



# **Peace Airshed Zone Association**

## **Ambient Air Monitoring Network Summary**

**Continuous Ambient Air Quality Monitoring Program  
Monthly Report  
April 2013**

**Operations and Reporting**

**FOCUS**  
AIR QUALITY MONITORING

May 22<sup>nd</sup>, 2013

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

**RE: Peace Airshed Zone Association (PAZA) – April 2013 Ambient Air Report**

Enclosed is the PAZA Ambient Monitoring Network Report for the month of **April 2013**.

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

Company	Facility	LSD	EPEA Approval Number
Advantage Oil & Gas Ltd.	Glacier	05-02-076-13-W6	262479-00-00
Alberta Power (2000) Ltd. (an ATCO company)	Sturgeon	SW-06-069-21-W5	10283-02-02
ATCO Power Canada	Poplar Hill	11-19-073-08-W6	67774-01-01
ATCO Power Canada	Valleyview	SW-06-069-21-W5	147709-01-01
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
Apache Canada Ltd.	House Mountain	01-08-070-10-W5	10137-02-02
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	00000029-01-00
	Progress/Gordondale	01-01-077-10-W6	00010036-02-00

<b>Company</b>	<b>Facility</b>	<b>LSD</b>	<b>EPEA Approval Number</b>
	Gold Creek	13-26-067-05-W6	00010446-02-00
	Teepee Creek	SE-2-074-04-W6	00001635-02-00
Canfor Forest Products	Grande Prairie	SW-23-071-06-W6	152645-01-00
Conocophillips Canada Energy Partnership	Wembley	06-19-073-08-W6	00000212-01-00
Devon Canada	NW Belloy (Dunvegan)	16-36-079-03-W6	00009810-02-00
	Eaglesham (South)	02-14-077-25-W5	00047669-01-00
	North Normanville	03-36-079-23-W5	00047455-01-00
	West Culp	05-34-078-25-W6	00136284-00-00
	Cecil	08-15-084-08-W6	00010032-02-00
Encana Corporation	Sexsmith	04-08-075-07-W6	00010002-01-00
Enerplus Resources	Pouce Coupe	SW-06-069-21-W5	1464-02-03
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	00238762-00-00
Long Run Exploration	Eaglesham	01-25-076-01-W6	00241532-00-00
	Kakut	14-12-075-03-W6	00248469-00-00
	Donnelly	06-01-077-21-W5	00000087-02-00
	Puskwaskau	03-26-074-01-W6	00017524-01-00
Longview Oil Corp.	Sunset House	06-22-070-20-W5	138884-01-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	00001746-02-00
	Pouce Coupe	16-07-078-11-W6	00000614-01-00

Company	Facility	LSD	EPEA Approval Number
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	00000263-01-00
	Gordondale	11-26-079-09-W6	00011495-01-01
	Pouce Coupe/Bonanza	3-23-080-13-W6	00070203-01-01
Suncor Energy Inc.	Progress	07-22-078-09-W6	00011428-02-00
TAQA North Ltd.	Valhalla	13-21-076-09-W6	00017620-01-00
Veresen Energy	Hythe Brainard	11-18-074-12-W6	00010910-02-00
Weyerhaeuser Canada	Grande Prairie Pulp and Wood Plant	01-14-070-05-W6	00000113-02-00

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

**Continuous Monitoring: Seven (7) Stations including Henry Pirker (Grande Prairie), Evergreen Park, Smoky Heights, Beaverlodge, Valleyview, Falher and Portable-Sunset House.**

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

**Henry Pirker Station:**

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

**Evergreen Park Station:**

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

**Smoky Heights Station:**

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

**Beaverlodge Station:**

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

**Valleyview Station:**

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

**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 April.

**Falher Station:**

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

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

There were five duplicate sites sampled in the month of April: Sylvester, Eaglesham, McLennan, Valleyview, 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 0.6 ppb, with a mean of 0.3 ppb.
- Monthly average concentrations for NO<sub>2</sub> passives ranged from 0.1 ppb to 4.2 ppb, with a mean of 0.7 ppb.
- Monthly average concentrations for O<sub>3</sub> passives ranged from 36.0 ppb to 52.0 ppb, with a mean of 42.7 ppb.
- Monthly average concentrations for H<sub>2</sub>S were between 0.1 And 0.2 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

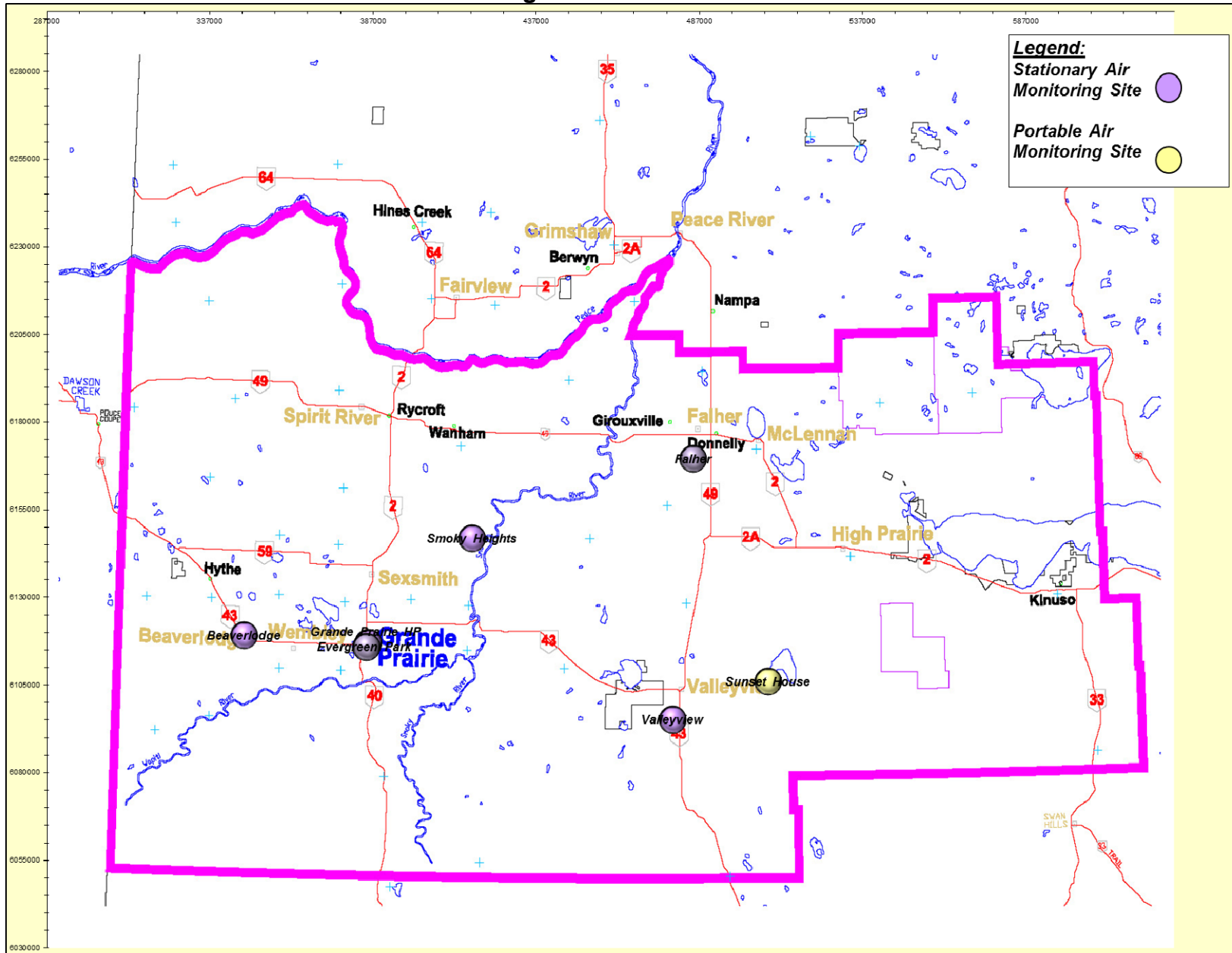


Patrick Andersen, B.Sc.  
FOCUS AQM Data Specialist



Jeff Cooper, C.Tech.  
AQM Operations Manager

# Location of PAZA Continuous Monitoring Stations



## PAZA Monthly Continuous Data Summary

Apr-2013		Peace Airshed Zone Association					Maximum Recorded Values				Operational Time (%)
							1-hr		24-hr / 8-hr		
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		Conc	Day	Conc	Day	
	1-hr	24-hr			1-hr	24-hr					
SO <sub>2</sub> (ppb)	172	48	Henry Pirker	0.4	0	0	5.0	Apr-27 20:00	1.1	Apr-15	100%
SO <sub>2</sub> (ppb)	172	48	Evergreen Park	0.2	0	0	3.4	Apr-27 20:00	0.4	Apr-08	100%
SO <sub>2</sub> (ppb)	172	48	Smoky Heights	0.4	0	0	6.1	Apr-25 05:00	1.2	Apr-24	100%
SO <sub>2</sub> (ppb)	172	48	Beaverlodge	0.3	0	0	3.4	Apr-08 23:00	1.0	Apr-08	100%
SO <sub>2</sub> (ppb)	172	48	Valleyview	0.6	0	0	11.3	Apr-25 08:00	2.4	Apr-26	100%
SO <sub>2</sub> (ppb)	172	48	Sunset House	0.2	0	0	4.0	Apr-12 18:00	0.8	Apr-01	100%
SO <sub>2</sub> (ppb)	172	48	Falher	0.2	0	0	1.7	Apr-17 16:00	0.7	Apr-16	100%
NO (ppb)			Henry Pirker	0.8	0	0	33.3	Apr-17 08:00	2.6	Apr-17	100%
NO <sub>2</sub> (ppb)	159	106	Henry Pirker	6.1	0	0	41.4	Apr-09 21:00	16.0	Apr-09	100%
NO <sub>x</sub> (ppb)			Henry Pirker	6.9	0	0	67.8	Apr-17 08:00	18.0	Apr-09	100%
NO (ppb)			Beaverlodge	0.2	0	0	3.5	Apr-09 11:00	1.2	Apr-09	100%
NO <sub>2</sub> (ppb)	159	106	Beaverlodge	1.9	0	0	11.4	Apr-04 07:00	5.3	Apr-09	100%
NO <sub>x</sub> (ppb)			Beaverlodge	2.1	0	0	11.8	Apr-04 07:00	6.4	Apr-09	100%
NO (ppb)			Sunset House	0.1	0	0	1.5	Apr-08 16:00	0.3	Apr-28	100%
NO <sub>2</sub> (ppb)	159	106	Sunset House	1.0	0	0	5.1	Apr-12 18:00	2.3	Apr-09	100%
NO <sub>x</sub> (ppb)			Sunset House	1.1	0	0	6.1	Apr-12 18:00	2.4	Apr-09	100%
O <sub>3</sub> (ppb)	82		Henry Pirker	37.2	0	-	56.0	Apr-22 16:00	47.9	Apr-08	100%
O <sub>3</sub> (ppb) - 8-hr			Henry Pirker		0				54.3	Apr-22	
O <sub>3</sub> (ppb)	82		Beaverlodge	43.2	0	-	62.1	Apr-08 18:00	55.3	Apr-08	100%
O <sub>3</sub> (ppb) - 8-hr			Beaverlodge		0				603.0	Apr-08	
O <sub>3</sub> (ppb)	82		Sunset House	44.8	0	-	61.8	Apr-01 23:00	55.2	Apr-01	100%
O <sub>3</sub> (ppb) - 8-hr			Sunset House		0				60.5	Apr-02	
CO (ppm)	13		Henry Pirker	0.19	0	-	0.6	Apr-17 08:00	0.3	Apr-17	100%
CO (ppm) - 8-hr		5	Henry Pirker		0				0.4	Apr-10	



## PAZA Monthly Continuous Data Summary – continued

Apr-2013		Peace Airshed Zone Association					Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
THC (ppm)			Henry Pirker	2.0	-	-	2.7	Apr-28 00:00	2.1	Apr-22	100%
CH4 (ppm)			Henry Pirker	1.9	-	-	2.7	Apr-28 00:00	2.1	Apr-22	100%
NMHC (ppm)			Henry Pirker	0.00	-	-	0.4	Apr-04 08:00	0.0	Apr-04	100%
TRS (ppb)			Henry Pirker	0.1	-	-	2.9	Apr-29 04:00	0.3	Apr-29	100%
TRS (ppb)			Evergreen Park	0.3	-	-	0.8	Apr-19 07:00	0.4	Apr-15	100%
TRS (ppb)			Smoky Heights	0.0	-	-	0.2	Apr-19 20:00	0.1	Apr-19	100%
TRS (ppb)			Sunset House	0.3	-	-	0.4	Apr-06 16:00	0.3	Apr-06	100%
H <sub>2</sub> S (ppb)	10	3	Valleyview	0.1	0	0	2.7	Apr-02 23:00	0.4	Apr-02	100%
H <sub>2</sub> S (ppb)	10	3	Falher	0.1	0	0	2.3	Apr-05 09:00	1.0	Apr-05	100%
PM2.5 (µg/m3)	80	30	Henry Pirker	3.9	0	0	19.0	Apr-23 22:00	5.8	Apr-23	100%
PM2.5 (µg/m3)	80	30	Evergreen Park	2.1	0	0	37.5	Apr-26 11:00	5.8	Apr-25	99%
PM2.5 (µg/m3)	80	30	Smoky Heights	2.5	0	0	31.4	Apr-14 22:00	9.2	Apr-06	100%
PM2.5 (µg/m3)	80	30	Beaverlodge	5.9	0	0	13.4	Apr-09 15:00	8.8	Apr-09	100%
PM2.5 (µg/m3)	80	30	Sunset House	1.8	0	0	11.6	Apr-17 20:00	3.5	Apr-02	100%
RH (%)			Henry Pirker	57.0	-	-	87.6	Apr-13 04:00	75.0	Apr-13	100%
RH (%)			Evergreen Park	57.9	-	-	95.1	Apr-13 05:00	82.6	Apr-13	100%
RH (%)			Beaverlodge	67.5	-	-	100.0	Apr-19 06:00	91.6	Apr-07	100%
RH (%)			Valleyview	59.0	-	-	96.1	Apr-18 01:00	79.2	Apr-13	100%
SR (W/m <sup>2</sup> )			Henry Pirker	174.7	-	-	754.0	Apr-30 13:00	259.0	Apr-30	100%
Temp (°C)			Henry Pirker	1.7	-	-	14.7	Apr-26 13:00	11.5	Apr-26	100%
Temp (°C)			Evergreen Park	1.7	-	-	14.6	Apr-25 16:00	12.0	Apr-26	100%
Temp (°C)			Smoky Heights	0.7	-	-	13.5	Apr-26 16:00	10.4	Apr-26	100%
Temp (°C)			Beaverlodge	0.9	-	-	13.6	Apr-25 15:00	10.5	Apr-26	100%
Temp (°C)			Valleyview	2.0	-	-	16.4	Apr-26 14:00	13.1	Apr-26	100%
Temp (°C)			Sunset House	0.7	-	-	13.8	Apr-26 15:00	10.4	Apr-26	100%
Temp (°C)			Falher	-0.7	-	-	11.9	Apr-25 15:00	8.9	Apr-26	100%

## PAZA Monthly Continuous Data Summary – continued

Apr-2013 Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
WSPD s (km/hr)			Henry Pirker	12.4	-	-	49.0	Apr-27 16:00	23.8	Apr-26	100%
WSPD s (km/hr)			Evergreen Park	18.0	-	-	70.0	Apr-26 11:00	44.7	Apr-26	100%
WSPD s (km/hr)			Smoky Heights	17.7	-	-	56.0	Apr-27 15:00	34.1	Apr-26	100%
WSPD s (km/hr)			Beaverlodge	15.7	-	-	59.0	Apr-26 10:00	40.2	Apr-26	100%
WSPD s (km/hr)			Valleyview	8.4	-	-	27.0	Apr-26 15:00	15.8	Apr-20	100%
WSPD s (km/hr)			Sunset House	14.3	-	-	36.0	Apr-27 18:00	28.6	Apr-09	100%
WSPD s (km/hr)			Falher	20.5	-	-	58.0	Apr-27 17:00	29.6	Apr-09	100%
WSPD v (km/hr)			Henry Pirker	3.5	-	-	49.0	Apr-27 16:00	22.9	Apr-26	100%
WSPD v (km/hr)			Evergreen Park	6.2	-	-	70.0	Apr-26 11:00	43.6	Apr-26	100%
WSPD v (km/hr)			Smoky Heights	4.5	-	-	56.0	Apr-27 15:00	33.4	Apr-26	100%
WSPD v (km/hr)			Beaverlodge	3.6	-	-	59.0	Apr-26 10:00	39.7	Apr-26	100%
WSPD v (km/hr)			Valleyview	2.7	-	-	26.0	Apr-26 15:00	13.9	Apr-20	100%
WSPD v (km/hr)			Sunset House	1.6	-	-	36.0	Apr-27 17:00	28.2	Apr-09	100%
WSPD v (km/hr)			Falher	0.5	-	-	57.0	Apr-27 17:00	26.6	Apr-09	100%
WDIR			Henry Pirker	NW	-	-	-	-	-	-	100%
WDIR			Evergreen Park	NW	-	-	-	-	-	-	100%
WDIR			Smoky Heights	NW	-	-	-	-	-	-	100%
WDIR			Beaverlodge	WNW	-	-	-	-	-	-	100%
WDIR			Valleyview	NW	-	-	-	-	-	-	100%
WDIR			Sunset House	SSE	-	-	-	-	-	-	100%
WDIR			Falher	W	-	-	-	-	-	-	100%

# Continuous Network Equipment Summary

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## PAZA – Henry Pirker Station

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### General Station Issues

Routine monthly calibrations were performed on April 8<sup>th</sup> (CO), April 11<sup>th</sup> (O<sub>3</sub>, NO<sub>x</sub>), April 12<sup>th</sup> (SO<sub>2</sub>, THC) and April 22<sup>nd</sup> (TRS, PM<sub>2.5</sub>).

Parameter	Make	Model	Notes
SO <sub>2</sub>	TEI	43C	No operational issues observed.
NO <sub>x</sub> /NO/NO <sub>2</sub>	TEI	42C	No operational issues observed.
O <sub>3</sub>	TEI	49C	Returned original analyzer to service during calibration period.
CO	TEI	48C	Replaced external with internal sample pump during calibration period.
THC/CH <sub>4</sub> /NMHC	TEI	55I	Span cylinder ran out April 7 <sup>th</sup> , replaced April 16 <sup>th</sup> .
TRS	TEI	45C/43C	No operational issues observed.
PM <sub>2.5</sub>	Sharp	5030	No operational issues observed.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS / 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 April 24<sup>th</sup> (SO<sub>2</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.
TRS	TEI	43C	No operational issues observed.
PM <sub>2.5</sub>	R&P	1400AB	Blowing snow and particulate matter restricted flow, resulting in ten (10) hours invalidated.
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**

Routine monthly calibration performed on April 26<sup>th</sup> (SO<sub>2</sub>, TRS, PM<sub>2.5</sub>).

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<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
SO <sub>2</sub>	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM <sub>2.5</sub>	R&P	1400AB	No operational issues observed.
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 April 32<sup>rd</sup> (SO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, PM<sub>2.5</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	No operational issues observed.
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 April 27<sup>th</sup> (SO<sub>2</sub> & H<sub>2</sub>S).

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<b>Parameter</b>	<b>Make</b>	<b>Model</b>	<b>Notes</b>
SO <sub>2</sub>	TEI	43i	No operational issues observed.
H <sub>2</sub> S	TEI	43A	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS / 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 April 27<sup>th</sup> (SO<sub>2</sub>, O<sub>3</sub>, NO<sub>x</sub>, TRS, PM<sub>2.5</sub>).

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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	Three (3) hours invalidated due to negative swings.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

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**PAZA – Falher Station**

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**General Station Issues**

Routine monthly calibrations were performed on April 28<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	Thermo	450i	No operational issues observed.
ET	Gill	RM Young 5103	No operational issues observed.
WS / WD	Gill	RM Young 5103	No operational issues observed.

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PAZA

Henry Pirker Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

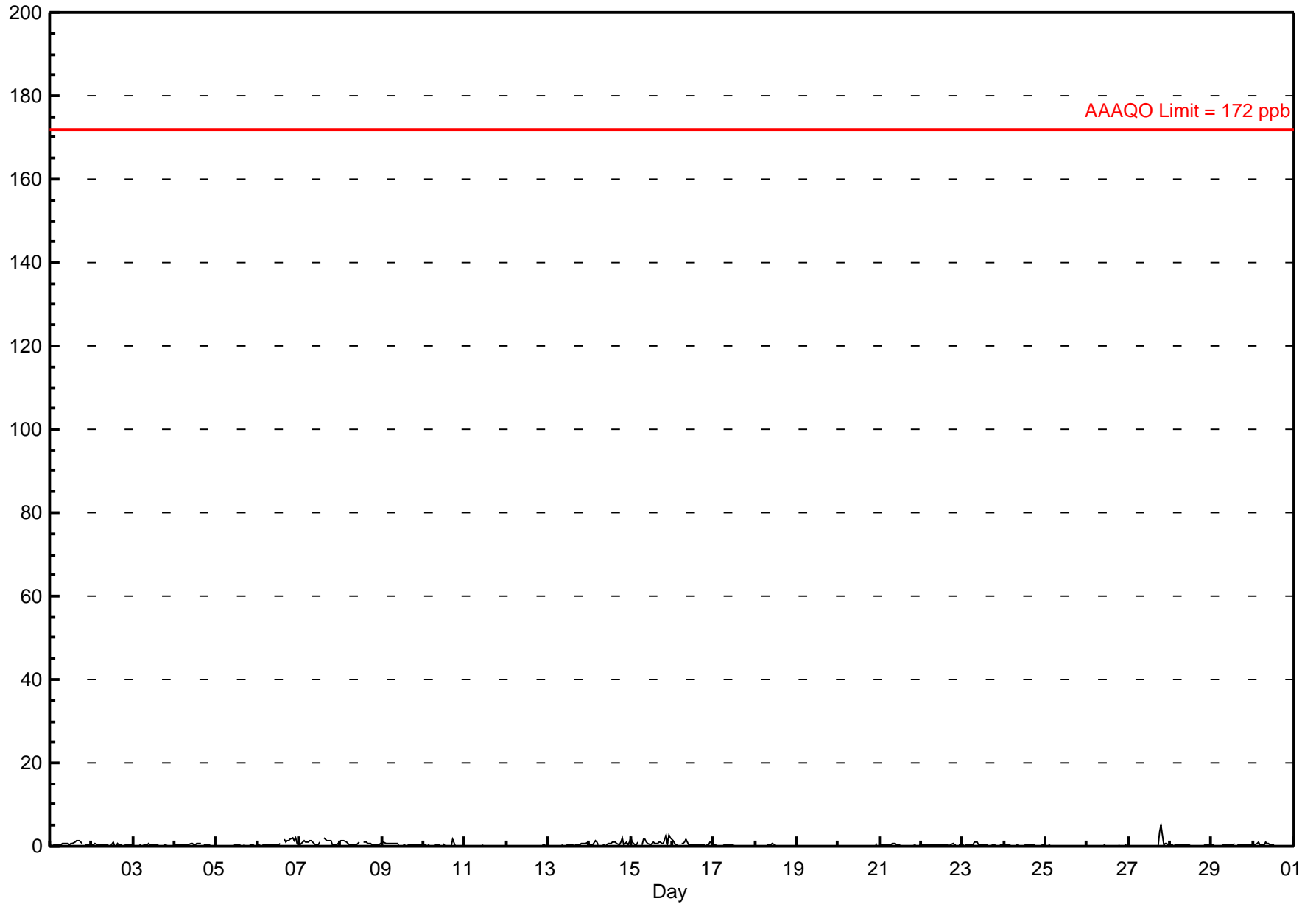
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Henry Pirker - April 2013

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 5.0 ppb on Apr 27 20:00	Maximum Daily Average: 1.1 ppb on Apr 15		Hours of Data:	684
Minimum Value: 0 ppb on Apr 5 07:00	Minimum Daily Average: 0.1 ppb on Apr 25		Hours of Missing Data:	36
Maximum Diurnal Average: 0.5 ppb at hour 20	Minimum Diurnal Average: 0.3 ppb at hour 6		Hours of Calibration:	36
Monthly Average: 0.35 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> = 0.4 P <sub>90</sub> = 0.9 P <sub>99</sub> = 1.9		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-Apr	0	0	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	A	0	0	0	0	0.6	1.4	
2-Apr	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	A	0	0	0	0	0	0.3	1.0	
3-Apr	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.7	
4-Apr	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0.4	0.8	
5-Apr	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	
6-Apr	1	0	0	0	0	0	0	0	0	0	0	0	0	1	A	2	1	1	1	1	2	2	1	2	1	0.8	2.1
7-Apr	0	1	1	1	1	1	2	1	1	0	0	0	1	A	2	2	1	1	1	1	0	0	0	1	0.9	1.9	
8-Apr	1	1	1	1	1	0	0	0	0	0	1	1	A	1	1	1	1	1	0	0	0	0	0	1	0.7	1.4	
9-Apr	1	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9	
10-Apr	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	2	0	0	0	0	0	0.3	1.7	
11-Apr	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	
12-Apr	0	0	0	0	0	0	0	0	0	A	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.1	0.4	
13-Apr	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.3	1.1	
14-Apr	0	0	0	1	1	0	A	0	0	0	0	1	1	1	1	1	1	0	1	2	0	1	0	1	0.7	1.9	
15-Apr	2	1	0	0	1	A	0	2	2	1	1	0	1	1	1	1	1	1	1	1	3	1	3	2	1.1	2.8	
16-Apr	1	1	0	0	A	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.5	1.8	
17-Apr	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
18-Apr	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8	
19-Apr	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
20-Apr	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0.1	0.5	
21-Apr	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8	
22-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0.3	0.6	
23-Apr	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	1.1	
24-Apr	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	
25-Apr	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	
26-Apr	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	
27-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	3	5	0	1	1	0	0.5	5.0	
28-Apr	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	
29-Apr	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	0.7	
30-Apr	0	0	1	1	0	0	0	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.5	0.4	0.3	0.4	0.4	Diurnal Average	
	2.0	1.4	1.3	1.3	1.2	1.1	1.5	1.5	1.8	0.9	0.8	0.9	1.0	1.2	1.9	1.8	1.4	1.7	3.4	5.0	2.6	1.3	2.8	2.1	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

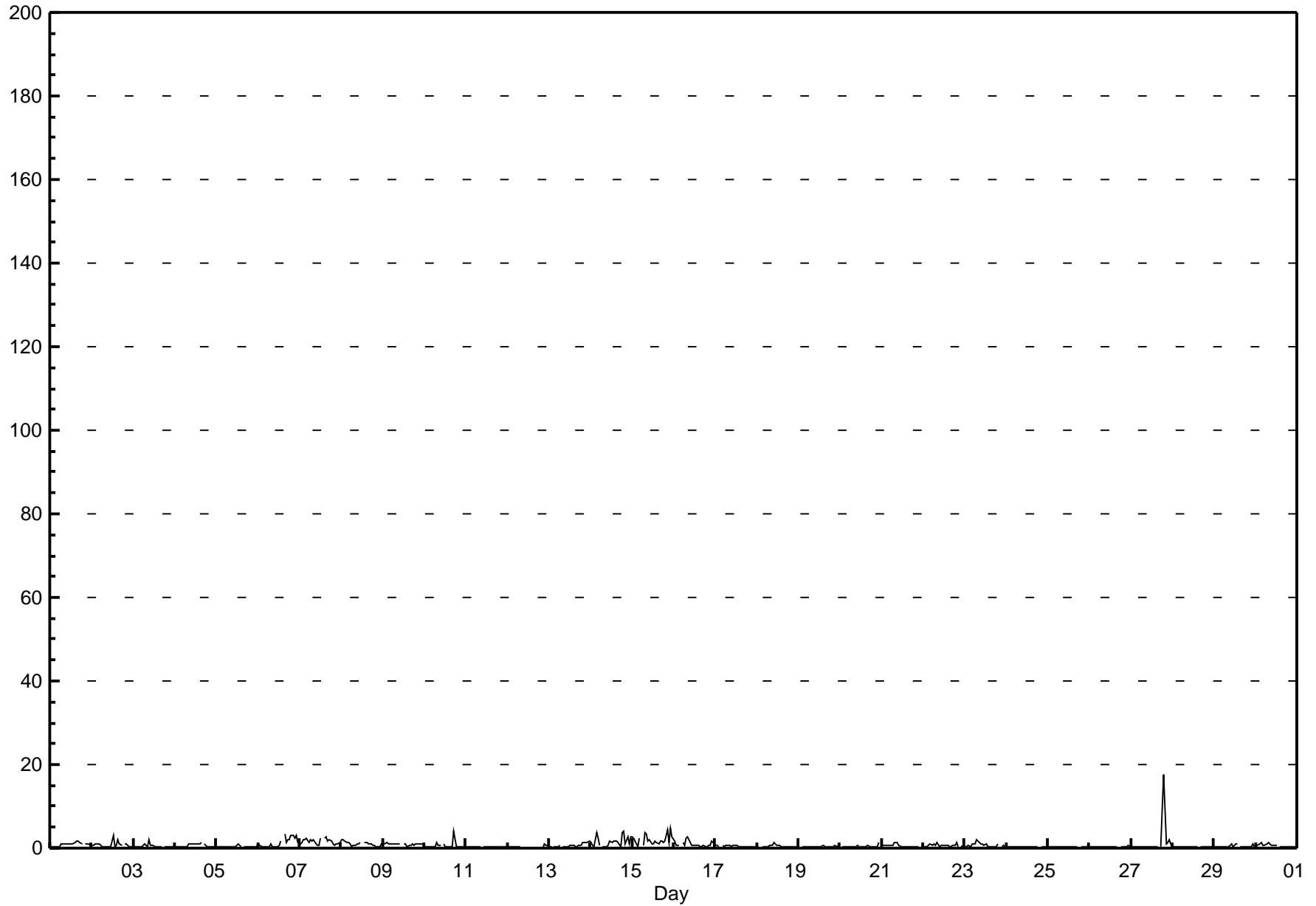


## Hourly Maximums

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

Henry Pirker - April 2013

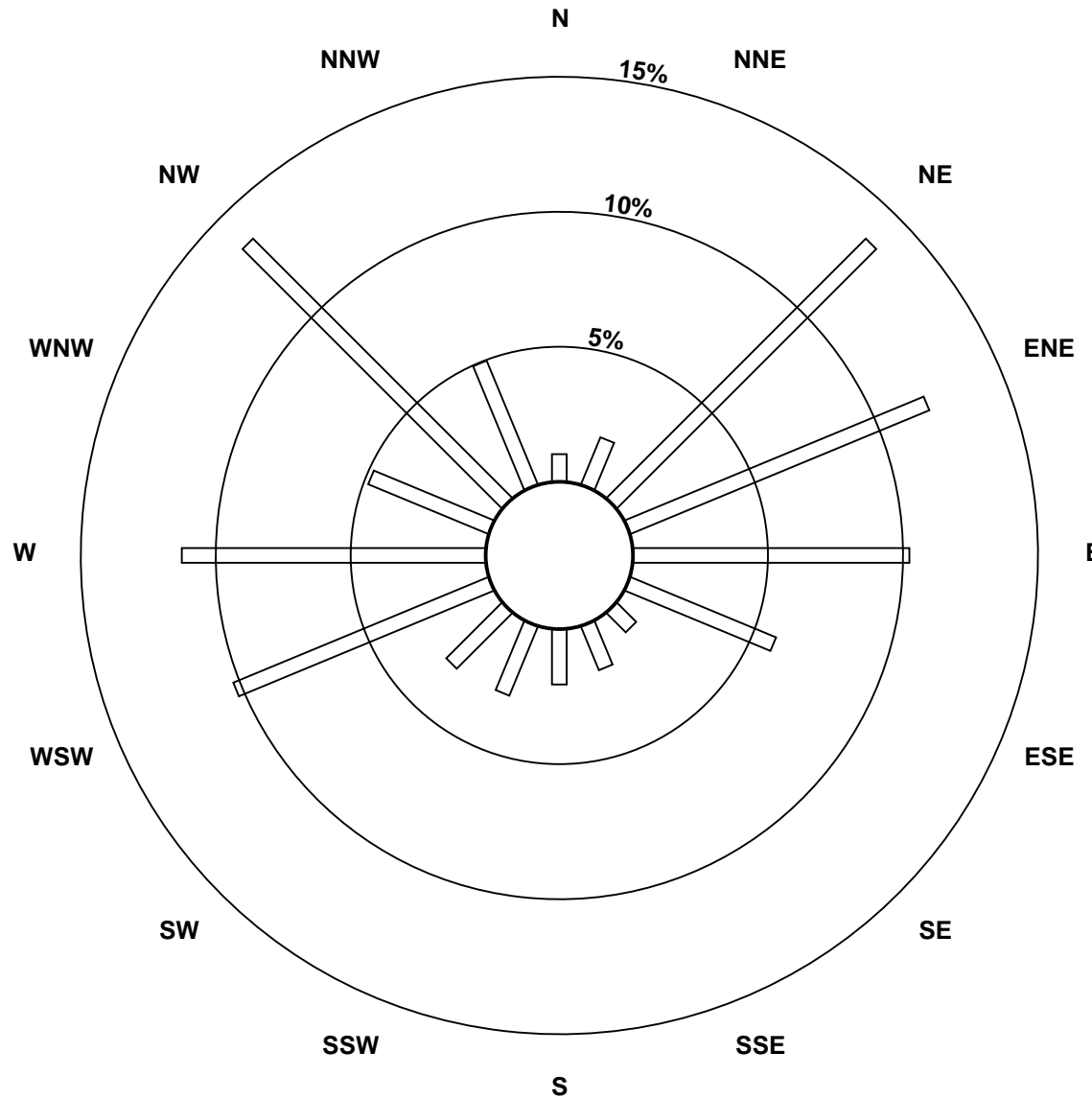
Maximum Value: 17.5 ppb on Apr 27 20:00		Maximum Daily Average: 2.0 ppb on Apr 15		Hours in Service: 720																							
Minimum Value: 0 ppb on Apr 12 15:00		Minimum Daily Average: 0.3 ppb on Apr 12		Hours of Data: 684																							
Maximum Diurnal Average: 1.4 ppb at hour 20		Minimum Diurnal Average: 0.6 ppb at hour 6		Hours of Missing Data: 36																							
Monthly Average: 0.77 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.4 Median = 0.5 Q <sub>3</sub> = 0.9 P <sub>90</sub> = 1.4 P <sub>99</sub> = 3.9		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-Apr	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	1	1	A	1	1	1	1	0.9	1.8	
2-Apr	1	1	1	1	1	1	0	0	0	0	0	0	3	0	1	2	1	1	A	1	1	0	0	0	0.8	2.9	
3-Apr	0	0	0	0	0	0	1	1	0	2	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.6	2.0	
4-Apr	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0.7	1.2	
5-Apr	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0.5	0.9	
6-Apr	1	1	0	0	0	0	0	1	0	0	0	0	1	2	A	3	1	2	2	3	3	2	3	1	1.3	3.4	
7-Apr	1	1	2	2	2	1	2	2	2	1	1	1	2	A	2	3	2	2	2	1	1	1	1	1	1.6	2.7	
8-Apr	2	2	2	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	1	1.0	1.9	
9-Apr	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	0.9	1.4	
10-Apr	0	0	0	0	0	0	0	1	1	1	A	1	0	0	0	0	0	0	4	0	0	0	0	0	0.7	3.9	
11-Apr	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4	
12-Apr	0	0	0	0	0	0	0	0	A	C	C	C	C	C	0	0	0	0	0	0	0	1	1	1	0.3	1.1	
13-Apr	0	0	0	0	0	0	1	A	0	0	0	0	1	1	1	0	0	1	1	1	1	1	1	2	0.7	1.8	
14-Apr	1	1	0	4	2	1	A	0	0	0	1	2	2	2	2	2	1	0	4	4	1	3	1	3	1.6	4.0	
15-Apr	3	2	1	0	2	A	1	4	3	2	2	1	1	2	1	1	2	2	1	2	4	1	5	3	2.0	4.9	
16-Apr	2	1	1	1	A	1	1	2	3	1	1	1	1	1	1	0	0	1	0	0	1	1	2	1	1.0	2.8	
17-Apr	1	1	0	A	1	0	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7	
18-Apr	0	0	A	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2	
19-Apr	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0.3	0.7	
20-Apr	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	A	0.3	1.2	
21-Apr	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.3	
22-Apr	0	0	0	1	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1	1	0	A	0	1	0.7	1.3	
23-Apr	0	0	1	0	1	1	1	2	1	1	1	1	1	0	0	0	0	0	0	1	A	0	1	0	0.7	1.9	
24-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.5	
25-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.5	
26-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0.5	0.6	
27-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	9	18	1	1	2	1	1.7	17.5	
28-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.5	
29-Apr	0	0	0	0	0	0	0	0	0	1	1	0	1	1	A	0	0	0	0	0	0	0	1	0	0.5	1.1	
30-Apr	0	1	1	1	1	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0.6	1.3	
		0.7	0.7	0.6	0.7	0.7	0.6	0.6	0.9	0.9	0.7	0.7	0.6	0.8	0.7	0.8	0.7	0.8	1.0	1.4	0.7	0.7	0.9	0.8	Diurnal Average		
		2.9	2.4	1.9	3.8	2.4	1.4	1.9	3.9	3.4	2.0	1.9	1.7	2.9	1.8	2.3	3.4	1.9	3.9	9.0	17.5	4.4	2.9	4.9	2.9	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



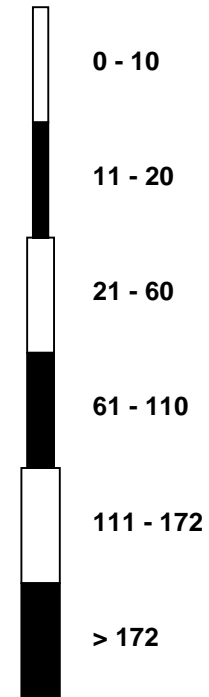
**Pollutant Rose**

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

**Henry Pirker - April 2013**

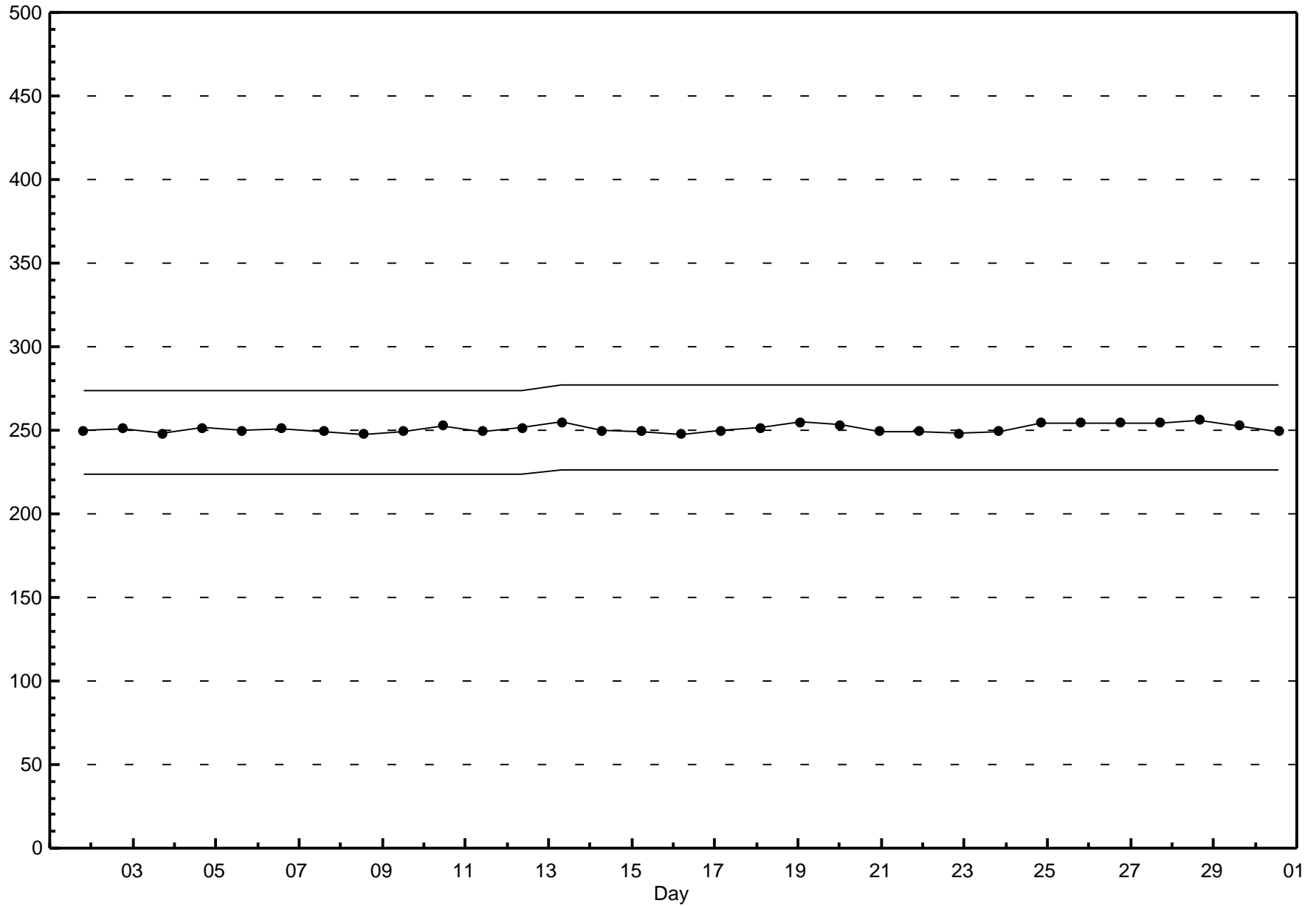


**Pollutant Classes (ppb)**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Henry Pirker - April 2013





## Hourly Averages

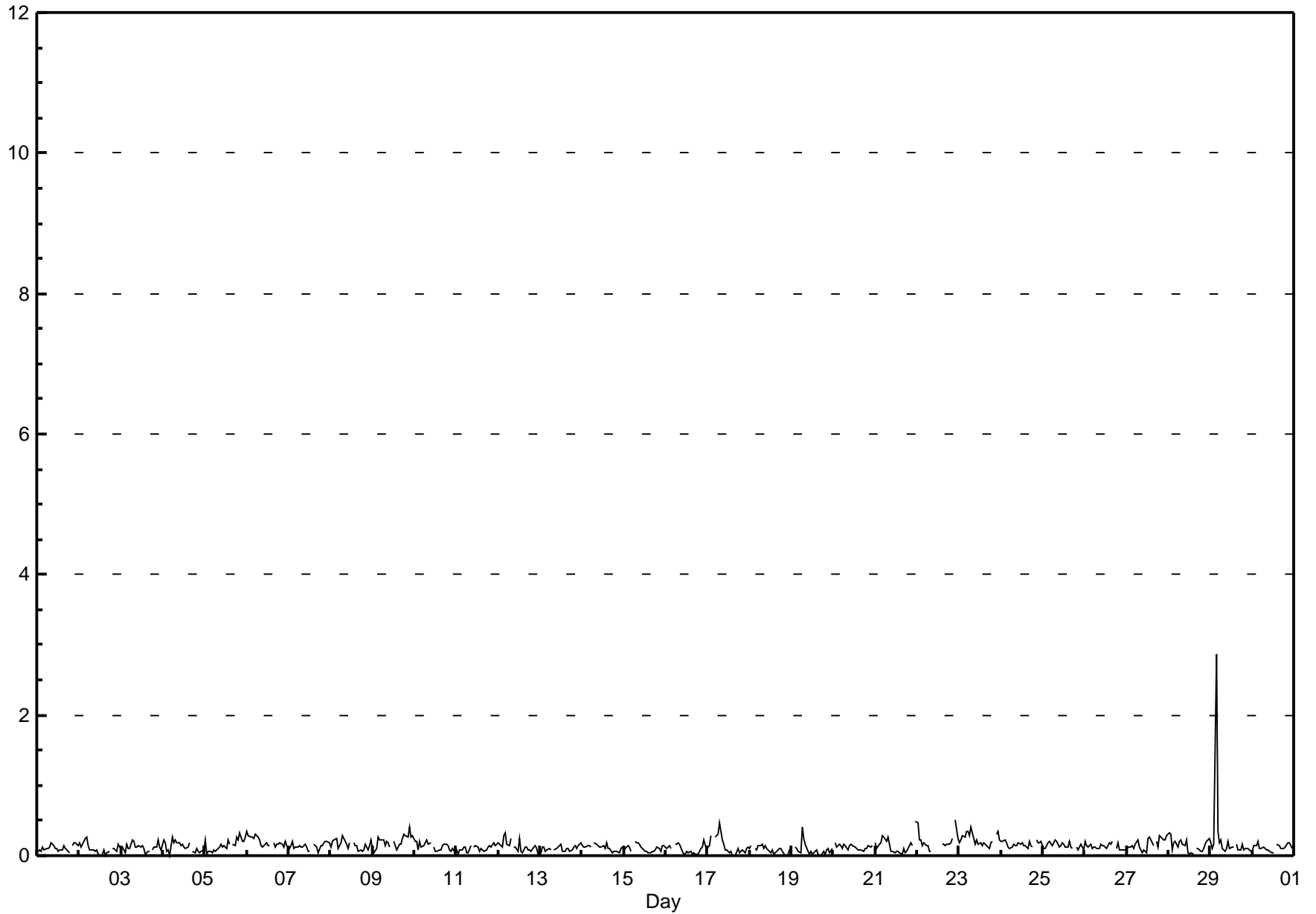
## Total Reduced Sulphur (TRS) - ppb

### Henry Pirker - April 2013

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 2.9 ppb on Apr 29 04:00	Maximum Daily Average: 0.3 ppb on Apr 29		Hours of Data:	684
Minimum Value: 0 ppb on Apr 2 16:00	Minimum Daily Average: 0.1 ppb on Apr 19		Hours of Missing Data:	36
Maximum Diurnal Average: 0.3 ppb at hour 4	Minimum Diurnal Average: 0.1 ppb at hour 18		Hours of Calibration:	36
Monthly Average: 0.14 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.1 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.2 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-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2																								
2-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.3																								
3-Apr	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																								
4-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3																								
5-Apr	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																								
6-Apr	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																								
7-Apr	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																								
8-Apr	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																								
9-Apr	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4																								
10-Apr	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																								
11-Apr	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																								
12-Apr	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																								
13-Apr	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2																								
14-Apr	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																								
15-Apr	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																								
16-Apr	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																								
17-Apr	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	0.5																								
18-Apr	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2																								
19-Apr	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																								
20-Apr	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2																								
21-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.5																								
22-Apr	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	A	0	0	0.2	0.5																								
23-Apr	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																								
24-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.2																								
25-Apr	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																								
26-Apr	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																								
27-Apr	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																								
28-Apr	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-Apr	0	0	0	3	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	2.9																								
30-Apr	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																								
																								0.2	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average		
																								0.5	0.3	0.3	2.9	0.3	0.4	0.4	0.5	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.5	Diurnal Maximum	

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

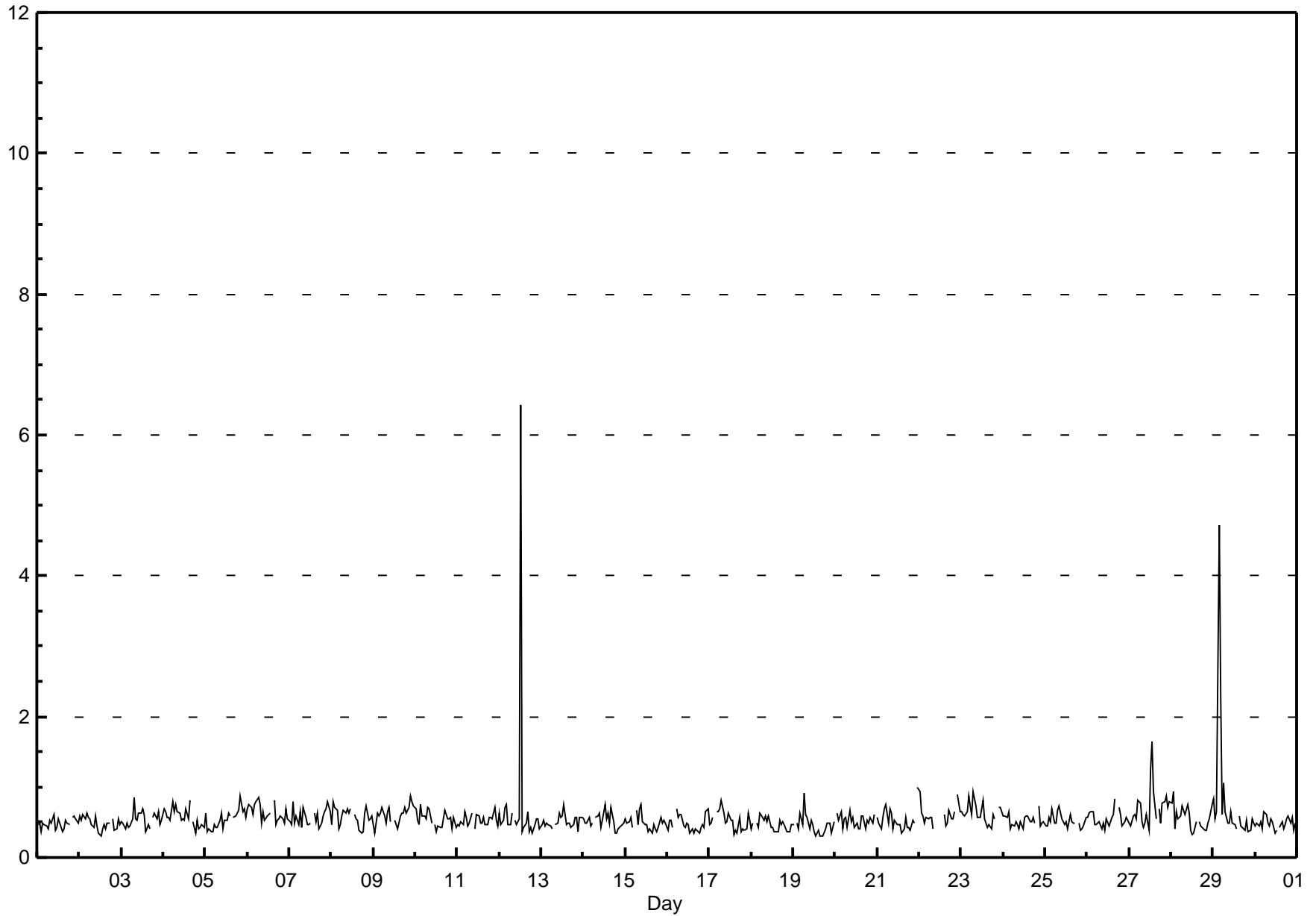


## Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

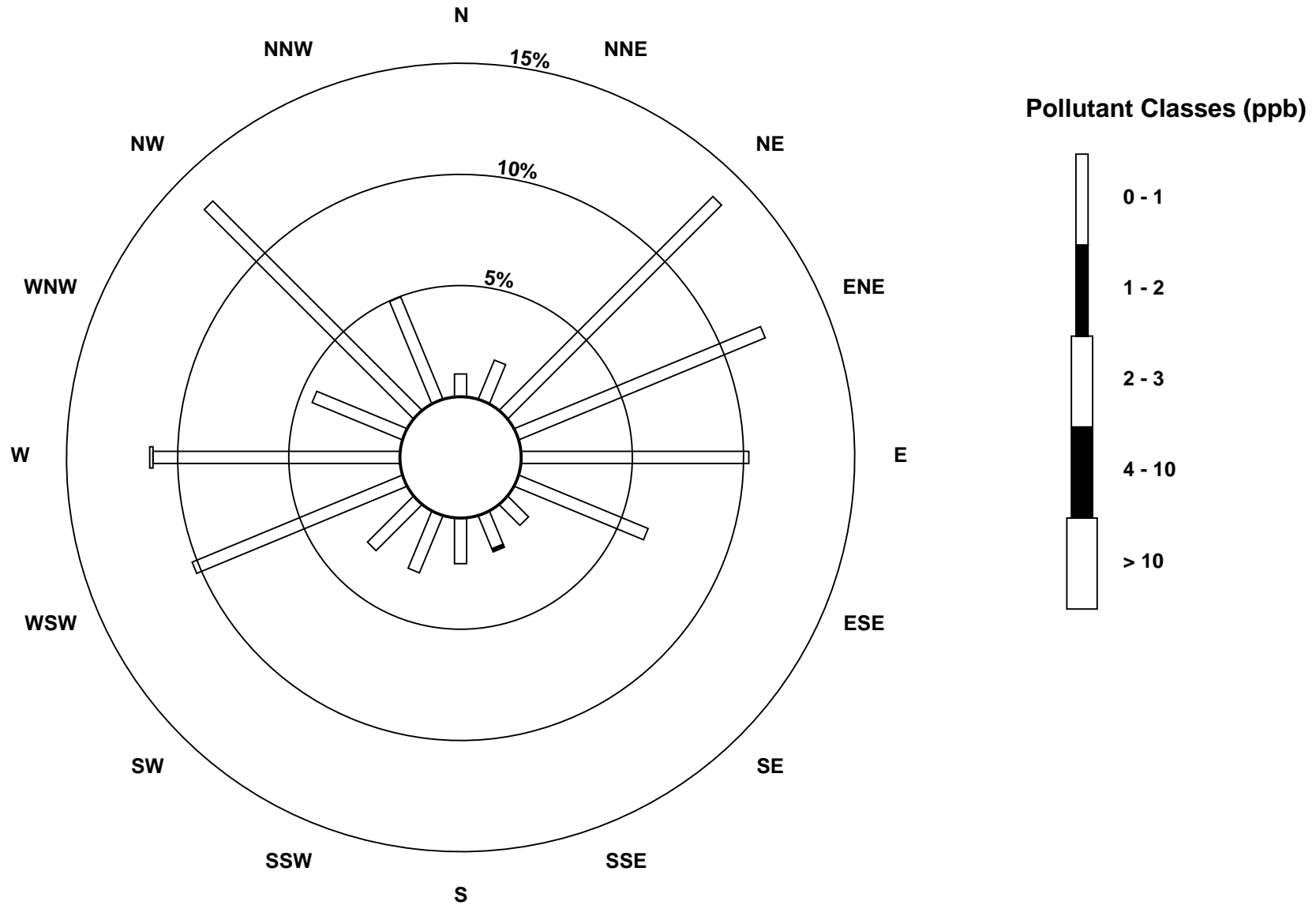
Henry Pirker - April 2013

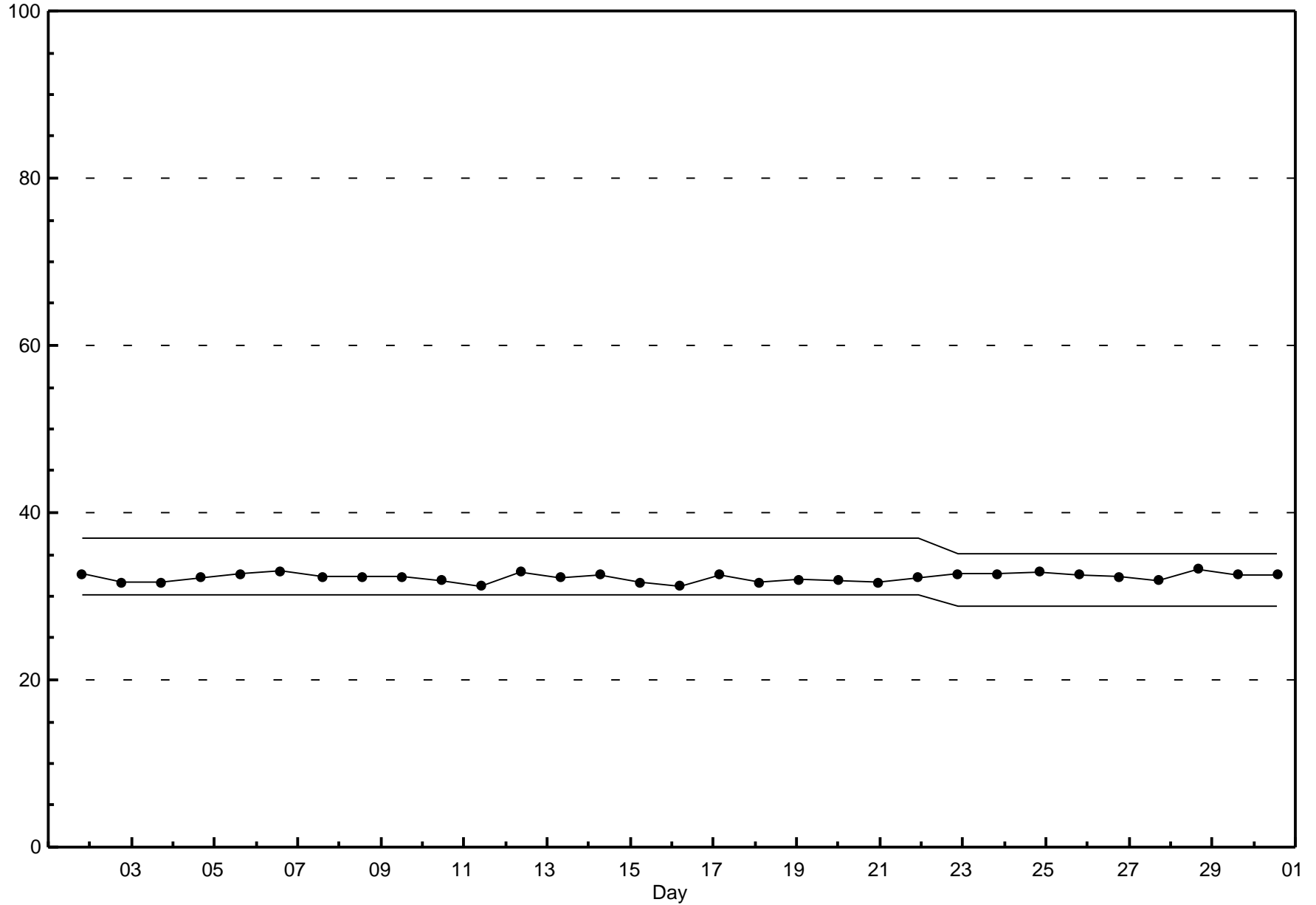
Maximum Value: 6.4 ppb on Apr 12 13:00		Maximum Daily Average: 0.8 ppb on Apr 29		Hours in Service: 720																						
Minimum Value: 0 ppb on Apr 2 13:00		Minimum Daily Average: 0.5 ppb on Apr 19		Hours of Data: 684																						
Maximum Diurnal Average: 0.7 ppb at hour 13		Minimum Diurnal Average: 0.5 ppb at hour 18		Hours of Missing Data: 36																						
Monthly Average: 0.56 ppb		Percentiles: P <sub>1</sub> = 0.3 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> = 0.7 P <sub>99</sub> = 1.0		Hours of Calibration: 36																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0	0	A	1	1	1	0	0.5	0.6
2-Apr	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	A	1	0	0	1	0	0.5	0.6
3-Apr	1	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	A	1	1	1	1	0	1	0.5	0.8	
4-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	0	0	0	0	0.6	0.8	
5-Apr	1	0	0	0	0	0	0	0	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	0.5	0.9	
6-Apr	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	1	0	1	1	1	1	0	1	0.6	0.8	
7-Apr	1	0	1	0	1	0	1	0	1	1	0	0	0	A	1	1	1	0	0	1	1	1	1	0.6	0.8	
8-Apr	0	1	1	1	0	0	1	1	1	1	1	1	A	1	1	1	0	0	1	1	1	1	1	0.6	0.8	
9-Apr	0	0	1	1	1	1	1	0	1	1	1	A	1	0	0	1	1	1	1	1	1	1	1	0.6	0.9	
10-Apr	1	1	0	1	1	1	1	1	1	0	A	0	0	0	0	0	1	1	1	1	1	0	1	0.5	0.8	
11-Apr	0	0	1	0	1	1	0	0	1	A	0	1	1	0	0	1	0	0	1	1	1	1	0	0.5	0.7	
12-Apr	1	0	1	1	1	0	0	1	A	1	0	1	6	0	0	0	1	0	0	0	0	1	0	0.8	6.4	
13-Apr	0	1	0	0	0	0	0	A	0	0	1	1	1	1	0	0	0	0	0	1	1	0	1	0.5	0.8	
14-Apr	1	0	0	1	0	0	A	1	1	1	0	1	1	1	1	0	1	1	0	0	0	0	0	0.5	0.8	
15-Apr	1	0	1	1	0	A	1	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0.5	0.8	
16-Apr	0	1	1	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.7	
17-Apr	0	0	1	A	1	1	1	1	1	0	1	1	1	1	0	0	0	1	0	0	0	1	1	0.5	0.8	
18-Apr	0	0	A	0	0	1	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0.5	0.6	
19-Apr	0	A	0	0	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.9	
20-Apr	A	1	1	1	0	1	1	0	1	1	1	0	0	0	1	1	0	1	0	1	0	1	0	0.5	0.7	
21-Apr	1	0	0	1	1	1	0	1	1	0	1	0	0	0	0	0	1	0	0	0	1	0	A	0.5	1.0	
22-Apr	1	1	1	0	1	1	1	1	0	C	C	C	C	C	1	0	0	1	1	1	1	A	1	0.6	0.9	
23-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	A	1	1	0.6	0.9	
24-Apr	1	1	1	1	0	0	0	1	0	0	1	0	1	1	1	1	1	1	0	A	1	0	0	0.5	0.7	
25-Apr	0	0	1	1	1	0	0	1	1	1	1	0	1	0	1	1	0	0	A	0	0	0	0	0.5	0.7	
26-Apr	1	1	1	1	0	0	0	1	0	0	0	1	0	1	1	1	1	A	1	1	0	1	1	0.5	0.8	
27-Apr	0	0	1	1	1	1	1	1	0	0	1	0	1	2	1	1	A	1	0	1	1	1	1	0.7	1.6	
28-Apr	1	1	0	1	1	1	1	1	1	1	0	0	0	0	1	A	1	0	0	0	0	0	1	0.6	0.9	
29-Apr	1	1	1	5	2	1	1	1	0	0	1	0	0	0	A	1	0	0	0	1	0	0	1	0.8	4.7	
30-Apr	0	0	0	1	0	1	1	0	0	1	1	0	0	A	0	1	0	0	1	1	0	1	0	0.5	0.6	
		0.6	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	Diurnal Average
		0.9	0.9	0.8	4.7	2.3	0.8	1.1	0.9	0.7	0.8	0.6	0.7	6.4	1.6	0.9	0.8	0.8	0.7	0.7	0.8	0.9	0.9	0.9	1.0	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								



**Pollutant Rose**

**Total Reduced Sulphur (TRS) - ppb**  
**Henry Pirker - April 2013**





## Hourly Averages

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

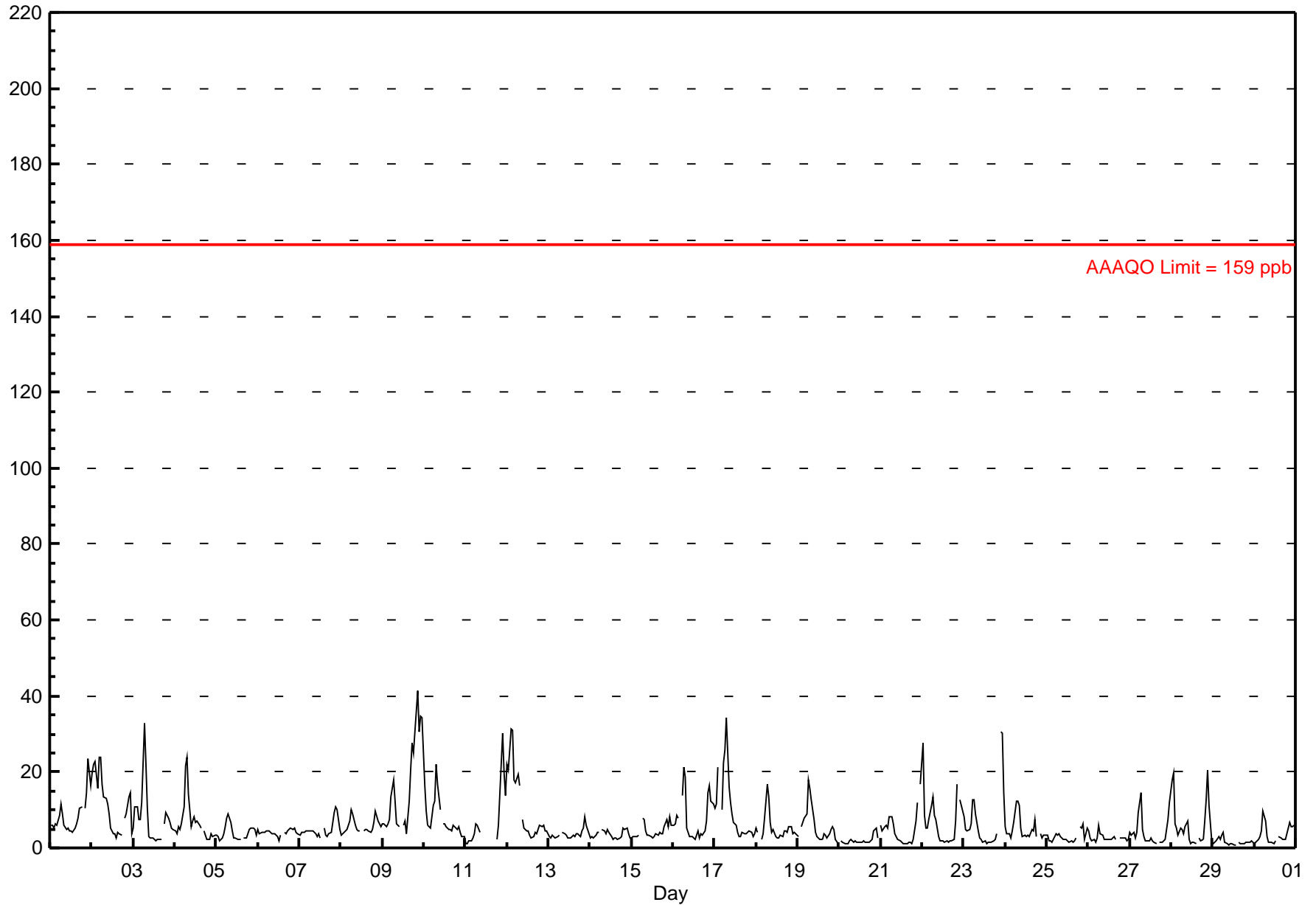
Henry Pirker - April 2013

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 41.4 ppb on Apr 9 21:00	Maximum Daily Average: 16.0 ppb on Apr 9		Hours of Data:	681
Minimum Value: 1 ppb on Apr 29 14:00	Minimum Daily Average: 1.6 ppb on Apr 29		Hours of Missing Data:	39
Maximum Diurnal Average: 12.0 ppb at hour 7	Minimum Diurnal Average: 2.9 ppb at hour 14		Hours of Calibration:	39
Monthly Average: 6.08 ppb	Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 1.7 Q <sub>1</sub> = 2.6 Median = 4.2 Q <sub>3</sub> = 6.5 P <sub>90</sub> = 13.3 P <sub>99</sub> = 30.9		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-Apr	6	6	5	6	6	9	12	9	6	5	5	5	4	5	6	8	11	11	A	10	15	24	16	8.4	23.6		
2-Apr	20	22	23	16	24	24	17	14	13	12	9	5	4	4	3	4	4	3	A	8	9	13	14	4	11.6	24.0	
3-Apr	5	11	11	7	7	12	33	22	10	3	3	3	2	2	2	2	2	A	6	9	8	7	5	5	7.7	32.9	
4-Apr	5	4	5	5	6	11	22	24	14	6	7	8	7	7	6	5	A	4	2	2	2	4	3	3	7.1	24.0	
5-Apr	3	3	2	3	4	5	8	9	7	5	3	2	2	2	2	A	3	3	4	5	5	5	5	3	4.0	8.9	
6-Apr	5	4	4	4	4	4	4	4	4	4	4	3	2	3	A	4	4	5	5	5	5	5	4	4	4.1	5.2	
7-Apr	4	4	4	4	4	5	5	4	5	4	3	4	3	A	5	3	3	4	4	7	9	11	10	5	4.9	11.0	
8-Apr	3	4	4	5	6	7	10	9	6	5	5	4	A	5	5	4	4	5	7	10	7	6	6	6	5.7	10.1	
9-Apr	6	6	6	6	7	14	18	12	6	6	6	A	6	7	4	12	20	27	25	30	41	31	35	34	16.0	41.4	
10-Apr	16	10	6	6	5	11	12	22	17	10	A	6	6	5	5	5	5	6	5	5	5	4	3	3	7.8	21.9	
11-Apr	1	1	2	2	3	4	6	6	4	A	C	C	C	C	C	C	C	C	C	2	6	14	30	20	14	--	30.1
12-Apr	22	20	31	31	18	17	19	16	A	7	5	4	5	3	3	3	4	4	5	6	6	6	4	4	10.6	31.2	
13-Apr	3	3	3	3	3	3	3	A	4	4	3	3	3	3	4	3	4	4	3	4	5	8	6	4	3.7	8.2	
14-Apr	3	3	3	3	4	4	A	5	5	4	5	4	3	2	3	3	2	3	3	5	5	5	4	3	3.6	5.2	
15-Apr	3	3	3	3	3	A	8	7	4	3	3	3	3	3	4	3	4	4	4	6	8	6	8	6	4.4	8.0	
16-Apr	6	7	9	8	A	14	21	19	5	3	3	3	2	2	5	2	4	3	4	7	14	16	12	12	7.9	21.1	
17-Apr	10	12	21	A	10	22	26	34	16	12	9	7	6	4	3	3	4	4	4	4	5	4	3	4	9.8	34.3	
18-Apr	5	4	A	2	4	8	17	13	7	4	5	3	2	3	3	3	5	5	4	6	6	4	4	4	5.2	16.9	
19-Apr	3	A	5	7	8	9	18	16	13	7	4	3	3	2	2	4	3	3	4	5	6	5	2	1	5.7	18.0	
20-Apr	A	2	1	1	1	1	2	2	2	2	2	1	1	2	1	2	1	1	2	2	2	5	5	3	A	1.9	5.2
21-Apr	6	5	5	6	5	8	8	6	4	3	2	2	1	1	1	1	2	1	1	2	7	12	A	17	4.7	16.7	
22-Apr	28	9	5	5	7	11	13	9	8	3	2	2	2	1	2	1	2	2	2	7	17	A	13	10	7.0	27.8	
23-Apr	8	5	4	5	6	13	13	9	5	3	2	2	2	1	2	1	1	2	2	4	A	31	30	15	7.2	30.5	
24-Apr	6	4	4	3	4	7	12	12	11	5	3	3	3	3	3	5	5	7	3	A	4	3	3	3	5.1	12.4	
25-Apr	3	2	2	2	2	4	3	4	3	2	2	2	2	2	2	2	2	2	A	6	5	6	2	5	2.9	6.3	
26-Apr	4	3	2	2	1	3	6	4	4	2	2	2	2	2	2	3	2	A	3	2	2	3	2	2	2.7	6.1	
27-Apr	4	3	4	3	4	9	15	5	3	2	2	2	3	2	2	1	A	2	1	2	2	5	8	12	4.1	14.6	
28-Apr	18	20	6	5	3	5	5	4	6	7	2	1	1	1	1	A	3	2	2	7	13	20	11	1	6.4	20.5	
29-Apr	1	1	2	3	2	4	4	1	1	1	1	1	1	1	1	A	2	1	1	1	1	2	2	1	1.6	4.3	
30-Apr	1	2	2	3	4	10	7	3	2	1	2	1	2	A	3	2	2	2	2	4	7	5	6	6	3.5	9.7	

7.2	6.2	6.4	5.5	5.8	8.9	12.0	10.5	6.6	4.6	3.7	3.2	3.0	2.9	3.0	3.4	3.8	4.4	4.3	5.9	8.1	9.6	8.7	7.1	Diurnal Average	
27.8	22.0	31.2	31.0	24.0	24.0	32.9	34.3	16.7	11.9	9.1	8.2	6.6	6.9	5.9	12.3	20.5	27.5	25.0	30.5	41.4	30.5	34.6	34.2	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

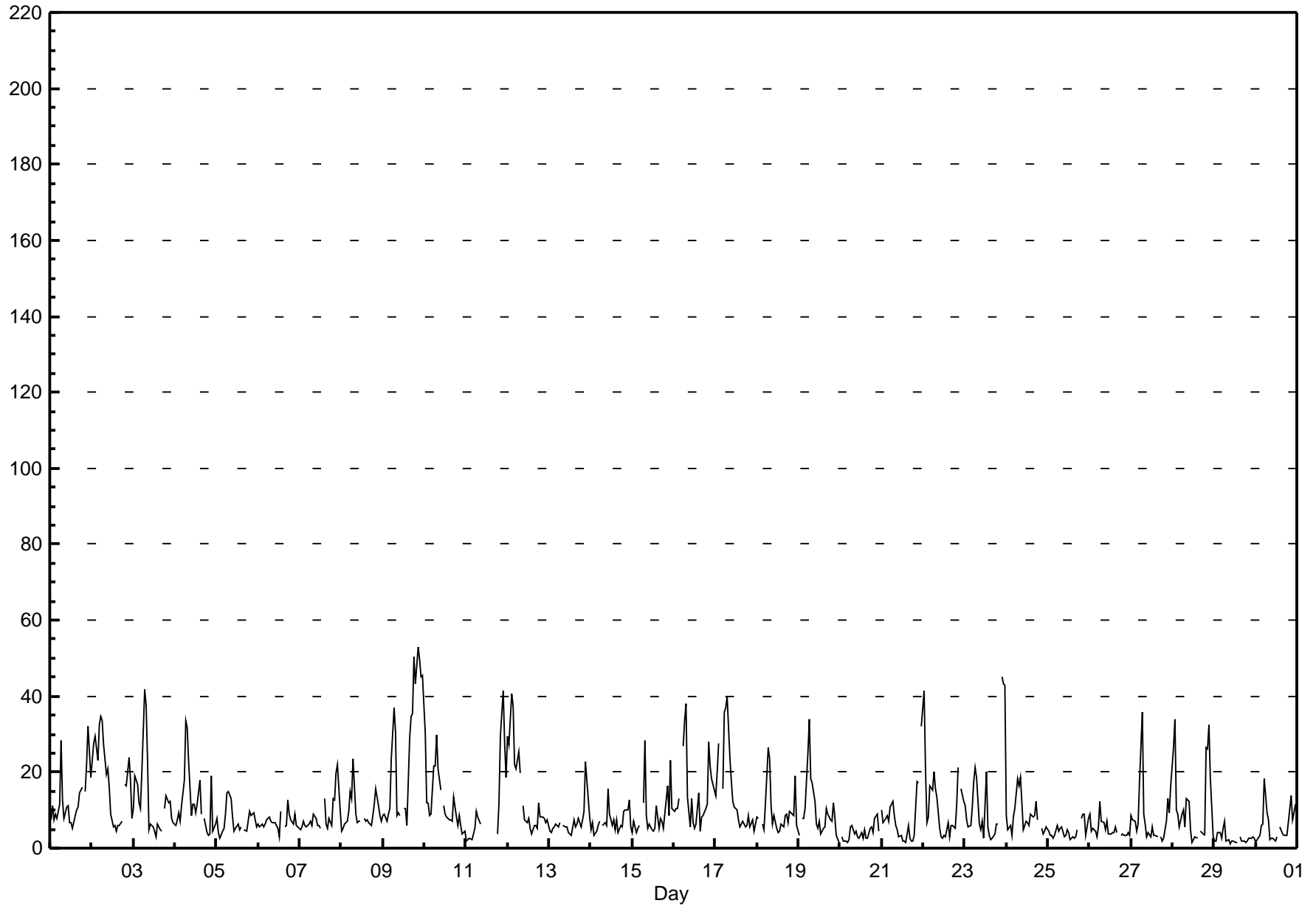
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Henry Pirker - April 2013

Maximum Value: 53.0 ppb on Apr 9 21:00		Maximum Daily Average: 25.0 ppb on Apr 9		Hours in Service: 720																							
Minimum Value: 1 ppb on Apr 29 10:00		Minimum Daily Average: 2.6 ppb on Apr 29		Hours of Data: 681																							
Maximum Diurnal Average: 20.0 ppb at hour 7		Minimum Diurnal Average: 5.3 ppb at hour 14		Hours of Missing Data: 39																							
Monthly Average: 10.16 ppb		Percentiles: P <sub>1</sub> = 1.5 P <sub>10</sub> = 3.0 Q <sub>1</sub> = 5.0 Median = 7.1 Q <sub>3</sub> = 11.5 P <sub>90</sub> = 21.6 P <sub>99</sub> = 42.7		Hours of Calibration: 39																							
				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-Apr	7	11	7	9	8	12	28	13	8	11	11	7	7	5	8	10	11	14	16	A	15	22	32	18	12.7	32.0	
2-Apr	23	27	30	23	32	35	33	27	20	21	16	9	6	6	4	6	6	7	A	17	17	24	18	8	18.0	34.8	
3-Apr	10	19	17	12	11	20	42	38	24	5	6	5	5	3	6	5	4	A	11	14	12	12	8	7	12.8	41.8	
4-Apr	6	7	9	7	11	18	33	32	23	9	12	11	10	11	18	9	A	8	4	3	4	19	5	6	12.0	33.4	
5-Apr	8	4	3	5	5	9	15	15	13	8	5	5	6	5	6	A	5	4	7	10	9	9	8	6	7.3	14.9	
6-Apr	6	6	6	6	6	7	8	7	7	7	7	5	3	10	A	6	6	13	9	7	6	9	6	6	6.9	12.6	
7-Apr	5	6	7	6	5	6	7	6	9	8	6	6	5	A	13	6	5	8	6	13	13	20	22	10	8.6	21.9	
8-Apr	5	5	6	7	10	15	13	24	9	7	7	A	8	7	7	7	6	9	11	16	11	9	7	9.2	23.5		
9-Apr	9	9	7	9	10	24	37	31	9	9	8	A	10	10	6	29	35	35	50	43	53	50	45	46	25.0	53.0	
10-Apr	30	12	12	9	9	22	22	30	21	15	A	11	9	8	7	8	7	13	8	6	9	6	4	5	12.3	30.3	
11-Apr	2	2	3	2	4	5	10	8	6	A	C	C	C	C	C	C	C	C	C	4	12	29	41	28	19	--	41.2
12-Apr	29	27	41	37	22	21	25	20	A	11	7	7	8	5	4	6	6	5	12	8	8	8	7	7	14.5	40.8	
13-Apr	5	4	5	5	6	5	7	A	6	5	5	4	4	3	7	5	6	8	6	7	10	23	18	8	7.1	22.7	
14-Apr	5	7	3	4	6	7	A	6	7	6	16	9	6	7	5	7	4	6	6	10	10	10	13	6	7.2	15.5	
15-Apr	4	7	4	5	6	A	12	28	9	5	6	5	5	5	11	5	8	7	5	9	16	9	23	10	8.9	28.2	
16-Apr	10	10	10	13	A	27	33	38	13	6	13	7	5	6	14	4	8	9	11	11	28	22	18	15	14.5	37.9	
17-Apr	14	20	28	A	16	36	37	40	24	17	12	11	10	8	6	6	7	5	6	8	6	7	4	6	14.6	39.9	
18-Apr	8	8	A	6	5	11	26	23	11	6	8	5	4	4	6	6	9	9	7	10	9	9	19	6	9.4	26.4	
19-Apr	4	A	8	8	11	25	34	18	17	12	6	5	7	4	5	6	10	9	8	7	12	8	3	1	10.0	33.9	
20-Apr	A	3	2	2	1	2	5	6	4	4	3	2	4	2	5	2	3	5	6	4	8	9	4	A	4.0	9.0	
21-Apr	10	7	8	8	7	11	12	9	6	5	3	4	2	2	2	6	3	2	2	3	17	17	A	32	7.7	32.2	
22-Apr	41	20	7	8	17	15	20	16	13	5	3	2	3	3	7	3	6	6	5	12	21	A	16	12	11.4	41.2	
23-Apr	11	7	5	6	11	17	21	19	6	5	7	3	20	5	3	2	3	4	6	6	A	45	43	43	13.1	45.2	
24-Apr	8	5	6	4	8	10	18	16	19	12	5	7	6	9	8	8	12	7	A	5	4	4	5	5	8.5	18.7	
25-Apr	4	3	3	3	3	6	4	5	5	3	3	5	4	2	3	3	3	5	A	8	9	9	3	8	4.6	9.0	
26-Apr	9	4	5	4	3	6	12	7	7	5	7	4	4	4	4	5	4	A	3	4	3	4	4	3	5.1	12.4	
27-Apr	8	7	7	5	6	17	36	9	6	3	4	3	5	3	3	3	A	3	2	3	7	13	9	16	7.9	35.7	
28-Apr	27	34	10	9	5	9	10	6	13	12	5	2	2	3	2	A	4	4	3	27	26	32	18	3	11.6	33.9	
29-Apr	2	2	4	4	3	5	7	2	2	1	2	2	2	2	A	3	2	2	2	2	3	3	3	3	2.6	7.0	
30-Apr	2	2	4	6	7	18	10	8	2	2	3	2	3	A	6	4	4	4	4	7	14	8	9	11	5.9	18.4	
		10.8	9.9	9.2	8.0	8.8	14.6	20.0	17.4	11.0	7.8	7.1	5.5	5.9	6.6	6.4	6.8	7.9	8.0	10.1	13.6	15.9	14.0	11.5	Diurnal Average		
		41.2	33.9	40.8	37.5	32.5	35.9	41.8	39.9	23.6	21.0	15.9	11.4	20.0	11.5	17.9	29.1	34.8	35.5	50.5	43.3	53.0	49.7	45.2	45.5	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

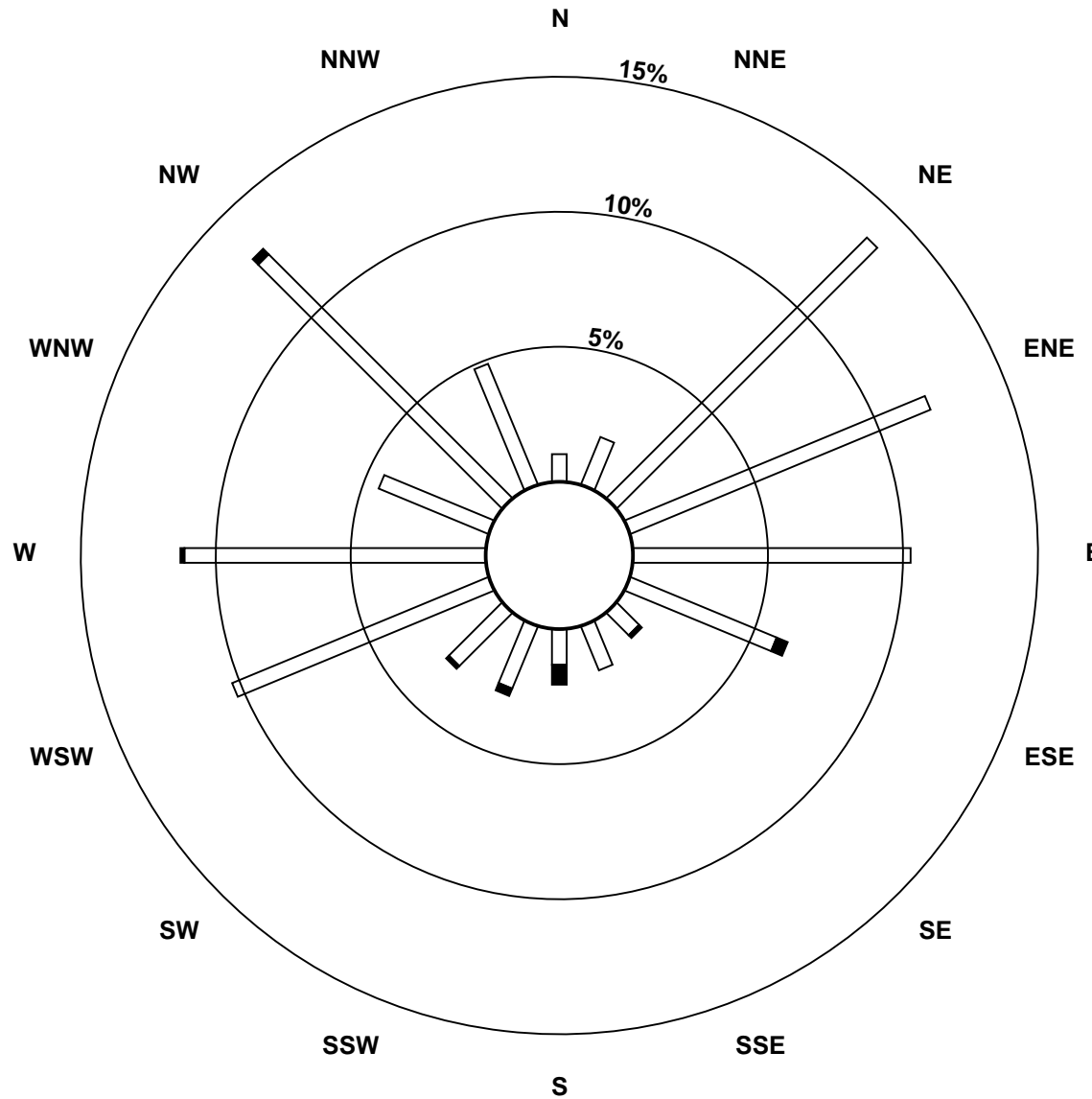
### Hourly Maximums

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Henry Pirker - April 2013

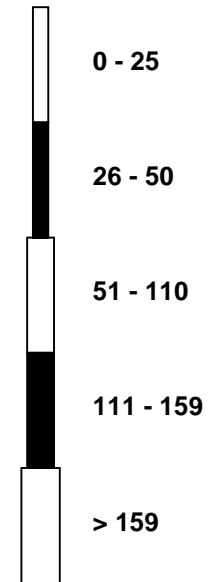


**Pollutant Rose**

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Henry Pirker - April 2013**

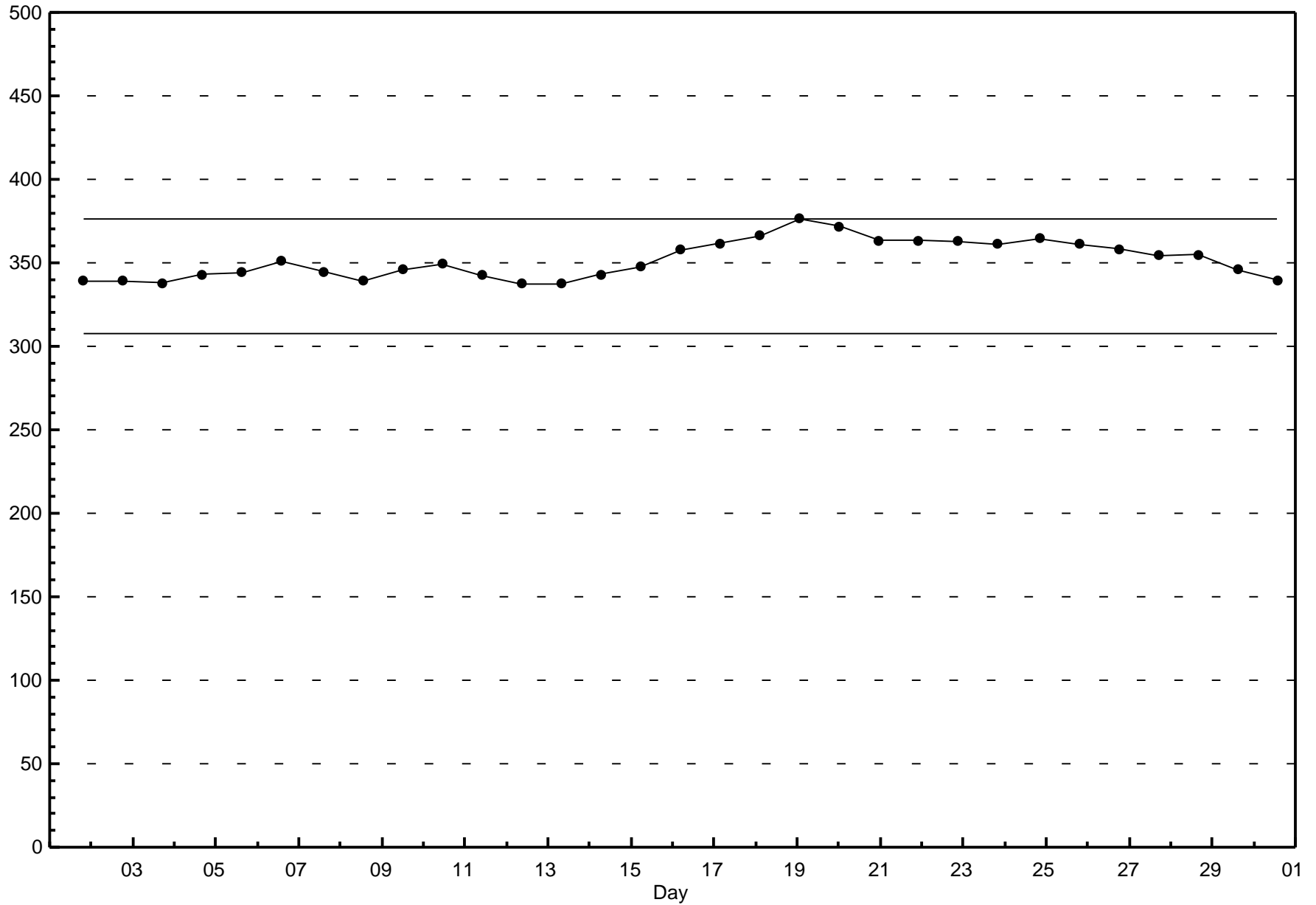


**Pollutant Classes (ppb)**



### Span Responses

Nitrogen Dioxide (NO<sub>2</sub>)  
Henry Pirker - April 2013



## Hourly Averages

Nitrogen Oxide (NO) - ppb

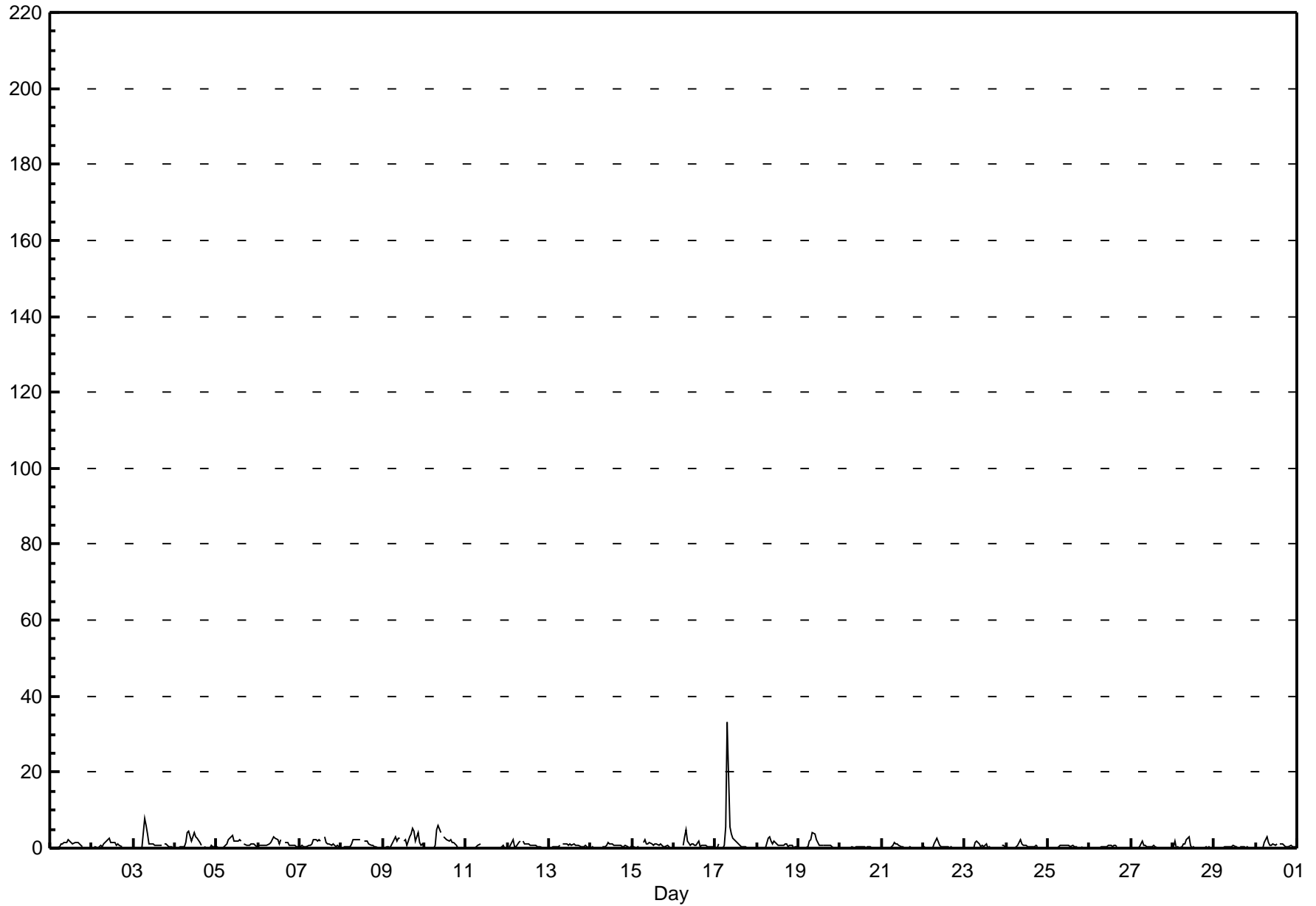
Henry Pirker - April 2013

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 33.3 ppb on Apr 17 08:00	Maximum Daily Average: 2.6 ppb on Apr 17		Hours of Data:	681
Minimum Value: 0 ppb on Apr 10 02:00	Minimum Daily Average: 0.1 ppb on Apr 20		Hours of Missing Data:	39
Maximum Diurnal Average: 3.0 ppb at hour 8	Minimum Diurnal Average: 0.1 ppb at hour 1		Hours of Calibration:	39
Monthly Average: 0.82 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.5 Q <sub>3</sub> = 1.0 P <sub>90</sub> = 2.1 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-Apr	0	0	0	0	0	0	1	1	1	2	2	2	2	1	2	2	1	1	1	A	0	0	0	0	0.8	2.2
2-Apr	0	0	0	0	0	1	0	1	2	2	3	2	1	1	1	1	1	0	A	0	0	0	0	0	0.8	2.5
3-Apr	0	0	0	0	0	0	8	6	4	1	1	1	1	1	1	1	1	A	1	1	1	0	0	1.2	7.9	
4-Apr	0	0	0	0	0	0	2	4	4	2	3	4	3	3	2	1	A	0	0	0	0	1	0	1.3	4.4	
5-Apr	0	0	0	0	0	1	1	2	3	3	2	2	2	2	2	A	1	1	1	1	1	1	1	1.3	3.4	
6-Apr	1	1	1	1	1	1	1	2	2	3	3	2	1	2	A	2	1	1	1	1	1	1	1	1.2	2.9	
7-Apr	1	1	0	0	0	1	1	1	2	2	2	2	2	A	3	1	1	1	1	1	1	1	1	1.1	2.9	
8-Apr	0	0	0	0	0	1	1	2	2	2	2	2	A	2	2	2	1	1	1	1	0	0	0	1.0	2.4	
9-Apr	0	0	0	0	0	1	2	3	2	3	3	A	2	2	1	3	4	5	5	2	4	2	1	2.0	5.1	
10-Apr	0	0	0	0	0	0	1	5	6	4	A	3	3	2	2	2	1	2	1	0	0	0	0	1.4	6.0	
11-Apr	0	0	0	0	0	0	0	1	1	A	C	C	C	C	C	C	C	C	C	0	0	0	1	--	1.0	
12-Apr	0	0	1	2	0	1	1	2	A	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0.8	2.3	
13-Apr	0	0	0	0	0	0	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0.6	1.3	
14-Apr	0	0	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0.5	1.5	
15-Apr	0	0	0	0	0	A	2	2	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0.8	2.2	
16-Apr	0	0	0	0	A	1	3	5	2	1	1	1	1	1	2	1	1	1	1	0	0	0	0	1.0	5.0	
17-Apr	0	0	1	A	0	1	6	33	6	4	3	2	2	1	1	1	0	0	0	0	0	0	0	2.6	33.3	
18-Apr	0	0	A	0	0	0	2	3	2	1	2	1	1	1	1	1	1	1	1	1	1	0	0	0.9	3.1	
19-Apr	0	A	0	0	0	0	2	2	4	4	2	1	1	1	1	1	1	1	1	0	0	0	0	0.9	4.2	
20-Apr	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	
21-Apr	0	0	0	0	0	0	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6	
22-Apr	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.5	
23-Apr	0	0	0	0	0	0	1	2	1	1	1	0	1	0	0	0	0	0	0	0	A	1	1	0.4	2.0	
24-Apr	0	0	0	0	0	0	1	1	2	1	1	1	0	0	0	0	0	1	0	A	0	0	0	0.4	2.4	
25-Apr	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0	0.3	0.9	
26-Apr	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	A	0	0	0	0	0	0.2	0.7	
27-Apr	0	0	0	0	0	0	2	1	1	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0.3	2.0	
28-Apr	0	2	0	0	0	0	1	1	2	3	1	0	0	0	0	A	0	0	0	0	0	0	0	0.5	3.0	
29-Apr	0	0	0	0	0	0	0	1	1	1	0	1	1	0	0	A	0	0	0	0	0	0	0	0.3	0.6	
30-Apr	0	0	0	0	0	2	3	1	1	1	1	1	1	A	1	1	1	0	0	0	1	0	0	0.7	3.0	

0.1	0.2	0.2	0.2	0.1	0.3	1.6	3.0	2.0	1.6	1.4	1.3	1.1	1.0	0.9	0.8	0.8	0.6	0.4	0.4	0.3	0.2	0.2	Diurnal Average		
0.6	1.8	1.4	2.3	0.9	1.6	7.9	33.3	6.0	4.0	3.1	4.0	3.1	2.5	2.9	2.9	3.7	5.1	4.5	2.0	4.1	1.6	0.8	1.1	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span



## Hourly Maximums

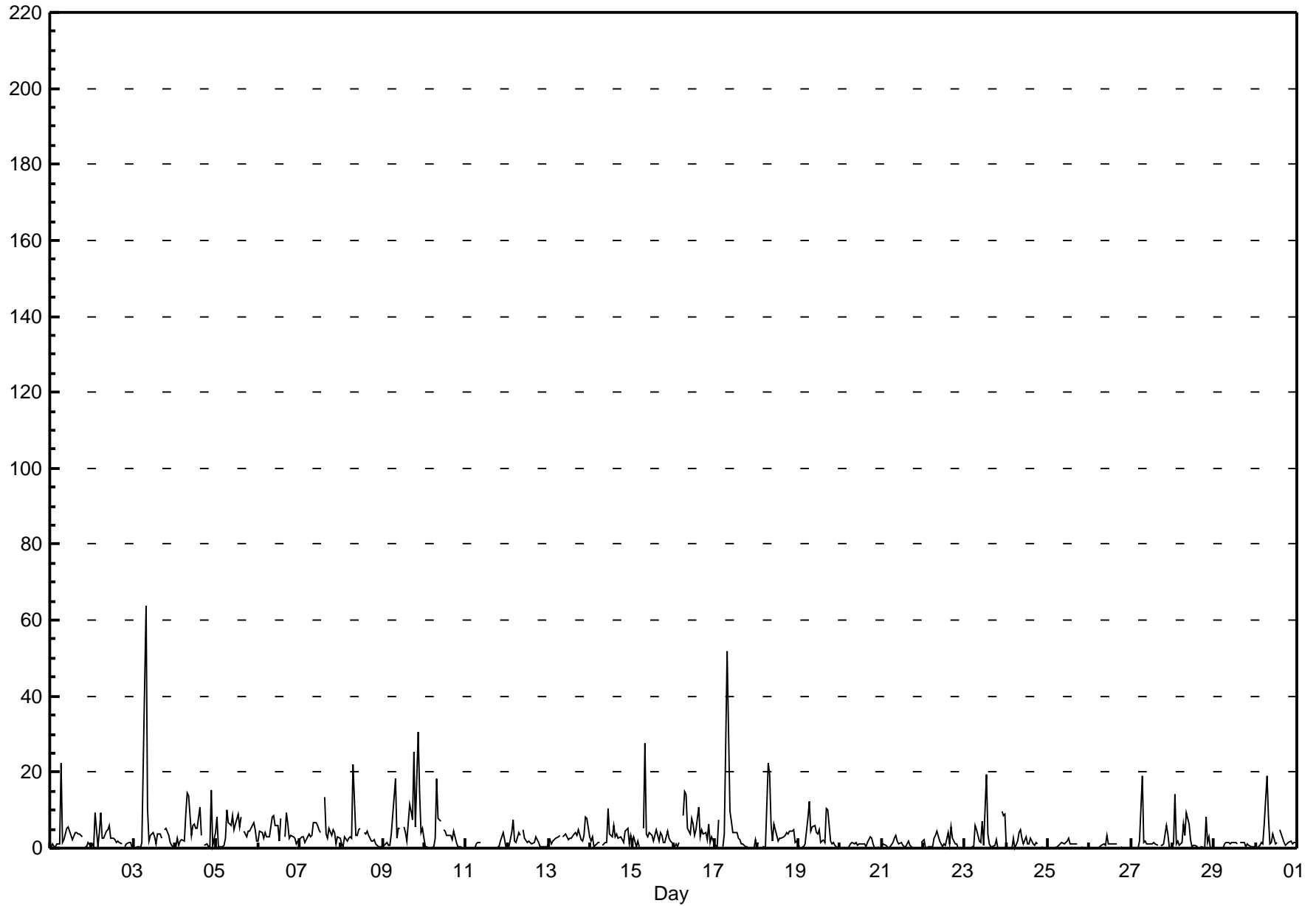
Nitrogen Oxide (NO) - ppb

Henry Pirker - April 2013

Maximum Value: 63.6 ppb on Apr 3 08:00		Maximum Daily Average: 7.7 ppb on Apr 9		Hours in Service: 720																							
Minimum Value: 0 ppb on Apr 12 00:00		Minimum Daily Average: 0.6 ppb on Apr 26		Hours of Data: 681																							
Maximum Diurnal Average: 10.8 ppb at hour 8		Minimum Diurnal Average: 1.1 ppb at hour 4		Hours of Missing Data: 39																							
Monthly Average: 3.18 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.6 Median = 1.6 Q <sub>3</sub> = 3.9 P <sub>90</sub> = 6.6 P <sub>99</sub> = 24.7		Hours of Calibration: 39																							
				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-Apr	1	1	1	1	1	1	22	2	2	5	6	4	3	2	4	4	4	4	3	A	1	1	1	0	3.2	22.4	
2-Apr	1	0	9	0	4	9	2	3	4	5	6	2	3	2	1	2	2	1	A	1	1	1	1	2.7	9.1		
3-Apr	0	0	1	0	0	1	44	64	11	2	3	4	3	1	4	4	3	A	5	5	3	1	1	7.0	63.6		
4-Apr	1	3	1	2	2	2	9	14	14	3	6	6	5	5	11	3	A	1	1	1	1	15	1	4.8	15.1		
5-Apr	8	1	1	1	1	2	10	7	6	9	5	6	9	5	8	A	4	3	5	4	5	7	5	4.9	10.0		
6-Apr	2	4	4	2	4	3	3	5	8	8	6	6	2	8	A	3	9	6	2	4	3	3	1	4.3	9.1		
7-Apr	2	3	3	1	2	4	3	3	7	7	6	5	4	A	13	4	3	5	3	5	4	1	3	4.1	13.5		
8-Apr	1	1	3	2	2	3	2	22	3	3	5	5	A	4	4	4	3	2	2	1	1	1	1	3.4	22.1		
9-Apr	1	1	1	1	1	4	13	18	3	5	5	A	5	4	2	12	10	7	25	6	31	15	4	7.7	30.6		
10-Apr	1	0	0	0	0	1	2	18	8	7	A	5	4	4	3	3	2	5	2	1	1	0	0	2.9	18.1		
11-Apr	0	0	0	0	0	0	1	1	2	A	C	C	C	C	C	C	C	C	C	0	0	2	4	--	3.9		
12-Apr	0	0	4	7	2	1	4	3	A	5	2	2	2	1	1	1	3	2	1	1	1	1	0	2.1	7.3		
13-Apr	2	1	2	2	2	3	3	A	3	4	3	2	3	2	4	4	3	5	2	2	3	8	8	3.3	8.3		
14-Apr	2	3	1	1	2	1	A	1	1	1	10	4	3	6	3	4	3	3	2	1	5	5	1	2.9	10.3		
15-Apr	2	3	1	2	1	A	5	28	4	3	4	3	2	3	5	2	4	3	2	1	4	2	2	3.8	27.7		
16-Apr	1	1	1	1	A	9	15	14	5	4	8	6	3	5	11	3	5	4	4	2	6	2	3	4.9	14.9		
17-Apr	1	1	7	A	0	4	27	52	10	7	4	4	4	2	2	1	1	1	1	0	0	0	0	5.7	51.8		
18-Apr	1	1	A	0	1	0	23	19	6	2	6	3	2	3	2	3	3	4	4	4	5	2	2	4.4	22.5		
19-Apr	1	A	1	0	1	8	12	4	5	6	4	4	5	1	2	2	10	10	2	1	1	0	0	3.6	12.3		
20-Apr	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	3	3	1	0	0	0	0.9	2.9		
21-Apr	1	1	1	0	0	1	1	2	3	2	1	1	1	1	0	2	1	0	0	0	0	0	A	0.9	3.3		
22-Apr	2	0	0	0	0	1	2	3	4	2	1	1	1	1	4	1	6	3	1	1	0	A	0	1.5	5.6		
23-Apr	0	0	0	0	0	0	6	5	2	1	7	1	19	4	1	1	1	1	2	0	A	10	9	3.4	19.2		
24-Apr	1	0	0	0	2	0	2	4	5	3	1	3	1	1	3	1	1	2	1	A	0	0	0	1.3	5.0		
25-Apr	0	0	0	0	0	0	1	1	2	1	1	2	3	1	1	1	1	1	A	1	0	0	0	0.8	2.5		
26-Apr	0	0	0	0	0	0	1	1	1	1	3	1	1	1	1	1	1	A	0	0	0	0	0	0.6	3.5		
27-Apr	0	0	0	0	0	2	19	1	2	1	1	1	1	1	1	1	A	1	1	1	6	4	1	2.0	19.0		
28-Apr	1	14	1	2	1	2	6	3	9	6	2	1	1	1	1	A	1	0	0	8	1	3	0	2.8	14.2		
29-Apr	0	0	0	0	0	0	1	1	1	1	2	2	1	1	1	A	1	1	1	1	1	1	1	0.8	1.6		
30-Apr	0	0	1	2	1	6	19	8	1	1	4	1	2	A	5	2	2	1	1	2	2	1	2	2.8	19.1		
		1.1	1.4	1.4	1.1	1.1	2.4	9.0	10.8	4.6	3.7	4.1	3.1	3.4	2.7	3.7	2.6	3.2	2.9	2.7	2.0	3.0	3.1	1.7	1.5	Diurnal Average	
		8.3	14.2	9.1	7.3	4.2	9.1	43.8	63.6	13.8	8.6	10.3	6.4	19.2	7.8	13.5	11.7	10.5	10.0	25.3	8.0	30.6	15.1	8.6	8.9	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

# Hourly Maximums

Nitrogen Oxide (NO) - ppb  
Henry Pirker - April 2013





## Hourly Averages

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

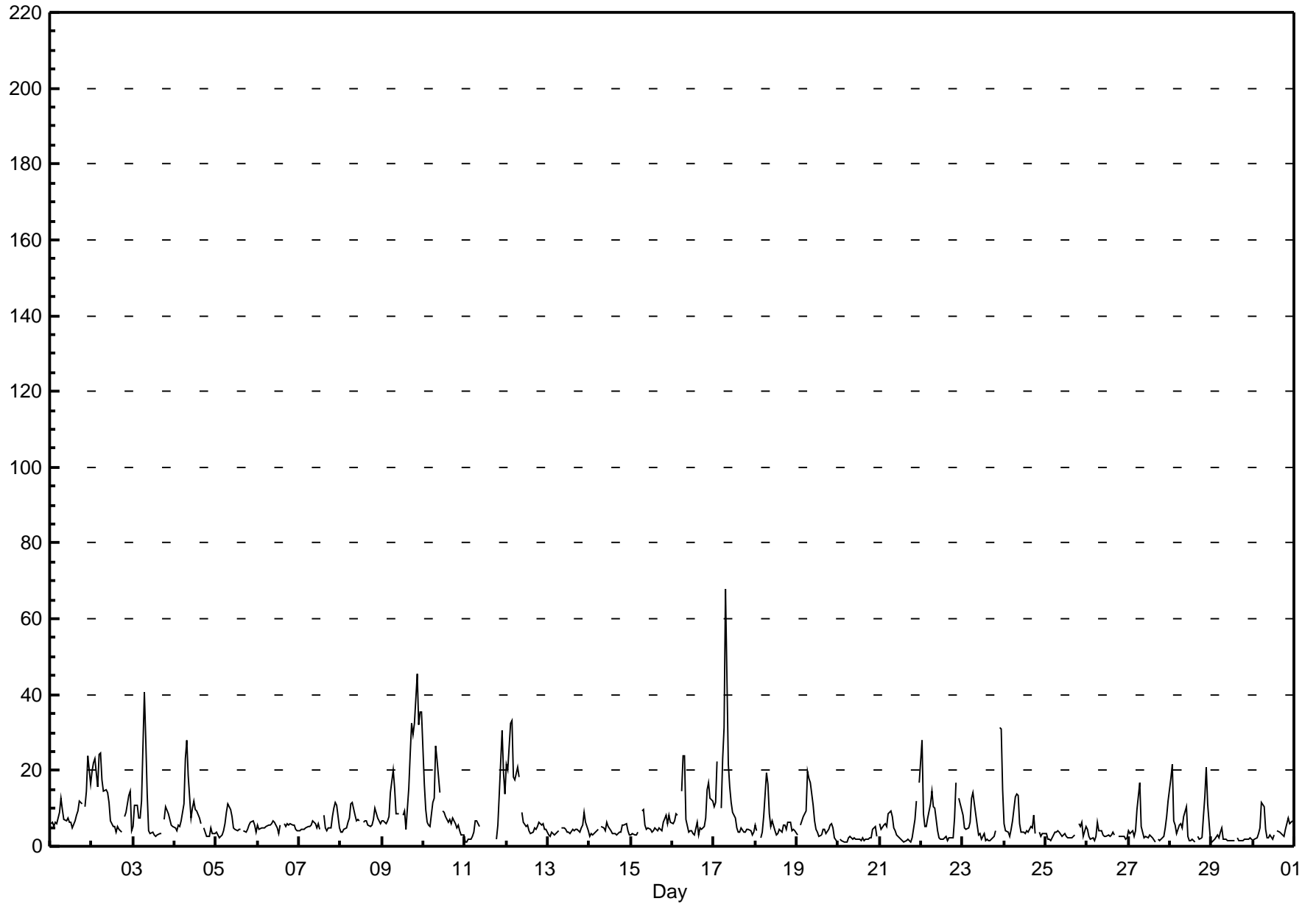
### Henry Pirker - April 2013

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 67.8 ppb on Apr 17 08:00	Maximum Daily Average: 18.0 ppb on Apr 9		Hours of Data:	681
Minimum Value: 1 ppb on Apr 20 05:00	Minimum Daily Average: 1.9 ppb on Apr 29		Hours of Missing Data:	39
Maximum Diurnal Average: 13.6 ppb at hour 7	Minimum Diurnal Average: 3.9 ppb at hour 14		Hours of Calibration:	39
Monthly Average: 6.94 ppb	Percentiles: P <sub>1</sub> = 1.2 P <sub>10</sub> = 2.0 Q <sub>1</sub> = 3.2 Median = 4.9 Q <sub>3</sub> = 7.7 P <sub>90</sub> = 14.4 P <sub>99</sub> = 32.3		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-Apr	6	6	5	6	6	9	13	10	7	7	7	6	6	5	7	8	9	12	11	A	10	15	24	17	9.2	23.7	
2-Apr	20	22	23	16	24	25	17	15	15	14	12	7	5	5	4	5	5	4	A	8	9	14	14	4	12.4	24.7	
3-Apr	5	11	11	7	7	12	41	28	14	4	3	4	3	3	3	3	3	A	7	10	8	7	6	5	9.0	40.7	
4-Apr	5	4	6	5	7	11	23	28	19	8	10	12	10	9	8	6	A	5	3	2	3	5	3	3	8.4	27.9	
5-Apr	4	3	2	3	4	6	9	11	10	8	5	4	4	5	4	A	4	4	5	6	6	7	6	4	5.3	11.3	
6-Apr	6	4	5	5	5	5	5	6	6	7	6	5	3	6	A	6	5	6	6	6	5	6	4	4	5.3	6.7	
7-Apr	4	5	5	4	5	5	5	6	7	6	5	6	4	A	8	5	4	5	5	8	10	12	11	5	6.0	11.5	
8-Apr	4	4	5	5	6	8	11	12	8	7	7	7	A	6	7	7	6	5	6	7	10	7	7	6	6.8	11.5	
9-Apr	7	7	6	7	8	14	20	15	8	8	8	A	8	9	5	15	24	32	30	33	45	32	35	35	18.0	45.5	
10-Apr	17	10	6	6	5	11	13	27	23	14	A	9	9	8	6	7	6	8	6	5	6	4	3	3	9.1	26.6	
11-Apr	1	1	2	2	3	4	7	7	5	A	C	C	C	C	C	C	C	C	C	2	6	14	30	20	14	--	30.5
12-Apr	22	20	33	33	18	18	21	18	A	9	6	5	6	4	3	4	5	4	5	6	6	6	4	4	11.4	33.2	
13-Apr	3	3	4	3	3	4	4	A	5	5	5	4	4	3	5	4	4	4	4	5	6	9	6	4	4.3	8.9	
14-Apr	3	3	3	4	4	4	A	5	5	4	6	5	4	3	4	3	3	4	4	5	6	6	4	3	4.1	6.5	
15-Apr	3	3	3	3	4	A	9	10	6	4	5	4	4	4	5	4	5	5	4	6	8	6	8	6	5.2	9.8	
16-Apr	6	7	9	8	A	15	24	24	7	4	4	4	3	3	6	3	5	4	5	7	15	17	13	12	8.9	24.0	
17-Apr	11	12	22	A	10	23	31	68	22	16	12	9	7	5	4	4	5	4	4	4	5	4	3	4	12.5	67.8	
18-Apr	5	4	A	2	4	8	19	17	9	5	7	4	3	3	4	4	5	6	5	6	7	4	4	4	6.1	19.4	
19-Apr	3	A	6	7	8	9	20	18	17	11	7	4	4	3	3	4	4	3	4	5	6	5	2	1	6.7	19.8	
20-Apr	A	2	1	1	1	1	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	3	A	2.1	5.2
21-Apr	6	5	6	6	5	9	9	8	5	4	3	2	2	1	1	1	2	1	1	2	7	12	A	17	5.0	16.8	
22-Apr	28	9	5	5	7	11	14	10	10	4	2	2	2	2	3	2	2	2	2	7	17	A	13	10	7.4	28.1	
23-Apr	8	5	4	5	7	13	14	11	6	3	3	2	3	2	2	2	2	2	2	4	A	31	31	15	7.7	31.3	
24-Apr	6	4	4	3	5	7	13	14	14	6	4	4	3	4	4	5	5	8	3	A	4	3	3	3	5.5	14.0	
25-Apr	3	2	2	2	2	4	4	4	4	3	3	3	3	2	2	2	2	3	A	6	5	6	2	5	3.3	6.3	
26-Apr	4	3	2	2	1	3	6	4	4	3	3	3	3	3	3	4	3	A	3	3	2	3	2	2	2.9	6.3	
27-Apr	4	4	4	3	4	10	17	5	4	2	2	2	3	2	2	1	A	2	2	2	3	5	8	12	4.4	16.7	
28-Apr	18	22	7	6	4	6	6	5	8	10	3	1	2	2	1	A	3	2	2	8	13	21	11	2	7.0	21.7	
29-Apr	1	1	2	3	2	4	5	2	2	1	2	2	1	1	A	2	2	1	1	2	2	2	2	2	1.9	4.8	
30-Apr	1	2	2	3	5	12	10	5	2	2	3	2	3	A	4	4	3	3	3	4	8	6	6	7	4.4	11.5	

7.3	6.4	6.6	5.7	6.0	9.2	13.6	13.6	8.6	6.3	5.2	4.5	4.1	3.9	4.0	4.3	4.7	5.2	4.9	6.3	8.6	9.9	8.9	7.3	Diurnal Average	
28.1	22.0	32.5	33.2	24.3	24.7	40.7	67.8	22.6	15.6	11.7	12.1	9.6	9.4	8.1	15.3	24.1	32.5	29.5	32.5	45.5	32.1	35.3	35.3	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span

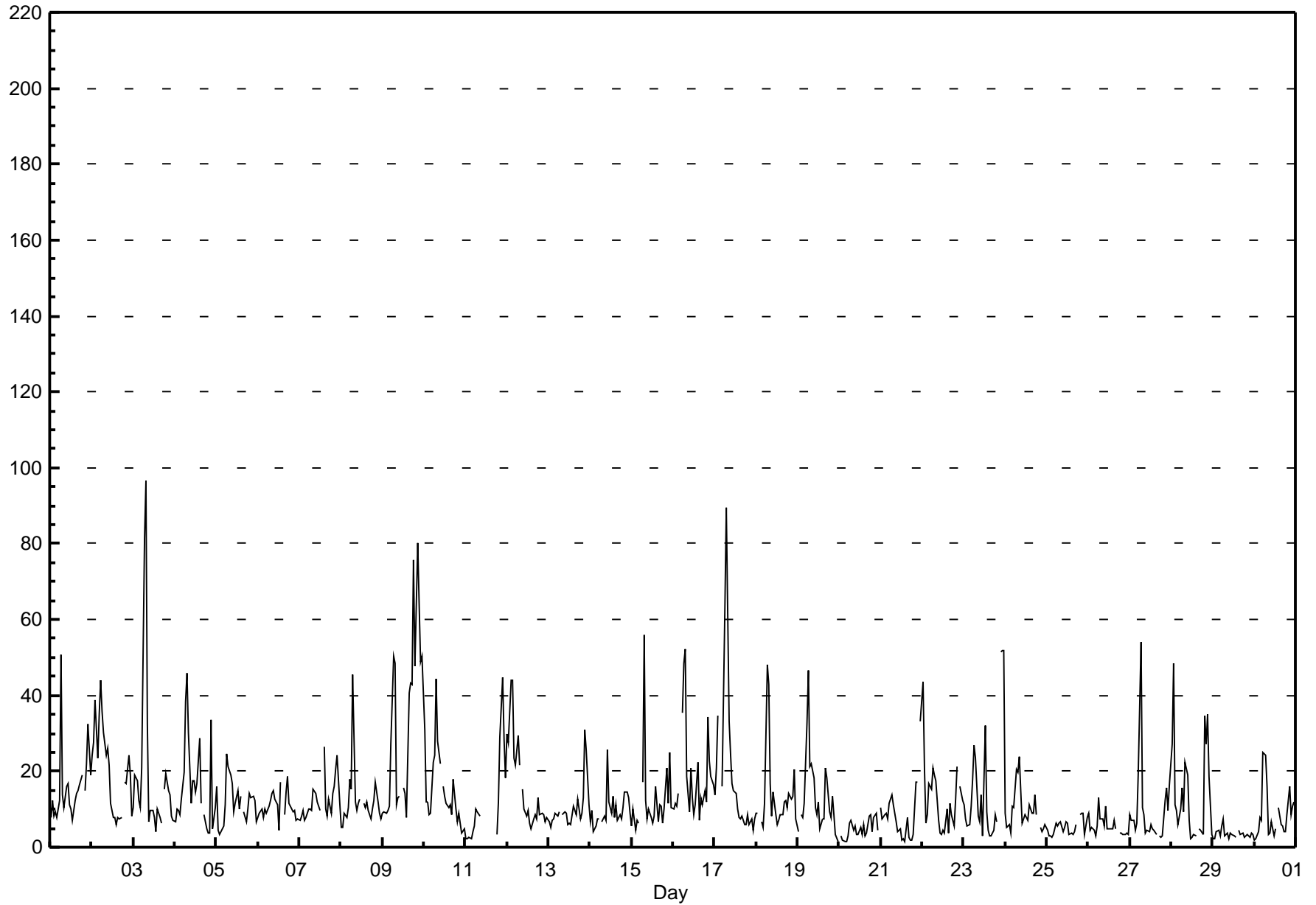


## Hourly Maximums

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

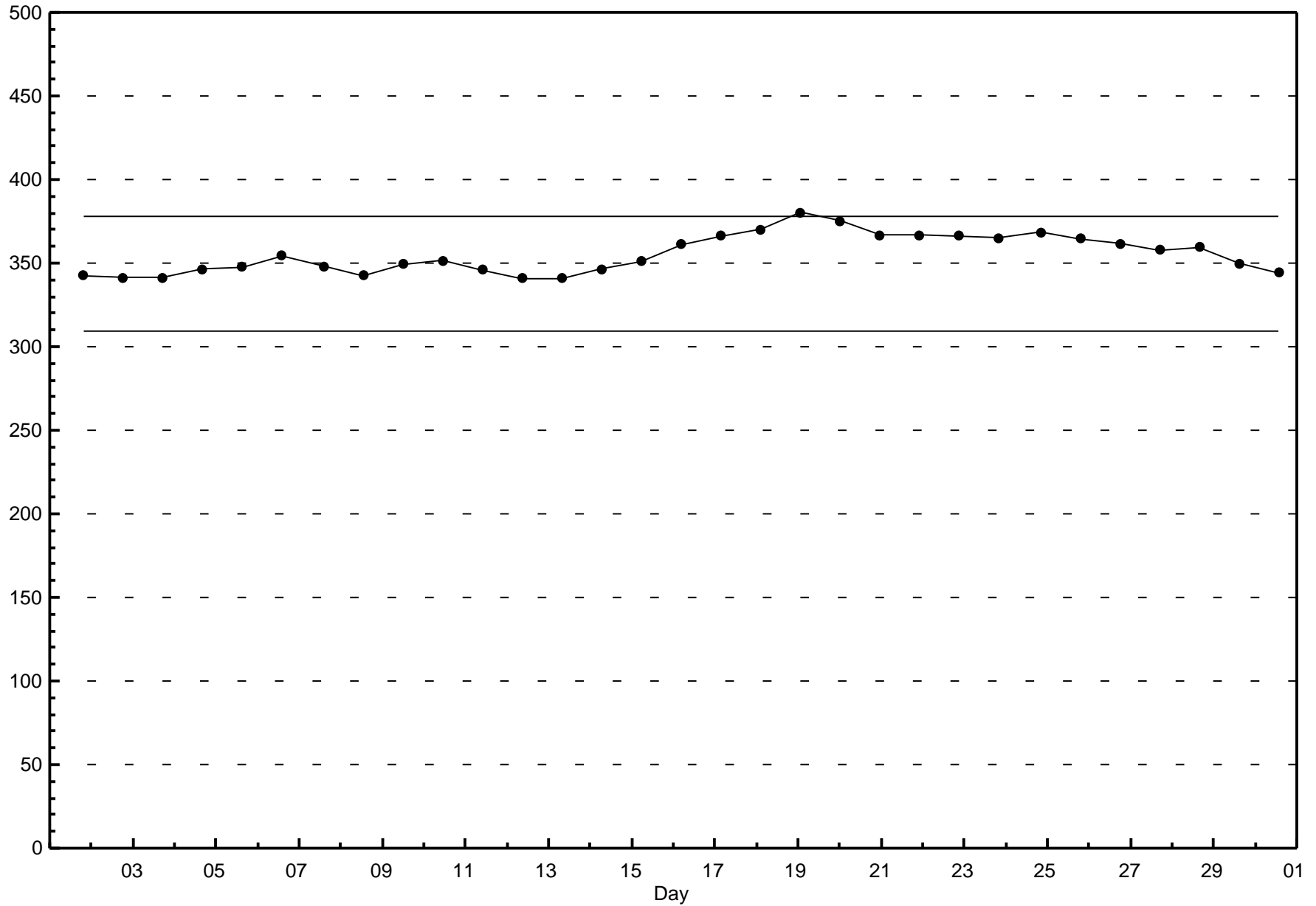
Henry Pirker - April 2013

Maximum Value: 96.7 ppb on Apr 3 08:00		Maximum Daily Average: 32.3 ppb on Apr 9		Hours in Service: 720																																													
Minimum Value: 1 ppb on Apr 20 05:00		Minimum Daily Average: 3.5 ppb on Apr 29		Hours of Data: 681																																													
Maximum Diurnal Average: 28.4 ppb at hour 7		Minimum Diurnal Average: 7.9 ppb at hour 14		Hours of Missing Data: 39																																													
Monthly Average: 13.08 ppb		Percentiles: P <sub>1</sub> = 2.0 P <sub>10</sub> = 3.5 Q <sub>1</sub> = 6.2 Median = 9.2 Q <sub>3</sub> = 14.9 P <sub>90</sub> = 26.6 P <sub>99</sub> = 62.6		Hours of Calibration: 39																																													
				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-Apr	8	12	8	9	8	12	51	14	10	16	17	11	10	7	12	14	15	16	19	A	15	22	32	19	15.6	50.6																							
2-Apr	24	27	39	23	35	44	36	30	24	26	22	11	8	8	6	8	8	8	A	17	17	24	19	8	20.5	43.9																							
3-Apr	10	19	18	12	11	21	81	97	32	7	10	10	8	4	10	8	6	A	15	20	15	14	8	7	19.2	96.7																							
4-Apr	7	10	10	8	13	20	38	46	30	11	17	18	15	17	29	12	A	8	5	4	4	34	5	10	16.1	46.0																							
5-Apr	16	5	3	5	6	11	25	21	19	17	9	12	15	10	14	A	9	7	10	14	13	14	12	7	11.8	24.7																							
6-Apr	8	9	10	8	10	9	11	12	14	15	13	11	5	17	A	9	15	19	11	11	9	10	7	8	10.8	18.7																							
7-Apr	7	8	10	7	8	10	10	10	15	14	12	11	10	A	27	10	8	13	9	14	16	21	24	11	12.3	26.5																							
8-Apr	5	5	9	8	11	18	15	46	12	10	12	13	A	12	11	12	10	8	10	12	17	12	9	8	12.3	45.6																							
9-Apr	9	9	9	10	11	27	50	48	11	13	14	A	16	14	8	41	43	43	76	48	80	64	49	50	32.3	80.3																							
10-Apr	31	12	12	9	9	22	24	44	28	22	A	16	14	12	11	11	9	18	10	7	9	6	4	5	14.9	44.4																							
11-Apr	2	2	3	2	4	5	10	9	8	A	C	C	C	C	C	C	C	C	C	3	12	29	45	28	18	--	44.6																						
12-Apr	30	28	44	44	24	22	30	22	A	15	10	8	10	6	5	7	8	7	13	8	9	8	7	8	16.2	44.2																							
13-Apr	7	5	7	7	9	8	9	A	9	9	9	6	6	6	11	10	9	13	7	9	13	31	26	11	10.3	30.9																							
14-Apr	7	10	4	5	7	7	A	7	8	7	26	12	9	13	8	11	7	9	7	10	15	15	13	9	9.8	25.6																							
15-Apr	5	10	5	7	6	A	17	56	12	8	10	8	6	8	16	7	11	11	6	10	21	11	25	11	12.5	55.9																							
16-Apr	10	11	11	14	A	36	48	52	19	9	21	13	9	11	22	7	13	11	15	12	34	23	19	16	19.0	52.1																							
17-Apr	14	21	35	A	16	39	63	90	33	25	17	15	14	10	8	7	8	6	6	9	6	7	4	8	20.0	89.6																							
18-Apr	9	9	A	7	5	12	48	43	17	8	14	9	6	7	8	9	12	12	10	14	13	13	21	8	13.6	48.1																							
19-Apr	4	A	8	8	12	33	46	21	22	18	10	9	12	5	7	7	21	18	9	8	14	8	4	2	13.3	46.4																							
20-Apr	A	3	2	2	1	3	6	7	4	5	3	3	5	3	6	3	4	8	8	4	8	9	4	A	4.7	8.9																							
21-Apr	11	7	8	9	7	11	14	11	9	7	4	5	2	2	2	8	3	2	2	4	17	17	A	33	8.5	33.0																							
22-Apr	44	20	6	9	17	15	21	19	18	7	4	3	5	4	10	4	12	9	6	13	21	A	16	12	12.7	43.7																							
23-Apr	11	7	6	6	11	18	27	24	8	7	14	3	32	9	4	3	3	4	9	7	A	52	52	52	16.0	52.0																							
24-Apr	9	5	6	4	11	10	20	20	24	15	6	8	8	7	11	9	9	14	9	A	5	4	5	6	9.8	23.9																							
25-Apr	5	3	3	3	4	6	5	7	7	4	5	7	7	3	4	4	4	6	A	9	9	9	4	8	5.3	9.0																							
26-Apr	9	5	5	4	3	6	13	8	8	5	11	5	5	5	5	7	5	A	4	4	4	4	4	3	5.7	13.2																							
27-Apr	8	7	7	5	6	19	54	10	8	4	5	4	6	5	4	4	A	3	3	3	12	16	10	16	9.6	54.1																							
28-Apr	27	48	11	10	6	10	16	9	23	19	7	2	3	4	3	A	5	4	4	35	27	35	18	3	14.3	48.4																							
29-Apr	2	2	4	4	3	6	7	3	4	2	4	3	3	3	A	5	3	4	4	3	3	3	4	3	3.5	7.4																							
30-Apr	2	2	4	8	7	25	24	16	3	4	7	3	5	A	11	6	6	4	4	9	16	9	11	12	8.5	25.1																							
																								11.7	11.2	10.6	8.8	9.6	16.8	28.4	27.6	15.2	11.4	11.1	8.5	8.9	10.1	8.9	9.8	10.6	10.5	11.7	16.2	18.6	15.3	12.8	Diurnal Average		
																								43.7	48.4	44.1	44.2	35.2	43.9	81.3	96.7	33.3	25.9	25.6	17.6	32.1	17.2	28.9	40.7	43.3	42.9	75.7	47.9	80.3	64.2	52.0	52.0	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									



### Span Responses

Oxides of Nitrogen (NO<sub>x</sub>)  
Henry Pirker - April 2013



## Hourly Averages

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

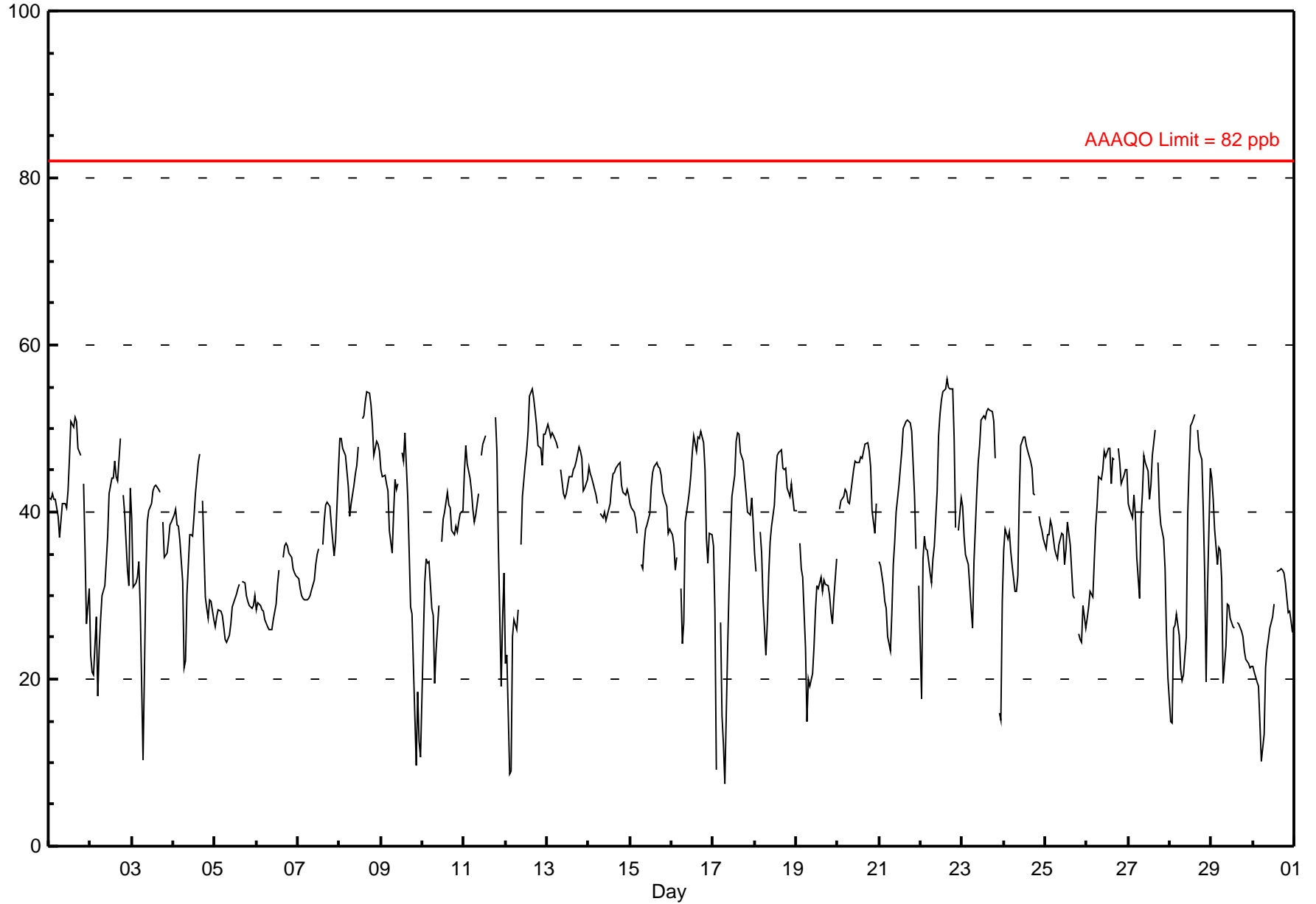
Henry Pirker - April 2013

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 56.0 ppb on Apr 22 16:00	Maximum Daily Average: 47.9 ppb on Apr 8		Hours of Data:	684
Minimum Value: 8 ppb on Apr 17 08:00	Minimum Daily Average: 25.1 ppb on Apr 30		Hours of Missing Data:	36
Maximum Diurnal Average: 45.3 ppb at hour 15	Minimum Diurnal Average: 28.4 ppb at hour 7		Hours of Calibration:	36
Monthly Average: 37.22 ppb	Percentiles: P <sub>1</sub> = 9.6 P <sub>10</sub> = 25.1 Q <sub>1</sub> = 30.0 Median = 38.4 Q <sub>3</sub> = 44.6 P <sub>90</sub> = 48.2 P <sub>99</sub> = 54.4		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-Apr	42	42	42	42	42	40	37	39	41	41	40	43	47	51	50	51	51	48	47	A	43	36	27	31	42.2	51.3
2-Apr	23	21	21	27	18	24	27	30	31	34	37	42	44	44	46	44	44	49	A	42	40	33	31	43	34.6	48.9
3-Apr	39	31	32	32	34	29	10	21	32	39	40	41	43	43	43	43	42	A	39	35	35	37	39	39	35.5	43.2
4-Apr	40	40	38	38	37	32	21	22	30	37	37	37	39	42	46	47	A	41	30	29	27	29	29	27	34.7	47.0
5-Apr	26	27	28	28	28	26	25	24	25	27	29	29	30	31	31	A	32	32	30	29	29	29	29	30	28.4	31.6
6-Apr	28	29	29	28	28	27	26	26	26	26	27	29	31	33	A	35	36	36	36	35	35	33	33	32	30.6	36.3
7-Apr	32	31	30	30	29	30	30	30	31	32	34	35	36	A	36	39	41	41	41	38	37	35	37	45	34.7	44.9
8-Apr	49	49	48	47	45	43	40	41	43	45	46	48	A	51	52	53	54	54	53	50	47	48	48	47	47.9	54.5
9-Apr	45	44	44	43	43	38	35	40	44	43	43	A	47	46	49	42	35	29	28	22	10	19	13	11	35.3	49.5
10-Apr	25	32	34	34	34	28	28	19	23	29	A	36	39	40	42	41	40	38	37	38	38	39	40	40	34.6	42.4
11-Apr	45	48	46	44	43	40	39	40	42	A	47	48	49	C	C	C	C	C	51	47	36	19	27	33	41.3	51.4
12-Apr	22	23	9	9	25	27	26	28	A	36	42	46	47	50	54	55	53	52	50	48	48	46	49	49	38.9	54.8
13-Apr	51	50	49	50	49	48	48	A	45	42	42	42	43	44	44	45	45	46	48	47	46	43	43	44	45.8	50.6
14-Apr	45	45	44	43	42	41	A	40	39	40	39	40	41	43	45	45	45	46	46	43	42	42	43	42	42.6	45.9
15-Apr	41	40	40	39	37	A	34	33	36	38	38	40	43	45	45	46	45	45	44	42	41	41	37	38	40.5	46.0
16-Apr	37	36	33	35	A	31	24	27	39	41	43	44	47	49	47	49	49	50	48	45	37	34	37	37	40.0	49.6
17-Apr	36	28	9	A	27	16	12	8	24	31	37	42	44	48	49	49	47	46	44	42	40	40	42	39	34.8	49.4
18-Apr	35	33	A	38	35	30	23	27	32	36	38	41	45	47	47	48	45	45	45	43	42	43	42	40	39.1	47.5
19-Apr	40	A	36	33	32	24	15	20	19	21	24	28	31	31	32	30	32	31	31	30	28	27	30	34	28.7	40.3
20-Apr	A	40	41	42	43	42	41	41	44	45	46	46	46	47	46	47	48	48	47	45	40	38	41	A	43.9	48.3
21-Apr	34	34	31	29	29	25	23	28	34	36	40	43	45	47	50	51	51	51	51	50	42	36	A	31	38.7	51.0
22-Apr	18	34	37	36	35	33	32	34	36	43	49	52	53	54	55	56	55	55	55	49	38	A	38	42	43.0	56.0
23-Apr	41	37	35	34	31	28	26	34	42	46	48	51	52	51	52	52	52	52	51	46	A	16	15	29	40.1	52.3
24-Apr	35	38	37	38	35	34	31	31	32	42	48	49	49	48	47	46	45	42	42	A	39	38	38	37	40.0	49.1
25-Apr	36	37	37	39	38	36	35	34	36	37	37	34	36	39	36	33	30	30	A	25	25	24	29	26	33.5	39.0
26-Apr	27	29	31	30	34	38	41	44	44	45	47	47	48	48	43	46	46	A	48	46	43	44	45	45	41.7	47.7
27-Apr	41	40	39	42	40	35	30	39	42	47	46	45	42	43	47	50	A	46	41	38	37	33	25	20	39.5	49.8
28-Apr	15	15	26	26	28	25	21	20	21	25	40	45	50	51	52	A	50	48	46	40	32	20	31	45	33.5	51.7
29-Apr	44	41	38	34	36	35	32	20	24	29	29	27	26	26	A	27	27	26	25	23	22	22	21	22	28.5	44.0
30-Apr	22	21	20	19	15	10	13	21	24	25	26	27	29	A	33	33	33	33	33	31	28	28	27	26	25.1	33.2
34.9 35.0 34.0 34.8 34.2 31.5 28.4 29.7 33.9 36.5 39.3 40.6 42.2 44.2 45.3 44.6 43.5 42.9 42.4 39.3 36.1 33.4 34.0 35.3																								Diurnal Average		
50.6 49.8 48.9 49.5 49.2 48.4 47.6 44.3 45.1 46.8 49.2 51.7 53.4 54.4 54.8 56.0 54.9 54.8 54.8 50.4 47.6 48.4 49.3 49.3																								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

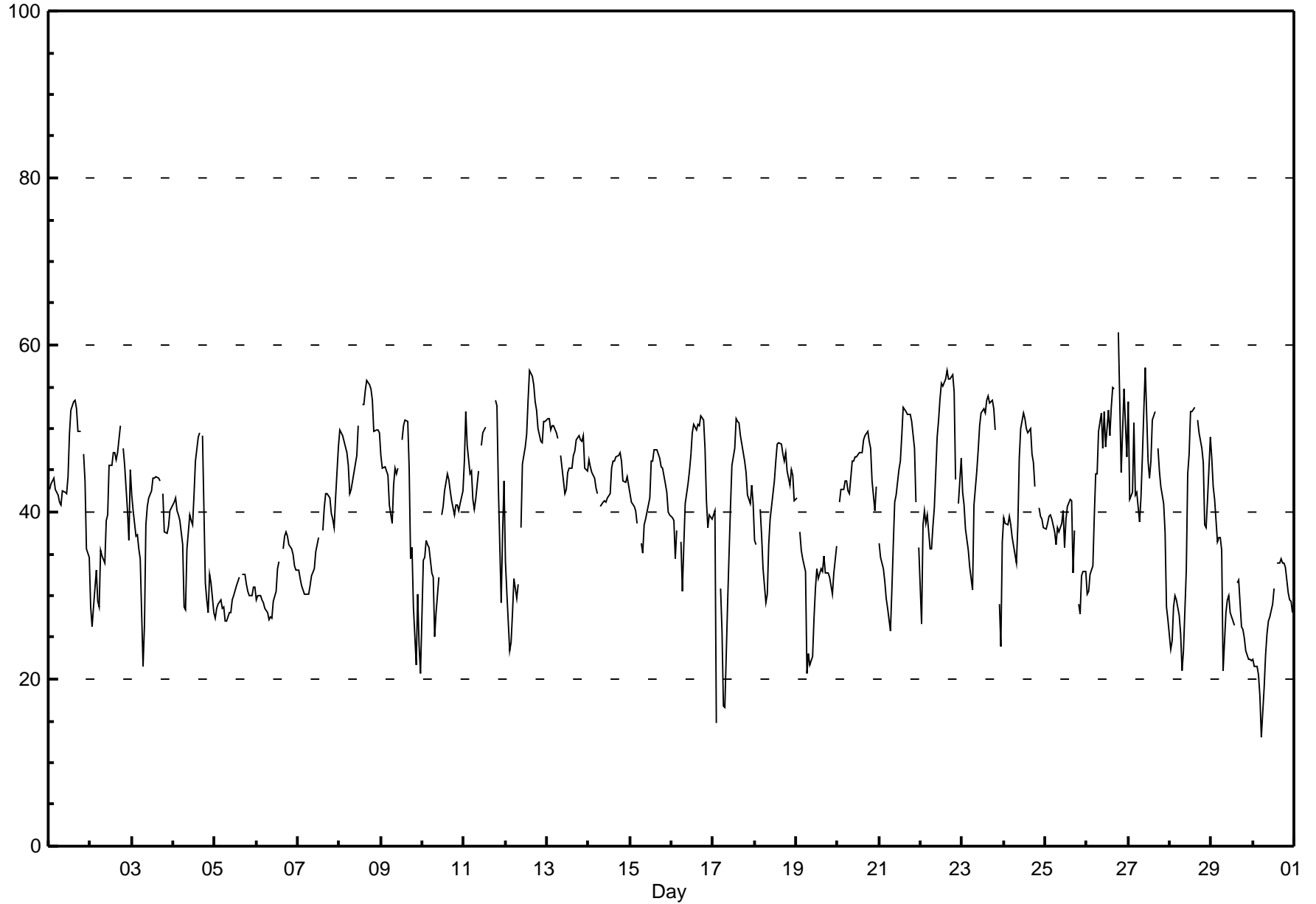
Henry Pirker - April 2013

Maximum Value: 61.6 ppb on Apr 26 19:00		Maximum Daily Average: 49.6 ppb on Apr 8		Hours in Service: 720																							
Minimum Value: 13 ppb on Apr 30 06:00		Minimum Daily Average: 26.9 ppb on Apr 30		Hours of Data: 684																							
Maximum Diurnal Average: 47.4 ppb at hour 15		Minimum Diurnal Average: 32.6 ppb at hour 7		Hours of Missing Data: 36																							
Monthly Average: 40.10 ppb		Percentiles: P <sub>1</sub> = 20.7 P <sub>10</sub> = 28.5 Q <sub>1</sub> = 33.2 Median = 41.1 Q <sub>3</sub> = 46.8 P <sub>90</sub> = 51.0 P <sub>99</sub> = 55.8		Hours of Calibration: 36																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	43	43	44	44	43	42	41	41	42	42	42	44	49	52	53	53	52	50	50	A	47	44	36	35	44.9	53.4	
2-Apr	29	26	29	33	29	29	35	35	34	39	40	46	46	47	47	46	47	50	A	48	46	40	37	45	39.2	50.3	
3-Apr	42	40	37	37	36	34	22	26	39	41	42	43	44	44	44	44	44	A	42	38	38	38	40	41	38.9	44.3	
4-Apr	41	42	40	40	39	36	29	28	36	40	39	38	42	46	49	49	A	49	31	30	28	33	32	28	37.6	49.4	
5-Apr	27	29	29	29	29	29	27	27	28	28	30	30	31	32	32	A	33	33	31	31	30	30	31	31	29.8	32.6	
6-Apr	30	30	30	30	29	29	28	27	28	27	29	31	33	34	A	36	37	38	37	36	36	35	34	33	31.9	37.6	
7-Apr	33	32	31	31	30	30	30	31	32	33	35	36	37	A	38	41	42	42	42	40	39	38	42	48	36.2	47.8	
8-Apr	50	50	49	48	47	46	42	43	45	46	47	50	A	53	53	55	56	55	55	53	50	50	50	50	49.6	55.7	
9-Apr	47	45	45	45	44	41	39	43	45	44	45	A	49	50	51	51	45	34	36	29	22	30	24	21	40.3	51.0	
10-Apr	34	35	37	36	36	33	32	25	28	32	A	40	41	43	45	44	43	41	40	41	41	40	41	43	37.7	44.6	
11-Apr	46	52	48	45	45	42	40	41	45	A	48	50	50	C	C	C	C	C	53	53	43	29	37	44	45.1	53.4	
12-Apr	34	30	23	24	28	32	30	31	A	38	46	48	49	53	57	56	55	53	52	50	49	48	51	51	43.1	57.0	
13-Apr	51	51	50	50	50	49	49	A	47	44	42	43	45	45	45	47	47	49	49	49	49	49	45	45	47.4	51.3	
14-Apr	46	45	45	44	43	42	A	41	41	41	41	42	42	45	46	46	47	47	47	46	44	44	44	43	44.0	47.2	
15-Apr	42	41	41	40	39	A	36	35	39	39	40	42	46	46	48	47	47	46	45	45	43	42	40	40	42.2	47.5	
16-Apr	39	39	34	38	A	36	30	36	41	43	45	47	49	51	50	51	50	52	51	48	41	38	40	39	43.0	51.6	
17-Apr	40	40	15	A	31	26	17	17	29	35	41	46	48	51	51	51	49	47	46	45	42	41	43	41	38.7	51.2	
18-Apr	37	36	A	40	37	33	29	30	36	39	41	44	46	48	48	48	47	46	47	45	43	45	44	41	41.4	48.3	
19-Apr	42	A	38	35	34	33	21	23	22	23	27	31	33	32	33	33	35	33	33	32	31	30	33	36	31.4	41.7	
20-Apr	A	41	43	43	44	44	42	42	46	46	47	47	47	47	47	49	49	50	49	48	44	40	43	A	45.3	49.6	
21-Apr	36	35	33	32	30	28	26	31	36	41	42	45	46	49	53	52	52	52	52	51	48	41	A	36	41.1	52.6	
22-Apr	27	38	40	39	40	36	36	38	41	49	51	53	55	55	56	57	56	56	56	54	44	A	41	46	46.3	57.0	
23-Apr	42	41	38	35	33	32	31	41	45	47	50	52	52	52	53	54	53	53	52	50	A	29	24	36	43.4	53.8	
24-Apr	39	39	38	39	38	37	35	34	38	46	50	52	51	50	49	50	47	46	43	A	41	40	39	38	42.6	51.9	
25-Apr	38	39	40	40	39	38	36	38	38	39	40	36	39	41	42	41	33	38	A	29	28	32	33	33	36.8	41.6	
26-Apr	30	30	32	33	40	45	45	50	52	48	52	48	52	49	53	55	55	A	62	53	45	55	50	47	46.9	61.6	
27-Apr	53	42	42	51	42	42	39	42	47	52	57	46	44	46	51	52	A	48	45	43	41	38	29	27	44.3	57.3	
28-Apr	24	25	29	30	29	28	25	21	23	33	45	47	52	52	53	A	51	50	48	46	39	38	42	49	38.1	52.5	
29-Apr	46	43	41	36	37	37	35	21	28	29	30	28	27	26	A	32	32	26	26	25	23	22	22	22	30.3	46.5	
30-Apr	22	21	21	20	18	13	19	23	25	27	27	29	31	A	34	34	34	34	34	34	30	29	29	28	26.9	34.4	
		38.3	38.0	36.6	37.5	36.5	35.2	32.6	33.2	37.1	39.1	41.8	42.4	44.1	45.9	47.4	47.1	45.8	45.1	44.8	42.5	39.4	38.3	37.8	38.4	Diurnal Average	
		53.2	52.1	49.8	50.6	50.3	49.4	48.8	49.7	51.8	52.2	57.3	53.5	55.5	55.1	57.0	57.0	55.9	55.9	61.6	54.4	49.7	54.8	50.8	50.8	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



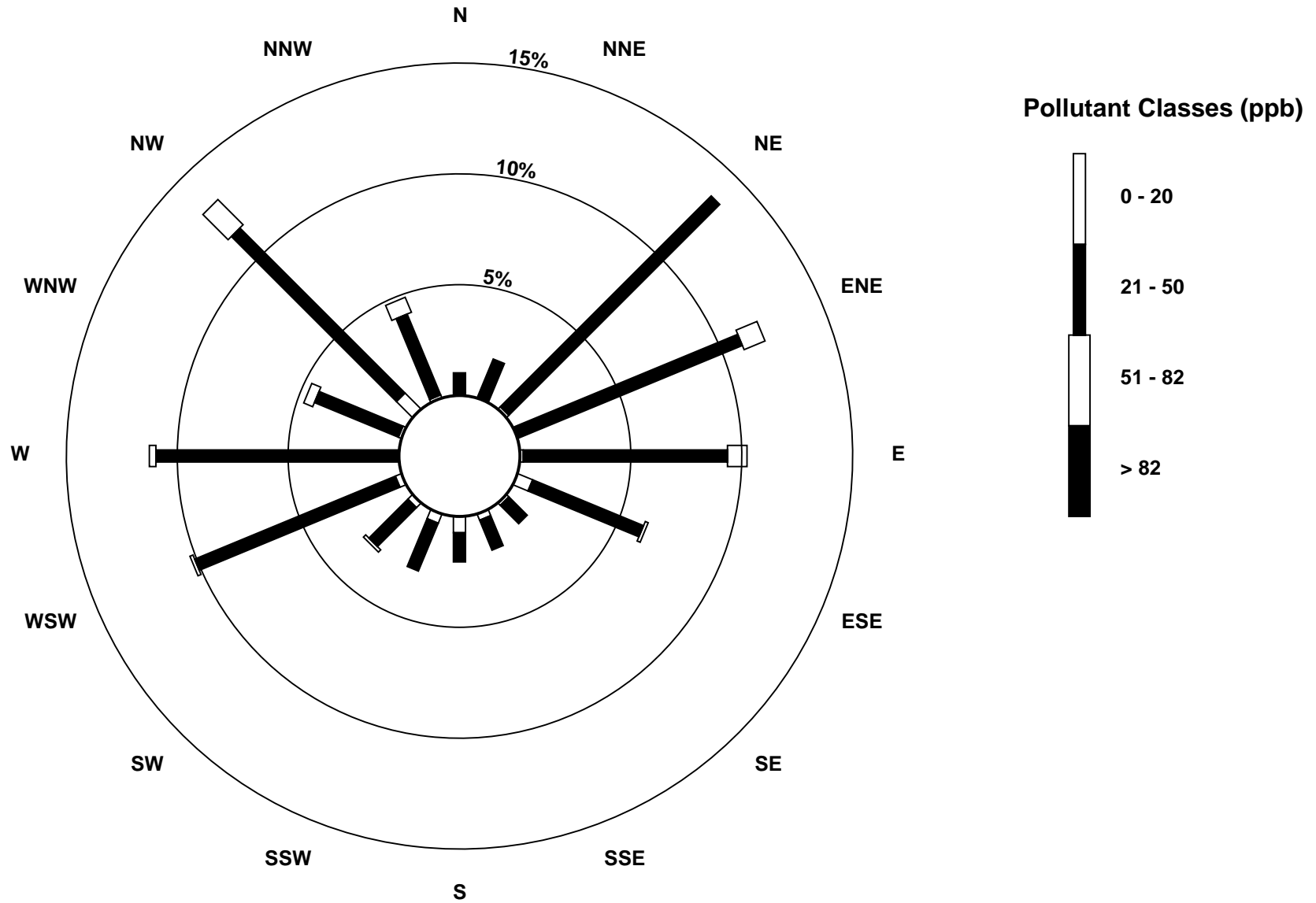
# Hourly Maximums

Ozone (O<sub>3</sub>) - ppb  
Henry Pirker - April 2013



**Pollutant Rose**

Ozone (O<sub>3</sub>) - ppb  
Henry Pirker - April 2013



# Eight Hour Running Averages

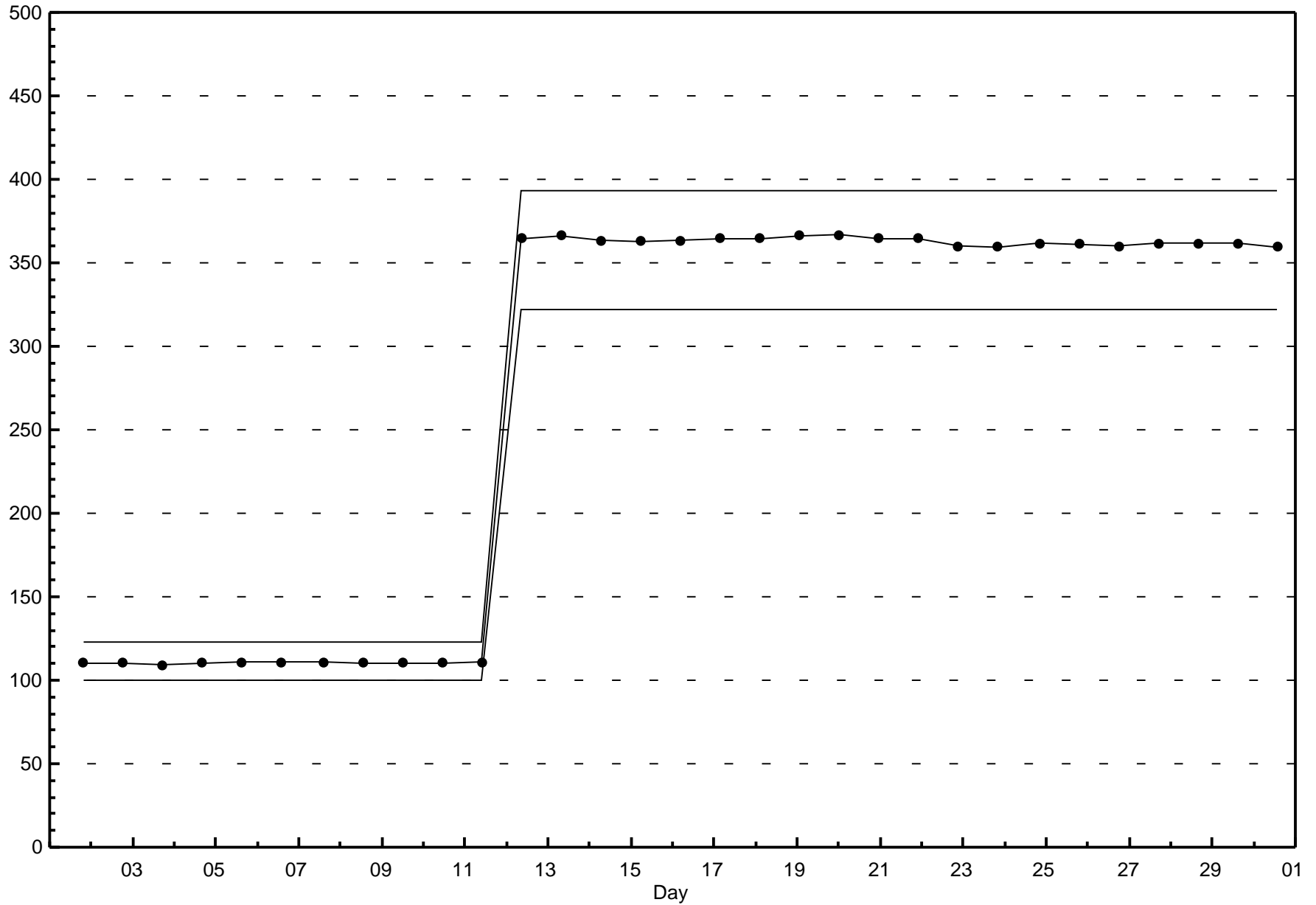
Ozone (O<sub>3</sub>) - ppb

Henry Pirker - April 2013

Maximum Value: 54.3 ppb on Apr 22 19:00																					Hours in Service:	720				
Minimum Value: 17.6 ppb on Apr 17 09:00																					Hours of Data:	711				
Percentiles: P <sub>1</sub> = 19.1 P <sub>10</sub> = 26.6 Q <sub>1</sub> = 30.9 Median = 38.3 Q <sub>3</sub> = 43.6 P <sub>90</sub> = 46.7 P <sub>99</sub> = 52.1																					Hours of Missing Data:	9				
																					Hours of Calibration:	9				
																					Percent Operational Time:	100.0				
Day	Hourly Period Ending At (MST)																								Daily Maximum	
1-Apr	42	41	40	40	40	41	41	41	40	40	40	40	41	42	44	46	47	48	48	49	49	47	43	40	49.2	
2-Apr	36	32	29	29	25	24	24	24	25	26	29	30	34	36	39	40	42	44	45	45	44	43	40	40	44.8	
3-Apr	40	37	36	35	34	34	31	29	28	29	30	31	32	34	38	40	42	42	42	41	40	39	38	38	42.1	
4-Apr	37	38	38	38	38	38	36	34	32	32	32	32	32	33	36	40	41	41	40	39	37	36	33	30	41.5	
5-Apr	30	28	28	28	28	28	27	27	27	26	26	27	27	27	28	29	30	30	31	31	30	30	30	30	30.7	
6-Apr	29	29	29	29	29	29	28	28	27	27	27	27	27	28	28	30	31	32	34	35	35	35	35	34	35.1	
7-Apr	34	33	33	32	31	31	30	30	30	30	31	31	32	32	33	35	36	37	38	39	39	38	39	39	39.3	
8-Apr	40	41	42	43	44	45	46	45	44	44	44	44	44	45	46	48	50	51	52	53	52	51	50	50	52.6	
9-Apr	49	48	47	46	45	44	42	42	41	41	41	41	41	41	43	45	45	44	42	39	37	33	29	24	21	49.2
10-Apr	19	20	20	22	25	26	28	29	29	29	28	28	29	31	33	36	38	40	39	40	39	39	39	39	39.6	
11-Apr	39	41	42	42	43	43	43	43	43	42	42	43	44	44	N	N	N	N	N	N	N	N	N	36	44.2	
12-Apr	34	32	27	22	21	22	22	21	21	23	28	33	36	39	43	47	48	50	51	51	51	51	50	49	51.2	
13-Apr	49	49	49	49	49	49	49	49	48	47	46	45	44	44	43	44	44	44	45	45	46	46	45	45	49.4	
14-Apr	45	45	45	44	44	43	43	43	42	41	41	40	40	40	41	41	42	43	44	44	44	44	44	44	45.3	
15-Apr	43	42	42	41	41	40	39	38	37	37	37	37	37	38	40	41	43	44	44	45	44	44	43	42	44.6	
16-Apr	41	40	38	37	37	35	33	32	32	33	34	36	37	39	42	45	46	47	48	48	47	45	44	42	48.0	
17-Apr	41	38	33	31	30	27	24	19	18	18	22	24	27	31	35	41	44	45	46	46	46	45	44	42	46.4	
18-Apr	41	39	39	38	37	36	33	31	31	32	32	33	34	36	39	42	43	44	45	46	45	45	44	43	45.6	
19-Apr	43	42	41	40	38	35	32	29	26	25	23	23	23	24	26	27	29	30	31	31	31	30	30	30	42.6	
20-Apr	30	31	33	35	37	39	41	42	42	42	43	44	44	44	45	46	46	47	47	47	46	45	44	44	47.0	
21-Apr	42	40	38	35	34	32	29	29	29	29	31	32	34	37	40	43	46	47	49	49	49	48	47	44	49.5	
22-Apr	40	37	35	33	32	32	32	32	35	36	37	39	41	44	47	50	52	54	54	54	52	52	49	47	54.3	
23-Apr	45	43	40	38	37	36	34	33	33	35	36	38	41	44	47	49	51	51	52	51	51	46	41	37	51.6	
24-Apr	35	33	31	30	30	33	35	35	34	35	36	38	39	41	43	45	47	47	46	46	44	43	42	40	46.8	
25-Apr	39	38	38	38	38	37	37	37	37	37	36	36	36	36	36	36	35	34	34	33	31	29	28	27	38.9	
26-Apr	27	26	27	28	29	30	32	34	36	38	40	43	44	45	46	46	46	46	47	46	46	45	46	45	46.5	
27-Apr	45	44	43	43	42	41	39	38	38	39	40	40	41	42	44	45	46	45	45	44	43	42	39	34	45.6	
28-Apr	32	28	26	25	24	23	22	22	23	24	26	28	31	34	38	40	45	48	49	48	46	41	38	39	48.8	
29-Apr	38	38	36	36	36	38	38	35	32	31	30	29	28	27	26	27	27	27	26	26	25	25	24	24	38.3	
30-Apr	23	22	22	21	20	19	18	18	18	18	19	20	22	24	26	28	30	31	32	32	32	32	31	30	32.2	
49.2 48.8 48.6 48.8 49.0 49.4 49.2 49.1 48.4 47.3 46.3 45.2 44.3 45.4 47.1 49.7 52.1 53.6 54.3 54.0 52.1 51.8 51.1 50.4																										
Diurnal Maximums																										
N - Not Valid																										

## Span Responses

Ozone (O<sub>3</sub>)  
Henry Pirker - April 2013

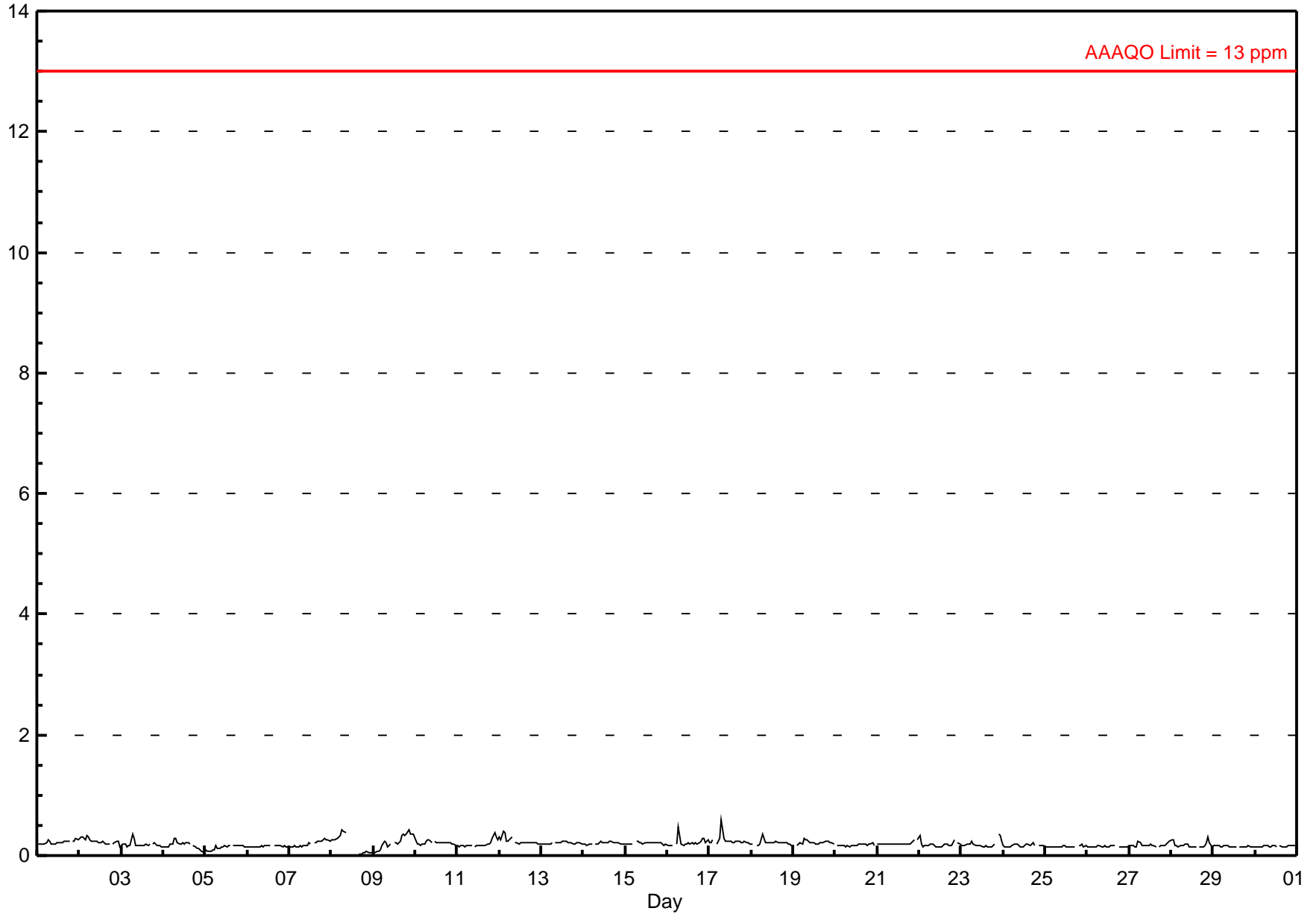


## Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.60 ppm on Apr 17 08:00      Maximum Daily Average: 0.25 ppm on Apr 17		Hours in Service: 720 Hours of Data: 683 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0																									
Minimum Value: 0.0 ppm on Apr 8 17:00 Maximum Diurnal Average: 0.24 ppm at hour 7 Monthly Average: 0.191 ppm		Minimum Daily Average: 0.13 ppm on Apr 5 Minimum Diurnal Average: 0.17 ppm at hour 4 Percentiles: P <sub>1</sub> = 0.05 P <sub>10</sub> = 0.15 Q <sub>1</sub> = 0.16 Median = 0.18 Q <sub>3</sub> = 0.21 P <sub>90</sub> = 0.25 P <sub>99</sub> = 0.37																									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.3	0.22	0.29	
2-Apr	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.24	0.34	
3-Apr	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.1	0.19	0.35	
4-Apr	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.17	0.30	
5-Apr	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.13	0.17	
6-Apr	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.16	0.18
7-Apr	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.20	0.28	
8-Apr	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	C	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	--	0.42	
9-Apr	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.23	0.44	
10-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.27	
11-Apr	0.2	0.2	0.2	0.2	0.2	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	0.2	0.2	0.3	0.4	0.3	0.3	0.19	0.38
12-Apr	0.3	0.3	0.4	0.4	0.2	0.2	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24	0.40	
13-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.23	
14-Apr	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.23	
15-Apr	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.25	
16-Apr	0.2	0.2	0.2	0.2	A	0.2	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.22	0.47
17-Apr	0.2	0.2	0.3	A	0.2	0.2	0.3	0.6	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	0.25	0.60	
18-Apr	0.2	0.2	A	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.35	
19-Apr	0.2	A	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	0.2	0.2	0.2	0.2	0.2	0.21	0.28	
20-Apr	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.17	0.21	
21-Apr	0.2	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	0.3	A	0.3	0.20	0.26	
22-Apr	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.2	0.2	0.18	0.33	
23-Apr	0.2	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	A	0.3	0.3	0.2	0.19	0.35	
24-Apr	0.2	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	A	0.2	0.2	0.2	0.2	0.17	0.20	
25-Apr	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	A	0.2	0.2	0.2	0.2	0.2	0.16	0.18	
26-Apr	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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.15	0.16	
27-Apr	0.2	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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.23	
28-Apr	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.3	0.2	0.2	0.18	0.32
29-Apr	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	A	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.15	0.16
30-Apr	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.18	
0.18 0.18 0.18 0.17 0.18 0.19 0.24 0.23 0.19 0.18 0.18 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.21 0.21 0.19 0.19																								Diurnal Average			
0.33 0.30 0.40 0.37 0.34 0.33 0.47 0.60 0.37 0.25 0.24 0.24 0.24 0.23 0.23 0.25 0.32 0.36 0.34 0.36 0.44 0.38 0.35 0.35																								Diurnal Maximum			
C - Calibration      A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na																											

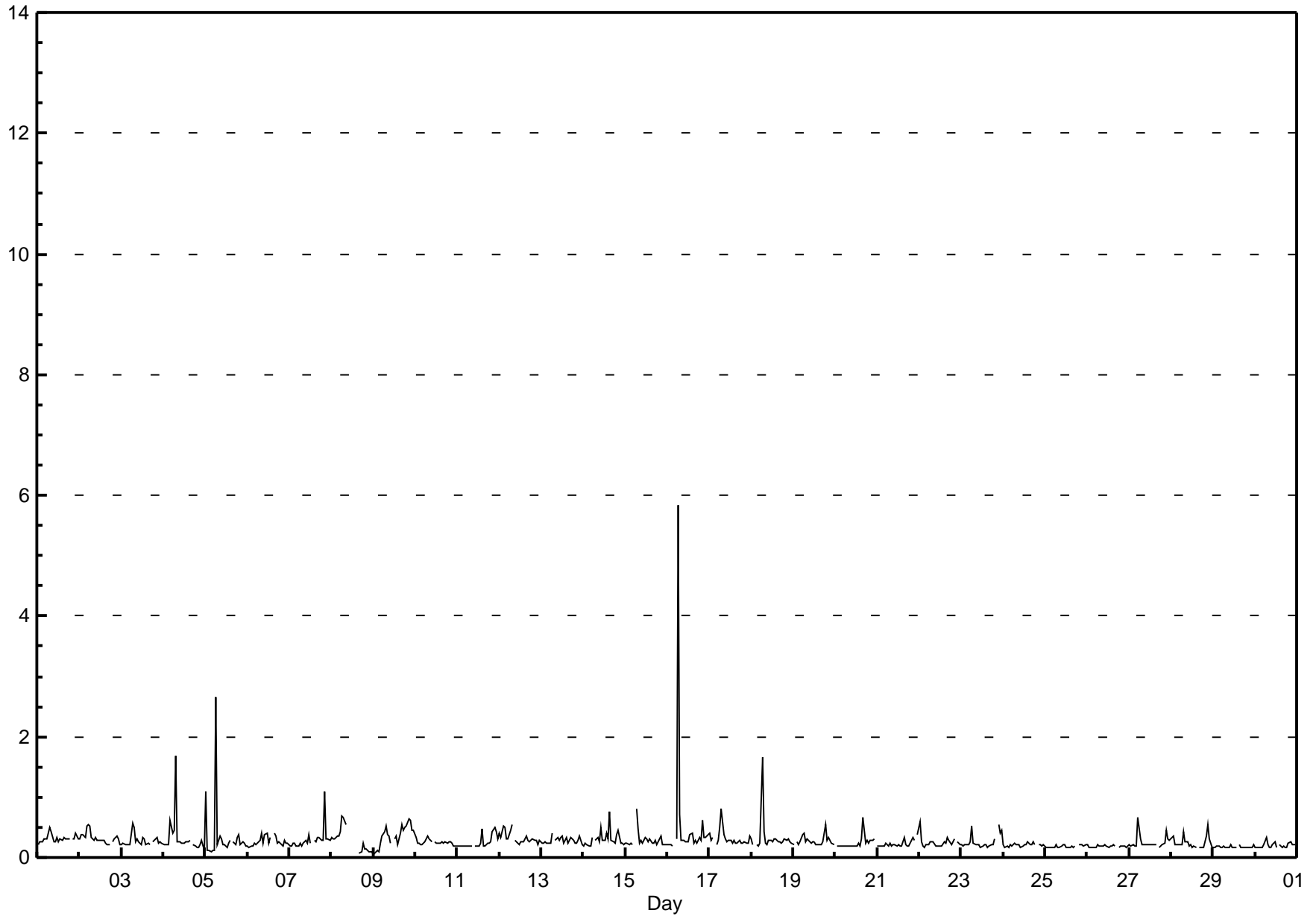


## Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - April 2013

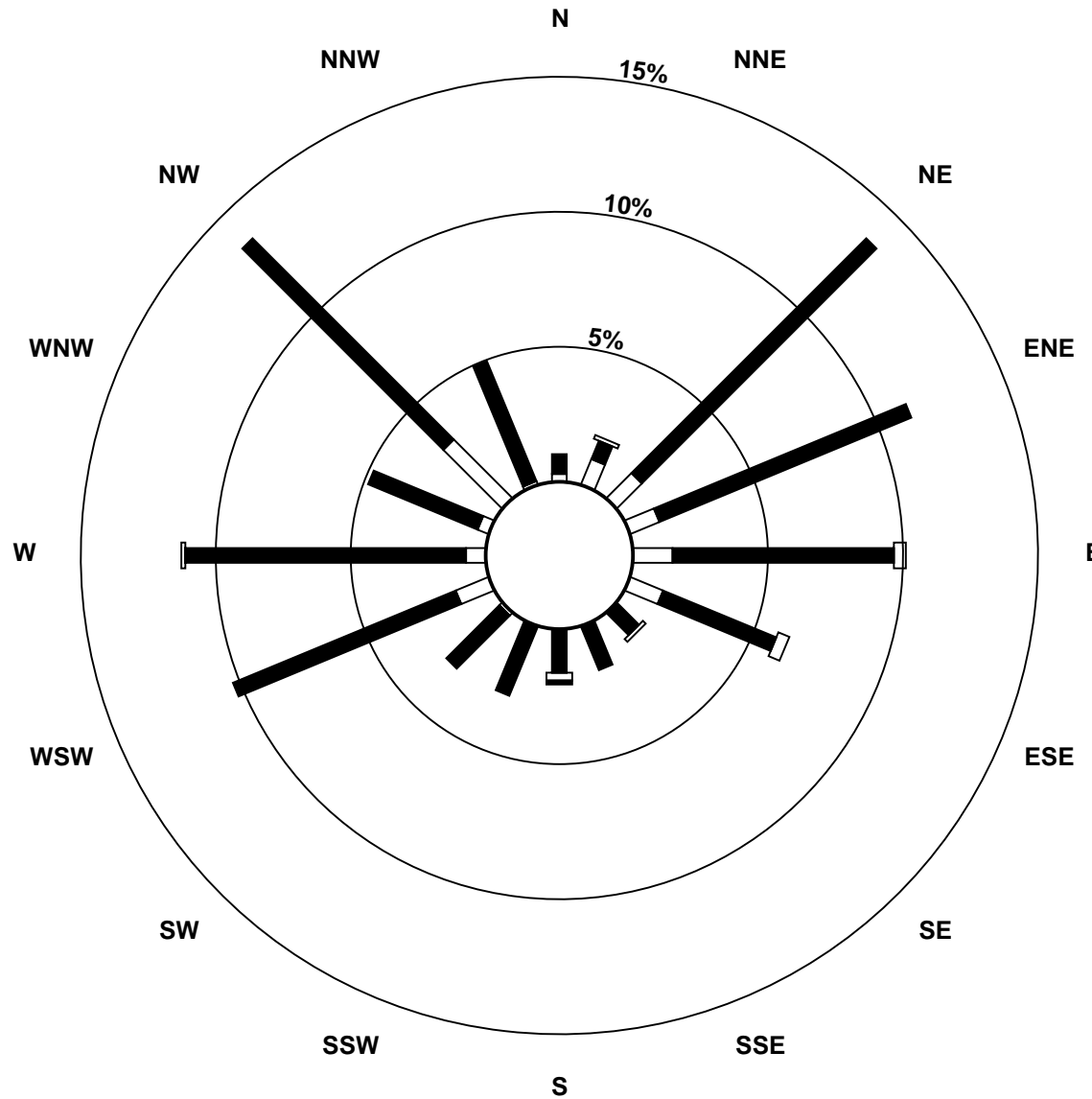
Maximum Value: 5.84 ppm on Apr 16 07:00		Maximum Daily Average: 0.56 ppm on Apr 16		Hours in Service: 720																							
Minimum Value: 0.1 ppm on Apr 9 01:00		Minimum Daily Average: 0.18 ppm on Apr 29		Hours of Data: 683																							
Maximum Diurnal Average: 0.68 ppm at hour 7		Minimum Diurnal Average: 0.21 ppm at hour 4		Hours of Missing Data: 37																							
Monthly Average: 0.280 ppm		Percentiles: P <sub>1</sub> = 0.10 P <sub>10</sub> = 0.17 Q <sub>1</sub> = 0.20 Median = 0.24 Q <sub>3</sub> = 0.30 P <sub>90</sub> = 0.40 P <sub>99</sub> = 0.70		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-Apr	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.4	0.3	0.31	0.49	
2-Apr	0.3	0.4	0.4	0.3	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	A	0.3	0.3	0.4	0.3	0.2	0.32	0.55		
3-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.5	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	A	0.3	0.3	0.3	0.2	0.3	0.2	0.27	0.56		
4-Apr	0.2	0.2	0.2	0.2	0.6	0.4	0.5	1.7	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.32	1.68	
5-Apr	1.1	0.1	0.1	0.1	0.1	0.1	2.6	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.3	A	0.3	0.2	0.3	0.4	0.2	0.2	0.2	0.36	2.65		
6-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.2	0.4	0.4	0.2	0.3	A	0.4	0.4	0.2	0.3	0.2	0.2	0.3	0.2	0.27	0.41		
7-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.2	A	0.3	0.3	0.3	0.3	0.3	1.1	0.3	0.3	0.3	0.29	1.10	
8-Apr	0.3	0.3	0.3	0.4	0.4	0.4	0.7	0.7	0.5	C	C	C	C	C	C	C	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	--	0.69	
9-Apr	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.4	0.4	0.2	A	0.3	0.3	0.2	0.4	0.5	0.4	0.5	0.5	0.6	0.6	0.4	0.4	0.36	0.63	
10-Apr	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	A	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.25	0.35		
11-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.4	0.5	0.4	0.3	0.25	0.50	
12-Apr	0.4	0.3	0.5	0.5	0.3	0.3	0.4	0.6	A	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.32	0.55	
13-Apr	0.2	0.2	0.3	0.2	0.2	0.2	0.4	A	0.3	0.3	0.3	0.3	0.4	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.28	0.39	
14-Apr	0.2	0.2	0.2	0.2	0.2	0.3	A	0.3	0.3	0.3	0.5	0.3	0.3	0.4	0.3	0.8	0.3	0.3	0.2	0.4	0.4	0.2	0.2	0.31	0.76		
15-Apr	0.2	0.2	0.2	0.2	0.2	A	0.8	0.5	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.4	0.2	0.2	0.2	0.29	0.80		
16-Apr	0.2	0.2	0.2	0.2	A	0.3	5.8	0.7	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.3	0.2	0.3	0.3	0.6	0.3	0.3	0.4	0.56	5.84	
17-Apr	0.4	0.3	0.3	A	0.2	0.3	0.5	0.8	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.4	0.31	0.80		
18-Apr	0.3	0.2	A	0.2	0.2	0.2	1.7	0.4	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.33	1.67		
19-Apr	0.2	A	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.3	0.3	0.2	0.2	0.28	0.55		
20-Apr	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.7	0.2	0.3	0.2	0.3	0.3	A	0.24	0.67		
21-Apr	0.2	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	0.2	0.2	0.2	0.2	0.3	0.3	A	0.4	0.23	0.38	
22-Apr	0.6	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.3	A	0.3	0.2	0.25	0.58	
23-Apr	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.6	0.4	0.26	0.55	
24-Apr	0.2	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	0.2	0.2	0.3	0.2	A	0.2	0.2	0.2	0.2	0.21	0.27	
25-Apr	0.2	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	A	0.2	0.2	0.2	0.2	0.2	0.18	0.21	
26-Apr	0.2	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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.21	
27-Apr	0.2	0.2	0.2	0.2	0.2	0.7	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.24	0.66	
28-Apr	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.4	0.6	0.3	0.2	0.25	0.56
29-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.21	
30-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.20	0.34	
		0.27	0.22	0.22	0.21	0.24	0.27	0.68	0.39	0.27	0.25	0.24	0.25	0.24	0.25	0.26	0.27	0.26	0.24	0.26	0.26	0.33	0.30	0.27	0.25	Diurnal Average	
		1.08	0.37	0.51	0.50	0.62	0.66	5.84	1.68	0.53	0.35	0.49	0.41	0.36	0.40	0.47	0.76	0.67	0.45	0.55	0.53	1.10	0.62	0.45	0.45	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



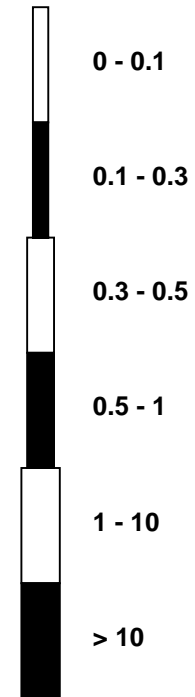


**Pollutant Rose**

**Carbon Monoxide (CO) - ppm**  
**Henry Pirker - April 2013**



**Pollutant Classes (ppm)**



## Eight Hour Running Averages

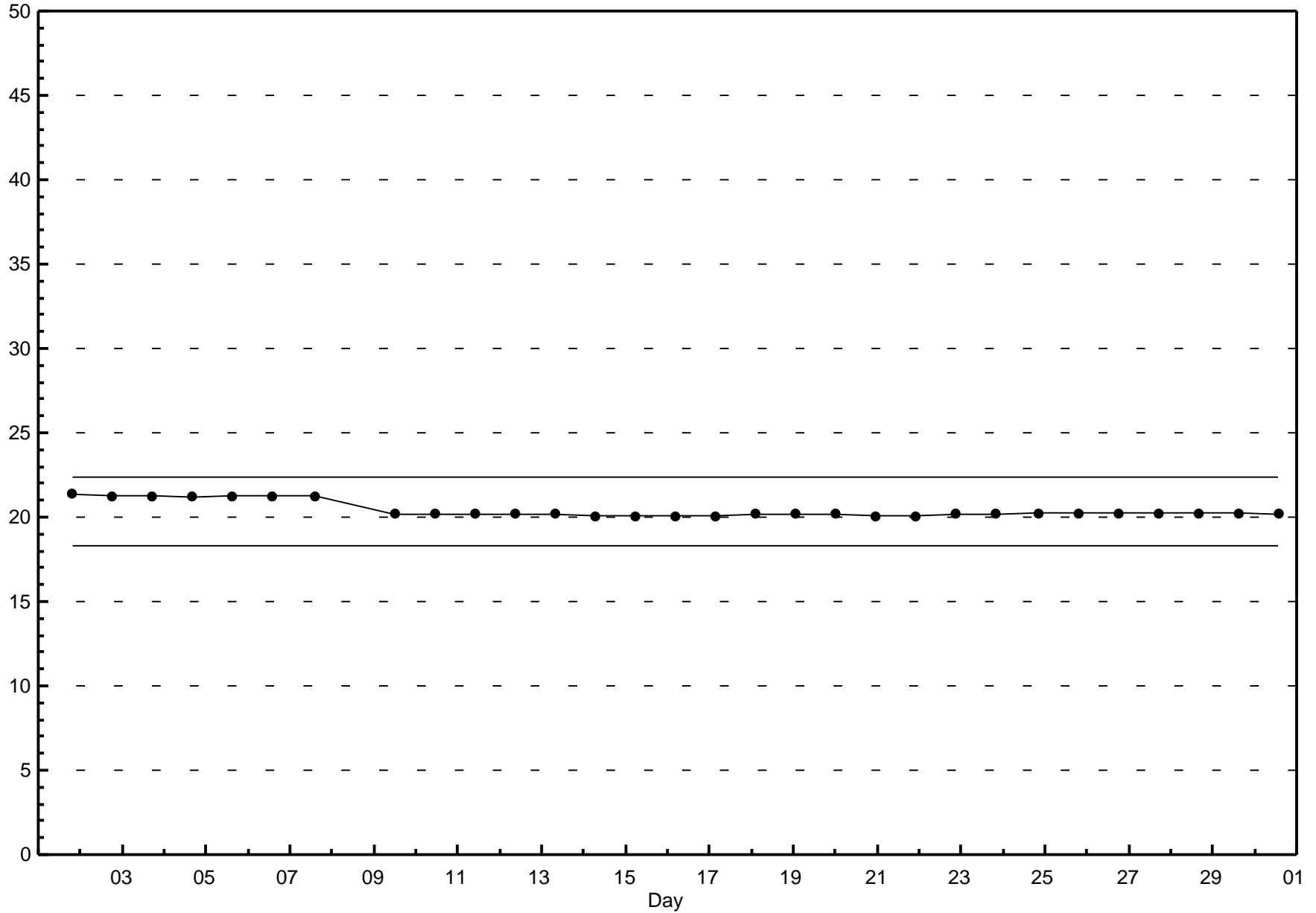
Carbon Monoxide (CO) - ppm

Henry Pirker - April 2013

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.36 ppm on Apr 10 00:00		Hours in Service: 720 Hours of Data: 710 Hours of Missing Data: 10 Hours of Calibration: 10 Percent Operational Time: 100.0																							
Minimum Value: 0.04 ppm on Apr 8 22:00																									
Percentiles: P <sub>1</sub> = 0.05 P <sub>10</sub> = 0.15 Q <sub>1</sub> = 0.16 Median = 0.19 Q <sub>3</sub> = 0.21 P <sub>90</sub> = 0.24 P <sub>99</sub> = 0.33																									
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-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
2-Apr	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.30
3-Apr	0.2	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	0.21
4-Apr	0.2	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	0.1	0.1	0.1	0.23
5-Apr	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17
6-Apr	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	0.2	0.2	0.2	0.2	0.17
7-Apr	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	0.25
8-Apr	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	N	N	N	N	N	N	N	N	N	N	0.0	0.0	0.0	0.35
9-Apr	0.0	0.0	0.0	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	0.3	0.3	0.3	0.3	0.3	0.4	0.36
10-Apr	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.35
11-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
12-Apr	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.32
13-Apr	0.2	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
14-Apr	0.2	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
15-Apr	0.2	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
16-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
17-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.30
18-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
19-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
20-Apr	0.2	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
21-Apr	0.2	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	0.21
22-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
23-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
24-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
25-Apr	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16
26-Apr	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16
27-Apr	0.2	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	0.18
28-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.21
29-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.19
30-Apr	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16
0.35 0.33 0.31 0.32 0.31 0.30 0.29 0.32 0.33 0.34 0.35 0.29 0.30 0.29 0.29 0.24 0.23 0.25 0.27 0.28 0.31 0.33 0.35 0.36																								Diurnal Maximums	
N - Not Valid Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

### Span Responses

**Carbon Monoxide (CO)**  
**Henry Pirker - April 2013**

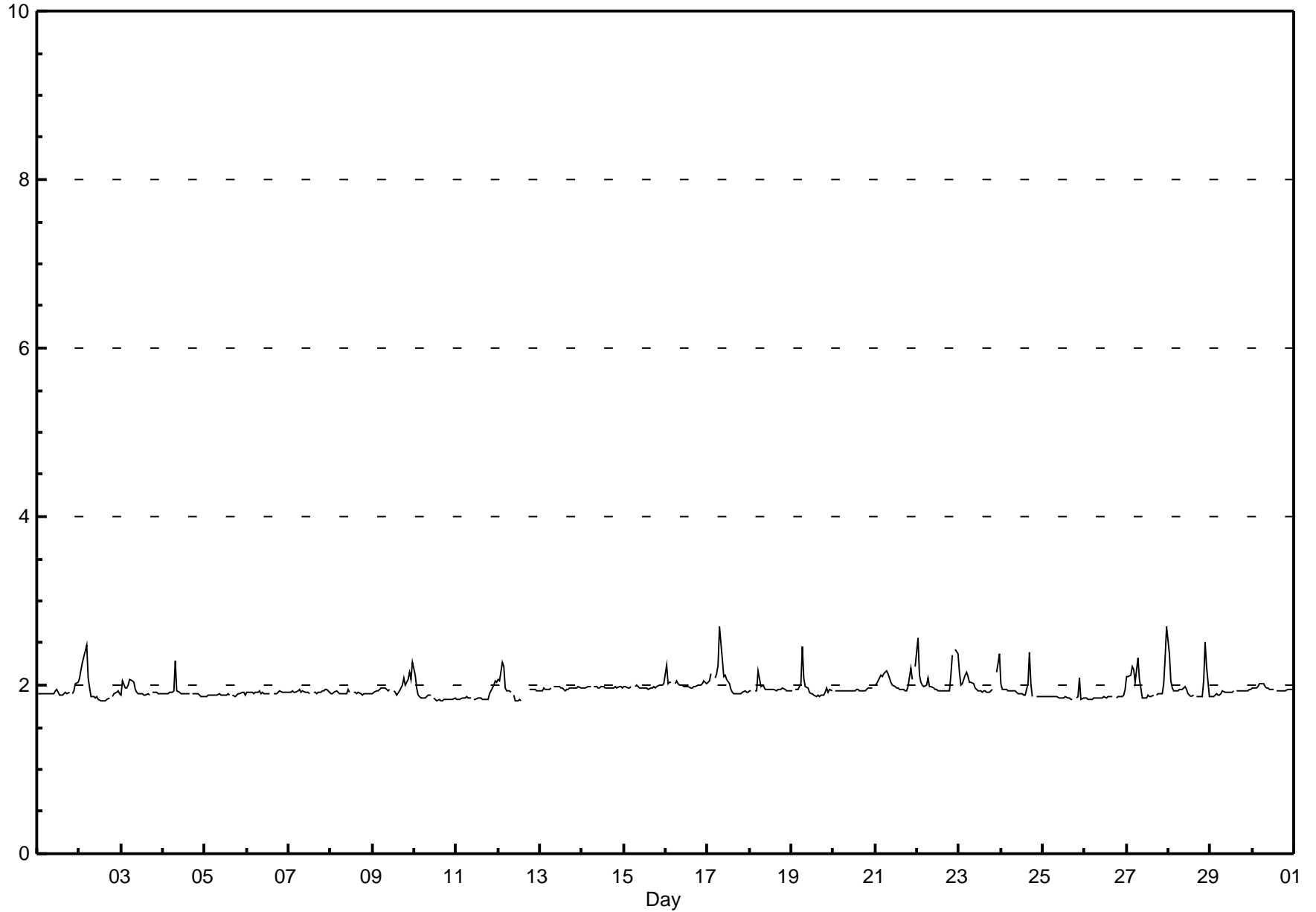


## Hourly Averages

### Total Hydrocarbons (THC) - ppm

#### Henry Pirker - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 720																								
Maximum Value: 2.70 ppm on Apr 28 00:00		Maximum Daily Average: 2.06 ppm on Apr 22																								
Minimum Value: 1.8 ppm on Apr 12 11:00		Hours of Data: 685																								
Maximum Diurnal Average: 2.01 ppm at hour 24		Hours of Missing Data: 35																								
Monthly Average: 1.951 ppm		Hours of Calibration: 35																								
Minimum Daily Average: 1.86 ppm on Apr 26		Percent Operational Time: 100.0																								
Minimum Diurnal Average: 1.90 ppm at hour 15																										
Percentiles: P <sub>1</sub> = 1.82 P <sub>10</sub> = 1.85 Q <sub>1</sub> = 1.89 Median = 1.93 Q <sub>3</sub> = 1.97 P <sub>90</sub> = 2.06 P <sub>99</sub> = 2.41																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	1.92	2.03
2-Apr	2.1	2.2	2.3	2.4	2.5	2.1	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.96	2.47
3-Apr	1.9	2.1	2.0	2.0	2.0	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.07
4-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	2.30
5-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.91
6-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.93
7-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.92	1.96
8-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.95
9-Apr	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.3	1.98	2.27	
10-Apr	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.86	2.13
11-Apr	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	1.87	2.04
12-Apr	2.1	2.0	2.3	2.2	2.0	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.28
13-Apr	1.9	1.9	2.0	1.9	1.9	1.9	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	1.99
14-Apr	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	1.99
15-Apr	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.01
16-Apr	2.2	2.0	2.0	2.0	A	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	2.1	2.0	2.01	2.23
17-Apr	2.0	2.1	2.1	A	2.1	2.1	2.2	2.7	2.3	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.04	2.69
18-Apr	1.9	1.9	A	1.9	1.9	2.2	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.96	2.17
19-Apr	1.9	A	1.9	1.9	2.0	2.0	2.5	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.95	2.45
20-Apr	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	1.94	1.97
21-Apr	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.2	2.1	A	2.2	2.04	2.21
22-Apr	2.6	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.4	A	2.4	2.4	2.06	2.56
23-Apr	2.2	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.1	2.2	2.4	2.03	2.38
24-Apr	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.4	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.94	2.38
25-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.8	1.8	1.8	A	1.8	1.9	2.1	1.8	1.8	1.87	2.08
26-Apr	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	1.86	1.96
27-Apr	2.1	2.1	2.1	2.2	2.2	2.0	2.3	2.1	2.0	1.9	1.8	1.8	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	2.3	2.7	2.03	2.70
28-Apr	2.4	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	2.5	2.2	1.9	1.98	2.50
29-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.92	1.95
30-Apr	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.96	2.02
2.00 1.97 1.97 1.98 1.97 1.97 1.99 1.99 1.95 1.93 1.93 1.91 1.91 1.90 1.90 1.91 1.92 1.91 1.92 1.93 1.96 1.98 1.99 2.01																								Diurnal Average		
2.56 2.18 2.28 2.41 2.47 2.17 2.45 2.69 2.30 2.10 2.13 2.07 2.01 1.98 1.97 2.02 2.38 2.01 2.08 2.11 2.36 2.50 2.42 2.70																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										



## Hourly Maximums

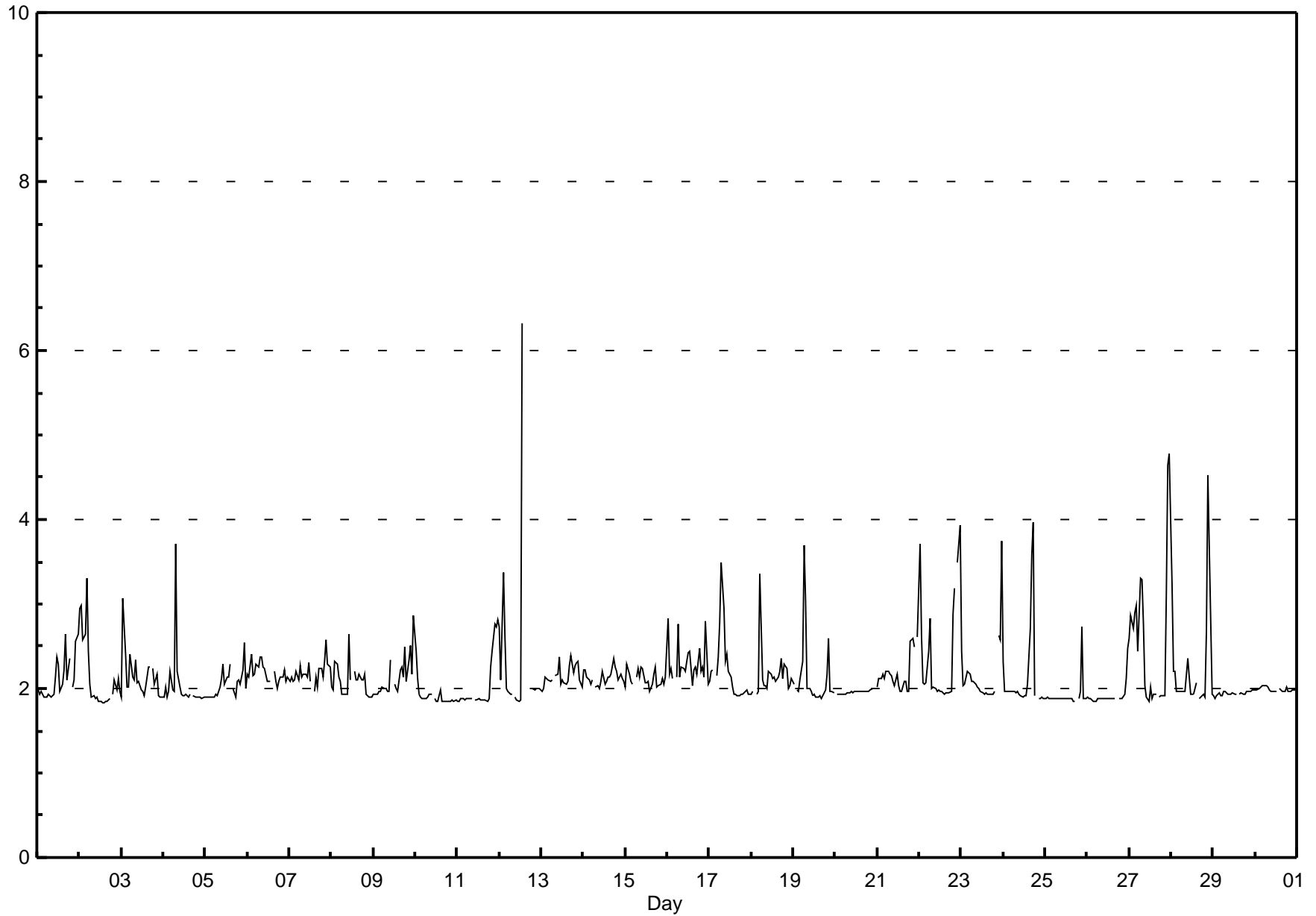
## Total Hydrocarbons (THC) - ppm

Henry Pirker - April 2013

Maximum Value: 6.33 ppm on Apr 12 14:00		Maximum Daily Average: 2.59 ppm on Apr 27		Hours in Service: 720																																													
Minimum Value: 1.8 ppm on Apr 2 15:00		Minimum Daily Average: 1.91 ppm on Apr 10		Hours of Data: 685																																													
Maximum Diurnal Average: 2.34 ppm at hour 24		Minimum Diurnal Average: 1.99 ppm at hour 15		Hours of Missing Data: 35																																													
Monthly Average: 2.132 ppm		Percentiles: P <sub>1</sub> = 1.85 P <sub>10</sub> = 1.88 Q <sub>1</sub> = 1.93 Median = 2.01 Q <sub>3</sub> = 2.17 P <sub>90</sub> = 2.44 P <sub>99</sub> = 3.69		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-Apr	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.4	2.3	2.0	2.1	2.2	2.6	2.1	2.4	A	2.0	2.1	2.6	2.6	2.12	2.64																							
2-Apr	2.9	3.0	2.6	2.6	3.3	2.4	2.1	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.9	2.1	2.0	2.1	2.0	2.15	3.30																							
3-Apr	1.9	3.1	2.4	2.0	2.0	2.4	2.1	2.1	2.3	2.1	2.1	2.0	2.0	1.9	2.0	2.3	2.3	A	2.2	2.1	2.2	1.9	1.9	1.9	2.14	3.06																							
4-Apr	1.9	2.0	1.9	2.0	2.2	2.0	2.0	3.7	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.03	3.72																							
5-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.3	2.0	2.1	2.1	2.3	A	2.0	1.9	2.1	2.1	2.0	2.2	2.5	2.0	2.05	2.55																							
6-Apr	2.2	2.1	2.4	2.2	2.2	2.3	2.3	2.4	2.4	2.3	2.2	2.1	2.1	2.1	A	2.2	2.1	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.18	2.41																							
7-Apr	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.1	2.2	2.2	2.1	2.3	2.1	A	2.0	2.1	2.0	2.2	2.2	2.1	2.3	2.6	2.3	2.3	2.18	2.58																							
8-Apr	2.0	2.0	2.3	2.3	2.1	2.1	1.9	1.9	1.9	1.9	2.6	2.1	A	2.2	2.1	2.1	2.2	2.1	2.1	2.2	1.9	1.9	1.9	1.9	2.08	2.65																							
9-Apr	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	A	2.1	2.0	2.0	2.2	2.3	2.1	2.5	2.1	2.3	2.5	2.2	2.9	2.13	2.86																							
10-Apr	2.4	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.8	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.91	2.44																							
11-Apr	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	2.3	2.4	2.8	2.7	2.8	2.03	2.82																							
12-Apr	2.7	2.1	3.4	2.6	2.0	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	6.3	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.34	6.33																							
13-Apr	2.0	2.0	2.1	2.1	2.1	2.1	2.1	A	2.1	2.2	2.4	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2.2	2.3	2.3	2.3	2.1	2.0	2.15	2.39																							
14-Apr	2.2	2.2	2.1	2.1	2.0	2.1	A	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.2	2.1	2.2	2.1	2.1	2.13	2.35																							
15-Apr	2.0	2.3	2.2	2.1	2.0	A	2.1	2.2	2.1	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.2	2.3	2.0	2.0	2.1	2.1	2.1	2.1	2.12	2.28																							
16-Apr	2.8	2.2	2.2	2.1	A	2.1	2.8	2.1	2.3	2.2	2.2	2.3	2.4	2.4	2.0	2.2	2.3	2.2	2.5	2.2	2.3	2.1	2.8	2.1	2.30	2.83																							
17-Apr	2.1	2.2	2.2	A	2.1	2.4	2.8	3.5	2.9	2.3	2.4	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.20	3.49																							
18-Apr	1.9	2.0	A	1.9	2.0	3.4	2.1	2.0	2.0	2.0	2.2	2.2	2.1	2.1	2.1	2.2	2.4	2.1	2.3	2.2	2.0	2.0	2.1	2.15	3.36																								
19-Apr	2.0	A	2.0	2.0	2.1	2.3	3.7	3.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.6	2.0	2.0	1.9	2.14	3.70																							
20-Apr	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.96	2.00																							
21-Apr	2.0	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.2	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.6	2.6	2.5	A	2.6	2.17	2.61																							
22-Apr	3.7	2.6	2.1	2.1	2.1	2.4	2.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.9	3.2	A	3.5	3.9	2.39	3.93																							
23-Apr	2.4	2.0	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.6	2.6	3.8	2.16	3.75																							
24-Apr	2.3	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.1	2.7	3.6	4.0	1.9	A	1.9	1.9	1.9	1.9	2.15	3.96																							
25-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.9	2.0	2.7	1.9	1.9	1.92	2.73																							
26-Apr	1.9	1.9	1.9	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.1	2.5	1.91	2.47																							
27-Apr	2.6	2.9	2.7	2.9	3.0	2.4	3.3	3.3	2.8	2.0	1.9	1.9	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	3.1	4.7	4.8	2.59	4.77																							
28-Apr	3.2	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.1	1.9	1.9	1.9	2.1	A	1.9	1.9	1.9	1.9	2.7	4.5	3.7	1.9	2.27	4.53																							
29-Apr	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.94	1.98																							
30-Apr	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.04																							
																								2.24	2.15	2.15	2.09	2.10	2.14	2.20	2.20	2.09	2.04	2.08	2.02	2.01	2.15	1.99	2.05	2.11	2.10	2.06	2.09	2.16	2.27	2.32	2.34	Diurnal Average	
																								3.70	3.06	3.37	2.89	3.30	3.36	3.70	3.72	2.94	2.35	2.65	2.38	2.43	6.33	2.29	2.71	3.57	3.96	2.49	2.89	3.19	4.53	4.65	4.77	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									

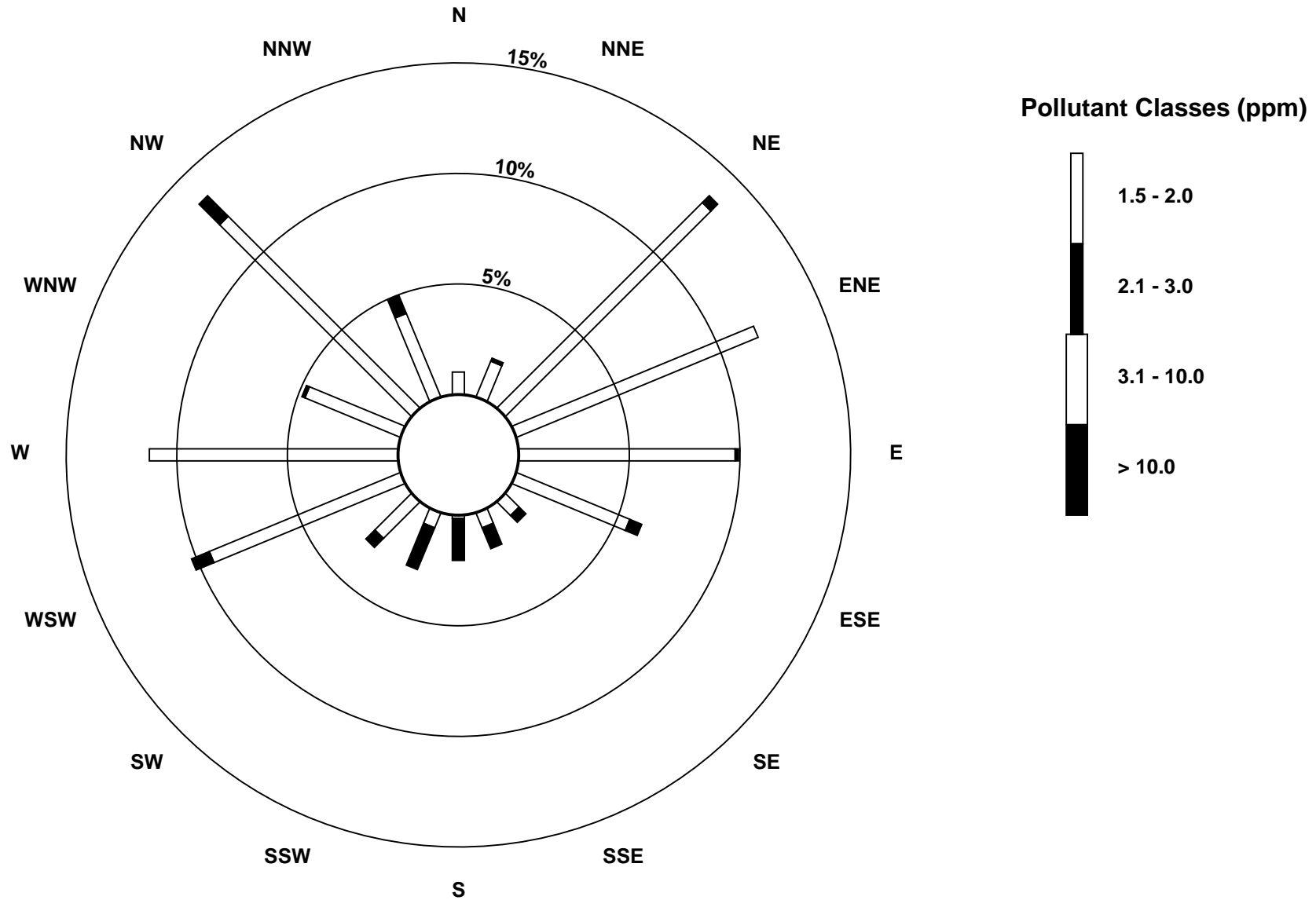
**Hourly Maximums**

**Total Hydrocarbons (THC) - ppm**  
**Henry Pirker - April 2013**



**Pollutant Rose**

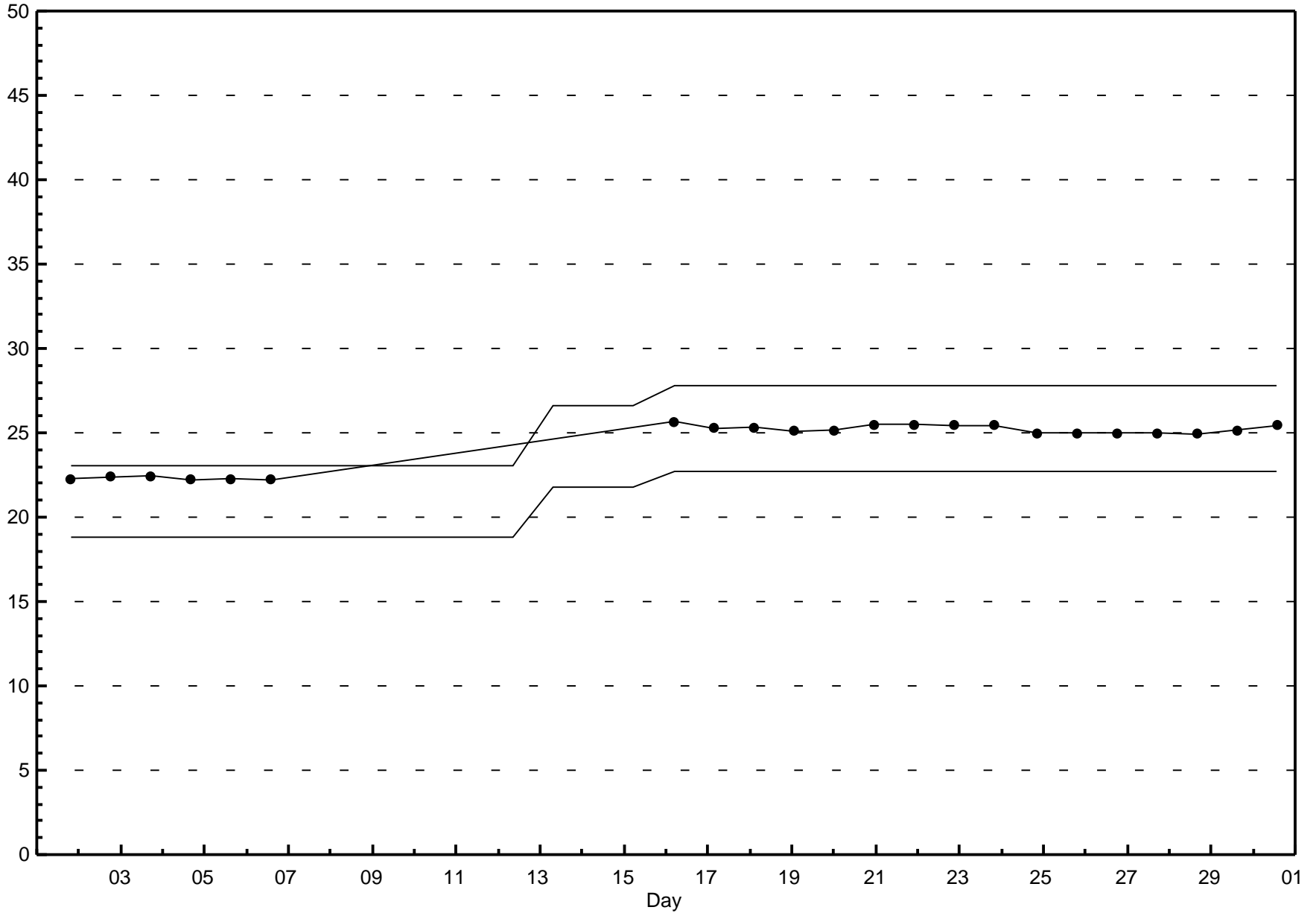
**Total Hydrocarbons (THC) - ppm**  
**Henry Pirker - April 2013**





**Span Responses**

**Total Hydrocarbons (THC)**  
**Henry Pirker - April 2013**



## Hourly Averages

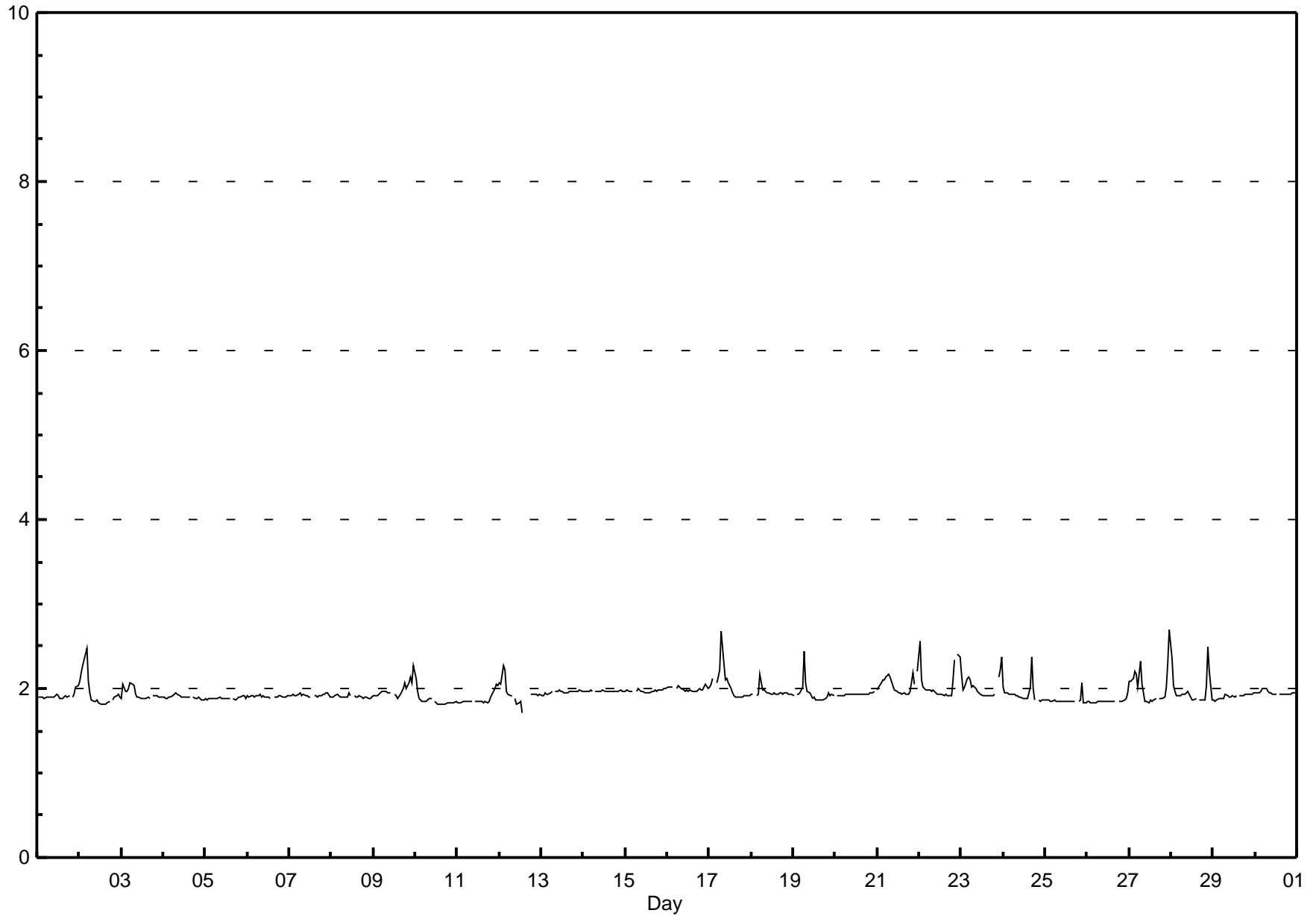
Methane (CH<sub>4</sub>) - ppm

Henry Pirker - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 720																								
Maximum Value: 2.69 ppm on Apr 28 00:00		Maximum Daily Average: 2.05 ppm on Apr 22																								
Minimum Value: 1.7 ppm on Apr 12 14:00		Hours of Data: 685																								
Maximum Diurnal Average: 2.00 ppm at hour 24		Hours of Missing Data: 35																								
Monthly Average: 1.944 ppm		Hours of Calibration: 35																								
Minimum Daily Average: 1.85 ppm on Apr 26		Percent Operational Time: 100.0																								
Minimum Diurnal Average: 1.89 ppm at hour 14																										
Percentiles: P <sub>1</sub> = 1.82 P <sub>10</sub> = 1.85 Q <sub>1</sub> = 1.89 Median = 1.92 Q <sub>3</sub> = 1.97 P <sub>90</sub> = 2.05 P <sub>99</sub> = 2.40																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	1.91	2.03
2-Apr	2.1	2.2	2.3	2.4	2.5	2.1	2.0	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.96	2.47
3-Apr	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.07
4-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.95
5-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.91
6-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.93
7-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.92	1.95
8-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.94
9-Apr	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.3	1.98	2.27
10-Apr	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.86	2.12
11-Apr	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	1.87	2.04
12-Apr	2.1	2.0	2.3	2.2	2.0	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.7	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.27
13-Apr	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	1.98
14-Apr	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	1.98
15-Apr	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.00
16-Apr	2.0	2.0	2.0	2.0	A	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	2.00	2.04
17-Apr	2.0	2.0	2.1	A	2.1	2.1	2.2	2.7	2.3	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.04	2.68
18-Apr	1.9	1.9	A	1.9	1.9	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.95	2.16
19-Apr	1.9	A	1.9	1.9	1.9	2.0	2.4	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.94	2.44
20-Apr	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	A	1.93	1.96
21-Apr	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	A	2.03	2.21
22-Apr	2.6	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.3	A	2.4	2.05	2.55
23-Apr	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.1	2.2	2.4	2.02	2.37
24-Apr	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.4	2.0	1.9	A	1.9	1.9	1.9	1.9	1.93	2.37
25-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.9	2.1	1.8	1.8	1.86	2.07
26-Apr	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.9	1.9	1.9	1.9	1.85	1.95
27-Apr	2.1	2.1	2.1	2.2	2.2	2.0	2.3	2.1	2.0	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.3	2.7	2.02	2.69
28-Apr	2.4	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	2.5	2.2	1.9	1.97	2.49
29-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.94
30-Apr	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.00
1.99 1.96 1.97 1.97 1.97 1.96 1.98 1.97 1.95 1.93 1.92 1.91 1.90 1.89 1.90 1.91 1.92 1.91 1.91 1.92 1.95 1.97 1.98 2.00																								Diurnal Average		
2.55 2.18 2.27 2.41 2.47 2.16 2.44 2.68 2.29 2.10 2.12 2.06 2.01 1.98 1.97 2.01 2.37 2.00 2.08 2.11 2.35 2.49 2.41 2.69																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

**Hourly Averages**

**Methane (CH<sub>4</sub>) - ppm**  
**Henry Pirker - April 2013**



## Hourly Maximums

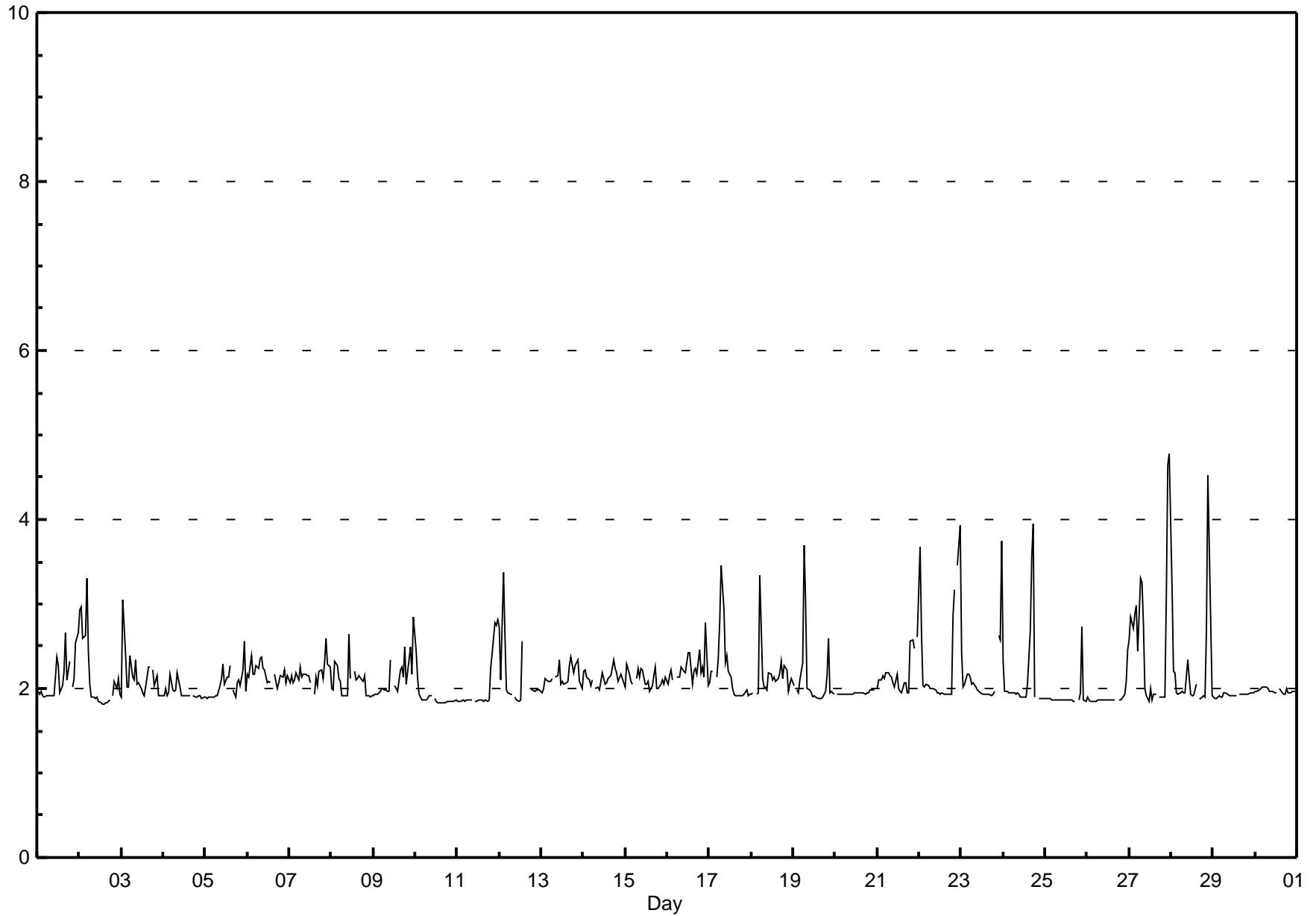
Methane (CH<sub>4</sub>) - ppm

Henry Pirker - April 2013

Maximum Value: 4.79 ppm on Apr 28 00:00		Maximum Daily Average: 2.58 ppm on Apr 27		Hours in Service: 720																																													
Minimum Value: 1.8 ppm on Apr 2 15:00		Minimum Daily Average: 1.90 ppm on Apr 26		Hours of Data: 685																																													
Maximum Diurnal Average: 2.33 ppm at hour 24		Minimum Diurnal Average: 1.98 ppm at hour 15		Hours of Missing Data: 35																																													
Monthly Average: 2.110 ppm		Percentiles: P <sub>1</sub> = 1.83 P <sub>10</sub> = 1.86 Q <sub>1</sub> = 1.92 Median = 1.99 Q <sub>3</sub> = 2.16 P <sub>90</sub> = 2.42 P <sub>99</sub> = 3.67		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-Apr	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.4	2.3	2.0	2.0	2.2	2.7	2.1	2.3	A	2.0	2.1	2.6	2.7	2.11	2.66																							
2-Apr	2.9	3.0	2.6	2.6	3.3	2.4	2.1	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.9	2.1	2.0	2.1	1.9	2.15	3.31																							
3-Apr	1.9	3.1	2.4	2.0	2.0	2.4	2.1	2.1	2.3	2.1	2.1	2.0	2.0	1.9	2.0	2.3	2.3	A	2.2	2.0	2.2	1.9	1.9	1.9	2.13	3.05																							
4-Apr	1.9	2.0	1.9	2.0	2.2	2.0	2.0	2.0	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.19																							
5-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.3	2.1	2.1	2.1	2.3	A	2.0	1.9	2.1	2.1	2.0	2.2	2.6	2.0	2.05	2.57																						
6-Apr	2.2	2.1	2.4	2.2	2.2	2.3	2.2	2.3	2.4	2.2	2.2	2.1	2.1	2.1	A	2.2	2.1	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.17	2.39																							
7-Apr	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.1	2.2	2.2	2.1	2.1	2.1	A	1.9	2.1	2.0	2.2	2.2	2.1	2.3	2.6	2.3	2.3	2.17	2.60																							
8-Apr	2.0	2.0	2.3	2.3	2.1	2.1	1.9	1.9	1.9	1.9	2.6	2.1	A	2.2	2.1	2.1	2.2	2.1	2.1	2.2	1.9	1.9	1.9	1.9	2.08	2.64																							
9-Apr	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	A	2.0	2.0	2.0	2.2	2.2	2.1	2.5	2.1	2.3	2.5	2.2	2.8	2.13	2.85																							
10-Apr	2.4	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.90	2.44																							
11-Apr	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	2.2	2.4	2.8	2.7	2.8	2.02	2.81																							
12-Apr	2.7	2.1	3.4	2.6	2.0	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	2.6	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.14	3.36																							
13-Apr	2.0	2.0	2.1	2.1	2.1	2.1	2.1	A	2.1	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2.2	2.3	2.3	2.3	2.1	2.0	2.14	2.38																							
14-Apr	2.2	2.2	2.1	2.1	2.0	2.1	A	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.1	2.2	2.1	2.1	2.12	2.33																							
15-Apr	2.0	2.3	2.2	2.1	2.0	A	2.1	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.2	2.3	2.0	2.0	2.1	2.1	2.1	2.1	2.11	2.28																							
16-Apr	2.0	2.2	2.2	2.1	A	2.1	2.1	2.1	2.3	2.2	2.2	2.3	2.4	2.4	2.0	2.2	2.2	2.2	2.5	2.2	2.3	2.1	2.8	2.0	2.23	2.79																							
17-Apr	2.1	2.2	2.2	A	2.1	2.4	2.8	3.5	2.9	2.3	2.4	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.19	3.46																							
18-Apr	1.9	2.0	A	1.9	2.0	3.3	2.1	2.0	2.0	2.0	2.2	2.2	2.1	2.1	2.1	2.2	2.3	2.1	2.3	2.2	2.0	2.0	2.1	2.14	3.35																								
19-Apr	2.0	A	2.0	2.0	2.1	2.3	3.7	3.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.6	2.0	2.0	1.9	2.12	3.69																							
20-Apr	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	1.95	1.98																							
21-Apr	2.0	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.2	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.6	2.6	2.5	A	2.6	2.16	2.61																							
22-Apr	3.7	2.6	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.9	3.2	A	3.5	3.9	2.32	3.93																							
23-Apr	2.4	2.0	2.1	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.6	2.6	3.8	2.15	3.75																							
24-Apr	2.3	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.7	3.6	3.9	1.9	A	1.9	1.9	1.9	1.9	2.14	3.95																							
25-Apr	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.9	1.9	2.7	1.9	1.8	1.90	2.73																							
26-Apr	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.1	2.5	1.90	2.45																							
27-Apr	2.6	2.8	2.7	2.9	3.0	2.4	3.3	3.3	2.8	2.0	1.9	1.8	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	3.1	4.7	4.8	2.58	4.79																							
28-Apr	3.2	2.2	2.2	1.9	1.9	2.0	2.0	2.0	2.0	2.3	2.1	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	1.9	1.9	2.7	4.5	3.7	1.9	2.26	4.53																						
29-Apr	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.93	1.96																							
30-Apr	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.03																							
																								2.20	2.14	2.14	2.08	2.09	2.12	2.14	2.13	2.08	2.03	2.07	2.01	2.00	2.00	1.98	2.04	2.10	2.09	2.04	2.08	2.16	2.27	2.31	2.33	Diurnal Average	
																								3.68	3.05	3.36	2.89	3.31	3.35	3.69	3.46	2.93	2.33	2.64	2.37	2.42	2.57	2.28	2.70	3.56	3.95	2.49	2.87	3.17	4.53	4.65	4.79	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									

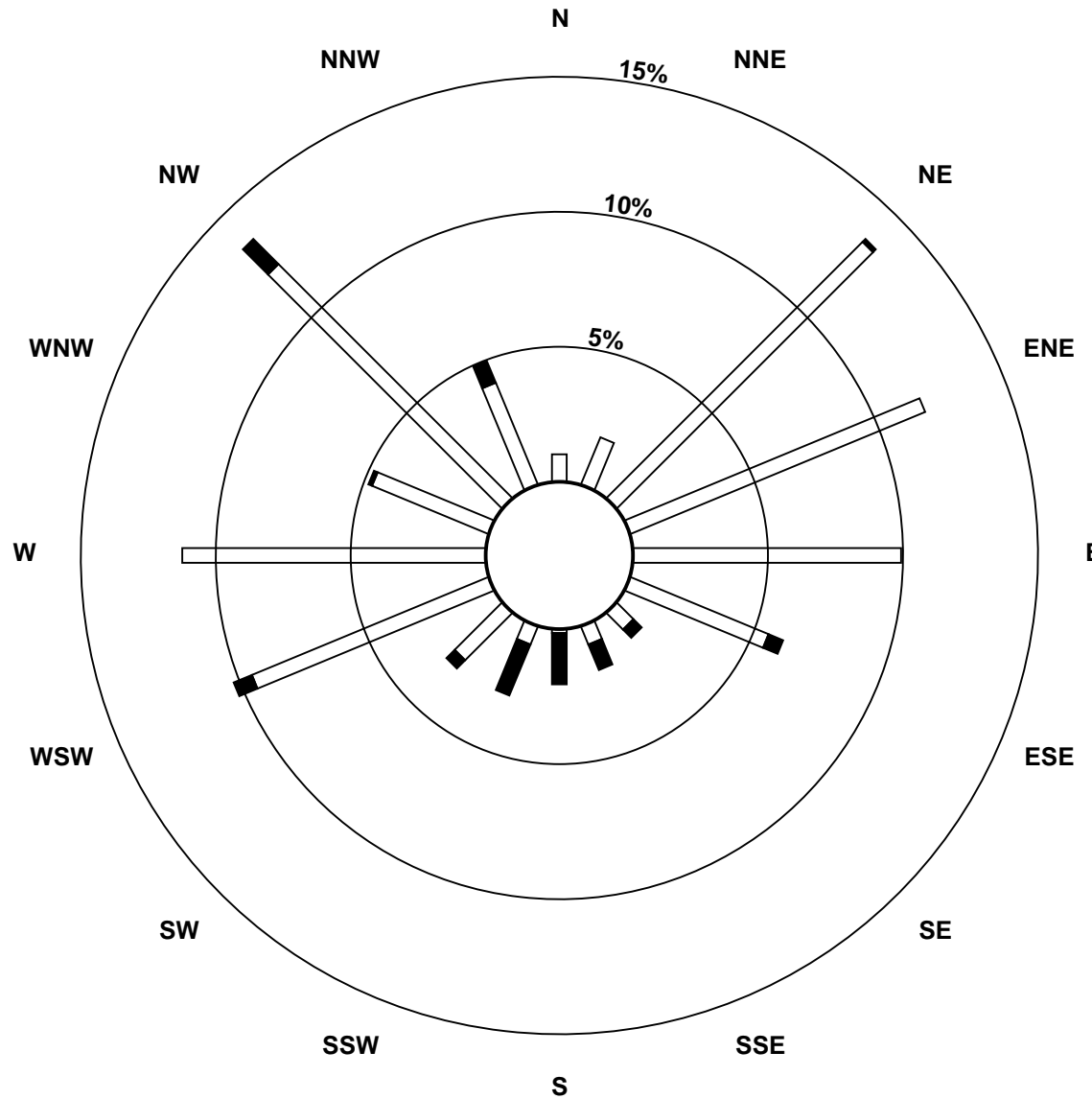
### Hourly Maximums

Methane (CH<sub>4</sub>) - ppm  
Henry Pirker - April 2013

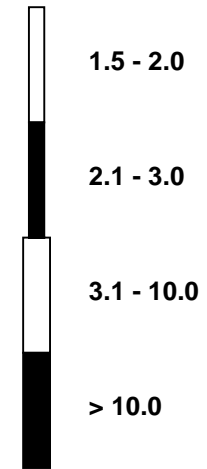


**Pollutant Rose**

**Methane (CH<sub>4</sub>) - ppm**  
**Henry Pirker - April 2013**

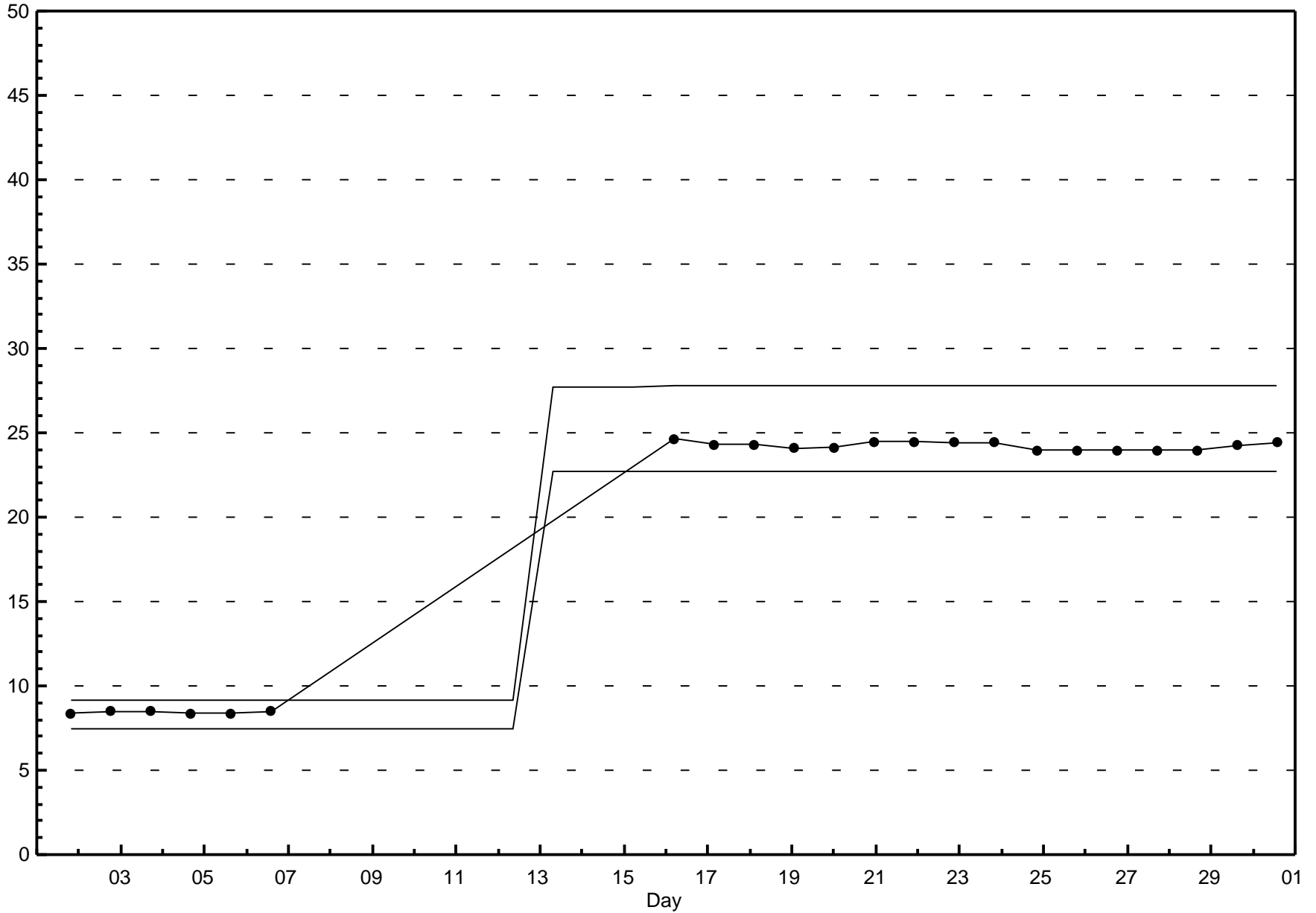


**Pollutant Classes (ppm)**



### Span Responses

Methane (CH<sub>4</sub>)  
Henry Pirker - April 2013



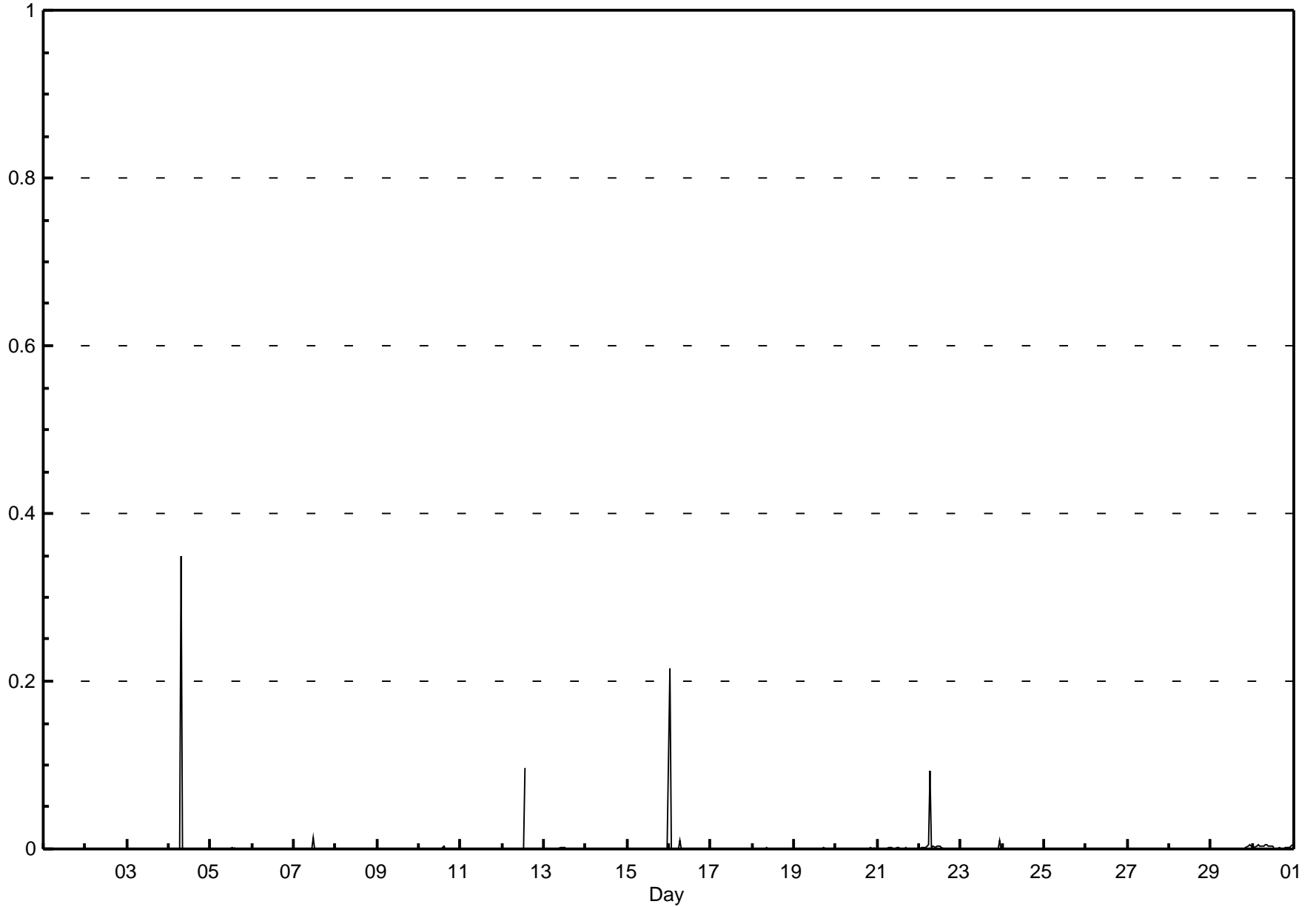
## Hourly Averages

## Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - April 2013

Number of Exceedences (AAQO):		1-hr: 0		24-hr: 0		Hours in Service:		720																																									
Maximum Value: 0.35 ppm on Apr 4 08:00		Maximum Daily Average: 0.02 ppm on Apr 4				Hours of Data:		685																																									
Minimum Value: 0.0 ppm on Apr 1 02:00		Minimum Daily Average: 0.00 ppm on Apr 8				Hours of Missing Data:		35																																									
Maximum Diurnal Average: 0.01 ppm at hour 8		Minimum Diurnal Average: 0.00 ppm at hour 2				Hours of Calibration:		35																																									
Monthly Average: 0.001 ppm		Percentiles: P <sub>1</sub> = 0.00 P <sub>10</sub> = 0.00 Q <sub>1</sub> = 0.00 Median = 0.00 Q <sub>3</sub> = 0.00 P <sub>90</sub> = 0.00 P <sub>99</sub> = 0.01				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-Apr	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	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00																							
2-Apr	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	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
3-Apr	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	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
4-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	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	0.0	0.0	0.02	0.35																							
5-Apr	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	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
6-Apr	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
7-Apr	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01																							
8-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
9-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
10-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
11-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
12-Apr	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	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.10																							
13-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
14-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
15-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
16-Apr	0.2	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.22																							
17-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
18-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
19-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
20-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00																							
21-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
22-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.01	0.09																							
23-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.01																							
24-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00																							
25-Apr	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	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00																							
26-Apr	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	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
27-Apr	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	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
28-Apr	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	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
29-Apr	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
30-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
																								0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Diurnal Average		
																								0.22	0.00	0.00	0.00	0.00	0.01	0.09	0.35	0.00	0.00	0.00	0.01	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									



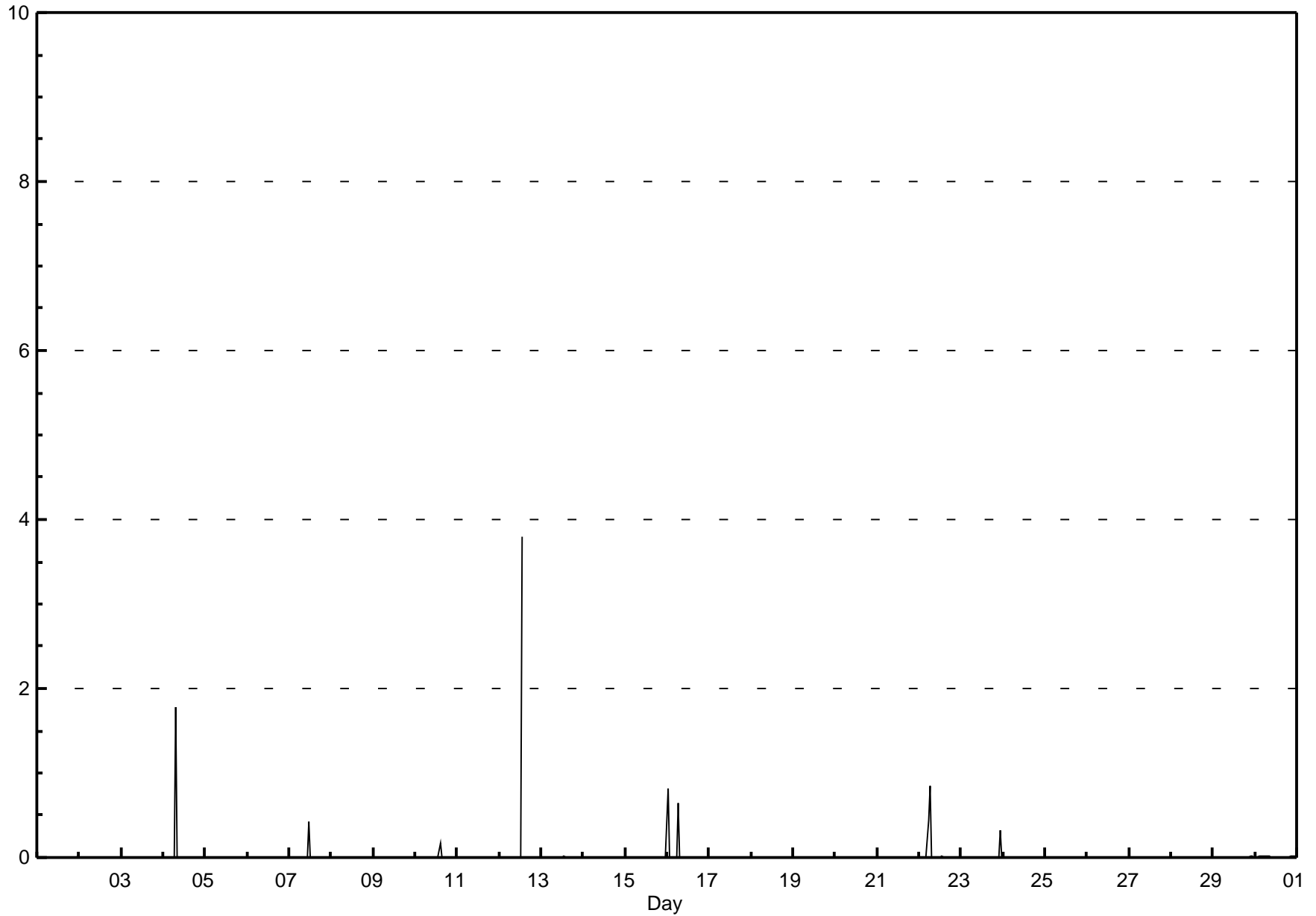


## Hourly Maximums

## Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - April 2013

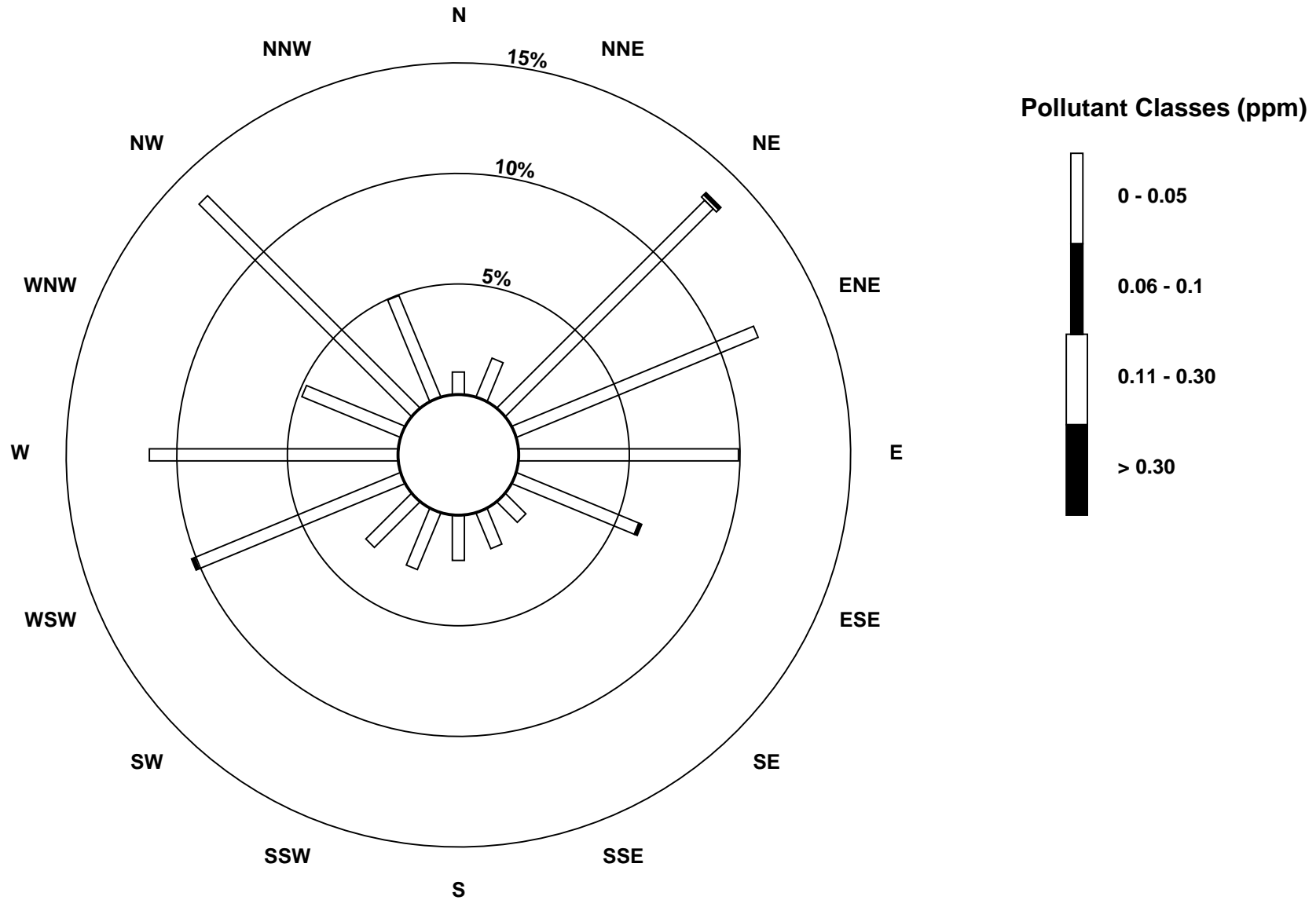
Maximum Value: 3.79 ppm on Apr 12 14:00		Maximum Daily Average: 0.20 ppm on Apr 12		Hours in Service: 720																							
Minimum Value: 0.0 ppm on Apr 8 16:00		Minimum Daily Average: 0.00 ppm on Apr 8		Hours of Data: 685																							
Maximum Diurnal Average: 0.14 ppm at hour 14		Minimum Diurnal Average: 0.00 ppm at hour 2		Hours of Missing Data: 35																							
Monthly Average: 0.018 ppm		Percentiles: P <sub>1</sub> = 0.00 P <sub>10</sub> = 0.00 Q <sub>1</sub> = 0.00 Median = 0.00 Q <sub>3</sub> = 0.00 P <sub>90</sub> = 0.01 P <sub>99</sub> = 0.42		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-Apr	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	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.01	
2-Apr	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	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
3-Apr	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	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
4-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	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	0.0	0.0	0.08	1.77	
5-Apr	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	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
6-Apr	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
7-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.43	
8-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
9-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
10-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.17	
11-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
12-Apr	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	3.8	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.20	3.79	
13-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
14-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
15-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
16-Apr	0.8	0.0	0.0	0.0	A	0.0	0.6	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	0.0	0.0	0.0	0.07	0.81	
17-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
18-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
19-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
20-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.01	0.01	
21-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.01	0.01	
22-Apr	0.0	0.0	0.0	0.0	0.0	0.4	0.8	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	0.0	A	0.0	0.06	0.84	
23-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.3	0.02	0.31	
24-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.01	
25-Apr	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	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
26-Apr	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	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
27-Apr	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	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
28-Apr	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	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
29-Apr	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	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
30-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.01	
		0.03	0.00	0.00	0.00	0.00	0.02	0.06	0.07	0.00	0.00	0.02	0.00	0.14	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Diurnal Average	
		0.81	0.01	0.01	0.01	0.01	0.45	0.84	1.77	0.01	0.01	0.01	0.43	0.01	3.79	0.17	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

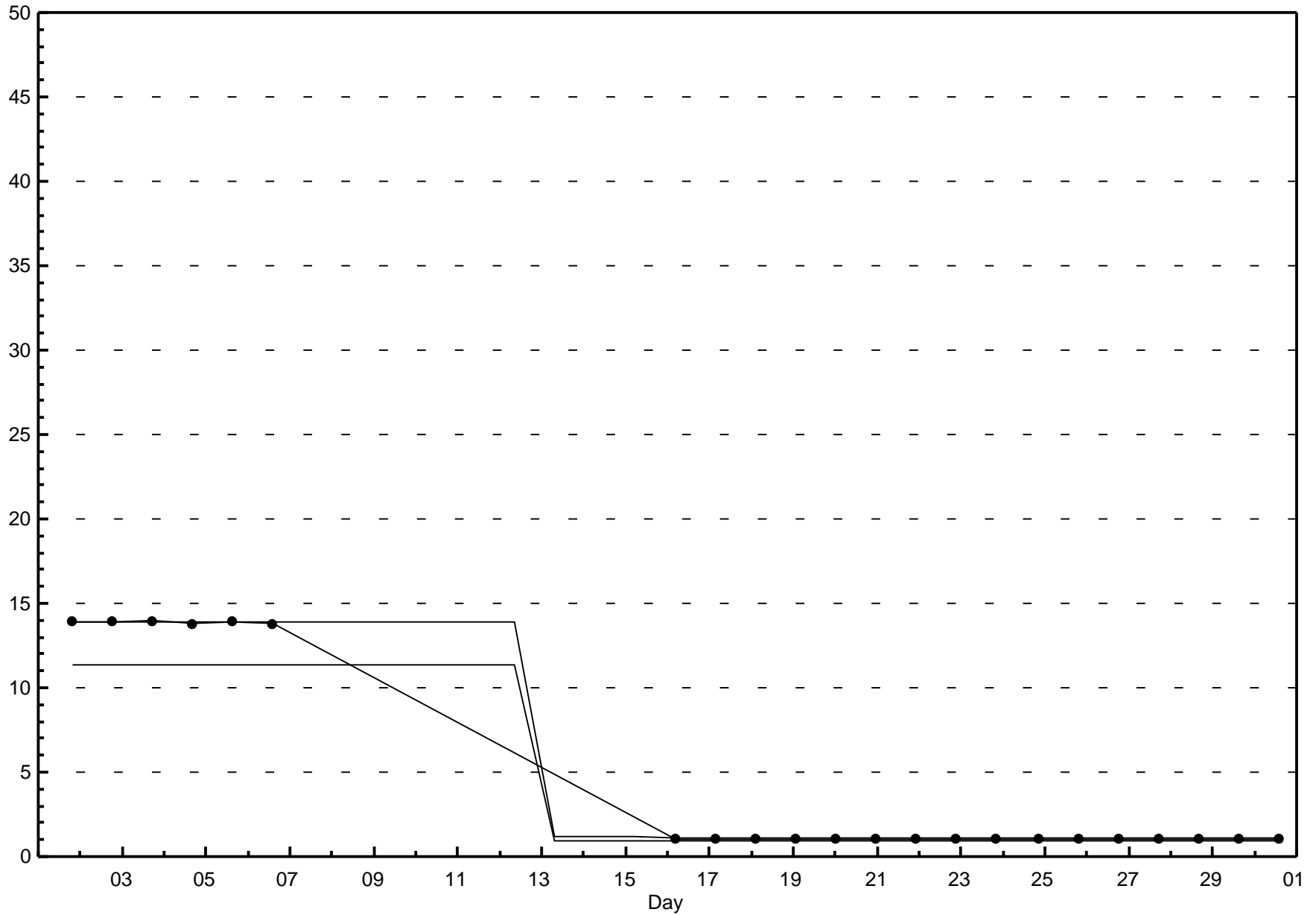


**Pollutant Rose**

**Non Methane Hydrocarbon (NMHC) - ppm**

**Henry Pirker - April 2013**



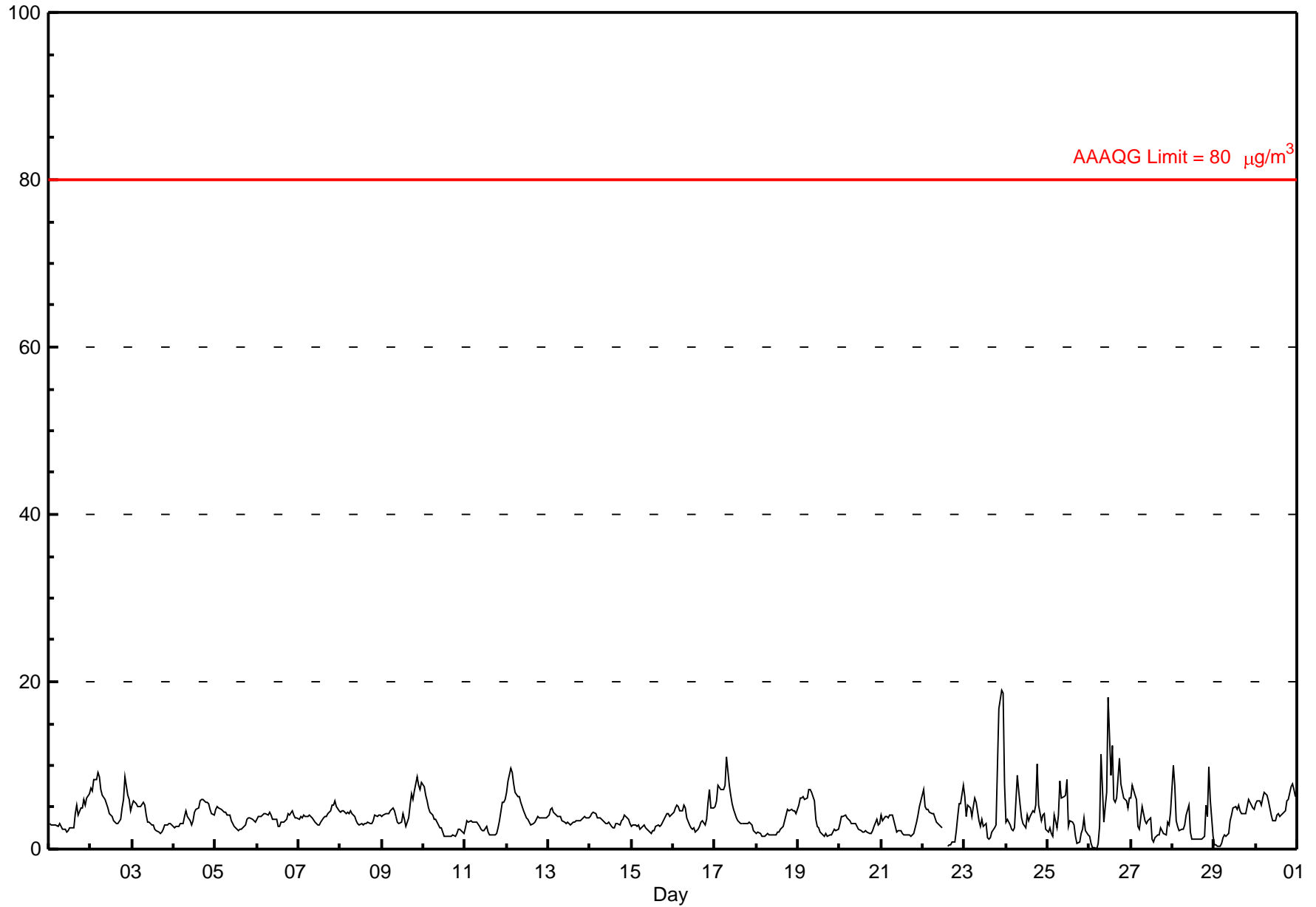


## Hourly Averages

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

Henry Pirker - April 2013

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 19.0 µg/m <sup>3</sup> on Apr 23 22:00      Maximum Daily Average: 5.8 µg/m <sup>3</sup> on Apr 23																	Hours in Service: 720 Hours of Data: 718																																
Minimum Value: 0 µg/m <sup>3</sup> on Apr 26 05:00      Minimum Daily Average: 2.7 µg/m <sup>3</sup> on Apr 18 Maximum Diurnal Average: 5.2 µg/m <sup>3</sup> at hour 22      Minimum Diurnal Average: 2.7 µg/m <sup>3</sup> at hour 15 Monthly Average: 3.92 µg/m <sup>3</sup> Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 1.8 Q <sub>1</sub> = 2.7 Median = 3.6 Q <sub>3</sub> = 4.8 P <sub>90</sub> = 6.3 P <sub>99</sub> = 10.7																	Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0																																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Apr	3	3	3	3	3	3	3	3	2	2	2	2	3	3	3	4	5	4	5	5	6	5	6	7	3.6	6.6																							
2-Apr	7	7	8	8	9	9	7	6	6	5	5	4	4	3	3	3	3	4	5	6	9	7	6	5	5.8	9.2																							
3-Apr	5	6	5	5	5	5	6	5	4	3	3	3	3	2	2	2	2	2	2	3	3	3	3	3	3.6	5.8																							
4-Apr	3	3	3	3	3	3	4	4	4	3	3	3	4	5	5	6	6	6	6	6	5	5	4	4	4.2	5.9																							
5-Apr	5	5	5	5	5	4	4	4	4	3	3	3	2	2	2	2	3	3	4	4	4	4	3	3	3.6	5.1																							
6-Apr	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	4	4	4	5	4	4	4	3.8	4.6																							
7-Apr	4	4	4	4	4	4	4	4	4	3	3	3	3	3	4	4	4	4	5	5	5	6	5	5	4.0	5.8																							
8-Apr	4	5	5	4	4	4	5	4	4	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	3.7	4.6																							
9-Apr	4	4	4	4	4	5	5	5	4	3	3	3	4	4	3	4	5	7	6	7	9	8	7	8	4.9	8.7																							
10-Apr	7	7	6	5	4	4	4	4	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3.0	7.4																							
11-Apr	3	3	3	3	3	3	3	3	3	2	2	2	3	2	2	2	2	2	2	2	3	6	6	6	3.0	5.9																							
12-Apr	7	8	10	9	8	7	6	6	6	5	5	4	4	3	3	3	3	4	4	4	4	4	4	4	5.1	9.6																							
13-Apr	4	5	5	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	3.7	4.8																							
14-Apr	4	4	4	4	4	4	4	4	3	3	3	3	3	2	3	3	3	3	3	4	4	4	3	3	3.4	4.4																							
15-Apr	3	3	3	3	3	2	3	3	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	2.9	4.2																							
16-Apr	4	5	5	5	5	5	5	5	4	3	3	2	3	2	2	3	3	3	3	4	6	7	5	5	4.0	7.1																							
17-Apr	5	6	8	7	7	7	8	11	8	6	5	5	4	3	3	3	3	3	3	3	3	3	2	2	4.9	10.9																							
18-Apr	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	4	5	5	5	5	4	4	2.7	4.8																							
19-Apr	5	6	6	6	6	6	7	7	7	6	4	3	3	2	2	2	2	2	2	2	2	2	2	2	3.8	7.1																							
20-Apr	3	4	4	4	4	4	3	3	3	3	3	2	2	2	2	2	2	2	2	2	3	4	3	3	2.9	4.1																							
21-Apr	4	3	4	4	4	4	4	3	3	2	2	2	2	2	2	2	2	2	2	2	3	4	5	6	3.0	5.8																							
22-Apr	7	5	5	5	4	4	4	4	3	3	3	3	C	C	0	0	1	1	1	2	4	5	5	8	3.5	7.7																							
23-Apr	6	4	5	5	4	5	6	6	3	3	3	3	3	1	1	1	2	2	3	10	17	19	19	8	5.8	19.0																							
24-Apr	3	4	3	2	2	2	9	7	5	4	3	3	4	3	4	5	4	5	10	5	3	4	4	2	4.3	10.1																							
25-Apr	2	3	2	2	4	3	4	8	6	6	6	8	3	3	3	3	1	1	1	2	2	4	2	2	3.4	8.3																							
26-Apr	2	1	0	0	0	1	3	11	3	5	7	18	9	12	6	6	6	11	8	7	6	6	5	6	5.7	18.2																							
27-Apr	6	8	6	6	3	2	5	4	3	3	3	4	1	1	1	2	2	3	2	2	2	3	3	4	3.3	7.7																							
28-Apr	10	8	3	3	2	2	2	3	4	5	2	1	1	1	1	1	1	1	2	5	4	10	6	1	3.4	9.9																							
29-Apr	1	0	0	0	1	1	2	1	2	3	4	5	5	5	5	5	4	4	4	5	6	5	5	5	3.3	6.0																							
30-Apr	5	6	6	5	6	7	6	6	5	4	3	3	4	4	4	4	4	5	6	6	8	8	7	6	5.4	7.7																							
																								4.4	4.4	4.4	4.2	4.0	4.0	4.5	4.8	3.9	3.6	3.3	3.6	3.1	3.0	2.7	2.9	3.0	3.3	3.6	4.1	4.8	5.2	4.8	4.3	Diurnal Average	
																								9.9	8.1	9.6	9.1	9.2	8.7	8.9	11.4	7.6	6.4	6.8	18.2	8.8	12.4	6.0	5.7	6.1	10.9	10.1	9.8	16.7	19.0	18.6	7.9	Diurnal Maximum	
C - Calibration																																																	
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m <sup>3</sup> Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m <sup>3</sup>																																																	



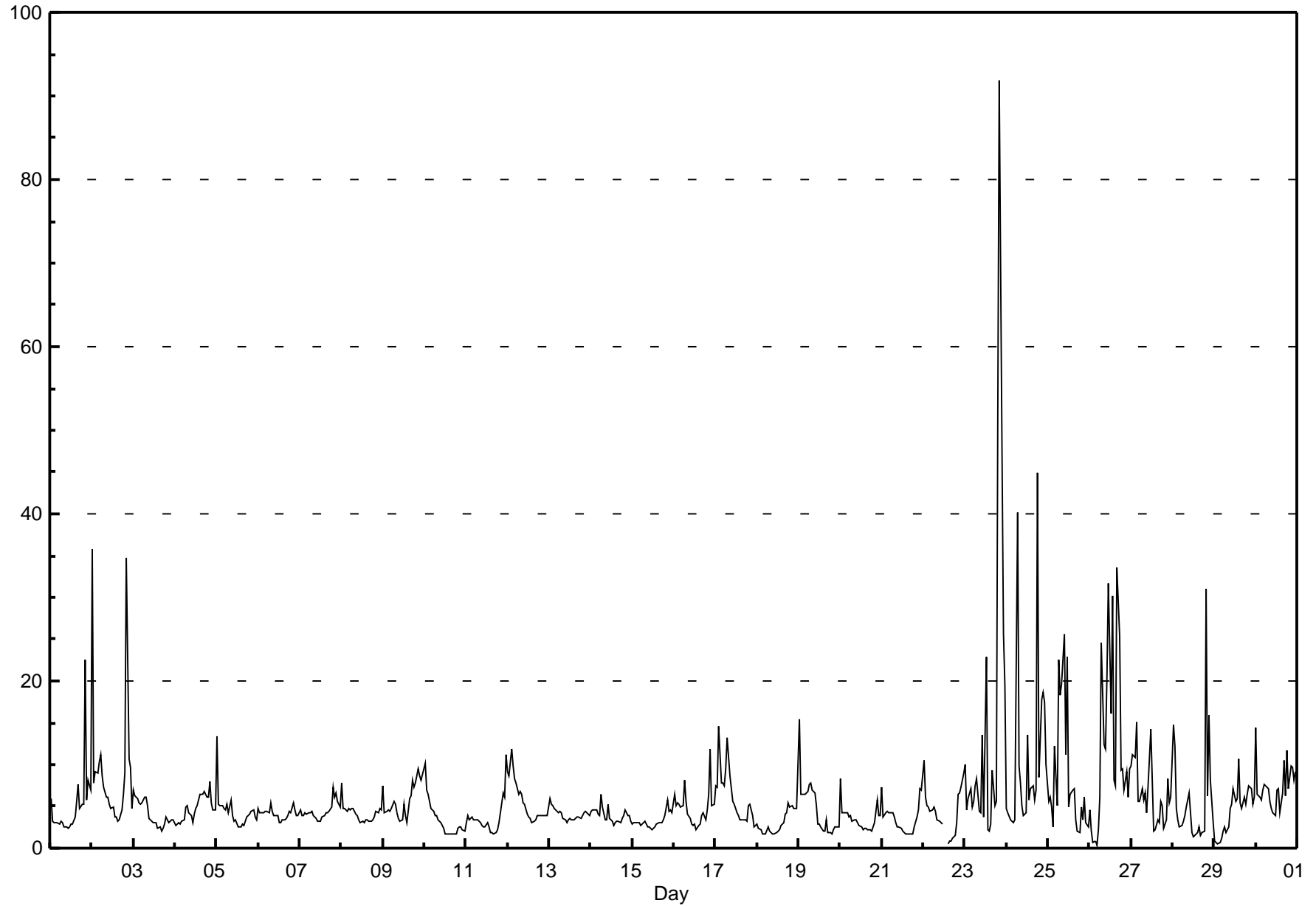
# Hourly Maximums

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

## Henry Pirker - April 2013

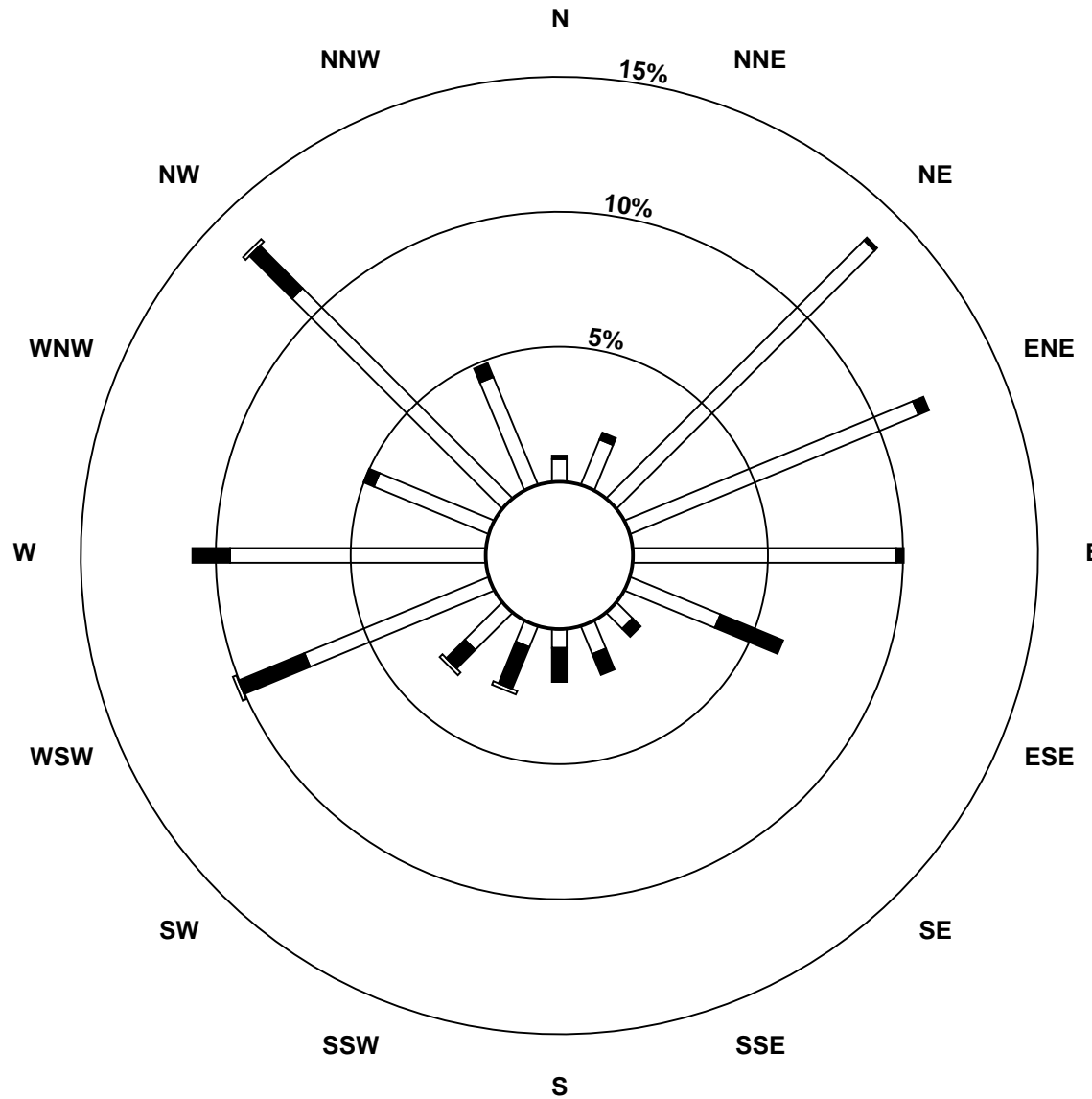
Maximum Value: 91.9 µg/m <sup>3</sup> on Apr 23 21:00		Maximum Daily Average: 15.3 µg/m <sup>3</sup> on Apr 23		Hours in Service: 720																							
Minimum Value: 0 µg/m <sup>3</sup> on Apr 26 05:00		Minimum Daily Average: 3.0 µg/m <sup>3</sup> on Apr 18		Hours of Data: 718																							
Maximum Diurnal Average: 10.1 µg/m <sup>3</sup> at hour 21		Minimum Diurnal Average: 3.6 µg/m <sup>3</sup> at hour 15		Hours of Missing Data: 2																							
Monthly Average: 5.69 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 2.2 Q <sub>1</sub> = 3.1 Median = 4.2 Q <sub>3</sub> = 6.1 P <sub>90</sub> = 9.2 P <sub>99</sub> = 34.1		Hours of Calibration: 2																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	6	3	3	3	3	3	3	3	3	3	2	3	3	3	4	6	8	5	5	5	23	6	8	7	5.0	22.6	
2-Apr	36	8	9	9	10	11	9	7	6	6	5	5	5	4	4	3	3	5	7	9	35	11	10	5	9.2	35.7	
3-Apr	7	6	6	5	5	5	6	6	5	4	3	3	3	2	2	2	2	3	4	3	3	3	3	3	4.1	7.0	
4-Apr	3	3	3	3	3	3	5	5	4	4	3	4	5	5	6	6	7	7	6	6	8	5	5	5	4.8	8.0	
5-Apr	13	5	5	5	5	5	5	4	6	4	3	3	3	3	3	3	3	4	4	4	4	5	4	3	4.4	13.3	
6-Apr	5	4	4	4	4	4	4	5	4	4	4	4	3	3	3	3	4	4	4	4	5	5	4	4	4.1	5.4	
7-Apr	5	4	4	4	4	4	4	4	4	4	3	3	3	4	4	4	4	5	7	6	7	6	5	5	4.4	7.3	
8-Apr	8	5	5	4	5	5	5	4	4	3	3	3	3	3	3	3	3	3	4	4	4	5	5	5	4.1	7.9	
9-Apr	7	4	4	5	4	5	6	5	4	4	3	3	5	4	3	6	6	8	7	8	10	9	8	9	5.7	9.6	
10-Apr	10	7	6	6	5	4	4	4	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3.4	10.2	
11-Apr	3	4	3	4	3	3	3	3	3	3	2	3	3	2	2	2	2	2	2	3	4	7	6	11	3.5	11.2	
12-Apr	9	9	12	10	8	8	7	7	6	5	5	4	4	4	3	3	3	4	4	4	4	4	4	4	5.6	11.9	
13-Apr	6	5	5	5	5	4	4	4	4	3	3	3	4	3	3	4	4	4	4	4	4	4	4	4	4.1	5.9	
14-Apr	4	5	5	5	4	4	6	5	3	3	5	4	3	3	3	3	3	3	4	4	5	4	4	3	4.0	6.4	
15-Apr	3	3	3	3	3	3	3	3	3	2	2	2	2	2	3	3	3	3	3	4	6	4	5	4	3.2	5.8	
16-Apr	7	5	5	5	5	5	8	6	4	4	3	3	3	2	3	3	4	4	3	5	7	12	5	5	4.8	11.8	
17-Apr	7	7	15	8	8	7	9	13	9	7	6	5	4	4	3	3	3	3	3	5	5	4	2	3	6.1	14.6	
18-Apr	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	4	4	5	5	5	5	5	5	3.0	5.4	
19-Apr	15	6	6	7	6	7	8	8	7	7	5	3	3	2	2	2	3	2	2	2	2	3	3	3	4.7	15.5	
20-Apr	8	4	4	4	4	4	4	3	3	3	3	3	2	2	2	2	2	2	2	3	3	6	4	4	3.5	8.3	
21-Apr	7	4	4	4	4	4	4	4	3	2	2	2	2	2	2	2	2	2	2	3	4	5	7	7	3.5	7.2	
22-Apr	11	6	5	5	4	5	5	4	3	3	3	3	C	C	1	1	1	1	2	3	6	7	7	9	4.3	10.5	
23-Apr	10	5	6	7	5	6	7	8	4	4	14	4	23	2	2	3	9	5	6	52	92	47	26	19	15.3	91.9	
24-Apr	5	4	3	3	3	3	40	10	8	5	4	4	14	6	7	7	6	7	45	8	18	19	17	10	10.7	44.9	
25-Apr	6	6	5	3	12	5	23	18	20	26	11	23	5	7	7	7	3	2	2	5	3	6	3	3	8.7	25.6	
26-Apr	5	2	1	1	0	2	6	25	12	12	20	32	16	30	8	7	34	25	9	9	7	9	6	9	12.0	33.6	
27-Apr	10	11	11	15	6	6	7	6	7	4	7	14	8	2	2	3	3	6	5	2	3	8	5	6	6.6	15.1	
28-Apr	15	12	5	3	3	3	3	4	5	7	4	2	1	1	2	2	2	2	31	6	16	8	3	3	5.9	31.0	
29-Apr	1	1	1	1	1	2	2	2	2	3	5	5	7	6	6	11	5	5	6	5	7	7	5	6	4.4	10.7	
30-Apr	14	6	6	6	7	8	7	7	6	5	4	4	7	7	4	7	11	6	12	7	10	10	8	9	7.4	14.5	
		8.3	5.2	5.3	4.9	4.8	4.7	7.0	6.4	5.3	5.0	4.9	5.3	5.1	4.3	3.6	3.8	4.9	4.6	5.6	7.3	10.1	8.0	6.3	5.8	Diurnal Average	
		35.7	12.1	14.6	15.1	12.2	11.2	40.1	24.6	19.6	25.6	20.3	31.7	22.9	30.1	10.7	7.5	33.6	25.5	44.9	52.2	91.9	46.7	25.8	19.5	Diurnal Maximum	
C - Calibration																											



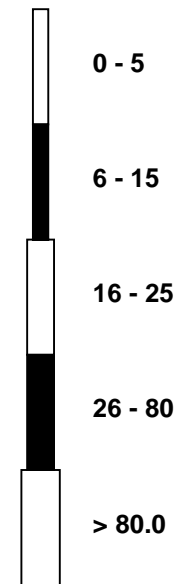


**Pollutant Rose**

**Particulate Matter 2.5 (PM<sub>2.5</sub>) - μg/m<sup>3</sup>**  
Henry Pirker - April 2013



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





Peace Airshed Zone Association

# Hourly Averages

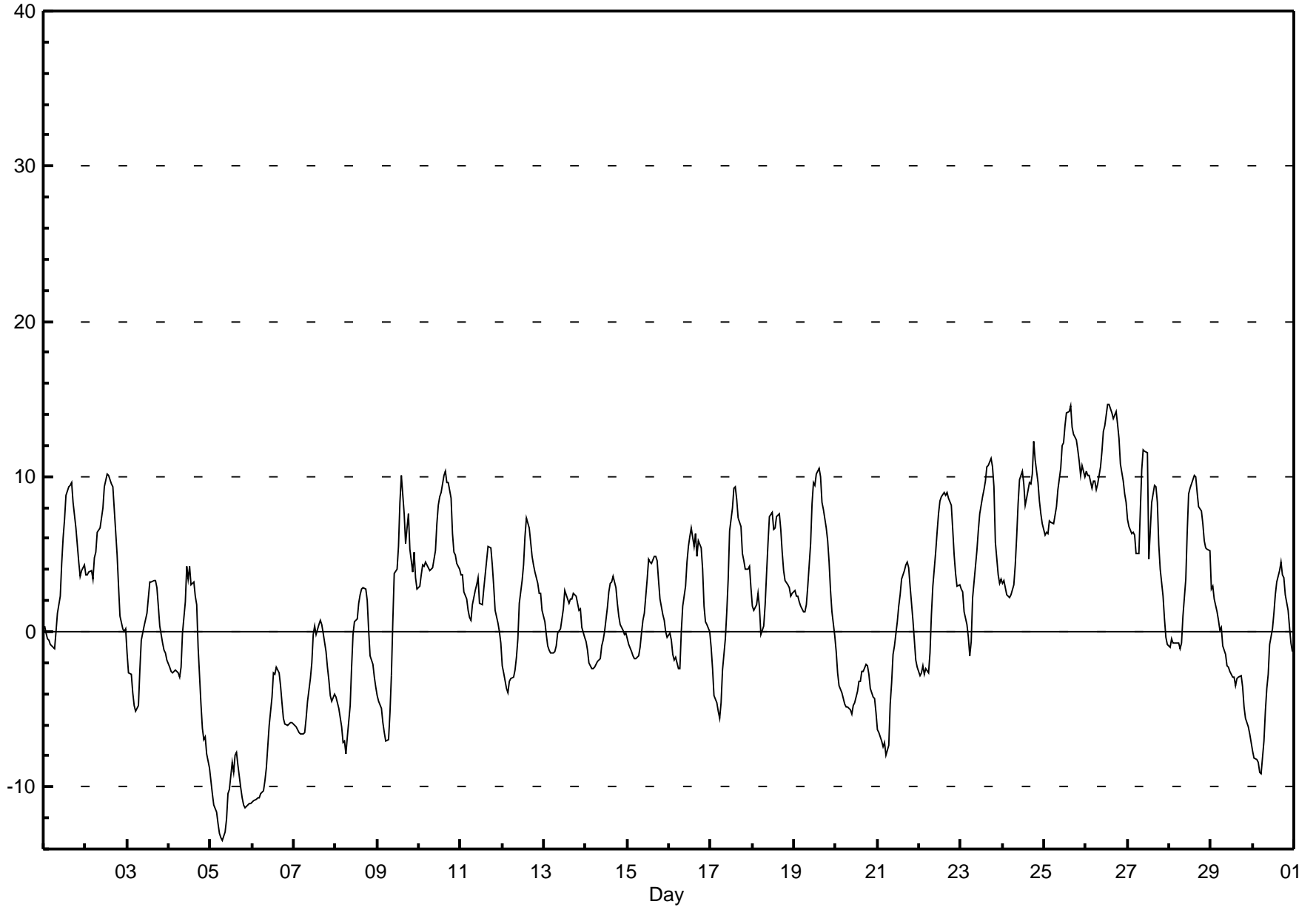
External Temperature (ET) - °C

Henry Pirker - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 720
Maximum Value: 14.7 °C on Apr 26 13:00	Maximum Daily Average: 11.5 °C on Apr 26
Minimum Value: -13 °C on Apr 5 08:00	Hours of Data: 720
Minimum Daily Average: -10.8 °C on Apr 5	Hours of Missing Data: 0
Maximum Diurnal Average: 5.6 °C at hour 16	Hours of Calibration: 0
Monthly Average: 1.67 °C	Percent Operational Time: 100.0
Percentiles: P <sub>1</sub> = -11.4 P <sub>10</sub> = -6.0 Q <sub>1</sub> = -2.3 Median = 1.9 Q <sub>3</sub> = 5.6 P <sub>90</sub> = 9.4 P <sub>99</sub> = 14.0	

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-Apr	0	0	0	-1	-1	-1	-1	0	1	2	4	6	7	9	9	9	10	8	7	6	4	4	4	4	3.8	9.6	
2-Apr	4	4	4	4	3	5	5	6	7	7	8	9	10	10	10	10	9	6	5	3	1	0	0	0	5.4	10.2	
3-Apr	-1	-3	-3	-4	-5	-5	-5	-2	-1	0	0	1	2	3	3	3	3	3	2	0	-1	-1	-1	-2	-0.5	3.3	
4-Apr	-2	-3	-3	-3	-2	-3	-3	-2	0	2	4	3	4	3	3	2	2	-1	-5	-6	-7	-7	-8	-9	-1.6	4.3	
5-Apr	-10	-10	-11	-12	-12	-13	-13	-13	-13	-12	-10	-10	-8	-9	-8	-8	-9	-10	-11	-11	-11	-11	-11	-11	-10.8	-7.8	
6-Apr	-11	-11	-11	-11	-11	-10	-10	-10	-9	-7	-6	-4	-3	-3	-2	-3	-3	-5	-6	-6	-6	-6	-6	-6	-6.9	-2.3	
7-Apr	-6	-6	-6	-7	-7	-7	-6	-6	-4	-3	-2	0	0	0	0	1	0	0	-1	-2	-3	-4	-4	-4	-3.2	0.7	
8-Apr	-4	-5	-5	-6	-7	-7	-8	-7	-5	-2	0	1	1	2	2	3	3	3	2	0	-2	-2	-3	-4	-2.1	2.9	
9-Apr	-4	-4	-5	-6	-6	-7	-7	-5	-3	1	4	4	5	8	10	8	6	7	8	5	4	5	3	3	1.3	10.0	
10-Apr	3	4	4	4	4	4	4	4	4	4	5	7	8	9	9	10	10	10	10	9	6	5	5	4	4	6.1	10.3
11-Apr	4	4	3	2	1	1	1	2	3	3	3	2	2	3	4	5	6	5	4	3	1	1	0	-1	2.5	5.5	
12-Apr	-2	-3	-4	-4	-3	-3	-3	-2	-2	0	2	3	4	6	7	7	6	5	4	4	3	2	3	1	1.3	7.4	
13-Apr	1	0	-1	-1	-1	-1	-1	-1	0	0	1	1	3	2	2	2	2	2	2	2	1	1	0	0	0.7	2.7	
14-Apr	-1	-1	-2	-2	-2	-2	-2	-2	-2	-1	-1	0	2	3	3	3	4	3	2	1	0	0	0	0	0.1	3.6	
15-Apr	0	-1	-1	-2	-2	-2	-2	-1	0	1	1	3	5	5	4	5	5	5	3	2	1	1	0	0	1.2	4.9	
16-Apr	0	-1	-1	-2	-2	-2	-2	0	2	3	5	5	6	7	6	6	5	6	5	4	2	1	0	0	2.2	6.7	
17-Apr	-1	-2	-4	-5	-5	-6	-5	-2	0	1	3	7	8	9	9	8	7	7	5	5	4	4	4	3	2.3	9.3	
18-Apr	2	1	2	3	2	0	0	2	4	6	7	8	7	7	8	7	5	4	3	3	3	2	2	2	3.9	7.7	
19-Apr	3	2	2	2	2	1	1	2	3	6	8	10	9	10	11	10	8	8	7	6	4	3	1	0	5.0	10.5	
20-Apr	-1	-3	-4	-4	-4	-5	-5	-5	-5	-5	-5	-5	-4	-3	-3	-3	-3	-2	-2	-3	-4	-4	-4	-5	-3.7	-1.3	
21-Apr	-6	-6	-7	-7	-7	-8	-7	-5	-3	-1	-1	1	2	2	3	4	4	4	4	3	1	-1	-2	-2	-1.5	4.5	
22-Apr	-3	-3	-2	-3	-2	-3	-1	1	3	5	6	8	8	9	9	9	9	9	8	7	5	4	3	3	3.7	9.0	
23-Apr	3	3	1	0	0	-2	-1	2	4	5	6	8	9	9	10	11	11	11	11	9	6	4	3	3	5.3	11.1	
24-Apr	3	3	2	2	2	2	3	4	6	8	10	10	9	8	9	10	9	10	12	11	10	8	8	7	7.0	12.2	
25-Apr	6	6	6	7	7	7	8	8	9	11	12	12	13	14	14	15	13	13	12	12	11	10	11	10	10.3	14.5	
26-Apr	10	10	10	9	10	10	9	10	11	12	13	13	15	15	14	14	14	14	13	12	11	10	9	8	11.5	14.7	
27-Apr	7	7	6	6	6	5	5	8	10	12	12	12	5	6	8	9	9	8	6	4	2	1	0	-1	6.4	11.7	
28-Apr	-1	0	-1	-1	-1	-1	-1	-1	1	3	6	9	9	10	10	10	9	8	8	7	6	5	5	5	4.4	10.1	
29-Apr	3	3	2	1	1	0	0	-1	-1	-2	-2	-3	-3	-3	-3	-3	-3	-3	-4	-5	-6	-6	-7	-7	-2.1	2.9	
30-Apr	-8	-8	-8	-8	-9	-9	-7	-5	-4	-3	-1	0	1	2	3	4	4	4	4	2	1	0	-1	-1	-1.9	4.5	

-0.5	-0.8	-1.2	-1.5	-1.7	-2.0	-1.8	-0.7	0.5	1.8	3.2	4.1	4.6	5.1	5.5	5.6	5.2	4.8	3.9	2.8	1.6	1.0	0.5	0.0	Diurnal Average	
10.3	10.1	10.0	9.3	9.7	9.7	9.1	9.5	10.6	11.7	13.0	13.2	14.7	14.6	14.3	14.5	13.7	14.2	13.4	12.5	11.0	10.1	10.7	10.0	Diurnal Maximum	



# Hourly Averages

Relative Humidity (RH) - %

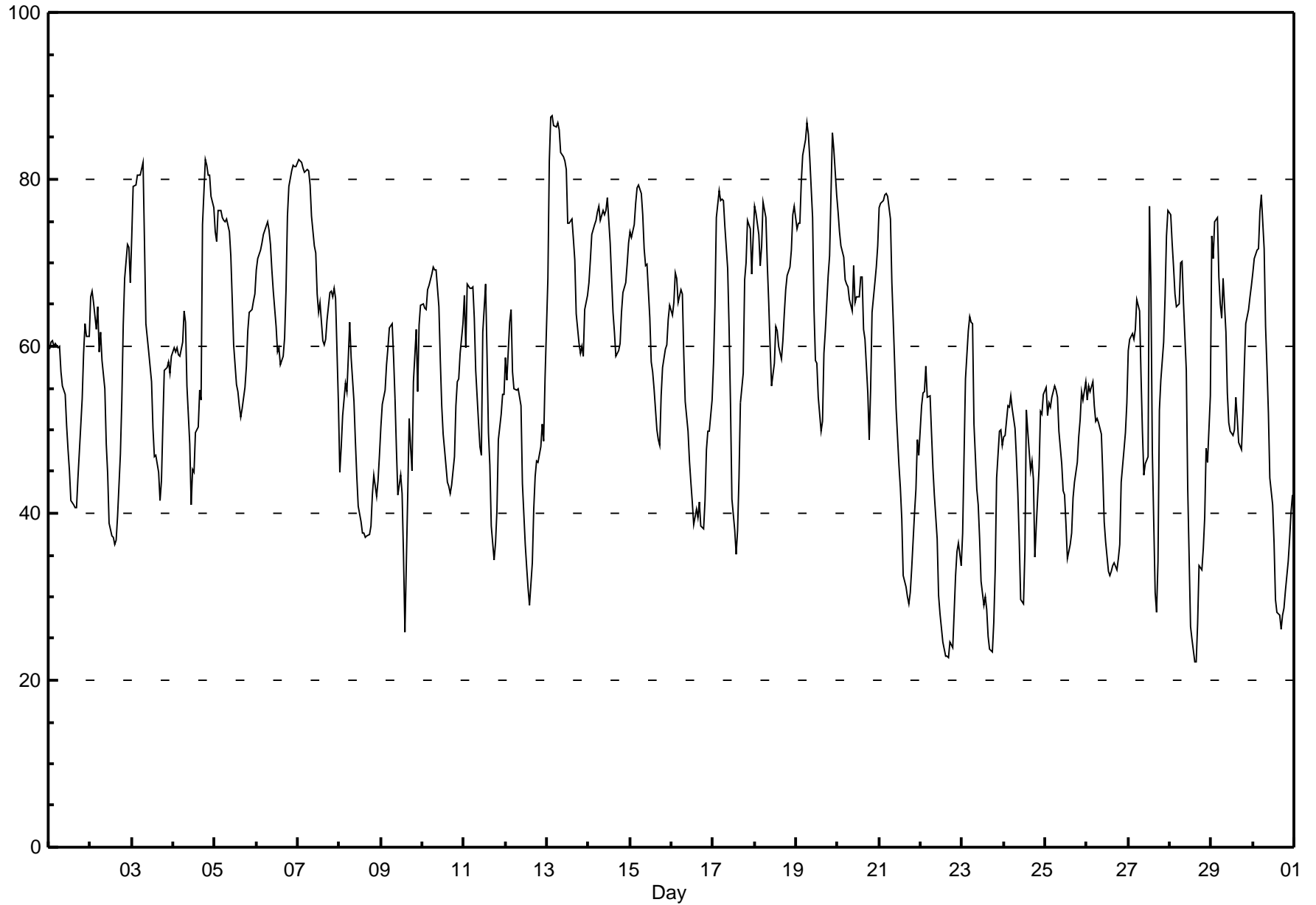
Henry Pirker - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 87.6 % on Apr 13 04:00 Maximum Daily Average: 75.0 % on Apr 13		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																								
Minimum Value: 22 % on Apr 28 15:00 Maximum Diurnal Average: 68.2 % at hour 6 Monthly Average: 56.99 %		Minimum Daily Average: 37.3 % on Apr 22 Minimum Diurnal Average: 43.9 % at hour 16 Percentiles: P <sub>1</sub> = 23.7 P <sub>10</sub> = 36.3 Q <sub>1</sub> = 46.5 Median = 58.0 Q <sub>3</sub> = 68.1 P <sub>90</sub> = 76.2 P <sub>99</sub> = 85.8																								
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-Apr	60	61	61	60	60	60	60	57	55	54	51	48	45	41	41	41	41	44	51	54	59	63	61	61	53.6	62.7
2-Apr	66	67	65	62	65	59	62	58	55	48	45	39	37	37	36	37	40	47	54	63	68	72	72	68	55.0	72.2
3-Apr	73	79	79	80	80	81	82	73	63	61	59	56	50	47	47	45	42	44	51	57	57	58	57	59	61.7	82.1
4-Apr	60	59	60	59	59	60	64	63	55	48	41	45	45	50	50	55	54	75	82	82	80	81	78	77	61.7	82.4
5-Apr	74	73	76	76	75	75	75	75	74	71	66	60	55	55	53	52	53	55	58	62	64	64	65	66	65.5	76.3
6-Apr	69	71	72	72	73	74	75	74	72	69	67	62	59	60	58	59	61	67	76	79	81	82	82	82	70.6	81.6
7-Apr	82	82	82	81	81	81	81	79	76	72	71	66	64	65	61	60	61	63	66	67	66	67	66	53	70.6	82.3
8-Apr	45	48	52	56	55	59	63	59	53	49	44	41	39	38	38	37	37	38	38	42	45	42	44	47	46.1	62.9
9-Apr	50	53	55	58	60	62	63	59	54	48	42	45	42	35	26	42	51	48	45	56	62	55	63	65	51.5	64.9
10-Apr	65	65	64	67	67	69	69	69	69	65	58	53	50	48	44	43	42	43	47	53	56	56	59	63	57.7	69.5
11-Apr	66	60	68	67	67	67	63	57	51	48	47	62	68	59	50	46	38	34	36	40	49	52	54	54	54.3	67.5
12-Apr	59	56	63	64	57	55	55	55	54	53	44	36	34	31	29	34	41	44	46	46	48	51	49	56	48.3	64.3
13-Apr	68	82	88	88	86	86	87	86	83	83	82	81	75	75	75	73	70	64	60	59	60	59	64	66	75.0	87.6
14-Apr	68	70	73	75	75	76	77	75	76	76	76	78	72	68	64	62	59	59	60	64	66	68	70	72	70.0	77.8
15-Apr	74	73	75	77	79	79	78	76	72	70	70	63	58	57	55	50	49	48	54	57	60	60	63	65	65.1	79.4
16-Apr	64	65	69	68	65	67	66	59	53	50	46	44	41	39	41	39	41	38	38	42	48	50	50	54	51.5	68.7
17-Apr	58	65	75	79	77	78	77	74	69	62	53	42	38	35	38	44	53	57	68	70	75	74	69	73	62.7	78.7
18-Apr	77	76	73	70	72	77	75	70	65	60	55	58	62	62	60	58	61	64	67	69	70	72	76	77	67.7	77.3
19-Apr	74	75	75	80	83	85	87	85	82	75	64	58	58	54	50	51	59	62	69	71	78	86	83	78	71.8	86.7
20-Apr	76	74	72	71	68	67	67	66	64	70	65	66	66	68	68	62	61	54	49	55	64	68	69	72	65.9	76.0
21-Apr	77	77	78	78	78	78	75	68	63	58	53	46	43	39	33	31	30	29	30	33	40	43	49	47	53.2	78.4
22-Apr	53	54	55	58	54	54	50	45	42	37	30	28	26	25	23	23	23	25	24	28	33	35	36	34	37.3	57.7
23-Apr	38	47	56	62	64	63	63	51	43	41	37	32	29	30	29	25	24	23	27	33	44	50	48	42.0	63.5	
24-Apr	49	49	53	53	54	53	50	47	42	37	30	29	36	52	50	45	46	44	35	38	45	52	52	54	45.7	54.2
25-Apr	55	52	53	53	54	55	55	54	50	46	43	42	39	35	36	38	42	44	46	49	51	55	54	56	48.1	55.7
26-Apr	54	55	55	56	53	51	51	51	50	45	39	37	33	33	33	34	34	33	35	36	44	48	50	53	44.2	55.7
27-Apr	59	61	62	61	62	66	64	57	50	45	46	47	77	67	47	30	28	34	52	56	60	66	73	76	56.1	76.8
28-Apr	76	72	69	66	65	65	70	70	65	57	43	35	26	25	22	22	27	34	33	36	39	48	46	54	48.6	75.8
29-Apr	73	71	75	75	68	65	63	68	62	54	51	50	49	50	54	51	48	48	52	58	63	64	66	67	60.3	75.4
30-Apr	69	70	72	72	76	78	72	62	57	52	44	41	36	30	28	28	26	28	29	31	34	37	40	42	48.1	78.1
																								Diurnal Average	Diurnal Maximum	
																								64.3	82.3	
																								65.4	82.3	
																								67.4	87.5	
																								68.1	87.6	
																								67.8	86.5	
																								68.2	86.2	
																								68.0	86.7	
																								64.7	86.0	
																								60.7	83.3	
																								56.8	82.7	
																								52.1	82.2	
																								49.6	81.3	
																								48.5	76.8	
																								46.9	74.8	
																								44.6	75.2	
																								43.9	72.9	
																								44.7	70.4	
																								46.4	74.5	
																								49.3	82.4	
																								52.8	81.7	
																								57.0	81.0	
																								59.2	85.6	
																								60.3	83.5	
																								61.3	81.6	

**Hourly Averages**

**Relative Humidity (RH) - %**

**Henry Pirker - April 2013**

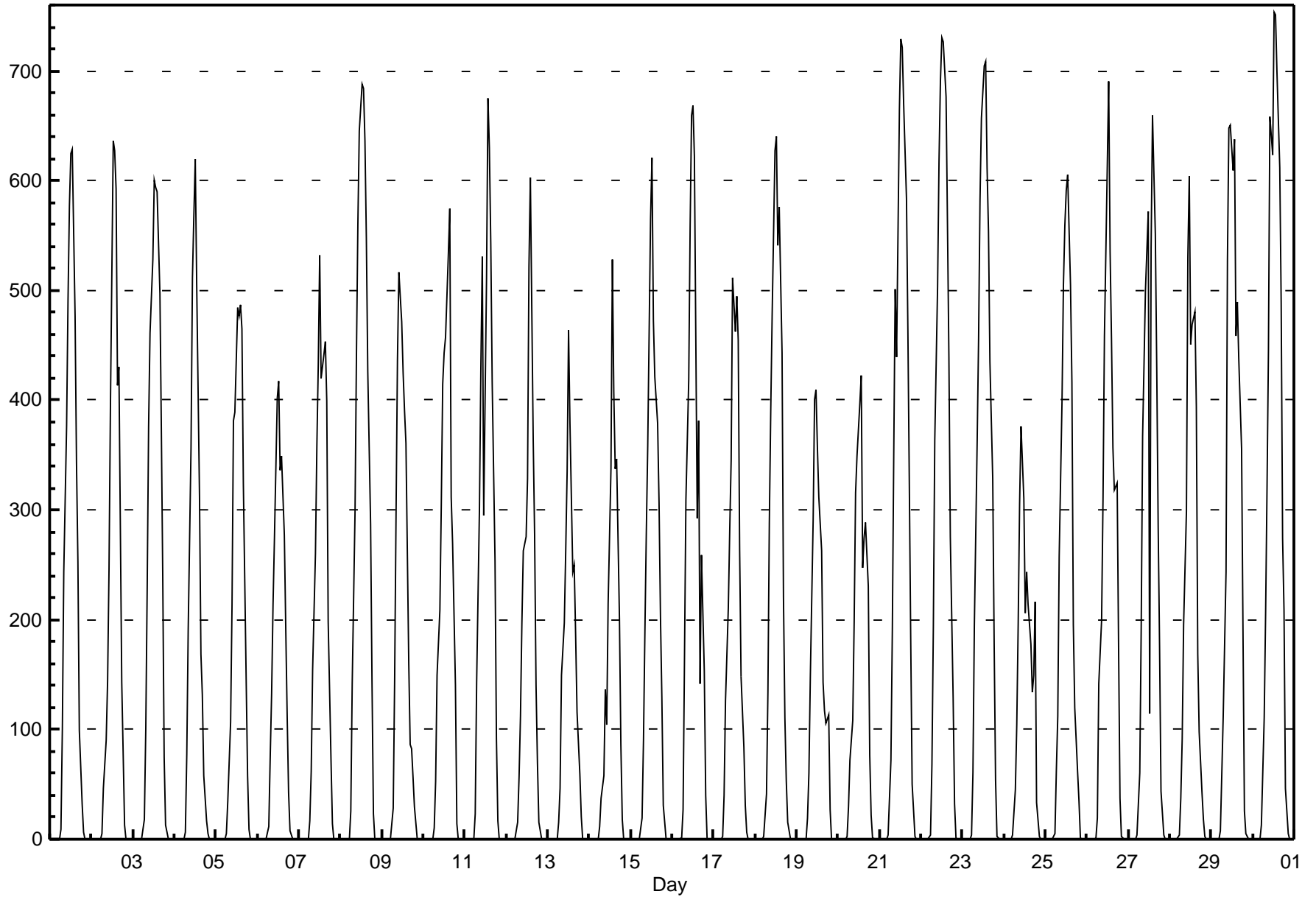


## Hourly Averages

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

Henry Pirker - April 2013

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 754.0 W/m <sup>2</sup> on Apr 30 13:00      Maximum Daily Average: 259.0 W/m <sup>2</sup> on Apr 30		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																									
Minimum Value: 0 W/m <sup>2</sup> on Apr 1 01:00 Maximum Diurnal Average: 534.2 W/m <sup>2</sup> at hour 14 Monthly Average: 174.73 W/m <sup>2</sup>		Minimum Daily Average: 113.2 W/m <sup>2</sup> on Apr 24 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 = 49.6 Q <sub>3</sub> = 337.9 P <sub>90</sub> = 532.0 P <sub>99</sub> = 700.6																									
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-Apr	0	0	0	0	0	0	9	100	244	376	490	578	625	629	477	343	253	99	32	6	0	0	0	0	177.6	628.8	
2-Apr	0	0	0	0	0	0	5	46	90	144	245	395	637	628	592	413	430	143	78	13	0	0	0	0	160.8	637.0	
3-Apr	0	0	0	0	0	0	18	100	230	376	461	528	601	594	590	497	374	240	75	13	0	0	0	0	195.7	600.9	
4-Apr	0	0	0	0	0	0	7	78	191	357	511	568	619	506	312	169	132	58	17	5	0	0	0	0	147.0	619.4	
5-Apr	0	0	0	0	0	0	5	35	107	214	381	388	484	476	487	465	325	146	59	9	0	0	0	0	149.2	487.5	
6-Apr	0	0	0	0	0	0	12	75	132	214	274	402	417	336	349	277	192	112	42	8	0	0	0	0	118.5	417.5	
7-Apr	0	0	0	0	0	0	17	62	154	260	358	433	533	420	441	453	399	198	72	14	0	0	0	0	159.0	532.6	
8-Apr	0	0	0	0	0	0	25	142	299	442	561	646	688	685	636	548	427	287	143	23	0	0	0	0	231.3	687.8	
9-Apr	0	0	0	0	0	0	28	144	296	437	517	471	425	391	361	159	86	83	57	30	0	0	0	0	145.2	517.0	
10-Apr	0	0	0	0	0	0	10	52	149	209	305	414	443	457	534	575	312	269	140	14	0	0	0	0	161.9	574.9	
11-Apr	0	0	0	0	0	0	24	143	303	431	531	295	511	675	630	543	416	254	91	17	0	0	0	0	202.6	674.8	
12-Apr	0	0	0	0	0	0	15	57	113	197	263	276	328	522	603	364	276	140	69	16	0	0	0	0	135.0	603.2	
13-Apr	0	0	0	0	0	0	15	47	149	198	263	335	464	378	243	250	186	116	59	21	0	0	0	0	113.5	463.6	
14-Apr	0	0	0	0	0	0	11	38	58	137	104	215	338	528	408	338	346	201	87	18	0	0	0	0	117.8	528.3	
15-Apr	0	0	0	0	0	1	20	90	190	279	359	566	621	473	422	379	307	203	129	30	0	0	0	0	169.6	621.5	
16-Apr	0	0	0	0	0	1	27	165	309	418	559	659	668	622	293	382	141	259	153	39	1	0	0	0	195.7	668.2	
17-Apr	0	0	0	0	0	3	40	126	211	282	345	512	463	494	454	264	148	83	31	6	0	0	0	0	144.2	511.7	
18-Apr	0	0	0	0	0	3	41	133	289	390	478	627	640	541	575	443	220	110	53	15	0	0	0	0	190.0	640.4	
19-Apr	0	0	0	0	0	1	19	60	148	291	401	410	357	312	262	143	117	106	113	28	1	0	0	0	115.3	410.0	
20-Apr	0	0	0	0	0	3	30	72	108	199	316	349	396	423	247	275	289	230	77	22	1	0	0	0	126.5	423.1	
21-Apr	0	0	0	0	0	4	72	190	351	501	440	664	729	721	669	583	462	325	182	50	2	0	0	0	247.8	729.0	
22-Apr	0	0	0	0	0	3	68	193	363	504	617	691	730	726	676	559	440	276	129	32	1	0	0	0	250.3	729.9	
23-Apr	0	0	0	0	0	4	60	194	363	456	583	657	704	709	612	554	435	329	179	55	3	0	0	0	245.7	708.9	
24-Apr	0	0	0	0	0	4	45	104	196	305	376	310	206	244	214	178	134	149	216	33	2	0	0	0	113.2	376.0	
25-Apr	0	0	0	0	0	5	64	113	257	399	505	560	591	605	505	416	196	120	62	35	2	0	0	0	184.8	605.5	
26-Apr	0	0	0	0	0	1	19	141	200	310	459	535	691	536	455	357	319	324	176	37	2	0	0	0	190.1	690.6	
27-Apr	0	0	0	0	0	3	61	192	367	433	500	572	115	539	659	552	429	286	175	44	4	0	0	0	205.4	659.0	
28-Apr	0	0	0	0	0	4	37	91	196	298	530	604	451	469	480	394	169	97	43	18	3	0	0	0	161.9	604.1	
29-Apr	0	0	0	0	0	7	60	113	243	528	648	651	610	637	459	490	438	356	188	26	5	0	0	0	227.4	651.1	
30-Apr	0	0	0	0	0	13	111	207	321	445	658	623	754	751	700	612	488	275	209	46	5	0	0	0	259.0	754.0	
		0.0	0.0	0.0	0.0	0.0	2.0	32.5	110.1	220.9	334.4	434.6	497.8	528.0	534.2	478.2	399.1	296.2	195.8	104.5	24.1	1.1	0.0	0.0	0.0	Diurnal Average	
		0.0	0.0	0.0	0.0	0.0	12.9	110.9	206.6	367.3	527.5	658.2	691.0	754.0	751.3	699.5	611.9	487.9	356.2	216.3	54.7	5.1	0.0	0.0	0.0	Diurnal Maximum	





## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Henry Pirker - April 2013

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	9	8	8	9	10	10	12	12	13	13	11	12	13	13	11	11	9	8	6	6	3	1	6	2	8.5	13.2
Dir	88	100	87	97	93	97	96	100	106	95	87	79	81	82	76	73	67	62	66	63	346	120	146	113	87.1	81.1
2 Spd	1	3	3	1	3	6	8	8	13	13	17	16	21	30	28	32	24	18	17	11	6	4	4	10	10.4	32.3
Dir	256	179	182	143	210	232	279	259	242	247	262	259	277	279	281	274	280	327	325	325	314	262	320	11	276.4	281.2
3 Spd	5	4	4	4	4	3	5	4	6	8	8	8	6	6	8	10	11	11	9	8	9	10	11	10	4.9	11.5
Dir	318	232	273	309	283	301	326	2	54	78	90	76	55	64	80	73	78	76	79	78	82	94	99	95	70.7	75.9
4 Spd	9	10	8	9	6	4	3	3	4	2	4	7	7	10	9	11	13	13	23	23	20	13	16	13	6.2	22.8
Dir	93	89	96	99	81	80	37	36	35	114	282	280	301	340	0	1	28	344	315	315	309	344	15	17	356.9	314.7
5 Spd	13	12	12	11	12	12	10	10	8	9	8	8	6	8	6	7	6	6	7	6	6	7	7	7	7.3	12.9
Dir	15	16	355	3	15	15	12	19	45	35	47	61	51	75	70	71	83	101	90	60	66	75	82	86	41.7	15.5
6 Spd	6	6	6	7	7	7	7	8	8	8	9	9	10	12	13	12	12	11	9	8	7	7	8	8	8.4	12.7
Dir	68	71	65	62	72	70	62	64	80	68	89	67	57	53	37	40	43	47	52	56	56	55	51	56	58.2	39.9
7 Spd	7	8	7	7	8	8	9	8	9	9	10	11	12	11	12	13	14	10	9	8	6	5	7	10	8.9	13.8
Dir	59	61	55	53	52	56	54	54	56	52	59	48	49	52	44	51	46	50	47	62	60	60	65	87	54.7	45.7
8 Spd	11	11	10	10	10	11	13	13	11	10	10	12	15	15	15	15	14	13	12	11	10	11	11	12	11.6	15.3
Dir	86	86	77	79	84	88	93	98	98	95	64	67	71	74	74	74	75	86	86	85	94	107	111	111	85.5	74.4
9 Spd	11	12	13	11	9	8	9	11	9	9	7	10	9	8	13	3	2	2	4	1	2	3	2	6	5.8	13.0
Dir	113	111	113	112	108	93	100	100	109	119	101	85	89	116	156	222	295	183	193	281	177	114	306	204	115.8	112.5
10 Spd	8	9	11	10	10	11	13	11	11	9	7	7	14	13	18	16	14	17	18	17	15	15	16	16	12.1	18.3
Dir	209	223	242	249	258	256	256	237	229	257	276	284	272	260	255	277	262	268	259	257	253	250	248	250	254.8	276.6
11 Spd	25	23	16	18	18	18	17	21	23	29	25	29	23	20	17	10	8	7	5	4	2	3	4	3	13.2	29.4
Dir	256	263	255	256	255	254	257	265	274	290	301	301	307	324	334	324	294	313	305	268	345	109	128	225	282.3	301.4
12 Spd	3	3	3	4	6	7	8	8	12	13	15	16	16	14	16	16	15	16	14	12	13	15	16	14	10.9	16.5
Dir	183	169	129	116	122	117	122	113	116	111	118	128	131	115	109	92	75	84	89	93	91	96	110	95	106.7	109.6
13 Spd	14	14	10	9	9	10	11	11	13	14	15	15	15	15	14	13	11	10	12	9	8	9	8	9	11.5	15.5
Dir	89	85	66	58	57	55	56	53	52	54	54	54	50	49	48	56	73	67	61	61	60	46	38	45	58.1	54.3
14 Spd	12	10	9	8	9	7	8	10	10	12	8	9	10	11	11	11	13	13	11	8	8	8	9	9	9.6	12.9
Dir	49	60	55	50	44	48	30	35	39	31	48	51	45	61	51	43	50	60	55	47	53	53	45	53	48.3	50.5
15 Spd	11	10	9	9	10	11	9	10	9	11	12	12	12	14	15	13	13	11	13	10	8	6	6	5	10.3	14.8
Dir	46	52	52	51	48	46	53	64	56	65	57	39	44	50	41	44	41	51	44	39	49	56	52	55	49.0	40.5
16 Spd	6	4	3	5	6	4	4	4	8	6	6	7	8	8	8	7	8	8	7	5	4	4	6	7	5.6	7.7
Dir	34	64	79	47	52	25	30	62	76	83	62	50	60	59	45	62	56	58	49	47	60	65	80	96	58.8	59.5
17 Spd	4	2	2	3	4	2	1	4	6	5	6	7	8	13	16	21	18	20	20	16	11	12	14	8	7.1	20.7
Dir	75	14	39	302	319	330	176	169	190	201	171	191	212	222	269	272	278	263	260	254	218	227	261	309	251.3	271.6
18 Spd	5	6	10	12	9	1	6	6	8	9	5	10	13	11	11	11	12	12	11	10	11	12	10	10	5.6	12.6
Dir	327	317	303	309	324	333	332	337	323	289	35	58	63	66	67	60	65	67	65	72	73	95	90	83	41.8	62.7
19 Spd	11	11	8	4	5	2	5	7	7	5	13	12	12	14	13	12	15	13	7	6	6	7	23	25	5.5	25.3
Dir	86	98	108	123	114	247	168	228	245	293	273	304	320	323	325	312	321	329	30	100	332	307	316	314	319.6	314.4
20 Spd	22	1	1	22	31	31	32	32	34	32	32	32	28	27	21	18	18	11	11	9	7	7	11	9	19.5	33.8
Dir	316	315	314	307	308	299	299	300	304	305	309	310	307	307	318	323	335	349	348	332	313	317	324	332	311.4	303.9
21 Spd	7	8	6	6	6	6	5	6	6	8	7	6	5	8	6	4	4	5	5	1	6	6	5	4	3.7	7.9
Dir	327	338	341	330	328	338	324	325	315	292	294	269	263	299	293	264	249	306	294	231	180	177	168	157	297.3	299.0
22 Spd	4	6	6	6	7	8	9	10	13	18	22	22	21	18	19	19	18	13	8	3	6	7	7	7	7.6	22.3
Dir	172	246	265	288	270	265	259	269	256	290	307	301	303	324	335	340	339	337	344	111	139	155	164	161	300.2	307.4

## Hourly Averages

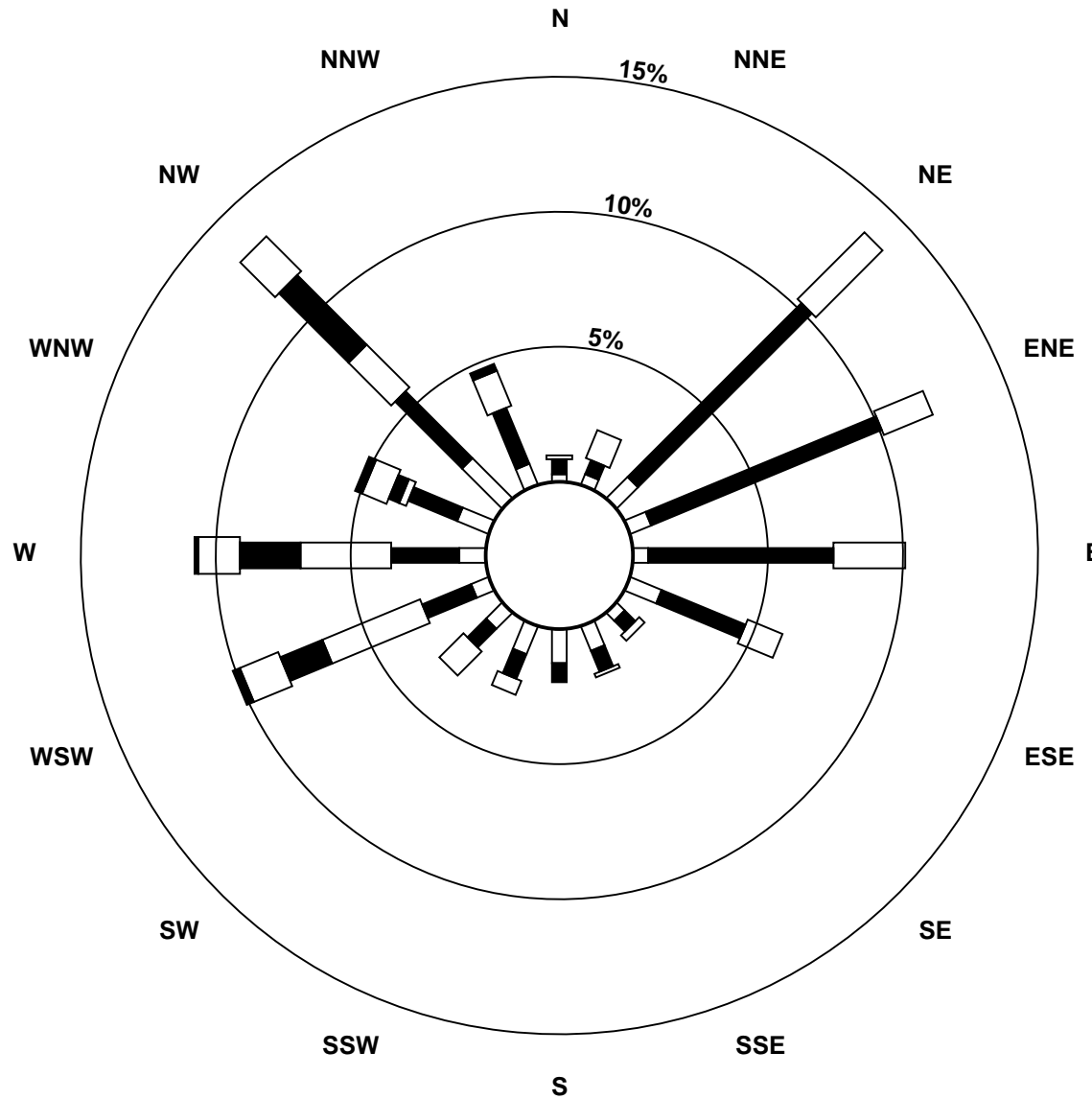
Wind Speed (km/h)  
Wind Direction (deg)  
Henry Pirker - April 2013

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	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	6	7	10	7	7	5	12	17	22	22	21	25	26	23	24	21	17	13	7	3	3	4	7	12.4	25.6
Dir	238	312	303	321	310	310	298	313	314	307	308	311	309	312	307	306	313	315	321	309	305	217	208	239	307.4	312.5
24 Spd	6	10	9	10	8	7	9	6	9	15	21	24	25	17	8	4	6	6	23	21	21	20	14	13	11.6	25.2
Dir	277	256	286	291	281	271	272	280	264	275	267	279	270	263	321	197	171	140	253	246	248	243	233	233	260.1	270.1
25 Spd	13	14	16	21	22	23	27	30	32	30	29	35	33	38	36	37	36	26	15	11	7	5	14	8	22.8	37.7
Dir	243	251	254	257	253	253	256	253	253	258	255	253	271	279	264	265	265	264	248	235	228	214	241	245	257.5	279.3
26 Spd	11	13	13	12	18	19	10	14	20	32	39	43	33	37	34	32	34	32	28	25	18	14	17	15	22.9	43.4
Dir	258	249	259	251	247	257	276	268	259	257	256	255	260	261	261	247	251	246	246	246	227	223	218	210	250.9	255.1
27 Spd	13	14	10	11	11	6	7	9	17	27	30	31	26	37	42	49	45	30	27	20	11	5	2	3	14.0	48.8
Dir	198	201	200	192	192	117	158	165	208	241	242	251	266	268	274	287	286	312	336	348	339	306	254	169	265.4	286.5
28 Spd	3	5	6	11	8	8	7	8	6	5	10	8	18	17	18	19	22	15	7	3	2	2	4	18	4.5	22.0
Dir	150	88	124	116	106	119	91	114	129	164	241	261	254	259	227	235	260	289	270	325	160	105	201	272	231.3	260.0
29 Spd	13	13	13	13	16	15	18	29	33	36	37	35	35	34	30	29	27	26	24	21	20	16	14	13	22.2	36.8
Dir	273	239	275	273	258	260	279	296	295	304	310	309	304	309	307	311	308	306	308	313	315	321	325	321	300.7	309.8
30 Spd	11	8	9	9	5	5	7	5	6	6	5	3	4	3	1	2	2	1	4	8	9	11	8	8	1.4	11.1
Dir	317	314	314	320	308	310	320	336	277	274	271	254	260	221	98	8	348	290	193	116	108	109	112	123	313.1	109.0
Spd	1.0	0.1	1.0	2.2	2.2	2.2	2.7	3.0	3.8	5.9	6.5	7.1	7.6	7.5	7.0	7.0	6.6	5.4	4.4	2.6	1.1	0.6	0.3	0.7	Diurnal Average	
Dir	356.3	187.2	315.8	315.4	305.9	302.5	306.9	301.4	284.5	291.1	294.0	298.4	303.3	308.4	312.4	313.0	318.1	332.5	329.3	334.0	336.5	96.4	55.9	18.4	Diurnal Maximum	
Spd	24.9	22.8	16.2	21.5	30.6	31.4	32.0	31.9	33.8	36.1	39.4	43.4	34.7	37.7	41.7	48.8	44.6	32.1	27.9	24.8	21.3	20.4	23.5	25.3	Diurnal Maximum	
Dir	256.3	262.5	254.0	307.4	307.5	298.6	299.3	299.9	303.9	304.2	256.0	255.1	304.0	279.3	273.7	286.5	286.0	245.6	245.6	246.1	248.3	243.2	316.0	314.4	Diurnal Maximum	
Maximum Speed Value: 49 km/h on Apr 27 16:00		Minimum Speed Value: 1 km/h on Apr 18 06:00										Hours in Service: 720														
Maximum Daily Speed Average: 22.9 km/h on Apr 26		Minimum Daily Speed Average: 1.4 km/h on Apr 21										Hours of Data: 720														
Maximum Diurnal Speed Average: 7.6 km/h at hour 13		Minimum Diurnal Speed Average: 0.1 km/h at hour 2										Hours of Missing Data: 0														
Monthly Average Velocity: 3.49 km/h 310.07 deg		Speed Percentiles: P <sub>1</sub> = 1.4 P <sub>10</sub> = 4.0 Q <sub>1</sub> = 6.6 Median = 9.9 Q <sub>3</sub> = 14.4 P <sub>90</sub> = 22.8 P <sub>99</sub> = 36.7										Percent Operational Time: 100.0														
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	6	11	13	2	0	0	32																			
NorthEast	13	103	43	0	0	0	159																			
East	7	74	42	0	0	0	123																			
SouthEast	11	20	7	0	0	0	38																			
South	17	15	2	0	0	0	34																			
SouthWest	11	16	17	6	3	0	53																			
West	14	32	48	23	21	5	143																			
NorthWest	21	45	23	29	20	0	138																			
Total	100	316	195	60	44	5	720																			

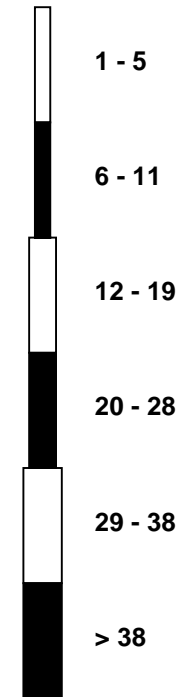
**Wind Rose**

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

**Henry Pirker - April 2013**



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



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - April 2013

Maximum Speed: 49 km/h on Apr 27 16:00	Maximum Daily Speed Average: 23.8 km/h on Apr 26	Hours in Service: 720
Minimum Speed: 1 km/h on Apr 20 03:00	Minimum Daily Speed Average: 6.3 km/h on Apr 16	Hours of Data: 720
Maximum Diurnal Speed Average: 17.4 km/h at hour 14	Minimum Diurnal Speed Average: 8.5 km/h at hour 3	Hours of Missing Data: 0
Monthly Average Speed: 12.42 km/h	Percentiles: P <sub>1</sub> = 3.1 P <sub>10</sub> = 5.2 Q <sub>1</sub> = 7.2 Median = 10.2 Q <sub>3</sub> = 14.7 P <sub>90</sub> = 23.4 P <sub>99</sub> = 38.0	Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	9	8	8	9	10	10	12	12	13	13	11	12	13	13	12	11	9	8	7	7	9	4	7	6	9.7	13.4
2-Apr	4	6	5	3	5	8	10	13	13	18	16	21	30	28	32	24	19	17	11	6	4	5	5	10	13.1	32.4
3-Apr	6	4	4	4	5	4	5	4	7	8	8	8	7	7	9	10	11	12	9	8	9	10	11	10	7.5	11.8
4-Apr	9	10	8	9	6	4	5	3	5	4	5	8	7	10	9	12	14	15	23	23	20	16	16	13	10.6	22.9
5-Apr	13	12	12	11	12	12	10	10	8	9	8	8	7	8	7	8	7	6	7	6	7	7	7	8	8.8	13.0
6-Apr	6	6	6	7	7	7	7	8	8	8	10	10	9	11	12	13	13	13	11	10	9	7	7	8	8.9	13.0
7-Apr	8	8	7	7	8	8	9	8	9	9	10	11	13	11	12	13	14	10	10	8	7	5	7	10	9.3	14.2
8-Apr	11	11	10	10	10	12	13	13	11	10	10	13	15	15	16	14	14	14	12	11	10	11	11	12	12.0	15.6
9-Apr	11	12	13	11	9	8	9	11	9	9	7	10	10	9	13	9	6	5	6	3	4	5	5	6	8.2	13.0
10-Apr	8	9	11	10	10	11	13	11	11	11	8	9	14	13	13	18	16	15	17	18	17	15	15	16	12.8	18.4
11-Apr	25	23	16	18	18	18	17	21	24	29	25	30	23	20	18	11	8	8	5	5	4	4	5	4	15.8	29.6
12-Apr	3	3	3	4	6	7	8	9	12	13	15	16	16	15	16	16	16	16	15	12	13	15	17	14	11.7	16.6
13-Apr	14	15	10	9	10	11	11	12	13	15	15	16	16	16	14	14	12	11	13	9	8	10	9	10	12.1	15.9
14-Apr	12	10	9	8	9	7	8	10	11	13	9	9	10	12	11	11	13	13	11	9	8	9	9	9	10.0	13.2
15-Apr	11	11	10	9	10	11	10	10	10	11	12	13	12	14	15	14	13	11	13	10	8	7	6	5	10.7	15.1
16-Apr	7	5	3	5	6	4	4	5	8	7	7	8	8	9	9	7	8	8	7	5	4	4	6	7	6.3	8.6
17-Apr	4	3	2	4	4	2	2	4	6	6	6	8	8	14	17	21	18	20	20	17	11	12	15	9	9.8	20.9
18-Apr	5	7	11	12	9	3	6	7	8	9	7	10	13	11	12	12	11	13	12	11	10	11	12	11	9.6	12.9
19-Apr	12	11	8	4	5	4	5	8	8	6	13	14	12	14	13	12	16	14	9	7	12	8	24	25	11.0	25.4
20-Apr	22	1	1	22	31	32	32	32	34	32	32	32	28	27	22	19	19	12	12	9	7	7	11	9	20.2	34.0
21-Apr	7	8	6	6	6	6	5	6	7	8	8	7	8	9	8	7	5	7	5	3	6	6	5	4	6.3	9.4
22-Apr	5	6	6	6	7	8	9	11	13	19	23	22	22	18	19	19	19	14	8	5	6	7	7	8	12.0	22.5
23-Apr	4	6	7	10	7	7	6	12	17	22	22	22	25	26	23	24	22	17	13	7	3	3	4	7	13.2	25.8
24-Apr	7	10	10	11	8	8	9	7	9	15	21	24	26	19	10	5	6	7	23	21	21	21	14	13	13.6	25.8
25-Apr	13	14	16	21	22	23	27	30	32	30	30	35	34	38	36	37	36	27	15	11	7	5	14	8	23.5	38.1
26-Apr	11	13	14	12	18	20	11	14	20	32	40	44	33	38	35	32	34	33	28	25	19	14	17	15	23.8	43.7
27-Apr	13	14	10	11	11	6	7	10	18	28	30	31	29	38	43	49	45	31	27	20	11	6	4	3	20.7	49.3
28-Apr	4	5	7	11	10	8	7	8	6	6	10	9	19	18	18	20	23	15	8	4	3	4	6	19	10.3	23.1
29-Apr	15	13	13	14	17	15	19	29	33	37	37	35	35	34	31	29	28	26	24	21	20	16	14	13	23.7	37.2
30-Apr	11	8	9	9	6	5	7	5	6	7	7	6	7	6	7	6	6	6	6	9	10	11	8	8	7.4	11.2
	9.7	9.1	8.5	9.6	10.1	9.6	10.1	11.4	13.0	14.9	15.5	16.7	17.0	17.4	17.0	16.7	16.1	14.1	12.9	10.7	9.5	8.8	9.9	10.0	Diurnal Average	
	25.1	23.3	16.3	21.6	30.8	31.7	32.2	32.0	34.0	36.7	39.7	43.7	35.1	38.1	42.5	49.3	45.2	32.6	28.1	25.1	21.4	20.5	23.6	25.4	Diurnal Maximum	

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

# Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - April 2013

Maximum Value: 97.1 deg on Apr 18 06:00																		Hours in Service: 720							
Minimum Value: 4.4 deg on Apr 25 04:00																		Hours of Data: 720							
Percentiles: P <sub>1</sub> = 5.0 P <sub>10</sub> = 6.6 Q <sub>1</sub> = 8.6 Median = 13.2 Q <sub>3</sub> = 19.1 P <sub>90</sub> = 36.5 P <sub>99</sub> = 89.0																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	5	15	7	8	6	7	6	7	8	10	12	10	10	12	12	9	11	17	23	45	79	92	31	71	91.9
2-Apr	89	75	63	72	81	49	36	6	5	9	8	7	6	5	5	8	11	11	9	22	19	21	29	18	89.4
3-Apr	27	31	23	20	23	42	29	32	19	22	23	21	28	31	22	13	14	14	17	10	10	7	6	6	42.0
4-Apr	7	8	8	12	15	15	60	38	30	77	39	12	28	25	23	25	15	33	5	5	6	32	9	12	77.4
5-Apr	8	11	9	9	12	9	12	16	16	17	20	23	26	20	24	25	26	26	19	15	13	15	15	14	25.8
6-Apr	18	19	14	16	16	13	14	16	15	13	18	22	19	16	13	14	19	14	12	13	14	17	20	15	21.9
7-Apr	20	16	18	19	16	15	14	12	16	13	15	13	16	14	16	14	14	13	13	15	13	13	9	9	19.9
8-Apr	8	10	9	8	7	7	6	7	11	9	14	16	9	10	10	10	10	9	8	7	6	7	5	5	15.7
9-Apr	6	5	5	5	11	6	8	7	10	15	27	17	9	29	10	79	91	74	44	91	63	54	78	13	91.4
10-Apr	12	7	8	11	8	11	5	9	7	37	18	35	13	12	12	7	9	11	8	6	6	7	7	8	37.4
11-Apr	6	12	8	6	6	6	6	7	8	6	6	7	9	12	14	24	13	23	31	39	89	51	53	41	89.2
12-Apr	37	20	30	10	9	9	8	8	8	8	9	11	11	14	12	17	10	8	7	8	7	8	7	7	36.5
13-Apr	6	9	12	12	12	12	13	20	14	14	12	13	14	13	16	15	12	18	17	13	13	23	14	14	23.1
14-Apr	14	11	16	18	15	19	13	13	13	10	17	17	21	19	19	16	14	14	13	15	13	14	15	15	21.4
15-Apr	12	13	13	14	15	14	14	13	16	14	18	17	18	13	12	19	15	15	14	11	14	16	16	19	19.2
16-Apr	13	52	32	19	14	35	30	32	18	17	35	26	26	26	30	30	18	18	22	18	13	10	10	6	51.6
17-Apr	22	44	24	52	15	37	64	7	22	31	21	31	22	26	14	9	8	13	9	18	9	14	9	27	64.0
18-Apr	10	17	12	16	13	97	12	11	14	12	54	20	13	15	15	12	12	11	11	10	12	14	11	12	97.1
19-Apr	9	7	9	54	31	80	21	17	18	25	13	28	14	12	10	13	16	15	41	23	83	33	6	5	83.0
20-Apr	6	6	6	6	6	7	6	6	6	6	7	7	8	7	18	16	22	17	17	21	5	6	7	5	21.6
21-Apr	6	8	7	10	7	6	8	18	22	18	30	37	44	37	38	72	51	46	20	80	7	6	11	21	79.5
22-Apr	29	11	10	19	11	11	10	12	11	15	7	10	12	14	14	11	12	13	15	46	8	12	8	13	45.9
23-Apr	50	24	11	17	14	6	13	7	6	7	8	9	9	8	11	10	8	8	9	9	21	34	19	10	50.1
24-Apr	42	17	25	15	16	27	11	15	16	14	11	13	13	22	46	46	19	39	9	7	6	7	7	6	45.8
25-Apr	8	7	5	4	6	5	6	6	7	8	12	8	14	8	9	8	8	7	8	8	11	27	7	17	26.6
26-Apr	15	10	13	14	9	12	28	14	12	9	8	8	11	12	11	8	8	10	8	8	8	8	6	11	28.3
27-Apr	7	8	10	14	9	23	12	12	18	15	12	10	25	13	11	8	10	14	12	9	24	45	63	43	63.0
28-Apr	36	14	39	8	51	14	20	11	23	35	20	32	16	18	16	16	18	11	25	55	43	64	45	19	64.4
29-Apr	29	9	14	10	6	8	21	7	8	11	8	9	9	9	8	9	10	9	9	7	7	6	6	6	29.1
30-Apr	5	5	7	7	11	11	10	36	27	37	64	73	74	78	90	87	80	85	56	19	9	7	9	11	89.6
89.4	74.9	63.0	71.9	80.5	97.1	64.0	38.0	30.5	77.4	63.6	72.8	74.2	77.8	89.6	86.9	91.4	84.9	55.7	90.9	89.2	91.9	77.9	70.9		

PAZA

Evergreen Park Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

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

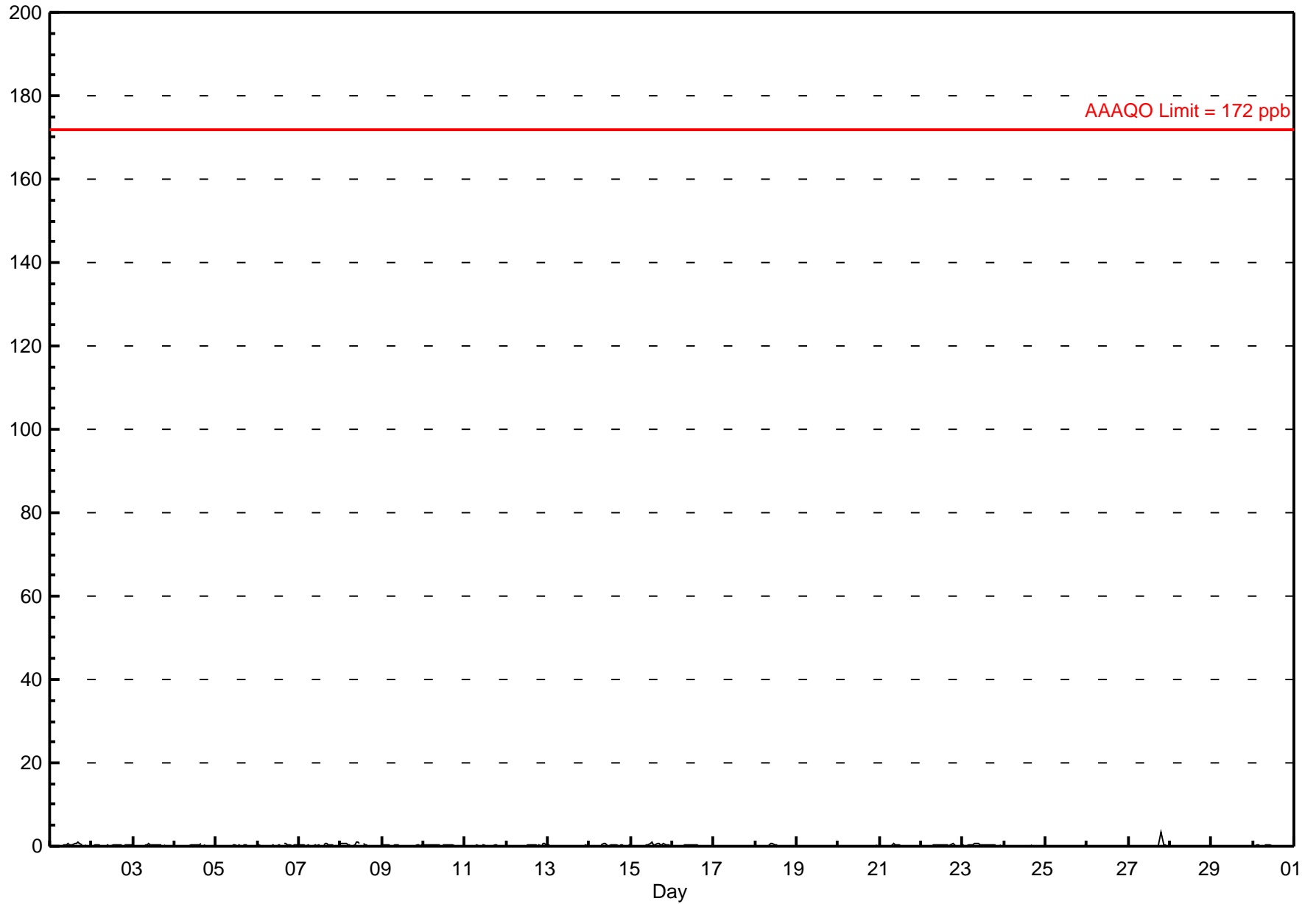
Evergreen Park - April 2013

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 3.4 ppb on Apr 27 20:00	Maximum Daily Average: 0.4 ppb on Apr 8		Hours of Data:	685
Minimum Value: 0 ppb on Apr 1 03:00	Minimum Daily Average: 0.0 ppb on Apr 28		Hours of Missing Data:	35
Maximum Diurnal Average: 0.3 ppb at hour 20	Minimum Diurnal Average: 0.1 ppb at hour 7		Hours of Calibration:	35
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> = 0.3 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-Apr	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	0	A	0	0	0	0	0.3	0.9
2-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4
3-Apr	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.5
4-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0.1	0.6
5-Apr	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	0.3
6-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0.2	0.6
7-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0.2	0.8
8-Apr	1	1	1	1	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
9-Apr	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
10-Apr	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
11-Apr	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
12-Apr	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2	0.8
13-Apr	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
14-Apr	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
15-Apr	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	1	1	0	0	1	0	0	0	0	0.3	0.9
16-Apr	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
17-Apr	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	0.2
18-Apr	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
19-Apr	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
20-Apr	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	0.2
21-Apr	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.6
22-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0.2	0.5
23-Apr	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.8
24-Apr	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	A	0	0	0	0	0.0	0.2
25-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.2
26-Apr	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
27-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	2	3	0	0	0	0	0.3	3.4
28-Apr	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-Apr	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	0.2
30-Apr	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

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	0.3	0.1	0.1	0.1	0.1	Diurnal Average
0.8	0.7	0.7	0.6	0.4	0.3	0.3	0.7	0.8	0.9	0.8	0.7	0.9	0.7	0.7	0.8	0.9	0.8	1.8	3.4	0.4	0.8	0.7	0.5	0.1	Diurnal Maximum	

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





## Hourly Maximums

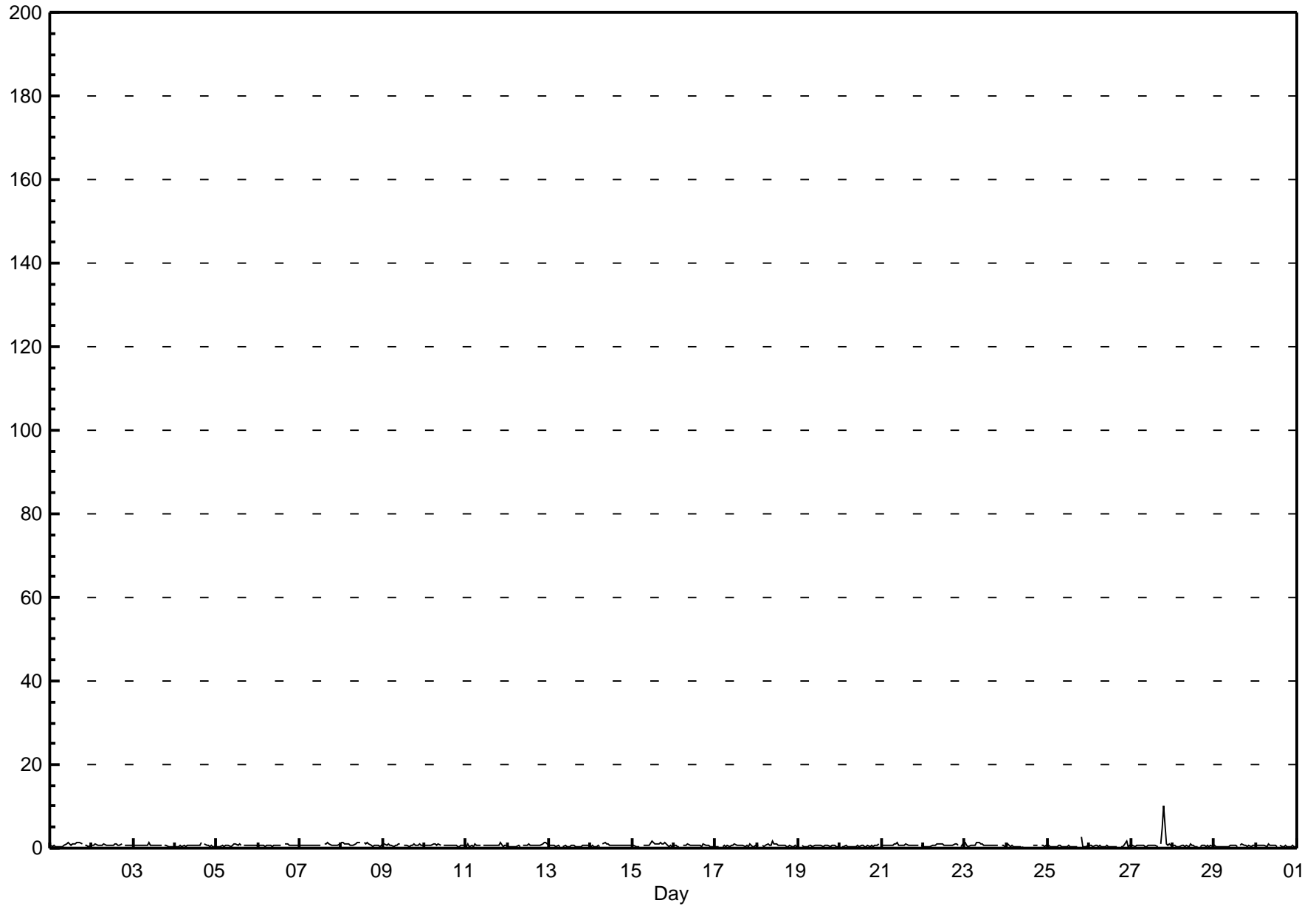
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Evergreen Park - April 2013

Maximum Value: 10.3 ppb on Apr 27 20:00		Maximum Daily Average: 1.2 ppb on Apr 27		Hours in Service: 720																							
Minimum Value: 0 ppb on Apr 24 10:00		Minimum Daily Average: 0.5 ppb on Apr 24		Hours of Data: 685																							
Maximum Diurnal Average: 1.1 ppb at hour 20		Minimum Diurnal Average: 0.5 ppb at hour 5		Hours of Missing Data: 35																							
Monthly Average: 0.67 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> = 1.5		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	1	0	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	0.8	1.4	
2-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.1	
3-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	0	0	0.6	1.2	
4-Apr	0	1	0	1	0	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	0	0.6	1.2	
5-Apr	0	0	0	1	0	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.6	1.0	
6-Apr	0	1	1	1	0	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.2	
7-Apr	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3	
8-Apr	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	0.9	1.5	
9-Apr	1	1	1	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1	
10-Apr	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0.7	1.1	
11-Apr	0	1	0	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.6	1.3	
12-Apr	1	0	1	0	0	0	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3	
13-Apr	1	1	1	1	0	1	0	A	0	1	1	0	0	1	1	0	0	0	0	1	1	1	1	1	0.5	0.8	
14-Apr	1	1	0	0	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3	
15-Apr	1	1	1	0	0	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0	0.8	1.5	
16-Apr	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	0	0.6	0.9	
17-Apr	0	0	0	A	0	1	0	1	0	1	1	1	1	1	1	1	0	1	0	1	0	0	1	0	0.5	1.0	
18-Apr	1	1	A	1	0	1	1	1	1	2	1	1	1	1	1	1	0	0	1	0	0	1	0	0	0.7	1.6	
19-Apr	0	A	1	0	0	0	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	0	0.5	0.7	
20-Apr	A	0	1	1	0	0	0	1	0	0	1	0	1	1	0	1	0	1	0	1	0	1	1	A	0.5	1.1	
21-Apr	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	1.2	
22-Apr	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	0.8	1.4	
23-Apr	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0.8	1.4	
24-Apr	0	1	0	1	0	0	0	0	0	0	C	C	C	C	1	1	1	1	A	1	1	0	1	0.5	0.9		
25-Apr	1	0	0	1	0	0	1	1	0	0	0	0	1	0	0	1	0	0	A	3	0	1	0	1	0.6	2.7	
26-Apr	1	1	0	1	1	0	1	1	0	0	1	0	0	0	0	0	0	A	0	0	1	2	0	1	0.5	1.8	
27-Apr	0	1	0	1	1	1	1	1	0	0	1	1	1	1	1	0	A	1	5	10	1	1	1	1	1.2	10.3	
28-Apr	1	1	0	0	0	1	1	0	1	0	1	1	1	0	0	A	0	1	1	0	1	0	1	0	0.5	0.9	
29-Apr	1	0	0	0	0	0	0	0	0	1	1	1	1	0	A	1	1	1	1	0	1	0	1	1	0.5	1.0	
30-Apr	1	1	1	1	1	1	0	1	1	1	1	1	0	A	1	0	0	1	0	0	0	1	0	0	0.6	0.9	
		0.6	0.6	0.5	0.6	0.5	0.6	0.6	0.6	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	1.1	0.6	0.6	0.6	0.6	Diurnal Average	
		1.3	1.3	1.0	1.1	1.0	1.1	0.9	1.4	1.3	1.6	1.3	1.5	1.5	1.3	1.1	1.2	1.4	1.4	4.8	10.3	1.3	1.8	1.3	1.4	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

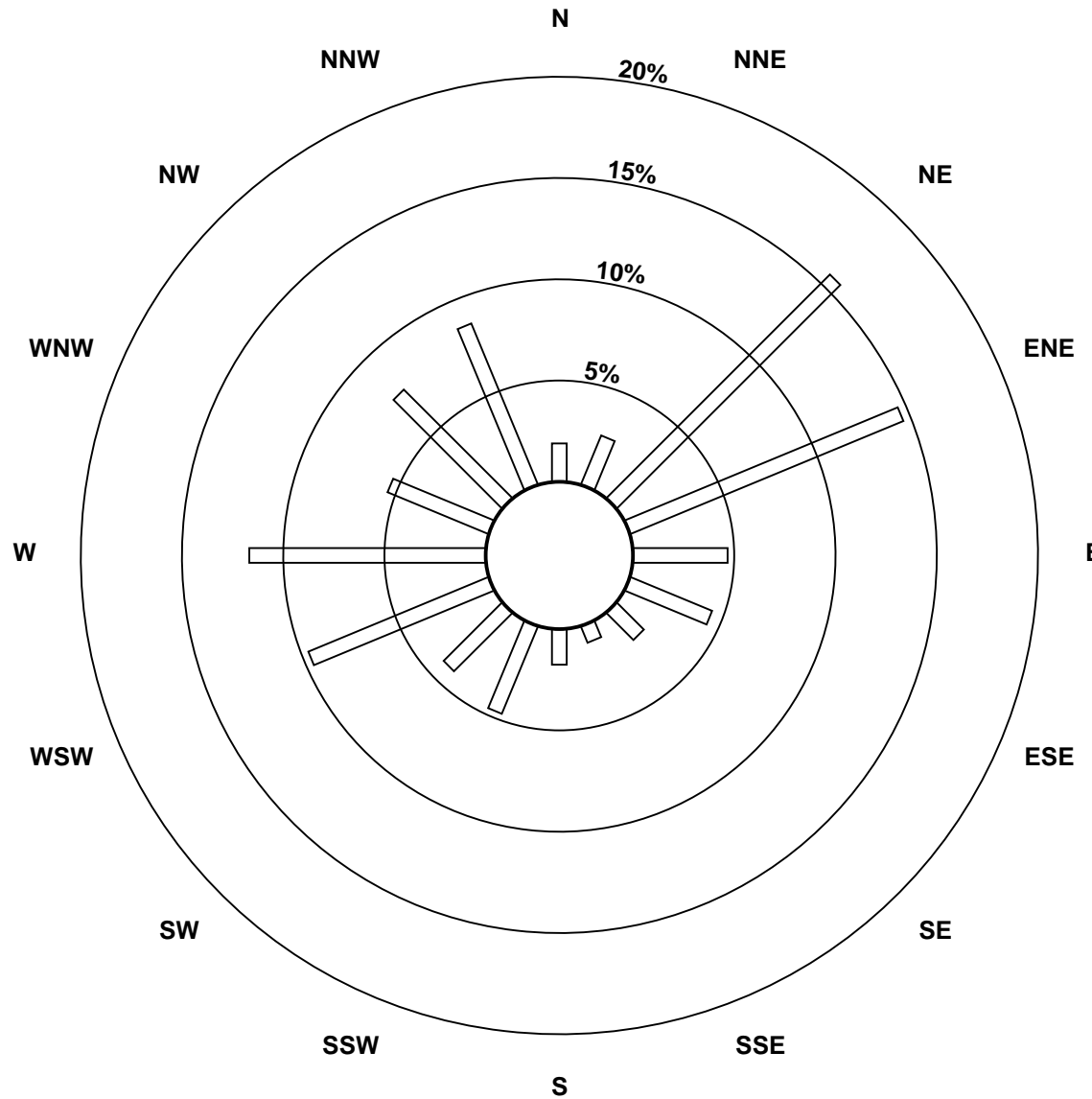
### Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Evergreen Park - April 2013

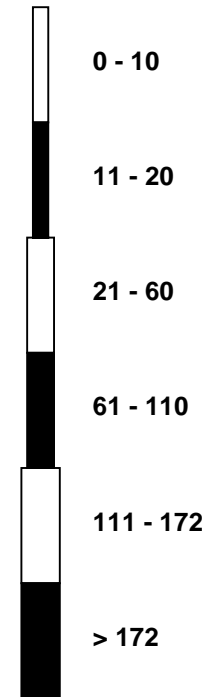


**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Evergreen Park - April 2013**

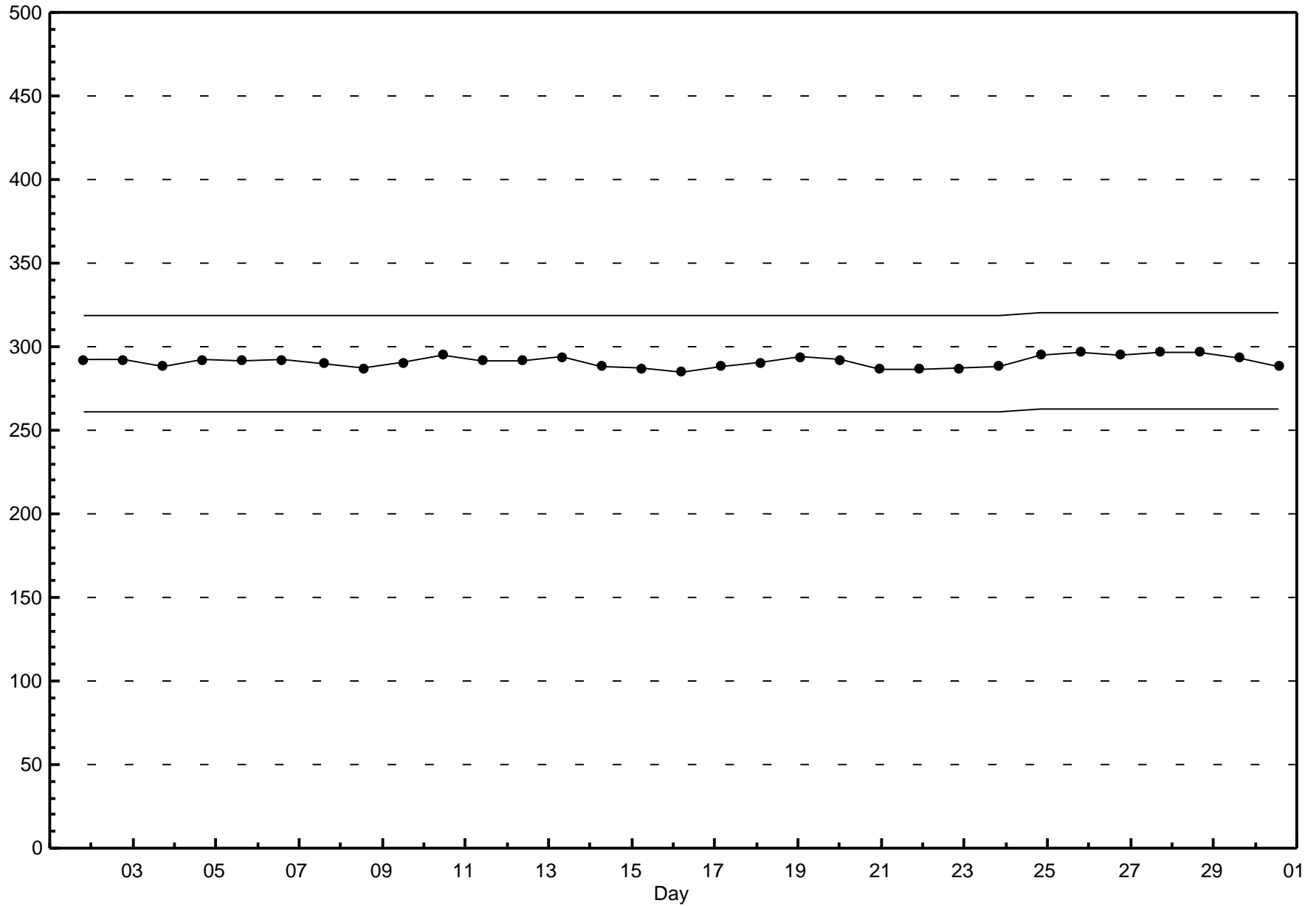


**Pollutant Classes (ppb)**



### Span Responses

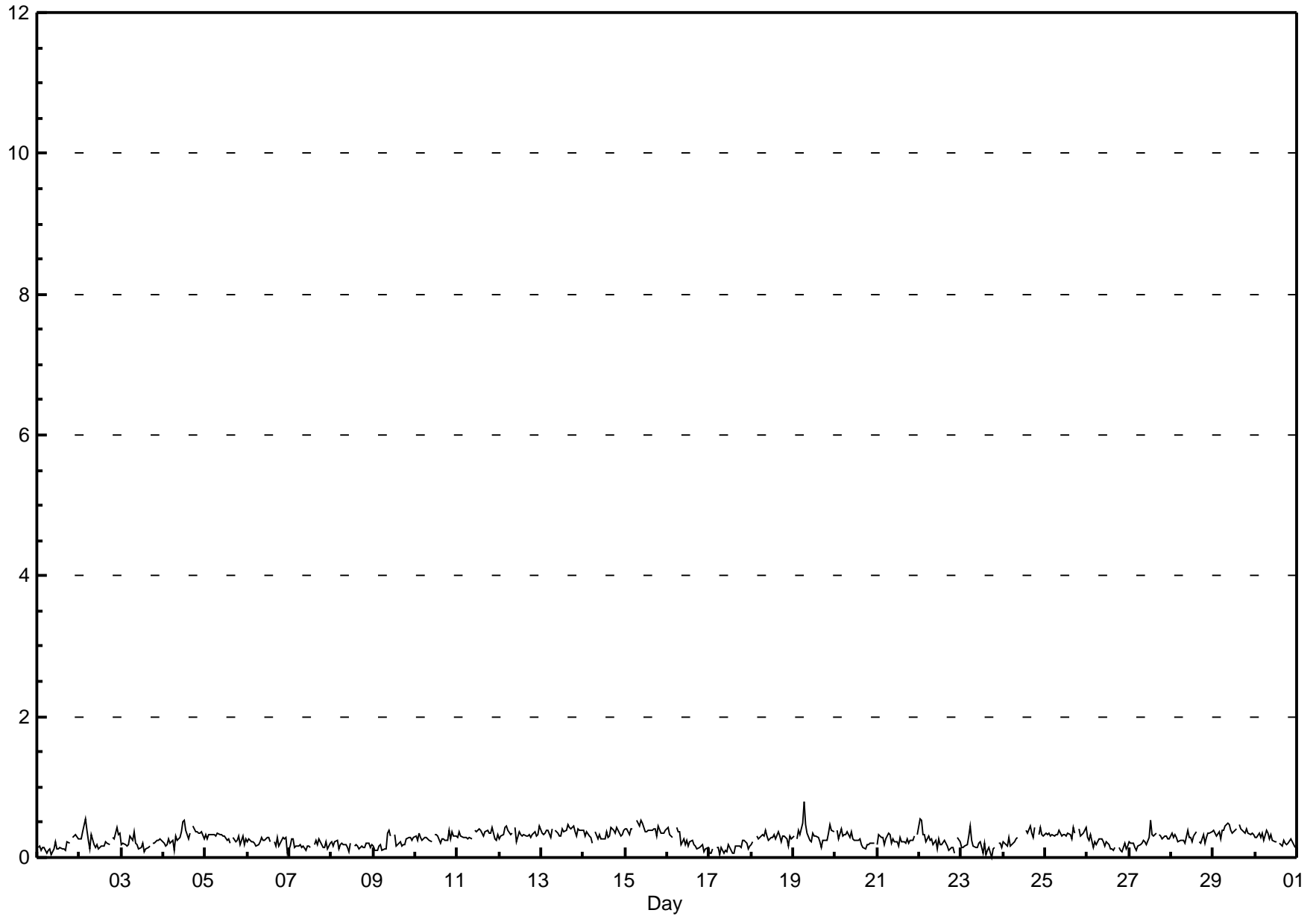
Sulphur Dioxide (SO<sub>2</sub>)  
Evergreen Park - April 2013



## Hourly Averages

**Total Reduced Sulphur (TRS) - ppb**  
**Evergreen Park - April 2013**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.8 ppb on Apr 19 07:00 Maximum Daily Average: 0.4 ppb on Apr 15		Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0																									
Minimum Value: 0 ppb on Apr 23 18:00 Maximum Diurnal Average: 0.3 ppb at hour 22 Monthly Average: 0.26 ppb		Minimum Daily Average: 0.1 ppb on Apr 17 Minimum Diurnal Average: 0.2 ppb at hour 15 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> = 0.3 P <sub>90</sub> = 0.4 P <sub>99</sub> = 0.5																									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	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	0.3
2-Apr	0	0	0	1	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
3-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.4
4-Apr	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.5
5-Apr	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	0.3	0.4
6-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.3
7-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.3
8-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.3
9-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.4
10-Apr	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	0.3	0.4
11-Apr	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	0.3	0.4
12-Apr	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	0.4
13-Apr	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	0.4	0.5
14-Apr	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	0.3	0.4
15-Apr	0	0	0	0	0	A	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
16-Apr	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	0.2	0.4
17-Apr	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	0.2
18-Apr	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
19-Apr	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
20-Apr	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
21-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3
22-Apr	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
23-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4
24-Apr	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.4
25-Apr	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	0.3	0.4
26-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.3
27-Apr	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	0.3	0.5
28-Apr	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	0.3	0.4
29-Apr	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	0.4	0.5
30-Apr	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	0.3	0.4
0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.3 0.3 0.3 0.2 0.3 0.2 0.3 0.2 0.3 0.2 0.3 0.3 0.3 0.3 0.3 0.6 0.5 0.4 0.5 0.4 0.5 0.8 0.5 0.5 0.5 0.5 0.5 0.5 0.4 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.4 0.4 0.5 0.4 0.4																										Diurnal Average	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

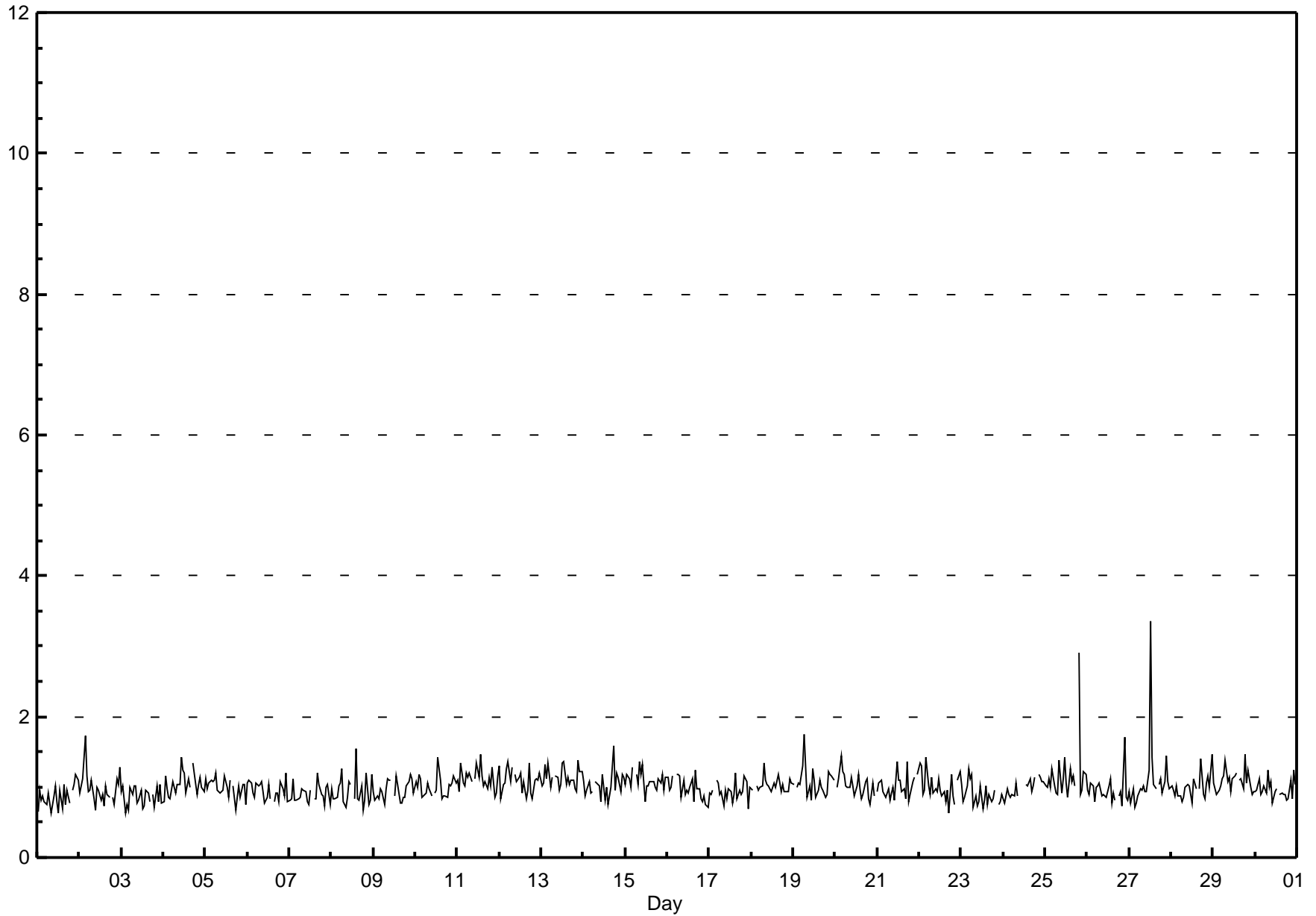
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - April 2013

Maximum Value: 3.3 ppb on Apr 27 13:00		Maximum Daily Average: 1.2 ppb on Apr 25		Hours in Service: 720																							
Minimum Value: 1 ppb on Apr 3 03:00		Minimum Daily Average: 0.9 ppb on Apr 3		Hours of Data: 685																							
Maximum Diurnal Average: 1.1 ppb at hour 13		Minimum Diurnal Average: 1.0 ppb at hour 16		Hours of Missing Data: 35																							
Monthly Average: 1.01 ppb		Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 0.9 Median = 1.0 Q <sub>3</sub> = 1.1 P <sub>90</sub> = 1.2 P <sub>99</sub> = 1.5		Hours of Calibration: 35																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	1.2	
2-Apr	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.7	
3-Apr	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	1.0	
4-Apr	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	
5-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.0	1.2	
6-Apr	1	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	1.2	
7-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	1.2	
8-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	0.9	1.5	
9-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2	
10-Apr	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4	
11-Apr	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5	
12-Apr	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4	
13-Apr	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4	
14-Apr	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1.0	1.6	
15-Apr	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4	
16-Apr	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2	
17-Apr	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2	
18-Apr	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	1.3	
19-Apr	1	A	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.7	
20-Apr	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4	
21-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4	
22-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.4	
23-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.3	
24-Apr	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	A	1	1	1	1.0	1.2	
25-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	1	1	1	1.2	2.9	
26-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	1	1	0.9	1.7	
27-Apr	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	A	1	1	1	1	1	1	1.1	3.3	
28-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.0	1.5	
29-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.1	1.5	
30-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.2	
		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.0	Diurnal Average		
		1.3	1.3	1.3	1.7	1.4	1.4	1.7	1.4	1.4	1.2	1.4	1.4	3.3	1.5	1.5	1.2	1.2	1.6	1.5	2.9	1.3	1.7	1.2	1.5	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

**Hourly Maximums**

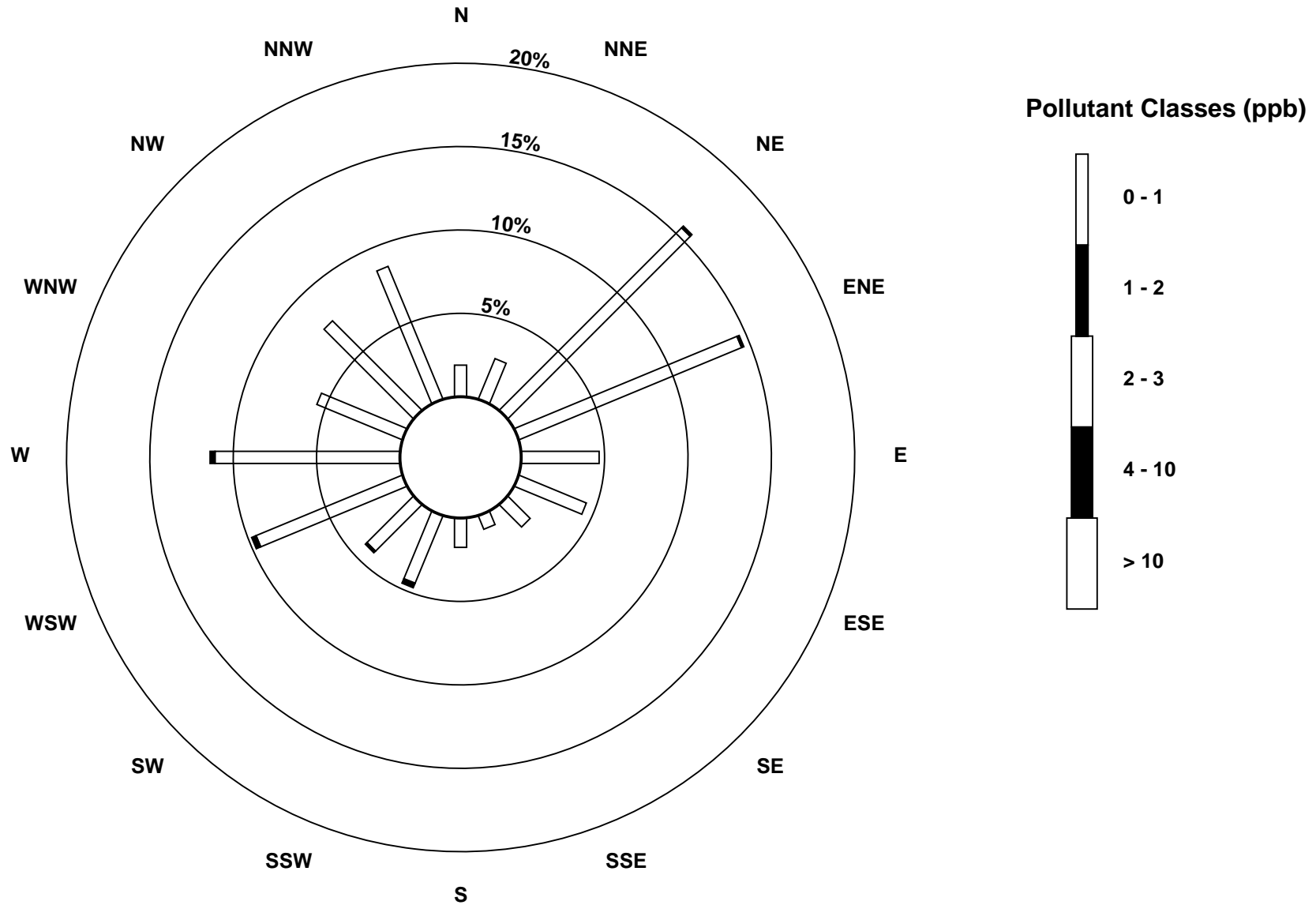
**Total Reduced Sulphur (TRS) - ppb**  
**Evergreen Park - April 2013**





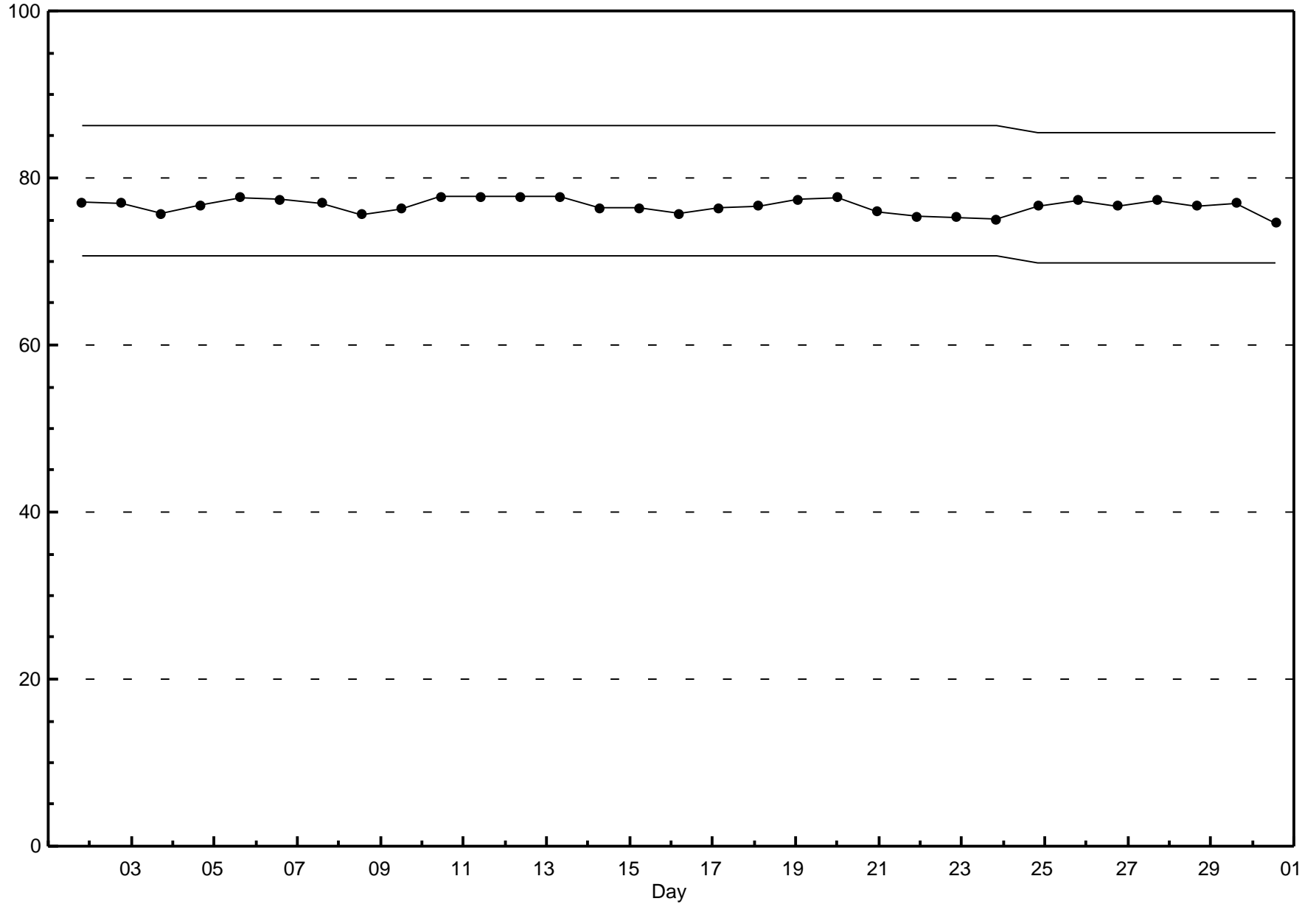
**Pollutant Rose**

**Total Reduced Sulphur (TRS) - ppb**  
**Evergreen Park - April 2013**



**Span Responses**

**Total Reduced Sulphur (TRS)  
Evergreen Park - April 2013**



## Hourly Averages

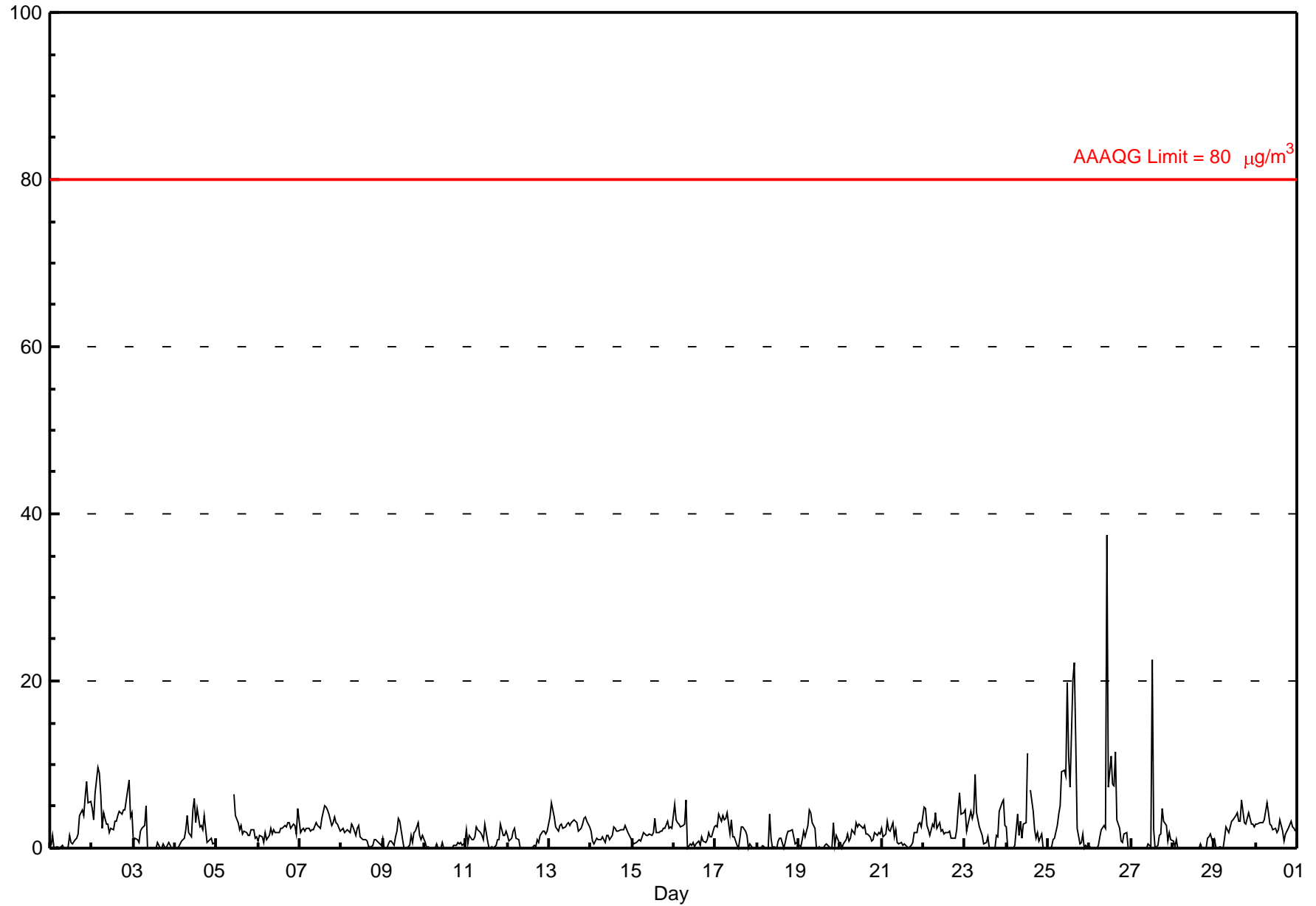
## Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

### Evergreen Park - April 2013

Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 720
Maximum Value: 37.5 µg/m <sup>3</sup> on Apr 26 11:00	Maximum Daily Average: 5.8 µg/m <sup>3</sup> on Apr 25
Minimum Value: 0 µg/m <sup>3</sup> on Apr 1 03:00	Hours of Data: 709
Minimum Daily Average: 0.2 µg/m <sup>3</sup> on Apr 10	Hours of Missing Data: 11
Maximum Diurnal Average: 3.2 µg/m <sup>3</sup> at hour 11	Hours of Calibration: 0
Monthly Average: 2.06 µg/m <sup>3</sup>	Percent Operational Time: 98.5
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.5 Median = 1.6 Q <sub>3</sub> = 2.7 P <sub>90</sub> = 4.2 P <sub>99</sub> = 10.8	

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-Apr	0	1	0	0	0	0	0	0	0	0	0	2	1	1	1	1	2	4	5	4	6	8	5	6	2.0	8.0
2-Apr	5	3	7	10	9	6	2	4	3	3	2	2	2	3	3	4	4	4	5	5	6	8	4	4	4.5	9.7
3-Apr	1	1	1	1	2	2	3	5	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0.8	5.1
4-Apr	0	0	0	1	1	1	2	4	2	1	5	6	3	5	3	3	2	4	1	1	1	1	1	1	1.9	5.9
5-Apr	N	N	N	N	N	N	N	N	N	N	7	4	3	2	3	2	2	2	2	2	2	2	1	1	--	6.5
6-Apr	1	2	1	1	2	1	1	2	2	2	2	2	2	2	3	3	3	3	3	2	3	3	2	5	2.1	4.7
7-Apr	2	2	2	2	2	2	2	2	2	3	3	3	2	4	5	5	5	4	3	3	4	3	3	2	2.9	5.0
8-Apr	2	2	2	2	2	2	3	3	2	2	3	1	1	1	1	0	0	0	1	1	1	1	0	0	1.4	2.9
9-Apr	1	0	0	1	1	1	0	1	2	4	3	1	0	0	0	0	2	1	2	2	3	1	1	1	1.2	3.6
10-Apr	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	1	0.2	0.7
11-Apr	2	1	1	1	1	1	3	2	2	2	1	3	1	0	0	0	0	0	1	1	3	1	2	2	1.3	2.9
12-Apr	2	1	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2	2	2	2	2	0.9	2.3
13-Apr	4	5	5	4	2	2	3	3	2	3	3	3	3	3	3	3	3	2	2	3	4	4	3	2	3.1	5.4
14-Apr	2	1	1	1	1	1	1	1	1	2	1	1	2	2	2	2	2	2	2	2	3	2	2	1	1.6	2.8
15-Apr	1	0	1	1	1	1	2	2	2	1	2	2	2	4	2	2	2	2	2	2	3	2	2	2	1.8	3.6
16-Apr	5	3	3	3	2	3	3	6	0	1	0	1	0	1	1	0	1	1	1	1	2	1	1	3	1.8	5.8
17-Apr	3	3	4	3	4	3	3	4	2	3	1	1	0	0	1	3	3	2	1	0	1	0	0	0	1.9	4.2
18-Apr	0	0	0	0	0	0	0	4	1	0	0	0	1	1	0	1	2	2	2	2	1	1	1	1	0.8	4.1
19-Apr	0	0	1	2	1	3	5	4	3	2	0	0	0	0	0	0	0	0	0	0	3	0	1	1	1.2	4.6
20-Apr	1	0	0	1	2	1	1	2	2	3	3	3	3	2	3	2	2	1	1	1	2	2	2	2	1.6	3.0
21-Apr	2	1	2	3	2	2	3	1	2	1	0	1	0	0	0	0	0	0	1	2	2	3	3	3	1.5	3.1
22-Apr	5	5	3	2	2	3	2	4	2	3	2	2	2	2	2	1	1	1	1	2	5	7	4	4	2.8	6.6
23-Apr	5	2	3	4	4	4	9	4	3	2	1	1	1	1	0	0	0	0	2	1	4	5	6	3	2.7	8.8
24-Apr	3	0	0	0	0	0	4	2	3	1	3	3	11	M	7	4	2	1	2	1	2	0	0	0	2.1	11.4
25-Apr	0	0	0	1	1	3	4	5	9	9	9	20	11	7	20	22	13	2	0	1	2	0	0	0	5.8	22.2
26-Apr	0	0	0	0	0	0	1	2	3	2	38	7	11	8	8	12	3	2	1	1	2	2	0	0	4.3	37.5
27-Apr	0	0	0	0	0	0	0	0	0	0	1	0	23	2	0	0	2	2	5	3	3	1	2	1	1.8	22.6
28-Apr	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	0.3	1.7
29-Apr	1	0	0	0	0	0	1	2	2	2	3	3	4	4	3	3	6	3	3	4	4	3	3	3	2.4	5.8
30-Apr	3	3	3	3	3	3	5	4	3	3	2	2	2	2	3	2	1	2	2	2	3	2	2	2	2.7	5.3
1.8 1.3 1.5 1.7 1.7 1.7 2.3 2.6 1.8 1.9 3.2 2.5 3.0 2.0 2.5 2.6 2.1 1.7 1.7 1.7 2.6 2.3 1.8 1.8																								Diurnal Average		
5.2 5.4 6.6 9.7 8.9 6.4 8.8 5.8 9.2 9.3 37.5 19.9 22.6 7.6 20.2 22.2 12.8 4.0 4.7 4.5 6.1 8.1 5.7 5.6																								Diurnal Maximum		

M - Maintenance N - Not Valid  
 Alberta Ambient Air Quality Guideline (AAQG): 1-hr 80 µg/m<sup>3</sup> Alberta Ambient Air Quality Objective (AAQO): 24-hr 30 µg/m<sup>3</sup>

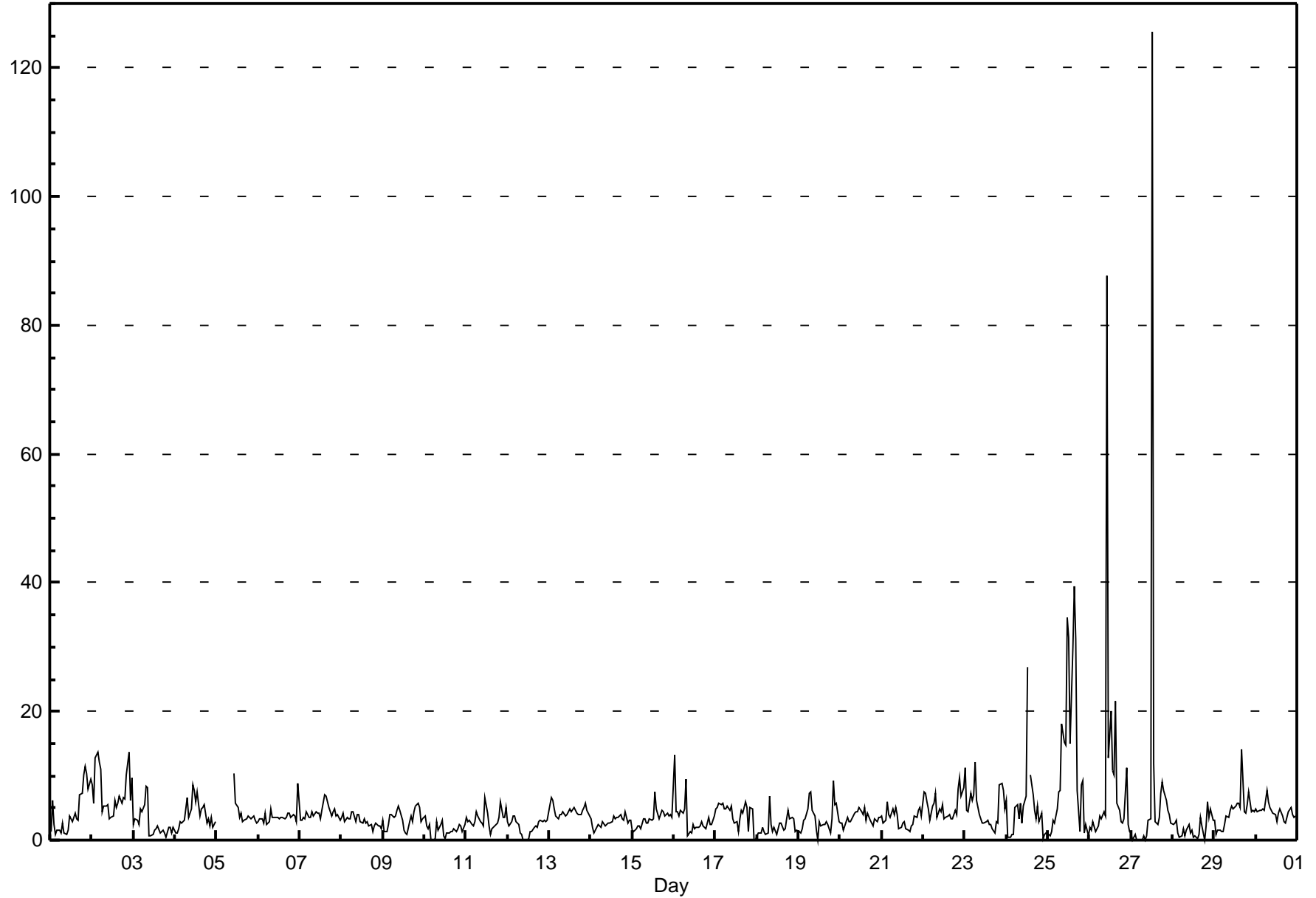


## Hourly Maximums

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

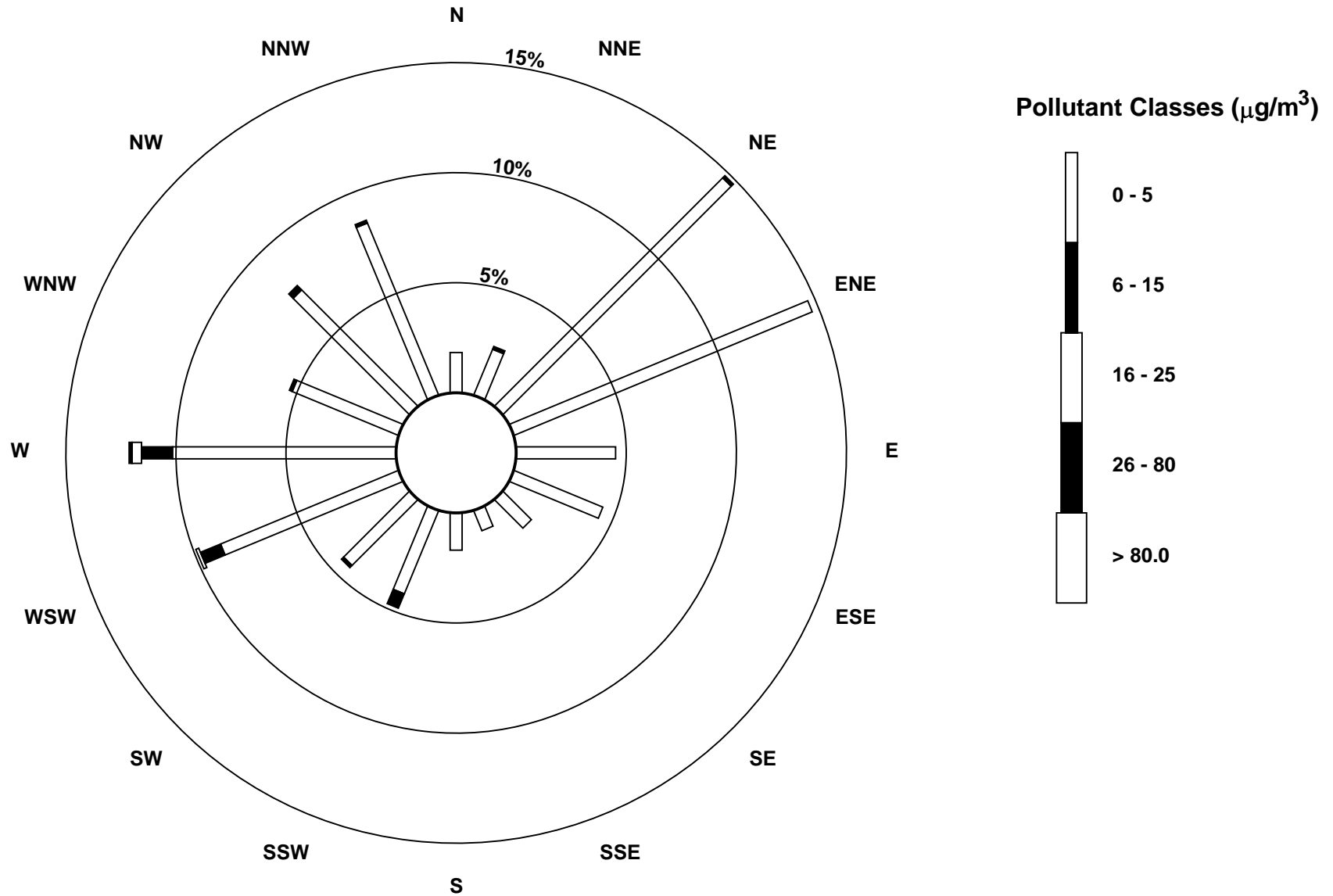
Evergreen Park - April 2013

Maximum Value: 125.5 µg/m <sup>3</sup> on Apr 27 13:00		Maximum Daily Average: 12.1 µg/m <sup>3</sup> on Apr 25		Hours in Service: 720																						
Minimum Value: 0 µg/m <sup>3</sup> on Apr 10 05:00		Minimum Daily Average: 1.6 µg/m <sup>3</sup> on Apr 10		Hours of Data: 709																						
Maximum Diurnal Average: 9.4 µg/m <sup>3</sup> at hour 13		Minimum Diurnal Average: 2.9 µg/m <sup>3</sup> at hour 2		Hours of Missing Data: 11																						
Monthly Average: 4.33 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 1.1 Q <sub>1</sub> = 2.3 Median = 3.3 Q <sub>3</sub> = 4.8 P <sub>90</sub> = 7.1 P <sub>99</sub> = 29.0		Hours of Calibration: 0																						
				Percent Operational Time: 98.5																						
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-Apr	1	6	2	1	2	2	1	3	1	1	2	4	3	3	4	3	3	7	7	10	11	10	8	9	4.4	11.4
2-Apr	9	6	13	14	12	11	4	5	5	6	3	4	4	6	5	6	7	6	7	6	10	14	6	10	7.4	13.7
3-Apr	2	3	3	2	5	4	6	8	8	1	1	1	2	2	2	1	1	2	1	1	2	2	1	2	2.6	8.5
4-Apr	1	1	2	3	3	3	5	7	4	5	9	8	6	7	4	5	5	6	3	3	2	4	2	3	4.1	8.7
5-Apr	N	N	N	N	N	N	N	N	N	N	10	6	5	4	4	3	3	3	4	4	3	4	3	3	--	10.4
6-Apr	3	3	3	3	4	2	3	5	4	4	4	4	3	4	4	3	4	4	4	4	4	4	3	9	3.7	8.7
7-Apr	3	3	4	3	4	4	4	4	4	4	4	4	3	5	7	7	6	5	4	4	5	4	4	3	4.2	7.2
8-Apr	4	4	3	4	3	3	4	4	3	4	4	3	3	3	3	2	2	1	2	3	2	2	2	2	3.0	4.3
9-Apr	3	1	1	2	4	4	4	4	5	5	5	3	2	1	1	3	4	3	4	5	6	5	3	3	3.4	5.8
10-Apr	4	2	2	2	0	0	0	3	2	2	3	1	0	1	1	1	1	2	1	2	2	2	1	2	1.6	3.8
11-Apr	4	3	3	2	2	3	4	4	3	3	2	7	4	2	1	2	2	2	3	4	6	4	4	5	3.2	6.5
12-Apr	3	2	3	4	4	3	2	1	1	0	0	0	0	1	1	2	2	2	3	3	3	3	3	3	2.1	3.8
13-Apr	6	7	6	5	4	3	4	4	4	4	4	5	5	4	5	5	4	4	4	5	5	6	5	4	4.6	6.7
14-Apr	3	2	1	2	2	2	2	3	2	2	3	3	3	4	3	4	4	4	3	3	4	3	3	3	2.8	4.3
15-Apr	2	1	2	2	2	2	3	3	3	3	3	3	3	7	5	3	4	5	4	4	4	4	4	4	3.3	7.5
16-Apr	13	4	4	4	5	4	5	9	1	1	1	2	2	2	2	2	3	2	2	3	4	2	3	4	3.5	13.3
17-Apr	5	5	6	6	6	5	5	5	5	5	3	3	3	1	3	5	4	6	5	1	5	5	0	0	4.0	6.0
18-Apr	1	1	1	2	1	1	1	7	2	1	2	1	2	3	3	2	2	3	5	3	4	3	1	2	2.2	6.7
19-Apr	1	1	2	3	3	5	7	7	5	4	2	0	3	2	2	2	3	2	1	3	9	6	6	3	3.4	9.2
20-Apr	3	3	2	3	4	3	3	3	4	4	4	5	4	4	5	3	4	3	3	2	3	3	4	4	3.4	5.1
21-Apr	4	3	3	6	4	3	5	4	5	4	2	2	3	3	2	2	1	2	2	4	4	5	5	4	3.3	6.0
22-Apr	7	7	6	5	3	5	6	7	4	5	4	6	3	4	4	4	3	3	5	4	8	10	7	8	5.3	9.7
23-Apr	11	5	4	7	6	7	12	6	4	3	3	3	3	3	2	2	2	1	3	3	9	9	8	5	5.0	12.2
24-Apr	6	0	0	1	1	5	6	3	6	3	5	7	27	M	10	7	5	3	5	3	4	0	1	1	4.8	27.0
25-Apr	1	1	1	3	3	5	7	8	18	15	15	35	32	15	30	39	31	8	1	9	9	1	2	1	12.1	39.4
26-Apr	2	2	3	1	2	2	4	3	4	4	88	13	20	11	10	22	6	5	3	3	3	11	2	1	9.3	87.7
27-Apr	1	0	1	0	0	0	0	1	0	1	3	3	126	12	3	2	4	7	9	8	6	5	4	3	8.2	125.5
28-Apr	2	3	3	1	0	1	2	1	2	2	1	2	0	1	0	1	4	2	0	2	6	4	5	3	1.9	6.0
29-Apr	3	1	2	2	1	1	2	4	4	5	5	5	5	6	6	5	14	4	4	6	7	4	5	4	4.4	14.1
30-Apr	5	5	5	5	5	5	8	6	5	5	4	4	3	4	5	4	3	3	4	4	5	4	4	4	4.4	7.7
		3.9	2.9	3.1	3.3	3.3	3.4	4.1	4.6	3.9	3.6	6.6	4.7	9.4	4.3	4.6	5.1	4.7	3.7	3.5	3.9	5.2	4.7	3.6	3.7	Diurnal Average
		13.3	7.3	12.9	13.6	12.1	10.9	12.2	9.4	18.0	15.3	87.7	34.5	125.5	15.0	29.9	39.4	31.4	7.7	8.9	10.2	11.4	13.7	8.0	9.6	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 - April 2013**



## Hourly Averages

External Temperature (ET) - °C

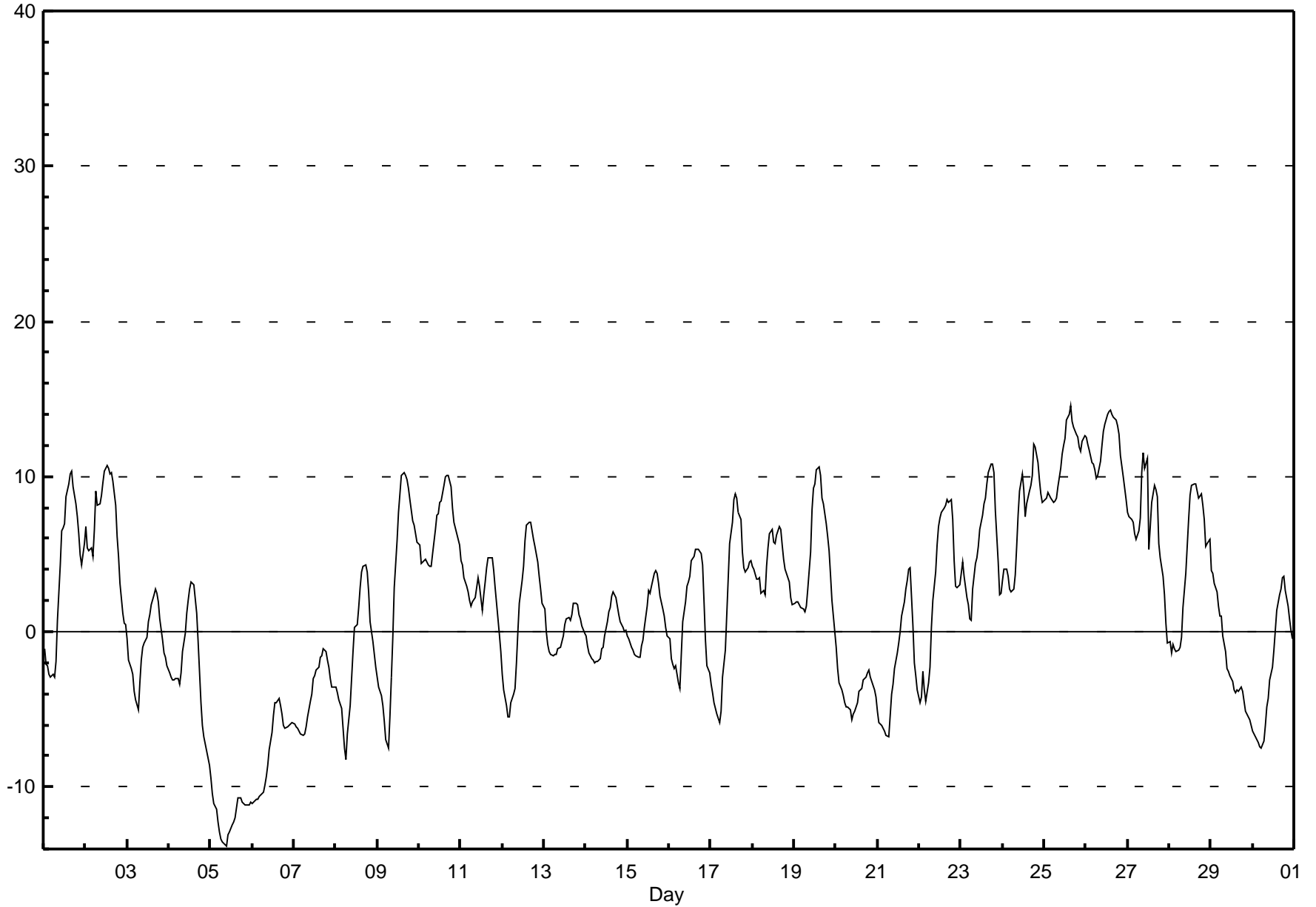
Evergreen Park - April 2013

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 14.6 °C on Apr 25 16:00	Maximum Daily Average: 12.0 °C on Apr 26		Hours of Data:	720
Minimum Value: -14 °C on Apr 5 10:00	Minimum Daily Average: -11.8 °C on Apr 5		Hours of Missing Data:	0
Maximum Diurnal Average: 5.1 °C at hour 16	Minimum Diurnal Average: -1.7 °C at hour 6		Hours of Calibration:	0
Monthly Average: 1.66 °C	Percentiles: P <sub>1</sub> = -12.5 P <sub>10</sub> = -5.9 Q <sub>1</sub> = -2.8 Median = 1.8 Q <sub>3</sub> = 6.3 P <sub>90</sub> = 9.5 P <sub>99</sub> = 13.8		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-Apr	-1	-2	-2	-3	-3	-3	-3	-2	1	4	6	7	7	9	10	10	10	9	8	7	6	5	4	6	3.8	10.4	
2-Apr	7	5	5	5	5	7	9	8	8	9	10	10	11	11	10	10	10	8	6	5	3	1	1	0	6.9	10.7	
3-Apr	0	-2	-2	-3	-4	-4	-5	-3	-2	-1	-1	0	1	1	2	2	3	2	2	1	-1	-1	-2	-2	-0.8	2.8	
4-Apr	-3	-3	-3	-3	-3	-3	-3	-3	-1	0	1	2	3	3	3	2	1	-1	-5	-6	-7	-7	-8	-9	-2.1	3.2	
5-Apr	-9	-10	-11	-11	-12	-13	-13	-14	-14	-14	-13	-13	-12	-12	-12	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11.8	-9.4	
6-Apr	-11	-11	-11	-11	-11	-10	-10	-10	-9	-9	-8	-6	-5	-5	-5	-4	-5	-5	-6	-6	-6	-6	-6	-6	-7.6	-4.3	
7-Apr	-6	-6	-6	-6	-7	-7	-7	-6	-5	-5	-4	-3	-3	-2	-2	-2	-1	-1	-2	-2	-3	-4	-4	-4	-4.0	-1.1	
8-Apr	-4	-4	-4	-5	-6	-8	-8	-7	-5	-3	-1	0	1	2	3	4	4	4	4	3	1	-1	-1	-2	-1.4	4.3	
9-Apr	-3	-4	-4	-5	-6	-7	-7	-5	-3	0	3	6	8	9	10	10	10	10	9	8	7	7	6	6	2.7	10.3	
10-Apr	6	4	5	5	5	4	4	4	5	7	8	8	8	8	9	10	10	10	10	9	8	7	7	6	6	6.8	10.1
11-Apr	5	4	3	3	3	2	2	2	2	3	3	3	1	2	3	4	5	5	5	4	3	1	0	-1	2.8	4.8	
12-Apr	-3	-4	-5	-5	-6	-5	-4	-4	-2	0	2	3	4	6	7	7	7	6	6	5	4	4	3	2	1.3	7.1	
13-Apr	1	0	-1	-1	-1	-2	-2	-1	-1	-1	-1	0	0	1	1	1	1	2	2	2	1	1	0	0	0.1	1.9	
14-Apr	0	-1	-1	-2	-2	-2	-2	-2	-2	-1	-1	0	1	1	2	2	3	2	2	1	1	0	0	0	-0.1	2.6	
15-Apr	0	0	-1	-1	-1	-2	-2	-2	-1	-1	0	2	3	3	3	4	4	4	3	2	2	1	0	0	0.8	3.9	
16-Apr	0	-2	-2	-2	-2	-3	-4	-1	1	2	3	3	4	5	5	5	5	5	5	4	2	-1	-2	-3	1.1	5.3	
17-Apr	-3	-4	-5	-5	-6	-6	-5	-3	-1	1	3	6	7	8	9	9	8	7	5	4	4	4	4	5	1.9	8.9	
18-Apr	4	4	3	3	3	3	3	2	4	5	6	7	6	6	6	7	7	6	5	4	4	3	2	2	4.4	6.8	
19-Apr	2	2	2	2	2	1	1	2	3	5	8	9	10	10	11	10	9	8	7	6	5	4	2	0	5.0	10.6	
20-Apr	-1	-2	-3	-4	-4	-5	-5	-5	-5	-6	-5	-5	-5	-4	-4	-4	-3	-3	-3	-3	-3	-4	-4	-4	-3.8	-1.0	
21-Apr	-5	-6	-6	-6	-6	-7	-7	-5	-4	-3	-2	-1	-1	0	1	2	3	3	4	4	0	-2	-3	-4	-2.1	4.1	
22-Apr	-5	-4	-3	-4	-5	-3	-2	0	2	4	6	7	7	8	8	8	9	8	8	7	5	3	3	3	2.9	8.5	
23-Apr	4	4	4	2	2	1	1	3	4	5	5	7	8	8	9	10	10	11	11	10	8	4	2	2	5.6	10.8	
24-Apr	3	4	4	4	3	3	3	4	5	7	9	10	9	7	8	9	9	10	12	12	11	10	9	8	7.3	12.0	
25-Apr	9	9	9	9	9	8	8	9	9	11	11	12	12	14	14	15	14	13	13	13	12	12	12	13	11.1	14.6	
26-Apr	13	12	12	11	11	10	10	10	11	12	13	13	14	14	14	14	14	14	13	13	11	10	9	9	12.0	14.2	
27-Apr	8	7	7	7	6	6	6	7	10	12	11	11	5	7	8	9	9	9	6	5	4	2	1	-1	6.8	11.6	
28-Apr	-1	-1	-1	-1	-1	-1	-1	0	2	4	6	7	9	9	10	10	9	9	8	7	6	6	6	6	4.4	9.6	
29-Apr	4	4	3	3	2	1	1	0	-1	-2	-3	-3	-3	-4	-4	-4	-4	-4	-4	-5	-5	-5	-6	-6	-1.9	3.9	
30-Apr	-6	-7	-7	-7	-7	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	4	3	2	1	0	0	-2.2	3.6	

0.1	-0.4	-0.7	-1.1	-1.5	-1.7	-1.6	-0.9	0.2	1.3	2.4	3.3	3.6	4.2	4.7	5.1	5.0	4.8	4.3	3.6	2.5	1.5	0.8	0.5		Diurnal Average
12.6	12.1	11.7	10.9	10.8	10.4	9.9	10.1	11.0	12.0	12.9	13.4	14.0	14.2	14.2	14.6	13.9	13.6	13.3	12.7	11.9	11.7	12.3	12.6		Diurnal Maximum





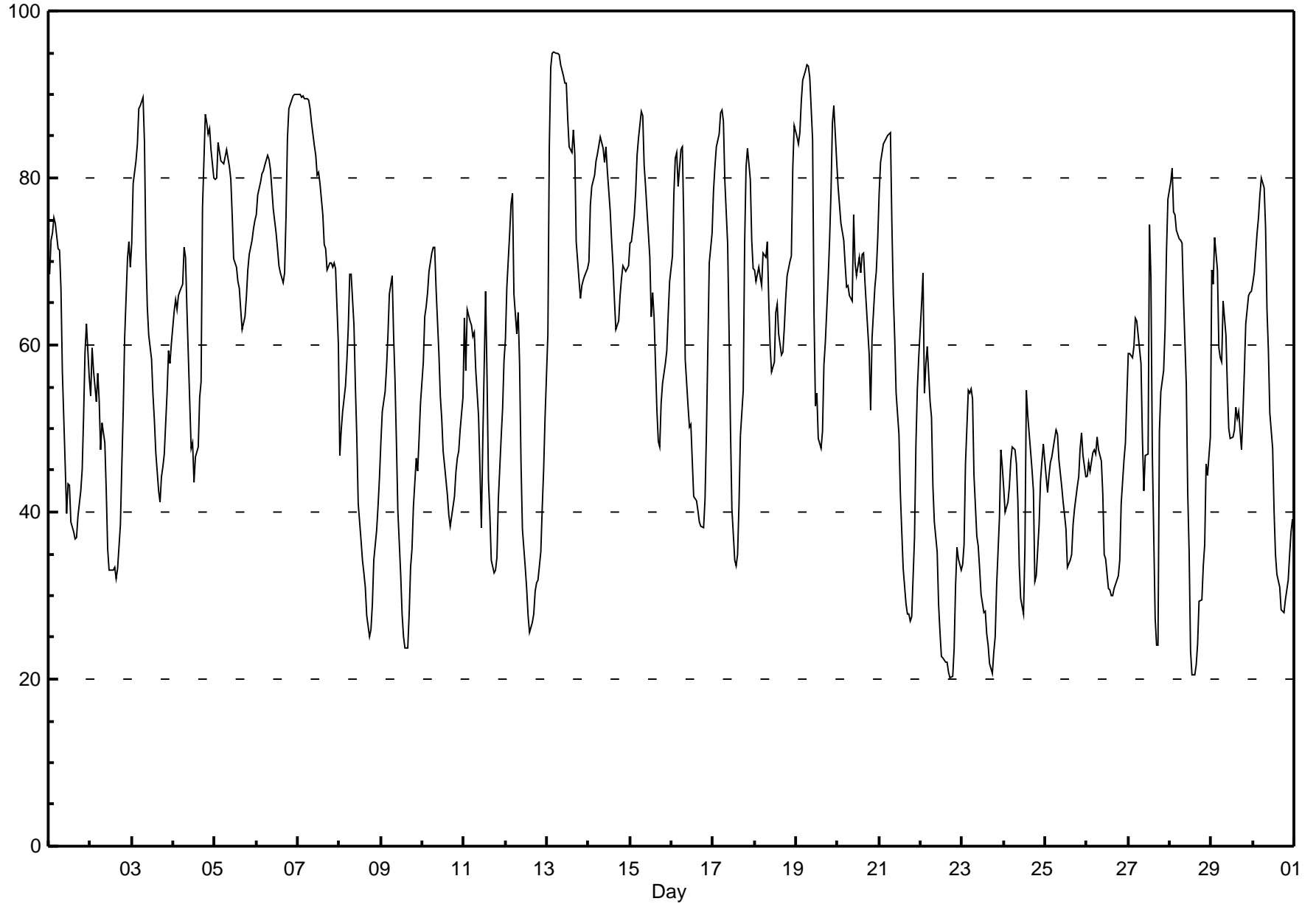
# Hourly Averages

Relative Humidity (RH) - %  
Evergreen Park - April 2013

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 95.1 % on Apr 13 05:00 Maximum Daily Average: 82.6 % on Apr 13																			Hours in Service: 720 Hours of Data: 720							
Minimum Value: 20 % on Apr 22 18:00 Minimum Daily Average: 36.4 % on Apr 23 Maximum Diurnal Average: 71.3 % at hour 7 Minimum Diurnal Average: 43.5 % at hour 17 Monthly Average: 57.88 % Percentiles: P <sub>1</sub> = 21.9 P <sub>10</sub> = 32.4 Q <sub>1</sub> = 43.0 Median = 58.5 Q <sub>3</sub> = 72.2 P <sub>90</sub> = 83.5 P <sub>99</sub> = 93.5																			Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	68	73	73	75	75	72	71	67	57	46	40	43	39	38	37	37	39	43	45	52	59	63	56	54.5	75.3	
2-Apr	54	60	57	53	57	53	47	51	48	43	36	33	33	33	32	33	38	46	52	61	70	72	69	48.6	72.4	
3-Apr	72	79	82	84	88	89	90	84	71	65	61	58	54	51	47	43	41	44	45	47	54	59	58	60	63.7	89.6
4-Apr	64	65	64	66	66	67	72	71	64	53	48	48	44	47	48	54	56	76	88	87	85	86	83	80	65.9	87.6
5-Apr	80	80	84	82	82	82	83	83	81	80	75	70	69	68	67	64	62	63	66	69	71	73	74	75	74.3	84.2
6-Apr	76	78	80	81	81	82	83	82	81	79	76	73	71	69	69	67	69	75	85	88	89	90	90	90	79.3	90.1
7-Apr	90	90	90	90	89	89	89	88	87	84	83	80	81	79	76	72	72	69	70	70	69	70	69	60	79.4	90.0
8-Apr	47	50	52	55	58	62	68	68	62	55	49	41	37	34	33	31	28	25	26	29	34	38	41	44	44.5	68.5
9-Apr	48	52	54	57	61	66	68	61	56	48	40	32	28	25	24	24	28	33	36	41	46	45	49	53	44.9	68.3
10-Apr	58	63	65	66	69	71	72	72	67	59	54	51	47	46	42	40	38	39	42	45	46	47	50	54	54.3	71.7
11-Apr	63	57	64	63	62	61	62	57	52	45	38	49	66	56	44	40	34	33	33	35	41	49	52	58	50.6	66.4
12-Apr	61	67	73	77	78	66	61	64	58	46	38	33	31	28	26	27	28	30	31	32	35	41	45	51	47.0	78.1
13-Apr	61	84	93	95	95	95	95	95	94	92	91	91	87	84	83	86	83	72	68	66	67	68	68	69	82.6	95.1
14-Apr	70	77	79	80	82	83	84	85	84	82	84	81	76	72	69	65	62	63	66	68	70	69	69	69	74.5	84.9
15-Apr	72	72	75	78	83	85	88	88	82	79	76	70	63	66	63	52	48	48	53	55	58	59	64	68	68.6	88.1
16-Apr	71	78	82	83	79	83	84	75	58	53	50	51	46	42	41	40	39	38	38	42	50	60	70	73	59.4	83.7
17-Apr	79	81	84	85	88	88	87	80	72	61	50	40	34	34	35	41	49	55	72	81	84	80	72	69	66.7	88.2
18-Apr	69	68	69	68	67	71	70	72	65	60	57	58	64	65	61	59	59	62	66	68	70	71	81	86	67.0	86.3
19-Apr	85	84	85	89	92	93	94	93	92	85	64	53	54	49	48	50	58	60	68	73	78	87	89	82	75.1	93.6
20-Apr	79	77	75	73	70	67	67	66	65	76	70	68	70	69	71	71	68	62	59	52	61	67	69	73	68.4	79.1
21-Apr	78	82	84	84	85	85	85	75	66	61	54	49	42	38	33	29	28	28	27	27	37	48	55	59	55.8	85.4
22-Apr	65	69	54	58	60	53	51	43	39	35	29	26	23	23	22	22	21	20	20	24	31	36	34	33	37.1	68.6
23-Apr	34	36	46	55	54	55	54	44	37	36	33	30	28	28	25	24	22	21	23	25	31	39	48	45	36.4	54.7
24-Apr	43	40	41	43	46	48	48	46	41	34	30	28	36	55	51	47	45	43	32	32	38	44	46	48	41.8	54.7
25-Apr	44	42	44	46	47	49	50	49	46	43	41	40	38	33	34	35	39	40	43	44	48	49	47	44	43.2	49.9
26-Apr	44	46	45	47	47	47	49	47	46	42	35	34	31	31	30	30	31	32	32	34	41	46	48	54	40.4	53.7
27-Apr	59	59	59	60	63	63	59	58	49	43	47	47	74	68	47	27	24	24	50	54	57	62	71	77	54.2	77.5
28-Apr	79	81	76	76	74	73	73	72	66	55	42	35	23	21	21	22	24	29	29	34	36	46	44	49	49.1	81.3
29-Apr	69	67	73	69	60	58	58	65	61	55	50	49	49	50	52	51	52	47	52	57	63	66	66	66	58.6	72.9
30-Apr	67	69	73	75	78	80	79	74	64	59	52	48	40	35	33	31	28	28	28	30	32	35	38	39	50.6	79.9
																			Diurnal Average							
																			Diurnal Maximum							

**Hourly Averages**

**Relative Humidity (RH) - %**  
**Evergreen Park - April 2013**





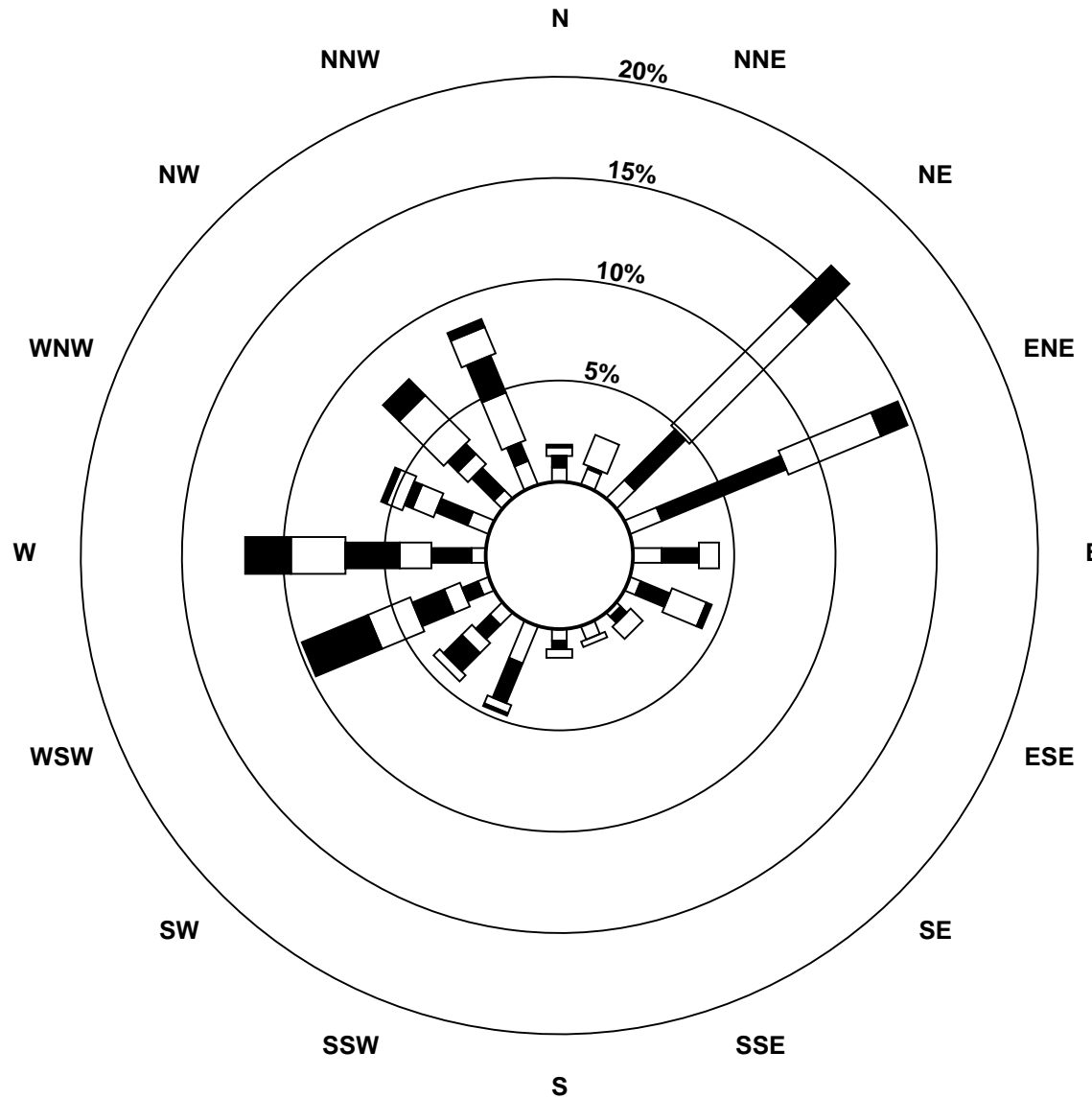
## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Evergreen Park - April 2013

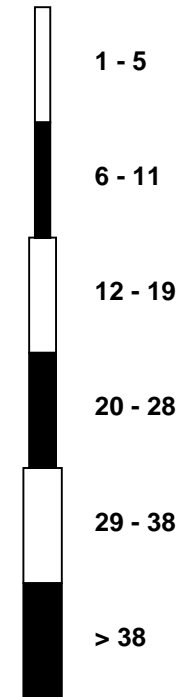
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	12	16	10	12	9	8	7	12	25	39	37	32	33	31	35	29	27	26	20	12	3	6	3	2	16.6	39.2
Dir	231	262	319	331	305	300	273	298	330	336	330	323	319	309	321	317	318	324	343	345	227	206	210	201	316.8	336.5
24 Spd	10	18	19	15	8	8	6	10	14	27	31	28	36	26	11	3	8	5	35	39	42	34	28	24	19.1	42.0
Dir	253	254	255	264	290	280	285	276	274	268	267	280	271	295	255	213	195	143	257	255	253	248	242	233	260.0	253.3
25 Spd	29	30	37	41	43	47	51	51	51	52	54	57	56	49	52	58	54	36	28	21	15	15	28	22	40.1	57.8
Dir	244	251	256	259	257	257	257	259	262	262	262	269	260	269	272	267	267	263	246	241	229	239	244	243	259.1	267.2
26 Spd	26	31	37	37	49	39	29	32	41	39	70	59	64	65	59	62	58	56	46	41	35	28	32	26	43.6	69.5
Dir	252	248	244	247	248	256	258	266	258	255	260	247	255	255	258	259	252	250	249	243	235	230	229	221	250.5	260.4
27 Spd	23	25	22	15	11	12	15	9	30	44	48	46	45	45	56	52	50	39	34	20	15	2	1	3	21.3	56.4
Dir	220	220	214	201	200	197	200	181	225	245	247	244	253	268	274	280	284	298	341	358	347	340	214	163	258.7	273.6
28 Spd	1	4	2	4	4	5	4	5	2	6	14	14	41	42	37	36	36	16	4	3	1	3	9	15	9.8	41.8
Dir	89	77	159	66	94	87	70	120	106	214	270	280	258	252	265	262	260	284	284	8	348	199	242	289	262.1	251.6
29 Spd	19	19	16	18	26	24	26	35	34	44	42	42	42	44	40	38	39	33	31	28	32	24	21	21	28.3	44.2
Dir	289	248	264	272	262	265	270	313	315	314	309	317	315	320	321	324	337	324	326	324	331	334	332	335	311.8	320.0
30 Spd	19	12	8	10	8	7	10	9	8	10	5	7	4	10	6	3	11	8	7	7	8	9	7	5	3.5	19.0
Dir	333	332	305	326	305	286	278	295	293	272	288	320	265	259	345	147	338	80	85	95	89	105	122	117	321.8	333.3
Spd	2.9	3.4	3.8	4.2	4.4	5.0	5.1	5.6	6.5	8.6	11.1	11.3	11.3	11.9	11.7	10.9	9.9	7.7	6.5	3.9	3.3	2.5	2.2	2.2	Diurnal Average	
Dir	294.4	285.7	283.3	295.2	293.4	288.2	280.2	291.0	291.0	288.6	289.6	302.3	301.9	309.8	316.4	320.7	325.3	341.8	340.9	323.7	294.8	252.7	273.6	297.5	Diurnal Maximum	
Spd	38.9	34.9	37.0	40.8	49.2	47.1	50.6	51.5	51.1	52.2	69.5	58.6	63.8	64.6	59.3	62.3	57.7	56.0	46.5	41.1	42.0	34.4	32.3	30.3	Diurnal Maximum	
Dir	261.5	325.9	256.0	259.2	248.0	257.3	257.4	258.6	262.5	262.0	260.4	247.3	254.7	254.9	257.9	258.7	252.4	249.5	248.9	242.9	253.3	248.4	229.5	314.8		
Maximum Speed Value: 70 km/h on Apr 26 11:00		Minimum Speed Value: 0 km/h on Apr 17 03:00																Hours in Service: 720								
Maximum Daily Speed Average: 43.6 km/h on Apr 26		Minimum Daily Speed Average: 3.5 km/h on Apr 16																Hours of Data: 720								
Maximum Diurnal Speed Average: 11.9 km/h at hour 14		Minimum Diurnal Speed Average: 2.2 km/h at hour 23																Hours of Missing Data: 0								
Monthly Average Velocity: 6.17 km/h 304.08 deg		Speed Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 3.5 Q <sub>1</sub> = 8.2 Median = 13.7 Q <sub>3</sub> = 23.8 P <sub>90</sub> = 36.2 P <sub>99</sub> = 57.2																Percent Operational Time: 100.0								
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	19	7	19	7	3	0	55																			
NorthEast	9	41	94	35	0	0	179																			
East	24	44	17	2	0	0	87																			
SouthEast	6	6	21	1	0	0	34																			
South	18	9	9	0	0	0	36																			
SouthWest	16	17	7	16	8	5	69																			
West	13	22	22	23	38	38	156																			
NorthWest	9	19	17	15	29	15	104																			
Total	114	165	206	99	78	58	720																			

**Wind Rose**

**Wind Speed (WS) (km/h)**  
**Evergreen Park - April 2013**



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



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - April 2013

<b>Maximum Speed: 70 km/h on Apr 26 11:00</b>		<b>Maximum Daily Speed Average: 44.7 km/h on Apr 26</b>																				<b>Hours in Service: 720</b>																											
<b>Minimum Speed: 1 km/h on Apr 16 23:00</b>		<b>Minimum Daily Speed Average: 7.2 km/h on Apr 16</b>																				<b>Hours of Data: 720</b>																											
<b>Maximum Diurnal Speed Average: 26.8 km/h at hour 14</b>		<b>Minimum Diurnal Speed Average: 12.0 km/h at hour 22</b>																				<b>Hours of Missing Data: 0</b>																											
<b>Monthly Average Speed: 18.03 km/h</b>		<b>Percentiles: P<sub>1</sub> = 1.6 P<sub>10</sub> = 4.7 Q<sub>1</sub> = 9.0 Median = 14.5 Q<sub>3</sub> = 24.4 P<sub>90</sub> = 37.0 P<sub>99</sub> = 58.0</b>																				<b>Percent Operational Time: 100.0</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-Apr	7	4	7	3	6	9	7	7	9	10	13	13	19	18	17	17	12	13	11	10	10	6	6	12	10.3	19.0																							
2-Apr	8	6	6	9	4	17	25	18	23	24	31	29	36	35	38	38	33	26	18	9	4	7	4	15	19.3	37.9																							
3-Apr	7	5	5	2	4	3	4	4	10	11	14	16	13	15	16	17	18	18	14	10	8	8	8	7	9.9	17.9																							
4-Apr	7	6	6	6	5	3	3	3	8	8	8	11	12	17	15	19	21	20	35	37	29	18	18	17	13.9	37.5																							
5-Apr	18	19	15	15	19	18	13	13	14	16	15	15	15	16	15	15	10	9	11	9	9	8	9	6	13.3	19.2																							
6-Apr	8	7	9	11	10	9	8	11	11	13	14	14	15	15	21	24	21	20	20	16	13	10	10	11	13.3	23.5																							
7-Apr	12	13	12	10	11	12	12	13	15	15	17	17	20	20	21	23	22	20	13	12	10	10	9	10	14.6	22.6																							
8-Apr	12	10	10	12	11	10	8	12	17	17	16	13	19	19	18	15	19	19	18	12	10	12	11	13	13.9	19.4																							
9-Apr	11	13	13	9	7	5	5	6	12	12	12	17	16	17	18	14	12	11	10	11	6	17	10	8	11.3	18.1																							
10-Apr	11	7	7	10	9	12	11	9	15	23	15	23	26	27	26	31	28	25	31	29	30	28	25	22	19.9	31.4																							
11-Apr	39	33	29	29	33	33	33	37	41	39	37	45	40	34	28	20	15	15	10	14	9	5	5	3	26.0	44.6																							
12-Apr	2	2	2	2	2	4	5	5	8	14	19	17	20	20	21	19	20	20	17	12	10	18	20	15	12.1	21.4																							
13-Apr	17	15	14	18	17	18	20	21	25	26	23	26	26	27	26	22	17	17	18	13	8	5	9	12	18.3	27.2																							
14-Apr	14	17	14	11	11	11	12	14	15	16	14	13	15	17	19	21	23	21	18	13	9	11	11	14	14.8	23.3																							
15-Apr	15	13	11	13	13	11	13	16	15	18	18	19	23	22	20	24	25	21	21	17	11	8	4	4	15.6	25.1																							
16-Apr	3	2	2	4	2	3	2	2	10	8	12	14	12	9	14	14	12	16	14	8	5	2	1	1	7.2	15.9																							
17-Apr	2	2	1	3	3	2	2	4	9	7	9	12	15	25	35	28	21	26	32	28	27	22	23	24	15.1	34.6																							
18-Apr	13	16	12	14	13	9	9	7	6	13	10	17	22	23	20	21	19	17	18	12	12	11	10	10	14.0	22.7																							
19-Apr	11	6	2	2	3	6	5	8	6	9	28	31	16	18	16	16	27	16	12	6	16	12	29	31	13.9	31.5																							
20-Apr	31	36	35	35	38	36	36	38	39	39	40	39	34	35	33	28	27	17	7	12	10	8	14	17	28.5	40.4																							
21-Apr	7	5	5	5	5	5	4	8	10	13	16	14	14	16	15	14	12	10	6	3	2	3	3	2	8.2	15.9																							
22-Apr	2	4	5	2	3	3	9	19	25	31	30	28	32	29	30	29	26	23	13	5	3	4	4	9	15.3	31.7																							
23-Apr	12	18	11	13	10	8	7	13	26	40	38	34	35	34	36	31	29	27	21	13	6	6	4	2	19.6	39.8																							
24-Apr	10	18	19	16	9	9	6	11	15	27	31	29	37	32	13	5	9	7	36	39	42	35	28	24	21.1	42.3																							
25-Apr	29	30	37	41	43	47	51	52	51	53	55	57	56	50	53	59	54	37	28	22	15	15	28	22	41.0	58.6																							
26-Apr	26	31	37	37	50	40	30	32	41	40	70	59	64	65	60	63	58	57	47	42	35	28	32	27	44.7	70.2																							
27-Apr	23	25	22	16	11	12	15	10	31	45	49	47	46	49	58	53	52	41	35	22	16	6	3	5	28.8	57.7																							
28-Apr	3	4	4	5	6	5	5	6	4	8	16	18	42	44	38	37	37	18	7	4	5	3	10	17	14.4	43.7																							
29-Apr	22	19	16	19	26	24	27	36	36	46	44	44	44	46	42	40	39	35	33	29	32	24	21	21	31.9	45.9																							
30-Apr	19	13	8	10	8	8	11	11	10	12	9	12	11	13	13	11	14	10	10	7	8	9	8	6	10.4	19.2																							
																								13.4	13.3	12.6	12.7	13.1	13.1	13.2	14.8	18.6	21.8	24.1	24.8	26.5	26.8	26.5	25.5	24.4	21.1	19.4	15.7	13.6	12.0	12.6	12.9	Diurnal Average	
																								39.2	35.9	37.1	41.0	49.5	47.3	50.9	51.8	51.4	52.7	70.2	59.4	64.4	65.5	60.1	63.1	58.1	56.6	46.9	41.6	42.3	34.8	32.4	31.3	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																																																	

# Hourly Standard Deviations

Wind Direction (WD) - deg  
Evergreen Park - April 2013

Maximum Value: 94.1 deg on Apr 16 05:00																								Hours in Service: 720	
Minimum Value: 3.4 deg on Apr 17 21:00																								Hours of Data: 720	
Percentiles: P <sub>1</sub> = 5.1 P <sub>10</sub> = 8.4 Q <sub>1</sub> = 11.7 Median = 16.4 Q <sub>3</sub> = 27.8 P <sub>90</sub> = 51.7 P <sub>99</sub> = 88.1																								Hours of Missing Data: 0	
																								Hours of Calibration: 0	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	6	45	18	39	10	8	12	15	19	31	30	30	15	15	19	14	20	9	17	70	88	76	87	44	87.6
2-Apr	77	71	24	13	82	56	5	6	7	7	7	10	11	12	10	9	10	32	12	31	72	24	82	32	82.4
3-Apr	80	57	26	81	78	73	41	40	25	33	22	21	30	21	22	18	18	16	14	12	10	12	13	10	81.5
4-Apr	9	15	17	28	26	50	58	56	27	60	33	25	26	33	20	12	14	28	9	8	11	41	18	15	59.6
5-Apr	12	12	14	13	12	10	15	15	15	19	22	26	23	16	16	33	51	41	21	20	19	23	18	28	51.2
6-Apr	22	29	15	16	22	28	20	21	26	23	22	26	22	22	14	14	15	14	10	11	12	13	13	14	29.1
7-Apr	11	12	17	13	11	11	11	12	14	23	18	14	13	14	14	16	13	13	15	16	12	9	12	16	22.6
8-Apr	14	14	11	13	9	8	9	18	20	22	35	53	31	25	36	49	29	19	17	13	12	14	11	13	53.4
9-Apr	14	12	10	13	16	15	31	41	21	23	31	24	26	19	20	23	30	20	10	10	25	7	75	23	74.6
10-Apr	10	12	15	24	17	13	16	11	8	14	23	10	9	8	11	10	12	8	8	6	5	6	6	9	24.3
11-Apr	7	11	8	7	6	6	7	7	9	11	17	19	10	11	17	25	35	23	21	21	47	57	68	71	70.8
12-Apr	58	79	66	76	59	13	10	20	17	15	15	18	20	26	25	29	23	16	16	16	19	13	13	13	78.6
13-Apr	16	18	14	10	11	13	13	10	11	11	13	11	11	12	12	12	18	15	11	11	7	31	6	10	30.5
14-Apr	13	13	12	15	14	14	15	15	13	19	17	27	19	18	18	16	13	15	13	10	12	9	11	13	26.8
15-Apr	12	12	11	12	12	13	14	11	12	18	17	17	15	16	21	14	13	15	11	9	11	9	30	56	55.9
16-Apr	49	77	79	27	94	50	54	83	22	88	32	24	25	74	50	44	43	19	16	15	11	42	59	93	94.1
17-Apr	51	32	89	63	47	48	30	17	19	46	34	37	24	21	15	22	20	14	9	12	3	4	12	8	89.5
18-Apr	19	25	15	20	17	18	29	12	54	31	44	36	16	16	18	16	14	16	15	14	16	29	12	11	54.2
19-Apr	11	14	28	37	70	71	38	18	29	42	11	12	36	24	35	19	17	28	33	61	89	19	13	14	88.8
20-Apr	13	13	14	17	14	17	16	15	15	15	17	14	17	16	16	16	22	28	50	24	18	19	12	8	50.2
21-Apr	16	25	18	39	24	31	12	26	33	31	37	49	50	43	45	43	51	41	65	65	75	27	16	85	84.7
22-Apr	75	18	57	41	52	36	46	7	9	11	26	21	23	23	17	17	18	16	27	34	28	16	52	20	74.7
23-Apr	16	28	18	23	28	13	16	18	20	10	13	21	19	21	19	21	19	19	13	12	61	32	42	58	61.4
24-Apr	9	5	5	8	18	17	20	21	14	9	10	13	11	37	29	61	24	43	24	7	7	9	7	5	61.2
25-Apr	8	5	5	6	6	5	6	7	6	8	8	8	8	11	9	10	9	12	9	11	9	51	5	6	51.3
26-Apr	9	7	7	7	7	9	13	12	9	11	8	10	7	9	9	9	7	8	8	9	8	6	5	7	13.2
27-Apr	5	6	7	14	12	13	19	29	13	12	12	14	15	22	12	11	13	20	17	23	19	87	91	56	91.3
28-Apr	86	29	76	25	69	27	25	43	75	40	31	48	12	17	12	12	10	26	71	35	83	34	40	30	85.8
29-Apr	29	8	13	16	6	7	16	14	16	16	18	16	16	15	18	17	9	18	17	15	11	10	10	10	29.5
30-Apr	8	20	14	16	10	28	21	35	52	37	76	68	88	49	68	85	53	47	47	22	10	15	20	47	88.3
85.8	78.6	89.5	81.5	94.1	72.7	58.0	83.0	75.2	88.2	76.2	67.6	88.3	74.4	68.4	84.5	53.2	46.7	71.0	69.8	88.8	86.9	91.3	92.8		



PAZA

## Smoky Heights Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

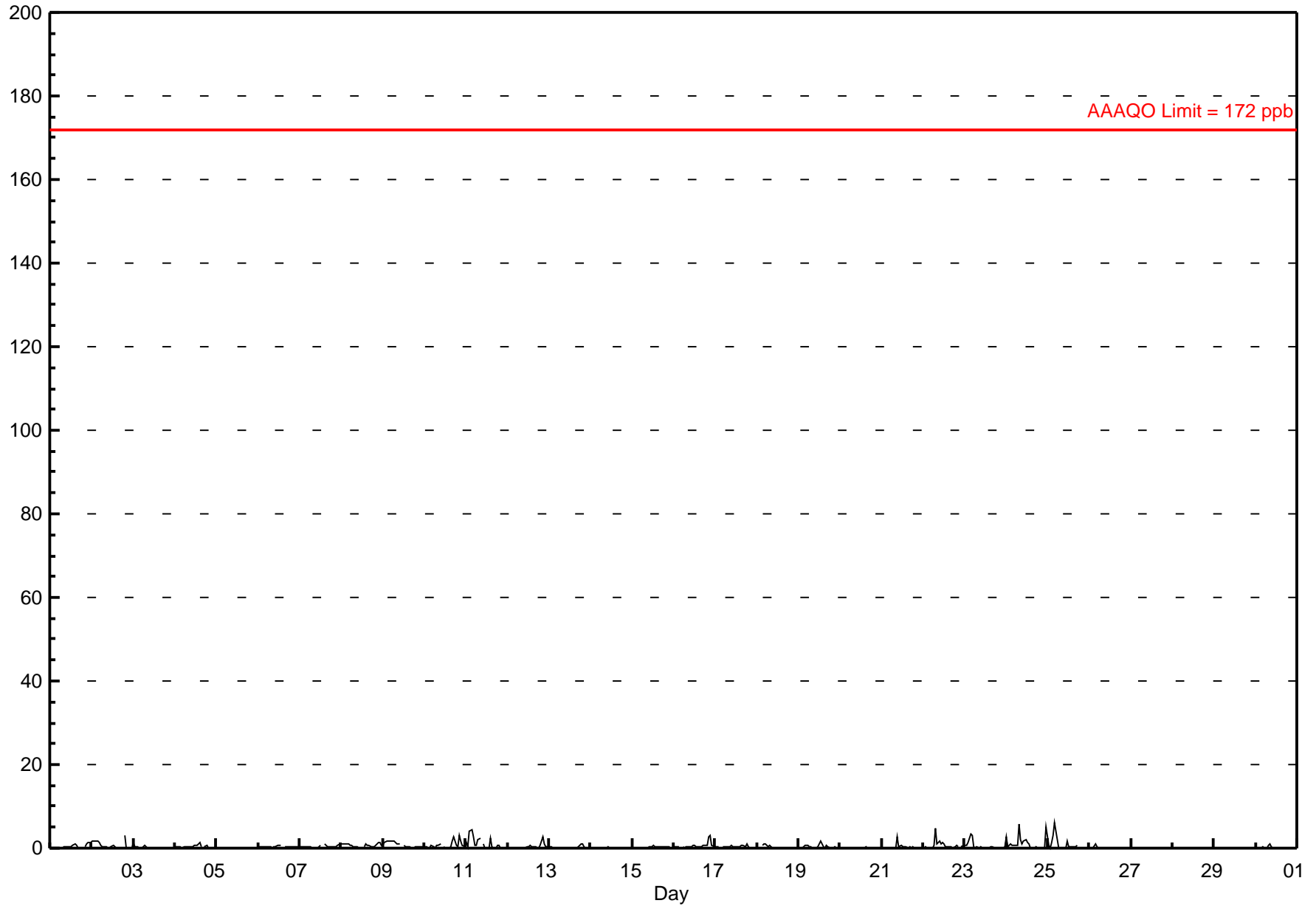
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Smoky Heights - April 2013

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 6.1 ppb on Apr 25 05:00	Maximum Daily Average: 1.2 ppb on Apr 24		Hours of Data:	686
Minimum Value: 0 ppb on Apr 3 20:00	Minimum Daily Average: 0.0 ppb on Apr 29		Hours of Missing Data:	34
Maximum Diurnal Average: 0.7 ppb at hour 5	Minimum Diurnal Average: 0.2 ppb at hour 23		Hours of Calibration:	34
Monthly Average: 0.39 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> = 1.0 P <sub>99</sub> = 3.3		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-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	A	0	1	1	1	0.3	1.3																						
2-Apr	2	2	2	2	1	1	0	0	0	0	0	0	1	0	0	0	0	0	A	3	0	0	0	0	0.6	3.2																						
3-Apr	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	1.2																						
4-Apr	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	A	0	1	0	0	0	0	0	0.4	1.3																						
5-Apr	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																						
6-Apr	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0.4	0.6																						
7-Apr	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	1	0	0	0	0	0	0	1	1	0.4	1.0																						
8-Apr	1	1	1	1	1	1	1	0	0	0	0	0	A	0	1	1	1	0	0	0	0	1	1	1	0.7	1.4																						
9-Apr	1	1	2	2	2	2	2	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0.8	1.8																						
10-Apr	0	0	0	0	1	0	0	1	1	1	A	0	0	0	0	0	0	2	3	1	0	3	2	1	0.7	3.1																						
11-Apr	1	0	4	4	3	1	1	2	2	A	1	0	0	0	2	0	0	0	0	1	1	0	0	0	1.0	4.4																						
12-Apr	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	1	3	1	0	0	0.3	2.6																						
13-Apr	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.2	0.9																						
14-Apr	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																						
15-Apr	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5																						
16-Apr	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	1	1	1	1	3	3	1	0	0.6	3.2																						
17-Apr	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0.3	1.1																						
18-Apr	0	0	A	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0																						
19-Apr	0	A	0	0	1	1	0	0	0	0	1	2	0	0	0	1	0	0	0	0	0	0	0	0	0.3	1.9																						
20-Apr	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2																						
21-Apr	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.7																						
22-Apr	0	0	0	0	0	0	1	5	1	2	1	1	1	0	0	0	0	0	0	1	0	A	0	1	0.7	4.6																						
23-Apr	1	1	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0.5	3.5																						
24-Apr	3	0	1	1	1	1	1	6	2	1	2	2	1	1	0	0	0	0	0	A	0	0	0	5	1.2	5.6																						
25-Apr	1	0	1	3	6	2	0	0	0	0	2	1	0	0	0	0	0	1	A	0	0	0	0	0	0.8	6.1																						
26-Apr	0	0	0	1	0	0	0	0	0	0	C	C	C	0	0	0	0	A	0	0	0	0	0	0	0.1	0.9																						
27-Apr	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																						
28-Apr	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																						
29-Apr	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																						
30-Apr	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.9																						
																								0.5	0.3	0.5	0.7	0.7	0.4	0.3	0.7	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.4	Diurnal Average
																								2.7	1.6	4.0	4.4	6.1	2.0	1.7	5.6	2.4	2.7	1.7	2.1	1.4	1.9	2.2	0.7	1.8	2.6	1.1	3.2	3.1	3.2	1.2	5.2	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

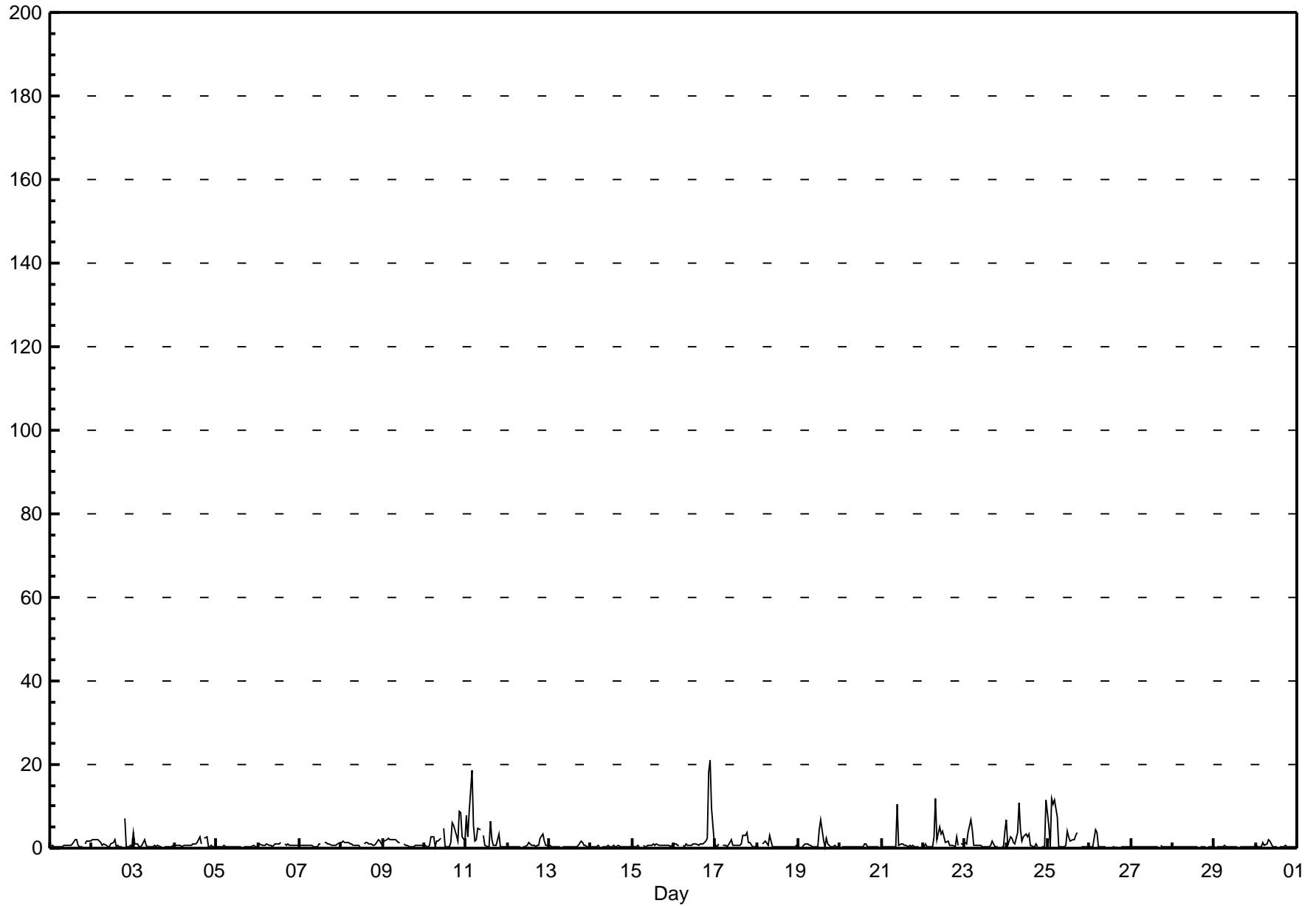
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Smoky Heights - April 2013

Maximum Value: 21.1 ppb on Apr 16 22:00		Maximum Daily Average: 3.4 ppb on Apr 11		Hours in Service: 720																							
Minimum Value: 0 ppb on Apr 29 02:00		Minimum Daily Average: 0.3 ppb on Apr 28		Hours of Data: 686																							
Maximum Diurnal Average: 2.0 ppb at hour 4		Minimum Diurnal Average: 0.7 ppb at hour 2		Hours of Missing Data: 34																							
Monthly Average: 1.16 ppb		Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.3 Median = 0.5 Q <sub>3</sub> = 1.0 P <sub>90</sub> = 2.5 P <sub>99</sub> = 11.4		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-Apr	0	1	0	0	0	0	0	0	1	1	1	1	1	1	2	2	1	0	0	A	1	2	2	2	0.8	2.1	
2-Apr	2	2	2	2	2	1	1	1	1	0	0	1	1	2	0	1	0	0	A	7	0	0	1	0	1.3	7.1	
3-Apr	4	1	1	0	0	1	2	1	0	0	0	0	1	0	1	0	1	A	0	0	0	0	0	1	0.7	3.6	
4-Apr	1	1	1	1	0	1	1	1	1	1	1	1	1	1	3	1	A	3	3	0	0	1	0	0	0.9	2.8	
5-Apr	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0.3	0.6	
6-Apr	0	1	1	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.2	
7-Apr	1	1	1	1	1	1	1	1	0	0	0	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.4	
8-Apr	1	2	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	2	2	1	1.1	1.9	
9-Apr	1	2	2	2	2	2	2	2	2	2	1	A	1	1	1	0	0	0	0	1	1	1	1	1	1.2	2.2	
10-Apr	1	0	0	1	3	3	0	2	2	2	A	5	0	0	0	1	6	5	3	2	9	9	3	2	2.6	8.9	
11-Apr	8	3	9	19	5	2	2	5	4	A	3	1	0	0	6	2	1	1	2	3	0	0	0	0	3.4	18.7	
12-Apr	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	1	0	1	1	2	3	2	1	1	0.8	3.4	
13-Apr	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	2	1	1	1	0	0	0.5	1.6	
14-Apr	0	0	0	0	1	0	A	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0.4	0.6	
15-Apr	1	0	0	1	0	A	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6	1.0	
16-Apr	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	2	2	18	21	10	1	2.9	21.1	
17-Apr	1	0	1	A	1	1	1	0	1	2	1	1	1	1	1	1	3	3	4	1	1	0	0	0	1.1	3.8	
18-Apr	1	0	A	1	2	2	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.7	3.1	
19-Apr	0	A	0	1	1	1	1	1	0	0	0	4	7	2	0	2	1	0	0	0	1	0	0	0	1.1	6.6	
20-Apr	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0.4	1.2	
21-Apr	0	0	0	0	0	0	0	0	0	11	1	1	1	1	1	0	1	0	1	0	0	0	A	0	0.9	10.5	
22-Apr	0	1	0	0	0	0	3	12	2	5	3	4	3	1	2	1	1	1	0	3	1	A	1	1	1.9	11.9	
23-Apr	1	1	4	7	4	1	1	1	1	1	0	0	0	0	0	1	2	0	0	0	A	0	0	4	1.4	6.8	
24-Apr	7	1	3	2	1	1	4	11	5	2	3	3	3	4	1	0	0	1	0	A	0	0	0	12	2.8	11.6	
25-Apr	5	0	12	11	11	8	0	0	0	0	1	4	3	2	2	2	3	4	A	0	0	0	0	0	3.0	12.0	
26-Apr	0	0	0	4	4	0	0	0	0	0	C	C	C	0	0	0	0	A	0	0	0	0	0	0	0.7	4.3	
27-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0.3	0.5	
28-Apr	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	
29-Apr	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.5	
30-Apr	1	0	0	0	1	1	1	2	2	1	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0.6	1.9	
		1.4	0.7	1.5	2.0	1.6	1.0	0.9	1.6	1.0	1.2	0.8	1.1	1.0	1.1	0.8	1.0	1.0	0.9	1.1	1.5	1.6	0.9	1.1	Diurnal Average		
		7.9	2.6	12.0	18.7	11.5	7.5	3.8	11.9	4.5	10.5	3.2	4.8	4.4	6.6	6.4	2.1	5.9	5.4	3.8	7.1	18.4	21.1	9.5	11.6	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

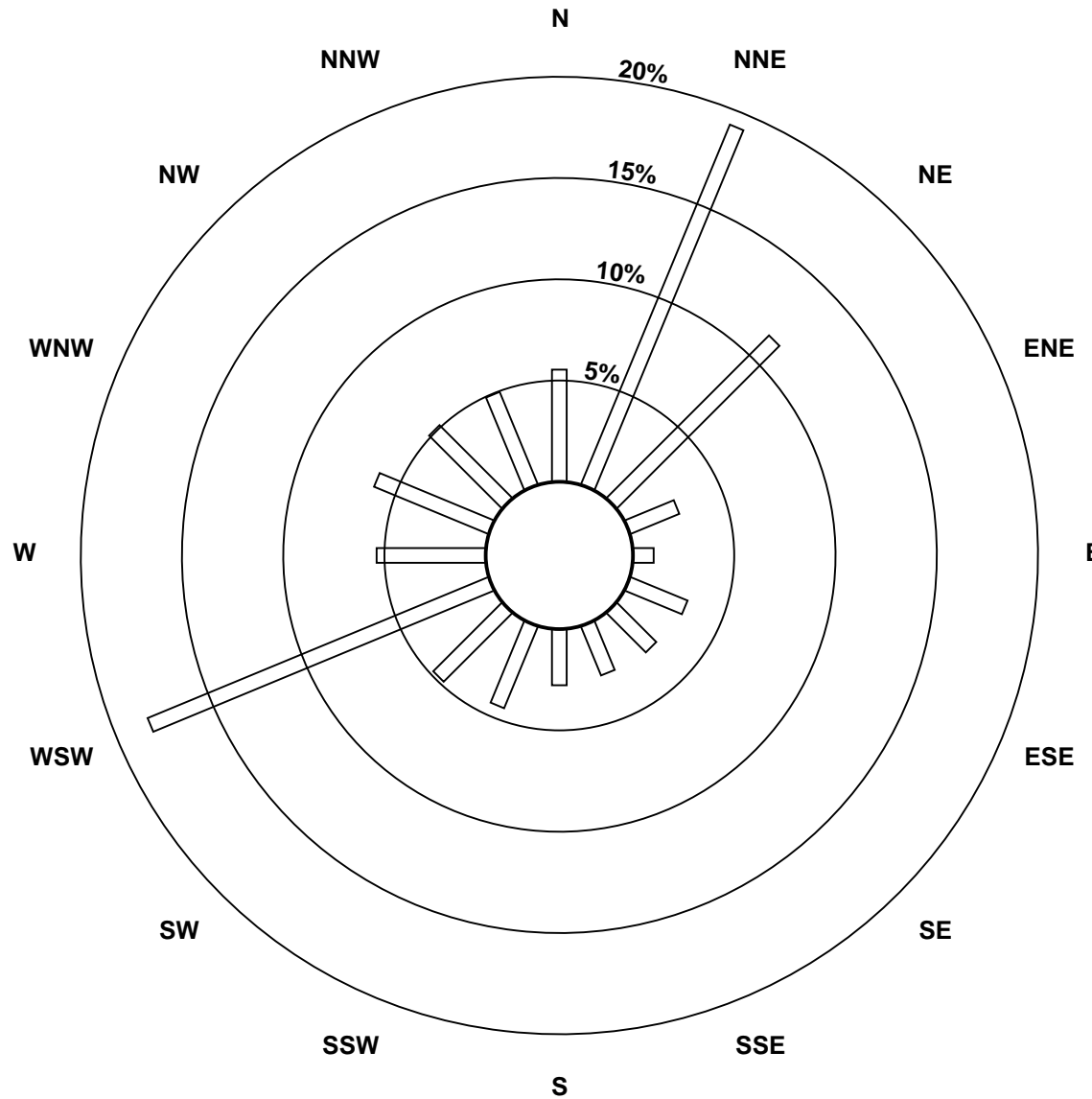
### Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Smoky Heights - April 2013

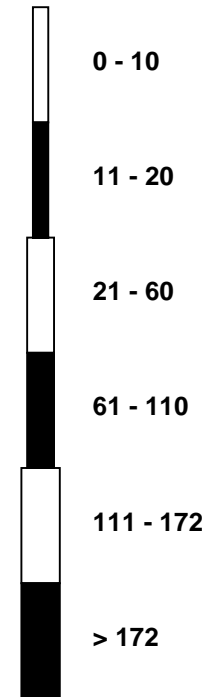


**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Smoky Heights - April 2013**

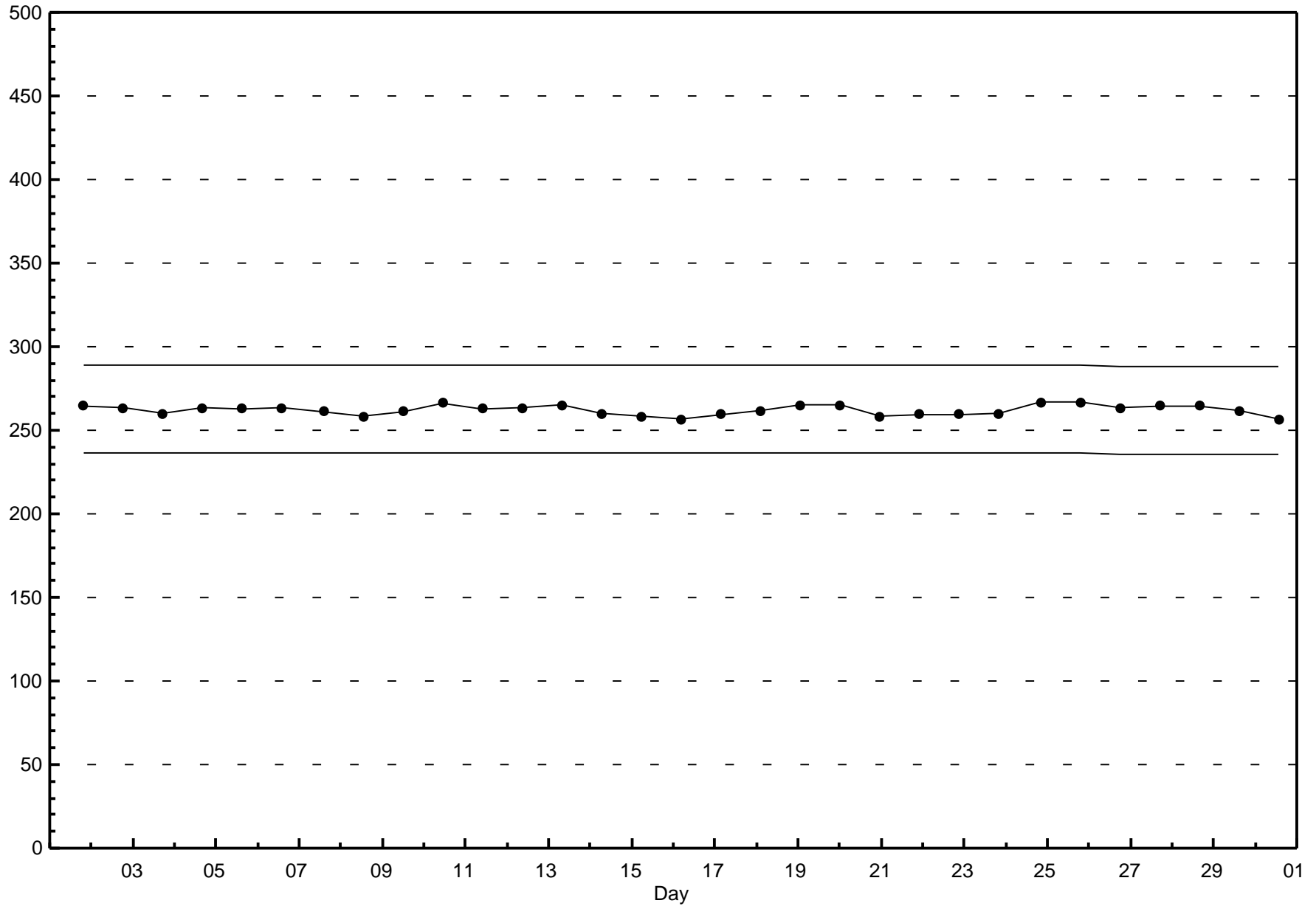


**Pollutant Classes (ppb)**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Smoky Heights - April 2013



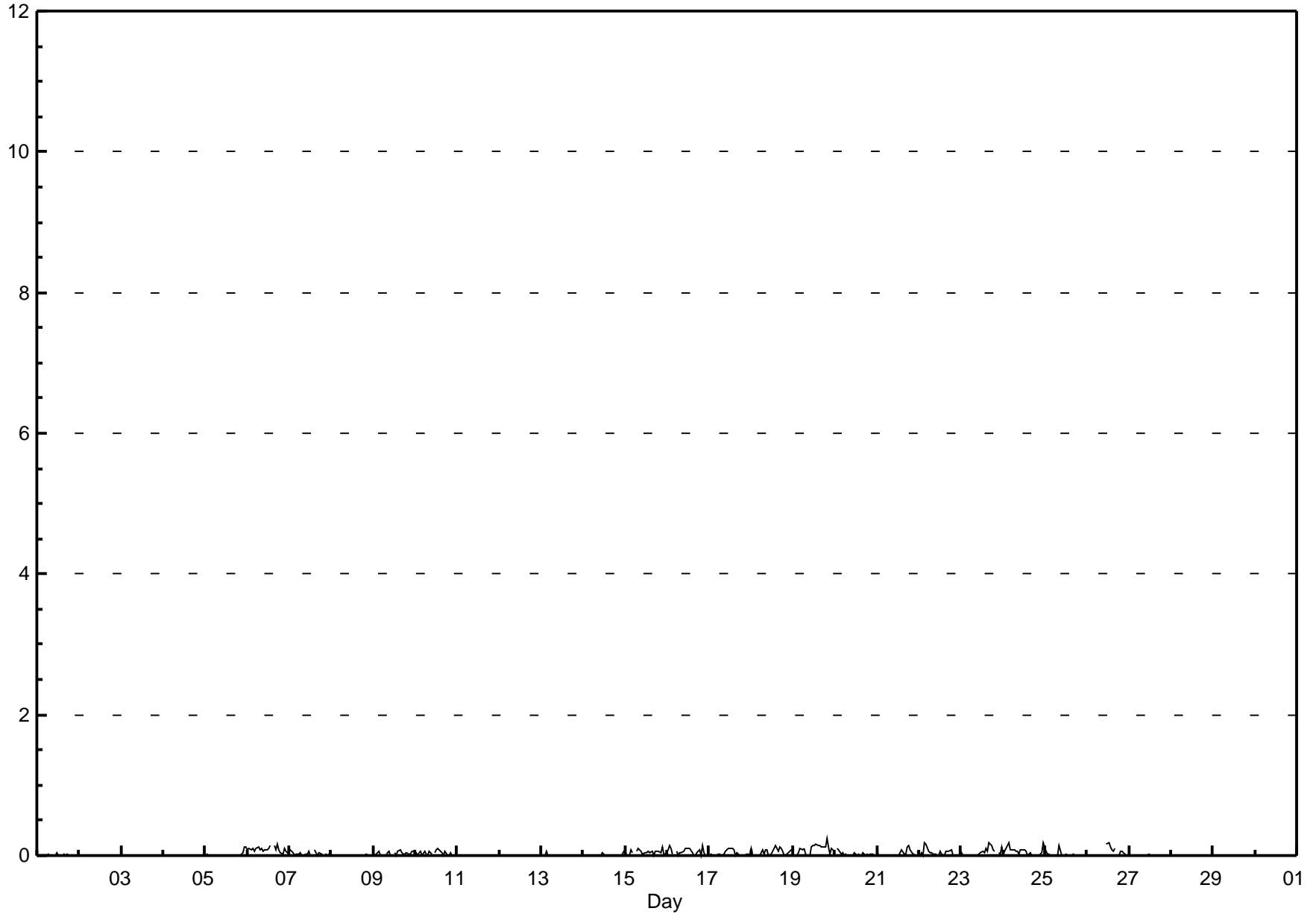
## Hourly Averages

## Total Reduced Sulphur (TRS) - ppb Smoky Heights - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.2 ppb on Apr 19 20:00      Maximum Daily Average: 0.1 ppb on Apr 19		Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0																								
Minimum Value: 0 ppb on Apr 1 01:00 Maximum Diurnal Average: 0.0 ppb at hour 14 Monthly Average: 0.02 ppb		Minimum Daily Average: 0.0 ppb on Apr 2 Minimum Diurnal Average: 0.0 ppb at hour 8 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> = 0.1 P <sub>99</sub> = 0.2																								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.0
2-Apr	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
3-Apr	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
4-Apr	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
5-Apr	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
6-Apr	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
7-Apr	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	0.1
8-Apr	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
9-Apr	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
10-Apr	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	0.1
11-Apr	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
12-Apr	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
13-Apr	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
14-Apr	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
15-Apr	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
16-Apr	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
17-Apr	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
18-Apr	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
19-Apr	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
20-Apr	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
21-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.1
22-Apr	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	0.2
23-Apr	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
24-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
25-Apr	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
26-Apr	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.2
27-Apr	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
28-Apr	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
29-Apr	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
30-Apr	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
																								Diurnal Average	Diurnal Maximum	
																								0.0	0.0	
																								0.1	0.2	

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





## Hourly Maximums

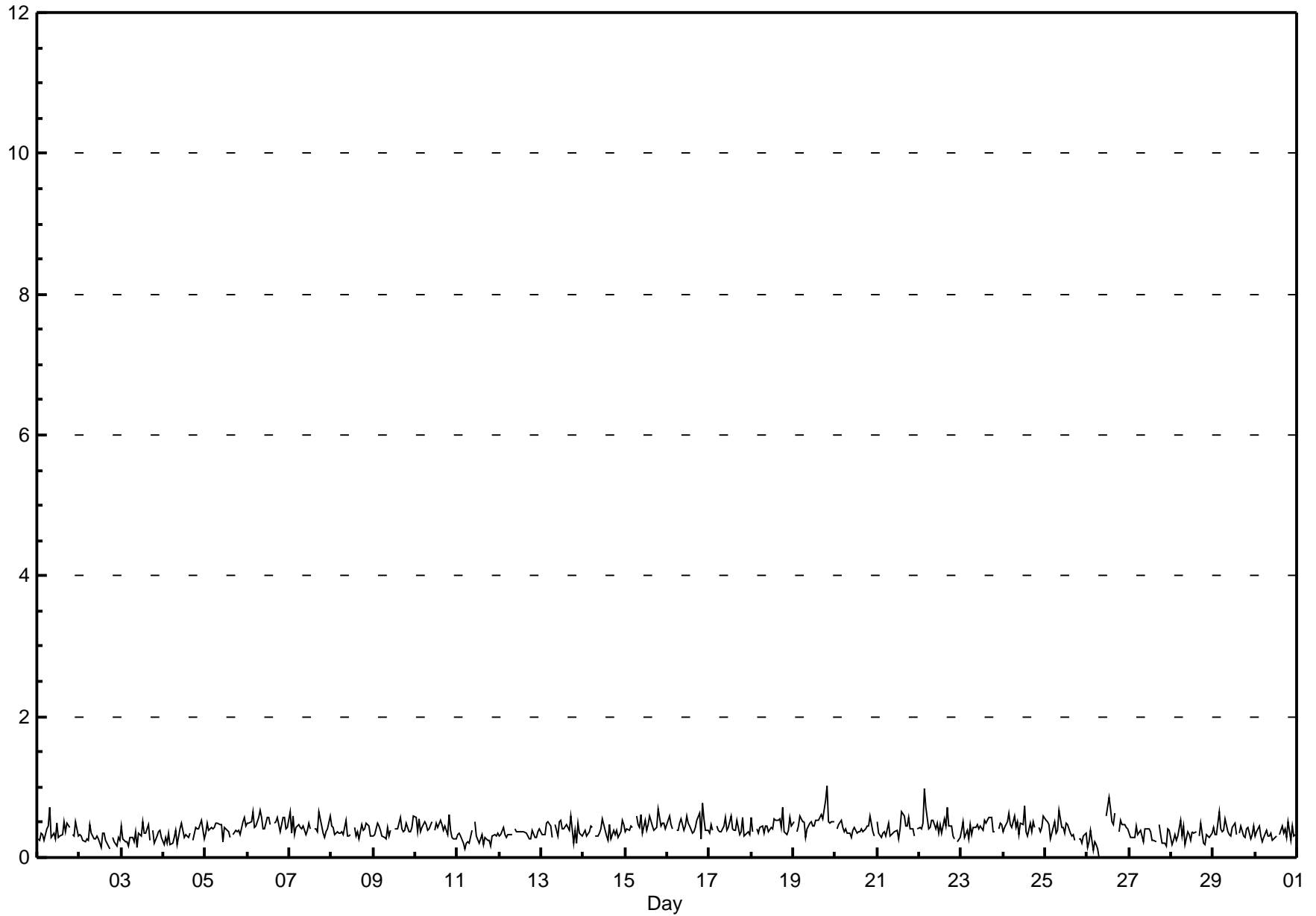
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - April 2013

Maximum Value: 1.0 ppb on Apr 19 20:00		Maximum Daily Average: 0.5 ppb on Apr 19		Hours in Service: 720																																												
Minimum Value: 0 ppb on Apr 26 08:00		Minimum Daily Average: 0.3 ppb on Apr 2		Hours of Data: 686																																												
Maximum Diurnal Average: 0.4 ppb at hour 16		Minimum Diurnal Average: 0.4 ppb at hour 5		Hours of Missing Data: 34																																												
Monthly Average: 0.39 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.3 Median = 0.4 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 0.5 P <sub>99</sub> = 0.7		Hours of Calibration: 34																																												
				Percent Operational Time: 100.0																																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Apr	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	A	0	0	1	0	0.4	0.7																						
2-Apr	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																						
3-Apr	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	0.5																						
4-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0.3	0.5																						
5-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0.4	0.6																					
6-Apr	0	0	0	1	0	0	1	1	1	0	0	1	1	0	0	A	0	1	1	0	0	1	1	0	0	0.5	0.7																					
7-Apr	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	1	0.4	0.7																					
8-Apr	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5																					
9-Apr	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	0.4	0.6																					
10-Apr	1	0	1	0	0	1	0	0	0	0	1	A	0	0	0	1	0	0	0	0	0	1	0	0	0	0.4	0.6																					
11-Apr	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5																					
12-Apr	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	0.4																					
13-Apr	0	0	0	0	1	0	0	A	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.4	0.6																					
14-Apr	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	0.5																					
15-Apr	0	0	0	0	0	A	1	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0.5	0.7																					
16-Apr	1	1	0	0	A	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	1	1	0	1	0	0.5	0.8																					
17-Apr	0	0	0	A	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0.4	0.6																					
18-Apr	1	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0	1	0	0	0.5	0.7																					
19-Apr	1	A	0	0	1	0	1	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0.5	1.0																					
20-Apr	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0.4	0.6																					
21-Apr	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	A	0	0.4	0.6																					
22-Apr	0	0	0	1	1	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	A	0	0	0	0.5	1.0																					
23-Apr	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0	0	A	0	0	0	0	0.4	0.6																					
24-Apr	0	0	1	1	0	0	1	0	1	0	0	1	0	0	0	0	0	1	0	A	0	0	0	1	0	0.5	0.7																					
25-Apr	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.7																					
26-Apr	0	0	0	0	0	0	0	0	C	C	C	1	1	1	1	0	1	A	0	1	0	0	0	0	0	0.4	0.9																					
27-Apr	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	0.3	0.5																					
28-Apr	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.5																					
29-Apr	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.7																					
30-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0.3	0.5																					
																								0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Diurnal Average
																								0.6	0.6	0.6	1.0	0.7	0.5	0.6	0.7	0.7	0.6	0.5	0.6	0.9	0.7	0.6	0.6	0.7	0.7	0.8	1.0	0.8	0.6	0.6	0.6	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								

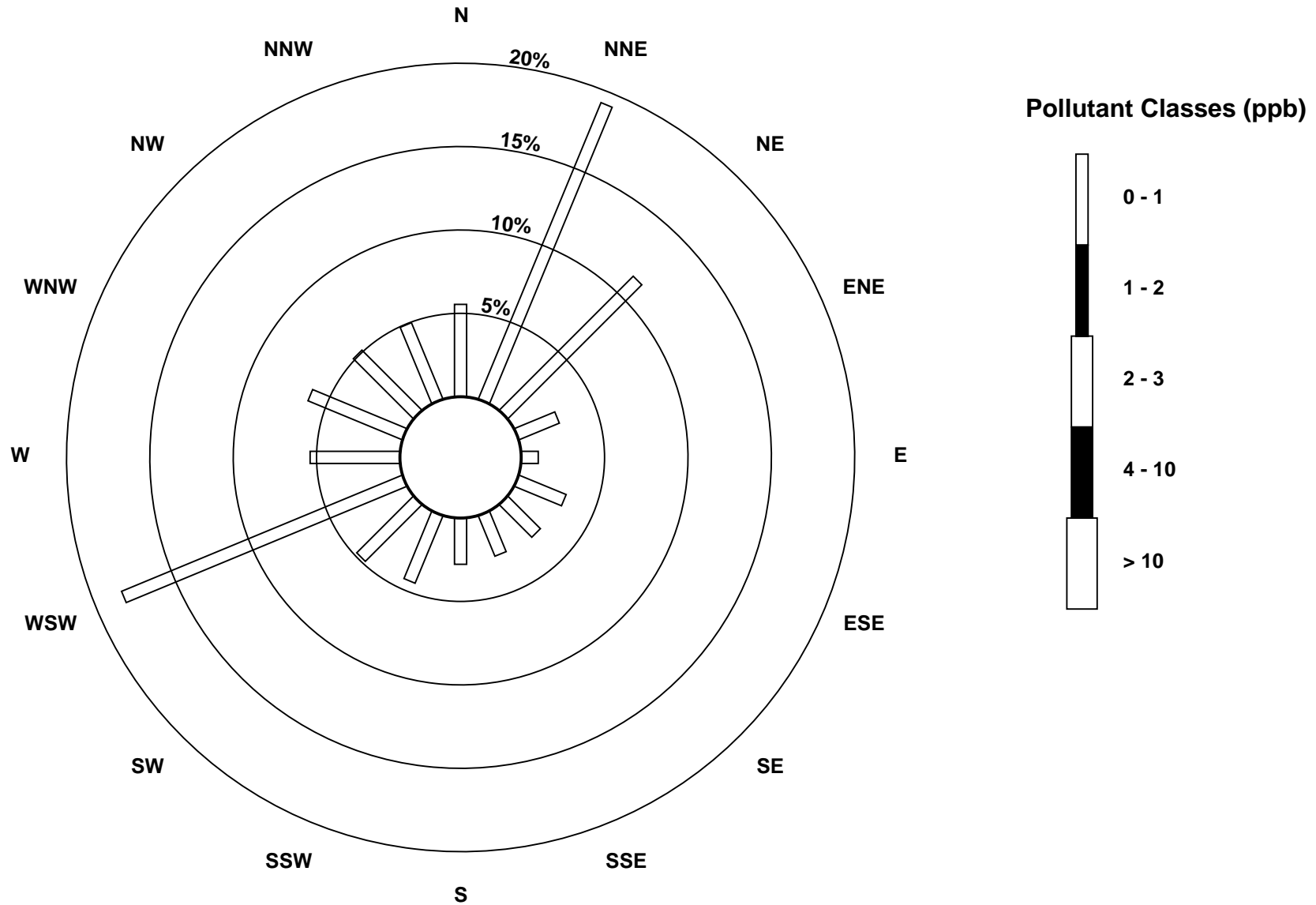
**Hourly Maximums**

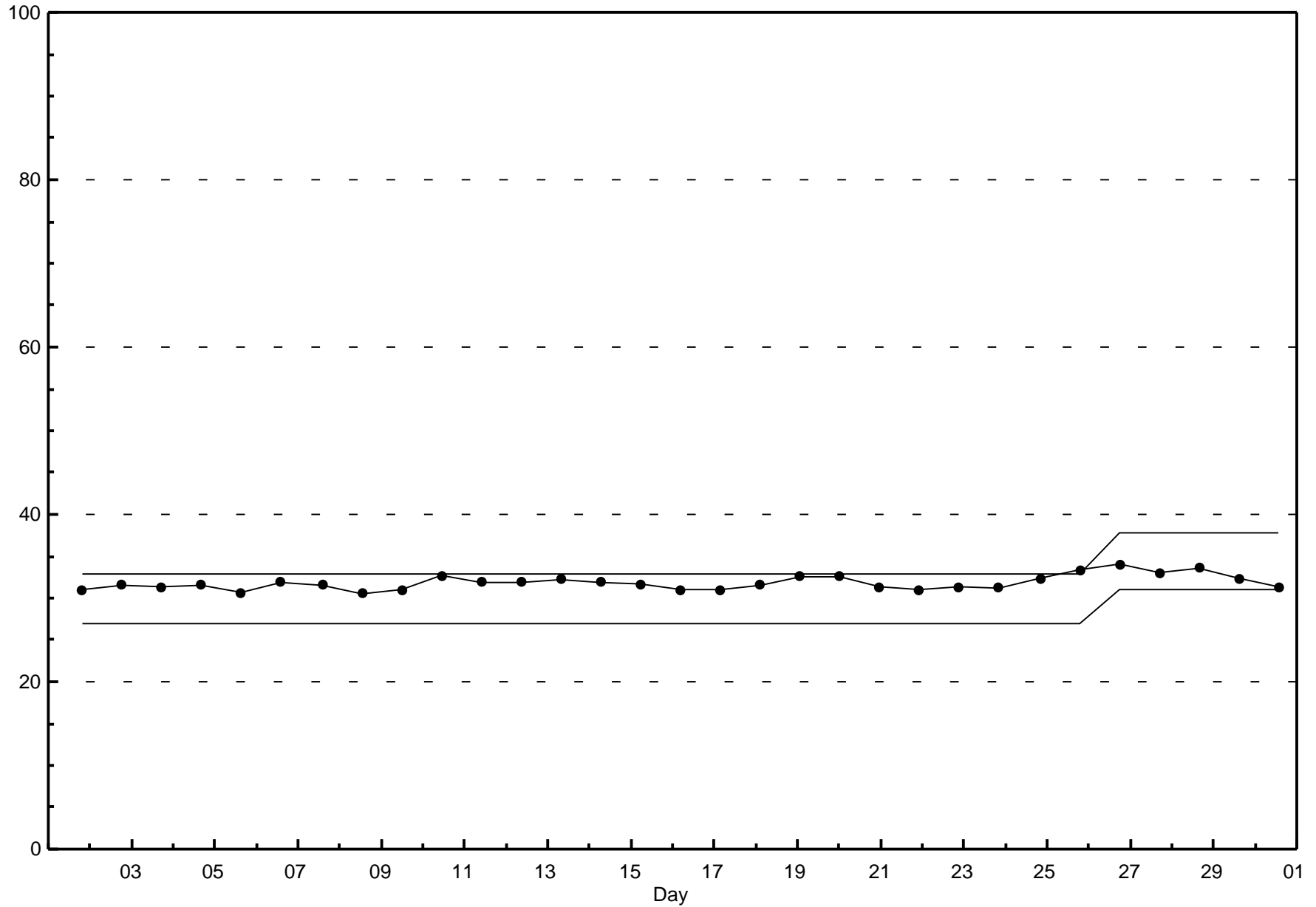
**Total Reduced Sulphur (TRS) - ppb**  
**Smoky Heights - April 2013**



**Pollutant Rose**

**Total Reduced Sulphur (TRS) - ppb**  
**Smoky Heights - April 2013**



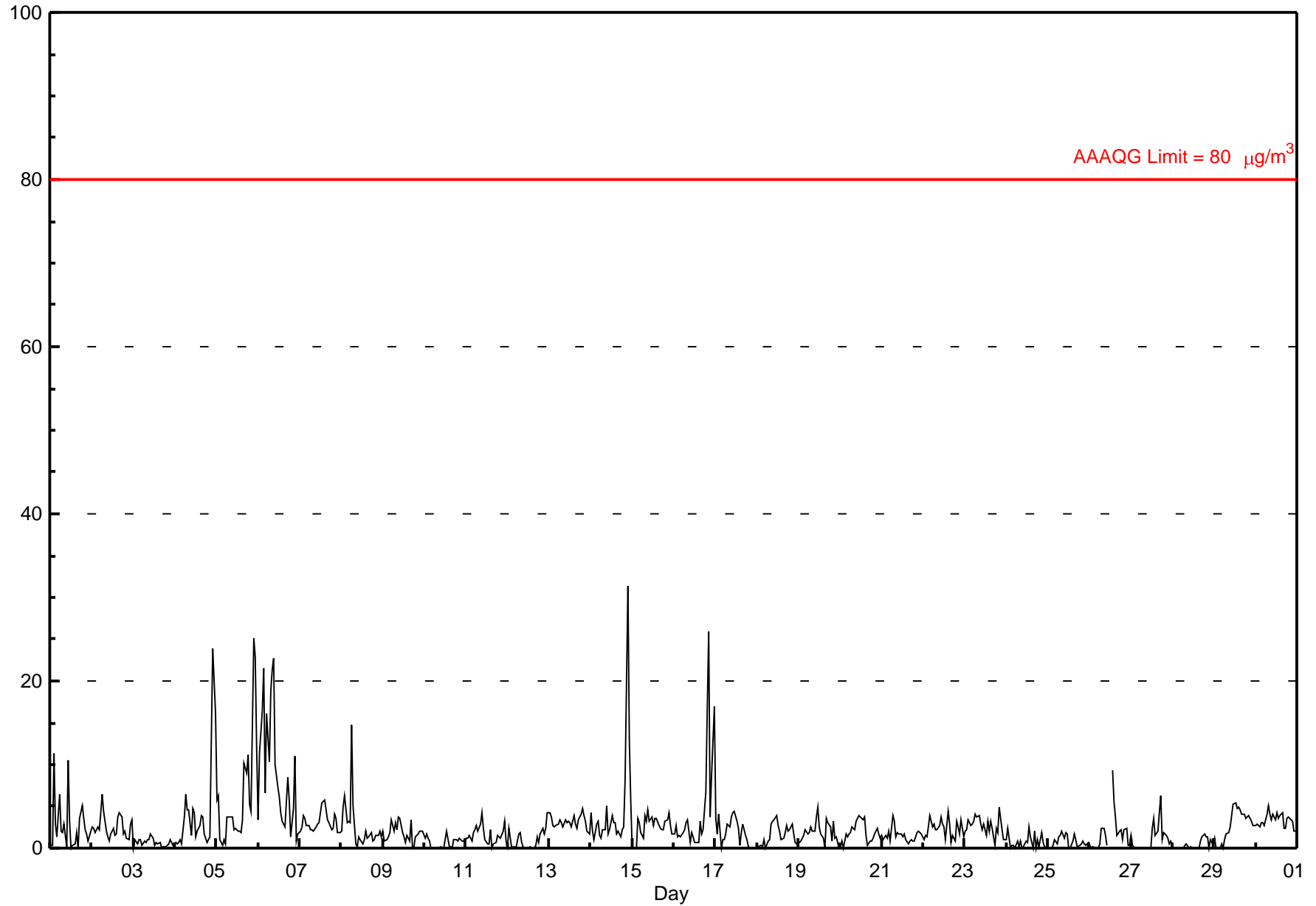


## Hourly Averages

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

### Smoky Heights - April 2013

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 31.4 µg/m <sup>3</sup> on Apr 14 22:00      Maximum Daily Average: 9.2 µg/m <sup>3</sup> on Apr 6																			Hours in Service: 720 Hours of Data: 718																														
Minimum Value: 0 µg/m <sup>3</sup> on Apr 1 13:00 Maximum Diurnal Average: 4.3 µg/m <sup>3</sup> at hour 22 Monthly Average: 2.52 µg/m <sup>3</sup>																			Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0																														
Minimum Daily Average: 0.4 µg/m <sup>3</sup> on Apr 28 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> = 0.9 Median = 1.9 Q <sub>3</sub> = 3.2 P <sub>90</sub> = 4.4 P <sub>99</sub> = 20.5																																																	
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-Apr	0	0	11	3	1	6	2	2	3	0	10	3	0	0	2	0	3	5	3	2	2	1	2	2.7	11.4																								
2-Apr	2	2	2	3	2	4	7	4	2	1	1	2	2	1	2	4	4	4	2	2	1	1	3	3	2.6	6.5																							
3-Apr	0	1	1	1	1	0	1	1	1	1	2	1	0	1	0	1	0	0	0	0	1	1	1	0	0.6	1.6																							
4-Apr	1	1	1	1	1	4	6	5	5	2	5	4	1	2	3	4	4	2	1	1	1	13	24	16	4.4	23.8																							
5-Apr	6	6	1	0	1	1	4	4	4	4	2	2	2	2	2	3	10	9	11	5	4	25	23	12	6.0	25.1																							
6-Apr	3	11	16	21	7	16	10	19	21	23	10	7	6	4	3	3	6	9	6	1	5	11	1	2	9.2	22.8																							
7-Apr	2	3	4	4	3	3	2	2	2	2	3	3	4	5	6	5	3	3	2	2	4	4	2	2	3.1	5.8																							
8-Apr	2	5	6	3	3	3	15	5	0	0	1	1	0	1	2	1	1	2	1	1	2	2	2	1	2.6	14.8																							
9-Apr	2	1	1	1	2	3	2	3	2	4	3	2	1	1	1	1	3	0	0	1	2	2	2	2	1.8	3.7																							
10-Apr	1	2	1	1	0	0	0	0	0	0	0	0	1	2	0	0	0	1	1	1	1	1	1	1	0.6	2.0																							
11-Apr	1	1	2	1	2	2	3	2	3	4	2	1	1	1	2	0	1	1	1	1	1	2	3	1	1.6	4.3																							
12-Apr	0	2	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	1	1	2	2	2	2	4	0.9	4.2																							
13-Apr	4	4	3	3	3	3	3	3	3	3	3	3	3	2	4	3	2	3	4	5	4	3	2	2	3.1	4.7																							
14-Apr	4	2	1	3	3	2	1	2	2	5	2	2	4	3	3	2	2	1	2	3	8	31	13	6	4.5	31.4																							
15-Apr	0	0	0	4	3	2	1	4	3	5	3	4	3	4	4	3	2	2	2	3	3	4	3	2	2.6	4.5																							
16-Apr	2	3	1	2	1	2	2	3	3	1	2	1	1	1	1	3	2	2	7	17	26	4	9	17	4.6	25.9																							
17-Apr	4	2	4	0	1	1	2	3	2	4	4	4	3	2	0	2	3	2	1	0	0	0	0	0	1.8	4.4																							
18-Apr	0	0	0	0	1	0	1	1	3	3	3	4	3	2	1	1	2	3	2	2	3	2	1	1	1.6	3.9																							
19-Apr	1	1	1	1	2	2	2	2	2	2	4	5	2	2	1	0	4	3	3	1	3	1	1	0	1.9	4.9																							
20-Apr	0	1	0	2	1	2	2	3	2	3	4	4	4	3	4	1	0	1	1	1	2	2	2	1	1.9	3.9																							
21-Apr	2	1	2	1	2	1	4	3	1	2	2	2	1	2	1	1	1	1	1	1	2	2	2	2	1.6	3.9																							
22-Apr	1	2	1	3	4	3	3	2	2	3	4	3	2	1	4	3	1	2	1	3	3	2	3	1	2.3	4.4																							
23-Apr	2	2	3	3	3	3	4	4	4	3	2	3	2	3	2	3	2	0	2	2	5	2	1	1	2.6	4.8																							
24-Apr	1	2	0	0	0	0	1	0	1	0	0	1	1	2	1	0	2	0	1	0	2	1	0	0	0.7	2.5																							
25-Apr	0	0	0	0	1	0	1	2	2	1	2	2	0	0	1	2	1	0	0	1	1	0	0	1	0.8	2.0																							
26-Apr	0	0	0	0	0	0	1	2	2	2	0	C	C	9	6	4	2	2	2	1	2	2	0	0	1.8	9.4																							
27-Apr	2	0	0	0	0	0	0	0	0	0	0	0	0	2	4	1	2	4	6	1	2	2	1	1	1	1.2	6.2																						
28-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	0	1	0	0.4	1.7																							
29-Apr	1	0	0	0	0	0	1	2	2	3	4	5	5	5	5	5	4	4	3	4	4	3	3	3	2.7	5.3																							
30-Apr	3	3	2	3	3	3	4	5	4	3	4	3	4	4	4	4	2	2	4	4	3	3	2	2	3.3	5.0																							
																								1.6	1.9	2.2	2.1	1.7	2.2	2.9	3.0	2.8	2.8	2.8	2.5	2.1	2.3	2.2	2.0	2.3	2.4	2.3	2.4	3.3	4.3	3.6	2.8	Diurnal Average	
																								5.8	11.4	16.4	21.4	6.7	16.1	14.8	18.9	21.3	22.8	10.5	7.4	6.1	9.4	5.8	4.6	10.1	9.0	11.1	16.8	25.9	31.4	23.8	16.9	Diurnal Maximum	
C - Calibration																																																	
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m <sup>3</sup> Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m <sup>3</sup>																																																	



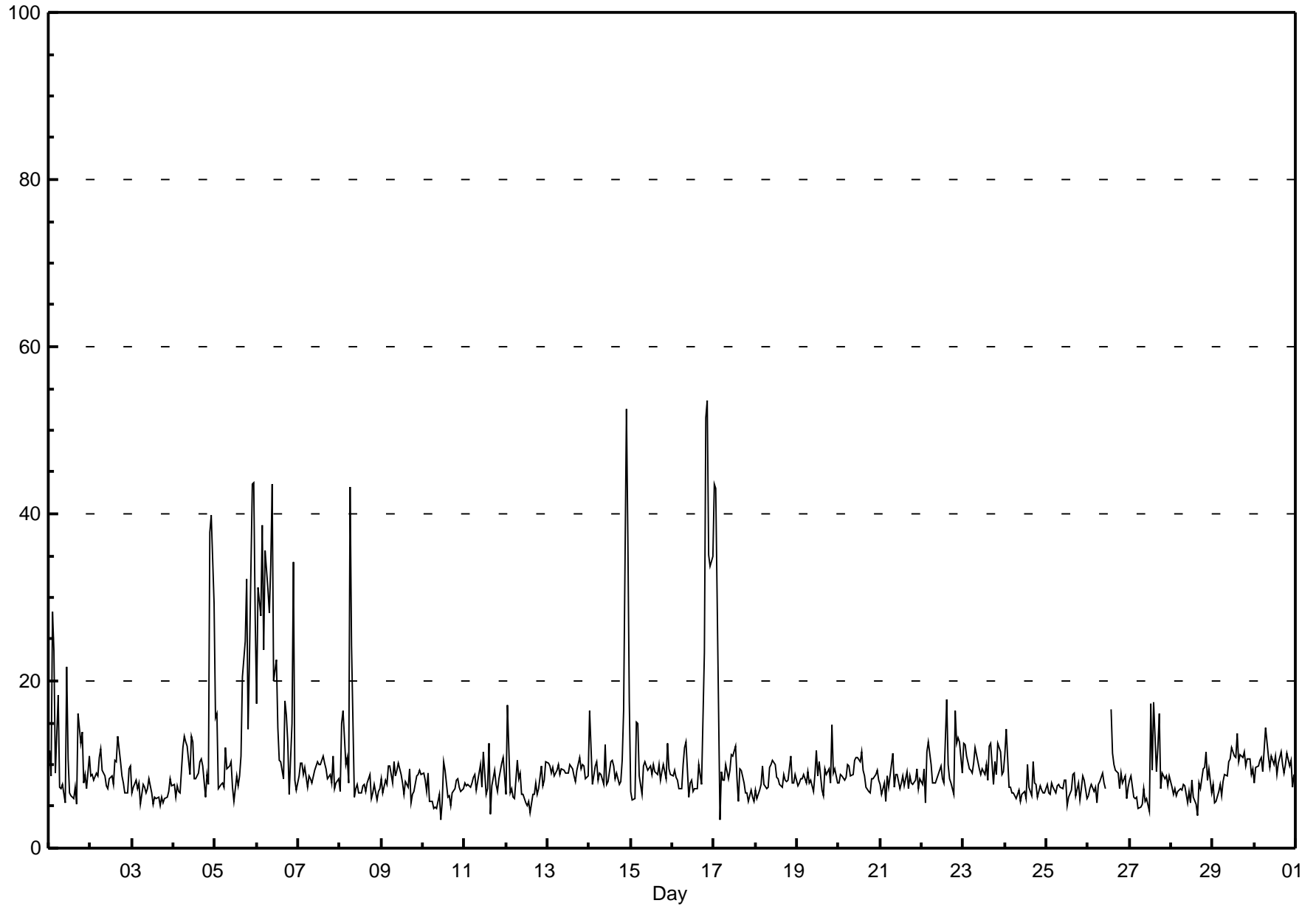
## Hourly Maximums

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

### Smoky Heights - April 2013

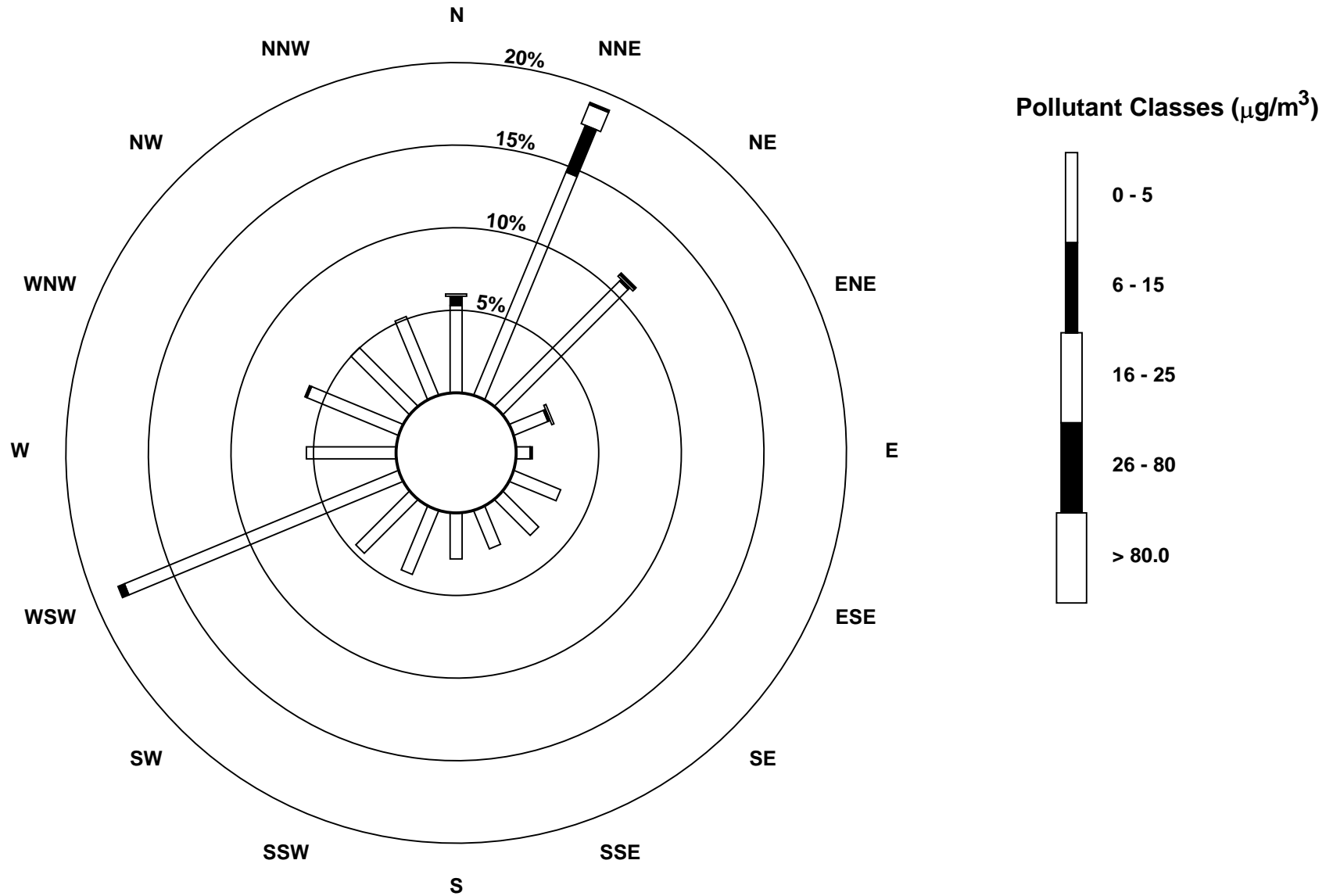
Maximum Value: 53.5 µg/m <sup>3</sup> on Apr 16 21:00		Maximum Daily Average: 21.4 µg/m <sup>3</sup> on Apr 6		Hours in Service: 720																							
Minimum Value: 3 µg/m <sup>3</sup> on Apr 17 04:00		Minimum Daily Average: 6.7 µg/m <sup>3</sup> on Apr 3		Hours of Data: 718																							
Maximum Diurnal Average: 14.1 µg/m <sup>3</sup> at hour 22		Minimum Diurnal Average: 8.4 µg/m <sup>3</sup> at hour 16		Hours of Missing Data: 2																							
Monthly Average: 9.99 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 4.6 P <sub>10</sub> = 6.2 Q <sub>1</sub> = 7.2 Median = 8.6 Q <sub>3</sub> = 10.1 P <sub>90</sub> = 12.6 P <sub>99</sub> = 43.5		Hours of Calibration: 2																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	12	9	28	23	9	18	7	7	8	5	22	11	7	6	6	7	5	16	13	14	8	9	7	11	11.2	28.3	
2-Apr	9	9	8	9	9	11	12	9	9	8	7	8	9	8	11	10	13	10	9	8	7	7	10	10	9.0	13.5	
3-Apr	7	7	8	7	8	5	8	7	7	7	8	7	5	6	6	6	5	6	5	6	6	7	8	8	6.7	8.3	
4-Apr	8	6	7	7	7	12	13	13	12	9	13	13	8	8	9	10	11	10	6	9	8	38	40	29	12.8	39.8	
5-Apr	16	16	7	8	8	7	12	10	10	10	7	6	9	8	9	11	21	25	32	14	23	44	44	28	15.9	43.8	
6-Apr	17	31	28	39	24	36	31	28	34	44	20	22	14	11	10	8	18	16	13	6	15	34	8	7	21.4	43.5	
7-Apr	9	10	10	9	10	7	9	8	8	9	10	10	10	10	11	10	10	8	9	8	11	7	8	8	9.1	11.0	
8-Apr	7	15	16	10	11	8	43	24	6	7	8	7	7	7	8	7	8	9	6	7	8	6	7	7	10.3	43.3	
9-Apr	8	7	8	8	10	10	8	10	9	9	10	9	8	6	8	7	10	5	6	7	9	9	9	9	8.3	10.3	
10-Apr	9	8	7	9	6	6	5	5	5	6	3	6	10	9	6	6	5	7	7	8	8	7	7	7	6.8	10.3	
11-Apr	8	8	8	7	8	8	9	7	9	10	7	12	6	7	13	4	7	9	8	7	8	10	11	9	8.3	12.5	
12-Apr	6	17	7	7	6	6	11	8	9	6	6	5	5	6	4	6	6	8	6	7	10	7	8	10	7.5	17.2	
13-Apr	10	10	9	10	9	9	10	9	10	9	9	9	9	10	10	9	8	9	11	10	10	10	8	9	9.4	10.9	
14-Apr	16	12	8	10	10	8	9	9	8	12	8	8	10	11	10	8	9	8	8	11	16	53	37	18	13.1	52.6	
15-Apr	7	6	6	15	15	9	6	10	10	10	9	10	9	10	9	9	10	8	9	10	8	13	10	9	9.4	15.2	
16-Apr	9	9	8	8	7	7	10	12	13	6	8	8	7	7	7	10	9	8	23	52	54	35	34	35	16.1	53.5	
17-Apr	44	43	30	3	9	8	8	10	8	9	11	11	12	8	6	10	9	8	7	7	6	7	6	6	11.9	43.6	
18-Apr	7	6	7	8	10	8	7	7	10	10	11	10	8	8	8	7	9	8	8	8	11	8	8	9	8.3	11.0	
19-Apr	7	8	8	8	9	8	9	8	8	7	9	12	9	10	7	6	10	9	10	8	15	9	10	8	8.7	14.7	
20-Apr	8	9	9	8	8	10	10	9	9	11	11	11	10	12	9	9	7	7	7	8	8	9	9	8	8.9	11.6	
21-Apr	8	6	8	6	9	7	10	11	7	9	9	7	8	9	7	9	7	9	8	8	8	10	7	8	8.1	11.4	
22-Apr	8	10	5	12	13	10	8	8	8	9	9	10	8	8	18	10	8	8	6	16	13	13	13	9	9.9	17.8	
23-Apr	13	12	11	10	9	9	10	12	10	10	9	10	9	10	8	12	13	8	10	9	13	12	9	9	10.2	12.6	
24-Apr	11	14	7	7	7	7	6	6	7	6	6	7	6	10	7	6	10	8	8	6	7	7	7	7	7.5	14.2	
25-Apr	8	7	6	8	7	7	7	8	7	7	8	8	5	6	7	9	9	6	8	6	7	9	8	6	7.2	8.9	
26-Apr	6	7	8	7	7	5	8	8	9	8	7	C	C	17	11	10	9	9	7	9	8	9	6	7	8.3	16.6	
27-Apr	8	9	6	6	6	5	5	5	7	6	6	4	17	9	17	9	12	16	7	9	8	9	7	9	8.5	17.4	
28-Apr	7	6	7	6	7	7	7	8	8	5	7	5	8	6	5	4	8	7	10	10	12	8	10	7	7.3	11.6	
29-Apr	8	5	6	7	8	6	8	9	9	10	11	12	11	11	14	10	11	11	12	10	11	11	9	10	9.4	13.7	
30-Apr	8	10	10	11	11	9	14	13	11	10	11	10	11	9	10	12	10	9	10	11	10	11	7	9	10.2	14.5	
		10.2	11.0	10.1	9.7	9.1	9.1	10.7	9.9	9.4	9.5	9.4	9.2	8.8	8.8	9.0	8.4	9.6	9.5	9.6	10.2	11.5	14.1	12.3	10.8	Diurnal Average	
		43.6	43.0	29.8	38.7	23.7	35.6	43.3	28.1	34.0	43.5	21.7	22.5	17.3	16.6	17.8	12.3	20.5	24.7	32.3	51.6	53.5	52.6	43.8	35.0	Diurnal Maximum	
C - Calibration																											





**Pollutant Rose**

**Particulate Matter 2.5 (PM<sub>2.5</sub>) - μg/m<sup>3</sup>**  
**Smoky Heights - April 2013**

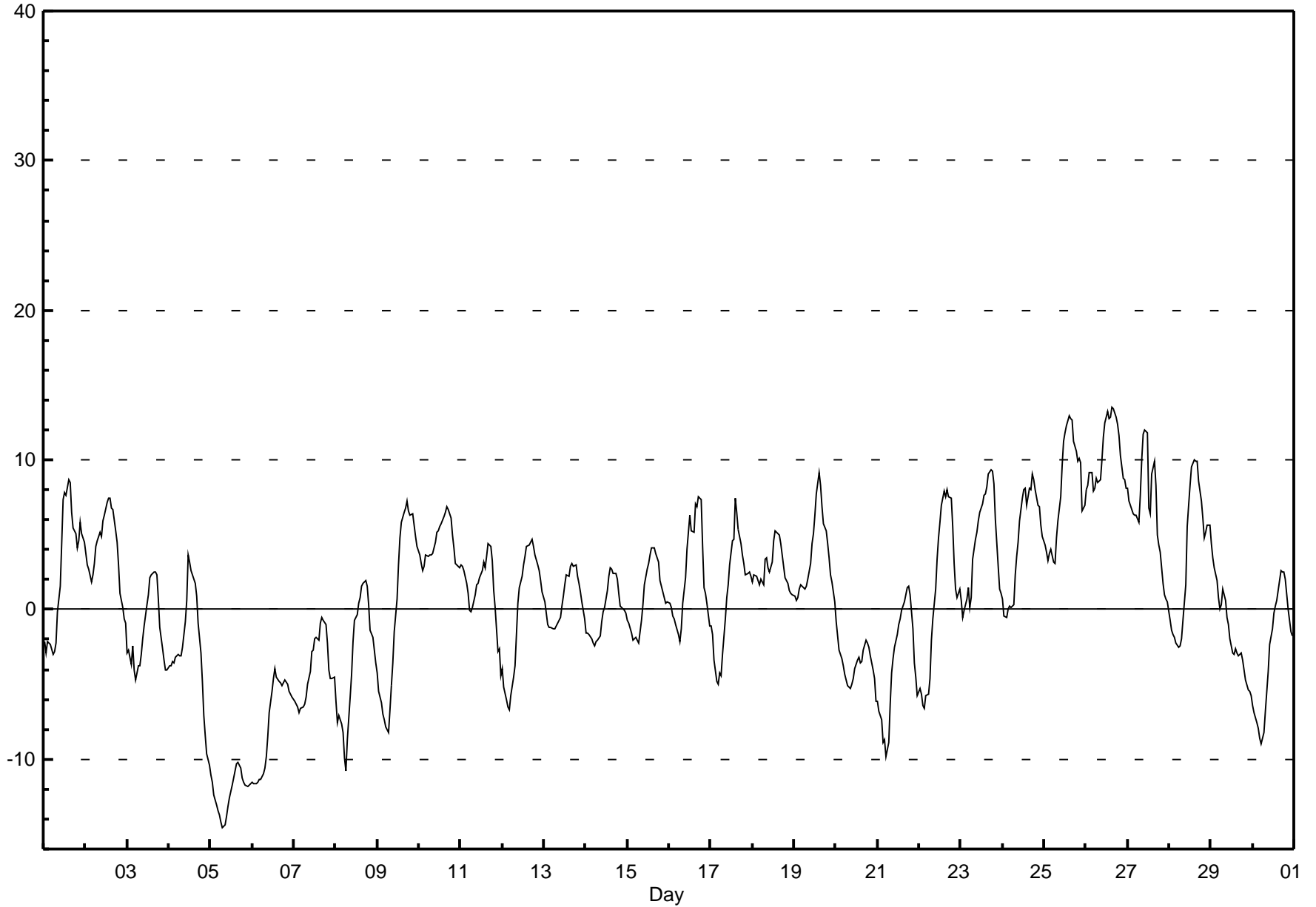


## Hourly Averages

External Temperature (ET) - °C

Smoky Heights - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13.5 °C on Apr 26 16:00 Maximum Daily Average: 10.4 °C on Apr 26		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																								
Minimum Value: -15 °C on Apr 5 08:00 Maximum Diurnal Average: 4.3 °C at hour 16 Monthly Average: 0.70 °C		Minimum Daily Average: -12.2 °C on Apr 5 Minimum Diurnal Average: -2.7 °C at hour 6 Percentiles: P <sub>1</sub> = -13.2 P <sub>10</sub> = -6.5 Q <sub>1</sub> = -2.9 Median = 1.0 Q <sub>3</sub> = 4.5 P <sub>90</sub> = 7.6 P <sub>99</sub> = 12.7																								
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-Apr	-2	-3	-2	-2	-2	-3	-3	-2	0	2	4	7	8	8	9	8	6	5	5	4	5	6	5	4	2.8	8.7
2-Apr	4	3	3	2	2	3	4	5	5	5	6	6	7	7	7	7	7	5	5	3	1	0	-1	-1	4.0	7.5
3-Apr	-3	-3	-4	-2	-4	-5	-4	-4	-3	-2	-1	0	1	2	2	2	2	2	1	-1	-3	-3	-4	-4	-1.5	2.5
4-Apr	-4	-4	-3	-4	-3	-3	-3	-3	-3	-1	1	4	3	3	2	2	1	-1	-3	-5	-7	-8	-10	-10	-2.5	3.7
5-Apr	-11	-12	-12	-13	-13	-14	-14	-15	-14	-14	-13	-13	-12	-11	-11	-10	-10	-11	-11	-12	-12	-12	-12	-12	-12.2	-10.2
6-Apr	-12	-12	-12	-12	-11	-11	-11	-11	-10	-9	-7	-5	-5	-4	-5	-5	-5	-5	-5	-5	-5	-5	-6	-6	-7.5	-4.0
7-Apr	-6	-6	-7	-7	-7	-7	-6	-6	-5	-4	-3	-3	-2	-2	-2	-1	-1	-1	-1	-2	-4	-5	-5	-5	-4.0	-0.5
8-Apr	-6	-8	-7	-8	-8	-10	-11	-9	-6	-4	-2	-1	0	0	1	2	2	2	2	0	-1	-2	-3	-4	-3.4	1.9
9-Apr	-4	-5	-6	-7	-7	-8	-8	-7	-5	-4	-1	1	3	5	6	7	7	7	7	6	6	6	5	4	0.2	7.3
10-Apr	4	3	3	3	4	4	4	4	4	5	5	5	6	6	6	7	7	7	6	5	4	3	3	3	4.5	6.8
11-Apr	3	3	3	2	1	0	0	0	1	2	2	2	3	3	3	4	4	4	3	1	0	-3	-3	-4	1.4	4.4
12-Apr	-4	-5	-6	-7	-7	-6	-5	-4	-2	0	2	2	3	4	4	4	4	5	4	4	3	3	2	1	0.0	4.7
13-Apr	1	0	-1	-1	-1	-1	-1	-1	-1	-1	0	1	2	2	2	3	3	3	3	2	2	1	0	-1	0.7	3.1
14-Apr	-2	-2	-2	-2	-2	-2	-2	-2	-2	-1	0	0	1	2	3	3	2	2	2	1	0	0	0	0	-0.1	2.8
15-Apr	-1	-1	-2	-2	-2	-2	-2	-1	-1	0	2	3	3	4	4	4	4	3	3	2	1	1	0	0	0.9	4.1
16-Apr	0	0	0	-1	-1	-2	-2	-1	0	2	4	5	6	5	5	7	7	8	7	4	1	1	0	-1	2.4	7.6
17-Apr	-1	-2	-3	-5	-5	-4	-4	-3	-1	1	2	3	5	5	7	7	5	4	4	3	2	2	2	2	1.1	7.4
18-Apr	2	2	2	2	2	2	2	3	3	3	2	3	5	5	5	5	4	4	3	2	2	1	1	1	2.8	5.2
19-Apr	1	1	1	1	2	1	1	2	2	3	4	5	6	8	9	8	7	6	5	4	3	2	2	1	3.6	9.2
20-Apr	-1	-2	-3	-3	-4	-4	-5	-5	-5	-5	-5	-4	-3	-3	-4	-4	-3	-2	-2	-2	-3	-4	-5	-6	-3.6	-0.8
21-Apr	-6	-7	-7	-9	-9	-10	-9	-6	-4	-3	-2	-2	-1	-1	0	0	1	1	2	1	-1	-4	-5	-6	-3.6	1.6
22-Apr	-5	-6	-6	-7	-6	-6	-5	-2	-1	1	3	5	6	7	8	8	8	8	7	6	3	1	1	1	1.3	8.0
23-Apr	1	-1	0	1	1	0	1	3	5	5	6	6	7	8	8	8	9	9	9	8	6	3	1	1	4.4	9.4
24-Apr	1	0	-1	0	0	0	0	2	4	5	6	7	8	8	7	8	8	9	9	8	7	7	6	5	4.7	9.1
25-Apr	4	4	3	4	4	3	3	5	6	8	10	11	12	12	13	13	13	11	11	10	10	10	7	7	8.0	12.9
26-Apr	8	8	9	9	8	8	9	9	9	10	12	12	13	13	13	14	13	13	12	12	10	9	9	8	10.4	13.5
27-Apr	8	7	7	6	6	6	6	8	10	12	12	12	7	6	9	10	8	5	4	4	2	1	1	1	6.6	12.0
28-Apr	-1	-1	-2	-2	-2	-3	-2	-2	-1	2	6	7	8	9	10	10	10	9	7	6	5	5	6	6	3.7	10.0
29-Apr	4	3	3	2	1	0	0	1	1	-1	-1	-2	-3	-3	-3	-3	-3	-3	-4	-5	-5	-5	-6	-6	-1.4	4.4
30-Apr	-6	-7	-8	-8	-9	-9	-8	-7	-6	-4	-2	-1	0	0	1	2	3	3	3	2	0	-1	-1	-2	-2.8	2.6
																								Diurnal Average		
																								Diurnal Maximum		





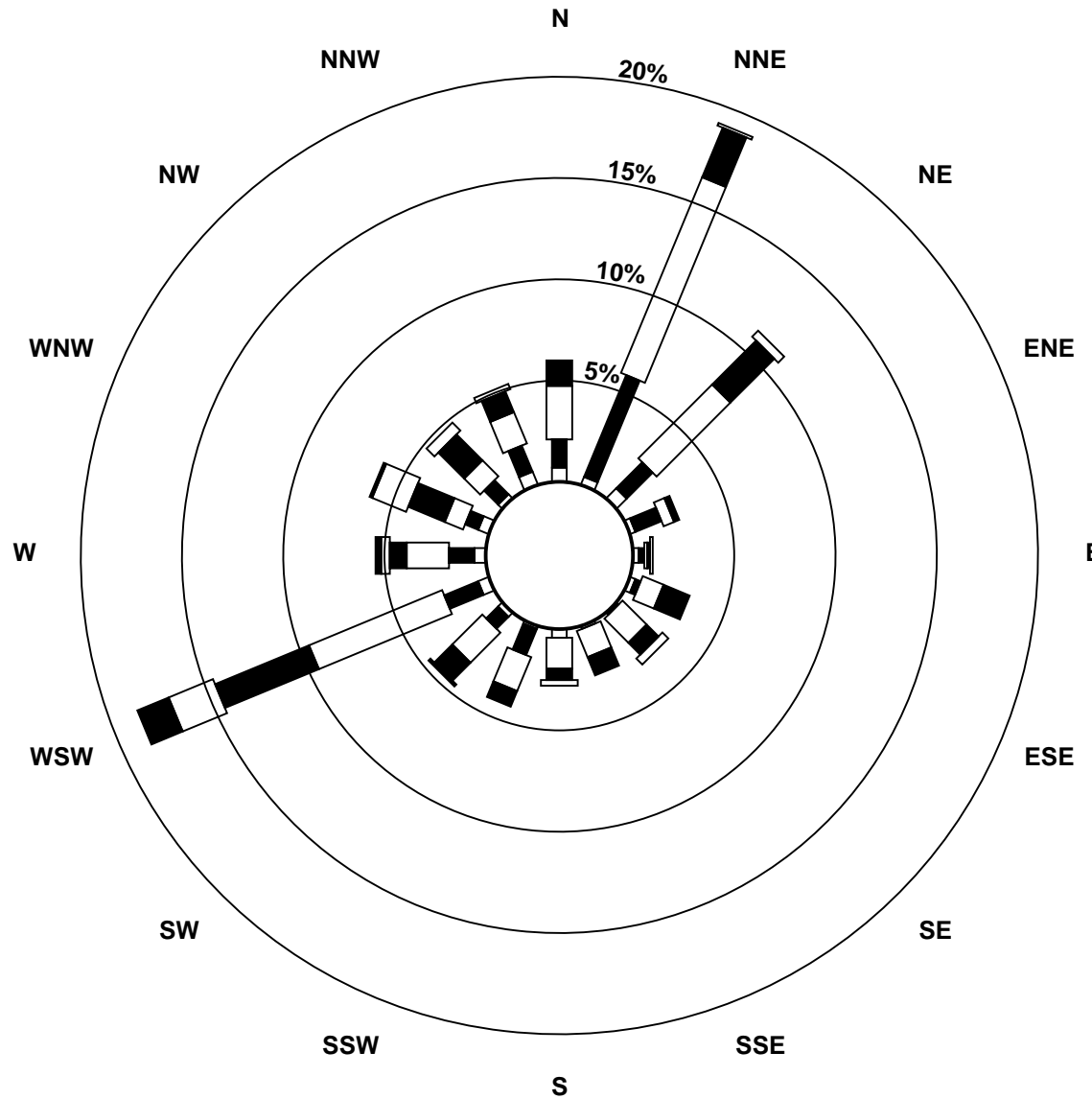
## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Smoky Heights - April 2013

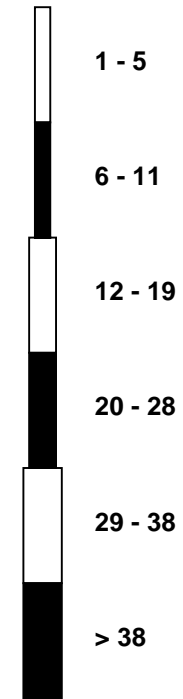
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	6	2	10	10	10	14	16	18	23	21	22	26	24	23	33	19	13	18	11	10	8	8	12	15	14.4	33.2
Dir	232	267	7	351	336	315	297	290	299	296	292	293	302	297	297	294	286	308	310	292	268	277	263	259	296.8	297.3
24 Spd	1	1	13	18	17	11	4	8	9	17	22	23	19	26	25	8	13	10	16	14	13	20	21	19	13.2	26.3
Dir	324	306	271	266	268	264	253	210	212	245	247	246	244	253	240	215	230	237	183	182	187	230	245	257	239.3	253.2
25 Spd	16	14	17	18	18	17	16	19	19	22	23	25	36	34	32	41	42	30	32	22	21	18	11	16	23.1	41.9
Dir	242	243	236	242	252	246	239	245	247	246	249	253	249	249	256	258	256	244	249	233	230	223	244	242	246.5	256.1
26 Spd	21	21	26	34	25	35	45	40	30	29	51	53	50	49	46	35	32	33	28	29	30	21	27	25	33.4	53.2
Dir	235	240	244	248	237	242	248	247	241	247	248	252	255	258	257	252	246	246	246	252	238	225	220	215	245.5	251.9
27 Spd	28	19	21	17	17	18	17	17	28	39	44	49	44	36	56	54	43	36	27	24	13	11	3	3	21.5	56.0
Dir	213	206	203	194	195	184	188	190	212	231	242	238	258	248	259	270	284	303	312	330	321	300	315	162	248.5	259.5
28 Spd	2	4	8	11	11	9	8	8	6	4	1	9	16	26	24	23	26	13	3	4	4	3	10	10	4.1	26.2
Dir	218	38	50	61	62	56	51	44	42	113	236	232	228	259	250	247	251	253	269	52	80	67	286	206	256.4	251.2
29 Spd	21	17	16	17	15	15	15	20	26	28	30	32	35	32	27	29	26	28	26	22	20	19	15	13	20.1	35.0
Dir	217	233	255	264	259	261	258	287	290	302	290	296	303	303	301	307	311	304	318	320	322	334	343	332	295.5	303.4
30 Spd	12	12	11	10	8	3	5	6	8	8	2	2	4	2	5	3	6	5	9	10	9	9	13	12	1.9	12.7
Dir	344	329	326	337	346	332	346	31	37	50	8	291	332	107	189	222	211	181	110	115	101	87	137	155	42.9	136.9
Spd	2.8	3.6	4.6	4.3	4.3	5.0	5.8	5.0	3.7	4.6	6.3	7.3	7.2	7.6	6.8	6.5	7.3	6.7	4.6	4.0	2.6	1.2	1.3	1.8	Diurnal Average	
Dir	289.7	310.5	302.8	301.7	291.0	284.3	286.2	286.5	282.8	306.1	288.9	287.3	296.3	301.6	298.1	307.1	323.8	330.7	352.4	7.4	350.2	322.9	341.7	290.3	Diurnal Maximum	
Spd	30.9	29.5	27.7	33.9	33.1	34.8	45.4	39.6	31.5	38.8	50.6	53.2	50.3	48.9	56.0	53.9	42.8	35.8	31.8	33.5	30.2	29.3	26.7	26.4	Diurnal Maximum	
Dir	323.5	311.9	307.6	247.8	253.1	242.0	247.6	247.4	263.8	230.6	247.8	251.9	255.2	257.5	259.5	269.5	284.4	303.4	248.8	172.4	238.4	96.8	220.4	325.2	Diurnal Maximum	
Maximum Speed Value: 56 km/h on Apr 27 15:00		Minimum Speed Value: 1 km/h on Apr 24 02:00																		Hours in Service: 720						
Maximum Daily Speed Average: 33.4 km/h on Apr 26		Minimum Daily Speed Average: 1.9 km/h on Apr 30																		Hours of Data: 720						
Maximum Diurnal Speed Average: 7.6 km/h at hour 14		Minimum Diurnal Speed Average: 1.2 km/h at hour 22																		Hours of Missing Data: 0						
Monthly Average Velocity: 4.46 km/h 305.12 deg		Speed Percentiles: P <sub>1</sub> = 2.3 P <sub>10</sub> = 7.7 Q <sub>1</sub> = 11.2 Median = 16.2 Q <sub>3</sub> = 21.4 P <sub>90</sub> = 28.0 P <sub>99</sub> = 48.6																		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	7	36	58	27	1	0	129																			
NorthEast	6	37	80	35	5	0	163																			
East	3	5	1	10	1	0	20																			
SouthEast	1	2	26	15	3	0	47																			
South	3	2	20	9	2	0	36																			
SouthWest	6	23	52	34	10	4	129																			
West	9	15	34	28	19	12	117																			
NorthWest	7	12	21	23	16	0	79																			
Total	42	132	292	181	57	16	720																			

**Wind Rose**

**Wind Speed (WS) (km/h)**  
**Smoky Heights - April 2013**



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



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - April 2013

<b>Maximum Speed: 56 km/h on Apr 27 15:00</b>		<b>Maximum Daily Speed Average: 34.1 km/h on Apr 26</b>																		Hours in Service: 720						
<b>Minimum Speed: 2 km/h on Apr 28 01:00</b>		<b>Minimum Daily Speed Average: 8.7 km/h on Apr 30</b>																		Hours of Data: 720						
<b>Maximum Diurnal Speed Average: 23.3 km/h at hour 15</b>		<b>Minimum Diurnal Speed Average: 14.7 km/h at hour 5</b>																		Hours of Missing Data: 0						
<b>Monthly Average Speed: 17.71 km/h</b>		Percentiles: P <sub>1</sub> = 4.3 P <sub>10</sub> = 8.2 Q <sub>1</sub> = 12.0 Median = 16.5 Q <sub>3</sub> = 22.0 P <sub>90</sub> = 28.3 P <sub>99</sub> = 48.6																		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-Apr	4	5	8	9	8	9	12	10	8	9	9	14	21	20	30	26	28	22	20	22	22	18	23	23	15.9	30.0
2-Apr	23	26	25	17	16	13	19	20	26	22	25	24	22	18	23	23	22	23	18	15	7	10	12	7	19.1	26.0
3-Apr	10	12	13	9	4	10	9	11	9	10	10	8	7	6	7	10	12	13	13	10	10	10	11	9	9.7	13.3
4-Apr	10	10	9	9	9	9	10	9	10	11	10	6	14	22	21	17	18	21	21	24	25	23	24	23	15.2	24.6
5-Apr	19	19	19	17	16	14	15	15	15	21	19	20	27	27	24	13	13	12	10	8	8	8	8	9	15.7	27.4
6-Apr	12	13	13	14	15	13	16	15	15	16	16	17	20	19	21	20	18	16	15	15	14	13	16	16	15.8	21.1
7-Apr	16	16	14	13	14	14	13	15	15	16	16	15	18	30	28	18	18	17	15	11	8	10	10	12	15.5	29.5
8-Apr	14	11	10	11	10	9	9	7	9	17	14	15	17	18	19	20	21	18	19	17	14	19	24	24	15.3	24.0
9-Apr	23	20	18	18	16	14	14	12	19	18	19	21	20	23	30	30	24	23	25	34	29	20	17	20	21.1	33.6
10-Apr	20	15	17	7	19	16	15	14	16	14	16	17	20	19	16	18	19	21	25	21	20	19	18	22	17.6	24.9
11-Apr	25	28	25	28	33	32	37	36	32	30	23	29	31	23	23	36	23	20	19	17	20	16	13	15	25.7	37.5
12-Apr	17	14	16	15	13	19	20	19	19	15	16	20	27	25	23	22	21	21	21	22	25	29	25	23	20.4	29.5
13-Apr	22	24	25	19	20	22	23	23	25	28	32	35	29	26	26	23	21	19	19	15	15	19	25	19	23.1	35.3
14-Apr	15	17	17	14	14	14	16	17	17	18	16	16	16	16	17	19	29	26	26	16	13	12	12	12	16.8	28.7
15-Apr	14	16	16	13	14	16	16	17	20	18	16	16	18	19	17	18	23	26	22	19	17	14	16	18	17.5	26.0
16-Apr	19	20	20	20	15	14	12	14	14	13	10	10	9	18	16	16	11	6	6	17	9	10	7	5	13.0	20.1
17-Apr	5	6	5	4	5	8	11	12	12	10	11	10	8	10	10	15	20	18	16	20	13	14	18	17	11.6	20.3
18-Apr	21	23	21	14	8	12	14	9	16	19	14	16	15	17	25	28	20	20	17	16	14	17	17	25	17.3	28.1
19-Apr	19	14	13	16	18	18	19	14	15	15	17	20	21	24	22	27	28	13	17	24	21	23	19	27	19.2	27.6
20-Apr	31	30	28	27	33	27	30	30	31	33	33	29	29	28	23	20	20	18	14	11	12	11	8	9	23.5	33.3
21-Apr	9	9	8	10	5	3	5	5	5	10	13	13	12	13	13	15	15	13	12	7	6	6	6	9	9.3	15.3
22-Apr	8	6	9	10	14	13	11	15	16	18	13	14	15	11	11	14	12	16	14	12	10	12	14	10	12.5	18.4
23-Apr	7	5	10	10	11	14	16	18	23	21	22	26	25	24	34	20	15	18	12	10	8	8	12	15	16.0	33.7
24-Apr	8	3	13	18	17	11	5	9	9	17	22	23	19	27	25	9	13	13	16	14	13	20	21	20	15.2	26.5
25-Apr	16	14	18	18	18	17	16	19	19	22	23	25	36	35	32	41	42	31	32	22	21	18	11	16	23.5	42.3
26-Apr	21	21	26	34	25	35	46	40	30	29	51	53	51	49	46	35	32	33	28	29	30	21	27	25	34.1	53.3
27-Apr	28	20	21	17	17	18	17	17	28	39	44	50	46	37	56	54	44	37	28	24	14	12	7	5	28.4	56.4
28-Apr	2	4	8	11	11	9	8	8	6	4	5	11	17	27	24	24	27	27	13	5	5	5	8	12	11.8	26.6
29-Apr	21	17	16	18	15	15	15	21	26	29	30	33	35	33	28	30	27	28	26	22	20	19	15	13	23.0	35.3
30-Apr	12	12	11	10	8	4	6	6	8	8	6	7	7	7	7	8	8	8	9	10	9	10	13	12	8.7	12.7
15.8 14.9 15.7 14.9 14.7 14.8 15.8 16.0 17.1 18.4 19.1 20.4 21.8 22.3 23.3 22.3 21.4 19.9 18.4 17.0 15.1 14.9 15.2 15.7																								Diurnal Average		
31.1 30.2 27.9 34.1 33.2 35.0 45.5 39.7 31.8 39.3 50.8 53.3 50.6 49.0 56.4 54.3 43.7 37.0 32.0 33.6 30.4 29.5 26.7 26.5																								Diurnal Maximum		

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



# Hourly Standard Deviations

Wind Direction (WD) - deg  
Smoky Heights - April 2013

Maximum Value: 92.5 deg on Apr 28 11:00																	Hours in Service: 720								
Minimum Value: 2.3 deg on Apr 23 06:00																	Hours of Data: 720								
Percentiles: P <sub>1</sub> = 2.7 P <sub>10</sub> = 4.3 Q <sub>1</sub> = 5.6 Median = 7.9 Q <sub>3</sub> = 12.5 P <sub>90</sub> = 28.5 P <sub>99</sub> = 80.9																	Hours of Missing Data: 0								
																	Hours of Calibration: 0								
																	Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	11	10	5	5	6	5	4	4	7	5	4	4	28	15	8	47	4	5	7	24	58	49	12	31	57.6
2-Apr	29	12	12	8	6	19	4	9	4	3	10	5	6	7	8	5	24	9	9	7	53	33	49	58	57.5
3-Apr	21	26	16	44	67	28	13	12	13	17	12	10	11	34	35	17	10	9	6	10	10	5	4	5	66.7
4-Apr	5	8	9	17	7	12	7	8	7	7	7	35	23	13	11	10	10	9	15	5	6	6	7	8	34.8
5-Apr	9	10	8	7	9	9	8	7	9	6	8	5	16	14	14	17	18	12	11	8	8	7	7	5	17.7
6-Apr	5	5	6	6	5	5	5	6	5	5	6	7	7	9	10	5	6	6	5	5	7	6	4	4	9.6
7-Apr	3	4	5	5	4	4	5	4	5	6	7	6	7	8	7	18	9	9	7	12	9	6	19	12	19.3
8-Apr	7	11	8	9	6	4	8	30	13	8	10	10	10	11	15	9	7	6	5	7	6	8	5	5	30.3
9-Apr	3	4	9	3	5	7	6	13	5	7	5	5	5	6	4	5	25	21	7	4	3	6	5	7	24.9
10-Apr	4	4	12	21	4	3	4	19	11	32	6	4	2	2	3	2	5	4	4	6	6	12	4	7	31.6
11-Apr	4	4	5	6	4	3	3	3	7	16	22	38	10	19	7	19	27	14	12	29	8	42	75	15	75.1
12-Apr	20	87	13	7	18	14	14	11	51	26	9	10	7	7	7	6	8	8	6	6	4	7	9	12	86.7
13-Apr	12	9	6	5	6	6	6	6	6	5	5	6	9	7	11	6	9	7	12	7	5	6	4	5	12.1
14-Apr	6	5	7	9	6	6	16	11	10	8	5	5	6	13	11	10	10	11	10	13	5	6	5	5	15.7
15-Apr	4	4	5	6	5	5	4	5	6	8	11	10	9	9	7	8	9	8	8	5	4	4	16	9	16.4
16-Apr	8	7	6	7	6	6	8	8	10	8	13	12	44	18	52	88	67	77	56	28	16	11	24	17	87.5
17-Apr	28	10	13	15	30	15	8	3	3	11	13	25	21	9	27	12	8	8	12	8	15	15	3	11	30.1
18-Apr	3	3	3	4	21	5	13	79	17	12	16	10	15	14	10	8	8	7	5	9	8	6	8	8	79.0
19-Apr	8	13	12	41	7	9	12	13	3	8	4	5	4	46	41	8	15	29	65	3	36	21	10	7	64.6
20-Apr	6	12	6	10	6	6	6	5	5	5	8	9	10	8	10	10	7	9	8	14	9	6	9	8	13.6
21-Apr	6	5	6	4	78	33	29	30	12	9	7	8	9	7	9	7	6	6	7	5	12	21	12	6	78.4
22-Apr	11	14	9	14	4	4	8	4	6	7	15	7	3	47	46	19	39	9	15	75	13	11	6	13	75.3
23-Apr	40	75	14	9	17	2	5	5	6	6	8	7	11	12	10	27	38	9	17	9	16	23	8	4	74.8
24-Apr	86	78	11	7	4	6	42	42	7	8	3	4	3	8	7	12	15	36	8	7	14	9	7	3	86.3
25-Apr	8	4	5	4	7	9	6	6	5	4	5	5	5	7	5	5	9	8	6	3	4	3	16	4	16.0
26-Apr	8	10	7	5	5	5	4	4	4	5	5	4	5	4	4	7	5	5	7	5	7	6	3	3	10.4
27-Apr	5	8	5	5	7	6	5	9	10	10	6	7	21	11	7	7	12	14	10	9	16	28	83	66	82.6
28-Apr	42	49	8	6	7	6	9	10	16	32	92	28	22	11	13	9	9	12	6	58	44	43	76	37	92.5
29-Apr	11	5	8	8	3	7	6	15	12	13	10	11	7	10	10	9	11	11	8	7	8	9	10	8	14.7
30-Apr	10	6	8	9	8	24	26	24	18	22	72	89	69	85	62	82	71	68	22	10	8	21	6	8	89.1
	86.3	86.7	15.9	44.3	78.4	33.0	41.8	79.0	51.1	32.1	92.5	89.1	68.8	85.1	62.3	87.5	71.2	77.3	64.6	75.3	57.6	49.1	82.6	66.0	

PAZA

Beaverlodge Station

Monthly Summary Tables, Graphs and  
Roses

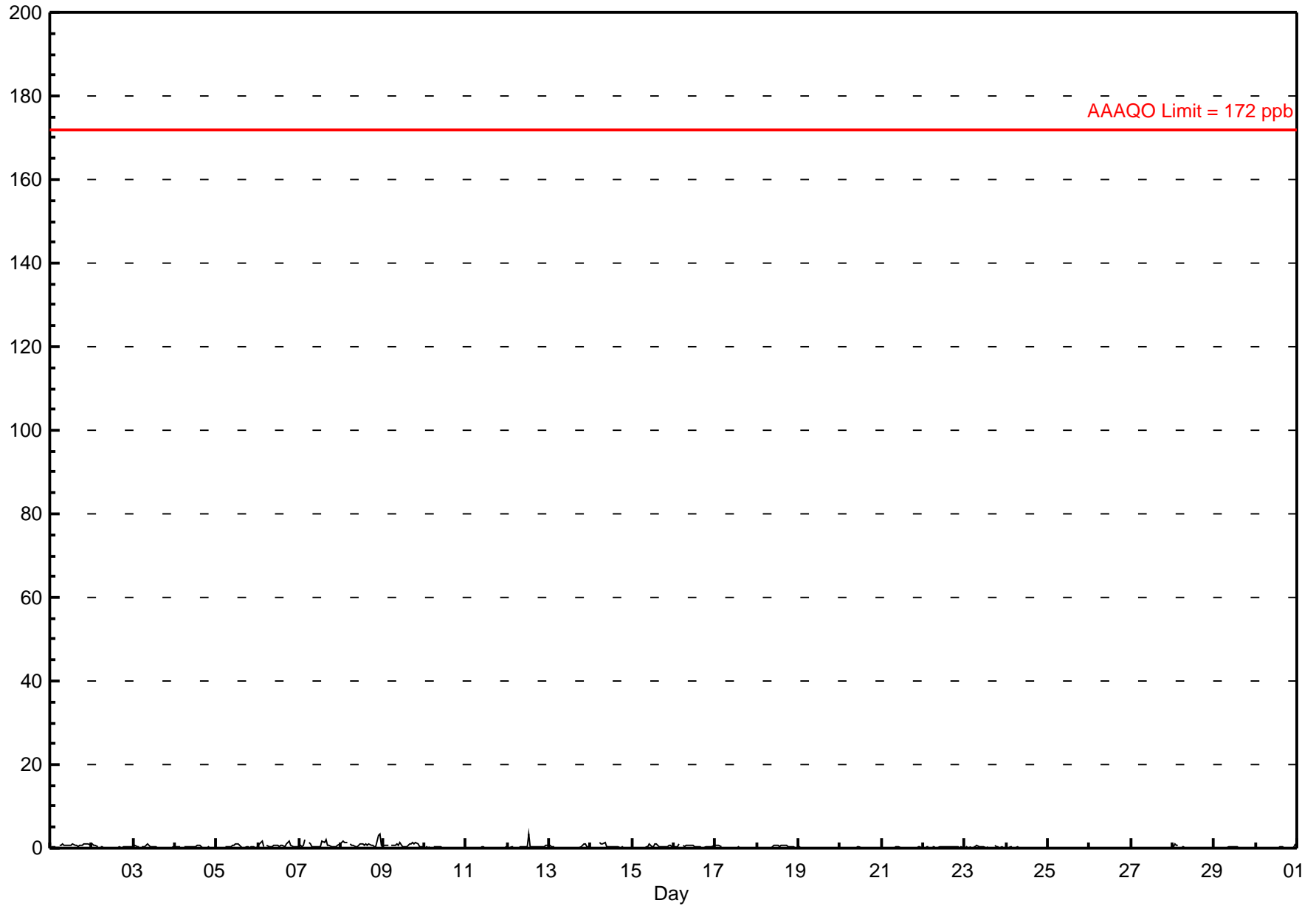
## Hourly Averages

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

Beaverlodge - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.4 ppb on Apr 8 23:00 Maximum Daily Average: 1.0 ppb on Apr 8		Hours in Service: 720 Hours of Data: 687 Hours of Missing Data: 33 Hours of Calibration: 33 Percent Operational Time: 100.0																								
Minimum Value: 0 ppb on Apr 26 20:00 Maximum Diurnal Average: 0.4 ppb at hour 13 Monthly Average: 0.31 ppb		Minimum Daily Average: 0.0 ppb on Apr 26 Minimum Diurnal Average: 0.2 ppb at hour 21 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> = 0.4 P <sub>90</sub> = 0.8 P <sub>99</sub> = 1.6																								
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-Apr	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0	
2-Apr	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
3-Apr	0	1	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0	
4-Apr	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.3	0.7	
5-Apr	0	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.0	
6-Apr	1	1	2	1	A	1	0	0	0	1	1	1	0	1	1	0	1	1	2	1	0	0	0	0.7	1.7	
7-Apr	1	0	1	2	A	1	1	0	0	0	0	0	0	2	1	2	1	1	0	0	1	0	1	0.8	2.1	
8-Apr	1	2	1	1	A	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	0	3	3	1.0	3.4	
9-Apr	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0	0	0.7	1.4	
10-Apr	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	
11-Apr	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	0.3	
12-Apr	0	0	0	0	A	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0.4	3.3	
13-Apr	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0.3	1.1	
14-Apr	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.4	
15-Apr	0	0	0	0	A	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	1	1	0.4	1.1	
16-Apr	0	0	0	1	A	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.4	0.9	
17-Apr	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8	
18-Apr	0	0	0	0	A	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0	0	0	0	0.3	0.8	
19-Apr	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	
20-Apr	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	
21-Apr	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	0.3	
22-Apr	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
23-Apr	0	0	0	0	A	0	0	1	0	0	0	0	0	C	C	C	1	0	0	0	0	0	0	0.3	0.7	
24-Apr	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	
25-Apr	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	
26-Apr	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	
27-Apr	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	
28-Apr	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9	
29-Apr	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	
30-Apr	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	1.2	
																								Diurnal Average	Diurnal Maximum	
																								0.3	1.3	
																								0.3	1.6	
																								0.3	1.7	
																								0.3	1.9	
																								--	--	
																								0.3	1.4	
																								0.3	1.0	
																								0.3	1.0	
																								0.3	1.4	
																								0.3	0.8	
																								0.3	1.2	
																								0.3	1.0	
																								0.4	3.3	
																								0.3	1.6	
																								0.3	1.3	
																								0.3	2.1	
																								0.3	1.2	
																								0.3	1.4	
																								0.3	1.6	
																								0.3	1.2	
																								0.2	1.1	
																								0.3	3.1	
																								0.3	3.4	
																								0.3	1.2	

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

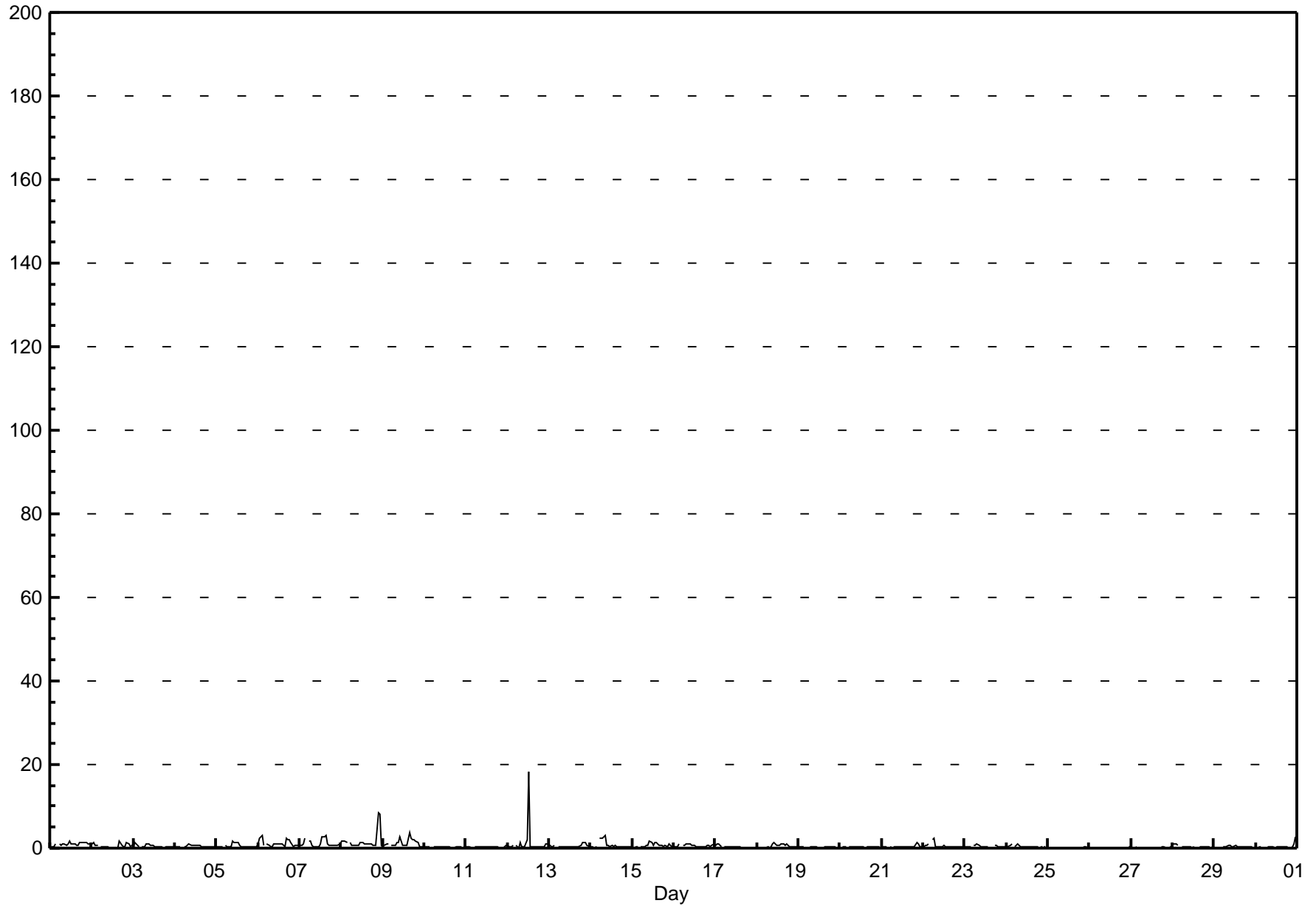
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Beaverlodge - April 2013

Maximum Value: 18.2 ppb on Apr 12 13:00		Maximum Daily Average: 1.7 ppb on Apr 8		Hours in Service: 720																						
Minimum Value: 0 ppb on Apr 26 17:00		Minimum Daily Average: 0.1 ppb on Apr 26		Hours of Data: 687																						
Maximum Diurnal Average: 1.1 ppb at hour 13		Minimum Diurnal Average: 0.4 ppb at hour 1		Hours of Missing Data: 33																						
Monthly Average: 0.55 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> = 0.6 P <sub>90</sub> = 1.1 P <sub>99</sub> = 3.1		Hours of Calibration: 33																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0	0	0	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.6
2-Apr	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	1	1	0	1	0.5	1.6
3-Apr	0	1	1	0	A	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.4
4-Apr	0	0	0	0	A	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.1
5-Apr	0	0	0	0	A	1	0	0	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	1.7
6-Apr	1	2	3	1	A	1	1	0	0	1	1	1	1	1	0	2	2	2	2	1	0	1	1	1	1.1	3.2
7-Apr	1	1	1	2	A	2	2	1	0	0	0	0	1	3	3	3	1	1	1	1	1	1	1	1	1.1	3.1
8-Apr	2	2	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8	8	1	1.7	8.4
9-Apr	1	1	1	1	A	1	1	1	1	1	3	1	1	1	1	4	2	2	2	2	1	0	0	0	1.2	3.8
10-Apr	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
11-Apr	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.8
12-Apr	1	0	0	1	A	1	0	1	0	0	0	2	18	0	0	0	0	0	0	0	0	0	1	1	1.3	18.2
13-Apr	1	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0.5	1.3
14-Apr	0	0	0	0	A	3	2	2	3	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0.7	3.1
15-Apr	0	0	0	0	A	0	0	0	1	1	2	2	1	1	1	1	1	1	0	1	0	1	1	0	0.7	1.7
16-Apr	0	0	0	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	1	1	0.6	1.1
17-Apr	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
18-Apr	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.5	1.4
19-Apr	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
20-Apr	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-Apr	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.3	1.3
22-Apr	0	1	1	1	A	2	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.6	2.5
23-Apr	0	0	0	0	A	1	1	1	1	0	0	0	0	0	C	C	C	1	1	0	0	0	0	0	0.4	1.1
24-Apr	0	0	1	1	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
25-Apr	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
26-Apr	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
27-Apr	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
28-Apr	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
29-Apr	0	0	0	0	A	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
30-Apr	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0.4	2.8
		0.4	0.5	0.6	0.5	--	0.6	0.6	0.5	0.5	0.5	0.6	0.5	1.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Diurnal Average	
		1.6	2.3	3.2	2.5	--	2.5	2.5	2.3	3.1	1.7	2.8	1.9	18.2	2.7	2.8	3.8	2.5	2.1	2.0	1.7	1.4	8.4	8.1	2.8	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

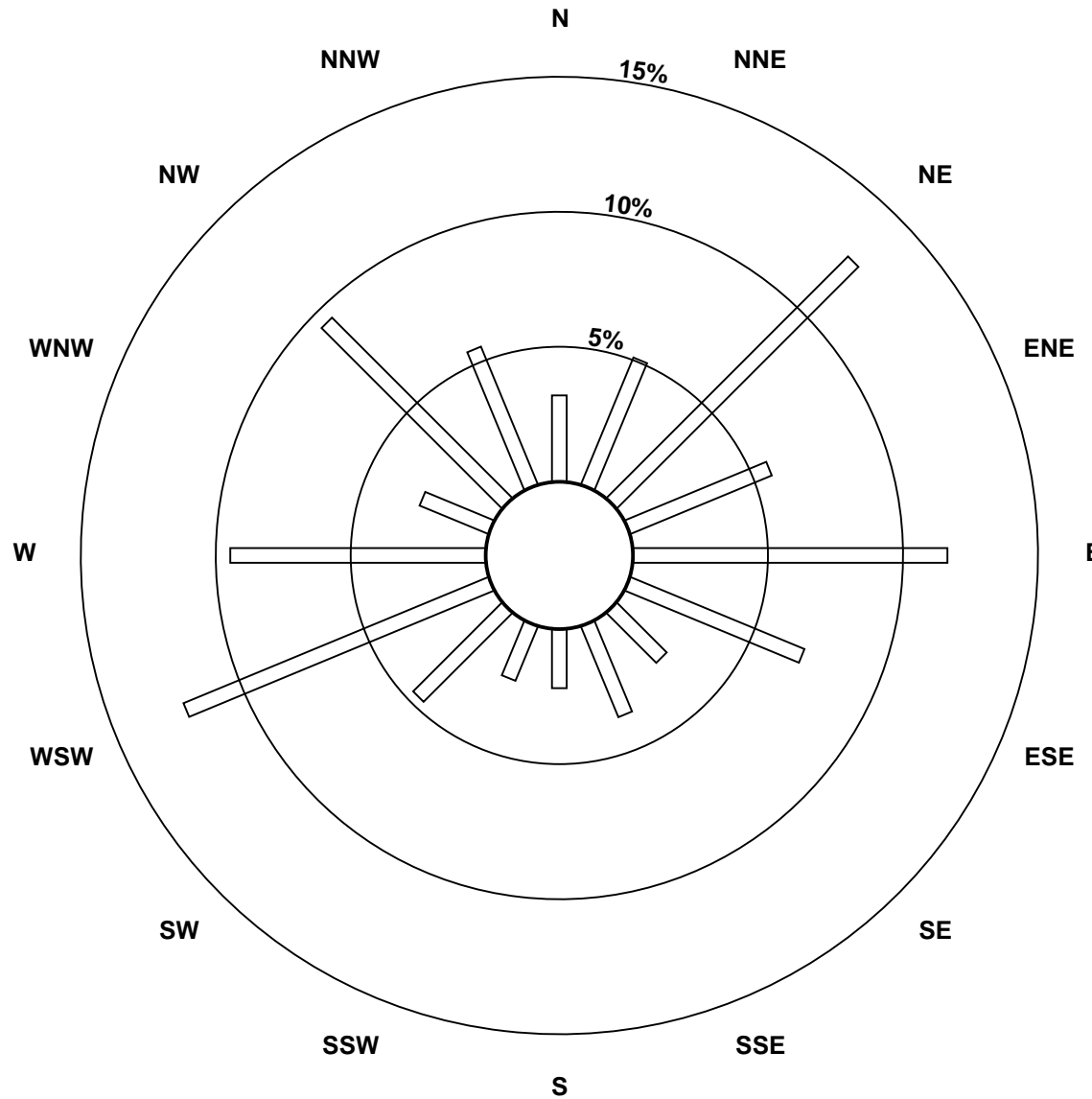
**Hourly Maximums**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Beaverlodge - April 2013**

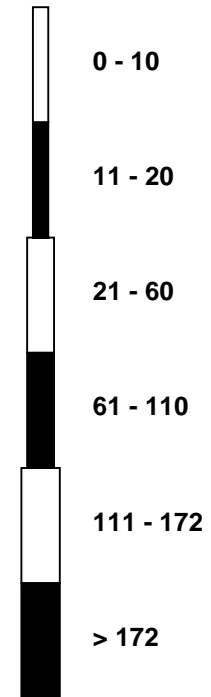


**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Beaverlodge - April 2013**

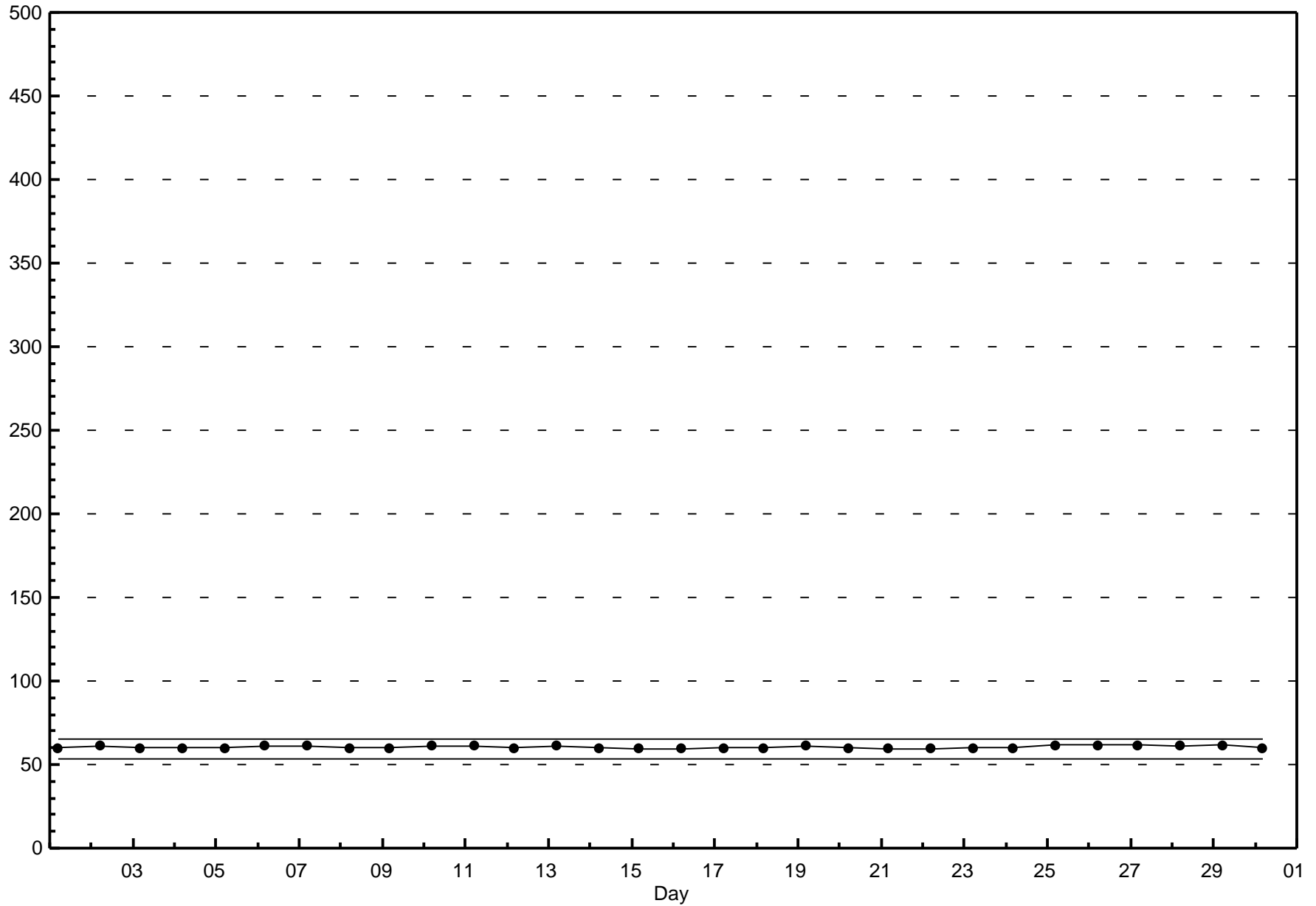


**Pollutant Classes (ppb)**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Beaverlodge - April 2013





## Hourly Averages

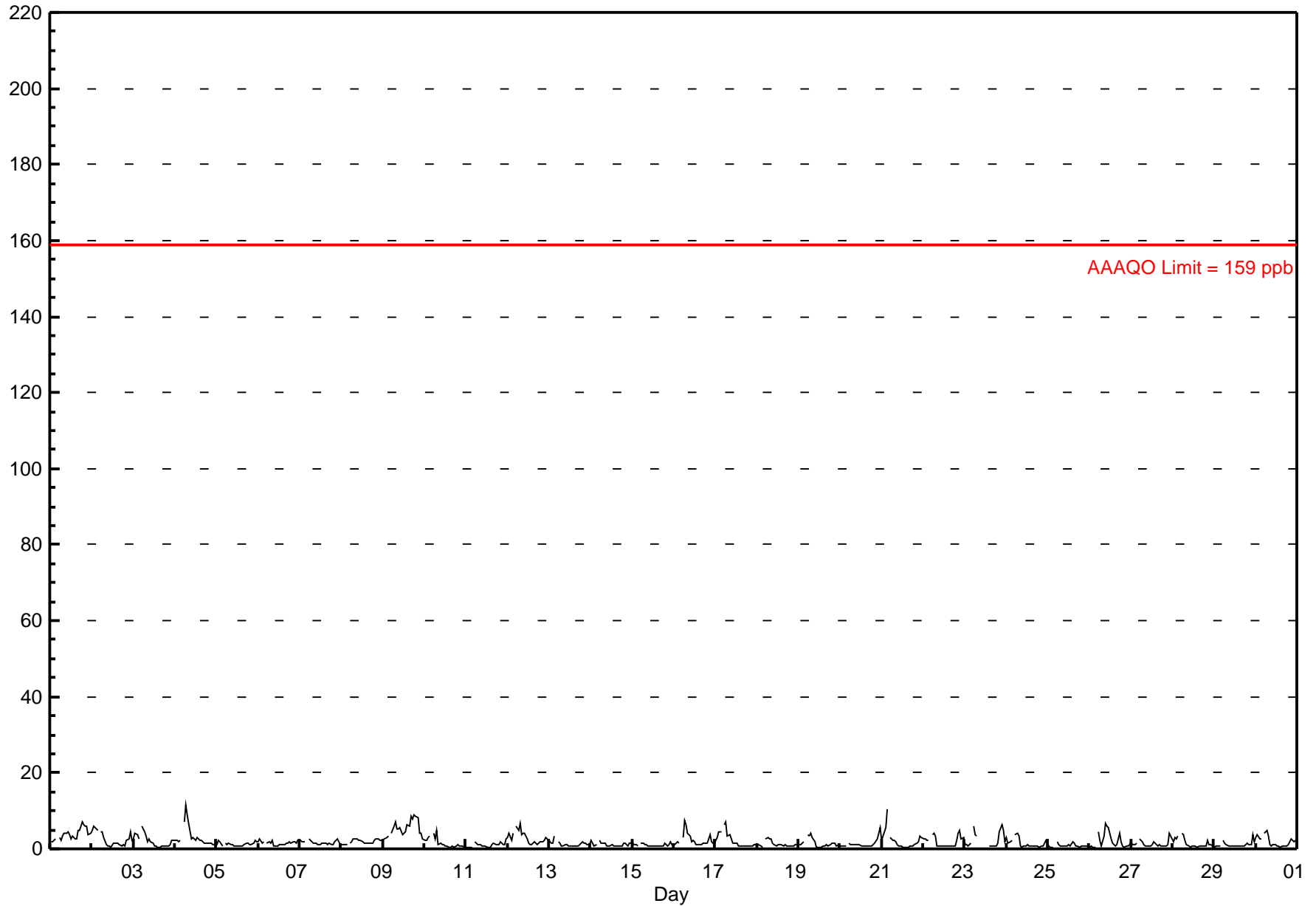
## Nitrogen Dioxide (NO<sub>2</sub>) - ppb

### Beaverlodge - April 2013

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 11.4 ppb on Apr 4 07:00	Maximum Daily Average: 5.3 ppb on Apr 9		Hours of Data:	684
Minimum Value: 0 ppb on Apr 25 02:00	Minimum Daily Average: 0.8 ppb on Apr 25		Hours of Missing Data:	36
Maximum Diurnal Average: 3.4 ppb at hour 6	Minimum Diurnal Average: 1.2 ppb at hour 16		Hours of Calibration:	36
Monthly Average: 1.91 ppb	Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.8 Median = 1.3 Q <sub>3</sub> = 2.4 P <sub>90</sub> = 4.1 P <sub>99</sub> = 8.0		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2	2	2	3	A	3	2	4	4	4	5	4	3	3	3	3	5	5	7	6	6	6	4	4	3.8	7.0
2-Apr	5	6	6	5	A	5	4	3	1	1	1	1	1	2	1	1	1	1	1	1	2	2	4	2	2.5	5.9
3-Apr	3	4	4	3	A	6	4	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2.0	6.1
4-Apr	2	2	2	2	A	7	11	9	7	3	3	3	2	3	2	2	2	1	1	1	1	1	1	1	3.1	11.4
5-Apr	1	2	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	2	2	2	1.3	2.2
6-Apr	2	2	1	2	A	1	2	1	2	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1.5	2.5
7-Apr	2	2	2	2	A	3	2	2	1	1	1	1	1	1	1	2	1	1	1	1	2	2	3	1	1.7	2.7
8-Apr	1	1	1	1	A	2	2	3	3	2	2	2	1	1	2	2	1	2	2	2	3	2	2	2	1.8	2.7
9-Apr	2	2	3	3	A	4	6	7	5	5	6	4	4	5	6	6	9	8	9	9	8	4	4	3	5.3	9.0
10-Apr	2	2	3	3	A	4	3	5	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1.6	4.7
11-Apr	0	0	0	0	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	3	1.0	2.7
12-Apr	3	4	2	4	A	6	5	7	4	4	4	3	2	1	1	2	1	1	1	2	2	2	3	2	2.9	6.6
13-Apr	2	1	2	3	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1.3	3.4
14-Apr	2	2	1	1	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1.2	2.2
15-Apr	2	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.0	2.0
16-Apr	1	2	2	1	A	3	8	6	4	3	2	2	2	1	1	1	1	1	2	1	2	4	2	1	2.3	7.5
17-Apr	2	3	4	5	A	6	7	3	4	3	2	1	2	1	1	1	1	1	1	1	1	1	1	1	2.2	7.2
18-Apr	1	1	1	1	A	2	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.8
19-Apr	1	1	1	2	A	4	3	4	3	2	1	0	0	0	1	1	1	1	1	2	2	1	1	1	1.5	4.0
20-Apr	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	4	6	1.4	5.6
21-Apr	2	3	6	10	A	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3	2.1	10.4
22-Apr	3	3	2	2	A	4	4	4	1	1	1	1	1	1	1	1	1	1	1	2	4	5	3	3	2.0	4.9
23-Apr	1	1	1	2	A	6	4	3	C	C	C	C	C	C	1	1	1	1	1	2	4	6	5	2	--	6.5
24-Apr	3	2	2	2	A	4	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.5	4.2
25-Apr	1	0	0	0	A	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	0.8	1.7
26-Apr	0	1	0	0	A	5	2	1	3	7	6	5	3	1	1	1	1	4	2	1	0	1	1	1	2.1	6.7
27-Apr	2	1	1	1	A	3	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	4	3	1.4	4.0
28-Apr	2	3	3	3	A	4	4	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.5	4.1
29-Apr	0	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	2	1.1	3.8
30-Apr	3	4	3	3	A	4	5	3	1	1	1	1	1	1	1	1	1	1	1	1	3	2	2	2	1.9	5.0
	1.9	2.0	2.0	2.3	--	3.4	3.4	2.9	2.1	1.8	1.6	1.4	1.3	1.2	1.2	1.2	1.3	1.4	1.5	1.7	2.0	2.0	2.3	2.0	Diurnal Average	
	4.8	5.9	5.6	10.4	--	7.1	11.4	9.0	6.5	6.7	5.9	5.5	4.1	4.6	6.3	6.1	8.6	7.8	9.0	8.7	8.1	6.5	4.9	5.6	Diurnal Maximum	

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

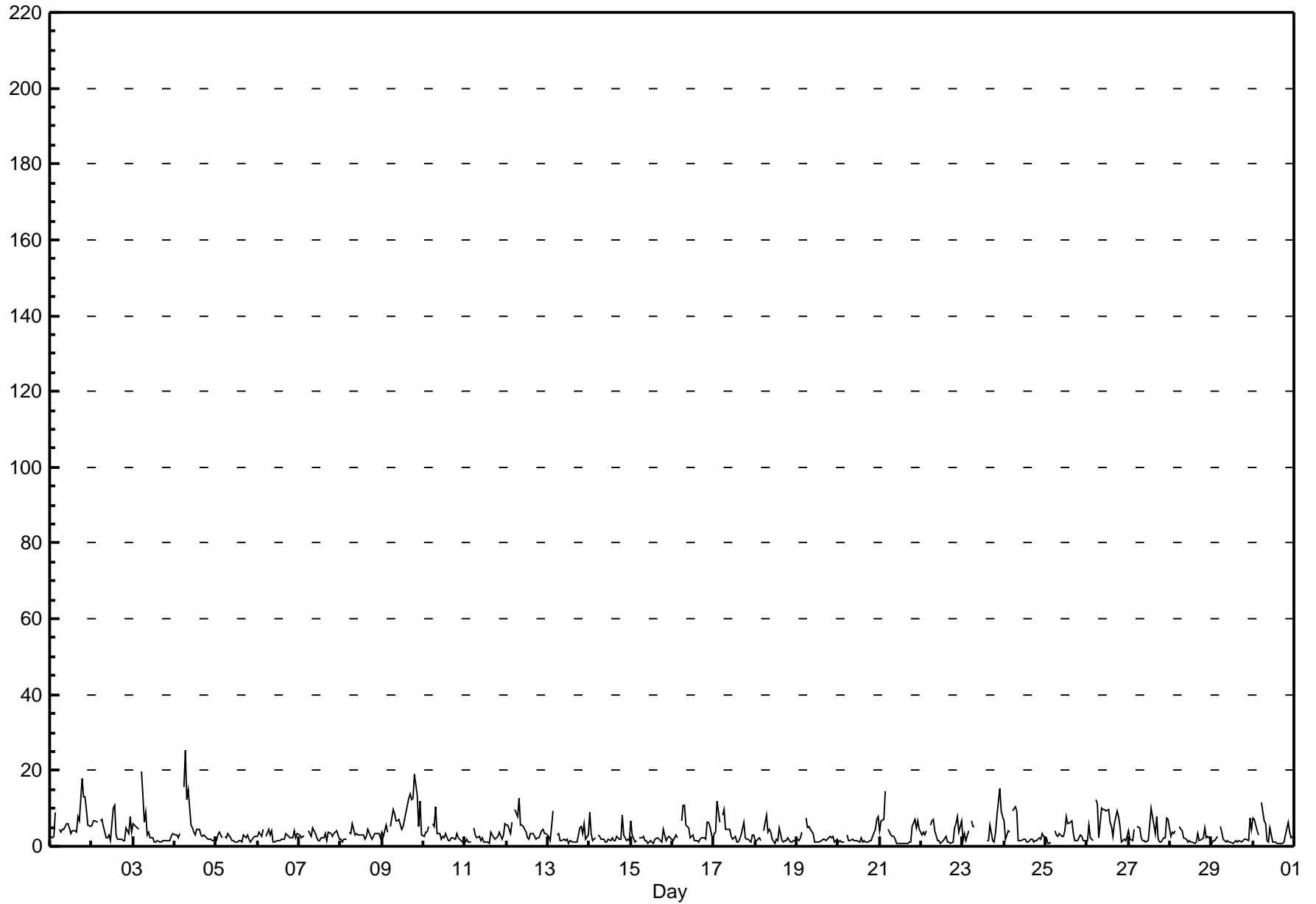


## Hourly Maximums

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

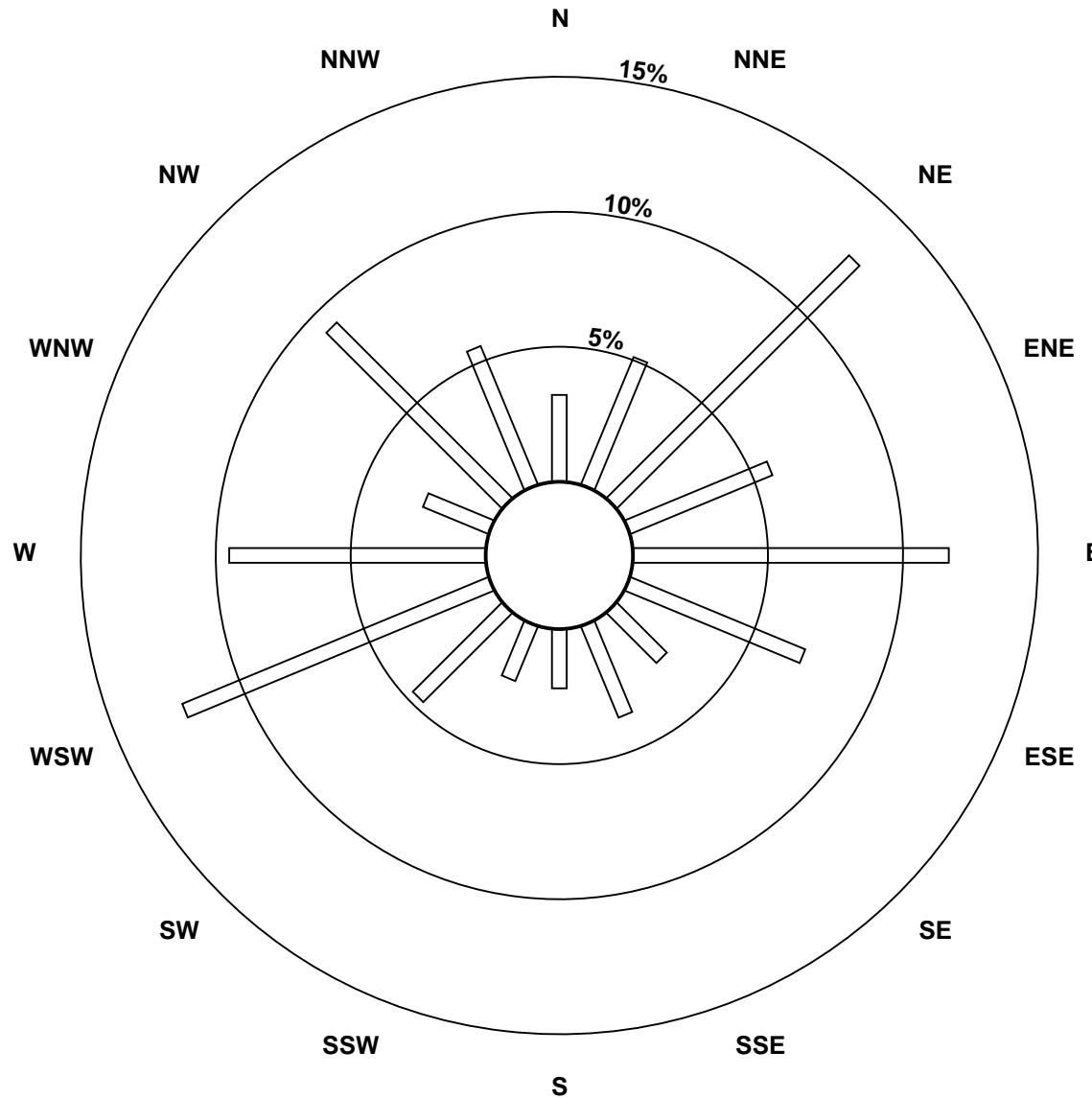
Beaverlodge - April 2013

Maximum Value: 25.4 ppb on Apr 4 07:00		Maximum Daily Average: 8.3 ppb on Apr 9		Hours in Service: 720																							
Minimum Value: 1 ppb on Apr 25 02:00		Minimum Daily Average: 2.1 ppb on Apr 29		Hours of Data: 684																							
Maximum Diurnal Average: 6.4 ppb at hour 6		Minimum Diurnal Average: 2.3 ppb at hour 12		Hours of Missing Data: 36																							
Monthly Average: 3.56 ppb		Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 1.2 Q <sub>1</sub> = 1.6 Median = 2.6 Q <sub>3</sub> = 4.5 P <sub>90</sub> = 7.2 P <sub>99</sub> = 14.7		Hours of Calibration: 36																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	3	2	2	9	A	5	4	4	5	6	6	5	3	4	4	4	8	7	18	13	13	10	6	5	6.3	17.9	
2-Apr	6	7	7	6	A	7	7	5	2	2	3	1	10	11	3	2	2	2	1	1	5	3	8	4	4.6	10.8	
3-Apr	6	5	5	4	A	20	6	9	3	4	2	2	1	1	2	1	1	2	1	1	1	2	3	3	3.7	19.8	
4-Apr	3	3	2	3	A	16	25	12	15	5	5	4	3	5	4	3	3	3	2	2	2	2	2	1	5.4	25.4	
5-Apr	2	3	4	2	A	3	2	3	2	2	1	1	1	1	2	1	3	2	3	2	1	2	3	3	2.1	3.7	
6-Apr	3	4	3	5	A	3	4	3	4	1	1	1	2	1	2	2	3	3	2	2	2	4	2	3	2.7	4.5	
7-Apr	3	2	3	3	A	4	3	3	5	3	2	2	2	2	2	3	2	4	4	2	3	4	4	2	2.9	4.7	
8-Apr	2	1	2	2	A	4	3	6	3	3	3	3	3	3	2	3	4	2	2	3	4	3	3	2	2.9	6.0	
9-Apr	4	3	6	4	A	5	10	9	7	7	7	5	5	7	9	13	14	12	13	19	13	5	12	3	8.3	19.0	
10-Apr	3	4	4	5	A	6	5	11	3	3	2	2	2	3	1	2	2	2	2	4	2	2	2	1	3.2	10.5	
11-Apr	1	2	1	1	A	5	3	2	2	2	2	1	1	1	4	3	2	2	3	4	2	3	6	6	2.3	5.8	
12-Apr	6	5	3	6	A	10	8	13	6	6	5	4	2	2	3	3	3	2	2	2	4	4	3	3	4.6	12.9	
13-Apr	3	2	5	9	A	3	3	2	1	2	1	2	1	2	1	1	1	1	5	5	3	6	2	3	2.8	9.3	
14-Apr	9	3	1	2	A	3	3	2	2	1	1	2	2	2	2	1	3	2	2	8	3	1	2	2	2.5	8.8	
15-Apr	7	3	1	1	A	2	2	3	2	1	1	1	1	1	2	2	2	1	1	5	2	2	3	2	2.1	6.9	
16-Apr	2	2	3	2	A	7	11	11	5	5	2	3	3	2	1	1	2	2	2	2	7	6	5	2	3.8	10.8	
17-Apr	3	4	12	6	A	8	10	4	5	4	3	2	2	1	1	2	3	6	2	2	2	1	3	3	3.9	12.0	
18-Apr	2	2	2	2	A	4	8	4	4	4	2	1	2	1	5	1	1	1	1	2	1	1	1	1	2.4	8.3	
19-Apr	2	2	2	4	A	7	5	5	4	3	1	1	1	1	2	2	2	1	2	3	2	2	1	2	2.6	7.3	
20-Apr	1	1	1	1	A	3	1	1	2	2	1	1	1	2	1	1	1	1	1	2	2	4	7	8	2.2	7.9	
21-Apr	4	7	7	14	A	5	3	3	3	2	1	1	1	1	1	1	1	1	1	5	7	5	7	4	3.6	14.4	
22-Apr	3	4	3	4	A	6	7	7	4	1	2	1	1	1	3	1	1	1	1	5	6	8	4	7	3.5	7.9	
23-Apr	2	3	1	4	A	7	5	5	C	C	C	C	C	C	1	1	6	2	1	4	8	15	9	8	--	15.3	
24-Apr	7	2	4	4	A	9	10	9	1	1	1	2	2	1	1	2	2	1	1	1	2	2	3	3	3.2	10.4	
25-Apr	2	1	1	1	A	4	3	3	4	3	2	4	8	6	6	7	3	2	2	2	3	3	2	1	3.1	7.8	
26-Apr	1	5	2	2	A	12	11	2	10	10	10	9	10	6	5	3	6	9	8	5	1	2	1	2	5.8	12.1	
27-Apr	4	2	2	4	A	5	5	2	1	1	1	1	5	10	8	4	8	2	1	1	2	2	8	7	3.8	10.0	
28-Apr	3	4	3	4	A	5	4	4	2	2	1	1	1	1	1	1	3	2	2	2	5	2	3	2	2.6	5.3	
29-Apr	1	1	1	3	A	5	4	2	1	1	1	1	1	1	2	1	2	1	1	2	2	2	7	5	2.1	7.4	
30-Apr	8	7	4	3	A	11	7	6	2	1	5	1	1	1	1	1	1	1	1	3	6	4	2	3	3.5	11.4	
		3.4	3.2	3.3	4.1	--	6.4	6.1	5.2	3.8	3.1	2.6	2.3	2.7	2.9	2.6	2.5	3.1	2.7	3.0	3.8	4.0	3.8	4.0	3.4	Diurnal Average	
		8.8	7.0	12.0	14.4	--	19.8	25.4	12.9	14.9	9.6	9.5	9.4	10.0	10.8	9.0	12.5	13.8	12.3	17.9	19.0	13.5	15.3	12.0	7.9	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

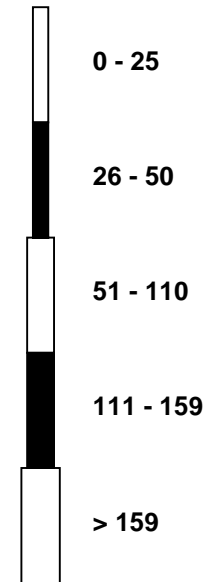


**Pollutant Rose**

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Beaverlodge - April 2013**

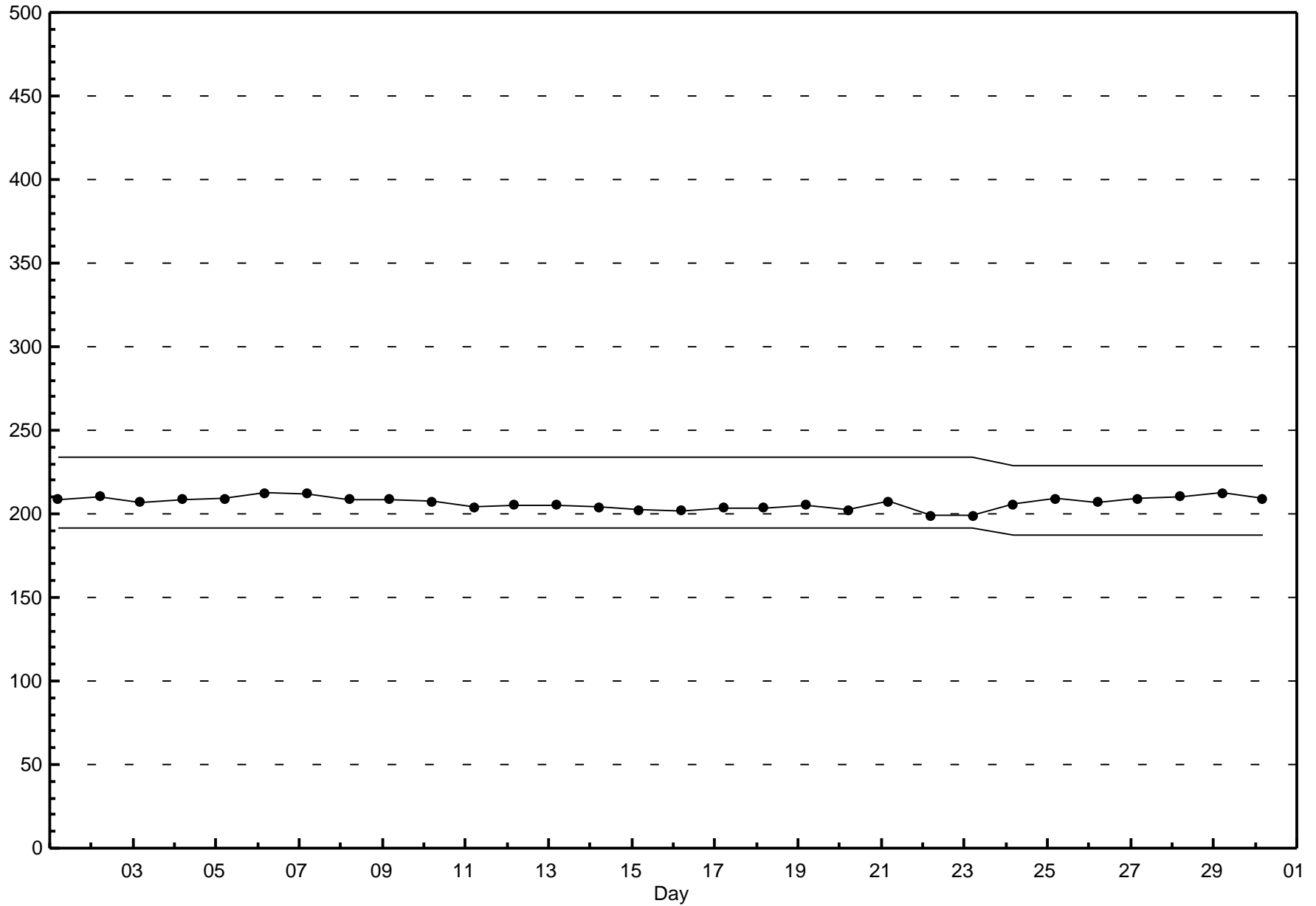


**Pollutant Classes (ppb)**



### Span Responses

**Nitrogen Dioxide (NO<sub>2</sub>)**  
**Beaverlodge - April 2013**



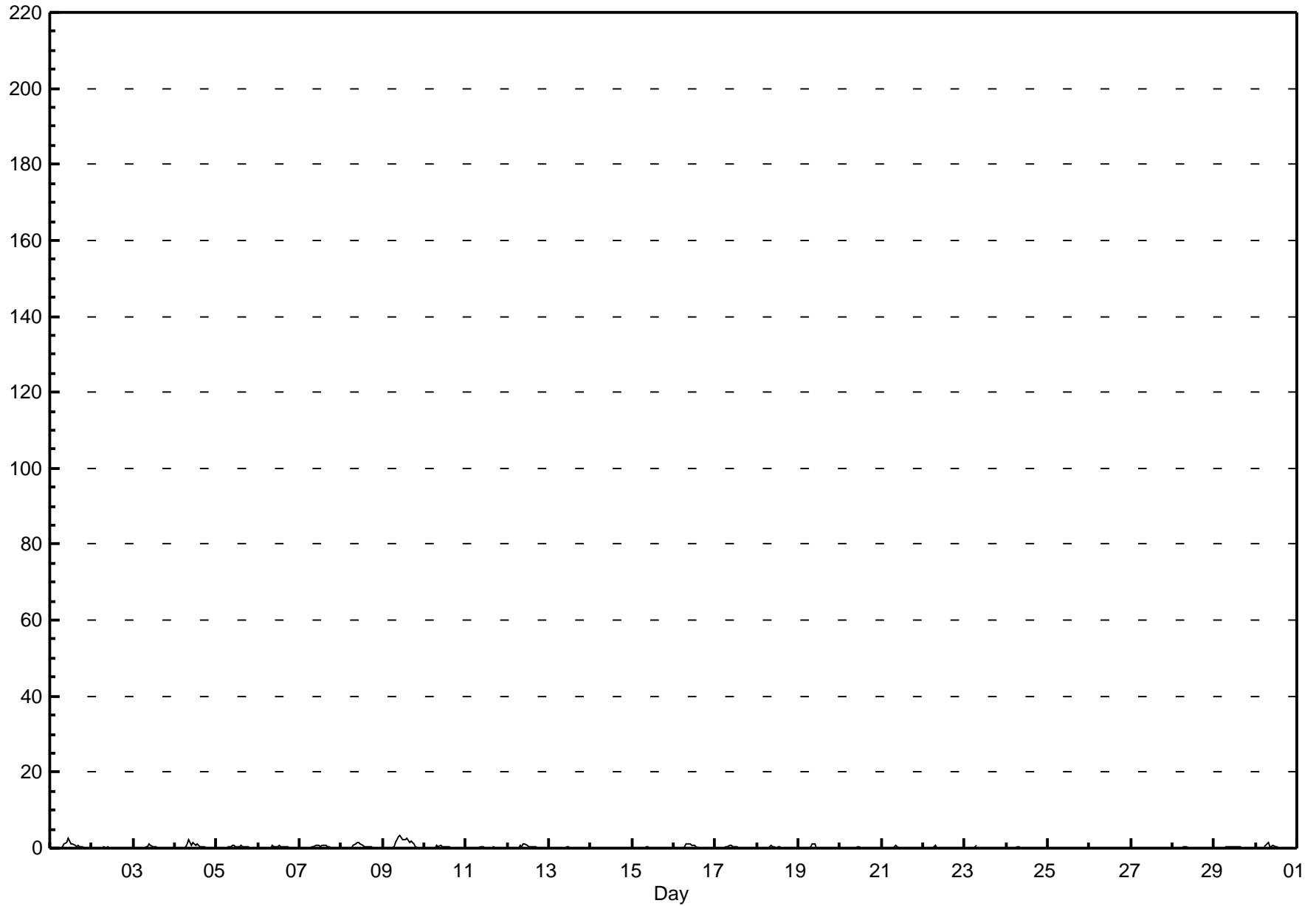
## Hourly Averages

Nitrogen Oxide (NO) - ppb  
Beaverlodge - April 2013

Number of Exceedences (AAQO):		1-hr: 0    24-hr: 0		Hours in Service:		720																																										
Maximum Value: 3.5 ppb on Apr 9 11:00		Maximum Daily Average: 1.2 ppb on Apr 9		Hours of Data:		684																																										
Minimum Value: 0 ppb on Apr 1 23:00		Minimum Daily Average: 0.1 ppb on Apr 14		Hours of Missing Data:		36																																										
Maximum Diurnal Average: 0.6 ppb at hour 10		Minimum Diurnal Average: 0.0 ppb at hour 3		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 = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.6 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-Apr	0	0	0	0	A	0	0	0	1	2	2	1	1	1	0	1	0	0	0	0	0	0	0	0	0.5	2.4																						
2-Apr	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-Apr	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9																						
4-Apr	0	0	0	0	A	0	0	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	2.1																						
5-Apr	0	0	0	0	A	0	0	0	0	1	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0.3	0.6																						
6-Apr	0	0	0	0	A	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9																						
7-Apr	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	0.7																						
8-Apr	0	0	0	0	A	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.5																						
9-Apr	0	0	0	0	A	0	0	2	2	3	4	2	2	2	3	1	2	1	1	0	0	0	0	0	1.2	3.5																						
10-Apr	0	0	0	0	A	0	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.7																						
11-Apr	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-Apr	0	0	0	0	A	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1																						
13-Apr	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																						
14-Apr	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																						
15-Apr	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																						
16-Apr	0	0	0	0	A	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2																						
17-Apr	0	0	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8																						
18-Apr	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6																						
19-Apr	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1																						
20-Apr	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																						
21-Apr	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6																						
22-Apr	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8																						
23-Apr	0	0	0	0	A	0	0	1	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	--	0.6																						
24-Apr	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																						
25-Apr	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																						
26-Apr	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2																						
27-Apr	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																						
28-Apr	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																						
29-Apr	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																						
30-Apr	0	0	0	0	A	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6																						
																								0.0	0.0	0.0	0.0	--	0.0	0.2	0.5	0.6	0.6	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	Diurnal Average
																								0.0	0.0	0.0	0.1	--	0.4	1.3	1.7	2.3	3.2	3.5	2.2	2.2	2.3	2.5	1.3	1.8	1.5	1.2	0.4	0.1	0.1	0.0	0.1	Diurnal Maximum
C - Calibration                      A - Automated Daily Zero Span																																																

### Hourly Averages

**Nitrogen Oxide (NO) - ppb**  
**Beaverlodge - April 2013**





## Hourly Maximums

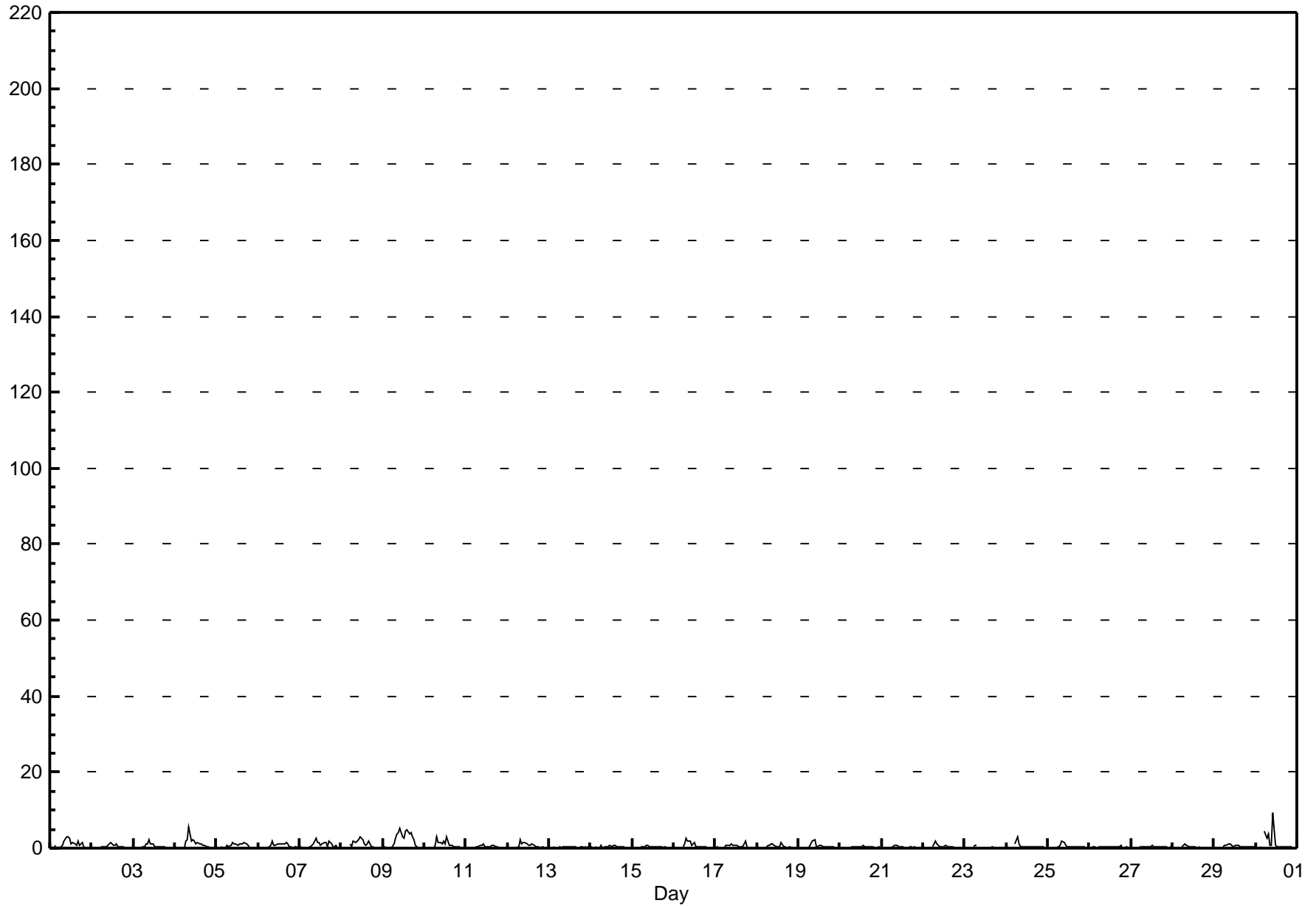
Nitrogen Oxide (NO) - ppb

Beaverlodge - April 2013

Maximum Value: 9.5 ppb on Apr 30 11:00		Maximum Daily Average: 2.0 ppb on Apr 9		Hours in Service: 720																						
Minimum Value: 0 ppb on Apr 25 01:00		Minimum Daily Average: 0.2 ppb on Apr 21		Hours of Data: 684																						
Maximum Diurnal Average: 1.3 ppb at hour 11		Minimum Diurnal Average: 0.1 ppb at hour 2		Hours of Missing Data: 36																						
Monthly Average: 0.57 ppb		Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.1 Median = 0.3 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 1.3 P <sub>99</sub> = 4.1		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-Apr	0	0	0	1	A	0	0	1	2	3	3	1	1	1	1	1	2	1	1	0	0	0	0	0	1.0	3.1
2-Apr	0	0	0	0	A	0	0	0	0	1	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0.5	1.6
3-Apr	0	0	0	0	A	0	0	1	1	2	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0.5	2.1
4-Apr	0	0	0	0	A	0	2	2	6	2	2	2	1	2	1	1	1	1	0	0	0	0	0	0	1.0	5.6
5-Apr	0	0	0	0	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.7	1.4
6-Apr	0	0	0	0	A	0	0	1	2	1	1	1	1	1	1	2	1	0	0	0	0	0	0	0	0.6	1.8
7-Apr	0	0	0	0	A	0	0	1	1	3	2	2	1	1	2	2	1	2	1	0	0	1	0	0	0.8	2.7
8-Apr	0	0	0	0	A	1	1	2	1	2	2	3	2	1	1	2	1	0	0	0	0	0	0	0	0.9	3.1
9-Apr	0	0	0	0	A	0	1	3	4	4	5	3	3	4	5	4	4	3	2	1	0	0	0	0	2.0	5.1
10-Apr	0	0	0	0	A	0	1	3	1	2	1	2	1	3	1	1	1	0	0	0	0	0	0	0	0.8	3.0
11-Apr	0	0	0	0	A	0	0	0	1	1	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0.3	1.1
12-Apr	0	0	0	0	A	0	0	2	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.6	2.1
13-Apr	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0.3	0.7
14-Apr	0	0	0	0	A	0	1	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0.3	0.8
15-Apr	0	0	0	0	A	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.3	0.7
16-Apr	0	0	0	0	A	0	1	3	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.6	2.7
17-Apr	0	0	0	0	A	0	1	1	1	1	1	1	1	0	0	0	1	2	0	0	0	0	0	0	0.5	1.7
18-Apr	0	0	0	0	A	0	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0.4	1.5
19-Apr	0	0	0	0	A	0	0	1	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	2.3
20-Apr	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	0.6
21-Apr	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
22-Apr	0	0	0	0	A	0	1	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.4	2.0
23-Apr	0	0	0	0	A	0	1	1	C	C	C	C	C	C	0	0	1	0	0	0	0	0	0	0	--	0.8
24-Apr	0	0	0	0	A	1	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.9
25-Apr	0	0	0	0	A	1	1	1	2	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0.5	1.9
26-Apr	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.6
27-Apr	0	0	0	0	A	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0.3	0.9
28-Apr	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
29-Apr	0	0	0	0	A	0	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0.5	1.0
30-Apr	0	0	0	0	A	4	3	4	1	1	9	1	1	0	0	0	0	0	0	0	0	0	0	0	1.1	9.5
		0.1	0.1	0.1	0.2	--	0.4	0.7	1.1	1.2	1.3	1.3	1.0	0.8	0.8	0.8	0.7	0.7	0.6	0.4	0.2	0.2	0.2	0.1	0.1	Diurnal Average
		0.3	0.2	0.4	0.9	--	4.4	2.9	3.5	5.6	4.2	9.5	3.1	2.8	4.4	4.9	3.8	4.1	2.8	2.4	0.8	0.6	0.6	0.3	0.7	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								

### Hourly Maximums

**Nitrogen Oxide (NO) - ppb**  
**Beaverlodge - April 2013**



## Hourly Averages

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

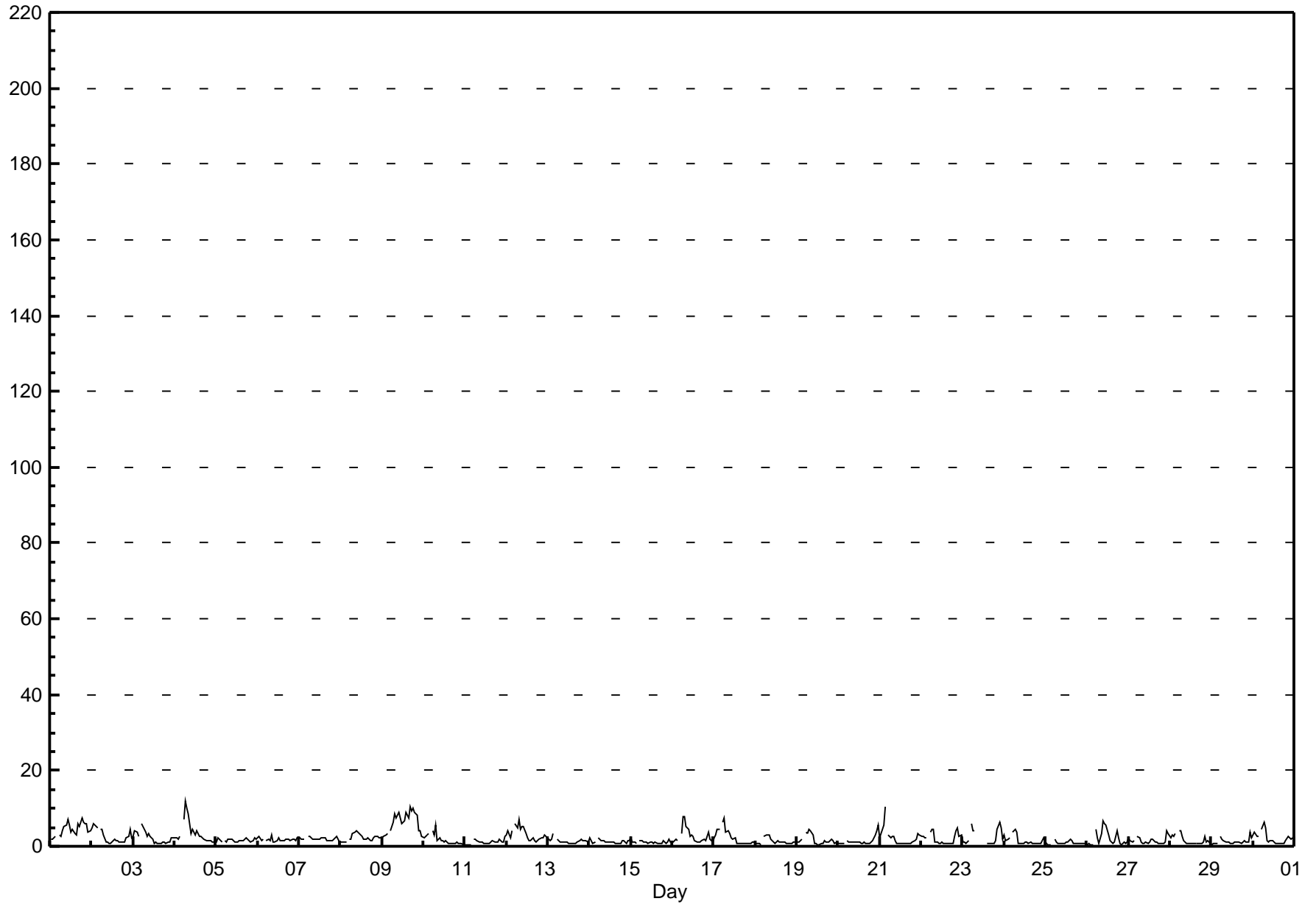
### Beaverlodge - April 2013

Number of Exceedences (AAAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 11.8 ppb on Apr 4 07:00	Maximum Daily Average: 6.4 ppb on Apr 9		Hours of Data:	684
Minimum Value: 0 ppb on Apr 25 02:00	Minimum Daily Average: 0.9 ppb on Apr 25		Hours of Missing Data:	36
Maximum Diurnal Average: 3.6 ppb at hour 7	Minimum Diurnal Average: 1.4 ppb at hour 16		Hours of Calibration:	36
Monthly Average: 2.13 ppb	Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 0.7 Q <sub>1</sub> = 0.9 Median = 1.5 Q <sub>3</sub> = 2.6 P <sub>90</sub> = 4.4 P <sub>99</sub> = 9.0		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2	2	2	3	A	3	2	4	5	6	7	6	4	4	3	3	6	5	7	6	6	6	4	4	4.4	7.3
2-Apr	5	6	5	5	A	5	4	3	1	1	1	1	2	2	2	2	1	1	1	1	2	2	4	2	2.5	5.9
3-Apr	3	4	4	3	A	6	4	4	2	3	3	2	1	1	1	1	1	1	1	1	1	1	2	2	2.2	6.1
4-Apr	2	2	2	2	A	7	12	10	9	3	5	4	3	4	3	3	2	2	2	2	1	1	1	1	3.6	11.8
5-Apr	1	2	2	1	A	1	1	2	2	2	2	1	1	1	2	1	2	2	2	1	1	2	2	2	1.6	2.3
6-Apr	2	2	2	2	A	1	2	2	3	1	1	1	2	2	1	1	2	2	2	2	2	2	2	2	1.8	3.0
7-Apr	2	2	2	2	A	3	2	2	2	2	2	2	2	2	2	2	1	2	1	1	2	2	3	1	2.0	2.8
8-Apr	1	1	1	1	A	2	2	3	4	4	4	3	3	2	2	2	2	2	2	2	2	3	2	2	2.3	4.0
9-Apr	2	2	3	3	A	4	6	9	7	8	9	6	6	7	9	7	10	9	10	9	8	4	4	2	6.4	10.4
10-Apr	2	2	3	3	A	4	3	5	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	0	1.8	5.4
11-Apr	0	0	0	0	A	2	2	1	1	1	1	1	1	1	1	1	2	1	1	1	2	1	1	3	1.1	2.7
12-Apr	3	4	2	4	A	6	5	7	4	5	5	4	2	2	1	2	2	1	1	2	2	2	3	2	3.2	7.1
13-Apr	2	1	2	4	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1.4	3.5
14-Apr	2	2	1	1	A	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1.3	2.2
15-Apr	2	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.1	2.1
16-Apr	1	2	2	2	A	3	8	8	5	4	3	3	3	1	1	1	1	2	2	1	2	4	2	1	2.7	8.0
17-Apr	2	3	4	5	A	6	8	4	4	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2.4	7.6
18-Apr	1	1	1	1	A	2	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	3.1
19-Apr	1	1	1	2	A	4	3	4	4	3	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1.7	4.5
20-Apr	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	4	6	1.5	5.6
21-Apr	2	3	6	10	A	3	2	3	3	2	1	1	1	1	1	1	1	1	1	1	2	2	3	3	2.2	10.4
22-Apr	3	3	2	2	A	4	4	4	1	1	1	1	1	1	1	1	1	1	1	2	4	5	3	3	2.1	4.9
23-Apr	1	1	1	2	A	6	4	4	C	C	C	C	C	C	1	1	1	1	1	2	4	6	5	2	--	6.4
24-Apr	3	2	2	2	A	4	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.5	4.5
25-Apr	1	0	0	0	A	2	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	0.9	1.9
26-Apr	1	1	1	0	A	5	2	1	3	7	6	6	3	2	1	1	1	4	2	1	1	1	1	1	2.2	6.8
27-Apr	2	1	1	1	A	3	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	4	3	1.5	4.0
28-Apr	2	3	3	3	A	4	4	3	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.6	4.1
29-Apr	1	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	2	1.3	3.8
30-Apr	3	4	3	3	A	4	6	5	2	1	2	1	1	1	1	1	1	1	1	1	3	2	2	2	2.1	6.3

1.9	2.0	2.0	2.4	--	3.5	3.6	3.4	2.7	2.5	2.2	1.9	1.7	1.6	1.5	1.4	1.6	1.6	1.6	1.6	1.7	2.0	2.0	2.3	2.0	Diurnal Average	
4.8	5.9	5.6	10.4	--	7.1	11.8	10.3	8.6	8.3	9.0	6.0	6.2	6.9	8.8	7.4	10.4	9.3	10.2	9.0	8.1	6.4	4.9	5.6	Diurnal Maximum		

C - Calibration                      A - Automated Daily Zero Span



# Hourly Maximums

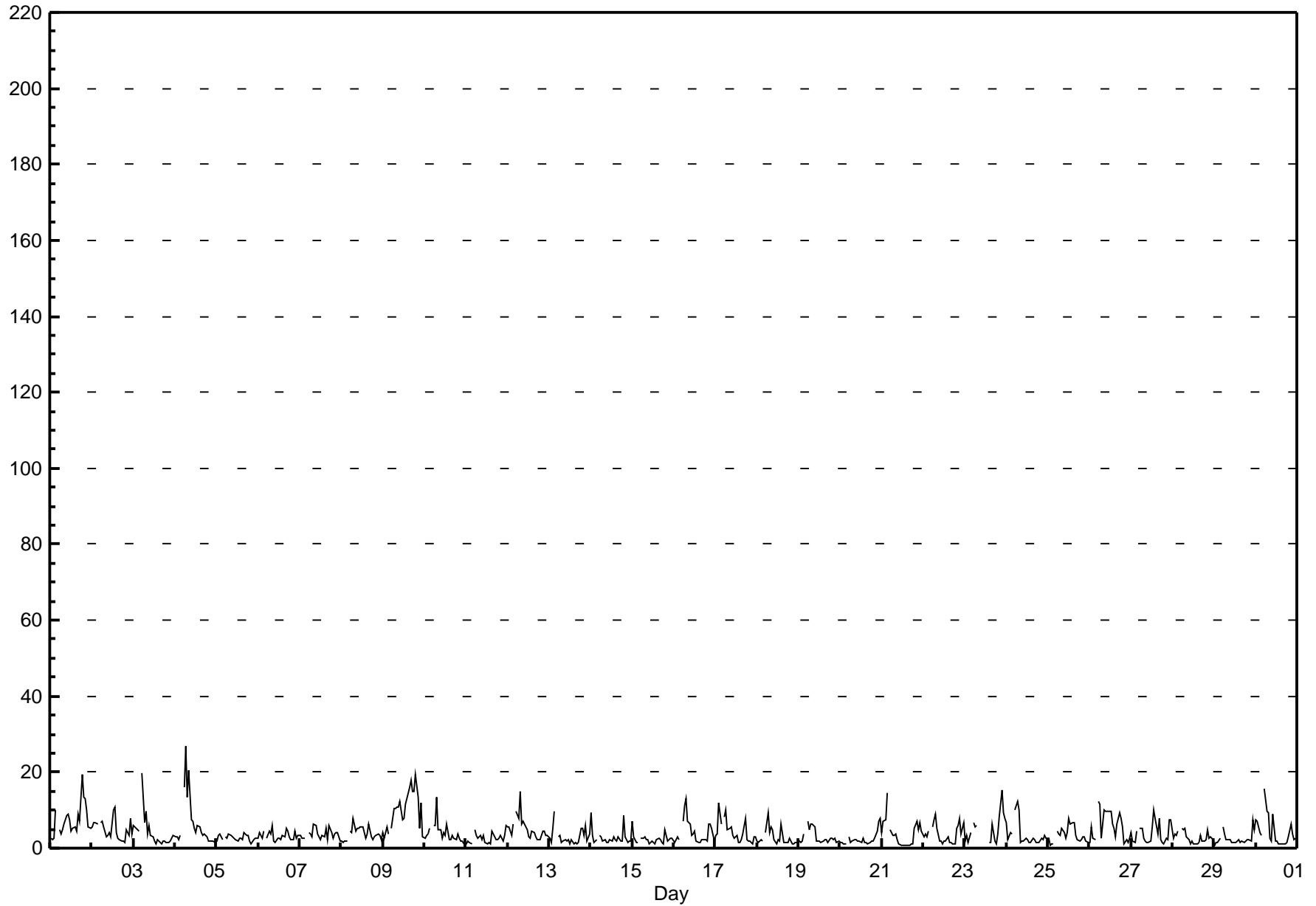
## Oxides of Nitrogen (NO<sub>x</sub>) - ppb

### Beaverlodge - April 2013

Maximum Value: 26.7 ppb on Apr 4 07:00      Maximum Daily Average: 10.1 ppb on Apr 9 Minimum Value: 1 ppb on Apr 25 02:00      Minimum Daily Average: 2.4 ppb on Apr 20 Maximum Diurnal Average: 6.7 ppb at hour 6      Minimum Diurnal Average: 3.1 ppb at hour 16 Monthly Average: 4.05 ppb      Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 1.9 Median = 2.9 Q <sub>3</sub> = 5.3 P <sub>90</sub> = 7.9 P <sub>99</sub> = 15.6																			Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 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-Apr	3	2	2	10	A	5	4	5	6	9	9	8	4	5	6	5	9	7	19	13	13	10	6	5	7.2	19.2
2-Apr	6	7	7	6	A	7	7	6	3	3	4	3	10	11	4	3	2	2	2	1	5	3	8	4	4.9	11.0
3-Apr	6	5	5	4	A	20	7	10	4	6	3	3	2	1	2	1	1	2	2	2	2	2	3	3	4.1	19.8
4-Apr	3	3	2	3	A	16	27	13	20	7	7	5	4	6	6	4	3	4	3	2	2	2	2	1	6.4	26.7
5-Apr	2	3	4	2	A	3	3	4	3	3	3	2	2	3	3	2	4	3	3	2	1	2	3	3	2.7	4.2
6-Apr	3	4	3	5	A	3	4	4	6	2	1	2	3	2	3	3	5	5	3	2	2	4	3	3	3.2	6.0
7-Apr	3	2	3	3	A	4	4	3	6	6	4	3	2	3	3	5	2	6	4	3	4	4	4	2	3.6	6.2
8-Apr	2	1	2	2	A	4	4	8	4	5	5	6	6	4	3	4	6	3	2	3	3	4	3	2	3.8	7.8
9-Apr	4	3	6	4	A	5	11	10	11	11	12	7	8	12	13	16	18	15	15	19	13	5	12	3	10.1	19.3
10-Apr	3	3	4	5	A	6	6	13	5	5	3	4	3	6	2	2	3	3	2	4	3	2	2	1	3.9	13.4
11-Apr	1	2	1	1	A	5	3	3	3	2	3	1	1	2	1	5	4	2	2	3	4	2	3	6	2.6	5.8
12-Apr	6	5	3	6	A	10	8	15	6	7	6	5	3	3	4	4	3	2	2	2	4	4	3	3	5.1	15.0
13-Apr	3	2	5	10	A	3	3	2	2	2	2	2	1	2	1	2	1	1	5	5	3	6	2	4	3.0	9.6
14-Apr	9	3	1	2	A	3	3	2	2	1	1	2	2	3	2	2	3	2	2	8	3	1	2	2	2.8	9.1
15-Apr	7	3	1	1	A	3	3	3	2	2	1	2	1	1	2	3	2	2	1	5	2	2	3	2	2.4	7.0
16-Apr	2	2	3	2	A	7	11	13	7	6	3	4	4	2	2	1	2	2	2	2	6	6	5	2	4.3	13.2
17-Apr	3	4	12	6	A	8	10	5	5	6	3	3	3	2	2	2	4	8	2	2	2	1	3	3	4.3	12.1
18-Apr	2	1	2	2	A	4	9	4	5	5	2	1	2	2	6	2	1	1	1	3	1	1	1	1	2.7	9.1
19-Apr	2	2	2	4	A	7	5	6	6	6	2	2	2	2	2	2	2	2	3	3	2	3	1	2	3.0	7.2
20-Apr	1	1	1	1	A	3	2	2	2	2	2	2	1	3	1	2	1	1	2	2	3	4	7	8	2.4	7.9
21-Apr	4	7	7	14	A	5	3	3	4	2	1	1	1	1	1	1	1	1	1	5	7	5	7	4	3.8	14.4
22-Apr	3	4	3	4	A	6	7	9	5	2	2	1	2	2	3	1	1	1	1	5	6	8	4	7	3.8	8.8
23-Apr	2	3	1	4	A	7	6	6	C	C	C	C	C	C	1	2	6	2	1	4	8	15	9	8	--	15.3
24-Apr	7	2	4	4	A	10	12	10	2	2	2	3	2	1	1	2	2	1	2	2	3	2	3	3	3.6	12.4
25-Apr	2	1	1	1	A	5	4	3	5	4	3	4	8	6	7	7	4	2	2	2	3	3	2	1	3.4	7.9
26-Apr	1	6	3	2	A	12	11	3	10	10	10	10	10	6	5	3	6	9	8	5	1	2	1	3	6.0	12.4
27-Apr	4	2	2	4	A	5	5	3	2	2	2	2	6	10	8	4	8	2	1	1	3	2	8	7	4.0	10.1
28-Apr	3	4	3	4	A	5	5	5	3	2	1	2	1	1	1	1	3	2	2	2	5	2	3	2	2.8	5.4
29-Apr	1	1	1	3	A	6	4	2	2	2	2	1	1	2	2	1	2	1	2	2	2	2	8	5	2.4	7.6
30-Apr	8	7	4	3	A	16	10	9	3	2	9	2	2	1	1	1	1	1	2	3	6	4	2	3	4.2	15.8
	3.5	3.2	3.3	4.1	--	6.7	6.7	6.1	5.0	4.3	3.7	3.2	3.4	3.6	3.3	3.1	3.8	3.2	3.4	3.9	4.1	3.8	4.0	3.4	Diurnal Average	
	9.1	7.0	12.1	14.4	--	19.8	26.7	15.0	20.4	10.7	12.1	9.6	10.1	11.6	13.2	16.1	17.8	14.7	19.2	19.3	13.5	15.3	12.0	7.9	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span		

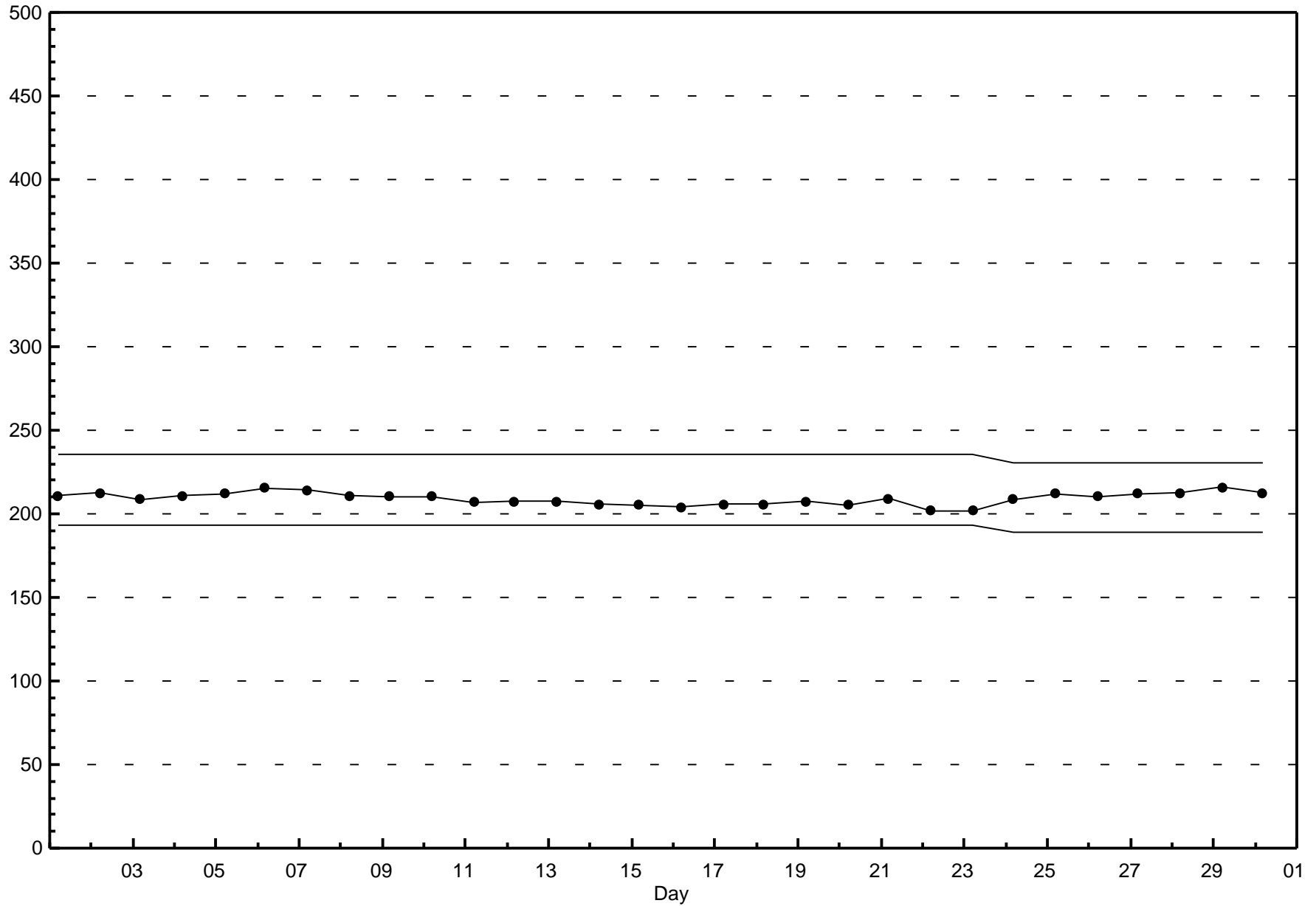
### Hourly Maximums

Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
Beaverlodge - April 2013



**Span Responses**

**Oxides of Nitrogen (NO<sub>x</sub>)  
Beaverlodge - April 2013**

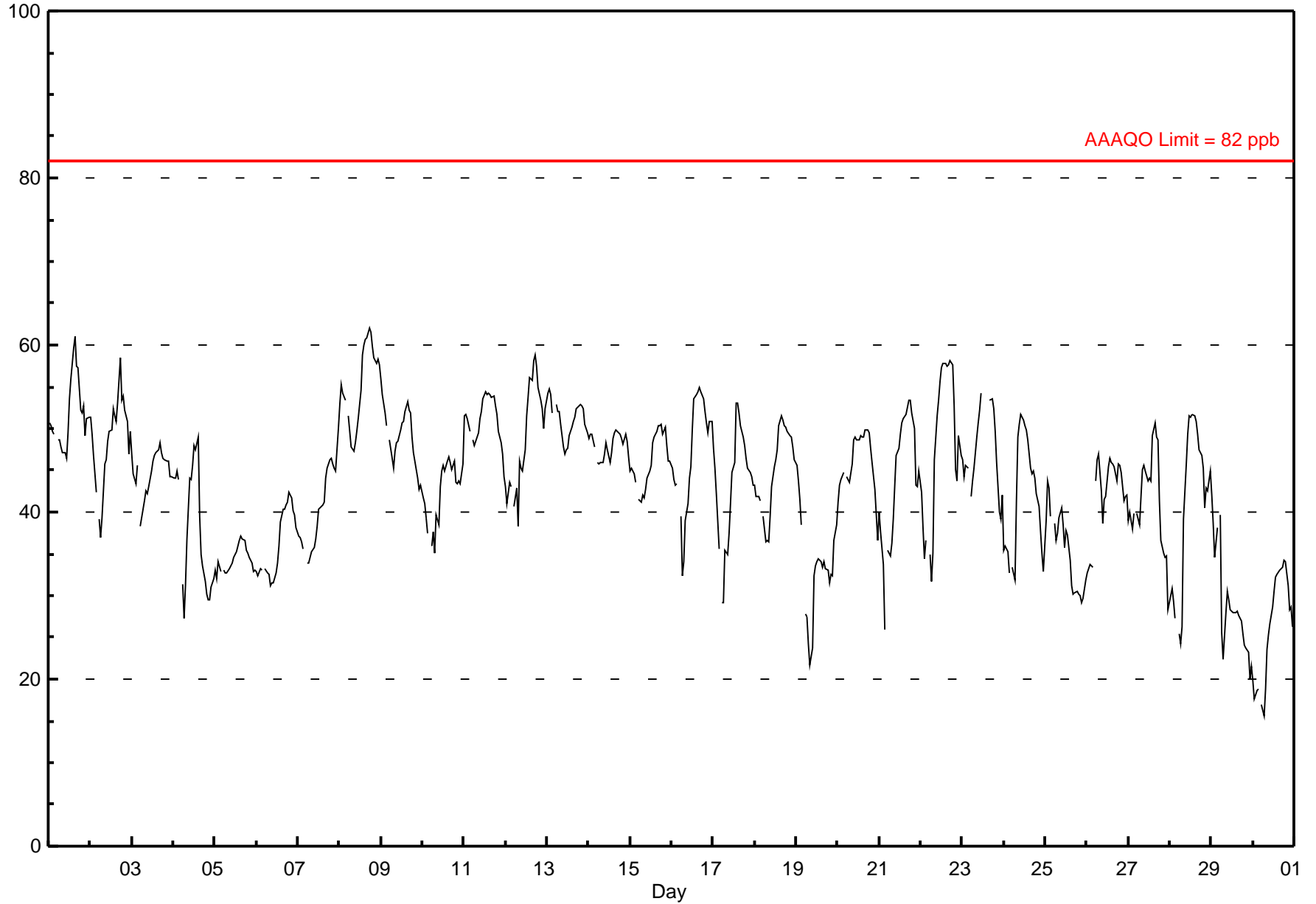






### Hourly Averages

Ozone (O<sub>3</sub>) - ppb  
Beaverlodge - April 2013



# Hourly Maximums

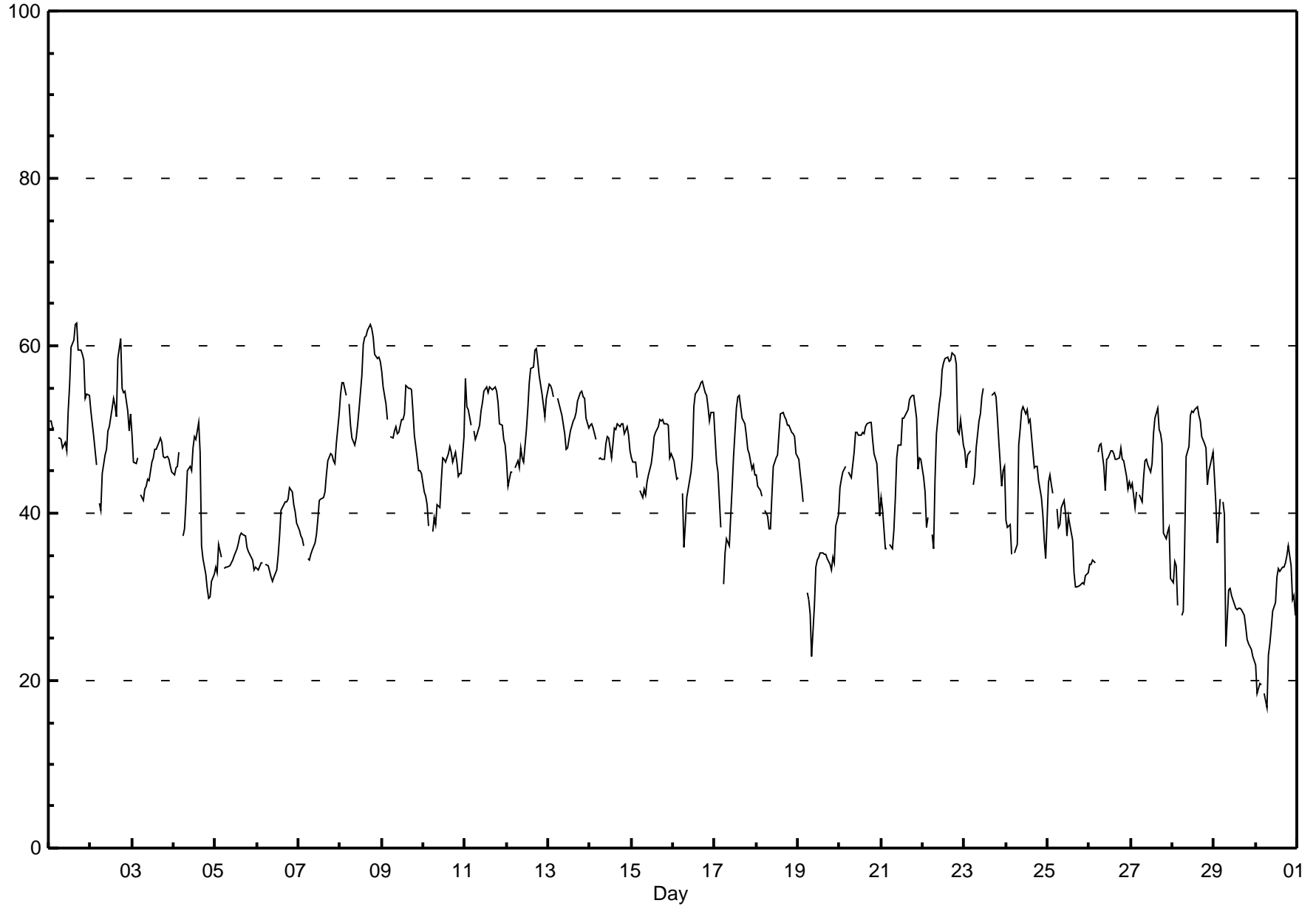
Ozone (O<sub>3</sub>) - ppb

Beaverlodge - April 2013

Maximum Value: 62.7 ppb on Apr 1 17:00		Maximum Daily Average: 56.2 ppb on Apr 8		Hours in Service: 720																							
Minimum Value: 17 ppb on Apr 30 07:00		Minimum Daily Average: 27.8 ppb on Apr 30		Hours of Data: 686																							
Maximum Diurnal Average: 48.8 ppb at hour 15		Minimum Diurnal Average: 39.9 ppb at hour 7		Hours of Missing Data: 34																							
Monthly Average: 44.86 ppb		Percentiles: P <sub>1</sub> = 22.8 P <sub>10</sub> = 33.3 Q <sub>1</sub> = 38.6 Median = 46.4 Q <sub>3</sub> = 50.8 P <sub>90</sub> = 54.4 P <sub>99</sub> = 61.0		Hours of Calibration: 34																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	51	51	50	50	A	49	49	49	48	48	47	52	55	60	61	62	63	59	59	59	58	54	54	54	54.1	62.7	
2-Apr	52	51	49	46	A	41	40	45	47	48	50	50	53	54	53	51	58	61	55	54	55	52	50	52	50.7	60.8	
3-Apr	49	46	46	47	A	42	42	43	43	44	44	46	47	48	48	48	49	49	47	47	47	46	46	45	45.9	49.2	
4-Apr	45	45	46	47	A	37	38	41	45	46	45	48	49	49	51	47	36	35	33	31	30	30	32	33	40.8	50.8	
5-Apr	34	33	36	35	A	33	34	34	34	34	34	35	36	36	37	38	37	37	36	36	35	34	33	34	35.0	37.5	
6-Apr	33	33	34	34	A	34	34	33	32	32	32	33	35	37	40	41	41	41	42	43	42	41	40	39	36.9	43.0	
7-Apr	38	37	37	36	A	35	34	35	36	36	38	39	42	42	42	43	45	46	47	47	46	46	48	52	41.1	51.9	
8-Apr	54	56	56	54	A	53	50	49	48	49	51	52	56	60	61	61	62	62	62	61	59	58	59	58	56.2	62.5	
9-Apr	57	55	53	51	A	49	49	50	50	49	50	51	51	52	55	55	55	55	52	49	47	45	45	45	50.9	56.9	
10-Apr	43	42	41	38	A	38	39	39	41	41	44	47	46	46	47	48	47	46	47	46	44	45	45	49	43.9	49.2	
11-Apr	56	53	52	50	A	50	49	49	50	52	53	55	55	54	55	55	55	55	55	53	51	50	49	48	52.4	56.1	
12-Apr	46	43	45	45	A	45	46	45	48	47	46	50	53	56	57	57	59	60	58	57	54	53	51	54	51.1	59.7	
13-Apr	55	55	55	54	A	54	53	52	52	49	48	48	49	50	51	51	52	53	54	55	54	54	51	50	52.2	55.4	
14-Apr	50	51	50	49	A	46	47	47	46	48	49	49	47	48	50	50	51	50	51	51	49	50	49	47	49.0	50.8	
15-Apr	47	46	46	44	A	43	42	43	42	44	45	46	47	49	50	50	51	51	51	51	51	51	47	47	47.1	51.3	
16-Apr	46	45	44	44	A	42	36	39	42	44	45	47	53	54	55	55	56	56	54	54	53	51	52	52	48.6	55.8	
17-Apr	49	46	45	38	A	31	35	37	36	40	43	47	53	54	54	53	51	51	49	48	47	45	46	44	45.3	54.1	
18-Apr	45	43	43	42	A	40	40	38	38	42	46	47	47	49	52	52	52	51	51	50	50	49	49	47	46.2	52.0	
19-Apr	46	45	43	41	A	31	30	28	23	29	34	34	35	35	35	35	35	34	33	35	34	39	40	35.1	46.5		
20-Apr	43	44	45	46	A	45	45	44	47	50	50	49	49	50	50	50	51	51	51	49	47	46	43	40	47.1	50.9	
21-Apr	42	41	36	36	A	36	36	38	42	47	48	48	51	51	52	52	53	54	54	54	51	45	47	46	46.1	54.1	
22-Apr	44	42	38	40	A	37	36	44	49	53	54	57	58	58	59	58	58	59	59	58	50	50	51	48	50.5	59.2	
23-Apr	48	45	47	47	A	43	45	48	51	52	54	55	C	C	C	C	54	54	54	51	49	43	45	46	49.0	54.9	
24-Apr	39	38	39	35	A	35	36	48	50	52	53	52	52	51	51	47	45	46	46	44	42	40	37	35	44.0	52.6	
25-Apr	44	45	43	42	A	41	38	39	41	41	40	37	40	39	37	33	31	31	31	31	32	32	32	33	37.1	44.6	
26-Apr	34	34	34	34	A	47	48	48	46	43	46	47	47	47	47	46	47	48	46	46	44	43	44	44	44.1	48.3	
27-Apr	43	44	41	42	A	42	41	44	46	46	46	45	46	50	51	53	50	50	48	38	37	38	38	32	43.9	52.5	
28-Apr	32	34	34	29	A	28	28	37	47	48	52	52	52	52	53	52	51	49	48	48	43	45	46	47	43.8	52.7	
29-Apr	44	41	37	42	A	41	40	24	31	31	30	30	29	29	29	29	28	28	26	25	24	23	22	22	30.7	44.3	
30-Apr	22	18	20	19	A	18	17	23	24	26	28	29	32	33	33	33	34	34	35	36	34	30	28	28	27.8	36.1	
		44.4	43.4	42.8	42.0	--	40.3	39.9	41.1	42.5	43.7	44.8	45.9	47.1	48.1	48.8	48.6	48.6	48.5	47.9	46.8	45.4	44.2	44.0	43.7	Diurnal Average	
		56.9	55.6	55.5	54.1	--	53.7	53.0	52.5	51.7	53.1	54.2	57.0	58.0	60.1	61.0	62.5	62.7	62.5	62.0	61.1	59.0	58.5	58.7	58.2	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

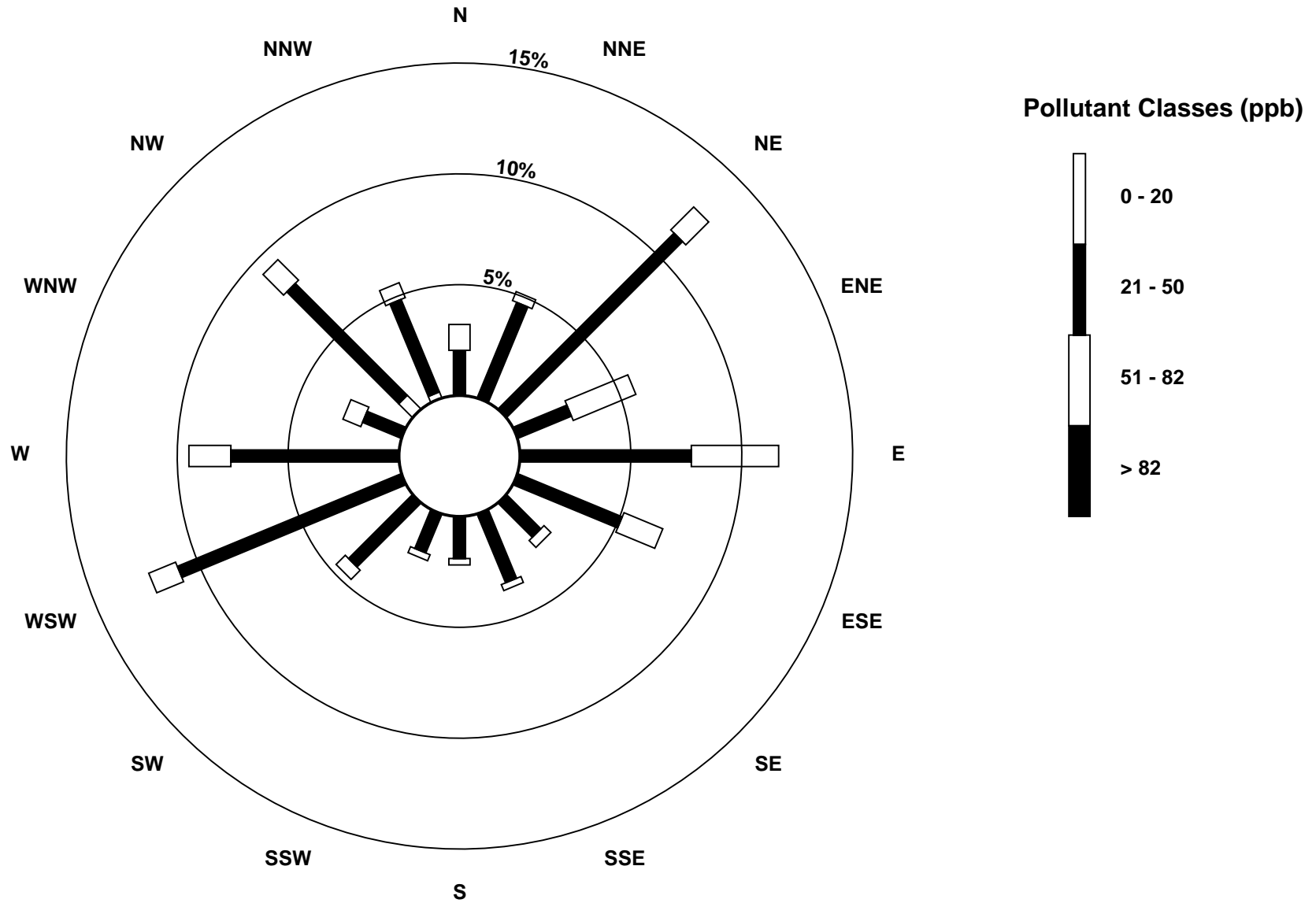
### Hourly Maximums

Ozone (O<sub>3</sub>) - ppb  
Beaverlodge - April 2013



**Pollutant Rose**

Ozone (O<sub>3</sub>) - ppb  
Beaverlodge - April 2013



# Eight Hour Running Averages

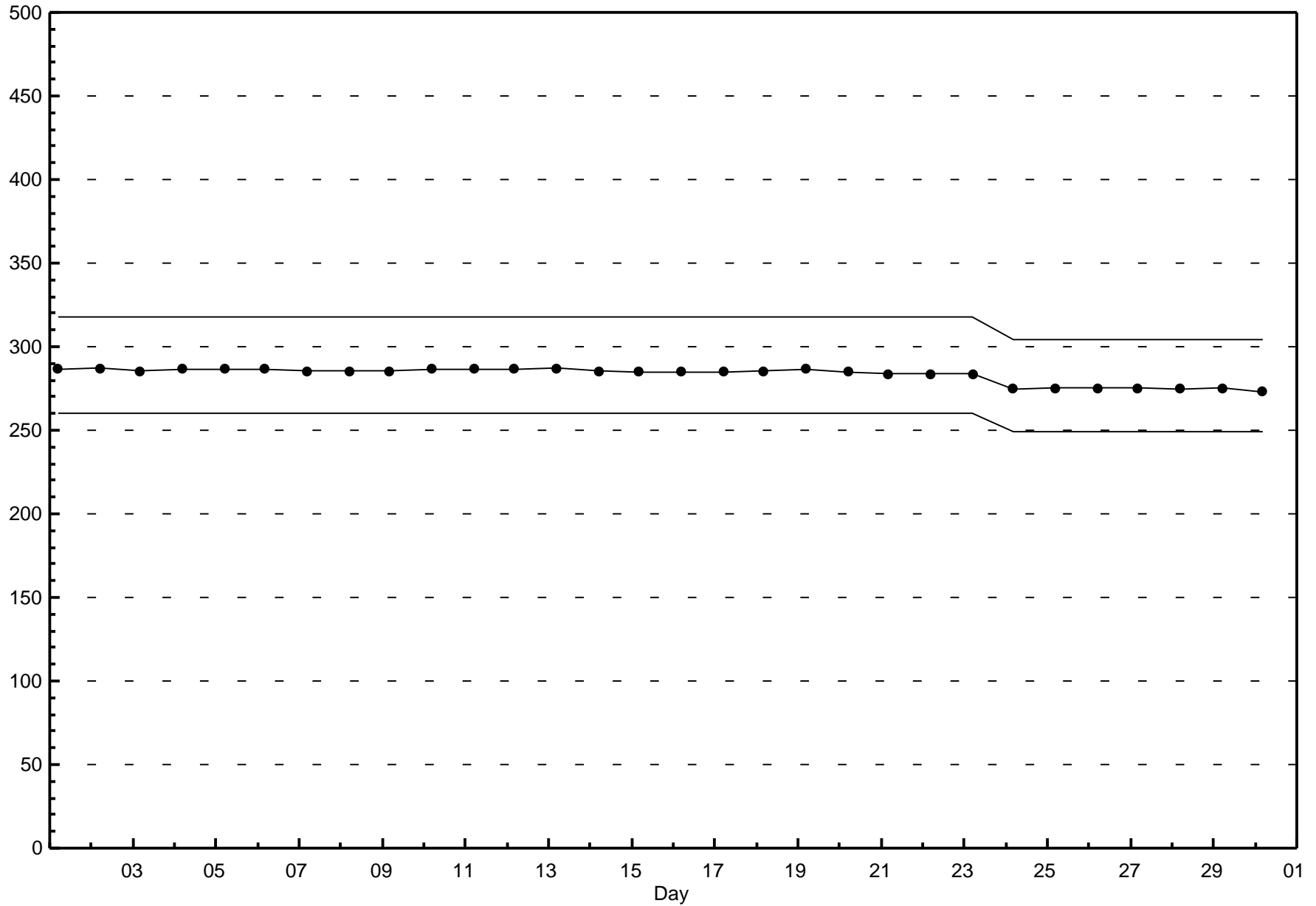
Ozone (O<sub>3</sub>) - ppb

Beaverlodge - April 2013

Maximum Value: 60.3 ppb on Apr 8 21:00																					Hours in Service: 720				
Minimum Value: 18.1 ppb on Apr 30 08:00																					Hours of Data: 713				
Percentiles: P <sub>1</sub> = 20.7 P <sub>10</sub> = 32.5 Q <sub>1</sub> = 38.1 Median = 44.5 Q <sub>3</sub> = 49.0 P <sub>90</sub> = 52.2 P <sub>99</sub> = 58.6																					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-Apr	53	52	51	51	50	50	50	49	49	48	48	48	49	50	51	53	54	55	56	56	56	55	54	53	56.1
2-Apr	52	51	50	49	49	47	45	44	43	42	43	44	44	46	48	49	50	52	52	53	53	53	52	52	53.2
3-Apr	52	50	49	48	47	45	44	43	42	42	42	42	43	44	45	46	46	47	47	47	47	47	47	46	51.6
4-Apr	46	45	45	45	45	42	40	38	37	37	37	37	39	41	43	44	44	43	41	39	37	35	32	32	45.6
5-Apr	31	31	31	32	32	33	33	33	33	33	33	33	34	34	34	35	35	36	36	36	36	36	35	35	36.1
6-Apr	34	34	33	33	33	33	33	33	33	33	32	32	32	33	34	34	36	37	38	39	40	41	41	41	40.8
7-Apr	40	40	39	38	38	37	36	35	35	35	35	35	36	37	38	39	40	41	42	43	44	44	45	46	46.0
8-Apr	47	48	49	50	51	52	52	52	51	50	50	49	50	51	52	54	56	57	59	60	60	60	60	60	60.3
9-Apr	59	58	57	56	55	54	52	50	49	48	48	48	48	49	50	51	51	51	51	51	50	49	48	47	58.9
10-Apr	46	44	43	42	41	40	39	38	38	38	38	39	40	41	42	44	44	45	46	46	45	45	45	45	45.7
11-Apr	45	46	47	48	48	49	49	50	50	49	50	50	51	51	52	53	53	54	54	54	53	52	51	50	53.8
12-Apr	49	47	46	45	44	43	43	42	42	43	43	44	45	46	48	50	52	53	55	56	56	56	55	55	56.0
13-Apr	54	54	53	53	53	53	53	53	53	52	51	50	50	49	49	49	49	49	50	51	52	52	52	52	54.2
14-Apr	51	51	51	50	50	49	48	48	47	47	47	47	47	47	47	47	48	48	48	49	49	49	49	49	51.4
15-Apr	48	48	47	46	46	45	44	43	43	42	42	43	43	44	45	46	47	48	49	49	50	50	49	49	49.7
16-Apr	48	47	47	46	45	44	42	40	39	39	39	39	41	42	45	48	50	51	52	53	53	53	53	52	53.4
17-Apr	51	50	49	47	46	43	40	38	36	35	35	36	37	40	43	45	47	49	49	50	50	49	47	46	51.2
18-Apr	46	45	44	43	43	42	41	40	39	39	39	40	41	43	45	47	48	49	50	50	50	50	49	49	50.1
19-Apr	48	48	47	45	45	42	39	36	32	29	28	27	28	29	30	31	32	34	34	33	33	33	33	34	48.5
20-Apr	35	36	38	39	40	42	43	44	44	45	46	46	47	47	48	48	49	49	49	49	49	48	47	45	49.2
21-Apr	44	42	40	38	37	36	35	35	35	35	37	40	42	43	46	47	49	50	51	52	52	51	50	49	51.9
22-Apr	48	46	43	42	40	39	38	36	37	39	41	44	46	49	52	55	56	57	57	57	56	54	53	51	57.5
23-Apr	50	48	47	46	46	46	45	45	45	46	47	48	48	49	N	N	N	N	N	N	N	49	48	47	49.9
24-Apr	45	43	40	38	37	36	35	35	37	39	42	44	45	47	49	50	49	48	47	46	45	44	42	40	49.6
25-Apr	40	39	39	39	39	39	39	40	40	39	39	38	38	38	38	37	36	34	33	33	32	31	30	30	39.7
26-Apr	31	31	31	32	32	34	36	39	40	41	42	43	43	44	44	44	44	45	45	46	45	45	44	44	45.5
27-Apr	43	43	42	41	40	40	40	40	40	41	42	43	43	43	45	46	46	47	46	45	44	43	41	39	46.7
28-Apr	36	34	32	31	31	29	28	28	29	31	34	37	39	42	46	49	50	50	50	49	48	47	46	45	50.4
29-Apr	44	43	41	41	41	40	38	34	32	31	31	29	29	27	28	29	28	28	28	27	26	26	25	24	44.0
30-Apr	23	22	21	20	20	19	18	18	19	20	21	22	23	25	27	29	30	31	32	33	33	33	32	31	33.0
58.9 57.9 56.7 55.6 55.1 53.8 53.1 53.1 52.6 51.6 50.6 50.2 50.7 51.4 52.2 54.6 56.1 57.2 58.7 59.8 60.3 60.1 59.9 59.5																									
Diurnal Maximums																									
N - Not Valid																									

**Span Responses**

**Ozone (O<sub>3</sub>)**  
**Beaverlodge - April 2013**



## Hourly Averages

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

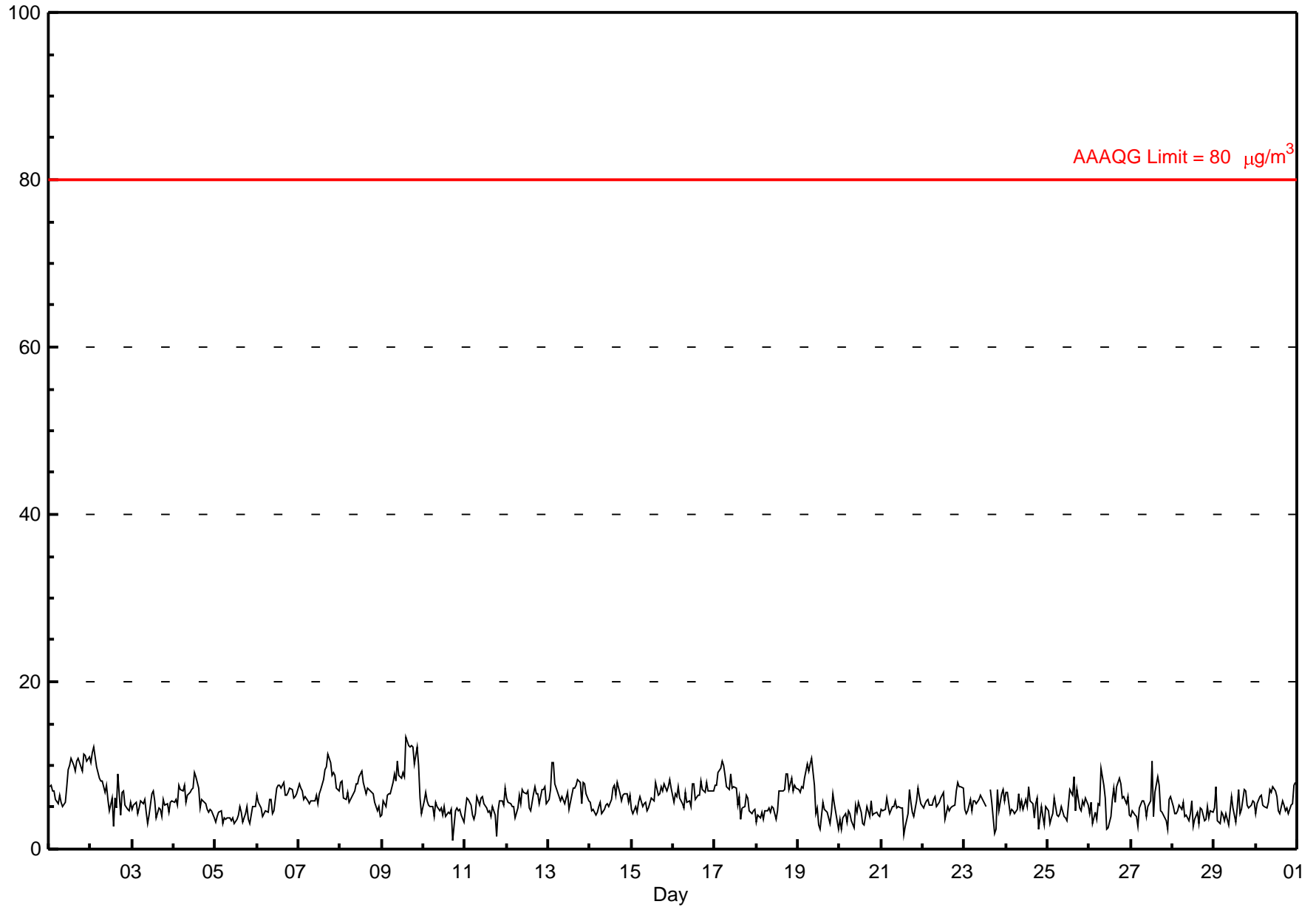
### Beaverlodge - April 2013

Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 720
Maximum Value: 13.4 µg/m <sup>3</sup> on Apr 9 15:00	Maximum Daily Average: 8.8 µg/m <sup>3</sup> on Apr 9
Minimum Value: 1 µg/m <sup>3</sup> on Apr 10 18:00	Hours of Data: 718
Maximum Diurnal Average: 6.5 µg/m <sup>3</sup> at hour 17	Hours of Missing Data: 2
Monthly Average: 5.86 µg/m <sup>3</sup>	Hours of Calibration: 2
Minimum Daily Average: 4.0 µg/m <sup>3</sup> on Apr 5	Percent Operational Time: 100.0
Minimum Diurnal Average: 5.5 µg/m <sup>3</sup> at hour 5	
Percentiles: P <sub>1</sub> = 2.3 P <sub>10</sub> = 3.8 Q <sub>1</sub> = 4.6 Median = 5.6 Q <sub>3</sub> = 6.9 P <sub>90</sub> = 8.1 P <sub>99</sub> = 12.1	

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	7	8	7	7	6	5	6	6	5	6	7	9	10	11	10	9	11	11	10	9	11	11	11	11	8.5	11.4
2-Apr	10	12	12	10	9	8	8	8	7	8	6	5	6	3	6	5	9	4	7	7	5	5	5	6	7.0	12.2
3-Apr	5	5	6	4	5	6	5	6	4	3	4	7	7	6	4	5	5	4	6	5	5	4	6	6	5.1	7.0
4-Apr	6	6	5	8	7	7	8	6	6	7	7	7	9	9	7	5	6	6	5	5	4	5	5	4	6.2	9.2
5-Apr	3	4	4	5	3	4	4	4	4	3	4	3	4	4	5	4	3	4	5	4	3	5	5	5	4.0	5.2
6-Apr	7	6	5	4	4	5	4	6	6	4	5	7	8	8	7	8	6	6	7	7	7	6	6	7	6.1	8.0
7-Apr	8	7	7	6	6	6	5	6	6	6	6	5	7	7	8	9	10	11	10	9	9	9	7	7	7.4	11.4
8-Apr	8	8	6	6	7	6	6	6	7	8	8	9	9	8	7	7	7	7	7	7	6	5	5	4	6.7	9.2
9-Apr	4	6	5	7	7	7	8	9	8	11	9	9	9	9	13	12	12	12	12	10	12	10	6	4	8.8	13.4
10-Apr	6	7	6	5	5	5	4	6	5	5	5	4	5	4	4	4	5	1	5	5	5	5	4	3	4.7	6.8
11-Apr	5	6	6	5	4	4	4	6	5	6	6	5	5	4	5	4	5	4	2	5	6	6	5	7	5.0	7.3
12-Apr	6	6	5	5	5	4	5	6	5	7	7	7	7	5	5	7	7	7	7	5	7	7	8	5	6.0	7.5
13-Apr	6	7	10	10	8	7	6	6	6	5	6	7	5	6	7	7	8	8	8	5	8	8	7	6	7.0	10.4
14-Apr	6	5	5	4	4	5	6	4	5	5	5	5	6	7	8	7	8	7	6	6	7	7	6	6	5.8	8.0
15-Apr	5	4	5	4	6	6	5	5	6	5	5	6	6	6	8	6	7	7	7	8	7	7	8	7	6.1	8.2
16-Apr	6	7	6	7	6	5	5	7	6	6	5	8	8	6	6	6	8	7	7	8	7	7	7	7	6.6	8.1
17-Apr	8	8	9	10	11	10	9	7	7	9	7	7	7	5	6	4	5	5	6	6	5	4	5	5	6.9	10.6
18-Apr	3	4	4	4	4	5	5	5	4	5	5	4	5	7	7	7	9	9	9	7	8	7	8	7	5.8	8.9
19-Apr	7	7	7	7	8	10	9	10	11	8	4	5	3	2	6	5	5	4	3	4	7	5	4	2	6.1	10.9
20-Apr	3	2	4	4	3	5	4	3	3	5	4	6	4	3	3	4	5	4	6	4	4	4	4	4	4.0	5.7
21-Apr	5	5	5	6	5	4	5	5	6	5	5	5	5	2	3	4	7	6	4	4	6	7	6	6	5.0	7.3
22-Apr	5	5	6	6	5	5	6	6	5	6	6	7	7	4	5	5	5	5	5	7	8	7	7	7	5.8	7.9
23-Apr	5	4	5	6	5	6	6	5	6	6	6	6	5	C	C	7	6	2	2	7	5	7	7	6	5.4	7.2
24-Apr	7	7	4	5	5	4	5	7	5	6	5	6	5	7	6	5	4	5	6	2	5	4	3	5	5.1	7.5
25-Apr	5	3	4	4	6	4	4	4	5	4	4	3	5	7	6	9	5	7	5	5	6	5	6	5	5.0	8.7
26-Apr	4	6	3	4	3	5	5	10	8	6	2	3	4	6	7	6	7	9	8	6	6	5	6	4	5.6	9.6
27-Apr	4	5	4	4	3	5	6	6	5	4	5	6	11	4	7	9	8	5	4	4	3	2	6	6	5.2	10.5
28-Apr	5	4	4	5	5	5	6	4	4	3	4	6	3	4	4	3	5	5	3	3	5	4	5	4	4.3	5.8
29-Apr	5	8	3	3	4	4	3	4	3	5	6	5	3	5	7	4	5	7	7	5	5	5	6	6	5.0	7.5
30-Apr	4	5	6	6	5	5	5	6	7	7	7	7	6	5	4	6	5	5	5	4	5	5	8	8	5.7	7.9

5.5	5.8	5.6	5.7	5.5	5.5	5.6	6.0	5.7	5.7	5.6	5.9	6.1	5.6	6.3	6.1	6.5	6.1	6.1	5.8	6.3	6.0	6.0	5.7		Diurnal Average
10.4	11.6	12.2	10.4	10.6	10.1	9.2	10.1	10.9	10.6	8.8	9.5	10.5	10.9	13.4	12.4	12.2	12.3	12.3	10.1	12.3	11.2	10.6	11.1		Diurnal Maximum

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



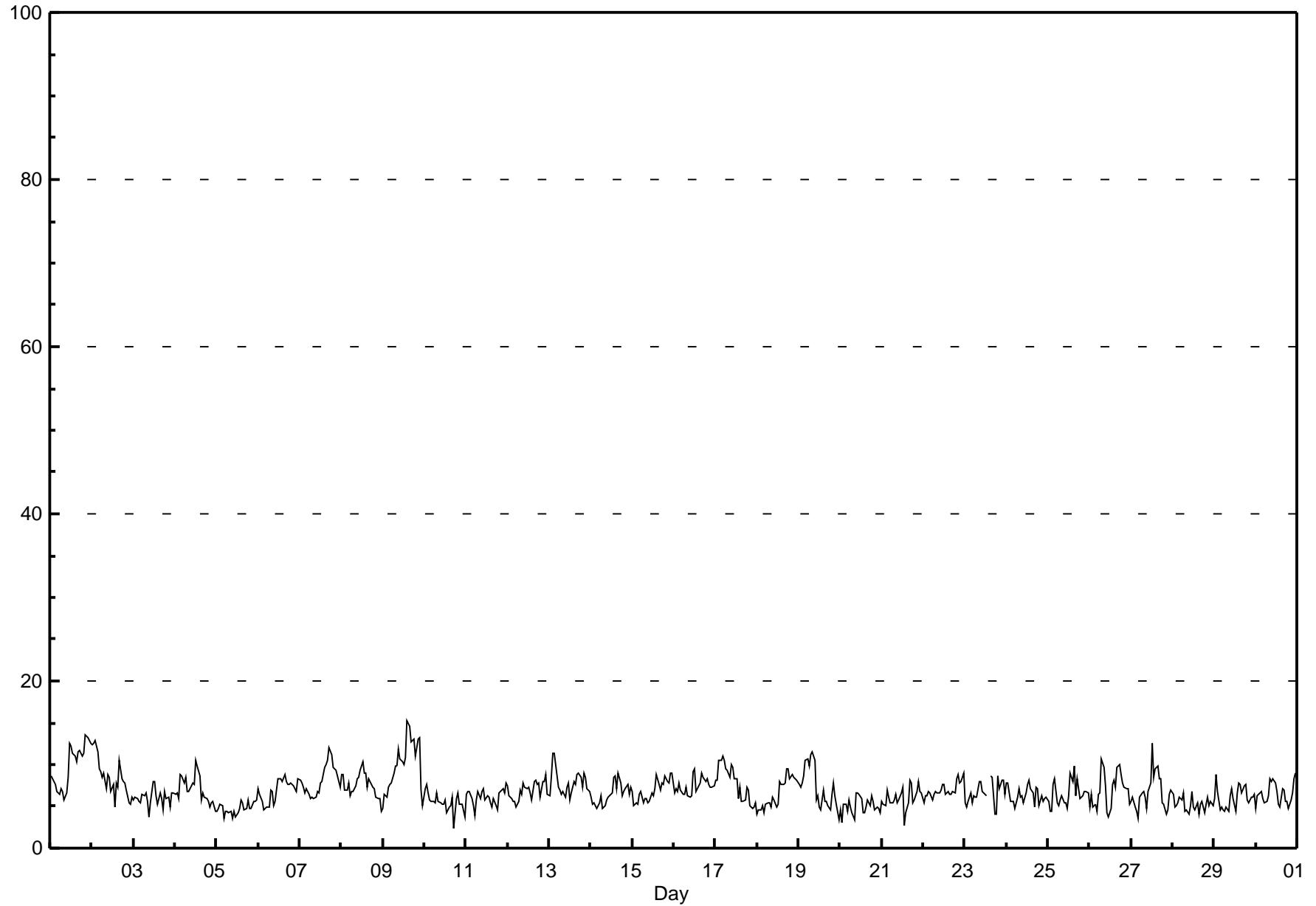


## Hourly Maximums

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

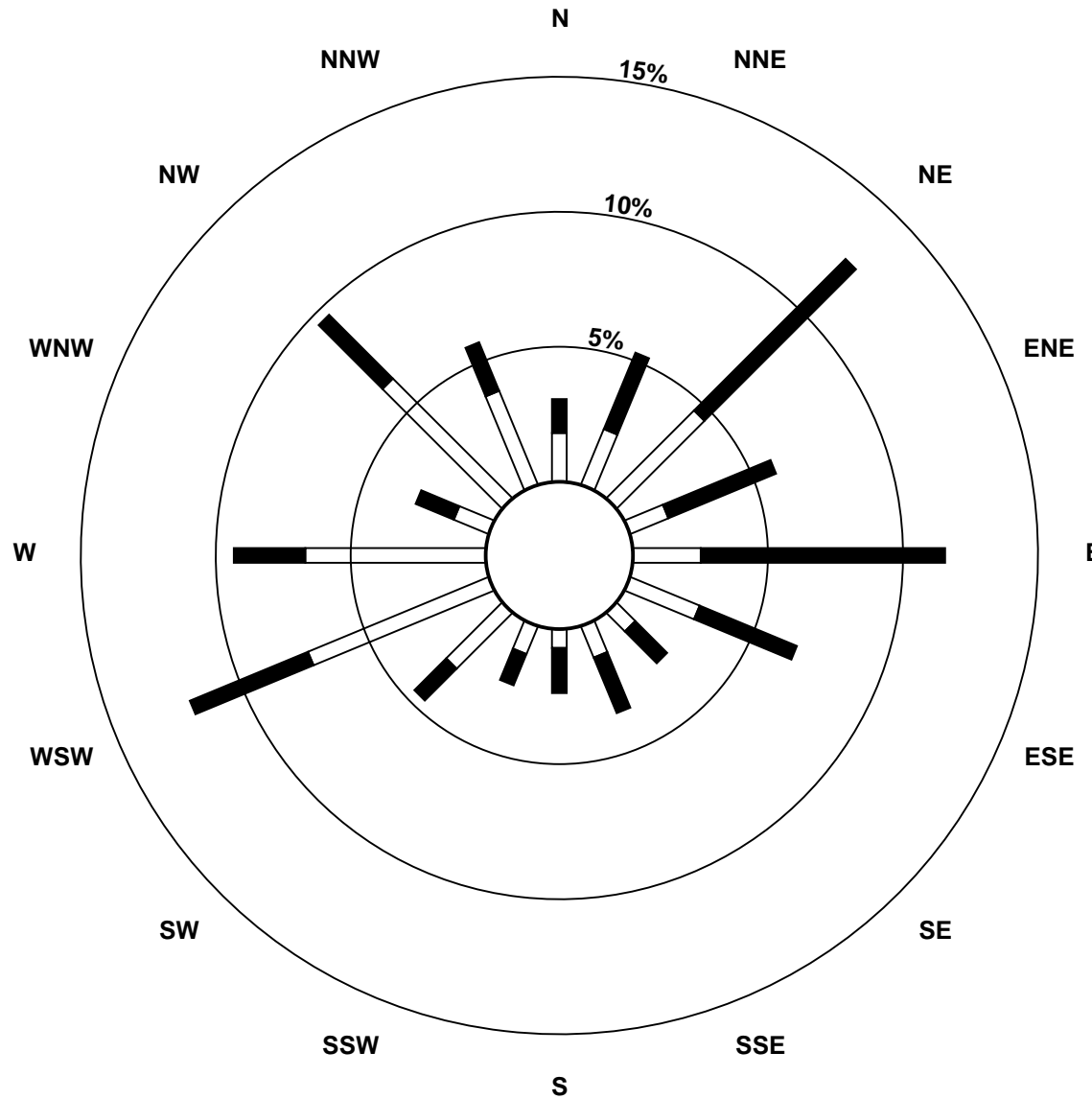
Beaverlodge - April 2013

Maximum Value: 15.2 µg/m <sup>3</sup> on Apr 9 15:00		Maximum Daily Average: 10.0 µg/m <sup>3</sup> on Apr 9		Hours in Service: 720																							
Minimum Value: 2 µg/m <sup>3</sup> on Apr 10 18:00		Minimum Daily Average: 4.8 µg/m <sup>3</sup> on Apr 5		Hours of Data: 718																							
Maximum Diurnal Average: 7.6 µg/m <sup>3</sup> at hour 17		Minimum Diurnal Average: 6.3 µg/m <sup>3</sup> at hour 6		Hours of Missing Data: 2																							
Monthly Average: 6.88 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 3.6 P <sub>10</sub> = 4.8 Q <sub>1</sub> = 5.5 Median = 6.6 Q <sub>3</sub> = 7.8 P <sub>90</sub> = 9.3 P <sub>99</sub> = 13.0		Hours of Calibration: 2																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	9	8	8	8	7	6	7	7	6	7	8	13	12	11	11	10	11	12	11	11	14	13	13	12	9.8	13.6	
2-Apr	12	13	13	11	10	9	9	9	7	9	9	7	8	5	8	7	11	8	8	8	7	5	5	6	8.4	12.9	
3-Apr	6	6	6	6	6	6	6	7	6	4	6	8	8	6	5	7	6	5	7	6	6	5	7	7	6.0	8.0	
4-Apr	6	7	6	9	9	8	9	7	7	7	8	8	10	10	9	6	7	6	6	6	5	5	6	4	7.0	10.5	
5-Apr	4	5	5	5	4	4	4	4	4	4	4	4	4	5	6	6	5	5	6	5	5	6	6	6	4.8	5.8	
6-Apr	7	6	6	5	5	5	5	7	7	5	6	8	8	8	8	9	8	8	8	8	8	7	7	8	6.9	8.8	
7-Apr	8	8	7	7	7	6	6	6	6	6	7	7	8	8	10	10	10	12	11	10	10	9	9	7	8.1	12.1	
8-Apr	9	9	7	7	8	6	7	7	8	8	9	9	10	9	9	7	8	8	7	7	6	6	6	4	7.6	10.3	
9-Apr	5	6	6	7	8	8	9	10	10	12	11	10	10	11	15	15	13	13	13	11	13	13	7	5	10.0	15.2	
10-Apr	7	8	7	6	6	6	5	7	6	5	5	5	6	4	5	5	6	2	6	7	5	5	5	4	5.5	7.6	
11-Apr	6	7	7	6	5	4	6	7	6	7	7	6	6	6	5	5	6	5	4	7	7	7	7	8	6.1	7.8	
12-Apr	8	6	6	6	6	5	6	7	6	8	7	7	7	7	6	8	8	8	8	6	8	8	9	6	6.9	8.8	
13-Apr	6	9	11	11	10	7	7	6	7	6	7	8	6	7	8	8	9	9	8	7	9	9	7	7	7.9	11.4	
14-Apr	6	5	5	5	5	5	6	5	5	6	6	6	7	8	9	7	9	8	6	7	7	8	6	7	6.5	9.0	
15-Apr	7	5	5	5	6	7	6	6	6	5	6	7	6	7	9	8	7	8	8	9	8	8	9	9	6.9	9.0	
16-Apr	7	7	7	8	7	6	7	7	6	6	6	9	10	7	7	8	9	9	8	8	8	7	7	7	7.4	9.5	
17-Apr	8	8	11	10	11	11	10	9	8	10	10	8	8	6	7	6	6	6	7	7	5	5	5	5	7.8	11.0	
18-Apr	4	5	5	5	4	5	5	5	5	6	6	5	5	8	8	8	8	10	10	8	9	8	8	8	6.6	9.5	
19-Apr	8	7	8	9	11	11	10	11	11	10	6	6	5	5	7	6	6	5	5	6	8	6	5	3	7.3	11.5	
20-Apr	5	3	5	5	4	6	5	4	3	7	7	6	6	4	4	5	6	5	6	6	5	5	5	4	5.0	6.6	
21-Apr	6	5	5	7	6	5	5	6	6	5	6	7	7	3	4	5	8	8	5	6	7	8	7	7	6.0	8.1	
22-Apr	5	6	6	7	7	6	6	7	7	7	7	8	8	7	7	6	6	7	7	8	9	8	8	9	7.0	9.0	
23-Apr	5	5	6	7	5	6	6	6	8	8	7	7	6	C	C	9	8	4	4	9	7	8	8	6	6.6	8.6	
24-Apr	8	8	6	6	6	5	6	7	6	6	5	7	8	8	7	7	5	7	7	5	6	6	6	6	6.4	8.1	
25-Apr	6	4	4	8	8	5	5	6	6	5	5	5	6	9	8	10	6	8	6	6	6	7	7	7	6.4	9.8	
26-Apr	5	6	5	5	4	6	7	11	10	7	4	4	5	8	8	7	10	10	9	8	7	7	7	5	6.9	10.6	
27-Apr	6	6	5	4	4	6	7	7	6	5	7	8	13	9	10	10	8	8	5	5	4	5	6	7	6.6	12.5	
28-Apr	6	5	5	5	6	6	7	4	5	4	5	7	5	5	5	4	5	6	4	5	6	5	6	5	5.3	6.8	
29-Apr	6	9	7	5	5	5	4	5	4	6	7	6	4	7	8	8	7	7	8	6	5	6	6	6	6.1	8.8	
30-Apr	5	6	7	7	6	5	6	6	8	8	8	8	7	5	5	7	7	6	6	5	6	7	8	9	6.5	9.0	
		6.5	6.6	6.5	6.7	6.4	6.3	6.4	6.8	6.5	6.7	6.7	7.0	7.3	6.9	7.5	7.3	7.6	7.4	7.1	7.0	7.2	7.1	6.9	6.6	Diurnal Average	
		12.4	12.5	12.9	11.5	11.0	10.7	9.8	11.2	11.5	11.9	10.8	12.5	12.5	11.4	15.2	14.5	12.7	12.9	13.0	11.3	13.6	13.4	13.2	12.5	Diurnal Maximum	
C - Calibration																											

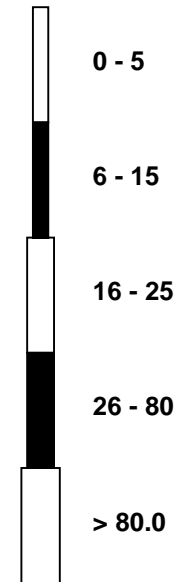


**Pollutant Rose**

**Particulate Matter 2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$**   
**Beaverlodge - April 2013**



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

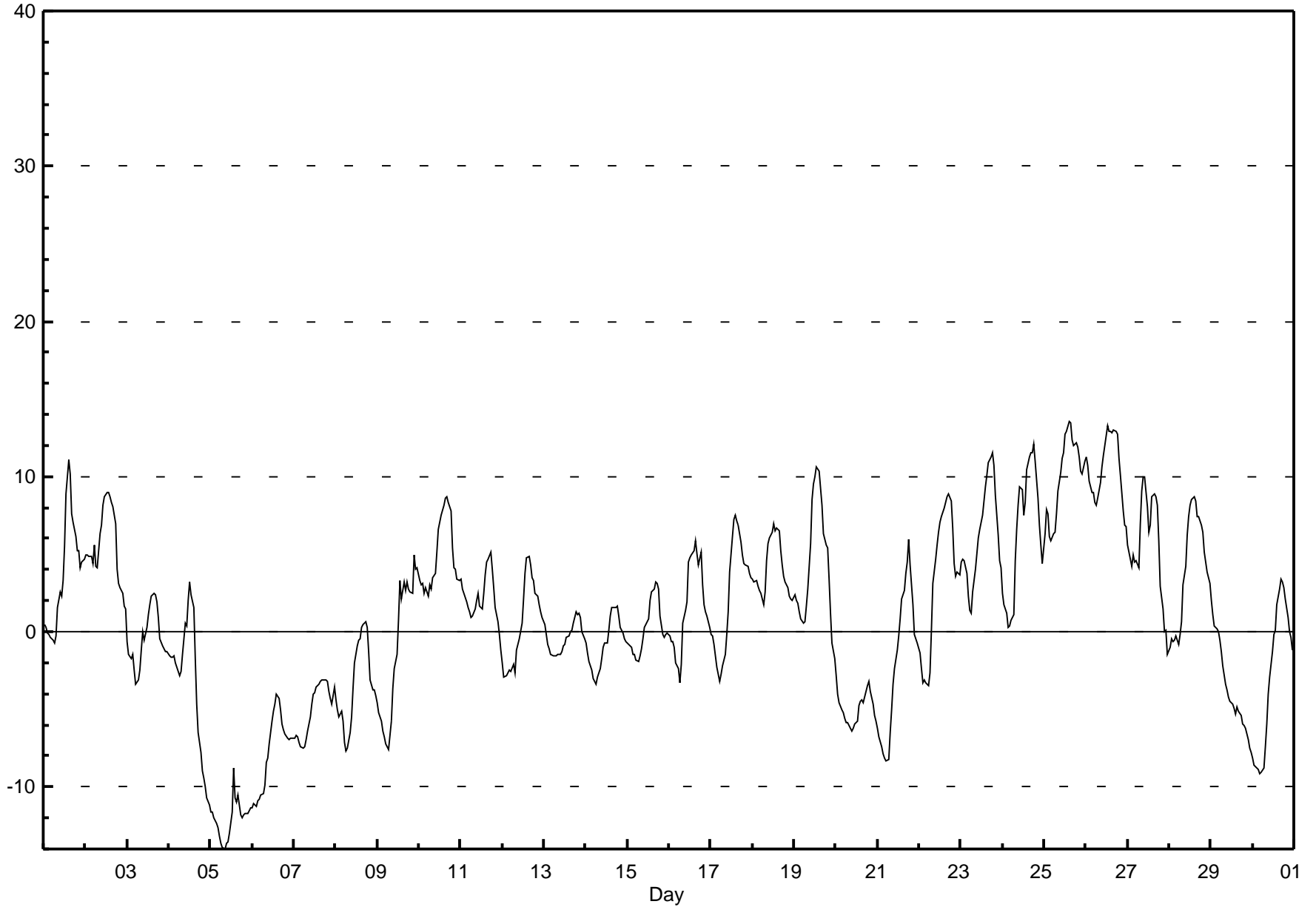


## Hourly Averages

External Temperature (ET) - °C

Beaverlodge - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13.6 °C on Apr 25 15:00      Maximum Daily Average: 10.5 °C on Apr 26		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																								
Minimum Value: -14 °C on Apr 5 09:00 Maximum Diurnal Average: 4.2 °C at hour 16 Monthly Average: 0.93 °C		Minimum Daily Average: -12.1 °C on Apr 5 Minimum Diurnal Average: -2.1 °C at hour 7 Percentiles: P <sub>1</sub> = -12.7 P <sub>10</sub> = -6.8 Q <sub>1</sub> = -2.8 Median = 1.0 Q <sub>3</sub> = 4.8 P <sub>90</sub> = 8.6 P <sub>99</sub> = 12.9																								
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-Apr	0	0	0	0	0	-1	-1	0	2	3	2	3	5	9	11	10	8	7	6	5	5	4	5	5	3.7	11.0
2-Apr	5	5	5	5	4	6	4	4	6	7	8	9	9	9	9	8	8	7	4	3	3	2	2	1	5.6	9.0
3-Apr	-1	-1	-2	-1	-3	-3	-3	-2	-1	0	-1	0	1	2	2	3	2	2	1	0	-1	-1	-1	-1	-0.4	2.5
4-Apr	-2	-2	-2	-2	-2	-3	-3	-3	-1	1	0	2	3	2	2	-2	-5	-6	-8	-9	-9	-10	-11	-11	-3.3	3.2
5-Apr	-12	-12	-12	-12	-13	-13	-14	-14	-14	-14	-14	-13	-12	-9	-11	-11	-11	-12	-12	-12	-12	-12	-12	-11	-12.1	-8.8
6-Apr	-11	-11	-11	-11	-11	-10	-10	-10	-8	-8	-7	-6	-5	-5	-4	-4	-5	-6	-6	-7	-7	-7	-7	-7	-7.7	-4.0
7-Apr	-7	-7	-7	-7	-7	-7	-7	-7	-6	-6	-5	-4	-4	-4	-3	-3	-3	-3	-3	-3	-4	-4	-5	-4	-5.0	-3.1
8-Apr	-4	-5	-5	-5	-6	-7	-8	-7	-7	-5	-4	-2	-1	-1	0	0	0	1	0	-1	-3	-4	-4	-4	-3.4	0.6
9-Apr	-5	-5	-6	-6	-7	-7	-8	-7	-6	-4	-2	-1	1	3	2	3	3	3	3	3	2	5	4	4	-1.1	4.9
10-Apr	3	3	3	2	3	2	3	3	3	4	5	7	7	8	8	9	9	8	8	5	4	4	3	3	4.9	8.7
11-Apr	3	3	2	2	2	1	1	1	1	2	2	2	1	2	4	4	5	5	4	3	2	1	0	-1	2.2	5.1
12-Apr	-2	-3	-3	-3	-2	-3	-2	-3	-1	-1	0	1	2	4	5	5	4	3	3	2	2	2	1	1	0.5	4.8
13-Apr	0	0	-1	-1	-1	-2	-2	-2	-1	-1	-1	-1	-1	0	0	0	0	1	1	1	1	1	0	0	-0.4	1.3
14-Apr	-1	-1	-2	-3	-3	-3	-3	-3	-2	-2	-1	-1	-1	0	1	2	2	2	2	1	0	0	0	-1	-0.8	1.7
15-Apr	-1	-1	-1	-1	-1	-2	-2	-2	-1	0	0	1	1	2	3	3	3	3	3	1	0	0	0	0	0.2	3.2
16-Apr	0	-1	-1	-1	-2	-2	-3	-2	1	1	2	4	5	5	5	6	5	4	5	3	2	1	1	0	1.6	5.9
17-Apr	0	0	-1	-2	-3	-3	-3	-2	-1	0	1	4	6	7	8	7	7	6	5	4	4	4	4	4	2.3	7.5
18-Apr	3	3	3	3	3	2	2	3	5	6	6	6	7	6	7	6	5	4	4	3	3	2	2	2	4.0	6.9
19-Apr	2	2	2	1	1	1	1	2	3	6	9	9	10	11	10	9	8	6	6	5	3	1	-1	-2	4.4	10.6
20-Apr	-3	-4	-5	-5	-5	-6	-6	-6	-6	-6	-6	-6	-6	-5	-4	-4	-5	-4	-3	-3	-4	-5	-5	-6	-4.9	-2.9
21-Apr	-6	-7	-7	-8	-8	-8	-8	-6	-5	-3	-2	-1	0	1	2	3	4	5	6	4	2	0	0	-1	-2.0	5.9
22-Apr	-1	-2	-3	-3	-3	-3	-3	0	3	5	6	6	7	7	8	8	9	9	8	7	4	4	4	4	3.3	8.8
23-Apr	4	5	5	4	2	1	1	3	4	5	6	7	7	8	9	10	11	11	12	11	9	6	5	4	6.3	11.5
24-Apr	2	2	1	0	0	1	1	5	7	8	9	9	8	8	10	11	11	12	12	11	9	7	6	4	6.5	12.1
25-Apr	6	8	8	6	6	6	6	8	9	10	11	12	13	13	14	13	12	12	12	12	11	10	10	11	10.0	13.6
26-Apr	11	11	10	9	9	8	8	9	10	11	11	12	13	13	13	13	13	13	13	11	10	8	7	7	10.5	13.3
27-Apr	6	5	4	5	5	5	4	7	9	10	10	8	6	7	9	9	9	8	6	3	1	0	0	-2	5.6	10.0
28-Apr	-1	0	-1	-1	0	-1	0	1	3	4	6	7	8	9	9	8	7	7	7	6	5	5	4	3	4.0	8.7
29-Apr	2	1	0	0	0	-1	-1	-2	-3	-4	-4	-4	-5	-5	-5	-5	-5	-5	-6	-6	-6	-7	-7	-8	-3.6	2.0
30-Apr	-8	-9	-9	-9	-9	-9	-9	-7	-6	-4	-3	-1	0	0	2	3	3	3	3	2	1	0	0	-1	-2.8	3.4
																								Diurnal Average		
																								Diurnal Maximum		



# Hourly Averages

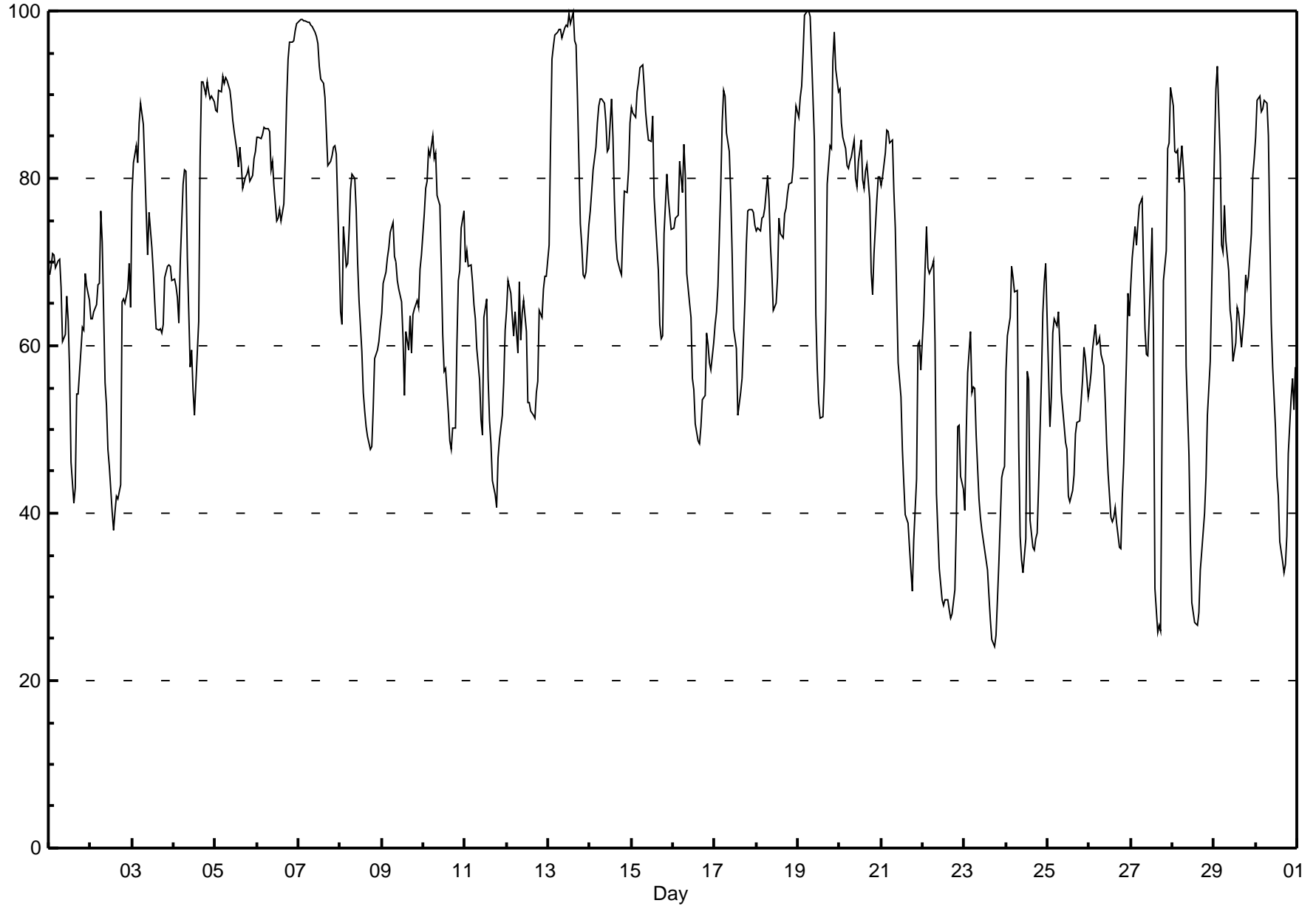
Relative Humidity (RH) - %

Beaverlodge - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100.0 % on Apr 19 06:00 Maximum Daily Average: 91.6 % on Apr 7																			Hours in Service: 720 Hours of Data: 720							
Minimum Value: 24 % on Apr 23 18:00 Minimum Daily Average: 40.7 % on Apr 23 Maximum Diurnal Average: 79.7 % at hour 7 Minimum Diurnal Average: 55.1 % at hour 16 Monthly Average: 67.49 % Percentiles: P <sub>1</sub> = 26.8 P <sub>10</sub> = 41.7 Q <sub>1</sub> = 55.9 Median = 68.5 Q <sub>3</sub> = 81.6 P <sub>90</sub> = 89.8 P <sub>99</sub> = 98.8																			Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	68	69	71	71	69	70	70	67	61	61	66	63	57	46	41	43	54	54	59	62	62	69	67	65	62.0	71.0
2-Apr	63	63	64	65	67	68	76	72	56	53	48	46	40	38	40	42	42	43	65	66	65	67	70	64	57.6	76.0
3-Apr	78	82	84	82	87	89	86	81	76	71	76	72	69	65	62	62	62	61	63	68	69	70	69	68	73.0	88.9
4-Apr	68	67	66	63	70	79	81	81	71	58	59	55	52	55	63	83	92	92	90	92	90	89	90	89	74.7	91.6
5-Apr	88	88	90	90	92	91	92	92	91	89	87	86	83	81	84	82	79	80	81	81	80	80	82	83	85.5	92.2
6-Apr	85	85	85	85	86	86	86	86	81	82	79	75	75	76	75	77	82	89	94	96	96	97	98	98	85.6	98.5
7-Apr	99	99	99	99	99	99	99	98	98	97	97	96	93	92	91	90	86	82	82	83	84	84	83	71	91.6	99.0
8-Apr	64	63	74	69	70	74	79	81	80	76	70	65	59	54	52	50	49	48	48	53	59	59	60	62	63.3	80.6
9-Apr	64	67	69	71	72	74	75	71	70	68	67	65	61	54	62	59	64	59	64	64	65	65	69	71	66.2	74.7
10-Apr	76	79	80	83	83	85	82	83	78	77	69	61	57	57	52	49	48	50	50	60	68	69	74	76	68.6	85.0
11-Apr	70	71	69	70	68	65	63	60	56	51	49	63	66	56	51	48	44	42	41	47	49	52	56	62	57.0	71.4
12-Apr	64	68	66	64	61	64	59	68	61	64	65	62	53	53	52	52	51	54	56	64	63	67	68	68	61.2	68.4
13-Apr	72	84	94	96	97	97	98	98	97	98	98	98	100	98	100	97	96	90	75	72	68	68	69	74	88.9	99.7
14-Apr	76	78	81	84	87	89	89	89	89	87	83	84	90	85	78	73	70	69	69	74	78	78	81	87	81.1	89.6
15-Apr	88	88	87	90	92	93	94	91	88	86	85	84	87	78	75	69	63	61	61	73	81	78	76	74	80.9	93.6
16-Apr	74	75	75	76	82	78	84	80	69	65	63	56	55	51	49	48	50	53	54	61	60	58	57	60	64.0	84.0
17-Apr	63	64	67	79	87	91	90	85	83	78	71	62	60	52	53	54	56	65	72	76	76	76	74	74	71.3	90.5
18-Apr	74	74	74	75	75	76	80	78	72	69	64	65	68	75	73	73	76	76	78	79	79	81	86	89	75.4	88.7
19-Apr	87	90	91	95	99	100	100	99	95	84	64	57	53	51	52	56	64	79	84	84	94	98	93	90	81.7	100.0
20-Apr	91	87	85	83	82	81	82	83	85	80	79	82	85	80	79	81	82	78	69	66	71	77	80	80	80.3	90.7
21-Apr	79	80	83	86	86	84	85	78	74	66	58	54	48	44	40	39	36	33	31	37	44	60	60	57	60.0	85.7
22-Apr	64	69	74	69	69	70	70	60	42	33	31	30	29	30	30	29	27	28	31	39	50	51	44	43	46.3	74.2
23-Apr	40	50	57	62	54	55	55	49	42	39	38	37	34	33	30	27	25	24	25	30	34	44	45	46	40.7	61.6
24-Apr	57	61	63	69	68	66	67	48	37	34	33	37	57	56	39	36	36	37	38	43	56	64	68	70	51.7	69.8
25-Apr	57	50	54	62	63	62	64	60	54	51	48	48	42	41	43	45	50	51	53	56	60	58	54	54	53.2	64.0
26-Apr	55	57	60	63	60	60	61	59	58	53	48	45	40	39	39	41	39	36	36	42	46	59	66	64	51.0	66.3
27-Apr	67	71	74	72	75	77	78	69	62	59	59	69	74	61	31	26	27	26	50	68	71	83	84	91	63.4	90.9
28-Apr	89	83	83	83	79	84	81	78	58	47	37	29	28	27	28	33	35	40	44	52	55	58	75	75	55.6	88.6
29-Apr	83	91	93	83	72	71	77	73	69	64	63	58	60	65	64	62	60	64	68	67	68	73	80	82	71.3	93.3
30-Apr	85	89	90	88	88	89	89	85	73	63	57	50	44	42	37	34	33	34	37	47	54	56	52	58	61.5	89.8
73.0 74.8 76.8 77.5 78.0 78.9 79.7 76.8 70.8 66.8 63.8 61.8 60.6 57.9 55.4 55.1 55.8 56.5 58.7 63.0 66.3 69.5 70.7 71.5																								Diurnal Average		
98.8 99.0 99.0 98.9 99.5 100.0 100.0 99.3 98.1 98.0 98.3 98.1 99.7 98.4 99.7 96.5 95.9 91.6 94.3 96.3 96.3 97.5 97.6 98.5																								Diurnal Maximum		

**Hourly Averages**

**Relative Humidity (RH) - %**  
**Beaverlodge - April 2013**







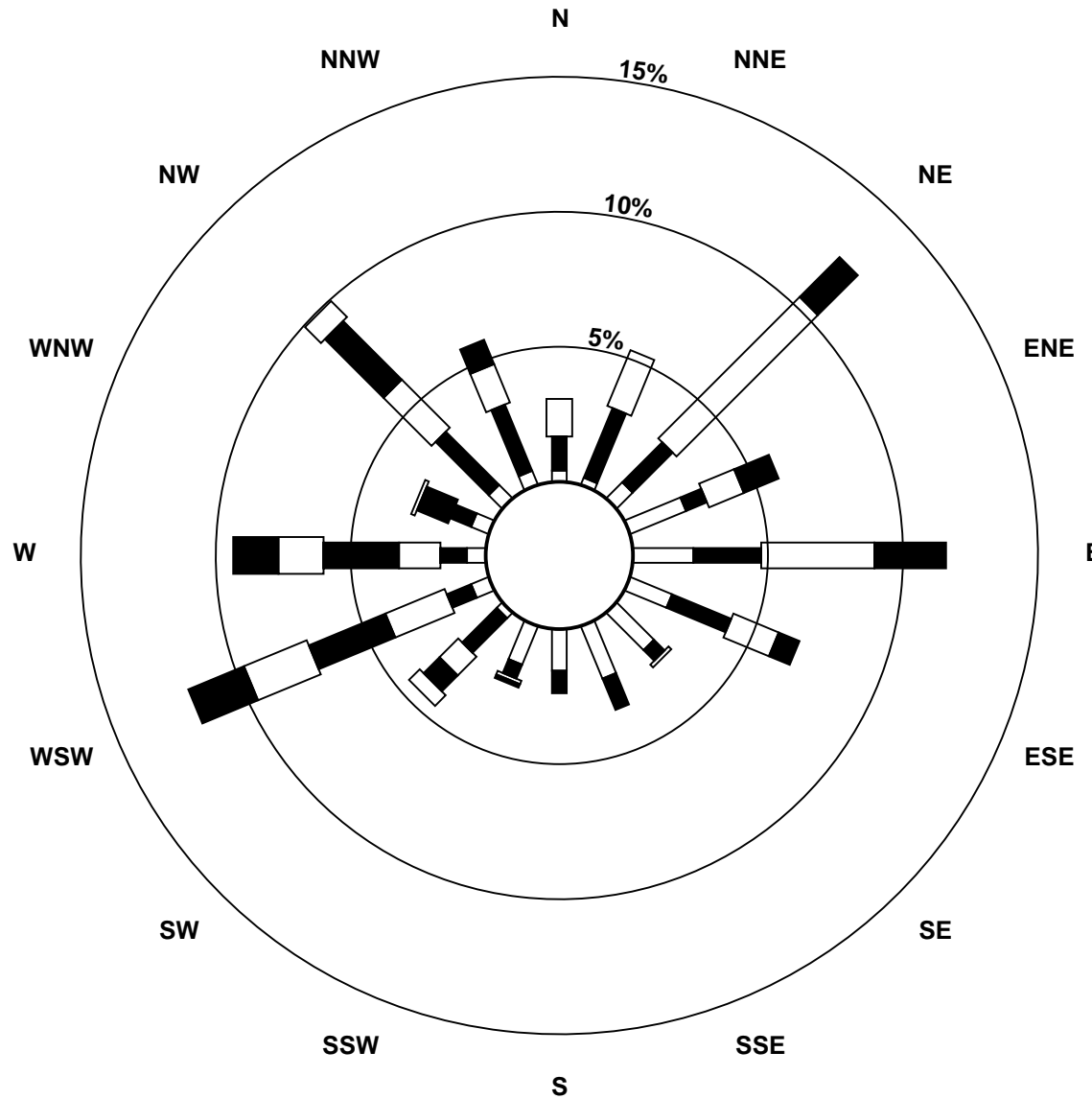
## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Beaverlodge - April 2013

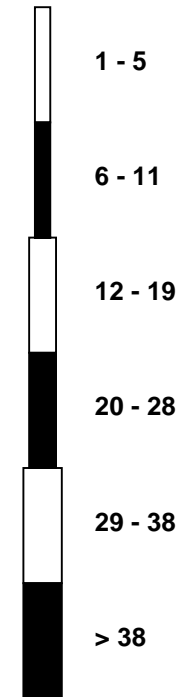
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	7	9	12	10	10	11	14	11	16	18	19	23	21	19	18	17	16	14	10	6	2	2	2	5	11.5	22.5
Dir	298	289	277	333	327	322	316	320	323	324	313	300	311	307	311	308	310	309	329	347	265	59	206	254	311	300
24 Spd	2	3	3	3	3	4	4	11	26	25	31	33	30	11	20	27	28	34	31	28	28	19	11	9	15.3	33.8
Dir	97	78	63	32	64	55	43	268	267	268	272	258	267	299	282	280	262	257	247	251	246	242	230	225	262	257
25 Spd	17	24	25	19	21	23	26	28	33	37	42	48	46	45	45	46	36	25	24	21	23	18	19	20	29.3	47.8
Dir	259	258	254	249	252	250	248	251	259	263	261	262	265	261	253	257	247	243	244	247	243	235	235	245	254	262
26 Spd	30	35	38	29	42	47	42	33	45	59	55	55	53	45	43	40	43	52	45	37	27	20	22	22	39.7	59.3
Dir	246	254	256	249	246	250	248	251	248	247	244	248	256	255	250	254	254	250	246	245	250	227	225	229	248	247
27 Spd	10	7	8	7	11	14	9	23	34	36	37	35	36	45	56	54	46	38	20	18	14	7	4	3	17.6	56.2
Dir	217	169	190	225	210	210	184	207	217	229	226	248	244	265	269	277	278	287	339	16	6	17	305	93	256	269
28 Spd	5	4	4	4	4	2	2	7	12	19	25	32	32	31	28	29	22	16	13	12	9	12	10	19	13.2	32.4
Dir	118	109	143	118	175	179	183	205	242	229	234	247	240	234	241	259	237	254	229	212	245	261	258	258	237	247
29 Spd	12	13	10	16	24	23	23	27	31	29	29	31	27	26	25	23	24	19	16	15	13	8	7	7	17.8	31.2
Dir	246	233	249	262	266	268	304	302	315	314	313	314	321	320	323	325	319	327	330	325	335	340	334	333	307	315
30 Spd	6	7	7	7	7	7	6	7	4	1	3	4	4	4	2	4	3	6	7	9	6	8	10	6	0.9	10.2
Dir	325	318	323	327	324	320	311	304	299	49	154	115	194	197	147	99	132	187	224	253	151	63	96	95	306	96
Spd	1.9	1.9	1.9	2.7	3.2	3.3	3.6	3.9	6.2	6.1	7.4	7.1	7.2	6.6	7.2	7.2	6.4	4.8	3.4	2.6	1.8	1.5	1.5	1.5	Diurnal Average	
Dir	32	22	331	334	312	300	313	297	278	273	271	280	285	287	288	294	303	312	325	344	350	26	26	25	Diurnal Maximum	
Spd	32.0	35.3	38.1	28.6	42.0	46.5	42.4	33.0	45.1	59.3	54.6	55.1	52.7	47.7	56.2	54.0	46.4	51.9	44.9	37.1	28.0	24.1	27.1	26.6	Diurnal Maximum	
Dir	263	254	256	249	246	250	248	251	248	247	244	248	256	265	269	277	278	250	246	245	246	86	91	93	Diurnal Maximum	
Maximum Speed Value: 59 km/h on Apr 26 10:00		Minimum Speed Value: 1 km/h on Apr 1 14:00																Hours in Service: 720								
Maximum Daily Speed Average: 39.7 km/h on Apr 26		Minimum Daily Speed Average: 0.9 km/h on Apr 30																Hours of Data: 720								
Maximum Diurnal Speed Average: 7.4 km/h at hour 11		Minimum Diurnal Speed Average: 1.5 km/h at hour 23																Hours of Missing Data: 0								
Monthly Average Velocity: 3.64 km/h 300.9 deg		Speed Percentiles: P <sub>1</sub> = 1.4 P <sub>10</sub> = 3.6 Q <sub>1</sub> = 6.9 Median = 13.3 Q <sub>3</sub> = 21.0 P <sub>90</sub> = 28.3 P <sub>99</sub> = 51.4																Percent Operational Time: 100.0								
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	6	22	18	2	0	0	48																			
NorthEast	18	27	68	19	1	0	133																			
East	26	34	40	37	1	0	138																			
SouthEast	22	15	6	1	0	0	44																			
South	25	12	0	0	0	0	37																			
SouthWest	9	19	22	16	15	4	85																			
West	7	11	17	34	23	25	117																			
NorthWest	9	41	24	36	8	0	118																			
Total	122	181	195	145	48	29	720																			

**Wind Rose**

**Wind Speed (WS) (km/h)**  
**Beaverlodge - April 2013**



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



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - April 2013

Maximum Speed: 59 km/h on Apr 26 10:00      Maximum Daily Speed Average: 40.2 km/h on Apr 26		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0																																															
Minimum Speed: 1 km/h on Apr 1 14:00      Minimum Daily Speed Average: 6.6 km/h on Apr 21 Maximum Diurnal Speed Average: 20.5 km/h at hour 13      Minimum Diurnal Speed Average: 11.0 km/h at hour 4 Monthly Average Speed: 15.65 km/h      Percentiles: P <sub>1</sub> = 2.4 P <sub>10</sub> = 4.6 Q <sub>1</sub> = 7.2 Median = 13.3 Q <sub>3</sub> = 21.2 P <sub>90</sub> = 28.3 P <sub>99</sub> = 51.7		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-Apr	14	15	16	17	15	17	16	9	5	5	10	9	5	1	2	2	6	5	4	8	10	7	7	4	8.6	17.1																							
2-Apr	4	3	5	5	4	14	10	9	26	20	31	36	47	48	44	41	31	22	16	17	11	8	8	15	19.9	47.8																							
3-Apr	11	9	7	7	5	5	6	8	6	6	11	10	11	12	13	14	14	17	15	15	17	20	16	16	11.1	19.7																							
4-Apr	18	17	13	4	3	4	4	5	5	4	5	5	6	12	17	19	22	21	21	23	20	17	21	19	12.7	22.5																							
5-Apr	18	14	12	14	12	11	10	12	12	10	12	11	7	4	8	10	8	13	11	9	7	9	10	10	10.5	17.6																							
6-Apr	9	6	8	6	5	7	6	5	4	7	6	8	8	10	7	11	13	14	12	12	11	11	9	7	8.5	14.4																							
7-Apr	8	8	7	8	10	9	8	8	8	8	8	12	15	14	16	14	18	17	16	14	11	12	11	21	11.7	21.2																							
8-Apr	27	28	16	16	22	23	22	19	21	21	19	18	19	19	22	18	20	20	18	13	17	15	17	20	19.5	28.2																							
9-Apr	19	17	15	10	8	7	7	6	7	7	7	12	11	6	10	3	5	4	4	7	6	11	11	6	8.6	18.8																							
10-Apr	5	5	10	6	7	5	12	11	18	14	12	10	17	13	25	24	27	27	29	18	18	16	13	23	15.3	29.4																							
11-Apr	32	23	26	22	24	29	29	31	30	27	26	23	21	16	11	8	4	6	18	16	10	7	4	2	18.6	32.2																							
12-Apr	4	3	4	4	4	4	3	7	10	21	22	20	20	19	19	19	22	26	24	20	16	22	27	27	15.4	27.1																							
13-Apr	22	23	24	22	21	21	24	25	25	25	26	25	26	28	25	27	21	16	16	17	13	15	16	18	21.6	28.2																							
14-Apr	22	19	18	9	14	17	18	14	15	18	18	18	16	14	14	16	16	17	14	16	13	14	18	16	16.0	21.7																							
15-Apr	15	17	20	17	16	16	16	20	20	19	19	17	16	16	18	16	17	17	17	19	13	12	13	13	16.7	20.4																							
16-Apr	12	12	11	12	8	7	12	7	4	4	5	4	7	6	7	7	8	7	7	8	6	8	7	7	7.5	11.8																							
17-Apr	5	3	4	4	4	4	4	5	5	6	7	8	11	21	26	32	27	27	28	22	21	21	14	11	13.3	31.6																							
18-Apr	11	10	12	13	9	10	5	5	4	7	10	13	13	17	18	19	21	19	24	25	24	24	22	16	14.7	24.9																							
19-Apr	12	12	4	5	5	6	4	6	13	12	27	28	31	24	24	21	12	13	10	9	11	19	24	22	14.7	31.1																							
20-Apr	23	22	25	26	27	28	28	28	27	31	31	28	27	24	23	18	14	13	11	12	9	9	8	8	20.8	31.0																							
21-Apr	10	9	10	7	7	11	10	6	6	6	7	7	7	8	6	7	6	5	3	4	4	5	5	3	6.6	11.0																							
22-Apr	2	2	4	3	3	2	3	5	17	23	21	20	18	18	17	18	15	11	7	5	6	5	4	2	9.7	23.0																							
23-Apr	7	10	13	10	10	11	14	11	16	18	20	23	22	20	19	18	16	14	10	6	2	2	3	5	12.6	22.8																							
24-Apr	3	3	3	4	4	4	5	12	26	25	31	34	31	11	21	27	29	34	31	28	28	19	11	9	18.0	33.9																							
25-Apr	17	24	25	19	21	23	26	28	33	37	42	48	47	45	45	46	36	25	24	22	23	18	19	20	29.8	48.1																							
26-Apr	30	35	38	29	42	47	43	33	45	59	55	55	53	46	44	41	44	52	45	37	27	21	22	22	40.2	59.5																							
27-Apr	10	7	8	8	11	14	9	23	34	36	38	40	37	46	57	54	47	38	21	19	14	8	6	4	24.6	56.5																							
28-Apr	6	5	4	4	4	3	3	7	13	19	26	33	33	32	29	30	22	16	13	12	9	12	10	20	15.2	33.4																							
29-Apr	12	13	11	16	24	23	23	27	31	29	29	31	27	26	25	24	24	19	16	15	13	8	7	7	20.1	31.5																							
30-Apr	6	7	7	7	7	7	6	7	4	4	5	6	7	8	6	6	6	7	8	9	7	8	11	7	6.9	10.5																							
																								13.1	12.8	12.7	11.0	12.0	13.0	12.8	13.3	16.3	17.7	19.6	20.4	20.5	19.5	20.5	20.4	19.1	18.0	16.5	15.2	13.3	12.7	12.4	12.7	Diurnal Average	
																								32.2	35.4	38.2	28.7	42.1	46.6	42.5	33.1	45.4	59.5	54.8	55.3	53.1	47.8	56.5	54.4	47.0	52.3	45.1	37.1	28.1	24.1	27.1	26.7	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																																																	

# Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - April 2013

Maximum Value: 93.5 deg on Apr 22 08:00																		Hours in Service: 720							
Minimum Value: 1.4 deg on Apr 9 00:00																		Hours of Data: 720							
Percentiles: P <sub>1</sub> = 2.2 P <sub>10</sub> = 3.7 Q <sub>1</sub> = 5.2 Median = 8.8 Q <sub>3</sub> = 18.1 P <sub>90</sub> = 41.9 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-Apr	6	3	2	2	4	3	2	18	22	24	9	15	15	75	42	89	9	46	70	41	50	71	62	63	89.5
2-Apr	34	19	30	19	46	8	14	26	3	10	17	7	4	4	6	4	9	31	5	4	7	15	9	22	45.8
3-Apr	28	7	36	25	35	76	13	5	25	30	10	10	7	6	4	7	4	5	3	3	4	2	4	3	75.9
4-Apr	5	4	15	77	78	53	64	50	27	71	21	41	46	13	15	8	5	6	7	4	6	6	5	4	77.7
5-Apr	4	5	6	11	7	10	5	5	5	9	5	8	14	55	18	11	13	7	10	11	9	8	5	7	54.9
6-Apr	6	34	8	8	24	19	21	27	29	12	11	11	15	9	19	15	17	7	4	5	5	4	13	8	34.0
7-Apr	11	7	8	6	3	9	12	11	17	9	10	11	8	10	9	6	6	7	8	5	6	6	13	9	17.0
8-Apr	3	3	7	7	3	3	2	3	2	3	5	7	5	4	4	4	5	4	3	4	6	4	4	1	7.5
9-Apr	2	2	4	7	18	8	16	20	28	15	27	8	5	67	14	77	53	28	46	52	26	7	16	16	77.1
10-Apr	45	80	18	79	7	13	9	5	8	15	4	21	9	11	10	9	5	6	5	6	2	4	3	4	79.8
11-Apr	7	6	3	5	4	3	3	5	5	8	13	11	11	13	19	29	18	73	23	5	7	25	55	80	80.2
12-Apr	29	25	26	12	16	39	9	59	14	4	2	5	5	5	4	10	4	4	4	3	3	3	2	3	58.9
13-Apr	4	4	4	4	5	5	4	4	5	4	4	5	4	4	5	6	6	6	7	7	7	12	3	6	12.3
14-Apr	4	4	5	24	9	3	2	4	9	5	5	6	6	8	11	8	9	7	9	8	6	3	4	3	24.1
15-Apr	7	6	3	3	4	5	4	4	4	6	7	9	5	8	6	7	11	8	5	14	2	2	4	5	14.2
16-Apr	6	5	5	4	16	9	8	31	54	29	21	16	15	20	15	19	22	12	11	12	6	7	6	9	53.6
17-Apr	26	20	20	32	22	19	24	15	14	25	13	20	49	13	9	7	9	7	5	4	3	3	9	7	49.4
18-Apr	6	8	6	4	13	12	48	54	51	45	13	11	22	5	6	8	6	6	4	3	3	4	4	5	54.0
19-Apr	6	15	46	59	63	27	17	48	6	20	8	10	8	12	10	38	25	22	8	42	18	8	6	6	62.6
20-Apr	8	7	6	5	6	6	6	5	6	6	5	7	6	9	9	12	9	14	15	7	9	8	5	5	15.1
21-Apr	2	4	4	17	29	3	5	27	24	58	43	49	60	67	89	58	65	46	57	25	19	10	19	25	89.2
22-Apr	27	26	17	31	15	33	29	94	5	7	11	13	16	14	15	16	12	17	11	28	10	12	32	83	93.5
23-Apr	20	21	5	20	8	3	2	6	6	11	16	10	13	13	13	15	17	11	18	10	46	32	55	36	55.3
24-Apr	39	23	29	37	48	11	21	60	3	5	6	8	18	12	16	11	16	5	8	5	5	4	7	9	59.7
25-Apr	8	3	3	6	2	5	4	4	6	7	6	7	9	7	6	7	6	6	6	19	12	12	3	7	19.3
26-Apr	4	4	5	6	4	4	5	5	6	4	5	5	7	7	10	12	10	7	4	4	3	9	3	5	11.7
27-Apr	27	16	18	24	14	12	11	5	5	7	7	29	10	13	6	7	9	7	19	9	13	19	57	44	56.7
28-Apr	36	44	21	24	22	51	78	27	23	10	12	11	14	11	10	11	13	13	10	11	12	19	16	17	77.6
29-Apr	10	8	17	12	3	5	12	6	7	7	10	12	11	9	11	11	10	10	12	10	13	9	8	7	17.0
30-Apr	10	4	5	5	4	2	8	11	50	81	70	67	79	82	87	72	81	52	28	23	41	10	17	13	86.6
Average	45.4	79.8	45.5	79.3	77.7	75.9	77.6	93.5	53.6	81.3	70.2	67.0	78.8	81.9	89.2	89.5	80.6	72.7	69.8	51.8	50.4	71.5	61.9	83.0	

PAZA

## Valleyview Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

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

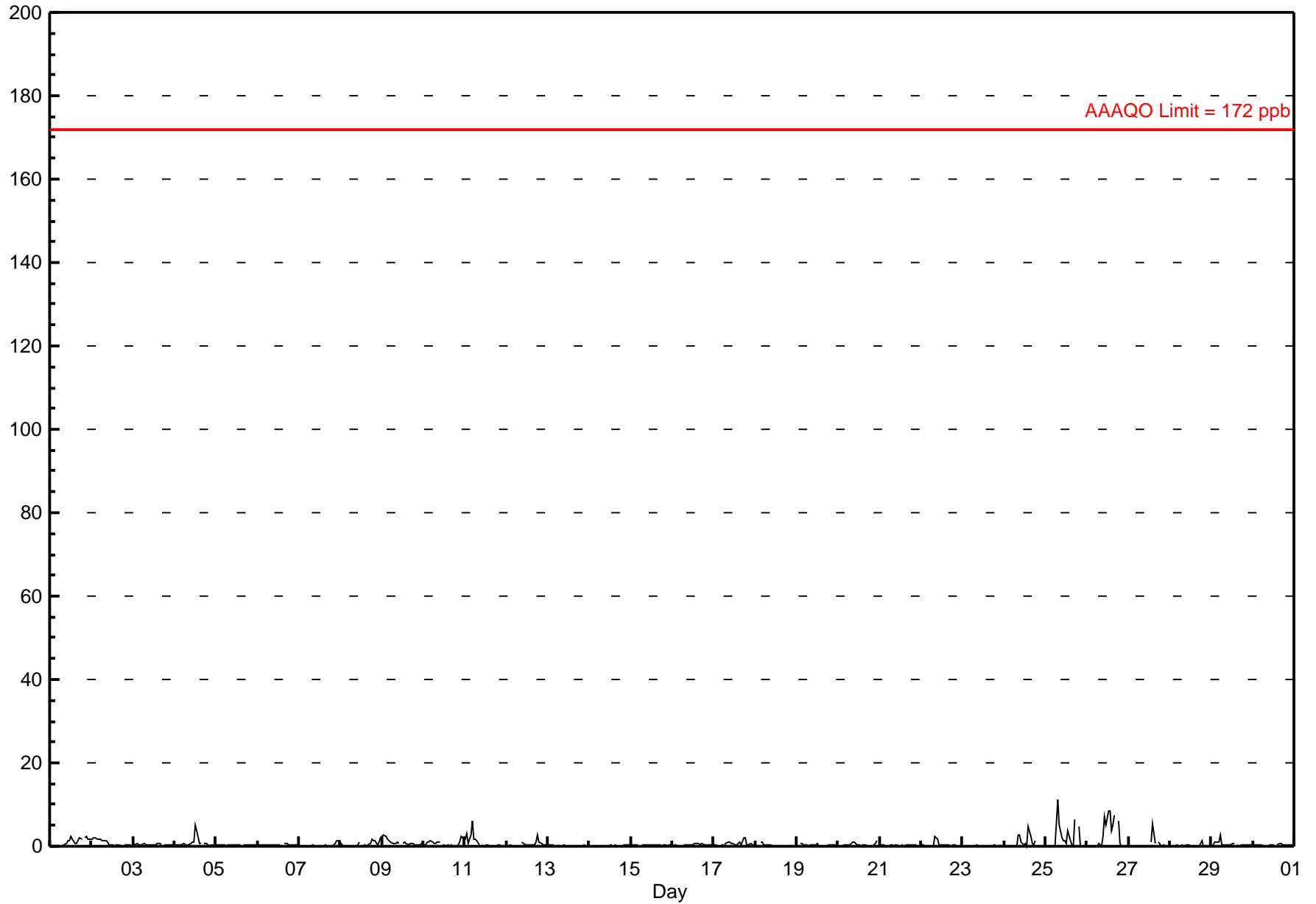
Valleyview - April 2013

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 11.3 ppb on Apr 25 08:00	Maximum Daily Average: 2.4 ppb on Apr 26		Hours of Data:	686
Minimum Value: 0 ppb on Apr 1 06:00	Minimum Daily Average: 0.1 ppb on Apr 23		Hours of Missing Data:	34
Maximum Diurnal Average: 0.9 ppb at hour 14	Minimum Diurnal Average: 0.3 ppb at hour 21		Hours of Calibration:	34
Monthly Average: 0.57 ppb	Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.3 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 1.3 P <sub>99</sub> = 6.0		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0	0	0	0	0	0	0	0	0	1	1	1	3	2	1	1	1	2	2	A	2	3	2	2	1.0	2.5
2-Apr	2	2	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.8	2.0
3-Apr	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0.4	0.8
4-Apr	0	0	0	0	0	1	0	0	0	1	1	1	5	4	1	1	A	1	1	0	0	0	0	0	0.8	5.2
5-Apr	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
6-Apr	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	1	1	0	0	0	0	0	0	0	0.4	0.6
7-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	0.2	1.5
8-Apr	1	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	1	2	1	1	0	1	2	0.5	2.0
9-Apr	2	3	3	2	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	1	0	0	0	1	1.0	2.6
10-Apr	0	0	1	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	1	2	2	0.7	2.3
11-Apr	2	3	1	3	6	2	2	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	6.1
12-Apr	0	0	0	0	0	0	0	0	A	1	1	0	0	1	0	0	0	1	3	1	1	0	0	0	0.5	2.6
13-Apr	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
14-Apr	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
15-Apr	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	0.4
16-Apr	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0.3	0.8
17-Apr	0	0	0	A	0	0	0	1	1	1	1	1	0	0	1	1	0	2	2	0	0	1	0	0	0.6	2.0
18-Apr	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
19-Apr	0	A	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
20-Apr	A	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	A	0.4	1.5
21-Apr	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	0.5
22-Apr	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	2.2
23-Apr	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-Apr	0	0	0	0	0	0	0	0	3	3	1	0	1	0	5	2	1	0	1	A	0	0	0	0	0.7	4.8
25-Apr	0	0	0	0	0	0	5	11	5	2	1	1	1	4	1	0	0	6	A	5	0	0	0	0	1.9	11.3
26-Apr	0	0	0	0	0	0	0	1	0	2	7	5	9	8	4	5	7	A	6	1	0	0	0	0	2.4	8.6
27-Apr	0	0	0	0	0	0	0	0	0	0	C	C	C	1	6	1	A	1	1	0	0	0	0	0	0.5	5.6
28-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0.2	1.4
29-Apr	0	0	1	1	1	3	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0.6	2.6
30-Apr	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	1	0.3	0.7

0.4	0.5	0.4	0.4	0.5	0.4	0.5	0.7	0.7	0.7	0.7	0.6	0.9	0.9	0.8	0.6	0.5	0.7	0.8	0.5	0.3	0.4	0.4	0.4	0.4	Diurnal Average
2.3	3.2	2.5	2.6	6.1	2.6	5.4	11.3	5.0	2.8	7.1	5.2	8.6	8.4	5.6	5.1	7.4	6.4	6.1	4.6	2.1	2.5	2.3	2.0	Diurnal Maximum	

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



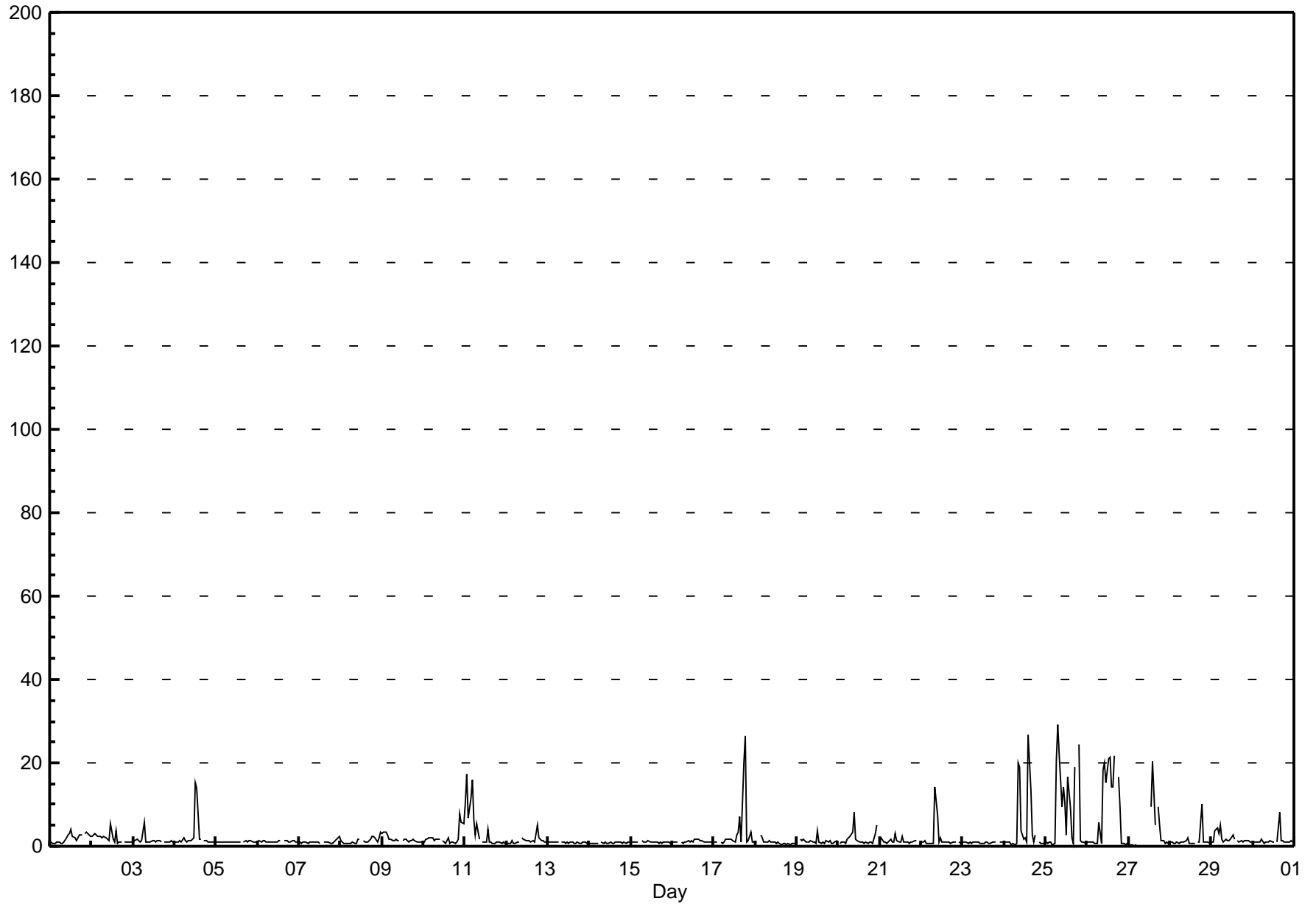
## Hourly Maximums

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

Valleyview - April 2013

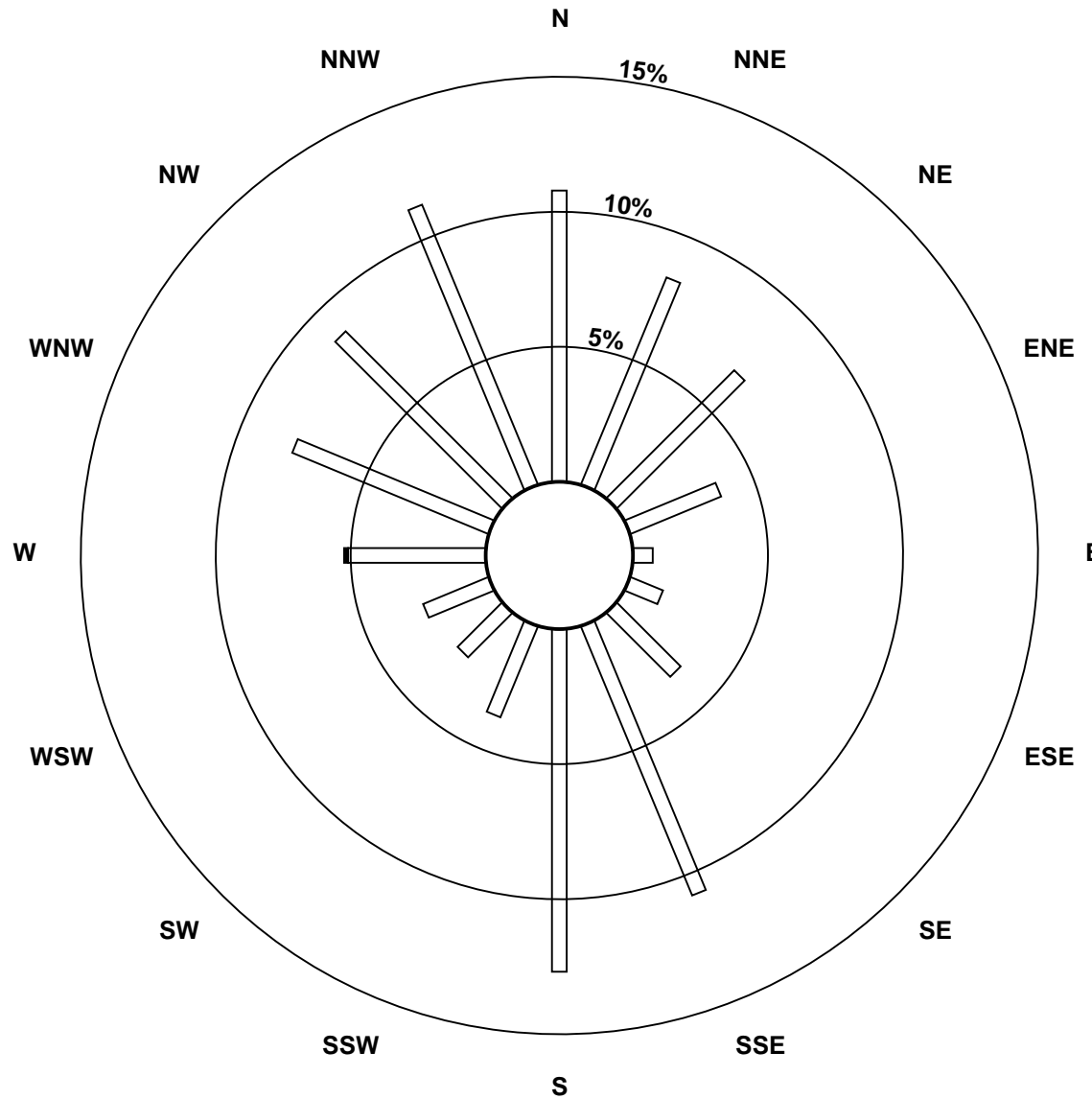
Maximum Value: 29.3 ppb on Apr 25 08:00		Maximum Daily Average: 8.2 ppb on Apr 25		Hours in Service: 720																							
Minimum Value: 0 ppb on Apr 27 04:00		Minimum Daily Average: 0.8 ppb on Apr 23		Hours of Data: 686																							
Maximum Diurnal Average: 3.7 ppb at hour 15		Minimum Diurnal Average: 1.2 ppb at hour 21		Hours of Missing Data: 34																							
Monthly Average: 2.17 ppb		Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.7 Q <sub>1</sub> = 0.9 Median = 1.1 Q <sub>3</sub> = 1.5 P <sub>90</sub> = 3.3 P <sub>99</sub> = 21.3		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-Apr	1	1	1	1	1	1	1	1	1	2	3	3	4	2	2	1	2	3	3	A	3	3	3	2	1.9	4.0	
2-Apr	2	3	3	2	2	2	2	2	2	2	1	5	2	1	4	1	1	1	A	1	1	1	1	1	1.9	5.5	
3-Apr	1	1	2	1	1	2	6	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.4	5.7	
4-Apr	1	1	1	1	1	2	1	1	1	1	2	2	15	14	2	2	A	1	1	1	1	1	1	1	2.4	15.4	
5-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.1	1.4	
6-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.1	1.4	
7-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	2	1.0	2.3	
8-Apr	1	1	1	1	1	1	1	1	1	1	2	2	A	1	1	1	1	2	2	2	2	1	2	3	1.3	3.3	
9-Apr	3	3	3	3	2	2	1	1	2	1	2	A	1	2	2	1	1	1	2	1	1	1	1	1	1.7	3.5	
10-Apr	1	2	2	2	2	2	1	2	2	2	A	1	1	1	2	1	1	1	1	1	2	8	6	6	2.1	7.7	
11-Apr	11	17	7	11	16	6	3	6	2	A	1	1	1	4	1	1	1	1	1	1	1	1	1	1	4.1	17.3	
12-Apr	1	1	1	1	1	1	1	1	A	2	2	1	1	1	1	1	1	3	5	2	1	1	1	1	1.4	4.9	
13-Apr	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.9	1.1		
14-Apr	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	1.1	
15-Apr	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3	
16-Apr	1	1	1	1	A	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1.1	1.8	
17-Apr	1	1	1	A	1	1	1	2	2	2	2	1	1	3	4	7	1	20	26	1	1	3	1	1	3.6	26.5	
18-Apr	1	1	A	3	2	1	1	1	2	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1.0	2.6		
19-Apr	1	A	2	1	2	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1.2	3.8	
20-Apr	A	1	1	1	1	2	2	2	4	8	2	1	1	1	1	1	1	1	1	1	1	3	5	A	1.9	8.2	
21-Apr	1	2	1	1	1	1	2	1	1	3	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1.2	3.2	
22-Apr	1	1	1	1	1	1	1	1	14	7	1	2	1	1	1	1	1	1	1	1	1	A	1	1	1.8	14.1	
23-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.0	
24-Apr	1	1	1	1	0	1	0	1	20	19	4	2	2	1	27	14	3	1	3	A	1	1	1	1	4.5	26.9	
25-Apr	1	1	1	1	0	1	21	29	22	9	14	11	3	16	9	2	1	19	A	24	1	1	1	1	8.2	29.3	
26-Apr	1	1	1	1	1	1	1	6	1	18	20	15	21	21	14	14	22	A	17	10	1	1	0	1	8.1	21.8	
27-Apr	0	0	0	0	0	0	0	0	0	0	C	C	C	9	20	5	A	10	5	1	1	1	1	1	2.8	20.2	
28-Apr	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	10	1	1	1	1	1	1.3	10.1	
29-Apr	1	1	4	4	3	5	2	1	2	1	1	2	3	2	A	1	1	1	1	1	1	1	1	1	1.8	5.2	
30-Apr	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	8	1	1	1	1	1	1	1	1	1.4	8.1	
		1.4	1.7	1.5	1.6	1.6	1.4	1.9	2.4	3.0	3.2	2.5	2.3	2.6	3.4	3.7	2.7	1.8	2.8	3.2	2.2	1.2	1.5	1.4	1.2	Diurnal Average	
		10.6	17.3	6.7	11.4	16.0	6.3	20.7	29.3	21.9	18.9	20.0	15.2	21.0	21.4	26.9	14.3	21.8	20.1	26.5	24.3	2.9	7.7	5.9	5.6	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



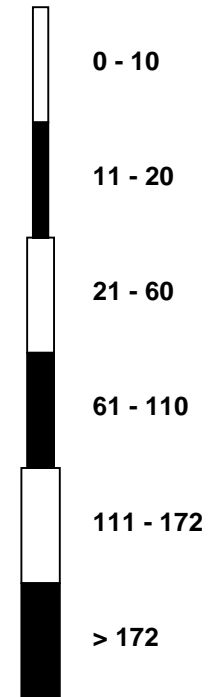


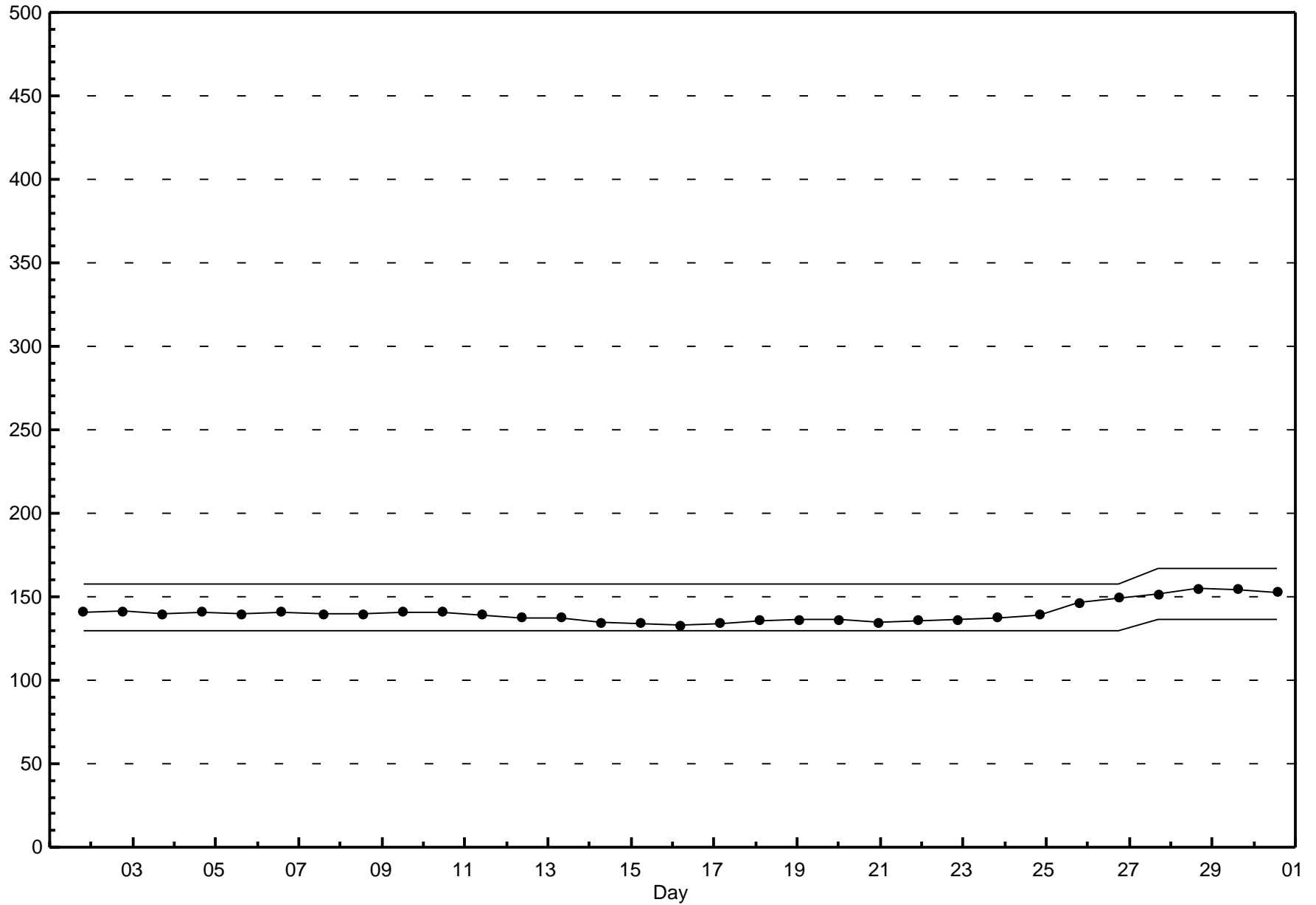
**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Valleyview - April 2013**



**Pollutant Classes (ppb)**



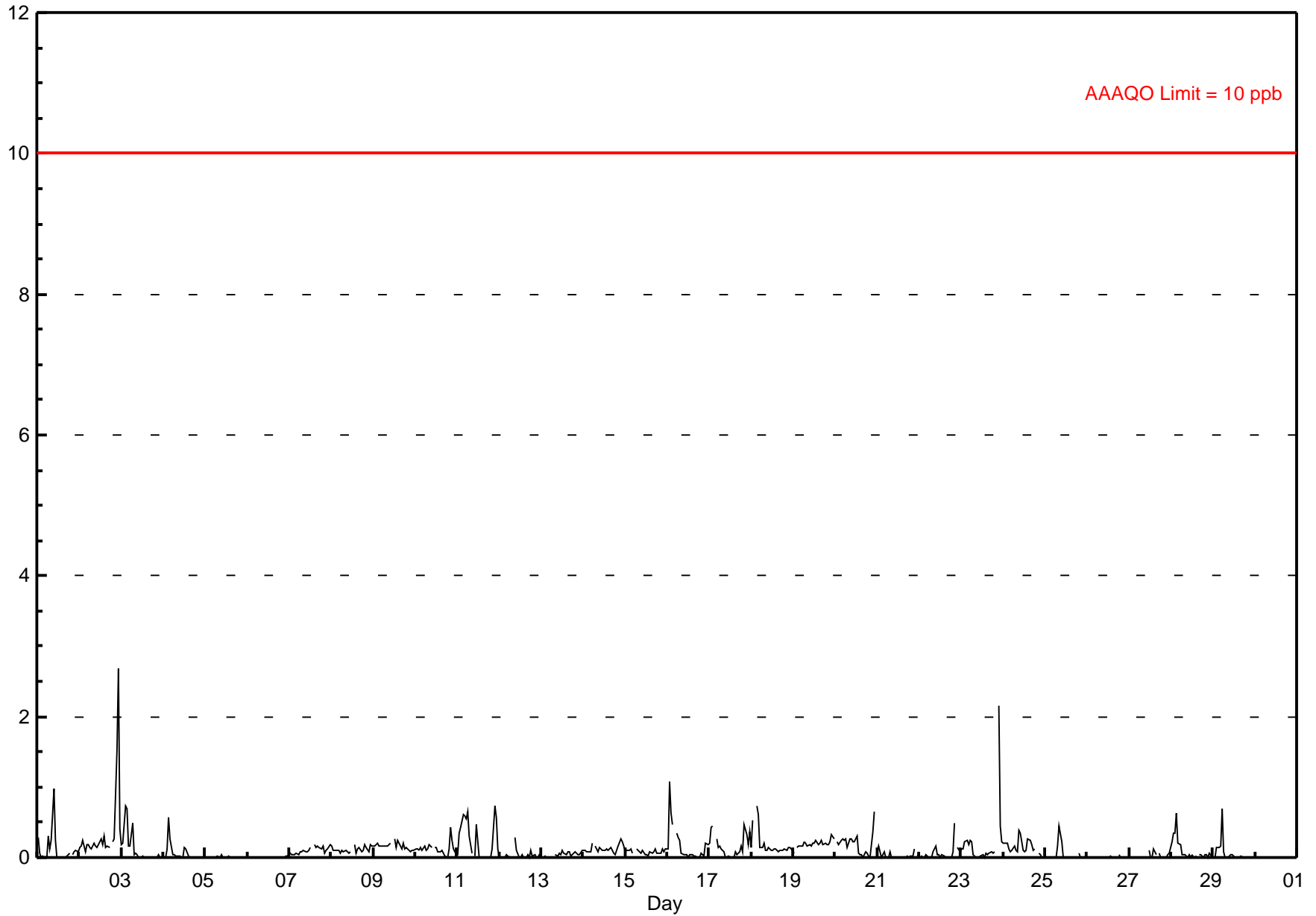


## Hourly Averages

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

Valleyview - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.7 ppb on Apr 2 23:00 Maximum Daily Average: 0.4 ppb on Apr 2		Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0																																																																																	
Minimum Value: 0 ppb on Apr 1 03:00 Maximum Diurnal Average: 0.2 ppb at hour 22 Monthly Average: 0.11 ppb		Minimum Daily Average: 0.0 ppb on Apr 30 Minimum Diurnal Average: 0.1 ppb at hour 19 Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.1 P <sub>90</sub> = 0.2 P <sub>99</sub> = 0.7																																																																																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																																																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																																																											
1-Apr	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	1.0																																																								
2-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	2	3	0	0	0.4	2.7																																																								
3-Apr	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.7																																																								
4-Apr	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.6																																																								
5-Apr	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	0.0																																																								
6-Apr	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	0.0																																																								
7-Apr	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	0.2																																																								
8-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2																																																								
9-Apr	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	0.3																																																								
10-Apr	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4																																																								
11-Apr	0	0	0	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.2	0.7																																																								
12-Apr	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	0.3																																																								
13-Apr	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	0.1																																																								
14-Apr	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	0.3																																																								
15-Apr	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	0.1																																																								
16-Apr	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1																																																								
17-Apr	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	0.5																																																								
18-Apr	0	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7																																																								
19-Apr	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3																																																								
20-Apr	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0.2	0.6																																																								
21-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.2																																																								
22-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.5																																																								
23-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2	0	0	0.2	2.2																																																								
24-Apr	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	0.4																																																								
25-Apr	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	0.5																																																								
26-Apr	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	0.0																																																								
27-Apr	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1																																																								
28-Apr	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.6																																																								
29-Apr	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.7																																																								
30-Apr	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	0.0																																																								
																								0.1	0.3	0.2	1.1	0.2	0.7	0.2	0.7	0.1	0.6	0.1	0.7	0.1	0.6	0.1	0.3	0.1	0.5	0.1	0.5	0.1	0.4	0.1	0.5	0.1	1.0	0.1	0.4	0.1	0.5	0.1	0.3	0.1	0.2	0.1	0.3	0.1	0.2	0.1	0.3	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.5	0.2	2.2	0.2	2.7	0.1	0.4	Diurnal Average	Diurnal Maximum
C - Calibration                      A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb    24-hr 3 ppb																																																																																			

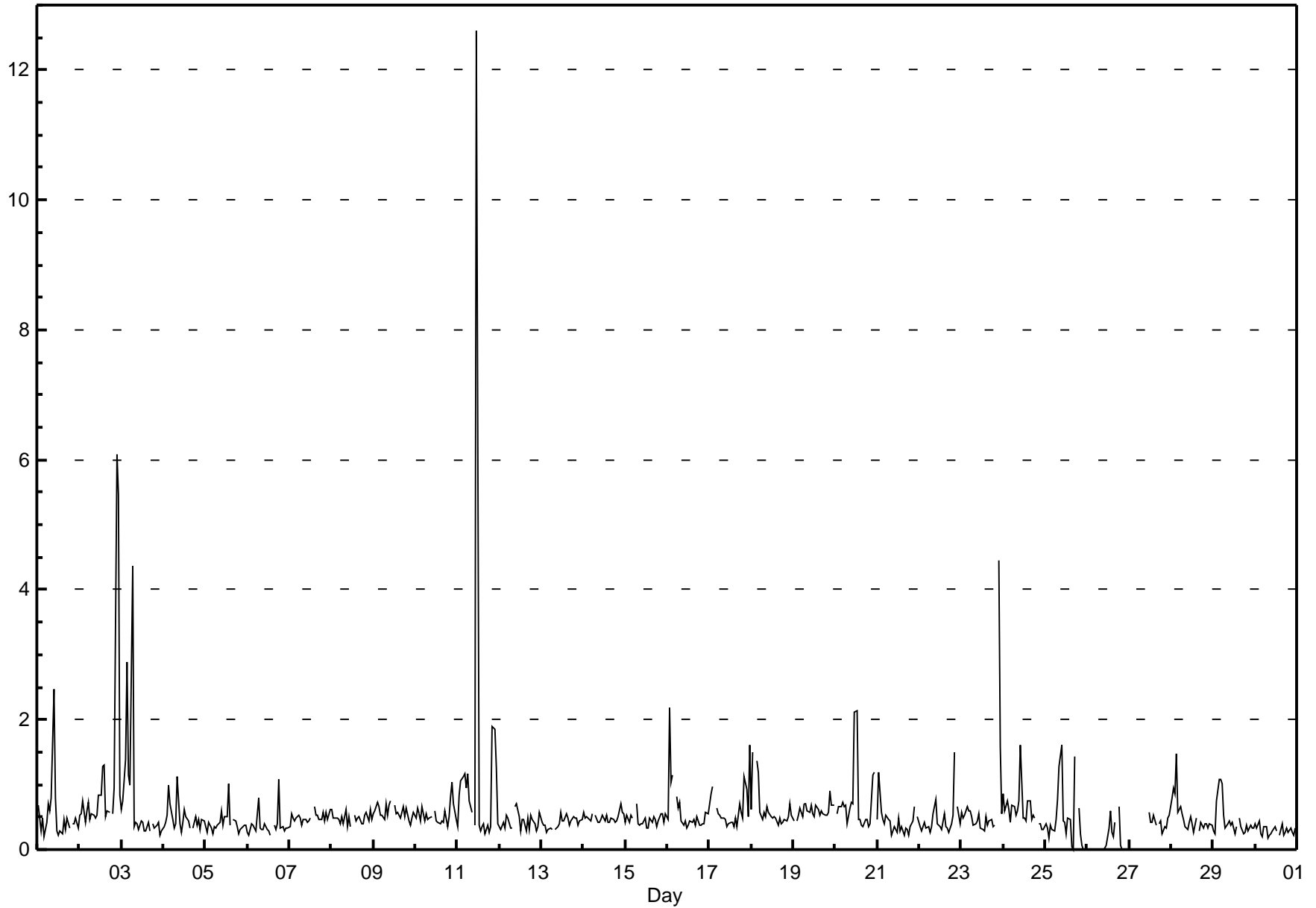


## Hourly Maximums

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

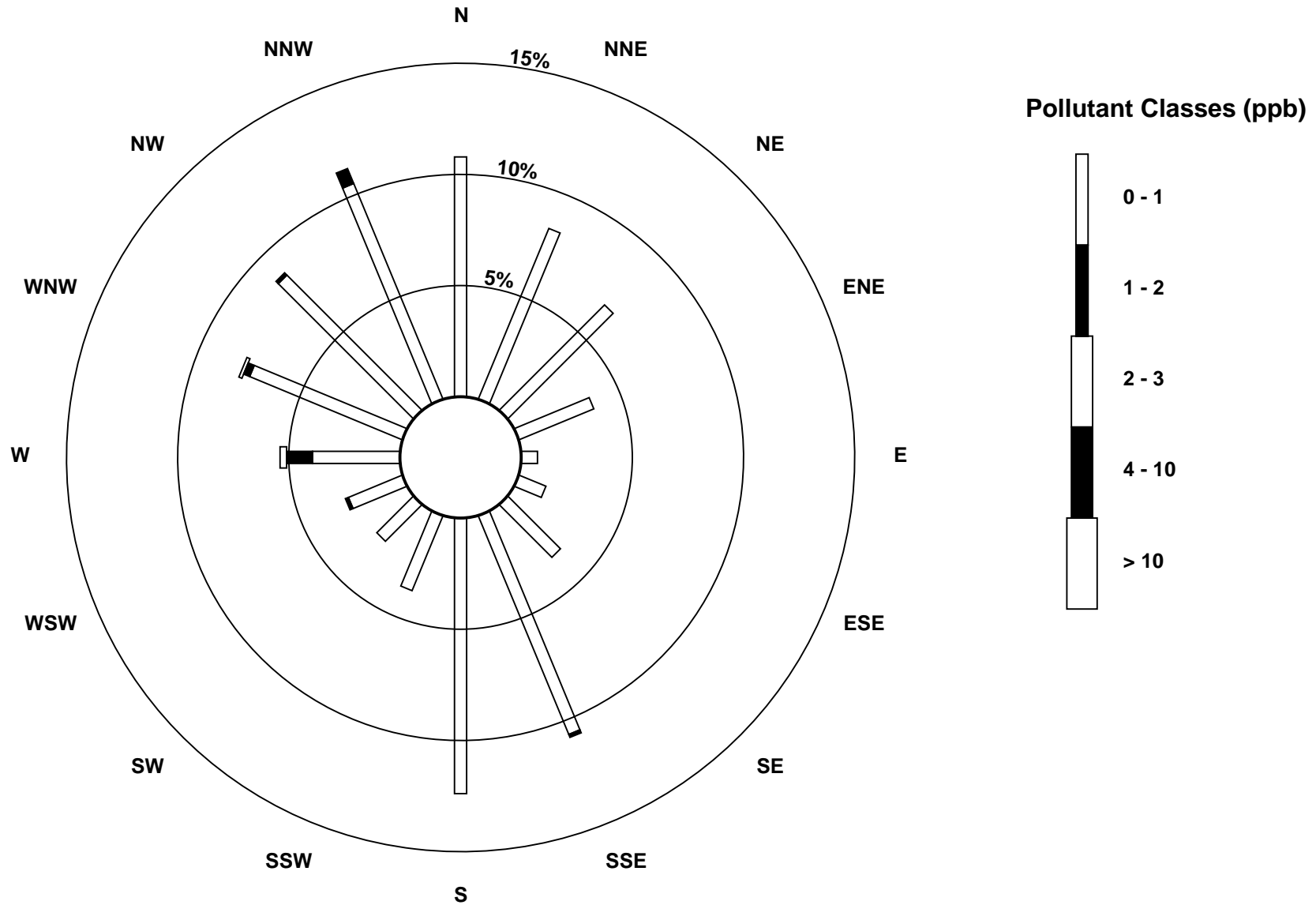
Valleyview - April 2013

Maximum Value: 12.6 ppb on Apr 11 12:00		Maximum Daily Average: 1.3 ppb on Apr 11		Hours in Service: 720																							
Minimum Value: 0 ppb on Apr 25 17:00		Minimum Daily Average: 0.1 ppb on Apr 26		Hours of Data: 686																							
Maximum Diurnal Average: 0.9 ppb at hour 12		Minimum Diurnal Average: 0.4 ppb at hour 17		Hours of Missing Data: 34																							
Monthly Average: 0.54 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.4 Median = 0.5 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 0.8 P <sub>99</sub> = 2.3		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-Apr	1	0	0	0	0	0	1	1	1	2	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0.5	2.5	
2-Apr	1	1	1	0	1	1	0	1	1	0	1	1	1	1	1	1	1	1	A	1	1	6	5	1	1.1	6.1	
3-Apr	1	1	1	3	1	1	4	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.8	4.4	
4-Apr	0	0	1	1	1	0	0	0	1	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0.5	1.1	
5-Apr	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0.4	1.0	
6-Apr	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0.4	1.1	
7-Apr	0	1	0	0	0	1	0	0	0	0	0	0	0	A	1	1	1	0	0	1	0	1	0	1	0.5	0.7	
8-Apr	1	0	0	0	0	0	1	0	1	0	1	0	1	0	0	1	0	0	1	0	1	1	0	1	0	0.5	0.6
9-Apr	1	1	1	1	1	1	1	0	1	1	1	A	1	1	1	0	1	1	1	1	1	0	0	1	0.6	0.8	
10-Apr	0	1	1	0	1	0	1	0	0	1	A	1	0	0	0	0	0	1	0	1	1	1	1	0	0.5	1.0	
11-Apr	0	1	1	1	1	1	1	1	1	A	0	13	0	0	0	0	0	0	0	0	2	2	1	0	1.3	12.6	
12-Apr	0	0	0	0	1	0	0	0	A	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0.4	0.7	
13-Apr	0	0	0	0	0	0	0	A	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0.4	0.6	
14-Apr	1	0	1	0	0	1	A	1	0	0	0	1	0	1	0	0	0	0	0	0	1	1	1	1	0.5	0.7	
15-Apr	0	1	0	1	0	A	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	1	0.5	0.7	
16-Apr	0	2	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0.6	2.2	
17-Apr	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	2	0.6	1.6	
18-Apr	1	2	A	1	1	1	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	1	1	1	0.6	1.5	
19-Apr	0	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9	
20-Apr	A	1	1	1	1	1	1	0	1	1	1	2	2	0	0	0	0	0	0	0	0	1	1	A	0.7	2.1	
21-Apr	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0.4	1.2	
22-Apr	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	1	1	A	1	0	0.5	1.5	
23-Apr	1	0	1	1	1	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	A	4	2	1	0.7	4.4	
24-Apr	1	1	1	1	0	1	1	1	1	1	2	0	0	0	1	1	0	1	0	A	0	0	0	0	0.6	1.6	
25-Apr	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	1	A	1	0	0	0	0	0	0.5	1.6	
26-Apr	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	1	0	0	0	0	0	0.1	0.7	
27-Apr	0	0	0	0	0	0	0	0	C	C	C	1	0	0	1	0	A	0	0	0	0	0	0	1	0.3	0.6	
28-Apr	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.5	1.5	
29-Apr	0	0	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.5	1.1	
30-Apr	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	
		0.5	0.6	0.6	0.7	0.5	0.5	0.6	0.4	0.5	0.6	0.5	0.9	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.5	0.9	0.7	0.5	Diurnal Average		
		0.9	2.2	1.4	2.9	1.2	1.0	4.4	0.8	1.3	2.5	1.6	12.6	2.1	1.3	1.3	0.7	0.6	1.4	1.1	0.6	1.9	6.1	5.5	1.6	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



**Pollutant Rose**

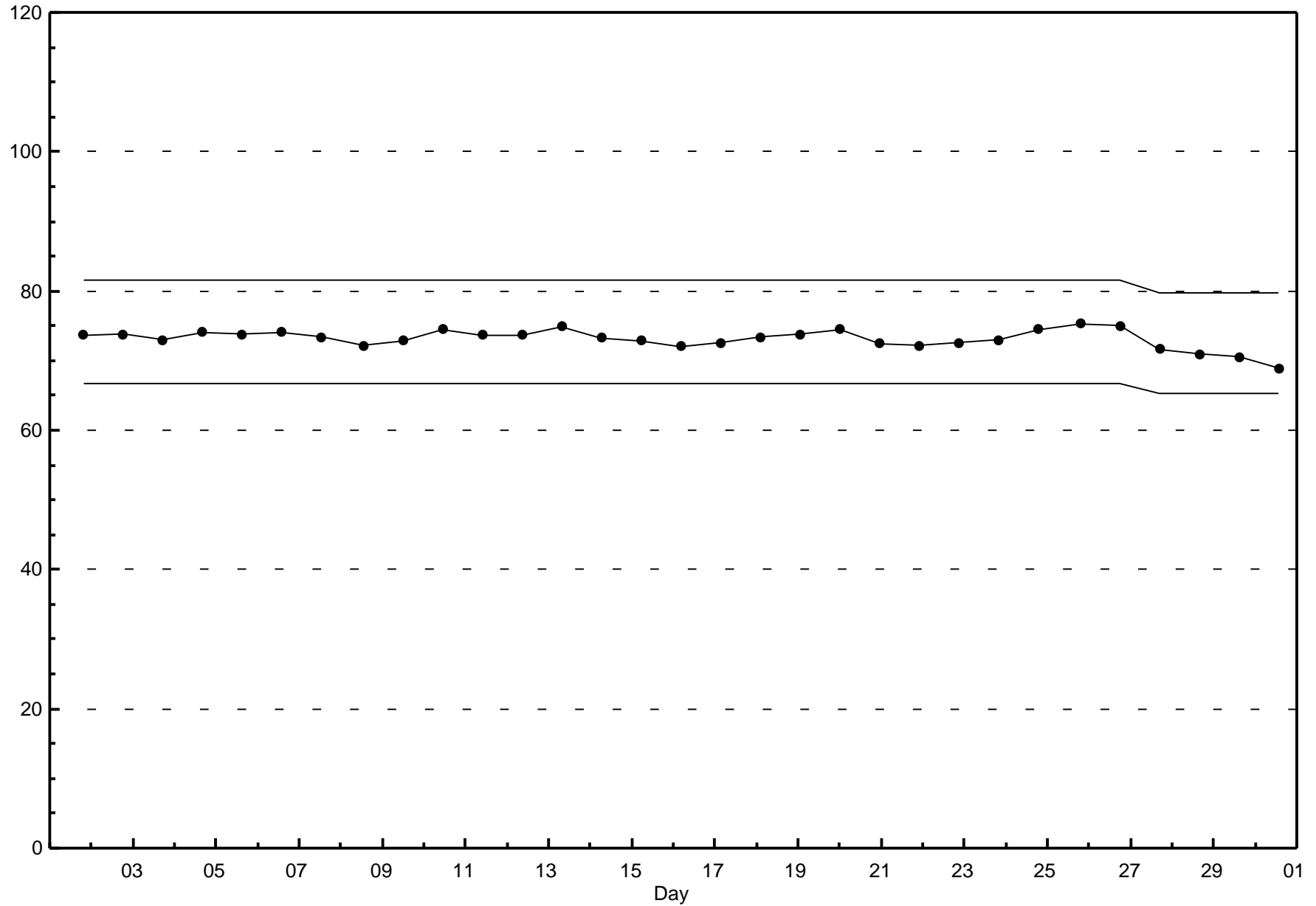
**Hydrogen Sulphide (H<sub>2</sub>S) - ppb**  
**Valleyview - April 2013**





### Span Responses

Hydrogen Sulphide (H<sub>2</sub>S)  
Valleyview - April 2013

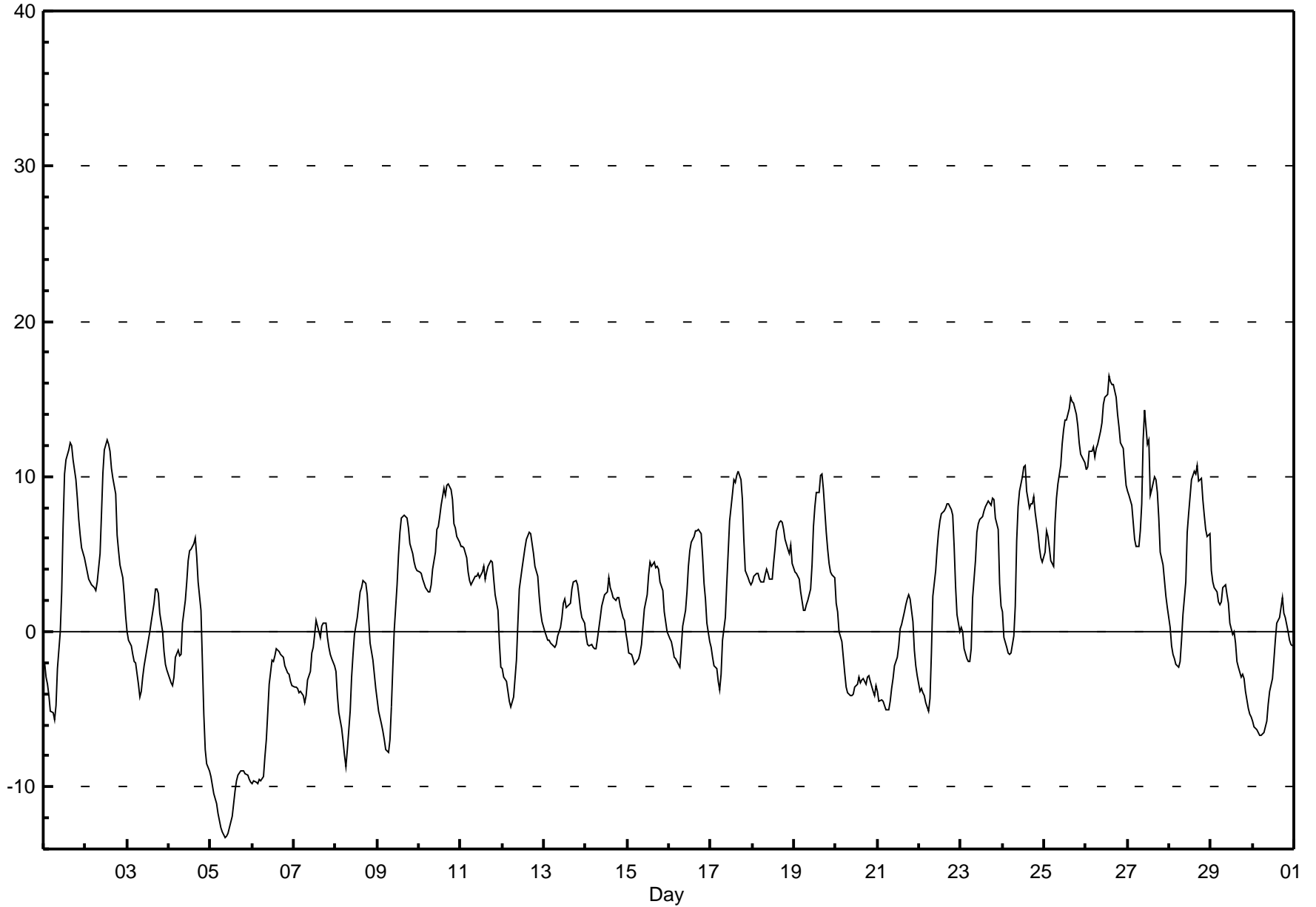


## Hourly Averages

External Temperature (ET) - °C

Valleyview - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0										Hours in Service: 720																
Maximum Value: 16.4 °C on Apr 26 14:00										Maximum Daily Average: 13.1 °C on Apr 26										Hours of Data: 720						
Minimum Value: -13 °C on Apr 5 09:00										Minimum Daily Average: -10.8 °C on Apr 5										Hours of Missing Data: 0						
Maximum Diurnal Average: 5.6 °C at hour 17										Minimum Diurnal Average: -1.8 °C at hour 6										Hours of Calibration: 0						
Monthly Average: 1.97 °C										Percentiles: P <sub>1</sub> = -11.9 P <sub>10</sub> = -4.8 Q <sub>1</sub> = -1.9 Median = 2.1 Q <sub>3</sub> = 5.9 P <sub>90</sub> = 9.8 P <sub>99</sub> = 15.1										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-Apr	-2	-3	-3	-4	-5	-5	-6	-5	-2	0	3	7	10	11	12	12	12	11	10	9	7	6	5	5	3.5	12.1
2-Apr	4	4	3	3	3	3	3	3	5	8	10	12	12	12	12	11	10	9	6	5	4	3	2	1	6.2	12.3
3-Apr	0	-1	-1	-2	-2	-2	-3	-4	-4	-3	-2	-1	-1	0	1	2	3	3	3	1	0	-1	-2	-2	-0.8	2.8
4-Apr	-3	-3	-4	-3	-2	-1	-2	-1	1	2	3	5	5	5	6	6	5	3	1	-2	-5	-8	-9	-9	-0.4	6.1
5-Apr	-9	-10	-10	-11	-12	-12	-13	-13	-13	-13	-13	-13	-12	-11	-10	-10	-9	-9	-9	-9	-9	-9	-10	-10	-10.8	-8.9
6-Apr	-10	-10	-10	-10	-10	-10	-9	-8	-7	-5	-3	-2	-2	-2	-1	-1	-1	-2	-2	-2	-3	-3	-3	-3	-4.9	-1.1
7-Apr	-4	-4	-4	-4	-4	-4	-5	-4	-3	-3	-1	-1	0	1	0	0	0	1	1	0	-1	-1	-2	-2	-1.9	0.7
8-Apr	-3	-4	-5	-6	-7	-8	-9	-8	-5	-3	-1	0	1	2	3	3	3	3	2	1	-1	-2	-3	-4	-2.1	3.3
9-Apr	-4	-5	-6	-6	-7	-8	-8	-7	-5	-2	0	3	5	6	7	8	7	7	7	6	5	4	4	4	0.6	7.5
10-Apr	4	4	3	3	3	3	3	3	4	5	7	7	7	8	9	9	9	9	9	9	7	7	6	6	6.0	9.5
11-Apr	6	6	5	5	4	3	3	3	4	4	4	3	4	4	3	4	4	5	4	3	2	1	-1	-2	3.4	5.5
12-Apr	-2	-3	-3	-4	-5	-5	-4	-3	-2	1	3	4	5	5	6	6	6	6	5	4	4	2	1	1	1.2	6.4
13-Apr	0	0	-1	-1	-1	-1	-1	-1	0	0	1	2	2	2	2	2	3	3	3	3	2	2	1	1	1.0	3.3
14-Apr	0	-1	-1	-1	-1	-1	-1	0	1	2	2	2	3	3	3	3	2	2	2	2	2	1	1	0	1.0	3.5
15-Apr	-1	-1	-1	-2	-2	-2	-2	-1	-1	0	2	2	4	4	4	5	4	4	4	3	3	1	1	0	1.2	4.5
16-Apr	0	-1	-1	-2	-2	-2	-2	-1	0	1	3	4	5	6	6	6	6	7	6	5	3	2	1	-1	2.1	6.6
17-Apr	-1	-2	-2	-2	-3	-4	-3	-1	1	3	5	7	9	10	10	10	10	10	9	6	4	3	3	3	3.6	10.4
18-Apr	3	4	4	4	3	3	3	4	4	4	3	3	4	5	7	7	7	7	7	6	5	5	6	4	4.7	7.2
19-Apr	4	4	4	3	3	1	1	2	2	3	4	7	8	9	9	10	10	9	6	5	4	4	4	3	5.0	10.2
20-Apr	2	1	0	-1	-2	-3	-4	-4	-4	-4	-4	-4	-3	-3	-3	-3	-3	-3	-3	-3	-3	-4	-4	-4	-2.7	1.8
21-Apr	-4	-4	-4	-5	-5	-5	-5	-4	-4	-3	-2	-2	-1	0	0	1	2	2	2	2	1	-1	-2	-3	-1.8	2.4
22-Apr	-4	-4	-4	-4	-5	-5	-4	-1	2	4	5	6	7	8	8	8	8	8	8	8	6	3	1	0	2.5	8.2
23-Apr	0	0	-1	-2	-2	-2	-1	2	5	6	7	7	7	8	8	8	8	8	9	9	7	7	3	2	4.3	8.6
24-Apr	1	0	-1	-1	-1	-1	0	2	6	8	9	10	11	11	9	8	8	8	9	8	6	5	5	4	5.1	10.7
25-Apr	5	6	6	5	5	4	7	9	10	11	12	13	14	14	14	15	15	15	14	13	12	11	11	11	10.5	15.1
26-Apr	10	11	12	12	12	11	12	12	13	13	15	15	15	16	16	16	16	15	14	13	12	12	11	9	13.1	16.4
27-Apr	9	9	8	7	6	5	6	6	8	12	14	12	12	9	9	10	10	9	7	5	4	3	2	2	7.8	14.3
28-Apr	0	-1	-1	-2	-2	-2	-2	-1	1	3	6	8	9	10	10	10	11	10	10	9	7	7	6	6	4.7	10.7
29-Apr	4	3	3	3	2	2	2	3	3	2	2	1	0	0	-1	-2	-2	-3	-3	-3	-4	-5	-5	-5	-0.2	3.9
30-Apr	-6	-6	-6	-6	-7	-7	-7	-6	-6	-5	-4	-3	-2	-1	1	1	2	2	1	1	0	-1	-1	-1	-2.7	2.2
0.0 -0.4 -0.7 -1.1 -1.5 -1.8 -1.7 -0.8 0.4 1.7 2.9 3.9 4.6 5.1 5.3 5.5 5.6 5.3 4.8 3.8 2.8 1.9 1.1 0.5										Diurnal Average																
10.4 10.6 11.6 11.6 11.9 11.2 11.8 12.1 12.9 13.5 14.7 15.1 15.3 16.4 16.1 15.9 16.0 15.1 14.0 13.2 12.2 11.8 11.2 10.9										Diurnal Maximum																



## Hourly Averages

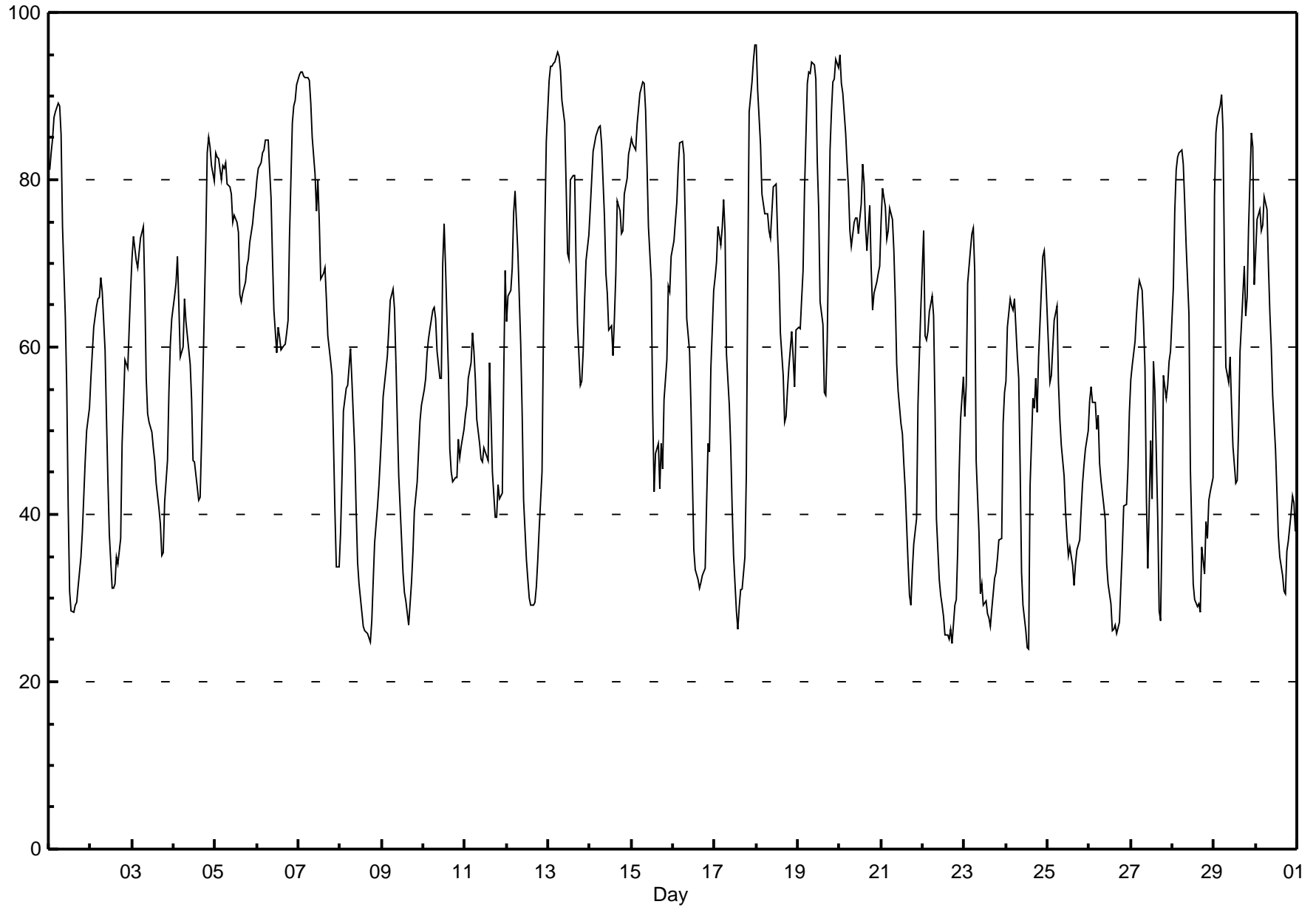
Relative Humidity (RH) - %

Valleyview - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																	Hours in Service: 720									
Maximum Value: 96.1 % on Apr 18 01:00																	Maximum Daily Average: 79.2 % on Apr 13		Hours of Data: 720							
Minimum Value: 24 % on Apr 24 14:00																	Minimum Daily Average: 39.8 % on Apr 8		Hours of Missing Data: 0							
Maximum Diurnal Average: 75.6 % at hour 6																	Minimum Diurnal Average: 43.2 % at hour 17		Hours of Calibration: 0							
Monthly Average: 58.99 %																	Percentiles: P <sub>1</sub> = 25.7 P <sub>10</sub> = 31.8 Q <sub>1</sub> = 43.7 Median = 59.4 Q <sub>3</sub> = 74.3 P <sub>90</sub> = 84.5 P <sub>99</sub> = 94.0		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	81	83	85	88	88	89	89	85	74	64	55	41	31	28	29	30	31	35	38	42	46	50	53	56.8	89.1	
2-Apr	56	59	62	65	66	66	68	67	60	52	44	38	31	31	32	35	34	37	48	53	58	57	62	67	52.1	68.4
3-Apr	71	73	70	69	71	73	74	67	56	52	51	50	48	46	44	41	39	35	35	41	46	55	60	63	55.5	74.4
4-Apr	66	68	71	65	59	60	66	63	61	58	54	46	46	45	42	42	49	57	73	83	85	84	82	80	62.7	85.1
5-Apr	83	83	83	80	82	81	82	79	79	78	75	76	75	74	66	65	66	68	70	70	73	75	77	78	75.7	83.3
6-Apr	80	81	82	83	84	85	85	81	78	71	64	59	62	61	60	60	60	62	63	73	87	89	90	91	74.6	91.3
7-Apr	93	93	93	92	92	92	92	89	85	81	76	80	75	68	69	69	66	61	58	57	49	41	34	34	72.4	92.9
8-Apr	38	44	52	55	55	58	60	56	48	40	34	32	28	27	26	26	26	25	27	32	37	41	43	47	39.8	59.8
9-Apr	50	54	57	59	62	66	67	65	58	51	45	37	33	31	30	27	29	32	35	40	44	48	51	53	46.8	67.0
10-Apr	55	56	59	61	62	64	65	63	60	56	56	70	75	69	57	48	45	44	44	44	49	47	48	50	56.2	74.8
11-Apr	52	53	56	58	62	60	56	51	48	47	46	48	47	46	58	52	45	40	40	44	42	43	56	69	50.8	69.2
12-Apr	63	66	67	69	76	79	71	66	60	52	42	35	32	30	29	29	29	31	35	38	45	62	75	85	52.8	84.6
13-Apr	92	94	94	94	94	95	95	93	89	87	79	71	70	80	81	80	70	63	55	56	60	66	70	73	79.2	95.3
14-Apr	77	80	83	85	86	86	86	84	76	69	67	62	63	59	63	69	77	76	74	74	78	80	83	84	75.9	86.4
15-Apr	85	84	83	87	88	90	92	91	88	82	74	68	52	43	47	48	43	48	45	54	59	67	67	71	69.1	91.6
16-Apr	73	75	77	82	84	85	83	74	63	59	53	44	36	33	32	31	32	33	34	41	49	47	57	67	56.0	84.5
17-Apr	68	70	74	72	74	78	74	59	53	48	41	35	29	26	29	31	31	35	45	68	88	92	94	96	58.7	96.1
18-Apr	96	91	84	78	77	76	76	74	73	76	79	80	74	69	62	57	51	52	55	58	62	59	55	62	69.8	96.1
19-Apr	62	62	66	69	79	92	93	93	94	94	92	82	77	65	63	55	54	61	83	88	92	92	94	93	79.0	94.5
20-Apr	95	92	90	86	82	79	74	72	75	75	75	74	77	82	80	74	72	77	70	64	66	68	69	70	76.5	94.9
21-Apr	75	79	77	73	74	77	75	71	66	58	55	51	50	46	43	34	30	29	33	36	40	53	59	65	56.2	78.9
22-Apr	74	61	61	62	64	66	64	53	39	32	30	29	28	26	26	25	26	25	29	30	36	45	51	57	43.3	74.0
23-Apr	52	55	68	72	74	74	69	46	38	31	32	29	30	28	28	27	29	32	33	35	37	37	51	55	44.1	74.3
24-Apr	56	62	66	65	64	66	59	56	46	33	29	26	24	24	43	54	53	56	52	59	67	71	71	68	53.0	71.5
25-Apr	60	56	57	60	63	65	56	51	48	45	40	37	35	36	34	32	34	36	37	41	44	46	48	50	46.2	65.0
26-Apr	54	55	53	53	50	52	46	44	41	39	34	32	29	26	26	27	26	27	32	36	41	41	46	52	40.1	55.2
27-Apr	56	58	61	64	66	68	67	63	57	42	34	49	42	58	55	40	28	27	38	57	54	55	58	59	52.3	67.9
28-Apr	67	76	81	83	83	84	82	77	72	64	45	38	32	30	29	28	36	33	39	37	42	43	44	44	53.1	83.6
29-Apr	78	86	87	89	90	86	70	58	56	59	53	48	44	44	50	60	63	70	64	66	74	86	84	67	68.0	90.2
30-Apr	71	75	77	74	75	78	76	70	64	60	54	48	43	37	35	33	31	31	36	37	40	42	41	38	52.7	78.0
69.3 70.9 72.6 73.1 74.3 75.6 73.7 68.8 63.6 58.4 53.6 50.5 47.2 45.7 45.5 44.3 43.2 44.5 47.0 51.7 56.0 59.2 62.4 64.7																	Diurnal Average									
96.1 93.6 93.6 93.9 94.1 95.3 94.8 93.1 94.0 93.8 92.0 82.3 77.2 81.9 80.6 80.5 77.4 76.9 83.5 88.2 91.6 92.1 94.5 96.1																	Diurnal Maximum									

**Hourly Averages**

**Relative Humidity (RH) - %**  
**Valleyview - April 2013**





# Hourly Averages

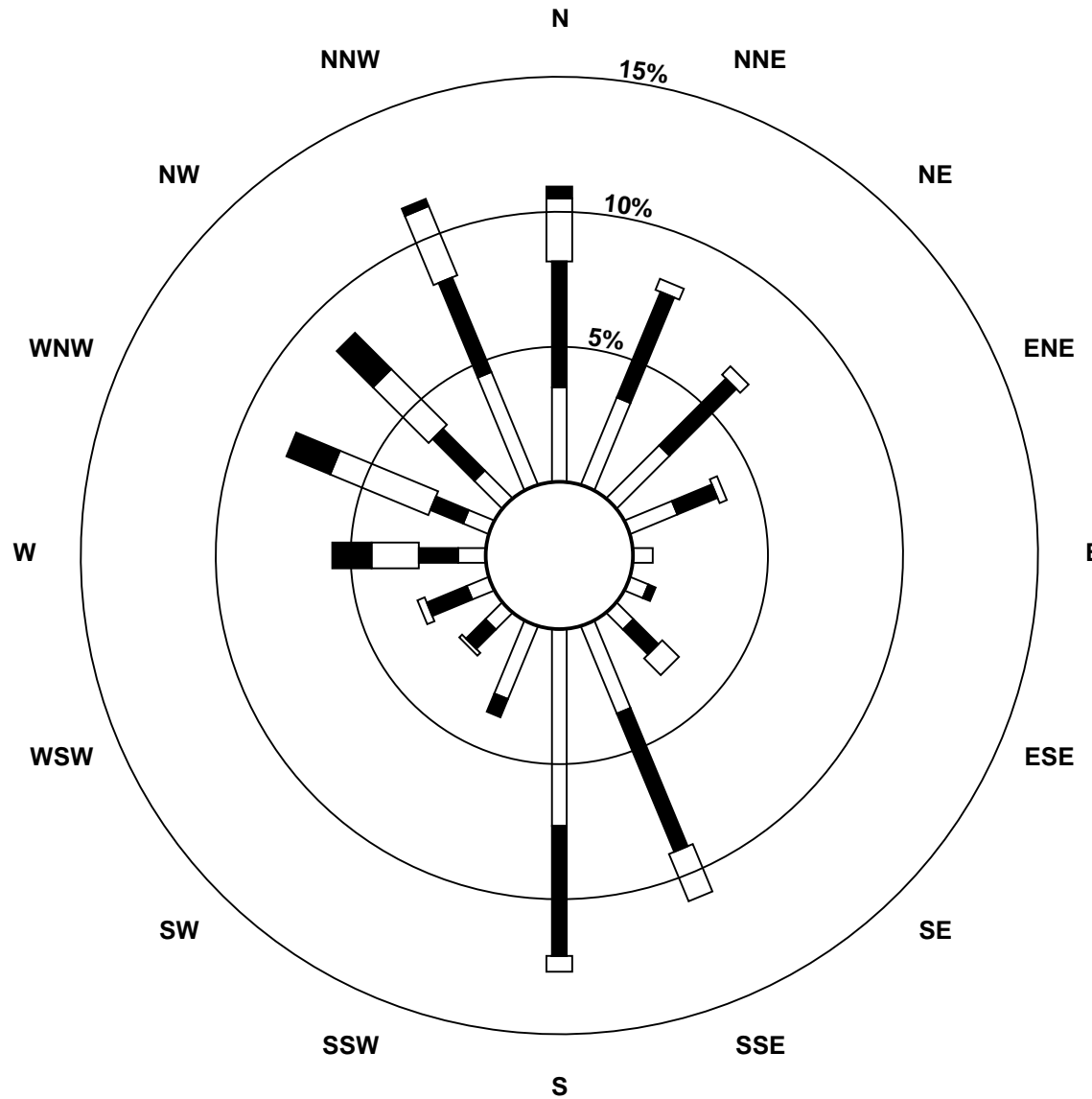
Wind Speed (km/h)  
Wind Direction (deg)  
Valleyview - April 2013

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	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	1	2	2	1	2	1	8	10	12	16	20	21	21	20	22	20	14	11	7	4	4	2	2	8.5	21.8
Dir	173	169	355	12	268	198	162	293	296	310	315	322	311	304	307	321	316	318	328	319	305	277	193	96	311	321
24 Spd	1	2	2	3	2	2	2	2	3	15	15	13	12	13	17	12	10	3	3	6	6	6	4	4	4.1	16.5
Dir	187	192	192	196	197	177	181	173	235	278	283	299	300	299	271	282	298	20	140	170	167	174	181	188	264	271
25 Spd	4	7	6	5	3	2	9	10	15	17	19	18	18	16	18	19	16	16	18	7	3	4	5	5	9.2	19.1
Dir	213	226	221	211	211	197	260	268	278	284	286	283	289	280	287	292	300	274	268	258	163	177	171	166	271	292
26 Spd	4	3	4	2	8	5	11	7	8	11	21	26	25	26	26	24	23	22	18	8	9	11	8	6	12.2	25.9
Dir	168	175	208	188	243	225	251	248	237	250	268	263	268	268	264	272	274	273	267	247	226	236	232	192	257	264
27 Spd	5	5	4	2	3	4	5	6	7	8	15	16	19	20	21	25	25	23	21	16	13	8	9	1	8.2	25.1
Dir	181	187	186	176	186	183	172	175	176	186	232	260	244	270	271	289	294	287	314	322	321	316	334	20	272	289
28 Spd	0	0	1	1	2	1	1	1	1	3	3	4	7	6	9	7	5	4	4	9	5	2	2	6	1.2	9.3
Dir	192	123	29	327	48	332	354	324	162	172	162	176	208	197	182	180	165	43	329	339	19	123	165	207	187	182
29 Spd	7	3	4	1	4	7	11	14	19	20	21	22	23	21	20	20	17	15	14	15	13	12	11	17	12.4	23.0
Dir	210	215	255	261	268	272	292	299	308	313	306	296	293	306	310	314	298	296	309	310	344	357	352	346	307	293
30 Spd	15	10	10	10	8	5	7	9	12	12	13	9	6	4	3	6	3	3	7	5	2	3	4	6	5.0	14.6
Dir	342	332	336	350	5	326	310	321	331	333	343	345	344	333	69	22	27	77	71	93	112	114	141	157	351	342
Spd	0.3	0.9	1.5	1.5	1.2	1.4	2.0	2.1	2.7	3.6	4.6	5.3	5.3	5.4	5.7	6.0	5.7	5.0	4.4	2.8	1.3	0.4	0.1	0.1	Diurnal Average	
Dir	337	277	294	316	294	287	288	292	302	300	299	298	300	307	315	323	332	335	343	352	12	10	185	94	Diurnal Maximum	
Spd	15.3	15.7	16.0	18.3	15.4	15.0	19.9	18.1	18.6	22.3	24.2	25.7	25.1	25.5	25.9	25.1	24.9	22.9	20.6	19.2	20.5	18.6	18.7	17.2	Diurnal Maximum	
Dir	355	355	349	344	347	346	287	282	284	284	285	263	268	268	264	289	294	287	314	4	9	9	359	346	Diurnal Maximum	
Maximum Speed Value: 26 km/h on Apr 26 15:00		Minimum Speed Value: 0 km/h on Apr 12 06:00		Hours in Service: 720																						
Maximum Daily Speed Average: 13.9 km/h on Apr 20		Minimum Daily Speed Average: 1.2 km/h on Apr 16		Hours of Data: 720																						
Maximum Diurnal Speed Average: 6.0 km/h at hour 16		Minimum Diurnal Speed Average: 0.1 km/h at hour 23		Hours of Missing Data: 0																						
Monthly Average Velocity: 2.69 km/h 314.2 deg				Speed Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 1.8 Q <sub>1</sub> = 3.7 Median = 6.8 Q <sub>3</sub> = 11.1 P <sub>90</sub> = 16.9 P <sub>99</sub> = 23.8				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	53	68	28	6	0	0	155																			
NorthEast	36	47	7	0	0	0	90																			
East	13	6	0	0	0	0	19																			
SouthEast	14	25	13	0	0	0	52																			
South	86	62	15	0	0	0	163																			
SouthWest	17	16	2	0	0	0	35																			
West	15	20	27	19	0	0	81																			
NorthWest	26	34	45	20	0	0	125																			
Total	260	278	137	45	0	0	720																			

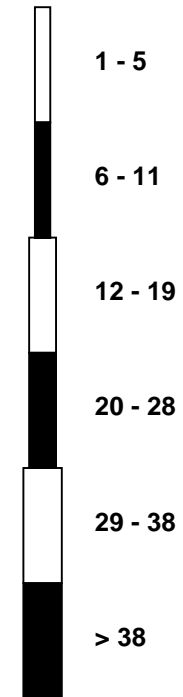
**Wind Rose**

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

**Valleyview - April 2013**



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





# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - April 2013

Maximum Speed: 27 km/h on Apr 26 15:00		Maximum Daily Speed Average: 15.8 km/h on Apr 20		Hours in Service: 720																							
Minimum Speed: 1 km/h on Apr 12 06:00		Minimum Daily Speed Average: 3.4 km/h on Apr 16		Hours of Data: 720																							
Maximum Diurnal Speed Average: 12.9 km/h at hour 15		Minimum Diurnal Speed Average: 5.4 km/h at hour 4		Hours of Missing Data: 0																							
Monthly Average Speed: 8.35 km/h		Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 2.1 Q <sub>1</sub> = 4.1 Median = 7.2 Q <sub>3</sub> = 11.3 P <sub>90</sub> = 17.2 P <sub>99</sub> = 24.2		Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	1	1	1	1	1	1	1	2	2	4	5	5	8	9	8	8	8	8	7	7	7	8	8	9	5.0	8.9	
2-Apr	9	9	7	6	6	8	7	6	5	5	6	9	14	12	17	16	19	21	20	11	4	5	4	4	9.6	21.4	
3-Apr	6	3	5	2	4	7	8	6	7	6	6	5	7	7	7	6	5	5	4	4	2	4	4	2	5.2	8.4	
4-Apr	3	1	1	2	3	4	1	3	5	9	6	4	4	5	6	4	11	16	19	19	21	19	19	16	8.4	20.6	
5-Apr	15	16	16	18	16	15	12	13	11	10	11	10	10	10	9	10	9	8	8	6	4	4	5	6	10.5	18.4	
6-Apr	4	3	5	4	3	5	5	2	3	4	5	5	10	14	15	18	15	13	11	9	5	4	5	4	7.0	17.5	
7-Apr	3	3	3	3	3	3	4	4	5	7	5	7	9	8	9	11	9	10	9	8	8	8	6	5	6.3	11.1	
8-Apr	9	7	6	4	4	3	3	4	3	6	9	9	10	11	10	10	8	8	8	8	9	9	9	9	7.4	10.9	
9-Apr	7	7	5	6	10	12	13	17	12	13	14	15	17	16	15	16	14	11	10	12	11	12	11	9	11.9	17.1	
10-Apr	7	8	5	6	4	3	1	2	3	3	2	3	6	6	4	5	4	8	6	3	2	7	8	9	4.9	9.0	
11-Apr	9	13	13	12	14	15	15	18	18	20	19	21	19	18	20	16	16	11	8	5	3	2	2	2	12.8	20.9	
12-Apr	2	3	2	2	1	1	1	1	2	1	8	13	13	12	13	12	12	13	13	12	12	13	10	5	7.4	13.2	
13-Apr	5	6	6	5	7	8	8	9	10	11	13	13	13	14	13	12	11	12	11	7	8	8	6	7	9.3	14.3	
14-Apr	8	9	8	7	7	8	8	7	7	6	7	8	7	5	8	5	11	9	6	2	2	2	1	3	6.3	10.8	
15-Apr	4	5	6	7	7	7	6	8	8	9	11	14	14	9	9	6	7	6	7	6	2	4	6	2	7.0	14.4	
16-Apr	2	4	1	2	1	1	1	2	3	5	5	5	6	6	5	4	4	6	3	4	4	3	3	1	3.4	6.0	
17-Apr	1	1	1	1	1	1	2	5	7	6	5	5	5	4	7	8	6	11	13	12	7	4	2	3	4.9	12.8	
18-Apr	2	5	9	11	10	7	5	9	12	9	9	10	8	11	8	7	7	8	6	5	2	5	11	9	7.7	11.9	
19-Apr	8	7	10	11	12	10	9	6	5	7	6	6	3	8	10	10	9	9	5	5	3	1	4	6	7.1	11.5	
20-Apr	10	13	12	14	14	15	20	18	19	23	24	24	22	19	22	22	20	17	14	11	6	6	7	7	15.8	24.5	
21-Apr	8	4	5	7	5	3	2	3	4	7	8	9	8	9	11	10	11	10	8	4	1	1	1	2	5.8	10.8	
22-Apr	1	2	2	2	2	2	2	4	9	12	12	13	16	16	19	20	18	13	8	4	2	2	2	3	7.8	20.2	
23-Apr	3	1	2	3	2	2	1	8	10	13	16	20	21	21	21	22	20	15	11	7	5	4	3	4	9.8	22.1	
24-Apr	2	2	2	3	2	2	2	2	5	15	16	13	13	13	17	12	10	4	3	6	6	6	4	4	6.8	17.2	
25-Apr	5	7	6	5	3	2	9	10	15	17	20	19	18	16	18	20	16	16	18	8	3	4	5	5	11.0	19.6	
26-Apr	4	3	4	3	8	6	11	8	9	12	22	26	25	26	27	25	23	22	18	8	9	11	8	6	13.4	26.7	
27-Apr	5	5	4	2	3	4	5	6	7	8	16	16	20	22	21	26	25	23	22	16	14	8	9	2	12.0	25.7	
28-Apr	2	1	1	2	2	2	1	1	2	4	4	5	8	7	10	7	5	5	6	10	5	3	3	6	4.2	9.7	
29-Apr	7	3	4	2	4	8	11	15	19	20	21	22	24	22	21	20	17	15	14	15	14	12	11	17	14.1	23.5	
30-Apr	15	10	10	10	8	5	7	9	12	12	13	10	8	7	6	8	6	5	8	5	2	3	4	6	7.9	14.7	
		5.5	5.4	5.5	5.4	5.5	5.6	6.1	7.0	7.9	9.5	10.7	11.5	12.1	12.1	12.9	12.6	11.9	11.3	10.1	7.9	6.0	6.1	6.0	5.7	Diurnal Average	
		15.5	15.9	16.2	18.4	15.5	15.4	20.2	18.2	19.3	22.6	24.5	26.1	25.4	25.9	26.7	25.7	25.3	23.3	21.7	19.3	20.6	18.8	19.0	17.4	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

# Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - April 2013

Maximum Value: 93.8 deg on Apr 15 21:00																								Hours in Service:	720
Minimum Value: 5.0 deg on Apr 1 10:00																								Hours of Data:	720
Percentiles: P <sub>1</sub> = 5.8 P <sub>10</sub> = 7.7 Q <sub>1</sub> = 9.9 Median = 13.2 Q <sub>3</sub> = 23.2 P <sub>90</sub> = 46.4 P <sub>99</sub> = 84.3																								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-Apr	53	63	87	65	49	66	48	47	17	5	5	77	13	14	13	13	16	12	11	11	10	8	8	7	87.1
2-Apr	7	6	7	11	12	8	15	12	10	6	30	19	12	12	25	8	5	6	6	13	50	16	18	12	50.2
3-Apr	30	19	12	39	50	6	20	11	19	20	26	22	15	8	7	29	42	22	19	12	14	14	23	43	49.9
4-Apr	21	60	57	71	18	35	51	20	24	8	12	20	78	26	11	20	40	6	8	7	7	7	9	8	78.0
5-Apr	8	10	9	7	8	9	9	11	10	15	12	14	16	9	7	8	15	13	9	18	13	12	11	14	18.4
6-Apr	17	15	13	25	21	13	13	35	26	32	31	33	16	7	9	7	8	8	11	9	13	31	15	13	34.6
7-Apr	22	26	9	16	11	9	8	11	20	12	19	20	19	22	18	11	16	14	10	12	9	11	15	12	26.4
8-Apr	15	8	13	18	19	18	14	11	40	45	14	13	12	9	15	21	16	16	11	11	9	9	9	9	45.4
9-Apr	8	10	15	16	8	6	6	8	8	8	9	7	8	8	10	8	7	8	10	8	9	7	7	6	16.2
10-Apr	8	9	12	8	11	16	18	30	18	12	22	16	10	9	85	8	14	13	9	42	32	8	9	7	84.5
11-Apr	7	10	9	9	6	6	7	7	10	11	10	13	11	16	10	10	9	11	11	19	13	23	48	13	47.6
12-Apr	14	39	13	27	80	88	36	30	17	53	36	11	12	13	17	15	13	9	10	8	8	7	10	28	87.6
13-Apr	14	9	7	12	10	8	8	10	12	12	13	15	13	11	16	12	13	17	12	10	11	10	10	14	17.1
14-Apr	6	8	7	8	7	7	7	12	20	23	27	33	33	45	59	44	15	12	13	38	63	69	64	21	68.9
15-Apr	21	9	8	9	7	9	12	11	15	11	12	10	24	28	44	46	29	43	12	43	94	20	10	63	93.8
16-Apr	46	69	87	20	66	90	44	50	25	8	7	12	26	36	54	72	58	28	21	9	29	16	17	62	90.3
17-Apr	32	56	56	49	23	31	46	8	9	15	17	22	31	62	59	33	28	26	18	16	11	28	14	11	62.1
18-Apr	10	20	9	15	11	19	10	9	15	17	16	12	14	12	24	20	20	12	10	15	62	52	9	11	62.5
19-Apr	11	11	8	7	7	7	8	13	14	8	10	10	70	33	13	14	11	29	27	24	36	80	39	50	80.0
20-Apr	21	12	12	10	15	12	9	13	12	10	9	9	9	13	10	11	12	12	14	7	10	11	9	13	21.0
21-Apr	9	36	15	9	12	14	22	39	37	26	29	32	28	37	20	19	28	16	17	37	53	13	12	8	53.2
22-Apr	14	7	11	14	9	11	9	12	43	13	15	12	16	15	11	10	13	14	12	12	49	13	18	6	48.6
23-Apr	11	29	51	55	52	16	45	18	10	13	15	14	13	10	11	9	11	9	9	7	25	14	32	57	56.7
24-Apr	51	20	47	14	7	11	13	13	47	9	12	15	18	13	17	17	19	57	30	7	6	12	12	7	57.5
25-Apr	22	14	10	10	16	10	15	10	9	10	13	14	13	13	14	12	11	13	8	18	19	6	6	8	21.6
26-Apr	8	16	15	23	18	20	9	24	18	21	15	11	8	9	14	10	11	10	10	27	15	12	23	9	27.0
27-Apr	8	9	7	16	12	9	6	14	13	15	19	12	17	21	13	12	10	11	19	9	15	9	11	61	60.6
28-Apr	85	84	84	78	45	38	39	82	66	24	53	57	35	30	13	20	24	48	51	18	37	22	35	27	84.9
29-Apr	14	28	29	68	20	12	12	12	15	12	12	12	13	13	11	11	11	13	14	24	10	9	8	8	68.4
30-Apr	6	8	7	10	12	26	11	16	13	22	16	28	44	67	68	56	69	53	25	21	27	27	11	12	68.8
	84.9	83.6	87.2	78.3	80.3	90.3	50.6	81.9	66.1	53.3	52.7	76.9	78.0	67.4	84.5	71.6	68.8	57.5	51.4	43.2	93.8	80.0	64.0	62.5	

PAZA

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

## Hourly Averages

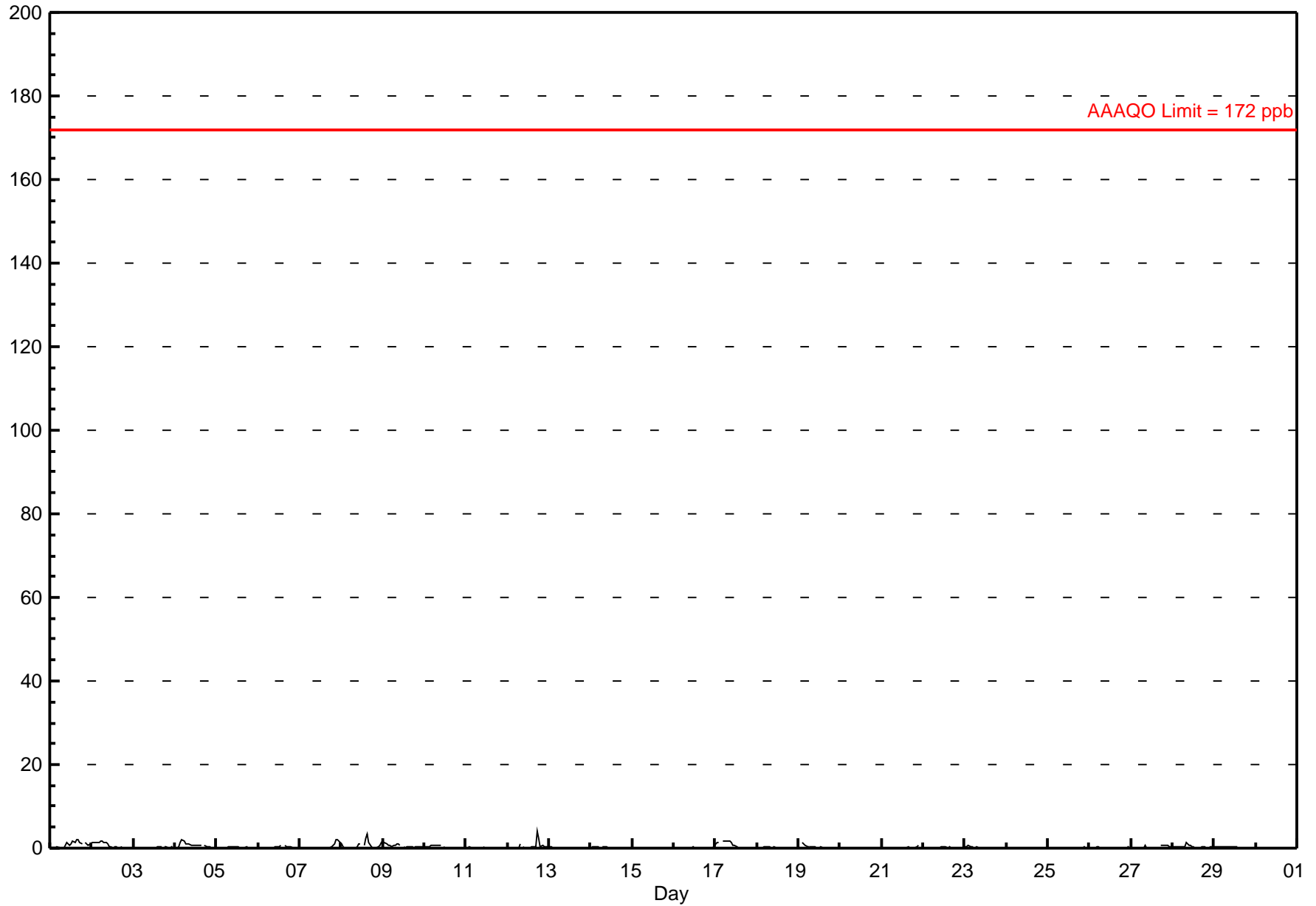
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Sunset House - April 2013

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 4.0 ppb on Apr 12 18:00	Maximum Daily Average: 0.8 ppb on Apr 1		Hours of Data:	686
Minimum Value: 0 ppb on Apr 1 01:00	Minimum Daily Average: 0.0 ppb on Apr 24		Hours of Missing Data:	34
Maximum Diurnal Average: 0.3 ppb at hour 9	Minimum Diurnal Average: 0.1 ppb at hour 20		Hours of Calibration:	34
Monthly Average: 0.24 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> = 0.7 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-Apr	0	0	0	0	0	0	0	0	0	2	1	1	1	2	1	2	2	2	1	A	1	1	1	1	0.8	2.2
2-Apr	1	1	1	1	1	2	2	2	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.7	1.6
3-Apr	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
4-Apr	0	0	0	1	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0.7	2.1
5-Apr	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
6-Apr	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	0	0	0	0	0	0	0	0.2	0.5
7-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	2	2	0.3	2.1
8-Apr	1	0	0	0	0	0	0	0	0	0	1	1	A	1	3	3	1	0	0	0	0	0	1	1	0.6	3.2
9-Apr	1	2	1	1	1	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.5
10-Apr	0	0	0	0	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
11-Apr	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
12-Apr	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	4	2	0	1	0	0	0	0.5	4.0
13-Apr	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	0.2
14-Apr	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
15-Apr	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
16-Apr	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	0.3
17-Apr	1	1	1	A	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.7	1.9
18-Apr	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
19-Apr	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
20-Apr	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
21-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0.1	0.5
22-Apr	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-Apr	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.6
24-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.0
25-Apr	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	0.3
26-Apr	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
27-Apr	0	0	0	0	0	0	0	0	1	0	0	0	C	C	C	C	1	1	1	1	1	1	1	0	0.3	0.8
28-Apr	0	0	0	0	0	0	0	0	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	1.2
29-Apr	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
30-Apr	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
	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2		Diurnal Average
	1.2	1.5	1.4	1.4	2.1	1.7	1.7	1.7	1.6	1.5	1.2	1.0	1.0	1.8	2.5	3.2	2.2	4.0	2.3	0.7	1.2	2.1	1.9	1.4		Diurnal Maximum

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



## Hourly Maximums

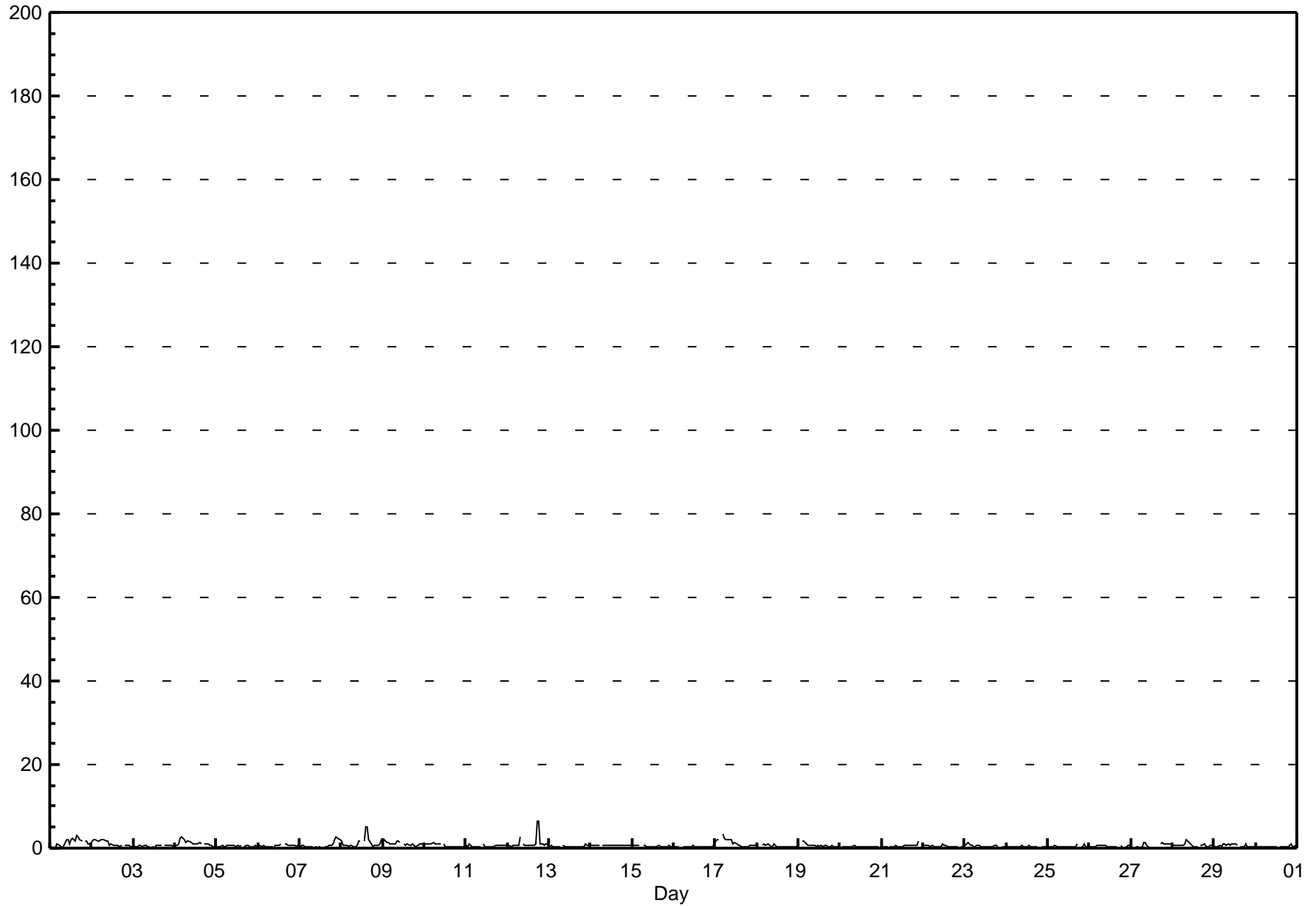
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Sunset House - April 2013

Maximum Value: 6.5 ppb on Apr 12 18:00		Maximum Daily Average: 1.3 ppb on Apr 8		Hours in Service: 720																																												
Minimum Value: 0 ppb on Apr 7 11:00		Minimum Daily Average: 0.3 ppb on Apr 24		Hours of Data: 686																																												
Maximum Diurnal Average: 0.9 ppb at hour 18		Minimum Diurnal Average: 0.5 ppb at hour 20		Hours of Missing Data: 34																																												
Monthly Average: 0.69 ppb		Percentiles: P <sub>1</sub> = 0.1 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> = 1.3 P <sub>99</sub> = 2.6		Hours of Calibration: 34																																												
				Percent Operational Time: 100.0																																												
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Apr	0	0	0	0	1	1	0	0	1	2	2	1	2	2	2	3	3	2	2	A	2	2	1	1	1.3	3.1																						
2-Apr	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	0	1	A	1	1	1	0	0	1.2	2.2																						
3-Apr	1	0	0	1	1	0	1	1	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	0	0.5	0.7																						
4-Apr	1	1	1	2	3	2	1	2	2	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	1.2	2.6																						
5-Apr	0	0	0	1	0	0	1	1	1	1	1	0	1	0	1	A	0	1	1	0	0	0	1	0	0.5	0.8																						
6-Apr	0	1	0	1	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	0	1	0.5	1.1																						
7-Apr	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	1	2	3	2	2	0.8	2.7																						
8-Apr	2	1	1	1	0	1	1	0	0	1	2	2	A	2	5	5	2	1	0	1	1	1	1	2	1.3	5.2																						
9-Apr	2	2	2	1	1	1	1	1	1	2	2	1	A	1	1	1	1	1	1	0	1	1	1	1	1.0	2.0																						
10-Apr	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0.7	1.5																						
11-Apr	1	0	1	0	0	0	0	0	0	0	A	1	0	0	0	0	1	1	1	1	1	1	1	1	0.5	1.0																						
12-Apr	1	1	0	1	1	1	1	3	A	1	1	1	1	1	1	1	1	7	6	1	1	1	1	1	1.3	6.5																						
13-Apr	0	1	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.5	0.9																						
14-Apr	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7																						
15-Apr	1	1	1	1	1	A	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0.5	0.7																						
16-Apr	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.8																						
17-Apr	2	2	2	A	3	2	2	2	2	2	2	1	1	1	1	1	0	0	1	1	1	1	1	1	1.3	3.4																						
18-Apr	1	1	A	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.0																						
19-Apr	1	A	2	2	1	1	1	1	1	1	0	1	0	1	0	1	1	0	0	1	0	0	0	0	0.7	1.8																						
20-Apr	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.6																						
21-Apr	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	2	A	0.5	1.6																						
22-Apr	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	0	0	0.5	0.9																						
23-Apr	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0.5	1.2																						
24-Apr	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0.3	0.5																						
25-Apr	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	1	0	0	0.4	1.0																						
26-Apr	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	A	1	0	0	0	1	1	0.4	0.8																						
27-Apr	0	0	0	0	0	0	0	1	1	1	0	0	C	C	C	C	1	1	1	1	1	1	1	1	0.6	1.4																						
28-Apr	1	1	1	1	1	1	1	1	2	1	1	1	0	0	A	1	1	1	0	0	0	0	1	1	0.8	2.1																						
29-Apr	0	0	0	1	0	1	1	1	1	1	1	1	1	1	A	0	0	0	1	0	0	0	0	0	0.6	0.9																						
30-Apr	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0.4	0.9																						
																								0.7	0.6	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.7	0.6	0.6	0.7	0.8	0.6	0.9	0.8	0.5	0.6	0.7	0.6	0.6	Diurnal Average	
																								1.8	2.0	2.0	2.3	3.4	2.4	2.1	2.6	2.1	2.1	1.9	1.7	1.9	2.3	5.2	5.2	2.6	6.5	6.5	1.1	2.1	2.7	2.2	2.1	Diurnal Maximum
C - Calibration																								A - Automated Daily Zero Span																								

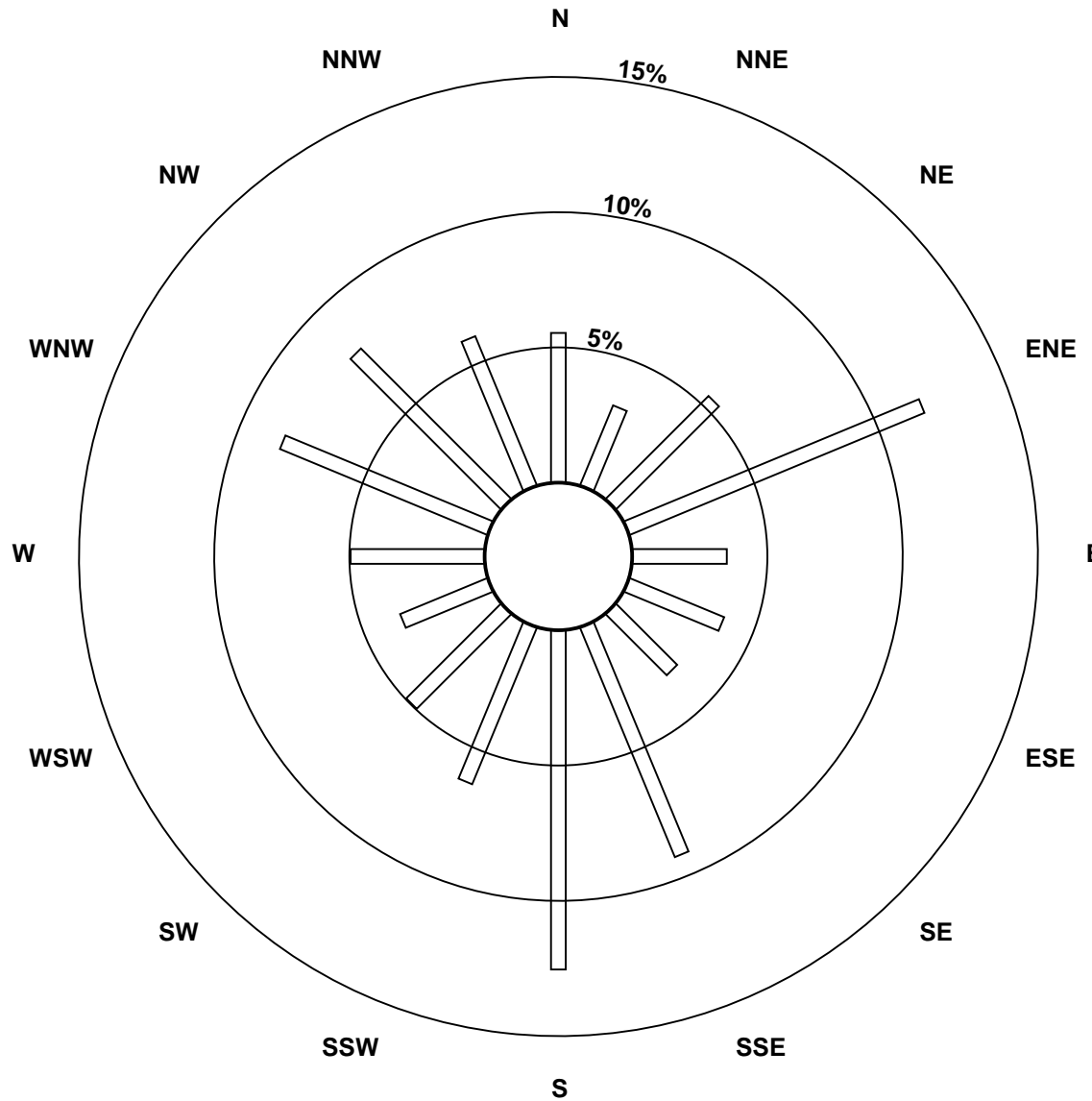
**Hourly Maximums**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Sunset House - April 2013**

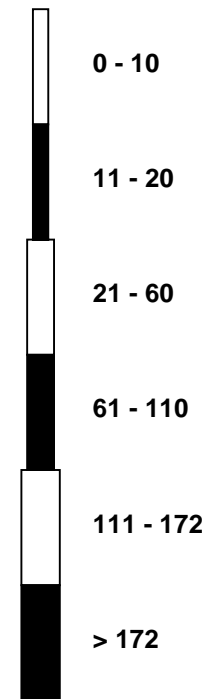


**Pollutant Rose**

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Sunset House - April 2013**



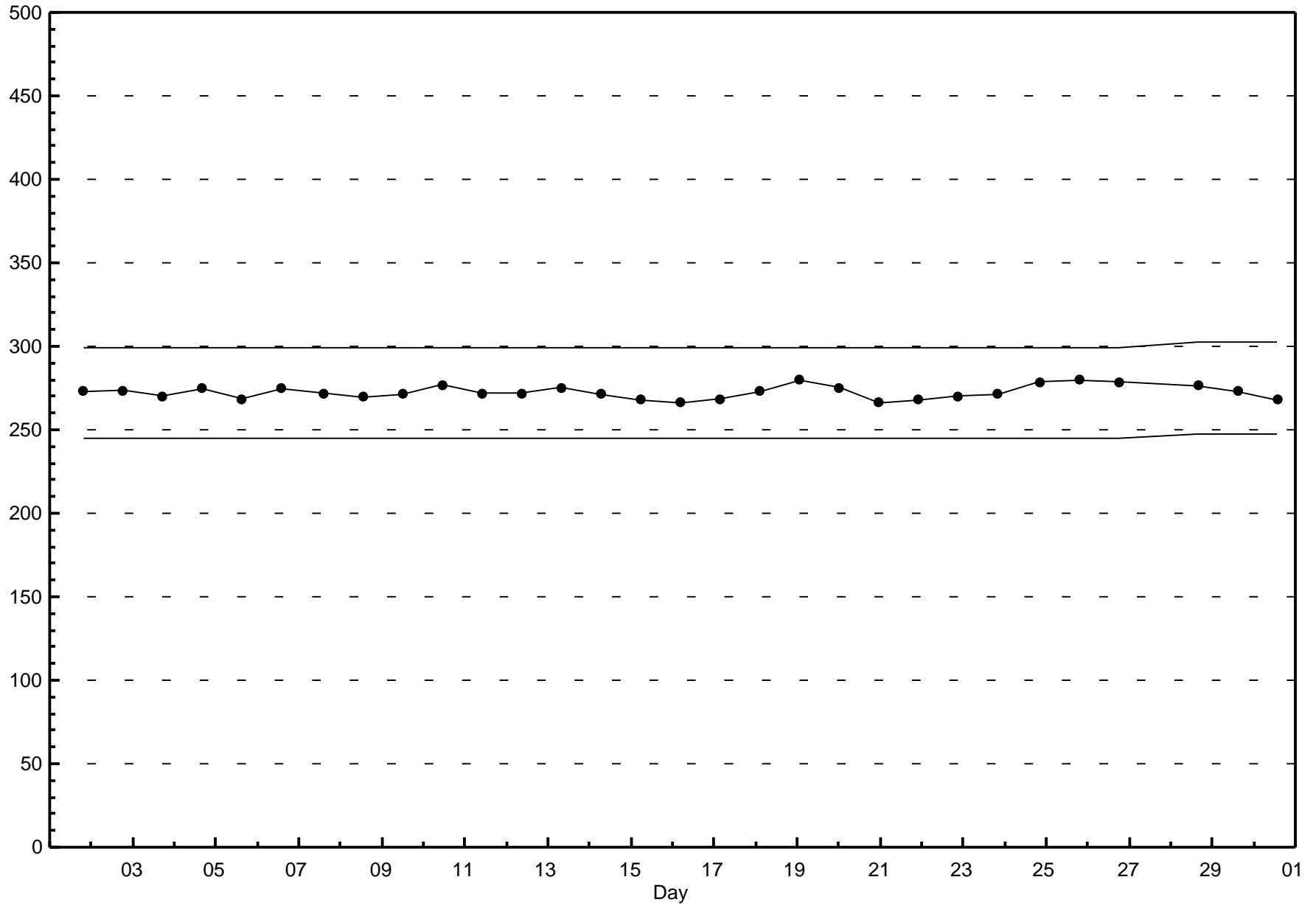
**Pollutant Classes (ppb)**





### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Sunset House - April 2013



## Hourly Averages

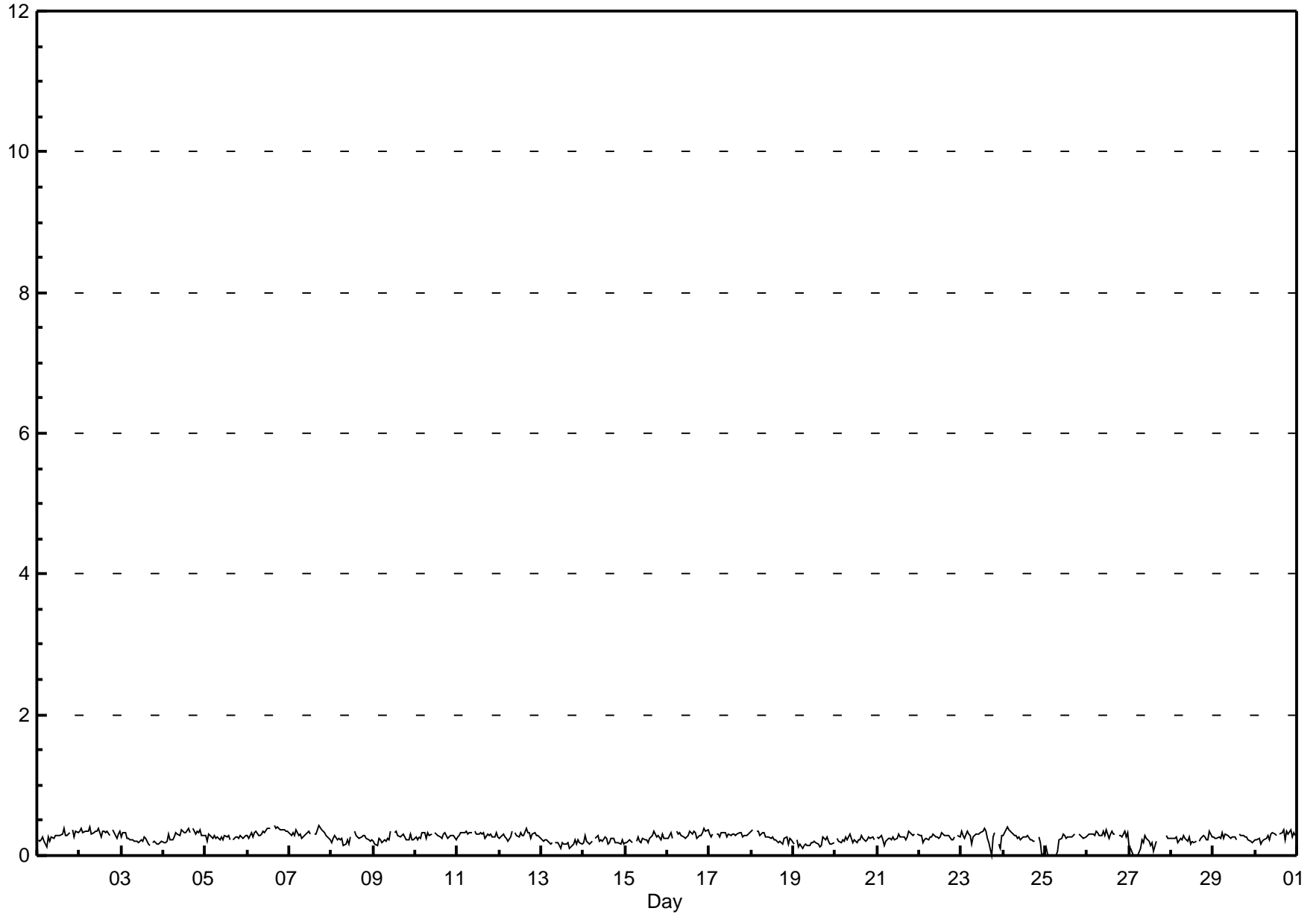
Total Reduced Sulphur (TRS) - ppb

Sunset House - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0	Hours in Service: 720
Maximum Value: 0.4 ppb on Apr 6 16:00	Maximum Daily Average: 0.3 ppb on Apr 6
Minimum Value: 0 ppb on Apr 23 18:00	Hours of Data: 686
Maximum Diurnal Average: 0.3 ppb at hour 20	Hours of Missing Data: 34
Minimum Daily Average: 0.2 ppb on Apr 27	Hours of Calibration: 34
Monthly Average: 0.26 ppb	Percent Operational Time: 100.0
Percentiles: $P_1 = 0.0$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.3$ $P_{90} = 0.3$ $P_{99} = 0.4$	

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-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.4
2-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.4
3-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.3
4-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.4
5-Apr	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	0.3
6-Apr	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
7-Apr	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
8-Apr	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
9-Apr	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
10-Apr	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	0.3
11-Apr	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	0.4
12-Apr	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
13-Apr	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	0.2
14-Apr	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
15-Apr	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	0.3
16-Apr	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	0.4
17-Apr	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
18-Apr	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
19-Apr	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
20-Apr	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
21-Apr	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
22-Apr	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
23-Apr	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
24-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.4
25-Apr	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
26-Apr	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
27-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0.2	0.3
28-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
29-Apr	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-Apr	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
Diurnal Average																								0.2	0.3	
Diurnal Maximum																								0.4	0.4	

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

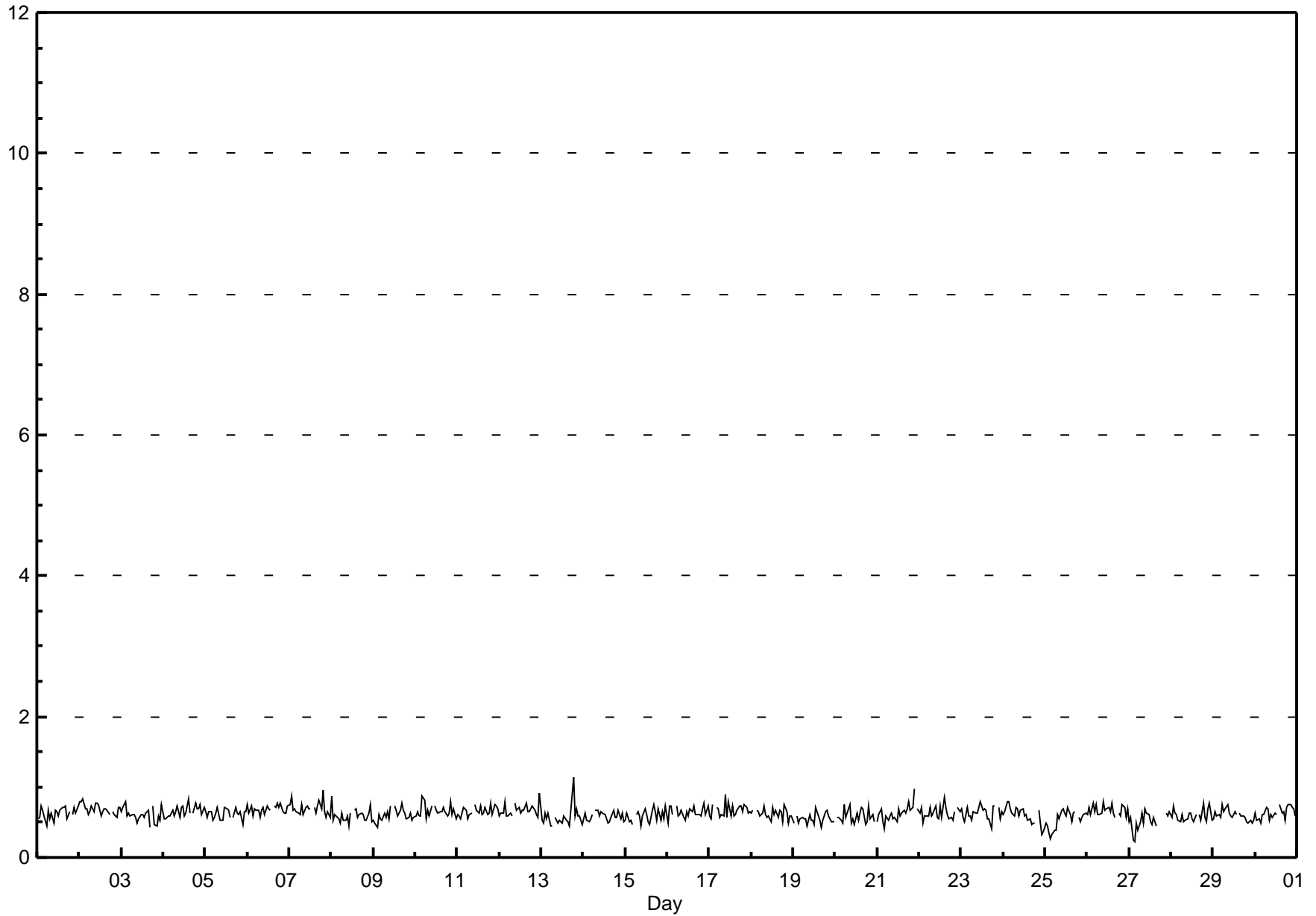


## Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

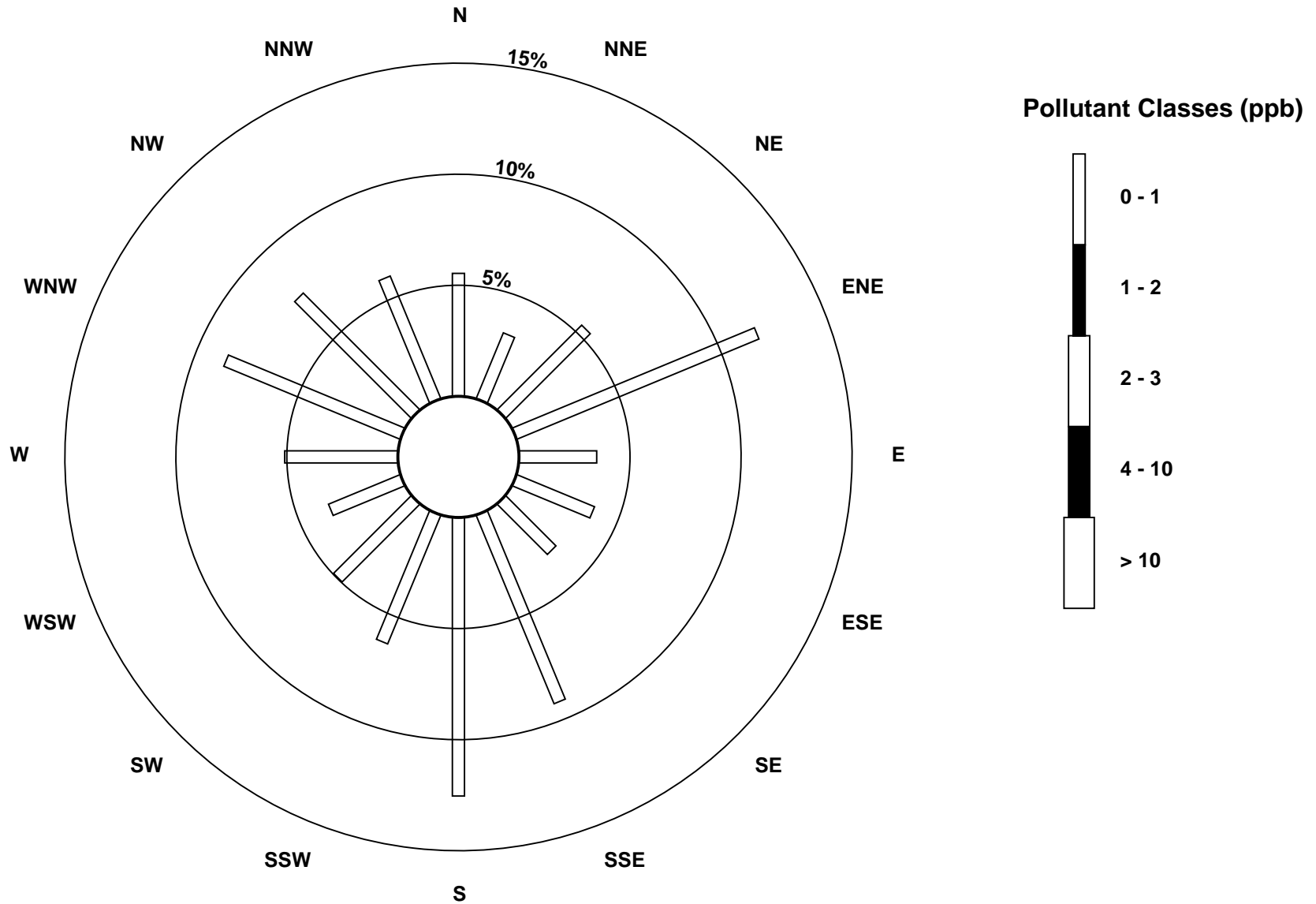
Sunset House - April 2013

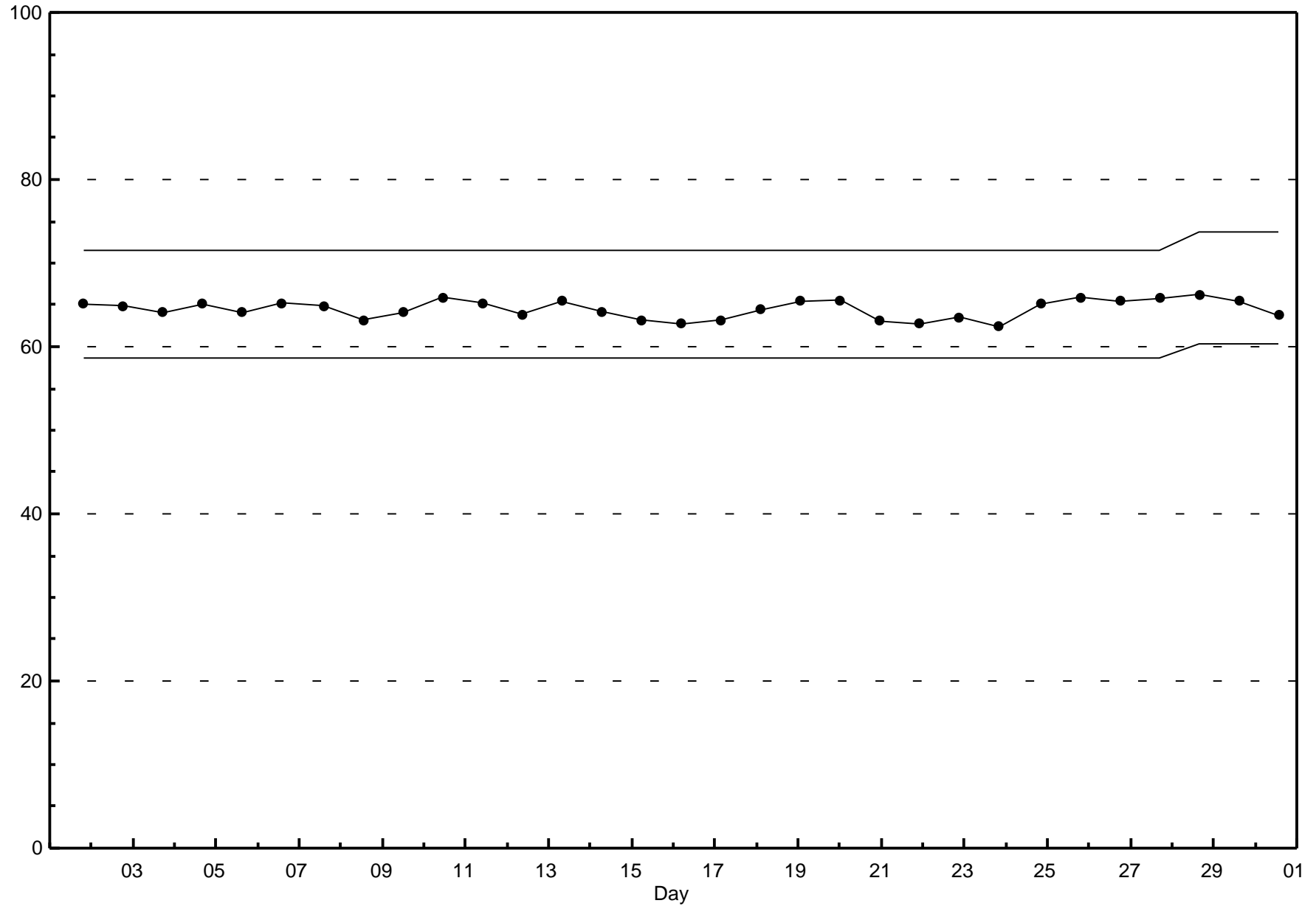
Maximum Value: 1.1 ppb on Apr 13 19:00		Maximum Daily Average: 0.7 ppb on Apr 7		Hours in Service: 720																							
Minimum Value: 0 ppb on Apr 27 04:00		Minimum Daily Average: 0.5 ppb on Apr 27		Hours of Data: 686																							
Maximum Diurnal Average: 0.7 ppb at hour 19		Minimum Diurnal Average: 0.6 ppb at hour 5		Hours of Missing Data: 34																							
Monthly Average: 0.62 ppb		Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.6 Median = 0.6 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 0.7 P <sub>99</sub> = 0.9		Hours of Calibration: 34																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	0.7	
2-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	0.8	
3-Apr	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	A	1	0	0	1	1	1	0.6	0.8	
4-Apr	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	
5-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	0.6	0.7	
6-Apr	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	0.8	
7-Apr	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	
8-Apr	1	1	1	1	1	0	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9	
9-Apr	1	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8	
10-Apr	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
11-Apr	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8	
12-Apr	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
13-Apr	1	0	1	1	1	0	0	A	1	0	1	1	0	1	1	1	0	1	1	1	1	1	1	0	0.6	1.1	
14-Apr	1	1	1	0	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0.6	0.7	
15-Apr	1	1	1	1	0	A	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	0.7	
16-Apr	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8	
17-Apr	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
18-Apr	1	1	A	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	
19-Apr	0	A	1	0	1	1	1	1	1	0	1	1	0	1	1	1	0	1	1	1	1	1	1	1	0.5	0.7	
20-Apr	A	1	1	1	0	1	1	1	1	0	1	0	1	1	1	1	1	0	1	1	1	1	1	A	0.6	0.8	
21-Apr	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0	
22-Apr	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	0.9	
23-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	0.6	0.8	
24-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	1	0	0	0	0	0.6	0.8	
25-Apr	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.5	0.7	
26-Apr	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	0.8	
27-Apr	0	1	0	0	0	0	0	1	0	1	1	1	0	1	0	A	1	C	C	C	1	1	1	1	0.5	0.7	
28-Apr	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	0.6	0.8	
29-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	0	1	0.6	0.8	
30-Apr	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7	
		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	Diurnal Average	
		0.9	0.9	0.8	0.8	0.9	0.8	0.7	0.7	0.8	0.9	0.8	0.8	0.7	0.7	0.9	0.8	0.8	0.8	1.1	0.9	0.8	1.0	0.8	0.9	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									



**Pollutant Rose**

**Total Reduced Sulphur (TRS) - ppb**  
**Sunset House - April 2013**





## Hourly Averages

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

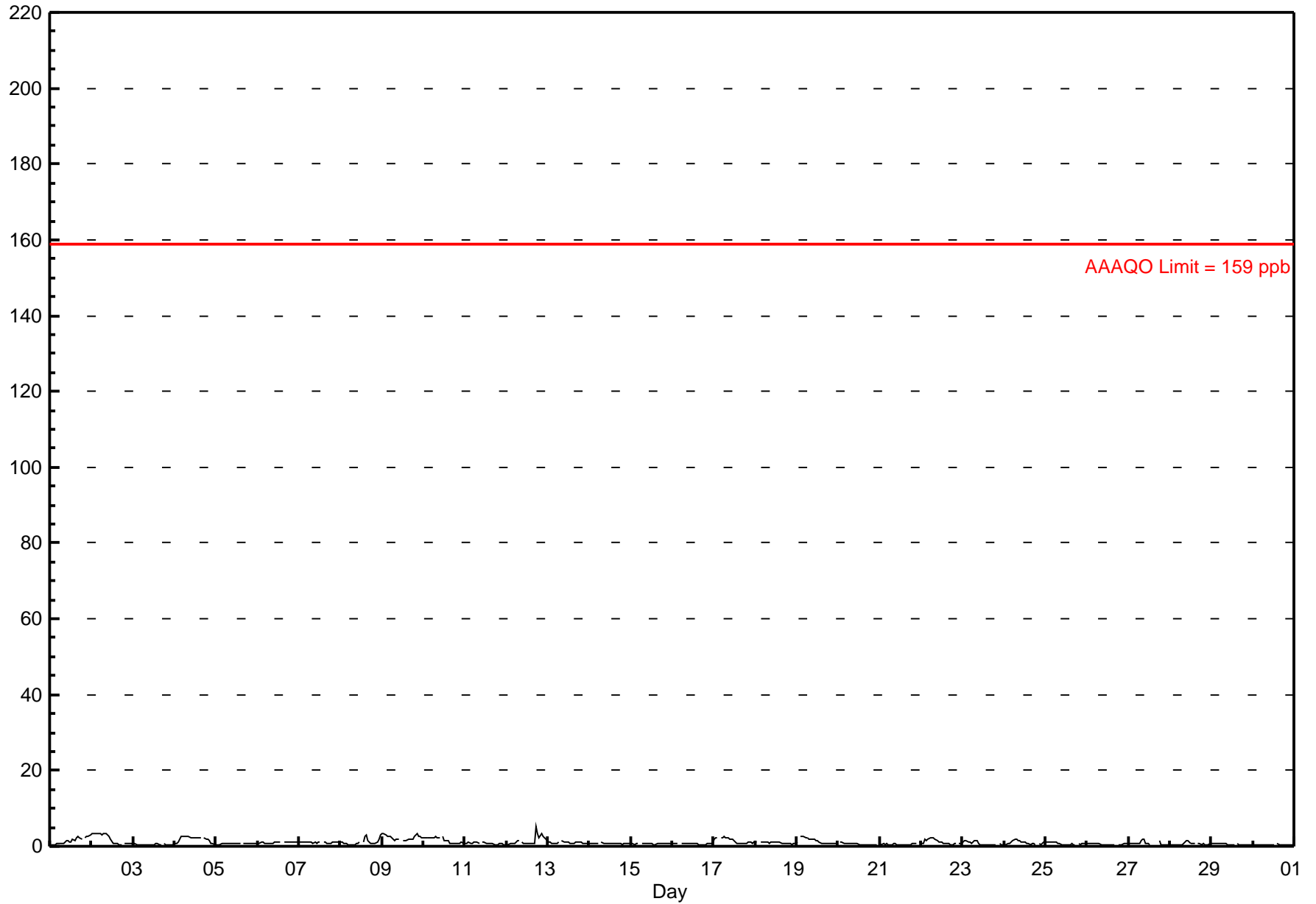
Sunset House - April 2013

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 5.1 ppb on Apr 12 18:00	Maximum Daily Average: 2.3 ppb on Apr 9		Hours of Data:	685
Minimum Value: 0 ppb on Apr 25 14:00	Minimum Daily Average: 0.4 ppb on Apr 30		Hours of Missing Data:	35
Maximum Diurnal Average: 1.2 ppb at hour 8	Minimum Diurnal Average: 0.8 ppb at hour 17		Hours of Calibration:	35
Monthly Average: 1.01 ppb	Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.6 Median = 0.8 Q <sub>3</sub> = 1.2 P <sub>90</sub> = 2.2 P <sub>99</sub> = 3.3		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-Apr	0	0	0	0	1	1	1	1	1	2	1	1	1	2	1	2	2	2	2	A	2	2	3	3	1.4	2.9
2-Apr	3	3	3	3	3	3	3	3	3	3	2	2	1	1	1	1	0	1	A	1	1	1	1	1	1.9	3.5
3-Apr	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	A	1	1	1	1	0	1	0.5	0.7
4-Apr	1	1	1	2	3	2	2	3	3	2	2	2	2	2	2	2	A	2	2	2	2	1	1	1	1.8	2.7
5-Apr	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
6-Apr	1	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	1.3
7-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.2
8-Apr	1	1	1	1	1	0	0	0	1	1	1	1	A	1	2	3	2	1	1	1	1	1	2	3	1.1	2.9
9-Apr	3	3	3	3	3	3	2	2	2	2	2	A	2	1	2	2	2	2	2	2	3	3	3	2	2.3	3.5
10-Apr	2	2	2	2	2	2	2	2	2	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1.6	2.5
11-Apr	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	0	0.8	1.2
12-Apr	0	0	1	1	1	1	2	1	A	1	1	1	1	1	1	1	1	5	3	2	3	2	2	2	1.4	5.1
13-Apr	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	1.3
14-Apr	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	1.1
15-Apr	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
16-Apr	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
17-Apr	2	2	2	A	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.5	2.5
18-Apr	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.9	1.2
19-Apr	1	A	3	3	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	2.7
20-Apr	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	A	0.6	1.3
21-Apr	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	0	0	1	1	1	A	1	0.6	1.0
22-Apr	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.2	2.4
23-Apr	1	2	1	1	1	1	1	2	1	1	1	1	0	0	0	0	0	0	0	0	A	1	1	1	0.8	1.6
24-Apr	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	1.7
25-Apr	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0	0	A	1	0	1	1	1	0.7	1.3
26-Apr	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	1	0	0	1	1	1	0.5	0.9
27-Apr	1	1	1	1	1	1	1	1	2	2	1	1	1	C	C	C	C	C	1	1	0	0	0	0	0.8	1.8
28-Apr	0	0	0	0	0	0	0	0	1	2	2	1	1	1	1	A	1	1	1	1	1	0	1	1	0.6	1.6
29-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	0	0	0.6	0.9
30-Apr	0	0	0	0	0	0	1	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0.4	0.6
	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.0	1.0	0.9	0.9	0.9	0.9	0.8	1.0	0.9	0.8	1.0	0.9	0.9	1.0		Diurnal Average
	3.3	3.5	3.5	3.4	3.3	3.2	3.1	3.2	3.2	3.0	2.5	2.5	2.2	2.2	2.5	2.8	2.5	5.1	3.3	2.6	3.5	2.7	2.6	2.9		Diurnal Maximum

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





## Hourly Maximums

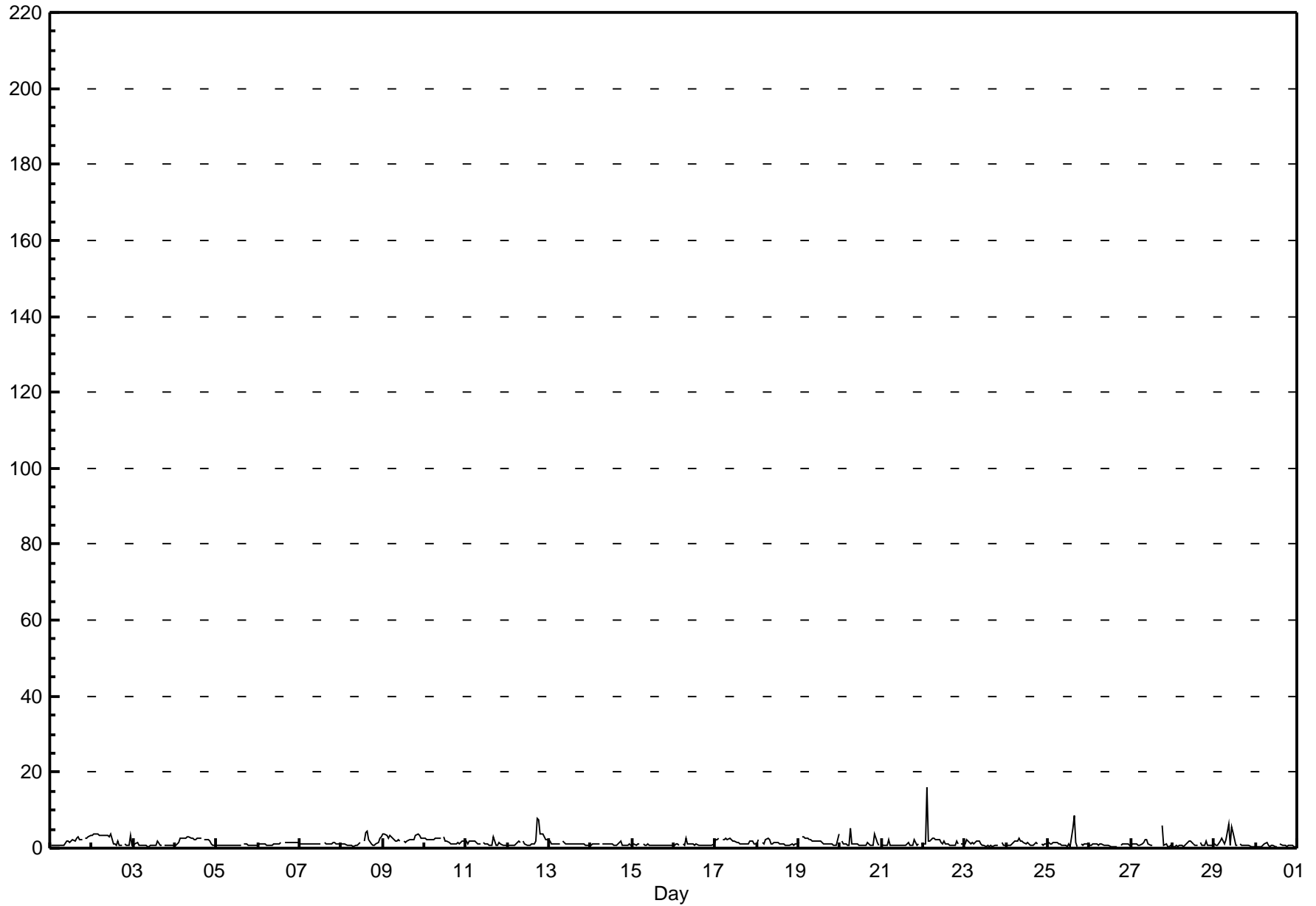
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Sunset House - April 2013

Maximum Value: 16.1 ppb on Apr 22 03:00		Maximum Daily Average: 2.6 ppb on Apr 9		Hours in Service: 720																							
Minimum Value: 0 ppb on Apr 26 15:00		Minimum Daily Average: 0.6 ppb on Apr 30		Hours of Data: 685																							
Maximum Diurnal Average: 1.9 ppb at hour 3		Minimum Diurnal Average: 1.1 ppb at hour 13		Hours of Missing Data: 35																							
Monthly Average: 1.41 ppb		Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 0.7 Q <sub>1</sub> = 0.8 Median = 1.1 Q <sub>3</sub> = 1.7 P <sub>90</sub> = 2.6 P <sub>99</sub> = 5.6		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-Apr	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	2	2	A	3	3	3	3	1.7	3.3	
2-Apr	3	4	4	4	3	3	3	3	3	3	3	4	1	1	1	2	1	1	A	1	1	1	3	1	2.4	3.7	
3-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	1	1	1	1	1	1	0.8	1.7	
4-Apr	1	1	2	3	3	3	3	3	3	3	3	2	2	2	3	3	A	2	2	2	2	2	1	1	2.1	3.0	
5-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.0	
6-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	2	1	1.2	1.7	
7-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1.2	1.6	
8-Apr	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4	4	2	1	1	1	1	1	2	3	1.5	4.3	
9-Apr	4	4	3	3	3	3	2	2	2	2	2	A	2	2	2	2	2	2	2	2	3	4	3	3	2.6	3.8	
10-Apr	2	2	2	2	2	2	3	3	3	3	A	3	2	2	2	1	1	1	1	1	2	1	2	2	1.9	3.1	
11-Apr	2	1	2	2	2	2	1	1	1	A	1	1	1	1	1	1	3	1	1	2	1	1	1	1	1.3	3.1	
12-Apr	1	1	1	1	1	1	2	2	A	2	1	1	1	1	1	1	2	8	8	4	4	3	2	2	2.1	7.7	
13-Apr	2	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.8	
14-Apr	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1.0	1.7	
15-Apr	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	1.1	
16-Apr	1	1	1	1	A	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.6	
17-Apr	2	2	2	A	2	2	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2	2	1	1.8	2.7	
18-Apr	1	2	A	1	1	2	3	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.8	
19-Apr	2	A	3	3	3	3	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	4	1.8	3.7	
20-Apr	A	2	1	1	1	1	5	1	1	1	1	1	1	1	1	1	2	1	1	1	4	1	1	A	1.3	5.1	
21-Apr	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	1	0.9	2.2	
22-Apr	1	1	16	2	2	3	3	2	2	2	2	1	2	1	1	1	1	1	1	2	1	A	1	1	2.1	16.1	
23-Apr	1	2	2	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1.1	2.2	
24-Apr	1	1	1	1	1	2	2	3	2	2	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1.3	2.7	
25-Apr	2	1	1	2	2	1	1	1	1	1	0	1	0	5	9	2	0	A	1	1	1	1	1	1	1.6	8.6	
26-Apr	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	A	1	1	1	1	1	1	1	0.8	1.3	
27-Apr	1	1	1	1	1	1	1	2	2	2	1	1	1	C	C	C	C	C	6	1	1	1	0	1	1.3	6.0	
28-Apr	1	1	1	1	1	1	0	1	1	2	2	1	1	1	1	A	1	1	1	2	1	1	1	1	0.9	2.0	
29-Apr	1	1	1	2	3	2	1	2	7	1	6	4	1	1	A	1	1	1	1	1	1	1	1	1	1.6	6.5	
30-Apr	1	0	0	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	0	0	0.6	1.3	
		1.3	1.3	1.9	1.4	1.5	1.5	1.7	1.6	1.6	1.5	1.5	1.4	1.1	1.4	1.6	1.2	1.3	1.4	1.3	1.4	1.2	1.3	1.3	Diurnal Average		
		3.6	3.7	16.1	3.6	3.5	3.4	5.1	3.5	6.5	3.3	5.7	4.1	2.4	2.5	5.1	8.6	3.1	7.7	7.6	3.7	3.8	3.2	3.4	3.7	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

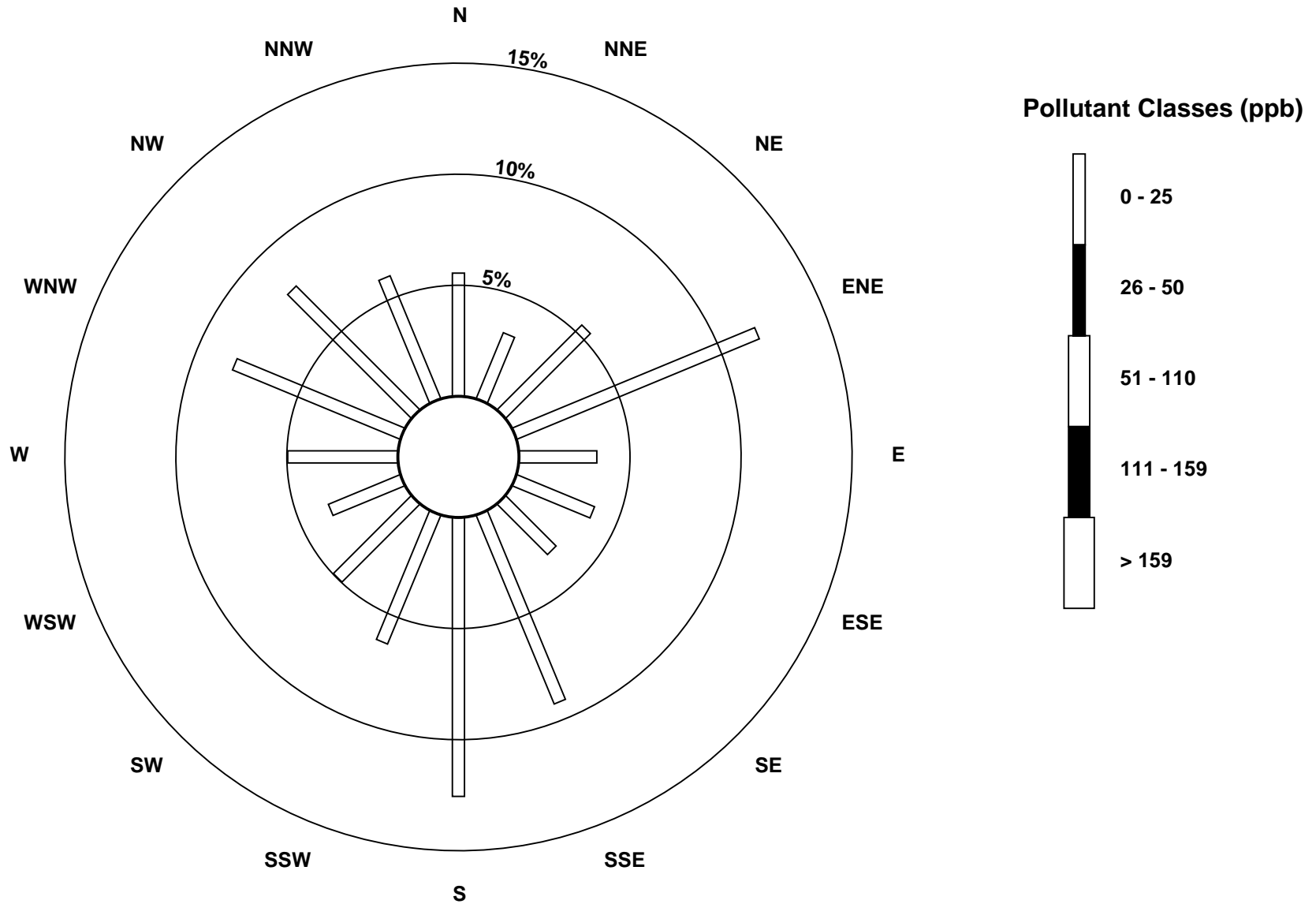
### Hourly Maximums

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Sunset House - April 2013



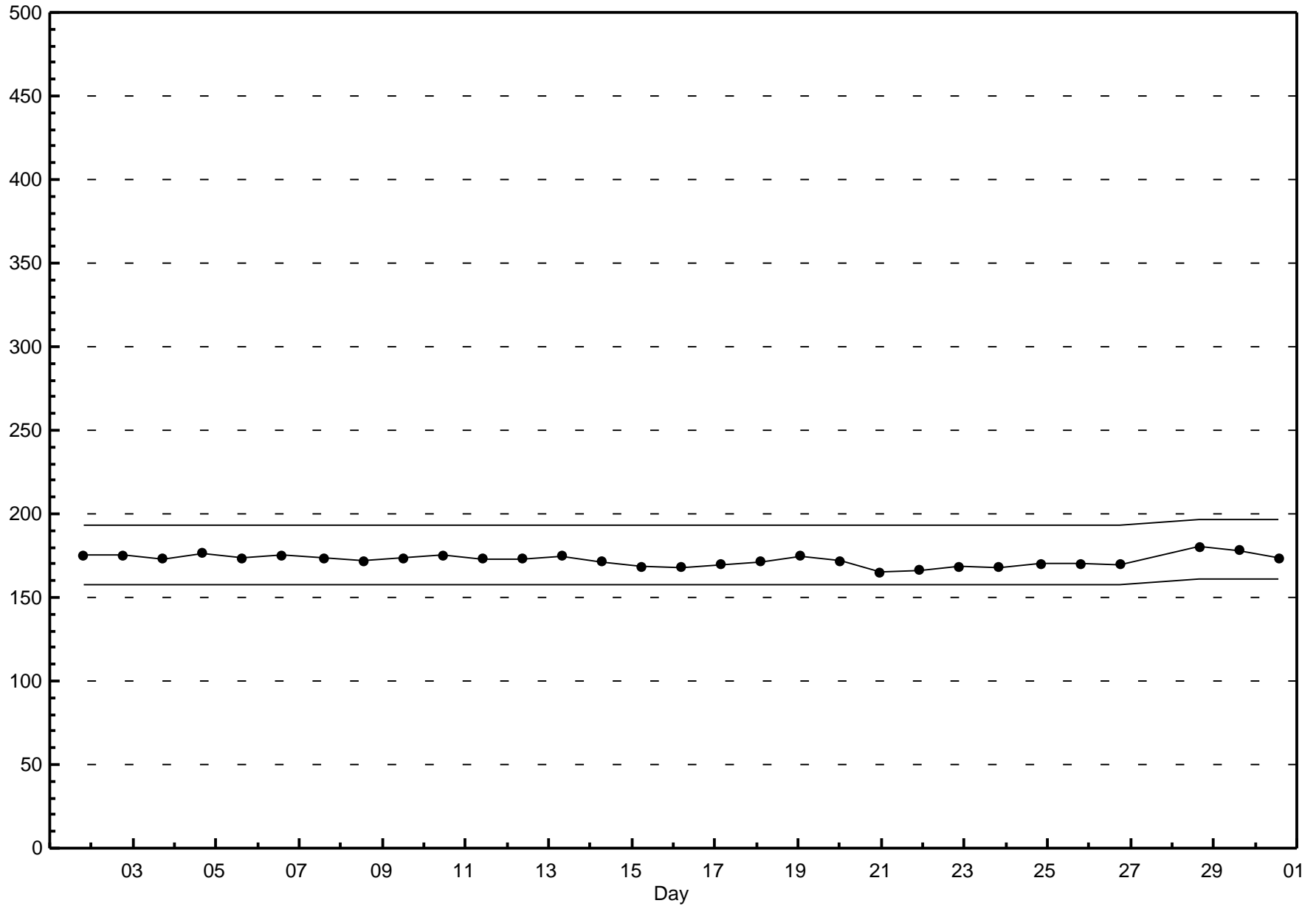
**Pollutant Rose**

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**Sunset House - April 2013**



### Span Responses

**Nitrogen Dioxide (NO<sub>2</sub>)**  
**Sunset House - April 2013**



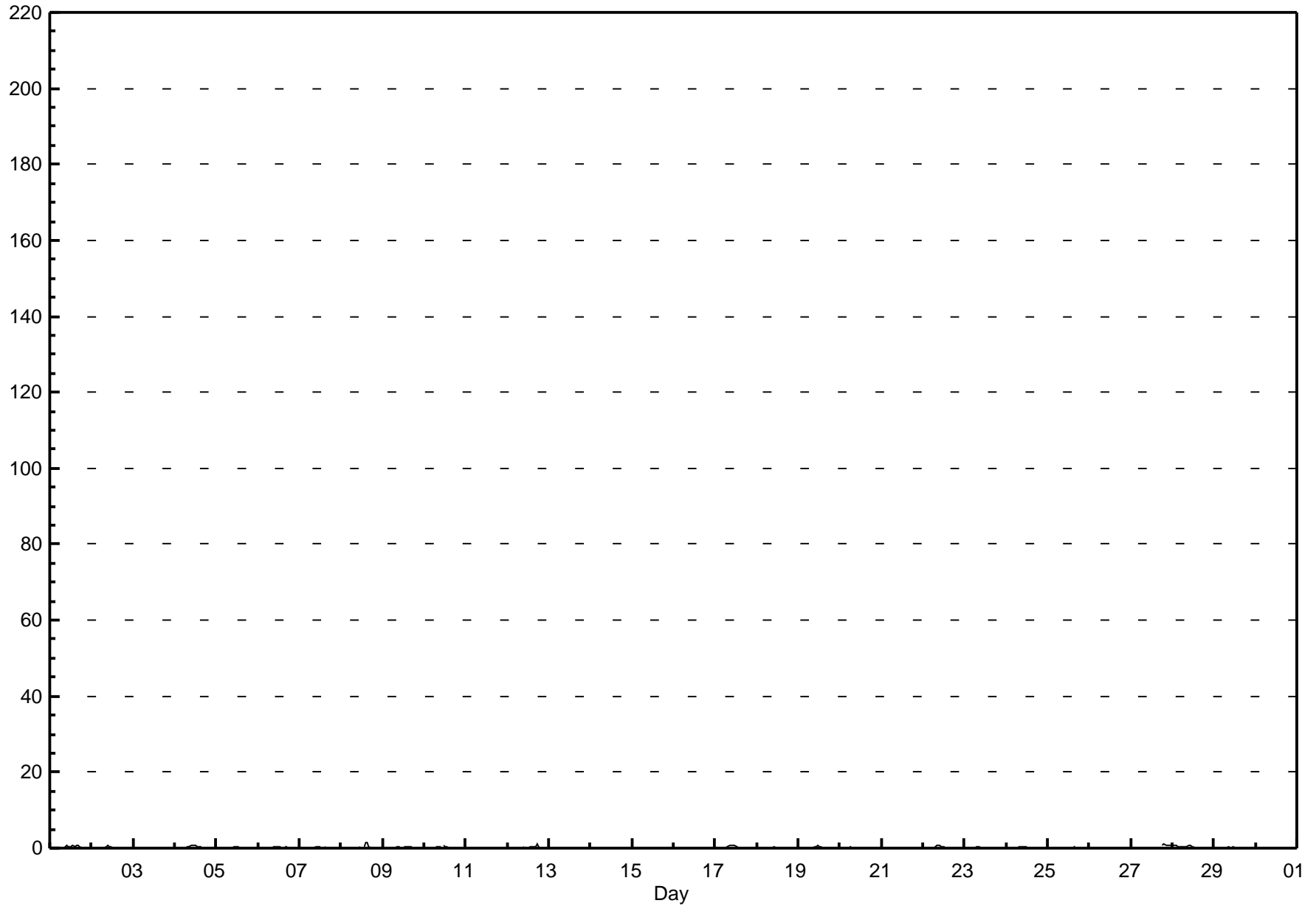
## Hourly Averages

**Nitrogen Oxide (NO) - ppb**  
**Sunset House - April 2013**

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.5 ppb on Apr 8 16:00 Maximum Daily Average: 0.3 ppb on Apr 28		Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0																									
Minimum Value: 0 ppb on Apr 1 02:00 Maximum Diurnal Average: 0.3 ppb at hour 10 Monthly Average: 0.10 ppb		Minimum Daily Average: 0.0 ppb on Apr 3 Minimum Diurnal Average: 0.0 ppb at hour 5 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> = 0.4 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-Apr	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	0	0	A	0	0	0	0	0	0.2	0.7
2-Apr	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.6
3-Apr	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	0.0
4-Apr	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0.2	0.6
5-Apr	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	0.3
6-Apr	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	0.5
7-Apr	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	0.3
8-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0.2	1.5
9-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
10-Apr	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
11-Apr	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
12-Apr	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	1.0
13-Apr	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	0.1
14-Apr	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	0.1
15-Apr	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	0.2
16-Apr	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	0.1
17-Apr	0	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
18-Apr	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	0.3
19-Apr	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
20-Apr	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.5
21-Apr	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	0.1
22-Apr	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
23-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.3
24-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.5
25-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.4
26-Apr	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	0.1
27-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	1	1	1	1	1	1	1	0.3	1.0
28-Apr	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.9
29-Apr	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	0.4
30-Apr	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	0.1
0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.2 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.7 0.7 0.6 0.5 0.5 0.4 0.5 0.5 0.7 0.8 0.9 0.6 0.6 0.7 1.4 1.5 0.6 1.0 0.7 1.0 0.9 0.8 0.8 0.7 0.7																								Diurnal Average	Diurnal Maximum		
C - Calibration                      A - Automated Daily Zero Span																											

**Hourly Averages**

**Nitrogen Oxide (NO) - ppb**  
**Sunset House - April 2013**



## Hourly Maximums

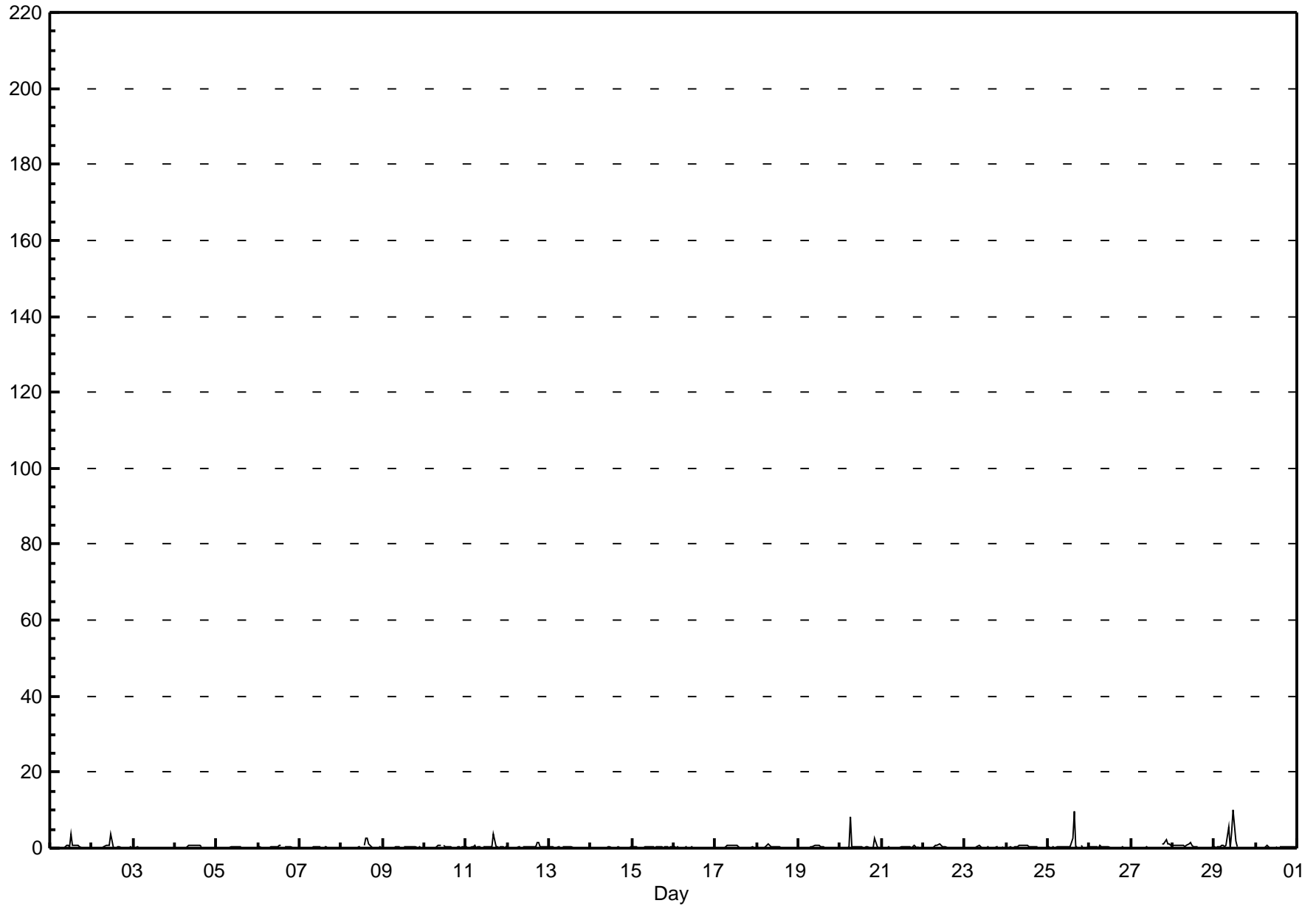
**Nitrogen Oxide (NO) - ppb**  
**Sunset House - April 2013**

Maximum Value: 10.2 ppb on Apr 29 12:00		Maximum Daily Average: 1.2 ppb on Apr 29		Hours in Service: 720																																													
Minimum Value: 0 ppb on Apr 5 01:00		Minimum Daily Average: 0.1 ppb on Apr 3		Hours of Data: 685																																													
Maximum Diurnal Average: 0.8 ppb at hour 12		Minimum Diurnal Average: 0.1 ppb at hour 4		Hours of Missing Data: 35																																													
Monthly Average: 0.33 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.6 P <sub>99</sub> = 3.7		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-Apr	0	0	0	0	0	0	0	0	0	1	1	0	4	1	1	1	1	0	0	A	0	0	0	0	0.5	3.7																							
2-Apr	0	0	0	0	0	0	0	0	1	1	1	4	0	0	0	0	0	0	A	0	0	0	0	0	0.4	3.6																							
3-Apr	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																							
4-Apr	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0.3	0.9																							
5-Apr	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																							
6-Apr	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0.2	0.7																							
7-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.5																							
8-Apr	0	0	0	0	0	0	0	0	0	0	0	0	A	1	3	3	1	0	0	0	0	0	0	0	0.4	2.7																							
9-Apr	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.5																							
10-Apr	0	0	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8																							
11-Apr	1	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0.4	3.7																							
12-Apr	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0.4	1.5																							
13-Apr	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	0.2																							
14-Apr	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	0.3																							
15-Apr	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																							
16-Apr	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																							
17-Apr	0	0	0	A	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9																							
18-Apr	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1																							
19-Apr	0	A	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7																							
20-Apr	A	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	A	0.7	8.0																							
21-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0.2	0.7																							
22-Apr	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	1.0																							
23-Apr	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.6																							
24-Apr	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.9																							
25-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	10	0	0	A	1	0	0	0	0	0.8	9.7																							
26-Apr	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6																							
27-Apr	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	1	1	2	1	1	1	0.4	2.2																								
28-Apr	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0.5	1.3																							
29-Apr	0	0	0	0	1	1	0	1	6	0	4	10	2	0	A	0	0	0	0	0	0	0	0	0	1.2	10.2																							
30-Apr	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7																							
																								0.2	0.2	0.1	0.1	0.2	0.2	0.5	0.3	0.5	0.4	0.5	0.8	0.5	0.3	0.4	0.7	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.2	Diurnal Average	
																								0.9	0.8	0.7	0.7	0.9	0.7	8.0	0.9	5.6	1.2	4.0	10.2	3.7	0.9	2.7	9.7	3.7	1.5	1.3	1.1	2.6	1.0	1.0	0.9	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									



# Hourly Maximums

Nitrogen Oxide (NO) - ppb  
Sunset House - April 2013



## Hourly Averages

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

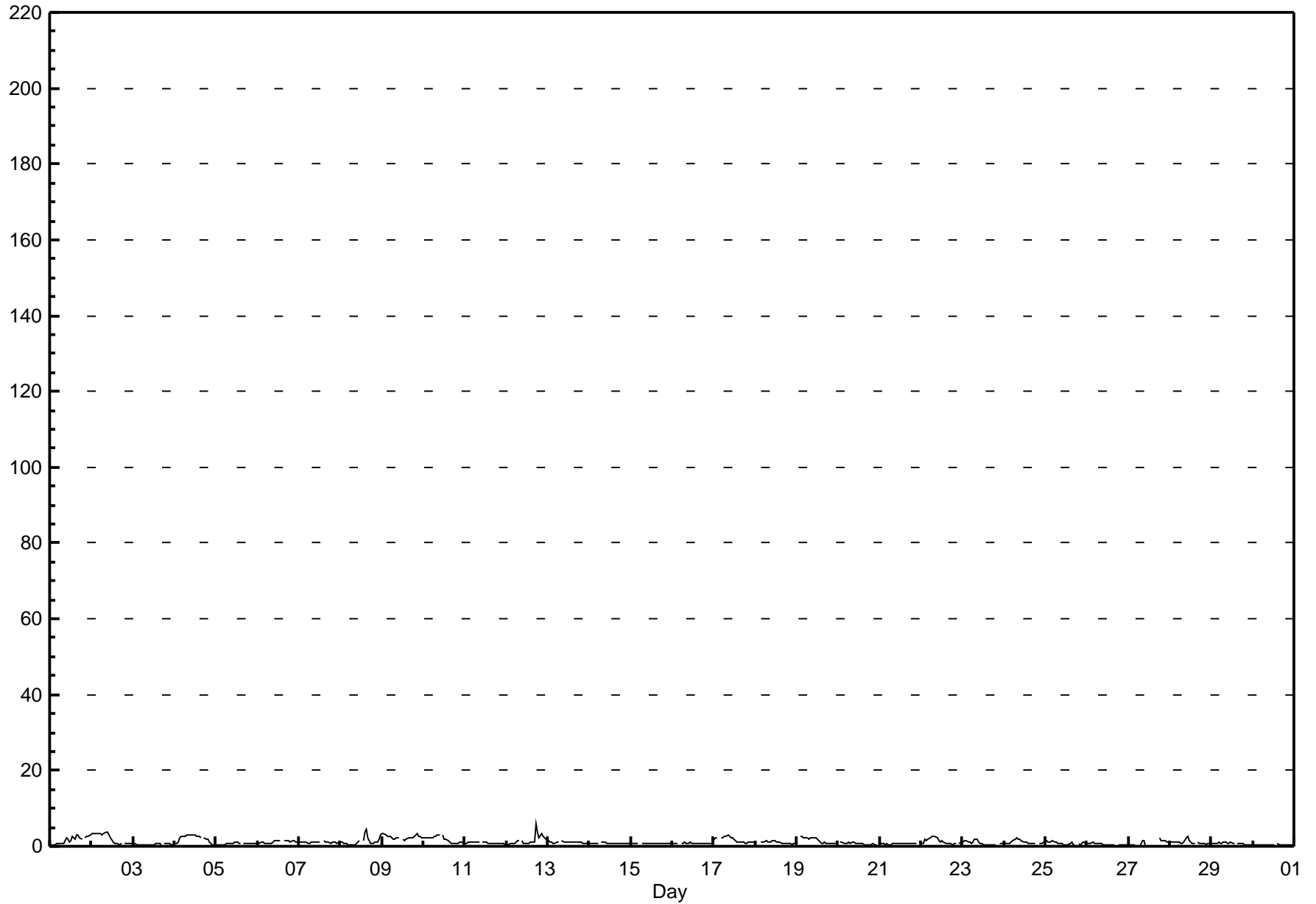
### Sunset House - April 2013

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 6.1 ppb on Apr 12 18:00	Maximum Daily Average: 2.4 ppb on Apr 9		Hours of Data:	685
Minimum Value: 0 ppb on Apr 27 12:00	Minimum Daily Average: 0.4 ppb on Apr 30		Hours of Missing Data:	35
Maximum Diurnal Average: 1.5 ppb at hour 10	Minimum Diurnal Average: 0.9 ppb at hour 20		Hours of Calibration:	35
Monthly Average: 1.12 ppb	Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.6 Median = 0.9 Q <sub>3</sub> = 1.3 P <sub>90</sub> = 2.3 P <sub>99</sub> = 3.5		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	1	0	0	0	1	1	1	1	1	2	2	1	2	2	2	3	3	2	2	A	2	2	3	3	1.6	3.1	
2-Apr	3	3	4	3	3	3	3	3	4	4	3	2	1	1	1	1	1	1	A	1	1	1	1	1	2.0	3.7	
3-Apr	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	A	1	1	1	1	1	1	0.5	0.8	
4-Apr	1	1	1	2	3	2	3	3	3	3	3	3	3	3	3	2	A	2	2	2	2	1	1	1	0	2.0	3.1
5-Apr	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	1.0	
6-Apr	1	1	1	1	1	1	1	1	1	1	1	2	2	2	A	2	2	1	1	1	1	1	1	1	1.2	1.7	
7-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.1	1.4	
8-Apr	1	1	1	1	0	0	0	0	0	1	1	2	A	1	4	4	2	1	1	1	1	1	2	3	1.3	4.3	
9-Apr	3	3	3	2	3	3	2	2	2	2	2	2	A	2	2	2	2	2	2	2	3	4	3	3	2.4	3.5	
10-Apr	2	2	2	2	2	2	2	3	3	3	A	3	2	2	2	1	1	1	1	1	1	1	1	1	1.7	3.2	
11-Apr	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2	
12-Apr	0	1	1	1	1	1	2	2	A	1	1	1	1	1	1	1	1	6	4	2	3	3	2	2	1.6	6.1	
13-Apr	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	1.5	
14-Apr	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	1.1	
15-Apr	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
16-Apr	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0	
17-Apr	2	2	2	A	2	2	3	3	3	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1.7	3.0	
18-Apr	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5	
19-Apr	1	A	3	3	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1.5	2.7	
20-Apr	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3	
21-Apr	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	1.0	
22-Apr	1	1	2	1	2	2	3	3	3	2	1	1	2	1	1	1	1	1	1	1	1	A	1	1	1.3	2.7	
23-Apr	1	2	1	1	1	1	1	2	2	1	1	1	0	0	0	0	0	0	0	1	0	A	1	1	0.9	1.8	
24-Apr	1	1	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1.1	2.1	
25-Apr	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	A	1	0	1	1	1	0.8	1.3	
26-Apr	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.5	0.9	
27-Apr	0	0	0	0	0	0	0	1	1	2	0	0	0	C	C	C	C	C	2	2	2	1	1	1	0.8	2.3	
28-Apr	1	1	1	1	1	1	1	1	1	2	3	2	1	1	1	A	1	1	1	1	1	1	1	1	1.1	2.6	
29-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	0	0	0.7	1.2	
30-Apr	0	0	0	0	0	0	1	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0.4	0.7	

1.0	1.1	1.2	1.1	1.2	1.2	1.3	1.3	1.4	1.5	1.3	1.2	1.1	1.1	1.1	1.1	0.9	1.1	1.0	0.9	1.0	1.0	1.0	1.0	1.0	Diurnal Average
3.3	3.5	3.5	3.3	3.3	3.2	3.2	3.4	3.6	3.7	3.0	3.2	2.9	2.8	3.8	4.3	3.1	6.1	3.7	2.7	3.5	2.8	2.5	2.9	Diurnal Maximum	

C - Calibration                      A - Automated Daily Zero Span



## Hourly Maximums

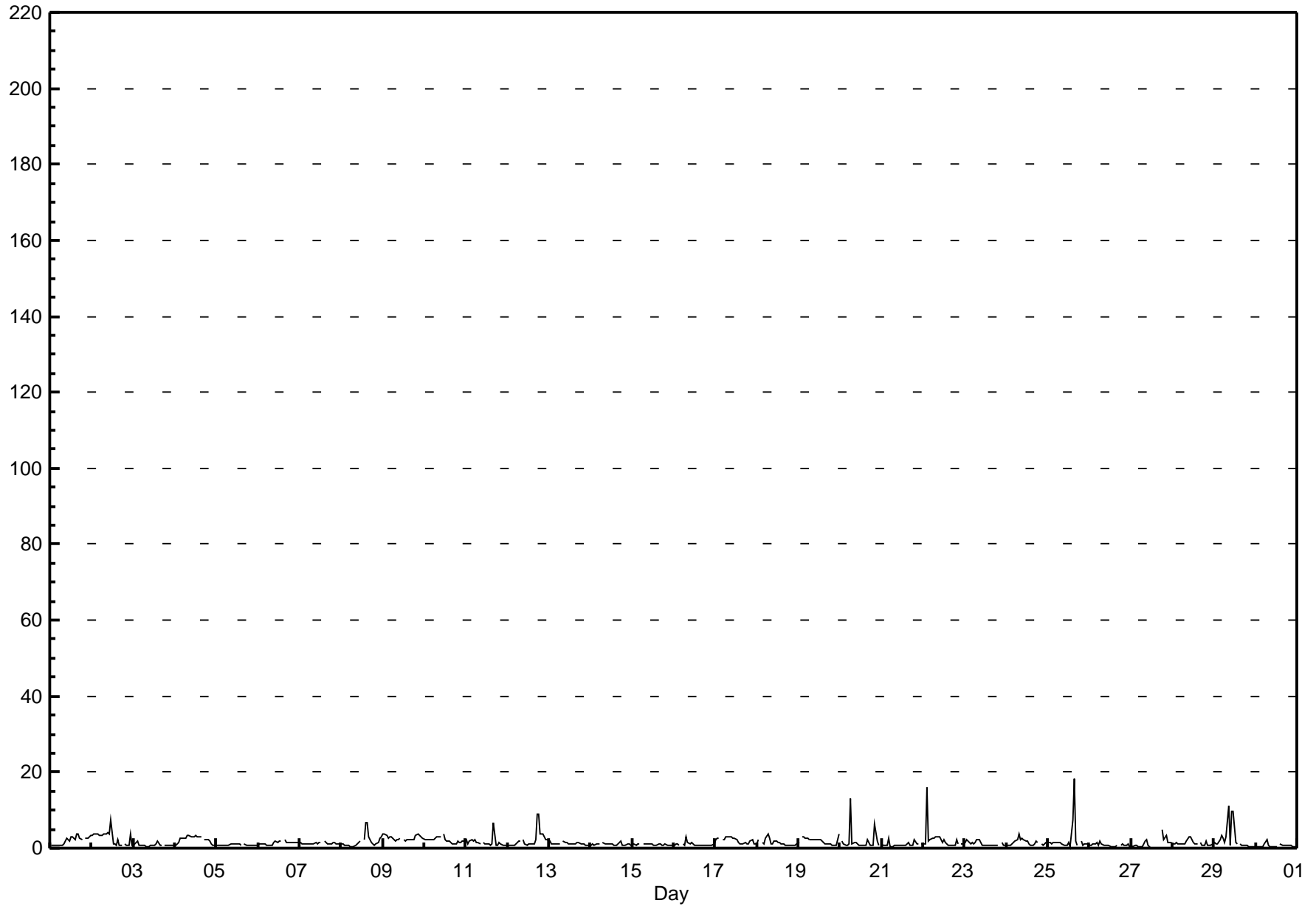
Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Sunset House - April 2013

Maximum Value: 18.3 ppb on Apr 25 16:00		Maximum Daily Average: 2.7 ppb on Apr 9		Hours in Service: 720																							
Minimum Value: 0 ppb on Apr 27 13:00		Minimum Daily Average: 0.7 ppb on Apr 30		Hours of Data: 685																							
Maximum Diurnal Average: 2.1 ppb at hour 16		Minimum Diurnal Average: 1.3 ppb at hour 22		Hours of Missing Data: 35																							
Monthly Average: 1.60 ppb		Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.8 Median = 1.1 Q <sub>3</sub> = 2.0 P <sub>90</sub> = 2.9 P <sub>99</sub> = 8.8		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-Apr	1	1	1	1	1	1	1	1	1	3	2	2	3	3	2	4	4	3	2	A	3	3	3	3	2.0	3.6	
2-Apr	3	4	4	4	3	3	3	4	4	4	4	7	1	1	2	1	1	A	1	1	1	4	1	2.7	7.4		
3-Apr	1	1	2	1	1	1	1	1	0	0	1	1	1	1	2	1	1	A	1	1	1	1	1	0.8	1.8		
4-Apr	1	1	2	3	3	3	3	3	3	3	3	3	3	3	3	A	2	2	2	2	2	1	1	2.3	3.3		
5-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.2		
6-Apr	1	1	1	1	1	1	1	1	1	1	2	2	2	2	A	2	2	2	1	1	1	1	1	1.3	2.1		
7-Apr	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1.2	1.9		
8-Apr	1	1	1	1	1	1	1	1	1	1	2	2	A	2	7	7	3	2	1	1	1	2	3	1.8	6.8		
9-Apr	4	4	3	3	3	3	2	2	2	2	2	A	2	2	2	2	2	2	2	3	4	3	3	2.7	3.9		
10-Apr	2	2	2	2	2	2	3	3	3	3	A	4	2	2	2	1	1	1	1	2	2	2	2	2.2	3.9		
11-Apr	2	1	2	2	2	2	1	2	1	A	2	1	1	1	1	1	7	1	1	2	1	1	1	1.6	6.8		
12-Apr	1	1	1	1	1	1	2	2	A	2	1	1	1	1	1	1	2	9	9	4	4	3	2	2.3	9.0		
13-Apr	2	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.8		
14-Apr	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1.0	1.7		
15-Apr	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2		
16-Apr	1	1	1	1	A	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.9		
17-Apr	2	2	2	A	2	2	3	3	3	3	3	3	2	1	1	1	1	1	1	1	2	2	1	2.0	3.2		
18-Apr	1	2	A	2	1	2	4	3	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1.4	3.7		
19-Apr	2	A	3	3	3	3	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	4	1.9	3.7		
20-Apr	A	2	1	1	1	1	13	1	1	1	1	1	1	1	1	2	1	1	1	1	6	2	1	1.9	13.0		
21-Apr	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	1.0	2.5		
22-Apr	1	1	16	2	2	3	3	3	3	3	2	1	2	2	1	1	1	1	1	2	1	A	1	2.3	16.2		
23-Apr	1	2	2	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1.1	2.4		
24-Apr	1	1	1	1	1	2	2	4	2	2	2	2	2	1	1	1	2	1	A	1	1	1	1	1.5	3.6		
25-Apr	2	1	1	2	2	1	1	1	1	1	1	1	1	8	18	2	1	A	2	1	1	1	1	2.2	18.3		
26-Apr	1	1	1	1	2	1	2	1	1	1	1	0	0	0	0	1	A	1	1	1	1	1	1	0.9	1.9		
27-Apr	1	1	1	1	0	0	0	1	2	2	1	0	0	C	C	C	C	C	5	2	4	2	1	1.2	4.8		
28-Apr	1	1	1	1	1	1	1	1	2	3	3	2	2	1	1	A	1	1	1	2	1	1	1	1.4	3.0		
29-Apr	1	1	1	2	3	3	1	3	11	1	10	10	1	1	A	1	1	1	1	1	0	0	0	2.4	11.1		
30-Apr	0	0	0	0	0	1	2	1	0	0	0	0	0	A	1	1	1	1	1	1	1	0	0	0.7	2.1		
		1.3	1.4	1.9	1.4	1.5	1.5	2.0	1.8	2.0	1.8	1.9	1.9	1.4	1.7	2.1	1.5	1.5	1.5	1.4	1.6	1.3	1.3	1.3	Diurnal Average		
		3.6	3.7	16.2	3.6	3.5	3.4	13.0	3.6	11.1	3.9	9.8	9.6	3.3	3.0	7.6	18.3	6.8	9.0	8.9	3.7	6.4	3.3	3.7	3.7	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

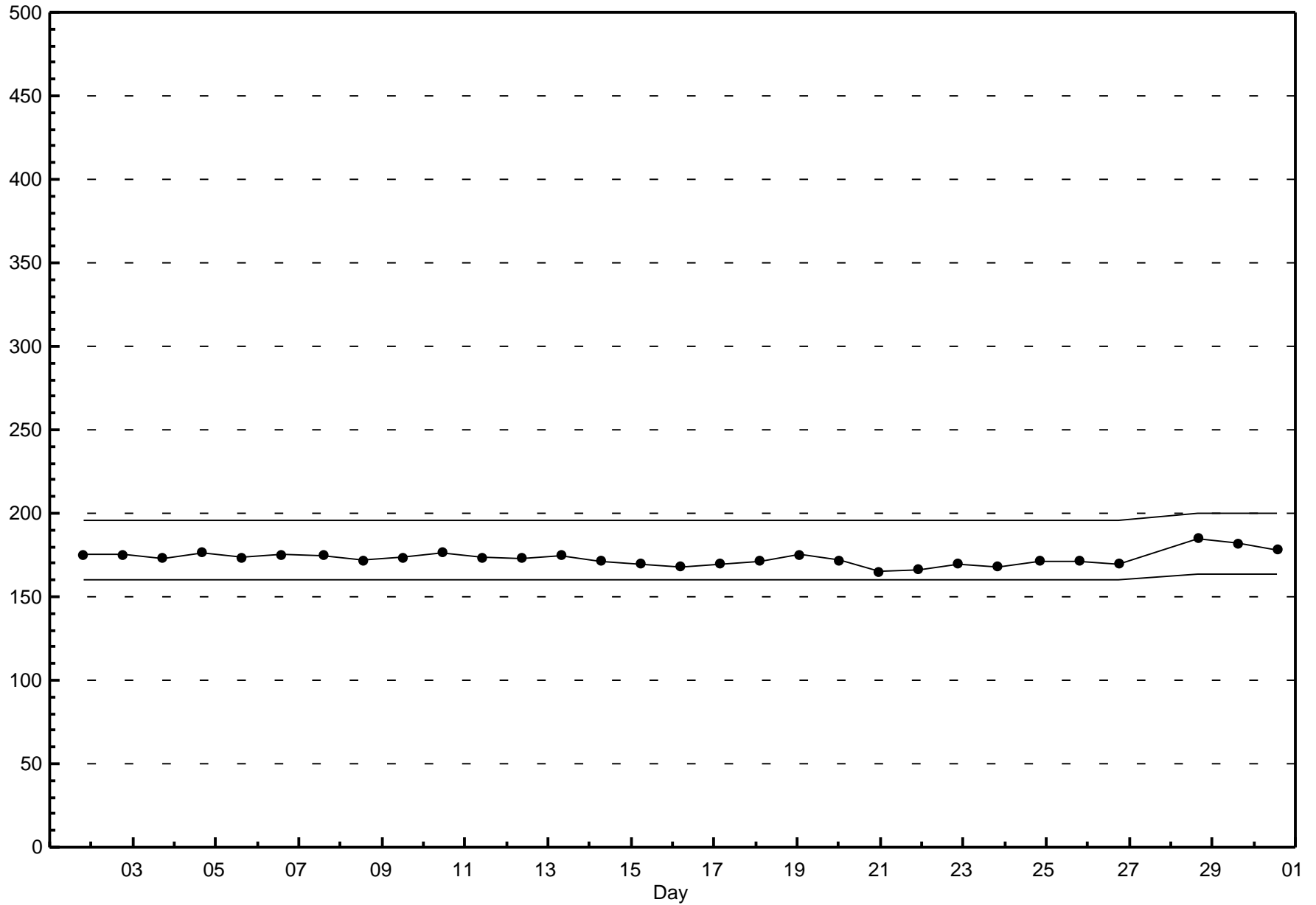
# Hourly Maximums

Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
Sunset House - April 2013



**Span Responses**

**Oxides of Nitrogen (NO<sub>x</sub>)  
Sunset House - April 2013**



## Hourly Averages

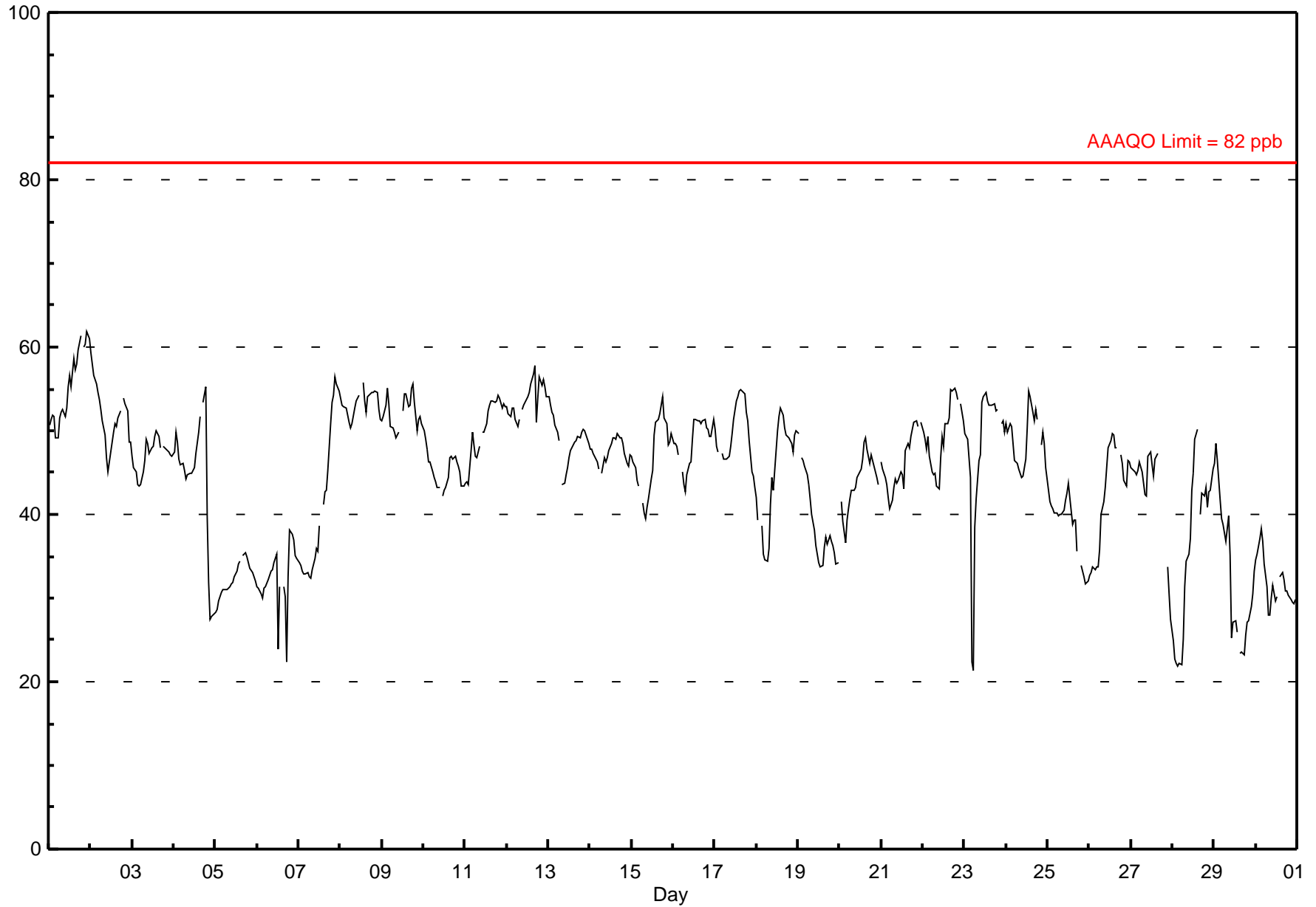
Ozone (O<sub>3</sub>) - ppb

Sunset House - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 61.8 ppb on Apr 1 23:00 Maximum Daily Average: 55.2 ppb on Apr 1														Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0													
Minimum Value: 21 ppb on Apr 23 06:00 Minimum Daily Average: 31.9 ppb on Apr 30 Maximum Diurnal Average: 48.5 ppb at hour 15 Minimum Diurnal Average: 41.7 ppb at hour 6 Monthly Average: 44.83 ppb Percentiles: P <sub>1</sub> = 22.3 P <sub>10</sub> = 32.2 Q <sub>1</sub> = 40.2 Median = 46.7 Q <sub>3</sub> = 50.9 P <sub>90</sub> = 53.7 P <sub>99</sub> = 59.3																											
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-Apr	51	51	52	52	49	49	52	52	52	52	53	55	57	55	59	57	58	60	61	A	60	60	62	61	55.2	61.8	
2-Apr	59	58	57	56	55	54	53	51	50	47	45	46	49	50	51	51	52	52	A	54	53	52	49	49	51.7	59.4	
3-Apr	47	46	45	44	43	44	45	46	49	48	47	48	48	49	50	49	48	A	48	48	48	47	47	47	47.1	49.9	
4-Apr	47	50	49	47	46	46	45	44	45	45	45	45	46	47	50	52	A	53	55	40	32	27	28	28	44.0	55.3	
5-Apr	28	29	30	31	31	31	31	31	31	32	32	32	33	34	34	A	35	35	35	34	34	33	33	32	32.2	35.4	
6-Apr	31	31	31	30	31	31	32	33	33	33	33	34	35	24	31	A	31	30	22	33	38	38	37	35	35	32.2	38.1
7-Apr	34	34	33	33	33	33	32	32	33	35	36	36	39	A	41	43	43	45	51	53	54	56	56	55	40.9	56.4	
8-Apr	54	53	53	53	52	51	50	51	53	54	54	54	A	56	54	52	54	54	55	55	55	55	53	51	53.2	55.8	
9-Apr	51	52	53	55	53	51	50	50	49	49	50	A	52	54	54	53	53	55	56	53	50	51	52	51	52.1	55.6	
10-Apr	50	49	48	46	46	45	44	44	43	43	A	42	43	43	44	47	47	47	47	46	46	45	43	43	45.3	50.0	
11-Apr	44	44	44	48	50	48	47	47	48	A	50	50	51	52	53	54	53	53	54	54	54	53	53	53	50.3	54.2	
12-Apr	53	52	52	53	53	51	50	51	A	53	53	54	54	55	56	57	58	51	54	56	55	56	55	54	53.7	57.8	
13-Apr	54	53	52	52	51	50	49	A	44	44	45	46	47	48	48	49	49	49	49	50	50	50	49	48	48.9	54.1	
14-Apr	48	48	47	47	46	45	A	45	47	46	47	48	48	49	49	49	50	49	49	48	47	46	46	47	47.5	49.7	
15-Apr	47	46	46	44	43	A	41	40	40	41	42	44	45	50	51	51	51	51	51	50	50	49	49	51	46.9	54.0	
16-Apr	48	48	48	47	A	45	44	43	45	46	46	49	51	51	51	51	51	51	51	50	50	49	49	51	48.6	51.4	
17-Apr	50	48	47	A	47	47	47	47	47	48	50	51	54	54	55	55	55	54	52	51	49	45	45	43	49.6	55.0	
18-Apr	42	39	A	39	35	35	34	36	41	44	43	48	50	52	53	52	50	50	49	49	48	47	49	50	45.0	52.6	
19-Apr	50	A	47	46	46	45	43	42	40	38	36	35	34	34	36	37	36	37	37	36	35	34	34	34	38.9	49.6	
20-Apr	A	42	39	37	39	41	42	43	43	43	44	45	45	47	49	49	48	46	47	46	46	44	44	A	44.0	49.2	
21-Apr	46	45	44	44	42	41	42	43	44	44	44	45	45	43	48	49	48	49	50	51	51	51	A	51	46.1	51.2	
22-Apr	50	49	48	49	47	45	45	45	43	43	47	49	48	51	51	52	55	55	55	55	54	A	53	51	49.5	55.2	
23-Apr	50	49	49	44	22	21	38	42	46	47	53	54	55	53	53	53	53	53	52	53	A	51	51	50	47.6	54.5	
24-Apr	51	50	51	50	48	46	46	45	45	44	45	47	50	55	54	52	51	52	51	A	48	50	48	46	49.0	54.7	
25-Apr	43	42	41	41	40	40	40	40	40	41	42	43	44	42	39	39	39	36	A	34	33	33	32	32	38.9	43.8	
26-Apr	33	33	34	33	34	34	36	40	42	43	46	48	49	50	50	48	48	A	47	46	44	43	46	46	42.3	49.6	
27-Apr	46	45	45	45	45	46	45	44	42	42	47	47	46	45	47	47	C	C	C	C	C	34	30	28	43.0	47.4	
28-Apr	25	23	22	22	22	22	25	31	34	35	37	43	45	49	50	A	40	43	42	43	41	43	43	45	35.9	50.1	
29-Apr	46	48	47	42	40	39	38	37	40	35	25	27	27	26	A	23	23	23	26	27	27	29	31	33	33.0	48.4	
30-Apr	35	35	37	38	37	34	31	28	28	30	32	30	30	A	33	33	32	31	31	30	30	29	29	30	31.9	38.3	
																								Diurnal Average	Diurnal Maximum		
45.3 44.6 44.4 43.6 42.3 41.7 42.0 42.2 42.7 43.0 43.8 44.7 45.1 47.3 48.5 47.7 46.9 46.7 47.8 46.5 45.9 44.9 44.6 44.7 59.4 58.0 56.6 55.7 54.5 53.7 52.6 52.3 52.8 53.6 54.0 55.3 56.7 55.8 58.6 57.4 57.9 59.7 61.4 56.4 60.0 60.4 61.8 61.0																								Diurnal Average	Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																											

### Hourly Averages

Ozone (O<sub>3</sub>) - ppb  
Sunset House - April 2013





## Hourly Maximums

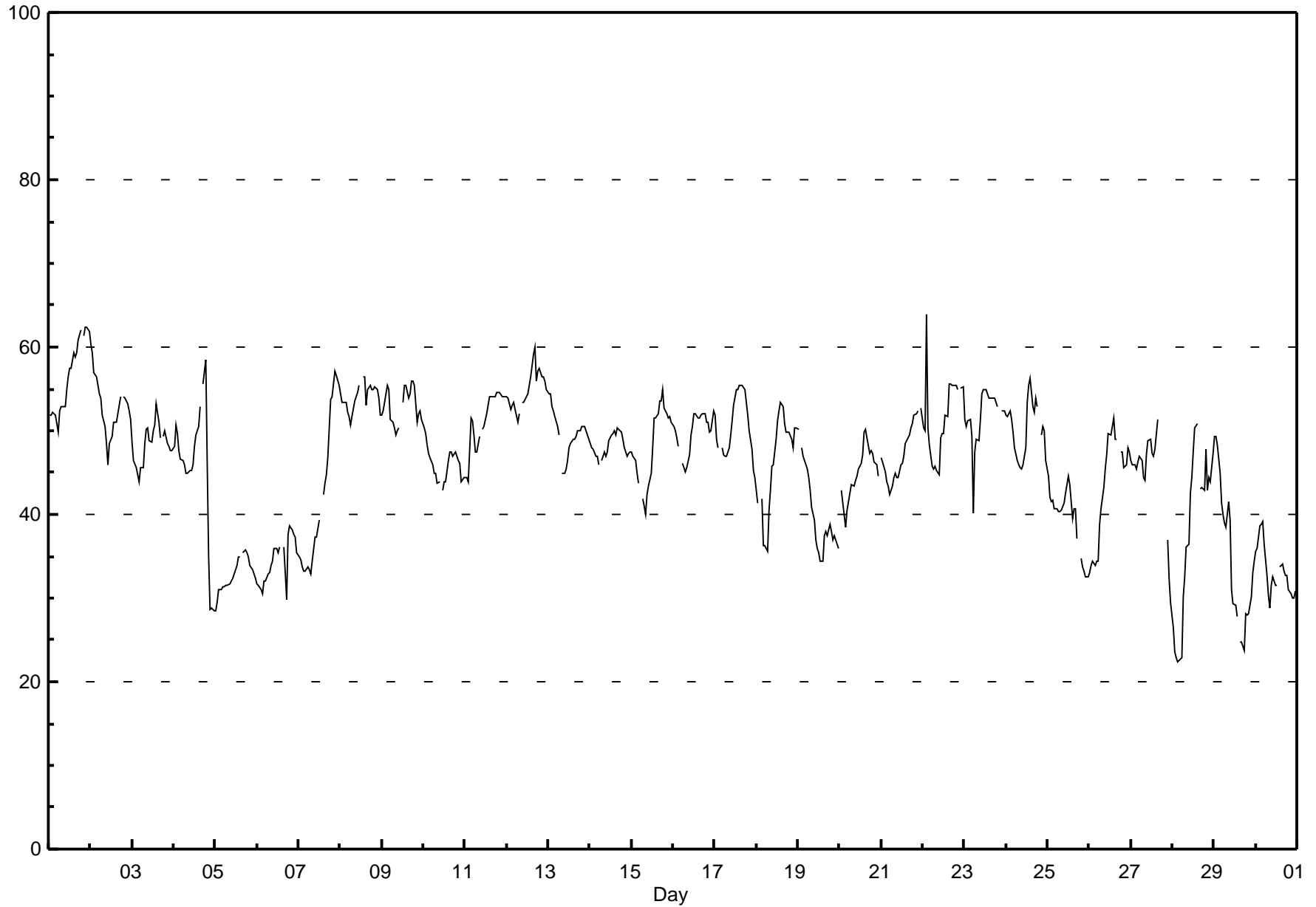
Ozone (O<sub>3</sub>) - ppb

Sunset House - April 2013

Maximum Value: 63.8 ppb on Apr 22 03:00		Maximum Daily Average: 56.3 ppb on Apr 1		Hours in Service: 720																																													
Minimum Value: 22 ppb on Apr 28 04:00		Minimum Daily Average: 32.7 ppb on Apr 5		Hours of Data: 685																																													
Maximum Diurnal Average: 49.6 ppb at hour 15		Minimum Diurnal Average: 43.3 ppb at hour 6		Hours of Missing Data: 35																																													
Monthly Average: 46.10 ppb		Percentiles: P <sub>1</sub> = 23.6 P <sub>10</sub> = 33.2 Q <sub>1</sub> = 41.9 Median = 47.8 Q <sub>3</sub> = 51.9 P <sub>90</sub> = 54.9 P <sub>99</sub> = 60.7		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-Apr	52	52	52	52	52	50	52	53	53	53	55	56	57	58	59	59	59	61	62	A	61	62	62	62	56.3	62.4																							
2-Apr	60	59	57	56	55	54	54	52	50	48	46	48	49	51	51	51	52	54	A	54	54	53	52	51	52.8	60.4																							
3-Apr	49	46	46	45	44	46	46	48	50	50	49	49	50	51	53	51	49	A	49	50	48	48	48	48	48.3	53.2																							
4-Apr	48	51	50	48	47	47	46	45	45	45	45	46	48	50	50	53	A	56	58	46	35	29	29	28	45.4	58.4																							
5-Apr	28	29	31	31	31	31	31	31	32	32	32	33	34	35	35	A	35	36	35	35	34	33	33	32	32.7	35.8																							
6-Apr	32	31	31	30	32	32	33	33	34	34	36	36	35	36	A	36	33	30	38	39	38	38	37	35	34.3	38.7																							
7-Apr	35	35	34	33	33	34	33	33	34	37	37	38	39	A	42	44	45	47	54	54	56	57	57	55	42.0	57.1																							
8-Apr	54	53	53	53	52	52	51	52	54	54	55	55	A	56	56	53	55	55	55	55	55	55	54	52	54.0	56.5																							
9-Apr	52	52	54	55	55	51	51	50	49	50	50	A	53	55	55	54	54	56	56	55	51	52	52	51	53.0	55.9																							
10-Apr	50	50	48	47	47	46	45	45	44	44	A	43	44	44	46	47	47	47	47	47	46	46	44	44	46.1	50.4																							
11-Apr	44	44	44	51	51	50	48	48	49	A	50	51	52	53	54	54	54	54	55	55	55	54	54	54	51.2	54.5																							
12-Apr	54	54	52	53	53	52	51	52	A	53	53	54	54	55	56	59	60	56	57	57	56	56	56	55	54.9	59.9																							
13-Apr	54	54	53	52	52	50	49	A	45	45	45	46	48	48	49	49	49	50	50	50	50	50	49	49	49.6	54.4																							
14-Apr	48	48	48	47	47	46	A	46	47	47	47	49	49	50	50	49	50	50	50	49	48	47	47	47	48.2	50.4																							
15-Apr	47	47	46	45	44	A	42	41	40	42	43	45	48	51	51	52	53	53	55	53	52	52	52	51	48.1	55.0																							
16-Apr	51	50	49	48	A	46	46	45	46	47	50	50	52	52	51	51	52	52	52	51	51	50	50	52	49.7	52.4																							
17-Apr	52	49	48	A	48	47	47	47	48	49	51	53	55	55	55	55	55	55	53	52	50	48	45	44	50.6	55.4																							
18-Apr	43	41	A	42	36	36	36	40	43	46	46	49	51	52	53	53	51	50	50	50	49	48	50	50	46.4	53.4																							
19-Apr	50	A	48	47	46	45	44	43	41	39	37	36	35	34	34	37	38	37	39	38	37	37	37	36	39.9	50.1																							
20-Apr	A	43	41	38	40	41	43	44	43	44	45	45	46	47	50	50	49	47	48	47	46	46	45	A	45.0	50.2																							
21-Apr	47	46	45	44	43	42	43	44	45	44	44	46	46	47	48	49	50	50	51	52	52	52	A	53	47.2	52.7																							
22-Apr	50	50	64	50	48	46	45	46	45	45	49	50	50	52	52	56	56	55	55	55	55	A	55	55	51.5	63.8																							
23-Apr	51	51	51	51	49	40	47	49	49	51	54	55	55	54	54	54	54	54	53	53	A	52	52	52	51.7	54.9																							
24-Apr	52	52	52	51	50	48	46	46	46	45	46	48	53	55	56	53	52	54	53	A	49	50	50	47	50.2	56.3																							
25-Apr	45	42	42	42	41	41	40	40	41	41	42	44	45	44	39	41	41	37	A	35	34	33	33	33	39.7	44.5																							
26-Apr	33	34	34	34	34	34	39	41	43	45	47	50	50	51	51	49	49	A	47	47	46	46	48	47	43.5	51.5																							
27-Apr	46	46	46	45	46	47	46	44	44	47	49	49	47	47	48	51	C	C	C	C	C	37	32	29	44.7	51.4																							
28-Apr	26	23	23	22	23	23	30	33	36	36	43	44	47	50	51	A	43	43	43	48	43	44	44	47	37.7	50.8																							
29-Apr	49	49	48	45	41	40	39	38	42	39	31	29	29	28	A	25	25	24	28	28	28	30	33	34	34.9	49.3																							
30-Apr	36	36	39	39	39	36	33	30	29	32	33	31	31	A	34	34	33	33	33	31	30	30	30	31	33.2	39.2																							
																								46.2	45.5	45.9	44.8	44.2	43.3	43.3	43.4	43.7	44.5	45.2	45.8	46.8	48.6	49.6	48.9	48.0	48.0	49.1	47.6	46.8	46.1	45.9	45.8	Diurnal Average	
																								60.4	59.4	63.8	56.4	55.4	54.4	53.9	52.9	53.6	54.1	54.9	56.4	57.4	57.5	59.4	59.1	59.9	60.8	62.1	57.4	61.3	62.4	62.4	61.8	Diurnal Maximum	
C - Calibration																								A - Automated Daily Zero Span																									

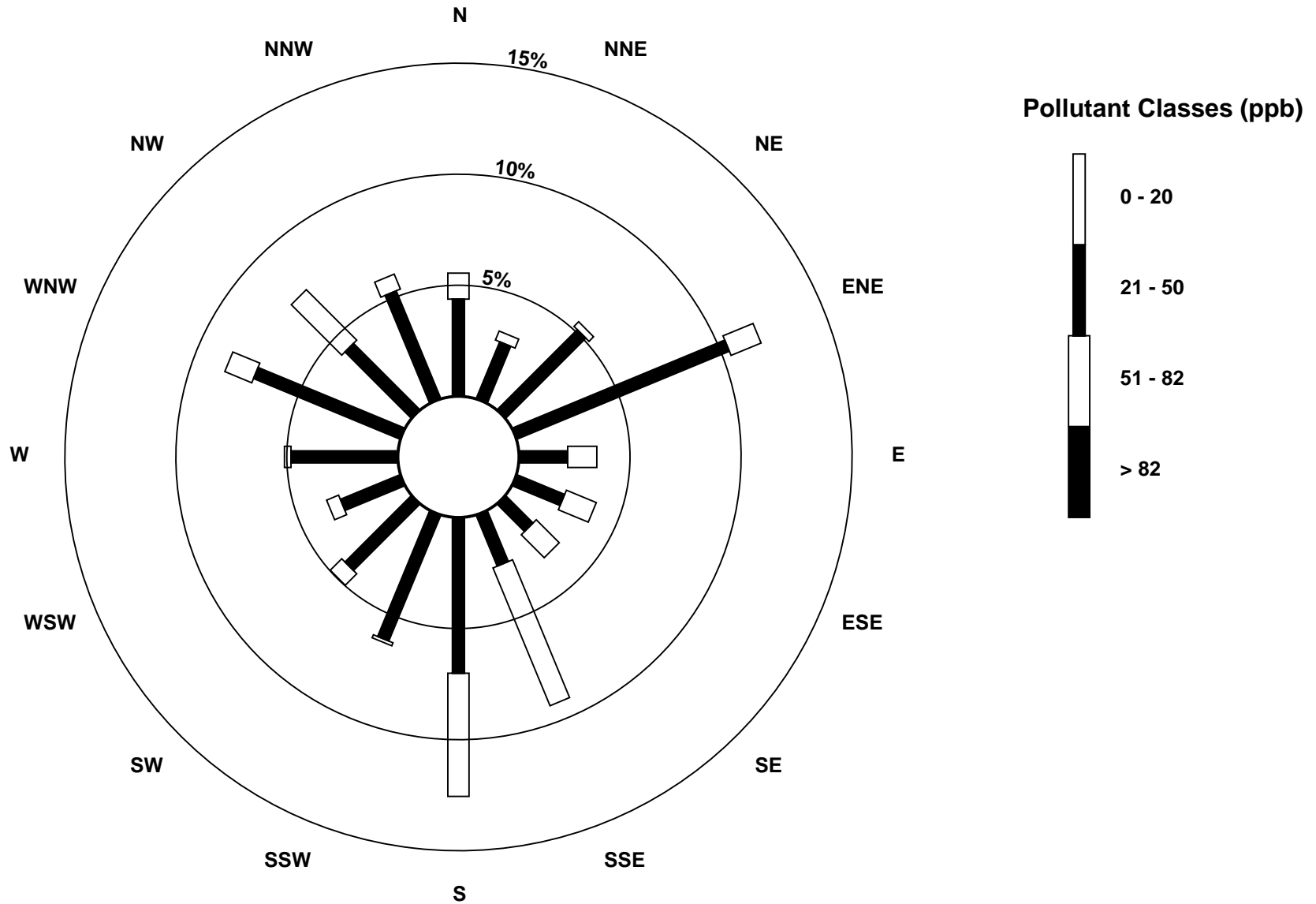
# Hourly Maximums

Ozone (O<sub>3</sub>) - ppb  
Sunset House - April 2013



**Pollutant Rose**

Ozone (O<sub>3</sub>) - ppb  
Sunset House - April 2013



# Eight Hour Running Averages

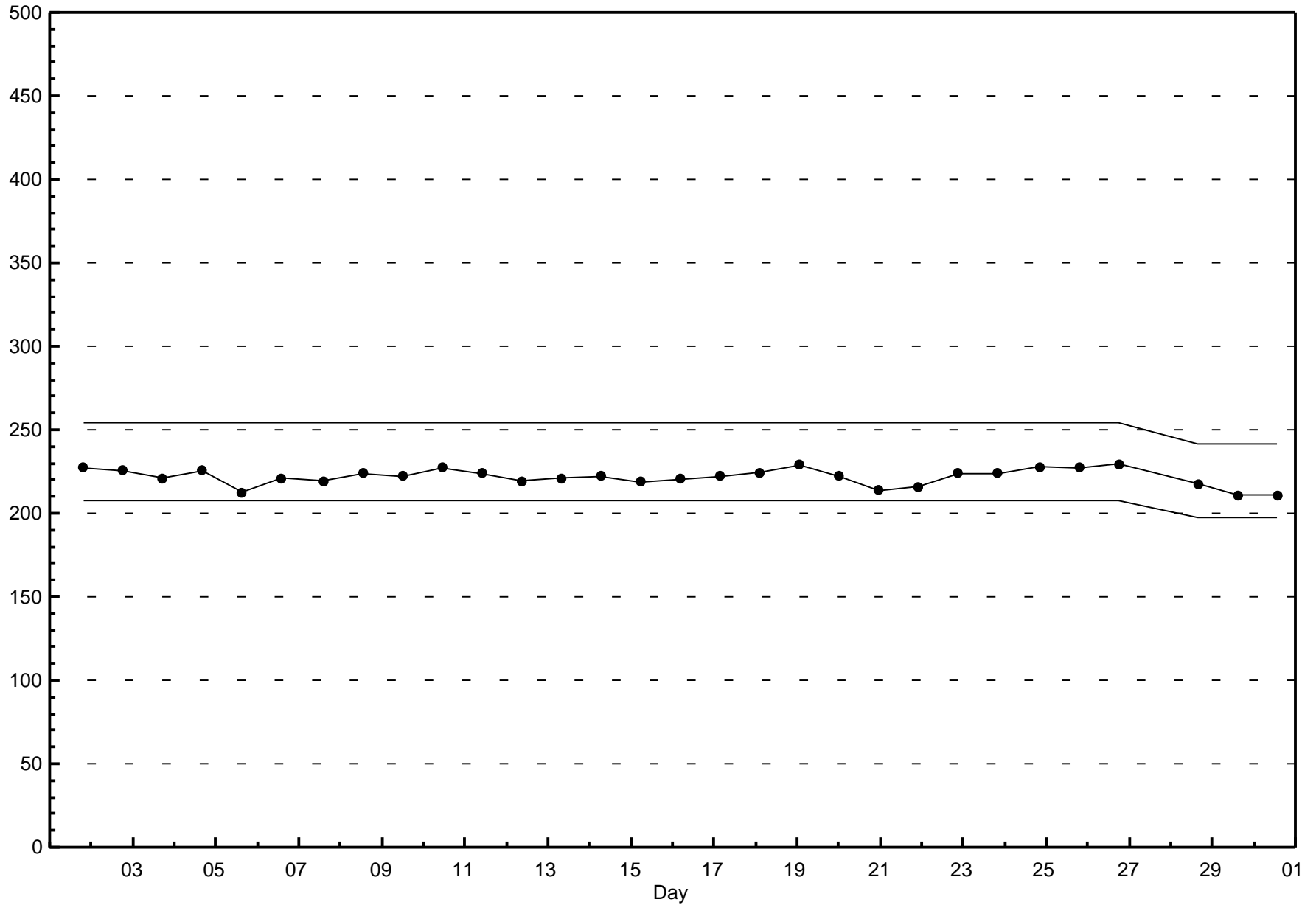
Ozone (O<sub>3</sub>) - ppb

Sunset House - April 2013

Maximum Value: 60.5 ppb on Apr 2 01:00																					Hours in Service: 720				
Minimum Value: 23.5 ppb on Apr 28 07:00																					Hours of Data: 712				
Percentiles: P <sub>1</sub> = 25.1 P <sub>10</sub> = 32.7 Q <sub>1</sub> = 40.8 Median = 46.7 Q <sub>3</sub> = 50.6 P <sub>90</sub> = 53.2 P <sub>99</sub> = 59.0																					Hours of Missing Data: 8				
																					Hours of Calibration: 8				
																					Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	52	51	51	51	51	51	51	51	51	51	51	52	53	53	54	55	56	57	58	58	59	59	60	60	60.3
2-Apr	61	60	60	59	58	58	56	55	54	53	51	50	49	49	49	48	49	49	50	51	52	52	52	52	60.5
3-Apr	51	50	49	48	47	46	45	45	45	46	46	46	47	48	48	49	49	49	49	49	49	48	48	48	50.9
4-Apr	48	48	48	48	47	47	47	47	46	46	45	45	45	45	46	47	47	48	50	49	47	44	41	38	49.7
5-Apr	36	33	30	29	29	29	30	30	31	31	31	31	32	32	33	33	33	34	34	34	35	34	34	34	36.5
6-Apr	33	33	32	32	31	31	31	31	32	32	32	33	32	32	32	32	31	30	30	30	32	33	33	33	33.4
7-Apr	34	35	35	35	34	34	33	33	33	33	33	34	35	35	36	38	39	40	42	45	47	48	50	52	51.7
8-Apr	53	54	54	54	54	53	53	52	52	52	52	52	52	53	54	54	54	54	54	54	54	54	54	54	54.3
9-Apr	54	53	53	53	53	52	52	52	52	51	51	50	50	51	51	52	52	53	54	54	54	53	53	53	54.0
10-Apr	52	51	51	50	49	48	47	47	46	45	45	44	44	43	43	44	44	45	45	46	46	46	46	46	52.2
11-Apr	45	45	44	45	45	45	46	46	47	47	48	49	49	49	50	51	52	52	53	53	53	53	53	53	53.5
12-Apr	53	53	53	53	53	52	52	52	52	52	52	52	52	53	54	54	55	55	55	55	55	55	55	55	55.4
13-Apr	55	55	55	54	53	53	52	52	50	49	48	47	46	46	46	46	47	47	48	49	49	49	49	49	54.8
14-Apr	49	49	49	48	48	47	47	47	46	46	46	46	46	47	47	47	48	48	49	49	49	48	48	48	49.3
15-Apr	47	47	47	46	46	46	45	44	43	42	42	42	42	43	44	45	47	49	50	51	52	52	51	51	51.7
16-Apr	51	50	49	49	48	48	47	46	46	45	45	45	46	47	48	49	50	50	51	51	51	51	50	50	51.1
17-Apr	50	50	50	49	49	49	48	48	47	47	47	48	49	50	51	52	53	53	54	54	53	52	51	49	53.7
18-Apr	48	46	45	43	41	40	38	37	37	38	38	39	41	43	46	48	49	50	50	51	50	50	49	49	50.6
19-Apr	49	49	49	48	48	48	47	46	44	43	42	41	39	38	37	36	36	35	36	36	36	36	36	36	49.1
20-Apr	36	37	37	37	37	38	39	40	41	41	41	43	43	44	45	46	46	47	47	47	47	47	46	46	47.2
21-Apr	46	46	45	45	44	44	43	43	43	43	43	43	43	44	44	45	46	46	47	48	49	50	50	50	50.2
22-Apr	50	50	50	50	49	48	48	47	46	46	46	46	46	46	47	48	49	51	52	53	53	54	54	54	54.0
23-Apr	53	52	52	50	46	43	41	40	39	39	39	41	45	49	51	52	53	54	53	53	53	53	52	52	53.5
24-Apr	52	51	51	51	50	50	49	49	48	47	46	46	46	47	48	49	50	51	52	52	52	51	51	50	52.3
25-Apr	48	47	45	45	44	43	42	41	40	40	40	41	41	41	41	41	40	40	39	37	36	35	34	34	48.4
26-Apr	33	33	33	33	33	33	34	34	36	37	38	40	42	44	46	47	48	48	48	47	47	46	46	46	48.4
27-Apr	46	46	45	45	45	46	45	45	45	44	45	45	45	45	45	46	46	N	N	N	N	N	N	N	46.5
28-Apr	N	N	27	26	26	24	24	24	25	27	29	31	34	38	41	42	43	44	45	45	44	43	42	43	44.6
29-Apr	43	44	45	44	44	44	43	42	41	40	37	35	34	32	31	29	27	25	25	25	26	26	26	27	44.5
30-Apr	29	30	32	33	34	35	35	34	34	33	32	31	30	30	30	31	31	31	31	31	31	31	31	30	35.1
60.5 60.3 59.6 59.1 58.4 57.6 56.4 55.2 54.0 52.6 52.1 52.3 52.7 53.5 54.4 55.0 55.7 56.7 57.8 58.1 58.6 59.3 59.8 60.3																									
Diurnal Maximums																									
N - Not Valid																									

**Span Responses**

**Ozone (O<sub>3</sub>)**  
**Sunset House - April 2013**



## Hourly Averages

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

Sunset House - April 2013

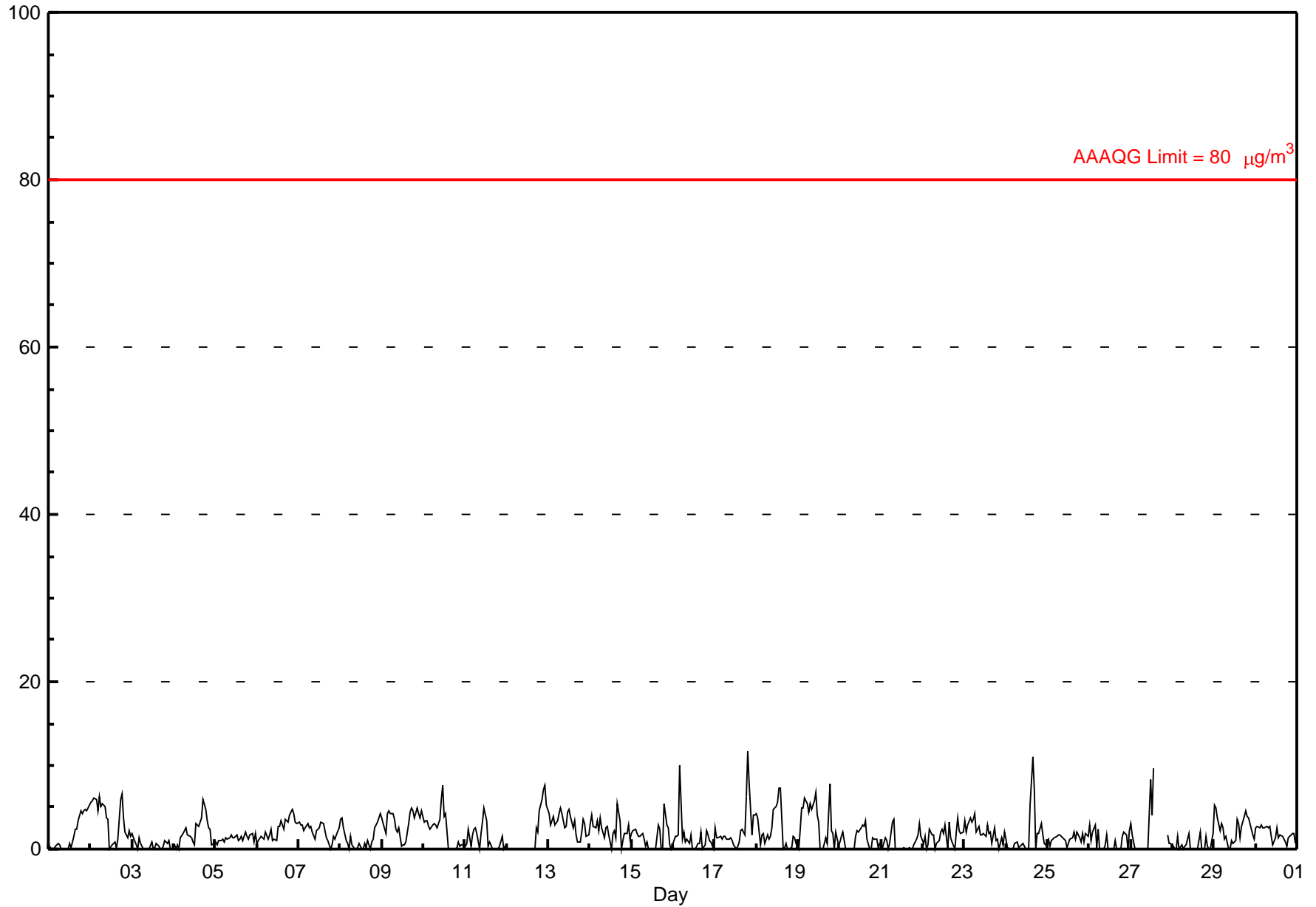
Number of Exceedences: 1-hr: 0 24-hr: 0	Hours in Service: 720
Maximum Value: 11.6 µg/m <sup>3</sup> on Apr 17 20:00	Maximum Daily Average: 3.5 µg/m <sup>3</sup> on Apr 2
Minimum Value: 0 µg/m <sup>3</sup> on Apr 1 02:00	Hours of Data: 714
Minimum Daily Average: 0.5 µg/m <sup>3</sup> on Apr 3	Hours of Missing Data: 6
Maximum Diurnal Average: 2.5 µg/m <sup>3</sup> at hour 21	Hours of Calibration: 3
Monthly Average: 1.83 µg/m <sup>3</sup>	Percent Operational Time: 99.6
Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.4 Median = 1.5 Q <sub>3</sub> = 2.7 P <sub>90</sub> = 4.2 P <sub>99</sub> = 7.8	

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-Apr	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2	2	3	5	4	5	5	5	5	1.7	5.2																							
2-Apr	6	6	6	6	5	6	5	5	5	4	4	0	0	1	1	0	1	6	7	4	2	1	2	2	3.5	6.6																							
3-Apr	2	1	1	0	1	1	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1	1	0	0	0.5	1.8																							
4-Apr	1	0	0	0	1	2	2	2	2	1	1	1	1	3	3	3	4	6	5	3	3	2	1	1	2.0	6.0																							
5-Apr	1	1	1	1	1	1	1	1	1	2	1	1	2	1	1	2	1	2	2	1	2	2	1	2	1.3	2.1																							
6-Apr	1	1	2	1	1	2	1	2	2	1	1	1	3	3	3	2	4	3	3	4	5	4	3	3	2.4	4.8																							
7-Apr	3	3	3	2	3	3	3	3	2	1	2	2	3	3	3	2	1	1	0	1	1	1	2	2	2.1	3.3																							
8-Apr	4	4	3	1	1	0	2	1	0	0	0	1	0	0	1	0	1	0	1	1	3	3	4	4	1.4	4.3																							
9-Apr	4	3	2	4	5	4	4	4	2	2	3	0	0	0	1	3	4	5	5	4	5	4	4	5	3.2	5.0																							
10-Apr	3	3	3	3	2	3	3	3	3	4	6	8	4	4	0	N	0	0	0	0	1	0	1	1	2.4	7.6																							
11-Apr	0	1	2	0	2	2	3	2	0	2	3	5	3	0	1	0	0	0	0	0	0	2	0	0	1.2	4.8																							
12-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	5	6	7	8	5	1.5	7.6																							
13-Apr	4	3	3	4	3	3	4	5	4	3	3	4	5	4	3	3	2	1	1	2	4	3	1	2	3.1	4.9																							
14-Apr	3	4	3	3	3	2	4	3	1	3	3	2	0	2	2	1	5	3	0	1	2	2	3	1	2.3	5.4																							
15-Apr	2	2	2	2	1	1	2	1	0	1	0	0	0	0	0	3	2	0	0	5	3	3	1	0	1.3	5.4																							
16-Apr	1	1	2	2	10	1	2	1	1	1	2	0	0	0	1	1	2	0	1	2	2	1	1	0	1.4	10.0																							
17-Apr	3	1	1	1	1	2	2	1	1	1	1	1	0	0	0	1	2	2	2	6	12	8	2	4	2.5	11.6																							
18-Apr	4	4	1	2	2	1	2	1	1	3	5	5	6	7	7	0	0	1	0	0	0	2	1	1	2.3	7.4																							
19-Apr	0	2	5	5	6	5	4	5	5	6	7	4	3	0	0	1	1	1	8	2	2	0	2	0	3.1	7.8																							
20-Apr	1	2	2	0	0	0	0	0	0	2	2	2	2	3	3	3	1	0	0	1	1	1	0	1	1.1	3.4																							
21-Apr	1	0	1	1	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	1	0.8	3.6																							
22-Apr	1	2	0	0	2	2	2	0	1	1	2	2	2	3	0	3	1	1	0	2	4	2	2	2	1.5	3.8																							
23-Apr	3	2	3	4	3	4	4	2	3	2	2	2	1	3	2	2	1	2	1	1	0	1	1	2	2.1	4.3																							
24-Apr	1	0	0	0	0	1	1	0	0	1	1	0	0	0	5	11	7	0	2	2	3	2	1	0	1.6	11.1																							
25-Apr	1	0	1	1	1	1	2	2	2	1	1	0	1	1	1	2	1	2	1	1	2	1	2	2	1.3	2.1																							
26-Apr	3	1	2	3	0	2	0	0	0	1	2	0	0	0	0	1	0	0	0	2	2	2	0	2	0.9	2.9																							
27-Apr	3	2	0	0	0	0	0	0	0	0	0	8	4	10	N	0	N	6	C	C	C	2	1	1	1.9	9.6																							
28-Apr	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	1	2	0	0	2	0	0	0	2	0.5	2.0																							
29-Apr	5	5	4	2	3	3	1	1	0	0	1	1	1	3	3	1	3	4	5	4	4	2	2	1	2.5	5.3																							
30-Apr	3	3	3	3	2	3	3	3	3	2	0	1	3	1	2	2	1	1	0	1	2	2	2	1	1.8	2.9																							
																								2.1	1.9	1.8	1.8	2.0	1.9	2.0	1.7	1.3	1.4	1.7	1.7	1.5	1.8	1.6	1.9	1.8	1.8	1.8	2.4	2.5	2.1	1.8	1.8	Diurnal Average	
																								5.6	5.8	6.1	6.0	10.0	6.3	5.0	5.4	5.0	5.8	6.8	8.4	5.6	9.6	7.4	11.1	7.0	6.2	7.8	11.6	7.9	7.1	7.6	5.3	Diurnal Maximum	

C - Calibration    N - Not Valid  
 Alberta Ambient Air Quality Guideline (AAQG): 1-hr 80 µg/m<sup>3</sup>    Alberta Ambient Air Quality Objective (AAQO): 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 - April 2013



## Hourly Maximums

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

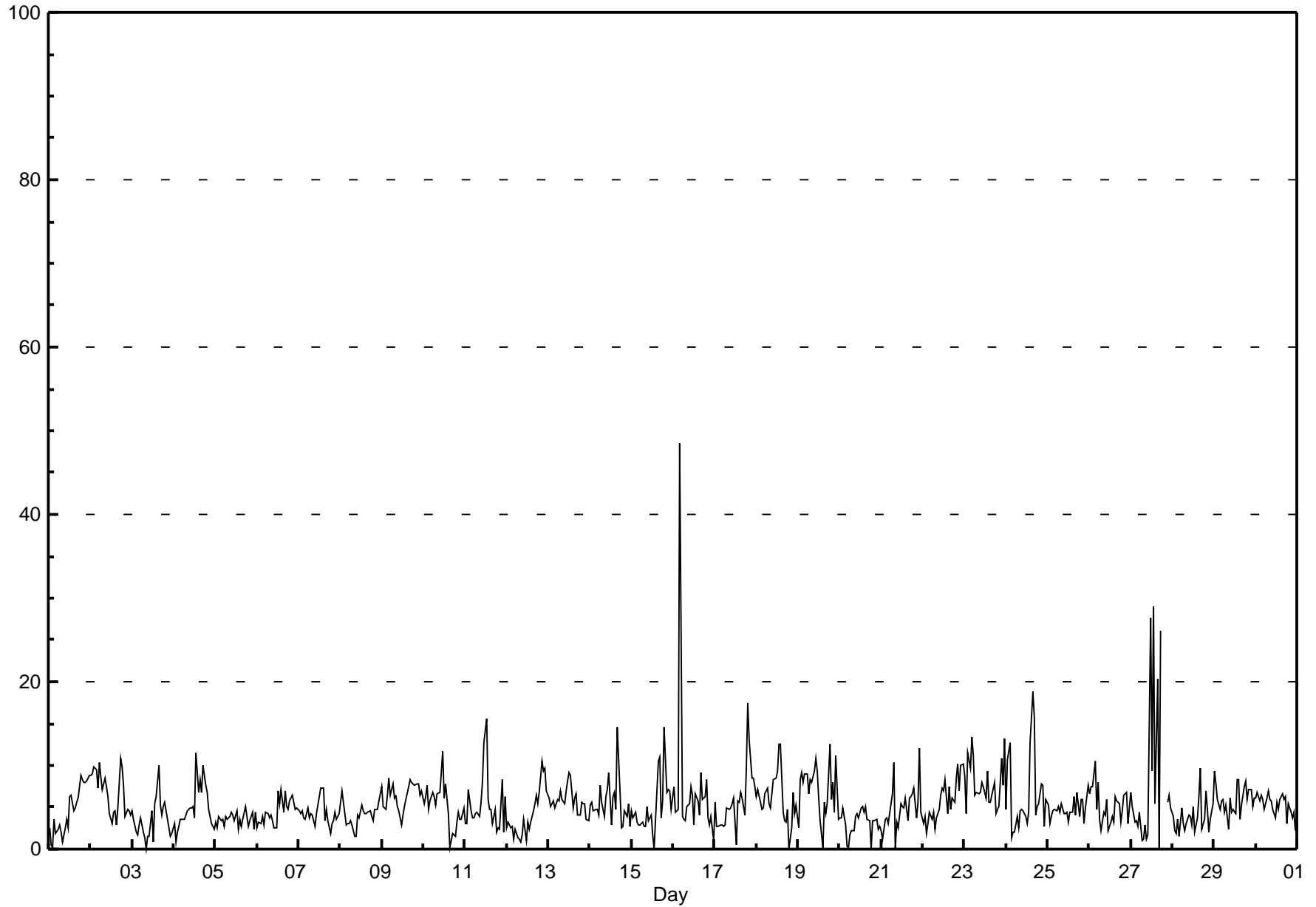
Sunset House - April 2013

Maximum Value: 48.6 µg/m <sup>3</sup> on Apr 16 05:00		Maximum Daily Average: 8.0 µg/m <sup>3</sup> on Apr 27		Hours in Service: 720																							
Minimum Value: 0 µg/m <sup>3</sup> on Apr 3 09:00		Minimum Daily Average: 3.2 µg/m <sup>3</sup> on Apr 20		Hours of Data: 717																							
Maximum Diurnal Average: 6.5 µg/m <sup>3</sup> at hour 14		Minimum Diurnal Average: 4.1 µg/m <sup>3</sup> at hour 9		Hours of Missing Data: 3																							
Monthly Average: 5.34 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 2.4 Q <sub>1</sub> = 3.5 Median = 4.8 Q <sub>3</sub> = 6.5 P <sub>90</sub> = 8.5 P <sub>99</sub> = 16.6		Hours of Calibration: 3																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	3	1	0	4	2	2	3	2	1	3	4	3	6	6	5	5	6	6	9	8	8	8	8	9	4.6	8.8	
2-Apr	9	9	10	10	7	10	9	7	8	7	6	4	3	4	5	3	5	11	10	8	4	5	5	4	6.8	10.9	
3-Apr	5	4	2	2	3	4	2	1	0	2	2	5	1	5	6	10	5	4	5	6	4	2	1	2	3.4	10.0	
4-Apr	3	1	2	3	4	4	3	4	5	5	5	5	4	12	7	8	7	10	8	7	5	4	3	2	4.9	11.6	
5-Apr	3	3	4	3	3	3	4	4	4	4	4	3	4	2	4	3	4	5	4	3	3	4	2	4	3.6	5.1	
6-Apr	2	3	3	4	3	4	4	4	4	3	3	3	7	6	7	4	7	5	5	6	6	6	5	5	4.5	7.2	
7-Apr	5	4	5	4	4	5	4	4	4	3	4	5	6	7	7	3	5	3	2	3	3	4	4	4	4.3	7.3	
8-Apr	6	7	6	3	3	3	3	3	2	2	4	4	5	5	4	4	4	4	4	3	5	5	6	7	4.2	7.0	
9-Apr	7	5	5	6	9	6	8	6	6	5	5	3	4	5	6	8	8	8	8	8	8	8	6	7	6.4	8.6	
10-Apr	5	6	8	5	6	7	6	5	7	7	9	12	6	8	4	0	1	2	2	3	4	4	4	5	5.2	11.7	
11-Apr	3	3	7	5	4	4	4	4	4	6	8	13	16	6	5	5	3	5	2	2	2	8	2	6	5.3	15.6	
12-Apr	3	3	3	3	1	2	1	1	1	2	4	1	3	2	3	5	5	6	5	7	11	9	10	7	4.1	10.5	
13-Apr	6	5	5	6	5	6	6	7	6	5	7	8	9	9	5	6	7	4	4	6	5	5	4	3	5.8	9.2	
14-Apr	5	6	5	5	5	4	8	6	4	6	7	9	3	6	7	5	15	7	2	3	5	4	5	3	5.5	14.6	
15-Apr	5	4	4	3	3	3	3	3	3	5	3	4	2	0	4	10	11	4	6	15	7	7	7	5	5.0	14.5	
16-Apr	7	4	5	5	49	4	4	3	5	5	7	6	3	7	6	4	9	6	6	8	4	3	4	1	6.9	48.6	
17-Apr	6	3	3	3	3	3	3	5	5	5	5	6	1	6	6	7	6	4	10	18	13	8	8	8	5.9	17.5	
18-Apr	6	7	6	5	5	7	7	5	5	7	8	9	9	12	13	4	3	3	5	0	3	7	4	5	6.1	12.6	
19-Apr	3	8	9	8	9	9	7	8	8	9	11	9	6	3	0	6	4	6	13	6	8	4	11	4	7.0	12.5	
20-Apr	4	4	5	3	0	0	2	2	2	4	4	4	5	5	4	5	3	3	0	3	3	4	2	3	3.2	5.1	
21-Apr	2	1	4	4	3	4	7	10	0	3	3	5	5	5	6	3	6	6	7	7	4	6	12	4	4.9	12.0	
22-Apr	3	4	2	3	4	4	4	2	4	5	6	7	7	8	4	7	5	6	6	9	10	7	10	10	5.7	10.2	
23-Apr	9	4	12	10	13	11	6	7	7	7	8	7	6	9	6	6	7	8	4	5	5	11	8	13	7.8	13.4	
24-Apr	5	11	13	1	2	2	4	3	5	5	5	4	3	4	13	19	16	4	5	5	8	8	3	6	6.3	18.9	
25-Apr	5	3	4	5	5	5	5	4	5	4	4	4	3	4	4	6	4	7	4	6	6	3	5	8	4.8	7.7	
26-Apr	7	7	8	10	5	8	4	2	4	4	6	2	3	4	3	6	6	5	3	5	6	7	3	5	5.2	10.5	
27-Apr	7	5	3	3	3	4	1	1	3	1	2	28	9	29	5	20	0	26	C	C	C	6	6	5	8.0	29.0	
28-Apr	4	2	2	4	1	5	3	2	3	4	4	3	5	2	4	6	10	2	4	7	5	2	4	5	3.9	9.6	
29-Apr	9	8	6	5	6	6	4	5	2	6	4	5	4	8	8	4	5	8	8	6	7	7	5	6	6.0	9.2	
30-Apr	6	7	6	7	6	5	6	7	6	6	5	4	6	5	6	7	6	6	3	5	4	4	4	2	5.3	7.0	
		5.1	4.7	5.1	4.6	5.8	4.8	4.5	4.3	4.1	4.6	5.2	6.2	5.2	6.5	5.5	6.3	6.1	6.2	5.2	6.1	5.7	5.6	5.4	5.3	Diurnal Average	
		9.2	10.8	12.7	10.5	48.6	11.2	8.6	10.3	8.5	9.3	10.9	27.7	15.6	29.0	12.6	20.3	15.8	26.2	12.5	17.5	13.1	10.9	12.0	13.3	Diurnal Maximum	
C - Calibration																											



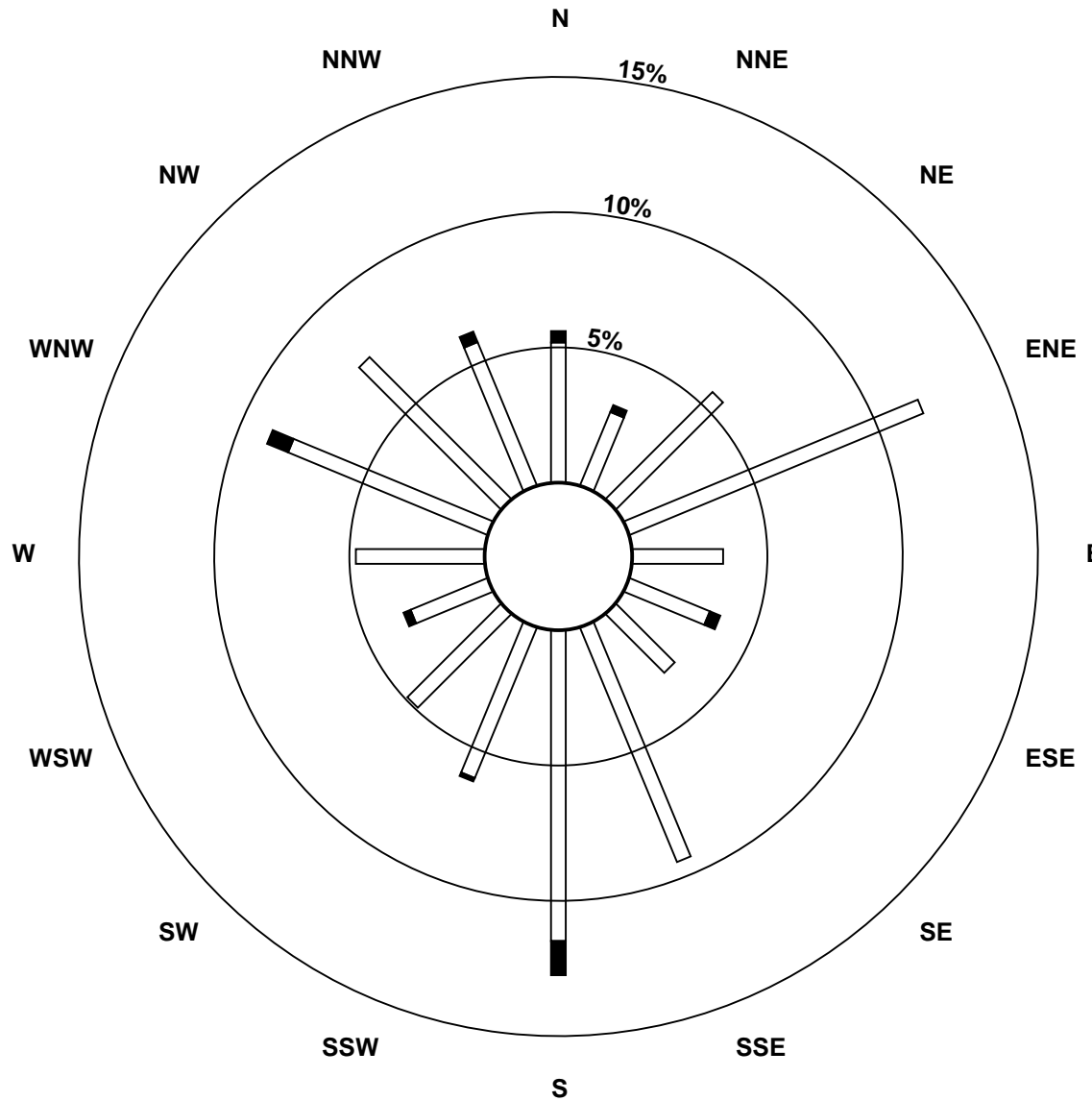
# Hourly Maximums

PM2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Sunset House - April 2013

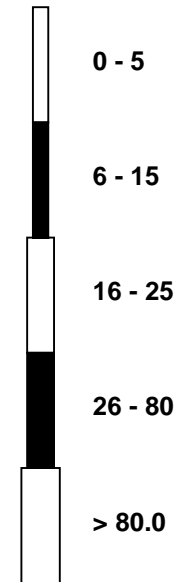


**Pollutant Rose**

**PM<sub>2.5</sub> (PM<sub>2.5</sub>) - μg/m<sup>3</sup>**  
**Sunset House - April 2013**



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





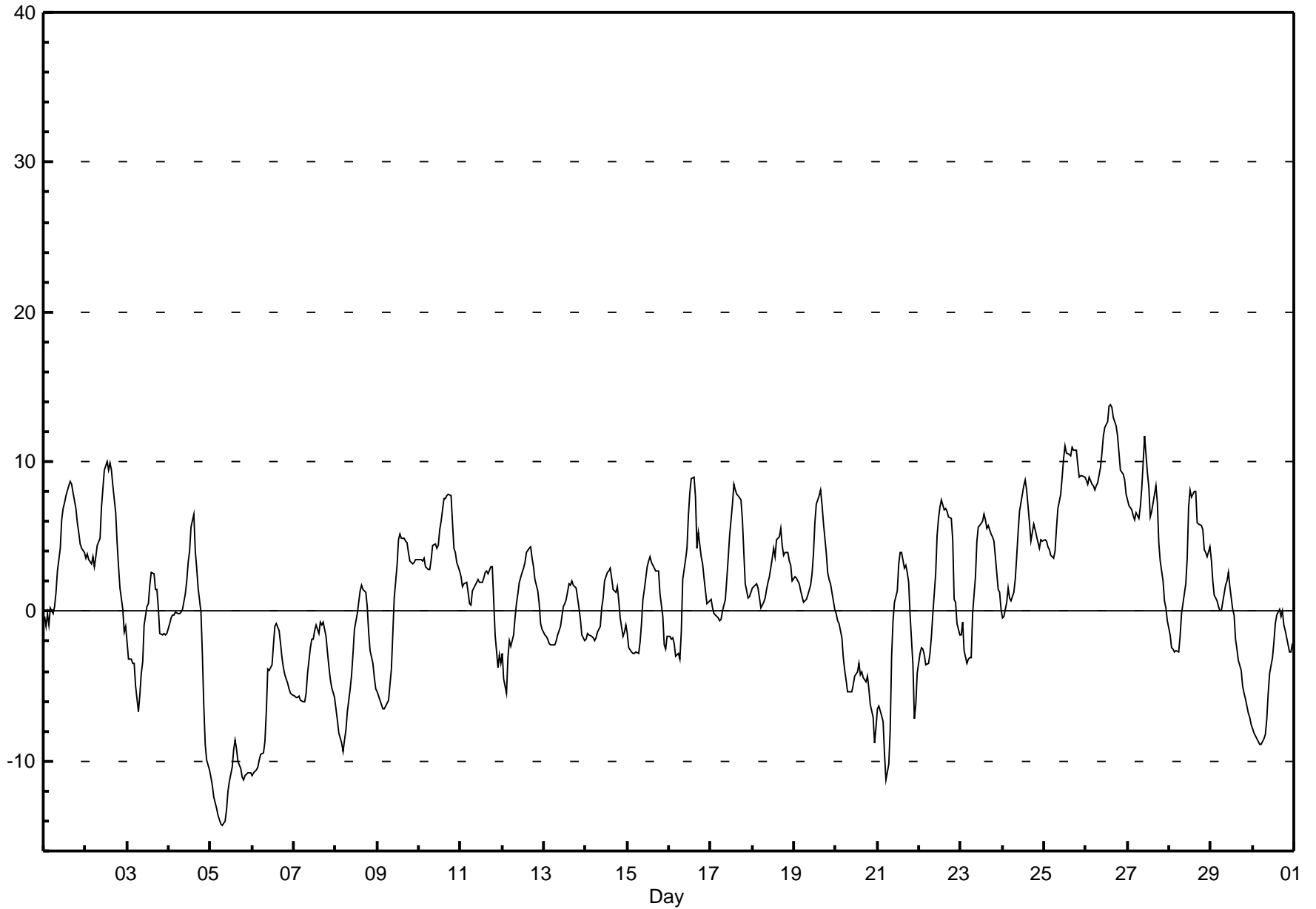
Peace Airshed Zone Association

# Hourly Averages

External Temperature (ET) - °C

Sunset House - April 2013

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13.8 °C on Apr 26 15:00 Maximum Daily Average: 10.4 °C on Apr 26																			Hours in Service: 720 Hours of Data: 720								
Minimum Value: -14 °C on Apr 5 08:00 Minimum Daily Average: -11.6 °C on Apr 5 Maximum Diurnal Average: 4.4 °C at hour 15 Minimum Diurnal Average: -2.3 °C at hour 6 Monthly Average: 0.73 °C Percentiles: P <sub>1</sub> = -12.5 P <sub>10</sub> = -6.3 Q <sub>1</sub> = -2.5 Median = 0.9 Q <sub>3</sub> = 4.2 P <sub>90</sub> = 7.8 P <sub>99</sub> = 12.2																			Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0	-1	0	-1	0	0	0	1	3	4	6	7	7	8	8	9	9	8	7	6	5	5	4	4	4.1	8.7	
2-Apr	4	4	3	3	4	3	4	4	5	7	8	9	10	9	10	9	8	7	5	3	2	0	-1	-1	4.9	10.0	
3-Apr	-2	-3	-3	-3	-3	-5	-7	-6	-4	-3	-1	0	0	2	3	2	1	1	0	-1	-2	-1	-2	-2	-1.6	2.6	
4-Apr	-1	0	0	0	0	0	0	0	0	1	2	3	4	6	7	4	3	2	0	-3	-6	-9	-10	-11	-0.4	6.5	
5-Apr	-11	-12	-12	-13	-14	-14	-14	-14	-14	-13	-12	-11	-10	-9	-9	-9	-10	-10	-11	-11	-11	-11	-11	-11	-11.6	-8.6	
6-Apr	-11	-11	-11	-10	-10	-10	-9	-9	-7	-4	-4	-4	-2	-1	-1	-1	-2	-3	-4	-4	-5	-5	-5	-6	-5.7	-0.8	
7-Apr	-6	-6	-6	-6	-6	-6	-6	-6	-4	-2	-2	-2	-1	-1	-1	-1	-1	-1	-2	-3	-4	-4	-5	-6	-3.6	-0.7	
8-Apr	-7	-7	-8	-9	-9	-9	-8	-7	-5	-4	-3	-1	0	1	1	2	1	1	0	-1	-3	-3	-4	-5	-3.6	1.8	
9-Apr	-5	-6	-6	-7	-6	-6	-6	-5	-4	-1	1	3	5	5	5	5	5	4	3	3	3	3	3	3	0.0	5.2	
10-Apr	3	3	3	4	3	3	3	3	4	4	4	4	5	6	7	8	8	8	8	8	6	4	4	3	3	4.7	7.8
11-Apr	2	2	2	2	1	0	0	1	2	2	2	2	2	2	3	3	3	3	3	3	1	-2	-4	-3	-3	1.1	3.0
12-Apr	-3	-4	-5	-3	-2	-2	-2	0	1	1	2	3	3	3	4	4	4	4	4	3	2	1	0	-1	-1	0.5	4.3
13-Apr	-2	-2	-2	-2	-2	-2	-2	-2	-2	-1	0	0	0	1	2	2	2	2	2	2	1	0	-1	-2	-2	-0.5	2.0
14-Apr	-2	-2	-2	-2	-2	-2	-2	-1	-1	0	1	2	3	3	3	2	1	1	2	1	0	-2	-1	-1	0.0	2.9	
15-Apr	-2	-2	-3	-3	-3	-3	-3	-2	-1	1	1	3	3	4	3	3	3	3	3	3	1	0	-2	-3	-2	0.0	3.7
16-Apr	-2	-2	-2	-2	-3	-3	-3	-1	2	3	4	6	8	9	9	8	4	5	4	3	2	1	1	1	2.2	9.0	
17-Apr	1	0	0	0	0	-1	0	0	1	2	4	5	7	8	8	8	8	7	6	4	2	1	1	1	3.0	8.5	
18-Apr	2	2	2	2	1	0	1	1	1	2	2	4	4	4	5	5	6	4	4	4	4	4	3	3	2	2.8	5.6
19-Apr	2	2	2	2	1	1	1	1	1	2	2	4	6	7	8	8	7	6	4	3	2	2	1	0	3.1	8.1	
20-Apr	0	-1	-1	-2	-3	-4	-5	-5	-5	-5	-5	-4	-4	-3	-4	-4	-4	-5	-4	-5	-6	-7	-9	-8	-4.4	-0.2	
21-Apr	-7	-6	-7	-7	-10	-11	-10	-8	-3	-1	1	1	3	4	4	3	3	3	2	0	-4	-7	-6	-4	-2.8	4.0	
22-Apr	-3	-2	-3	-3	-4	-3	-3	-2	0	3	5	6	7	7	7	7	7	6	6	5	1	1	-1	-2	1.8	7.5	
23-Apr	-2	-1	-3	-3	-3	-3	-3	0	2	5	6	6	6	6	6	6	6	5	5	5	4	1	1	0	2.2	6.5	
24-Apr	0	0	1	2	1	1	1	2	4	5	7	8	8	9	8	6	5	5	6	5	5	4	5	5	4.2	8.7	
25-Apr	5	5	4	4	4	4	4	6	7	8	9	10	11	11	11	10	11	11	11	10	9	9	9	9	7.9	11.1	
26-Apr	9	8	9	8	8	8	8	9	10	11	12	12	13	14	14	14	13	12	12	11	9	9	9	8	10.4	13.8	
27-Apr	7	7	7	6	6	7	6	7	8	10	12	9	8	6	7	8	8	7	5	3	2	1	0	-1	6.1	11.7	
28-Apr	-2	-2	-3	-3	-3	-3	-2	0	1	2	4	7	8	8	8	8	6	6	6	5	4	4	4	4	2.8	8.1	
29-Apr	3	2	1	1	0	0	0	1	2	2	3	2	0	0	-2	-3	-4	-5	-5	-6	-7	-7	-8	-8	-1.4	3.4	
30-Apr	-8	-8	-8	-9	-9	-9	-8	-8	-7	-5	-4	-3	-2	-1	0	0	0	-1	-1	-2	-3	-3	-2	-2	-4.3	0.1	
																			Diurnal Average								
																			Diurnal Maximum								





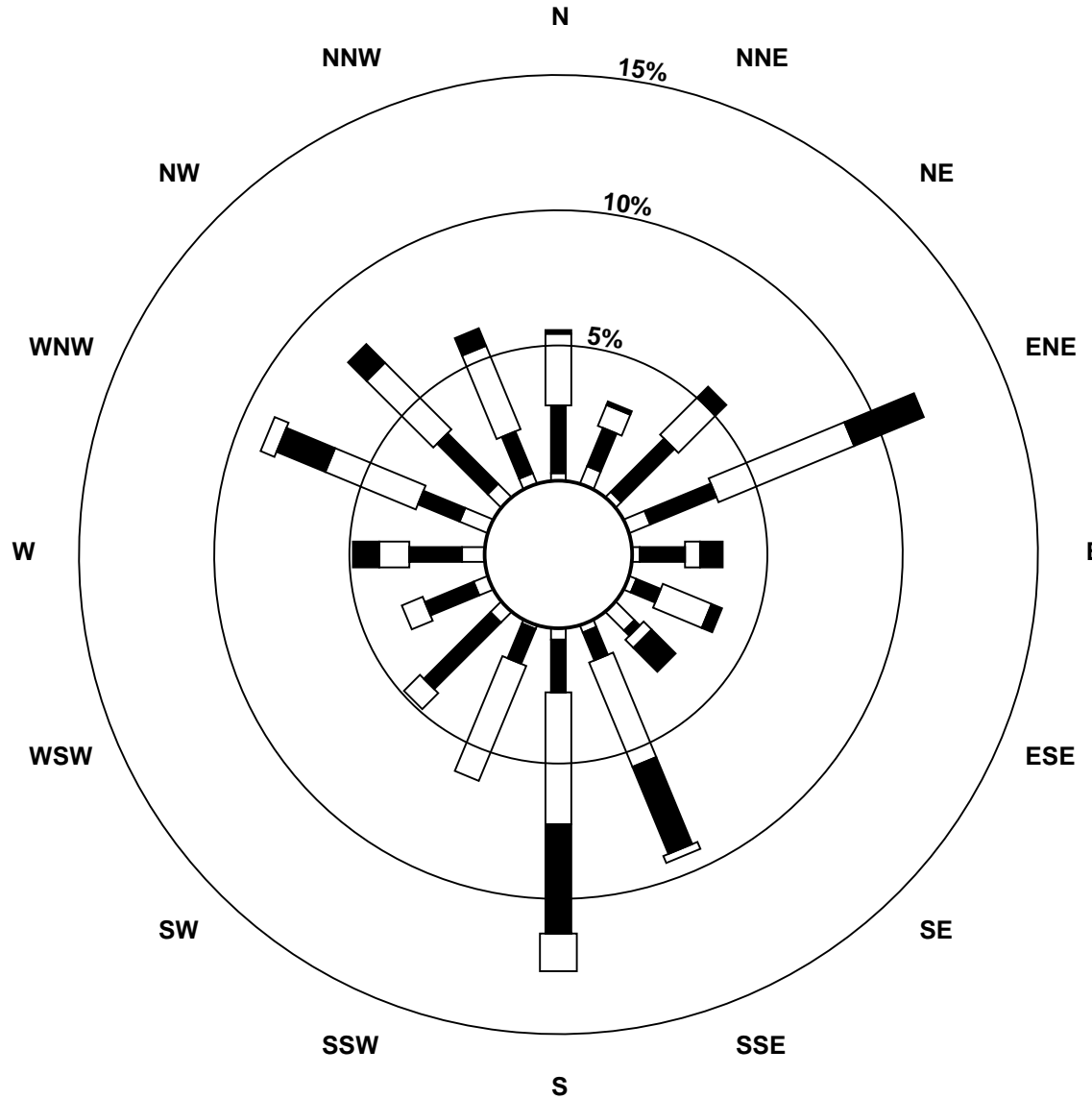
## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Sunset House - April 2013

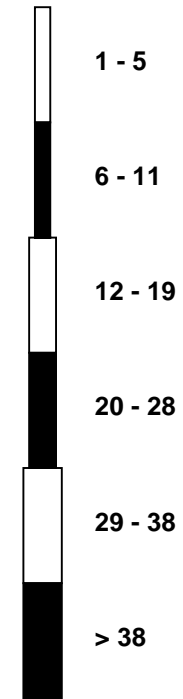
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	8	7	5	5	3	4	4	4	5	7	18	21	24	19	18	17	18	17	13	11	6	1	8	4	6.7	23.8
Dir	184	183	138	63	122	172	206	219	244	283	316	310	307	314	313	318	312	311	307	312	313	271	73	140	305.2	307.2
24 Spd	7	8	9	14	13	13	12	13	10	8	9	9	15	16	13	12	8	8	6	6	15	20	19	16	8.7	20.0
Dir	173	145	169	181	187	191	192	204	223	223	273	272	273	289	280	254	283	257	256	197	184	182	191	192	216.7	182.3
25 Spd	14	15	13	10	9	9	9	10	15	17	16	20	18	20	20	15	17	16	14	9	10	11	13	15	10.7	20.0
Dir	198	197	197	210	217	206	213	256	274	285	282	299	294	290	287	293	293	286	282	245	224	207	208	201	256.2	298.8
26 Spd	15	15	13	11	10	10	11	10	8	10	12	18	21	20	20	20	19	18	18	12	8	14	14	13	12.8	21.1
Dir	201	200	214	221	233	230	255	270	245	264	285	283	277	266	267	268	280	274	260	251	223	233	239	216	251.7	277.0
27 Spd	14	11	10	14	13	15	17	17	17	15	16	13	13	24	20	31	36	35	27	22	15	13	11	9	11.8	35.8
Dir	224	219	214	204	200	194	184	185	195	210	238	252	297	289	281	289	288	300	316	310	315	317	328	15	266.9	287.8
28 Spd	5	6	8	6	10	10	6	7	13	13	11	3	2	12	15	8	17	16	11	1	7	11	17	11	5.1	17.4
Dir	20	60	86	81	108	110	123	160	179	195	182	266	298	213	205	230	55	85	101	230	40	100	115	165	129.2	114.5
29 Spd	9	12	10	5	6	6	10	10	18	23	22	20	20	24	29	26	23	23	16	15	14	17	11	13	13.8	29.3
Dir	244	224	208	242	258	246	281	282	294	293	286	274	272	293	303	301	304	306	323	343	338	342	326	325	295.6	303.3
30 Spd	15	13	12	12	13	4	8	12	12	12	12	14	8	9	10	8	6	9	10	9	11	16	17	16	5.0	16.8
Dir	333	332	339	346	6	312	282	306	308	313	341	340	336	334	5	357	53	50	94	93	100	114	133	158	0.3	132.6
Spd	5.9	6.5	5.5	4.8	5.3	6.3	5.6	4.9	4.4	3.2	2.7	2.6	3.4	4.3	4.4	4.0	4.5	3.6	3.4	2.1	3.2	4.7	5.8	6.2	Diurnal Average	
Dir	155.8	156.9	160.7	161.8	158.7	160.7	166.9	180.6	196.8	222.5	257.3	289.2	302.1	314.3	322.6	329.9	339.2	353.3	8.7	61.3	99.5	125.5	143.1	151.4	Diurnal Maximum	
Spd	25.7	26.9	25.6	23.8	26.1	31.0	31.5	29.3	28.5	28.3	28.2	27.8	28.2	30.2	31.8	31.1	35.8	34.9	27.8	29.1	31.1	31.2	29.0	25.7	Diurnal Maximum	
Dir	143.2	170.3	169.5	168.6	162.0	159.5	163.2	173.3	171.9	165.2	72.4	67.3	63.5	174.9	174.2	288.9	287.8	300.3	180.8	172.1	173.0	173.2	179.6	183.3	Diurnal Maximum	
Maximum Speed Value: 36 km/h on Apr 27 17:00		Minimum Speed Value: 1 km/h on Apr 21 05:00																Hours in Service: 720								
Maximum Daily Speed Average: 28.2 km/h on Apr 9		Minimum Daily Speed Average: 2.1 km/h on Apr 21																Hours of Data: 720								
Maximum Diurnal Speed Average: 6.5 km/h at hour 2		Minimum Diurnal Speed Average: 2.1 km/h at hour 20																Hours of Missing Data: 0								
Monthly Average Velocity: 1.62 km/h 168.07 deg		Speed Percentiles: P <sub>1</sub> = 1.7 P <sub>10</sub> = 5.9 Q <sub>1</sub> = 8.9 Median = 13.2 Q <sub>3</sub> = 18.0 P <sub>90</sub> = 23.2 P <sub>99</sub> = 31.1																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	4	26	41	6	0	0	77																			
NorthEast	3	33	45	14	1	0	96																			
East	5	26	31	18	1	0	81																			
SouthEast	8	7	20	24	0	0	59																			
South	4	18	81	45	13	0	161																			
SouthWest	8	36	20	0	0	0	64																			
West	11	29	31	12	2	0	85																			
NorthWest	10	27	40	18	2	0	97																			
Total	53	202	309	137	19	0	720																			

**Wind Rose**

**Wind Speed (WS) (km/h)**  
**Sunset House - April 2013**



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



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Sunset House - April 2013

Maximum Speed: 36 km/h on Apr 27 18:00		Maximum Daily Speed Average: 28.6 km/h on Apr 9		Hours in Service: 720																																													
Minimum Speed: 2 km/h on Apr 21 08:00		Minimum Daily Speed Average: 5.3 km/h on Apr 21		Hours of Data: 720																																													
Maximum Diurnal Speed Average: 17.1 km/h at hour 17		Minimum Diurnal Speed Average: 12.1 km/h at hour 21		Hours of Missing Data: 0																																													
Monthly Average Speed: 14.28 km/h		Percentiles: P <sub>1</sub> = 2.9 P <sub>10</sub> = 6.5 Q <sub>1</sub> = 9.4 Median = 13.4 Q <sub>3</sub> = 18.3 P <sub>90</sub> = 23.3 P <sub>99</sub> = 31.2		Percent Operational Time: 100.0																																													
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Apr	9	12	11	9	11	12	12	13	14	14	12	16	17	18	17	20	18	20	17	18	22	25	25	26	16.1	25.7																							
2-Apr	24	23	23	23	22	20	19	19	18	16	12	13	17	19	20	21	28	23	20	15	12	6	4	13	18.1	28.0																							
3-Apr	9	3	7	9	10	15	12	10	10	11	9	8	8	8	7	10	11	13	12	8	11	15	17	17	10.4	17.1																							
4-Apr	20	24	24	23	20	22	24	23	21	16	14	10	9	7	7	10	13	16	17	18	19	22	19	16	17.3	24.2																							
5-Apr	13	14	16	15	16	12	12	13	13	13	12	11	12	13	13	13	13	14	13	10	8	8	8	8	12.1	15.6																							
6-Apr	9	7	10	11	10	11	14	14	7	8	14	16	17	19	18	21	21	22	21	20	16	14	12	10	14.2	21.6																							
7-Apr	10	11	10	10	12	13	13	12	13	13	15	16	19	21	21	21	22	20	20	16	18	20	20	18	16.0	21.8																							
8-Apr	15	16	16	14	20	23	21	17	16	18	17	15	19	19	18	15	18	16	18	16	18	22	21	25	18.1	25.4																							
9-Apr	26	27	26	24	26	31	32	30	29	28	26	28	28	31	32	30	31	27	28	29	31	31	29	26	28.6	32.1																							
10-Apr	25	24	22	18	19	18	15	14	11	12	12	13	15	15	9	10	11	8	12	7	5	6	6	6	13.1	25.3																							
11-Apr	6	6	9	10	8	9	12	14	19	21	20	18	17	16	14	18	17	14	11	8	3	2	3	6	11.8	21.2																							
12-Apr	6	8	9	11	11	12	13	14	17	20	22	25	27	26	22	27	24	24	23	23	23	25	20	19	18.8	27.1																							
13-Apr	21	23	25	23	22	22	25	25	26	27	28	28	28	26	22	24	22	20	17	16	15	15	13	15	22.1	28.4																							
14-Apr	14	13	13	13	11	8	8	7	10	12	14	17	21	17	17	14	9	5	8	11	8	5	7	11	11.3	21.0																							
15-Apr	12	13	13	13	15	14	14	13	13	13	15	16	19	20	17	16	15	11	12	9	4	4	5	7	12.7	19.8																							
16-Apr	8	8	5	4	5	6	5	3	3	4	6	5	7	6	6	7	10	8	8	9	11	12	13	16	7.3	16.4																							
17-Apr	19	18	16	17	17	18	18	19	18	15	14	11	9	7	8	9	10	8	12	15	10	6	10	12	13.3	19.1																							
18-Apr	11	7	11	7	6	5	4	7	9	11	8	7	8	10	11	13	15	18	15	16	16	14	26	25	11.7	26.0																							
19-Apr	26	26	20	24	26	26	24	21	20	18	14	15	10	8	9	9	10	12	13	10	9	7	9	4	15.4	26.1																							
20-Apr	8	10	10	16	18	13	16	16	16	18	18	22	22	21	24	22	19	15	15	12	8	6	4	4	14.7	24.4																							
21-Apr	3	6	5	5	2	4	2	2	5	6	7	7	7	7	7	8	8	5	4	4	3	4	7	10	5.3	10.4																							
22-Apr	14	16	14	15	12	16	13	13	11	8	10	11	9	14	15	14	15	13	10	3	3	6	7	8	11.3	15.9																							
23-Apr	8	7	6	6	4	4	5	5	5	8	18	21	24	19	18	17	18	17	13	12	6	4	8	6	10.7	24.0																							
24-Apr	7	8	10	14	13	13	12	14	10	9	9	10	10	15	16	14	13	8	8	7	15	20	19	16	12.0	20.1																							
25-Apr	14	15	14	11	9	9	9	10	15	17	17	20	18	20	20	16	17	17	14	9	10	11	13	15	14.1	20.2																							
26-Apr	15	15	13	12	10	10	12	10	8	10	13	19	21	21	21	20	19	18	19	13	9	14	14	13	14.6	21.4																							
27-Apr	15	11	10	14	13	15	17	17	18	16	17	14	15	25	21	31	36	36	28	22	15	13	11	9	18.2	36.4																							
28-Apr	7	7	8	7	10	10	7	8	13	13	12	6	6	13	15	16	18	16	12	5	9	11	17	13	10.9	17.9																							
29-Apr	9	12	10	5	6	7	10	10	19	23	22	20	20	25	30	26	23	23	17	15	14	17	12	13	16.2	29.6																							
30-Apr	15	13	12	12	13	6	8	12	12	13	13	15	10	11	12	10	9	10	10	9	11	16	17	17	11.9	17.1																							
																								13.3	13.5	13.2	13.1	13.3	13.5	13.6	13.4	13.9	14.3	14.6	15.1	15.7	16.5	16.3	16.8	17.1	16.0	14.9	12.9	12.1	12.8	13.3	13.5	Diurnal Average	
																								26.1	27.0	25.8	24.1	26.3	31.1	31.6	29.6	28.8	28.5	28.4	28.0	28.4	30.5	32.1	31.5	36.1	36.4	28.0	29.3	31.3	31.4	29.2	25.9	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																																																	



# Hourly Standard Deviations

Wind Direction (WD) - deg

Sunset House - April 2013

Maximum Value: 89.9 deg on Apr 19 23:00		Hours in Service: 720																							
Minimum Value: 2.3 deg on Apr 1 03:00		Hours of Data: 720																							
Percentiles: P <sub>1</sub> = 3.9 P <sub>10</sub> = 5.6 Q <sub>1</sub> = 7.3 Median = 10.2 Q <sub>3</sub> = 16.2 P <sub>90</sub> = 27.5 P <sub>99</sub> = 74.8		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-Apr	14	10	2	10	4	6	6	5	5	8	16	20	16	14	18	15	11	10	10	9	7	6	7	5	19.7
2-Apr	7	12	7	5	6	9	11	7	8	8	10	21	8	7	6	7	5	20	10	9	11	16	39	23	38.7
3-Apr	39	30	22	10	8	20	7	13	8	7	22	19	12	12	25	12	15	13	11	10	11	4	3	9	38.9
4-Apr	6	5	4	7	5	10	8	8	8	12	14	21	28	24	14	12	11	10	8	9	9	6	9	8	27.8
5-Apr	11	8	7	8	6	8	8	8	7	9	11	13	11	9	11	11	11	8	9	21	13	15	10	9	21.4
6-Apr	16	9	9	7	8	9	7	7	59	29	13	13	13	10	11	11	8	9	6	5	7	6	7	5	58.8
7-Apr	5	6	6	7	5	4	6	7	9	11	12	12	15	15	13	11	11	11	9	7	7	6	7	7	14.9
8-Apr	6	7	5	10	4	5	4	7	7	13	18	21	21	17	16	20	18	16	15	6	7	6	7	5	20.8
9-Apr	5	5	7	8	7	5	5	8	9	6	9	9	10	9	7	9	7	7	7	7	5	5	7	6	10.4
10-Apr	5	5	6	4	7	5	8	7	22	13	9	8	14	13	25	10	9	9	10	11	29	31	14	26	31.1
11-Apr	18	24	12	15	15	14	9	8	9	8	7	7	11	9	12	7	6	7	9	7	67	41	73	17	73.4
12-Apr	7	10	9	4	5	4	5	8	6	8	10	13	12	10	17	14	15	9	9	10	8	11	8	7	16.5
13-Apr	5	7	6	6	6	6	5	5	6	7	7	8	8	7	11	10	14	9	9	8	9	6	6	5	14.4
14-Apr	7	7	9	6	9	9	12	23	16	16	11	18	8	14	20	27	83	41	38	9	8	21	17	8	83.1
15-Apr	6	4	5	5	6	7	5	8	13	19	6	11	11	21	19	29	25	24	17	14	23	33	17	11	32.6
16-Apr	13	68	86	41	67	23	7	69	34	27	13	20	20	39	47	52	43	28	28	16	5	4	5	7	85.6
17-Apr	6	5	4	4	4	6	4	6	7	13	16	20	20	37	38	16	21	16	14	13	10	20	7	5	37.8
18-Apr	9	24	18	29	16	14	13	30	10	8	21	23	28	10	22	16	13	11	14	6	5	15	9	11	29.9
19-Apr	9	8	13	8	12	6	5	6	7	7	8	8	27	14	12	19	13	16	18	14	16	15	90	51	89.9
20-Apr	15	12	12	10	7	10	10	10	11	10	8	8	13	9	8	9	9	11	11	10	10	46	63	19	62.7
21-Apr	35	21	12	18	83	22	15	36	16	11	21	30	29	27	28	26	28	60	64	37	29	7	6	3	82.8
22-Apr	3	4	5	7	9	6	10	11	12	18	15	10	16	25	7	10	26	11	14	32	69	15	14	5	69.0
23-Apr	9	11	13	22	45	32	33	34	19	24	10	8	7	8	8	9	8	7	6	8	11	76	19	47	76.3
24-Apr	11	19	25	6	8	4	8	16	18	14	14	12	12	8	10	20	13	24	23	30	4	5	9	6	29.7
25-Apr	6	6	6	10	10	10	13	19	10	8	9	7	7	10	10	8	7	10	18	17	10	7	5	5	18.7
26-Apr	6	7	11	10	9	8	21	10	17	17	17	12	10	14	15	13	9	11	11	16	13	10	12	10	21.1
27-Apr	12	9	9	6	5	5	5	6	9	14	18	19	26	13	12	9	8	18	10	8	11	12	17	21	26.3
28-Apr	36	21	13	20	12	10	30	20	8	13	16	68	86	25	20	64	19	12	12	75	44	12	5	38	86.3
29-Apr	23	15	12	19	13	16	14	10	8	8	10	11	11	18	8	8	8	8	15	10	10	9	11	11	23.1
30-Apr	12	10	11	9	13	46	15	9	9	15	24	21	42	35	35	49	53	33	24	15	7	6	10	6	53.4
	38.9	67.6	85.6	41.0	82.8	45.5	33.4	68.8	58.8	28.9	23.5	68.1	86.3	39.4	47.1	64.2	83.1	59.5	64.0	75.4	69.0	76.3	89.9	50.9	

PAZA

Falher Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

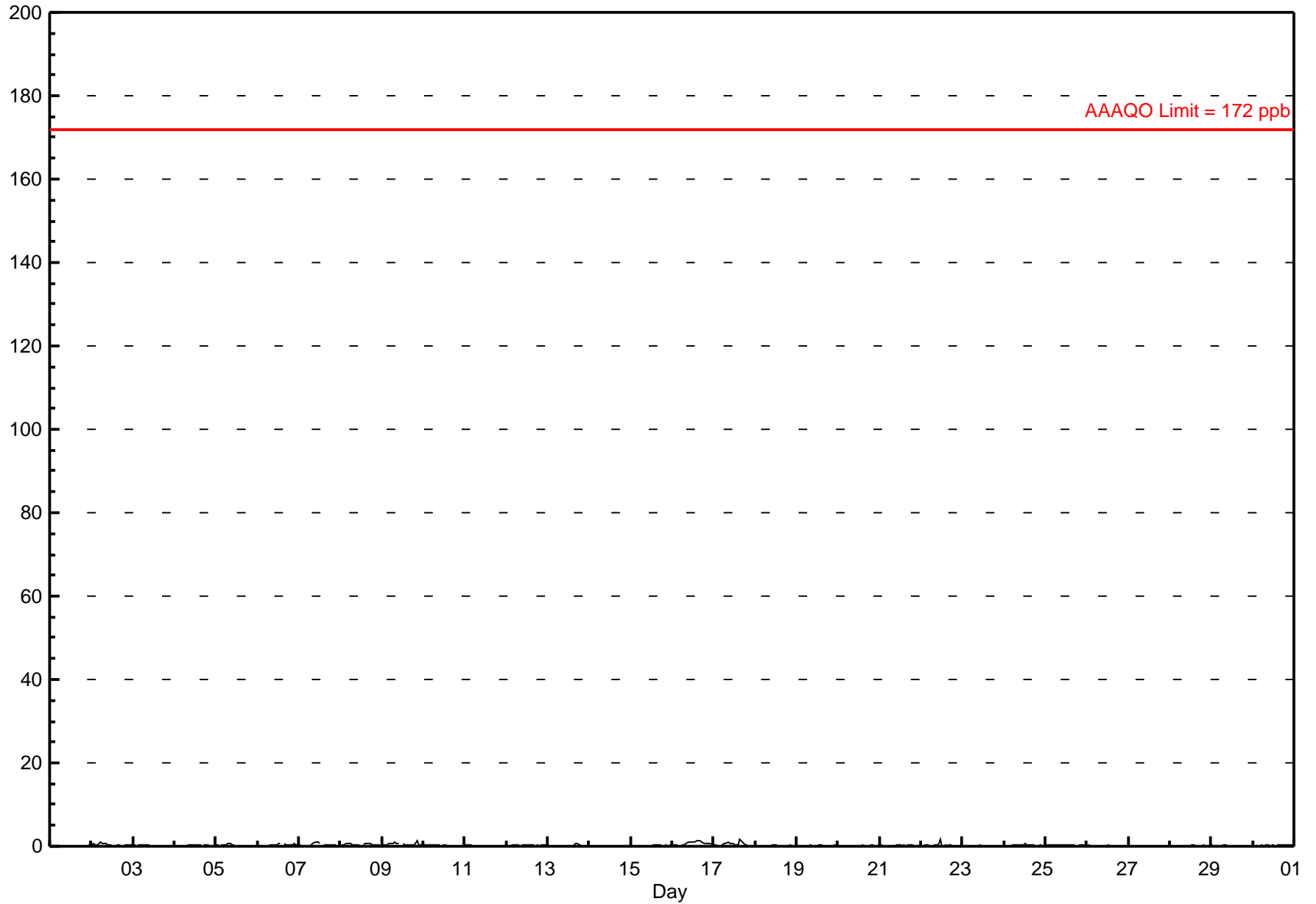
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Falher - April 2013

Number of Exceedences (AAQO):	1-hr: 0	24-hr: 0	Hours in Service:	720
Maximum Value: 1.7 ppb on Apr 17 16:00	Maximum Daily Average: 0.7 ppb on Apr 16		Hours of Data:	686
Minimum Value: 0 ppb on Apr 1 08:00	Minimum Daily Average: 0.0 ppb on Apr 27		Hours of Missing Data:	34
Maximum Diurnal Average: 0.3 ppb at hour 12	Minimum Diurnal Average: 0.1 ppb at hour 1		Hours of Calibration:	34
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 = 0.1 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.5 P <sub>99</sub> = 1.2		Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0.0	0.7
2-Apr	0	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.9
3-Apr	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
4-Apr	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
5-Apr	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.6
6-Apr	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	1	0	0	0	0	0	1	0	0	0.3	0.6
7-Apr	0	0	0	0	0	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0.4	1.1
8-Apr	0	0	0	1	1	1	1	0	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0.4	0.7
9-Apr	0	0	0	0	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	1	0	0	0	0.5	1.3
10-Apr	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
11-Apr	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
12-Apr	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
13-Apr	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0.1	0.7
14-Apr	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	0.2
15-Apr	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	0.3
16-Apr	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.7	1.4
17-Apr	0	0	0	A	0	0	1	1	1	1	1	1	0	0	0	2	1	1	0	0	0	0	0	0	0.5	1.7
18-Apr	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
19-Apr	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
20-Apr	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2
21-Apr	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	0.2
22-Apr	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	A	0	0.3	1.5
23-Apr	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-Apr	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0.2	0.6
25-Apr	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
26-Apr	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
27-Apr	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
28-Apr	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.3
29-Apr	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
30-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.4
	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	Diurnal Average	
	0.5	0.6	0.5	0.7	0.7	0.9	0.8	1.1	0.9	1.0	1.1	1.5	1.1	1.1	1.3	1.7	1.3	0.9	0.8	0.7	1.3	0.6	0.6	0.7	Diurnal Maximum	

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



## Hourly Maximums

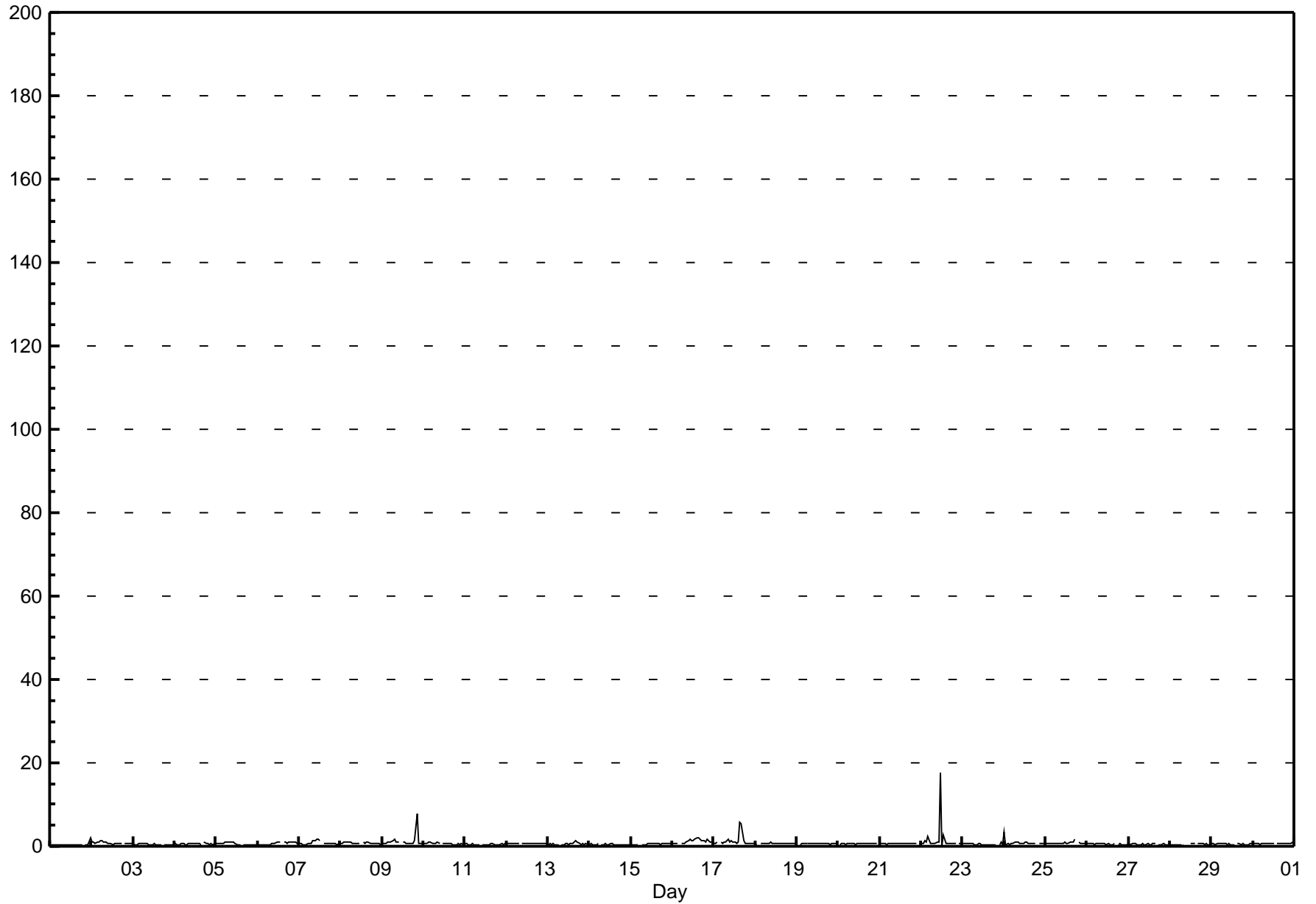
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Falher - April 2013

Maximum Value: 17.5 ppb on Apr 22 12:00		Maximum Daily Average: 1.6 ppb on Apr 22		Hours in Service: 720																							
Minimum Value: 0 ppb on Apr 22 13:00		Minimum Daily Average: 0.4 ppb on Apr 1		Hours of Data: 686																							
Maximum Diurnal Average: 1.3 ppb at hour 12		Minimum Diurnal Average: 0.6 ppb at hour 19		Hours of Missing Data: 34																							
Monthly Average: 0.70 ppb		Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.6 Q <sub>3</sub> = 0.7 P <sub>90</sub> = 1.0 P <sub>99</sub> = 2.5		Hours of Calibration: 34																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	2	0.4	2.1	
2-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.4	
3-Apr	1	0	0	1	1	1	1	1	1	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0.5	0.8	
4-Apr	1	0	0	0	1	1	0	0	1	1	1	1	1	1	1	1	A	1	1	1	0	1	0	1	0.6	0.9	
5-Apr	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0.5	1.1	
6-Apr	0	0	0	0	0	0	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.1	
7-Apr	1	1	0	0	0	1	1	1	1	1	2	2	1	A	1	1	1	1	1	1	1	1	0	1	0.8	1.7	
8-Apr	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1	
9-Apr	1	1	1	1	1	1	1	2	1	1	1	A	1	1	1	1	1	1	1	1	1	8	1	1	1.2	7.9	
10-Apr	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	1	0	1	0.6	0.9	
11-Apr	1	1	1	0	1	1	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0.5	0.7	
12-Apr	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.7	
13-Apr	0	1	0	1	0	0	1	A	0	1	1	1	0	1	1	1	1	1	0	1	0	1	0	1	0.6	1.4	
14-Apr	0	1	0	0	0	1	A	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0.5	0.6	
15-Apr	0	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0.7	
16-Apr	1	1	1	1	A	1	1	1	1	1	2	1	1	2	2	2	2	1	1	1	2	1	1	1	1.2	1.9	
17-Apr	1	1	1	A	1	1	1	1	2	1	1	1	1	1	1	6	5	1	1	1	1	1	1	1	1.3	5.8	
18-Apr	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8	
19-Apr	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.6	0.8	
20-Apr	A	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7	
21-Apr	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7	
22-Apr	1	1	1	1	2	1	1	1	1	1	1	17	0	3	1	1	1	1	1	1	1	1	A	1	1.6	17.5	
23-Apr	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	1	0	0.5	1.0	
24-Apr	3	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	3.3	
25-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	1	0.8	1.7	
26-Apr	1	1	1	1	0	1	1	1	1	1	1	0	1	0	0	0	1	A	0	1	0	0	0	0	0.5	0.7	
27-Apr	1	0	1	1	1	0	0	0	1	0	0	1	0	0	1	1	A	0	0	0	1	0	1	0	0.5	0.7	
28-Apr	0	0	0	0	0	0	0	0	0	C	C	C	1	1	1	A	1	1	1	1	0	1	0	0	0.5	0.7	
29-Apr	1	1	0	1	1	1	1	1	1	1	0	0	0	0	A	1	1	0	1	0	1	1	1	1	0.5	0.7	
30-Apr	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.6	0.9	
		0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7	1.3	0.7	0.7	0.9	0.9	0.7	0.6	0.6	0.9	0.6	0.6	0.6	Diurnal Average		
		3.3	1.1	1.2	1.1	2.5	1.4	1.4	1.6	1.5	1.4	1.7	17.5	1.5	2.6	1.9	5.8	5.5	1.7	1.2	1.2	7.9	1.2	1.0	2.1	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

### Hourly Maximums

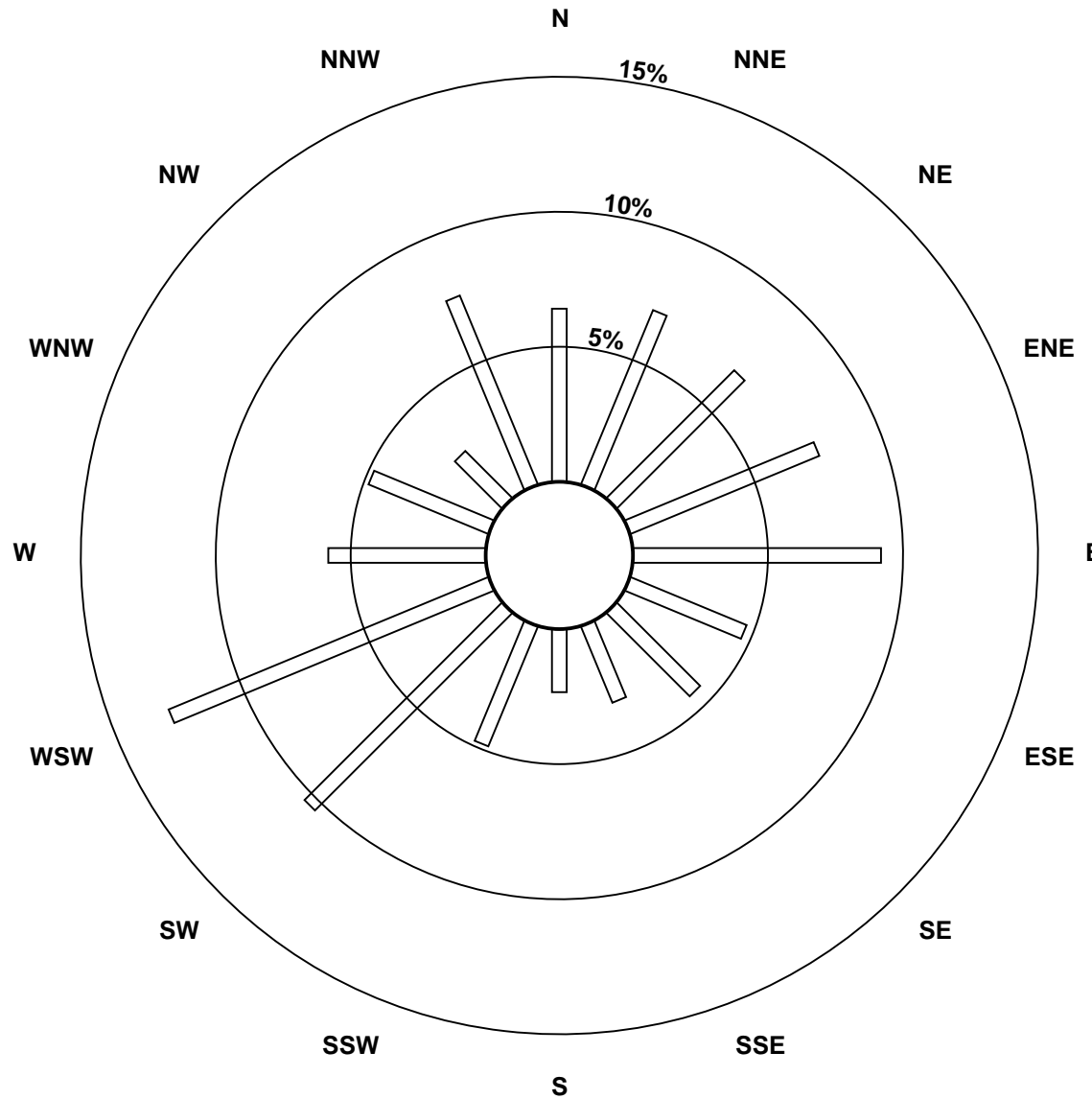
Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Falher - April 2013



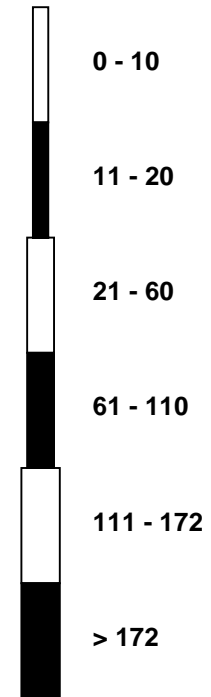
**Pollutant Rose**

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

**Falher - April 2013**

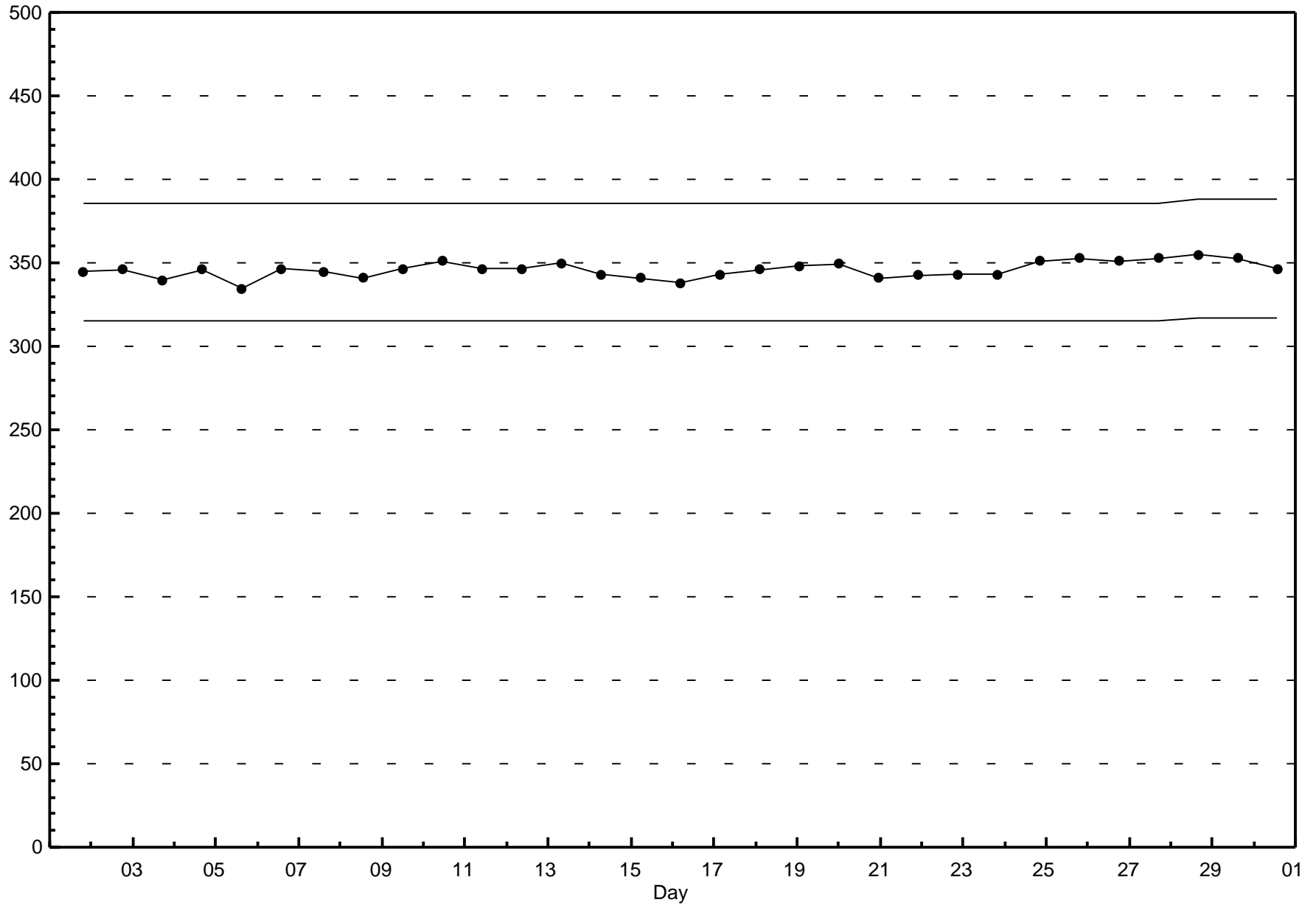


**Pollutant Classes (ppb)**



### Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Falher - April 2013





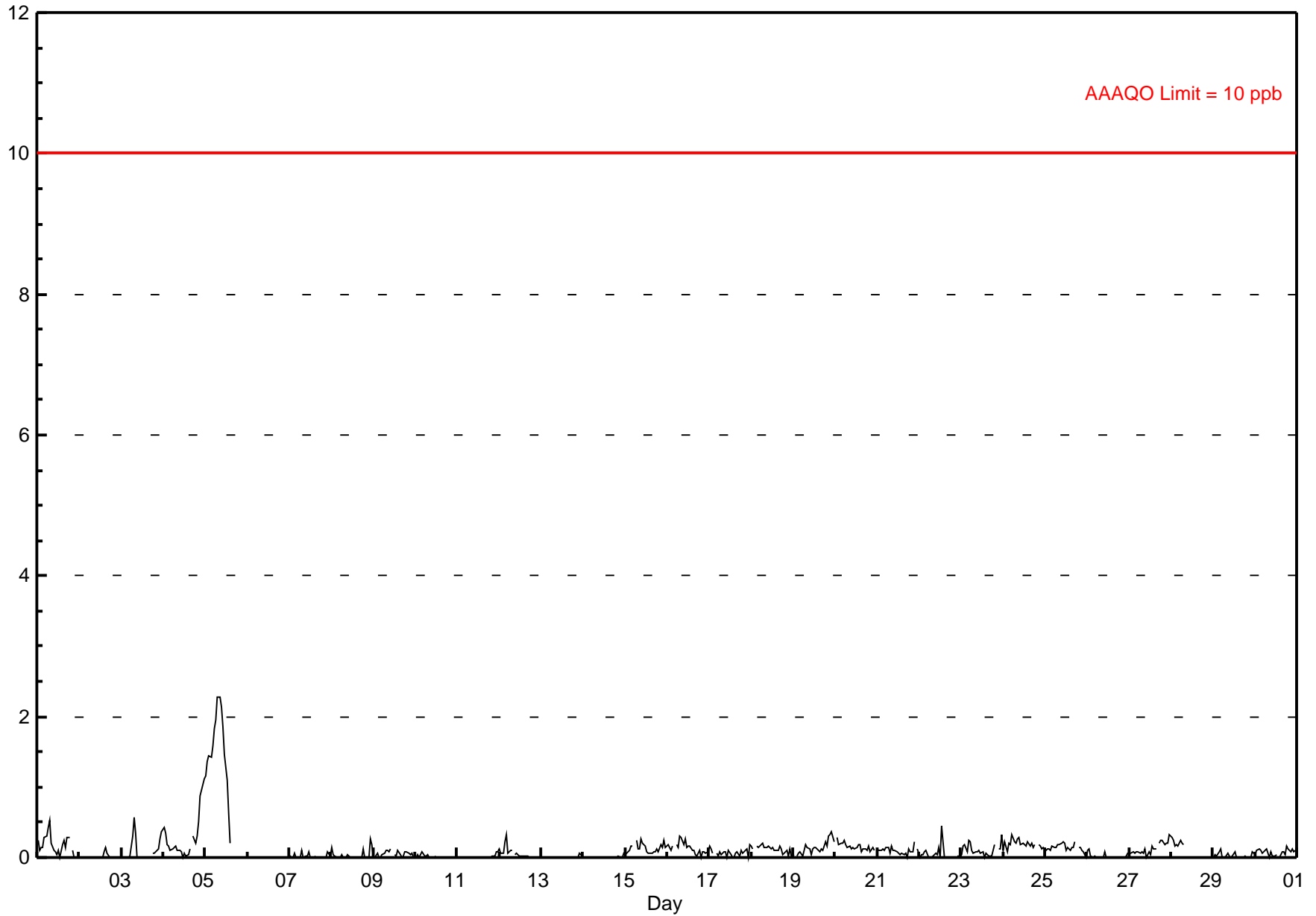
## Hourly Averages

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

Falher - April 2013

Number of Exceedences (AAAQO):		1-hr: 0    24-hr: 0		Hours in Service:		720																				
Maximum Value: 2.3 ppb on Apr 5 09:00		Maximum Daily Average: 1.0 ppb on Apr 5		Hours of Data:		686																				
Minimum Value: 0 ppb on Apr 1 14:00		Minimum Daily Average: 0.0 ppb on Apr 6		Hours of Missing Data:		34																				
Maximum Diurnal Average: 0.2 ppb at hour 8		Minimum Diurnal Average: 0.0 ppb at hour 17		Hours of Calibration:		34																				
Monthly Average: 0.11 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.1 P <sub>90</sub> = 0.2 P <sub>99</sub> = 1.5		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-Apr	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.5
2-Apr	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
3-Apr	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.6
4-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	0.3	1.1
5-Apr	1	1	1	1	2	2	2	2	2	2	2	1	1	1	0	A	0	0	0	0	0	0	0	0	1.0	2.3
6-Apr	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
7-Apr	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
8-Apr	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
9-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.1
10-Apr	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	0.1
11-Apr	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	0.1
12-Apr	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	0.3
13-Apr	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
14-Apr	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
15-Apr	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	0.3
16-Apr	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
17-Apr	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
18-Apr	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
19-Apr	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
20-Apr	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.3
21-Apr	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
22-Apr	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	0.4
23-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.3
24-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.3
25-Apr	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
26-Apr	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
27-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3
28-Apr	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.3
29-Apr	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
30-Apr	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
																								Diurnal Average	Diurnal Maximum	
																								0.1	1.2	
																								0.1	1.4	
																								0.1	1.4	
																								0.1	1.4	
																								0.1	1.6	
																								0.1	1.8	
																								0.2	2.0	
																								0.2	2.3	
																								0.2	2.3	
																								0.2	2.1	
																								0.1	1.9	
																								0.1	1.5	
																								0.1	1.1	
																								0.1	0.6	
																								0.1	0.2	
																								0.1	0.3	
																								0.0	0.2	
																								0.1	0.3	
																								0.1	0.3	
																								0.1	0.3	
																								0.1	0.3	
																								0.1	0.5	
																								0.1	0.9	
																								0.1	1.0	
																								0.1	1.1	

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



## Hourly Maximums

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

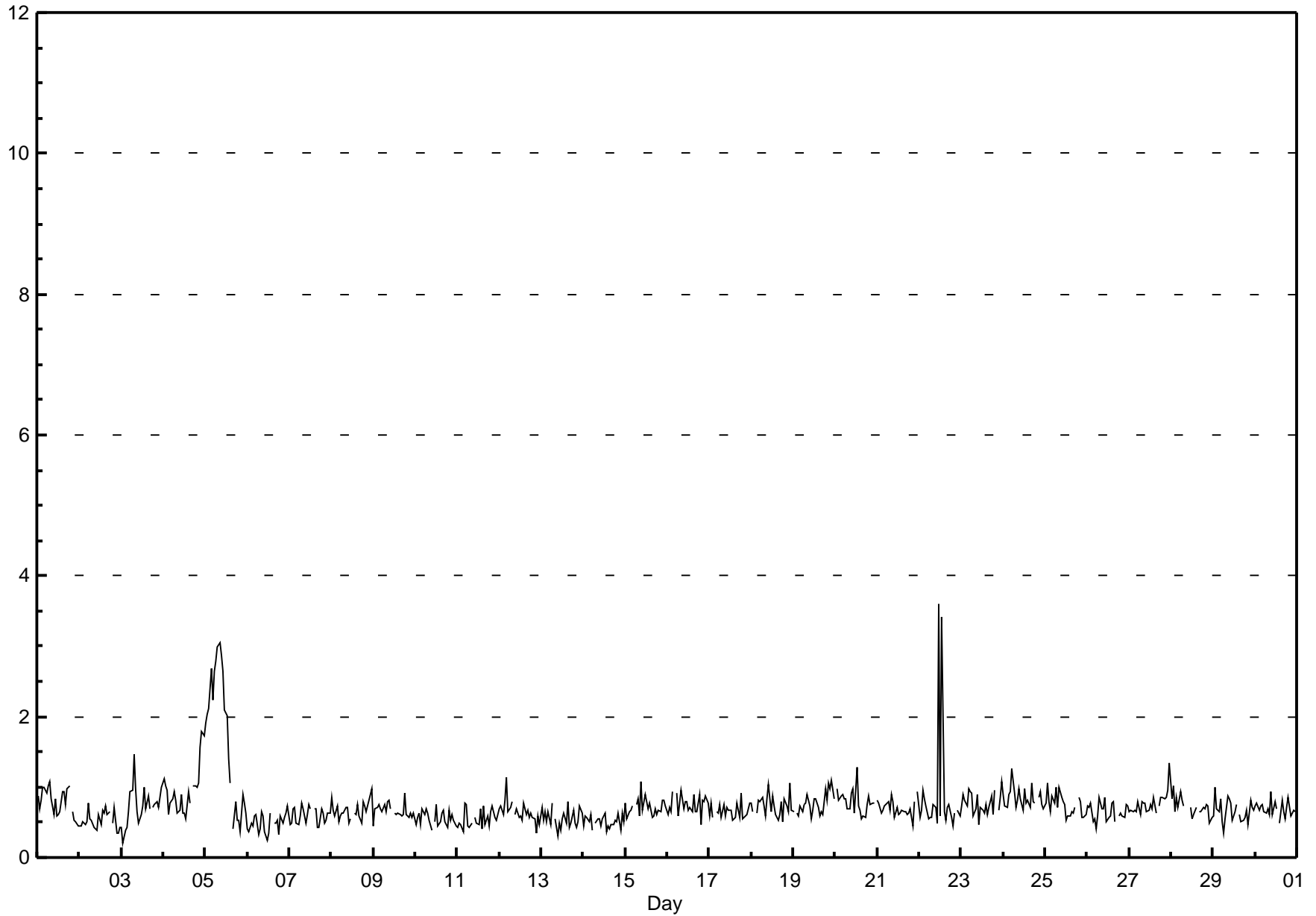
Falher - April 2013

Maximum Value: 3.6 ppb on Apr 22 12:00      Maximum Daily Average: 1.7 ppb on Apr 5 Minimum Value: 0 ppb on Apr 3 02:00      Minimum Daily Average: 0.5 ppb on Apr 6 Maximum Diurnal Average: 0.8 ppb at hour 9      Minimum Diurnal Average: 0.6 ppb at hour 17 Monthly Average: 0.73 ppb      Percentiles: P <sub>1</sub> = 0.3 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> = 0.9 P <sub>99</sub> = 2.6																								Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 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-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0.8	1.1	
2-Apr	0	0	1	0	1	1	1	1	0	0	0	1	0	1	1	1	1	1	A	0	1	0	0	0	0.5	0.8	
3-Apr	0	0	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.5	
4-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	2	2	1.0	1.8	
5-Apr	2	2	2	3	2	3	3	3	3	3	3	2	2	1	1	A	0	1	1	1	1	0	1	1	1.7	3.0	
6-Apr	0	0	0	0	1	1	0	0	1	1	0	0	0	1	A	0	0	1	0	1	0	1	1	1	0.5	0.7	
7-Apr	0	0	1	1	0	0	1	1	1	0	1	1	1	A	1	1	0	0	1	1	0	1	1	1	0.6	0.8	
8-Apr	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	0	1	1	1	1	1	1	0.7	1.0	
9-Apr	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
10-Apr	0	1	1	0	1	1	1	1	1	0	A	1	1	0	1	1	1	1	1	0	1	1	1	0	0.6	0.7	
11-Apr	0	0	0	0	1	1	0	0	0	A	1	0	0	1	0	1	0	1	0	1	1	1	1	1	0.5	0.8	
12-Apr	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0.6	1.1	
13-Apr	1	1	1	1	1	0	1	A	1	0	0	0	1	1	0	1	0	0	1	0	0	1	1	1	0.6	0.8	
14-Apr	0	1	1	1	1	0	A	0	1	1	0	1	1	0	0	0	0	0	1	1	1	0	1	1	0.5	0.6	
15-Apr	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1	
16-Apr	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.8	1.0	
17-Apr	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
18-Apr	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0	
19-Apr	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1	
20-Apr	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	1.3	
21-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	0.7	0.9	
22-Apr	1	1	1	1	1	1	1	1	1	1	0	4	1	3	1	1	1	1	1	0	1	A	1	1	0.9	3.6	
23-Apr	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.1	
24-Apr	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	
25-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.0	
26-Apr	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	0.9	
27-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.3	
28-Apr	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	A	1	1	1	1	1	0	1	1	0.7	1.0	
29-Apr	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	0.7	1.0	
30-Apr	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1	0.7	0.9	
	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.7	0.8	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	Diurnal Average		
	1.9	2.0	2.1	2.7	2.2	2.6	2.8	3.0	3.0	2.9	2.6	3.6	2.0	3.4	1.1	0.9	1.1	1.0	1.0	1.0	1.1	1.6	1.8	1.7	Diurnal Maximum		
C - Calibration      A - Automated Daily Zero Span																											

**Hourly Maximums**

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

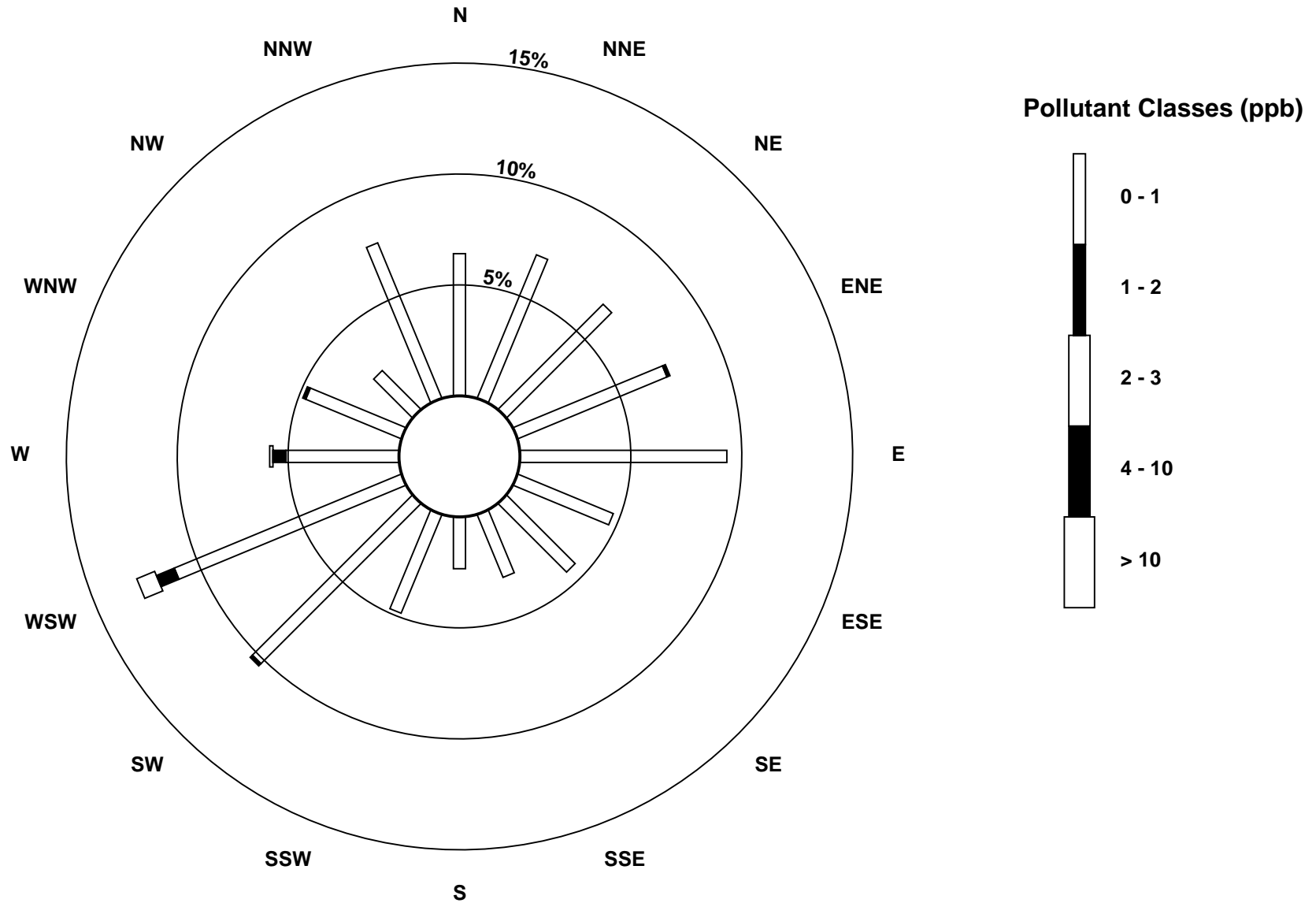
**Falher - April 2013**

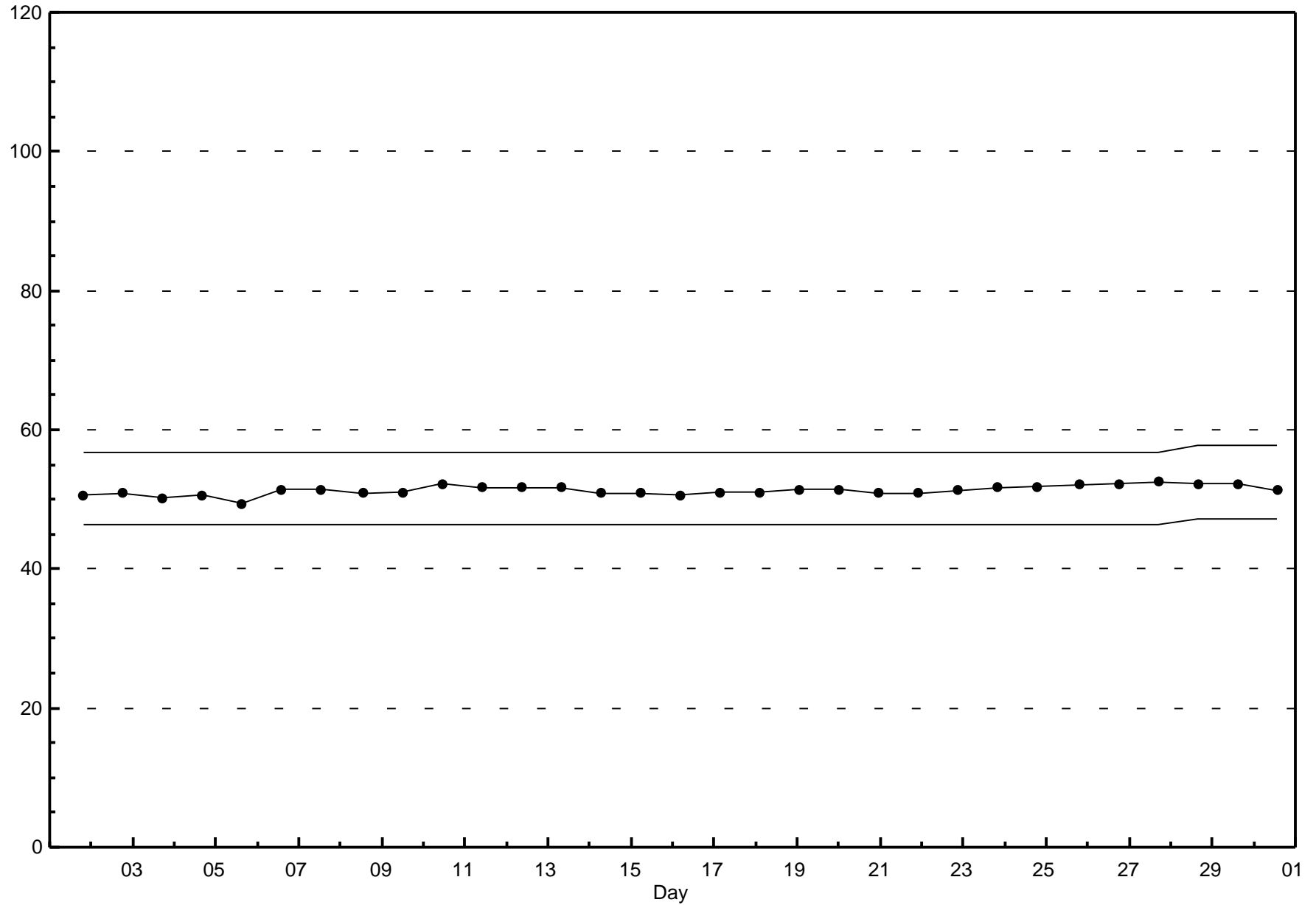


**Pollutant Rose**

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

**Falher - April 2013**





## Hourly Averages

External Temperature (ET) - °C

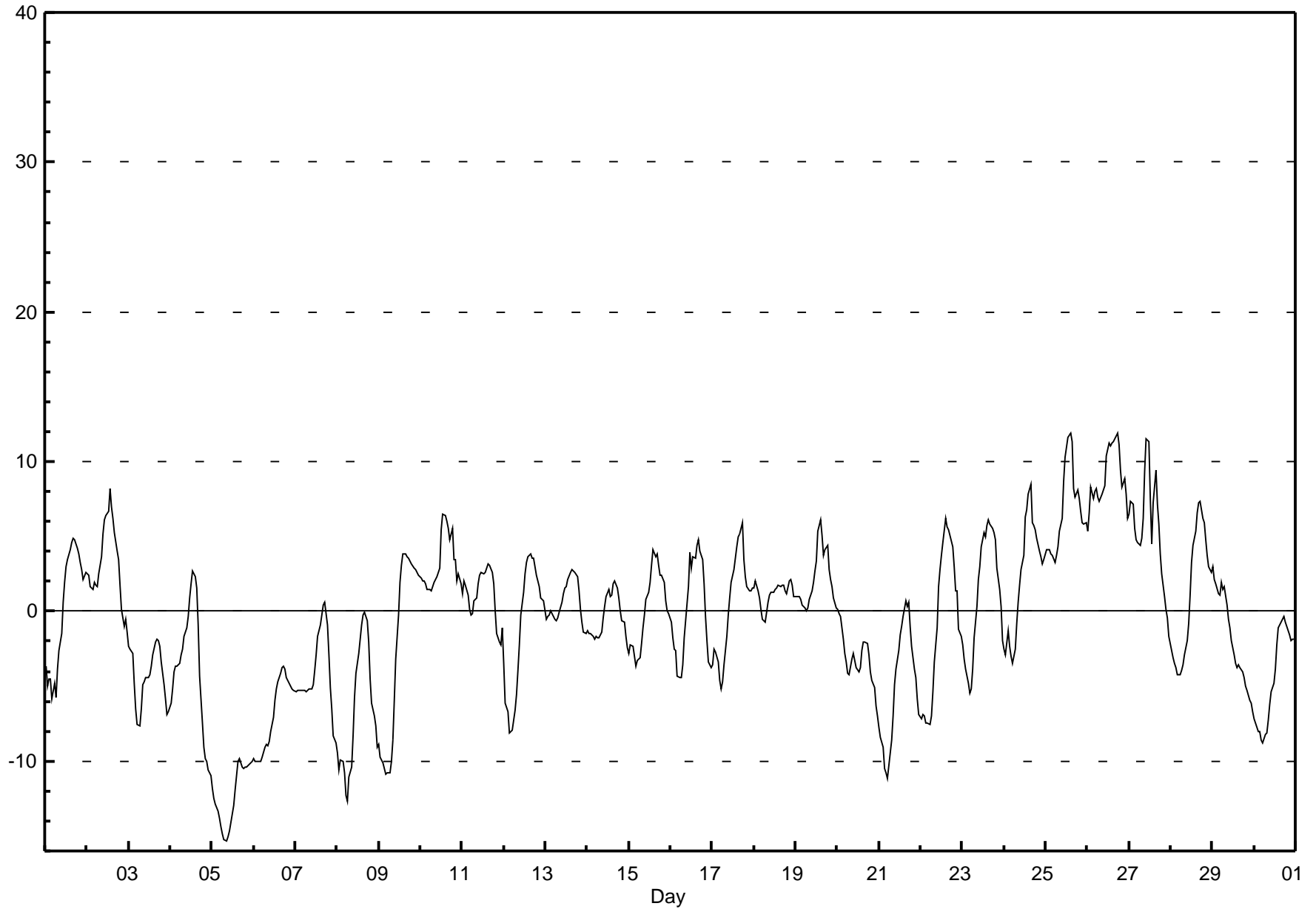
Falher - April 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11.9 °C on Apr 25 15:00      Maximum Daily Average: 8.9 °C on Apr 26		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0																								
Minimum Value: -15 °C on Apr 5 09:00 Maximum Diurnal Average: 3.0 °C at hour 16 Monthly Average: -0.65 °C		Minimum Daily Average: -12.3 °C on Apr 5 Minimum Diurnal Average: -3.8 °C at hour 6 Percentiles: P <sub>1</sub> = -13.9 P <sub>10</sub> = -8.1 Q <sub>1</sub> = -4.0 Median = -0.1 Q <sub>3</sub> = 2.9 P <sub>90</sub> = 5.8 P <sub>99</sub> = 11.3																								
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-Apr	-4	-5	-5	-5	-6	-5	-6	-4	-3	-1	1	2	3	3	4	5	5	5	4	4	3	3	2	3	0.2	4.8
2-Apr	2	2	2	1	2	2	2	3	4	5	6	6	7	8	7	6	5	4	3	2	0	-1	-1	-1	3.2	8.2
3-Apr	-2	-3	-3	-5	-7	-8	-8	-7	-5	-5	-4	-4	-4	-4	-3	-2	-2	-2	-2	-3	-5	-6	-7	-7	-4.4	-1.9
4-Apr	-6	-5	-4	-4	-4	-3	-3	-3	-2	-1	0	1	2	3	2	2	-1	-4	-7	-9	-10	-10	-11	-11	-3.7	2.7
5-Apr	-12	-12	-13	-13	-14	-14	-15	-15	-15	-15	-15	-14	-13	-12	-11	-10	-10	-10	-10	-10	-10	-10	-10	-10	-12.3	-9.9
6-Apr	-10	-10	-10	-10	-10	-10	-9	-9	-9	-9	-8	-7	-6	-5	-5	-4	-4	-4	-4	-4	-5	-5	-5	-5	-6.9	-3.6
7-Apr	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-4	-3	-2	-1	0	0	1	-1	-3	-5	-6	-8	-9	-4.1	0.6
8-Apr	-9	-11	-10	-10	-11	-12	-13	-11	-10	-8	-6	-4	-3	-2	-1	0	0	-1	-2	-5	-6	-7	-8	-9	-6.6	0.0
9-Apr	-9	-10	-10	-10	-11	-11	-11	-10	-9	-6	-3	0	2	3	4	4	4	4	3	3	3	3	3	2	-2.6	3.9
10-Apr	2	2	2	2	1	2	1	2	2	2	2	3	3	5	7	6	6	6	5	6	3	3	2	3	3.2	6.5
11-Apr	1	2	2	1	0	0	0	1	1	2	2	3	2	3	3	3	3	3	2	0	-1	-2	-2	-1	1.1	3.2
12-Apr	-3	-6	-7	-8	-8	-8	-7	-6	-4	-2	0	1	3	3	4	4	4	4	3	2	2	1	1	1	-1.2	3.9
13-Apr	-1	0	0	0	0	-1	-1	0	0	1	1	2	2	2	3	3	3	3	2	1	0	-1	-1	-1	0.6	2.8
14-Apr	-1	-1	-2	-2	-2	-2	-2	-2	-1	0	0	1	1	1	1	2	2	2	1	0	-1	-1	-2	-2	-0.4	2.1
15-Apr	-3	-2	-2	-3	-4	-3	-3	-2	-1	0	1	1	2	3	4	4	4	3	2	2	2	1	0	0	0.2	4.1
16-Apr	-1	-2	-3	-3	-4	-4	-4	-4	-2	0	2	4	3	4	4	4	5	4	3	2	0	-2	-3	-4	0.0	4.8
17-Apr	-4	-3	-3	-3	-5	-5	-5	-4	-2	0	1	2	3	4	4	5	5	6	3	2	2	1	1	2	0.4	5.9
18-Apr	2	2	1	1	0	-1	-1	0	1	1	1	1	2	2	2	2	2	1	1	2	2	2	2	1	1.2	2.1
19-Apr	1	1	1	1	0	0	0	0	1	1	2	3	3	5	6	5	4	4	4	3	2	2	1	0	2.1	6.1
20-Apr	0	0	0	-2	-3	-3	-4	-4	-3	-3	-3	-4	-4	-4	-3	-2	-2	-2	-3	-4	-5	-5	-6	-7	-3.2	0.2
21-Apr	-8	-8	-9	-11	-11	-11	-9	-9	-7	-5	-4	-3	-2	-1	0	1	0	1	-1	-2	-4	-4	-6	-7	-5.0	0.7
22-Apr	-7	-7	-7	-7	-7	-8	-7	-5	-3	-1	2	3	4	5	6	6	5	5	4	3	1	1	-1	-2	-0.7	6.2
23-Apr	-2	-3	-4	-5	-5	-5	-4	-2	0	2	3	4	5	5	6	6	6	6	5	5	3	1	0	-2	1.1	6.1
24-Apr	-3	-3	-1	-2	-3	-3	-3	-1	1	2	3	4	6	7	8	9	6	6	5	5	4	4	3	3	2.3	8.5
25-Apr	4	4	4	4	4	3	4	4	5	6	9	10	11	12	12	11	8	8	8	8	7	6	6	6	6.8	11.9
26-Apr	5	7	8	8	8	8	8	7	8	8	8	10	11	11	11	11	12	12	11	9	8	9	8	6	8.9	11.9
27-Apr	7	7	7	6	5	5	4	5	6	9	11	11	8	4	7	9	7	6	4	3	1	0	0	-2	5.4	11.5
28-Apr	-3	-3	-3	-4	-4	-4	-4	-4	-3	-2	-1	1	3	4	5	7	7	7	6	6	5	4	3	3	1.1	7.3
29-Apr	3	2	2	1	1	2	2	2	0	-1	-1	-2	-3	-4	-4	-4	-4	-4	-5	-5	-6	-6	-7	-7	-1.8	3.0
30-Apr	-7	-7	-8	-8	-9	-9	-8	-8	-7	-6	-5	-5	-4	-2	-1	-1	-1	0	-1	-1	-2	-2	-2	-2	-4.4	-0.4
																								Diurnal Average		
																								Diurnal Maximum		

**Hourly Averages**

**External Temperature (ET) - °C**

**Falher - April 2013**





## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Falher - April 2013

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1 Spd	16	14	16	17	15	17	17	23	28	26	26	28	30	30	30	29	31	33	30	28	29	29	27	28	23.8	32.7	
Dir	53	47	43	49	56	55	63	69	76	91	87	82	90	90	92	93	93	89	89	90	88	87	98	111	83	89	
2 Spd	27	27	24	24	23	24	24	24	21	21	16	21	19	18	19	22	27	28	27	19	13	17	30	22	9.6	30.1	
Dir	111	111	111	120	125	143	146	148	176	220	228	233	245	252	281	277	273	270	277	291	231	244	279	258	217	279	
3 Spd	20	24	24	24	25	11	6	6	8	11	12	12	13	12	11	10	10	9	11	10	9	11	15	16	7.9	25.4	
Dir	238	245	254	309	305	302	268	235	311	298	297	317	329	331	343	355	9	36	33	45	60	35	33	32	320	305	
4 Spd	17	17	25	24	22	22	24	26	26	28	29	22	15	12	16	22	34	41	46	42	40	38	35	33	10.6	45.8	
Dir	36	55	63	61	51	50	54	51	55	61	67	68	50	12	330	321	314	302	283	275	269	265	258	255	346	283	
5 Spd	32	31	29	26	27	27	26	26	26	26	25	25	24	22	20	18	17	19	17	16	14	12	9	5	20.4	32.4	
Dir	252	249	249	245	248	247	245	245	248	255	261	267	278	289	288	280	255	234	229	229	226	214	198	175	251	252	
6 Spd	11	17	17	17	18	17	17	20	21	20	18	17	18	17	17	16	19	20	22	22	22	22	21	20	18.1	22.2	
Dir	351	350	356	357	338	343	11	12	7	20	17	4	9	27	32	35	20	22	12	13	7	11	12	11	10	12	
7 Spd	20	19	18	18	19	17	19	20	20	24	23	23	18	18	20	16	5	11	9	5	16	18	18	19	14.3	23.9	
Dir	9	12	21	17	14	10	10	12	21	21	32	41	46	51	54	70	190	239	224	114	58	38	21	20	28	21	
8 Spd	21	22	24	24	23	21	21	20	22	23	27	25	23	23	20	18	20	21	21	17	23	23	26	25	19.7	27.2	
Dir	11	8	18	18	17	19	27	49	65	67	66	73	74	73	74	91	91	91	93	89	63	61	58	53	56	66	
9 Spd	27	29	28	30	29	34	31	33	34	31	25	25	21	28	32	28	33	30	30	33	30	29	29	29	22.9	34.2	
Dir	50	41	37	35	35	34	46	57	67	87	104	110	127	129	132	133	128	126	132	122	122	125	126	125	94	34	
10 Spd	32	27	25	24	20	22	24	22	23	26	24	21	11	22	20	19	16	19	13	22	17	20	21	20	14.1	31.9	
Dir	131	117	119	112	126	135	132	121	140	144	156	162	226	252	251	245	231	221	234	213	220	201	217	213	171	131	
11 Spd	21	25	22	22	20	20	20	16	15	18	19	23	30	30	32	30	29	25	17	11	11	18	16	15	19.7	31.8	
Dir	211	213	220	228	250	233	267	280	250	239	238	238	238	237	239	243	242	242	262	263	203	200	195	183	235	239	
12 Spd	14	13	14	14	14	18	18	21	19	20	26	26	27	30	31	28	28	28	31	35	35	33	32	34	23.6	35.3	
Dir	150	55	67	44	48	48	62	71	74	80	86	84	86	85	84	86	90	83	77	74	75	74	72	80	77	75	
13 Spd	33	31	24	29	27	28	29	30	29	29	29	31	30	27	24	21	23	15	21	18	19	20	20	18	23.4	32.9	
Dir	84	70	62	49	43	20	14	18	20	28	28	32	40	48	34	24	14	8	23	12	18	0	359	350	31	84	
14 Spd	15	14	17	15	13	16	15	17	16	16	17	16	17	16	7	8	9	19	19	18	16	15	17	14	14.1	18.7	
Dir	351	338	337	330	335	338	340	339	337	343	341	349	332	27	39	225	312	348	342	340	344	344	346	6	2	344	348
15 Spd	13	13	15	14	14	15	12	15	15	16	16	20	17	18	13	17	15	19	14	10	12	10	13	12	13.9	19.7	
Dir	354	357	342	331	329	321	314	339	360	332	324	332	333	306	300	345	340	330	344	2	328	341	340	354	335	332	
16 Spd	12	11	8	10	11	11	13	13	11	8	8	7	11	11	13	11	10	10	8	8	10	11	11	12	7.4	13.0	
Dir	0	356	12	345	258	295	320	346	358	10	348	302	289	281	286	307	318	348	5	26	50	59	57	49	343	346	
17 Spd	13	15	20	18	20	21	21	19	18	20	20	20	21	17	19	17	16	11	18	18	13	18	19	15	11.9	21.1	
Dir	47	54	69	65	70	67	73	87	114	138	136	136	129	142	119	116	103	172	227	220	198	163	163	185	120	67	
18 Spd	13	13	16	19	20	18	21	22	15	14	17	18	17	15	15	15	14	13	12	21	26	27	29	29	8.6	29.2	
Dir	223	260	248	249	267	280	302	325	338	340	11	331	326	333	335	339	349	355	348	1	72	81	94	72	339	72	
19 Spd	30	35	35	37	34	32	31	29	25	22	15	14	15	11	10	13	11	8	9	10	12	13	16	17	10.9	36.6	
Dir	71	68	78	84	86	91	89	94	113	123	130	152	152	182	266	294	352	343	297	340	23	336	306	304	80	84	
20 Spd	18	23	26	36	36	36	38	37	31	36	37	35	36	30	30	30	28	23	21	17	16	12	13	15	24.8	37.8	
Dir	263	254	259	235	230	228	221	220	237	274	292	290	298	277	280	277	284	281	285	279	275	255	249	251	261	221	
21 Spd	14	14	13	10	12	8	6	10	13	13	15	17	18	19	16	16	16	17	13	13	17	18	15	17	9.3	18.8	
Dir	246	234	220	185	190	201	214	214	223	234	229	230	242	234	230	242	236	259	150	123	120	118	103	110	207	234	
22 Spd	16	19	16	12	13	17	15	13	10	10	18	19	20	18	16	23	25	23	20	15	7	7	11	12	7.4	24.9	
Dir	116	114	105	86	91	114	146	172	167	203	245	244	242	234	245	242	237	235	233	231	208	115	74	64	195	237	

## Hourly Averages

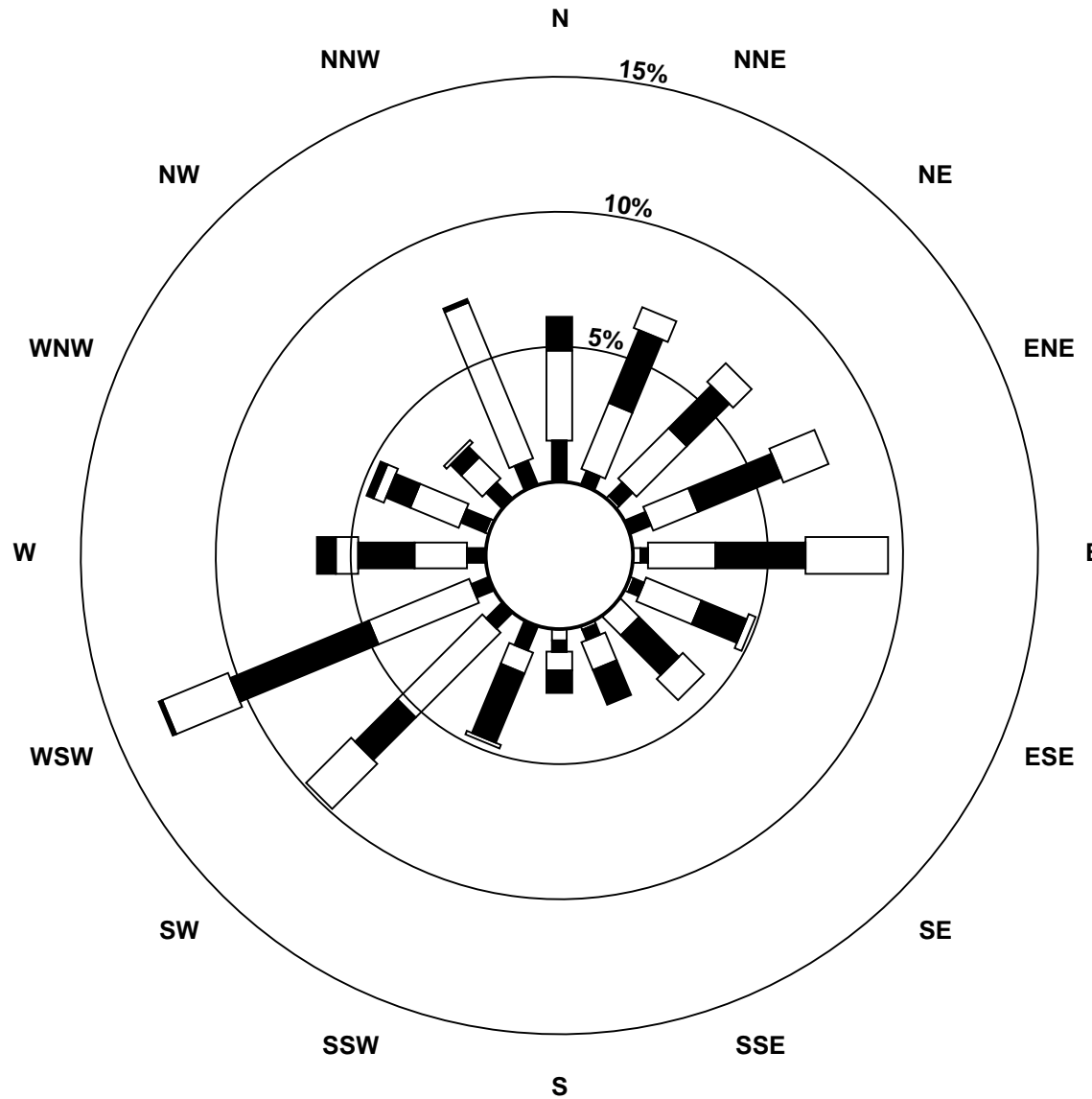
Wind Speed (km/h)  
Wind Direction (deg)  
Falher - April 2013

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	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	6	10	4	6	3	8	13	19	22	23	23	24	22	25	25	25	26	24	15	15	10	7	8	12	11.0	25.6
Dir	87	26	52	6	147	202	228	236	245	249	243	249	250	243	243	249	243	246	268	293	288	360	62	70	251	243
24 Spd	14	16	17	14	13	13	11	13	12	11	14	15	17	18	9	11	22	20	20	23	23	24	26	22	10.4	26.1
Dir	77	80	75	79	93	88	103	112	116	122	155	173	228	226	258	255	199	199	209	187	176	156	153	166	158	153
25 Spd	23	24	27	25	23	14	15	14	15	14	17	14	13	9	2	6	17	18	7	15	14	18	23	22	13.3	26.7
Dir	192	206	208	206	210	247	292	229	215	206	238	242	247	320	90	167	126	140	202	228	208	209	193	195	210	208
26 Spd	21	22	28	27	28	30	34	31	29	28	22	25	33	28	31	33	32	35	28	22	21	30	27	22	26.6	35.2
Dir	176	197	219	214	229	232	218	217	223	234	234	242	245	244	243	238	234	240	241	237	221	219	209	196	227	240
27 Spd	20	26	30	25	21	19	21	21	24	27	37	38	35	30	28	43	57	48	42	27	21	19	16	15	20.8	57.4
Dir	193	202	199	174	166	159	154	153	163	185	220	227	257	221	216	244	269	260	263	270	284	301	287	341	229	269
28 Spd	15	19	21	19	18	20	22	23	24	31	31	23	15	17	21	26	27	29	27	19	15	20	20	8	16.8	31.1
Dir	3	2	356	12	20	36	47	53	67	86	92	97	119	91	94	91	94	99	101	137	145	94	79	79	76	86
29 Spd	3	16	17	16	9	19	21	30	33	35	35	35	28	31	27	25	25	25	25	23	20	19	21	20	18.2	35.0
Dir	186	96	95	93	164	249	240	247	239	230	228	225	221	250	244	248	262	269	274	274	271	261	256	252	243	228
30 Spd	17	15	16	17	16	14	15	14	15	15	14	15	10	6	7	2	4	6	15	19	18	16	19	18	3.4	18.8
Dir	262	264	242	247	258	249	269	270	293	289	283	300	314	270	256	289	90	97	97	86	71	87	91	90	275	91
Spd	2.8	3.0	2.6	3.2	1.6	1.8	1.7	2.1	1.8	1.1	1.3	2.7	4.6	4.1	3.7	5.2	5.0	5.4	4.5	2.3	1.2	2.6	2.7	3.1	Diurnal Average	
Dir	92	58	63	51	29	13	34	61	93	148	221	246	268	257	263	264	265	261	270	265	108	104	100	93	Diurnal Maximum	
Spd	32.9	34.7	34.9	36.6	35.7	36.2	37.8	37.4	33.7	35.8	37.2	38.2	35.8	30.8	31.9	42.8	57.4	47.6	45.8	41.9	39.9	37.9	35.3	33.5	Diurnal Maximum	
Dir	84	68	78	84	230	228	221	220	67	274	220	227	298	250	132	244	269	260	283	275	269	265	258	80	Diurnal Maximum	
Maximum Speed Value: 57 km/h on Apr 27 17:00		Minimum Speed Value: 2 km/h on Apr 25 15:00		Hours in Service: 720																						
Maximum Daily Speed Average: 26.6 km/h on Apr 9		Minimum Daily Speed Average: 3.4 km/h on Apr 16		Hours of Data: 720																						
Maximum Diurnal Speed Average: 5.4 km/h at hour 18		Minimum Diurnal Speed Average: 1.1 km/h at hour 10		Hours of Missing Data: 0																						
Monthly Average Velocity: 0.51 km/h 278.9 deg				Speed Percentiles: P <sub>1</sub> = 5.3 P <sub>10</sub> = 10.9 Q <sub>1</sub> = 14.8 Median = 19.1 Q <sub>3</sub> = 25.3 P <sub>90</sub> = 30.3 P <sub>99</sub> = 40.4				Percent Operational Time: 100.0																		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																			
North	0	16	62	29	3	0	110																			
NorthEast	1	9	35	32	14	0	91																			
East	2	5	27	42	35	0	111																			
SouthEast	2	1	23	26	12	0	64																			
South	1	12	10	21	1	0	45																			
SouthWest	0	10	51	46	32	2	141																			
West	1	8	36	37	16	6	104																			
NorthWest	0	9	35	7	2	1	54																			
Total	7	70	279	240	115	9	720																			

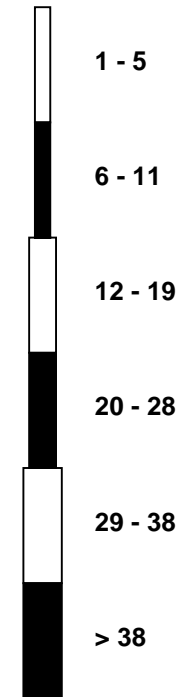
**Wind Rose**

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

**Falher - April 2013**



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



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Falher - April 2013

Maximum Speed: 58 km/h on Apr 27 17:00      Maximum Daily Speed Average: 29.6 km/h on Apr 9		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0																									
Minimum Speed: 6 km/h on Apr 6 00:00 Maximum Diurnal Speed Average: 22.3 km/h at hour 17 Monthly Average Speed: 20.51 km/h		Minimum Daily Speed Average: 10.8 km/h on Apr 16 Minimum Diurnal Speed Average: 18.5 km/h at hour 21 Percentiles: P <sub>1</sub> = 7.4 P <sub>10</sub> = 11.6 Q <sub>1</sub> = 15.1 Median = 19.4 Q <sub>3</sub> = 25.5 P <sub>90</sub> = 30.5 P <sub>99</sub> = 40.8																									
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-Apr	16	14	16	17	15	17	17	23	28	26	26	28	30	30	30	29	31	33	30	28	29	29	27	28	24.9	32.7	
2-Apr	27	27	24	24	23	24	25	24	23	21	17	22	19	18	19	23	27	28	28	19	13	17	30	22	22.6	30.3	
3-Apr	21	24	25	24	26	12	7	7	9	11	12	12	13	13	11	10	10	10	11	10	9	11	15	17	13.8	25.5	
4-Apr	17	17	25	24	22	22	24	26	26	28	29	22	16	12	16	22	34	41	46	42	40	38	35	33	27.5	46.0	
5-Apr	32	31	29	26	27	27	26	26	26	26	25	25	24	22	20	18	17	19	17	16	14	12	9	6	21.7	32.4	
6-Apr	12	17	17	17	18	17	17	20	21	20	19	17	18	18	18	16	19	20	22	22	22	22	21	20	18.7	22.3	
7-Apr	20	19	18	18	19	17	19	20	20	24	23	23	18	18	20	17	11	11	9	9	16	18	18	19	17.7	24.0	
8-Apr	21	22	24	24	23	21	21	20	22	23	27	25	23	23	21	18	20	22	21	17	23	23	26	25	22.2	27.2	
9-Apr	27	29	28	30	29	34	31	33	34	31	25	26	22	28	32	28	33	30	30	33	30	29	29	29	29.6	34.3	
10-Apr	32	27	25	24	21	22	24	22	24	26	24	21	15	22	20	19	16	19	13	22	18	20	21	20	21.5	31.9	
11-Apr	21	25	22	22	21	20	21	17	16	18	19	23	30	30	32	30	29	25	18	12	11	18	16	15	21.3	31.8	
12-Apr	15	13	14	14	14	18	18	21	19	20	26	26	27	30	31	28	28	28	31	35	35	33	32	34	24.6	35.3	
13-Apr	33	31	24	29	27	28	29	30	29	29	29	31	30	27	24	22	23	15	21	18	19	20	20	18	25.4	33.0	
14-Apr	15	14	17	15	13	16	15	17	16	17	17	16	18	20	9	9	13	19	19	18	16	15	17	14	15.5	19.7	
15-Apr	13	13	15	14	14	15	12	15	15	16	16	20	17	19	13	18	16	19	15	10	12	11	13	12	14.7	19.8	
16-Apr	12	12	10	11	12	11	13	13	11	9	8	8	12	11	13	11	10	10	9	8	11	12	11	12	10.8	13.1	
17-Apr	13	15	20	18	20	21	21	20	18	21	20	20	21	18	19	17	17	14	18	18	14	18	19	15	18.1	21.1	
18-Apr	13	15	16	19	20	18	22	22	15	15	17	18	17	15	15	15	14	13	12	22	26	27	29	18.0	29.2		
19-Apr	30	35	35	37	34	32	31	29	25	22	15	14	15	12	14	13	12	9	9	10	12	13	16	17	20.4	36.6	
20-Apr	18	23	26	36	36	36	38	37	32	36	37	35	36	30	30	30	28	23	21	17	16	13	13	15	27.6	37.9	
21-Apr	14	15	13	11	12	8	7	10	13	13	16	17	19	19	16	16	17	17	14	14	18	18	15	17	14.5	19.0	
22-Apr	17	19	17	12	13	17	16	13	11	10	18	19	20	18	16	23	25	23	20	15	8	8	12	13	16.0	24.9	
23-Apr	9	11	7	6	6	8	13	19	22	23	23	24	22	26	26	25	26	24	18	16	13	8	8	12	16.4	25.7	
24-Apr	14	16	17	15	14	13	11	13	12	12	14	15	17	18	11	12	22	21	21	23	23	24	26	23	16.9	26.2	
25-Apr	23	24	27	25	23	18	15	15	15	15	17	14	14	10	7	10	17	18	14	15	15	18	23	22	17.3	26.7	
26-Apr	21	23	28	27	28	30	34	31	29	28	22	26	33	28	31	33	32	35	28	22	21	30	27	22	27.8	35.4	
27-Apr	20	26	30	25	21	20	21	21	24	28	38	38	37	31	28	43	58	48	42	27	21	19	16	17	29.2	57.6	
28-Apr	15	19	21	19	18	20	22	24	24	31	31	23	16	18	21	26	27	29	27	22	16	20	21	14	21.7	31.3	
29-Apr	10	16	18	16	14	19	21	30	33	35	35	35	29	31	27	26	25	25	25	24	20	19	21	20	23.9	35.2	
30-Apr	17	15	16	17	16	14	15	15	16	15	15	15	12	10	10	10	10	10	15	19	18	17	19	18	14.7	18.8	
		18.9	20.2	20.8	20.5	20.0	19.9	20.2	21.1	20.9	21.6	22.0	22.0	21.2	20.7	20.0	20.6	22.3	22.0	20.9	19.1	18.5	19.4	20.2	19.3	Diurnal Average	
		33.0	34.8	34.9	36.6	35.8	36.3	37.9	37.5	33.7	36.0	37.6	38.5	37.3	31.4	31.9	43.4	57.6	47.7	46.0	42.0	40.0	37.9	35.4	33.9	Diurnal Maximum	

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

## Hourly Standard Deviations

Wind Direction (WD) - deg

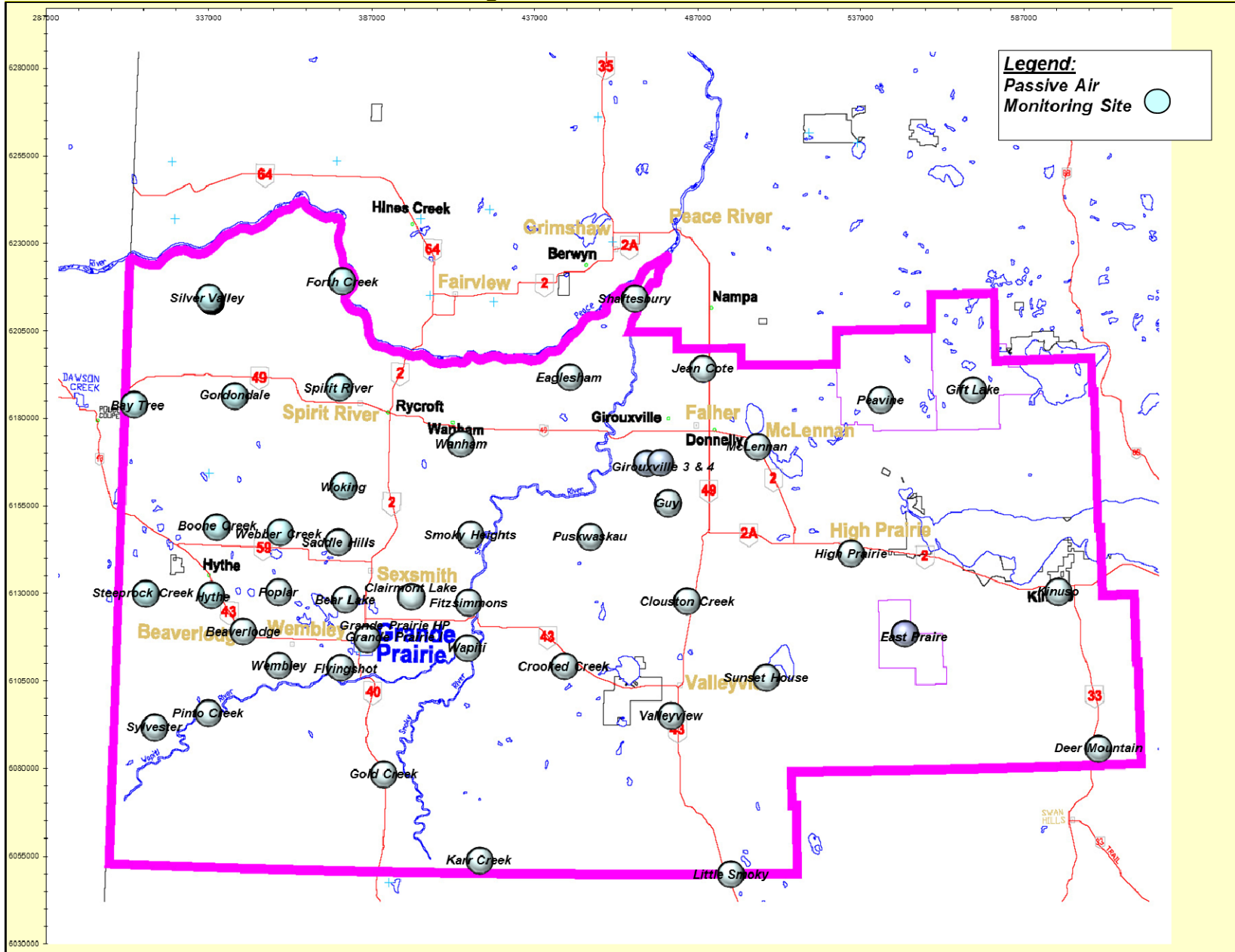
Falher - April 2013

Maximum Value: 84.9 deg on Apr 30 16:00																	Hours in Service: 720								
Minimum Value: 1.1 deg on Apr 8 06:00																	Hours of Data: 720								
Percentiles: P <sub>1</sub> = 1.7 P <sub>10</sub> = 2.6 Q <sub>1</sub> = 3.7 Median = 6.0 Q <sub>3</sub> = 10.7 P <sub>90</sub> = 19.3 P <sub>99</sub> = 69.9																	Hours of Missing Data: 0								
																	Hours of Calibration: 0								
																	Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	7	8	3	10	13	3	7	5	3	2	2	2	3	2	1	1	2	2	2	3	2	4	5	6	12.7
2-Apr	3	3	3	3	8	5	6	4	23	4	10	7	9	12	9	5	6	11	20	9	9	12	6	10	22.8
3-Apr	5	8	9	13	6	31	42	26	26	15	19	17	10	10	19	16	12	15	9	14	9	11	7	10	42.4
4-Apr	13	10	3	2	3	3	4	3	5	5	6	5	12	14	8	7	4	6	6	3	3	4	3	3	13.6
5-Apr	3	3	3	3	4	3	3	3	3	3	4	4	5	5	5	9	13	5	5	3	5	5	12	26	25.8
6-Apr	26	3	5	6	6	10	8	4	6	5	7	10	11	11	11	12	6	5	4	3	5	4	3	2	26.1
7-Apr	3	3	4	4	3	4	3	4	6	5	7	5	7	8	6	29	61	8	10	61	6	5	3	2	61.2
8-Apr	2	3	2	2	2	1	6	5	4	3	2	3	4	3	5	5	2	2	3	9	5	5	3	2	9.2
9-Apr	3	2	2	4	3	2	6	4	3	8	5	5	12	5	4	2	4	3	6	2	5	5	3	2	12.1
10-Apr	2	6	5	10	9	6	6	5	9	4	3	3	42	6	5	7	10	2	19	7	13	13	3	2	42.3
11-Apr	1	3	4	6	7	8	18	13	20	9	6	2	1	2	2	2	2	2	14	22	17	8	4	10	22.2
12-Apr	17	11	8	16	8	3	8	3	5	2	2	2	3	2	2	3	4	2	3	2	1	2	3	9	17.1
13-Apr	4	4	6	4	3	8	2	3	3	3	5	3	8	6	9	14	5	13	7	5	6	3	4	3	14.5
14-Apr	5	4	4	4	7	4	4	4	5	9	5	6	6	37	45	37	43	4	4	2	2	4	6	8	45.0
15-Apr	4	7	4	4	3	5	9	11	18	10	8	3	11	12	17	24	29	14	17	23	14	15	6	15	29.2
16-Apr	12	13	34	24	24	12	12	7	7	18	8	35	13	7	11	8	19	12	14	21	24	14	5	9	35.4
17-Apr	5	8	3	4	4	2	3	5	8	6	2	3	3	5	6	2	31	42	8	3	18	5	5	8	42.5
18-Apr	20	24	9	6	6	4	16	8	9	17	11	10	7	12	9	3	8	7	4	12	17	5	7	3	23.7
19-Apr	4	5	2	3	3	2	2	4	4	4	8	5	3	20	45	9	19	17	22	8	16	17	8	6	44.8
20-Apr	13	3	8	4	3	4	3	3	10	6	8	6	6	5	7	3	4	4	4	5	6	19	9	9	19.5
21-Apr	11	6	5	17	6	8	19	14	7	7	8	6	7	8	11	6	19	8	25	13	7	3	5	5	24.6
22-Apr	5	5	13	6	11	4	21	5	20	21	6	5	5	6	11	4	2	2	2	4	21	27	31	24	30.6
23-Apr	45	14	52	24	73	22	7	3	6	8	5	3	4	3	4	4	3	2	38	14	58	31	14	12	73.4
24-Apr	15	10	6	12	16	7	11	7	7	5	11	14	11	13	43	20	7	6	11	7	5	4	3	16	43.2
25-Apr	3	6	2	2	3	36	18	19	10	13	6	14	28	24	82	71	5	8	63	4	18	6	2	7	82.3
26-Apr	5	16	5	5	6	5	2	4	7	4	4	7	4	3	4	4	5	5	4	9	4	3	5	8	16.3
27-Apr	6	3	6	8	12	8	4	4	6	19	9	7	21	17	10	9	5	5	4	6	7	4	8	22	21.8
28-Apr	7	10	6	9	6	4	6	7	6	5	6	6	16	9	9	6	5	5	5	31	14	10	11	73	72.8
29-Apr	78	7	8	5	51	4	6	5	5	6	6	7	11	5	3	5	6	5	5	5	8	4	4	5	78.1
30-Apr	5	12	7	7	6	10	8	11	10	15	16	19	38	65	57	85	79	63	16	7	6	6	3	3	84.9
	78.1	23.7	52.4	23.6	73.4	36.3	42.4	26.2	25.9	20.8	18.6	35.4	42.3	64.5	82.3	84.9	78.7	63.2	62.7	61.2	58.5	30.5	30.6	72.8	

# PAZA

## Monthly Passive Data Summary

# Location of PAZA Passive Monitoring Stations



## PAZA Passive Results for April 2013

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
<b>Duplicates</b>						
14a	Sylvester	0.2	49.5	0.6		
14b	Sylvester	0.2	49.7	0.4		
21a	Eaglesham	0.2	41.4	2.0		
21b	Eaglesham	0.4	40.8	BDL		
40a	McLennan	0.5	44.0	BDL		
40b	McLennan	0.4	40.2	0.3		
41a	Valleyview	0.2	40.9	BDL		
41b	Valleyview	0.4	43.6	BDL		
64a	Girouxville 4				0.1	
64b	Girouxville 4				0.4	

1	Silver Valley	0.2	42.4	BDL		08-27-081-11 W6M
2	Bay Tree	0.4	46.8	BDL		13-16-078-13 W6M
3	Fourth Creek	0.2	40.2	BDL		04-13-082-07 W6M
4	Gordondale	0.3	47.2	0.2		04-34-078-10 W6M
5	Boone Creek	0.5	43.9	BDL		16-36-074-11 W6M
7	Steeprock Creek	0.2	44.2	0.9		09-35-072-13 W6M
9	Spirit River	0.1	36.4	0.2		08-12-079-07 W6M
10	Woking	0.4	45.5	0.2		01-13-076-07 W6M
11	Webber Creek	0.2	45.7	BDL		09-36-074-09 W6M
12	Hythe	0.5	47.0	0.1		14-36-072-11 W6M
14	Sylvester	0.2	49.6	BDL		08-06-069-12 W6M
16	Beaverlodge	0.4	44.0	0.1		15-36-071-10 W6M
17	Poplar	0.2	52.0	BDL		13-06-073-08 W6M
18	Saddle Hills	0.4	41.2	0.5		04-25-074-07 W6M
19	Wanham	0.4	44.6	BDL		16-22-077-03 W6M
20	Shaftesbury	0.3	46.8	BDL		04-03-082-23 W5M
21	Eaglesham	0.3	41.1	BDL		16-21-079-25 W5M
23	Bear Lake	0.5	42.7	BDL		15-31-072-06 W6M
24	Wembley	0.2	41.2	0.2		12-31-070-08 W6M
25	Pinto Creek	0.4	46.6	0.2		04-24-069-11 W6M
26	Flyingshot	0.4	42.1	BDL		15-36-070-07 W6M
27	Grande Prairie I	0.2	43.4	1.0		08-15-071-06 W6M

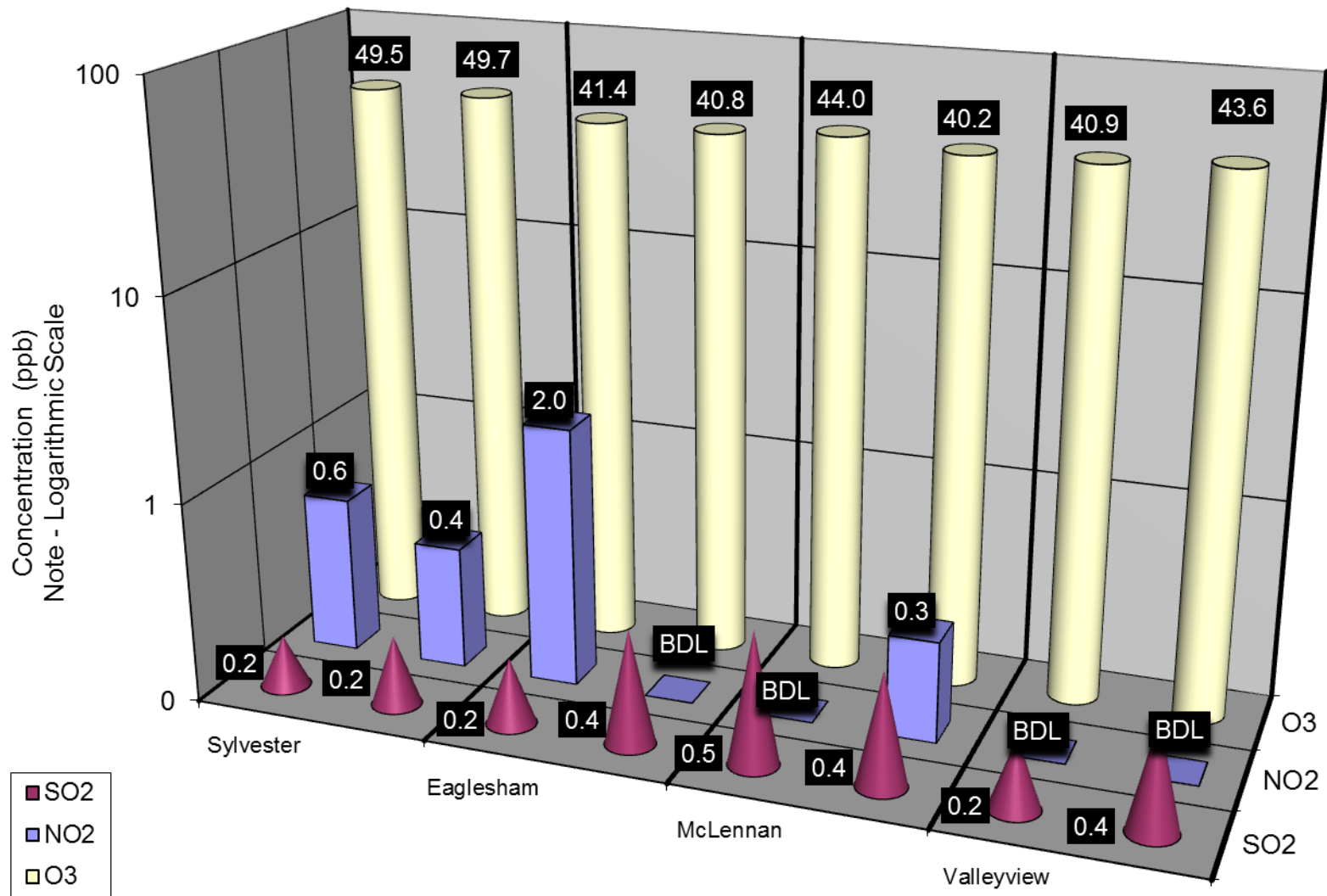


## PAZA Passive Results for April 2013 (Continued)

28	Clairmont Lake	0.2	36.6	0.1		09-06-073-04 W6M
29	Smoky Heights	0.3	46.9	0.3		04-06-075-02 W6M
30	Fitzsimmons	0.1	36.7	BDL		15-36-072-03 W6M
32	Gold Creek	0.3	37.0	BDL		06-33-067-05 W6M
33	Wapiti	0.2	41.7	BDL		02-25-071-03 W6M
34	Puskwaskau	0.4	43.3	BDL		15-35-074-25 W5M
35	Jean Cote	0.4	40.9	0.3		12-35-079-21 W5M
36	Guy	0.3	40.4	0.3		03-04-076-22 W5M
37	Crooked Creek	0.4	47.2	0.1		16-01-071-26 W5M
38	Karr Creek	0.4	50.0	4.2		10-16-065-02 W6M
39	Clouston Creek	0.2	46.3	3.9		12-01-073-22 W5M
40	McLennan	0.4	42.1	0.3		03-29-077-19 W5M
41	Valleyview	0.3	42.2	BDL		09-30-069-22 W5M
42	Sunset House	0.6	36.5	BDL		05-32-070-19 W5M
43	High Prairie	0.4	36.3	0.4		16-13-074-17 W5M
44	Peavine	0.3	43.6	BDL		03-05-079-15 W5M
45	Gift Lake	0.4	38.3	BDL	0.1	10-07-079-12 W5M
46	Little Smoky	0.4	40.8	BDL		12-01-065-21 W5M
47	Kinuso	0.2	36.0	BDL		12-10-073-10 W5M
48	Deer Mountain	0.2	39.1	BDL		15-22-068-09 W5M
49	Grande Prairie HP	0.3	45.7	0.1		17-26-071-06 W6M
62	East Prairie	0.4	38.7	BDL		13-02-072-15 W5M
63	Girouxville 3				0.2	14-02-077-23 W5M
64	Girouxville 4				0.2	4-08-077-22 W5M

\*BDL = Below Detection Level

\*NS - No sample



Duplicate Summary Chart

## Passive Summary for April 2013

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

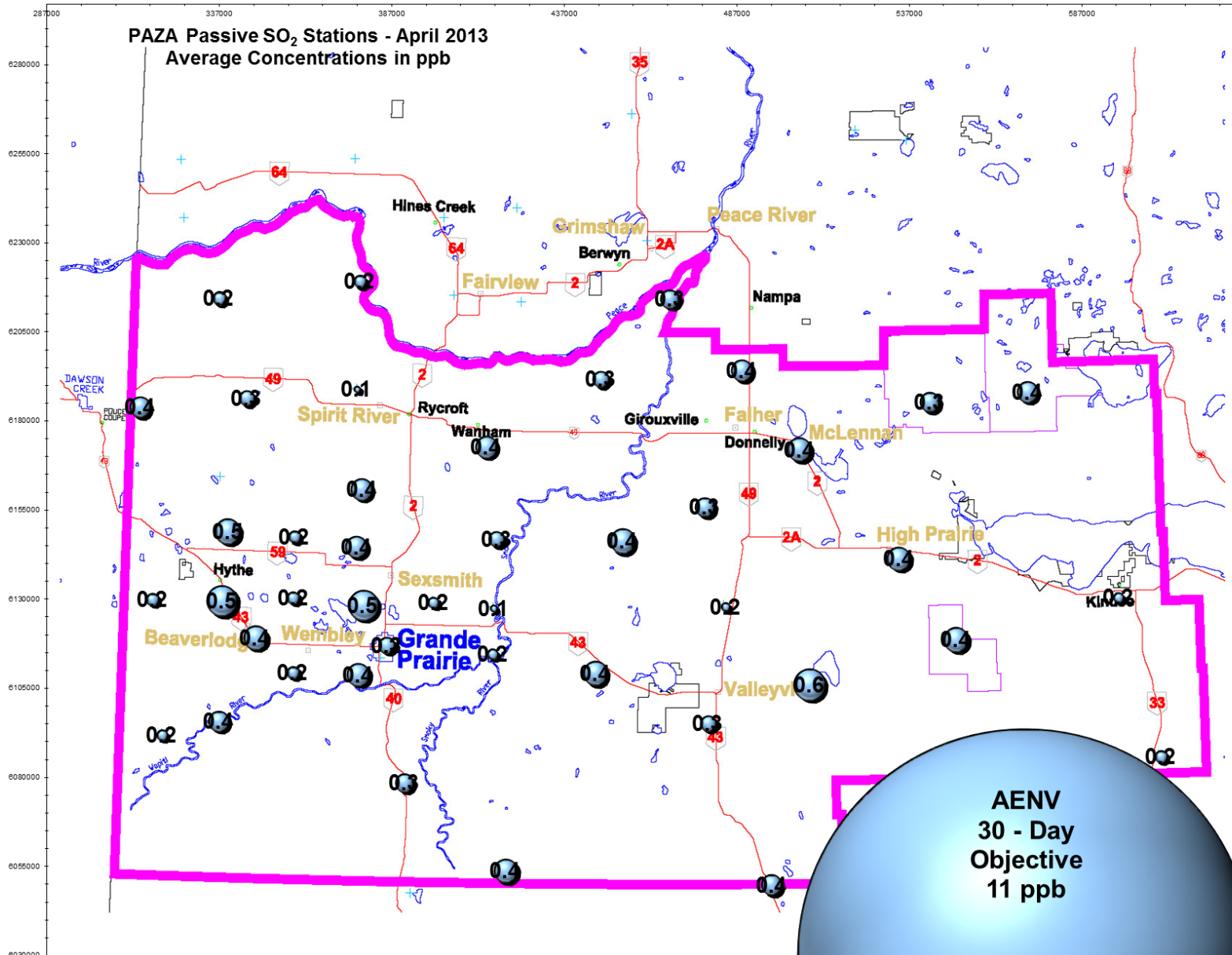
Passive Summary for April 2013 (PAZA Zone)				
<b>Mean</b>	<b>0.3</b>	<b>42.7</b>	<b>0.7</b>	<b>0.2</b>
<b>Standard Deviation</b>	<b>0.1</b>	<b>4.1</b>	<b>1.2</b>	<b>0.1</b>
<b>Minimum</b>	<b>0.1</b>	<b>36.0</b>	<b>0.1</b>	<b>0.1</b>
<b>Minimum At</b>	<b>Spirit River (#9)</b>	<b>Kinuso (#47)</b>	<b>Crooked Creek (#37)</b>	<b>Gift Lake (#45)</b>
<b>Maximum</b>	<b>0.6</b>	<b>52.0</b>	<b>4.2</b>	<b>0.2</b>
<b>Maximum At</b>	<b>Sunset House (#42)</b>	<b>Poplar (#17)</b>	<b>Karr Creek (#38)</b>	<b>Girouxville 4 (#64)</b>

### 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	43.1	1.9
PAZA Beaverlodge passive	0.4	44.0	0.1

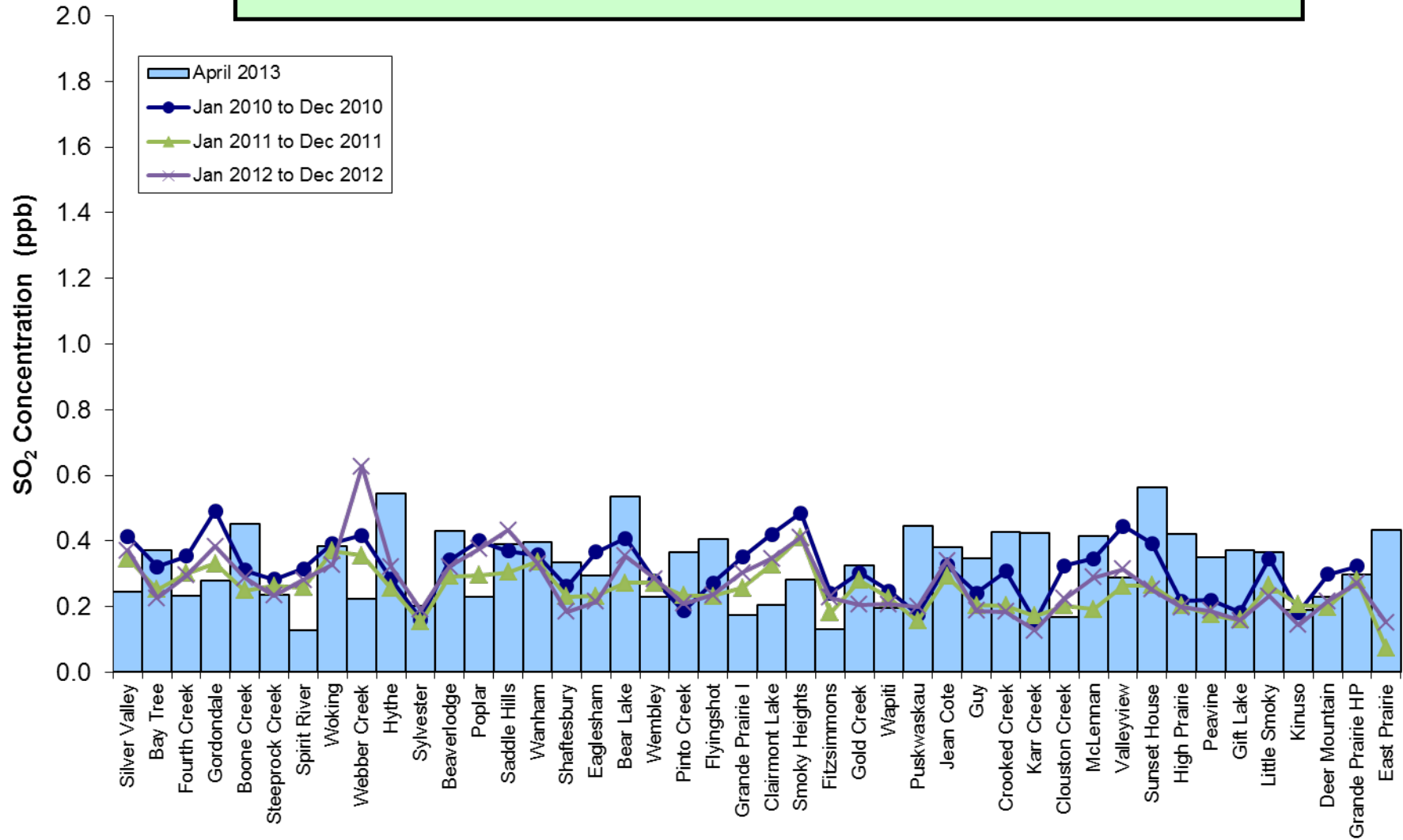
### Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PAZA Henry Pirker station	0.4	37.2	6.1
PAZA Grande Prairie passive	0.3	45.7	0.1

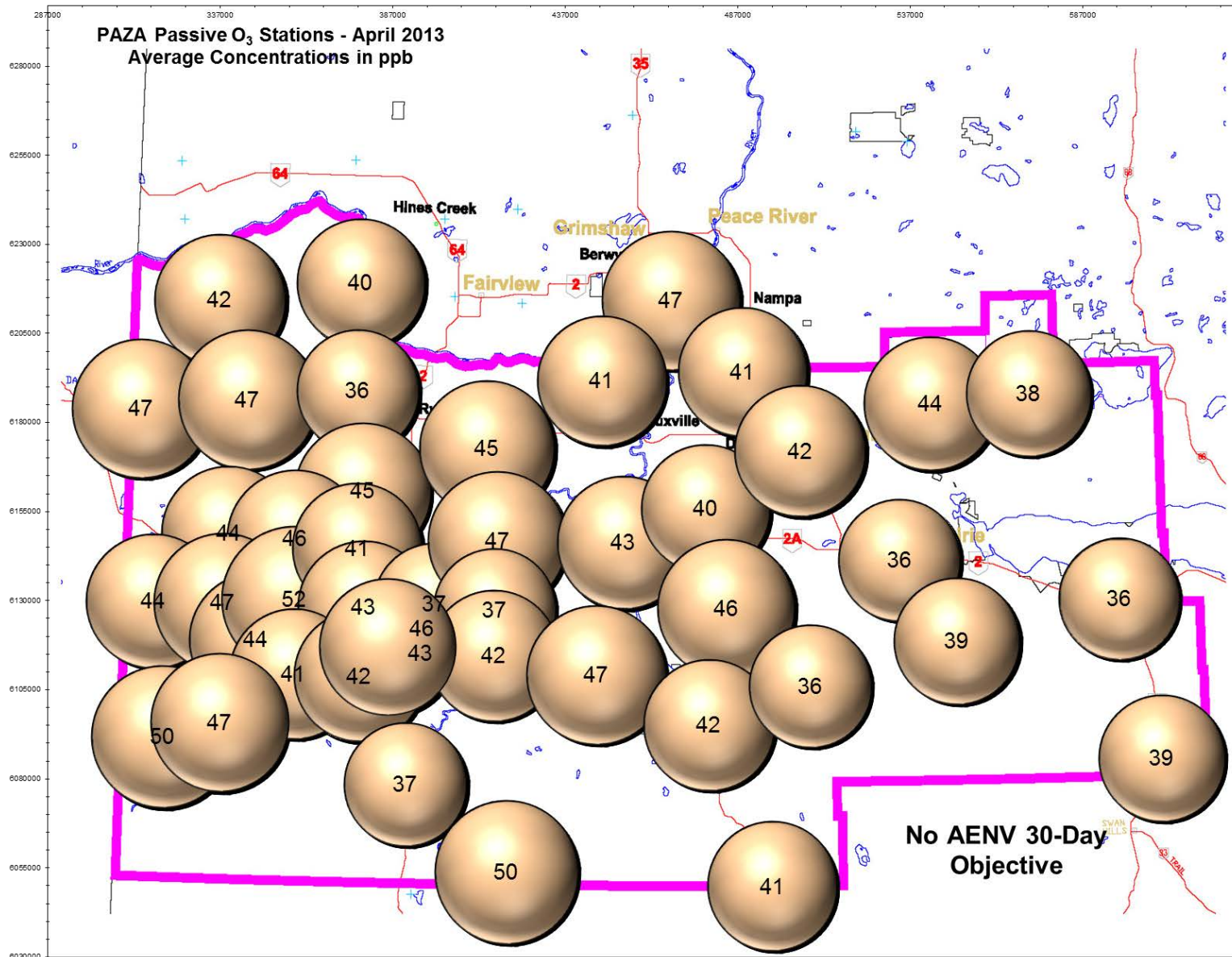


SO<sub>2</sub> Bubble Chart

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

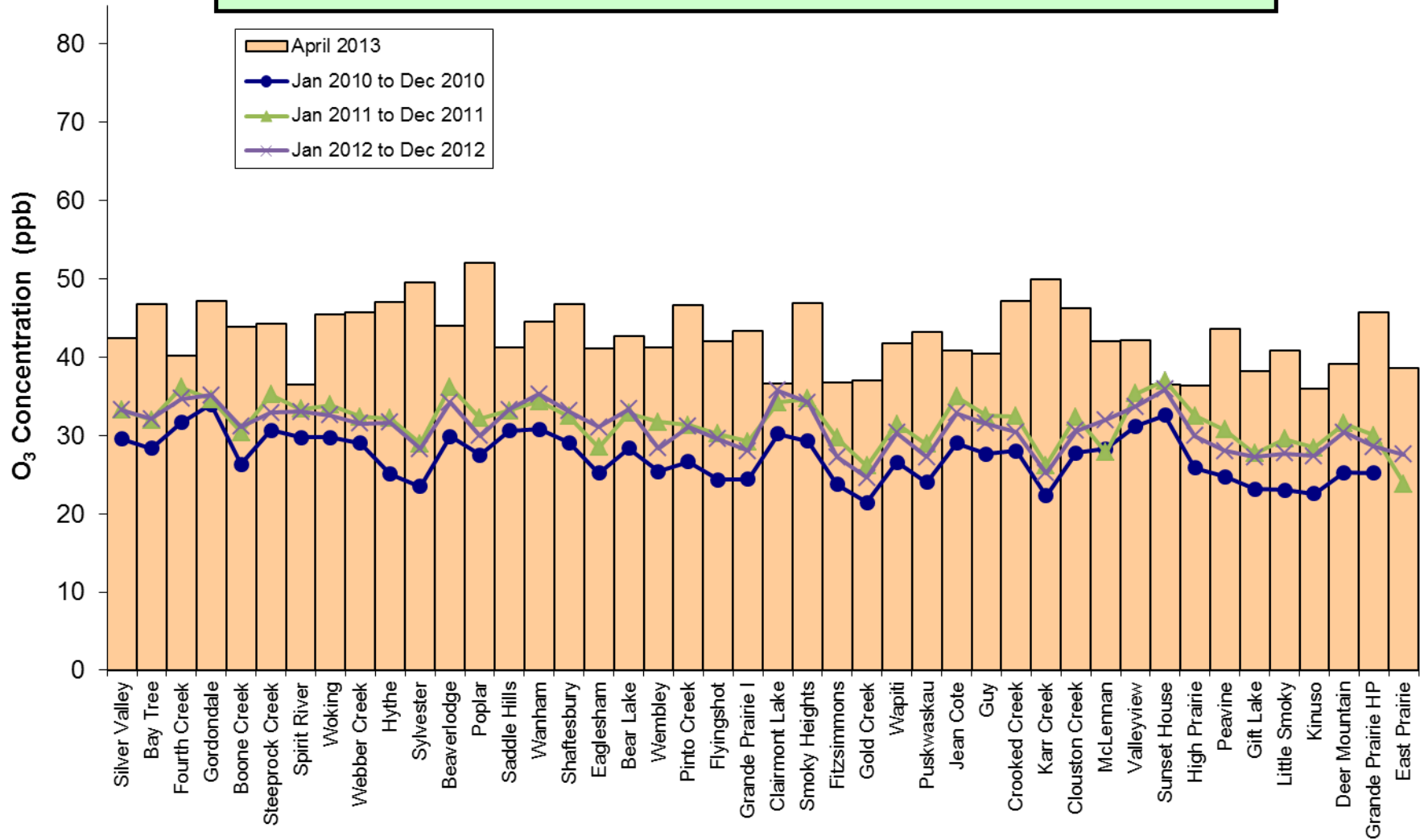


**SO<sub>2</sub> Summary Chart**

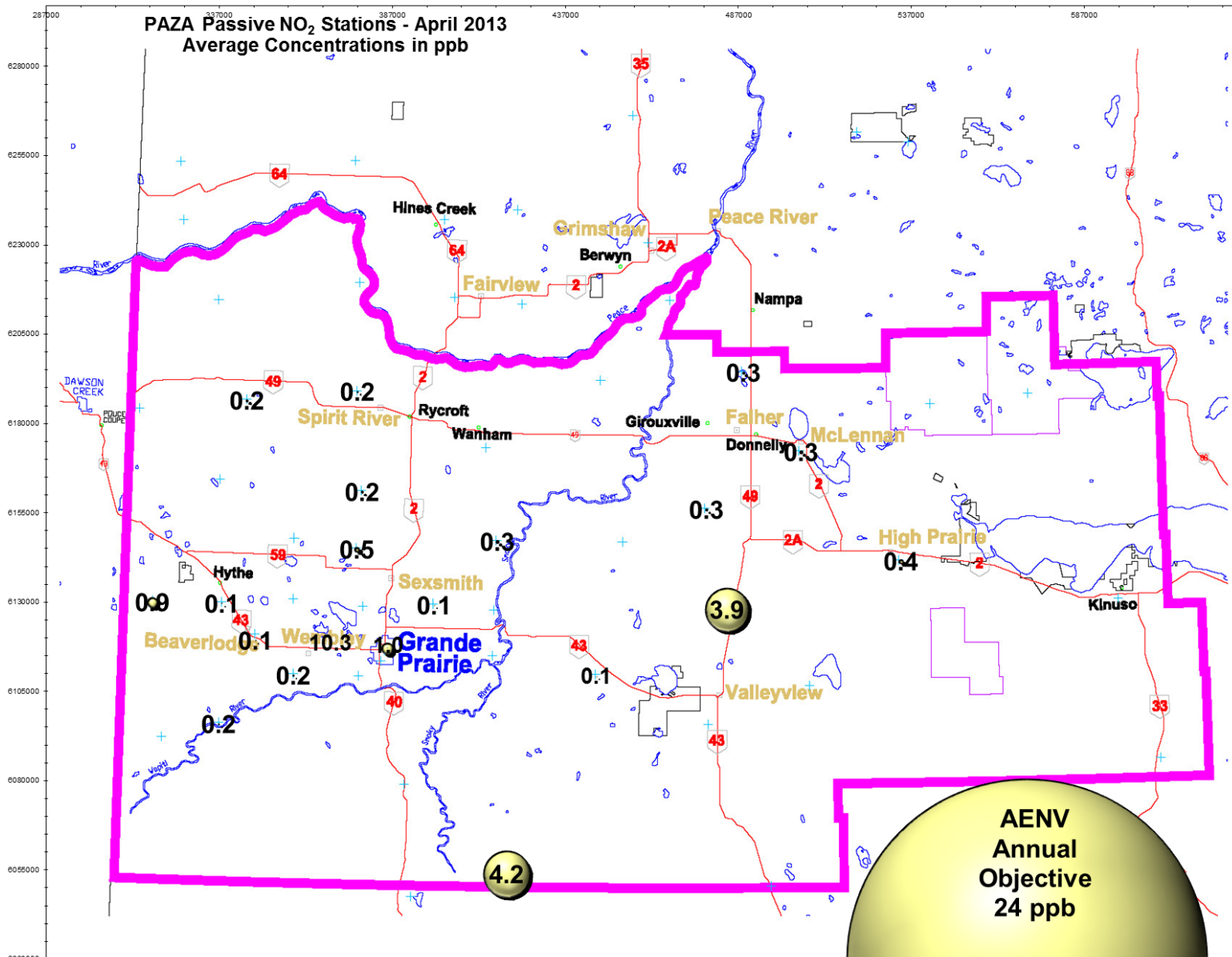


**O<sub>3</sub> Bubble Chart**

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



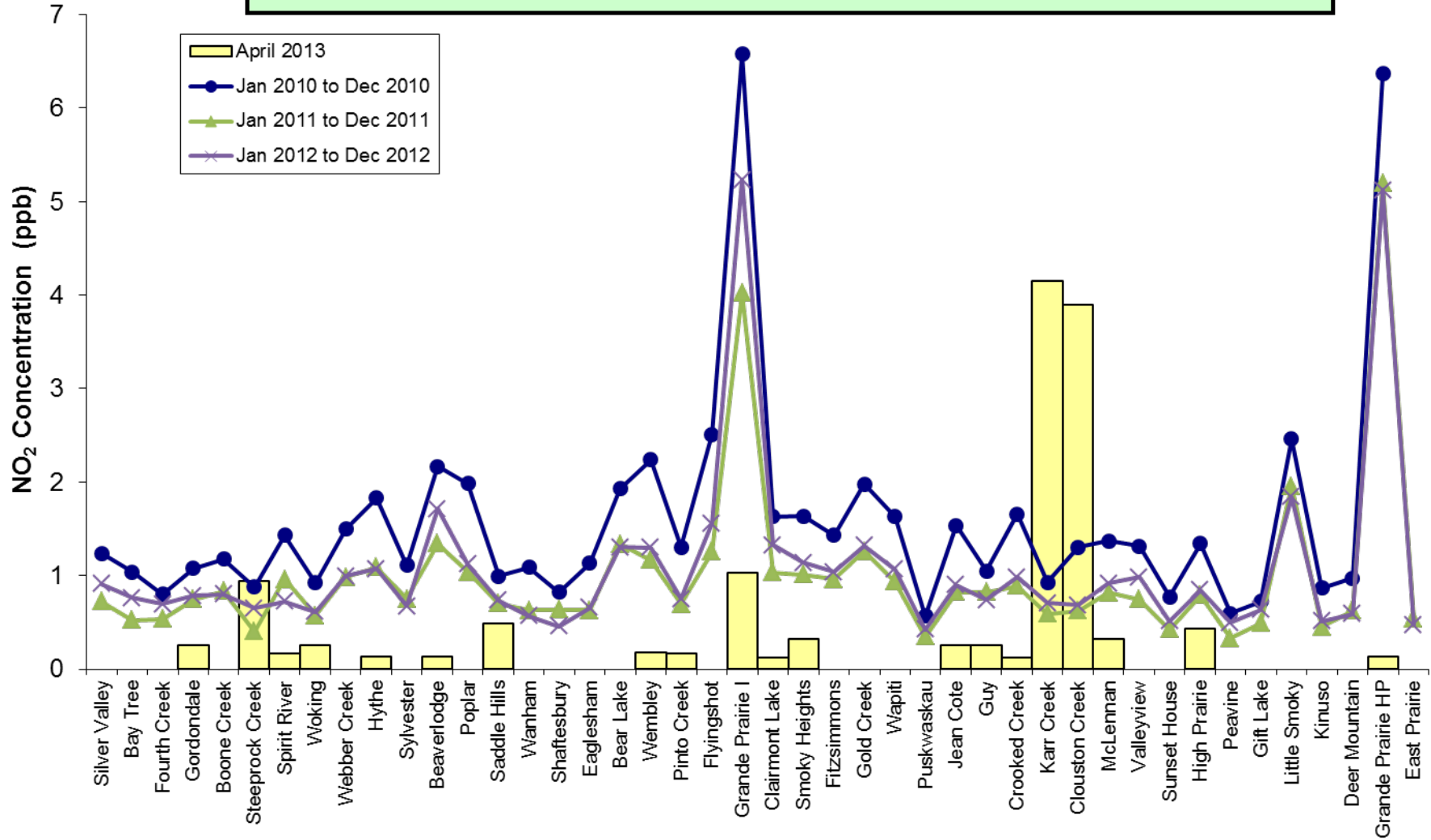
**O<sub>3</sub> Summary Chart**



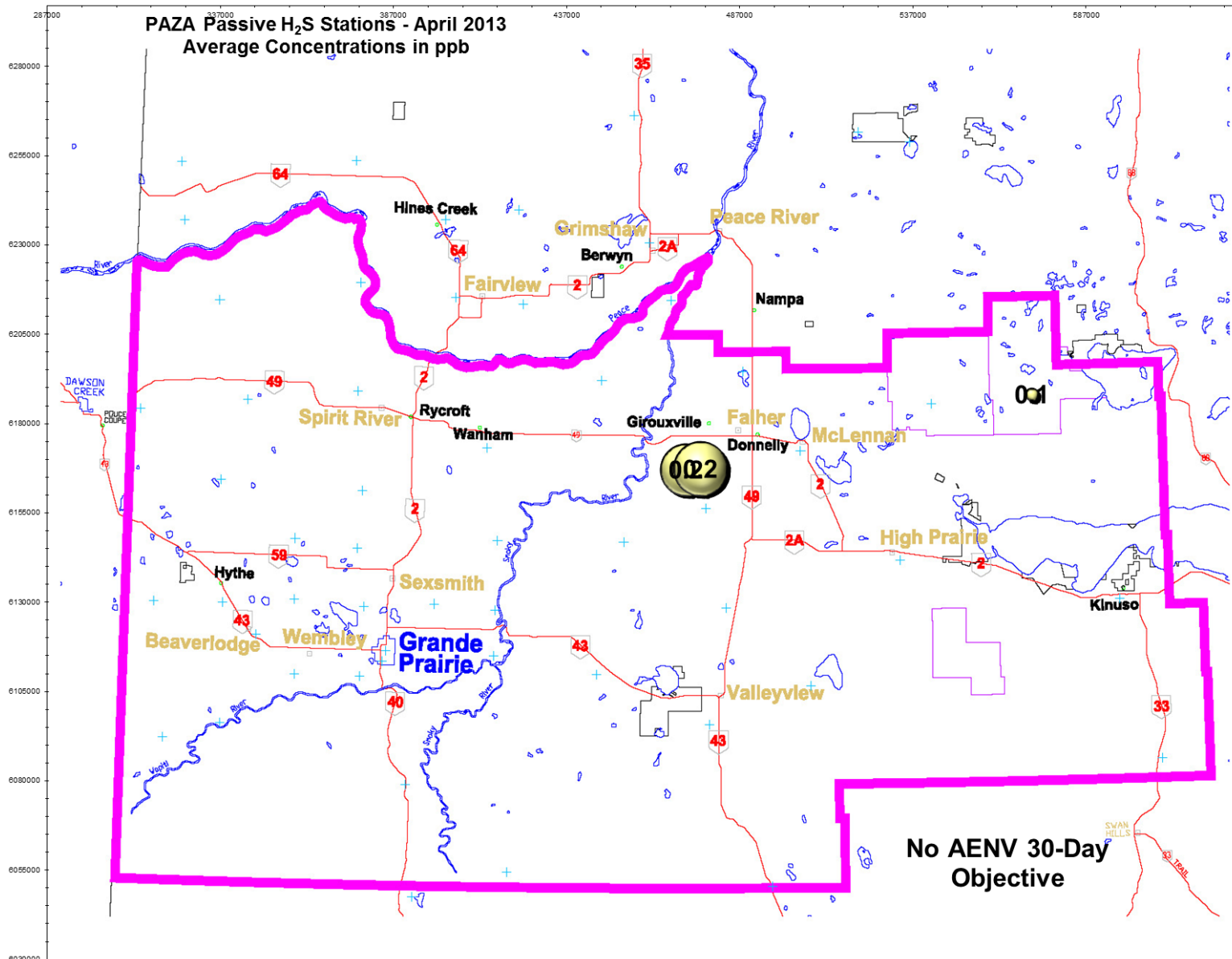
**NO<sub>2</sub> Bubble Chart**



**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**

# April 2013 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>, PM<sub>2.5</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, PM<sub>2.5</sub>**

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

# Calibration Report



Parameter SO2  
 Air Monitoring Network PAZA

## Station Information

Calibration Date	April 12, 2013	Previous Calibration	March 12, 2013
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)	9:25	End Time (MST)	13:22
Barometric Pressure	na ATM	Station Temperature	20.5 Deg C
Calibrator	Envionics 6100	Serial Number	3016
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	0.996863	Calculated slope	1.004816
Calculated intercept	2.591806	Calculated intercept	1.044649
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	9.0		9.2	
Coefficient	0.790		0.793	
Pressure	641.9	mm Hg	633.6	mm Hg
Flow	0.490	lpm	0.486	lpm
Lamp Voltage	44178	Hz	44118	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)
4990	0.00	0.0	0.3	N/A
4990	39.92	403.2	400.8	1.0058
4990	19.98	202.6	200.0	1.0130
4990	9.98	101.4	98.5	1.0296
4990	0.00	0.0	0.3	As Found Zero
4990	39.94	403.4	398.4	As Found Span
Average Correction Factor				1.0161

Calculated value of As Found Response: 399.4 ppb      Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	247.2	ppb	251.7	ppb

Notes: Slight span adjust. Calibrate.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PAZA

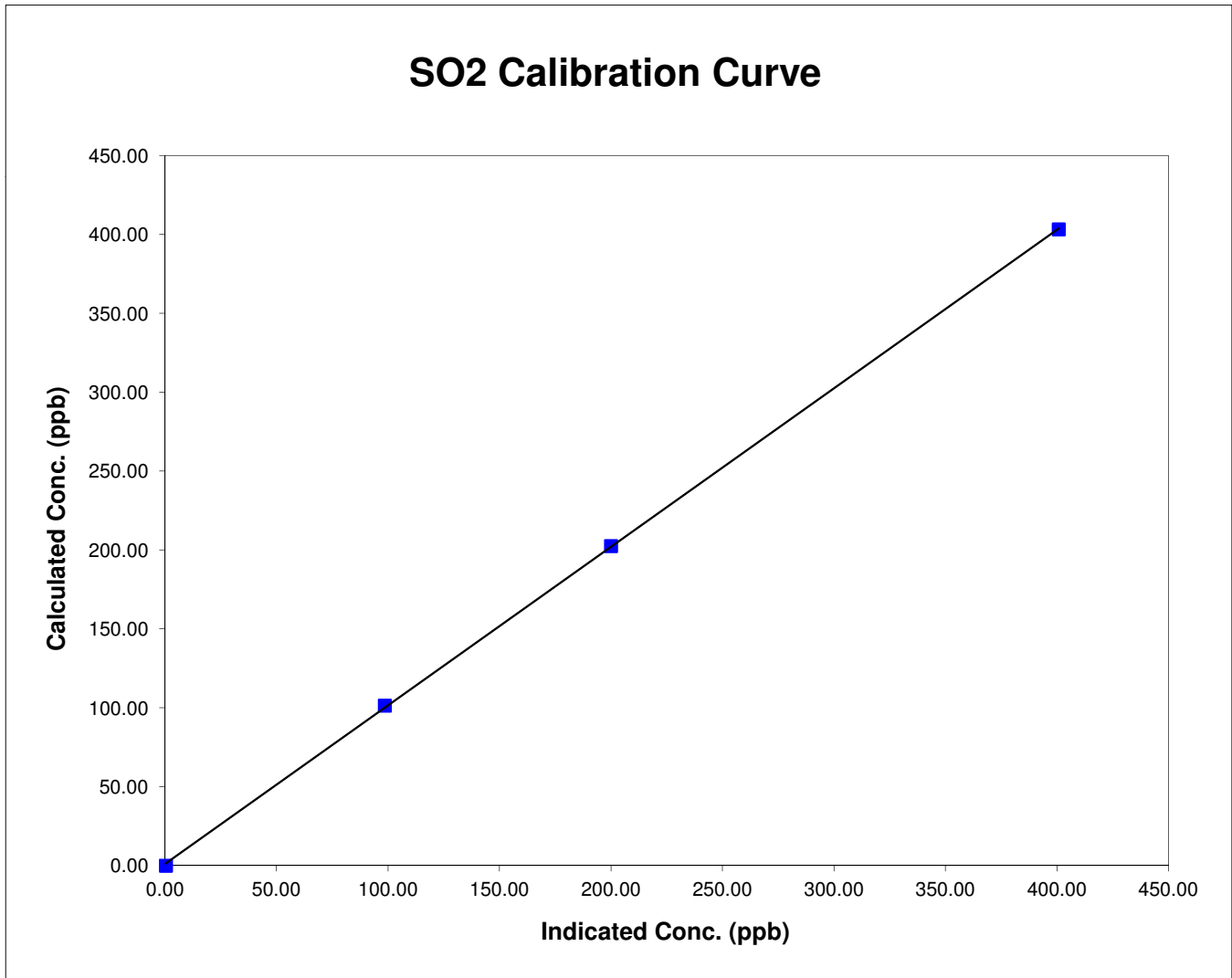


## Station Information

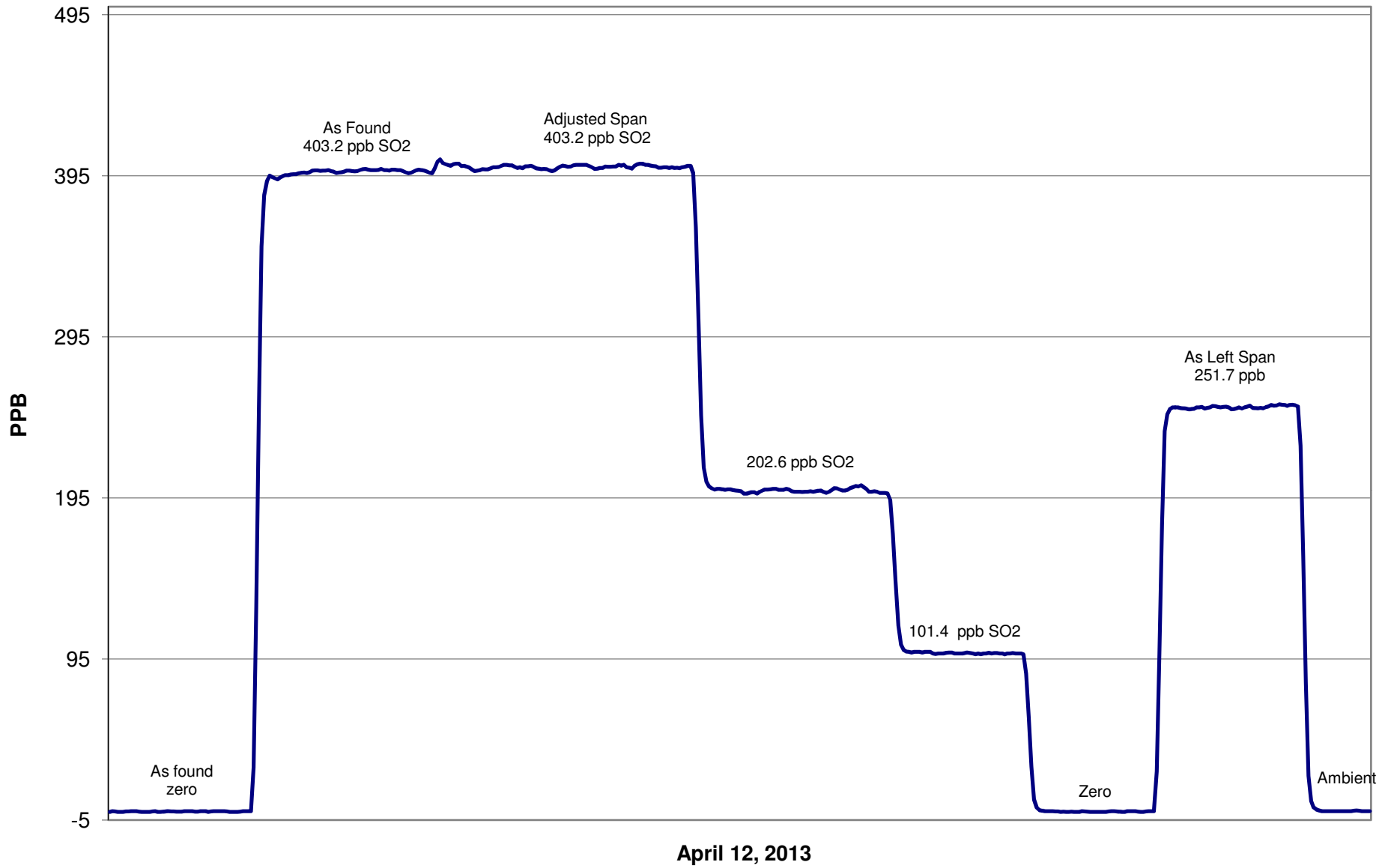
Calibration Date	April 12, 2013	Previous Calibration	March 12, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:25	End Time (MST)	13:22
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999949
403.2	400.8	1.0058		
202.6	200.0	1.0130	Slope	1.004816
101.4	98.5	1.0296		
			Intercept	1.044649



# SO2 Calibration



# Calibration Report

Parameter  
Air Monitoring Network

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



## Station Information

Calibration Date	April 11, 2013	Previous Calibration	March 12, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	<b>Routine</b> Installation    Removal    Other:		
Start Time (MST)	10:00	End Time (MST)	14:44
Barometric Pressure	na                  Atm	Station Temperature	20.5                  Deg C
Calibrator	EnviroNics 6100	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.	5408	
<b>Before</b>	Parameter	NO <sub>2</sub>	NO <sub>x</sub>	NO
	Data Slope	0.998860	0.997462	0.998946
	Data Offset	-0.186971	1.872004	1.943860
<b>After</b>	Data Slope	0.992544	0.995355	0.995417
	Data Offset	1.028711	2.083656	1.784733
	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	13.1	mV	12.9	mV
NO <sub>x</sub> bkgnd	13.6	mV	14.3	mV
NO coefficient	1.116		1.101	
NO <sub>x</sub> coefficient	1.001		1.001	
NO <sub>2</sub> conv temp	319.0	Deg C	319.0	Deg C
PMT Temp	-2.4	Deg C	-2.4	Deg C
PMT Volt	-768.0	mV	-768.0	mV
R Cell Press	171.5	in Hg	175.5	in Hg

# Calibration Report

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



Calibration Date: **April 11, 2013** 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	4990	0.00	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	
1	4990	39.92	406.3	406.3	0.0	407.3	407.4	-0.1	0.9976	0.9974	
2	4990	19.98	204.2	204.2	0.0	201.5	202.1	-0.7	1.0133	1.0103	
3	4990	9.98	102.2	102.2	0.0	98.9	99.4	-0.5	1.0334	1.0286	
AFZ	4990	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0000	0.0000	
AFS	4990	39.94	406.6	406.6	0.0	411.6	411.3	0.2	0.9878	0.9884	
									Average Correction Factor	1.0148	1.0121

As Found Concentrations: **NO<sub>x</sub>= 413.5** **NO= 413.3** As Found Percent Change **NO<sub>x</sub>= 1.7%** **NO= 1.7%**

Dilution Flow 4990 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	0.0	0.0	0.0	N/A	N/A	N/A	N/A	
NO point	406.1	406.1	0.0	405.4	406.1	-0.8	1.0019	1.0000	N/A	N/A	
300	406.1	96.6	309.5	406.1	96.6	309.8	1.0000	1.0000	0.9992	100.1%	
200	406.1	196.3	209.8	409.6	196.3	213.4	0.9916	1.0000	0.9830	101.7%	
100	406.1	291.9	114.3	402.8	291.9	111.0	1.0082	1.0000	1.0290	97.2%	
							Average Correction Factor	0.9999	1.0000	1.0037	99.7%

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	-0.3	0.0	ppb	-0.9	-1.0	0.0	ppb
Auto span	328.3	326.9	1.6	ppb	328.3	326.6	2.0	ppb

Calibration Performed By: Grover Christiansen



# Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PAZA



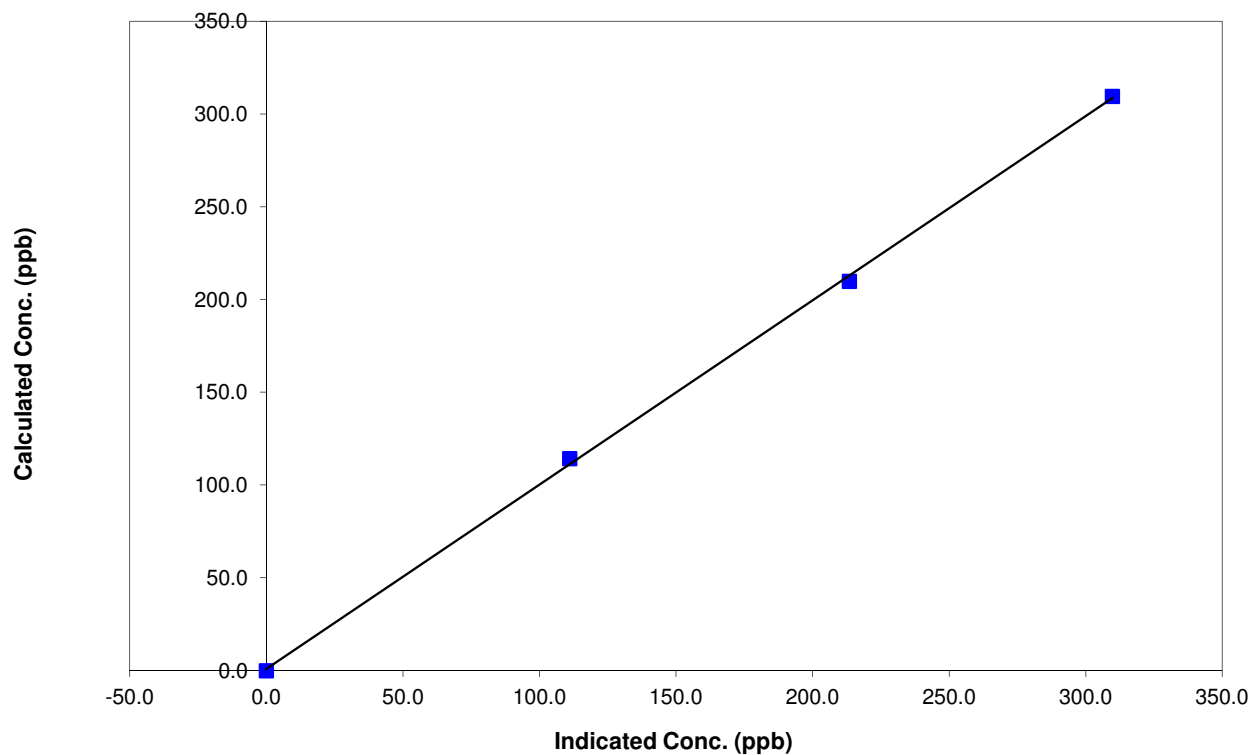
## Station Information

Calibration Date	April 11, 2013	Previous Calibration	March 12, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:00	End Time (MST)	14:44
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	0.999610
309.5	309.8	0.9992		
209.8	213.4	0.9830		
114.3	111.0	1.0290	Slope	0.992544
			Intercept	1.028711

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



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PAZA



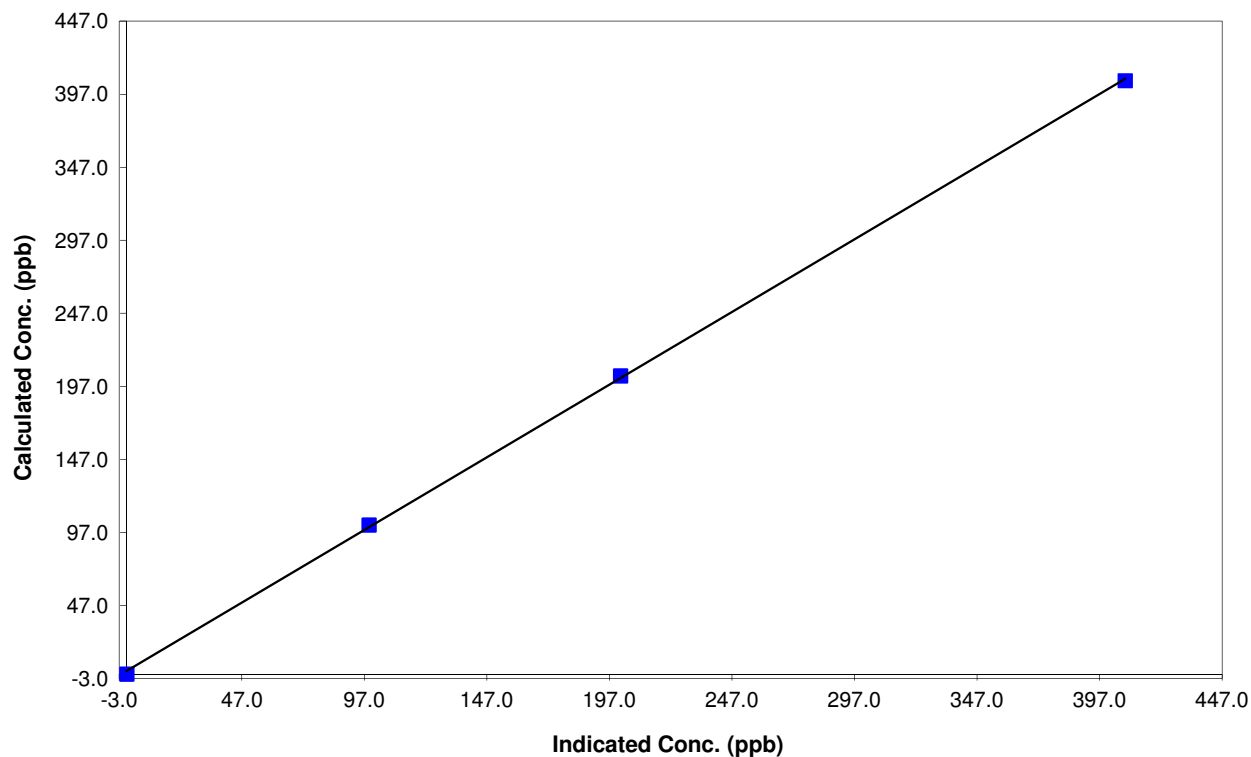
## Station Information

Calibration Date	April 11, 2013	Previous Calibration	March 12, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:00	End Time (MST)	14:44
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	0.999881
406.3	407.3	0.9976		
204.2	201.5	1.0133		
102.2	98.9	1.0334		
			Slope	0.995355
			Intercept	2.083656

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



# Calibration Summary

Parameter NO

Air Monitoring Network PAZA



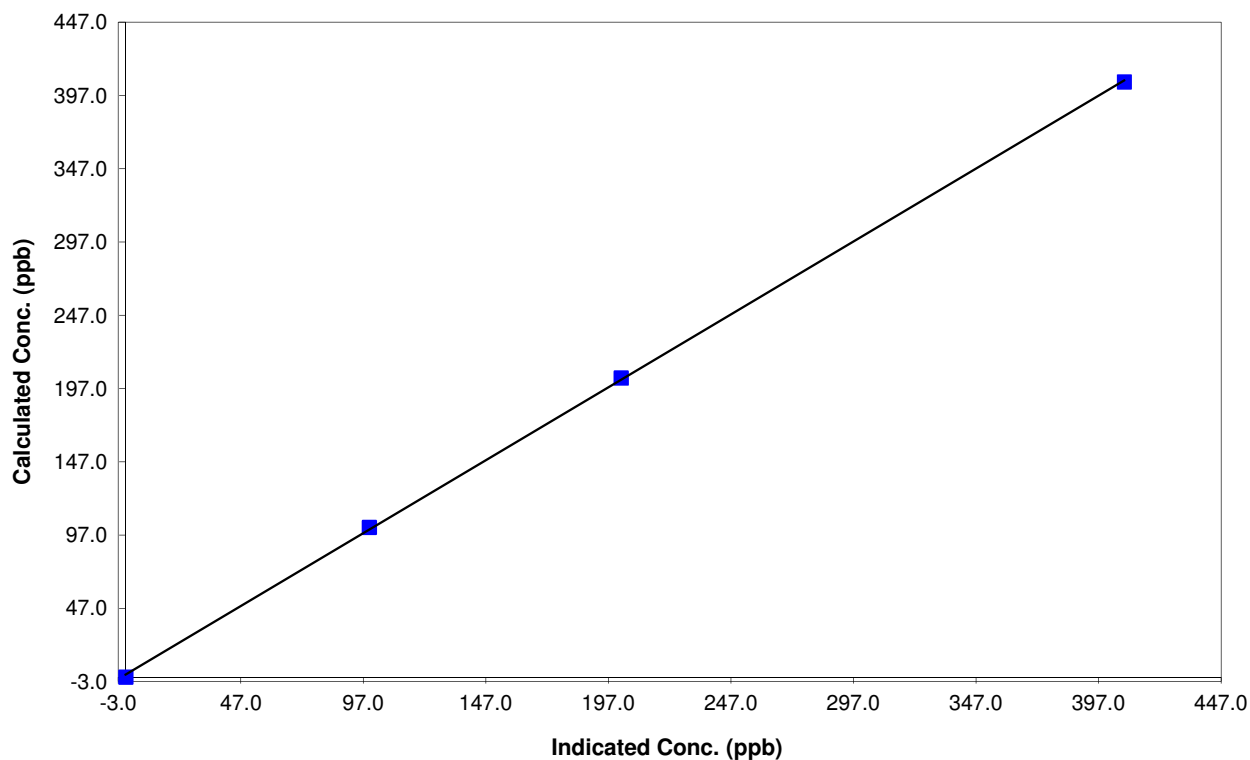
## Station Information

Calibration Date	April 11, 2013	Previous Calibration	March 12, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:00	End Time (MST)	14:44
Analyzer make	TEI 42C	Analyzer serial #	508011073

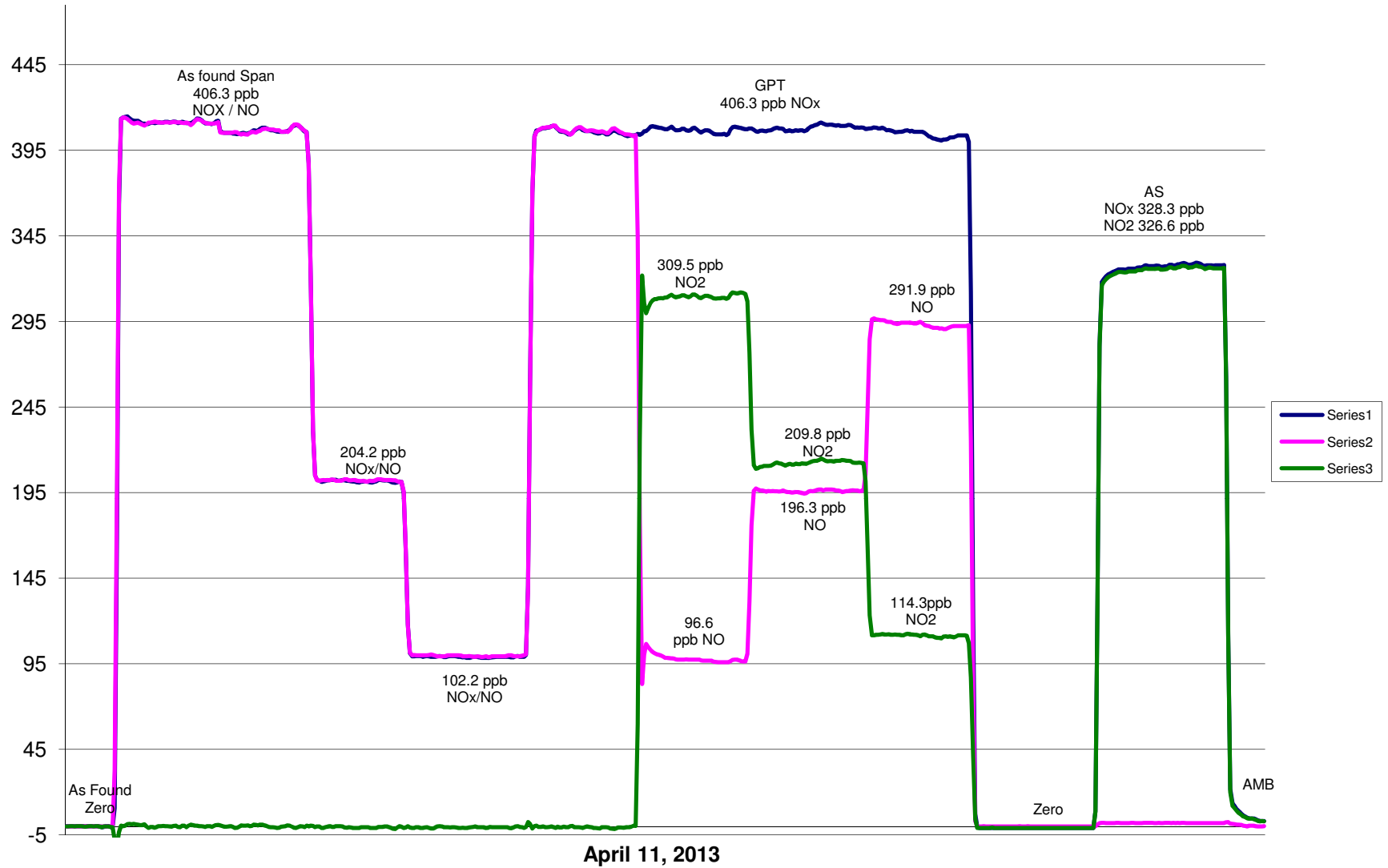
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
406.3	407.4	0.9974	Correlation Coefficient	0.999913
204.2	202.1	1.0103		
102.2	99.4	1.0286	Slope	0.995417
			Intercept	1.784733

## NO Calibration Curve



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



# Calibration Report



Parameter 03

Air Monitoring Network PAZA

## Station Information

Calibration Date	<u>April 11, 2013</u>	Previous Calibration	<u>March 18, 2013</u>
Station Number	<u>1</u>	Station Location	<u>Henry Pirker</u>
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	<u>13:24</u>	End Time (MST)	<u>14:49</u>
Barometric Pressure	<u>0.923 atm</u>	Station Temperature	<u>23.0 Deg C</u>
Calibrator	<u>EnviroNics 6100</u>	Serial Number	<u>2844</u>
Cal Gas Concentration	<u>NA</u>	Cal Gas Expiry Date	<u>NA</u>
DACS make	<u>CR3000</u>	DACS serial No.	<u>5237</u>
DACS voltage range	<u>0 - 5 volt</u>	DACS channel #	<u>9</u>
	<u>Before</u>		<u>After</u>
Calculated slope	<u>1.000808</u>	Calculated slope	<u>1.038072</u>
Calculated intercept	<u>0.198235</u>	Calculated intercept	<u>0.992125</u>
Analyzer make	<u>Teco 49C</u>	Analyzer serial #	<u>49C-76443-383</u>

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.60	ppb	-0.60	ppb
slope	0.988		0.988	
Lamp temp	56.4	mV	56.4	mV
Lamp Intensity A/B	51008/54793	mV	51008/54793	mV
Pressure	697.8	mm Hg	700.3	mm Hg
Flow A	0.766	ccm	0.766	ccm
Flow B	0.711	ccm	0.711	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	309.5	297.4	1.0407
5035	0.2	209.8	201.9	1.0393
5035	0.1	114.3	107.3	1.0657
5035	0.0	0.0	0.0	As found zero
5035	0.3	309.5	297.4	As found span
Average Correction Factor				1.0486

Calculated value of As Found Response: 297.8 ppm      Percent Change of As Found: -3.8%

	before calibration		after calibration	
Auto zero	0.4	ppb	NA	ppb
Auto span	110.0	ppb	#DIV/0!	ppb

Notes: As found pull out cal. Analyzer will be sent back to MOE.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter 03

Air Monitoring Network PAZA

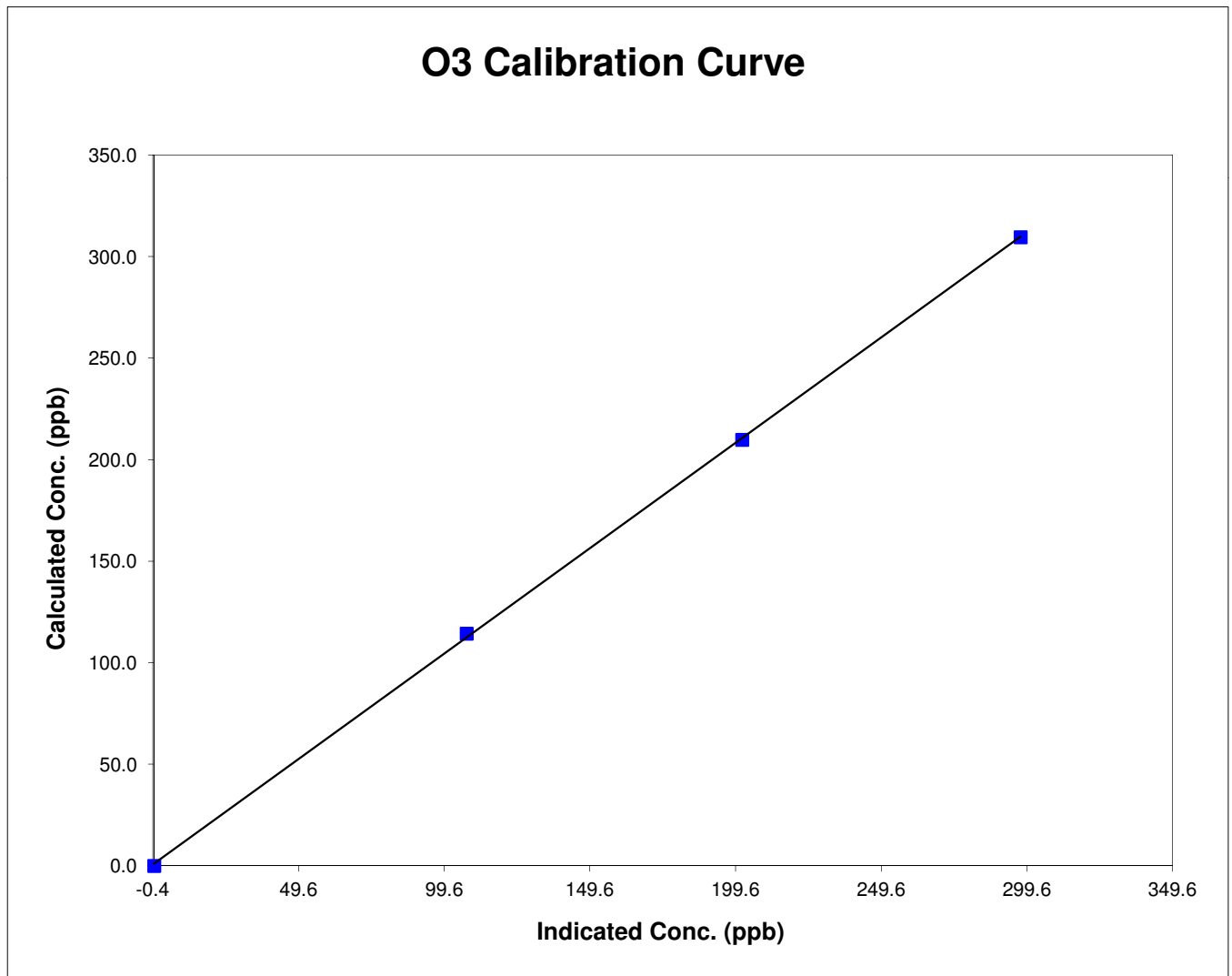


### Station Information

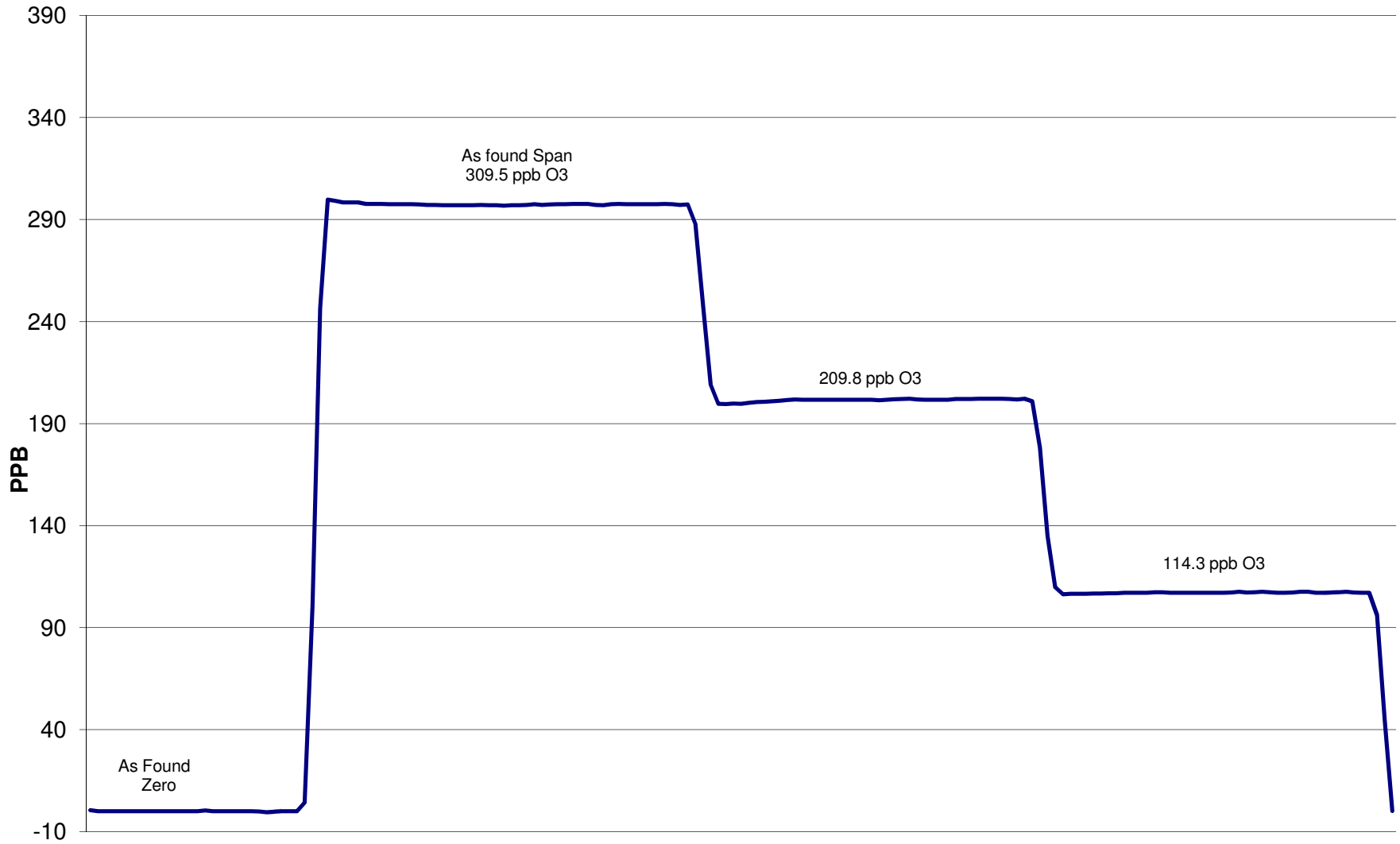
Calibration Date	<u>April 11, 2013</u>	Previous Calibration	<u>March 18, 2013</u>
Station Number	<u>1</u>	Station Location	<u>Henry Pirker</u>
Start Time (MST)	<u>13:24</u>	End Time (MST)	<u>14:49</u>
Analyzer make/model	<u>Teco 49C</u>	Analyzer serial #	<u>49C-76443-383</u>

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	NA		
309.5	297.4	1.0407	Correlation Coefficient	0.999895
209.8	201.9	1.0393		
114.3	107.3	1.0657	Slope	1.038072
			Intercept	0.992125



# O3 Calibration



April 11, 2013

# Calibration Report



Parameter 03  
 Air Monitoring Network PAZA

### Station Information

Calibration Date	<u>April 11, 2013</u>	Previous Calibration	<u>March 18, 2013</u>
Station Number	<u>1</u>	Station Location	<u>Henry Pirker</u>
Reason:	<input checked="checked" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	<u>15:06</u>	End Time (MST)	<u>17:40</u>
Barometric Pressure	<u>0.923 atm</u>	Station Temperature	<u>23.0 Deg C</u>
Calibrator	<u>Environics 6100</u>	Serial Number	<u>2844</u>
Cal Gas Concentration	<u>NA</u>	Cal Gas Expiry Date	<u>NA</u>
DACS make	<u>CR3000</u>	DACS serial No.	<u>5237</u>
DACS voltage range	<u>0 - 5 volt</u>	DACS channel #	<u>9</u>
	<u>Before</u>		<u>After</u>
Calculated slope	<u>1.000808</u>	Calculated slope	<u>0.997311</u>
Calculated intercept	<u>0.198235</u>	Calculated intercept	<u>0.940725</u>
Analyzer make	<u>Teco 49C</u>	Analyzer serial #	<u>607415761</u>

	before		after	
Concentration range	<u>0 - 500</u>	<u>ppb</u>	<u>0 - 500</u>	<u>ppb</u>
offset	<u>-0.60</u>	<u>ppb</u>	<u>-0.60</u>	<u>ppb</u>
slope	<u>0.988</u>		<u>0.988</u>	
Lamp temp	<u>56.4</u>	<u>mV</u>	<u>56.4</u>	<u>mV</u>
Lamp Intensity A/B	<u>51008/54793</u>	<u>mV</u>	<u>51008/54793</u>	<u>mV</u>
Pressure	<u>697.8</u>	<u>mm Hg</u>	<u>700.3</u>	<u>mm Hg</u>
Flow A	<u>0.766</u>	<u>ccm</u>	<u>0.766</u>	<u>ccm</u>
Flow B	<u>0.711</u>	<u>ccm</u>	<u>0.711</u>	<u>ccm</u>

### Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5035	0.0	0.0	-0.1	N/A
5035	0.3	309.5	309.4	1.0005
5035	0.2	209.8	210.5	0.9967
5035	0.1	114.3	111.8	1.0228
5035	0.0	0.0	-0.1	As found zero
5035	0.3	309.5	309.4	As found span
Average Correction Factor				1.0067

Calculated value of As Found Response: 309.9 ppm     Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	<u>0.4</u>	<u>ppb</u>	<u>0.9</u>	<u>ppb</u>
Auto span	<u>110.0</u>	<u>ppb</u>	<u>357.5</u>	<u>ppb</u>

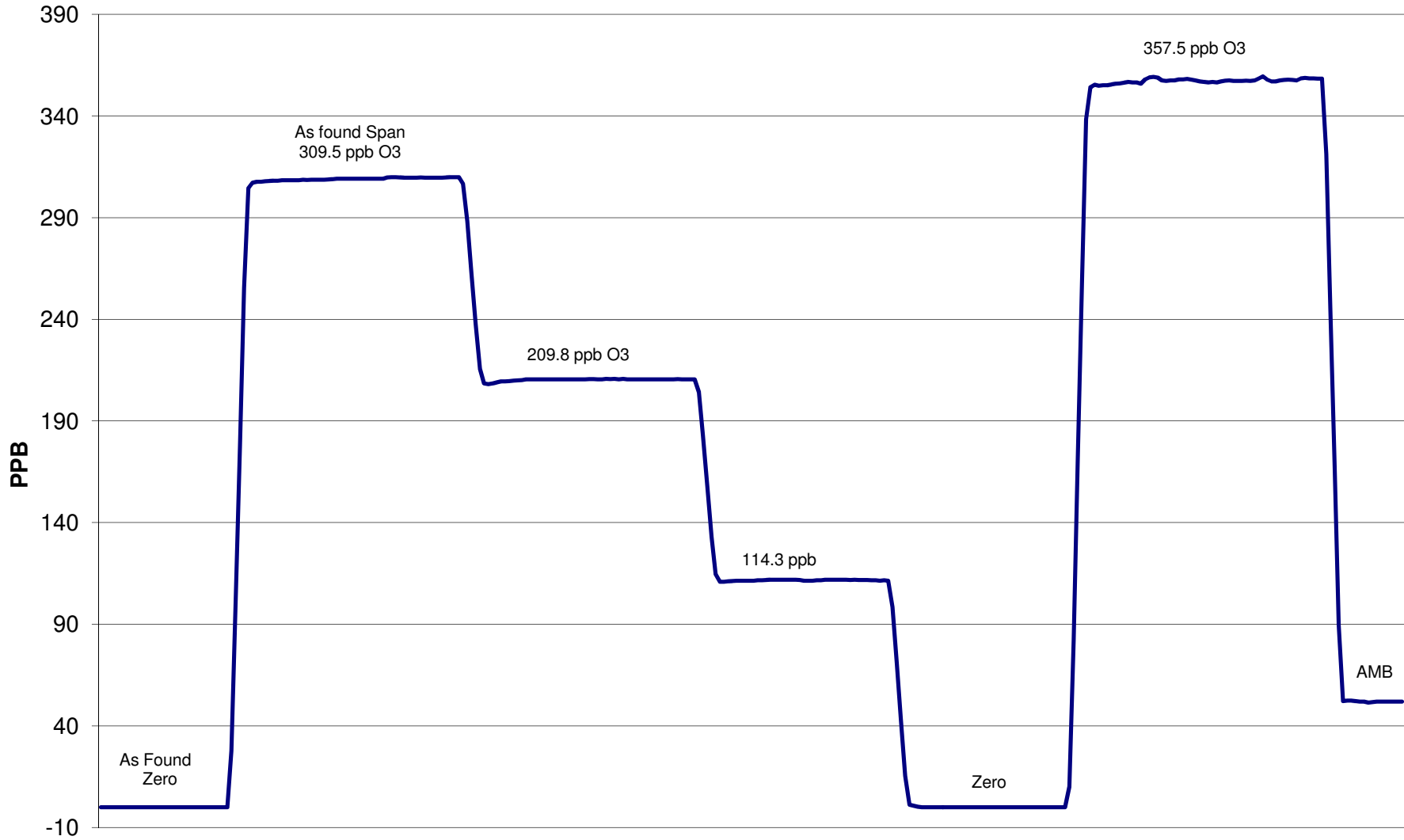
Notes: Install original analyzer, allow stabilize & calibrate.

Calibration Performed By: Grover Christiansen





# O3 Calibration



April 11, 2013

# Calibration Report



Parameter CO

Air Monitoring Network PAZA

## Station Information

Calibration Date	April 8, 2013	Previous Calibration	March 19, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			Other: <input type="checkbox"/>
Start Time (MST)	10:30	End Time (MST)	11:24
Barometric Pressure	0.922 ATM	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Conc	2898 ppm	Cal Gas Expiry Date	2/04/13
		Cal Gas Cylinder #	LL83909
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.017836	Calculated slope	1.000014
Calculated intercept	-0.305350	Calculated intercept	-0.740366
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.110		1.11	
CO zero setting	4.640		4.640	
Sample pressure	694.1	mm Hg	695.9	mm Hg
Sample Flow	1.153	LPM	1.124	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	0.78	N/A
4995	69.94	40.02	40.76	0.9818
4995	34.96	20.14	20.91	0.9633
4995	17.96	10.38	11.06	0.9390
4995	0.00	0.00	0.78	As Found Zero
4995	69.94	40.02	40.76	As Found Span
Average Correction Factor				0.9614

Calculated value of As Found Response: 40.393 ppm      Percent Change of As Found: -0.9%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.96	ppm	NA	ppm

Notes: Datalogger reads 0.35 ppm high. Currently running with external sample pump. Complete cal will be done before replacing internal pump with new provided by MOE.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter CO  
 Air Monitoring Network PAZA



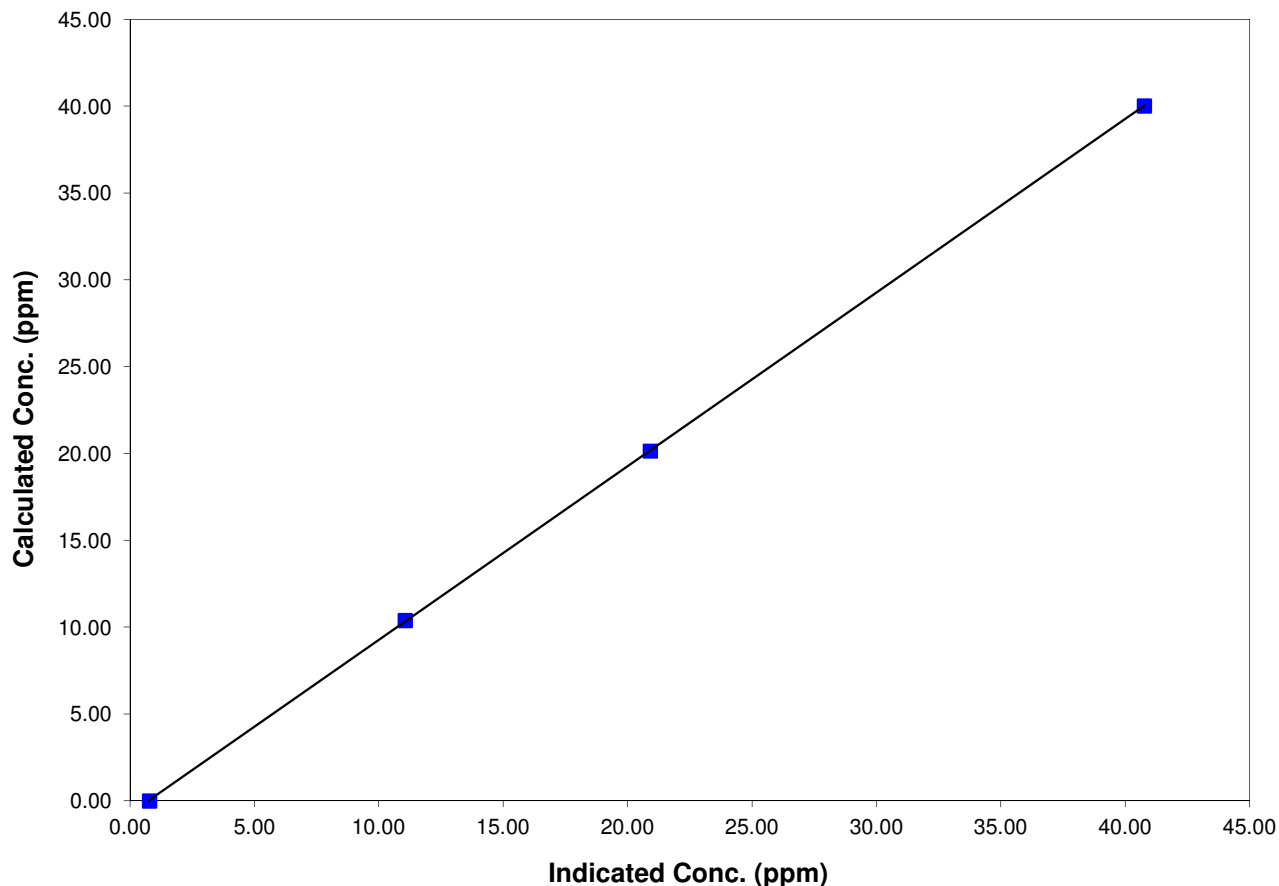
## Station Information

Calibration Date	April 8, 2013	Previous Calibration	March 19, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:30	End Time (MST)	11:24
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

## Calibration Data

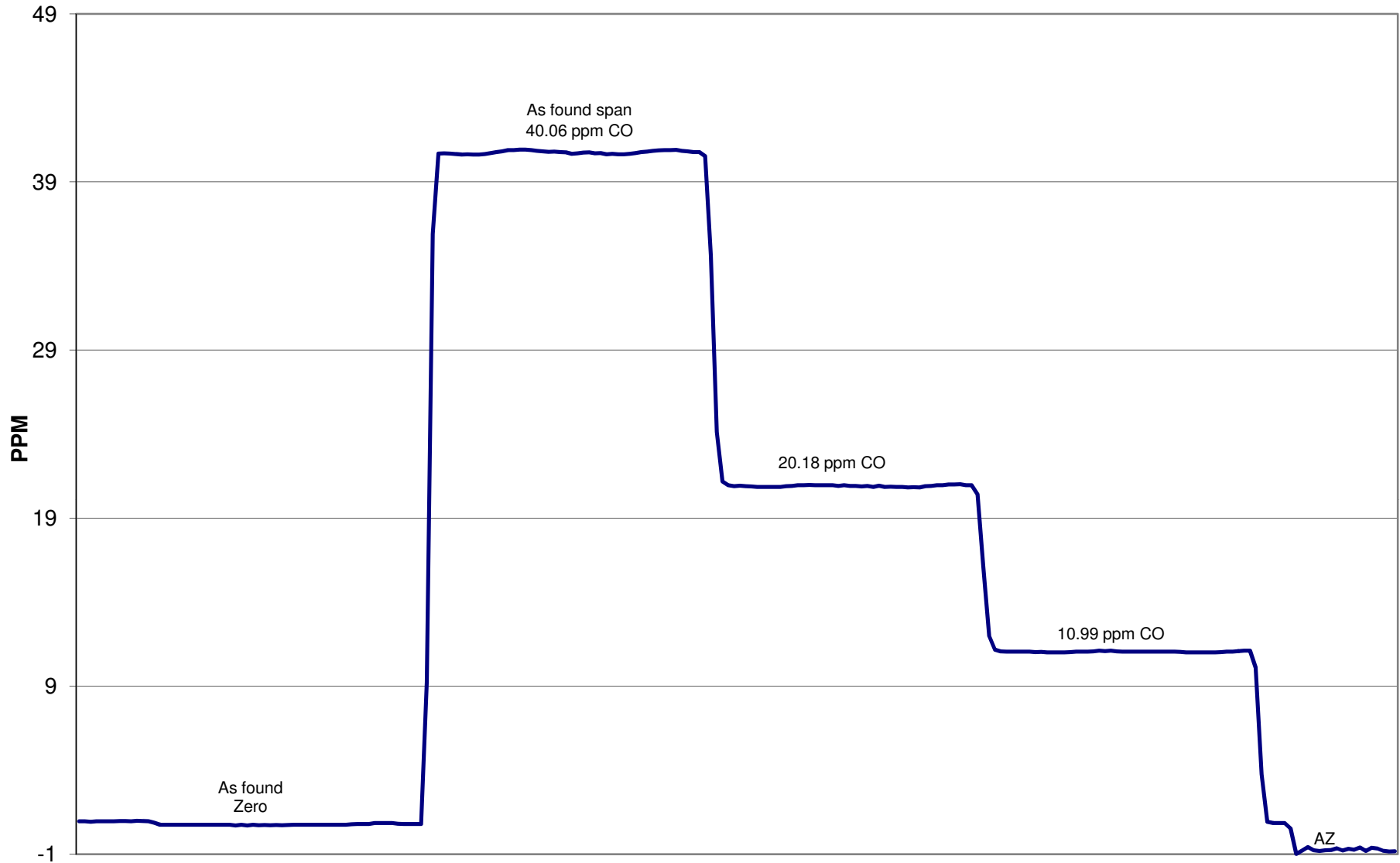
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.776	N/A	Correlation Coefficient	0.999993
40.017	40.761	0.9818		
20.142	20.909	0.9633		
10.383	11.057	0.9390	Slope	1.000014
			Intercept	-0.740366

### CO Calibration Curve



11.15 ppm CO

# CO Calibration



April 8, 2013

# Calibration Report



Parameter CO

Air Monitoring Network PAZA

## Station Information

Calibration Date	April 8, 2013	Previous Calibration	March 19, 2013
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)	12:59	End Time (MST)	15:27
Barometric Pressure	0.922 ATM	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Conc	2898 ppm	Cal Gas Expiry Date	2/04/13
		Cal Gas Cylinder #	LL83909
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.017836	Calculated slope	1.001385
Calculated intercept	-0.305350	Calculated intercept	0.024978
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.130		1.130	
CO zero setting	4.971		5.787	
Sample pressure	694.7	mm Hg	529.8	mm Hg
Sample Flow	1.126	LPM	1.124	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	0.06	N/A
4995	69.94	40.02	39.97	1.0011
4995	34.96	20.14	20.06	1.0040
4995	17.96	10.38	10.25	1.0127
4995	0.00	0.00	0.06	As Found Zero
4995	69.94	40.02	39.97	As Found Span
Average Correction Factor				1.0059

Calculated value of As Found Response: 40.325 ppm      Percent Change of As Found: -0.8%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.96	ppm	20.33	ppm

Notes: Cal following pump replacement. Perform analog out cal, only a .08 difference between logger and analyzer now. Run quick zero/span check - re calibrate.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter CO  
 Air Monitoring Network PAZA

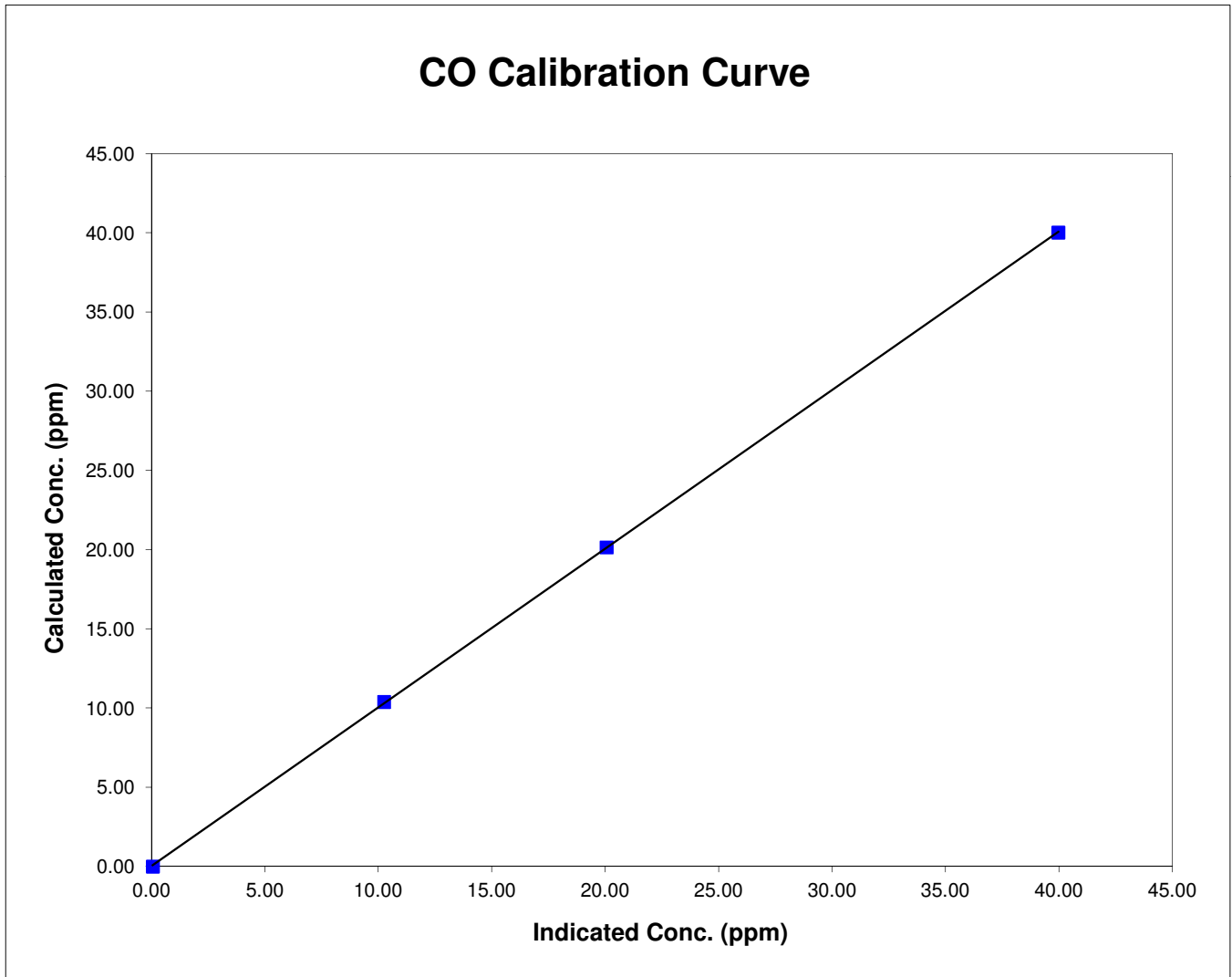


## Station Information

Calibration Date	April 8, 2013	Previous Calibration	March 19, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:59	End Time (MST)	15:27
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

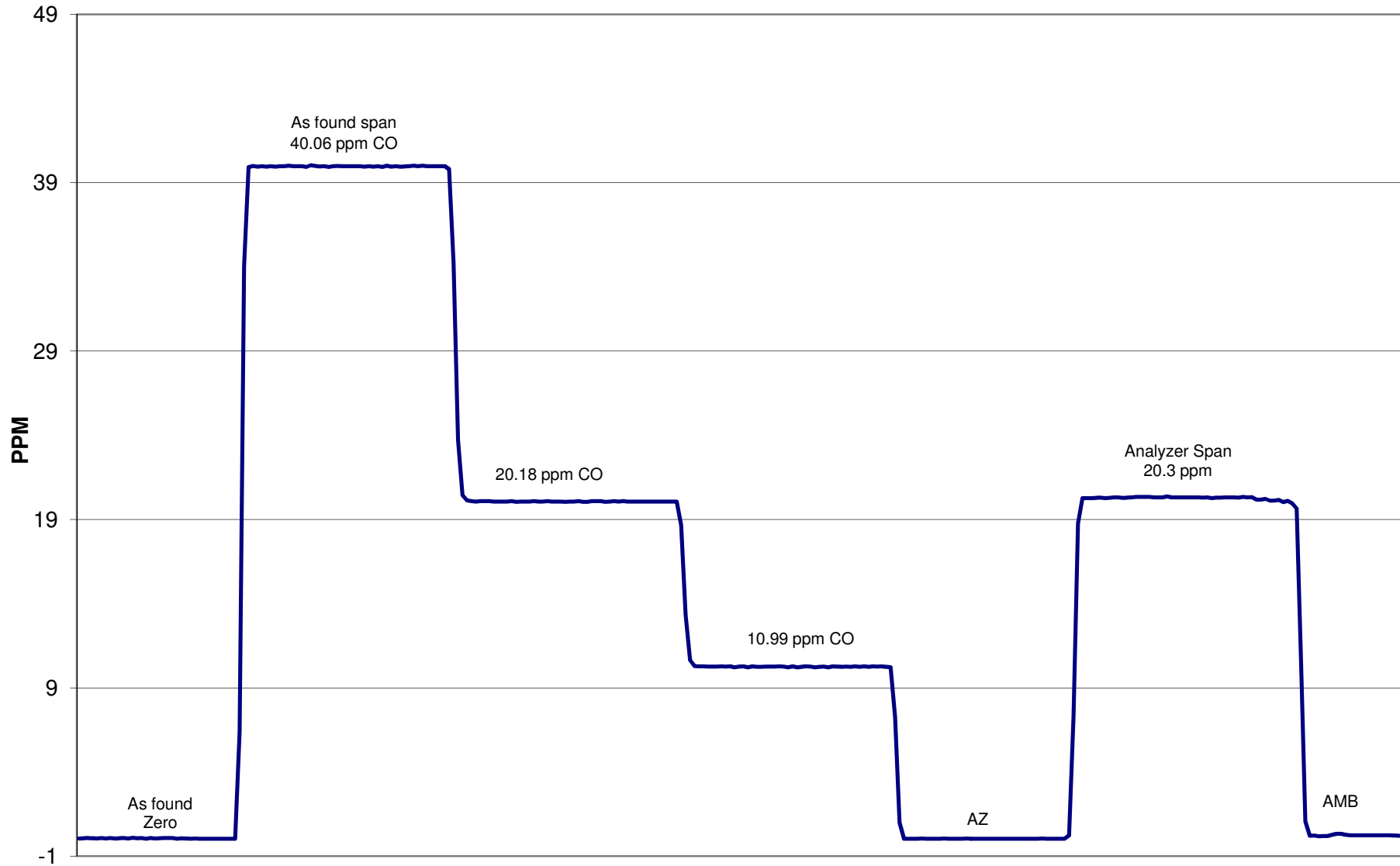
## Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.056	N/A	Correlation Coefficient	0.999981
40.017	39.974	1.0011		
20.142	20.063	1.0040	Slope	1.001385
10.383	10.253	1.0127		
			Intercept	0.024978



11.15 ppm CO

### CO Calibration



April 8, 2013



# Calibration Report

Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA



## Station Information

Calibration Date	April 12, 2013	Previous Calibration	March 18, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	<input type="checkbox"/> Routine	<input checked="" type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	12:14	End Time (MST)	17:52
Barometric Pressure	inches Hg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas CH4 Conc	404 ppm CH4	Cal Gas Expiry Date	3/28/14
Cal Gas C3H8 Conc	201x2.75= 552.75 ppm CH4	Cal Gas Cylinder #	LL28503
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 11,12,13

Analyzer make TEI 55I Analyzer serial # loaner

	before		after	
Concentration range	0-20 (CH4, NMHC); 0-40 (THC)	ppm	0-20 (CH4, NMHC); 0-40 (THC)	ppm
Air pressure	32.9	PSI	32.9	PSI
Fuel pressure	36.3	PSI	36.3	PSI
Carrier pressure	26	PSI	26	PSI
CH4 cal factor	3.70		3.70	
NMHC cal factor	9.63		9.63	
Rt	12.20	Sec	12.20	Sec
Pk Index	16.00		16.00	

## CH4 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)
2000	0.00	0.00	0.00	N/A
2000	64.93	12.70	12.72	0.9988
2000	39.93	7.91	7.80	1.0138
2000	14.95	3.00	2.87	1.0428
			0.00	As Found Zero
			12.72	As Found Span
Average Correction Factor				1.0185

Calculated value of As Found Response: 12.757 ppm Percent Change of As Found: NA

	Before		After
Calculated slope	0.999481	Calculated slope	0.997273
Calculated intercept	0.044920	Calculated intercept	0.069640

## Final Zero/Span Data

	before calibration		after calibration	
Auto zero	N/A	ppm	0.07	ppm
Auto span	N/A	ppm	25.22	ppm

### NMHC 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)
2000	0.00	0.00	0.04	N/A
2000	64.93	17.38	17.50	0.9934
2000	39.93	10.82	10.83	0.9992
2000	14.95	4.10	4.11	0.9990
			0.04	As Found Zero
			17.50	As Found Span
Average Correction Factor				0.9972

Calculated value of As Found Response: 17.337 ppm      Percent Change of As Found: NA

	Before		After
Calculated slope	0.993024	Calculated slope	0.995703
Calculated intercept	0.003489	Calculated intercept	-0.007508

#### Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.04	ppm	0.04	ppm
Auto span	11.66	ppm	1.07	ppm

### THC 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)
2000	0.00	0.00	0.05	N/A
2000	64.93	30.08	30.19	0.9966
2000	39.93	18.73	18.62	1.0057
2000	14.95	7.10	6.98	1.0170
			0.05	As Found Zero
			30.19	As Found Span
Average Correction Factor				1.0064

Calculated value of As Found Response: 30.083 ppm      Percent Change of As Found: NA

	Before		After
Calculated slope	0.997002	Calculated slope	0.997554
Calculated intercept	0.034537	Calculated intercept	0.051575

#### Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.01	ppm
Auto span	8.09	ppm	24.16	ppm

Notes: Re plumbed zero/span module. Run tests, seems ok.  
 Data logger must trip zero & span at the same time to get a span. Have to use straight Methane span bottle till Non Methane mix arrives via Praxair.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



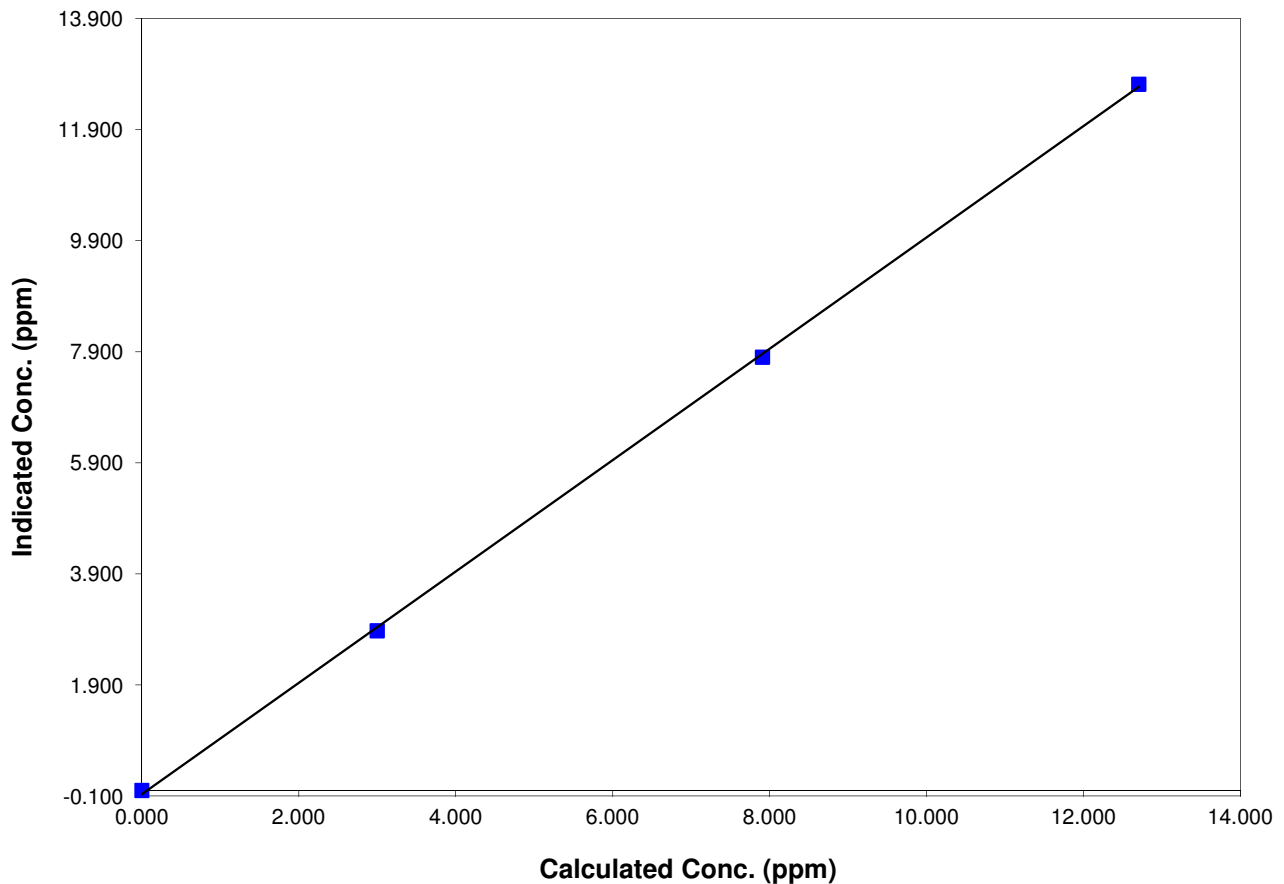
## Station Information

Calibration Date	April 12, 2013	Previous Calibration	March 18, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:14	End Time (MST)	17:52
Analyzer make/model	TEI 55I	Analyzer serial #	loaner

## Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.001	N/A	Correlation Coefficient	0.999843
12.703	12.718	0.9988		
7.908	7.801	1.0138	Slope	0.997273
2.997	2.874	1.0428		
			Intercept	0.069640

## CH4 Calibration Data



# Calibration Summary

Parameter         NMHC          
 Air Monitoring Network         PAZA        



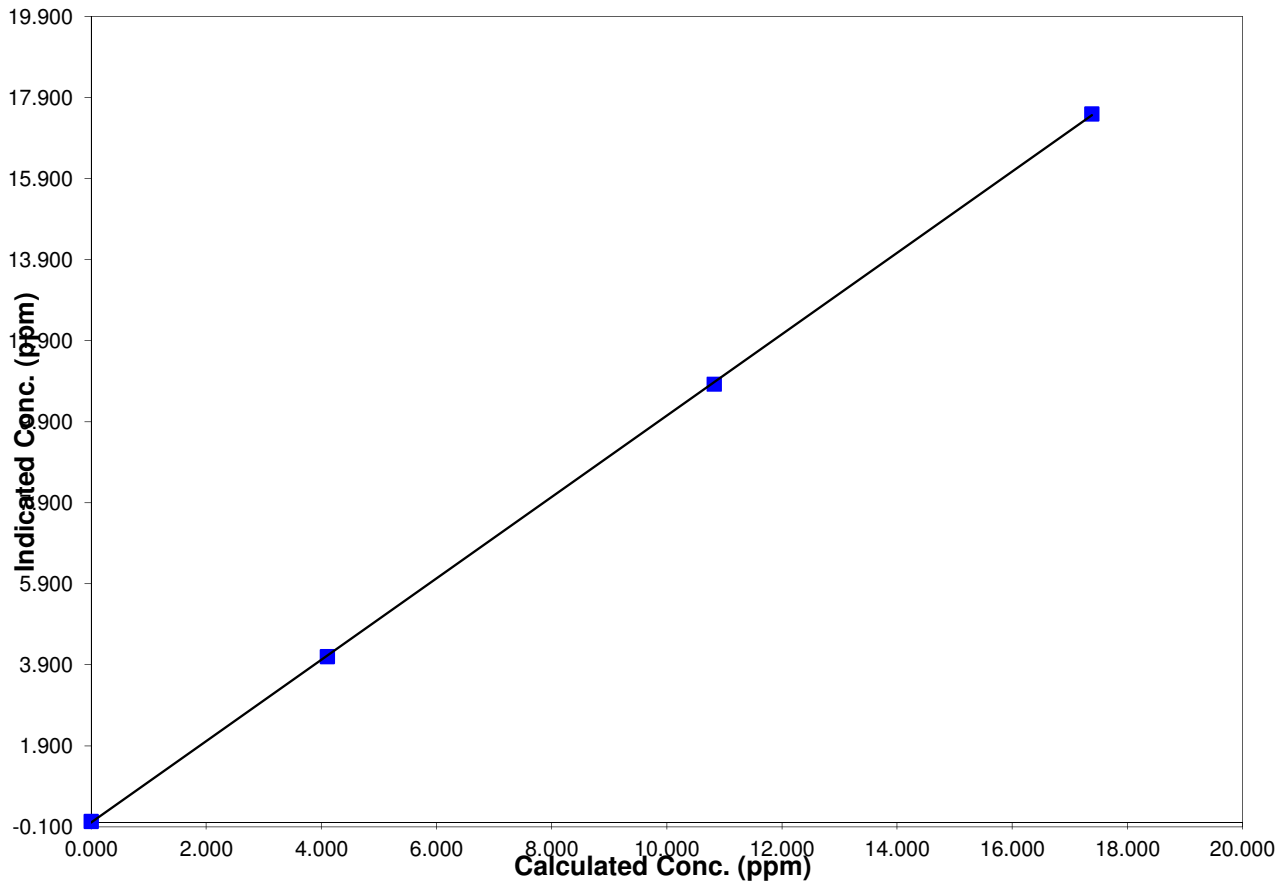
## Station Information

Calibration Date	<u>        April 12, 2013        </u>	Previous Calibration	<u>        March 18, 2013        </u>
Station Number	<u>        1        </u>	Station Location	<u>        Henry Pirker        </u>
Start Time (MST)	<u>        12:14        </u>	End Time (MST)	<u>        17:52        </u>
Analyzer make/model	<u>        TEI 551        </u>	Analyzer serial #	<u>        loaner        </u>

## Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.041	N/A		
17.381	17.497	0.9934	Correlation Coefficient	0.999973
10.820	10.828	0.9992		
4.101	4.105	0.9990	Slope	0.995703
			Intercept	-0.007508

## NMHC Calibration Data



# Calibration Summary

Parameter THC

Air Monitoring Network PAZA



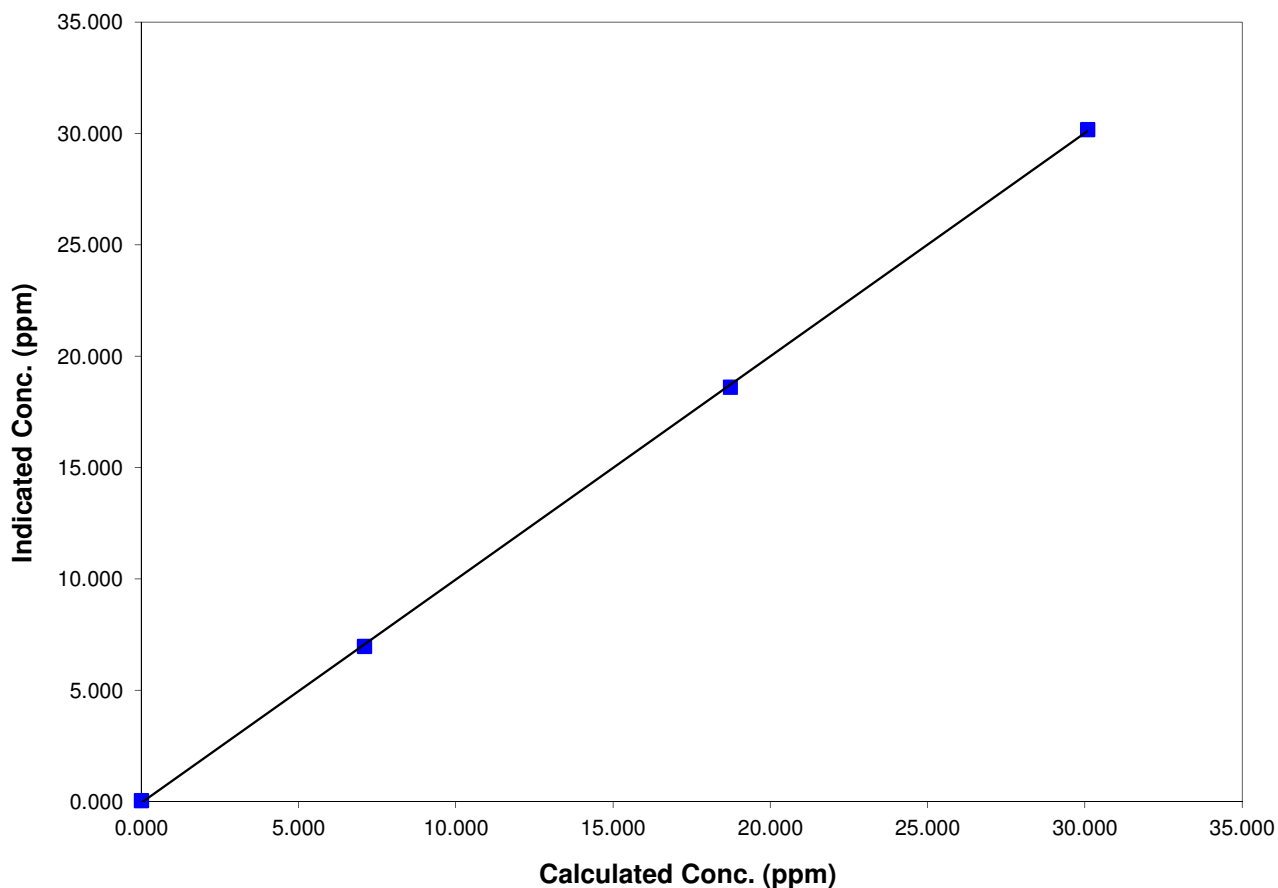
## Station Information

Calibration Date	<u>April 12, 2013</u>	Previous Calibration	<u>March 18, 2013</u>
Station Number	<u>1</u>	Station Location	<u>Henry Pirker</u>
Start Time (MST)	<u>12:14</u>	End Time (MST)	<u>17:52</u>
Analyzer make/model	<u>TEI 55I</u>	Analyzer serial #	<u>loaner</u>

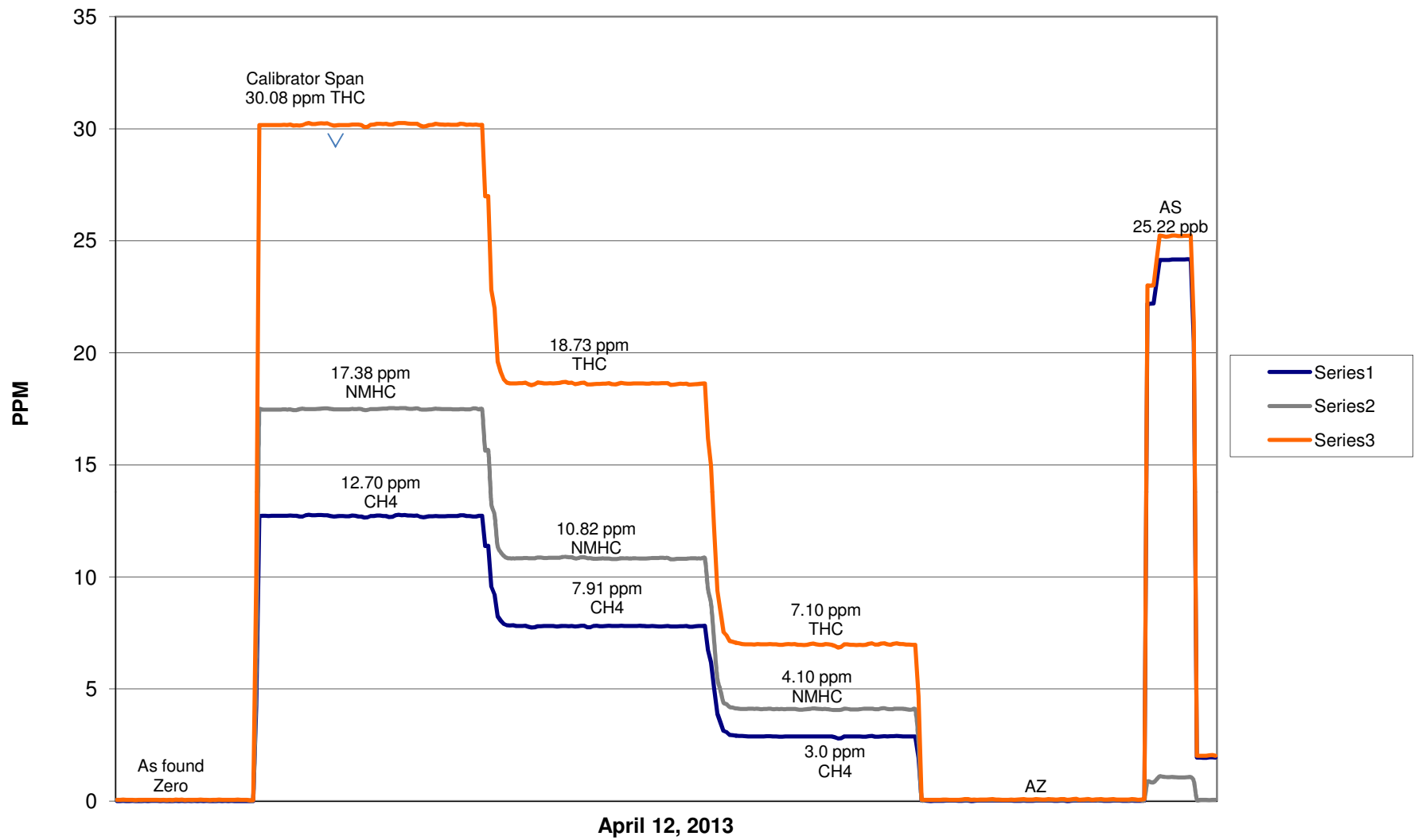
## Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.052	N/A	Correlation Coefficient	0.999934
30.084	30.188	0.9966		
18.728	18.621	1.0057	Slope	0.997554
7.099	6.980	1.0170		
			Intercept	0.051575

### THC Calibration Data



### THC/CH<sub>4</sub>/NMHC Calibration



# Calibration Report

Parameter TRS  
 Air Monitoring Network PAZA



## Station Information

Calibration Date	April 22, 2013	Previous Calibration	March 19, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
Other:			
Start Time (MST)	9:06	End Time (MST)	13:00
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	10.1 ppb	Cal Gas Expiry Date	11/05/13
		Cal Gas Cylinder #	LL160692
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.956484	Calculated slope	0.964977
Calculated intercept	-0.131775	Calculated intercept	-0.090494
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	666.6	mm Hg	666.7	mm Hg
Flow	0.457	ccm	0.457	ccm
Lamp Voltage	825	V	825	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	0.38	N/A
4995	39.93	80.10	83.10	0.9639
4995	19.95	40.18	41.83	0.9606
8995	8.94	10.03	10.11	0.9917
4995	0.00	0.00	0.38	As Found Zero
4995	39.93	80.10	83.10	As Found Span
Average Correction Factor				0.9721

Calculated value of As Found Response: 79.0 ppb      Percent Change of As Found: 1.4%

	before calibration		after calibration	
Auto zero	-0.29	ppb	0.19	ppb
Auto span	33.10	ppb	31.97	ppb

Notes: Sox scrubber checked with 403 ppb SO2. No adjustment made.  
Second point was left longer than usual as I was working on daily span solinoids on Non Methane analyzer.

Calibration Performed By: Grover Christiansen

## Calibration Summary

Parameter TRS  
Air Monitoring Network PAZA



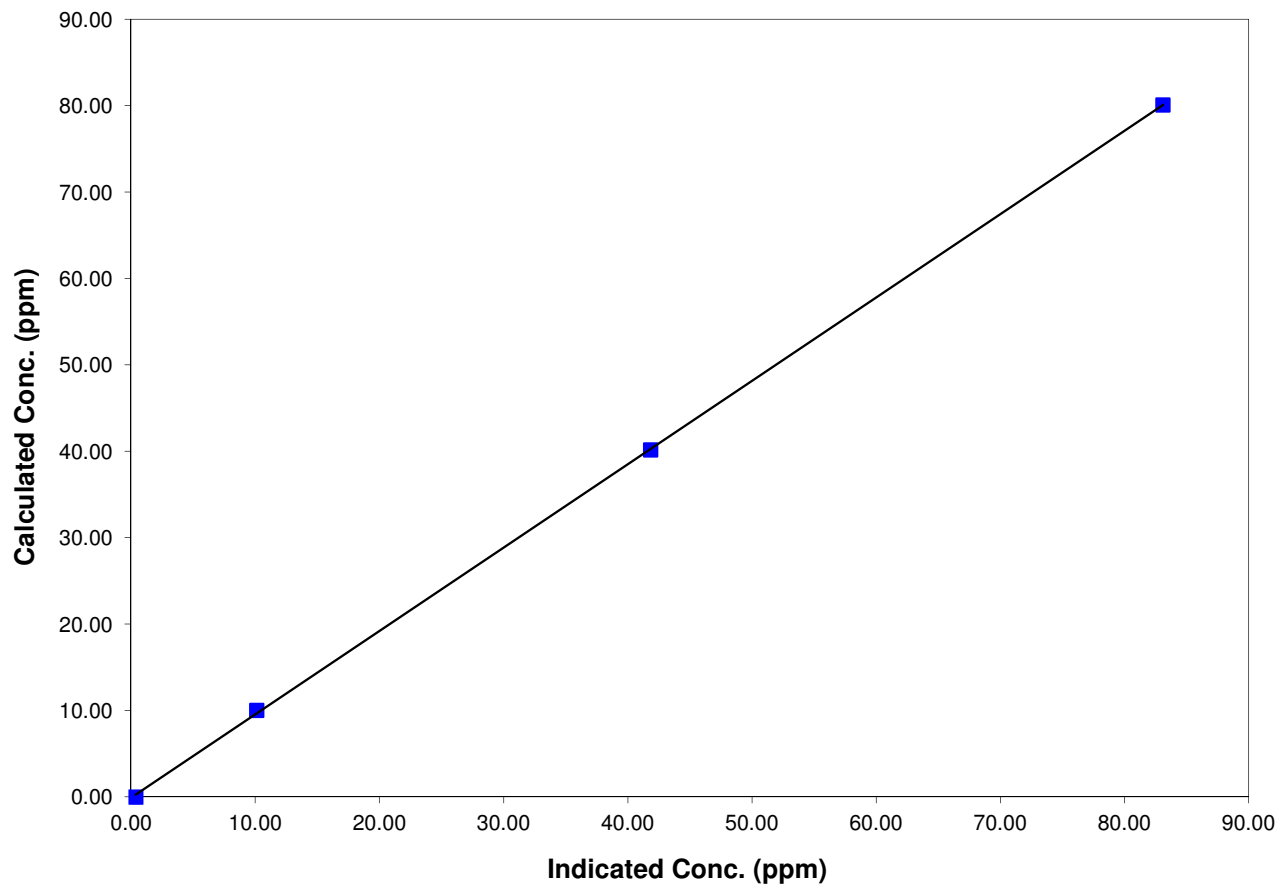
### Station Information

Calibration Date	April 22, 2013	Previous Calibration	March 19, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:06	End Time (MST)	13:00
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

### Calibration Data

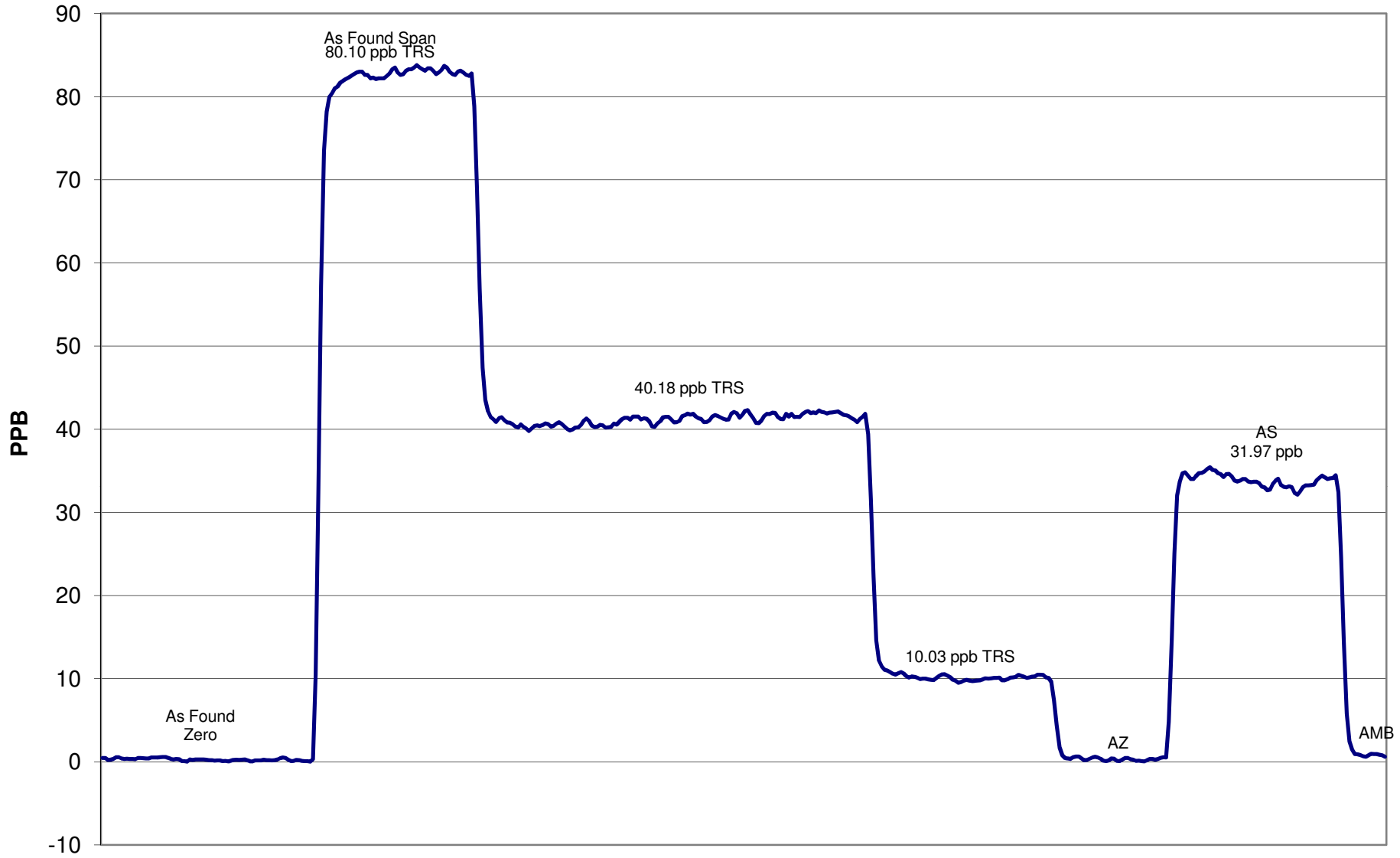
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.376	N/A		
80.099	83.096	0.9639	Correlation Coefficient	0.999945
40.179	41.826	0.9606		
10.028	10.112	0.9917	Slope	0.964977
			Intercept	-0.090494

### TRS Calibration Curve





# TRS Calibration



April 22, 2013

# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PAZA

## Station Information

Calibration Date	April 24, 2013	Previous Calibration	March 21, 2013
Station Number	2	Station Location	Evergreen Park
Reason:	<b>Routine</b>	Install	Removal
		Other:	
Start Time (MST)	11:13	End Time (MST)	14:36
Barometric Pressure	0.921 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Concentration	50.8 ppm	Cal Gas Expiry Date	3/12/14
Correction factor	0.031307	Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.000014	Calculated slope	1.000961
Calculated intercept	0.948270	Calculated intercept	1.631188
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.5		11.5	
coefficient	1.228		1.228	
Lamp Voltage	830	volts	830	volts
Chamber Temp	45.2	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	668.5	mm Hg	668.6	mm Hg
Sample Flow	0.448	ccm	0.449	ccm
Lamp Intensity	89	%	89	%

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	0.4	N/A
4995	39.93	402.9	402.0	1.0022
4995	19.97	202.3	199.0	1.0164
4995	9.97	101.2	97.7	1.0355
4995	0.0	0.0	0.4	As Found Zero
4995	39.93	402.9	402.0	As Found Span
Average Correction Factor				1.0180

Calculated value of As Found Response: 402.509 ppm      Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.6	ppm
Auto span	287.4	ppm	291.6	ppm

Notes: No adjust.

Calibration Performed By: Grover Christiansen

# Calibration Summary



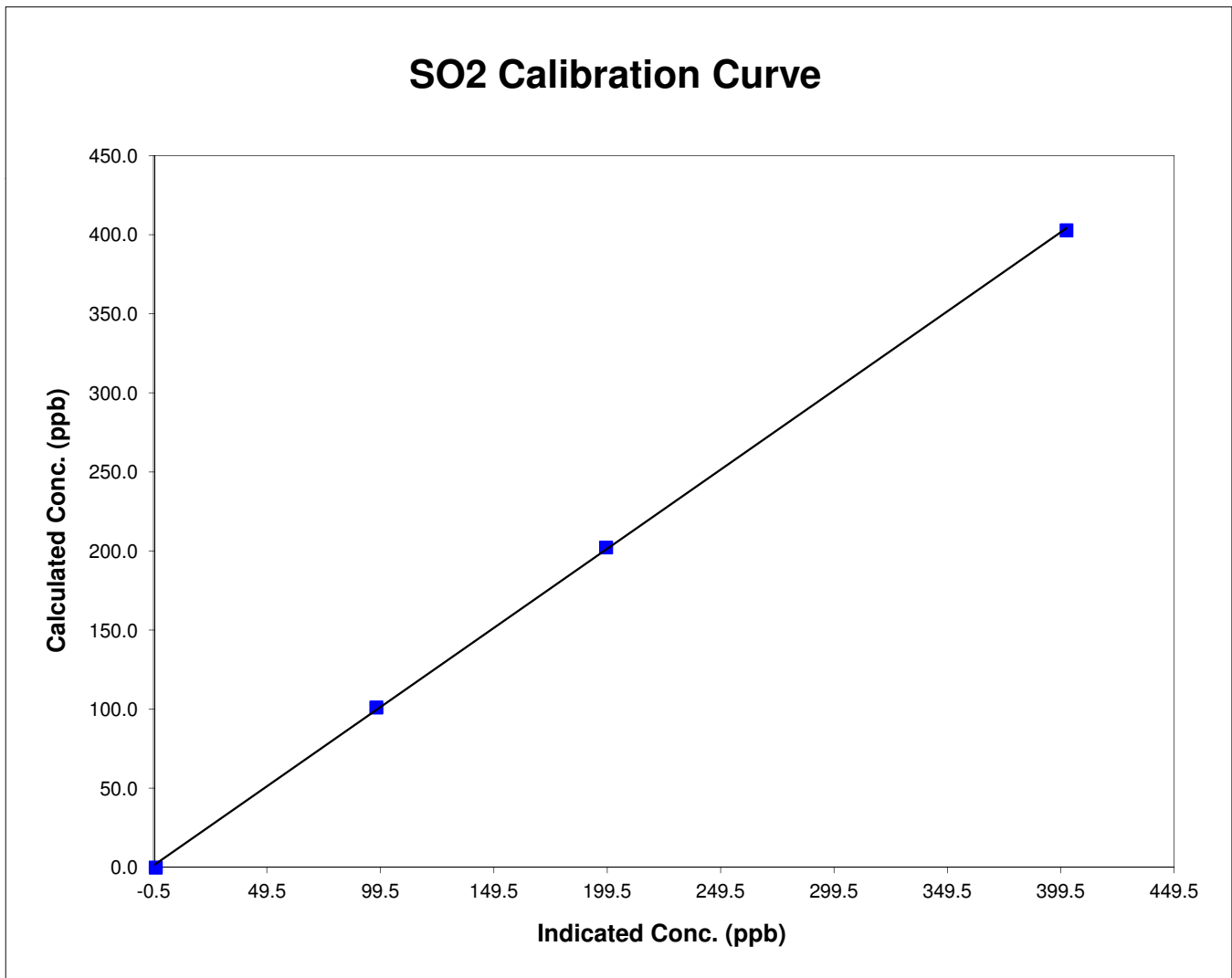
Parameter SO2  
 Air Monitoring Network PAZA

### Station Information

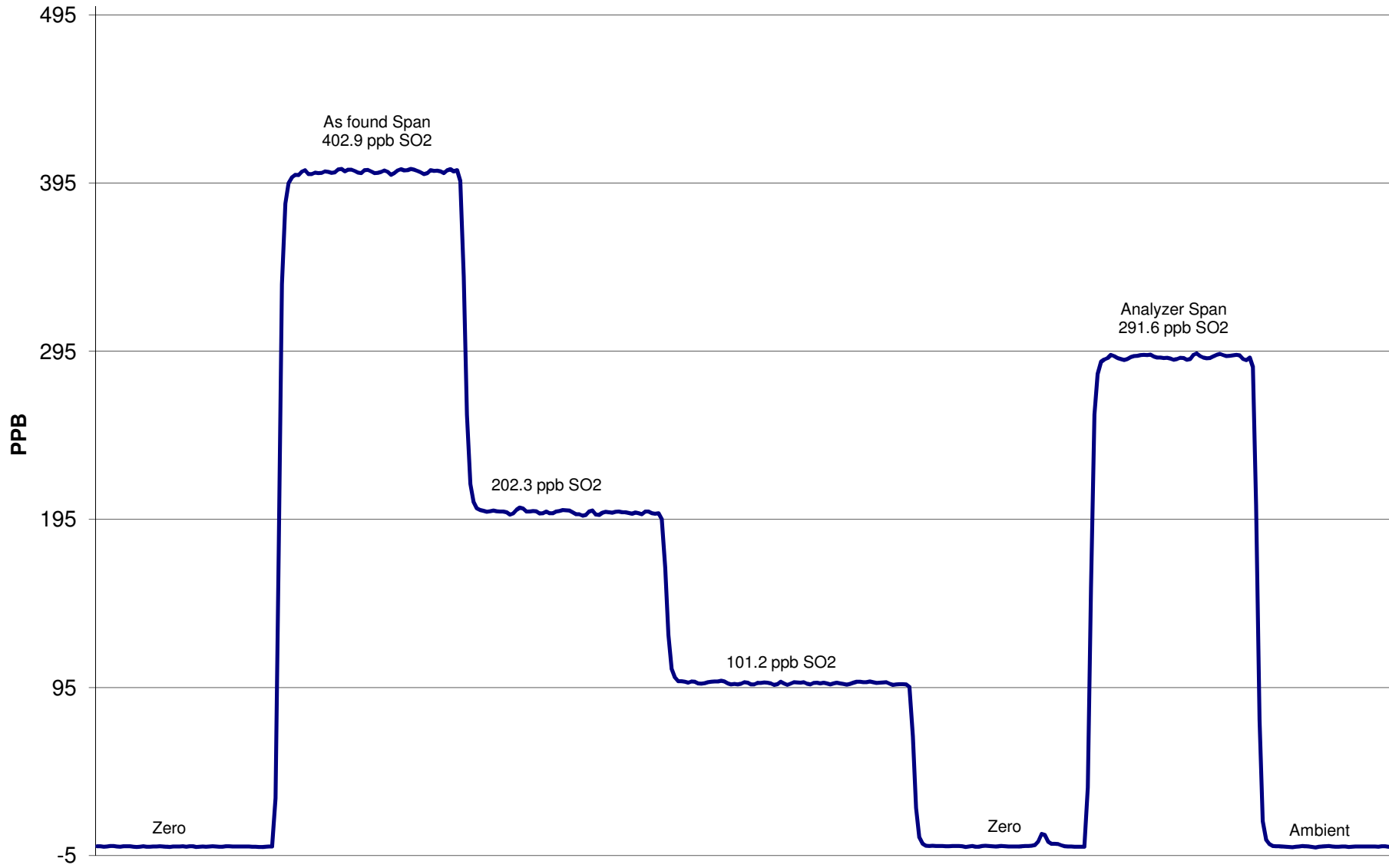
Calibration Date	April 24, 2013	Previous Calibration	March 21, 2013
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	11:13	End Time (MST)	14:36
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999881
402.9	402.0	1.0022		
202.3	199.0	1.0164		
101.2	97.7	1.0355	Slope	1.000961
			Intercept	1.631188



### SO2 Calibration



April 24, 2013



# Calibration Summary



Parameter TRS  
 Air Monitoring Network PAZA

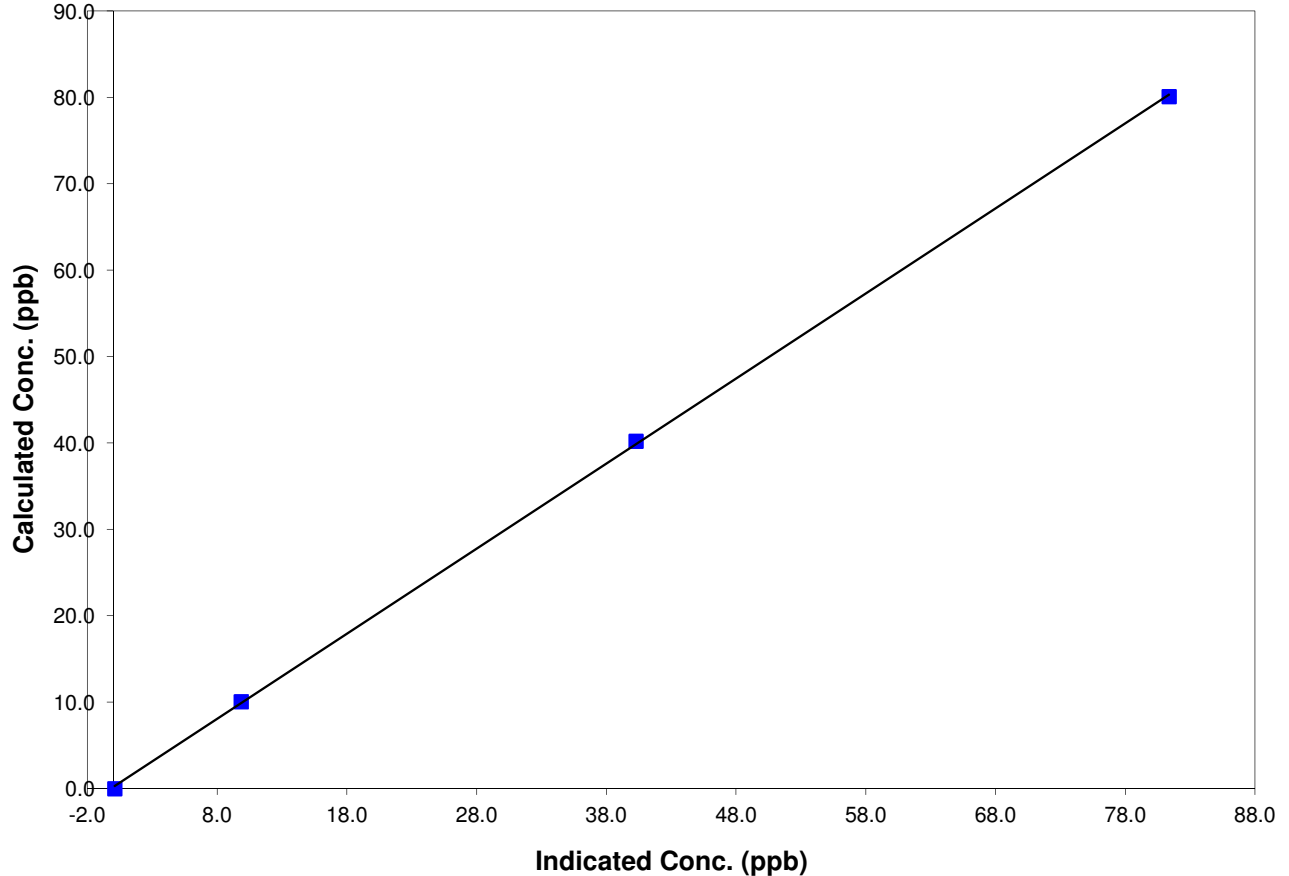
### Station Information

Calibration Date	April 24, 2013	Previous Calibration	March 21, 2013
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:31	End Time (MST)	12:33
Analyzer make/model	TEI Model 43C	Analyzer serial #	3199000000491

### Calibration Data

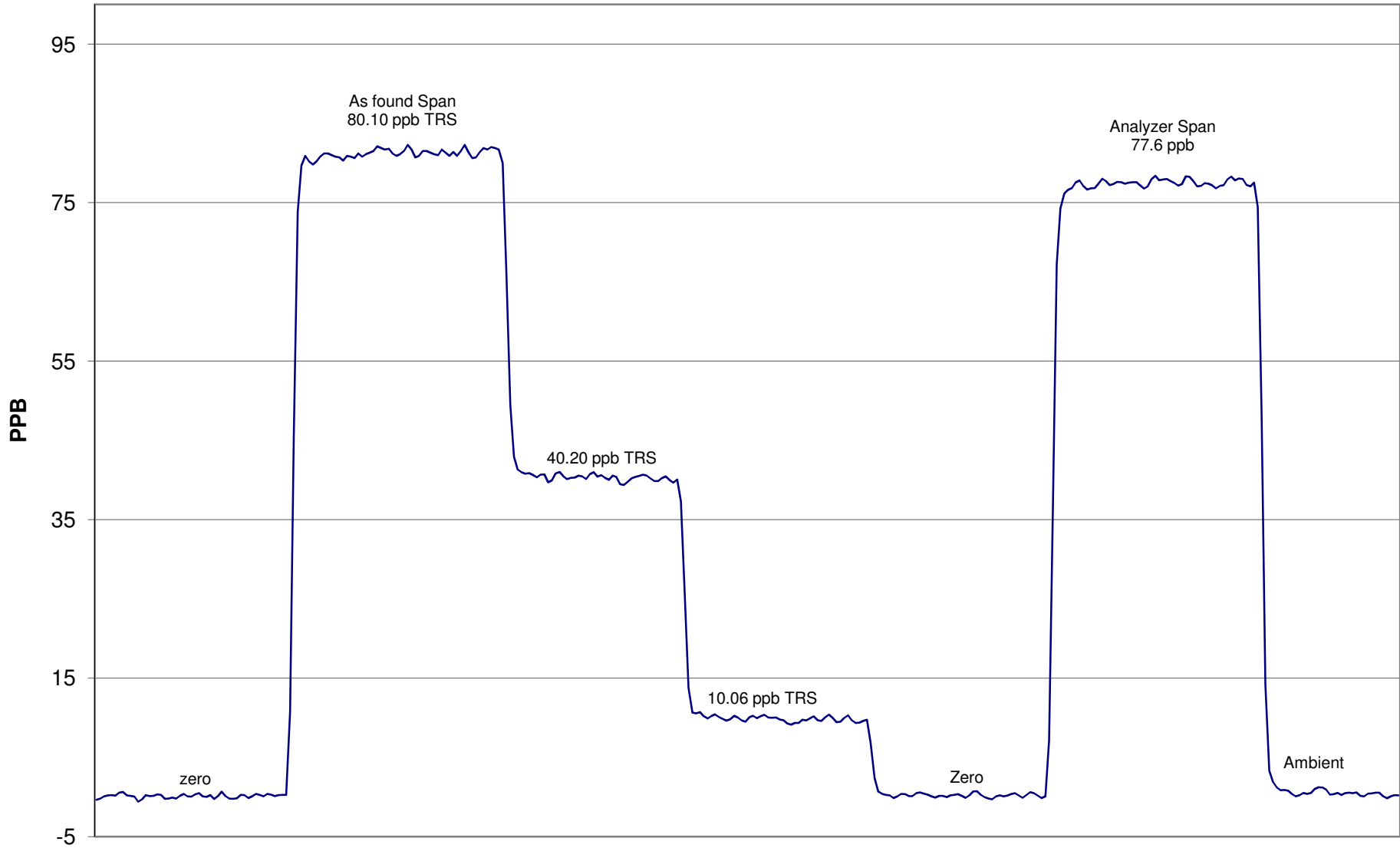
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999928
80.1	81.4	0.9843		
40.2	40.3	0.9981		
10.1	9.9	1.0207	Slope	0.984129
			Intercept	0.208932

## TRS Calibration Curve



As found Span  
80.10 ppb TRS

### TRS Calibration



April 24, 2013

# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PAZA

## Station Information

Calibration Date	April 26, 2013	Previous Calibration	March 26, 2013
Station Number	3	Station Location	Smokey Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			Other: <input type="text"/>
Start Time (MST)	9:55	End Time (MST)	12:58
Barometric Pressure	0.916 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.8 ppm	Cal Gas Cert Date	3/12/14
Correction factor	0.031137	Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.994440	Calculated slope	0.998023
Calculated intercept	2.073072	Calculated intercept	2.034350
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.6		11.3	
coefficient	0.985		0.970	
Lamp Voltage	924	volts	924	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	661.5	mm Hg	662.7	mm Hg
Sample Flow	0.442	ccm	0.443	ccm
Lamp Intensity	89	%	89	%

## Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.2	N/A
4995	39.93	402.87	402.8	1.0002
4995	19.97	202.29	199.3	1.0148
4995	9.97	101.19	97.3	1.0401
4995	0.0	0.00	0.2	As Found Zero
4995	39.93	402.87	408.1	As Found Span
Average Correction Factor				1.0184

Calculated value of As Found Response: 407.722 ppm      Percent Change of As Found: **-1.2%**

	before calibration		after calibration	
Auto zero	0.4	ppb	0.2	ppb
Auto span	304.5	ppb	262.0	ppb

Notes: Slight span adjust.

Calibration Performed By: Grover Christiansen



# Calibration Summary



Parameter SO2  
 Air Monitoring Network PAZA

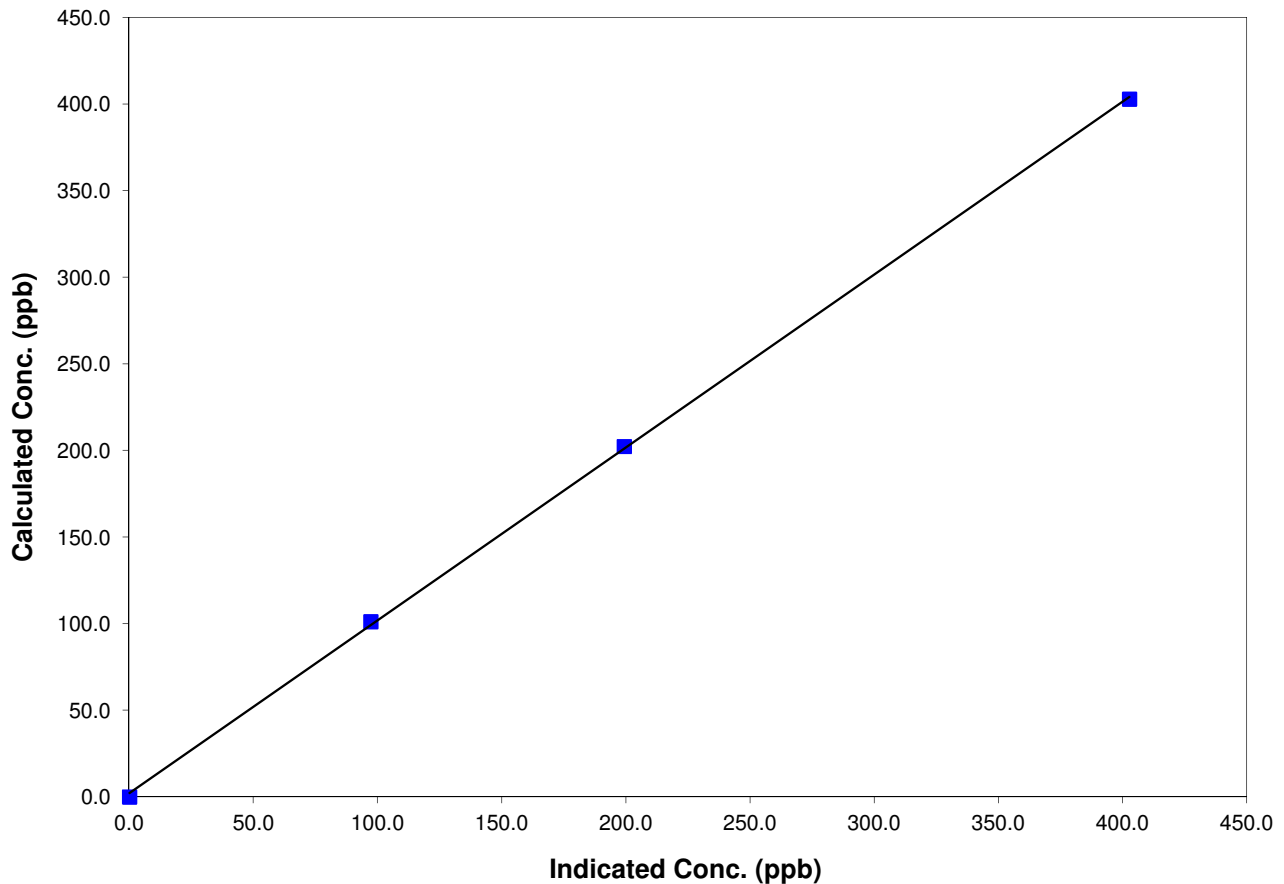
### Station Information

Calibration Date	April 26, 2013	Previous Calibration	March 26, 2013
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	9:55	End Time (MST)	12:58
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

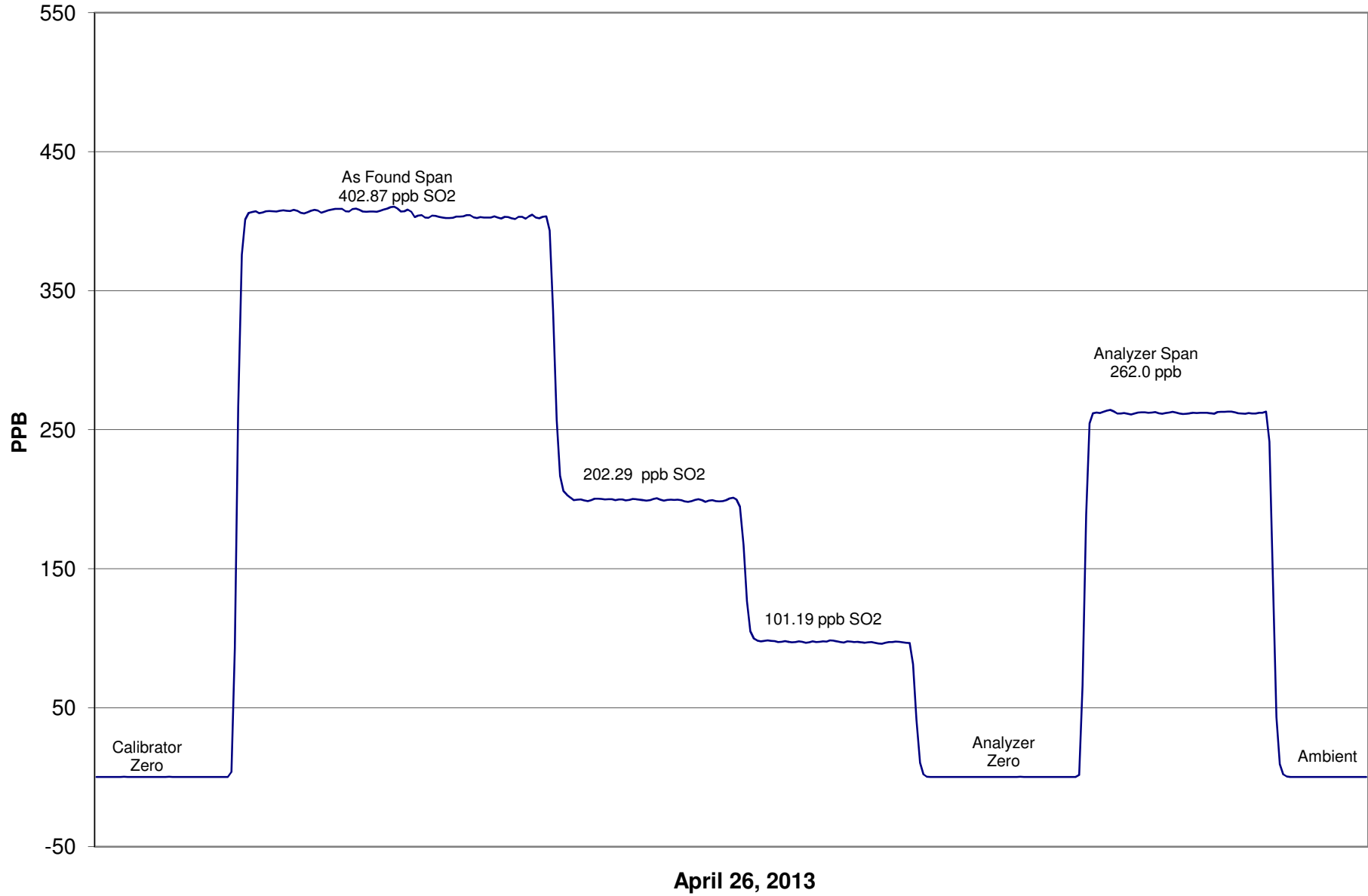
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999863
402.9	402.8	1.0002		
202.3	199.3	1.0148	Slope	0.998023
101.2	97.3	1.0401		
			Intercept	2.034350

## SO2 Calibration Curve



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



# Calibration Report



Parameter TRS

Air Monitoring Network PAZA

## Station Information

Calibration Date	April 26, 2013	Previous Calibration	March 26, 2013
Station Number	3	Station Location	Smokey Heights
Reason:	<input type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal <input checked="" type="checkbox"/> Other: Maintenance
Start Time (MST)	8:09	End Time (MST)	11:16
Barometric Pressure	0.916 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	10.1 ppm	Cal Gas Expiry Date	5/11/13
Correction factor	0.031137	Cal Gas Cylinder #	LL160692
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	0.996933	Calculated slope	1.001237
Calculated intercept	0.483680	Calculated intercept	0.811548
Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	19.2	ppb	19.2	ppb
coefficient	0.964		0.964	
Lamp Voltage	822	volts	822	volts
Chamber Temp	43.5	Deg C	43.5	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	597.6	mm Hg	597.3	mm Hg
Sample Flow	0.639	ccm	0.641	ccm
Lamp Intensity	34,707	mv	34,897	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	-0.3	N/A
4995	39.94	80.12	79.5	1.0075
4995	19.97	40.22	38.8	1.0371
8995	8.96	10.05	9.0	1.1207
4995	0.0	0.00	-0.3	As Found Zero
4995	39.94	80.12	79.5	As Found Span
Average Correction Factor				1.0551

Calculated value of As Found Response: 80.05 ppm      Percent Change of As Found: **0.1%**

	before calibration		after calibration	
Auto zero	0.0	ppm	0.6	ppm
Auto span	52.9	ppm	34.4	ppm

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

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter                          TRS     
Air Monitoring Network    PAZA   



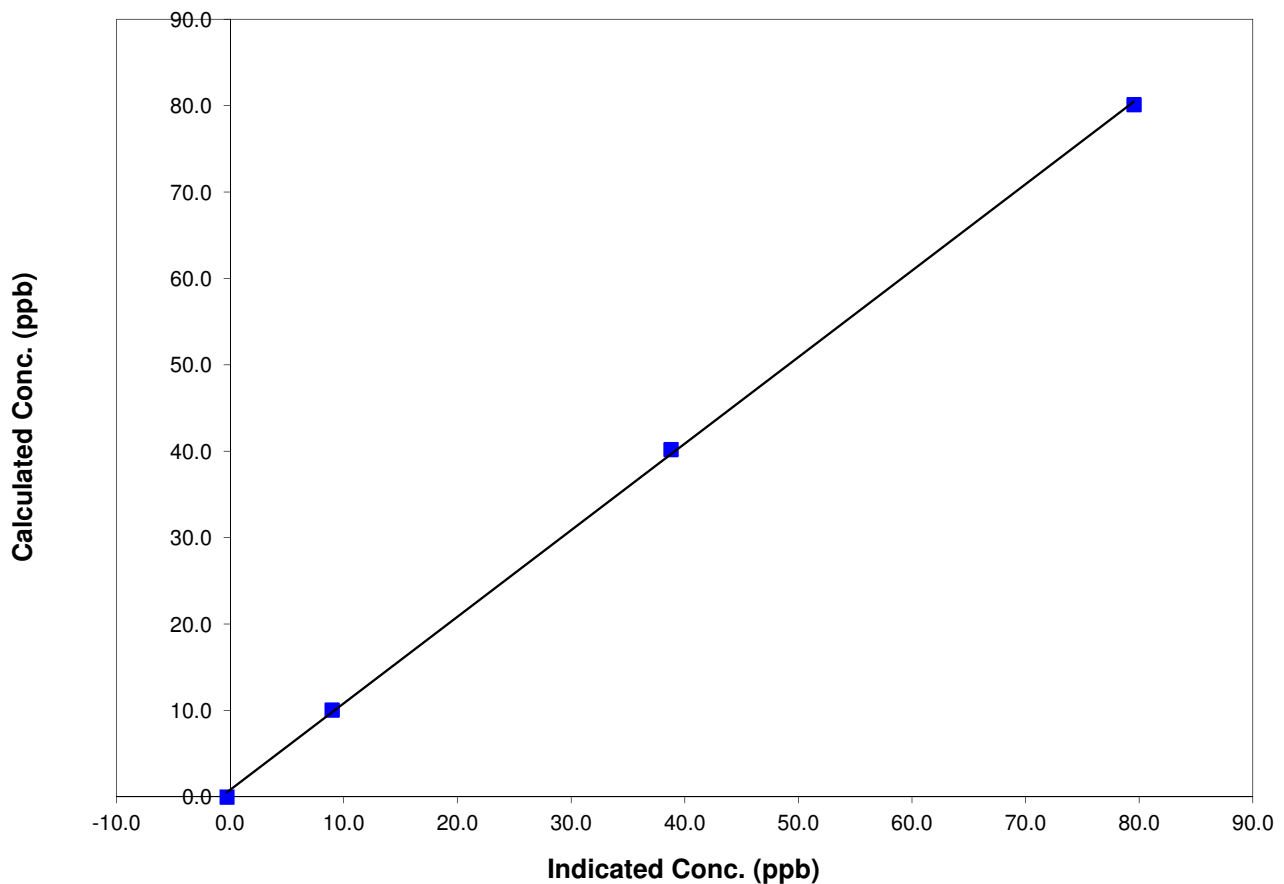
## Station Information

Calibration Date	April 26, 2013	Previous Calibration	March 26, 2013
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	8:09	End Time (MST)	11:16
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

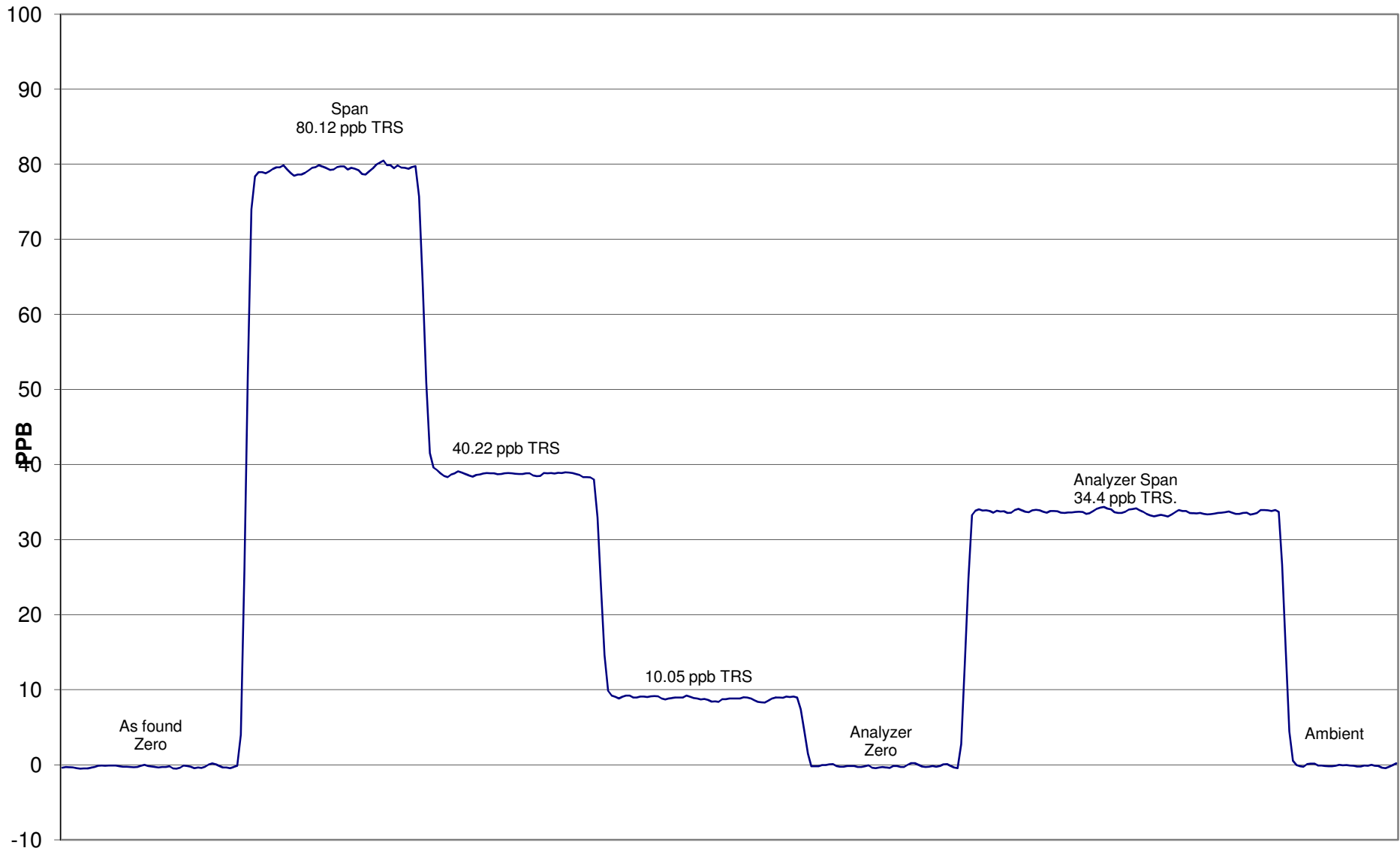
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A		
80.1	79.5	1.0075	Correlation Coefficient	0.999800
40.2	38.8	1.0371		
10.1	9.0	1.1207		
			Slope	1.001237
			Intercept	0.811548

## TRS Calibration Curve



# Smokey Heights TRS Calibration



April 26, 2013

# AB TEOM PM2.5 Calibration



STATION: Smokey Heights  
 LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christansen  
 DATE: 26-Apr-13

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	03-Oct-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	0.500
PUMP OFF	0.010	-0.010
NET	0.070	0.510
<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 )	11.8	0.917	<del>12122</del>	13.69	3.000
<i>As Found Data</i> MEASURED ( AF )	11.6	0.916	<del>12122</del>	13.65	3.004
<i>Adjusted Data</i> MEASURED ( M )	11.6	0.916	12085	13.65	3.004
DIFFERENCE (M-I)	-0.2	-0.001	-0.3%	-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>

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

COMMENTS:      PASS

Flows & leak checks were fine. Will watch noise on trace, if it gets bad I will swap out this sensor unit for the one we received from Wood Buffalo.

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

# Calibration Report

Parameter SO2  
 Air Monitoring Network PAZA



## Station Information

Calibration Date	April 23, 2013	Previous Calibration	March 14, 2013
Station Number	4	Station Location	Beaverlodge
Reason:	<b>Routine</b>	Install	Removal
			Other:
Start Time (MST)	13:56	End Time (MST)	16:28
Barometric Pressure	0.923 atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	10.8 ppm	Cal Gas Expiry Date	9/28/12
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	1.016954	Calculated slope	1.016514
Calculated intercept	-0.146711	Calculated intercept	-0.186703
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.38		2.37	
Coefficient	1.071		1.071	
PMT	-767.6	V	-767.6	V
UV Lamp Voltage	1063	V	1063	V
Chamber Temp	45.2	Deg C	45.2	Deg C
Pressure	672.2	mm Hg	674.6	mm Hg
Sample Flow	0.489	LPM	0.491	LPM
Lamp Intesity	98%	%	97%	%

## 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	0.4	N/A
4995	39.93	85.7	84.5	1.0133
4995	19.97	43.0	42.4	1.0140
4995	9.97	21.5	21.2	1.0163
4995	0.00	0.0	0.4	As found zero
4995	39.93	85.7	84.5	As found span
Average Correction Factor				1.0145

Calculated value of As Found Response: 85.449 ppm      Percent Change of As Found: 0.2%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.2	ppb
Auto span	58.5	ppb	59.7	ppb

Notes: No adjustments made.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PAZA



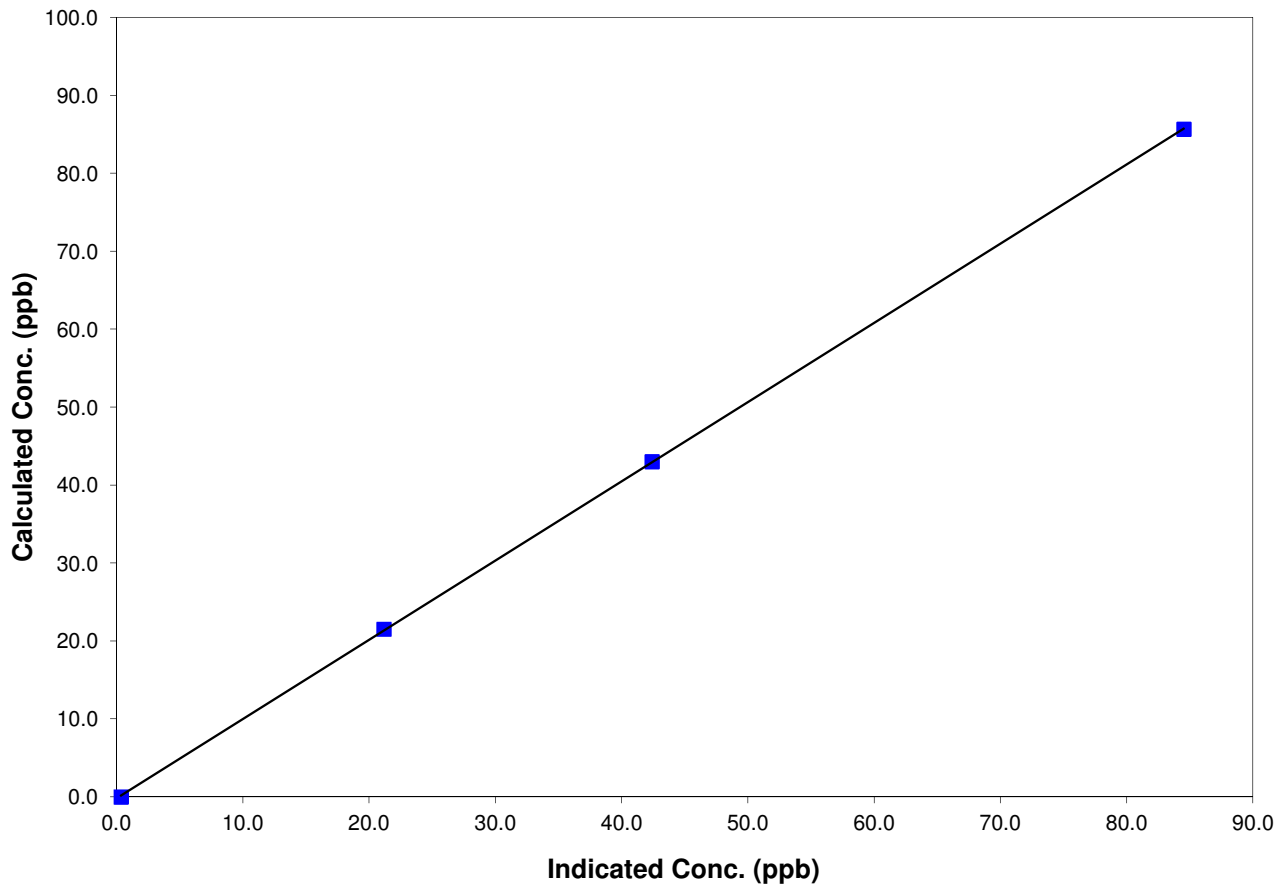
## Station Information

Calibration Date	April 23, 2013	Previous Calibration	March 14, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:56	End Time (MST)	16:28
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

## Calibration Data

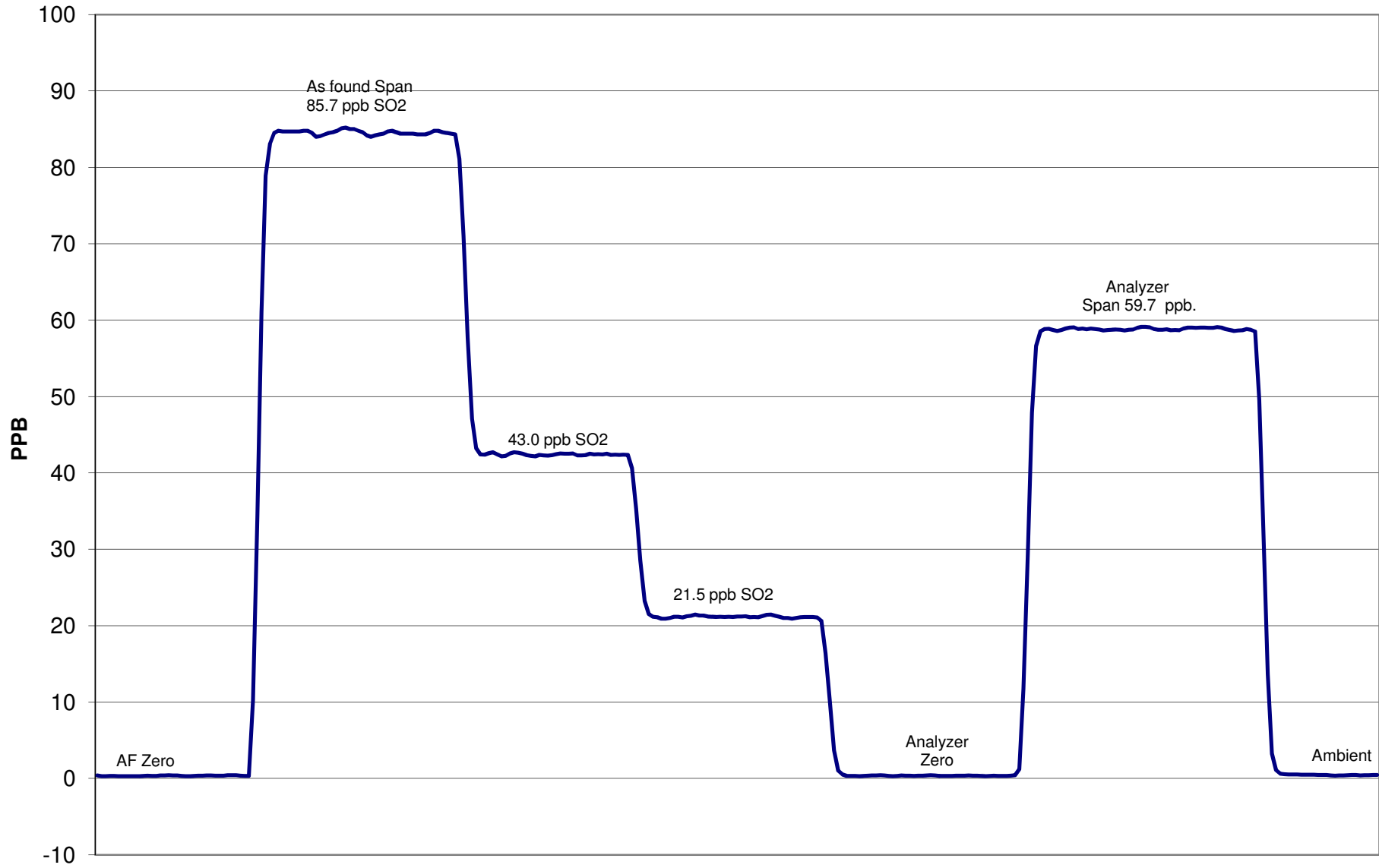
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999981
85.7	84.5	1.0133		
43.0	42.4	1.0140	Slope	1.016514
21.5	21.2	1.0163		
			Intercept	-0.186703

### SO2 Calibration Curve





# SO2 Calibration



April 23, 2013

# Calibration Report

Parameter

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

Air Monitoring Network

**PAZA**



### Station Information

Calibration Date	April 23, 2013	Previous Calibration	March 14, 2013
Station Number	4	Station Location	Beaverlodge
Reason:	<b>Routine</b> Installation Removal Other:		
Start Time (MST)	8:19	End Time (MST)	12:56
Barometric Pressure	0.923 Atm	Station Temperature	23.0 Deg C
Calibrator	Enviroics	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
<b>Parameter</b>	<b>NO2</b>	<b>NOx</b>	<b>NO</b>
Before	Data Slope	0.999310	0.995949
	Data Offset	0.037678	1.407715
After	Data Slope	0.996658	0.996616
	Data Offset	-0.113238	1.104559
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	
<b>Test Point</b>	<b>before</b>		<b>after</b>	
Concentration range	0-500	ppb	0-500	ppb
NO offset	2.1	mV	1.9	mV
NOx bkgnd	2.4	mV	2.1	mV
NO coefficient	1.452		1.208	
NOx coefficient	1.001		1.003	
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	157.9	in Hg	158.2	in Hg
Sample Flow	0.882	ccm	0.882	ccm

Notes: Sample pump crapped out before I could start 80%. Replace pump & calibrate. Span adjust first point.

# Calibration Report

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



## Station Information

Calibration Date: **April 23, 2013** 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	0.0	N/A	N/A
1	4995	39.94	406.1	406.1	0.0	406.7	404.8	1.1	0.9986	1.0033
2	4995	19.97	203.9	203.9	0.0	203.7	202.0	0.8	1.0011	1.0092
3	4995	9.97	102.0	102.0	0.0	99.5	99.1	0.3	1.0247	1.0295
AFZ	4995	0.00	0.0	0.0	0.0	0.1	-0.1	0.0	0.0000	0.0000
AFS	4995	39.94	406.1	406.1	0.8	406.7	404.8	1.1	0.9986	1.0033
Average Correction Factor									1.0081	1.0140

As Found Concentrations: **NO<sub>x</sub>= 408.1** **NO= 406.5** As Found Percent Change **NO<sub>x</sub>= 0.5%** **NO= 0.1%**

## 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	0.0	N/A	N/A	N/A	N/A
NO point	405.9	405.9	0.0	407.2	405.9	0.6	0.9967	1.0000	N/A	N/A
300	405.9	107.4	298.4	407.6	107.4	299.5	0.9957	1.0000	0.9964	100.4%
200	405.9	202.0	203.8	407.5	202.0	204.6	0.9959	1.0000	0.9964	100.4%
100	405.9	297.6	108.2	407.2	297.6	108.9	0.9969	1.0000	0.9935	100.7%
Average Correction Factor							0.9962	1.0000	0.9954	100.5%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	-0.1	0.0	ppb	0.0	-0.1	-0.1	ppb
Auto span	205.5	203.2	1.6	ppb	209.8	208.1	0.9	ppb

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PAZA



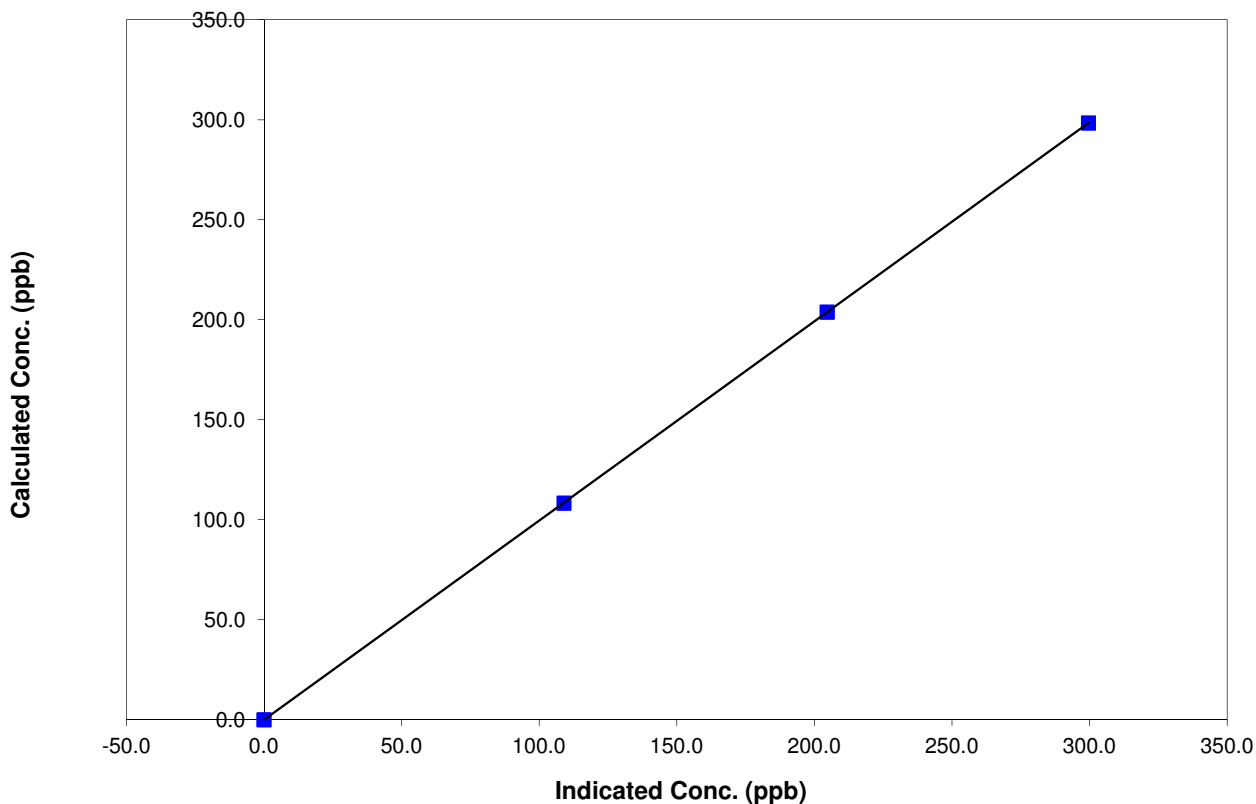
## Station Information

Calibration Date	April 23, 2013	Previous Calibration	March 14, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:19	End Time (MST)	12:56
Analyzer make	TEI 42i	Analyzer serial #	906535068

## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999998
298.4	299.5	0.9964		
203.8	204.6	0.9964		
108.2	108.9	0.9935	Slope	0.996658
			Intercept	-0.113238

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



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PAZA



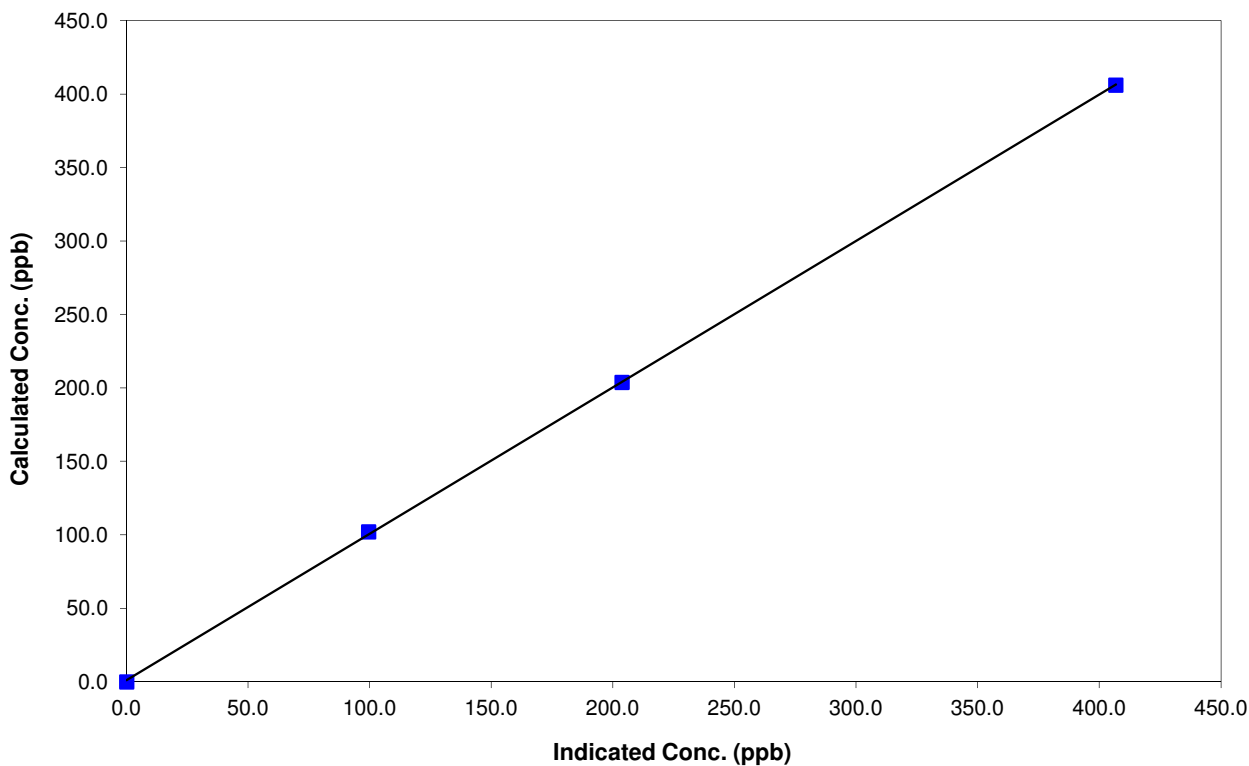
## Station Information

Calibration Date	April 23, 2013	Previous Calibration	March 14, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:19	End Time (MST)	12:56
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	0.999952
406.1	406.7	0.9986		
203.9	203.7	1.0011	Slope	0.996616
102.0	99.5	1.0247		
			Intercept	1.104559

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



# Calibration Summary

Parameter NO

Air Monitoring Network PAZA



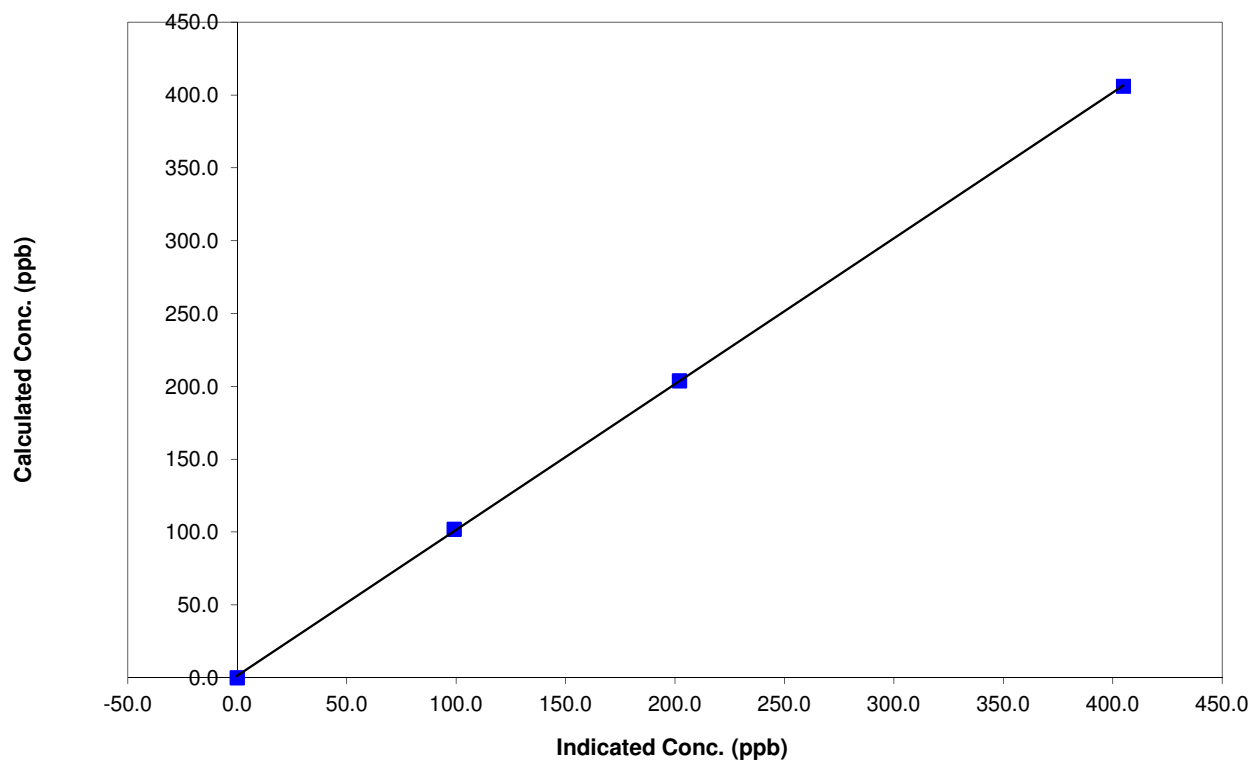
## Station Information

Calibration Date	April 23, 2013	Previous Calibration	March 14, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:19	End Time (MST)	12:56
Analyzer make	TEI 42i	Analyzer serial #	906535068

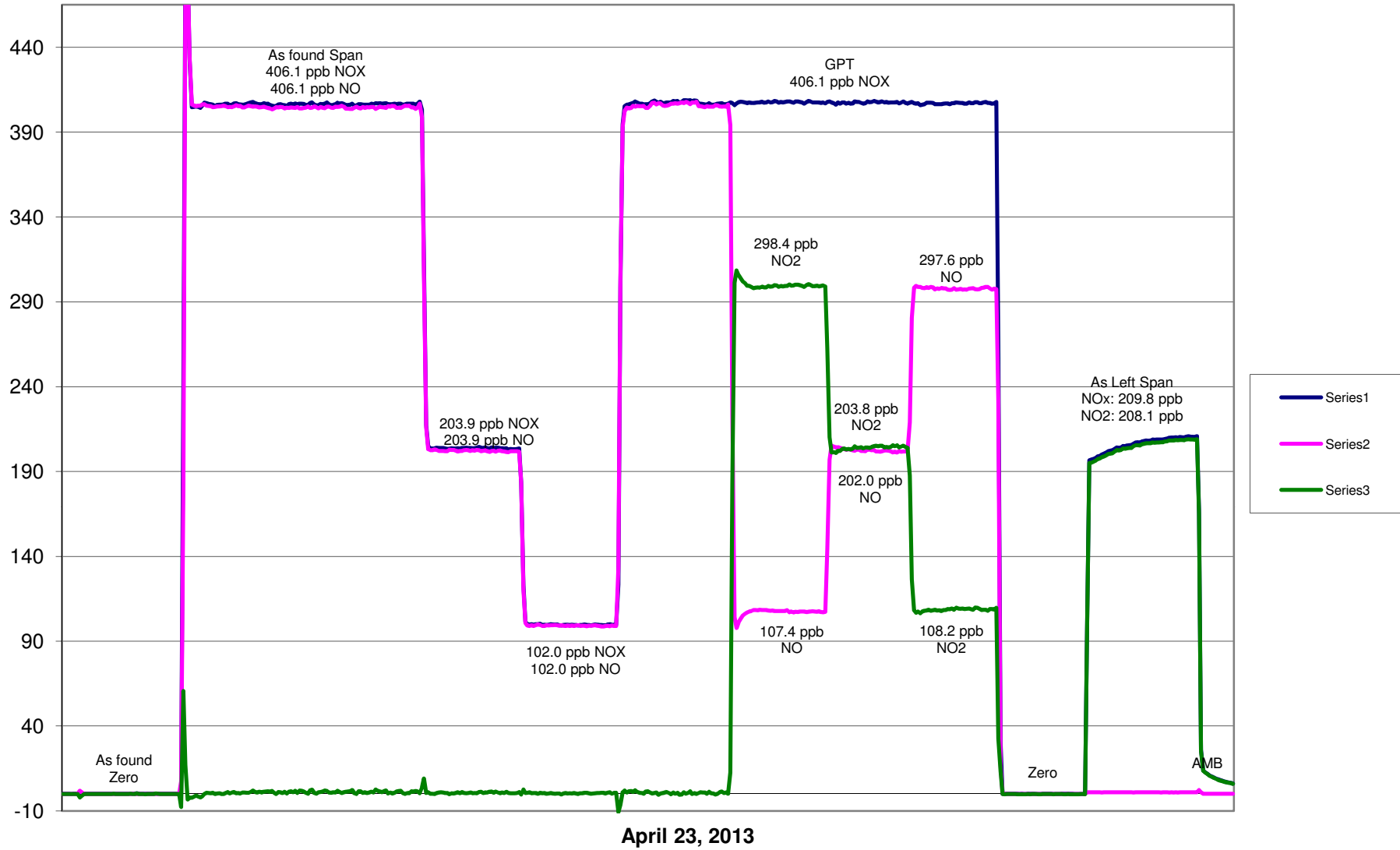
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999955
406.1	404.8	1.0033		
203.9	202.0	1.0092	Slope	1.001329
102.0	99.1	1.0295		

## NO Calibration Curve



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



# Calibration Report



Parameter 03  
Air Monitoring Network PAZA

## Station Information

Calibration Date	April 23, 2013	Previous Calibration	March 14, 2013
Station Number	4	Station Location	Beaverlodge
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	12:06	End Time (MST)	15:13
Barometric Pressure	0.924 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	1.000582	Calculated slope	0.993521
Calculated intercept	-0.097599	Calculated intercept	0.268015
Analyzer make	Teco 49i	Analyzer serial #	1136451236

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.00	ppb	-0.20	ppb
slope	1.064		1.027	
Lamp temp	54	mV	54	mV
Lamp Intensity A/B	90487/94771	mV	90446/94666	mV
Pressure	692.6	mm Hg	655.8	mm Hg
Flow A	0.749	ccm	0.716	ccm
Flow B	0.750	ccm	0.725	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	0.2	N/A
5035	0.3	298.4	300.7	0.9923
5035	0.2	203.8	204.1	0.9987
5035	0.1	108.2	108.3	0.9987
5035	0.0	0.0	0.2	As found zero
5035	0.3	298.4	309.5	As found span
Average Correction Factor				0.9965

Calculated value of As Found Response: 309.5 ppm      Percent Change of As Found: 3.7%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.6	ppb
Auto span	110.0	ppb	276.9	ppb

Notes: Slight span adjust 80% point.

Calibration Performed By: Grover Christiansen



# Calibration Summary



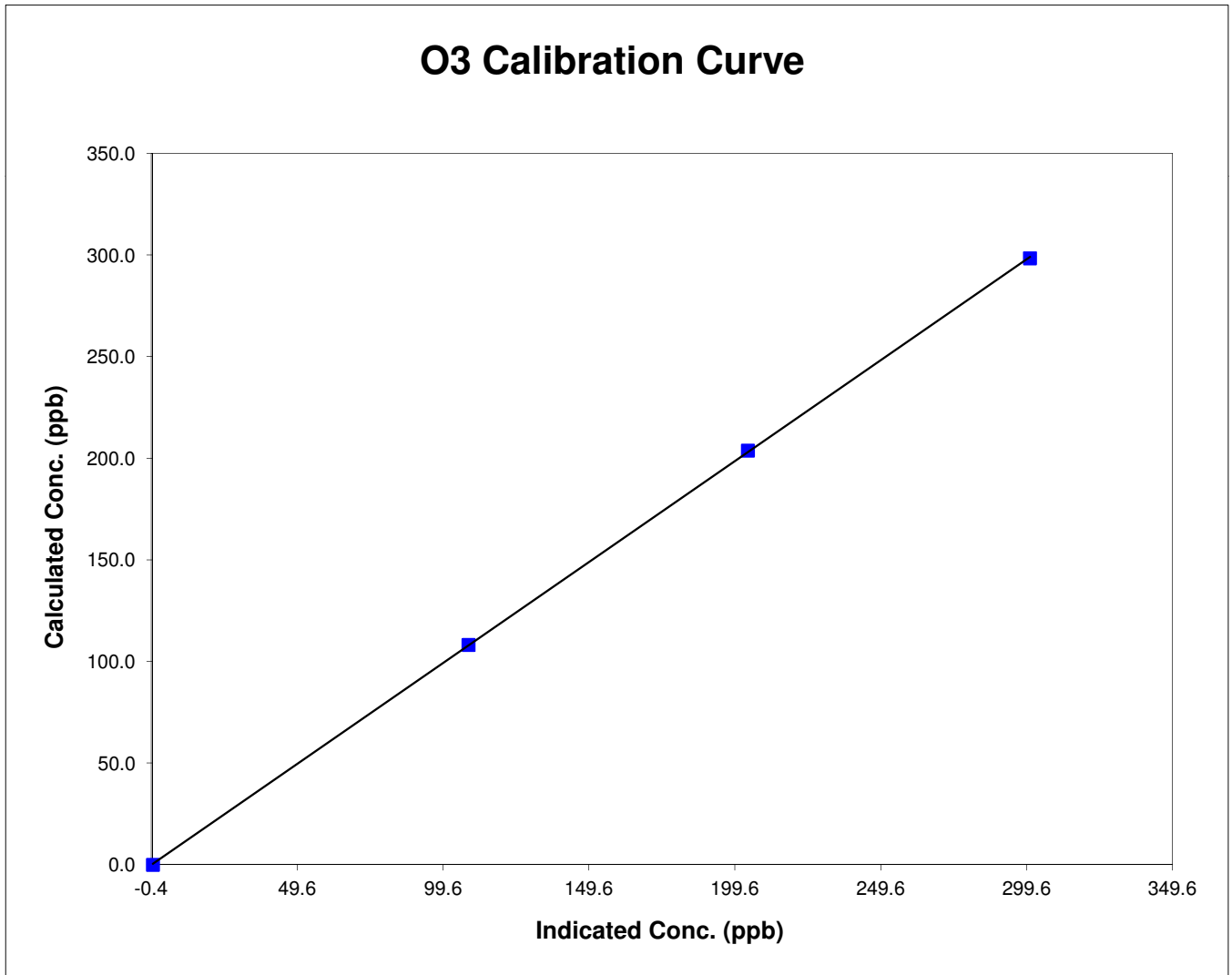
Parameter                     O3                      
 Air Monitoring Network   PAZA  

## Station Information

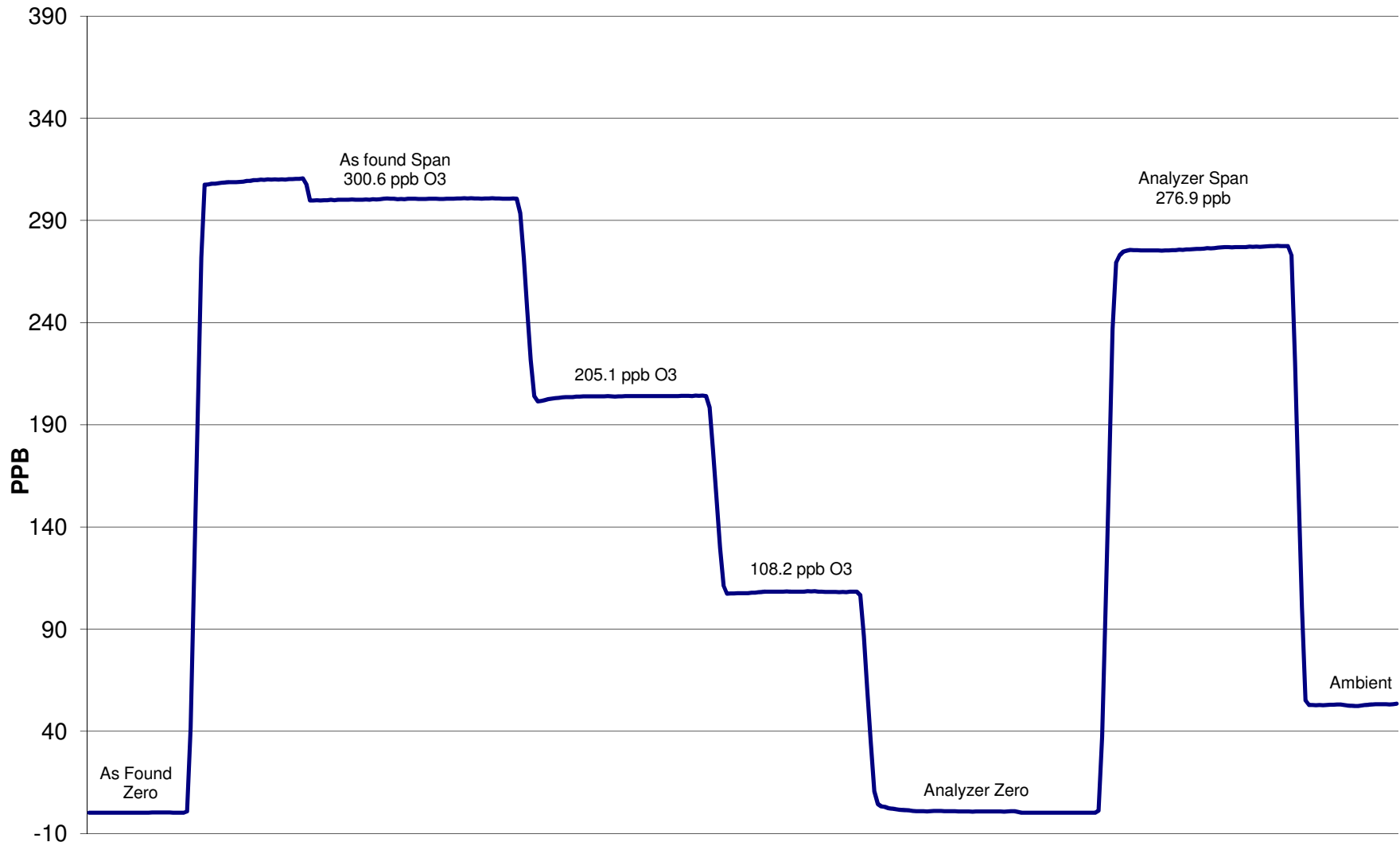
Calibration Date	<u>                    April 23, 2013                    </u>	Previous Calibration	<u>                    March 14, 2013                    </u>
Station Number	<u>                    4                    </u>	Station Location	<u>                    Beaverlodge                    </u>
Start Time (MST)	<u>                    12:06                    </u>	End Time (MST)	<u>                    15:13                    </u>
Analyzer make/model	<u>                    Teco 49i                    </u>	Analyzer serial #	<u>                    1136451236                    </u>

## Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	NA	Correlation Coefficient	0.999974
298.4	300.7	0.9923		
203.8	204.1	0.9987	Slope	0.993521
108.2	108.3	0.9987		
			Intercept	0.268015



# O3 Calibration

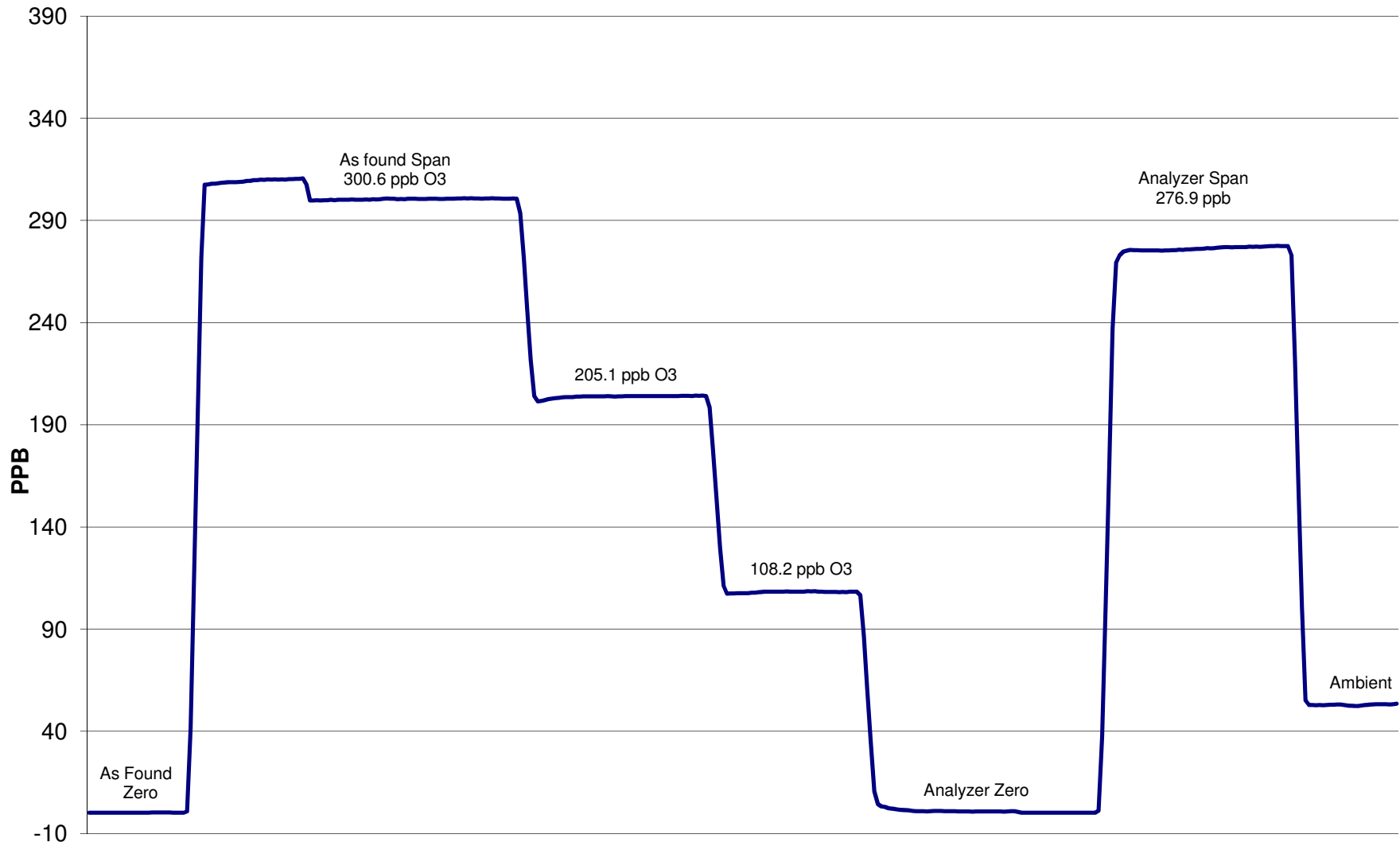


April 23, 2013





# O3 Calibration



April 23, 2013

# FDMS TEOM PM2.5 AUDIT



STATION: BeaverLodge  
 LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christiansen  
 DATE: 23-Apr-13

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	AMU1649
Site Number	4
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
T-Case Indicated / Set Point	30/30
T-Air Indicated / Set Point	30/30
T-Cap Indicated / Set Point	30/30
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	21-Dec-12
Previous Calibration	

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	-0.09	0.14
PUMP OFF	0.02	0.02
NET	-0.11	0.12
<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	14287	13.67	3.00
INDICATED ( I )	7.8	0.923	<del>14287</del>	13.68	3.00
MEASURED ( AF )	7.9	0.924	<del>14287</del>	13.69	3.01
MEASURED ( M )	7.9	0.924	14208	13.69	3.01
DIFFERENCE (M-I)	0.1	0.001	-0.6%	0.01	0.01
<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

Sample heads were cleaned.

Reference leak check: Main: -0.09 Aux: 0.14

**PASS**

**Sample Head Inspection Or Cleaning:**      **TEOM / FDMS IN LINE FILTER INSPECTION OR REPLACI**

# Calibration Report



Parameter SO2  
Air Monitoring Network PAZA

## Station Information

Calibration Date	April 27, 2013	Previous Calibration	March 28, 2013
Station Number	6	Station Location	Valleyview
Reason:	<b>Routine</b>	Install	Removal
		Other:	
Start Time (MST)	10:07	End Time (MST)	12:38
Barometric Pressure	702.00 mmHg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.8 ppm	Cal Gas Exp Date	March 12, 2014
Gas Cylinder Num.	LL107272		
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	1.001028	Calculated slope	1.001436
Calculated intercept	-0.470095	Calculated intercept	1.917562
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	37.3		37.1	
Coefficient	0.882		0.882	
UV Lamp Voltage	981	LPM	981	LPM
Chamber Temp	28.3	V	28.3	V
Perm Gas Temp	44.3	C	44.3	C
Pressure	598.9	in Hg	599.9	in Hg
Sample Flow	0.555	LPM	0.558	LPM
Lamp Intensity	48125	Hz	48185	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	0.4	N/A
4995	39.94	403.0	401.7	1.0032
4995	19.97	202.3	198.7	1.0182
4995	9.94	100.9	96.8	1.0427
4995	0.00	0.0	0.4	As found zero
4995	39.94	403.0	401.7	As found span
Average Correction Factor				1.0214

Calculated value of As Found Response: 401.2 ppm      Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	141.4	ppm	151.8	ppm

Notes: no adjustment made.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PAZA

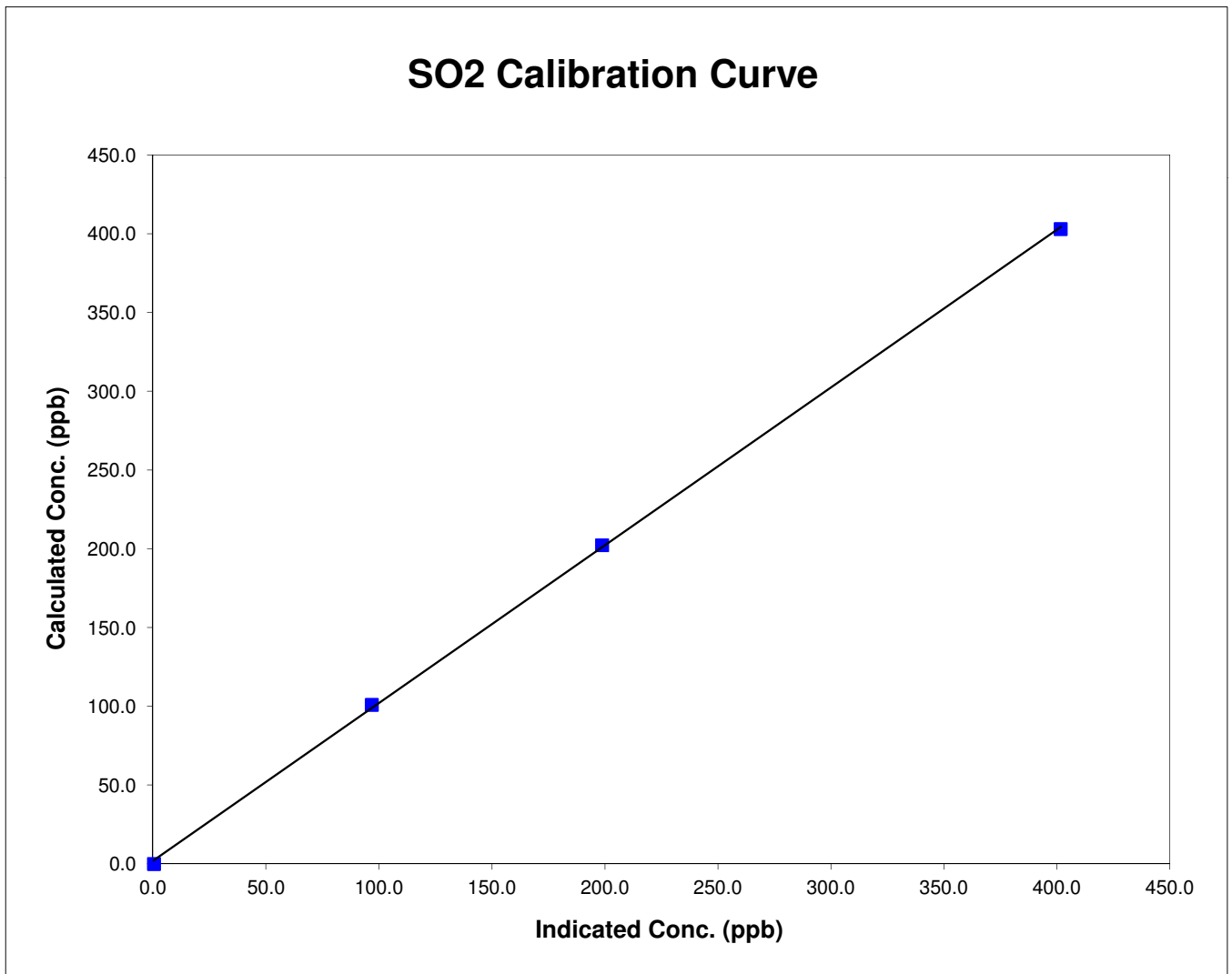


## Station Information

Calibration Date	April 27, 2013	Previous Calibration	March 28, 2013
Station Number	6	Station Location	Valleyview
Start Time (MST)	10:07	End Time (MST)	12:38
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

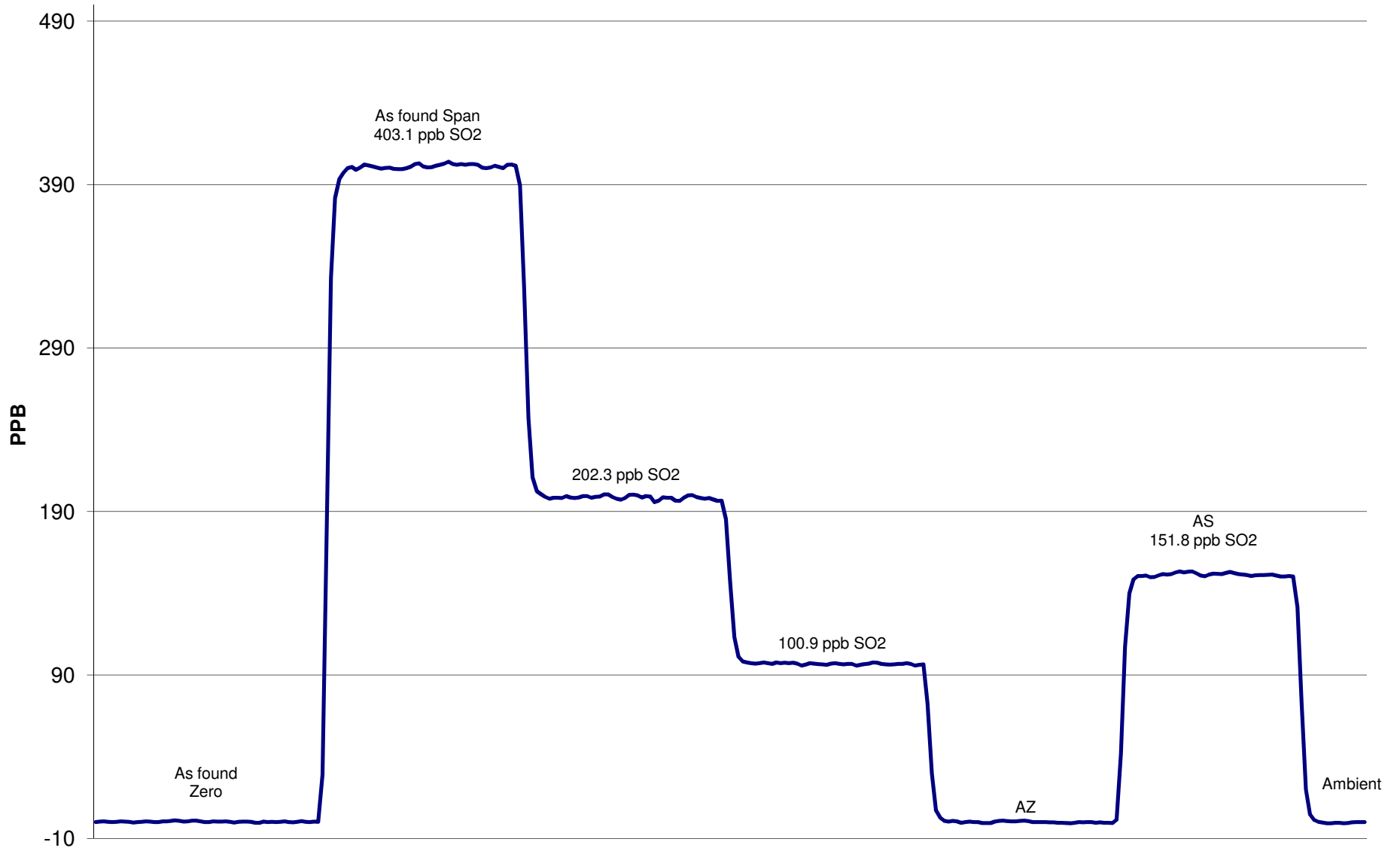
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999854
403.0	401.7	1.0032		
202.3	198.7	1.0182		
100.9	96.8	1.0427	Slope	1.001436
			Intercept	1.917562





# SO2 Calibration



April 27, 2013

# Calibration Report



Parameter H2S

Air Monitoring Network PAZA

## Station Information

Calibration Date	April 27, 2013	Previous Calibration	March 28, 2013
Station Number	6	Station Location	Valleyview
Reason:	<b>Routine</b>	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
		<input type="checkbox"/> Other:	
Start Time (MST)	8:26	End Time (MST)	11:15
Barometric Pressure	702.00 mm	Station Temperature	21.0 Deg C
Calibrator	Enviroics 6100	Serial Number	3474
Cal Gas Concentration	10.1 ppm	Cal Gas Expiry Date	5/11/13
Gas Cert Reference	BLM000121		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.023682	Calculated slope	0.960436
Calculated intercept	-0.203199	Calculated intercept	0.328503
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	7.8	ppb	7.8	ppb
Coefficient	1.040		1.040	
Lamp Voltage	789	v	789	v
Chamber Temp	45.2	c	45.2	c
Perm Oven Temp	44.35	c	44.35	c
Pressure	597.10	mm Hg	597.60	mm Hg
Sample Flow	0.414	ccm	0.406	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	39.94	80.1	83.3	0.9619
4995	19.97	40.2	41.2	0.9773
8979	8.97	10.1	9.9	1.0191
4995	0.00	0.0	0.1	As found zero
4995	39.94	80.1	83.4	As found span
Average Correction Factor				0.9861

Calculated value of As Found Response: 85.10 ppm      Percent Change of As Found: -6.2%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.7	ppm
Auto span	71.2	ppm	72.5	ppm

Notes: No adjustment. Scrubber checked.

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter                     H2S                      
 Air Monitoring Network                                     PAZA                                    



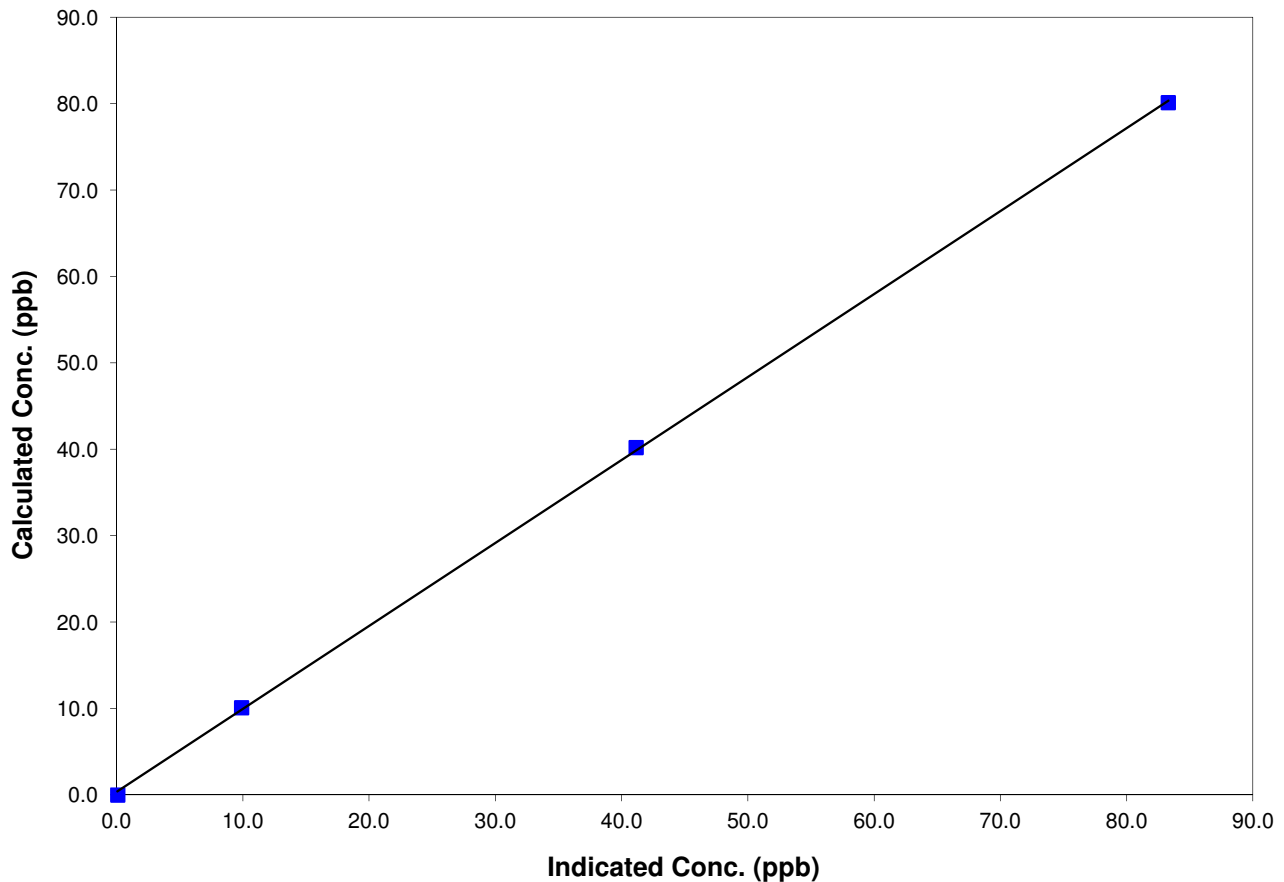
## Station Information

Calibration Date	<u>                    April 27, 2013                    </u>	Previous Calibration	<u>                    March 28, 2013                    </u>
Station Number	<u>                    6                    </u>	Station Location	<u>                    Valleyview                    </u>
Start Time (MST)	<u>                    8:26                    </u>	End Time (MST)	<u>                    11:15                    </u>
Analyzer make/model	<u>                    TEI Model 43i - APSCB                    </u>	Analyzer serial #	<u>                    701120010                    </u>

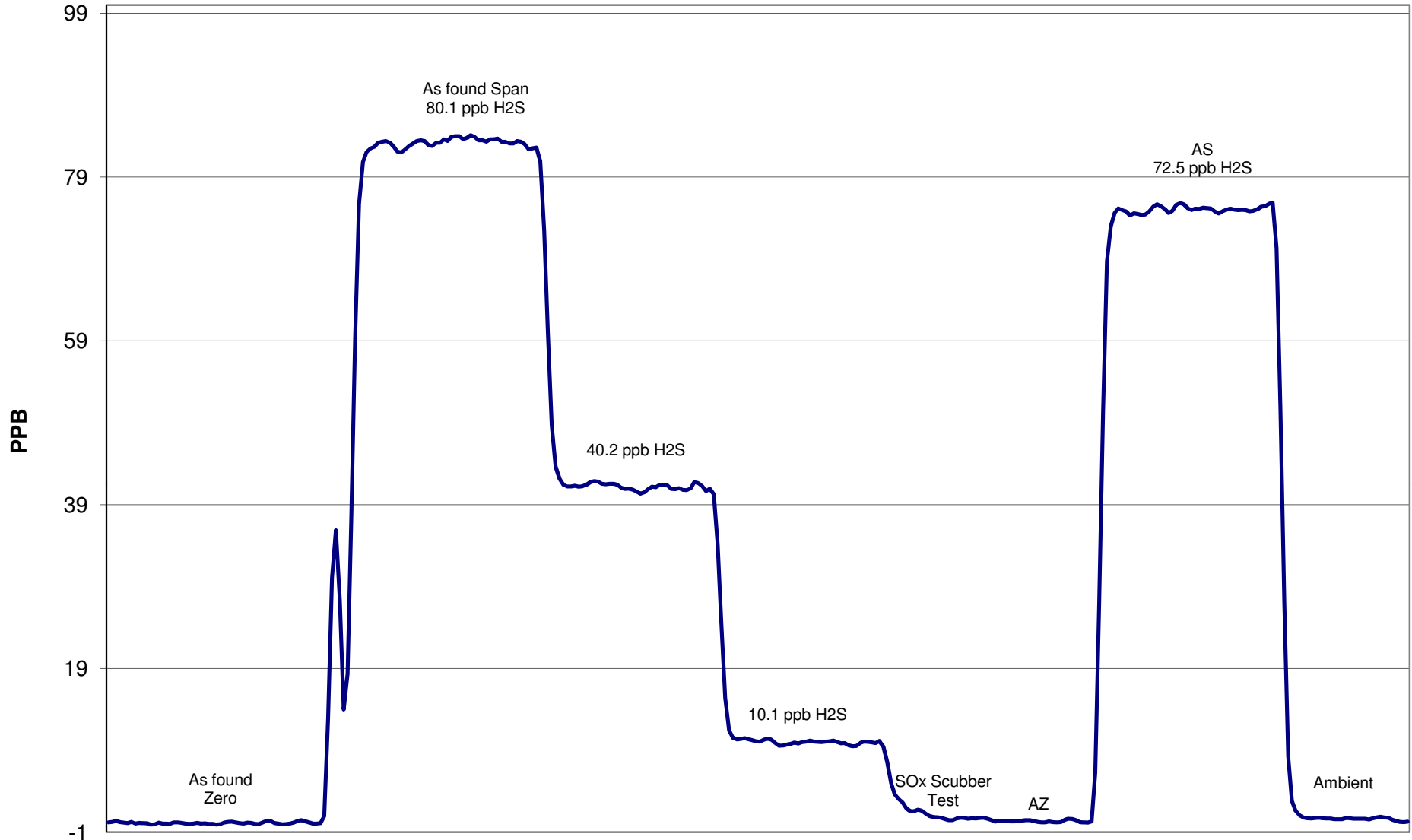
## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999895
80.1	83.3	0.9619		
40.2	41.2	0.9773		
10.1	9.9	1.0191	Slope	0.960436
			Intercept	0.328503

### H2S Calibration Curve



# H2S Calibration



April 27, 2013

# Calibration Report



Parameter SO2

Air Monitoring Network PAZA

## Station Information

Calibration Date	<u>April 27, 2013</u>	Previous Calibration	<u>March 27, 2013</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>13:26:00 PM</u>	End Time (MST)	<u>16:20</u>
Barometric Pressure	<u>0.90</u> Atm	Station Temperature	<u>20.0</u> Deg C
Calibrator	<u>EnviroNics 6100</u>	Serial Number	<u>3474</u>
Cal Gas Concentration	<u>50.8</u> ppm	Cal Gas Expiry Date	<u>3/12/14</u>
Gas Cert Reference	<u>LL107272</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>1.001088</u>	Calculated slope	<u>0.999399</u>
Calculated intercept	<u>0.679933</u>	Calculated intercept	<u>2.058137</u>
Analyzer make	<u>TEI 43C</u>	Analyzer serial #	<u>609716238</u>

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	18.5		18.2	
Coefficient	0.991		0.977	
UV Lamp Voltage	844	V	844	V
Chamber Temp	44.6	C	44.6	C
Perm Gas Temp	45	C	45	C
Pressure	653.4	mm Hg	656.3	mm Hg
Sample Flow	0.477	LPM	0.48	LPM
Lamp Intesity	37616	Hz	37191	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	0.7	N/A
4995	39.93	402.9	402.7	1.0006
4995	20.08	203.4	199.3	1.0206
4995	10.03	101.8	97.7	1.0425
4995	0.00	0.0	0.7	As found zero
4995	39.93	402.9	407.9	As found span
Average Correction Factor				1.0212

Calculated value of As Found Response: 408.364 ppm      Percent Change of As Found: -1.4%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	270.8	ppm	275.2	ppm

Notes: Slight span adjust first point. Calibrate.

---



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Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PAZA

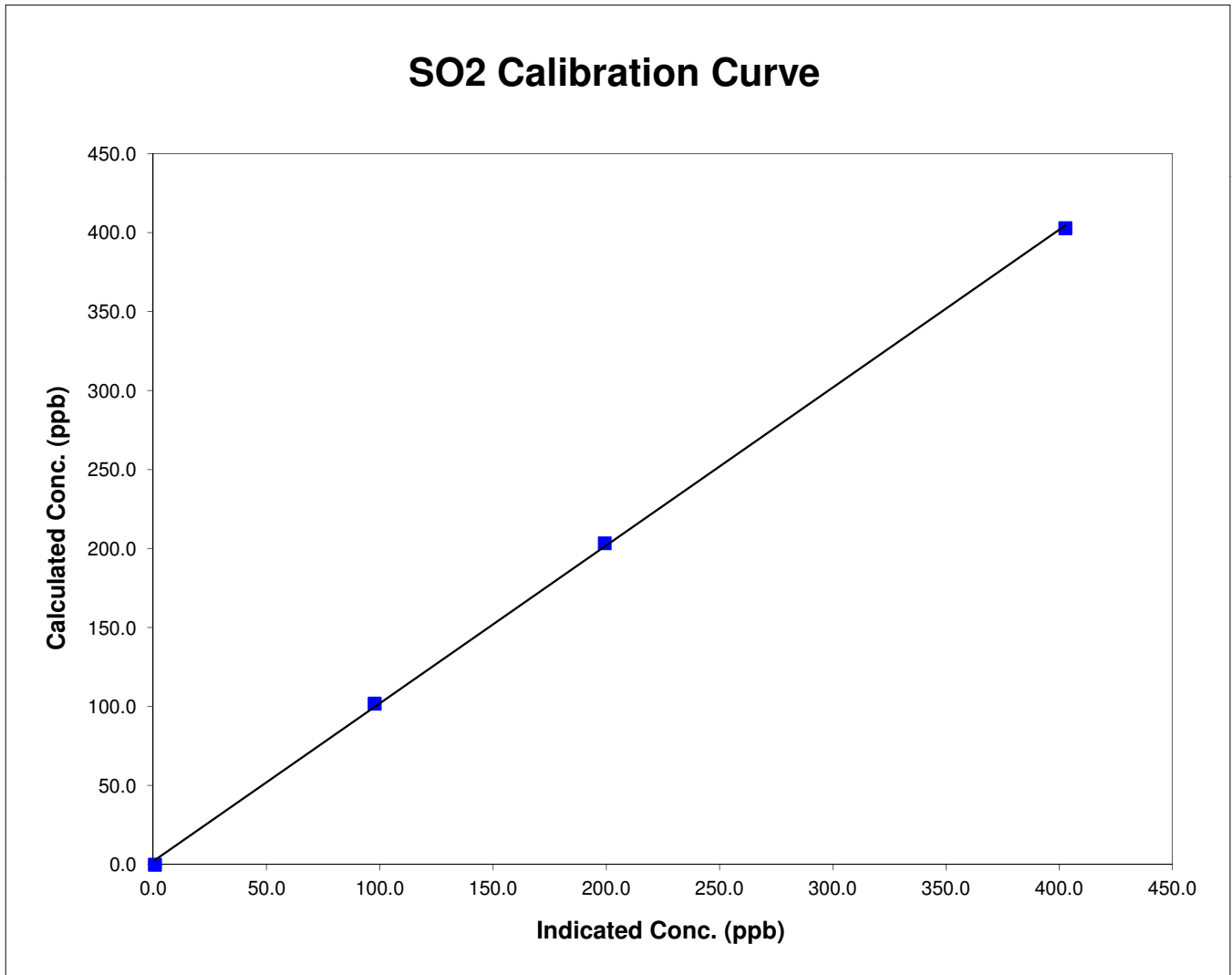


## Station Information

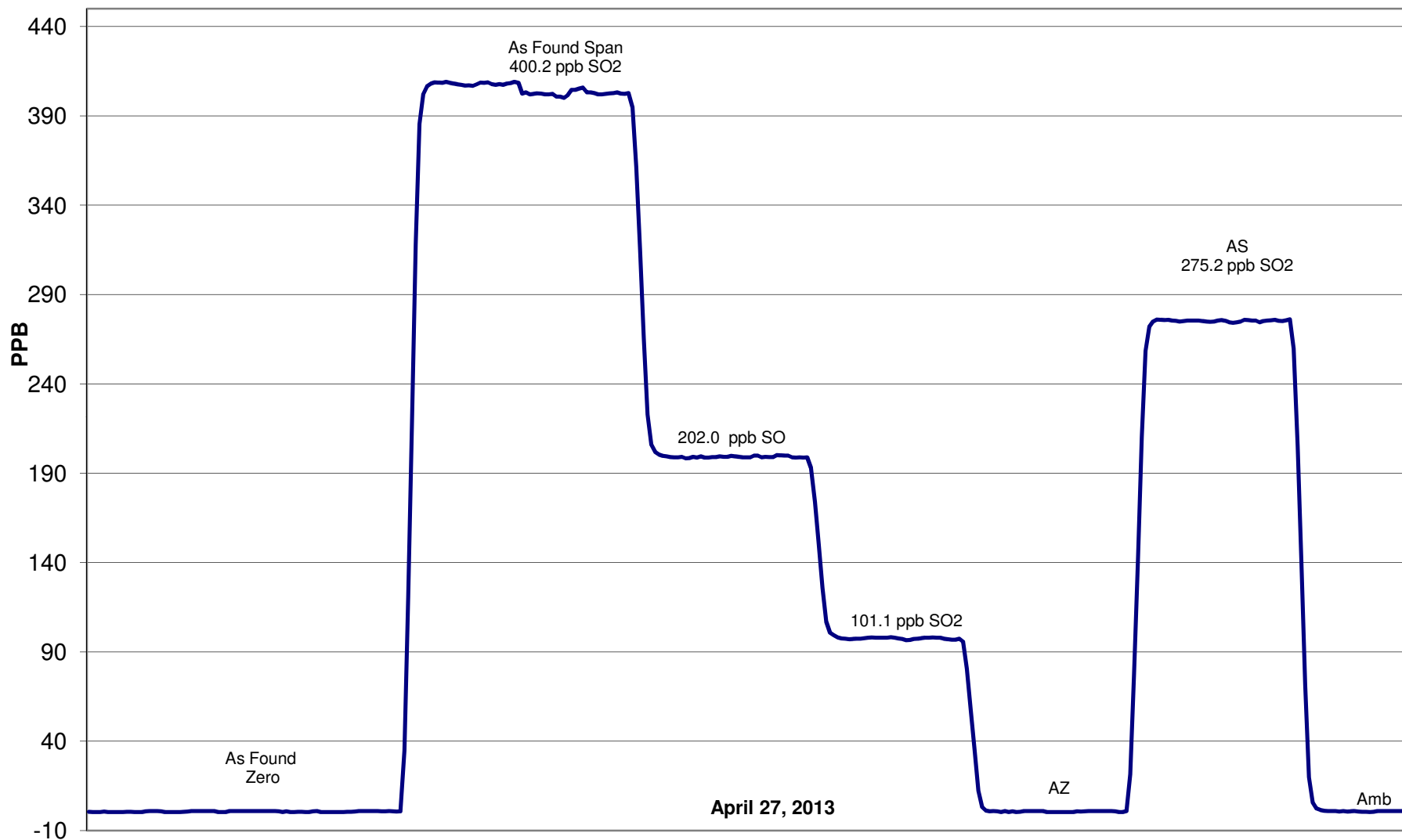
Calibration Date	April 27, 2013	Previous Calibration	March 27, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	13:26:00 PM	End Time (MST)	16:20
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	N/A		
402.9	402.7	1.0006	Correlation Coefficient	0.999782
203.4	199.3	1.0206		
101.8	97.7	1.0425	Slope	0.999399
			Intercept	2.058137



# SO2 Calibration



# Calibration Report

Parameter

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

Air Monitoring Network

PAZA



## Station Information

Calibration Date	April 27, 2013		Previous Calibration	March 27, 2013	
Station Number	9		Station Location	Sunset House	
Reason:	<b>Routine</b>	Install	Removal	Other: _____	
Start Time (MST)	13:27:00 PM		End Time (MST)	18:19	
Barometric Pressure	0.898	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.	5407	
	Parameter	NO <sub>2</sub>	NO <sub>x</sub>	NO	
Before	Data Slope	1.000956	0.990224	0.994285	
	Data Offset	-0.136355	-0.540245	-0.710246	
After	Data Slope	0.997476	0.994524	0.998323	
	Data Offset	-0.471411	1.531869	1.376776	
	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	4.7	mV	5.0	mV	
NO <sub>x</sub> bkgnd	4.9	mV	5.2	mV	
NO coefficient	1.093		1.158		
NO <sub>x</sub> coefficient	0.997		1.002		
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	-805.5	mV	-805.5	mV	
R Cell Press	179.3	in Hg	179.4	in Hg	
Sample Flow	0.742	ccm	0.752	ccm	

NOTES: Slight span adjust first point. GPT was interrupted twice by daily span sequence.



# Calibration Report



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

## Station Information

Calibration Date: April 27, 2013 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	0.8	0.1	N/A	N/A
1	4995	39.93	406.0	406.0	0.0	408.0	406.6	-0.2	0.9952	0.9986
2	4995	20.08	205.0	205.0	0.0	202.9	202.2	0.0	1.0102	1.0137
3	4995	10.03	102.6	102.6	0.0	99.7	99.7	0.2	1.0288	1.0294
AFZ	4995	0.00	0.0	0.0	0.0	0.7	0.7	0.1	0.0000	0.0000
AFS	4995	39.93	406.0	406.0	0.0	384.0	383.5	-1.0	1.0574	1.0587
Average Correction Factor									1.0114	1.0139

As Found Concentrations: NO<sub>x</sub>= 382.8 NO= 382.1 As Found Percent Change NO<sub>x</sub>= -5.7% NO= -5.9%

## 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	0.7	0.7	0.0	0.7	0.8	0.1	N/A	N/A	N/A	N/A
NO point	406.4	406.4	0.0	407.4	406.4	-0.9	0.9975	1.0000	N/A	N/A
300	406.4	107.9	298.4	408.8	107.9	299.4	0.9940	1.0000	0.9968	100.3%
200	406.4	201.1	205.2	409.5	201.1	206.3	0.9924	1.0000	0.9946	100.5%
100	406.4	295.4	111.0	409.3	295.4	112.3	0.9929	1.0000	0.9888	101.1%
Average Correction Factor							0.9931	1.0000	0.9934	100.7%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.8	0.1	0.9	ppb	0.9	0.2	0.9	ppb
Auto span	182.4	179.4	2.1	ppb	181.8	178.9	2.0	ppb

Calibration Performed By: Grover Christiansen

# Calibration Summary

Parameter NO<sub>2</sub>  
 Air Monitoring Network PAZA



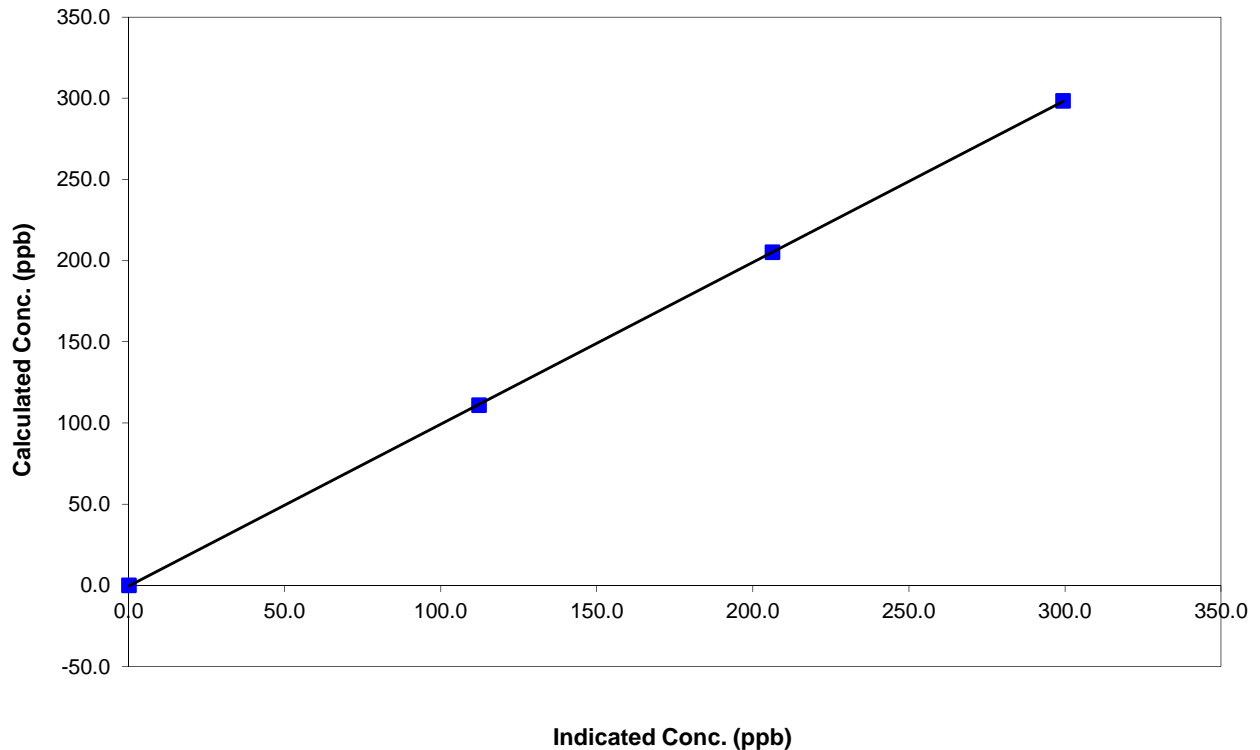
## Station Information

Calibration Date	April 27, 2013	Previous Calibration	March 27, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	13:27:00 PM	End Time (MST)	18:19
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		
298.4	299.4	0.9968	Correlation Coefficient	0.999991
205.2	206.3	0.9946		
111.0	112.3	0.9888		
			Slope	0.997476
			Intercept	-0.471411

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



# Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PAZA



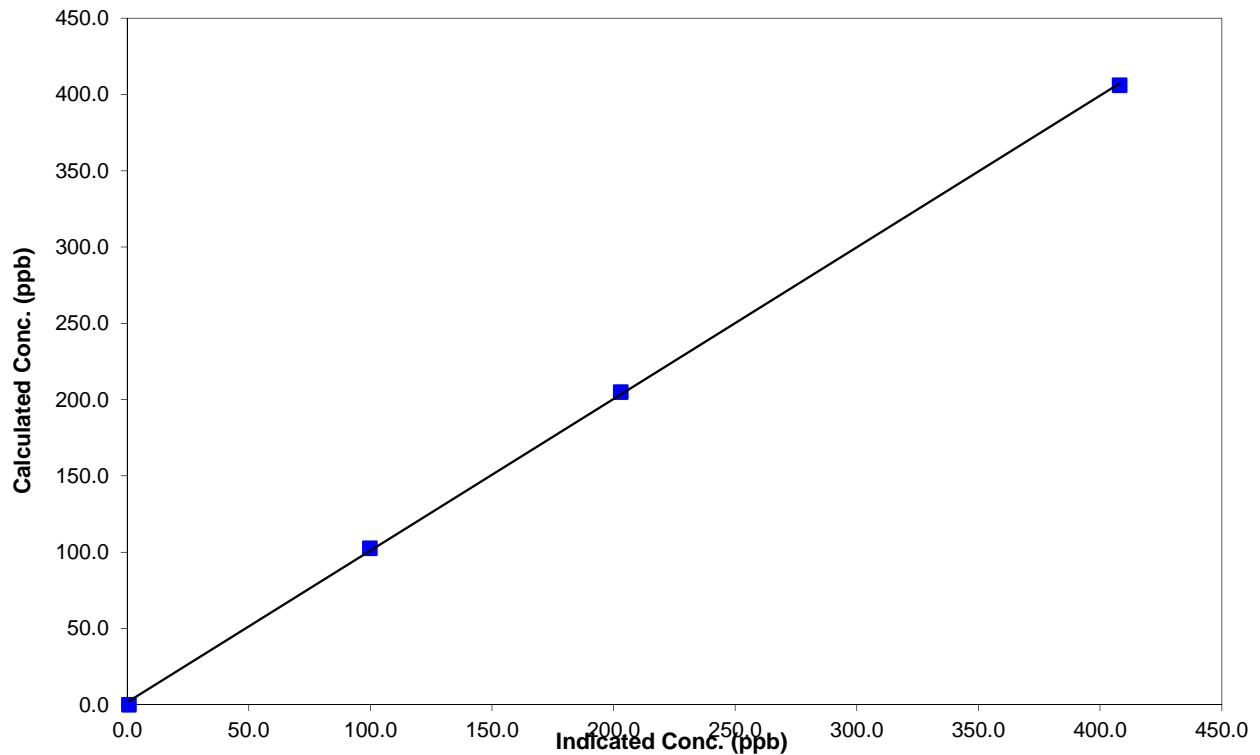
## Station Information

Calibration Date	April 27, 2013	Previous Calibration	March 27, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	13:27:00 PM	End Time (MST)	18:19
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		
406.0	408.0	0.9952	Correlation Coefficient	0.999856
205.0	202.9	1.0102		
102.6	99.7	1.0288		
			Slope	0.994524
			Intercept	1.531869

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



# Calibration Summary

Parameter NO  
 Air Monitoring Network PAZA



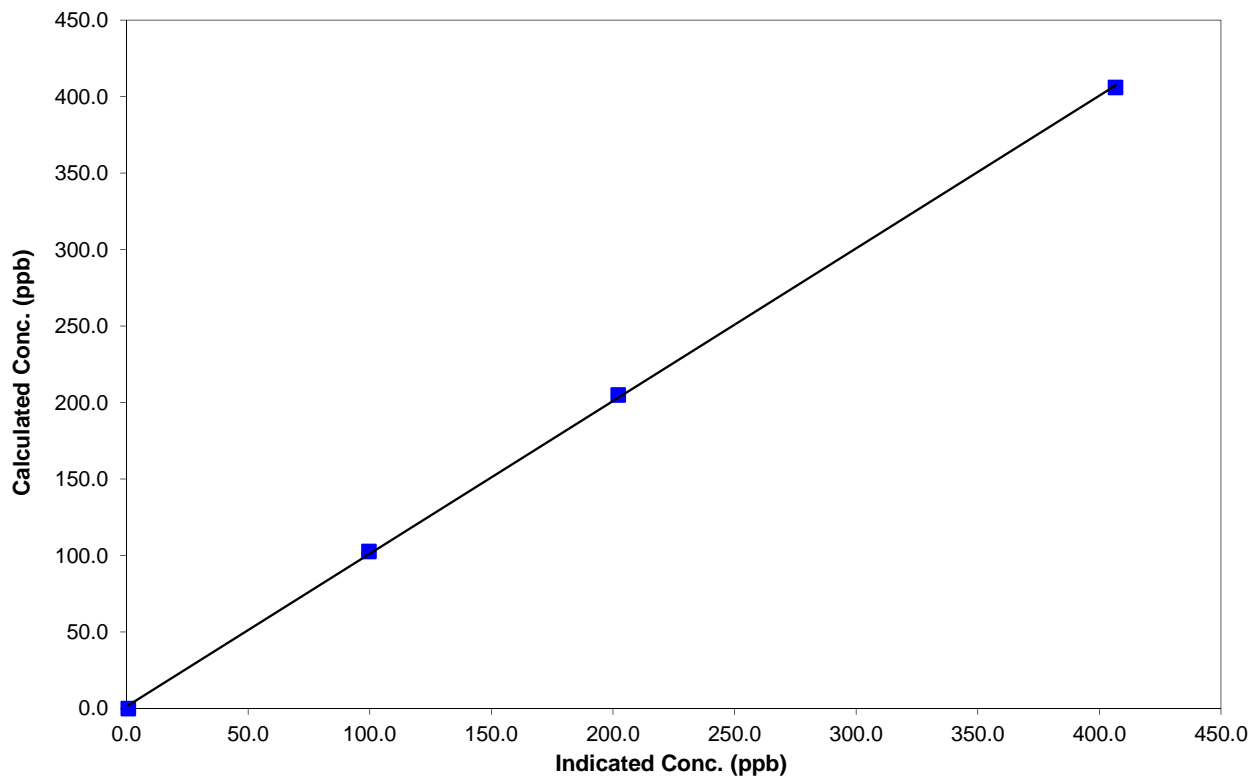
## Station Information

Calibration Date	April 27, 2013	Previous Calibration	March 27, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	13:27:00 PM	End Time (MST)	18:19
Analyzer make	TEI 42i	Analyzer serial #	0701120011

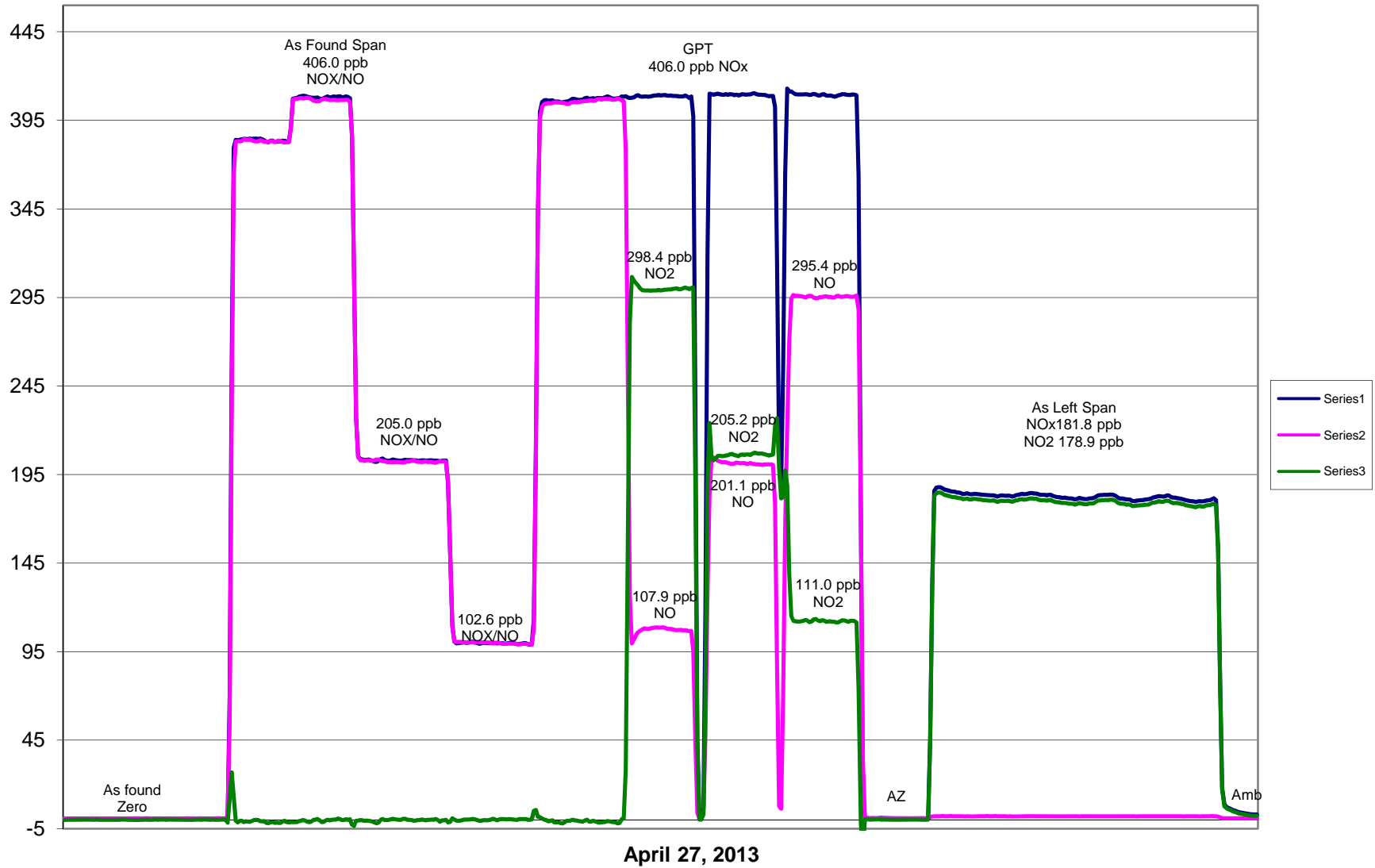
## Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.8	N/A		
406.0	406.6	0.9986	Correlation Coefficient	0.999864
205.0	202.2	1.0137		
102.6	99.7	1.0294	Slope	0.998323
			Intercept	1.376776

## NO Calibration Curve



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



# Calibration Report



Parameter           03            
Air Monitoring Network   

**PAZA**

## Station Information

Calibration Date	<u>          April 27, 2013          </u>	Previous Calibration	<u>          March 27, 2013          </u>
Station Number	<u>          9          </u>	Station Location	<u>          Sunset House          </u>
Reason:	<b>Routine</b>	<u>  Install  </u>	<u>  Removal  </u> remove <u>  Other:  </u>
Start Time (MST)	<u>          16:44:00 PM          </u>	End Time (MST)	<u>          19:48          </u>
Barometric Pressure	<u>          0.898      atm          </u>	Station Temperature	<u>          15.7      Deg C          </u>
Calibrator	<u>          EnviroNics 6100          </u>	Serial Number	<u>          3474          </u>
DACS make	<u>          CR3000          </u>	DACS serial No.	<u>          5407          </u>
DACS voltage range	<u>          0 - 5 Volts          </u>	DACS channel #	<u>          6          </u>
	<u>          Before          </u>		<u>          After          </u>
Calculated slope	<u>          1.000818          </u>	Calculated slope	<u>          0.988175          </u>
Calculated intercept	<u>          0.208100          </u>	Calculated intercept	<u>          0.788064          </u>
Analyzer make	<u>          TEI Model 49C          </u>	Analyzer serial #	<u>          49C-0609716240          </u>

	before		after	
Concentration range	<u>          0-500          </u>	<u>          ppb          </u>	<u>          0-500          </u>	<u>          ppb          </u>
Offset	<u>          0.3          </u>	<u>          ppb          </u>	<u>          0.3          </u>	<u>          ppb          </u>
Span	<u>          1.035          </u>		<u>          1.035          </u>	
Cell A intensity	<u>          82680          </u>	<u>          Hz          </u>	<u>          82680          </u>	<u>          Hz          </u>
Cell B intensity	<u>          78260          </u>	<u>          Hz          </u>	<u>          78260          </u>	<u>          Hz          </u>
Pressure	<u>          675.70          </u>	<u>          in Hg          </u>	<u>          675.70          </u>	<u>          in Hg          </u>
CellA Flow	<u>          0.898          </u>	<u>          ccm          </u>	<u>          0.894          </u>	<u>          ccm          </u>
Cell B Flow	<u>          0.734          </u>	<u>          cmm          </u>	<u>          0.734          </u>	<u>          cmm          </u>

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5040	0.00	0.0	0.1	N/A
5040	0.30	298.4	302.4	0.9869
5040	0.20	205.2	205.5	0.9986
5040	0.10	111.0	110.8	1.0018
5040	0.00	0.0	0.1	As found zero
5040	0.30	298.4	302.5	As found span
Average Correction Factor				0.9958

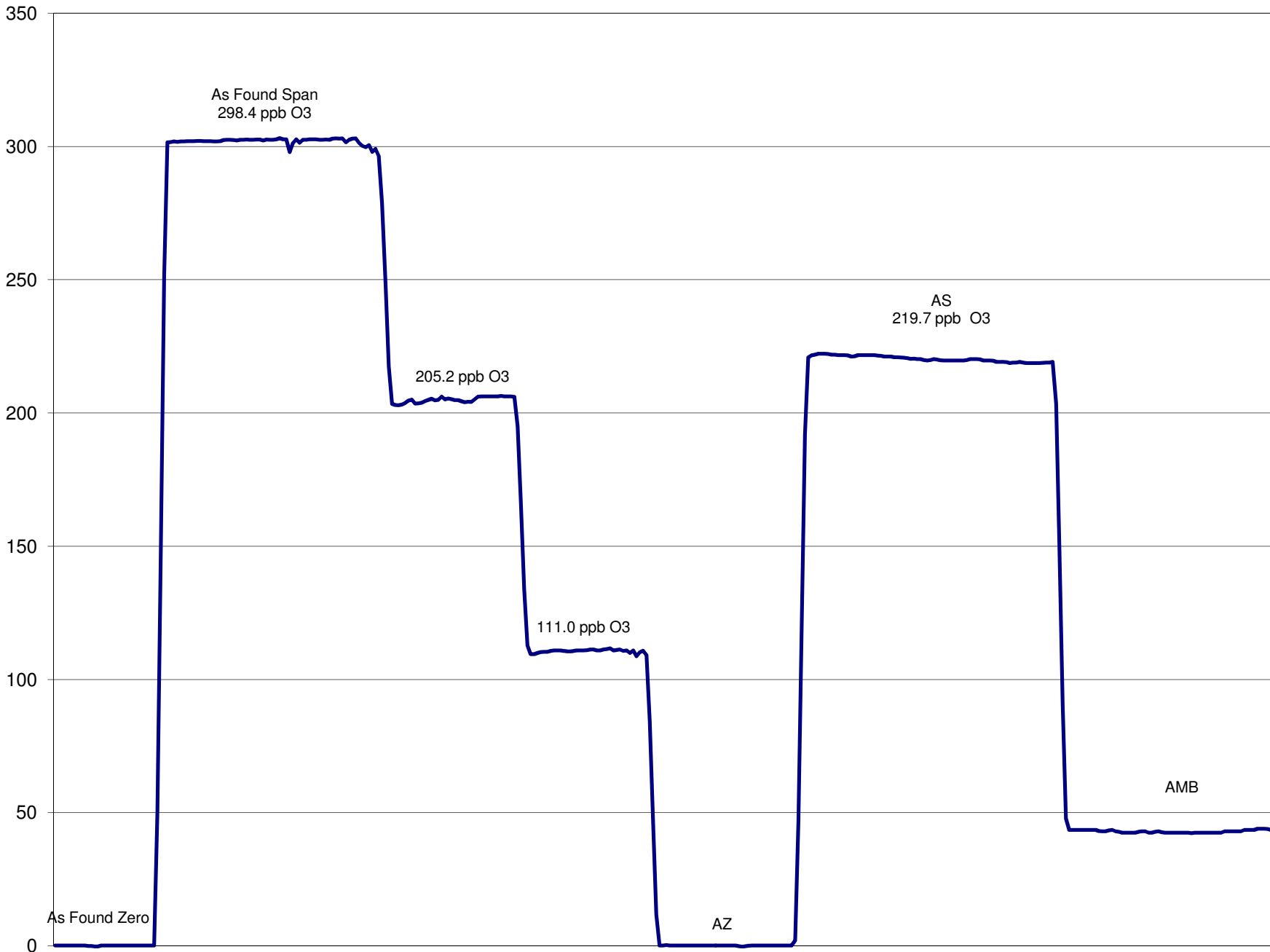
Calculated value of As Found Response:           302.8 ppm               Percent Change of As Found:           1.5%          

	before calibration		after calibration	
Auto zero	<u>          0.6          </u>	<u>          ppb          </u>	<u>          0.9          </u>	<u>          ppb          </u>
Auto span	<u>          226.5          </u>	<u>          ppb          </u>	<u>          219.7          </u>	<u>          ppb          </u>

Notes:           No adjustment made.          

Calibration Performed By:           Grover Christiansen





April 27, 2013



# Calibration Report



Parameter                                  **TRS**

Air Monitoring Network    **PAZA**

## Station Information

Calibration Date	April 27, 2013	Previous Calibration	March 27, 2013	
Station Name	PAZA Rover	Station Location	Sunset House	
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal	<input type="checkbox"/> Other:
Start Time (MST)	5:59 PM	End Time (MST)	20:42	
Barometric Pressure	0.898 Atm	Station Temperature	20.0 Deg C	
Calibrator	EnviroNics 6100	Serial Number	3474	
Cal Gas Concentration	10.1 ppm	Cal Gas Expiry Date	November 9, 2013	
Gas Cert Reference	LL160692			
DACS make	CR3000	DACS serial No.	5407	
DACS voltage range	0 - 5 Volt	DACS channel #	1	
	<u>Before</u>		<u>After</u>	
DACS Scale High	100	DACS slope	100	
DACS Scale Low	0	DACS intercept	0	
Calculated slope	0.993996	Calculated slope	0.992471	
Calculated intercept	-0.080272	Calculated intercept	-0.054075	
Analyzer make	TEI 43C	Analyzer serial #	609716238	

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.5	ppb	15.5	ppb
Coefficient	1.399		1.399	
Lamp Voltage	845	V	846	V
Chamber Temp	43.8	C	43.9	C
Perm gas Temp	45.0	C	45	C
Pressure	642.2	mmHg	642.6	mmHg
Sample Flow	0.436	ccm	0.437	ccm
Lamp Intensity	38168	Hz	38919	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	0.4	N/A
4995	39.94	80.1	81.0	0.9895
4995	19.96	40.2	40.2	0.9990
8995	8.94	10.0	9.9	1.0099
4995	0.00	0.0	0.4	As found zero
4995	39.94	80.1	81.0	As found span
Average Correction Factor				0.9995

Calculated value of As Found Response: **79.98 ppm**      Percent Change of As Found: **0.2%**

	before calibration		after calibration	
Auto zero	0.4	ppm	0.2	ppm
Auto span	66.4	ppm	67.1	ppm

Notes:           No span adjust.  

Calibration Performed By:                                 Grover Christiansen

# Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



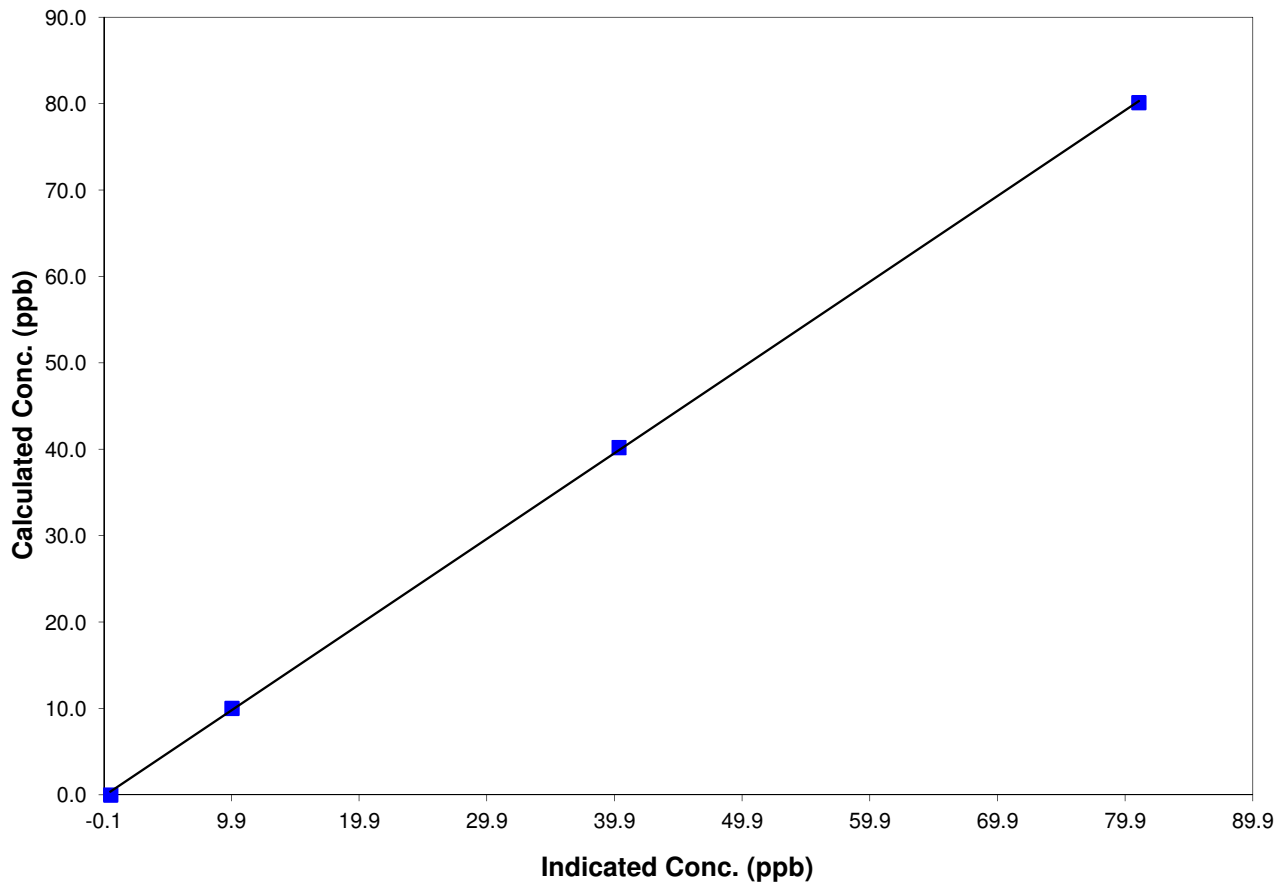
### Station Information

Calibration Date	April 27, 2013	Previous Calibration	March 27, 2013
Station Number	PAZA Rover	Station Location	Sunset House
Start Time (MST)	17:59	End Time (MST)	20:42
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

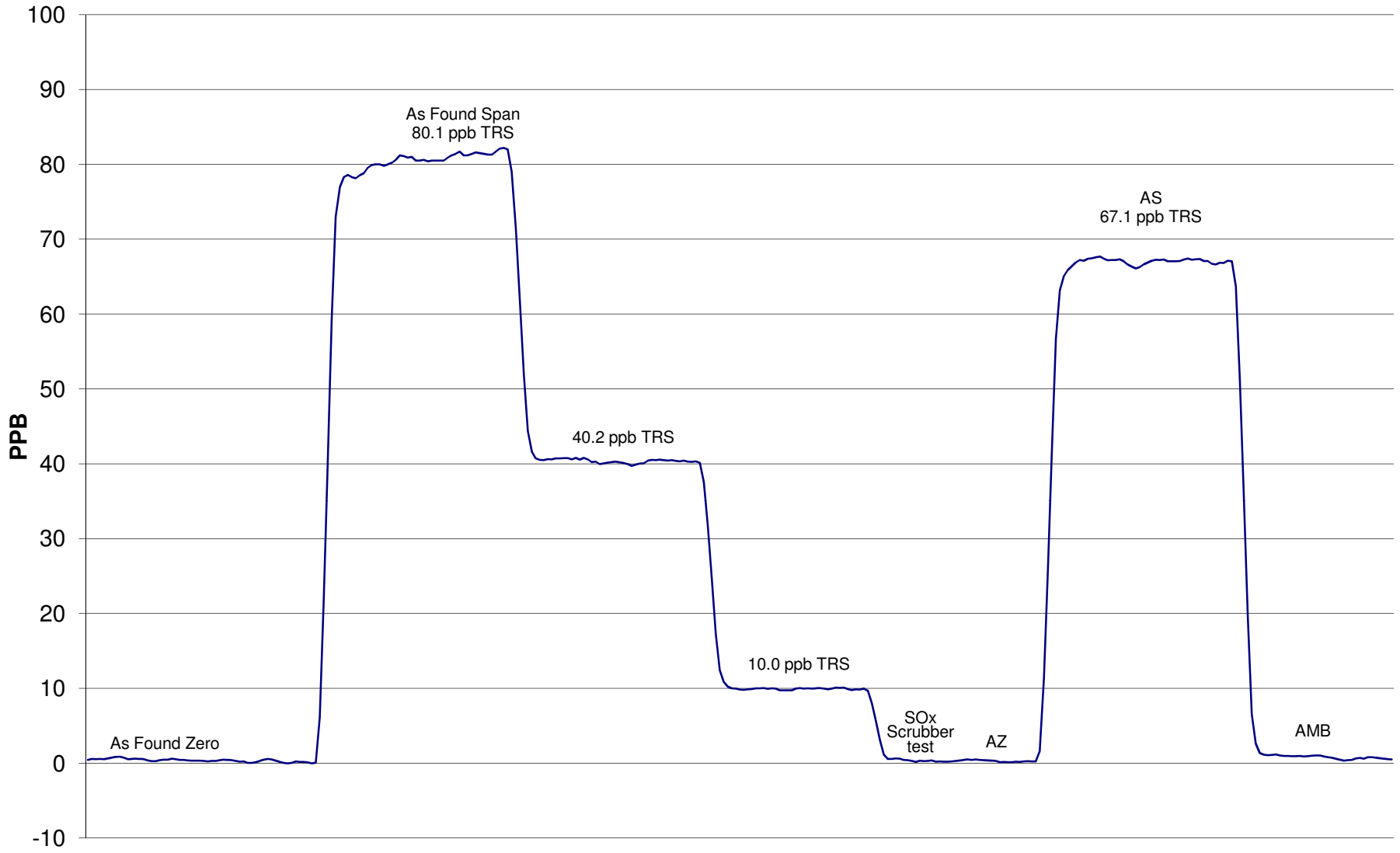
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999919
80.1	81.0	0.9895		
40.2	40.2	0.9990	Slope	0.992471
10.0	9.9	1.0099		
			Intercept	-0.054075

### TRS Calibration Curve



# TRS Calibration



April 27, 2013

# AB TEOM PM2.5 Calibration



STATION: Rover-Sunset House  
 LOCATION: PAZA - Grande Prairie

OPERATOR: Grover Christiansen  
 DATE: 27-Apr-13

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	21551
Site Number	2
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
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	18-Jan-13
Previous Calibration	

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	0.164	0.152
PUMP OFF	0.135	0.100
NET	0.029	0.052
<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	9689	13.67	3.000
INDICATED ( I )	5.3	0.905	<del>9689</del>	13.67	2.990
MEASURED ( AF )	4.9	0.904	<del>9689</del>	13.68	3.020
MEASURED ( M )	4.9	0.904	9675	13.68	3.020
DIFFERENCE (M-I)	-0.4	-0.001	-0.1%	0.01	0.02
<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: 0.11251      Serial #: CVK 3316

COMMENTS:      Pass

Full audit was performed.

TEOM control unit S/N: 140AB215519705

TEOM sensor unit S/N: 1200B137649705

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

# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PAZA

## Station Information

Calibration Date	April 28, 2013	Previous Calibration	March 28, 2013
Station Number	1	Station Location	Falher
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	9:18	End Time (MST)	11:59
Barometric Pressure	0.917 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Concentration	50.8 ppm	Cal Gas Expiry Date	3/12/14
Correction factor	0.031171	Cal Gas Cylinder #	LL107272
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.992838	Calculated slope	1.000464
Calculated intercept	0.612947	Calculated intercept	0.988540
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	7.1		7.1	
coefficient	0.932		0.932	
Lamp Voltage	855	volts	855	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	678.7	mm Hg	677	mm Hg
Sample Flow	0.424	ccm	0.421	ccm
Lamp Intensity	97	%	97	%

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	0.0	N/A
4995	39.93	402.9	402.4	1.0011
4995	19.98	202.4	200.1	1.0114
4995	9.84	99.9	98.3	1.0157
4995	0.0	0.0	0.0	As Found Zero
4995	39.93	402.9	402.4	As Found Span
Average Correction Factor				1.0094

Calculated value of As Found Response: 400.110 ppm      Percent Change of As Found: **0.7%**

	before calibration		after calibration	
Auto zero	0.5	ppm	-0.1	ppm
Auto span	359.4	ppm	352.6	ppm

Notes: No span adjust.

Calibration Performed By: Grover Christiansen

# Calibration Summary



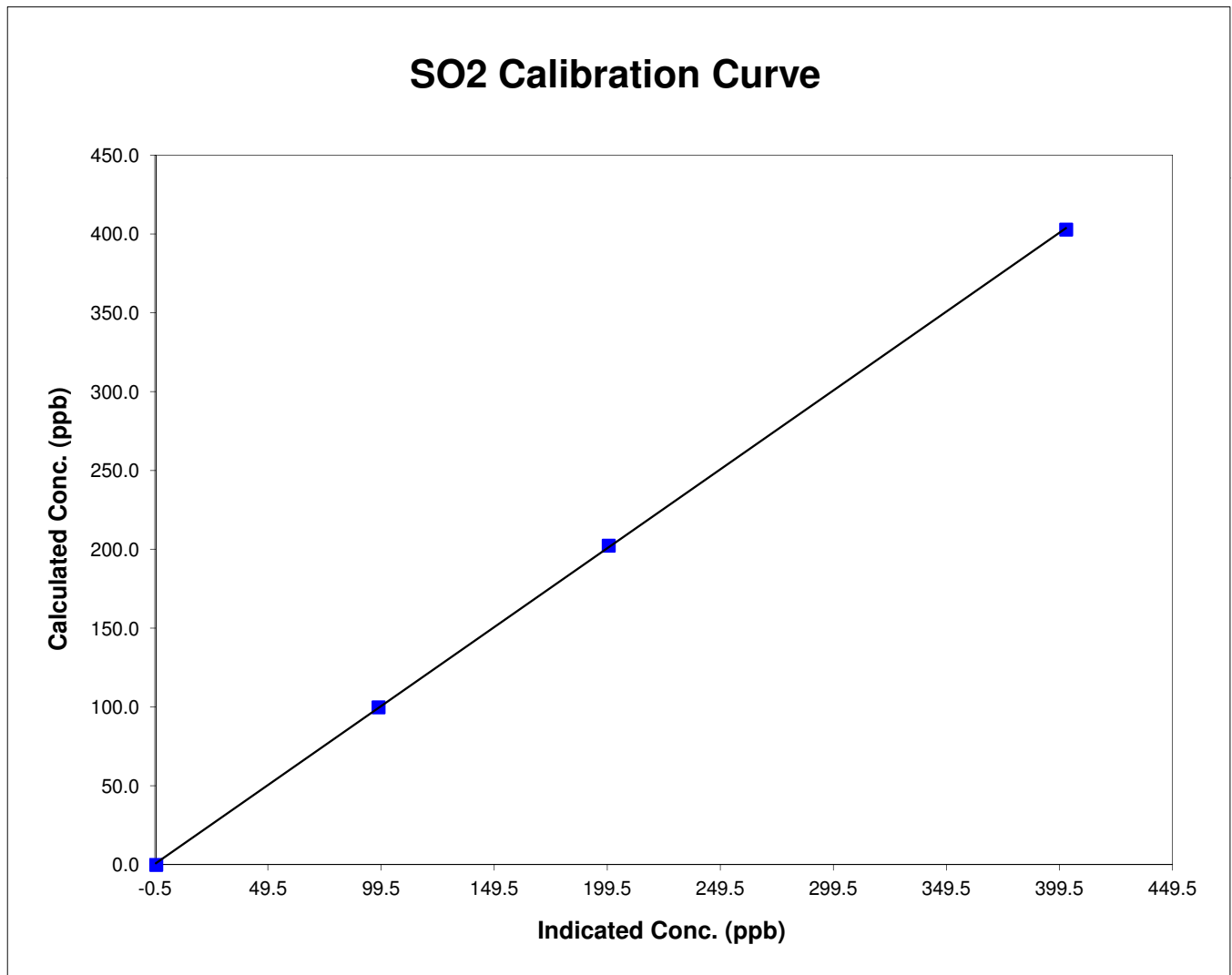
Parameter SO2  
 Air Monitoring Network PAZA

### Station Information

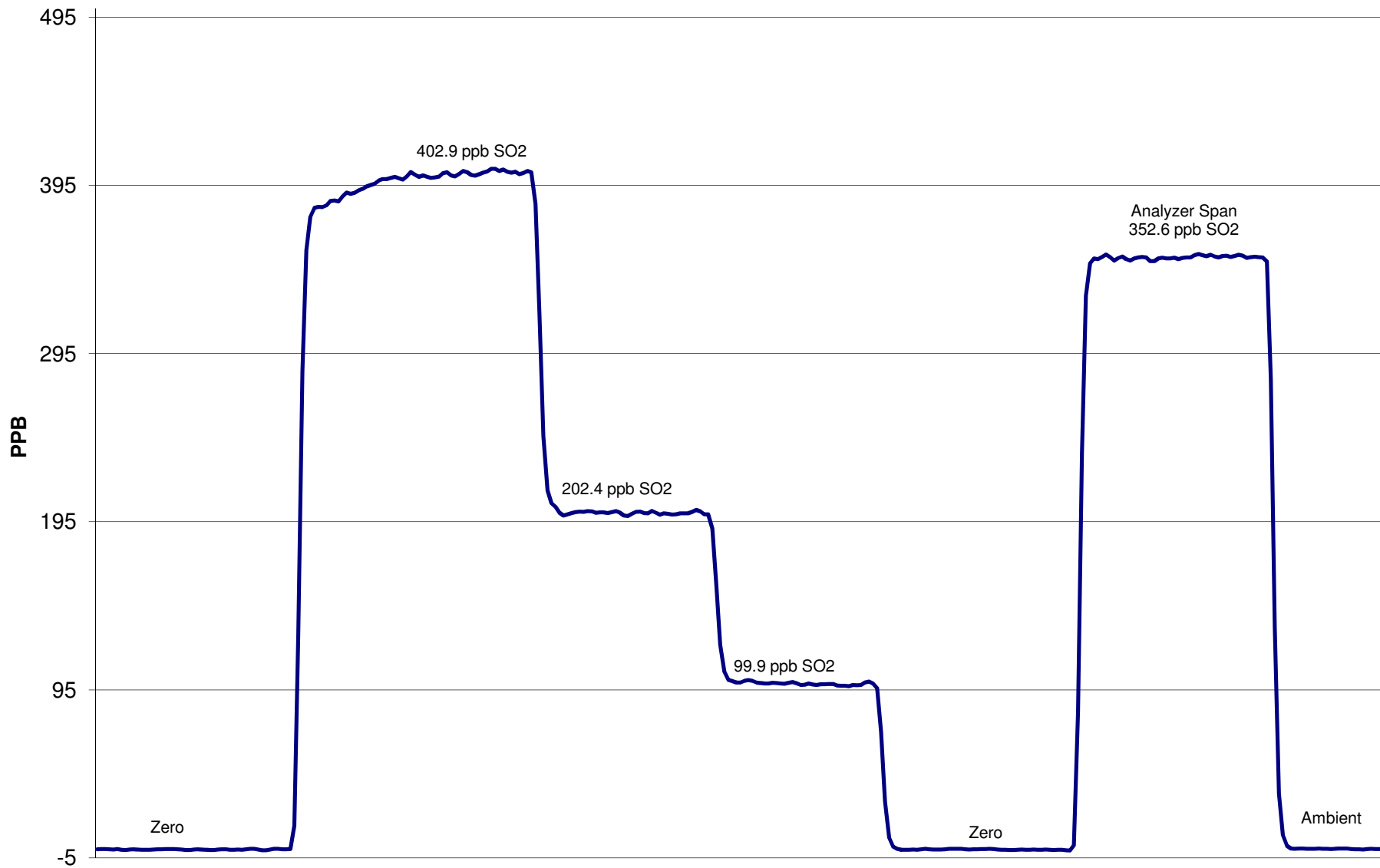
Calibration Date	April 28, 2013	Previous Calibration	March 28, 2013
Station Number	1	Station Location	Falher
Start Time (MST)	9:18	End Time (MST)	11:59
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999964
402.9	402.4	1.0011		
202.4	200.1	1.0114	Slope	1.000464
99.9	98.3	1.0157		
			Intercept	0.988540



# SO2 Calibration



April 28, 2013

# Calibration Report



Parameter H2S  
Air Monitoring Network PAZA

## Station Information

Calibration Date	April 28, 2013	Previous Calibration	March 28, 2013
Station Number	1	Station Location	Falher
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			Other: <input type="checkbox"/>
Start Time (MST)	8:00	End Time (MST)	10:42
Barometric Pressure	0.917 ATM	Station Temperature	20.0 Deg C
Calibrator	Enviroconics	Serial Number	3474
Cal Gas Conc	10.1 ppm	Cal Gas Expiry Date	11/05/13
Correction factor	0.031171	Cal Gas Cylinder #	LL160692
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	0.990935	Calculated slope	0.991777
Calculated intercept	0.279847	Calculated intercept	0.138069
Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	12.5	ppb	12.5	ppb
coefficient	1.169		1.169	
Lamp Voltage	803	volts	803	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	567.6	mm Hg	568.2	mm Hg
Sample Flow	0.940	ccm	0.942	ccm
Lamp Intensity	90	mv	90	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	0.0	N/A
4995	39.97	80.18	80.9	0.9910
4995	19.97	40.22	40.0	1.0060
8994	8.97	10.06	10.1	0.9971
4995	0.00	0.00	-0.1	As Found Zero
4995	39.95	80.14	80.7	As Found Span
Average Correction Factor				0.9980

Calculated value of As Found Response: 80.34 ppm      Percent Change of As Found: -0.3%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.1	ppm
Auto span	51.2	ppm	52.5	ppm

Notes: **No adjustment made.**

Calibration Performed By: Grover Christiansen



# Calibration Summary



Parameter                   H2S                  

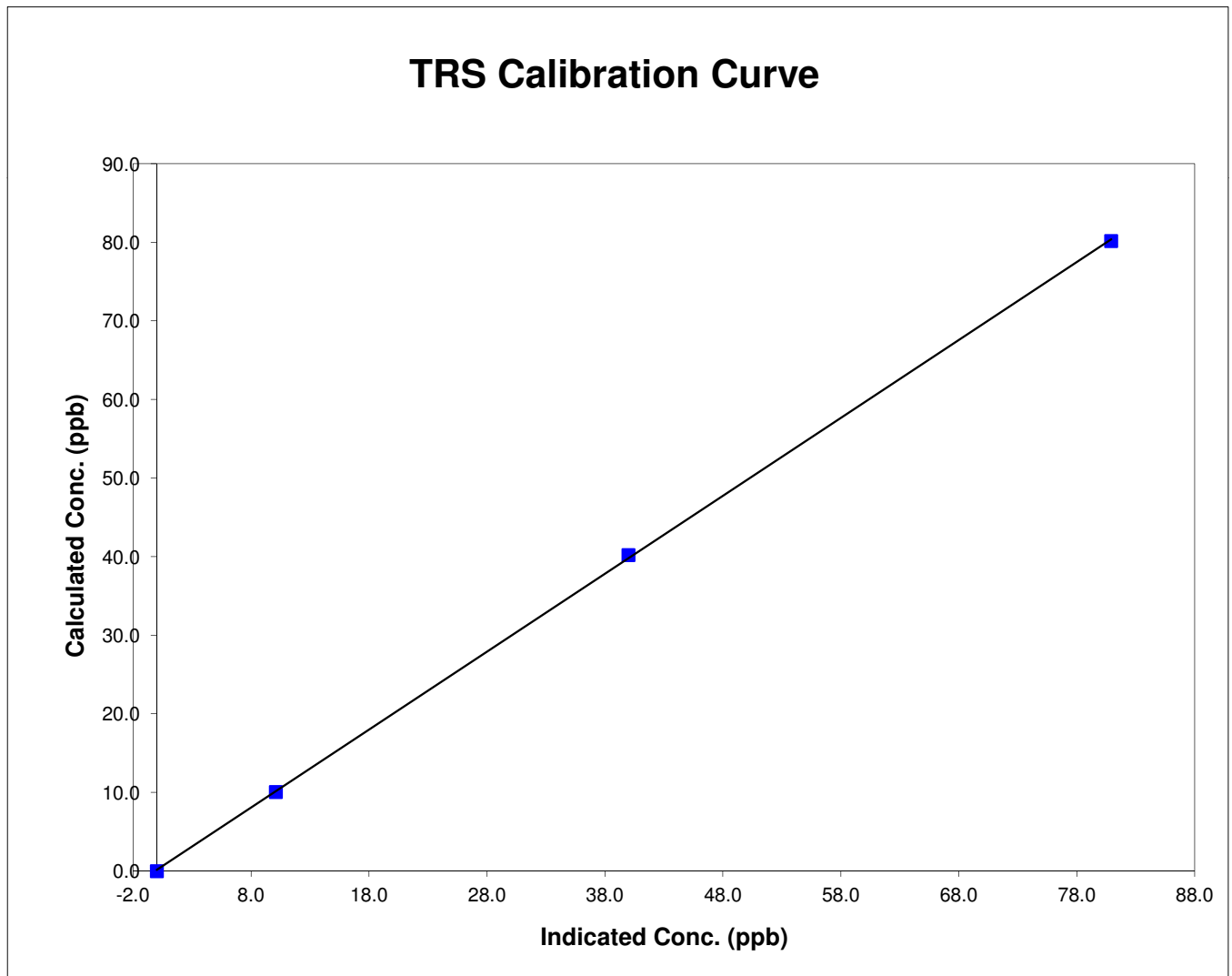
Air Monitoring Network   PAZA  

## Station Information

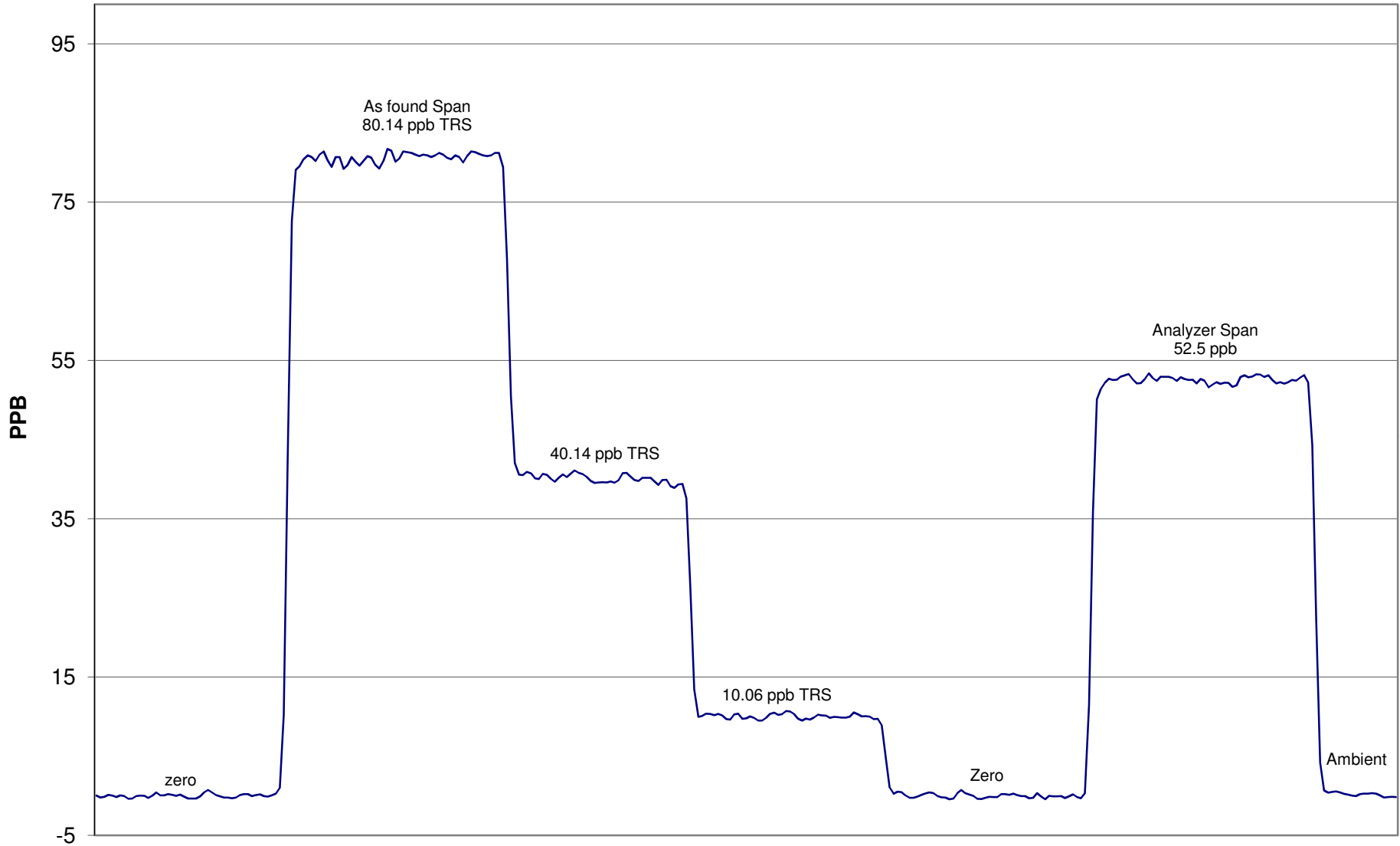
Calibration Date	<u>                  April 28, 2013                  </u>	Previous Calibration	<u>                  March 28, 2013                  </u>
Station Number	<u>  1  </u>	Station Location	<u>  Falher  </u>
Start Time (MST)	<u>  8:00  </u>	End Time (MST)	<u>  10:42  </u>
Analyzer make/model	<u>                  Thermo 450i                  </u>	Analyzer serial #	<u>  1207452006  </u>

## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
80.2	80.9	0.9910	Correlation Coefficient	0.999934
40.2	40.0	1.0060		
10.1	10.1	0.9971		
			Slope	0.991777
			Intercept	0.138069



# H2S Calibration



April 28, 2013