</sub> conv temp	325.0	Deg C	325.0	Deg C
PMT Temp	-2.8	Deg C	-2.8	Deg C
PMT Volt	-797.4	mV	-797.4	mV
R Cell Press	174.7	in Hg	174.4	in Hg
Sample Flow	0.775	ccm	0.774	ccm

NOTES: Slight span adjust.



# Calibration Report

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



## Station Information

Calibration Date: **October 18, 2012** Station Location: **Sunset House**

## 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	4995	0.00	0.0	0.0	0.0	0.7	0.6	0.1	N/A	N/A
1	4995	39.93	406.0	406.0	0.0	407.7	406.2	-0.2	0.9958	0.9997
2	4995	19.97	203.9	203.9	0.0	203.5	202.3	0.3	1.0017	1.0079
3	4995	9.96	101.9	101.9	0.0	100.0	99.9	0.1	1.0192	1.0201
AFZ	4995	0.00	0.0	0.0	0.0	0.7	0.6	0.2	0.0000	0.0000
AFS	4995	39.93	406.0	406.0	0.0	403.6	402.5	-0.7	1.0062	1.0087
Average Correction Factor									1.0056	1.0092

As Found Concentrations: **NO<sub>x</sub>= 403.5** **NO= 402.2** As Found Percent Change **NO<sub>x</sub>= -0.6%** **NO= -0.9%**

## GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 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	0.6	0.6	0.0	0.7	0.6	0.1	N/A	N/A	N/A	N/A
NO point	407.2	407.2	0.0	409.9	407.2	0.6	0.9934	1.0000	N/A	N/A
300	407.2	112.8	294.4	409.9	112.8	295.4	0.9935	1.0000	0.9966	100.3%
200	407.2	206.8	200.4	409.4	206.8	200.4	0.9947	1.0000	0.9999	100.0%
100	407.2	301.4	105.8	409.4	301.4	105.9	0.9946	1.0000	0.9987	100.1%
Average Correction Factor							0.9943	1.0000	0.9984	100.2%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.8	0.2	0.7	ppb	0.5	0.0	0.6	ppb
Auto span	169.8	167.0	2.2	ppb	189.0	186.1	1.9	ppb

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PAZA



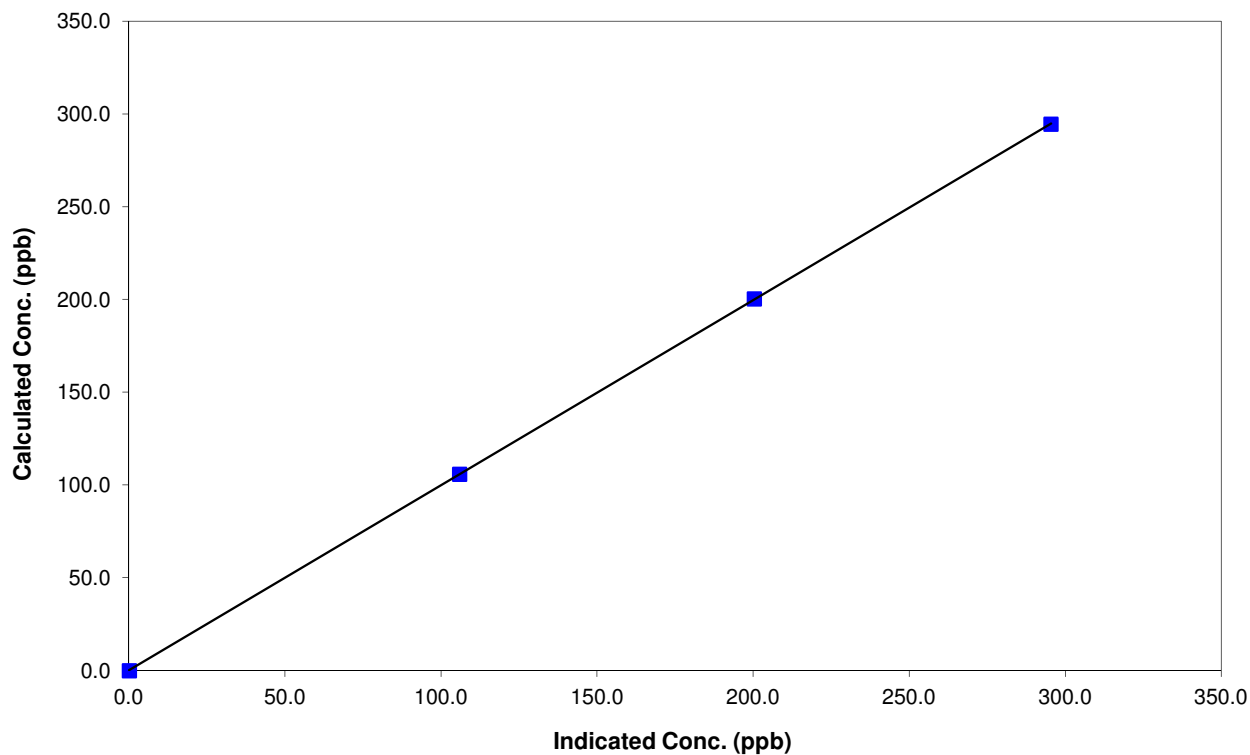
## Station Information

Calibration Date	October 18, 2012	Previous Calibration	September 20, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	8:10	End Time (MST)	12:53
Analyzer make	TEI 42i	Analyzer serial #	0701120011

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999994
294.4	295.4	0.9966		
200.4	200.4	0.9999	Slope	0.997406
105.8	105.9	0.9987		
			Intercept	0.081802

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



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PAZA



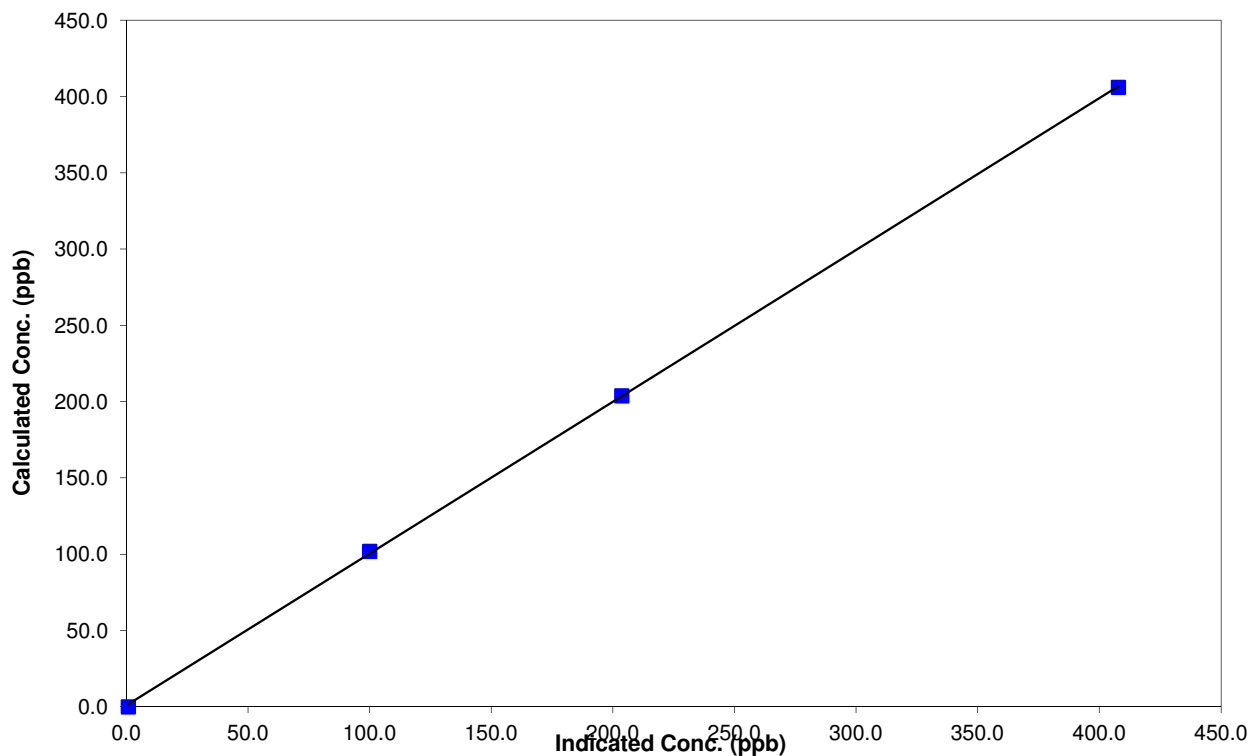
## Station Information

Calibration Date	October 18, 2012	Previous Calibration	September 20, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	8:10	End Time (MST)	12:53
Analyzer make	TEI 42i	Analyzer serial #	0701120011

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	N/A	Correlation Coefficient	0.999942
406.0	407.7	0.9958		
203.9	203.5	1.0017	Slope	0.995483
101.9	100.0	1.0192		
			Intercept	0.777580

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



# Calibration Summary

Parameter NO

Air Monitoring Network PAZA



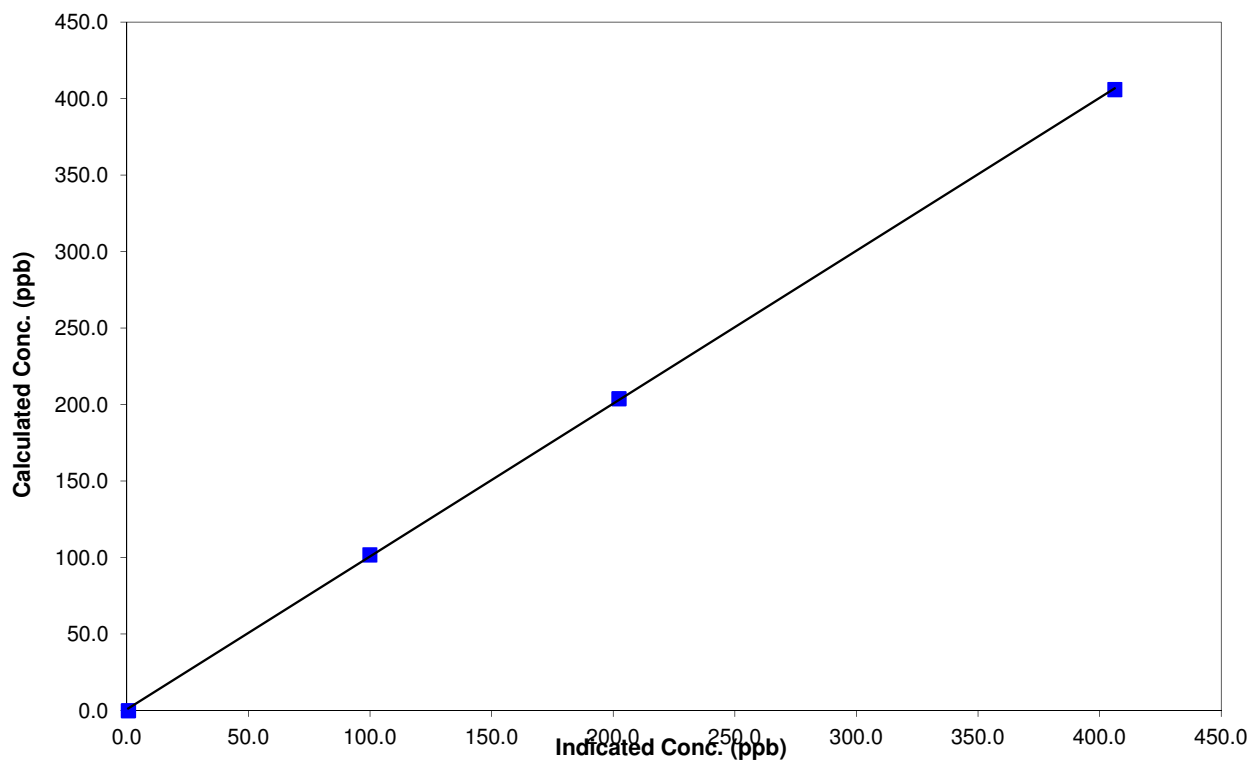
## Station Information

Calibration Date	October 18, 2012	Previous Calibration	September 20, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	8:10	End Time (MST)	12:53
Analyzer make	TEI 42i	Analyzer serial #	0701120011

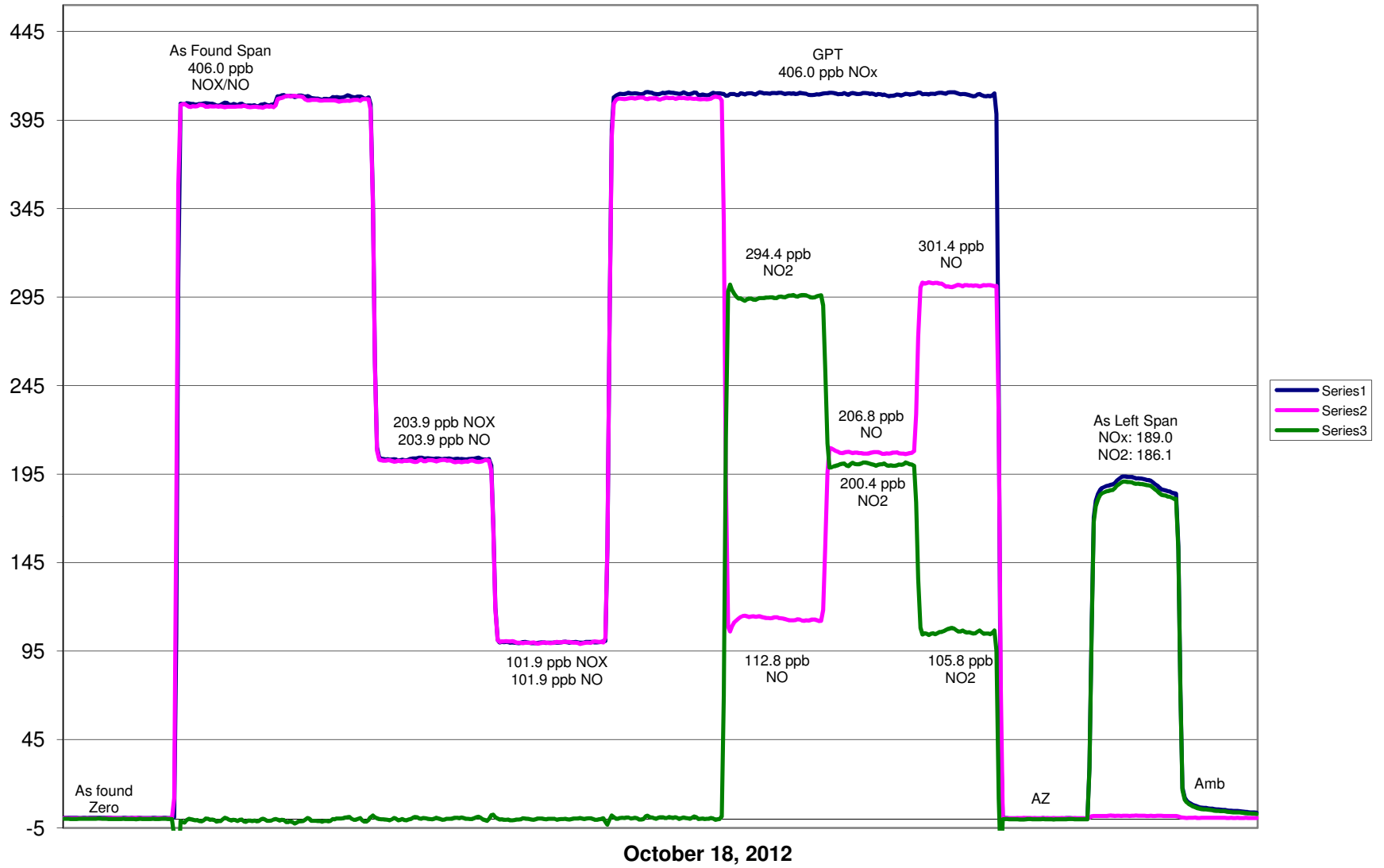
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A	Correlation Coefficient	0.999947
406.0	406.2	0.9997		
203.9	202.3	1.0079	Slope	0.999584
101.9	99.9	1.0201		
			Intercept	0.803215

## NO Calibration Curve



# PASZA Sunset House NO<sub>x</sub> Calibration





# Calibration Summary



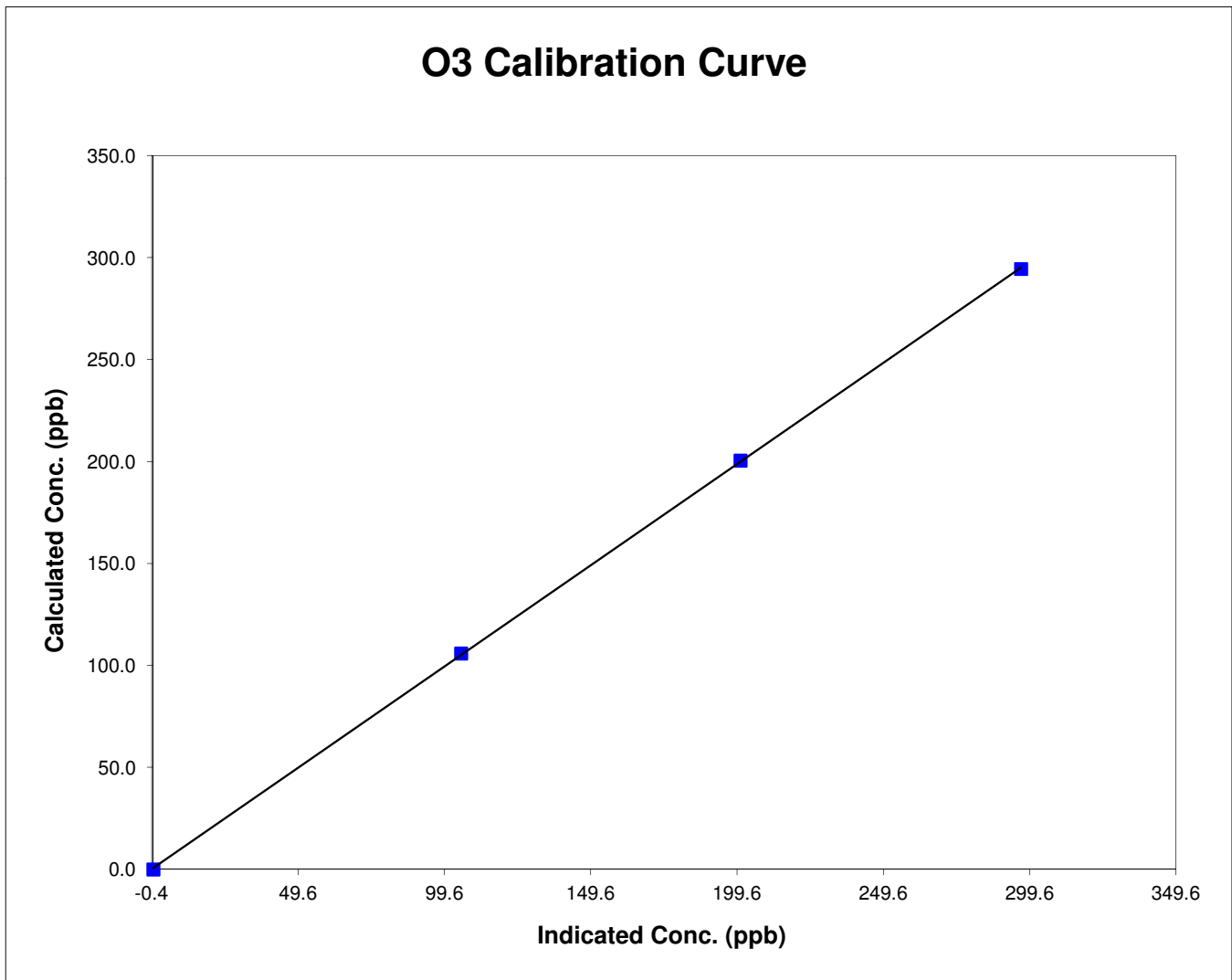
Parameter           O3            
Air Monitoring Network                                   PAZA                                  

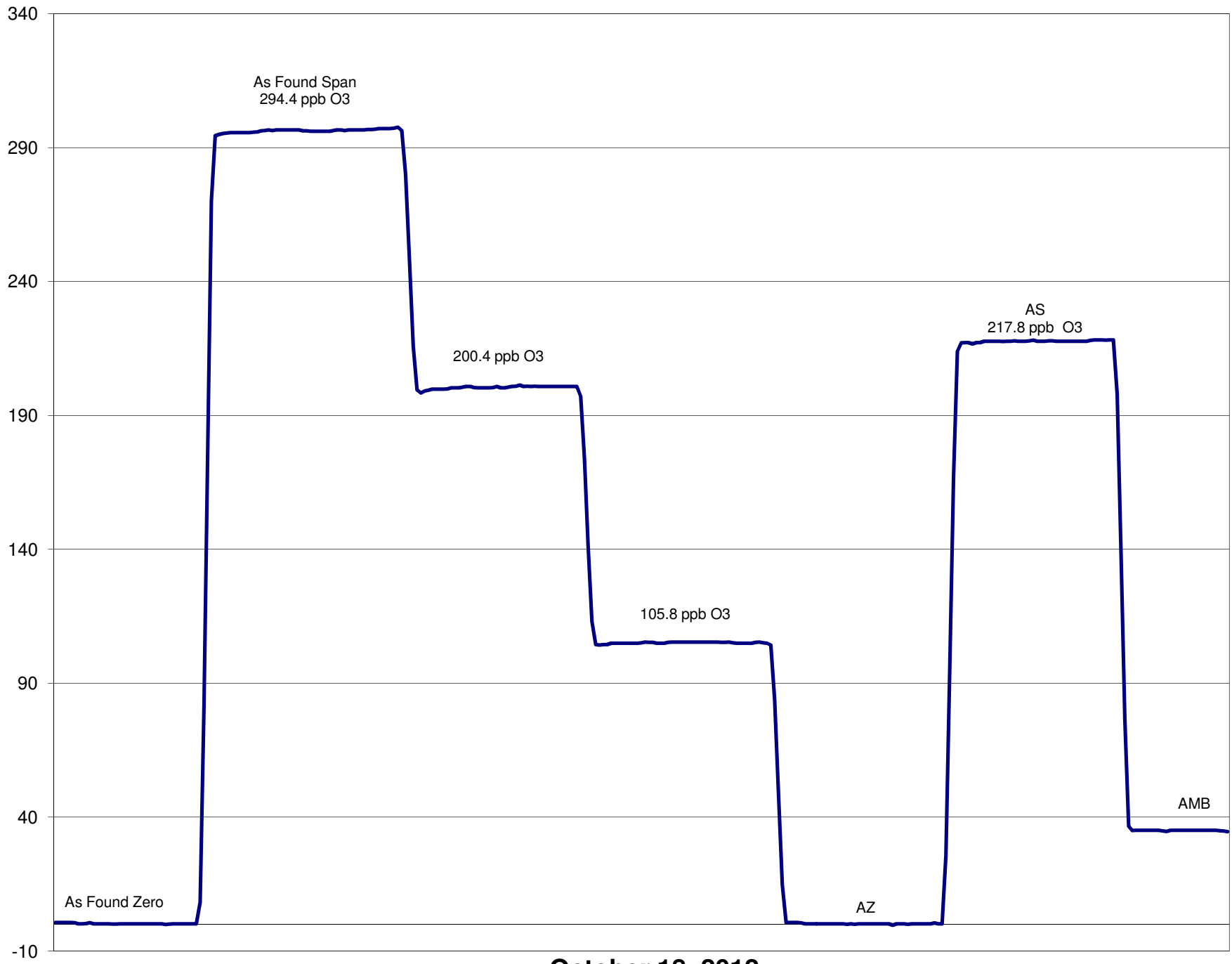
### Station Information

Calibration Date	October 18, 2012	Previous Calibration	September 20, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	11:50	End Time (MST)	14:28
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-0609716240

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA		
294.4	296.6	0.9927	Correlation Coefficient	0.999965
200.4	200.7	0.9984		
105.8	105.3	1.0050	Slope	0.993037
			Intercept	0.521785





October 18, 2012



# Calibration Report



Parameter TRS

Air Monitoring Network PAZA

### Station Information

Calibration Date	<u>October 18, 2012</u>	Previous Calibration	<u>September 20, 2012</u>
Station Name	<u>PAZA Rover</u>	Station Location	<u>Sunset House</u>
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	<u>13:10:00 PM</u>	End Time (MST)	<u>16:41</u>
Barometric Pressure	<u>27.5</u> inches Hg	Station Temperature	<u>20.0</u> Deg C
Calibrator	<u>Enviroics 6100</u>	Serial Number	<u>3474</u>
Cal Gas Concentration	<u>10.1</u> ppm	Cal Gas Expiry Date	<u>03/09/2011</u>
Gas Cert Reference	<u>BLM001434</u>		
DACS make	<u>CR3000</u>	DACS serial No.	<u>5407</u>
DACS voltage range	<u>0 - 5 Volt</u>	DACS channel #	<u>1</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>1.018031</u>	Calculated slope	<u>0.994357</u>
Calculated intercept	<u>0.466784</u>	Calculated intercept	<u>0.826974</u>
Analyzer make	<u>TEI 43C</u>	Analyzer serial #	<u>609716238</u>

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	14.3	ppb	13.7	ppb
Coefficient	1.424		1.369	
Lamp Voltage	793	V	793	V
Chamber Temp	43.8	C	43.8	C
Perm gas Temp	45.0	C	45.0	C
Pressure	646.2	mmHg	646.5	mmHg
Sample Flow	0.423	ccm	0.423	ccm
Lamp Intensity	39078.0	Hz	39160.0	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)
4995	0.0	0.0	-0.3	N/A
4995	39.94	80.1	80.0	1.0015
4995	19.94	40.2	39.1	1.0270
8995	8.94	10.0	8.9	1.1246
4995	0.00	0.0	-0.3	As found zero
4995	39.94	80.1	82.5	As found span
Average Correction Factor				1.0510

Calculated value of As Found Response: 84.74 ppm      Percent Change of As Found: -5.8%

	before calibration		after calibration	
Auto zero	-0.6	ppm	0.6	ppm
Auto span	69.6	ppm	67.7	ppm

Notes: Slight span adjust.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter                      **TRS**  
Air Monitoring Network                      **PAZA**



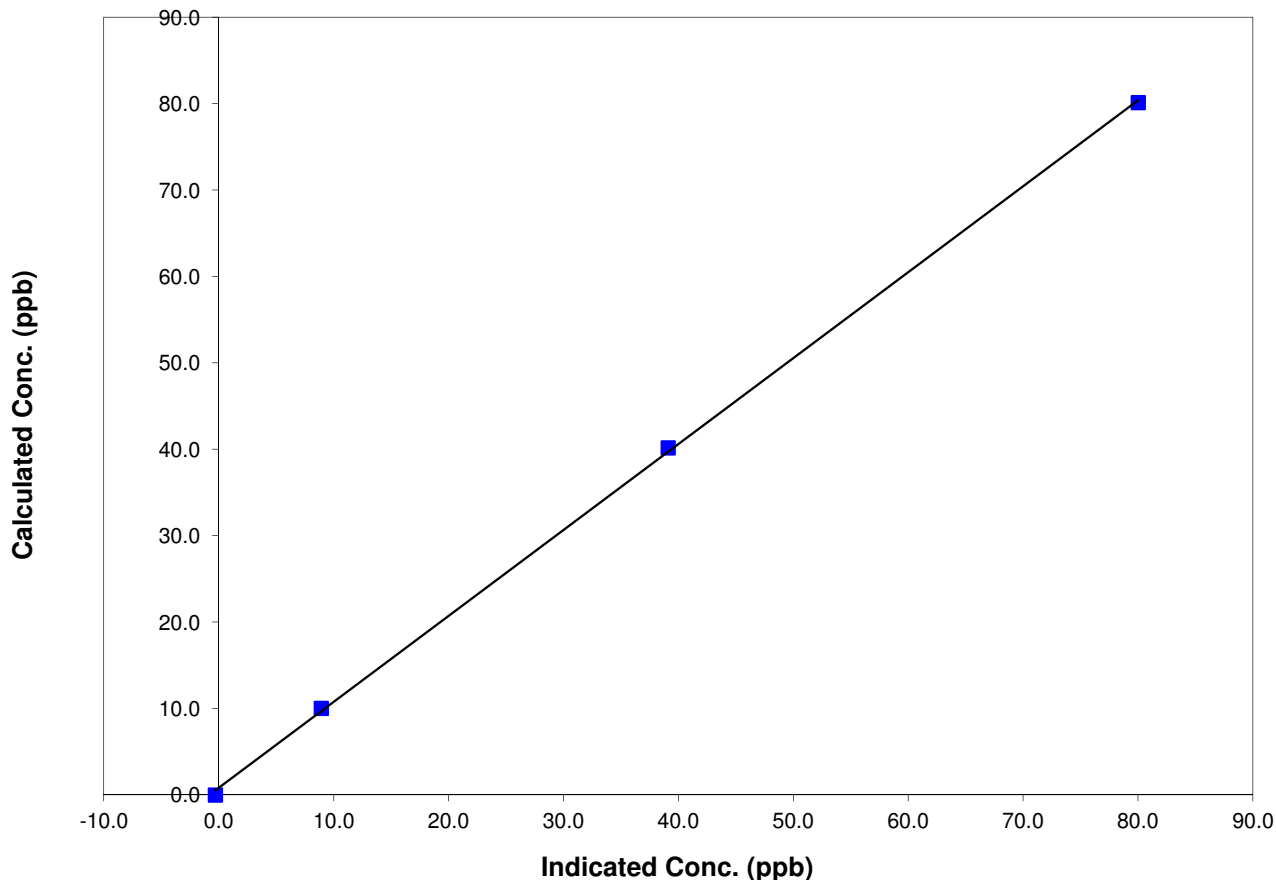
### Station Information

Calibration Date	<u>                    </u> October 18, 2012	Previous Calibration	<u>                    </u> September 20, 2012
Station Number	<u>                    </u> PAZA Rover	Station Location	<u>                    </u> Sunset House
Start Time (MST)	<u>                    </u> 13:10:00 PM	End Time (MST)	<u>                    </u> 16:41
Analyzer make/model	<u>                    </u> TEI 43C	Analyzer serial #	<u>                    </u> 609716238

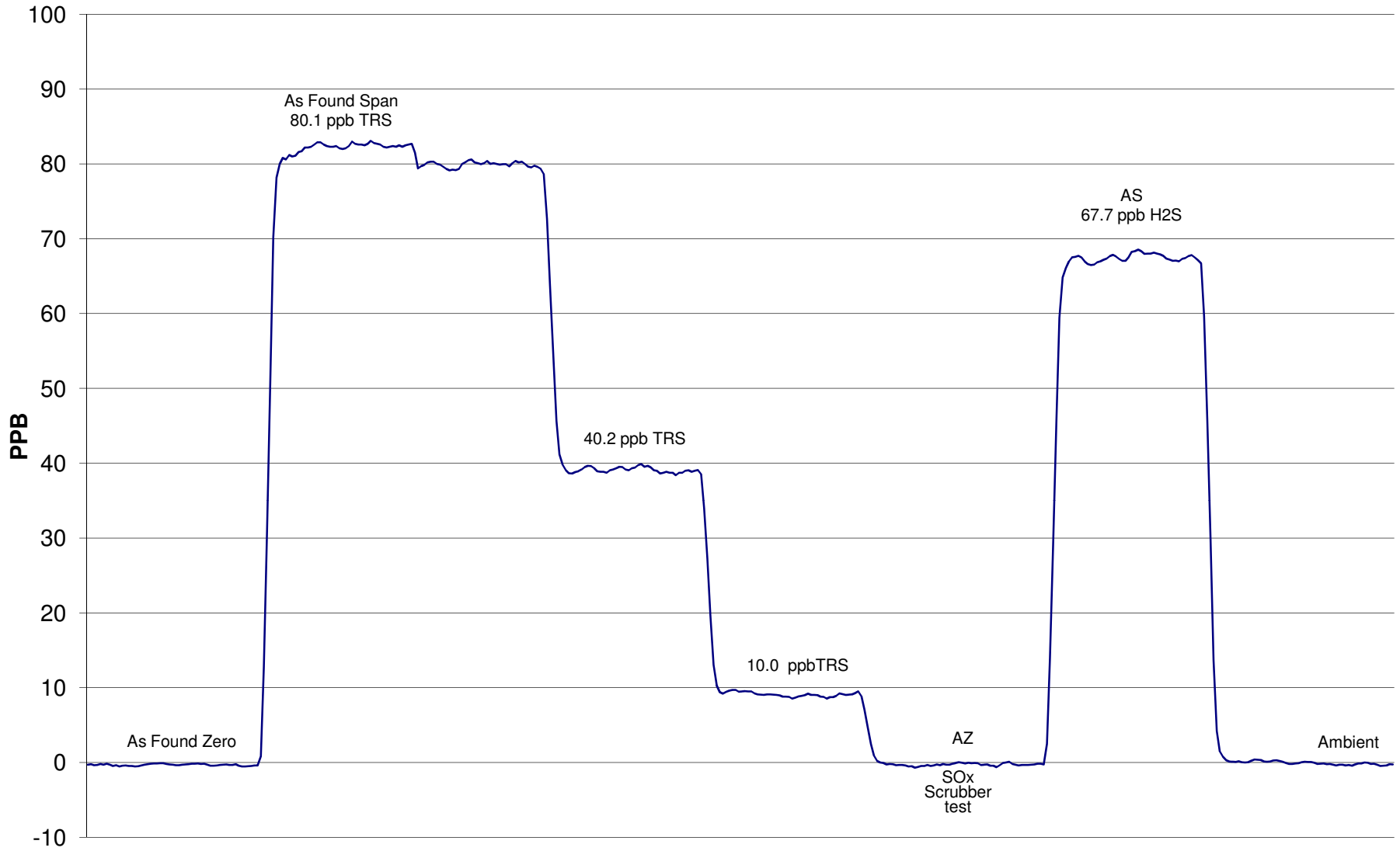
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A		
80.1	80.0	1.0015	Correlation Coefficient	0.999832
40.2	39.1	1.0270		
10.0	8.9	1.1246	Slope	0.994357
			Intercept	0.826974

### TRS Calibration Curve



# TRS Calibration



October 18, 2012