



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

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

Operations and Reporting



July 23rd, 2013

Alberta Environment
11th Floor, Oxbridge Place
9820-106 Street
Edmonton Alberta T5K 2J6

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

Enclosed is the PAZA Ambient Monitoring Network Report for the month of **June 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

Company	Facility	LSD	EPEA Approval Number
Canfor Forest Products	Gold Creek	13-26-067-05-W6	00010446-02-00
	Teepee Creek	SE-2-074-04-W6	00001635-02-00
	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
	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 **June** 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 June with the exception of the PM_{2.5} analyzer, which experienced hardware failure and delay in receiving replacement parts, returning an uptime of 62.5%. **AE Reference #271356.**

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 June.

Smoky Heights Station:

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station except for PM_{2.5}, which had two (2) 1-hour exceedences of the AAAQO guideline:
 - o June 18 08:00 90.0 µg/m³ Alberta Environment Reference # 271346
 - o June 19 10:00 108.9 µg/m³ Alberta Environment Reference # 271400
- ◆ All analyzers and sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of June.

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 June.

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 June.

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 June.

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 June.

Passive Monitoring - 46 Stations throughout the PAZA zone:

There were five duplicate sites sampled in the month of June: Silver Valley, Woking, Pinto Creek, Puskwaskau, 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 SO₂ passives ranged from 0.1 ppb to 0.4 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.1 ppb to 2.2 ppb, with a mean of 0.6 ppb.
- Monthly average concentrations for O₃ passives ranged from 16.7 ppb to 35.4 ppb, with a mean of 25.2 ppb.
- Monthly average concentrations for H₂S were between 0.1 And 0.3 pbb, with a mean of 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

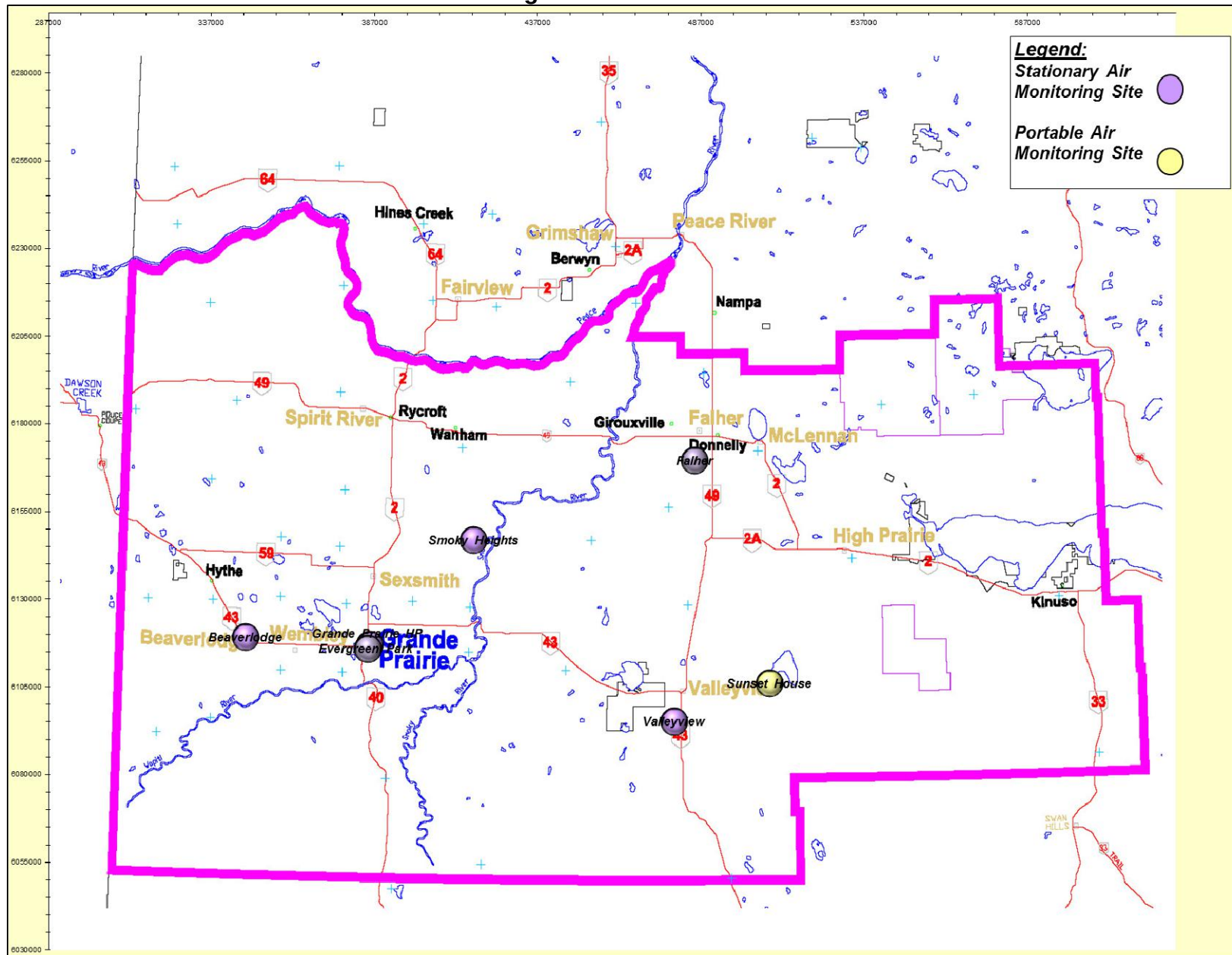


Patrick Andersen, B.Sc.
FOCUS AQM Data Specialist



Jeff Cooper, C.Tech.
AQM Operations Manager

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Jun-2013 Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		Conc	Day	Conc	Day	Operational Time (%)
	1-hr	24-hr			1-hr	24-hr					
SO ₂ (ppb)	172	48	Henry Pirker	0.1	0	0	2.2	Jun-13 13:00	0.2	Jun-13	100%
SO ₂ (ppb)	172	48	Evergreen Park	0.1	0	0	2.0	Jun-13 12:00	0.3	Jun-13	100%
SO ₂ (ppb)	172	48	Smoky Heights	0.1	0	0	3.5	Jun-26 04:00	0.9	Jun-28	100%
SO ₂ (ppb)	172	48	Beaverlodge	0.1	0	0	2.2	Jun-22 09:00	0.4	Jun-25	100%
SO ₂ (ppb)	172	48	Valleyview	0.5	0	0	10.1	Jun-08 07:00	1.4	Jun-08	97%
SO ₂ (ppb)	172	48	Sunset House	0.1	0	0	1.4	Jun-04 07:00	0.2	Jun-04	100%
SO ₂ (ppb)	172	48	Falher	0.1	0	0	1.4	Jun-23 09:00	0.4	Jun-22	100%
NO (ppb)			Henry Pirker	0.6	0	0	14.1	Jun-04 07:00	1.9	Jun-17	100%
NO ₂ (ppb)	159	106	Henry Pirker	3.9	0	0	17.8	Jun-22 23:00	7.6	Jun-17	100%
NO _x (ppb)			Henry Pirker	4.5	0	0	23.9	Jun-04 07:00	9.4	Jun-17	100%
NO (ppb)			Beaverlodge	0.3	0	0	4.9	Jun-30 07:00	0.8	Jun-04	100%
NO ₂ (ppb)	159	106	Beaverlodge	2.0	0	0	12.2	Jun-17 02:00	3.2	Jun-18	100%
NO _x (ppb)			Beaverlodge	2.3	0	0	12.3	Jun-17 02:00	3.8	Jun-30	100%
NO (ppb)			Sunset House	0.1	0	0	2.2	Jun-06 20:00	0.2	Jun-06	100%
NO ₂ (ppb)	159	106	Sunset House	0.7	0	0	2.5	Jun-03 01:00	1.1	Jun-05	100%
NO _x (ppb)			Sunset House	0.8	0	0	4.0	Jun-06 20:00	1.2	Jun-05	100%
O ₃ (ppb)	82		Henry Pirker	26.5	0	-	52.1	Jun-23 13:00	33.7	Jun-22	100%
O ₃ (ppb) - 8-hr			Henry Pirker		0				48.2	Jun-23	
O ₃ (ppb)	82		Beaverlodge	29.6	0	-	53.1	Jun-22 16:00	38.6	Jun-22	100%
O ₃ (ppb) - 8-hr			Beaverlodge		0				49.8	Jun-22	
O ₃ (ppb)	82		Sunset House	28.7	0	-	44.5	Jun-29 04:00	36.4	Jun-23	100%
O ₃ (ppb) - 8-hr			Sunset House		0				42.8	Jun-06	
CO (ppm)	13		Henry Pirker	0.18	0	-	0.5	Jun-22 23:00	0.2	Jun-22	98%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.4	Jun-18	

PAZA Monthly Continuous Data Summary – continued

Jun-2013Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
THC (ppm)			Henry Pirker	2.0	-	-	3.2	Jun-17 04:00	2.1	Jun-30	90%
CH4 (ppm)			Henry Pirker	1.9	-	-	3.2	Jun-17 04:00	2.1	Jun-30	90%
NMHC (ppm)			Henry Pirker	0.00	-	-	0.0	Jun-18 15:00	0.0	Jun-19	90%
TRS (ppb)			Henry Pirker	0.3	-	-	2.0	Jun-01 02:00	0.5	Jun-17	100%
TRS (ppb)			Evergreen Park	0.3	-	-	1.8	Jun-01 01:00	0.4	Jun-26	100%
TRS (ppb)			Smoky Heights	0.1	-	-	0.7	Jun-30 01:00	0.2	Jun-30	100%
TRS (ppb)			Sunset House	0.3	-	-	0.6	Jun-21 19:00	0.4	Jun-15	100%
H ₂ S (ppb)	10	3	Valleyview	0.9	0	0	2.2	Jun-06 06:00	1.2	Jun-06	100%
H ₂ S (ppb)	10	3	Falher	0.2	0	0	2.9	Jun-25 07:00	0.5	Jun-25	100%
PM2.5 (µg/m3)	80	30	Henry Pirker	5.9	0	0	31.4	Jun-22 23:00	12.4	Jun-25	63%
PM2.5 (µg/m3)	80	30	Evergreen Park	3.5	0	0	38.0	Jun-15 19:00	8.0	Jun-23	100%
PM2.5 (µg/m3)	80	30	Smoky Heights	4.7	2	0	108.9	Jun-19 10:00	15.2	Jun-21	97%
PM2.5 (µg/m3)	80	30	Beaverlodge	1.6	0	0	10.2	Jun-22 10:00	4.5	Jun-25	99%
PM2.5 (µg/m3)	80	30	Sunset House	2.8	0	0	21.9	Jun-18 20:00	7.1	Jun-21	100%
RH (%)			Henry Pirker	63.5	-	-	90.4	Jun-04 06:00	81.1	Jun-12	100%
RH (%)			Evergreen Park	67.6	-	-	96.6	Jun-26 06:00	87.5	Jun-25	100%
RH (%)			Beaverlodge	71.2	-	-	100.0	Jun-04 04:00	91.3	Jun-12	100%
RH (%)			Valleyview	73.2	-	-	99.7	Jun-04 06:00	92.7	Jun-12	100%
SR (W/m ²)			Henry Pirker	210.2	-	-	866.6	Jun-24 14:00	319.7	Jun-27	100%
Temp (°C)			Henry Pirker	15.6	-	-	30.8	Jun-30 16:00	23.0	Jun-30	100%
Temp (°C)			Evergreen Park	15.1	-	-	28.7	Jun-30 17:00	21.8	Jun-30	100%
Temp (°C)			Smoky Heights	14.8	-	-	29.1	Jun-30 17:00	21.8	Jun-30	100%
Temp (°C)			Beaverlodge	14.9	-	-	28.5	Jun-30 15:00	22.3	Jun-30	100%
Temp (°C)			Valleyview	15.1	-	-	29.2	Jun-30 19:00	21.9	Jun-30	100%
Temp (°C)			Sunset House	14.0	-	-	29.1	Jun-30 16:00	22.2	Jun-30	100%
Temp (°C)			Falher	15.1	-	-	28.3	Jun-30 17:00	22.1	Jun-30	100%

PAZA Monthly Continuous Data Summary – continued

Jun-2013 Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
WSPD s (km/hr)			Henry Pirker	9.2	-	-	29.0	Jun-05 17:00	16.1	Jun-15	100%
WSPD s (km/hr)			Evergreen Park	11.1	-	-	42.0	Jun-05 15:00	21.6	Jun-15	100%
WSPD s (km/hr)			Smoky Heights	12.0	-	-	39.0	Jun-05 18:00	22.7	Jun-15	100%
WSPD s (km/hr)			Beaverlodge	11.1	-	-	35.0	Jun-05 17:00	19.0	Jun-19	100%
WSPD s (km/hr)			Valleyview	4.6	-	-	20.0	Jun-09 20:00	11.6	Jun-15	100%
WSPD s (km/hr)			Sunset House	9.9	-	-	25.0	Jun-09 18:00	15.9	Jun-19	100%
WSPD s (km/hr)			Falher	17.0	-	-	41.0	Jun-25 15:00	26.2	Jun-15	100%
WSPD v (km/hr)			Henry Pirker	2.3	-	-	27.0	Jun-05 17:00	15.3	Jun-15	100%
WSPD v (km/hr)			Evergreen Park	3.9	-	-	41.0	Jun-05 15:00	19.6	Jun-15	100%
WSPD v (km/hr)			Smoky Heights	3.8	-	-	38.0	Jun-05 18:00	21.5	Jun-15	100%
WSPD v (km/hr)			Beaverlodge	2.2	-	-	33.0	Jun-05 16:00	18.3	Jun-19	100%
WSPD v (km/hr)			Valleyview	2.0	-	-	20.0	Jun-09 20:00	10.8	Jun-15	100%
WSPD v (km/hr)			Sunset House	0.6	-	-	25.0	Jun-09 18:00	15.5	Jun-19	100%
WSPD v (km/hr)			Falher	1.4	-	-	41.0	Jun-25 15:00	24.5	Jun-15	100%
WDIR			Henry Pirker	WNW	-	-	-	-	-	-	100%
WDIR			Evergreen Park	WNW	-	-	-	-	-	-	100%
WDIR			Smoky Heights	WNW	-	-	-	-	-	-	100%
WDIR			Beaverlodge	NW	-	-	-	-	-	-	100%
WDIR			Valleyview	NW	-	-	-	-	-	-	100%
WDIR			Sunset House	NE	-	-	-	-	-	-	100%
WDIR			Falher	W	-	-	-	-	-	-	100%

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on June 13th (SO₂, O₃, NO_x), and June 18th (THC, TRS).

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
NOx/NO/NO ₂	TEI	42C	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
CO	TEI	48C	Analyzer removed from service June 17 th and returned on June 18 th with replacement correlation wheel.
THC/CH ₄ /NMHC	TEI	55I	Analyzer malfunctioned on June 17 th -18 th , reset during calibration on June 18 th . Hydrogen cylinder expired on June 27 th , replaced June 29 th .
TRS	TEI	45C/43C	No operational issues observed.
PM _{2.5}	Sharp	5030	Analyzer control board failed June 9 th , replaced June 20 th . Delay due to wait for replacement parts from ministry. AE Reference#271356
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.

PAZA – Evergreen Park Station

General Station Issues

Routine monthly calibration performed on June 30th (SO₂, TRS).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM _{2.5}	R&P	1400AB	No operational issues observed.
ET	Met One/Gill	083D	No operational issues observed.
RH	Met One/Gill		No operational issues observed.
WS / WD	Met One/ Gill		No operational issues observed.

PAZA – Smoky Heights Station

General Station Issues

Routine monthly calibration performed on June 27th (SO₂, TRS).

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM _{2.5}	R&P	1400AB	Analyzer instability caused loss of 21 hours of data. Two (2) exceedences of the 1-hour guideline recorded. AE Reference# 271346, 271400.
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations performed on June 19th (SO₂, NO_x, O₃).

Parameter	Make	Model	Notes
SO ₂	TEI	43CTL	No operational issues observed.
NOx/NO/NO ₂	TEI	42C	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
PM _{2.5}	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.

PAZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed on June 21st (SO₂ & H₂S).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	Analyzer failed to return to normal operation after Zero/Span on June 2 nd . Operation reset after automatic Zero/Span period on June 3 rd .
H ₂ 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.

PAZA – Portable-Sunset House Station

General Station Issues

Routine monthly calibrations were performed on June 21st (SO₂, O₃, NO_x, TRS)

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
TRS	TEI	39C	No operational issues observed.
PM _{2.5}	R&P	1400AB	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA – Falher Station

General Station Issues

Routine monthly calibrations were performed on June 22nd (SO₂ & H₂S).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
H ₂ 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.

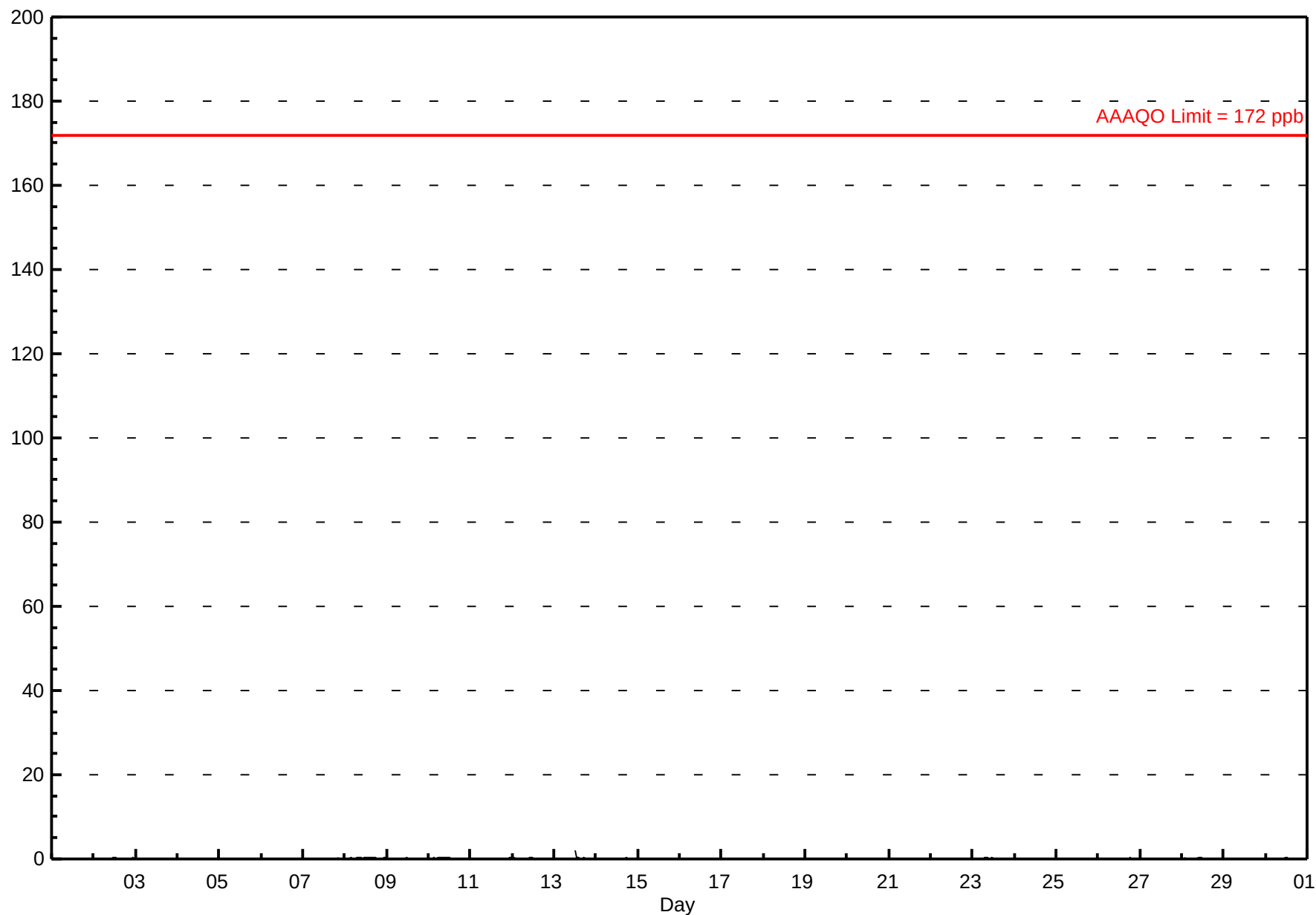
PAZA
Henry Pirker Station
Monthly Summary Tables, Graphs and
Roses

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Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - June 2013



Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

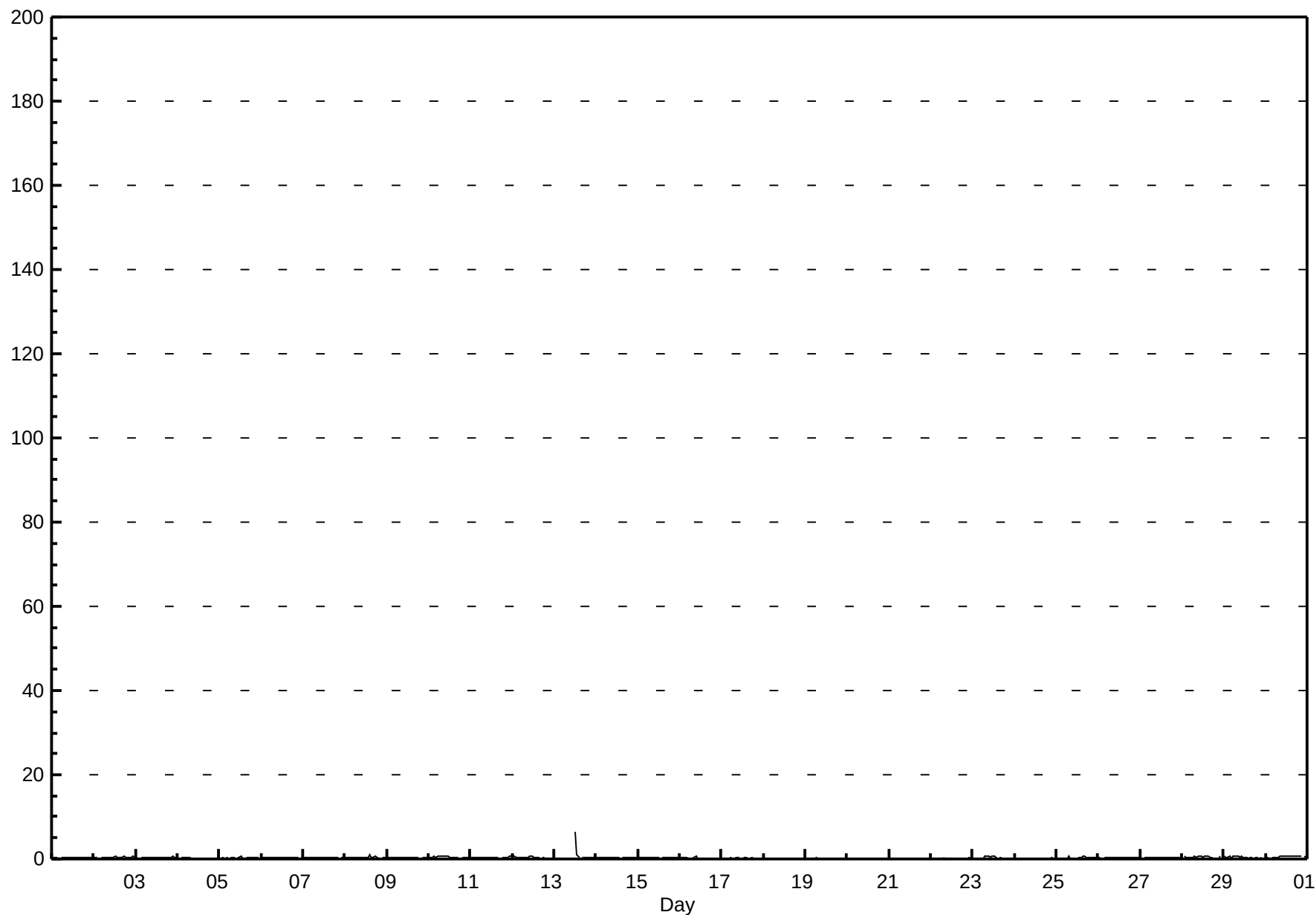
Henry Pirker - June 2013

Maximum Value: 6.5 ppb on Jun 13 13:00																				Maximum Daily Average: 0.6 ppb on Jun 13					Hours in Service: 720	
Minimum Value: 0 ppb on Jun 13 03:00																				Minimum Daily Average: 0.1 ppb on Jun 21					Hours of Data: 684	
Maximum Diurnal Average: 0.5 ppb at hour 13																				Minimum Diurnal Average: 0.2 ppb at hour 21					Hours of Missing Data: 36	
Monthly Average: 0.27 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 0.8					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-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
2-Jun	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0.3	0.7
3-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.3	0.7
4-Jun	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
5-Jun	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0.2	0.6
6-Jun	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	0.2
7-Jun	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
8-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	A	0	0	0	0.4	0.9
9-Jun	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
10-Jun	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0.5	0.8
11-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0.3	0.8
12-Jun	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0.3	1.0
13-Jun	0	0	0	0	0	0	0	0	C	C	C	C	6	1	0	A	0	0	0	0	0	0	0	0	0.6	6.5
14-Jun	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	0.4
15-Jun	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
16-Jun	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
17-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
18-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
19-Jun	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
20-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
21-Jun	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
22-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
23-Jun	0	0	0	0	0	A	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
24-Jun	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-Jun	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0.2	0.7
26-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
27-Jun	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	0.3
28-Jun	A	1	0	0	0	0	0	1	0	1	1	1	0	1	1	1	0	0	0	0	0	0	1	A	0.4	0.8
29-Jun	1	0	0	1	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.6
30-Jun	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0.4	0.5
0.3 0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.5 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2																									Diurnal Average	
1.0 0.8 0.4 0.6 0.4 0.6 0.8 0.8 0.8 0.8 0.7 0.8 6.5 1.0 0.9 0.6 0.7 0.7 0.5 0.5 0.5 0.5 0.5 0.7 0.8 0.8																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

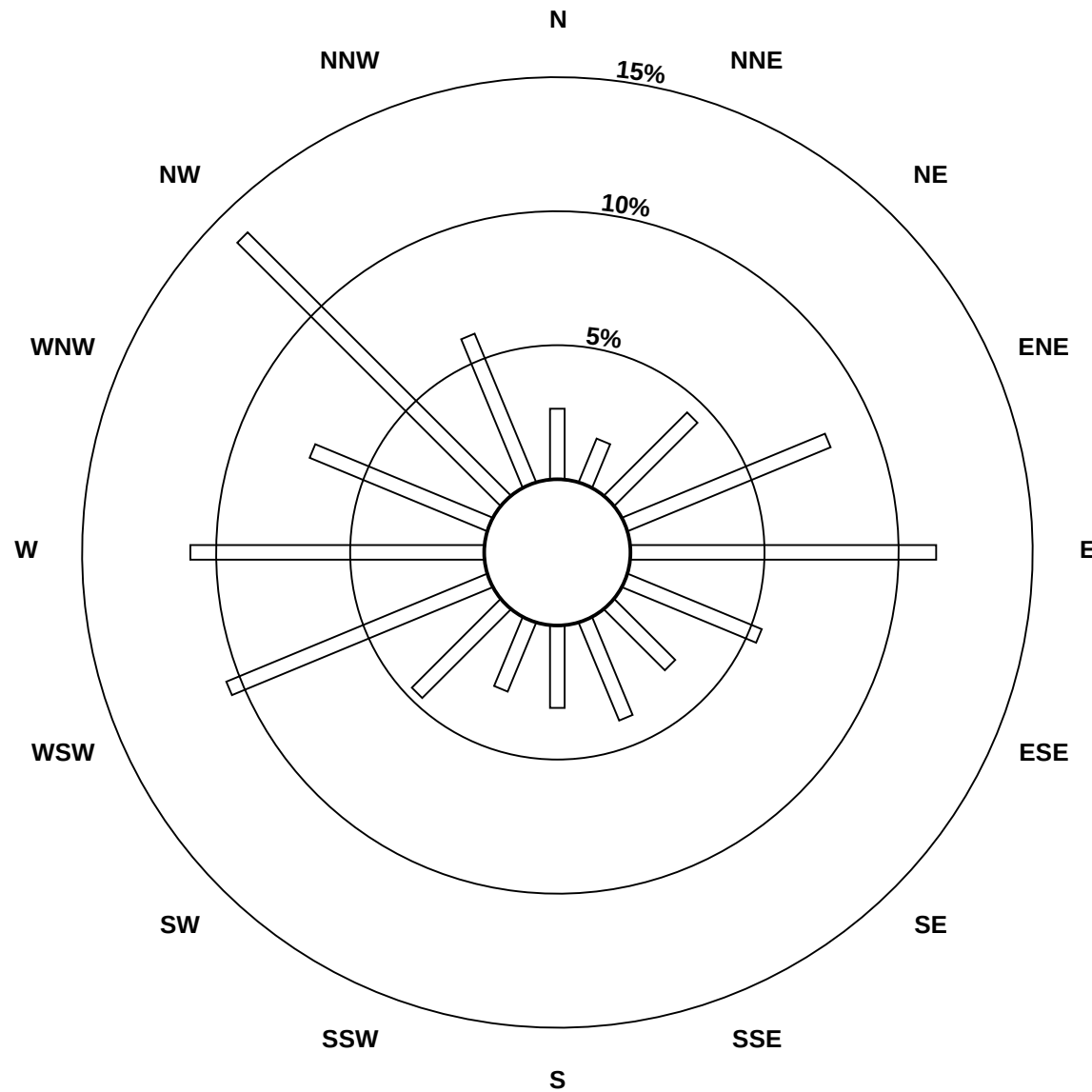
Henry Pirker - June 2013



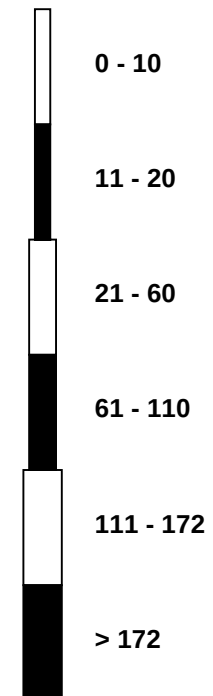
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - June 2013

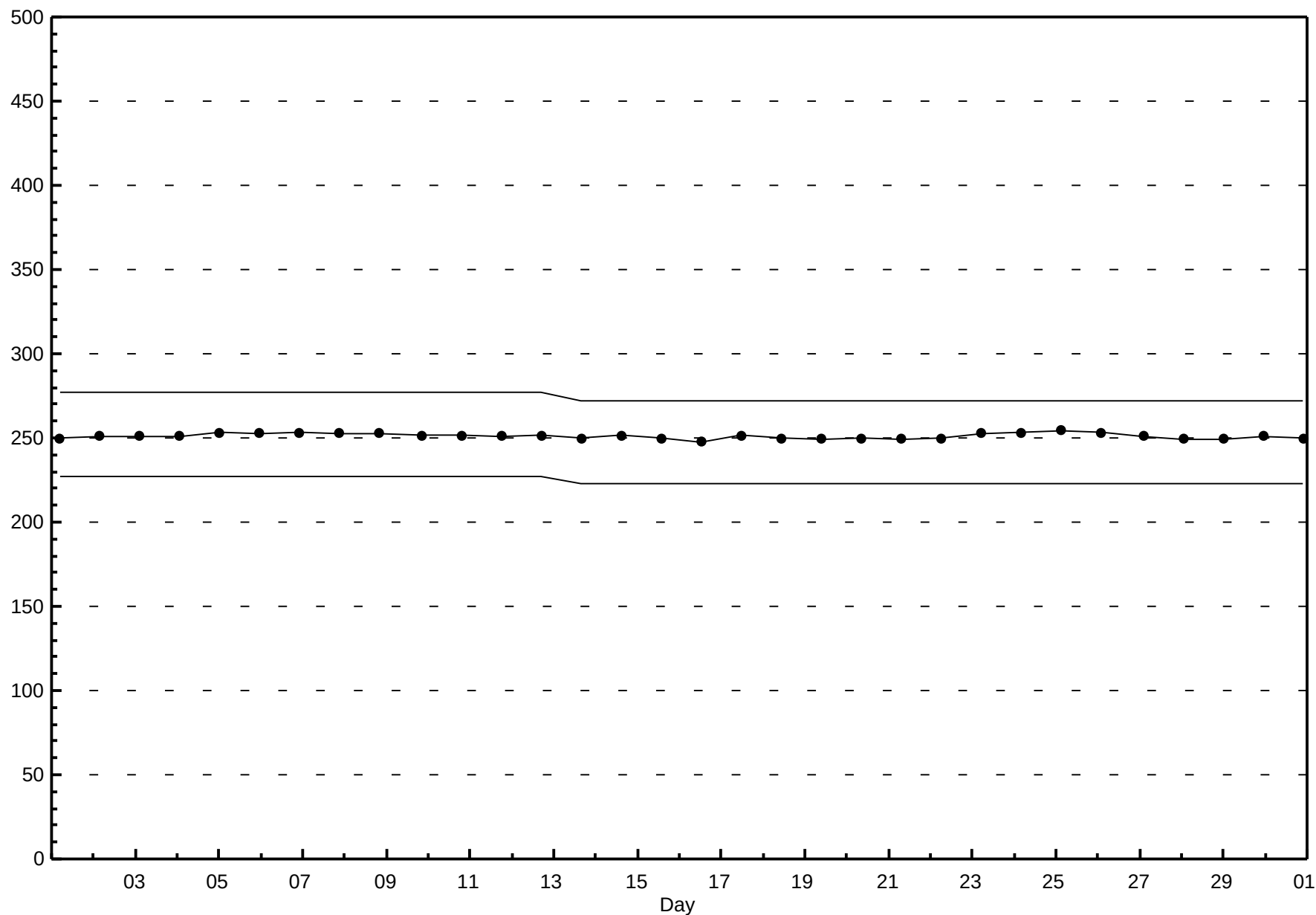


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - June 2013



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

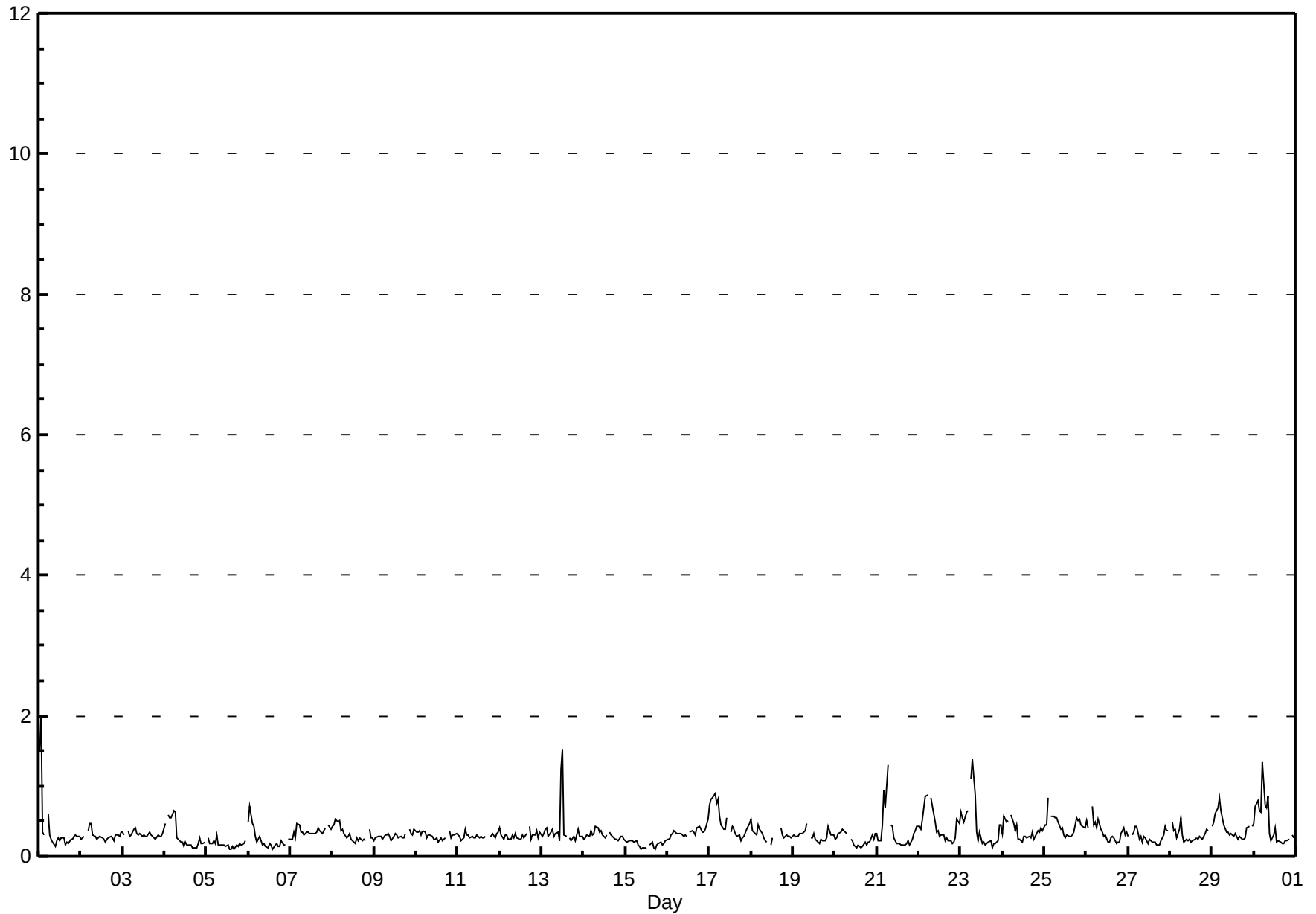
Henry Pirker - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.0 ppb on Jun 1 02:00 Maximum Daily Average: 0.5 ppb on Jun 17																			Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0							
Minimum Value: 0 ppb on Jun 5 15:00 Maximum Diurnal Average: 0.5 ppb at hour 6 Monthly Average: 0.33 ppb																			Minimum Daily Average: 0.2 ppb on Jun 5 Minimum Diurnal Average: 0.2 ppb at hour 17 Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 1.2							
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-Jun	1	2	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.0
2-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
3-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
4-Jun	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
5-Jun	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
6-Jun	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.7
7-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.5
8-Jun	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.5
9-Jun	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
10-Jun	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
11-Jun	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
12-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.4
13-Jun	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	A	0	0	0	0	0	0	0	0	0.4	1.5
14-Jun	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
15-Jun	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	0.2
16-Jun	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	0.5
17-Jun	1	1	1	1	1	1	1	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9
18-Jun	1	0	0	0	0	0	0	0	0	0	A	0	C	C	C	C	0	0	0	0	0	0	0	0	0.3	0.5
19-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
20-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
21-Jun	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.3
22-Jun	0	0	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.9
23-Jun	1	1	0	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.4
24-Jun	0	1	0	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
25-Jun	0	0	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0.4	0.8
26-Jun	1	0	A	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
27-Jun	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
28-Jun	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.5
29-Jun	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.8
30-Jun	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.5	1.3
																								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 Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - June 2013



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

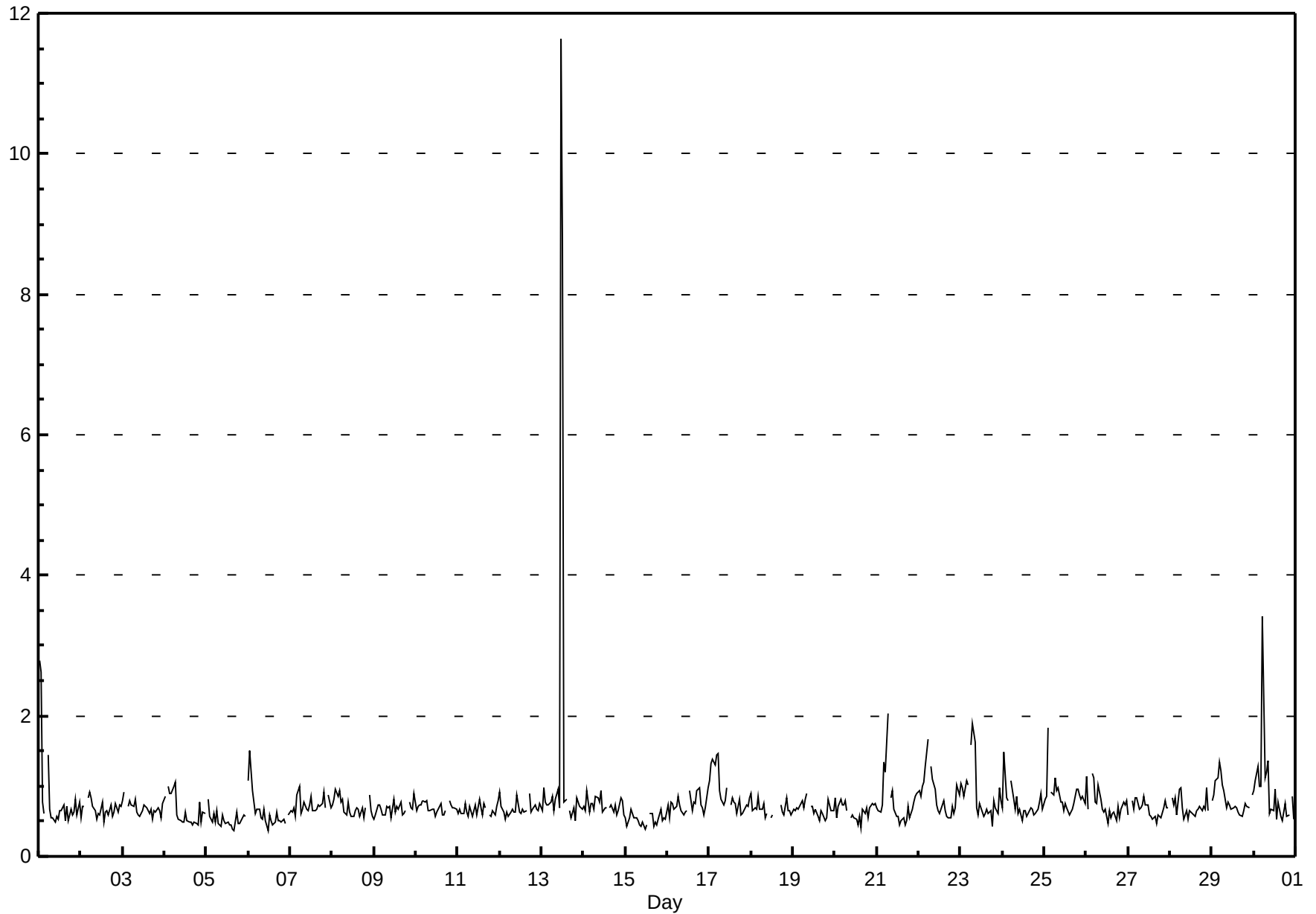
Henry Pirker - June 2013

Maximum Value: 11.6 ppb on Jun 13 12:00																				Maximum Daily Average: 1.6 ppb on Jun 13					Hours in Service: 720		
Minimum Value: 0 ppb on Jun 5 17:00																				Minimum Daily Average: 0.5 ppb on Jun 15					Hours of Data: 684		
Maximum Diurnal Average: 1.0 ppb at hour 12																				Minimum Diurnal Average: 0.6 ppb at hour 17					Hours of Missing Data: 36		
Monthly Average: 0.75 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 0.9 P ₉₉ = 1.8					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-Jun	3	3	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.8	
2-Jun	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
3-Jun	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
4-Jun	1	A	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	1	0	1	0.6	1.0	
5-Jun	A	1	1	0	1	0	1	0	0	1	1	0	0	0	0	0	0	1	0	0	0	1	1	1	A	0.5	0.8
6-Jun	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	1	0	1	0	1	0	1	0	0.6	1.5	
7-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.0	
8-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	0.9	
9-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	0.9	
10-Jun	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	
11-Jun	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	
12-Jun	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	0.9	
13-Jun	1	1	1	1	1	1	1	1	1	1	1	12	9	1	1	A	1	1	1	1	1	1	1	1	1.6	11.6	
14-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.9	
15-Jun	1	0	1	1	1	1	1	1	0	0	0	0	A	1	1	0	0	0	0	1	1	1	1	1	0.5	0.7	
16-Jun	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	1.0	
17-Jun	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5	
18-Jun	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	0.7	0.9	
19-Jun	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	
20-Jun	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	0.6	0.8	
21-Jun	1	1	1	1	1	1	2	A	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	0.8	2.0	
22-Jun	1	1	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.7	
23-Jun	1	1	1	1	1	A	2	2	2	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.9	1.9	
24-Jun	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.5	
25-Jun	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.8	
26-Jun	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2	
27-Jun	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.7	0.9	
28-Jun	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	1.0	
29-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.3	
30-Jun	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	1	0.9	3.4	
																									Diurnal Average		
																									Diurnal Maximum		
C - Calibration																									A - Automated Daily Zero Span		

Hourly Maximums

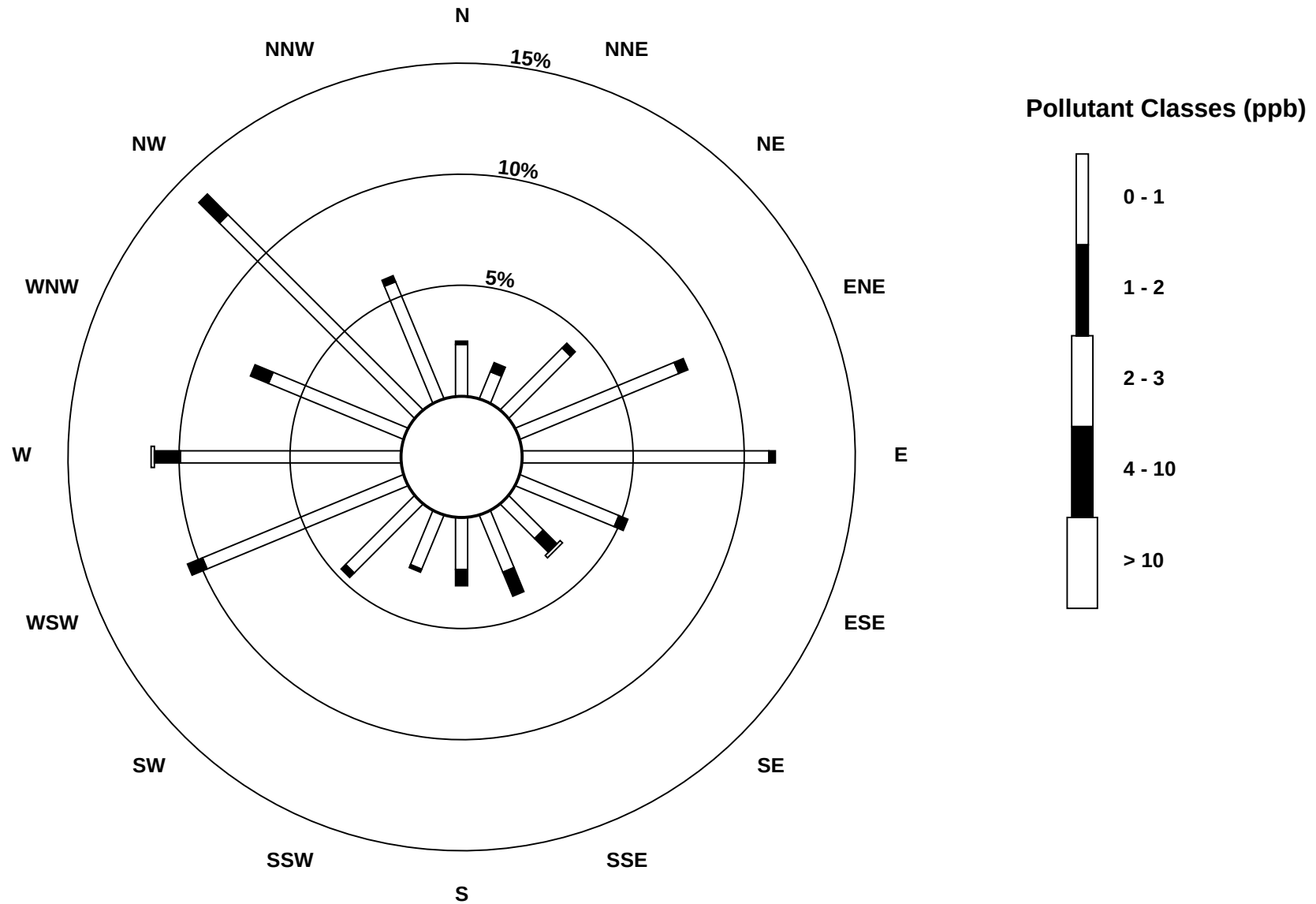
Total Reduced Sulphur (TRS) - ppb

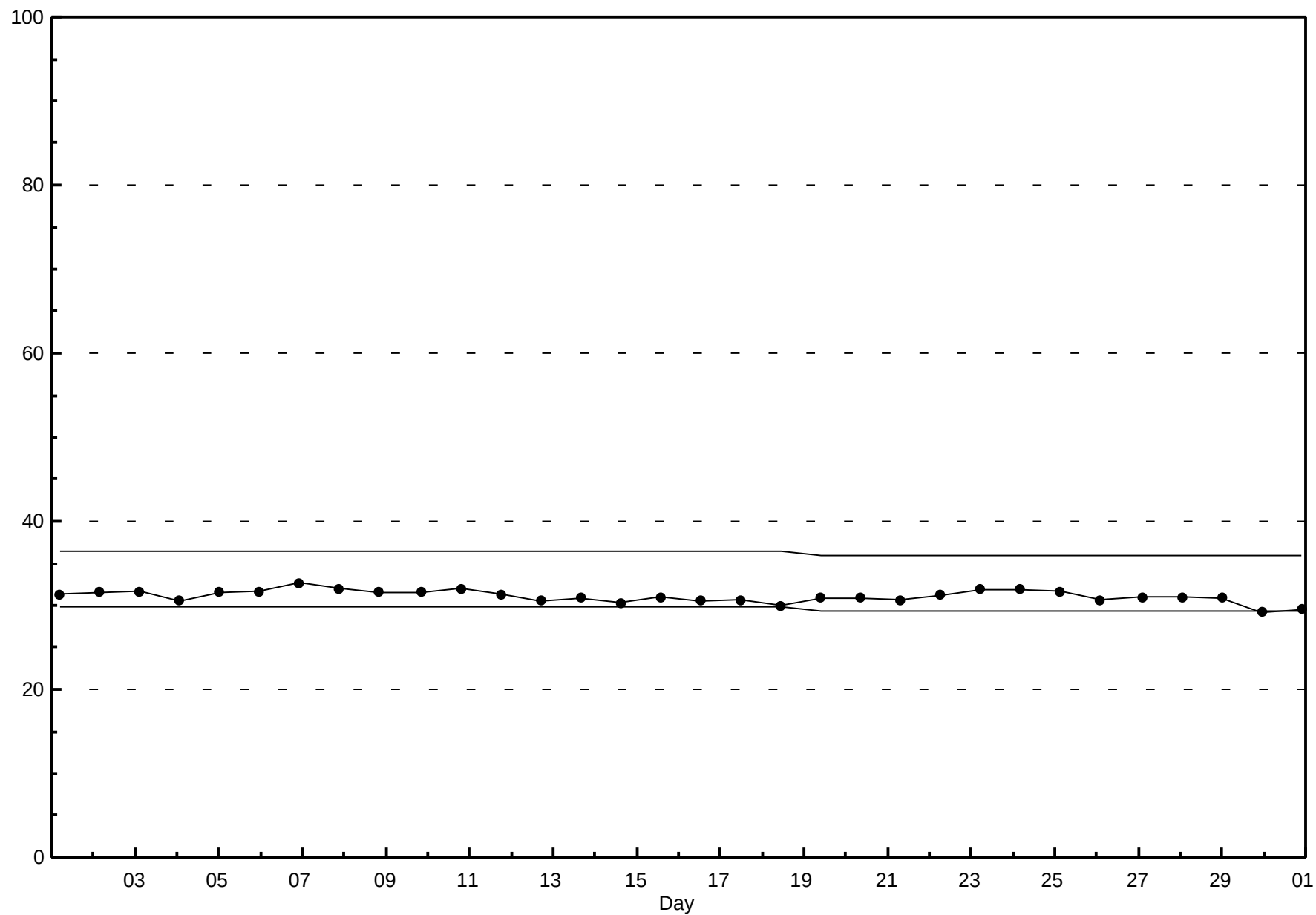
Henry Pirker - June 2013



Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Henry Pirker - June 2013





Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

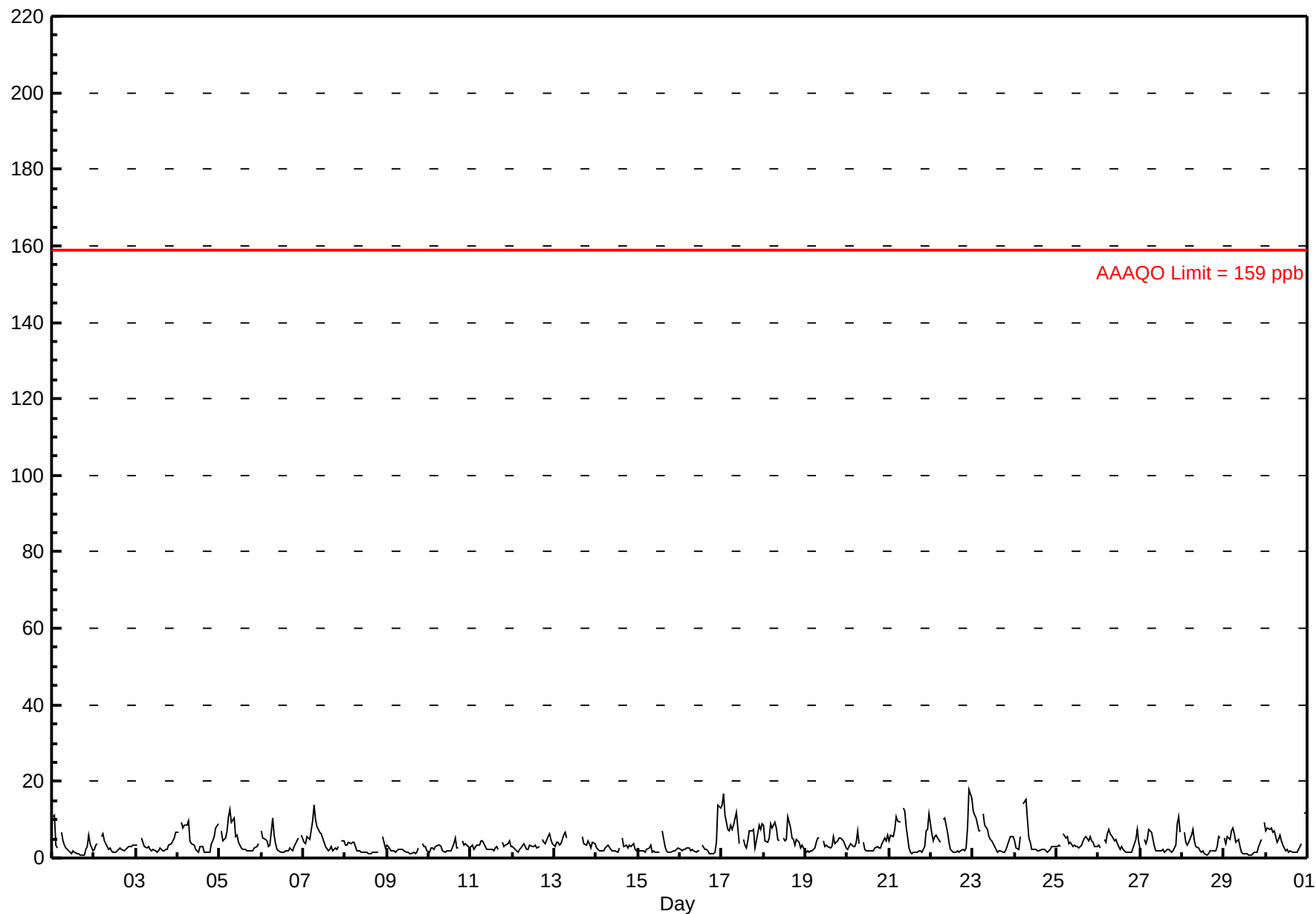
Henry Pirker - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 17.8 ppb on Jun 22 23:00 Maximum Daily Average: 7.6 ppb on Jun 17																					Hours in Service: 720 Hours of Data: 682 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0					
Minimum Value: 1 ppb on Jun 29 17:00 Maximum Diurnal Average: 6.6 ppb at hour 7 Monthly Average: 3.91 ppb										Minimum Daily Average: 2.1 ppb on Jun 9 Minimum Diurnal Average: 2.2 ppb at hour 14 Percentiles: P ₁ = 0.9 P ₁₀ = 1.6 Q ₁ = 2.0 Median = 3.0 Q ₃ = 4.9 P ₉₀ = 7.5 P ₉₉ = 13.8																
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-Jun	11	11	3	3	A	7	5	3	2	2	2	1	2	1	1	1	1	1	1	2	3	6	4	2	3.2	11.1
2-Jun	2	3	4	A	5	6	5	4	2	2	2	2	2	2	2	3	2	2	2	3	3	3	3	3	2.9	6.3
3-Jun	4	3	A	5	4	3	3	3	2	2	2	2	1	2	3	2	2	2	2	3	4	4	5	7	3.0	6.6
4-Jun	7	A	9	8	8	9	10	5	4	3	2	2	2	3	3	2	1	1	1	4	5	6	8	9	4.8	9.8
5-Jun	A	7	5	5	7	11	13	9	10	6	6	4	3	2	2	2	2	2	2	2	2	3	4	A	4.9	12.7
6-Jun	7	5	5	4	3	3	11	6	4	2	2	2	2	2	2	2	2	2	2	3	4	5	A	6	3.7	10.5
7-Jun	4	4	5	5	5	10	14	10	8	7	6	5	4	3	2	2	3	2	3	2	3	A	5	4	5.0	13.7
8-Jun	3	3	4	4	4	4	3	2	2	2	1	1	1	1	1	1	1	2	2	1	A	6	4	3	2.5	5.7
9-Jun	3	3	2	2	2	1	2	2	2	2	2	1	1	1	1	2	1	2	2	A	4	3	3	2	2.1	3.9
10-Jun	2	3	3	2	3	3	3	3	2	1	2	2	2	2	4	5	3	3	A	5	4	4	3	3	2.8	5.2
11-Jun	3	3	2	3	3	3	5	5	3	2	2	2	2	2	2	3	2	A	4	3	3	4	4	3	3.1	4.6
12-Jun	3	3	2	2	2	3	4	3	2	2	3	3	3	3	3	3	A	5	4	4	6	6	5	4	3.3	6.4
13-Jun	3	4	4	3	4	6	7	5	C	C	C	C	C	C	6	A	6	4	3	4	4	3	4	4	--	6.7
14-Jun	3	2	2	2	2	2	3	3	2	2	2	2	2	3	A	5	3	3	3	3	3	4	2	2	2.6	5.2
15-Jun	2	2	2	2	2	2	3	3	2	2	1	1	2	A	7	3	2	2	2	1	2	2	2	3	2.2	7.1
16-Jun	2	2	2	2	3	3	2	2	2	2	2	2	A	4	2	2	2	1	1	1	1	4	14	13	3.1	13.8
17-Jun	14	17	11	7	7	9	7	9	12	8	4	A	5	3	3	4	7	7	7	3	4	9	8	9	7.6	16.8
18-Jun	9	5	4	5	9	8	9	8	5	5	A	5	4	5	11	8	5	5	3	5	4	3	3	2	5.7	10.9
19-Jun	2	2	2	2	2	3	4	5	5	A	4	3	3	3	3	3	6	4	4	5	5	5	4	3	3.5	5.7
20-Jun	2	3	4	3	3	4	7	4	A	4	2	2	2	2	2	2	3	3	3	3	4	5	4	6	3.3	7.1
21-Jun	4	6	6	7	11	10	9	A	13	12	8	3	2	1	1	1	2	2	2	2	3	7	8	12	5.7	13.1
22-Jun	6	5	6	6	5	4	A	10	10	7	4	2	2	2	2	2	2	2	2	2	3	8	18	16	5.4	17.8
23-Jun	12	11	10	7	7	A	12	9	7	6	5	4	3	2	2	2	2	1	1	2	3	5	6	6	5.5	12.2
24-Jun	4	2	2	6	A	14	15	10	5	4	2	2	2	2	2	2	2	2	2	2	2	3	3	3	4.1	15.2
25-Jun	3	3	3	A	6	5	6	4	4	3	3	3	3	3	3	5	5	6	5	6	4	4	3	3	4.0	6.4
26-Jun	3	3	A	5	4	6	7	7	5	4	5	4	2	3	2	2	1	1	1	2	2	5	7	4	3.8	7.4
27-Jun	2	A	5	4	5	8	7	5	3	2	2	2	2	2	2	2	2	2	2	2	3	9	11	7	3.8	10.8
28-Jun	A	7	4	3	4	6	8	4	3	2	2	2	2	1	1	1	2	2	2	2	3	6	5	A	3.2	7.5
29-Jun	5	4	6	5	7	8	6	4	5	3	2	1	1	1	1	1	1	1	1	2	3	5	A	9	3.5	9.3
30-Jun	7	8	8	8	7	7	4	5	6	4	4	2	2	1	2	1	1	2	2	2	4	A	11	12	4.8	11.9
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - June 2013



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

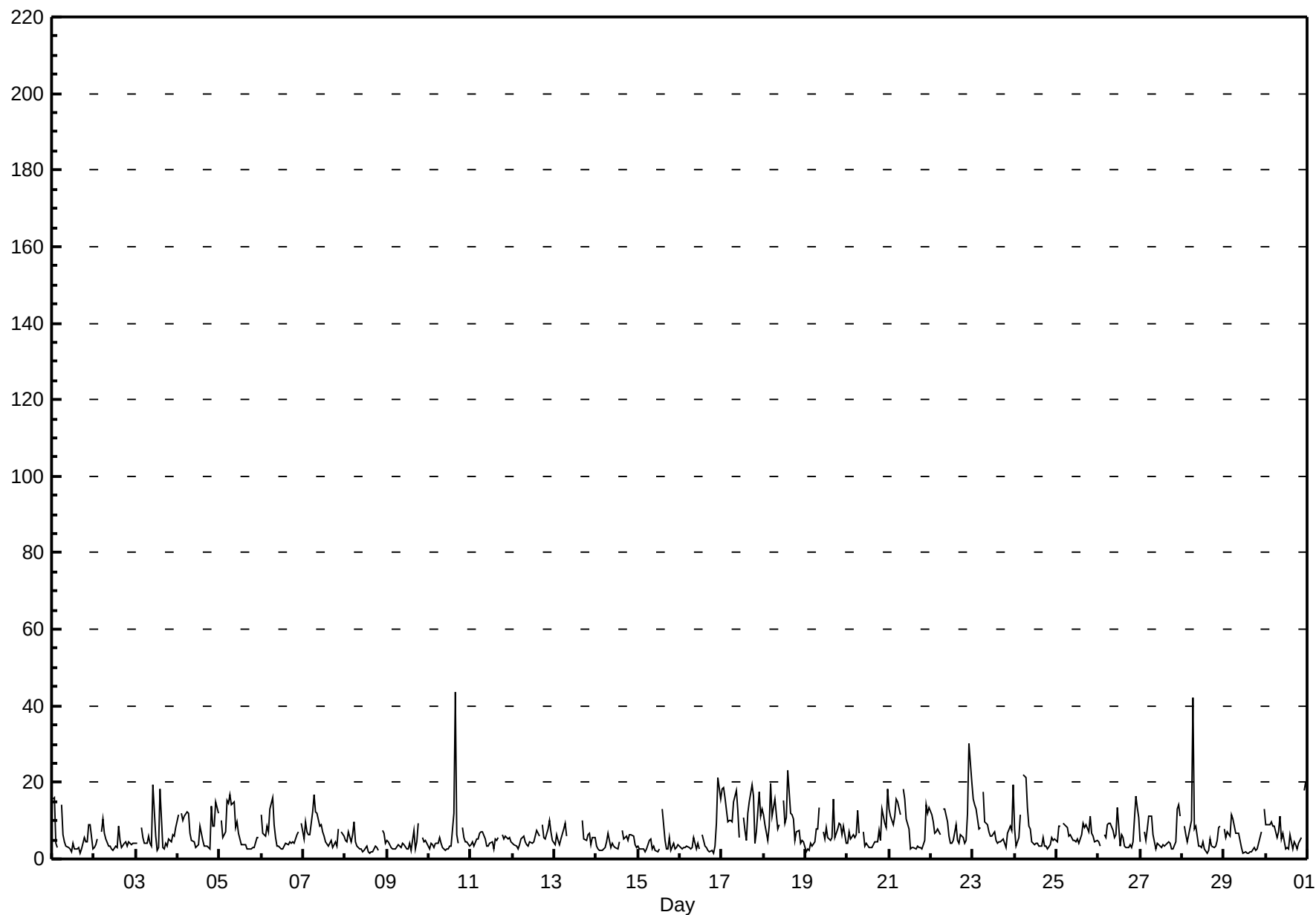
Henry Pirker - June 2013

Maximum Value: 43.5 ppb on Jun 10 16:00																				Maximum Daily Average: 12.2 ppb on Jun 17					Hours in Service: 720	
Minimum Value: 1 ppb on Jun 29 15:00																				Minimum Daily Average: 3.6 ppb on Jun 15					Hours of Data: 682	
Maximum Diurnal Average: 10.6 ppb at hour 7																				Minimum Diurnal Average: 4.2 ppb at hour 13					Hours of Missing Data: 38	
Monthly Average: 6.52 ppb																				Percentiles: P ₁ = 1.9 P ₁₀ = 2.5 Q ₁ = 3.5 Median = 5.0 Q ₃ = 8.1 P ₉₀ = 12.3 P ₉₉ = 21.2					Hours of Calibration: 38	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	16	16	4	3	A	14	6	5	4	3	3	2	4	3	3	3	2	2	5	5	5	9	9	3	5.5	16.1
2-Jun	3	4	5	A	7	10	7	5	4	3	3	2	3	3	8	5	3	4	5	4	4	4	4	4	4.5	10.3
3-Jun	4	4	A	8	6	4	4	6	4	3	19	6	2	3	18	3	3	4	4	5	5	6	6	8	5.9	19.5
4-Jun	12	A	12	10	11	12	12	7	5	5	3	3	4	8	5	3	3	3	3	14	8	9	15	12	7.8	15.0
5-Jun	A	10	5	7	15	15	17	14	15	8	10	7	4	4	4	4	3	3	3	3	3	5	6	A	7.4	16.7
6-Jun	12	7	6	9	7	13	16	9	6	3	3	3	3	4	4	4	4	4	5	4	6	7	A	9	6.4	16.1
7-Jun	5	10	7	6	7	12	17	12	12	9	9	7	6	4	3	4	5	3	4	3	8	A	7	6	7.3	16.8
8-Jun	5	5	7	5	6	10	5	3	3	3	2	2	4	2	2	2	2	3	3	2	A	7	7	4	4.0	9.5
9-Jun	5	5	3	3	3	3	4	4	3	4	4	2	3	4	2	7	2	5	9	A	6	4	5	4	4.0	9.3
10-Jun	2	4	4	3	4	4	5	4	3	2	3	3	4	4	12	43	6	4	A	8	6	5	5	3	6.1	43.5
11-Jun	4	5	4	5	5	7	7	7	5	4	3	4	4	3	5	5	6	A	6	5	6	5	6	4	4.9	7.1
12-Jun	4	4	3	3	4	5	6	4	4	3	5	4	5	6	7	6	A	9	6	5	8	10	7	5	5.3	10.0
13-Jun	4	6	5	4	5	8	9	6	C	C	C	C	C	C	12	A	10	5	5	6	7	4	6	6	--	11.8
14-Jun	3	3	2	2	3	3	4	7	3	4	3	3	3	5	A	8	5	6	5	6	6	6	4	3	4.2	7.5
15-Jun	3	3	3	3	2	3	5	5	2	3	2	2	2	A	13	5	3	3	6	2	4	3	3	4	3.6	13.0
16-Jun	3	3	3	3	4	3	3	3	6	3	4	3	A	6	4	3	2	2	2	2	3	9	21	16	4.7	21.4
17-Jun	18	19	16	10	10	10	10	15	18	13	6	A	11	7	5	12	15	20	16	4	7	17	11	13	12.2	19.6
18-Jun	11	9	5	9	20	11	16	12	8	9	A	15	9	11	23	12	12	10	5	7	8	4	5	4	10.2	23.0
19-Jun	2	2	2	4	3	4	8	8	13	A	7	5	8	5	5	6	16	5	8	9	9	7	9	4	6.5	15.7
20-Jun	4	7	5	6	6	6	13	7	A	7	3	4	3	3	3	4	4	5	7	5	13	9	8	18	6.6	18.2
21-Jun	13	11	9	11	16	15	12	A	18	16	10	8	3	3	3	3	3	3	3	2	5	14	12	14	8.9	18.2
22-Jun	11	10	7	7	8	6	A	13	13	10	6	4	4	5	9	5	4	6	6	4	5	12	30	20	8.9	30.2
23-Jun	16	14	13	8	8	A	18	10	9	7	6	6	7	5	4	4	4	5	4	3	7	8	8	19	8.4	19.4
24-Jun	8	4	5	12	A	22	21	13	9	8	4	4	4	4	4	3	5	3	4	3	4	6	5	5	6.9	22.0
25-Jun	4	9	9	A	9	8	8	6	6	5	5	4	5	4	6	9	8	9	7	11	7	6	5	5	6.8	11.0
26-Jun	5	4	A	6	5	9	10	9	7	6	6	14	3	6	6	3	3	3	4	3	5	16	14	11	6.8	16.4
27-Jun	4	A	7	5	8	11	11	7	4	3	4	3	3	4	3	4	4	4	3	3	5	13	14	11	6.0	14.0
28-Jun	A	9	7	5	6	10	42	8	9	4	3	3	4	2	2	2	5	3	3	4	5	8	8	A	6.9	42.1
29-Jun	8	6	7	6	12	11	9	7	7	5	3	2	2	2	1	2	2	3	2	3	4	7	A	13	5.3	13.0
30-Jun	9	9	9	10	9	9	6	7	11	5	7	3	3	3	6	2	4	4	3	4	6	A	18	20	7.2	20.1
7.1 7.0 6.2 6.1 7.4 8.9 10.6 7.6 7.5 5.5 5.2 4.6 4.2 4.3 6.3 6.1 5.2 5.0 4.9 4.8 5.9 7.9 9.1 8.9																									Diurnal Average	
18.1 18.6 15.9 11.5 19.9 22.0 42.1 15.1 18.2 15.5 19.5 15.4 10.6 11.0 23.0 43.5 15.7 19.6 16.4 13.9 12.9 17.4 30.2 20.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

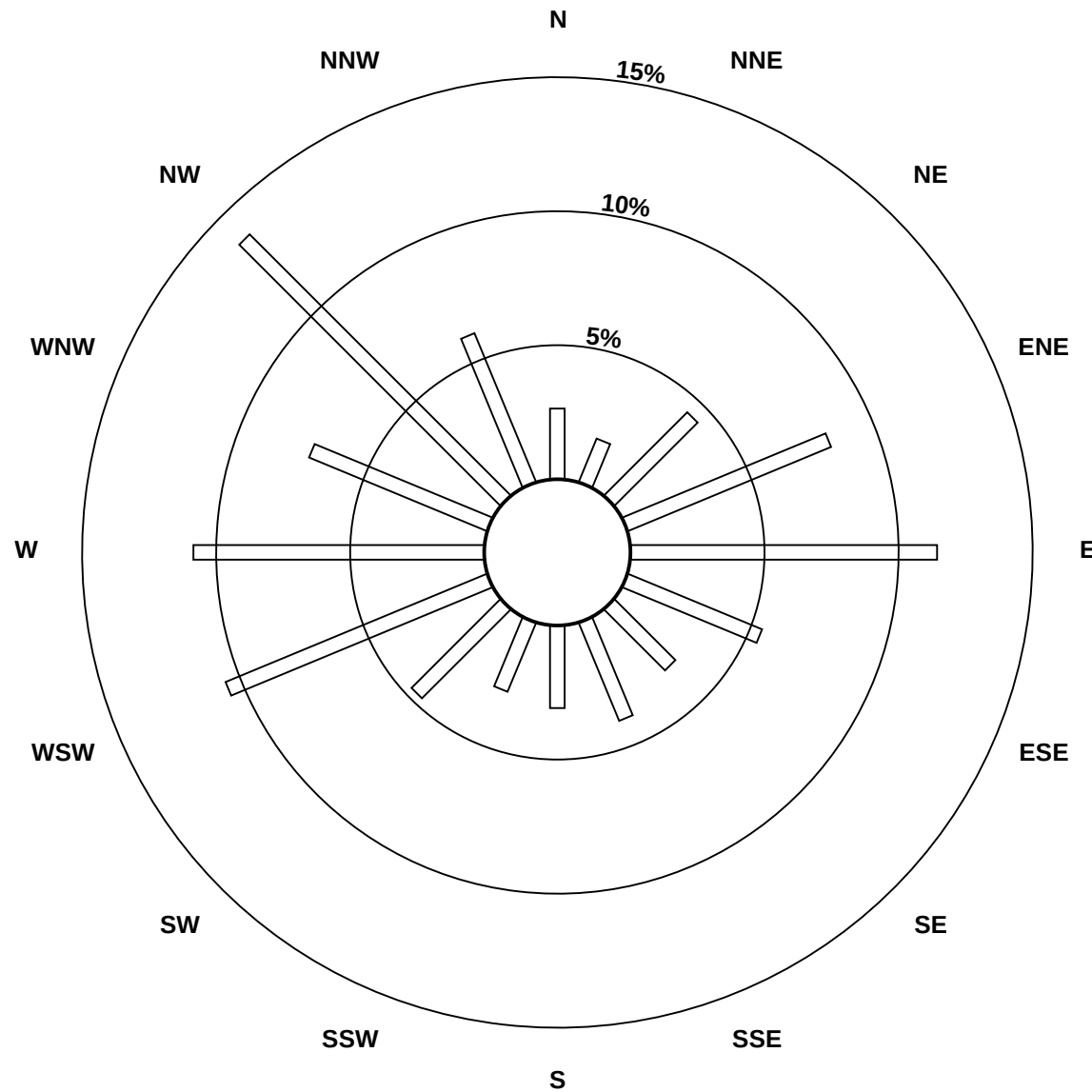
Henry Pirker - June 2013



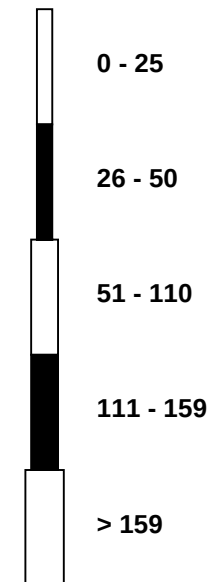
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - June 2013

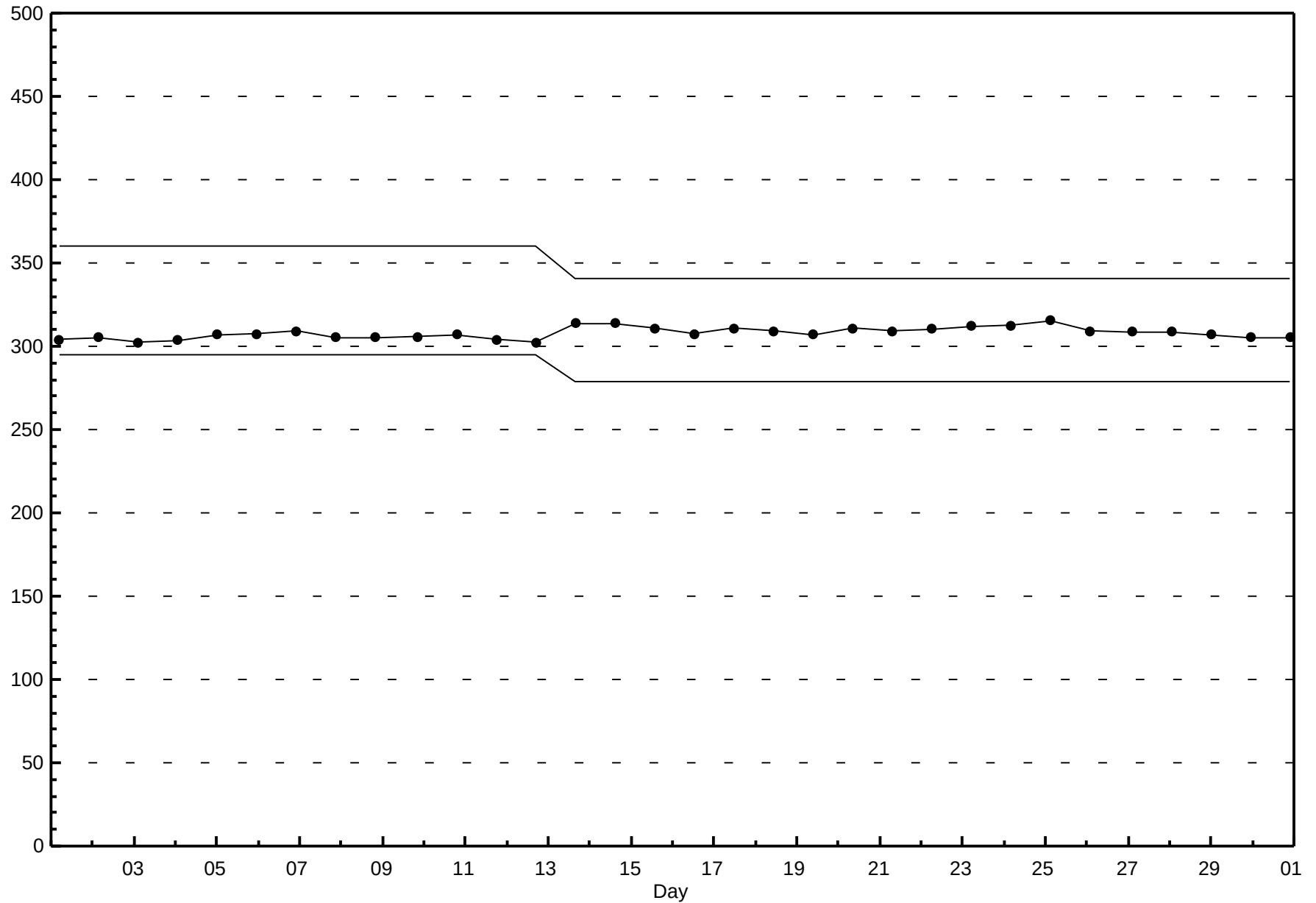


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Henry Pirker - June 2013



Hourly Averages

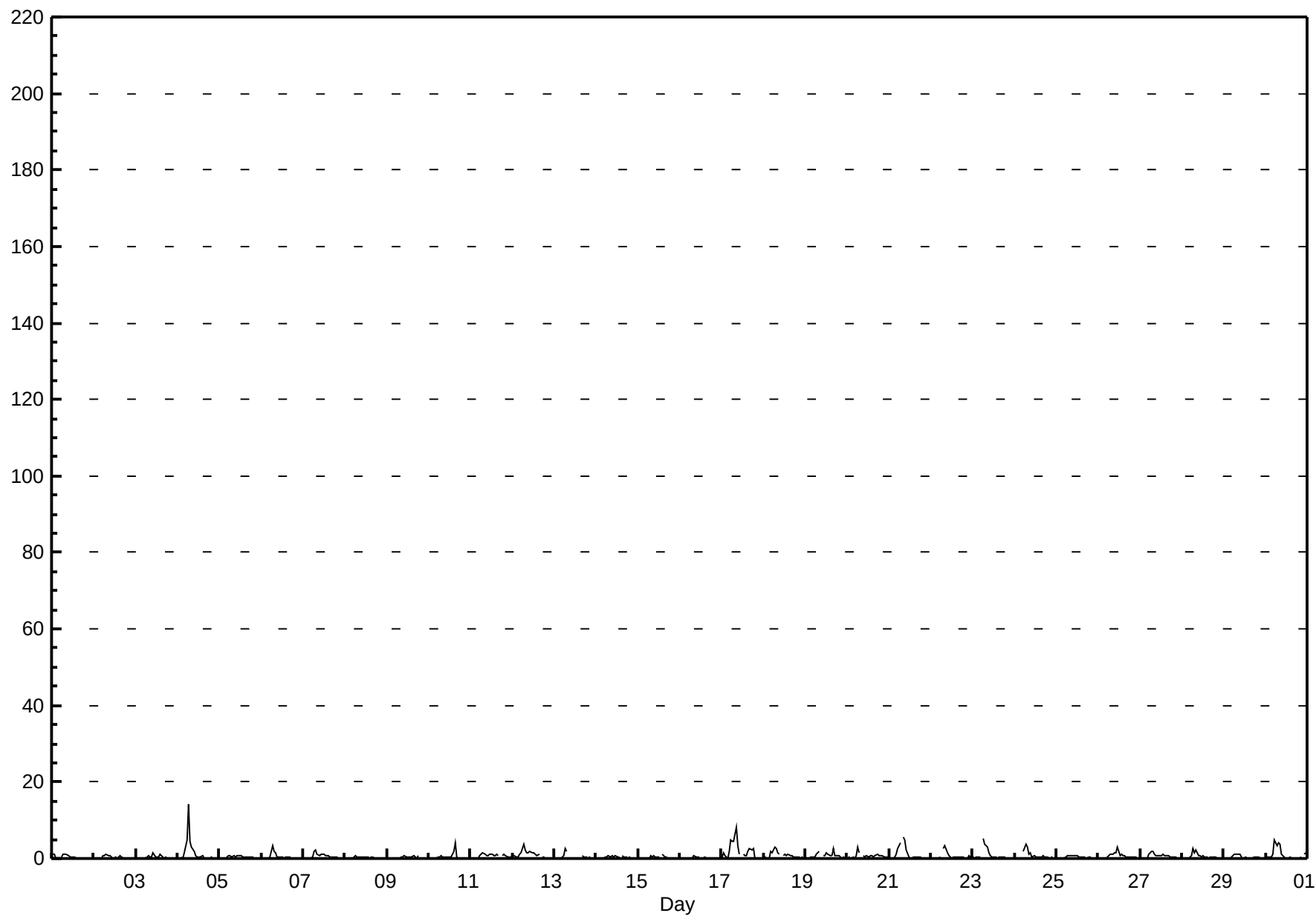
Nitrogen Oxide (NO) - ppb

Henry Pirker - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 14.1 ppb on Jun 4 07:00																				Maximum Daily Average: 1.9 ppb on Jun 17		Hours of Data: 682				
Minimum Value: 0 ppb on Jun 1 21:00																				Minimum Daily Average: 0.1 ppb on Jun 16		Hours of Missing Data: 38				
Maximum Diurnal Average: 2.3 ppb at hour 7																				Minimum Diurnal Average: 0.1 ppb at hour 22		Hours of Calibration: 38				
Monthly Average: 0.61 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.7 P ₉₀ = 1.4 P ₉₉ = 4.8		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-Jun	1	1	0	0	A	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.3
2-Jun	0	0	0	A	0	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.3	1.1
3-Jun	0	0	A	0	0	0	0	1	1	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0.3	1.6
4-Jun	0	A	0	0	2	5	14	4	3	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1.5	14.1
5-Jun	A	0	0	0	0	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0.4	0.9
6-Jun	0	0	0	0	0	0	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	3.5
7-Jun	0	0	0	0	0	0	2	2	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0.6	2.3
8-Jun	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.6
9-Jun	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	1	A	0	0	0	0	0.2	0.7
10-Jun	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	4	0	0	A	0	0	0	0	0	0.4	3.9
11-Jun	0	0	0	0	0	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	0	0.7	1.7
12-Jun	0	1	0	0	1	1	4	2	1	1	2	1	1	1	1	1	A	1	0	0	0	0	0	0	0.9	3.7
13-Jun	0	0	0	0	0	1	3	2	C	C	C	C	C	C	1	A	1	0	1	0	0	0	0	0	--	2.7
14-Jun	0	0	0	0	0	0	0	1	0	1	1	1	0	1	A	1	0	0	0	0	0	0	0	0	0.3	0.7
15-Jun	0	0	0	0	0	0	0	1	0	1	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0.2	1.2
16-Jun	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
17-Jun	0	1	1	0	2	5	5	5	8	3	1	A	1	1	1	2	3	2	3	0	0	0	0	0	1.9	8.2
18-Jun	0	0	0	0	2	1	3	3	1	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0.8	3.0
19-Jun	0	0	0	0	0	0	1	1	2	A	1	1	1	1	1	1	3	1	1	1	0	0	0	0	0.8	2.6
20-Jun	0	0	0	0	0	1	3	1	A	1	0	1	0	1	1	1	1	1	1	1	1	0	0	0	0.7	3.0
21-Jun	0	0	0	0	1	3	4	A	6	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	5.6
22-Jun	0	0	0	0	0	0	A	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.5	3.2
23-Jun	0	0	0	0	0	A	5	4	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.8	5.2
24-Jun	0	0	0	0	A	2	4	3	1	1	0	1	1	0	0	1	1	0	1	0	0	0	0	0	0.7	3.9
25-Jun	0	0	0	A	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
26-Jun	0	0	A	0	0	0	1	1	1	2	2	3	1	1	1	1	1	0	0	0	0	0	0	0	0.7	3.1
27-Jun	0	A	0	0	0	1	2	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.6	1.9
28-Jun	A	0	0	0	0	1	3	1	2	1	1	0	1	0	0	0	1	0	0	0	0	0	0	A	0.6	2.6
29-Jun	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	1.2
30-Jun	0	0	0	0	1	5	3	4	4	1	1	0	0	0	0	0	0	0	0	0	0	A	1	2	1.0	4.9
0.1		0.2	0.1	0.1	0.4	1.1	2.3	1.7	1.7	1.1	0.8	0.6	0.6	0.5	0.6	0.6	0.5	0.3	0.4	0.2	0.2	0.1	0.1	0.1	Diurnal Average	
1.3		1.4	0.8	0.4	1.9	5.0	14.1	4.6	8.2	4.7	2.2	3.1	1.4	1.2	1.7	3.9	2.7	2.3	2.6	1.1	0.9	0.4	0.9	1.6	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																								

Hourly Averages

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



Hourly Maximums

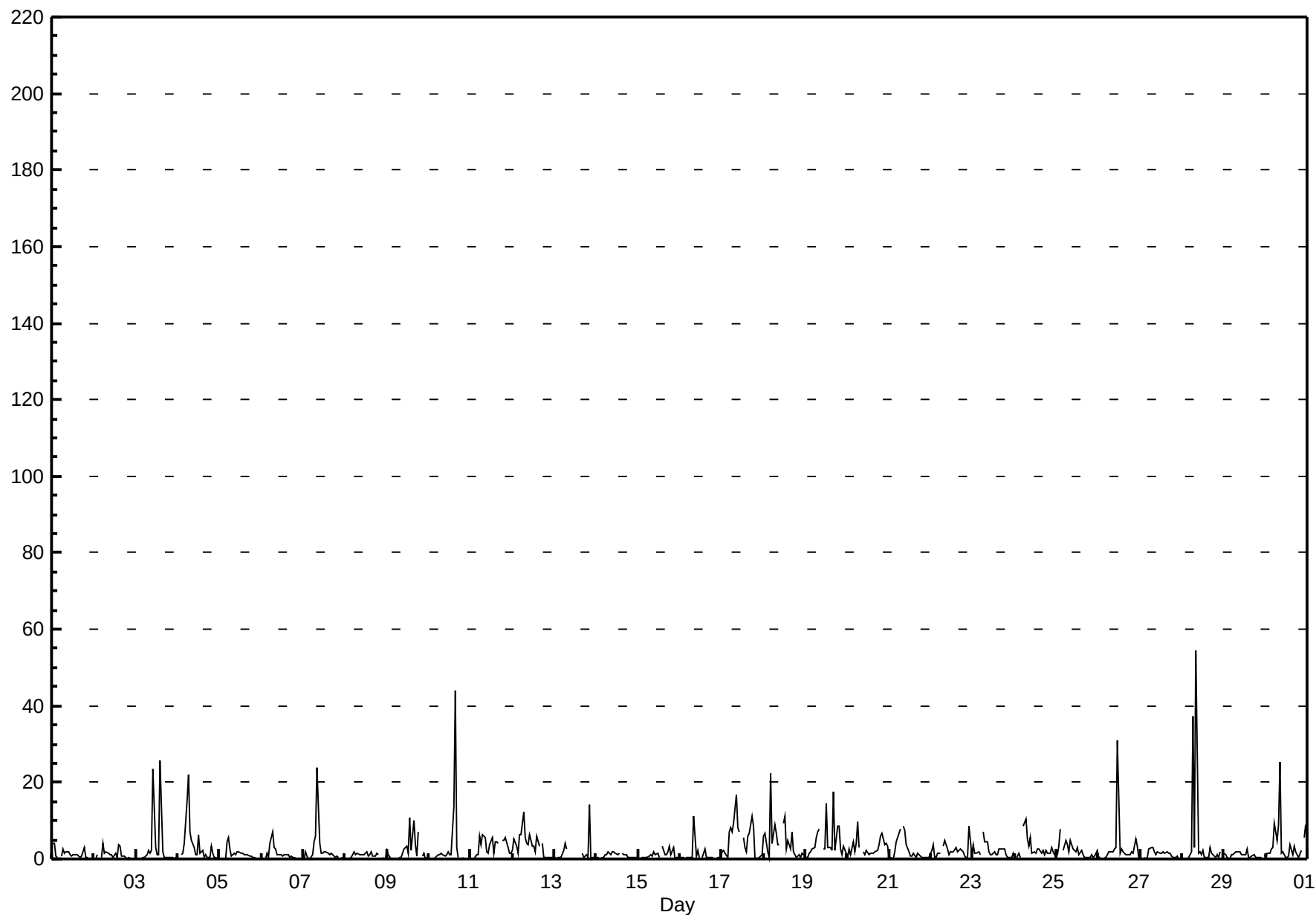
Nitrogen Oxide (NO) - ppb

Henry Pirker - June 2013

Maximum Value: 54.3 ppb on Jun 28 09:00																				Maximum Daily Average: 5.2 ppb on Jun 28					Hours in Service: 720	
Minimum Value: 0 ppb on Jun 13 02:00																				Minimum Daily Average: 0.9 ppb on Jun 8					Hours of Data: 682	
Maximum Diurnal Average: 7.3 ppb at hour 9																				Minimum Diurnal Average: 0.8 ppb at hour 4					Hours of Missing Data: 38	
Monthly Average: 2.50 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.5 Median = 1.1 Q ₃ = 2.6 P ₉₀ = 5.6 P ₉₉ = 23.6					Hours of Calibration: 38	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	4	4	1	0	A	1	2	2	2	2	1	1	1	1	1	1	1	1	3	0	0	0	0	0	1.2	4.0
2-Jun	0	0	1	A	0	4	2	2	1	1	1	1	2	1	4	3	1	1	1	0	0	0	0	0	1.1	4.2
3-Jun	0	0	A	0	0	0	1	2	2	2	23	3	1	1	26	2	1	1	1	1	1	0	0	1	3.0	25.7
4-Jun	1	A	1	1	4	15	22	7	5	3	1	1	6	2	2	1	1	1	1	3	1	0	1	0	3.5	22.0
5-Jun	A	0	0	0	4	5	2	1	1	1	2	2	2	1	1	1	1	1	1	1	1	0	0	A	1.3	5.5
6-Jun	0	0	0	1	0	4	7	3	3	1	1	1	1	1	1	1	1	1	1	0	0	0	A	0	1.2	7.0
7-Jun	0	2	1	0	0	1	4	6	24	4	2	2	2	2	1	1	1	1	1	1	0	A	0	0	2.5	24.0
8-Jun	0	0	0	0	1	2	1	1	1	1	1	1	2	1	1	2	1	1	2	1	A	0	0	0	0.9	2.0
9-Jun	2	1	0	0	0	0	0	1	1	2	3	3	1	11	2	10	4	1	7	A	1	1	0	0	2.2	10.8
10-Jun	0	0	0	0	0	1	1	1	1	1	1	2	1	1	14	44	3	1	A	1	0	0	0	0	3.2	44.0
11-Jun	0	0	0	1	1	6	4	6	6	2	1	4	5	1	4	4	4	A	5	5	6	3	1	1	3.1	6.5
12-Jun	2	5	3	1	6	6	12	5	4	4	6	3	3	2	6	4	A	4	1	0	0	0	0	0	3.6	12.1
13-Jun	0	0	0	0	0	2	4	3	C	C	C	C	C	C	4	A	2	1	1	14	0	0	0	0	--	14.1
14-Jun	0	0	0	0	1	1	1	2	1	2	2	1	1	2	A	2	1	1	1	1	1	0	0	1	0.9	2.0
15-Jun	0	0	0	0	0	1	1	1	1	2	1	1	1	A	3	1	1	2	3	1	3	0	0	0	1.1	3.5
16-Jun	0	0	0	0	0	0	0	1	11	1	2	1	A	1	3	1	1	1	1	0	0	0	1	1	1.1	11.3
17-Jun	2	2	2	1	7	8	7	10	17	8	7	A	5	3	2	6	7	11	8	1	0	1	1	1	5.0	16.8
18-Jun	6	7	2	1	22	4	9	7	4	4	A	9	11	3	5	3	7	2	1	1	1	1	1	1	4.8	22.4
19-Jun	1	0	1	2	2	3	5	7	8	A	2	3	14	3	3	2	18	2	8	8	2	1	3	2	4.5	17.5
20-Jun	1	3	1	4	2	4	10	3	A	2	1	2	1	1	1	2	2	2	4	6	7	4	4	4	3.0	9.5
21-Jun	1	1	0	2	5	6	8	A	8	7	4	2	1	1	1	1	1	1	1	1	0	1	0	1	2.2	8.5
22-Jun	2	4	0	0	1	1	A	3	5	3	1	2	2	2	3	2	2	3	2	1	1	0	8	1	2.2	8.5
23-Jun	4	1	2	2	1	A	7	4	4	2	1	1	2	1	1	2	3	2	2	1	0	0	0	2	2.1	7.0
24-Jun	1	0	1	0	A	8	10	5	3	5	2	2	1	3	3	1	2	1	2	2	1	3	2	1	2.7	10.4
25-Jun	1	3	8	A	2	5	4	2	5	2	2	2	3	1	2	1	1	0	1	1	1	0	1	2	2.2	7.6
26-Jun	0	0	A	0	0	1	2	2	2	2	3	31	1	2	2	1	1	1	1	2	1	5	3	0	3.0	31.0
27-Jun	0	A	0	0	1	2	3	3	2	1	2	2	1	2	2	2	1	1	1	1	1	0	0	0	1.3	3.0
28-Jun	A	0	0	0	1	2	37	3	54	2	2	1	2	1	1	1	3	1	1	1	1	1	2	A	5.2	54.3
29-Jun	2	1	0	0	1	1	2	2	2	2	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1.1	2.5
30-Jun	0	1	2	3	3	9	5	9	25	2	2	1	1	1	4	1	3	2	1	1	2	A	6	9	4.0	25.4
1.1 1.4 1.0 0.8 2.5 3.7 6.0 3.6 7.3 2.5 2.8 3.0 2.7 1.9 3.6 3.5 2.5 1.6 2.0 1.3 1.7 0.9 1.4 1.0																									Diurnal Average	
5.8 6.9 7.6 4.4 22.4 15.3 37.2 9.5 54.3 8.0 23.4 31.0 14.4 10.8 25.7 44.0 17.5 11.0 8.5 8.5 14.1 5.4 8.5 8.8																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

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



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

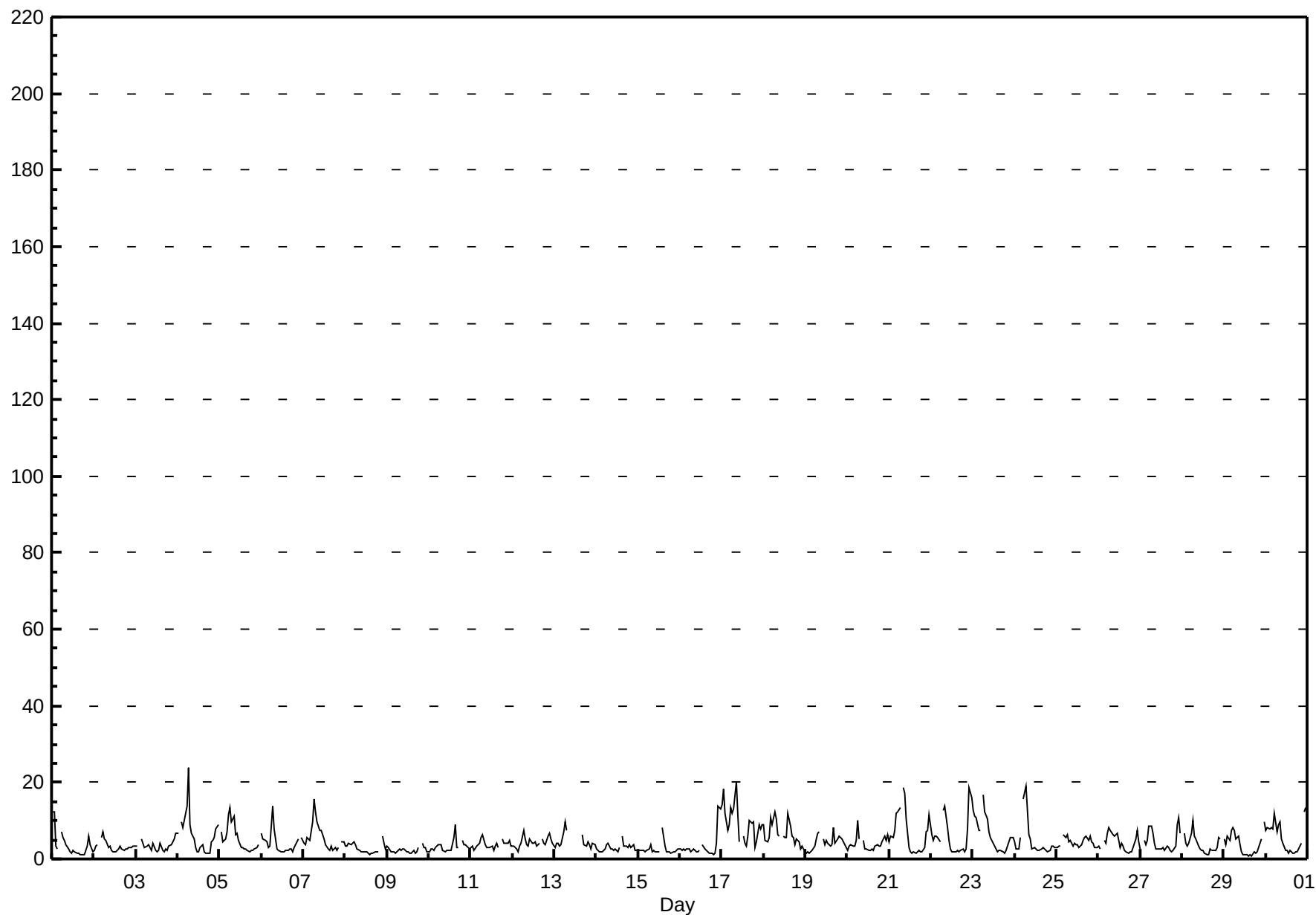
Henry Pirker - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 23.9 ppb on Jun 4 07:00 Maximum Daily Average: 9.4 ppb on Jun 17																				Hours in Service: 720 Hours of Data: 682 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0						
Minimum Value: 1 ppb on Jun 29 17:00 Maximum Diurnal Average: 8.9 ppb at hour 7 Monthly Average: 4.54 ppb										Minimum Daily Average: 2.3 ppb on Jun 9 Minimum Diurnal Average: 2.7 ppb at hour 14 Percentiles: P ₁ = 1.1 P ₁₀ = 1.8 Q ₁ = 2.3 Median = 3.5 Q ₃ = 5.6 P ₉₀ = 8.9 P ₉₉ = 16.8																
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-Jun	12	12	3	3	A	7	6	5	4	3	2	1	2	2	1	1	1	1	1	2	3	6	4	2	3.7	12.3
2-Jun	2	3	4	A	6	7	5	5	3	3	2	2	2	3	3	2	2	2	2	3	3	3	3	3	3.2	6.9
3-Jun	4	3	A	5	4	3	3	4	3	2	4	2	2	2	4	2	2	2	2	3	4	4	5	7	3.4	6.6
4-Jun	7	A	10	8	10	14	24	9	7	5	3	2	2	3	4	2	2	2	2	4	5	6	8	9	6.3	23.9
5-Jun	A	7	5	5	7	11	14	10	11	6	7	5	3	3	3	3	2	2	2	2	3	3	4	A	5.3	13.6
6-Jun	7	5	5	4	3	3	14	8	5	3	2	2	2	2	2	2	3	2	2	3	4	5	A	6	4.1	14.0
7-Jun	4	4	5	5	5	10	16	12	10	7	7	6	5	4	3	2	4	2	3	2	3	A	5	5	5.6	15.7
8-Jun	3	3	4	4	4	4	4	2	2	2	2	2	2	1	1	1	2	2	2	2	A	6	4	3	2.7	5.8
9-Jun	4	3	2	2	2	1	2	3	2	3	2	2	2	2	1	2	1	2	3	A	4	3	3	2	2.3	4.0
10-Jun	2	3	3	2	3	4	4	4	2	2	2	2	2	2	6	9	3	3	A	5	4	4	3	3	3.3	9.1
11-Jun	3	3	2	4	4	4	6	6	4	3	3	3	3	2	3	4	3	A	5	4	4	4	5	3	3.8	6.3
12-Jun	4	3	2	2	3	4	7	5	4	3	5	4	4	4	4	4	A	5	4	4	6	7	5	4	4.3	7.5
13-Jun	3	4	4	3	4	7	10	8	C	C	C	C	C	C	8	A	6	4	4	4	4	2	4	4	--	9.8
14-Jun	3	2	2	2	2	3	4	4	3	2	2	3	2	3	A	6	3	4	3	4	3	4	2	2	2.9	5.9
15-Jun	2	2	2	2	2	2	3	4	2	2	2	2	2	A	8	3	2	2	2	2	2	2	2	3	2.4	8.3
16-Jun	3	2	2	2	3	3	2	2	3	2	2	2	A	4	3	2	2	1	1	1	1	4	14	13	3.2	13.9
17-Jun	14	18	12	7	9	14	12	13	20	11	5	A	6	4	3	6	10	9	10	3	4	9	8	9	9.4	20.1
18-Jun	9	5	4	6	11	9	12	11	6	6	A	6	6	6	12	9	6	5	4	5	4	3	3	3	6.5	12.2
19-Jun	2	2	2	2	2	3	5	7	7	A	5	4	5	4	4	4	8	4	5	6	6	5	5	3	4.3	8.3
20-Jun	2	3	4	3	3	5	10	5	A	5	3	3	2	2	3	2	3	4	4	3	4	6	5	6	4.0	10.1
21-Jun	4	6	6	8	12	12	13	A	19	17	11	3	2	1	2	2	2	2	2	2	3	7	8	12	6.7	18.7
22-Jun	6	5	6	6	5	4	A	13	14	8	5	2	2	2	2	2	2	2	3	2	3	8	19	16	5.9	18.5
23-Jun	13	11	11	7	7	A	17	12	10	7	6	5	3	3	2	2	2	2	2	2	3	6	6	6	6.3	16.8
24-Jun	4	2	2	6	A	16	19	13	6	5	3	3	3	2	2	3	3	3	2	2	2	3	3	3	4.9	19.1
25-Jun	3	3	3	A	7	6	6	5	5	3	4	4	4	3	4	5	5	6	5	6	5	4	3	3	4.4	6.5
26-Jun	3	3	A	5	4	7	8	8	6	6	6	7	3	4	3	2	2	2	2	2	3	5	8	4	4.5	8.3
27-Jun	2	A	5	4	5	9	9	7	4	2	3	3	3	3	2	3	3	2	2	2	3	9	11	7	4.5	10.8
28-Jun	A	7	4	3	4	7	10	6	5	3	2	2	2	1	1	1	2	2	2	2	3	6	5	A	3.8	10.1
29-Jun	5	4	6	5	7	8	7	5	6	4	2	1	1	1	1	1	1	2	2	2	3	5	A	10	3.9	9.5
30-Jun	7	8	8	8	8	12	7	9	10	5	4	2	2	2	2	2	2	2	2	2	4	A	12	14	5.8	13.5
4.9 5.0 4.6 4.4 5.2 6.9 8.9 7.0 6.5 4.8 3.8 3.0 2.8 2.7 3.3 3.2 3.1 2.9 2.9 3.0 3.6 4.9 5.9 5.8																								Diurnal Average		
14.2 18.2 12.0 8.1 11.9 15.7 23.9 13.1 20.1 17.1 10.5 6.8 5.9 5.7 12.0 9.1 9.9 9.4 9.8 6.0 5.8 9.1 18.5 16.0																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - June 2013



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

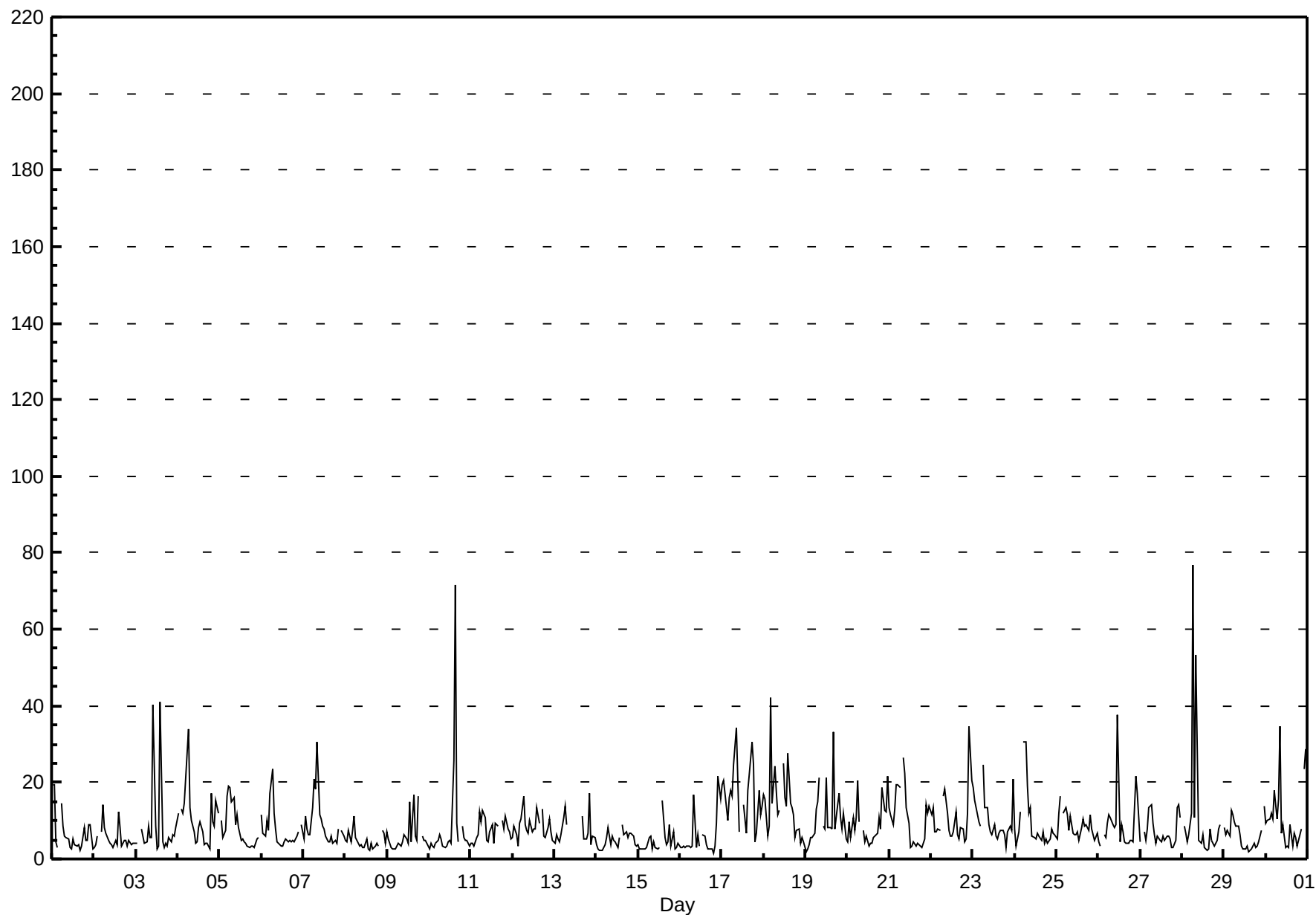
Henry Pirker - June 2013

Maximum Value: 76.9 ppb on Jun 28 07:00																				Maximum Daily Average: 16.7 ppb on Jun 17										Hours in Service: 720	
Minimum Value: 2 ppb on Jun 16 20:00																				Minimum Daily Average: 4.4 ppb on Jun 15										Hours of Data: 682	
Maximum Diurnal Average: 16.2 ppb at hour 7																				Minimum Diurnal Average: 5.8 ppb at hour 20										Hours of Missing Data: 38	
Monthly Average: 8.67 ppb																				Percentiles: P ₁ = 2.4 P ₁₀ = 3.2 Q ₁ = 4.3 Median = 6.5 Q ₃ = 10.5 P ₉₀ = 16.6 P ₉₉ = 36.7										Hours of Calibration: 38	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jun	20	20	4	3	A	14	9	6	6	5	3	3	5	4	4	4	2	3	8	5	5	9	9	3	6.6	19.5					
2-Jun	3	4	6	A	7	14	8	7	5	4	4	3	5	4	12	8	4	5	5	4	5	4	4	4	5.5	14.3					
3-Jun	4	4	A	8	6	4	4	8	5	6	40	8	3	3	41	4	3	4	4	6	5	6	6	8	8.3	40.9					
4-Jun	12	A	13	12	15	28	34	13	10	7	4	4	8	10	7	4	4	4	3	17	10	9	15	12	11.0	33.8					
5-Jun	A	10	6	7	17	19	19	15	16	9	11	8	5	5	4	4	3	3	3	3	3	5	6	A	8.3	19.2					
6-Jun	12	7	6	10	7	17	23	12	8	4	4	4	3	4	5	5	5	4	5	4	6	7	A	9	7.5	23.4					
7-Jun	5	11	8	6	7	13	21	18	31	12	11	9	8	6	4	4	6	4	5	4	8	A	7	6	9.3	30.7					
8-Jun	5	5	7	5	8	11	6	5	4	4	3	3	5	2	2	4	2	3	4	3	A	8	7	4	4.8	11.3					
9-Jun	7	5	3	3	3	3	4	4	3	5	6	5	4	15	4	17	6	5	16	A	6	5	5	4	5.9	16.7					
10-Jun	2	4	4	3	4	5	6	5	3	3	3	4	5	4	26	72	9	4	A	9	6	5	5	3	8.5	71.8					
11-Jun	4	4	4	6	6	12	10	13	11	5	4	7	9	4	9	9	9	A	10	8	11	8	7	5	7.6	12.8					
12-Jun	6	8	6	4	9	10	16	9	7	7	10	7	8	8	13	9	A	13	6	5	8	10	7	5	8.4	16.3					
13-Jun	4	6	5	4	6	11	14	9	C	C	C	C	C	C	15	A	11	5	5	7	17	4	6	6	--	17.1					
14-Jun	4	3	2	2	3	4	6	8	4	6	5	4	3	6	A	9	6	7	5	7	7	6	4	4	5.0	9.0					
15-Jun	4	3	3	3	2	3	5	6	3	5	3	2	3	A	15	6	4	4	9	3	7	3	3	4	4.4	15.3					
16-Jun	3	3	3	3	4	4	3	4	17	3	6	3	A	7	6	4	3	3	2	2	4	9	22	16	5.7	21.7					
17-Jun	19	20	17	10	16	18	16	25	34	21	7	A	14	10	7	18	22	30	24	5	7	18	11	14	16.7	34.4					
18-Jun	17	16	6	9	42	15	24	17	12	13	A	25	16	14	27	14	14	12	6	7	8	4	5	4	14.2	42.2					
19-Jun	2	2	4	5	6	7	13	15	21	A	8	8	21	8	8	8	33	8	14	17	11	8	12	5	10.7	33.4					
20-Jun	4	10	5	11	7	11	21	10	A	8	4	6	4	4	4	5	6	7	11	8	19	13	12	22	9.2	21.6					
21-Jun	13	12	9	13	19	19	19	A	26	22	14	9	3	4	4	3	4	4	4	3	5	14	12	14	10.9	26.5					
22-Jun	11	13	7	7	8	7	A	16	18	12	7	6	6	7	12	6	5	8	8	4	5	12	35	21	10.6	34.8					
23-Jun	18	15	13	10	9	A	25	13	13	9	7	6	9	6	5	7	7	8	6	3	7	9	7	21	10.2	24.5					
24-Jun	8	4	7	12	A	30	30	19	12	13	6	5	5	7	6	5	7	4	5	4	5	8	7	6	9.4	30.5					
25-Jun	5	12	16	A	12	13	12	7	11	7	6	6	7	5	8	10	8	9	8	12	8	6	5	7	8.8	16.3					
26-Jun	4	4	A	6	5	9	11	11	9	8	9	38	4	9	7	4	4	4	5	5	5	22	17	11	9.2	37.5					
27-Jun	4	A	7	5	8	13	14	9	7	4	6	5	4	6	5	6	6	5	3	3	5	13	14	11	7.2	14.3					
28-Jun	A	9	7	5	7	12	77	11	53	5	5	4	6	3	2	2	8	5	3	4	5	8	9	A	11.4	76.9					
29-Jun	8	6	7	6	13	12	10	9	9	6	4	2	3	3	2	2	3	4	3	3	5	7	A	14	6.1	14.0					
30-Jun	9	10	10	12	10	18	10	16	35	7	9	3	3	3	9	3	7	6	4	5	8	A	24	29	10.8	34.6					
7.8 8.2 7.0 6.7 9.5 12.4 16.2 11.1 14.0 7.8 7.5 7.2 6.5 6.1 9.6 8.9 7.3 6.4 6.7 5.8 7.2 8.6 10.1 9.7																									Diurnal Average						
19.5 20.5 17.2 13.0 42.2 30.5 76.9 24.5 53.4 22.5 40.1 37.5 21.3 14.8 40.9 71.8 33.4 30.5 24.5 17.1 18.6 21.6 34.8 28.6																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

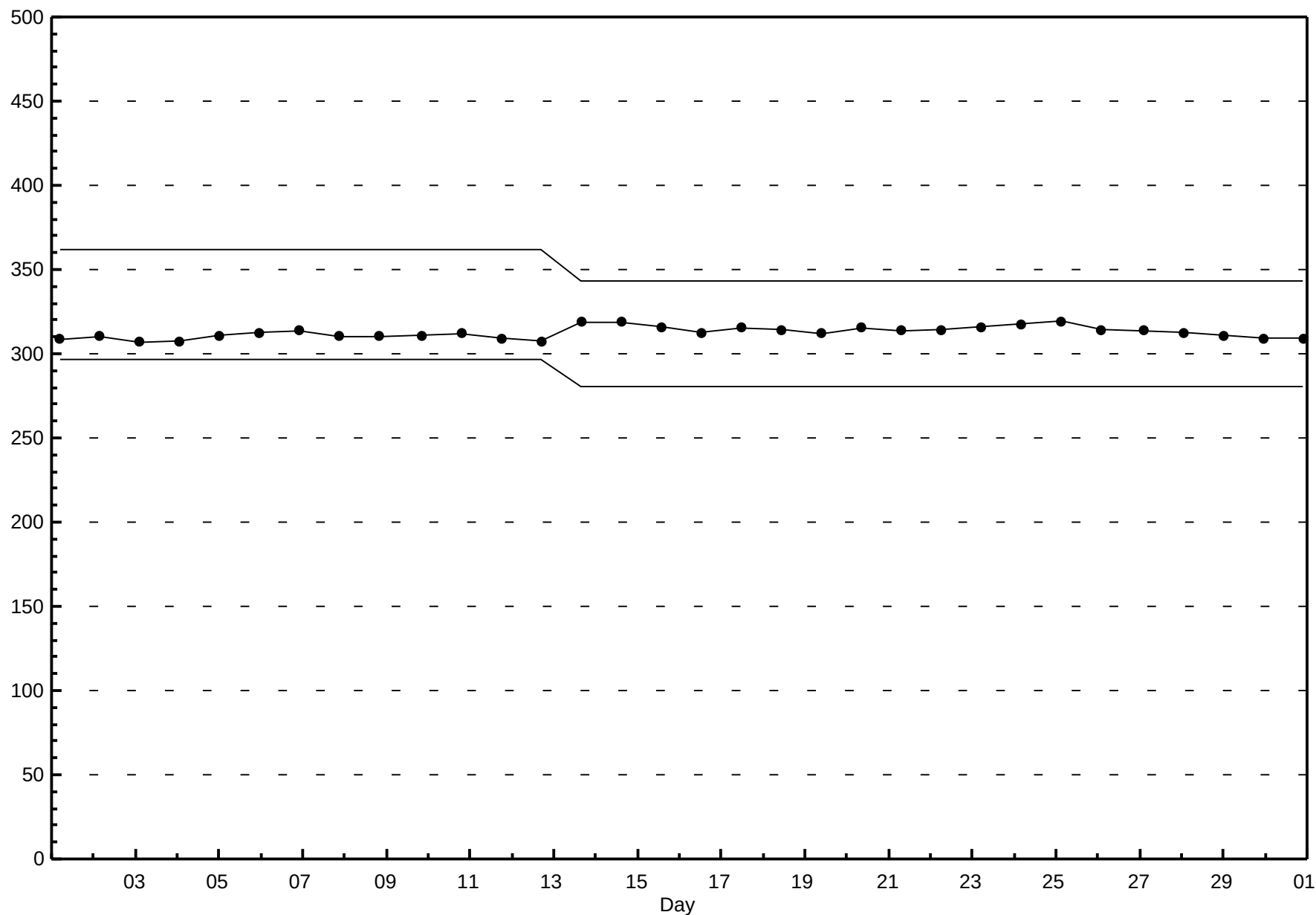
Henry Pirker - June 2013



Span Responses

Oxides of Nitrogen (NO_x)

Henry Pirker - June 2013



Hourly Averages

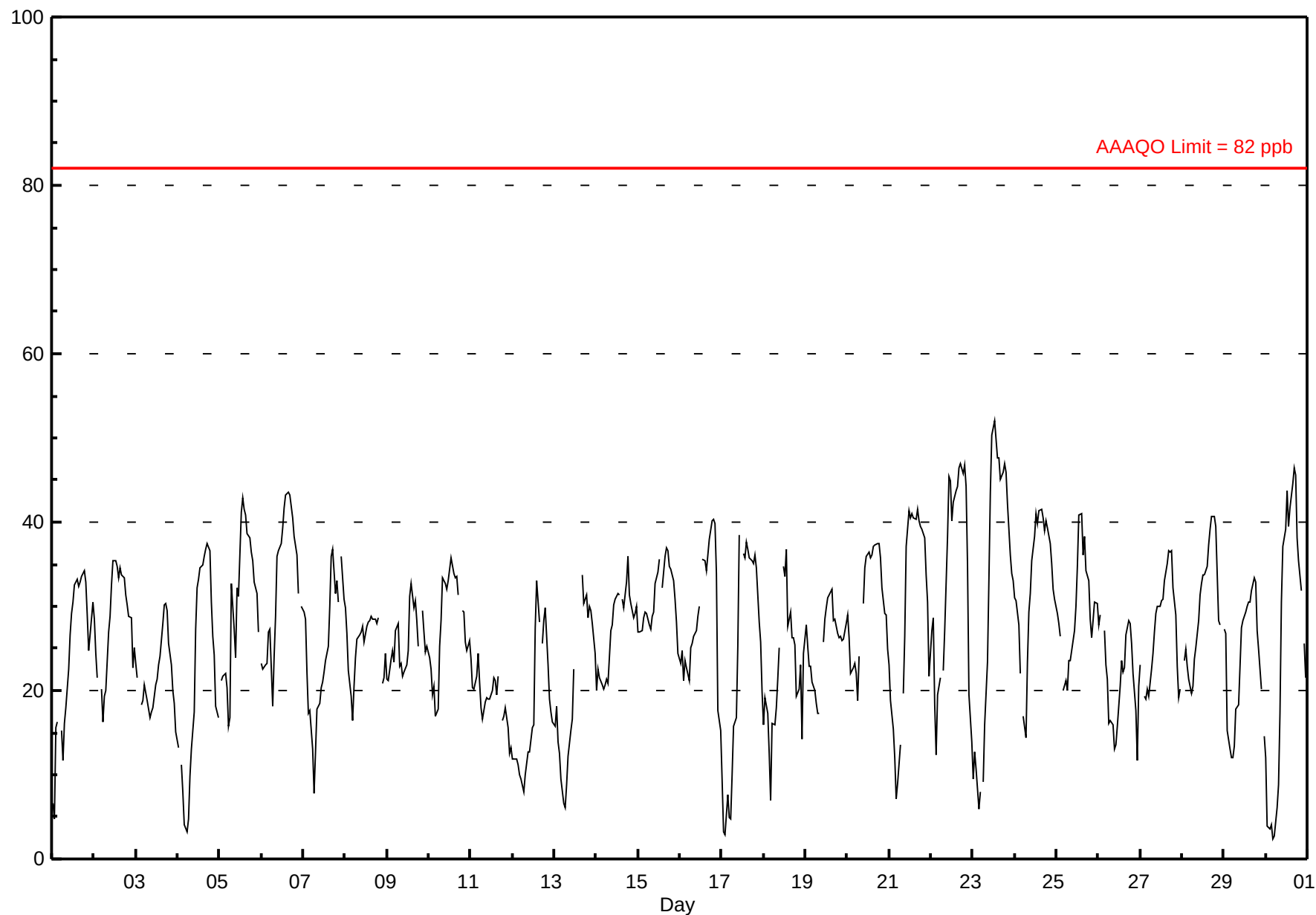
Ozone (O₃) - ppb

Henry Pirker - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 52.1 ppb on Jun 23 13:00 Maximum Daily Average: 33.7 ppb on Jun 22																								Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0		
Minimum Value: 2 ppb on Jun 30 05:00 Maximum Diurnal Average: 35.3 ppb at hour 17 Monthly Average: 26.45 ppb												Minimum Daily Average: 17.4 ppb on Jun 12 Minimum Diurnal Average: 16.5 ppb at hour 7 Percentiles: P ₁ = 4.1 P ₁₀ = 13.9 Q ₁ = 20.2 Median = 26.9 Q ₃ = 33.1 P ₉₀ = 38.3 P ₉₉ = 46.8														
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-Jun	7	5	16	16	A	15	12	16	18	22	27	29	31	33	33	32	33	34	34	33	29	25	27	30	24.1	34.2
2-Jun	29	24	22	A	20	16	19	20	27	29	33	35	36	35	33	35	34	33	31	30	29	29	23	25	28.1	35.5
3-Jun	23	22	A	18	19	21	19	18	17	17	18	21	21	23	24	28	30	30	30	26	23	20	18	15	21.8	30.3
4-Jun	13	A	11	8	4	3	5	10	13	17	27	32	33	35	35	36	37	37	37	31	26	24	18	17	22.1	37.4
5-Jun	A	21	22	22	20	16	17	33	27	24	32	31	41	43	41	41	39	38	36	35	33	31	27	A	30.5	42.9
6-Jun	23	23	23	23	27	27	18	24	29	36	37	37	39	42	43	44	43	42	41	38	36	31	A	30	32.9	43.5
7-Jun	29	29	22	17	18	13	8	13	18	18	20	21	22	24	25	30	36	37	31	33	30	A	36	31	24.4	36.7
8-Jun	30	27	22	19	16	20	24	26	27	27	28	26	28	28	29	28	29	28	29	A	21	22	24	25.5	29.9	
9-Jun	21	21	24	25	23	27	28	23	23	22	22	23	25	31	33	30	31	28	25	A	30	27	25	25	25.7	32.6
10-Jun	24	23	19	21	17	18	25	28	33	33	32	33	34	36	34	33	34	31	A	30	29	26	25	26	28.0	35.7
11-Jun	24	20	20	22	24	21	18	17	19	19	19	19	20	22	21	20	22	A	16	17	18	16	13	13	19.1	24.4
12-Jun	12	12	12	11	10	9	8	10	11	13	13	16	16	28	33	28	A	26	28	30	23	19	17	16	17.4	33.1
13-Jun	16	18	14	13	9	7	6	9	12	15	17	22	C	C	C	C	34	30	31	29	30	29	28	24	19.7	33.7
14-Jun	20	22	22	21	20	21	21	21	27	28	30	31	32	31	A	31	30	33	36	31	30	29	29	30	27.2	35.9
15-Jun	27	27	27	29	29	29	28	27	29	29	33	34	36	A	32	36	37	37	35	34	33	31	28	24	30.9	37.0
16-Jun	23	25	21	24	23	21	25	26	26	27	29	30	A	36	35	34	36	38	40	40	40	34	18	15	29.0	40.3
17-Jun	9	3	3	8	5	5	10	16	17	25	38	A	36	36	38	37	36	35	35	36	35	28	26	20	23.3	38.4
18-Jun	16	19	17	13	7	16	16	18	21	25	A	35	34	37	28	29	26	26	25	19	20	23	14	24	22.2	36.9
19-Jun	28	25	23	23	21	20	18	17	17	A	26	28	30	31	32	32	28	29	27	26	27	26	26	28	25.6	32.0
20-Jun	29	26	22	23	23	22	19	24	A	30	35	36	36	36	36	37	37	37	38	36	32	29	29	25	30.3	37.5
21-Jun	23	19	15	12	7	9	14	A	20	27	37	41	40	41	41	40	42	40	39	39	38	34	30	22	29.1	41.5
22-Jun	27	29	18	12	19	22	A	22	27	38	45	45	40	42	44	44	46	47	46	47	44	35	19	14	33.7	47.0
23-Jun	9	13	11	6	8	A	9	16	23	33	44	50	52	50	48	48	45	46	47	46	42	36	34	33	32.5	52.1
24-Jun	31	31	28	22	A	17	14	23	29	32	35	38	41	40	41	42	41	39	40	39	37	35	32	31	33.0	41.5
25-Jun	29	28	26	A	20	21	20	24	24	26	27	30	35	41	41	36	38	34	33	29	26	28	31	30	29.4	41.0
26-Jun	28	29	A	27	23	21	16	16	16	13	14	16	21	24	22	23	27	28	28	26	22	18	12	21	21.2	29.0
27-Jun	23	A	19	19	20	19	23	24	27	29	30	30	31	31	33	35	37	36	37	32	29	23	19	20	27.2	36.7
28-Jun	A	24	25	23	21	20	21	24	25	28	31	33	34	34	35	37	39	41	41	40	34	28	28	A	30.2	40.7
29-Jun	27	27	15	13	12	12	13	18	18	23	28	28	29	30	31	31	32	33	33	27	25	20	A	15	23.5	33.4
30-Jun	12	4	4	4	2	3	6	9	17	31	37	39	44	40	42	45	46	46	38	35	32	A	26	22	25.3	46.4
21.9 21.2 18.7 17.6 16.8 17.0 16.5 19.7 22.0 25.4 29.1 30.7 32.7 34.1 34.3 34.5 35.3 35.2 34.0 32.5 30.4 27.0 24.2 23.3																								Diurnal Average		
31.1 30.7 27.8 28.7 29.4 29.2 27.9 32.8 33.3 38.2 45.4 50.3 52.1 49.9 47.6 47.7 46.4 47.0 46.9 46.9 44.2 36.1 35.9 33.0																								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 (O₃) - ppb
Henry Pirker - June 2013



Hourly Maximums

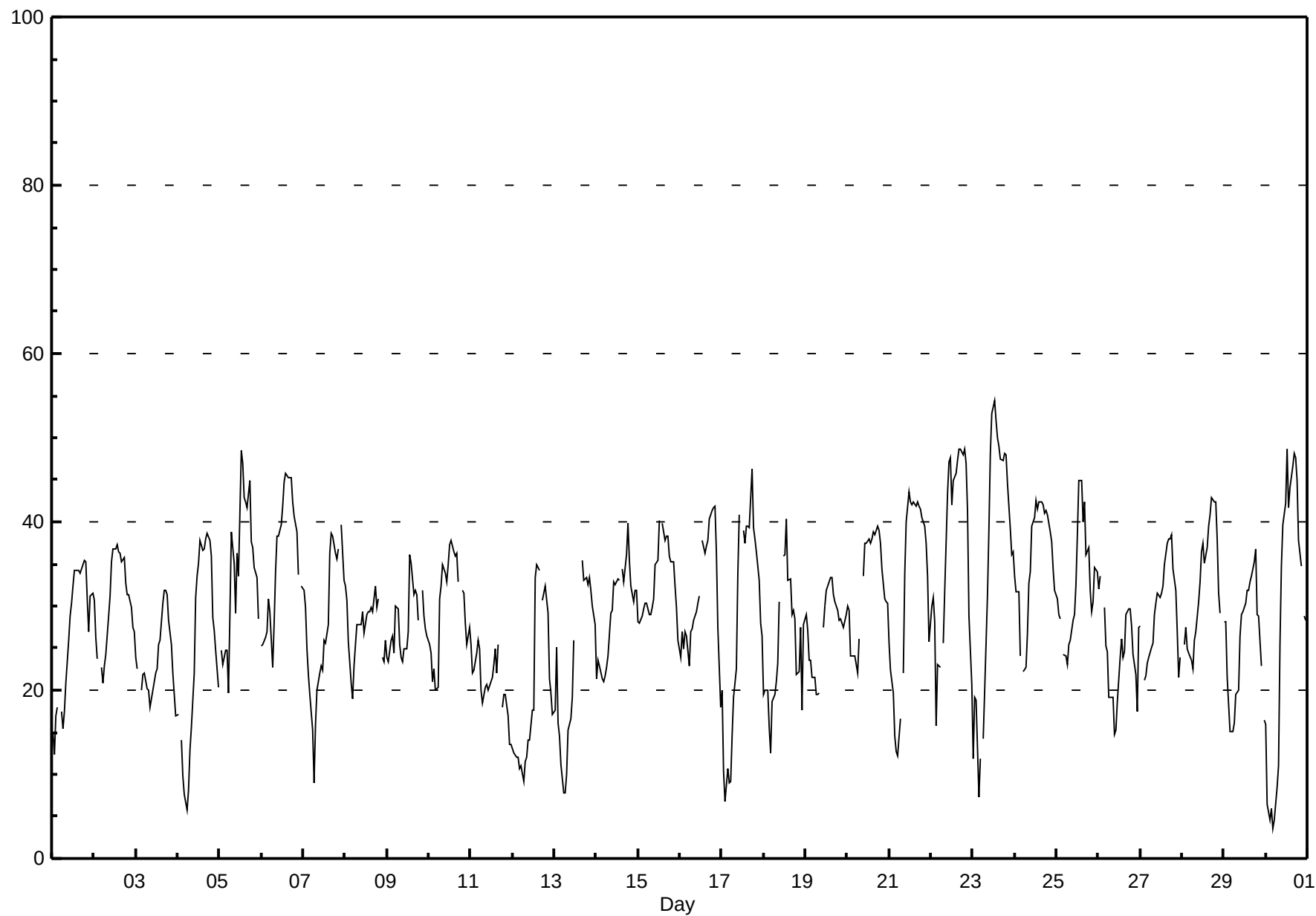
Ozone (O₃) - ppb

Henry Pirker - June 2013

Maximum Value: 54.4 ppb on Jun 23 13:00																				Maximum Daily Average: 37.3 ppb on Jun 22					Hours in Service: 720	
Minimum Value: 4 ppb on Jun 30 05:00																				Minimum Daily Average: 19.7 ppb on Jun 12					Hours of Data: 685	
Maximum Diurnal Average: 37.9 ppb at hour 18																				Minimum Diurnal Average: 19.5 ppb at hour 5					Hours of Missing Data: 35	
Monthly Average: 29.06 ppb																				Percentiles: P ₁ = 7.2 P ₁₀ = 17.0 Q ₁ = 22.8 Median = 29.2 Q ₃ = 35.5 P ₉₀ = 41.3 P ₉₉ = 48.6					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-Jun	15	12	17	18	A	17	15	17	21	26	29	30	32	34	34	34	34	35	35	31	27	31	32	26.7	35.4	
2-Jun	31	26	24	A	23	21	23	24	29	31	35	37	37	37	36	36	35	36	33	31	31	30	27	27	30.5	37.2
3-Jun	24	22	A	20	22	22	20	20	18	19	20	22	22	25	26	30	32	32	31	28	25	22	20	17	23.5	31.9
4-Jun	17	A	14	10	8	6	8	13	16	22	31	34	35	38	37	37	38	39	38	36	29	27	25	20	25.0	38.7
5-Jun	A	25	23	25	25	20	29	39	35	29	36	34	48	47	43	42	42	45	38	37	35	33	28	A	34.4	48.4
6-Jun	25	25	26	27	31	29	23	28	34	38	38	40	42	45	46	45	45	45	42	41	39	34	A	32	35.7	45.8
7-Jun	32	30	25	22	19	15	9	16	20	22	23	22	26	26	28	36	39	38	36	36	37	A	40	33	27.4	39.7
8-Jun	32	31	26	21	19	23	25	28	28	28	29	27	29	29	30	29	32	30	31	A	24	23	26	27.4	32.3	
9-Jun	24	23	26	26	24	30	30	25	24	23	25	25	27	36	35	31	32	31	28	A	32	29	27	26	27.9	36.1
10-Jun	25	24	21	22	20	20	31	32	35	34	33	35	37	38	36	36	36	33	A	32	32	28	25	27	30.2	37.9
11-Jun	25	22	22	24	26	25	20	19	20	21	20	21	21	23	25	22	25	A	18	20	20	17	14	14	21.0	26.0
12-Jun	13	13	12	12	11	11	9	12	12	14	14	18	18	33	35	34	A	31	31	32	29	21	20	17	19.7	34.9
13-Jun	18	25	16	15	11	8	8	10	15	17	19	26	C	C	C	C	36	33	33	33	33	32	30	28	22.2	35.5
14-Jun	21	24	23	21	21	22	23	24	29	30	33	33	33	33	A	34	33	36	40	35	32	30	32	32	29.3	39.9
15-Jun	28	28	29	30	30	30	29	29	30	31	35	35	40	A	40	38	38	38	36	35	35	32	30	26	32.8	40.2
16-Jun	24	27	25	27	26	23	27	27	28	29	30	31	A	38	36	37	38	40	41	42	42	36	27	18	31.4	41.8
17-Jun	20	10	7	11	9	9	15	19	23	34	41	A	39	37	39	39	39	46	39	38	36	33	28	27	27.8	46.2
18-Jun	20	20	20	16	13	19	20	21	23	30	A	36	36	40	33	33	29	30	28	22	22	27	18	28	25.4	40.4
19-Jun	29	27	24	24	22	22	20	19	20	A	27	30	32	32	33	33	31	30	29	28	28	28	27	29	27.2	33.4
20-Jun	30	29	24	24	24	23	22	26	A	34	37	37	38	37	38	39	38	39	39	37	34	31	31	30	32.3	39.4
21-Jun	26	22	20	15	13	12	17	A	22	34	40	44	42	42	42	42	42	42	42	40	39	37	34	26	31.9	43.6
22-Jun	30	31	28	16	23	23	A	26	32	43	47	48	42	45	46	47	49	49	48	49	47	41	29	21	37.3	48.7
23-Jun	12	19	19	7	12	A	14	20	31	39	48	53	54	52	50	49	47	47	48	48	45	39	36	37	36.0	54.4
24-Jun	34	32	32	24	A	22	23	27	33	34	40	40	43	41	42	42	42	41	41	41	39	38	34	32	35.5	42.6
25-Jun	31	29	28	A	24	24	23	26	26	28	29	32	38	45	45	40	42	36	37	32	29	30	35	34	32.4	44.9
26-Jun	32	34	A	30	25	25	19	19	19	15	15	19	24	26	24	25	29	30	30	28	24	22	17	27	24.2	33.6
27-Jun	28	A	21	22	23	24	25	26	29	30	32	31	32	32	35	37	38	38	39	34	32	27	22	24	29.5	38.5
28-Jun	A	25	27	25	24	23	23	26	27	30	33	36	37	35	37	39	41	43	42	42	38	32	29	A	32.6	42.9
29-Jun	28	28	22	15	15	15	16	20	20	26	29	29	30	32	32	33	33	35	37	29	29	23	A	16	25.8	36.8
30-Jun	16	6	5	6	4	5	8	11	26	35	40	42	49	42	44	47	48	48	45	38	35	A	29	28	28.4	48.7
24.6 24.0 21.6 19.8 19.5 19.6 19.7 22.3 25.0 28.5 31.3 32.6 35.2 36.5 36.7 36.9 37.3 37.9 36.4 34.8 33.1 29.7 27.4 26.2																									Diurnal Average	
33.6 33.6 31.6 29.8 30.9 30.4 30.8 38.8 35.1 43.5 48.2 52.9 54.4 52.0 50.0 49.0 48.6 48.7 48.2 48.6 47.0 41.4 39.7 36.5																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

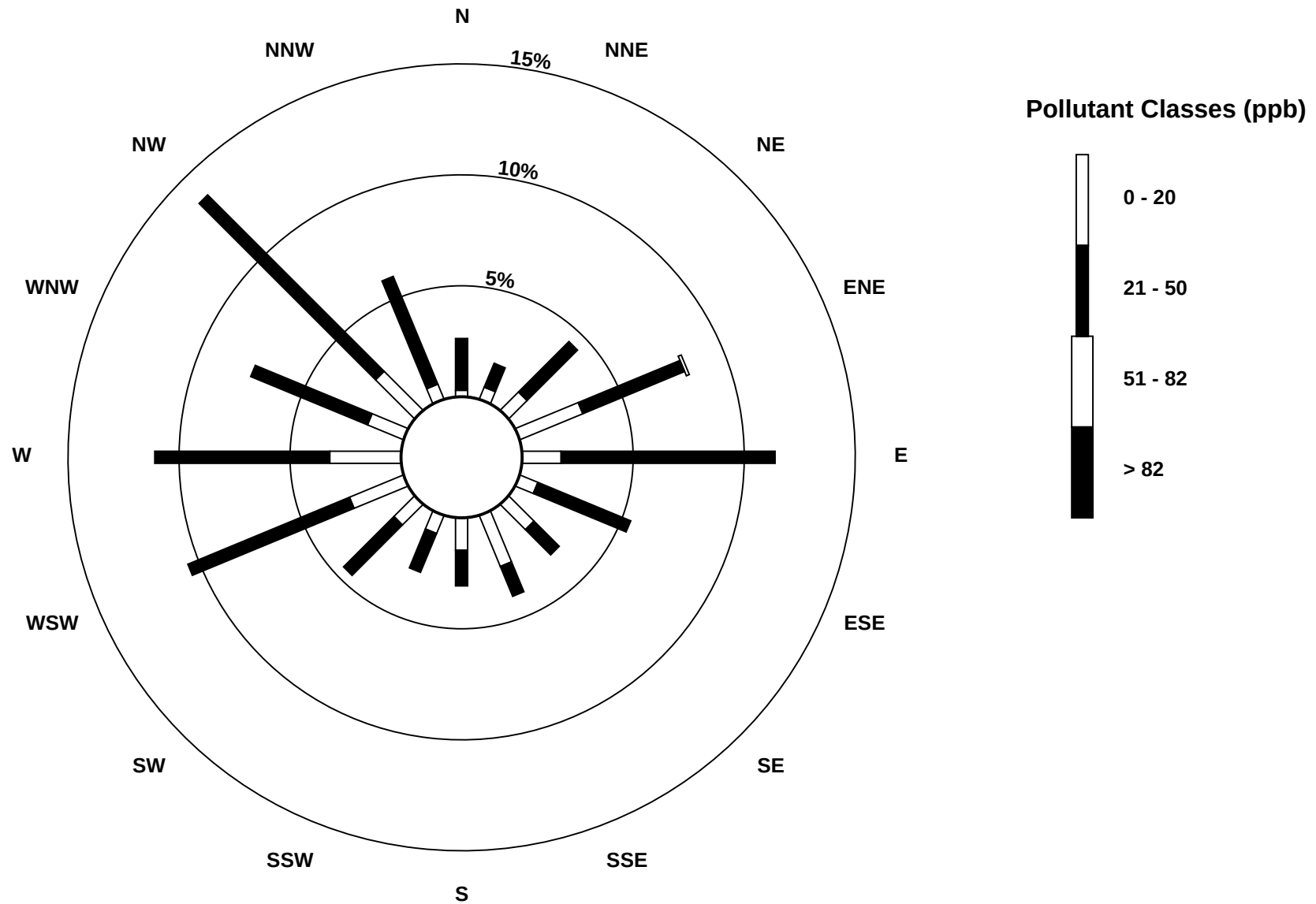
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - June 2013



Pollutant Rose

Ozone (O₃) - ppb
Henry Pirker - June 2013



Eight Hour Running Averages

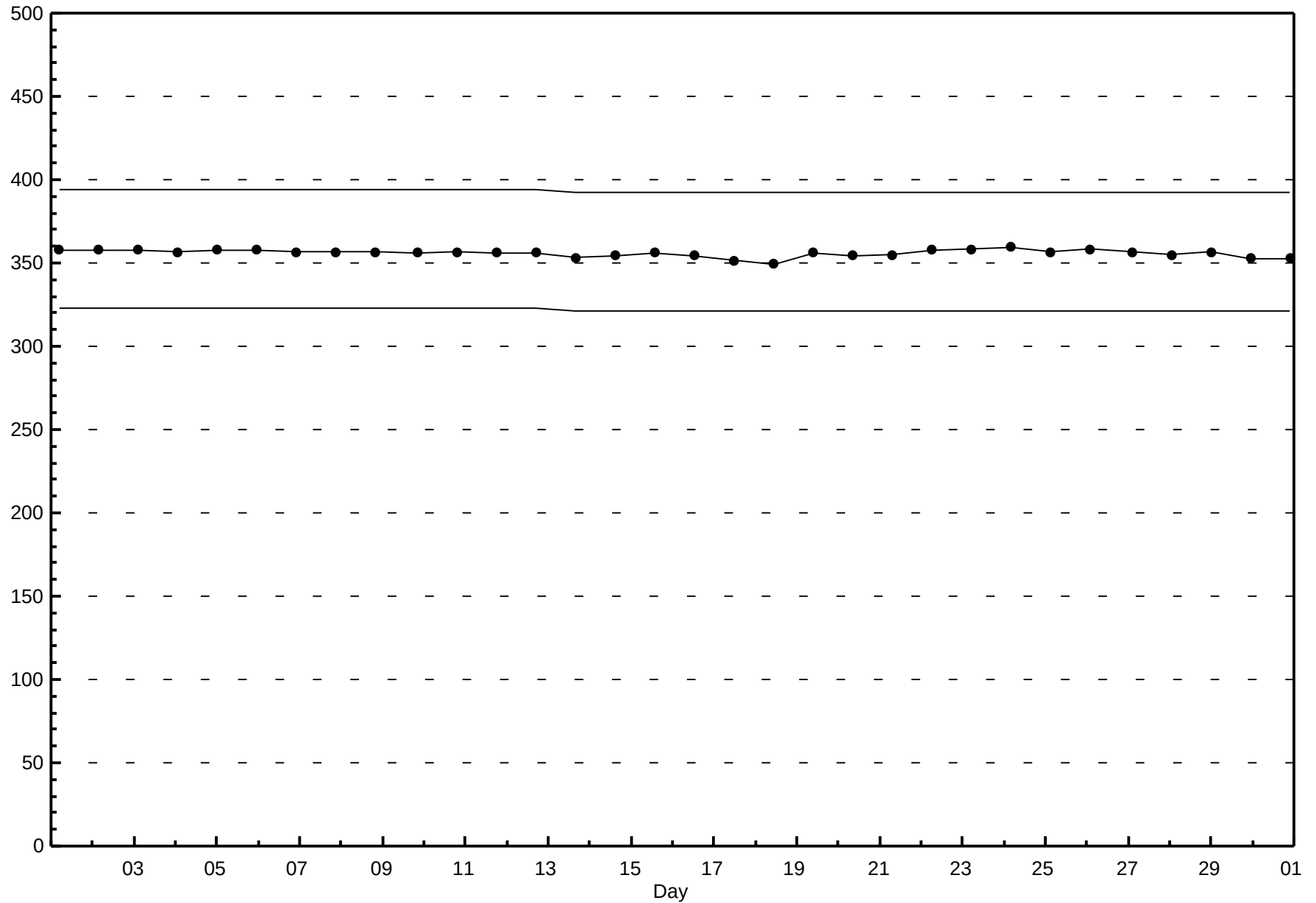
Ozone (O₃) - ppb

Henry Pirker - June 2013

Maximum Value: 48.2 ppb on Jun 23 19:00																								Hours in Service: 720	
Minimum Value: 5.5 ppb on Jun 30 08:00																								Hours of Data: 713	
																								Hours of Missing Data: 7	
Percentiles: P ₁ = 7.6 P ₁₀ = 16.2 Q ₁ = 21.5 Median = 26.3 Q ₃ = 31.7 P ₉₀ = 36.6 P ₉₉ = 44.5																								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-Jun	25	22	20	19	17	16	13	12	14	16	18	20	21	23	26	28	30	31	32	33	33	32	31	31	32.8
2-Jun	30	29	27	26	25	24	23	21	21	22	23	25	27	29	31	33	34	34	34	33	33	32	30	29	34.2
3-Jun	28	26	26	24	23	21	21	20	19	18	18	19	19	19	20	21	23	24	26	26	27	26	26	24	27.9
4-Jun	22	21	18	16	13	10	9	8	8	9	11	14	18	22	25	29	32	34	35	35	34	33	31	28	35.2
5-Jun	27	25	23	21	21	19	19	22	22	23	24	25	28	31	34	35	37	38	39	39	38	37	35	34	39.4
6-Jun	32	30	28	26	25	25	23	24	24	26	28	29	31	33	36	38	40	41	41	41	41	40	39	37	41.5
7-Jun	35	33	31	28	25	23	21	19	17	16	16	16	17	18	20	22	25	27	28	30	31	32	33	33	35.4
8-Jun	33	31	30	28	26	25	24	23	23	23	23	24	26	27	27	27	28	28	28	28	28	27	26	26	32.6
9-Jun	25	24	23	23	23	23	24	24	24	24	24	24	24	25	25	26	27	28	28	29	30	29	28	27	29.6
10-Jun	26	25	25	24	23	21	21	22	23	24	26	27	30	32	33	34	34	33	34	33	32	31	30	29	33.6
11-Jun	27	26	25	24	23	23	22	21	20	20	20	19	19	19	19	20	20	20	20	20	19	18	17	16	27.2
12-Jun	15	15	14	13	12	11	11	11	10	11	11	11	12	14	17	20	21	23	25	27	28	27	25	23	28.0
13-Jun	22	21	19	17	15	14	12	11	11	11	11	12	13	14	N	N	N	N	N	N	N	31	30	29	30.6
14-Jun	28	27	26	25	23	22	21	21	22	23	24	25	26	28	29	30	30	31	32	32	32	31	31	31	32.0
15-Jun	31	30	29	28	28	28	28	28	28	28	29	30	31	31	31	33	34	35	35	35	35	34	34	32	35.2
16-Jun	31	29	27	26	25	24	23	23	24	24	25	26	26	28	30	31	32	34	36	37	37	37	35	33	37.4
17-Jun	29	25	20	16	12	8	7	7	8	11	15	17	21	25	29	32	35	37	36	36	36	35	33	31	36.6
18-Jun	29	27	25	22	18	17	15	15	16	17	17	20	24	27	28	30	31	31	30	28	26	25	23	22	30.7
19-Jun	23	22	22	23	23	22	23	22	21	20	20	21	22	24	26	28	30	29	30	29	29	28	28	27	29.6
20-Jun	27	27	26	26	25	25	24	24	23	23	25	27	29	31	33	35	35	36	37	37	36	35	34	33	36.7
21-Jun	31	29	26	23	20	17	15	14	14	15	18	22	27	31	35	36	39	40	41	40	40	39	38	36	40.6
22-Jun	34	32	30	26	24	22	21	21	21	23	27	31	34	37	38	41	43	44	44	45	45	44	41	37	45.1
23-Jun	33	28	24	19	14	11	10	10	12	15	20	26	33	35	40	43	46	48	48	48	46	45	43	41	48.2
24-Jun	39	37	35	32	31	28	25	24	23	24	25	27	29	32	35	37	39	40	40	40	40	39	38	37	40.4
25-Jun	35	34	32	31	29	27	25	24	23	23	23	24	26	28	31	32	34	35	36	36	35	33	32	31	36.0
26-Jun	30	29	29	28	28	27	25	23	21	19	18	17	17	17	18	18	20	22	23	25	25	24	23	23	29.9
27-Jun	22	21	20	19	19	19	21	21	22	23	24	25	27	28	29	31	32	33	34	34	34	33	31	29	33.9
28-Jun	28	26	25	23	22	22	22	22	23	23	24	25	27	29	30	32	34	35	37	37	37	37	36	36	37.5
29-Jun	34	32	28	25	22	19	17	17	16	16	17	19	21	23	26	27	29	30	31	31	30	29	29	26	34.0
30-Jun	24	19	15	12	9	6	6	5	6	9	14	18	23	28	32	37	40	42	42	42	40	40	38	35	42.3
39.4 37.5 35.1 32.1 30.6 28.4 28.2 27.9 28.1 28.5 29.1 31.3 34.2 37.2 39.5 43.5 46.2 47.8 48.2 47.6 46.4 44.7 43.0 41.1																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - June 2013



Hourly Averages

Carbon Monoxide (CO) - ppm

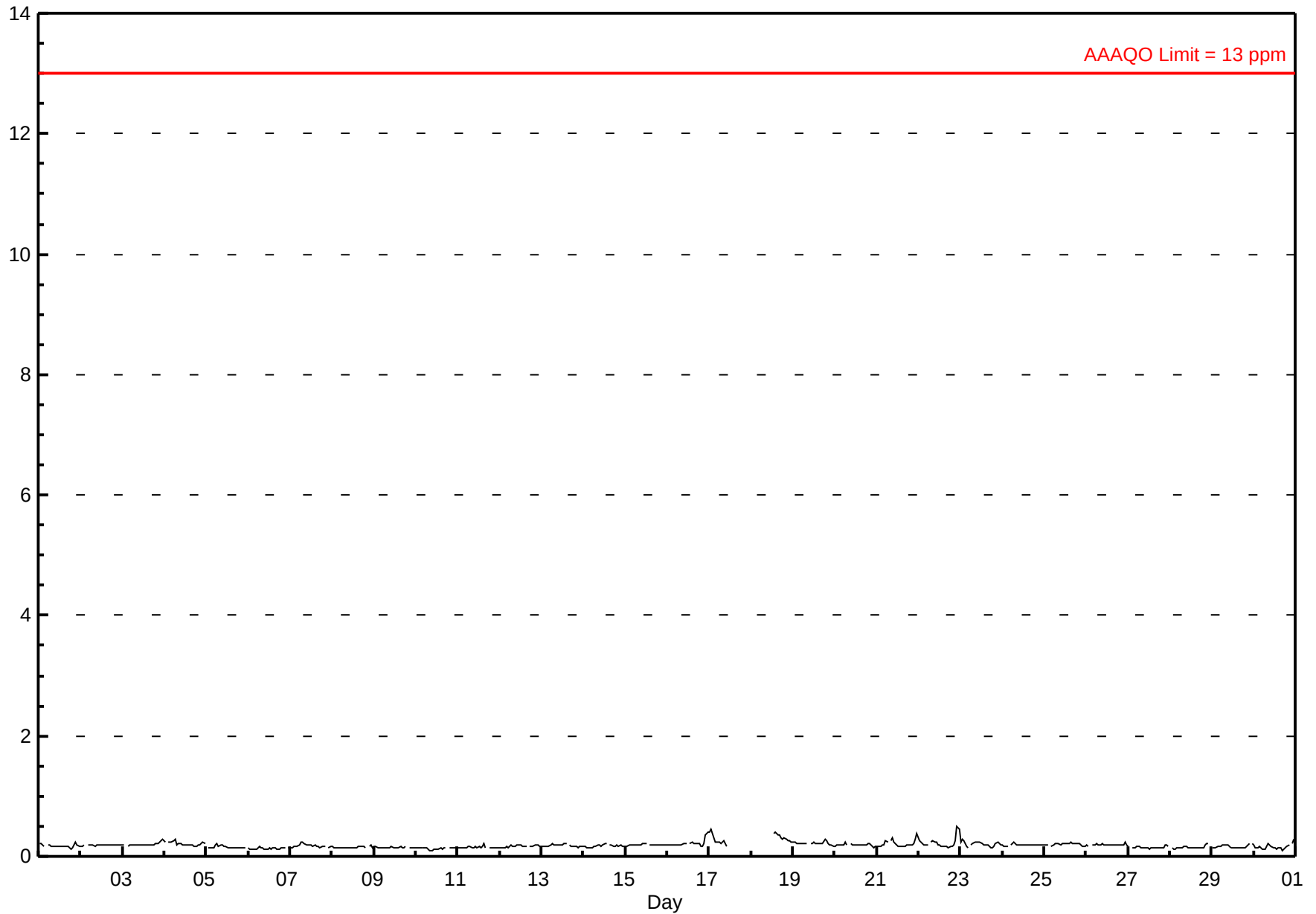
Henry Pirker - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.49 ppm on Jun 22 23:00 Maximum Daily Average: 0.23 ppm on Jun 22																				Hours in Service: 720 Hours of Data: 665 Hours of Missing Data: 55 Hours of Calibration: 39 Percent Operational Time: 97.8						
Minimum Value: 0.1 ppm on Jun 10 09:00 Maximum Diurnal Average: 0.21 ppm at hour 23 Monthly Average: 0.183 ppm										Minimum Daily Average: 0.13 ppm on Jun 6 Minimum Diurnal Average: 0.17 ppm at hour 4 Percentiles: P ₁ = 0.11 P ₁₀ = 0.14 Q ₁ = 0.15 Median = 0.18 Q ₃ = 0.20 P ₉₀ = 0.23 P ₉₉ = 0.38																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	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	0.1	0.1	0.2	0.2	0.2	0.2	0.18	0.24
2-Jun	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	0.2	0.2	0.19	0.20
3-Jun	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	0.2	0.3	0.3	0.20	0.28
4-Jun	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	0.2	0.21	0.29
5-Jun	A	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	A	0.16	0.20
6-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.1	0.13	0.17
7-Jun	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	0.2	0.2	A	0.2	0.2	0.18	0.24
8-Jun	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	A	0.2	0.2	0.2	0.15	0.18
9-Jun	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	A	0.1	0.1	0.1	0.1	0.15	0.16
10-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.2	0.1	0.13	0.15
11-Jun	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.1	0.16	0.20
12-Jun	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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.20
13-Jun	0.2	0.2	0.2	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	0.18	0.23
14-Jun	0.2	0.2	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
15-Jun	0.2	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	0.2	0.19	0.22
16-Jun	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	0.4	0.4	0.21	0.41
17-Jun	0.4	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	A	0.2	C	C	C	N	N	N	N	N	N	N	N	--	0.46
18-Jun	N	N	N	N	N	N	N	N	C	C	C	C	C	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	--	0.40
19-Jun	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	0.3	0.3	0.2	0.2	0.2	0.2	0.22	0.27
20-Jun	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	0.2	0.2	0.1	0.2	0.19	0.23
21-Jun	0.2	0.2	0.2	0.2	0.2	0.3	0.2	A	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	0.3	0.4	0.21	0.38
22-Jun	0.3	0.2	0.2	0.2	0.2	0.2	A	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	0.3	0.5	0.4	0.23	0.49
23-Jun	0.2	0.3	0.3	0.2	0.1	A	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	0.2	0.2	0.2	0.2	0.2	0.20	0.28
24-Jun	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	0.2	0.19	0.23
25-Jun	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	0.2	0.2	0.20	0.24
26-Jun	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	0.2	0.2	0.2	0.19	0.24
27-Jun	0.2	A	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.15	0.20
28-Jun	A	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	A	0.16	0.22
29-Jun	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	A	0.2	0.16	0.22
30-Jun	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.2	0.3	0.16	0.28
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration N - Not Valid A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na																										

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - June 2013



Hourly Maximums

Carbon Monoxide (CO) - ppm

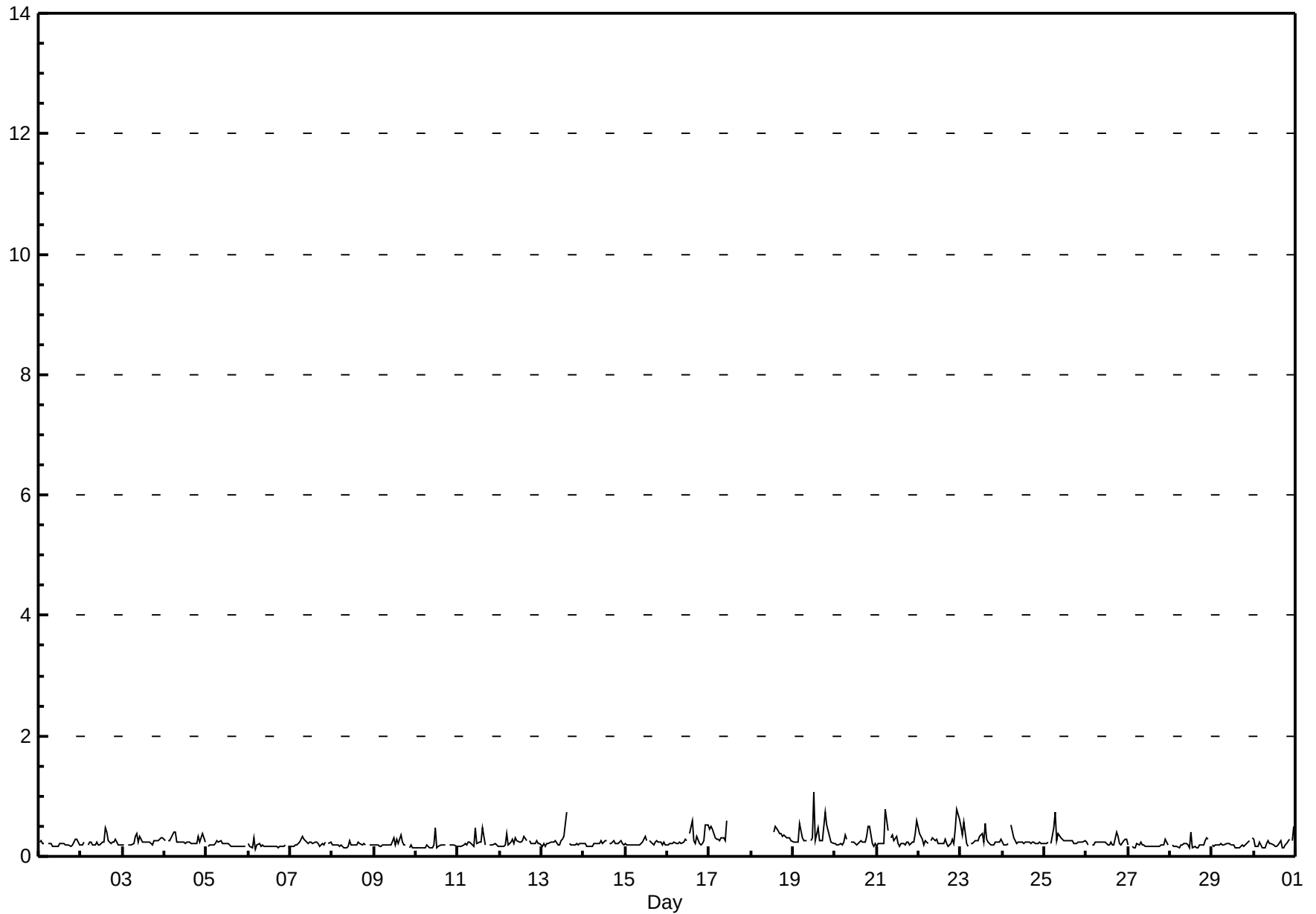
Henry Pirker - June 2013

Maximum Value: 1.06 ppm on Jun 19 13:00																					Maximum Daily Average: 0.36 ppm on Jun 19				Hours in Service: 720	
Minimum Value: 0.1 ppm on Jun 6 05:00																					Minimum Daily Average: 0.18 ppm on Jun 6				Hours of Data: 665	
Maximum Diurnal Average: 0.29 ppm at hour 15																					Minimum Diurnal Average: 0.21 ppm at hour 4				Hours of Missing Data: 55	
Monthly Average: 0.240 ppm																					Percentiles: P ₁ = 0.15 P ₁₀ = 0.16 Q ₁ = 0.19 Median = 0.21 Q ₃ = 0.25 P ₉₀ = 0.33 P ₉₉ = 0.59				Hours of Calibration: 39	
																					Percent Operational Time: 97.8					
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-Jun	0.2	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.21	0.28
2-Jun	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	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.23	0.47
3-Jun	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.25	0.37
4-Jun	0.3	A	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.2	0.26	0.41
5-Jun	A	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.19	0.27
6-Jun	0.2	0.2	0.1	0.3	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	A	0.2	0.18	0.31
7-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.22	0.32
8-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	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	0.19	0.27
9-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.20	0.35
10-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.5	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	0.46
11-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2	0.2	0.5	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.46
12-Jun	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.24	0.38
13-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.7	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24	0.73
14-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	A	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.21	0.27
15-Jun	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	A	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.22	0.34
16-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	A	0.4	0.6	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.5	0.5	0.28	0.59
17-Jun	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	A	0.6	C	C	C	N	N	N	N	N	N	N	N	--	0.61
18-Jun	N	N	N	N	N	N	N	N	C	C	C	C	C	0.4	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	--	0.49
19-Jun	0.2	0.2	0.2	0.2	0.5	0.3	0.3	0.3	0.3	A	0.3	0.3	1.1	0.3	0.5	0.3	0.3	0.3	0.7	0.5	0.4	0.3	0.2	0.2	0.36	1.06
20-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.5	0.5	0.2	0.2	0.2	0.26	0.49
21-Jun	0.2	0.2	0.2	0.2	0.2	0.8	0.4	A	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.6	0.29	0.78
22-Jun	0.4	0.3	0.3	0.2	0.3	0.2	A	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.5	0.8	0.6	0.30	0.79
23-Jun	0.5	0.4	0.6	0.2	0.2	A	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.2	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.29	0.56
24-Jun	0.2	0.2	0.2	0.2	A	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24	0.53
25-Jun	0.2	0.2	0.2	A	0.2	0.5	0.7	0.3	0.4	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	0.3	0.28	0.73
26-Jun	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	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.24	0.41
27-Jun	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	0.2	0.3	0.2	0.2	0.18	0.29
28-Jun	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	A	0.20	0.40
29-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.19	0.30
30-Jun	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.2	0.2	0.3	A	0.3	0.5	0.21	0.50
0.23 0.21 0.22 0.21 0.21 0.26 0.26 0.23 0.24 0.22 0.25 0.24 0.27 0.23 0.29 0.24 0.21 0.22 0.24 0.24 0.24 0.24 0.25 0.27 0.27																										Diurnal Average
0.49 0.51 0.56 0.31 0.54 0.78 0.73 0.33 0.39 0.36 0.60 0.46 1.06 0.41 0.73 0.42 0.38 0.41 0.75 0.52 0.49 0.45 0.79 0.61																										Diurnal Maximum
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Maximums

Carbon Monoxide (CO) - ppm

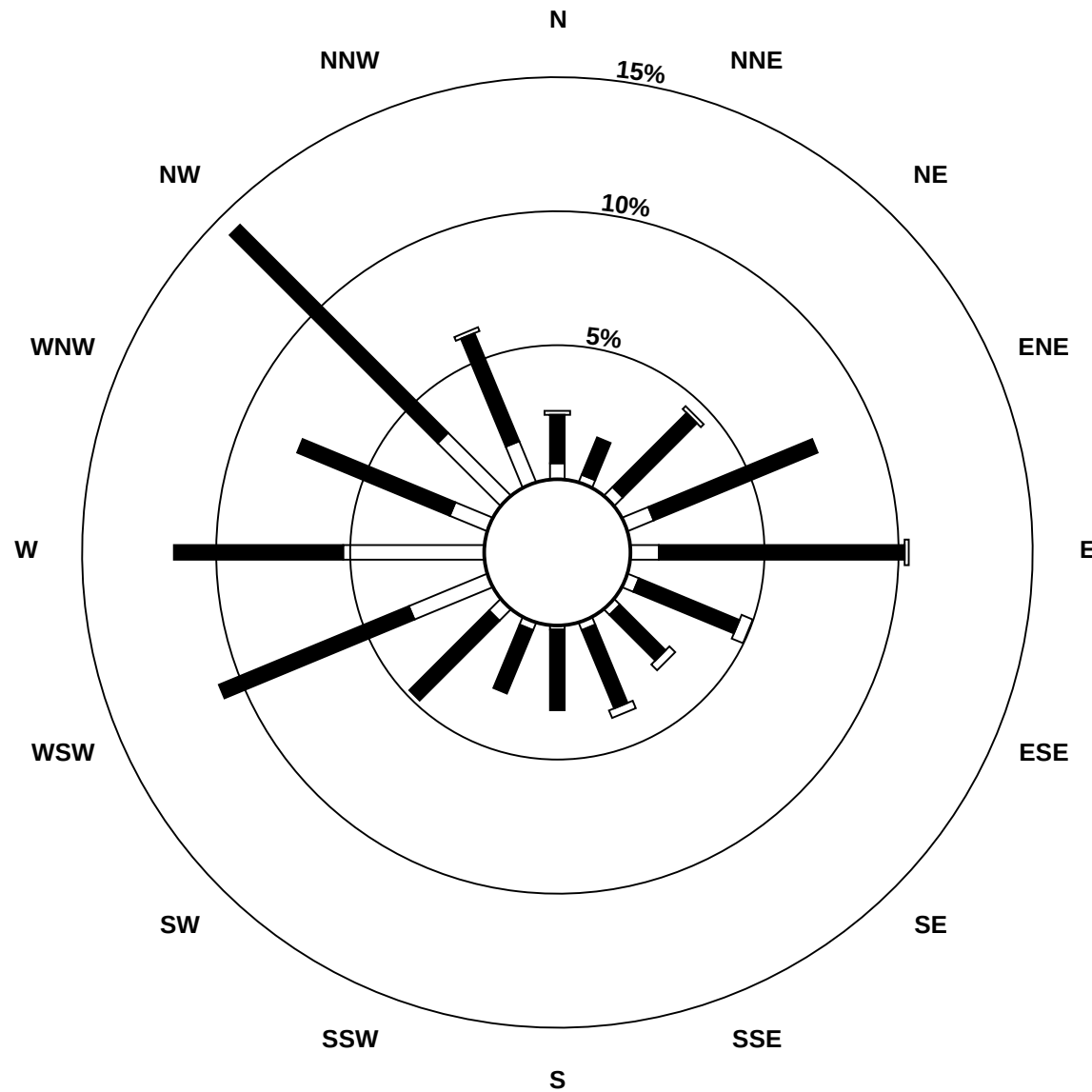
Henry Pirker - June 2013



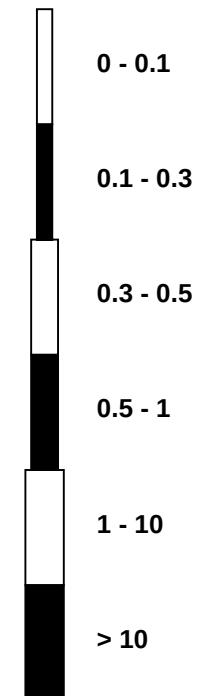
Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - June 2013



Pollutant Classes (ppm)



Eight Hour Running Averages

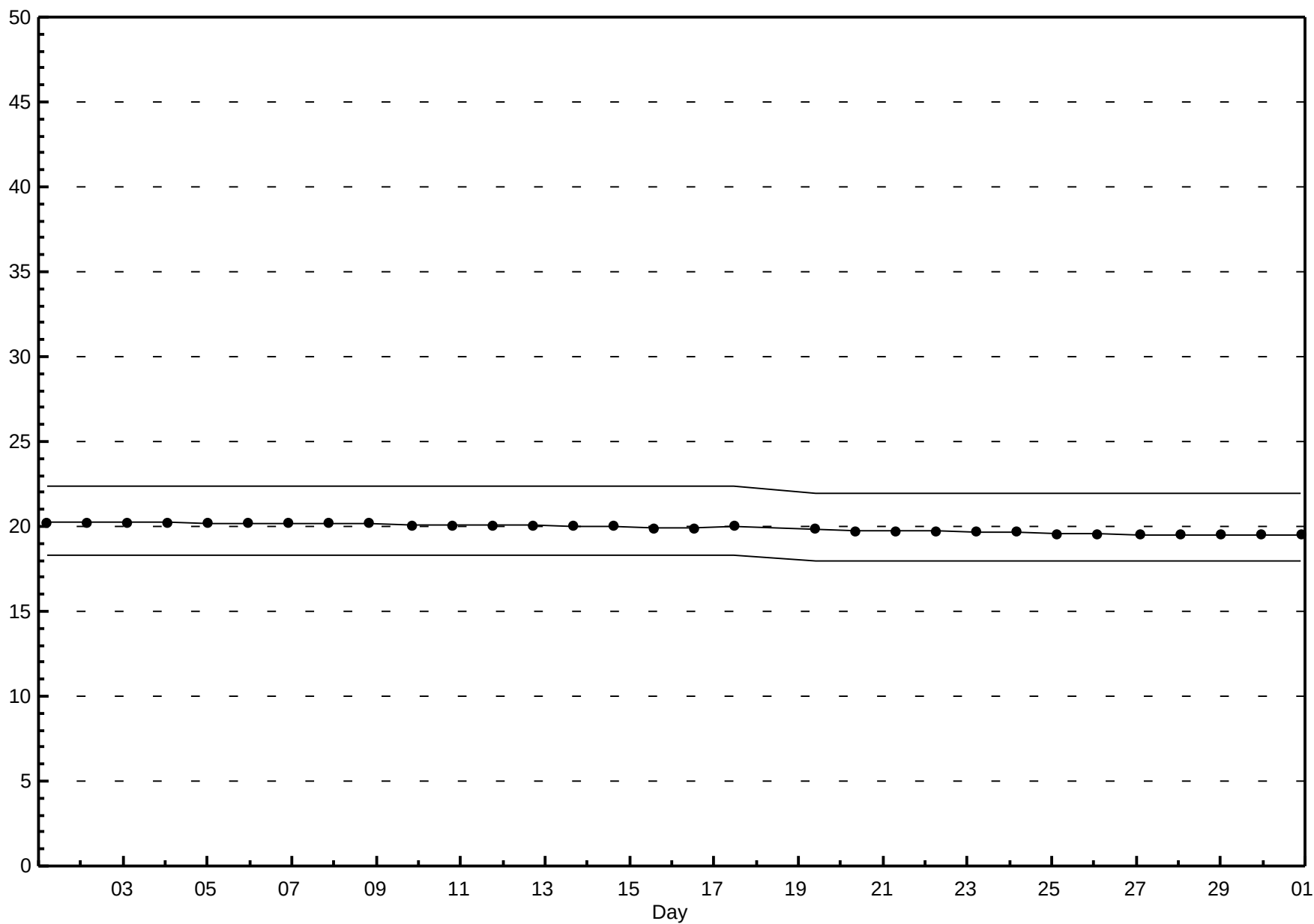
Carbon Monoxide (CO) - ppm

Henry Pirker - June 2013

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.35 ppm on Jun 18 19:00																								Hours in Service: 720	
Minimum Value: 0.12 ppm on Jun 10 16:00																								Hours of Data: 692	
Percentiles: P ₁ = 0.13 P ₁₀ = 0.14 Q ₁ = 0.16 Median = 0.18 Q ₃ = 0.20 P ₉₀ = 0.22 P ₉₉ = 0.32																								Hours of Missing Data: 28	
																								Hours of Calibration: 12	
																								Percent Operational Time: 97.8	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
2-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
3-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
4-Jun	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	0.2	0.2	0.2	0.2	0.2	0.25
5-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.20
6-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
7-Jun	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	0.2	0.2	0.2	0.20
8-Jun	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16
9-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.16
10-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
11-Jun	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
12-Jun	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18
13-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
14-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
15-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
16-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
17-Jun	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	N	N	N	N	N	N	N	N	N	N	0.34
18-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.3	0.3	0.3	0.3	0.3	0.3	0.35
19-Jun	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.28
20-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
21-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
22-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.25
23-Jun	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.29
24-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
25-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
26-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
27-Jun	0.2	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	0.2	0.2	0.19
28-Jun	0.2	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	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.17
29-Jun	0.2	0.2	0.2	0.2	0.2	0.2	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	0.2	0.2	0.2	0.18
30-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.18
0.28 0.30 0.32 0.33 0.34 0.34 0.33 0.30 0.28 0.25 0.24 0.24 0.24 0.23 0.22 0.22 0.22 0.22 0.35 0.34 0.34 0.32 0.30 0.29																									
Diurnal Maximums																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

Span Responses

Carbon Monoxide (CO)
Henry Pirker - June 2013



Hourly Averages

Total Hydrocarbons (THC) - ppm

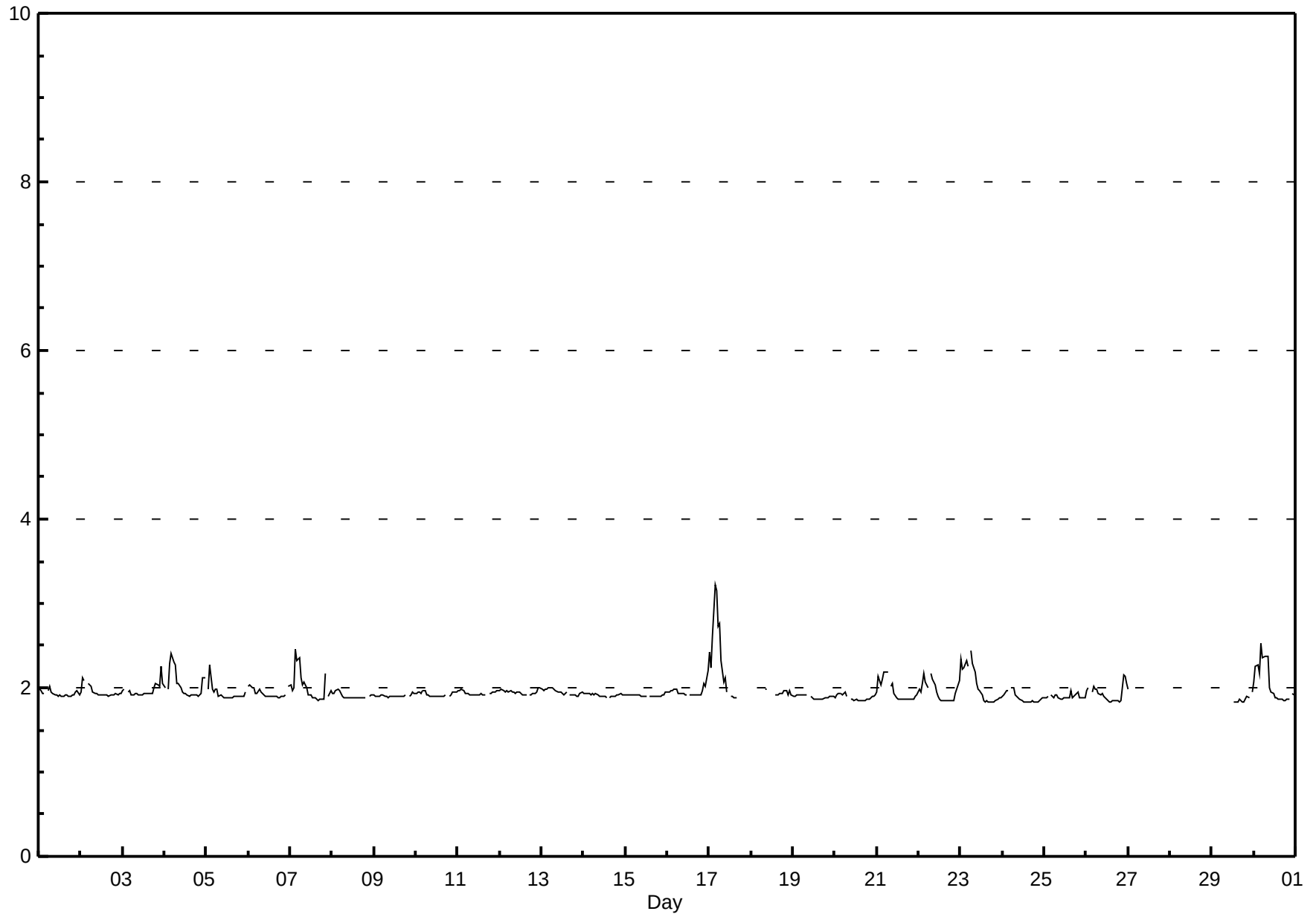
Henry Pirker - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.21 ppm on Jun 17 04:00 Maximum Daily Average: 2.05 ppm on Jun 30																								Hours in Service: 720 Hours of Data: 615 Hours of Missing Data: 105 Hours of Calibration: 33 Percent Operational Time: 90.0		
Minimum Value: 1.8 ppm on Jun 29 16:00 Maximum Diurnal Average: 2.09 ppm at hour 5 Monthly Average: 1.951 ppm												Minimum Daily Average: 1.88 ppm on Jun 24 Minimum Diurnal Average: 1.88 ppm at hour 15 Percentiles: P ₁ = 1.83 P ₁₀ = 1.86 Q ₁ = 1.89 Median = 1.92 Q ₃ = 1.96 P ₉₀ = 2.05 P ₉₉ = 2.47														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	2.0	2.0	1.9	1.9	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.93	2.02
2-Jun	1.9	2.1	2.1	A	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.12
3-Jun	2.0	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.0	2.0	2.3	2.1	1.97	2.25
4-Jun	2.0	A	2.0	2.3	2.4	2.3	2.3	2.0	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	2.1	2.1	2.03	2.41
5-Jun	A	2.0	2.3	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.93	2.26
6-Jun	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.93	2.03
7-Jun	2.0	2.0	2.0	2.5	2.3	2.4	2.1	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	A	1.9	2.0	2.01	2.46
8-Jun	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.90	1.98
9-Jun	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	1.9	1.90	1.95
10-Jun	1.9	1.9	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.92	1.97
11-Jun	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.9	2.0	2.0	1.94	1.98
12-Jun	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	A	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.95	2.00
13-Jun	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.95	2.01
14-Jun	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
15-Jun	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	1.94
16-Jun	1.9	1.9	2.0	2.0	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	1.9	2.0	2.1	2.0	2.2	1.96	2.20
17-Jun	2.4	2.2	2.6	3.2	3.2	2.7	2.8	2.3	2.1	2.1	1.9	A	1.9	1.9	1.9	1.9	1.9	N	N	N	N	N	N	N	--	3.21
18-Jun	N	N	N	N	N	N	N	N	N	2.0	2.0	A	C	C	C	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	1.9	--	1.99
19-Jun	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	1.9	1.89	1.92
20-Jun	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	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.88	1.94
21-Jun	2.0	2.1	2.0	2.1	2.2	2.2	2.2	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.18
22-Jun	2.0	2.0	2.1	2.2	2.1	2.0	A	2.2	2.1	2.0	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.1	1.96	2.18
23-Jun	2.3	2.2	2.2	2.3	2.2	A	2.4	2.3	2.2	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.02	2.44
24-Jun	1.9	1.9	2.0	2.0	A	2.0	2.0	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	1.9	1.9	1.9	1.88	2.00
25-Jun	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	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.96
26-Jun	2.0	2.0	A	1.9	2.0	2.0	2.0	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	1.9	2.1	2.1	2.1	1.93	2.15
27-Jun	2.0	A	1.9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	1.98
28-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
29-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	A	2.0	--	1.95
30-Jun	2.1	2.3	2.3	2.2	2.5	2.4	2.4	2.4	2.4	2.0	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	2.05	2.53
1.99 2.00 2.03 2.08 2.09 2.04 2.05 1.99 1.98 1.95 1.91 1.90 1.89 1.88 1.88 1.88 1.89 1.88 1.89 1.90 1.91 1.93 1.96 1.96																								Diurnal Average		
2.43 2.25 2.62 3.21 3.16 2.73 2.76 2.38 2.38 2.11 1.98 1.97 1.93 1.93 1.96 1.96 1.93 1.94 2.00 2.05 2.17 2.15 2.25 2.20																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - June 2013

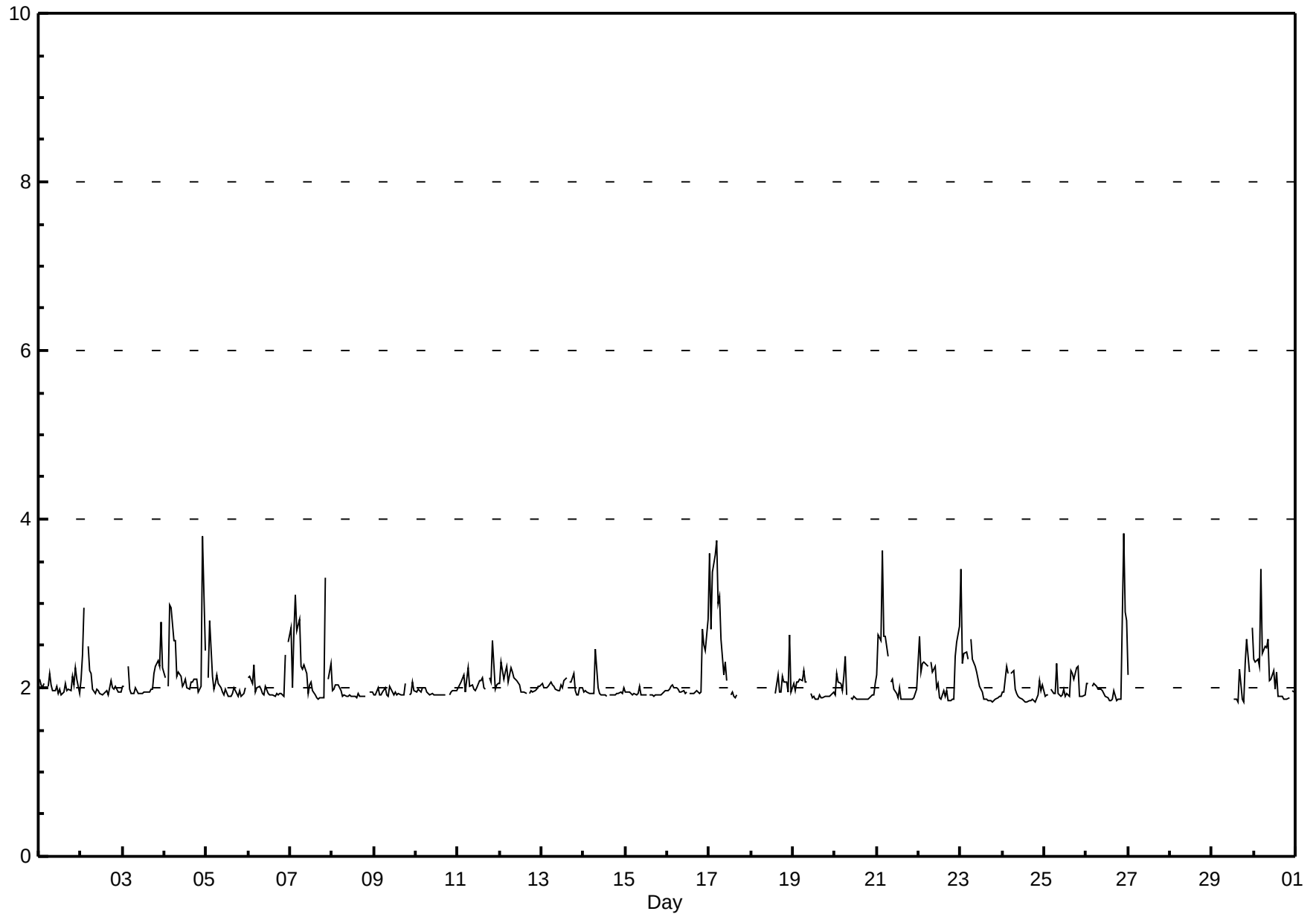


FOCUS
AIR QUALITY MONITORING

Hourly Maximums

Total Hydrocarbons (THC) - ppm

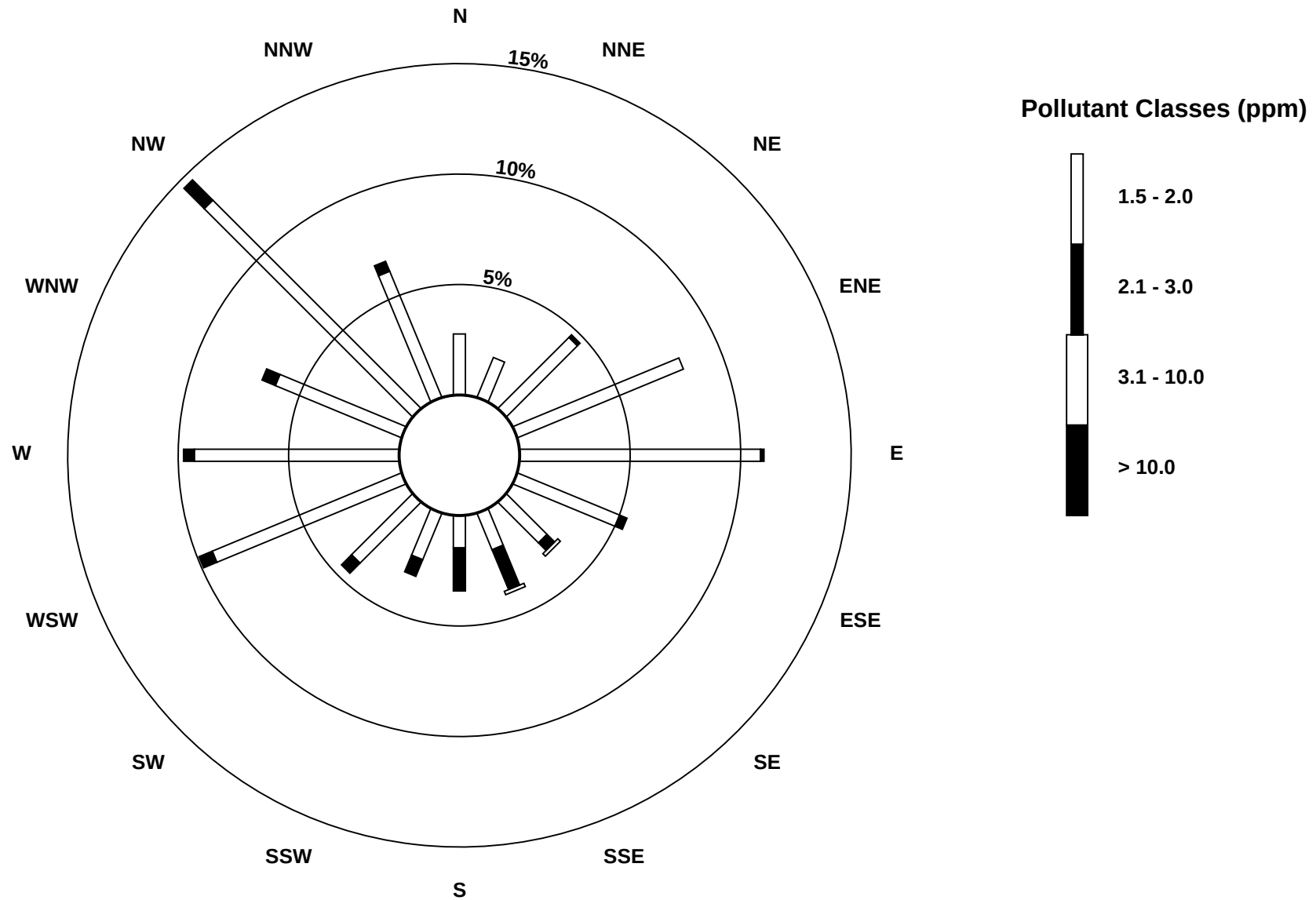
Henry Pirker - June 2013



Pollutant Rose

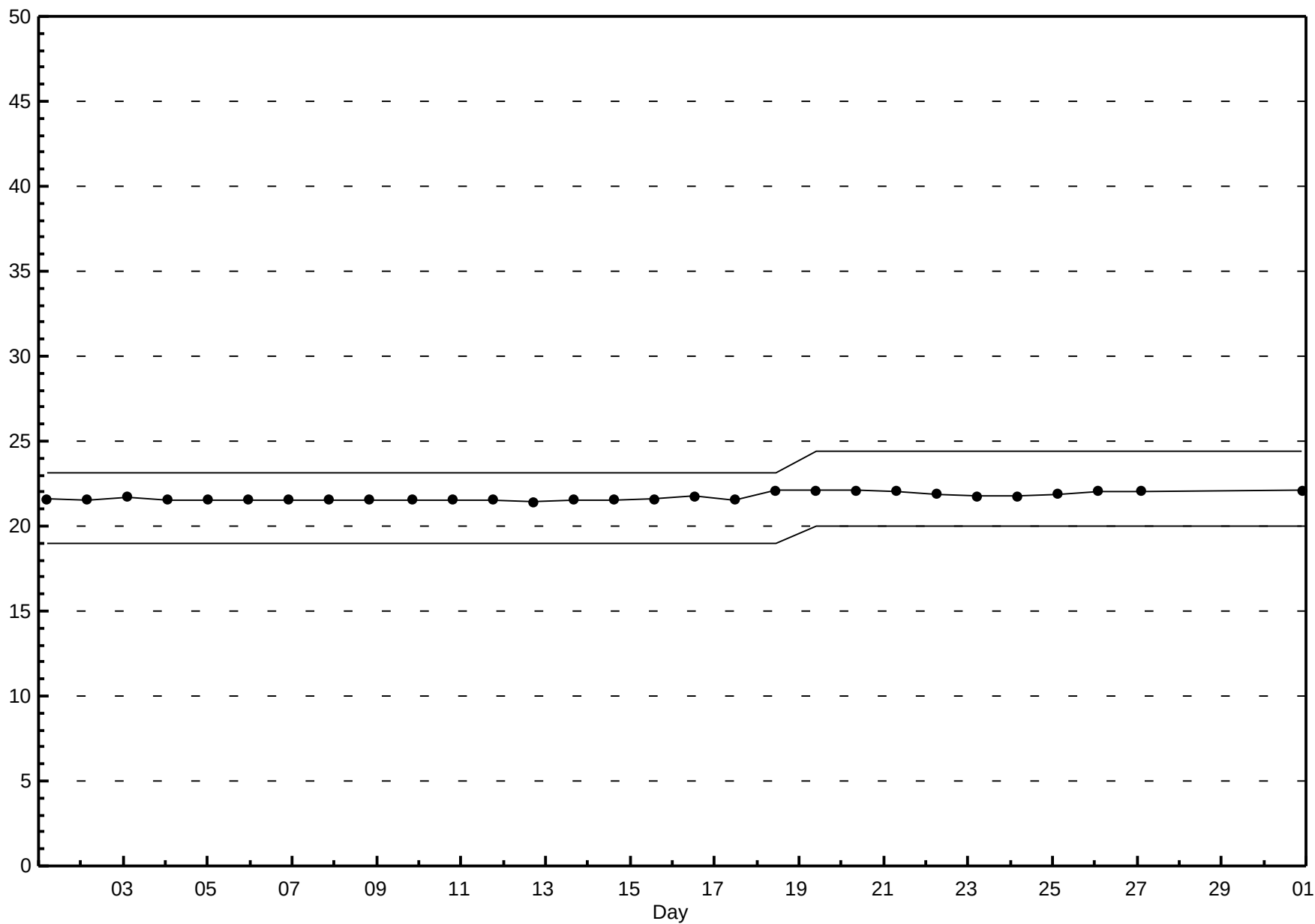
Total Hydrocarbons (THC) - ppm

Henry Pirker - June 2013



Span Responses

Total Hydrocarbons (THC)
Henry Pirker - June 2013



Hourly Averages

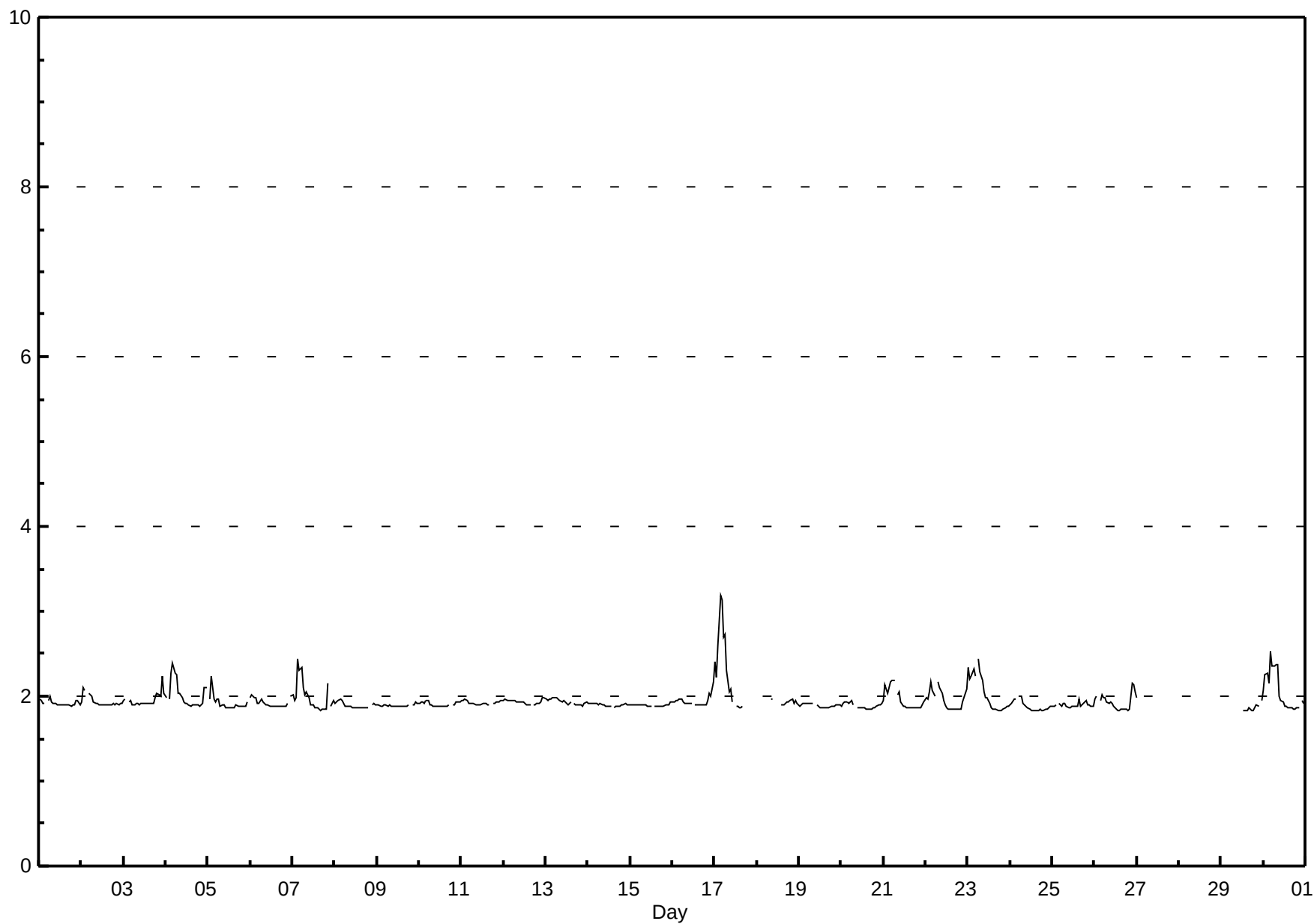
Methane (CH₄) - ppm

Henry Pirker - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.18 ppm on Jun 17 04:00 Maximum Daily Average: 2.05 ppm on Jun 30																								Hours in Service: 720 Hours of Data: 615 Hours of Missing Data: 105 Hours of Calibration: 33 Percent Operational Time: 90.0		
Minimum Value: 1.8 ppm on Jun 29 16:00 Minimum Daily Average: 1.88 ppm on Jun 24 Maximum Diurnal Average: 2.08 ppm at hour 5 Minimum Diurnal Average: 1.88 ppm at hour 15 Monthly Average: 1.942 ppm Percentiles: P ₁ = 1.83 P ₁₀ = 1.86 Q ₁ = 1.88 Median = 1.91 Q ₃ = 1.95 P ₉₀ = 2.04 P ₉₉ = 2.48																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	2.0	2.0	1.9	1.9	A	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.92	2.00
2-Jun	1.9	2.1	2.1	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.10
3-Jun	2.0	2.0	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	2.0	2.0	2.0	2.0	2.2	2.0	1.95	2.23
4-Jun	2.0	A	2.0	2.3	2.4	2.3	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	1.9	1.9	2.1	2.1	2.01	2.39
5-Jun	A	2.0	2.2	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.92	2.24
6-Jun	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.92	2.01
7-Jun	2.0	2.0	2.0	2.4	2.3	2.3	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	2.2	A	1.9	1.9	1.99	2.44
8-Jun	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.89	1.96
9-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.89	1.94
10-Jun	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.91	1.95
11-Jun	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.97
12-Jun	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.93	1.98
13-Jun	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	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	1.99
14-Jun	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	1.90	1.92
15-Jun	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	1.89	1.93
16-Jun	1.9	1.9	2.0	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	1.9	1.9	2.0	2.0	2.2	1.94	2.17
17-Jun	2.4	2.2	2.6	3.2	3.1	2.7	2.7	2.3	2.0	2.1	1.9	A	1.9	1.9	1.9	1.9	1.9	N	N	N	N	N	N	N	--	3.18
18-Jun	N	N	N	N	N	N	N	N	2.0	2.0	A	C	C	C	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	1.9	--	1.97
19-Jun	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	1.9	1.9	1.89	1.92
20-Jun	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	1.9	1.9	1.89	1.95
21-Jun	2.0	2.1	2.0	2.1	2.2	2.2	2.2	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.18
22-Jun	2.0	2.0	2.1	2.2	2.1	2.0	A	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.1	1.96	2.17
23-Jun	2.3	2.2	2.2	2.3	2.2	A	2.4	2.3	2.2	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.02	2.44
24-Jun	1.9	1.9	2.0	2.0	A	2.0	2.0	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	1.9	1.9	1.9	1.88	2.00
25-Jun	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	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.96
26-Jun	2.0	2.0	A	1.9	2.0	2.0	2.0	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	1.9	2.2	2.1	2.1	1.93	2.15
27-Jun	2.0	A	1.9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	1.98
28-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
29-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	A	2.0	--	1.96
30-Jun	2.1	2.3	2.3	2.2	2.5	2.4	2.4	2.4	2.4	2.0	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	2.05	2.53
1.98 1.99 2.02 2.07 2.08 2.03 2.04 1.98 1.96 1.94 1.91 1.89 1.88 1.88 1.88 1.88 1.88 1.88 1.88 1.88 1.89 1.91 1.92 1.95 1.95																								Diurnal Average		
2.40 2.25 2.59 3.18 3.13 2.70 2.74 2.38 2.38 2.09 1.98 1.97 1.92 1.91 1.94 1.96 1.92 1.93 1.98 2.03 2.15 2.15 2.23 2.17																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

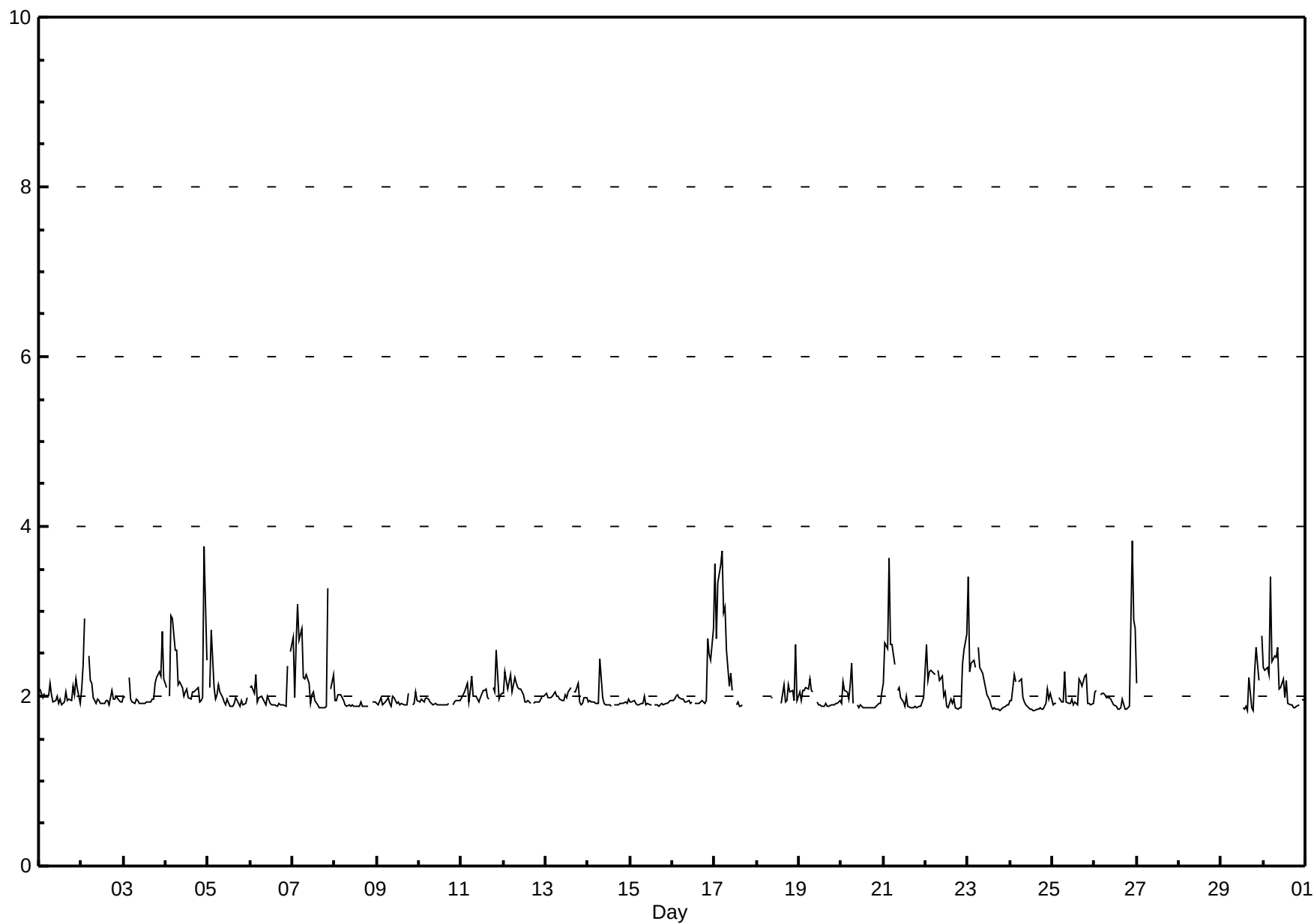
Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - June 2013



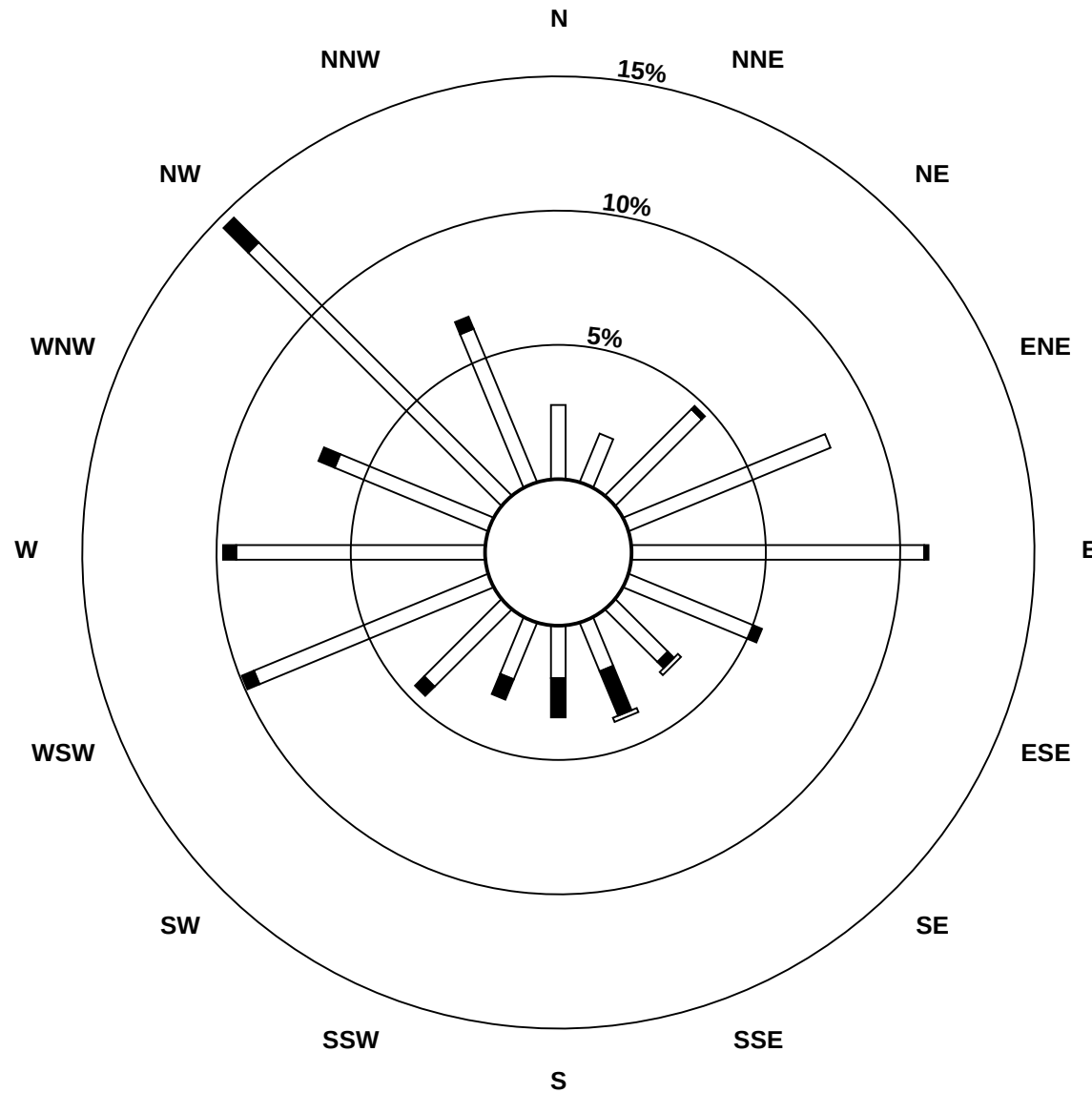
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - June 2013



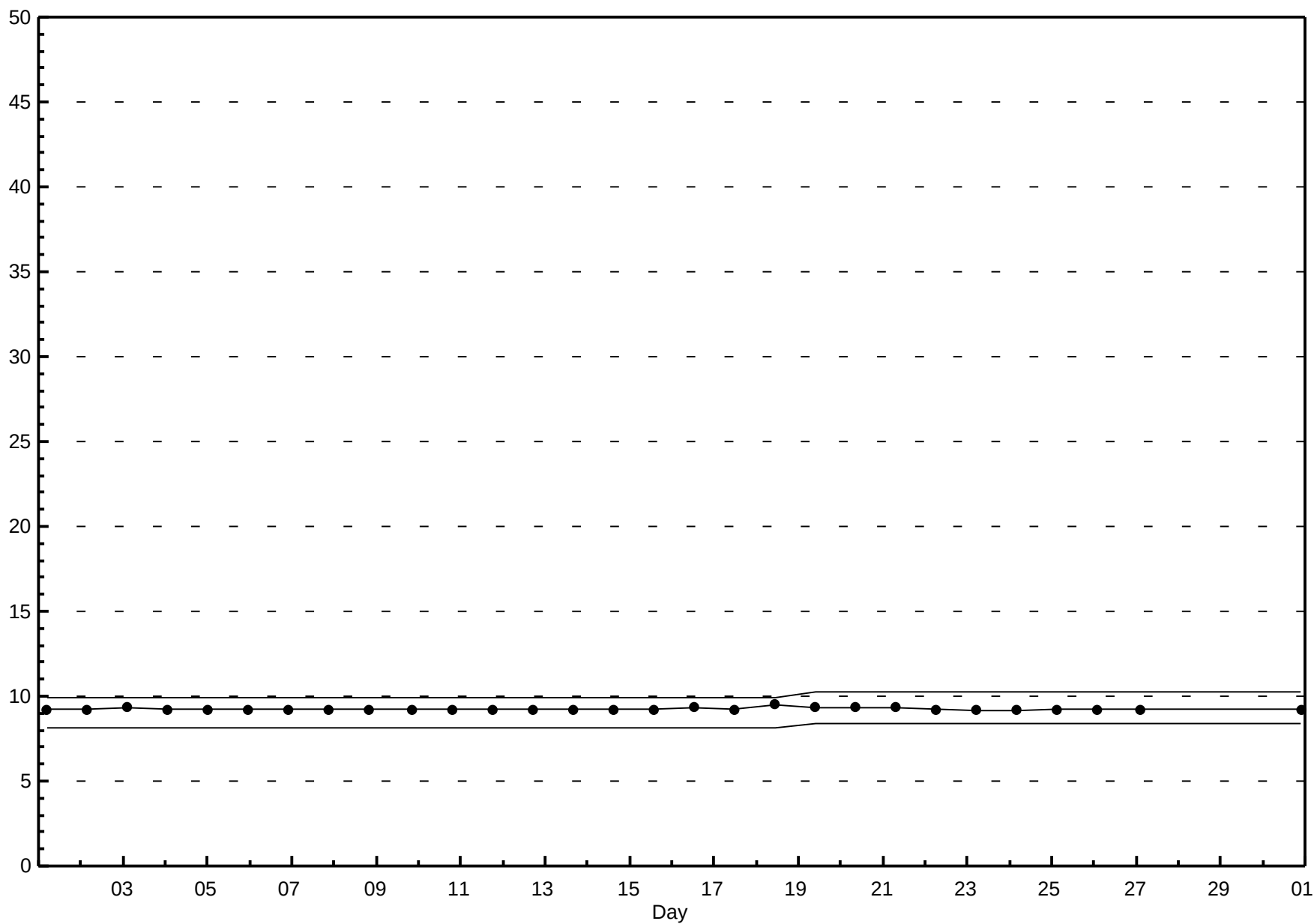
Pollutant Rose

Methane (CH₄) - ppm
Henry Pirker - June 2013



Span Responses

Methane (CH₄)
Henry Pirker - June 2013

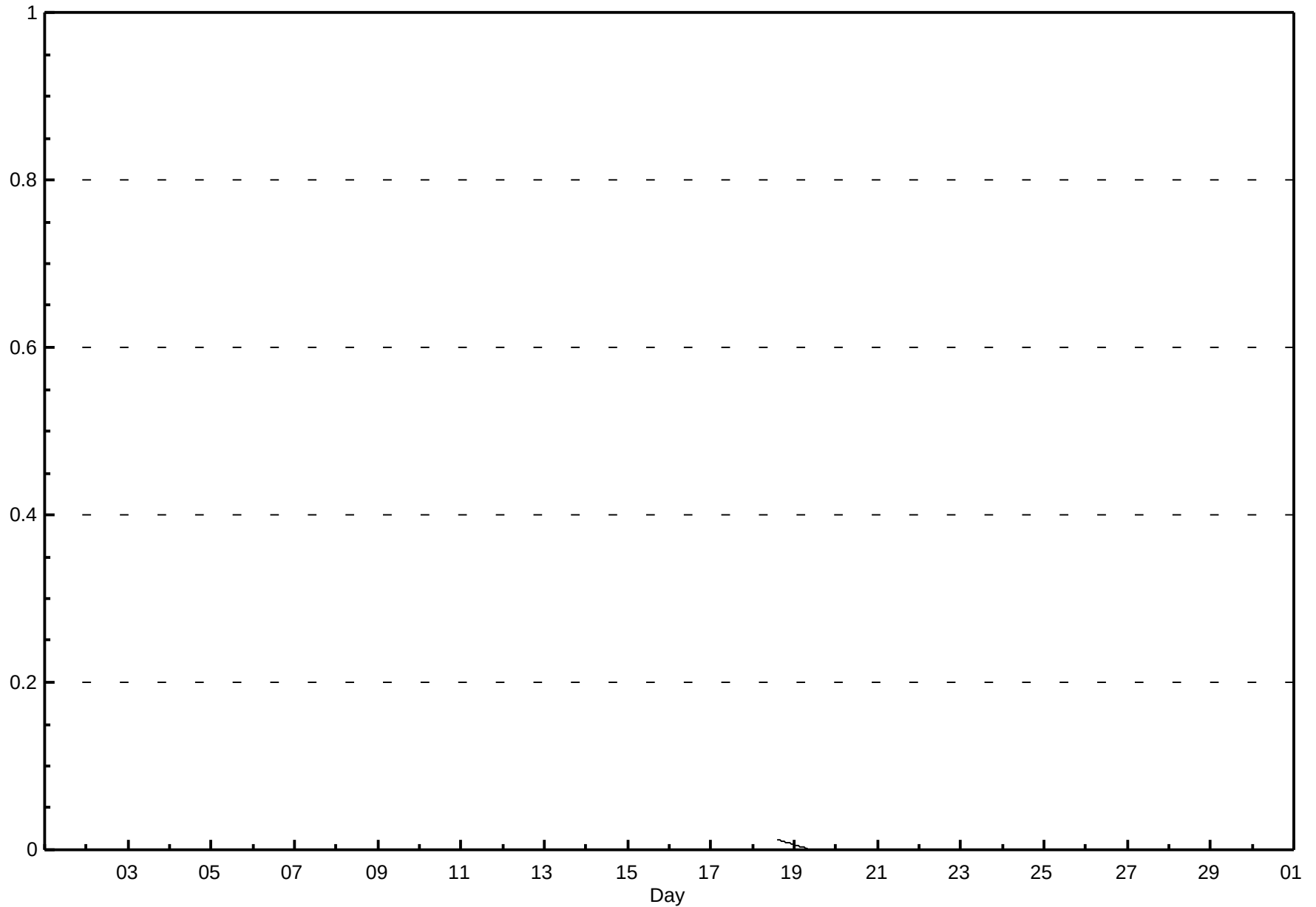


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.01 ppm on Jun 18 15:00 Maximum Daily Average: 0.00 ppm on Jun 19																								Hours in Service: 720 Hours of Data: 615 Hours of Missing Data: 105 Hours of Calibration: 33 Percent Operational Time: 90.0		
Minimum Value: 0.0 ppm on Jun 1 01:00 Maximum Diurnal Average: 0.00 ppm at hour 15 Monthly Average: 0.000 ppm												Minimum Daily Average: 0.00 ppm on Jun 6 Minimum Diurnal Average: 0.00 ppm at hour 13 Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.01														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	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	0.0	0.00	0.00
2-Jun	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
3-Jun	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
4-Jun	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
5-Jun	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
6-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.00	0.00
7-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.00
8-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
9-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
10-Jun	0.0	0.0	0.0	0.0	0.0	0.0	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
11-Jun	0.0	0.0	0.0	0.0	0.0	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
12-Jun	0.0	0.0	0.0	0.0	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
13-Jun	0.0	0.0	0.0	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
14-Jun	0.0	0.0	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
15-Jun	0.0	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	0.00
16-Jun	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
17-Jun	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	N	N	N	N	N	N	N	--	0.00
18-Jun	N	N	N	N	N	N	N	N	0.0	0.0	A	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.01
19-Jun	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
20-Jun	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	0.0	0.00	0.00
21-Jun	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
22-Jun	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
23-Jun	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
24-Jun	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	0.0	0.00	0.00
25-Jun	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
26-Jun	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
27-Jun	0.0	A	0.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.00
28-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
29-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	--	0.00
30-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.00
0.00 0.00																								Diurnal Average		
0.01 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 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

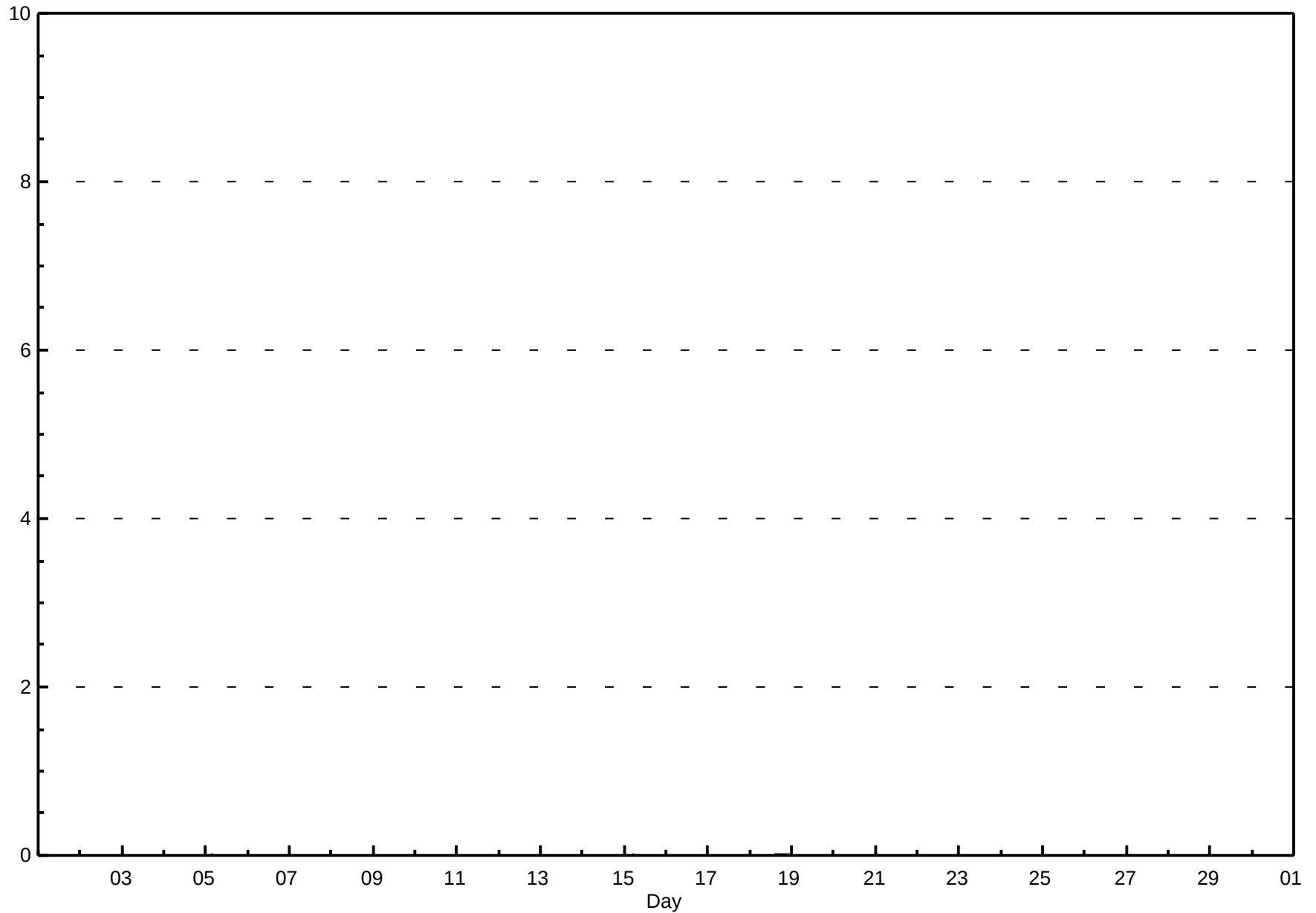


Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - June 2013

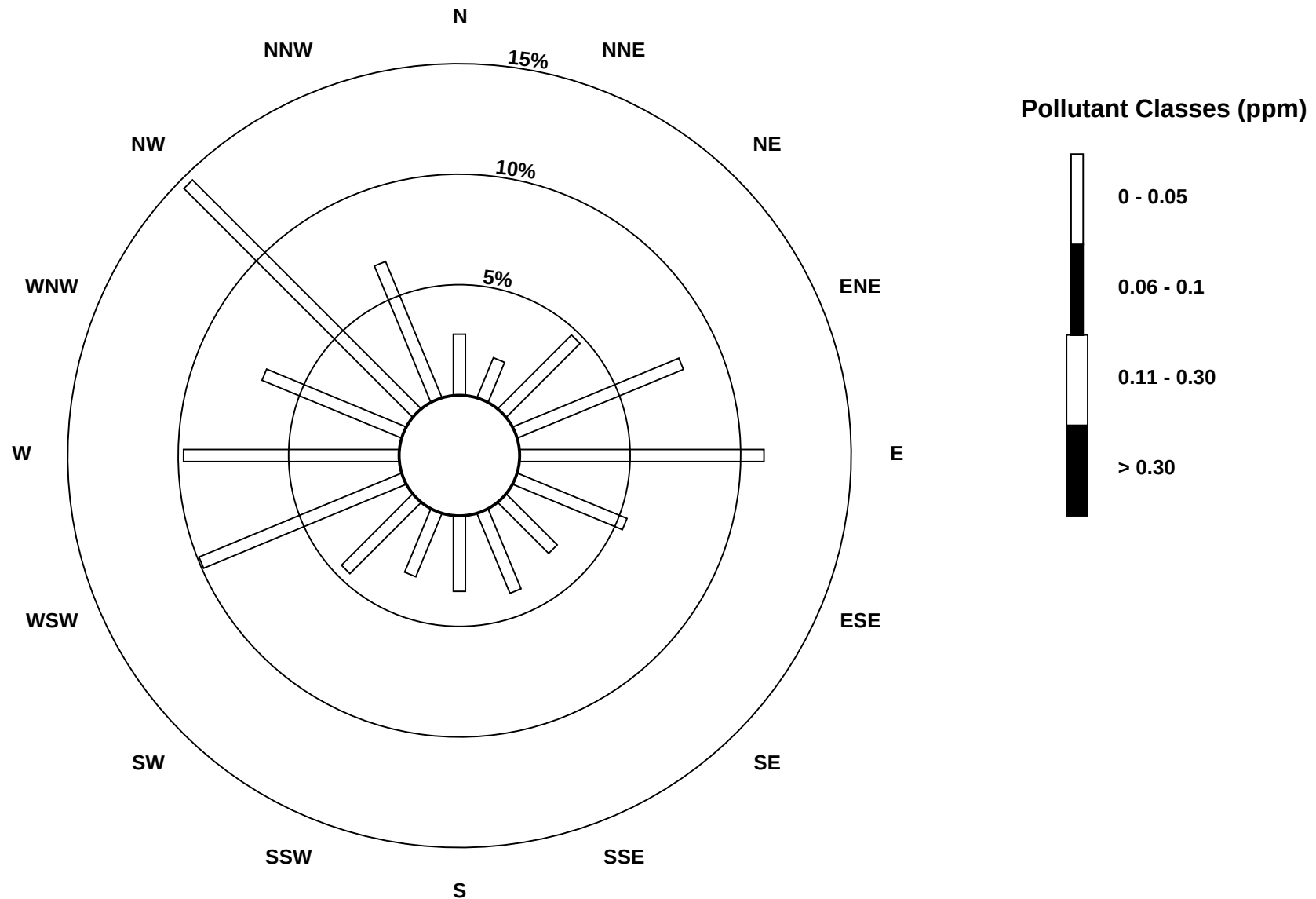
Maximum Value: 0.02 ppm on Jun 5 04:00																				Maximum Daily Average: 0.00 ppm on Jun 19					Hours in Service: 720	
Minimum Value: 0.0 ppm on Jun 9 22:00																				Minimum Daily Average: 0.00 ppm on Jun 20					Hours of Data: 615	
Maximum Diurnal Average: 0.00 ppm at hour 4																				Minimum Diurnal Average: 0.00 ppm at hour 13					Hours of Missing Data: 105	
Monthly Average: 0.002 ppm																				Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.01					Hours of Calibration: 33	
																									Percent Operational Time: 90.0	
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-Jun	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	0.0	0.00	0.01
2-Jun	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
3-Jun	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
4-Jun	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
5-Jun	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	0.02
6-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.00	0.00
7-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.00
8-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
9-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
10-Jun	0.0	0.0	0.0	0.0	0.0	0.0	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
11-Jun	0.0	0.0	0.0	0.0	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
12-Jun	0.0	0.0	0.0	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
13-Jun	0.0	0.0	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
14-Jun	0.0	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	0.00
15-Jun	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	0.01
16-Jun	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
17-Jun	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	N	N	N	N	N	N	N	--	0.00
18-Jun	N	N	N	N	N	N	N	N	0.0	0.0	A	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.01
19-Jun	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
20-Jun	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	0.0	0.00	0.00
21-Jun	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
22-Jun	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
23-Jun	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
24-Jun	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	0.0	0.00	0.00
25-Jun	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
26-Jun	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
27-Jun	0.0	A	0.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.00
28-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
29-Jun	N	N	N	N	N	N	N	N	N	N	N	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	--	0.00
30-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.00
0.00 0.00																								Diurnal Average		
0.01 0.01 0.01 0.02 0.00 0.01 0.00 0.00 0.00 0.00 0.00 0.01 0.01 0.00 0.00 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

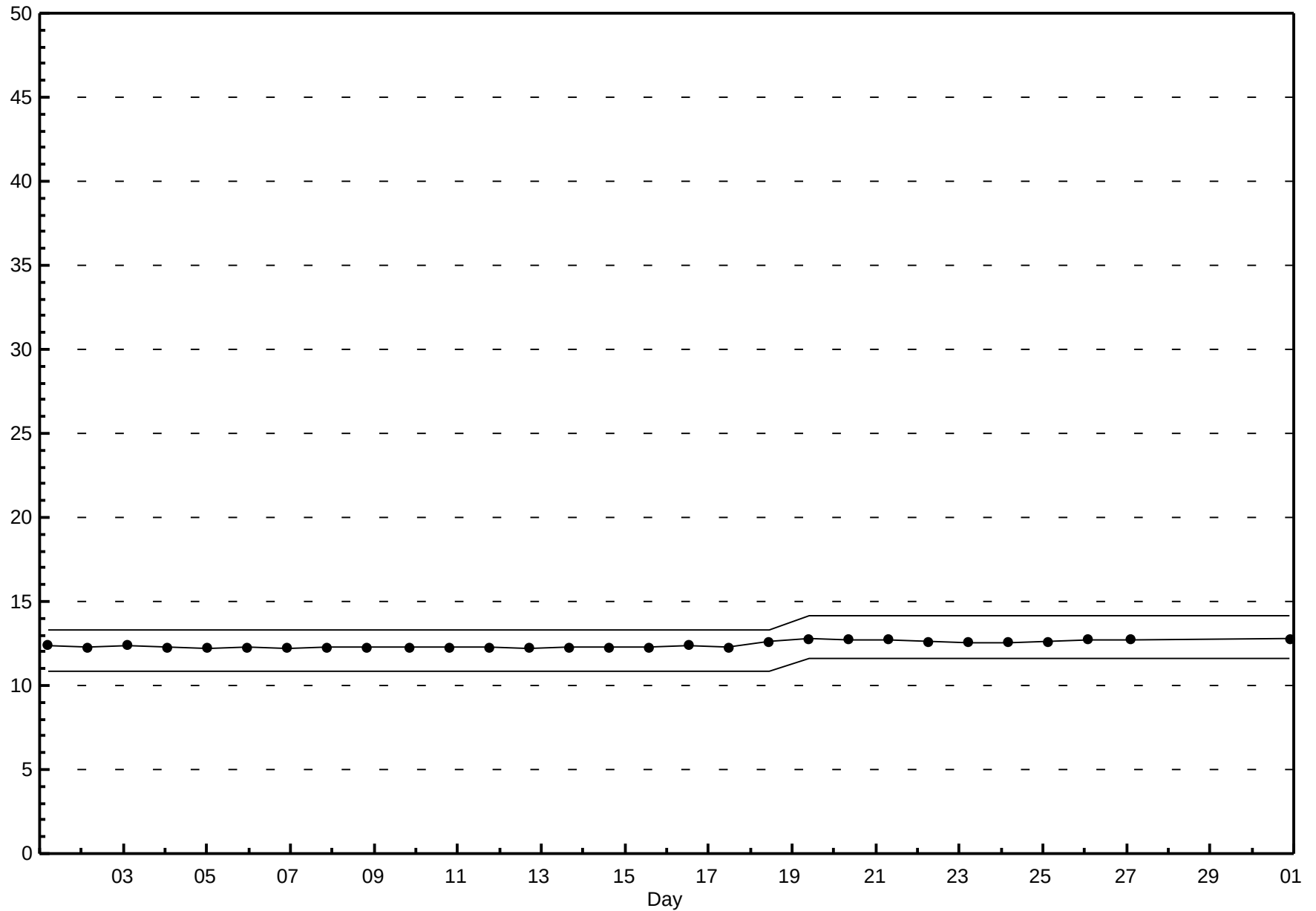


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - June 2013



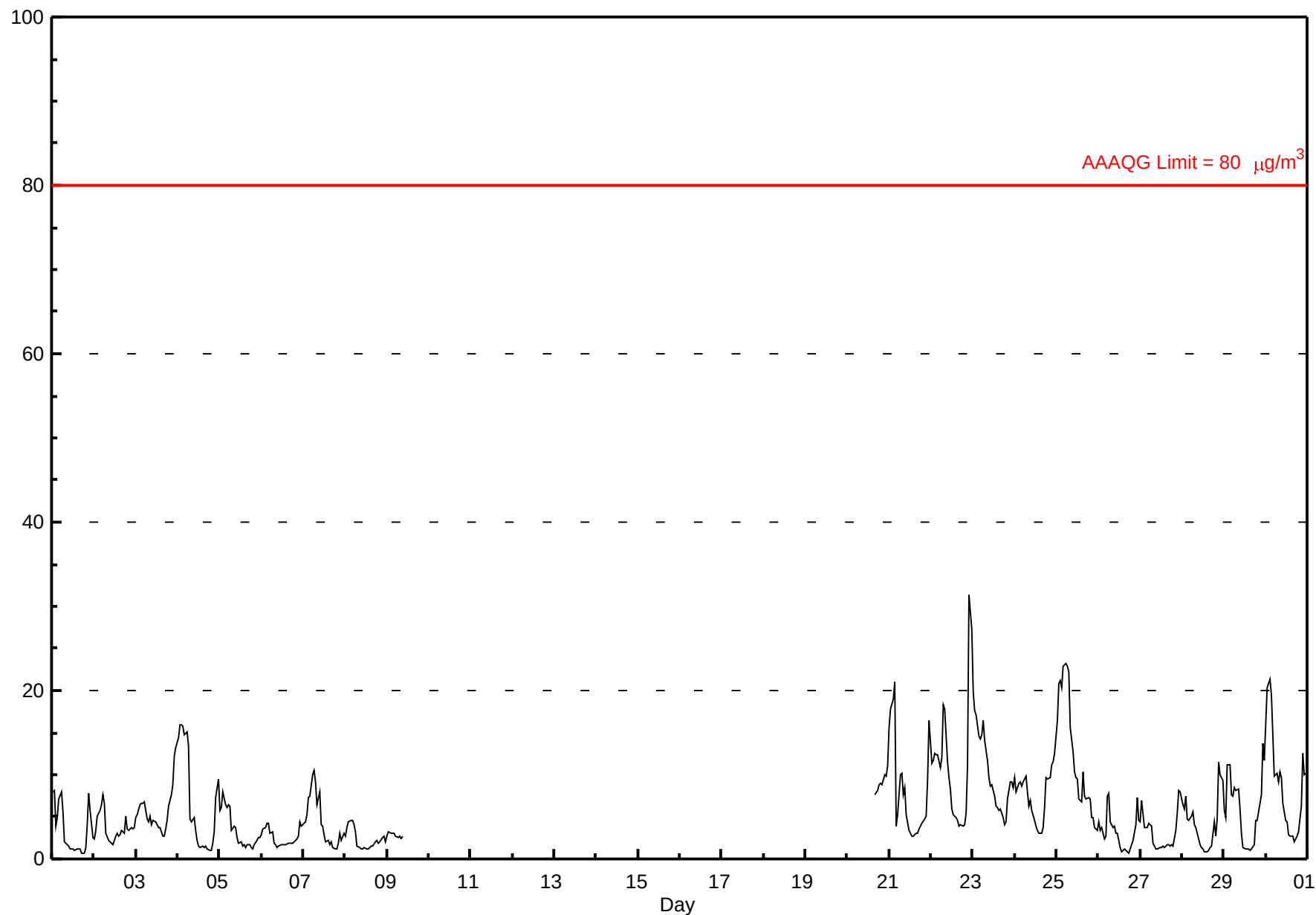


Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Henry Pirker - June 2013

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 31.4 µg/m³ on Jun 22 23:00 Minimum Value: 1 µg/m³ on Jun 1 18:00 Maximum Diurnal Average: 9.6 µg/m³ at hour 3 Monthly Average: 5.90 µg/m³																					Maximum Daily Average: 12.4 µg/m³ on Jun 25 Minimum Daily Average: 2.3 µg/m³ on Jun 8 Minimum Diurnal Average: 2.6 µg/m³ at hour 15 Percentiles: P ₁ = 0.9 P ₁₀ = 1.3 Q ₁ = 2.3 Median = 4.3 Q ₃ = 8.0 P ₉₀ = 12.3 P ₉₉ = 22.9										Hours in Service: 720 Hours of Data: 450 Hours of Missing Data: 270 Hours of Calibration: 0 Percent Operational Time: 62.5	
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-Jun	8	8	4	5	7	8	6	2	2	1	1	1	1	1	1	1	1	1	1	1	4	8	6	2	3.4	8.1						
2-Jun	2	3	5	6	6	8	7	3	2	2	2	3	3	3	3	3	3	3	5	4	3	4	4	4	3.7	7.7						
3-Jun	5	5	6	7	7	7	5	4	5	4	5	4	4	4	4	3	3	4	4	6	8	9	12	13	5.7	13.2						
4-Jun	14	16	16	16	15	15	13	5	4	5	3	2	1	1	1	1	1	1	1	1	2	3	7	9	6.5	15.9						
5-Jun	6	6	8	6	6	6	6	3	4	4	2	2	2	2	2	1	2	2	1	1	2	2	2	3	3.4	7.9						
6-Jun	3	4	4	4	4	3	3	2	2	1	2	2	2	2	2	2	2	2	2	2	2	3	4	4	2.6	4.5						
7-Jun	4	4	5	7	7	10	11	9	6	8	4	4	3	2	2	2	2	1	1	1	2	3	2	3	4.4	10.6						
8-Jun	3	4	4	5	5	4	3	2	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	2	2.3	4.6						
9-Jun	3	3	3	3	3	3	3	3	2	3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	3.3						
10-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--					
11-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--					
12-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--					
13-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--					
14-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--					
15-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--					
16-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--					
17-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--					
18-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--					
19-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--					
20-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	8	8	9	9	9	10	10	11	--	11.1						
21-Jun	16	18	19	21	4	5	10	10	8	9	5	3	3	3	3	3	3	4	4	4	5	5	9	16	7.9	21.0						
22-Jun	11	12	13	12	12	11	12	18	18	12	10	8	6	5	5	5	4	4	4	4	5	11	31	27	10.8	31.4						
23-Jun	20	18	17	15	14	15	16	14	12	10	9	9	7	6	6	6	6	5	4	4	7	9	9	9	10.3	19.7						
24-Jun	10	8	9	9	9	9	10	8	6	7	6	5	4	3	3	3	4	6	10	9	10	11	11	12	7.6	12.5						
25-Jun	16	21	21	20	23	23	23	22	16	13	10	10	10	7	7	10	8	7	7	7	5	5	4	3	12.4	23.3						
26-Jun	4	3	4	2	3	7	8	4	4	4	3	3	1	1	1	1	1	1	1	2	2	4	7	5	3.2	7.7						
27-Jun	4	7	4	4	4	4	4	2	2	1	1	1	1	1	1	2	2	2	2	2	3	5	8	8	3.1	8.1						
28-Jun	6	6	7	5	5	5	6	4	4	2	2	1	1	1	1	1	1	2	4	3	5	12	10	9	4.3	11.6						
29-Jun	6	5	11	11	8	7	8	8	8	6	3	1	1	1	1	1	1	2	5	5	6	8	14	12	5.8	13.8						
30-Jun	16	20	21	20	15	10	10	9	10	10	7	5	4	3	3	3	2	2	3	3	6	13	10	10	8.9	21.3						
8.3 9.0 9.6 9.3 8.2 8.5 8.6 7.0 6.1 5.4 4.2 3.6 3.1 2.7 2.6 2.7 2.9 3.0 3.7 3.7 4.6 6.7 8.7 8.6																									Diurnal Average							
19.7 20.8 21.3 21.0 22.9 23.3 23.0 22.3 17.9 12.7 10.4 9.6 9.5 7.1 6.7 10.3 7.7 8.2 9.6 9.4 9.7 12.5 31.4 27.3																									Diurnal Maximum							
N - Not Valid																																
Alberta Ambient Air Quality Guideline (AAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAQO): 24-hr 30 µg/m³																																



Hourly Maximums

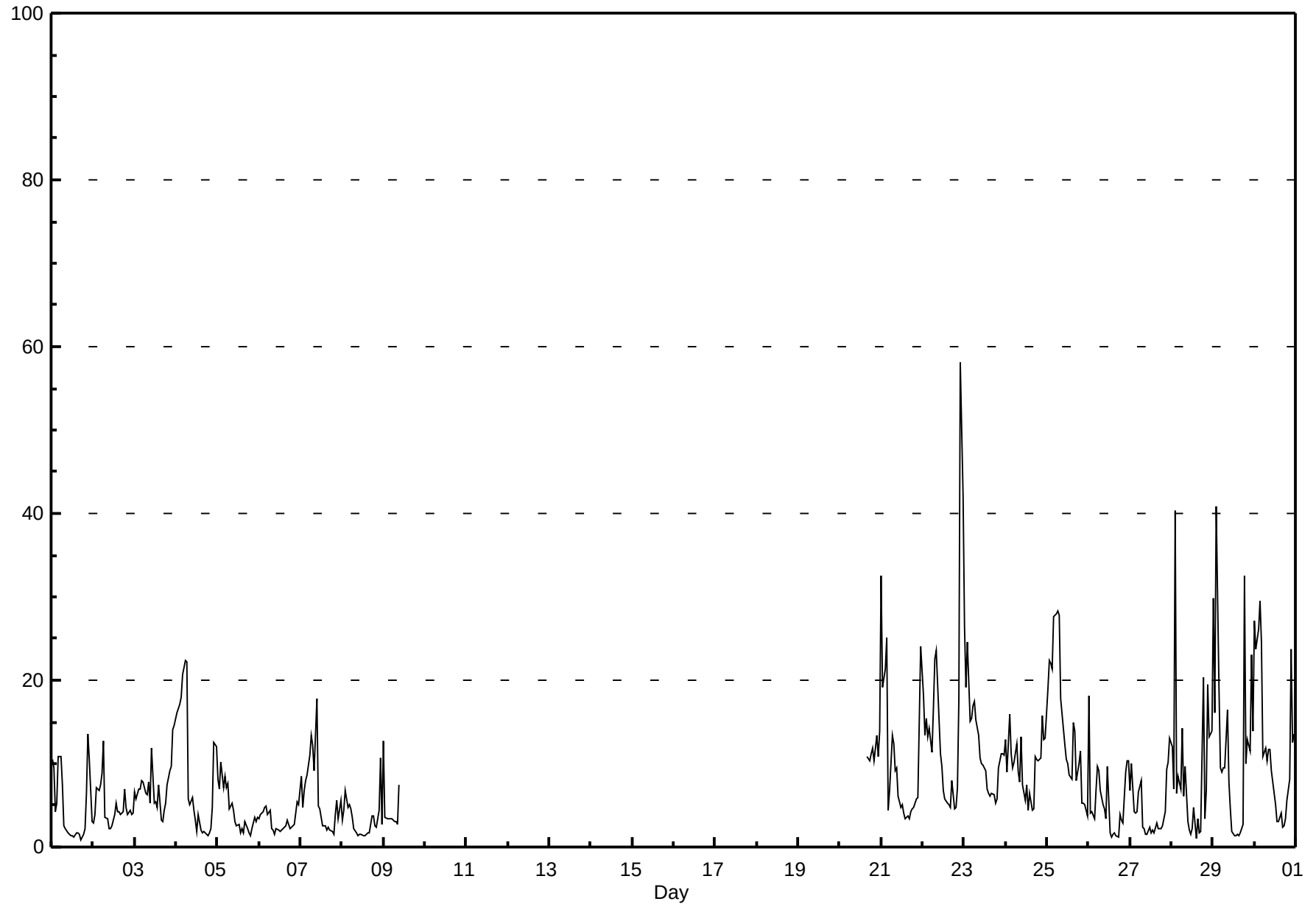
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Henry Pirker - June 2013

Maximum Value: 58.1 μg/m³ on Jun 22 23:00																								Maximum Daily Average: 14.8 μg/m³ on Jun 25										Hours in Service: 720	
Minimum Value: 1 μg/m³ on Jun 1 18:00																								Minimum Daily Average: 3.2 μg/m³ on Jun 6										Hours of Data: 450	
Maximum Diurnal Average: 14.8 μg/m³ at hour 3																								Minimum Diurnal Average: 3.5 μg/m³ at hour 15										Hours of Missing Data: 270	
Monthly Average: 8.15 μg/m³																								Percentiles: P ₁ = 1.3 P ₁₀ = 1.8 Q ₁ = 3.1 Median = 5.8 Q ₃ = 10.8 P ₉₀ = 17.0 P ₉₉ = 32.6										Hours of Calibration: 0	
																								Percent Operational Time: 62.5											
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-Jun	10	10	4	5	11	11	8	3	2	2	2	1	1	1	2	2	2	1	2	2	6	14	11	3	4.8	13.5									
2-Jun	3	4	7	7	7	9	13	4	3	2	2	3	4	5	4	4	4	4	7	5	4	4	4	4	4.9	12.6									
3-Jun	7	6	7	7	8	8	7	6	8	5	12	5	5	5	7	3	3	4	5	7	9	10	14	15	7.2	14.6									
4-Jun	16	17	17	18	21	22	22	6	5	6	4	3	2	4	2	2	2	2	1	2	2	5	13	12	8.5	22.4									
5-Jun	8	7	10	7	8	7	8	5	5	4	3	2	3	2	2	2	3	2	2	1	2	4	3	4	4.3	10.2									
6-Jun	3	4	4	5	5	4	4	2	2	2	2	2	2	2	2	2	3	3	2	2	3	4	5	5	3.2	5.4									
7-Jun	8	5	7	8	9	11	13	12	9	18	5	5	4	3	3	2	2	2	2	2	4	6	3	6	6.1	17.8									
8-Jun	3	4	7	5	5	5	4	2	2	1	2	2	1	1	2	2	2	4	4	2	2	4	11	3	3.3	10.7									
9-Jun	13	4	3	3	3	3	3	3	3	7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	12.6									
10-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--								
11-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--								
12-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--								
13-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--								
14-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--								
15-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--								
16-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--								
17-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--								
18-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--								
19-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--								
20-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	14.0								
21-Jun	33	19	21	25	4	7	13	12	9	10	6	5	5	4	3	4	3	4	5	5	6	6	15	24	10.4	32.6									
22-Jun	18	13	15	13	14	11	17	23	24	15	11	10	7	6	5	5	5	8	5	5	7	18	58	42	14.8	58.1									
23-Jun	26	19	25	15	15	17	17	15	13	11	10	10	9	7	6	6	6	6	5	6	10	11	11	11	12.1	26.5									
24-Jun	13	9	16	11	9	10	12	9	8	13	7	6	7	4	6	4	5	11	11	10	11	16	13	13	9.8	15.9									
25-Jun	19	22	22	21	28	28	28	28	18	14	12	11	10	9	8	15	14	8	10	12	5	5	5	4	14.8	28.3									
26-Jun	18	4	4	3	7	10	9	7	5	5	3	10	2	1	2	2	1	1	4	3	3	9	10	10	5.5	18.1									
27-Jun	7	10	4	4	4	7	8	2	2	2	2	2	2	2	2	3	2	2	2	2	4	9	10	13	4.5	13.1									
28-Jun	12	7	40	6	8	7	14	6	10	3	2	2	2	5	1	3	2	2	20	3	7	20	13	14	8.7	40.4									
29-Jun	30	16	41	19	10	9	10	9	16	8	5	2	1	1	2	1	2	3	32	10	13	12	23	14	12.0	40.9									
30-Jun	27	24	26	29	25	11	12	10	12	12	9	7	5	3	3	4	2	3	3	6	8	24	12	14	12.1	29.4									
																								Diurnal Average											
																								Diurnal Maximum											
N - Not Valid																																			

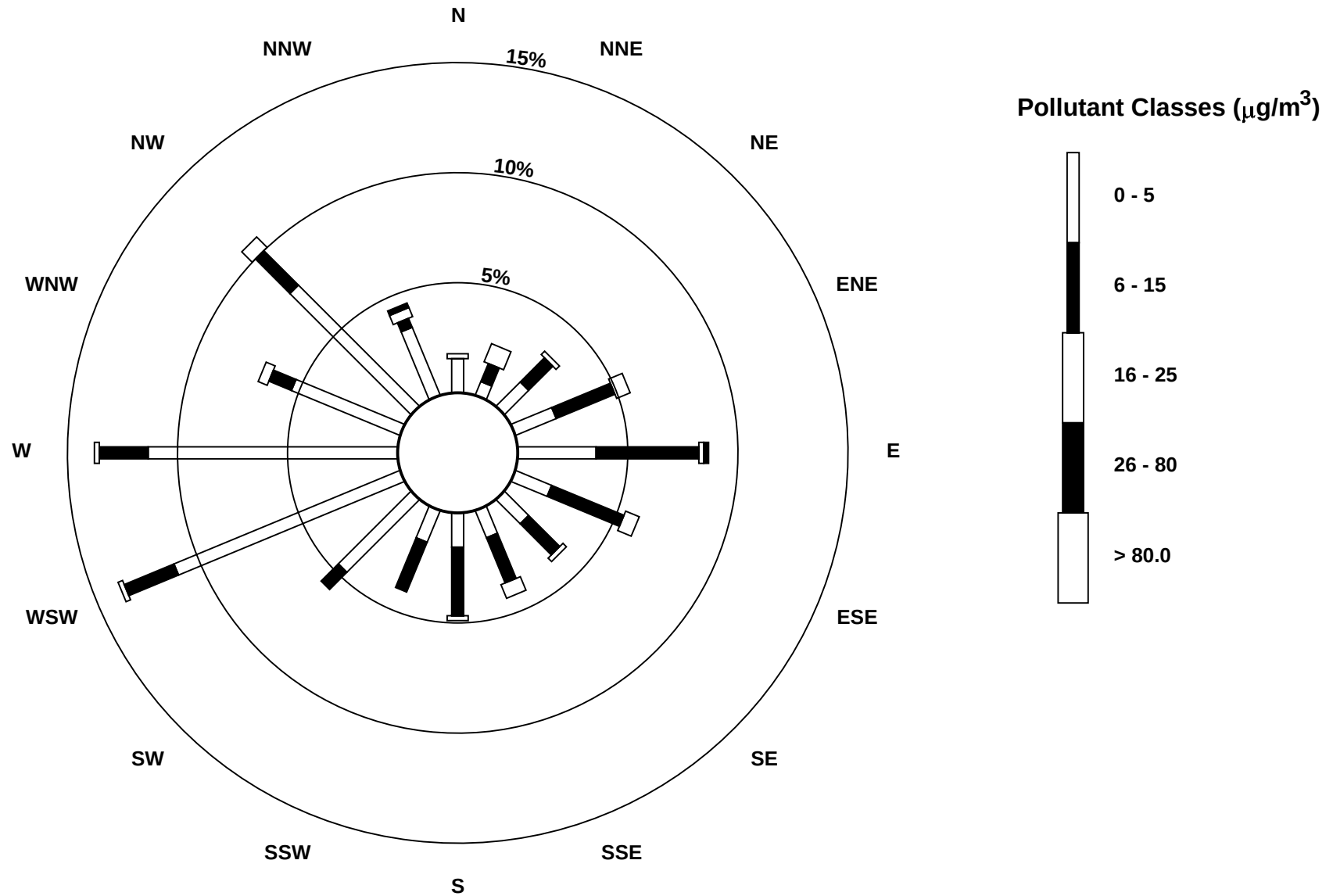
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Henry Pirker - June 2013



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Henry Pirker - June 2013



Hourly Averages

External Temperature (ET) - °C

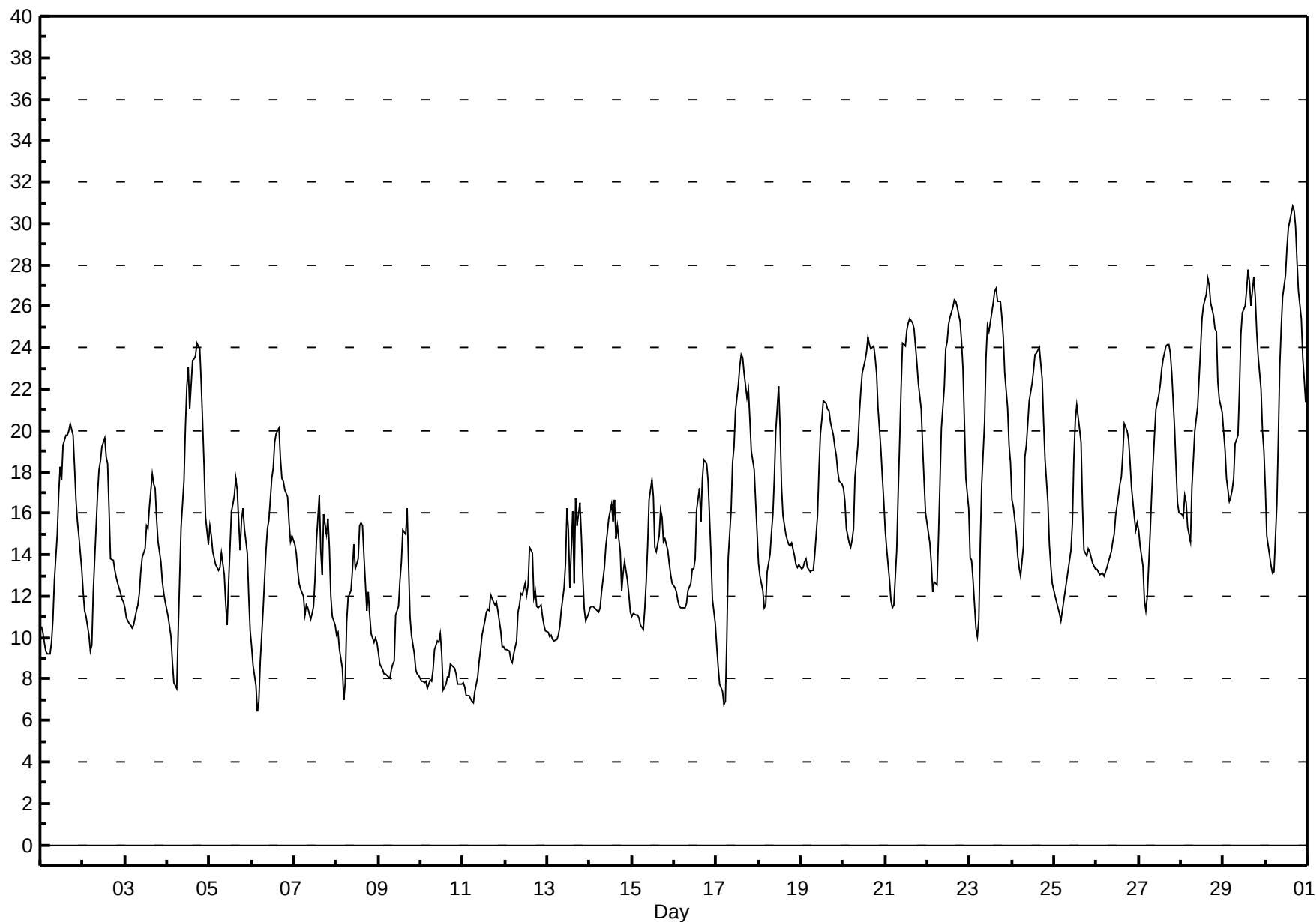
Henry Pirker - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 30.8 °C on Jun 30 16:00 Maximum Daily Average: 23.0 °C on Jun 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: 6 °C on Jun 6 04:00 Maximum Diurnal Average: 19.8 °C at hour 15 Monthly Average: 15.59 °C												Minimum Daily Average: 8.4 °C on Jun 10 Minimum Diurnal Average: 10.9 °C at hour 5 Percentiles: P ₁ = 7.0 P ₁₀ = 9.4 Q ₁ = 11.5 Median = 14.5 Q ₃ = 19.2 P ₉₀ = 23.7 P ₉₉ = 27.8														
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-Jun	11	10	10	9	9	9	10	11	13	15	17	18	18	19	20	20	20	20	20	18	17	16	15	13	14.9	20.4
2-Jun	12	11	11	10	9	10	12	14	17	18	19	19	20	19	18	16	14	14	13	13	13	12	12	12	14.1	19.6
3-Jun	11	11	11	11	10	11	11	12	12	13	14	14	15	15	16	18	17	17	16	15	14	13	12	12	13.4	17.9
4-Jun	11	11	10	9	8	8	10	13	15	18	20	22	23	21	23	23	24	24	24	22	20	18	16	14	17.0	24.2
5-Jun	15	15	14	14	13	13	13	14	13	12	11	13	16	16	17	18	17	14	16	16	15	14	12	10	14.2	17.7
6-Jun	10	9	8	6	7	9	11	13	14	15	16	18	18	19	20	20	19	18	18	17	17	16	15	15	14.4	20.1
7-Jun	14	14	13	13	12	12	11	12	11	11	11	12	13	15	17	14	13	16	15	16	14	12	11	11	13.0	16.9
8-Jun	10	10	9	9	7	8	11	12	12	13	14	13	14	15	16	15	14	11	12	11	10	10	10	10	11.6	15.6
9-Jun	9	9	8	8	8	8	8	8	9	9	11	11	13	14	15	15	16	14	11	10	9	8	8	8	10.4	16.2
10-Jun	8	8	8	8	8	8	8	8	9	10	10	10	9	7	8	8	8	9	9	9	8	8	8	8	8.4	10.2
11-Jun	8	8	7	7	7	7	7	7	8	9	9	10	11	11	11	11	12	12	12	12	11	10	10	10	9.5	12.0
12-Jun	9	9	9	9	9	9	10	11	12	12	12	13	12	13	14	14	12	12	12	11	12	11	11	10	11.2	14.4
13-Jun	10	10	10	10	10	10	10	11	11	12	14	16	15	12	16	13	17	15	17	15	13	11	11	11	12.5	16.7
14-Jun	11	12	12	11	11	11	11	12	13	14	15	16	16	16	17	15	15	14	12	13	14	13	12	11	13.3	16.6
15-Jun	11	11	11	11	11	11	10	11	13	14	17	18	17	14	14	15	16	16	15	15	14	14	13	13	13.5	17.6
16-Jun	12	12	12	11	11	11	11	12	12	13	13	13	14	16	17	16	18	19	18	18	16	14	12	11	13.9	18.6
17-Jun	10	9	8	7	7	7	10	14	16	18	19	21	22	23	24	24	23	22	22	21	19	18	17	15	16.4	23.7
18-Jun	14	13	12	11	12	13	14	15	16	18	20	22	20	17	16	15	15	15	14	15	14	14	13	14	15.0	22.1
19-Jun	13	13	14	14	13	13	13	13	14	16	18	20	21	21	21	21	21	20	20	19	19	18	18	17	17.1	21.5
20-Jun	17	17	15	15	14	15	15	18	19	21	22	23	23	24	24	24	24	24	24	23	21	19	18	17	19.8	24.5
21-Jun	15	14	13	12	11	12	14	17	19	22	24	24	25	25	25	25	25	24	23	22	21	19	18	16	19.5	25.4
22-Jun	15	15	14	12	13	13	15	17	20	22	24	24	25	26	26	26	26	26	25	24	23	20	18	16	20.2	26.3
23-Jun	14	14	13	10	10	11	14	17	20	24	25	25	26	26	27	27	26	26	25	25	23	21	19	18	20.3	26.9
24-Jun	17	16	15	14	13	13	14	19	19	20	21	22	23	24	24	24	23	22	20	19	16	15	13	13	18.4	24.0
25-Jun	12	12	11	11	11	12	12	13	13	14	16	19	20	21	20	19	16	14	14	14	14	14	14	13	14.6	21.2
26-Jun	13	13	13	13	13	13	13	14	14	15	15	16	17	17	18	19	20	20	20	19	17	16	15	16	15.8	20.4
27-Jun	15	14	13	12	11	12	15	17	18	20	21	22	22	23	23	24	24	24	24	23	20	18	17	16	18.7	24.2
28-Jun	16	16	17	16	15	15	17	19	20	21	23	24	25	26	27	27	27	26	26	25	25	22	22	21	21.5	27.3
29-Jun	20	19	18	17	17	17	18	19	20	22	25	26	26	27	28	27	26	27	26	25	24	22	20	19	22.2	27.8
30-Jun	17	15	14	13	13	13	16	20	23	25	26	27	29	30	30	31	31	30	28	27	25	24	22	21	23.0	30.8
12.7 12.3 11.8 11.1 10.9 11.1 12.3 13.7 15.0 16.2 17.4 18.4 18.9 19.1 19.8 19.5 19.3 18.9 18.3 17.6 16.6 15.3 14.3 13.7 20.0 19.1 17.7 16.6 16.8 17.1 17.7 19.6 23.0 24.9 26.5 27.5 28.8 29.8 30.1 30.8 30.6 29.9 28.2 26.7 25.4 23.5 22.5 21.4																								Diurnal Average		
																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - June 2013



Hourly Averages

Relative Humidity (RH) - %

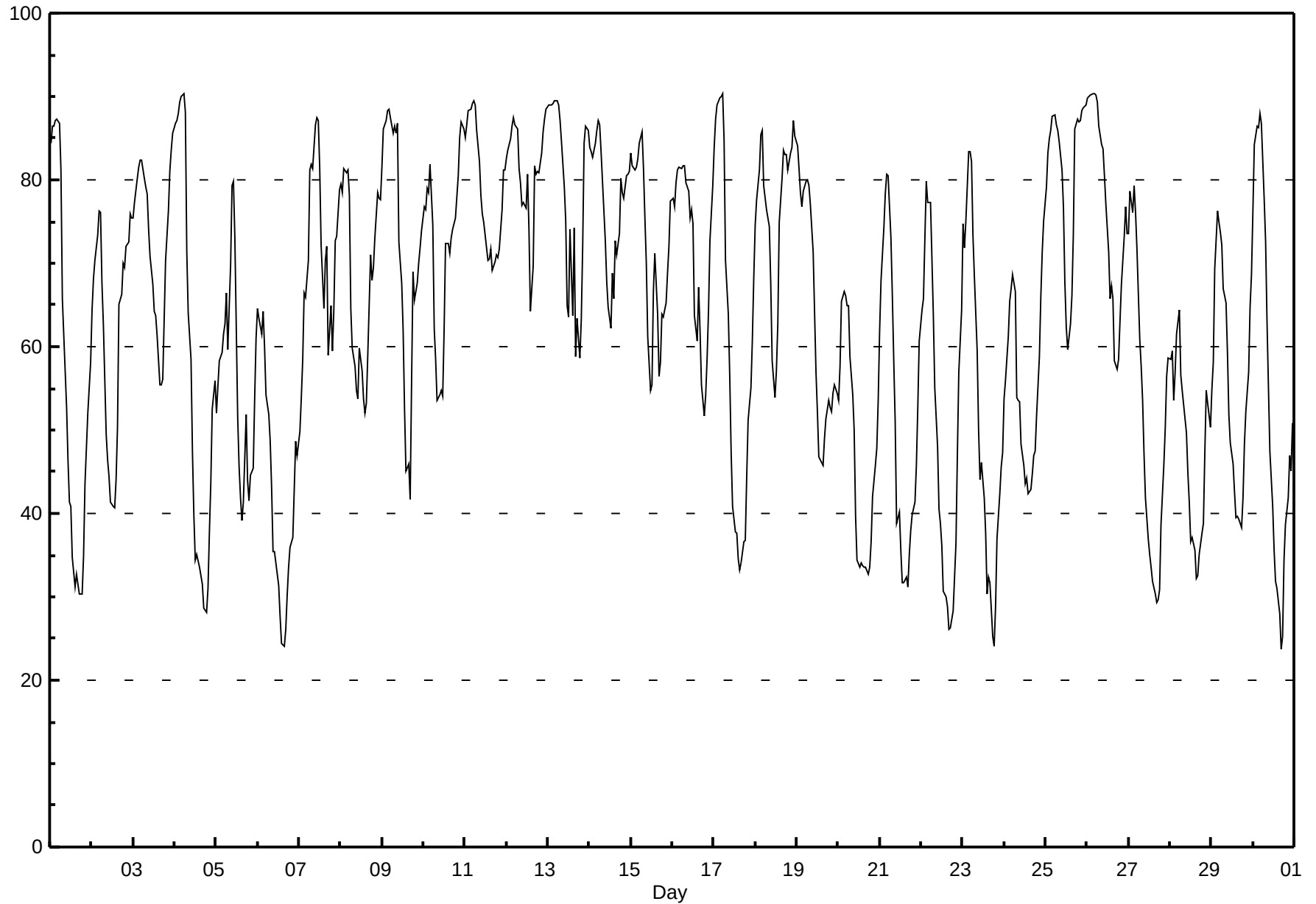
Henry Pirker - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 90.4 % on Jun 4 06:00 Maximum Daily Average: 81.1 % on Jun 12																				Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 24 % on Jun 30 17:00 Maximum Diurnal Average: 80.0 % at hour 5 Monthly Average: 63.52 %										Minimum Daily Average: 42.7 % on Jun 6 Minimum Diurnal Average: 48.6 % at hour 15 Percentiles: P ₁ = 26.0 P ₁₀ = 35.4 Q ₁ = 49.7 Median = 65.7 Q ₃ = 79.3 P ₉₀ = 86.2 P ₉₉ = 89.9																
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-Jun	84	86	86	87	87	87	81	66	61	53	46	41	41	35	31	33	31	30	30	35	44	48	52	58	55.6	87.4
2-Jun	64	68	70	73	76	76	68	63	50	46	44	41	41	41	44	50	65	66	70	69	72	73	76	75	61.8	76.3
3-Jun	75	77	80	81	82	82	80	79	78	74	71	68	64	64	61	55	55	56	63	70	76	81	84	86	72.7	85.5
4-Jun	87	87	88	89	90	90	88	71	64	58	48	40	34	35	34	32	32	29	28	31	38	44	53	56	56.1	90.4
5-Jun	52	55	58	59	62	63	66	60	70	79	80	73	51	46	42	39	41	52	44	41	45	45	54	61	55.8	79.9
6-Jun	65	63	62	64	60	54	52	49	43	36	35	33	31	28	24	24	26	30	34	36	37	43	49	47	42.7	64.6
7-Jun	50	54	58	67	66	70	81	82	81	87	87	87	82	72	65	70	72	59	65	59	64	73	73	79	71.0	87.4
8-Jun	80	79	81	81	81	78	65	60	58	55	54	60	57	54	52	53	59	71	68	69	73	78	78	78	67.5	81.4
9-Jun	81	86	87	88	88	87	86	86	86	87	73	68	62	53	45	46	42	56	69	66	68	70	72	74	71.9	88.5
10-Jun	77	76	79	78	82	75	62	58	54	54	55	54	62	72	72	71	73	74	75	78	80	85	87	86	71.7	87.0
11-Jun	85	87	88	88	89	90	89	86	82	78	76	75	72	70	71	72	69	70	71	71	72	76	81	81	78.7	89.6
12-Jun	83	84	85	86	88	87	86	81	80	77	77	77	81	74	64	70	82	81	81	81	83	86	87	88	81.1	88.4
13-Jun	89	89	89	89	90	90	89	87	85	79	75	65	64	74	64	74	59	63	59	63	72	84	86	86	77.6	89.5
14-Jun	84	83	83	84	86	87	87	83	76	73	68	65	62	69	66	73	71	74	80	79	78	80	81	81	77.2	87.1
15-Jun	83	82	81	82	83	84	86	81	75	70	61	55	55	67	71	64	56	58	64	64	65	69	72	77	71.1	85.8
16-Jun	78	77	80	81	81	81	82	82	80	79	75	76	75	64	61	67	62	56	52	54	59	64	73	79	71.5	81.7
17-Jun	84	87	89	90	90	90	85	70	64	56	47	41	38	38	35	33	34	37	37	44	51	55	61	68	59.4	90.3
18-Jun	75	78	81	85	86	79	76	75	74	68	58	54	57	63	75	80	84	83	83	81	83	84	87	85	76.5	87.1
19-Jun	84	81	78	77	79	80	80	79	77	71	64	57	52	47	46	46	49	51	54	53	52	54	55	54	63.4	84.0
20-Jun	54	58	65	67	66	65	65	59	54	50	40	34	34	34	34	34	34	33	34	37	42	46	48	54	47.4	66.6
21-Jun	62	68	74	78	81	81	73	66	58	51	39	40	36	32	32	32	31	35	38	40	41	46	53	61	51.9	80.7
22-Jun	64	66	73	80	77	77	70	64	55	48	40	39	36	31	30	29	26	26	28	32	36	47	57	64	49.9	79.8
23-Jun	75	72	75	83	83	82	73	69	59	50	44	46	42	38	30	32	32	25	24	29	37	42	46	47	51.5	83.5
24-Jun	54	56	61	65	67	69	67	54	54	53	48	46	44	44	42	43	45	47	47	52	59	66	71	75	55.4	75.1
25-Jun	79	83	85	86	88	88	87	86	85	81	77	68	62	60	63	66	73	86	87	87	87	88	89	89	80.4	89.0
26-Jun	90	90	90	90	90	90	89	86	84	84	80	77	71	66	67	66	58	57	59	63	67	73	77	74	76.7	90.4
27-Jun	74	79	76	79	76	72	61	58	54	47	42	37	35	34	32	30	29	30	31	39	46	50	56	59	51.0	79.3
28-Jun	58	59	54	57	62	64	57	55	53	50	45	41	37	37	36	32	33	35	38	39	47	55	53	50	47.7	64.4
29-Jun	55	58	69	76	75	74	72	67	65	59	52	48	46	43	39	40	39	38	42	48	52	57	65	69	56.2	76.3
30-Jun	76	84	86	86	88	87	78	72	63	55	47	41	36	32	31	28	24	25	34	39	42	47	45	51	54.1	87.9
73.3 75.1 77.2 79.3 80.0 79.3 76.0 71.2 67.4 63.6 58.3 54.9 52.0 50.4 48.6 49.5 49.5 51.1 52.9 55.0 59.0 63.7 67.3 69.8																								Diurnal Average		
89.8 90.0 90.2 90.3 90.4 90.4 89.3 87.1 85.5 86.8 87.4 87.1 81.6 74.1 74.9 80.2 83.5 86.1 87.3 86.9 87.1 88.3 88.7 89.0																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - June 2013



Hourly Averages

Solar Radiation (SR) - W/m²

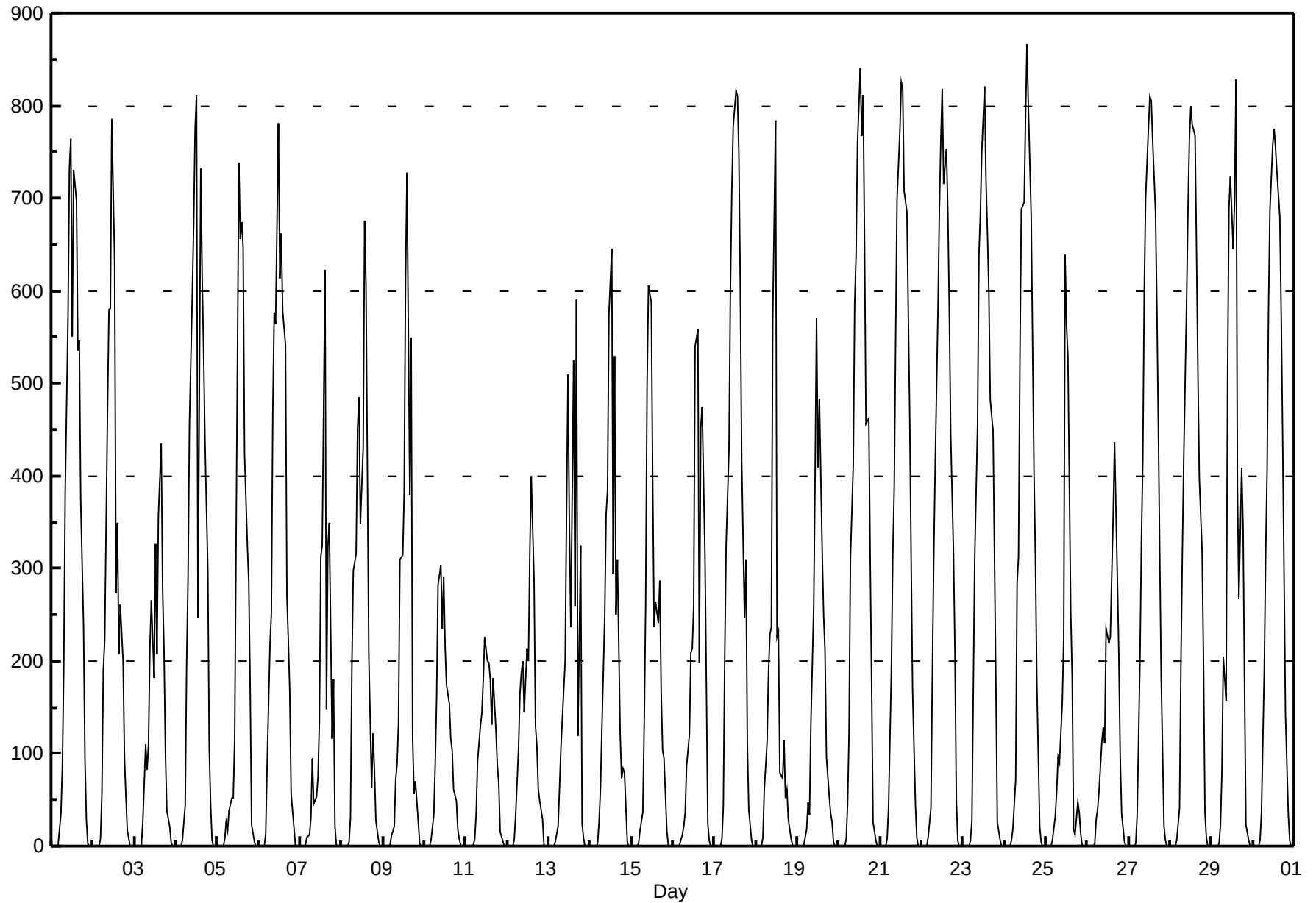
Henry Pirker - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 866.6 W/m ² on Jun 24 14:00 Maximum Daily Average: 319.7 W/m ² on Jun 27																								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 ² on Jun 1 01:00 Maximum Diurnal Average: 559.7 W/m ² at hour 12 Monthly Average: 210.15 W/m ²																								Minimum Daily Average: 83.4 W/m ² on Jun 11 Minimum Diurnal Average: 0.0 W/m ² at hour 1 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.2 Median = 94.1 Q ₃ = 345.9 P ₉₀ = 646.4 P ₉₉ = 817.8		
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-Jun	0	0	0	0	1	35	86	193	382	570	733	764	551	731	697	535	546	374	237	94	30	3	0	0	273.4	764.3
2-Jun	0	0	0	0	7	56	191	223	475	579	581	785	631	273	349	207	261	199	94	53	17	1	0	0	207.6	785.2
3-Jun	0	0	0	0	1	27	109	82	110	215	266	181	326	208	357	434	278	211	99	39	21	4	0	0	123.7	434.0
4-Jun	0	0	0	0	6	44	196	290	457	595	672	775	812	247	732	615	535	438	300	105	43	6	0	0	286.1	811.6
5-Jun	0	0	0	0	7	27	17	37	52	52	114	325	739	657	674	647	425	325	286	169	23	4	0	0	190.9	738.6
6-Jun	0	0	0	0	13	88	216	251	468	577	565	780	613	662	578	542	269	223	168	57	19	2	0	0	253.8	780.5
7-Jun	0	0	0	0	10	12	31	94	45	53	75	134	312	325	622	149	324	349	116	180	21	1	0	0	118.8	622.5
8-Jun	0	0	0	0	5	30	194	297	316	451	486	347	430	676	605	405	207	62	121	81	27	5	0	0	197.7	676.3
9-Jun	0	0	0	0	2	11	22	71	88	133	310	314	380	612	728	380	549	117	56	70	27	2	0	0	161.3	727.7
10-Jun	0	0	0	0	6	34	88	160	281	303	236	291	217	174	155	117	103	61	49	18	8	1	0	0	96.0	303.4
11-Jun	0	0	0	0	1	8	34	91	130	143	179	226	200	198	180	132	181	125	88	67	15	5	0	0	83.4	225.6
12-Jun	0	0	0	0	8	36	105	164	188	199	145	213	199	319	400	287	130	108	61	49	28	2	0	0	110.1	399.6
13-Jun	0	0	0	0	5	21	62	106	137	201	363	510	346	236	524	259	590	119	326	24	10	0	0	0	159.9	589.9
14-Jun	0	0	0	0	3	26	61	127	247	359	384	575	645	294	530	250	310	118	74	83	79	5	0	0	173.8	645.0
15-Jun	0	0	0	0	4	17	36	135	261	498	606	588	392	237	264	240	287	167	103	94	17	2	0	0	164.5	606.1
16-Jun	0	0	0	0	1	12	21	36	87	121	208	214	259	541	559	199	452	475	314	172	25	7	0	0	154.3	559.0
17-Jun	0	0	0	0	7	43	205	327	428	600	708	778	815	810	748	605	417	248	309	111	39	7	0	0	300.3	815.4
18-Jun	0	0	0	0	10	60	113	189	229	236	571	785	225	232	80	73	114	51	61	28	7	1	0	0	127.7	784.8
19-Jun	0	0	0	0	2	19	48	34	133	259	404	571	410	484	319	250	210	96	53	35	26	4	0	0	139.8	571.0
20-Jun	0	0	0	0	8	46	122	312	412	586	638	759	840	768	812	650	456	463	310	174	26	6	0	0	307.8	840.3
21-Jun	0	0	0	0	7	42	192	314	387	548	699	772	826	818	708	685	572	461	308	169	46	9	0	0	315.1	825.6
22-Jun	0	0	0	0	9	41	186	313	410	582	687	762	818	715	753	683	579	446	317	209	50	6	0	0	315.3	817.9
23-Jun	0	0	0	0	7	28	169	311	454	639	684	750	820	718	662	600	483	449	311	175	27	7	0	0	303.8	820.3
24-Jun	0	0	0	0	6	18	72	284	313	524	688	696	789	867	797	681	540	401	306	175	22	4	0	0	299.3	866.6
25-Jun	0	0	0	0	6	32	59	96	91	156	224	639	563	530	251	181	18	12	47	36	13	1	0	0	123.1	639.5
26-Jun	0	0	0	0	3	28	39	60	112	128	111	235	220	225	293	355	436	288	207	97	34	4	0	0	119.8	435.7
27-Jun	0	0	0	0	4	34	202	328	418	596	699	776	810	806	761	685	578	451	314	183	22	6	0	0	319.7	810.3
28-Jun	0	0	0	0	6	40	198	317	421	588	690	764	799	779	767	646	514	397	317	196	36	9	0	0	311.9	798.8
29-Jun	0	0	0	0	3	23	79	204	157	503	689	723	645	699	828	388	267	409	345	178	23	6	0	0	257.1	828.1
30-Jun	0	0	0	0	6	35	191	314	406	580	687	759	775	754	728	681	573	444	295	143	35	5	0	0	308.7	775.0
Diurnal Average																									Diurnal Maximum	

Hourly Averages

Solar Radiation (SR) - W/m²

Henry Pirker - June 2013



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - June 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	7	6	7	6	7	8	6	9	10	15	12	12	12	14	14	10	9	4	1	6	10	6	9	11	6.3	14.8
Dir	140	126	124	154	151	160	196	230	242	241	241	255	257	261	252	221	214	226	270	138	159	160	228	233	215.5	240.8
2 Spd	6	3	4	6	5	3	7	6	3	2	4	7	8	6	12	15	15	8	8	8	7	10	9	8	1.1	15.4
Dir	235	211	152	173	152	121	219	272	271	40	350	8	15	48	39	63	125	171	258	290	309	315	332	325	345.6	63.2
3 Spd	6	5	6	7	6	8	9	7	6	7	6	4	7	6	5	5	4	4	6	9	6	5	5	5	3.3	8.9
Dir	327	317	311	325	311	315	321	324	314	324	328	304	289	275	266	284	245	195	191	187	182	170	168	134	286.5	321.0
4 Spd	5	5	5	2	2	3	4	9	7	7	9	8	10	11	3	10	10	8	8	9	6	4	2	4	4.7	10.9
Dir	131	126	116	152	177	173	227	241	239	210	216	231	212	253	231	178	173	203	233	279	290	289	161	212	215.7	252.8
5 Spd	10	6	4	7	5	3	8	11	9	12	15	12	19	24	26	24	27	26	26	22	19	17	12	7	14.3	27.2
Dir	249	249	199	237	281	296	265	241	241	263	249	238	261	256	254	258	271	272	257	263	259	261	263	285	258.6	270.9
6 Spd	7	9	8	3	7	8	6	9	13	17	15	16	14	14	17	21	19	21	12	9	9	5	5	5	10.6	20.8
Dir	248	244	241	301	290	307	236	246	259	266	266	258	272	267	275	270	260	253	253	261	262	281	181	222	261.2	270.5
7 Spd	5	4	1	4	4	3	4	5	7	9	8	10	7	9	8	13	11	10	10	4	2	10	5	7	3.6	13.0
Dir	218	255	8	170	171	170	173	166	177	207	233	222	224	258	284	315	339	316	324	346	240	319	318	231	262.3	314.8
8 Spd	8	8	6	9	6	9	12	15	17	18	16	18	20	19	19	16	19	12	14	15	11	5	9	10	11.3	19.9
Dir	243	256	246	253	297	279	278	268	267	276	298	316	318	315	315	322	343	304	343	344	348	280	276	306	301.8	318.0
9 Spd	9	7	8	8	10	11	11	13	15	7	9	10	9	14	14	14	13	12	10	10	8	5	5	11	5.8	15.3
Dir	349	337	315	313	297	293	281	260	272	271	40	12	8	359	4	360	335	336	45	62	101	103	205	232	333.3	271.6
10 Spd	10	12	8	7	8	11	12	14	16	16	17	16	16	16	14	13	9	8	6	2	5	7	7	8	9.1	16.8
Dir	238	235	268	307	311	325	330	327	328	320	320	328	339	323	318	320	330	295	331	337	266	243	242	255	309.3	320.2
11 Spd	2	3	5	5	5	8	8	8	7	8	8	7	6	7	8	8	10	10	9	8	6	6	9	8	6.3	10.0
Dir	247	161	162	113	91	83	87	89	94	90	82	86	68	69	87	89	99	82	69	62	71	52	47	52	82.0	82.2
12 Spd	8	9	10	9	8	8	7	9	9	10	10	9	10	6	1	11	10	7	7	8	9	7	6	7	3.8	11.5
Dir	54	65	74	77	72	74	65	66	61	52	50	59	96	114	2	339	343	319	316	286	273	265	238	241	39.3	338.6
13 Spd	4	8	7	9	7	6	7	9	7	9	8	8	8	6	6	8	10	9	14	8	6	8	5	10	6.6	13.6
Dir	297	262	266	261	266	259	254	267	286	291	277	275	260	315	221	222	213	220	241	262	356	338	254	249	262.5	240.8
14 Spd	11	10	13	13	13	12	13	13	17	18	21	21	19	12	19	16	16	13	12	9	9	11	15	13	13.8	20.8
Dir	273	293	296	296	303	303	304	312	319	310	313	322	314	326	312	314	311	319	301	289	298	285	310	317	307.8	312.5
15 Spd	11	14	14	16	17	18	14	16	20	21	21	22	23	15	7	16	24	22	18	14	11	9	6	8	15.3	23.6
Dir	312	304	312	314	315	314	308	300	312	315	318	325	326	322	329	339	344	347	343	342	336	329	318	318	323.3	344.4
16 Spd	10	8	7	7	7	6	7	6	9	9	10	10	8	8	10	9	2	8	5	4	2	4	3	4	5.6	10.4
Dir	321	324	315	319	322	319	336	325	327	334	339	325	340	355	356	324	304	288	290	285	252	173	146	163	323.8	338.7
17 Spd	3	1	4	3	3	3	4	3	3	5	9	7	6	6	5	7	10	12	10	9	7	4	6	7	4.8	12.1
Dir	139	109	168	145	151	153	168	166	219	199	142	132	108	93	89	80	85	96	107	161	158	132	111	129	126.1	95.9
18 Spd	3	4	2	1	1	5	4	5	6	3	7	9	13	13	5	5	11	8	9	8	9	9	8	9	2.4	12.6
Dir	71	74	73	351	109	89	76	103	82	85	92	101	71	49	120	357	307	308	308	259	224	292	344	29	34.9	48.9
19 Spd	9	9	9	10	9	9	9	8	9	9	12	14	14	16	17	16	14	12	9	7	7	7	6	8	10.0	17.2
Dir	35	39	54	68	76	68	55	62	58	61	68	80	73	80	86	91	88	91	87	80	78	92	75	75	73.6	86.3
20 Spd	8	6	3	6	7	7	7	11	11	13	17	17	16	15	14	14	12	14	14	11	9	8	8	8	10.4	17.2
Dir	82	73	61	54	53	57	75	96	92	93	97	96	89	82	81	83	75	87	86	84	83	72	73	134	84.4	96.9
21 Spd	6	3	1	1	3	2	5	4	1	0	3	6	7	8	7	10	10	12	11	9	10	7	5	1	4.7	11.8
Dir	154	155	20	102	140	181	169	192	202	21	252	123	111	123	98	96	96	110	103	116	116	124	116	105	119.7	110.0
22 Spd	3	3	3	1	3	4	3	2	3	2	1	5	5	6	3	6	5	6	6	8	7	3	1	1	2.6	7.8
Dir	91	73	320	343	100	127	155	172	260	192	119	109	103	57	59	43	76	38	52	81	101	102	85	340	81.6	80.7

Hourly Averages

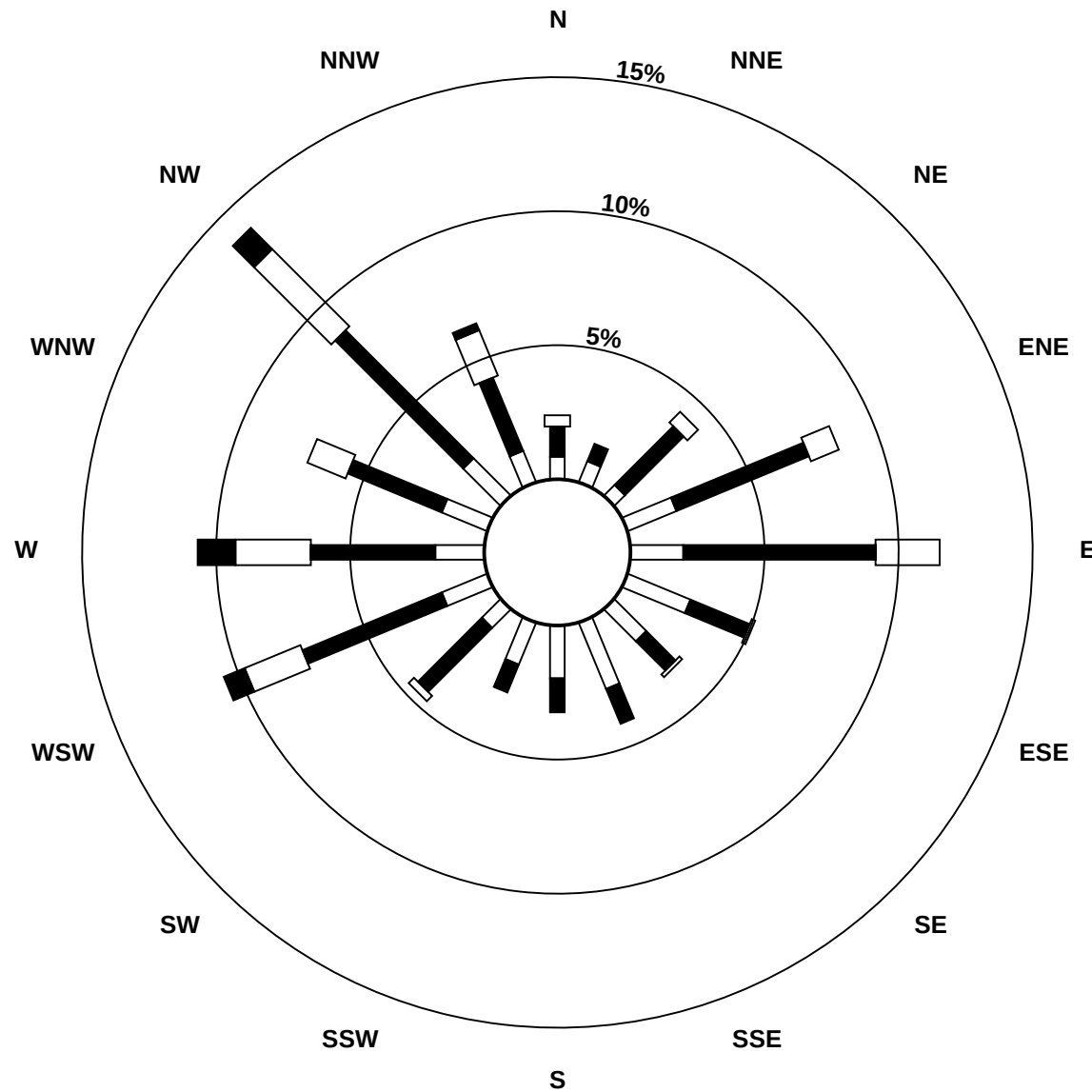
Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - June 2013

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	2	2	1	3	4	1	2	6	5	4	2	6	6	5	6	7	9	10	9	8	7	7	6	7	2.7	9.5					
Dir	331	48	303	304	321	253	253	285	266	236	193	103	66	73	50	35	60	67	69	87	111	111	109	100	71.8	66.7					
24 Spd	5	7	0	3	2	3	2	1	4	8	11	10	11	11	12	14	15	14	16	15	11	9	6	4	7.6	15.5					
Dir	87	112	105	45	16	18	30	97	83	95	101	93	84	96	87	65	72	57	50	55	59	55	87	44	72.6	49.8					
25 Spd	4	4	4	4	4	6	6	7	6	5	5	4	1	4	7	7	7	9	4	3	3	3	5	4	2.1	9.3					
Dir	71	24	75	347	10	15	22	78	99	88	115	127	120	99	117	178	115	159	164	212	304	331	336	334	84.9	158.9					
26 Spd	4	7	7	7	7	8	10	10	9	10	11	10	11	14	11	8	8	9	6	7	8	2	2	8	6.7	13.7					
Dir	264	248	253	256	251	255	252	266	262	257	253	273	287	296	316	315	300	311	321	351	352	147	192	233	278.4	296.3					
27 Spd	10	8	6	5	6	8	11	14	15	18	21	27	27	25	25	23	23	19	17	10	8	6	5	4	13.2	26.8					
Dir	201	212	242	239	241	223	224	232	244	253	258	270	271	270	274	276	277	284	283	290	291	269	266	251	262.4	270.0					
28 Spd	3	4	7	9	9	7	10	12	13	15	18	14	11	9	7	5	3	7	10	10	10	9	8	9	3.1	17.6					
Dir	345	280	272	268	282	280	269	266	243	251	254	270	289	310	322	305	149	76	95	94	92	90	84	86	275.3	254.0					
29 Spd	7	2	4	3	5	4	6	7	7	7	8	7	6	6	6	5	3	2	9	9	5	2	2	2	1.4	9.0					
Dir	82	80	322	294	286	271	231	260	255	249	290	318	323	334	316	327	292	105	124	138	126	132	65	89	286.8	124.1					
30 Spd	3	3	3	2	3	4	4	4	2	4	4	6	5	2	4	2	4	7	11	11	7	5	5	6	1.2	11.2					
Dir	307	309	296	318	279	315	309	302	249	244	183	163	180	205	18	27	355	47	86	95	86	70	71	77	61.2	86.5					
Spd	1.1	1.4	1.8	2.2	2.3	2.3	2.9	3.8	4.2	4.4	3.6	3.1	3.7	3.9	3.7	3.9	3.0	2.4	2.0	1.1	0.5	1.0	0.7	1.2	Diurnal Average						
Dir	280.5	279.8	285.5	294.0	302.2	307.0	278.7	271.5	278.9	278.7	287.8	306.3	318.7	321.6	322.3	329.3	333.0	324.0	344.3	353.2	353.1	312.7	301.3	263.7	Diurnal Maximum						
Spd	11.2	14.4	13.9	15.6	16.8	17.7	14.4	16.4	19.8	21.0	20.8	26.8	26.6	25.4	26.3	24.5	27.2	26.3	25.8	21.8	19.2	17.0	15.4	13.0	Diurnal Maximum						
Dir	273.0	303.6	312.1	314.3	314.8	314.1	307.8	299.7	312.3	314.5	312.5	270.0	270.9	270.4	253.9	257.7	270.9	272.4	256.7	262.8	259.0	261.1	309.5	317.3							
Maximum Speed Value: 27 km/h on Jun 5 17:00																		Minimum Speed Value: 0 km/h on Jun 21 10:00													
Maximum Daily Speed Average: 15.3 km/h on Jun 15																		Minimum Daily Speed Average: 1.1 km/h on Jun 22													
Maximum Diurnal Speed Average: 4.4 km/h at hour 10																		Minimum Diurnal Speed Average: 0.5 km/h at hour 21													
Monthly Average Velocity: 2.30 km/h 303.29 deg																		Speed Percentiles: P ₁ = 0.9 P ₁₀ = 3.1 Q ₁ = 5.2 Median = 7.7 Q ₃ = 10.5 P ₉₀ = 15.4 P ₉₉ = 25.3													
All monthly, daily, and diurnal averages have been calculated using vector methods																		Percent Operational Time: 100.0													
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	16		19		12		2		0		0		49																		
NorthEast	10		39		7		0		0		0		56																		
East	27		87		28		0		0		0		142																		
SouthEast	25		25		1		0		0		0		51																		
South	29		21		0		0		0		0		50																		
SouthWest	13		51		9		0		0		0		73																		
West	22		79		33		17		0		0		151																		
NorthWest	25		69		45		9		0		0		148																		
Total	167		390		135		28		0		0		720																		

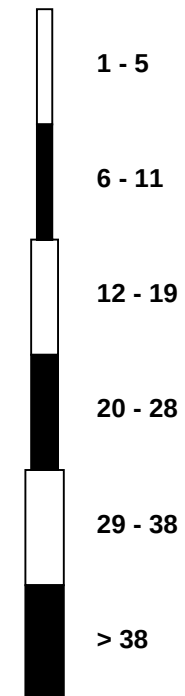
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - June 2013



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - June 2013

Maximum Speed: 29 km/h on Jun 5 17:00																				Maximum Daily Speed Average: 16.1 km/h on Jun 15										Hours in Service: 720																				
Minimum Speed: 1 km/h on Jun 23 03:00																				Minimum Daily Speed Average: 4.9 km/h on Jun 22										Hours of Data: 720																				
Maximum Diurnal Speed Average: 12.5 km/h at hour 16																				Minimum Diurnal Speed Average: 6.1 km/h at hour 3										Hours of Missing Data: 0																				
Monthly Average Speed: 9.17 km/h																				Percentiles: P ₁ = 2.0 P ₁₀ = 4.0 Q ₁ = 6.0 Median = 8.2 Q ₃ = 11.0 P ₉₀ = 15.8 P ₉₉ = 25.8										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-Jun	7	7	8	7	7	8	7	9	10	15	14	13	13	15	15	12	10	6	5	7	10	7	10	12	9.6	15.5																								
2-Jun	6	4	5	6	5	5	7	7	5	5	6	9	10	7	13	18	16	9	9	8	7	10	9	8	8.1	18.3																								
3-Jun	6	5	6	7	6	8	9	7	7	7	7	5	7	7	6	6	6	6	7	9	7	5	5	5	6.5	9.0																								
4-Jun	6	5	5	3	2	3	4	10	8	7	10	9	11	15	6	11	11	9	9	10	6	5	3	4	7.2	14.6																								
5-Jun	10	7	4	7	5	5	10	11	10	13	16	13	19	24	27	25	29	28	26	22	19	17	13	7	15.3	28.7																								
6-Jun	7	9	9	5	8	8	6	10	13	17	15	17	14	14	17	22	20	21	13	9	10	6	5	6	11.8	21.7																								
7-Jun	5	5	2	4	4	4	4	5	7	9	8	10	8	10	9	14	11	11	11	5	4	12	9	7	7.5	13.5																								
8-Jun	8	8	6	9	7	9	12	15	18	18	17	19	20	19	19	17	19	14	15	16	11	7	9	10	13.4	20.2																								
9-Jun	9	8	8	8	10	11	11	13	15	9	10	10	10	14	15	14	14	14	12	11	8	5	5	11	10.6	15.4																								
10-Jun	10	12	9	8	8	11	12	14	17	16	17	16	16	16	15	13	9	8	7	3	5	7	7	8	11.1	17.1																								
11-Jun	3	4	5	5	5	8	8	8	7	8	8	7	7	8	8	9	10	10	9	8	6	7	9	9	7.4	10.3																								
12-Jun	9	9	10	9	8	8	7	9	10	10	10	9	10	6	5	12	10	8	8	8	9	7	6	7	8.6	12.4																								
13-Jun	5	8	7	9	7	6	7	9	8	9	8	8	9	7	10	10	11	10	14	10	7	9	6	11	8.5	14.0																								
14-Jun	11	10	13	13	13	13	13	13	18	18	21	21	20	13	19	16	17	13	12	9	9	11	16	13	14.3	21.1																								
15-Jun	11	14	14	16	17	18	15	17	20	21	21	22	23	16	8	17	24	22	18	15	11	9	7	8	16.1	24.0																								
16-Jun	10	8	7	7	7	6	7	6	9	9	11	10	9	9	11	10	5	8	6	5	3	4	4	4	7.3	10.8																								
17-Jun	3	2	4	3	4	4	4	3	4	5	10	8	8	7	7	8	10	12	11	10	7	5	6	7	6.4	12.3																								
18-Jun	4	4	4	2	3	5	4	6	6	4	7	10	14	14	8	9	11	8	9	9	10	10	9	10	7.5	13.5																								
19-Jun	9	9	9	10	10	9	9	8	9	10	13	15	14	16	18	17	14	13	9	8	7	7	7	8	10.6	17.6																								
20-Jun	8	6	4	7	7	7	7	11	12	14	18	17	17	16	15	15	13	14	14	11	9	8	8	9	11.1	17.6																								
21-Jun	6	3	1	2	4	3	5	4	3	4	4	8	8	9	8	11	10	12	12	10	10	7	5	1	6.3	12.3																								
22-Jun	3	4	3	3	4	4	4	3	4	4	5	6	7	8	7	8	7	7	6	8	7	3	1	1	4.9	8.4																								
23-Jun	4	3	1	3	5	2	3	6	5	5	4	8	8	8	7	8	10	10	10	9	8	7	6	7	6.1	10.4																								
24-Jun	5	8	4	4	3	4	3	3	5	9	11	11	11	12	13	14	15	15	16	15	11	10	7	5	8.9	15.9																								
25-Jun	4	5	4	5	5	7	6	8	6	6	6	6	5	6	7	8	10	10	5	4	4	3	5	5	5.8	10.3																								
26-Jun	5	7	7	7	7	9	10	10	10	10	11	10	12	14	11	8	8	10	7	7	8	3	4	9	8.5	13.8																								
27-Jun	10	9	6	5	6	8	11	14	15	19	21	27	27	26	26	24	23	19	17	10	8	6	5	6	14.6	27.4																								
28-Jun	4	4	7	9	10	7	10	12	13	16	18	14	11	9	8	7	7	8	11	11	10	9	8	9	9.7	18.0																								
29-Jun	8	3	4	3	5	5	6	7	7	8	8	8	7	8	9	6	5	4	10	9	6	2	2	2	6.0	9.6																								
30-Jun	3	3	3	2	3	4	5	4	3	5	5	7	8	6	7	4	7	8	11	11	7	5	5	6	5.5	11.4																								
																									6.6	6.4	6.1	6.3	6.5	6.9	7.6	8.8	9.5	10.4	11.4	11.8	12.1	11.9	11.8	12.5	12.4	11.7	10.9	9.5	8.1	7.1	6.7	7.1	Diurnal Average	
																									11.3	14.5	14.1	15.7	16.9	17.8	14.6	16.6	20.0	21.3	21.3	27.4	27.1	25.8	26.7	25.0	28.7	28.2	26.1	22.2	19.4	17.3	15.6	13.1	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																																																		

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - June 2013

Maximum Value: 100.8 deg on Jun 21 10:00																			Hours in Service: 720						
Minimum Value: 5.5 deg on Jun 27 21:00																			Hours of Data: 720						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 6.6 P ₁₀ = 9.5 Q ₁ = 11.6 Median = 16.9 Q ₃ = 28.2 P ₉₀ = 49.0 P ₉₉ = 89.4																			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-Jun	11	26	14	13	12	10	35	16	14	17	27	22	28	19	22	28	28	66	89	28	10	24	26	14	89.4
2-Jun	21	22	43	22	17	50	21	23	72	90	60	42	35	41	31	33	20	32	29	13	12	7	11	9	89.8
3-Jun	15	15	9	9	7	7	10	17	19	19	25	33	20	24	31	54	55	50	18	10	14	10	11	12	54.6
4-Jun	8	9	9	29	46	22	27	17	19	24	22	36	28	45	72	27	28	27	27	11	8	21	86	18	85.7
5-Jun	16	34	22	14	27	47	38	18	14	14	18	17	13	11	11	11	18	21	10	10	7	10	25	18	46.7
6-Jun	12	13	15	71	17	23	14	11	14	14	18	18	19	21	17	17	24	16	20	16	11	34	18	24	70.9
7-Jun	23	32	63	13	13	21	16	13	10	15	14	12	20	25	28	19	11	27	14	29	55	54	62	25	63.4
8-Jun	13	17	15	13	18	11	8	14	11	11	21	11	10	11	10	18	10	36	24	11	11	36	13	16	35.5
9-Jun	11	13	8	9	8	11	8	11	9	78	26	20	22	14	16	15	21	30	45	17	16	24	21	12	78.0
10-Jun	12	12	31	11	10	10	8	8	10	12	9	12	15	15	8	11	14	13	19	40	20	14	12	12	40.0
11-Jun	58	19	19	23	10	12	13	12	14	19	19	23	25	17	23	18	20	13	13	16	19	18	12	11	58.2
12-Jun	13	10	12	11	12	11	12	14	15	16	17	18	12	19	95	25	13	17	12	11	9	15	10	11	95.1
13-Jun	32	14	10	9	10	11	10	10	16	10	17	22	29	58	43	35	19	20	15	33	22	29	39	10	57.6
14-Jun	8	8	8	7	7	7	7	9	9	10	10	10	10	25	11	14	9	9	10	16	12	9	11	6	24.9
15-Jun	9	7	8	6	7	7	8	8	7	9	13	10	12	17	33	32	11	10	14	11	8	8	14	8	33.1
16-Jun	8	8	7	8	8	10	10	14	13	13	15	11	15	29	23	29	78	22	33	26	49	19	24	10	77.9
17-Jun	30	59	14	15	32	23	15	31	50	38	20	31	52	42	42	35	18	11	14	23	11	28	12	13	59.0
18-Jun	55	13	52	90	96	19	33	28	17	39	24	20	22	22	66	57	11	13	9	29	32	22	20	14	96.1
19-Jun	12	13	17	12	10	11	13	16	13	17	15	15	13	12	11	9	8	9	9	12	9	10	10	11	17.3
20-Jun	11	13	39	15	13	14	15	13	13	14	13	14	15	18	18	16	16	13	10	12	11	9	10	28	38.9
21-Jun	22	11	76	33	50	31	16	31	81	101	41	41	41	39	49	28	22	17	15	17	15	9	11	12	100.8
22-Jun	8	48	40	86	51	24	26	65	29	79	89	62	49	43	75	47	56	34	27	22	16	10	15	64	89.4
23-Jun	54	51	31	24	25	65	32	21	29	40	64	34	39	53	45	42	26	21	17	15	13	8	6	10	65.2
24-Jun	12	15	95	39	52	44	70	63	30	23	22	22	19	24	19	19	17	17	14	13	15	16	21	31	95.2
25-Jun	31	34	36	38	45	30	33	31	27	27	39	64	89	53	26	20	61	24	29	39	28	29	13	20	88.7
26-Jun	29	12	11	15	16	14	13	12	13	12	11	15	10	8	15	16	16	19	20	16	13	67	76	44	75.8
27-Jun	13	11	15	10	14	16	11	9	13	13	14	12	12	10	11	13	12	11	10	7	5	20	15	36	36.3
28-Jun	42	25	13	16	24	19	11	12	15	13	11	17	18	25	38	55	76	33	18	13	9	8	7	9	76.3
29-Jun	11	52	24	25	26	28	17	25	17	32	25	33	48	57	61	48	55	91	23	23	24	14	37	41	90.7
30-Jun	17	19	27	29	24	11	19	19	49	30	44	44	58	85	66	81	71	27	12	10	9	12	10	14	84.6
	58.2	59.0	95.2	90.4	96.1	65.2	70.0	65.4	80.7	100.8	89.4	63.9	88.7	84.6	95.1	80.7	77.9	90.7	89.4	40.0	55.3	67.3	85.7	64.1	

PAZA

Evergreen Park Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

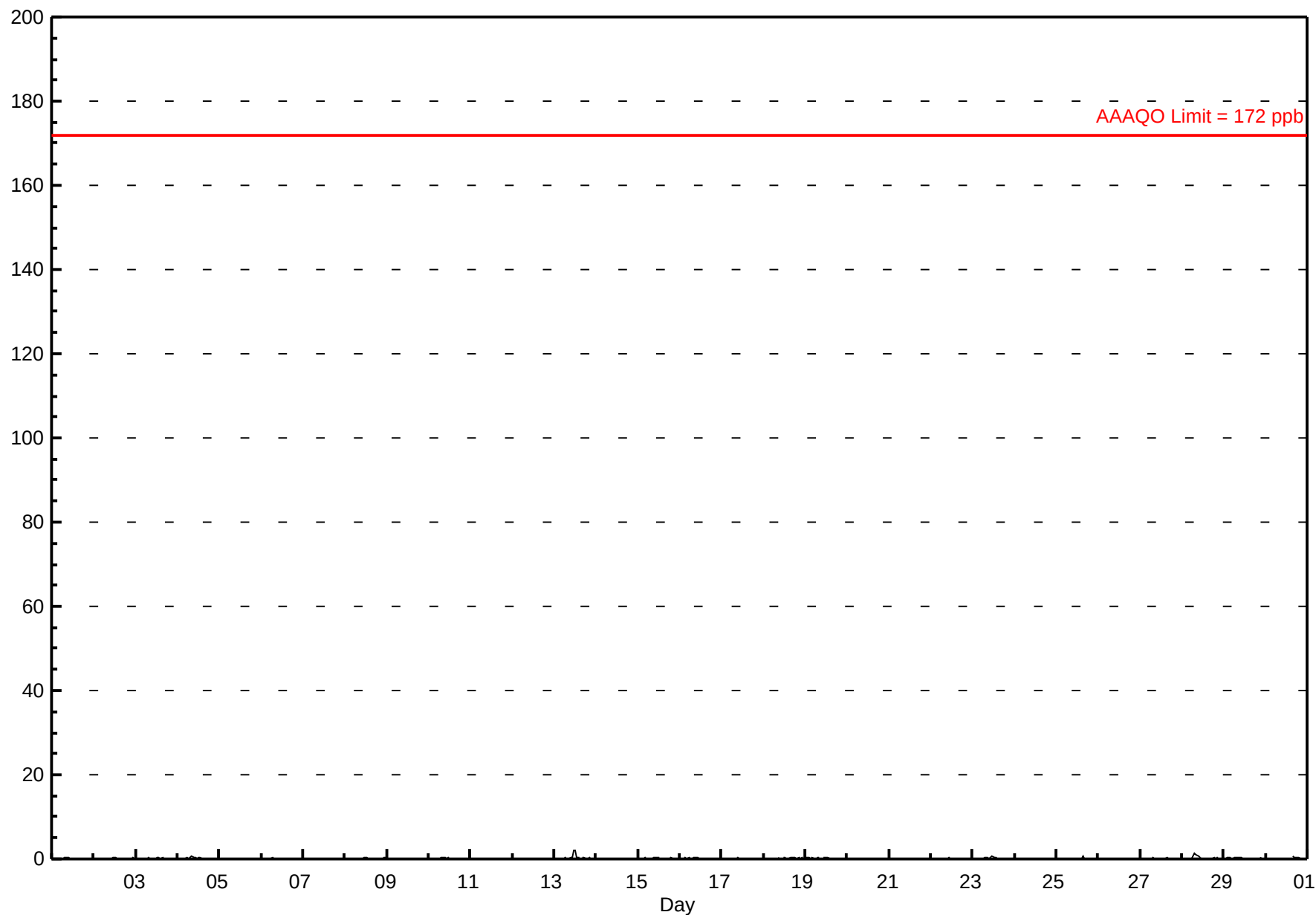
Sulphur Dioxide (SO₂) - ppb

Evergreen Park - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 2.0 ppb on Jun 13 12:00																				Maximum Daily Average: 0.3 ppb on Jun 13		Hours of Data: 684				
Minimum Value: 0 ppb on Jun 1 16:00																				Minimum Daily Average: 0.0 ppb on Jun 26		Hours of Missing Data: 36				
Maximum Diurnal Average: 0.2 ppb at hour 12																				Minimum Diurnal Average: 0.1 ppb at hour 1		Hours of Calibration: 36				
Monthly Average: 0.09 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.5		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-Jun	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
2-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
3-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
4-Jun	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
5-Jun	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
6-Jun	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
7-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1
8-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2
9-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
10-Jun	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
11-Jun	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
12-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
13-Jun	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	A	0	0	0	0	0	0	0	0	0.3	2.0
14-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Jun	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
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
17-Jun	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	0.2
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
19-Jun	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
20-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
21-Jun	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
22-Jun	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
23-Jun	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
24-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
25-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.0	0.5
26-Jun	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
27-Jun	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
28-Jun	A	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	1.5
29-Jun	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
30-Jun	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	1	0	0	0	0	0	A	0	0	0.1	0.5
0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
0.2		0.2	0.2	0.2	0.2	0.2	0.5	1.5	1.1	0.6	0.3	2.0	1.9	0.3	0.2	0.5	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																								
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - June 2013



Hourly Maximums

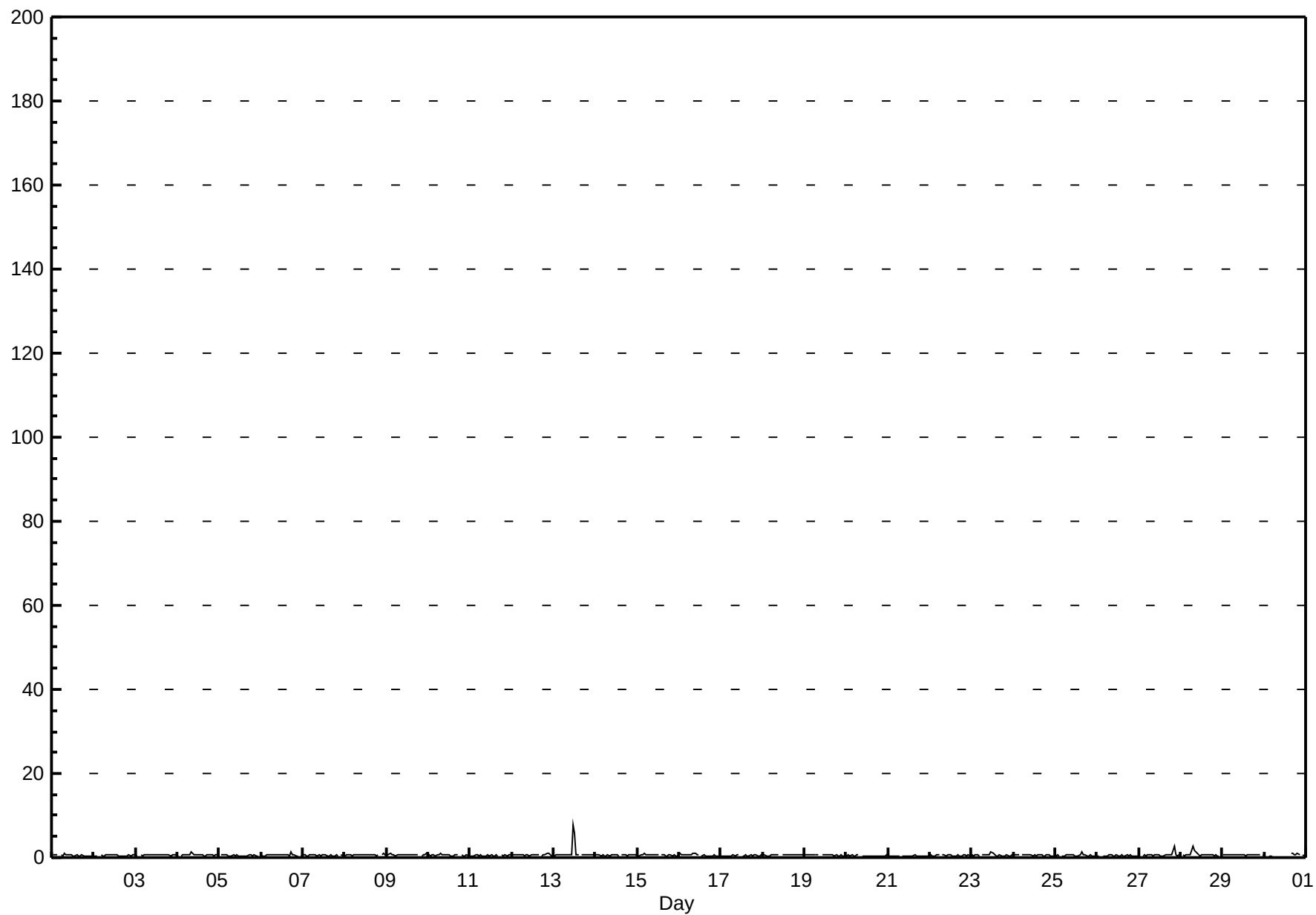
Sulphur Dioxide (SO₂) - ppb

Evergreen Park - June 2013

Maximum Value: 7.9 ppb on Jun 13 12:00																				Maximum Daily Average: 1.2 ppb on Jun 13										Hours in Service: 720	
Minimum Value: 0 ppb on Jun 30 07:00																				Minimum Daily Average: 0.4 ppb on Jun 30										Hours of Data: 684	
Maximum Diurnal Average: 0.9 ppb at hour 12																				Minimum Diurnal Average: 0.5 ppb at hour 2										Hours of Missing Data: 36	
Monthly Average: 0.58 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.7 P ₉₉ = 1.2										Hours of Calibration: 36	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jun	1	1	1	1	A	1	0	1	1	1	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0.5	0.9					
2-Jun	0	0	0	A	1	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0	1	1	0.5	0.8					
3-Jun	1	0	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.6	0.8					
4-Jun	0	A	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	1	0.6	1.2					
5-Jun	A	1	1	1	1	1	0	0	1	0	1	0	0	0	0	0	0	1	1	1	1	0	0	A	0.5	0.8					
6-Jun	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0.6	1.3					
7-Jun	1	1	0	0	1	1	1	1	0	1	0	1	1	1	0	0	1	0	0	1	0	A	1	0	0.5	0.7					
8-Jun	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	0.6	0.9					
9-Jun	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	1.0					
10-Jun	1	0	1	1	0	1	1	1	1	1	1	1	1	0	0	1	1	1	A	1	0	0	1	0	0.6	1.0					
11-Jun	1	0	0	1	1	0	1	0	0	0	1	0	1	0	0	1	0	A	1	0	1	0	1	1	0.5	0.7					
12-Jun	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	0.6	0.9					
13-Jun	0	1	1	1	1	1	1	1	1	1	1	8	6	1	1	A	1	1	1	1	1	1	1	1	1.2	7.9					
14-Jun	1	1	1	0	1	1	0	1	0	1	1	1	1	0	A	1	1	1	0	1	1	1	1	1	0.5	0.7					
15-Jun	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	1	1	0	1	0	0	0.6	1.0					
16-Jun	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	0	0	0	0	0	1	0	0	0	0.6	0.9					
17-Jun	0	0	0	0	0	0	0	1	0	1	1	A	0	0	1	0	0	1	0	1	1	0	0	1	0.5	0.8					
18-Jun	1	1	0	0	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8					
19-Jun	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	0	0	1	0	0	0.6	0.8					
20-Jun	0	1	0	1	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.5	0.6					
21-Jun	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.4	0.5					
22-Jun	1	0	0	0	1	1	A	1	1	0	1	1	1	0	0	0	1	0	0	1	1	0	1	0	0.5	0.7					
23-Jun	1	0	1	1	0	A	1	1	1	1	1	1	1	1	0	0	1	0	0	0	1	0	0	1	0.6	1.3					
24-Jun	1	1	1	1	A	1	1	1	1	1	1	0	1	0	1	1	1	1	0	1	1	0	0	0	0.6	0.7					
25-Jun	0	1	0	A	0	0	1	1	1	1	1	0	1	0	1	1	1	1	0	0	1	0	0	1	0.5	1.3					
26-Jun	0	0	A	0	0	0	0	1	1	1	0	1	0	1	1	0	0	1	0	1	0	0	0	0	0.5	0.8					
27-Jun	0	A	0	1	0	1	1	1	0	1	1	1	0	0	0	1	1	1	1	1	3	1	0	1	0.7	2.7					
28-Jun	A	1	0	0	1	1	2	3	2	1	1	1	1	1	1	1	1	1	1	0	1	0	0	A	0.8	2.7					
29-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	0.6	0.8					
30-Jun	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	1	1	1	1	1	1	A	1	0	0.4	0.9					
0.5 0.5 0.5 0.5 0.5 0.5 0.6 0.7 0.6 0.6 0.6 0.9 0.8 0.5 0.6 0.6 0.5 0.6 0.5 0.5 0.6 0.5 0.5 0.5																									Diurnal Average						
0.9 0.8 1.0 0.8 1.0 0.8 1.6 2.7 1.7 1.1 0.8 7.9 5.7 0.8 0.8 1.3 0.9 1.3 0.7 0.9 2.7 0.9 0.9 0.9																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

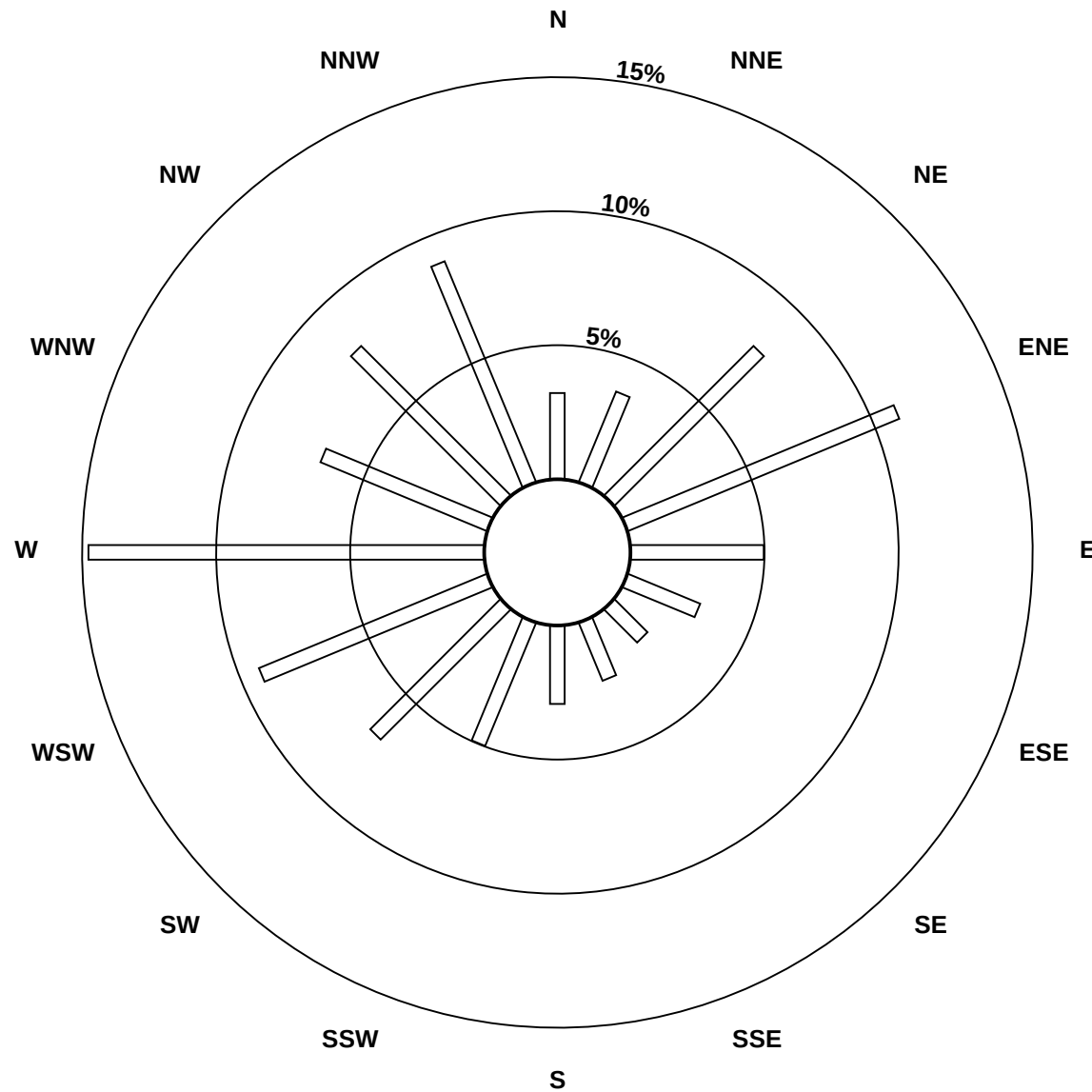
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - June 2013

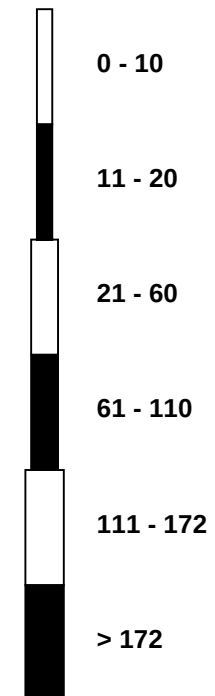


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - June 2013

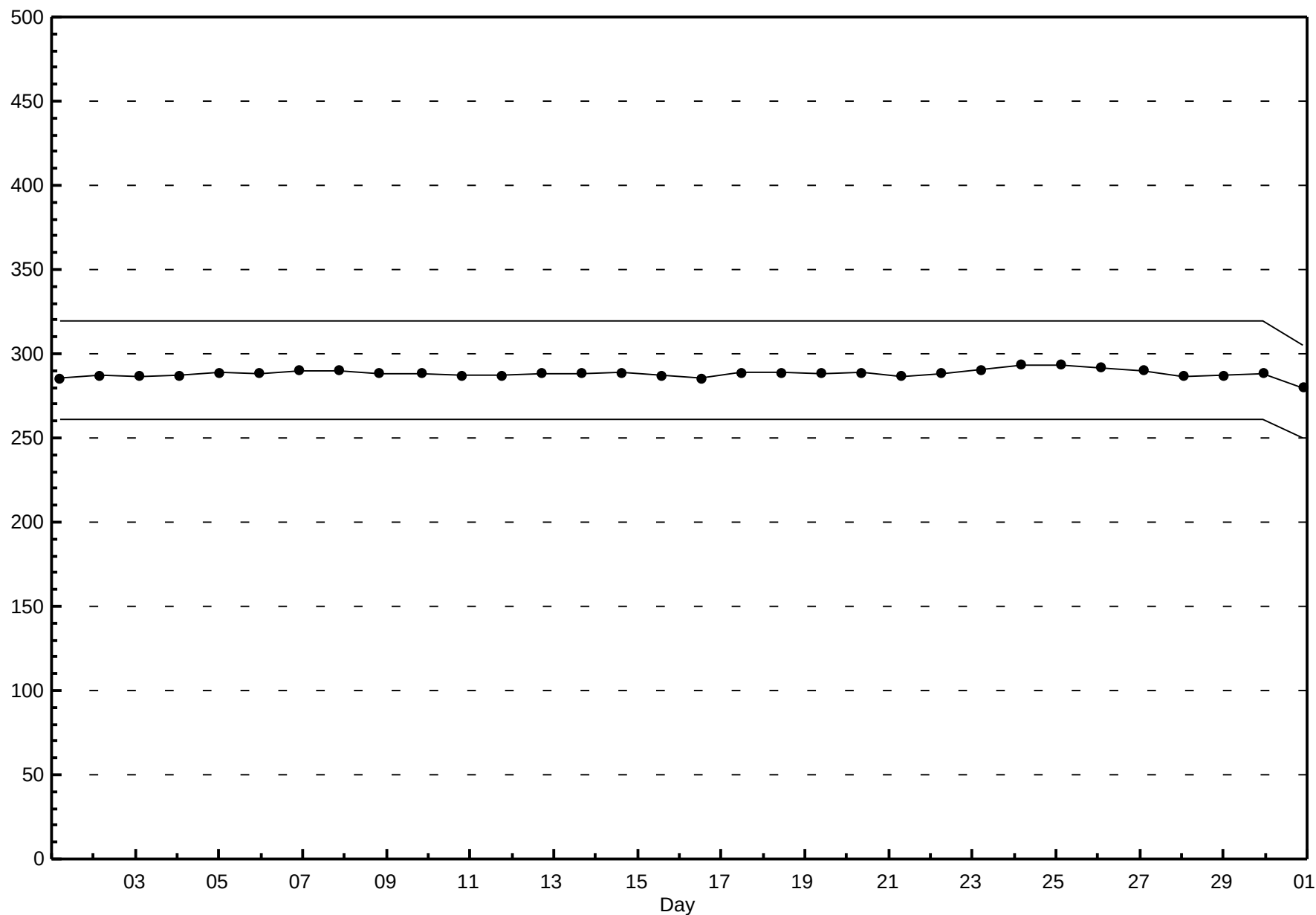


Pollutant Classes (ppb)



Span Responses

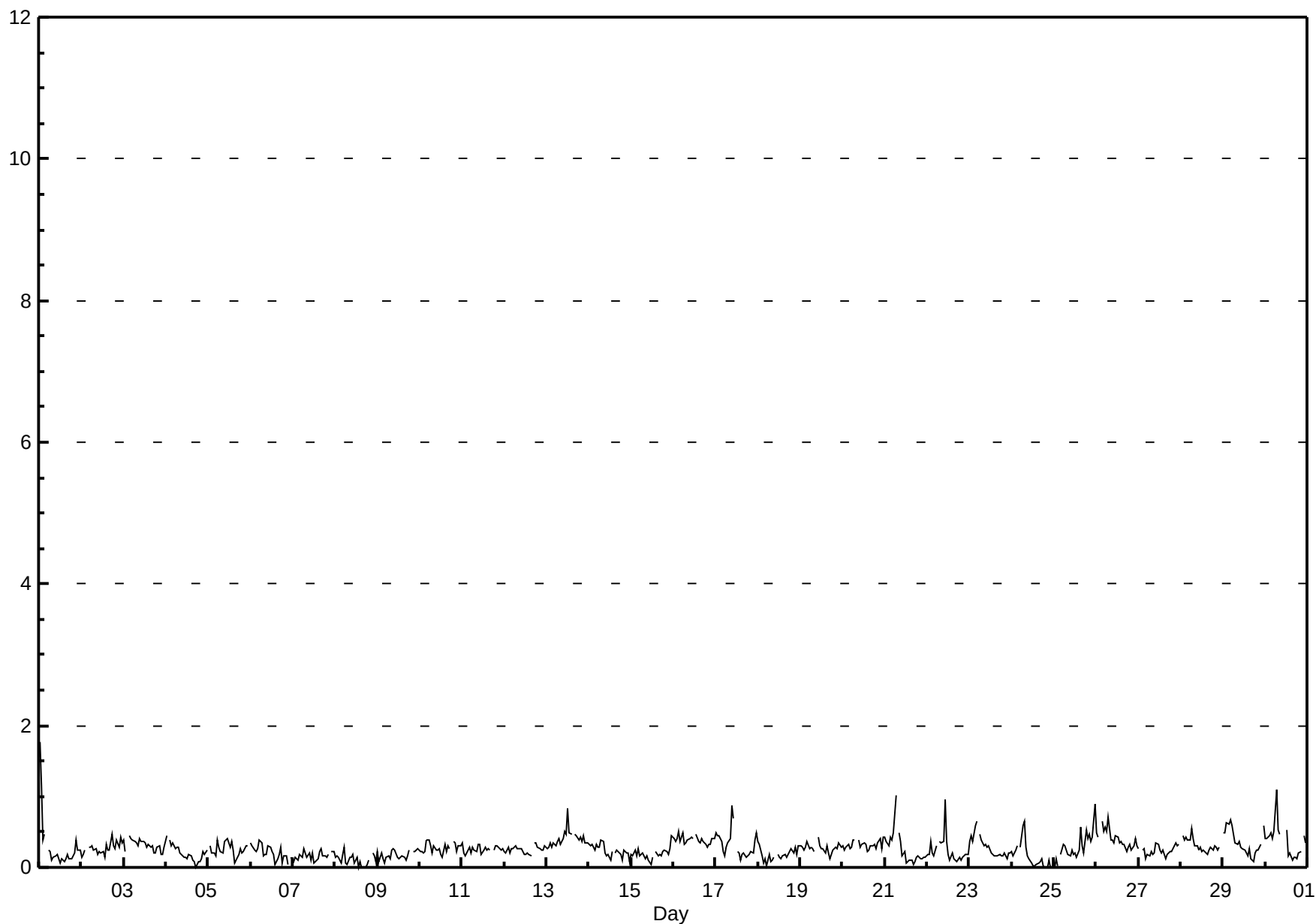
Sulphur Dioxide (SO₂)
Evergreen Park - June 2013



Number of Exceedences (AAAQO): Maximum Value: 1.8 ppb on Jun 1 01:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 0.4 ppb on Jun 26				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 Jun 8 16:00 Maximum Diurnal Average: 0.4 ppb at hour 7 Monthly Average: 0.27 ppb										Minimum Daily Average: 0.1 ppb on Jun 8 Minimum Diurnal Average: 0.2 ppb at hour 16 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 0.9																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jun	2	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8	
2-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
3-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
4-Jun	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
5-Jun	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.4	
6-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.4	
7-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3	
8-Jun	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	
9-Jun	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	
10-Jun	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	
11-Jun	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	0.3	
12-Jun	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	0.3	
13-Jun	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0.4	0.8	
14-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.4	
15-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
16-Jun	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
17-Jun	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
18-Jun	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	
19-Jun	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	
20-Jun	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	
21-Jun	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0	
22-Jun	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0	
23-Jun	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
24-Jun	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7	
25-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0.3	0.9	
26-Jun	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7	
27-Jun	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	
28-Jun	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.5	
29-Jun	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.4	0.7	
30-Jun	0	0	0	0	0	1	1	1	0	C	C	C	1	0	0	0	0	0	0	0	0	A	0	0	0.4	1.1	
																									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 Averages

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - June 2013



Hourly Maximums

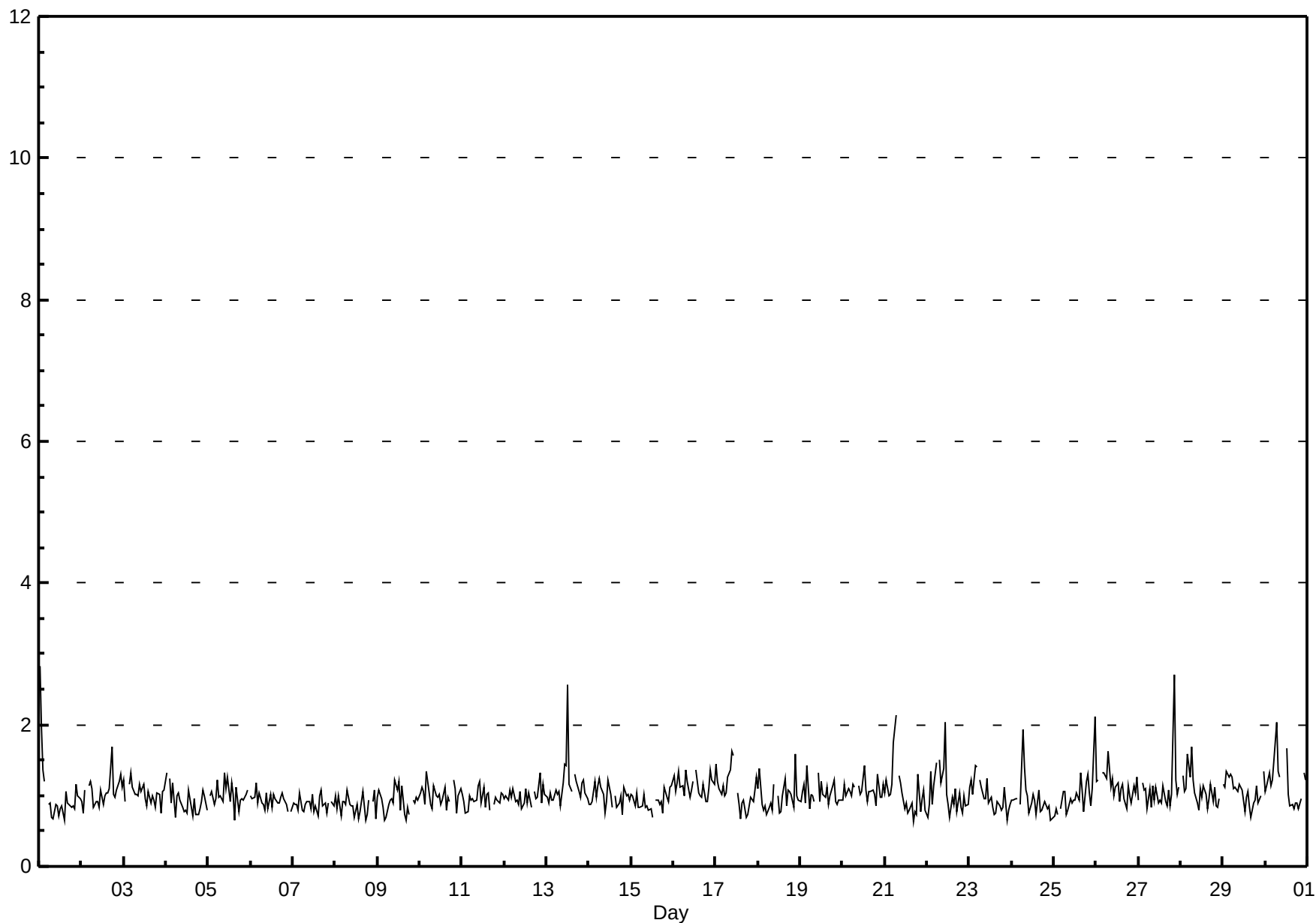
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - June 2013

Maximum Value: 2.8 ppb on Jun 1 01:00																			Maximum Daily Average: 1.2 ppb on Jun 30										Hours in Service: 720	
Minimum Value: 1 ppb on Jun 21 17:00																			Minimum Daily Average: 0.9 ppb on Jun 8										Hours of Data: 685	
Maximum Diurnal Average: 1.1 ppb at hour 7																			Minimum Diurnal Average: 0.9 ppb at hour 19										Hours of Missing Data: 35	
Monthly Average: 1.02 ppb																			Percentiles: P ₁ = 0.6 P ₁₀ = 0.8 Q ₁ = 0.9 Median = 1.0 Q ₃ = 1.1 P ₉₀ = 1.3 P ₉₉ = 2.0										Hours of Calibration: 35	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Jun	3	2	1		A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.8				
2-Jun	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1.1	1.7				
3-Jun	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	1.3				
4-Jun	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3				
5-Jun	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.0	1.3				
6-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.2				
7-Jun	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	1.1				
8-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.1				
9-Jun	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				
10-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.3				
11-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.0	1.2				
12-Jun	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	1.3				
13-Jun	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	A	1	1	1	1	1	1	1	1	1.2	2.6				
14-Jun	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				
15-Jun	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1				
16-Jun	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	1.4				
17-Jun	1	1	1	1	1	1	1	1	1	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.6				
18-Jun	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1.0	1.6				
19-Jun	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4				
20-Jun	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				
21-Jun	1	1	1	1	1	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.1				
22-Jun	1	1	1	1	1	1	A	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.0				
23-Jun	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4				
24-Jun	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.9				
25-Jun	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.0	2.1				
26-Jun	1	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	1.6				
27-Jun	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1.1	2.7				
28-Jun	A	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.1	1.7				
29-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.1	1.4				
30-Jun	1	1	1	1	1	1	2	1	1	C	C	C	2	1	1	1	1	1	1	1	1	A	1	1	1.2	2.0				
																									Diurnal Average					
																									Diurnal Maximum					
C - Calibration																									A - Automated Daily Zero Span					

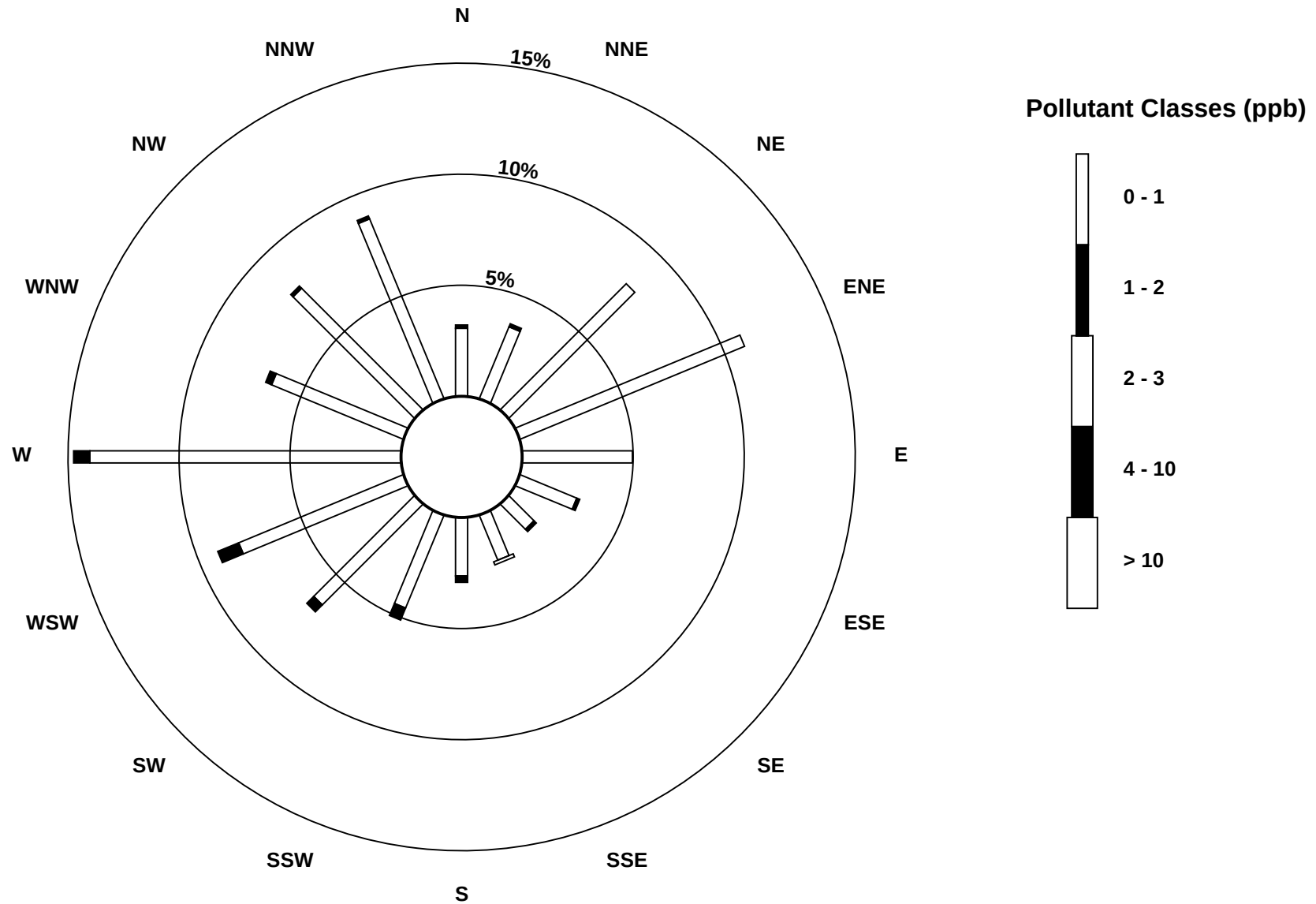
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - June 2013



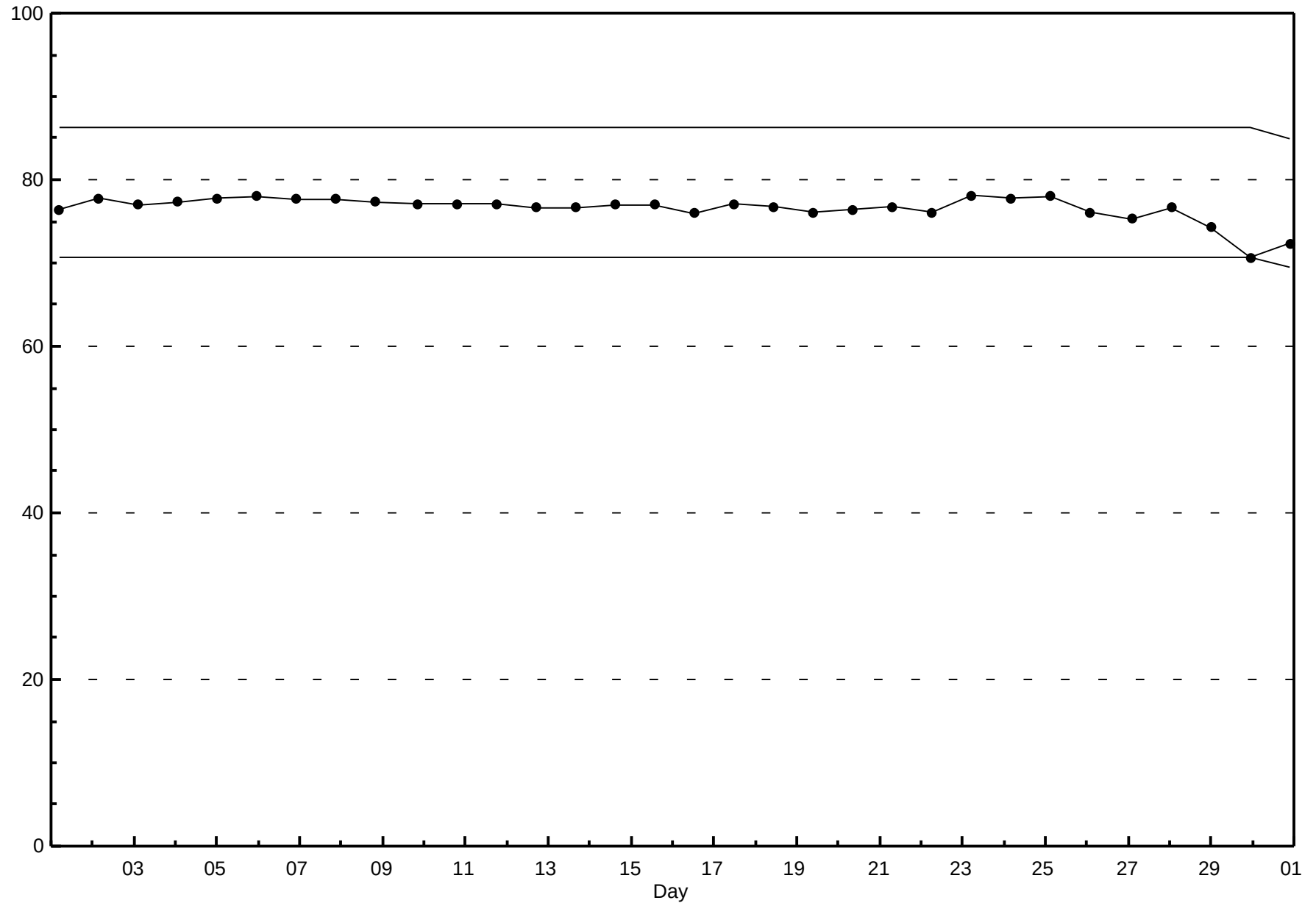
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - June 2013



Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - June 2013

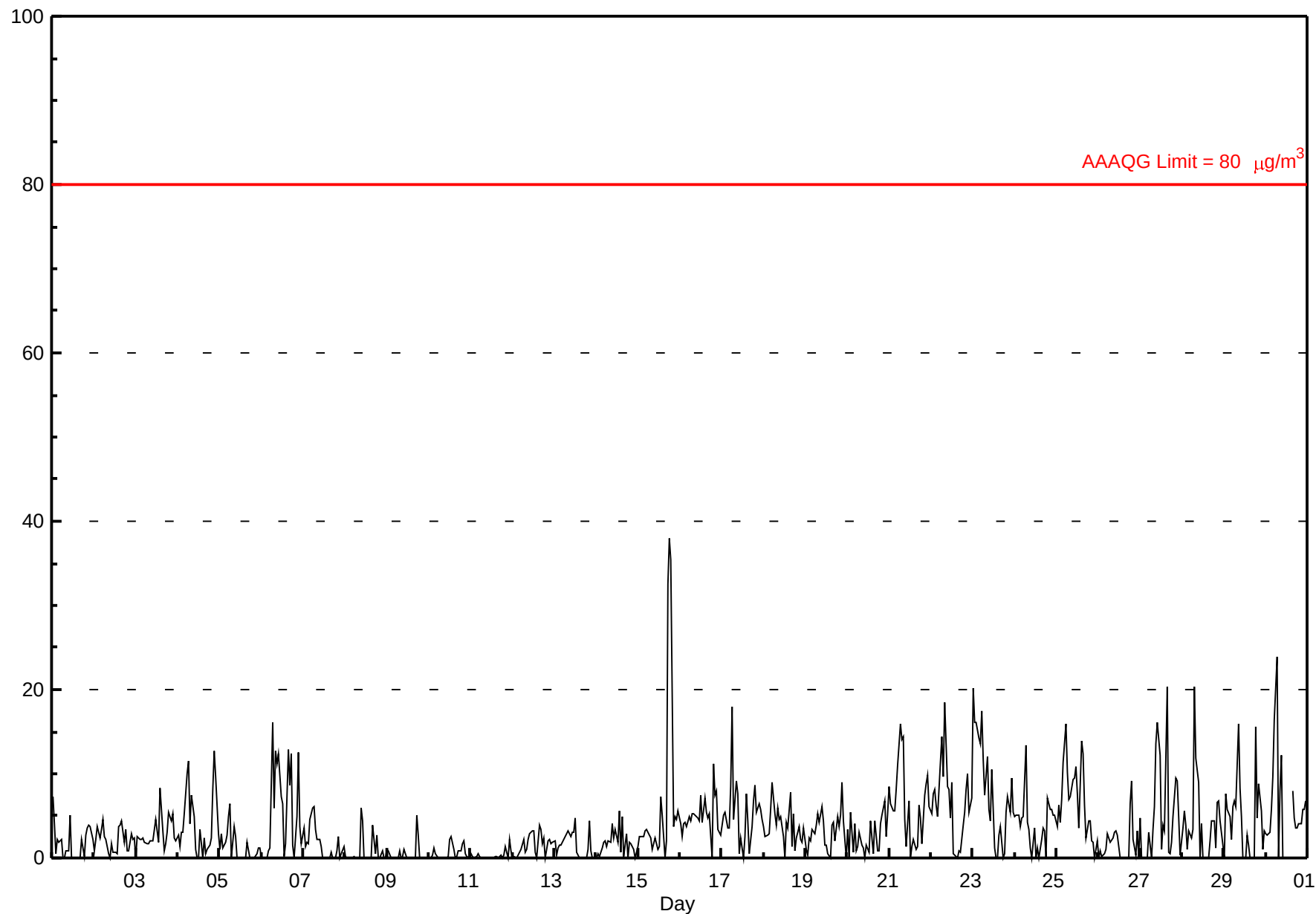


Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - June 2013

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 38.0 µg/m³ on Jun 15 19:00 Maximum Daily Average: 8.0 µg/m³ on Jun 23																								Hours in Service: 720 Hours of Data: 719 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9		
Minimum Value: 0 µg/m³ on Jun 1 07:00 Maximum Diurnal Average: 6.3 µg/m³ at hour 7 Monthly Average: 3.54 µg/m³ Minimum Daily Average: 0.3 µg/m³ on Jun 11 Minimum Diurnal Average: 1.7 µg/m³ at hour 14 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.4 Median = 2.4 Q ₃ = 5.0 P ₉₀ = 8.4 P ₉₉ = 19.9																										
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-Jun	7	4	1	2	2	2	0	0	1	1	5	0	0	0	0	0	0	2	0	3	4	4	4	2	1.8	7.4
2-Jun	1	2	4	2	3	5	3	2	0	0	2	1	1	0	4	4	4	2	3	1	1	3	2	2	2.2	4.5
3-Jun	0	3	2	2	2	2	2	2	2	2	2	5	3	2	8	3	1	2	3	5	4	5	2	2	2.8	8.3
4-Jun	3	1	3	3	5	10	11	4	7	5	1	0	0	3	0	2	0	1	2	2	8	13	10	3	4.1	12.6
5-Jun	1	3	1	2	3	5	6	0	4	3	0	0	0	0	0	0	2	0	0	0	0	0	1	1	1.3	6.4
6-Jun	0	0	0	0	1	1	16	6	13	11	12	7	6	0	2	13	9	12	1	0	5	13	4	2	5.6	16.1
7-Jun	4	1	2	2	5	6	6	3	2	2	1	0	0	0	0	0	1	0	0	1	2	0	1	1	1.7	6.1
8-Jun	0	0	0	0	0	0	0	0	0	6	4	0	0	0	0	0	4	0	3	0	0	1	0	0	0.8	6.0
9-Jun	1	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5	3	0	0	0	0	0	0.5	5.1
10-Jun	0	0	0	1	1	0	0	0	0	0	0	0	2	2	1	0	0	1	1	2	2	1	0	0	0.6	2.5
11-Jun	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	0.3	2.1
12-Jun	0	0	0	0	1	1	2	1	1	2	3	3	3	1	0	4	3	2	2	0	2	2	2	2	1.6	3.9
13-Jun	2	0	1	2	2	2	3	3	3	3	3	3	5	1	0	0	0	0	0	1	4	1	0	0	1.6	4.8
14-Jun	0	1	0	1	2	2	1	2	2	4	2	3	2	6	1	5	0	3	0	2	2	1	0	1	1.8	5.5
15-Jun	1	3	3	3	3	3	3	2	1	2	2	1	1	7	5	0	2	33	38	35	4	5	5	6	7.0	38.0
16-Jun	4	3	4	4	4	5	4	5	5	5	5	4	7	4	7	5	5	5	0	11	8	8	3	3	5.0	11.2
17-Jun	4	5	5	3	4	8	18	5	9	8	0	2	0	2	8	4	1	4	7	9	5	6	6	5	5.4	18.0
18-Jun	4	3	3	3	6	9	5	4	6	4	5	2	0	4	4	8	1	5	1	2	4	2	2	4	3.8	9.0
19-Jun	1	0	2	2	3	3	4	5	4	6	4	2	1	1	0	4	4	2	5	4	5	9	4	0	3.2	9.0
20-Jun	3	0	5	1	4	1	1	3	2	1	0	1	1	4	2	0	4	1	1	4	5	7	3	5	2.5	6.7
21-Jun	8	6	6	6	8	11	16	14	14	5	1	7	0	1	2	1	1	6	5	2	7	9	10	6	6.4	16.0
22-Jun	5	8	8	6	5	11	14	10	19	9	8	5	9	1	0	0	1	1	4	5	8	10	5	7	6.6	18.5
23-Jun	20	16	16	14	14	17	12	7	12	6	4	11	1	0	0	3	4	0	1	5	7	5	10	5	8.0	20.1
24-Jun	5	5	5	4	5	5	13	4	3	1	0	3	0	1	0	2	3	3	0	7	6	6	5	5	3.9	13.3
25-Jun	4	6	4	7	11	16	10	7	7	9	9	11	8	4	14	12	6	2	4	4	2	2	0	2	6.8	15.9
26-Jun	0	1	0	0	1	3	2	2	2	3	3	3	0	0	0	0	0	0	6	9	2	0	3	0	1.7	9.2
27-Jun	5	0	0	0	0	3	0	3	6	14	16	12	1	4	3	20	1	1	2	5	10	9	5	0	5.0	20.4
28-Jun	4	6	4	1	3	2	3	20	12	9	0	4	0	0	0	0	2	4	4	1	7	7	4	2	4.1	20.3
29-Jun	0	8	6	5	2	6	7	6	16	8	5	0	0	3	2	0	0	0	16	5	9	6	1	3	4.7	15.9
30-Jun	3	3	3	6	10	16	24	0	8	12	0	0	0	0	M	8	5	4	3	4	4	6	6	7	5.7	23.9
3.0 2.9 3.0 2.7 3.6 5.2 6.3 4.1 5.4 4.7 3.4 3.0 1.7 1.7 2.2 3.3 2.2 3.4 3.8 4.4 4.3 4.7 3.3 2.5																								Diurnal Average		
20.1 16.2 16.0 14.2 13.6 17.4 23.9 20.3 18.5 13.6 16.1 12.1 9.0 7.4 13.8 20.4 8.7 32.5 38.0 35.4 9.5 12.6 9.8 7.2																								Diurnal Maximum		
M - Maintenance																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										



Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

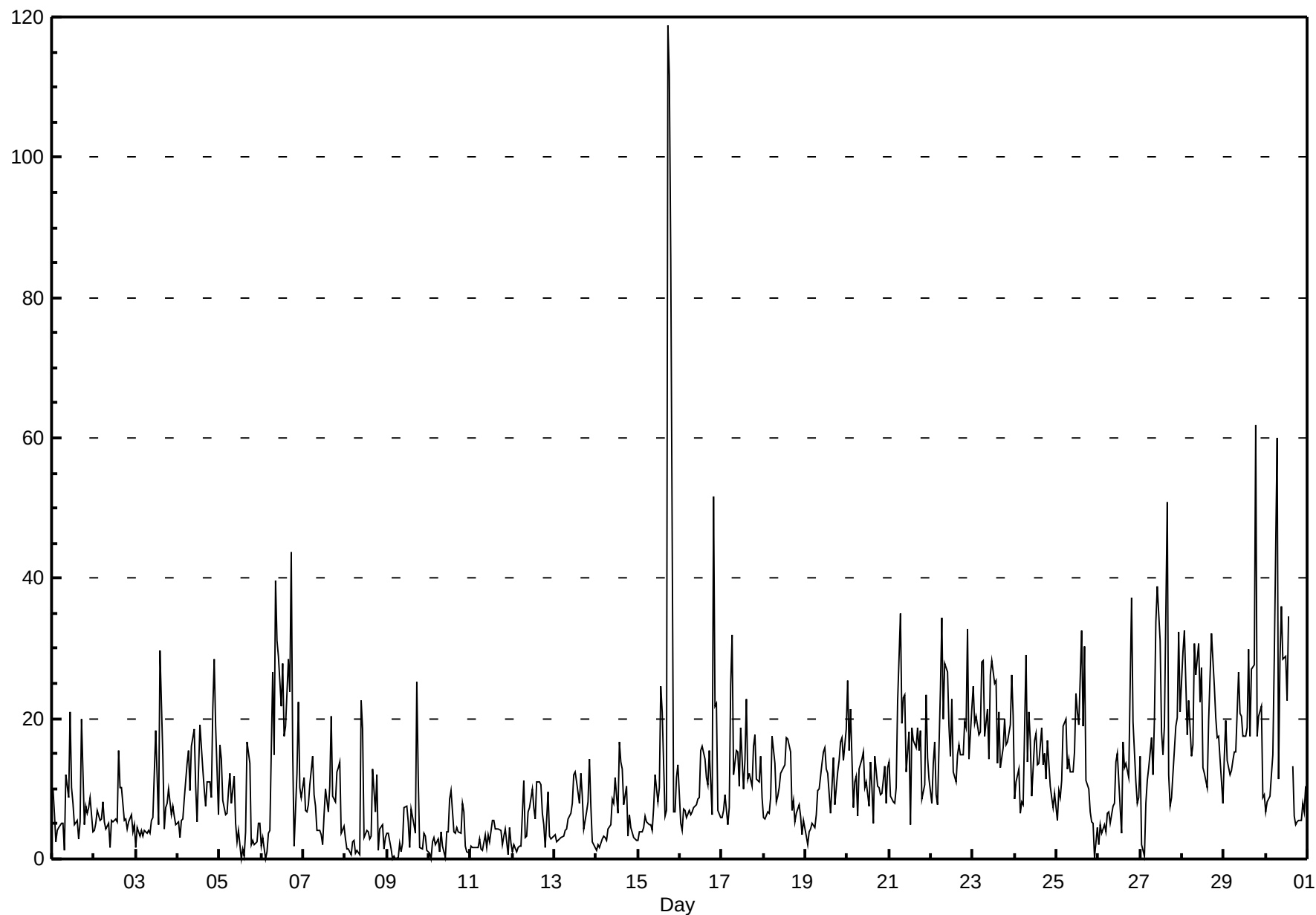
Evergreen Park - June 2013

Maximum Value: 118.7 µg/m ³ on Jun 15 18:00																					Maximum Daily Average: 21.3 µg/m ³ on Jun 28					Hours in Service: 720	
Minimum Value: 0 µg/m ³ on Jun 5 13:00																					Minimum Daily Average: 2.9 µg/m ³ on Jun 11					Hours of Data: 719	
Maximum Diurnal Average: 16.6 µg/m ³ at hour 18																					Minimum Diurnal Average: 6.3 µg/m ³ at hour 4					Hours of Missing Data: 1	
Monthly Average: 11.48 µg/m ³																					Percentiles: P ₁ = 0.1 P ₁₀ = 2.4 Q ₁ = 4.8 Median = 8.7 Q ₃ = 15.3 P ₉₀ = 22.5 P ₉₉ = 50.4					Hours of Calibration: 0	
																					Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jun	10	6	3	4	5	5	5	1	12	9	21	10	8	5	6	3	5	20	5	7	6	7	9	4	7.3	20.9	
2-Jun	4	5	7	6	6	8	5	4	5	2	6	5	6	5	15	10	10	6	6	4	5	6	4	5	6.1	15.4	
3-Jun	2	5	3	4	3	4	4	4	4	5	6	18	12	5	30	15	4	7	8	10	6	7	6	5	7.4	29.6	
4-Jun	5	3	6	6	8	14	16	10	16	18	10	5	13	19	13	10	7	11	11	9	21	28	19	6	11.9	28.5	
5-Jun	16	14	8	6	6	10	12	8	12	5	2	4	0	1	0	4	17	14	2	3	2	2	5	5	6.7	16.7	
6-Jun	2	3	0	1	4	4	27	15	40	31	29	22	28	17	19	28	24	44	16	2	12	22	10	9	17.0	43.8	
7-Jun	12	7	7	8	11	15	9	7	4	4	4	2	6	10	7	10	20	9	8	12	13	14	4	5	8.6	20.4	
8-Jun	3	1	1	1	2	3	1	1	1	23	19	3	4	4	3	3	13	7	12	1	4	5	1	3	4.9	22.5	
9-Jun	4	4	1	0	0	0	0	2	1	2	7	7	5	2	7	5	4	25	12	2	1	4	3	1	4.2	25.2	
10-Jun	1	0	2	3	2	3	1	4	2	0	4	4	8	10	4	4	5	4	4	8	7	2	1	1	3.4	9.7	
11-Jun	2	2	2	2	2	3	1	1	4	2	4	2	6	6	4	4	4	4	2	3	4	1	5	2	2.9	5.5	
12-Jun	1	2	1	2	2	2	11	3	3	7	7	10	7	6	11	11	11	7	5	2	10	3	3	3	5.3	11.2	
13-Jun	4	2	3	3	3	3	4	4	6	6	8	12	12	11	8	12	9	4	7	8	14	7	2	2	6.5	14.3	
14-Jun	1	2	2	3	3	3	3	4	5	8	8	12	6	17	14	13	8	10	3	6	5	3	3	3	6.0	16.8	
15-Jun	3	4	4	5	6	5	5	5	4	7	12	8	10	25	21	6	7	119	112	86	7	7	12	13	20.4	118.7	
16-Jun	5	4	7	7	6	7	6	7	7	8	8	9	16	16	14	12	11	16	6	52	22	22	7	6	11.7	51.6	
17-Jun	6	7	9	5	7	25	32	12	16	15	10	19	10	14	23	11	12	10	16	18	11	11	15	9	13.4	31.9	
18-Jun	6	6	7	7	9	17	14	8	9	10	12	13	13	17	17	15	7	8	5	7	8	6	4	6	9.6	17.5	
19-Jun	3	2	4	4	5	5	6	10	10	14	15	16	13	12	7	10	15	8	12	14	17	17	14	18	10.4	18.4	
20-Jun	26	16	21	7	11	12	6	13	14	15	10	11	7	14	10	5	15	10	10	9	9	13	8	13	11.9	25.5	
21-Jun	14	9	8	8	10	22	35	19	23	23	12	18	5	19	17	16	19	16	18	9	11	23	15	11	15.8	35.0	
22-Jun	8	14	17	9	8	24	34	20	28	27	19	15	23	12	11	15	16	15	15	19	19	33	14	21	18.1	34.3	
23-Jun	25	19	20	18	18	28	28	17	21	14	26	28	25	26	14	21	13	16	20	16	17	19	26	20	20.7	28.2	
24-Jun	8	11	13	6	8	8	29	14	21	17	9	17	18	13	14	19	14	15	11	17	10	9	7	9	13.2	29.2	
25-Jun	6	10	9	11	19	20	13	14	12	12	15	24	21	19	33	19	30	11	10	7	5	5	0	5	13.7	32.6	
26-Jun	2	5	4	5	4	7	7	5	7	8	14	15	7	4	17	13	14	12	25	37	19	11	8	9	10.7	37.2	
27-Jun	15	2	0	8	11	13	17	12	20	34	39	31	18	15	19	51	12	7	9	12	19	20	32	21	18.2	50.9	
28-Jun	29	33	25	18	23	15	16	31	26	31	22	27	13	12	10	20	26	32	25	20	17	17	14	8	21.3	32.6	
29-Jun	15	20	14	12	13	14	15	15	27	21	20	17	17	19	30	17	27	28	62	17	20	22	9	9	20.0	61.9	
30-Jun	7	8	9	12	15	28	60	11	28	36	28	29	23	35	M	13	6	5	5	6	6	8	7	10	17.2	59.9	
8.1 7.5 7.2 6.3 7.6 10.8 14.1 9.4 12.9 13.8 13.6 13.8 12.0 12.9 13.6 13.2 12.8 16.6 15.4 14.1 11.0 11.9 8.9 8.1																									Diurnal Average		
29.4 32.6 25.3 17.7 22.6 28.5 59.9 30.6 39.7 36.0 38.9 31.1 28.0 34.6 32.6 50.9 30.4 118.7 111.6 85.5 21.8 32.8 32.3 21.4																									Diurnal Maximum		
M - Maintenance																											

Hourly Maximums

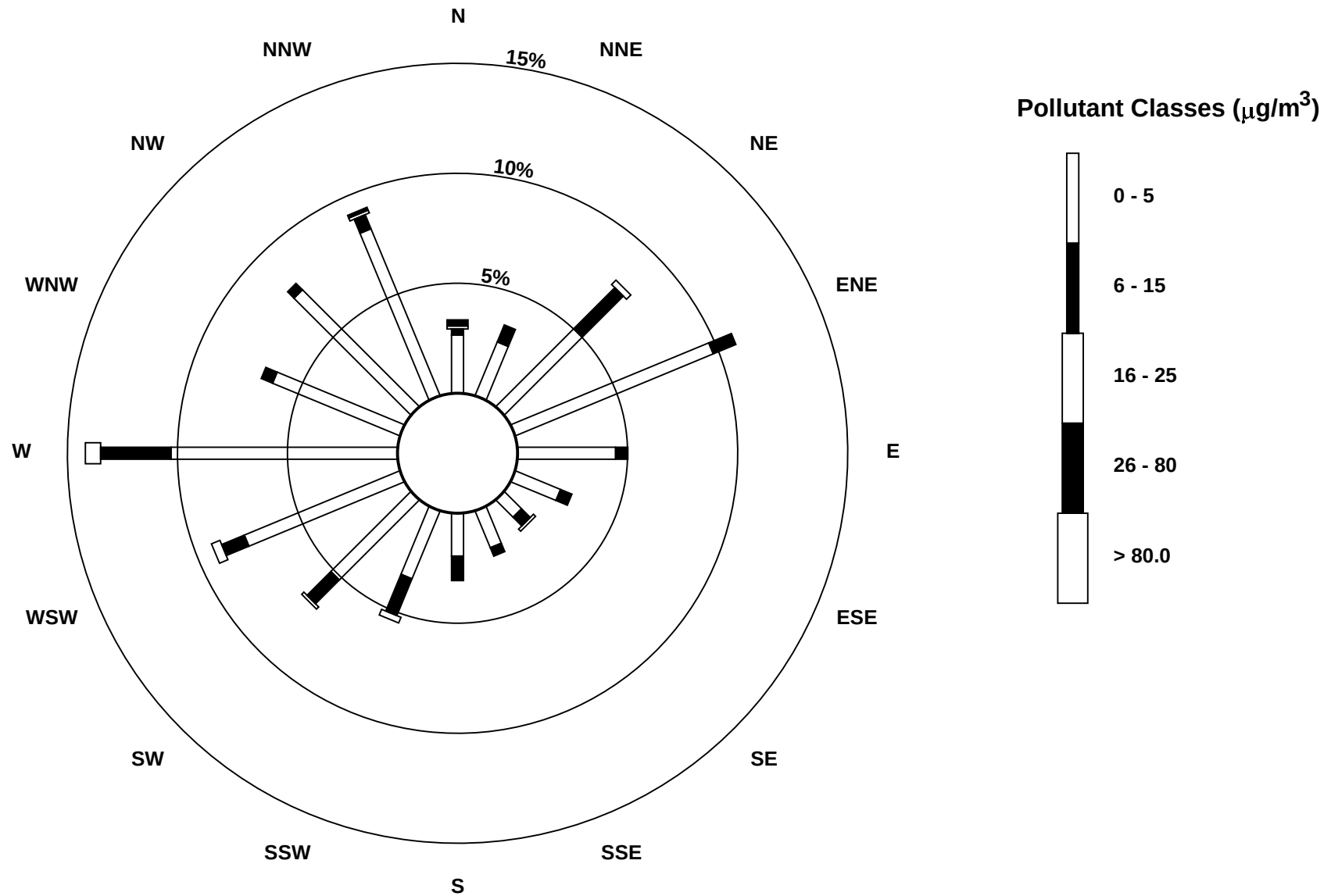
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Evergreen Park - June 2013



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Evergreen Park - June 2013



Hourly Averages

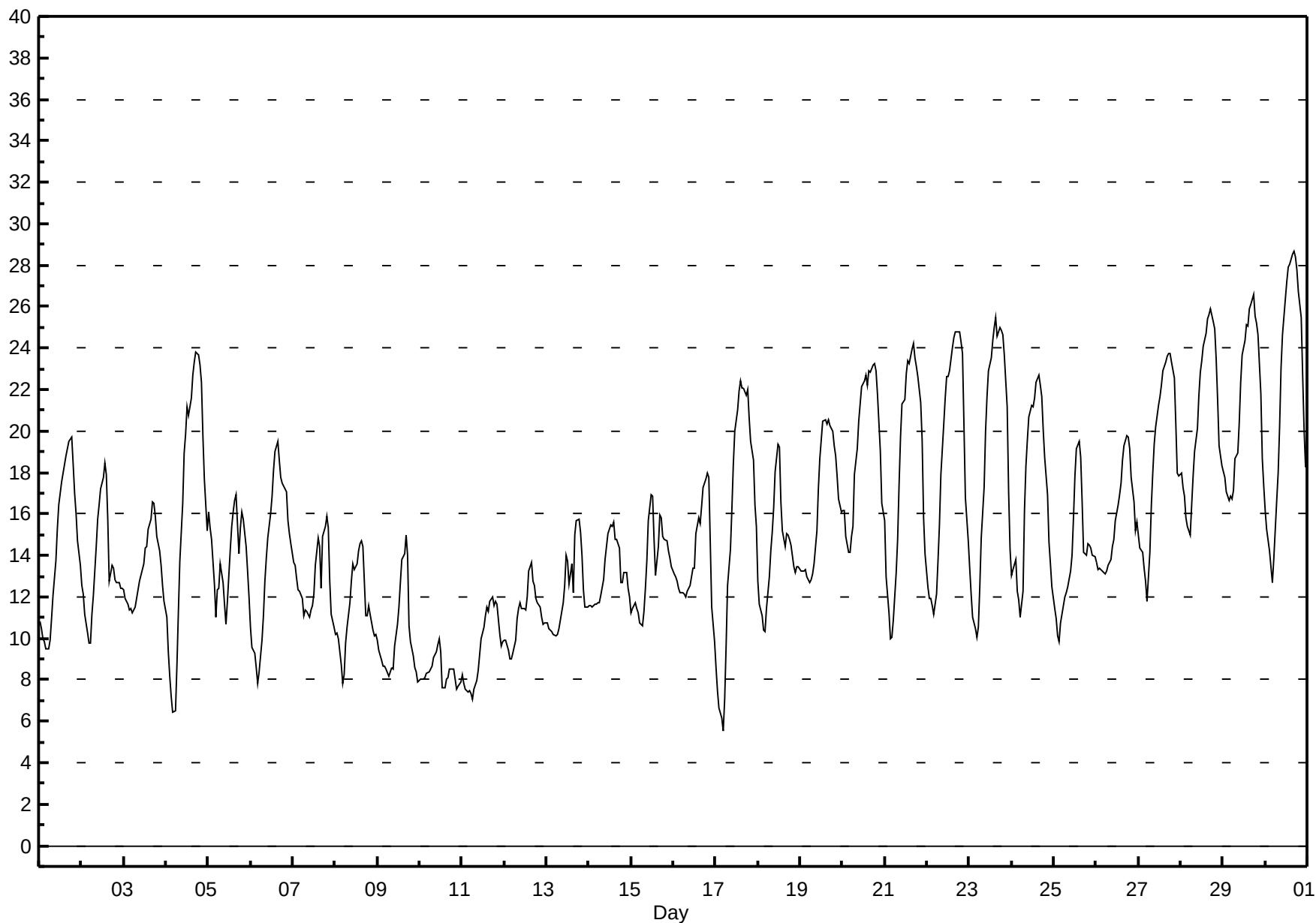
External Temperature (ET) - °C

Evergreen Park - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.7 °C on Jun 30 17:00 Maximum Daily Average: 21.8 °C on Jun 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: 6 °C on Jun 17 05:00 Maximum Diurnal Average: 18.7 °C at hour 17 Monthly Average: 15.12 °C												Minimum Daily Average: 8.4 °C on Jun 10 Minimum Diurnal Average: 10.7 °C at hour 5 Percentiles: P ₁ = 7.2 P ₁₀ = 9.6 Q ₁ = 11.5 Median = 14.2 Q ₃ = 18.2 P ₉₀ = 22.8 P ₉₉ = 26.8														
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-Jun	11	10	10	10	9	9	10	11	12	14	15	16	17	18	18	19	19	20	20	18	17	16	15	14	14.5	19.7
2-Jun	13	12	11	10	10	10	11	12	14	16	16	17	18	18	18	16	13	14	13	13	13	13	12	12	13.5	18.4
3-Jun	12	12	12	11	11	11	11	12	12	13	13	14	14	14	15	16	17	17	16	15	14	13	13	12	13.4	16.6
4-Jun	11	9	8	7	6	7	9	11	14	17	19	20	21	21	22	23	23	24	24	23	22	20	18	15	16.4	23.8
5-Jun	16	15	15	13	11	12	12	14	13	12	11	12	14	15	16	17	17	14	15	16	16	14	13	12	14.0	16.9
6-Jun	11	10	9	9	8	8	10	11	13	14	15	16	17	18	19	19	19	18	17	17	17	16	15	15	14.1	19.5
7-Jun	14	14	13	12	12	12	11	11	11	11	11	12	12	14	15	14	12	15	15	16	15	13	11	11	12.8	15.9
8-Jun	10	10	10	9	8	8	10	11	12	13	14	13	14	14	15	15	14	11	11	12	11	10	10	10	11.4	14.7
9-Jun	10	9	9	9	9	9	8	8	9	8	10	11	12	13	14	14	15	14	11	10	9	9	8	8	10.2	15.0
10-Jun	8	8	8	8	8	8	9	9	9	9	10	10	9	8	8	8	8	9	9	9	8	8	8	8	8.4	10.0
11-Jun	8	8	8	7	7	7	7	8	8	8	9	10	11	11	12	11	12	12	12	12	12	10	10	10	9.5	12.0
12-Jun	10	10	9	9	9	9	10	11	11	12	11	11	11	12	13	14	13	13	12	12	12	11	11	11	11.1	13.7
13-Jun	11	10	10	10	10	10	10	10	11	12	13	14	14	13	14	12	15	16	16	15	14	12	11	11	12.3	15.8
14-Jun	12	12	12	12	12	12	12	12	13	14	14	15	15	15	16	15	15	14	13	13	13	13	12	12	13.2	15.6
15-Jun	11	11	12	11	11	11	11	11	12	14	16	17	17	15	13	14	16	16	15	15	15	14	14	13	13.6	17.0
16-Jun	13	13	13	12	12	12	12	12	12	13	13	13	13	15	16	16	16	17	18	18	18	15	12	10	13.9	18.0
17-Jun	9	7	7	6	6	7	10	13	14	16	18	20	21	22	22	22	22	22	22	21	19	19	16	15	15.7	22.4
18-Jun	13	12	11	10	10	11	13	14	15	16	18	19	19	17	15	14	15	15	14	13	13	13	13	13	14.2	19.4
19-Jun	13	13	13	13	13	13	13	13	14	15	17	19	20	20	21	20	21	20	20	19	19	18	17	16	16.7	20.6
20-Jun	16	16	15	14	14	15	15	18	19	20	21	22	22	23	22	23	23	23	23	23	22	19	16	16	19.3	23.3
21-Jun	16	13	11	10	10	11	13	15	17	20	21	22	23	23	23	24	24	24	23	23	21	20	16	14	18.2	24.2
22-Jun	12	12	12	12	11	12	14	15	18	20	22	23	23	23	24	24	25	25	25	24	24	20	17	15	18.8	24.8
23-Jun	13	12	11	10	10	11	12	15	17	20	22	23	24	24	25	25	25	25	25	25	24	21	17	14	18.8	25.5
24-Jun	13	13	14	12	12	11	12	16	18	20	21	21	21	22	22	23	22	22	20	19	17	15	14	13	17.2	22.7
25-Jun	11	11	10	10	11	12	12	12	12	13	14	16	18	19	19	19	17	14	14	15	15	14	14	14	14.0	19.5
26-Jun	14	13	13	13	13	13	13	14	14	14	15	16	16	17	17	19	19	20	20	19	18	17	15	16	15.7	19.8
27-Jun	15	14	14	13	13	12	14	16	18	19	20	21	22	22	23	23	24	24	24	23	23	20	18	18	18.9	23.7
28-Jun	18	17	17	16	15	15	16	18	19	20	22	23	23	24	25	25	26	26	25	25	23	22	19	18	20.8	25.9
29-Jun	18	18	17	17	17	17	17	19	19	20	22	24	24	25	25	26	26	27	26	25	25	22	19	17	21.3	26.6
30-Jun	16	15	14	13	13	14	17	18	20	23	25	26	27	28	28	29	29	28	28	27	25	23	20	18	21.8	28.7
12.6 12.1 11.6 11.0 10.7 11.0 11.8 13.0 14.1 15.2 16.3 17.2 17.8 18.1 18.5 18.6 18.7 18.5 18.1 17.8 17.1 15.6 14.1 13.4																								Diurnal Average		
18.0 17.7 17.1 16.6 16.8 16.7 17.2 18.6 20.2 23.0 24.6 26.4 27.2 27.9 28.1 28.6 28.7 28.4 27.7 26.7 25.5 22.7 20.1 18.3																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C
Evergreen Park - June 2013



Hourly Averages

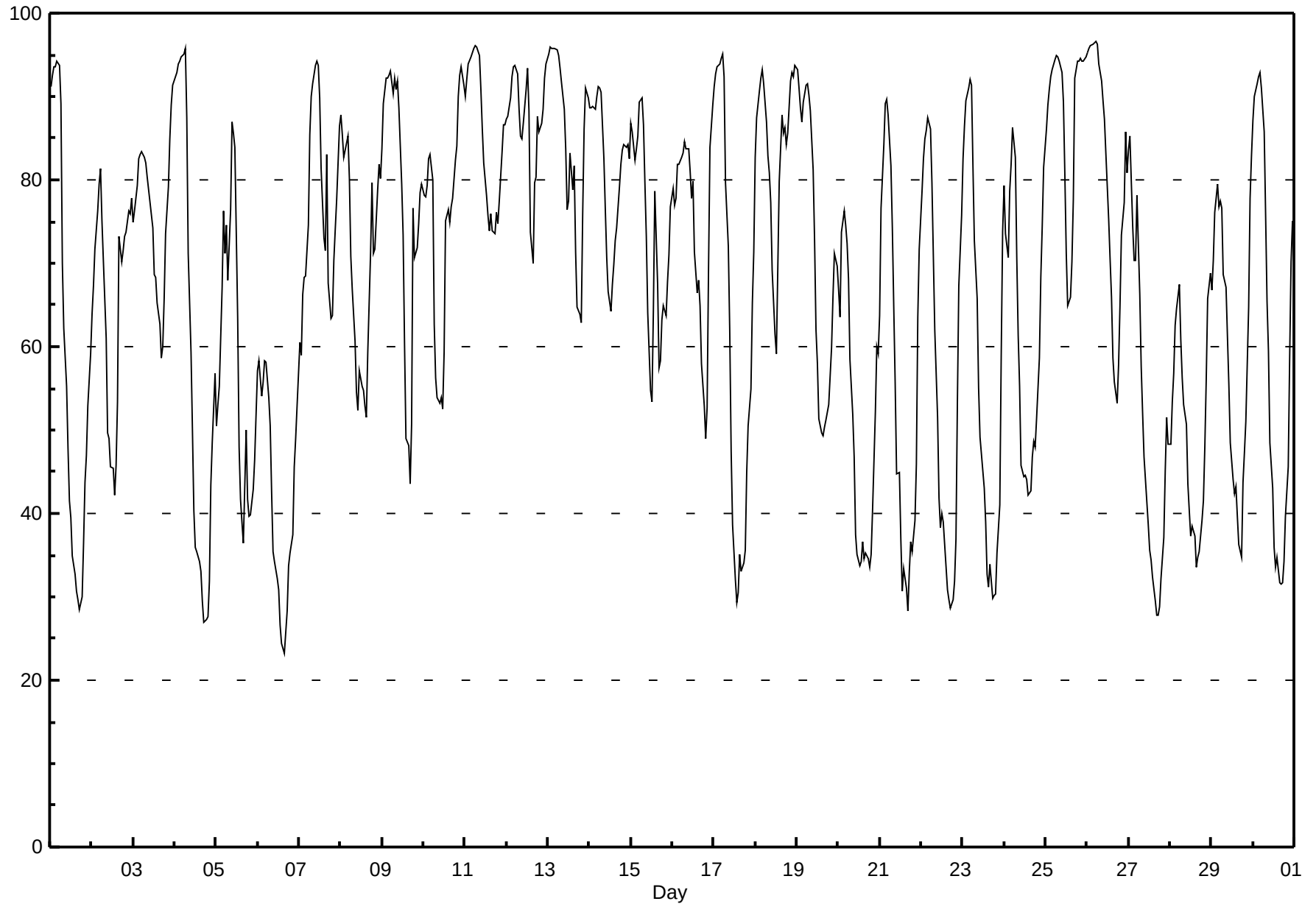
Relative Humidity (RH) - %

Evergreen Park - June 2013

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 96.6 % on Jun 26 06:00 Maximum Daily Average: 87.5 % on Jun 25																								Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 23 % on Jun 6 16:00 Maximum Diurnal Average: 85.5 % at hour 6 Monthly Average: 67.56 %												Minimum Daily Average: 41.8 % on Jun 6 Minimum Diurnal Average: 51.0 % at hour 16 Percentiles: P ₁ = 27.7 P ₁₀ = 35.3 Q ₁ = 51.0 Median = 71.4 Q ₃ = 85.4 P ₉₀ = 92.3 P ₉₉ = 95.9														
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-Jun	91	93	93	94	94	94	89	70	62	55	48	42	40	35	33	31	30	29	30	36	44	47	53	59	57.9	94.3
2-Jun	64	67	72	76	79	81	75	70	61	50	49	46	45	42	46	53	73	70	71	73	74	76	76	78	65.4	81.3
3-Jun	75	76	79	83	83	83	83	82	80	79	77	74	69	68	65	63	59	60	66	74	79	85	89	91	75.9	91.3
4-Jun	92	93	94	94	95	95	96	88	71	59	50	40	36	35	34	33	29	27	27	28	32	43	49	57	58.2	95.7
5-Jun	51	53	55	67	76	71	75	68	76	87	86	84	63	48	42	39	36	50	42	40	40	43	46	52	57.9	86.9
6-Jun	57	58	54	56	58	58	54	50	43	35	34	32	31	27	24	23	26	28	34	35	37	46	49	53	41.8	58.3
7-Jun	61	59	66	68	68	75	86	90	92	94	94	94	90	81	73	71	83	68	63	64	70	74	78	86	77.0	94.2
8-Jun	88	85	83	84	85	80	71	67	61	54	52	57	55	55	53	52	59	71	80	71	72	79	82	80	69.9	87.7
9-Jun	84	89	92	92	93	93	90	92	91	92	89	80	73	60	49	48	44	51	77	71	72	75	78	79	77.2	93.0
10-Jun	78	78	79	83	83	80	63	56	54	53	54	53	59	75	76	75	77	78	82	84	90	92	94	91	74.5	93.5
11-Jun	90	92	94	95	95	96	96	96	95	91	86	82	78	76	74	76	74	74	76	75	77	83	87	87	85.2	96.1
12-Jun	87	88	90	92	94	94	93	88	85	85	87	91	93	88	74	70	80	80	88	86	87	88	92	94	87.2	94.0
13-Jun	95	96	96	96	96	96	95	93	92	89	84	76	77	83	79	82	71	65	64	63	76	86	91	90	84.6	95.9
14-Jun	89	89	89	88	90	91	91	90	82	77	71	67	64	68	70	73	74	79	82	84	84	84	84	83	80.9	91.2
15-Jun	87	86	82	84	85	89	90	87	80	73	64	55	53	64	79	67	57	58	63	65	64	68	71	77	72.8	89.9
16-Jun	79	77	78	82	82	83	83	85	84	84	81	78	80	71	66	68	65	58	53	49	53	69	84	89	74.1	88.9
17-Jun	91	93	94	94	95	95	92	80	72	62	47	39	32	29	31	35	33	34	36	45	51	55	65	71	61.2	95.0
18-Jun	83	87	91	92	93	92	87	83	81	77	69	61	59	69	80	88	86	86	84	86	92	93	92	94	83.5	93.7
19-Jun	93	91	89	87	89	91	92	90	88	81	73	62	58	51	50	49	50	51	53	56	60	66	71	70	71.4	93.2
20-Jun	67	64	74	76	75	72	68	59	52	47	38	35	34	34	37	35	35	35	34	35	40	52	60	59	50.6	76.3
21-Jun	64	77	84	89	90	88	82	74	65	56	45	45	37	31	33	31	28	33	37	35	39	46	63	72	56.0	89.6
22-Jun	79	83	85	86	87	86	80	71	62	52	42	38	40	39	34	31	30	29	30	32	37	53	67	76	56.1	87.5
23-Jun	83	87	90	91	92	91	82	73	66	55	49	47	43	39	33	31	34	30	30	30	35	41	59	74	57.6	92.0
24-Jun	79	74	71	79	82	86	83	71	61	55	46	44	45	44	42	43	47	49	48	51	59	68	74	81	61.8	86.3
25-Jun	86	89	91	92	93	94	95	95	94	93	89	81	71	65	66	70	78	92	94	94	95	94	94	95	87.5	94.9
26-Jun	95	96	96	96	96	97	96	94	92	89	87	83	75	70	66	59	56	53	58	65	73	77	86	81	80.7	96.6
27-Jun	83	85	74	70	70	78	66	58	52	47	44	39	36	34	32	29	28	28	29	32	37	45	52	48	49.9	85.2
28-Jun	48	53	57	63	65	67	61	56	53	51	44	40	37	38	37	34	35	35	39	41	48	56	66	69	49.8	68.9
29-Jun	67	70	76	79	77	77	77	69	67	61	55	48	44	42	43	40	36	35	44	47	51	65	78	83	59.7	82.9
30-Jun	87	90	92	92	93	91	86	76	65	59	48	43	36	34	35	32	32	32	34	40	46	59	70	75	60.2	92.9
	79.1	80.6	81.9	84.1	85.1	85.5	82.5	77.3	72.7	68.0	62.7	58.5	55.2	53.3	51.8	51.0	51.5	52.2	54.9	56.2	60.4	67.0	73.4	76.4	Diurnal Average	
	95.3	95.9	96.2	96.3	96.5	96.6	96.3	96.0	94.9	93.7	94.2	93.7	93.3	88.4	79.8	87.7	85.6	92.1	94.2	94.2	94.5	94.3	94.2	94.8	Diurnal Maximum	

Hourly Averages

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



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - June 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	5	3	4	2	7	5	9	11	16	20	20	19	19	19	16	18	13	10	7	13	8	6	20	12	9.4	20.1
Dir	164	120	132	160	176	173	217	240	251	245	254	267	260	254	263	249	271	278	216	163	164	166	224	259	238.3	223.5
2 Spd	11	4	4	8	5	2	8	11	7	6	9	6	10	8	5	19	15	12	12	11	8	8	9	9	1.5	19.1
Dir	239	208	161	193	179	112	224	263	293	14	341	18	40	92	4	85	132	197	260	302	299	285	329	332	282.1	84.7
3 Spd	8	5	5	5	7	11	13	7	6	7	6	6	14	9	10	7	10	5	9	8	4	4	1	2	5.0	14.4
Dir	323	326	312	305	323	333	338	347	330	322	336	292	271	286	279	279	286	245	202	204	194	211	156	120	294.6	271.0
4 Spd	2	3	1	1	1	2	7	5	9	10	10	17	13	16	2	12	10	12	9	8	3	2	3	2	5.2	16.5
Dir	172	50	47	18	193	212	200	228	252	238	228	268	254	285	217	179	218	215	239	276	313	223	249	209	240.5	268.3
5 Spd	12	5	3	1	2	4	3	10	13	14	17	14	23	32	41	35	39	34	38	32	27	22	17	11	18.2	41.4
Dir	254	213	217	225	352	215	236	278	244	252	266	227	252	260	257	259	264	273	255	260	262	256	251	295	258.2	256.9
6 Spd	9	7	10	10	7	9	10	13	22	27	25	23	18	23	20	25	23	27	21	12	6	6	7	1	14.5	27.3
Dir	243	243	246	271	304	264	276	271	262	268	273	261	259	258	263	274	277	273	270	295	256	198	205	184	265.5	268.1
7 Spd	1	2	1	0	4	4	4	5	7	11	10	13	12	14	11	15	4	14	13	3	5	12	3	7	4.1	15.3
Dir	183	188	201	106	200	206	197	190	193	224	242	240	229	244	273	335	3	332	342	323	211	338	211	220	261.1	334.8
8 Spd	6	10	9	10	6	8	15	21	26	25	22	23	23	20	24	24	18	18	12	15	2	7	7	8	11.9	26.0
Dir	230	249	254	248	289	279	267	259	275	275	287	327	329	331	323	321	356	339	12	4	356	272	259	289	302.8	275.2
9 Spd	6	6	9	10	9	11	11	17	19	15	4	7	8	14	17	15	16	21	7	14	8	3	6	16	6.0	21.1
Dir	314	338	314	301	273	290	285	265	269	276	274	51	36	344	12	21	347	350	43	62	88	111	219	230	322.9	350.4
10 Spd	12	12	13	10	9	11	18	22	25	29	25	26	24	21	17	15	11	14	7	1	6	12	11	8	12.0	29.0
Dir	237	232	255	310	303	322	342	338	334	338	332	339	345	344	325	321	310	264	303	52	242	254	259	261	315.1	338.0
11 Spd	3	5	3	3	3	7	7	6	6	8	5	7	6	7	10	8	9	10	9	8	5	6	8	8	5.6	10.0
Dir	262	208	165	99	80	76	82	84	93	91	114	72	72	81	61	91	89	79	62	65	59	47	53	55	77.8	60.6
12 Spd	6	9	8	7	7	5	6	8	10	10	11	8	6	6	5	9	17	8	9	9	11	7	9	7	4.0	17.2
Dir	61	68	69	69	68	72	61	71	67	60	53	90	71	64	344	320	353	346	323	293	273	278	255	260	24.1	352.9
13 Spd	8	11	8	7	8	11	11	12	11	12	12	11	12	7	10	8	20	17	17	10	1	10	8	12	9.2	19.5
Dir	266	267	286	269	271	264	267	267	272	268	256	253	239	203	179	273	220	227	235	244	339	347	251	253	252.9	220.5
14 Spd	13	11	12	15	14	14	13	15	24	31	31	31	34	19	21	25	23	16	16	11	12	12	19	18	17.6	34.4
Dir	270	268	282	289	298	299	296	307	324	332	329	331	331	340	321	328	327	312	310	281	282	273	312	308	313.3	331.1
15 Spd	12	14	20	19	25	22	18	18	26	30	33	35	34	26	8	12	27	23	24	19	19	15	10	9	19.6	34.7
Dir	277	297	313	314	324	323	313	293	315	332	335	341	340	338	322	343	352	359	355	344	344	339	323	313	330.5	340.7
16 Spd	10	14	10	7	9	8	10	11	10	11	12	15	13	8	8	10	5	9	8	4	3	1	2	2	7.2	15.4
Dir	313	335	332	313	328	332	325	330	337	322	332	338	333	7	22	11	346	314	275	241	224	191	214	207	329.6	337.6
17 Spd	0	1	1	1	2	4	4	3	7	8	10	10	7	3	2	12	10	9	11	10	6	4	3	3	3.9	12.2
Dir	284	131	234	127	183	201	198	231	229	173	144	126	151	107	81	56	115	113	133	184	164	130	114	153	143.5	55.7
18 Spd	4	2	1	0	1	3	4	3	4	4	4	6	16	16	11	7	13	9	14	11	11	9	4	7	3.2	16.3
Dir	53	41	6	91	90	49	92	80	47	357	314	73	55	54	106	32	314	297	321	275	241	322	329	37	8.4	53.7
19 Spd	8	7	7	10	7	8	9	4	8	9	15	16	13	17	19	15	14	10	6	5	3	4	3	4	9.1	19.4
Dir	43	48	63	75	80	64	58	63	59	69	70	73	75	72	87	87	86	92	79	64	68	62	51	61	72.1	86.8
20 Spd	4	3	4	5	5	5	7	9	12	17	20	19	18	19	17	18	16	15	16	12	7	4	3	5	10.4	20.5
Dir	66	74	55	55	52	62	77	101	93	99	95	90	72	80	69	76	75	67	78	75	65	48	77	187	79.5	95.2
21 Spd	6	2	1	2	2	1	6	8	2	5	6	8	1	8	7	13	13	16	11	11	9	3	2	1	3.8	16.5
Dir	178	22	41	104	189	280	205	208	327	359	353	50	151	74	85	134	112	108	120	118	130	127	38	80	112.3	107.7
22 Spd	3	1	1	1	1	2	2	5	4	3	6	6	7	4	10	7	9	10	8	8	5	2	1	1	2.2	10.0
Dir	42	297	149	32	14	217	226	206	244	187	182	149	53	71	20	59	30	29	34	65	74	43	10	231	56.2	20.1

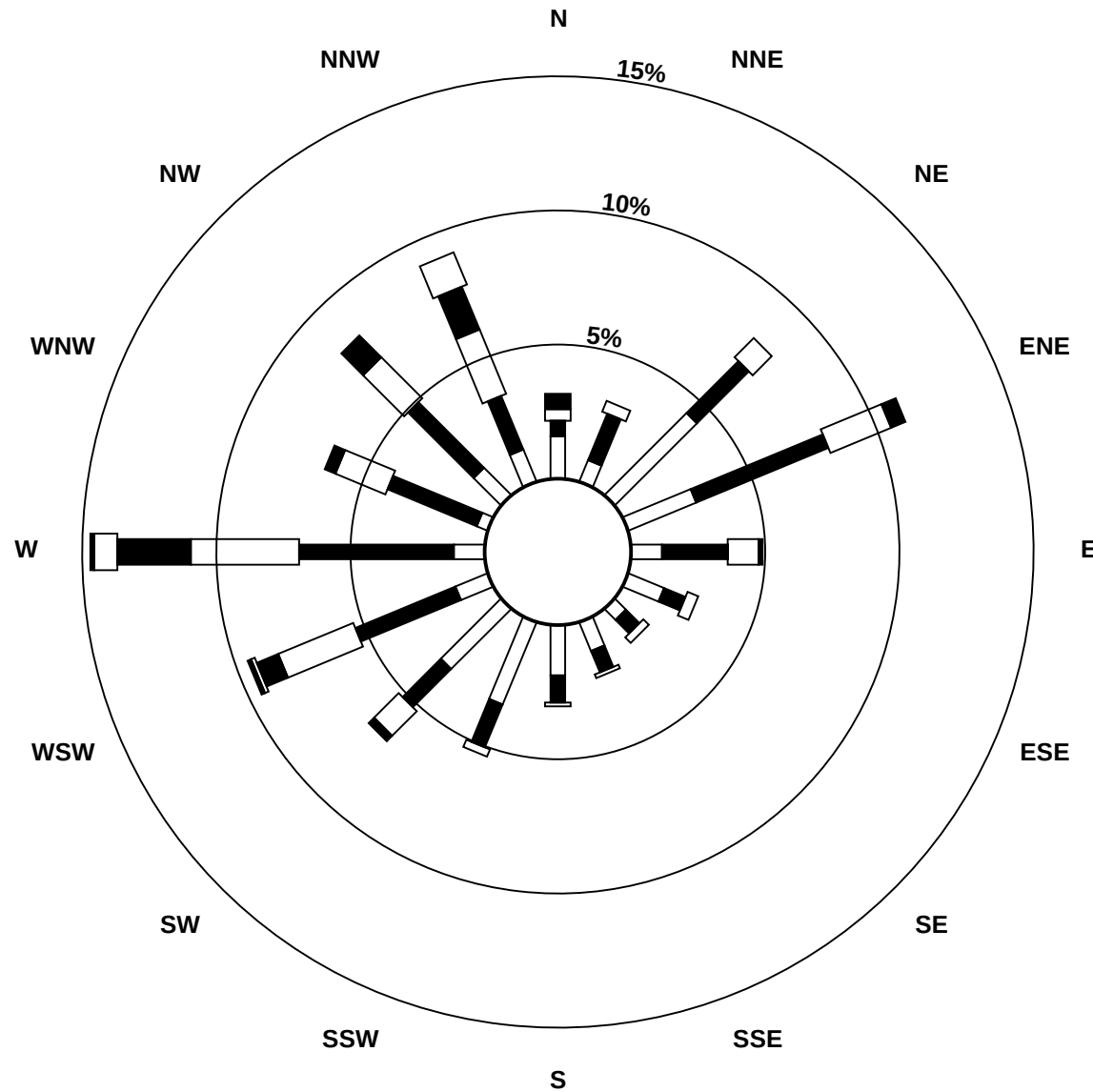
Hourly Averages

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

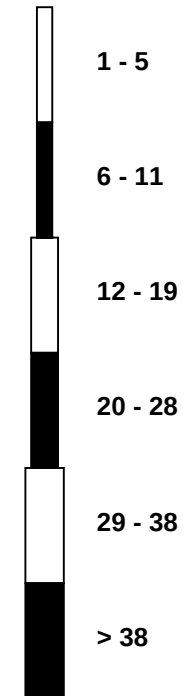
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	1	1	0	1	4	3	7	13	8	7	6	8	10	9	8	11	13	13	11	7	6	3	2	2	2.9	13.0
Dir	51	219	335	222	196	256	293	273	265	278	352	45	12	33	32	32	54	73	70	75	111	105	46	33	29.5	73.2
24 Spd	2	2	0	2	2	2	1	4	5	7	12	12	18	18	16	20	21	20	22	17	15	10	4	2	9.2	21.7
Dir	39	120	346	44	339	27	30	348	53	95	104	75	56	57	69	68	68	65	57	57	49	46	89	355	62.1	57.3
25 Spd	1	2	0	2	3	4	6	5	3	1	4	1	5	4	4	11	5	3	5	2	3	5	3	3	0.4	11.4
Dir	1	303	290	344	6	38	36	66	215	179	208	192	23	358	199	211	95	179	220	54	328	257	318	289	288.3	211.5
26 Spd	6	10	6	7	6	11	12	12	13	9	11	11	14	13	13	16	13	10	6	4	4	2	5	7	7.6	15.5
Dir	253	249	258	246	266	245	247	258	256	266	251	270	286	305	310	302	310	293	350	36	38	62	211	245	275.1	302.2
27 Spd	12	13	14	11	6	2	10	17	24	25	23	27	31	28	28	30	26	25	19	15	9	5	5	8	15.7	31.1
Dir	204	217	228	232	225	133	228	236	255	261	272	271	277	275	280	278	291	287	293	286	284	263	229	249	265.5	277.1
28 Spd	7	5	1	4	4	4	12	13	19	19	22	19	15	11	9	8	6	5	10	9	6	4	4	4	5.0	22.0
Dir	294	316	276	232	323	315	262	261	257	264	270	280	309	307	318	322	62	47	68	66	69	67	65	67	295.5	269.5
29 Spd	2	2	1	4	4	4	8	10	9	12	13	11	9	7	8	7	5	2	10	8	4	1	3	0	3.8	12.6
Dir	48	264	249	219	276	243	215	261	257	267	281	276	289	295	324	285	290	223	142	162	152	50	46	295	260.5	280.5
30 Spd	1	1	0	1	2	2	5	12	8	3	7	7	4	4	7	6	9	12	11	9	5	4	2	2	1.1	12.3
Dir	327	14	228	64	217	354	269	273	278	239	202	178	201	205	38	45	37	49	65	70	62	43	36	41	35.6	272.9
Spd	3.0	2.5	2.6	2.6	2.8	2.9	4.0	6.3	7.5	7.1	6.6	5.6	6.8	5.8	5.2	5.2	5.1	4.5	3.0	1.7	1.2	2.2	2.8	3.2	Diurnal Average	
Dir	263.8	272.3	279.6	283.7	298.6	300.8	280.8	274.2	282.3	289.7	295.6	312.9	321.7	325.6	323.3	328.3	335.2	321.3	323.4	329.0	289.0	302.0	267.2	276.0	Diurnal Maximum	
Spd	13.3	14.3	19.5	19.4	24.9	22.0	17.9	21.7	26.0	30.8	32.7	34.7	34.4	31.9	41.4	35.2	39.1	33.7	37.7	31.5	27.2	21.5	20.1	17.7	Diurnal Maximum	
Dir	270.1	297.5	313.5	313.5	324.2	323.0	312.6	338.0	275.2	332.3	334.9	340.7	331.1	260.4	256.9	259.3	263.7	272.9	254.6	260.1	261.7	256.3	223.5	307.9		
Maximum Speed Value: 41 km/h on Jun 5 15:00							Minimum Speed Value: 0 km/h on Jun 18 04:00													Hours in Service:				720		
Maximum Daily Speed Average: 19.6 km/h on Jun 15							Minimum Daily Speed Average: 0.4 km/h on Jun 25													Hours of Data:				720		
Maximum Diurnal Speed Average: 7.5 km/h at hour 9							Minimum Diurnal Speed Average: 1.2 km/h at hour 21													Hours of Missing Data:				0		
Monthly Average Velocity: 3.87 km/h 301.02 deg							Speed Percentiles: P ₁ = 0.4 P ₁₀ = 1.9 Q ₁ = 4.5 Median = 8.4 Q ₃ = 13.1 P ₉₀ = 19.8 P ₉₉ = 34.2													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	24		15		18		10		3		0		70													
NorthEast	48		47		11		2		0		0		108													
East	21		38		23		5		0		0		87													
SouthEast	16		9		4		0		0		0		29													
South	26		20		3		0		0		0		49													
SouthWest	37		34		23		3		0		0		97													
West	13		59		56		28		8		2		166													
NorthWest	16		44		31		17		6		0		114													
Total	201		266		169		65		17		2		720													

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - June 2013

Maximum Speed: 42 km/h on Jun 5 15:00																				Maximum Daily Speed Average: 21.6 km/h on Jun 15										Hours in Service: 720	
Minimum Speed: 1 km/h on Jun 22 23:00																				Minimum Daily Speed Average: 5.3 km/h on Jun 25										Hours of Data: 720	
Maximum Diurnal Speed Average: 16.6 km/h at hour 16																				Minimum Diurnal Speed Average: 6.3 km/h at hour 4										Hours of Missing Data: 0	
Monthly Average Speed: 11.14 km/h																				Percentiles: P ₁ = 1.6 P ₁₀ = 3.3 Q ₁ = 5.7 Median = 9.9 Q ₃ = 14.3 P ₉₀ = 21.4 P ₉₉ = 35.4										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-Jun	6	5	4	3	7	5	9	12	16	20	20	20	20	20	18	20	16	12	10	13	8	6	21	13	12.7	21.0					
2-Jun	11	4	5	8	6	4	8	11	9	8	11	12	12	13	12	22	16	14	13	12	8	8	10	10	10.4	22.0					
3-Jun	8	5	5	5	7	12	13	7	7	8	7	7	15	10	12	10	11	7	10	8	5	5	2	3	8.0	15.1					
4-Jun	2	3	2	2	2	2	7	7	10	11	12	19	15	18	10	15	12	13	10	9	4	3	4	2	8.1	18.7					
5-Jun	13	7	4	2	3	6	5	11	13	15	18	15	24	33	42	36	41	36	38	32	28	22	18	13	19.7	42.2					
6-Jun	10	7	10	10	7	10	10	14	23	28	26	24	19	25	22	27	25	29	23	13	7	6	7	3	16.1	29.0					
7-Jun	3	3	2	2	4	5	4	5	7	11	10	13	12	14	14	17	7	14	14	6	6	15	9	8	8.4	16.8					
8-Jun	7	10	9	10	7	8	15	21	27	26	24	24	23	21	25	25	19	20	13	16	5	8	8	9	15.9	26.7					
9-Jun	7	7	10	10	10	11	12	17	19	16	12	8	9	15	19	17	19	24	13	14	8	4	7	16	12.7	24.0					
10-Jun	12	13	13	11	10	11	18	22	26	30	26	26	25	23	18	15	12	15	8	5	7	12	11	8	15.7	29.5					
11-Jun	4	6	5	4	4	7	8	7	7	8	6	7	8	8	11	9	10	11	10	8	5	6	8	8	7.2	10.9					
12-Jun	6	9	9	7	7	5	6	9	11	11	11	9	7	7	7	11	18	10	9	9	11	7	9	8	8.9	18.3					
13-Jun	9	12	9	8	8	11	11	12	12	12	13	13	12	12	11	14	20	18	18	10	3	11	9	12	11.6	19.8					
14-Jun	14	12	13	15	14	14	14	16	25	32	32	32	35	22	22	26	24	16	17	12	13	12	20	19	19.6	35.5					
15-Jun	13	15	20	20	25	22	19	18	27	31	33	36	36	27	12	15	28	24	25	20	19	15	11	9	21.6	35.9					
16-Jun	10	15	10	8	10	8	10	11	10	12	12	16	15	11	11	11	8	11	10	5	4	2	2	2	9.2	15.9					
17-Jun	2	2	2	2	4	4	4	4	8	9	12	12	11	10	11	13	11	10	13	11	6	5	3	4	7.2	13.4					
18-Jun	4	3	4	2	2	4	5	4	5	5	7	10	17	17	13	9	14	12	16	12	17	10	4	8	8.4	17.1					
19-Jun	8	8	8	10	7	8	9	5	9	10	16	17	14	18	20	16	15	11	6	5	3	4	3	5	9.8	20.4					
20-Jun	5	4	4	5	5	6	8	10	13	18	22	21	20	21	18	20	18	16	18	13	7	4	5	6	12.0	22.5					
21-Jun	7	2	2	4	3	2	6	9	6	7	8	9	11	11	11	15	16	17	12	12	9	4	2	3	7.8	17.3					
22-Jun	4	2	4	3	2	2	4	5	5	6	9	10	10	6	12	11	12	11	9	9	6	2	1	2	6.1	11.9					
23-Jun	3	3	3	1	5	5	7	13	9	8	9	11	12	12	12	13	15	14	13	8	6	4	3	3	8.0	14.6					
24-Jun	3	4	6	3	3	3	4	5	6	9	14	15	19	20	17	21	22	21	23	18	15	11	5	3	11.3	22.6					
25-Jun	2	3	2	3	4	5	7	7	5	3	5	6	7	8	6	12	12	5	7	2	4	6	3	4	5.3	12.0					
26-Jun	6	10	6	8	7	12	12	12	13	10	12	12	15	14	13	16	14	11	7	4	5	3	6	10	9.9	16.2					
27-Jun	12	13	14	12	7	4	12	17	24	26	24	29	32	30	29	31	27	25	19	16	9	6	6	8	18.0	32.1					
28-Jun	8	5	3	5	5	5	12	13	19	20	23	22	18	13	12	11	10	9	11	10	6	4	4	4	10.5	22.9					
29-Jun	3	3	2	5	5	6	8	11	10	13	14	13	11	10	10	11	7	5	11	9	5	2	3	2	7.5	14.2					
30-Jun	2	2	2	2	3	2	6	13	9	5	9	9	10	10	10	10	11	13	12	9	5	4	2	4	6.7	12.7					
6.7 6.5 6.4 6.3 6.5 7.0 9.2 11.0 13.0 14.4 15.3 15.9 16.5 15.9 15.3 16.6 16.2 15.1 13.8 11.0 8.1 7.0 6.9 6.8																								Diurnal Average							
13.8 14.8 20.1 20.0 25.5 22.5 18.8 22.1 26.9 31.8 33.3 35.9 35.5 32.7 42.2 36.2 41.1 35.6 38.0 32.0 27.5 21.7 21.0 18.7																								Diurnal Maximum							
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - June 2013

Maximum Value: 94.0 deg on Jun 25 12:00																			Hours in Service: 720						
Minimum Value: 6.0 deg on Jun 27 03:00																			Hours of Data: 720						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 8.3 P ₁₀ = 13.5 Q ₁ = 17.4 Median = 25.6 Q ₃ = 44.6 P ₉₀ = 69.1 P ₉₉ = 90.3																			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-Jun	26	50	42	73	26	31	25	16	14	13	16	20	22	21	33	24	37	40	57	17	14	19	18	21	73.2
2-Jun	16	37	47	16	33	67	22	20	46	57	45	74	35	56	74	32	24	33	21	19	17	21	22	14	74.3
3-Jun	22	15	14	14	13	15	15	28	38	35	45	30	19	32	40	49	40	44	24	17	22	33	78	62	78.4
4-Jun	50	30	62	61	77	51	16	40	31	36	39	29	37	33	89	40	49	28	32	32	23	76	73	55	88.7
5-Jun	23	39	72	69	78	51	62	27	15	12	21	16	16	13	12	14	19	20	7	9	9	7	17	27	78.2
6-Jun	11	25	12	20	23	22	22	20	15	15	15	20	25	23	27	23	20	22	20	19	37	11	18	93	93.1
7-Jun	74	73	81	77	19	20	28	26	20	10	11	12	17	24	37	33	78	20	22	61	49	64	87	43	86.8
8-Jun	38	15	16	10	33	24	14	11	13	17	22	19	15	20	20	17	24	25	31	21	93	50	35	19	92.6
9-Jun	31	26	19	16	19	18	17	11	11	23	75	26	29	30	31	27	31	31	67	24	25	66	16	11	74.8
10-Jun	13	20	9	29	23	23	12	12	17	11	13	13	18	23	15	17	21	12	31	75	47	9	11	15	74.7
11-Jun	63	31	44	24	32	20	24	31	41	27	57	37	45	36	27	35	25	26	28	27	25	8	12	20	63.5
12-Jun	15	15	19	23	25	32	25	27	25	19	24	34	31	28	70	35	22	34	16	13	13	16	10	21	70.2
13-Jun	23	15	21	22	19	13	13	14	18	18	14	36	26	59	28	58	11	13	13	12	79	21	22	9	79.4
14-Jun	16	12	15	12	17	15	15	18	13	15	14	14	15	32	19	19	20	17	19	17	22	15	19	18	32.2
15-Jun	16	17	14	13	12	12	17	15	15	14	12	16	17	17	51	39	15	19	18	18	14	8	21	13	51.5
16-Jun	14	15	19	22	16	17	14	13	19	15	18	16	29	42	42	28	68	49	39	53	71	69	25	42	71.4
17-Jun	81	73	73	74	80	24	31	43	30	40	41	44	63	89	92	28	39	25	28	19	16	31	39	63	92.3
18-Jun	37	48	89	92	76	60	39	52	33	32	72	63	30	16	36	37	25	41	34	22	47	18	45	19	91.6
19-Jun	19	10	17	17	17	14	16	27	26	29	22	23	24	20	19	23	26	21	21	18	19	20	8	12	28.9
20-Jun	11	29	21	14	7	19	34	28	22	28	26	30	25	29	23	25	27	22	25	28	21	11	37	41	41.4
21-Jun	46	57	82	79	55	72	15	15	72	58	49	32	89	51	63	32	36	19	29	17	13	19	48	84	89.5
22-Jun	49	73	69	84	76	78	87	27	54	72	62	67	47	67	39	59	42	27	33	30	22	36	55	71	87.0
23-Jun	82	87	90	63	36	49	23	17	24	48	44	49	38	55	54	38	33	26	31	29	25	24	83	47	90.0
24-Jun	48	77	88	74	67	60	90	34	49	39	36	39	21	22	27	23	20	27	18	25	18	23	36	47	90.5
25-Jun	69	77	89	51	39	20	31	44	67	87	46	94	57	73	71	19	71	60	49	56	32	36	51	40	94.0
26-Jun	26	10	25	20	32	11	13	11	11	16	14	24	23	16	17	17	21	30	31	21	34	64	24	67	67.1
27-Jun	14	8	6	10	56	50	51	16	10	15	17	17	14	18	17	15	16	15	15	14	14	20	21	11	56.4
28-Jun	39	35	63	72	44	28	30	20	12	15	16	29	33	46	57	64	59	66	29	28	17	14	10	19	71.8
29-Jun	66	63	72	29	56	55	17	17	23	20	30	43	53	59	36	50	75	76	32	19	28	45	18	88	88.3
30-Jun	59	67	91	86	31	36	34	17	31	68	47	54	70	83	59	67	39	24	24	25	16	12	22	65	90.8
82.4 86.9 90.8 91.6 79.6 78.2 90.5 52.1 71.9 87.2 74.8 94.0 89.5 88.6 92.3 66.7 77.6 75.8 66.7 74.7 92.6 75.6 86.8 93.1																									

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

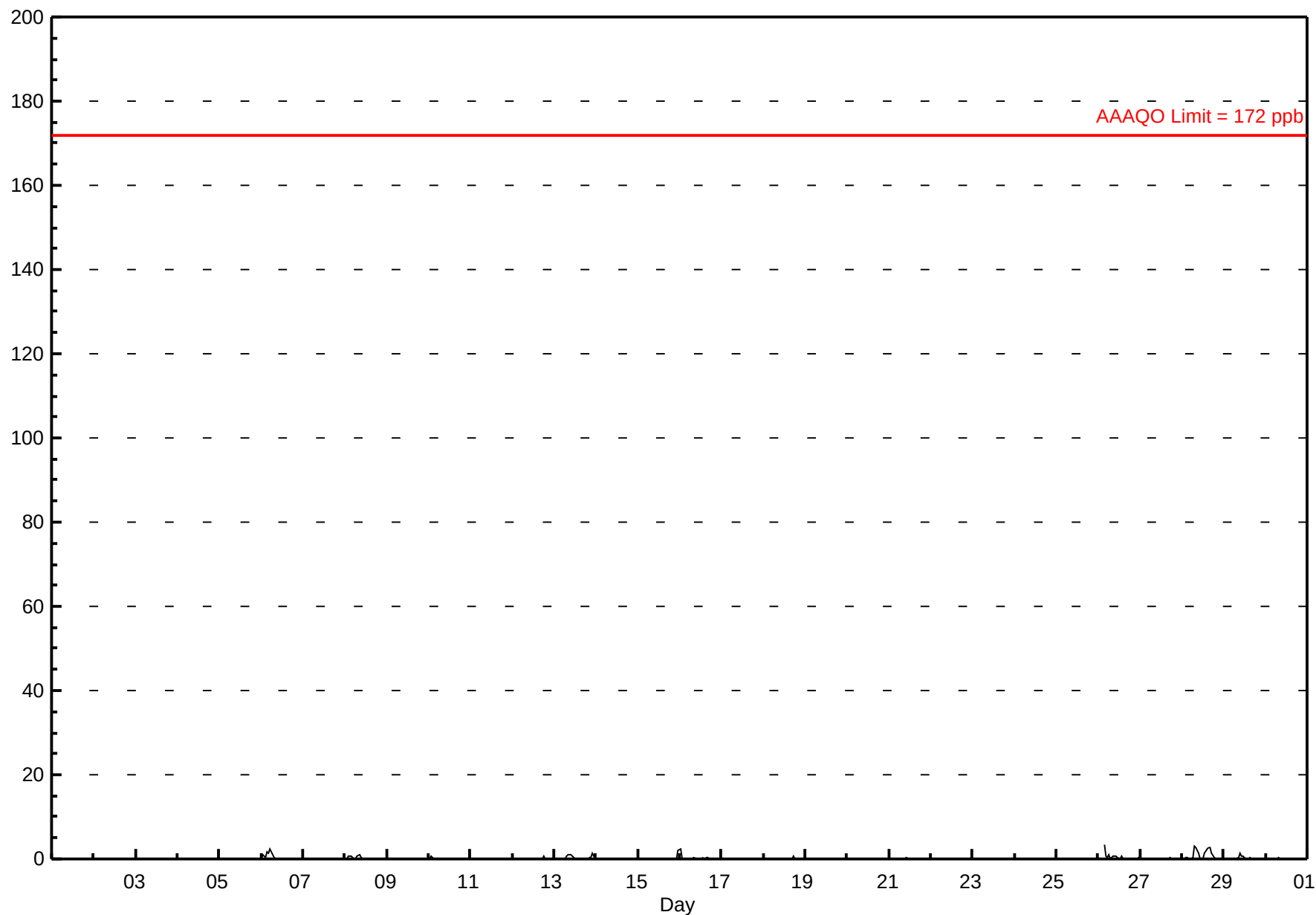
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720							
Maximum Value: 3.5 ppb on Jun 26 04:00																				Maximum Daily Average: 0.9 ppb on Jun 28				Hours of Data: 684			
Minimum Value: 0 ppb on Jun 5 04:00																				Minimum Daily Average: 0.0 ppb on Jun 17				Hours of Missing Data: 36			
Maximum Diurnal Average: 0.2 ppb at hour 4																				Minimum Diurnal Average: 0.0 ppb at hour 13				Hours of Calibration: 36			
Monthly Average: 0.11 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.1 P ₉₉ = 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-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	
2-Jun	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	
3-Jun	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	
4-Jun	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	
5-Jun	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1	
6-Jun	0	1	0	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	2.2	
7-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1	
8-Jun	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	1.0	
9-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.1	
10-Jun	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.7	
11-Jun	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	
12-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0.0	0.6	
13-Jun	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	1	0	0.2	1.2	
14-Jun	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	
15-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	2	0.1	2.1	
16-Jun	2	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	2.5	
17-Jun	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	
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.0	0.7	
19-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
20-Jun	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	
21-Jun	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	0.3	
22-Jun	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	
23-Jun	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	
24-Jun	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	
25-Jun	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	
26-Jun	0	0	A	3	1	0	1	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0.4	3.5	
27-Jun	0	A	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
28-Jun	A	0	0	0	0	0	0	3	3	1	0	0	0	1	2	3	3	1	0	0	0	0	0	A	0.9	3.0	
29-Jun	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0.2	1.2	
30-Jun	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	
0.1 0.1 0.1 0.2 0.1 0.1 0.1 0.2 0.2 0.2 0.1 0.1 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0 0.1 0.1																									Diurnal Average		
2.5 0.9 0.6 3.5 1.5 2.2 1.0 3.0 2.6 1.5 0.6 0.7 0.2 1.3 2.2 2.7 2.7 1.5 0.6 0.1 0.3 0.5 1.2 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 Averages

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - June 2013



Hourly Maximums

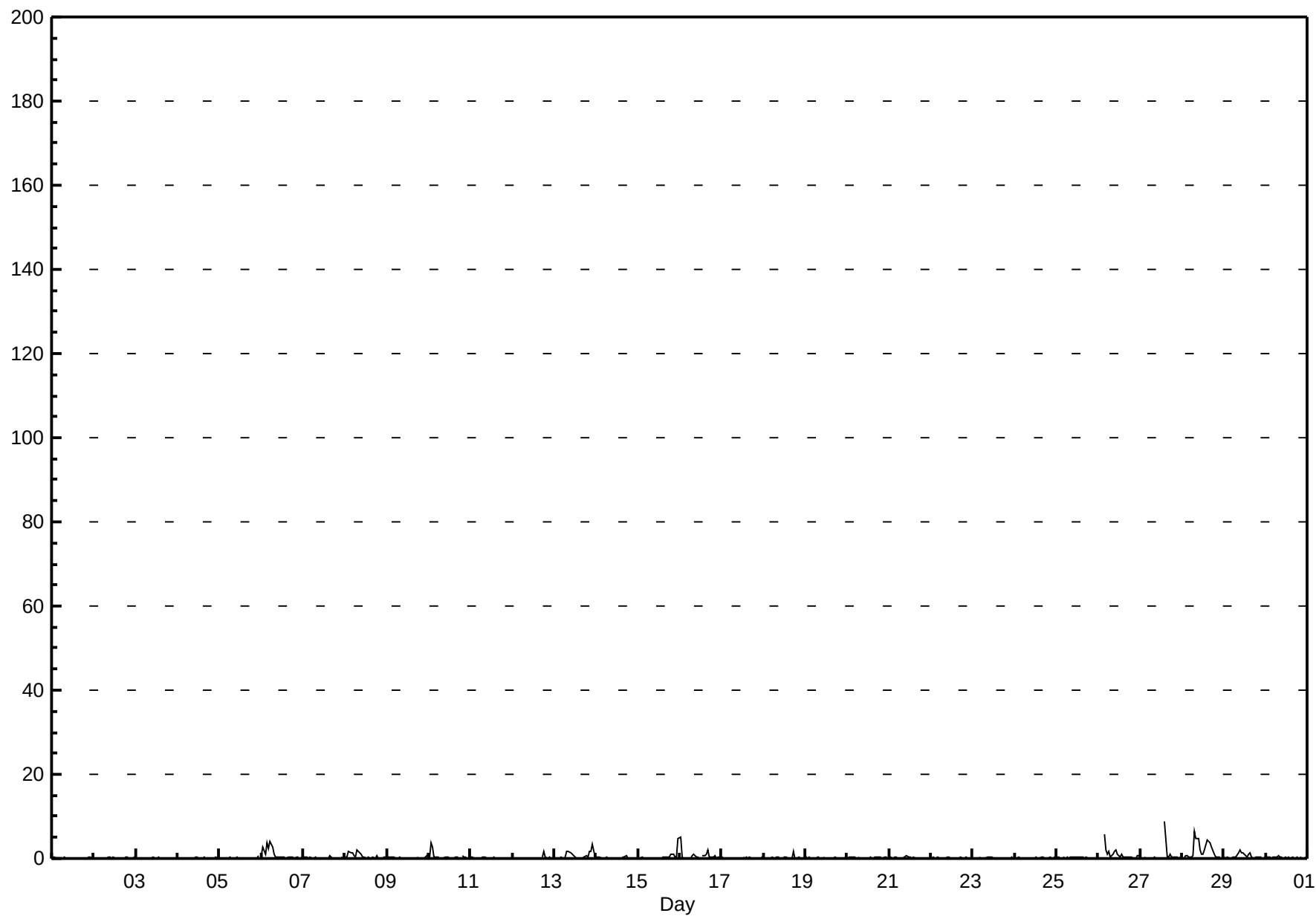
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - June 2013

Maximum Value: 8.9 ppb on Jun 27 15:00																				Maximum Daily Average: 1.9 ppb on Jun 28										Hours in Service: 720	
Minimum Value: 0 ppb on Jun 15 07:00																				Minimum Daily Average: 0.1 ppb on Jun 3										Hours of Data: 684	
Maximum Diurnal Average: 0.6 ppb at hour 15																				Minimum Diurnal Average: 0.2 ppb at hour 22										Hours of Missing Data: 36	
Monthly Average: 0.36 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.7 P ₉₉ = 4.6										Hours of Calibration: 36	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jun	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					
2-Jun	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	0.3					
3-Jun	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					
4-Jun	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					
5-Jun	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	0.6					
6-Jun	1	3	1	4	2	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1.0	4.0					
7-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0.2	0.5					
8-Jun	0	0	2	1	1	1	0	2	2	1	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0.6	2.0					
9-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0.2	0.6					
10-Jun	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0.5	3.6					
11-Jun	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					
12-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	2	0	0	0	0	0	0.2	1.6					
13-Jun	0	0	0	0	0	0	0	2	2	1	1	1	0	0	0	A	0	0	1	0	2	2	3	0	0.7	3.4					
14-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0.2	0.6					
15-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	5	0.4	4.7					
16-Jun	5	0	0	0	0	0	0	1	1	0	0	0	A	1	1	1	2	0	0	0	1	0	0	0	0.6	4.9					
17-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2					
18-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	2	0	0	0	0	0	0	0.2	1.8					
19-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5					
20-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3					
21-Jun	0	0	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7					
22-Jun	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					
23-Jun	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					
24-Jun	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-Jun	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					
26-Jun	0	0	A	6	2	1	2	0	1	2	2	1	0	1	0	0	0	0	0	0	0	0	1	1	0.9	5.6					
27-Jun	0	A	0	0	0	0	0	0	0	0	C	C	C	C	9	0	0	1	1	0	0	0	0	0	0.7	8.9					
28-Jun	A	0	1	1	0	0	1	7	5	5	2	1	1	2	4	4	4	3	1	0	0	0	0	A	1.9	6.5					
29-Jun	0	0	0	0	0	0	0	0	1	2	1	1	1	0	1	1	0	0	0	0	0	0	A	0	0.6	2.1					
30-Jun	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.7					
0.4 0.4 0.3 0.5 0.3 0.3 0.3 0.6 0.5 0.5 0.4 0.3 0.2 0.3 0.6 0.4 0.4 0.4 0.3 0.2 0.2 0.2 0.3 0.4																									Diurnal Average						
4.9 3.6 2.7 5.6 2.4 4.0 2.7 6.5 4.9 4.8 1.9 1.2 0.9 2.1 8.9 4.0 3.7 2.7 1.6 0.9 1.8 1.6 3.4 4.7																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

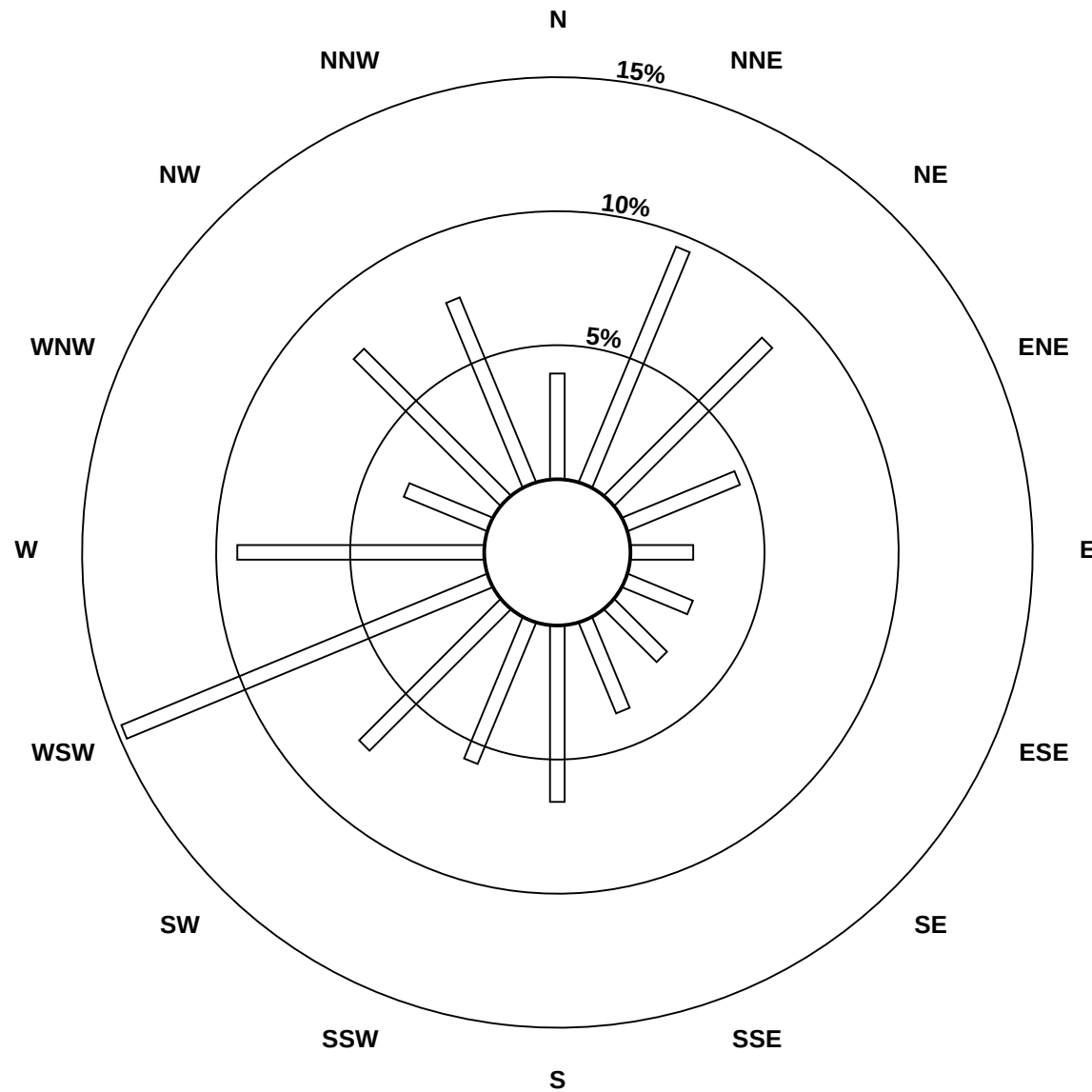
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - June 2013

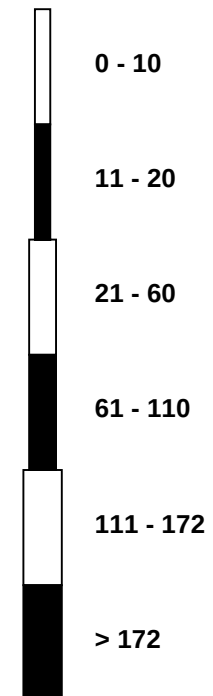


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - June 2013

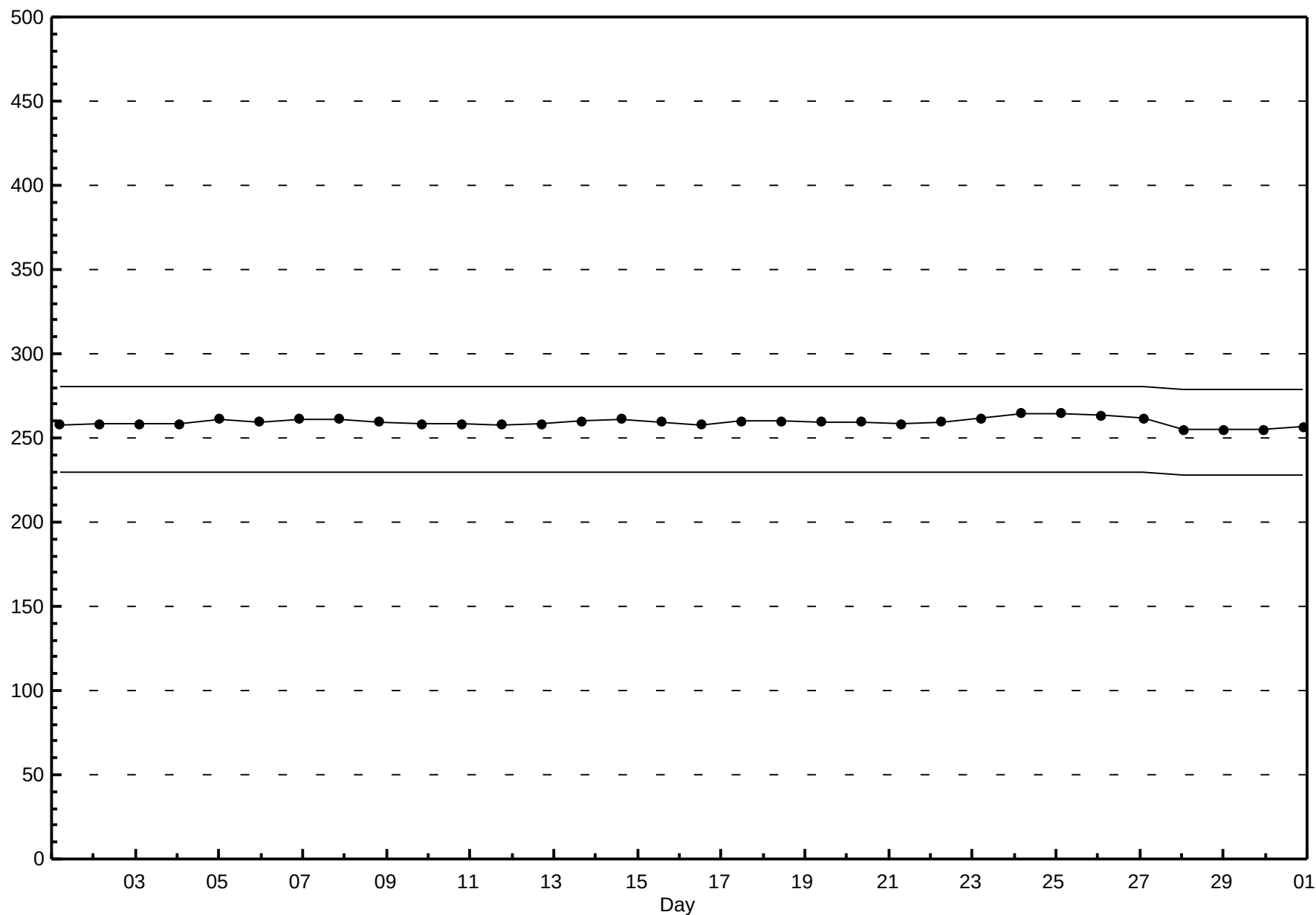


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - June 2013



Hourly Averages

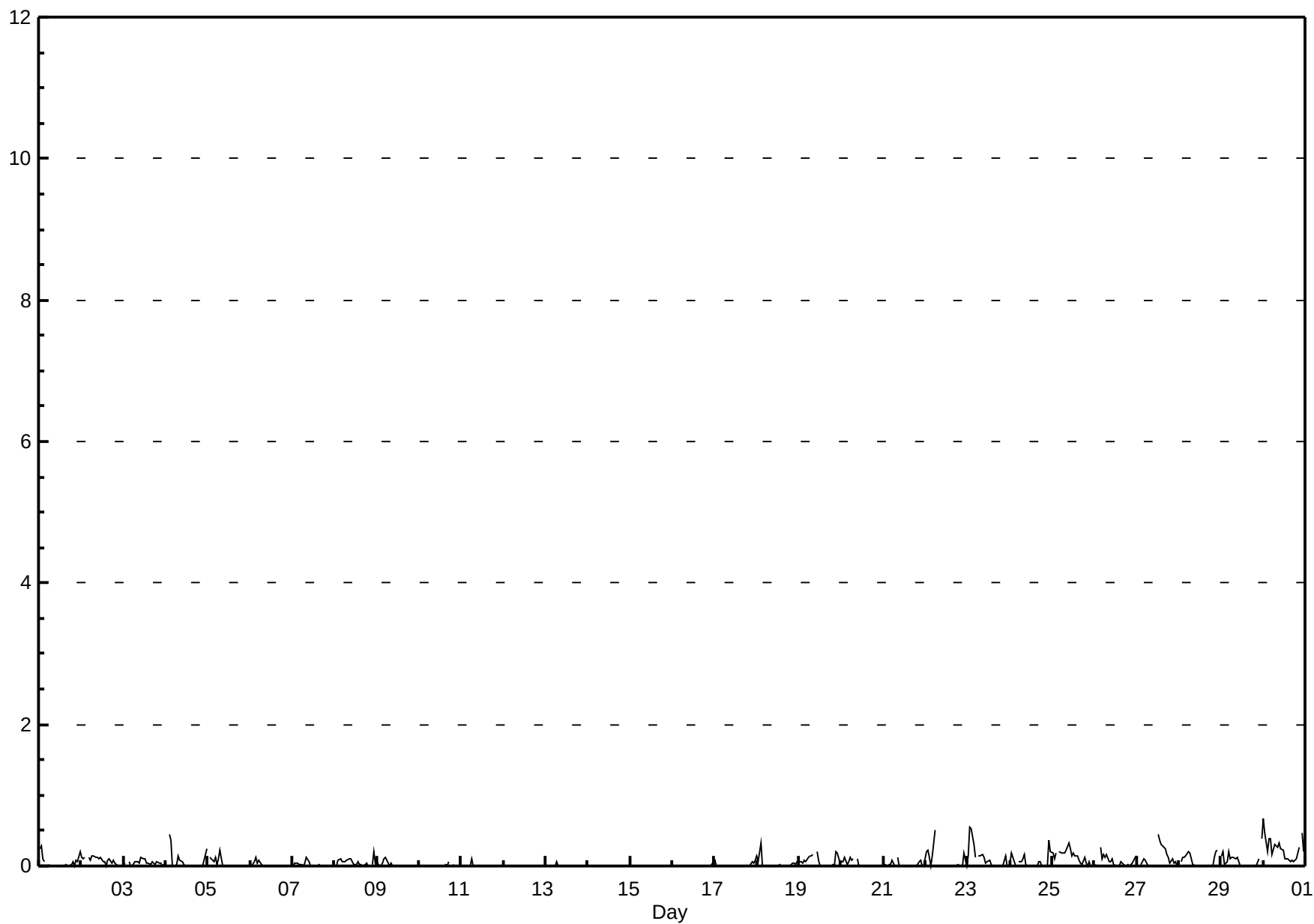
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 0.7 ppb on Jun 30 01:00																				Maximum Daily Average: 0.2 ppb on Jun 30		Hours of Data: 684				
Minimum Value: 0 ppb on Jun 1 07:00																				Minimum Daily Average: 0.0 ppb on Jun 12		Hours of Missing Data: 36				
Maximum Diurnal Average: 0.1 ppb at hour 3																				Minimum Diurnal Average: 0.0 ppb at hour 20		Hours of Calibration: 36				
Monthly Average: 0.05 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.1 P ₉₉ = 0.5		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-Jun	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
2-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
3-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
4-Jun	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	0.5
5-Jun	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
6-Jun	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
7-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1
8-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2
9-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.1
10-Jun	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
11-Jun	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
12-Jun	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
13-Jun	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
14-Jun	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
15-Jun	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
16-Jun	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
17-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
18-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
19-Jun	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
20-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
21-Jun	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
22-Jun	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
23-Jun	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
24-Jun	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
25-Jun	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	0.3
26-Jun	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
27-Jun	0	A	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
28-Jun	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
29-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.4
30-Jun	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.7
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1																									Diurnal Average	
0.7 0.6 0.5 0.4 0.4 0.5 0.3 0.3 0.3 0.3 0.2 0.2 0.4 0.4 0.3 0.3 0.2 0.2 0.1 0.1 0.3 0.2 0.5 0.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - June 2013



Hourly Maximums

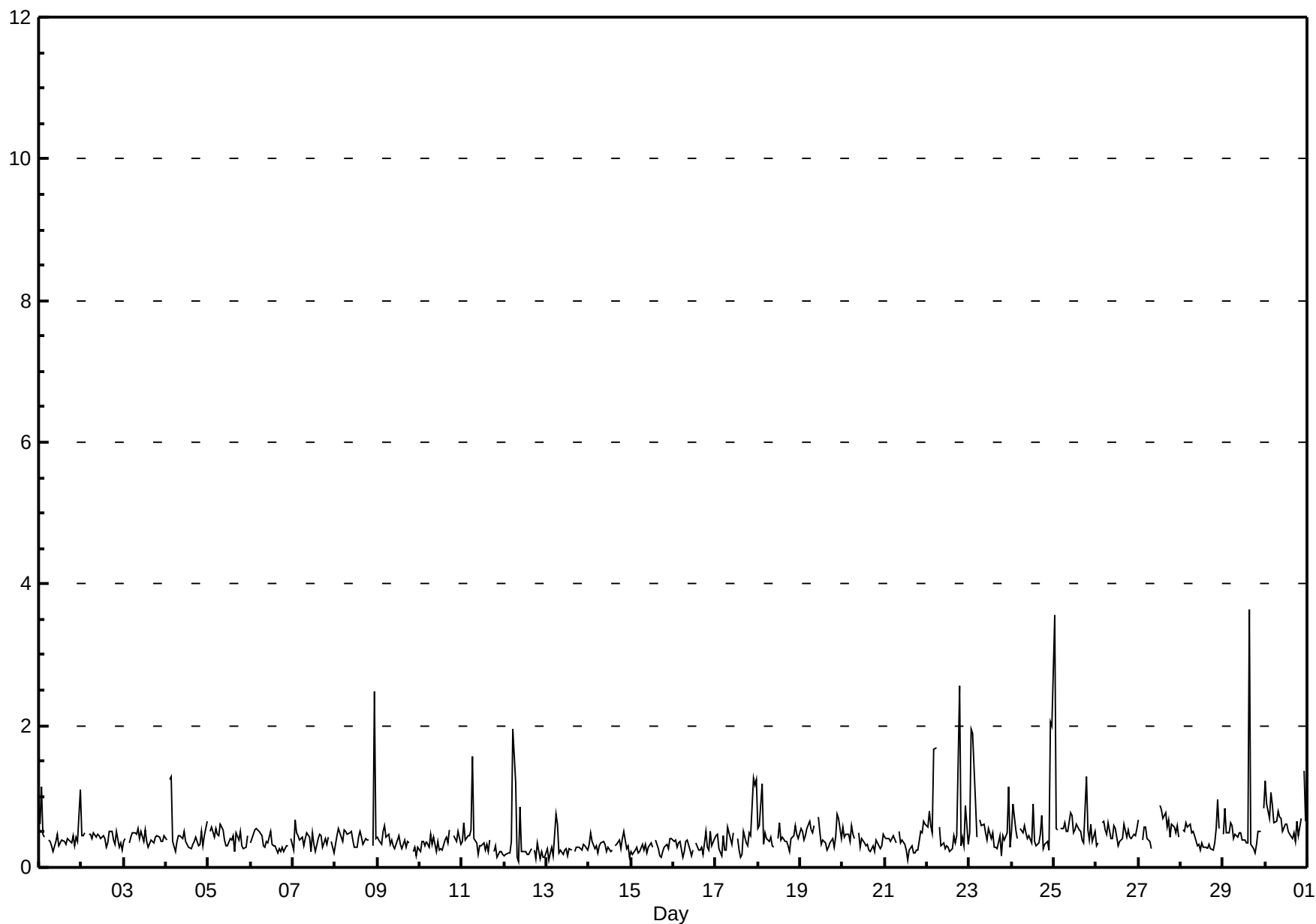
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - June 2013

Maximum Value: 3.6 ppb on Jun 29 16:00																				Maximum Daily Average: 0.7 ppb on Jun 30										Hours in Service: 720	
Minimum Value: 0 ppb on Jun 12 09:00																				Minimum Daily Average: 0.3 ppb on Jun 15										Hours of Data: 684	
Maximum Diurnal Average: 0.6 ppb at hour 23																				Minimum Diurnal Average: 0.3 ppb at hour 15										Hours of Missing Data: 36	
Monthly Average: 0.45 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.6 P ₉₉ = 1.9										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-Jun	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	1.1					
2-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0.4	0.5					
3-Jun	0	0	A	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6					
4-Jun	0	A	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0.5	1.3					
5-Jun	A	1	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0.4	0.6					
6-Jun	0	0	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.6					
7-Jun	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.7					
8-Jun	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	2	0	0.5	2.5					
9-Jun	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.6					
10-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	1	0	0.4	0.5					
11-Jun	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	1.6					
12-Jun	0	0	0	0	0	2	1	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	2.0					
13-Jun	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.8					
14-Jun	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	0.5					
15-Jun	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					
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	1	0	0	0.3	0.5					
17-Jun	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	1	0	0	0	0	1	1	1	0.5	1.3					
18-Jun	1	1	1	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	1	0	0	0.5	1.2					
19-Jun	1	1	0	0	1	1	1	0	1	A	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0.5	0.7					
20-Jun	1	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6					
21-Jun	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0.4	0.6					
22-Jun	1	1	1	0	2	2	A	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0.6	2.6					
23-Jun	0	2	2	1	0	A	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0.6	2.0					
24-Jun	1	1	1	0	A	1	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	2	0.6	2.1					
25-Jun	4	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	0	0	1	1	0	1	0	1	0.7	3.6					
26-Jun	0	0	A	1	1	1	0	1	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	1	0.5	0.6					
27-Jun	1	A	0	1	1	0	0	0	C	C	C	C	1	1	1	1	1	1	0	1	1	0	1	0	0.6	0.9					
28-Jun	A	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	0.4	1.0					
29-Jun	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	1	A	1	0.6	3.6					
30-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	1	A	1	1	0.7	1.4					
0.6 0.6 0.5 0.5 0.5 0.6 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.3 0.3 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.5																									Diurnal Average						
3.6 2.0 1.9 1.3 1.7 2.0 1.6 0.8 0.7 0.9 0.7 0.6 0.9 0.8 0.7 3.6 0.6 0.7 2.6 0.6 0.7 1.3 2.5 2.0																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

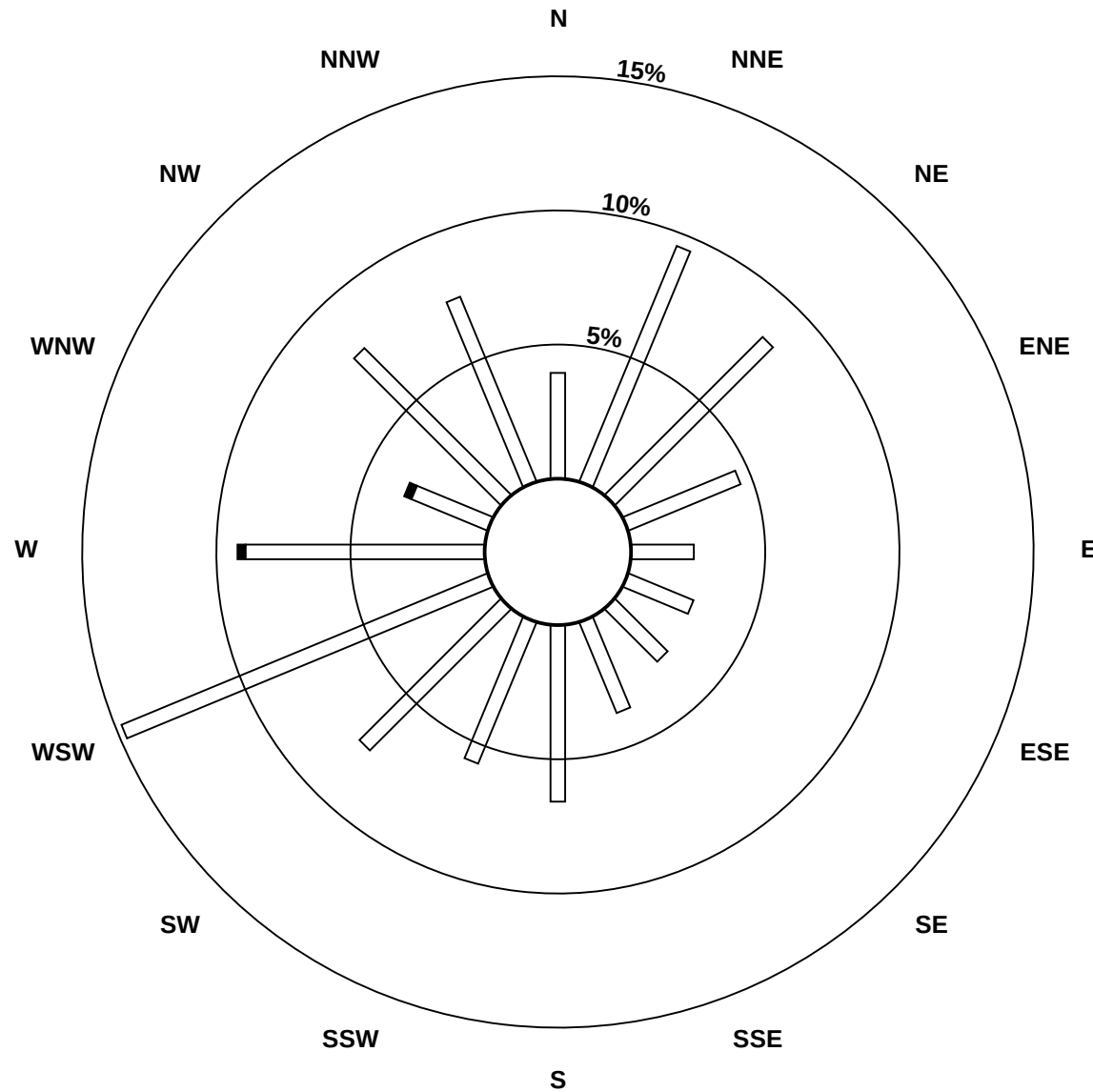
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - June 2013

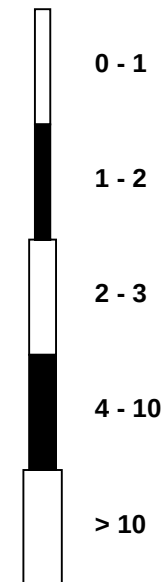


Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - June 2013

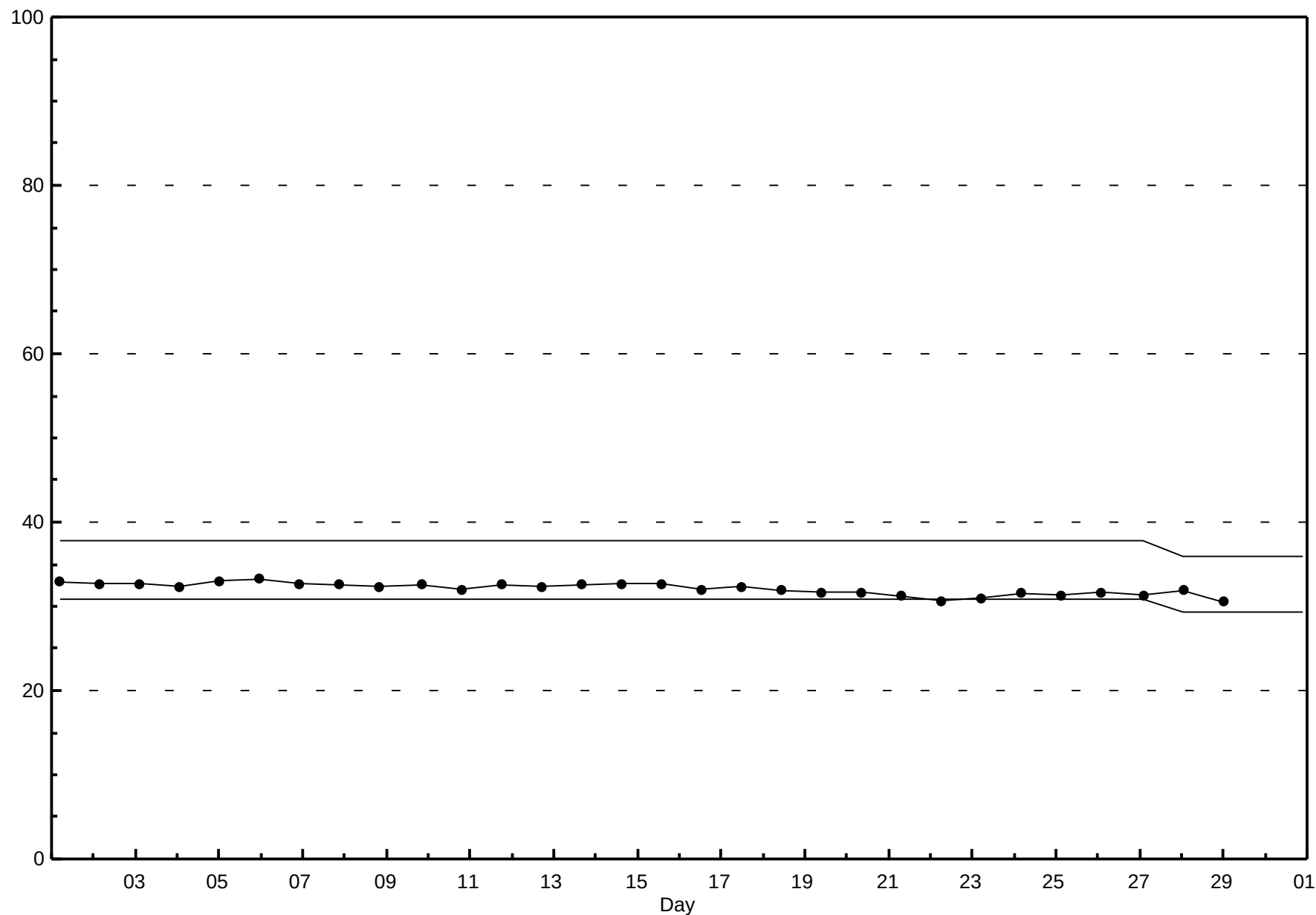


Pollutant Classes (ppb)



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - June 2013

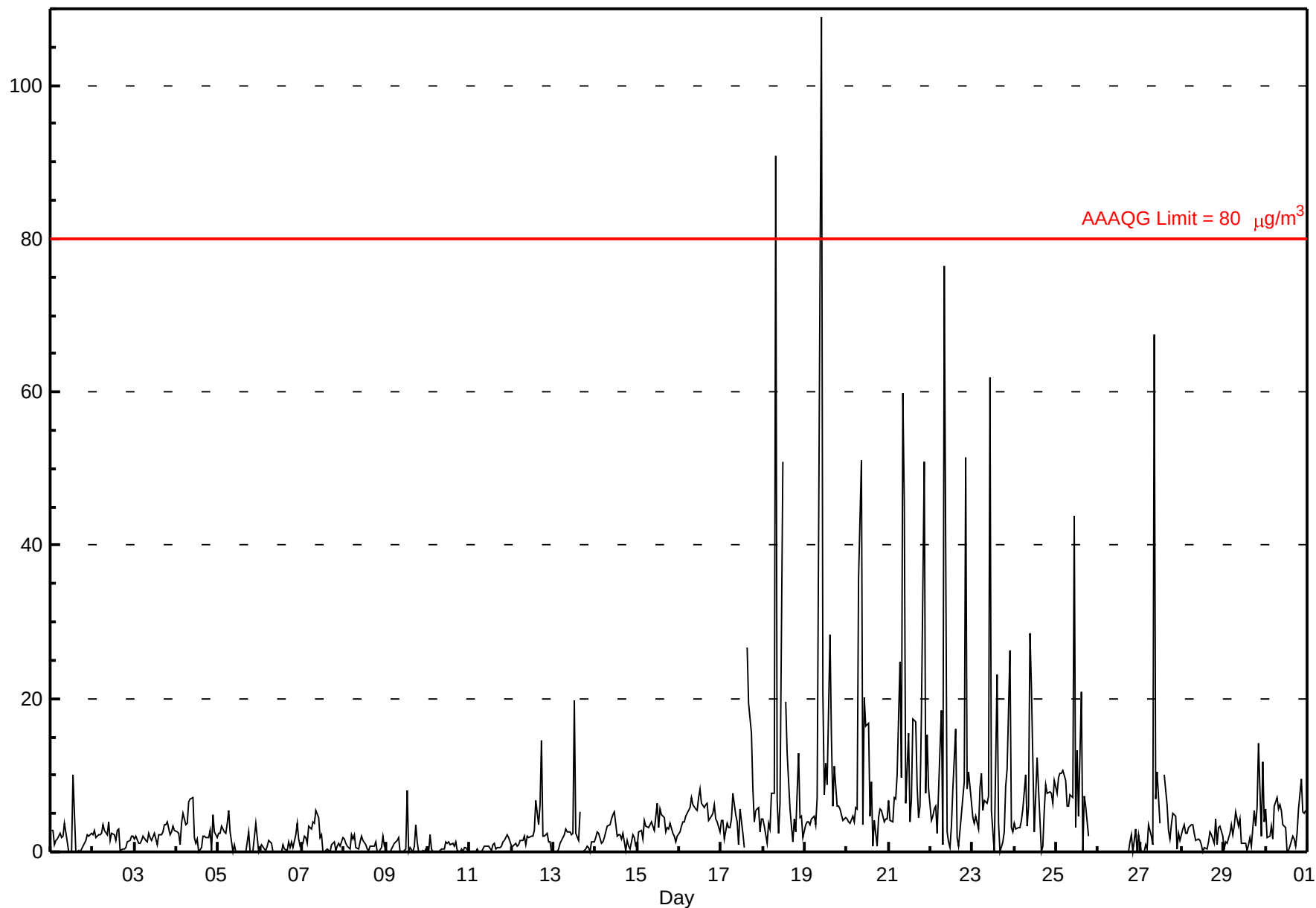


Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Smoky Heights - June 2013

Number of Exceedences: 1-hr: 2 24-hr: 0 Maximum Value: 108.9 µg/m³ on Jun 19 10:00 Minimum Value: 0 µg/m³ on Jun 1 11:00 Maximum Diurnal Average: 13.0 µg/m³ at hour 9 Monthly Average: 4.70 µg/m³																								Hours in Service: 720 Hours of Data: 697 Hours of Missing Data: 23 Hours of Calibration: 0 Percent Operational Time: 96.8		
Maximum Daily Average: 15.2 µg/m³ on Jun 21 Minimum Daily Average: 0.5 µg/m³ on Jun 10 Minimum Diurnal Average: 2.3 µg/m³ at hour 3 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 1.0 Median = 2.4 Q ₃ = 4.8 P ₉₀ = 8.6 P ₉₉ = 47.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	3	3	1	2	2	2	2	2	4	1	0	0	0	10	0	0	0	0	1	1	2	2	2	2	1.7	10.0
2-Jun	2	3	2	2	2	2	4	3	2	4	2	2	1	3	3	0	0	0	1	1	1	1	2	2	2.0	4.0
3-Jun	2	2	1	1	2	2	1	1	2	2	1	2	2	1	2	2	3	3	4	4	2	3	3	3	2.2	3.9
4-Jun	3	2	1	4	5	3	4	6	7	7	2	1	2	0	1	2	2	2	2	3	0	5	3	2	2.8	7.1
5-Jun	2	3	3	3	2	4	5	3	0	1	0	0	0	0	0	0	0	3	0	0	0	4	2	0	1.4	5.5
6-Jun	1	1	0	0	1	1	1	0	0	0	0	0	0	1	0	0	1	1	1	1	2	4	2	1	0.8	3.8
7-Jun	1	2	2	1	3	3	4	4	5	5	2	2	0	0	0	0	0	1	1	0	1	1	1	2	1.7	5.5
8-Jun	2	1	1	0	2	2	2	1	0	1	2	1	1	0	0	1	1	1	1	0	0	1	2	1	1.0	2.3
9-Jun	0	0	0	0	1	1	2	2	0	0	0	0	8	0	1	0	1	4	1	0	0	0	0	0	0.9	8.0
10-Jun	0	2	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0.5	2.2
11-Jun	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	2	2	2	1	0.7	2.1
12-Jun	1	1	1	1	1	1	1	2	1	2	2	2	2	3	7	3	6	15	2	2	2	1	1	0	2.5	14.5
13-Jun	0	0	0	0	1	2	2	3	3	3	2	2	20	2	2	5	N	0	0	1	1	0	1	1	2.2	19.8
14-Jun	2	3	2	1	1	2	3	3	3	4	5	5	2	2	2	2	3	0	1	1	0	2	2	1	2.2	5.3
15-Jun	1	3	3	2	4	3	3	3	4	3	3	6	3	6	5	5	3	3	3	4	2	2	1	2	3.2	6.3
16-Jun	3	3	4	4	5	5	6	7	6	6	5	7	8	6	6	6	6	4	5	5	6	4	4	3	5.2	8.2
17-Jun	4	4	2	4	3	3	4	8	5	4	1	6	3	1	N	27	19	16	8	4	5	6	3	4	6.2	26.7
18-Jun	4	3	1	4	3	8	8	91	7	2	6	51	N	20	13	6	3	1	4	3	13	5	5	2	11.4	90.8
19-Jun	4	4	4	4	4	5	4	7	40	109	21	7	12	9	28	15	6	11	6	6	6	5	4	4	13.5	108.9
20-Jun	4	4	4	5	4	6	6	36	51	4	20	16	17	5	9	1	4	1	4	6	5	4	4	4	9.3	51.1
21-Jun	7	4	4	7	7	10	25	10	60	46	6	16	4	7	17	17	9	5	6	18	51	8	15	8	15.2	59.9
22-Jun	4	5	6	6	2	13	19	1	76	3	1	1	3	8	16	2	1	3	7	9	51	8	10	7	10.9	76.4
23-Jun	4	4	5	3	8	10	5	7	6	7	62	5	0	12	23	4	0	1	3	9	11	26	3	3	9.2	61.8
24-Jun	4	3	3	3	4	6	10	3	6	29	22	3	7	12	8	0	1	5	9	8	8	6	9		7.4	28.5
25-Jun	8	10	10	10	11	9	6	6	7	7	44	3	13	5	21	0	7	6	2	N	N	N	N	N	9.8	43.9
26-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	0	0	0	0	0	1	2	0	3	0	2	--	3.0
27-Jun	1	0	0	1	0	3	2	1	68	7	10	4	M	M	10	6	3	2	3	5	5	0	2	2	6.2	67.5
28-Jun	3	3	2	2	3	4	4	2	1	2	1	1	0	0	0	1	3	2	1	4	1	3	3	2	2.1	4.3
29-Jun	0	1	1	2	4	2	3	5	3	4	1	1	1	0	1	2	1	5	3	6	14	2	12	4	3.4	14.1
30-Jun	6	2	2	3	2	6	7	6	6	5	4	3	0	0	1	2	2	1	2	6	9	5	5	5	3.7	9.4
2.6 2.6 2.3 2.6 3.0 4.2 4.9 7.7 13.0 9.2 7.9 5.2 4.1 3.9 6.2 3.7 2.9 3.2 2.8 3.7 6.9 4.0 3.5 2.7																								Diurnal Average		
7.7 9.7 10.2 10.3 10.6 13.4 24.7 90.8 76.4 108.9 61.8 50.9 19.8 19.6 28.3 26.7 19.3 15.5 8.8 17.8 51.5 26.3 15.3 9.4																								Diurnal Maximum		
M - Maintenance N - Not Valid																										
Alberta Ambient Air Quality Guideline (AAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAQO): 24-hr 30 µg/m³																										



Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

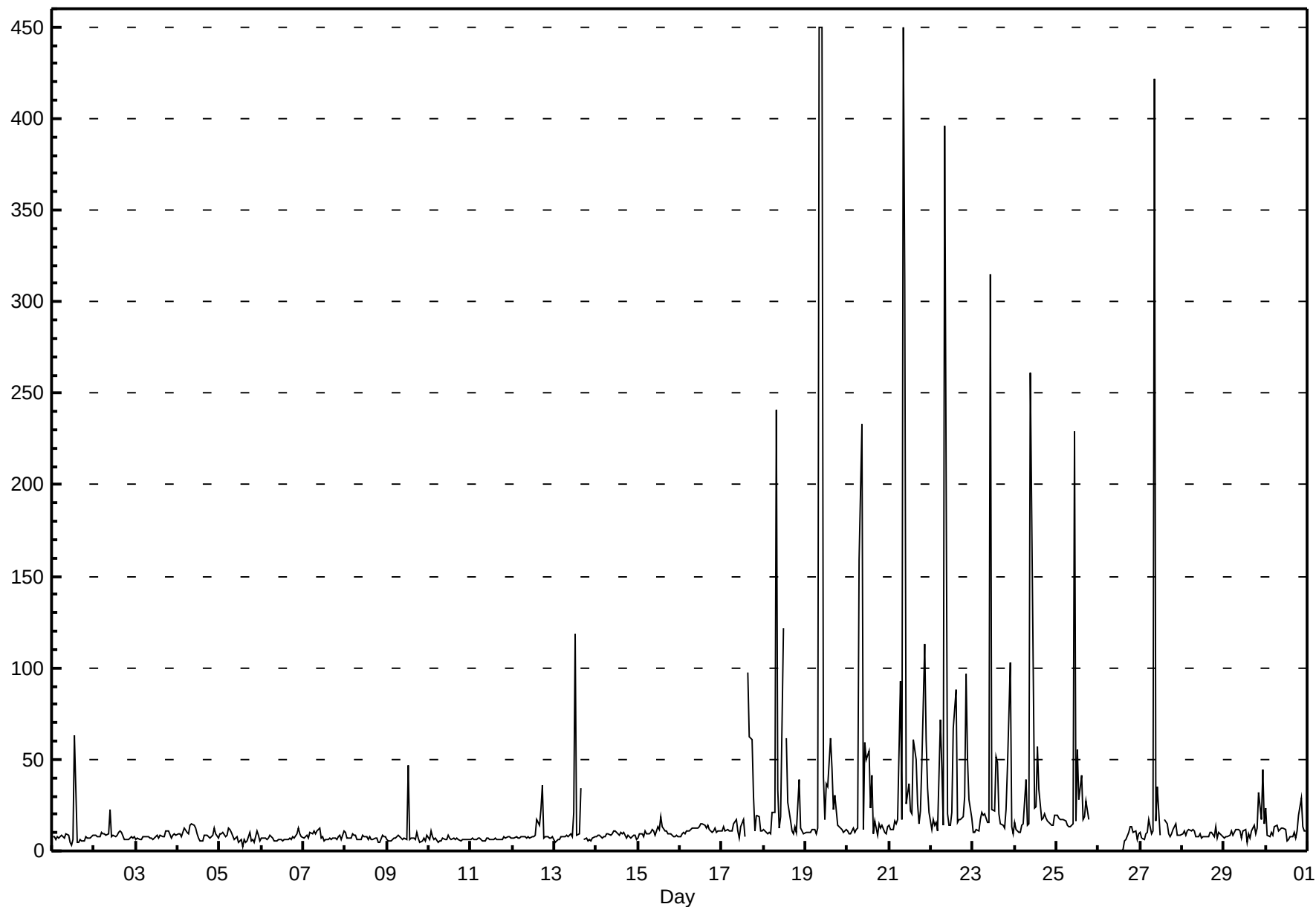
Smoky Heights - June 2013

Maximum Value: 450.2 µg/m ³ on Jun 19 10:00																								Maximum Daily Average: 63.0 µg/m ³ on Jun 21						Hours in Service: 720	
Minimum Value: 0 µg/m ³ on Jun 26 14:00																								Minimum Daily Average: 6.5 µg/m ³ on Jun 11						Hours of Data: 697	
Maximum Diurnal Average: 76.3 µg/m ³ at hour 9																								Minimum Diurnal Average: 8.8 µg/m ³ at hour 3						Hours of Missing Data: 23	
Monthly Average: 19.11 µg/m ³																								Percentiles: P ₁ = 4.7 P ₁₀ = 6.1 Q ₁ = 7.3 Median = 9.5 Q ₃ = 13.5 P ₉₀ = 25.9 P ₉₉ = 309.0						Hours of Calibration: 0	
																								Percent Operational Time: 96.8							
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-Jun	8	8	6	8	7	8	7	7	10	8	5	3	6	63	5	4	7	5	5	8	7	7	7	8	9.1	62.8					
2-Jun	9	9	8	8	10	10	9	9	10	23	8	9	8	9	10	11	10	6	6	7	7	8	7	8	8.9	23.0					
3-Jun	7	7	7	7	8	8	8	8	7	7	6	8	8	7	9	8	8	11	11	11	7	8	9	9	8.0	11.0					
4-Jun	9	9	8	10	12	10	10	14	14	14	12	10	7	5	6	9	9	8	7	8	9	13	10	7	9.5	14.5					
5-Jun	9	9	10	8	8	12	12	10	6	7	8	5	6	2	6	5	5	10	5	6	5	11	9	6	7.5	12.3					
6-Jun	7	7	7	7	7	8	7	5	5	5	7	6	6	6	6	6	7	6	8	7	10	13	9	8	7.1	12.7					
7-Jun	7	8	8	7	10	9	11	9	11	13	7	8	5	6	6	7	7	7	7	6	8	9	6	11	8.1	12.6					
8-Jun	10	7	7	7	9	8	8	7	6	7	9	8	8	6	8	6	6	7	7	5	5	9	8	7	7.2	10.4					
9-Jun	6	5	6	6	7	7	9	8	7	6	7	6	46	6	7	7	6	10	7	5	5	7	5	9	8.4	46.4					
10-Jun	6	11	8	6	7	5	6	5	7	6	7	8	7	7	7	6	7	6	6	6	6	6	6	6	6.6	10.6					
11-Jun	6	7	6	6	7	7	7	5	6	7	7	6	7	6	7	6	6	6	6	7	7	8	8	7	6.5	7.7					
12-Jun	7	7	8	7	7	8	8	8	7	8	7	8	8	9	17	14	23	36	7	8	8	7	7	8	10.0	36.2					
13-Jun	5	5	6	6	8	8	8	8	8	9	8	21	119	8	9	34	N	6	7	6	6	6	7	8	13.7	118.7					
14-Jun	8	9	9	7	8	8	9	10	8	9	11	11	9	9	10	9	10	7	9	8	7	8	9	6	8.6	11.3					
15-Jun	7	9	9	8	11	9	10	10	11	11	9	13	12	19	13	11	11	10	9	10	8	8	9	8	10.1	18.6					
16-Jun	8	9	10	10	11	11	12	13	12	12	12	14	15	14	14	13	14	12	10	11	13	11	11	11	11.7	14.9					
17-Jun	11	13	11	12	11	11	11	15	17	11	7	13	17	8	N	97	62	61	30	11	19	19	11	11	21.2	97.2					
18-Jun	12	11	9	10	10	21	21	241	33	13	19	122	N	62	27	16	11	9	13	11	39	13	11	9	32.2	241.1					
19-Jun	10	10	10	10	12	12	10	12	450	450	41	17	37	35	62	45	23	31	14	14	13	12	10	11	56.2	450.2					
20-Jun	11	9	10	12	10	12	12	159	233	12	59	50	54	23	41	10	16	9	15	13	14	11	10	13	34.0	232.9					
21-Jun	14	11	12	16	15	17	92	17	450	311	26	37	22	20	61	50	26	15	22	48	113	61	34	21	63.0	450.2					
22-Jun	12	17	14	15	11	72	45	14	396	20	14	14	21	67	88	16	17	17	19	30	97	50	28	18	46.4	396.1					
23-Jun	10	10	12	11	17	21	19	20	16	16	315	23	22	51	49	20	15	14	12	23	46	103	13	9	36.1	314.7					
24-Jun	15	12	11	10	14	14	39	14	15	261	184	24	24	57	34	17	18	20	18	16	15	14	14	20	36.6	261.2					
25-Jun	20	18	17	17	17	17	14	13	13	14	229	16	56	28	41	17	19	28	17	N	N	N	N	N	32.2	229.4					
26-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	0	1	5	6	11	13	13	10	11	6	9	--	13.0					
27-Jun	10	7	6	9	10	17	9	11	422	16	35	9	M	M	17	15	10	8	10	12	14	8	9	8	30.6	422.0					
28-Jun	9	11	9	11	12	11	12	11	8	8	9	7	8	8	8	10	10	8	13	7	10	10	8	8	9.3	13.3					
29-Jun	7	8	7	8	11	8	10	12	12	11	7	11	12	5	10	7	11	14	9	13	32	17	44	15	12.6	44.3					
30-Jun	23	8	8	10	9	13	14	11	12	13	13	12	5	6	8	8	10	7	11	20	29	13	11	11	11.9	28.6					
9.7 9.4 8.8 9.3 10.2 13.2 15.5 23.7 76.3 45.1 37.5 17.2 20.5 19.0 20.2 16.2 13.4 13.6 11.0 12.1 19.5 16.5 11.6 10.0																										Diurnal Average					
23.3 17.6 17.3 16.9 17.4 72.1 92.4 241.1 450.2 450.2 314.7 121.7 118.7 66.7 88.4 97.2 62.3 61.1 30.0 48.1 112.9 103.3 44.3 21.3																										Diurnal Maximum					
M - Maintenance N - Not Valid																															

Hourly Maximums

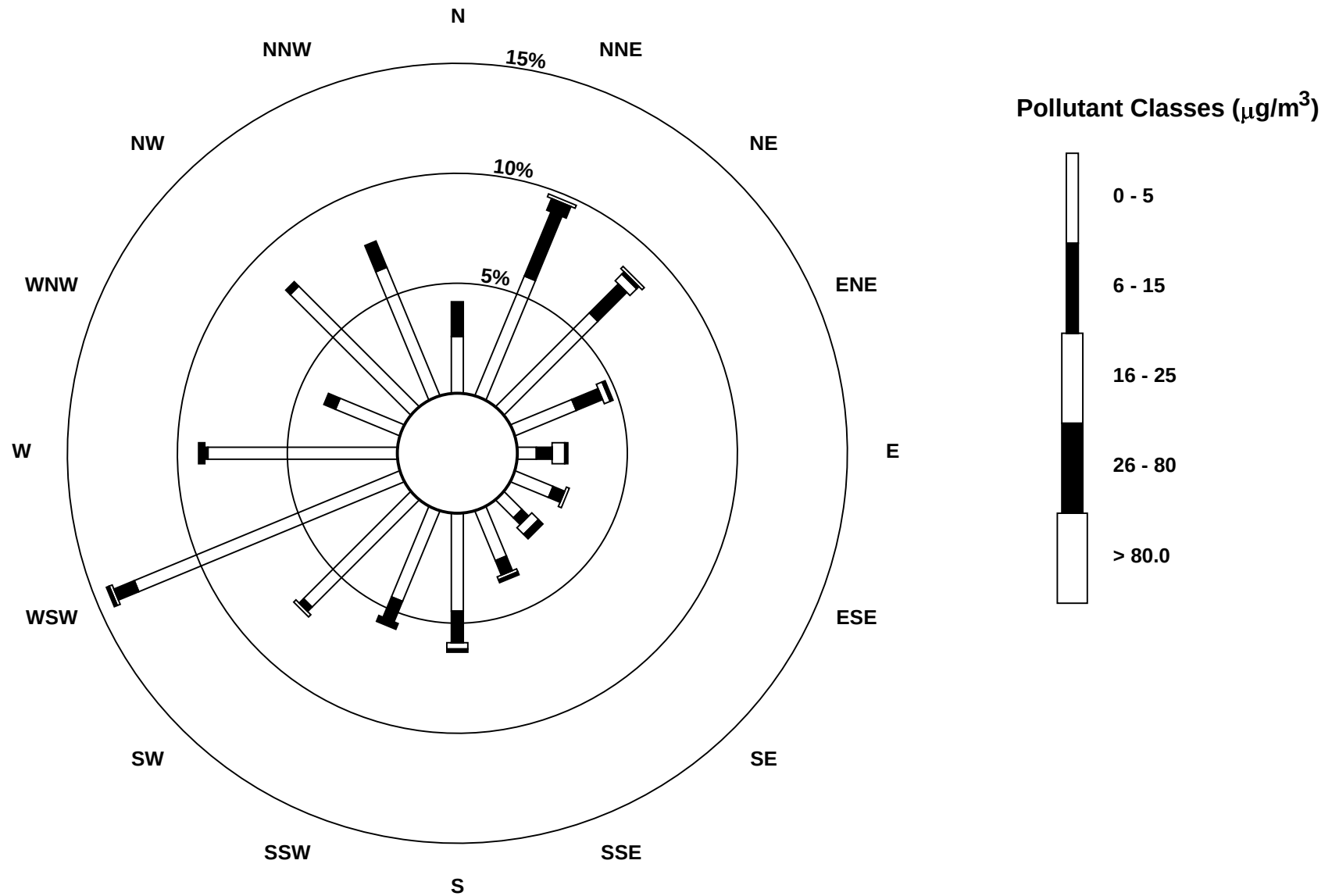
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Smoky Heights - June 2013



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Smoky Heights - June 2013



Hourly Averages

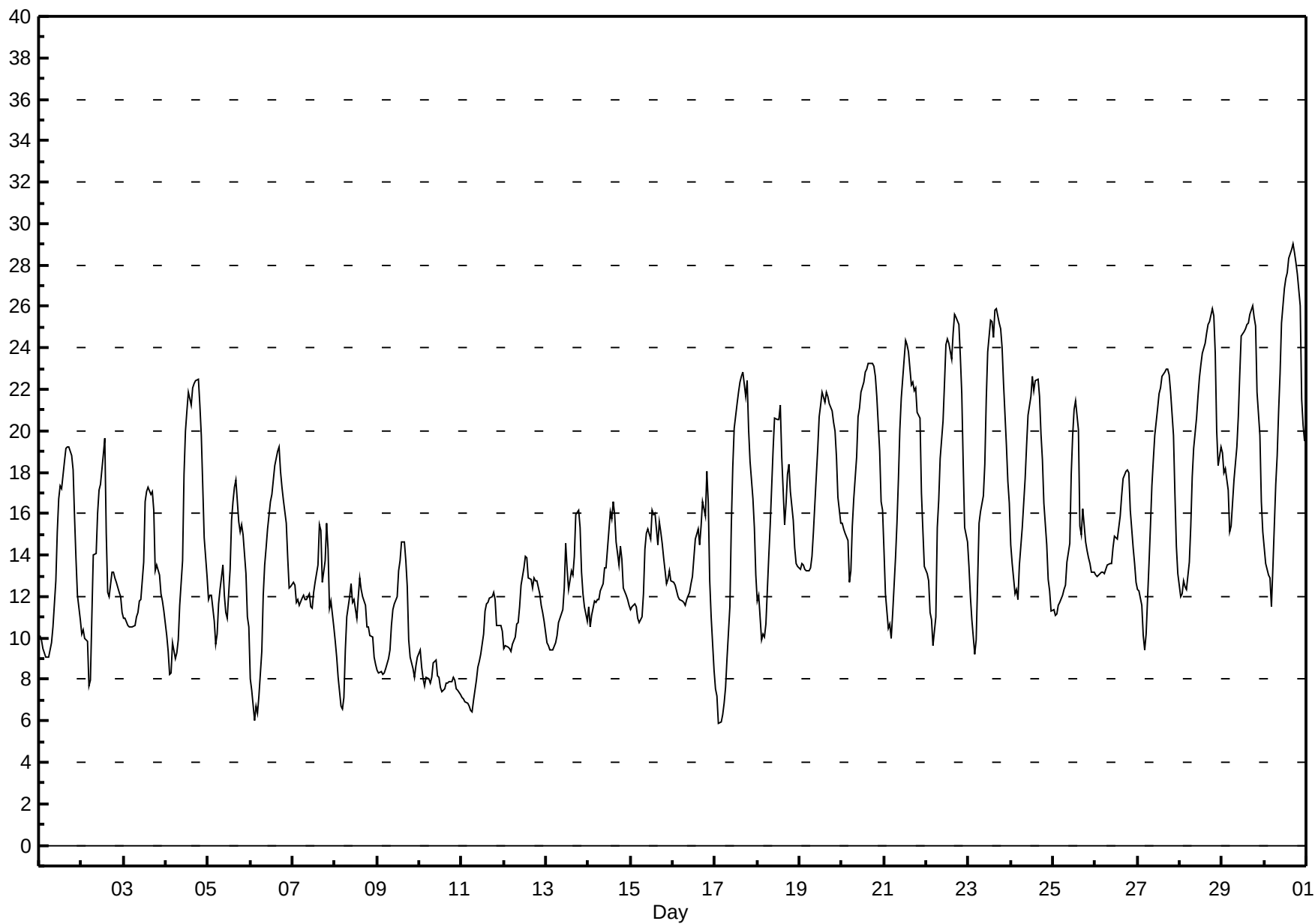
External Temperature (ET) - °C

Smoky Heights - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 29.1 °C on Jun 30 17:00 Maximum Daily Average: 21.8 °C on Jun 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: 6 °C on Jun 17 03:00 Maximum Diurnal Average: 18.6 °C at hour 14 Monthly Average: 14.83 °C												Minimum Daily Average: 8.0 °C on Jun 10 Minimum Diurnal Average: 10.2 °C at hour 5 Percentiles: P ₁ = 6.5 P ₁₀ = 9.1 Q ₁ = 11.3 Median = 13.5 Q ₃ = 18.1 P ₉₀ = 22.4 P ₉₉ = 27.5															
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-Jun	10	10	10	9	9	9	9	10	11	13	15	17	17	17	19	19	19	19	19	18	16	14	12	11	13.8	19.2	
2-Jun	10	10	10	10	8	8	11	14	14	16	17	17	19	20	15	12	12	13	13	13	13	12	12	11	13.0	19.6	
3-Jun	11	11	11	11	11	11	11	11	11	12	12	14	17	17	17	17	16	13	14	13	12	12	12	11	12.9	17.3	
4-Jun	10	9	8	8	10	9	9	10	12	14	18	20	21	22	21	22	22	22	23	21	20	17	15	13	15.7	22.5	
5-Jun	12	12	12	11	10	10	12	12	14	12	11	11	13	16	17	17	18	16	15	15	15	13	11	11	13.1	17.7	
6-Jun	8	7	6	7	6	7	9	12	14	14	15	17	17	18	18	19	19	18	17	17	16	14	12	12	13.4	19.2	
7-Jun	13	13	12	12	12	12	12	12	12	12	12	11	12	13	14	15	15	13	14	16	14	11	12	11	12.6	15.5	
8-Jun	10	9	8	7	7	7	9	11	12	13	12	12	11	12	13	12	12	12	11	11	10	10	9	9	10.3	12.9	
9-Jun	8	8	8	8	8	8	9	9	11	11	12	12	13	14	15	15	14	12	10	9	9	8	9	9	10.4	14.7	
10-Jun	9	9	8	8	8	8	8	8	9	9	8	8	8	7	8	8	8	8	8	8	8	8	7	7	8.0	9.4	
11-Jun	7	7	7	7	7	7	6	7	8	9	9	9	10	11	12	12	12	12	12	12	11	11	11	10	9.3	12.2	
12-Jun	10	10	10	9	9	10	10	11	11	11	13	13	14	14	13	13	12	13	13	13	12	12	11	11	11.5	13.9	
13-Jun	10	10	9	9	9	10	10	11	11	11	12	15	13	12	13	13	14	16	16	15	13	12	12	11	12.0	16.1	
14-Jun	12	11	11	12	12	12	12	12	13	13	13	14	16	16	17	16	15	14	14	14	12	12	12	12	13.1	16.6	
15-Jun	11	12	12	11	11	11	11	12	14	15	15	15	16	16	16	14	16	15	15	14	13	13	13	13	13.5	16.2	
16-Jun	13	13	12	12	12	12	12	12	12	12	13	13	14	15	15	15	15	17	16	18	17	13	11	8	13.3	18.1	
17-Jun	8	7	6	6	6	7	8	9	12	15	18	20	21	22	22	23	23	22	22	20	18	17	15	13	15.0	22.8	
18-Jun	12	12	10	10	10	11	14	15	17	19	21	21	21	21	19	15	17	18	18	17	16	14	14	13	15.6	21.2	
19-Jun	13	14	14	13	13	13	13	14	15	18	19	21	21	22	21	22	22	21	21	20	20	19	17	16	17.6	21.9	
20-Jun	16	15	15	15	13	13	15	17	19	21	21	22	22	23	23	23	23	23	23	23	22	19	17	16	19.1	23.3	
21-Jun	14	12	10	11	10	11	14	16	18	20	22	23	24	24	24	22	22	22	22	21	21	17	15	13	17.9	24.4	
22-Jun	13	13	11	11	10	11	15	17	19	20	22	24	24	24	23	25	26	25	25	24	22	18	15	15	18.9	25.6	
23-Jun	13	12	11	9	10	13	16	16	17	18	22	24	25	25	25	26	26	25	25	24	22	19	18	17	19.0	25.9	
24-Jun	15	14	12	12	12	14	15	16	18	19	21	22	23	22	22	22	22	20	19	16	14	13	12	11	16.9	22.6	
25-Jun	11	11	11	12	12	12	12	13	14	15	18	20	21	21	20	15	15	16	15	14	14	14	13	13	14.7	21.4	
26-Jun	13	13	13	13	13	13	13	14	14	14	14	15	15	15	16	17	18	18	18	18	16	14	14	13	14.7	18.1	
27-Jun	12	12	12	10	9	10	14	15	17	19	20	21	22	22	23	23	23	23	23	22	20	17	14	13	17.3	23.0	
28-Jun	12	12	13	13	12	14	15	18	19	21	22	23	23	24	24	25	25	25	26	26	24	20	18	19	19.6	25.9	
29-Jun	19	18	18	17	15	15	16	18	19	21	23	25	25	25	25	25	26	26	25	25	22	20	17	15	20.8	26.1	
30-Jun	14	14	13	13	12	13	17	19	21	23	25	27	27	28	28	29	29	29	29	28	28	26	22	20	20	21.8	29.1
11.6 11.3 10.8 10.5 10.2 10.7 12.0 13.0 14.1 15.3 16.5 17.5 18.2 18.6 18.6 18.4 18.5 18.3 18.0 17.5 16.2 14.5 13.3 12.6 18.9 18.0 18.2 17.1 15.1 15.4 17.4 18.8 20.9 22.8 25.2 26.8 27.4 27.6 28.3 28.8 29.1 28.6 28.1 27.6 26.0 21.5 20.3 19.5																								Diurnal Average			
																								Diurnal Maximum			

Hourly Averages

External Temperature (ET) - °C
Smoky Heights - June 2013



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - June 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	15	5	5	4	7	9	11	14	15	16	20	21	17	18	15	20	15	13	12	11	9	9	2	7	11.1	21.0
Dir	181	245	237	212	201	190	190	182	188	212	229	236	226	209	202	215	239	209	180	170	160	175	216	248	206.7	235.9
2 Spd	15	11	14	5	6	6	7	2	8	4	6	10	11	11	18	6	6	10	11	9	8	13	13	12	3.2	18.3
Dir	216	182	177	227	120	186	239	270	106	45	9	355	12	18	5	67	285	291	360	342	330	336	345	354	341.2	5.4
3 Spd	13	12	13	11	8	5	7	6	4	4	2	3	3	3	6	11	9	7	9	5	3	3	4	6	2.5	13.0
Dir	342	348	324	328	320	244	251	273	111	113	40	317	329	168	206	238	224	195	231	170	194	158	172	159	266.8	324.1
4 Spd	6	4	4	4	7	10	11	12	10	11	12	13	15	13	15	16	18	15	15	12	9	8	8	9	9.2	17.6
Dir	171	246	275	253	203	212	202	212	193	170	197	184	179	224	228	173	172	166	178	191	248	262	261	270	201.5	172.0
5 Spd	7	10	8	8	8	6	8	13	23	22	21	16	11	21	27	30	29	38	32	28	27	12	9	14	16.8	38.5
Dir	254	264	263	214	233	221	193	233	254	257	252	220	207	238	241	242	246	245	244	249	261	305	313	288	247.5	245.1
6 Spd	13	15	15	18	16	17	17	20	20	23	21	23	24	19	21	21	28	26	25	14	7	8	8	9	17.5	28.0
Dir	262	257	249	255	255	254	253	254	255	255	256	255	253	239	229	252	261	255	241	244	234	213	211	218	249.4	260.6
7 Spd	8	7	1	3	2	2	3	5	5	11	13	11	15	10	8	8	14	12	13	6	7	11	17	2	5.8	17.3
Dir	248	284	66	102	149	153	224	181	175	198	212	228	244	224	220	251	259	314	325	307	252	266	270	117	248.3	269.8
8 Spd	10	12	12	10	13	14	10	14	18	22	23	18	23	23	21	20	16	14	13	13	15	7	5	1	12.5	23.3
Dir	247	261	269	257	262	264	269	247	244	251	272	275	284	287	296	311	325	337	337	297	300	352	40	230	282.5	271.7
9 Spd	6	7	9	11	7	4	6	9	15	17	16	12	11	13	14	14	11	22	20	12	14	17	24	30	9.5	29.6
Dir	267	278	272	259	278	258	303	355	24	24	34	25	7	351	347	335	357	41	30	37	20	20	319	286	351.3	286.4
10 Spd	15	21	17	11	10	12	15	30	36	31	19	28	27	27	32	33	22	19	21	18	20	12	15	18	17.5	35.7
Dir	287	269	265	275	324	336	334	331	336	343	330	335	326	322	303	306	323	330	342	13	5	276	94	43	326.5	335.7
11 Spd	17	9	13	12	12	12	14	12	11	9	5	8	8	6	9	8	9	8	9	8	7	8	8	8	9.1	17.5
Dir	21	20	65	35	43	45	62	45	40	59	38	48	51	73	38	87	63	58	46	41	24	17	20	23	43.9	20.8
12 Spd	9	11	11	10	11	12	11	12	11	11	11	9	7	6	5	10	8	8	7	7	7	5	3	9	6.8	12.3
Dir	34	40	47	45	48	53	35	33	35	38	47	32	105	140	31	9	25	351	346	330	308	322	288	288	27.4	32.9
13 Spd	5	3	4	5	6	8	6	11	8	10	12	12	9	10	8	15	12	14	20	16	15	18	23	17	10.0	23.2
Dir	245	222	218	198	226	257	248	260	259	248	241	240	144	212	182	257	240	222	219	240	249	267	263	271	241.0	263.0
14 Spd	16	13	12	16	18	18	17	16	23	21	25	28	26	25	26	17	13	13	9	16	15	18	20	19	17.4	28.0
Dir	264	268	283	307	319	315	314	312	311	313	317	306	311	326	325	325	324	327	276	276	272	284	298	311	306.2	305.8
15 Spd	25	28	34	33	34	26	22	26	30	28	28	22	19	19	18	16	21	21	21	16	11	13	14	8	21.5	34.2
Dir	312	306	312	313	312	308	301	312	313	307	315	320	330	356	347	342	339	340	334	342	346	316	343	346	321.5	311.8
16 Spd	13	12	15	14	12	12	13	13	12	13	15	16	9	8	7	10	6	6	5	1	4	4	6	8	8.6	15.9
Dir	331	323	326	323	319	333	327	335	339	334	347	329	343	349	1	349	8	12	358	326	170	213	276	273	332.0	328.7
17 Spd	5	6	7	5	6	7	10	6	7	9	11	7	7	6	3	5	6	8	7	9	1	3	2	1	5.1	10.7
Dir	267	217	197	208	221	198	200	190	184	180	175	171	149	147	158	137	179	172	159	159	106	102	99	345	179.3	174.7
18 Spd	4	6	2	7	3	3	6	9	8	13	13	14	12	11	8	11	12	11	13	16	5	8	4	9	5.9	16.1
Dir	248	311	335	22	33	46	26	34	33	33	36	44	47	51	140	192	303	348	10	27	39	34	313	331	21.9	26.9
19 Spd	11	10	12	10	11	10	12	11	10	14	17	22	24	25	22	21	18	20	19	14	12	10	9	7	13.3	24.6
Dir	3	23	31	21	25	20	27	28	16	46	58	60	73	78	65	76	72	84	86	69	63	59	44	19	55.2	78.2
20 Spd	8	10	11	6	7	11	10	10	11	11	18	19	19	20	19	17	17	16	15	11	10	7	6	4	11.3	19.7
Dir	23	24	38	18	19	37	48	33	34	34	84	84	76	84	70	62	73	70	66	84	76	60	31	62	60.3	84.5
21 Spd	6	5	7	7	10	7	8	12	9	8	8	4	6	3	5	16	12	8	4	2	4	6	2	2	3.9	16.0
Dir	173	241	243	201	213	255	236	222	209	155	158	93	8	13	143	138	138	127	164	225	276	171	2	346	185.2	137.8
22 Spd	5	8	3	2	8	8	2	7	2	5	4	3	5	7	12	5	1	3	4	2	5	6	6	6	0.4	11.7
Dir	304	281	20	332	304	295	149	212	210	141	174	145	148	160	108	132	50	43	351	87	264	317	301	39	253.4	107.9

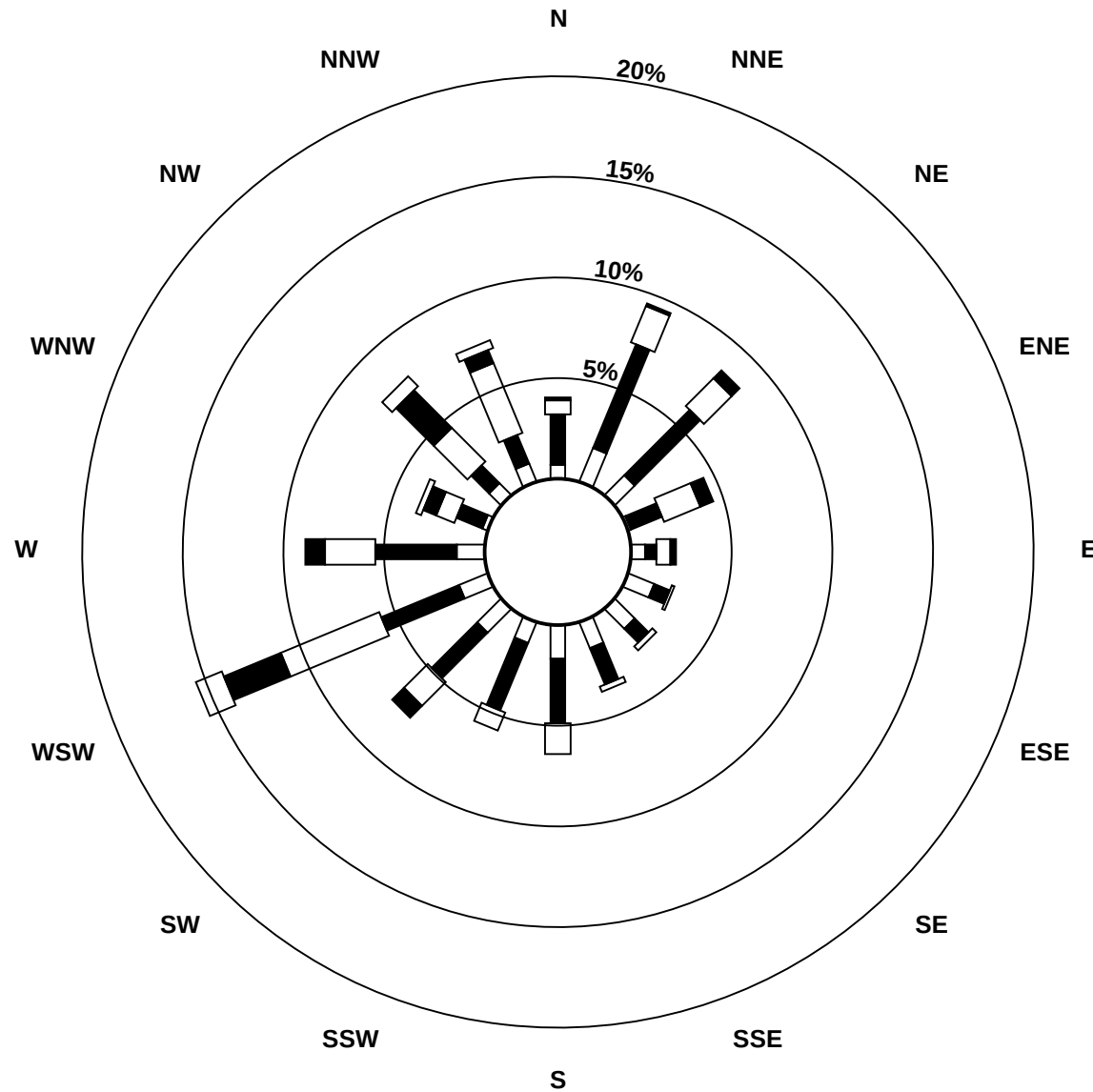
Hourly Averages

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

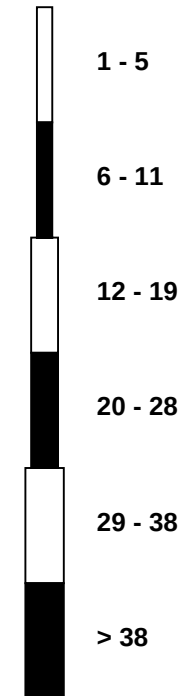
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	2	7	9	3	5	6	6	6	9	6	2	3	1	6	9	9	9	10	9	7	4	3	6	6	1.9	10.4
Dir	269	274	283	231	233	240	229	113	124	153	146	116	32	52	55	43	49	70	58	102	123	170	121	162	102.0	69.7
24 Spd	3	4	5	6	6	5	5	4	5	8	11	13	14	15	20	19	21	22	19	13	10	8	8	7	9.3	22.0
Dir	230	311	18	1	16	24	22	25	43	80	82	101	60	51	41	54	52	41	39	31	26	22	22	17	43.0	41.3
25 Spd	8	8	8	9	7	9	9	10	9	7	4	1	5	8	9	16	8	3	5	7	6	6	5	3	3.5	16.4
Dir	26	11	20	6	32	28	19	29	42	36	12	345	19	11	35	149	292	353	180	181	126	133	161	206	38.9	148.7
26 Spd	4	3	7	12	10	11	14	13	16	13	15	20	19	20	20	15	11	7	3	1	3	9	8	8	10.2	20.2
Dir	134	169	237	249	231	247	245	236	247	253	244	259	255	254	266	276	261	274	246	3	278	204	246	250	250.2	254.4
27 Spd	7	12	11	11	10	10	18	21	28	33	32	29	30	31	29	28	26	24	21	12	8	8	10	9	18.6	33.3
Dir	221	244	243	237	270	248	229	232	241	243	244	247	255	251	243	251	255	253	258	259	258	270	274	289	248.8	243.1
28 Spd	5	7	7	5	6	9	10	13	16	16	17	18	17	13	13	11	10	9	3	4	5	5	8	11	6.9	18.0
Dir	315	256	268	219	205	216	231	241	248	247	240	248	242	257	242	236	225	198	183	125	93	30	54	76	237.7	247.8
29 Spd	12	10	10	2	2	7	7	9	14	13	10	10	16	17	13	14	12	9	8	9	4	7	4	4	5.9	16.6
Dir	78	54	67	112	273	225	196	212	245	243	246	237	234	234	242	252	239	236	244	182	240	309	296	273	236.4	233.5
30 Spd	7	5	6	7	5	5	5	7	7	6	5	6	8	7	4	2	3	4	4	2	1	5	6	6	2.4	7.6
Dir	280	261	221	264	235	194	185	173	173	158	161	165	154	177	183	144	106	136	107	89	33	45	45	32	174.2	153.5
Spd	4.0	5.4	4.4	4.6	4.2	4.0	3.8	4.4	4.8	4.4	4.5	4.6	3.6	3.6	3.8	3.9	4.5	2.9	2.6	1.6	2.8	3.3	3.9	4.1	Diurnal Average	
Dir	289.2	290.2	293.1	292.1	292.3	281.8	271.8	277.8	283.9	278.8	275.3	283.1	288.1	282.1	291.0	270.6	284.9	304.1	306.4	301.1	304.6	309.9	313.1	310.9	Diurnal Maximum	
Spd	24.9	28.5	34.2	33.3	34.0	25.9	22.4	29.7	35.7	33.3	31.7	29.3	29.6	30.8	31.5	33.0	28.9	38.5	32.3	28.2	26.5	18.0	24.2	29.6	Diurnal Maximum	
Dir	311.9	305.7	311.8	313.4	312.1	308.1	301.4	330.7	335.7	243.1	243.9	247.4	254.9	250.7	303.3	305.5	246.5	245.1	243.9	248.6	260.8	284.3	319.1	286.4		
Maximum Speed Value: 38 km/h on Jun 5 18:00																									Minimum Speed Value: 1 km/h on Jun 7 03:00	
Maximum Daily Speed Average: 21.5 km/h on Jun 15																									Minimum Daily Speed Average: 0.4 km/h on Jun 22	
Maximum Diurnal Speed Average: 5.4 km/h at hour 2																									Minimum Diurnal Speed Average: 1.6 km/h at hour 20	
Monthly Average Velocity: 3.81 km/h 289.46 deg																									Speed Percentiles: P ₁ = 1.4 P ₁₀ = 3.7 Q ₁ = 6.4 Median = 10.0 Q ₃ = 15.0 P ₉₀ = 21.0 P ₉₉ = 32.8	
All monthly, daily, and diurnal averages have been calculated using vector methods																									Percent Operational Time: 100.0	
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	11		44		21		5		1		0		82													
NorthEast	13		64		35		7		0		0		119													
East	12		9		13		7		0		0		41													
SouthEast	16		17		3		0		0		0		36													
South	15		47		18		0		0		0		80													
SouthWest	19		53		42		11		7		1		133													
West	13		50		40		25		5		0		133													
NorthWest	9		17		35		23		12		0		96													
Total	108		301		207		78		25		1		720													

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - June 2013

Maximum Speed: 39 km/h on Jun 5 18:00																				Maximum Daily Speed Average: 22.7 km/h on Jun 15						Hours in Service: 720	
Minimum Speed: 1 km/h on Jun 30 21:00																				Minimum Daily Speed Average: 5.5 km/h on Jun 30						Hours of Data: 720	
Maximum Diurnal Speed Average: 15.6 km/h at hour 16																				Minimum Diurnal Speed Average: 9.0 km/h at hour 21						Hours of Missing Data: 0	
Monthly Average Speed: 12.04 km/h																				Percentiles: P ₁ = 2.8 P ₁₀ = 4.9 Q ₁ = 7.1 Median = 10.5 Q ₃ = 15.6 P ₉₀ = 21.7 P ₉₉ = 33.2						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-Jun	15	12	5	5	7	9	11	14	15	17	20	22	18	19	16	20	15	13	13	11	9	9	4	7	12.8	21.7	
2-Jun	16	12	15	13	8	7	8	6	8	5	7	11	12	13	19	8	7	12	11	9	9	13	13	12	10.6	19.1	
3-Jun	13	12	13	12	9	7	8	6	4	4	5	4	5	6	7	11	10	11	11	6	4	3	5	6	7.5	13.1	
4-Jun	6	5	4	5	8	10	11	12	11	11	13	14	16	14	15	17	18	16	16	12	9	8	8	9	11.2	18.0	
5-Jun	8	11	9	8	9	7	9	13	23	22	21	17	11	22	27	30	30	39	33	29	27	17	11	15	18.5	38.9	
6-Jun	13	15	16	18	16	17	17	20	21	23	22	23	25	20	21	22	29	27	25	14	7	8	8	10	18.2	28.7	
7-Jun	9	7	3	3	3	3	3	5	5	11	13	11	15	10	8	8	16	13	13	7	7	11	18	5	8.7	17.6	
8-Jun	10	12	13	10	13	14	10	14	18	22	24	19	23	23	21	20	16	14	13	14	16	9	5	3	14.9	23.6	
9-Jun	7	7	9	11	7	4	7	9	16	17	16	13	12	14	15	15	11	22	20	12	14	17	26	31	13.8	30.5	
10-Jun	24	21	17	11	10	12	15	30	36	31	20	28	28	28	32	33	25	21	23	21	22	19	18	19	22.7	36.3	
11-Jun	18	17	13	12	12	13	14	13	12	9	6	8	9	7	9	9	9	8	9	8	7	8	8	8	10.3	18.0	
12-Jun	9	11	11	10	11	12	11	12	12	11	11	10	8	6	8	11	8	8	8	7	7	5	4	9	9.2	12.5	
13-Jun	6	4	5	5	7	8	6	11	8	10	13	14	11	11	9	16	13	15	21	17	15	18	23	17	11.7	23.3	
14-Jun	16	13	13	16	18	18	17	16	23	21	25	29	27	26	27	18	14	14	10	16	16	18	20	19	18.7	28.5	
15-Jun	25	29	34	33	34	26	23	27	31	29	28	22	19	21	19	16	21	21	21	17	12	13	15	8	22.7	34.3	
16-Jun	13	12	15	14	12	13	13	13	12	14	15	16	10	9	7	11	7	7	5	2	4	5	6	8	10.1	16.3	
17-Jun	6	6	7	5	6	8	10	6	7	9	11	8	8	7	6	8	7	8	8	9	2	3	3	3	6.7	11.1	
18-Jun	4	7	5	7	4	4	7	9	8	14	14	15	13	11	14	13	12	11	13	16	8	9	7	10	9.7	16.2	
19-Jun	12	11	12	10	11	10	12	11	11	14	17	22	25	26	23	22	19	21	19	14	12	10	9	7	14.9	25.7	
20-Jun	8	10	11	7	7	11	10	10	11	11	19	19	20	20	20	18	18	16	15	11	10	7	6	7	12.6	20.3	
21-Jun	7	6	8	9	11	8	9	13	10	10	9	7	7	7	6	17	13	9	5	3	4	6	5	3	7.8	16.5	
22-Jun	6	8	6	5	8	8	5	7	4	5	5	5	7	8	13	6	4	5	5	2	5	6	6	6	6.1	12.8	
23-Jun	4	7	9	4	6	6	7	6	9	6	4	4	5	7	10	10	9	11	9	7	4	4	7	7	6.7	10.8	
24-Jun	6	7	5	6	6	6	5	5	6	9	12	14	14	15	20	19	21	22	19	13	10	8	8	8	11.1	22.3	
25-Jun	9	8	8	9	7	9	9	10	10	7	5	4	7	9	10	20	12	4	8	9	6	6	6	5	8.2	19.5	
26-Jun	4	3	7	12	10	11	14	13	16	13	15	20	19	20	20	15	11	7	3	3	4	9	9	10	11.2	20.4	
27-Jun	7	12	11	11	10	10	18	21	28	34	32	30	30	31	30	28	26	24	21	12	8	8	10	9	19.1	33.5	
28-Jun	8	8	8	7	6	9	10	14	16	16	18	18	17	13	14	12	10	9	4	4	5	5	8	12	10.5	18.4	
29-Jun	13	10	10	3	3	7	7	9	14	13	11	11	16	17	13	14	13	10	8	9	6	7	4	5	9.8	17.0	
30-Jun	7	5	6	7	6	6	5	7	7	6	5	6	8	8	5	3	4	4	4	2	1	5	6	6	5.5	8.2	
10.2		10.2	10.3	9.6	9.5	9.7	10.3	12.0	13.7	14.2	14.5	14.8	14.8	15.0	15.5	15.6	14.3	14.0	13.1	10.6	9.0	9.2	9.5	9.3	Diurnal Average		
25.0		28.6	34.3	33.4	34.2	26.0	22.5	30.2	36.3	33.5	32.1	29.7	29.9	31.2	31.8	33.3	29.6	38.9	32.5	28.6	26.6	18.5	26.4	30.5	Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - June 2013

Maximum Value: 90.0 deg on Jun 17 21:00																			Hours in Service: 720						
Minimum Value: 2.8 deg on Jun 23 03:00																			Hours of Data: 720						
Percentiles: P ₁ = 4.1 P ₁₀ = 7.1 Q ₁ = 9.6 Median = 14.1 Q ₃ = 24.3 P ₉₀ = 46.1 P ₉₉ = 79.9																			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-Jun	13	80	9	27	18	5	6	8	8	11	11	15	16	26	19	14	20	15	20	5	8	8	63	14	79.8
2-Jun	17	26	12	80	45	14	34	76	24	57	40	19	21	29	19	59	41	31	15	23	23	10	12	13	80.4
3-Jun	10	11	9	11	14	40	12	29	31	25	67	45	66	69	48	20	19	49	37	36	60	30	30	14	69.4
4-Jun	8	31	27	12	13	7	7	9	19	11	16	21	19	21	12	23	12	11	14	17	8	5	8	10	30.6
5-Jun	25	17	32	11	14	35	14	18	5	4	7	17	16	13	10	8	12	8	6	9	5	47	53	14	52.6
6-Jun	11	5	11	4	4	5	7	5	10	11	15	13	12	17	11	15	13	9	8	7	13	5	12	14	17.1
7-Jun	19	10	72	40	48	58	28	17	16	8	10	12	7	13	16	22	34	23	12	29	11	16	13	81	80.9
8-Jun	14	12	10	10	11	7	12	8	8	9	10	13	7	7	8	10	9	12	16	18	18	45	24	68	67.8
9-Jun	10	10	15	8	9	17	17	24	10	12	13	19	20	18	20	17	14	10	8	11	12	12	24	14	23.7
10-Jun	52	6	6	7	14	9	8	10	11	12	16	12	11	11	7	8	31	29	20	31	24	52	35	18	52.2
11-Jun	14	58	15	7	11	12	11	18	17	19	55	29	20	27	18	33	13	9	15	10	10	7	7	8	58.5
12-Jun	7	6	8	8	7	8	12	9	13	10	16	16	33	20	50	11	27	12	12	14	5	15	35	11	50.1
13-Jun	27	45	41	16	19	5	10	5	12	7	10	28	45	29	18	21	17	12	9	12	7	6	6	4	45.3
14-Jun	11	4	16	7	6	6	6	8	9	10	10	11	16	13	15	14	20	19	22	8	7	5	14	9	21.9
15-Jun	7	5	5	6	5	6	6	8	9	6	8	11	10	22	16	15	13	9	10	14	20	8	17	10	22.1
16-Jun	13	11	10	7	11	10	9	9	11	18	14	14	24	25	36	22	30	25	24	82	8	33	4	4	82.2
17-Jun	14	8	7	14	17	12	8	16	16	15	13	30	32	39	67	58	35	8	18	11	90	16	65	75	90.0
18-Jun	28	14	64	8	28	49	12	16	13	12	12	13	14	12	56	35	22	9	11	8	70	25	49	21	69.6
19-Jun	10	11	9	8	10	8	8	12	13	12	9	10	16	16	12	11	10	9	9	9	6	7	11	6	16.5
20-Jun	7	8	14	20	16	7	20	11	11	18	16	12	13	14	16	13	14	12	10	8	8	12	12	51	51.3
21-Jun	27	23	21	41	20	10	14	12	26	32	37	62	34	76	58	22	13	14	27	43	24	24	68	61	75.9
22-Jun	31	5	64	71	22	27	63	29	68	34	43	70	67	48	24	42	86	48	46	49	36	13	28	22	85.9
23-Jun	85	4	3	38	17	12	26	16	18	25	69	57	87	48	26	23	22	16	14	22	40	47	25	34	86.6
24-Jun	68	52	25	14	16	12	17	20	21	16	18	23	10	14	13	14	14	9	11	8	7	8	9	9	67.9
25-Jun	14	11	10	12	13	10	12	11	19	19	51	82	44	23	25	49	41	25	58	40	14	14	30	56	82.5
26-Jun	15	22	13	5	13	14	10	6	6	8	6	7	5	7	7	9	13	20	27	73	48	13	20	33	73.0
27-Jun	19	9	7	6	9	11	4	5	7	6	9	9	8	10	9	8	8	9	6	4	11	11	12	9	18.8
28-Jun	59	26	24	39	20	24	9	14	7	9	15	12	13	17	16	21	24	17	37	17	27	12	15	14	59.3
29-Jun	12	9	17	73	44	28	16	7	8	9	17	32	19	12	17	14	15	21	12	14	43	17	15	34	73.4
30-Jun	4	26	27	15	40	16	10	9	15	20	28	22	20	31	51	55	59	31	20	29	25	17	14	12	58.6
	84.8	79.8	71.9	80.4	48.0	58.2	62.7	76.4	67.7	56.7	69.0	82.5	86.6	75.9	67.3	58.7	85.9	48.6	57.8	82.2	90.0	51.9	67.9	80.9	

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

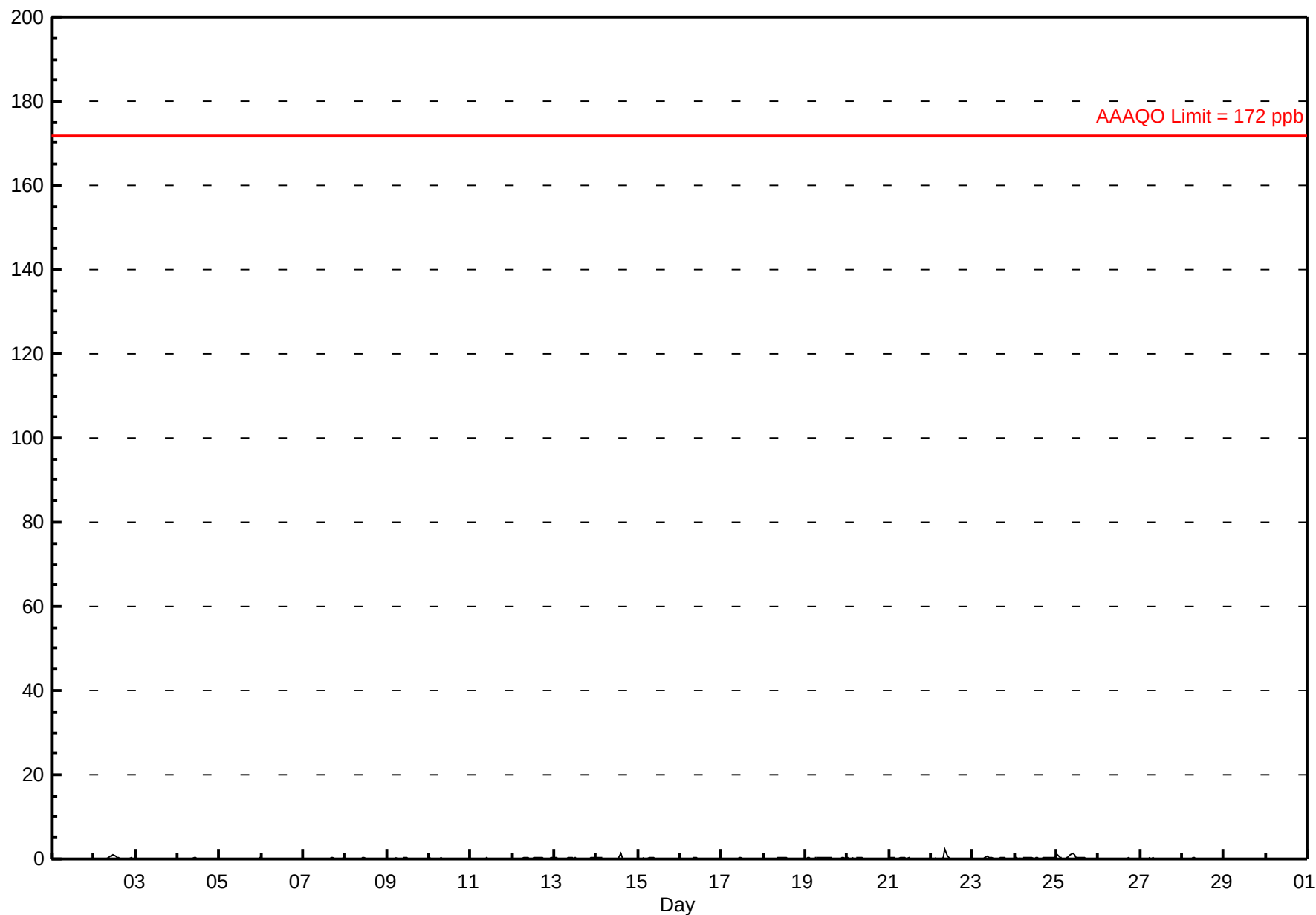
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.2 ppb on Jun 22 09:00 Maximum Daily Average: 0.4 ppb on Jun 25																				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 Jun 19 20:00 Maximum Diurnal Average: 0.3 ppb at hour 9 Monthly Average: 0.13 ppb										Minimum Daily Average: 0.0 ppb on Jun 26 Minimum Diurnal Average: 0.1 ppb at hour 21 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 0.9																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	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
2-Jun	0	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
3-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
4-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
5-Jun	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
6-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
7-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
8-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
9-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
10-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
11-Jun	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
12-Jun	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
13-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
14-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.2	1.2
15-Jun	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
16-Jun	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-Jun	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
18-Jun	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
19-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0.2	0.5
20-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
21-Jun	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
22-Jun	0	0	0	0	A	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2.2
23-Jun	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
24-Jun	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
25-Jun	1	1	0	0	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.4
26-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
27-Jun	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-Jun	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
29-Jun	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
30-Jun	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
0.1 0.1 0.1 0.1 -- 0.1 0.1 0.2 0.3 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 Diurnal Average																										
1.0 0.8 0.5 0.3 -- 0.4 0.5 0.8 2.2 1.4 0.9 1.1 0.8 0.6 1.2 0.3 0.3 0.3 0.4 0.4 0.3 0.3 0.4 0.3 Diurnal Maximum																										
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

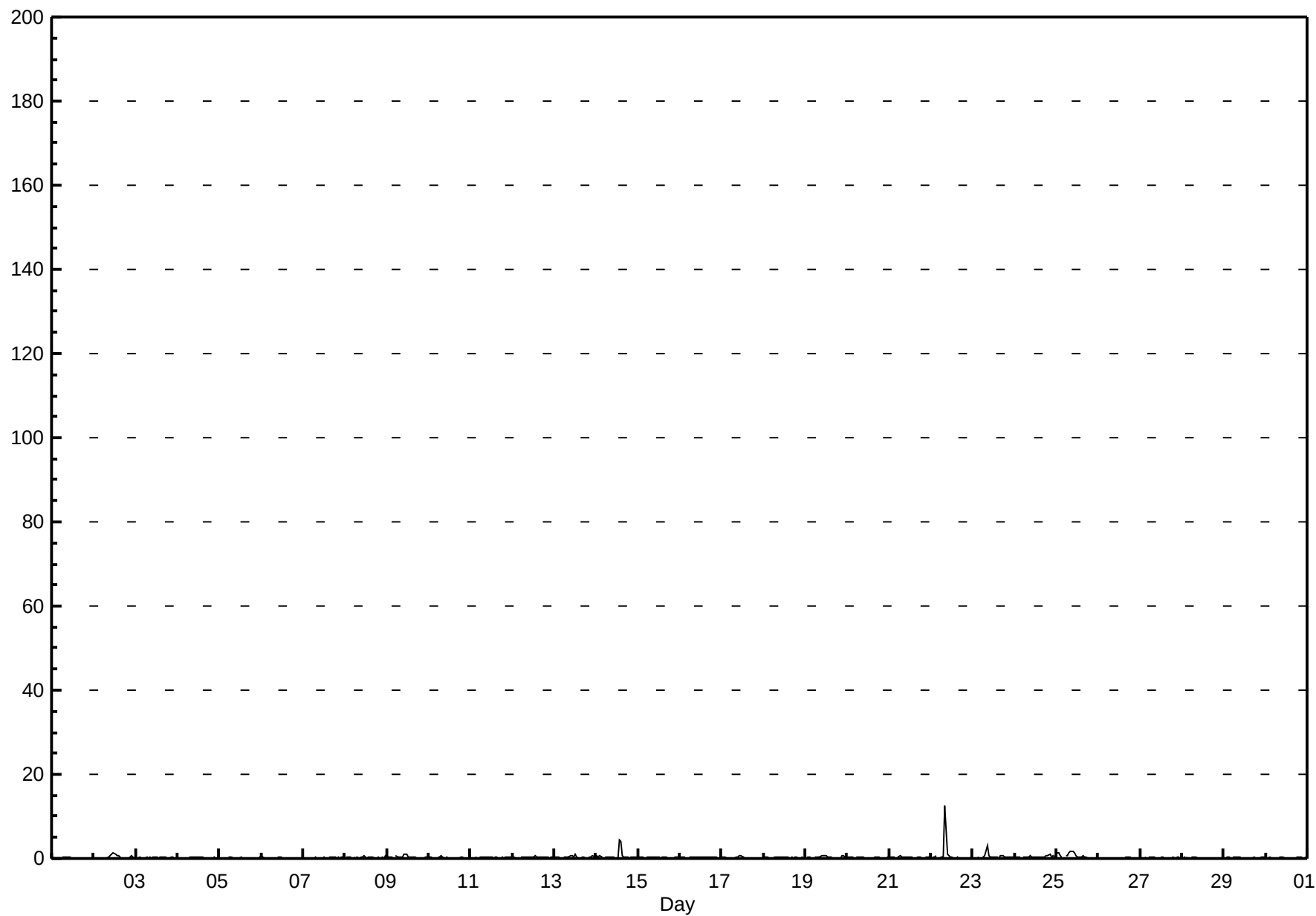
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - June 2013



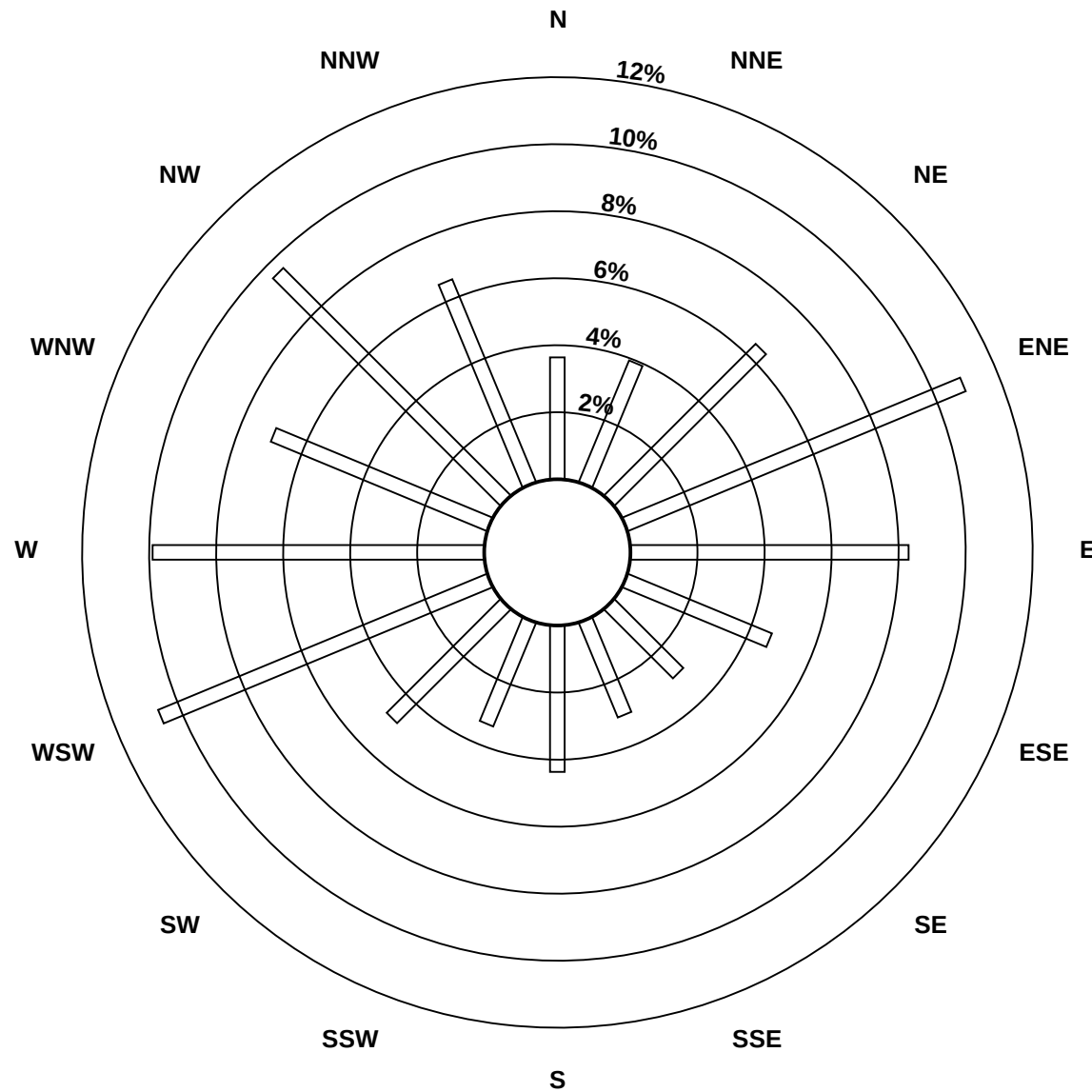
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - June 2013

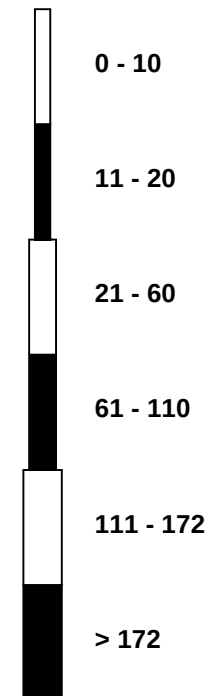


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - June 2013

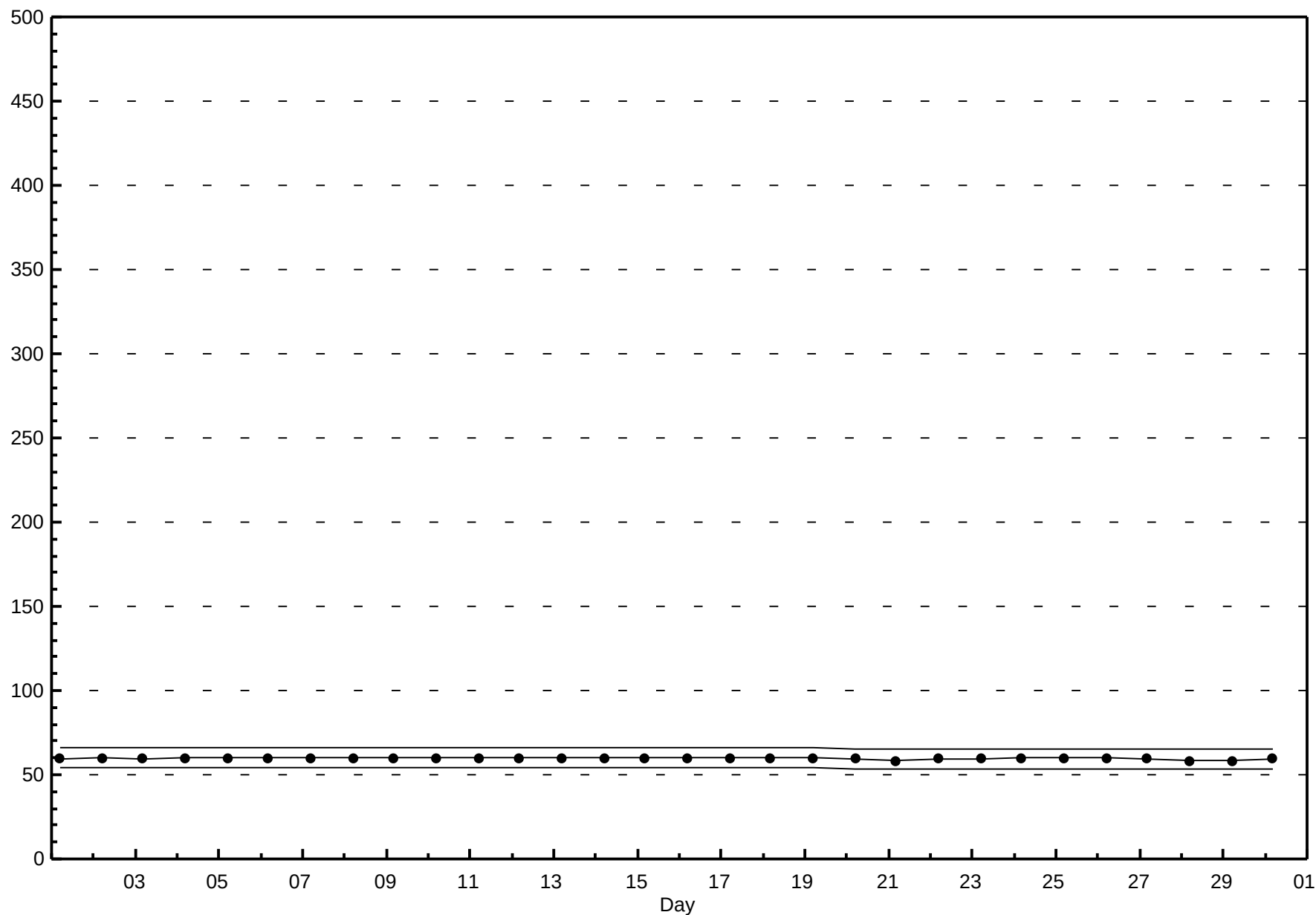


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - June 2013



Hourly Averages

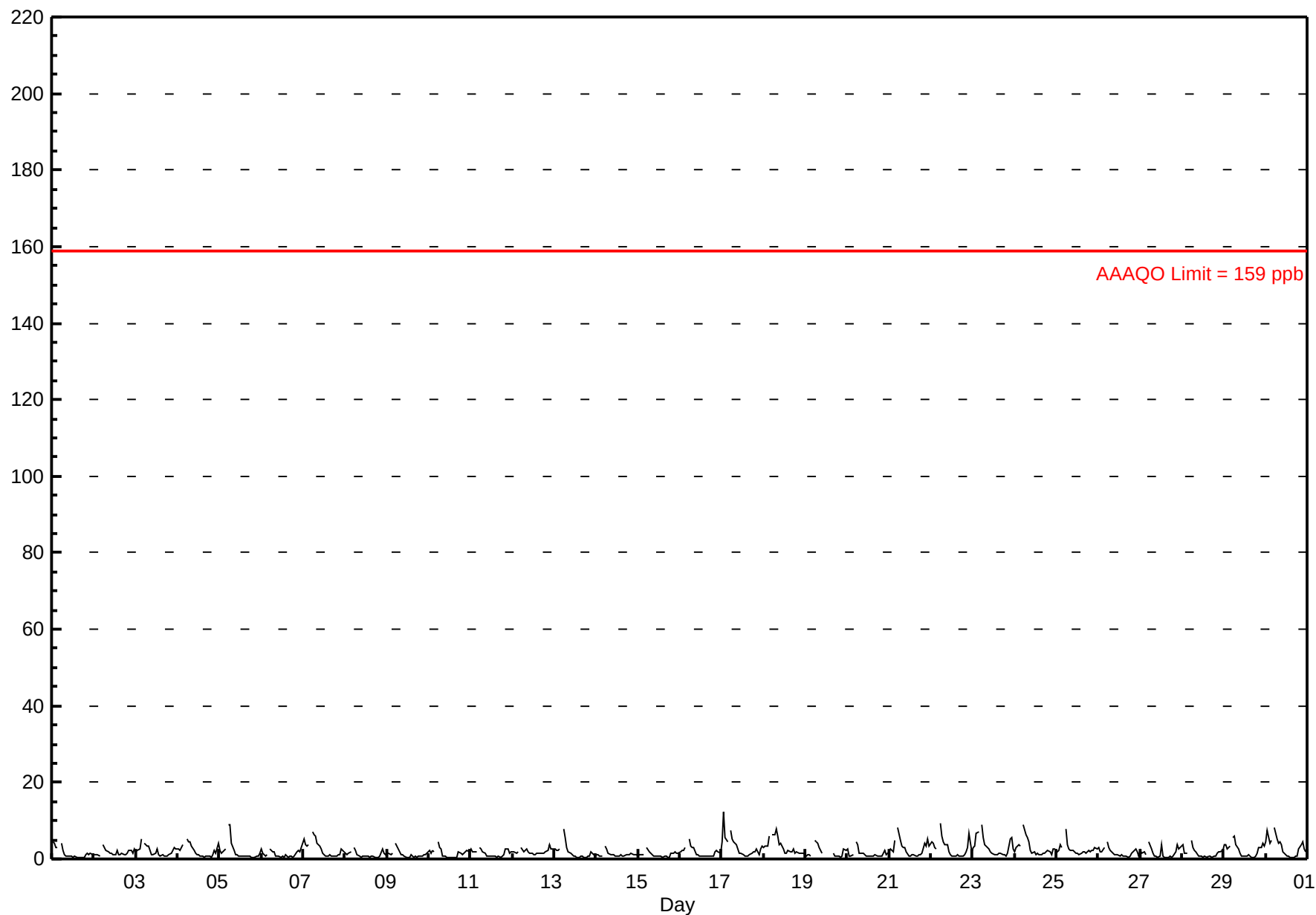
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12.2 ppb on Jun 17 02:00 Maximum Daily Average: 3.2 ppb on Jun 18																					Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0					
Minimum Value: 0 ppb on Jun 4 16:00 Maximum Diurnal Average: 5.6 ppb at hour 6 Monthly Average: 1.98 ppb										Minimum Daily Average: 1.1 ppb on Jun 8 Minimum Diurnal Average: 0.8 ppb at hour 16 Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.8 Median = 1.4 Q ₃ = 2.6 P ₉₀ = 4.2 P ₉₉ = 8.1																
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-Jun	4	4	3	3	A	4	2	1	1	1	1	1	0	1	0	0	0	0	0	1	2	1	2	1	1.5	4.5
2-Jun	1	1	1	1	A	4	3	2	2	1	1	1	1	2	1	1	2	1	1	1	2	2	2	3	1.7	3.9
3-Jun	2	2	2	5	A	4	3	3	2	1	1	1	3	1	1	1	1	1	1	1	1	2	3	3	2.0	5.2
4-Jun	3	2	3	4	A	5	4	4	3	2	2	1	1	1	1	0	1	1	1	0	1	2	1	4	2.1	5.1
5-Jun	2	2	2	3	A	9	9	4	2	1	1	1	1	1	1	1	1	1	1	0	0	1	1	2	1.9	8.8
6-Jun	2	1	1	1	A	3	2	2	1	1	1	1	1	1	1	1	1	1	0	1	2	2	2	3	1.2	2.9
7-Jun	5	4	3	4	A	7	6	6	4	3	3	1	1	1	1	1	1	1	1	1	1	1	3	2	2.6	6.9
8-Jun	1	1	1	2	A	3	2	1	1	1	1	1	1	1	1	1	1	1	0	0	1	3	1	1	1.1	3.0
9-Jun	1	1	1	1	A	4	3	2	1	1	1	0	0	1	1	1	1	0	1	1	1	1	1	2	1.2	4.2
10-Jun	2	1	2	2	A	4	3	2	1	1	1	1	1	0	0	0	0	2	2	1	1	2	2	2	1.5	4.3
11-Jun	3	2	2	2	A	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.4	3.1
12-Jun	2	2	1	2	A	3	2	2	3	2	2	1	1	1	2	1	1	1	1	2	2	4	3	3	1.9	3.7
13-Jun	3	2	2	3	A	8	6	3	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.8	7.8
14-Jun	1	1	1	1	A	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	3.4
15-Jun	1	1	1	1	A	3	2	2	1	1	1	1	1	1	1	1	1	0	0	2	1	2	1	1	1.1	3.1
16-Jun	2	2	2	3	A	5	3	3	3	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1.7	5.2
17-Jun	5	12	5	5	A	7	5	5	4	3	1	2	1	1	1	1	1	1	2	2	3	1	3	3	3.1	12.2
18-Jun	3	3	3	6	A	6	6	8	6	4	4	3	2	2	2	2	2	3	1	2	2	2	1	1	3.2	8.0
19-Jun	1	1	1	1	A	5	4	4	3	1	C	C	C	C	C	C	1	1	1	1	0	1	3	2	--	4.8
20-Jun	3	1	1	1	A	4	4	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.4	4.4
21-Jun	2	2	2	5	A	8	5	3	3	3	2	1	1	1	1	1	1	1	1	1	4	3	5	3	2.6	8.2
22-Jun	4	4	3	2	A	9	6	4	4	4	2	1	1	1	1	1	1	1	1	1	2	3	7	2	2.8	9.4
23-Jun	3	3	7	7	A	9	6	4	3	2	2	2	1	1	1	2	1	1	1	1	2	5	6	3	3.1	8.9
24-Jun	2	3	4	3	A	9	6	6	4	2	1	2	1	1	1	1	2	1	2	2	2	1	3	2	2.7	9.0
25-Jun	2	2	4	3	A	8	4	3	2	2	2	2	1	1	1	2	2	2	2	2	2	2	3	3	2.4	7.8
26-Jun	3	2	2	3	A	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	2	3	2	1	1.7	4.3
27-Jun	2	1	2	1	A	5	3	1	1	1	1	1	4	1	1	1	0	1	1	1	2	4	3	3	1.6	4.5
28-Jun	4	1	2	1	A	5	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.5	5.0
29-Jun	4	4	3	3	A	6	6	4	3	1	1	1	1	1	1	1	0	0	1	2	3	3	4	3	2.3	5.9
30-Jun	5	8	4	5	A	8	5	4	5	4	2	1	1	1	0	0	0	1	1	3	4	4	3	2	3.0	8.3
2.6 2.6 2.4 2.8 -- 5.6 4.0 3.1 2.4 1.7 1.3 1.0 1.0 0.9 0.9 0.8 0.9 0.9 0.9 1.2 1.7 2.2 2.4 2.1																								Diurnal Average		
5.1 12.2 6.7 7.0 -- 9.4 8.8 8.0 5.9 3.9 4.1 2.6 3.6 2.3 2.1 2.0 1.8 2.7 2.1 2.7 4.0 5.4 6.8 4.3																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - June 2013



Hourly Maximums

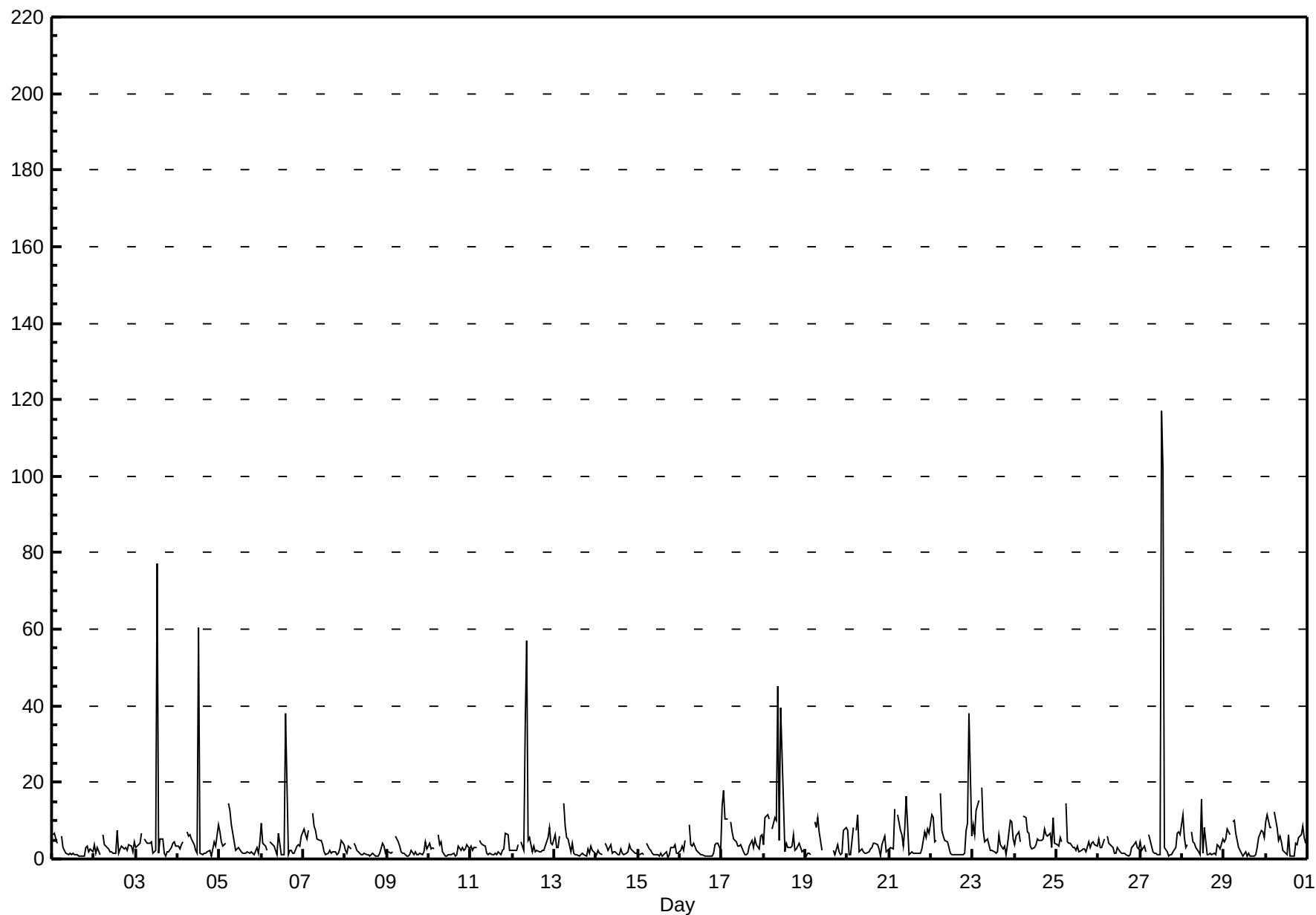
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - June 2013

Maximum Value: 117.2 ppb on Jun 27 13:00																								Hours in Service: 720		
Maximum Daily Average: 12.2 ppb on Jun 27																								Hours of Data: 684		
Minimum Value: 1 ppb on Jun 15 18:00																								Hours of Missing Data: 36		
Maximum Diurnal Average: 10.2 ppb at hour 13																								Hours of Calibration: 36		
Monthly Average: 4.50 ppb																								Percent Operational Time: 100.0		
Percentiles: P ₁ = 0.7 P ₁₀ = 1.1 Q ₁ = 1.5 Median = 2.9 Q ₃ = 4.7 P ₉₀ = 8.0 P ₉₉ = 37.5																										
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-Jun	6	7	5	4	A	6	3	2	1	1	1	1	2	1	1	1	1	1	1	3	3	2	3	2	2.5	6.7
2-Jun	4	2	3	1	A	6	4	3	2	2	2	1	1	8	2	3	3	3	3	2	4	3	2	4	2.9	7.6
3-Jun	3	3	4	7	A	5	4	4	4	4	2	2	77	2	5	5	2	1	2	2	3	4	5	3	6.7	77.2
4-Jun	3	3	4	4	A	7	6	6	5	4	2	1	60	2	1	1	1	2	2	1	3	4	3	9	5.9	60.3
5-Jun	7	4	4	4	A	14	13	9	5	2	3	3	2	2	1	1	2	2	2	1	1	3	1	5	3.9	14.4
6-Jun	9	4	3	2	A	4	4	3	2	1	7	1	1	1	38	1	2	2	2	2	3	4	3	6	4.6	37.9
7-Jun	8	6	5	7	A	12	9	8	5	5	5	4	2	1	2	2	1	2	2	1	2	3	5	4	4.3	11.9
8-Jun	2	2	3	3	A	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	2	4	3	1	1.9	4.2
9-Jun	2	2	1	2	A	6	4	3	2	2	1	1	1	1	2	1	2	1	1	2	1	2	4	3	2.0	5.8
10-Jun	4	3	3	3	A	6	4	5	2	1	1	1	1	1	2	1	1	3	2	3	2	3	4	3	2.5	6.3
11-Jun	4	2	3	3	A	5	4	4	3	1	1	2	1	1	1	1	2	1	2	3	7	6	2	2	2.7	6.6
12-Jun	2	2	2	4	A	4	2	35	57	5	5	2	4	2	2	2	2	2	2	4	5	8	4	4	7.1	57.0
13-Jun	6	3	3	6	A	15	9	6	5	2	4	2	1	1	1	1	1	1	1	3	2	3	2	1	3.4	14.7
14-Jun	1	2	2	1	A	4	3	2	4	2	2	2	1	1	3	1	1	1	2	4	2	2	2	1	2.0	4.2
15-Jun	1	1	1	1	A	4	3	2	2	1	1	1	1	1	1	2	2	1	1	3	3	4	2	2	1.7	4.2
16-Jun	2	3	2	5	A	9	4	3	4	2	2	2	1	1	1	1	1	1	1	1	4	4	4	2	2.6	9.0
17-Jun	14	18	11	11	A	10	7	5	4	3	3	4	2	1	1	1	3	5	3	5	4	3	6	6	5.6	18.0
18-Jun	4	11	12	11	A	8	11	10	45	5	39	15	2	4	3	3	3	6	2	3	4	3	2	2	9.0	45.0
19-Jun	1	2	1	1	A	10	8	11	7	2	C	C	C	C	C	C	2	1	4	2	1	2	7	8	--	10.7
20-Jun	7	1	1	8	A	7	11	2	3	2	2	2	2	3	3	4	4	4	3	1	4	6	2	2	3.6	11.5
21-Jun	3	3	3	13	A	12	7	6	4	8	16	1	1	2	2	2	1	1	1	3	7	6	8	7	5.1	16.4
22-Jun	12	11	4	5	A	17	7	6	5	5	3	2	1	1	1	1	1	1	1	2	7	9	38	6	6.4	37.9
23-Jun	9	7	13	15	A	19	7	5	5	4	2	2	2	1	2	6	4	3	3	1	4	10	10	5	6.1	18.5
24-Jun	4	6	7	5	A	11	11	7	7	3	3	3	4	5	5	5	5	8	6	6	7	3	11	4	5.9	11.3
25-Jun	4	3	6	4	A	14	4	4	4	3	3	2	3	2	2	2	2	2	4	3	4	5	4	3	3.9	14.4
26-Jun	5	3	3	5	A	6	4	4	3	2	2	3	2	2	1	1	1	1	1	3	3	5	3	2	2.9	6.1
27-Jun	4	2	3	2	A	6	3	2	1	1	1	1	117	102	3	2	1	1	1	2	3	7	7	6	12.2	117.2
28-Jun	12	5	3	4	A	7	4	4	3	2	1	16	1	8	1	1	2	1	2	1	4	3	3	5	4.0	15.7
29-Jun	5	5	8	6	A	10	10	7	3	2	1	1	2	1	2	1	1	1	1	3	6	7	7	6	4.1	10.1
30-Jun	10	12	8	8	A	12	8	5	6	4	2	1	1	6	1	1	1	4	4	6	6	9	6	4	5.4	12.2
5.3 4.6 4.4 5.1 -- 8.7 6.1 5.8 6.8 2.7 4.1 2.7 10.2 5.7 3.1 1.9 1.9 2.1 2.1 2.5 3.7 4.5 5.4 4.0																								Diurnal Average		
13.8 18.0 12.8 15.4 -- 18.5 12.8 35.5 57.0 7.7 39.4 15.7 117.2 101.8 37.9 6.4 5.1 7.9 6.2 6.1 7.4 10.0 37.9 9.0																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

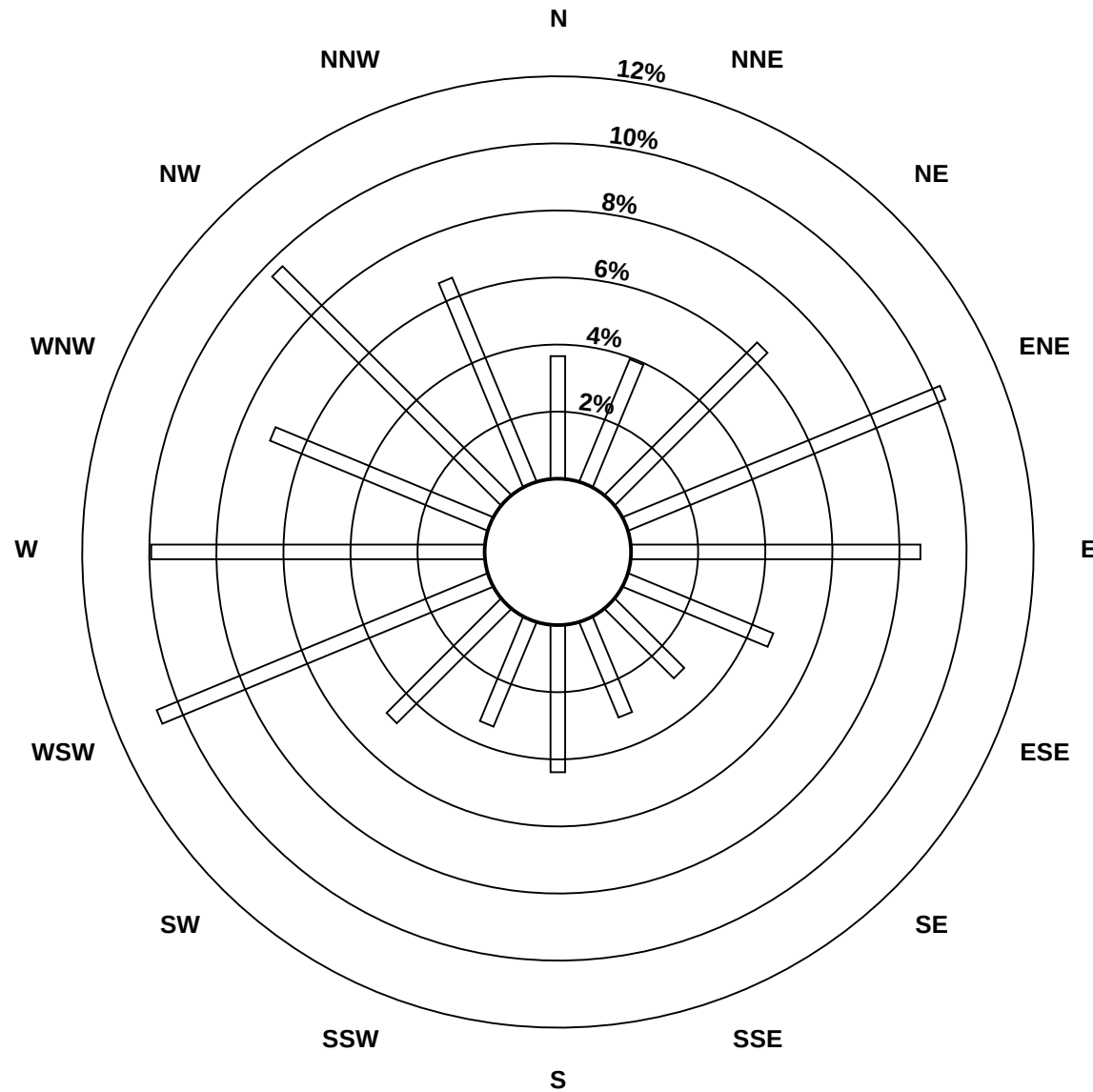
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - June 2013

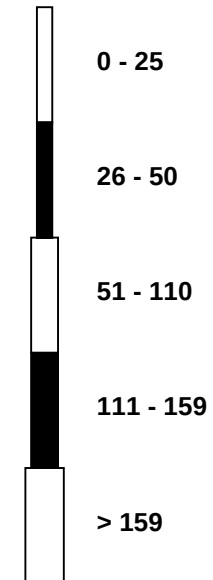


Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - June 2013

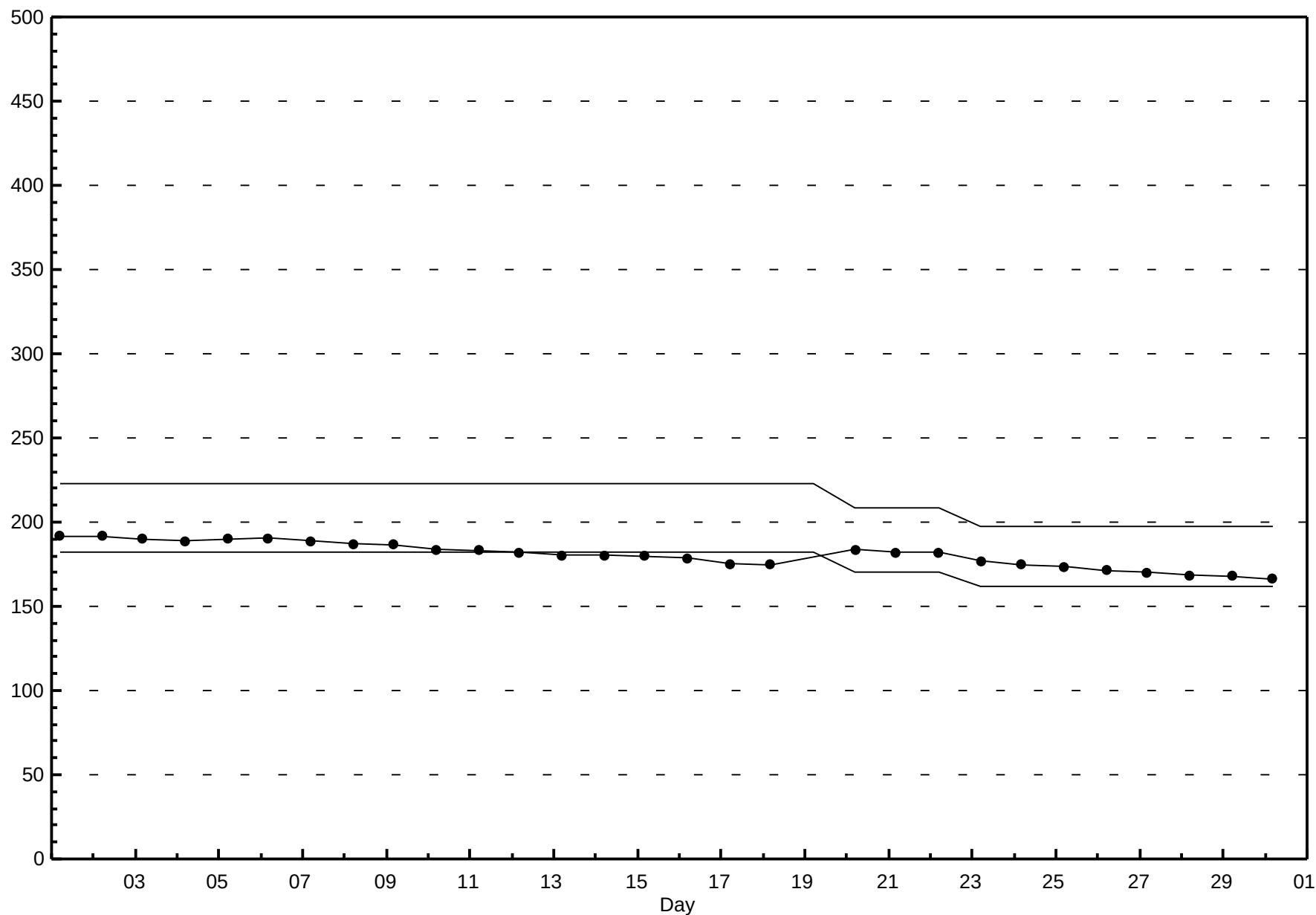


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - June 2013



Hourly Averages

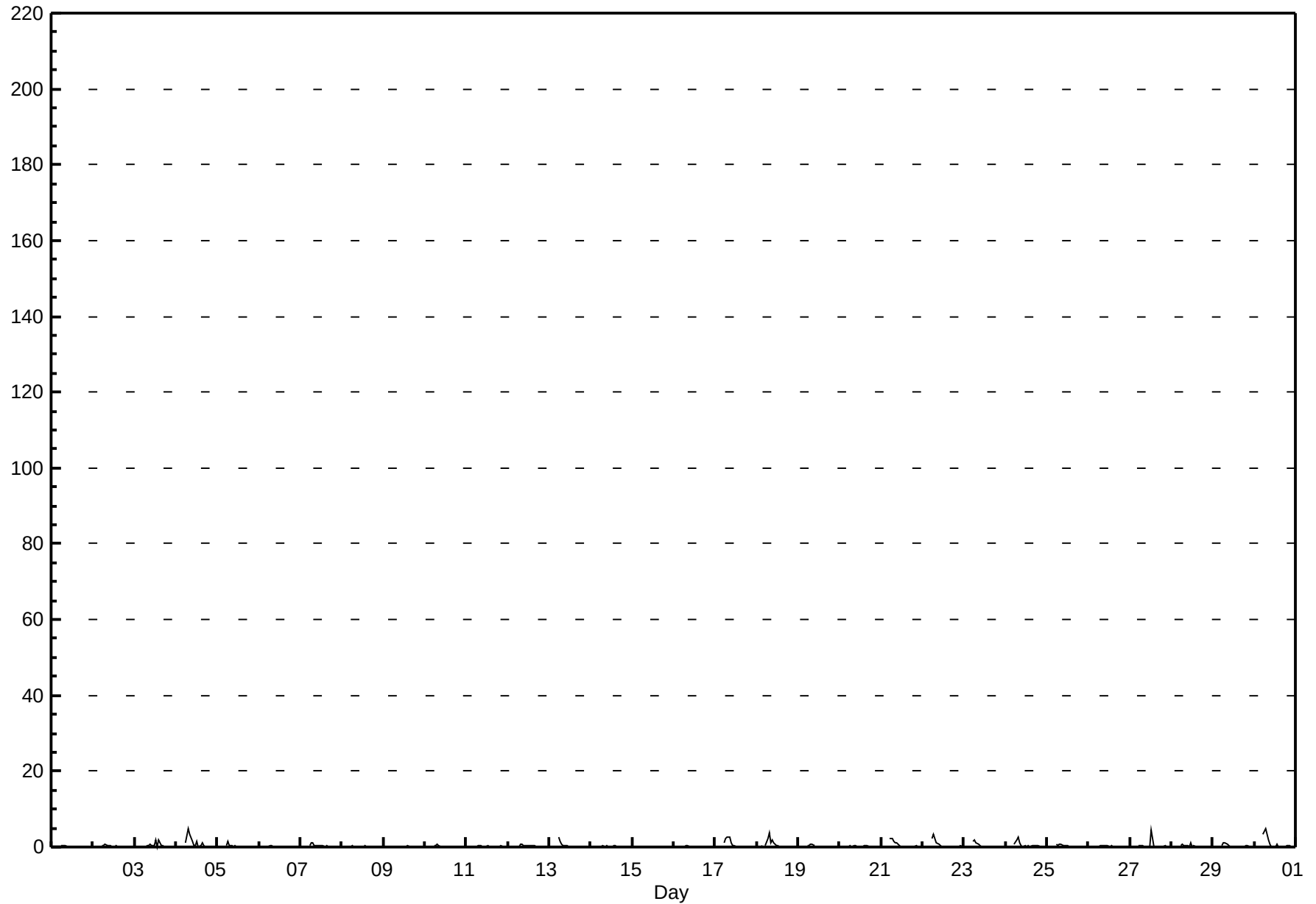
Nitrogen Oxide (NO) - ppb

Beaverlodge - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 4.9 ppb on Jun 30 07:00																				Maximum Daily Average: 0.8 ppb on Jun 4		Hours of Data: 684				
Minimum Value: 0 ppb on Jun 8 00:00																				Minimum Daily Average: 0.1 ppb on Jun 9		Hours of Missing Data: 36				
Maximum Diurnal Average: 1.1 ppb at hour 8																				Minimum Diurnal Average: 0.0 ppb at hour 24		Hours of Calibration: 36				
Monthly Average: 0.26 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.5 P ₉₉ = 3.4		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-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
2-Jun	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
3-Jun	0	0	0	0	A	0	0	0	0	1	0	1	2	0	2	0	0	0	0	0	0	0	0	0	0.3	1.8
4-Jun	0	0	0	0	A	1	3	5	3	2	1	0	2	0	0	1	0	0	0	0	0	0	0	0	0.8	4.8
5-Jun	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	1.4
6-Jun	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
7-Jun	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
8-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
9-Jun	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
10-Jun	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	0.7
11-Jun	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-Jun	0	0	0	0	A	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
13-Jun	0	0	0	0	A	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.8
14-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
15-Jun	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-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
17-Jun	0	0	0	0	A	1	2	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.8
18-Jun	0	0	0	0	A	0	2	4	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.7
19-Jun	0	0	0	0	A	0	1	1	1	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	--	0.7
20-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
21-Jun	0	0	0	0	A	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.3
22-Jun	0	0	0	0	A	2	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.4
23-Jun	0	0	0	0	A	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.7
24-Jun	0	0	0	0	A	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.5
25-Jun	0	0	0	0	A	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
26-Jun	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
27-Jun	0	0	0	0	A	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0.4	4.4
28-Jun	0	0	0	0	A	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
29-Jun	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
30-Jun	0	0	0	0	A	3	5	3	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.7	4.9
0.0 0.0 0.0 0.0 -- 0.7 1.1 1.1 0.7 0.5 0.3 0.2 0.4 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0																									Diurnal Average	
0.1 0.1 0.1 0.2 -- 3.4 4.9 4.8 3.5 1.7 1.0 1.1 4.4 2.2 1.8 1.0 0.3 0.2 0.3 0.3 0.3 0.2 0.4 0.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - June 2013



Hourly Maximums

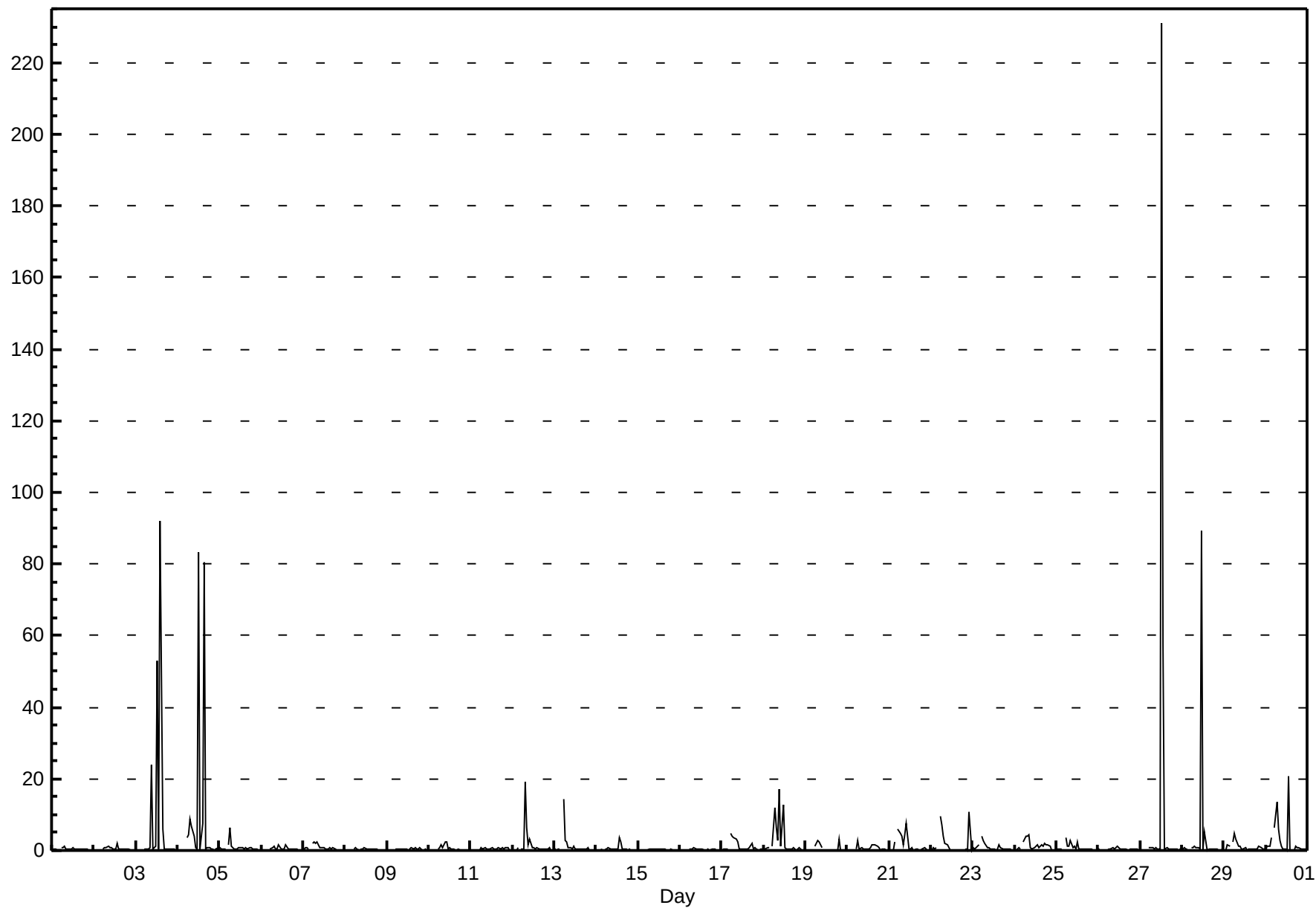
Nitrogen Oxide (NO) - ppb

Beaverlodge - June 2013

Maximum Value: 230.9 ppb on Jun 27 13:00																								Hours in Service: 720		
Maximum Daily Average: 12.9 ppb on Jun 27																								Hours of Data: 684		
Minimum Value: 0 ppb on Jun 19 17:00																								Hours of Missing Data: 36		
Maximum Diurnal Average: 13.2 ppb at hour 13																								Hours of Calibration: 36		
Monthly Average: 1.94 ppb																								Percent Operational Time: 100.0		
Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.7 P ₉₀ = 2.3 P ₉₉ = 51.1																										
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-Jun	0	1	1	0	A	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
2-Jun	0	0	0	0	A	1	1	1	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0.5	2.0
3-Jun	0	0	0	0	A	0	0	1	1	24	1	1	53	0	92	6	1	0	0	0	0	0	0	0	7.9	92.1
4-Jun	0	0	0	0	A	4	4	9	7	4	1	1	83	1	8	81	1	1	1	0	0	0	0	1	8.9	83.4
5-Jun	1	0	0	0	A	2	6	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0.8	6.4
6-Jun	0	0	0	0	A	0	1	1	1	0	1	0	0	0	2	0	1	1	0	0	0	0	0	0	0.5	1.7
7-Jun	0	1	1	0	A	2	2	2	2	1	1	1	1	1	0	1	0	1	1	0	0	0	0	0	0.8	2.5
8-Jun	0	0	0	0	A	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
9-Jun	0	0	0	0	A	0	0	1	0	1	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0.3	0.9
10-Jun	0	0	0	0	A	1	1	2	1	2	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0.5	2.5
11-Jun	0	0	0	0	A	0	1	1	1	0	0	0	1	0	0	0	1	1	1	0	1	1	0	0	0.4	0.8
12-Jun	0	0	0	1	A	0	0	19	6	2	3	1	1	0	1	0	0	0	0	0	0	1	0	0	1.6	19.0
13-Jun	0	0	0	0	A	14	3	2	1	1	1	1	0	1	1	0	0	1	0	1	0	0	0	0	1.2	14.4
14-Jun	0	0	0	0	A	0	0	1	0	1	1	0	0	4	3	1	0	0	0	0	0	0	0	0	0.5	3.7
15-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
16-Jun	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
17-Jun	0	0	0	0	A	5	4	4	3	2	1	0	0	0	0	0	1	2	0	1	0	0	0	0	1.1	4.6
18-Jun	0	0	1	1	A	1	12	6	3	17	1	13	1	0	0	0	0	1	0	0	1	0	0	0	2.6	17.1
19-Jun	0	0	0	0	A	1	2	3	2	1	C	C	C	C	C	C	0	0	0	3	0	0	0	0	--	3.1
20-Jun	0	0	0	0	A	0	3	1	1	0	1	0	1	1	1	1	2	1	1	0	0	0	0	0	0.6	2.6
21-Jun	0	0	0	2	A	6	5	4	2	4	8	0	0	1	0	0	0	0	0	0	1	0	0	0	1.5	7.7
22-Jun	0	1	0	1	A	10	7	4	2	1	1	0	0	0	0	0	0	0	0	0	1	0	11	0	1.7	10.9
23-Jun	1	0	1	2	A	4	3	2	1	1	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0.9	3.9
24-Jun	0	0	1	0	A	2	4	4	4	1	1	1	1	2	1	1	1	2	2	1	1	0	0	0	1.3	4.2
25-Jun	1	0	0	0	A	4	1	1	3	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0.8	3.6
26-Jun	0	0	0	0	A	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1
27-Jun	0	0	0	0	A	1	1	1	0	1	0	0	231	58	0	1	0	0	0	0	0	1	0	0	12.9	230.9
28-Jun	1	1	0	0	A	1	1	1	1	1	0	89	1	5	0	0	0	0	0	0	0	0	0	0	4.5	89.4
29-Jun	0	0	2	1	A	2	5	3	1	1	0	0	1	0	0	0	0	0	0	1	1	1	0	1	1.0	5.0
30-Jun	0	1	1	4	A	6	14	6	3	1	0	0	0	21	0	0	0	1	1	1	1	1	0	0	2.7	20.5
0.2 0.3 0.3 0.5 -- 2.3 2.8 2.7 1.7 2.3 1.0 4.0 13.2 3.5 3.9 3.4 0.4 0.5 0.4 0.5 0.4 0.3 0.5 0.2																								Diurnal Average		
0.8 1.4 1.6 3.6 -- 14.4 13.5 19.0 6.7 23.9 7.7 89.4 230.9 57.9 92.1 80.5 1.7 2.0 1.6 3.1 1.1 1.0 10.9 0.8																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - June 2013



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

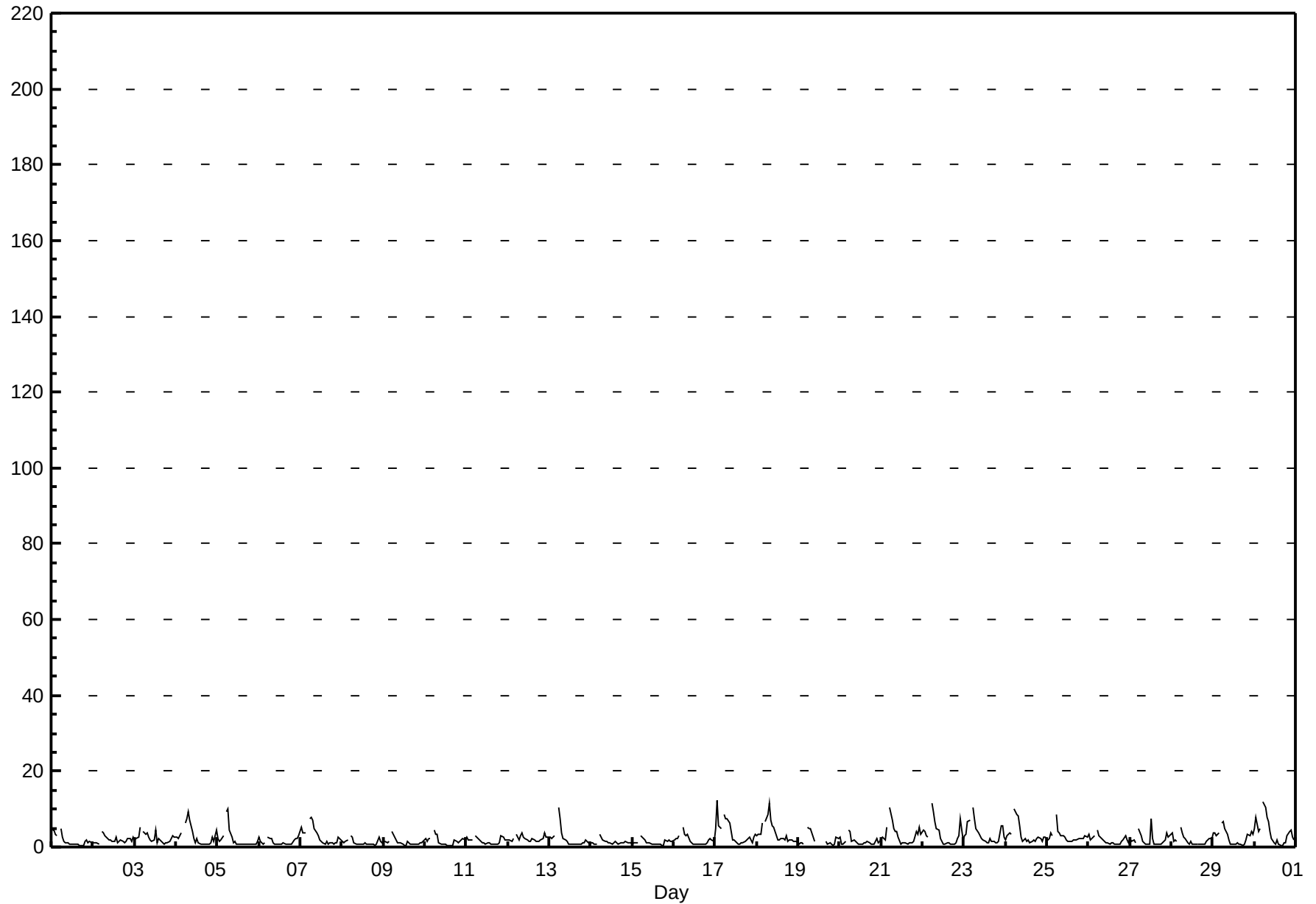
Beaverlodge - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12.3 ppb on Jun 17 02:00 Maximum Daily Average: 3.8 ppb on Jun 30																				Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Jun 1 18:00 Maximum Diurnal Average: 6.3 ppb at hour 6 Monthly Average: 2.28 ppb										Minimum Daily Average: 1.2 ppb on Jun 8 Minimum Diurnal Average: 1.0 ppb at hour 18 Percentiles: P ₁ = 0.5 P ₁₀ = 0.7 Q ₁ = 1.0 Median = 1.7 Q ₃ = 2.8 P ₉₀ = 4.7 P ₉₉ = 10.2																
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-Jun	5	4	3	3	A	5	3	2	1	1	1	1	1	1	1	1	0	0	0	1	2	1	2	1	1.7	4.7
2-Jun	1	1	1	1	A	4	4	3	2	2	2	1	1	3	1	1	2	1	1	1	2	2	2	3	1.9	4.1
3-Jun	2	2	2	5	A	4	3	4	3	2	1	2	4	1	2	2	1	1	1	1	2	2	3	3	2.3	5.3
4-Jun	3	2	3	4	A	6	7	9	7	4	2	1	2	1	1	1	1	1	1	1	1	2	1	4	2.9	9.2
5-Jun	2	2	2	3	A	9	10	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2.1	10.2
6-Jun	2	1	1	1	A	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	1.4	3.0
7-Jun	5	4	4	4	A	7	8	7	5	4	3	2	1	1	1	1	1	1	1	1	1	1	3	2	2.9	7.7
8-Jun	1	1	1	2	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	3	1	1	1.2	3.0
9-Jun	1	1	1	1	A	4	3	2	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	2	1.2	4.3
10-Jun	2	1	2	2	A	5	3	3	1	1	1	1	1	1	1	0	1	2	2	1	1	2	2	2	1.6	4.6
11-Jun	3	2	2	2	A	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	3	3	2	2	1.6	3.1
12-Jun	2	2	2	2	A	3	2	3	4	3	2	2	2	2	2	2	2	2	2	2	2	4	3	3	2.2	3.8
13-Jun	3	2	2	3	A	11	7	4	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2.1	10.6
14-Jun	1	1	1	1	A	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	3.5
15-Jun	1	1	1	1	A	3	2	2	1	1	1	1	1	1	1	1	1	0	1	2	1	2	1	1	1.2	3.1
16-Jun	2	2	2	3	A	5	3	3	4	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.8	5.3
17-Jun	5	12	5	5	A	9	7	7	6	4	2	2	1	1	1	1	1	2	2	2	3	1	3	3	3.7	12.3
18-Jun	3	3	3	6	A	7	9	12	7	6	5	3	2	2	2	2	2	3	2	2	2	2	1	1	3.8	11.7
19-Jun	1	1	1	1	A	5	5	5	4	2	C	C	C	C	C	C	1	1	1	1	1	3	2	2	--	5.2
20-Jun	3	1	1	1	A	5	4	2	2	2	1	1	1	1	1	1	2	1	1	1	1	2	1	2	1.5	4.6
21-Jun	2	2	2	5	A	11	7	5	4	4	3	1	1	1	1	1	1	1	1	1	4	3	5	3	3.1	10.6
22-Jun	5	4	3	2	A	12	9	7	5	4	2	1	1	1	1	1	1	1	1	1	2	3	7	2	3.3	11.7
23-Jun	3	3	7	7	A	10	8	5	4	3	2	2	1	1	1	2	2	1	1	1	2	6	6	3	3.5	10.3
24-Jun	2	3	4	3	A	10	8	8	6	3	2	2	1	2	1	1	2	2	2	3	2	1	3	3	3.2	9.9
25-Jun	2	2	4	3	A	9	4	4	3	3	2	2	2	1	1	2	2	2	2	2	2	2	3	3	2.7	8.6
26-Jun	3	2	2	3	A	4	3	2	2	1	1	1	1	1	1	1	1	1	1	2	2	3	2	1	1.8	4.4
27-Jun	2	1	2	1	A	5	3	2	1	1	1	1	8	2	1	1	1	1	1	1	2	4	3	3	2.0	7.6
28-Jun	4	2	2	1	A	5	4	3	2	1	1	2	1	1	1	1	1	1	1	1	1	2	2	2	1.7	5.3
29-Jun	4	4	3	4	A	6	7	5	3	2	1	1	1	1	1	1	1	1	1	2	3	3	4	3	2.6	6.9
30-Jun	5	8	4	5	A	12	10	8	7	4	2	1	1	2	1	0	1	1	1	3	4	4	3	2	3.8	11.8
2.6 2.7 2.5 2.9 -- 6.3 5.1 4.2 3.1 2.2 1.6 1.2 1.4 1.1 1.1 1.0 1.0 1.0 1.0 1.3 1.8 2.3 2.4 2.2																								Diurnal Average		
5.2 12.3 6.8 7.2 -- 11.8 10.3 11.7 7.3 5.7 5.2 3.1 7.6 2.7 2.3 2.1 2.0 2.8 2.2 3.0 4.2 5.5 7.3 4.4																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - June 2013



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

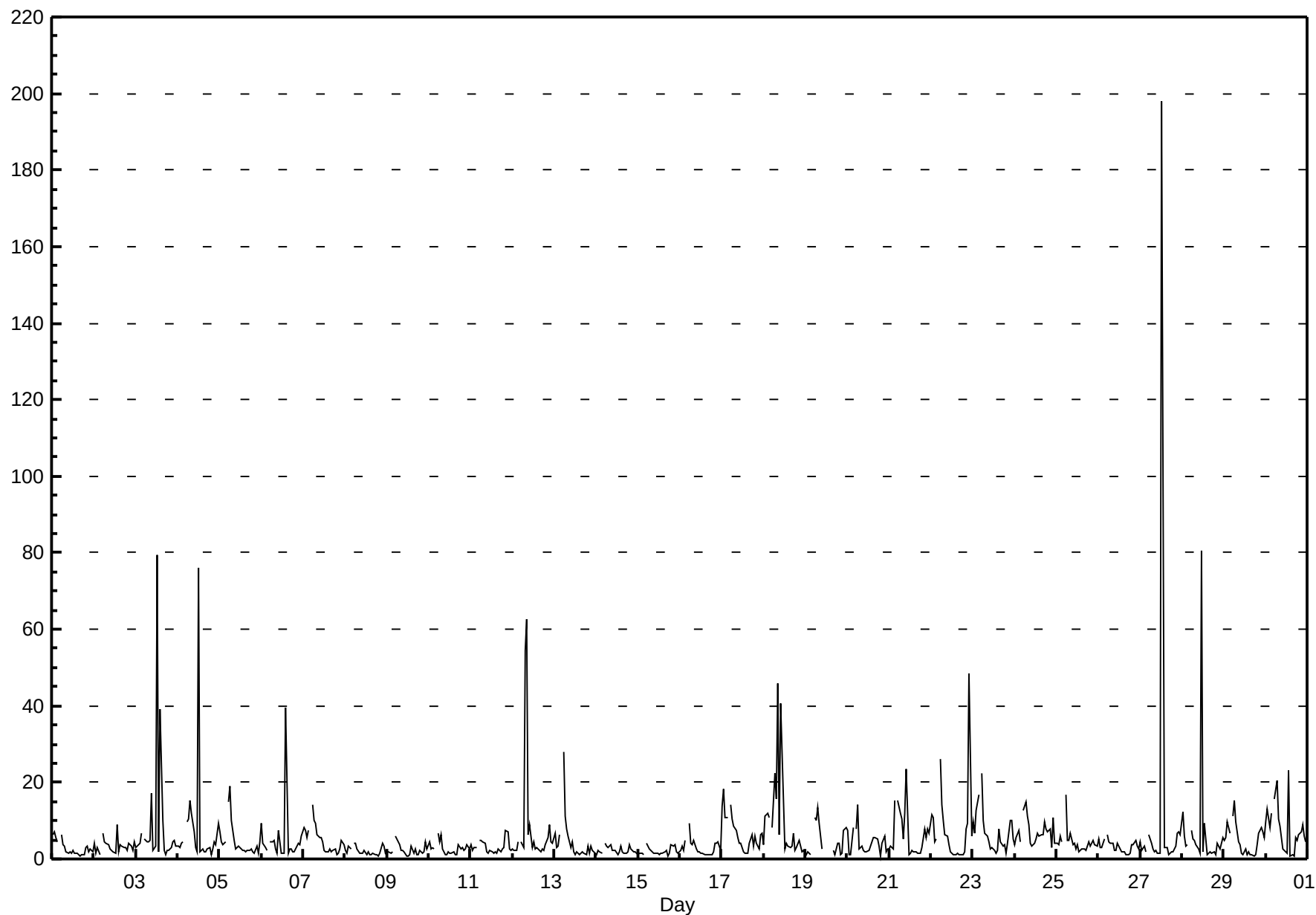
Beaverlodge - June 2013

Maximum Value: 198.0 ppb on Jun 27 13:00																				Maximum Daily Average: 16.0 ppb on Jun 27					Hours in Service: 720	
Minimum Value: 1 ppb on Jun 15 18:00																				Minimum Daily Average: 1.9 ppb on Jun 15					Hours of Data: 684	
Maximum Diurnal Average: 14.0 ppb at hour 13																				Minimum Diurnal Average: 2.3 ppb at hour 17					Hours of Missing Data: 36	
Monthly Average: 5.55 ppb																				Percentiles: P ₁ = 0.9 P ₁₀ = 1.3 Q ₁ = 1.9 Median = 3.2 Q ₃ = 5.6 P ₉₀ = 10.0 P ₉₉ = 51.7					Hours of Calibration: 36	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jun	6	7	6	4	A	6	4	3	2	2	2	1	2	1	2	1	1	1	3	3	2	3	2	2.9	7.2	
2-Jun	4	2	3	1	A	7	4	4	4	3	2	2	2	9	2	4	3	3	2	4	3	2	4	3.4	9.1	
3-Jun	3	3	4	7	A	5	4	4	5	17	2	3	79	2	39	10	2	1	2	2	3	4	5	3	9.2	79.4
4-Jun	3	3	4	4	A	10	10	15	12	7	3	2	76	2	3	2	2	3	3	1	3	5	4	9	8.0	76.0
5-Jun	7	4	4	4	A	15	19	10	5	3	3	3	3	2	2	2	2	2	3	2	1	3	2	5	4.6	19.2
6-Jun	9	4	3	2	A	4	4	5	3	2	7	1	1	2	39	1	3	3	2	2	3	4	4	6	5.0	39.5
7-Jun	8	7	6	8	A	14	10	9	6	5	6	4	2	2	3	2	2	3	1	2	3	5	4		4.9	14.1
8-Jun	2	1	3	3	A	4	4	3	2	2	1	2	1	2	1	1	2	1	1	2	4	3	1		2.1	4.3
9-Jun	2	2	1	2	A	6	5	4	2	2	2	1	1	1	3	1	3	1	1	2	1	2	4	3	2.3	6.0
10-Jun	4	3	3	3	A	7	4	6	3	1	1	2	1	2	2	1	1	4	2	3	2	3	4	3	2.8	6.5
11-Jun	4	2	3	3	A	5	5	4	4	2	2	2	2	2	1	3	2	3	3	7	7	2	2		3.1	7.4
12-Jun	2	2	2	4	A	5	3	54	62	6	9	3	4	2	3	2	2	3	2	4	6	9	4	4	8.7	62.5
13-Jun	7	3	3	6	A	28	11	8	6	3	5	2	1	2	1	1	2	1	1	3	2	3	2	1	4.5	27.9
14-Jun	1	2	2	1	A	4	3	3	4	2	2	2	1	2	3	2	2	2	2	4	3	2	2	2	2.3	4.2
15-Jun	1	1	1	1	A	4	3	2	2	1	2	1	1	2	1	2	2	1	1	4	3	4	2	2	1.9	4.3
16-Jun	2	3	2	5	A	9	4	4	5	3	2	2	1	1	1	1	1	1	2	4	4	4	4	2	2.8	9.1
17-Jun	14	18	11	11	A	14	11	8	8	6	4	4	2	1	2	2	4	6	3	6	4	3	6	7	6.7	18.1
18-Jun	4	11	12	11	A	8	22	16	46	6	41	15	2	4	3	3	3	7	2	3	5	3	2	2	10.1	46.0
19-Jun	1	2	1	1	A	11	10	13	9	3	C	C	C	C	C	C	2	1	4	4	1	2	8	8	--	13.3
20-Jun	7	1	1	8	A	8	14	2	3	2	2	2	2	4	5	6	6	5	3	1	4	6	2	3	4.2	14.2
21-Jun	3	3	3	15	A	15	12	11	5	12	24	1	2	2	2	2	2	2	2	3	8	6	8	7	6.4	23.6
22-Jun	12	11	5	5	A	26	14	10	6	6	4	2	1	1	1	1	1	1	2	8	9	49	6		8.0	48.6
23-Jun	10	7	13	17	A	22	10	7	6	5	3	3	2	2	2	8	4	3	4	1	4	10	10	5	6.9	22.5
24-Jun	4	6	8	5	A	13	15	11	9	4	3	4	5	7	6	6	6	10	8	7	8	3	11	4	7.0	15.1
25-Jun	4	4	6	5	A	17	5	5	7	4	4	2	4	2	3	3	3	2	4	3	4	5	4	3	4.4	16.9
26-Jun	5	3	3	5	A	6	5	4	4	2	2	4	2	2	2	2	1	1	1	4	4	5	3	3	3.2	6.2
27-Jun	4	2	3	2	A	6	4	2	2	2	2	1	198	102	3	3	1	1	2	2	3	7	7	6	16.0	198.0
28-Jun	12	6	3	4	A	7	5	5	4	3	1	81	2	9	1	1	2	1	2	1	4	3	3	5	7.2	80.5
29-Jun	5	6	10	7	A	11	15	10	5	4	2	1	2	1	2	1	1	1	1	4	7	8	7	6	5.0	15.2
30-Jun	10	13	8	12	A	16	21	10	8	6	3	2	1	23	1	1	1	6	5	6	7	9	6	4	7.7	23.0
5.4 4.8 4.6 5.5 -- 10.5 8.7 8.5 8.3 4.1 5.0 5.4 14.0 6.7 4.8 2.6 2.3 2.6 2.5 2.9 4.0 4.7 5.9 4.1																										Diurnal Average
13.8 18.1 12.8 16.6 -- 27.9 22.2 54.4 62.5 17.2 40.6 80.5 198.0 102.5 39.5 9.9 6.2 9.7 7.9 6.9 7.9 10.1 48.6 9.4																										Diurnal Maximum
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

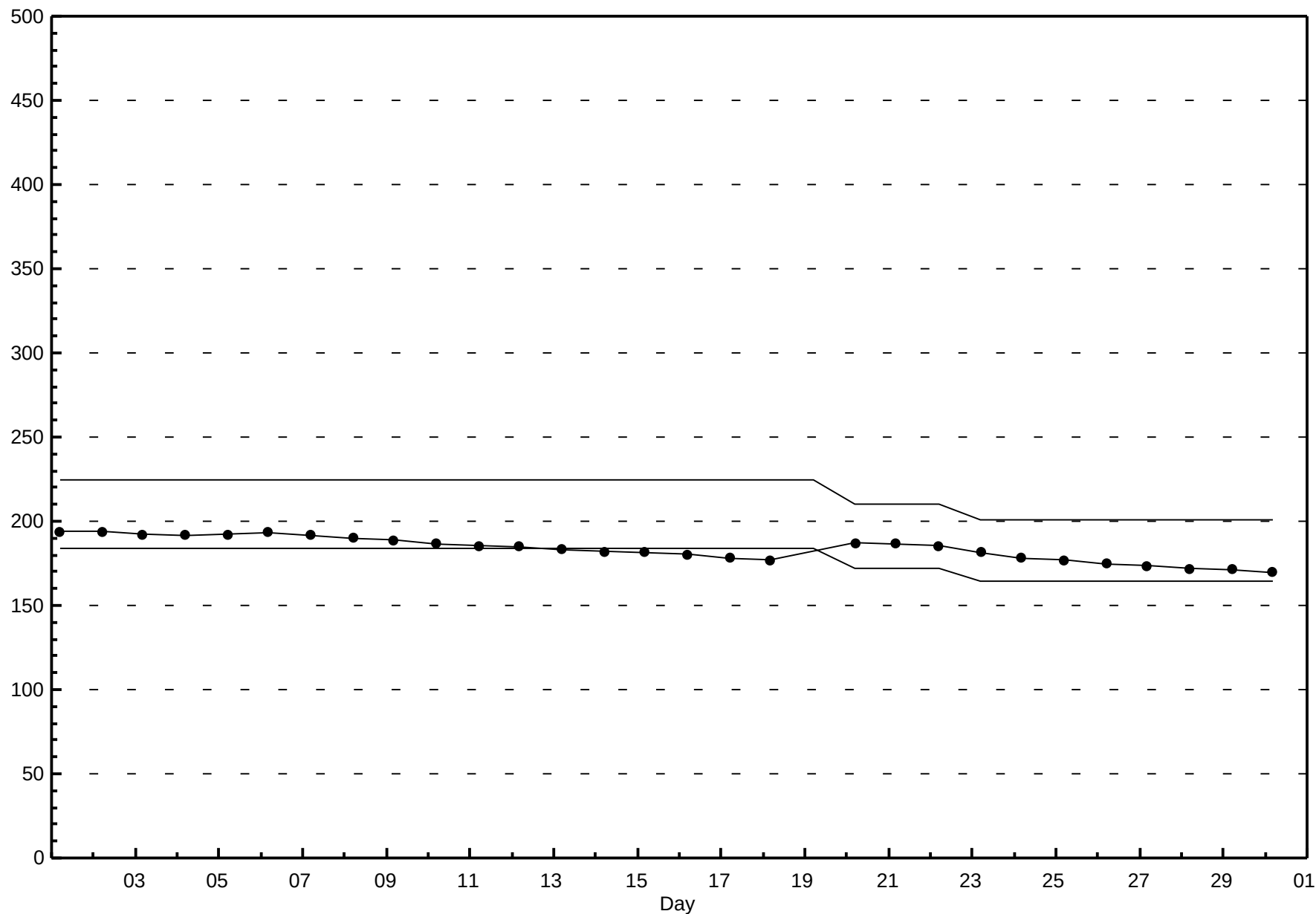
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - June 2013



Span Responses

Oxides of Nitrogen (NO_x)
Beaverlodge - June 2013



Hourly Averages

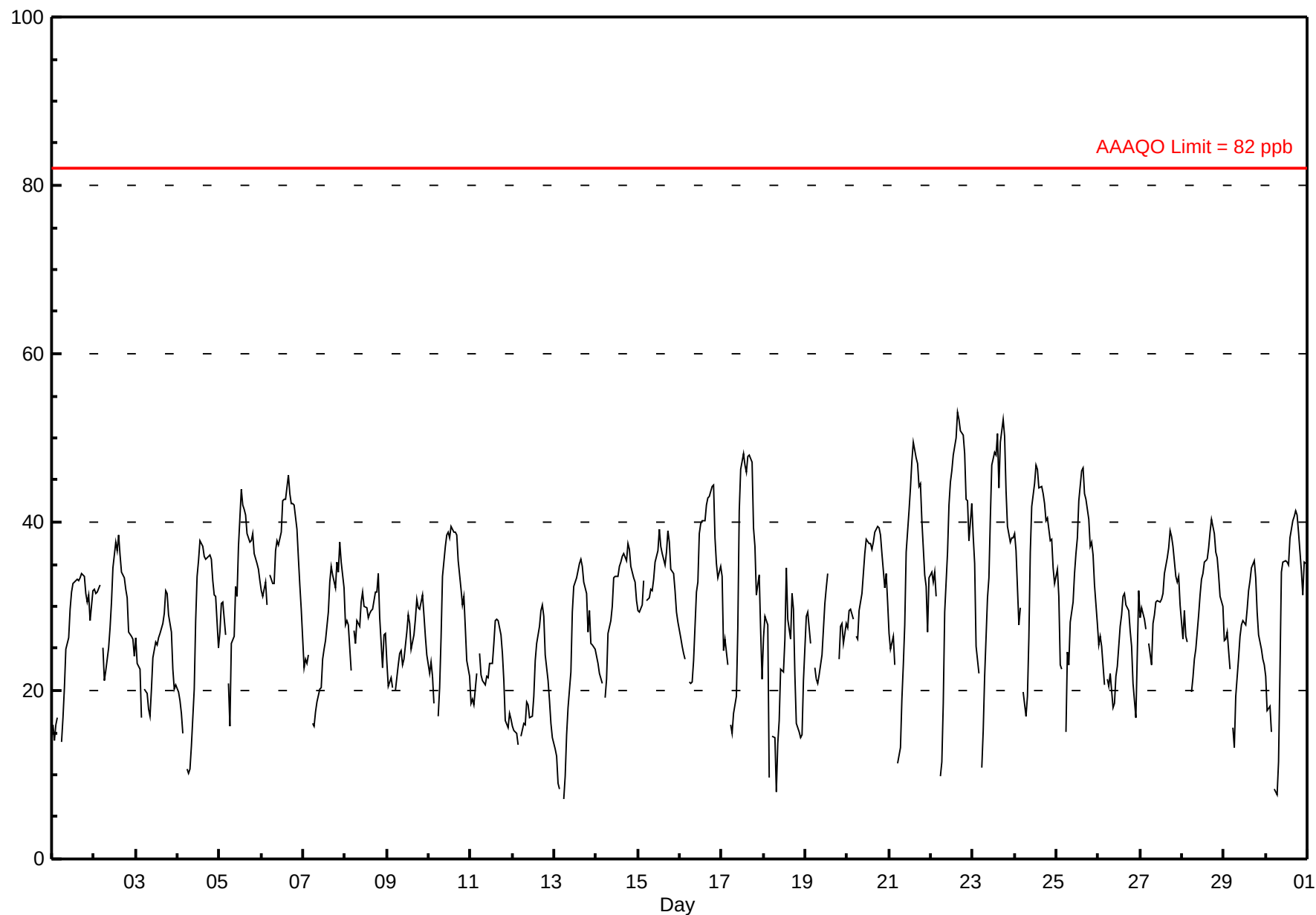
Ozone (O₃) - ppb

Beaverlodge - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 53.1 ppb on Jun 22 16:00 Maximum Daily Average: 38.6 ppb on Jun 22																								Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0		
Minimum Value: 7 ppb on Jun 13 06:00 Maximum Diurnal Average: 37.5 ppb at hour 17 Monthly Average: 29.63 ppb												Minimum Daily Average: 19.8 ppb on Jun 12 Minimum Diurnal Average: 18.6 ppb at hour 6 Percentiles: P ₁ = 9.8 P ₁₀ = 17.5 Q ₁ = 23.3 Median = 29.7 Q ₃ = 35.5 P ₉₀ = 40.9 P ₉₉ = 50.1														
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-Jun	16	14	16	17	A	14	17	20	25	26	30	32	33	33	33	33	34	34	31	31	31	28	32	26.6	33.9	
2-Jun	32	31	32	33	A	25	21	22	25	27	31	35	38	37	39	36	34	33	32	31	27	26	26	24	30.3	38.5
3-Jun	26	23	23	17	A	20	20	18	17	20	24	26	25	26	27	28	29	32	32	29	27	23	20	21	24.0	31.8
4-Jun	20	19	17	15	A	11	10	11	13	20	28	34	35	38	37	36	36	36	36	36	33	31	31	25	26.4	37.8
5-Jun	27	30	31	27	A	21	16	26	26	32	31	37	44	42	41	41	39	38	38	39	36	35	34	33	33.2	43.9
6-Jun	32	31	33	30	A	34	33	33	37	38	37	39	43	43	43	46	43	42	42	42	39	36	33	30	37.2	45.7
7-Jun	23	24	23	24	A	16	16	18	19	20	20	24	25	26	29	33	35	34	32	35	34	38	35	32	26.7	37.6
8-Jun	28	28	28	22	A	27	26	28	28	30	32	30	30	29	29	29	30	32	32	34	29	23	27	27	28.5	34.0
9-Jun	23	21	22	20	A	20	23	24	25	23	24	27	29	28	25	27	29	31	30	30	31	29	26	24	25.6	31.4
10-Jun	22	23	22	18	A	17	20	26	33	37	38	39	38	39	39	39	38	35	32	30	31	27	24	22	30.1	39.5
11-Jun	19	19	18	22	A	24	22	21	21	22	22	23	23	26	28	28	28	27	24	21	16	16	17	17	21.9	28.5
12-Jun	16	15	15	14	A	15	16	16	19	18	17	17	19	24	26	28	30	30	29	24	21	19	16	14	19.8	30.1
13-Jun	13	12	9	8	A	7	10	15	18	22	29	32	33	33	35	36	35	33	32	27	29	26	25	25	23.7	35.6
14-Jun	24	23	22	21	A	19	21	27	28	30	33	34	34	35	35	36	36	35	37	37	35	33	33	31	30.4	37.4
15-Jun	30	29	30	33	A	31	31	32	32	33	35	37	39	37	36	35	36	39	38	34	34	32	29	28	33.5	39.1
16-Jun	26	25	24	24	A	21	21	21	24	32	33	39	40	40	40	42	43	43	44	44	38	35	33	35	33.4	44.4
17-Jun	34	25	26	23	A	16	15	17	19	28	41	46	48	47	46	48	48	47	39	37	31	34	27	21	33.2	48.1
18-Jun	26	29	28	10	A	15	14	8	14	16	23	22	26	35	28	26	31	30	22	16	15	14	15	21	21.0	34.6
19-Jun	29	29	27	26	A	23	21	21	22	24	27	30	32	34	C	C	C	C	C	24	28	28	26	28	26.6	33.9
20-Jun	27	29	30	28	A	26	26	29	32	34	36	38	37	37	37	38	39	40	39	38	36	32	34	30	33.7	39.5
21-Jun	27	25	26	23	A	11	13	19	23	28	37	41	44	47	49	48	47	44	45	40	34	32	27	33	33.2	49.5
22-Jun	34	33	34	31	A	10	11	19	29	37	42	45	46	48	50	53	52	51	50	48	43	42	38	42	38.6	53.1
23-Jun	38	35	25	22	A	11	15	22	31	33	41	47	48	48	50	44	49	52	50	44	40	38	38	38	37.4	52.2
24-Jun	39	37	28	30	A	20	17	19	26	36	42	44	47	46	44	44	43	42	40	40	38	38	35	33	36.0	46.8
25-Jun	34	31	23	23	A	15	25	23	28	31	34	36	38	42	46	46	43	43	40	37	38	36	33	28	33.6	46.4
26-Jun	25	27	25	21	A	21	20	22	18	18	22	23	28	29	31	32	30	29	27	25	21	17	24	32	24.7	31.9
27-Jun	29	30	28	27	A	26	23	28	29	31	31	30	31	32	34	36	37	39	38	37	34	33	34	30	31.5	38.9
28-Jun	26	29	26	26	A	20	22	24	25	29	31	33	34	35	36	37	39	40	39	36	36	34	31	30	31.2	40.4
29-Jun	26	26	27	23	A	16	13	19	24	26	28	28	28	30	32	33	35	35	33	29	27	25	24	23	26.5	35.5
30-Jun	22	18	18	15	A	8	8	12	22	34	35	35	35	35	38	40	41	41	41	39	34	31	35	35	29.3	41.4
26.4 25.7 24.6 22.4 -- 18.6 18.9 21.3 24.4 27.9 31.1 33.4 35.0 36.0 36.7 37.1 37.5 37.5 36.1 33.9 31.5 29.8 28.6 28.1																								Diurnal Average		
38.7 36.7 34.1 33.0 -- 33.7 32.7 32.7 36.6 37.8 42.0 46.7 48.3 48.0 50.5 53.1 52.2 52.2 50.3 48.2 42.8 42.5 38.1 42.1																								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 (O₃) - ppb
Beaverlodge - June 2013



Hourly Maximums

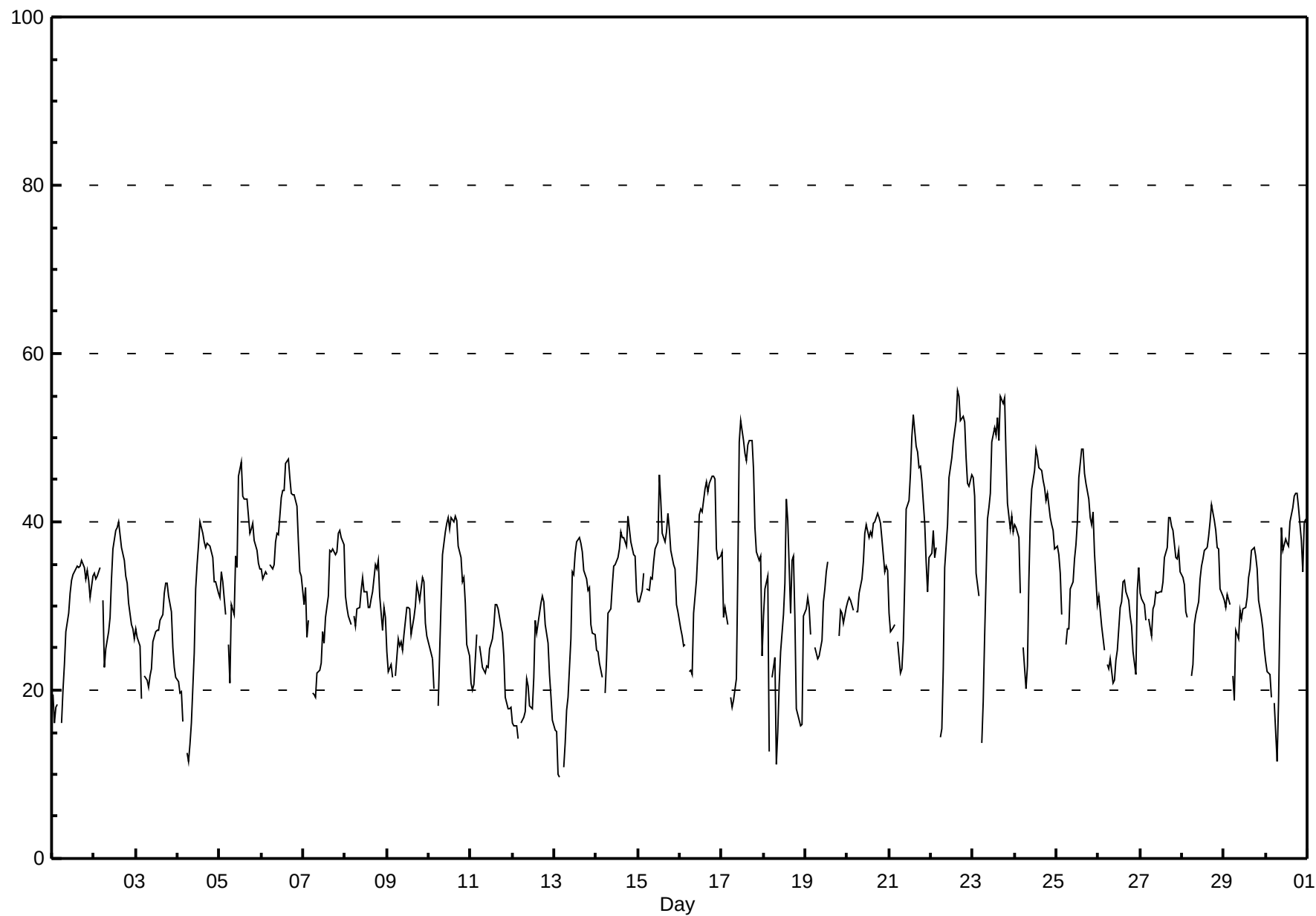
Ozone (O₃) - ppb

Beaverlodge - June 2013

Maximum Value: 55.6 ppb on Jun 22 16:00																					Maximum Daily Average: 41.9 ppb on Jun 22					Hours in Service: 720	
Minimum Value: 10 ppb on Jun 13 04:00																					Minimum Daily Average: 21.7 ppb on Jun 12					Hours of Data: 685	
Maximum Diurnal Average: 39.6 ppb at hour 17																					Minimum Diurnal Average: 22.1 ppb at hour 7					Hours of Missing Data: 35	
Monthly Average: 32.27 ppb																					Percentiles: P ₁ = 12.3 P ₁₀ = 20.9 Q ₁ = 26.5 Median = 32.1 Q ₃ = 38.1 P ₉₀ = 43.6 P ₉₉ = 52.5					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-Jun	19	16	18	18	A	16	20	23	27	29	32	33	34	34	35	35	35	35	35	33	34	33	31	34	28.6	35.4	
2-Jun	34	33	34	35	A	31	23	25	27	29	33	37	39	39	40	38	37	35	33	33	30	28	27	26	32.4	40.0	
3-Jun	27	26	25	19	A	22	21	20	22	23	26	27	27	27	28	29	31	33	33	31	29	25	23	22	25.9	32.7	
4-Jun	21	20	20	16	A	13	12	13	16	24	32	35	37	40	39	38	37	37	37	37	36	33	33	31	28.5	40.0	
5-Jun	31	34	33	29	A	25	21	30	29	36	35	45	47	43	43	43	43	39	39	40	38	37	35	34	36.0	47.1	
6-Jun	34	33	34	34	A	35	34	35	38	39	38	43	44	44	47	47	45	43	43	43	42	38	34	34	39.2	47.4	
7-Jun	30	32	26	28	A	20	19	19	22	22	23	27	26	29	31	37	37	37	36	36	39	39	38	37	30.0	39.0	
8-Jun	31	30	29	28	A	29	28	30	30	32	33	32	32	30	30	31	32	35	34	35	31	27	30	29	30.7	35.3	
9-Jun	25	22	23	22	A	22	26	25	26	25	27	30	30	30	27	29	30	33	32	31	33	33	28	27	27.5	33.4	
10-Jun	25	24	24	20	A	18	24	30	36	39	40	40	39	40	40	41	40	37	36	33	33	30	25	24	32.2	40.6	
11-Jun	21	20	21	27	A	25	24	23	22	23	23	25	26	28	30	30	30	28	27	24	19	18	18	18	23.8	30.2	
12-Jun	16	16	16	14	A	16	17	17	21	20	18	18	21	28	27	29	30	31	31	28	26	22	19	16	21.7	31.1	
13-Jun	15	15	10	10	A	11	14	18	19	26	34	34	36	38	38	37	36	34	33	32	32	28	27	27	26.3	38.1	
14-Jun	25	24	23	22	A	20	24	29	30	32	35	35	36	37	39	38	38	37	41	39	38	36	36	32	32.4	40.7	
15-Jun	31	31	32	34	A	32	32	33	33	35	37	38	46	43	39	38	39	41	39	37	35	34	30	29	35.5	45.6	
16-Jun	27	26	25	26	A	22	22	22	29	33	37	41	42	41	44	45	44	44	45	45	45	37	36	36	35.4	45.4	
17-Jun	36	29	30	28	A	19	18	19	21	34	49	52	50	48	47	49	50	50	46	39	36	35	36	24	36.8	52.0	
18-Jun	29	32	34	13	A	22	24	11	15	21	25	29	33	43	40	29	35	36	29	18	16	16	16	29	25.8	42.7	
19-Jun	30	31	30	27	A	25	24	24	24	26	31	32	34	35	C	C	C	C	C	26	29	29	28	30	28.6	35.3	
20-Jun	30	31	31	30	A	29	29	32	33	35	39	40	38	39	38	40	40	41	41	40	38	34	35	34	35.5	41.0	
21-Jun	29	27	27	28	A	26	22	22	26	33	41	43	46	50	53	49	48	46	47	45	40	35	32	36	37.0	52.7	
22-Jun	36	39	36	37	A	14	15	23	35	40	45	46	48	49	52	56	55	52	53	52	48	45	44	46	41.9	55.6	
23-Jun	45	43	34	31	A	14	19	26	40	42	43	49	51	50	52	50	55	54	55	48	42	39	41	39	41.9	54.9	
24-Jun	40	39	38	32	A	25	20	23	33	40	44	46	49	48	46	46	45	44	43	43	40	40	39	37	39.1	48.7	
25-Jun	37	36	34	29	A	25	27	27	32	33	36	37	40	45	49	49	46	45	43	41	40	41	36	30	37.3	48.7	
26-Jun	31	30	28	25	A	23	22	24	21	21	24	25	30	31	33	33	32	31	29	28	25	22	32	35	27.4	34.7	
27-Jun	32	31	30	28	A	29	26	30	30	32	32	32	32	33	36	37	40	41	40	39	36	36	37	34	33.4	40.5	
28-Jun	33	33	29	29	A	22	23	28	29	31	33	35	36	37	37	38	40	42	40	39	37	37	32	31	33.5	42.1	
29-Jun	31	30	31	30	A	22	19	27	26	30	29	30	30	31	33	34	37	37	36	34	31	29	27	25	29.9	36.9	
30-Jun	23	22	22	19	A	18	12	19	30	39	37	38	37	37	40	42	43	43	43	42	38	34	40	40	33.0	43.5	
29.2 28.5 27.5 25.5 -- 22.3 22.1 24.2 27.4 30.8 33.6 35.7 37.1 38.2 39.0 39.2 39.6 39.4 38.5 36.3 34.5 32.3 31.5 30.8																									Diurnal Average		
45.3 43.1 38.2 37.0 -- 35.0 34.5 34.9 40.4 41.7 49.5 52.0 51.3 50.3 52.7 55.6 55.0 54.0 54.7 51.9 47.7 44.5 44.3 45.7																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

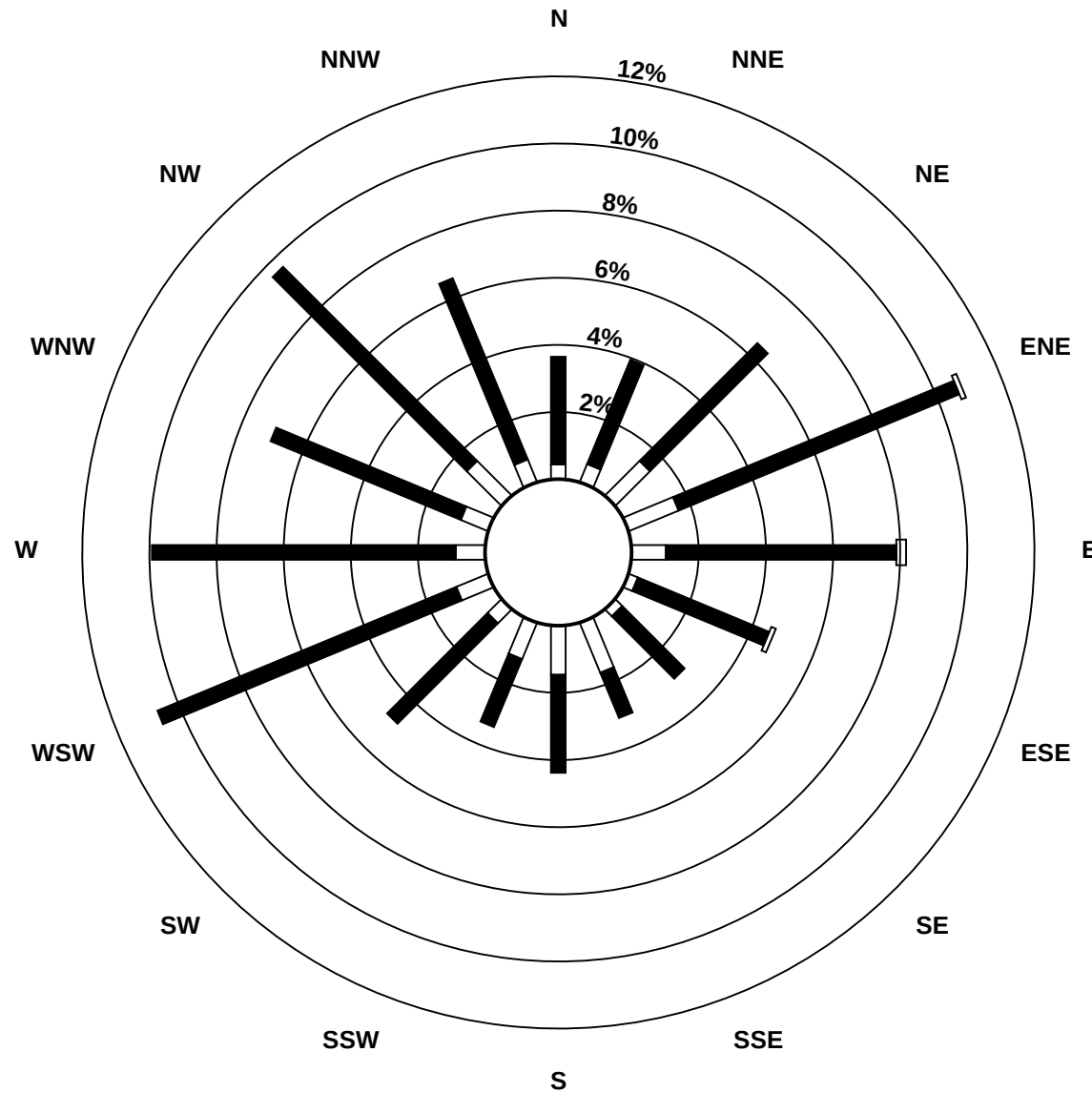
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - June 2013

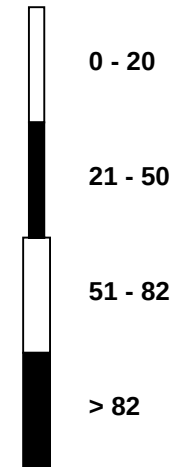


Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - June 2013



Pollutant Classes (ppb)



Eight Hour Running Averages

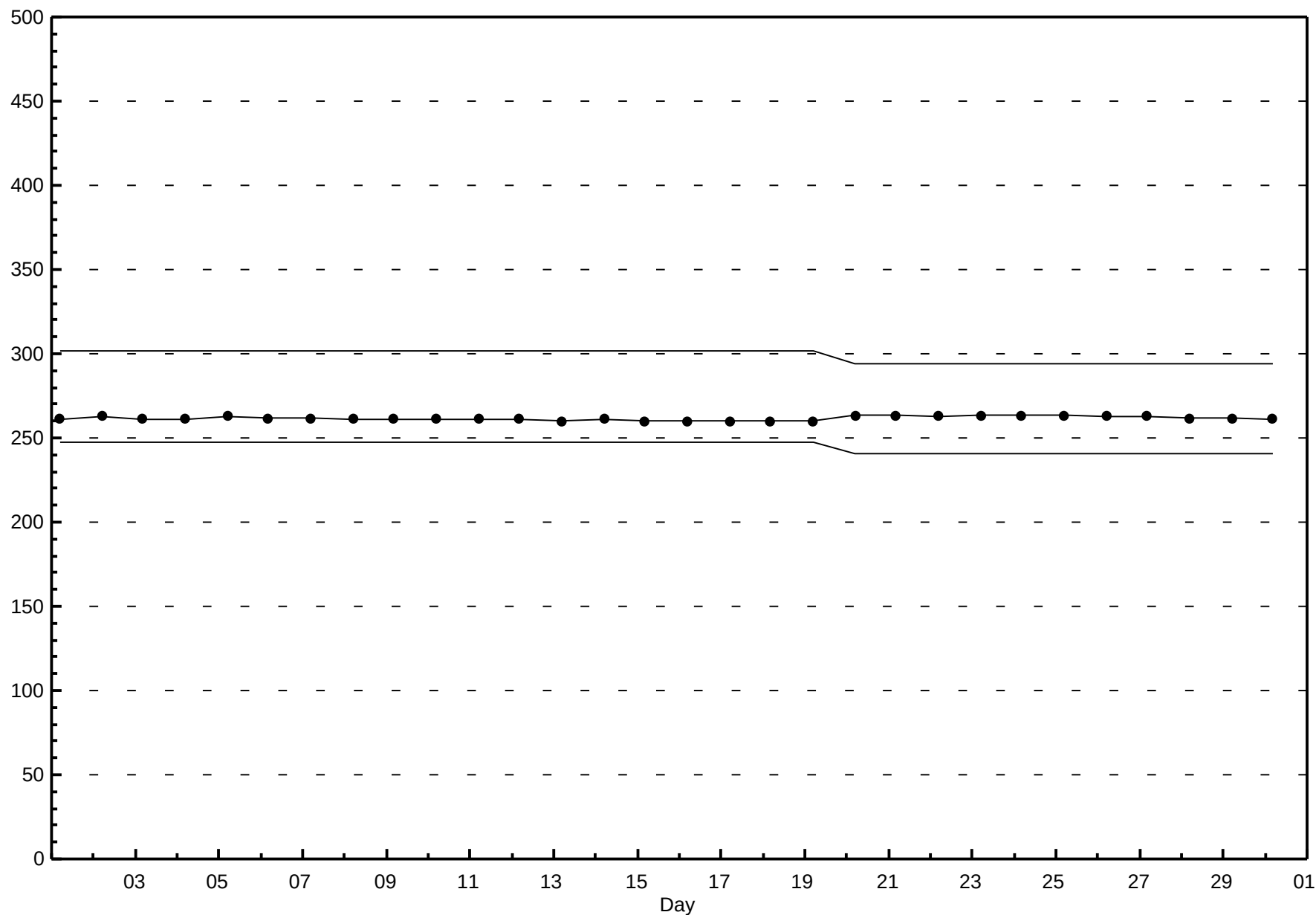
Ozone (O₃) - ppb

Beaverlodge - June 2013

Maximum Value: 49.8 ppb on Jun 22 20:00																								Hours in Service: 720	
Minimum Value: 10.6 ppb on Jun 13 07:00																								Hours of Data: 712	
																								Hours of Missing Data: 8	
Percentiles: P ₁ = 13.8 P ₁₀ = 20.5 Q ₁ = 24.1 Median = 28.7 Q ₃ = 34.6 P ₉₀ = 39.3 P ₉₉ = 48.2																								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-Jun	26	23	21	20	19	17	16	16	18	19	21	23	25	27	29	31	32	33	33	33	33	33	32	32	33.1
2-Jun	32	31	31	31	31	30	29	28	27	27	26	27	28	29	32	33	34	35	35	35	34	32	31	29	35.4
3-Jun	28	27	26	24	24	23	22	21	20	19	19	21	21	22	23	24	26	27	28	29	29	28	27	26	28.7
4-Jun	25	24	22	20	19	17	16	15	14	14	15	18	20	24	27	30	33	35	36	36	36	35	34	33	36.2
5-Jun	32	31	31	29	29	27	25	25	25	25	26	27	29	32	35	37	38	39	40	40	39	38	37	36	40.1
6-Jun	36	35	34	33	33	32	32	32	33	34	34	36	37	38	39	41	41	42	43	43	42	42	40	38	42.9
7-Jun	36	33	31	29	27	25	22	20	20	19	19	19	20	21	23	25	27	28	30	31	32	34	34	34	35.8
8-Jun	34	33	32	31	30	29	27	27	27	27	28	29	29	29	29	30	30	30	30	31	30	30	29	29	33.5
9-Jun	28	27	26	24	23	23	22	22	22	22	23	24	24	25	26	26	26	27	28	28	29	29	29	29	29.0
10-Jun	28	27	26	25	24	22	21	21	23	25	27	30	31	34	36	38	38	38	37	36	36	34	32	30	38.5
11-Jun	28	25	24	23	21	21	21	21	21	21	22	22	22	22	23	24	25	26	26	26	25	24	22	21	27.5
12-Jun	19	18	17	16	16	15	15	15	16	16	16	17	17	18	19	21	22	24	25	26	26	26	25	23	26.3
13-Jun	21	19	16	14	13	11	11	11	11	13	16	19	21	24	27	30	32	33	34	33	32	31	30	29	33.6
14-Jun	28	26	25	24	24	23	22	22	23	24	26	27	28	30	32	33	34	35	35	36	36	36	35	35	35.8
15-Jun	34	33	32	32	31	31	31	31	31	32	32	33	34	35	35	36	36	37	37	37	36	36	35	34	37.1
16-Jun	33	31	29	28	27	25	24	23	23	24	25	27	29	31	33	36	39	40	41	42	42	41	40	39	42.1
17-Jun	38	36	34	31	30	27	25	22	20	21	23	26	29	33	37	40	44	46	46	45	43	41	39	36	46.4
18-Jun	33	31	29	26	25	22	20	18	17	15	14	16	17	20	21	24	26	28	28	27	25	23	21	21	32.9
19-Jun	20	20	21	22	23	24	25	25	24	23	23	24	25	27	27	28	N	N	N	N	N	N	N	N	28.3
20-Jun	27	27	27	28	28	28	28	28	29	29	30	32	32	34	35	36	37	38	38	38	38	37	37	36	38.2
21-Jun	35	33	31	29	28	25	22	21	20	21	22	25	27	32	36	40	43	45	46	46	44	42	40	38	45.7
22-Jun	36	35	33	32	32	29	27	25	24	24	26	27	30	35	39	44	47	48	49	50	49	49	47	46	49.8
23-Jun	44	42	39	36	35	30	27	24	23	23	25	28	31	36	40	43	45	47	49	48	47	46	44	44	48.7
24-Jun	42	40	38	36	35	33	30	27	25	25	27	29	32	35	38	41	43	44	44	43	42	41	40	39	44.2
25-Jun	38	36	34	32	31	28	26	25	24	24	25	27	29	32	35	38	40	41	42	42	42	41	40	37	42.1
26-Jun	35	33	31	29	28	26	24	23	22	21	20	21	22	22	24	25	27	28	29	29	28	27	26	26	35.0
27-Jun	26	26	26	26	27	28	28	27	27	27	28	28	29	29	31	32	33	34	35	35	36	36	36	35	35.9
28-Jun	34	33	31	30	29	27	26	25	25	24	25	26	27	29	31	33	34	36	37	37	37	37	36	36	37.2
29-Jun	34	32	31	29	28	25	23	21	21	21	21	22	23	25	27	29	30	31	32	32	32	31	30	29	34.0
30-Jun	27	25	23	21	21	18	16	14	14	17	19	22	24	27	31	34	37	38	38	39	39	38	38	37	38.7
44.1 42.1 39.0 35.8 35.3 32.7 32.2 32.2 32.9 33.8 34.4 35.7 36.5 37.7 40.0 43.7 46.6 48.4 49.4 49.8 49.4 48.7 47.2 45.8																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Beaverlodge - June 2013

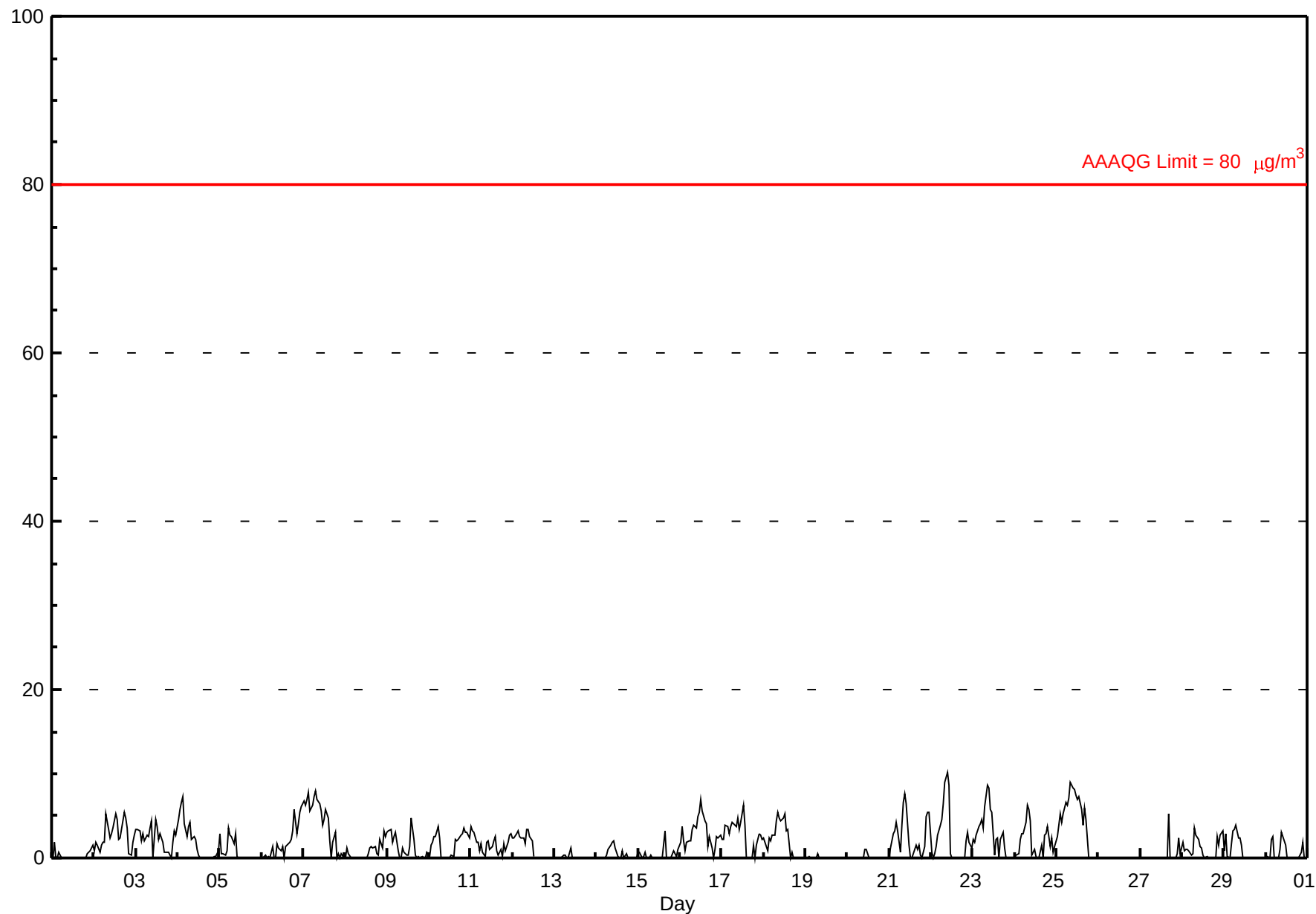


Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - June 2013

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 10.2 µg/m ³ on Jun 22 10:00 Minimum Value: 0 µg/m ³ on Jun 1 03:00 Maximum Diurnal Average: 3.0 µg/m ³ at hour 10 Monthly Average: 1.57 µg/m ³																								Hours in Service: 720 Hours of Data: 716 Hours of Missing Data: 4 Hours of Calibration: 0 Percent Operational Time: 99.4		
Maximum Daily Average: 4.5 µg/m ³ on Jun 25 Minimum Daily Average: 0.0 µg/m ³ on Jun 26 Minimum Diurnal Average: 0.6 µg/m ³ at hour 20 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.6 Q ₃ = 2.6 P ₉₀ = 4.5 P ₉₉ = 8.2																										
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-Jun	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	0.3	1.9
2-Jun	1	2	2	1	2	2	2	5	3	2	3	4	5	5	2	2	3	5	5	4	0	0	2	3	2.7	5.5
3-Jun	3	3	3	2	3	2	3	2	4	4	0	4	4	2	3	2	1	1	1	1	0	2	3	3	2.3	4.5
4-Jun	4	6	7	7	4	2	4	4	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	1	2.0	7.3
5-Jun	3	1	1	0	1	4	3	3	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	3.5
6-Jun	0	0	0	0	0	0	1	0	0	2	1	1	1	0	1	2	2	2	3	6	3	4	5	6	1.7	6.1
7-Jun	7	6	7	8	6	6	7	8	7	6	6	4	5	6	5	2	0	2	3	0	0	0	1	0	4.2	8.0
8-Jun	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	2	1	3	2	0.7	3.2
9-Jun	3	3	3	2	3	3	1	0	0	1	1	0	0	1	5	2	0	0	0	0	0	0	0	1	1.3	4.7
10-Jun	0	1	2	3	2	4	2	0	0	0	0	0	0	0	0	2	2	2	3	3	4	3	3	2	1.6	3.8
11-Jun	4	3	3	2	2	1	2	1	0	2	2	1	1	2	3	1	0	1	0	2	1	2	3	3	1.7	3.7
12-Jun	2	2	3	3	3	2	2	2	3	3	3	2	0	M	M	M	M	0	0	0	0	0	0	0	1.6	3.5
13-Jun	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.2
14-Jun	0	0	0	0	0	0	0	1	1	2	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0.4	2.0
15-Jun	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	0	1	0.3	3.2
16-Jun	2	4	2	1	2	2	2	3	4	4	5	5	7	6	4	4	1	2	1	0	1	3	2	3	2.9	7.0
17-Jun	2	2	4	4	3	4	4	4	4	5	3	4	6	4	0	0	0	0	2	0	2	3	3	2	2.7	6.3
18-Jun	2	2	1	2	2	3	3	4	5	5	4	5	5	3	3	0	1	0	0	0	0	0	0	0	2.1	5.4
19-Jun	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	0.5
20-Jun	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0
21-Jun	0	1	3	3	4	3	1	4	7	8	6	2	0	0	0	1	1	2	0	0	1	5	5	5	2.7	7.7
22-Jun	1	0	0	1	3	4	5	6	9	10	9	1	0	0	0	0	0	0	0	0	2	3	2	1	2.4	10.2
23-Jun	2	2	3	4	4	5	4	6	9	8	6	5	0	2	2	0	2	3	1	0	0	0	0	0	2.8	8.7
24-Jun	0	0	1	2	3	3	4	6	6	4	0	1	0	0	0	1	0	3	3	4	1	2	1	1	2.0	6.2
25-Jun	3	4	5	4	5	7	6	7	9	8	8	8	7	7	6	4	6	5	0	0	0	0	0	0	4.5	8.9
26-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
27-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	1	2	0	0.4	5.3
28-Jun	2	1	1	1	1	0	0	4	3	2	1	1	0	0	0	0	0	0	0	0	3	2	3	3	1.2	3.6
29-Jun	1	3	0	0	2	3	3	4	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	3.9
30-Jun	0	0	0	2	3	0	0	0	1	3	3	1	0	0	0	0	0	0	0	0	1	2	0	0	0.6	3.0
1.4 1.7 1.7 1.8 1.9 2.0 2.0 2.5 2.7 3.0 2.3 1.8 1.5 1.3 1.3 1.0 0.9 1.0 0.7 0.6 0.8 1.1 1.3 1.3																								Diurnal Average		
6.7 6.2 6.9 7.8 5.6 6.5 7.3 8.0 9.1 10.2 8.7 7.5 7.0 7.3 5.7 4.1 5.9 5.5 4.7 5.8 3.6 4.9 5.5 6.1																								Diurnal Maximum		
M - Maintenance																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m ³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m ³																										

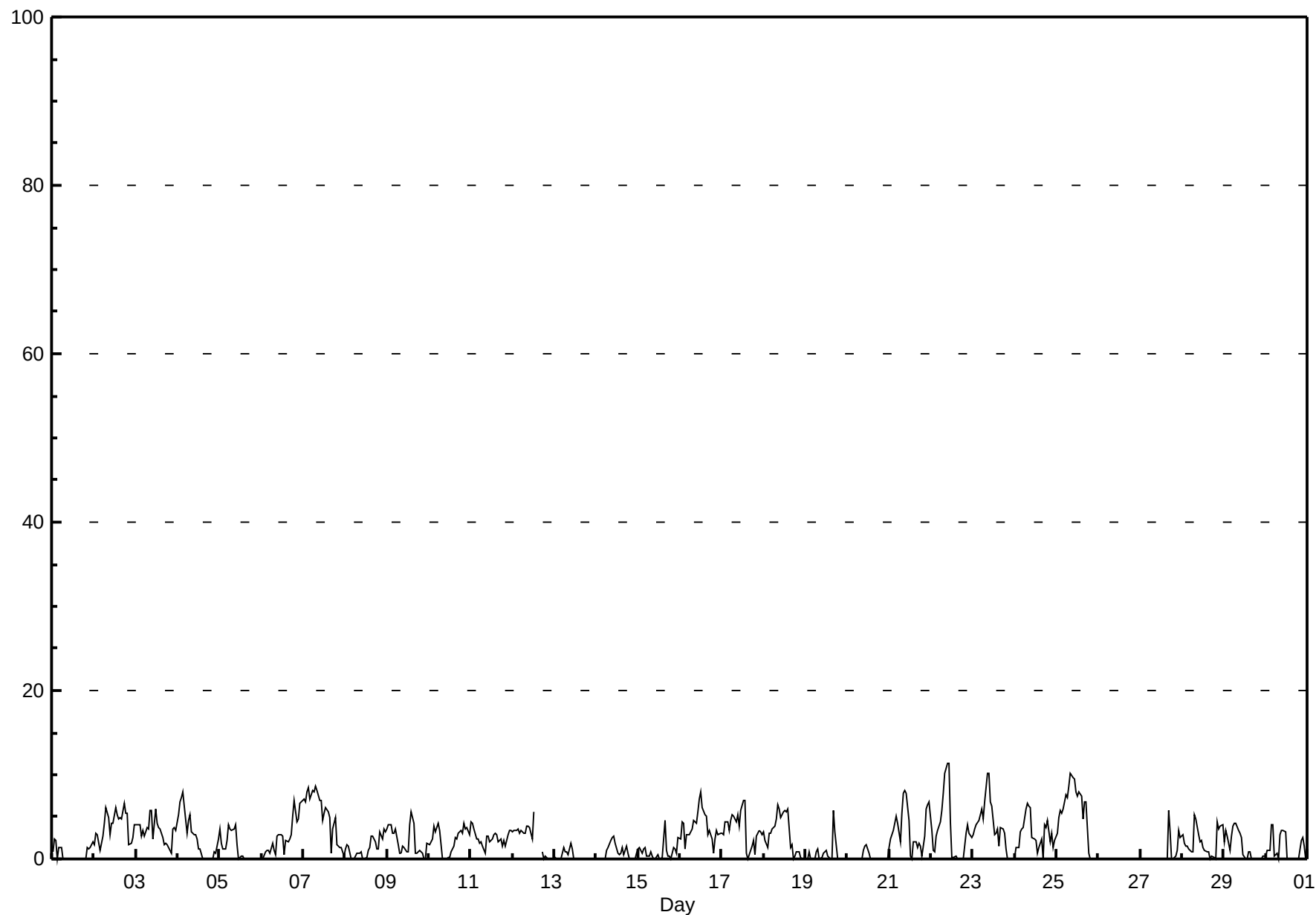


Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

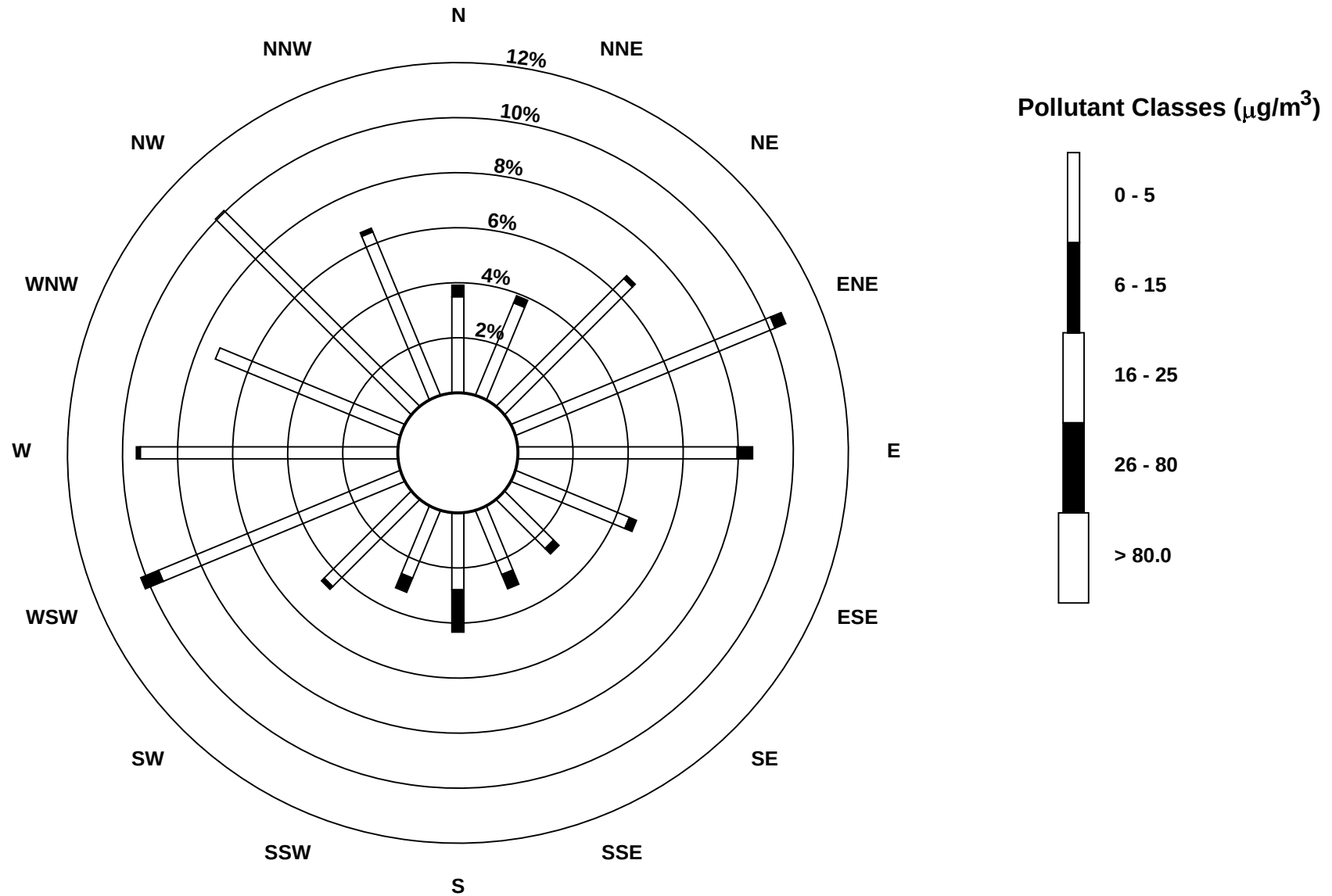
Beaverlodge - June 2013

Maximum Value: 11.4 μg/m³ on Jun 22 11:00																				Maximum Daily Average: 5.3 μg/m³ on Jun 25					Hours in Service: 720	
Minimum Value: 0 μg/m³ on Jun 1 04:00																				Minimum Daily Average: 0.0 μg/m³ on Jun 26					Hours of Data: 716	
Maximum Diurnal Average: 3.7 μg/m³ at hour 10																				Minimum Diurnal Average: 1.1 μg/m³ at hour 20					Hours of Missing Data: 4	
Monthly Average: 2.26 μg/m³																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 1.6 Q ₃ = 3.6 P ₉₀ = 5.7 P ₉₉ = 9.3					Hours of Calibration: 0	
																				Percent Operational Time: 99.4						
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-Jun	1	2	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	0.6	2.4
2-Jun	2	3	3	1	2	3	4	6	5	3	4	4	6	5	5	5	5	7	5	5	2	2	3	4	3.9	6.6
3-Jun	4	4	4	3	3	3	4	4	6	6	2	6	4	4	4	3	2	2	2	1	1	4	4	3	3.3	6.0
4-Jun	5	7	7	8	6	3	5	5	3	3	3	2	1	1	0	0	0	0	0	0	0	1	1	2	2.7	7.9
5-Jun	4	2	1	1	2	4	4	3	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3	4.1
6-Jun	0	0	1	1	1	1	2	1	1	3	3	3	3	1	2	2	2	3	5	7	4	5	7	7	2.6	6.9
7-Jun	7	7	8	8	7	8	8	9	8	7	7	5	5	6	6	5	1	4	5	2	2	1	1	0	5.3	8.6
8-Jun	1	2	1	0	0	0	0	1	1	1	0	0	0	1	1	3	3	2	1	1	3	2	4	3	1.3	3.6
9-Jun	4	4	4	3	3	4	2	1	1	2	1	1	1	4	6	4	1	1	1	1	1	0	0	2	2.0	5.5
10-Jun	2	2	2	4	3	4	3	2	0	0	0	0	0	1	2	3	2	3	3	3	4	4	4	3	2.3	4.3
11-Jun	4	4	4	2	2	2	2	1	1	3	3	2	2	3	3	3	2	2	2	2	1	3	3	3	2.5	4.5
12-Jun	3	3	3	4	3	3	3	3	4	4	4	2	6	M	M	M	M	1	0	0	0	0	0	0	2.3	5.6
13-Jun	0	0	0	0	0	1	1	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8
14-Jun	0	0	0	0	0	0	1	1	2	3	3	2	1	1	1	1	1	1	1	0	0	0	0	1	0.8	2.6
15-Jun	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	5	1	0	0	0	1	1	1	3	0.8	4.5
16-Jun	2	4	4	1	3	3	3	4	5	4	6	7	8	6	5	5	3	3	2	1	2	3	3	3	3.8	7.9
17-Jun	3	3	4	4	3	5	5	5	4	5	4	6	7	7	1	0	1	2	2	1	3	3	3	3	3.5	7.0
18-Jun	3	2	1	3	3	4	4	5	6	6	5	6	6	6	6	1	2	0	0	1	1	0	0	0	3.0	6.5
19-Jun	0	0	1	0	0	0	1	1	0	0	1	1	1	0	0	0	6	3	0	0	0	0	0	0	0.6	5.7
20-Jun	0	0	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0.2	1.7
21-Jun	1	2	3	4	5	4	2	6	8	8	8	5	0	0	2	2	1	2	2	0	3	6	6	7	3.7	8.2
22-Jun	3	1	1	3	3	4	6	8	10	11	11	4	0	0	0	0	0	0	0	2	3	4	3	3	3.4	11.4
23-Jun	3	4	4	5	5	6	5	7	10	10	7	6	3	3	4	2	4	4	3	1	0	0	0	0	3.9	10.2
24-Jun	0	1	1	3	4	4	6	7	6	6	3	2	2	1	1	2	0	4	4	5	2	3	1	2	2.9	6.5
25-Jun	3	5	6	5	6	8	7	9	10	10	10	8	7	8	7	5	7	7	1	0	0	0	0	0	5.3	10.1
26-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
27-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	3	0	0	0	1	3	3	0.7	5.8
28-Jun	3	2	2	2	1	1	1	5	5	3	2	2	1	1	1	1	0	0	0	0	4	4	4	4	2.0	5.3
29-Jun	2	3	3	1	3	4	4	4	3	3	3	0	0	0	1	1	0	0	0	0	0	0	0	0	1.5	4.3
30-Jun	0	1	1	4	4	0	1	0	3	3	3	3	0	0	0	0	0	0	0	0	2	3	2	0	1.3	4.1
2.1 2.4 2.4 2.4 2.6 2.7 2.8 3.3 3.5 3.7 3.2 2.7 2.2 2.0 2.0 1.8 1.6 1.8 1.3 1.1 1.4 1.7 1.8 1.9																									Diurnal Average	
7.2 6.8 7.9 8.5 7.1 8.2 8.0 8.6 10.2 11.4 11.4 7.9 7.9 7.9 7.5 5.1 6.9 6.7 5.4 6.9 4.5 6.0 6.5 6.8																									Diurnal Maximum	
M - Maintenance																										



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Beaverlodge - June 2013



Hourly Averages

External Temperature (ET) - °C

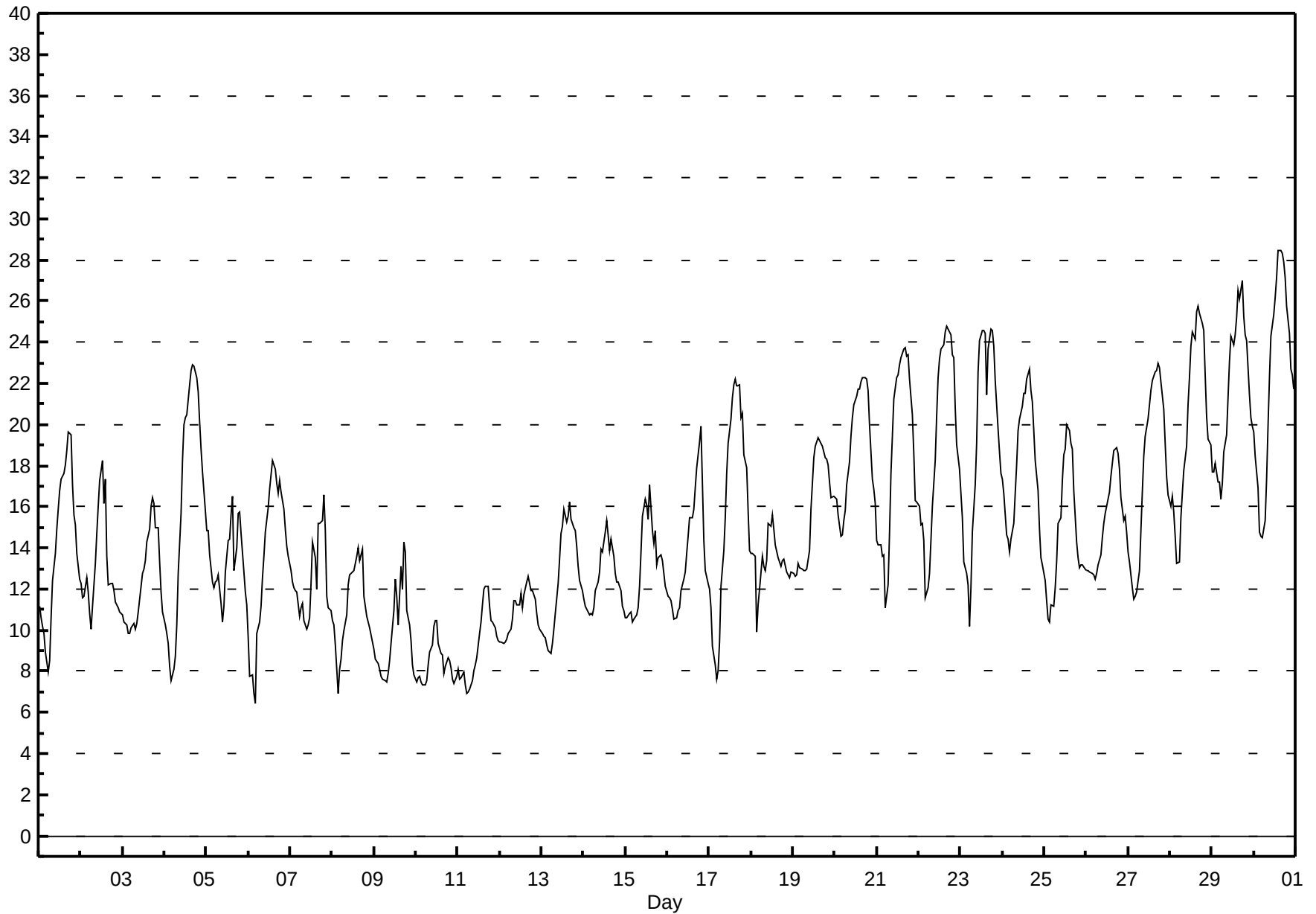
Beaverlodge - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.5 °C on Jun 30 15:00 Maximum Daily Average: 22.3 °C on Jun 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: 6 °C on Jun 6 05:00 Maximum Diurnal Average: 18.3 °C at hour 18 Monthly Average: 14.88 °C												Minimum Daily Average: 8.4 °C on Jun 10 Minimum Diurnal Average: 10.9 °C at hour 6 Percentiles: P ₁ = 7.3 P ₁₀ = 9.4 Q ₁ = 11.2 Median = 13.9 Q ₃ = 17.8 P ₉₀ = 22.2 P ₉₉ = 26.9														
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-Jun	11	11	10	10	9	8	9	11	12	14	15	16	17	17	18	18	19	20	19	17	16	15	14	12	14.0	19.6
2-Jun	12	12	12	13	12	11	10	11	13	15	16	17	18	16	17	14	12	12	12	12	11	11	11	11	13.0	18.2
3-Jun	11	10	10	10	10	10	10	10	10	11	11	13	13	13	14	15	16	16	16	15	15	13	12	11	12.4	16.5
4-Jun	10	10	9	8	8	8	9	10	13	16	18	20	20	20	22	23	23	23	22	22	20	19	18	16	16.1	22.9
5-Jun	15	15	14	12	12	12	12	13	11	10	11	13	14	14	16	16	13	14	16	16	15	13	12	11	13.4	16.5
6-Jun	10	8	8	7	6	10	10	11	13	14	15	16	17	18	18	18	17	17	17	17	16	15	14	14	13.5	18.2
7-Jun	13	12	12	12	12	11	11	11	10	10	10	11	12	14	14	12	15	15	15	17	15	12	11	11	12.4	16.6
8-Jun	10	10	9	7	8	9	9	10	11	12	13	13	13	13	14	14	13	14	12	11	11	10	10	9	11.1	14.0
9-Jun	9	9	8	8	8	8	8	8	7	8	9	9	11	12	10	13	12	14	14	11	10	10	8	8	9.8	14.3
10-Jun	7	8	8	7	7	7	8	8	9	9	10	10	10	9	9	9	8	8	9	9	8	8	7	8	8.4	10.5
11-Jun	8	8	8	8	7	7	7	7	8	8	8	9	10	10	11	12	12	12	11	10	10	10	10	9	9.2	12.2
12-Jun	9	9	9	9	10	10	10	11	11	11	11	11	12	11	12	12	13	12	12	12	11	11	10	10	10.9	12.6
13-Jun	10	10	10	9	9	9	9	10	11	12	13	15	15	16	15	16	16	15	15	15	14	13	12	12	12.6	16.3
14-Jun	12	11	11	11	11	11	11	12	12	13	14	14	15	15	15	14	14	14	13	12	12	12	11	11	12.5	15.3
15-Jun	11	11	11	11	10	11	11	11	12	14	16	16	16	15	17	15	14	15	13	14	14	13	13	12	13.1	17.1
16-Jun	12	12	11	11	11	11	11	11	12	12	13	14	15	15	15	16	17	18	19	20	17	14	13	12	13.8	19.9
17-Jun	12	11	9	8	8	8	9	12	14	15	18	19	20	21	22	22	22	22	20	21	19	18	16	14	15.8	22.2
18-Jun	14	14	14	10	11	12	14	13	13	13	15	15	16	15	14	14	13	13	13	13	13	13	13	13	13.3	15.6
19-Jun	13	13	13	13	13	13	13	13	13	14	16	17	18	19	19	19	19	19	18	18	18	17	16	17	15.9	19.4
20-Jun	16	16	16	15	15	15	16	17	18	19	20	21	21	22	22	22	22	22	22	22	20	17	17	16	18.8	22.3
21-Jun	14	14	14	14	14	11	12	15	18	19	21	22	22	23	23	24	24	23	23	22	20	19	16	16	18.5	23.7
22-Jun	16	15	15	14	12	12	13	14	16	18	20	22	23	24	24	25	25	25	24	23	23	21	19	18	19.2	24.8
23-Jun	17	15	13	13	12	10	12	15	17	19	23	24	25	25	24	21	24	25	25	24	22	20	19	18	19.2	24.6
24-Jun	17	17	15	14	14	14	15	17	18	20	20	21	21	22	22	23	22	21	20	18	17	15	13	13	17.9	22.7
25-Jun	12	11	11	10	11	11	12	13	15	15	17	18	19	20	20	19	19	17	14	14	13	13	13	13	14.7	20.0
26-Jun	13	13	13	13	13	13	13	13	14	15	15	16	16	17	17	18	19	19	19	18	16	15	16	15	15.3	18.9
27-Jun	14	13	12	12	12	12	13	15	17	18	19	20	21	22	22	23	23	23	23	22	21	19	17	17	17.9	23.0
28-Jun	16	17	16	15	13	13	15	17	18	19	21	22	24	25	24	25	26	25	25	25	22	20	19	19	20.0	25.7
29-Jun	18	18	18	17	17	16	17	19	20	21	23	24	24	24	25	26	26	27	25	24	24	21	20	20	21.5	27.0
30-Jun	20	18	17	15	15	14	15	17	20	22	24	25	26	27	28	28	28	28	27	26	24	23	22	22	22.3	28.5
12.7 12.3 11.8 11.2 10.9 10.9 11.5 12.5 13.5 14.7 15.9 16.9 17.6 17.8 18.2 18.2 18.2 18.3 17.8 17.3 16.3 15.0 14.1 13.6																								Diurnal Average		
19.6 18.5 18.1 17.2 17.2 16.4 17.1 18.7 19.9 22.3 24.3 25.4 26.1 27.1 28.5 28.5 28.3 27.9 27.2 25.8 24.5 22.7 22.4 21.7																								Diurnal Maximum		

Hourly Averages

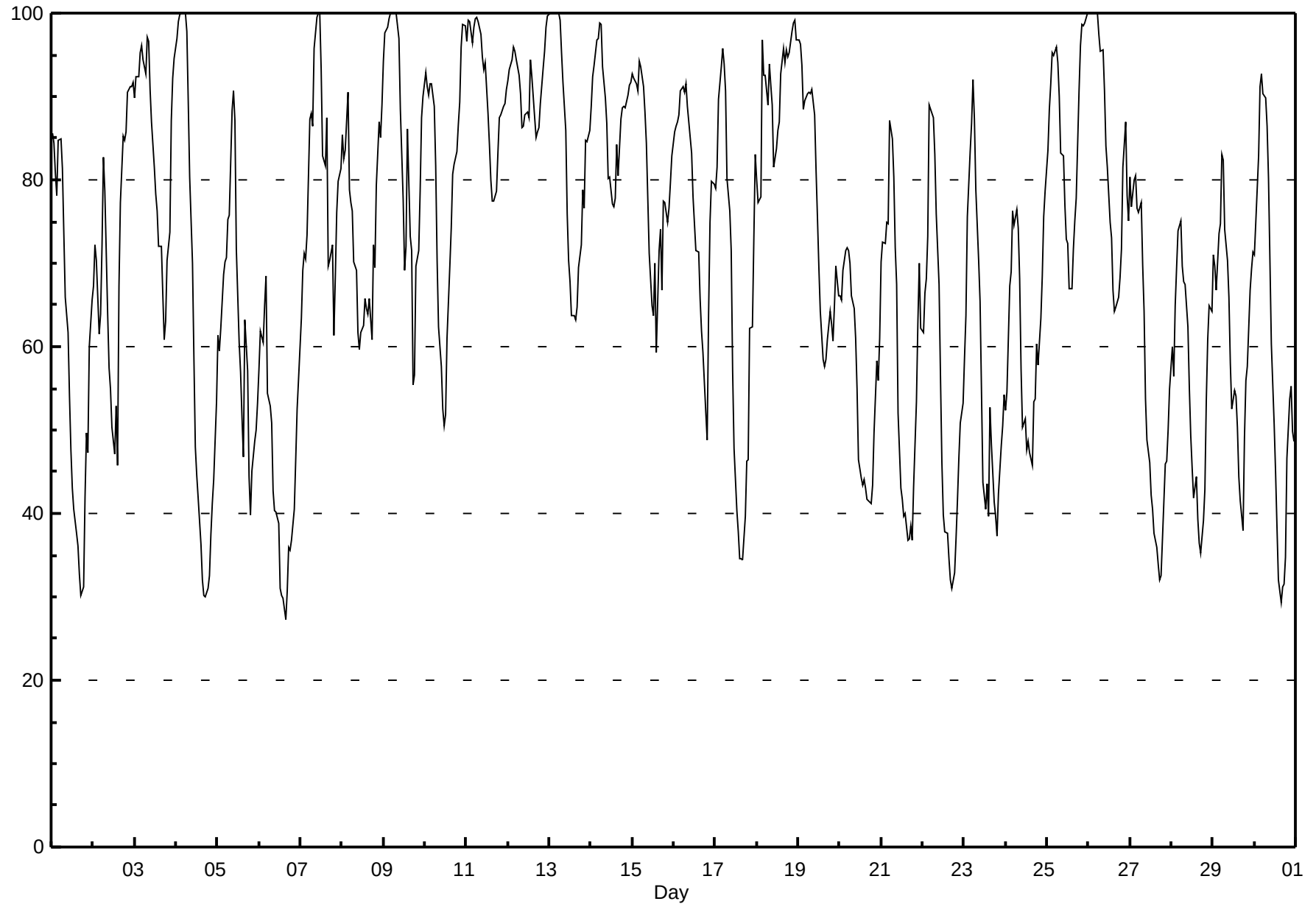
External Temperature (ET) - °C

Beaverlodge - June 2013



Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - June 2013



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - June 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	2	2	3	4	3	5	6	12	19	18	15	18	18	17	15	13	11	6	5	9	6	9	11	12	8.3	19.3
Dir	161	165	155	192	163	201	212	224	241	239	254	261	233	270	256	267	277	249	284	187	254	294	174	183	239	241
2 Spd	13	17	18	12	12	3	8	5	6	7	7	4	2	13	9	14	2	14	4	5	6	9	10	9	2.9	18.2
Dir	187	247	290	302	324	247	130	237	299	340	340	21	45	52	25	51	240	147	188	208	285	313	320	337	308	290
3 Spd	9	7	6	7	7	7	9	8	7	10	10	9	7	4	2	8	4	4	6	9	8	8	4	5	3.1	10.4
Dir	339	321	332	323	317	327	334	324	332	360	344	19	347	12	298	285	280	234	132	154	161	143	100	88	339	344
4 Spd	5	4	2	3	2	3	3	5	7	10	12	16	20	14	18	21	25	23	24	28	18	4	5	6	9.2	27.8
Dir	83	97	97	118	123	178	173	188	195	206	214	224	211	206	210	239	257	255	267	267	267	299	250	238	236	267
5 Spd	8	6	6	1	3	2	3	15	11	16	17	23	25	28	33	33	33	31	32	31	27	20	12	8	16.5	33.4
Dir	246	236	223	72	59	138	159	252	273	230	220	252	252	240	245	237	274	237	262	266	260	263	275	300	251	237
6 Spd	8	8	12	5	4	21	19	17	17	16	11	12	22	19	22	27	29	24	20	21	11	10	6	3	14.8	28.6
Dir	283	271	275	258	266	259	262	269	277	283	272	227	247	256	270	264	254	258	247	268	281	273	280	244	263	254
7 Spd	2	1	2	3	2	4	4	6	8	8	7	11	10	9	8	10	9	7	7	3	5	11	7	4	1.1	10.9
Dir	175	125	61	80	171	67	154	164	192	211	208	198	224	240	295	10	323	7	43	39	350	355	324	226	269	198
8 Spd	6	6	6	6	6	8	6	12	12	22	19	15	14	14	14	13	11	15	18	14	12	5	9	9	9.0	21.9
Dir	239	293	257	217	304	309	246	260	260	273	298	321	323	342	333	323	314	338	358	6	9	290	330	331	313	273
9 Spd	8	5	6	8	7	7	9	14	16	13	16	14	12	11	13	16	13	13	12	21	7	5	9	8	6.0	21.5
Dir	305	292	318	318	312	282	285	272	273	299	30	38	26	346	299	306	303	313	336	55	76	160	168	188	323	55
10 Spd	9	11	7	4	9	11	11	16	20	20	20	18	16	16	12	14	9	5	7	7	5	5	4	2	8.0	20.1
Dir	218	234	255	351	329	325	328	327	328	331	329	332	333	347	353	358	341	282	273	255	178	194	195	198	319	331
11 Spd	1	2	2	6	14	12	10	11	9	10	10	9	12	12	11	13	14	19	18	12	11	11	12	14	9.7	19.2
Dir	96	56	17	337	34	45	50	57	62	97	95	101	74	73	84	80	78	85	73	56	67	48	46	33	65	85
12 Spd	14	15	15	12	8	8	12	12	14	14	16	13	12	5	5	5	7	10	11	5	5	5	5	6	4.5	16.1
Dir	36	40	44	48	38	70	79	73	75	73	51	43	42	78	229	247	267	261	268	260	269	259	252	253	42	51
13 Spd	5	0	3	5	6	6	5	8	12	10	12	15	16	18	12	9	20	21	18	15	13	7	6	8	9.3	20.9
Dir	243	280	185	257	283	277	275	292	307	306	301	285	283	267	337	274	259	242	256	234	272	273	276	284	274	242
14 Spd	11	13	13	13	13	6	8	13	16	18	19	20	19	19	18	18	16	17	16	14	13	15	15	15	14.8	19.7
Dir	299	294	294	298	291	316	320	318	312	308	306	317	311	302	301	312	305	304	302	295	298	311	314	310	306	317
15 Spd	15	14	15	19	18	15	16	17	16	21	20	20	16	15	23	19	18	25	19	12	12	9	8	8	15.7	24.6
Dir	304	309	310	318	315	315	314	312	322	317	320	329	343	307	318	344	352	1	347	321	337	317	310	316	325	1
16 Spd	6	5	8	9	8	8	8	9	9	11	10	10	9	7	11	9	9	7	4	2	6	7	5	4	5.2	11.5
Dir	303	308	316	322	315	318	311	322	347	1	342	359	22	357	7	24	19	54	66	22	145	131	72	81	356	1
17 Spd	5	3	3	4	3	3	3	2	4	8	13	13	7	5	6	11	15	15	12	11	6	2	2	6	5.9	15.4
Dir	63	117	83	104	104	107	153	154	159	162	134	118	128	118	116	114	102	93	135	138	217	349	122	69	119	102
18 Spd	6	7	8	1	3	3	2	5	14	15	13	15	15	4	10	13	11	11	12	9	10	6	11	15	7.5	14.8
Dir	74	38	31	133	342	351	328	301	321	320	321	307	323	332	311	335	358	300	332	292	256	306	322	22	328	307
19 Spd	16	14	14	19	18	19	20	18	19	19	21	21	24	26	29	26	23	21	14	16	16	13	13	12	18.2	28.7
Dir	31	24	28	57	67	66	59	68	57	52	66	75	78	73	77	81	82	83	81	78	77	82	68	68	68	77
20 Spd	12	11	11	10	9	3	13	19	20	21	27	29	30	29	27	27	26	24	22	20	16	14	14	12	18.3	29.7
Dir	67	79	81	55	41	40	75	85	93	89	93	89	80	80	73	77	70	71	79	78	73	72	76	100	79	80
21 Spd	7	3	3	5	6	3	3	2	2	2	4	5	13	10	8	8	11	14	13	13	9	5	7	7	5.8	13.9
Dir	93	114	87	33	24	162	182	171	183	181	180	119	109	114	110	131	93	110	105	116	124	112	88	62	108	110
22 Spd	5	6	3	3	2	3	3	3	6	5	5	5	8	7	8	6	7	10	10	6	3	5	7	4	3.8	10.0
Dir	51	55	40	18	360	69	172	183	176	174	180	137	92	114	129	102	85	93	86	114	70	47	40	41	96	93

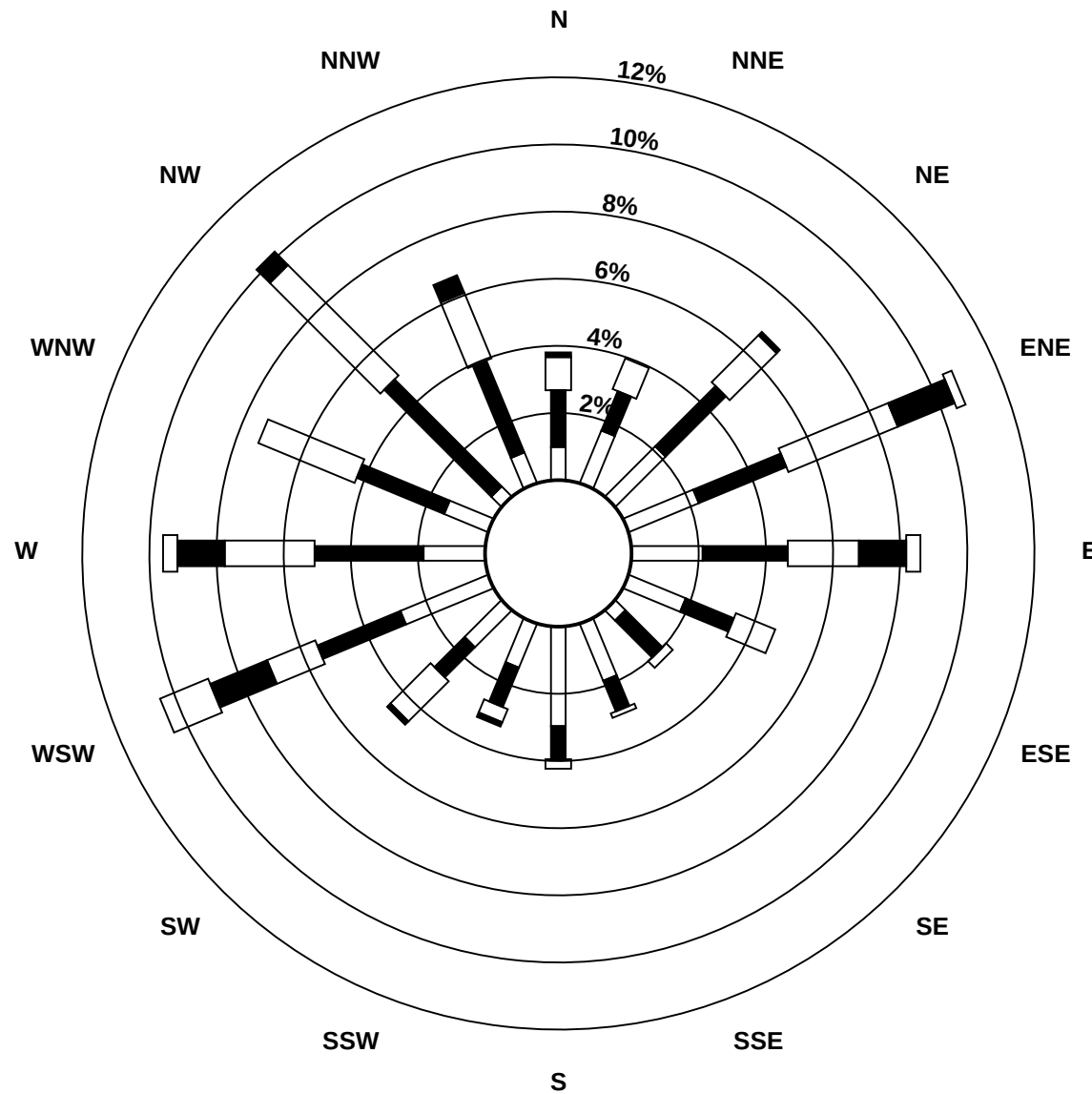
Hourly Averages

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

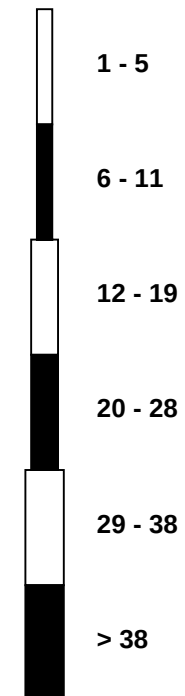
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	5	4	3	6	6	2	1	3	4	3	2	3	5	1	5	14	9	11	14	14	8	7	8	8	3.8	14.3
Dir	44	322	359	33	301	21	179	193	230	257	173	109	79	109	54	0	56	76	93	96	74	46	63	73	60	0
24 Spd	7	4	4	1	5	2	3	3	2	5	14	15	19	18	22	23	26	27	29	24	16	11	4	6	10.8	28.9
Dir	75	54	20	124	47	75	220	245	156	115	105	97	92	85	84	80	69	71	65	63	61	48	219	55	76	65
25 Spd	5	3	3	5	3	5	8	9	4	6	2	4	4	7	10	11	9	21	15	6	7	3	3	3	2.3	21.0
Dir	19	268	336	25	355	24	351	350	333	243	190	73	43	96	102	135	152	100	111	207	274	328	348	61	75	100
26 Spd	4	5	3	4	10	9	5	6	6	8	11	12	17	14	17	15	11	11	8	8	4	4	10	17	6.5	17.2
Dir	225	243	274	228	96	269	254	266	236	263	270	267	277	279	286	294	314	336	338	351	39	174	236	229	275	229
27 Spd	12	11	12	5	6	5	7	18	21	30	33	32	32	31	28	31	30	26	25	18	11	5	6	6	17.8	33.0
Dir	234	247	248	237	246	234	212	231	234	245	247	251	249	242	248	249	251	275	272	264	259	268	287	278	250	247
28 Spd	2	3	6	9	2	2	4	9	13	15	18	15	6	5	7	4	6	10	15	15	12	10	11	6	1.9	18.1
Dir	325	279	245	244	221	92	204	219	228	236	248	250	274	273	22	156	72	114	106	93	79	80	83	91	180	248
29 Spd	4	4	1	5	7	5	1	0	2	5	4	4	4	3	4	3	6	2	11	6	3	7	7	7	0.4	11.1
Dir	195	85	80	258	324	295	77	232	250	257	253	302	22	47	87	257	237	281	112	146	146	53	49	52	39	112
30 Spd	5	2	2	2	1	0	1	3	4	3	4	8	8	6	8	9	11	17	14	9	9	8	8	6	3.8	16.7
Dir	61	60	295	62	5	162	144	265	214	194	183	174	172	178	86	66	105	77	70	60	63	53	65	47	88	77
Spd	1.3	2.1	2.9	2.6	3.5	2.3	1.3	3.4	4.1	4.7	3.4	2.7	2.3	2.1	3.0	3.1	3.2	1.6	2.0	0.6	1.3	2.0	1.8	1.7	Diurnal Average	
Dir	342	313	320	336	346	326	318	282	284	283	294	304	313	306	323	324	320	14	16	357	324	353	359	16	Diurnal Maximum	
Spd	15.7	16.7	18.2	18.8	18.3	20.8	20.3	18.8	20.9	29.8	33.0	31.7	31.6	30.7	33.1	33.4	32.9	31.3	31.5	31.4	27.4	19.6	14.8	17.2	Diurnal Maximum	
Dir	31	247	290	57	315	259	59	85	234	245	247	251	249	242	245	237	274	237	262	266	260	263	314	229		
Maximum Speed Value: 33 km/h on Jun 5 16:00																								Hours in Service: 720		
Minimum Speed Value: 0 km/h on Jun 29 08:00																								Hours of Data: 720		
Maximum Daily Speed Average: 18.3 km/h on Jun 19																								Hours of Missing Data: 0		
Minimum Daily Speed Average: 0.4 km/h on Jun 29																										
Maximum Diurnal Speed Average: 4.7 km/h at hour 10																										
Minimum Diurnal Speed Average: 0.6 km/h at hour 20																										
Monthly Average Velocity: 2.17 km/h 319.9 deg																								Percent Operational Time: 100.0		
Speed Percentiles: P ₁ = 0.9 P ₁₀ = 3.1 Q ₁ = 5.1 Median = 8.9 Q ₃ = 14.3 P ₉₀ = 19.9 P ₉₉ = 31.5																										
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		24		16		1		0		0		60													
NorthEast	22		38		25		6		1		0		92													
East	29		28		44		21		4		0		126													
SouthEast	17		22		7		0		0		0		46													
South	33		19		2		0		0		0		54													
SouthWest	18		30		19		7		7		0		81													
West	19		47		35		18		9		0		128													
NorthWest	12		48		63		10		0		0		133													
Total	169		256		211		63		21		0		720													

Wind Rose

Wind Speed (WS) (km/h)
Beaverlodge - June 2013



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - June 2013

Maximum Speed: 35 km/h on Jun 5 17:00																				Maximum Daily Speed Average: 19.0 km/h on Jun 19										Hours in Service: 720	
Minimum Speed: 2 km/h on Jun 30 05:00																				Minimum Daily Speed Average: 5.8 km/h on Jun 29										Hours of Data: 720	
Maximum Diurnal Speed Average: 15.9 km/h at hour 18																				Minimum Diurnal Speed Average: 7.1 km/h at hour 2										Hours of Missing Data: 0	
Monthly Average Speed: 11.14 km/h																				Percentiles: P ₁ = 2.1 P ₁₀ = 3.9 Q ₁ = 6.0 Median = 9.4 Q ₃ = 14.8 P ₉₀ = 20.4 P ₉₉ = 31.9										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-Jun	2	2	3	4	3	6	6	12	19	18	16	18	18	20	16	14	12	7	6	10	7	9	11	12	10.6	19.9					
2-Jun	13	18	18	12	12	9	9	6	7	8	9	6	4	13	11	17	8	14	6	5	6	10	10	9	10.1	18.5					
3-Jun	9	7	6	7	7	7	9	8	7	11	11	10	7	4	3	8	6	5	6	9	8	8	5	5	7.2	10.7					
4-Jun	5	4	3	3	3	3	3	5	7	11	13	17	21	16	19	22	26	24	24	28	18	4	5	6	12.0	27.9					
5-Jun	8	6	6	3	4	3	4	16	12	16	18	23	27	28	34	34	35	31	32	32	28	20	14	8	18.3	34.7					
6-Jun	9	8	12	7	8	21	19	17	17	16	13	13	22	19	22	27	29	25	21	21	11	10	6	4	15.8	29.4					
7-Jun	2	3	3	3	2	4	4	6	9	8	7	11	11	10	12	10	10	8	7	4	7	11	8	6	6.9	11.6					
8-Jun	7	6	7	6	7	8	7	12	12	22	19	15	14	14	15	14	12	15	18	15	12	5	9	9	11.7	22.3					
9-Jun	8	6	6	8	8	7	9	14	17	13	17	14	12	12	13	17	13	14	15	22	8	6	10	8	11.5	21.5					
10-Jun	9	12	8	5	9	11	11	16	20	20	20	19	16	17	12	14	10	6	7	8	5	5	4	2	11.1	20.4					
11-Jun	2	2	2	6	14	12	10	11	9	11	10	10	13	13	12	13	14	20	18	12	11	11	12	14	10.8	19.5					
12-Jun	14	15	15	12	8	9	12	12	14	14	16	13	12	9	6	5	7	10	11	5	5	5	5	6	10.1	16.3					
13-Jun	5	3	3	5	6	6	5	9	12	10	12	15	17	19	15	9	21	21	18	15	13	7	6	9	10.8	21.1					
14-Jun	11	13	13	13	13	11	12	14	17	19	19	20	19	20	19	18	18	18	16	14	13	16	15	15	15.6	20.4					
15-Jun	15	14	15	19	18	15	16	17	17	21	20	21	18	16	24	21	18	25	19	12	12	9	8	8	16.6	24.9					
16-Jun	6	5	8	9	8	8	8	9	9	12	10	10	9	8	11	10	10	8	4	3	6	7	5	4	7.9	11.7					
17-Jun	5	3	4	5	4	4	4	2	4	9	13	13	9	8	7	12	16	16	12	11	8	2	3	6	7.5	16.1					
18-Jun	6	7	11	4	4	4	5	6	14	15	13	15	15	11	10	15	11	12	12	9	11	9	12	15	10.3	15.5					
19-Jun	16	14	14	19	18	20	20	19	19	19	22	22	25	26	29	26	24	21	14	16	16	13	13	13	19.0	28.9					
20-Jun	12	11	11	11	9	4	14	19	20	21	27	29	30	30	27	27	27	24	23	20	16	14	14	13	18.9	30.3					
21-Jun	7	4	3	5	7	5	3	2	3	4	5	7	14	12	10	10	12	14	13	13	9	5	8	7	7.5	14.3					
22-Jun	5	6	3	4	5	4	5	4	6	5	6	7	8	8	9	8	8	10	10	6	3	5	7	5	6.2	10.5					
23-Jun	5	4	5	6	7	4	3	4	4	5	5	5	6	6	8	17	9	11	14	14	8	7	8	8	7.2	16.7					
24-Jun	7	4	7	2	5	3	3	4	4	6	14	16	19	19	22	24	27	27	29	24	16	11	6	7	12.8	29.2					
25-Jun	5	4	5	6	4	6	8	9	5	6	5	6	6	8	11	12	9	21	18	8	7	3	4	3	7.5	21.3					
26-Jun	4	5	4	5	13	9	6	6	6	9	11	12	17	14	17	15	11	11	8	8	5	4	11	17	9.5	17.4					
27-Jun	12	11	12	6	7	6	7	18	21	30	33	32	32	31	29	31	30	26	25	18	11	6	6	7	18.6	33.4					
28-Jun	4	7	6	10	4	4	4	10	13	16	18	15	8	8	8	6	7	10	16	15	12	10	11	7	9.6	18.4					
29-Jun	4	4	2	5	7	6	2	2	4	6	6	8	7	6	5	7	7	5	12	6	4	7	7	7	5.8	11.7					
30-Jun	5	3	2	2	2	2	3	4	5	4	5	8	8	7	9	9	12	17	14	9	9	8	9	7	6.6	17.2					
7.5 7.1 7.2 7.1 7.5 7.2 7.7 9.7 11.1 12.8 13.8 14.4 14.8 14.4 14.9 15.7 15.3 15.9 15.0 13.1 10.1 8.2 8.3 8.2																								Diurnal Average							
15.8 18.1 18.5 18.8 18.3 20.8 20.3 19.0 21.1 30.0 33.4 32.1 32.0 31.0 33.8 33.6 34.7 31.4 32.5 31.6 27.6 19.6 14.8 17.4																								Diurnal Maximum							
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - June 2013

Maximum Value: 95.8 deg on Jun 23 14:00																		Hours in Service: 720							
Minimum Value: 1.9 deg on Jun 20 23:00																		Hours of Data: 720							
																		Hours of Missing Data: 0							
Percentiles: P ₁ = 3.2 P ₁₀ = 6.0 Q ₁ = 8.6 Median = 14.6 Q ₃ = 28.7 P ₉₀ = 52.3 P ₉₉ = 84.4																		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-Jun	26	22	12	9	35	18	13	6	8	11	23	14	13	30	24	18	29	55	64	28	15	20	24	14	64.2
2-Jun	10	25	10	12	7	71	37	27	39	40	47	63	64	28	34	36	87	9	41	13	19	7	7	7	87.4
3-Jun	6	7	12	7	7	10	10	9	14	16	11	21	27	30	54	24	59	46	29	8	9	11	18	11	59.3
4-Jun	7	26	37	31	37	20	15	18	20	14	16	14	21	27	16	15	10	14	8	4	9	18	7	44	43.6
5-Jun	18	43	25	80	15	52	40	18	10	8	7	15	19	8	12	6	19	5	15	8	7	3	27	14	79.5
6-Jun	10	24	5	87	80	4	7	8	9	14	32	20	14	17	11	11	14	15	13	10	6	4	7	35	87.2
7-Jun	64	84	56	22	32	23	40	10	15	13	13	8	22	18	49	19	33	29	24	17	74	12	20	43	84.2
8-Jun	13	9	25	22	23	8	35	8	8	11	12	11	12	17	13	21	17	17	10	9	9	32	10	9	34.6
9-Jun	9	14	8	9	8	12	6	5	6	12	22	15	18	25	12	16	13	25	31	5	46	35	25	26	46.0
10-Jun	22	7	16	41	27	6	6	9	9	10	10	13	12	16	13	12	18	22	9	10	28	13	13	18	40.8
11-Jun	56	14	42	15	14	7	8	7	19	11	12	15	15	12	12	11	12	10	9	11	6	10	3	4	56.3
12-Jun	4	7	6	8	13	23	9	14	9	8	9	11	14	61	19	32	16	8	10	9	19	13	14	9	60.6
13-Jun	12	76	41	18	6	3	10	13	7	11	11	16	17	20	33	23	20	8	6	12	11	12	11	9	76.3
14-Jun	6	4	6	4	5	60	54	11	8	8	9	15	9	18	16	10	33	8	7	5	5	9	6	5	60.3
15-Jun	3	6	4	5	5	5	6	6	7	7	11	12	29	15	11	25	10	8	11	8	8	7	6	6	29.1
16-Jun	12	16	6	5	9	7	8	8	21	11	13	19	17	29	20	17	26	25	53	76	16	19	14	15	76.2
17-Jun	10	15	32	35	44	43	11	39	29	12	14	17	37	56	53	23	14	18	12	9	77	15	61	7	76.5
18-Jun	33	7	48	80	55	43	64	25	5	5	8	17	10	79	16	28	11	28	9	10	28	53	19	15	80.1
19-Jun	6	4	13	4	4	7	4	6	5	4	11	7	8	7	7	5	6	4	3	5	4	7	4	4	13.3
20-Jun	6	5	10	22	9	51	10	9	8	10	8	12	12	9	7	11	11	9	10	6	2	2	2	23	50.7
21-Jun	15	28	20	18	18	44	20	45	49	60	49	52	23	29	40	42	30	15	9	9	8	20	22	7	60.0
22-Jun	15	11	41	26	71	41	52	34	16	18	26	46	32	40	46	48	44	19	20	13	17	7	3	60	70.9
23-Jun	26	51	51	26	25	69	76	18	19	58	69	58	52	96	59	36	14	17	13	5	9	8	6	4	95.8
24-Jun	5	46	54	61	14	41	29	28	60	47	13	14	15	16	13	13	10	8	8	6	13	7	72	44	71.9
25-Jun	34	53	50	20	57	45	13	14	67	21	85	55	51	44	21	26	15	10	34	41	8	28	42	15	85.0
26-Jun	58	13	21	44	51	5	18	14	10	13	8	7	7	6	9	8	13	13	12	16	46	24	25	9	57.5
27-Jun	4	7	5	65	20	38	26	4	8	6	8	9	9	7	10	8	12	8	6	5	8	18	17	30	65.2
28-Jun	63	71	19	31	70	49	31	24	12	11	9	16	49	67	37	55	52	18	8	5	7	8	5	17	71.2
29-Jun	35	26	57	27	12	29	54	94	58	38	59	72	61	74	60	85	33	74	23	21	45	13	6	5	94.1
30-Jun	8	64	41	59	73	86	72	34	22	37	42	14	20	33	51	25	21	15	4	5	4	7	9	16	85.9
	64.2	84.2	57.2	87.2	80.0	85.9	75.7	94.1	67.3	60.0	85.0	71.9	64.3	95.8	59.8	84.7	87.4	74.5	64.2	76.2	76.5	52.5	71.9	60.0	

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

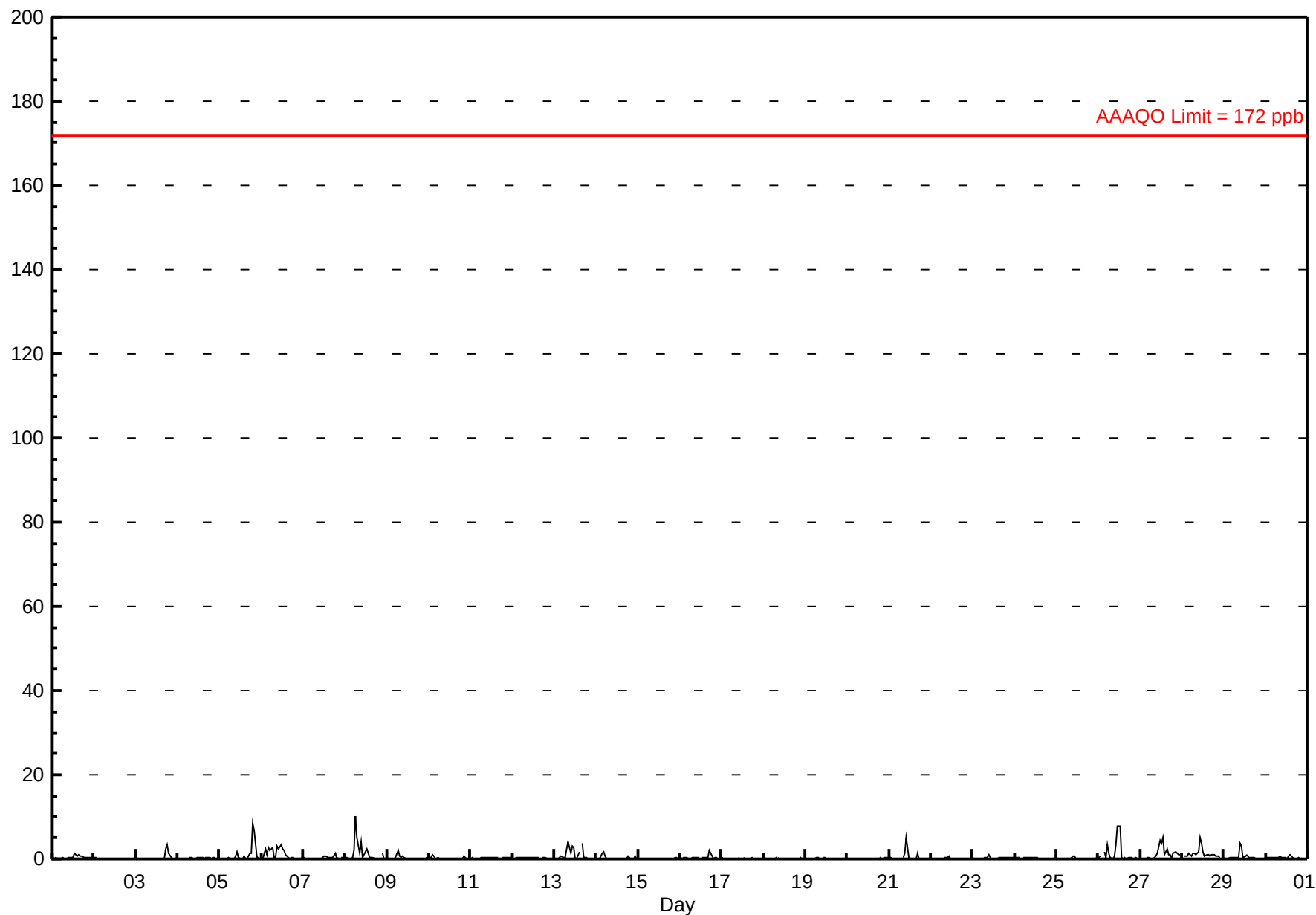
Sulphur Dioxide (SO₂) - ppb

Valleyview - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 10.1 ppb on Jun 8 07:00																				Maximum Daily Average: 1.4 ppb on Jun 8		Hours of Data: 663				
Minimum Value: 0 ppb on Jun 3 04:00																				Minimum Daily Average: 0.0 ppb on Jun 15		Hours of Missing Data: 57				
Maximum Diurnal Average: 1.1 ppb at hour 11																				Minimum Diurnal Average: 0.1 ppb at hour 1		Hours of Calibration: 34				
Monthly Average: 0.45 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 1.1 P ₉₉ = 5.1		Percent Operational Time: 96.8				
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-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0.4	1.5
2-Jun	0	0	0	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.2
3-Jun	N	N	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	1	0	0	0	0	0.4	3.3
4-Jun	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
5-Jun	A	0	0	0	0	0	0	0	0	1	2	0	0	0	1	0	0	1	1	8	7	0	0	A	1.0	8.3
6-Jun	0	0	2	1	3	2	3	0	0	3	2	3	2	2	1	0	0	0	0	0	0	0	A	0	1.2	3.4
7-Jun	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	A	0	0	0.2	1.4
8-Jun	0	0	0	0	0	2	10	5	1	4	0	1	2	1	0	0	0	0	0	0	A	2	0	0	1.4	10.1
9-Jun	0	0	0	0	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	2.0
10-Jun	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0.2	0.9
11-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.4
12-Jun	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
13-Jun	0	0	0	0	1	0	0	2	4	1	3	3	0	0	2	A	4	0	1	0	0	0	0	0	0.9	4.2
14-Jun	0	0	0	1	2	1	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	1	0	0.2	1.8
15-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.2
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	2	1	0	0	0	0	0	0.3	2.0
17-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
18-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
19-Jun	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
20-Jun	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
21-Jun	0	0	0	0	0	0	0	A	0	1	5	0	C	C	C	0	2	0	0	0	0	0	0	0	0.4	4.9
22-Jun	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
23-Jun	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
24-Jun	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
25-Jun	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
26-Jun	0	1	A	2	0	4	1	0	0	1	3	8	8	0	0	0	0	0	0	0	0	0	0	0	1.3	8.0
27-Jun	0	A	0	0	0	0	0	0	0	1	1	4	4	5	1	2	1	1	1	0	1	2	1	1	1.2	4.9
28-Jun	A	1	1	1	1	1	1	1	1	2	5	4	2	1	1	1	1	1	1	1	1	1	1	0	1.3	5.2
29-Jun	0	0	0	0	0	0	0	0	0	4	3	0	1	1	0	0	0	0	0	0	0	0	A	0	0.5	3.8
30-Jun	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0.3	0.9
0.1 0.1 0.2 0.3 0.3 0.4 0.7 0.5 0.4 0.8 1.1 0.9 0.8 0.5 0.4 0.3 0.4 0.4 0.4 0.5 0.4 0.2 0.2 0.1																									Diurnal Average	
0.4 0.7 2.3 1.8 2.7 3.5 10.1 5.2 4.2 4.2 5.2 8.0 7.8 4.9 1.7 2.3 3.7 2.4 3.3 8.3 6.8 1.5 1.0 1.0																									Diurnal Maximum	
C - Calibration N - Not Valid A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Valleyview - June 2013



Hourly Maximums

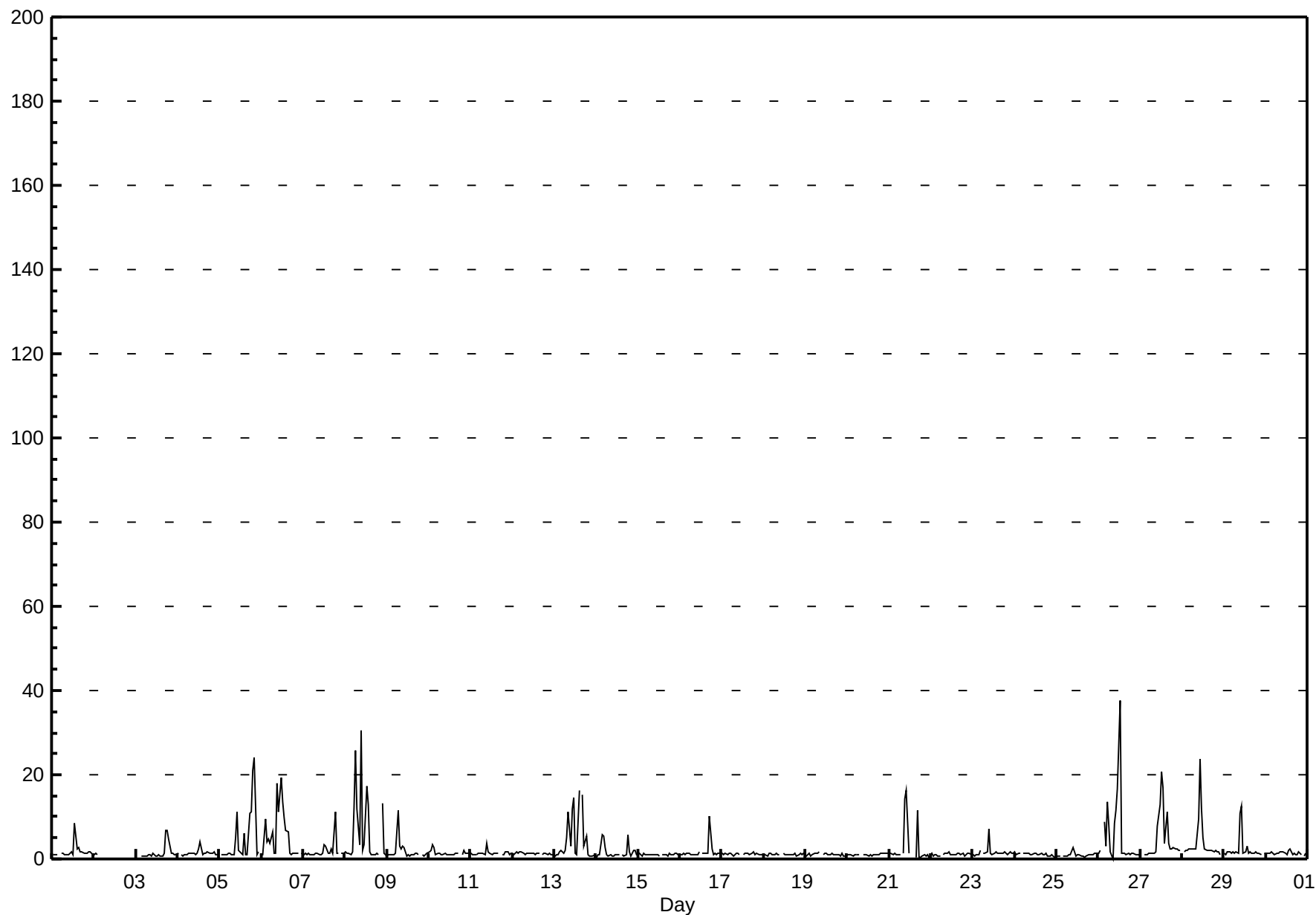
Sulphur Dioxide (SO₂) - ppb

Valleyview - June 2013

Maximum Value: 37.6 ppb on Jun 26 13:00																				Maximum Daily Average: 6.5 ppb on Jun 8										Hours in Service: 720									
Minimum Value: 0 ppb on Jun 26 09:00																				Minimum Daily Average: 1.0 ppb on Jun 25										Hours of Data: 663									
Maximum Diurnal Average: 4.8 ppb at hour 10																				Minimum Diurnal Average: 1.1 ppb at hour 24										Hours of Missing Data: 57									
Monthly Average: 2.34 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.8 Q ₁ = 1.0 Median = 1.2 Q ₃ = 1.5 P ₉₀ = 3.9 P ₉₉ = 20.6										Hours of Calibration: 34									
																				Percent Operational Time: 96.8																			
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-Jun	1	1	1	1	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1	1	1	2	2	1	1.8	8.4												
2-Jun	1	1	1	A	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	1.4												
3-Jun	N	N	N	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	7	N	N	N	N	N	1	1.6	6.8												
4-Jun	1	A	1	1	1	1	1	1	1	1	1	1	2	4	1	1	1	2	1	1	1	2	1	1	1	1.4	4.1												
5-Jun	A	1	1	1	1	1	1	1	1	5	11	2	1	1	6	1	1	11	11	21	24	1	2	A	4.9	24.0													
6-Jun	1	1	9	4	5	4	7	1	1	18	11	19	13	10	7	6	1	1	1	1	1	1	A	1	5.5	19.3													
7-Jun	1	1	1	1	1	1	1	1	1	1	1	1	3	3	1	1	2	1	11	1	1	A	1	1	1.9	11.2													
8-Jun	2	1	1	1	2	12	26	12	4	30	2	3	17	13	2	1	1	1	1	1	A	13	1	1	6.5	30.5													
9-Jun	1	1	1	1	1	1	12	3	2	3	3	1	1	1	1	1	1	1	1	A	1	1	1	1	1.8	11.7													
10-Jun	2	2	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1	2	1	1	1	1.4	3.2													
11-Jun	1	1	1	1	1	1	1	1	1	4	2	1	1	1	1	1	1	A	1	1	2	2	1	1	1.4	3.6													
12-Jun	2	1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.3	1.7													
13-Jun	1	1	1	2	2	1	2	5	11	3	12	15	1	1	16	A	15	3	5	1	1	1	1	1	4.4	16.2													
14-Jun	0	1	1	6	5	3	1	1	1	1	1	1	1	1	A	1	1	1	6	2	1	2	2	1	1.7	5.9													
15-Jun	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	1.4													
16-Jun	1	1	2	1	1	1	1	1	1	1	1	2	A	1	1	1	1	10	2	1	1	1	1	1	1.7	10.3													
17-Jun	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1.2	1.6													
18-Jun	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5													
19-Jun	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5													
20-Jun	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													
21-Jun	1	1	1	1	1	1	1	A	1	14	16	1	C	C	C	0	12	0	0	1	1	1	1	0	2.8	16.2													
22-Jun	1	1	1	1	1	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.6													
23-Jun	1	1	1	1	2	A	1	1	2	7	1	1	1	2	1	1	1	1	2	1	1	2	1	1	1.6	7.0													
24-Jun	2	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0	1.1	1.5													
25-Jun	1	1	1	A	1	1	1	1	1	3	2	1	1	1	1	1	0	1	1	1	1	1	1	1	1.0	2.6													
26-Jun	1	2	A	9	3	14	8	2	0	9	12	17	38	1	1	1	1	1	1	1	1	1	1	1	5.5	37.6													
27-Jun	1	A	1	1	1	1	1	1	1	2	8	13	21	17	4	11	4	2	2	3	3	2	2	2	4.5	20.7													
28-Jun	A	2	2	2	3	2	2	2	2	10	24	12	5	2	2	2	2	2	2	2	2	2	1	A	3.9	23.7													
29-Jun	1	1	2	2	1	2	1	2	1	11	13	1	2	3	1	2	1	2	2	1	1	1	A	1	2.4	12.7													
30-Jun	1	1	1	2	1	1	1	1	2	2	2	1	1	2	2	1	1	1	1	2	1	A	1	1	1.4	2.3													
1.1 1.2 1.5 1.8 1.6 2.2 2.9 1.8 1.7 4.8 4.7 3.8 4.5 3.1 2.3 1.8 2.2 2.1 2.6 2.1 2.0 1.8 1.2 1.1																									Diurnal Average														
1.6 2.1 9.4 8.9 5.4 13.7 25.8 11.9 11.1 30.5 23.7 19.3 37.6 16.9 16.2 11.3 15.3 10.9 11.2 21.1 24.0 13.2 2.1 2.1																									Diurnal Maximum														
C - Calibration N - Not Valid A - Automated Daily Zero Span																																							

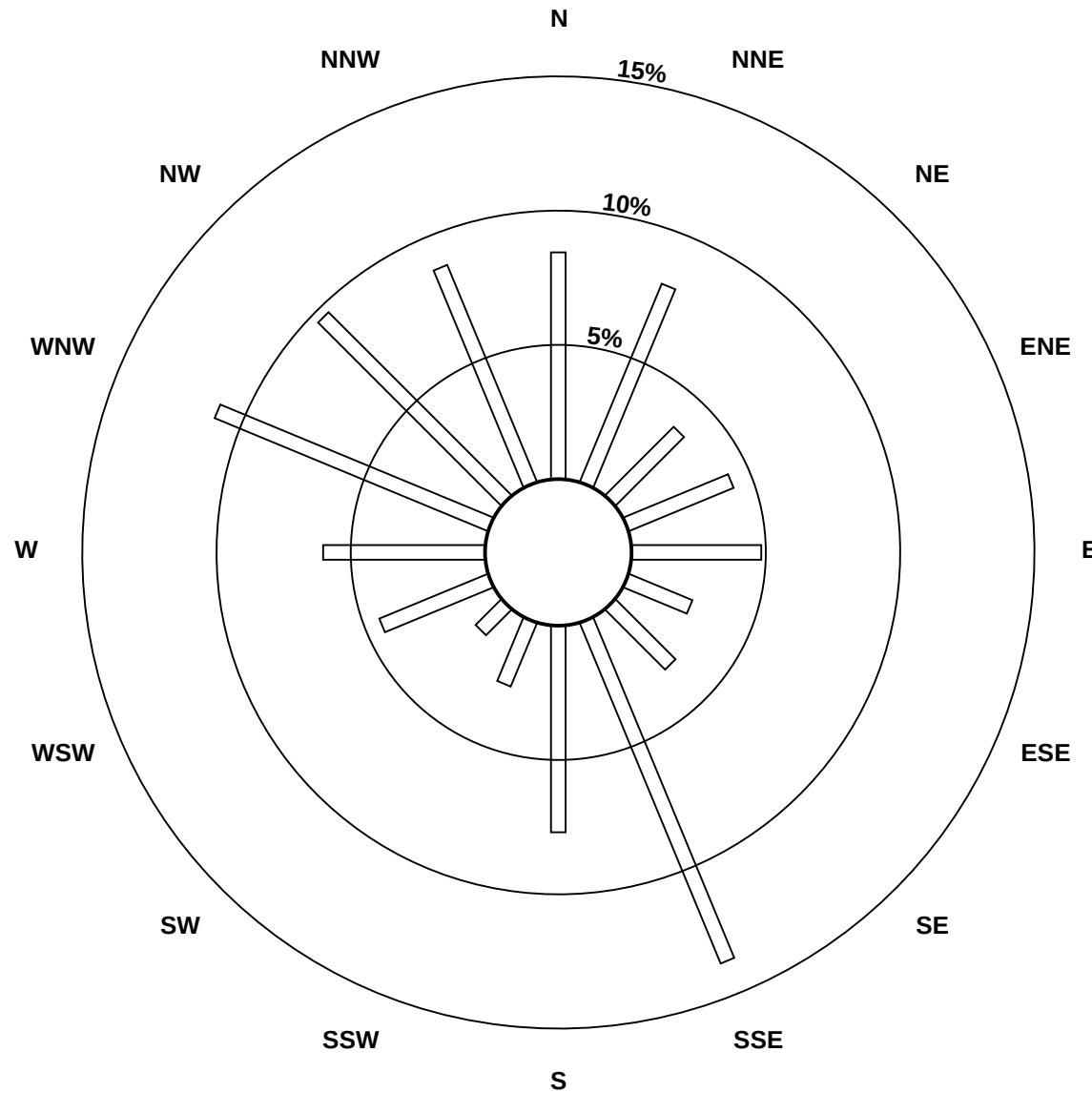
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - June 2013

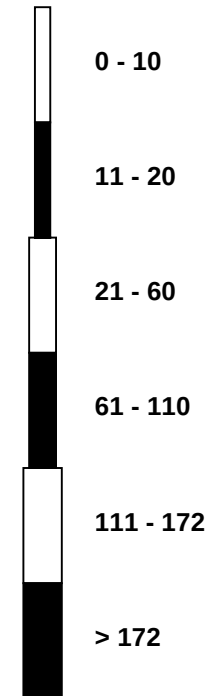


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - June 2013

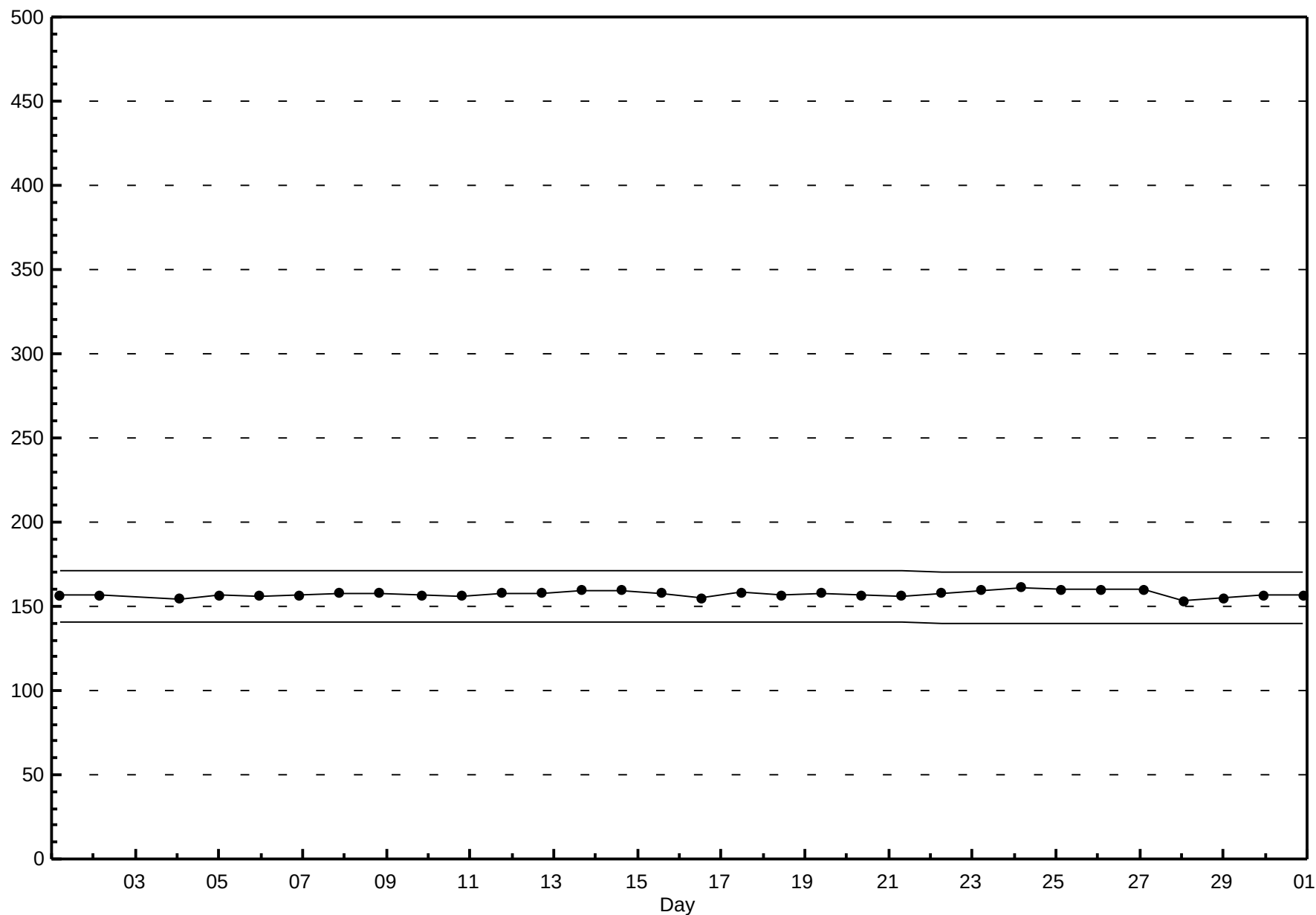


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - June 2013



Hourly Averages

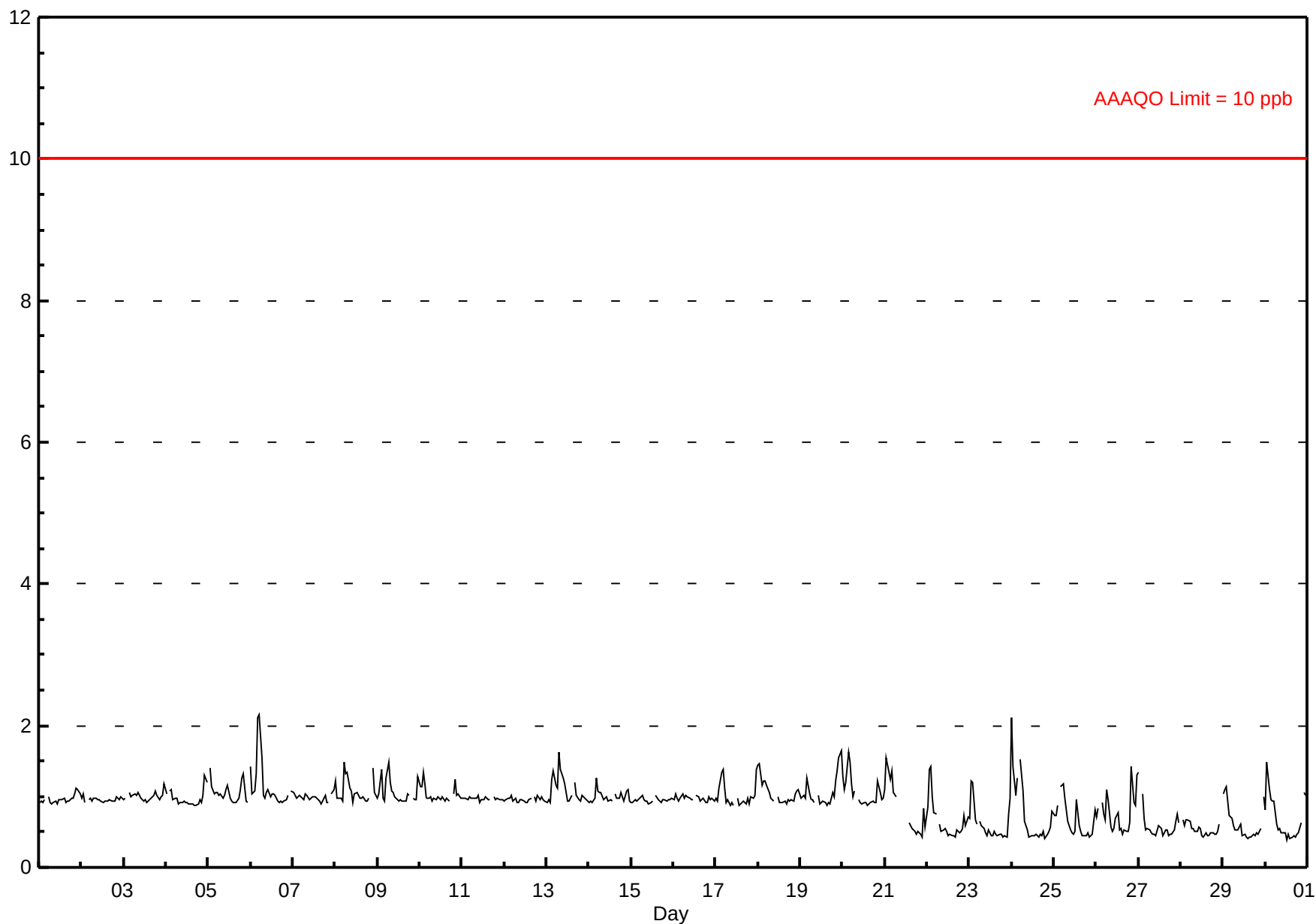
Hydrogen Sulphide (H₂S) - ppb

Valleyview - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.2 ppb on Jun 6 06:00 Maximum Daily Average: 1.2 ppb on Jun 6																				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 ppb on Jun 30 13:00 Maximum Diurnal Average: 1.1 ppb at hour 2 Monthly Average: 0.90 ppb Minimum Daily Average: 0.5 ppb on Jun 28 Minimum Diurnal Average: 0.8 ppb at hour 16 Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.8 Median = 0.9 Q ₃ = 1.0 P ₉₀ = 1.2 P ₉₉ = 1.5																										
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-Jun	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.1
2-Jun	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	1.0
3-Jun	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	1.2
4-Jun	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
5-Jun	A	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	1.4
6-Jun	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.2	2.2
7-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.1
8-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.1	1.5
9-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.1	1.5
10-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.3
11-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.0	1.0
12-Jun	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	1.0
13-Jun	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.1	1.6
14-Jun	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
15-Jun	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	1.0
16-Jun	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.0	1.0
17-Jun	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
18-Jun	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5
19-Jun	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.1	1.6
20-Jun	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.6
21-Jun	1	2	1	1	1	1	1	A	1	C	C	C	C	C	1	1	1	0	0	1	0	0	1	1	0.8	1.5
22-Jun	1	1	1	1	1	1	A	1	1	1	1	1	0	0	0	0	0	1	0	1	1	1	1	1	0.7	1.4
23-Jun	1	1	1	1	1	A	1	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1	0.6	1.2
24-Jun	2	1	1	1	A	2	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0.7	2.1
25-Jun	1	1	1	A	1	1	1	1	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0.7	1.2
26-Jun	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.8	1.4
27-Jun	1	A	1	1	1	1	1	0	0	0	0	1	1	1	0	1	1	0	0	0	1	1	1	1	0.6	1.4
28-Jun	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	A	0.5	0.7
29-Jun	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	A	1	0.6	1.1
30-Jun	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	A	1	1	0.7	1.5
																									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 Averages

Hydrogen Sulphide (H₂S) - ppb
Valleyview - June 2013



Hourly Maximums

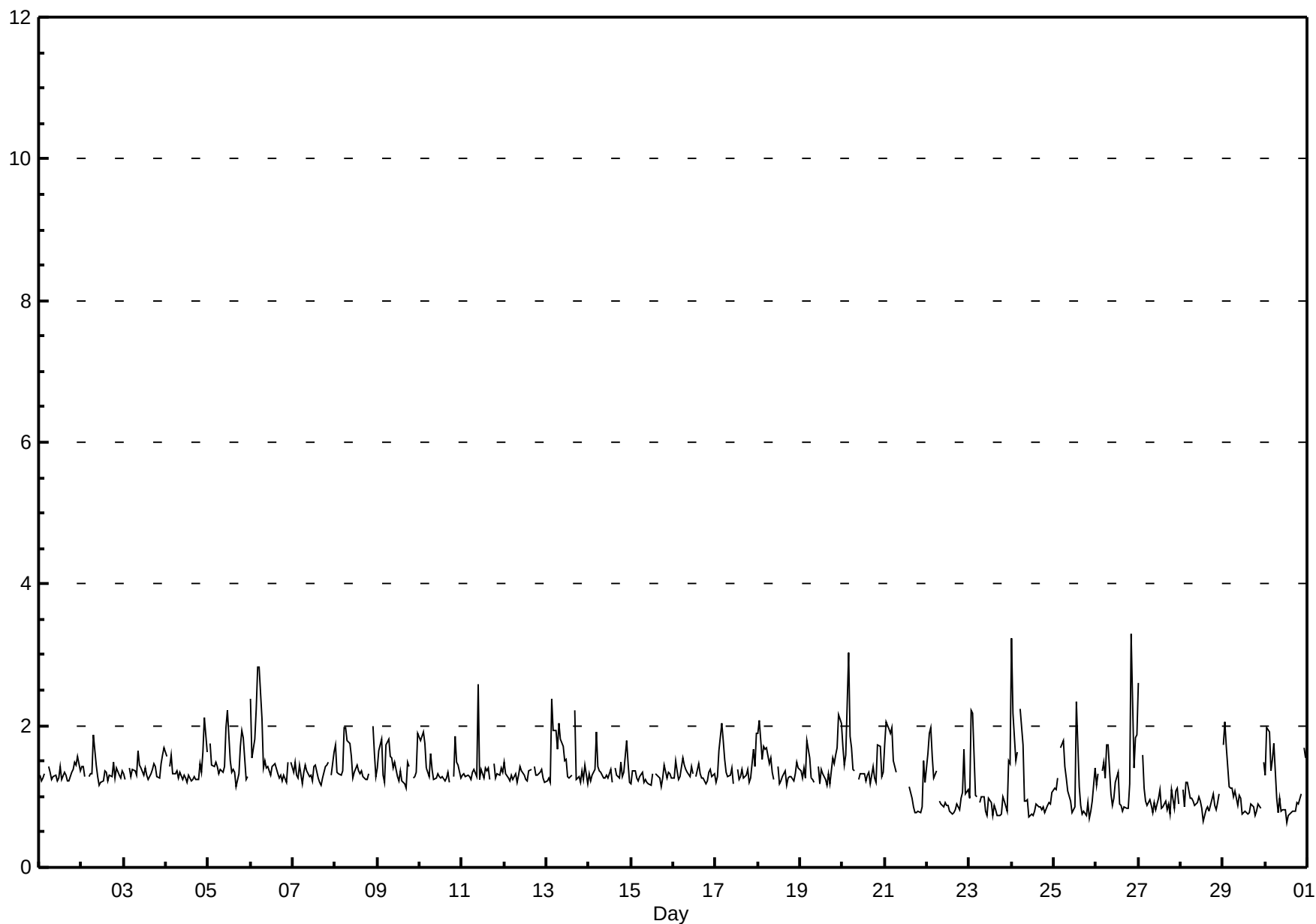
Hydrogen Sulphide (H₂S) - ppb

Valleyview - June 2013

Maximum Value: 3.3 ppb on Jun 26 21:00																			Maximum Daily Average: 1.6 ppb on Jun 6										Hours in Service: 720	
Minimum Value: 1 ppb on Jun 30 13:00																			Minimum Daily Average: 0.9 ppb on Jun 28										Hours of Data: 683	
Maximum Diurnal Average: 1.6 ppb at hour 1																			Minimum Diurnal Average: 1.1 ppb at hour 18										Hours of Missing Data: 37	
Monthly Average: 1.32 ppb																			Percentiles: P ₁ = 0.7 P ₁₀ = 0.9 Q ₁ = 1.2 Median = 1.3 Q ₃ = 1.4 P ₉₀ = 1.7 P ₉₉ = 2.6										Hours of Calibration: 37	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Jun	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.3	1.6				
2-Jun	1	1	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	1.9				
3-Jun	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.4	1.7				
4-Jun	2	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.4	2.1				
5-Jun	A	2	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	2	2	2	1	1	A	1.5	2.2				
6-Jun	2	2	2	2	3	3	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.6	2.8				
7-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1.3	1.6				
8-Jun	2	1	1	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1.5	2.0				
9-Jun	1	2	2	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	1.4	1.9				
10-Jun	2	2	2	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1.4	1.9				
11-Jun	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.4	2.6				
12-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.3	1.5				
13-Jun	1	1	1	2	2	2	2	2	2	2	1	2	1	1	1	A	2	1	1	1	1	1	1	1	1.5	2.4				
14-Jun	1	1	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1.4	1.9				
15-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.3	1.4				
16-Jun	1	2	1	1	1	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.3	1.5				
17-Jun	1	1	2	2	2	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	2	1.4	2.0				
18-Jun	2	2	2	2	2	2	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	2.1				
19-Jun	1	1	1	1	2	2	1	1	1	A	1	1	1	1	1	1	1	1	2	1	2	2	2	2	1.4	2.2				
20-Jun	2	1	2	3	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1.5	3.0				
21-Jun	2	2	2	2	2	2	1	A	1	C	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1.3	2.1				
22-Jun	2	2	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.1	2.0				
23-Jun	1	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.2				
24-Jun	3	2	2	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	3.2				
25-Jun	1	1	1	A	2	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1.1	2.3				
26-Jun	1	1	A	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	3	1	2	2	1.3	3.3				
27-Jun	3	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.6				
28-Jun	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.2				
29-Jun	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	2.1				
30-Jun	1	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1.1	2.0				
																									Diurnal Average					
																									Diurnal Maximum					
C - Calibration																														
A - Automated Daily Zero Span																														

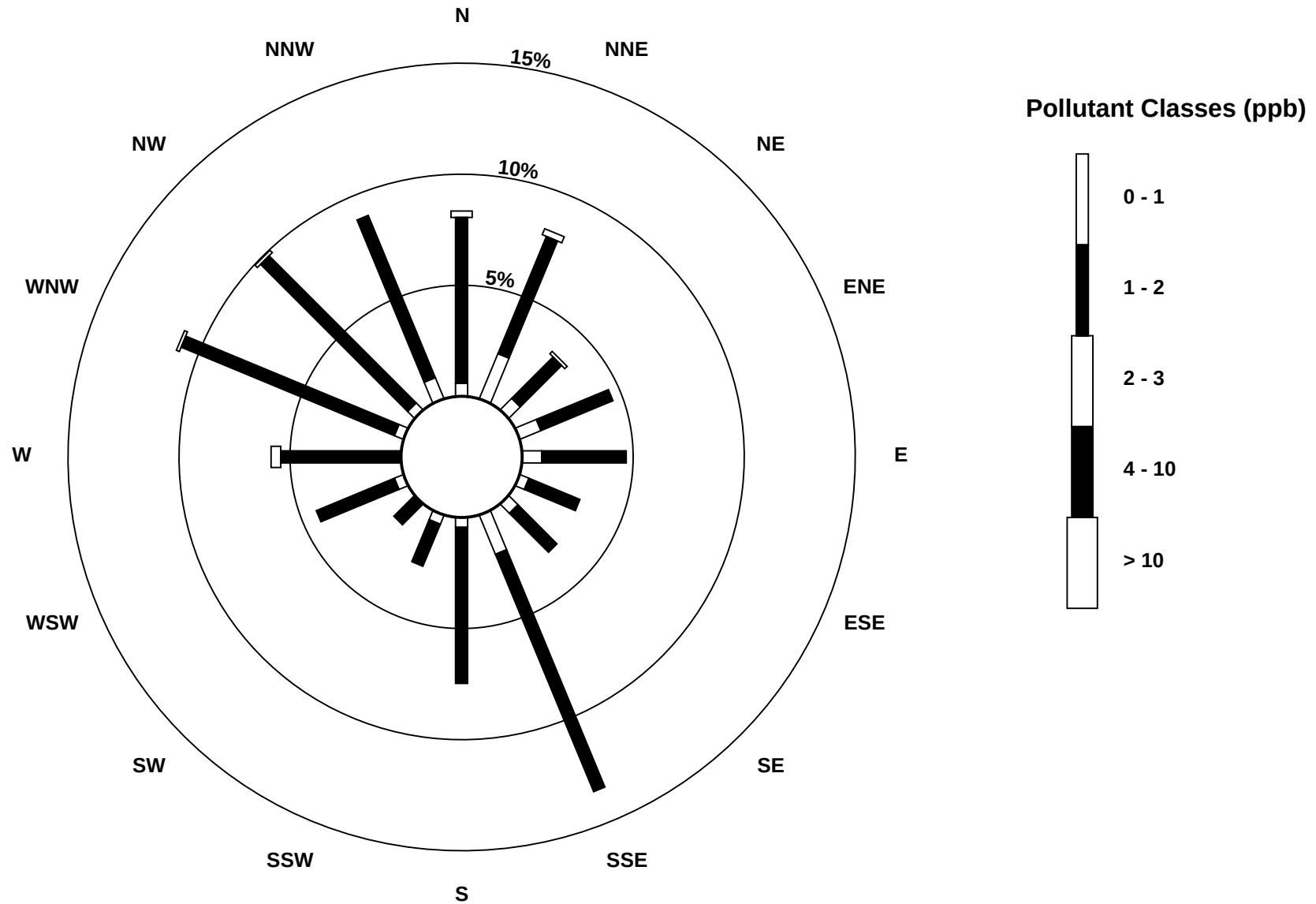
Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb
Valleyview - June 2013



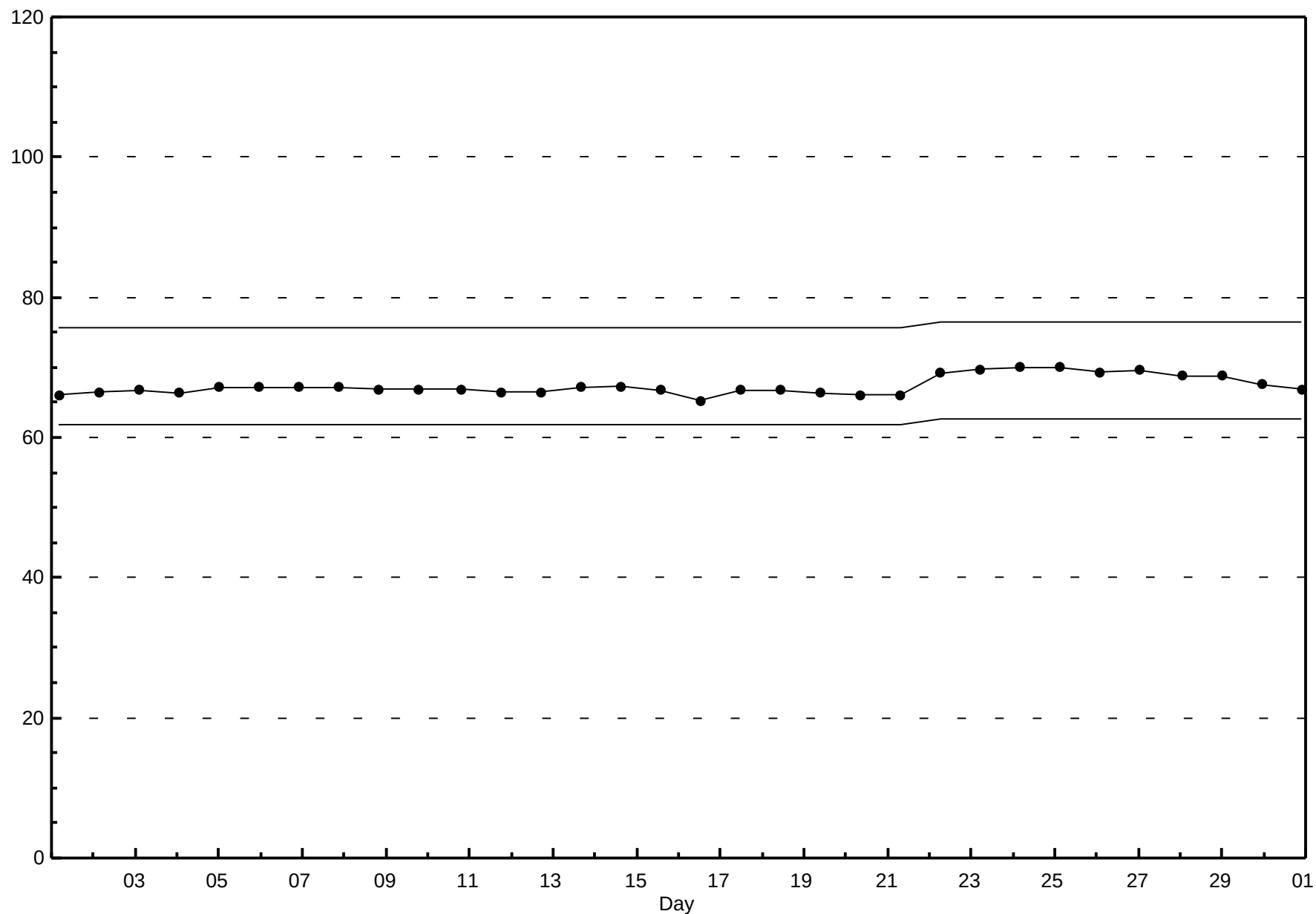
Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb
Valleyview - June 2013



Span Responses

Hydrogen Sulphide (H₂S)
Valleyview - June 2013



Hourly Averages

External Temperature (ET) - °C

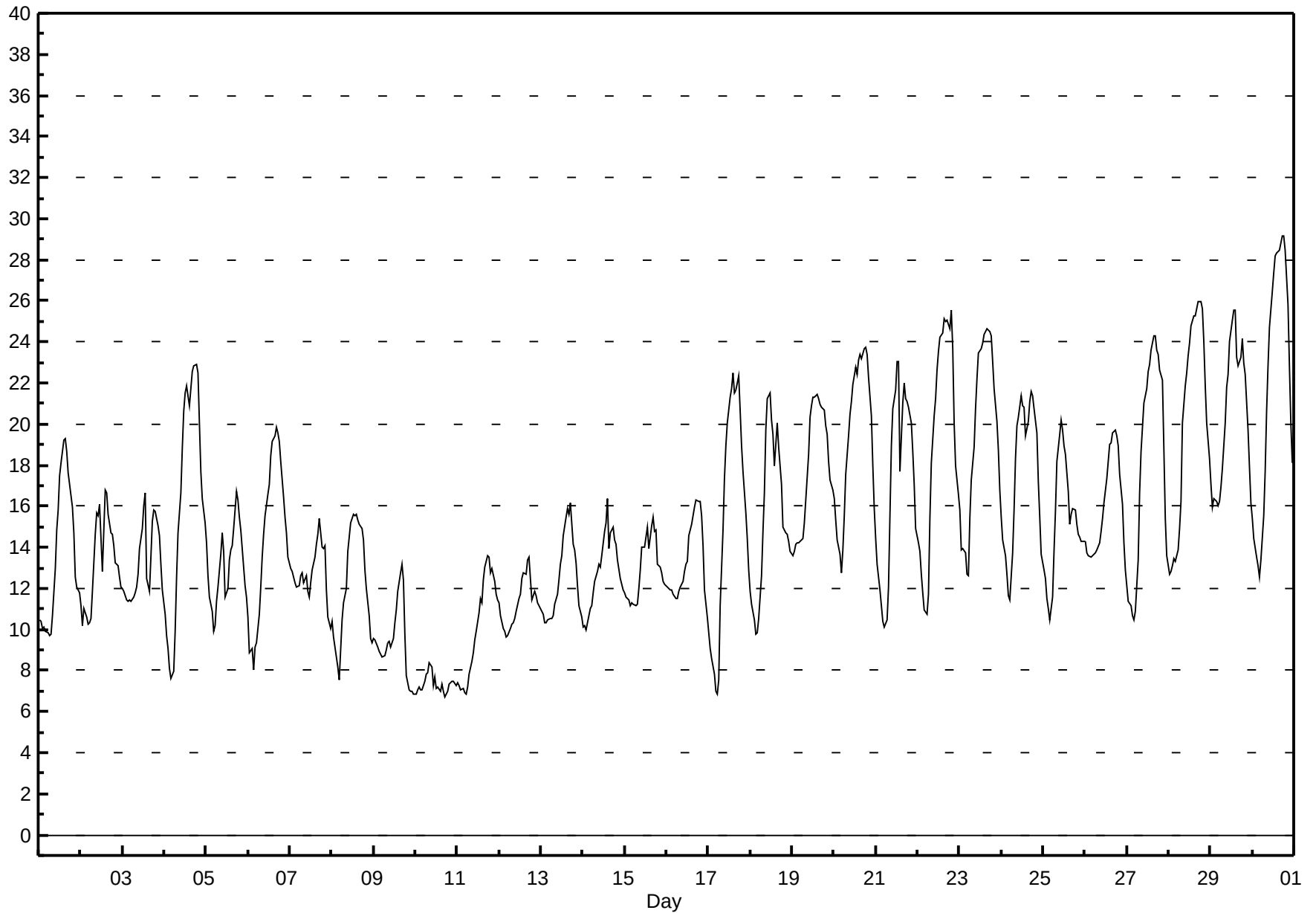
Valleyview - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 29.2 °C on Jun 30 19:00 Maximum Daily Average: 21.9 °C on Jun 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: 7 °C on Jun 10 18:00 Maximum Diurnal Average: 18.7 °C at hour 18 Monthly Average: 15.09 °C												Minimum Daily Average: 7.3 °C on Jun 10 Minimum Diurnal Average: 10.7 °C at hour 5 Percentiles: P ₁ = 7.0 P ₁₀ = 9.6 Q ₁ = 11.6 Median = 14.2 Q ₃ = 18.6 P ₉₀ = 22.5 P ₉₉ = 28.0														
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-Jun	10	10	10	10	10	10	10	10	11	13	15	16	17	18	19	19	19	18	16	16	15	13	12	12	13.7	19.3
2-Jun	11	10	11	11	10	10	11	12	15	16	16	16	13	15	17	17	16	15	15	14	13	13	13	12	13.3	16.8
3-Jun	12	12	11	11	11	11	12	12	12	13	14	15	16	17	12	12	14	15	16	16	15	15	13	12	13.3	16.7
4-Jun	11	10	9	8	8	8	10	13	15	17	19	21	22	22	21	22	23	23	23	22	20	18	16	15	16.4	22.9
5-Jun	14	13	12	11	10	10	11	12	14	15	14	12	12	13	14	14	15	17	16	15	15	13	12	12	13.1	16.7
6-Jun	11	9	9	8	9	9	11	12	14	15	16	17	17	18	19	19	20	20	19	18	16	15	15	14	14.6	19.8
7-Jun	13	13	13	12	12	12	13	13	12	13	12	12	12	13	14	14	15	15	14	14	14	12	11	10	12.7	15.4
8-Jun	10	10	9	8	8	9	10	11	12	14	15	16	16	16	15	15	15	15	14	13	12	11	10	9	12.2	15.6
9-Jun	10	9	9	9	9	9	9	9	9	9	9	10	10	11	12	13	13	12	10	8	7	7	7	7	9.4	13.2
10-Jun	7	7	7	7	7	7	8	8	8	8	7	8	7	7	7	7	7	7	7	7	7	7	7	7	7.3	8.4
11-Jun	7	7	7	7	7	7	7	8	8	9	10	10	11	12	11	12	13	14	14	13	13	12	12	11	10.1	13.6
12-Jun	11	11	10	10	10	10	10	10	10	11	11	12	12	12	13	13	13	13	13	11	12	12	11	11	11.3	13.5
13-Jun	11	11	10	10	10	11	11	11	11	12	12	13	14	15	15	16	16	16	14	14	13	12	11	11	12.5	16.2
14-Jun	10	10	10	11	11	11	12	12	13	13	13	14	15	15	16	14	15	15	14	14	13	12	12	12	12.9	16.4
15-Jun	12	12	11	11	11	11	11	11	12	13	14	14	14	15	14	15	15	15	15	13	13	13	12	12	13.0	15.5
16-Jun	12	12	12	12	12	12	12	12	12	12	13	13	13	15	15	16	16	16	16	16	16	14	12	11	13.3	16.3
17-Jun	10	9	9	8	7	7	8	11	15	17	19	20	21	22	22	22	22	22	21	19	18	16	14	13	15.4	22.5
18-Jun	12	11	10	10	10	11	13	15	17	20	21	22	20	20	18	20	19	18	17	15	15	15	14	14	15.6	21.5
19-Jun	14	14	14	14	14	14	14	15	16	19	20	21	21	21	21	21	21	21	21	20	20	18	17	17	17.9	21.4
20-Jun	16	15	14	14	13	14	16	18	19	20	21	22	23	22	23	23	23	24	24	23	22	20	18	16	19.4	23.7
21-Jun	14	13	12	11	10	10	10	12	16	19	21	22	23	23	18	21	22	21	21	21	20	19	17	15	17.1	23.0
22-Jun	14	14	13	12	11	11	12	15	18	20	21	23	24	24	24	25	25	25	25	26	24	20	18	17	19.2	25.6
23-Jun	16	14	14	14	13	13	15	17	19	21	22	23	24	24	24	24	25	24	24	23	22	20	19	17	19.6	24.7
24-Jun	15	14	14	13	12	11	14	16	18	20	20	21	21	21	19	20	21	22	21	21	20	17	15	14	17.5	21.6
25-Jun	13	12	12	11	10	12	14	16	18	20	20	20	19	19	17	15	16	16	16	15	15	15	14	14	15.3	20.2
26-Jun	14	14	14	14	14	14	14	14	14	15	15	16	17	18	19	19	20	20	19	19	18	16	14	13	15.9	19.7
27-Jun	12	11	11	11	10	11	13	17	19	20	21	22	23	23	24	24	24	24	23	23	22	19	15	14	18.1	24.3
28-Jun	13	13	13	13	13	14	15	16	20	22	23	23	24	25	25	25	26	26	26	26	24	22	20	18	20.2	26.0
29-Jun	17	16	16	16	16	16	17	18	20	22	22	24	25	26	26	23	23	23	24	23	22	20	18	16	20.4	25.5
30-Jun	15	14	14	13	13	13	16	18	21	23	25	26	27	28	28	28	29	29	29	28	26	23	20	18	21.9	29.2
12.3 11.7 11.3 11.0 10.7 10.9 11.9 13.1 14.6 15.9 16.7 17.3 17.8 18.3 18.2 18.4 18.6 18.7 18.3 17.6 16.7 15.3 14.0 13.1																								Diurnal Average		
17.0 15.9 16.4 16.2 16.0 16.2 16.9 17.8 20.6 22.8 24.7 26.4 27.4 28.2 28.3 28.5 28.8 29.1 29.2 28.5 25.9 22.8 20.1 18.3																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Valleyview - June 2013



Hourly Averages

Relative Humidity (RH) - %

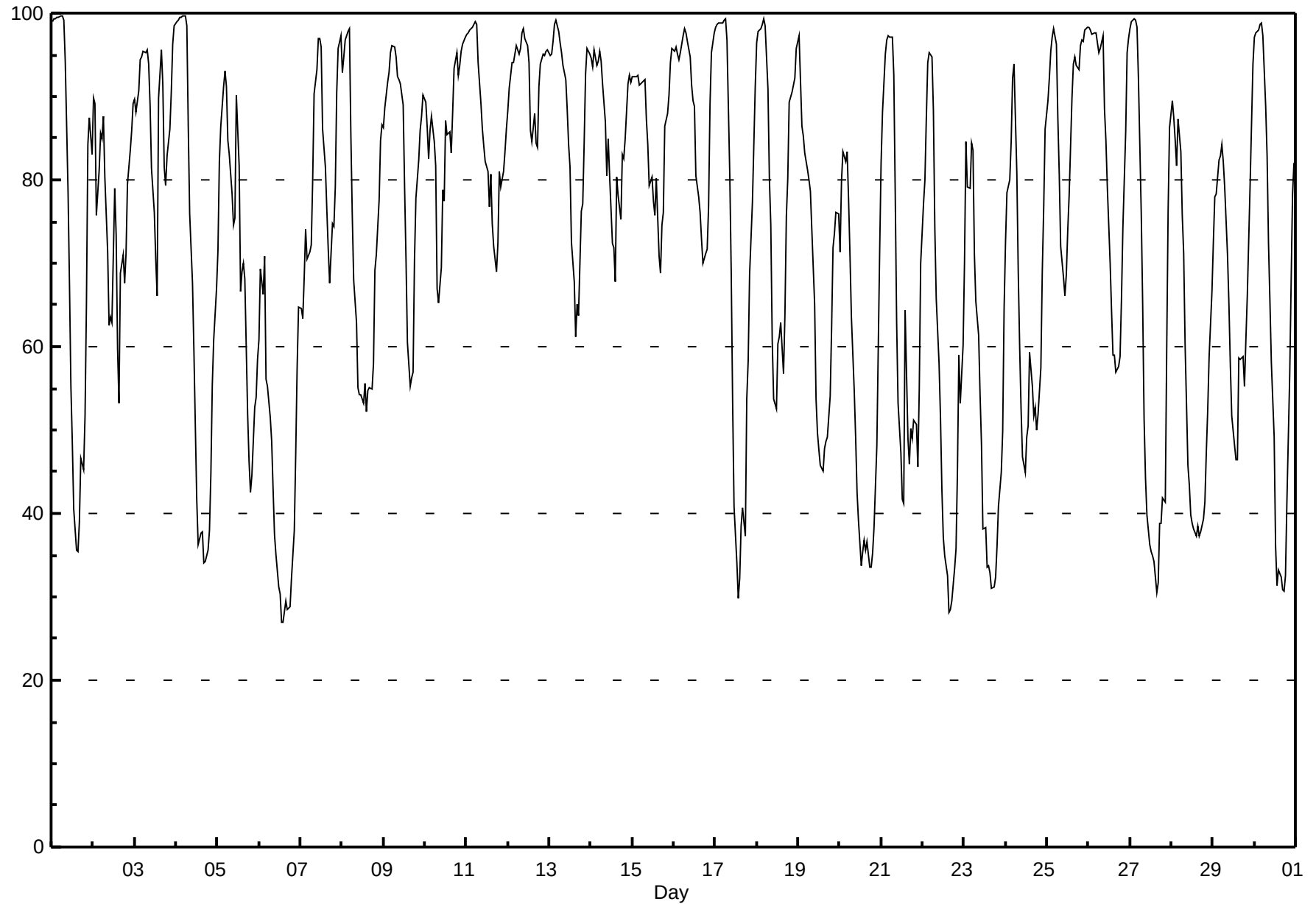
Valleyview - June 2013

Number of Exceedences (AAAQO): Maximum Value: 99.7 % on Jun 4 06:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 92.7 % on Jun 12				Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0			
Minimum Value: 27 % on Jun 6 15:00 Maximum Diurnal Average: 91.7 % at hour 5 Monthly Average: 73.24 %																				Minimum Daily Average: 44.4 % on Jun 6 Minimum Diurnal Average: 56.5 % at hour 14 Percentiles: P ₁ = 29.4 P ₁₀ = 38.8 Q ₁ = 56.9 Median = 78.4 Q ₃ = 92.0 P ₉₀ = 97.1 P ₉₉ = 99.4							
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-Jun	99	99	99	99	100	100	100	99	94	78	67	55	48	40	36	35	39	47	45	52	65	84	87	83	73.0	99.6	
2-Jun	90	89	76	81	86	85	88	80	71	63	64	63	79	73	60	53	69	71	68	71	79	84	86	89	75.7	89.7	
3-Jun	90	88	91	94	95	95	95	96	94	89	81	76	70	66	90	96	92	81	79	83	86	91	96	98	88.1	98.5	
4-Jun	99	99	99	100	100	100	98	86	76	68	59	51	42	36	38	38	34	34	36	38	45	55	61	67	64.9	99.7	
5-Jun	71	82	87	91	93	91	85	83	78	75	75	90	82	67	69	70	68	52	46	42	45	53	54	58	71.1	93.1	
6-Jun	61	69	66	71	56	55	52	49	43	37	35	31	30	27	27	29	29	29	29	32	38	47	57	65	44.4	70.9	
7-Jun	65	63	68	74	71	71	72	80	90	93	97	97	96	86	81	76	72	68	75	74	79	90	96	97	80.5	97.2	
8-Jun	93	95	97	98	98	85	76	68	63	55	54	54	53	56	52	55	55	55	58	69	71	78	85	87	71.2	98.2	
9-Jun	86	89	92	93	95	96	96	95	92	92	91	89	79	70	61	55	56	57	70	78	82	86	88	90	82.5	96.0	
10-Jun	89	86	82	86	88	84	82	67	65	70	79	77	87	85	86	83	88	93	95	93	94	95	96	97	85.4	97.1	
11-Jun	97	98	98	98	99	99	99	94	89	86	84	82	81	77	81	75	72	69	72	81	79	81	83	86	85.9	99.0	
12-Jun	88	91	94	94	95	96	95	96	98	98	97	96	94	86	85	88	84	84	91	94	95	95	95	96	92.7	98.1	
13-Jun	95	95	97	99	99	98	97	95	94	92	88	84	82	73	68	61	65	64	76	77	84	93	96	95	86.1	99.2	
14-Jun	94	94	96	94	94	95	94	91	87	80	85	81	72	72	68	80	78	75	83	83	85	92	93	92	85.7	95.6	
15-Jun	92	92	92	93	91	92	92	92	87	84	79	80	78	76	80	71	69	75	76	86	88	90	94	96	85.2	95.7	
16-Jun	95	96	95	94	95	97	98	98	97	95	91	89	89	81	78	76	73	70	71	72	77	89	95	98	87.9	98.2	
17-Jun	98	99	99	99	99	99	99	97	80	69	53	41	34	30	32	38	41	37	54	58	69	77	84	91	69.9	99.4	
18-Jun	96	98	98	99	99	99	91	80	75	61	54	52	60	61	63	57	64	76	80	89	91	91	92	96	80.1	99.3	
19-Jun	97	92	86	85	83	81	80	79	74	65	54	50	48	46	45	48	49	49	54	62	72	74	76	76	67.7	97.4	
20-Jun	71	80	83	82	83	78	71	64	55	49	42	39	34	35	37	36	37	34	34	35	38	48	60	72	54.0	83.5	
21-Jun	82	88	95	97	97	97	97	92	78	63	53	47	42	41	64	49	46	50	49	51	51	46	55	70	66.7	97.2	
22-Jun	77	80	88	94	95	95	88	74	66	58	52	43	37	35	33	28	28	29	33	36	45	59	53	60	57.8	95.2	
23-Jun	70	85	79	79	84	83	71	65	61	54	48	38	38	34	34	33	31	31	32	36	41	45	50	65	53.7	84.6	
24-Jun	72	78	80	85	92	94	81	69	60	53	47	45	49	51	59	55	52	53	50	52	57	69	77	86	65.2	93.9	
25-Jun	89	92	95	97	98	96	87	81	72	68	66	69	74	78	90	94	95	94	93	96	97	97	98	98	88.1	98.4	
26-Jun	98	98	97	98	98	96	95	96	97	89	85	79	70	64	59	59	57	58	59	66	74	86	95	97	82.1	98.2	
27-Jun	98	99	99	99	98	92	76	65	51	44	40	36	35	35	34	30	32	39	39	42	41	60	76	86	60.4	99.3	
28-Jun	89	88	85	82	87	83	76	71	60	46	43	40	39	38	37	39	37	38	39	41	47	52	59	67	57.7	89.5	
29-Jun	73	78	78	82	83	84	82	79	71	65	58	52	48	46	46	59	58	59	55	61	66	79	87	94	68.5	93.9	
30-Jun	97	98	98	99	99	97	89	83	72	66	58	49	36	31	33	32	31	31	33	41	57	68	78	82	64.9	98.9	
87.2 89.3 89.7 91.2 91.7 90.5 86.7 82.1 76.4 70.1 66.1 62.5 60.2 56.5 57.5 56.6 56.6 56.7 59.2 63.1 68.0 75.1 80.1 84.4																									Diurnal Average		
99.0 99.3 99.5 99.5 99.7 99.7 99.6 99.1 97.6 98.1 97.0 96.9 95.9 86.1 89.9 95.6 94.7 93.7 95.2 96.0 96.7 96.5 98.0 98.5																									Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %

Valleyview - June 2013



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - June 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	1	1	2	1	1	1	3	4	4	5	5	5	3	2	2	2	3	4	3	0	0	1	1	1	2.0	5.5
Dir	166	195	159	184	171	172	161	162	162	162	164	253	200	265	171	128	158	169	165	45	243	143	185	158	174	162
2 Spd	1	3	3	2	2	2	4	7	1	3	2	1	4	2	1	5	6	7	4	3	4	2	3	4	1.0	6.9
Dir	133	161	163	168	155	65	102	320	290	15	112	68	113	173	61	24	313	318	331	6	338	307	300	307	350	320
3 Spd	3	3	3	2	2	3	3	2	2	4	3	4	5	6	4	3	1	1	1	1	2	0	0	1	1.5	5.8
Dir	327	333	324	317	334	324	360	13	8	2	335	336	321	298	131	348	178	85	119	92	96	336	187	169	340	298
4 Spd	1	1	1	1	1	1	1	3	3	3	2	3	1	2	4	3	3	3	3	3	2	0	0	2	1.7	3.9
Dir	202	170	174	230	175	186	167	164	160	159	167	167	237	240	233	158	162	154	153	157	149	238	228	159	173	233
5 Spd	0	0	1	1	2	2	2	1	0	2	9	10	10	6	2	4	4	6	13	14	7	4	4	2	3.5	14.4
Dir	200	237	189	163	191	165	177	153	115	265	280	293	293	297	185	164	176	251	281	272	265	241	250	276	264	272
6 Spd	4	2	3	2	6	7	6	9	8	9	10	10	8	7	7	9	9	7	8	9	8	1	1	1	5.5	10.3
Dir	248	199	247	244	277	275	282	290	290	278	276	276	286	273	288	325	317	321	324	328	334	94	171	178	292	276
7 Spd	1	1	1	1	1	1	1	1	1	1	2	3	1	10	7	5	7	4	3	4	1	2	1	1	1.2	9.8
Dir	168	161	165	164	168	168	165	162	173	168	152	157	203	294	299	314	295	327	327	346	277	234	214	297	282	294
8 Spd	2	1	1	1	1	4	8	11	11	11	9	10	12	12	15	13	12	14	10	12	6	4	3	4	7.2	15.3
Dir	222	41	163	156	213	273	265	275	282	282	304	298	288	316	304	321	313	314	311	333	297	281	330	320	300	304
9 Spd	5	2	4	5	5	5	5	7	8	10	10	8	13	13	15	12	9	16	19	20	14	8	4	6	7.7	19.6
Dir	326	306	281	306	301	284	277	280	292	284	303	353	1	360	2	343	346	8	7	7	5	339	299	281	338	7
10 Spd	7	7	7	8	6	7	7	10	13	12	11	14	12	13	12	12	11	8	5	3	3	1	1	1	7.5	13.8
Dir	298	290	281	288	285	299	314	333	336	329	337	330	335	322	315	309	311	326	343	353	270	285	357	310	318	330
11 Spd	1	1	1	1	2	2	1	3	2	2	1	3	0	3	2	3	6	7	3	4	3	3	3	2	2.0	7.4
Dir	198	117	129	116	99	56	65	19	39	38	20	7	66	73	32	9	357	353	56	48	56	40	53	53	35	353
12 Spd	2	4	3	2	4	4	5	4	6	4	4	4	2	5	5	4	4	5	3	6	5	7	8	5	3.9	7.6
Dir	70	96	95	75	2	8	13	10	15	25	23	13	65	7	12	11	359	8	4	352	328	356	359	338	11	359
13 Spd	6	4	4	4	3	4	4	4	5	6	6	8	10	7	7	13	10	7	2	4	1	1	1	1	4.2	12.7
Dir	333	318	289	251	263	285	281	275	269	279	271	285	301	324	284	290	272	246	10	138	191	191	160	173	283	290
14 Spd	1	1	1	1	5	4	6	7	8	10	10	13	13	9	11	11	10	10	10	10	8	7	10	9	7.2	13.2
Dir	170	174	172	254	284	284	306	309	320	322	325	326	320	325	306	336	304	304	280	285	295	301	285	297	307	320
15 Spd	8	9	10	10	11	11	12	12	12	12	12	15	19	14	17	18	15	8	9	10	9	7	7	6	10.8	18.6
Dir	302	306	305	301	302	302	305	298	306	303	306	318	339	333	340	348	345	347	337	339	326	325	325	318	322	339
16 Spd	6	5	6	5	6	5	5	4	4	5	4	6	5	7	5	5	5	4	3	3	0	1	1	1	3.8	6.9
Dir	322	302	300	300	307	305	299	302	297	330	325	347	327	351	304	313	328	291	285	299	193	188	165	170	313	351
17 Spd	1	1	0	0	0	0	1	1	1	2	1	3	1	3	2	3	2	1	4	1	0	2	0	1	0.3	3.6
Dir	166	168	175	185	289	180	251	207	178	168	110	112	97	3	34	357	348	55	162	165	123	146	82	339	112	162
18 Spd	1	0	0	1	1	1	1	1	2	1	3	4	4	6	5	6	3	1	2	3	1	3	2	0	1.1	6.0
Dir	13	224	154	30	9	316	146	43	4	18	348	65	55	99	58	88	46	145	183	221	161	348	357	23	61	88
19 Spd	2	4	3	2	4	4	5	3	6	5	7	7	7	7	5	5	3	2	1	1	1	1	1	2	2.7	7.2
Dir	27	22	12	14	360	10	25	30	33	70	100	97	100	100	112	100	121	126	65	161	329	353	13	20	67	100
20 Spd	1	2	2	3	3	3	3	3	4	6	7	8	6	6	5	6	7	7	6	4	3	4	3	2	3.4	7.9
Dir	32	33	345	357	357	2	27	71	77	63	95	80	106	98	82	72	66	67	62	55	67	160	161	163	72	80
21 Spd	0	1	1	1	1	1	3	2	2	2	1	4	2	4	11	2	1	5	3	2	2	3	1	1	0.3	11.1
Dir	190	5	174	219	243	160	162	163	160	188	326	328	352	21	12	24	167	168	169	157	130	152	267	155	111	12
22 Spd	0	1	0	0	0	1	1	1	2	1	2	1	3	3	2	2	4	4	1	1	1	1	1	1	0.6	4.3
Dir	71	344	28	247	195	150	173	153	146	138	344	327	21	70	12	282	319	358	18	94	117	89	80	358	18	358

Hourly Averages

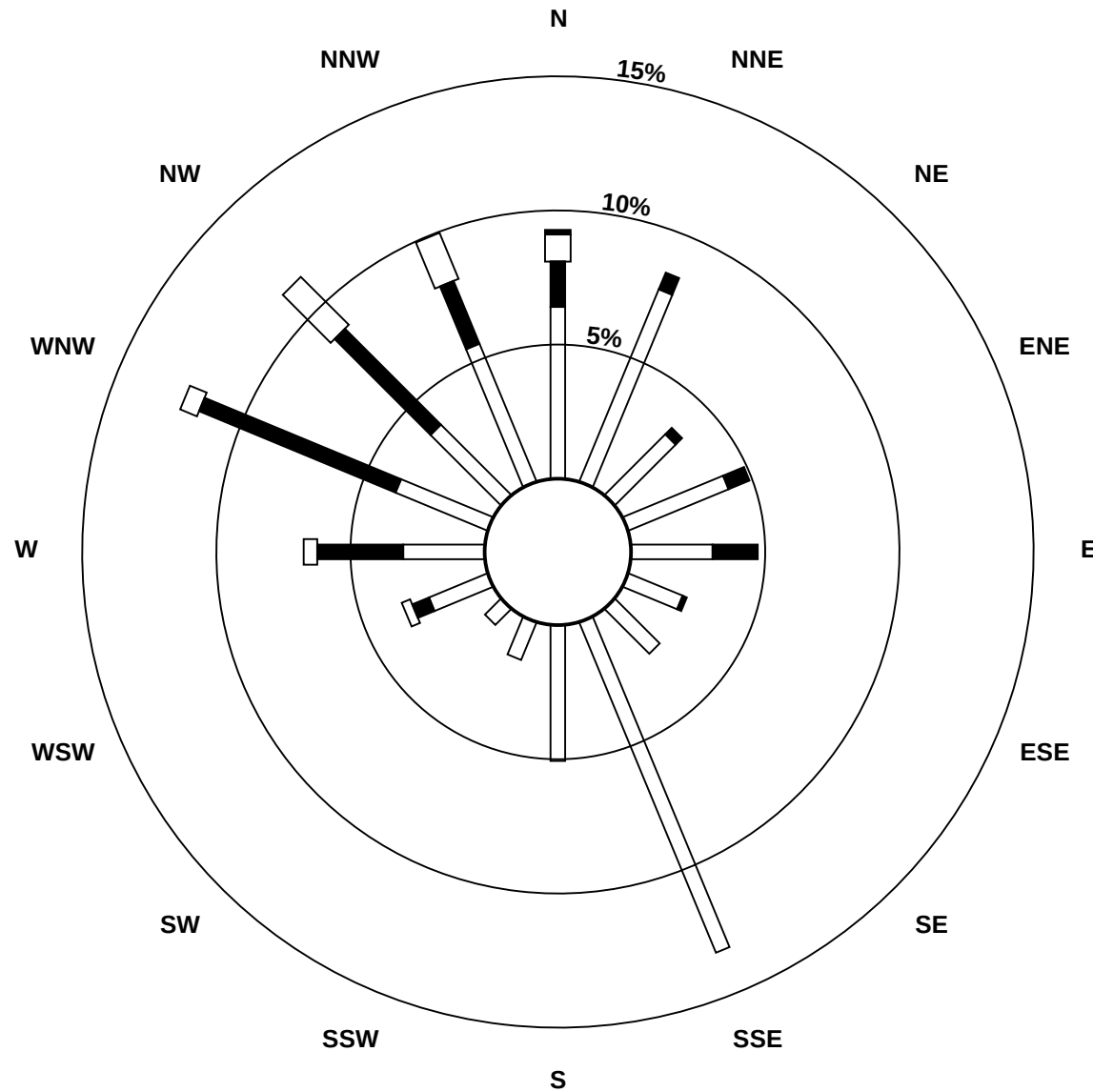
Wind Speed (km/h)
Wind Direction (deg)
Valleyview - June 2013

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	0	1	2	2	1	2	1	2	1	1	1	2	4	6	6	5	4	4	3	3	3	2	2	1	1.6	6.0							
Dir	18	20	110	222	162	140	143	147	126	115	77	28	14	28	34	70	82	75	94	109	104	138	248	27	78	34							
24 Spd	1	1	1	1	0	1	1	1	1	3	5	4	10	6	3	4	6	4	5	5	4	5	4	5	2.7	9.8							
Dir	42	326	1	345	2	324	128	61	123	74	64	27	354	41	97	79	86	100	61	30	25	12	359	354	38	354							
25 Spd	4	2	3	2	3	1	2	2	0	3	1	4	4	3	3	4	4	2	1	1	1	1	1	1	0.8	4.2							
Dir	356	10	5	12	357	21	349	22	237	315	51	125	95	95	110	140	163	151	151	175	154	164	212	290	78	125							
26 Spd	1	3	4	5	3	5	4	2	1	7	7	7	10	9	10	12	9	9	8	2	1	0	1	1	4.1	12.3							
Dir	269	257	275	272	271	262	272	256	196	255	265	267	281	292	298	314	326	2	353	40	110	337	338	340	294	314							
27 Spd	0	1	1	2	2	2	3	3	10	14	12	14	11	8	9	9	11	10	9	6	3	1	1	1	4.0	13.8							
Dir	354	186	159	162	164	162	164	202	243	247	251	265	283	283	300	282	307	347	347	344	330	172	180	174	277	247							
28 Spd	2	2	2	0	0	1	2	2	2	3	5	6	5	5	4	3	5	4	3	4	2	1	1	2	0.8	6.0							
Dir	163	164	165	144	193	169	164	159	150	260	278	283	303	335	29	5	31	46	32	55	71	89	44	349	283								
29 Spd	1	1	1	0	1	0	1	2	2	1	4	3	3	2	4	5	2	1	1	3	1	1	0	0	0.3	4.7							
Dir	353	296	241	187	254	198	173	177	158	180	309	342	322	338	340	164	158	160	162	163	125	185	43	311	242	164							
30 Spd	0	0	1	0	0	0	1	3	2	3	2	1	1	1	2	3	3	2	1	1	1	1	1	2	0.3	2.7							
Dir	170	251	171	173	178	213	175	158	163	162	177	201	66	358	28	38	27	19	58	19	24	5	329	334	70	38							
Spd	1.1	0.8	1.0	1.2	1.5	1.6	1.4	1.8	1.7	2.4	2.6	3.3	3.8	3.8	3.7	3.5	3.3	3.0	2.5	2.5	1.6	0.9	1.1	1.3	Diurnal Average								
Dir	314	303	281	285	294	297	294	297	301	297	303	316	327	335	336	341	330	343	344	344	338	325	313	316	Diurnal Maximum								
Spd	8.4	8.8	10.1	9.6	10.8	11.0	11.6	11.9	12.9	13.8	12.5	14.6	18.6	14.4	17.2	17.8	14.6	16.2	19.3	19.6	14.3	8.1	9.9	9.5	Diurnal Maximum								
Dir	302	306	305	301	302	302	305	298	336	247	251	318	339	333	340	348	345	8	7	7	5	339	285	297									
Maximum Speed Value: 20 km/h on Jun 9 20:00																								Minimum Speed Value: 0 km/h on Jun 22 03:00				Hours in Service:				720	
Maximum Daily Speed Average: 10.8 km/h on Jun 15																								Minimum Daily Speed Average: 0.3 km/h on Jun 30				Hours of Data:				720	
Maximum Diurnal Speed Average: 3.8 km/h at hour 13																								Minimum Diurnal Speed Average: 0.8 km/h at hour 2				Hours of Missing Data:				0	
Monthly Average Velocity: 2.02 km/h 321.3 deg																								Speed Percentiles: P ₁ = 0.2 P ₁₀ = 0.7 Q ₁ = 1.3 Median = 3.0 Q ₃ = 5.7 P ₉₀ = 9.8 P ₉₉ = 14.6				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	85	26	11	2	0	0	124																										
NorthEast	61	11	0	0	0	0	72																										
East	43	15	0	0	0	0	58																										
SouthEast	52	0	0	0	0	0	52																										
South	143	2	0	0	0	0	145																										
SouthWest	27	2	1	0	0	0	30																										
West	41	45	8	0	0	0	94																										
NorthWest	51	69	25	0	0	0	145																										
Total	503	170	45	2	0	0	720																										

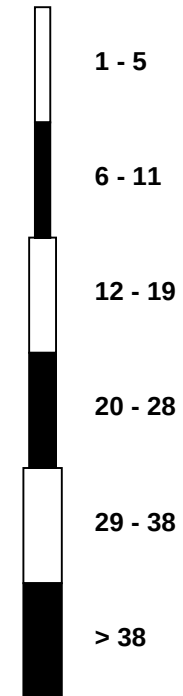
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - June 2013



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - June 2013

Maximum Speed: 20 km/h on Jun 9 20:00																				Maximum Daily Speed Average: 11.6 km/h on Jun 15										Hours in Service: 720	
Minimum Speed: 1 km/h on Jun 17 03:00																				Minimum Daily Speed Average: 1.9 km/h on Jun 30										Hours of Data: 720	
Maximum Diurnal Speed Average: 7.4 km/h at hour 13																				Minimum Diurnal Speed Average: 2.5 km/h at hour 1										Hours of Missing Data: 0	
Monthly Average Speed: 4.60 km/h																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.1 Q ₁ = 1.8 Median = 3.5 Q ₃ = 6.3 P ₉₀ = 10.1 P ₉₉ = 15.6										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-Jun	1	2	2	1	2	2	3	4	4	6	6	6	4	4	3	3	3	4	3	2	1	1	1	1	2.9	5.7					
2-Jun	1	3	3	2	2	3	4	7	2	4	3	2	4	2	3	6	6	7	5	4	4	2	3	4	3.7	7.5					
3-Jun	3	3	3	2	2	3	3	2	2	4	4	5	6	7	6	5	2	2	1	2	2	1	1	1	2.9	6.5					
4-Jun	1	1	1	1	1	1	1	3	3	3	3	3	4	3	5	3	3	3	4	3	2	1	1	2	2.4	5.1					
5-Jun	1	1	2	1	2	2	2	2	2	3	9	11	10	7	2	4	5	8	14	15	7	4	5	2	5.0	14.7					
6-Jun	4	2	4	3	6	7	7	9	9	10	10	11	9	8	7	9	9	8	9	9	8	1	1	1	6.8	11.1					
7-Jun	2	2	1	1	1	1	1	1	1	1	2	3	3	10	7	6	7	4	6	5	1	2	1	2	3.0	10.2					
8-Jun	3	2	1	1	2	4	8	11	11	12	10	11	13	13	16	14	12	15	10	12	7	5	3	4	8.3	15.9					
9-Jun	5	3	4	5	5	5	5	7	8	10	11	8	13	13	15	12	10	16	19	20	14	8	5	7	9.5	19.9					
10-Jun	8	7	7	9	6	7	7	10	13	13	11	14	13	13	12	12	11	9	5	3	3	2	2	1	8.2	14.0					
11-Jun	1	1	1	1	2	2	2	3	2	3	2	3	3	4	4	4	6	8	6	5	3	3	3	2	3.0	7.7					
12-Jun	3	4	3	3	4	4	5	5	6	4	4	4	4	6	5	5	5	6	4	6	6	7	8	5	4.7	7.7					
13-Jun	6	4	4	4	3	5	4	4	5	7	6	9	11	8	7	13	10	8	7	4	1	1	1	2	5.6	13.2					
14-Jun	2	1	1	2	5	5	6	7	8	11	11	13	14	10	12	11	10	10	10	10	8	9	10	10	8.1	13.7					
15-Jun	8	9	10	10	11	11	12	12	12	12	12	15	19	15	18	18	15	9	10	11	9	7	7	7	11.6	19.0					
16-Jun	6	5	6	5	6	5	5	4	5	5	5	6	6	7	6	6	6	4	4	3	1	1	1	1	4.6	7.4					
17-Jun	1	1	1	1	1	1	1	2	1	2	3	4	3	4	3	4	3	2	4	2	1	2	1	2	2.1	4.5					
18-Jun	1	1	1	1	1	1	1	1	2	3	4	5	5	7	5	7	4	2	3	4	3	3	2	1	2.9	6.8					
19-Jun	2	4	3	2	4	4	6	4	6	6	8	8	8	8	6	5	3	2	1	1	1	1	2	2	4.0	8.0					
20-Jun	2	2	2	3	3	3	3	3	5	7	8	9	7	6	6	7	8	8	6	5	3	4	3	2	4.8	8.9					
21-Jun	1	2	1	1	1	1	3	2	2	3	3	4	4	6	11	3	2	5	3	2	2	3	2	1	2.9	11.5					
22-Jun	1	1	1	1	1	1	1	1	2	2	3	3	4	4	4	4	5	5	2	1	1	2	3	3	2.4	4.8					
23-Jun	1	1	2	3	2	2	1	2	2	2	3	3	5	7	7	6	5	5	4	3	4	2	2	1	3.2	6.9					
24-Jun	1	2	1	1	1	1	1	1	2	3	6	5	10	6	4	5	6	5	5	5	4	5	5	5	3.9	10.4					
25-Jun	4	2	3	2	3	2	2	2	2	3	3	5	4	3	3	4	4	2	2	2	1	1	1	1	2.5	4.5					
26-Jun	1	3	5	5	3	5	4	3	2	7	8	7	10	10	10	13	9	9	9	2	1	1	1	2	5.4	13.0					
27-Jun	2	2	3	2	2	2	3	3	10	14	13	14	12	9	10	10	11	10	9	6	3	1	1	1	6.4	14.3					
28-Jun	2	2	2	1	1	1	2	2	2	5	6	7	6	6	5	4	6	4	3	4	2	2	2	2	3.3	6.8					
29-Jun	2	2	1	1	1	1	1	2	2	1	5	4	4	3	5	5	3	1	1	3	1	2	1	2	2.2	4.8					
30-Jun	1	1	1	1	1	1	1	3	3	3	2	2	3	3	3	3	3	3	2	2	1	1	2	2	1.9	3.5					
2.5 2.5 2.7 2.6 2.8 3.1 3.6 4.1 4.6 5.6 6.1 6.8 7.4 7.0 7.1 7.0 6.4 6.1 5.6 5.1 3.5 2.8 2.7 2.6																									Diurnal Average						
8.5 8.9 10.2 9.7 10.9 11.2 11.8 12.1 13.0 14.1 12.8 14.9 19.0 14.8 17.6 18.1 14.9 16.3 19.5 19.9 14.5 8.5 10.0 9.7																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - June 2013

Maximum Value: 95.4 deg on Jun 21 11:00																								Hours in Service: 720	
Minimum Value: 6.5 deg on Jun 27 06:00																								Hours of Data: 720	
																								Hours of Missing Data: 0	
Percentiles: P ₁ = 7.7 P ₁₀ = 11.5 Q ₁ = 16.4 Median = 27.8 Q ₃ = 50.5 P ₉₀ = 71.8 P ₉₉ = 92.7																								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-Jun	42	52	11	29	23	20	9	9	14	11	13	47	55	76	60	76	26	15	29	93	78	68	71	38	92.8
2-Jun	81	14	8	12	49	57	47	37	94	47	38	65	30	34	84	28	23	24	53	45	20	20	11	12	94.3
3-Jun	11	15	8	24	21	17	25	33	22	23	38	37	35	29	83	88	45	85	41	61	26	60	77	39	88.0
4-Jun	42	27	32	49	40	28	33	17	25	26	41	51	77	71	49	23	38	31	19	14	9	76	56	25	77.1
5-Jun	60	83	42	50	36	15	25	72	82	56	15	13	15	20	43	14	24	47	31	12	15	19	27	41	82.6
6-Jun	17	19	35	61	11	11	21	14	16	21	20	24	25	38	28	19	16	19	18	15	7	61	55	35	61.2
7-Jun	23	21	43	58	19	19	19	21	29	40	35	18	59	16	17	27	29	24	49	20	59	40	43	86	85.5
8-Jun	51	90	47	53	38	18	11	10	13	15	22	21	23	20	16	16	17	13	15	13	28	17	27	22	90.5
9-Jun	12	36	19	13	14	15	14	13	17	11	22	20	11	13	15	20	19	8	9	10	8	13	16	11	35.8
10-Jun	18	25	18	11	14	13	16	8	9	13	14	12	11	11	15	12	13	23	24	28	16	46	56	55	56.3
11-Jun	35	42	50	39	28	28	49	26	44	42	71	34	92	51	76	62	25	17	54	31	27	27	31	28	92.3
12-Jun	32	19	20	23	12	10	13	18	14	23	20	13	63	33	19	45	39	18	65	20	16	12	11	17	64.7
13-Jun	12	16	19	16	13	13	13	13	15	15	20	15	16	24	26	16	23	35	89	16	46	44	19	29	88.8
14-Jun	38	23	30	59	25	15	14	10	12	13	14	11	15	25	21	11	16	19	11	9	11	30	10	13	59.2
15-Jun	8	9	8	10	8	10	10	11	11	11	13	12	13	14	11	11	11	31	17	16	8	10	15	16	31.0
16-Jun	15	12	11	13	13	10	12	12	16	20	23	25	19	20	27	30	30	33	19	25	77	27	19	32	77.0
17-Jun	29	12	60	63	63	85	46	44	64	55	86	56	81	66	70	23	31	68	8	27	82	17	88	59	88.4
18-Jun	47	83	65	54	79	70	33	80	63	89	63	40	49	33	26	30	50	61	26	40	75	32	46	89	89.0
19-Jun	47	13	14	47	7	12	9	21	16	33	28	27	23	26	24	19	21	42	28	43	58	62	30	62.0	
20-Jun	54	37	21	20	9	19	20	40	30	33	32	29	25	32	32	34	30	29	32	28	32	23	10	20	53.5
21-Jun	80	92	40	62	71	23	8	10	18	55	95	53	91	94	15	72	68	20	23	16	18	31	82	66	95.4
22-Jun	82	93	93	66	70	70	36	52	31	74	75	90	66	53	82	69	38	27	62	53	37	79	60	91	92.8
23-Jun	94	80	51	28	35	27	56	33	61	77	83	76	51	34	37	36	36	41	37	18	18	17	58	77	93.6
24-Jun	32	56	25	60	91	63	61	70	61	52	39	46	27	32	42	35	27	31	32	17	17	10	13	10	90.9
25-Jun	19	24	19	14	24	48	43	50	87	50	80	23	28	29	28	13	15	23	46	35	45	48	56	66	87.2
26-Jun	72	12	15	20	27	13	15	43	33	20	17	16	16	17	15	19	18	16	18	31	48	66	92	67	92.0
27-Jun	89	66	63	20	12	6	8	37	28	13	17	20	21	18	17	25	17	15	11	8	32	26	22	17	88.5
28-Jun	8	19	12	72	75	61	8	9	34	55	33	34	40	39	55	49	25	34	33	18	33	63	37	19	75.4
29-Jun	34	26	56	68	66	81	37	25	18	58	35	45	59	63	60	10	19	34	23	10	76	60	84	78	84.3
30-Jun	71	75	62	84	75	78	36	12	20	27	42	60	84	93	64	58	46	61	54	50	52	60	42	65	92.7
	93.6	92.8	92.6	84.3	90.9	84.9	60.6	79.8	94.3	88.8	95.4	89.5	92.3	94.2	84.3	88.0	68.0	85.1	88.8	92.8	82.4	78.6	92.0	91.2	

PAZA

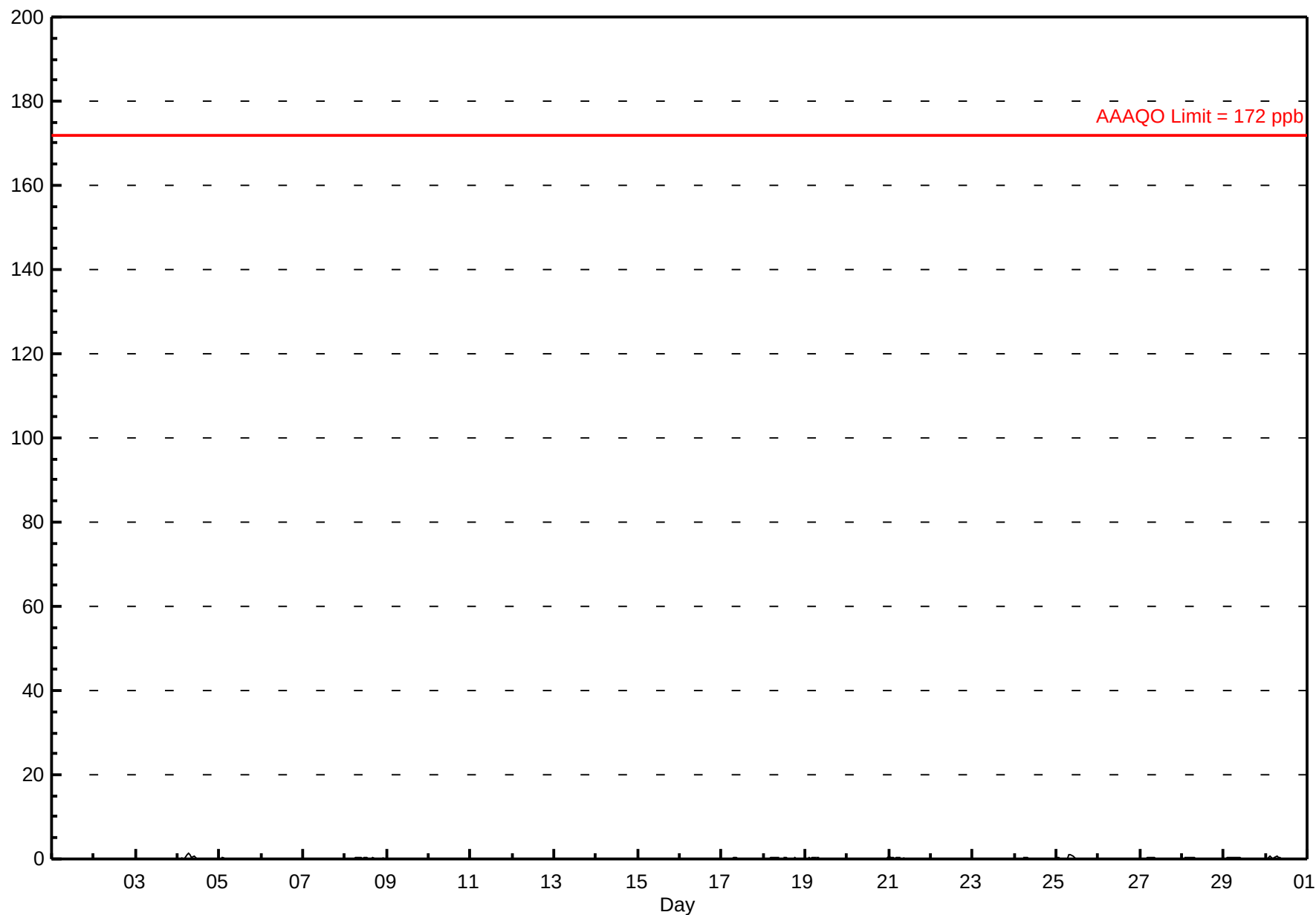
Portable – Sunset House Station

Monthly Summary Tables, Graphs and Roses

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.4 ppb on Jun 4 07:00 Maximum Daily Average: 0.2 ppb on Jun 4																								Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Jun 1 01:00 Maximum Diurnal Average: 0.2 ppb at hour 7 Monthly Average: 0.06 ppb Minimum Daily Average: 0.0 ppb on Jun 10 Minimum Diurnal Average: 0.0 ppb at hour 21 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 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-Jun	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
2-Jun	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
3-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
4-Jun	0	A	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4
5-Jun	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	0.3
6-Jun	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
7-Jun	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
8-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.4
9-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.1
10-Jun	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
11-Jun	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
12-Jun	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
13-Jun	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
14-Jun	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
15-Jun	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
16-Jun	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
17-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
18-Jun	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
19-Jun	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	0.5
20-Jun	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	0.4
21-Jun	1	0	0	0	0	0	0	A	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.6
22-Jun	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
23-Jun	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
24-Jun	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
25-Jun	0	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
26-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
27-Jun	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	0.5
28-Jun	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.4
29-Jun	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
30-Jun	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.5
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Sunset House - June 2013



Hourly Maximums

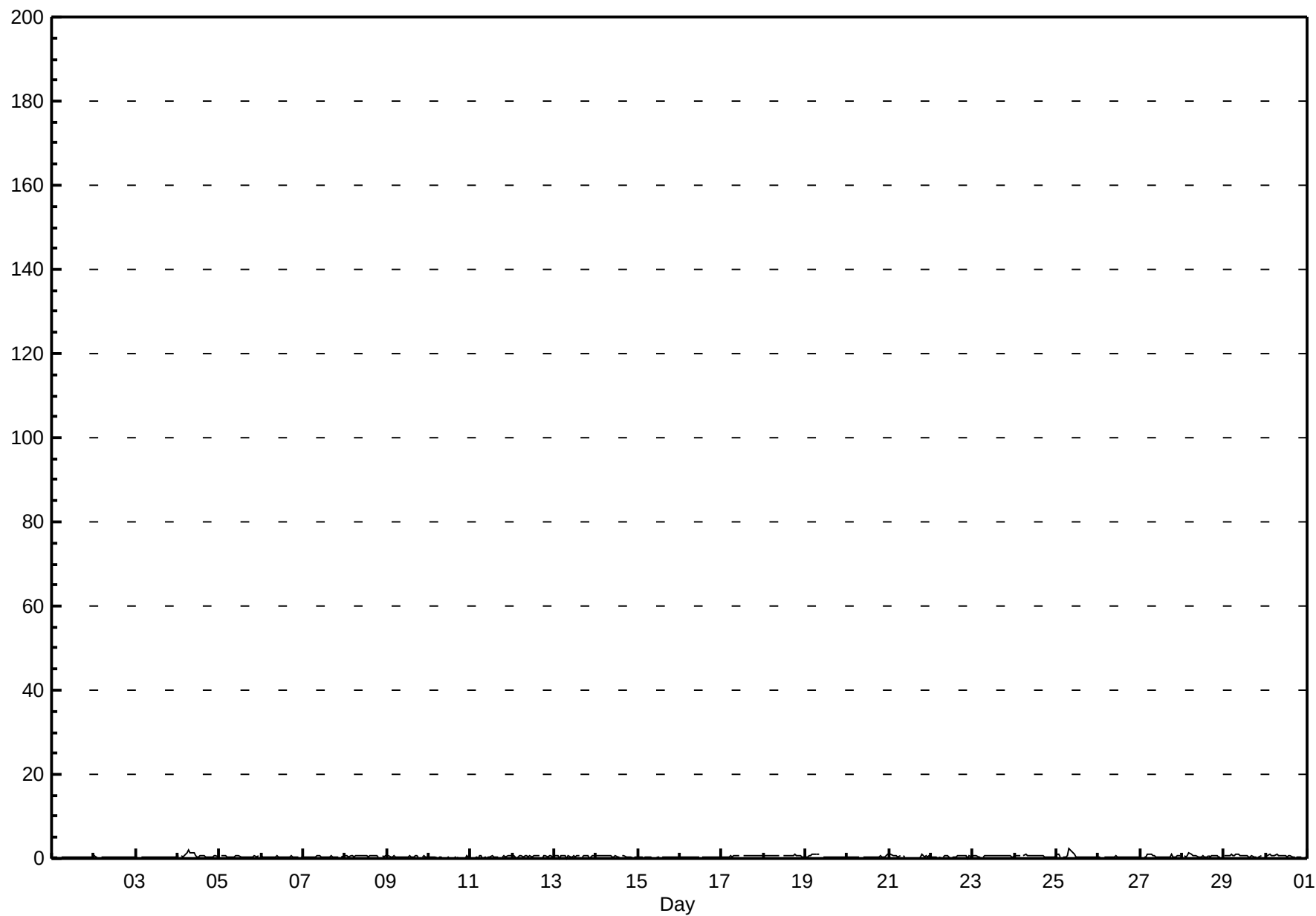
Sulphur Dioxide (SO₂) - ppb

Sunset House - June 2013

Maximum Value: 2.3 ppb on Jun 25 08:00																				Maximum Daily Average: 0.7 ppb on Jun 4										Hours in Service: 720	
Minimum Value: 0 ppb on Jun 15 09:00																				Minimum Daily Average: 0.2 ppb on Jun 10										Hours of Data: 684	
Maximum Diurnal Average: 0.6 ppb at hour 7																				Minimum Diurnal Average: 0.4 ppb at hour 21										Hours of Missing Data: 36	
Monthly Average: 0.48 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.7 P ₉₉ = 1.3										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-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5					
2-Jun	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.8					
3-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5					
4-Jun	1	A	1	0	1	1	2	1	1	1	1	0	0	1	1	1	0	0	0	0	0	1	1	0	0.7	2.0					
5-Jun	A	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0	1	A	0.4	0.8					
6-Jun	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0.3	0.7					
7-Jun	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	A	0	1	0.3	0.7					
8-Jun	1	1	0	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	0	A	1	0	1	0.6	0.8					
9-Jun	1	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1	0	A	0	1	0	0	0.4	0.8					
10-Jun	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0.2	0.6					
11-Jun	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	0	0	A	0	1	0	1	1	1	0.4	0.7					
12-Jun	1	1	0	0	1	1	0	1	1	0	1	0	1	1	1	1	A	0	1	1	0	1	1	0	0.5	0.7					
13-Jun	1	1	1	0	1	1	1	0	1	0	0	1	0	1	1	A	0	1	1	1	0	0	1	1	0.5	0.6					
14-Jun	1	1	1	1	1	1	1	1	1	0	0	1	0	0	A	1	1	0	0	0	0	0	0	0	0.5	0.6					
15-Jun	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					
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5					
17-Jun	0	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0.7					
18-Jun	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0.6	1.0					
19-Jun	0	0	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.1					
20-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0.4	0.9					
21-Jun	1	1	1	1	1	0	1	A	1	0	C	C	C	C	0	0	0	0	0	1	0	1	0	1	0.5	0.9					
22-Jun	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0.4	0.6					
23-Jun	1	1	1	0	0	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.5	0.6					
24-Jun	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.6	1.1					
25-Jun	1	1	0	A	0	0	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	2.3					
26-Jun	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6					
27-Jun	0	A	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0.6	1.0					
28-Jun	A	1	1	1	1	1	1	1	1	0	0	0	1	0	0	1	0	1	1	1	1	0	0	A	0.6	1.5					
29-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	1	A	0	0.6	1.1					
30-Jun	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	A	0	0	0.6	1.1					
																								Diurnal Average							
																								Diurnal Maximum							
C - Calibration A - Automated Daily Zero Span																															

Hourly Maximums

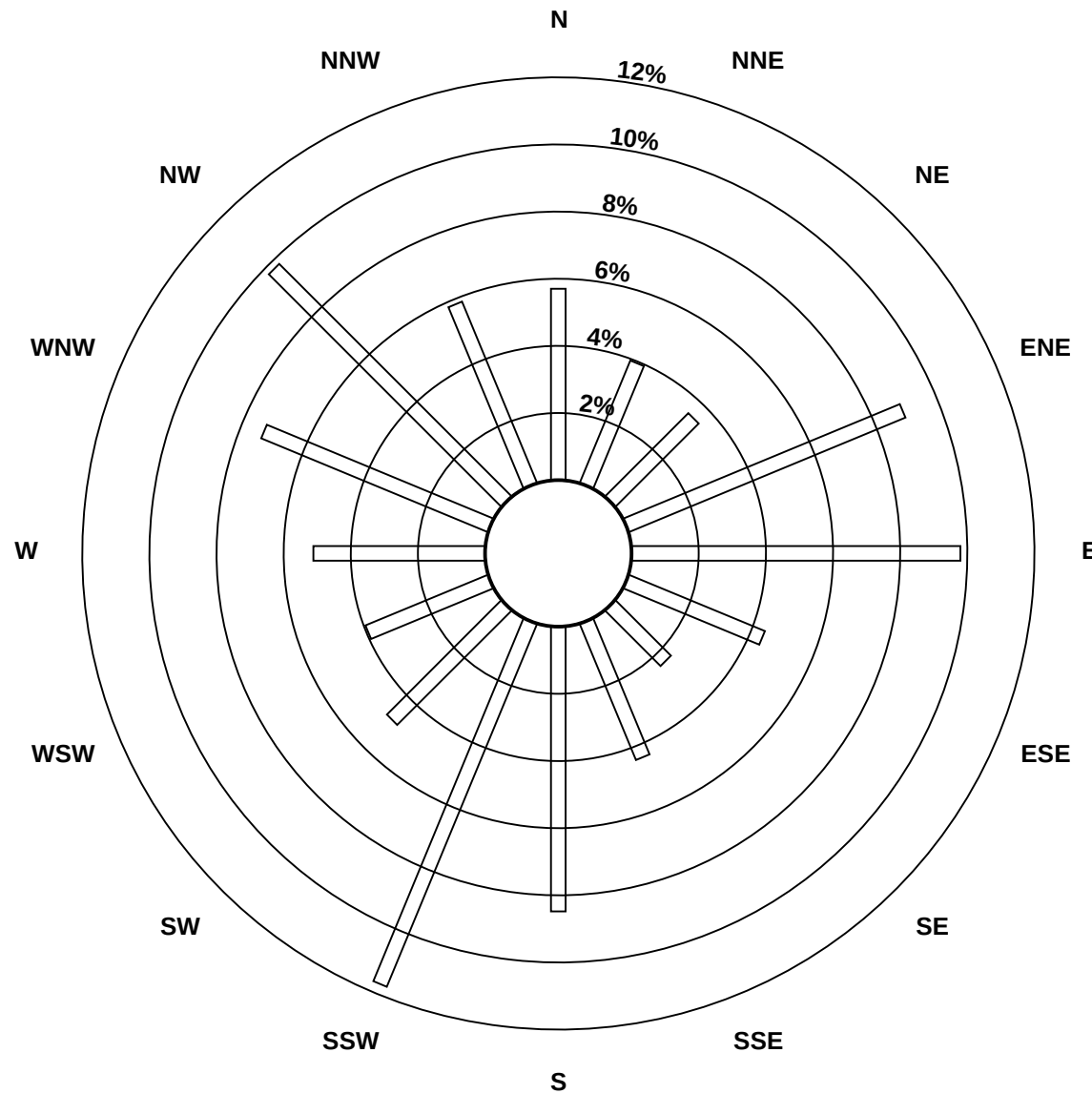
Sulphur Dioxide (SO₂) - ppb
Sunset House - June 2013



Pollutant Rose

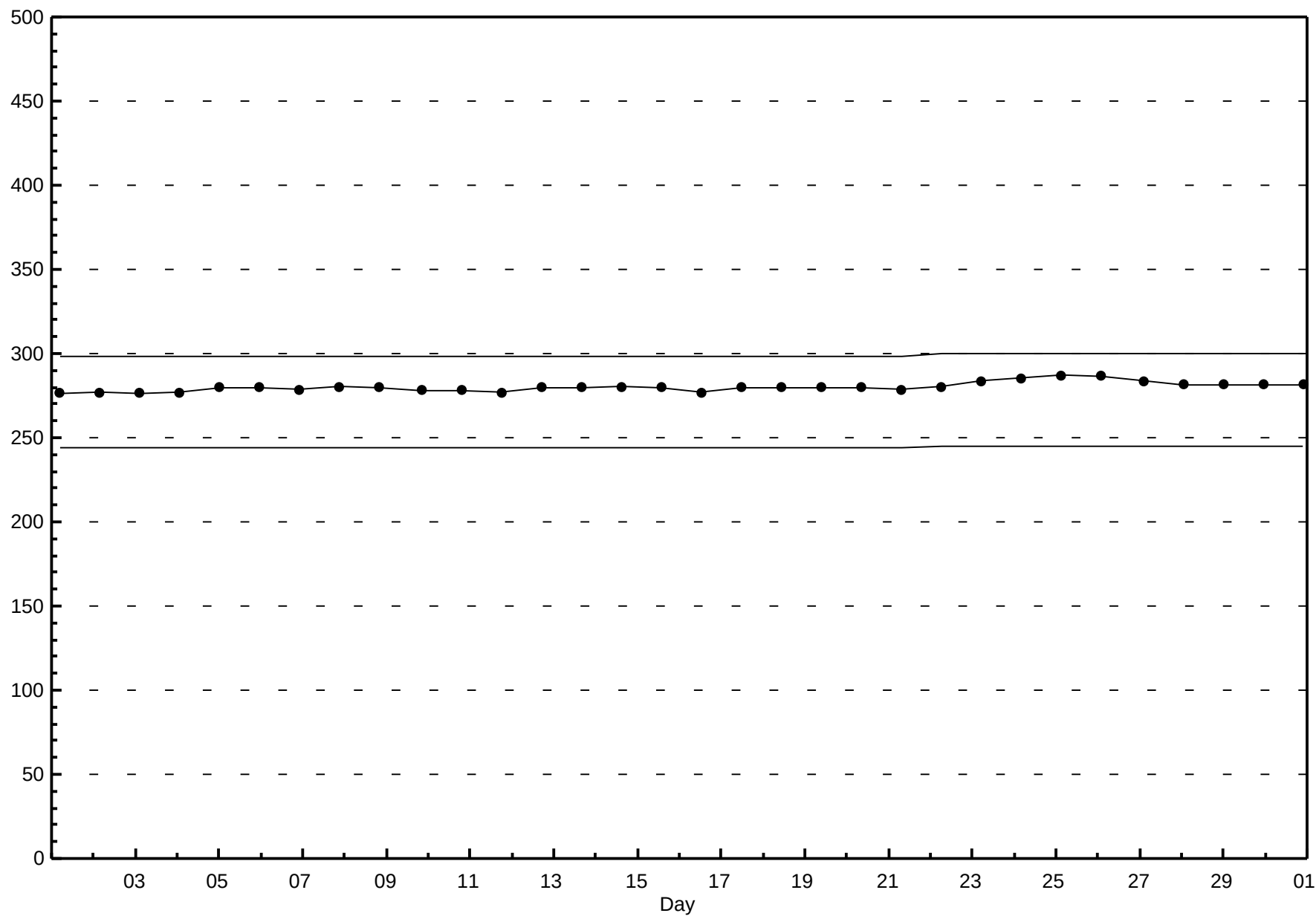
Sulphur Dioxide (SO₂) - ppb

Sunset House - June 2013



Span Responses

Sulphur Dioxide (SO₂)
Sunset House - June 2013



Hourly Averages

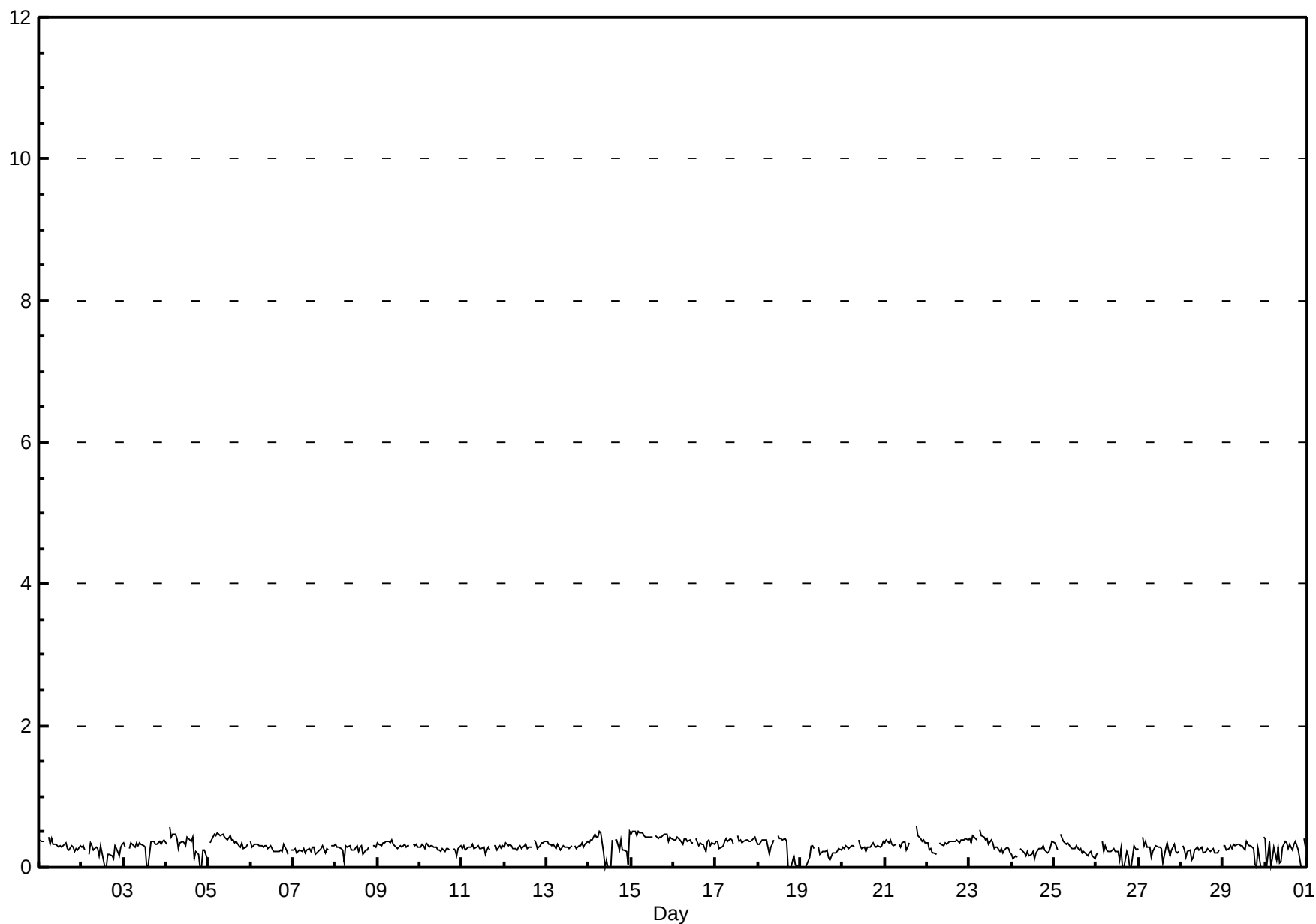
Total Reduced Sulphur (TRS) - ppb

Sunset House - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 0.6 ppb on Jun 21 19:00																				Maximum Daily Average: 0.4 ppb on Jun 15		Hours of Data: 685				
Minimum Value: 0 ppb on Jun 2 14:00																				Minimum Daily Average: 0.2 ppb on Jun 19		Hours of Missing Data: 35				
Maximum Diurnal Average: 0.3 ppb at hour 7																				Minimum Diurnal Average: 0.3 ppb at hour 20		Hours of Calibration: 35				
Monthly Average: 0.29 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.4 P ₉₉ = 0.5		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-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
2-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
3-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
4-Jun	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
5-Jun	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.5
6-Jun	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
7-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3
8-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.3
9-Jun	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
10-Jun	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	0.3
11-Jun	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	0.3
12-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.4
13-Jun	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
14-Jun	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0.3	0.5
15-Jun	0	0	1	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4
17-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4
18-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
19-Jun	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	0.3
20-Jun	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
21-Jun	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	C	C	C	1	0	0	0	0	0	0.4	0.6
22-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
23-Jun	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
24-Jun	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
25-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
26-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
27-Jun	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
28-Jun	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
29-Jun	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
30-Jun	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
																								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 Averages

Total Reduced Sulphur (TRS) - ppb
Sunset House - June 2013



Hourly Maximums

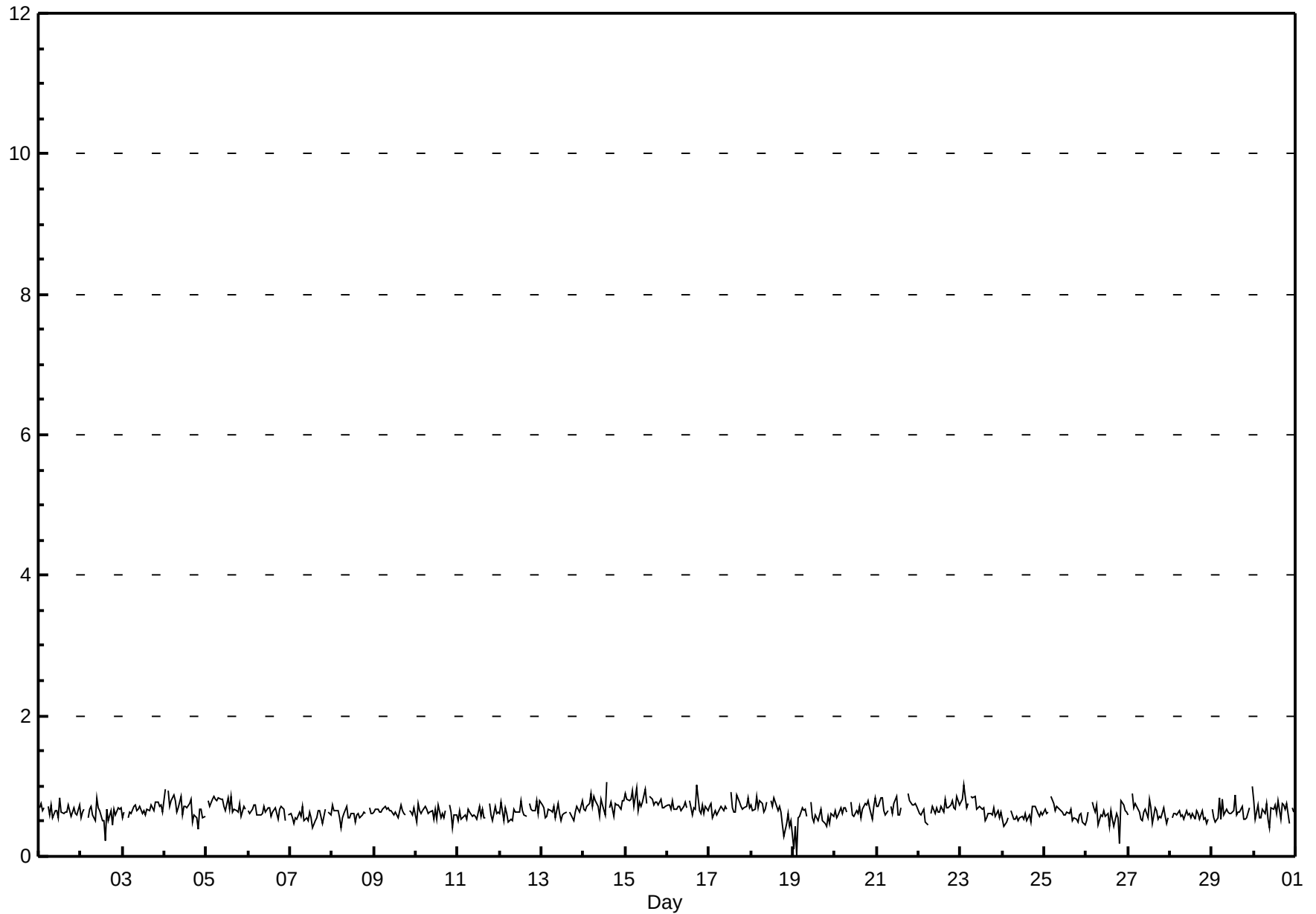
Total Reduced Sulphur (TRS) - ppb

Sunset House - June 2013

Maximum Value: 1.0 ppb on Jun 14 14:00																			Maximum Daily Average: 0.8 ppb on Jun 15										Hours in Service: 720	
Minimum Value: 0 ppb on Jun 19 03:00																			Minimum Daily Average: 0.5 ppb on Jun 19										Hours of Data: 685	
Maximum Diurnal Average: 0.7 ppb at hour 7																			Minimum Diurnal Average: 0.6 ppb at hour 15										Hours of Missing Data: 35	
Monthly Average: 0.65 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.8 P ₉₉ = 1.0										Hours of Calibration: 35	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Jun	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	0.8				
2-Jun	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	1	1	1	0.6	0.8			
3-Jun	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8				
4-Jun	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	0.7	1.0				
5-Jun	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	0.9				
6-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.6	0.7				
7-Jun	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	A	1	1	0.6	0.7				
8-Jun	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	1	0.6	0.7				
9-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	0.7				
10-Jun	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	0.6	0.8				
11-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	0.7				
12-Jun	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.6	0.8				
13-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.6	0.8				
14-Jun	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	1.0				
15-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.0				
16-Jun	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	1.0				
17-Jun	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
18-Jun	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	1	0	1	0.7	0.9				
19-Jun	0	0	0	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	0	0	1	0	1	1	0.5	0.8				
20-Jun	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	0.8				
21-Jun	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	0.7	0.9				
22-Jun	1	1	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
23-Jun	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0.7	1.0				
24-Jun	1	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.6	0.7				
25-Jun	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0.6	0.9				
26-Jun	1	1	A	1	1	1	1	0	1	1	1	1	1	0	1	1	0	1	1	0	1	1	1	1	0.6	0.8				
27-Jun	1	A	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	0.6	0.9				
28-Jun	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	0.6	0.7				
29-Jun	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.0				
30-Jun	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	A	1	1	0.6	0.8				
0.6 0.6 0.6 0.7 0.7 0.7 0.7 0.7 0.6 0.7 0.7 0.6 0.7 0.6 0.6 0.6 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.7																								Diurnal Average						
1.0 0.8 1.0 0.9 0.9 0.9 1.0 0.8 0.9 0.8 0.8 1.0 0.9 1.0 0.9 0.8 0.9 1.0 0.9 0.8 0.8 0.8 0.9 1.0																								Diurnal Maximum						
C - Calibration A - Automated Daily Zero Span																														

Hourly Maximums

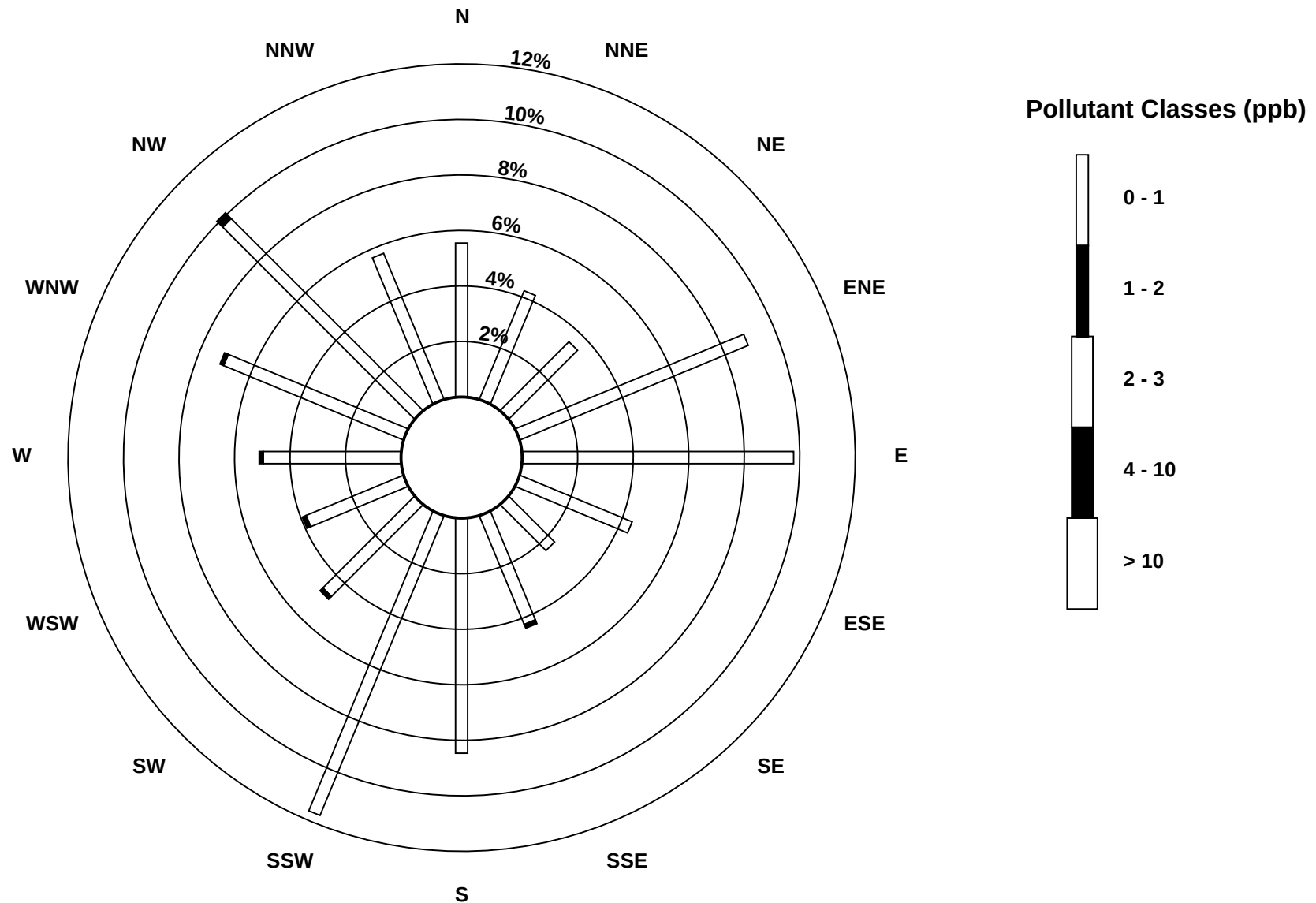
Total Reduced Sulphur (TRS) - ppb
Sunset House - June 2013



Pollutant Rose

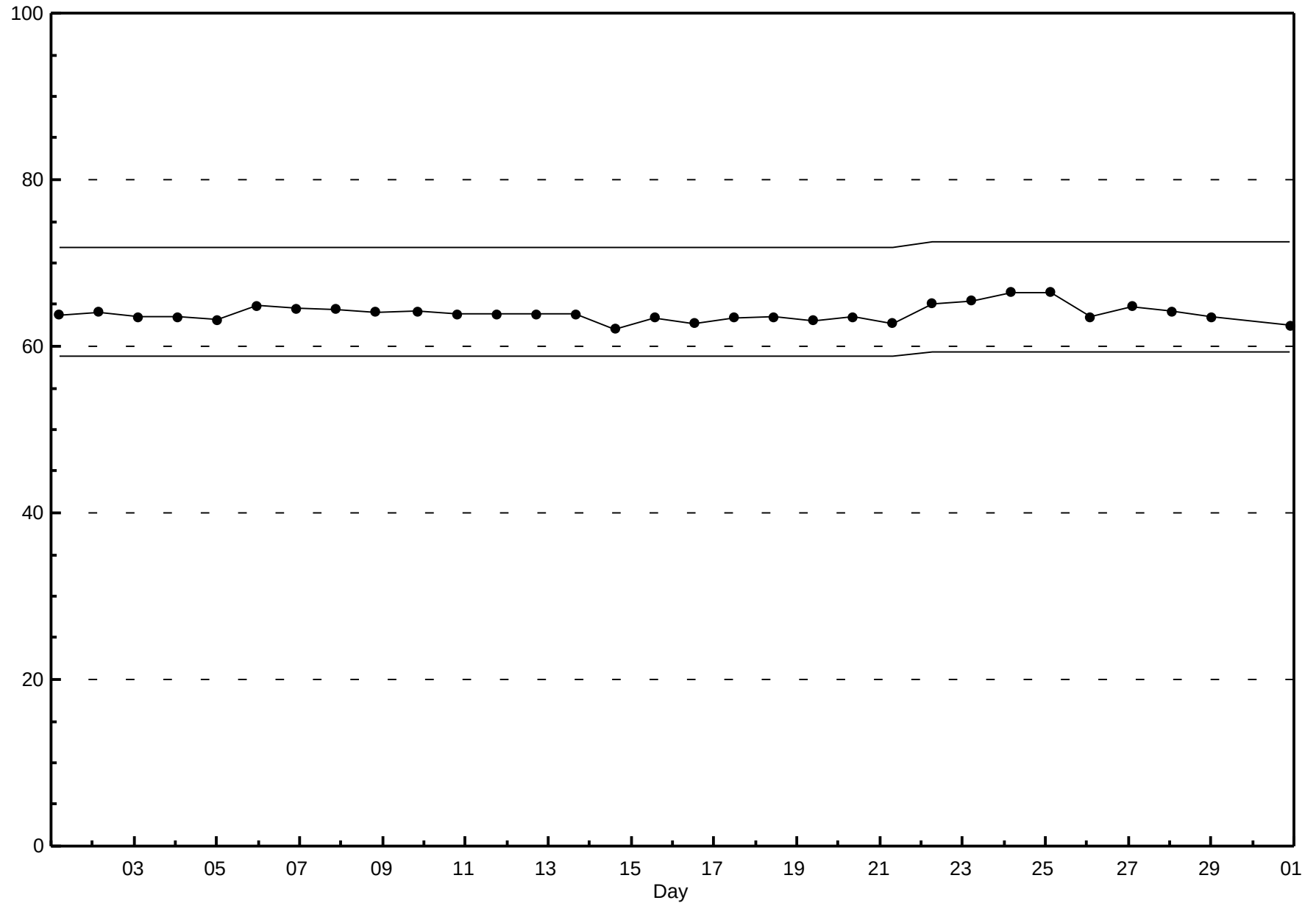
Total Reduced Sulphur (TRS) - ppb

Sunset House - June 2013



Span Responses

Total Reduced Sulphur (TRS)
Sunset House - June 2013



Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

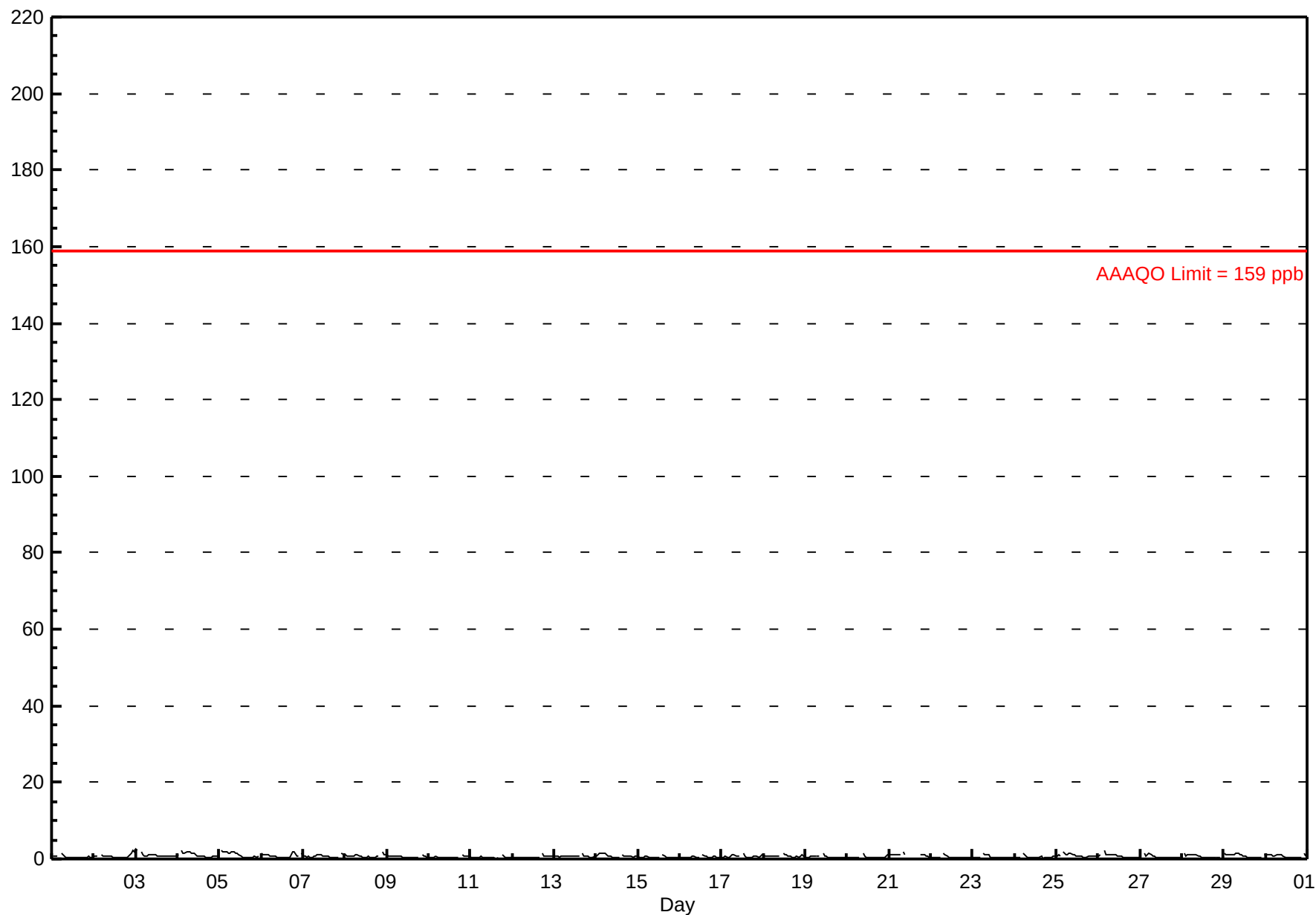
Sunset House - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720							
Maximum Value: 2.5 ppb on Jun 3 01:00																			Maximum Daily Average: 1.1 ppb on Jun 5		Hours of Data: 680					
Minimum Value: 0 ppb on Jun 24 17:00																			Minimum Daily Average: 0.4 ppb on Jun 11		Hours of Missing Data: 40					
Maximum Diurnal Average: 0.9 ppb at hour 7																			Minimum Diurnal Average: 0.4 ppb at hour 17		Hours of Calibration: 40					
Monthly Average: 0.70 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.6 Q ₃ = 0.9 P ₉₀ = 1.3 P ₉₉ = 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-Jun	1	1	1	1	A	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0.6	1.5
2-Jun	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	2	2	2	0.7	2.2
3-Jun	2	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.5
4-Jun	1	A	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1.1	2.1
5-Jun	A	2	2	2	2	1	2	2	2	1	2	1	1	0	0	0	0	0	0	1	1	0	1	A	1.1	2.2
6-Jun	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	2	2	1	1	A	2	0.9	1.8
7-Jun	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	1	1	0.7	1.4
8-Jun	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	A	2	1	1	0.8	1.8
9-Jun	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0.6	1.3
10-Jun	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0.5	1.3
11-Jun	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0.4	1.2
12-Jun	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	1	1	1	1	1	1	1	0.5	1.4
13-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	1	0.7	1.4
14-Jun	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	1	1	1	1	1	1	0	1	1	0.8	1.5
15-Jun	1	0	0	0	1	1	1	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0.5	1.1
16-Jun	0	0	0	0	0	0	1	1	1	1	0	0	A	1	1	1	1	1	0	1	1	1	0	0	0.5	1.3
17-Jun	0	0	1	0	0	1	1	1	1	1	1	A	1	1	0	0	0	0	1	1	1	0	1	1	0.7	1.4
18-Jun	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	0	0	1	1	1	1	1	0.8	1.7
19-Jun	0	0	0	1	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	1.3
20-Jun	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0.5	1.4
21-Jun	1	1	1	1	1	1	1	A	2	1	C	C	C	C	C	C	C	C	1	1	1	1	1	1	--	1.8
22-Jun	1	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.3
23-Jun	0	0	0	0	0	A	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.6
24-Jun	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0.5	1.4
25-Jun	1	1	1	A	2	1	1	2	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0.9	1.7
26-Jun	1	1	A	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.8	2.4
27-Jun	0	A	1	1	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.6
28-Jun	A	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0.7	1.5
29-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	1	0.9	1.4
30-Jun	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	2	1	0.7	1.6
0.8 0.8 0.8 0.9 0.9 0.9 0.9 0.9 0.9 0.8 0.7 0.6 0.6 0.5 0.5 0.5 0.4 0.5 0.6 0.6 0.6 0.6 0.7 0.7																								Diurnal Average		
2.5 2.2 2.1 2.4 1.7 2.0 1.9 1.9 1.8 1.5 1.6 1.7 1.4 1.3 1.1 1.2 1.4 1.4 1.7 1.8 1.3 1.8 2.2 1.8																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

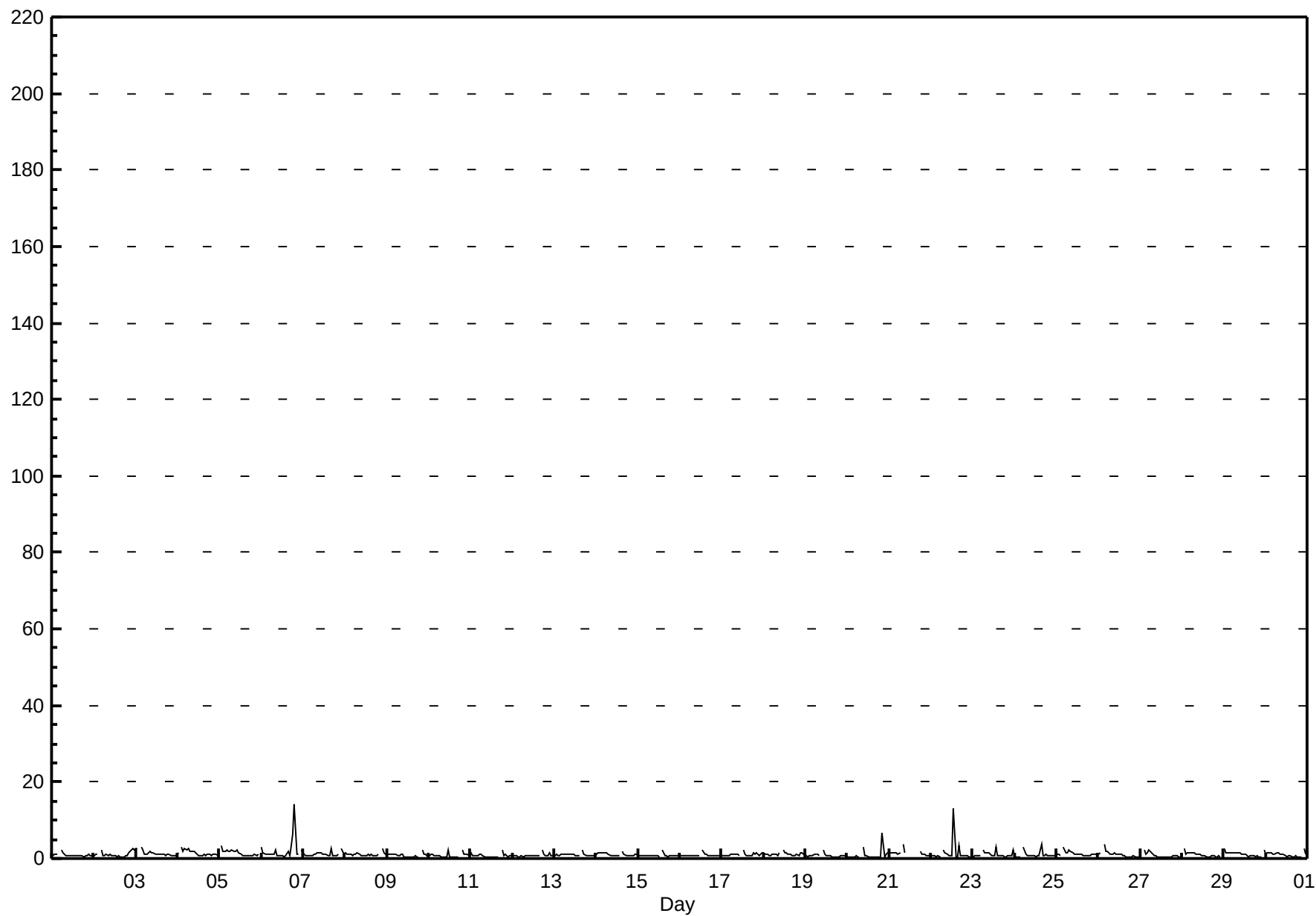
Nitrogen Dioxide (NO₂) - ppb

Sunset House - June 2013



Hourly Maximums

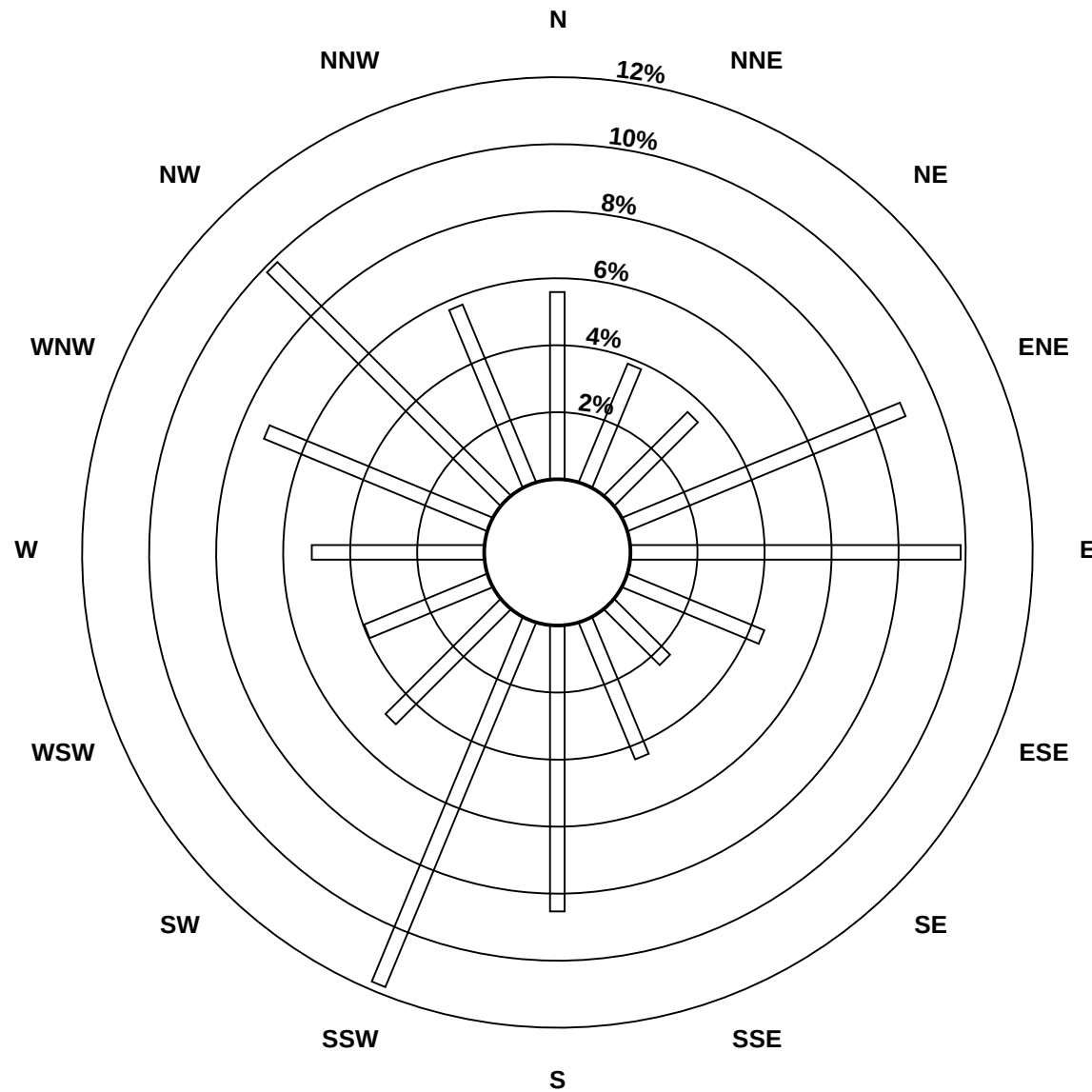
Nitrogen Dioxide (NO₂) - ppb
Sunset House - June 2013



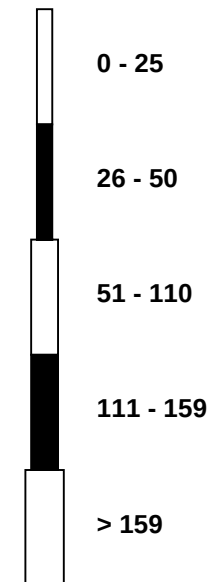
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb

Sunset House - June 2013

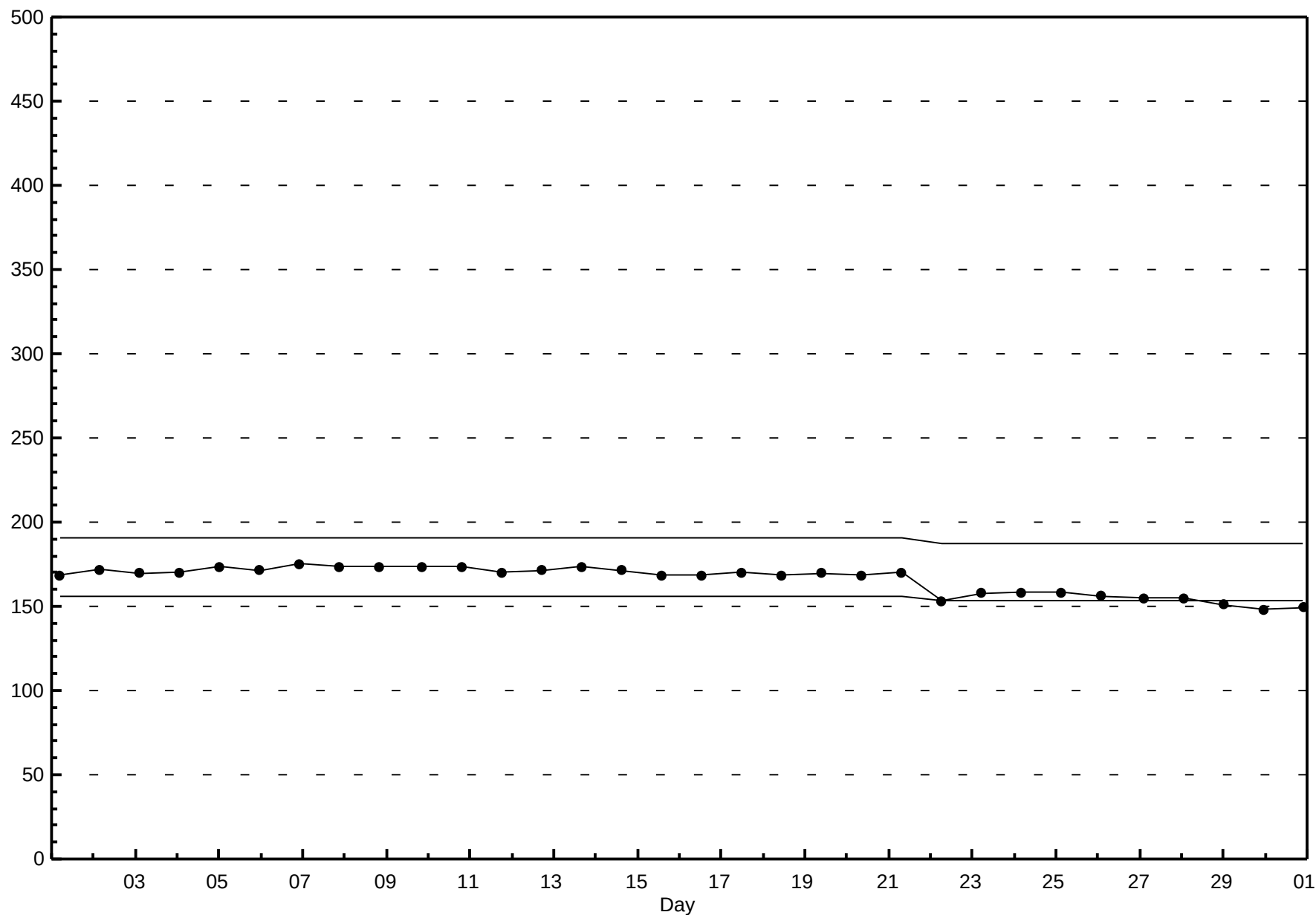


Pollutant Classes (ppb)



Span Responses

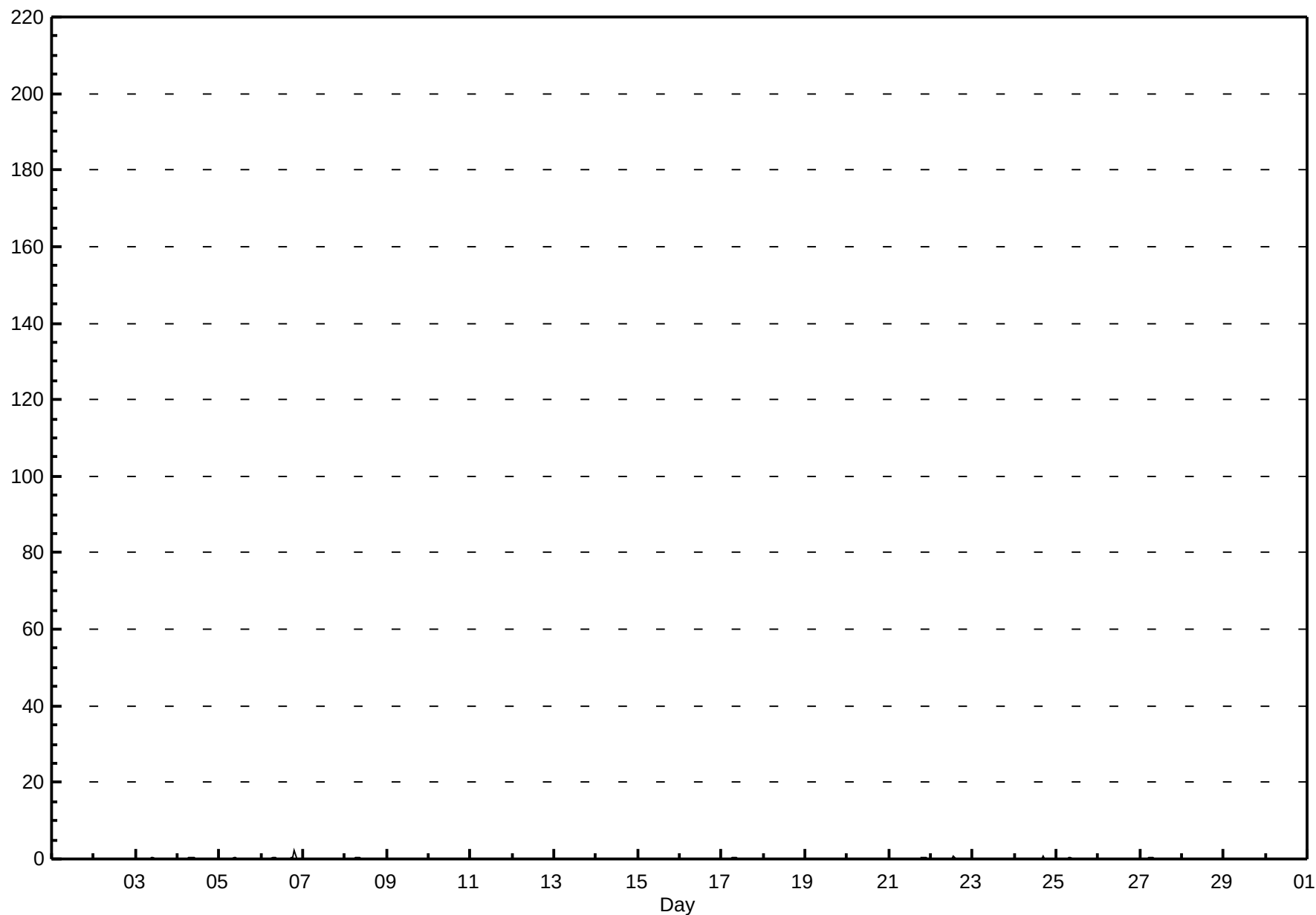
Nitrogen Dioxide (NO₂)
Sunset House - June 2013



Number of Exceedences (AAAQO): Maximum Value: 2.2 ppb on Jun 6 20:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 0.2 ppb on Jun 6				Hours in Service: 720 Hours of Data: 680 Hours of Missing Data: 40 Hours of Calibration: 40 Percent Operational Time: 100.0			
Minimum Value: 0 ppb on Jun 1 17:00 Maximum Diurnal Average: 0.1 ppb at hour 9 Monthly Average: 0.06 ppb										Minimum Daily Average: 0.0 ppb on Jun 19 Minimum Diurnal Average: 0.0 ppb at hour 15 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.1 P ₉₉ = 0.3																	
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-Jun	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	
2-Jun	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	
3-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	
4-Jun	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	
5-Jun	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	
6-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	A	0	0.2	2.2	
7-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1	
8-Jun	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	
9-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.1	
10-Jun	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	
11-Jun	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	
12-Jun	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	
13-Jun	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	
14-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.1	
15-Jun	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	0.1	
16-Jun	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	
17-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
18-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
19-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
20-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
21-Jun	0	0	0	0	0	0	0	A	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	--	0.2	
22-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.7	
23-Jun	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	
24-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.0	0.6	
25-Jun	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	
26-Jun	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	
27-Jun	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	
28-Jun	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	
29-Jun	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	
30-Jun	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	
Diurnal Average																									Diurnal Maximum		
C - Calibration																									A - Automated Daily Zero Span		

Hourly Averages

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



Hourly Maximums

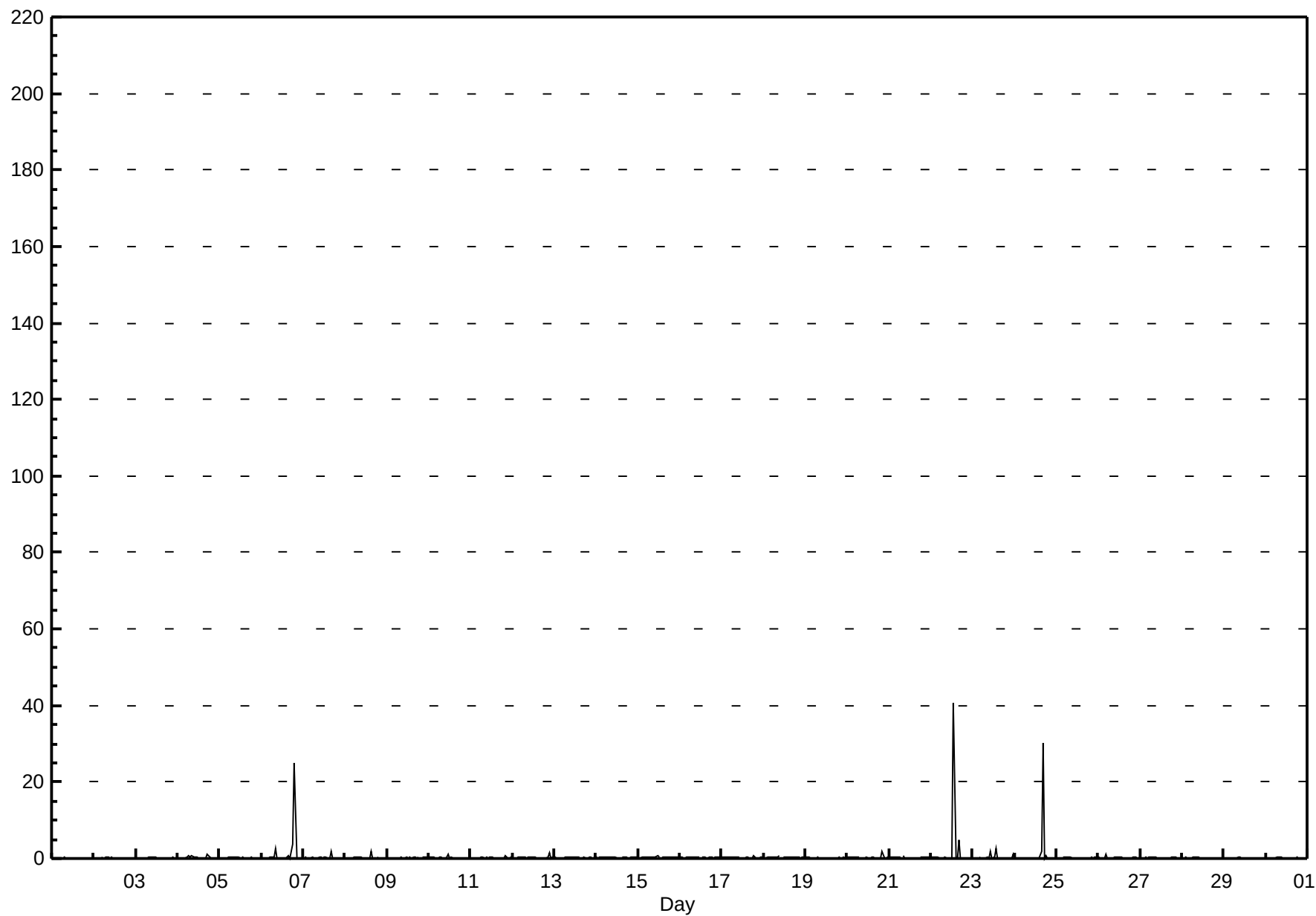
Nitrogen Oxide (NO) - ppb

Sunset House - June 2013

Maximum Value: 40.5 ppb on Jun 22 14:00																				Maximum Daily Average: 2.1 ppb on Jun 22					Hours in Service: 720	
Minimum Value: 0 ppb on Jun 4 20:00																				Minimum Daily Average: 0.1 ppb on Jun 19					Hours of Data: 680	
Maximum Diurnal Average: 1.7 ppb at hour 14																				Minimum Diurnal Average: 0.2 ppb at hour 15					Hours of Missing Data: 40	
Monthly Average: 0.38 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 2.6					Hours of Calibration: 40	
																				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-Jun	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
2-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
3-Jun	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
4-Jun	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.3	0.9
5-Jun	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
6-Jun	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	1	0	2	4	25	0	0	A	0	1.6	25.1
7-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	A	0	0	0.3	1.8
8-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	A	0	0	0	0.3	1.8
9-Jun	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
10-Jun	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0.2	1.1
11-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0.2	0.6
12-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	2	0	0	0.2	1.5
13-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3
14-Jun	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	0.2
15-Jun	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.7
16-Jun	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	0.2
17-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.9
18-Jun	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
19-Jun	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
20-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0.2	1.7
21-Jun	0	0	0	0	0	0	0	A	1	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	--	0.8
22-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	41	0	0	5	0	0	0	0	0	0	0	2.1	40.5
23-Jun	0	0	0	0	0	A	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0	1	0	0.4	2.7
24-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	2	30	0	1	0	0	0	0	0	1.6	30.3
25-Jun	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
26-Jun	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
27-Jun	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
28-Jun	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
29-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3
30-Jun	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
0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.4 0.3 0.3 0.2 0.2 1.7 0.2 0.3 1.5 0.2 0.3 1.0 0.3 0.2 0.2 0.2																									Diurnal Average	
0.3 0.3 0.3 0.3 1.1 0.3 0.6 0.6 2.6 0.9 1.7 1.1 0.3 40.5 0.3 1.8 30.3 1.7 3.7 25.1 1.7 1.5 0.3 1.3																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

Hourly Maximums

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



Hourly Averages

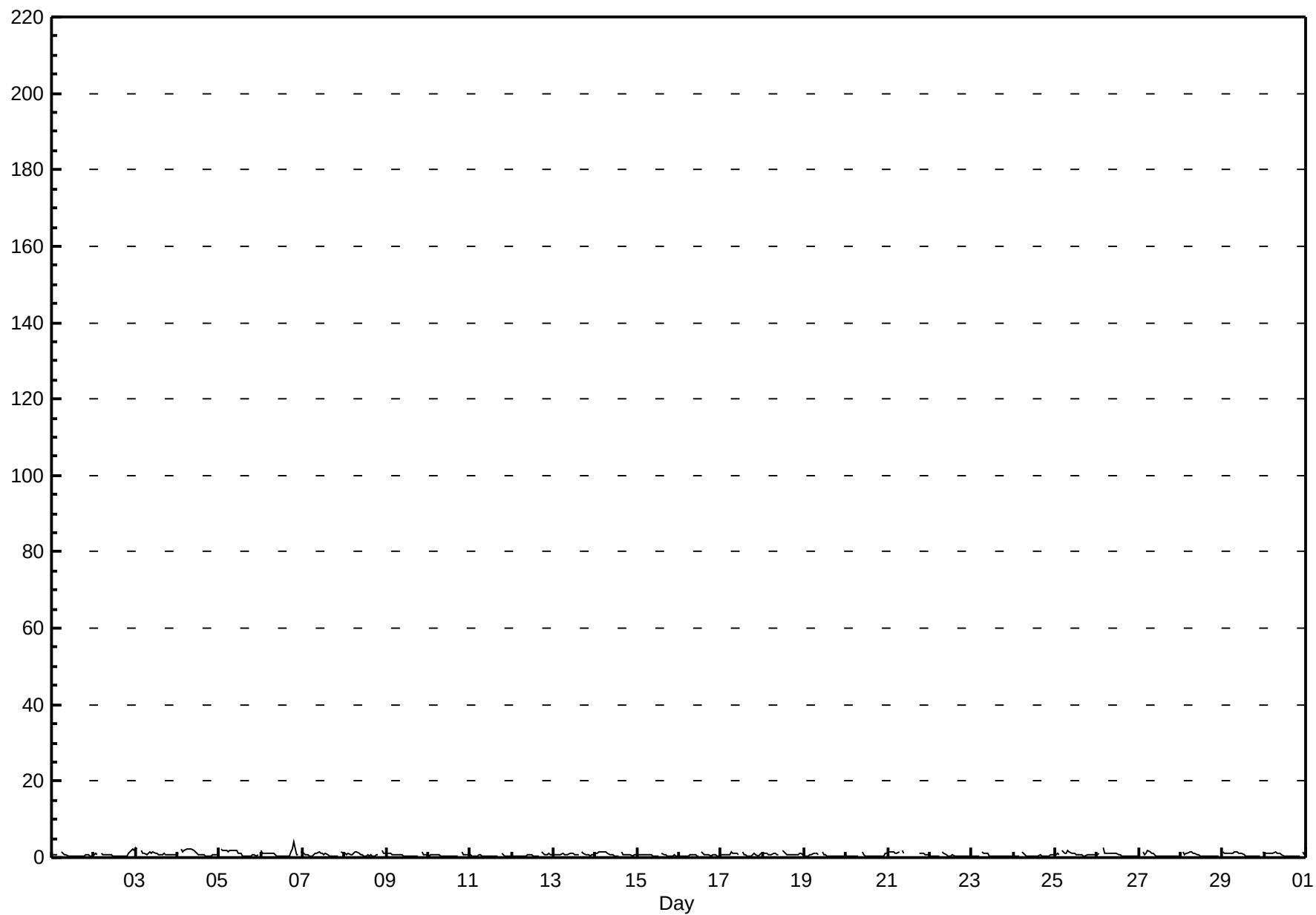
Oxides of Nitrogen (NO_x) - ppb

Sunset House - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.0 ppb on Jun 6 20:00 Maximum Daily Average: 1.2 ppb on Jun 5																				Hours in Service: 720 Hours of Data: 680 Hours of Missing Data: 40 Hours of Calibration: 40 Percent Operational Time: 100.0							
Minimum Value: 0 ppb on Jun 27 01:00 Maximum Diurnal Average: 1.1 ppb at hour 7 Monthly Average: 0.77 ppb																				Minimum Daily Average: 0.5 ppb on Jun 11 Minimum Diurnal Average: 0.5 ppb at hour 17 Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.7 Q ₃ = 1.0 P ₉₀ = 1.4 P ₉₉ = 2.2							
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-Jun	1	1	1	1	A	2	1	1	1	1	0	1	0	0	1	0	0	0	0	1	1	1	1	1	0.7	1.6	
2-Jun	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	2	2	0.8	2.3	
3-Jun	3	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.6	
4-Jun	1	A	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1.2	2.3	
5-Jun	A	2	2	2	2	2	2	2	2	2	2	1	1	1	0	0	0	0	1	1	1	0	1	A	1.2	2.2	
6-Jun	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	2	4	1	1	A	2	1.1	4.0	
7-Jun	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	A	2	1	0.8	1.5	
8-Jun	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0	1	1	1	A	2	1	1	0.9	1.8	
9-Jun	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0	0	A	1	1	1	1	0.7	1.4	
10-Jun	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0.5	1.4	
11-Jun	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	1	1	1	0	0	0	0.5	1.3	
12-Jun	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	A	1	1	1	1	1	1	1	0.6	1.5	
13-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	0.8	1.5	
14-Jun	1	1	1	1	2	2	2	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	0.9	1.6	
15-Jun	1	1	1	1	1	1	1	1	1	1	0	0	0	A	1	1	1	0	0	1	1	1	1	1	0.6	1.2	
16-Jun	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0.6	1.4	
17-Jun	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	0	1	1	1	1	1	1	1	1	0.8	1.5	
18-Jun	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	0.9	1.8	
19-Jun	1	0	1	1	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.6	1.4	
20-Jun	0	0	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0.5	1.4
21-Jun	1	1	1	1	1	1	1	A	2	1	C	C	C	C	C	C	C	C	1	1	1	1	1	1	--	2.0	
22-Jun	1	0	0	0	0	0	A	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.5	1.4	
23-Jun	0	0	0	0	0	A	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.6	
24-Jun	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	1	0.5	1.5	
25-Jun	1	1	1	A	2	1	1	2	2	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.9	1.9	
26-Jun	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.8	2.4	
27-Jun	0	A	1	1	1	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.6	1.8	
28-Jun	A	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0.7	1.6	
29-Jun	1	1	1	1	1	1	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	1	0.9	1.5	
30-Jun	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	2	1	0.8	1.6	
0.9 0.9 0.9 0.9 1.0 1.0 1.1 1.1 1.0 0.9 0.8 0.7 0.6 0.6 0.5 0.5 0.5 0.5 0.6 0.7 0.6 0.7 0.8 0.8																								Diurnal Average			
2.6 2.3 2.1 2.4 1.8 2.1 2.3 2.2 2.1 1.9 1.8 1.8 1.5 1.4 1.2 1.3 1.5 1.5 2.4 4.0 1.4 1.8 2.3 1.9																								Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																											

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb
Sunset House - June 2013



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

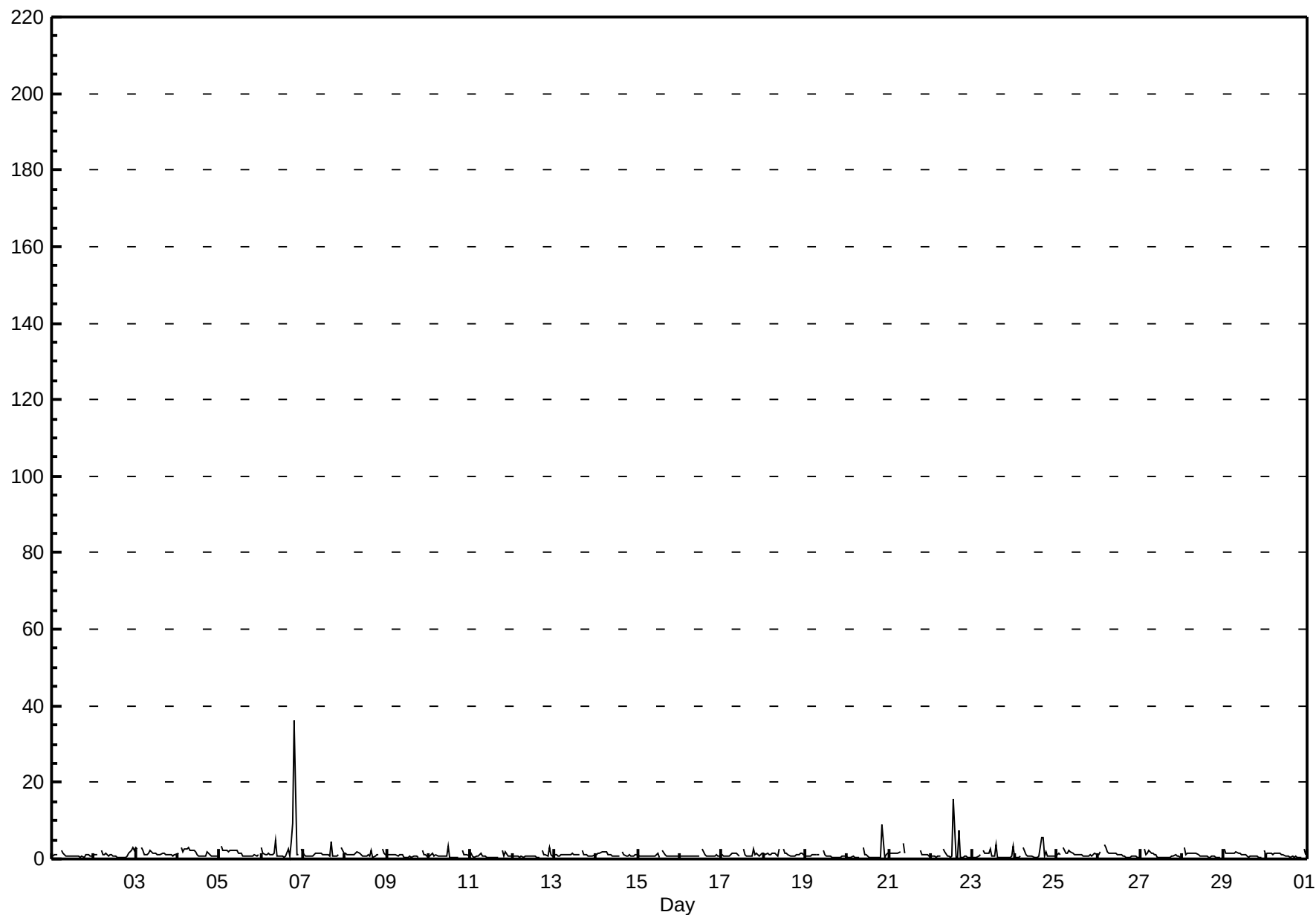
Sunset House - June 2013

Maximum Value: 36.2 ppb on Jun 6 20:00																				Maximum Daily Average: 3.4 ppb on Jun 6					Hours in Service: 720	
Minimum Value: 0 ppb on Jun 27 01:00																				Minimum Daily Average: 0.8 ppb on Jun 11					Hours of Data: 680	
Maximum Diurnal Average: 2.1 ppb at hour 20																				Minimum Diurnal Average: 0.8 ppb at hour 15					Hours of Missing Data: 40	
Monthly Average: 1.21 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.9 Q ₃ = 1.4 P ₉₀ = 2.2 P ₉₉ = 5.7					Hours of Calibration: 40	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jun	1	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.4	
2-Jun	1	1	1	A	2	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	2	2	3	2	1.1	2.8
3-Jun	3	3	A	3	2	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.5	3.0
4-Jun	2	A	3	2	3	3	3	2	2	2	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1.6	3.0
5-Jun	A	3	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	A	1.5	3.3
6-Jun	3	1	1	1	1	1	1	2	5	1	1	1	1	0	1	3	1	5	9	36	1	1	A	2	3.4	36.2
7-Jun	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	4	1	1	1	1	1	A	3	1	1.3	4.3
8-Jun	2	1	1	1	1	1	2	2	1	1	1	1	1	1	2	1	1	1	1	1	A	3	1	1	1.2	2.8
9-Jun	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	A	2	1	1	1	0.9	2.3
10-Jun	1	1	1	1	1	1	1	1	1	1	1	3	0	0	0	1	1	1	1	A	2	1	1	1	0.9	3.4
11-Jun	1	1	1	1	1	1	2	1	1	1	1	0	0	0	0	0	0	A	2	1	2	1	1	1	0.8	2.4
12-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	3	1	1	0.9	3.0
13-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1.1	2.3
14-Jun	1	1	2	2	2	2	2	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1.2	2.0
15-Jun	1	1	1	1	1	1	1	1	1	1	1	0	A	2	1	1	1	1	1	1	1	1	1	1	0.8	2.3
16-Jun	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	0.8	2.4
17-Jun	1	1	1	1	1	1	2	2	1	1	1	1	A	2	1	1	1	1	1	2	1	1	1	1	1.2	2.5
18-Jun	1	1	1	1	1	1	2	1	1	3	A	3	1	2	1	1	1	1	1	1	1	1	1	1	1.3	2.6
19-Jun	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	0	1	1	1	1	1	1	1	0.8	2.2
20-Jun	1	1	1	1	1	1	1	1	A	3	1	1	1	1	1	1	0	1	1	1	9	1	1	2	1.1	8.8
21-Jun	2	2	2	2	1	1	2	A	4	2	C	C	C	C	C	C	C	C	2	1	1	1	1	1	--	4.2
22-Jun	1	1	1	0	1	1	A	2	2	1	1	1	1	16	0	0	8	1	0	1	1	0	0	0	1.7	15.6
23-Jun	0	0	0	1	1	A	2	1	2	1	2	1	1	4	0	1	0	1	0	0	0	0	1	3	1.1	3.6
24-Jun	0	0	0	1	A	3	1	1	1	1	1	0	0	1	1	6	6	1	2	1	1	1	1	1	1.2	5.8
25-Jun	1	1	1	A	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	3.0
26-Jun	1	2	A	4	3	2	2	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0	0	1.2	3.9
27-Jun	0	A	3	1	1	2	2	1	1	1	0	0	0	0	0	0	1	0	1	1	1	1	1	0	0.9	2.6
28-Jun	A	3	1	1	2	2	2	1	1	1	1	1	1	1	1	0	0	1	1	0	0	1	0	A	1.0	2.8
29-Jun	3	2	2	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	0	1	A	2	1.2	2.6
30-Jun	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0	0	1	A	3	1	1.1	2.6
																								Diurnal Average	Diurnal Maximum	
																								1.2	3.1	
																								3.3	15.6	
																								3.0	3.6	
																								1.2	5.8	
																								1.3	3.0	
																								1.2	3.9	
																								0.9	2.6	
																								1.0	2.8	
																								1.2	2.6	
																								1.1	2.6	

C - CalibrationA - Automated Daily Zero Span

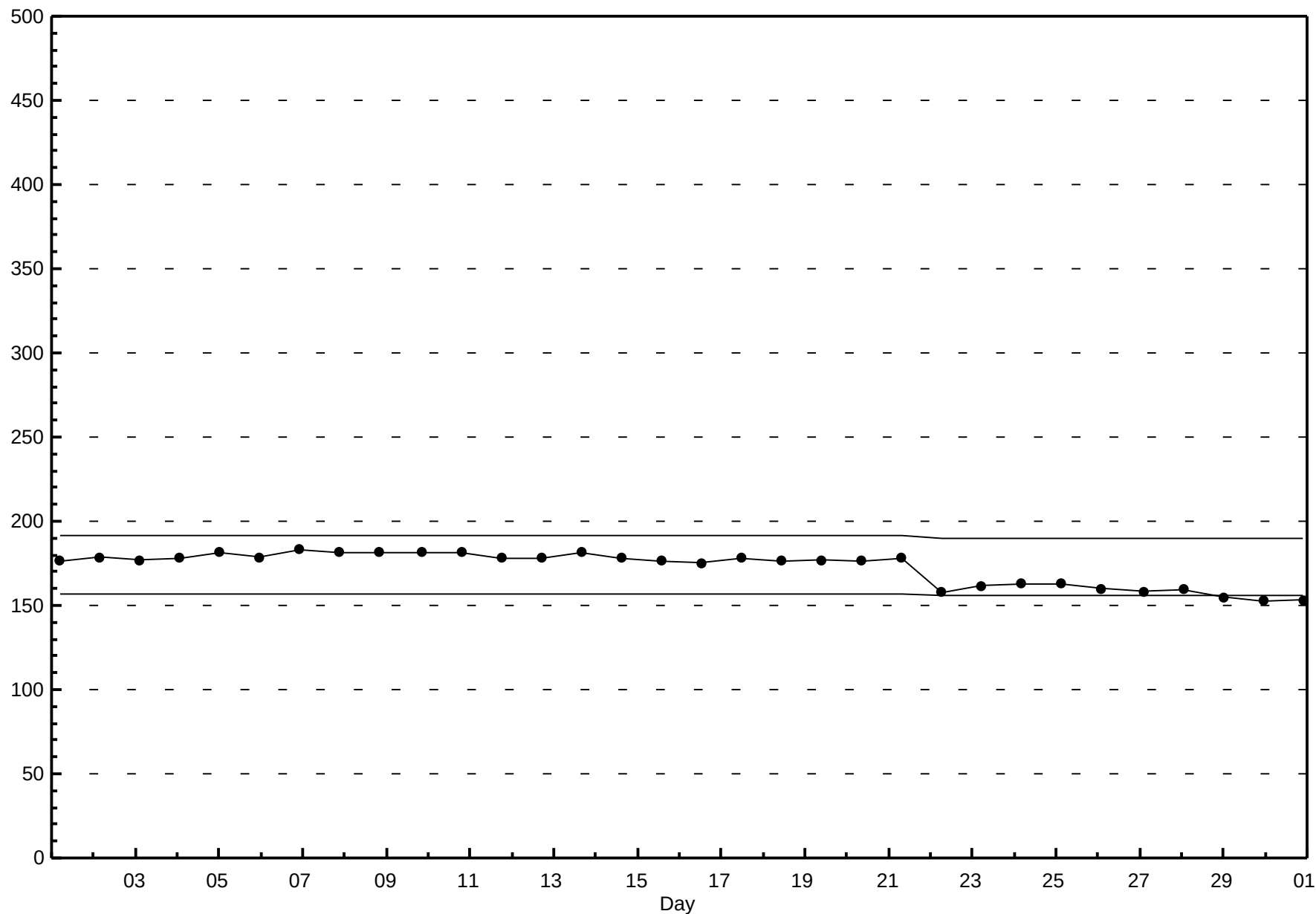
Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb
Sunset House - June 2013



Span Responses

Oxides of Nitrogen (NO_x)
Sunset House - June 2013



Hourly Averages

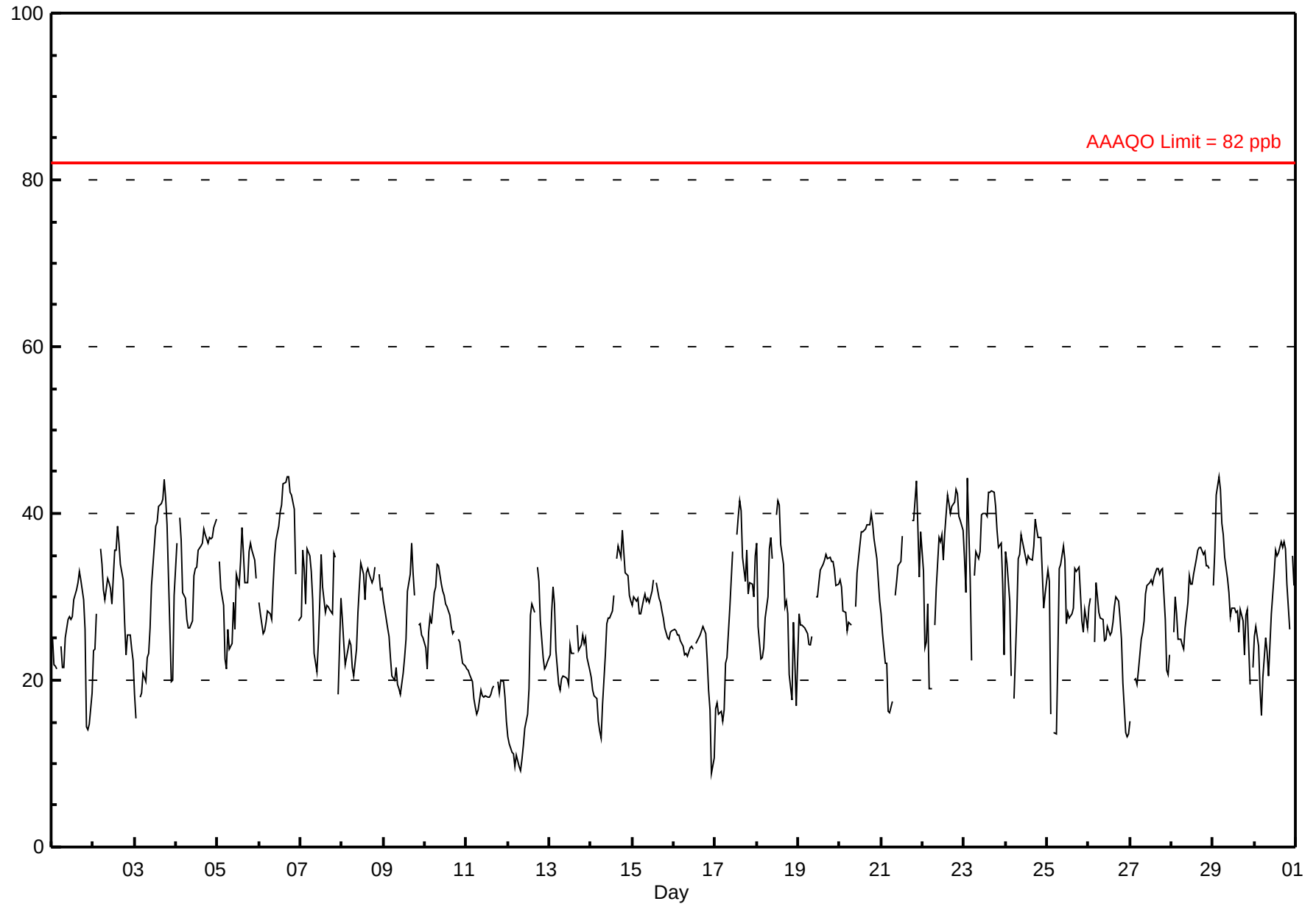
Ozone (O₃) - ppb

Sunset House - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 44.5 ppb on Jun 29 04:00 Maximum Daily Average: 36.4 ppb on Jun 23																					Hours in Service: 720 Hours of Data: 683 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0					
Minimum Value: 9 ppb on Jun 16 23:00 Maximum Diurnal Average: 33.6 ppb at hour 18 Monthly Average: 28.65 ppb										Minimum Daily Average: 18.5 ppb on Jun 12 Minimum Diurnal Average: 23.4 ppb at hour 6 Percentiles: P ₁ = 11.1 P ₁₀ = 18.9 Q ₁ = 23.8 Median = 28.8 Q ₃ = 34.1 P ₉₀ = 37.9 P ₉₉ = 43.6																
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-Jun	25	22	22	21	A	24	22	22	25	27	28	27	28	30	31	32	33	32	30	26	14	14	15	18	24.7	33.0
2-Jun	23	24	28	A	36	34	31	30	32	32	31	29	36	36	38	36	34	32	27	23	25	25	24	22	29.9	38.4
3-Jun	18	15	A	18	18	21	20	23	23	26	31	36	38	39	41	41	42	44	42	39	26	20	20	30	29.2	44.1
4-Jun	36	A	40	37	30	30	27	26	26	27	33	33	34	36	36	36	38	37	37	37	37	37	38	39	34.3	39.6
5-Jun	A	34	31	29	23	21	26	24	24	29	26	33	31	34	38	35	32	32	35	37	36	34	32	A	30.8	38.3
6-Jun	29	28	26	26	27	28	28	27	31	35	37	39	40	41	44	44	44	44	43	42	40	33	A	27	34.9	44.4
7-Jun	28	36	33	29	36	35	33	30	23	21	24	29	35	31	28	29	29	29	28	35	35	A	18	30	29.7	35.8
8-Jun	27	24	22	24	25	24	22	21	24	28	31	34	33	30	33	33	33	32	32	34	A	33	31	31	28.6	34.0
9-Jun	30	28	26	25	23	21	20	22	20	19	18	21	23	25	31	33	36	33	30	A	27	27	25	25	25.5	36.4
10-Jun	24	21	26	28	27	31	31	34	34	31	31	30	29	29	28	27	26	26	A	25	25	23	22	22	27.3	33.9
11-Jun	21	21	21	20	18	17	16	16	19	18	18	18	18	18	19	19	A	20	19	20	20	18	15	15	18.5	21.3
12-Jun	13	12	11	11	10	11	10	9	11	12	14	16	19	28	29	28	A	34	32	27	23	21	22	22	18.5	33.5
13-Jun	23	28	31	29	24	19	19	20	21	20	20	20	24	23	23	A	27	24	24	25	24	25	23	21	23.4	31.1
14-Jun	20	19	18	18	15	14	13	17	23	27	27	27	28	30	A	35	36	35	38	35	33	33	30	30	26.1	38.0
15-Jun	29	30	30	30	28	28	30	30	29	30	29	31	32	A	32	30	29	28	28	26	25	25	26	26	28.7	32.0
16-Jun	26	26	25	25	25	24	23	23	23	24	24	24	A	24	25	25	26	26	26	23	19	16	9	11	22.7	26.5
17-Jun	17	17	16	16	15	16	22	23	29	32	36	A	37	40	41	40	35	32	36	30	32	31	30	35	28.6	41.5
18-Jun	36	27	23	23	24	28	30	36	37	35	A	40	42	41	36	34	29	30	28	21	18	27	22	17	29.6	41.5
19-Jun	28	27	27	26	26	26	24	24	25	A	30	30	32	33	34	34	35	35	35	34	34	33	31	32	30.2	35.1
20-Jun	32	31	28	28	26	27	27	27	A	29	33	35	38	38	38	38	39	39	40	39	37	35	32	29	33.2	39.9
21-Jun	28	26	22	22	16	16	18	A	30	32	34	34	37	C	C	C	C	C	39	39	44	38	32	38	30.3	43.9
22-Jun	33	24	25	29	19	19	A	27	31	37	37	37	34	38	42	41	40	41	41	43	42	40	39	38	34.7	43.0
23-Jun	35	31	44	32	22	A	32	35	35	35	40	40	40	40	43	42	43	42	41	38	36	36	32	23	36.4	44.2
24-Jun	35	34	29	20	A	18	28	35	35	38	37	35	34	35	35	34	36	39	38	37	37	33	29	30	33.1	39.3
25-Jun	33	32	16	A	14	14	23	33	34	36	34	27	28	28	28	29	33	33	34	30	27	26	28	26	28.1	36.1
26-Jun	29	30	A	25	32	30	28	28	27	25	25	26	25	26	27	29	30	30	27	25	20	14	13	14	25.3	31.7
27-Jun	15	A	20	20	19	21	25	26	27	30	31	32	32	32	32	33	33	33	33	33	27	21	21	23	27.0	33.5
28-Jun	A	26	30	28	25	25	24	24	26	29	33	32	32	33	35	36	36	36	35	35	34	34	33	A	30.9	36.0
29-Jun	31	35	42	44	43	39	38	35	32	30	28	29	29	28	28	26	29	27	23	28	29	20	A	22	31.0	44.5
30-Jun	25	26	24	19	16	20	25	23	21	24	28	33	36	35	35	37	36	37	36	31	26	A	35	31	28.7	36.6
26.8 26.2 26.3 25.1 23.6 23.4 24.6 25.8 26.8 28.3 29.2 30.2 31.8 32.1 33.2 33.5 33.5 33.6 33.0 31.6 29.4 27.6 26.1 26.0																								Diurnal Average		
36.5 35.6 44.2 44.5 42.9 38.8 37.5 35.7 37.2 37.5 39.8 40.0 41.5 41.1 43.6 43.7 44.4 44.3 42.5 43.0 43.9 39.7 39.2 39.3																								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 (O₃) - ppb
Sunset House - June 2013



Hourly Maximums

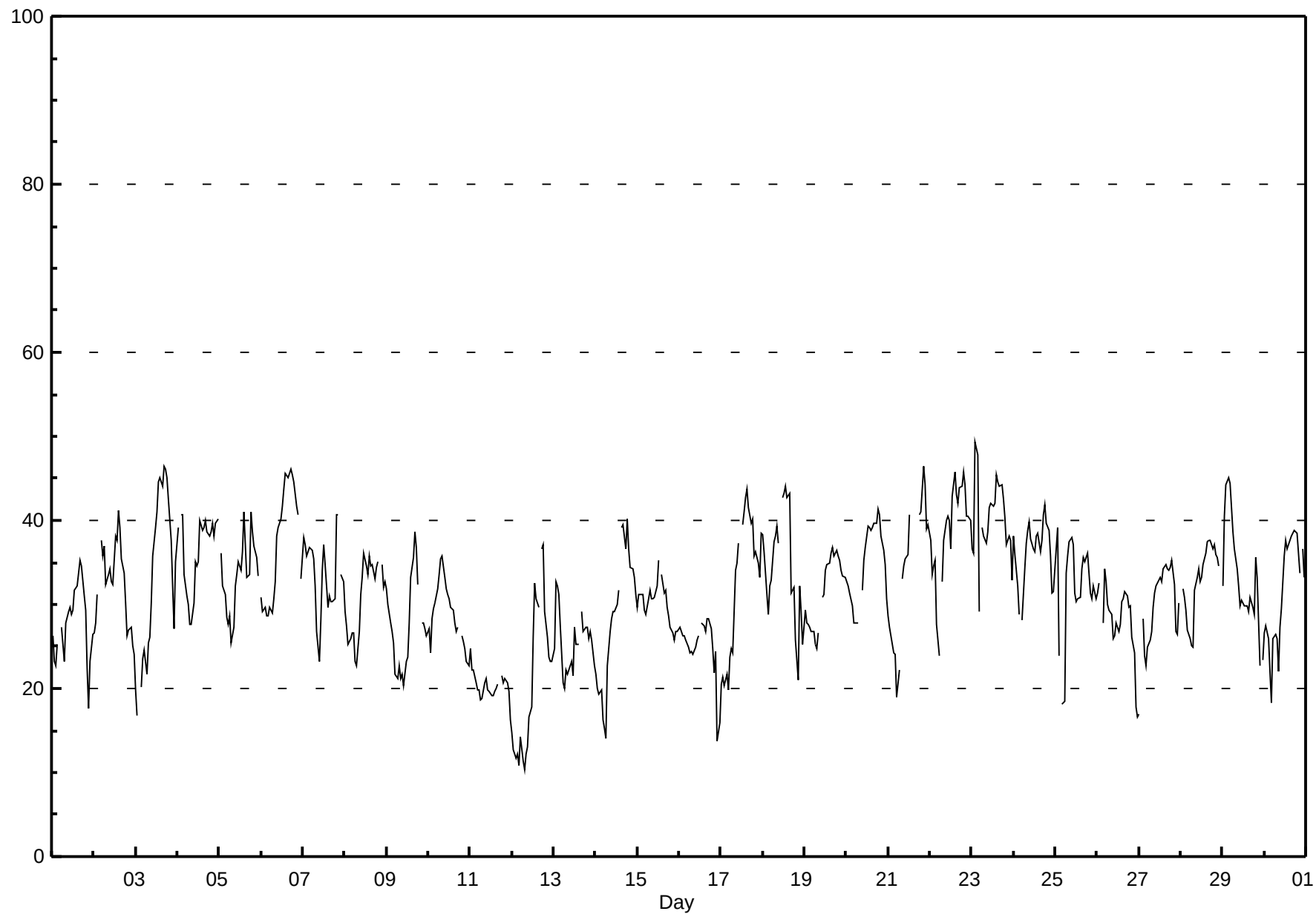
Ozone (O₃) - ppb

Sunset House - June 2013

Maximum Value: 49.3 ppb on Jun 23 03:00																					Maximum Daily Average: 40.3 ppb on Jun 23				Hours in Service: 720	
Minimum Value: 10 ppb on Jun 12 08:00																					Minimum Daily Average: 20.3 ppb on Jun 11				Hours of Data: 683	
Maximum Diurnal Average: 35.9 ppb at hour 16																					Minimum Diurnal Average: 26.5 ppb at hour 6				Hours of Missing Data: 37	
Monthly Average: 31.37 ppb																					Percentiles: P ₁ = 12.5 P ₁₀ = 21.9 Q ₁ = 26.6 Median = 31.4 Q ₃ = 36.6 P ₉₀ = 40.5 P ₉₉ = 45.8				Hours of Calibration: 37	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	26	23	23	25	A	27	25	23	28	29	30	29	29	32	32	34	35	35	31	29	22	18	23	26	27.6	35.2
2-Jun	27	28	31	A	38	36	37	32	34	34	33	32	38	38	41	39	35	34	30	26	27	27	25	24	32.5	41.2
3-Jun	20	17	A	20	23	25	22	25	26	30	36	39	41	45	45	44	46	46	45	43	38	32	27	35	33.5	46.4
4-Jun	39	A	41	41	34	31	30	28	28	30	35	35	35	40	39	39	40	39	38	39	40	38	40	40	36.4	40.6
5-Jun	A	36	32	31	28	28	29	25	27	32	34	35	34	36	41	37	33	34	41	39	37	36	33	A	33.6	41.1
6-Jun	31	29	30	29	29	30	29	31	33	38	39	40	42	44	46	45	46	46	45	45	42	41	A	33	37.4	46.1
7-Jun	38	37	36	36	37	37	35	32	27	23	28	34	37	35	30	31	30	30	31	41	41	A	34	33	33.6	40.6
8-Jun	29	28	25	26	27	27	23	23	27	31	33	36	35	34	36	35	35	33	34	35	A	35	32	33	30.8	36.1
9-Jun	32	30	28	27	25	22	21	23	21	22	20	23	24	28	33	36	39	37	32	A	28	28	27	26	27.4	38.6
10-Jun	27	24	28	30	30	32	34	35	36	33	32	31	31	30	29	28	27	27	A	26	26	25	23	23	29.0	35.7
11-Jun	25	22	22	21	20	20	19	19	21	21	20	20	19	19	20	20	20	A	22	21	21	21	20	16	20.3	24.7
12-Jun	15	13	12	12	11	14	11	10	12	13	17	18	26	33	31	30	A	37	37	29	26	24	23	23	20.7	37.1
13-Jun	25	33	32	31	27	21	20	22	22	23	23	22	27	25	25	A	29	27	27	27	26	27	26	23	25.6	32.7
14-Jun	22	20	19	20	16	15	14	23	27	28	29	29	30	32	A	39	39	37	40	37	34	34	33	31	28.2	40.1
15-Jun	30	31	31	31	29	29	31	32	31	31	31	32	35	A	34	31	32	30	29	27	27	26	27	27	30.1	35.2
16-Jun	27	27	26	26	26	25	24	24	24	25	26	26	A	28	27	27	28	28	27	25	22	24	14	16	24.9	28.3
17-Jun	21	21	20	22	20	24	25	24	34	35	37	A	40	41	43	44	42	40	40	36	36	35	33	39	32.6	43.7
18-Jun	38	36	31	29	32	33	37	38	39	37	A	43	43	44	43	43	31	32	32	26	21	32	29	25	34.6	44.0
19-Jun	29	28	28	27	27	27	25	25	27	A	31	31	34	35	35	36	37	36	36	36	35	34	33	33	31.5	36.7
20-Jun	33	32	31	30	28	28	28	28	A	32	35	37	39	39	39	39	40	40	41	41	38	36	35	31	34.7	41.3
21-Jun	29	27	25	24	24	19	22	A	33	35	35	36	41	C	C	C	C	C	41	41	46	44	39	39	33.4	46.4
22-Jun	38	34	35	35	28	24	A	33	38	40	41	40	37	43	46	43	42	44	44	46	44	41	41	40	38.8	45.8
23-Jun	37	36	49	48	29	A	39	38	37	39	42	42	42	42	45	45	44	44	43	40	37	38	38	33	40.3	49.3
24-Jun	38	36	32	29	A	28	34	37	39	40	38	37	36	38	38	36	38	41	42	40	39	36	31	32	36.3	41.9
25-Jun	37	39	24	A	18	19	34	36	37	38	37	31	30	31	31	34	36	35	36	34	31	31	32	31	32.2	39.1
26-Jun	31	33	A	28	34	33	30	29	29	26	26	28	27	28	30	31	32	31	30	30	26	24	18	17	28.2	34.2
27-Jun	17	A	28	24	23	25	26	27	30	31	32	33	33	33	34	35	34	34	34	35	32	27	26	30	29.7	35.2
28-Jun	A	32	31	29	27	26	25	25	32	33	34	33	33	35	36	37	38	38	37	37	36	36	35	A	32.9	37.6
29-Jun	32	41	44	45	44	42	39	37	34	32	30	31	30	30	30	29	31	30	29	36	33	23	A	23	33.6	45.1
30-Jun	27	27	26	22	18	26	26	26	22	27	29	36	38	37	37	38	38	39	39	38	34	A	37	33	31.3	38.8
29.2 29.3 29.3 28.5 26.9 26.5 27.4 27.9 29.4 30.7 31.5 32.3 34.0 34.7 35.6 35.9 35.6 35.7 35.6 34.6 32.6 31.1 29.8 29.1																									Diurnal Average	
39.1 40.5 49.3 47.7 44.5 41.5 39.1 38.1 39.4 40.1 41.5 42.7 43.2 44.6 45.8 45.1 46.4 46.1 45.5 45.8 46.4 44.3 40.5 40.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

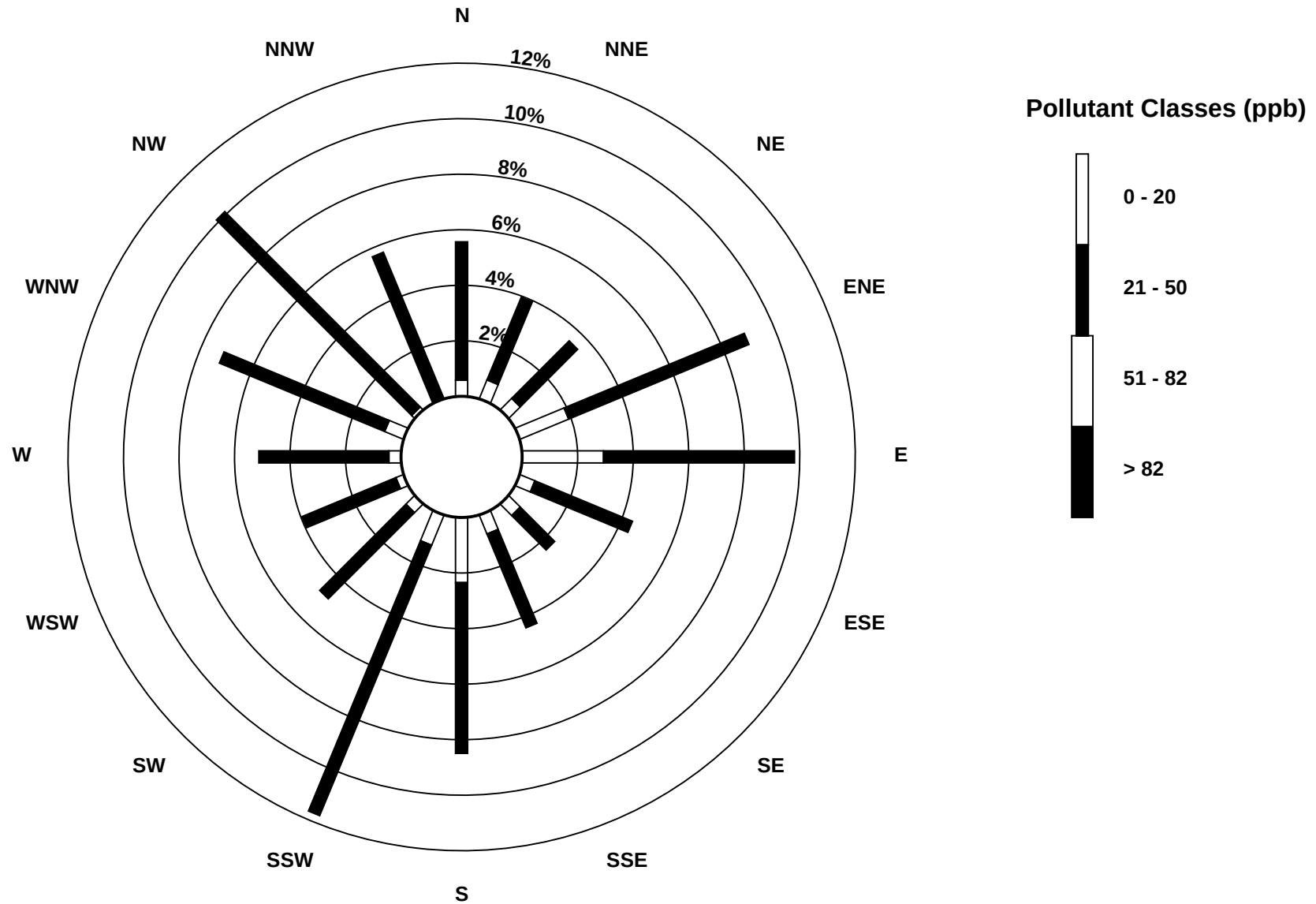
Hourly Maximums

Ozone (O₃) - ppb
Sunset House - June 2013



Pollutant Rose

Ozone (O₃) - ppb
Sunset House - June 2013



Eight Hour Running Averages

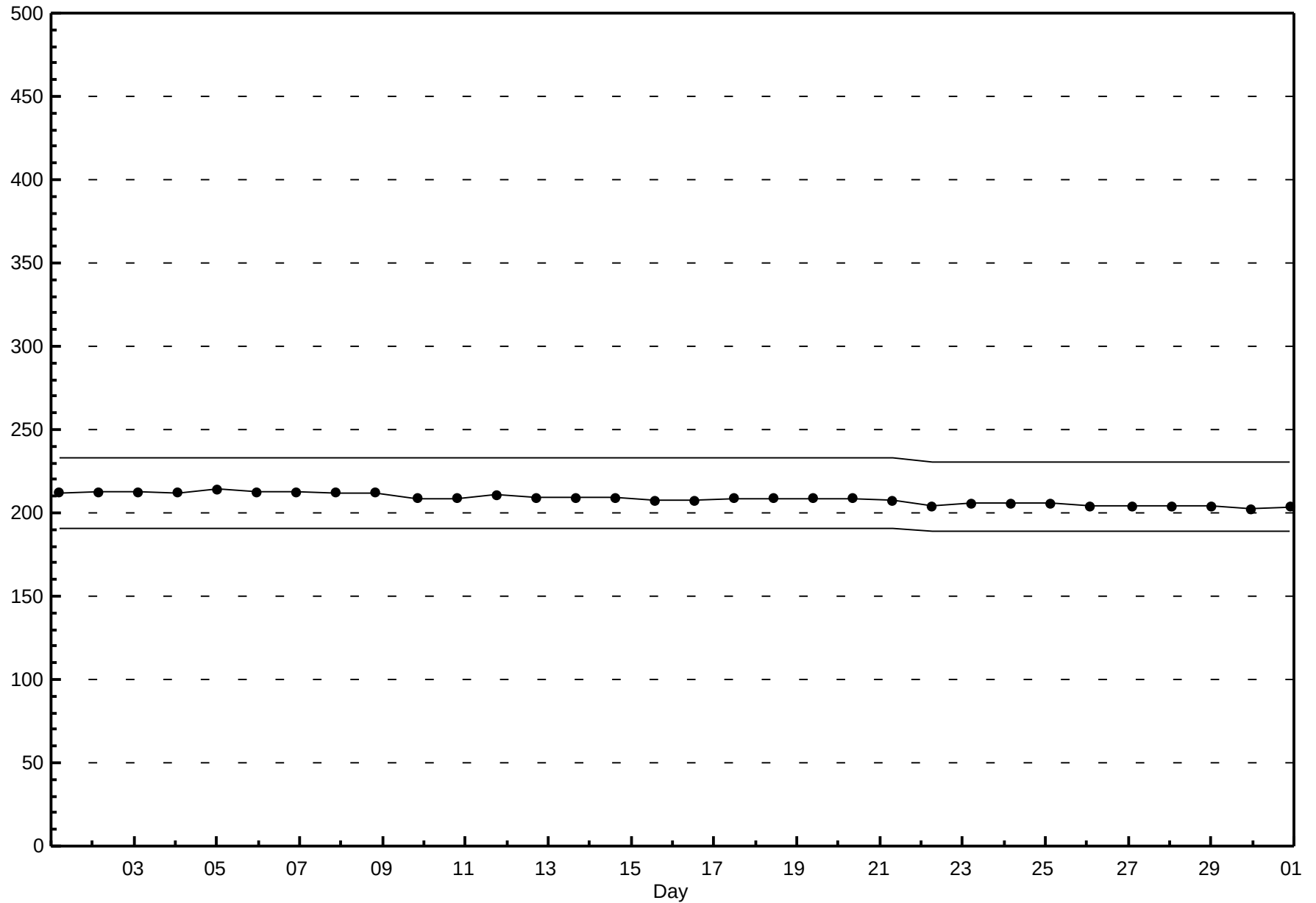
Ozone (O₃) - ppb

Sunset House - June 2013

Maximum Value: 42.8 ppb on Jun 6 21:00																								Hours in Service: 720	
Minimum Value: 10.6 ppb on Jun 12 10:00																								Hours of Data: 711	
																								Hours of Missing Data: 9	
Percentiles: P ₁ = 12.3 P ₁₀ = 20.5 Q ₁ = 24.6 Median = 28.8 Q ₃ = 32.8 P ₉₀ = 36.4 P ₉₉ = 41.2																								Hours of Calibration: 9	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jun	26	24	23	23	23	23	23	22	22	23	24	25	25	26	27	28	29	30	30	30	28	26	24	23	30.2
2-Jun	22	21	20	20	23	25	28	29	31	32	32	32	32	32	33	34	34	34	34	33	31	30	28	27	34.0
3-Jun	25	23	22	21	20	20	19	19	20	21	23	25	27	30	32	35	37	39	40	41	39	37	34	33	40.7
4-Jun	32	30	30	30	30	32	33	32	31	30	30	29	30	30	31	33	34	35	36	36	37	37	37	38	37.6
5-Jun	38	37	36	35	33	31	29	27	27	26	25	26	27	29	30	31	32	33	34	34	35	35	34	34	37.5
6-Jun	34	33	32	30	29	28	27	27	28	29	30	31	33	35	37	39	40	42	42	43	43	42	41	39	42.8
7-Jun	37	35	34	32	32	32	32	32	32	30	29	29	29	28	28	28	28	29	30	31	30	30	29	29	36.7
8-Jun	29	28	27	26	24	24	25	24	23	24	25	26	27	28	29	31	32	32	32	32	32	33	32	32	32.7
9-Jun	32	31	30	29	28	27	25	24	23	22	21	20	20	21	22	24	26	27	29	30	31	31	30	29	31.7
10-Jun	27	26	25	25	25	26	27	28	29	30	31	31	31	31	31	30	29	28	28	27	26	26	25	24	31.4
11-Jun	23	23	22	22	21	20	19	19	18	18	18	17	17	18	18	18	18	18	19	19	19	19	19	19	23.4
12-Jun	18	17	16	15	14	13	12	11	11	11	11	12	13	15	17	20	21	24	26	28	29	28	27	26	28.6
13-Jun	25	25	25	25	25	25	24	24	24	23	22	20	20	21	21	22	22	23	24	24	24	25	25	24	25.5
14-Jun	23	23	22	21	20	18	17	17	17	18	19	20	22	24	26	28	30	31	33	34	35	35	34	34	34.9
15-Jun	33	32	31	30	30	29	29	29	29	29	29	29	30	30	30	30	30	30	30	29	28	28	27	27	32.8
16-Jun	26	26	26	26	26	25	25	25	24	24	24	24	24	24	24	24	25	25	25	25	24	23	21	19	26.2
17-Jun	18	17	16	15	15	15	16	18	19	21	24	25	28	31	34	36	37	37	37	36	36	35	33	33	37.3
18-Jun	33	32	30	30	29	28	28	28	28	29	30	33	35	37	38	38	37	36	35	32	30	28	26	24	38.0
19-Jun	24	23	23	24	25	25	25	26	26	26	26	27	27	28	30	31	33	33	33	34	34	34	34	34	34.3
20-Jun	33	33	32	31	30	29	29	28	28	27	28	29	31	32	34	35	36	37	38	38	38	38	37	36	38.4
21-Jun	35	33	31	29	26	24	22	21	21	22	24	26	29	31	N	N	N	N	N	N	N	N	N	38	38.5
22-Jun	38	36	34	33	30	27	27	25	25	27	28	30	32	34	35	37	38	39	39	40	41	41	41	41	41.3
23-Jun	40	39	39	38	35	34	33	33	33	34	33	34	37	37	38	39	40	41	41	41	41	40	39	36	41.3
24-Jun	35	34	33	31	30	27	27	29	28	29	30	32	32	34	35	35	35	36	36	36	36	36	35	35	36.5
25-Jun	35	34	31	30	27	24	23	23	24	24	27	27	29	30	31	30	30	30	30	30	30	30	30	30	34.6
26-Jun	29	29	28	27	28	29	28	29	28	28	27	28	27	26	26	26	27	27	28	27	27	25	23	21	29.2
27-Jun	20	18	17	16	16	18	19	21	23	24	25	26	28	29	30	31	32	32	33	33	32	31	29	28	32.7
28-Jun	27	26	26	25	25	25	26	26	26	26	27	27	28	29	30	32	33	34	34	35	35	35	35	35	35.0
29-Jun	34	34	35	36	38	38	39	38	39	38	36	34	32	31	30	29	28	28	27	27	27	26	26	25	38.9
30-Jun	25	25	25	24	22	22	22	22	22	22	22	24	26	28	29	31	33	34	35	35	34	34	34	33	35.4
39.9 38.6 38.9 37.6 37.6 38.4 38.9 38.4 38.5 37.9 36.1 34.3 36.8 37.2 38.4 39.3 40.4 41.6 42.3 42.7 42.8 41.7 41.5 40.5																									Diurnal Maximums
N - Not Valid																									

Span Responses

Ozone (O₃)
Sunset House - June 2013



Hourly Averages

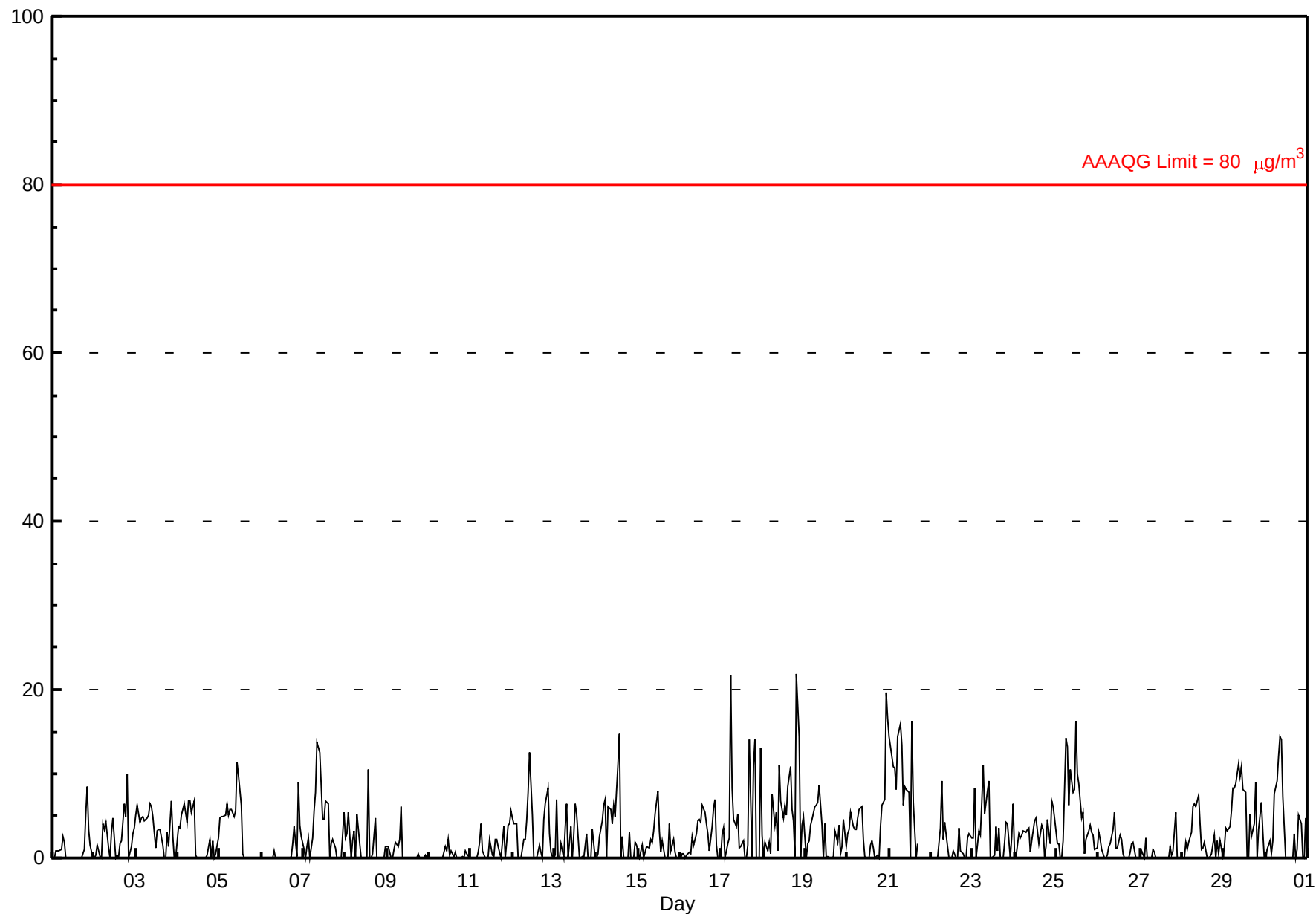
PM2.5 (PM_{2.5}) - µg/m³

Sunset House - June 2013

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 21.9 µg/m³ on Jun 18 20:00 Minimum Value: 0 µg/m³ on Jun 1 01:00 Maximum Diurnal Average: 4.8 µg/m³ at hour 8 Monthly Average: 2.80 µg/m³																				Maximum Daily Average: 7.1 µg/m³ on Jun 21 Minimum Daily Average: 0.3 µg/m³ on Jun 10 Minimum Diurnal Average: 1.1 µg/m³ at hour 18 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 1.6 Q ₃ = 4.5 P ₉₀ = 7.1 P ₉₉ = 15.8																				Hours in Service: 720 Hours of Data: 718 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																	
1-Jun	0	0	1	1	1	1	3	2	0	0	0	0	0	0	0	0	0	1	5	8	3	1	0	1.1	8.5																
2-Jun	0	0	2	0	0	4	3	4	1	0	3	5	0	0	0	2	2	6	5	10	0	1	3	4	2.3	10.0															
3-Jun	5	6	4	5	5	4	5	5	6	6	5	1	3	3	3	2	0	0	3	1	7	3	0	0	3.5	6.7															
4-Jun	4	3	5	6	7	4	7	7	5	7	0	0	0	0	0	0	0	0	2	0	2	0	0	2	2.6	6.8															
5-Jun	5	5	5	5	6	5	6	6	5	6	11	10	6	0	0	0	0	0	0	0	0	0	0	0	3.4	11.4															
6-Jun	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	4	0	9	4	3	0.9	8.9															
7-Jun	1	0	1	2	0	2	6	8	14	13	9	5	5	7	6	0	2	2	1	0	0	0	0	5	3.7	13.8															
8-Jun	2	3	5	0	2	3	0	5	2	0	0	0	0	10	0	0	0	5	0	0	0	0	0	1	1.7	10.5															
9-Jun	1	1	0	0	1	2	1	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	6.1															
10-Jun	0	0	0	0	0	0	0	0	0	1	1	2	0	1	0	1	0	0	0	0	0	1	1	0	0.3	2.2															
11-Jun	0	0	0	0	1	2	4	1	0	0	0	2	0	0	2	2	1	0	2	4	0	4	4	6	1.5	5.5															
12-Jun	5	4	4	0	0	0	2	2	4	8	13	5	0	0	0	1	1	0	5	6	8	3	1	0	3.0	12.6															
13-Jun	0	7	0	0	2	0	4	6	0	4	0	3	6	5	0	0	0	0	3	0	0	0	3	0	1.8	7.0															
14-Jun	0	0	3	4	6	7	0	6	6	4	6	5	11	15	0	3	0	0	0	3	0	0	2	2	3.4	14.7															
15-Jun	1	0	2	0	1	1	1	2	2	3	5	8	3	1	2	0	0	0	4	1	2	1	0	0	1.7	8.0															
16-Jun	0	1	0	0	0	1	0	3	2	3	4	5	4	6	5	4	3	1	4	6	7	2	0	0	2.5	7.0															
17-Jun	3	4	0	2	2	22	8	5	4	5	1	1	2	0	0	2	14	0	11	14	0	0	13	3	4.8	21.8															
18-Jun	0	2	1	2	0	8	4	6	1	11	7	5	6	5	8	11	6	4	0	22	14	0	4	5	5.5	21.9															
19-Jun	0	2	2	4	5	6	6	7	9	4	0	4	0	0	0	0	3	2	4	1	1	4	1	1	2.7	8.6															
20-Jun	3	3	5	4	3	3	5	6	6	2	0	0	0	2	2	1	0	0	4	6	7	20	17	4.1	19.7																
21-Jun	14	13	11	11	8	14	16	13	6	9	8	8	0	16	7	0	2	M	M	0	0	0	0	0	7.1	16.3															
22-Jun	0	0	0	0	0	4	9	2	4	1	0	0	0	1	0	0	4	1	1	0	0	2	3	2	1.4	9.2															
23-Jun	2	8	0	3	3	7	11	5	8	9	0	0	0	4	1	4	0	0	2	4	4	0	3	6	3.5	10.9															
24-Jun	0	0	3	2	3	3	3	3	4	1	2	4	5	3	2	4	3	0	1	5	2	7	6	5	3.0	6.7															
25-Jun	2	2	0	0	2	14	13	6	10	8	8	16	10	9	5	5	1	2	3	4	3	3	1	1	5.4	16.3															
26-Jun	3	2	1	0	0	0	1	2	3	5	1	1	3	2	1	0	0	0	1	2	2	0	0	0	1.3	5.4															
27-Jun	0	1	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	1	5	0	0	0	0.5	5.4															
28-Jun	0	0	2	1	2	3	6	7	6	8	4	1	1	2	0	0	0	0	3	0	2	0	2	0	2.1	7.5															
29-Jun	1	4	3	4	6	8	8	9	11	10	11	8	8	0	0	5	2	4	9	0	3	7	3	0	5.2	11.3															
30-Jun	0	1	2	1	2	8	9	12	14	14	7	0	0	0	0	0	3	0	1	5	4	0	0	5	3.7	14.5															
																									Diurnal Average	Diurnal Maximum															
																									1.7	14.4															
																									2.4	13.2															
																									2.1	10.9															
																									2.0	10.7															
																									2.3	8.1															
																									4.6	21.8															
																									4.7	16.0															
																									4.8	13.4															
																									4.7	14.5															
																									4.7	14.0															
																									3.6	12.6															
																									3.3	16.3															
																									2.5	11.2															
																									3.1	16.3															
																									1.5	8.5															
																									1.5	10.8															
																									1.5	14.1															
																									1.1	6.4															
																									2.3	10.9															
																									3.5	21.9															
																									2.7	14.4															
																									1.8	8.9															
																									2.6	19.7															
																									2.3	16.6															
M - Maintenance																																									
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																																									

Hourly Averages

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Sunset House - June 2013



Hourly Maximums

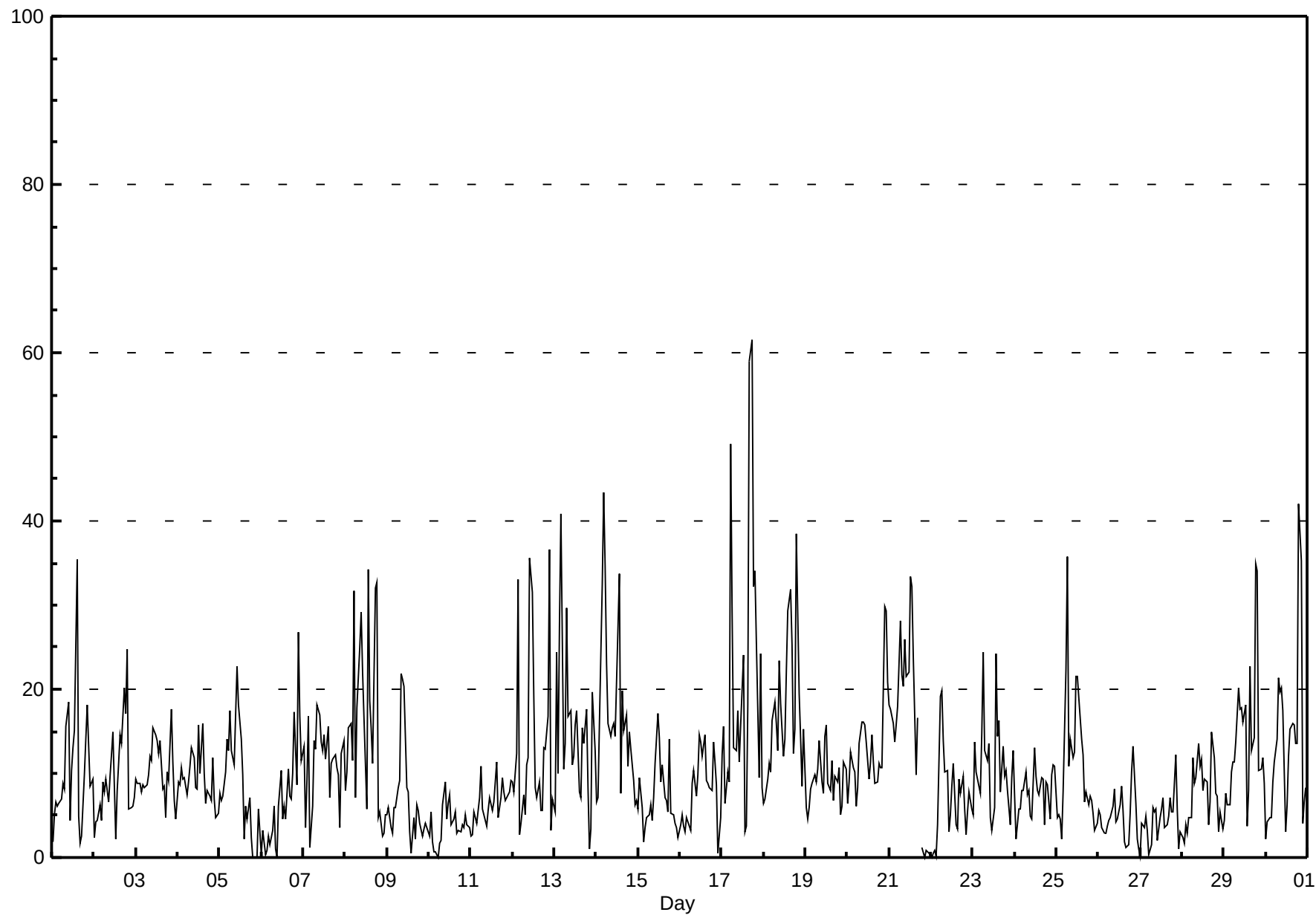
PM2.5 (PM_{2.5}) - µg/m³

Sunset House - June 2013

Maximum Value: 61.5 μg/m³ on Jun 17 18:00																					Maximum Daily Average: 21.0 μg/m³ on Jun 17					Hours in Service: 720	
Minimum Value: 0 μg/m³ on Jun 5 20:00																					Minimum Daily Average: 3.8 μg/m³ on Jun 10					Hours of Data: 718	
Maximum Diurnal Average: 13.5 μg/m³ at hour 10																					Minimum Diurnal Average: 5.8 μg/m³ at hour 1					Hours of Missing Data: 2	
Monthly Average: 10.58 μg/m³																					Percentiles: P ₁ = 0.1 P ₁₀ = 3.0 Q ₁ = 5.2 Median = 8.8 Q ₃ = 13.7 P ₉₀ = 19.8 P ₉₉ = 36.9					Hours of Calibration: 0	
																					Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jun	2	5	7	6	6	7	9	8	16	18	4	10	13	15	35	5	2	2	10	14	18	13	8	9	10.2	35.5	
2-Jun	2	4	4	6	4	9	8	9	7	10	12	15	2	8	11	15	14	20	17	25	6	6	6	7	9.5	24.8	
3-Jun	9	9	9	8	9	8	9	10	12	12	15	15	14	12	14	8	8	5	10	9	18	11	7	5	10.2	17.6	
4-Jun	9	9	11	9	10	7	9	11	13	12	8	8	16	10	16	10	6	8	7	7	12	7	5	5	9.4	16.0	
5-Jun	8	7	7	10	14	13	17	13	11	17	23	18	14	10	2	6	5	7	2	0	0	0	6	3	8.9	22.7	
6-Jun	0	3	0	1	3	2	3	6	1	0	6	10	5	6	5	10	7	7	10	17	9	27	17	12	6.9	26.7	
7-Jun	13	4	9	17	1	6	14	13	18	17	14	13	15	12	16	7	11	12	12	11	10	4	12	14	11.4	18.1	
8-Jun	8	10	15	16	11	32	7	18	25	29	22	16	6	34	19	15	11	32	33	5	5	2	3	5	15.9	34.2	
9-Jun	5	6	4	3	6	6	8	9	22	21	20	8	8	3	0	5	2	6	6	4	3	3	4	4	6.9	21.9	
10-Jun	2	5	2	1	1	0	2	2	6	9	5	6	7	4	5	5	3	3	3	4	4	5	4	3	3.8	9.0	
11-Jun	2	3	5	4	6	7	11	6	4	4	6	7	6	7	9	11	5	7	9	8	7	7	8	9	6.6	11.4	
12-Jun	9	8	12	33	3	4	7	5	11	12	36	32	19	8	7	9	6	6	13	13	17	37	3	7	13.2	36.6	
13-Jun	5	24	10	28	41	11	14	30	17	17	11	12	16	17	8	7	15	14	18	8	1	3	20	13	15.0	40.8	
14-Jun	7	7	16	33	43	35	23	16	14	15	16	14	27	34	8	20	15	17	11	15	13	9	6	7	17.5	43.4	
15-Jun	6	10	6	2	4	5	5	6	4	7	11	17	14	9	11	7	7	5	14	5	5	4	4	2	7.1	17.1	
16-Jun	4	5	4	3	5	4	3	9	10	7	10	15	14	12	15	9	9	8	8	14	11	9	1	5	8.0	14.6	
17-Jun	12	16	6	10	9	49	29	13	13	17	11	16	24	3	4	18	59	62	32	34	26	9	24	8	21.0	61.5	
18-Jun	6	7	9	11	10	16	18	16	13	23	18	12	14	22	29	32	25	12	15	38	19	14	9	15	17.0	38.5	
19-Jun	6	5	6	8	9	10	9	10	14	9	8	14	16	9	8	12	7	10	9	11	5	6	11	10	9.2	15.8	
20-Jun	6	9	12	11	10	6	8	14	16	16	16	14	9	11	15	11	9	9	11	11	11	30	29	21	13.1	29.8	
21-Jun	18	18	16	14	16	18	28	22	20	26	22	22	33	32	24	10	17	M	M	1	0	1	1	1	16.3	33.4	
22-Jun	0	1	1	0	4	19	20	14	10	10	3	5	8	11	4	3	9	8	10	6	3	5	8	6	7.0	19.8	
23-Jun	5	14	10	8	8	15	24	13	12	14	5	3	6	24	14	16	8	13	10	10	8	4	10	13	11.1	24.4	
24-Jun	7	2	6	6	8	8	10	8	8	5	5	13	10	8	7	9	9	4	9	9	5	10	11	11	7.8	13.0	
25-Jun	5	5	5	2	8	22	36	11	14	12	13	22	21	19	14	12	7	8	6	7	7	5	3	4	11.2	35.8	
26-Jun	6	5	3	3	3	4	4	5	6	8	4	5	6	8	6	2	1	2	5	10	13	6	2	1	5.0	13.3	
27-Jun	0	4	3	5	3	0	2	6	5	6	2	5	6	7	4	4	5	7	5	5	12	6	1	3	4.4	12.2	
28-Jun	2	2	4	3	5	5	12	9	10	14	11	12	8	9	9	4	7	15	12	8	7	3	5	3	7.4	14.9	
29-Jun	4	8	6	6	10	11	11	14	20	18	18	16	18	4	8	23	13	14	35	34	10	10	12	9	13.9	35.0	
30-Jun	2	4	5	5	9	11	14	21	20	20	18	3	6	12	15	16	16	14	14	42	35	4	7	8	13.4	42.0	
5.8 7.2 7.2 9.0 9.2 11.7 12.5 11.5 12.4 13.5 12.4 12.6 12.7 12.7 11.3 10.8 10.5 11.6 12.3 12.8 9.9 8.7 8.2 7.4																									Diurnal Average		
18.1 24.4 16.0 33.1 43.4 49.2 35.8 29.7 25.0 29.2 35.5 31.6 33.4 34.2 35.5 31.8 58.9 61.5 35.0 42.0 35.2 36.6 29.3 20.9																									Diurnal Maximum		
M - Maintenance																											

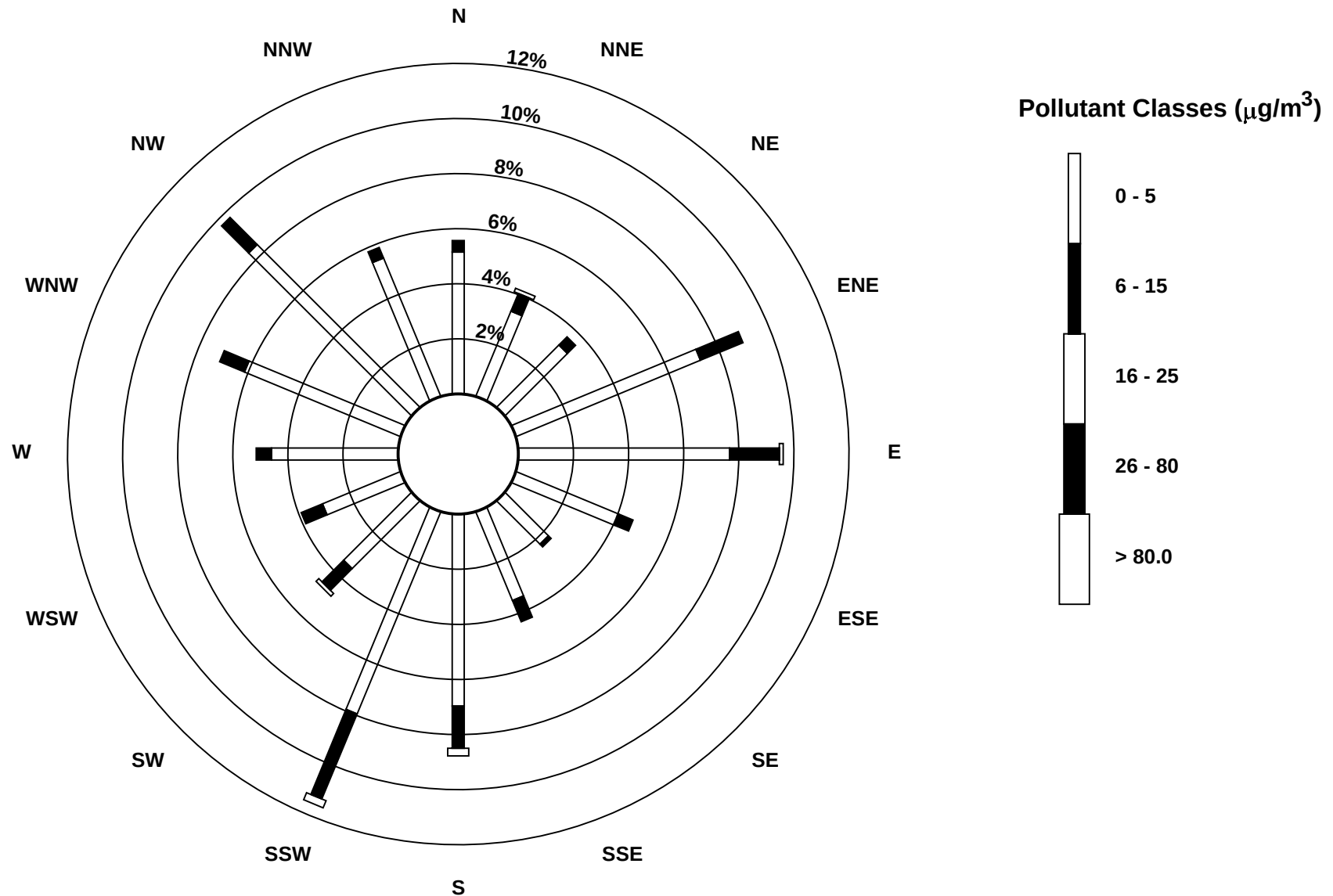
Hourly Maximums

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Sunset House - June 2013



Pollutant Rose

PM2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Sunset House - June 2013



Hourly Averages

External Temperature (ET) - °C

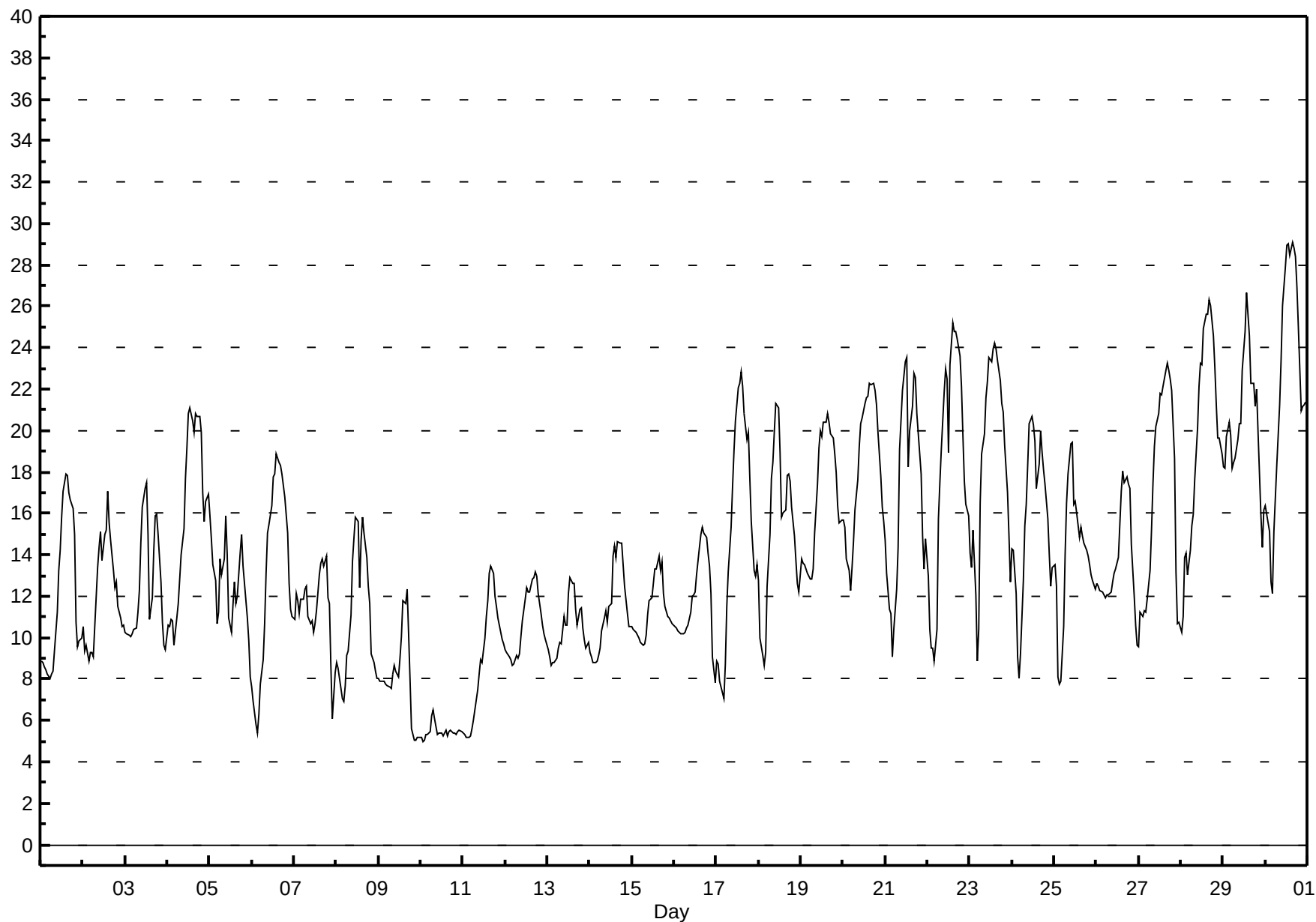
Sunset House - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 29.1 °C on Jun 30 16:00 Maximum Daily Average: 22.2 °C on Jun 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: 5 °C on Jun 10 02:00 Maximum Diurnal Average: 17.7 °C at hour 17 Monthly Average: 14.04 °C												Minimum Daily Average: 5.5 °C on Jun 10 Minimum Diurnal Average: 9.7 °C at hour 5 Percentiles: P ₁ = 5.2 P ₁₀ = 8.2 Q ₁ = 10.3 Median = 13.1 Q ₃ = 17.7 P ₉₀ = 21.2 P ₉₉ = 27.6														
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-Jun	9	9	9	8	8	8	8	8	9	11	13	14	16	17	18	18	17	17	16	15	11	10	10	10	12.1	17.9
2-Jun	11	9	10	9	9	9	9	11	13	14	15	14	15	15	17	16	15	13	12	13	12	11	11	11	12.2	17.1
3-Jun	10	10	10	10	10	10	10	11	12	15	16	17	18	15	11	12	14	16	16	15	13	11	10	9	12.6	17.5
4-Jun	11	11	11	11	10	11	12	13	14	15	18	19	21	21	20	20	21	21	21	20	17	16	17	17	16.0	21.1
5-Jun	16	15	13	13	11	11	14	13	14	16	14	11	10	12	13	12	12	14	15	13	13	11	10	8	12.6	15.9
6-Jun	8	7	6	5	6	8	9	11	13	15	16	16	18	18	19	18	18	18	17	17	15	13	11	11	13.0	18.9
7-Jun	11	12	12	11	12	12	12	12	11	11	11	10	11	11	13	14	14	13	14	12	12	9	6	8	11.4	13.9
8-Jun	9	9	8	7	7	8	9	9	11	14	15	16	16	12	15	16	15	14	13	12	9	9	8	8	11.1	15.8
9-Jun	8	8	8	8	8	8	8	8	8	9	8	8	9	10	12	12	12	10	8	6	5	5	5	5	8.1	12.4
10-Jun	5	5	5	5	5	5	6	6	6	6	5	5	5	5	6	5	5	6	5	5	5	5	6	5	5.5	6.5
11-Jun	5	5	5	5	5	6	6	7	7	8	9	9	10	11	12	13	13	13	12	12	11	10	10	10	9.0	13.5
12-Jun	9	9	9	9	9	9	9	9	9	10	11	12	12	12	12	13	13	13	13	12	11	11	10	10	10.7	13.2
13-Jun	9	9	9	9	9	9	10	10	10	11	11	11	12	13	13	13	11	11	11	11	10	10	10	10	10.4	12.9
14-Jun	9	9	9	9	9	9	10	10	11	11	11	11	12	14	14	14	15	15	15	13	13	11	11	11	11.4	14.7
15-Jun	11	10	10	10	10	10	10	10	10	11	12	12	13	13	13	14	13	14	12	12	11	11	11	11	11.4	14.0
16-Jun	11	10	10	10	10	10	10	10	11	11	12	12	12	13	14	15	15	15	15	14	13	12	9	8	11.9	15.3
17-Jun	9	9	8	7	7	9	12	13	15	17	19	20	22	22	23	22	21	20	20	18	16	13	13	14	15.3	22.9
18-Jun	13	10	9	9	9	12	15	18	18	20	21	21	19	16	16	16	18	18	18	16	15	14	13	12	15.2	21.3
19-Jun	14	14	14	13	13	13	13	13	15	17	19	20	20	20	20	21	20	20	20	19	18	16	16	16	16.8	20.9
20-Jun	16	15	14	13	12	13	15	16	18	19	20	21	21	22	22	22	22	22	22	21	20	18	16	16	18.2	22.3
21-Jun	15	13	11	11	9	10	12	14	19	20	22	23	24	18	20	21	23	23	21	20	18	15	13	15	17.1	23.5
22-Jun	13	10	9	9	9	10	16	17	19	22	23	22	19	23	25	25	25	24	24	22	20	18	16	16	18.2	25.2
23-Jun	14	13	15	12	9	10	17	19	20	22	22	24	23	24	24	24	23	22	21	21	19	17	15	13	18.5	24.2
24-Jun	14	14	12	9	8	9	13	15	16	18	20	21	20	19	17	18	20	19	18	17	16	14	13	13	15.7	20.7
25-Jun	14	13	8	8	8	11	14	17	18	19	19	16	17	16	15	15	15	15	14	14	14	13	13	12	14.0	19.4
26-Jun	13	12	12	12	12	12	12	12	12	13	13	13	14	15	17	18	17	18	17	17	14	12	11	10	13.7	18.0
27-Jun	10	11	11	11	11	12	13	15	17	19	20	21	22	22	22	23	23	23	22	22	19	13	11	11	16.9	23.3
28-Jun	10	11	14	14	13	14	15	16	18	20	22	23	23	25	26	26	26	26	25	23	21	20	20	19	19.6	26.3
29-Jun	18	18	20	20	20	18	18	19	20	20	20	23	25	27	26	25	22	22	21	22	20	16	14	16	20.4	26.6
30-Jun	16	16	15	13	12	15	18	20	21	23	26	28	29	29	28	29	29	28	27	25	21	21	21	21	22.2	29.1
11.3 10.9 10.5 10.1 9.7 10.4 11.8 12.8 13.9 15.3 16.2 16.5 16.9 17.1 17.4 17.6 17.7 17.4 16.8 16.0 14.3 12.8 11.9 11.8																								Diurnal Average		
18.3 18.2 19.7 20.4 19.8 18.2 18.5 19.8 21.2 23.4 26.0 27.9 28.9 29.0 28.5 29.1 28.8 28.4 26.9 25.0 21.2 21.2 21.2 21.4																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Sunset House - June 2013



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Sunset House - June 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	11	7	8	10	10	7	9	11	13	14	13	12	7	5	3	2	8	7	8	4	3	5	3	4	6.6	14.0
Dir	209	206	204	209	211	229	200	197	191	191	207	217	218	258	309	13	186	203	209	197	95	130	92	150	202.1	191.4
2 Spd	9	7	16	13	12	14	4	2	5	8	7	14	16	16	17	16	15	12	5	6	10	7	8	10	4.7	16.6
Dir	194	195	193	192	170	151	209	274	343	10	22	93	79	76	54	60	68	90	47	13	354	29	39	27	81.4	54.4
3 Spd	8	6	6	4	3	4	4	1	3	5	8	8	10	6	8	4	1	3	4	3	3	3	5	9	1.7	9.7
Dir	20	25	17	40	57	41	355	319	324	354	331	352	15	105	185	267	310	263	256	217	109	88	143	161	18.8	15.0
4 Spd	10	10	11	11	14	15	16	15	14	13	10	8	7	4	4	8	7	11	11	10	10	11	16	20	10.3	20.2
Dir	156	153	162	192	168	182	179	194	203	198	208	197	240	241	228	223	229	193	186	179	161	158	163	166	184.2	165.7
5 Spd	17	15	12	10	8	7	10	9	4	2	8	12	11	8	7	11	16	14	12	11	9	7	5	3	7.4	17.4
Dir	175	179	183	190	156	190	203	197	204	252	245	278	285	279	246	204	199	207	266	275	265	221	257	245	220.0	174.9
6 Spd	6	6	6	6	7	8	7	6	7	9	11	11	11	10	12	9	10	12	8	9	9	3	6	7	6.0	12.1
Dir	207	206	199	205	209	218	226	231	270	283	272	258	262	266	296	283	291	296	290	295	311	148	139	146	257.6	295.7
7 Spd	6	9	8	8	9	9	11	11	7	7	7	9	14	10	8	10	7	6	4	8	0	4	6	6	4.6	14.4
Dir	171	184	174	177	179	176	188	208	217	210	215	192	188	195	306	353	316	317	297	33	50	196	190	206	203.1	188.4
8 Spd	4	7	5	5	8	8	6	7	8	11	13	11	13	14	17	20	20	17	14	12	8	8	6	6	7.9	20.4
Dir	226	207	200	207	203	208	239	224	241	277	294	291	289	349	300	304	306	315	315	317	303	315	335	305	289.8	304.3
9 Spd	7	8	6	7	6	7	8	7	6	10	15	15	16	18	17	15	21	25	24	20	17	13	9	9	11.4	24.6
Dir	303	314	306	300	292	289	291	288	289	3	357	6	357	349	349	350	359	9	2	356	360	344	310	304	343.4	9.0
10 Spd	7	4	5	8	7	8	11	13	15	14	15	15	14	14	15	12	11	12	12	9	8	5	5	6	9.9	15.5
Dir	306	242	273	323	316	321	326	332	337	344	329	328	323	322	328	335	337	326	339	334	338	319	297	309	326.1	327.8
11 Spd	4	7	6	4	4	1	1	3	4	6	5	8	7	11	11	12	15	13	8	6	15	16	18	18	6.9	17.6
Dir	323	7	10	18	43	2	265	79	130	102	90	71	79	47	45	33	26	35	77	79	82	92	97	99	63.4	96.6
12 Spd	15	15	13	13	11	10	12	13	14	11	8	8	9	14	13	10	8	11	9	12	10	11	10	10	10.1	15.2
Dir	95	96	99	101	79	83	66	69	66	74	78	61	62	82	74	72	68	76	40	30	14	17	14	2	66.6	95.2
13 Spd	13	12	7	6	5	4	6	6	6	6	5	5	6	6	6	7	3	4	8	12	10	11	10	10	3.5	13.2
Dir	355	1	1	328	276	273	291	286	280	282	255	232	289	265	227	220	292	155	197	191	188	183	190	196	247.7	355.0
14 Spd	10	10	7	8	6	6	4	9	10	12	13	12	13	13	12	13	14	12	15	13	10	8	4	7	7.2	14.9
Dir	197	202	204	205	212	218	276	314	313	319	322	320	321	321	324	347	330	328	318	304	300	293	244	287	301.8	317.7
15 Spd	11	11	13	14	13	15	16	14	15	16	15	17	19	19	17	18	18	14	16	15	10	13	13	12	13.9	18.8
Dir	302	308	311	308	308	310	310	308	309	307	309	330	348	340	349	357	354	345	353	345	339	344	344	338	329.5	348.4
16 Spd	11	10	9	9	8	9	9	10	9	9	8	8	8	8	7	9	7	6	5	2	2	4	5	7	6.0	10.9
Dir	336	332	332	327	318	329	337	338	337	345	324	306	296	307	300	314	312	308	301	270	249	198	176	181	317.3	335.7
17 Spd	8	9	8	7	6	6	11	9	8	6	4	4	5	9	8	8	3	5	4	3	6	9	12	12	3.3	12.2
Dir	188	187	184	180	152	174	191	197	206	226	234	271	324	15	355	360	346	60	168	202	105	117	168	170	179.7	170.2
18 Spd	11	4	3	7	6	4	2	3	13	14	14	17	13	16	14	10	7	8	5	5	3	3	2	6	5.3	17.2
Dir	167	138	139	51	80	154	232	333	69	35	47	68	86	130	102	101	88	98	97	234	230	237	106	72	90.7	67.5
19 Spd	15	15	17	17	17	18	17	18	19	17	20	18	19	20	22	19	15	13	11	10	9	8	7	10	15.5	22.1
Dir	66	69	78	81	88	82	85	90	83	78	82	80	82	75	75	76	86	74	79	72	86	89	83	93	80.1	74.6
20 Spd	11	10	11	12	12	13	12	11	12	16	18	19	19	18	18	20	19	17	16	14	11	8	13	13	12.5	20.0
Dir	99	96	85	91	88	97	87	71	78	73	82	77	75	70	68	64	72	57	65	62	64	100	187	193	80.9	63.9
21 Spd	13	8	8	8	6	5	6	5	3	4	6	7	8	19	14	10	8	6	7	11	14	4	7	11	1.2	19.4
Dir	195	200	198	196	189	189	196	184	274	283	305	304	15	16	14	351	343	298	224	191	171	164	68	99	219.3	16.5
22 Spd	6	6	6	7	3	3	1	4	4	3	12	8	7	3	5	8	7	7	7	7	11	17	11	8	2.8	17.3
Dir	202	162	164	146	101	127	226	263	271	47	12	39	351	325	350	316	12	12	14	63	81	107	74	133	62.1	106.7

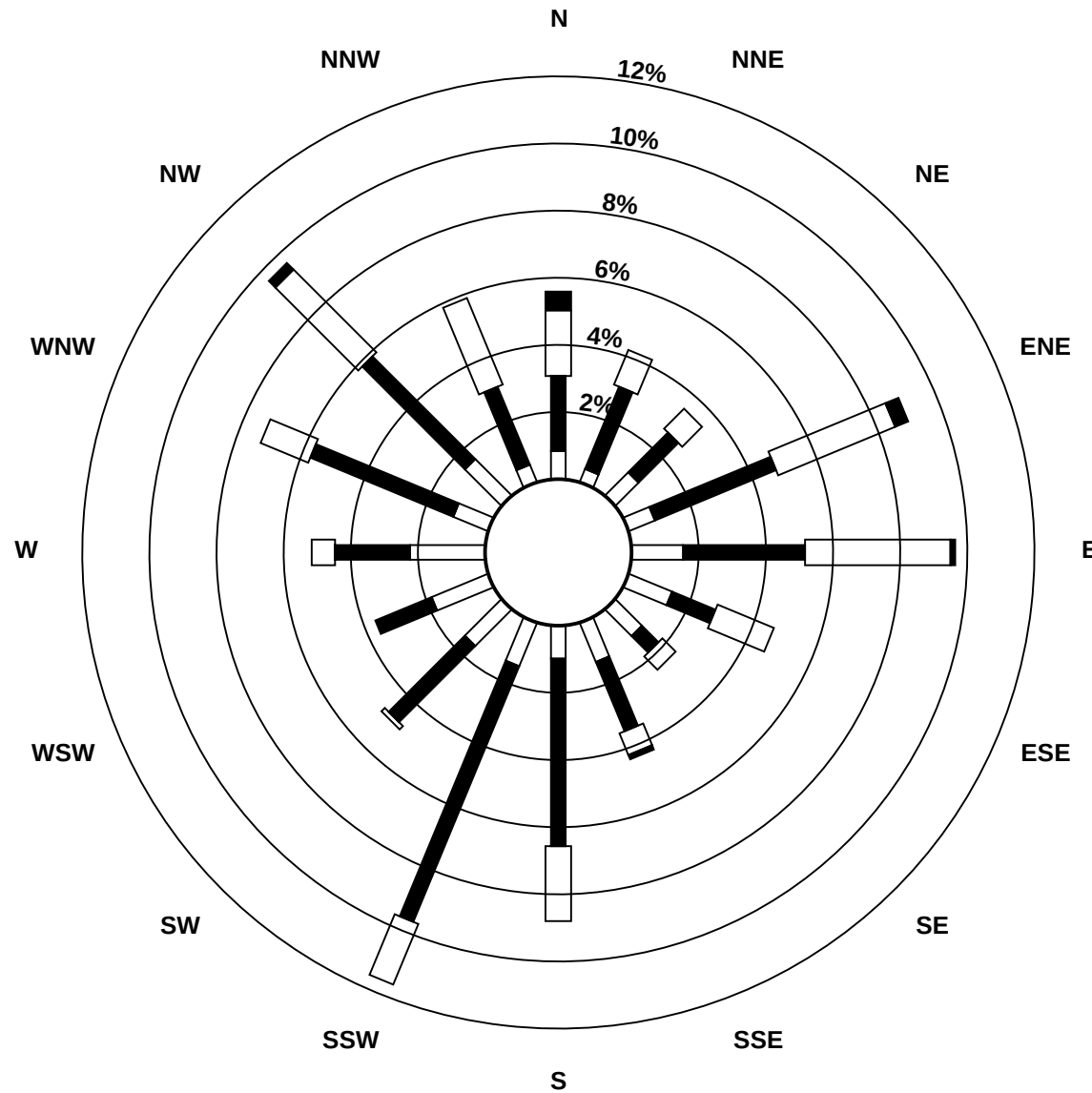
Hourly Averages

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

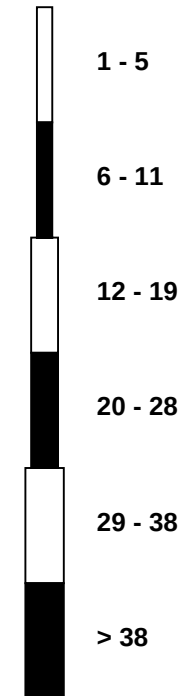
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	6	6	11	4	3	4	1	3	5	6	8	11	11	12	12	11	10	12	12	16	15	11	2	4	5.8	15.9	
Dir	152	58	58	115	118	120	258	308	290	300	87	28	64	38	42	36	66	85	94	104	113	118	158	77	75.1	103.6	
24 Spd	9	8	5	5	3	5	6	12	13	11	11	19	19	11	6	11	15	14	13	14	9	11	8	9	8.9	19.0	
Dir	97	114	122	67	106	80	71	112	117	114	63	26	34	41	111	72	58	83	96	75	49	59	45	102	74.4	26.4	
25 Spd	12	3	3	2	4	6	4	5	9	3	3	8	11	11	12	16	16	9	5	2	2	2	2	1	5.1	15.8	
Dir	134	150	120	99	79	71	74	95	114	139	58	94	69	88	108	121	122	153	153	187	255	222	271	256	112.7	121.6	
26 Spd	3	3	5	7	8	6	6	7	10	10	8	9	7	8	13	16	14	9	5	3	4	3	7	8	4.7	15.9	
Dir	322	282	271	273	286	274	244	243	233	236	254	252	248	274	296	298	307	346	10	37	117	123	153	150	272.3	297.9	
27 Spd	7	5	8	14	10	12	10	9	10	11	15	14	13	12	14	13	12	12	11	7	1	5	8	8	6.4	14.8	
Dir	160	177	191	187	199	196	205	222	236	261	270	275	274	290	297	297	292	304	300	299	178	140	143	170	247.5	270.2	
28 Spd	8	8	12	9	10	11	11	11	9	9	7	8	6	8	10	10	7	4	8	9	8	11	16	17	2.6	16.6	
Dir	175	189	192	199	189	190	187	197	206	215	243	274	261	295	313	304	352	349	18	53	66	84	103	107	187.5	106.8	
29 Spd	14	14	18	19	14	9	12	11	10	8	5	6	5	8	9	3	15	8	5	7	8	5	7	9	7.2	18.7	
Dir	114	127	145	164	181	195	180	189	196	208	201	231	242	305	308	226	191	203	192	195	202	171	187	185	183.8	163.7	
30 Spd	12	11	10	7	7	7	8	6	7	6	4	6	3	4	2	4	5	6	6	5	6	9	11	13	2.1	12.8	
Dir	178	176	175	171	170	185	197	203	230	241	279	354	305	307	299	24	335	4	47	44	84	87	98	103	154.1	103.0	
Spd	3.5	2.9	3.3	3.1	3.0	2.9	2.5	2.2	1.4	1.6	2.7	3.2	3.6	4.6	5.0	4.9	4.1	3.4	2.7	2.1	2.1	2.9	3.0	3.7	Diurnal Average		
Dir	160.2	159.1	163.7	174.0	170.5	177.6	204.5	212.2	234.7	304.9	328.6	349.5	359.3	4.9	357.5	1.4	4.2	13.1	4.0	15.0	58.8	98.2	121.2	138.3	Diurnal Maximum		
Spd	17.4	15.3	17.9	18.7	16.7	17.7	17.4	18.4	18.7	17.3	20.2	19.0	19.2	20.2	22.1	20.4	21.1	24.6	24.4	20.4	17.1	17.3	17.6	20.2	Diurnal Maximum		
Dir	174.9	69.2	145.3	163.7	87.8	81.6	84.7	89.5	82.8	77.9	81.9	26.4	82.0	75.5	74.6	304.3	359.4	9.0	2.4	356.5	359.6	106.7	96.6	165.7			
Maximum Speed Value: 25 km/h on Jun 9 18:00																		Minimum Speed Value: 0 km/h on Jun 7 21:00						Hours in Service: 720			
Maximum Daily Speed Average: 15.5 km/h on Jun 19																		Minimum Daily Speed Average: 1.2 km/h on Jun 3						Hours of Data: 720			
Maximum Diurnal Speed Average: 5.0 km/h at hour 15																		Minimum Diurnal Speed Average: 1.4 km/h at hour 9						Hours of Missing Data: 0			
Monthly Average Velocity: 0.56 km/h 42.77 deg																		Speed Percentiles: P ₁ = 1.4 P ₁₀ = 3.8 Q ₁ = 6.1 Median = 8.7 Q ₃ = 12.2 P ₉₀ = 15.6 P ₉₉ = 20.1						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	9		37		27		5		0		0		78														
NorthEast	12		25		23		1		0		0		61														
East	14		39		66		6		0		0		125														
SouthEast	18		21		10		0		0		0		49														
South	12		76		38		1		0		0		127														
SouthWest	16		64		5		0		0		0		85														
West	25		36		13		0		0		0		74														
NorthWest	16		59		44		2		0		0		121														
Total	122		357		226		15		0		0		720														

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Sunset House - June 2013

Maximum Speed: 25 km/h on Jun 9 18:00																				Maximum Daily Speed Average: 15.9 km/h on Jun 19										Hours in Service: 720	
Minimum Speed: 1 km/h on Jun 26 00:00																				Minimum Daily Speed Average: 5.9 km/h on Jun 3										Hours of Data: 720	
Maximum Diurnal Speed Average: 12.5 km/h at hour 14																				Minimum Diurnal Speed Average: 8.2 km/h at hour 22										Hours of Missing Data: 0	
Monthly Average Speed: 9.91 km/h																				Percentiles: P ₁ = 2.4 P ₁₀ = 4.8 Q ₁ = 6.7 Median = 9.2 Q ₃ = 12.8 P ₉₀ = 15.9 P ₉₉ = 20.7										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-Jun	11	9	8	10	10	7	9	11	13	14	13	13	9	7	5	6	8	8	8	4	4	5	3	7	8.4	14.3					
2-Jun	9	8	16	13	13	16	6	4	6	8	10	14	17	17	18	16	15	12	6	6	10	7	8	10	11.1	18.3					
3-Jun	8	6	7	5	4	5	4	3	4	6	9	9	11	13	9	4	2	4	5	4	4	4	6	9	5.9	13.2					
4-Jun	10	10	11	12	14	15	16	15	14	14	10	9	8	7	6	9	8	12	11	11	11	11	16	20	11.6	20.2					
5-Jun	17	15	12	11	8	7	10	9	5	6	9	12	12	9	8	11	16	14	15	12	10	8	8	5	10.3	17.5					
6-Jun	6	6	6	6	8	9	8	7	8	10	11	13	12	11	13	9	11	12	8	10	9	4	6	7	8.7	12.9					
7-Jun	6	9	8	8	9	9	11	11	7	7	7	10	15	10	10	10	8	6	5	10	4	4	7	6	8.3	14.6					
8-Jun	4	7	5	5	8	8	7	8	8	11	13	12	14	15	18	21	20	17	14	12	8	8	6	6	10.7	20.7					
9-Jun	7	8	6	7	6	7	8	8	6	12	15	15	16	19	18	15	22	25	25	21	17	13	10	10	13.1	24.8					
10-Jun	7	6	6	8	8	9	11	13	16	15	16	16	15	15	15	13	11	12	12	9	8	6	5	7	10.7	16.0					
11-Jun	4	7	6	4	4	2	2	4	5	7	6	8	7	12	11	13	16	13	8	7	15	17	18	18	8.9	17.7					
12-Jun	15	15	13	14	11	11	12	13	14	11	9	9	9	14	13	10	9	12	9	12	11	11	10	10	11.6	15.3					
13-Jun	13	12	7	6	5	5	7	6	6	7	6	5	7	7	6	7	9	5	8	13	10	11	10	10	7.8	13.3					
14-Jun	10	10	8	8	6	6	5	9	10	12	13	13	13	13	13	13	15	13	15	14	10	8	4	8	10.4	15.3					
15-Jun	11	11	13	14	13	15	16	14	15	16	15	18	19	19	18	19	18	14	17	15	10	13	14	12	15.0	19.3					
16-Jun	11	11	10	9	9	9	9	10	9	10	8	8	8	9	8	9	7	6	5	3	2	4	5	7	7.7	11.1					
17-Jun	8	9	8	7	6	7	11	9	8	7	6	6	7	10	9	9	4	5	8	5	7	9	12	12	7.9	12.2					
18-Jun	11	5	5	7	7	4	4	4	13	14	15	18	14	19	16	11	7	8	5	6	5	5	4	6	8.8	18.5					
19-Jun	16	15	18	17	17	18	17	19	19	18	21	18	20	21	23	20	16	14	12	10	9	8	8	10	15.9	22.7					
20-Jun	11	10	11	12	12	13	12	12	12	16	19	20	20	19	19	21	19	17	17	14	11	8	13	13	14.7	20.9					
21-Jun	13	8	8	9	7	6	6	5	4	5	7	8	11	20	14	10	9	7	8	12	14	6	7	11	8.9	19.7					
22-Jun	7	6	7	7	4	4	2	4	5	7	13	10	7	5	8	9	8	8	8	8	11	17	12	10	7.7	17.5					
23-Jun	8	8	14	6	4	5	3	3	5	7	9	12	12	14	13	13	13	13	12	16	15	11	3	4	9.3	16.4					
24-Jun	9	8	5	5	4	6	6	13	13	11	13	19	19	14	9	12	16	15	13	14	10	11	9	9	10.9	19.4					
25-Jun	12	7	3	2	4	6	5	6	10	6	6	8	11	11	12	16	16	9	5	3	2	2	3	1	6.9	16.1					
26-Jun	3	4	6	7	9	6	7	7	10	10	9	9	8	9	14	16	14	10	6	3	4	3	8	8	7.9	16.2					
27-Jun	8	6	9	14	10	12	10	10	11	12	16	15	14	13	14	14	13	13	11	7	3	5	8	8	10.5	15.5					
28-Jun	8	8	12	9	10	11	11	11	9	10	9	9	7	9	11	10	8	5	9	9	9	11	16	17	9.9	16.6					
29-Jun	14	14	18	19	14	10	12	11	10	8	5	7	7	9	10	5	15	8	5	7	8	5	7	9	9.9	18.9					
30-Jun	12	11	10	7	7	7	8	7	7	6	5	7	5	6	5	6	6	7	7	5	6	9	11	13	7.5	12.8					
9.7 8.9 9.2 9.0 8.3 8.4 8.4 8.9 9.4 10.1 10.7 11.6 11.8 12.5 12.2 11.9 12.0 10.8 9.8 9.3 8.6 8.2 8.6 9.5																									Diurnal Average						
17.5 15.4 18.2 18.9 16.8 17.8 17.5 18.5 18.9 17.9 20.9 19.7 20.4 20.8 22.7 20.9 21.6 24.8 24.6 20.7 17.3 17.5 17.7 20.2																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Sunset House - June 2013

Maximum Value: 89.5 deg on Jun 7 21:00																			Hours in Service: 720						
Minimum Value: 2.6 deg on Jun 4 22:00																			Hours of Data: 720						
																			Hours of Missing Data: 0						
																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Percentiles: P ₁ = 4.4 P ₁₀ = 7.4 Q ₁ = 10.8 Median = 15.5 Q ₃ = 25.1 P ₉₀ = 44.0 P ₉₉ = 78.4																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jun	11	28	10	12	11	16	10	7	7	13	19	19	41	56	65	73	26	16	12	40	40	19	29	51	72.5
2-Jun	10	11	6	7	28	31	56	77	38	14	42	12	18	21	25	14	16	19	16	18	12	13	6	9	77.2
3-Jun	13	8	13	29	50	22	45	71	51	43	30	29	26	57	37	27	80	48	37	38	58	30	21	5	80.1
4-Jun	4	4	5	25	7	13	10	11	13	13	21	31	38	51	45	22	28	20	21	10	10	3	5	5	50.8
5-Jun	5	4	6	20	18	17	10	15	40	87	24	15	18	27	31	11	10	13	33	20	23	17	54	52	87.5
6-Jun	14	13	11	21	11	18	15	21	24	23	24	28	25	25	23	24	18	12	24	15	17	57	8	11	56.6
7-Jun	18	8	4	6	9	9	11	13	14	12	14	15	10	19	43	16	29	27	39	57	90	15	8	10	89.5
8-Jun	30	13	14	15	9	13	28	18	23	20	16	18	22	23	13	10	9	15	17	15	12	13	15	14	29.9
9-Jun	13	11	14	9	15	16	14	19	18	46	11	11	11	12	15	14	14	8	7	9	9	12	16	11	45.8
10-Jun	20	44	33	16	18	12	17	12	15	11	12	12	12	11	11	13	13	12	12	14	13	21	25	14	44.3
11-Jun	18	12	10	23	15	51	63	42	42	35	47	21	33	18	19	24	11	13	21	12	9	7	7	8	63.1
12-Jun	8	9	9	8	10	14	6	8	7	12	15	12	19	13	10	13	15	15	17	8	10	6	7	12	19.2
13-Jun	7	6	11	18	31	44	17	24	23	24	31	20	21	29	22	21	84	28	15	7	5	5	8	10	84.5
14-Jun	5	7	7	11	17	15	34	13	14	15	13	13	14	15	26	21	12	16	13	9	8	20	25	19	33.8
15-Jun	8	9	9	8	8	9	9	9	10	9	11	18	14	12	12	15	14	12	10	12	15	13	10	11	18.1
16-Jun	11	12	13	13	12	13	11	15	12	13	18	17	17	19	31	19	19	25	16	34	38	11	7	6	38.3
17-Jun	6	5	4	8	12	12	6	13	18	36	51	61	61	27	30	26	62	25	62	84	59	6	17	5	83.7
18-Jun	5	31	68	15	22	46	51	58	17	21	20	20	30	36	33	14	13	8	14	36	75	58	73	14	74.8
19-Jun	5	5	6	5	5	6	6	7	9	14	15	14	20	13	13	14	18	12	13	11	9	8	13	10	19.7
20-Jun	6	7	11	8	8	7	8	14	16	17	16	17	17	17	15	18	16	16	12	12	7	23	6	7	23.1
21-Jun	5	10	8	6	12	10	15	24	39	42	37	29	44	11	11	19	28	35	24	27	10	49	17	21	48.8
22-Jun	42	19	17	7	40	34	46	43	44	67	14	44	31	62	59	33	34	31	18	19	15	8	18	34	67.0
23-Jun	46	53	46	55	46	37	77	20	29	37	32	24	23	31	23	33	38	22	13	14	9	10	56	22	76.9
24-Jun	10	13	37	25	33	20	20	10	10	21	30	12	13	65	52	17	15	18	14	13	12	11	23	12	65.3
25-Jun	10	82	21	22	19	9	48	25	19	62	77	23	8	9	13	9	10	12	14	27	25	34	45	45	82.5
26-Jun	22	24	23	18	16	28	24	22	13	15	27	22	20	28	13	11	12	15	22	16	29	28	16	9	29.1
27-Jun	9	26	25	8	11	12	10	16	18	21	19	18	26	13	11	15	16	13	13	11	63	15	6	12	63.1
28-Jun	5	17	8	22	6	5	6	7	17	20	37	32	31	21	18	20	34	67	18	19	9	9	8	4	67.0
29-Jun	8	13	10	9	10	24	6	9	12	13	18	26	38	26	21	47	11	18	16	17	10	10	18	6	47.1
30-Jun	5	4	3	8	8	7	8	18	16	32	37	45	74	55	83	67	51	32	34	25	8	6	6	5	83.2
	46.2	82.5	67.7	55.3	50.0	50.6	76.9	77.2	50.5	87.5	76.6	61.4	74.1	65.3	83.2	72.5	84.5	67.0	61.8	83.7	89.5	57.6	73.1	52.1	

PAZA
Falher Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

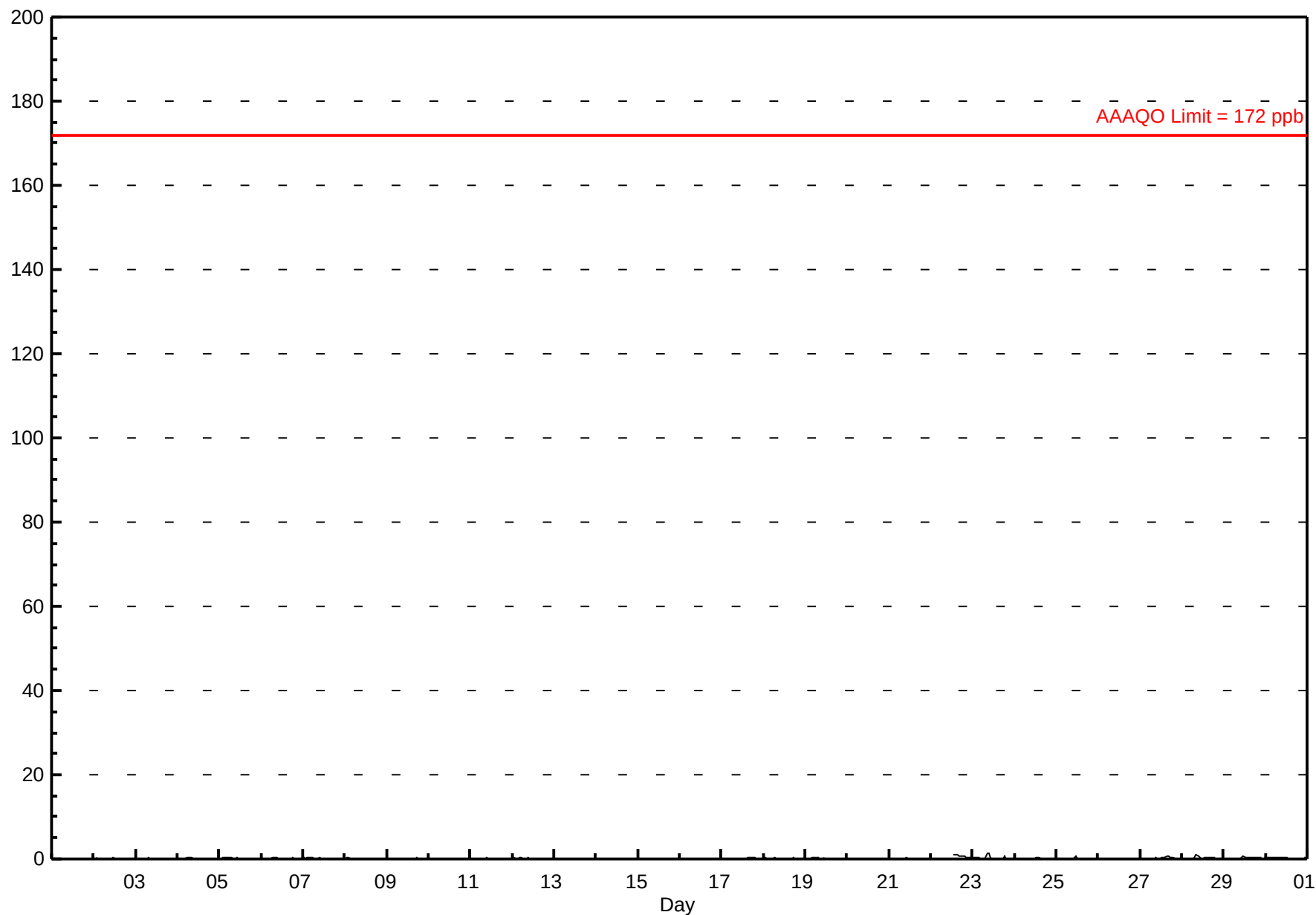
Falher - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.4 ppb on Jun 23 09:00 Maximum Daily Average: 0.4 ppb on Jun 22																				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 Jun 1 01:00 Maximum Diurnal Average: 0.2 ppb at hour 9 Monthly Average: 0.10 ppb										Minimum Daily Average: 0.0 ppb on Jun 16 Minimum Diurnal Average: 0.1 ppb at hour 22 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 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-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
2-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
3-Jun	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
4-Jun	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
5-Jun	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.3
6-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.4
7-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.4
8-Jun	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
9-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
10-Jun	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	0.1
11-Jun	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
12-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
13-Jun	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
14-Jun	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	0.1
15-Jun	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
16-Jun	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
17-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
18-Jun	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
19-Jun	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	0.5
20-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
21-Jun	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
22-Jun	0	0	0	0	0	0	A	0	0	0	C	C	C	1	1	1	1	1	1	1	0	0	0	0	0.4	1.0
23-Jun	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.2	1.4
24-Jun	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-Jun	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
26-Jun	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
27-Jun	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0.2	0.7
28-Jun	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.9
29-Jun	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.6
30-Jun	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	0.5
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1																									Diurnal Average	
0.4 0.3 0.3 0.3 0.4 0.5 0.4 0.4 1.4 1.3 0.4 0.6 0.4 0.9 1.0 1.0 0.8 0.7 0.6 0.5 0.5 0.5 0.4 0.5 0.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Falher - June 2013



Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

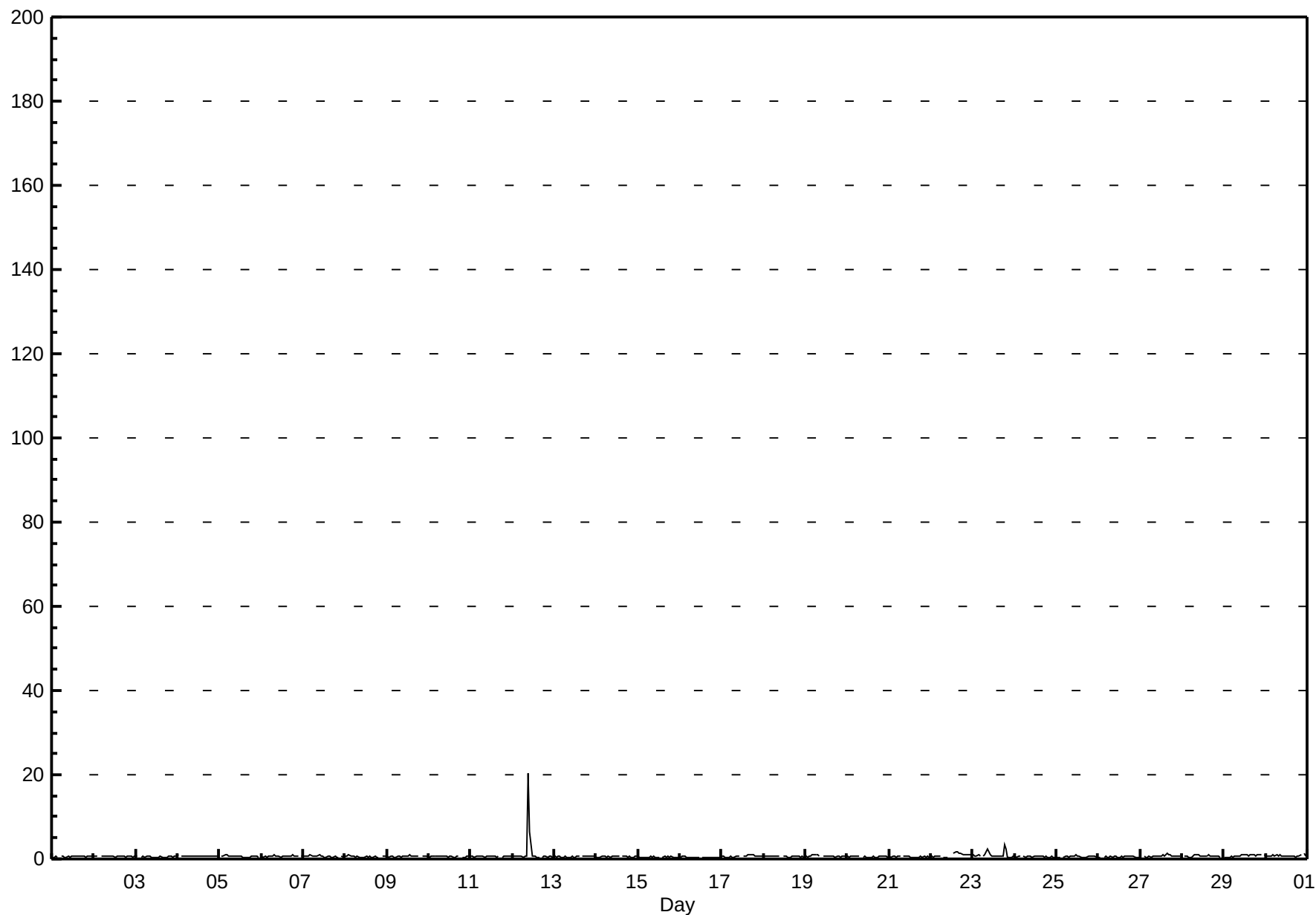
Falher - June 2013

Maximum Value: 20.2 ppb on Jun 12 10:00																				Hours in Service: 720						
Maximum Daily Average: 1.7 ppb on Jun 12																				Hours of Data: 685						
Minimum Value: 0 ppb on Jun 16 09:00																				Hours of Missing Data: 35						
Maximum Diurnal Average: 1.4 ppb at hour 10																				Hours of Calibration: 35						
Monthly Average: 0.66 ppb																				Percent Operational Time: 100.0						
Minimum Daily Average: 0.4 ppb on Jun 16																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.8 P ₉₉ = 1.6						
Minimum Diurnal Average: 0.5 ppb at hour 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-Jun	0	0	1	0	A	1	1	0	0	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	0.6	0.8
2-Jun	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	0	1	0.6	0.8
3-Jun	1	1	A	0	1	0	1	1	1	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1	0.5	0.7
4-Jun	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
5-Jun	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	0	A	0.6	1.0
6-Jun	1	0	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.0
7-Jun	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	1	0	0	A	1	0	0.6	1.0
8-Jun	1	1	1	1	1	1	0	1	0	0	0	0	1	0	1	0	1	1	0	0	A	1	1	1	0.5	0.9
9-Jun	1	0	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	A	0	1	1	1	0.6	0.9
10-Jun	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	1	1	A	0	0	0	1	1	0.6	0.8
11-Jun	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	0	1	A	0	1	1	1	1	1	0.6	0.8
12-Jun	1	1	1	1	1	1	0	1	1	20	6	1	1	1	0	0	A	0	1	1	0	1	1	0	1.7	20.2
13-Jun	1	0	1	1	0	0	1	0	0	0	1	1	0	1	1	A	1	1	1	1	1	1	1	1	0.5	0.7
14-Jun	0	0	0	1	1	1	0	1	0	1	1	1	1	1	A	1	1	1	0	1	0	0	1	1	0.6	0.8
15-Jun	1	0	0	0	0	0	0	1	0	1	0	0	0	A	1	1	0	1	0	1	0	0	0	0	0.5	0.7
16-Jun	0	1	1	1	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	1	0	0	0.4	0.7
17-Jun	1	1	0	0	0	1	0	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1
18-Jun	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	1	1	1	1	1	0	1	0	0.7	0.8
19-Jun	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	0	1	1	1	0.7	1.1
20-Jun	1	0	1	1	1	1	1	1	A	0	1	0	0	0	0	1	0	0	1	1	1	1	1	1	0.5	0.7
21-Jun	1	0	1	1	0	1	1	A	1	1	1	1	0	0	0	1	1	0	1	0	1	0	1	0	0.5	0.7
22-Jun	1	0	1	1	1	1	A	0	0	0	C	C	C	1	2	2	1	1	1	1	1	1	1	1	0.9	1.7
23-Jun	1	1	1	1	1	A	1	1	2	2	1	1	1	1	1	1	1	1	3	2	0	0	0	1	1.0	3.3
24-Jun	1	0	1	1	A	1	0	1	1	1	0	1	1	1	1	1	1	0	1	0	0	1	0	0	0.6	0.8
25-Jun	0	0	1	A	0	1	1	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0.6	1.1
26-Jun	1	0	A	0	1	0	0	1	0	1	1	0	0	1	0	1	1	1	1	1	1	0	0	0	0.5	0.7
27-Jun	0	A	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
28-Jun	A	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0.7	1.2
29-Jun	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.1
30-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	0.7	1.2
0.6 0.5 0.6 0.6 0.6 0.6 0.6 0.7 0.7 1.4 0.8 0.6 0.6 0.6 0.6 0.7 0.6 0.6 0.7 0.7 0.6 0.6 0.6 0.6																									Diurnal Average	
1.0 0.7 0.9 0.9 1.0 1.1 1.0 1.0 2.4 20.2 6.3 1.1 1.0 1.4 1.7 1.6 1.2 1.2 3.3 2.4 1.0 0.9 1.2 1.0																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

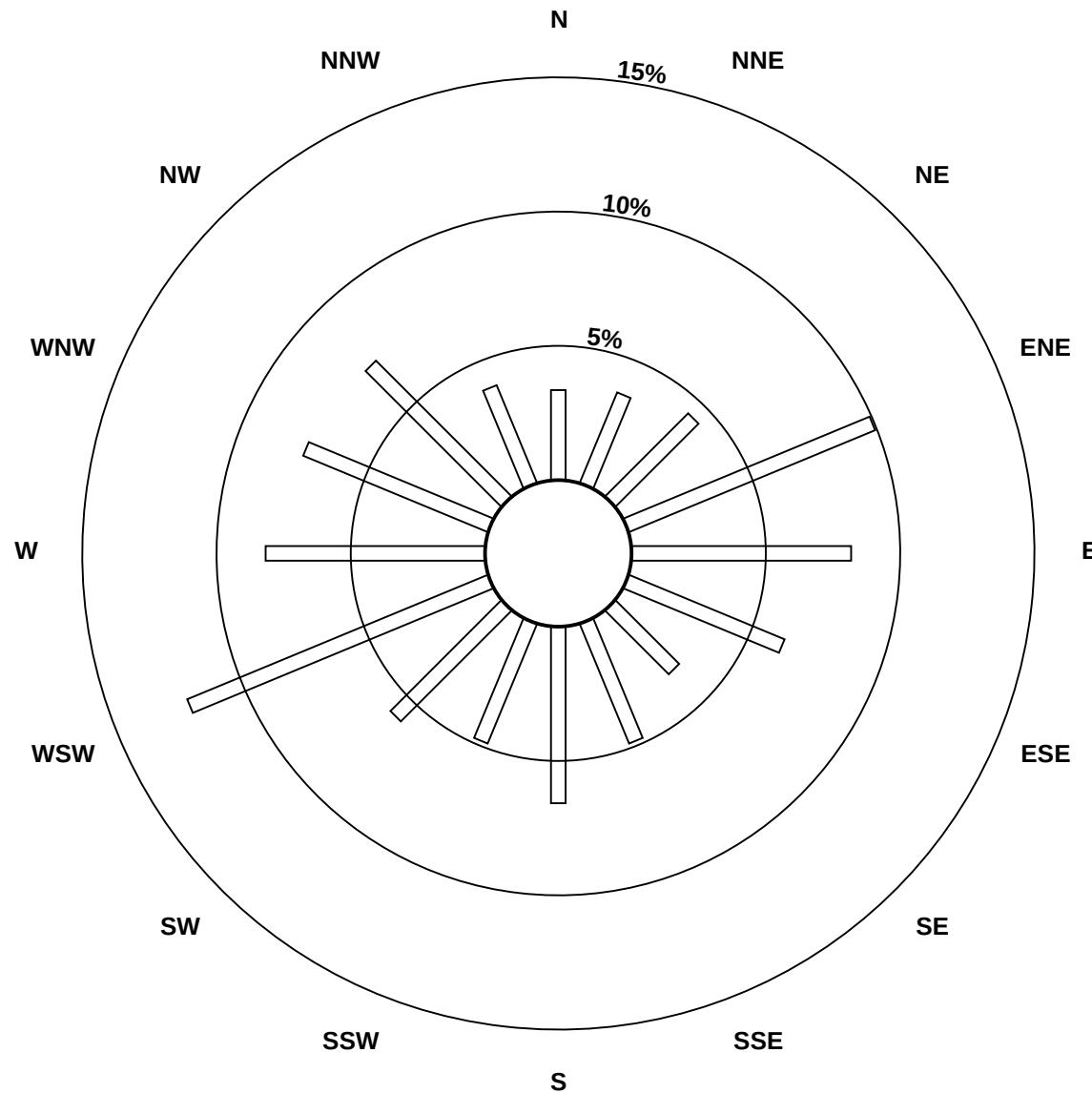
Falher - June 2013



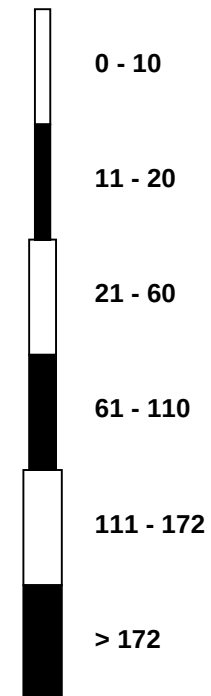
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Falher - June 2013



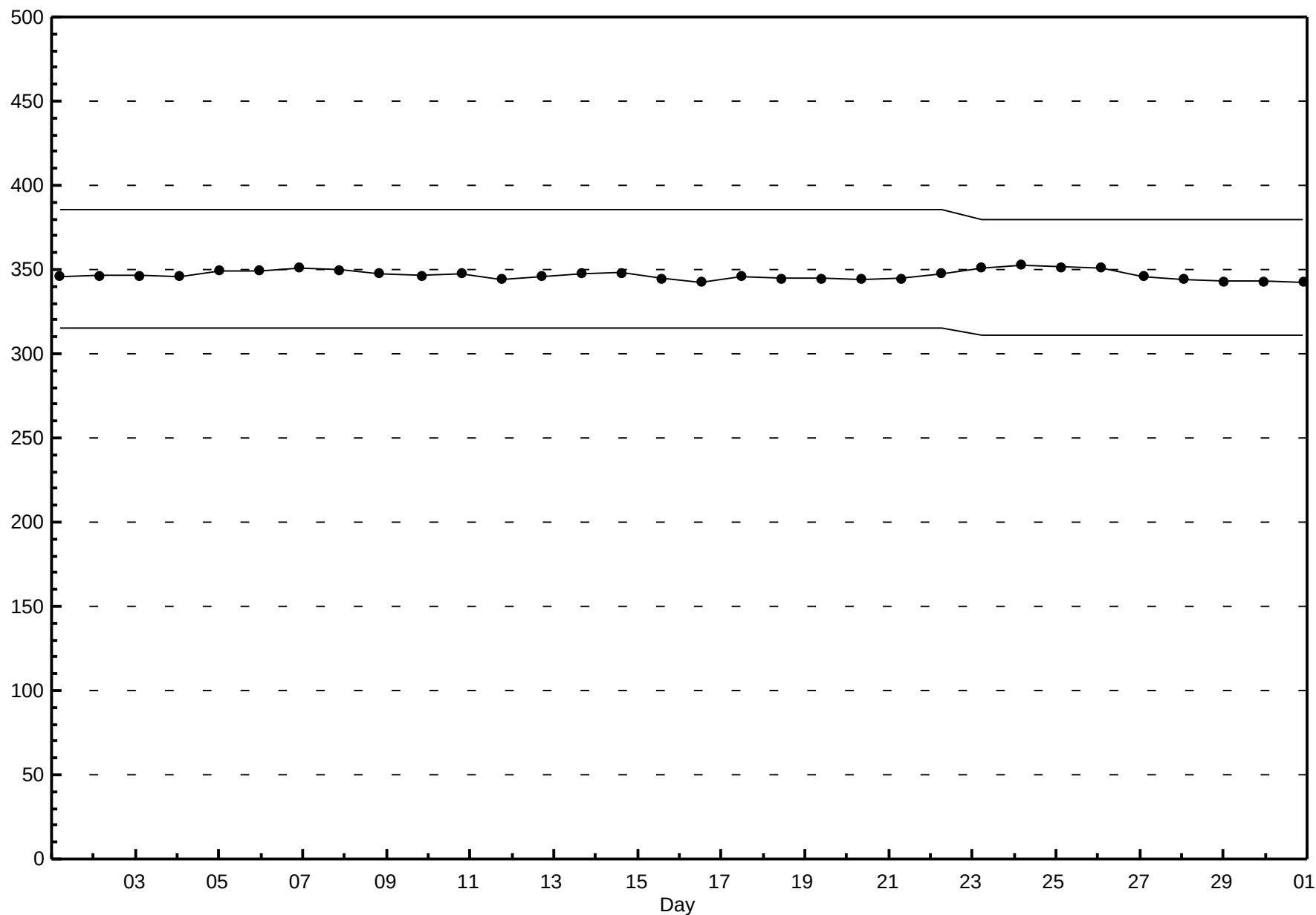
Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)

Falher - June 2013

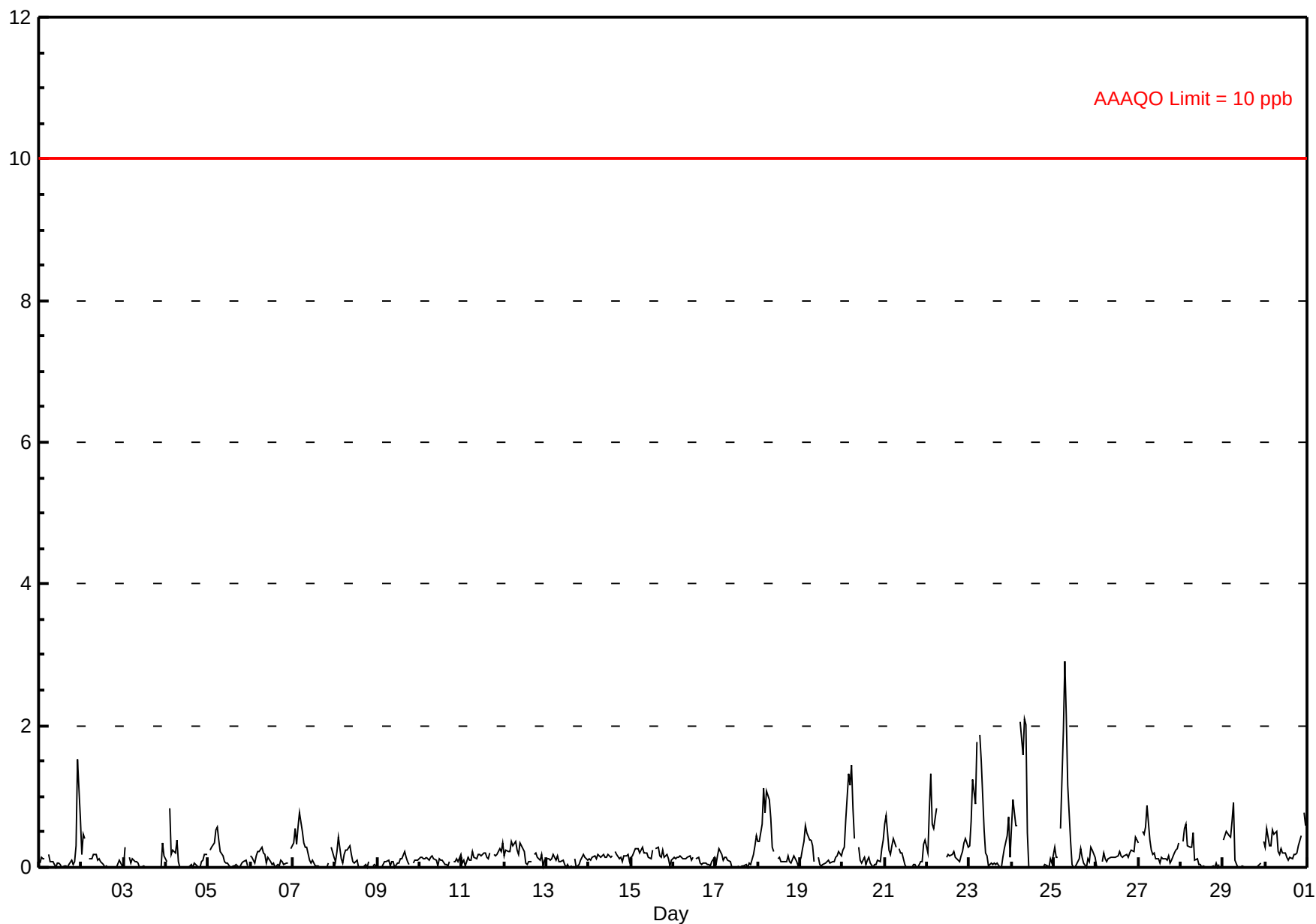


[illegible]

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

Falher - June 2013



Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

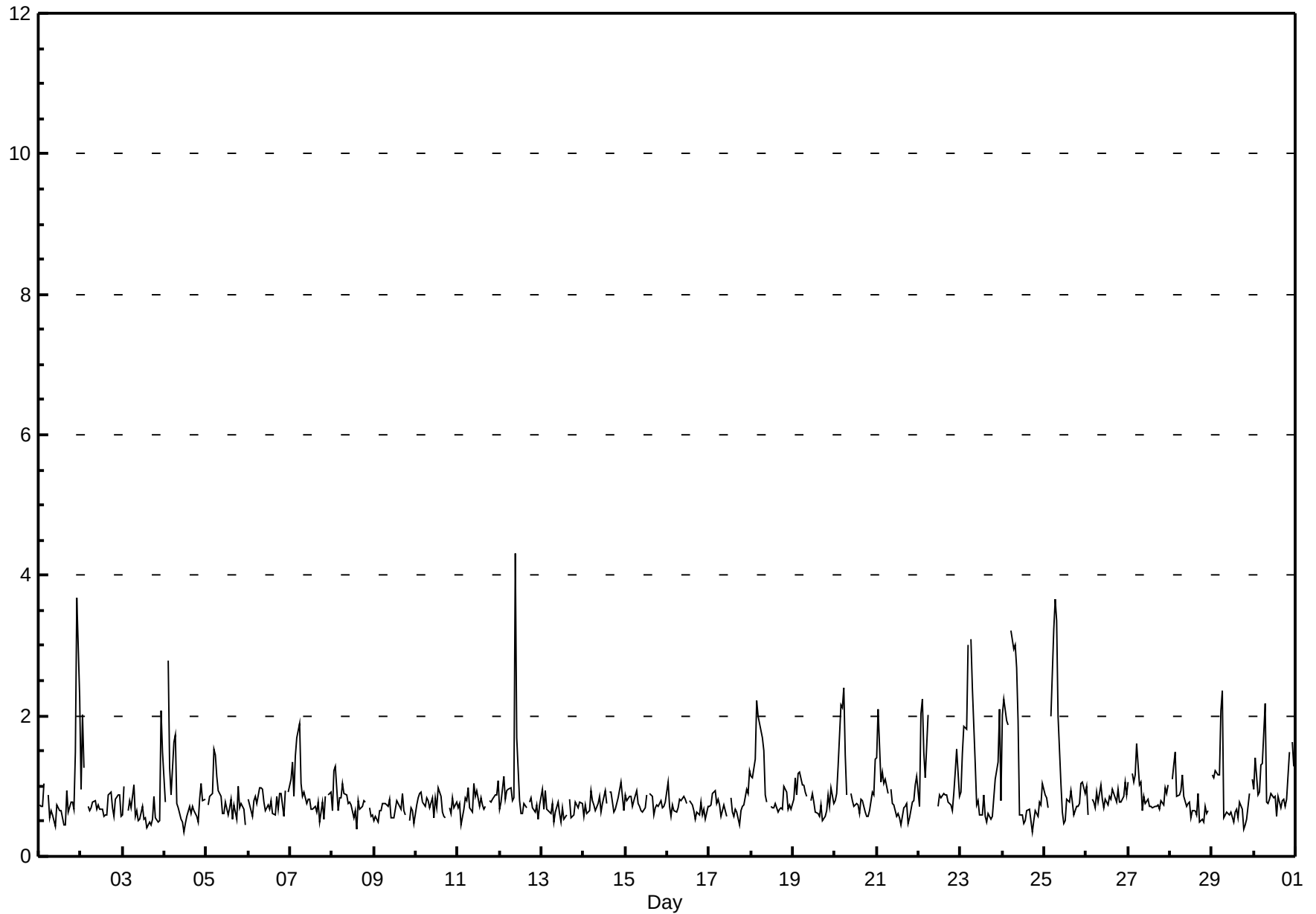
Falher - June 2013

Maximum Value: 4.3 ppb on Jun 12 10:00																				Maximum Daily Average: 1.3 ppb on Jun 24										Hours in Service: 720	
Minimum Value: 0 ppb on Jun 24 18:00																				Minimum Daily Average: 0.7 ppb on Jun 9										Hours of Data: 685	
Maximum Diurnal Average: 1.3 ppb at hour 7																				Minimum Diurnal Average: 0.6 ppb at hour 18										Hours of Missing Data: 35	
Monthly Average: 0.88 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.8 Q ₃ = 0.9 P ₉₀ = 1.3 P ₉₉ = 3.1										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-Jun	1	1	1	1	A	1	1	1	1	0	1	1	1	1	0	0	1	1	1	1	1	1	4	2	0.9	3.7					
2-Jun	1	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.0					
3-Jun	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	1	2	1	0.7	2.1					
4-Jun	1	A	3	1	1	2	2	1	1	1	0	0	0	1	1	1	1	1	1	0	1	1	1	1	0.9	2.8					
5-Jun	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0.8	1.5					
6-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.0					
7-Jun	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	0.9	1.9					
8-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	0.8	1.3					
9-Jun	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	0	0.7	0.9					
10-Jun	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					
11-Jun	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.1					
12-Jun	1	1	1	1	1	1	1	1	1	4	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	4.3					
13-Jun	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	0.7	1.0					
14-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.1					
15-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	0.9					
16-Jun	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	1.1					
17-Jun	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	0.7	1.2					
18-Jun	1	1	1	2	2	2	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.2					
19-Jun	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2					
20-Jun	1	1	1	2	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.4					
21-Jun	1	2	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0.9	2.1					
22-Jun	1	2	2	1	1	2	A	1	C	C	C	1	1	1	1	1	1	1	1	1	1	2	1	1	1.1	2.2					
23-Jun	1	1	2	2	3	A	3	2	1	1	1	1	1	1	0	1	1	1	1	1	1	2	1	1	1.2	3.1					
24-Jun	2	2	2	2	A	3	3	3	3	2	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1.3	3.2					
25-Jun	1	1	1	A	2	3	4	3	2	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1.2	3.7					
26-Jun	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1					
27-Jun	1	A	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6					
28-Jun	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	A	0.8	1.5					
29-Jun	1	1	1	1	1	2	2	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1	A	1	0.9	2.4					
30-Jun	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1.0	2.2					
0.9 1.1 1.1 1.1 1.1 1.3 1.3 1.0 0.9 0.9 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.6 0.7 0.7 0.7 0.8 0.9 1.0 0.9																								Diurnal Average							
2.0 2.2 2.8 2.2 3.0 3.2 3.7 3.3 2.7 4.3 1.7 0.9 0.9 1.0 0.9 1.0 0.9 0.9 0.9 1.0 1.0 1.5 1.5 3.7 2.3																								Diurnal Maximum							
C - Calibration A - Automated Daily Zero Span																															

Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

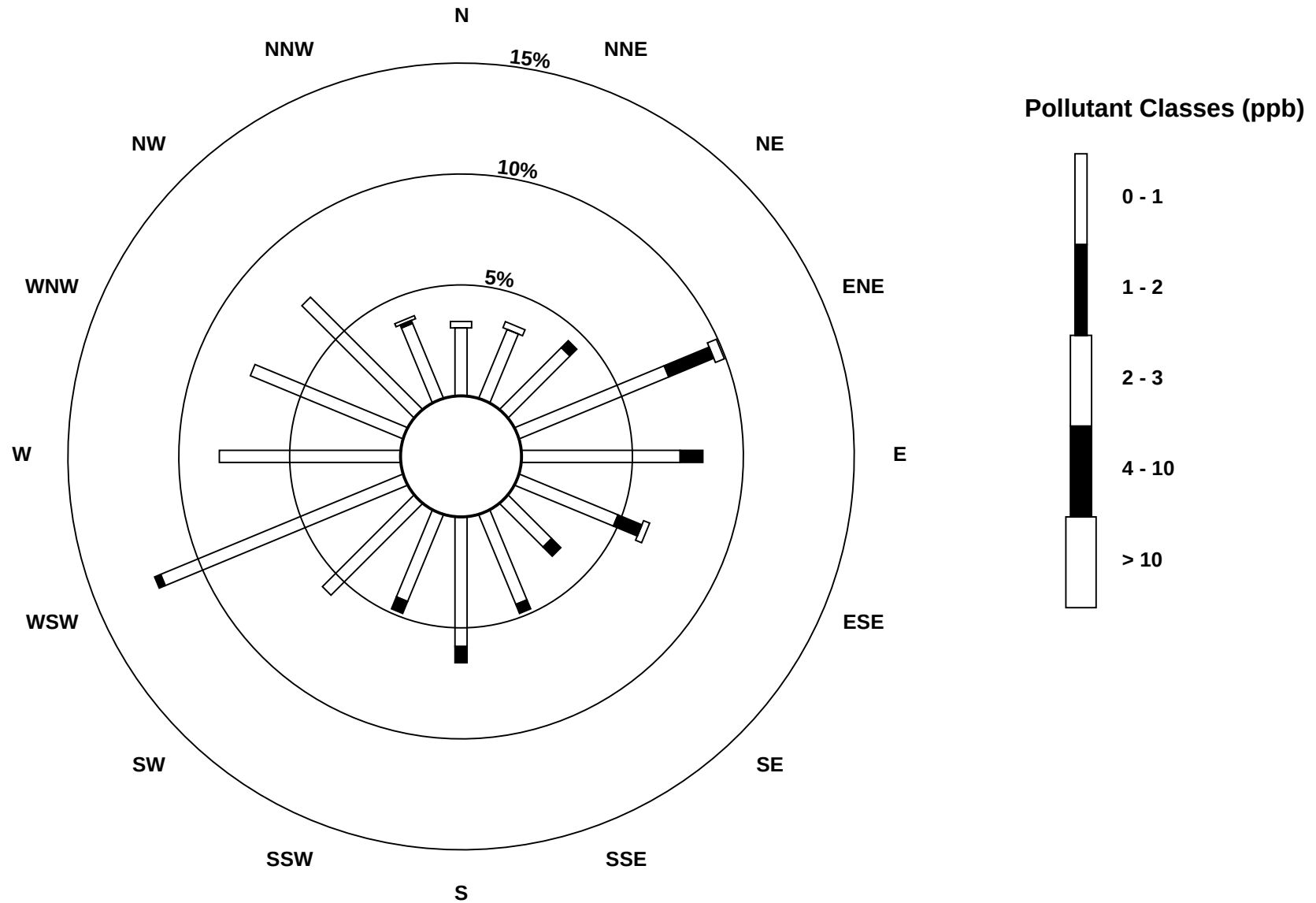
Falher - June 2013



Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb

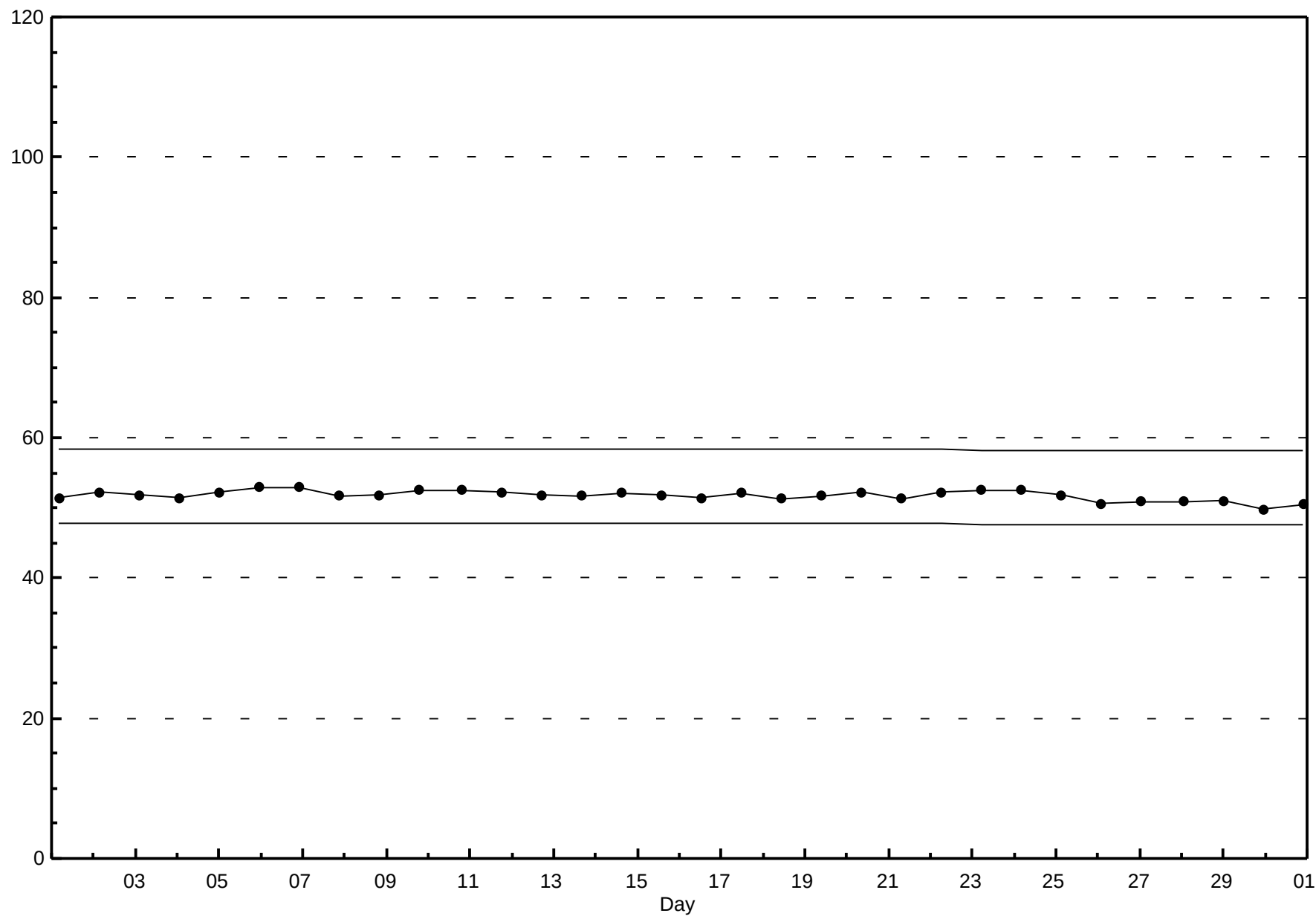
Falher - June 2013



Span Responses

Hydrogen Sulphide (H₂S)

Falher - June 2013



Hourly Averages

External Temperature (ET) - °C

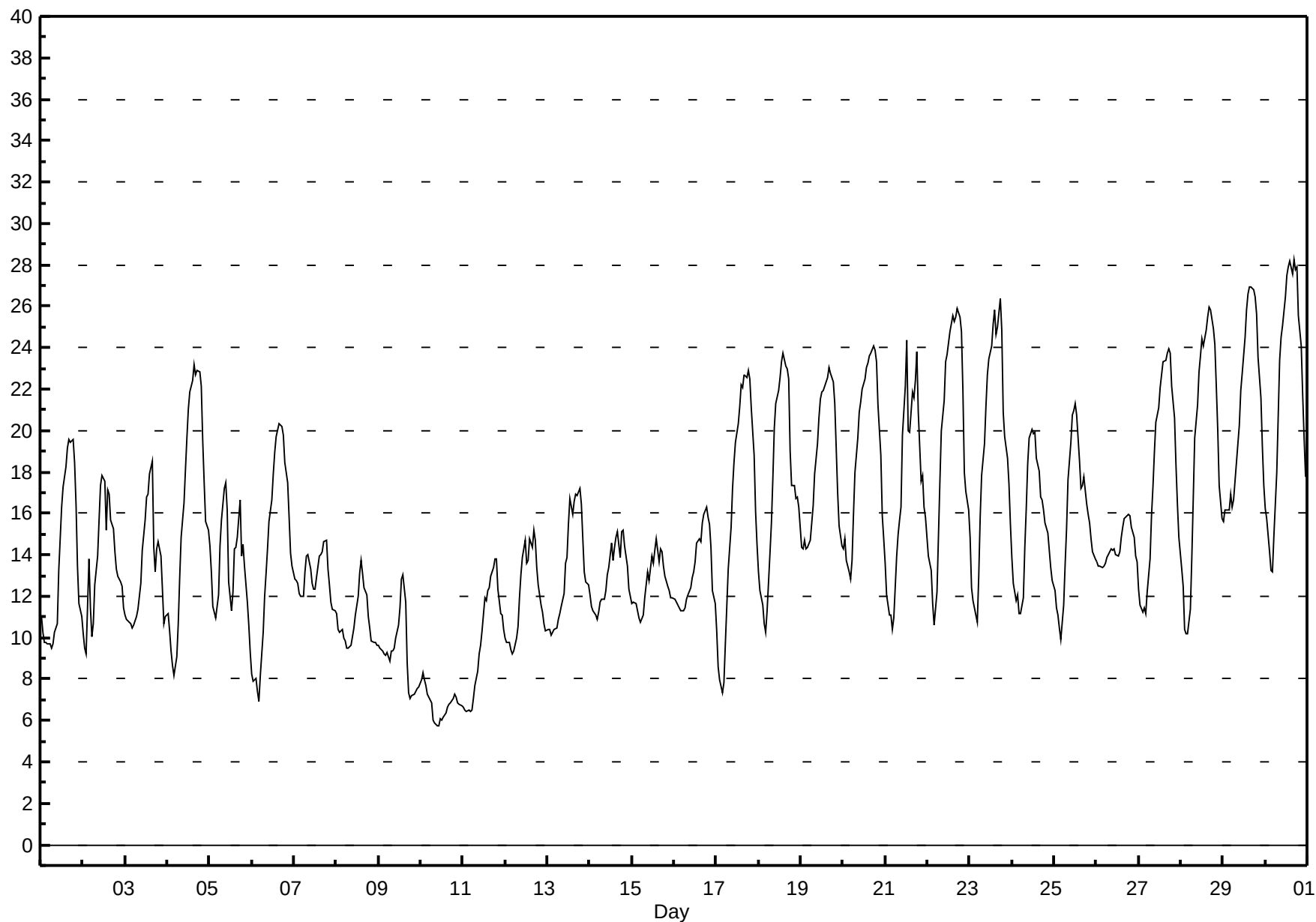
Falher - June 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.3 °C on Jun 30 17:00 Maximum Daily Average: 22.1 °C on Jun 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: 6 °C on Jun 10 11:00 Maximum Diurnal Average: 18.7 °C at hour 16 Monthly Average: 15.08 °C												Minimum Daily Average: 6.8 °C on Jun 10 Minimum Diurnal Average: 10.6 °C at hour 5 Percentiles: P ₁ = 6.3 P ₁₀ = 9.5 Q ₁ = 11.4 Median = 14.1 Q ₃ = 18.0 P ₉₀ = 22.8 P ₉₉ = 27.4														
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-Jun	11	10	10	10	10	10	10	10	10	11	13	15	16	17	18	19	20	19	20	18	16	13	12	11	13.7	19.6
2-Jun	10	9	9	14	11	10	11	13	14	16	17	18	18	15	17	17	16	15	14	13	13	13	13	11	13.6	17.9
3-Jun	11	11	11	11	10	11	11	11	12	13	14	16	17	17	18	19	14	13	14	15	14	12	11	11	13.2	18.5
4-Jun	11	10	9	9	8	9	11	13	15	16	18	20	21	22	22	23	23	23	23	22	19	17	16	15	16.5	23.2
5-Jun	14	13	12	11	11	12	14	16	17	17	16	13	11	12	14	14	15	17	14	15	13	12	11	9	13.5	17.5
6-Jun	8	8	8	7	7	8	10	12	13	14	16	17	18	19	20	20	20	20	20	18	17	16	14	13	14.4	20.3
7-Jun	13	13	13	12	12	12	13	14	14	13	13	12	12	13	14	14	14	15	15	13	13	12	11	11	12.9	14.7
8-Jun	11	10	10	10	10	10	9	9	10	10	10	11	12	13	14	13	12	12	11	10	10	10	10	10	10.8	13.8
9-Jun	10	10	9	9	9	9	9	9	9	9	10	11	11	13	13	12	9	7	7	7	7	7	8	8	9.3	13.0
10-Jun	8	8	8	8	7	7	7	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	6.8	8.3
11-Jun	7	6	6	7	6	7	7	8	8	9	10	10	12	12	12	12	13	13	14	14	12	11	11	10	9.9	13.8
12-Jun	10	10	10	9	9	9	10	11	12	13	14	15	14	14	15	14	15	15	13	13	12	11	11	10	12.0	15.2
13-Jun	10	10	10	10	10	10	11	11	11	12	14	14	15	17	16	17	17	17	17	16	15	13	13	13	13.4	17.2
14-Jun	12	12	11	11	11	11	12	12	12	12	13	13	15	14	14	15	15	14	15	15	14	13	12	12	13.0	15.2
15-Jun	12	12	12	11	11	11	11	12	13	13	13	14	14	14	15	14	14	14	13	13	12	12	12	12	12.6	14.8
16-Jun	12	12	12	11	11	11	11	12	12	12	13	13	14	15	15	15	16	16	16	16	15	14	12	12	13.3	16.3
17-Jun	10	9	8	7	8	10	12	13	15	17	18	19	20	21	22	22	23	23	23	22	21	19	16	15	16.4	22.9
18-Jun	13	12	12	11	10	11	14	16	18	20	21	22	23	23	24	23	23	23	19	17	17	17	17	16	17.6	23.8
19-Jun	14	14	15	14	14	15	16	16	18	19	21	22	22	22	22	23	23	23	22	21	19	17	15	14	18.4	23.0
20-Jun	14	15	14	13	13	14	16	18	20	21	21	22	22	23	23	24	24	24	24	23	21	19	16	15	19.1	24.1
21-Jun	14	12	11	11	10	11	14	15	16	16	20	22	24	20	20	22	22	22	24	21	18	18	16	16	17.3	24.4
22-Jun	14	14	13	12	11	12	15	17	20	21	23	24	24	25	26	25	25	26	25	25	22	18	17	16	19.6	25.9
23-Jun	15	12	12	11	11	13	16	18	19	21	23	23	24	25	26	25	25	26	25	21	20	19	17	15	19.3	26.4
24-Jun	14	13	12	12	11	11	12	14	16	18	20	20	20	20	19	18	17	17	16	16	15	14	13	13	15.4	20.1
25-Jun	12	11	11	10	10	12	14	15	18	19	21	21	21	21	19	17	17	18	16	16	16	15	14	14	15.7	21.3
26-Jun	14	13	13	13	13	14	14	14	14	14	14	14	14	14	15	15	16	16	16	16	15	15	14	14	14.4	16.0
27-Jun	12	12	11	11	11	12	14	16	17	19	20	21	22	23	23	23	24	24	24	22	21	18	16	15	18.0	23.9
28-Jun	13	13	10	10	10	11	14	17	20	21	23	24	24	24	25	25	26	26	25	24	22	20	17	16	19.2	26.0
29-Jun	16	16	16	16	17	16	17	18	19	20	22	23	25	26	27	27	27	27	26	26	24	22	19	17	21.1	27.0
30-Jun	16	16	14	13	13	15	18	21	23	25	25	26	27	28	28	28	28	28	28	26	24	22	20	18	22.1	28.3
12.1 11.5 11.1 10.9 10.6 11.1 12.4 13.5 14.7 15.7 16.7 17.3 18.0 18.2 18.7 18.7 18.6 18.6 18.3 17.4 16.2 14.9 13.7 13.0																								Diurnal Average		
16.3 16.2 16.2 16.2 16.9 16.3 17.9 20.7 23.4 24.5 25.1 26.4 27.5 27.9 28.2 27.6 28.3 27.8 27.9 25.6 24.1 21.7 19.6 17.8																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Falher - June 2013



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Falher - June 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	24	21	15	12	8	16	17	16	20	21	24	23	19	18	20	21	15	15	11	17	15	15	16	17	14.2	24.1
Dir	203	220	233	251	201	192	222	198	180	158	175	213	211	189	194	207	215	200	199	136	137	123	113	105	188	203
2 Spd	14	12	16	9	8	11	16	17	14	13	11	16	20	33	31	20	21	11	19	15	12	15	11	12	4.2	33.3
Dir	94	114	97	50	200	160	182	209	244	284	344	20	67	92	59	40	35	18	285	307	302	310	317	318	33	92
3 Spd	11	11	10	8	3	7	7	6	6	9	9	7	9	7	8	6	26	11	10	6	13	14	12	14	4.4	26.5
Dir	296	278	263	275	284	168	115	122	162	190	241	258	284	267	259	168	167	205	250	236	153	120	101	103	199	167
4 Spd	15	12	6	3	12	14	17	19	16	17	17	17	18	18	17	14	18	24	24	21	18	19	17	18	13.4	24.1
Dir	119	119	188	132	93	99	146	163	175	176	176	184	193	215	244	250	212	197	192	193	172	160	180	170	178	197
5 Spd	18	17	11	12	10	14	13	12	20	27	31	33	28	17	18	18	18	21	21	17	12	22	21	20	15.4	33.3
Dir	165	153	163	162	157	180	195	237	229	239	244	237	229	228	202	200	174	239	250	229	290	275	251	267	224	237
6 Spd	16	17	18	14	7	6	14	20	22	19	20	16	22	25	24	22	22	18	25	33	23	15	14	13	17.7	33.0
Dir	238	239	242	253	221	156	246	263	257	255	252	249	251	264	257	255	257	266	242	224	238	236	203	235	246	224
7 Spd	7	12	11	9	1	11	4	7	11	19	17	21	19	14	11	13	15	15	17	17	9	13	14	13	11.3	20.8
Dir	218	209	244	252	240	154	136	162	173	179	167	183	191	214	175	171	187	191	189	215	222	211	218	251	196	183
8 Spd	12	9	10	13	13	12	13	12	16	18	18	18	12	9	11	17	16	15	16	18	16	14	16	10	12.1	18.4
Dir	302	268	261	249	247	232	227	250	245	246	273	266	297	311	324	331	332	309	256	257	268	273	286	297	274	257
9 Spd	10	11	13	11	10	9	17	20	26	27	29	28	27	24	29	34	39	36	23	17	16	16	11	12	15.9	38.9
Dir	263	247	269	274	288	345	16	354	347	348	345	342	337	337	340	352	342	330	323	300	260	230	229	187	326	342
10 Spd	7	18	17	22	19	22	27	24	21	23	26	24	23	26	26	25	22	19	16	16	16	16	13	11	19.7	26.7
Dir	251	305	306	303	301	297	299	306	299	294	289	302	311	305	308	314	309	307	293	304	315	322	326	317	304	299
11 Spd	11	12	10	10	13	10	11	10	9	7	9	9	7	10	13	15	15	14	13	14	20	16	18	17	10.9	20.0
Dir	327	347	355	11	1	5	30	51	36	50	43	16	339	4	11	11	3	30	24	3	66	45	59	61	23	66
12 Spd	17	20	20	19	16	14	19	19	22	22	18	16	13	13	16	20	19	25	21	13	13	9	8	13	13.4	24.6
Dir	62	68	61	57	50	44	52	63	64	75	63	55	89	72	347	347	2	1	1	47	76	22	300	287	42	1
13 Spd	13	10	10	10	12	15	15	15	16	15	17	16	17	13	17	21	19	18	14	16	11	10	3	14	12.4	20.9
Dir	286	285	269	266	257	249	265	271	293	295	288	265	275	288	266	251	246	239	239	257	282	81	252	216	265	251
14 Spd	12	10	9	10	15	16	19	21	23	25	25	20	17	22	26	26	28	23	23	21	22	19	23	22	18.8	27.7
Dir	242	241	249	249	262	271	282	283	276	278	285	285	308	325	307	303	297	305	305	292	278	276	300	288	287	297
15 Spd	20	23	25	24	24	27	27	30	32	29	29	30	28	33	30	28	28	29	25	24	22	20	19	19	24.5	33.1
Dir	281	279	281	278	265	266	266	278	281	298	316	316	312	322	322	318	315	316	320	311	308	315	297	296	299	322
16 Spd	20	19	17	17	17	17	15	17	17	17	15	16	16	16	15	14	16	15	13	11	10	10	9	11	13.3	19.9
Dir	302	301	310	312	303	305	315	326	329	328	327	313	299	281	263	266	288	285	293	304	268	251	229	201	297	302
17 Spd	11	10	12	13	13	12	14	15	15	17	15	13	14	7	5	9	6	7	5	6	8	10	10	13	8.0	17.0
Dir	184	152	140	139	151	155	161	190	179	188	176	170	155	148	240	135	26	108	62	95	107	95	70	51	147	188
18 Spd	15	15	13	14	11	9	12	13	17	22	27	25	25	25	25	27	24	26	33	28	22	15	19	21	17.3	33.2
Dir	88	82	69	64	70	117	71	83	99	88	73	78	73	75	78	105	67	43	3	7	13	22	35	43	62	3
19 Spd	16	17	19	21	21	22	24	27	26	29	32	34	32	31	31	31	30	30	27	23	19	18	17	17	24.1	33.5
Dir	47	58	56	59	64	66	58	59	69	75	78	79	81	77	92	90	85	85	86	83	69	54	39	46	72	79
20 Spd	19	22	19	22	22	23	22	26	25	25	25	22	21	23	22	20	17	20	20	21	16	13	12	14	19.7	26.2
Dir	51	59	66	68	67	71	81	87	87	89	102	109	104	89	101	93	84	92	83	101	107	86	85	77	85	87
21 Spd	15	16	16	14	9	5	8	6	6	9	8	12	6	26	21	14	14	8	5	24	36	21	11	8	7.7	36.2
Dir	76	132	148	168	181	139	152	190	283	210	273	316	2	119	170	126	98	93	94	65	72	99	87	20	112	72
22 Spd	12	15	14	16	15	10	10	10	8	8	6	6	7	9	5	9	7	1	11	10	18	21	8	8	6.9	21.4
Dir	60	99	111	107	101	113	146	150	155	178	153	159	176	182	135	124	2	39	336	344	90	116	161	136	118	116

Hourly Averages

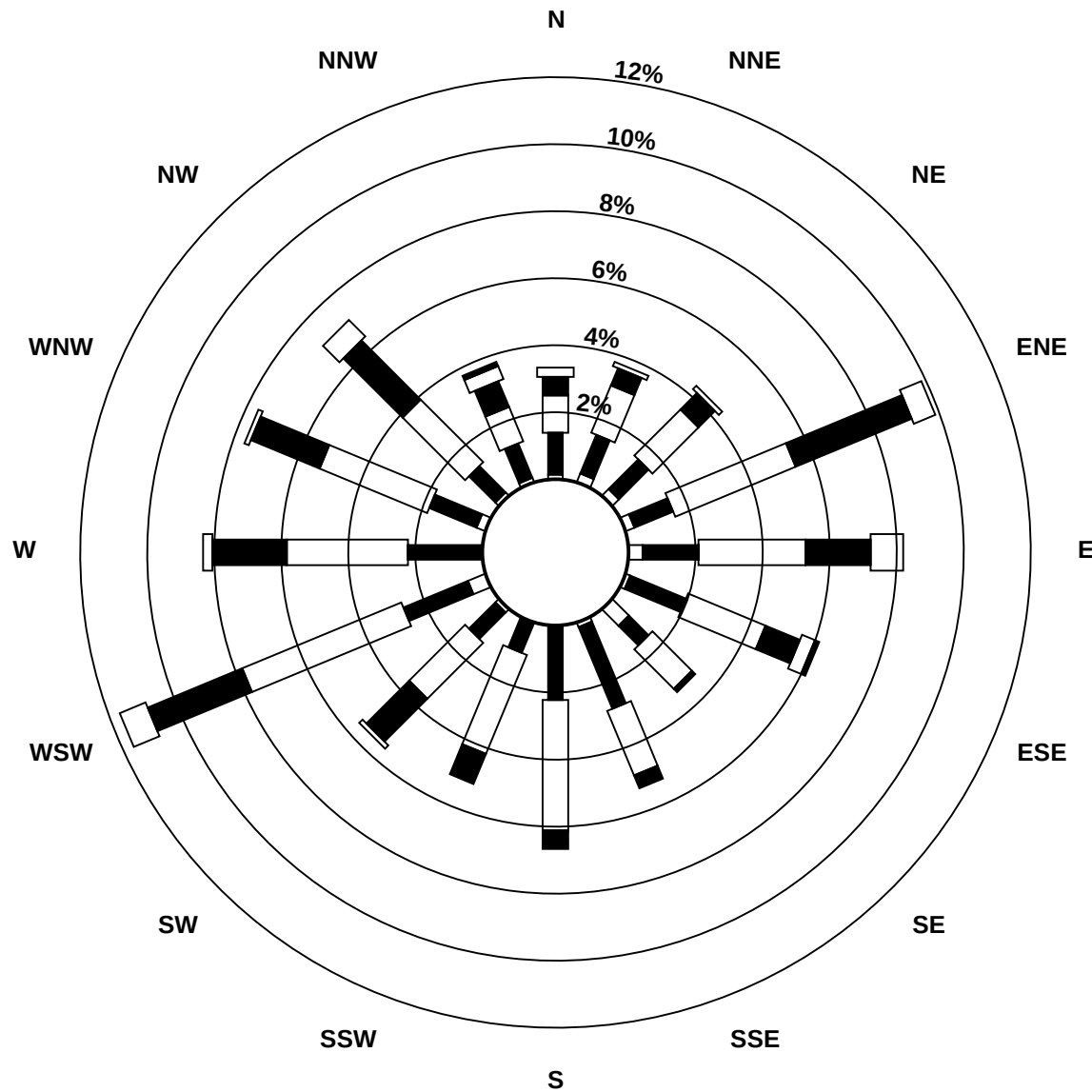
Wind Speed (km/h)
Wind Direction (deg)
Falher - June 2013

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	10	11	7	10	14	12	12	12	10	6	5	9	10	3	5	12	7	4	13	33	24	17	11	11	9.0	33.2
Dir	185	78	48	52	57	80	109	133	180	145	124	66	70	81	18	44	88	26	122	113	119	119	103	104	100	113
24 Spd	14	13	10	8	4	8	8	10	9	14	17	20	22	25	24	30	30	26	25	22	18	13	13	15	14.2	30.3
Dir	70	64	41	82	148	14	7	78	78	107	97	77	70	59	55	36	32	25	13	14	23	15	4	357	45	36
25 Spd	16	14	14	12	9	11	11	9	11	12	11	15	21	32	41	34	26	22	17	10	12	11	8	7	11.0	41.1
Dir	5	26	31	14	343	328	350	16	72	100	91	56	78	108	110	120	116	126	134	122	134	119	70	11	86	110
26 Spd	4	6	11	13	14	15	19	24	22	21	24	26	26	21	25	26	28	22	16	13	12	12	12	11	16.7	28.2
Dir	308	273	267	275	257	247	237	236	245	235	235	238	236	226	232	237	254	260	261	244	237	234	188	180	241	254
27 Spd	13	14	15	17	15	18	22	25	26	26	31	31	31	29	28	26	27	24	20	15	11	6	7	10	18.1	31.1
Dir	187	192	193	200	194	202	214	226	231	237	254	254	253	256	248	239	246	253	271	262	302	313	223	290	239	254
28 Spd	5	9	12	14	14	13	12	18	19	17	17	17	17	16	14	14	10	4	7	8	11	13	14	15	6.2	18.9
Dir	282	209	179	185	170	169	184	217	236	250	270	262	264	233	245	254	258	216	135	83	82	69	65	76	216	236
29 Spd	16	17	18	18	19	18	17	17	20	19	16	17	22	18	16	12	5	9	10	11	12	10	8	11	3.8	21.7
Dir	90	67	69	71	100	118	115	129	151	168	209	211	223	243	271	271	249	280	300	306	311	319	124	181	162	223
30 Spd	8	11	12	5	14	12	9	8	7	7	7	5	3	5	9	3	3	10	6	11	11	11	10	12	4.0	13.5
Dir	173	139	156	49	134	118	151	240	249	230	173	142	4	339	249	61	95	2	55	112	102	90	82	95	124	134
Spd	0.3	1.3	0.4	0.6	1.0	2.3	2.2	3.4	4.4	4.4	3.9	3.9	3.1	1.1	2.8	2.0	3.2	4.4	5.0	2.1	1.2	1.3	0.6	0.7	Diurnal Average	
Dir	166	131	197	332	166	168	198	227	234	225	253	266	264	275	279	308	317	310	299	301	47	66	53	4	Diurnal Maximum	
Spd	24.1	22.6	24.7	23.7	24.3	26.9	27.1	30.4	31.6	28.9	32.5	33.5	32.3	33.3	41.1	34.4	38.9	35.7	33.2	33.2	36.2	21.9	22.6	22.3	Diurnal Maximum	
Dir	203	279	281	278	265	266	266	278	281	75	78	79	81	92	110	352	342	330	3	113	72	275	300	288		
Maximum Speed Value: 41 km/h on Jun 25 15:00																								Hours in Service: 720		
Maximum Daily Speed Average: 24.5 km/h on Jun 15																								Hours of Data: 720		
Maximum Diurnal Speed Average: 5.0 km/h at hour 19																								Hours of Missing Data: 0		
Minimum Speed Value: 1 km/h on Jun 22 18:00																										
Minimum Daily Speed Average: 3.8 km/h on Jun 30																										
Minimum Diurnal Speed Average: 0.3 km/h at hour 1																										
Monthly Average Velocity: 1.41 km/h 264.5 deg																								Percent Operational Time: 100.0		
Speed Percentiles: P ₁ = 3.4 P ₁₀ = 7.9 Q ₁ = 10.9 Median = 15.5 Q ₃ = 20.6 P ₉₀ = 25.7 P ₉₉ = 33.3																										
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	2	21	16	11	5	1	56																			
NorthEast	4	13	32	23	3	0	75																			
East	2	24	43	33	12	1	115																			
SouthEast	5	25	31	6	2	0	69																			
South	0	22	53	13	0	0	88																			
SouthWest	2	16	47	27	3	0	95																			
West	3	32	51	35	8	0	129																			
NorthWest	1	14	37	33	8	0	93																			
Total	19	167	310	181	41	2	720																			

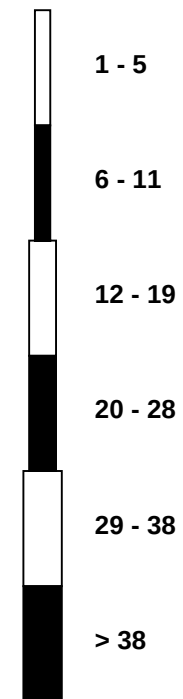
Wind Rose

Wind Speed (WS) (km/h)

Falher - June 2013



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Falher - June 2013

Maximum Speed: 41 km/h on Jun 25 15:00																					Maximum Daily Speed Average: 26.2 km/h on Jun 15					Hours in Service: 720	
Minimum Speed: 6 km/h on Jun 26 01:00																					Minimum Daily Speed Average: 10.2 km/h on Jun 30					Hours of Data: 720	
Maximum Diurnal Speed Average: 20.7 km/h at hour 15																					Minimum Diurnal Speed Average: 13.8 km/h at hour 5					Hours of Missing Data: 0	
Monthly Average Speed: 16.96 km/h																					Percentiles: P ₁ = 7.1 P ₁₀ = 9.8 Q ₁ = 11.9 Median = 16.0 Q ₃ = 21.1 P ₉₀ = 26.1 P ₉₉ = 33.9					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-Jun	25	21	19	14	9	16	17	16	20	21	25	24	20	19	21	21	16	16	13	17	16	15	16	17	18.2	25.3	
2-Jun	14	13	17	16	13	13	16	18	14	14	13	17	24	34	31	22	21	13	20	15	12	15	11	12	16.9	33.8	
3-Jun	11	11	10	8	7	7	8	7	7	10	10	9	10	10	10	10	30	12	13	10	13	14	13	14	11.0	29.6	
4-Jun	15	13	8	8	12	14	17	19	17	17	18	18	19	19	20	16	20	24	24	21	19	19	18	18	17.3	24.5	
5-Jun	18	17	11	12	11	14	14	14	21	28	32	33	28	17	18	19	19	21	22	17	17	23	22	20	19.5	33.5	
6-Jun	17	17	18	14	12	11	16	20	22	19	21	17	23	25	25	23	24	19	25	33	23	15	14	14	19.4	33.0	
7-Jun	9	12	11	9	7	12	6	7	11	19	18	21	19	14	12	13	15	16	17	17	9	14	14	14	13.3	21.0	
8-Jun	12	10	11	13	13	13	13	13	17	18	19	18	13	10	13	17	17	16	17	18	16	15	16	10	14.5	18.6	
9-Jun	10	11	13	11	10	13	17	20	26	27	29	28	27	25	30	35	39	36	23	17	16	16	11	12	21.0	39.4	
10-Jun	11	19	18	22	20	22	27	24	21	23	26	24	23	26	26	25	22	20	16	17	16	16	13	11	20.3	26.8	
11-Jun	11	13	10	10	13	10	11	11	10	9	10	10	9	11	14	15	15	15	14	14	21	16	18	17	12.8	20.9	
12-Jun	18	20	20	19	16	14	19	19	22	22	18	16	15	15	17	20	19	25	21	15	13	10	9	13	17.3	24.7	
13-Jun	13	10	10	10	12	15	15	16	16	15	17	16	17	14	17	21	19	18	14	16	13	13	13	14	14.8	21.1	
14-Jun	12	11	9	10	15	16	20	21	23	25	25	21	19	23	26	26	28	23	23	22	22	19	23	22	20.2	28.0	
15-Jun	20	23	25	24	24	27	27	31	32	29	30	30	28	33	30	28	28	29	25	25	22	21	20	19	26.2	33.3	
16-Jun	20	19	17	17	17	17	15	17	17	17	15	16	16	16	15	14	17	16	13	11	10	10	10	11	15.2	19.9	
17-Jun	11	11	12	13	13	12	14	15	16	17	15	15	16	10	10	11	10	11	9	8	8	11	12	13	12.2	17.1	
18-Jun	15	15	13	14	13	11	12	15	17	23	27	25	25	25	26	28	26	27	33	28	22	15	20	22	20.8	33.5	
19-Jun	17	17	19	21	21	22	24	27	26	29	33	34	33	31	32	32	31	30	28	23	19	18	17	17	25.0	33.9	
20-Jun	19	22	19	22	22	23	22	26	25	25	26	23	22	24	23	22	18	21	20	21	16	13	12	14	20.8	26.3	
21-Jun	16	17	16	14	9	7	8	7	9	11	11	13	12	27	22	18	16	10	8	24	36	21	14	14	15.0	36.4	
22-Jun	13	15	14	17	15	11	11	10	9	10	9	10	11	11	11	11	12	9	12	11	23	22	11	10	12.4	22.8	
23-Jun	11	12	9	11	14	12	13	13	11	9	10	13	12	10	10	14	10	9	16	33	24	17	13	16	13.3	33.4	
24-Jun	15	13	10	8	8	9	9	11	9	14	17	20	22	26	24	30	30	26	25	22	18	13	13	15	17.0	30.5	
25-Jun	16	15	14	12	10	11	11	11	12	13	13	17	23	32	41	34	26	22	17	10	12	11	8	8	16.6	41.4	
26-Jun	6	7	11	13	14	15	19	24	23	21	24	26	26	21	25	27	28	23	16	13	12	12	12	11	17.9	28.3	
27-Jun	13	14	15	17	15	18	23	25	26	26	31	32	31	30	29	26	27	25	20	15	12	6	8	10	20.5	31.6	
28-Jun	9	9	12	14	15	13	12	19	19	18	17	18	18	18	16	15	12	9	8	9	12	13	14	15	14.0	19.2	
29-Jun	16	17	18	18	20	18	18	17	20	19	17	17	22	19	16	13	10	10	11	11	12	10	10	11	15.4	22.2	
30-Jun	9	11	12	9	14	12	9	9	8	9	9	8	10	11	12	10	9	11	7	11	12	11	10	12	10.2	13.8	
14.0 14.5 14.0 14.0 13.8 14.3 15.4 16.7 17.5 18.7 19.5 19.7 19.7 20.2 20.7 20.5 20.5 18.7 17.7 17.5 16.6 14.8 13.8 14.3																									Diurnal Average		
25.3 22.6 24.7 23.9 24.3 26.9 27.1 30.5 31.6 29.1 32.8 33.9 32.7 33.8 41.4 34.6 39.4 35.9 33.5 33.4 36.4 23.2 22.6 22.3																									Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

Hourly Standard Deviations

Wind Direction (WD) - deg

Falher - June 2013

Maximum Value: 97.3 deg on Jun 22 18:00																		Hours in Service: 720							
Minimum Value: 1.8 deg on Jun 20 04:00																		Hours of Data: 720							
																		Hours of Missing Data: 0							
Percentiles: P ₁ = 2.7 P ₁₀ = 4.8 Q ₁ = 6.8 Median = 10.8 Q ₃ = 20.2 P ₉₀ = 38.5 P ₉₉ = 72.3																		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-Jun	18	14	34	29	42	7	6	13	5	6	16	12	20	19	19	15	21	19	30	13	9	9	4	5	41.9
2-Jun	5	23	5	67	57	33	13	8	17	22	34	21	35	11	11	22	8	29	10	16	4	6	9	6	66.8
3-Jun	7	11	6	10	70	15	21	23	36	18	30	47	38	48	35	58	28	26	41	60	15	4	15	9	69.6
4-Jun	4	18	38	67	8	9	18	7	12	14	16	22	20	17	32	28	26	11	12	8	14	7	17	8	66.8
5-Jun	7	6	5	10	16	7	23	31	15	10	7	6	4	12	11	19	16	8	16	7	46	20	20	6	46.3
6-Jun	8	3	6	11	66	57	32	6	8	12	11	20	16	13	15	18	19	15	10	4	7	10	8	8	66.3
7-Jun	38	9	10	11	86	23	49	17	9	6	10	8	6	12	23	18	14	16	8	12	16	10	7	20	86.2
8-Jun	20	34	15	9	11	9	23	20	18	10	15	12	19	33	31	13	11	21	14	7	7	10	10	13	34.0
9-Jun	7	5	7	15	9	48	9	10	7	7	7	10	10	14	15	7	9	5	11	9	11	9	17	15	48.4
10-Jun	57	13	12	11	6	7	5	5	5	7	6	7	7	5	8	6	6	7	6	8	5	5	7	13	57.3
11-Jun	16	6	8	8	8	11	8	16	25	38	27	30	44	39	21	17	16	19	19	9	20	9	3	4	43.8
12-Jun	3	4	6	7	9	8	5	5	7	8	14	13	32	28	21	7	9	7	4	32	9	13	29	6	31.9
13-Jun	5	10	4	12	8	5	4	10	7	8	13	8	12	27	13	7	15	11	16	7	35	39	85	9	85.1
14-Jun	12	8	8	10	9	4	5	5	5	5	5	14	27	10	11	12	8	8	7	13	7	6	3	3	26.6
15-Jun	5	2	3	7	2	2	3	6	4	9	6	5	10	6	10	12	8	8	9	6	5	6	4	5	11.5
16-Jun	3	5	4	4	4	6	6	8	8	8	15	12	9	12	12	12	11	11	15	9	8	9	18	5	18.3
17-Jun	13	11	5	6	5	3	9	10	12	8	18	23	26	62	68	37	65	54	72	57	23	20	32	4	72.1
18-Jun	13	11	9	12	33	37	16	33	9	12	10	10	15	14	19	9	23	14	7	4	6	6	6	6	36.8
19-Jun	11	8	6	2	4	3	5	4	6	7	8	9	10	8	9	9	9	7	10	6	6	5	5	5	11.0
20-Jun	4	4	4	2	3	3	3	4	6	10	12	12	15	16	16	22	19	17	9	10	7	9	12	13	22.5
21-Jun	20	8	12	9	17	58	28	37	48	42	43	23	75	20	16	34	27	36	65	12	6	11	33	56	75.5
22-Jun	21	7	11	11	5	23	22	25	24	46	64	63	53	44	75	37	62	97	31	15	52	6	61	39	97.3
23-Jun	19	27	32	26	10	7	9	19	26	56	77	57	41	83	77	32	56	83	42	6	4	4	32	49	83.4
24-Jun	11	5	11	11	67	29	27	18	18	21	12	12	9	12	10	7	7	8	6	7	6	5	5	7	67.4
25-Jun	5	10	4	16	19	10	9	38	27	22	34	29	23	8	7	5	5	5	16	9	8	13	17	20	38.1
26-Jun	41	38	5	10	5	7	5	5	4	5	8	5	4	7	7	9	5	8	6	5	13	11	6	9	40.6
27-Jun	15	7	5	5	7	8	2	6	4	7	9	10	8	8	12	8	8	10	4	9	9	17	31	14	31.2
28-Jun	59	19	10	6	6	5	8	11	9	13	13	17	16	28	30	22	35	71	35	22	21	13	10	7	71.2
29-Jun	6	10	3	4	9	4	8	9	4	6	20	15	13	19	19	31	74	33	25	15	5	8	54	12	73.7
30-Jun	38	22	7	62	10	13	16	23	32	36	39	55	89	61	51	75	71	17	40	21	28	17	20	10	89.2
	58.5	38.5	38.3	66.8	86.2	58.2	48.5	38.1	47.5	55.6	76.7	62.6	89.2	83.1	76.7	75.0	73.7	97.3	72.1	60.0	52.5	38.6	85.1	56.2	

PAZA

Monthly Passive Data Summary

This map displays the Peace River region, highlighting various monitoring sites and geographical features. The map includes a legend in the top right corner indicating that a blue circle represents a 'Passive Air Monitoring Site'. The map shows the Peace River flowing through the region, with several creeks and rivers branching off, including Hines Creek, Forth Creek, Spirit River, and the Peace River itself. Major towns and communities are marked, such as Silver Valley, Fairview, Berwyn, Nampa, Rycroft, Wapaham, Girouxville, and High Prairie. The map also shows the locations of several monitoring sites, including Silver Valley, Forth Creek, Spirit River, Rycroft, Wapaham, Girouxville, High Prairie, and others. The map is overlaid with a grid showing coordinates from 287000 to 587000 on the x-axis and 6200000 to 6030000 on the y-axis.

PAZA Passive Results for June 2013

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
1a	Silver Valley	0.2	22.6	0.4		
1b	Silver Valley	0.2	21.8	0.5		
10a	Woking	0.2	26.2	0.9		
10b	Woking	0.2	24.9	0.8		
25a	Pinto Creek	0.1	22.1	0.5		
25b	Pinto Creek	0.1	24.5	0.5		
34a	Puskwaskau	0.1	18.5	N/S		
34b	Puskwaskau	0.2	17.3	N/S		
64a	Girouxville 4				0.2	
64b	Girouxville 4				0.2	

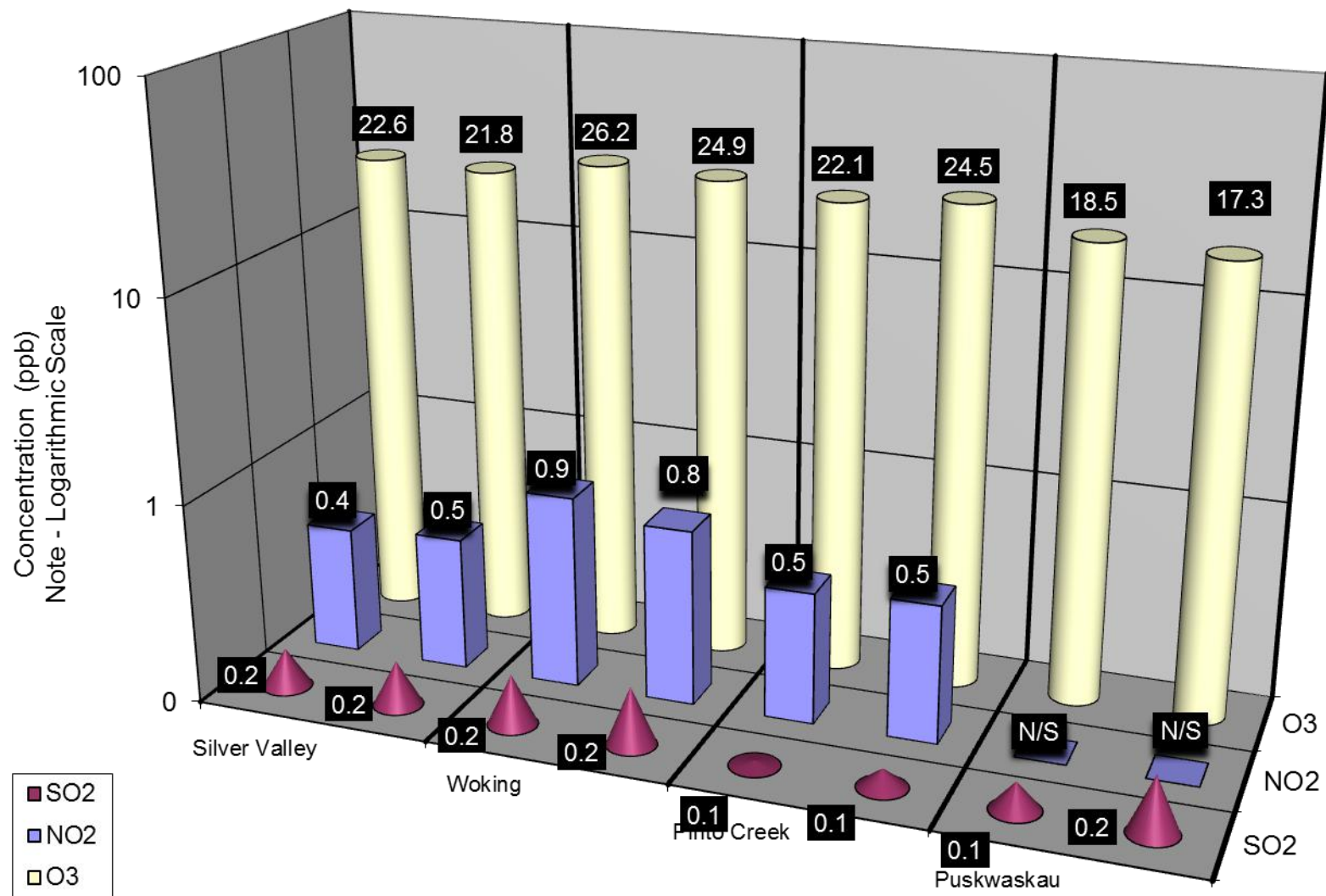
1	Silver Valley	0.2	22.2	0.5		08-27-081-11 W6M
2	Bay Tree	0.1	28.0	0.4		13-16-078-13 W6M
3	Fourth Creek	0.2	28.1	0.3		04-13-082-07 W6M
4	Gordondale	0.3	26.9	0.4		04-34-078-10 W6M
5	Boone Creek	0.2	23.5	0.3		16-36-074-11 W6M
7	Steeprock Creek	0.2	25.9	0.4		09-35-072-13 W6M
9	Spirit River	0.2	27.3	1.6		08-12-079-07 W6M
10	Woking	0.2	25.5	0.8		01-13-076-07 W6M
11	Webber Creek	0.2	28.2	0.8		09-36-074-09 W6M
12	Hythe	0.3	21.7	0.6		14-36-072-11 W6M
14	Sylvester	0.1	24.4	0.3		08-06-069-12 W6M
16	Beaverlodge	0.2	35.4	0.7		15-36-071-10 W6M
17	Poplar	0.2	27.6	1.0		13-06-073-08 W6M
18	Saddle Hills	0.1	26.7	BDL		04-25-074-07 W6M
19	Wanham	0.2	28.2	0.7		16-22-077-03 W6M
20	Shaftesbury	0.2	26.7	0.3		04-03-082-23 W5M
21	Eaglesham	0.4	22.7	1.5		16-21-079-25 W5M
23	Bear Lake	0.2	26.2	1.1		15-31-072-06 W6M
24	Wembley	0.1	24.6	1.1		12-31-070-08 W6M
25	Pinto Creek	0.1	23.3	0.5		04-24-069-11 W6M
26	Flyingshot	0.2	23.4	0.4		15-36-070-07 W6M
27	Grande Prairie I	0.2	26.9	1.4		08-15-071-06 W6M

PAZA Passive Results for June 2013 (Continued)

28	Clairmont Lake	0.2	27.4	0.4	09-06-073-04 W6M
29	Smoky Heights	0.3	33.4	0.5	04-06-075-02 W6M
30	Fitzsimmons	0.1	21.9	0.2	15-36-072-03 W6M
32	Gold Creek	0.2	18.8	0.4	06-33-067-05 W6M
33	Wapiti	0.1	28.0	0.2	02-25-071-03 W6M
34	Puskwaskau	0.2	17.9	N/S	15-35-074-25 W5M
35	Jean Cote	0.2	24.5	1.4	12-35-079-21 W5M
36	Guy	0.3	25.0	2.2	03-04-076-22 W5M
37	Crooked Creek	0.1	26.3	0.5	16-01-071-26 W5M
38	Karr Creek	0.1	20.8	0.1	10-16-065-02 W6M
39	Clouston Creek	0.2	23.5	0.5	12-01-073-22 W5M
40	McLennan	0.3	28.9	0.7	03-29-077-19 W5M
41	Valleyview	0.1	28.1	0.2	09-30-069-22 W5M
42	Sunset House	0.2	26.8	0.1	05-32-070-19 W5M
43	High Prairie	0.1	26.0	1.1	16-13-074-17 W5M
44	Peavine	0.2	21.3	0.2	03-05-079-15 W5M
45	Gift Lake	0.1	18.1	BDL	0.1 10-07-079-12 W5M
46	Little Smoky	0.2	30.0	0.3	12-01-065-21 W5M
47	Kinuso	0.1	16.7	BDL	12-10-073-10 W5M
48	Deer Mountain	0.1	21.3	0.5	15-22-068-09 W5M
49	Grande Prairie HP	0.2	29.4	1.4	17-26-071-06 W6M
62	East Prairie	0.1	19.9	0.1	13-02-072-15 W5M
63	Girouxville 3			0.3	14-02-077-23 W5M
64	Girouxville 4			0.2	4-08-077-22 W5M

*BDL = Below Detection Level

*N/S - No sample



Duplicate Summary Chart

Passive Summary for June 2013

Stats	Sulphur Dioxide SO ₂	Ozone O ₃	Nitrogen Dioxide NO ₂	Hydrogen Sulphide H ₂ S
	ppb	ppb	ppb	ppb

Passive Summary for June 2013 (PAZA Zone)				
Mean	0.2	25.2	0.6	0.2
Standard Deviation	0.1	3.9	0.5	0.1
Minimum	0.1	16.7	0.1	0.1
Minimum At	Karr Creek (#38)	Kinuso (#47)	Karr Creek (#38)	Gift Lake (#45)
Maximum	0.4	35.4	2.2	0.3
Maximum At	Eaglesham (#21)	Beaverlodge (#16)	Guy (#36)	Girouxville 3 (#63)

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

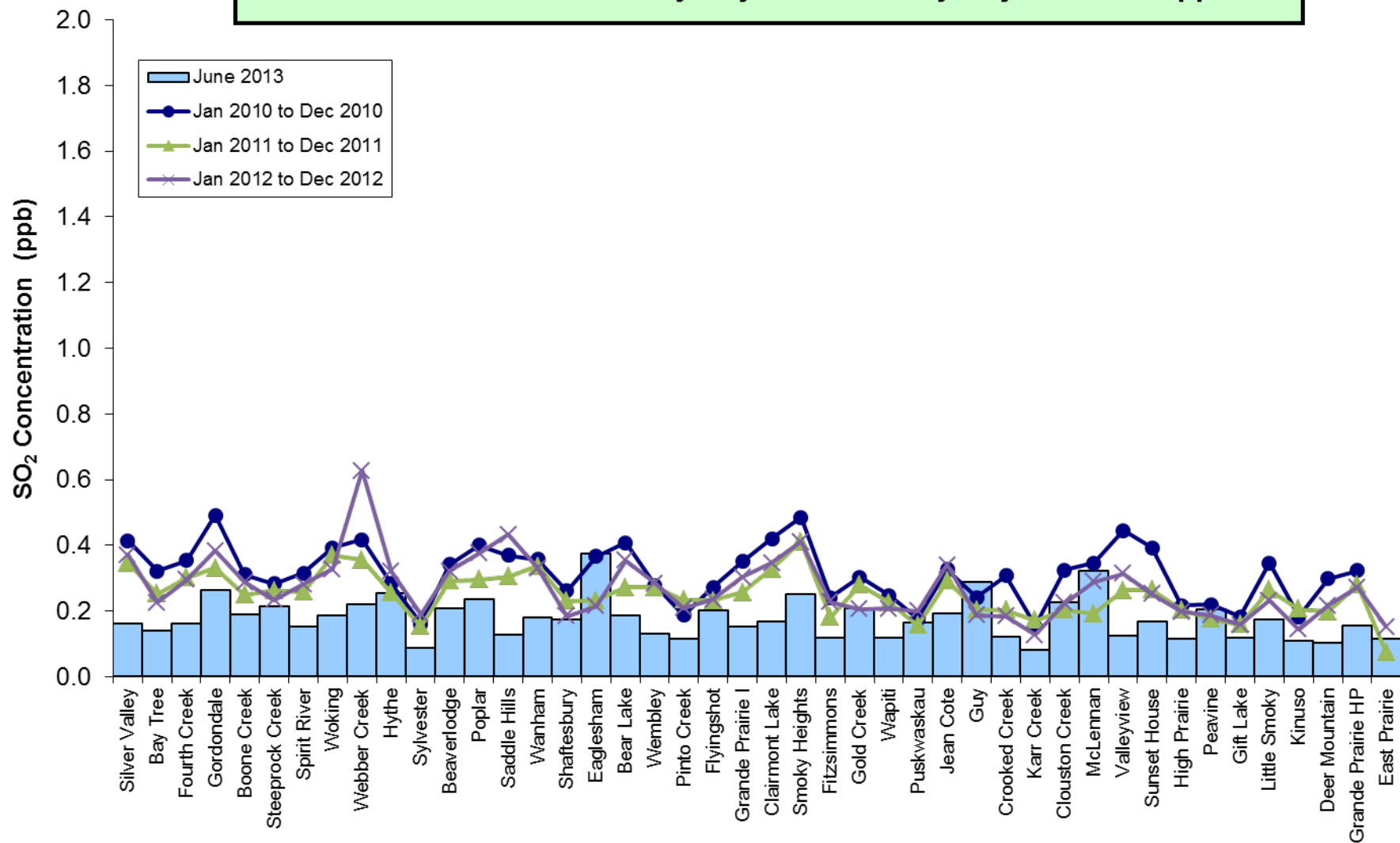
	SO ₂	O ₃	NO ₂
PAZA Beaverlodge station	0.1	29.6	2.0
PAZA Beaverlodge passive	0.2	35.4	0.7

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

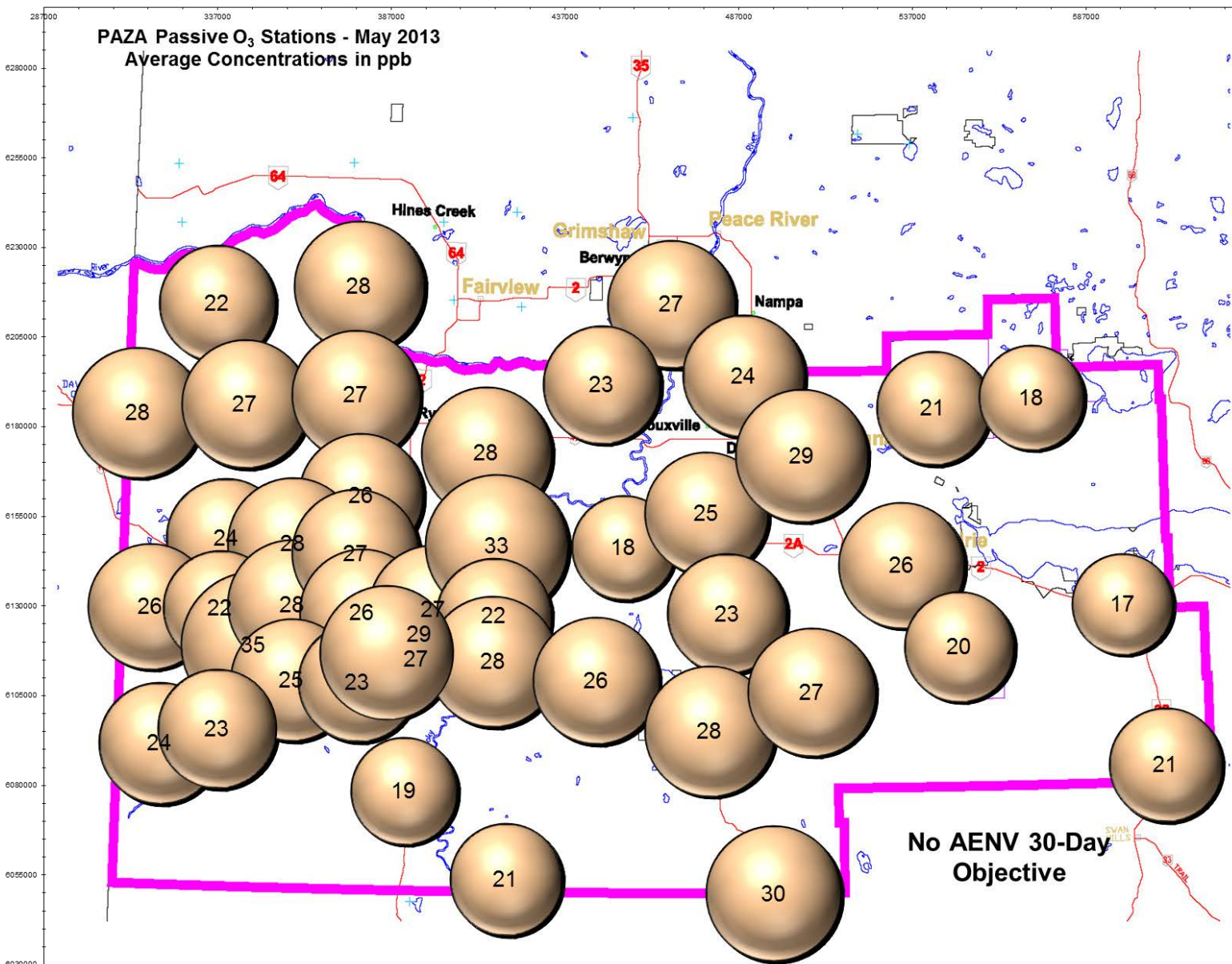
	SO ₂	O ₃	NO ₂
PAZA Henry Pirker station	0.1	26.5	3.9
PAZA Grande Prairie passive	0.2	29.4	1.4



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

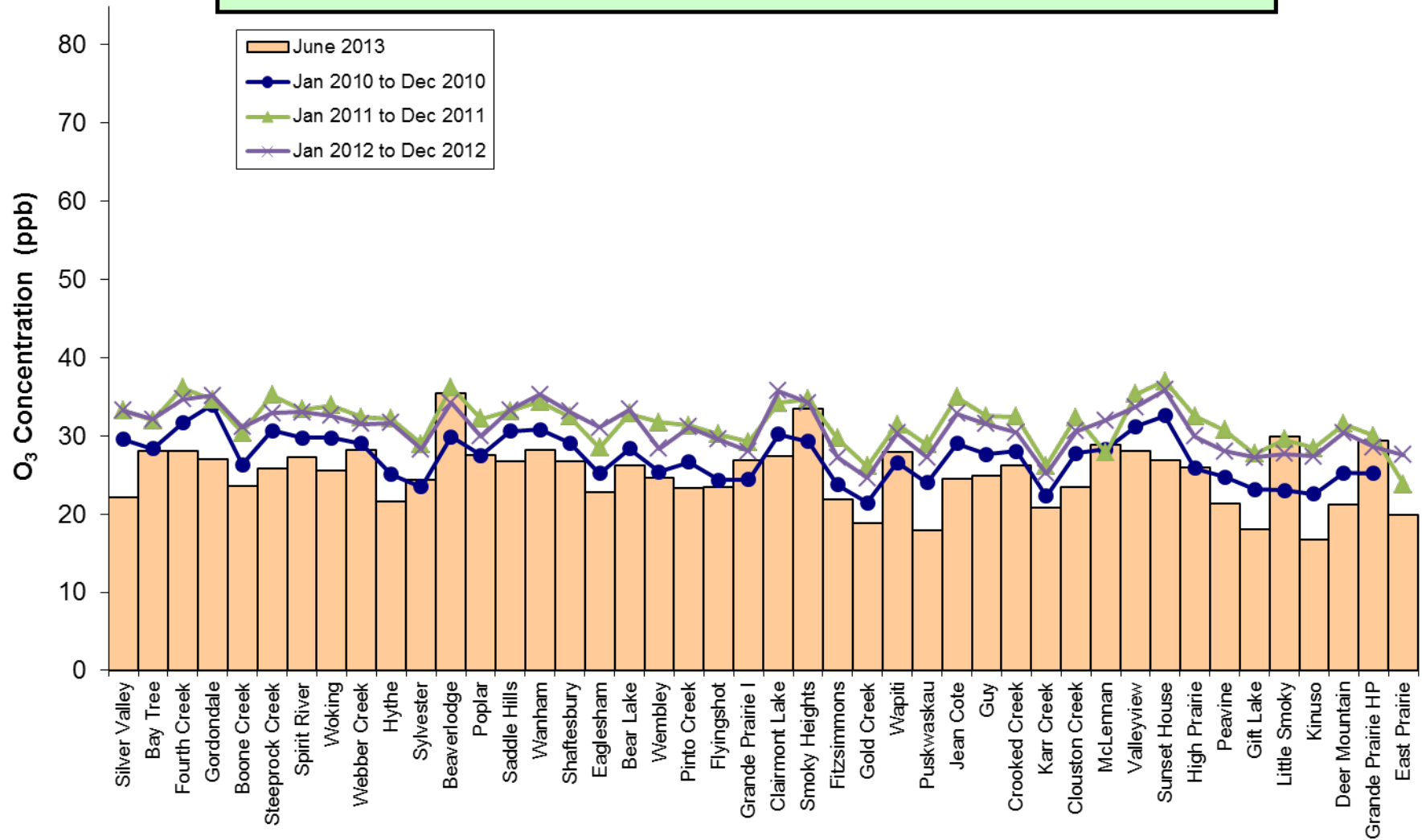


SO₂ Summary Chart



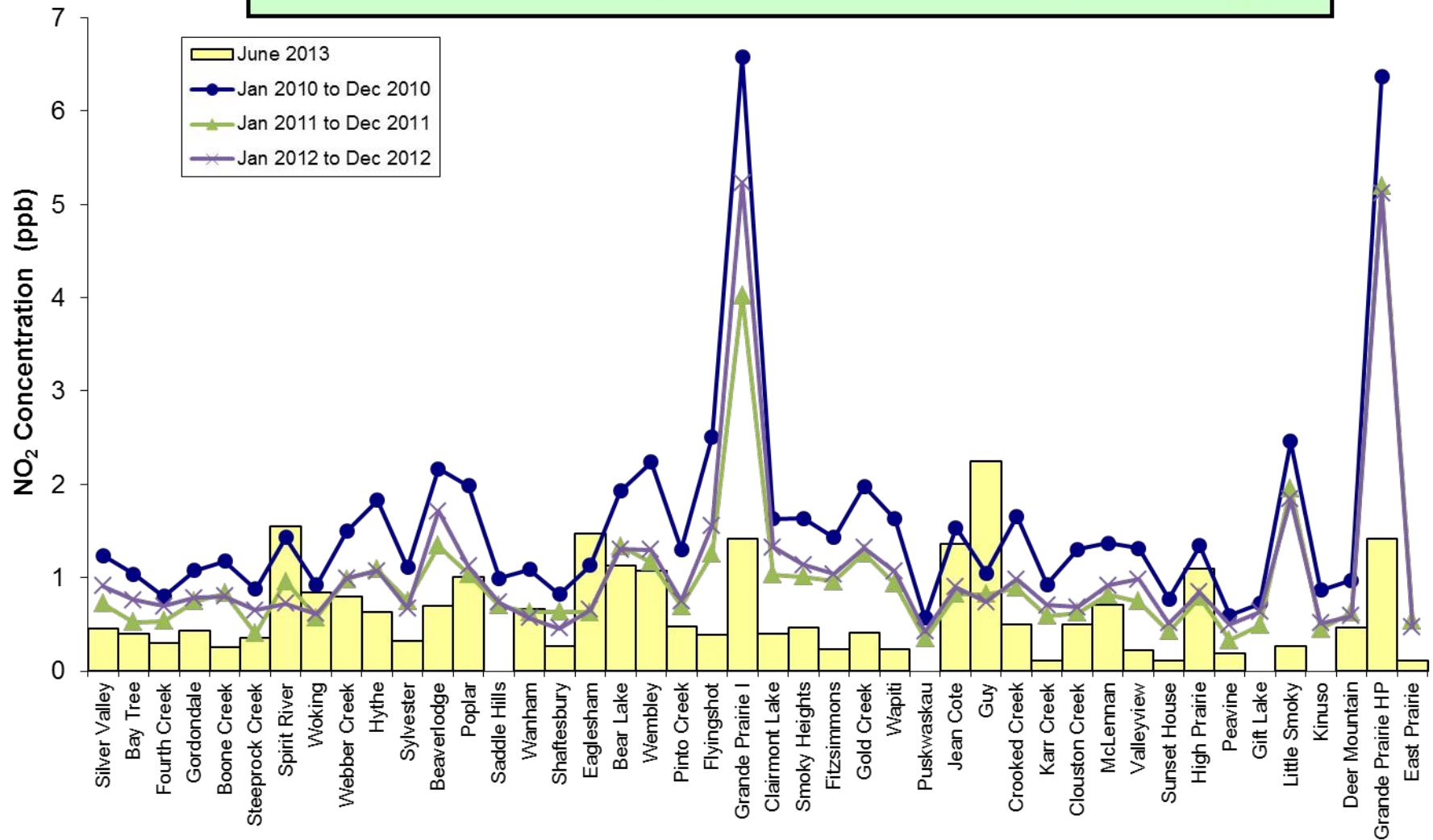
O₃ Bubble Chart

Alberta Ambient Air Quality Objective - No Annual O₃ Objective

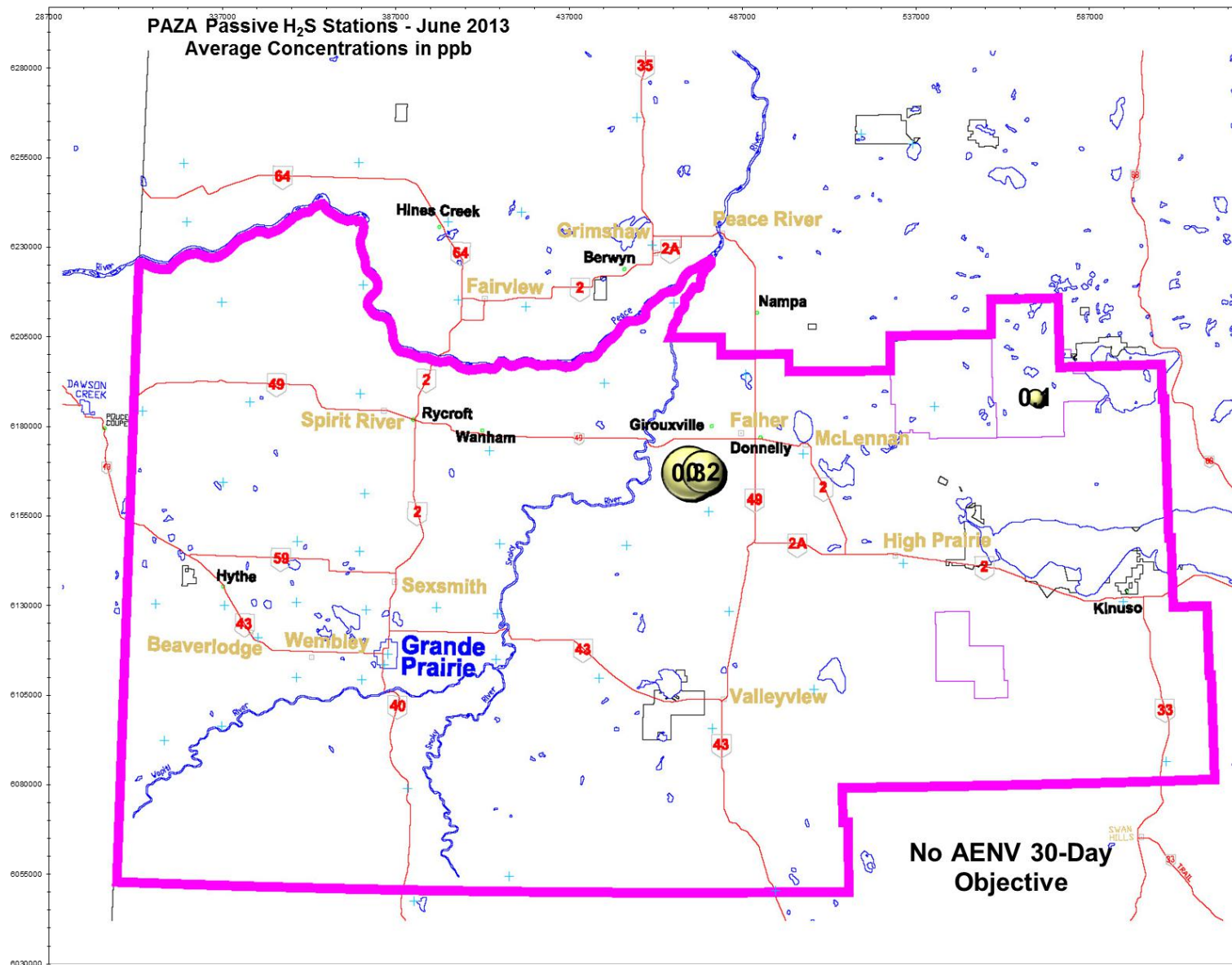


O₃ Summary Chart

Alberta Ambient Air Quality Objective - Annual NO₂ Objective is 24 ppb



NO₂ Summary Chart



H₂S Bubble Chart

June 2013 Calibration Reports

PAZA - Henry Pirker Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃, CO, THC, TRS

PAZA – Evergreen Park Station with the following calibrations:

SO₂, TRS

PAZA – Smoky Heights Station with the following calibrations:

SO₂, TRS

PAZA – Beaverlodge Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃

PAZA – Valleyview Station with the following calibrations:

SO₂ & H₂S

PAZA – Sunset House Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃, TRS

PAZA – Falher Station with the following calibrations:

SO₂ & H₂S

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	June 13, 2013	Previous Calibration	May 17, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	8:32	End Time (MST)	12:03
Barometric Pressure	na ATM	Station Temperature	20.5 Deg C
Calibrator	Enviroics 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	0.998713	Calculated slope	1.000334
Calculated intercept	1.835652	Calculated intercept	2.549510
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	9.1		8.9	
Coefficient	0.793		0.781	
Pressure	644.5	mm Hg	644.0	mm Hg
Flow	0.494	lpm	0.493	lpm
Lamp Voltage	44177	Hz	44181	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	0.2	N/A
4990	39.92	403.2	401.9	1.0031
4990	19.98	202.6	198.3	1.0217
4990	9.98	101.4	96.3	1.0533
4990	0.00	0.0	0.3	As Found Zero
4990	39.94	403.4	407.6	As Found Span
Average Correction Factor				1.0260

Calculated value of As Found Response: 408.7 ppb Percent Change of As Found: -1.3%

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

Notes: Slight adjustment required.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



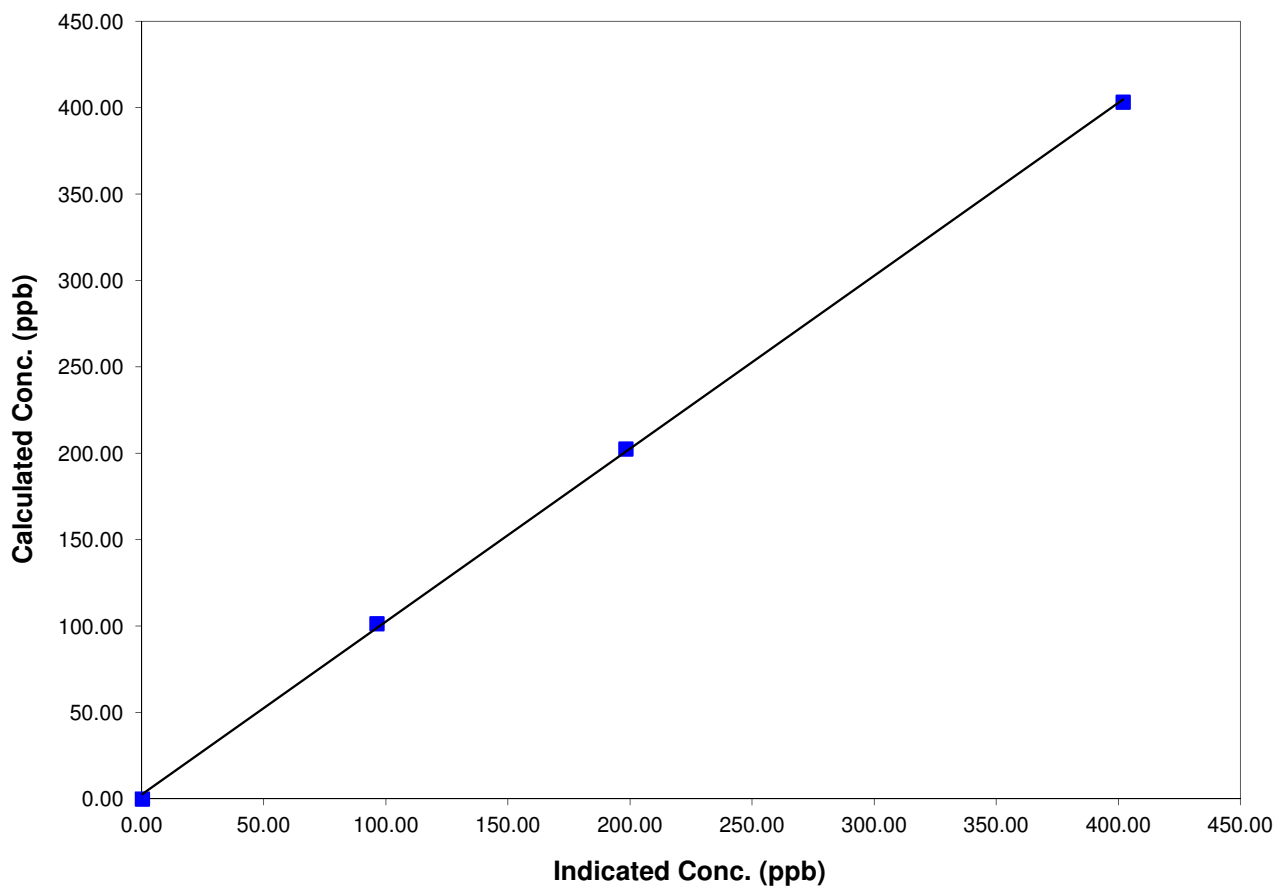
Station Information

Calibration Date	June 13, 2013	Previous Calibration	May 17, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:32	End Time (MST)	12:03
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

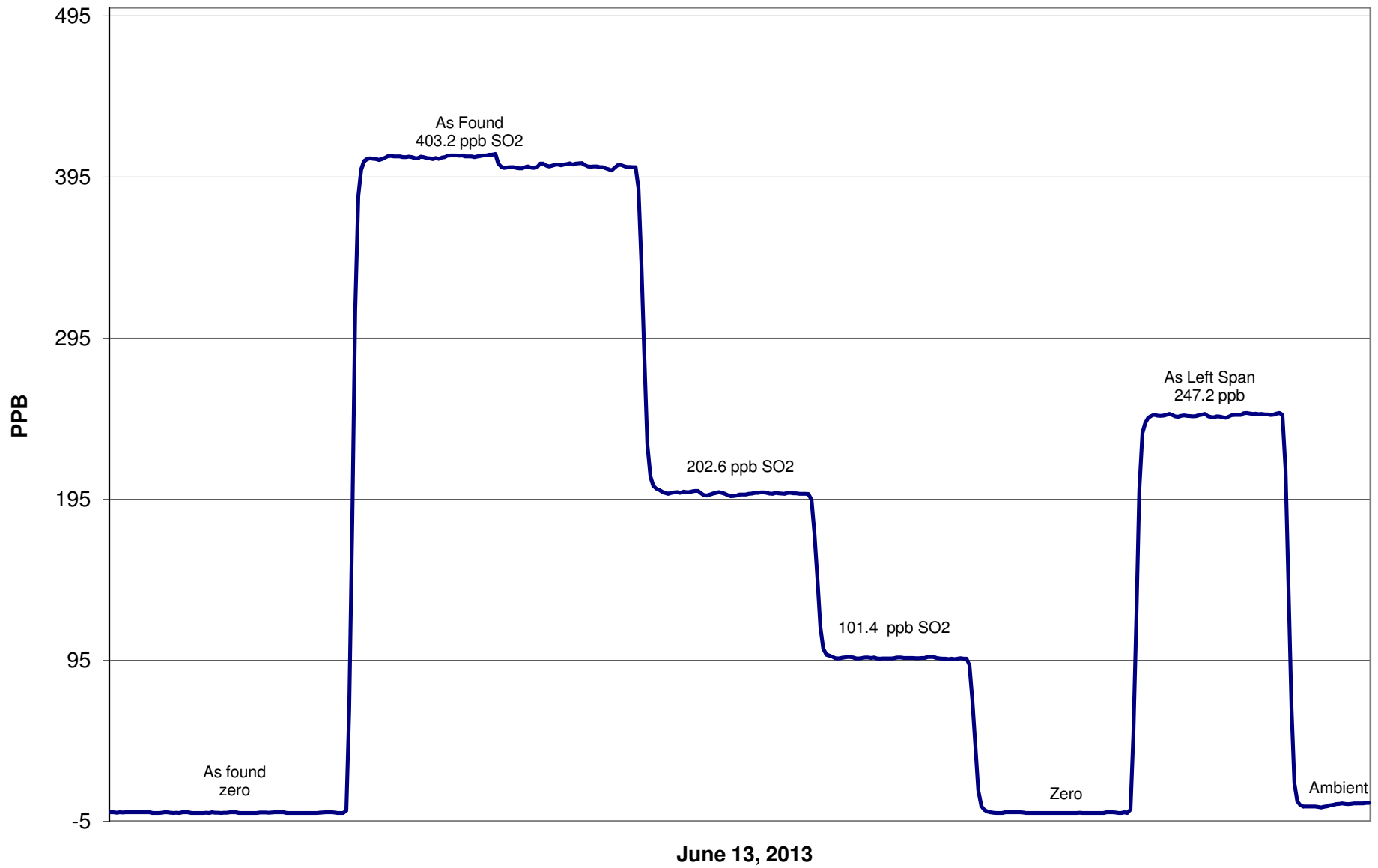
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999783
403.2	401.9	1.0031		
202.6	198.3	1.0217		
101.4	96.3	1.0533	Slope	1.000334
			Intercept	2.549510

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	June 13, 2013	Previous Calibration	May 17, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Installation	Removal
Other:			
Start Time (MST)	8:49	End Time (MST)	13:52
Barometric Pressure	na	Atm	Station Temperature
Calibrator	EnviroNics 6100	Serial Number	3016
NO Cal Gas Conc	51.2	ppm	Cal Gas Expiry Date
NO _x Cal Gas Conc	51.2	ppm	Cal Gas Serial #
			March 12, 2014
			LL107272

DACS Information

DACS make	CR3000	DACS serial No.	5408
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Parameter	NO ₂	NO _x	NO
Before			
Data Slope	1.000867	0.999418	1.001598
Data Offset	-1.196663	1.871495	1.787501
After			
Data Slope	1.001573	0.999767	1.001313
Data Offset	-0.497601	2.212343	2.313946
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
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Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	12.6	mV	13.1	mV
NO _x bkgnd	12.8	mV	13.4	mV
NO coefficient	1.072		1.116	
NO _x coefficient	1.001		1.001	
NO ₂ 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	181.3	in Hg	181.8	in Hg

Calibration Report

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



Calibration Date: June 13, 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	0.1	0.0	0.0	N/A	N/A
1	4990	39.92	406.3	406.3	0.0	405.3	404.7	0.6	1.0025	1.0042
2	4990	19.98	204.2	204.2	0.0	200.9	200.3	0.4	1.0166	1.0192
3	4990	9.98	102.2	102.2	0.0	97.8	97.6	0.1	1.0450	1.0471
AFZ	4990	0.00	0.0	0.0	0.0	0.1	0.0	0.0	0.0000	0.0000
AFS	4990	39.94	406.6	406.6	0.0	390.5	389.6	0.7	1.0412	1.0434
Average Correction Factor									1.0214	1.0235

As Found Concentrations: NO_x= 392.3 NO= 391.5 As Found Percent Change NO_x= -3.5% NO= -3.7%

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	0.1	0.0	0.0	N/A	N/A	N/A	N/A
NO point	403.7	403.7	0.0	403.7	403.7	0.0	0.9999	1.0000	N/A	N/A
300	403.7	92.7	310.9	403.6	92.7	311.1	1.0001	1.0000	0.9995	100.0%
200	403.7	189.5	214.1	402.8	189.5	213.4	1.0021	1.0000	1.0034	99.7%
100	403.7	288.4	115.2	405.2	288.4	116.8	0.9962	1.0000	0.9866	101.4%
Average Correction Factor							0.9995	1.0000	0.9965	100.4%

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	-0.3	0.0	ppb	0.1	0.0	0.0	ppb
Auto span	328.3	326.9	1.6	ppb	311.7	309.4	2.4	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



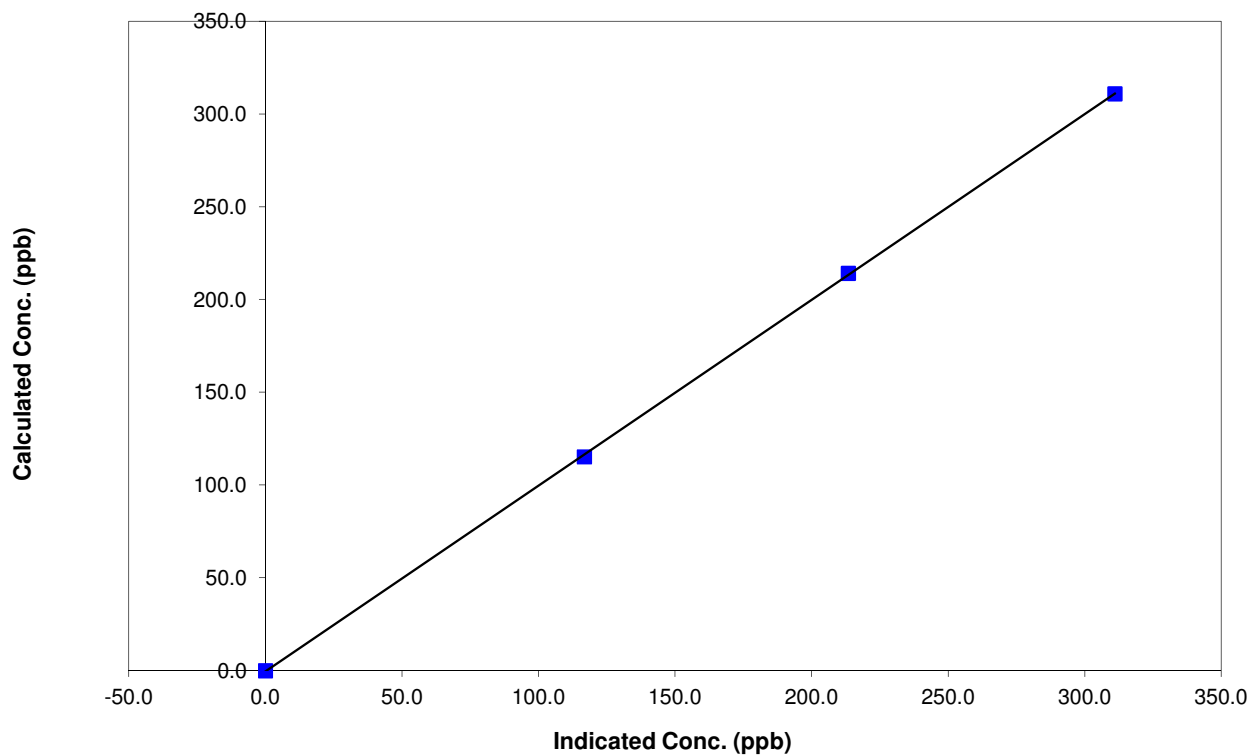
Station Information

Calibration Date	June 13, 2013	Previous Calibration	May 17, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:49	End Time (MST)	13:52
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	0.999950
310.9	311.1	0.9995		
214.1	213.4	1.0034		
115.2	116.8	0.9866	Slope	1.001573
			Intercept	-0.497601

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



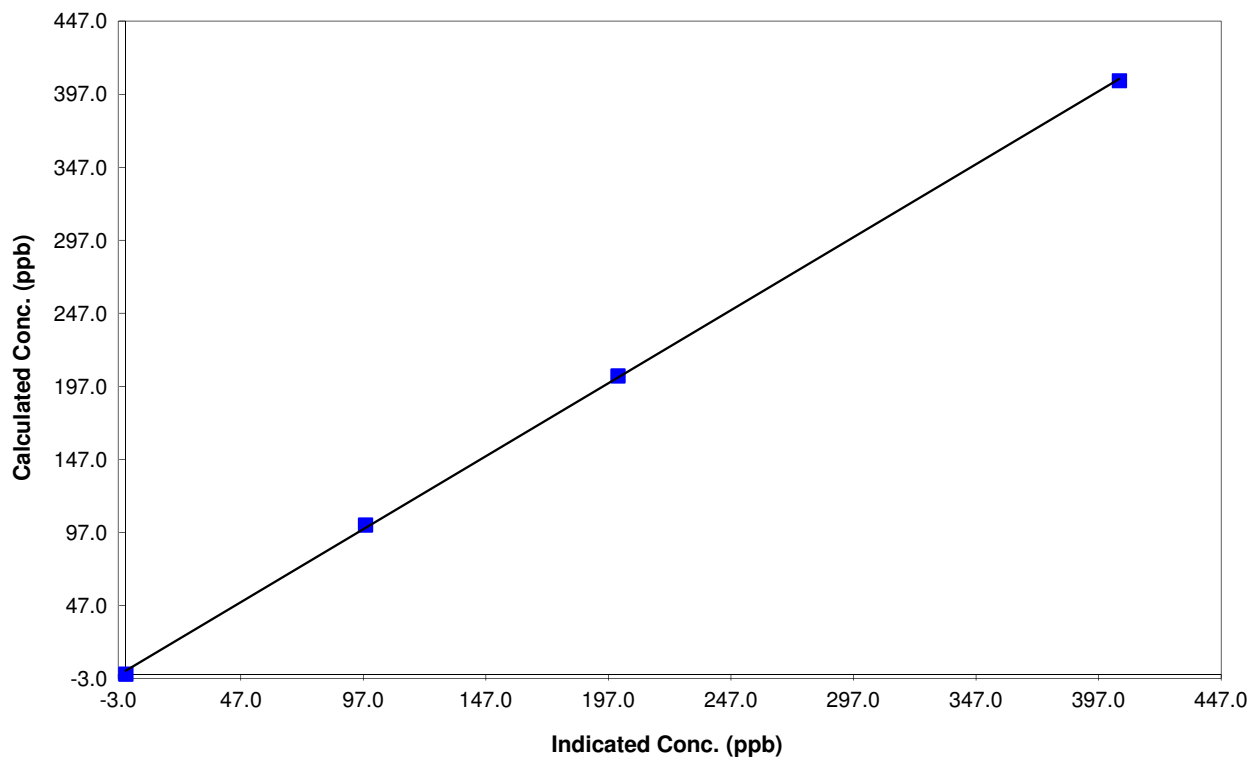
Station Information

Calibration Date	June 13, 2013	Previous Calibration	May 17, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:49	End Time (MST)	13:52
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999860
406.3	405.3	1.0025		
204.2	200.9	1.0166		
102.2	97.8	1.0450	Slope	0.999767
			Intercept	2.212343

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



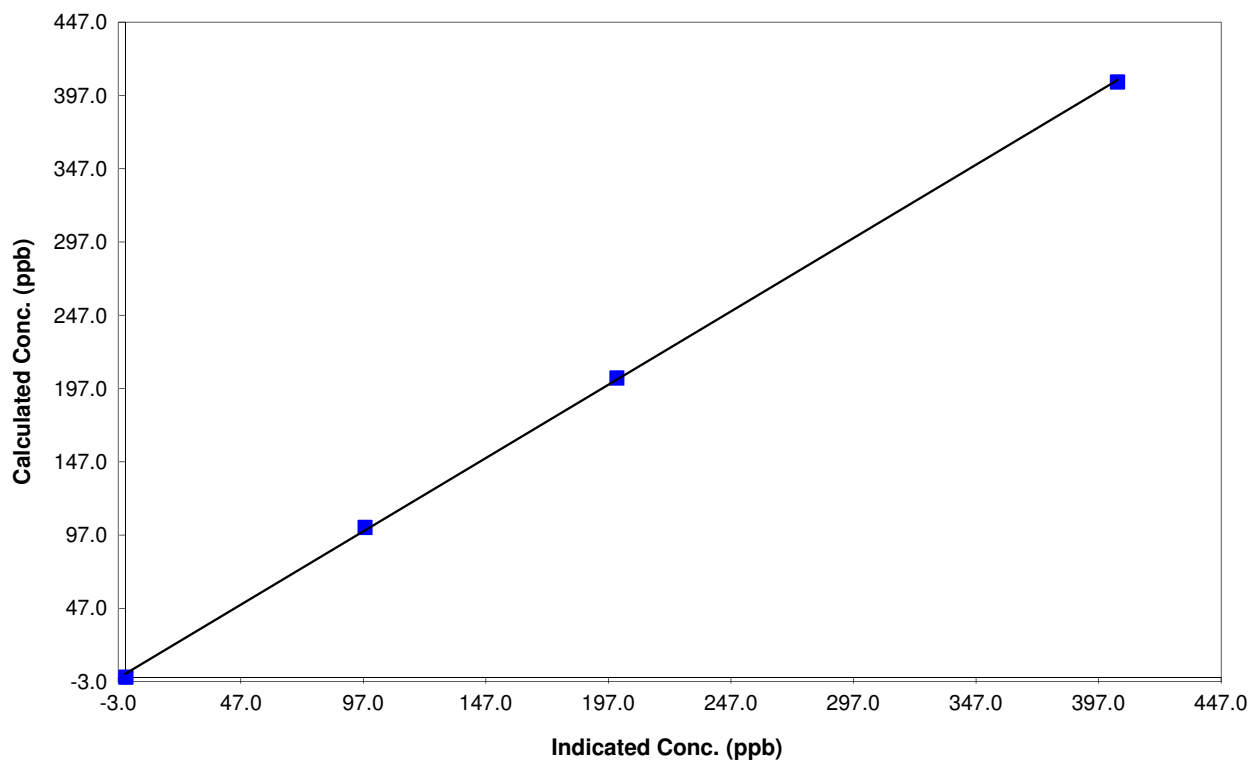
Station Information

Calibration Date	June 13, 2013	Previous Calibration	May 17, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:49	End Time (MST)	13:52
Analyzer make	TEI 42C	Analyzer serial #	508011073

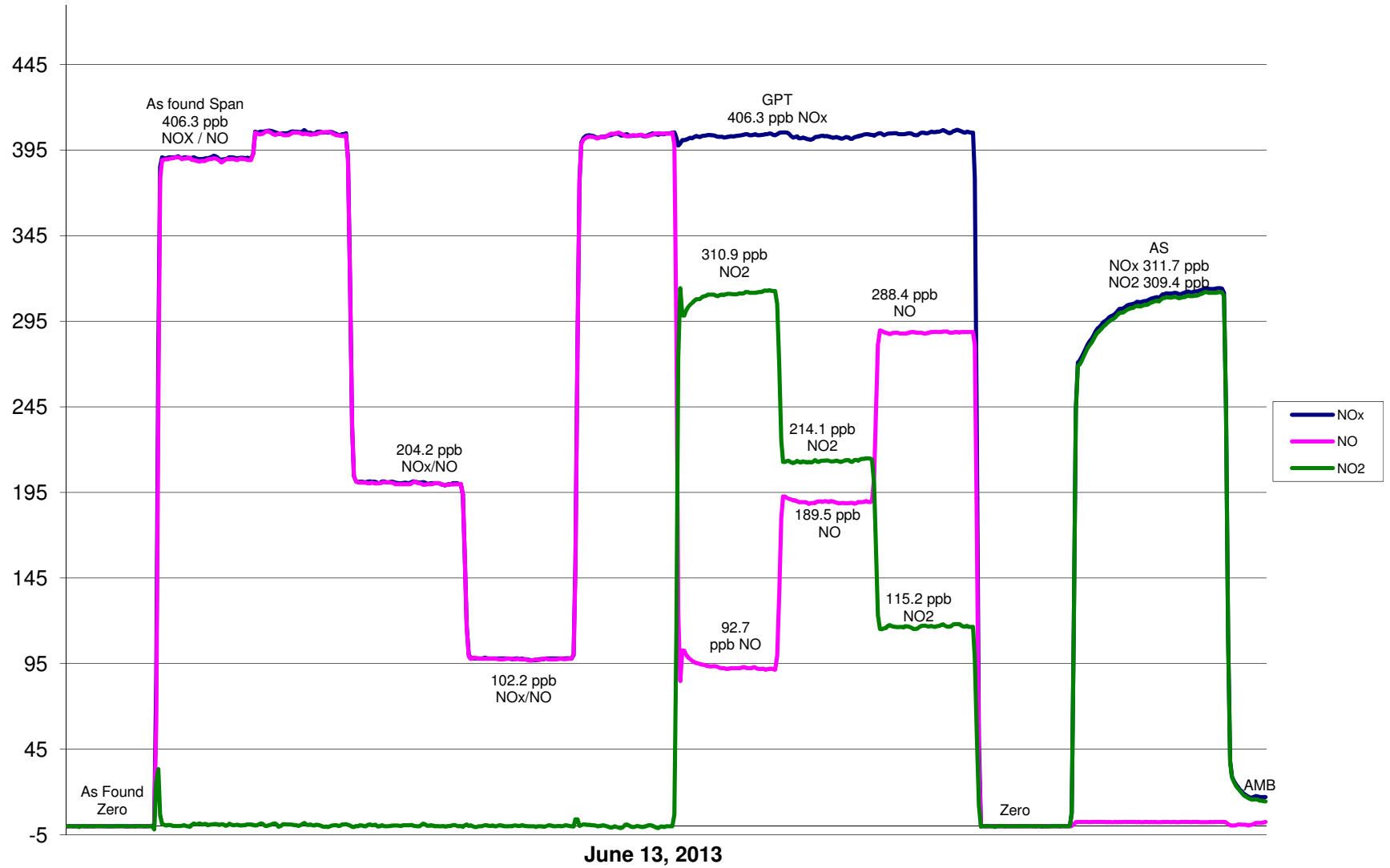
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999859
406.3	404.7	1.0042		
204.2	200.3	1.0192		
102.2	97.6	1.0471	Slope	1.001313
			Intercept	2.313946

NO Calibration Curve



PAZA NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	June 13, 2013	Previous Calibration	May 17, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	12:22	End Time (MST)	15:15
Barometric Pressure	0.923 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	0.991527	Calculated slope	0.991533
Calculated intercept	-0.736694	Calculated intercept	-0.257818

Analyzer make	Teco 49C	Analyzer serial #	607415761
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.30	ppb	-0.30	ppb
slope	1.019		1.019	
Lamp temp	56.9	mV	56.9	mV
Lamp Intensity A/B	107932/96654	mV	108457/97108	mV
Pressure	680.1	mm Hg	680.5	mm Hg
Flow A	0.722	ccm	0.722	ccm
Flow B	0.725	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	0.0	N/A
5035	0.3	310.9	314.0	0.9903
5035	0.2	214.1	215.6	0.9930
5035	0.1	115.2	117.2	0.9833
5035	0.0	0.0	0.0	As found zero
5035	0.3	310.9	312.0	As found span
Average Correction Factor				0.9889

Calculated value of As Found Response: 308.6 ppm Percent Change of As Found: -0.7%

	before calibration		after calibration	
Auto zero	0.4	ppb	-0.2	ppb
Auto span	110.0	ppb	356.6	ppb

Notes: No adjustment required.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



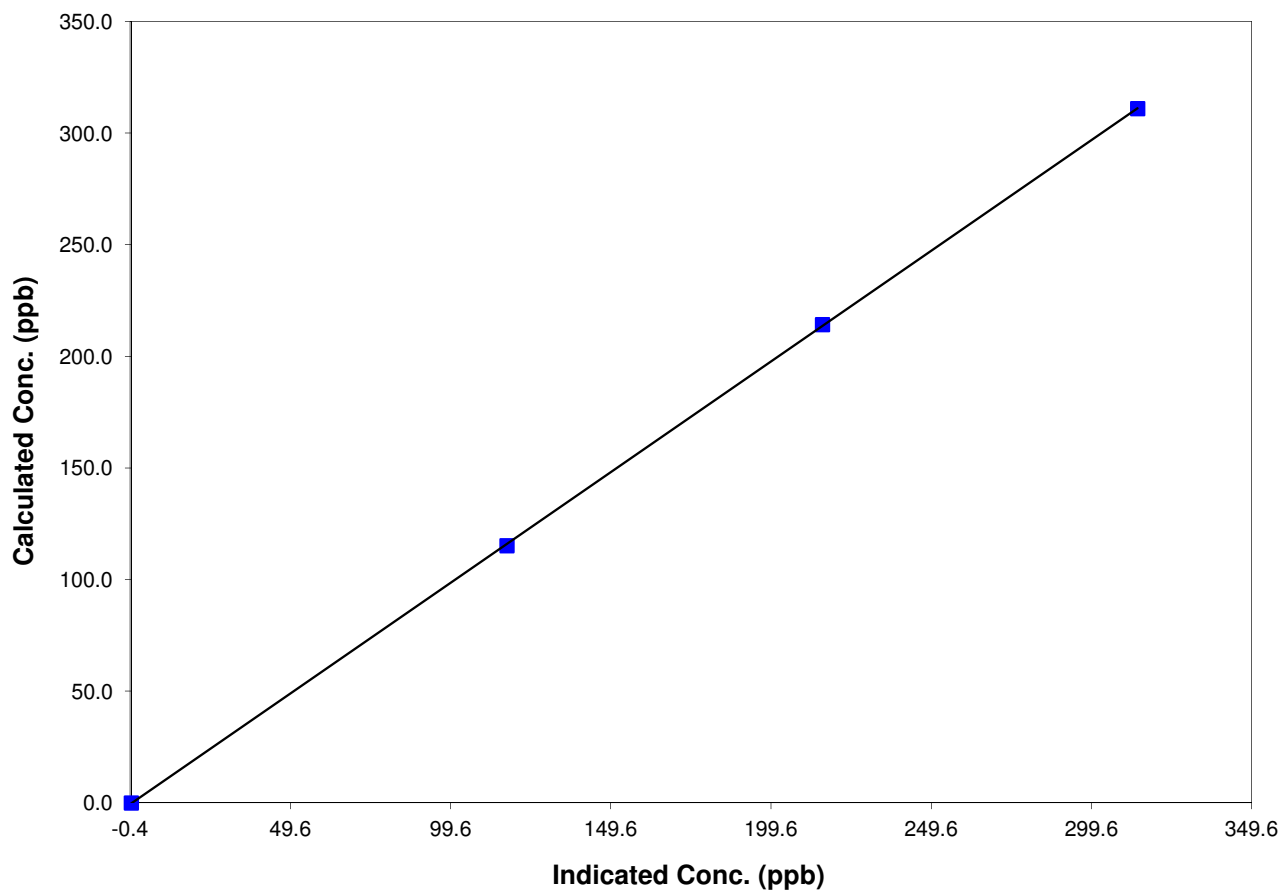
Station Information

Calibration Date	June 13, 2013	Previous Calibration	May 17, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:22	End Time (MST)	15:15
Analyzer make/model	Teco 49C	Analyzer serial #	607415761

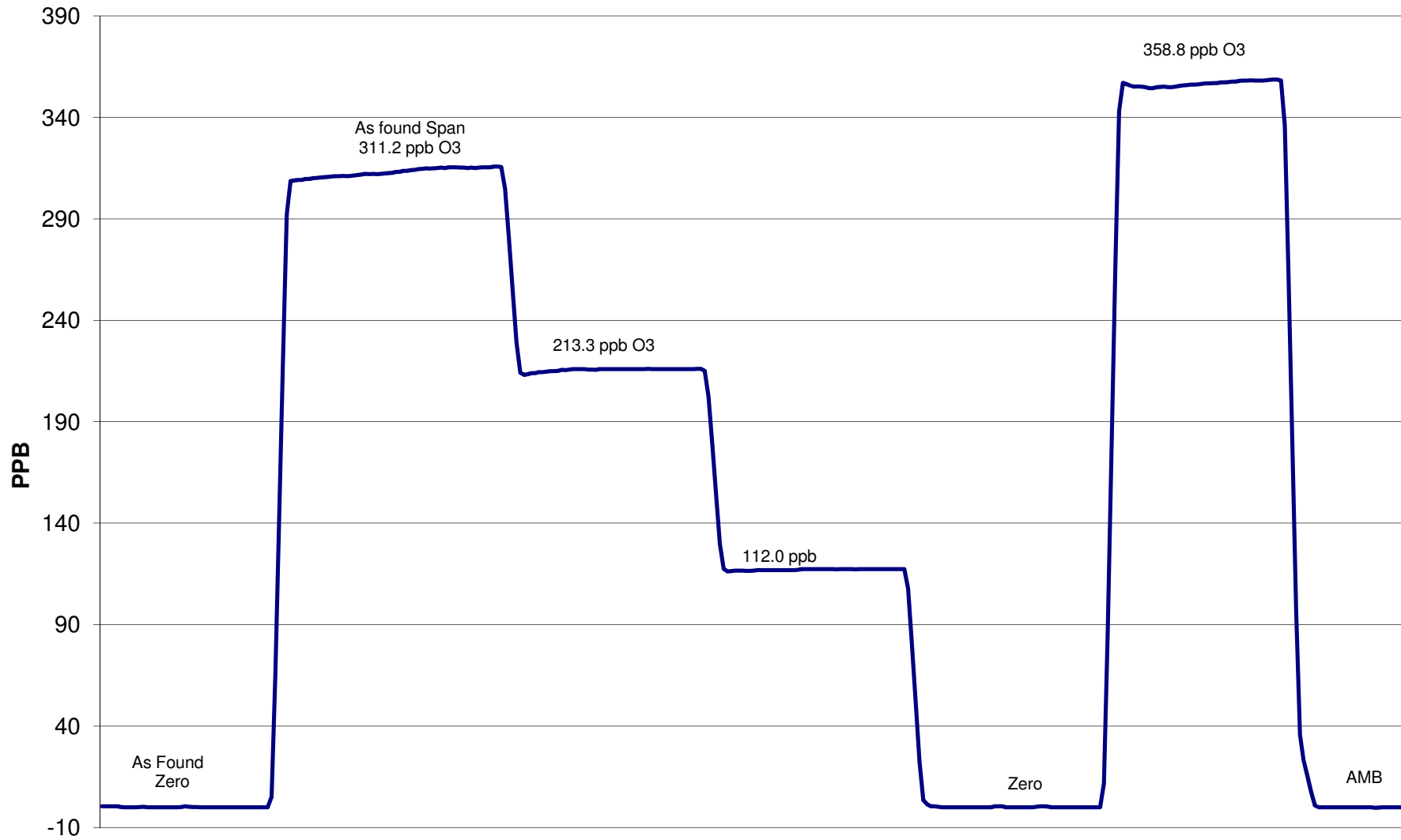
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	NA		
310.9	314.0	0.9903	Correlation Coefficient	0.999983
214.1	215.6	0.9930		
115.2	117.2	0.9833	Slope	0.991533
			Intercept	-0.257818

O3 Calibration Curve



O3 Calibration



June 13, 2013

Calibration Report

Parameter CH4 / NMHC / THC

Air Monitoring Network

PAZA



Station Information

Calibration Date	June 18, 2013	Previous Calibration	May 8, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	☐ Routine	☒ Install	☐ Removal
			☐ Other:

Start Time (MST)	11:18	End Time (MST)	14:00
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 551	Analyzer serial #	1134650658
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	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)
1996	0.00	0.00	0.02	N/A
1996	64.93	12.73	12.76	0.9973
1996	39.93	7.92	7.90	1.0029
1996	14.95	3.00	2.97	1.0118
1996	0.00	0.00	0.02	As Found Zero
1996	64.93	12.73	12.76	As Found Span
Average Correction Factor				1.0040

Calculated value of As Found Response: 12.552 ppm Percent Change of As Found: 1.4%

	Before		After
Calculated slope	0.986147	Calculated slope	0.998127
Calculated intercept	-0.013855	Calculated intercept	0.012179

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.01	ppm	0.03	ppm
Auto span	9.51	ppm	9.35	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)
1996	0.00	0.00	0.02	N/A
1996	64.93	17.41	17.48	0.9963
1996	39.93	10.84	10.98	0.9876
1996	14.95	4.11	4.17	0.9843
1996	0.00	0.00	0.02	As Found Zero
1996	64.93	17.41	17.48	As Found Span
Average Correction Factor				0.9894

Calculated value of As Found Response: 17.391 ppm Percent Change of As Found: 0.1%

	<u>Before</u>		<u>After</u>
Calculated slope	0.999398	Calculated slope	0.996721
Calculated intercept	-0.060415	Calculated intercept	-0.044516

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.01	ppm	0.02	ppm
Auto span	12.38	ppm	12.86	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)
1996	0.00	0.00	0.03	N/A
1996	64.93	30.14	30.22	0.9974
1996	39.93	18.76	18.85	0.9953
1996	14.95	7.11	7.14	0.9968
1996	0.00	0.00	0.03	As Found Zero
1996	64.93	30.14	30.22	As Found Span
Average Correction Factor				0.9965

Calculated value of As Found Response: 29.948 ppm Percent Change of As Found: 0.6%

	<u>Before</u>		<u>After</u>
Calculated slope	0.994255	Calculated slope	0.997933
Calculated intercept	-0.068379	Calculated intercept	-0.026676

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.01	ppm	0.02	ppm
Auto span	21.90	ppm	22.21	ppm

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



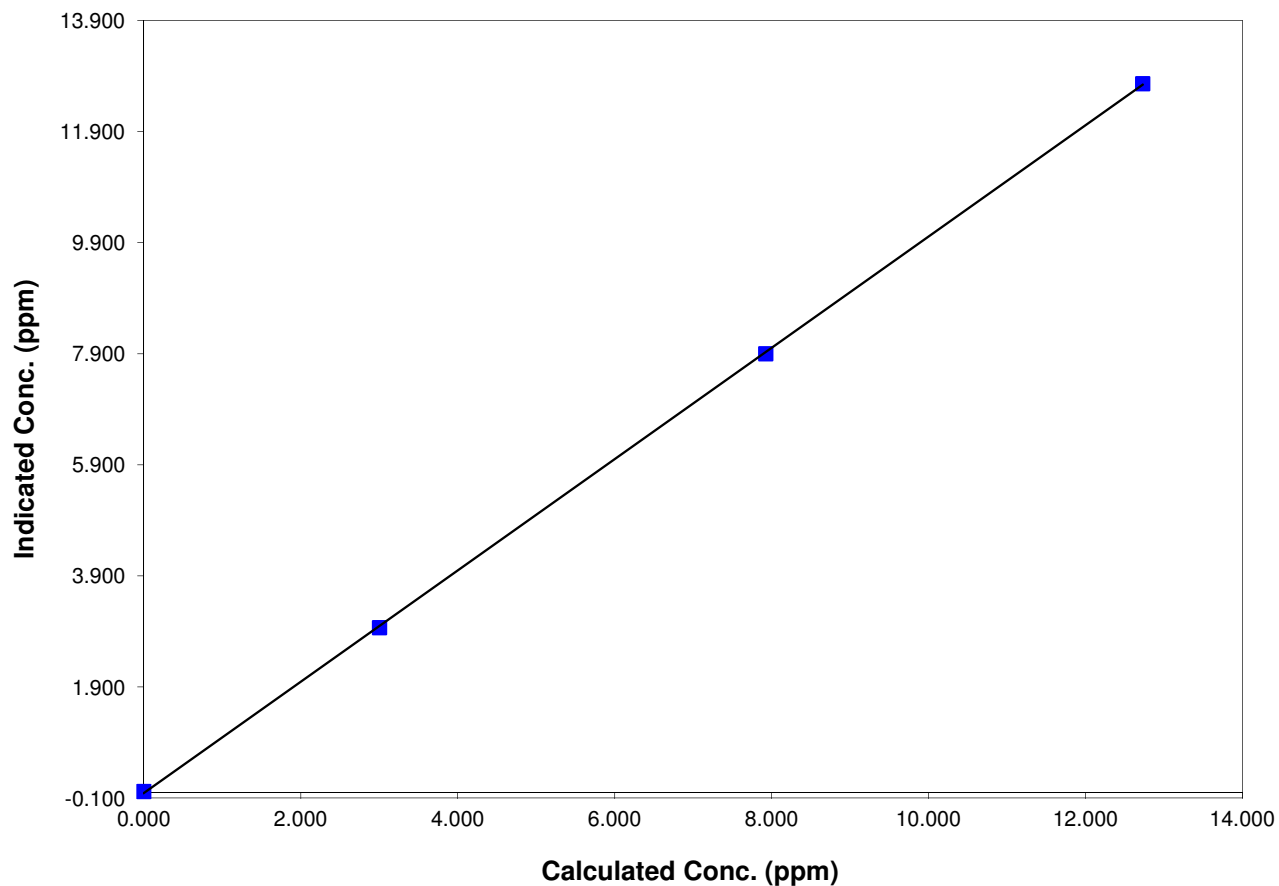
Station Information

Calibration Date	June 18, 2013	Previous Calibration	May 8, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:18	End Time (MST)	14:00
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.019	N/A		
12.728	12.762	0.9973	Correlation Coefficient	0.999968
7.924	7.900	1.0029		
3.003	2.969	1.0118	Slope	0.998127
			Intercept	0.012179

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



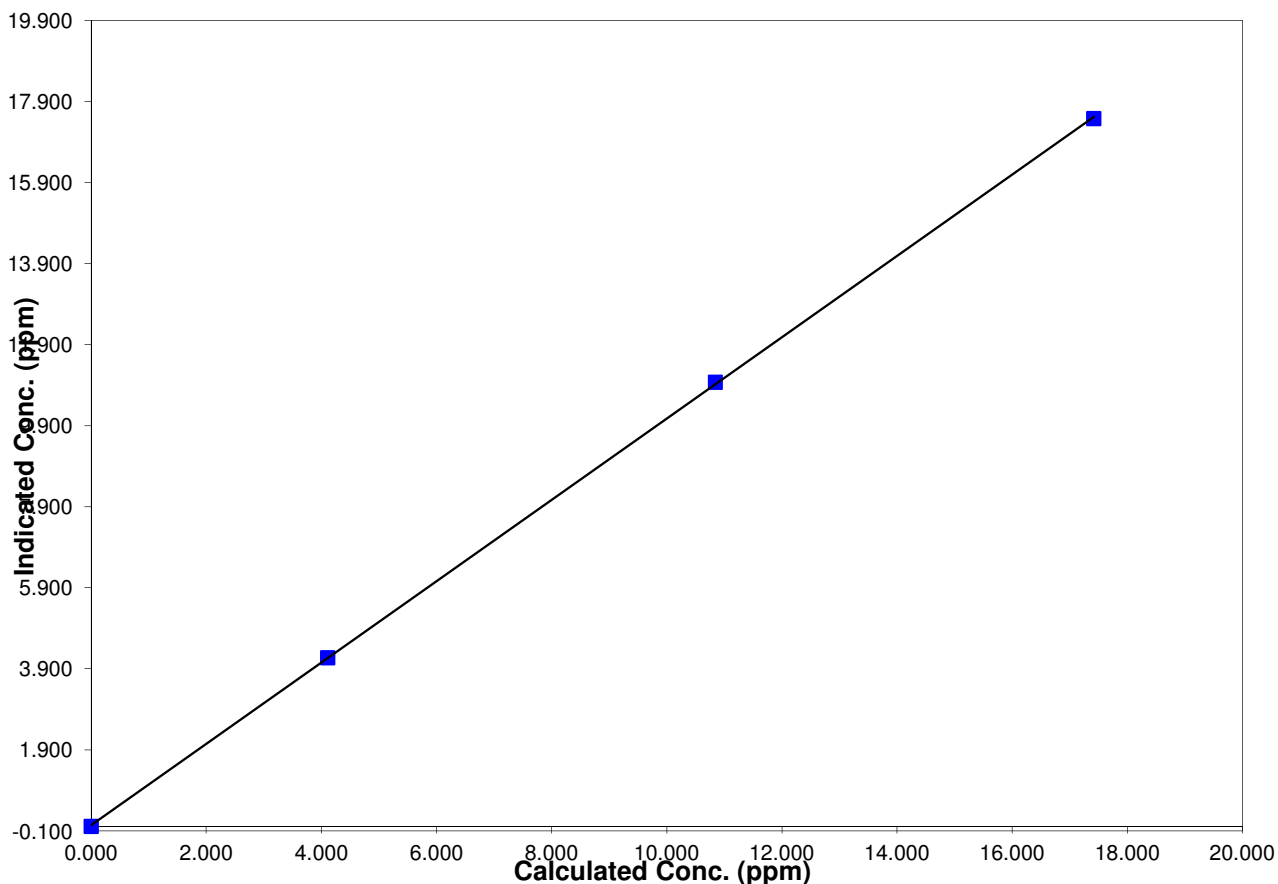
Station Information

Calibration Date	June 18, 2013	Previous Calibration	May 8, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:18	End Time (MST)	14:00
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.019	N/A	Correlation Coefficient	0.999971
17.414	17.480	0.9963		
10.841	10.977	0.9876		
4.109	4.175	0.9843	Slope	0.996721
			Intercept	-0.044516

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



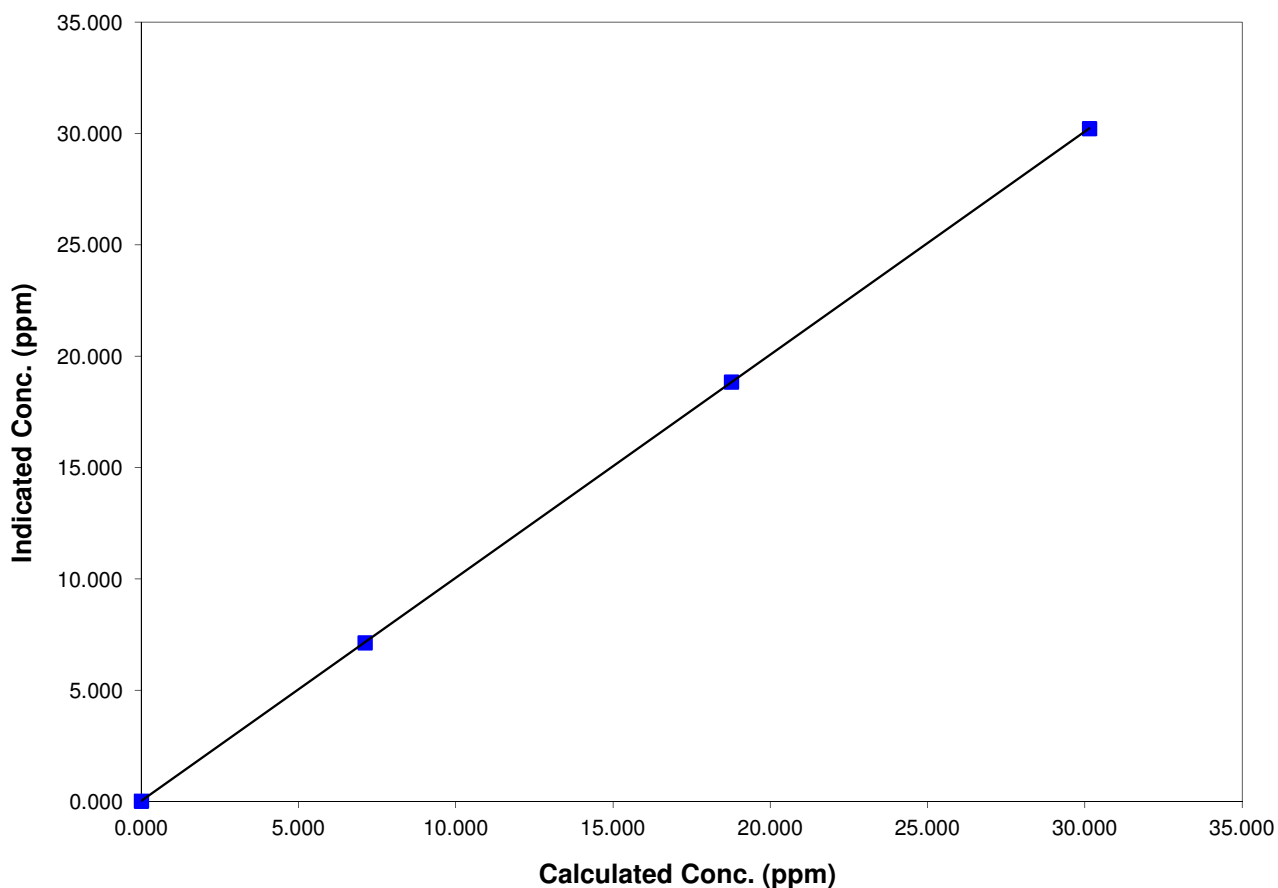
Station Information

Calibration Date	June 18, 2013	Previous Calibration	May 8, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:18	End Time (MST)	14:00
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

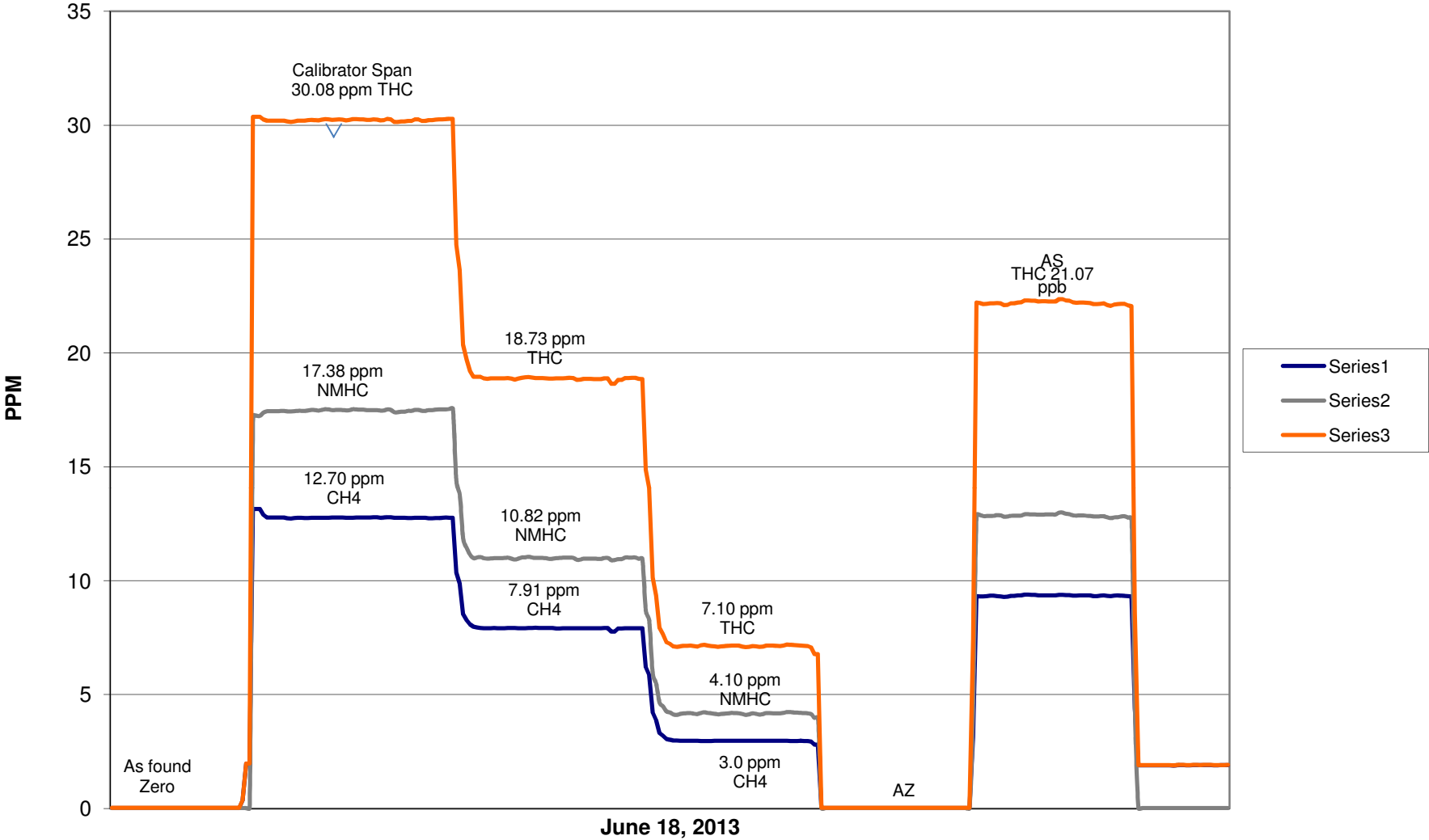
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.032	N/A	Correlation Coefficient	0.999998
30.143	30.222	0.9974		
18.764	18.853	0.9953		
7.113	7.136	0.9968	Slope	0.997933
			Intercept	-0.026676

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter TR5

Air Monitoring Network PAZA



Station Information

Calibration Date	June 18, 2013	Previous Calibration	May 22, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	13:15	End Time (MST)	16:31
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	0.950779	Calculated slope	1.001970
Calculated intercept	0.298647	Calculated intercept	0.119981
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.132		1.093	
Background	11.4		11.0	
Pressure	665.5	mm Hg	666.6	mm Hg
Flow	0.456	ccm	0.456	ccm
Lamp Voltage	824	V	823	V

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)		Correction factor (Cc/lc)
4990	0.00	0.00	-0.02	N/A
4990	39.93	80.18	79.98	1.0025
4990	19.95	40.22	39.87	1.0087
8995	8.94	10.03	9.86	1.0175
4990	0.00	0.00	-0.02	As Found Zero
4990	39.93	80.18	78.33	As Found Span
Average Correction Factor				1.0096

Calculated value of As Found Response: 74.8 ppb Percent Change of As Found: 6.7%

	before calibration		after calibration	
Auto zero	0.56	ppb	0.39	ppb
Auto span	33.10	ppb	32.62	ppb

Notes: Sox scrubber checked with 100 ppb of SO2. Slight span adjust 80% point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



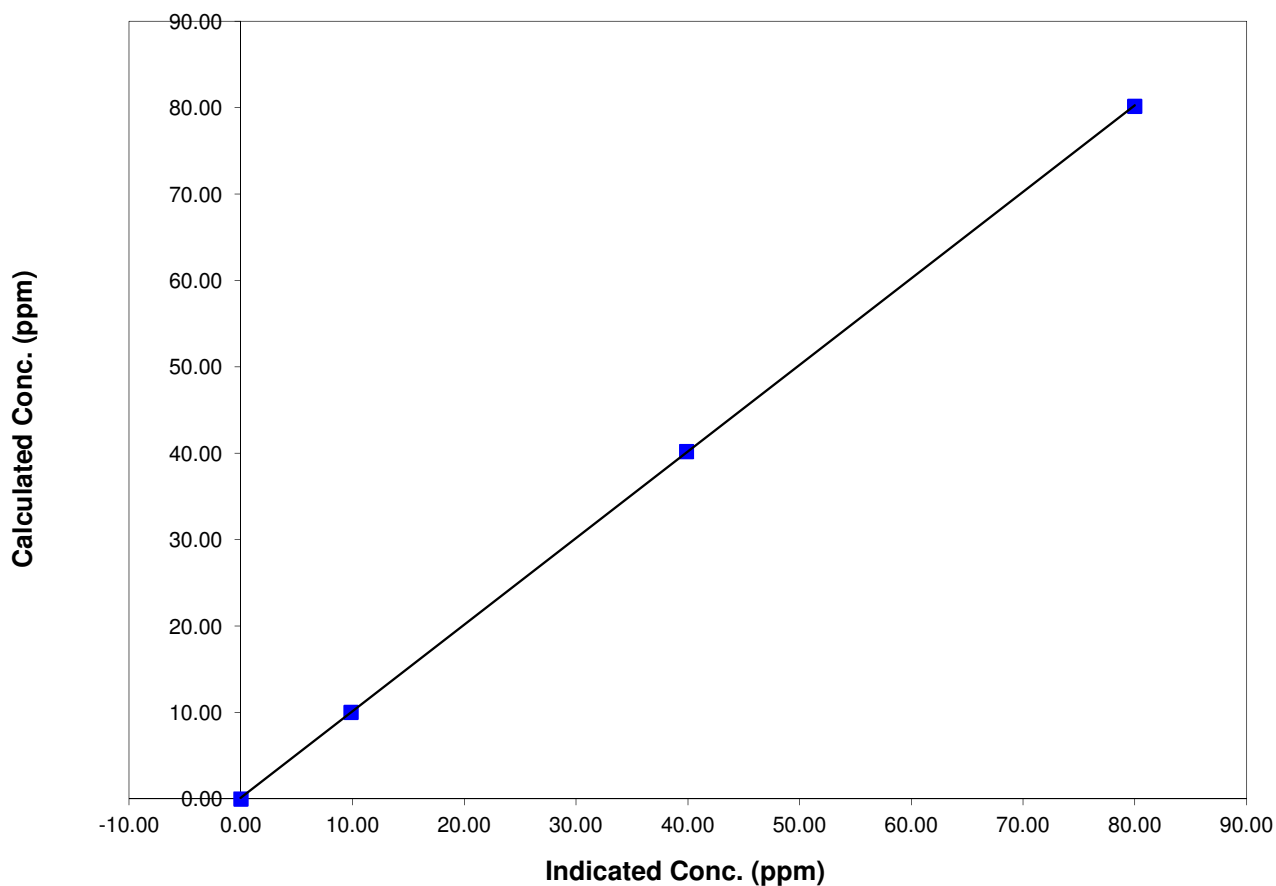
Station Information

Calibration Date	June 18, 2013	Previous Calibration	May 22, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:15	End Time (MST)	16:31
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

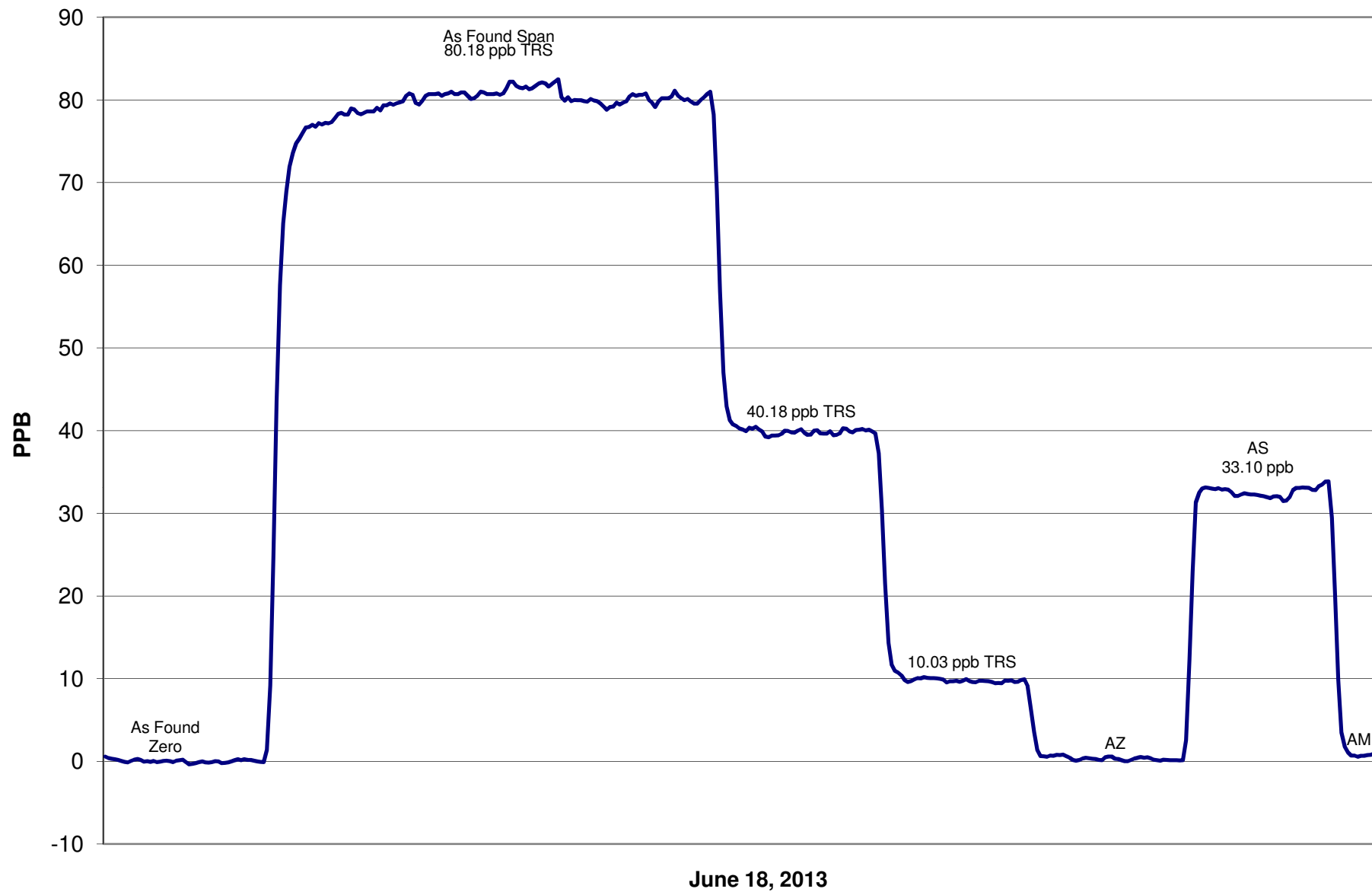
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.016	N/A		
80.179	79.980	1.0025	Correlation Coefficient	0.999990
40.219	39.870	1.0087		
10.028	9.856	1.0175	Slope	1.001970
			Intercept	0.119981

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	June 30 2013	Previous Calibration	May 13 2013
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	10:53	End Time (MST)	14:23
Barometric Pressure	0.921 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	2/25/25
Correction factor	0.031307	Cal Gas Cylinder #	LL105159
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.001111	Calculated slope	0.992294
Calculated intercept	1.184618	Calculated intercept	3.025965
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.5		11.2	
coefficient	1.228		1.194	
Lamp Voltage	824	volts	824	volts
Chamber Temp	45.2	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	672.8	mm Hg	672.6	mm Hg
Sample Flow	0.456	ccm	0.455	ccm
Lamp Intensity	90	%	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	0.1	N/A
4995	39.93	408.4	410.3	0.9955
4995	19.97	205.1	201.4	1.0181
4995	9.97	102.6	97.6	1.0510
4995	0.0	0.0	0.1	As Found Zero
4995	39.93	408.4	417.3	As Found Span
Average Correction Factor				1.0215

Calculated value of As Found Response: 418.810 ppm Percent Change of As Found: -2.5%

	before calibration		after calibration	
Auto zero	-0.1	ppm	0.3	ppm
Auto span	290.3	ppm	277.4	ppm

Notes: Slight span adjust down.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



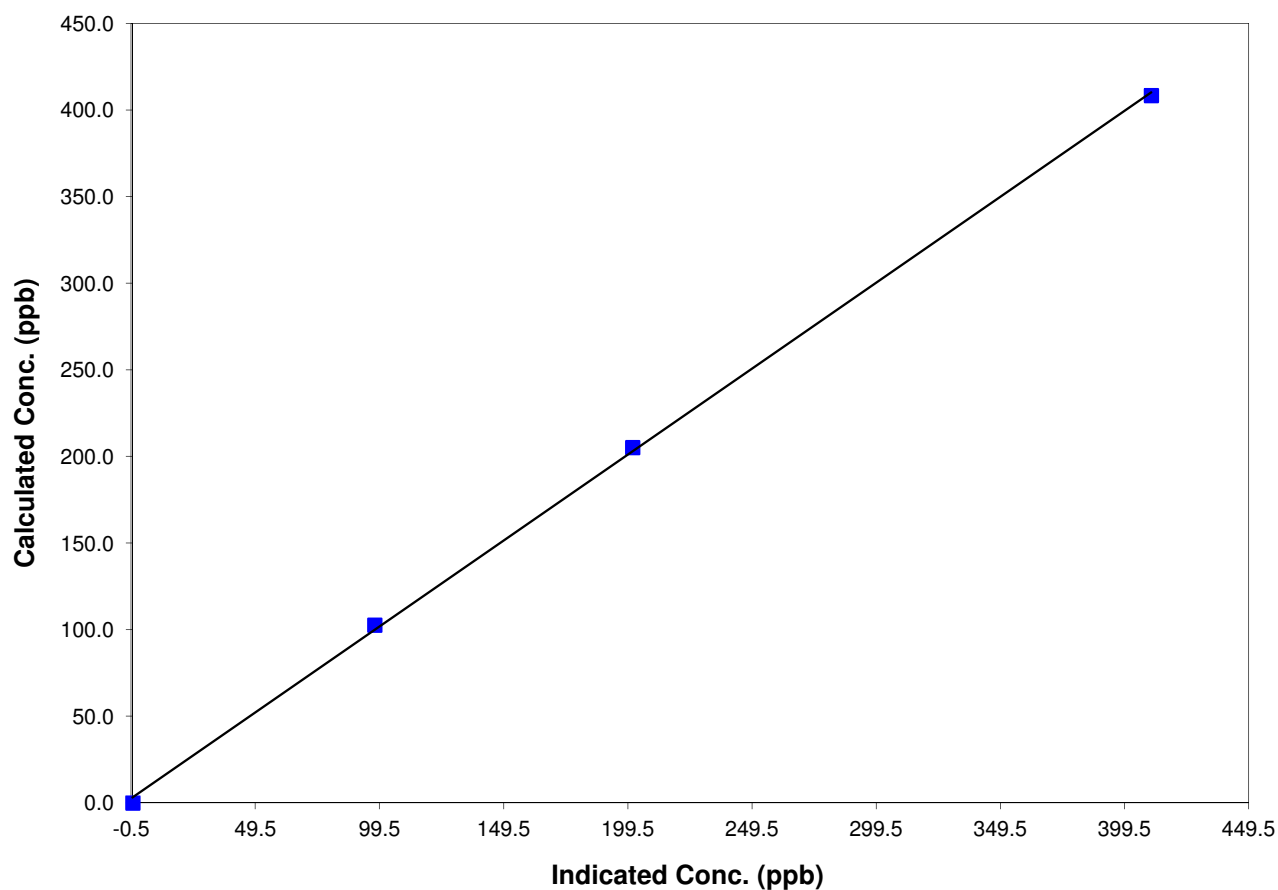
Station Information

Calibration Date	June 30 2013	Previous Calibration	May 13 2013
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:53	End Time (MST)	14:23
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

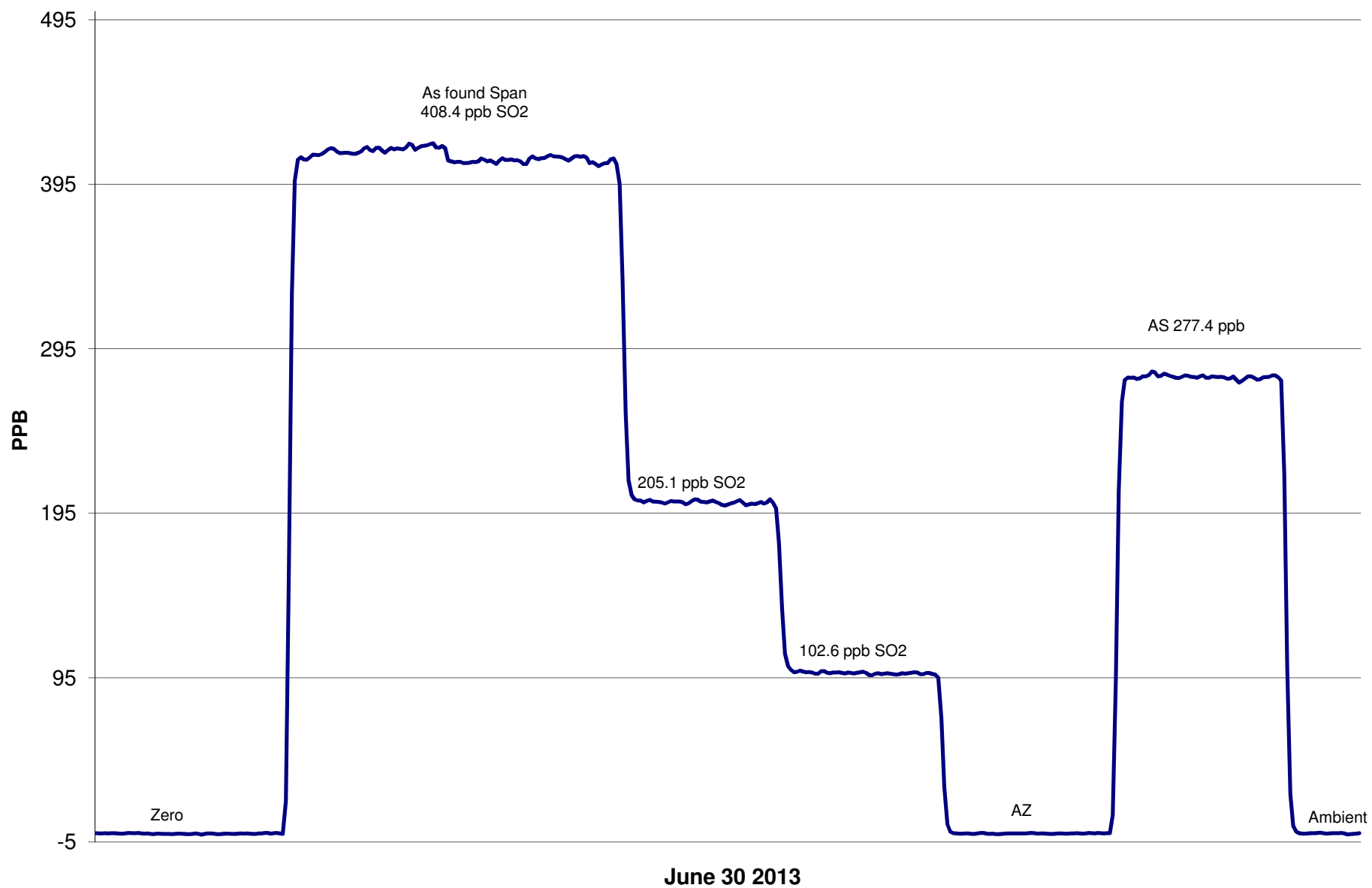
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999727
408.4	410.3	0.9955		
205.1	201.4	1.0181		
102.6	97.6	1.0510	Slope	0.992294
			Intercept	3.025965

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	June 30 2013	Previous Calibration	May 13 2013
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	9:00	End Time (MST)	12:16
Barometric Pressure	0.923 ATM	Station Temperature	22.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Conc	10.1 ppm	Cal Gas Expiry Date	5/11/13
Correction factor	0.031163	Cal Gas Cylinder #	LL160692
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	0.997000	Calculated slope	0.977685
Calculated intercept	0.702462	Calculated intercept	0.379335

Analyzer make	TEI Model 43C	Analyzer serial #	3.199E+13
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	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	36.3	ppb	36.4	ppb
coefficient	1.058		1.058	
Lamp Voltage	1006	volts	1006	volts
Chamber Temp	44.3	Deg C	44.3	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	641	mm Hg	638.1	mm Hg
Sample Flow	0.630	ccm	0.625	ccm
Lamp Intensity	31,946	mv	31,405	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	-0.1	N/A
4995	39.93	80.10	81.7	0.9802
4995	19.96	40.20	40.4	0.9949
8995	8.95	10.04	9.7	1.0309
4995	9.95	102.58	0.6	Sox Test
4995	0.00	0.00	-0.1	As Found Zero
4995	39.95	80.14	81.7	As Found Span
Average Correction Factor				1.0020

Calculated value of As Found Response: 82.27 ppm Percent Change of As Found: **-2.7%**

	before calibration		after calibration	
Auto zero	0.4	ppm	0.6	ppm
Auto span	77.6	ppm	77.2	ppm

Notes: **Slow to settle at 80%. No adjustment made.**

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



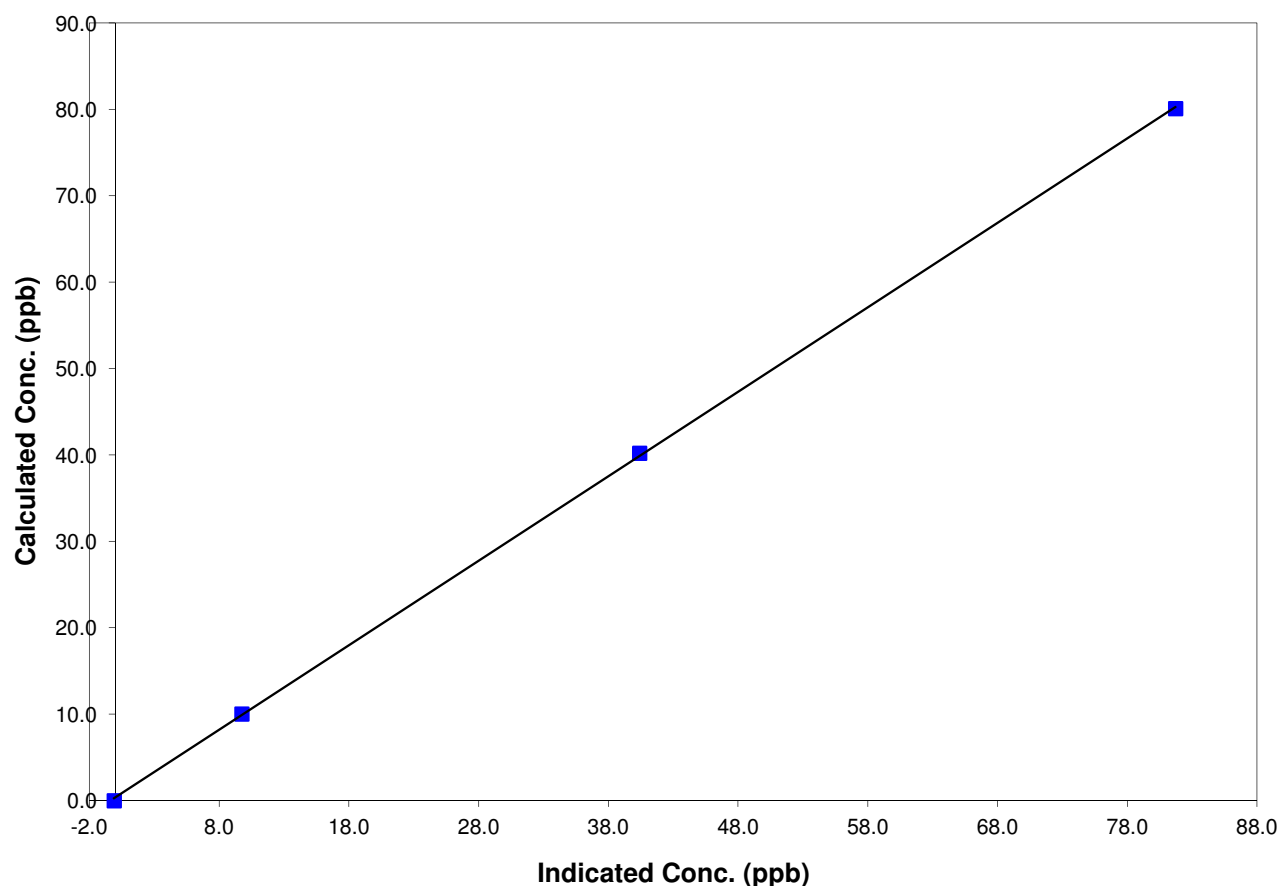
Station Information

Calibration Date	June 30 2013	Previous Calibration	May 13 2013
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:00	End Time (MST)	12:16
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

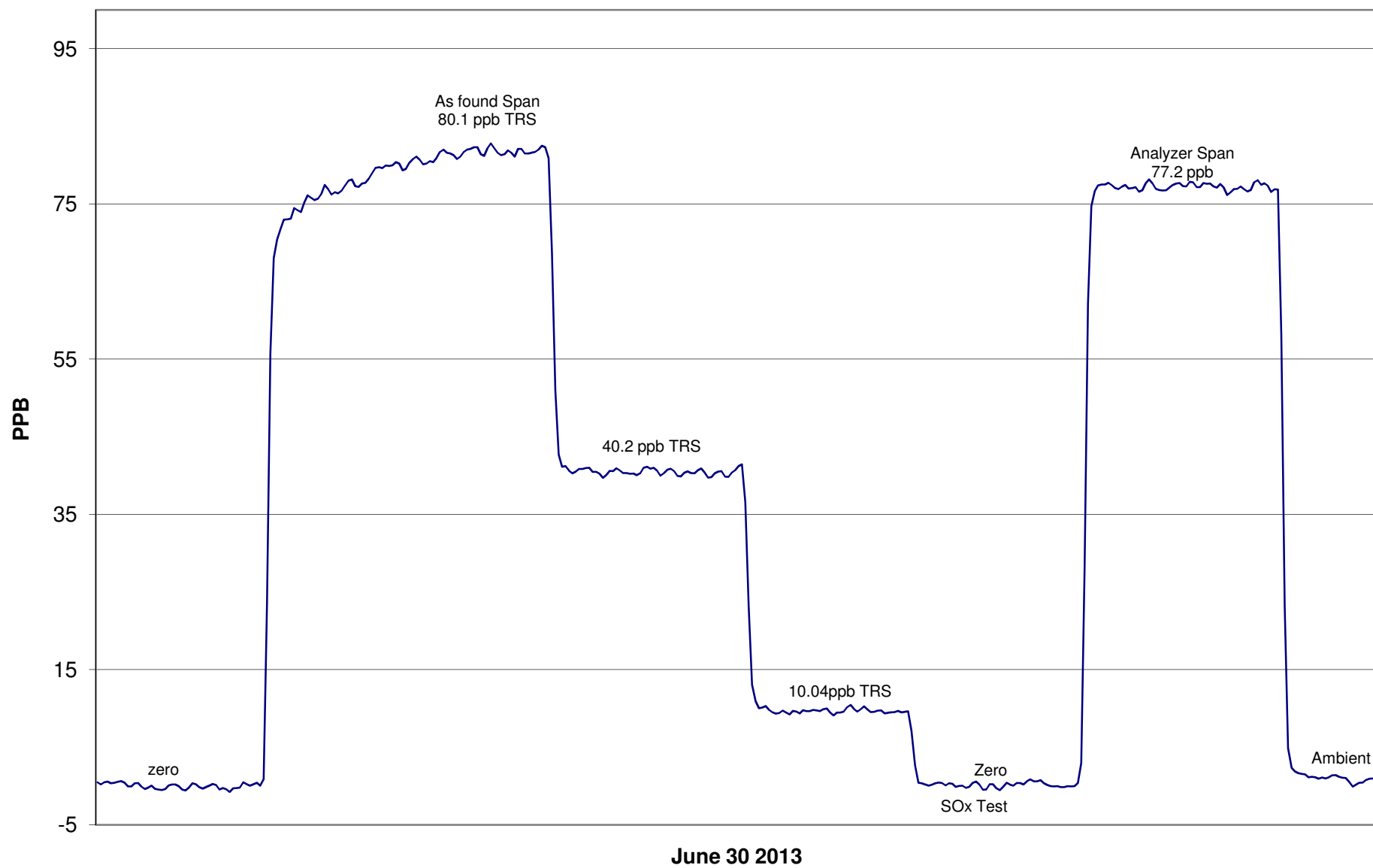
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
80.1	81.7	0.9802	Correlation Coefficient	0.999941
40.2	40.4	0.9949		
10.0	9.7	1.0309	Slope	0.977685
			Intercept	0.379335

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	June 27, 2013	Previous Calibration	May 31, 2013
Station Number	3	Station Location	Smokey Heights
Reason:	☒ Routine	☐ Install	☐ Removal
			Other:
Start Time (MST)	10:15	End Time (MST)	14:17
Barometric Pressure	0.926 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Cert Date	2/25/25
Correction factor	0.031477	Cal Gas Cylinder #	LL105159
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.008662	Calculated slope	0.999527
Calculated intercept	2.976894	Calculated intercept	3.009063
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.1		10.9	
coefficient	0.956		0.937	
Lamp Voltage	919	volts	919	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	669.9	mm Hg	671.7	mm Hg
Sample Flow	0.448	ccm	0.449	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	408.43	407.3	1.0028
4995	19.97	205.08	200.1	1.0250
4995	9.97	102.59	96.9	1.0592
4995	0.0	0.00	0.2	As Found Zero
4995	39.93	408.43	413.8	As Found Span
Average Correction Factor				1.0290

Calculated value of As Found Response: 420.158 ppm Percent Change of As Found: -2.9%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.2	ppb
Auto span	304.5	ppb	253.3	ppb

Notes: Slight span adjust down.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



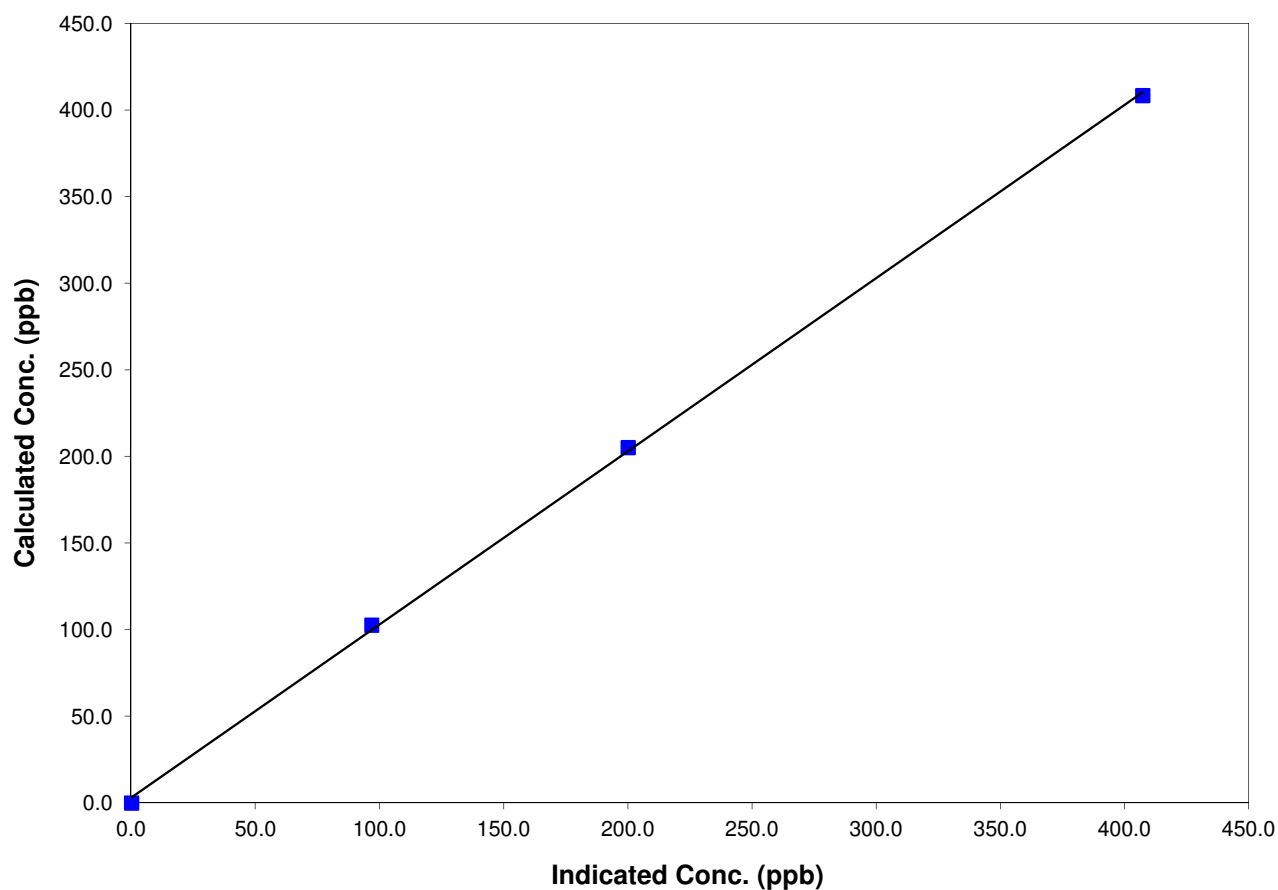
Station Information

Calibration Date	June 27, 2013	Previous Calibration	May 31, 2013
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:15	End Time (MST)	14:17
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

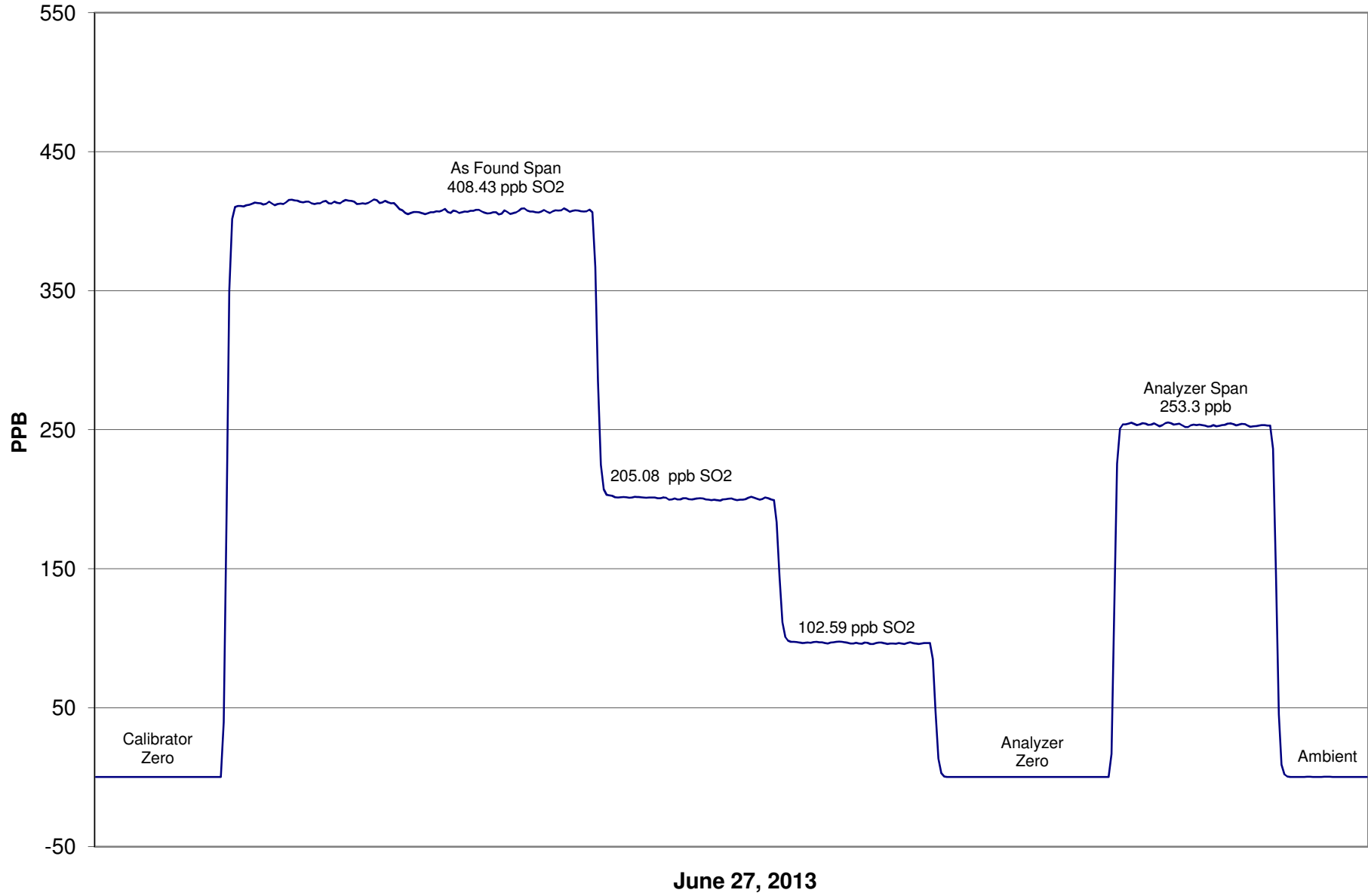
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999726
408.4	407.3	1.0028		
205.1	200.1	1.0250		
102.6	96.9	1.0592	Slope	0.999527
			Intercept	3.009063

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	June 27, 2013	Previous Calibration	May 31, 2013
Station Number	3	Station Location	Smokey Heights
Reason:	☐ Routine	☐ Install	☐ Removal
		☒ Other:	Maintenance

Start Time (MST)	8:25	End Time (MST)	11:47
Barometric Pressure	0.926 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	0.031477	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	0.972513	Calculated slope	0.967888
Calculated intercept	1.380177	Calculated intercept	1.165317

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005
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	before		after	
Concentration range	100	ppb	100	ppb
Background	18.5	ppb	17.7	ppb
coefficient	0.983		0.983	
Lamp Voltage	813	volts	813	volts
Chamber Temp	43.5	Deg C	43.5	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	603.2	mm Hg	587.1	mm Hg
Sample Flow	0.647	ccm	0.633	ccm
Lamp Intensity	35,376	mv	35,167	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	0.1	N/A
4995	39.94	80.12	82.3	0.9732
4995	19.97	40.22	38.9	1.0341
8995	8.96	10.05	8.5	1.1778
4995	0.0	0.00	0.1	As Found Zero
4995	39.94	80.12	82.3	As Found Span
Average Correction Factor				1.0617

Calculated value of As Found Response: 81.30 ppm Percent Change of As Found: **-1.5%**

	before calibration		after calibration	
Auto zero	0.0	ppm	1.4	ppm
Auto span	52.9	ppm	32.6	ppm

Notes: Slight zero adjust, no span adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



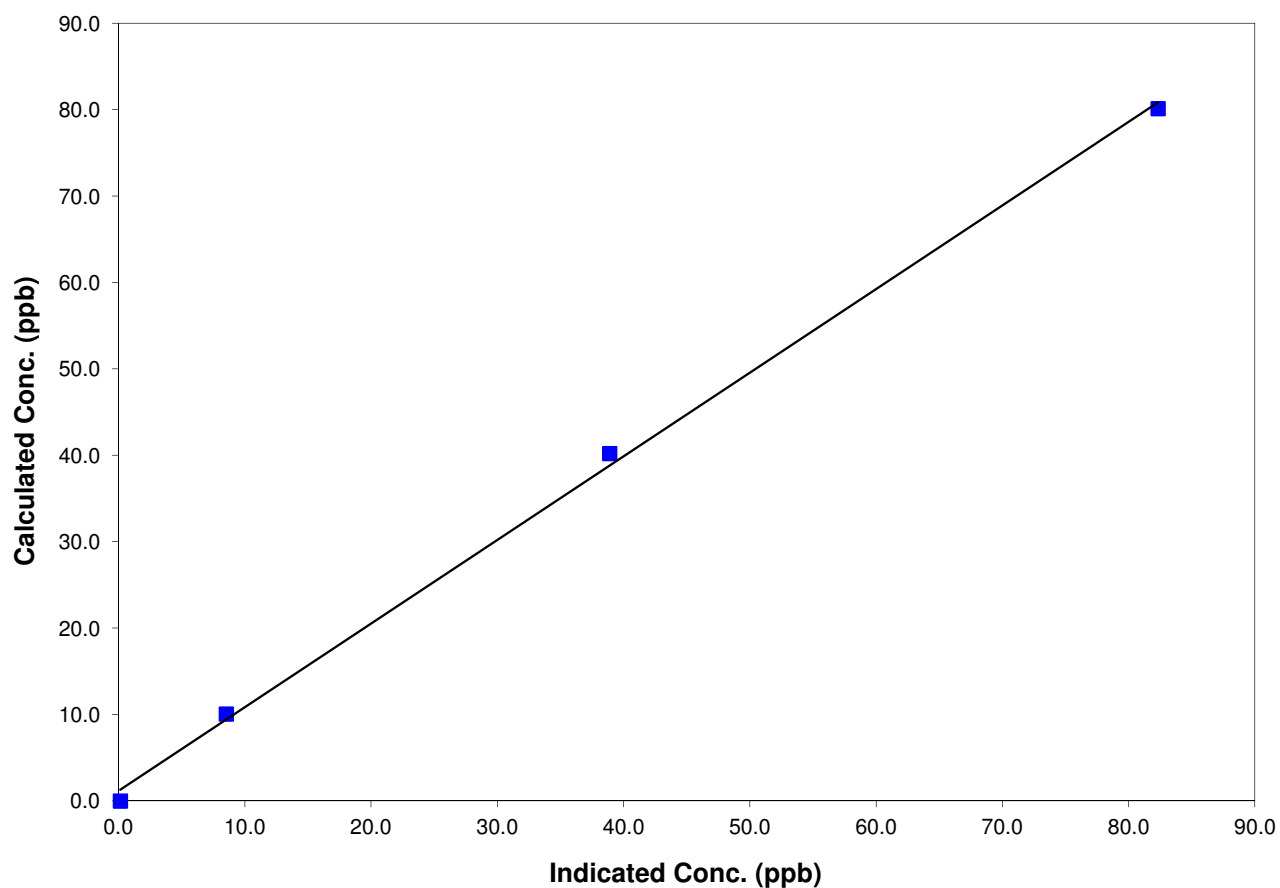
Station Information

Calibration Date	June 27, 2013	Previous Calibration	May 31, 2013
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	8:25	End Time (MST)	11:47
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

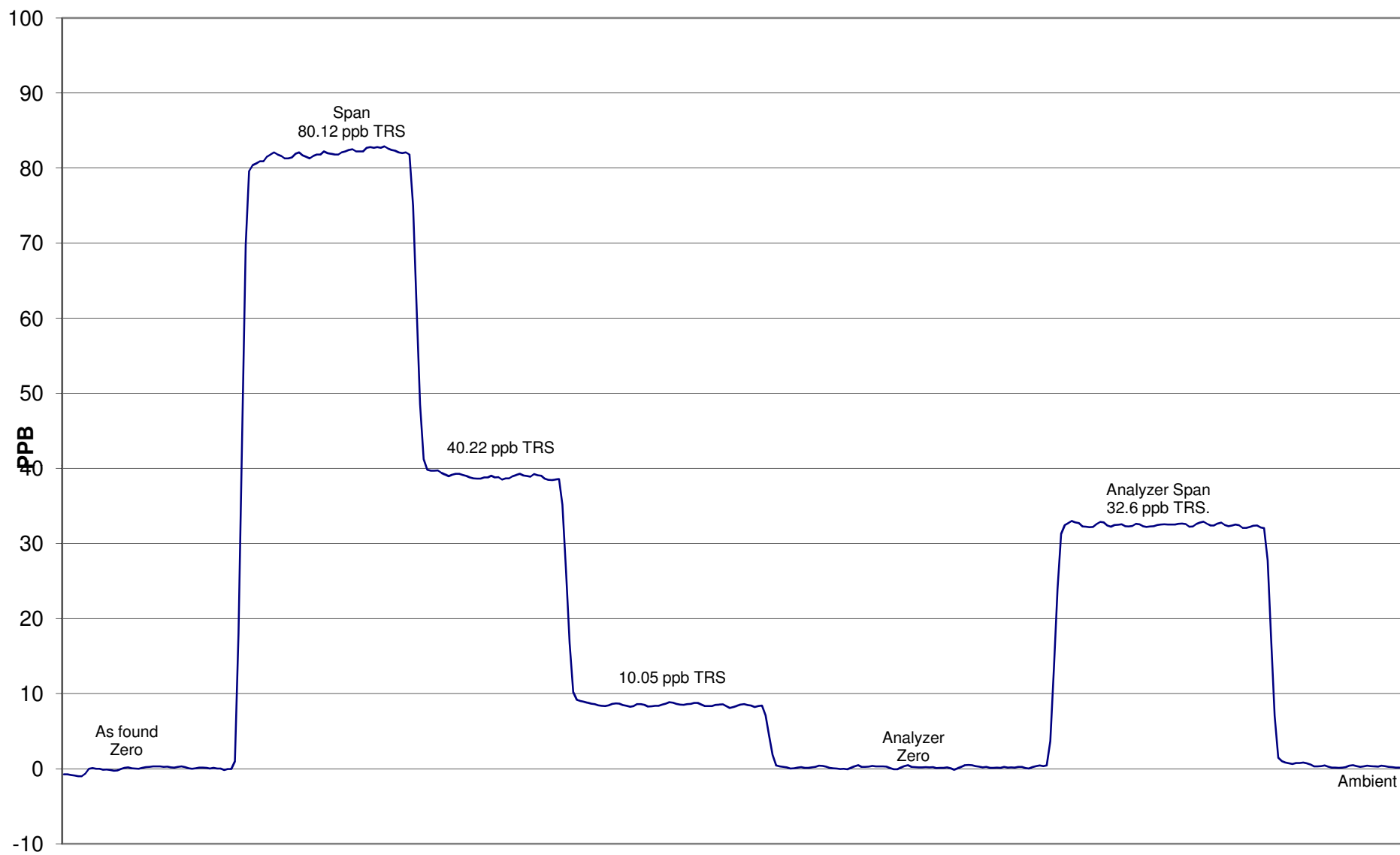
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.998811
80.1	82.3	0.9732		
40.2	38.9	1.0341		
10.1	8.5	1.1778	Slope	0.967888
			Intercept	1.165317

TRS Calibration Curve



Smokey Heights TRS Calibration



June 27, 2013

Calibration Report

Parameter SO2
Air Monitoring Network PAZA



Station Information

Calibration Date	June 19, 2013	Previous Calibration	May 24, 2013
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
Start Time (MST)	16:11	End Time (MST)	18:51
Barometric Pressure	0.923 atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	2844
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
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.997750	Calculated slope	0.980894
Calculated intercept	-0.112088	Calculated intercept	-0.400277
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.41		2.41	
Coefficient	1.071		1.071	
PMT	-767.6	V	-768.1	V
UV Lamp Voltage	1063	V	1052	V
Chamber Temp	45.2	Deg C	45	Deg C
Pressure	666.4	mm Hg	665.8	mm Hg
Sample Flow	0.485	LPM	0.485	LPM
Lamp Intesity	97%	%	98%	%

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	0.3	N/A
4995	40.10	86.0	87.9	0.9781
4995	20.00	43.1	44.7	0.9646
4995	9.97	21.5	22.3	0.9642
4995	0.00	0.0	0.3	As found zero
4995	40.10	86.0	87.9	As found span
Average Correction Factor				0.9690

Calculated value of As Found Response: 87.360 ppm Percent Change of As Found: -1.6%

	before calibration		after calibration	
Auto zero	0.2	ppb	-0.1	ppb
Auto span	60.0	ppb	59.1	ppb

Notes: No adjustments made.

Calibration Performed By: Gagandeep Singh

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



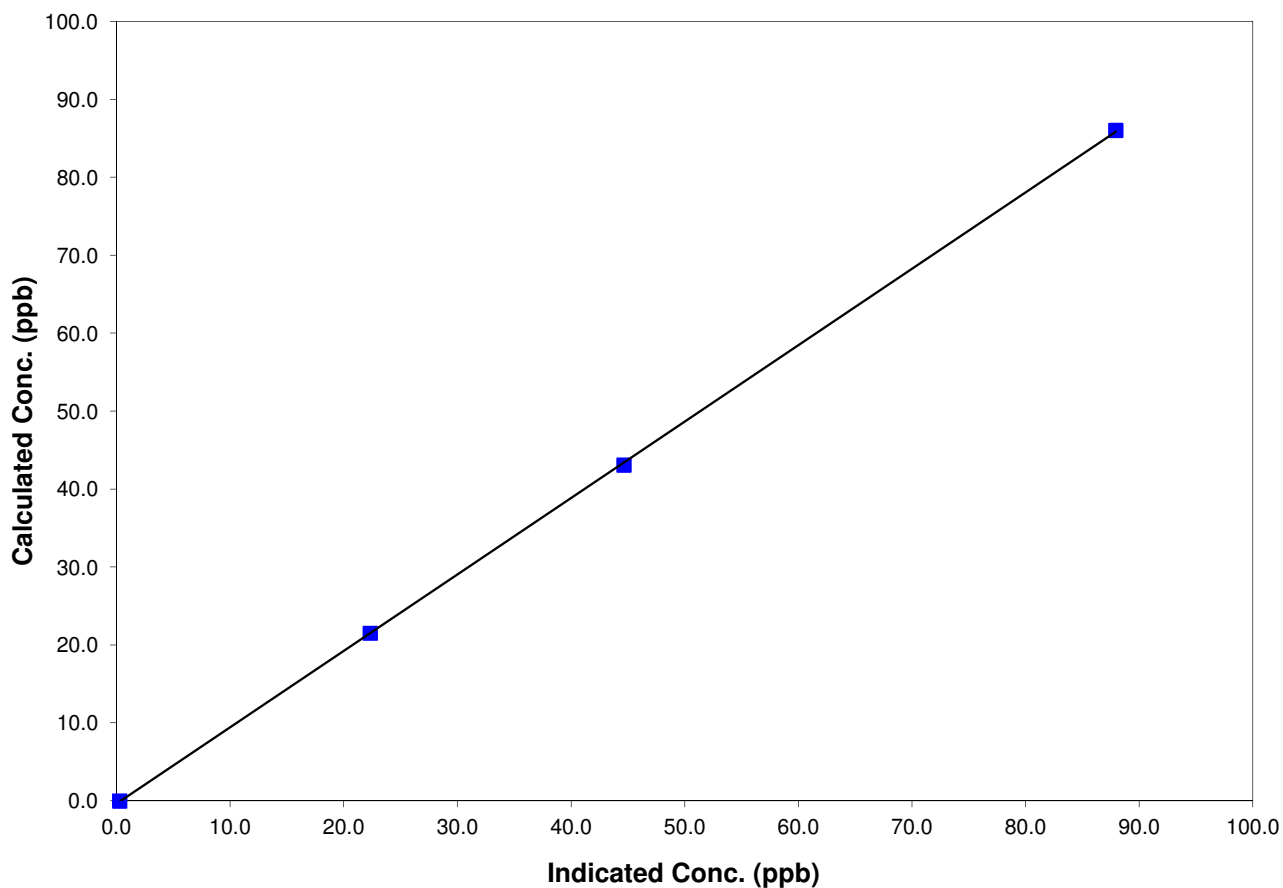
Station Information

Calibration Date	June 19, 2013	Previous Calibration	May 24, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	16:11	End Time (MST)	18:51
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

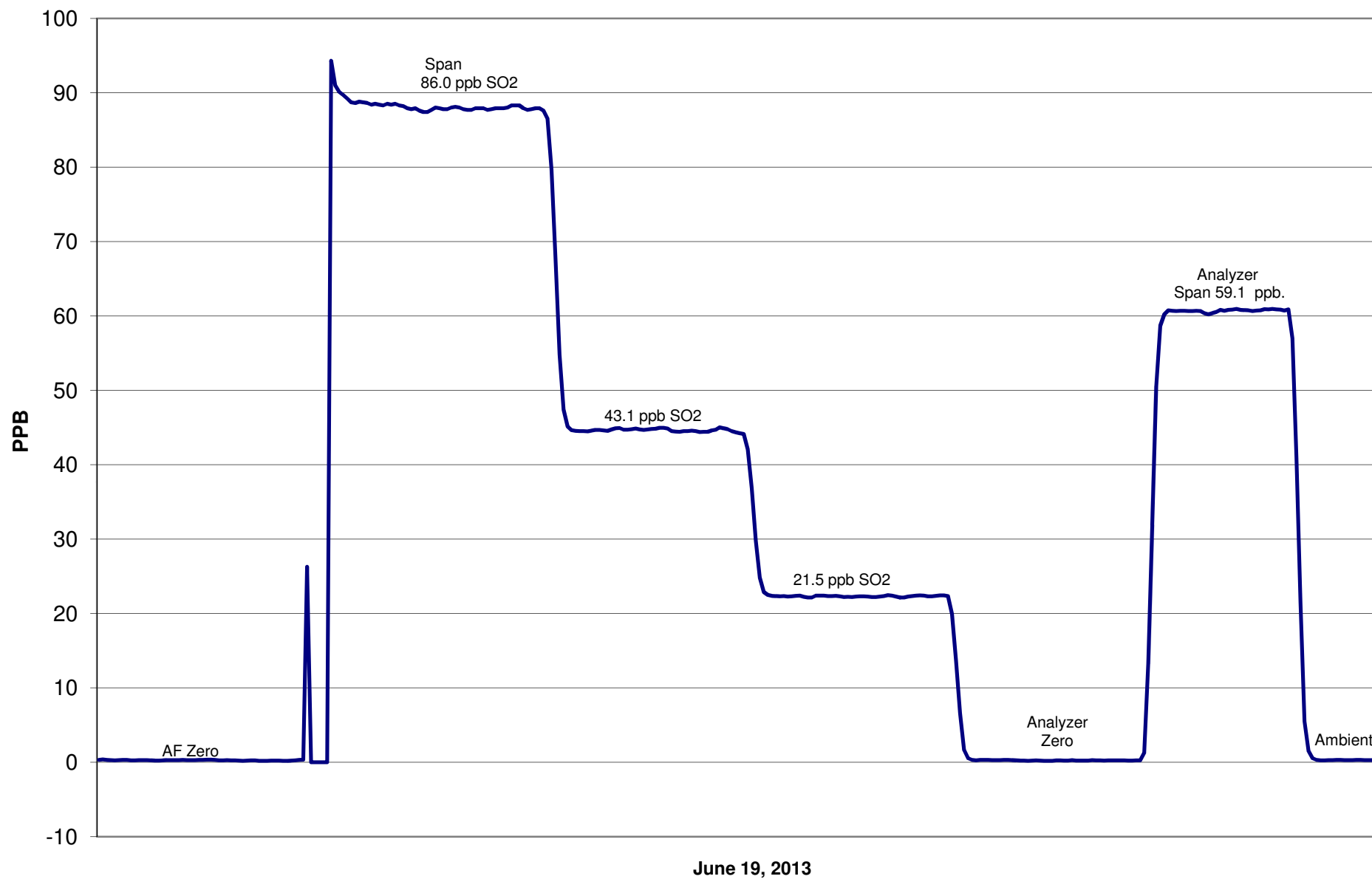
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999962
86.0	87.9	0.9781		
43.1	44.7	0.9646		
21.5	22.3	0.9642	Slope	0.980894
			Intercept	-0.400277

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	June 19, 2013	Previous Calibration	May 23, 2013
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Installation	Removal
Start Time (MST)	9:52	End Time (MST)	15:00
Barometric Pressure	0.923	Atm	Station Temperature
Calibrator	EnviroNics 6103	Serial Number	2844
NO Cal Gas Conc	51.3	ppm	Cal Gas Expiry Date
NO _x Cal Gas Conc	51.4	ppm	Cal Gas Serial #
			February 25, 2021
			LL105159

DACS Information

DACS make	CR3000	DACS serial No.	5237
Parameter	NO ₂	NO _x	NO
Before	Data Slope	1.003865	1.001061
	Data Offset	-0.335700	1.272457
After	Data Slope	0.993570	0.997193
	Data Offset	-1.156819	0.426349
Channel #	8	6	7
Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	906535068
Test Point	before	after	
Concentration range	0-500	ppb	0-500
NO offset	1.7	mV	1.9
NO _x bkgnd	2.1	mV	2.2
NO coefficient	1.208		1.104
NO _x coefficient	1.003		1.003
NO ₂ conv temp	326.0	Deg C	324.4
PMT Temp	-2.8	Deg C	-2.7
PMT Volt	-671.9	mV	-696.6
R Cell Press	200.0	in Hg	162.1
Sample Flow	0.864	LPM	0.826

Notes: As found point low @ about 373 ppb. Adjusted the span up by about 9%.

Calibration Report

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



Station Information

Calibration Date: June 19, 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	0.3	0.0	0.3	N/A	N/A
1	4995	40.30	411.4	410.6	0.8	412.1	409.8	1.5	0.9984	1.0019
2	4995	20.30	208.0	207.6	0.4	209.1	207.4	0.9	0.9948	1.0012
3	4995	10.30	105.8	105.6	0.2	104.0	103.3	0.5	1.0171	1.0217
AFZ	4995	0.00	0.0	0.0	0.0	0.3	0.0	0.3	0.0000	0.0000
AFS	4995	40.30	411.4	410.6	0.8	373.7	372.6	0.2	1.1010	1.1020
Average Correction Factor									1.0034	1.0083

As Found Concentrations: NO_x= 374.6 NO= 374.2 As Found Percent Change NO_x= -8.9% NO= -8.9%

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	0.0	0.0	0.0	0.3	0.0	0.3	N/A	N/A	N/A	N/A
NO point	409.4	409.4	0.0	411.4	409.4	1.2	0.9951	1.0000	N/A	N/A
300	409.4	109.1	300.3	412.5	109.1	302.8	0.9925	1.0000	0.9916	100.8%
200	409.4	188.2	221.2	412.9	188.2	223.8	0.9915	1.0000	0.9883	101.2%
100	409.4	292.5	116.8	413.3	292.5	120.2	0.9905	1.0000	0.9723	102.8%
Average Correction Factor							0.9915	1.0000	0.9841	101.6%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	-0.1	0.0	ppb	0.0	0.0	-0.1	ppb
Auto span	204.2	202.7	1.0	ppb	191.3	189.7	1.0	ppb

Calibration Performed By: Gagandeep Singh

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



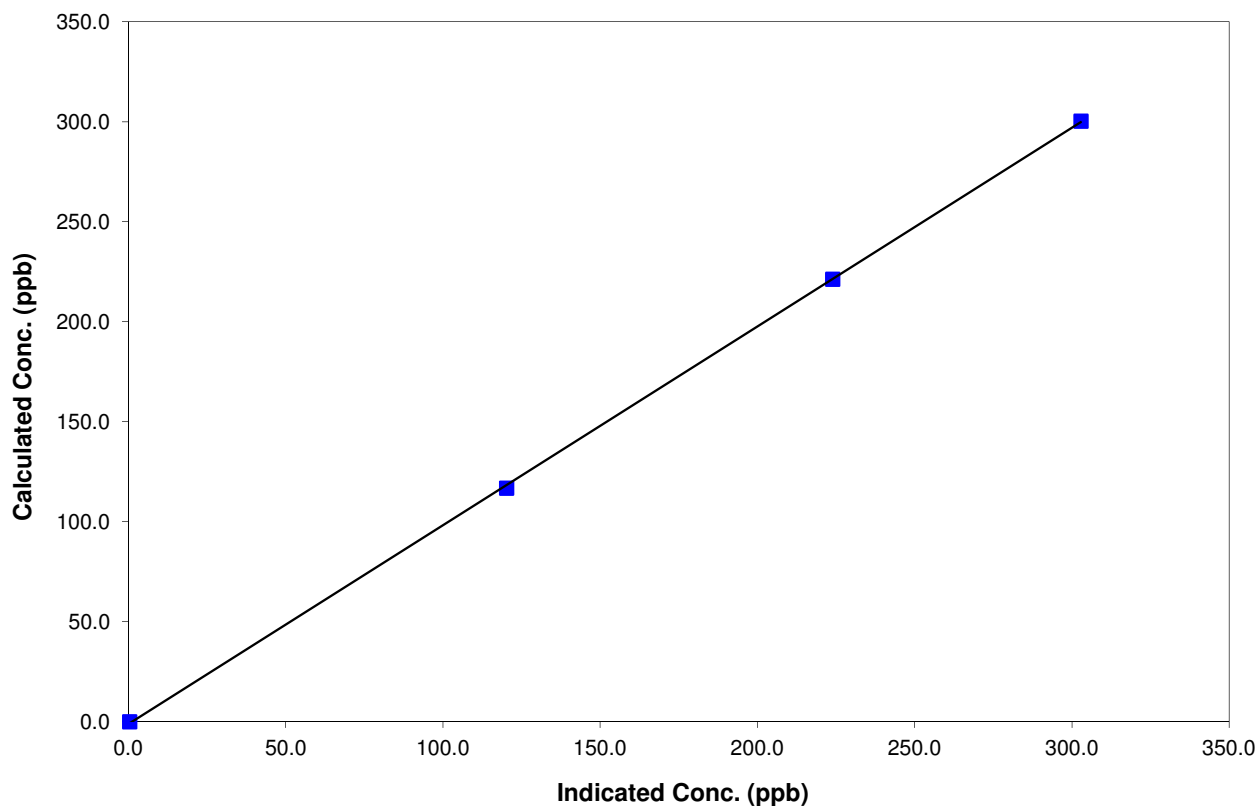
Station Information

Calibration Date	June 19, 2013	Previous Calibration	May 23, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:52	End Time (MST)	15:00
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999941
300.3	302.8	0.9916		
221.2	223.8	0.9883		
116.8	120.2	0.9723	Slope	0.993570
			Intercept	-1.156819

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



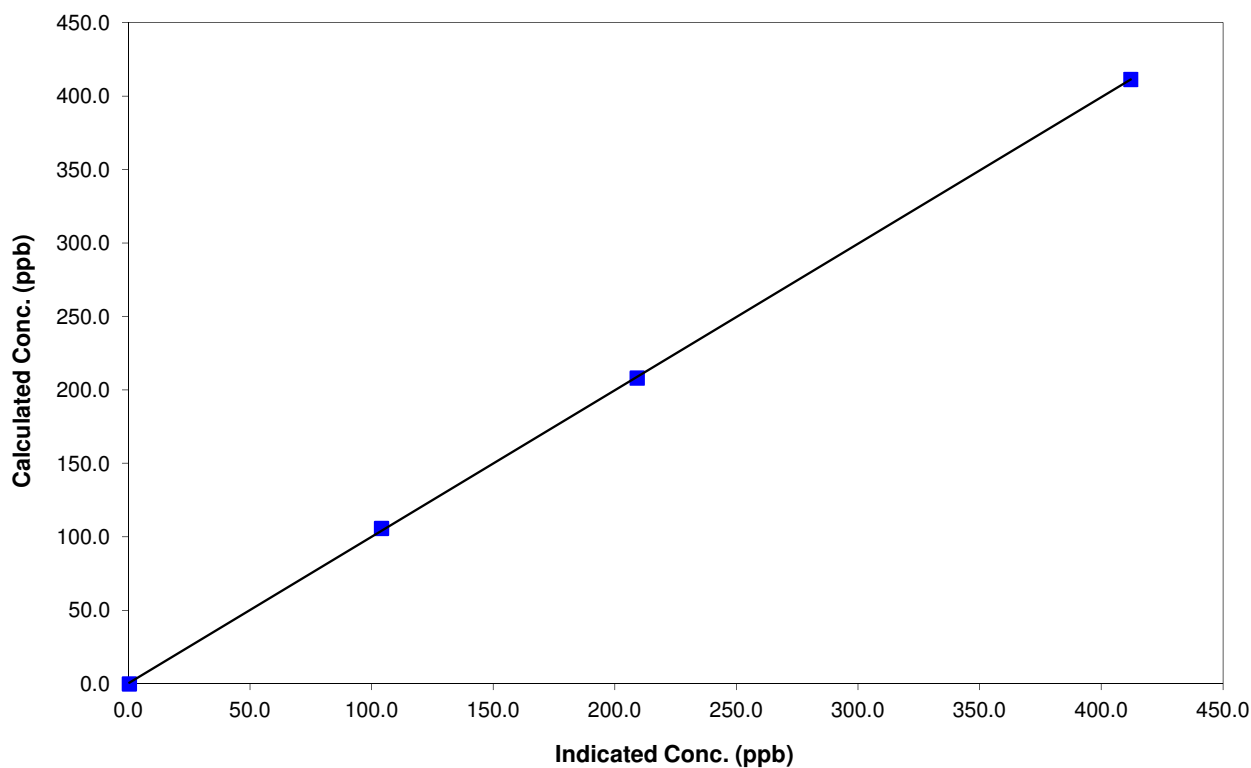
Station Information

Calibration Date	June 19, 2013	Previous Calibration	May 23, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:52	End Time (MST)	15:00
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999955
411.4	412.1	0.9984		
208.0	209.1	0.9948		
105.8	104.0	1.0171	Slope	0.997193
			Intercept	0.426349

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



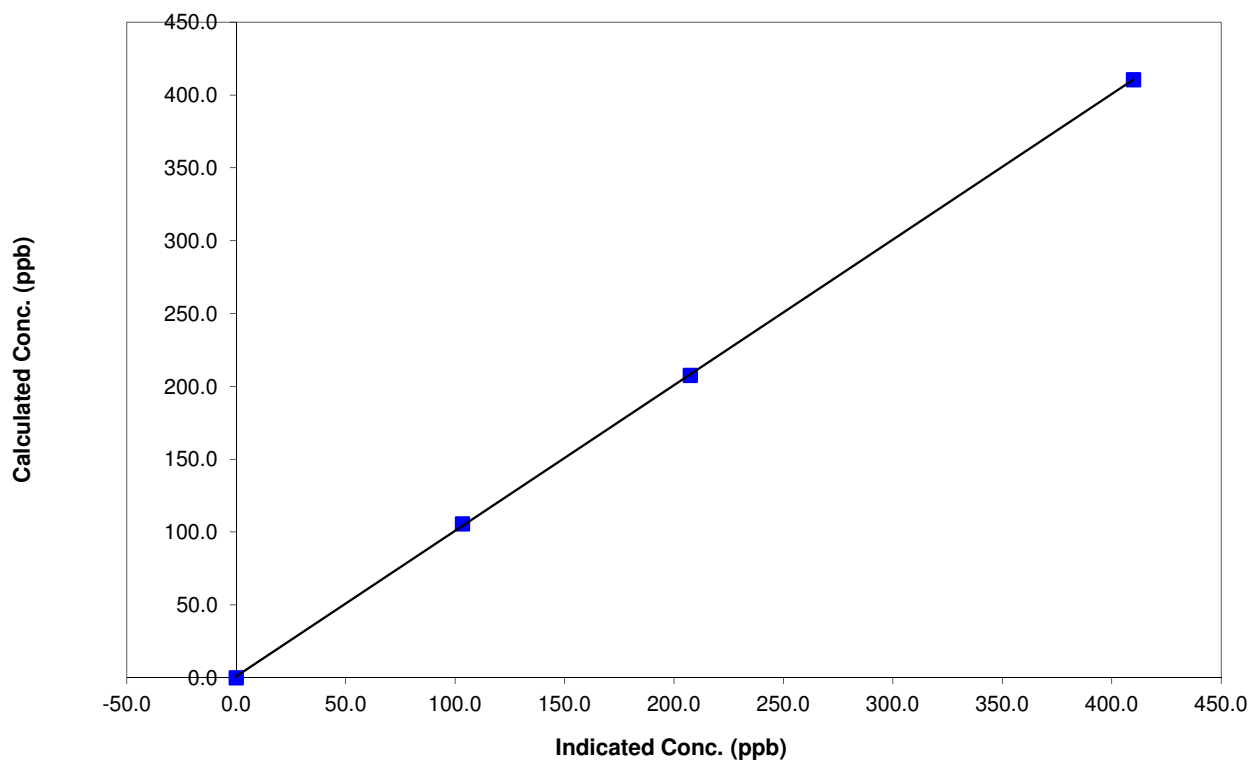
Station Information

Calibration Date	June 19, 2013	Previous Calibration	May 23, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:52	End Time (MST)	15:00
Analyzer make	TEI 42i	Analyzer serial #	906535068

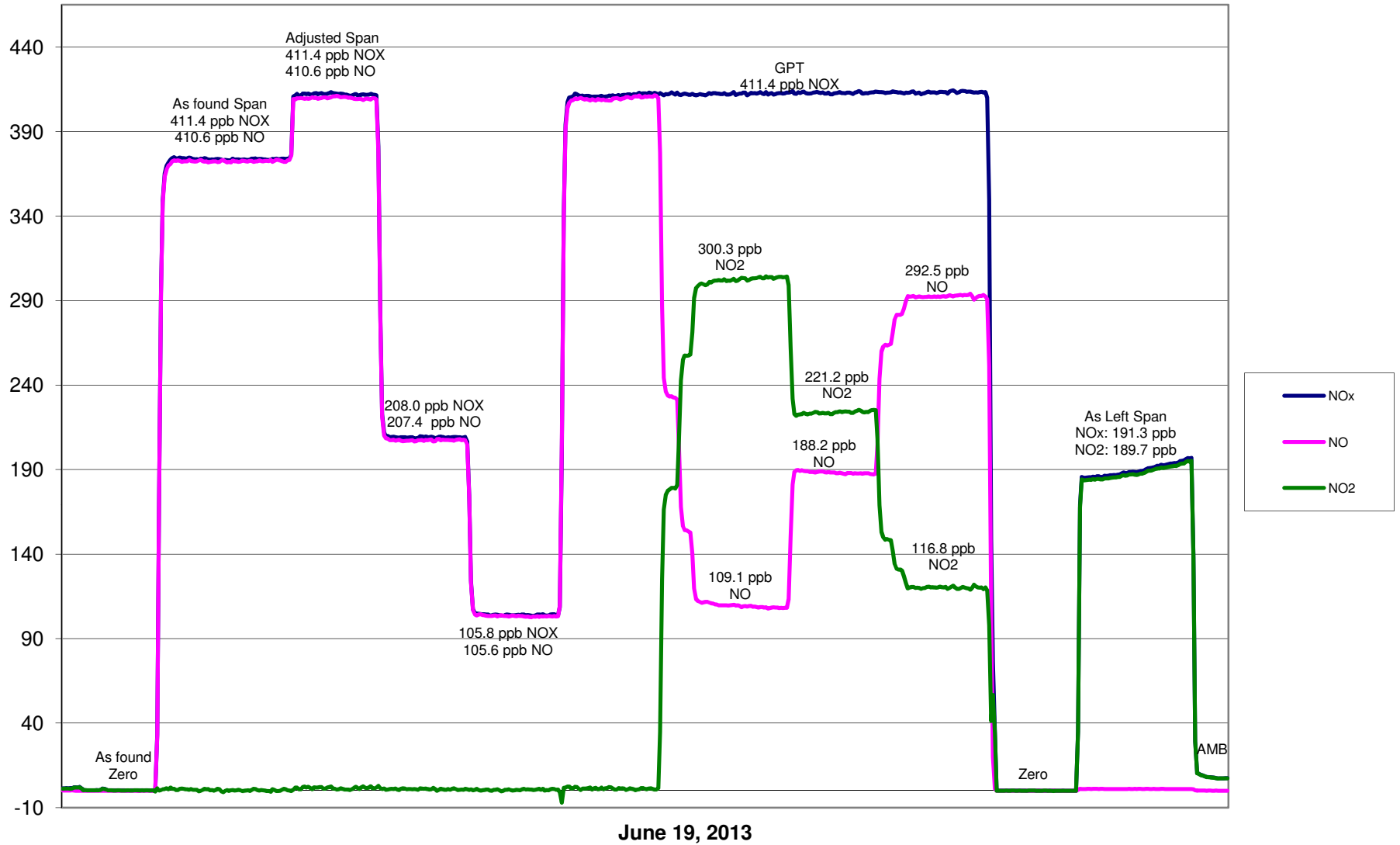
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999968
410.6	409.8	1.0019		
207.6	207.4	1.0012		
105.6	103.3	1.0217	Slope	1.000028
			Intercept	0.824439

NO Calibration Curve



PAZA Beaverlodge NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	June 19, 2013	Previous Calibration	May 24, 2013
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	13:58	End Time (MST)	18:38
Barometric Pressure	0.924 atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6103	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	0.978202	Calculated slope	0.989860
Calculated intercept	0.589784	Calculated intercept	-1.133346

Analyzer make	Teco 49i	Analyzer serial #	1136451236
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.00	ppb	-1.00	ppb
slope	1.027		1.033	
Lamp temp	54	mV	53.8	mV
Lamp Intensity A/B	87008/91303	mV	82190/86491	mV
Pressure	685.4	mm Hg	682.7	mm Hg
Flow A	0.742	LPM	0.74	LPM
Flow B	0.747	LPM	0.745	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)
5035	0.0	0.0	1.0	N/A
5035	0.0	300.3	304.3	0.9868
5035	0.0	221.2	224.8	0.9839
5035	0.0	116.8	119.3	0.9793
5035	0.0	0.0	1.0	As found zero
5035	0.0	300.3	298.3	As found span
Average Correction Factor				0.9833

Calculated value of As Found Response: 291.4 ppm Percent Change of As Found: -3.0%

	before calibration		after calibration	
Auto zero	1.2	ppb	-1.0	ppb
Auto span	274.5	ppb	267.7	ppb

Notes: Adjusted span.

Calibration Performed By: Gagandeep Singh

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



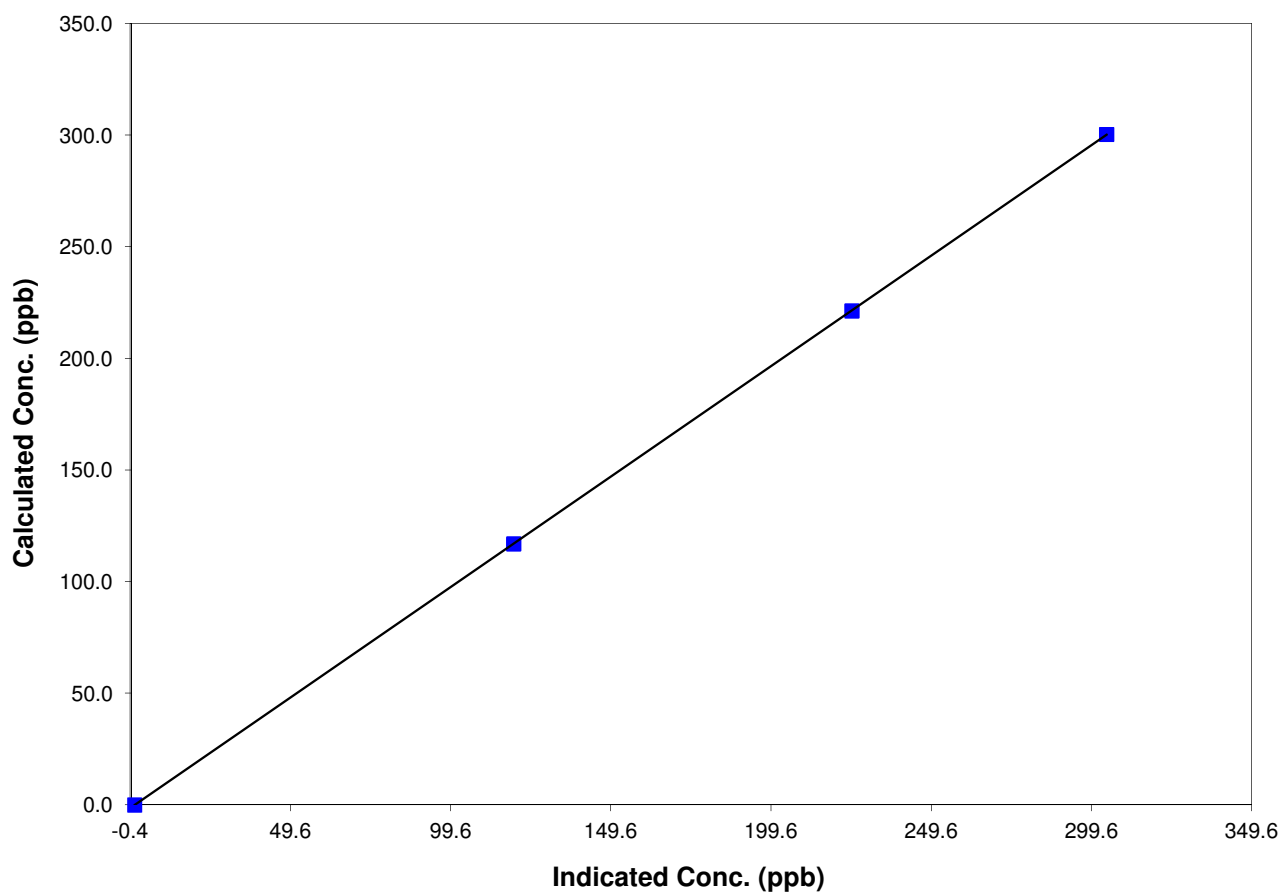
Station Information

Calibration Date	June 19, 2013	Previous Calibration	May 24, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:58	End Time (MST)	18:38
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236

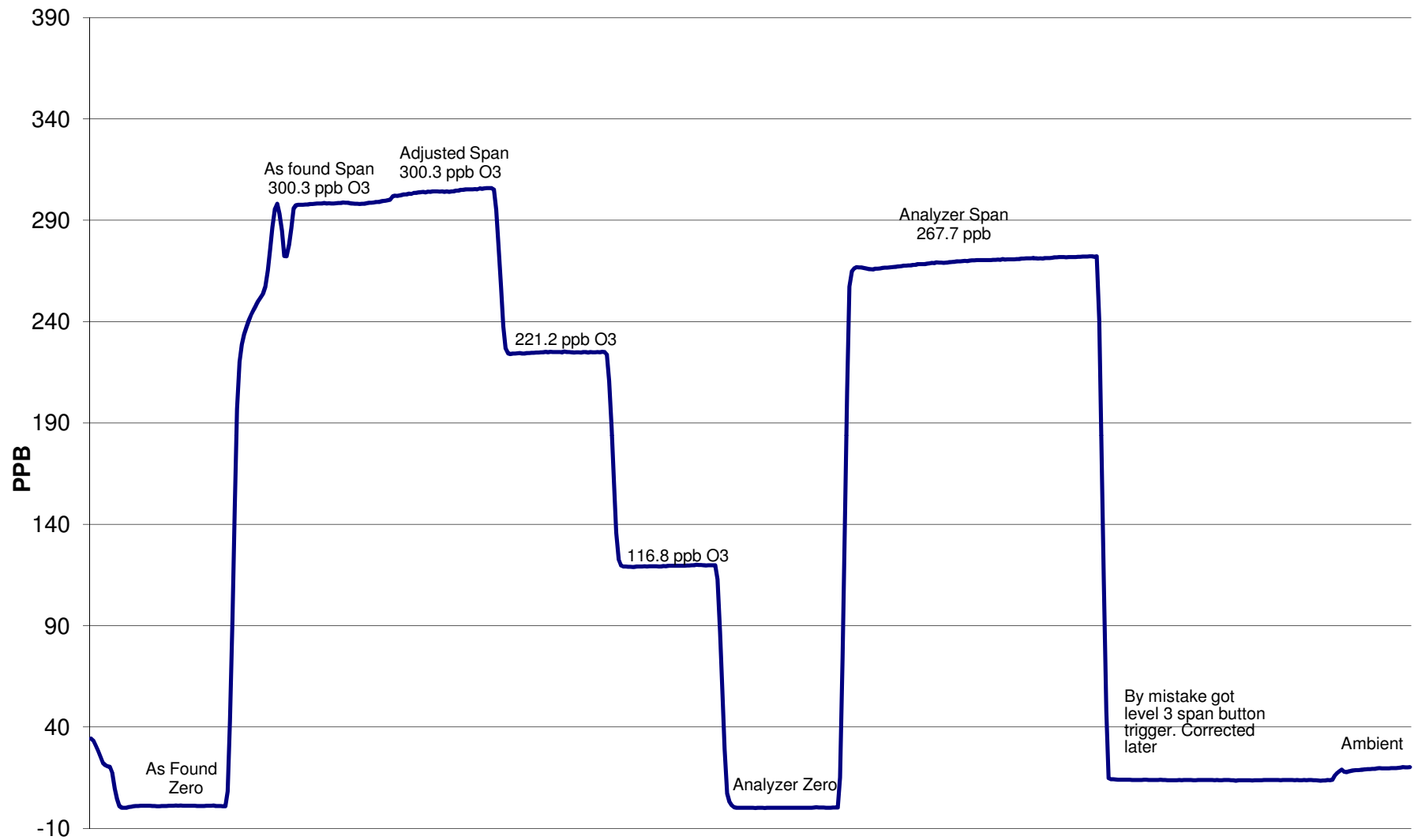
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.0	NA		
300.3	304.3	0.9868	Correlation Coefficient	0.999998
221.2	224.8	0.9839		
116.8	119.3	0.9793	Slope	0.989860
			Intercept	-1.133346

O3 Calibration Curve



O3 Calibration



June 19, 2013

Calibration Report

Parameter SO2
Air Monitoring Network PAZA



Station Information

Calibration Date	June 21, 2013	Previous Calibration	May 30 2013
Station Number	6	Station Location	Valleyview
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:02	End Time (MST)	14:55
Barometric Pressure	702.00 mmHg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	2844
Cal Gas Concentration	51 ppm	Cal Gas Exp Date	December 3, 2014
Gas Cylinder Num.	LL85362		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.996590	Calculated slope	0.997248
Calculated intercept	1.965546	Calculated intercept	1.431237
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	57.4		56.9	
Coefficient	1.003		1.003	
UV Lamp Voltage	817	V	817	V
Chamber Temp	44.1	C	44.3	C
Perm Gas Temp	44.3	C	35	C
Pressure	601.9	in Hg	609.5	in Hg
Sample Flow	0.556	LPM	0.559	LPM
Lamp Intensity	42125	Hz	42084	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	40.10	406.2	405.8	1.0010
4995	20.10	204.4	204.5	0.9993
4995	10.20	103.9	101.1	1.0283
4995	0.00	0.0	-0.7	As found zero
4995	40.10	406.2	405.8	As found span
Average Correction Factor				1.0095

Calculated value of As Found Response: 407.0 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	156.0	ppm	155.1	ppm

Notes: No adjustment made.

Calibration Performed By: Gagandeep Singh

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



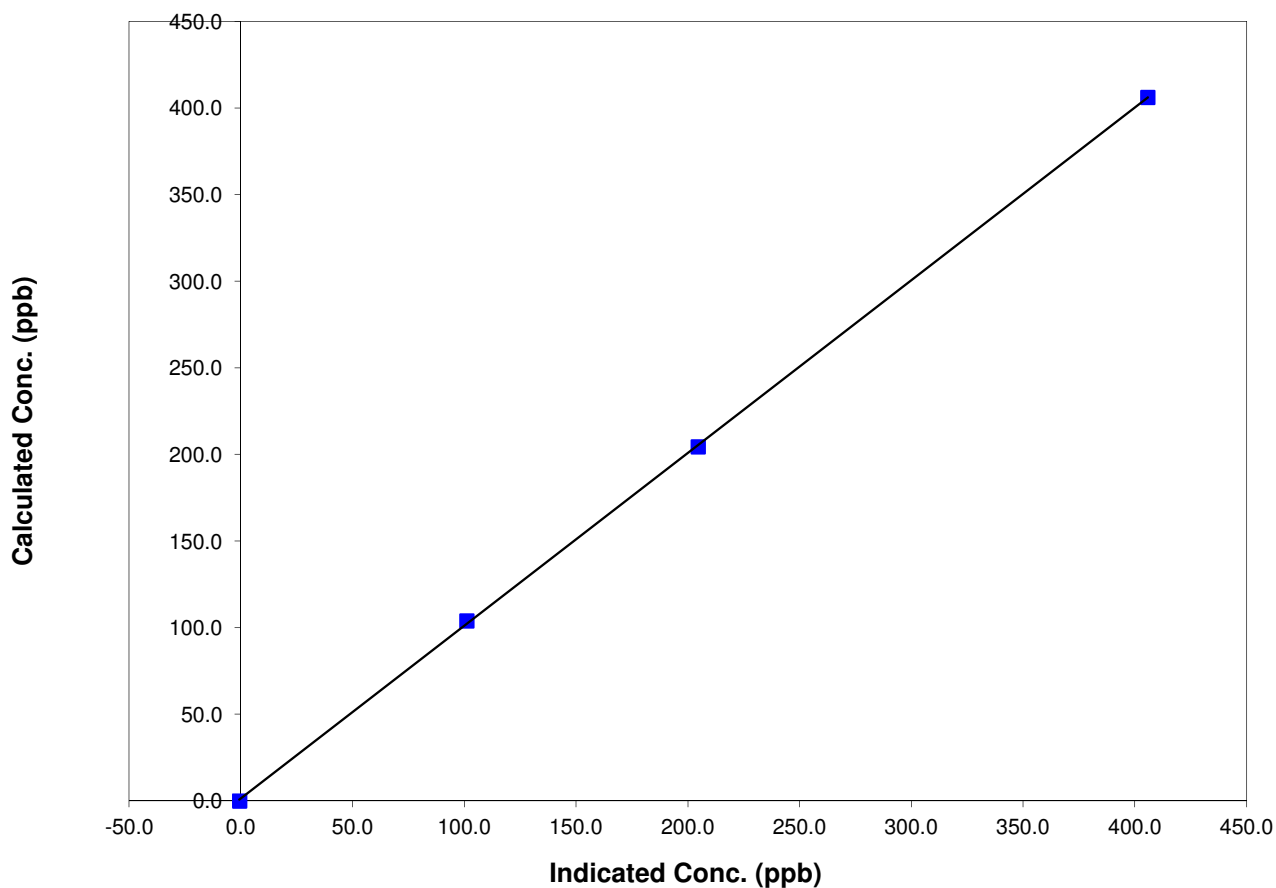
Station Information

Calibration Date	June 21, 2013	Previous Calibration	May 30 2013
Station Number	6	Station Location	Valleyview
Start Time (MST)	12:02	End Time (MST)	14:55
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

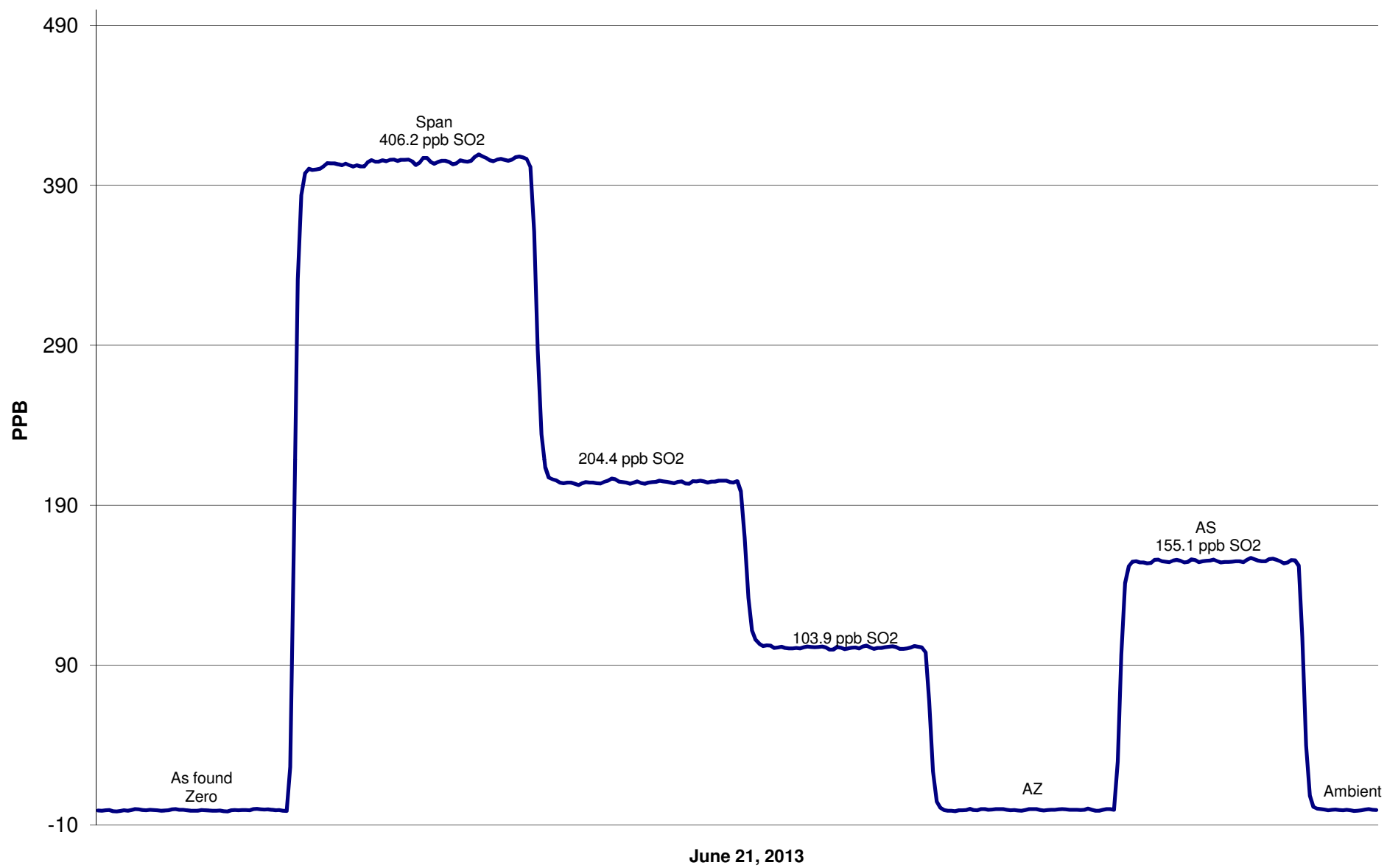
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.7	N/A		
406.2	405.8	1.0010	Correlation Coefficient	0.999950
204.4	204.5	0.9993		
103.9	101.1	1.0283	Slope	0.997248
			Intercept	1.431237

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter H2S
Air Monitoring Network PAZA



Station Information

Calibration Date	June 21, 2013	Previous Calibration	May 14 2013
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	9:35	End Time (MST)	13:15
Barometric Pressure	702.00 mm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	2844
Cal Gas Concentration	9.96 ppm	Cal Gas Expiry Date	December 25, 2015
Gas Cert Reference	BLM03975		
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	0.970456	Calculated slope	1.009205
Calculated intercept	0.854987	Calculated intercept	0.396273
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	7.8	ppb	7.3	ppb
Coefficient	1.040		0.976	
Lamp Voltage	787	V	782	V
Chamber Temp	45.2	c	45	c
Perm Oven Temp	44.99	c	45	c
Pressure	606.70	mm Hg	607.30	mm Hg
Sample Flow	0.412	ccm	0.412	ccm
Lamp Intensity	90.0	%	90.0	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.1	N/A
4995	40.10	79.3	78.3	1.0127
4995	20.10	39.9	39.3	1.0166
4995	10.20	20.3	19.0	1.0674
4995	9.90	102.1	0.1	Sox Test
4995	0.00	0.0	0.1	As found zero
4995	39.94	79.0	78.3	As found span
Average Correction Factor				1.0323

Calculated value of As Found Response: 76.78 ppm Percent Change of As Found: 2.8%

	before calibration		after calibration	
Auto zero	0.6	ppm	0.5	ppm
Auto span	68.7	ppm	69.5	ppm

Notes: No adjustments made. Scrubber checked.

Calibration Performed By: Gagandeep Singh

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



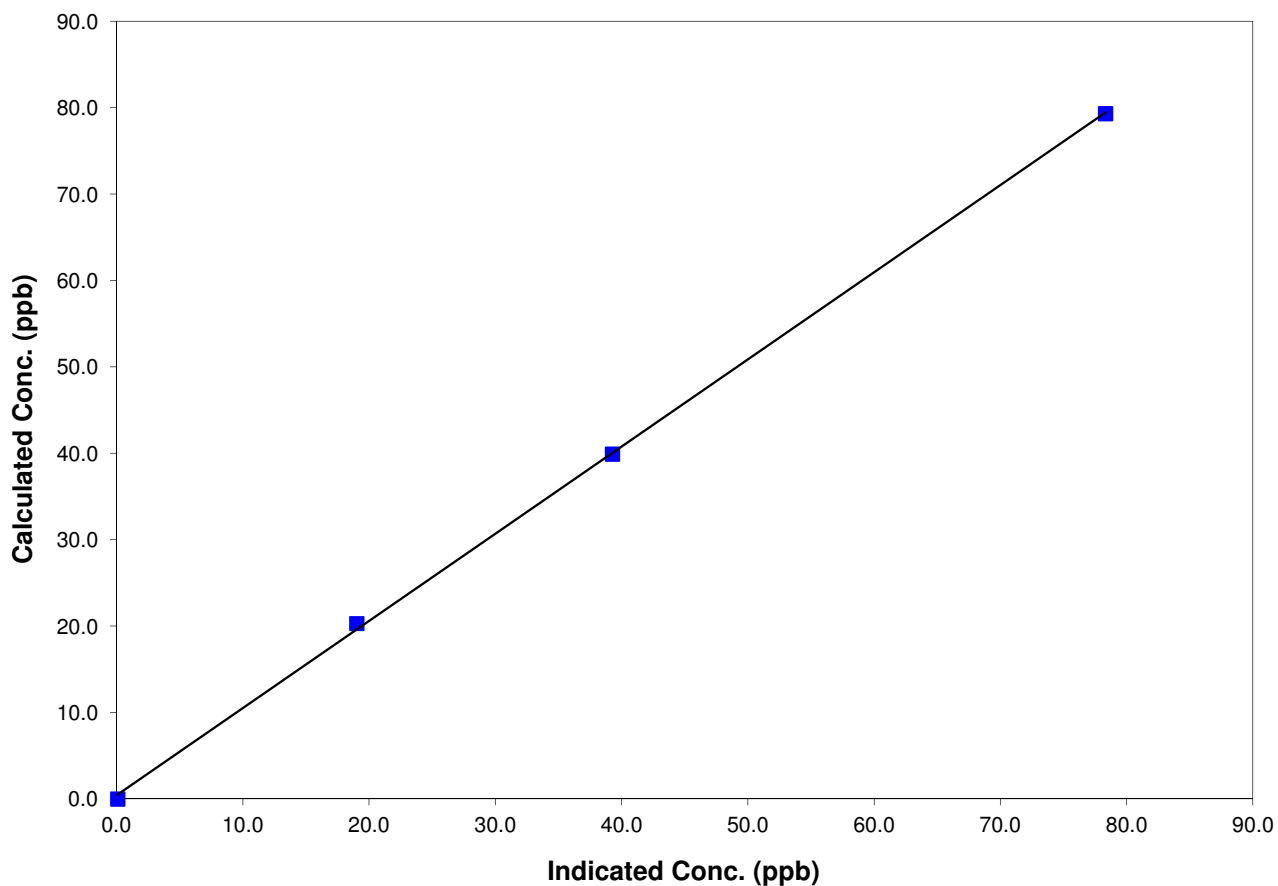
Station Information

Calibration Date	June 21, 2013	Previous Calibration	May 14 2013
Station Number	6	Station Location	Valleyview
Start Time (MST)	9:35	End Time (MST)	13:15
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

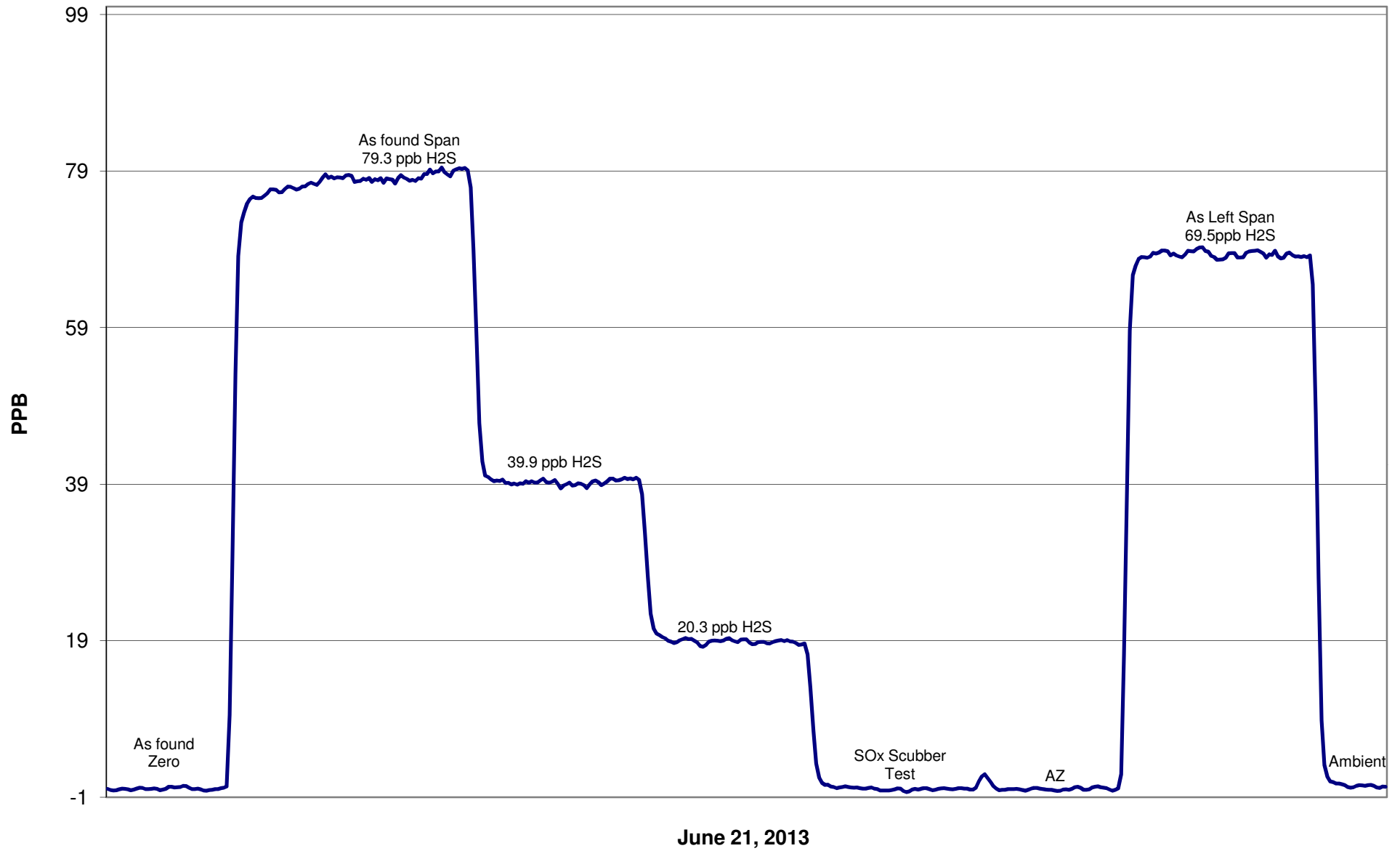
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999777
79.3	78.3	1.0127		
39.9	39.3	1.0166		
20.3	19.0	1.0674	Slope	1.009205
			Intercept	0.396273

H2S Calibration Curve



H2S Calibration



Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	June 21 2013	Previous Calibration	May 15 2013
Station Number	9	Station Location	Sunset House
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	10:30	End Time (MST)	13:39
Barometric Pressure	0.916 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	2/25/25
Gas Cert Reference	LL105159		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.991264	Calculated slope	0.994704
Calculated intercept	1.060549	Calculated intercept	2.998250
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	18.4		20	
Coefficient	0.992		0.978	
UV Lamp Voltage	848	V	848	V
Chamber Temp	44.6	C	44.6	C
Perm Gas Temp	45	C	45	C
Pressure	666.6	mm Hg	664.5	mm Hg
Sample Flow	0.485	LPM	0.484	LPM
Lamp Intesity	37461	Hz	37292	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	0.3	N/A
4995	39.93	408.4	409.2	0.9982
4995	19.96	205.0	201.4	1.0180
4995	9.97	102.6	96.9	1.0582
4995	0.00	0.0	0.3	As found zero
4995	39.93	408.4	413.2	As found span
Average Correction Factor				1.0248

Calculated value of As Found Response: 410.334 ppm Percent Change of As Found: -0.5%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	275.2	ppm	272.5	ppm

Notes: Adjstuted Span

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



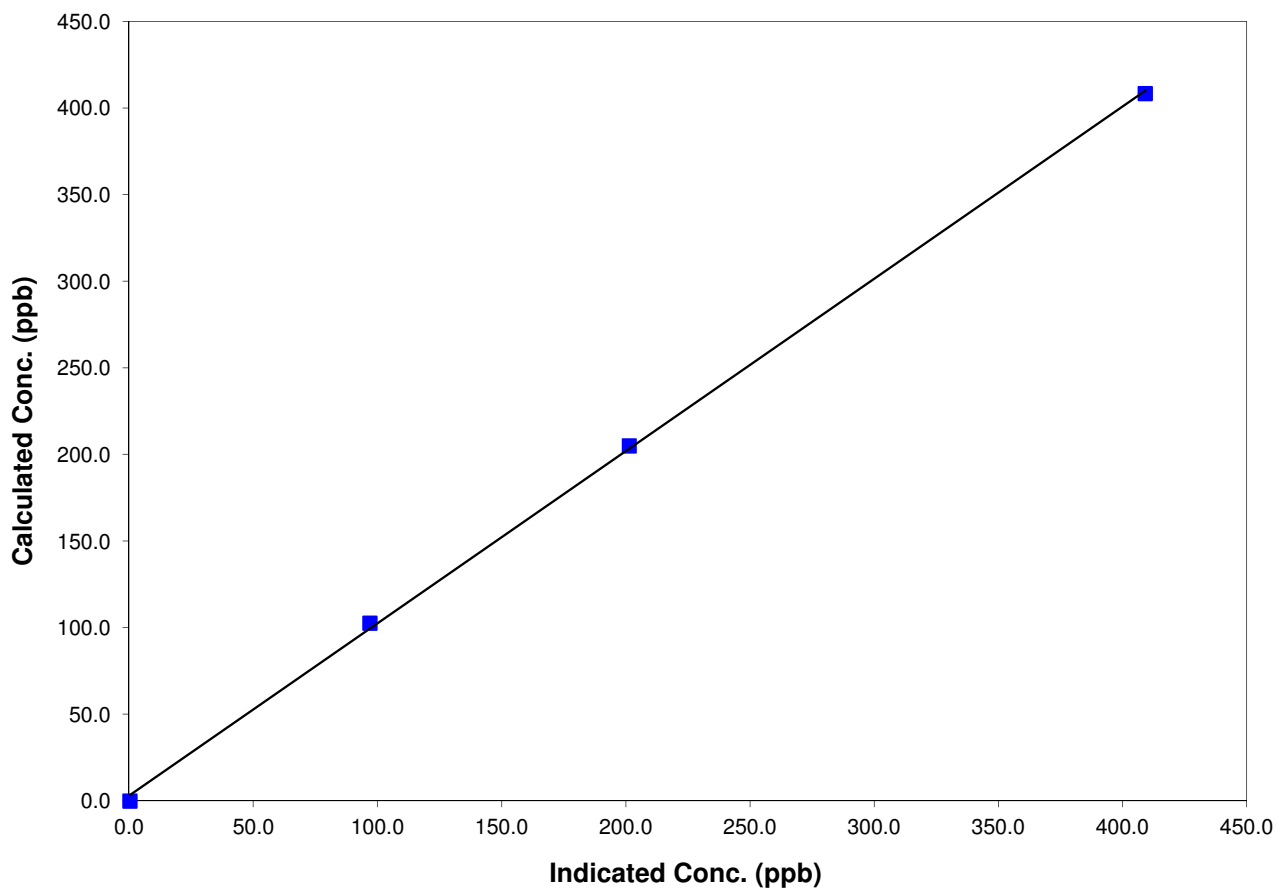
Station Information

Calibration Date	June 21 2013	Previous Calibration	May 15 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	10:30	End Time (MST)	13:39
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

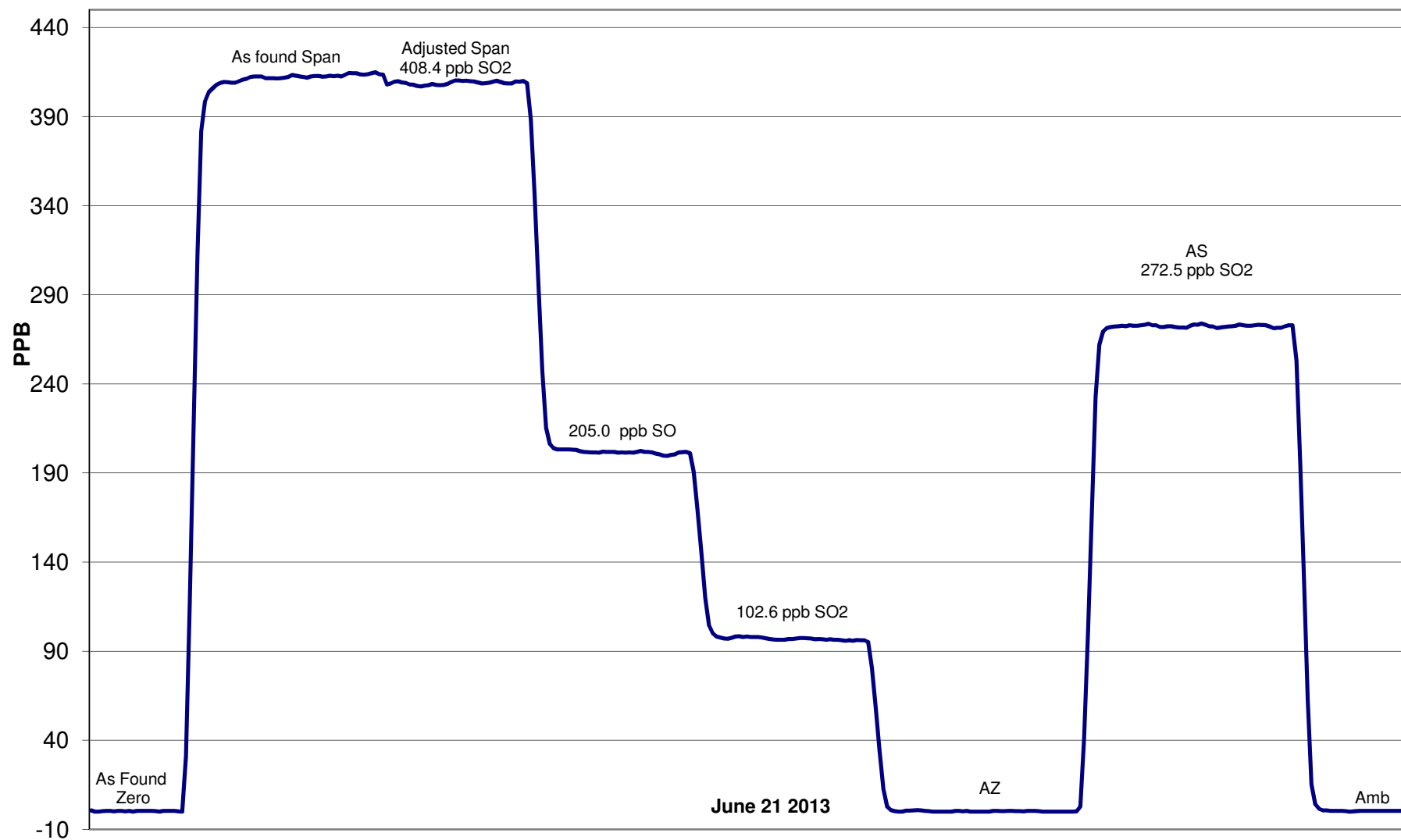
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999715
408.4	409.2	0.9982		
205.0	201.4	1.0180		
102.6	96.9	1.0582	Slope	0.994704
			Intercept	2.998250

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	June 21 2013	Previous Calibration	May 15 2013
Station Number	9	Station Location	Sunset House
Reason:	Routine	Install	Removal
Start Time (MST)	10:30	End Time (MST)	15:39
Barometric Pressure	0.916	Atm	Station Temperature
Calibrator	EnviroNics	Serial Number	3474
NO Cal Gas Conc	51.3	ppm	Cal Gas Expiry Date
NOx Cal Gas Conc	51.4	ppm	Cal Gas Serial #
			February 25, 2021
			LL105159

DACS Information

DACS make	CR3000	DACS serial No.	5407
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Parameter		NO2	NOx	NO
Before	Data Slope	0.989519	1.034884	1.034491
	Data Offset	-0.407057	0.795867	0.654077
After	Data Slope	0.996202	0.997625	1.000224
	Data Offset	0.087566	1.479650	1.220800
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
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Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	5.0	mV	5.2	mV
NOx bkgnd	5.3	mV	5.8	mV
NO coefficient	1.186		1.218	
NOx coefficient	1.000		1.000	
NO2 conv temp	324.5	Deg C	324.5	Deg C
PMT Temp	-2.7	Deg C	-2.7	Deg C
PMT Volt	-805.1	mV	-805.1	mV
R Cell Press	190.2	in Hg	189.9	in Hg
Sample Flow	0.731	ccm	0.723	ccm

NOTES: Used new cal gas cylinder noted above.

Calibration Report

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



Station Information

Calibration Date: June 21 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	0.6	0.7	0.1	N/A	N/A
1	4995	39.93	407.6	406.8	0.8	408.1	406.5	0.0	0.9989	1.0009
2	4995	19.96	204.6	204.2	0.4	202.7	202.0	-0.1	1.0094	1.0108
3	4995	9.95	102.2	102.0	0.2	98.8	98.8	0.1	1.0346	1.0322
AFZ	4995	0.00	0.0	0.0	0.0	0.6	0.7	0.1	0.0000	0.0000
AFS	4995	39.93	407.6	406.8	0.8	399.8	398.0	0.2	1.0196	1.0223
Average Correction Factor									1.0143	1.0147

As Found Concentrations: NO_x= 399.9 NO= 397.9 As Found Percent Change NO_x= -1.9% NO= -2.2%

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	0.6	0.7	0.1	N/A	N/A	N/A	N/A
NO point	407.5	407.5	0.0	409.4	407.5	-0.1	0.9953	1.0000	N/A	N/A
300	407.5	106.0	301.5	410.7	106.0	303.2	0.9922	1.0000	0.9944	100.6%
200	407.5	198.4	209.0	409.2	198.4	208.7	0.9957	1.0000	1.0017	99.8%
100	407.5	293.7	113.7	410.1	293.7	114.4	0.9935	1.0000	0.9946	100.5%
Average Correction Factor							0.9938	1.0000	0.9969	100.3%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.9	0.2	0.9	ppb	0.5	-0.1	0.8	ppb
Auto span	181.8	178.9	2.0	ppb	172.8	170.0	2.0	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



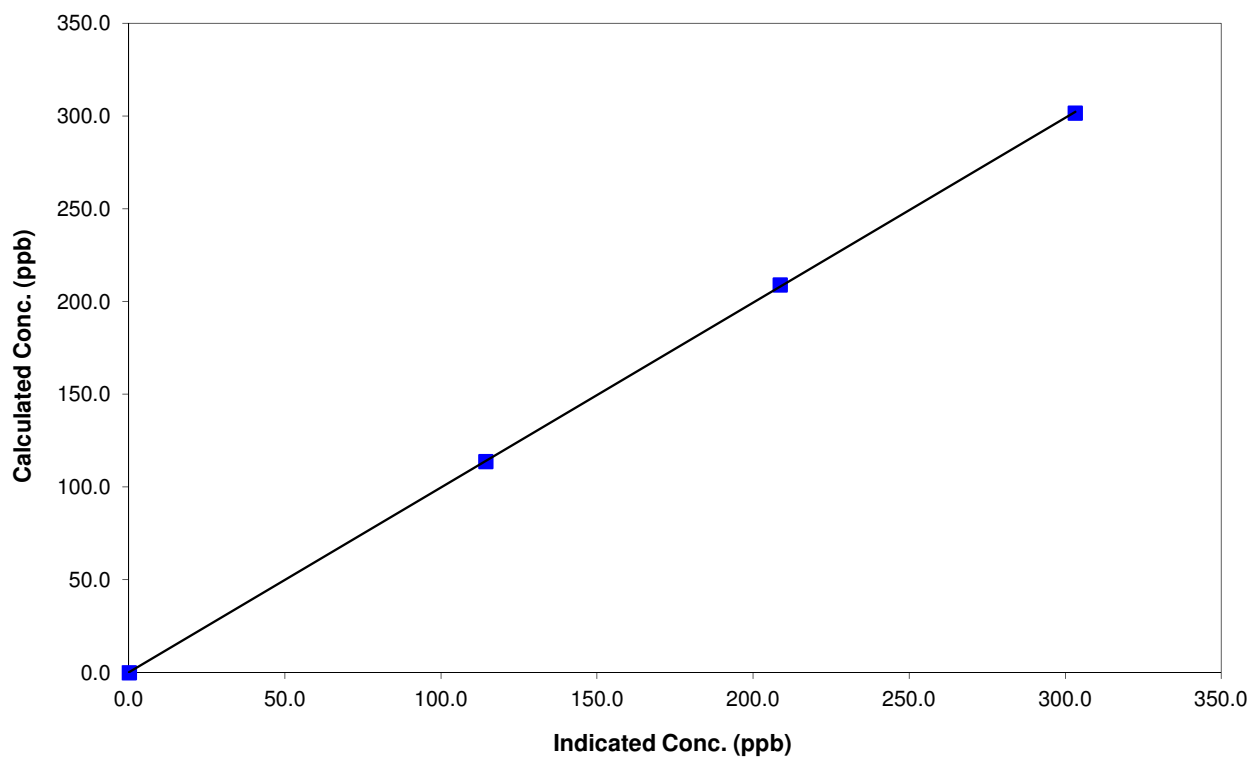
Station Information

Calibration Date	June 21 2013	Previous Calibration	May 15 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	10:30	End Time (MST)	15:39
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999968
301.5	303.2	0.9944		
209.0	208.7	1.0017		
113.7	114.4	0.9946	Slope	0.996202
			Intercept	0.087566

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



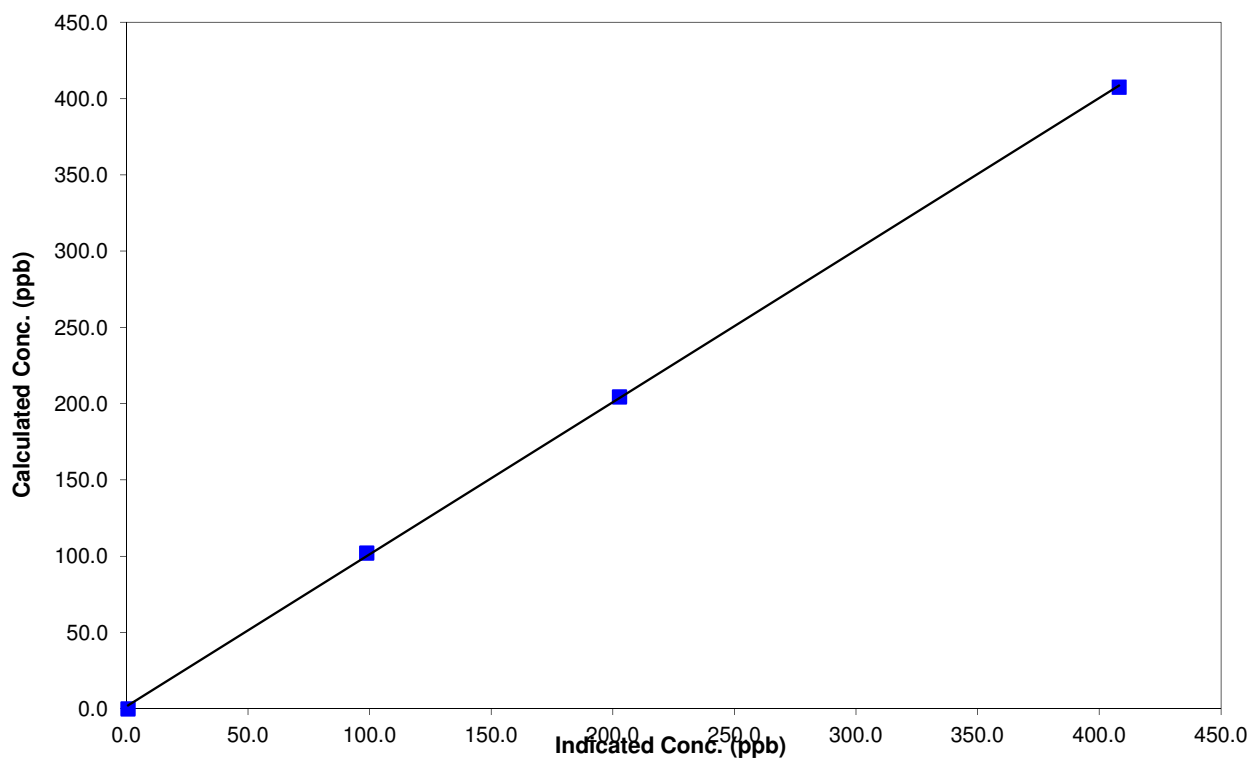
Station Information

Calibration Date	June 21 2013	Previous Calibration	May 15 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	10:30	End Time (MST)	15:39
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A	Correlation Coefficient	0.999880
407.6	408.1	0.9989		
204.6	202.7	1.0094		
102.2	98.8	1.0346	Slope	0.997625
			Intercept	1.479650

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



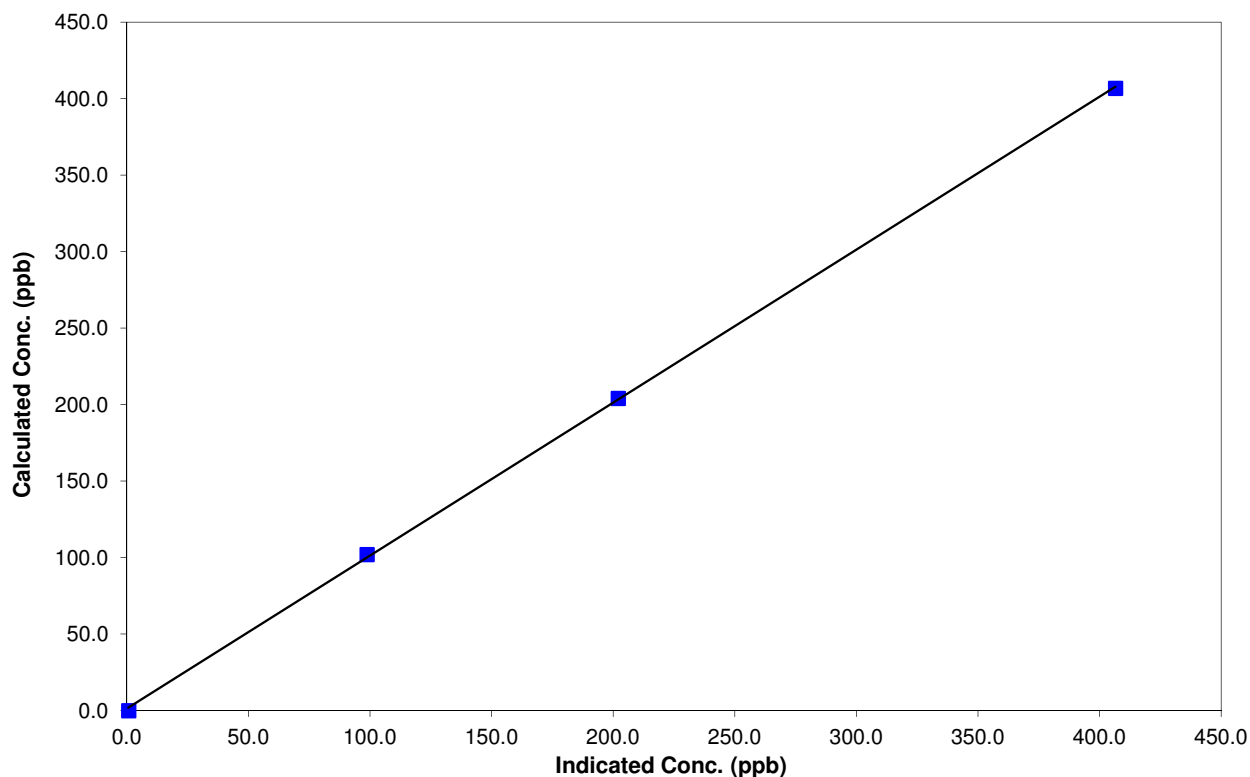
Station Information

Calibration Date	June 21 2013	Previous Calibration	May 15 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	10:30	End Time (MST)	15:39
Analyzer make	TEI 42i	Analyzer serial #	0701120011

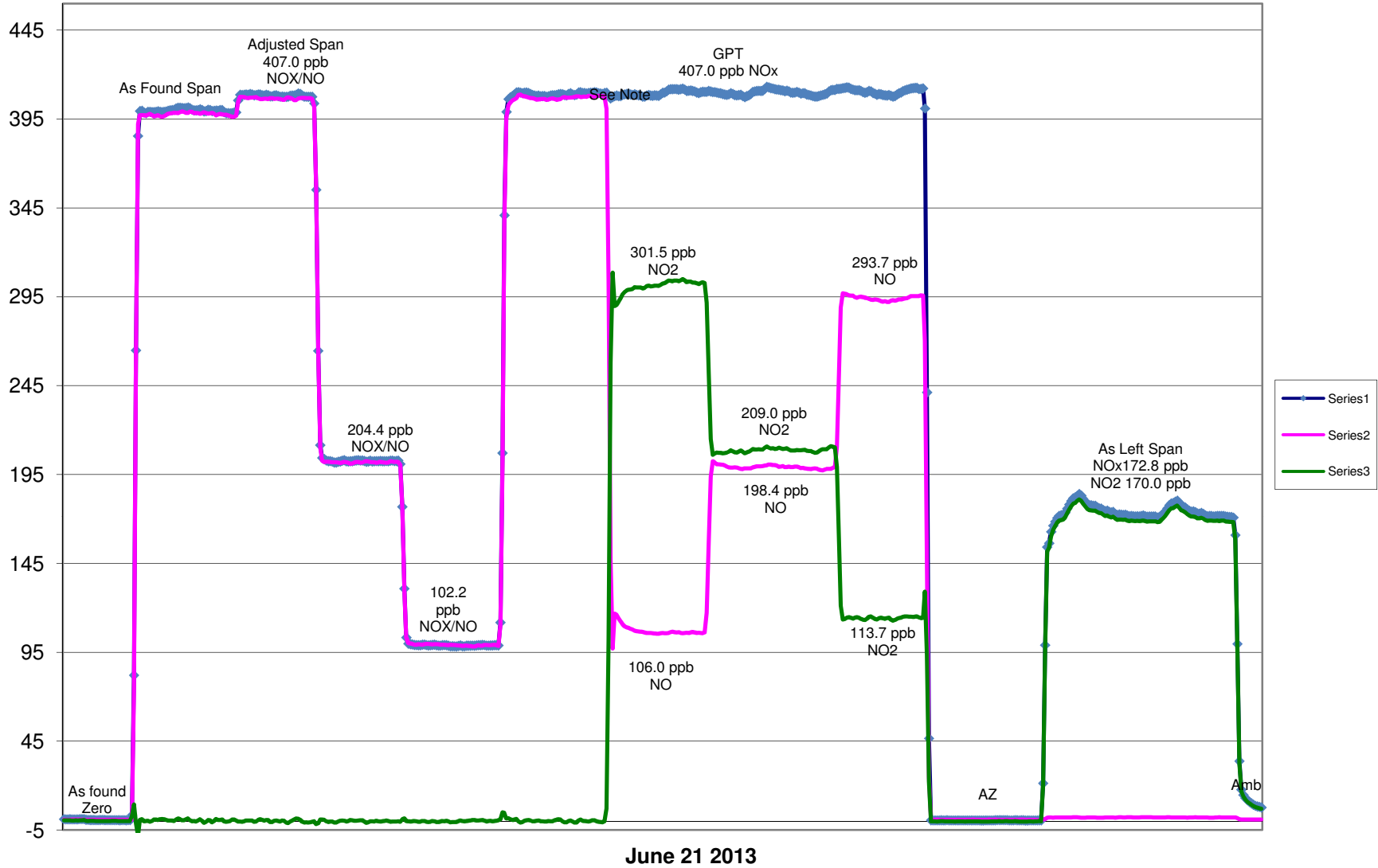
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	N/A	Correlation Coefficient	0.999898
406.8	406.5	1.0009		
204.2	202.0	1.0108		
102.0	98.8	1.0322	Slope	1.000224
			Intercept	1.220800

NO Calibration Curve



PASZA Sunset House NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	June 21 2013	Previous Calibration	May 16 2013
Station Number	9	Station Location	Sunset House
Reason:	Routine	☐ Install	☐ Removal remove ☐ Other:

Start Time (MST)	14:00	End Time (MST)	17:30
Barometric Pressure	0.915 atm	Station Temperature	15.7 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474

DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	0.995366	Calculated slope	0.981266
Calculated intercept	-0.615831	Calculated intercept	0.603542

Analyzer make	TEI Model 49C	Analyzer serial #	49C-0609716240
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	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0.3	ppb	0.3	ppb
Span	1.035		1.035	
Cell A intensity	76782	Hz	76938	Hz
Cell B intensity	72824	Hz	72894	Hz
Pressure	688.20	in Hg	687.90	in Hg
CellA Flow	0.911	ccm	0.912	ccm
Cell B Flow	0.738	cmm	0.738	cmm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5040	0.00	0.0	0.1	N/A
5040	0.00	301.5	308.0	0.9791
5040	0.00	209.0	210.6	0.9922
5040	0.00	113.7	114.9	0.9892
5040	0.00	0.0	0.1	As found zero
5040	0.00	301.5	308.0	As found span
Average Correction Factor				0.9868

Calculated value of As Found Response: 305.8 ppm Percent Change of As Found: 1.4%

	before calibration		after calibration	
Auto zero	0.6	ppb	0.7	ppb
Auto span	226.5	ppb	209.6	ppb

Notes: No adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



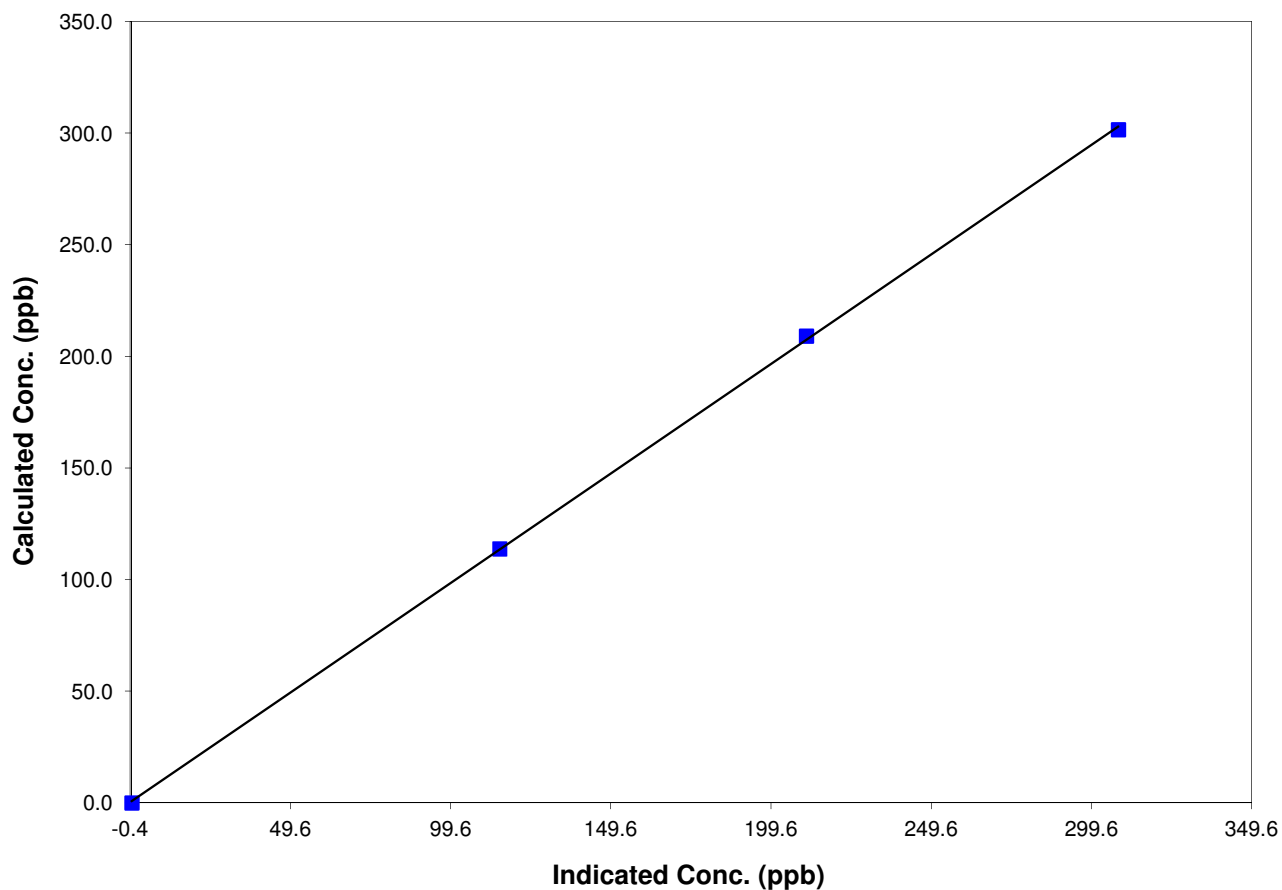
Station Information

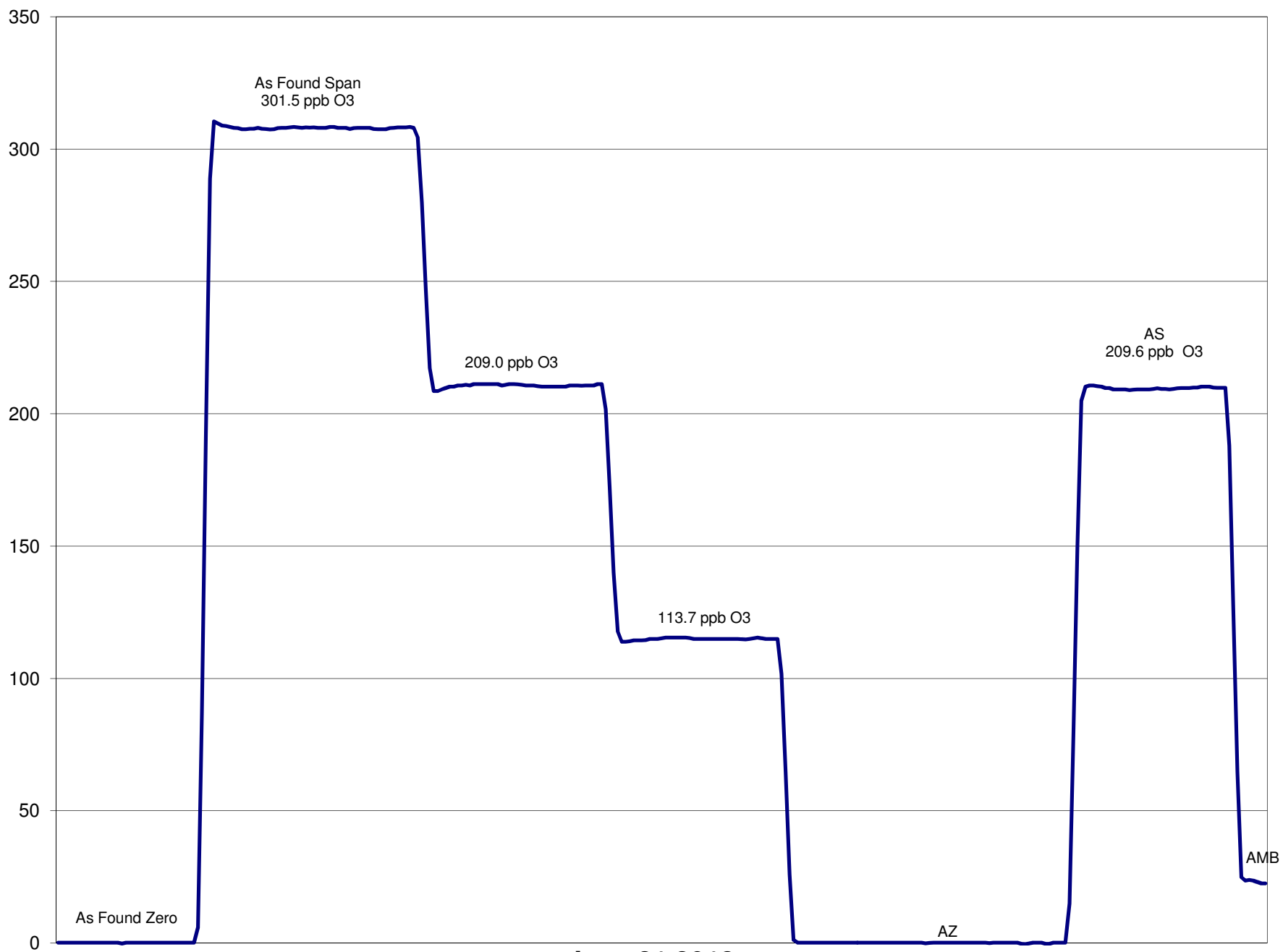
Calibration Date	June 21 2013	Previous Calibration	May 16 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	14:00	End Time (MST)	17:30
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-0609716240

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999896
301.5	308.0	0.9791		
209.0	210.6	0.9922		
113.7	114.9	0.9892	Slope	0.981266
			Intercept	0.603542

O3 Calibration Curve





June 21 2013

Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	June 21 2013	Previous Calibration	May 16 2013
Station Name	PAZA Rover	Station Location	Sunset House
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	3:17 PM	End Time (MST)	18:05
Barometric Pressure	0.915 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	10.1 ppm	Cal Gas Expiry Date	5/11/13
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	0.989716	Calculated slope	0.995604
Calculated intercept	0.233695	Calculated intercept	0.330038
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.4	ppb	15.4	ppb
Coefficient	1.399		1.399	
Lamp Voltage	842	V	842	V
Chamber Temp	43.9	C	43.9	C
Perm gas Temp	45	C	45	C
Pressure	648.7	mmHg	650.9	mmHg
Sample Flow	0.440	ccm	0.442	ccm
Lamp Intensity	38857	Hz	38777	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	0.0	N/A
4995	39.93	80.1	80.3	0.9977
4995	19.96	40.2	39.8	1.0109
9995	9.97	10.1	9.5	1.0547
4995	9.97	102.8	0.6	Sox Test
4995	0.00	0.0	0.0	As found zero
4995	39.94	80.1	80.3	As found span
Average Correction Factor				1.0211

Calculated value of As Found Response: 79.68 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	4.6	ppm	0.5	ppm
Auto span	67.1	ppm	65.9	ppm

Notes: No span adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



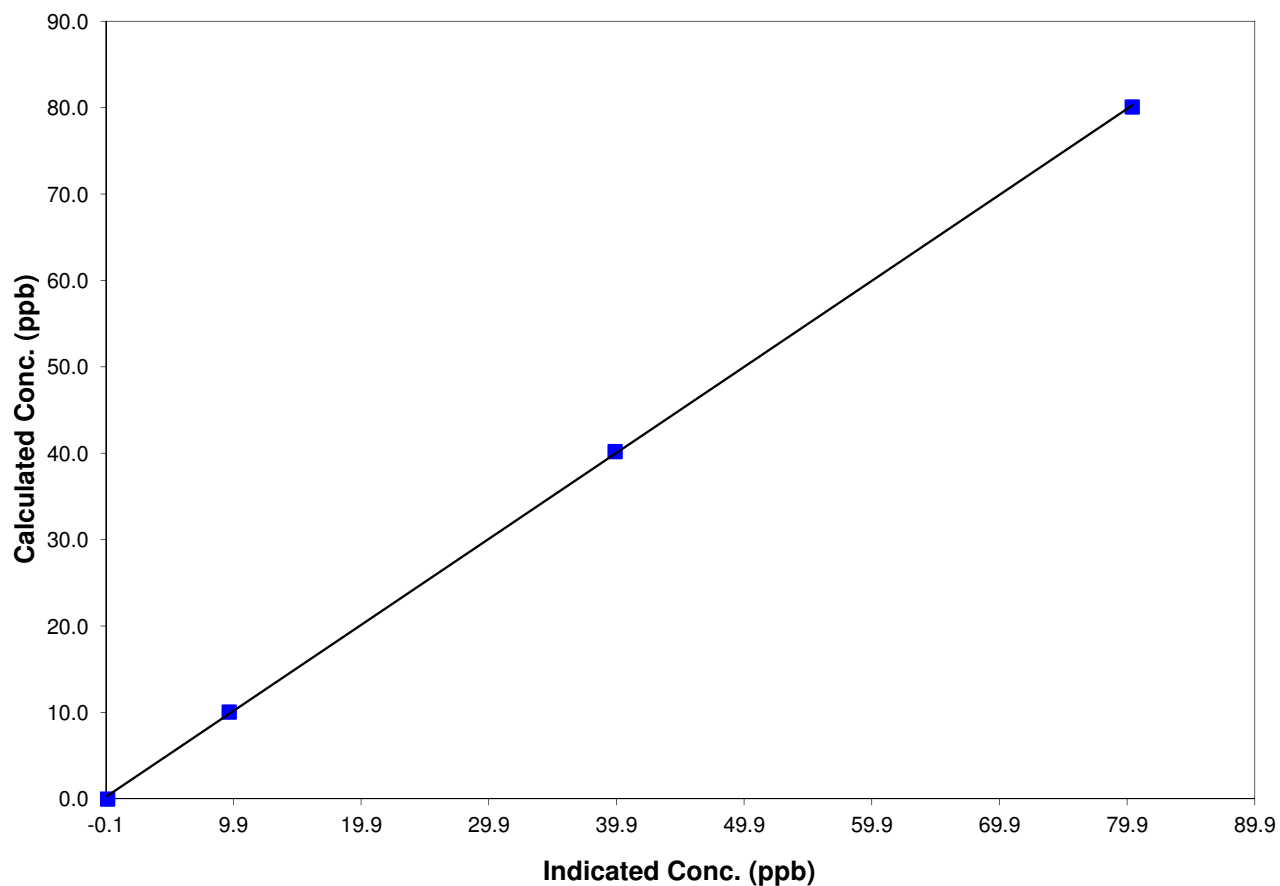
Station Information

Calibration Date	June 21 2013	Previous Calibration	May 16 2013
Station Number	PAZA Rover	Station Location	Sunset House
Start Time (MST)	15:17	End Time (MST)	18:05
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

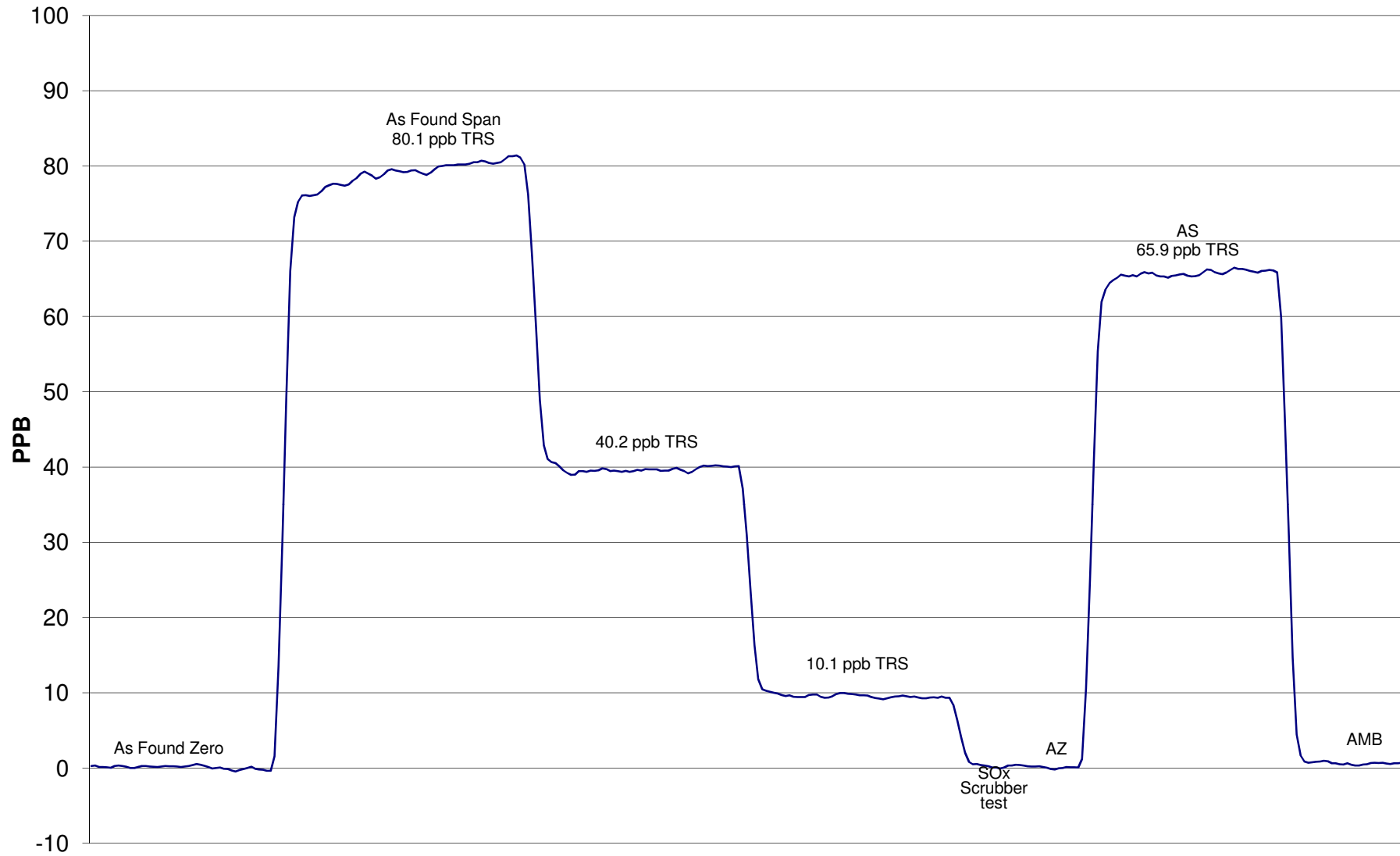
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999928
80.1	80.3	0.9977		
40.2	39.8	1.0109		
10.1	9.5	1.0547	Slope	0.995604
			Intercept	0.330038

TRS Calibration Curve



TRS Calibration



June 21 2013

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	June 22, 2013	Previous Calibration	May 28, 2013
Station Number	1	Station Location	Falher
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	9:42	End Time (MST)	12:44
Barometric Pressure	0.917 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	2/25/25
Correction factor	0.031171	Cal Gas Cylinder #	LL105159
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.002499	Calculated slope	0.997391
Calculated intercept	2.219339	Calculated intercept	3.483003
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		0.936	
Lamp Voltage	840	volts	840	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	680	mm Hg	680	mm Hg
Sample Flow	0.421	ccm	0.422	ccm
Lamp Intensity	96	%	96	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	-0.3	N/A
4995	39.93	408.4	407.5	1.0023
4995	19.96	205.0	200.5	1.0223
4995	9.97	102.6	96.2	1.0665
4995	0.0	0.0	-0.3	As Found Zero
4995	39.93	408.4	402.0	As Found Span
Average Correction Factor				1.0303

Calculated value of As Found Response: 405.568 ppm Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	0.5	ppm	-0.3	ppm
Auto span	359.4	ppm	345.3	ppm

Notes: New cal gas. Slight span adjust up.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



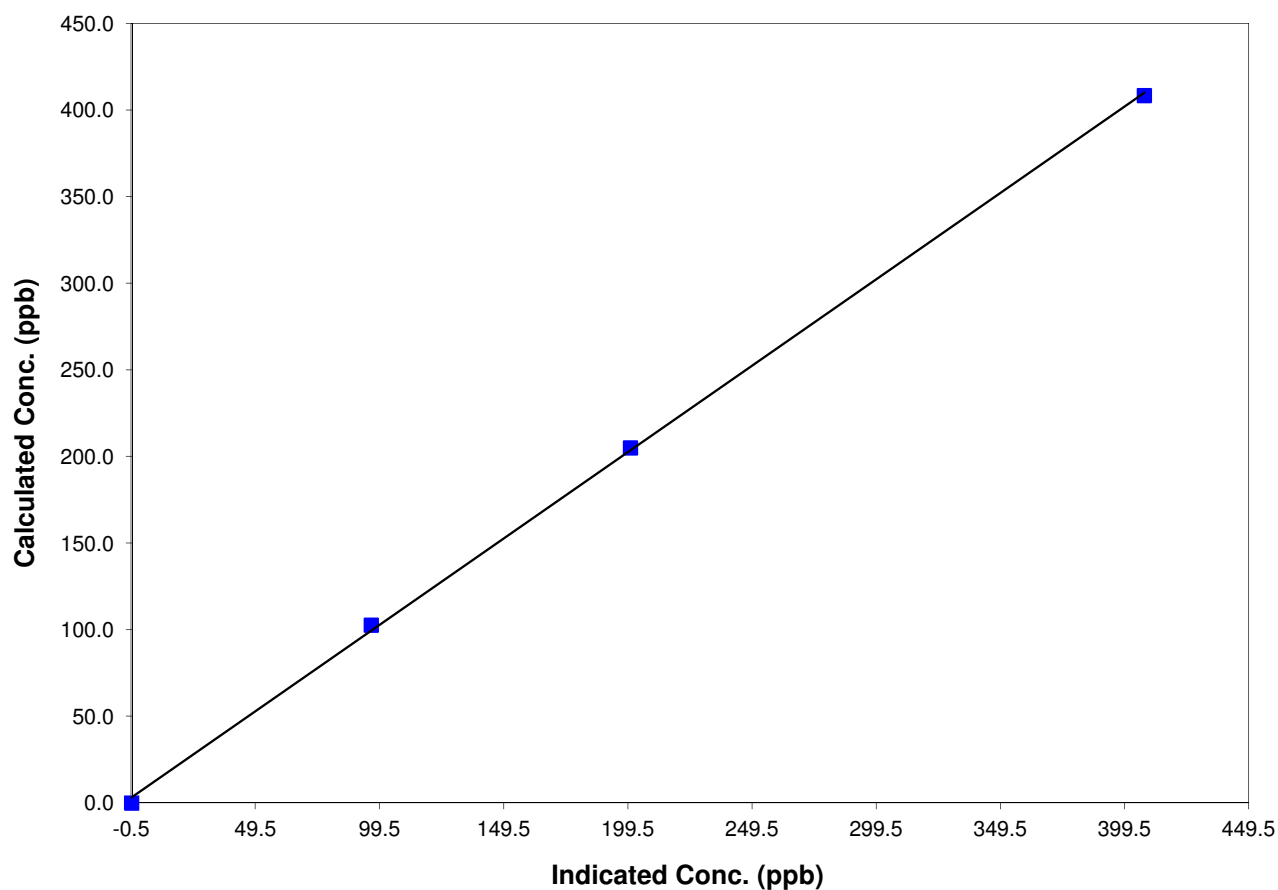
Station Information

Calibration Date	June 22, 2013	Previous Calibration	May 28, 2013
Station Number	1	Station Location	Falher
Start Time (MST)	9:42	End Time (MST)	12:44
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

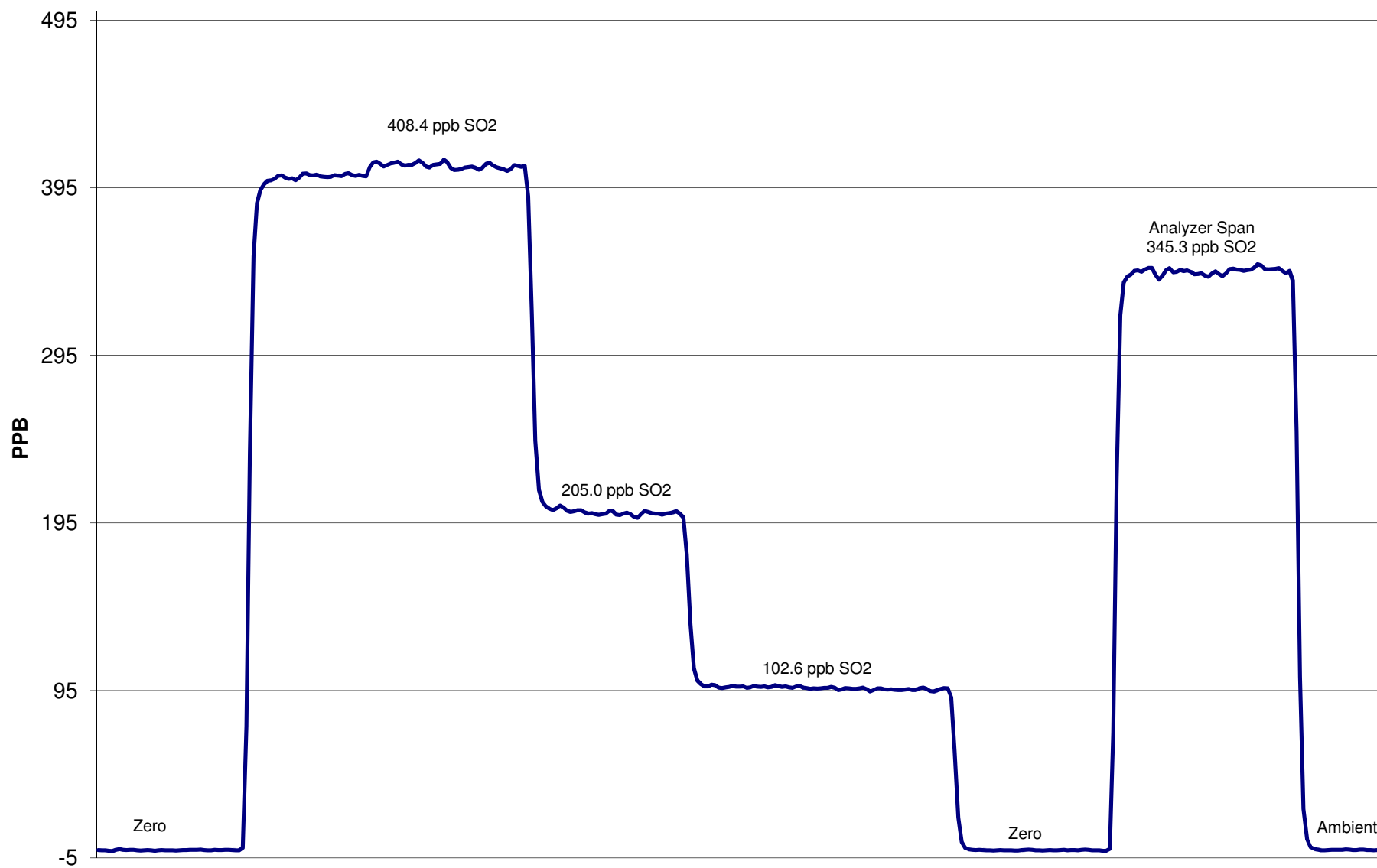
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A		
408.4	407.5	1.0023	Correlation Coefficient	0.999730
205.0	200.5	1.0223		
102.6	96.2	1.0665	Slope	0.997391
			Intercept	3.483003

SO2 Calibration Curve



SO2 Calibration



June 22, 2013

Calibration Report



Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	June 22, 2013	Previous Calibration	May 28, 2013
Station Number	1	Station Location	Falher
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	7:45	End Time (MST)	10:49
Barometric Pressure	0.917 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	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	1.005591	Calculated slope	1.006644
Calculated intercept	0.246869	Calculated intercept	0.333306
Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	12.5	ppb	12.4	ppb
coefficient	1.169		1.169	
Lamp Voltage	798	volts	798	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	571.3	mm Hg	572.1	mm Hg
Sample Flow	0.934	ccm	0.956	ccm
Lamp Intensity	91	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	-0.2	N/A
4995	39.97	80.18	79.3	1.0110
4995	19.97	40.22	39.7	1.0135
8994	8.97	10.06	9.5	1.0585
4995	0.00	0.00	-0.2	As Found Zero
4995	39.95	80.14	79.3	As Found Span
Average Correction Factor				1.0277

Calculated value of As Found Response: 80.22 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.3	ppm
Auto span	51.2	ppm	52.8	ppm

Notes: **No adjustment made. Sox scrubber was checked.**

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



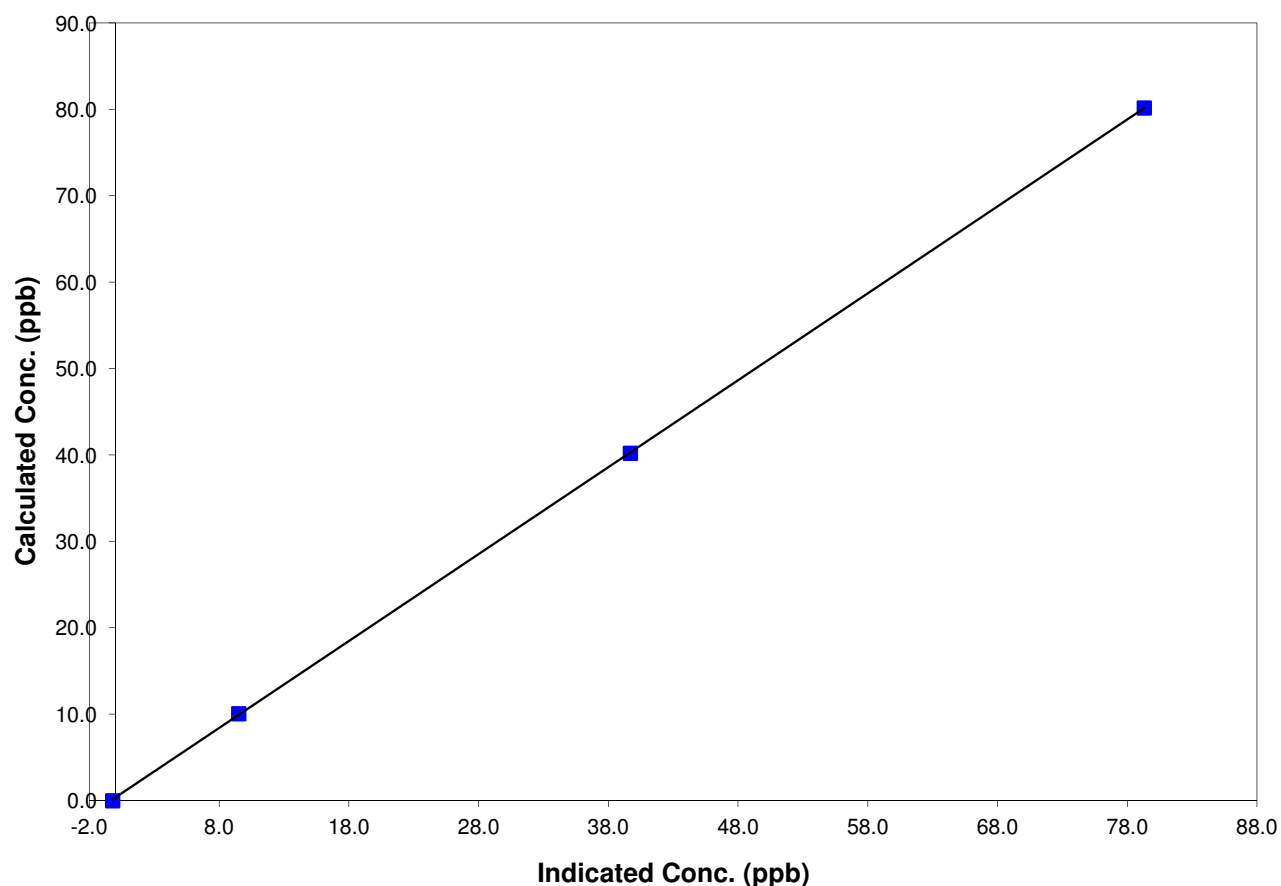
Station Information

Calibration Date	June 22, 2013	Previous Calibration	May 28, 2013
Station Number	1	Station Location	Falher
Start Time (MST)	7:45	End Time (MST)	10:49
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
80.2	79.3	1.0110	Correlation Coefficient	0.999989
40.2	39.7	1.0135		
10.1	9.5	1.0585	Slope	1.006644
			Intercept	0.333306

TRS Calibration Curve



H2S Calibration

