



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

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

Operations and Reporting

FOCUS
AIR QUALITY MONITORING

September 21st, 2012

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

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

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

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

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

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

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

Henry Pirker Station:

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

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 August.

Smoky Heights Station:

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station except for PM_{2.5}, which had one (1) 1-hour exceedence of the AAAQO guideline:
 - o August 11 21:00 100.7 µg/m³ Alberta Environment Reference # 261997
- ◆ All analyzers and sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of August.

Beaverlodge Station:

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

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 August.

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 August.

Passive Monitoring - 46 Stations throughout the PAZA zone:

There were five duplicate sites sampled in the month of August: Woking, Webber Creek, Eaglesham, Sunset House, 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 0.5 ppb, with a mean of 0.1 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.1 ppb to 1.5 ppb, with a mean of 0.4 ppb.
- Monthly average concentrations for O₃ passives ranged from 13.9 ppb to 30.9 ppb, with a mean of 21.7 ppb.
- Monthly average concentrations for H₂S passives were 0.0 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

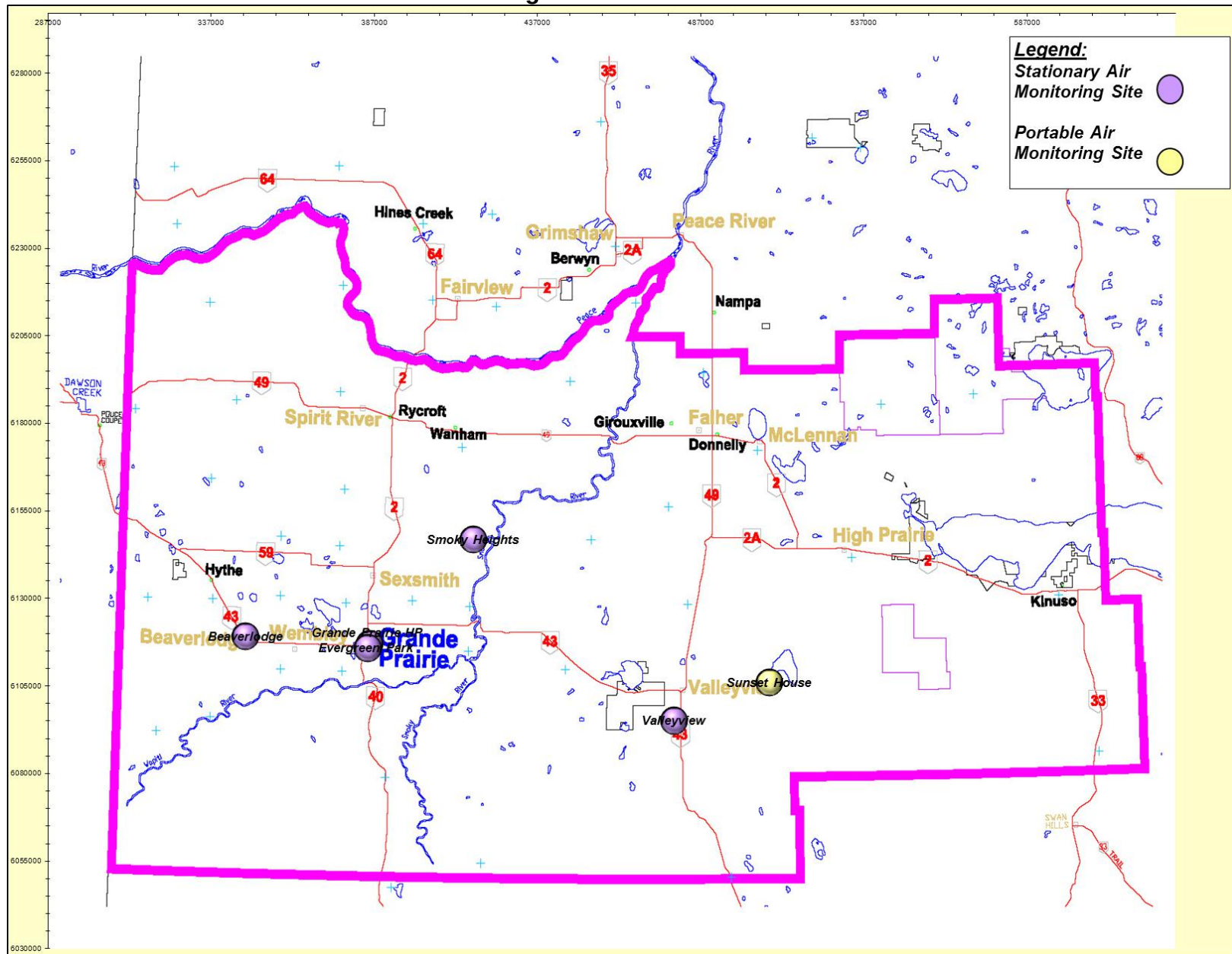


Patrick Andersen, B.Sc.
FOCUS AQM Data Specialist



Jeff Cooper, C.Tech.
AQM Operations Manager

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Aug-2012Peace 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	4.8	Aug-21 12:00	0.6	Aug-21	100%
SO ₂ (ppb)	172	48	Evergreen Park	0.2	0	0	2.7	Aug-21 12:00	0.4	Aug-23	100%
SO ₂ (ppb)	172	48	Smoky Heights	0.3	0	0	4.2	Aug-25 01:00	1.6	Aug-24	100%
SO ₂ (ppb)	172	48	Beaverlodge	0.2	0	0	2.0	Aug-11 08:00	0.5	Aug-19	100%
SO ₂ (ppb)	172	48	Valleyview	0.4	0	0	5.5	Aug-29 20:00	1.8	Aug-09	100%
SO ₂ (ppb)	172	48	Sunset House	0.1	0	0	1.6	Aug-18 03:00	0.6	Aug-29	100%
NO (ppb)			Henry Pirker	1.1	0	0	28.2	Aug-31 09:00	4.6	Aug-31	100%
NO ₂ (ppb)	159	106	Henry Pirker	4.1	0	0	25.0	Aug-16 22:00	8.2	Aug-16	100%
NO _x (ppb)			Henry Pirker	5.3	0	0	45.9	Aug-27 08:00	12.1	Aug-31	100%
NO (ppb)			Beaverlodge	0.3	0	0	6.5	Jul-09 07:00	0.8	Jul-09	100%
NO ₂ (ppb)	159	106	Beaverlodge	2.2	0	0	13.8	Jul-08 01:00	3.8	Jul-09	100%
NO _x (ppb)			Beaverlodge	2.5	0	0	17.7	Jul-09 07:00	4.6	Jul-09	100%
NO (ppb)			Sunset House	0.1	0	0	3.6	Aug-29 15:00	0.6	Aug-29	100%
NO ₂ (ppb)	159	106	Sunset House	1.0	0	0	5.0	Aug-29 15:00	1.6	Aug-27	100%
NO _x (ppb)			Sunset House	1.1	0	0	9.1	Aug-29 15:00	1.7	Aug-19	100%
O ₃ (ppb)	82		Henry Pirker	24.1	0	-	61.2	Aug-18 15:00	32.0	Aug-21	100%
O ₃ (ppb) - 8-hr			Henry Pirker		0				48.7	Aug-20	
O ₃ (ppb)	82		Beaverlodge	27.2	0	-	54.0	Aug-06 15:00	34.7	Aug-21	100%
O ₃ (ppb) - 8-hr			Beaverlodge		0				51.9	Jul-10	
O ₃ (ppb)	82		Sunset House	26.7	0	-	53.3	Aug-18 23:00	38.8	Aug-18	100%
O ₃ (ppb) - 8-hr			Sunset House		0				49.2	Aug-19	
CO (ppm)	13		Henry Pirker	0.19	0	-	0.7	Aug-16 21:00	0.3	Aug-19	100%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.3	Aug-20	
THC (ppm)			Henry Pirker	2.23	-	-	3.2	Aug-19 07:00	2.5	Aug-19	100%
TRS (ppb)			Henry Pirker	0.3	-	-	1.8	Aug-12 07:00	0.5	Aug-19	100%
TRS (ppb)			Evergreen Park	0.5	-	-	1.9	Jul-03 07:00	0.8	Jul-21	100%
TRS (ppb)			Smoky Heights	0.3	-	-	0.6	Aug-10 12:00	0.3	Aug-15	100%
TRS (ppb)			Sunset House	0.3	-	-	0.6	Aug-10 12:00	0.3	Aug-15	100%
H ₂ S (ppb)	10	3	Valleyview	0.0	0	0	0.8	Aug-10 22:00	0.0	Aug-13	100%
PM2.5 (µg/m3)	80	30	Henry Pirker	6.1	0	0	27.4	Aug-20 05:00	17.4	Aug-20	100%
PM2.5 (µg/m3)	80	30	Evergreen Park	6.4	0	0	55.1	Aug-29 15:00	17.2	Aug-19	100%
PM2.5 (µg/m3)	80	30	Smoky Heights	6.3	1	0	100.7	Aug-11 21:00	18.2	Aug-19	100%
PM2.5 (µg/m3)	80	30	Beaverlodge	8.5	0	0	35.5	Aug-19 22:00	20.7	Aug-19	100%
PM2.5 (µg/m3)	80	30	Sunset House	4.1	0	0	48.0	Aug-19 18:00	18.3	Aug-19	96%

PAZA Monthly Continuous Data Summary – continued

Aug-2012Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
RH (%)			Henry Pirker	57.5	-	-	89.9	Aug-14 06:00	74.8	Aug-14	100%
RH (%)			Evergreen Park	59.8	-	-	95.0	Aug-15 06:00	79.5	Aug-14	100%
RH (%)			Beaverlodge	61.8	-	-	100.0	Aug-08 04:00	82.1	Aug-14	100%
RH (%)			Valleyview	70.4	-	-	99.3	Aug-20 07:00	84.6	Aug-14	100%
SR (W/m ²)			Henry Pirker	198.7	-	-	729.0	Aug-06 13:00	268.1	Aug-06	100%
Temp (°C)			Henry Pirker	17.4	-	-	32.5	Aug-18 16:00	22.0	Aug-06	100%
Temp (°C)			Evergreen Park	16.8	-	-	32.2	Aug-18 18:00	21.6	Aug-04	100%
Temp (°C)			Smoky Heights	16.3	-	-	30.7	Aug-18 17:00	21.1	Aug-07	100%
Temp (°C)			Beaverlodge	16.8	-	-	32.7	Aug-18 17:00	22.6	Aug-18	100%
Temp (°C)			Valleyview	16.8	-	-	30.9	Aug-18 17:00	22.2	Aug-06	100%
Temp (°C)			Sunset House	16.1	-	-	29.5	Aug-20 16:00	23.2	Aug-18	100%
WSPD s (km/hr)			Henry Pirker	9.4	-	-	30.0	Aug-29 18:00	19.1	Aug-09	100%
WSPD s (km/hr)			Evergreen Park	12.2	-	-	47.0	Aug-29 17:00	27.3	Aug-29	100%
WSPD s (km/hr)			Smoky Heights	12.2	-	-	55.0	Aug-08 21:00	25.3	Aug-29	100%
WSPD s (km/hr)			Beaverlodge	11.2	-	-	42.0	Aug-08 20:00	21.0	Aug-29	100%
WSPD s (km/hr)			Valleyview	3.9	-	-	19.0	Aug-29 17:00	8.6	Aug-24	100%
WSPD s (km/hr)			Sunset House	9.9	-	-	25.0	Aug-14 12:00	16.0	Aug-18	100%
WSPD v (km/hr)			Henry Pirker	5.1	-	-	30.0	Aug-29 18:00	18.4	Aug-09	100%
WSPD v (km/hr)			Evergreen Park	7.4	-	-	47.0	Aug-29 17:00	26.3	Aug-29	100%
WSPD v (km/hr)			Smoky Heights	7.2	-	-	54.0	Aug-08 21:00	24.7	Aug-29	100%
WSPD v (km/hr)			Beaverlodge	5.4	-	-	41.0	Aug-08 20:00	20.3	Aug-29	100%
WSPD v (km/hr)			Valleyview	1.6	-	-	18.0	Aug-29 17:00	7.5	Aug-24	100%
WSPD v (km/hr)			Sunset House	4.3	-	-	25.0	Aug-14 12:00	15.4	Aug-18	100%
WDIR			Henry Pirker	W	-	-	-	-	-	-	100%
WDIR			Evergreen Park	W	-	-	-	-	-	-	100%
WDIR			Smoky Heights	WSW	-	-	-	-	-	-	100%
WDIR			Beaverlodge	W	-	-	-	-	-	-	100%
WDIR			Valleyview	W	-	-	-	-	-	-	100%
WDIR			Sunset House	SSW	-	-	-	-	-	-	100%

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on August 7th (SO₂, NO_x, O₃, THC) and August 8th (TRS).

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
NOx/NO/NO ₂	TEI	42C	Zero/Span trouble call August 6 th . Second calibration performed on August 24 th during troubleshoot of Zero/Span instability.
O ₃	TEI	49C	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC	TEI	51-CLT	No operational issues observed.
TRS	TEI	45C/43C	No operational issues observed.
PM _{2.5}	Sharp	5030	No operational issues observed.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Evergreen Park Station

General Station Issues

Routine monthly calibration performed on August 23rd (SO₂ and 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 calibrations were performed on August 24th (SO₂, TRS) and August 27th (PM_{2.5}).

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	Three (3) hours flagged invalid due to negative readings. One (1) 1-hour exceedence was recorded. AE Reference #261997
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 August 16th (SO₂, NO_x, O₃ and PM_{2.5}). Power outage caused a 3 hour station outage on August 22nd and 23rd.

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	One (1) hour flagged invalid due to negative reading.
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 August 28th (SO₂ & H₂S).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
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 August 29th (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	Thirty-one (31) hours flagged invalid due to negative readings.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA

Henry Pirker Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

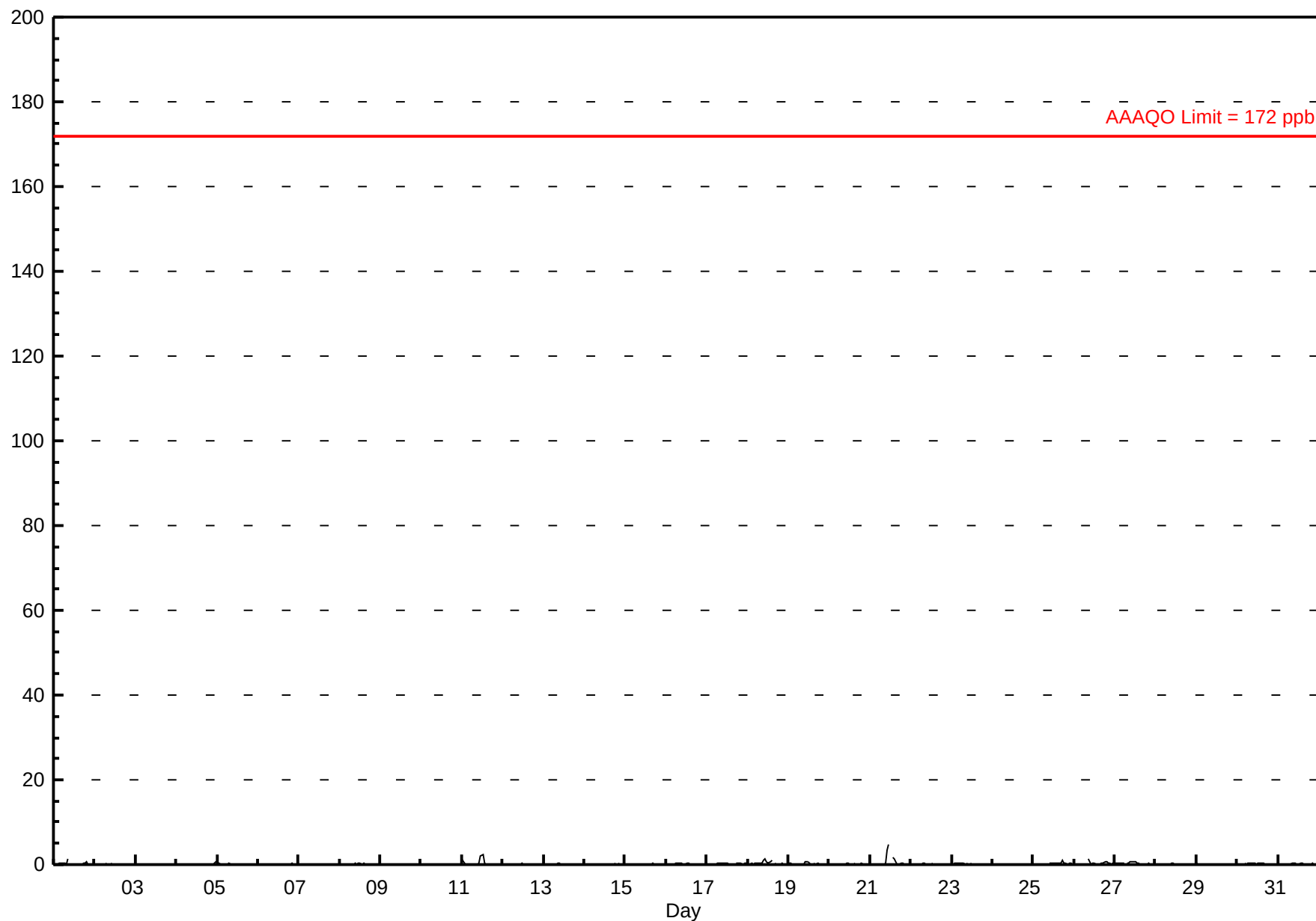
Henry Pirker - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.8 ppb on Aug 21 12:00 Maximum Daily Average: 0.6 ppb on Aug 21																				Hours in Service: 744 Hours of Data: 708						
Minimum Value: 0 ppb on Aug 1 23:00 Minimum Daily Average: 0.0 ppb on Aug 9 Maximum Diurnal Average: 0.4 ppb at hour 12 Minimum Diurnal Average: 0.0 ppb at hour 22 Monthly Average: 0.13 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 1.3																				Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	1.3
2-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
4-Aug	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	0.8
5-Aug	1	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	0.8
6-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
7-Aug	0	0	0	A	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
8-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
9-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
10-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
11-Aug	1	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	A	0	0.3	2.4
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.2
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.3
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.3
15-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.2
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.5
18-Aug	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	A	0	0	0	0	0	0	0	0	0.4	1.4
19-Aug	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.7
20-Aug	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.5
21-Aug	0	0	0	0	0	0	0	0	0	0	3	5	A	2	1	1	0	0	0	0	0	0	0	0	0.6	4.8
22-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
23-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
24-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
25-Aug	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0.2	1.0
26-Aug	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.3	1.2
27-Aug	0	0	0	0	0	0	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
28-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
30-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
31-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.3 0.4 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.1																									Diurnal Average	
1.4 0.4 0.4 0.4 0.4 0.3 0.5 0.4 0.4 1.3 1.0 3.4 4.8 2.4 1.7 1.3 0.7 0.3 1.0 0.6 0.7 0.4 0.3 0.3 0.8																									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

Henry Pirker - August 2012



Hourly Maximums

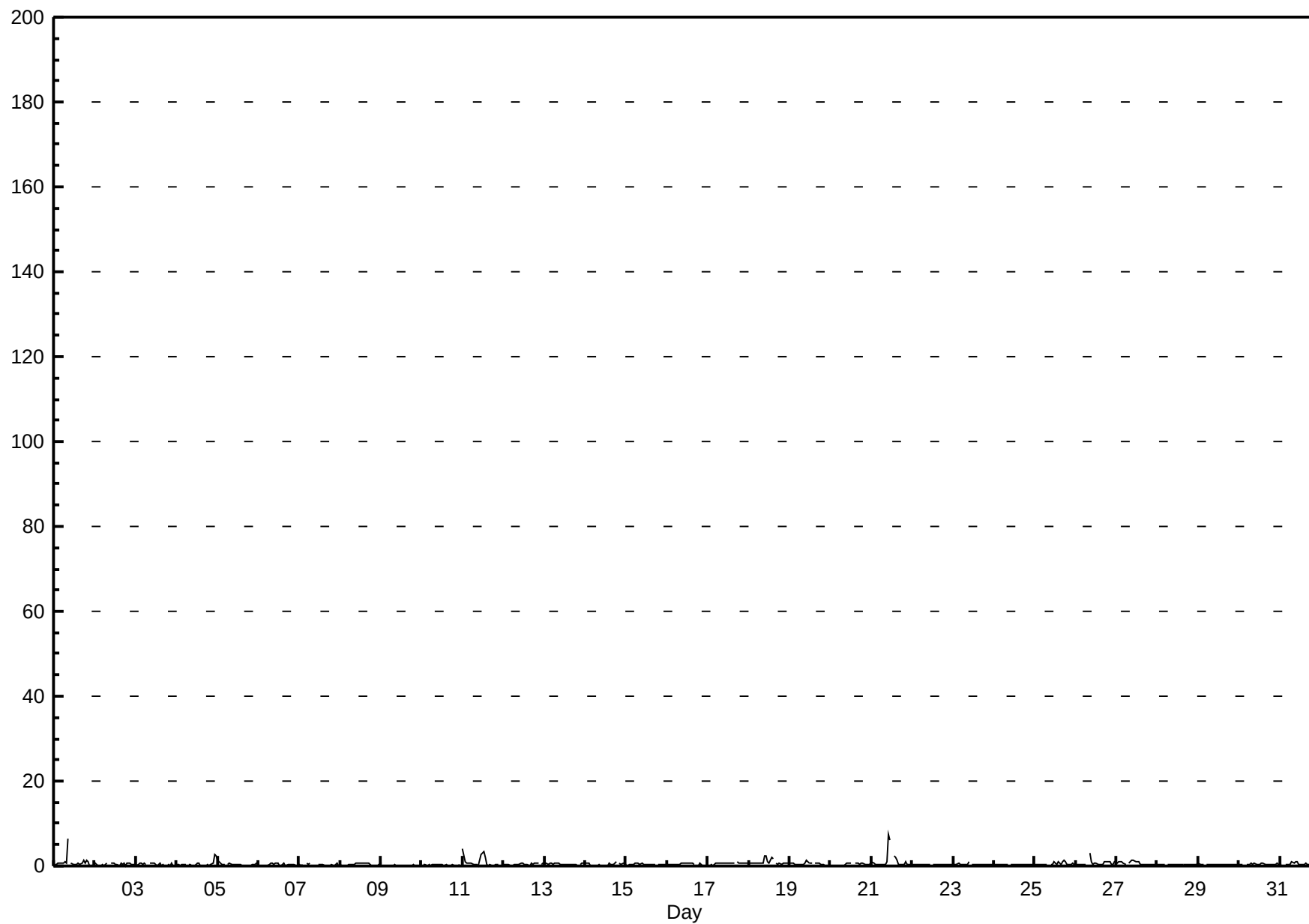
Sulphur Dioxide (SO₂) - ppb

Henry Pirker - August 2012

Maximum Value: 7.4 ppb on Aug 21 11:00																				Maximum Daily Average: 1.3 ppb on Aug 21										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 7 19:00																				Minimum Daily Average: 0.1 ppb on Aug 9										Hours of Data: 708									
Maximum Diurnal Average: 0.9 ppb at hour 11																				Minimum Diurnal Average: 0.3 ppb at hour 6										Hours of Missing Data: 36									
Monthly Average: 0.49 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.7 P ₉₉ = 2.7										Hours of Calibration: 36									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	0	0	1	1	1	1	1	1	7	A	1	0	0	0	1	0	1	1	1	1	1	0	0	0	0.8	6.5													
2-Aug	1	0	0	0	0	0	0	1	A	1	1	1	0	0	0	1	0	1	0	1	1	0	0	0	0.4	0.6													
3-Aug	0	0	1	1	0	1	1	A	1	1	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0.3	0.6													
4-Aug	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	3	2	0.4	2.7													
5-Aug	1	1	0	0	0	A	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0.4	1.5													
6-Aug	0	0	0	0	A	0	0	1	1	1	1	1	0	0	1	1	0	1	1	1	1	1	0	0	0.3	0.5													
7-Aug	1	0	1	A	1	0	1	C	C	C	C	0	0	0	0	0	0	0	0	0	0	1	1	0	0.3	0.6													
8-Aug	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0.3	0.6													
9-Aug	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.1	0.6													
10-Aug	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.5													
11-Aug	4	1	1	1	1	1	1	1	1	0	1	3	3	2	0	0	0	0	0	0	0	0	A	0	0.9	4.0													
12-Aug	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	1	0	1	1	1	A	0	1	0.4	0.5													
13-Aug	0	1	0	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	1	1	1	0.4	0.5													
14-Aug	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	A	1	0	1	1	0.4	1.2													
15-Aug	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.6													
16-Aug	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	A	0	1	0	0	0	0	0.4	0.7													
17-Aug	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.6	1.0													
18-Aug	1	1	1	1	1	1	1	1	1	2	2	1	1	2	2	A	1	0	1	0	1	1	1	1	0.9	2.3													
19-Aug	1	1	1	0	0	0	0	0	0	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0.5	1.3													
20-Aug	0	0	0	0	0	0	0	0	0	1	1	1	1	A	1	1	1	0	1	1	0	0	0	0	0.3	0.8													
21-Aug	1	1	0	0	0	0	0	0	0	1	7	6	A	2	2	1	0	0	0	0	1	0	0	0	1.3	7.4													
22-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4													
23-Aug	0	0	0	1	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9													
24-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4													
25-Aug	0	0	0	0	0	0	0	0	A	0	0	1	1	0	1	0	1	1	1	0	0	0	1	0	0.6	1.5													
26-Aug	0	0	0	0	0	0	0	A	3	1	0	1	1	0	0	0	0	1	1	1	1	0	0	1	0.7	3.0													
27-Aug	1	1	1	1	1	0	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.7	1.4													
28-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4													
29-Aug	1	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	0.6													
30-Aug	0	0	0	A	0	0	0	1	0	1	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0.5	0.7													
31-Aug	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0.5	0.9													
0.6 0.4 0.4 0.4 0.4 0.3 0.4 0.5 0.8 0.6 0.9 0.8 0.6 0.6 0.5 0.4 0.3 0.5 0.4 0.4 0.4 0.4 0.4 0.5																									Diurnal Average														
4.0 1.0 0.9 0.9 0.7 0.7 1.0 0.9 6.5 2.3 7.4 6.0 3.5 2.5 2.0 1.5 1.0 1.5 1.2 1.2 1.0 0.7 2.7 2.5																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Maximums

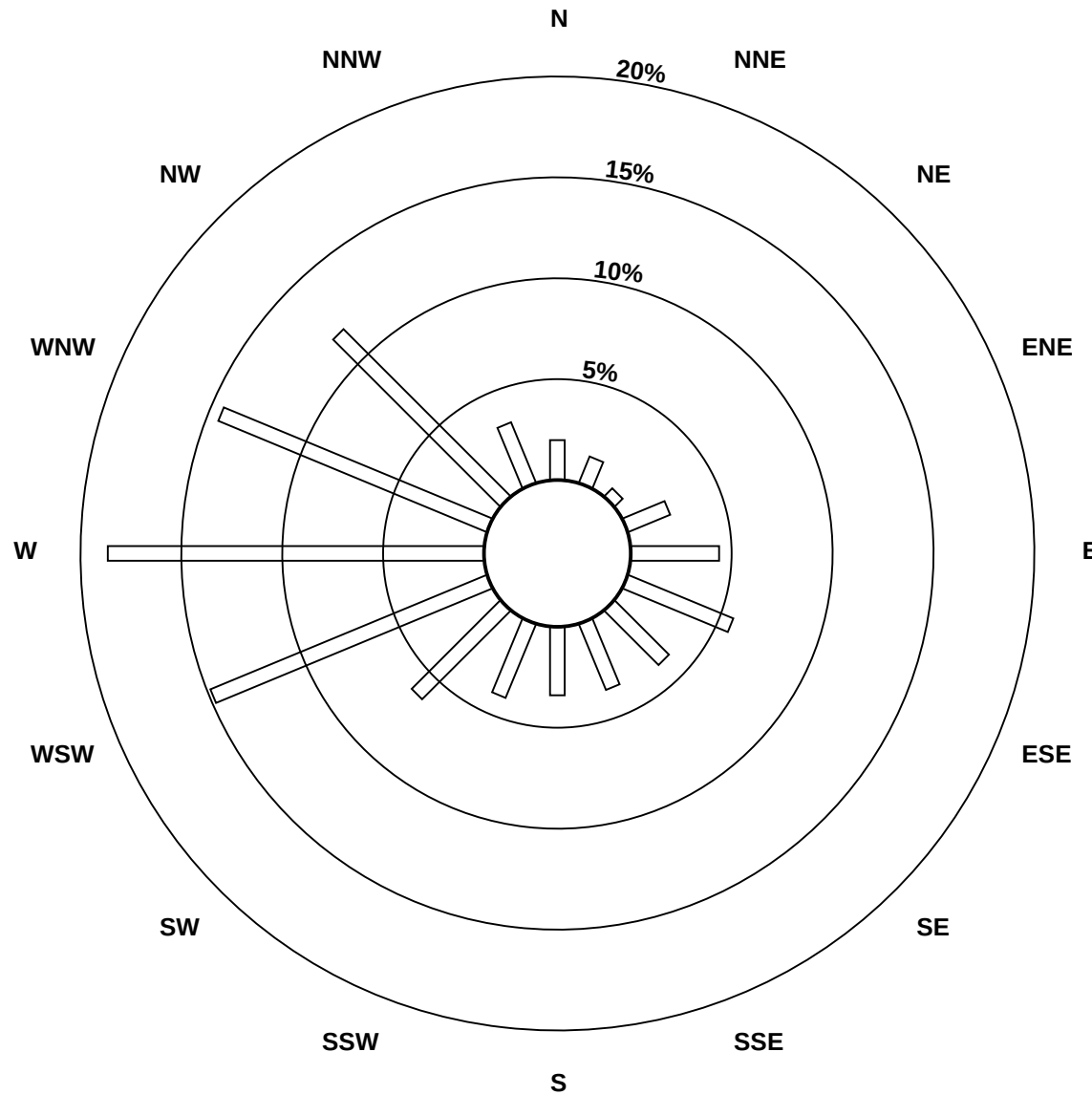
Sulphur Dioxide (SO₂) - ppb
Henry Pirker - August 2012



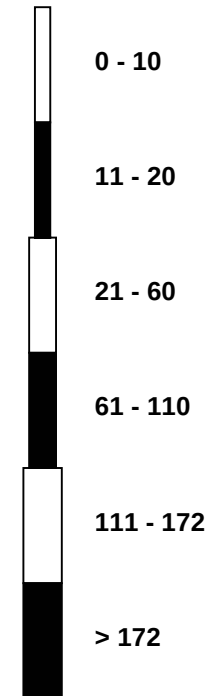
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - August 2012

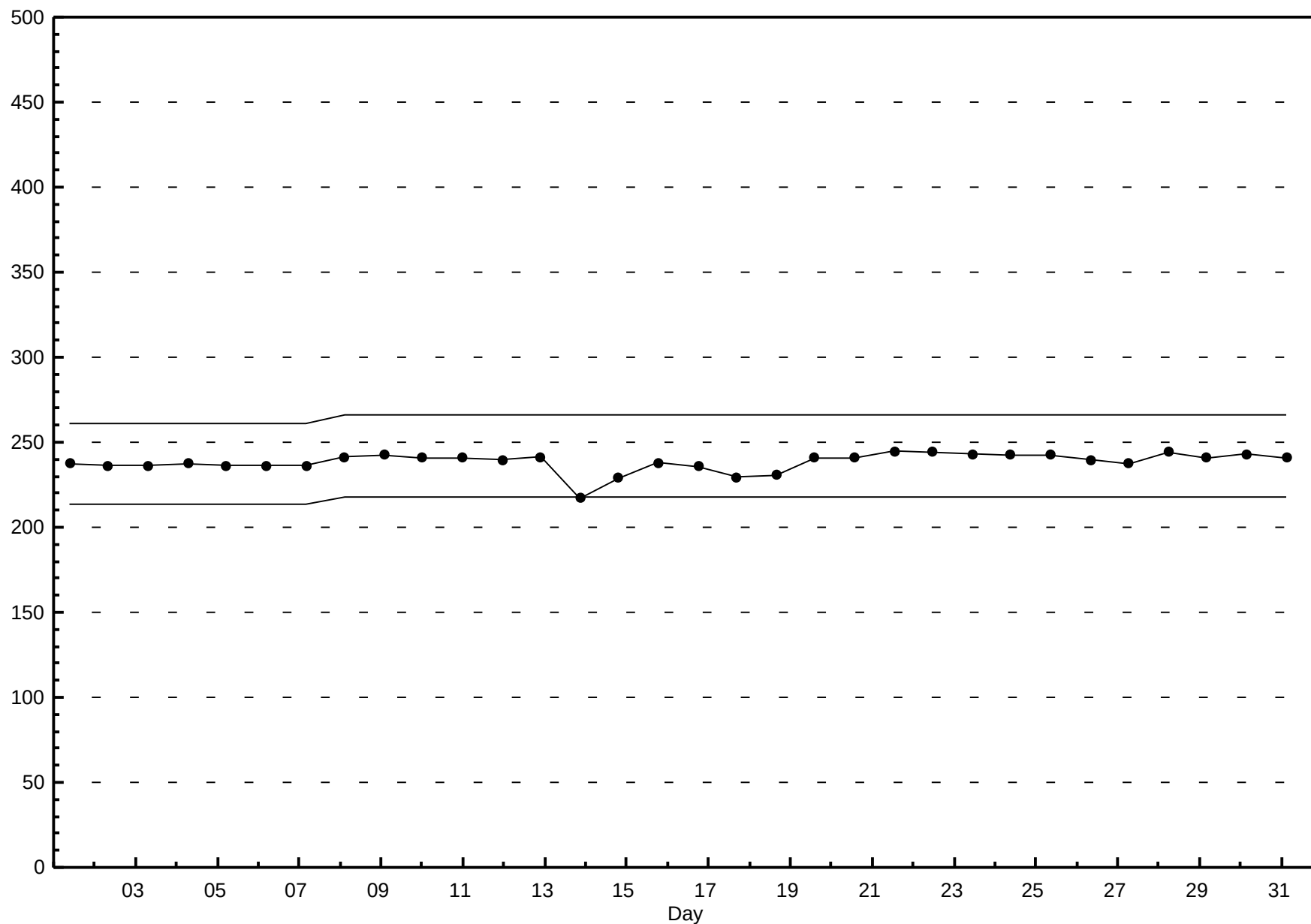


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - August 2012



Hourly Averages

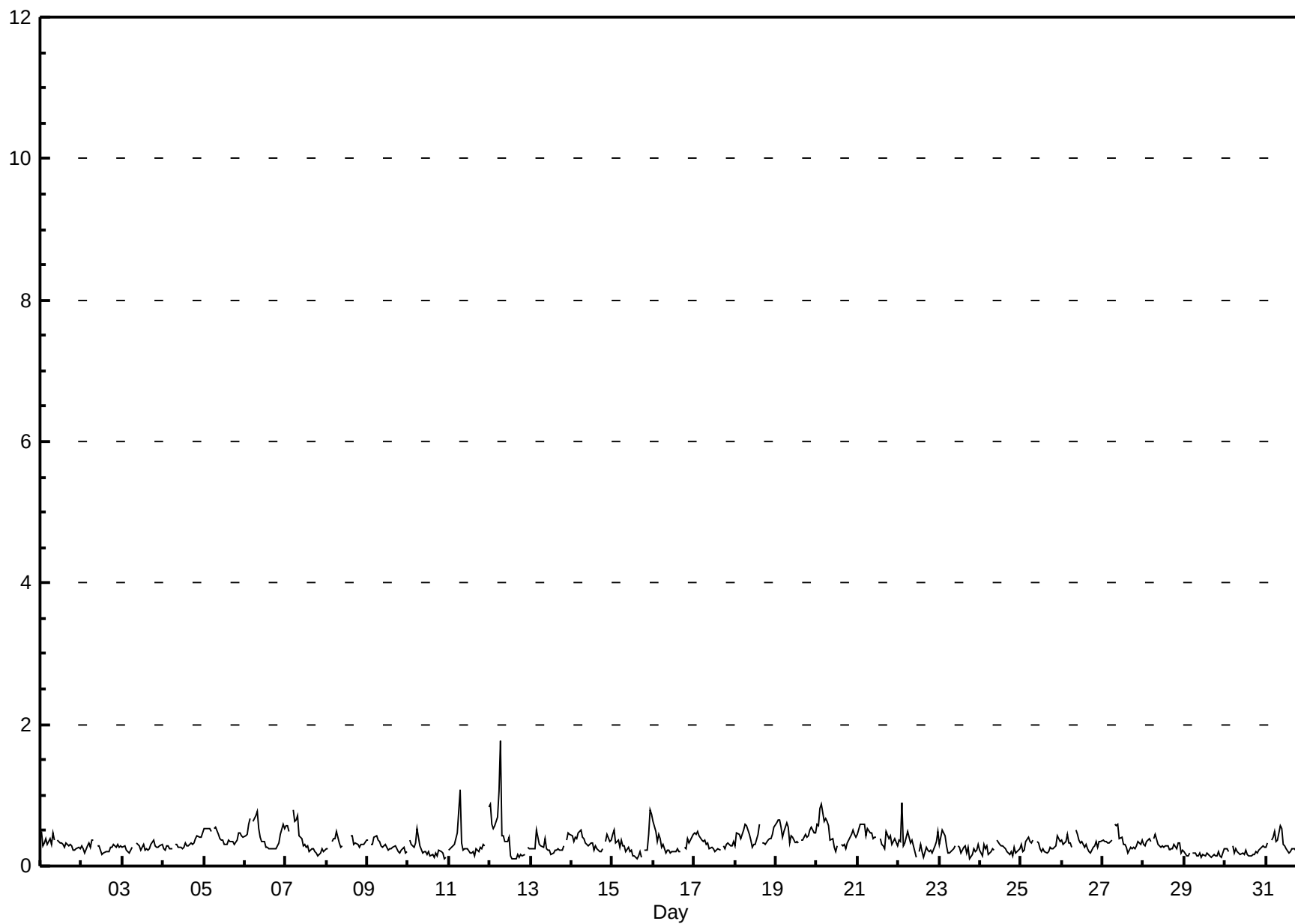
Total Reduced Sulphur (TRS) - ppb

Henry Pirker - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 1.8 ppb on Aug 12 07:00																				Maximum Daily Average: 0.5 ppb on Aug 19		Hours of Data: 708				
Minimum Value: 0 ppb on Aug 12 14:00																				Minimum Daily Average: 0.2 ppb on Aug 29		Hours of Missing Data: 36				
Maximum Diurnal Average: 0.5 ppb at hour 7																				Minimum Diurnal Average: 0.2 ppb at hour 16		Hours of Calibration: 36				
Monthly Average: 0.32 ppb																				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 = 0.8		Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
2-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
4-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
5-Aug	1	1	1	1	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
6-Aug	0	0	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.8
7-Aug	1	1	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
8-Aug	0	0	A	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.3	0.5
9-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
10-Aug	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.5
11-Aug	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.3	1.1
12-Aug	1	1	1	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	1.8
13-Aug	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.5
14-Aug	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.5
15-Aug	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0.3	0.8
16-Aug	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.6
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.5
18-Aug	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	1	0.4	0.6
19-Aug	1	1	1	1	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0.5	0.7
20-Aug	1	1	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0.5	0.9
21-Aug	0	1	1	1	1	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
22-Aug	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
23-Aug	0	0	1	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
24-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
25-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
26-Aug	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
27-Aug	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
28-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
30-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
31-Aug	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
0.4 0.4 0.4 0.4 0.4 0.4 0.5 0.4 0.3 0.3 0.3 0.3 0.2 0.2 0.3 0.2 0.2 0.2 0.3 0.3 0.3 0.3 0.3 0.4																								Diurnal Average		
0.9 0.7 0.9 0.9 0.8 1.0 1.8 0.8 0.6 0.6 0.4 0.4 0.4 0.4 0.6 0.4 0.4 0.5 0.4 0.4 0.5 0.6 0.8 0.8																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Henry Pirker - August 2012



Hourly Maximums

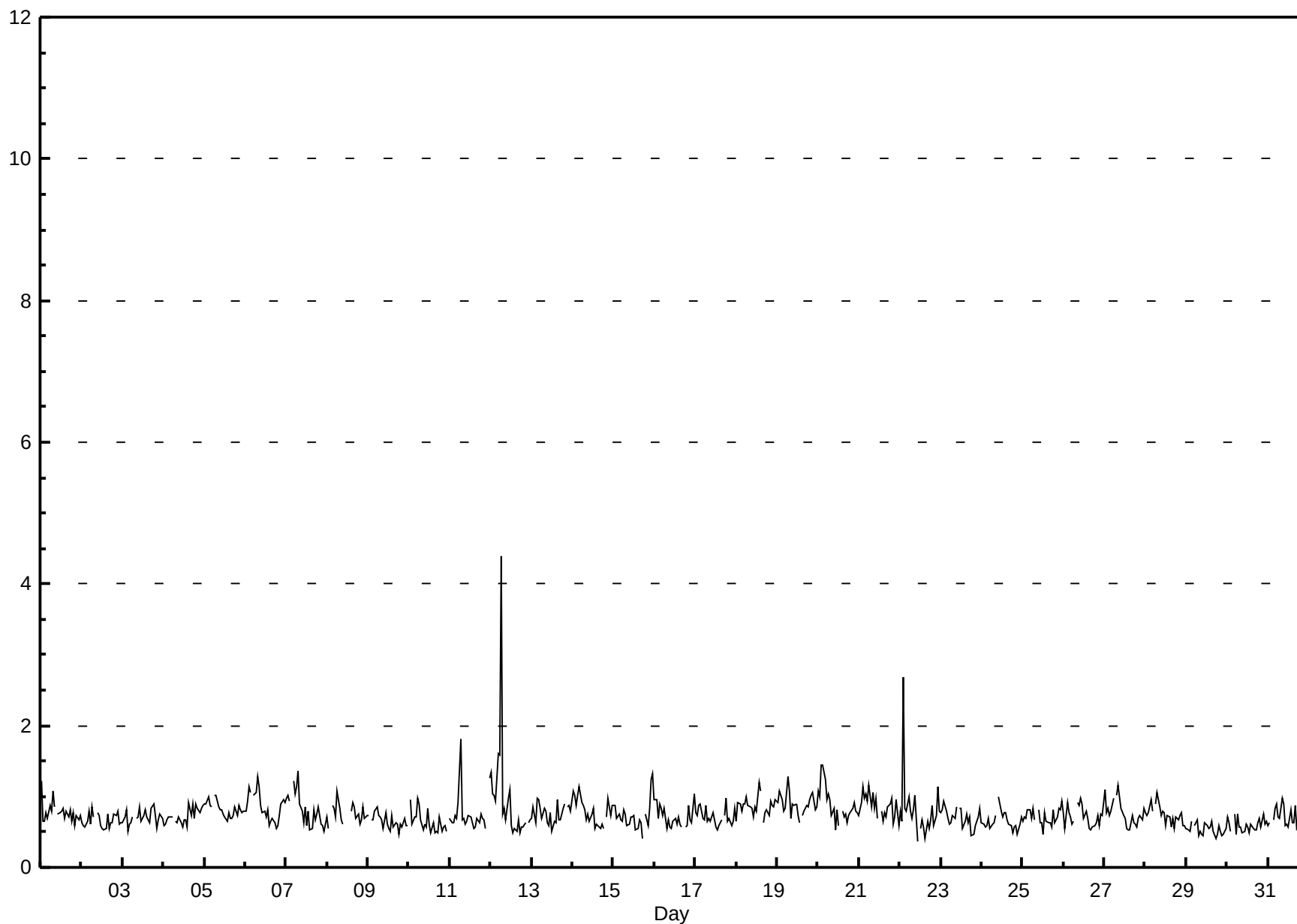
Total Reduced Sulphur (TRS) - ppb

Henry Pirker - August 2012

Maximum Value: 4.4 ppb on Aug 12 07:00																				Maximum Daily Average: 1.0 ppb on Aug 12										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 22 11:00																				Minimum Daily Average: 0.5 ppb on Aug 29										Hours of Data: 708									
Maximum Diurnal Average: 1.0 ppb at hour 7																				Minimum Diurnal Average: 0.6 ppb at hour 18										Hours of Missing Data: 36									
Monthly Average: 0.75 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.6 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 1.0 P ₉₉ = 1.4										Hours of Calibration: 36									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2													
2-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8													
3-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
4-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
5-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0													
6-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3													
7-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4													
8-Aug	1	1	A	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	1	0.8	1.1													
9-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.6	0.9													
10-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	1	1	1	A	0.6	1.0													
11-Aug	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.8													
12-Aug	1	1	1	1	2	2	4	1	1	1	1	1	0	1	1	1	0	1	1	1	1	A	1	1	1.0	4.4													
13-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.0													
14-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.1													
15-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	0.7	1.3													
16-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.0													
17-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.0													
18-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.2													
19-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.3													
20-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	1.4													
21-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2													
22-Aug	1	1	3	1	1	1	1	1	1	1	0	A	1	1	1	0	1	1	1	1	1	1	1	1	0.8	2.7													
23-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	1	1	1	1	0.7	0.9													
24-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	0	1	1	0.7	1.0													
25-Aug	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9													
26-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0													
27-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2													
28-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1													
29-Aug	1	1	0	1	A	1	1	0	1	0	0	1	1	1	1	1	1	0	0	1	1	0	0	1	0.5	0.7													
30-Aug	1	1	1	A	1	0	1	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	0.8													
31-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0													
0.8 0.8 0.9 0.8 0.8 0.8 1.0 0.8 0.8 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.6 0.7 0.7 0.7 0.7 0.7 0.8																									Diurnal Average														
1.3 1.1 2.7 1.4 1.6 1.6 4.4 1.4 1.2 1.0 1.0 1.1 0.8 1.2 1.1 1.0 0.9 0.9 1.0 1.0 1.0 1.0 1.2 1.3																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Maximums

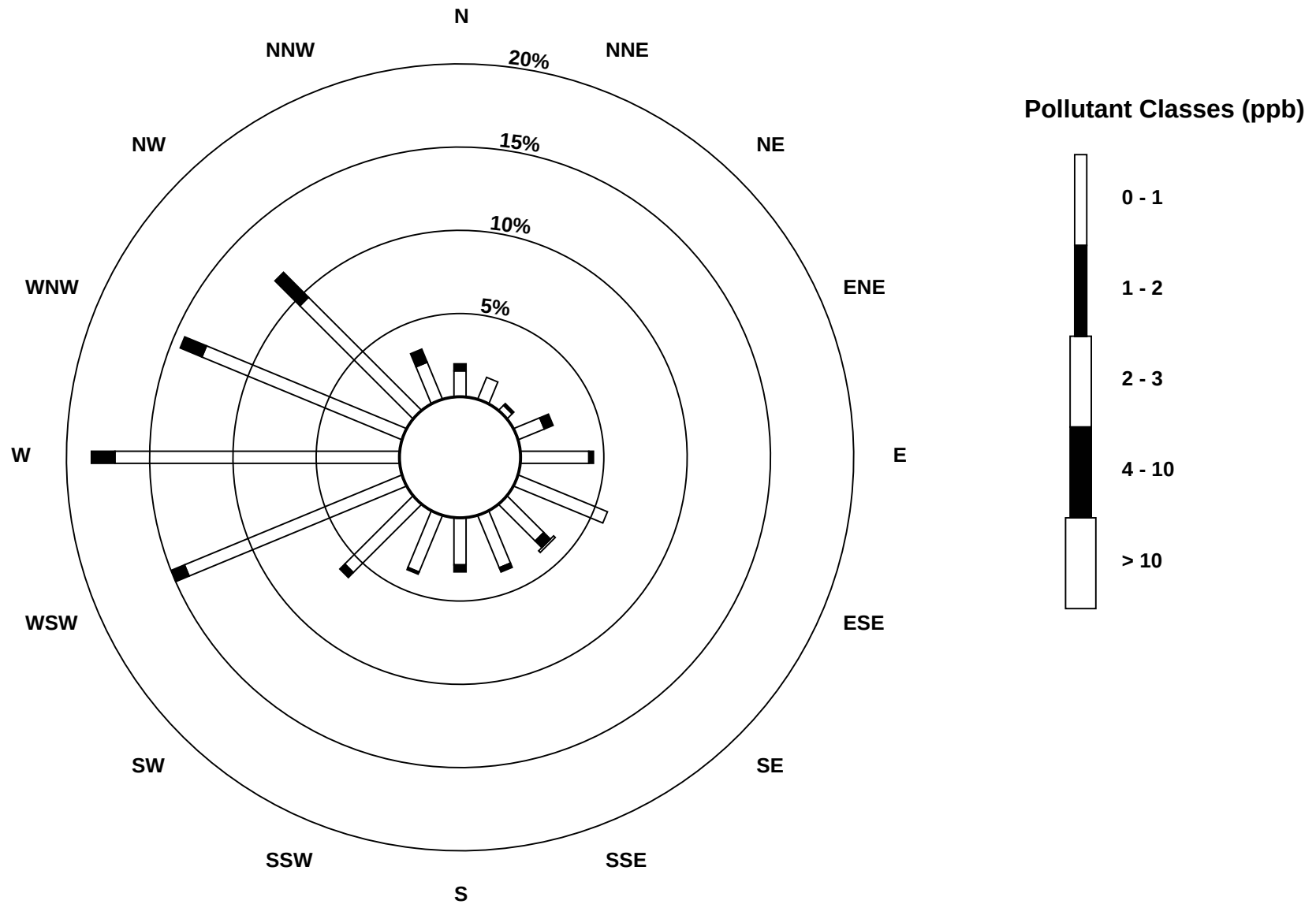
Total Reduced Sulphur (TRS) - ppb
Henry Pirker - August 2012



Pollutant Rose

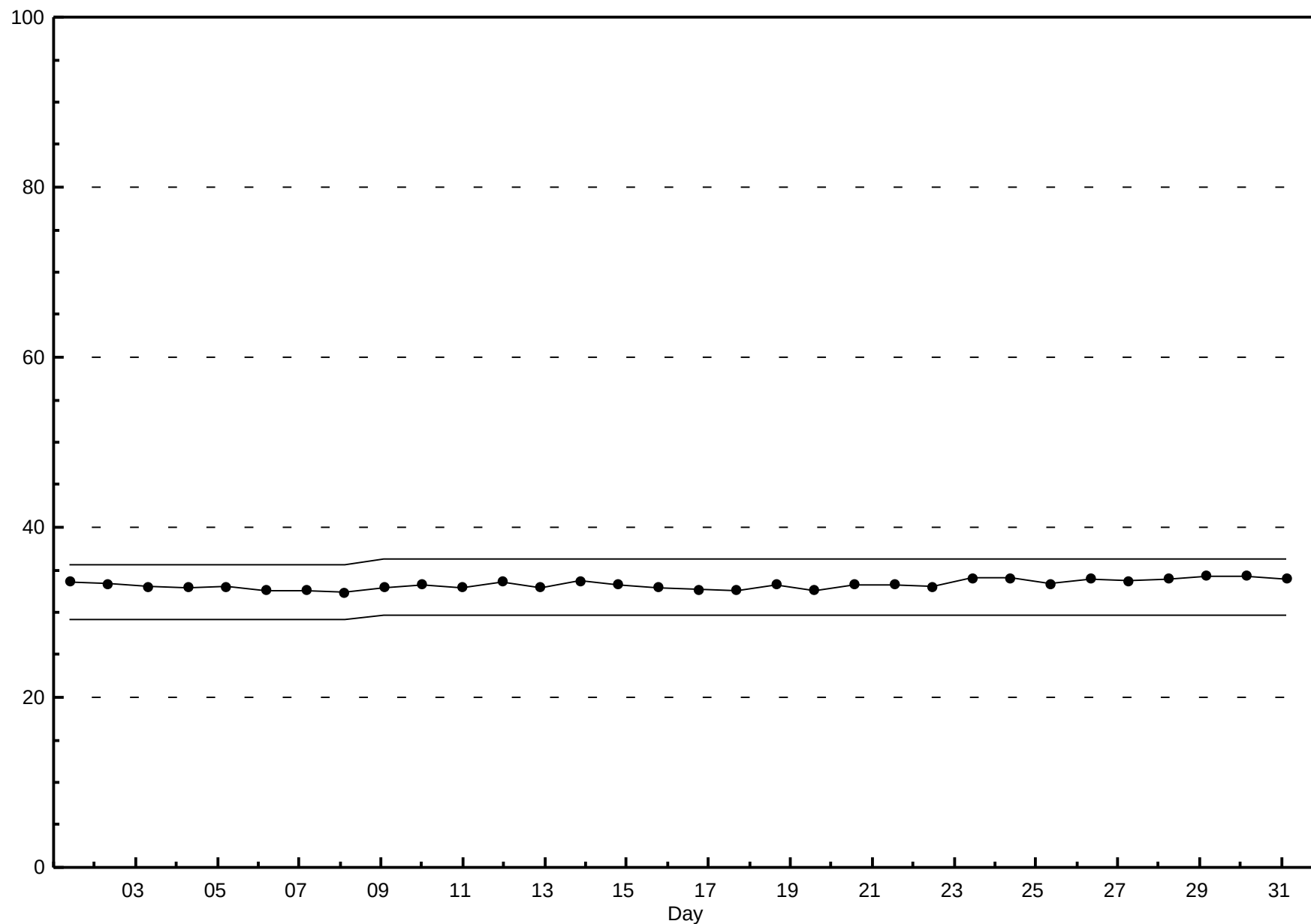
Total Reduced Sulphur (TRS) - ppb

Henry Pirker - August 2012



Span Responses

Total Reduced Sulphur (TRS)
Henry Pirker - August 2012



Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

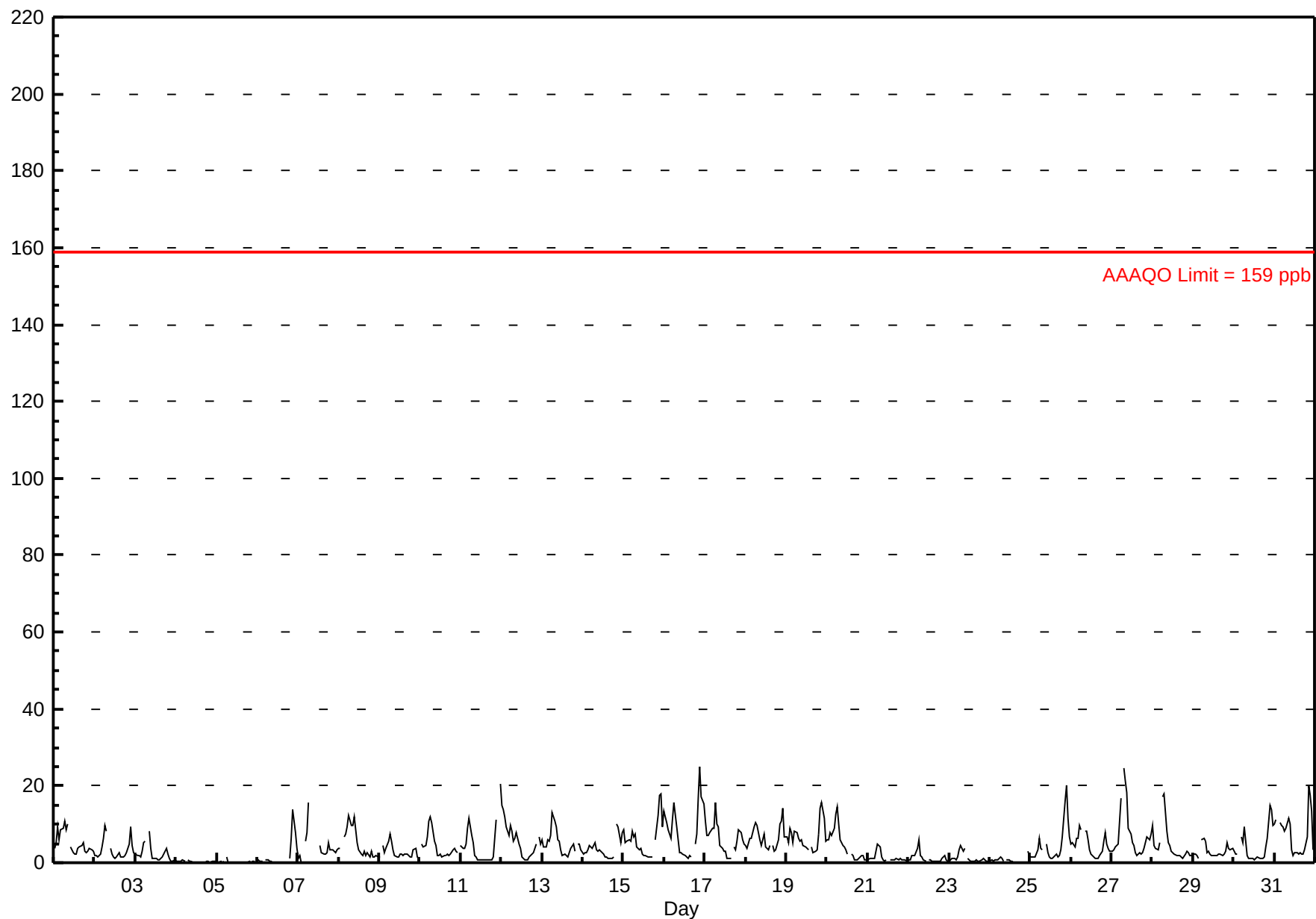
Henry Pirker - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 25.0 ppb on Aug 16 22:00 Maximum Daily Average: 8.2 ppb on Aug 16																				Hours in Service: 744 Hours of Data: 696						
Minimum Value: 0 ppb on Aug 6 11:00 Minimum Daily Average: 0.2 ppb on Aug 5 Maximum Diurnal Average: 8.5 ppb at hour 7 Minimum Diurnal Average: 1.5 ppb at hour 15 Monthly Average: 4.14 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.5 Q ₁ = 1.2 Median = 2.8 Q ₃ = 5.8 P ₉₀ = 9.6 P ₉₉ = 17.7																				Hours of Missing Data: 48 Hours of Calibration: 45 Percent Operational Time: 99.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	4	5	9	6	9	9	11	9	10	A	4	2	2	2	4	4	4	5	3	3	3	4	3	3	5.2	10.9
2-Aug	2	2	2	2	4	6	10	8	A	4	2	1	1	2	3	2	2	2	2	3	5	9	5	3	3.5	9.7
3-Aug	2	2	2	2	3	5	6	A	8	4	1	1	1	1	1	1	1	2	4	2	1	1	0	1	2.3	8.3
4-Aug	0	0	0	0	1	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
5-Aug	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.3
6-Aug	1	1	0	0	A	1	1	1	0	0	0	0	0	0	0	0	M	M	M	1	6	14	8	4	1.9	13.8
7-Aug	1	2	0	A	6	8	16	C	C	C	C	C	C	5	3	2	2	3	5	3	3	3	3	3	--	15.6
8-Aug	4	4	A	7	8	9	12	10	10	12	9	5	4	2	2	3	2	3	2	3	2	2	2	2	5.0	12.1
9-Aug	2	A	4	3	4	6	7	6	3	2	2	2	2	2	2	2	2	2	1	2	3	4	2	1	2.8	7.4
10-Aug	A	5	4	5	7	11	12	10	6	4	2	2	2	2	2	2	2	2	2	4	4	3	3	A	4.3	11.8
11-Aug	4	4	4	5	9	12	7	5	2	1	1	1	1	1	1	1	1	1	1	1	6	11	A	20	4.3	20.4
12-Aug	15	14	12	9	7	10	8	5	6	8	5	4	1	1	1	1	2	2	2	3	5	A	7	5	5.7	14.9
13-Aug	6	4	4	6	5	7	13	11	9	6	6	3	2	2	2	2	3	4	5	3	A	5	5	4	5.1	13.1
14-Aug	2	3	3	3	5	4	4	5	3	3	3	3	2	2	2	1	1	1	2	A	10	9	5	8	3.7	10.0
15-Aug	8	5	5	6	6	8	7	8	4	3	4	2	2	2	2	1	2	1	A	6	12	18	18	9	6.1	17.8
16-Aug	14	10	9	7	7	11	16	9	6	3	3	2	2	1	1	2	1	A	5	8	17	25	17	15	8.2	25.0
17-Aug	11	7	7	8	9	9	16	10	9	4	4	3	3	1	1	1	A	4	3	6	8	8	6	5	6.2	15.8
18-Aug	4	4	6	6	8	9	10	10	6	4	6	7	4	3	5	A	4	3	3	6	10	11	14	7	6.6	14.3
19-Aug	7	5	9	8	5	8	8	6	6	6	4	4	4	3	A	4	3	3	3	7	14	16	12	5	6.6	15.7
20-Aug	6	6	8	7	9	13	15	10	6	5	4	3	2	A	2	2	1	1	1	1	2	2	1	1	4.6	14.5
21-Aug	1	1	1	1	1	3	5	4	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.3	4.8
22-Aug	1	1	2	2	2	4	6	2	1	1	0	A	1	1	0	1	0	0	0	0	1	2	1	0	1.3	6.1
23-Aug	0	1	1	1	1	2	3	4	3	4	A	1	1	1	1	1	1	1	0	1	1	1	1	0	1.2	4.5
24-Aug	0	1	0	1	1	1	2	1	1	A	1	1	1	0	0	C	C	C	C	C	C	C	3	2	--	3.2
25-Aug	2	1	1	1	3	6	4	4	A	5	3	2	1	1	1	2	1	2	3	7	16	20	12	7	4.6	20.2
26-Aug	5	5	4	6	6	10	8	A	8	8	6	3	2	1	1	1	1	2	3	6	8	5	4	3	4.7	9.8
27-Aug	3	4	4	5	5	17	A	25	21	18	9	7	5	5	2	2	3	2	3	4	5	7	6	7	7.3	24.7
28-Aug	10	4	4	3	5	A	17	18	8	5	4	3	3	2	2	2	2	2	1	2	3	3	2	2	4.7	17.9
29-Aug	2	2	2	1	A	6	6	6	3	3	2	2	2	2	2	2	2	2	2	3	5	4	3	4	3.0	6.2
30-Aug	3	2	2	A	7	5	9	6	2	1	1	1	1	1	1	1	1	1	2	4	6	15	14	10	4.2	15.0
31-Aug	10	11	A	10	10	9	8	9	11	10	3	2	3	2	2	3	2	2	3	7	20	17	13	3	7.5	20.2
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration M - Maintenance 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 - August 2012



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

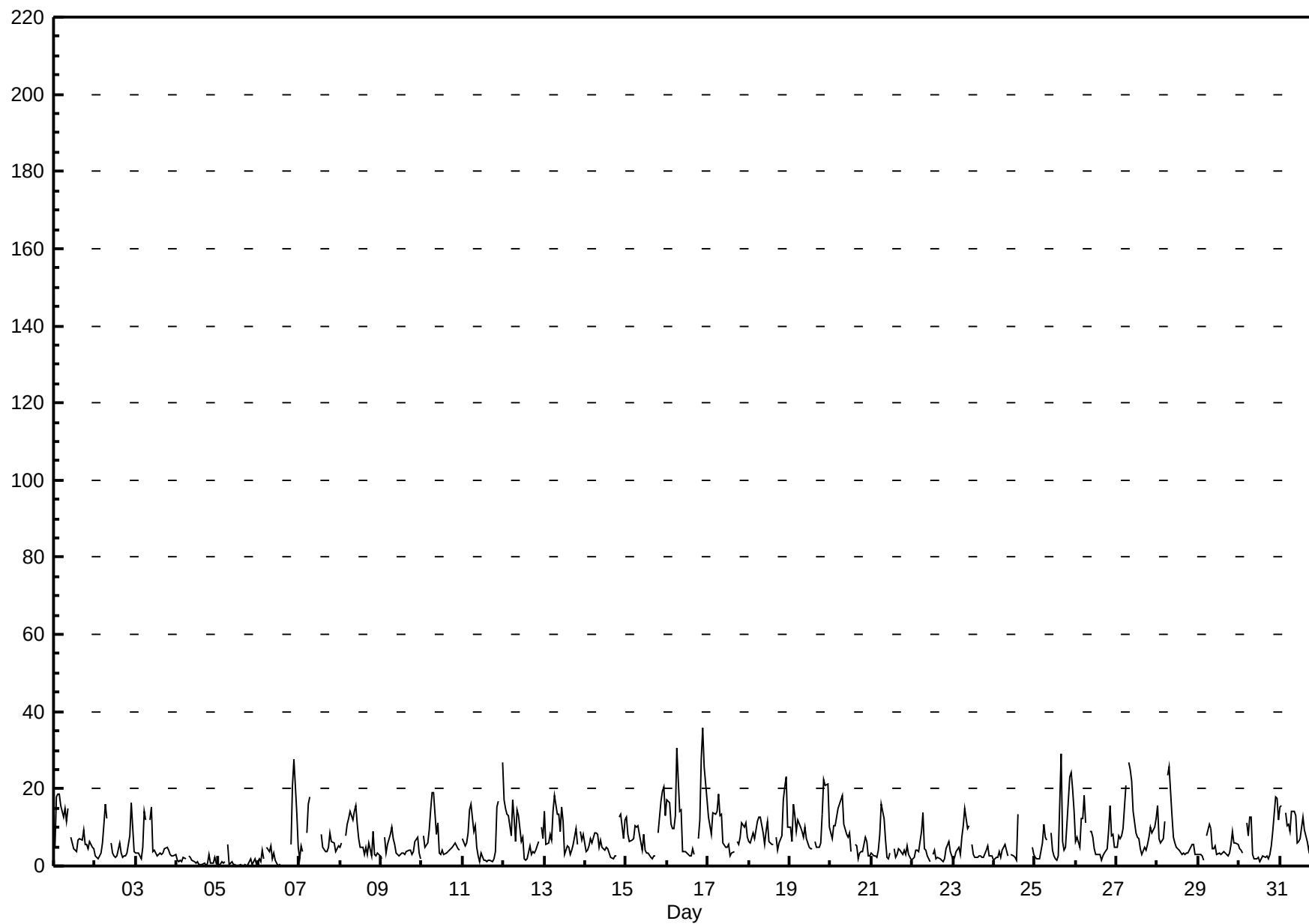
Henry Pirker - August 2012

Maximum Value: 35.6 ppb on Aug 16 22:00																				Maximum Daily Average: 12.5 ppb on Aug 16					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 6 12:00																				Minimum Daily Average: 0.8 ppb on Aug 5					Hours of Data: 696	
Maximum Diurnal Average: 13.1 ppb at hour 7																				Minimum Diurnal Average: 3.4 ppb at hour 13					Hours of Missing Data: 48	
Monthly Average: 6.95 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 1.9 Q ₁ = 3.0 Median = 5.0 Q ₃ = 9.5 P ₉₀ = 14.9 P ₉₉ = 26.6					Hours of Calibration: 45	
																									Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	5	18	19	18	16	13	15	12	15	A	7	4	4	4	7	7	7	9	5	5	4	6	5	4	9.2	18.8
2-Aug	2	2	2	3	6	11	16	12	A	6	3	2	2	2	6	4	2	2	3	4	8	16	10	4	5.7	16.4
3-Aug	3	4	3	2	5	14	12	A	12	15	4	4	3	3	3	3	3	5	5	4	3	2	3	3	5.1	15.2
4-Aug	2	1	1	1	2	2	A	3	2	2	1	1	1	0	0	0	1	0	1	3	1	1	2	1	1.2	2.9
5-Aug	1	0	1	1	1	A	6	1	1	1	0	0	0	1	0	0	1	0	0	2	1	1	2	1	0.8	5.6
6-Aug	2	1	4	2	A	5	4	5	2	3	1	0	0	0	0	0	M	M	M	5	21	27	14	5	5.1	27.5
7-Aug	2	5	4	A	9	16	18	C	C	C	C	C	C	8	5	4	4	5	9	6	6	4	5	5	--	17.8
8-Aug	5	6	A	8	11	12	14	12	14	16	11	7	5	5	3	5	3	6	2	9	3	2	3	2	7.2	15.5
9-Aug	2	A	8	4	5	8	10	7	6	4	3	3	3	4	3	4	4	4	3	4	6	8	4	2	4.6	10.0
10-Aug	A	8	5	6	10	15	19	19	8	11	3	3	4	3	3	4	4	4	5	6	5	4	4	A	7.0	18.9
11-Aug	7	5	6	9	15	16	9	11	5	3	1	4	2	2	1	2	1	1	2	4	15	17	A	27	7.0	26.8
12-Aug	17	15	14	13	8	17	12	7	14	13	7	8	2	2	2	5	3	4	3	4	6	A	10	7	8.4	17.2
13-Aug	14	6	6	8	7	14	18	14	14	9	15	11	3	5	5	3	4	6	10	6	A	9	7	8	8.7	18.3
14-Aug	4	4	5	7	6	9	9	8	5	7	5	4	5	5	3	2	2	3	3	A	13	13	7	12	6.1	13.4
15-Aug	13	8	7	7	7	11	10	11	8	4	8	4	4	3	2	2	3	3	A	8	17	20	21	13	8.3	20.5
16-Aug	17	17	11	10	10	13	30	14	14	4	4	4	3	3	3	5	3	A	7	12	28	36	26	17	12.5	35.6
17-Aug	13	11	8	14	13	14	19	13	14	6	5	5	6	3	3	4	A	6	6	8	11	10	11	8	9.1	18.8
18-Aug	7	6	9	7	10	12	13	13	9	6	9	12	6	5	6	A	8	4	6	8	17	21	23	10	9.7	23.0
19-Aug	10	7	16	13	9	12	10	9	8	10	7	5	4	5	A	7	5	5	6	13	22	21	21	10	10.2	22.3
20-Aug	9	7	11	11	15	16	17	18	11	8	7	9	4	A	6	5	2	3	4	4	7	6	3	3	8.0	18.1
21-Aug	3	2	3	2	4	8	16	12	7	2	2	3	A	4	2	3	4	4	3	4	3	5	3	1	4.5	16.2
22-Aug	2	2	4	4	4	9	14	4	4	3	1	A	3	4	2	2	2	1	1	2	5	6	4	3	3.8	13.6
23-Aug	2	2	4	5	3	7	10	15	10	10	A	6	3	2	2	3	3	2	2	4	5	3	3	3	4.7	14.9
24-Aug	2	2	2	4	2	4	5	4	3	A	3	3	2	2	13	C	C	C	C	C	C	C	5	3	--	13.3
25-Aug	2	2	2	2	6	11	7	7	A	8	4	2	2	1	3	29	6	4	5	11	23	24	20	14	8.6	29.0
26-Aug	6	7	5	12	12	18	11	A	9	9	7	4	3	3	3	1	2	3	4	9	16	8	8	5	7.4	18.3
27-Aug	5	8	7	8	10	21	A	27	25	22	14	8	7	7	5	3	5	4	5	7	10	8	10	12	10.4	26.8
28-Aug	16	7	6	7	11	A	24	26	13	7	6	5	4	4	3	3	3	3	3	5	5	5	3	3	7.6	25.7
29-Aug	3	3	2	1	A	8	11	10	4	4	5	3	3	3	4	4	3	2	3	5	9	6	6	6	4.8	10.8
30-Aug	5	4	4	A	11	8	13	13	3	2	2	2	1	2	2	2	2	2	3	5	9	18	18	12	6.2	17.8
31-Aug	15	16	A	14	10	11	9	14	14	13	6	6	7	13	9	8	6	4	6	18	29	22	23	5	12.1	28.8
6.5 6.2 6.1 7.0 8.2 11.5 13.1 11.3 9.0 7.4 5.3 4.6 3.4 3.6 3.7 4.3 3.4 3.6 4.1 6.4 10.6 11.4 9.3 7.0																									Diurnal Average	
17.0 17.8 18.8 18.5 15.8 21.0 30.5 26.8 24.9 22.0 15.4 11.5 7.5 12.7 13.3 29.0 7.5 9.2 9.6 17.5 28.8 35.6 25.9 26.8																									Diurnal Maximum	
C - Calibration M - Maintenance A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

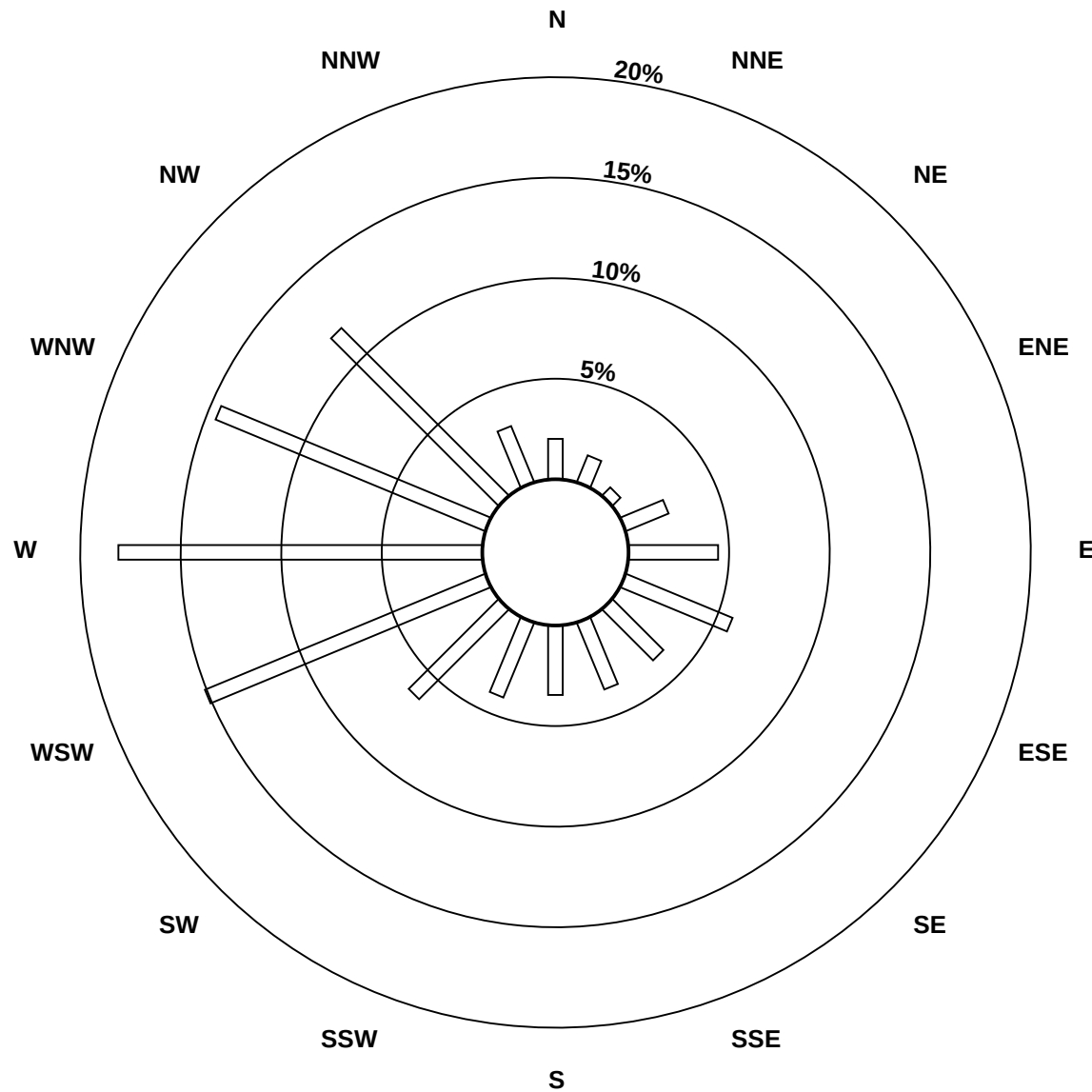
Henry Pirker - August 2012



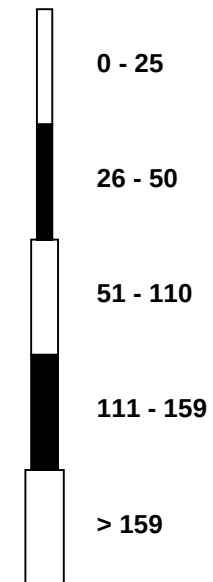
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - August 2012

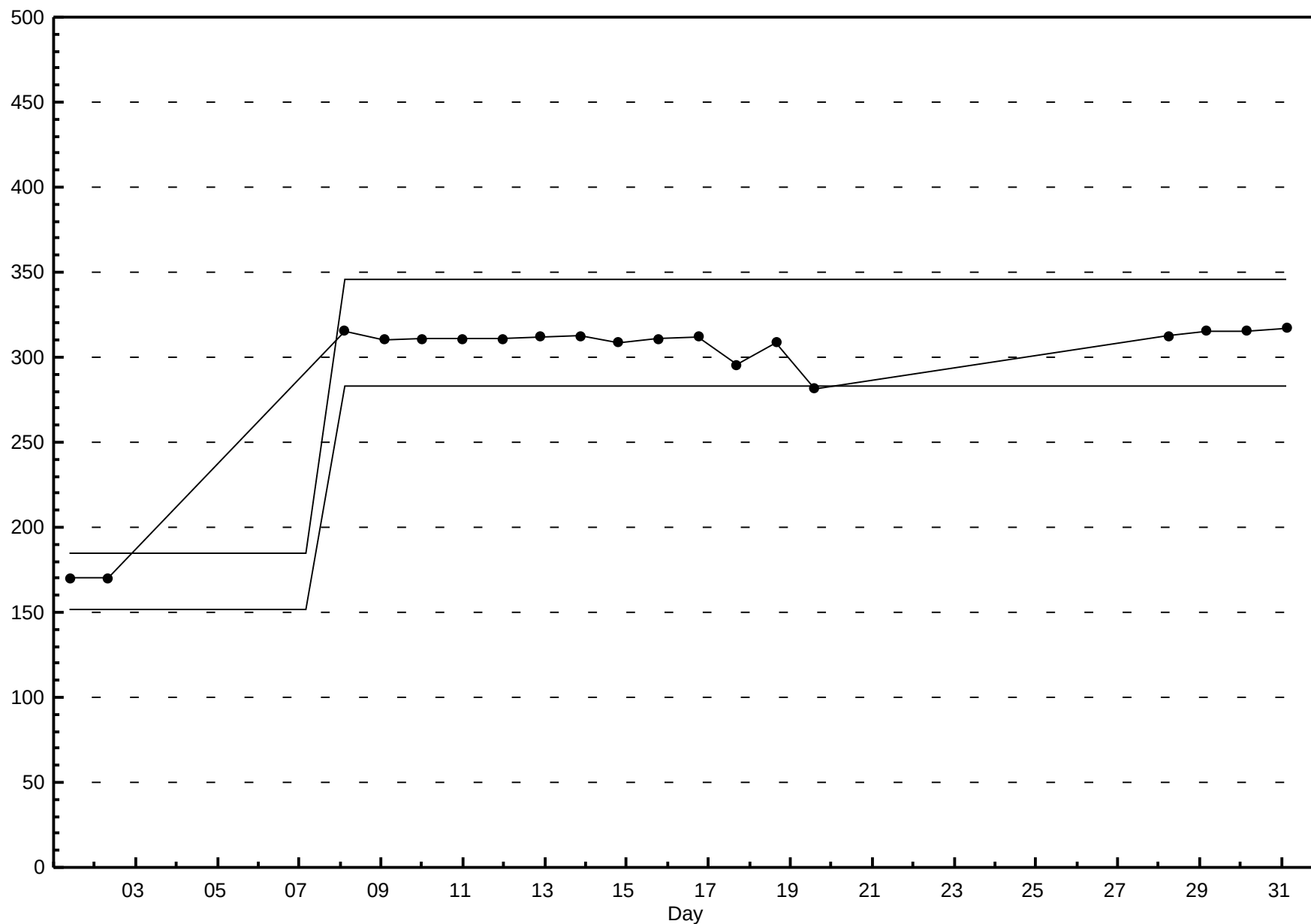


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Henry Pirker - August 2012



Hourly Averages

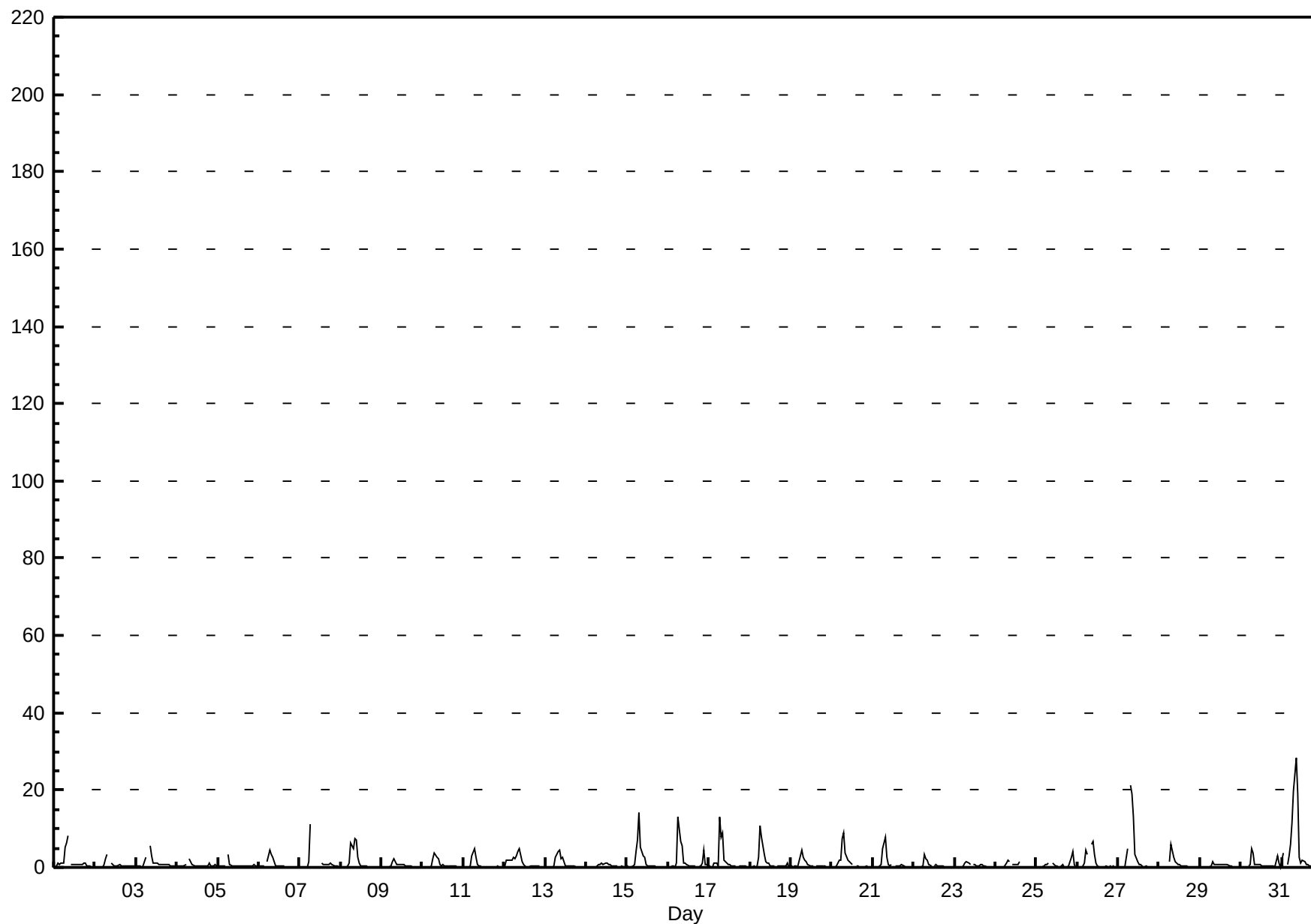
Nitrogen Oxide (NO) - ppb

Henry Pirker - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.2 ppb on Aug 31 09:00 Maximum Daily Average: 4.6 ppb on Aug 31																				Hours in Service: 744 Hours of Data: 697 Hours of Missing Data: 47 Hours of Calibration: 44 Percent Operational Time: 99.6							
Minimum Value: 0 ppb on Aug 1 01:00 Minimum Daily Average: 0.4 ppb on Aug 29 Maximum Diurnal Average: 5.4 ppb at hour 8 Minimum Diurnal Average: 0.2 ppb at hour 24 Monthly Average: 1.13 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.4 Q ₃ = 0.9 P ₉₀ = 2.6 P ₉₉ = 12.6																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0	0	1	1	1	1	5	6	8	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1.4	8.2	
2-Aug	0	0	0	0	0	1	2	3	A	1	1	0	1	1	1	1	1	0	0	0	0	1	0	0	0.7	3.4	
3-Aug	0	0	0	0	0	2	3	A	6	3	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1.1	5.5	
4-Aug	0	0	0	0	0	1	A	2	1	1	1	0	0	1	1	1	0	0	1	1	0	0	1	0	0.6	2.2	
5-Aug	0	0	0	0	0	A	3	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0.6	3.3	
6-Aug	0	0	1	0	A	2	4	3	3	2	1	0	0	0	0	0	M	M	M	0	0	0	0	0	0.9	4.3	
7-Aug	0	0	0	A	0	1	11	C	C	C	C	C	C	1	1	1	1	1	1	1	0	0	0	0	--	11.2	
8-Aug	0	0	A	0	0	1	6	5	7	7	3	1	1	0	0	0	0	0	0	0	0	0	0	0	1.4	7.5	
9-Aug	0	A	0	0	0	0	1	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.5	2.1	
10-Aug	A	0	0	0	0	0	2	4	3	2	1	1	1	0	1	0	0	0	0	0	0	0	0	A	0.7	3.7	
11-Aug	0	0	0	0	0	3	5	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.6	4.7	
12-Aug	1	2	2	2	2	3	2	3	4	5	1	1	0	0	0	0	0	0	0	0	0	A	0	0	1.3	4.9	
13-Aug	0	0	0	0	0	0	3	4	4	2	3	2	0	0	0	0	0	0	0	0	A	0	0	0	0.9	4.4	
14-Aug	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0.4	1.1	
15-Aug	0	0	0	0	1	4	7	14	5	3	3	1	0	0	0	0	0	0	A	0	0	0	0	0	1.8	14.2	
16-Aug	0	0	0	0	0	1	13	7	5	1	1	1	0	0	0	0	0	A	0	0	1	5	1	1	1.8	13.1	
17-Aug	0	0	0	1	1	1	13	8	9	2	1	1	1	0	0	0	A	0	0	0	0	0	0	0	1.8	13.0	
18-Aug	0	0	0	0	1	3	11	8	3	2	1	1	0	0	0	A	0	0	0	0	0	0	1	0	1.5	10.8	
19-Aug	0	0	0	0	0	1	4	3	2	2	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0.7	4.3	
20-Aug	0	0	0	0	2	2	7	9	4	2	2	1	1	A	0	0	0	0	0	0	0	0	0	0	1.4	9.1	
21-Aug	0	0	0	0	0	1	5	8	3	1	1	1	A	0	0	0	0	1	0	0	0	0	0	0	0.9	7.7	
22-Aug	0	0	0	0	0	0	3	2	2	1	0	A	0	1	0	1	0	0	0	0	0	0	0	0	0.5	3.4	
23-Aug	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.4	
24-Aug	0	0	0	0	0	0	1	2	1	A	1	1	1	1	1	C	C	C	C	C	C	0	0	0	--	1.8	
25-Aug	0	0	0	0	0	1	1	1	A	1	1	1	0	0	0	1	0	0	0	0	0	2	4	1	0	0.6	4.0
26-Aug	0	0	0	0	1	5	3	A	6	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1.2	6.6	
27-Aug	0	0	0	0	0	5	A	21	19	13	3	2	1	1	0	0	0	0	0	0	0	0	0	0	2.9	21.3	
28-Aug	0	0	0	0	0	A	1	6	3	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.7	6.1	
29-Aug	0	0	0	0	A	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.3	
30-Aug	0	0	0	A	0	1	5	4	1	1	1	1	0	0	0	0	0	0	0	0	0	3	1	0	0.8	4.9	
31-Aug	2	4	A	1	3	6	12	20	28	19	2	1	2	2	1	1	0	0	0	0	1	0	0	0	4.6	28.2	
0.2 0.3 0.2 0.3 0.5 1.5 4.8 5.4 4.7 2.9 1.2 0.8 0.6 0.5 0.5 0.4 0.4 0.4 0.3 0.3 0.3 0.6 0.2 0.2																								Diurnal Average			
2.0 3.6 1.8 1.7 3.1 6.0 13.1 21.3 28.2 19.1 3.4 1.6 1.9 1.6 1.4 0.9 0.9 1.2 1.1 1.0 2.4 4.6 1.2 1.2																								Diurnal Maximum			
C - Calibration M - Maintenance A - Automated Daily Zero Span																											

Hourly Averages

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



Hourly Maximums

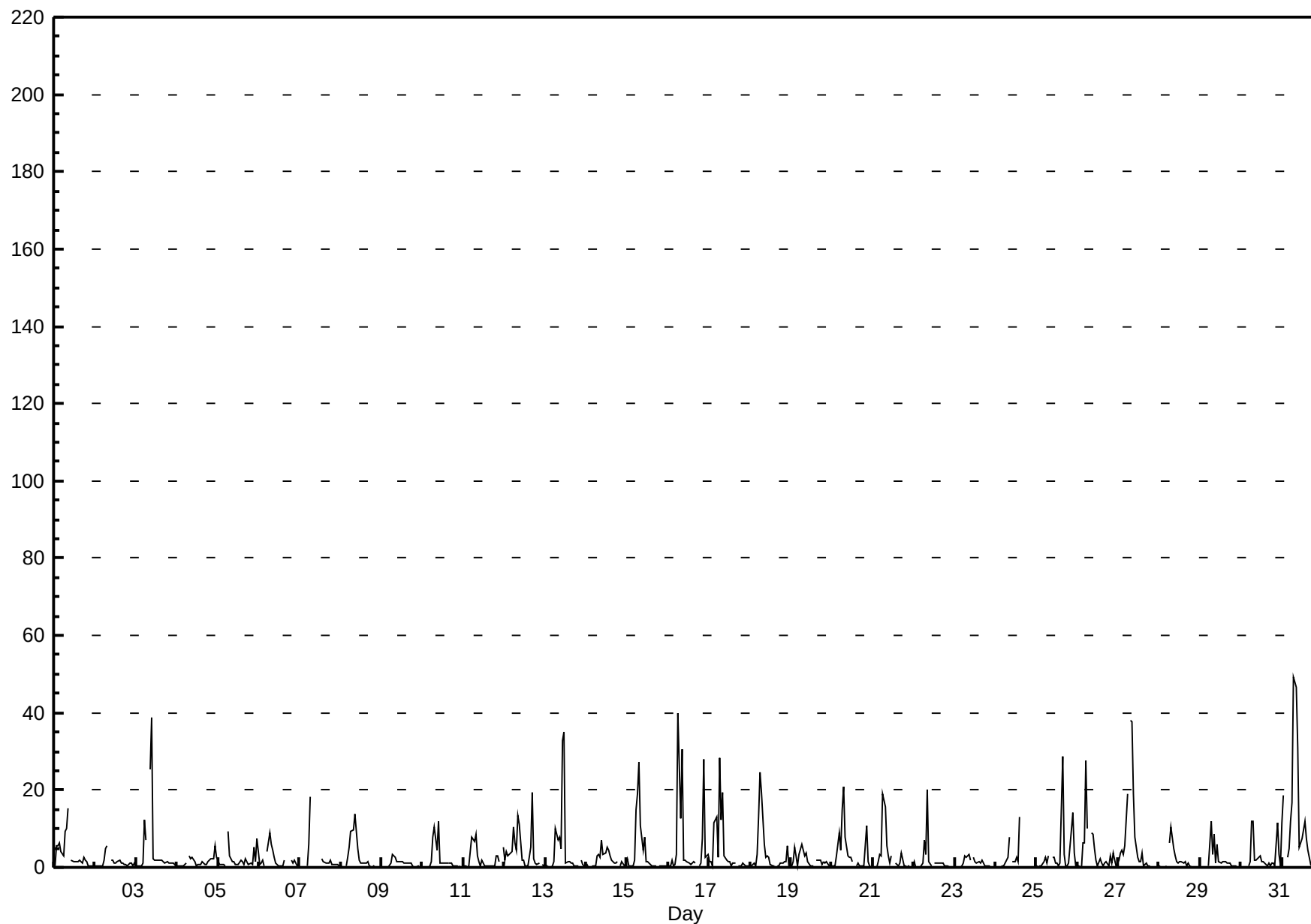
Nitrogen Oxide (NO) - ppb

Henry Pirker - August 2012

Maximum Value: 49.1 ppb on Aug 31 08:00																				Maximum Daily Average: 10.9 ppb on Aug 31					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 23 22:00																				Minimum Daily Average: 1.0 ppb on Aug 9					Hours of Data: 696	
Maximum Diurnal Average: 11.4 ppb at hour 9																				Minimum Diurnal Average: 0.8 ppb at hour 19					Hours of Missing Data: 48	
Monthly Average: 3.26 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.5 Median = 1.0 Q ₃ = 2.9 P ₉₀ = 8.6 P ₉₉ = 33.9					Hours of Calibration: 45	
																									Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	5	6	6	4	3	9	10	15	A	2	1	1	1	1	2	1	2	2	1	0	0	0	0	3.4	15.5
2-Aug	0	0	0	0	0	2	5	6	A	2	2	1	1	1	2	1	1	1	1	0	1	1	0	1	1.4	5.5
3-Aug	0	0	0	0	1	12	7	A	26	39	2	2	2	2	2	2	1	1	1	1	1	1	1	0	4.6	38.7
4-Aug	0	0	0	0	0	1	A	3	2	2	1	0	1	1	1	1	1	1	1	2	2	2	6	3	1.5	5.7
5-Aug	2	1	1	1	0	A	9	3	1	1	1	1	1	2	1	1	2	2	1	1	1	5	2	8	2.1	9.2
6-Aug	1	1	2	0	A	4	9	6	4	2	1	0	0	0	0	2	M	M	M	2	1	2	0	0	2.0	8.8
7-Aug	0	0	0	A	0	6	18	C	C	C	C	C	C	2	2	1	1	1	2	1	1	1	1	0	--	18.1
8-Aug	0	0	A	0	3	5	9	10	14	9	5	2	1	1	1	1	1	0	0	0	0	0	0	0	2.8	13.8
9-Aug	0	A	0	0	0	1	3	3	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1.0	3.5
10-Aug	A	0	0	0	0	1	8	10	4	12	1	1	1	1	1	1	1	1	0	0	0	0	0	A	2.1	12.1
11-Aug	0	0	0	0	4	8	7	9	3	1	0	2	0	0	0	0	0	0	0	3	3	2	A	5	2.2	8.6
12-Aug	2	4	3	3	4	10	6	4	13	11	2	2	0	0	0	5	20	2	1	1	1	A	1	0	4.3	19.6
13-Aug	1	0	0	0	0	1	10	7	8	5	33	35	1	1	1	1	1	0	0	0	A	2	1	0	4.8	35.0
14-Aug	1	0	0	0	0	0	3	3	2	7	3	4	5	5	3	2	1	1	1	A	0	1	0	1	2.1	7.2
15-Aug	2	0	0	0	2	15	19	27	11	4	8	1	1	1	0	0	0	0	A	0	0	0	0	0	4.3	27.4
16-Aug	0	0	2	0	1	3	40	13	31	2	2	1	1	1	1	1	1	A	0	1	8	28	2	3	6.3	39.8
17-Aug	1	1	0	11	13	3	28	12	19	3	2	1	1	0	1	1	A	0	0	0	1	0	0	0	4.6	28.4
18-Aug	0	0	1	0	3	13	25	19	6	2	3	2	1	0	0	A	0	0	1	1	1	1	6	0	3.9	24.6
19-Aug	0	1	5	3	0	3	6	4	3	4	1	0	0	0	A	2	2	2	1	1	1	2	0	0	2.0	6.0
20-Aug	0	0	0	3	9	4	15	21	8	3	2	2	1	A	0	1	0	0	0	0	11	1	0	0	3.8	20.9
21-Aug	0	0	0	1	3	3	19	16	6	3	1	3	A	1	1	0	1	4	0	0	0	0	0	0	2.8	19.2
22-Aug	1	0	0	0	0	1	7	3	20	1	0	A	1	1	1	1	1	1	0	0	0	0	0	0	1.9	20.3
23-Aug	0	0	0	0	0	1	3	2	3	2	A	3	1	1	1	1	2	1	0	0	0	0	0	0	1.0	3.5
24-Aug	0	0	0	0	0	0	2	2	8	A	1	1	2	1	13	C	C	C	C	C	C	C	1	0	--	12.9
25-Aug	0	0	0	0	1	2	1	3	A	2	2	1	1	0	1	29	3	0	0	1	10	14	4	0	3.5	28.8
26-Aug	0	0	0	6	6	27	10	A	9	8	5	2	0	2	1	0	1	2	0	3	1	4	2	0	4.0	27.5
27-Aug	2	4	4	3	5	19	A	38	38	19	8	2	1	1	4	0	1	0	0	0	0	0	0	0	6.6	38.0
28-Aug	0	0	0	0	0	A	6	10	5	3	1	1	1	1	1	1	0	1	0	0	0	0	0	0	1.6	10.5
29-Aug	0	0	0	0	A	0	12	3	9	1	6	1	1	1	1	1	1	1	0	0	0	0	0	0	1.8	11.8
30-Aug	0	0	0	A	0	2	12	12	2	2	2	3	1	1	1	0	1	0	1	1	0	12	3	0	2.6	11.9
31-Aug	11	19	A	2	5	12	17	49	46	31	5	6	7	12	7	4	2	1	1	4	4	1	2	0	10.9	49.1
1.0 1.4 1.0 1.6 2.4 5.7 11.3 11.1 11.4 6.7 3.7 3.0 1.5 1.6 1.8 2.3 1.9 1.1 0.8 1.0 1.8 2.9 1.2 0.9																									Diurnal Average	
11.5 18.5 5.7 11.4 13.2 27.5 39.8 49.1 46.5 38.7 32.7 35.0 7.3 11.9 12.9 28.8 19.6 3.9 1.8 3.6 10.9 28.1 5.7 7.6																									Diurnal Maximum	
C - Calibration M - Maintenance A - Automated Daily Zero Span																										

Hourly Maximums

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



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

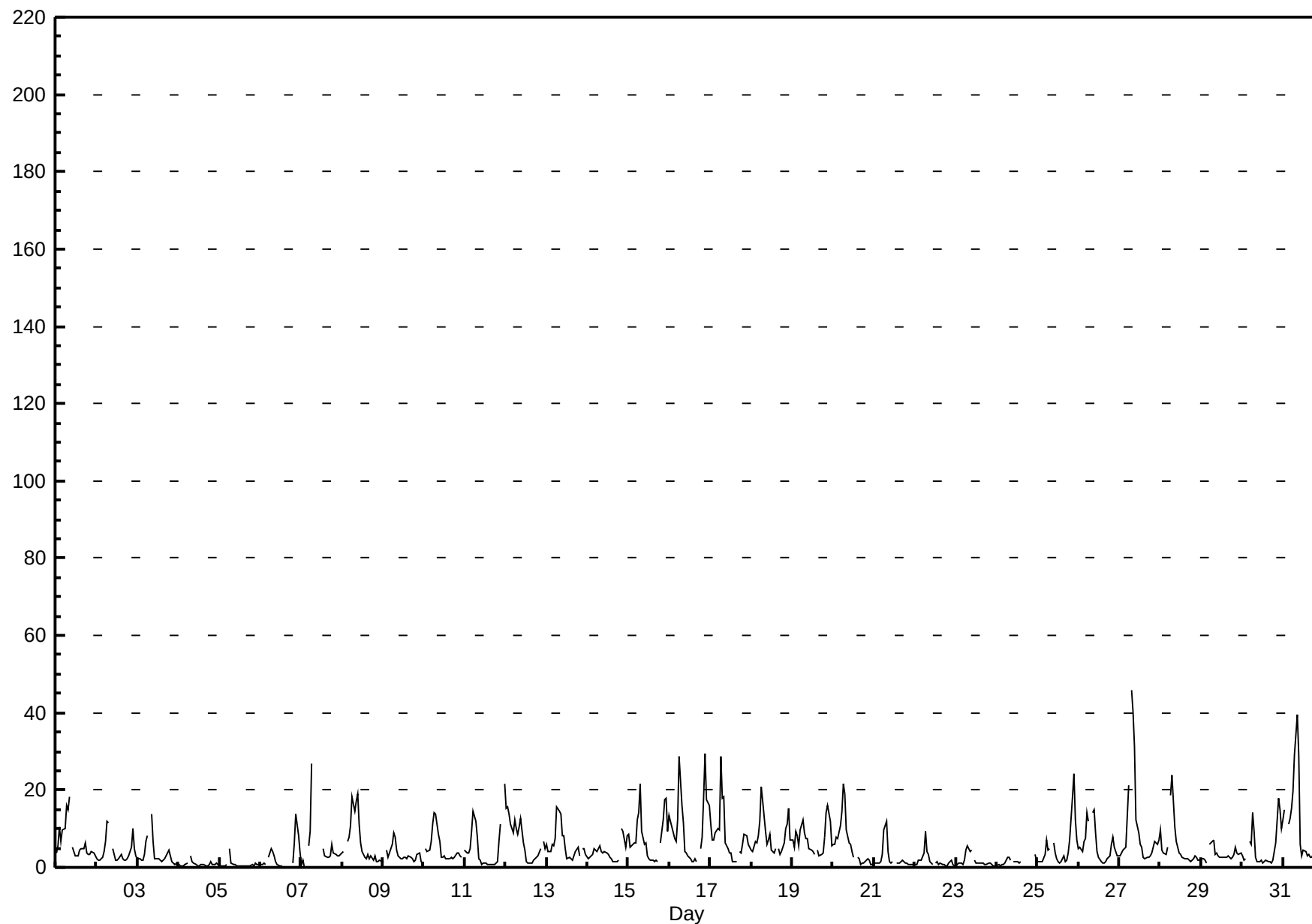
Henry Pirker - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 45.9 ppb on Aug 27 08:00 Maximum Daily Average: 12.1 ppb on Aug 31																				Hours in Service: 744 Hours of Data: 696 Hours of Missing Data: 48 Hours of Calibration: 45 Percent Operational Time: 99.6							
Minimum Value: 0 ppb on Aug 6 14:00 Maximum Diurnal Average: 13.3 ppb at hour 7 Monthly Average: 5.25 ppb										Minimum Daily Average: 0.7 ppb on Aug 5 Minimum Diurnal Average: 1.9 ppb at hour 15 Percentiles: P ₁ = 0.3 P ₁₀ = 0.8 Q ₁ = 1.6 Median = 3.3 Q ₃ = 6.7 P ₉₀ = 12.3 P ₉₉ = 29.0																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	4	5	11	7	10	10	16	15	18	A	5	3	3	3	4	5	5	6	4	3	3	4	4	3	6.6	18.4	
2-Aug	2	2	2	3	4	7	12	12	A	5	3	2	2	2	4	2	2	2	2	3	5	10	5	3	4.1	12.0	
3-Aug	2	2	2	2	3	7	8	A	14	7	2	2	2	2	2	2	2	3	5	3	2	1	1	1	3.3	13.9	
4-Aug	1	0	0	0	1	1	A	3	2	1	1	0	1	1	1	1	0	0	1	1	1	1	1	1	0.8	2.9	
5-Aug	0	0	1	0	1	A	5	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.7	4.7	
6-Aug	1	1	1	1	A	2	5	4	3	2	1	0	0	0	0	0	M	M	M	1	6	14	8	4	2.7	14.0	
7-Aug	1	2	0	A	6	9	27	C	C	C	C	C	C	5	3	3	3	3	6	4	3	3	3	3	--	27.0	
8-Aug	4	4	A	7	8	11	18	15	17	19	11	6	4	3	2	3	2	3	2	3	2	2	2	2	6.4	19.1	
9-Aug	2	A	4	3	4	6	9	8	5	3	2	2	3	3	2	3	3	2	2	2	3	4	2	1	3.3	8.9	
10-Aug	A	5	4	5	7	11	14	14	8	7	3	3	3	2	2	2	3	2	2	4	4	3	3	A	5.0	14.2	
11-Aug	4	4	4	5	9	15	12	8	2	2	1	1	1	1	1	1	1	1	1	1	7	11	A	22	4.9	21.5	
12-Aug	15	15	14	11	9	12	10	8	11	13	6	5	2	1	1	1	2	2	2	3	5	A	7	5	7.0	15.5	
13-Aug	6	4	4	6	6	8	16	15	14	8	8	5	2	3	2	2	3	4	5	3	A	5	5	4	5.9	15.6	
14-Aug	2	3	3	4	5	4	5	6	4	4	4	4	3	2	2	2	1	2	2	A	10	9	5	8	4.1	10.1	
15-Aug	9	5	6	6	6	12	14	22	9	6	6	3	2	2	2	2	2	2	A	6	12	18	18	9	7.8	21.8	
16-Aug	14	10	9	8	7	12	29	16	12	4	4	3	2	2	2	2	2	A	5	8	18	29	18	16	9.9	29.5	
17-Aug	11	7	7	9	10	10	29	18	18	6	5	4	4	2	1	1	A	4	4	6	9	8	6	5	8.0	28.7	
18-Aug	4	4	7	6	8	12	21	17	9	6	7	9	5	4	5	A	5	3	4	6	10	11	15	7	8.1	21.1	
19-Aug	7	5	9	8	5	10	12	9	8	7	5	4	4	3	A	5	3	3	4	8	14	16	12	6	7.3	15.9	
20-Aug	6	6	8	7	11	15	22	19	10	6	6	4	3	A	3	2	1	1	1	1	2	2	1	1	6.0	21.8	
21-Aug	1	1	1	1	1	3	10	12	4	1	1	2	A	1	1	1	1	2	1	1	1	1	1	1	2.2	11.9	
22-Aug	1	1	2	2	2	4	9	4	3	1	1	A	1	1	1	1	1	1	0	0	1	2	1	1	1.8	9.4	
23-Aug	0	1	1	1	1	2	4	6	4	4	A	2	1	1	1	1	1	1	1	1	1	1	0	0	1.6	5.8	
24-Aug	0	1	0	1	1	1	3	3	2	A	1	1	1	1	1	1	C	C	C	C	C	C	C	3	2	--	3.3
25-Aug	2	1	2	1	3	7	4	5	A	6	4	2	1	1	2	3	2	2	4	7	18	24	12	7	5.3	24.2	
26-Aug	5	5	4	7	7	14	12	A	14	15	9	4	3	2	1	1	1	2	3	6	8	5	4	3	5.9	14.8	
27-Aug	3	4	4	5	5	21	A	46	40	31	12	9	6	5	3	2	3	2	3	4	5	7	6	7	10.2	45.9	
28-Aug	10	4	4	3	5	A	19	24	11	7	5	4	3	3	2	2	2	2	1	2	3	3	2	2	5.3	24.0	
29-Aug	2	2	2	1	A	6	7	7	3	4	3	2	2	2	3	3	3	2	3	3	5	4	3	4	3.3	7.1	
30-Aug	3	2	2	A	7	6	14	9	2	2	2	2	1	1	2	2	1	1	2	4	6	18	15	10	5.0	17.9	
31-Aug	12	15	A	11	13	15	20	29	40	29	6	3	4	4	3	4	2	2	4	7	21	18	14	3	12.1	39.6	
4.5 4.1 4.0 4.5 5.7 8.7 13.3 12.6 10.3 7.4 4.3 3.2 2.4 2.1 1.9 2.0 2.1 2.2 2.6 3.6 6.5 8.1 5.9 4.7																								Diurnal Average			
15.4 15.5 13.9 11.2 12.7 21.4 28.7 45.9 40.4 31.5 12.3 8.8 5.8 5.3 5.0 4.8 5.0 6.4 5.9 7.9 21.3 29.5 17.8 21.5																								Diurnal Maximum			
C - Calibration M - Maintenance A - Automated Daily Zero Span																											

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - August 2012



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

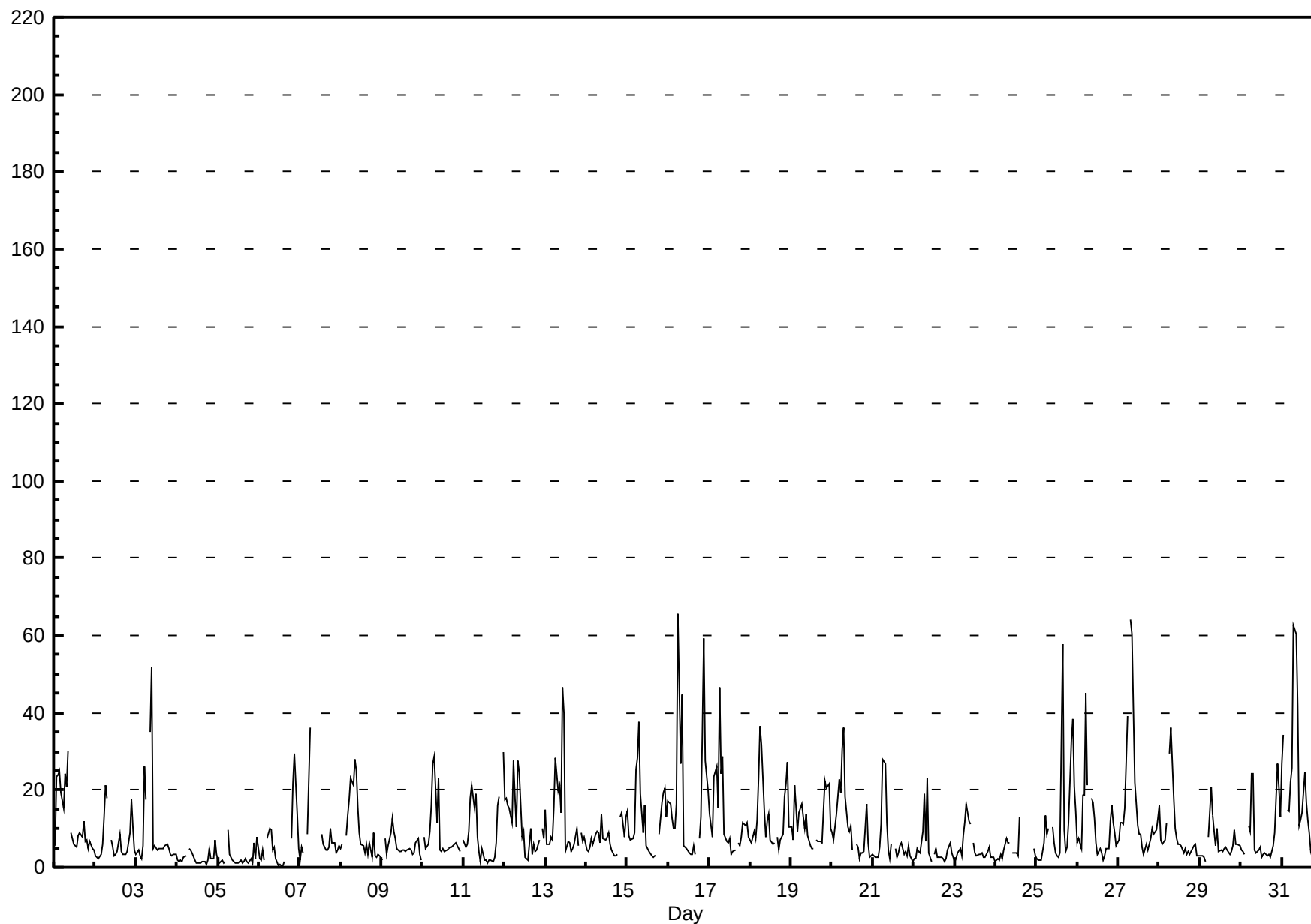
Henry Pirker - August 2012

Maximum Value: 65.5 ppb on Aug 16 07:00																				Maximum Daily Average: 22.6 ppb on Aug 31										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 6 14:00																				Minimum Daily Average: 2.4 ppb on Aug 5										Hours of Data: 696	
Maximum Diurnal Average: 23.2 ppb at hour 7																				Minimum Diurnal Average: 4.5 ppb at hour 17										Hours of Missing Data: 48	
Monthly Average: 9.79 ppb																				Percentiles: P ₁ = 1.0 P ₁₀ = 2.3 Q ₁ = 3.7 Median = 6.0 Q ₃ = 11.9 P ₉₀ = 22.8 P ₉₉ = 56.9										Hours of Calibration: 45	
																														Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	5	23	24	25	19	15	24	21	30	A	9	6	6	5	8	9	8	12	7	7	5	7	5	5	12.4	30.3					
2-Aug	3	2	2	3	6	13	21	18	A	7	5	3	3	4	8	4	3	3	3	4	9	17	11	4	7.0	21.3					
3-Aug	3	4	3	2	6	26	18	A	35	52	5	6	4	5	5	5	5	6	6	5	3	3	3	3	9.3	52.0					
4-Aug	2	1	2	1	3	3	A	5	4	4	2	1	1	1	1	1	1	1	2	5	2	2	7	3	2.5	7.0					
5-Aug	2	1	2	1	1	A	10	3	2	1	1	1	1	2	1	1	2	2	1	2	1	6	2	8	2.4	9.7					
6-Aug	2	2	4	2	A	8	10	10	5	5	2	0	1	0	0	2	M	M	M	7	22	29	14	5	6.5	29.4					
7-Aug	2	5	4	A	9	22	36	C	C	C	C	C	C	9	6	4	4	5	10	6	6	4	5	5	--	36.2					
8-Aug	5	6	A	8	13	17	23	21	28	25	16	9	6	5	4	6	3	6	2	9	3	2	3	2	9.8	27.9					
9-Aug	2	A	7	3	5	9	13	9	7	5	4	4	4	4	4	4	5	4	3	4	6	7	3	2	5.4	12.8					
10-Aug	A	8	5	6	9	16	27	29	12	23	4	4	5	4	4	5	5	5	5	6	5	5	4	A	9.0	28.9					
11-Aug	7	5	6	9	18	21	15	19	8	4	1	5	2	2	1	2	2	1	2	6	16	18	A	30	8.8	30.0					
12-Aug	17	18	16	15	11	28	18	10	28	24	8	9	2	2	2	10	3	6	4	4	7	A	10	7	11.4	27.6					
13-Aug	15	6	6	8	7	16	28	20	21	14	47	40	4	7	6	4	5	6	10	6	A	9	7	8	13.0	46.7					
14-Aug	5	4	5	7	6	9	9	9	6	14	7	7	8	9	6	4	3	3	3	A	13	14	8	13	7.5	14.3					
15-Aug	15	8	7	7	9	25	28	38	19	9	16	5	5	4	3	2	3	3	A	8	17	19	20	13	12.4	37.8					
16-Aug	17	16	13	10	10	17	65	27	45	6	5	5	4	3	3	5	3	A	7	13	35	59	28	20	18.1	65.5					
17-Aug	14	11	8	24	26	15	47	24	29	9	7	6	7	3	4	5	A	6	5	8	11	11	11	8	13.1	46.8					
18-Aug	7	6	9	7	12	23	37	32	14	8	12	14	7	6	6	A	8	4	7	8	18	22	27	10	13.4	36.7					
19-Aug	10	7	21	16	9	14	16	13	10	14	8	5	5	5	A	7	7	7	6	15	22	21	21	10	11.8	22.4					
20-Aug	9	7	11	14	23	19	30	36	18	10	9	11	5	A	6	5	2	4	4	4	16	6	3	3	11.1	36.0					
21-Aug	3	3	3	3	5	11	28	27	12	5	2	6	A	5	3	4	5	6	4	4	3	6	3	1	6.5	28.1					
22-Aug	2	2	5	4	4	9	19	7	23	4	2	A	3	5	3	3	3	2	1	2	5	6	4	3	5.2	23.0					
23-Aug	2	2	4	5	3	8	12	16	12	11	A	6	4	3	3	4	4	3	3	4	5	3	3	2	5.3	16.3					
24-Aug	2	2	2	4	2	5	8	6	6	A	4	4	4	3	13	C	C	C	C	C	C	C	5	3	--	13.0					
25-Aug	2	2	2	2	6	13	8	10	A	10	6	4	3	2	4	58	10	4	5	11	33	38	21	14	11.8	57.6					
26-Aug	6	7	5	19	19	45	21	A	18	17	13	6	3	5	4	2	3	5	5	12	16	11	9	5	11.2	45.3					
27-Aug	7	12	12	11	15	39	A	64	60	41	22	11	8	8	5	3	6	4	6	7	10	8	10	13	16.7	64.3					
28-Aug	16	7	6	7	11	A	29	36	18	10	7	6	6	5	4	5	3	4	3	5	5	6	3	3	9.0	36.0					
29-Aug	3	3	2	1	A	8	21	13	9	5	10	4	4	4	5	5	4	3	4	5	10	6	6	5	6.3	20.9					
30-Aug	4	4	3	A	11	9	24	24	4	4	4	5	3	3	4	3	3	2	4	5	9	27	20	13	8.5	26.8					
31-Aug	27	34	A	15	14	22	26	63	60	42	11	12	14	25	17	12	9	4	6	21	32	23	25	6	22.6	62.8					
7.3 7.4 6.8 8.3 10.2 16.8 23.2 21.8 19.5 13.7 8.7 7.1 4.6 5.0 4.8 6.4 4.5 4.5 4.7 7.1 12.0 13.8 10.0 7.7																									Diurnal Average						
26.8 34.2 23.8 24.8 26.0 45.3 65.5 64.3 60.5 52.0 46.7 40.0 14.1 24.6 16.6 57.6 9.8 12.0 10.2 21.0 35.0 59.1 27.7 30.0																									Diurnal Maximum						
C - Calibration M - Maintenance A - Automated Daily Zero Span																															

Hourly Maximums

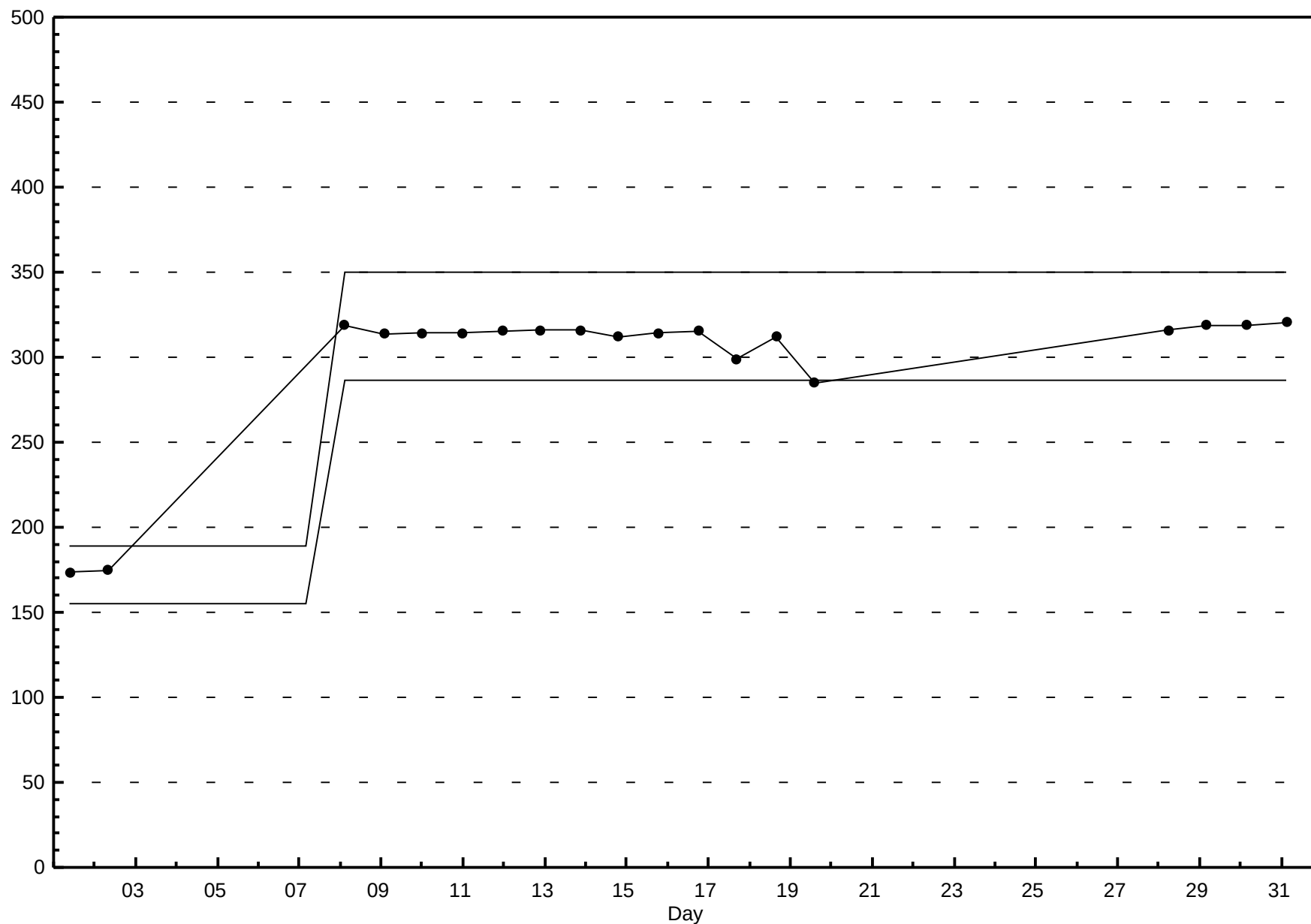
Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - August 2012



Span Responses

Oxides of Nitrogen (NO_x)
Henry Pirker - August 2012



Hourly Averages

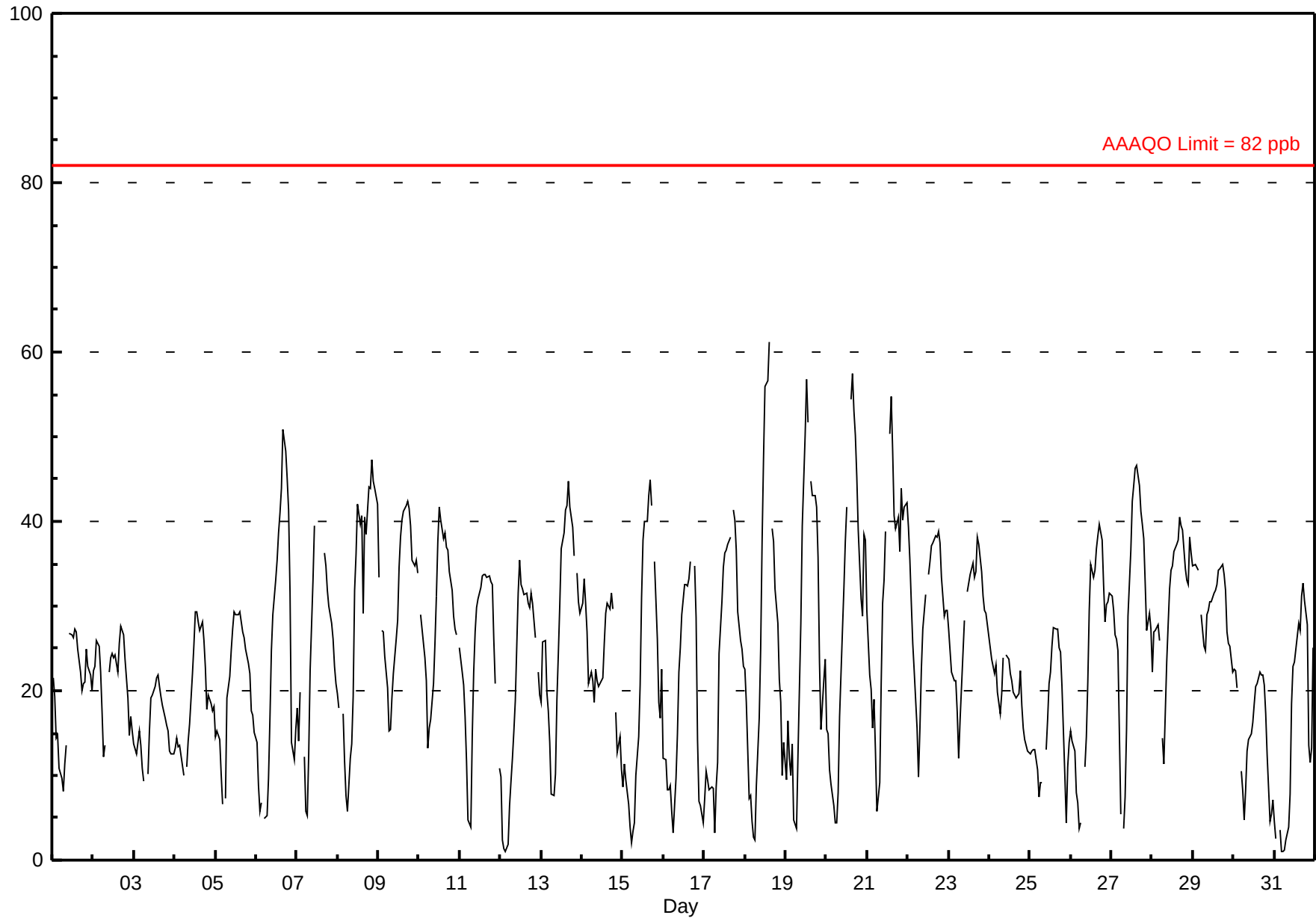
Ozone (O₃) - ppb

Henry Pirker - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 61.2 ppb on Aug 18 15:00 Maximum Daily Average: 32.0 ppb on Aug 21																								Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0		
Minimum Value: 1 ppb on Aug 31 06:00 Maximum Diurnal Average: 35.3 ppb at hour 15 Monthly Average: 24.14 ppb												Minimum Daily Average: 15.2 ppb on Aug 30 Minimum Diurnal Average: 8.6 ppb at hour 7 Percentiles: P ₁ = 2.3 P ₁₀ = 8.5 Q ₁ = 14.5 Median = 23.9 Q ₃ = 32.6 P ₉₀ = 39.5 P ₉₉ = 54.3														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	22	19	14	15	11	10	8	11	14	A	27	27	26	27	27	25	22	20	21	25	23	22	20	19.8	27.2	
2-Aug	22	23	26	25	22	17	12	14	A	22	24	24	24	24	22	26	28	27	27	24	19	15	17	15	21.7	27.7
3-Aug	14	13	14	15	14	11	9	A	10	15	19	20	20	22	22	21	19	18	17	16	15	13	12	13	15.7	21.9
4-Aug	13	14	13	14	12	10	A	11	14	16	22	25	29	29	28	27	28	26	23	18	19	19	18	18	19.5	29.3
5-Aug	15	15	14	10	7	A	7	19	22	25	27	29	29	29	29	28	27	26	25	23	22	18	17	15	20.8	29.4
6-Aug	14	9	6	7	A	5	5	10	17	25	29	33	36	39	41	44	51	48	45	41	32	14	12	15	25.1	50.8
7-Aug	18	14	20	A	12	6	5	12	22	33	39	C	C	C	C	C	36	35	32	30	28	26	23	21	22.9	39.5
8-Aug	20	18	A	17	12	8	6	12	14	19	32	36	42	40	41	29	41	38	44	44	47	45	44	42	30.0	47.2
9-Aug	33	A	27	27	24	20	15	15	19	22	26	28	35	38	40	41	42	42	41	39	35	35	35	34	31.2	42.4
10-Aug	A	29	27	24	21	13	16	17	21	26	31	38	42	40	38	39	37	37	34	32	29	27	27	A	29.2	41.8
11-Aug	25	22	21	17	12	5	4	15	22	27	30	31	32	34	34	34	33	33	33	33	26	21	A	11	24.1	33.8
12-Aug	10	2	1	1	2	6	9	12	15	19	32	35	33	32	31	31	30	30	32	30	26	A	22	19	20.1	35.3
13-Aug	19	26	26	20	18	14	8	8	10	19	24	30	37	39	41	42	45	42	39	36	A	34	31	29	27.6	44.8
14-Aug	30	33	30	27	21	22	21	19	22	21	20	21	22	26	29	30	30	31	30	A	18	13	15	11	23.6	33.1
15-Aug	9	11	9	7	4	2	3	4	10	15	21	31	38	40	40	43	45	42	A	35	26	19	17	23	21.4	44.9
16-Aug	12	12	8	8	9	6	3	10	15	22	25	29	32	33	32	33	35	A	35	29	14	7	6	4	18.3	35.3
17-Aug	7	10	9	8	9	9	3	9	12	24	30	34	36	37	37	38	A	41	40	37	29	26	25	23	23.2	41.3
18-Aug	23	19	7	8	5	3	2	9	17	25	38	47	56	57	61	A	39	38	32	28	21	19	10	14	25.0	61.2
19-Aug	10	16	12	10	14	5	4	12	20	28	39	50	57	52	A	45	43	43	42	36	23	15	21	24	27.0	56.7
20-Aug	15	15	11	9	6	4	4	8	17	27	32	38	42	A	54	57	53	50	45	39	31	29	39	38	28.9	57.5
21-Aug	29	22	20	16	19	13	6	9	21	30	33	39	A	50	55	48	41	39	40	37	44	40	42	42	32.0	54.7
22-Aug	39	35	30	26	22	16	10	16	23	27	31	A	34	35	37	38	38	38	39	38	33	29	29	30	30.1	39.4
23-Aug	27	25	22	21	21	17	12	17	24	28	A	32	33	34	35	33	34	38	37	34	31	29	29	28	28.0	38.2
24-Aug	27	24	23	22	23	20	17	20	24	A	24	24	22	21	20	20	19	20	22	18	16	14	13	13	20.2	26.5
25-Aug	13	13	13	13	11	7	9	9	A	13	17	21	22	25	28	27	27	25	25	21	10	4	11	14	16.4	27.5
26-Aug	15	14	13	8	7	4	4	A	11	15	21	30	35	33	34	37	38	40	38	33	28	30	31	32	23.9	39.7
27-Aug	31	29	27	26	25	6	A	4	8	15	29	37	42	44	46	47	44	41	40	38	33	27	29	27	30.2	46.7
28-Aug	22	27	27	28	26	A	14	11	23	28	32	34	35	37	37	38	40	40	39	34	33	33	38	36	31.0	40.4
29-Aug	35	35	35	34	A	29	25	25	29	29	31	31	31	32	33	34	34	35	34	32	27	26	25	22	30.5	35.0
30-Aug	23	22	20	A	11	8	5	8	13	14	15	16	18	20	21	22	22	22	21	17	12	5	5	7	15.2	22.5
31-Aug	5	2	A	4	1	1	1	2	4	8	18	23	23	26	28	27	31	33	31	28	14	12	13	25	15.7	32.7
19.9 19.0 18.2 16.1 13.7 10.2 8.6 12.0 17.0 22.0 27.3 30.8 33.2 34.3 35.3 34.6 35.1 34.6 33.4 30.7 25.6 22.1 22.6 22.2																								Diurnal Average		
39.4 35.4 34.6 34.2 25.9 28.9 25.3 24.8 29.0 33.0 39.5 50.2 56.7 56.6 61.2 57.5 53.1 50.1 45.3 44.0 47.2 44.8 43.9 42.2																								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 - August 2012



Hourly Maximums

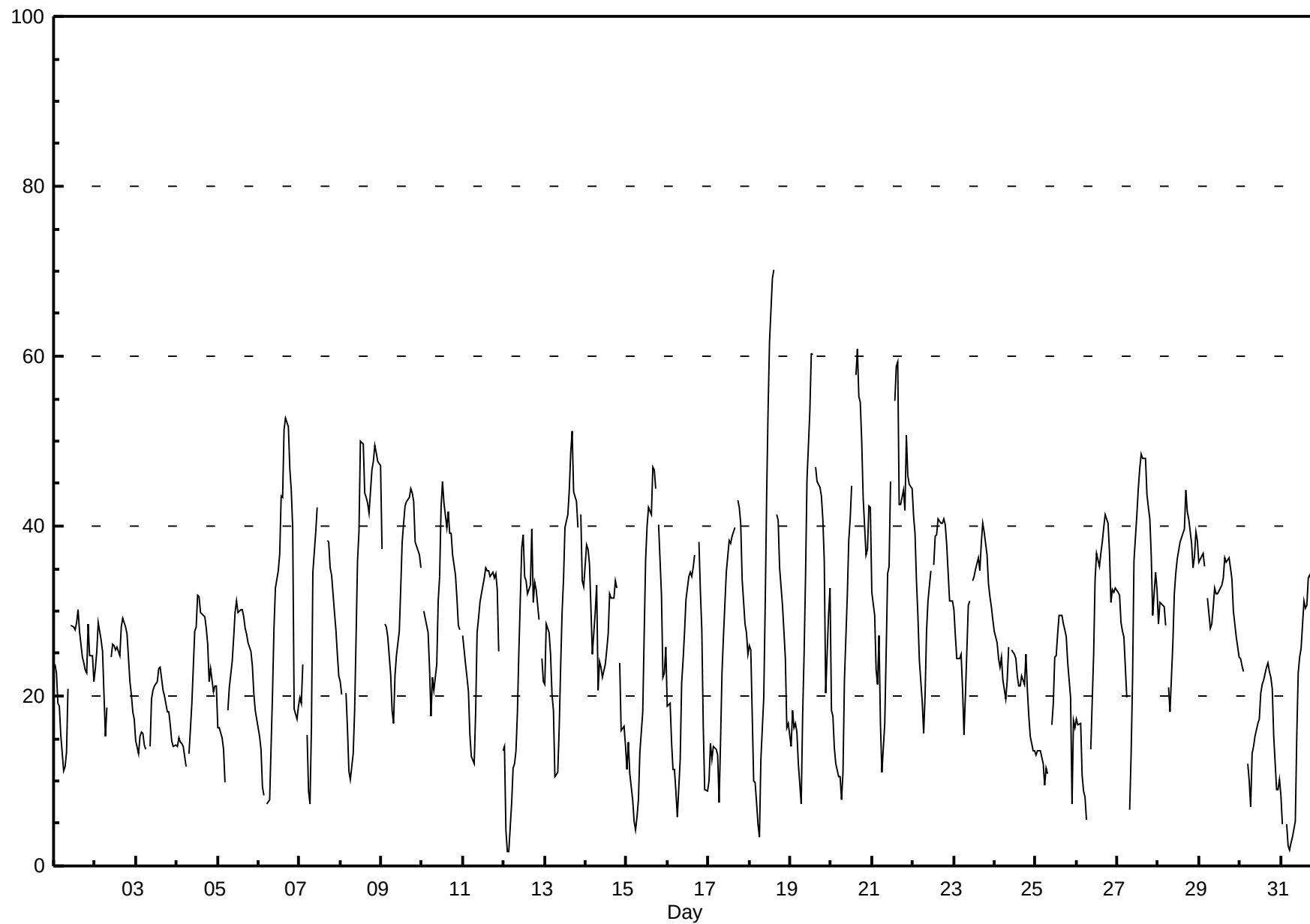
Ozone (O₃) - ppb

Henry Pirker - August 2012

Maximum Value: 70.2 ppb on Aug 18 15:00																				Maximum Daily Average: 36.9 ppb on Aug 21					Hours in Service: 744	
Minimum Value: 2 ppb on Aug 12 03:00																				Minimum Daily Average: 17.2 ppb on Aug 30					Hours of Data: 707	
Maximum Diurnal Average: 37.8 ppb at hour 16																				Minimum Diurnal Average: 12.7 ppb at hour 7					Hours of Missing Data: 37	
Monthly Average: 27.30 ppb																				Percentiles: P ₁ = 4.2 P ₁₀ = 12.0 Q ₁ = 18.3 Median = 27.2 Q ₃ = 35.2 P ₉₀ = 42.5 P ₉₉ = 59.0					Hours of Calibration: 37	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	24	23	19	19	15	11	12	13	21	A	28	28	28	29	30	28	25	24	23	23	29	25	25	22	22.7	30.2
2-Aug	23	25	29	27	25	20	15	19	A	25	26	26	25	26	25	28	29	29	28	27	22	20	18	17	24.1	29.2
3-Aug	15	13	15	16	16	14	14	A	14	20	21	21	22	23	23	22	21	20	18	18	17	15	14	14	17.6	23.4
4-Aug	14	15	15	14	14	12	A	13	16	19	28	28	32	32	30	30	29	28	26	22	23	21	21	21	21.9	31.9
5-Aug	16	16	15	14	10	A	18	21	24	27	30	31	30	30	30	29	28	27	26	25	24	20	18	17	23.0	31.2
6-Aug	15	14	9	8	A	7	8	14	20	28	33	35	37	43	43	51	53	52	47	44	40	18	17	19	28.5	52.6
7-Aug	20	19	24	A	16	9	7	16	35	39	42	C	C	C	C	C	38	38	35	34	30	28	25	22	26.5	42.2
8-Aug	22	20	A	20	16	11	10	13	18	27	36	39	50	50	44	43	43	41	47	48	50	49	48	47	34.4	50.0
9-Aug	37	A	28	28	27	23	18	17	22	25	28	33	38	40	42	43	43	44	44	43	38	37	37	35	33.5	44.4
10-Aug	A	30	29	28	23	18	22	21	24	31	34	42	45	43	40	42	39	39	37	34	31	28	28	A	32.2	45.2
11-Aug	27	24	22	20	15	13	12	18	27	29	31	32	34	35	35	35	34	35	34	34	33	25	A	14	26.9	35.1
12-Aug	14	4	2	2	7	12	12	14	18	25	37	39	34	34	32	33	40	31	33	33	29	A	24	22	23.1	39.6
13-Aug	21	28	27	25	20	18	10	11	16	23	30	34	40	41	44	49	51	44	43	40	A	41	34	33	31.5	51.1
14-Aug	38	37	36	31	25	30	33	21	24	23	22	24	25	27	32	32	32	34	33	A	24	16	17	14	27.3	37.7
15-Aug	11	15	11	8	5	4	6	8	13	18	27	36	40	42	41	47	47	44	A	40	32	22	23	26	24.7	46.9
16-Aug	19	19	15	11	11	9	6	12	22	24	27	31	34	35	34	35	37	A	38	32	28	16	9	9	22.3	38.1
17-Aug	10	14	13	14	14	13	7	15	23	27	35	36	38	38	39	40	A	43	42	40	34	29	27	25	26.8	43.1
18-Aug	26	25	10	10	7	5	3	13	20	31	44	54	62	69	70	A	41	41	35	31	28	24	16	17	29.6	70.2
19-Aug	14	18	16	17	16	12	7	18	25	34	45	54	60	60	A	47	45	44	43	41	36	20	30	33	32.0	60.3
20-Aug	18	18	14	12	10	11	8	11	22	32	38	41	45	A	58	61	55	55	50	43	37	37	42	42	33.0	60.8
21-Aug	32	30	23	21	27	17	11	17	25	34	35	45	A	55	59	59	43	43	44	42	51	46	45	44	36.9	59.4
22-Aug	41	39	34	30	24	19	16	20	28	31	35	A	35	39	39	41	40	40	41	40	38	31	31	31	33.2	41.2
23-Aug	30	27	24	24	25	21	15	20	31	31	A	34	34	35	36	35	38	40	39	37	33	32	30	29	30.5	40.4
24-Aug	28	26	24	23	25	22	20	22	26	A	25	25	24	22	21	21	22	21	25	21	18	15	14	14	21.9	27.7
25-Aug	13	14	14	14	12	9	12	11	A	17	19	25	25	27	30	30	29	28	27	24	20	7	17	16	19.0	29.6
26-Aug	17	17	17	11	9	8	6	A	14	19	25	34	37	35	37	38	40	41	40	37	31	33	32	33	26.5	41.3
27-Aug	32	32	29	28	27	20	A	7	13	22	36	41	44	47	49	48	48	44	42	41	36	29	35	33	34.0	48.5
28-Aug	28	31	31	30	28	A	21	18	26	32	34	36	37	38	39	40	44	42	41	38	35	36	39	38	34.1	44.2
29-Aug	36	36	37	35	A	32	28	28	31	33	32	32	33	33	34	36	36	36	35	34	30	29	27	25	32.4	36.7
30-Aug	24	24	23	A	12	10	7	13	14	15	17	17	20	21	22	23	24	23	22	21	15	9	9	10	17.2	24.4
31-Aug	8	5	A	5	2	2	3	3	5	15	23	24	26	31	30	31	34	34	34	33	18	17	23	29	18.9	34.3
22.5 22.0 20.8 18.8 16.8 14.1 12.7 15.4 21.3 26.1 30.8 33.7 35.7 37.3 37.5 37.8 37.6 36.9 35.8 34.0 30.2 25.9 25.8 25.0																									Diurnal Average	
41.2 39.2 36.7 35.2 28.3 31.5 33.1 28.4 34.5 39.4 45.5 53.7 61.7 69.2 70.2 60.8 55.2 54.6 49.9 47.6 50.6 48.6 47.6 47.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

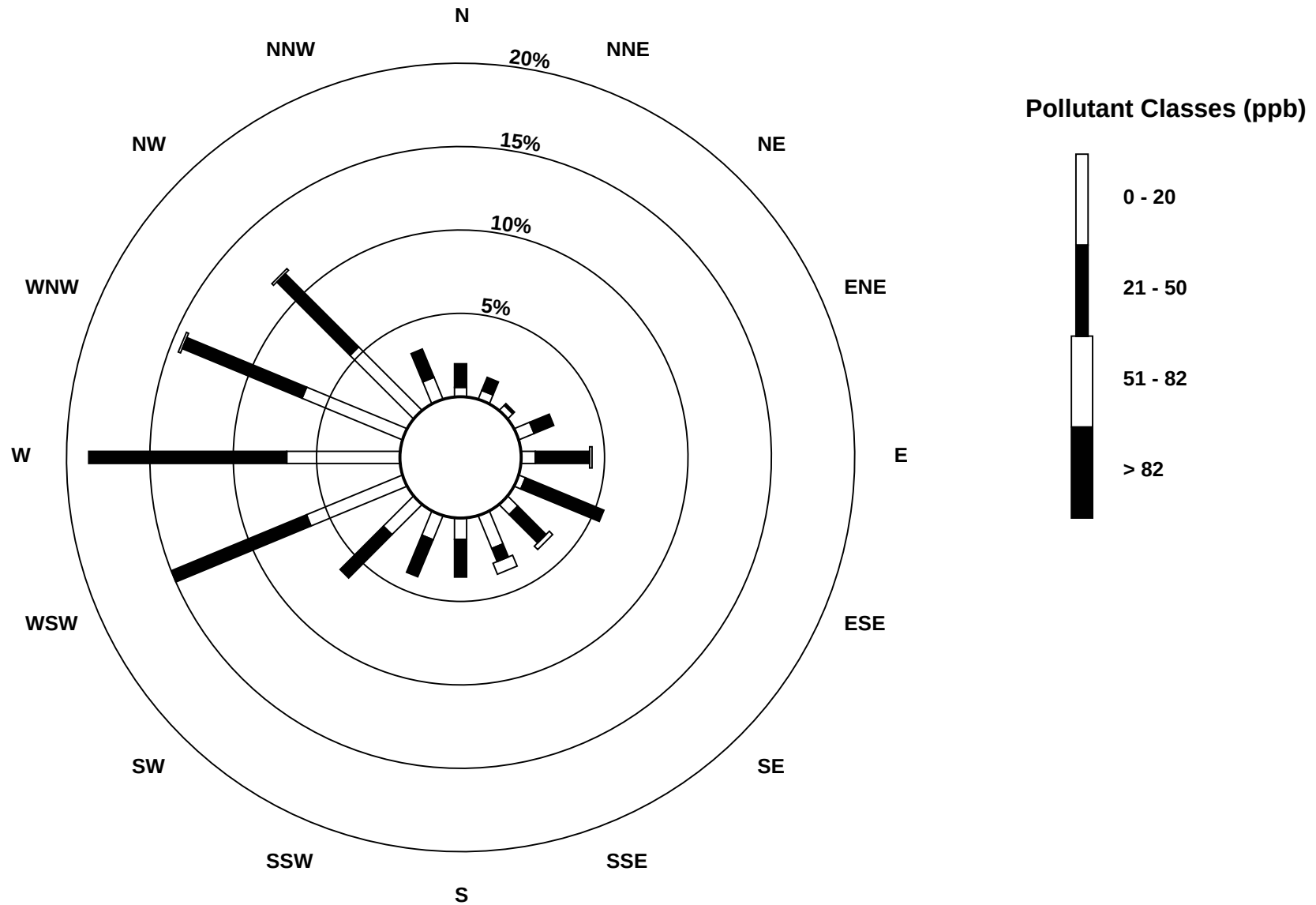
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - August 2012



Pollutant Rose

Ozone (O₃) - ppb
Henry Pirker - August 2012



Eight Hour Running Averages

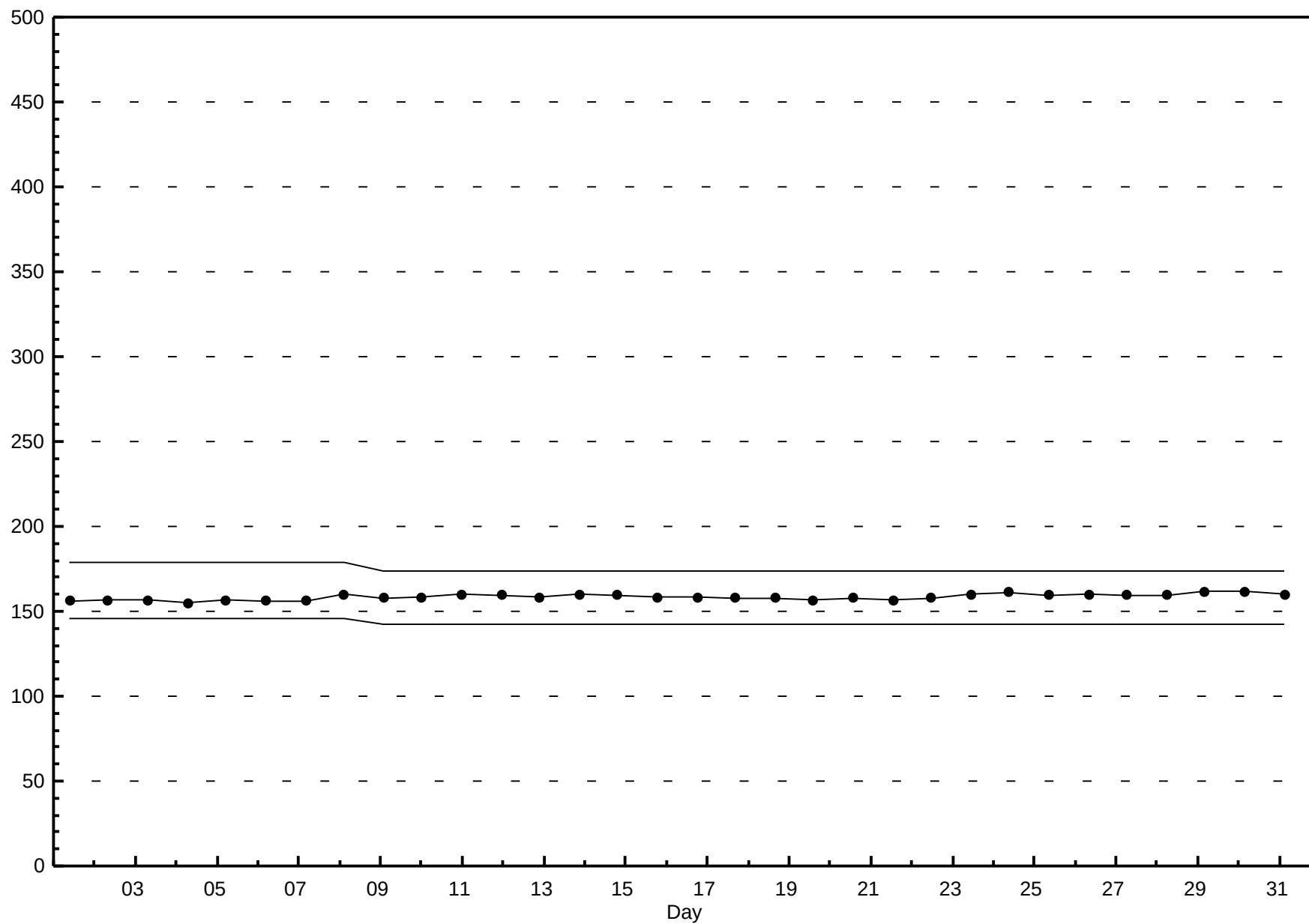
Ozone (O₃) - ppb

Henry Pirker - August 2012

Maximum Value: 48.7 ppb on Aug 20 20:00																								Hours in Service: 744	
Minimum Value: 2.2 ppb on Aug 31 09:00																								Hours of Data: 736	
Percentiles: P ₁ = 4.8 P ₁₀ = 11.8 Q ₁ = 16.5 Median = 23.4 Q ₃ = 31.4 P ₉₀ = 37.5 P ₉₉ = 46.8																								Hours of Missing Data: 8	
																								Hours of Calibration: 8	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	28	26	24	22	19	17	15	14	13	12	14	15	17	20	23	25	26	25	24	24	24	23	22	22	27.9
2-Aug	22	22	23	23	23	22	21	20	20	20	20	19	20	21	22	24	24	25	25	25	25	23	23	21	25.2
3-Aug	20	18	16	15	14	14	13	13	12	13	13	14	15	16	18	19	20	20	20	19	19	18	16	15	20.1
4-Aug	15	14	14	13	13	13	13	13	13	13	14	16	18	21	22	24	26	27	27	26	25	23	22	21	27.0
5-Aug	19	18	17	16	14	14	12	12	13	15	17	19	23	23	26	27	28	28	28	27	26	25	23	22	28.2
6-Aug	20	18	15	13	12	10	9	8	8	11	14	18	20	24	29	33	37	40	42	43	43	39	36	32	43.1
7-Aug	28	24	21	18	15	14	13	12	13	16	19	19	20	N	N	N	N	N	N	N	N	31	30	29	31.2
8-Aug	27	25	24	22	19	17	14	13	12	12	15	17	21	25	29	32	35	37	39	40	40	41	42	43	43.1
9-Aug	42	43	40	38	35	31	27	23	21	21	21	21	23	25	28	31	34	37	39	40	40	40	39	38	42.8
10-Aug	38	36	34	31	29	26	23	21	21	21	21	23	25	29	31	34	36	38	38	37	36	34	33	32	38.0
11-Aug	30	28	26	24	22	18	15	15	15	15	16	18	21	24	28	30	32	33	33	33	32	31	30	27	33.2
12-Aug	24	19	15	10	7	5	5	6	6	8	12	16	20	23	26	29	30	32	32	31	30	30	29	27	31.8
13-Aug	25	25	24	23	21	20	19	17	16	15	15	16	19	22	26	30	35	37	39	40	41	40	38	36	40.5
14-Aug	34	33	32	31	29	28	27	25	24	23	22	21	21	22	23	24	25	26	27	28	28	26	24	21	34.4
15-Aug	18	15	12	11	10	8	7	6	6	7	8	11	15	20	25	30	34	37	40	40	39	36	32	29	40.4
16-Aug	25	20	19	16	13	12	10	8	9	10	12	15	18	21	25	28	30	31	33	33	30	27	23	19	32.8
17-Aug	15	14	11	8	8	8	8	8	9	10	13	16	20	23	27	31	34	36	38	38	37	36	34	32	38.1
18-Aug	30	28	24	20	17	14	11	9	9	9	13	18	25	31	39	43	46	48	47	44	39	34	27	25	47.9
19-Aug	21	19	16	14	13	11	11	10	12	13	17	22	27	33	37	42	45	47	47	45	40	35	34	31	47.3
20-Aug	27	24	20	17	15	13	11	9	9	11	14	17	22	24	31	38	43	47	49	49	47	45	43	40	48.7
21-Aug	37	34	31	28	26	24	20	17	16	17	18	21	22	27	34	39	42	44	45	44	44	43	41	41	44.6
22-Aug	40	40	39	37	35	32	28	24	22	21	21	21	22	25	29	32	34	36	37	37	37	36	35	34	40.5
23-Aug	33	31	29	27	26	24	22	20	20	20	20	22	23	26	29	31	33	34	35	35	35	34	33	33	34.8
24-Aug	32	30	28	27	26	24	23	22	22	21	21	22	22	22	22	22	21	21	21	20	19	19	18	17	31.7
25-Aug	16	15	14	13	13	12	11	11	11	11	11	12	14	17	19	22	23	24	25	25	23	21	19	17	25.0
26-Aug	16	14	13	11	11	11	10	9	9	9	10	13	17	21	26	27	30	33	36	36	35	35	34	34	36.0
27-Aug	33	31	30	29	29	26	25	21	18	16	16	17	20	26	28	33	38	41	43	43	42	39	37	35	42.8
28-Aug	32	30	29	28	27	27	25	22	22	23	23	24	25	27	30	33	35	37	37	37	37	37	37	37	37.5
29-Aug	36	35	35	35	35	35	33	31	30	29	29	28	29	29	30	31	32	33	33	33	33	32	31	29	36.0
30-Aug	28	26	25	24	21	19	16	14	13	11	11	11	12	14	16	18	19	20	20	20	20	18	16	14	27.9
31-Aug	12	9	8	6	4	4	3	2	2	3	5	7	10	13	17	20	23	26	28	28	27	25	23	23	28.4
42.2 42.8 40.3 37.9 35.1 34.6 32.7 31.1 30.3 29.5 28.9 28.4 28.8 32.8 38.7 42.9 46.1 47.9 48.5 48.7 47.2 44.9 42.9 43.1																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - August 2012



Hourly Averages

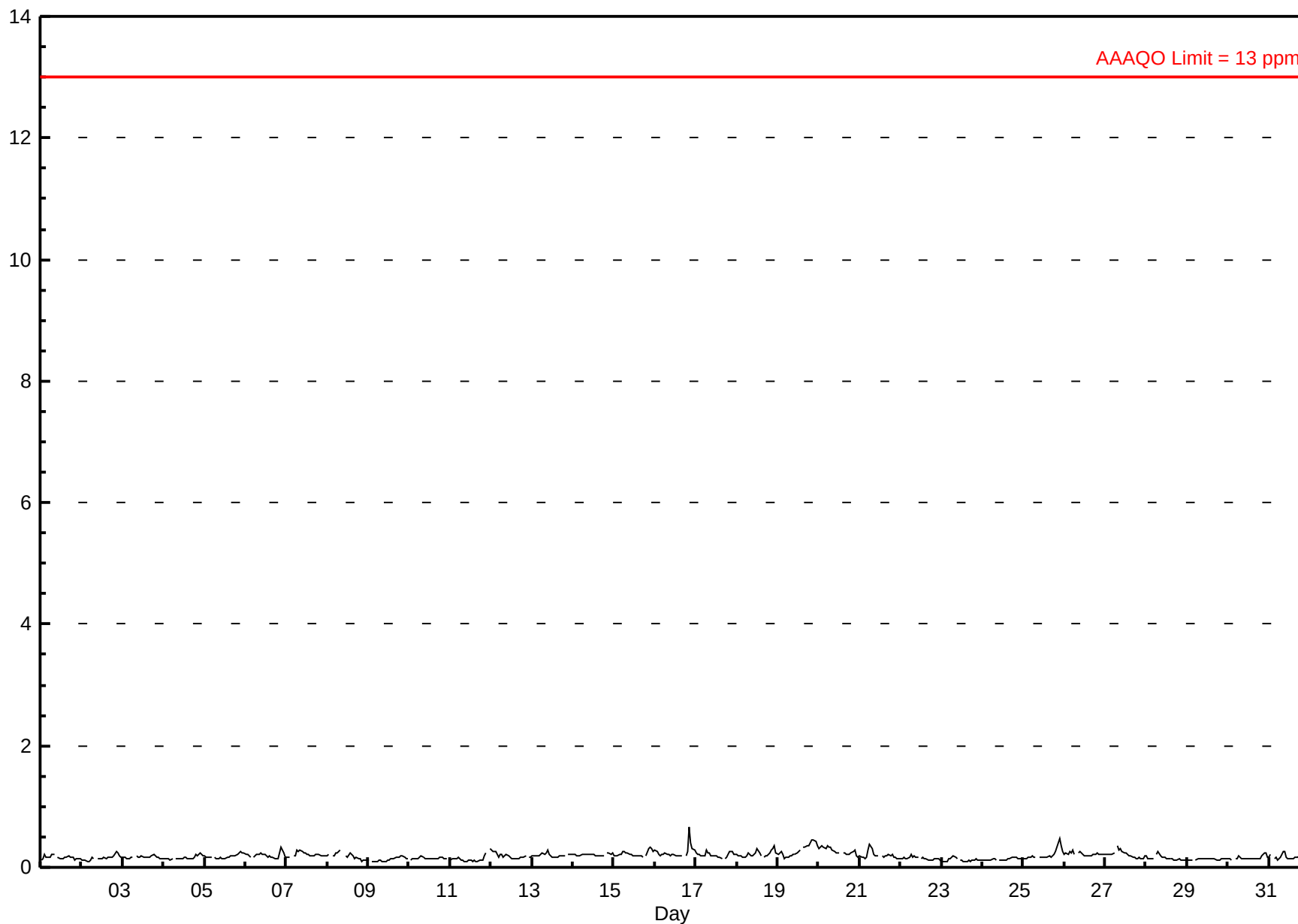
Carbon Monoxide (CO) - ppm

Henry Pirker - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.66 ppm on Aug 16 21:00 Maximum Daily Average: 0.28 ppm on Aug 19																								Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0																									
Minimum Value: 0.1 ppm on Aug 9 10:00 Maximum Diurnal Average: 0.23 ppm at hour 22 Monthly Average: 0.186 ppm												Minimum Daily Average: 0.12 ppm on Aug 23 Minimum Diurnal Average: 0.17 ppm at hour 15 Percentiles: P ₁ = 0.10 P ₁₀ = 0.12 Q ₁ = 0.15 Median = 0.17 Q ₃ = 0.21 P ₉₀ = 0.26 P ₉₉ = 0.39																																					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Aug	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.17	0.22																							
2-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	A	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.16	0.25																							
3-Aug	0.2	0.2	0.1	0.1	0.1	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	0.1	0.17	0.21																							
4-Aug	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.23																							
5-Aug	0.2	0.2	0.2	0.2	0.2	A	0.2	0.1	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	0.3	0.2	0.2	0.18	0.26																							
6-Aug	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	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.20	0.34																							
7-Aug	0.2	0.2	0.2	A	0.2	0.2	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	0.21	0.29																							
8-Aug	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	C	C	C	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.18	0.30																							
9-Aug	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.13	0.20																							
10-Aug	A	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	A	0.15	0.20																							
11-Aug	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.3	0.13	0.31																							
12-Aug	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.19	0.29																							
13-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.20	0.29																							
14-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.20	0.24																							
15-Aug	0.2	0.2	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	A	0.2	0.3	0.3	0.3	0.3	0.22	0.33																							
16-Aug	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	A	0.2	0.3	0.7	0.4	0.3	0.3	0.25	0.66																							
17-Aug	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	0.1	A	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.20	0.28																							
18-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.2	0.22	0.35																							
19-Aug	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	A	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.28	0.45																							
20-Aug	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.27	0.36																							
21-Aug	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.20	0.39																								
22-Aug	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	0.21																								
23-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.18																							
24-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.13	0.16																							
25-Aug	0.1	0.1	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	0.3	0.4	0.5	0.3	0.3	0.21	0.46																						
26-Aug	0.2	0.2	0.2	0.2	0.2	0.3	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	0.2	0.2	0.22	0.28																							
27-Aug	0.2	0.2	0.2	0.2	0.2	0.2	A	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.21	0.36																							
28-Aug	0.2	0.1	0.1	0.1	0.1	A	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	0.26																							
29-Aug	0.1	0.1	0.1	0.1	A	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.13	0.15																							
30-Aug	0.1	0.1	0.1	A	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.16	0.23																							
31-Aug	0.2	0.2	A	0.1	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.20	0.38																							
																								0.18	0.18	0.18	0.17	0.17	0.19	0.21	0.21	0.20	0.19	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.18	0.19	0.23	0.23	0.21	0.19	Diurnal Average
																								0.32	0.34	0.36	0.34	0.32	0.36	0.39	0.36	0.29	0.31	0.26	0.25	0.32	0.28	0.24	0.32	0.32	0.35	0.36	0.40	0.66	0.46	0.42	0.36	Diurnal Maximum	
C - Calibration 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 - August 2012



Hourly Maximums

Carbon Monoxide (CO) - ppm

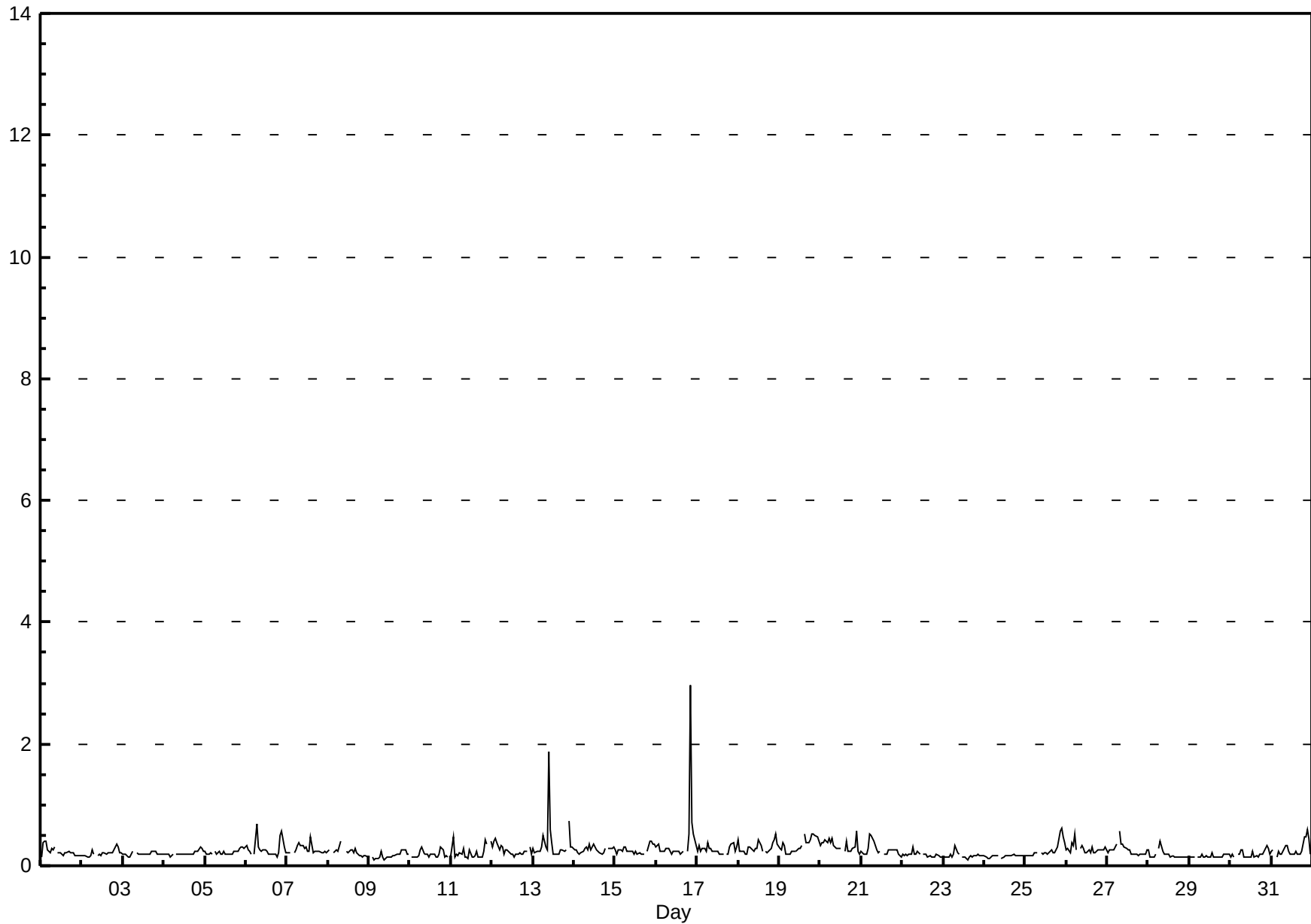
Henry Pirker - August 2012

Maximum Value: 2.97 ppm on Aug 16 21:00																					Maximum Daily Average: 0.42 ppm on Aug 16					Hours in Service: 744	
Minimum Value: 0.1 ppm on Aug 9 10:00																					Minimum Daily Average: 0.16 ppm on Aug 24					Hours of Data: 709	
Maximum Diurnal Average: 0.38 ppm at hour 21																					Minimum Diurnal Average: 0.20 ppm at hour 15					Hours of Missing Data: 35	
Monthly Average: 0.245 ppm																					Percentiles: P ₁ = 0.13 P ₁₀ = 0.15 Q ₁ = 0.18 Median = 0.22 Q ₃ = 0.27 P ₉₀ = 0.35 P ₉₉ = 0.59					Hours of Calibration: 35	
																					Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	0.2	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23	0.41	
2-Aug	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.20	0.36	
3-Aug	0.2	0.2	0.2	0.1	0.1	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	0.20	0.24	
4-Aug	0.2	0.2	0.2	0.2	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.20	0.31	
5-Aug	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.23	0.30	
6-Aug	0.3	0.3	0.2	0.2	A	0.2	0.7	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	0.5	0.6	0.3	0.2	0.28	0.69	
7-Aug	0.2	0.2	0.2	A	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26	0.47	
8-Aug	0.2	0.3	A	0.2	0.2	0.2	0.2	0.4	C	C	C	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.22	0.40	
9-Aug	0.2	A	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.17	0.25	
10-Aug	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	A	0.19	0.30	
11-Aug	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.4	A	0.4	0.22	0.48	
12-Aug	0.3	0.4	0.4	0.4	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	A	0.3	0.2	0.26	0.44	
13-Aug	0.3	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.3	1.9	0.6	0.4	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	A	0.7	0.3	0.3	0.37	1.88	
14-Aug	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.4	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.3	A	0.3	0.3	0.3	0.3	0.26	0.37	
15-Aug	0.2	0.2	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	A	0.2	0.4	0.4	0.3	0.3	0.26	0.40	
16-Aug	0.3	0.3	0.2	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	A	0.2	0.5	3.0	0.7	0.5	0.3	0.42	2.97	
17-Aug	0.2	0.3	0.2	0.3	0.3	0.2	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.3	0.4	0.2	0.3	0.26	0.38	
18-Aug	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.2	A	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.3	0.29	0.53	
19-Aug	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	A	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.34	0.53	
20-Aug	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	A	0.2	0.4	0.2	0.2	0.2	0.3	0.3	0.6	0.2	0.2	0.34	0.58	
21-Aug	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.4	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.26	0.52	
22-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.3	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	0.19	0.30	
23-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	A	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.33	
24-Aug	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	A	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.18	
25-Aug	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	0.3	0.2	0.2	0.3	0.3	0.6	0.6	0.5	0.4	0.26	0.62	
26-Aug	0.3	0.3	0.2	0.4	0.3	0.5	0.3	A	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.28	0.53	
27-Aug	0.2	0.3	0.3	0.3	0.3	0.4	A	0.6	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26	0.56	
28-Aug	0.2	0.2	0.2	0.2	0.2	A	0.3	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	0.2	0.2	0.2	0.2	0.19	0.41	
29-Aug	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	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.22	
30-Aug	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	0.3	0.3	0.2	0.19	0.33	
31-Aug	0.2	0.3	A	0.1	0.2	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	0.5	0.5	0.6	0.4	0.2	0.27	0.60	
0.23 0.24 0.22 0.22 0.22 0.25 0.29 0.29 0.24 0.29 0.23 0.23 0.21 0.21 0.20 0.21 0.21 0.21 0.21 0.22 0.26 0.38 0.34 0.27 0.24																									Diurnal Average		
0.43 0.48 0.44 0.44 0.39 0.53 0.69 0.56 0.35 1.88 0.58 0.38 0.43 0.33 0.47 0.53 0.37 0.38 0.43 0.53 2.97 0.73 0.53 0.41																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

Hourly Maximums

Carbon Monoxide (CO) - ppm

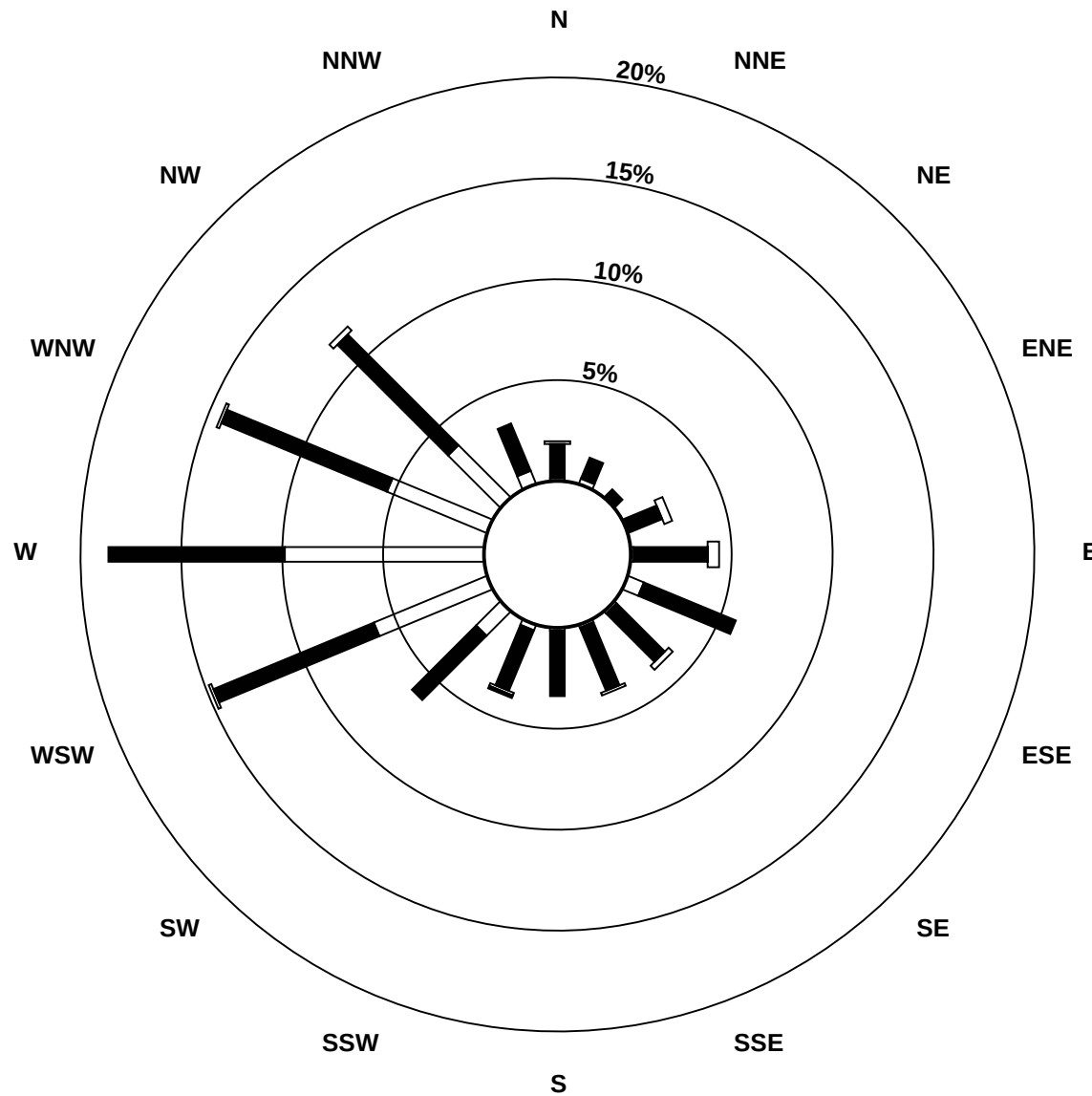
Henry Pirker - August 2012



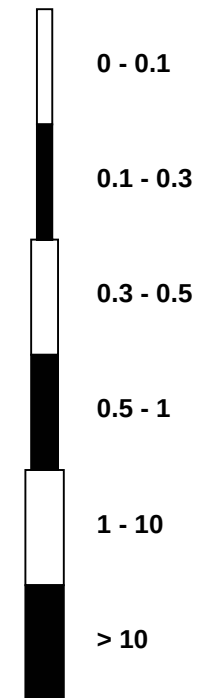
Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - August 2012



Pollutant Classes (ppm)



Eight Hour Running Averages

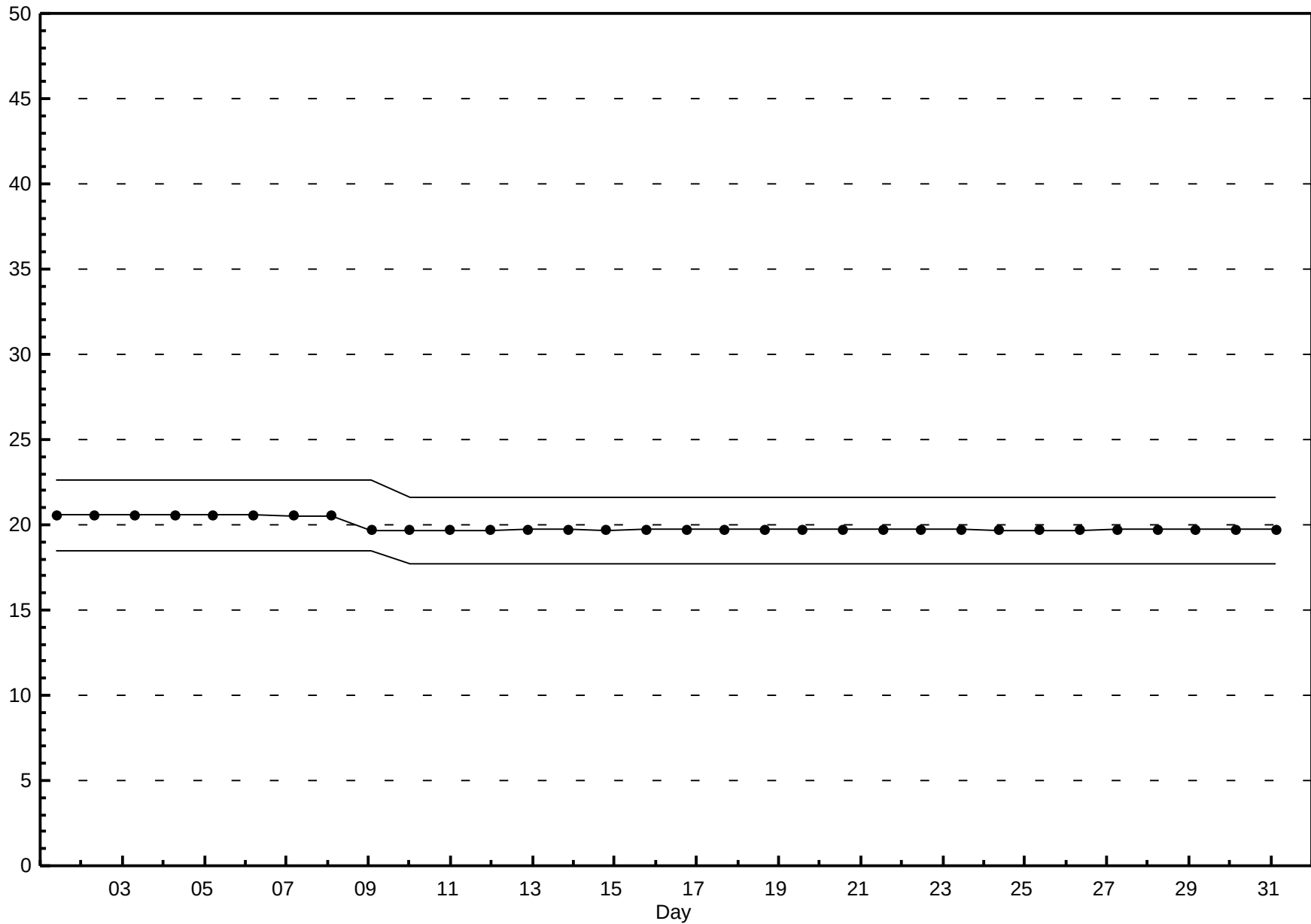
Carbon Monoxide (CO) - ppm

Henry Pirker - August 2012

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.39 ppm on Aug 20 00:00																								Hours in Service: 744	
Minimum Value: 0.10 ppm on Aug 9 11:00																								Hours of Data: 737	
Percentiles: P ₁ = 0.11 P ₁₀ = 0.13 Q ₁ = 0.15 Median = 0.18 Q ₃ = 0.21 P ₉₀ = 0.24 P ₉₉ = 0.38																								Hours of Missing Data: 7	
																								Hours of Calibration: 7	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	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	0.2	0.20
2-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
3-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
4-Aug	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	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
5-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
6-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
7-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
8-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	N	N	N	N	N	N	N	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.23
9-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.17
10-Aug	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.17
11-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.17
12-Aug	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	0.2	0.2	0.2	0.2	0.2	0.2	0.25
13-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
14-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
15-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.25
16-Aug	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	0.3	0.3	0.3	0.3	0.33
17-Aug	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.34
18-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25
19-Aug	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	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.39
20-Aug	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.39
21-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
22-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.18
23-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
24-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.15
25-Aug	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.29
26-Aug	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	0.30
27-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.28
28-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.19
29-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
30-Aug	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.17
31-Aug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
0.39 0.39 0.39 0.38 0.36 0.35 0.34 0.34 0.33 0.32 0.31 0.30 0.29 0.28 0.27 0.25 0.27 0.28 0.30 0.33 0.36 0.38 0.38 0.39																									
Diurnal Maximums																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

Span Responses

Carbon Monoxide (CO)
Henry Pirker - August 2012



Hourly Averages

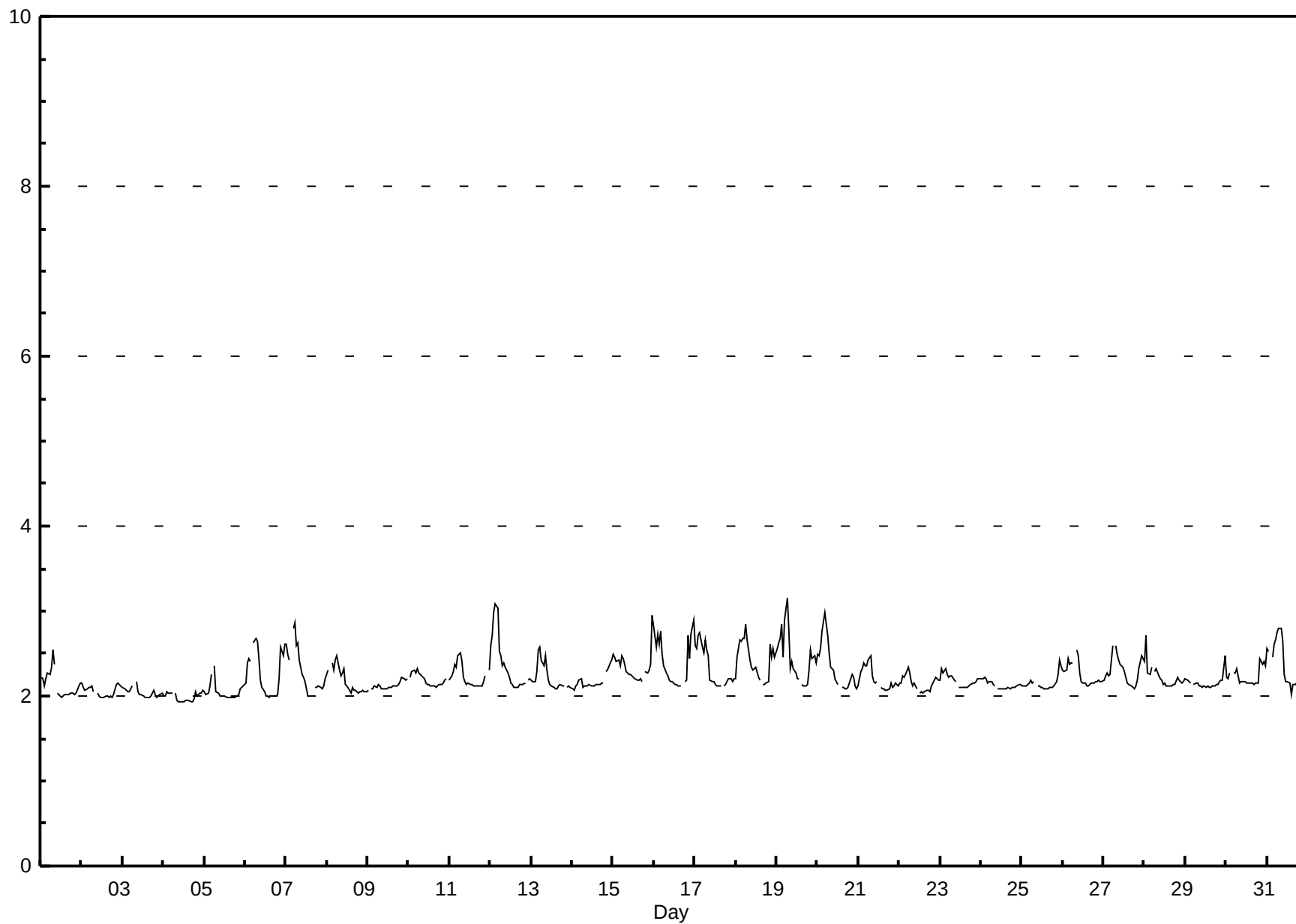
Total Hydrocarbons (THC) - ppm

Henry Pirker - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.15 ppm on Aug 19 07:00 Maximum Daily Average: 2.45 ppm on Aug 19																								Hours in Service: 744 Hours of Data: 709				
Minimum Value: 1.9 ppm on Aug 4 12:00 Minimum Daily Average: 1.99 ppm on Aug 4 Maximum Diurnal Average: 2.41 ppm at hour 7 Minimum Diurnal Average: 2.08 ppm at hour 15 Monthly Average: 2.225 ppm Percentiles: P ₁ = 1.95 P ₁₀ = 2.03 Q ₁ = 2.11 Median = 2.16 Q ₃ = 2.30 P ₉₀ = 2.51 P ₉₉ = 2.98																								Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
1-Aug	2.2	2.2	2.1	2.2	2.3	2.3	2.3	2.5	2.4	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.13	2.55
2-Aug	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.06	2.15
3-Aug	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.04	2.17
4-Aug	2.0	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.99	2.08	
5-Aug	2.1	2.0	2.0	2.1	2.3	A	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.05	2.35	
6-Aug	2.2	2.4	2.4	2.4	A	2.6	2.7	2.6	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.6	2.5	2.6	2.26	2.67			
7-Aug	2.6	2.5	2.4	A	2.8	2.9	2.6	2.6	2.4	2.2	2.2	2.2	2.1	2.0	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.32	2.86		
8-Aug	2.3	2.3	A	2.4	2.3	2.4	2.5	2.3	2.2	2.3	2.3	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.18	2.48	
9-Aug	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.12	2.21	
10-Aug	A	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	A	2.19	2.32		
11-Aug	2.2	2.2	2.3	2.4	2.3	2.5	2.5	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	A	2.3	2.23	2.51		
12-Aug	2.6	2.7	3.0	3.1	3.0	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	A	2.2	2.2	2.2	2.37	3.08	
13-Aug	2.2	2.2	2.2	2.3	2.5	2.6	2.4	2.4	2.5	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.22	2.58		
14-Aug	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	A	2.3	2.3	2.4	2.4	2.17	2.42		
15-Aug	2.5	2.5	2.4	2.4	2.4	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.3	2.3	2.3	2.4	2.9	2.34	2.95		
16-Aug	2.8	2.6	2.7	2.6	2.8	2.5	2.4	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	A	2.2	2.2	2.7	2.4	2.7	2.9	2.40	2.90		
17-Aug	2.6	2.6	2.7	2.7	2.6	2.5	2.7	2.5	2.5	2.2	2.2	2.2	2.1	2.1	2.1	2.1	A	A	2.1	2.1	2.2	2.2	2.2	2.2	2.33	2.75		
18-Aug	2.2	2.5	2.7	2.7	2.7	2.7	2.8	2.7	2.4	2.3	2.3	2.3	2.3	2.2	2.2	A	2.1	2.1	2.1	2.2	2.6	2.5	2.6	2.5	2.42	2.85		
19-Aug	2.6	2.6	2.7	2.8	2.5	2.9	3.1	2.8	2.3	2.4	2.3	2.3	2.2	2.2	A	2.1	2.1	2.1	2.1	2.3	2.5	2.4	2.5	2.4	2.45	3.15		
20-Aug	2.5	2.5	2.6	2.8	3.0	2.8	2.7	2.5	2.3	2.3	2.2	2.2	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.1	2.1	2.34	2.98		
21-Aug	2.1	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.2	2.2	2.2	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.20	2.48		
22-Aug	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.1	2.2	2.1	A	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.15	2.34		
23-Aug	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.18	2.33		
24-Aug	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.13	2.23		
25-Aug	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.4	2.3	2.15	2.43		
26-Aug	2.3	2.3	2.3	2.4	2.4	2.4	2.4	A	2.5	2.5	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.25	2.55		
27-Aug	2.2	2.2	2.3	2.2	2.3	2.6	A	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.5	2.4	2.29	2.59		
28-Aug	2.4	2.7	2.3	2.3	2.3	A	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.22	2.71		
29-Aug	2.2	2.2	2.2	2.1	A	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.5	2.16	2.48			
30-Aug	2.2	2.2	2.3	A	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.4	2.4	2.4	2.4	2.23	2.45		
31-Aug	2.6	2.5	A	2.5	2.6	2.7	2.8	2.8	2.8	2.7	2.3	2.2	2.2	2.1	2.0	2.1	2.1	2.1	2.2	2.2	2.3	3.0	3.1	2.3	2.43	3.05		
2.28 2.32 2.32 2.36 2.38 2.41 2.41 2.36 2.29 2.22 2.16 2.13 2.11 2.10 2.08 2.09 2.09 2.09 2.10 2.13 2.21 2.24 2.27 2.28 Diurnal Average																												
2.82 2.72 2.98 3.08 3.03 2.89 3.15 2.79 2.80 2.65 2.37 2.34 2.33 2.23 2.19 2.19 2.20 2.16 2.17 2.31 2.71 2.98 3.05 2.95 Diurnal Maximum																												
C - Calibration A - Automated Daily Zero Span																												

Hourly Averages

Total Hydrocarbons (THC) - ppm
Henry Pirker - August 2012



Hourly Maximums

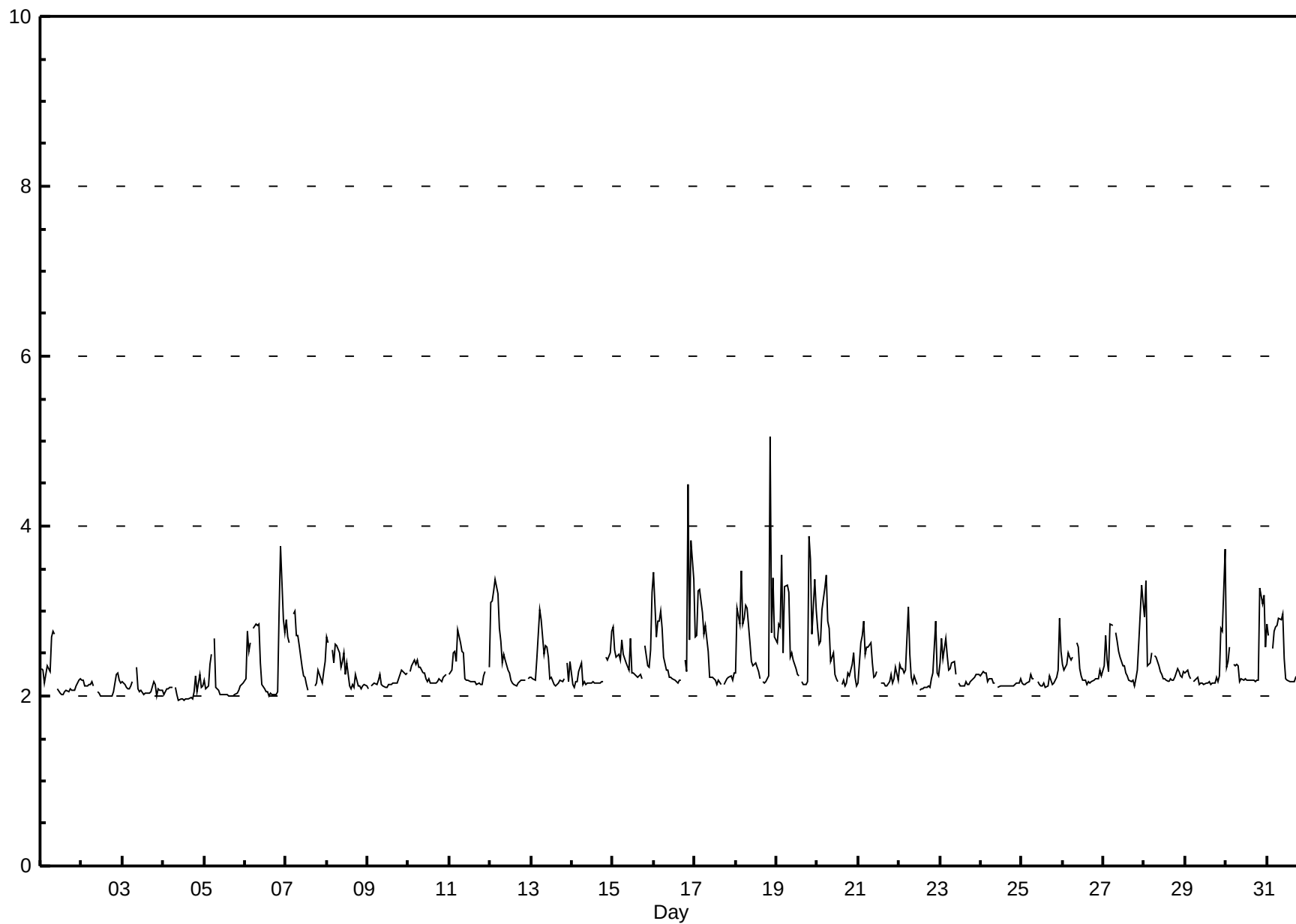
Total Hydrocarbons (THC) - ppm

Henry Pirker - August 2012

Maximum Value: 5.05 ppm on Aug 18 21:00																								Maximum Daily Average: 2.77 ppm on Aug 19																								Hours in Service:		744	
Minimum Value: 1.9 ppm on Aug 4 13:00																								Minimum Daily Average: 2.05 ppm on Aug 4																								Hours of Data:		709	
Maximum Diurnal Average: 2.60 ppm at hour 6																								Minimum Diurnal Average: 2.12 ppm at hour 15																								Hours of Missing Data:		35	
Monthly Average: 2.354 ppm																								Percentiles: P ₁ = 1.97 P ₁₀ = 2.08 Q ₁ = 2.14 Median = 2.21 Q ₃ = 2.45 P ₉₀ = 2.82 P ₉₉ = 3.73																								Hours of Calibration:		35	
																								Percent Operational Time:																								100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																											
1-Aug	2.3	2.3	2.2	2.2	2.4	2.3	2.7	2.8	2.7	A	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.22	2.77																									
2-Aug	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.1	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.3	2.2	2.2	2.10	2.27																									
3-Aug	2.2	2.1	2.1	2.1	2.1	2.1	2.2	A	2.3	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.1	2.1	2.1	2.09	2.33																									
4-Aug	2.0	2.1	2.1	2.1	2.1	2.1	A	2.1	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.3	2.1	2.1	2.05	2.26																									
5-Aug	2.2	2.1	2.1	2.4	2.5	A	2.7	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.12	2.68																									
6-Aug	2.2	2.8	2.5	2.6	A	2.8	2.8	2.8	2.8	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	3.0	3.8	2.9	2.8	2.46	3.77																									
7-Aug	2.9	2.7	2.6	A	3.0	3.0	2.7	2.7	2.6	2.3	2.2	2.2	2.1	2.1	C	C	C	2.1	2.1	2.3	2.2	2.2	2.3	2.4	2.44	3.00																									
8-Aug	2.7	2.6	A	2.5	2.4	2.6	2.6	2.5	2.3	2.4	2.5	2.3	2.4	2.1	2.1	2.1	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.31	2.69																									
9-Aug	2.1	A	2.1	2.1	2.2	2.1	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.17	2.30																									
10-Aug	A	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.25	2.42																									
11-Aug	2.3	2.3	2.5	2.5	2.4	2.8	2.6	2.5	2.5	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.2	2.3	A	2.3	2.31	2.78																									
12-Aug	3.1	3.1	3.2	3.4	3.2	2.8	2.6	2.4	2.5	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	A	2.2	2.2	2.49	3.37																									
13-Aug	2.2	2.2	2.2	2.4	2.7	3.0	2.9	2.5	2.6	2.6	2.5	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	A	2.4	2.2	2.4	2.36	3.02																									
14-Aug	2.1	2.1	2.2	2.2	2.3	2.4	2.1	2.2	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.5	2.4	2.5	2.8	2.24	2.77																									
15-Aug	2.8	2.5	2.5	2.5	2.4	2.7	2.5	2.4	2.4	2.3	2.7	2.3	2.3	2.3	2.2	2.2	2.2	2.2	A	2.6	2.4	2.3	2.5	3.2	2.45	3.22																									
16-Aug	3.5	2.7	2.9	2.9	3.0	2.8	2.5	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	A	2.4	2.3	4.5	2.7	3.8	3.4	2.67	4.50																									
17-Aug	2.7	2.7	3.2	3.3	3.0	2.7	2.8	2.7	2.5	2.2	2.2	2.2	2.2	2.1	2.2	2.1	A	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.45	3.25																									
18-Aug	2.3	3.0	2.8	3.5	2.8	2.9	3.1	3.0	2.6	2.4	2.4	2.4	2.4	2.3	2.2	A	2.2	2.1	2.2	2.2	5.0	2.7	3.4	2.7	2.73	5.05																									
19-Aug	2.6	2.8	2.8	3.7	2.5	3.3	3.3	3.2	2.5	2.5	2.4	2.3	2.3	2.2	A	2.2	2.1	2.1	2.2	3.9	3.6	2.7	3.4	3.0	2.77	3.88																									
20-Aug	2.8	2.6	2.6	3.0	3.3	3.4	2.9	2.8	2.4	2.5	2.2	2.2	2.2	A	2.1	2.2	2.1	2.2	2.3	2.2	2.4	2.5	2.2	2.1	2.49	3.43																									
21-Aug	2.1	2.6	2.7	2.9	2.5	2.6	2.6	2.6	2.4	2.2	2.2	2.3	A	2.1	2.2	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.3	2.2	2.34	2.88																									
22-Aug	2.4	2.3	2.3	2.3	2.3	3.0	2.5	2.2	2.1	2.2	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.9	2.3	2.2	2.28	3.05																									
23-Aug	2.4	2.7	2.4	2.7	2.5	2.3	2.3	2.4	2.4	2.3	A	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.29	2.68																									
24-Aug	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.16	2.29																									
25-Aug	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	A	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.3	2.9	2.5	2.22	2.92																									
26-Aug	2.4	2.3	2.4	2.5	2.5	2.4	2.5	A	2.6	2.6	2.3	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.30	2.63																									
27-Aug	2.4	2.7	2.4	2.3	2.8	2.8	A	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.3	2.6	3.3	2.49	3.31																									
28-Aug	2.9	3.4	2.4	2.4	2.5	A	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.3	2.36	3.36																									
29-Aug	2.3	2.3	2.2	2.2	A	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.8	2.8	3.7	2.30	3.72																									
30-Aug	2.3	2.4	2.6	A	2.4	2.4	2.4	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.3	3.1	3.2	2.6	2.40	3.27																									
31-Aug	2.8	2.7	A	2.6	2.8	2.8	2.8	2.9	2.9	3.0	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	4.5	4.6	2.5	2.67	4.56																									
2.45 2.50 2.45 2.56 2.53 2.60 2.55 2.48 2.40 2.30 2.23 2.18 2.16 2.13 2.12 2.13 2.13 2.14 2.16 2.25 2.50 2.50 2.57 2.48																								Diurnal Average																											
3.45 3.36 3.24 3.65 3.27 3.43 3.30 3.22 2.90 2.97 2.68 2.36 2.39 2.28 2.24 2.24 2.25 2.26 2.42 3.88 5.05 4.54 4.56 3.72																								Diurnal Maximum																											
C - Calibration A - Automated Daily Zero Span																																																			

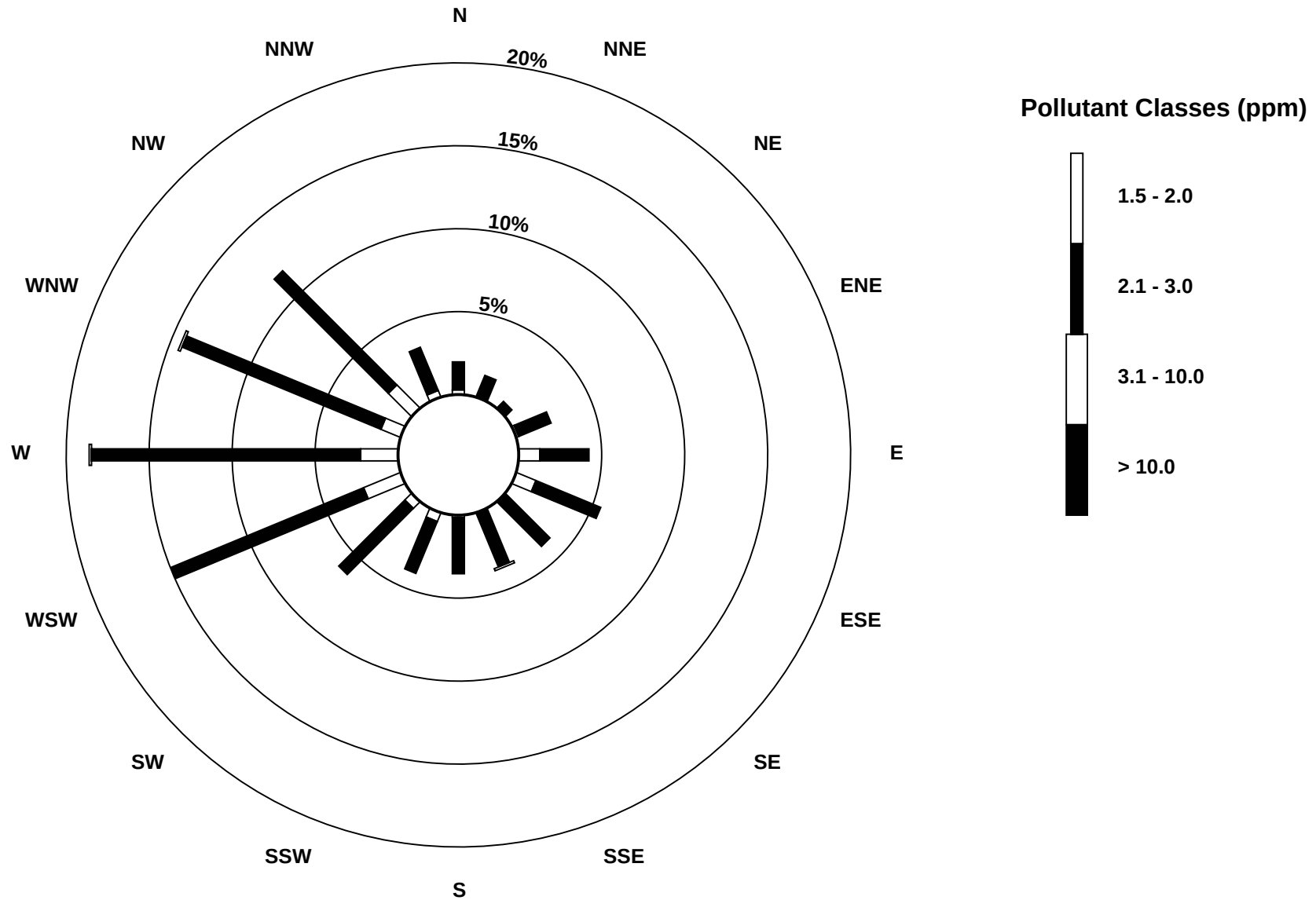
Hourly Maximums

Total Hydrocarbons (THC) - ppm
Henry Pirker - August 2012



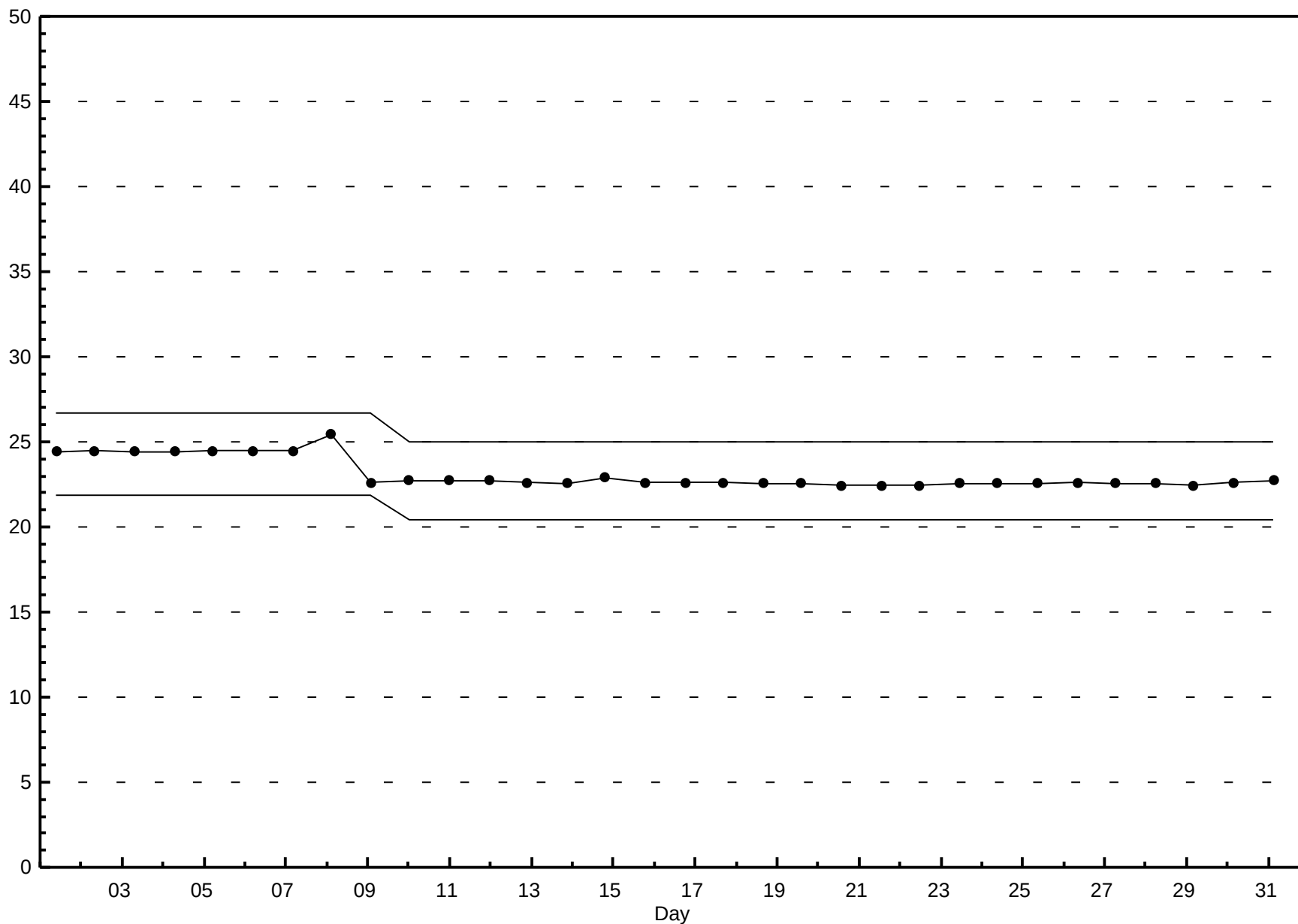
Pollutant Rose

Total Hydrocarbons (THC) - ppm
Henry Pirker - August 2012



Span Responses

Total Hydrocarbons (THC)
Henry Pirker - August 2012

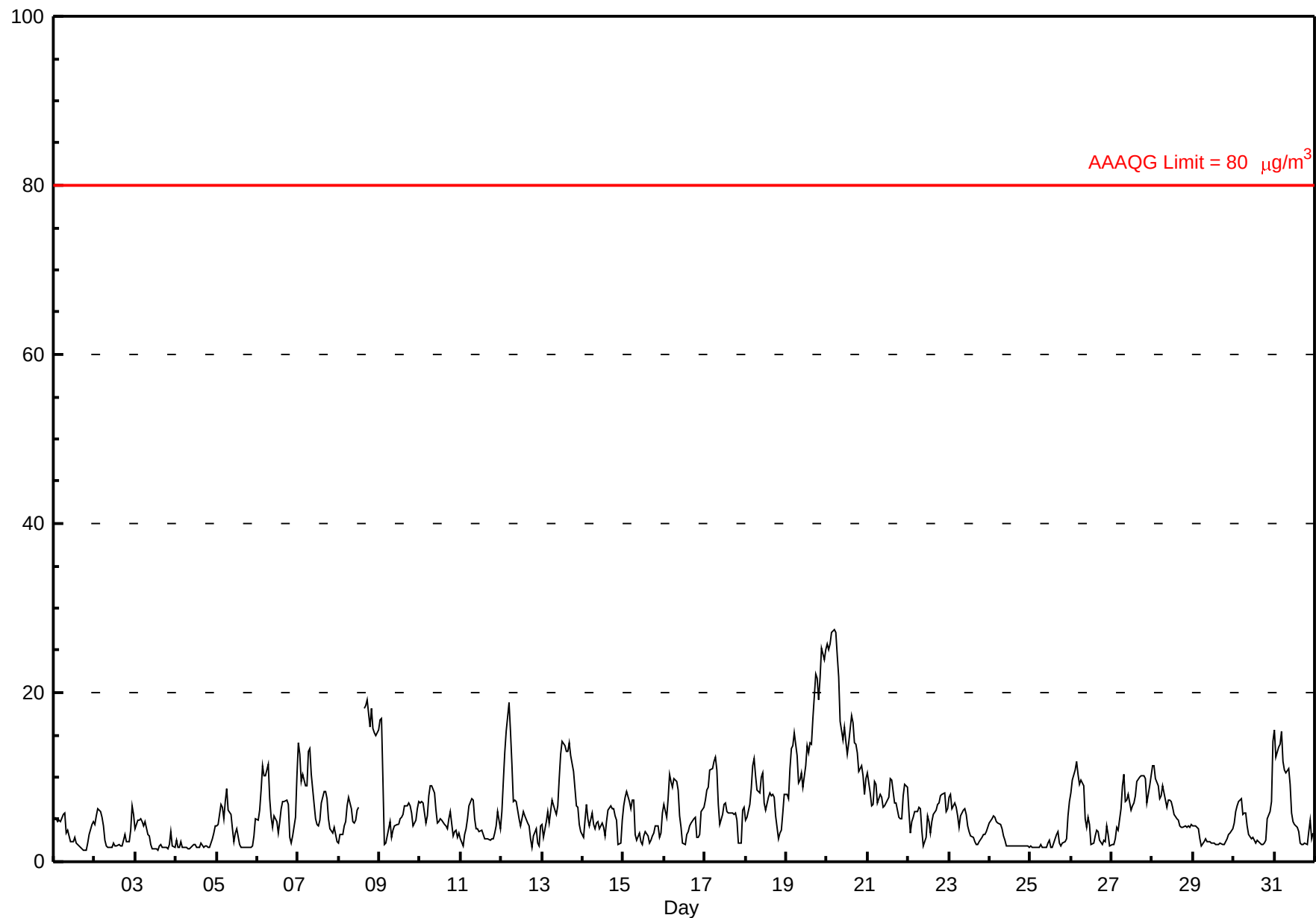


Hourly Averages

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

Henry Pirker - August 2012

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 27.4 µg/m³ on Aug 20 05:00 Maximum Daily Average: 17.4 µg/m³ on Aug 20																					Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7					
Minimum Value: 1 µg/m³ on Aug 1 20:00 Maximum Diurnal Average: 8.0 µg/m³ at hour 7 Monthly Average: 6.07 µg/m³										Minimum Daily Average: 2.0 µg/m³ on Aug 4 Minimum Diurnal Average: 4.8 µg/m³ at hour 20 Percentiles: P ₁ = 1.5 P ₁₀ = 1.9 Q ₁ = 2.9 Median = 4.9 Q ₃ = 7.5 P ₉₀ = 11.5 P ₉₉ = 24.9																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	5	5	5	5	5	6	6	3	4	3	2	2	3	2	2	2	2	1	1	1	2	3	4	5	3.4	5.8
2-Aug	4	5	6	6	5	4	3	2	2	2	2	2	2	2	2	2	2	2	3	2	2	4	7	6	3.3	6.7
3-Aug	4	5	5	5	5	4	5	3	3	2	2	2	1	1	2	2	2	2	2	1	2	4	2	2	2.8	5.1
4-Aug	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	4	2.0	4.2
5-Aug	4	4	7	7	5	7	9	6	6	4	2	3	4	2	2	2	2	2	2	2	2	2	3	5	3.8	8.7
6-Aug	5	6	9	11	10	10	12	8	5	4	5	5	3	5	6	7	7	7	7	3	2	3	5	10	6.5	11.5
7-Aug	14	13	9	10	9	9	13	13	10	7	5	4	4	5	7	8	8	8	5	4	3	4	3	2	7.5	14.1
8-Aug	2	3	3	4	5	7	8	6	5	5	5	6	6	M	M	18	18	19	16	18	16	15	15	16	9.8	19.1
9-Aug	17	17	10	2	2	4	5	3	4	4	4	4	5	5	6	7	7	7	7	6	4	5	6	7	6.1	17.0
10-Aug	7	7	7	5	5	8	9	9	8	6	5	5	5	5	4	4	4	5	6	3	3	4	3	3	5.4	9.0
11-Aug	3	2	3	4	5	7	7	7	5	4	4	4	4	3	3	3	3	3	3	3	3	4	6	4	4.0	7.5
12-Aug	6	9	13	15	19	15	12	7	7	7	5	4	5	6	5	5	4	3	2	3	4	2	2	4	6.9	18.8
13-Aug	4	3	5	6	5	6	7	6	6	7	10	13	14	14	13	13	14	13	11	9	7	6	4	3	8.2	14.2
14-Aug	3	5	7	5	4	6	4	4	5	5	4	5	4	3	5	6	7	6	6	5	5	2	2	5	4.7	6.9
15-Aug	7	8	8	7	6	7	7	3	2	3	2	2	3	4	3	2	3	3	3	4	4	3	3	6	4.4	8.2
16-Aug	7	5	7	10	10	9	10	10	8	5	4	2	2	3	4	4	5	5	5	3	3	3	6	7	5.7	10.3
17-Aug	7	9	9	11	11	12	12	11	7	4	6	7	7	6	6	6	6	6	6	5	2	2	6	6	7.0	12.5
18-Aug	5	5	7	9	11	12	10	8	8	10	11	7	6	8	8	8	8	8	5	3	3	4	6	8	7.4	12.2
19-Aug	8	7	11	13	14	15	13	9	10	11	9	11	14	13	14	14	17	22	22	19	22	25	24	25	15.1	25.3
20-Aug	26	25	26	27	27	27	24	22	17	14	16	14	13	14	17	16	14	14	13	11	11	10	8	10	17.4	27.4
21-Aug	11	8	7	7	10	9	7	8	8	6	7	7	8	10	10	8	7	7	5	5	5	8	9	9	7.7	10.5
22-Aug	6	3	5	5	6	6	7	6	4	2	3	5	5	3	5	6	6	7	7	8	8	8	6	6	5.5	8.1
23-Aug	8	8	6	7	7	5	4	5	6	6	6	4	3	3	3	2	2	2	2	3	3	3	4	4	4.5	8.0
24-Aug	5	5	5	5	5	5	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.9	5.4
25-Aug	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	2	2	2	2	3	5	7	2.4	7.1
26-Aug	8	10	11	12	10	9	10	9	5	4	5	4	2	2	3	4	4	3	2	3	2	4	3	2	5.5	11.9
27-Aug	2	2	3	4	4	6	9	10	7	7	8	6	7	7	8	10	10	10	10	10	10	7	9	10	7.3	10.3
28-Aug	11	11	10	9	7	8	9	8	6	7	7	7	6	6	5	5	4	4	4	4	4	4	4	4	6.6	11.4
29-Aug	4	4	4	4	3	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	4	2.7	4.2
30-Aug	5	6	7	7	7	6	6	6	4	3	3	3	2	2	2	2	2	2	2	2	5	6	7	14	4.7	14.2
31-Aug	16	12	14	14	15	12	11	10	11	9	6	5	4	4	3	2	2	2	2	2	3	5	3	3	7.2	15.6
7.0 7.0 7.4 7.8 7.8 7.9 8.0 6.9 5.8 5.2 5.0 4.9 4.9 4.8 5.2 5.7 5.7 5.8 5.4 4.8 4.9 5.2 5.6 6.6																								Diurnal Average		
25.8 25.0 25.7 27.1 27.4 27.0 24.3 21.8 16.7 14.3 15.9 14.3 14.2 14.0 17.3 18.1 18.4 22.2 21.7 19.1 21.6 25.3 23.9 25.1																								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																										

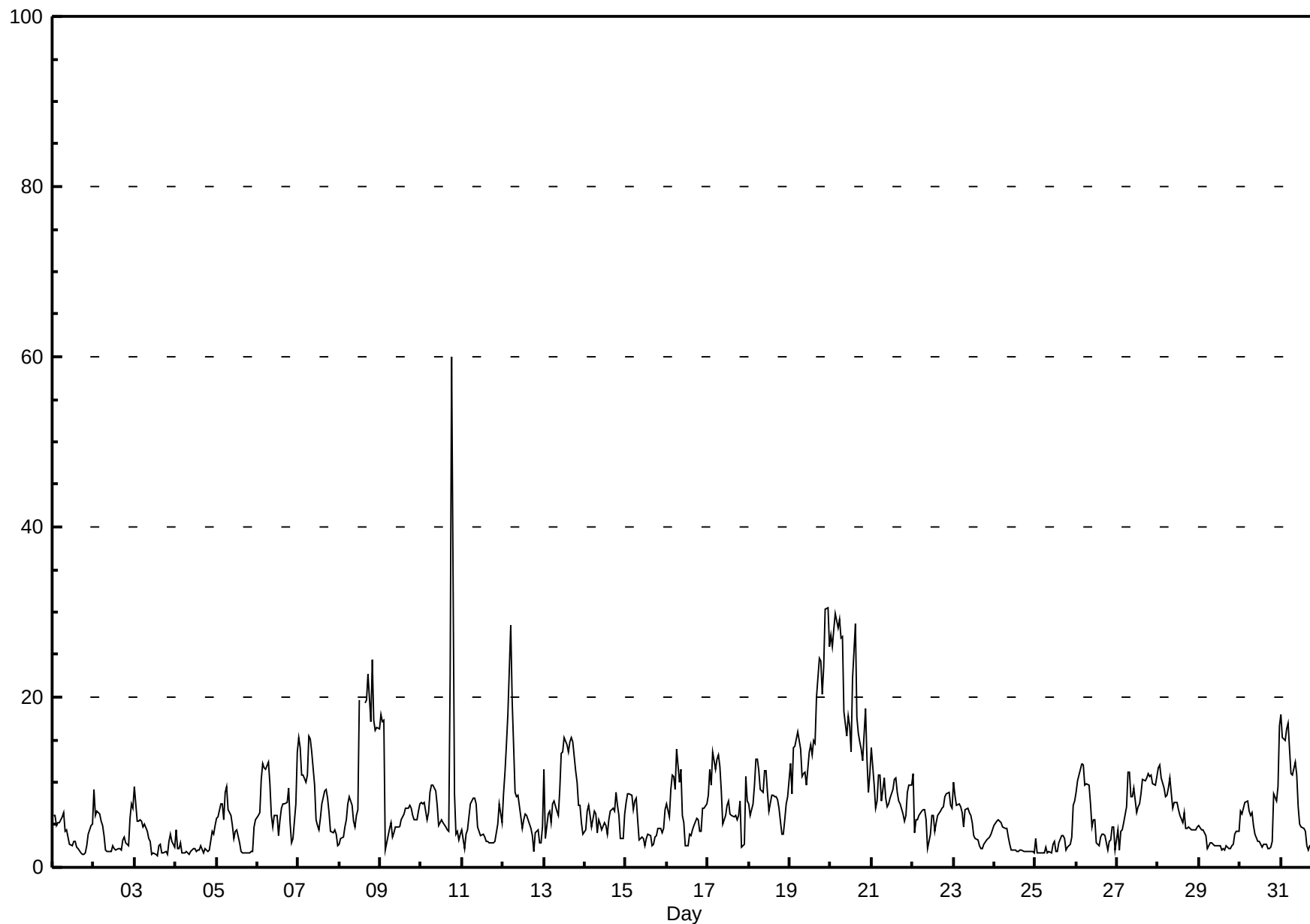


Hourly Maximums

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

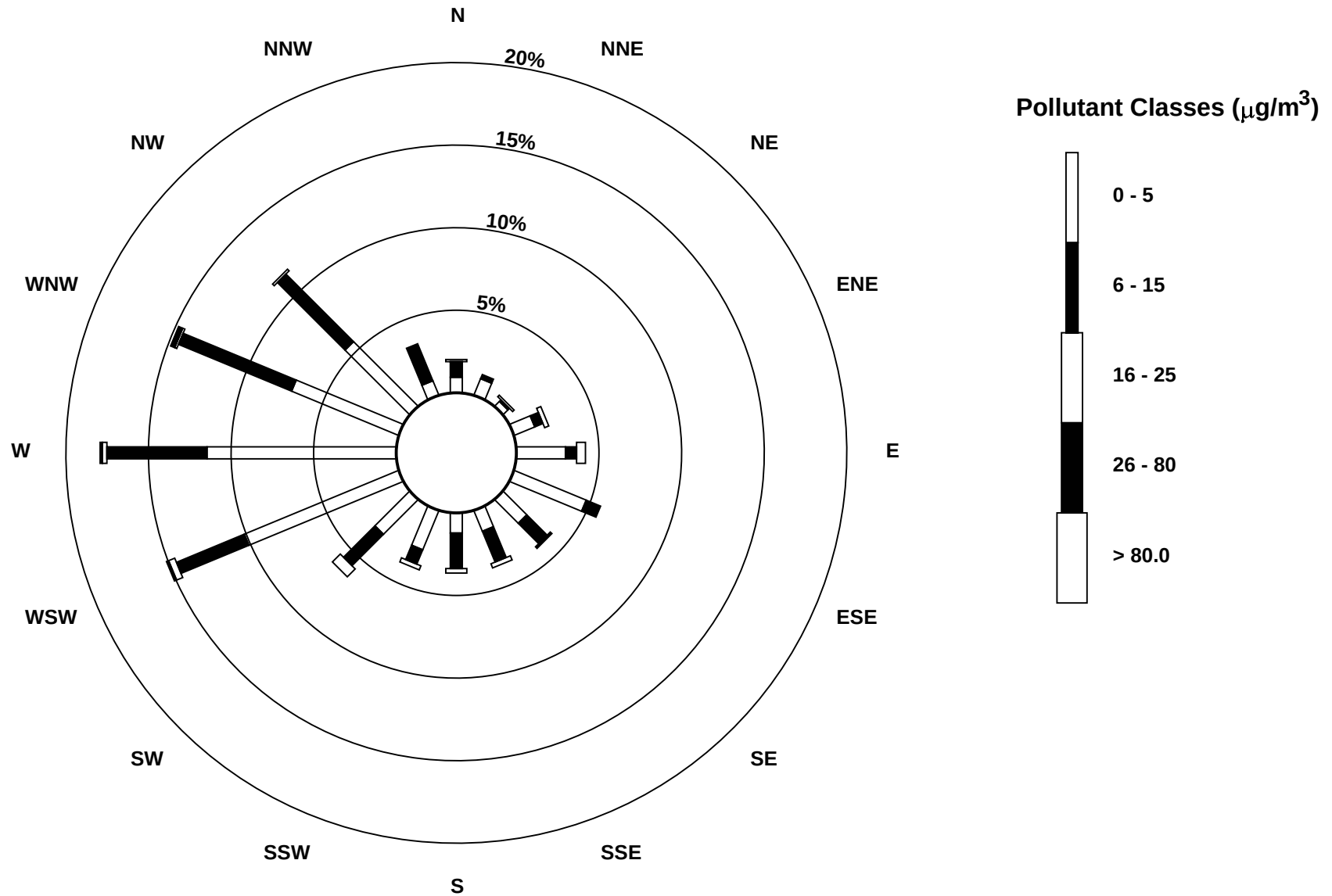
Henry Pirker - August 2012

Maximum Value: 59.9 μg/m ³ on Aug 10 19:00																								Maximum Daily Average: 20.0 μg/m ³ on Aug 20										Hours in Service: 744	
Minimum Value: 1 μg/m ³ on Aug 3 14:00																								Minimum Daily Average: 2.4 μg/m ³ on Aug 4										Hours of Data: 742	
Maximum Diurnal Average: 9.1 μg/m ³ at hour 1																								Minimum Diurnal Average: 5.6 μg/m ³ at hour 14										Hours of Missing Data: 2	
Monthly Average: 7.09 μg/m ³																								Percentiles: P ₁ = 1.6 P ₁₀ = 2.1 Q ₁ = 3.6 Median = 5.8 Q ₃ = 8.7 P ₉₀ = 13.5 P ₉₉ = 28.4										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-Aug	6	6	5	5	5	6	6	4	4	4	3	3	3	3	2	2	2	2	2	2	3	4	5	5	3.8	6.4									
2-Aug	9	6	7	6	5	5	4	2	2	2	2	2	2	2	2	2	2	3	4	3	2	6	7	7	4.0	9.1									
3-Aug	9	5	5	6	5	5	5	4	3	3	2	2	2	1	2	3	2	2	2	2	3	4	3	2	3.4	9.5									
4-Aug	4	2	2	3	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	4	4	5	2.4	4.9									
5-Aug	6	6	8	7	6	9	9	7	6	5	3	4	4	3	2	2	2	2	2	2	2	2	5	6	4.5	9.5									
6-Aug	6	6	10	12	12	12	12	10	6	5	6	6	4	6	7	8	8	8	9	5	3	3	8	13	7.7	13.5									
7-Aug	15	14	11	11	10	11	15	15	14	10	6	5	4	6	8	9	9	8	6	4	4	4	4	3	8.6	15.5									
8-Aug	3	3	4	5	6	7	8	7	5	5	6	7	20	M	M	19	20	23	17	24	17	16	16	16	11.6	24.5									
9-Aug	18	17	17	2	3	5	5	4	4	5	5	5	6	6	6	7	7	7	7	6	6	6	7	7	6.9	17.9									
10-Aug	8	8	8	6	6	9	10	10	9	7	5	5	6	5	5	4	4	23	60	9	4	4	3	4	9.2	59.9									
11-Aug	4	2	4	4	6	7	8	8	8	5	4	4	4	4	3	3	3	3	3	3	4	5	7	5	4.6	8.1									
12-Aug	9	11	14	18	29	19	14	9	8	8	6	5	6	6	6	5	5	4	2	4	4	3	3	5	8.4	28.5									
13-Aug	12	3	6	7	5	8	8	7	6	9	13	13	15	14	14	15	15	15	11	10	7	7	5	4	9.6	15.2									
14-Aug	4	7	7	6	5	7	6	4	6	5	4	5	5	4	6	7	7	7	9	7	6	3	3	6	5.7	8.8									
15-Aug	8	9	9	8	7	8	8	6	3	4	3	2	3	4	4	2	3	4	4	5	5	4	5	7	5.1	8.6									
16-Aug	8	6	9	11	11	9	14	10	12	6	5	3	2	4	4	4	5	6	6	4	4	7	7	8	6.8	13.9									
17-Aug	8	12	10	14	12	13	13	12	9	5	6	7	8	6	6	6	6	6	6	8	2	3	11	8	8.1	13.6									
18-Aug	8	6	8	10	13	13	11	9	9	11	11	9	7	8	8	8	8	8	7	4	4	6	7	8	8.4	12.8									
19-Aug	12	9	14	14	15	16	14	11	11	11	10	14	14	13	15	15	20	25	24	20	24	30	30	26	16.9	30.5									
20-Aug	27	26	28	30	28	29	27	27	18	15	18	17	14	22	29	18	16	15	14	13	19	13	9	11	20.0	29.8									
21-Aug	14	10	7	8	11	11	8	11	8	7	7	8	9	10	10	9	8	7	6	5	6	9	10	10	8.7	14.1									
22-Aug	11	4	6	6	6	7	7	7	6	2	4	6	6	4	5	6	7	7	7	8	9	9	7	7	6.4	11.0									
23-Aug	10	8	7	7	7	6	5	7	7	6	6	5	4	3	3	3	2	2	3	3	3	4	4	4	5.1	10.1									
24-Aug	5	5	6	5	5	5	5	5	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3.1	5.6									
25-Aug	3	2	2	2	2	2	2	2	2	2	3	3	2	2	3	4	4	3	2	2	3	4	7	8	2.9	7.9									
26-Aug	9	10	12	12	12	10	10	10	8	5	6	6	3	3	4	4	4	4	2	3	3	5	5	2	6.2	12.3									
27-Aug	4	2	4	4	5	7	11	11	8	8	9	6	7	8	9	10	10	11	11	11	11	10	10	11	8.3	11.2									
28-Aug	12	12	10	9	8	8	9	10	7	8	8	8	7	6	5	6	5	5	5	4	4	4	4	5	7.1	12.0									
29-Aug	5	4	4	4	4	2	3	3	3	3	3	2	3	2	2	2	2	2	2	3	3	4	4	4	3.1	4.9									
30-Aug	7	6	7	8	8	7	6	6	5	4	3	3	3	2	3	3	2	2	2	3	9	8	10	17	5.5	16.7									
31-Aug	18	15	15	16	17	14	11	11	12	11	7	5	5	5	4	3	2	3	3	2	6	5	4	4	8.2	18.0									
9.1 7.9 8.5 8.6 8.8 8.9 9.0 8.0 6.9 6.0 5.7 5.6 5.8 5.6 6.0 6.2 6.2 7.0 7.8 5.9 5.9 6.4 7.0 7.4 27.3 26.0 27.9 29.8 28.5 29.1 27.0 27.2 18.3 15.3 17.8 16.7 19.7 22.2 28.6 19.4 20.0 24.5 59.9 24.5 23.5 30.4 30.5 26.0 Diurnal Average Diurnal Maximum																																			
M - Maintenance																																			



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Henry Pirker - August 2012



Hourly Averages

External Temperature (ET) - °C

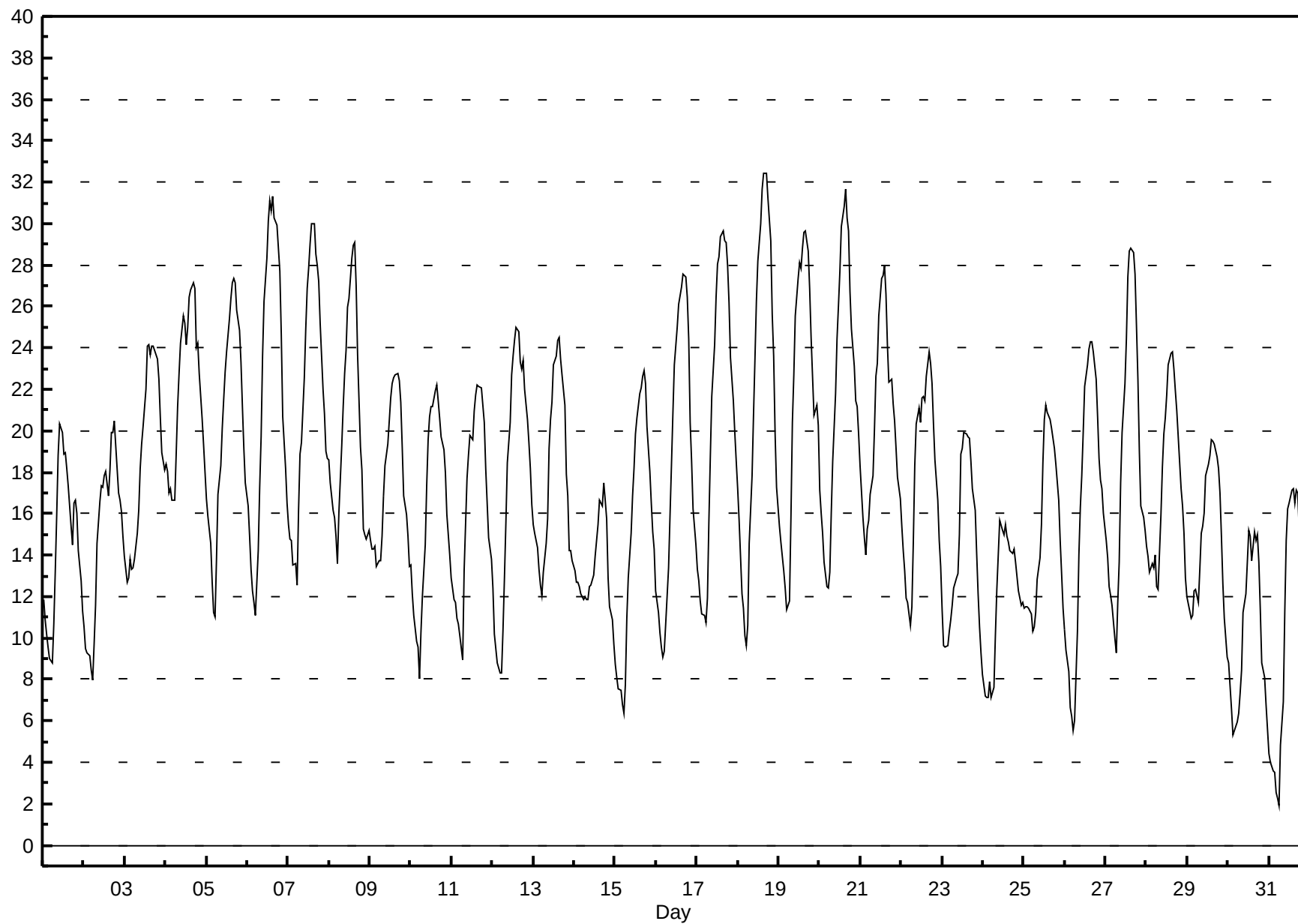
Henry Pirker - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 32.5 °C on Aug 18 16:00 Maximum Daily Average: 22.0 °C on Aug 6																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 2 °C on Aug 31 07:00 Minimum Daily Average: 10.1 °C on Aug 30 Maximum Diurnal Average: 23.9 °C at hour 16 Minimum Diurnal Average: 10.4 °C at hour 6 Monthly Average: 17.43 °C Percentiles: P ₁ = 4.8 P ₁₀ = 10.2 Q ₁ = 12.9 Median = 16.8 Q ₃ = 21.8 P ₉₀ = 26.4 P ₉₉ = 31.2																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	12	11	10	10	9	9	11	13	16	19	20	20	19	19	18	17	15	16	17	16	14	13	11	14.6	20.3	
2-Aug	11	9	9	9	8	8	10	12	15	17	17	17	18	18	17	18	20	20	19	17	17	16	15	14.9	20.5	
3-Aug	14	13	13	14	13	13	14	15	16	18	19	20	22	24	24	24	24	24	23	23	21	19	18	18.9	24.2	
4-Aug	18	18	17	17	17	17	19	21	23	24	26	25	24	25	26	27	27	27	24	24	23	21	19	22.0	27.1	
5-Aug	17	16	15	13	11	11	14	17	18	20	22	23	24	25	26	27	27	27	26	25	23	21	19	20.2	27.3	
6-Aug	16	15	13	12	12	11	14	17	20	24	26	28	30	31	31	31	30	30	29	28	25	21	18	22.0	31.3	
7-Aug	15	15	15	14	14	13	16	19	19	23	25	27	28	29	30	30	29	28	27	25	22	21	19	21.7	30.0	
8-Aug	19	18	16	16	15	14	16	19	21	23	24	26	26	28	29	29	27	24	19	18	15	15	15	20.3	29.1	
9-Aug	15	14	14	14	13	14	14	15	17	18	19	21	22	22	23	23	23	22	21	19	17	16	15	13	17.7	22.7
10-Aug	14	12	11	10	10	8	10	12	15	17	20	21	21	21	22	22	21	21	20	19	18	16	15	14	16.2	22.2
11-Aug	13	12	12	11	11	10	9	13	15	18	19	20	20	21	22	22	22	22	21	20	18	17	15	14	16.5	22.2
12-Aug	12	10	10	9	8	8	10	13	16	18	20	23	24	24	25	25	23	23	23	22	21	19	18	16	17.6	25.0
13-Aug	15	15	14	13	13	12	13	15	16	19	21	21	23	24	24	25	23	23	21	18	17	14	14	14	17.8	24.5
14-Aug	13	13	13	12	12	12	12	12	12	12	13	13	14	15	15	17	16	18	17	16	13	12	11	10	13.4	17.5
15-Aug	9	8	8	7	7	6	8	11	13	15	17	18	20	21	22	22	23	23	22	20	18	17	15	14	15.1	22.9
16-Aug	12	11	10	10	9	9	11	13	16	18	21	23	25	26	27	27	28	27	26	24	20	19	16	15	18.5	27.6
17-Aug	13	13	12	11	11	11	12	16	19	22	24	26	28	28	29	30	29	29	28	26	24	21	20	19	20.9	29.7
18-Aug	17	16	12	11	10	10	11	15	18	21	23	26	28	30	32	32	32	32	31	29	26	24	20	17	21.8	32.5
19-Aug	15	15	14	13	12	11	12	16	20	23	26	27	28	28	29	30	30	29	27	25	23	21	21	20	21.4	29.6
20-Aug	17	16	15	14	13	12	13	16	19	22	24	26	28	30	31	32	30	30	27	25	23	21	21	20	21.8	31.7
21-Aug	18	16	15	14	15	16	17	18	20	23	23	26	27	27	28	27	24	22	22	21	20	19	18	17	20.6	28.0
22-Aug	15	14	13	12	12	11	12	15	18	20	21	20	22	22	21	23	24	23	22	20	19	17	15	13	17.7	23.8
23-Aug	11	10	10	10	10	11	12	12	13	13	15	19	19	20	20	20	20	19	17	16	14	12	11	9	14.2	19.9
24-Aug	8	7	7	7	8	7	8	10	12	14	16	15	15	15	15	15	14	14	14	14	13	12	12	12	11.9	15.7
25-Aug	11	12	12	11	11	10	11	11	13	14	15	18	21	21	21	21	20	20	19	18	17	15	13	11	15.3	21.2
26-Aug	10	9	8	7	6	6	6	10	14	16	18	20	22	23	24	24	24	24	22	21	19	18	17	16	16.1	24.3
27-Aug	15	14	12	12	12	10	9	12	14	17	20	22	24	27	29	29	29	28	25	23	19	16	16	15	18.7	28.8
28-Aug	14	14	13	14	13	14	12	12	16	18	20	21	22	23	24	24	23	22	21	18	17	16	15	13	17.5	23.8
29-Aug	12	11	11	11	12	12	12	13	15	15	16	18	18	19	20	19	19	19	18	17	15	13	11	9	14.8	19.6
30-Aug	9	8	7	5	6	6	6	7	8	11	12	14	15	15	14	15	15	15	14	11	9	8	7	6	10.1	15.2
31-Aug	4	4	4	3	3	2	2	5	7	11	15	16	16	17	17	16	17	17	15	14	12	11	11	11	10.5	17.2
13.5 12.5 11.7 11.2 10.8 10.4 11.4 13.7 15.9 18.2 19.9 21.3 22.3 23.2 23.7 23.9 23.5 23.0 22.0 20.5 18.5 16.9 15.6 14.5																								Diurnal Average		
18.6 18.0 17.0 17.2 16.7 16.7 18.9 21.2 22.8 24.2 26.2 28.3 30.2 31.1 31.7 32.5 32.4 32.4 31.2 29.1 25.6 23.6 21.2 20.3																								Diurnal Maximum		

Hourly Averages

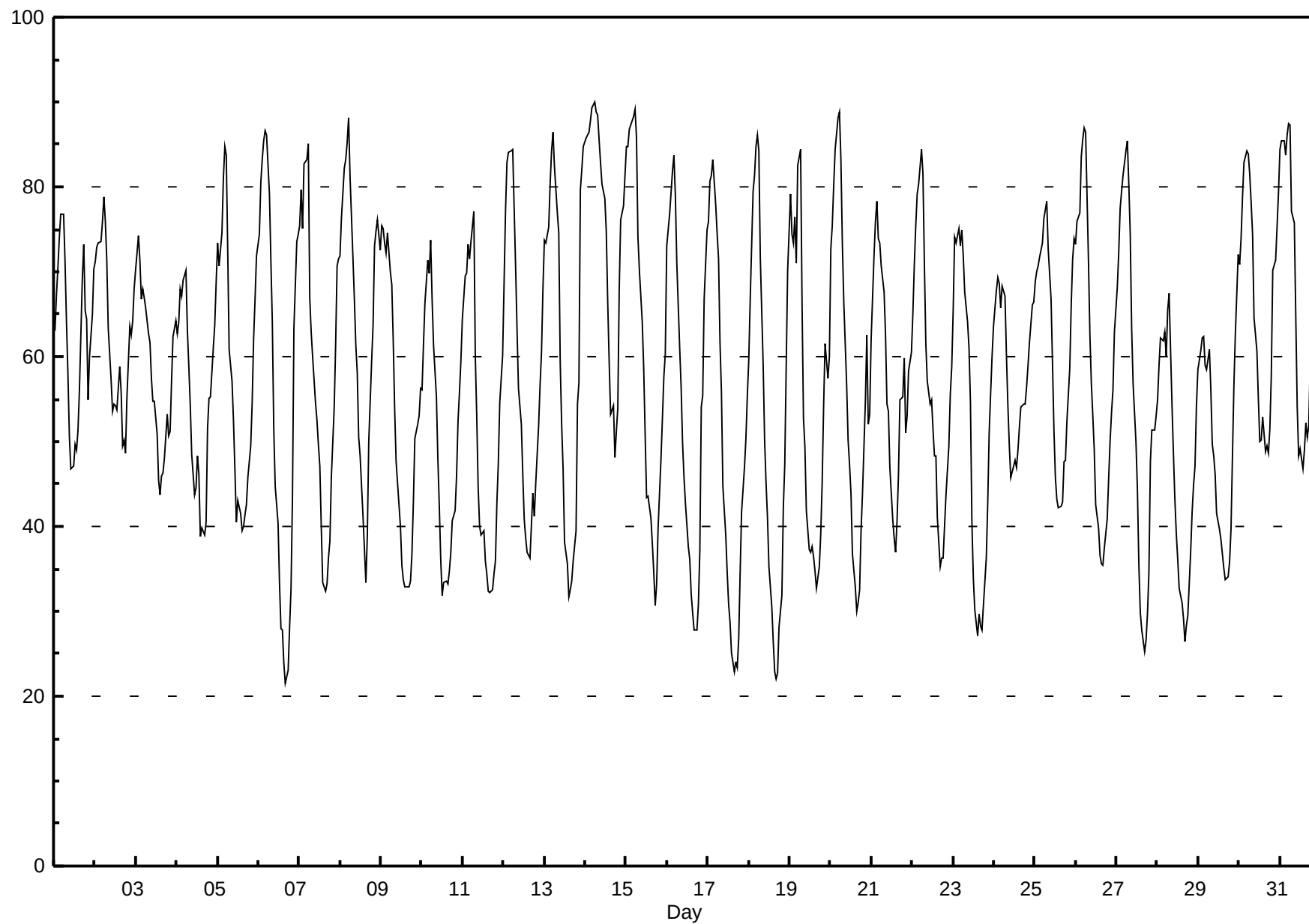
External Temperature (ET) - °C

Henry Pirker - August 2012



Hourly Averages

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



Hourly Averages

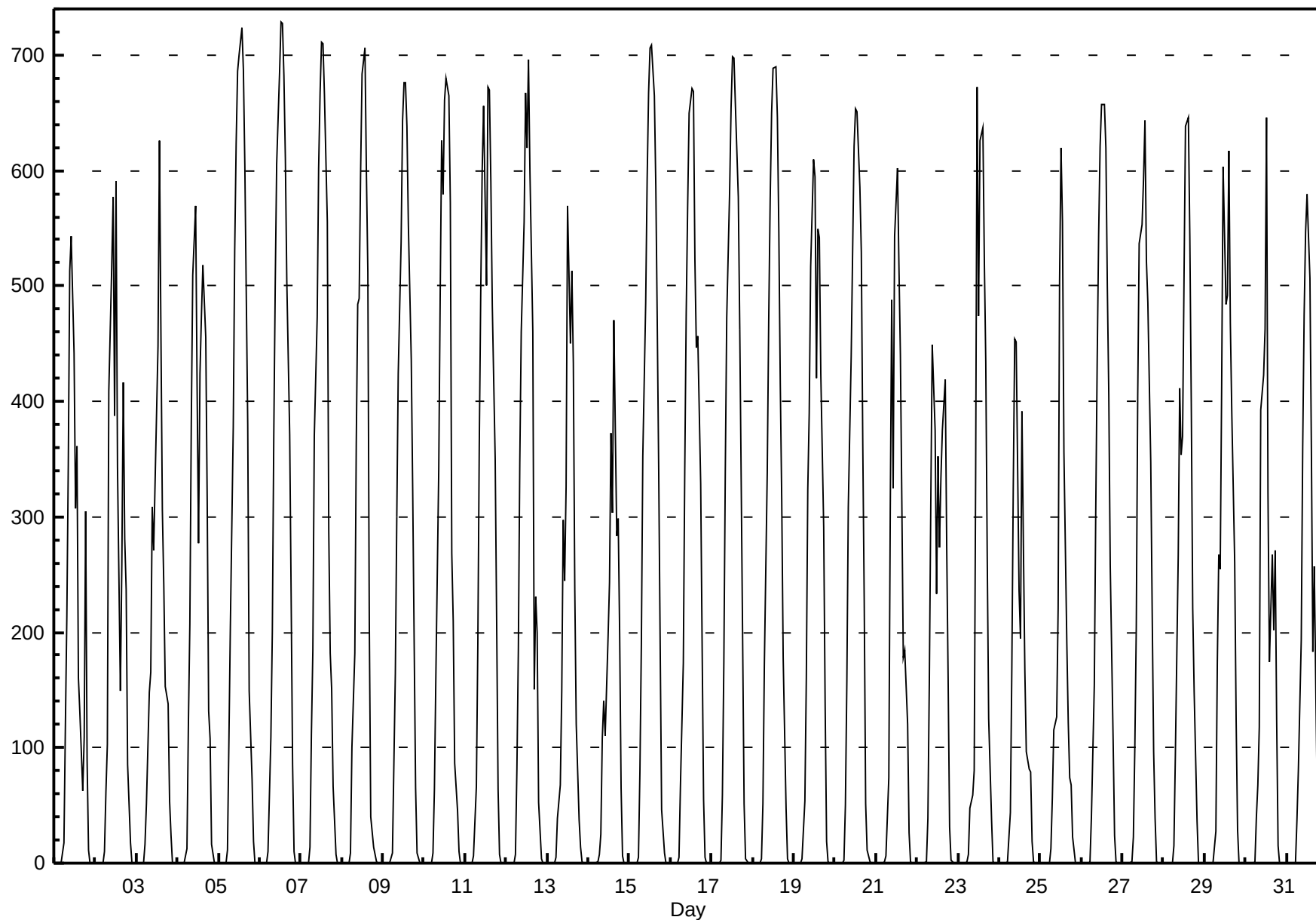
Solar Radiation (SR) - W/m²

Henry Pirker - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 729.0 W/m ² on Aug 6 13:00 Maximum Daily Average: 268.1 W/m ² on Aug 6																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 0 W/m ² on Aug 1 01:00 Maximum Diurnal Average: 568.7 W/m ² at hour 14 Monthly Average: 198.65 W/m ²												Minimum Daily Average: 117.8 W/m ² on Aug 14 Minimum Diurnal Average: 0.0 W/m ² at hour 1 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 73.8 Q ₃ = 386.4 P ₉₀ = 590.8 P ₉₉ = 704.9														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	0	0	0	0	1	17	120	213	345	513	544	441	307	361	161	130	62	109	305	90	11	0	0	0	155.4	543.5
2-Aug	0	0	0	0	0	10	62	103	409	516	577	388	591	344	149	258	416	281	237	85	17	0	0	0	185.1	591.3
3-Aug	0	0	0	0	0	16	52	148	166	308	270	331	448	626	462	306	241	153	138	54	24	0	0	0	156.0	626.3
4-Aug	0	0	0	0	0	12	120	207	381	510	569	414	277	424	475	519	456	312	132	108	16	0	0	0	205.5	568.9
5-Aug	0	0	0	0	0	11	106	206	377	531	623	686	700	724	688	605	492	380	149	73	19	0	0	0	265.4	724.2
6-Aug	0	0	0	0	0	11	109	200	370	501	606	685	729	728	682	610	505	372	231	86	11	0	0	0	268.1	729.0
7-Aug	0	0	0	0	0	14	112	184	370	473	602	668	711	710	666	556	287	182	150	66	8	0	0	0	239.9	711.4
8-Aug	0	0	0	0	0	9	101	182	364	484	489	598	683	707	599	512	210	40	14	8	1	0	0	0	208.3	706.6
9-Aug	0	0	0	0	0	9	87	164	300	424	538	643	676	676	638	553	436	323	192	65	9	0	0	0	238.9	676.3
10-Aug	0	0	0	0	0	8	64	161	342	493	626	579	661	680	665	572	268	209	86	45	10	0	0	0	227.9	679.7
11-Aug	0	0	0	0	0	6	67	189	363	493	599	656	500	673	670	591	483	350	210	64	8	0	0	0	246.8	672.7
12-Aug	0	0	0	0	0	8	82	184	348	461	556	668	619	696	600	460	150	231	200	52	4	0	0	0	221.6	695.9
13-Aug	0	0	0	0	0	5	39	68	149	297	245	326	569	450	514	433	237	120	37	14	1	0	0	0	146.0	569.2
14-Aug	0	0	0	0	0	1	7	25	108	140	110	195	243	372	304	471	283	298	199	65	6	0	0	0	117.8	470.6
15-Aug	0	0	0	0	0	4	79	189	353	485	593	667	706	708	665	586	467	339	189	47	9	0	0	0	253.6	708.4
16-Aug	0	0	0	0	0	5	66	173	341	477	569	650	671	668	523	447	457	329	188	55	5	0	0	0	234.3	671.4
17-Aug	0	0	0	0	0	3	59	173	339	473	582	655	698	698	656	576	463	330	192	51	4	0	0	0	248.0	698.0
18-Aug	0	0	0	0	0	4	52	172	339	470	574	649	689	690	646	547	415	315	178	47	4	0	0	0	241.3	689.8
19-Aug	0	0	0	0	0	4	54	160	324	390	517	609	594	421	550	542	424	291	136	19	1	0	0	0	209.8	609.3
20-Aug	0	0	0	0	0	3	50	156	309	439	530	620	654	652	586	529	363	226	52	12	1	0	0	0	215.9	654.1
21-Aug	0	0	0	0	0	1	6	74	305	488	325	544	602	517	440	312	179	185	121	26	1	0	0	0	171.9	601.8
22-Aug	0	0	0	0	0	1	39	157	311	449	375	233	353	274	333	375	419	275	158	31	2	0	0	0	157.7	448.6
23-Aug	0	0	0	0	0	1	8	48	59	80	335	672	475	626	637	523	434	266	125	38	2	0	0	0	180.3	672.0
24-Aug	0	0	0	0	0	1	44	168	326	455	451	236	194	392	275	166	96	82	79	19	1	0	0	0	124.3	454.5
25-Aug	0	0	0	0	0	0	13	57	115	127	221	504	620	555	356	191	122	74	68	22	1	0	0	0	126.9	619.7
26-Aug	0	0	0	0	0	1	40	155	306	436	545	621	658	657	619	499	406	259	107	24	1	0	0	0	222.3	657.6
27-Aug	0	0	0	0	0	1	22	100	205	405	537	553	592	643	521	486	348	216	97	39	1	0	0	0	198.7	643.4
28-Aug	0	0	0	0	0	0	16	92	267	411	353	370	508	639	645	543	399	221	147	36	0	0	0	0	193.7	645.3
29-Aug	0	0	0	0	0	0	28	173	267	255	413	603	484	491	617	468	391	260	124	29	0	0	0	0	191.8	616.8
30-Aug	0	0	0	0	0	1	41	67	118	392	423	463	646	321	174	267	202	271	124	16	0	0	0	0	147.0	646.4
31-Aug	0	0	0	0	0	0	36	80	193	360	476	547	579	506	359	183	258	157	60	9	0	0	0	0	158.4	578.9
																								Diurnal Average		
																								Diurnal Maximum		

Hourly Averages

Solar Radiation (SR) - W/m²
Henry Pirker - August 2012



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	4	3	5	4	5	6	5	5	5	9	14	17	19	17	16	12	12	12	14	12	17	13	9	9	8.2	18.5
Dir	265	188	161	167	163	160	162	169	225	244	267	267	271	275	264	257	217	202	202	211	259	259	248	245	239.7	270.9
2 Spd	11	9	8	9	9	7	7	11	14	14	18	18	18	16	16	16	15	14	13	9	8	7	12	14	11.4	17.9
Dir	251	286	286	263	273	282	266	298	299	285	297	312	312	308	306	308	306	310	315	303	288	257	250	258	292.3	312.1
3 Spd	11	9	7	10	7	7	6	8	7	8	10	10	12	11	16	14	9	9	6	16	20	14	10	10	9.6	20.0
Dir	272	289	284	273	290	258	246	222	216	232	239	236	238	252	268	261	240	210	178	248	256	250	239	236	249.3	255.7
4 Spd	12	9	8	11	9	11	11	8	18	25	22	16	14	13	25	21	21	15	8	6	4	5	5	8	10.3	24.9
Dir	234	242	260	246	267	254	249	252	270	276	287	308	321	293	265	284	294	298	251	267	9	99	81	50	277.9	275.9
5 Spd	9	8	4	3	3	3	2	6	10	10	10	10	10	8	8	7	7	9	9	8	8	5	5	3	6.1	10.4
Dir	60	80	74	336	332	348	2	93	96	110	111	105	113	103	107	110	92	95	83	88	89	74	70	58	89.9	105.4
6 Spd	3	2	3	3	4	3	3	4	6	6	6	5	5	6	8	8	14	12	10	9	5	3	5	5	4.4	13.9
Dir	37	310	320	324	302	305	328	288	245	243	234	237	242	253	326	328	324	330	331	0	346	324	289	308	307.2	324.1
7 Spd	3	5	5	5	5	3	2	2	6	4	5	4	6	9	7	9	9	10	8	11	13	11	7	4	1.4	12.8
Dir	316	335	329	300	327	288	254	248	173	150	112	137	128	112	96	105	121	121	133	240	231	243	315	294	175.0	230.9
8 Spd	3	2	4	4	3	3	1	1	3	4	4	3	4	5	2	6	3	13	19	24	26	14	15	18	5.8	26.5
Dir	265	228	187	244	326	304	226	244	256	201	182	198	188	260	261	222	198	173	172	235	281	297	219	251	235.0	281.4
9 Spd	27	21	15	12	12	17	14	17	21	22	24	24	24	25	25	25	23	23	21	16	10	13	12	9	18.4	26.8
Dir	257	257	267	272	280	268	257	258	267	276	267	262	252	257	262	269	274	282	286	289	289	283	290	289	269.1	256.7
10 Spd	8	7	5	5	6	5	8	8	10	11	10	18	22	23	22	22	24	23	18	18	15	11	11	11	13.0	23.8
Dir	256	255	233	253	246	298	247	249	242	245	232	252	263	271	265	270	264	278	283	272	251	243	250	291	261.7	263.6
11 Spd	6	3	2	3	3	2	4	5	6	3	5	6	6	7	8	9	9	9	8	5	3	5	5	5	3.6	9.3
Dir	305	322	325	16	23	327	321	311	312	282	276	305	281	288	323	318	329	321	326	355	87	115	134	157	317.7	328.8
12 Spd	3	2	1	2	2	3	3	4	2	3	5	7	10	10	8	8	7	10	11	10	8	5	8	9	5.0	10.8
Dir	188	309	267	261	233	144	146	136	179	141	132	121	112	108	119	107	117	86	89	95	108	112	102	117	114.0	89.2
13 Spd	7	8	8	2	1	3	4	6	6	7	12	13	19	15	18	14	17	12	14	8	15	13	8	5	6.7	18.6
Dir	122	127	144	281	239	204	293	290	286	271	267	274	279	284	292	298	266	269	274	306	297	357	10	49	285.6	278.9
14 Spd	2	1	1	4	6	8	13	12	14	15	14	13	15	18	15	17	10	11	12	8	4	4	3	2	8.4	17.6
Dir	84	192	241	324	322	337	15	15	18	8	17	18	4	12	2	353	330	332	327	331	300	300	299	307	355.4	12.2
15 Spd	3	5	4	5	6	4	4	4	7	6	6	8	7	6	7	8	8	5	4	5	5	7	5	3	4.1	7.7
Dir	268	251	240	264	287	300	308	298	243	233	194	173	211	203	224	207	213	227	227	171	159	160	167	146	219.0	207.5
16 Spd	3	4	4	5	3	2	4	7	7	10	9	7	7	7	11	9	9	7	6	4	2	2	4	3	5.0	11.3
Dir	175	221	283	299	272	256	235	234	238	241	249	239	249	283	296	295	276	276	294	312	210	205	275	272	263.1	296.0
17 Spd	5	4	3	2	4	4	2	3	4	6	5	4	5	7	8	7	8	6	9	9	9	9	9	7	2.4	9.3
Dir	297	310	317	298	270	287	311	326	282	239	228	246	210	208	236	201	169	159	139	120	114	117	130	112	186.8	120.0
18 Spd	5	1	2	3	3	3	3	4	6	6	5	5	6	7	9	10	10	10	11	7	5	3	4	6	2.7	10.6
Dir	109	93	276	299	284	307	283	232	238	242	208	180	156	152	134	128	127	140	122	123	193	196	304	320	164.2	122.1
19 Spd	6	3	1	4	5	4	4	5	4	3	1	2	4	4	5	6	7	9	11	2	2	3	3	2	1.4	10.5
Dir	308	321	184	296	314	300	297	265	281	317	24	187	132	81	43	33	65	88	95	93	315	8	80	68	25.5	95.3
20 Spd	2	2	4	4	1	4	5	6	7	4	3	6	6	2	2	1	5	6	9	7	2	4	11	9	2.5	10.8
Dir	278	42	135	291	298	238	273	261	234	231	192	188	176	165	162	150	155	163	169	172	179	68	95	118	174.1	95.0
21 Spd	6	4	4	6	5	4	2	3	8	9	7	5	1	6	5	10	0	8	2	5	8	4	10	7	3.0	10.3
Dir	162	311	356	331	196	159	77	232	312	320	311	270	310	312	285	216	68	358	125	245	242	358	267	265	282.1	266.7
22 Spd	4	4	5	9	9	3	8	10	8	8	8	14	14	17	16	16	16	18	19	12	9	8	9	8	9.6	18.6
Dir	217	277	233	241	253	281	242	267	281	335	308	286	307	287	317	292	286	285	292	286	278	259	250	254	281.5	292.2

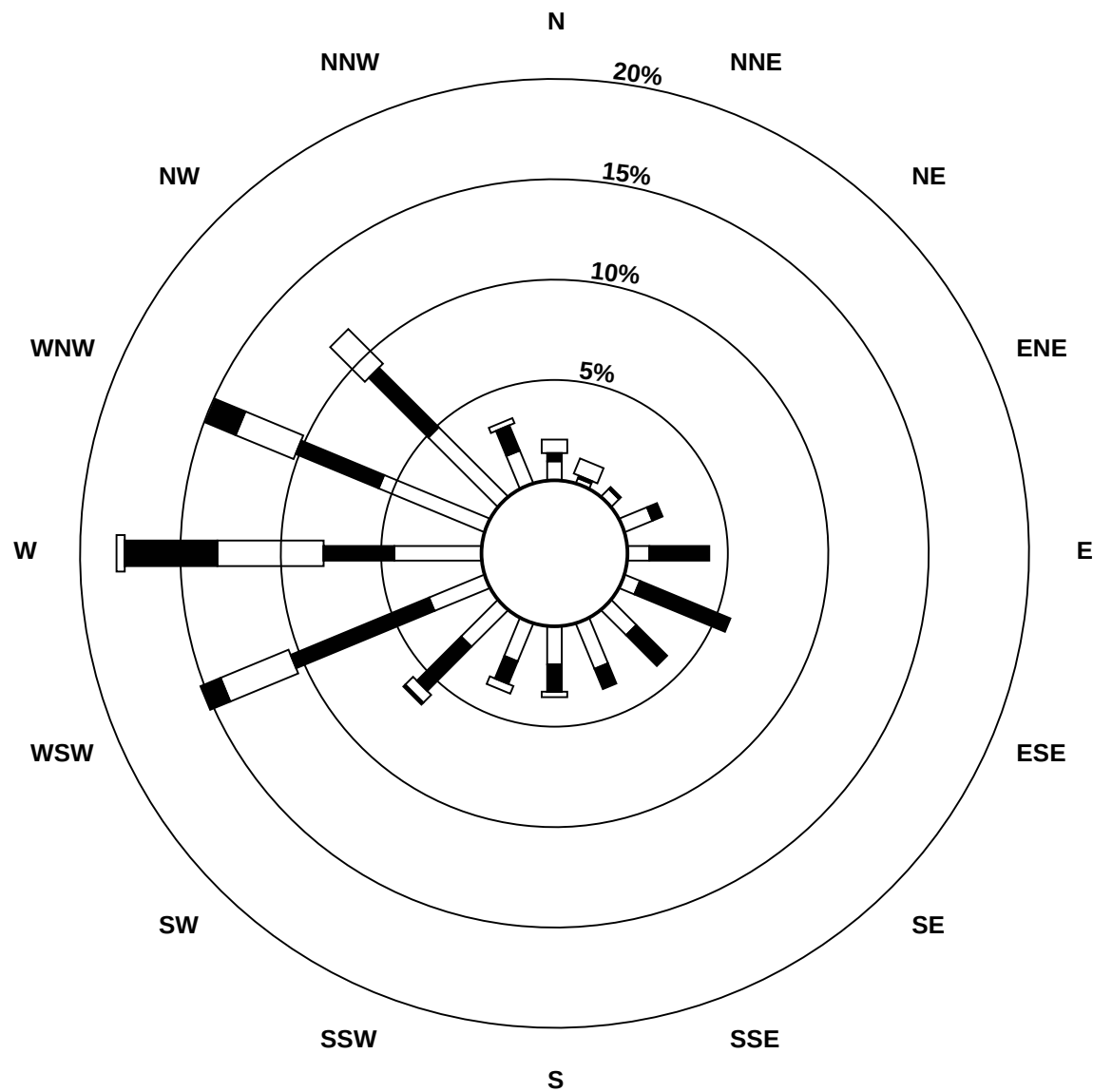
Hourly Averages

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

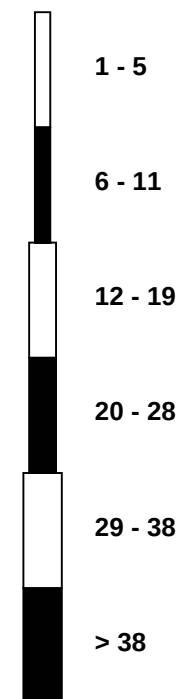
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
23 Spd	4	3	2	4	7	7	6	5	10	11	10	12	17	23	26	23	21	23	19	14	13	12	11	9	11.7	26.3							
Dir	290	263	268	262	286	256	255	204	235	229	222	244	264	273	268	266	255	260	244	247	251	250	242	244	254.7	267.9							
24 Spd	7	6	9	11	17	15	12	13	21	23	21	21	21	23	23	22	22	20	20	18	18	15	14	14	16.5	23.4							
Dir	235	265	245	251	257	254	259	275	272	274	293	285	289	276	267	277	287	280	277	268	268	263	261	256	271.4	267.1							
25 Spd	11	12	14	12	9	6	8	8	5	8	14	11	11	8	9	6	3	3	6	5	5	4	2	5	5.8	14.3							
Dir	266	260	261	276	277	280	306	299	284	304	292	302	277	300	313	325	329	181	182	163	152	131	200	236	277.2	261.3							
26 Spd	4	4	4	2	5	3	1	3	2	2	5	7	7	9	9	9	9	9	8	7	8	8	8	8	4.0	9.4							
Dir	241	251	295	180	166	162	156	261	272	205	141	120	137	134	123	120	97	102	97	88	84	82	87	92	116.1	96.8							
27 Spd	7	6	4	4	3	2	3	3	2	3	4	2	2	3	5	4	8	10	11	12	7	5	6	3	2.8	12.0							
Dir	77	75	66	75	69	285	355	306	301	252	216	280	251	230	307	339	250	303	315	317	313	299	293	266	309.7	317.4							
28 Spd	2	5	6	9	8	8	3	6	7	9	12	16	15	17	19	21	23	22	20	11	13	12	14	7	11.1	22.5							
Dir	250	261	254	280	284	255	256	174	226	233	247	266	272	274	275	280	276	284	288	288	277	252	255	227	267.7	276.1							
29 Spd	7	9	13	12	17	19	14	15	23	20	26	27	29	29	27	26	28	30	21	18	13	7	8	3	18.1	29.8							
Dir	232	227	248	250	258	260	253	251	256	263	268	269	268	269	268	265	251	265	262	263	275	303	295	263	262.3	265.4							
30 Spd	5	5	6	4	9	8	6	9	9	11	10	10	12	11	11	12	13	14	12	7	3	4	3	3	8.1	14.3							
Dir	297	304	311	317	325	295	267	307	310	305	304	302	315	303	307	302	308	312	319	317	291	322	298	313	307.3	312.3							
31 Spd	2	3	2	4	1	4	3	2	2	1	5	6	10	7	7	7	6	8	8	4	3	2	6	6	2.6	9.8							
Dir	215	160	297	331	269	304	316	286	269	309	114	120	141	128	122	111	132	136	123	114	80	74	161	201	135.7	141.2							
Spd	3.4	3.1	3.3	4.5	4.6	4.5	3.9	4.4	6.1	6.6	6.5	6.6	6.8	7.4	8.2	7.4	6.9	6.0	4.3	4.8	5.2	3.1	3.3	3.1	Diurnal Average								
Dir	254.9	263.5	262.3	273.7	275.5	269.7	270.6	266.3	265.9	266.9	265.8	267.3	267.5	273.4	278.7	278.1	269.5	273.9	264.7	264.7	265.9	267.6	250.0	251.9	Diurnal Maximum								
Spd	26.8	20.5	15.4	12.5	17.1	19.1	14.1	17.3	23.3	24.9	26.4	27.5	28.5	28.5	26.8	25.9	28.1	29.8	21.4	24.1	26.5	14.8	15.0	18.0	Diurnal Maximum								
Dir	256.7	256.8	267.2	250.1	256.9	260.4	253.1	257.9	256.1	275.9	267.5	269.0	268.1	269.4	268.2	265.2	250.8	265.4	261.6	235.2	281.4	263.4	218.8	250.8									
Maximum Speed Value: 30 km/h on Aug 29 18:00																		Minimum Speed Value: 0 km/h on Aug 21 17:00														Hours in Service: 744	
Maximum Daily Speed Average: 18.4 km/h on Aug 9																		Minimum Daily Speed Average: 1.4 km/h on Aug 19														Hours of Data: 744	
Maximum Diurnal Speed Average: 8.2 km/h at hour 15																		Minimum Diurnal Speed Average: 3.1 km/h at hour 24														Hours of Missing Data: 0	
Monthly Average Velocity: 5.14 km/h 268.37 deg																		Speed Percentiles: P ₁ = 1.0 P ₁₀ = 2.7 Q ₁ = 4.3 Median = 7.4 Q ₃ = 11.5 P ₉₀ = 17.9 P ₉₉ = 26.7														Percent Operational Time: 100.0	
All monthly, daily, and diurnal averages have been calculated using vector methods																																	
Frequency Distribution																																	
Speed Range (km/h)																																	
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																										
North	10	4	11	0	0	0	25																										
NorthEast	8	4	0	0	0	0	12																										
East	19	43	0	0	0	0	62																										
SouthEast	19	41	0	0	0	0	60																										
South	33	23	4	0	0	0	60																										
SouthWest	33	60	13	1	0	0	107																										
West	54	70	80	52	4	0	260																										
NorthWest	66	57	33	2	0	0	158																										
Total	242	302	141	55	4	0	744																										

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - August 2012

Maximum Speed: 30 km/h on Aug 29 18:00																								Maximum Daily Speed Average: 19.1 km/h on Aug 9										Hours in Service: 744	
Minimum Speed: 2 km/h on Aug 8 07:00																								Minimum Daily Speed Average: 5.2 km/h on Aug 19										Hours of Data: 744	
Maximum Diurnal Speed Average: 13.7 km/h at hour 15																								Minimum Diurnal Speed Average: 5.9 km/h at hour 3										Hours of Missing Data: 0	
Monthly Average Speed: 9.42 km/h																								Percentiles: P ₁ = 2.5 P ₁₀ = 3.6 Q ₁ = 4.9 Median = 8.1 Q ₃ = 12.0 P ₉₀ = 18.2 P ₉₉ = 27.3										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Aug	5	5	5	4	5	6	5	5	6	10	15	18	19	18	16	13	13	12	14	12	18	13	9	9	10.5	18.9									
2-Aug	11	10	8	9	9	7	7	11	14	14	18	18	18	17	16	16	15	14	13	9	8	7	12	14	12.4	18.4									
3-Aug	12	9	8	10	8	8	6	8	7	9	11	11	13	12	17	15	9	9	7	17	20	14	10	10	10.8	20.2									
4-Aug	12	10	9	11	9	11	11	9	18	25	22	17	14	14	25	22	21	16	10	7	7	5	5	8	13.4	25.4									
5-Aug	9	8	4	3	3	4	3	7	10	10	11	11	11	9	9	8	8	10	9	8	8	6	5	4	7.4	10.9									
6-Aug	3	3	4	3	5	4	3	4	6	6	7	6	6	8	10	9	14	12	10	9	5	3	5	5	6.3	14.2									
7-Aug	4	5	6	5	5	4	2	3	6	5	6	5	8	9	8	10	10	10	8	13	14	12	8	4	7.1	14.4									
8-Aug	4	3	4	4	3	4	2	2	4	5	5	5	6	6	5	7	5	15	19	28	27	15	16	20	8.9	27.5									
9-Aug	27	21	16	12	12	17	14	17	21	22	24	25	25	25	26	25	23	23	21	16	11	13	12	10	19.1	26.9									
10-Aug	8	7	5	5	7	6	9	9	10	12	11	19	22	23	22	23	24	24	19	18	15	11	11	12	13.9	24.4									
11-Aug	7	4	4	5	4	4	5	6	6	5	6	7	8	10	9	10	10	9	8	6	4	5	5	5	6.3	10.4									
12-Aug	3	2	2	2	3	3	4	4	3	5	6	8	10	11	9	9	8	10	11	10	8	5	8	9	6.5	11.0									
13-Aug	7	8	8	3	3	3	4	6	6	8	13	13	19	16	18	15	17	13	14	8	15	14	9	6	10.3	18.9									
14-Aug	3	2	4	4	6	9	13	12	14	15	14	14	15	18	16	18	11	12	12	9	4	4	4	3	9.8	18.0									
15-Aug	4	5	4	5	6	4	5	4	7	7	7	9	9	8	9	9	8	6	5	5	5	7	5	4	6.1	8.8									
16-Aug	4	5	4	5	3	3	4	7	7	11	10	8	9	9	12	10	10	8	6	5	4	4	4	3	6.4	12.0									
17-Aug	5	4	3	3	4	4	3	3	4	7	6	5	7	8	9	9	8	7	9	9	9	9	9	7	6.3	9.5									
18-Aug	5	3	3	4	3	4	3	4	6	7	6	6	7	8	10	11	11	10	11	7	6	5	5	6	6.3	10.9									
19-Aug	6	4	3	4	5	4	5	5	4	4	4	4	5	5	6	7	7	10	11	4	4	4	4	5	5.2	10.6									
20-Aug	4	4	5	4	3	4	5	6	7	5	5	6	7	6	5	5	5	7	9	8	7	7	11	9	6.0	10.9									
21-Aug	6	6	5	7	10	4	5	6	9	9	8	5	6	7	7	11	11	9	4	6	9	6	11	8	7.2	11.0									
22-Aug	6	5	5	9	9	4	9	10	8	8	9	14	14	18	16	17	17	19	19	12	9	8	9	8	11.0	18.9									
23-Aug	5	4	4	5	7	7	7	5	10	11	10	14	18	23	27	24	22	24	19	14	13	12	11	10	12.7	27.0									
24-Aug	7	7	9	11	17	15	12	13	21	23	22	22	22	24	24	22	22	20	20	19	18	15	14	14	17.2	23.9									
25-Aug	11	12	14	12	9	6	8	8	6	9	14	11	11	9	10	7	4	3	6	5	5	4	3	5	8.0	14.5									
26-Aug	4	4	5	3	5	3	3	3	3	3	6	8	8	9	10	10	10	9	9	8	7	8	8	8	6.4	10.2									
27-Aug	7	6	4	4	3	3	3	3	3	4	5	4	4	4	6	6	11	11	11	12	7	5	6	4	5.6	12.1									
28-Aug	4	5	6	9	8	8	5	6	7	9	12	16	16	17	19	22	23	23	20	11	13	13	14	8	12.3	23.0									
29-Aug	7	10	13	13	17	19	14	15	24	20	27	28	29	29	27	26	29	30	22	18	13	8	9	4	18.8	30.2									
30-Aug	6	6	6	4	9	8	6	9	9	11	11	11	13	12	11	13	13	15	12	7	3	4	3	4	8.6	14.5									
31-Aug	3	3	3	4	3	5	3	3	4	4	6	7	11	8	9	8	7	9	8	5	4	2	8	8	5.6	10.6									
6.7 6.1 5.9 6.0 6.5 6.3 6.1 6.9 8.8 9.7 10.8 11.4 12.5 13.0 13.7 13.4 13.2 13.2 12.2 10.4 9.7 8.1 8.1 7.5																								Diurnal Average											
26.9 20.7 15.7 12.7 17.3 19.2 14.3 17.4 23.6 25.2 26.8 28.2 28.9 29.0 27.4 26.4 28.7 30.2 21.8 27.5 27.3 15.4 15.7 19.5																								Diurnal Maximum											
All monthly, daily, and diurnal averages have been calculated using scalar methods																																			

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - August 2012

Maximum Value: 95.8 deg on Aug 21 13:00																			Hours in Service: 744						
Minimum Value: 5.6 deg on Aug 2 21:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 6.3 P ₁₀ = 8.9 Q ₁ = 11.6 Median = 18.1 Q ₃ = 31.9 P ₉₀ = 53.3 P ₉₉ = 86.9																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Aug	62	46	10	14	16	7	20	14	42	18	16	13	12	11	12	26	12	12	14	15	14	12	10	12	62.5
2-Aug	9	32	20	12	12	11	22	7	11	15	12	11	14	10	8	10	11	11	10	9	6	18	8	9	32.0
3-Aug	15	10	20	11	34	25	14	14	17	18	19	17	20	27	14	25	23	17	16	28	8	11	8	12	34.4
4-Aug	12	13	18	8	21	10	10	19	9	9	10	18	8	18	12	9	8	11	41	28	57	13	26	16	57.0
5-Aug	17	9	35	49	29	28	53	17	16	18	18	16	17	27	26	35	25	13	15	9	9	14	19	30	52.9
6-Aug	34	55	41	38	29	37	24	19	15	15	20	33	48	46	51	33	11	13	11	10	13	25	16	18	54.6
7-Aug	33	19	28	21	22	32	48	61	18	47	35	61	50	28	37	21	15	13	13	41	28	32	27	20	61.4
8-Aug	37	31	14	25	32	20	54	70	30	37	42	73	55	48	64	43	60	55	9	30	14	26	19	32	72.6
9-Aug	7	8	10	13	10	8	9	6	9	10	12	13	12	13	12	11	10	10	7	6	6	7	13	12	13.4
10-Aug	16	19	13	21	18	36	16	16	13	15	22	15	12	15	17	13	13	12	8	8	14	9	9	26	35.8
11-Aug	29	46	50	69	50	62	20	18	25	57	39	45	42	42	37	29	34	23	14	27	36	14	20	7	69.4
12-Aug	31	58	77	55	30	28	34	24	54	61	40	32	20	25	32	36	27	14	11	9	12	13	10	9	77.2
13-Aug	12	10	9	43	66	37	23	17	14	20	20	18	11	15	11	12	15	16	12	10	14	18	33	29	66.3
14-Aug	71	67	64	17	10	21	11	11	10	11	13	16	16	12	13	14	22	16	10	10	16	10	38	34	70.8
15-Aug	30	20	17	20	8	12	13	18	17	24	27	31	40	50	47	26	23	38	48	21	7	6	6	32	50.2
16-Aug	17	30	17	10	25	34	27	11	23	14	18	23	31	38	20	31	24	31	16	21	71	53	22	30	71.3
17-Aug	18	18	26	23	30	31	51	28	16	18	29	44	55	41	33	35	23	29	18	9	6	7	7	8	54.9
18-Aug	14	92	49	65	27	46	32	15	16	20	31	43	32	31	25	17	17	14	11	9	31	66	23	14	91.7
19-Aug	14	73	89	18	18	26	19	23	25	43	88	74	54	53	46	38	27	23	7	61	63	46	57	73	89.0
20-Aug	85	57	19	67	84	30	22	24	18	25	61	30	42	81	88	87	35	42	8	10	87	57	10	11	87.8
21-Aug	11	47	45	27	76	23	71	71	21	17	18	21	96	31	43	33	89	30	61	44	24	66	20	29	95.8
22-Aug	58	40	39	14	18	61	49	14	17	22	29	13	15	16	17	20	13	11	9	8	8	15	10	10	61.3
23-Aug	38	40	56	24	21	28	30	23	15	11	17	30	17	15	13	15	14	10	9	11	11	9	9	9	56.1
24-Aug	10	24	9	12	9	8	8	10	8	10	11	11	12	12	12	10	9	9	8	8	7	8	7	7	24.2
25-Aug	9	8	8	12	9	15	7	13	18	29	10	16	20	32	21	20	39	21	6	8	9	17	43	18	43.3
26-Aug	30	25	29	47	6	7	86	32	52	57	41	32	43	28	33	26	20	18	9	10	8	7	8	9	85.9
27-Aug	10	13	17	14	54	43	28	36	50	50	47	72	67	54	42	53	43	25	13	6	10	14	13	40	71.6
28-Aug	73	19	15	9	7	14	52	14	22	17	16	13	13	14	14	15	12	11	9	7	10	15	10	23	73.2
29-Aug	14	11	10	12	10	7	9	11	10	12	10	14	10	10	12	11	12	10	10	8	10	23	17	54	54.0
30-Aug	38	17	16	28	8	27	22	13	15	16	15	24	21	20	11	14	13	11	8	6	28	19	25	27	38.0
31-Aug	50	17	63	41	67	25	26	26	60	85	35	42	23	44	33	35	28	23	11	11	18	62	55	39	85.2
85.0 91.7 89.0 69.4 83.9 61.9 85.9 70.6 59.7 85.2 88.2 73.6 95.8 80.6 87.8 87.3 89.4 54.9 61.2 61.0 87.0 66.4 57.4 72.9																									

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and
Roses

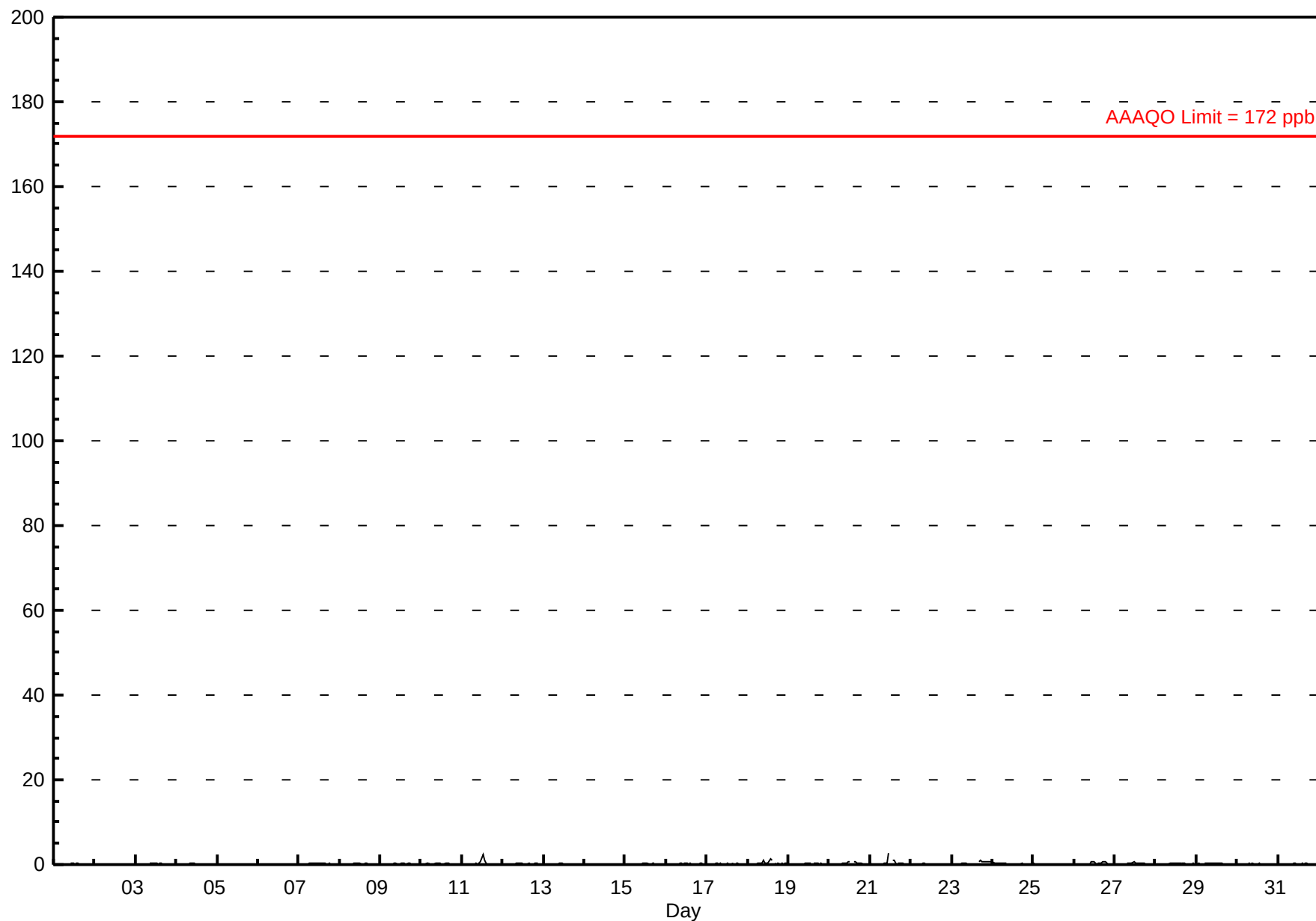
Hourly Averages

Sulphur Dioxide (SO₂) - ppb Evergreen Park - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.7 ppb on Aug 21 12:00 Maximum Daily Average: 0.4 ppb on Aug 23																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Aug 1 21:00 Maximum Diurnal Average: 0.3 ppb at hour 12 Monthly Average: 0.15 ppb										Minimum Daily Average: 0.0 ppb on Aug 14 Minimum Diurnal Average: 0.1 ppb at hour 5 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 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-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
2-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
4-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
6-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
7-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
8-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
9-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
10-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.4
11-Aug	0	0	0	0	0	0	0	0	0	0	0	1	3	1	0	0	0	0	0	0	0	0	A	0	0.3	2.5
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.4
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.3
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.1
15-Aug	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
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.4
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.4
18-Aug	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0.3	1.2
19-Aug	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
20-Aug	0	0	0	0	0	0	0	0	0	0	0	1	1	A	1	1	0	0	0	0	0	0	0	0	0.2	0.7
21-Aug	0	0	0	0	0	0	0	0	0	0	0	3	A	1	1	0	0	0	0	0	0	0	0	0	0.3	2.7
22-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
23-Aug	0	0	0	0	0	0	0	0	0	0	A	C	C	C	C	C	1	1	1	1	1	1	1	1	0.4	1.0
24-Aug	1	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
25-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
26-Aug	0	0	0	0	0	0	0	A	0	0	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0.2	0.7
27-Aug	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
28-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
30-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
31-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1																									Diurnal Average	
0.5 0.4 0.5 0.4 0.3 0.3 0.4 0.4 0.5 1.1 0.7 2.7 2.5 1.2 1.1 0.6 0.8 1.0 0.8 0.8 0.7 0.7 0.7 0.6																									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 - August 2012



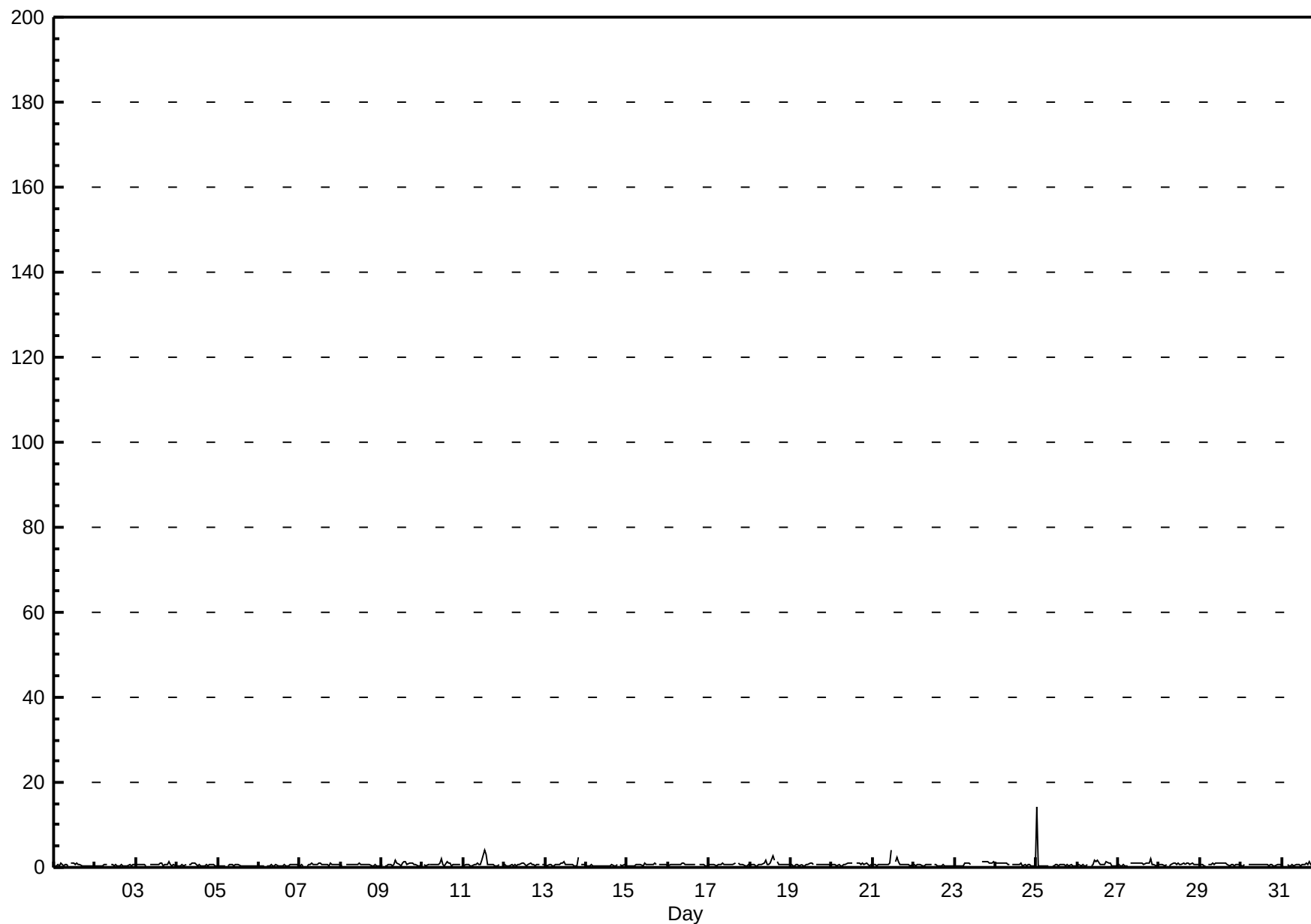
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb Evergreen Park - August 2012

Maximum Value: 14.1 ppb on Aug 25 01:00																				Maximum Daily Average: 1.1 ppb on Aug 25					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 6 02:00																				Minimum Daily Average: 0.4 ppb on Aug 14					Hours of Data: 707	
Maximum Diurnal Average: 1.0 ppb at hour 1																				Minimum Diurnal Average: 0.5 ppb at hour 3					Hours of Missing Data: 37	
Monthly Average: 0.68 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 1.0 P ₉₉ = 2.2					Hours of Calibration: 37	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	1	1	1	0	1	1	0	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.6	1.1
2-Aug	1	0	0	0	0	1	1	1	A	1	1	0	1	0	1	1	1	0	0	0	1	0	1	1	0.5	0.8
3-Aug	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0	0.6	1.4
4-Aug	0	0	0	1	0	1	A	1	1	1	1	1	0	1	0	0	0	1	0	1	1	1	0	0	0.6	1.2
5-Aug	0	0	0	1	0	A	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	0.6
6-Aug	0	0	0	0	A	0	0	1	0	0	1	0	0	0	0	1	0	0	1	1	1	1	1	0	0.5	0.7
7-Aug	0	1	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.6	1.1
8-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0.6	0.9
9-Aug	1	A	0	1	1	1	0	1	2	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0.8	1.7
10-Aug	A	1	0	1	1	1	1	1	1	1	1	2	1	0	1	1	1	0	1	1	1	1	1	A	0.8	2.0
11-Aug	0	1	1	1	0	0	1	1	1	1	1	2	4	3	1	1	1	1	0	0	0	1	A	0	0.9	4.0
12-Aug	1	0	0	0	1	0	1	0	1	1	1	1	1	0	1	1	1	1	0	1	1	A	1	1	0.6	1.1
13-Aug	1	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	2	A	1	1	1	0.7	2.2
14-Aug	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	A	1	0	1	0	0.4	0.6
15-Aug	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.6	1.0
16-Aug	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0.6	1.0
17-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	1	0.7	1.0
18-Aug	0	1	1	0	0	1	1	1	1	2	1	1	1	3	2	A	1	1	1	1	1	1	1	1	0.9	2.6
19-Aug	1	0	0	1	1	0	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0.6	0.9
20-Aug	1	1	1	0	1	0	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	0.7	1.1
21-Aug	1	1	0	1	1	1	1	1	1	1	1	4	A	1	2	1	1	1	1	1	1	1	0	1	0.9	4.1
22-Aug	1	0	1	1	1	0	0	1	1	1	1	A	1	1	0	1	0	1	0	0	0	0	0	0	0.5	0.7
23-Aug	0	0	0	0	0	0	1	1	1	1	A	C	C	C	C	C	1	1	1	1	1	1	1	1	0.9	1.4
24-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	0	1	1	0	0	1	0.7	1.0
25-Aug	14	0	0	0	0	0	0	0	A	0	0	1	1	0	1	1	1	0	1	0	1	0	0	0	1.1	14.1
26-Aug	0	1	0	1	0	0	1	A	0	1	2	1	2	1	1	1	1	1	1	1	0	0	0	0	0.7	1.7
27-Aug	1	0	0	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	0	1	0.8	2.0
28-Aug	1	1	1	0	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
29-Aug	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	0.7	1.1
30-Aug	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	1	1	1	0.6	0.8
31-Aug	0	0	A	1	0	0	1	0	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	0.6	1.4
1.0 0.5 0.5 0.5 0.5 0.5 0.6 0.6 0.7 0.8 0.8 1.0 0.9 0.8 0.8 0.7 0.7 0.6 0.7 0.7 0.6 0.6 0.5 0.5																									Diurnal Average	
14.1 0.9 0.9 0.9 1.0 0.9 1.2 1.1 1.7 1.8 1.6 4.1 4.0 3.0 2.3 1.2 1.4 1.4 1.3 2.2 1.1 1.1 1.0 1.2																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

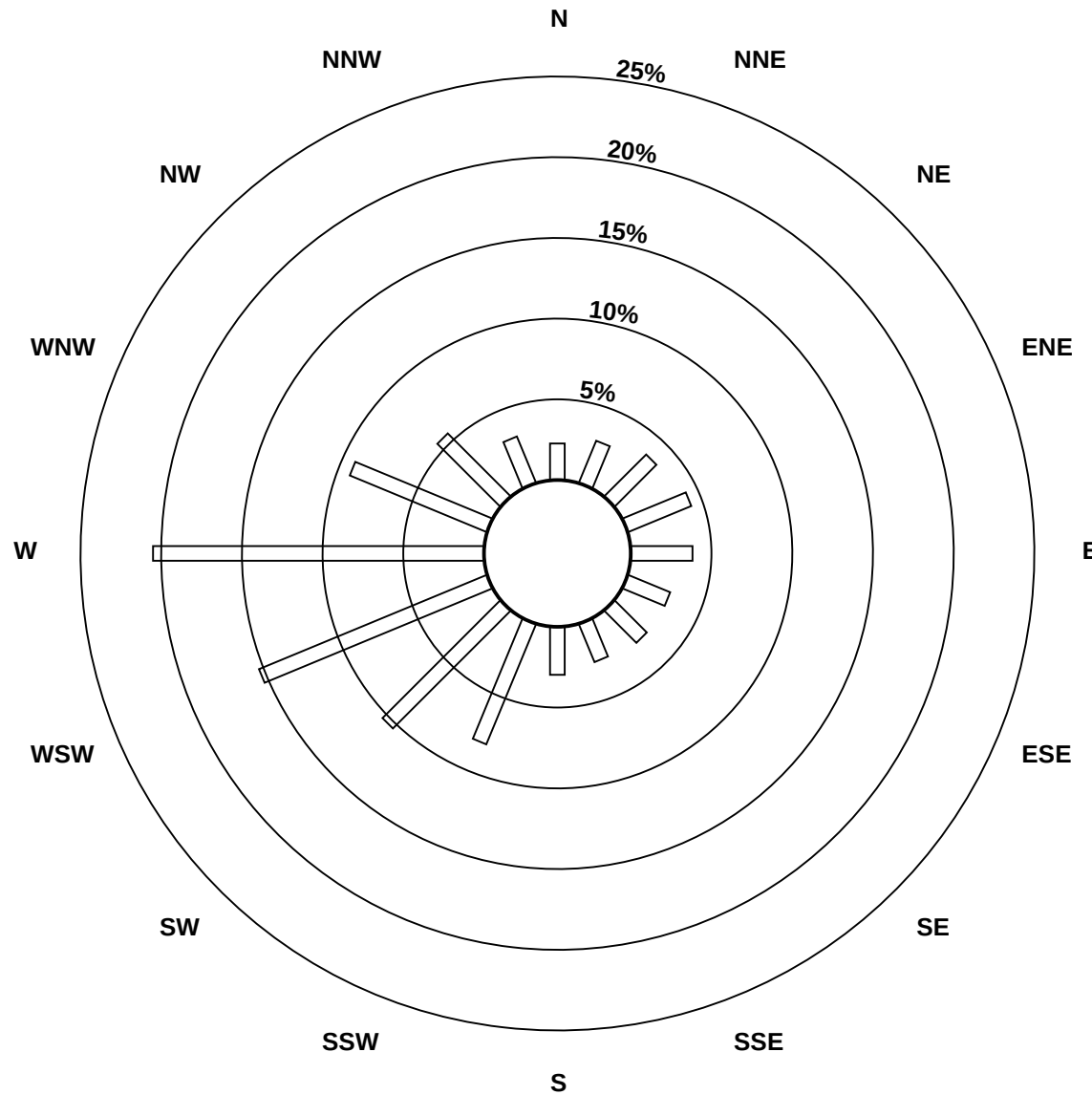
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - August 2012

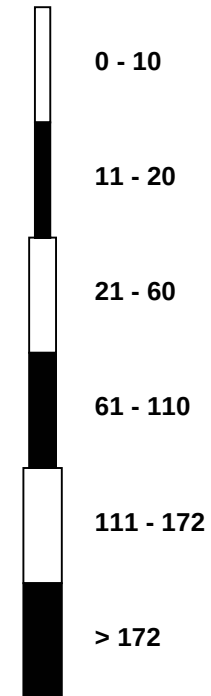


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - August 2012

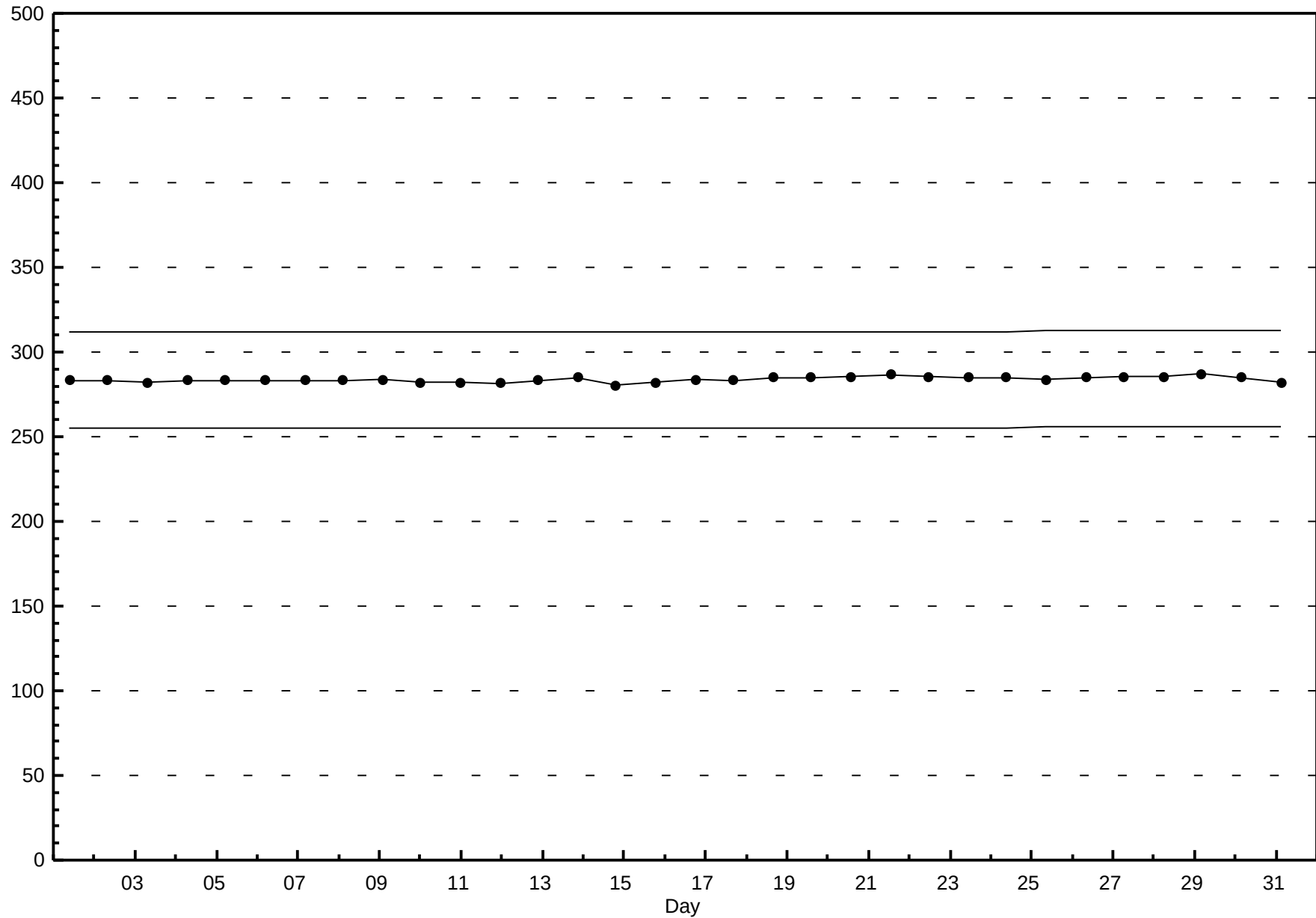


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - August 2012



Hourly Averages

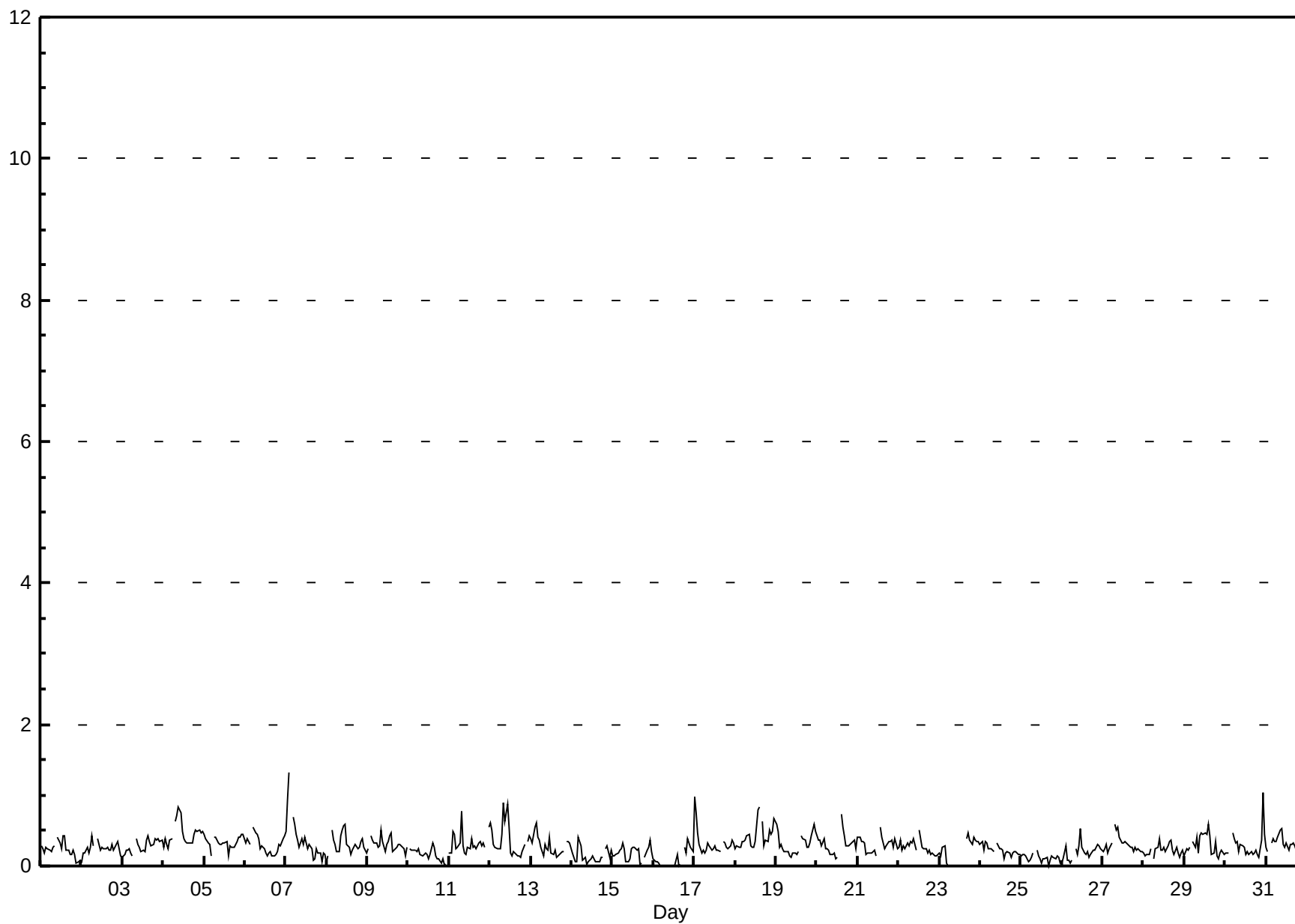
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.3 ppb on Aug 7 03:00 Maximum Daily Average: 0.4 ppb on Aug 4																			Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 39 Percent Operational Time: 100.0							
Minimum Value: 0 ppb on Aug 16 06:00 Maximum Diurnal Average: 0.3 ppb at hour 9 Monthly Average: 0.27 ppb																			Minimum Daily Average: 0.1 ppb on Aug 16 Minimum Diurnal Average: 0.2 ppb at hour 18 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 0.8							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
2-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
4-Aug	0	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0.4	0.8
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
6-Aug	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
7-Aug	0	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.3
8-Aug	0	0	A	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
9-Aug	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
10-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.3
11-Aug	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.3	0.8
12-Aug	1	1	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.9
13-Aug	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.6
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.4
15-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.4
17-Aug	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	1.0
18-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0	0	1	0	0	1	0.4	0.8
19-Aug	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0.3	0.6
20-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0.3	0.7
21-Aug	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
22-Aug	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
23-Aug	0	0	0	0	0	0	0	0	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	--	0.5
24-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
25-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
26-Aug	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
27-Aug	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
28-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.3	0.6
30-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	1.0
31-Aug	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
																									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

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - August 2012



Hourly Maximums

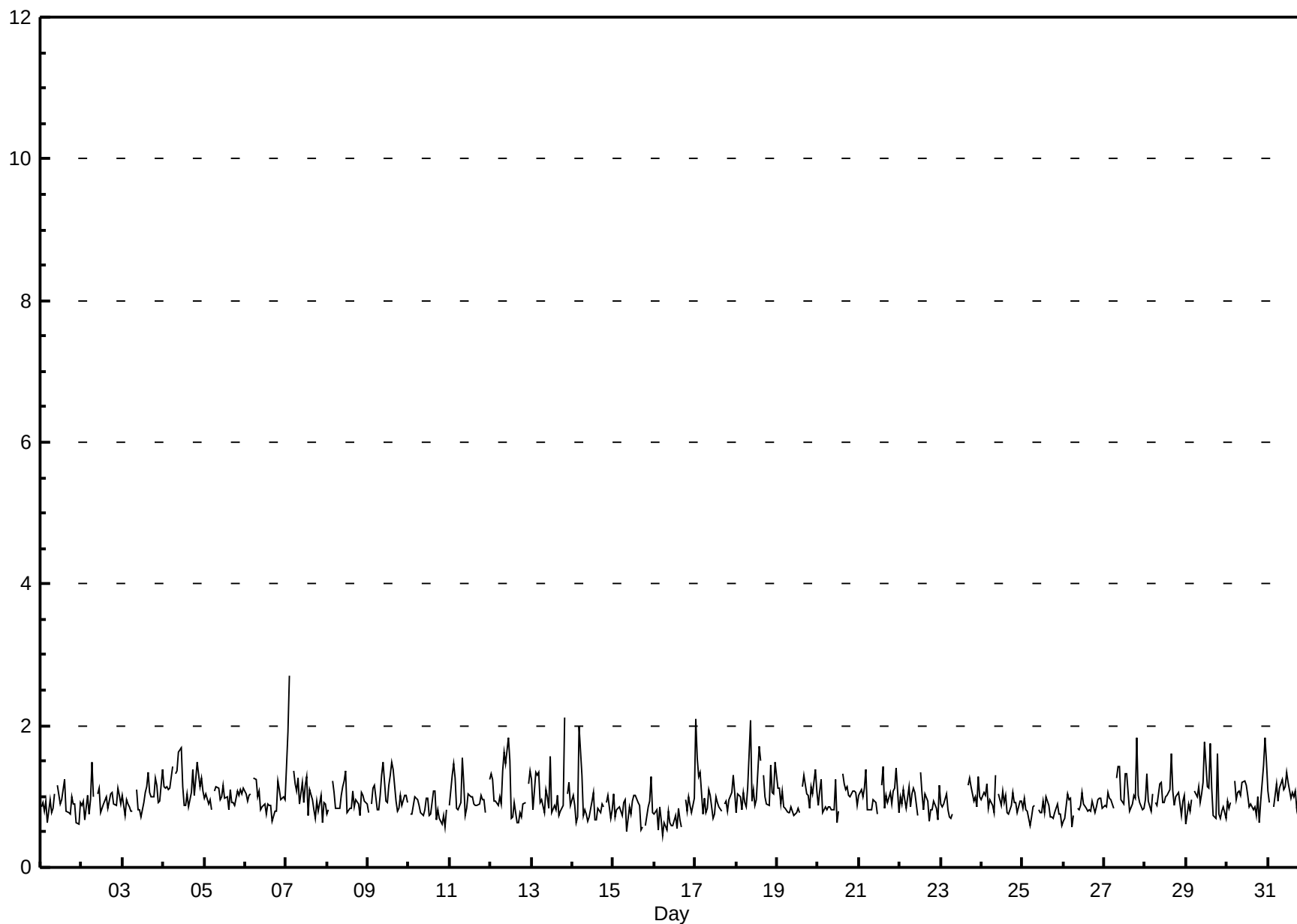
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - August 2012

Maximum Value: 2.7 ppb on Aug 7 03:00																			Maximum Daily Average: 1.2 ppb on Aug 4																			Hours in Service: 744	
Minimum Value: 0 ppb on Aug 16 06:00																			Minimum Daily Average: 0.7 ppb on Aug 16																			Hours of Data: 705	
Maximum Diurnal Average: 1.1 ppb at hour 9																			Minimum Diurnal Average: 0.9 ppb at hour 17																			Hours of Missing Data: 39	
Monthly Average: 0.98 ppb																			Percentiles: P ₁ = 0.6 P ₁₀ = 0.7 Q ₁ = 0.8 Median = 0.9 Q ₃ = 1.1 P ₉₀ = 1.3 P ₉₉ = 1.8																			Hours of Calibration: 39	
																																						Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2													
2-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5													
3-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4													
4-Aug	1	1	1	1	1	1	A	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.7													
5-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2													
6-Aug	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3													
7-Aug	1	2	3	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.7													
8-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4													
9-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5													
10-Aug	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.1													
11-Aug	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.5													
12-Aug	1	1	1	1	1	1	1	1	2	1	2	2	1	1	1	1	1	1	1	1	1	A	1	1	1.1	1.8													
13-Aug	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	A	1	1	1	1.1	2.1													
14-Aug	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	2.0													
15-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.3													
16-Aug	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.0													
17-Aug	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	2.1													
18-Aug	1	1	1	1	1	1	1	1	2	1	1	1	1	2	2	A	1	1	1	1	1	1	1	1	1.1	2.1													
19-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.0	1.4													
20-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.3													
21-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4													
22-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3													
23-Aug	1	1	1	1	1	1	1	1	C	C	C	C	C	C	C	C	1	1	1	1	1	1	1	1	--	1.3													
24-Aug	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3													
25-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0													
26-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0													
27-Aug	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1.1	1.8													
28-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1.0	1.6													
29-Aug	1	1	1	1	A	1	1	1	1	1	1	2	1	1	2	1	1	1	2	1	1	1	1	1	1.0	1.8													
30-Aug	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	1.8													
31-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3													
1.0 1.0 1.0 1.0 1.0 0.9 0.9 1.0 1.1 1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.9 0.9 0.9 1.0 1.0 0.9 1.0 1.0																									Diurnal Average														
2.1 1.9 2.7 1.3 2.0 1.4 1.5 1.5 2.1 1.6 1.8 1.8 1.3 1.7 1.7 1.6 1.3 1.4 1.6 2.1 1.5 1.4 1.8 1.5																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

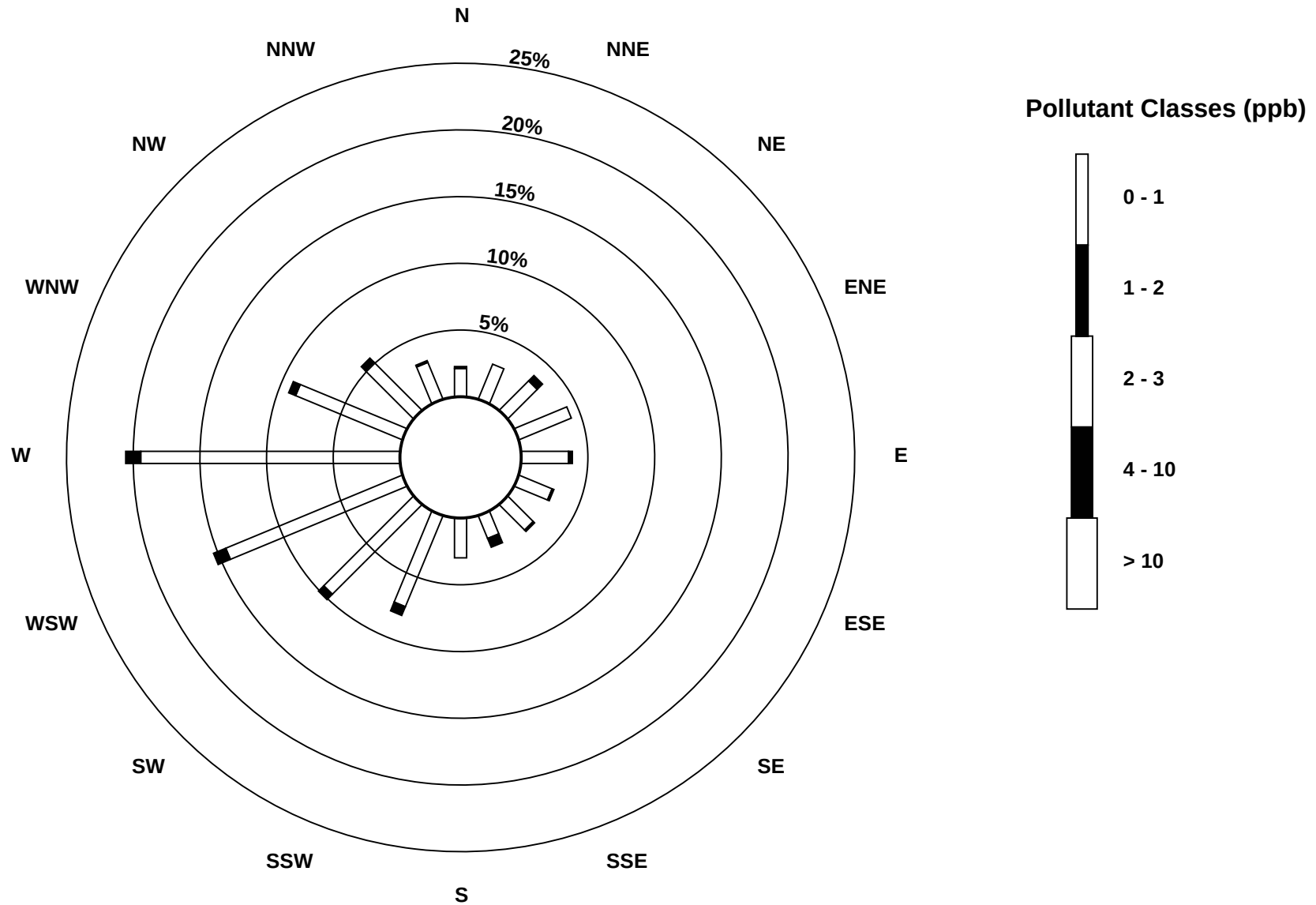
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - August 2012



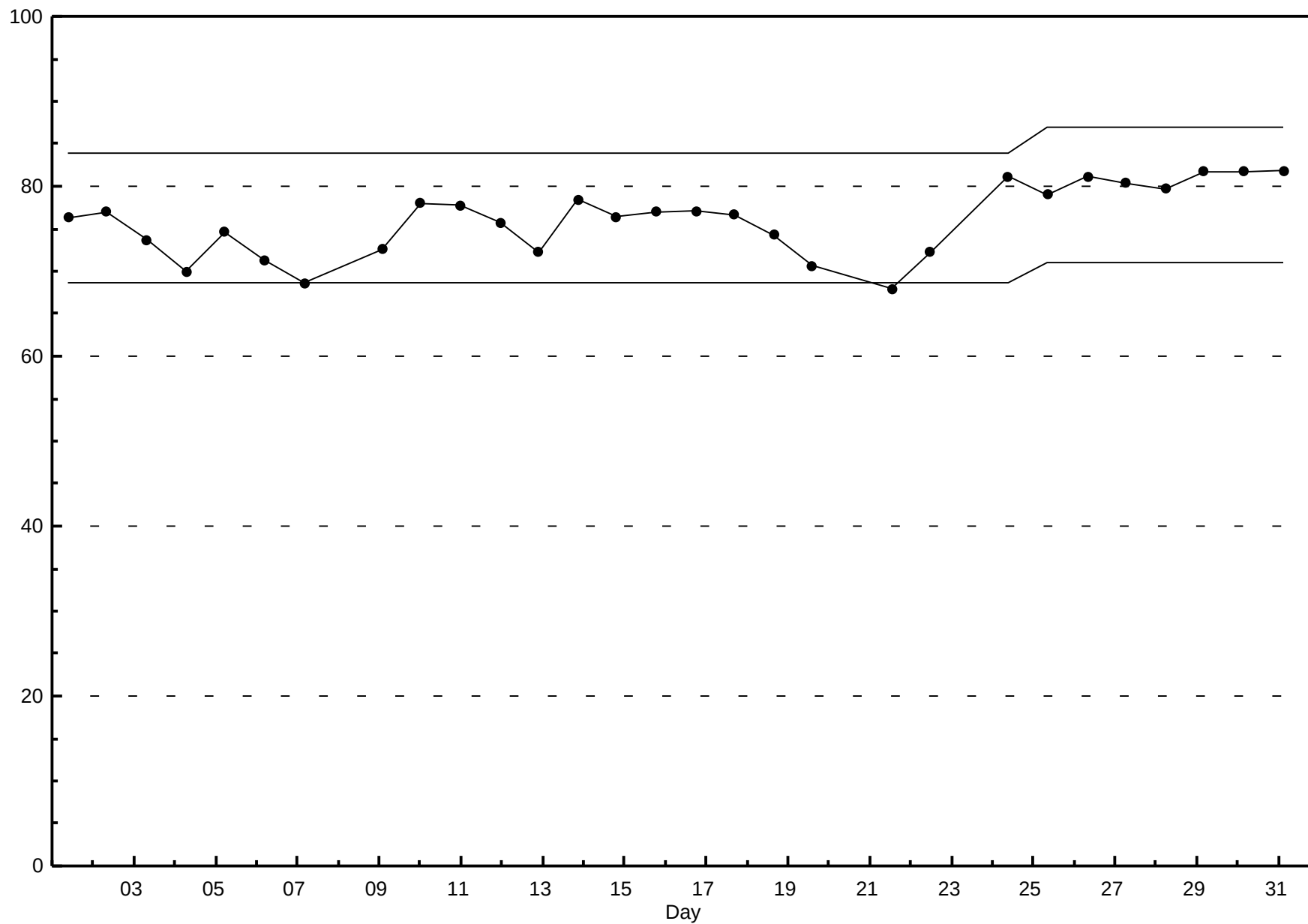
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - August 2012

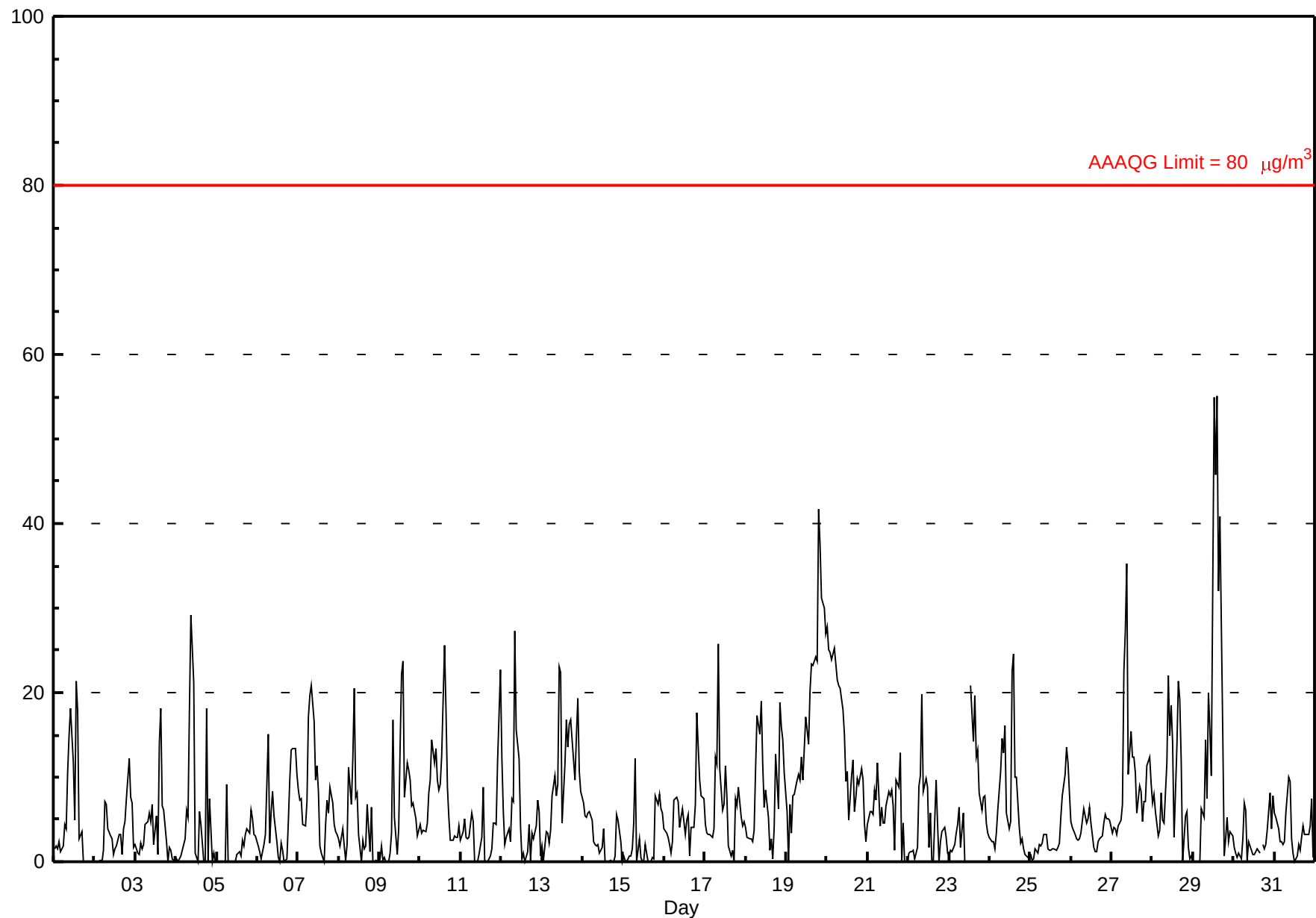


Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - August 2012



FOCUS
AIR QUALITY MONITORING



Hourly Maximums

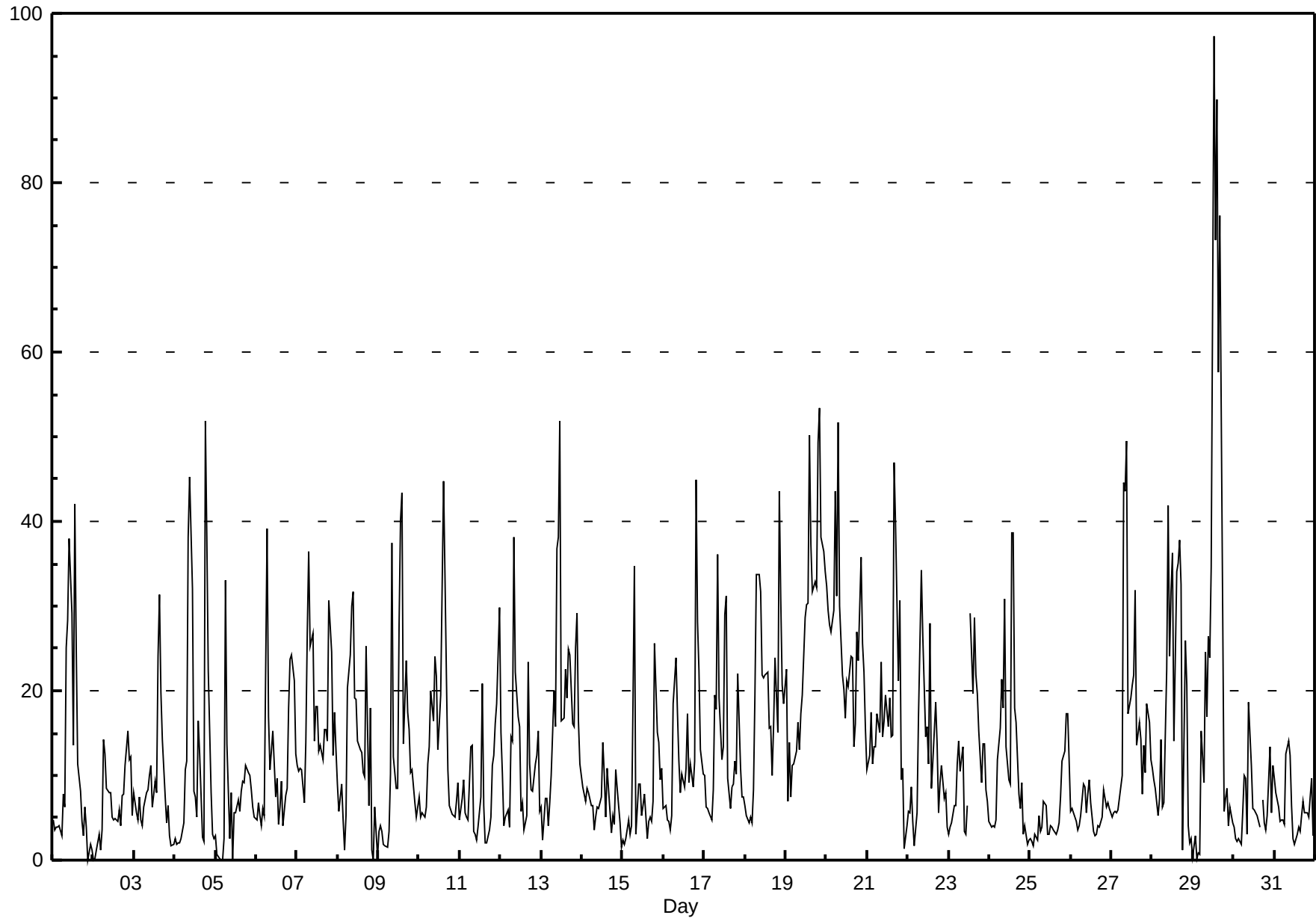
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - August 2012

Maximum Value: 97.3 μg/m ³ on Aug 29 13:00																				Maximum Daily Average: 26.6 μg/m ³ on Aug 19										Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Aug 1 22:00																				Minimum Daily Average: 5.8 μg/m ³ on Aug 26										Hours of Data: 742	
Maximum Diurnal Average: 20.1 μg/m ³ at hour 10																				Minimum Diurnal Average: 5.4 μg/m ³ at hour 5										Hours of Missing Data: 2	
Monthly Average: 13.21 μg/m ³																				Percentiles: P ₁ = 0.2 P ₁₀ = 3.1 Q ₁ = 5.1 Median = 9.3 Q ₃ = 17.2 P ₉₀ = 29.9 P ₉₉ = 50.5										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-Aug	5	4	4	4	4	3	8	6	25	28	38	29	14	42	25	11	8	5	3	6	4	0	2	1	11.6	42.1					
2-Aug	0	0	1	3	1	4	14	13	8	8	8	5	5	5	5	6	4	8	8	11	15	12	12	5	6.7	15.3					
3-Aug	8	6	5	7	5	4	6	8	8	10	11	6	9	8	24	31	20	14	7	4	7	3	2	2	9.0	31.3					
4-Aug	3	2	2	2	3	4	11	12	38	45	32	8	7	5	16	13	3	2	52	38	22	8	3	3	13.9	51.8					
5-Aug	3	1	0	0	0	3	33	14	3	8	0	6	6	7	6	8	9	9	11	10	10	8	6	5	6.9	33.1					
6-Aug	5	7	5	4	6	5	39	17	11	13	15	7	10	4	6	9	4	8	8	18	24	24	21	13	11.8	39.2					
7-Aug	11	10	11	11	7	14	27	36	25	27	14	18	18	13	14	12	15	15	14	31	25	12	17	13	17.1	36.5					
8-Aug	9	6	9	5	1	5	20	24	30	32	19	19	14	13	13	10	10	25	6	18	1	0	6	0	12.4	31.7					
9-Aug	3	4	3	2	2	2	3	10	37	12	8	8	28	40	43	14	24	17	15	10	11	7	5	6	13.2	43.4					
10-Aug	7	5	6	5	6	11	13	20	16	24	22	13	16	19	45	33	22	11	6	5	5	5	7	9	13.9	44.8					
11-Aug	5	7	9	6	5	5	13	14	3	3	2	4	7	21	6	2	2	4	5	11	12	16	18	30	8.8	29.9					
12-Aug	15	10	4	5	6	4	15	14	38	22	17	16	6	7	4	5	23	11	8	8	11	12	15	6	11.8	38.2					
13-Aug	6	2	7	7	4	7	10	20	16	37	38	52	17	17	23	19	25	24	16	16	25	29	17	11	18.5	51.9					
14-Aug	9	8	7	8	8	6	6	4	5	6	6	7	14	10	5	11	6	3	5	4	11	8	4	2	6.9	13.8					
15-Aug	2	2	3	5	3	4	18	35	3	9	9	5	7	8	3	5	5	5	7	26	15	14	9	11	8.8	34.8					
16-Aug	6	6	5	5	4	5	18	24	17	12	8	10	9	11	17	9	11	9	12	45	28	22	13	10	13.2	45.0					
17-Aug	10	6	6	6	5	8	19	18	36	19	12	13	29	31	10	6	9	9	12	10	22	11	7	7	13.4	36.0					
18-Aug	7	5	4	5	4	8	19	34	34	32	22	22	22	22	16	16	10	16	24	15	44	31	21	18	18.7	43.6					
19-Aug	23	7	14	7	11	11	13	16	13	17	19	29	30	30	50	37	32	33	32	49	53	38	37	34	26.6	53.4					
20-Aug	32	29	28	27	29	44	31	52	30	22	20	17	21	20	24	24	13	16	27	24	36	26	22	16	26.2	51.7					
21-Aug	11	12	17	11	13	13	17	15	23	15	17	19	16	19	15	15	47	40	21	31	9	11	1	4	17.2	47.0					
22-Aug	6	6	9	5	2	6	17	26	34	27	15	16	11	28	8	12	19	14	6	9	11	7	8	4	12.6	34.3					
23-Aug	3	4	4	7	7	11	14	10	13	3	3	7	N	29	20	29	22	20	15	9	14	14	8	7	11.9	29.2					
24-Aug	5	4	4	4	5	12	16	21	18	31	13	9	9	39	39	18	16	8	6	9	3	4	2	2	12.4	38.7					
25-Aug	3	2	2	3	2	5	3	4	7	7	3	3	4	4	4	3	4	4	7	12	13	17	17	12	6.0	17.2					
26-Aug	6	6	5	5	4	4	5	9	9	6	8	9	7	3	3	3	4	4	5	8	7	6	7	6	5.8	9.5					
27-Aug	5	6	6	6	6	9	10	45	44	49	17	19	21	22	32	14	16	14	8	14	10	18	16	12	17.4	49.4					
28-Aug	11	9	8	5	7	14	6	7	23	42	24	32	36	14	34	35	38	33	1	26	21	4	2	3	18.1	41.9					
29-Aug	0	3	0	1	1	15	9	25	17	26	24	35	97	73	90	58	76	30	6	7	8	4	6	4	25.7	97.3					
30-Aug	4	3	2	3	2	6	10	10	3	19	11	6	6	6	5	4	M	7	4	4	5	13	6	11	6.5	18.7					
31-Aug	10	8	6	5	5	5	4	13	14	12	7	3	2	3	4	3	5	7	6	6	5	7	10	3	6.3	14.1					
7.4 6.1 6.4 5.7 5.4 8.3 14.5 18.5 19.5 20.1 14.9 14.6 16.6 18.5 19.6 15.3 16.7 13.7 11.8 16.0 15.7 12.7 10.6 8.7																									Diurnal Average						
32.4 29.4 27.8 27.0 29.4 43.6 39.2 51.7 43.6 49.4 38.2 51.9 97.3 73.1 89.9 57.7 76.1 39.7 51.8 49.4 53.4 38.2 36.5 34.1																									Diurnal Maximum						
M - Maintenance N - Not Valid																															

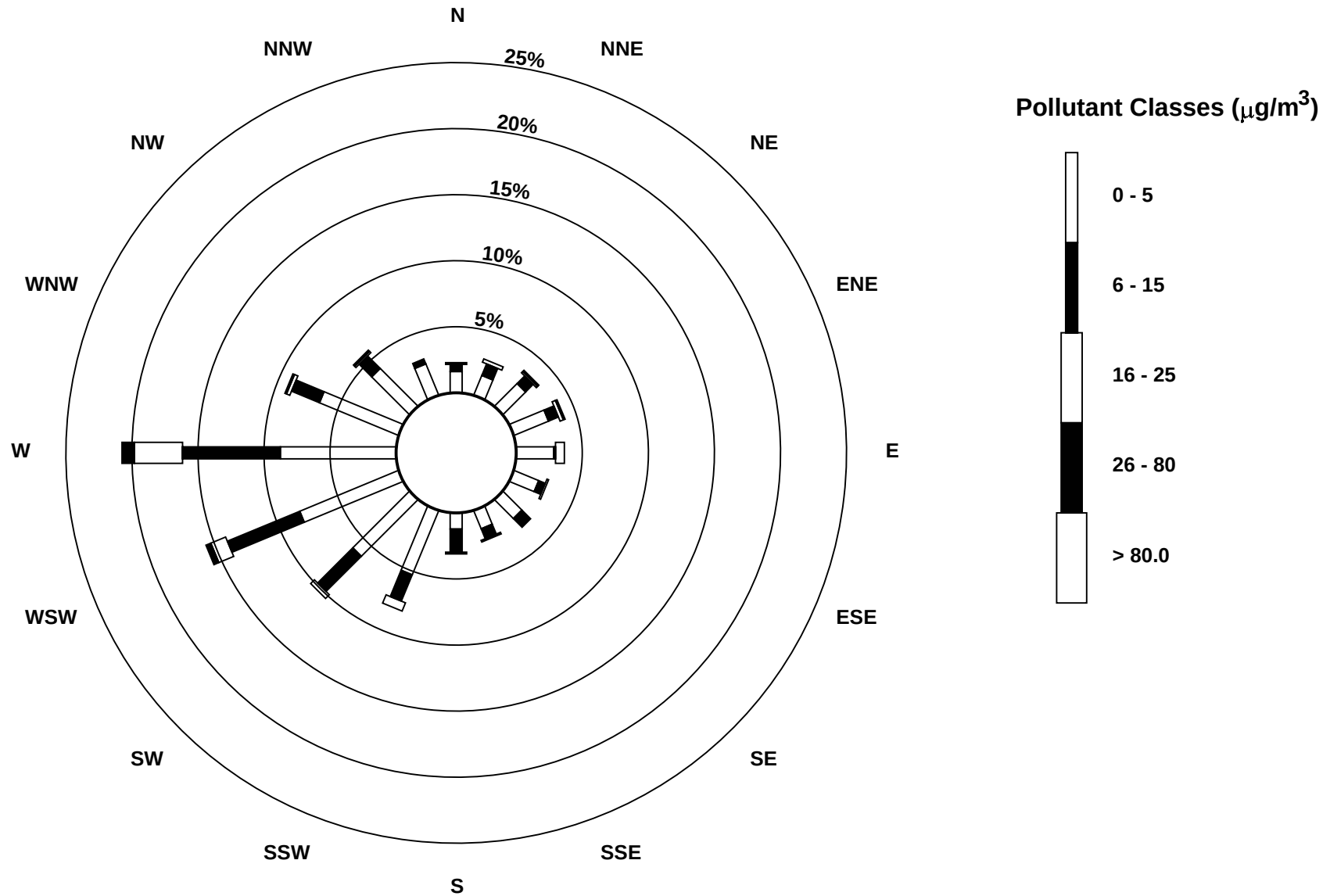
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - August 2012



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - August 2012



Hourly Averages

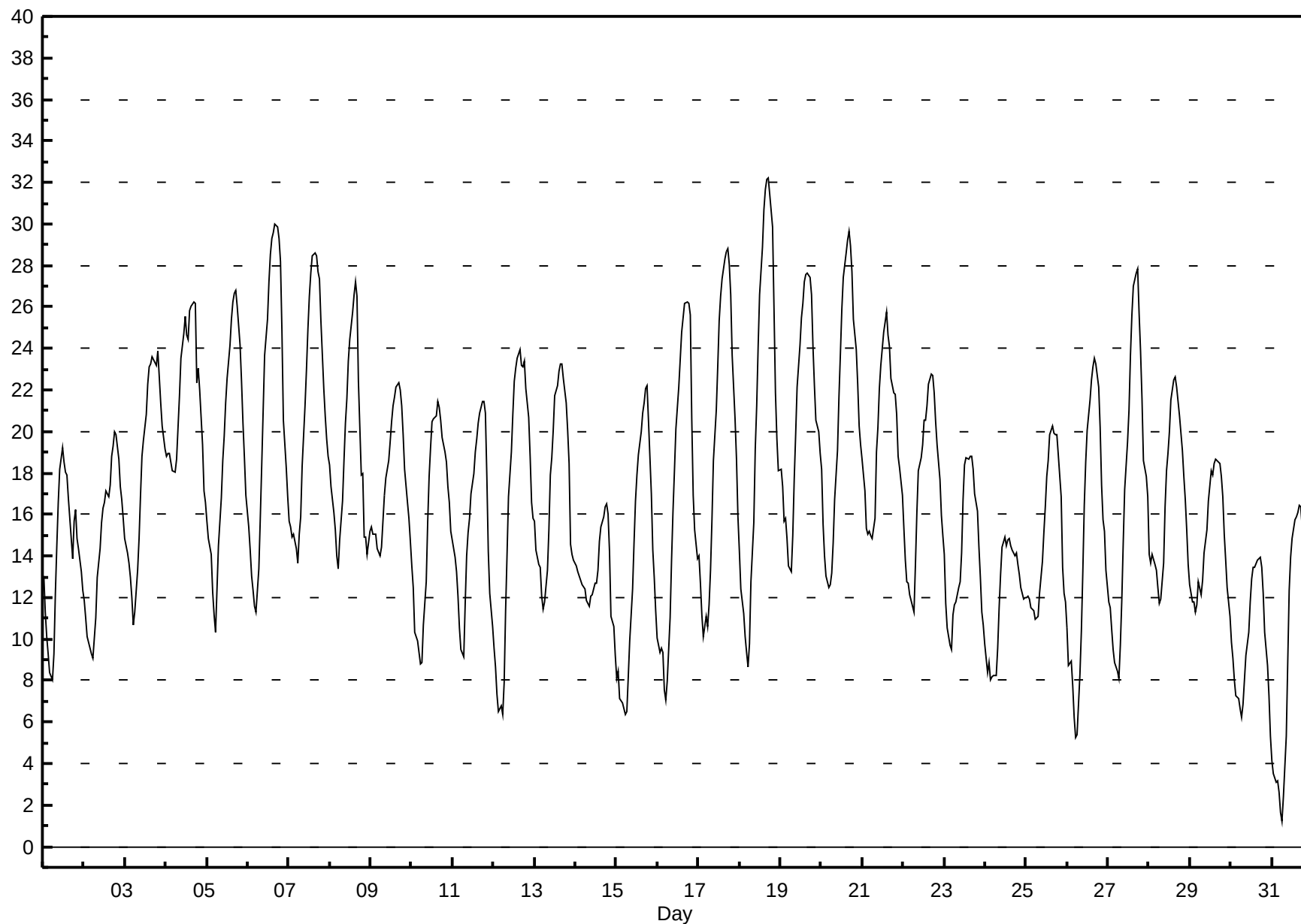
External Temperature (ET) - °C

Evergreen Park - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 32.2 °C on Aug 18 18:00 Maximum Daily Average: 21.6 °C on Aug 4																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 1 °C on Aug 31 07:00 Minimum Daily Average: 9.6 °C on Aug 31 Maximum Diurnal Average: 22.9 °C at hour 17 Minimum Diurnal Average: 10.3 °C at hour 6 Monthly Average: 16.79 °C Percentiles: P ₁ = 4.1 P ₁₀ = 9.5 Q ₁ = 12.5 Median = 16.1 Q ₃ = 20.8 P ₉₀ = 25.3 P ₉₉ = 29.7																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	13	11	10	9	8	8	9	12	15	17	18	19	19	18	18	17	15	14	16	16	15	14	13	12	14.0	19.2
2-Aug	12	11	10	10	9	9	10	11	13	14	16	16	17	17	17	19	19	20	20	19	17	17	16	16	14.8	20.0
3-Aug	15	14	14	13	12	11	11	13	15	17	19	20	21	22	23	23	24	23	23	24	23	21	20	19	18.3	23.9
4-Aug	19	19	19	19	18	18	19	20	22	24	25	26	25	24	26	26	26	26	22	23	22	19	17	17	21.6	26.3
5-Aug	16	15	14	12	11	10	12	14	17	19	20	21	23	24	25	26	27	27	26	24	22	20	19	17	19.3	26.8
6-Aug	15	14	13	12	12	11	13	16	18	21	24	25	27	29	29	30	30	30	29	28	25	21	18	17	21.2	30.0
7-Aug	16	15	15	15	14	14	15	16	18	21	23	25	26	28	28	29	28	28	27	25	22	21	20	19	21.2	28.6
8-Aug	18	17	16	15	14	13	15	17	19	20	22	23	24	26	27	27	27	22	18	18	15	15	14	15	19.1	27.2
9-Aug	15	15	15	15	14	14	14	16	17	18	19	20	20	21	22	22	22	22	21	20	18	17	16	15	17.8	22.3
10-Aug	14	12	10	10	9	9	9	11	13	16	18	19	20	21	21	21	21	21	20	19	18	17	17	15	15.9	21.4
11-Aug	15	14	13	12	11	9	9	12	14	15	16	17	18	19	20	20	21	21	21	18	14	12	11	15.6	21.4	
12-Aug	10	9	7	7	7	6	8	11	14	17	19	21	22	23	24	24	23	23	23	22	21	19	17	16	16.3	24.0
13-Aug	16	14	14	13	12	11	12	13	15	18	19	20	22	22	23	23	23	23	21	20	18	15	14	14	17.3	23.3
14-Aug	14	13	13	13	13	12	12	12	12	12	12	13	13	13	15	15	16	16	17	16	14	11	11	9	13.2	16.5
15-Aug	8	8	7	7	7	6	7	8	10	12	15	17	18	19	20	21	21	22	22	21	17	14	13	11	13.8	22.2
16-Aug	10	9	10	9	8	7	8	11	14	16	18	20	22	23	25	25	26	26	26	26	21	17	15	14	16.9	26.3
17-Aug	14	13	11	10	11	11	12	13	16	19	21	23	25	27	27	28	29	29	28	27	24	21	19	16	19.7	28.8
18-Aug	14	12	11	10	9	9	10	13	16	19	21	24	27	29	31	32	32	32	31	30	26	22	20	18	20.7	32.2
19-Aug	18	17	16	16	15	13	13	15	18	20	22	24	25	26	27	28	28	27	27	24	22	21	20	19	20.9	27.6
20-Aug	18	16	14	13	12	13	13	15	17	19	22	24	26	27	29	29	30	29	28	25	24	22	20	19	21.0	29.6
21-Aug	19	17	15	15	15	15	15	16	19	20	22	23	25	25	26	25	24	23	22	22	21	19	18	17	19.9	25.8
22-Aug	15	14	13	13	12	12	11	14	16	18	19	19	21	21	21	22	23	23	22	21	19	18	16	15	17.3	22.8
23-Aug	14	12	11	10	9	11	12	12	12	13	14	17	18	19	19	19	19	18	17	16	14	13	11	11	14.2	18.8
24-Aug	10	8	9	8	8	8	8	10	12	13	14	15	15	15	15	14	14	14	14	14	13	12	12	12	12.0	14.9
25-Aug	12	12	12	11	11	11	11	11	12	14	15	16	18	19	20	20	20	20	20	19	17	13	12	12	14.9	20.2
26-Aug	11	9	9	8	6	5	5	8	10	13	16	19	20	22	22	23	24	23	22	20	17	16	15	13	14.9	23.5
27-Aug	12	12	10	10	9	8	8	10	12	15	17	19	21	24	26	27	28	28	26	24	22	19	18	17	17.5	27.8
28-Aug	14	14	14	14	13	12	12	12	14	16	18	19	20	22	22	23	22	21	21	19	18	17	15	14	16.9	22.6
29-Aug	13	12	12	11	12	13	12	13	14	15	15	17	18	18	18	19	19	18	18	17	15	14	12	11	14.8	18.7
30-Aug	10	9	8	7	7	7	6	7	8	9	10	12	13	13	13	14	14	14	13	12	10	9	7	5	10.0	14.0
31-Aug	4	4	3	3	3	2	1	2	5	9	12	14	15	16	16	16	16	16	15	14	11	10	11	11	9.6	16.4
13.6 12.6 11.9 11.3 10.7 10.3 10.7 12.4 14.4 16.4 18.1 19.6 20.8 21.6 22.4 22.8 22.9 22.6 21.9 20.8 18.8 16.7 15.5 14.4																								Diurnal Average		
18.8 19.0 18.9 18.5 18.1 18.0 18.6 20.2 21.7 23.5 24.7 25.5 27.2 28.9 30.7 31.7 32.1 32.2 31.5 29.9 25.9 22.3 20.3 19.3																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C
Evergreen Park - August 2012



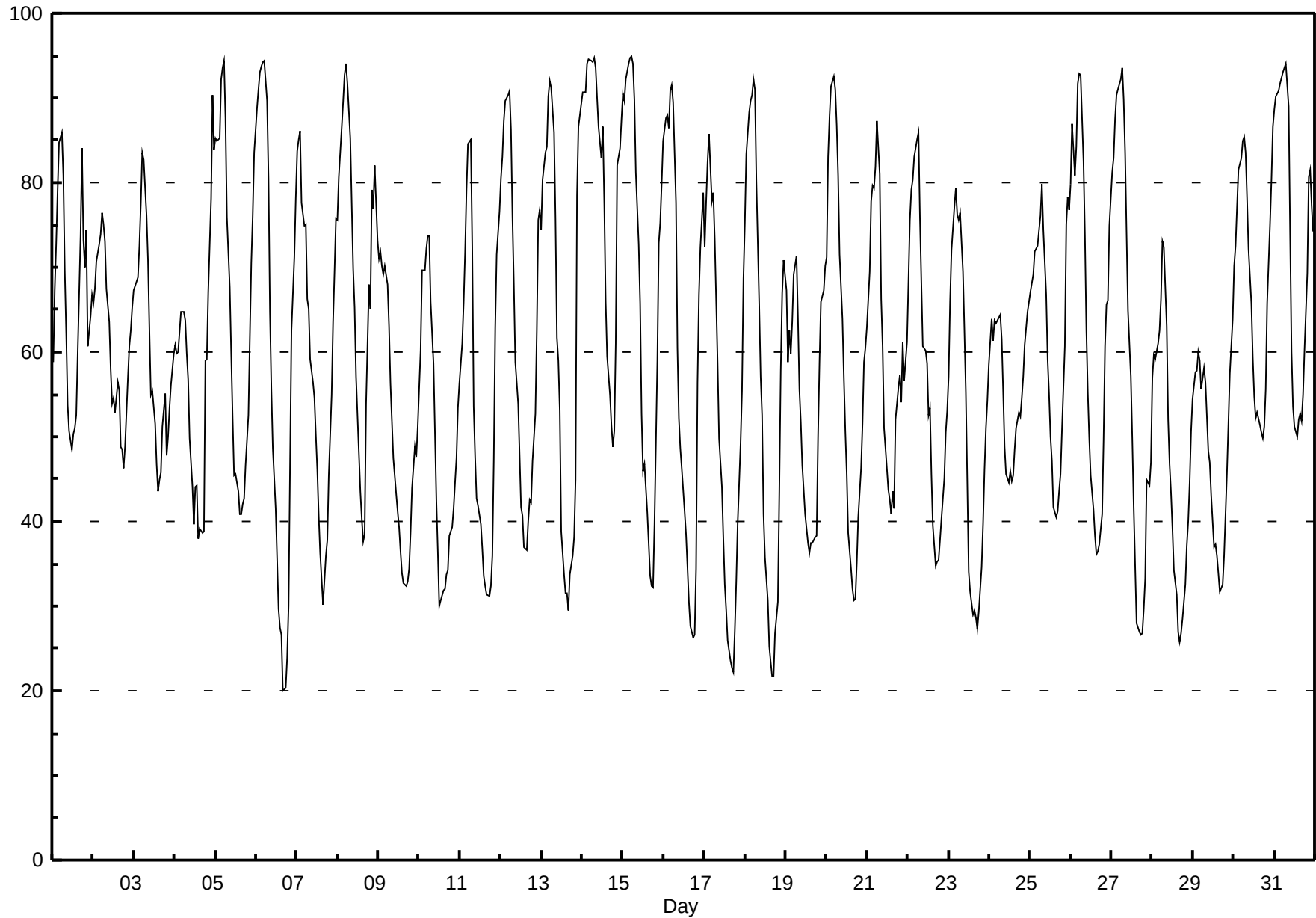
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 95.0 % on Aug 15 06:00 Maximum Daily Average: 79.5 % on Aug 14																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 20 % on Aug 6 17:00 Minimum Daily Average: 47.3 % on Aug 28 Maximum Diurnal Average: 82.5 % at hour 6 Minimum Diurnal Average: 37.3 % at hour 17 Monthly Average: 59.77 % Percentiles: P ₁ = 23.6 P ₁₀ = 34.0 Q ₁ = 44.0 Median = 58.9 Q ₃ = 75.6 P ₉₀ = 87.5 P ₉₉ = 94.3																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	59	67	73	79	85	86	81	70	62	54	51	48	50	51	53	60	74	84	73	70	74	61	64	67	66.4	86.0
2-Aug	66	67	71	73	74	76	75	73	68	63	58	54	55	53	56	55	49	49	46	49	57	61	63	65	61.5	76.4
3-Aug	67	68	69	73	77	83	83	76	71	62	55	55	52	47	44	45	46	51	55	48	50	53	56	60	60.3	83.5
4-Aug	61	60	60	62	65	65	64	60	57	50	44	40	44	44	38	39	39	39	59	59	67	78	90	84	57.0	90.3
5-Aug	85	85	85	92	94	94	88	76	68	60	52	45	46	44	41	41	42	43	47	53	62	71	76	83	65.5	94.5
6-Aug	89	91	93	94	94	94	90	81	65	56	49	42	36	30	27	27	20	20	24	30	46	63	71	78	58.7	94.3
7-Aug	84	85	86	78	75	75	66	65	59	56	55	50	46	41	36	30	33	36	38	45	55	64	69	76	58.5	86.1
8-Aug	76	81	86	89	93	94	92	85	77	70	65	57	53	44	40	38	38	54	68	65	79	77	82	73	69.8	94.0
9-Aug	71	72	70	69	70	68	63	56	52	48	43	41	39	36	34	33	32	33	34	39	44	49	48	51	49.8	71.8
10-Aug	56	60	70	70	72	74	74	66	59	50	42	37	30	31	32	32	34	34	38	39	42	45	48	53	49.4	73.8
11-Aug	56	61	66	72	79	85	85	72	54	48	43	42	40	37	34	32	31	31	32	36	47	63	71	77	53.9	85.1
12-Aug	80	83	87	90	90	91	86	76	68	59	54	48	42	41	37	37	40	43	42	47	53	63	76	77	62.8	90.8
13-Aug	74	80	83	84	90	92	91	86	76	62	59	53	39	34	31	32	30	34	36	38	45	79	87	88	62.6	91.9
14-Aug	91	91	91	94	94	94	94	95	94	90	87	83	87	78	66	60	55	51	49	51	61	82	84	87	79.5	94.8
15-Aug	90	90	92	94	95	95	94	90	81	73	66	53	46	47	41	37	34	32	32	40	59	73	75	80	67.0	95.0
16-Aug	85	88	88	87	91	92	89	78	60	52	49	46	41	38	35	30	28	26	27	34	56	67	72	79	59.9	91.5
17-Aug	72	78	82	86	78	79	73	66	59	50	44	38	33	29	26	24	23	22	27	33	40	49	55	69	51.4	85.7
18-Aug	75	83	88	90	90	92	91	80	66	57	53	41	36	31	25	23	22	22	27	31	44	58	67	71	56.7	92.2
19-Aug	67	59	63	60	64	69	71	64	56	52	47	41	39	38	36	37	37	38	38	50	59	66	67	70	53.7	71.3
20-Aug	71	83	88	91	92	91	87	81	72	64	57	51	46	39	34	32	31	31	35	41	46	51	59	60	59.7	92.5
21-Aug	63	70	78	80	79	82	87	81	66	61	51	49	44	43	41	44	41	52	56	57	54	61	57	61	60.7	87.4
22-Aug	68	76	79	80	83	85	86	76	68	61	60	59	53	53	46	39	35	35	35	38	40	45	51	53	58.5	86.0
23-Aug	57	66	72	77	79	76	76	76	69	63	55	45	34	32	29	30	29	27	29	35	40	46	51	54	52.0	79.4
24-Aug	58	64	61	64	63	64	64	61	55	49	46	45	46	45	45	48	51	53	52	55	57	61	65	66	55.8	66.0
25-Aug	67	68	69	72	72	74	76	80	74	67	59	55	50	47	42	41	41	43	46	51	61	75	78	77	61.9	79.9
26-Aug	80	87	81	84	92	93	93	83	74	63	55	50	46	41	38	36	36	37	41	50	61	66	66	75	63.6	92.9
27-Aug	81	83	88	90	91	92	94	90	84	74	65	57	50	42	35	28	27	27	27	30	33	45	44	47	59.3	93.6
28-Aug	57	60	59	61	63	66	73	72	63	52	47	43	39	34	31	27	26	27	29	33	37	40	45	51	47.3	73.1
29-Aug	54	58	58	60	59	56	58	56	52	48	47	43	37	37	36	34	32	33	36	41	46	51	57	64	48.1	63.9
30-Aug	70	72	77	81	83	85	85	84	78	72	66	59	55	52	53	51	50	50	51	56	66	75	80	87	68.3	86.6
31-Aug	89	90	91	92	92	93	94	94	89	74	60	54	51	50	52	53	52	55	60	69	81	82	77	74	73.6	94.1
71.6 75.0 77.6 79.6 81.3 82.5 81.4 75.8 67.5 59.9 54.2 49.1 45.2 42.1 39.2 37.9 37.3 39.1 41.6 45.5 53.6 61.8 66.2 69.6																								Diurnal Average		
90.7 91.0 93.0 94.0 94.7 95.0 94.2 94.8 93.6 90.1 86.6 82.9 86.6 77.6 65.9 59.8 73.7 84.0 73.2 70.0 80.7 82.1 90.3 87.9																								Diurnal Maximum		

Hourly Averages

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



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	10	6	5	6	2	2	1	5	8	17	21	20	22	23	20	18	17	10	20	18	13	17	12	18	11.6	23.0
Dir	213	203	205	220	213	202	167	203	234	250	273	278	286	270	268	232	227	208	214	217	231	254	240	241	243.8	270.1
2 Spd	20	20	10	12	14	13	13	16	20	17	18	23	23	22	20	19	24	17	21	13	6	9	16	17	14.9	24.2
Dir	250	255	259	258	283	285	276	279	276	283	293	313	315	309	309	326	332	316	334	315	264	257	256	259	292.0	331.7
3 Spd	16	14	7	3	2	1	1	4	8	13	17	17	19	17	23	18	8	8	8	25	25	23	19	13	11.5	25.2
Dir	262	263	275	359	86	98	80	177	199	245	252	237	248	252	269	263	274	189	171	256	255	257	246	225	249.5	255.6
4 Spd	18	21	23	17	13	20	14	18	26	31	32	28	20	18	35	27	21	19	8	10	2	1	3	6	15.4	35.2
Dir	227	238	240	248	240	245	249	240	255	270	272	284	328	303	262	284	298	308	309	263	348	35	36	50	268.7	262.4
5 Spd	5	5	1	2	2	1	3	6	6	8	10	12	11	8	4	7	8	11	8	6	4	4	4	1	5.1	11.7
Dir	55	56	47	216	15	3	61	66	65	66	61	81	96	93	118	95	79	108	79	62	57	61	73	11	76.7	81.1
6 Spd	2	0	1	0	1	2	3	9	13	10	9	13	6	6	11	7	16	14	11	5	0	1	2	0	3.9	16.2
Dir	12	263	52	1	225	206	204	238	263	252	241	281	306	279	271	357	343	338	353	13	315	214	218	281	295.7	343.3
7 Spd	1	0	4	5	3	6	9	7	4	2	6	2	3	7	7	9	6	8	5	17	17	14	5	7	2.2	16.8
Dir	266	5	262	297	294	239	271	291	290	199	68	257	70	75	91	130	139	120	130	256	230	262	292	216	234.8	230.3
8 Spd	7	2	5	1	1	3	3	1	4	3	6	6	7	6	10	8	5	20	20	39	31	17	22	15	7.5	39.4
Dir	213	202	205	200	34	205	201	216	245	236	191	164	213	271	327	301	355	188	187	246	283	284	229	241	240.3	245.6
9 Spd	36	27	26	22	10	15	12	21	22	24	27	31	27	31	33	30	26	26	25	18	14	10	14	12	22.1	36.2
Dir	260	264	260	263	300	268	264	258	271	281	275	260	265	268	262	273	285	285	284	286	281	289	288	275	271.6	260.1
10 Spd	13	8	6	5	5	6	6	12	14	14	15	27	33	31	32	25	26	27	23	22	23	20	18	13	17.1	32.5
Dir	255	239	203	214	226	228	248	257	254	250	257	258	266	263	273	270	251	282	287	287	263	252	260	282	262.7	266.0
11 Spd	12	5	3	0	3	1	1	4	7	4	10	8	12	12	16	13	12	9	7	4	3	2	1	0	4.9	16.2
Dir	279	297	354	154	58	251	263	329	323	315	270	280	258	280	267	278	316	289	324	45	92	193	182	199	289.5	267.1
12 Spd	0	3	2	2	1	2	1	1	2	2	6	8	11	9	10	7	4	9	10	7	4	2	4	5	4.0	11.2
Dir	218	45	53	68	165	63	30	10	246	97	158	119	122	116	111	125	93	99	89	93	110	130	95	153	108.8	122.4
13 Spd	4	4	2	2	1	1	2	3	9	14	18	19	27	27	26	22	23	17	15	14	18	15	8	6	9.7	27.4
Dir	144	85	97	198	60	299	181	254	283	280	254	259	263	260	268	273	267	259	272	284	296	14	33	34	273.9	260.5
14 Spd	2	3	1	0	3	9	12	15	16	17	19	18	13	19	16	16	13	15	18	13	3	3	3	2	8.5	19.4
Dir	76	154	104	3	323	343	32	34	34	31	38	39	32	33	23	24	353	336	341	344	311	216	228	206	17.0	37.5
15 Spd	5	4	4	4	5	6	7	9	11	7	9	9	10	10	10	9	8	6	4	5	1	2	4	2	5.5	11.4
Dir	218	222	231	245	221	218	217	235	247	272	226	201	203	196	208	228	256	262	248	154	137	214	213	49	224.7	247.2
16 Spd	0	2	1	4	2	3	2	5	13	18	17	14	10	11	7	12	15	18	14	2	3	1	1	1	6.9	18.3
Dir	271	214	232	211	208	222	220	214	250	256	246	248	256	258	282	301	277	261	256	270	204	209	232	232	255.1	256.1
17 Spd	3	1	1	5	7	3	6	9	9	14	10	7	8	11	13	7	9	9	10	8	5	2	2	3	3.9	14.3
Dir	312	229	162	208	211	225	221	246	251	259	259	273	273	261	295	255	200	179	131	123	109	117	133	57	235.1	259.1
18 Spd	2	2	1	1	1	3	2	10	9	3	7	8	7	8	10	12	12	11	9	5	4	2	2	2	3.6	12.0
Dir	74	353	43	227	230	206	221	244	252	209	217	226	152	161	161	140	125	152	150	140	243	211	274	273	180.1	125.0
19 Spd	6	4	3	7	7	7	7	11	13	6	3	6	2	8	7	9	12	11	9	1	1	3	2	2	0.7	12.6
Dir	278	213	288	268	247	219	236	253	278	274	25	75	94	20	26	45	85	80	97	318	6	60	42	166	332.0	278.0
20 Spd	3	1	1	1	1	6	7	11	12	9	5	6	8	5	3	8	9	11	10	7	5	3	7	3	3.8	11.6
Dir	189	113	69	234	206	232	270	265	263	267	221	205	199	261	297	234	177	176	177	185	193	116	83	138	214.5	263.2
21 Spd	3	2	4	3	11	2	2	5	7	10	12	10	8	11	11	23	2	6	5	7	15	4	14	12	4.2	22.8
Dir	188	261	42	13	196	133	54	216	322	343	334	331	321	310	258	224	229	27	11	263	229	25	264	260	278.1	224.0
22 Spd	2	0	12	9	10	5	11	10	14	17	11	17	17	18	24	21	23	23	19	12	11	9	10	16	12.1	23.7
Dir	47	333	215	248	248	299	243	274	279	273	276	267	305	281	326	298	281	281	297	289	274	256	257	252	278.3	326.2

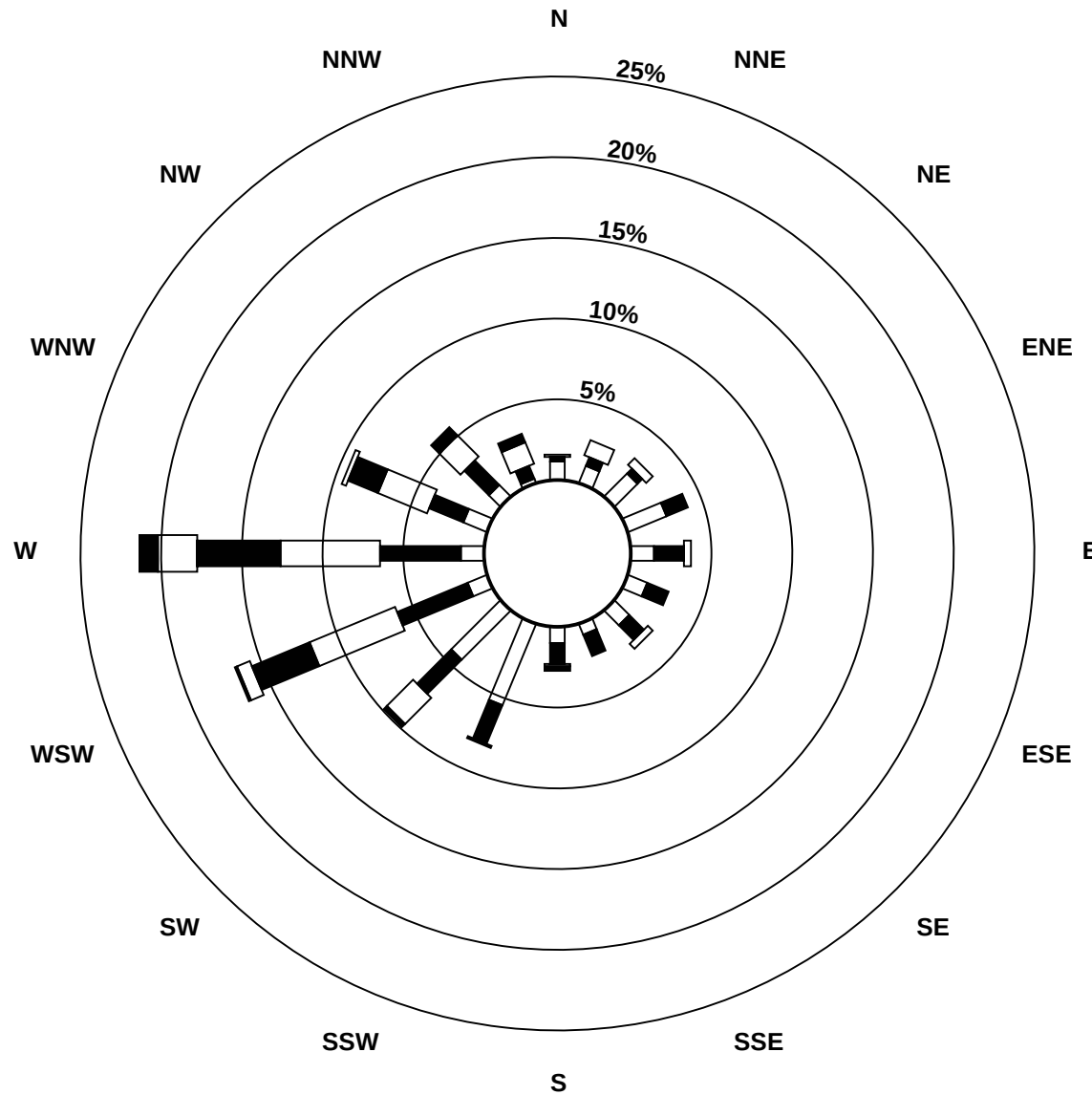
Hourly Averages

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

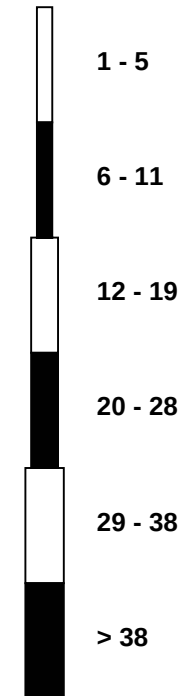
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	11	7	4	4	10	10	8	6	11	19	18	19	26	28	32	31	31	33	29	18	19	18	14	14	16.4	32.8
Dir	275	319	313	301	227	237	243	175	235	230	223	247	249	250	277	275	253	266	255	244	249	254	235	253	253.4	265.6
24 Spd	9	6	10	12	24	21	23	25	28	34	26	25	29	39	39	30	28	21	27	23	19	21	23	21	23.0	38.8
Dir	228	230	251	262	258	255	255	264	270	273	291	292	286	267	264	275	278	279	271	268	269	258	260	262	268.7	266.9
25 Spd	19	24	24	15	16	13	10	7	12	11	16	16	16	14	17	11	2	3	6	7	2	0	3	7	9.2	24.0
Dir	266	263	264	281	278	276	290	314	267	285	295	308	292	319	264	321	354	122	166	176	137	177	221	211	277.2	264.5
26 Spd	2	2	4	5	3	3	3	9	8	3	3	10	8	11	12	11	11	12	9	5	4	5	6	3	3.3	11.9
Dir	234	264	266	205	202	208	210	246	261	277	124	151	138	135	130	114	93	101	92	71	69	70	75	48	129.7	100.9
27 Spd	5	3	1	1	2	0	1	4	3	6	5	6	11	7	6	7	4	10	14	11	6	4	6	3	3.5	14.0
Dir	66	57	9	47	238	200	194	246	287	246	204	302	277	246	295	305	222	247	322	335	312	230	259	281	283.1	321.8
28 Spd	1	3	6	8	8	6	2	2	7	15	21	21	19	19	23	28	27	24	24	17	17	20	18	15	13.7	27.8
Dir	195	229	278	292	247	216	208	187	287	265	257	254	256	288	271	271	271	280	297	281	268	251	247	230	265.9	271.1
29 Spd	14	16	27	18	22	29	24	29	28	33	27	29	42	41	43	41	47	41	30	16	12	12	14	7	26.3	46.6
Dir	229	234	253	227	253	259	252	254	250	257	258	252	269	265	265	259	260	263	254	253	243	277	270	298	257.3	260.4
30 Spd	6	9	7	6	6	8	6	8	14	14	17	15	15	14	15	12	16	21	17	9	1	2	1	2	9.4	21.3
Dir	313	271	300	316	318	264	271	292	330	308	291	307	306	302	331	308	329	331	329	337	295	320	222	230	310.7	330.9
31 Spd	1	3	1	2	2	1	2	2	1	3	5	8	7	9	9	7	4	7	5	2	1	2	12	8	2.7	11.8
Dir	176	202	321	21	174	181	7	179	303	36	85	128	117	124	121	155	119	142	102	61	43	230	179	253	136.6	178.6
Spd	5.7	5.0	5.2	4.7	5.0	5.5	4.9	7.0	9.4	10.4	9.5	9.6	10.2	10.8	12.4	10.6	9.0	7.8	6.4	7.3	7.0	5.6	5.9	5.6	Diurnal Average	
Dir	250.6	251.2	255.3	256.7	252.1	252.3	254.4	256.6	268.0	270.5	267.6	268.4	273.0	272.5	274.7	273.7	276.8	270.7	276.7	268.6	261.3	263.0	250.1	251.0	Diurnal Maximum	
Spd	36.2	26.7	26.8	21.8	24.4	29.2	24.1	29.2	28.4	33.6	32.1	31.3	41.8	41.3	43.0	40.9	46.6	41.5	29.6	39.4	31.1	23.3	22.8	20.9	Diurnal Maximum	
Dir	260.1	264.2	253.5	262.7	258.1	259.1	251.7	254.0	269.7	273.1	272.1	260.4	269.1	265.1	265.2	259.0	260.4	262.9	253.7	245.6	283.4	257.1	260.4	262.2		
Maximum Speed Value: 47 km/h on Aug 29 17:00							Minimum Speed Value: 0 km/h on Aug 6 02:00													Hours in Service: 744						
Maximum Daily Speed Average: 26.3 km/h on Aug 29							Minimum Daily Speed Average: 0.7 km/h on Aug 31													Hours of Data: 744						
Maximum Diurnal Speed Average: 12.4 km/h at hour 15							Minimum Diurnal Speed Average: 4.7 km/h at hour 4													Hours of Missing Data: 0						
Monthly Average Velocity: 7.44 km/h 265.47 deg							Speed Percentiles: P ₁ = 0.3 P ₁₀ = 1.6 Q ₁ = 3.8 Median = 9.0 Q ₃ = 16.5 P ₉₀ = 23.6 P ₉₉ = 38.0													Percent Operational Time: 100.0						
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - August 2012

Maximum Speed: 47 km/h on Aug 29 17:00																					Maximum Daily Speed Average: 27.3 km/h on Aug 29					Hours in Service: 744	
Minimum Speed: 1 km/h on Aug 12 01:00																					Minimum Daily Speed Average: 6.0 km/h on Aug 31					Hours of Data: 744	
Maximum Diurnal Speed Average: 19.6 km/h at hour 15																					Minimum Diurnal Speed Average: 6.8 km/h at hour 4					Hours of Missing Data: 0	
Monthly Average Speed: 12.18 km/h																					Percentiles: P ₁ = 1.6 P ₁₀ = 2.7 Q ₁ = 5.1 Median = 10.2 Q ₃ = 17.4 P ₉₀ = 24.7 P ₉₉ = 41.6					Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	10	6	5	6	3	2	3	5	9	17	22	22	23	24	21	18	18	10	20	18	14	17	12	19	13.5	23.7	
2-Aug	20	20	11	12	14	13	14	16	20	18	21	25	25	23	21	20	25	19	21	14	6	10	16	17	17.6	25.4	
3-Aug	16	15	8	4	2	1	2	5	8	14	17	17	20	19	24	19	9	9	8	26	25	23	19	14	13.5	25.9	
4-Aug	18	21	23	17	13	20	15	19	26	32	33	30	21	20	36	28	22	20	11	10	7	2	4	6	19.0	35.8	
5-Aug	5	5	3	3	2	2	3	6	7	9	11	13	13	10	8	10	11	12	9	7	4	4	4	2	6.8	13.4	
6-Aug	2	2	3	3	3	3	4	10	14	10	10	14	10	12	13	13	18	16	12	7	2	2	3	2	7.8	17.8	
7-Aug	2	2	5	6	5	7	10	8	6	6	8	7	10	10	11	12	8	9	5	17	19	16	7	8	8.5	18.7	
8-Aug	7	3	5	3	2	4	3	3	5	6	8	7	10	10	11	10	6	23	20	42	32	22	23	16	11.7	41.9	
9-Aug	36	27	26	22	11	15	12	22	23	25	28	32	28	32	34	31	27	27	26	18	14	10	15	13	23.1	36.4	
10-Aug	13	9	6	5	5	7	8	12	15	15	17	28	34	33	33	26	27	28	24	23	23	21	18	16	18.5	33.7	
11-Aug	13	6	5	4	4	1	2	5	8	9	12	12	15	15	19	17	15	12	10	4	3	5	2	2	8.3	18.6	
12-Aug	1	3	3	2	2	2	2	2	4	5	9	11	13	12	12	10	5	10	11	7	4	4	5	6	6.1	13.2	
13-Aug	5	4	4	4	2	2	3	4	10	15	19	20	28	28	28	23	24	18	16	15	20	16	8	7	13.5	28.2	
14-Aug	3	5	3	2	4	9	13	15	16	17	20	18	14	20	18	17	14	16	19	13	4	3	4	3	11.2	19.8	
15-Aug	5	4	4	4	5	6	7	9	12	9	10	12	12	12	13	12	12	8	6	5	3	2	4	2	7.4	13.1	
16-Aug	2	3	2	4	2	3	2	6	14	19	17	15	12	13	11	14	17	18	14	3	3	2	3	2	8.4	18.7	
17-Aug	4	2	2	5	7	4	6	9	10	15	11	9	10	14	16	10	11	10	11	8	5	3	2	3	7.8	15.9	
18-Aug	3	2	1	2	2	3	2	10	10	5	8	10	9	10	12	13	13	12	9	6	5	3	3	3	6.6	13.1	
19-Aug	7	5	4	8	7	7	7	11	13	8	6	7	6	10	10	11	13	12	10	3	3	5	4	4	7.6	13.1	
20-Aug	4	4	3	3	2	6	8	12	12	10	7	8	10	8	9	11	11	11	10	8	6	8	7	6	7.7	12.4	
21-Aug	4	6	4	4	11	4	6	7	8	10	12	12	11	15	14	23	8	8	6	8	15	6	15	12	9.5	23.1	
22-Aug	6	4	12	10	10	7	11	11	15	18	13	19	18	20	25	24	25	24	20	12	11	9	11	16	14.6	24.7	
23-Aug	13	8	5	5	11	11	9	7	12	19	19	21	27	29	34	33	32	33	29	18	19	19	14	14	18.4	33.9	
24-Aug	10	7	10	12	25	21	23	26	29	34	28	27	30	39	40	31	29	22	28	24	20	22	23	21	24.2	39.6	
25-Aug	19	24	24	16	16	13	10	8	12	12	17	18	19	16	17	12	5	3	6	7	3	1	4	7	12.1	24.3	
26-Aug	3	3	5	5	3	3	4	9	8	6	7	11	11	14	14	13	13	14	10	5	4	5	6	3	7.5	14.2	
27-Aug	5	4	2	3	4	3	2	5	4	7	7	8	12	9	11	10	10	12	14	11	7	4	6	4	6.8	14.4	
28-Aug	2	4	6	9	8	7	3	3	8	16	21	22	20	21	25	29	27	25	25	17	17	20	18	15	15.5	28.9	
29-Aug	14	17	27	18	23	30	24	30	28	34	27	30	43	43	44	42	47	42	30	16	12	13	14	8	27.3	47.3	
30-Aug	7	10	8	7	7	9	6	9	15	16	19	17	19	17	16	13	17	22	18	9	2	3	2	2	11.3	22.1	
31-Aug	3	3	2	3	4	3	3	4	3	5	7	10	11	13	11	9	7	8	5	3	2	2	12	10	6.0	12.9	
8.5 7.6 7.5 6.8 7.1 7.4 7.3 9.9 12.4 14.3 15.2 16.5 17.5 18.4 19.6 18.2 17.1 16.5 15.0 12.5 10.2 9.1 9.3 8.5																									Diurnal Average		
36.4 27.0 27.0 22.2 24.5 29.5 24.3 29.5 29.0 34.4 32.9 32.0 42.7 42.5 43.8 41.7 47.3 42.1 30.0 41.9 32.5 23.4 23.0 21.1																									Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

Hourly Standard Deviations

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

Maximum Value: 98.4 deg on Aug 6 02:00																				Hours in Service: 744					
Minimum Value: 5.2 deg on Aug 17 05:00																				Hours of Data: 744					
																				Hours of Missing Data: 0					
																				Hours of Calibration: 0					
Percentiles: P ₁ = 6.3 P ₁₀ = 10.7 Q ₁ = 15.5 Median = 27.8 Q ₃ = 50.9 P ₉₀ = 75.2 P ₉₉ = 93.5																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	9	7	27	10	37	40	68	45	36	13	19	22	15	15	18	13	18	18	10	10	23	8	13	12	68.2
2-Aug	7	6	28	19	19	15	13	12	15	20	29	25	22	18	18	19	15	21	12	15	16	9	6	7	28.5
3-Aug	8	10	20	38	48	54	80	26	17	30	17	19	14	27	20	22	32	31	18	17	9	6	8	11	79.5
4-Aug	7	7	9	10	8	9	10	11	11	15	13	21	22	29	11	20	19	18	59	17	74	86	66	21	85.9
5-Aug	17	17	82	46	51	48	40	22	33	30	39	29	36	41	82	49	49	31	32	20	15	16	27	64	81.8
6-Aug	57	98	78	92	94	70	86	31	18	22	32	26	67	71	48	56	28	38	21	37	82	80	69	90	98.4
7-Aug	82	86	50	24	58	34	18	37	67	90	63	90	83	52	62	45	37	23	30	35	30	34	53	67	89.9
8-Aug	20	59	18	86	63	48	47	87	44	69	57	44	66	68	34	59	48	48	16	20	18	40	14	23	87.4
9-Aug	6	8	7	14	26	11	20	10	14	15	16	12	16	17	15	19	18	14	12	15	14	13	15	16	26.2
10-Aug	9	23	9	13	18	17	48	14	11	15	27	17	16	18	15	21	14	15	13	14	10	6	8	34	48.4
11-Aug	16	48	60	97	59	69	80	34	43	75	43	68	49	51	32	38	39	42	48	22	28	79	73	95	97.4
12-Aug	93	33	28	55	77	42	83	84	81	84	55	63	41	50	42	63	43	30	25	20	44	78	37	36	93.2
13-Aug	49	30	82	84	76	73	56	51	28	20	14	18	14	14	19	18	14	13	22	21	25	23	35	32	84.1
14-Aug	85	43	85	96	38	20	26	12	14	13	12	14	20	16	22	23	30	25	25	20	49	18	54	80	96.1
15-Aug	10	14	13	14	15	7	9	14	15	42	28	55	50	44	48	45	52	44	62	44	88	49	42	67	87.9
16-Aug	80	69	63	15	60	30	37	15	13	12	13	21	44	45	56	33	30	17	13	72	57	64	83	88	88.3
17-Aug	37	93	71	21	5	58	14	18	16	17	30	58	47	44	41	61	46	30	17	13	15	45	37	21	93.3
18-Aug	63	50	81	79	86	49	69	17	31	72	31	35	47	47	38	28	27	25	22	19	41	73	76	69	85.7
19-Aug	25	56	45	16	17	15	30	16	15	49	62	43	82	35	60	43	28	21	20	59	83	76	61	88	88.3
20-Aug	57	75	76	86	64	22	23	13	22	30	57	54	41	67	90	52	40	22	14	24	57	73	25	54	90.3
21-Aug	38	73	27	50	13	74	88	53	64	19	20	35	62	53	50	10	85	34	41	37	14	50	20	16	87.7
22-Aug	80	98	8	28	19	40	42	22	29	19	43	30	21	27	17	29	21	20	17	18	14	13	18	7	98.3
23-Aug	39	25	61	43	17	28	40	38	24	8	14	26	20	18	18	20	13	12	11	9	11	7	13	8	61.3
24-Aug	13	28	19	20	6	6	6	8	12	13	18	21	17	10	13	18	17	16	15	12	10	8	7	8	28.4
25-Aug	11	8	9	15	13	19	20	17	20	25	22	25	33	33	20	41	70	36	23	16	66	93	53	8	93.2
26-Aug	73	50	44	14	59	32	28	16	34	76	75	39	50	49	39	38	32	32	19	14	10	11	10	22	76.1
27-Aug	13	27	83	91	75	89	68	63	56	38	54	69	39	59	62	57	81	46	13	14	42	35	19	60	91.1
28-Aug	77	42	17	23	20	30	76	84	37	17	16	15	24	27	24	16	14	20	19	15	13	9	10	10	83.8
29-Aug	9	14	7	11	13	8	8	8	10	10	12	13	12	13	11	12	10	10	10	11	10	21	14	25	24.6
30-Aug	36	28	24	25	52	44	32	28	23	29	28	32	39	33	23	30	22	15	16	14	75	68	82	53	81.5
31-Aug	76	28	72	64	94	94	65	76	89	63	56	41	60	57	47	48	57	44	31	73	79	34	22	40	93.6
93.2 98.4 85.5 97.4 93.6 93.6 87.7 87.4 88.5 89.8 75.4 89.9 83.0 71.3 90.3 63.0 85.2 48.4 62.1 73.1 87.9 93.2 82.9 95.4																									

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

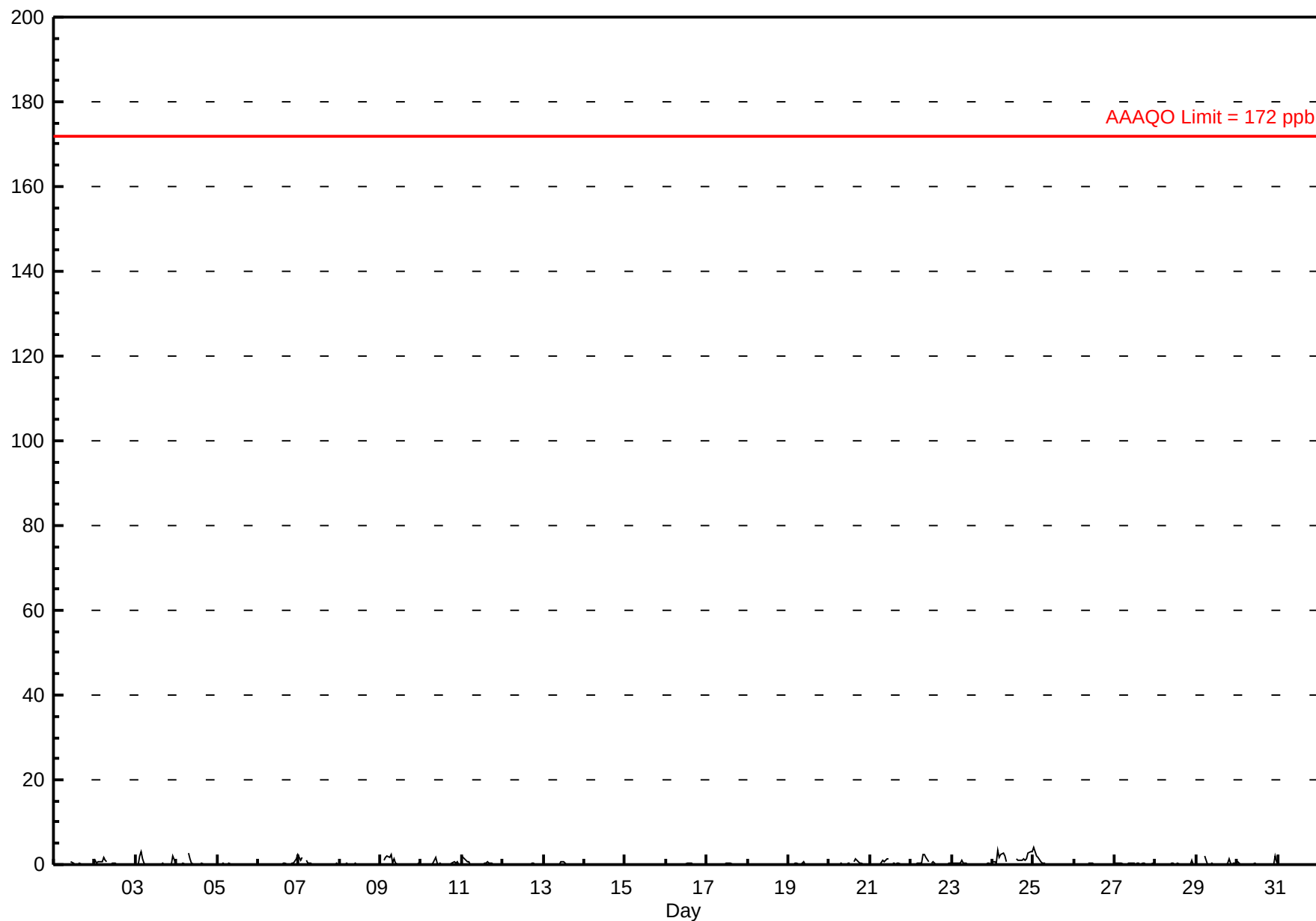
Hourly Averages

Sulphur Dioxide (SO₂) - ppb Smoky Heights - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.2 ppb on Aug 25 01:00 Maximum Daily Average: 1.6 ppb on Aug 24																				Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Aug 17 00:00 Maximum Diurnal Average: 0.4 ppb at hour 4 Monthly Average: 0.26 ppb										Minimum Daily Average: 0.0 ppb on Aug 14 Minimum Diurnal Average: 0.1 ppb at hour 21 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.6 P ₉₉ = 2.6																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
2-Aug	1	0	1	1	1	2	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
3-Aug	0	0	2	3	2	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0.5	3.0
4-Aug	0	0	0	0	0	0	A	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.6
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
6-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0.3	2.3
7-Aug	2	1	2	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8
8-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
9-Aug	0	A	1	2	2	2	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.5
10-Aug	A	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	A	0.3	1.5
11-Aug	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0.4	2.2
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.2
13-Aug	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0.2	0.8
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.0
15-Aug	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
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.5
18-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
19-Aug	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.5
20-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0.3	1.4
21-Aug	0	0	0	0	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
22-Aug	0	0	0	0	0	0	0	3	2	2	1	A	0	1	0	0	0	0	0	0	0	0	0	0	0.5	2.5
23-Aug	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
24-Aug	1	1	0	3	2	2	3	2	1	A	0	C	C	C	1	1	1	1	1	1	1	3	3	3	1.6	3.5
25-Aug	4	3	2	2	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.2
26-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
27-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
28-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.1	1.0
29-Aug	0	0	0	0	A	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0.3	1.9
30-Aug	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0.2	1.9
31-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
																									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
Smoky Heights - August 2012



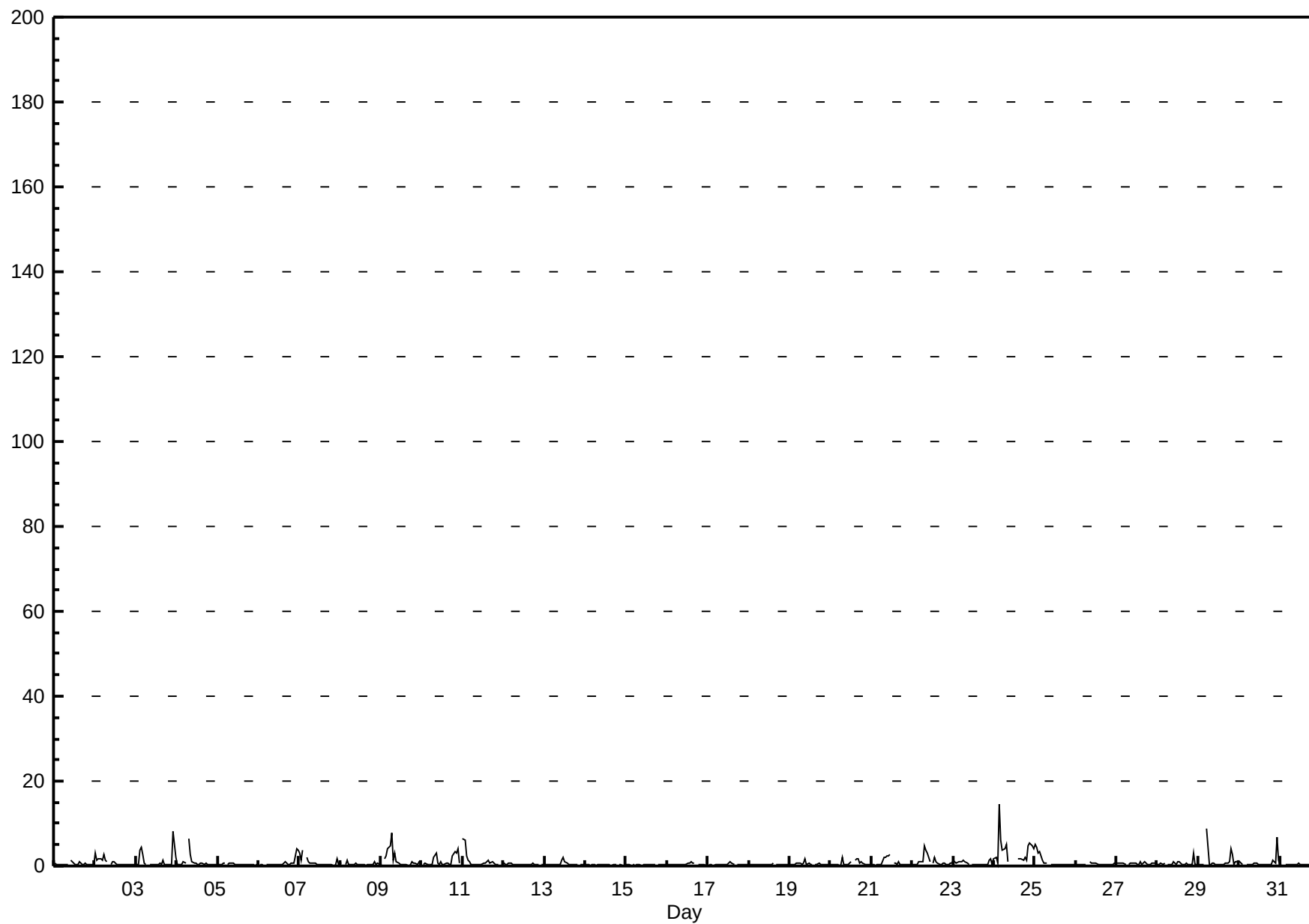
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb Smoky Heights - August 2012

Maximum Value: 14.7 ppb on Aug 24 04:00																				Maximum Daily Average: 3.4 ppb on Aug 24					Hours in Service: 744		
Minimum Value: 0 ppb on Aug 5 23:00																				Minimum Daily Average: 0.2 ppb on Aug 14					Hours of Data: 709		
Maximum Diurnal Average: 1.3 ppb at hour 4																				Minimum Diurnal Average: 0.5 ppb at hour 13					Hours of Missing Data: 35		
Monthly Average: 0.77 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.6 P ₉₀ = 1.5 P ₉₉ = 6.2					Hours of Calibration: 35		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	1	0	0	0	0	0	0	0	0	A	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0.5	1.3	
2-Aug	3	1	2	2	1	3	1	1	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.9	3.2	
3-Aug	0	0	4	5	3	1	0	A	0	0	0	0	0	0	1	0	1	0	0	0	0	0	8	2	1.3	8.1	
4-Aug	0	0	0	0	1	1	A	6	3	1	1	1	0	0	1	1	0	1	0	0	0	0	0	0	0.8	6.4	
5-Aug	0	0	0	1	1	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7	
6-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	4	4	0.7	4.0	
7-Aug	3	1	4	A	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0.8	3.7	
8-Aug	1	1	A	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.4	1.4	
9-Aug	0	A	2	2	4	5	8	1	3	1	1	0	0	0	0	0	0	0	1	1	1	0	1	1	1.5	7.8	
10-Aug	A	0	1	0	0	0	0	2	3	1	0	1	0	0	1	1	0	0	2	3	3	4	1	A	1.2	4.2	
11-Aug	6	6	2	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	A	0	1.2	6.3	
12-Aug	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0.4	0.7	
13-Aug	0	0	0	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	A	0	0	0	0.5	2.0	
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.3	
15-Aug	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	
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0.4	0.9	
17-Aug	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	A	0	0	0	0	0	0	0	0.4	1.0	
18-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0.3	0.5	
19-Aug	0	0	0	0	1	1	1	0	1	2	0	1	0	0	A	0	0	0	1	0	0	0	0	0	0	0.5	1.7
20-Aug	0	0	0	0	0	0	0	2	0	0	0	1	1	A	1	2	2	1	1	1	0	0	0	0	0.6	1.9	
21-Aug	0	0	0	0	0	0	0	2	2	2	2	3	A	1	1	0	1	0	0	0	0	0	0	0	0.8	2.8	
22-Aug	0	0	0	0	1	1	1	5	4	3	1	A	1	2	1	1	0	0	1	1	0	0	1	1	1.0	4.7	
23-Aug	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	1	2	0	0.7	1.6	
24-Aug	2	2	1	15	6	4	4	5	1	A	1	C	C	C	2	2	2	1	2	1	5	6	5	4	3.4	14.7	
25-Aug	5	5	3	3	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1.1	5.1	
26-Aug	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.4	0.9	
27-Aug	1	1	1	1	1	0	A	0	1	1	1	1	0	0	1	0	1	1	0	0	0	1	1	1	0.6	1.1	
28-Aug	0	0	1	0	1	A	0	0	0	1	1	0	1	1	0	0	1	1	0	0	0	3	0	0	0.6	3.1	
29-Aug	0	0	0	0	A	9	0	0	0	1	1	0	0	0	0	0	1	1	1	4	3	0	1	1	1.1	9.0	
30-Aug	1	1	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	7	1	0.8	6.8	
31-Aug	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5	
1.0 0.8 0.9 1.3 1.0 1.1 0.9 1.2 0.9 0.7 0.6 0.6 0.5 0.5 0.6 0.5 0.5 0.5 0.5 0.6 0.7 0.8 1.2 0.7																									Diurnal Average		
6.3 6.0 3.7 14.7 6.2 9.0 7.8 6.4 3.7 3.1 2.3 2.8 1.2 1.9 1.6 1.8 1.7 1.4 2.3 4.0 4.8 5.5 8.1 4.0																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

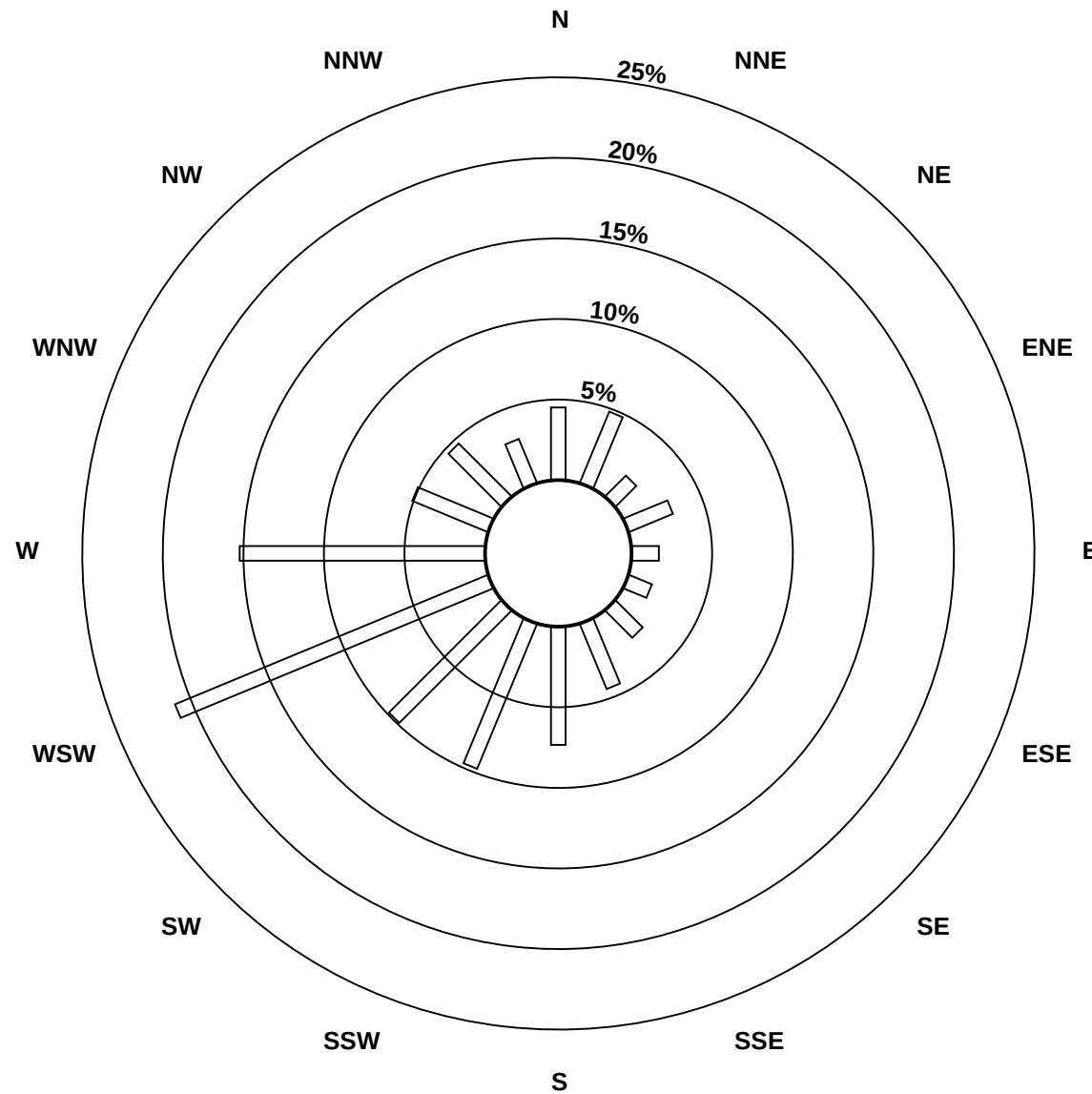
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - August 2012

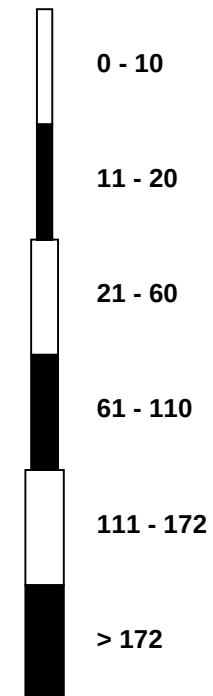


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - August 2012

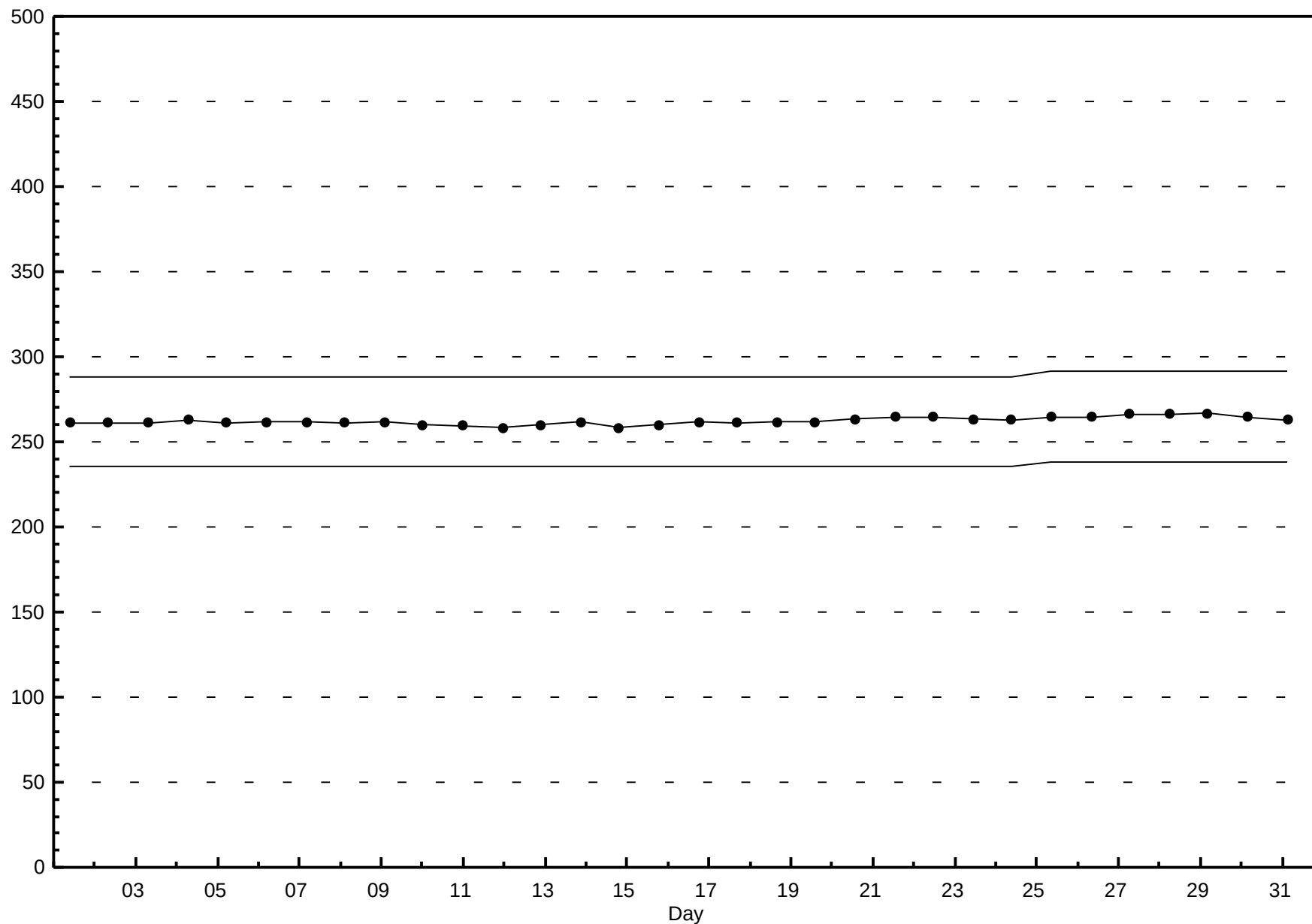


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - August 2012



Hourly Averages

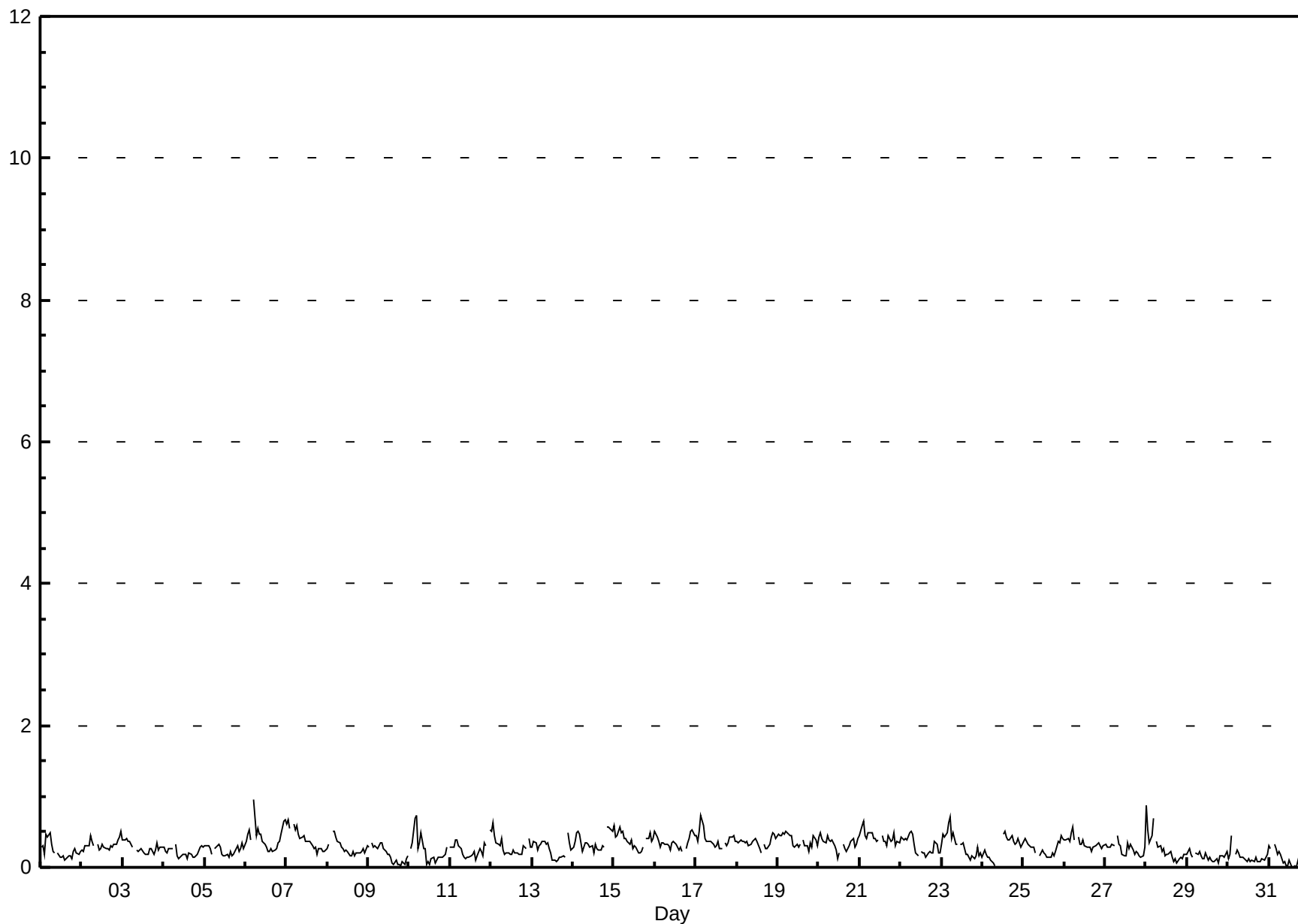
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.9 ppb on Aug 6 06:00 Maximum Daily Average: 0.4 ppb on Aug 21																				Hours in Service: 744 Hours of Data: 709						
Minimum Value: 0 ppb on Aug 31 14:00 Minimum Daily Average: 0.1 ppb on Aug 30 Maximum Diurnal Average: 0.4 ppb at hour 5 Minimum Diurnal Average: 0.2 ppb at hour 17 Monthly Average: 0.29 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 0.7																				Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	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
2-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
4-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
6-Aug	0	0	1	0	A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.9
7-Aug	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
8-Aug	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
9-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
10-Aug	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.7
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.2	0.5
12-Aug	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.6
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.5
14-Aug	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0.4	0.6
15-Aug	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.6
16-Aug	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0	0.4	0.5
17-Aug	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.7
18-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.5
19-Aug	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.5
20-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.5
21-Aug	0	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
22-Aug	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
23-Aug	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
24-Aug	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
25-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
26-Aug	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
27-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
28-Aug	1	1	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
30-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
31-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
0.4 0.4 0.4 0.4 0.4 0.4 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.3																									Diurnal Average	
0.9 0.7 0.7 0.7 0.7 0.9 0.6 0.5 0.5 0.5 0.4 0.4 0.5 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.6 0.6 0.7 0.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - August 2012



Hourly Maximums

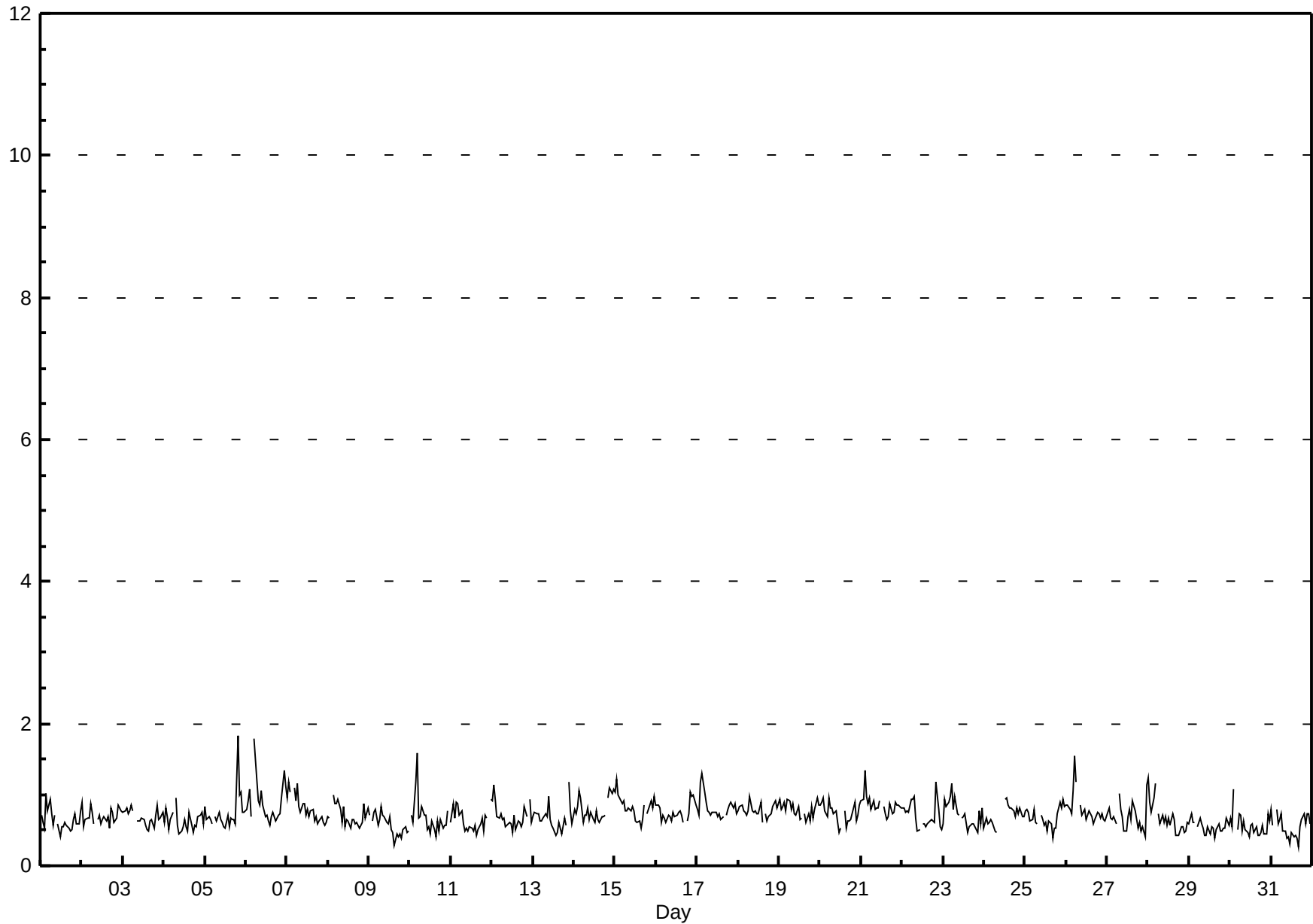
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - August 2012

Maximum Value: 1.8 ppb on Aug 5 20:00																			Maximum Daily Average: 0.9 ppb on Aug 6										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 31 17:00																			Minimum Daily Average: 0.5 ppb on Aug 29										Hours of Data: 709	
Maximum Diurnal Average: 0.8 ppb at hour 6																			Minimum Diurnal Average: 0.6 ppb at hour 17										Hours of Missing Data: 35	
Monthly Average: 0.71 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 = 1.3										Hours of Calibration: 35	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Aug	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	1	0	1	1	1	1	1	1	0.6	1.0				
2-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
3-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	0.8				
4-Aug	1	1	1	1	1	1	A	1	1	0	0	1	1	1	0	1	1	0	1	1	1	1	1	1	0.6	1.0				
5-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	0.7	1.8				
6-Aug	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.8				
7-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2				
8-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0				
9-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0.6	0.8				
10-Aug	A	1	1	1	2	1	1	1	1	1	1	0	1	1	0	1	0	1	0	1	1	1	1	A	0.7	1.6				
11-Aug	1	1	1	1	1	1	1	1	0	1	0	1	1	0	1	0	1	1	1	0	1	1	A	1	0.6	0.9				
12-Aug	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.1				
13-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	A	1	1	1	0.7	1.2				
14-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.1				
15-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.2				
16-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.0				
17-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.3				
18-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.0				
19-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.0				
20-Aug	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0				
21-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3				
22-Aug	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2				
23-Aug	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	1	1	0	1	1	1	0.7	1.2				
24-Aug	1	1	1	1	1	1	0	0	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0				
25-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	0.7	0.9				
26-Aug	1	1	1	1	1	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5				
27-Aug	1	1	1	1	1	1	A	1	1	1	0	0	1	1	1	1	1	1	1	1	0	1	0	1	0.7	1.1				
28-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	1	0.7	1.2				
29-Aug	1	1	1	1	A	1	1	1	1	0	0	1	0	1	1	0	1	1	0	0	1	1	1	1	0.5	0.7				
30-Aug	1	1	1	A	1	1	1	0	1	0	0	0	1	1	0	1	0	0	0	0	1	0	0	1	0.6	1.1				
31-Aug	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.6	0.8				
0.8		0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	Diurnal Average					
1.2		1.2	1.3	1.3	1.6	1.8	1.2	1.0	0.9	1.1	0.9	0.9	0.9	1.0	0.9	0.9	0.8	0.9	0.8	1.8	1.2	1.2	1.3	1.1	Diurnal Maximum					
C - Calibration		A - Automated Daily Zero Span																												

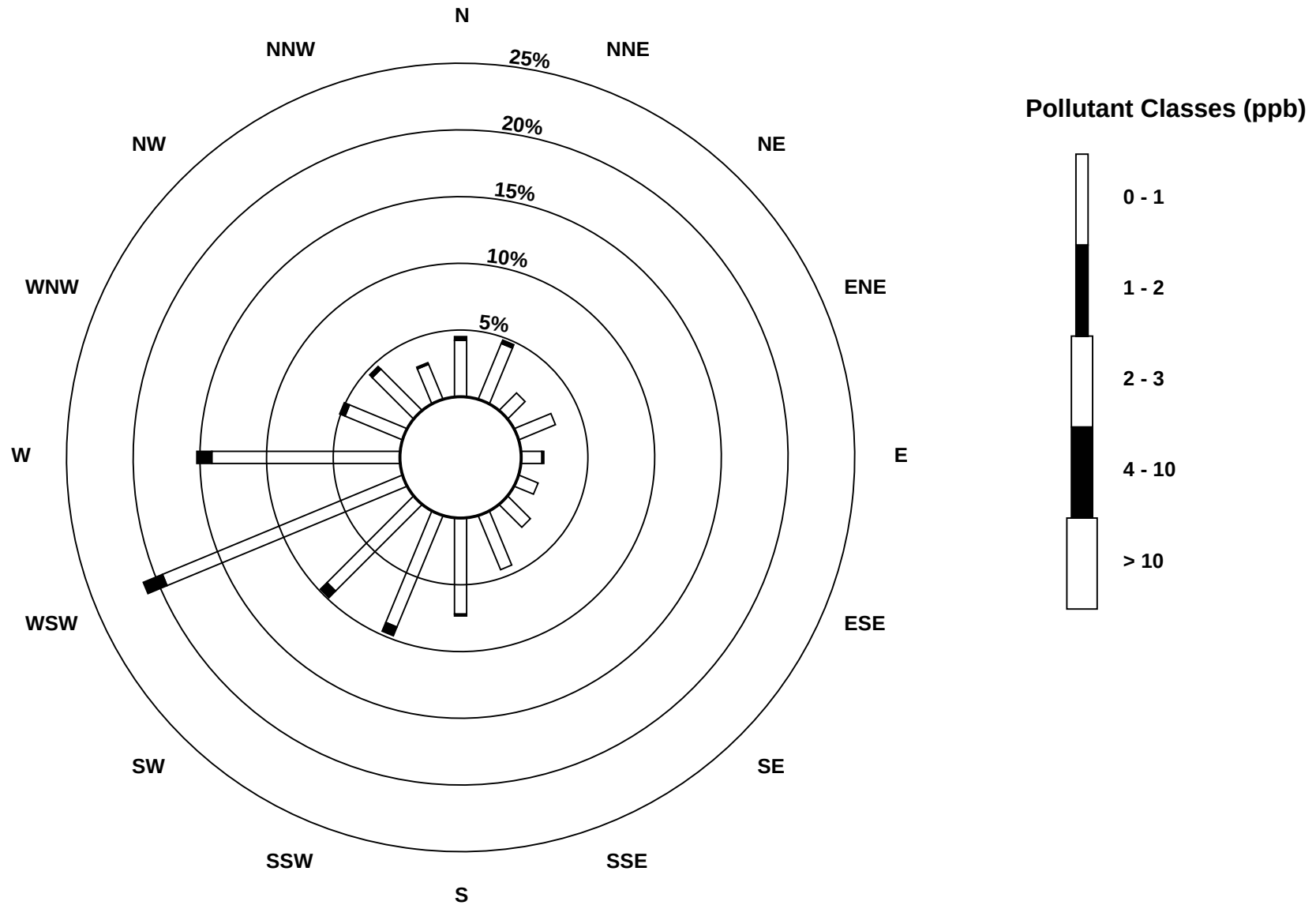
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - August 2012



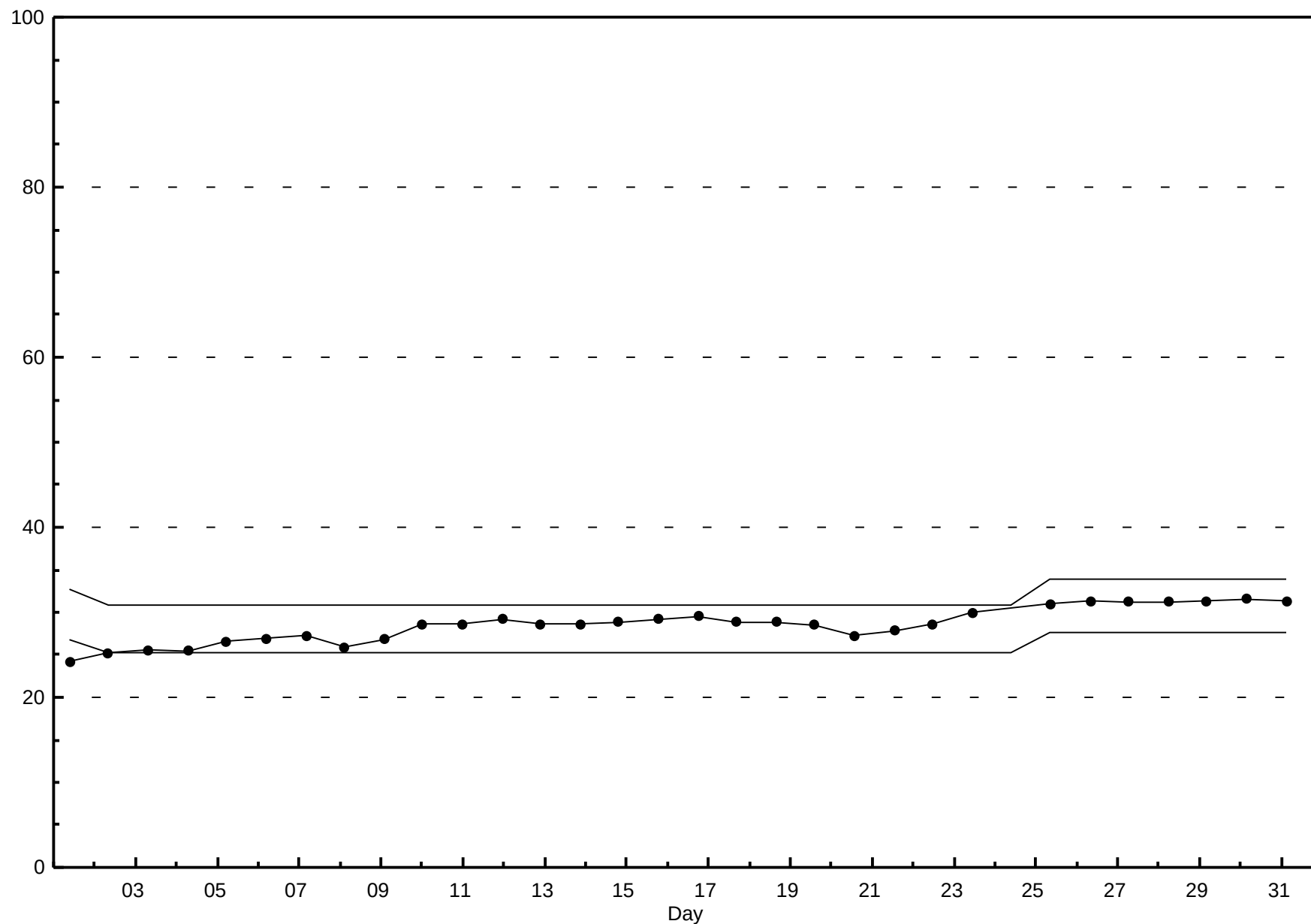
Pollutant Rose

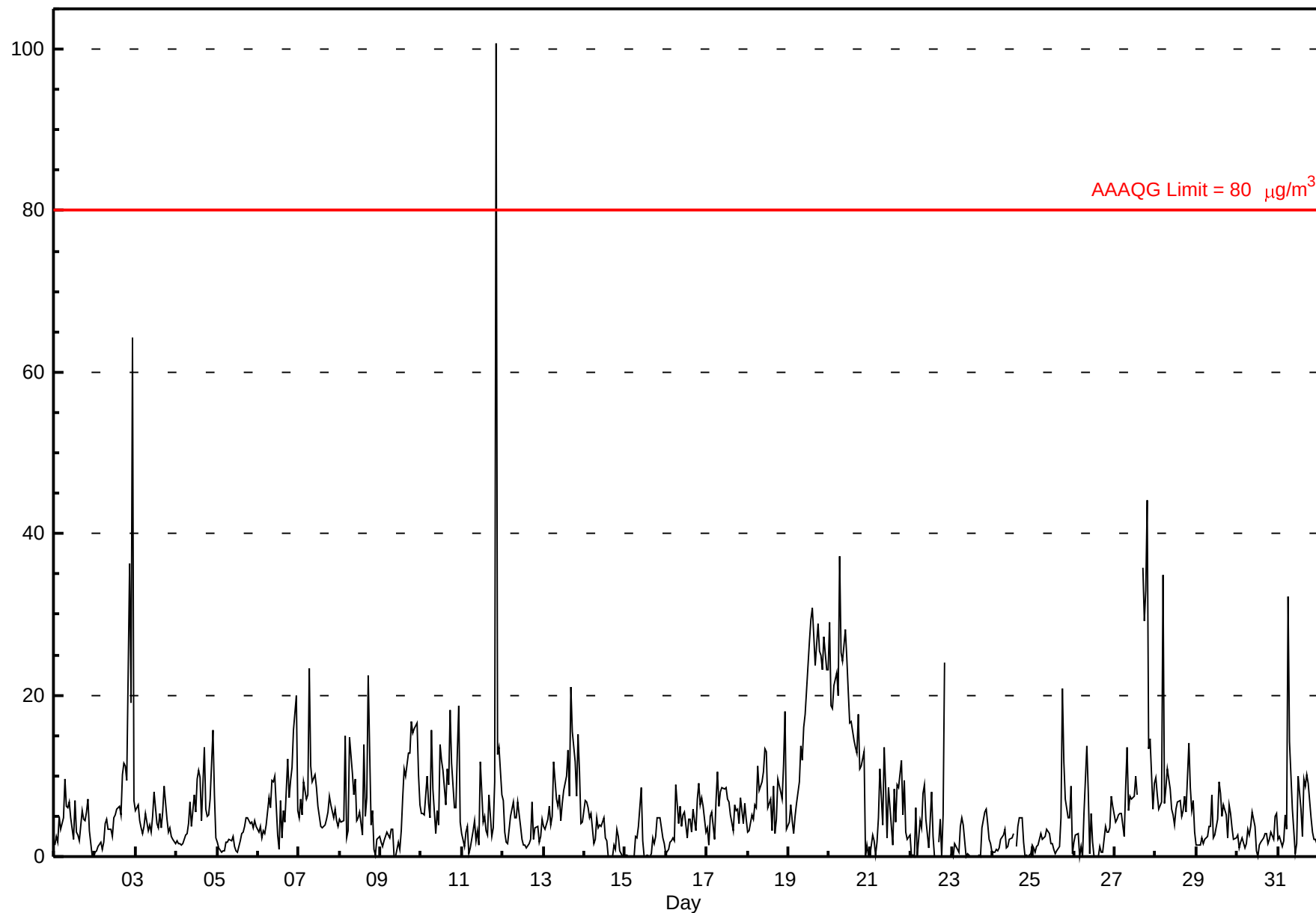
Total Reduced Sulphur (TRS) - ppb
Smoky Heights - August 2012



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - August 2012





Hourly Maximums

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

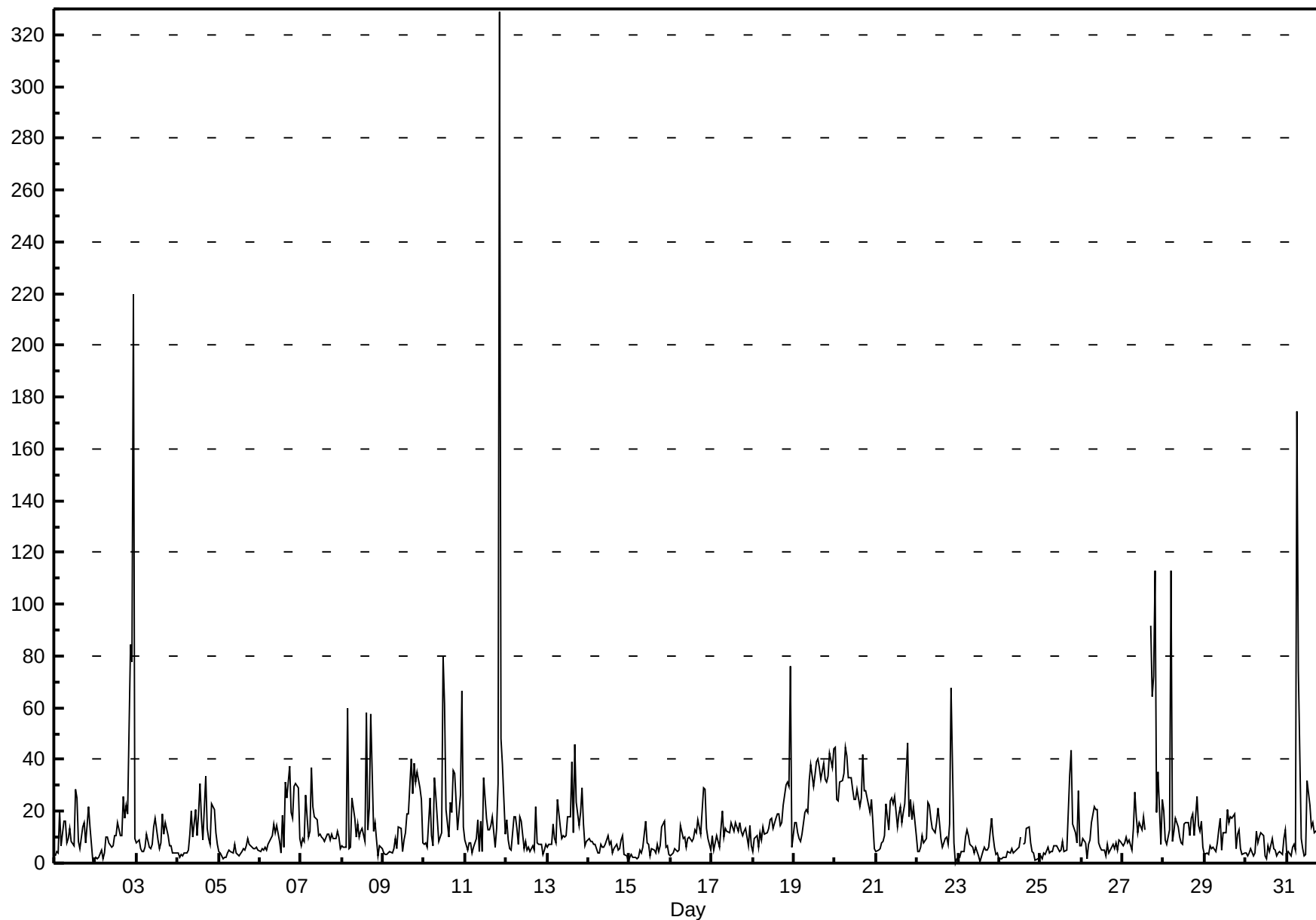
Smoky Heights - August 2012

Maximum Value: 328.7 μg/m ³ on Aug 11 21:00																								Maximum Daily Average: 28.5 μg/m ³ on Aug 20						Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Aug 22 23:00																								Minimum Daily Average: 4.8 μg/m ³ on Aug 5						Hours of Data: 741	
Maximum Diurnal Average: 30.5 μg/m ³ at hour 21																								Minimum Diurnal Average: 6.3 μg/m ³ at hour 3						Hours of Missing Data: 3	
Monthly Average: 14.49 μg/m ³																								Percentiles: P ₁ = 1.5 P ₁₀ = 3.7 Q ₁ = 5.6 Median = 9.6 Q ₃ = 17.1 P ₉₀ = 29.0 P ₉₉ = 77.4						Hours of Calibration: 2	
Percent Operational Time: 99.9																															
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Aug	3	5	4	20	7	16	16	8	9	13	8	7	29	25	8	5	14	16	8	14	22	14	0	1	11.4	28.8					
2-Aug	2	2	2	5	2	4	10	10	8	6	7	11	11	16	10	10	26	17	22	19	84	78	220	9	24.7	219.6					
3-Aug	8	9	6	5	5	6	11	6	6	7	14	17	9	6	8	19	11	15	11	7	7	4	4	4	8.4	18.9					
4-Aug	4	3	3	3	4	4	5	11	20	10	21	11	19	31	17	9	34	14	10	7	23	21	12	7	12.5	33.7					
5-Aug	5	4	2	2	2	4	5	4	4	7	4	4	3	4	5	5	6	10	7	6	6	5	6	5	4.8	9.6					
6-Aug	5	5	5	6	5	7	10	11	15	12	14	8	4	18	6	31	25	37	20	18	30	31	29	9	15.1	37.4					
7-Aug	7	10	8	26	10	13	37	22	18	17	11	11	10	10	8	11	11	9	11	10	10	13	10	5	12.8	37.0					
8-Aug	7	6	6	60	6	6	25	17	10	15	10	12	13	9	58	13	21	57	13	15	9	3	6	6	16.9	60.1					
9-Aug	4	3	3	4	4	4	6	9	5	14	14	5	9	12	19	19	40	27	39	32	35	29	25	8	15.4	40.3					
10-Aug	7	8	6	25	11	7	33	26	8	10	12	80	61	21	10	23	20	36	35	13	19	26	67	14	24.0	80.2					
11-Aug	9	5	8	8	4	6	10	17	4	16	4	33	17	13	13	14	18	6	14	31	329	48	38	11	28.2	328.7					
12-Aug	17	9	6	5	18	18	13	7	18	16	6	8	5	6	5	7	5	22	8	7	7	4	5	7	9.5	21.7					
13-Aug	6	7	7	15	9	8	25	14	9	10	10	11	18	18	39	12	46	23	15	19	29	15	7	9	15.8	46.1					
14-Aug	10	8	8	7	7	4	4	7	6	6	7	11	7	8	4	6	8	5	6	9	11	4	3	1	6.5	10.6					
15-Aug	2	3	3	2	2	2	5	4	6	16	8	7	3	5	5	4	7	5	6	14	16	6	6	3	6.0	16.5					
16-Aug	3	4	6	5	4	5	14	10	10	6	10	10	8	10	13	12	17	11	20	29	28	14	9	5	11.0	29.0					
17-Aug	11	5	8	11	6	13	20	10	14	13	12	15	14	13	15	12	16	12	11	12	13	7	15	7	11.9	20.1					
18-Aug	4	10	11	6	12	9	14	11	12	13	17	18	13	17	19	19	15	16	22	30	31	30	76	6	17.9	75.8					
19-Aug	16	15	12	10	8	11	20	21	20	32	38	30	34	39	41	37	33	39	33	31	34	42	37	44	28.1	44.1					
20-Aug	45	25	24	31	32	34	45	42	33	33	28	24	25	29	22	25	42	28	28	25	19	25	15	5	28.5	44.7					
21-Aug	4	5	6	8	9	11	23	13	24	25	23	26	14	19	22	16	20	23	46	18	24	17	22	11	17.8	46.4					
22-Aug	4	4	6	11	8	9	23	22	17	13	12	15	21	16	9	6	10	10	7	15	68	8	0	2	13.2	67.9					
23-Aug	3	2	4	5	10	13	11	7	6	4	6	4	3	1	4	6	5	5	6	17	11	6	3	4	6.2	17.1					
24-Aug	2	2	2	3	2	4	4	5	4	4	5	6	10	M	7	8	13	14	8	5	4	1	2	2	5.1	13.9					
25-Aug	3	2	4	4	6	4	5	4	6	7	6	4	5	9	4	5	20	34	44	15	12	8	28	6	10.2	43.6					
26-Aug	7	9	8	2	7	9	15	22	21	21	8	6	5	5	3	7	4	5	7	6	8	5	9	8	8.6	21.7					
27-Aug	7	8	10	8	9	5	14	28	18	12	16	13	18	13	C	C	92	64	72	113	20	35	7	25	27.5	112.9					
28-Aug	20	9	7	13	113	9	12	17	14	10	8	7	15	16	16	11	17	19	11	25	15	12	16	6	17.4	113.1					
29-Aug	3	4	3	7	5	6	5	8	13	17	5	12	12	21	16	18	17	19	5	11	13	6	3	4	9.7	20.8					
30-Aug	4	3	4	5	3	4	12	8	10	12	11	3	1	7	4	9	5	5	3	4	4	3	9	13	6.2	13.0					
31-Aug	3	5	3	6	7	5	174	75	9	5	3	3	32	23	14	16	12	12	13	8	5	4	4	3	18.5	174.3					
7.5 6.4 6.3 10.6 10.9 8.4 20.2 15.4 12.2 13.1 11.4 14.0 14.5 14.5 14.2 13.2 20.3 19.8 18.0 19.0 30.5 16.8 22.3 8.1																									Diurnal Average						
44.7 24.7 23.8 60.1 113.1 34.4 174.3 74.6 33.2 33.0 37.9 80.2 61.4 39.0 58.0 36.9 91.9 64.2 71.9 112.9 328.7 78.0 219.6 44.1																									Diurnal Maximum						
C - Calibration M - Maintenance																															

Hourly Maximums

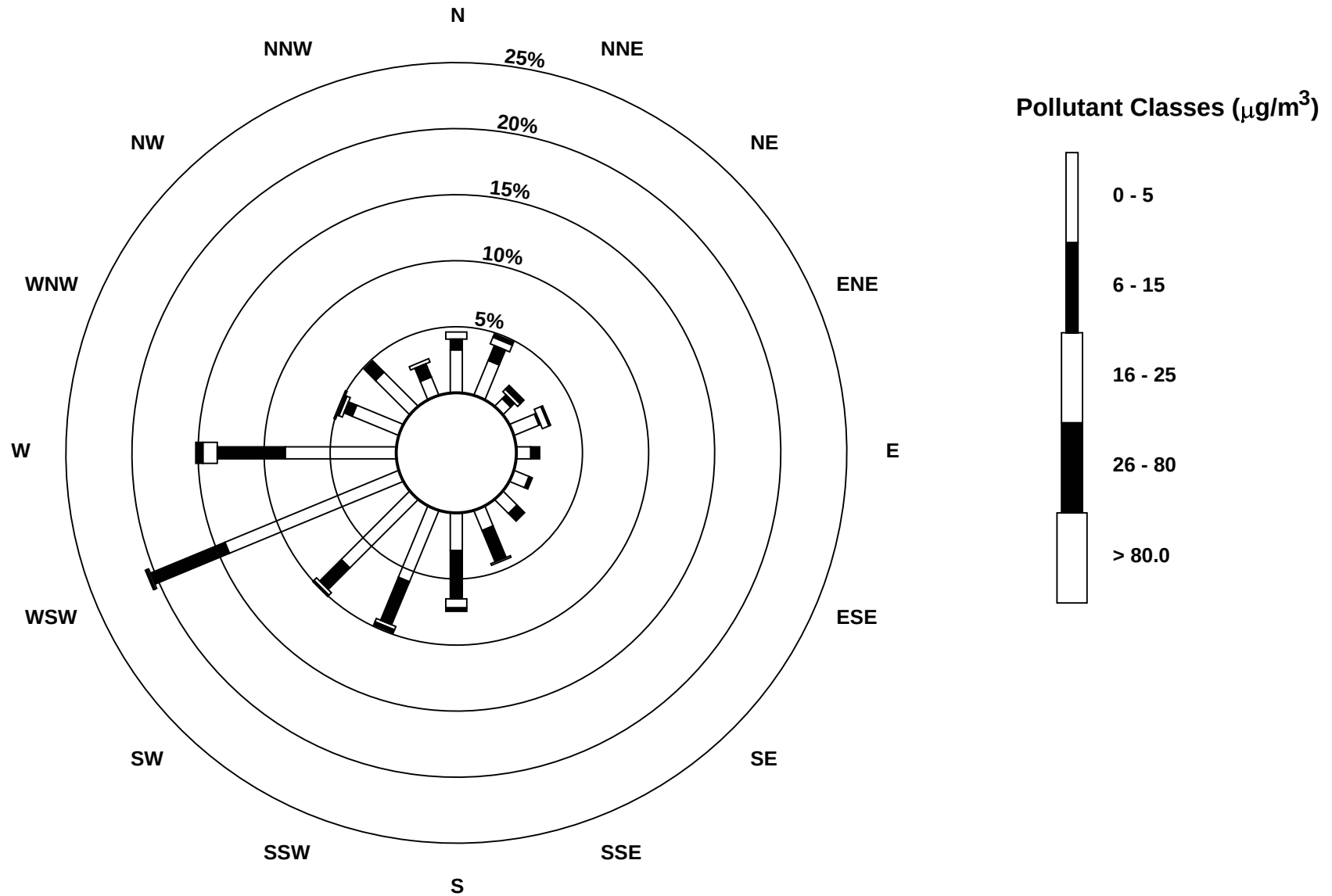
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Smoky Heights - August 2012



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Smoky Heights - August 2012



Hourly Averages

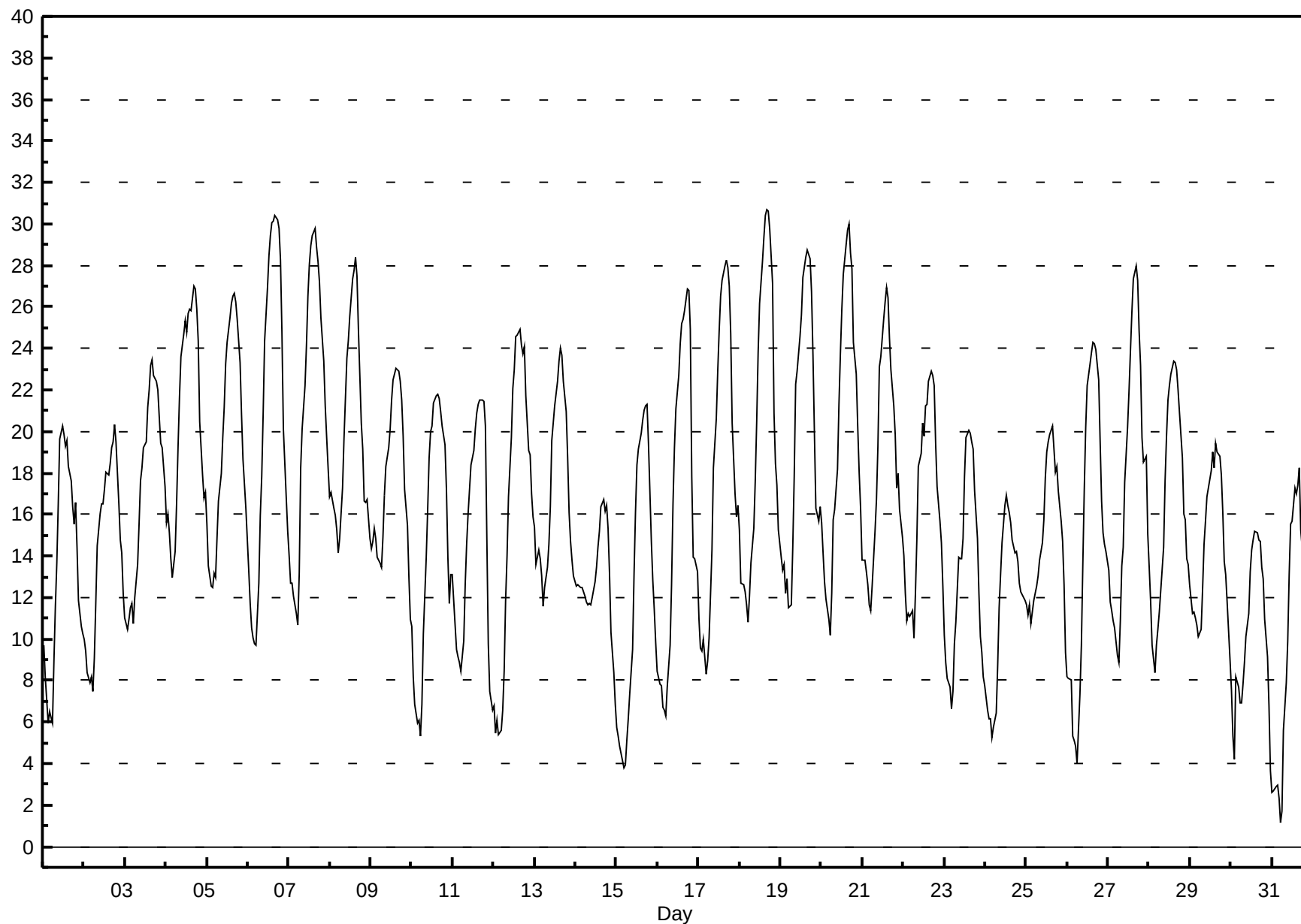
External Temperature (ET) - °C

Smoky Heights - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 30.7 °C on Aug 18 17:00 Maximum Daily Average: 21.1 °C on Aug 7																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 1 °C on Aug 31 06:00 Minimum Daily Average: 9.6 °C on Aug 31 Maximum Diurnal Average: 23.4 °C at hour 16 Minimum Diurnal Average: 9.2 °C at hour 6 Monthly Average: 16.33 °C Percentiles: P ₁ = 3.7 P ₁₀ = 8.2 Q ₁ = 11.8 Median = 15.7 Q ₃ = 20.9 P ₉₀ = 25.4 P ₉₉ = 29.9																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	10	8	7	6	6	6	9	12	14	16	20	20	20	19	20	18	18	16	16	17	14	12	11	10	13.5	20.3
2-Aug	10	9	8	8	8	7	9	12	14	16	17	17	17	18	18	18	19	19	20	20	17	15	14	12	14.3	20.3
3-Aug	11	10	11	12	12	11	12	14	16	18	18	19	19	21	22	23	23	23	22	22	21	19	19	17	17.3	23.5
4-Aug	16	16	15	14	13	14	16	19	22	24	25	25	25	26	26	26	27	27	26	24	20	18	17	17	20.7	27.0
5-Aug	16	14	13	13	13	13	15	17	18	20	21	23	24	25	26	27	27	26	25	23	21	19	17	16	19.6	26.7
6-Aug	13	12	11	10	10	10	13	16	18	21	24	27	28	29	30	30	30	30	30	28	25	20	17	15	20.7	30.4
7-Aug	14	13	13	12	11	11	13	18	20	22	24	27	28	29	29	30	29	28	27	25	23	21	20	18	21.1	29.8
8-Aug	17	17	16	16	15	14	15	17	20	22	24	24	26	27	28	28	27	25	20	19	17	17	17	15	20.1	28.4
9-Aug	14	15	15	15	14	14	13	15	17	18	19	20	22	22	23	23	23	22	22	20	17	15	13	11	17.6	23.1
10-Aug	11	8	7	6	6	5	7	10	14	16	19	20	20	21	22	22	22	21	20	19	17	14	12	13	14.7	21.8
11-Aug	13	11	9	9	9	8	10	13	15	16	17	18	19	20	21	21	21	21	21	20	15	10	7	7	14.7	21.5
12-Aug	7	5	6	5	6	7	8	12	14	17	20	22	23	25	25	25	24	24	24	22	19	19	17	16	16.3	24.9
13-Aug	15	14	14	14	13	12	13	13	15	16	20	20	21	22	23	24	24	22	21	19	16	15	14	13	17.2	24.0
14-Aug	13	13	13	12	12	12	12	12	12	12	12	13	13	14	15	16	17	16	16	15	13	10	8	7	12.9	16.7
15-Aug	6	5	5	4	4	4	5	6	7	9	13	16	18	19	20	21	21	21	21	19	15	13	11	10	12.3	21.3
16-Aug	8	8	8	7	7	6	8	10	13	17	19	21	23	24	25	25	26	27	27	25	18	14	14	13	16.3	26.9
17-Aug	11	10	9	10	8	9	10	12	14	18	21	23	25	27	27	28	28	28	27	25	20	17	16	16	18.3	28.3
18-Aug	15	13	13	12	12	11	12	14	15	18	20	24	26	28	29	30	31	31	30	27	21	18	17	15	20.1	30.7
19-Aug	14	13	14	12	13	12	12	14	18	22	23	25	26	27	28	28	29	28	27	24	20	16	16	16	19.8	28.8
20-Aug	16	14	13	12	11	10	12	16	16	18	21	24	26	28	29	30	30	29	28	24	23	20	18	16	20.1	30.0
21-Aug	14	14	13	13	12	11	13	15	17	19	23	24	25	26	27	26	24	23	21	20	17	18	16	15	18.6	26.9
22-Aug	14	12	11	11	11	11	10	12	15	18	19	20	20	21	21	22	23	23	22	19	17	16	15	13	16.6	22.9
23-Aug	10	9	8	8	7	7	10	11	14	14	14	15	18	20	20	20	19	19	17	15	12	10	9	8	13.1	20.0
24-Aug	8	7	6	6	5	6	6	9	11	13	15	16	17	16	16	16	15	14	14	14	13	12	12	12	11.6	17.0
25-Aug	12	11	12	11	12	12	13	13	14	15	16	18	19	19	20	20	19	18	18	17	16	15	13	9	15.0	20.3
26-Aug	8	8	8	5	5	5	4	7	10	14	17	20	22	23	24	24	24	24	22	20	17	15	15	14	14.8	24.3
27-Aug	13	12	11	11	11	9	9	11	13	14	18	20	22	24	26	27	28	27	25	23	20	19	19	15	17.8	28.0
28-Aug	13	12	10	8	10	10	11	12	14	18	20	22	22	23	23	23	23	22	21	19	16	16	14	14	16.5	23.4
29-Aug	13	11	11	11	11	10	10	12	15	16	17	17	18	19	18	19	19	19	18	16	14	13	12	9	14.5	19.5
30-Aug	8	5	4	8	8	7	7	8	9	10	11	13	14	15	15	15	15	15	13	13	11	9	7	4	10.2	15.2
31-Aug	3	3	3	3	2	1	2	6	8	10	13	16	16	17	17	17	18	15	14	12	10	8	9	9	9.6	18.3
11.7 10.7 10.2 9.8 9.5 9.2 10.3 12.5 14.5 16.7 18.7 20.3 21.4 22.5 23.0 23.4 23.4 22.7 21.9 20.2 17.2 15.3 14.0 12.8																								Diurnal Average		
16.9 17.0 16.3 15.9 15.2 14.2 16.5 19.2 21.7 23.6 24.7 26.9 28.5 29.4 30.0 30.4 30.7 30.6 29.8 28.2 24.8 21.2 19.7 18.2																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C
Smoky Heights - August 2012



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	12	10	6	6	5	6	8	10	9	9	15	21	23	24	28	27	20	20	18	16	13	11	16	17	13.4	27.8
Dir	259	252	228	251	236	253	206	191	203	210	229	252	263	262	254	248	229	213	203	200	203	218	256	258	236.2	254.0
2 Spd	17	18	16	13	16	10	8	9	11	16	15	17	17	16	21	19	16	17	14	8	9	11	12	10	13.0	21.0
Dir	259	256	254	243	255	257	248	287	297	291	287	305	294	298	299	306	305	302	306	275	263	263	260	256	280.4	299.1
3 Spd	9	12	16	16	11	9	8	9	10	15	16	17	13	13	14	16	15	7	9	8	7	10	18	16	10.3	18.1
Dir	237	260	260	258	225	190	184	200	181	221	220	221	211	182	150	238	241	197	156	160	151	212	251	244	217.9	250.9
4 Spd	14	18	15	12	10	14	12	15	15	22	20	20	17	25	24	14	27	23	11	8	5	6	6	10	11.8	26.9
Dir	242	243	246	237	227	236	239	242	243	262	279	278	290	261	273	284	265	270	22	21	18	19	26	10	267.7	264.9
5 Spd	8	6	6	7	8	6	5	7	8	10	9	9	11	9	10	10	11	12	11	8	8	6	6	5	7.4	11.5
Dir	12	7	8	5	5	19	29	32	43	53	58	53	78	79	70	76	60	60	58	57	31	30	21	21	45.1	60.3
6 Spd	4	2	2	3	6	5	7	8	9	8	7	8	10	12	12	15	10	15	8	6	7	5	5	1	4.3	14.6
Dir	322	335	275	297	267	239	197	194	172	170	178	204	225	241	245	268	246	274	320	335	347	1	3	93	251.3	274.4
7 Spd	3	2	2	1	1	2	3	4	8	9	10	10	12	9	11	10	10	13	11	8	11	14	16	8	3.6	16.1
Dir	279	334	357	174	325	20	32	35	43	34	38	63	54	60	68	71	84	87	84	96	136	226	258	270	64.4	257.9
8 Spd	4	3	5	6	8	8	7	8	7	9	12	13	10	7	10	10	9	14	25	31	54	37	13	22	11.4	54.3
Dir	141	232	269	218	264	191	187	180	165	159	168	164	180	198	222	210	204	194	200	236	255	267	224	202	218.6	255.5
9 Spd	15	17	22	25	25	26	23	18	24	32	31	33	36	36	34	31	29	28	27	23	14	13	11	11	23.9	36.5
Dir	204	223	245	249	252	249	243	241	245	250	251	246	249	248	248	248	246	252	260	269	267	277	269	261	249.2	248.6
10 Spd	10	13	11	10	12	5	8	11	15	16	21	24	29	31	33	30	31	27	25	19	17	10	9	9	17.2	33.2
Dir	267	261	257	262	266	238	214	227	229	232	235	242	251	254	256	251	253	268	253	248	253	263	256	311	251.6	255.6
11 Spd	7	5	4	4	5	3	3	5	2	3	9	9	10	11	12	13	11	12	8	6	2	1	4	7	5.5	13.1
Dir	355	358	346	270	308	299	293	316	316	308	283	308	249	242	248	266	261	255	269	310	299	350	288	253	280.1	266.1
12 Spd	7	5	6	6	6	7	7	7	8	6	8	10	6	8	8	9	9	8	8	9	13	12	6	12	4.6	13.0
Dir	256	240	206	218	207	245	247	193	181	148	125	119	125	79	66	115	130	165	106	89	80	82	129	152	138.8	80.0
13 Spd	10	9	13	12	8	10	7	6	6	9	12	20	19	22	20	22	12	9	9	5	6	10	9	14	7.2	21.8
Dir	174	188	169	182	222	226	223	193	205	193	218	252	259	266	271	264	290	335	357	17	275	269	336	354	251.3	266.4
14 Spd	13	7	1	4	3	13	15	15	16	15	16	14	16	13	14	12	12	11	10	6	4	6	8	7	9.5	16.3
Dir	8	4	331	275	5	14	17	12	359	359	6	9	0	352	343	345	334	340	342	351	307	283	284	283	351.5	0.5
15 Spd	4	5	5	6	9	7	7	10	10	9	9	12	14	15	13	12	11	12	9	7	5	6	8	7	8.0	15.1
Dir	272	206	197	198	190	189	189	186	183	169	173	173	199	191	219	205	210	205	219	173	202	245	259	260	201.1	190.6
16 Spd	6	8	10	10	10	9	8	11	11	13	13	12	14	14	13	8	6	6	4	2	2	5	7	5	7.4	14.2
Dir	219	208	214	222	208	202	196	186	192	214	214	218	223	231	217	221	313	326	323	141	264	257	240	248	220.5	223.4
17 Spd	3	7	10	9	6	9	7	7	8	6	7	5	7	7	8	9	7	10	11	9	3	2	5	5	6.1	11.2
Dir	228	211	199	197	203	191	192	181	176	176	130	147	108	157	196	194	174	157	139	144	161	249	195	210	176.1	138.7
18 Spd	4	6	8	9	10	9	10	10	9	9	9	9	9	9	10	12	13	11	9	5	4	9	5	3	6.6	12.5
Dir	248	243	246	246	239	226	205	185	180	171	172	166	161	164	163	149	146	144	169	182	268	246	227	240	190.5	146.3
19 Spd	3	5	7	8	9	9	5	5	2	4	8	9	7	6	6	8	9	9	9	5	5	5	4	5	1.6	9.3
Dir	267	238	246	233	227	185	193	175	163	60	64	64	58	44	49	23	43	51	63	37	344	300	14	355	44.1	63.3
20 Spd	2	2	1	3	2	6	8	3	10	10	8	9	9	8	6	7	8	12	13	10	10	24	3	4	4.9	24.1
Dir	22	270	24	299	358	262	238	173	160	179	174	175	189	208	210	252	189	174	159	155	194	278	26	207	201.6	278.1
21 Spd	7	7	9	2	4	2	8	10	2	8	6	10	8	9	7	10	8	10	9	7	6	15	6	6	4.1	14.8
Dir	261	244	231	343	38	182	253	295	121	277	359	2	353	22	30	13	338	324	331	316	240	238	33	317	316.3	237.9
22 Spd	8	8	5	5	7	13	6	8	9	4	13	10	11	15	22	26	20	13	19	11	3	8	14	14	10.7	25.6
Dir	289	275	262	221	227	244	257	250	247	302	279	292	259	248	288	283	286	297	267	275	345	286	267	269	272.1	283.1

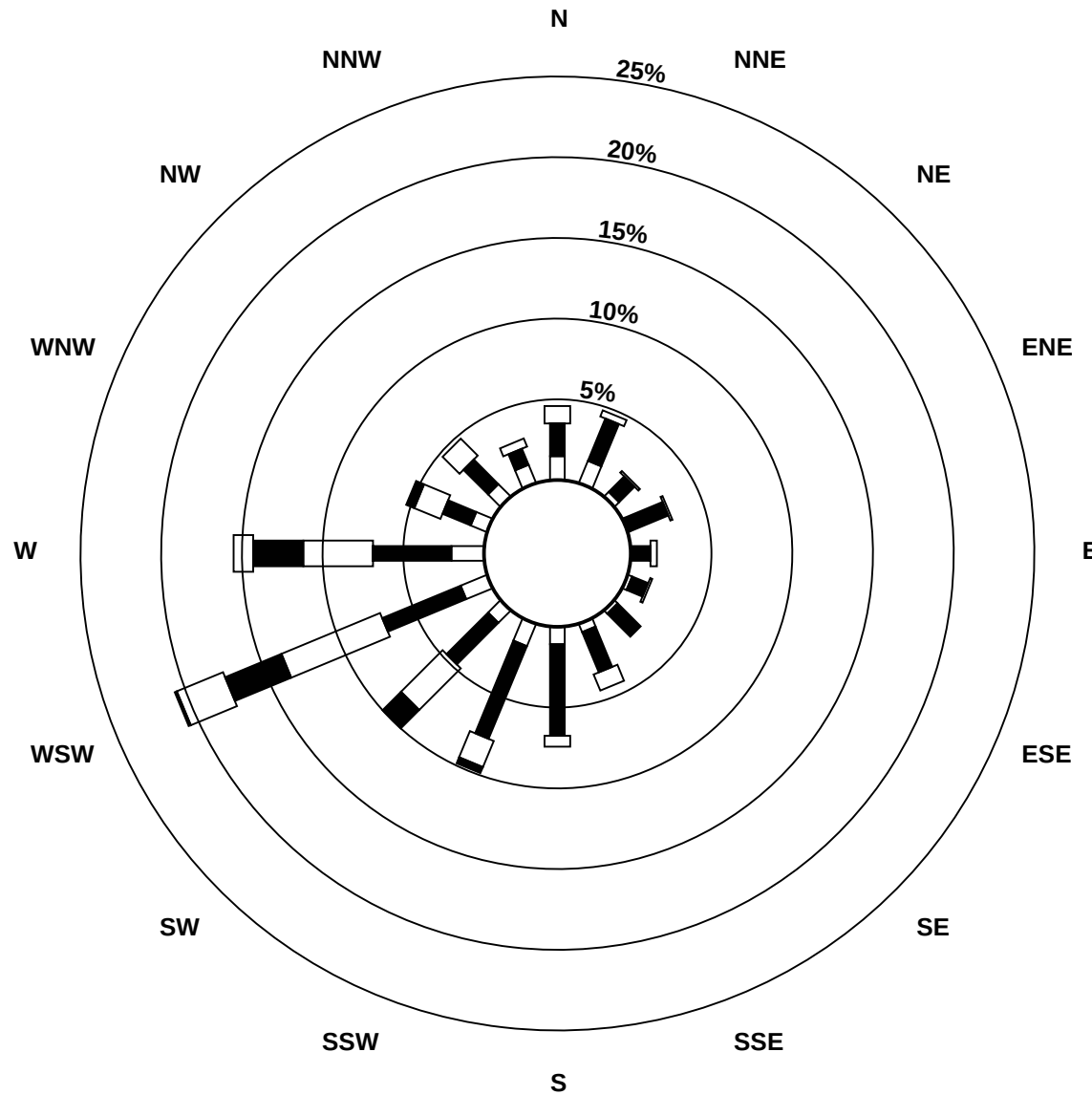
Hourly Averages

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

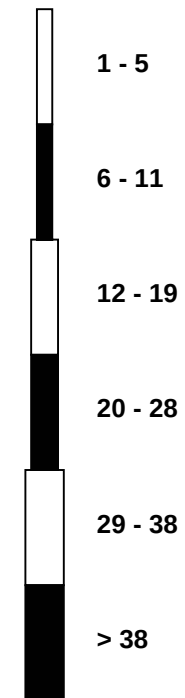
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
23 Spd	14	11	11	6	8	7	9	10	17	21	21	18	22	28	28	30	27	27	21	17	15	17	17	18	16.7	30.4			
Dir	264	277	259	197	234	235	206	202	228	231	223	213	226	232	235	251	258	247	232	231	239	254	261	262	239.1	251.3			
24 Spd	18	17	16	19	18	18	18	18	27	28	21	21	29	33	31	29	30	25	23	21	19	20	18	17	22.2	33.0			
Dir	256	257	252	256	260	245	253	255	259	254	262	253	259	259	254	259	260	264	261	259	254	253	254	252	256.6	259.3			
25 Spd	15	13	14	10	12	12	16	17	10	11	10	9	10	10	13	12	12	6	4	4	4	4	5	5	9.3	16.6			
Dir	253	253	261	266	283	279	284	295	276	283	291	305	303	307	280	264	248	266	210	204	240	262	260	255	273.1	294.7			
26 Spd	4	5	4	2	5	6	6	6	6	7	6	9	9	11	10	11	10	12	8	7	7	7	8	7	4.1	12.1			
Dir	212	218	241	223	183	251	195	198	166	176	156	124	136	131	119	100	109	123	102	76	75	41	24	15	129.7	123.5			
27 Spd	6	6	6	7	7	5	4	2	6	8	6	6	7	13	11	12	8	9	12	11	15	16	14	9	4.1	16.5			
Dir	15	9	8	14	14	13	30	2	173	164	182	168	197	234	244	268	224	178	213	266	280	278	275	255	255.3	278.4			
28 Spd	14	5	7	8	7	9	7	11	13	15	17	21	24	22	27	27	29	28	28	20	14	16	16	22	15.5	28.8			
Dir	261	253	242	219	213	170	179	182	201	228	214	223	232	236	242	244	251	263	269	267	251	236	227	237	237.8	250.9			
29 Spd	21	20	23	22	18	14	15	23	28	37	35	36	32	33	29	35	30	31	35	21	17	19	14	12	24.7	36.7			
Dir	243	234	242	241	236	231	230	246	248	255	248	260	265	262	268	260	252	242	251	257	256	264	270	253	251.9	254.8			
30 Spd	11	10	11	14	15	12	8	12	11	14	13	9	11	12	10	13	12	14	15	10	7	8	3	7	9.8	15.2			
Dir	258	266	280	310	323	318	304	293	267	258	239	259	300	306	324	318	329	317	310	319	311	305	324	267	296.6	322.9			
31 Spd	7	7	7	2	4	1	6	3	5	4	4	7	8	7	9	10	8	10	5	5	6	5	5	2	0.9	10.4			
Dir	251	266	273	271	229	174	269	274	189	201	114	114	101	80	82	131	131	138	334	330	8	8	9	149	131.3	131.3			
Spd	6.5	7.0	7.3	6.9	6.4	6.0	5.8	5.8	6.7	7.9	7.4	7.4	8.6	9.9	10.1	10.5	9.3	7.9	6.2	5.0	5.8	8.0	6.4	6.6	Diurnal Average				
Dir	257.7	251.5	247.7	245.6	249.8	239.1	233.2	232.5	224.2	236.5	235.5	240.3	247.5	248.6	254.6	256.8	253.4	249.6	251.0	253.2	256.0	265.0	267.7	259.0	Diurnal Maximum				
Spd	20.7	20.0	23.4	25.0	24.8	25.8	22.6	22.8	28.0	36.7	35.2	36.5	36.5	36.3	34.0	34.9	30.8	31.1	34.9	30.8	54.3	37.2	18.4	22.1	Diurnal Maximum				
Dir	243.2	233.8	242.1	248.6	252.0	249.0	242.8	246.2	248.5	254.8	248.3	259.8	248.6	248.1	248.3	259.6	252.8	242.1	250.7	236.5	255.5	266.5	253.7	202.5					
Maximum Speed Value: 54 km/h on Aug 8 21:00																		Minimum Speed Value: 1 km/h on Aug 7 00:00										Hours in Service: 744	
Maximum Daily Speed Average: 24.7 km/h on Aug 29																		Minimum Daily Speed Average: 0.9 km/h on Aug 31										Hours of Data: 744	
Maximum Diurnal Speed Average: 10.5 km/h at hour 16																		Minimum Diurnal Speed Average: 5.0 km/h at hour 20										Hours of Missing Data: 0	
Monthly Average Velocity: 7.19 km/h 248.58 deg																		Speed Percentiles: P ₁ = 1.5 P ₁₀ = 4.5 Q ₁ = 6.7 Median = 9.6 Q ₃ = 14.6 P ₉₀ = 22.5 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	17	35	14	0	0	0	66																						
NorthEast	7	32	2	0	0	0	41																						
East	1	19	5	0	0	0	25																						
SouthEast	5	25	7	0	0	0	37																						
South	11	85	13	2	0	0	111																						
SouthWest	12	74	56	23	6	0	171																						
West	19	65	69	44	30	1	228																						
NorthWest	18	25	21	1	0	0	65																						
Total	90	360	187	70	36	1	744																						

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - August 2012

Maximum Speed: 55 km/h on Aug 8 21:00																				Maximum Daily Speed Average: 25.3 km/h on Aug 29										Hours in Service: 744	
Minimum Speed: 2 km/h on Aug 11 22:00																				Minimum Daily Speed Average: 6.9 km/h on Aug 31										Hours of Data: 744	
Maximum Diurnal Speed Average: 17.3 km/h at hour 15																				Minimum Diurnal Speed Average: 8.9 km/h at hour 7										Hours of Missing Data: 0	
Monthly Average Speed: 12.23 km/h																				Percentiles: P ₁ = 2.6 P ₁₀ = 5.3 Q ₁ = 7.2 Median = 10.3 Q ₃ = 15.0 P ₉₀ = 22.8 P ₉₉ = 34.8										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	12	10	7	6	6	6	8	10	9	10	16	22	23	24	28	27	20	20	18	17	13	11	16	17	14.9	28.2					
2-Aug	17	19	16	13	16	10	8	10	11	17	16	18	18	16	21	19	16	18	14	9	9	11	12	10	14.3	21.3					
3-Aug	9	12	16	16	12	9	8	9	11	16	16	17	13	13	14	17	16	8	9	8	7	13	18	16	12.7	18.2					
4-Aug	14	18	15	13	10	14	12	15	15	23	20	21	18	26	27	16	27	26	11	8	5	6	7	10	15.7	27.2					
5-Aug	8	6	6	7	8	6	6	8	8	10	9	10	11	10	11	11	11	12	11	8	8	6	6	5	8.4	11.9					
6-Aug	5	3	3	4	6	5	7	8	9	8	7	10	11	13	14	16	12	15	9	7	7	6	5	2	7.9	15.5					
7-Aug	4	2	4	6	4	4	3	5	8	10	10	11	13	10	12	10	11	13	11	8	11	15	16	10	8.8	16.2					
8-Aug	5	4	5	7	8	8	7	8	7	9	13	14	11	9	11	11	10	15	25	31	55	37	18	23	14.7	54.7					
9-Aug	16	18	23	25	25	26	23	19	25	33	31	33	37	37	35	31	29	29	27	23	15	13	11	12	24.7	37.0					
10-Aug	10	13	11	10	12	6	9	11	15	16	22	24	30	32	34	31	32	28	25	20	17	11	10	9	18.1	33.8					
11-Aug	7	5	4	4	6	4	5	6	4	6	10	10	12	13	13	14	12	13	10	6	3	2	4	7	7.5	14.4					
12-Aug	7	5	6	6	6	7	7	7	8	7	9	11	9	10	9	12	10	8	8	9	13	13	6	12	8.6	13.1					
13-Aug	10	10	13	12	9	11	8	6	6	10	13	21	19	22	20	22	14	9	10	6	7	10	9	14	12.1	22.4					
14-Aug	13	8	4	5	4	13	15	16	16	16	17	14	17	13	15	13	13	11	10	6	4	6	8	7	11.0	16.7					
15-Aug	5	6	6	7	9	7	7	10	10	9	9	12	15	16	14	13	12	13	9	7	5	6	9	7	9.2	15.8					
16-Aug	7	8	10	10	10	9	8	11	11	14	13	12	15	15	14	11	7	6	5	3	3	5	7	5	9.1	15.1					
17-Aug	4	8	10	10	6	9	7	8	8	7	8	6	8	7	10	10	9	11	11	9	4	3	5	5	7.6	11.3					
18-Aug	4	6	8	9	10	9	10	10	9	9	10	10	10	9	11	12	13	12	9	5	5	9	6	4	8.6	12.7					
19-Aug	4	6	7	9	10	9	5	5	3	5	8	9	8	7	7	8	9	9	9	6	5	6	6	6	7.0	10.4					
20-Aug	4	4	2	4	3	7	8	4	10	10	9	10	10	9	9	8	9	13	13	10	13	25	12	7	8.8	24.8					
21-Aug	8	7	9	5	5	4	8	13	8	8	7	10	9	11	9	11	9	10	9	7	8	16	11	8	8.8	16.0					
22-Aug	8	8	6	8	9	13	7	9	10	6	13	11	13	16	23	26	21	14	19	11	4	8	14	14	12.1	26.0					
23-Aug	14	11	11	8	9	8	9	11	17	21	21	19	23	29	29	31	28	27	21	17	15	17	17	18	18.0	31.3					
24-Aug	18	17	16	19	18	18	18	18	27	29	22	21	29	33	32	29	30	26	23	21	19	20	18	17	22.5	33.4					
25-Aug	15	13	14	10	13	12	16	17	10	12	11	10	11	11	14	13	13	6	4	4	4	4	5	5	10.3	16.8					
26-Aug	4	5	5	3	5	6	6	7	7	7	7	10	10	12	12	12	11	12	9	7	7	7	8	7	7.7	12.4					
27-Aug	6	6	6	7	7	5	4	2	7	9	7	7	8	13	12	12	10	10	13	11	15	17	14	9	9.0	16.5					
28-Aug	14	6	7	8	7	9	7	11	13	16	17	22	24	23	28	27	29	29	28	20	14	16	16	22	17.2	29.1					
29-Aug	21	20	24	22	18	15	15	23	28	37	36	37	33	34	29	35	30	31	35	21	17	19	15	13	25.3	37.0					
30-Aug	11	10	11	15	15	12	10	12	12	15	14	11	12	12	12	14	13	14	15	10	7	9	7	7	11.7	15.3					
31-Aug	7	8	7	6	4	5	6	4	6	5	6	8	9	8	9	12	11	11	5	5	6	5	5	6	6.9	12.0					
9.4 9.1 9.4 9.5 9.3 9.2 8.9 10.0 11.2 13.1 13.7 14.9 15.8 16.6 17.3 17.3 16.0 15.4 14.1 10.9 10.5 11.3 10.3 10.1																									Diurnal Average						
20.8 20.2 23.6 25.1 24.9 25.9 22.7 22.9 28.2 37.0 35.8 36.8 37.0 36.8 34.5 35.5 31.7 31.4 35.2 31.1 54.7 37.3 18.5 22.5																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

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

Hourly Standard Deviations

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

Maximum Value: 90.3 deg on Aug 21 09:00																				Hours in Service: 744					
Minimum Value: 2.3 deg on Aug 3 03:00																				Hours of Data: 744					
																				Hours of Missing Data: 0					
																				Hours of Calibration: 0					
Percentiles: P ₁ = 3.2 P ₁₀ = 6.3 Q ₁ = 9.3 Median = 14.3 Q ₃ = 25.3 P ₉₀ = 39.9 P ₉₉ = 79.0																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Aug	8	15	22	18	17	11	11	11	19	19	19	13	10	8	9	10	9	11	7	7	6	19	6	3	21.5
2-Aug	3	3	7	5	11	18	21	23	17	13	16	17	18	12	10	13	15	14	11	16	3	3	6	8	22.5
3-Aug	20	15	2	3	24	6	5	8	9	18	8	11	13	14	11	22	10	22	6	12	8	35	7	6	35.5
4-Aug	7	4	4	15	21	18	9	5	12	13	16	15	14	12	33	25	9	39	9	10	15	10	14	9	39.0
5-Aug	9	11	7	9	10	14	12	10	12	16	15	20	22	33	18	23	17	14	9	16	8	16	10	14	32.7
6-Aug	27	50	57	60	12	11	22	13	11	16	29	30	31	24	30	22	38	14	16	23	8	16	33	63	63.4
7-Aug	30	34	66	79	79	78	15	28	13	14	17	19	18	34	23	28	17	13	10	13	16	24	6	65	79.1
8-Aug	46	30	18	27	14	14	8	8	24	16	17	15	31	60	28	29	29	20	10	9	7	5	39	11	60.1
9-Aug	20	19	5	4	4	5	7	7	8	8	9	11	9	10	10	11	10	8	7	5	6	8	14	13	20.5
10-Aug	9	8	10	10	8	16	17	13	9	11	15	12	13	12	10	12	14	7	7	6	12	21	13	13	21.2
11-Aug	29	25	23	28	30	38	50	29	83	68	34	33	40	37	35	28	26	21	37	13	29	47	29	7	83.0
12-Aug	17	24	10	12	7	11	8	23	13	24	21	25	55	44	45	44	23	21	15	10	8	14	17	10	55.3
13-Aug	14	23	8	8	28	6	31	13	17	17	22	7	9	14	15	12	35	16	19	46	39	10	19	13	45.7
14-Aug	14	25	80	27	51	13	11	10	12	13	12	12	13	16	13	18	15	14	12	14	19	6	6	5	80.4
15-Aug	22	31	25	16	9	10	10	7	9	13	17	18	18	18	23	20	24	18	16	15	19	11	5	13	30.8
16-Aug	10	10	10	7	4	5	6	5	10	12	13	15	19	23	25	53	31	33	39	75	55	42	7	15	75.3
17-Aug	53	27	9	49	13	14	10	8	9	31	27	41	29	33	39	36	46	24	7	7	43	50	30	14	52.7
18-Aug	26	11	7	5	8	5	7	7	9	13	12	19	21	20	23	15	10	9	11	16	27	12	28	32	32.3
19-Aug	51	18	14	16	34	14	26	21	55	56	15	18	25	38	39	25	20	18	10	20	22	26	37	34	55.6
20-Aug	63	81	75	40	41	47	12	55	16	14	17	17	24	29	58	42	36	11	8	4	39	15	77	61	80.5
21-Aug	22	21	11	65	31	79	22	46	90	26	41	23	31	28	36	26	27	12	8	25	39	26	53	45	90.3
22-Aug	14	18	51	54	62	8	30	30	40	66	17	19	27	19	10	10	12	12	7	11	52	22	6	5	66.0
23-Aug	12	12	20	45	26	24	14	12	8	7	10	10	13	11	12	14	12	10	6	4	7	4	6	3	45.4
24-Aug	4	3	4	6	3	8	5	5	6	7	12	15	12	9	9	8	9	8	6	4	5	4	4	4	14.7
25-Aug	4	5	5	6	10	7	8	10	18	14	21	25	31	26	14	24	9	9	27	30	8	9	16	10	30.5
26-Aug	14	15	24	43	15	10	15	12	15	20	34	26	34	28	30	22	27	14	16	7	8	16	6	13	43.2
27-Aug	10	14	12	5	6	13	34	51	28	15	31	41	37	16	33	21	46	12	22	14	4	3	6	8	50.6
28-Aug	3	40	14	16	22	7	12	8	8	12	12	14	14	15	14	11	9	12	7	7	7	10	8	4	40.3
29-Aug	6	7	9	4	5	7	14	5	8	8	11	8	9	10	9	10	8	7	7	4	4	6	13	11	14.5
30-Aug	6	12	17	10	7	21	36	16	14	17	25	38	25	21	34	24	27	13	8	10	19	15	88	14	88.0
31-Aug	12	21	11	83	40	82	20	45	31	47	50	43	33	36	27	33	41	37	25	7	10	26	19	83	83.2
62.5 80.5 80.4 83.2 79.1 82.1 50.4 55.1 90.3 68.3 49.9 43.4 55.3 60.1 57.6 53.1 46.0 39.0 38.7 75.3 54.8 50.3 88.0 82.9																									

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

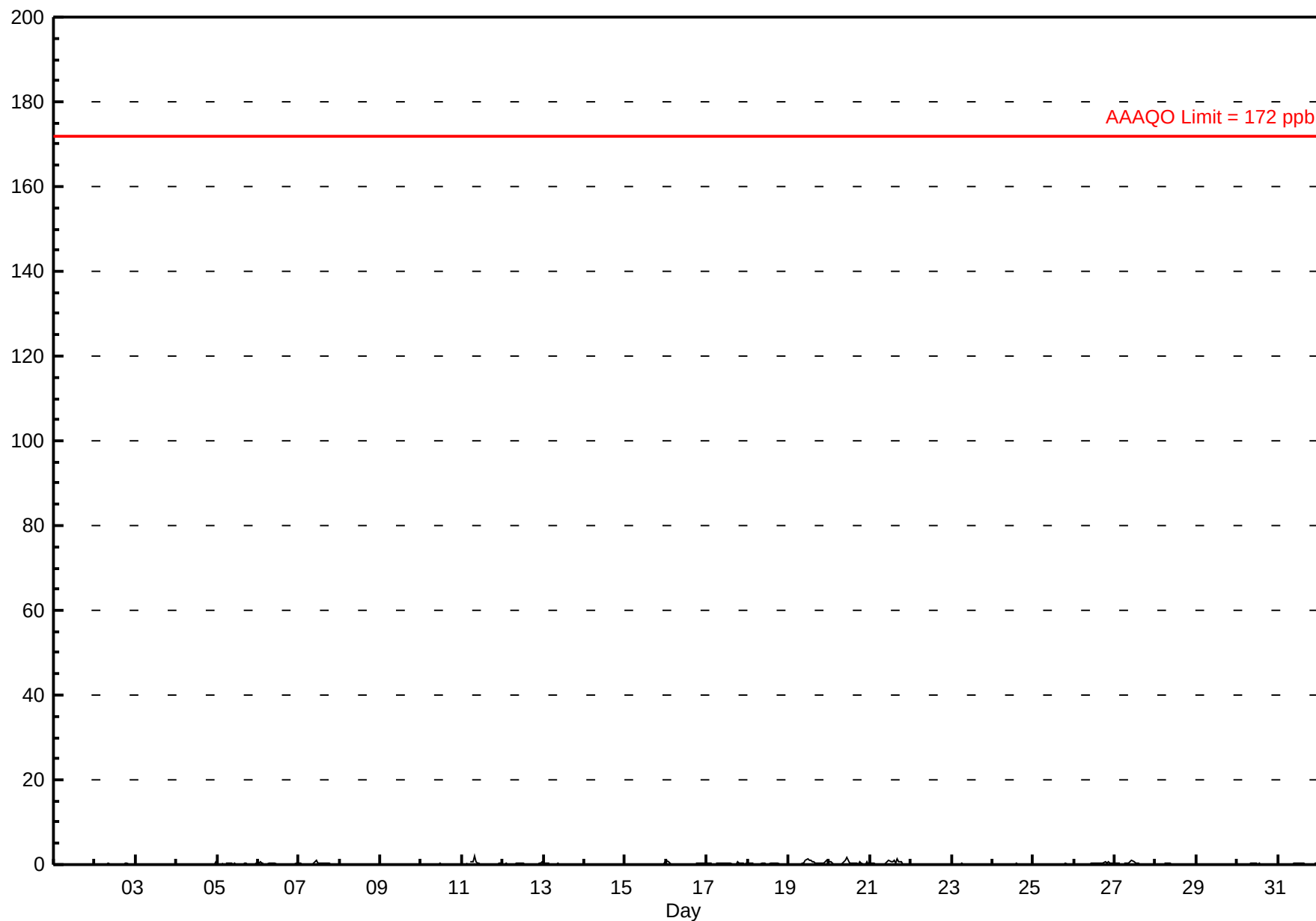
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.0 ppb on Aug 11 08:00 Maximum Daily Average: 0.5 ppb on Aug 19																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 34 Percent Operational Time: 99.6						
Minimum Value: 0 ppb on Aug 1 19:00 Maximum Diurnal Average: 0.3 ppb at hour 11 Monthly Average: 0.16 ppb										Minimum Daily Average: 0.0 ppb on Aug 9 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 = 0.2 P ₉₀ = 0.4 P ₉₉ = 1.1																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	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-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
3-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
4-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.6
5-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.5
6-Aug	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
7-Aug	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
8-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
9-Aug	0	0	0	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
10-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
11-Aug	0	0	0	0	A	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0
12-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.6	
13-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
14-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
16-Aug	1	1	0	0	A	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0.2	0.9
17-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.3	0.7
18-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
19-Aug	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	1	1	0.5	1.3	
20-Aug	1	1	0	0	A	0	0	0	0	1	2	1	0	0	0	0	0	1	0	0	0	1	0	0.4	1.7	
21-Aug	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	0	2	1	1	0	0	0	0	0	0.4	1.5
22-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	D	0.1	0.1	
23-Aug	D	D	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
24-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
25-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
26-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0.2	0.6
27-Aug	0	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
28-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
30-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
31-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
0.2 0.1 0.1 0.1 -- 0.1 0.1 0.2 0.2 0.2 0.3 0.2 0.2 0.2 0.2 0.1 0.2 0.1 0.2 0.1 0.1 0.1 0.2 0.2 Diurnal Average																										
0.9 0.6 0.4 0.3 -- 0.6 0.7 2.0 0.7 1.1 1.7 1.3 1.0 0.9 0.9 0.6 1.5 0.6 0.7 0.5 0.6 0.5 1.2 1.1 Diurnal Maximum																										
C - Calibration D - DAS Failure 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 - August 2012



Hourly Maximums

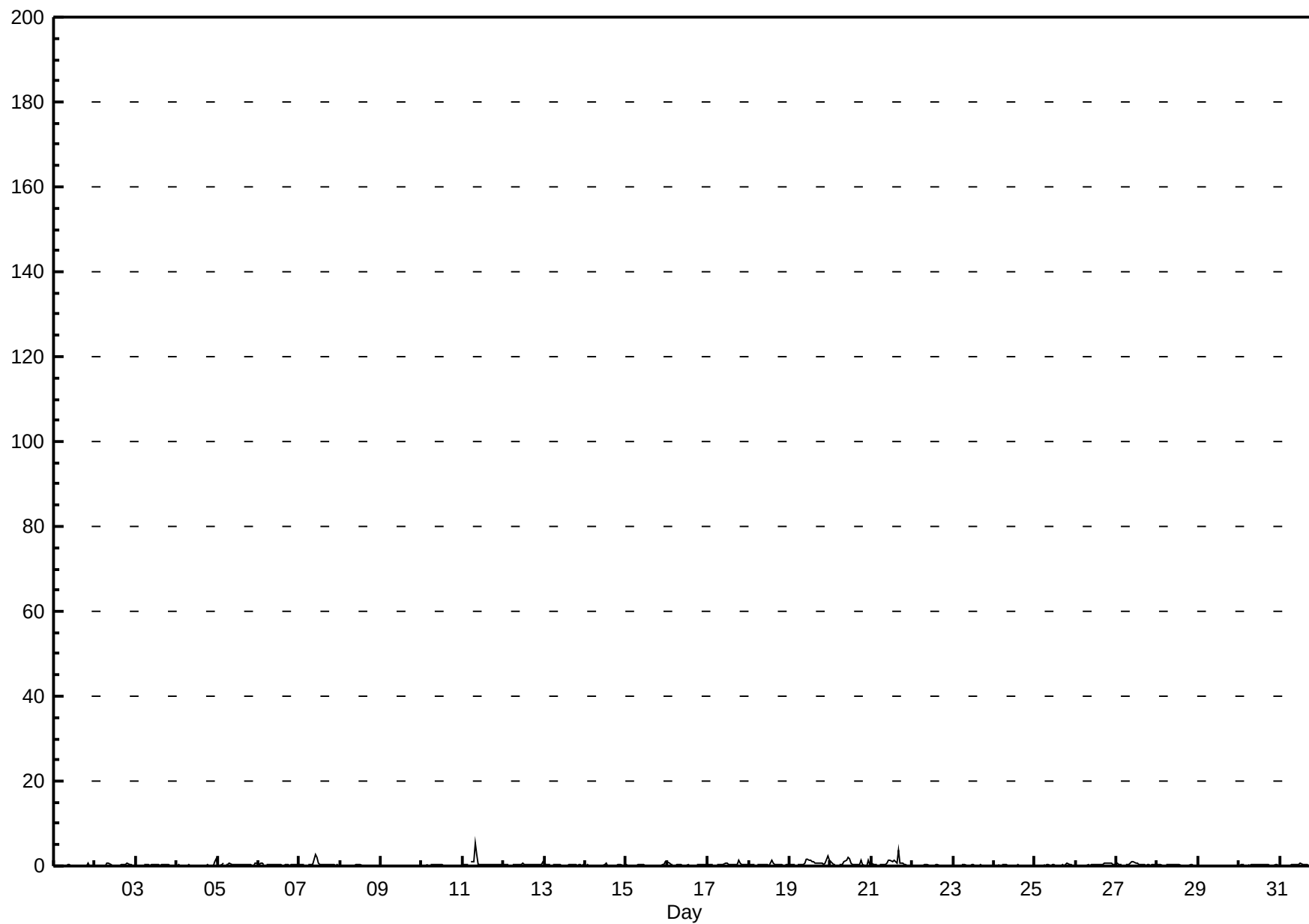
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - August 2012

Maximum Value: 5.5 ppb on Aug 11 08:00																				Maximum Daily Average: 0.7 ppb on Aug 19										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 16 14:00																				Minimum Daily Average: 0.1 ppb on Aug 9										Hours of Data: 707	
Maximum Diurnal Average: 0.5 ppb at hour 11																				Minimum Diurnal Average: 0.2 ppb at hour 22										Hours of Missing Data: 37	
Monthly Average: 0.30 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 1.9										Hours of Calibration: 34	
																				Percent Operational Time: 99.6											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.8					
2-Aug	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	0.7					
3-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3					
4-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0.3	1.6					
5-Aug	0	0	0	1	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	0.6					
6-Aug	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7					
7-Aug	0	0	0	0	A	0	0	0	0	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	2.7					
8-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3					
9-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1					
10-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3					
11-Aug	0	0	0	0	A	1	1	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	5.5					
12-Aug	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.3	1.1					
13-Aug	1	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	0.6					
14-Aug	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8					
15-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.9					
16-Aug	1	1	0	0	A	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0.3	1.1					
17-Aug	0	0	0	0	A	0	0	1	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0.4	1.2					
18-Aug	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.3					
19-Aug	0	0	0	0	A	0	0	0	0	1	2	1	1	1	1	1	1	1	1	1	0	1	2	1	0.7	2.3					
20-Aug	1	1	1	0	A	0	0	0	1	1	2	2	1	0	0	0	0	0	1	0	0	0	1	0	0.6	1.9					
21-Aug	1	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	4	1	1	0	0	0	0	0	0.7	3.7					
22-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	D	0.2	0.3					
23-Aug	D	D	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3					
24-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3					
25-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	0.6					
26-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0.3	0.7					
27-Aug	1	0	0	0	A	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0					
28-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5					
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2					
30-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4					
31-Aug	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0.3	0.6					
																									Diurnal Average						
																									Diurnal Maximum						
C - Calibration																															
D - DAS Failure																															
A - Automated Daily Zero Span																															

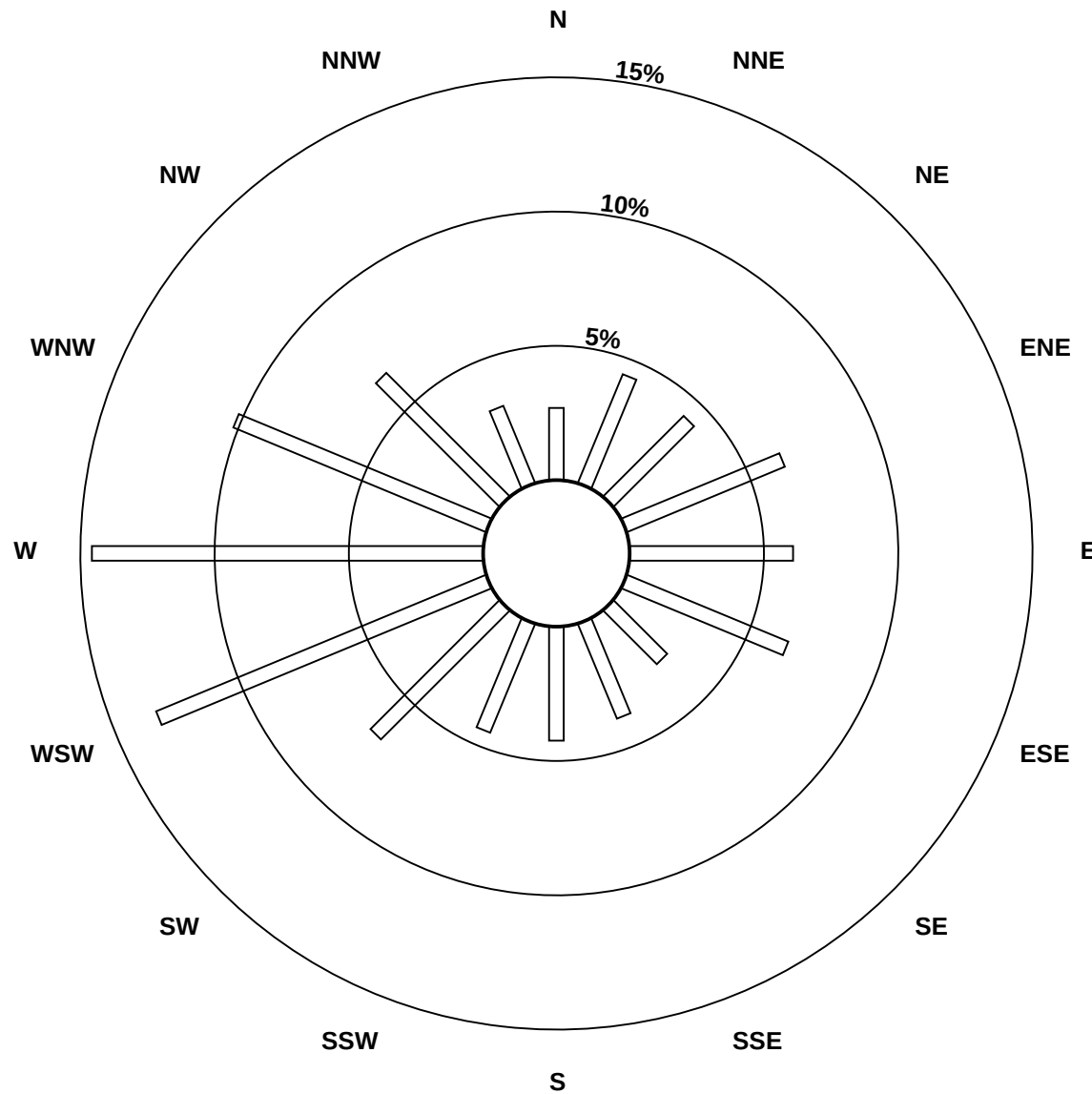
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - August 2012

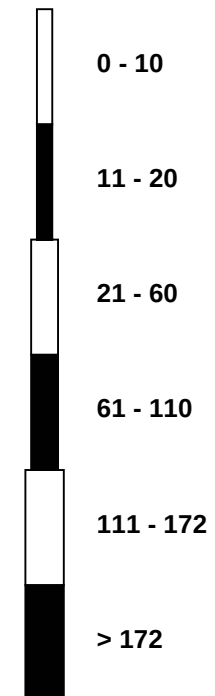


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - August 2012

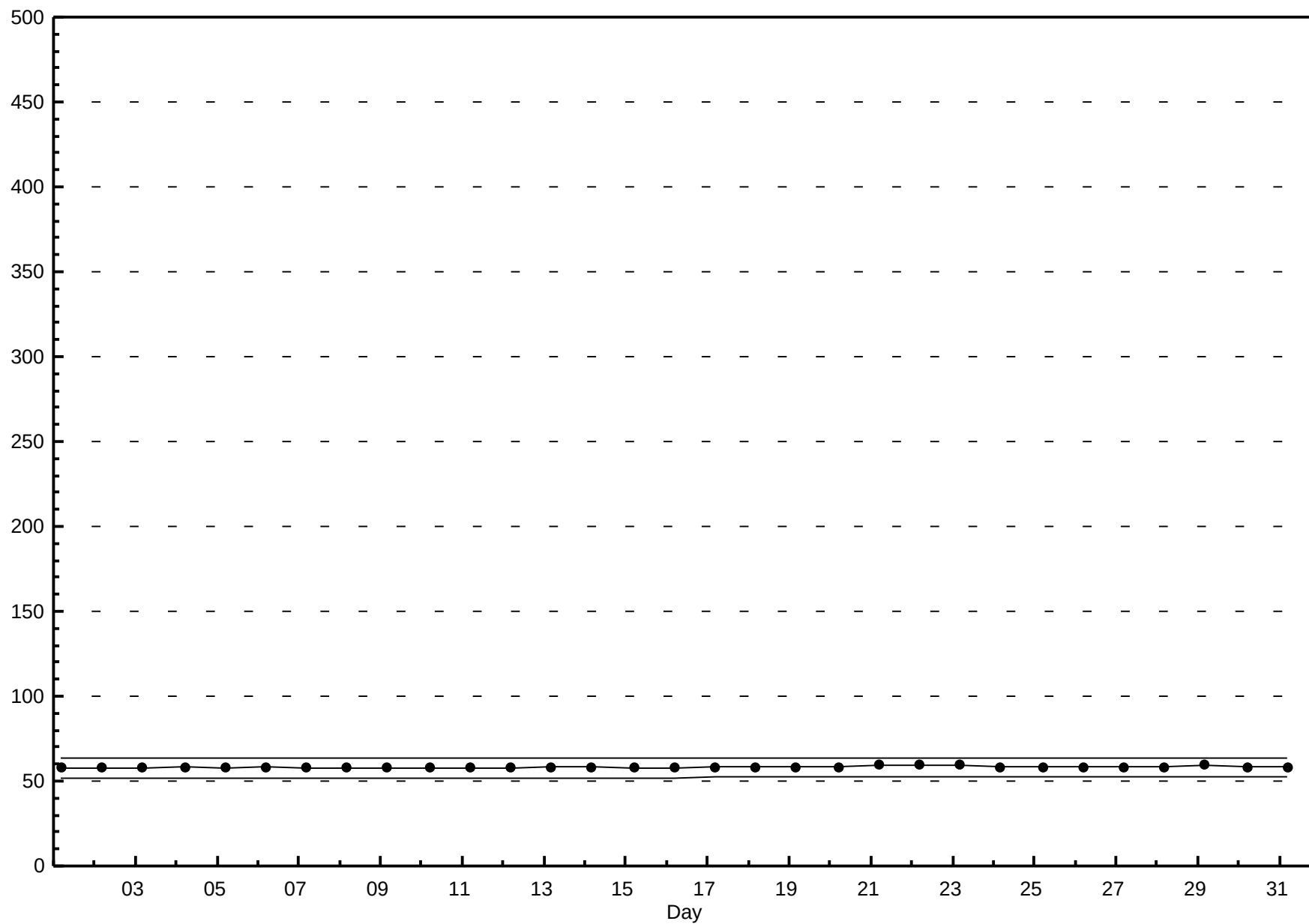


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - August 2012



Hourly Averages

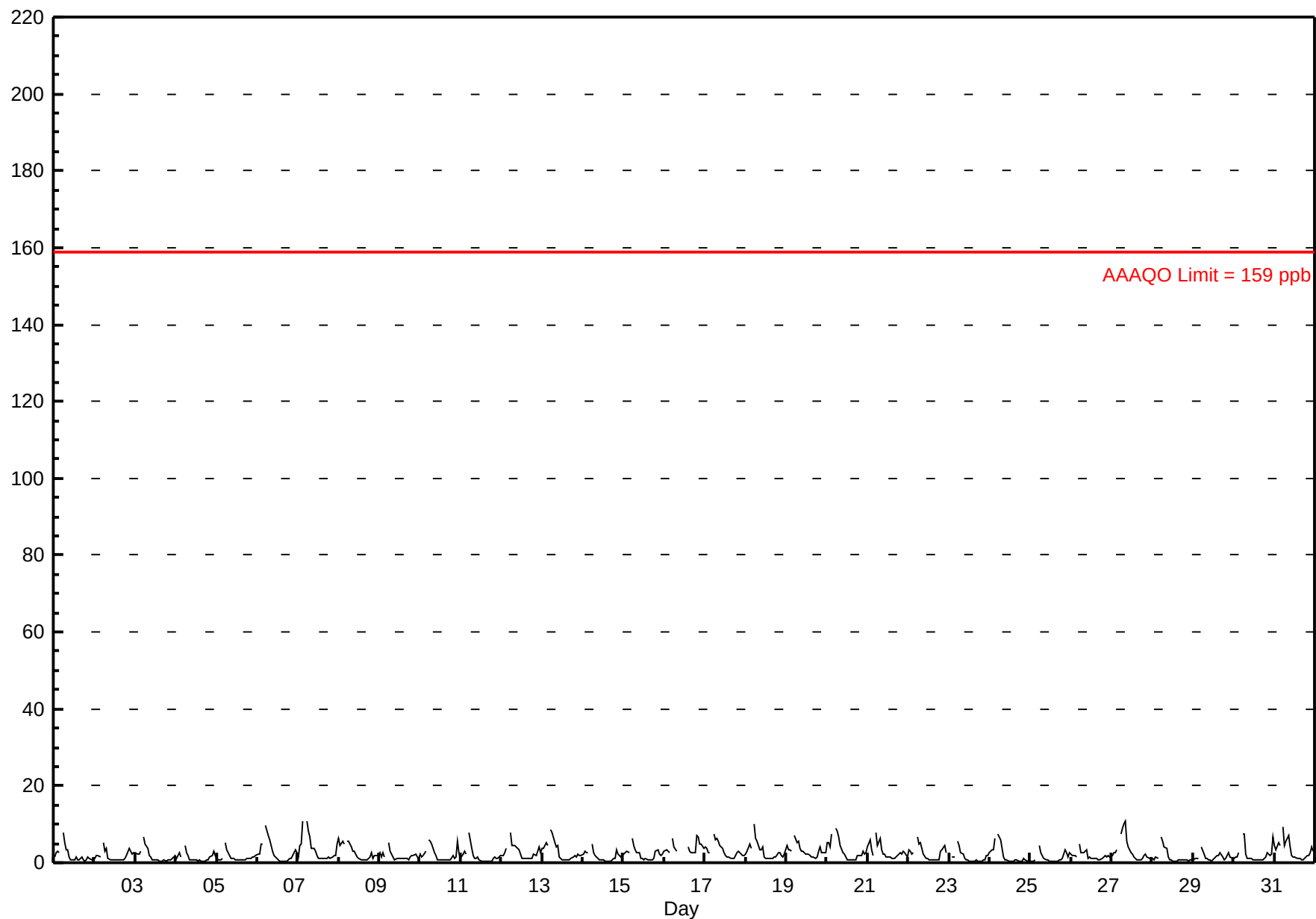
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11.0 ppb on Aug 27 09:00 Maximum Daily Average: 3.5 ppb on Aug 7																					Hours in Service: 744 Hours of Data: 704 Hours of Missing Data: 40 Hours of Calibration: 37 Percent Operational Time: 99.6					
Minimum Value: 0 ppb on Aug 25 00:00 Maximum Diurnal Average: 6.9 ppb at hour 6 Monthly Average: 2.29 ppb										Minimum Daily Average: 1.2 ppb on Aug 25 Minimum Diurnal Average: 0.9 ppb at hour 16 Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.9 Median = 1.6 Q ₃ = 3.0 P ₉₀ = 5.0 P ₉₉ = 9.3																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	2	3	3	2	A	8	5	3	4	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.9	7.9
2-Aug	1	2	2	1	A	5	3	4	1	1	1	1	1	1	1	1	1	1	1	2	4	3	2	2	1.7	5.3
3-Aug	3	2	2	3	A	7	5	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.7	6.7
4-Aug	1	2	2	2	A	5	3	2	1	1	1	1	1	1	1	1	0	0	1	1	2	2	3	2	1.4	4.6
5-Aug	1	1	1	1	A	5	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.4	5.1
6-Aug	2	2	5	5	A	10	7	6	4	3	2	1	1	1	0	0	0	0	1	1	1	2	3	3	2.6	9.8
7-Aug	1	4	5	11	A	11	8	7	4	4	3	2	1	1	1	1	1	1	2	1	2	2	2	5	3.5	10.9
8-Aug	6	4	5	5	A	6	5	4	3	3	2	2	1	1	1	1	1	1	1	3	1	2	2	2	2.7	6.5
9-Aug	3	2	2	2	A	5	3	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1.7	5.4
10-Aug	2	1	2	3	A	6	6	5	3	2	1	1	1	1	1	1	1	1	1	2	1	2	6	2	2.1	6.1
11-Aug	1	2	3	2	A	8	4	2	1	1	1	1	1	0	0	0	0	0	1	1	2	1	1	2	1.6	7.7
12-Aug	2	2	3	4	A	8	5	4	5	4	3	2	1	1	1	1	1	1	1	2	2	3	4	3	2.7	7.9
13-Aug	4	4	5	4	A	9	8	5	4	4	2	1	1	1	1	1	1	1	1	2	1	2	2	2	2.8	8.5
14-Aug	2	3	3	2	A	5	2	2	1	1	1	1	1	1	0	0	1	1	1	1	3	2	1	2	1.6	5.0
15-Aug	2	3	3	2	A	6	4	3	3	2	1	1	1	1	1	1	1	1	1	3	4	2	2	2	2.2	6.2
16-Aug	3	3	3	3	A	6	4	3	C	C	C	C	C	C	4	3	3	2	3	7	7	5	5	4	--	7.0
17-Aug	4	4	3	3	A	7	6	6	5	4	4	3	2	1	1	1	1	1	2	3	3	2	2	2	3.1	7.5
18-Aug	2	3	5	4	A	10	6	6	3	4	4	2	1	1	1	1	1	1	3	3	2	1	2	2	2.9	10.0
19-Aug	4	3	3	3	A	7	5	6	4	3	3	2	2	2	2	2	2	1	1	3	4	3	3	3	3.1	6.9
20-Aug	5	5	4	7	A	9	8	7	5	3	2	1	1	1	1	1	1	1	2	2	2	3	2	3	3.2	9.1
21-Aug	4	6	3	2	A	8	4	6	3	2	2	2	2	1	1	1	1	1	2	3	2	3	3	2	2.9	8.0
22-Aug	3	3	2	3	A	7	5	5	4	2	1	1	1	1	1	1	1	1	1	3	3	5	2	D	2.4	6.5
23-Aug	D	D	2	2	A	6	4	3	2	1	1	1	0	0	1	1	1	1	1	1	1	1	2	2	1.4	5.5
24-Aug	3	3	4	6	A	7	6	4	2	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	1.9	7.4
25-Aug	1	0	0	1	A	4	3	2	1	1	1	1	0	1	0	0	1	1	1	1	3	3	2	2	1.2	4.3
26-Aug	2	2	2	1	A	5	3	2	3	3	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1.9	5.0
27-Aug	2	3	3	3	A	7	9	10	11	6	4	3	2	1	1	1	1	1	1	2	2	2	1	1	3.3	11.0
28-Aug	1	1	1	1	A	7	6	4	4	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1.6	6.7
29-Aug	1	1	1	1	A	4	2	1	1	1	1	0	1	1	2	2	3	2	1	1	2	2	2	1	1.5	4.3
30-Aug	1	1	2	3	A	7	7	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	7	2.1	7.5
31-Aug	4	3	5	5	A	9	5	6	7	4	2	1	2	1	1	1	1	1	1	2	2	3	4	3	3.2	9.5
2.5 2.6 2.9 3.1 -- 6.9 5.0 4.2 3.1 2.3 1.6 1.2 1.0 0.9 1.0 0.9 0.9 0.9 1.1 1.8 2.2 2.1 2.2 2.2 Diurnal Average																										
6.5 6.0 5.4 10.8 -- 10.9 9.1 10.1 11.0 5.7 4.2 2.7 2.2 2.4 4.0 3.0 2.7 2.5 2.8 7.0 6.7 4.7 5.7 6.9 Diurnal Maximum																										
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

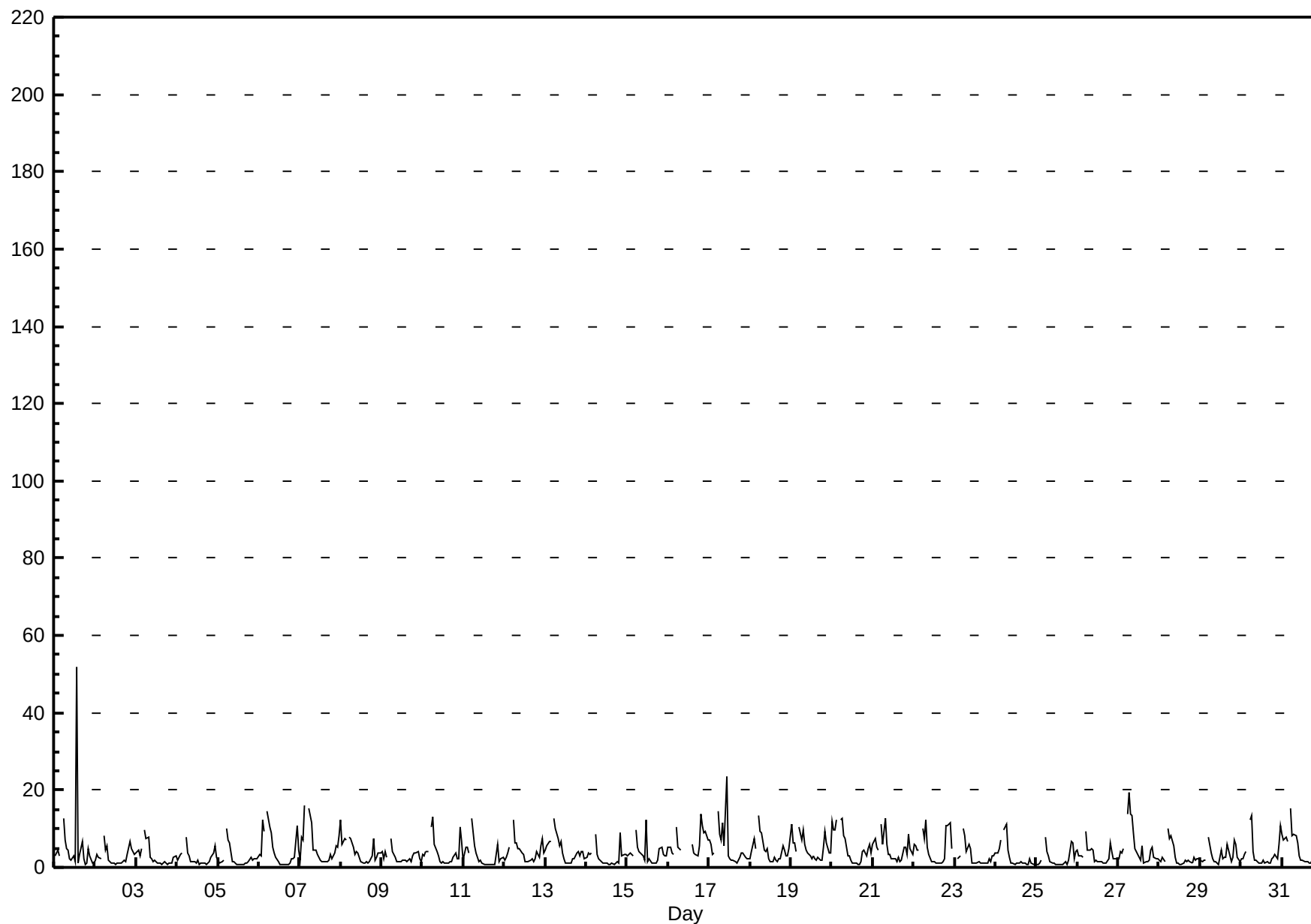
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - August 2012



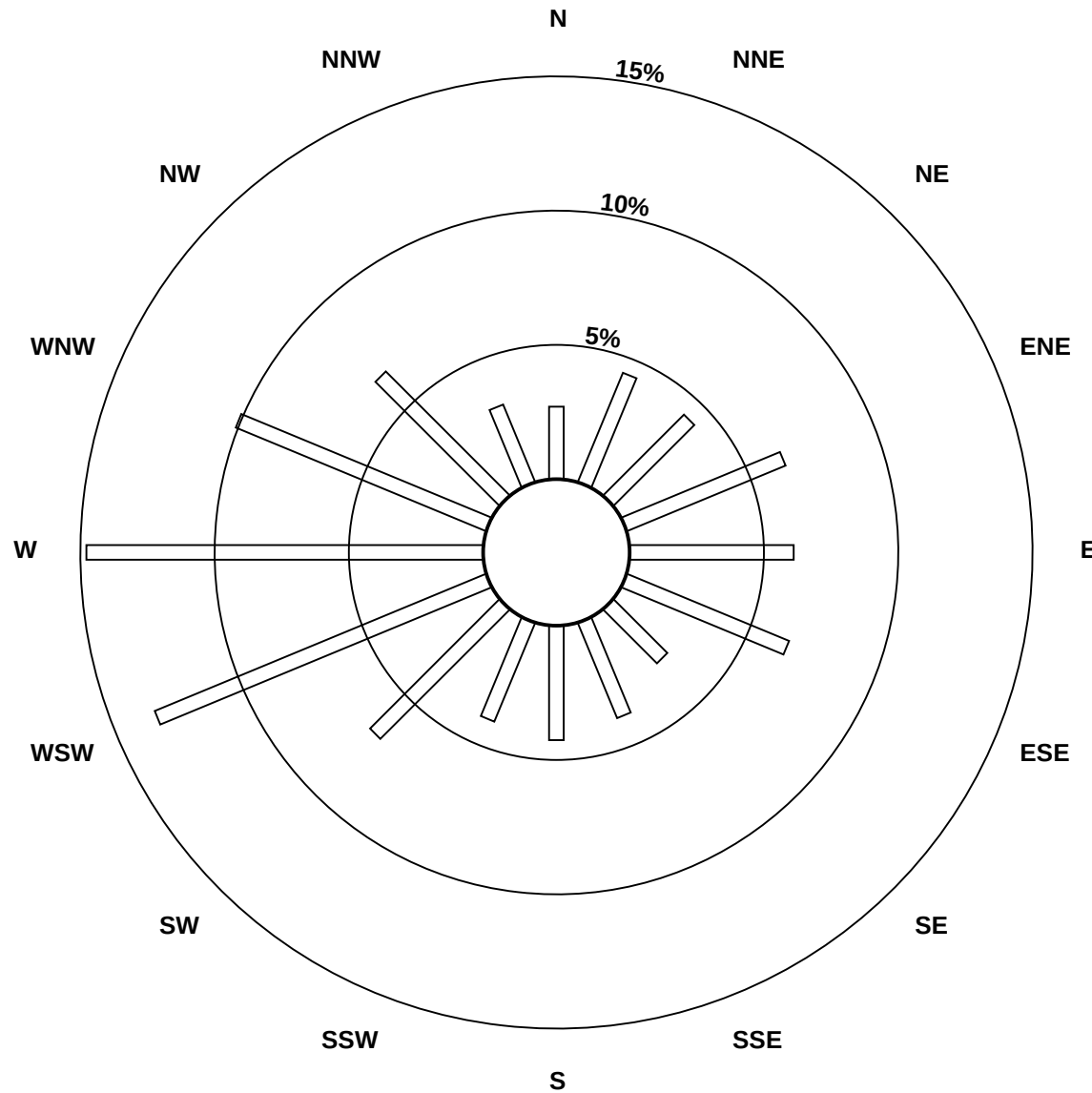
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - August 2012

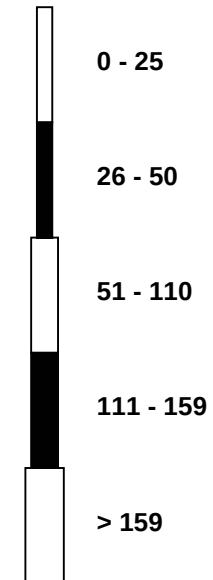


Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - August 2012

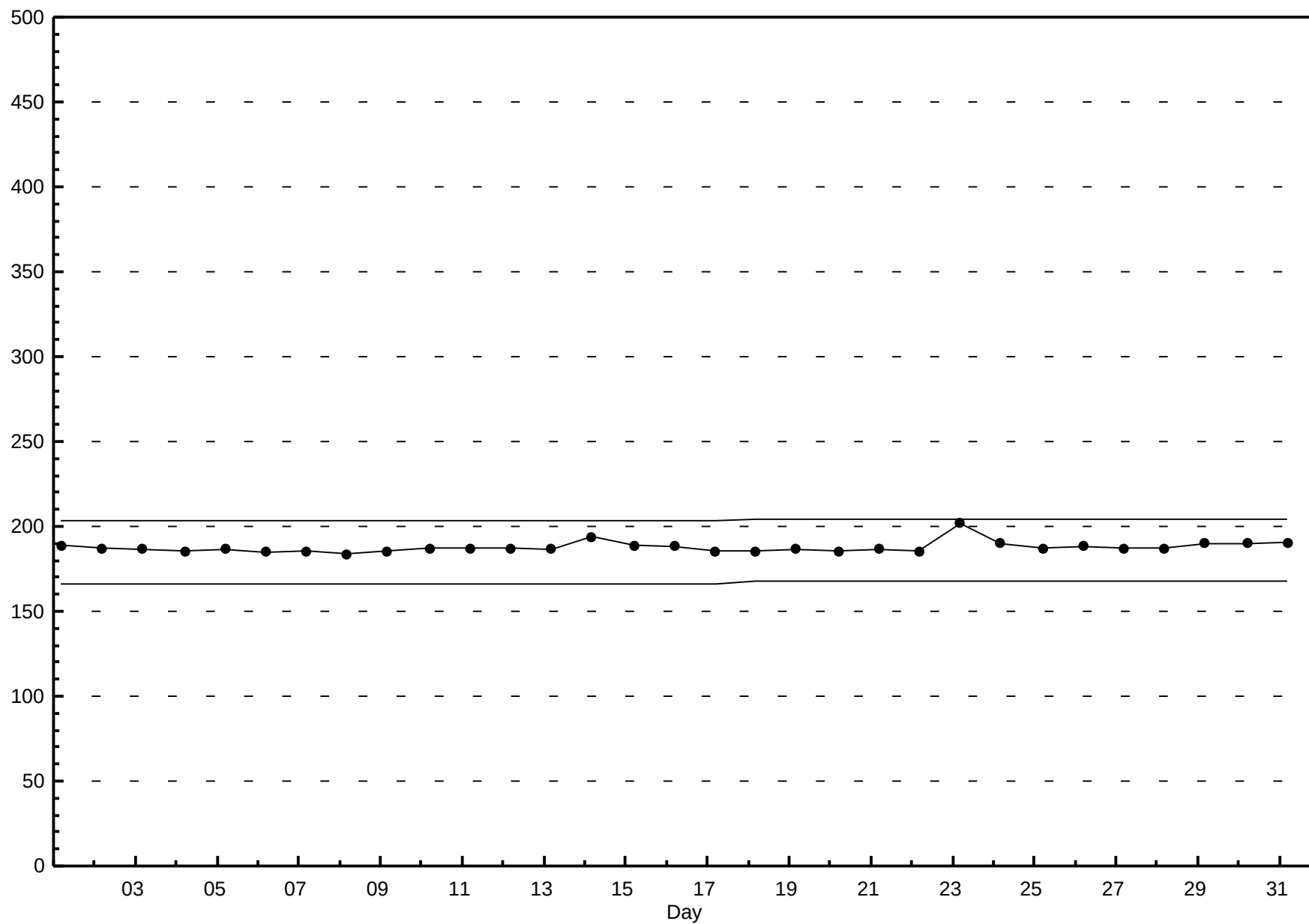


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - August 2012



Hourly Averages

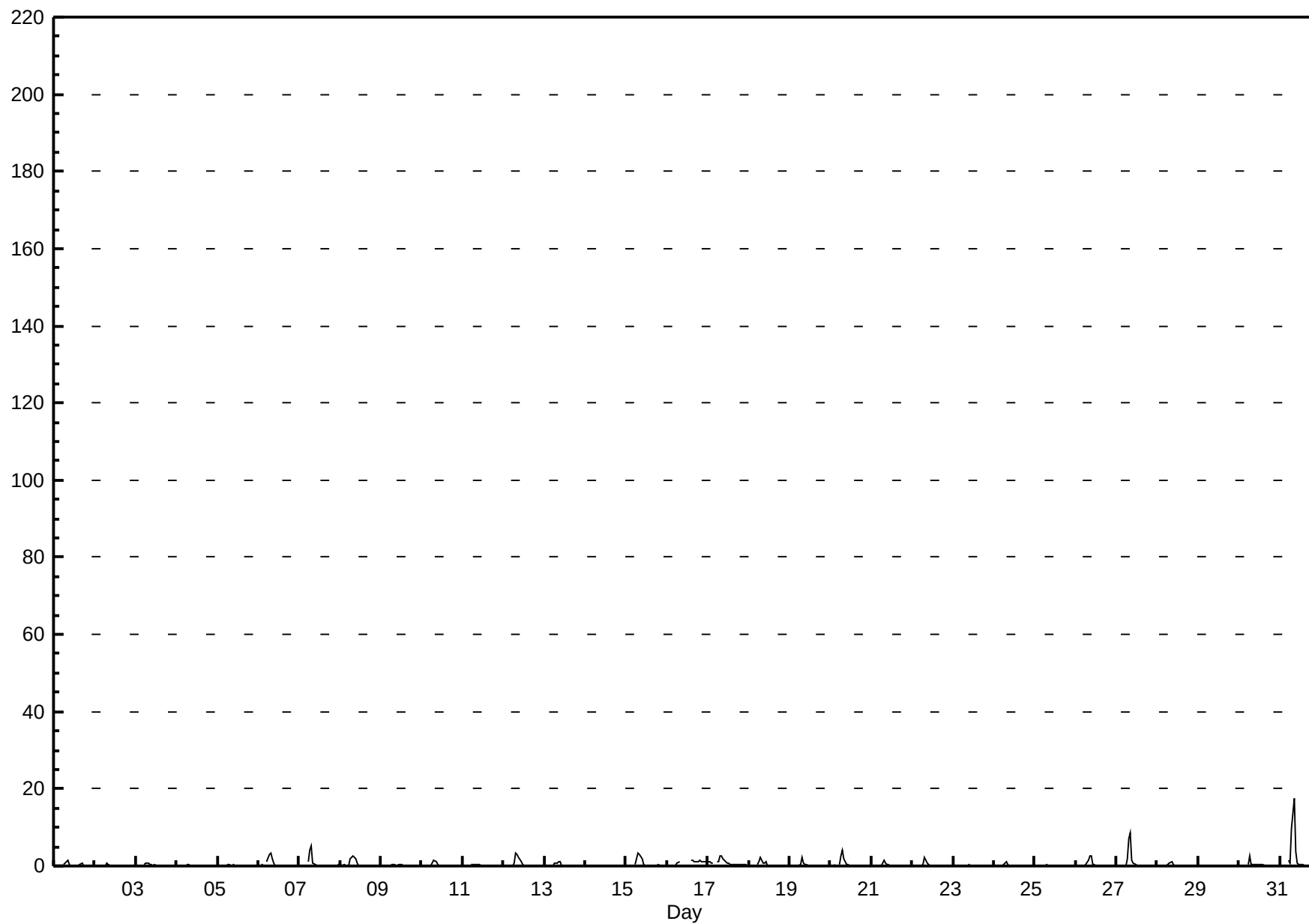
Nitrogen Oxide (NO) - ppb

Beaverlodge - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 17.5 ppb on Aug 31 09:00 Maximum Daily Average: 1.6 ppb on Aug 31																				Hours in Service: 744 Hours of Data: 704 Hours of Missing Data: 40 Hours of Calibration: 37 Percent Operational Time: 99.6						
Minimum Value: 0 ppb on Aug 1 01:00 Maximum Diurnal Average: 2.0 ppb at hour 8 Monthly Average: 0.34 ppb										Minimum Daily Average: 0.0 ppb on Aug 14 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 = 0.2 P ₉₀ = 0.9 P ₉₉ = 3.8																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2	1.4
2-Aug	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9
3-Aug	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
4-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
5-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
6-Aug	0	0	0	0	A	1	3	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.5
7-Aug	0	0	0	0	A	1	4	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	5.2
8-Aug	1	0	0	0	A	0	2	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.7
9-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
10-Aug	0	0	0	0	A	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.7
11-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
12-Aug	0	0	0	0	A	0	1	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.3
13-Aug	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.3
14-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
15-Aug	0	0	0	0	A	0	2	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.4
16-Aug	0	0	0	0	A	0	1	1	C	C	C	C	C	C	1	1	1	1	1	1	1	1	1	1	--	1.4
17-Aug	1	1	1	1	A	1	1	3	3	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.8	2.7
18-Aug	0	0	0	0	A	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.1
19-Aug	0	0	0	0	A	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2.1
20-Aug	0	0	0	0	A	0	3	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.9
21-Aug	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.5
22-Aug	0	0	0	0	A	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	D	0.3	2.2
23-Aug	D	D	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
24-Aug	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
25-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
26-Aug	0	0	0	0	A	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.7
27-Aug	0	0	0	0	A	0	2	7	9	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	8.6
28-Aug	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
30-Aug	0	0	0	0	A	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.5
31-Aug	0	0	0	0	A	2	1	10	17	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	17.5
0.1 0.1 0.1 0.1 -- 0.3 0.9 2.0 1.8 0.8 0.3 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1																									Diurnal Average	
1.0 0.9 0.8 0.8 -- 1.7 4.2 9.8 17.5 3.6 1.1 0.7 0.6 0.5 1.3 1.3 1.3 1.3 1.3 1.3 1.4 1.1 1.0 1.0 1.0																									Diurnal Maximum	
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - August 2012



Hourly Maximums

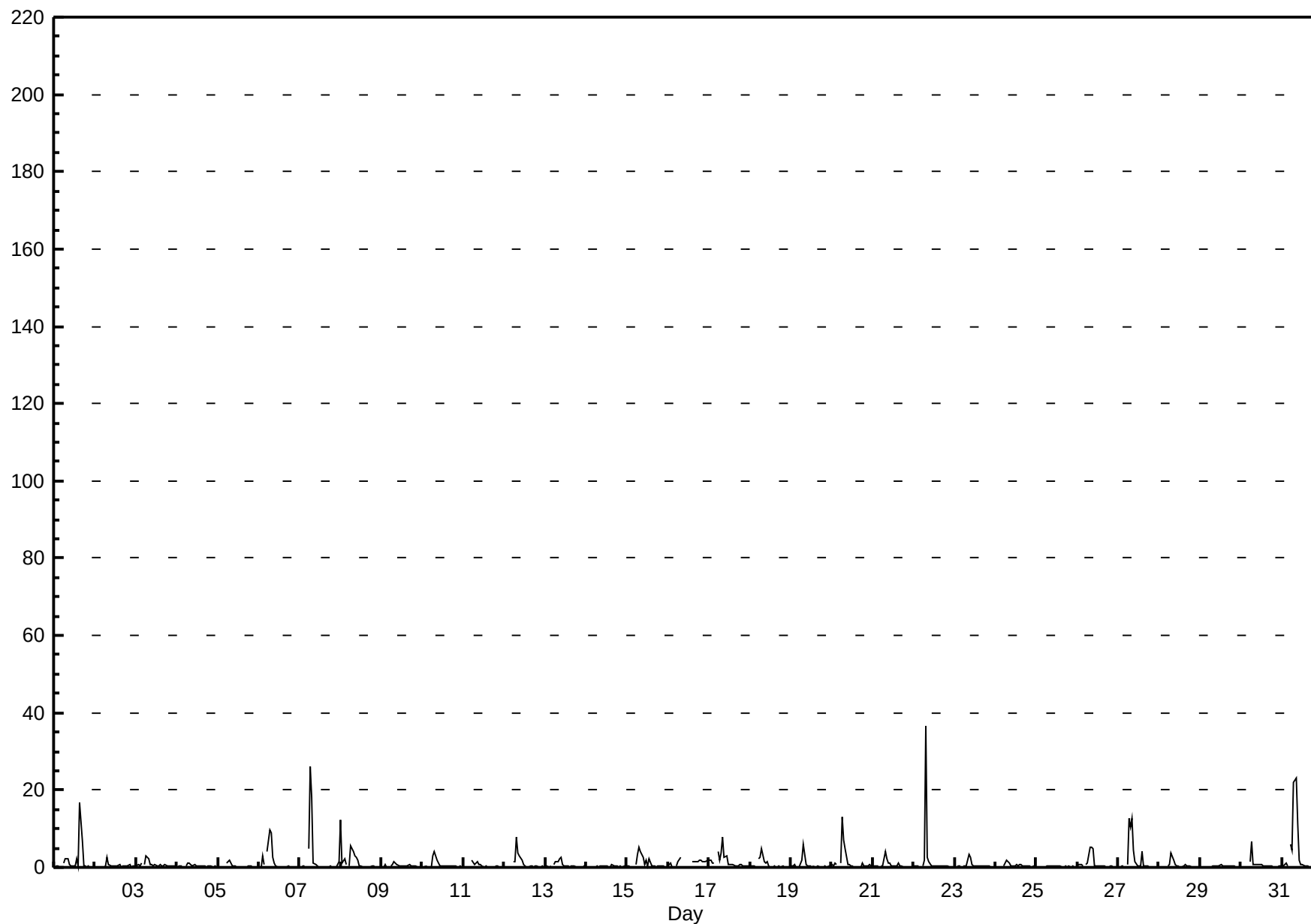
Nitrogen Oxide (NO) - ppb

Beaverlodge - August 2012

Maximum Value: 36.7 ppb on Aug 22 08:00																				Maximum Daily Average: 3.3 ppb on Aug 31										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 11 22:00																				Minimum Daily Average: 0.2 ppb on Aug 25										Hours of Data: 704	
Maximum Diurnal Average: 5.5 ppb at hour 8																				Minimum Diurnal Average: 0.2 ppb at hour 22										Hours of Missing Data: 40	
Monthly Average: 1.00 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.6 P ₉₀ = 2.0 P ₉₉ = 10.8										Hours of Calibration: 37	
																				Percent Operational Time: 99.6											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	0	0	0	0	A	1	2	2	2	1	1	0	0	2	0	17	7	1	0	0	0	0	0	0	1.7	16.7					
2-Aug	0	0	0	0	A	0	0	3	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0.4	2.6					
3-Aug	0	1	0	1	A	1	3	2	1	1	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0.7	2.9					
4-Aug	0	0	0	0	A	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2					
5-Aug	0	0	0	0	A	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.8					
6-Aug	0	0	3	1	A	4	10	9	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	9.6					
7-Aug	0	0	0	1	A	5	26	18	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2.4	26.0					
8-Aug	12	1	2	1	A	1	6	4	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	12.4					
9-Aug	0	0	1	0	A	0	1	1	1	1	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0.5	1.3					
10-Aug	0	0	0	0	A	0	3	4	2	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.6	3.9					
11-Aug	0	0	0	0	A	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.9					
12-Aug	0	0	0	0	A	1	1	8	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1.0	7.9					
13-Aug	0	0	0	0	A	1	2	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.7					
14-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.6					
15-Aug	0	0	0	0	A	1	3	5	4	3	1	2	0	2	0	0	0	0	0	0	0	0	0	0	1.1	5.2					
16-Aug	0	1	0	0	A	0	1	3	C	C	C	C	C	C	2	1	2	2	2	2	1	1	1	2	--	2.7					
17-Aug	2	2	1	1	A	4	2	4	8	3	3	1	1	1	1	1	1	1	1	1	0	0	0	0	1.6	7.8					
18-Aug	0	0	0	0	A	2	2	5	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	5.0					
19-Aug	0	0	1	0	A	0	2	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	5.9					
20-Aug	1	0	1	1	A	1	13	7	5	1	1	0	0	0	0	0	0	0	1	0	0	0	1	0	1.5	12.9					
21-Aug	0	0	0	0	A	0	0	4	2	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0.6	4.1					
22-Aug	0	0	0	0	A	0	2	37	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	D	2.2	36.7					
23-Aug	D	D	0	0	A	0	0	0	4	3	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0.6	3.5					
24-Aug	0	0	0	0	A	0	2	1	1	0	0	0	1	0	1	1	0	0	0	0	1	0	0	0	0.5	1.8					
25-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5					
26-Aug	1	1	1	0	A	1	1	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	5.2					
27-Aug	0	0	0	0	A	1	13	11	13	4	1	1	0	1	4	0	0	0	0	0	0	0	0	0	2.2	12.6					
28-Aug	0	0	0	0	A	0	1	4	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.5	3.6					
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0.3	0.8					
30-Aug	0	0	0	0	A	2	7	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0.7	6.6					
31-Aug	0	0	1	0	A	6	5	22	23	11	2	1	1	0	0	0	0	0	0	0	2	1	0	0	3.3	23.0					
0.7 0.4 0.5 0.3 -- 1.2 3.6 5.5 3.2 1.7 0.8 0.4 0.3 0.4 0.5 0.9 0.5 0.3 0.3 0.3 0.3 0.2 0.3 0.3																									Diurnal Average						
12.4 1.7 2.8 1.2 -- 5.8 26.0 36.7 23.0 11.2 2.9 1.8 0.8 2.3 4.0 16.7 6.6 1.5 1.8 1.9 1.7 1.5 1.5 1.9																									Diurnal Maximum						
C - Calibration D - DAS Failure A - Automated Daily Zero Span																															

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - August 2012



Hourly Averages

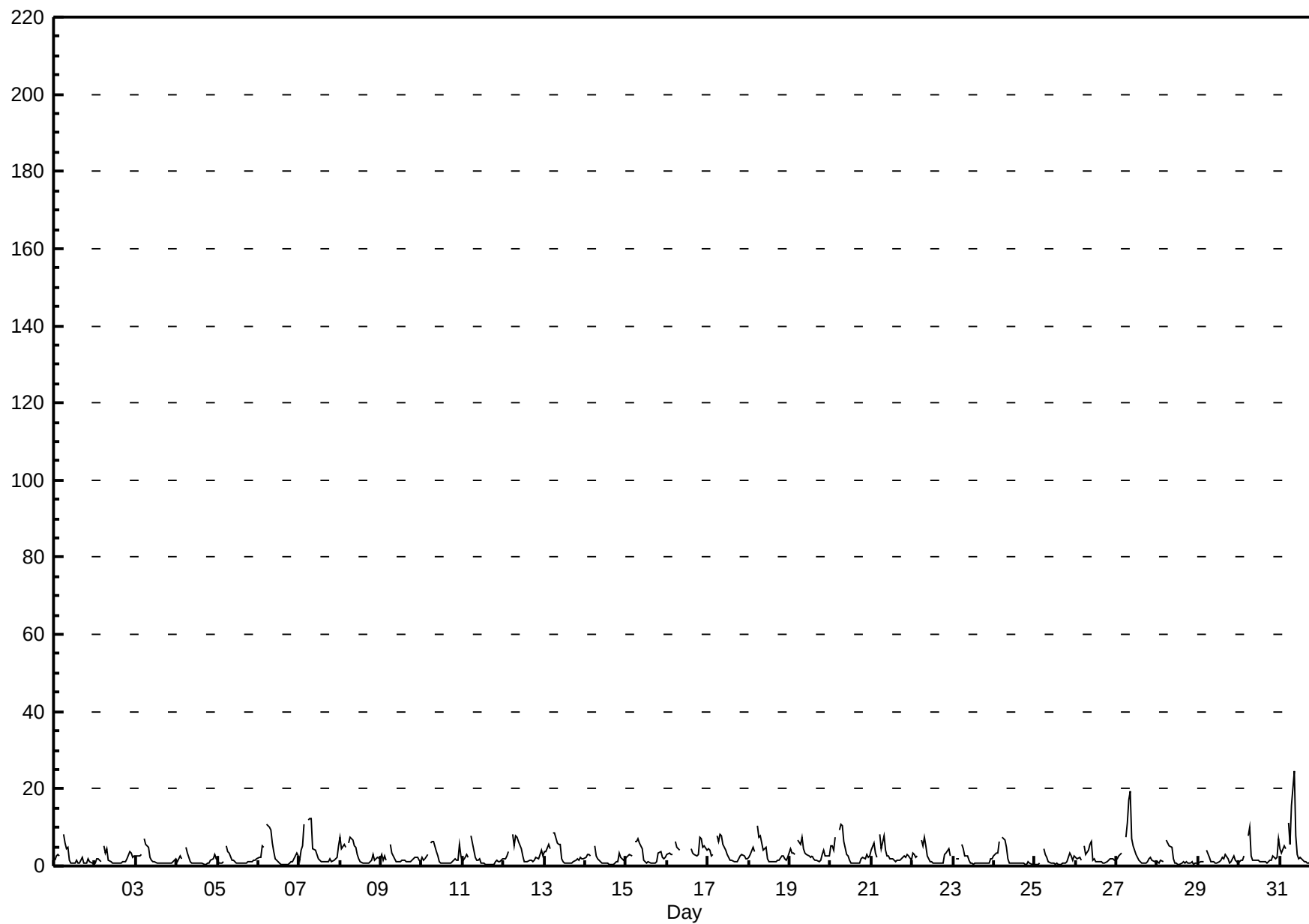
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 24.6 ppb on Aug 31 09:00 Maximum Daily Average: 4.7 ppb on Aug 31																				Hours in Service: 744 Hours of Data: 704						
Minimum Value: 0 ppb on Aug 25 00:00 Maximum Diurnal Average: 7.2 ppb at hour 6 Monthly Average: 2.61 ppb										Minimum Daily Average: 1.3 ppb on Aug 25 Minimum Diurnal Average: 1.0 ppb at hour 18 Percentiles: P ₁ = 0.5 P ₁₀ = 0.7 Q ₁ = 1.0 Median = 1.8 Q ₃ = 3.2 P ₉₀ = 5.8 P ₉₉ = 11.9										Hours of Missing Data: 40 Hours of Calibration: 37 Percent Operational Time: 99.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	2	3	3	2	A	8	6	4	5	2	1	1	1	2	1	1	2	1	1	1	2	1	1	1	2.2	8.3
2-Aug	1	2	2	1	A	5	3	5	2	1	1	1	1	1	1	1	1	1	1	2	4	3	2	3	1.9	5.3
3-Aug	3	2	2	3	A	7	6	5	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.9	6.9
4-Aug	1	2	3	2	A	5	3	2	1	1	1	1	1	1	1	1	0	0	1	1	2	2	3	2	1.5	4.7
5-Aug	1	1	1	1	A	5	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.5	5.1
6-Aug	2	2	5	5	A	11	10	9	6	4	2	1	1	1	0	0	0	0	1	1	1	2	3	2	3.1	10.9
7-Aug	1	4	5	11	A	12	12	12	5	4	3	2	1	1	1	1	1	1	2	1	2	2	2	5	4.0	12.3
8-Aug	7	5	6	5	A	6	7	7	5	5	3	2	1	1	1	1	1	1	2	3	1	2	2	2	3.2	7.4
9-Aug	3	2	3	2	A	5	3	3	2	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1.9	5.5
10-Aug	2	1	2	3	A	6	6	6	4	3	1	1	1	1	1	1	1	1	1	2	1	2	6	2	2.4	6.5
11-Aug	1	2	3	2	A	8	4	2	2	2	2	1	1	0	1	0	0	0	1	1	2	1	1	2	1.7	8.0
12-Aug	2	2	3	4	A	8	5	8	7	6	4	2	1	1	1	1	1	1	1	2	2	3	4	3	3.2	8.1
13-Aug	4	4	5	4	A	9	9	6	5	6	2	1	1	1	1	1	1	1	1	2	1	2	2	2	3.0	8.7
14-Aug	2	3	3	3	A	5	3	2	1	1	1	1	1	1	1	1	1	1	1	1	3	2	1	2	1.7	5.1
15-Aug	2	3	3	3	A	6	6	7	6	4	2	1	1	1	1	1	1	1	1	3	4	2	2	2	2.7	7.0
16-Aug	3	3	3	3	A	6	5	4	C	C	C	C	C	C	4	3	3	3	3	8	7	5	5	4	--	7.5
17-Aug	4	4	3	3	A	8	6	8	8	6	4	3	2	2	1	1	1	1	2	3	3	2	2	2	3.5	8.3
18-Aug	2	3	5	4	A	11	8	8	4	4	5	2	1	1	1	1	1	1	1	3	3	2	1	2	3.2	10.5
19-Aug	4	3	3	3	A	7	5	8	4	3	3	2	2	2	2	2	2	1	1	3	4	3	3	3	3.2	7.6
20-Aug	5	5	4	8	A	9	11	11	6	3	3	1	1	1	1	1	1	1	2	2	2	3	2	3	3.7	10.8
21-Aug	4	6	3	2	A	8	4	8	4	2	2	2	2	2	1	1	1	1	2	3	2	3	3	2	3.0	8.1
22-Aug	3	3	2	3	A	7	5	7	5	3	1	1	1	1	1	1	1	1	1	3	3	5	2	D	2.7	7.5
23-Aug	D	D	2	2	A	6	5	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.5	5.5
24-Aug	3	3	3	6	A	8	7	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	2.0	7.5
25-Aug	1	0	0	1	A	4	3	2	1	1	1	1	0	1	1	0	1	1	1	1	3	3	2	2	1.3	4.3
26-Aug	2	2	2	1	A	5	3	4	5	6	2	2	1	1	1	1	1	1	1	2	2	2	2	2	2.2	6.2
27-Aug	2	3	3	3	A	8	11	17	20	7	5	3	2	2	1	1	1	1	1	2	2	2	1	1	4.3	19.6
28-Aug	1	1	1	1	A	7	6	5	5	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1.7	6.7
29-Aug	1	1	1	1	A	4	2	1	1	1	1	1	1	2	2	2	3	2	1	1	2	3	2	1	1.5	4.2
30-Aug	1	1	2	3	A	8	10	3	2	2	1	1	1	1	1	1	1	1	1	2	2	2	2	7	2.4	10.0
31-Aug	5	3	5	5	A	11	5	16	25	8	3	2	2	1	1	1	1	1	1	2	2	3	4	3	4.7	24.6
2.6 2.7 2.9 3.1 -- 7.2 6.0 6.2 5.0 3.1 2.0 1.3 1.1 1.0 1.0 1.0 1.0 1.0 1.2 1.9 2.3 2.1 2.2 2.2																									Diurnal Average	
7.4 6.0 5.8 10.9 -- 12.0 12.3 17.3 24.6 7.7 5.1 3.0 2.3 2.5 4.3 3.3 2.9 2.8 3.1 7.5 6.9 4.8 5.8 7.0																									Diurnal Maximum	
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb
Beaverlodge - August 2012



Hourly Maximums

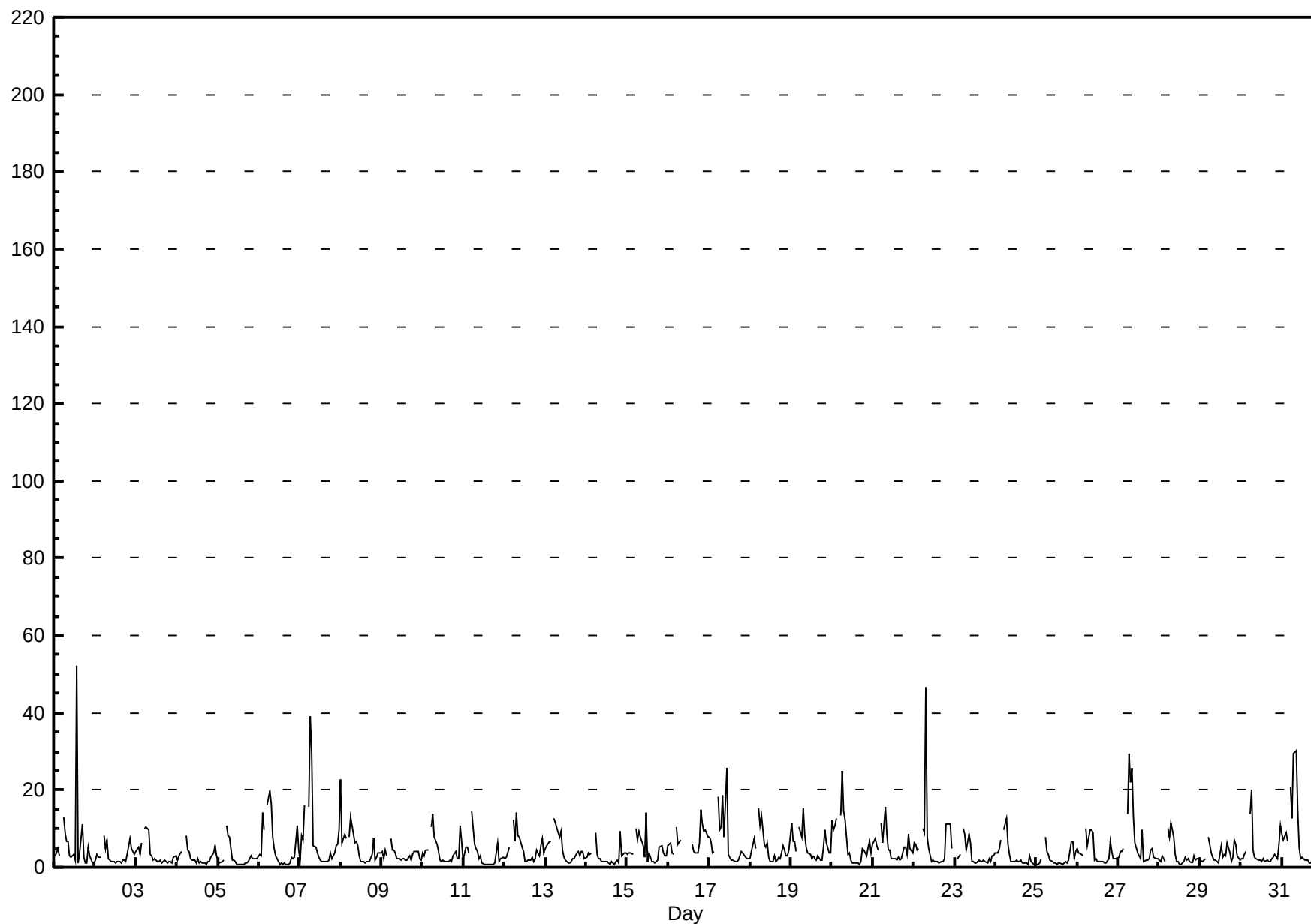
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - August 2012

Maximum Value: 52.2 ppb on Aug 1 14:00																				Maximum Daily Average: 8.5 ppb on Aug 31										Hours in Service: 744	
Minimum Value: 1 ppb on Aug 6 17:00																				Minimum Daily Average: 2.4 ppb on Aug 25										Hours of Data: 704	
Maximum Diurnal Average: 11.6 ppb at hour 6																				Minimum Diurnal Average: 1.7 ppb at hour 16										Hours of Missing Data: 40	
Monthly Average: 4.71 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.2 Q ₁ = 1.7 Median = 3.0 Q ₃ = 5.8 P ₉₀ = 10.0 P ₉₉ = 29.5										Hours of Calibration: 37	
																				Percent Operational Time: 99.6											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	3	4	5	3	A	13	9	7	7	3	2	3	2	52	1	4	11	3	1	1	5	3	1	1	6.3	52.2					
2-Aug	2	3	3	2	A	8	5	7	2	2	1	1	1	1	1	1	2	2	2	4	7	5	4	3	3.1	8.4					
3-Aug	4	5	3	6	A	10	10	10	3	3	2	2	1	1	2	1	1	2	1	2	1	1	3	3	3.5	10.4					
4-Aug	2	3	4	4	A	8	4	4	2	2	2	1	2	1	2	1	1	1	1	2	3	4	6	3	2.7	8.2					
5-Aug	2	1	1	2	A	11	8	8	2	2	1	1	1	1	1	1	1	1	2	3	2	2	2	2	2.5	10.9					
6-Aug	3	3	14	10	A	16	20	16	8	5	3	2	1	1	1	1	1	1	1	2	2	3	11	5	5.6	19.9					
7-Aug	2	8	7	16	A	16	39	30	5	5	4	3	2	1	2	2	2	2	4	2	4	5	6	10	7.6	39.3					
8-Aug	23	6	9	8	A	8	13	8	6	7	6	3	2	1	1	1	1	1	3	8	2	3	4	4	5.6	22.8					
9-Aug	4	2	5	3	A	8	5	4	4	2	2	2	2	2	2	2	3	2	4	4	4	4	2	2	3.2	7.6					
10-Aug	4	3	4	4	A	10	14	8	6	4	2	1	2	1	2	1	2	2	3	4	2	2	11	7	4.3	13.7					
11-Aug	2	5	5	4	A	15	6	5	4	2	3	1	1	1	1	1	1	1	1	4	6	2	2	2	3.2	14.6					
12-Aug	2	3	4	5	A	12	7	14	8	8	5	4	2	1	2	2	3	1	2	5	3	6	7	4	4.8	14.3					
13-Aug	5	5	7	7	A	13	12	9	8	9	4	3	2	1	1	1	2	2	4	4	3	4	4	2	4.9	12.8					
14-Aug	3	4	4	4	A	9	3	2	2	1	1	1	2	1	1	2	1	2	2	1	9	3	4	4	2.8	9.2					
15-Aug	4	4	4	3	A	10	7	9	8	6	3	14	2	4	1	1	1	1	2	5	5	4	3	3	4.5	14.0					
16-Aug	6	6	4	3	A	10	6	7	C	C	C	C	C	C	6	4	4	4	6	15	11	9	10	8	--	14.8					
17-Aug	8	7	4	4	A	18	10	10	19	8	26	3	3	2	2	2	1	2	3	4	4	3	2	2	6.3	25.7					
18-Aug	2	4	7	5	A	15	11	13	6	5	6	3	2	1	3	2	2	3	2	6	4	3	3	5	4.9	15.2					
19-Aug	12	7	7	4	A	10	8	15	9	5	4	3	2	3	2	2	3	2	2	5	10	6	4	4	5.6	15.4					
20-Aug	12	10	11	12	A	13	25	15	12	3	4	2	1	1	1	1	1	1	5	5	3	5	7	4	6.7	24.9					
21-Aug	6	8	5	5	A	11	6	16	8	5	5	2	2	2	2	3	2	2	5	5	3	9	5	4	5.3	15.5					
22-Aug	6	6	5	5	A	10	9	46	8	5	2	2	2	1	2	1	2	2	2	11	11	11	5	D	7.0	46.5					
23-Aug	D	D	2	3	A	10	9	4	9	6	2	1	1	1	2	2	2	2	1	1	2	2	3	3	3.3	10.1					
24-Aug	4	4	5	7	A	10	13	6	4	1	2	1	2	2	2	2	1	1	1	1	3	1	1	1	3.2	12.7					
25-Aug	1	1	1	2	A	8	4	3	2	1	1	1	1	1	1	1	1	2	1	2	7	7	2	4	2.4	8.0					
26-Aug	5	4	3	3	A	10	5	10	10	9	2	2	2	1	1	1	1	1	2	7	4	2	2	2	4.0	10.2					
27-Aug	3	4	4	5	A	14	30	22	26	13	6	4	3	2	10	1	2	2	2	4	5	3	2	2	7.3	29.5					
28-Aug	2	1	3	2	A	10	8	12	8	3	1	1	1	1	1	3	2	2	2	1	3	2	2	2	3.2	11.7					
29-Aug	2	2	2	2	A	8	4	3	2	2	1	1	5	2	3	3	6	4	2	3	7	6	3	2	3.2	7.8					
30-Aug	2	2	3	4	A	14	20	5	3	2	2	2	2	2	1	2	1	2	2	3	4	2	6	11	4.2	20.0					
31-Aug	9	7	9	7	A	21	13	30	30	15	5	2	3	2	2	2	1	1	2	4	13	10	5	5	8.5	30.2					
4.8 4.4 4.9 5.0 -- 11.6 11.0 11.6 7.7 4.8 3.7 2.5 1.8 3.3 2.0 1.7 2.1 1.8 2.4 4.1 4.9 4.3 4.3 3.7																									Diurnal Average						
22.8 9.8 14.3 16.2 -- 20.9 39.3 46.5 30.2 15.1 25.7 14.0 5.4 52.2 9.7 4.1 11.0 3.6 6.5 14.8 12.7 11.4 10.8 10.9																									Diurnal Maximum						
C - Calibration D - DAS Failure A - Automated Daily Zero Span																															

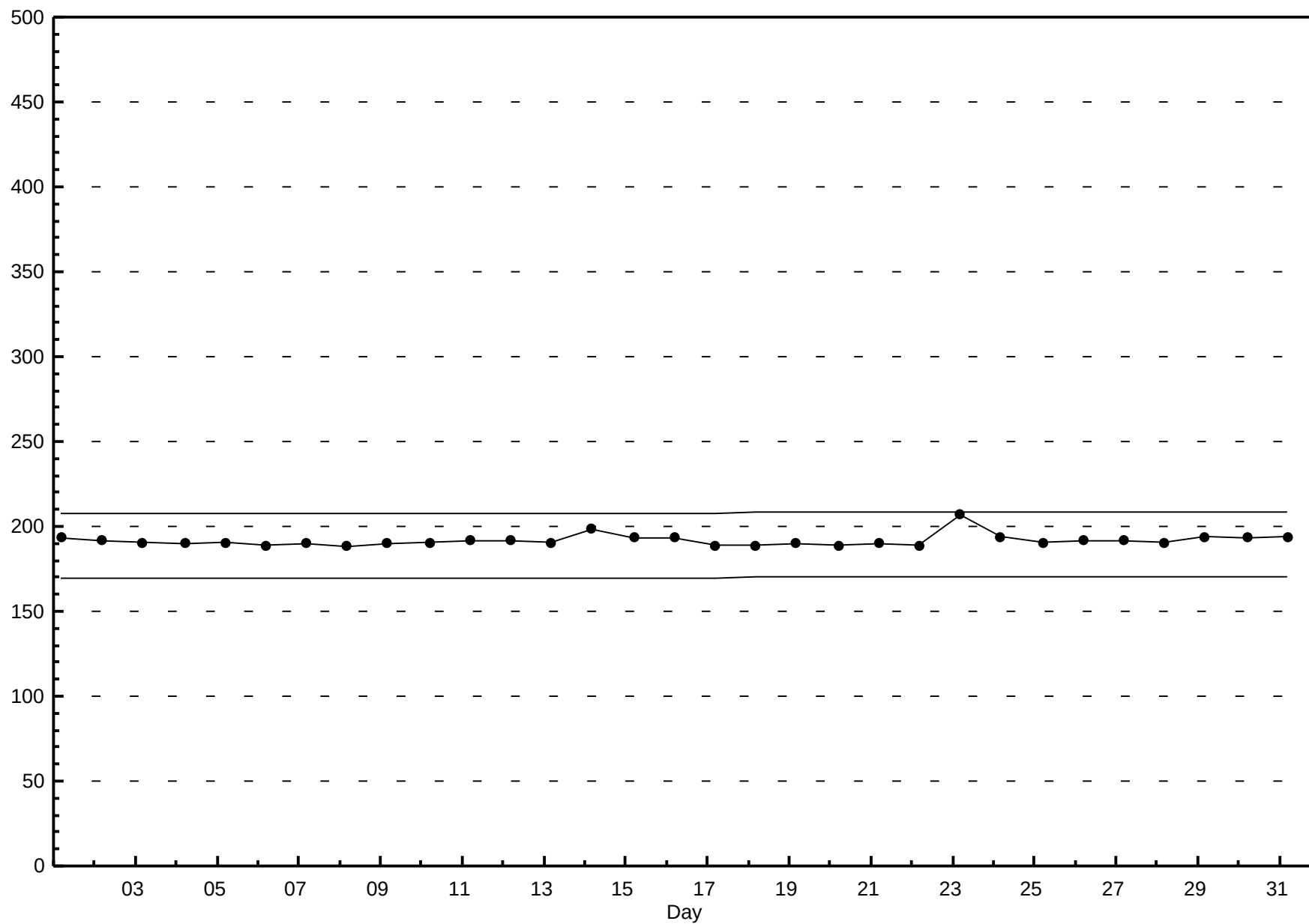
Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb
Beaverlodge - August 2012



Span Responses

Oxides of Nitrogen (NO_x)
Beaverlodge - August 2012



Hourly Averages

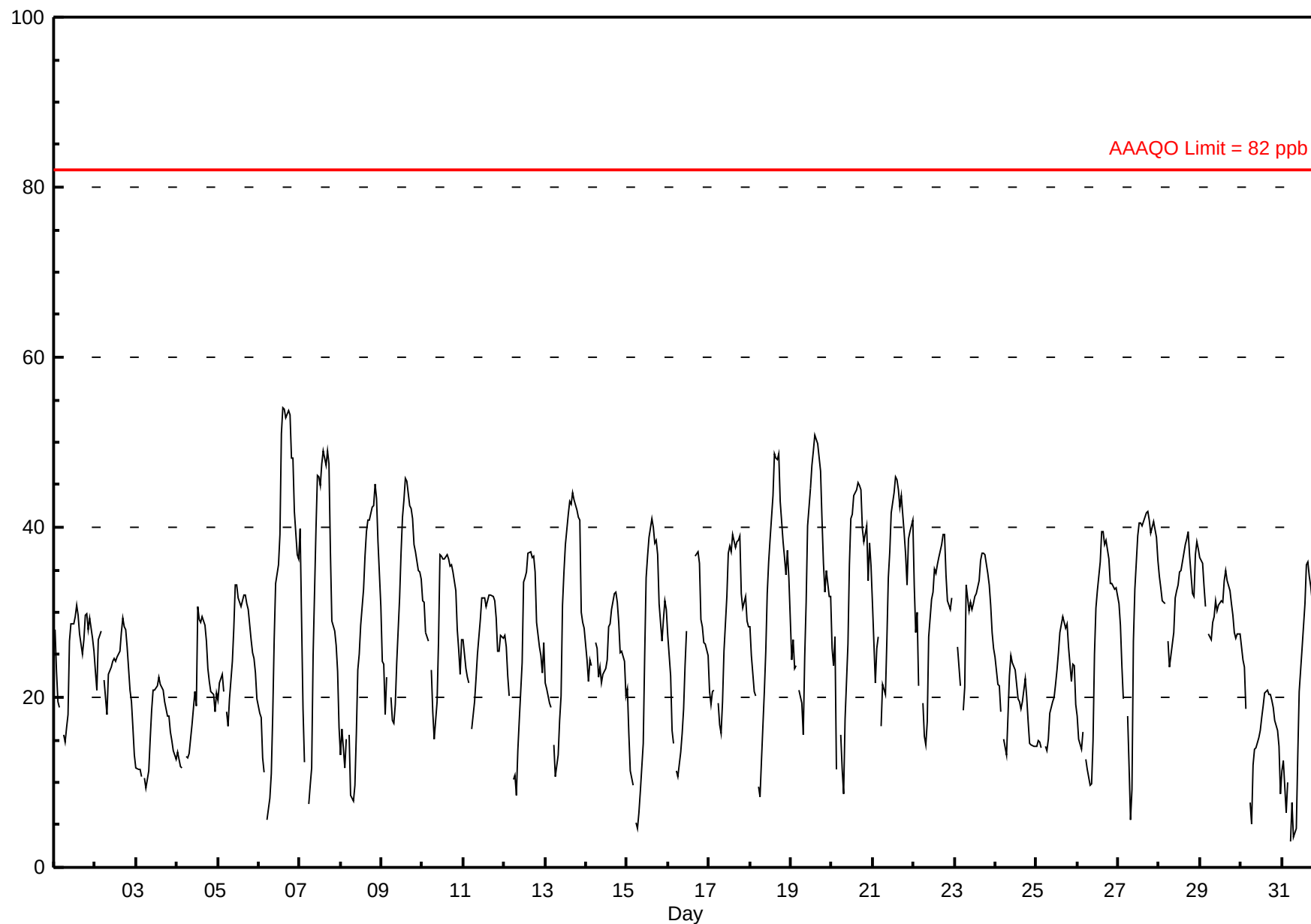
Ozone (O₃) - ppb

Beaverlodge - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 54.0 ppb on Aug 6 15:00 Maximum Daily Average: 34.7 ppb on Aug 21																								Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 35 Percent Operational Time: 99.6		
Minimum Value: 3 ppb on Aug 31 06:00 Minimum Daily Average: 16.2 ppb on Aug 3 Maximum Diurnal Average: 36.6 ppb at hour 16 Minimum Diurnal Average: 14.4 ppb at hour 7 Monthly Average: 27.22 ppb Percentiles: P ₁ = 5.4 P ₁₀ = 13.7 Q ₁ = 19.6 Median = 27.0 Q ₃ = 34.7 P ₉₀ = 40.8 P ₉₉ = 50.8																										
Day	Hourly Period Ending At (MST)																							Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	28	23	20	19	A	16	15	16	18	27	29	29	29	31	30	27	25	27	30	30	28	29	27	25	25.0	30.8
2-Aug	23	21	27	28	A	22	20	18	23	24	24	25	24	25	25	28	29	28	28	26	21	19	16	13	23.4	29.4
3-Aug	12	11	12	11	A	11	9	11	15	19	21	21	21	22	21	21	21	19	18	18	16	15	14	13	16.2	22.4
4-Aug	14	13	12	12	A	13	13	13	15	17	21	19	31	29	29	29	29	27	23	22	21	20	18	21	20.0	30.7
5-Aug	20	22	23	21	A	18	17	20	24	28	33	33	32	31	31	32	32	31	30	27	25	25	23	20	26.0	33.2
6-Aug	18	18	13	11	A	6	8	11	18	27	33	36	39	51	54	54	53	54	53	48	48	42	37	36	33.4	54.0
7-Aug	40	29	19	12	A	7	10	12	25	40	46	46	45	47	49	47	49	47	37	29	28	26	23	17	31.7	48.9
8-Aug	13	16	12	15	A	16	9	8	10	16	23	25	29	33	37	39	41	41	42	43	45	43	38	31	27.1	45.1
9-Aug	24	24	18	22	A	20	17	17	19	24	32	37	41	43	46	45	43	42	41	38	37	35	35	34	32.0	45.7
10-Aug	31	31	28	27	A	23	18	15	20	27	37	37	36	36	37	36	35	36	35	33	28	26	23	27	29.5	36.8
11-Aug	27	23	22	22	A	16	19	22	25	27	29	32	32	31	31	32	32	32	31	29	25	25	27	27	27.0	32.1
12-Aug	27	26	23	20	A	10	11	9	14	17	24	34	34	35	37	37	36	37	35	29	26	25	23	26	25.8	37.1
13-Aug	22	21	19	19	A	14	11	13	17	20	31	35	38	42	43	43	44	43	42	41	41	30	29	28	29.8	44.1
14-Aug	24	22	24	24	A	26	26	22	24	22	23	23	24	28	29	30	32	32	31	29	25	25	24	20	25.7	32.5
15-Aug	21	16	11	10	A	5	5	6	9	15	25	34	37	39	41	40	38	39	37	31	27	29	31	30	25.0	41.1
16-Aug	27	23	16	15	A	11	11	14	16	19	24	28	C	C	C	C	37	37	36	29	28	26	26	25	23.5	37.1
17-Aug	21	19	21	21	A	19	17	16	20	25	32	37	38	37	39	38	38	38	39	32	31	32	29	28	29.0	39.2
18-Aug	28	25	21	20	A	9	8	13	21	25	32	36	39	44	49	48	48	49	43	38	36	34	37	34	32.1	48.7
19-Aug	24	27	23	24	A	21	19	16	25	31	40	45	47	49	51	50	50	47	41	36	32	35	32	32	34.6	50.9
20-Aug	26	24	27	11	A	16	12	9	17	26	36	41	42	44	44	45	45	44	40	38	40	34	38	35	31.9	45.2
21-Aug	31	22	26	27	A	17	22	20	27	34	37	42	44	46	46	44	42	44	39	37	33	39	39	41	34.7	46.0
22-Aug	33	28	30	21	A	19	15	14	17	27	31	32	35	35	36	36	38	39	39	34	31	30	32	D	29.8	39.2
23-Aug	D	D	26	21	A	18	21	33	30	31	30	31	32	32	34	36	37	37	37	35	33	31	28	26	30.4	37.0
24-Aug	25	21	21	18	A	15	13	18	23	25	24	23	22	20	20	19	19	22	20	17	15	14	14	14	19.2	24.8
25-Aug	14	15	15	14	A	14	14	15	18	20	20	22	23	25	28	29	29	28	29	26	22	24	24	19	21.1	29.5
26-Aug	18	15	14	16	A	13	12	10	10	15	25	30	32	36	39	39	38	39	36	33	33	33	33	33	26.2	39.5
27-Aug	31	28	24	20	A	18	12	6	9	27	33	39	41	41	40	41	42	42	41	39	40	41	39	36	31.6	41.9
28-Aug	34	33	31	31	A	27	23	25	28	32	33	33	35	35	37	38	39	39	37	32	32	37	38	37	33.3	39.5
29-Aug	36	36	33	31	A	27	27	29	29	31	30	31	31	31	34	35	34	33	31	30	28	27	27	27	30.8	36.4
30-Aug	26	24	24	19	A	8	5	12	14	14	15	16	18	19	20	21	20	20	20	19	17	16	14	9	17.0	26.0
31-Aug	11	13	6	10	A	3	8	4	5	13	21	23	26	31	36	36	34	33	31	27	28	26	23	26	20.6	36.0
24.3 22.3 20.6 19.1 -- 15.5 14.4 15.0 18.8 24.0 28.8 31.4 33.2 34.9 36.4 36.6 36.4 36.3 34.6 31.4 29.7 28.9 27.8 26.4																								Diurnal Average		
39.8 35.7 33.0 31.0 -- 27.4 26.8 33.1 30.1 39.8 46.2 45.9 47.3 51.0 54.0 54.0 52.8 53.8 53.2 48.1 48.1 43.3 39.5 40.9																								Diurnal Maximum		
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Beaverlodge - August 2012



Hourly Maximums

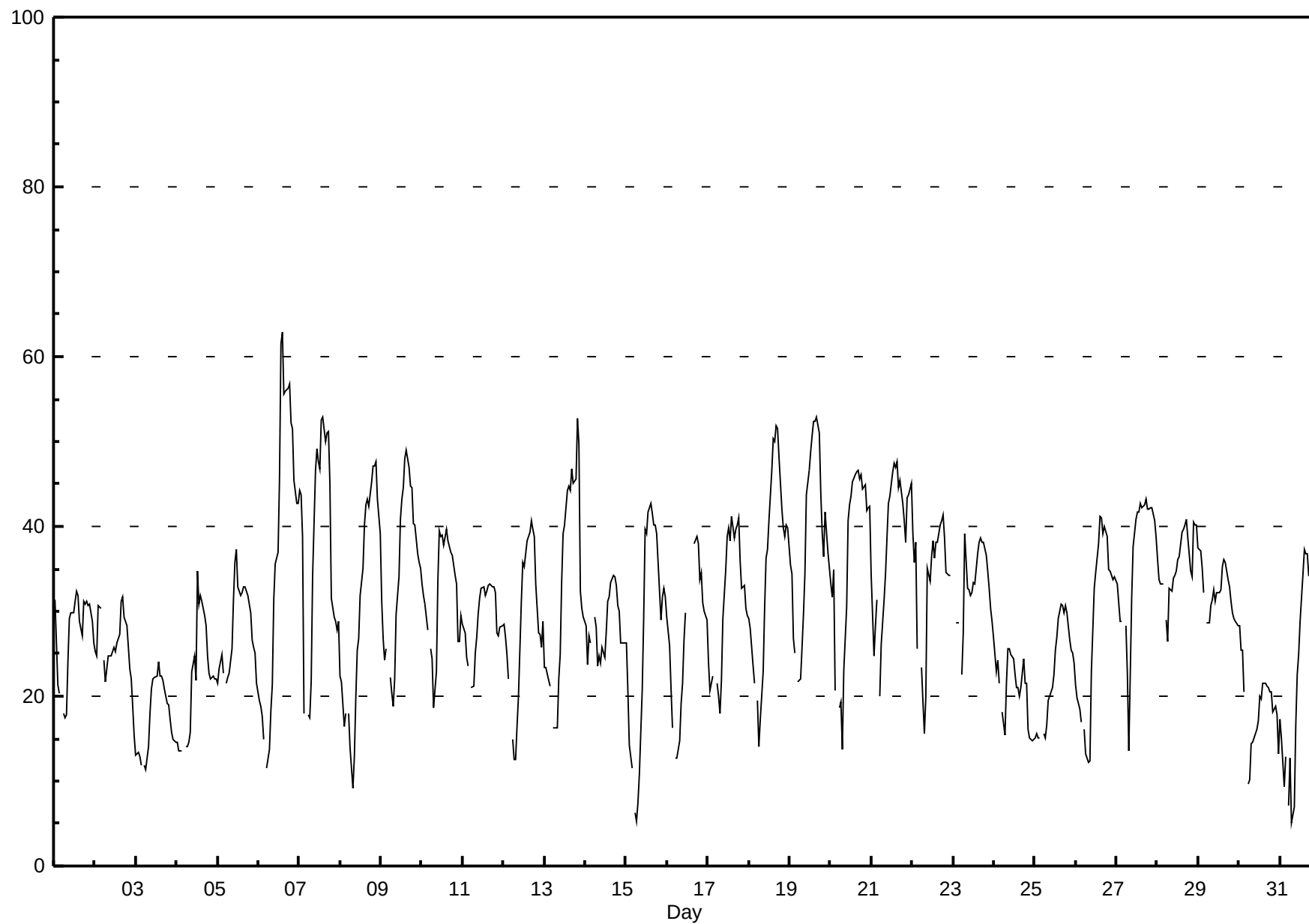
Ozone (O₃) - ppb

Beaverlodge - August 2012

Maximum Value: 63.0 ppb on Aug 6 15:00																								Maximum Daily Average: 38.6 ppb on Aug 21										Hours in Service: 744	
Minimum Value: 5 ppb on Aug 31 08:00																								Minimum Daily Average: 17.6 ppb on Aug 3										Hours of Data: 706	
Maximum Diurnal Average: 38.6 ppb at hour 15																								Minimum Diurnal Average: 18.2 ppb at hour 7										Hours of Missing Data: 38	
Monthly Average: 30.11 ppb																								Percentiles: P ₁ = 9.1 P ₁₀ = 16.2 Q ₁ = 22.1 Median = 30.0 Q ₃ = 37.9 P ₉₀ = 43.7 P ₉₉ = 51.5										Hours of Calibration: 35	
																								Percent Operational Time: 99.6											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Aug	31	26	21	20	A	18	17	18	24	29	30	30	31	32	32	29	27	31	31	31	31	31	29	26	27.2	32.3									
2-Aug	25	25	31	30	A	24	22	23	25	25	25	26	25	26	27	31	32	29	29	28	23	22	19	15	25.6	31.7									
3-Aug	13	13	13	12	A	12	11	14	18	21	22	22	22	24	22	22	22	21	19	19	17	16	15	15	17.6	24.0									
4-Aug	15	14	14	14	A	14	14	15	16	23	25	22	35	31	32	31	29	28	25	23	22	22	22	22	22.0	34.7									
5-Aug	22	23	25	23	A	22	22	23	26	31	36	37	33	32	32	33	33	32	32	30	27	26	25	21	28.0	37.2									
6-Aug	19	19	18	15	A	11	14	18	21	31	36	37	46	62	63	56	56	56	57	52	52	45	43	43	37.8	63.0									
7-Aug	44	44	39	18	A	18	17	22	34	47	49	48	47	53	53	50	51	51	45	32	29	29	28	29	38.1	52.9									
8-Aug	22	22	16	18	A	18	14	9	13	20	25	27	32	35	40	42	43	42	45	47	47	48	43	39	30.8	47.6									
9-Aug	31	27	24	26	A	22	20	19	22	30	34	41	43	45	48	49	47	45	45	40	40	37	36	35	35.0	49.0									
10-Aug	33	32	31	28	A	26	24	19	23	34	39	39	39	38	40	38	38	37	37	34	33	26	26	29	32.3	39.6									
11-Aug	28	28	25	24	A	21	21	25	27	30	31	33	33	32	32	33	33	33	33	32	27	27	28	28	28.9	33.2									
12-Aug	28	27	25	22	A	15	12	12	16	20	31	36	35	37	38	39	41	40	39	33	27	27	26	29	28.6	40.7									
13-Aug	23	23	22	21	A	16	16	16	22	25	33	39	40	44	45	44	47	45	46	53	50	32	30	29	33.2	52.6									
14-Aug	28	24	27	26	A	29	28	24	25	24	26	25	28	31	32	33	34	34	33	31	30	26	26	26	28.3	34.2									
15-Aug	26	21	14	12	A	6	5	7	11	21	29	40	39	42	43	42	40	40	39	36	29	32	33	32	27.7	42.8									
16-Aug	29	26	21	16	A	13	13	15	19	22	27	30	C	C	C	C	38	39	38	34	35	31	30	29	26.5	38.9									
17-Aug	24	21	22	22	A	21	20	18	22	29	35	39	40	38	41	39	40	40	41	36	33	33	30	29	31.0	41.2									
18-Aug	29	28	24	22	A	19	14	17	23	30	36	37	41	47	50	50	52	52	48	42	40	39	40	40	35.6	51.9									
19-Aug	35	34	27	25	A	22	22	26	30	34	44	47	49	51	52	52	53	51	44	39	36	42	37	35	38.6	53.0									
20-Aug	33	32	35	21	A	19	19	14	23	30	41	43	44	45	46	46	47	46	46	44	45	42	42	42	36.7	46.6									
21-Aug	34	25	28	31	A	20	26	31	34	39	43	44	46	47	47	48	45	45	43	41	38	43	44	45	38.6	47.7									
22-Aug	39	36	38	26	A	23	19	16	20	35	34	36	38	36	38	38	40	41	41	39	35	34	34	D	33.5	41.3									
23-Aug	D	D	29	29	A	22	27	39	33	33	32	32	33	33	37	38	39	38	38	37	35	33	30	29	33.1	39.1									
24-Aug	27	23	24	21	A	18	15	21	26	26	25	24	23	21	21	20	21	24	21	21	16	15	15	15	21.1	26.9									
25-Aug	15	16	15	15	A	16	15	17	20	21	21	22	25	27	29	31	31	30	31	30	27	25	25	24	22.9	30.8									
26-Aug	21	20	18	17	A	16	13	12	12	23	28	33	35	38	41	41	39	40	39	35	35	34	34	34	28.6	41.1									
27-Aug	33	31	29	29	A	28	23	14	22	32	38	41	42	42	43	42	43	43	42	42	42	42	41	39	35.7	43.3									
28-Aug	36	34	33	33	A	29	26	33	32	34	34	35	36	37	39	40	40	41	39	35	34	41	40	40	35.7	40.9									
29-Aug	37	37	35	32	A	29	29	31	31	32	31	32	32	33	35	36	36	34	33	31	30	29	29	28	32.3	37.5									
30-Aug	28	25	25	21	A	10	10	14	15	15	16	17	20	20	22	22	21	21	21	21	18	19	18	13	18.7	28.4									
31-Aug	17	15	9	13	A	7	13	5	7	17	23	25	29	34	37	37	37	34	34	29	31	29	27	32	23.5	37.2									
27.7 25.6 24.4 22.0 -- 18.9 18.2 18.9 22.3 27.8 31.5 33.4 35.4 37.0 38.6 38.4 38.5 38.2 37.2 34.7 32.7 31.5 30.5 29.8																								Diurnal Average											
44.2 43.7 38.8 33.3 -- 29.3 28.6 39.1 34.3 46.6 49.2 47.6 48.8 61.5 63.0 55.5 55.9 56.2 56.8 52.6 51.6 47.6 43.7 45.2																								Diurnal Maximum											
C - Calibration D - DAS Failure A - Automated Daily Zero Span																																			

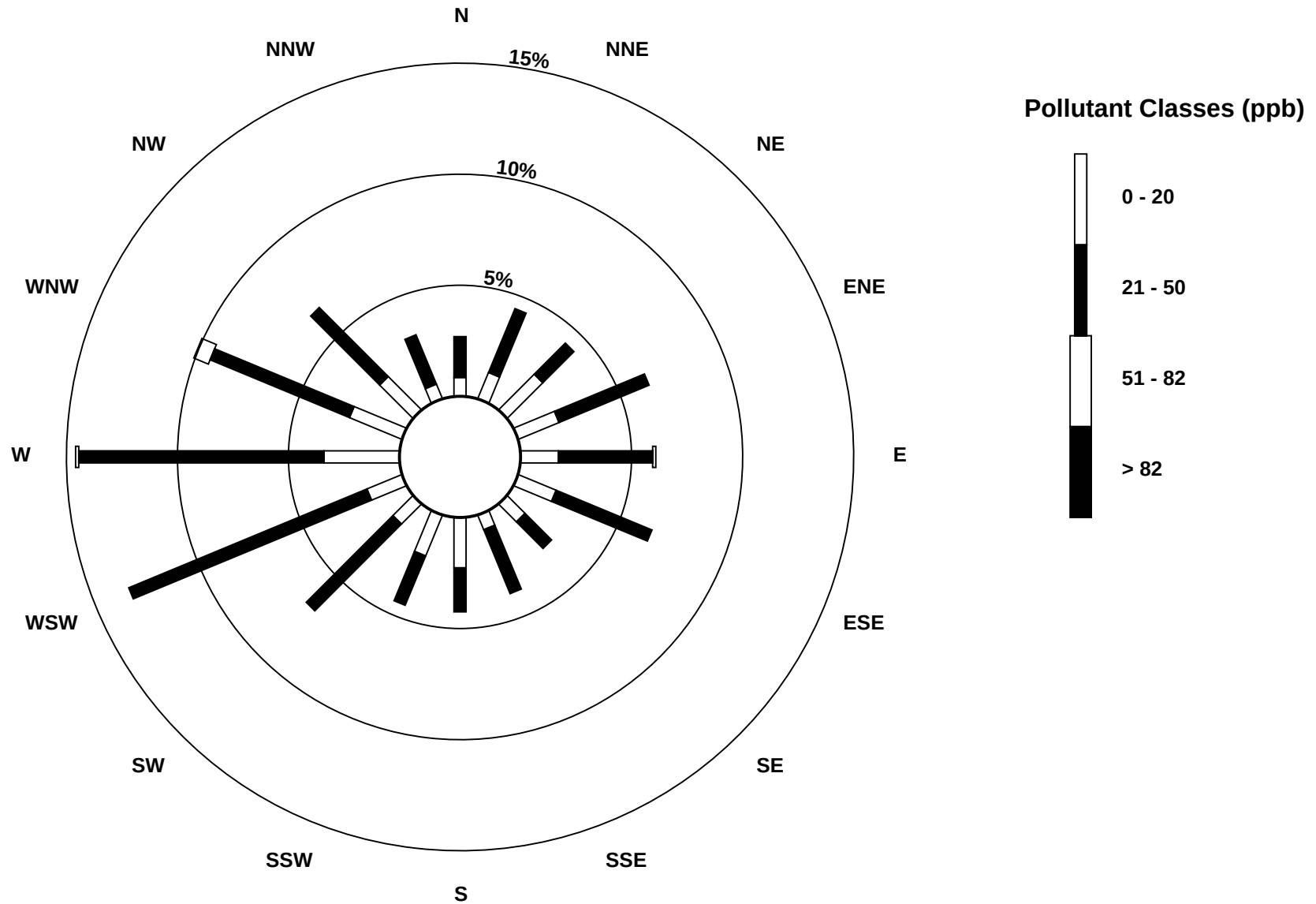
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - August 2012



Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - August 2012



Eight Hour Running Averages

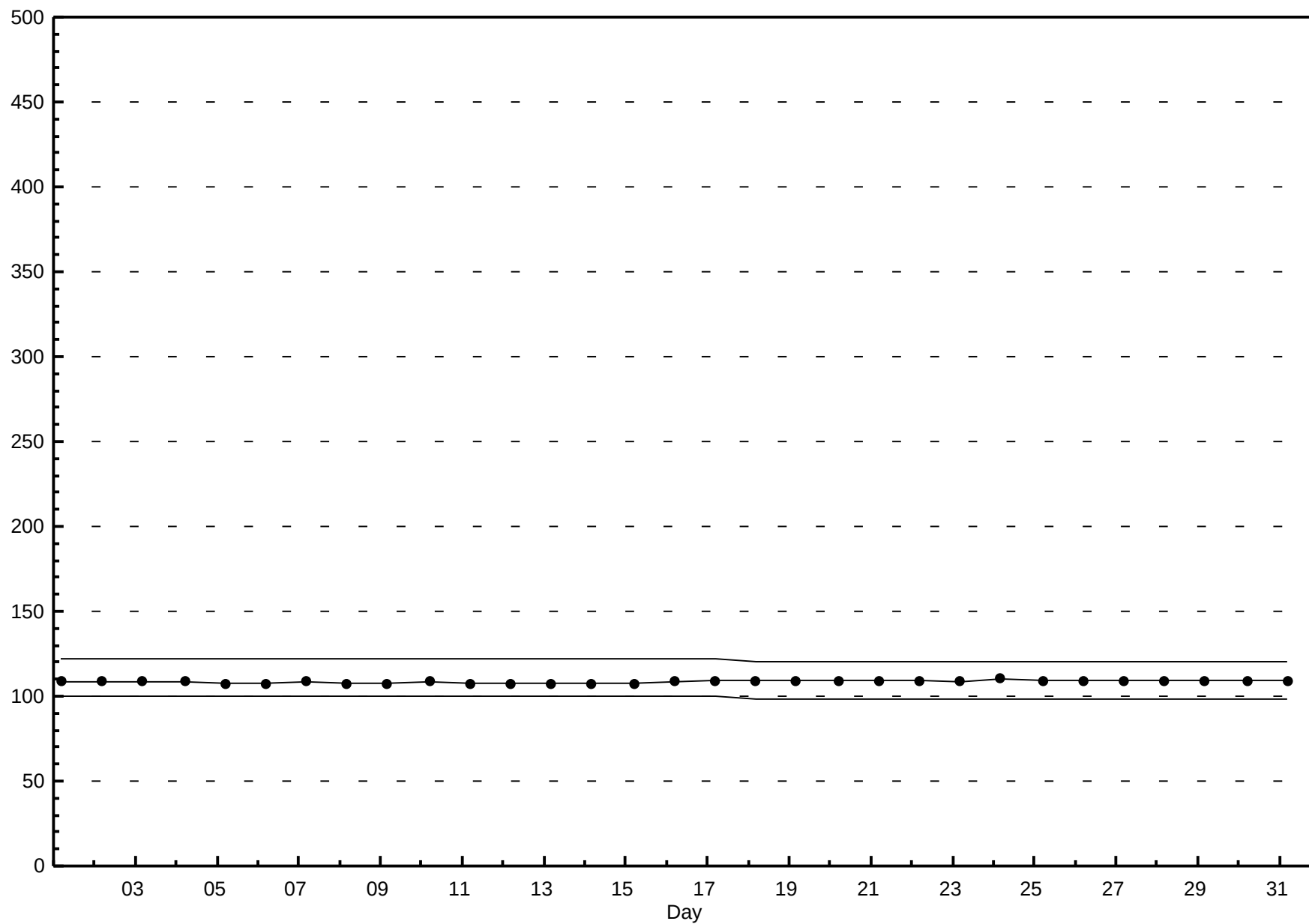
Ozone (O₃) - ppb

Beaverlodge - August 2012

Maximum Value: 51.9 ppb on Aug 6 21:00																								Hours in Service: 744	
Minimum Value: 6.8 ppb on Aug 31 09:00																								Hours of Data: 730	
																								Hours of Missing Data: 14	
Percentiles: P ₁ = 9.2 P ₁₀ = 15.6 Q ₁ = 20.3 Median = 26.5 Q ₃ = 33.0 P ₉₀ = 39.0 P ₉₉ = 47.3																								Hours of Calibration: 7	
																								Percent Operational Time: 99.1	
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
1-Aug	32	30	28	27	26	24	21	19	18	19	20	21	22	24	26	27	28	28	28	29	28	28	28	28	32.0
2-Aug	27	27	26	26	26	25	24	23	23	23	23	22	22	23	23	25	25	26	27	27	26	26	25	23	27.4
3-Aug	21	18	16	14	14	12	11	11	11	12	14	15	16	17	19	20	21	21	21	20	20	19	18	17	21.1
4-Aug	16	15	14	13	13	13	13	13	13	14	15	16	18	20	22	24	25	27	27	27	26	25	24	23	27.3
5-Aug	21	21	21	21	21	20	20	20	21	22	23	25	26	27	29	31	32	32	32	31	30	29	28	27	31.9
6-Aug	25	23	21	19	18	15	13	12	12	13	16	20	22	28	34	39	43	47	49	51	52	51	49	46	51.9
7-Aug	45	42	37	33	31	26	22	18	16	18	22	27	29	34	39	43	46	47	46	44	42	39	36	32	47.1
8-Aug	28	24	20	19	17	16	14	13	12	12	14	15	17	19	22	26	30	33	36	38	40	41	42	41	41.6
9-Aug	38	36	33	31	29	25	22	20	20	20	22	24	26	29	32	36	39	41	42	42	42	41	39	38	42.4
10-Aug	37	35	34	32	31	30	27	25	23	22	24	25	27	28	30	33	35	36	36	35	34	33	31	30	36.6
11-Aug	29	28	26	25	24	23	22	22	21	22	23	24	25	27	29	30	31	31	32	31	31	30	29	29	31.6
12-Aug	28	27	26	25	25	23	21	18	16	15	15	17	19	22	25	29	32	34	36	35	34	33	31	30	35.5
13-Aug	28	26	24	23	22	21	19	17	16	16	18	20	22	26	30	34	37	40	41	42	42	41	39	37	42.3
14-Aug	35	32	30	28	26	25	25	24	24	24	24	24	24	24	24	25	26	28	29	30	30	29	29	27	34.8
15-Aug	26	24	21	19	18	15	13	11	9	9	11	14	17	21	26	30	34	37	38	38	36	35	34	33	38.0
16-Aug	31	29	27	25	24	22	19	17	15	14	15	17	17	18	N	N	N	N	N	N	N	32	31	31	32.2
17-Aug	29	26	24	23	23	22	20	19	19	20	21	24	25	28	30	33	36	37	38	37	37	36	35	33	38.0
18-Aug	32	31	28	27	26	23	20	18	17	17	18	21	23	27	32	37	40	43	44	45	44	43	42	40	44.7
19-Aug	37	34	32	30	29	27	25	22	22	23	25	28	30	34	38	42	45	47	47	46	44	43	40	38	47.4
20-Aug	35	32	30	27	27	24	21	18	17	17	18	22	25	28	32	37	40	43	43	43	43	41	41	39	43.1
21-Aug	38	35	33	32	30	28	26	23	23	25	26	28	30	34	37	40	42	43	43	43	41	41	40	39	43.4
22-Aug	38	36	35	33	33	30	27	23	21	21	21	22	24	26	28	31	34	35	36	37	36	36	35	35	38.1
23-Aug	34	N	N	N	N	N	N	N	25	26	27	28	28	30	32	32	33	34	34	35	35	35	34	33	35.1
24-Aug	31	29	27	25	24	22	20	19	19	19	19	20	20	21	22	22	21	21	21	20	19	18	18	17	31.3
25-Aug	16	15	15	14	14	14	14	14	15	16	16	17	18	20	21	23	24	26	27	27	27	26	25	27.2	
26-Aug	24	22	20	19	18	17	15	14	13	13	14	16	18	21	25	28	32	35	36	37	37	36	36	35	36.8
27-Aug	34	33	31	29	29	27	24	20	17	16	18	20	23	26	29	34	38	40	41	41	41	40	40	40	40.7
28-Aug	39	38	37	36	35	33	31	29	28	28	28	29	30	32	34	35	36	37	36	36	36	37	36	36	39.0
29-Aug	36	36	35	35	35	34	33	31	30	30	29	29	30	30	31	32	32	32	32	32	32	31	30	30	36.2
30-Aug	29	28	27	25	25	22	19	17	15	14	12	12	13	14	16	17	18	19	19	20	20	19	18	17	28.6
31-Aug	16	15	13	12	11	9	9	8	7	7	9	11	13	16	20	24	27	30	31	32	32	31	30	29	32.1
44.8 41.7 37.3 35.6 35.5 34.2 32.5 31.3 30.3 29.7 29.2 29.3 30.5 34.0 38.7 43.2 46.2 47.3 49.2 50.8 51.9 50.7 48.6 46.4																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Beaverlodge - August 2012



Hourly Averages

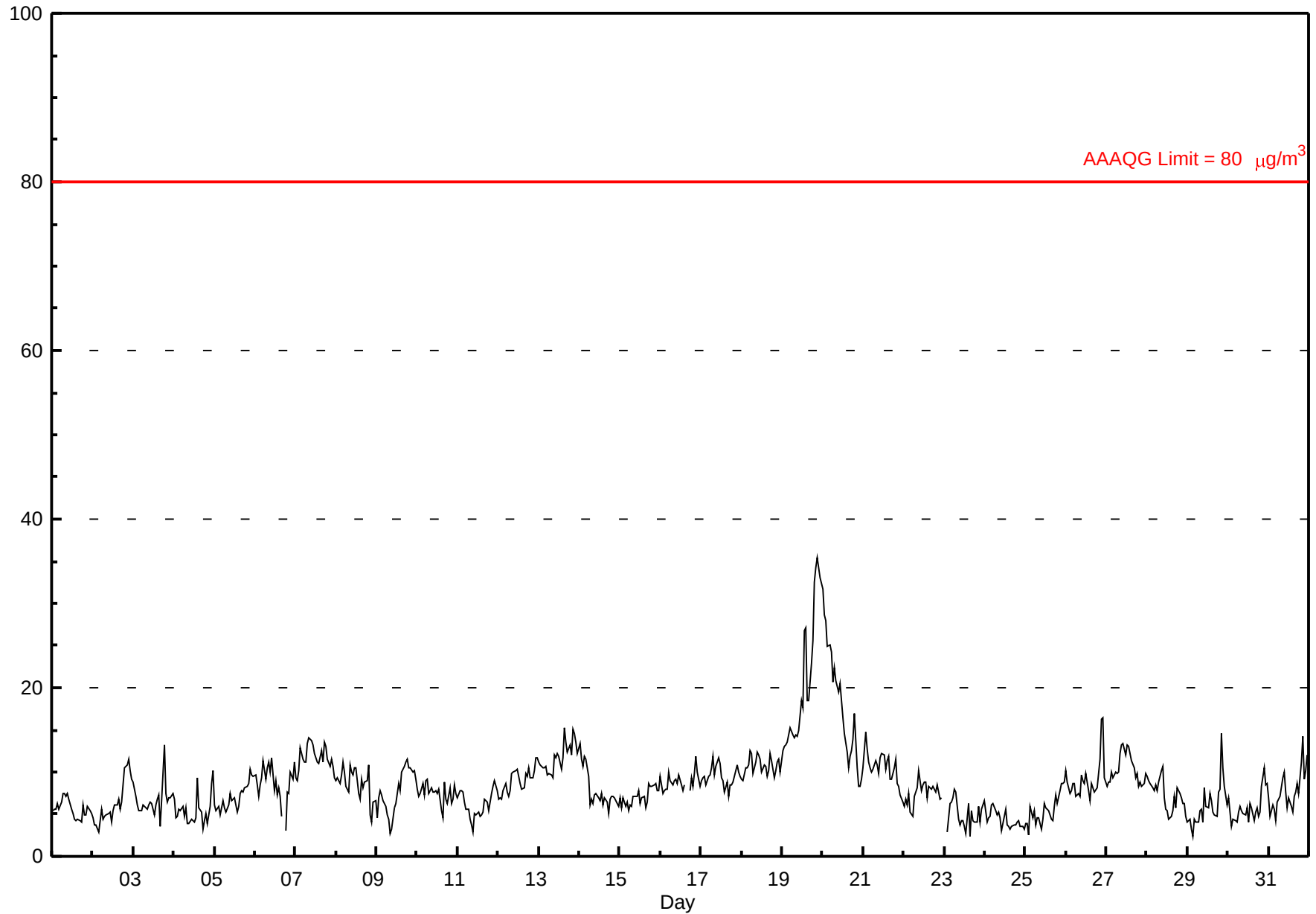
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - August 2012

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 35.5 µg/m³ on Aug 19 22:00 Minimum Value: 2 µg/m³ on Aug 29 04:00 Maximum Diurnal Average: 9.7 µg/m³ at hour 22 Monthly Average: 8.53 µg/m³																				Maximum Daily Average: 20.7 µg/m³ on Aug 19 Minimum Daily Average: 4.4 µg/m³ on Aug 24 Minimum Diurnal Average: 7.8 µg/m³ at hour 17 Percentiles: P ₁ = 2.9 P ₁₀ = 4.5 Q ₁ = 5.9 Median = 7.8 Q ₃ = 10.1 P ₉₀ = 12.2 P ₉₉ = 25.9					Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 2 Percent Operational Time: 99.5	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	5	6	6	6	6	6	7	7	7	8	7	6	5	4	4	4	4	4	6	5	5	6	6	5	5.7	7.5
2-Aug	5	4	4	3	4	6	4	5	5	5	5	4	5	6	6	7	6	6	9	10	11	12	10	9	6.3	11.6
3-Aug	9	7	6	5	5	5	6	6	6	6	7	6	5	6	7	7	4	7	13	7	6	7	7	8	6.6	13.2
4-Aug	7	4	5	6	5	6	5	6	4	4	4	4	4	5	9	6	5	3	4	5	4	6	9	10	5.4	10.2
5-Aug	6	5	6	5	6	7	6	5	6	8	7	7	7	5	6	8	8	8	8	8	9	10	10	9	7.0	10.4
6-Aug	10	8	7	9	9	11	9	10	11	10	12	8	9	7	8	7	5	N	3	8	7	10	9	11	8.7	11.6
7-Aug	9	9	10	13	12	11	11	13	14	14	13	12	12	11	11	13	11	14	13	12	11	12	11	9	11.7	14.0
8-Aug	9	9	9	10	11	10	8	8	11	10	10	11	10	7	7	9	8	9	9	11	5	4	6	7	8.6	11.2
9-Aug	5	7	8	7	7	6	5	4	3	3	6	6	7	9	8	10	11	11	12	11	10	10	10	9	7.7	11.6
10-Aug	8	7	7	9	7	9	9	7	8	8	8	8	7	8	6	5	9	7	6	8	6	7	8	8	7.5	9.1
11-Aug	7	8	8	8	6	6	6	4	4	3	5	5	5	5	5	5	7	6	5	6	7	8	9	8	6.1	9.0
12-Aug	7	7	7	8	9	8	7	8	10	10	10	10	9	9	8	8	10	9	11	9	9	10	12	12	9.0	11.7
13-Aug	11	11	10	10	11	10	10	10	9	12	12	12	12	10	12	15	14	12	13	12	15	15	13	12	11.8	15.2
14-Aug	13	12	11	12	11	9	6	7	6	7	7	7	7	7	6	7	6	5	7	7	7	7	6	6	7.8	13.4
15-Aug	7	6	7	6	6	5	6	6	7	7	7	8	6	7	7	6	6	9	8	8	9	9	8	8	7.0	8.7
16-Aug	9	7	8	8	8	10	9	8	9	9	9	10	9	8	8	C	C	8	9	8	10	12	10	8	8.9	11.9
17-Aug	9	9	10	9	10	10	10	12	10	11	12	11	9	9	8	9	7	8	8	9	9	11	10	9	9.5	11.9
18-Aug	9	9	10	10	11	13	12	10	11	12	12	12	10	11	11	10	10	12	11	9	10	11	12	10	10.8	12.5
19-Aug	13	13	13	14	14	15	14	14	14	14	15	18	18	27	27	18	18	23	26	33	34	35	33	32	20.7	35.5
20-Aug	32	29	28	25	25	24	21	22	21	20	21	18	17	15	12	11	12	13	14	17	10	8	8	9	17.9	31.7
21-Aug	11	15	13	11	10	10	10	11	11	10	12	12	12	10	11	12	9	9	11	12	9	8	7	6	10.5	14.7
22-Aug	6	7	6	7	5	5	7	8	8	10	8	8	9	9	7	8	8	8	8	8	9	7	7	D	7.5	10.2
23-Aug	D	D	3	6	6	7	8	8	4	4	4	4	3	3	6	2	5	4	4	4	6	4	6	6	5.0	8.0
24-Aug	7	4	5	5	6	6	5	5	5	5	3	5	6	4	4	3	4	4	4	4	4	3	4	3	4.4	6.6
25-Aug	4	4	2	6	5	5	4	5	5	3	4	6	6	6	5	4	4	6	7	6	8	9	9	9	5.5	8.9
26-Aug	10	9	7	8	9	9	7	7	7	10	9	9	10	8	7	9	8	8	8	10	12	16	16	9	9.2	16.5
27-Aug	8	9	9	10	9	10	10	10	12	13	13	12	13	13	12	11	10	9	10	8	9	8	9	10	10.4	13.4
28-Aug	10	9	9	8	8	9	8	9	10	11	7	6	5	4	5	5	7	6	8	7	7	6	6	5	7.3	10.8
29-Aug	4	4	3	2	4	4	4	5	6	4	8	6	6	7	7	5	5	5	8	8	15	10	8	6	6.1	14.6
30-Aug	7	5	3	4	4	4	5	6	5	5	5	6	4	6	6	4	5	6	5	5	8	11	8	9	5.7	10.6
31-Aug	7	5	6	6	4	7	7	7	9	10	8	6	7	6	5	7	8	9	8	11	14	9	10	12	7.8	14.3
8.7 8.3 7.9 8.2 8.2 8.5 8.0 8.2 8.4 8.5 8.7 8.5 8.2 8.1 8.1 7.9 7.8 8.2 8.9 9.3 9.5 9.7 9.6 9.2																									Diurnal Average	
31.7 28.6 27.9 24.8 25.1 24.2 20.7 22.4 20.8 19.6 20.6 18.4 17.6 26.7 27.2 18.5 18.5 22.9 25.6 32.5 34.3 35.5 33.1 32.3																									Diurnal Maximum	
C - Calibration D - DAS Failure 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 Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Beaverlodge - August 2012



Hourly Maximums

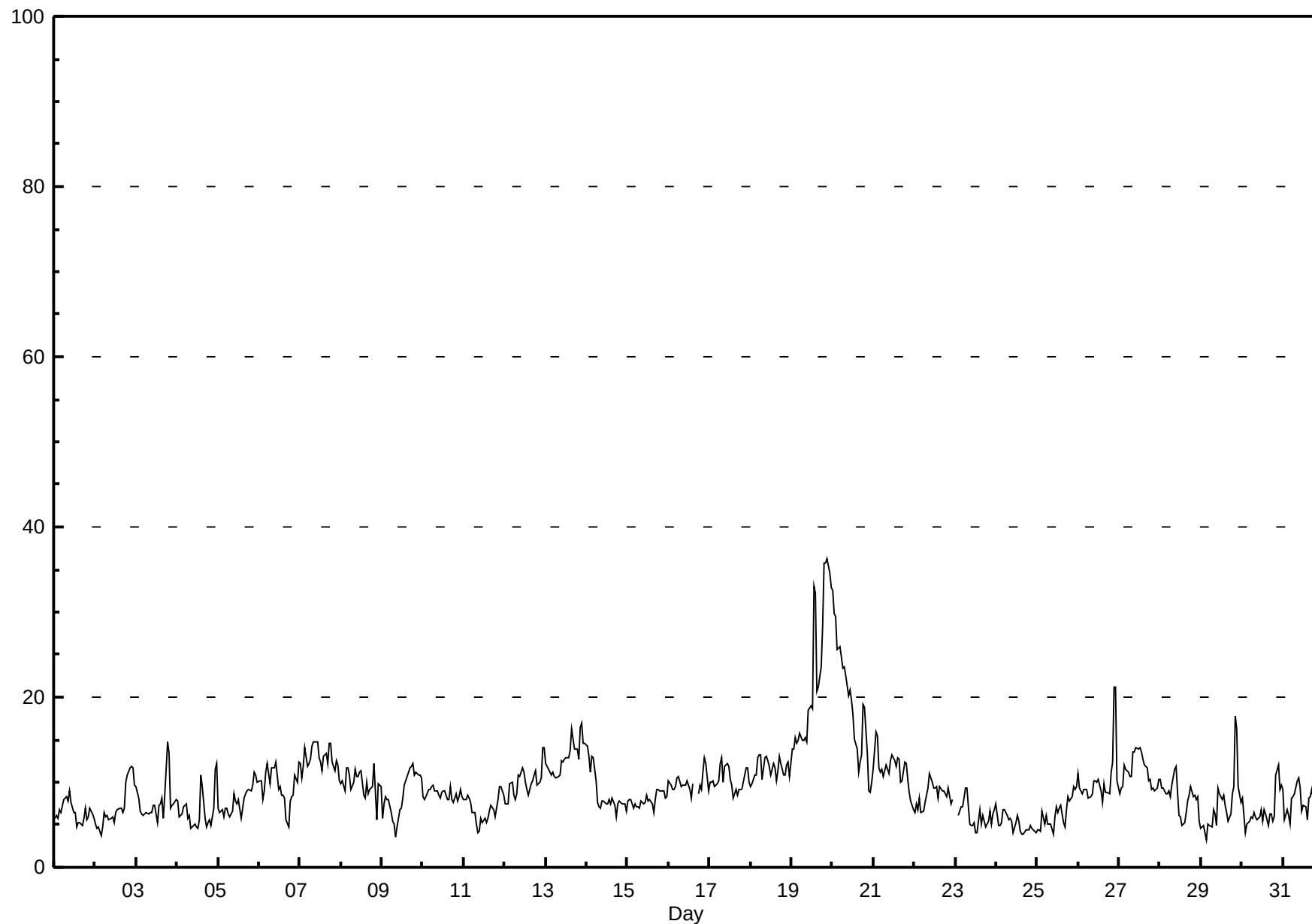
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - August 2012

Maximum Value: 36.3 μg/m³ on Aug 19 22:00																					Maximum Daily Average: 22.4 μg/m³ on Aug 19					Hours in Service: 744	
Minimum Value: 3 μg/m³ on Aug 29 04:00																					Minimum Daily Average: 5.1 μg/m³ on Aug 24					Hours of Data: 739	
Maximum Diurnal Average: 10.9 μg/m³ at hour 22																					Minimum Diurnal Average: 8.7 μg/m³ at hour 17					Hours of Missing Data: 5	
Monthly Average: 9.55 μg/m³																					Percentiles: P ₁ = 4.1 P ₁₀ = 5.3 Q ₁ = 6.7 Median = 8.9 Q ₃ = 11.1 P ₉₀ = 13.5 P ₉₉ = 32.3					Hours of Calibration: 2	
																					Percent Operational Time: 99.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Aug	6	6	6	7	7	8	8	8	8	9	8	6	7	5	5	5	5	6	7	6	6	7	6	6	6.5	9.0	
2-Aug	5	5	5	4	5	7	6	6	6	6	6	5	7	7	7	7	6	7	10	11	12	12	12	10	7.1	11.9	
3-Aug	9	8	7	6	6	6	7	6	6	7	7	7	5	7	7	8	6	8	15	13	7	7	8	8	7.6	14.8	
4-Aug	8	6	6	6	7	7	6	6	5	5	5	5	5	6	11	9	6	5	5	6	5	7	12	12	6.6	12.1	
5-Aug	7	7	7	6	7	7	6	6	7	9	8	7	8	6	7	8	9	9	9	9	10	11	11	10	7.9	11.2	
6-Aug	10	10	8	9	11	12	10	12	12	12	12	9	9	9	8	8	6	5	8	8	8	11	10	12	9.6	12.5	
7-Aug	12	10	12	14	12	12	13	14	15	15	15	13	12	11	13	13	12	15	15	12	11	13	12	10	12.8	14.8	
8-Aug	10	10	9	12	12	11	9	10	12	11	11	11	8	8	10	9	9	9	12	9	6	10	9	9	9.9	12.1	
9-Aug	6	7	8	8	8	6	5	5	4	5	7	7	8	10	11	12	12	12	11	11	11	11	10	8.5	12.1		
10-Aug	8	8	8	9	9	9	10	9	9	8	8	9	9	9	8	8	9	8	8	9	8	8	9	8	8.6	9.7	
11-Aug	8	8	8	8	8	7	6	5	4	4	6	5	6	5	6	7	7	7	6	7	8	9	9	8	6.8	9.4	
12-Aug	7	7	7	10	10	8	8	9	11	11	12	11	10	9	8	10	10	11	11	10	10	10	14	14	10.0	14.1	
13-Aug	12	12	11	11	11	11	10	11	11	13	12	13	13	13	14	16	15	14	14	13	16	17	15	15	13.0	17.0	
14-Aug	14	13	11	13	13	10	8	7	7	8	8	7	7	8	7	8	7	6	8	8	8	7	7	7	8.7	14.3	
15-Aug	8	8	8	7	7	7	7	7	8	8	8	8	8	8	8	7	8	9	9	9	9	9	8	8	7.9	9.2	
16-Aug	10	10	9	9	9	11	11	9	10	10	10	10	9	8	10	C	C	9	10	9	11	13	12	9	9.9	12.9	
17-Aug	10	10	10	9	10	10	12	13	10	12	12	12	10	10	8	9	9	9	9	9	10	12	12	10	10.3	12.9	
18-Aug	9	10	11	11	13	13	13	10	13	13	13	12	11	12	12	10	11	13	12	11	11	12	12	11	11.7	13.3	
19-Aug	14	14	15	15	15	16	15	15	15	15	18	19	19	33	32	21	21	24	28	36	36	36	35	33	22.4	36.3	
20-Aug	33	30	30	26	26	25	23	24	23	20	21	20	18	15	14	11	12	13	19	19	13	9	9	10	19.2	32.5	
21-Aug	12	16	15	12	11	12	11	12	12	11	13	13	12	12	13	13	10	10	12	12	10	9	8	7	11.5	15.9	
22-Aug	7	8	7	8	6	7	8	8	9	11	10	9	9	10	8	9	9	9	9	8	9	7	8	D	8.4	11.0	
23-Aug	D	D	6	7	7	8	9	9	5	5	5	5	4	4	7	5	6	5	5	5	7	5	6	7	6.1	9.3	
24-Aug	7	5	5	5	7	7	6	6	6	5	4	5	6	5	4	4	4	4	4	4	5	5	4	4	5.1	7.4	
25-Aug	4	4	4	7	5	6	5	5	5	4	6	7	6	7	7	5	5	7	8	8	8	9	9	10	6.4	9.5	
26-Aug	11	9	9	9	9	9	8	8	9	10	10	10	10	9	8	10	9	9	9	11	12	21	21	10	10.5	21.2	
27-Aug	9	9	9	12	12	11	11	13	14	14	14	14	14	13	12	12	10	10	9	9	9	9	10	11.3	14.2		
28-Aug	10	9	9	9	9	9	8	10	11	12	9	6	6	5	5	6	8	9	10	8	9	8	8	5	8.3	11.9	
29-Aug	5	5	4	3	5	5	5	7	6	5	9	9	8	9	7	6	5	6	9	9	18	16	9	8	7.4	17.8	
30-Aug	8	6	4	5	5	6	6	6	6	6	6	7	5	7	6	5	6	6	5	6	11	12	9	10	6.7	12.0	
31-Aug	9	6	7	6	5	8	8	9	10	10	9	7	7	7	6	8	8	9	8	16	17	10	11	13	9.0	16.9	
9.6 9.2 8.9 9.1 9.3 9.4 9.0 9.1 9.2 9.4 9.7 9.3 9.1 9.2 9.3 9.0 8.7 9.1 10.1 10.5 10.8 10.9 10.9 10.2																									Diurnal Average		
32.5 29.9 29.6 25.5 26.0 24.7 23.3 23.6 22.6 20.2 20.9 19.7 18.6 33.0 32.3 20.6 21.3 23.6 28.4 35.8 35.8 36.3 34.5 32.8																									Diurnal Maximum		
C - Calibration D - DAS Failure																											

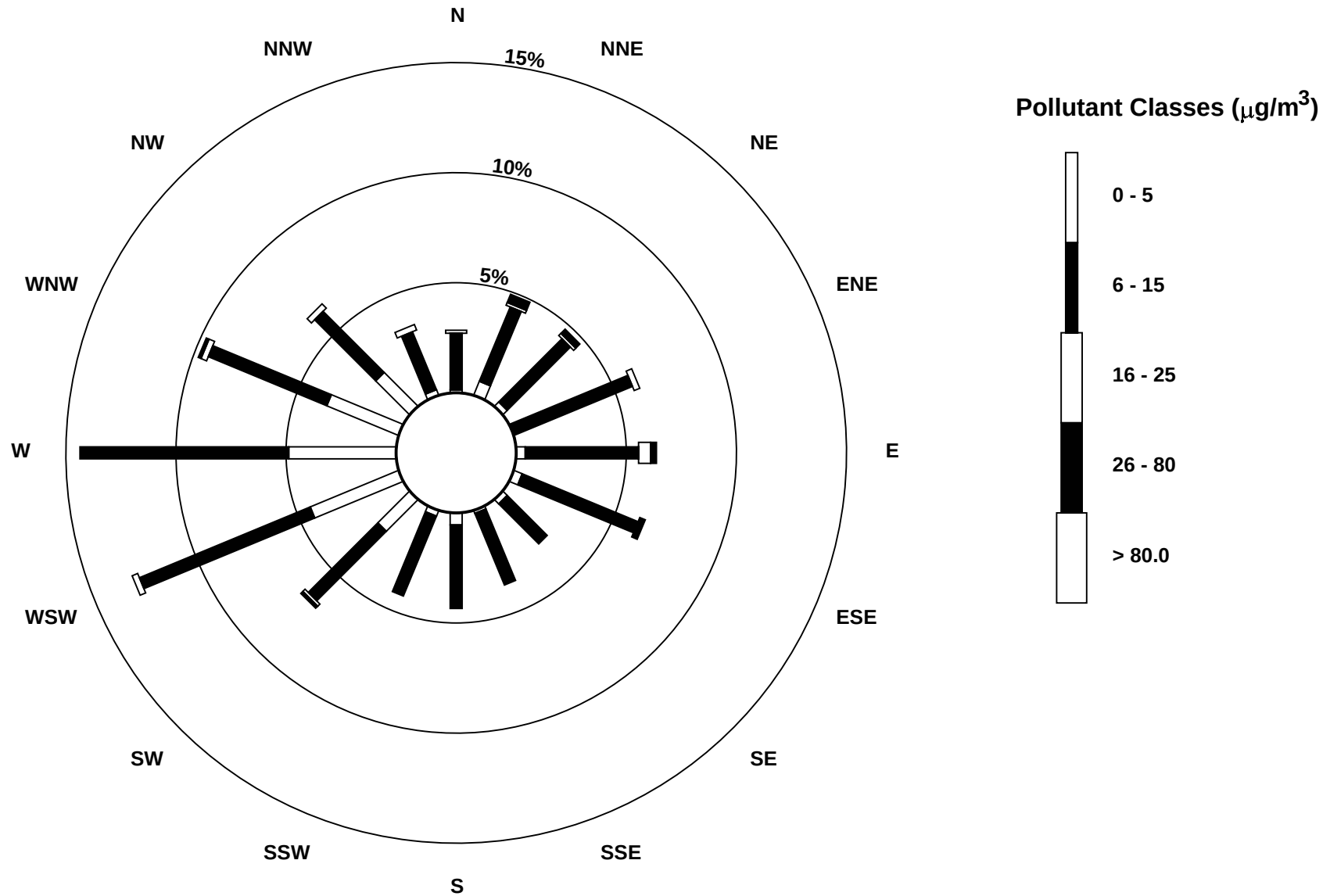
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Beaverlodge - August 2012



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Beaverlodge - August 2012



Hourly Averages

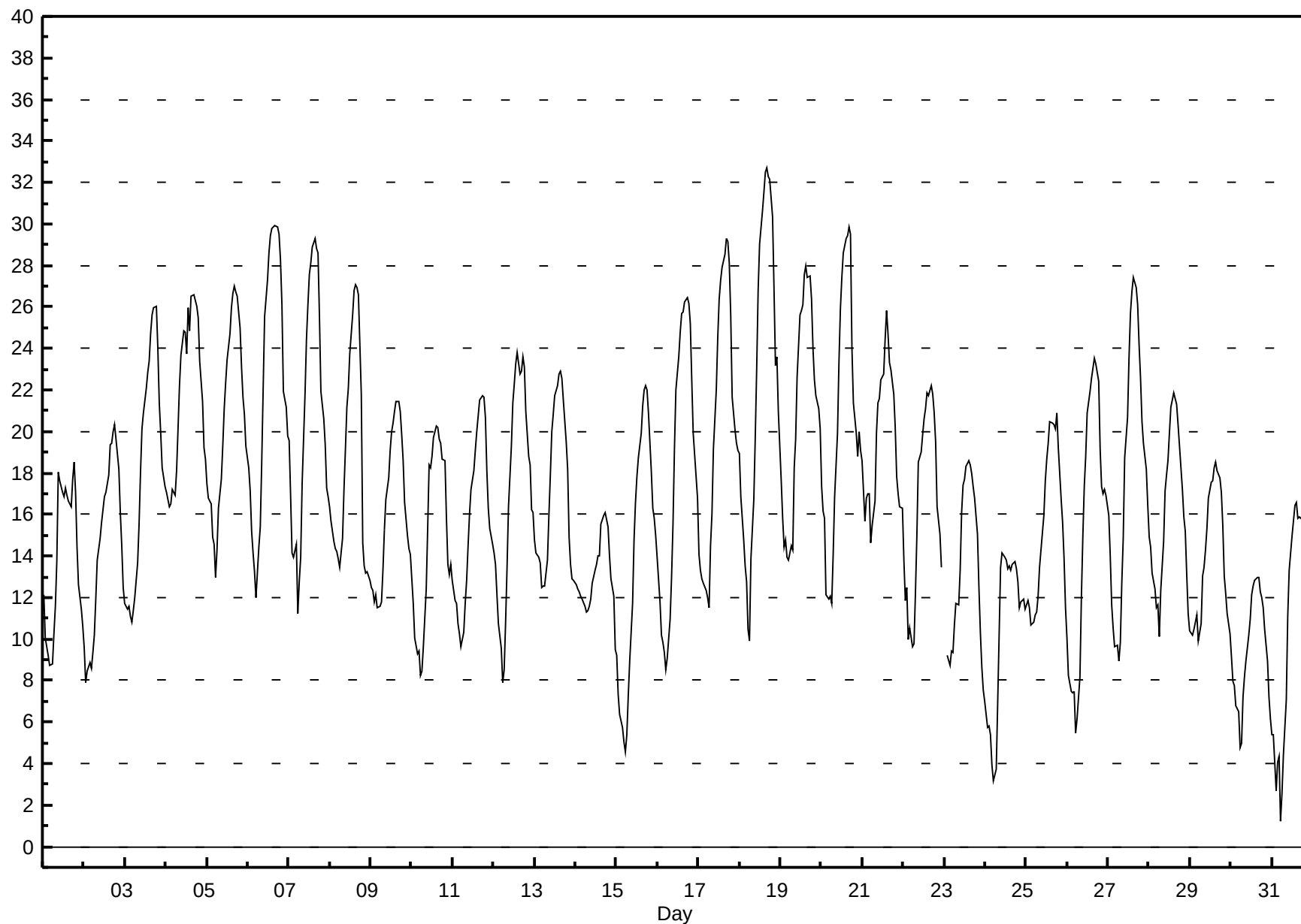
External Temperature (ET) - °C

Beaverlodge - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 32.7 °C on Aug 18 17:00 Maximum Daily Average: 22.6 °C on Aug 18																								Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 0 Percent Operational Time: 99.6		
Minimum Value: 1 °C on Aug 31 06:00 Maximum Diurnal Average: 22.8 °C at hour 17 Monthly Average: 16.77 °C												Minimum Daily Average: 9.4 °C on Aug 30 Minimum Diurnal Average: 10.0 °C at hour 6 Percentiles: P ₁ = 4.4 P ₁₀ = 9.6 Q ₁ = 12.3 Median = 16.3 Q ₃ = 21.0 P ₉₀ = 25.7 P ₉₉ = 30.1														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	12	10	10	9	9	9	10	12	14	18	18	17	17	17	17	17	16	18	19	17	14	13	11	11	13.9	18.5
2-Aug	10	8	8	9	9	9	10	12	14	15	16	16	17	17	18	19	19	20	20	20	18	16	15	12	14.5	20.3
3-Aug	12	11	12	11	11	11	12	14	16	18	20	21	22	23	23	25	26	26	26	24	21	20	18	17	18.3	26.0
4-Aug	17	17	16	16	17	17	18	20	22	24	25	25	24	26	25	27	27	26	26	25	23	21	19	19	21.8	26.6
5-Aug	18	17	17	15	15	13	14	16	18	19	21	22	23	25	26	27	27	27	27	25	23	22	21	19	20.6	27.0
6-Aug	18	17	15	14	13	12	14	15	19	22	26	27	29	29	30	30	30	30	29	28	26	22	21	20	22.4	29.9
7-Aug	20	17	14	14	15	11	13	14	17	22	24	26	28	28	29	29	29	29	26	22	21	19	17	17	20.8	29.3
8-Aug	16	16	15	14	14	14	13	15	17	19	21	22	24	26	27	27	27	27	22	15	14	13	13	13	18.5	27.1
9-Aug	12	12	12	12	12	12	12	13	15	17	18	19	20	20	21	21	21	21	20	19	17	15	14	14	16.2	21.5
10-Aug	13	12	10	9	9	8	8	10	12	15	18	18	19	20	20	20	20	19	19	19	16	14	13	14	14.8	20.3
11-Aug	13	12	12	11	10	10	10	12	13	14	16	17	18	19	20	21	22	22	22	21	18	16	15	15	15.7	21.7
12-Aug	14	14	12	11	10	8	9	11	13	16	19	21	22	23	24	23	23	24	23	21	19	18	16	16	17.1	23.8
13-Aug	15	14	14	14	12	13	13	14	16	18	20	21	22	22	23	23	23	21	20	18	15	14	13	13	17.0	22.9
14-Aug	13	12	12	12	12	12	11	11	12	12	13	13	14	14	14	16	16	16	16	15	14	13	12	9	13.1	16.1
15-Aug	9	7	6	6	5	5	5	7	9	12	15	17	18	19	20	21	22	22	22	21	18	16	16	15	13.9	22.2
16-Aug	14	12	10	10	9	8	9	11	13	16	19	22	24	25	26	26	26	26	26	25	22	20	19	17	18.1	26.4
17-Aug	14	13	13	13	12	12	11	14	16	19	22	24	26	27	28	29	29	29	28	26	22	20	19	19	20.3	29.3
18-Aug	19	17	15	13	13	10	10	14	17	20	23	27	29	31	32	33	33	32	32	30	27	23	24	21	22.6	32.7
19-Aug	18	16	14	15	14	14	15	14	18	20	23	26	26	26	28	28	27	28	26	24	23	22	21	20	21.0	28.0
20-Aug	17	16	16	12	12	12	12	14	17	20	23	26	27	29	29	29	30	30	24	21	20	19	20	19	20.6	29.8
21-Aug	19	16	17	17	17	15	15	17	20	21	22	23	23	24	26	25	23	23	22	20	18	17	16	16	19.6	25.8
22-Aug	14	12	13	10	11	10	10	12	15	18	19	20	21	21	22	22	22	22	21	19	16	15	13	D	16.4	22.2
23-Aug	D	D	9	9	9	9	11	12	12	13	16	17	18	18	19	18	18	17	17	15	13	10	9	8	13.5	18.6
24-Aug	7	6	6	5	4	3	4	7	10	13	14	14	14	13	14	13	14	14	13	13	12	12	12	11	10.3	14.2
25-Aug	12	12	12	11	11	11	11	12	13	15	16	18	19	19	20	20	20	20	21	19	17	16	14	11	15.4	20.9
26-Aug	10	8	7	7	7	5	6	8	12	15	17	19	21	22	23	23	24	23	22	19	17	17	17	17	15.4	23.6
27-Aug	16	14	12	11	10	10	9	10	13	15	19	21	24	26	27	27	27	26	24	23	20	19	18	16	18.1	27.5
28-Aug	15	14	13	12	12	12	10	12	15	17	18	19	20	21	22	22	21	20	19	17	16	15	13	11	16.1	21.9
29-Aug	10	10	10	11	11	10	11	13	13	14	15	17	18	18	18	19	18	18	17	15	13	12	11	10	13.9	18.5
30-Aug	9	8	8	7	7	5	5	7	8	9	10	11	12	13	13	13	13	12	12	12	10	9	7	6	9.4	13.0
31-Aug	5	5	3	4	4	1	3	4	7	11	13	14	15	16	17	16	16	16	16	14	12	11	10	10	10.2	16.6
13.7 12.5 11.7 11.1 10.8 10.0 10.5 12.2 14.4 16.7 18.7 20.0 21.0 21.9 22.5 22.8 22.8 22.7 21.8 20.1 17.9 16.4 15.5 14.6 19.6 17.1 16.8 17.0 17.2 16.9 18.1 20.1 22.2 23.7 25.6 27.3 29.0 30.6 31.5 32.5 32.7 32.3 32.1 30.3 26.8 23.2 23.6 21.0																								Diurnal Average		
																								Diurnal Maximum		
D - DAS Failure																										

Hourly Averages

External Temperature (ET) - °C
Beaverlodge - August 2012



Hourly Averages

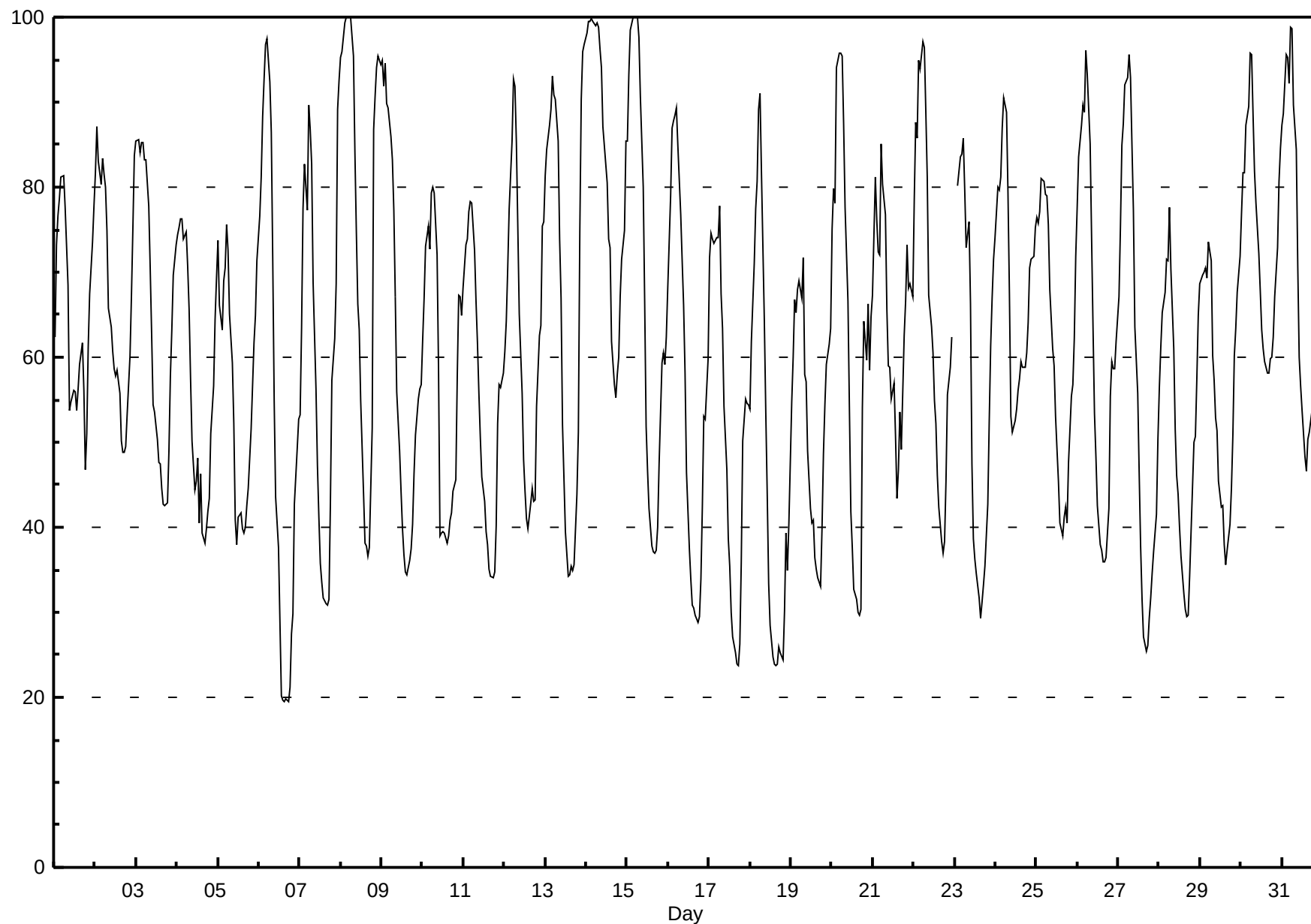
Relative Humidity (RH) - %

Beaverlodge - August 2012

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100.0 % on Aug 8 04:00 Maximum Daily Average: 82.1 % on Aug 14																								Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 0 Percent Operational Time: 99.6		
Minimum Value: 19 % on Aug 6 18:00 Maximum Diurnal Average: 86.9 % at hour 6 Monthly Average: 61.78 %												Minimum Daily Average: 47.8 % on Aug 18 Minimum Diurnal Average: 38.9 % at hour 17 Percentiles: P ₁ = 23.8 P ₁₀ = 35.5 Q ₁ = 44.6 Median = 61.1 Q ₃ = 77.4 P ₉₀ = 89.4 P ₉₉ = 100.0														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	62	73	77	79	81	81	78	73	68	54	55	56	56	54	56	59	62	56	47	51	61	67	74	78	64.9	81.4
2-Aug	82	87	83	80	83	82	80	75	66	64	61	59	58	58	56	50	49	49	49	53	60	67	75	84	67.1	87.1
3-Aug	85	86	84	85	85	83	83	78	70	63	54	53	50	48	48	45	43	42	43	49	58	63	70	73	64.2	85.5
4-Aug	74	75	76	76	74	75	71	66	57	50	44	45	48	41	46	39	38	40	42	43	51	57	64	69	56.8	76.4
5-Aug	74	66	63	69	71	76	72	65	59	52	41	38	41	42	40	39	40	43	45	51	57	62	65	71	55.9	75.5
6-Aug	77	81	88	93	97	98	92	87	72	55	44	38	29	20	20	19	20	19	21	27	30	43	49	53	52.9	97.5
7-Aug	53	63	78	83	77	90	87	83	69	56	47	41	36	34	32	31	31	31	43	57	62	69	89	93	59.7	92.5
8-Aug	95	96	99	100	100	100	100	95	84	75	66	63	55	44	38	38	37	38	52	87	91	94	95	94	76.5	100.0
9-Aug	95	92	95	90	89	86	83	77	67	56	49	44	40	37	35	34	36	37	40	46	51	55	56	57	60.3	95.0
10-Aug	62	67	73	75	73	79	80	79	72	59	39	39	39	39	38	39	41	42	44	46	58	67	67	65	57.7	80.0
11-Aug	68	73	74	77	78	78	73	67	62	56	51	46	43	39	38	35	34	34	35	40	52	57	56	58	55.2	78.2
12-Aug	61	64	71	77	85	93	92	85	75	65	56	48	44	41	40	43	45	43	43	54	63	64	75	76	62.6	92.6
13-Aug	81	84	87	89	93	91	90	85	74	67	52	46	40	34	34	35	35	36	44	51	75	90	96	97	67.0	96.8
14-Aug	98	100	99	100	100	99	99	99	96	94	87	83	81	74	73	62	57	55	58	60	67	71	75	85	82.1	99.8
15-Aug	85	93	99	100	100	100	100	98	91	80	66	52	47	42	38	37	37	37	40	47	59	60	59	62	67.9	100.0
16-Aug	68	79	87	88	88	89	85	77	71	66	58	46	37	34	31	30	30	29	30	34	42	53	53	60	56.9	89.4
17-Aug	72	75	74	73	74	74	78	67	63	54	47	39	35	30	27	25	24	24	24	26	36	50	55	54	51.3	77.8
18-Aug	54	62	71	77	81	89	91	82	64	54	44	33	28	25	24	24	24	26	25	24	30	39	35	40	47.8	91.1
19-Aug	55	60	67	65	68	69	67	72	58	57	49	42	40	41	36	35	34	33	40	49	54	59	62	63	53.2	71.8
20-Aug	75	80	78	94	96	96	95	87	78	67	54	42	38	33	32	30	30	30	54	64	60	66	58	65	62.5	95.8
21-Aug	67	81	76	72	72	85	80	77	66	59	59	55	57	51	43	47	54	49	63	67	73	68	69	67	64.9	85.1
22-Aug	79	88	86	95	94	97	96	89	81	67	64	60	55	52	46	42	38	37	38	45	56	59	62	D	66.4	97.1
23-Aug	D	D	80	83	84	86	80	73	76	66	47	39	36	35	32	29	31	33	35	43	53	61	67	72	56.4	85.7
24-Aug	74	80	80	81	87	91	89	79	67	53	51	53	54	56	58	59	59	59	60	64	71	72	72	75	68.5	90.6
25-Aug	76	76	77	81	81	79	79	76	68	61	59	53	49	45	41	39	41	42	40	48	55	57	62	72	60.7	80.9
26-Aug	78	84	87	90	89	96	93	85	74	63	53	48	43	38	37	36	36	37	42	55	60	59	59	62	62.6	96.1
27-Aug	67	75	85	87	92	93	96	93	85	77	64	56	46	38	32	27	25	26	29	32	35	37	42	50	57.9	95.6
28-Aug	56	61	65	68	72	71	78	70	61	52	46	44	40	37	32	30	29	30	34	45	50	51	57	65	51.8	77.7
29-Aug	69	70	70	71	69	73	71	60	57	53	51	45	42	42	38	36	37	40	45	51	60	63	68	72	56.5	73.5
30-Aug	77	82	82	87	89	96	96	89	82	78	72	68	63	61	59	58	58	60	60	62	67	73	81	85	74.4	95.8
31-Aug	87	89	96	95	92	99	99	90	84	71	60	57	54	48	47	50	51	53	54	61	68	75	79	75	72.2	98.9
73.6 78.0 80.9 83.3 84.3 86.9 85.6 79.9 71.6 62.7 54.5 49.4 46.0 42.3 40.2 38.9 38.9 39.0 42.6 49.8 57.3 62.4 66.0 69.8																								Diurnal Average		
98.1 99.5 99.4 100.0 100.0 100.0 100.0 98.9 96.3 94.0 87.0 82.7 80.5 74.0 72.8 61.9 61.6 59.8 62.5 86.9 90.7 94.1 96.0 96.8																								Diurnal Maximum		
D - DAS Failure																										

Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - August 2012



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	5	2	3	4	4	4	3	5	6	22	27	24	20	25	20	16	18	20	30	27	17	10	11	9	11.8	29.8
Dir	261	63	92	89	100	114	141	178	207	258	262	262	253	250	241	242	222	222	256	253	259	251	249	250	246	256
2 Spd	6	1	7	6	4	6	6	7	15	19	19	19	18	22	21	17	15	15	17	10	5	5	6	2	10.4	22.3
Dir	232	190	280	296	313	303	312	270	296	301	298	306	299	297	302	312	308	307	302	301	285	230	226	179	297	297
3 Spd	2	1	2	4	5	3	3	4	6	13	19	23	22	21	22	19	19	21	27	29	23	17	9	4	11.4	29.3
Dir	170	113	115	98	98	144	76	143	191	230	251	262	256	257	246	258	255	252	254	253	242	248	233	210	247	253
4 Spd	10	10	5	1	6	8	7	14	26	34	33	26	13	32	28	30	27	23	20	23	6	2	3	15	15.0	34.3
Dir	228	226	216	317	262	261	268	250	264	259	262	273	300	258	267	273	274	278	282	267	297	304	21	34	268	259
5 Spd	11	10	4	3	3	1	1	4	14	16	17	17	13	12	10	13	13	14	13	12	9	10	8	9	8.6	17.3
Dir	36	53	36	235	251	57	274	109	115	110	109	117	123	108	95	88	100	97	77	86	77	77	82	82	94	109
6 Spd	3	3	1	2	3	1	1	3	3	4	3	7	15	24	15	16	19	16	13	6	5	6	2	1	4.7	23.6
Dir	120	180	213	37	31	338	13	209	171	169	169	236	263	271	292	300	285	286	296	349	17	37	9	320	286	271
7 Spd	2	1	1	5	3	3	3	4	3	6	10	10	10	12	14	11	9	13	14	15	6	11	7	2	3.6	14.8
Dir	57	196	263	318	13	343	26	213	148	112	133	125	120	115	96	112	110	133	201	230	228	189	311	29	142	230
8 Spd	3	2	2	2	2	3	2	3	3	7	9	7	7	7	8	8	6	5	21	41	17	14	12	9	5.1	40.6
Dir	56	102	149	64	45	66	130	179	187	203	201	188	212	237	241	218	200	158	152	254	276	308	268	231	228	254
9 Spd	11	10	2	6	9	13	11	16	20	28	34	33	34	35	33	32	28	30	29	22	10	11	14	12	19.6	35.0
Dir	230	249	102	247	247	255	251	246	262	265	263	263	252	243	242	251	251	265	265	265	285	282	270	270	257	243
10 Spd	15	11	4	3	4	1	2	2	9	13	26	24	27	28	28	27	27	28	24	22	14	10	8	11	14.6	28.5
Dir	264	249	226	224	217	73	133	177	199	223	253	243	244	258	261	261	245	256	255	254	244	251	256	281	250	256
11 Spd	8	5	6	6	7	4	9	11	9	5	5	7	9	8	8	8	7	9	8	6	6	7	8	7	4.8	10.9
Dir	346	267	314	337	348	356	7	16	18	316	285	278	288	278	304	308	299	295	304	11	57	58	63	71	336	16
12 Spd	7	6	2	3	3	0	4	2	3	3	5	11	14	9	11	7	9	9	12	9	6	8	8	4	5.6	13.6
Dir	76	74	151	148	82	44	46	166	145	178	109	113	134	125	83	148	147	86	129	108	78	102	95	82	110	134
13 Spd	5	5	2	5	3	1	3	4	5	6	20	24	25	27	25	21	20	22	17	15	9	15	18	6	7.9	27.2
Dir	123	106	123	160	123	156	72	35	313	280	265	257	266	265	273	265	255	252	267	259	336	16	24	49	274	265
14 Spd	6	6	6	7	8	12	15	14	17	14	19	17	22	20	18	18	13	12	10	6	6	7	5	3	10.9	21.8
Dir	307	313	332	335	351	1	6	4	25	11	19	16	10	10	4	356	357	354	337	348	298	308	311	36	359	10
15 Spd	3	3	1	1	4	2	2	4	6	7	8	11	10	9	8	6	6	8	7	6	5	6	5	5	3.1	10.6
Dir	263	53	75	68	50	104	114	178	191	212	194	179	207	225	225	203	210	187	161	126	87	87	73	61	174	179
16 Spd	2	3	2	2	2	2	2	3	4	4	6	12	13	14	17	13	10	9	16	6	1	2	4	1	4.3	16.7
Dir	69	104	85	86	98	78	99	170	199	200	213	269	286	287	261	268	289	274	268	285	254	335	291	22	269	261
17 Spd	4	4	4	1	5	2	4	2	3	3	3	3	3	8	8	8	7	10	13	11	10	9	9	10	3.3	13.1
Dir	66	63	59	65	53	85	55	95	181	150	221	292	173	224	228	214	166	147	136	110	94	89	91	82	122	136
18 Spd	8	3	1	3	1	1	4	1	2	4	5	5	9	12	12	10	9	9	6	7	3	3	4	3	2.8	12.0
Dir	85	178	341	60	42	274	35	144	218	167	172	163	154	153	170	189	160	158	149	276	310	25	313	322	161	153
19 Spd	3	3	1	2	1	3	1	3	3	7	7	4	1	3	6	9	11	17	13	5	6	9	9	8	3.7	17.3
Dir	293	76	193	43	32	71	303	261	289	311	6	95	331	298	80	64	59	88	86	114	46	29	17	38	51	88
20 Spd	5	9	1	2	2	5	3	1	3	6	7	8	7	7	8	9	4	7	6	9	9	5	8	3	2.9	9.5
Dir	224	30	114	289	353	29	246	55	221	253	292	305	308	321	312	312	344	56	199	328	18	345	68	51	332	312
21 Spd	3	4	8	8	7	3	7	3	5	8	12	11	9	11	4	14	9	10	6	11	10	11	3	6	3.2	13.7
Dir	116	151	293	338	346	120	55	312	14	327	312	301	309	356	98	243	18	55	94	234	212	265	291	304	315	243
22 Spd	3	4	4	7	6	1	2	1	3	11	12	13	18	19	23	24	29	29	27	16	10	9	8	D	11.0	29.3
Dir	206	31	344	236	267	174	78	141	210	272	294	294	284	288	271	273	262	265	265	257	282	272	268	D	272	262

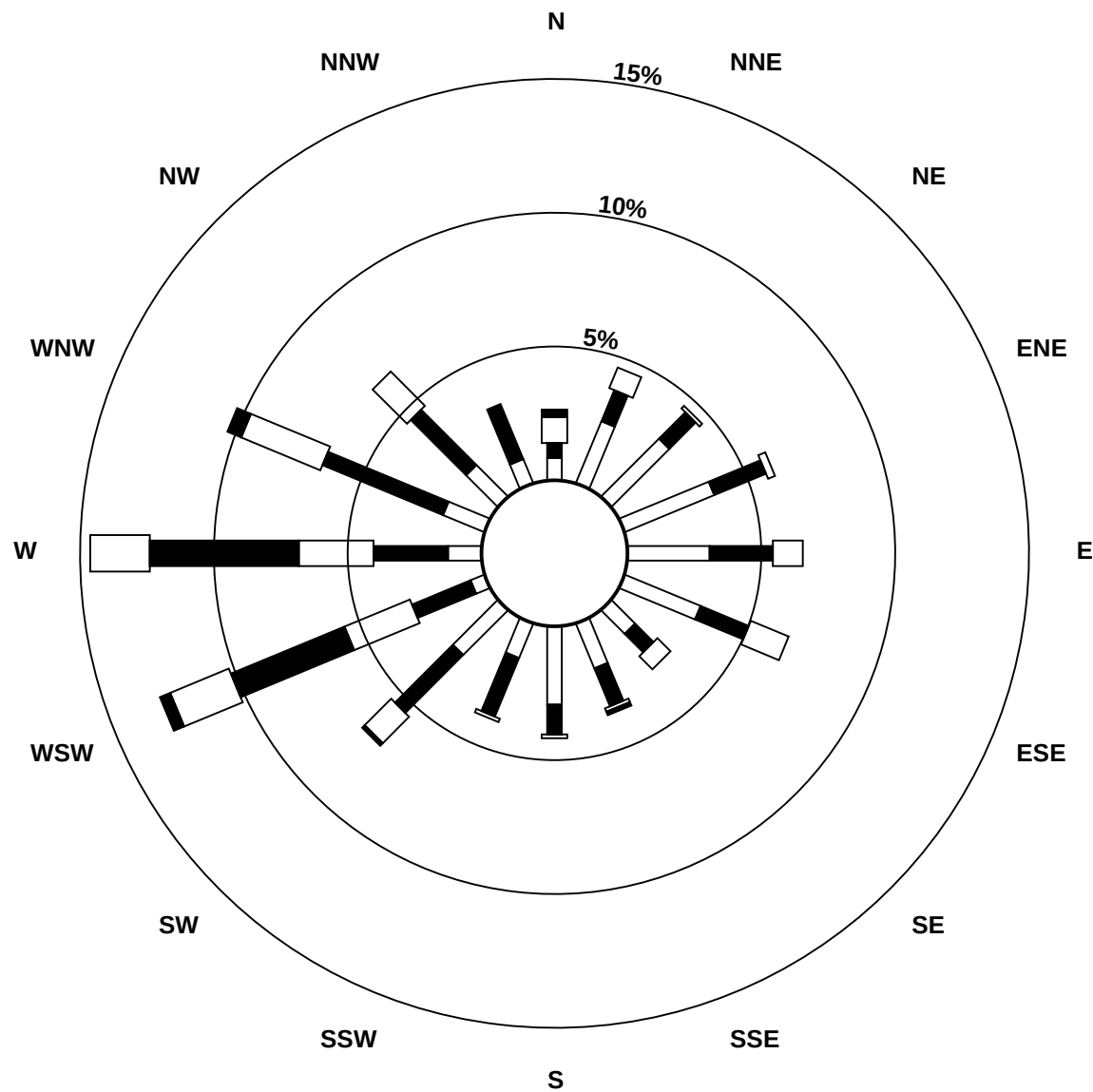
Hourly Averages

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

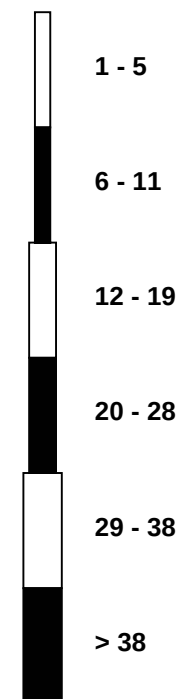
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	D	D	3	2	2	3	6	16	9	11	25	29	31	31	31	30	28	29	28	25	19	12	6	6	16.1	31.2
Dir	D	D	32	112	125	65	201	232	191	205	254	246	242	245	249	238	242	238	243	248	250	245	216	203	240	242
24 Spd	7	3	4	4	3	1	2	5	15	29	25	28	34	31	28	25	25	27	28	24	17	16	18	13	16.1	34.2
Dir	224	168	181	202	178	115	96	222	242	273	280	277	266	266	269	283	278	275	264	268	262	259	269	277	267	266
25 Spd	9	10	11	9	10	11	11	11	16	19	15	14	12	11	13	13	7	7	8	2	1	9	9	1	8.4	19.2
Dir	287	276	286	292	298	294	289	288	285	287	282	287	291	295	261	265	12	54	99	23	256	301	296	276	290	287
26 Spd	4	2	3	4	4	4	4	1	1	1	7	10	12	14	13	12	13	11	12	12	11	10	11	9	6.9	14.4
Dir	33	213	46	49	56	62	53	65	117	175	106	116	120	121	129	118	105	117	88	68	73	80	84	72	96	121
27 Spd	5	2	1	4	5	1	2	1	3	4	2	3	1	4	13	16	24	20	13	10	9	8	6	6	5.5	23.7
Dir	78	189	65	276	30	357	349	248	253	267	252	273	307	229	251	259	274	278	313	302	282	277	273	256	277	274
28 Spd	2	6	6	5	3	3	1	4	7	18	25	22	22	27	31	36	33	35	28	22	22	22	14	12	16.2	35.5
Dir	215	243	236	223	176	233	82	5	251	258	264	267	256	266	258	256	266	268	272	272	265	248	234	228	259	256
29 Spd	7	12	11	15	14	4	10	19	20	27	28	32	39	36	39	36	38	28	25	20	15	12	6	7	20.3	38.9
Dir	220	218	233	229	234	219	241	248	256	253	261	259	254	262	258	257	255	255	261	259	254	267	279	299	254	254
30 Spd	8	8	10	13	11	9	2	10	10	10	10	13	12	14	12	14	12	10	6	6	6	4	3	2	8.7	13.8
Dir	300	310	320	324	332	307	317	331	337	323	301	301	314	305	312	307	317	324	292	302	312	327	15	288	315	307
31 Spd	3	2	1	5	3	0	1	1	2	3	10	9	9	10	10	10	8	6	4	3	5	7	4	3	3.5	10.3
Dir	19	39	81	36	29	350	6	25	211	92	124	122	119	126	138	156	137	168	79	77	55	62	98	224	112	126
Spd	1.1	0.8	1.2	1.5	1.3	1.0	1.1	2.4	3.8	7.8	9.4	9.7	10.2	11.5	11.3	11.5	9.8	8.5	8.8	9.2	4.6	3.4	2.3	1.0	Diurnal Average	
Dir	265	242	290	297	329	329	346	257	254	261	264	263	260	262	260	261	261	259	256	263	275	286	296	320	Diurnal Maximum	
Spd	15.2	11.6	11.5	14.6	14.2	12.6	14.9	19.1	25.5	34.3	33.9	33.2	38.9	35.8	38.9	36.0	37.6	35.1	29.8	40.6	22.9	21.7	17.6	14.5	Diurnal Maximum	
Dir	264	218	286	229	234	255	6	248	264	259	263	263	254	262	258	257	255	268	256	254	242	248	24	34		
Maximum Speed Value: 41 km/h on Aug 8 20:00																								Hours in Service: 744		
Maximum Daily Speed Average: 20.3 km/h on Aug 29																								Hours of Data: 741		
Maximum Diurnal Speed Average: 11.5 km/h at hour 14																								Hours of Missing Data: 3		
Minimum Speed Value: 0 km/h on Aug 31 06:00																								Percent Operational Time: 99.6		
Minimum Daily Speed Average: 2.8 km/h on Aug 31																										
Minimum Diurnal Speed Average: 0.8 km/h at hour 2																										
Monthly Average Velocity: 5.40 km/h 264.7 deg																										
Speed Percentiles: P ₁ = 0.7 P ₁₀ = 2.1 Q ₁ = 3.9 Median = 8.0 Q ₃ = 13.8 P ₉₀ = 24.4 P ₉₉ = 35.3																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										
D - DAS Failure																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	20		19		11		2		0		0		52													
NorthEast	48		20		5		0		0		0		73													
East	40		34		16		0		0		0		90													
SouthEast	29		20		14		1		0		0		64													
South	34		20		2		0		0		0		56													
SouthWest	25		37		19		8		8		0		97													
West	23		43		44		64		34		3		211													
NorthWest	19		52		23		4		0		0		98													
Total	238		245		134		79		42		3		741													

Wind Rose

Wind Speed (WS) (km/h)
Beaverlodge - August 2012



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - August 2012

Maximum Speed: 42 km/h on Aug 8 20:00																				Maximum Daily Speed Average: 21.0 km/h on Aug 29										Hours in Service: 744	
Minimum Speed: 2 km/h on Aug 15 03:00																				Minimum Daily Speed Average: 6.0 km/h on Aug 31										Hours of Data: 741	
Maximum Diurnal Speed Average: 18.5 km/h at hour 15																				Minimum Diurnal Speed Average: 4.6 km/h at hour 6										Hours of Missing Data: 3	
Monthly Average Speed: 11.24 km/h																				Percentiles: P ₁ = 2.0 P ₁₀ = 3.2 Q ₁ = 4.8 Median = 9.0 Q ₃ = 14.6 P ₉₀ = 24.7 P ₉₉ = 35.6										Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Aug	5	3	4	4	4	4	4	5	6	22	27	24	21	25	20	16	18	21	30	27	17	10	11	9	14.1	30.1					
2-Aug	6	3	8	6	6	6	6	7	15	20	19	20	19	23	21	18	16	15	17	10	6	5	6	2	11.7	22.8					
3-Aug	3	2	2	4	5	3	4	4	7	13	20	24	22	21	23	20	20	22	27	30	23	17	9	5	13.8	29.6					
4-Aug	11	10	8	5	6	8	7	14	26	35	33	27	15	32	29	30	28	23	21	23	6	4	4	15	17.4	34.5					
5-Aug	12	10	6	3	3	2	2	4	14	16	18	17	14	13	11	13	13	14	13	12	10	10	8	9	10.3	17.8					
6-Aug	4	3	2	4	4	3	3	3	3	5	5	9	16	25	18	17	19	17	14	6	6	6	6	4	8.4	24.6					
7-Aug	3	3	5	5	4	4	5	4	5	6	11	11	11	13	15	13	10	13	17	15	6	11	9	4	8.5	17.3					
8-Aug	4	4	3	2	3	3	5	3	6	7	9	7	9	9	11	10	8	5	25	42	17	14	13	9	9.5	41.6					
9-Aug	11	10	3	6	9	13	11	16	20	28	34	33	35	35	34	32	29	30	30	22	10	11	14	12	20.3	35.3					
10-Aug	15	11	4	4	5	2	2	4	9	14	26	24	27	29	29	27	27	29	24	22	14	10	8	14	15.8	28.8					
11-Aug	8	7	7	7	7	6	9	11	9	6	6	8	10	10	10	10	8	10	9	6	6	7	8	7	8.1	11.0					
12-Aug	7	6	3	3	3	3	4	2	3	4	5	11	15	10	12	8	9	11	12	9	7	8	8	6	7.1	14.6					
13-Aug	6	5	3	5	3	3	3	4	5	6	21	24	25	28	25	22	21	22	17	15	12	15	18	7	13.1	27.6					
14-Aug	6	6	6	7	8	12	15	14	17	15	19	17	22	21	19	18	13	12	10	6	6	7	6	4	12.0	22.1					
15-Aug	3	4	2	2	4	3	3	4	6	7	8	11	11	10	8	8	8	8	7	6	5	6	5	5	6.0	11.0					
16-Aug	2	3	3	3	3	2	2	3	4	5	7	12	14	14	18	14	11	10	17	6	3	4	4	2	7.0	17.7					
17-Aug	4	5	4	3	5	3	4	2	3	3	5	4	6	9	10	9	8	11	13	11	10	9	9	10	6.7	13.3					
18-Aug	8	4	4	3	2	4	4	2	4	4	5	6	10	13	12	12	13	10	9	7	4	5	5	5	6.5	13.2					
19-Aug	5	4	3	4	3	3	3	3	4	7	8	6	4	5	7	10	12	18	13	7	7	10	10	8	6.8	17.5					
20-Aug	6	9	4	5	5	5	4	2	4	7	8	8	9	9	12	12	8	8	14	14	11	10	8	6	7.8	14.2					
21-Aug	5	5	8	9	12	5	7	5	6	9	12	11	10	12	7	14	12	11	7	13	10	11	4	7	8.9	14.3					
22-Aug	4	7	9	7	6	3	4	3	3	12	12	14	18	20	25	25	30	29	27	16	10	10	9	D	13.1	29.7					
23-Aug	D	D	5	3	2	4	7	16	9	12	26	30	32	31	32	31	29	30	28	25	19	12	6	6	17.9	31.6					
24-Aug	7	5	5	4	4	2	2	5	15	29	26	28	34	31	29	25	25	28	28	24	17	16	18	13	17.5	34.5					
25-Aug	9	10	12	9	10	11	11	11	16	19	16	15	14	11	15	14	8	8	8	4	4	9	9	3	10.6	19.4					
26-Aug	5	3	4	4	4	4	4	3	2	3	8	11	13	15	15	13	15	12	12	12	11	11	11	9	8.4	15.5					
27-Aug	6	3	2	6	5	2	4	3	3	4	4	5	4	6	14	17	25	20	13	11	9	8	7	7	7.9	24.5					
28-Aug	3	7	6	6	4	5	2	5	7	19	26	23	23	27	32	36	34	35	28	22	22	22	14	12	17.4	35.9					
29-Aug	8	12	11	15	14	4	10	19	20	27	28	33	39	36	39	37	38	29	25	20	15	12	6	7	21.0	39.3					
30-Aug	9	8	10	13	13	9	3	10	10	11	11	14	13	15	13	14	12	11	6	6	6	5	5	3	9.5	14.7					
31-Aug	3	3	4	5	5	3	2	3	3	4	10	10	10	12	11	10	9	6	4	4	5	7	4	6	6.0	11.5					
6.2 5.8 5.1 5.4 5.5 4.6 5.1 6.4 8.6 12.2 15.2 16.1 16.9 18.4 18.5 17.9 17.3 17.0 17.0 14.6 10.1 9.8 8.4 7.2																									Diurnal Average						
15.2 11.7 11.5 14.6 14.2 12.6 15.0 19.2 25.7 34.5 34.2 33.5 39.3 36.2 39.3 36.6 37.9 35.2 30.1 41.6 22.9 21.9 17.8 14.7																									Diurnal Maximum						
D - DAS Failure																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - August 2012

Maximum Value: 95.8 deg on Aug 25 21:00																				Hours in Service: 744					
Minimum Value: 1.9 deg on Aug 26 21:00																				Hours of Data: 741					
																				Hours of Missing Data: 3					
Percentiles: P ₁ = 3.6 P ₁₀ = 6.9 Q ₁ = 10.1 Median = 19.4 Q ₃ = 41.2 P ₉₀ = 64.8 P ₉₉ = 87.4																				Hours of Calibration: 0					
																				Percent Operational Time: 99.6					
Day	Hourly Period Ending At (MST)																								Daily Maximum
1-Aug	35	73	26	20	16	21	37	22	26	15	7	9	9	8	6	6	10	15	8	8	6	8	5	7	73.2
2-Aug	61	78	55	27	55	9	15	19	8	13	11	11	14	11	13	19	17	16	9	8	14	16	30	39	78.0
3-Aug	41	59	40	18	11	44	29	22	29	16	11	10	13	14	17	15	17	15	10	8	3	3	18	50	59.4
4-Aug	15	9	70	83	39	8	26	10	6	7	8	12	23	11	15	10	7	12	12	4	19	77	83	13	83.1
5-Aug	14	24	70	48	23	84	90	46	13	10	13	13	15	17	27	21	19	10	7	7	16	8	10	6	89.7
6-Aug	37	21	87	81	41	73	82	14	33	36	54	47	27	19	32	24	16	22	20	14	15	10	72	93	92.6
7-Aug	36	87	74	23	68	56	70	15	47	30	20	21	23	19	22	45	23	13	38	12	33	25	52	81	87.4
8-Aug	20	65	42	52	64	43	57	46	74	14	21	19	44	47	55	49	49	24	30	13	14	9	18	19	73.7
9-Aug	9	15	44	47	8	6	6	3	11	7	7	7	8	7	10	10	12	10	6	4	8	5	6	5	46.8
10-Aug	6	6	38	54	48	74	44	55	13	15	9	8	9	12	12	10	6	9	4	4	4	6	5	42	74.0
11-Aug	18	43	31	36	15	74	14	6	10	45	45	49	36	55	43	41	40	21	30	24	13	6	8	7	74.1
12-Aug	4	5	46	17	31	92	12	43	34	40	32	20	21	25	33	35	26	29	11	10	7	15	16	63	92.1
13-Aug	47	18	35	19	20	74	42	13	29	17	8	8	10	10	9	12	11	5	7	13	38	5	7	24	74.1
14-Aug	24	9	9	6	9	9	5	15	10	11	7	9	10	11	12	15	15	12	19	12	14	9	33	40	40.2
15-Aug	33	62	57	74	10	32	20	23	17	15	22	17	28	32	20	54	47	30	18	11	18	14	10	11	73.6
16-Aug	52	45	47	33	25	41	36	20	22	19	27	21	22	17	24	25	26	20	7	19	75	62	9	56	74.5
17-Aug	14	13	17	77	8	46	5	36	23	29	62	63	86	43	45	42	34	23	10	6	5	4	8	6	85.8
18-Aug	5	43	76	9	73	87	19	67	62	31	28	34	20	20	16	32	46	29	69	10	50	41	25	58	87.0
19-Aug	66	76	82	90	87	18	75	34	66	12	29	55	84	57	49	20	7	9	5	39	25	21	33	27	90.2
20-Aug	60	10	81	74	77	19	57	73	40	17	23	24	65	42	61	35	65	34	71	62	46	60	14	68	80.9
21-Aug	49	46	22	14	76	43	19	56	37	31	13	18	18	31	70	17	45	25	45	32	11	14	58	39	75.9
22-Aug	26	77	60	33	45	75	75	56	36	40	13	14	14	14	28	14	10	9	7	5	10	15	27	D	77.1
23-Aug	D	D	58	59	49	49	32	16	9	16	12	10	9	10	12	9	14	8	6	5	4	3	11	23	59.1
24-Aug	11	52	38	14	35	41	41	28	17	8	9	10	7	7	11	7	8	9	6	5	4	4	5	7	51.8
25-Aug	7	11	6	10	7	7	4	8	5	8	16	22	31	22	36	19	30	20	12	54	96	6	6	85	95.8
26-Aug	28	69	58	34	13	17	26	81	61	75	30	21	23	22	25	22	30	23	16	3	2	3	4	13	80.8
27-Aug	38	31	87	52	36	74	73	87	46	25	83	64	83	62	27	27	16	14	8	20	7	8	50	57	87.4
28-Aug	48	10	20	49	51	63	75	37	20	8	6	8	8	12	11	8	10	5	5	6	6	8	7	11	74.9
29-Aug	18	9	5	6	5	25	7	7	7	7	9	12	8	9	9	11	8	9	7	4	8	10	14	17	24.7
30-Aug	16	13	10	7	30	11	50	14	15	17	17	14	18	22	24	14	15	14	17	19	6	47	61	54	60.7
31-Aug	34	63	65	11	72	87	61	83	72	36	24	26	24	27	28	20	28	23	50	17	8	10	27	66	86.7
65.8 87.4 87.2 90.2 86.6 92.1 89.7 87.4 73.7 74.9 83.3 63.7 85.8 61.7 70.5 54.4 65.0 34.0 71.2 62.3 95.8 77.3 82.8 92.6																									
D - DAS Failure																									

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

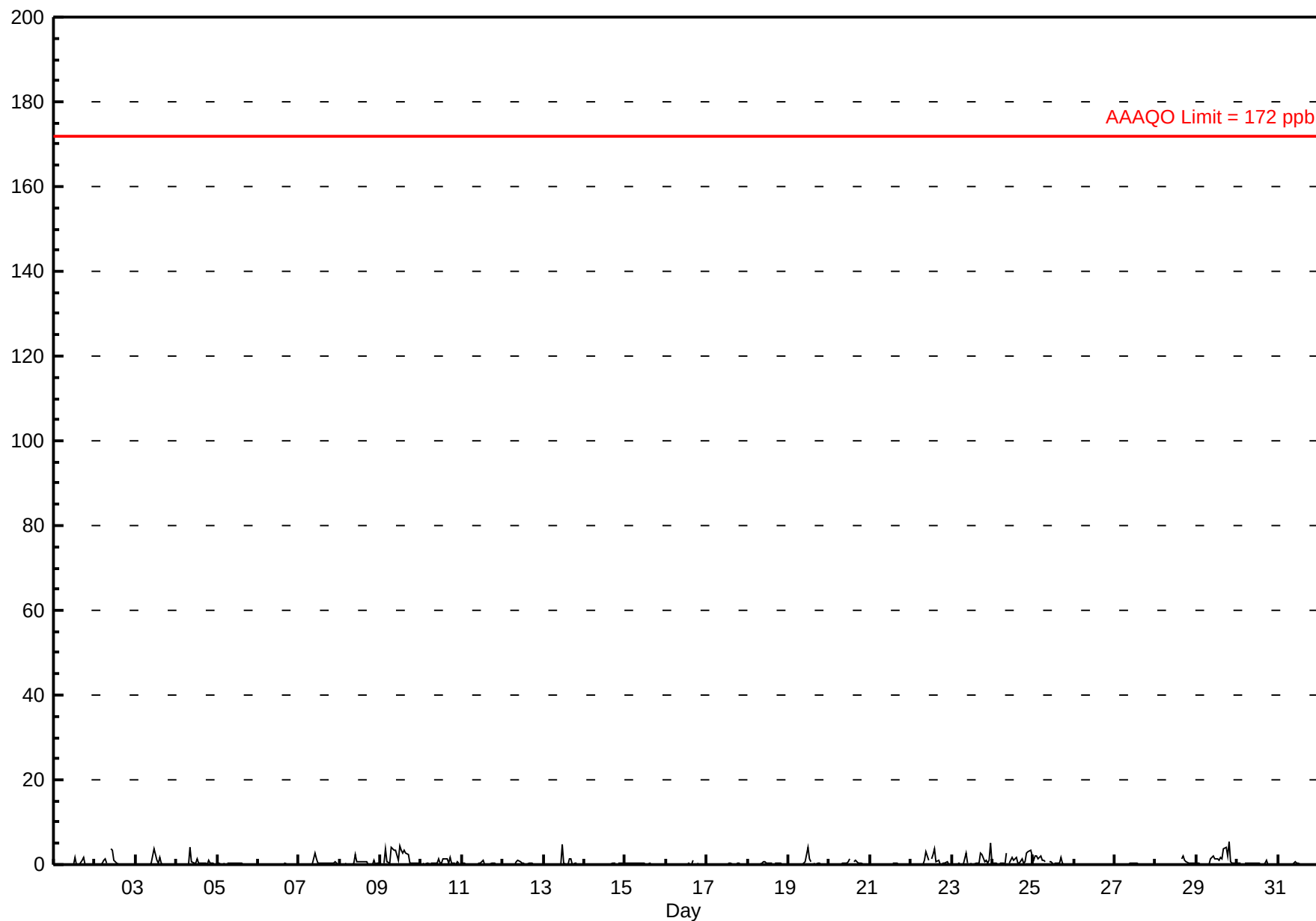
Sulphur Dioxide (SO₂) - ppb

Valleyview - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.5 ppb on Aug 29 20:00 Maximum Daily Average: 1.8 ppb on Aug 9																				Hours in Service: 744 Hours of Data: 709						
Minimum Value: 0 ppb on Aug 1 01:00 Minimum Daily Average: 0.0 ppb on Aug 26 Maximum Diurnal Average: 0.9 ppb at hour 12 Minimum Diurnal Average: 0.1 ppb at hour 1 Monthly Average: 0.40 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 1.2 P ₉₉ = 4.1																				Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	0	0	0	0	A	0	0	2	0	0	0	1	2	0	0	0	0	0	0	0.2	1.7
2-Aug	0	0	0	0	0	1	1	0	A	4	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0.6	3.8
3-Aug	0	0	0	0	0	0	0	A	0	0	2	4	1	0	2	0	0	0	0	0	0	0	0	0	0.4	3.6
4-Aug	0	0	0	0	0	0	A	0	4	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0.4	3.9
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
6-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
7-Aug	0	0	0	A	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0.4	2.8
8-Aug	0	0	A	0	0	0	0	0	0	2	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0.4	2.5
9-Aug	0	A	0	4	1	0	4	4	3	3	1	5	4	3	3	3	2	0	0	0	0	0	0	0	1.8	4.5
10-Aug	A	0	0	0	0	0	0	0	0	0	1	0	0	2	1	1	0	2	0	0	0	1	0	A	0.5	1.7
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0.2	0.9
12-Aug	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	1.2
13-Aug	0	0	0	0	0	0	0	0	0	0	5	0	0	0	1	1	0	0	0	0	A	0	0	0	0.4	4.7
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
15-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0.1	1.1
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
18-Aug	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.7
19-Aug	0	0	0	0	0	0	0	0	0	0	1	4	2	1	A	0	0	0	0	0	0	0	0	0	0.4	4.1
20-Aug	0	0	0	0	0	0	0	0	0	0	1	2	A	1	1	1	1	0	0	0	0	0	0	0	0.3	1.5
21-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
22-Aug	0	0	0	0	0	0	0	0	1	3	1	A	1	2	4	1	1	0	0	0	0	1	0	0	0.7	3.6
23-Aug	0	0	0	0	0	0	0	0	3	0	A	0	0	0	0	0	0	3	2	1	1	0	1	5	0.8	5.2
24-Aug	0	0	0	0	0	0	0	0	3	A	0	2	1	1	2	0	0	1	0	1	3	3	4	2	1.1	3.5
25-Aug	1	2	2	1	2	1	1	1	A	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0.7	2.1
26-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
27-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
28-Aug	0	0	0	0	0	A	0	0	0	0	0	0	C	C	C	1	2	1	1	0	0	0	0	0	0.3	2.1
29-Aug	0	0	0	0	A	0	0	0	1	2	2	1	1	1	2	1	4	4	2	5	1	0	0	0	1.3	5.5
30-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	1.0
31-Aug	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
0.1 0.1 0.1 0.2 0.2 0.1 0.3 0.3 0.6 0.8 0.7 0.9 0.7 0.5 0.6 0.5 0.7 0.6 0.3 0.4 0.3 0.2 0.2 0.3																									Diurnal Average	
1.1 2.1 2.1 3.8 2.1 1.0 4.1 3.8 3.9 3.8 3.4 4.7 3.5 2.9 3.6 2.6 3.8 4.1 2.2 5.5 2.6 2.9 3.5 5.2																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Valleyview - August 2012



Hourly Maximums

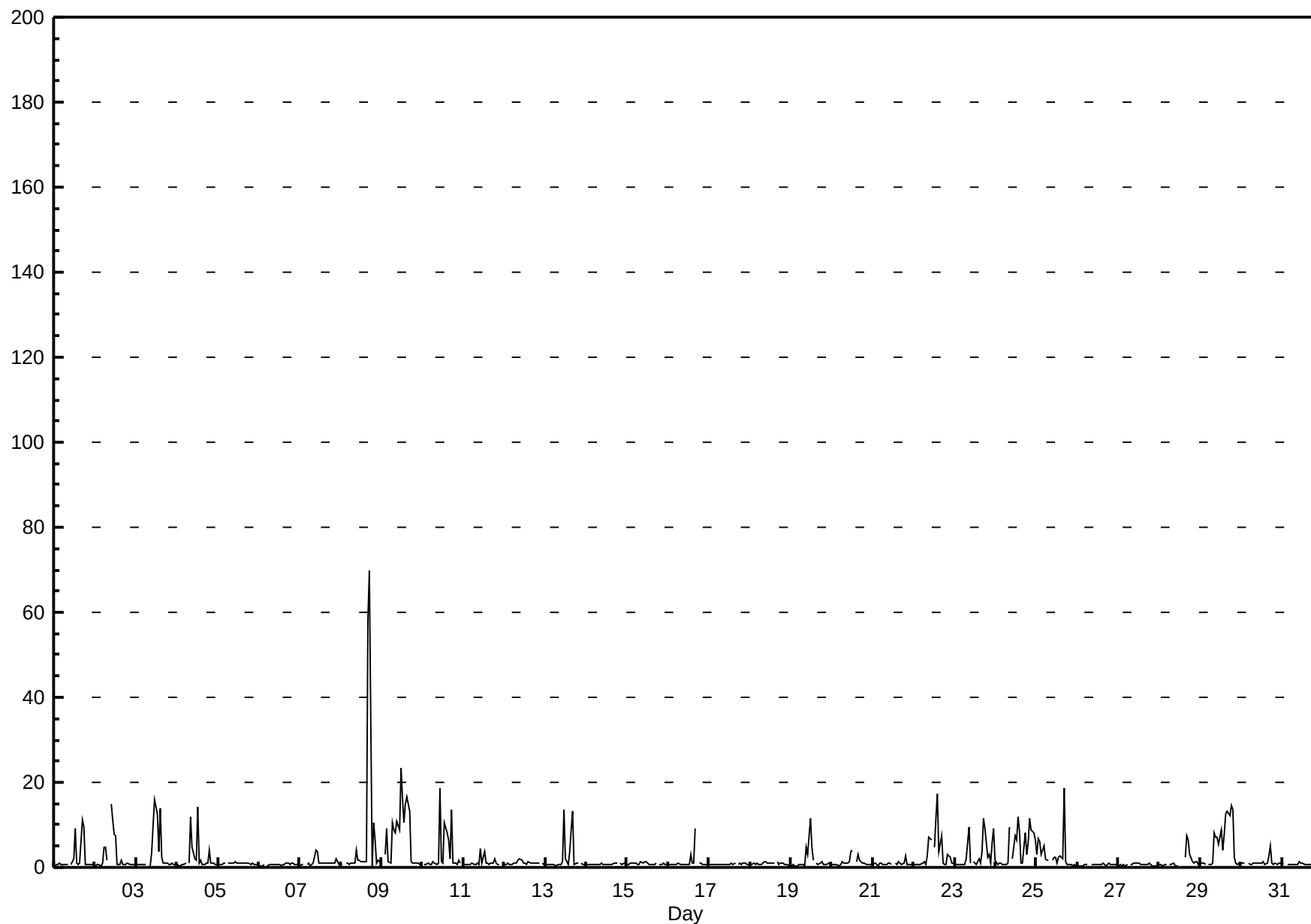
Sulphur Dioxide (SO₂) - ppb

Valleyview - August 2012

Maximum Value: 69.8 ppb on Aug 8 18:00																				Maximum Daily Average: 7.3 ppb on Aug 8					Hours in Service: 744				
Minimum Value: 0 ppb on Aug 8 19:00																				Minimum Daily Average: 0.6 ppb on Aug 26					Hours of Data: 709				
Maximum Diurnal Average: 5.9 ppb at hour 17																				Minimum Diurnal Average: 0.7 ppb at hour 1					Hours of Missing Data: 35				
Monthly Average: 2.19 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.9 Q ₃ = 1.2 P ₉₀ = 6.3 P ₉₉ = 16.0					Hours of Calibration: 35				
																				Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Aug	0	1	1	1	1	1	1	1	1	A	1	2	9	1	1	1	11	10	1	1	1	1	1	1	2.0	11.2			
2-Aug	0	1	1	0	1	5	5	2	A	15	11	8	8	1	1	2	1	1	1	1	1	1	1	1	2.8	14.9			
3-Aug	1	1	1	1	1	1	1	A	0	3	10	16	13	4	14	2	1	1	1	1	1	1	1	1	3.2	15.9			
4-Aug	1	0	0	1	1	1	A	1	12	5	2	2	14	1	2	1	1	1	1	4	1	1	1	1	2.3	14.2			
5-Aug	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2			
6-Aug	0	0	0	1	A	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.7	1.2			
7-Aug	0	1	1	A	1	1	0	1	1	4	4	1	1	1	1	1	1	1	1	1	1	2	1	1	1.2	4.2			
8-Aug	1	1	A	1	1	1	1	1	1	4	2	2	1	1	1	1	58	70	0	10	7	1	2	1	7.3	69.8			
9-Aug	1	A	3	9	1	1	11	9	8	11	9	23	16	11	15	17	13	1	1	1	1	1	1	1	7.1	23.5			
10-Aug	A	1	1	1	1	1	1	1	1	1	19	1	1	11	8	7	2	13	1	1	1	2	1	A	3.4	18.6			
11-Aug	1	1	1	1	1	1	1	1	1	1	4	1	4	1	1	1	1	1	2	1	1	1	A	1	1.1	4.4			
12-Aug	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.9			
13-Aug	1	1	1	1	1	1	0	1	1	1	1	14	2	1	4	9	13	1	1	1	A	1	1	1	2.4	13.5			
14-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.2			
15-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.9	1.2			
16-Aug	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	9	A	1	1	1	1	1	1	1.1	9.2			
17-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.0			
18-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0.9	1.4			
19-Aug	0	1	0	0	0	1	1	1	0	5	3	11	5	2	A	1	1	1	1	1	1	1	1	1	1	1.7	11.4		
20-Aug	1	1	1	1	1	1	1	1	1	1	1	4	4	A	1	3	2	1	1	1	1	1	1	1	1.3	4.0			
21-Aug	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	3	1	1	1	1	0.9	2.8			
22-Aug	1	1	1	1	1	1	1	1	3	7	6	A	5	11	17	4	8	1	1	1	3	2	1	1	3.4	17.3			
23-Aug	1	1	1	1	1	1	1	2	10	1	A	1	1	1	2	1	4	12	9	2	3	1	6	9	3.0	11.5			
24-Aug	2	1	1	1	1	1	1	1	9	A	2	8	6	12	9	1	1	8	3	6	11	9	8	6	4.6	11.8			
25-Aug	3	7	6	3	5	2	2	2	A	2	2	2	1	2	3	2	19	1	1	1	1	0	1	0	2.9	18.6			
26-Aug	0	0	0	0	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.6	0.9			
27-Aug	0	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.7	1.0			
28-Aug	1	1	0	1	1	A	1	1	1	0	0	0	C	C	C	2	8	6	3	1	1	1	1	1	1.6	7.5			
29-Aug	1	1	1	1	A	1	1	1	8	7	7	5	9	4	8	13	13	12	15	13	2	1	1	1	5.4	14.7			
30-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	3	5	1	1	1	1	1	1	1.2	5.1			
31-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5			
0.7 0.9 0.9 1.1 0.9 0.9 1.3 1.2 2.4 2.8 3.3 3.7 3.8 2.7 3.4 2.6 5.9 5.2 1.8 2.0 1.5 1.2 1.2 1.2																									Diurnal Average				
3.0 6.8 6.1 9.0 5.0 4.9 10.5 8.9 12.0 14.9 18.6 23.5 16.3 11.8 17.3 16.5 57.8 69.8 14.7 13.4 11.4 8.8 8.2 9.2																									Diurnal Maximum				
C - Calibration A - Automated Daily Zero Span																													

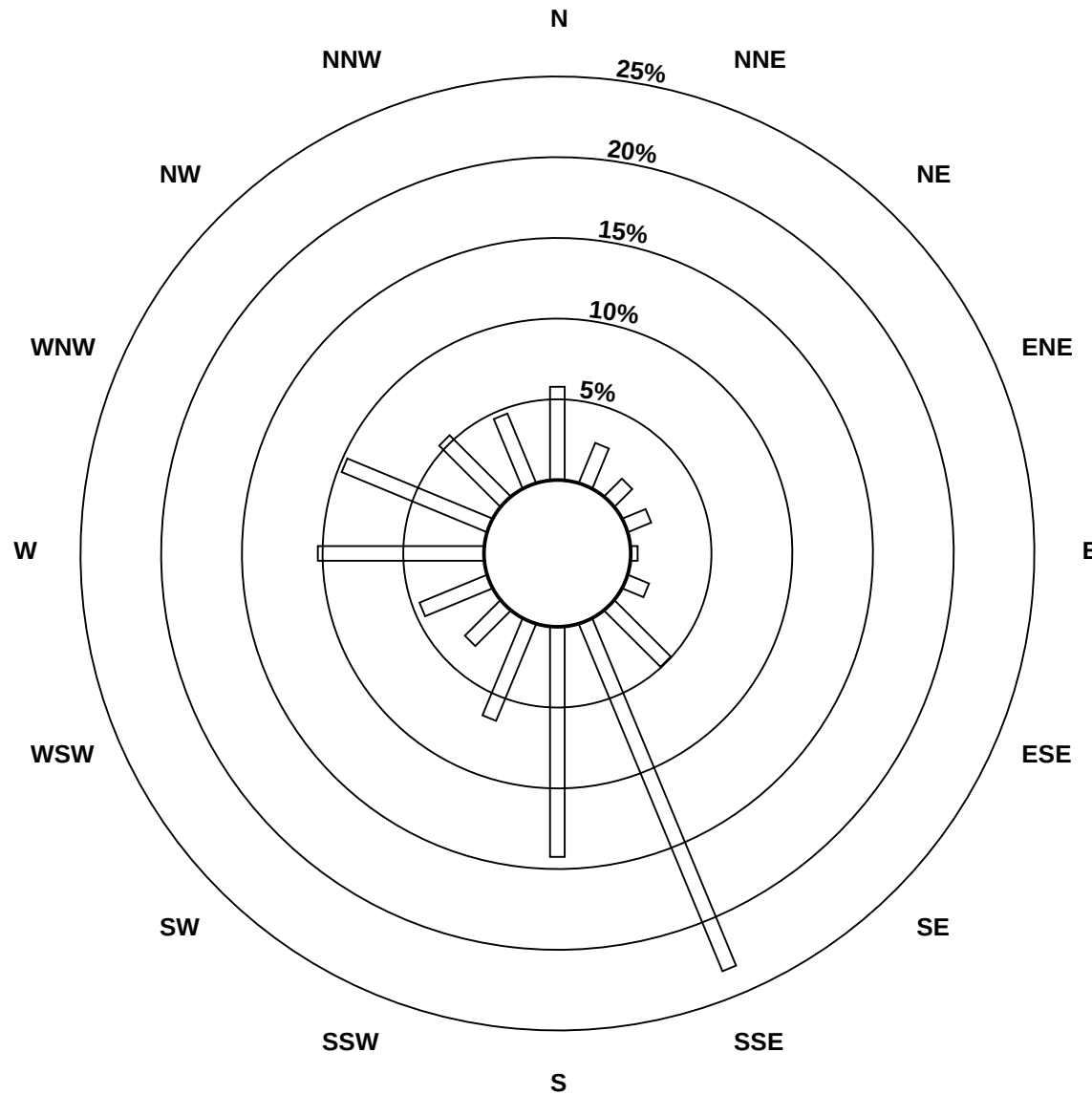
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - August 2012

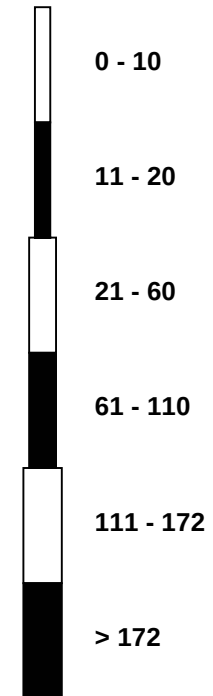


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - August 2012

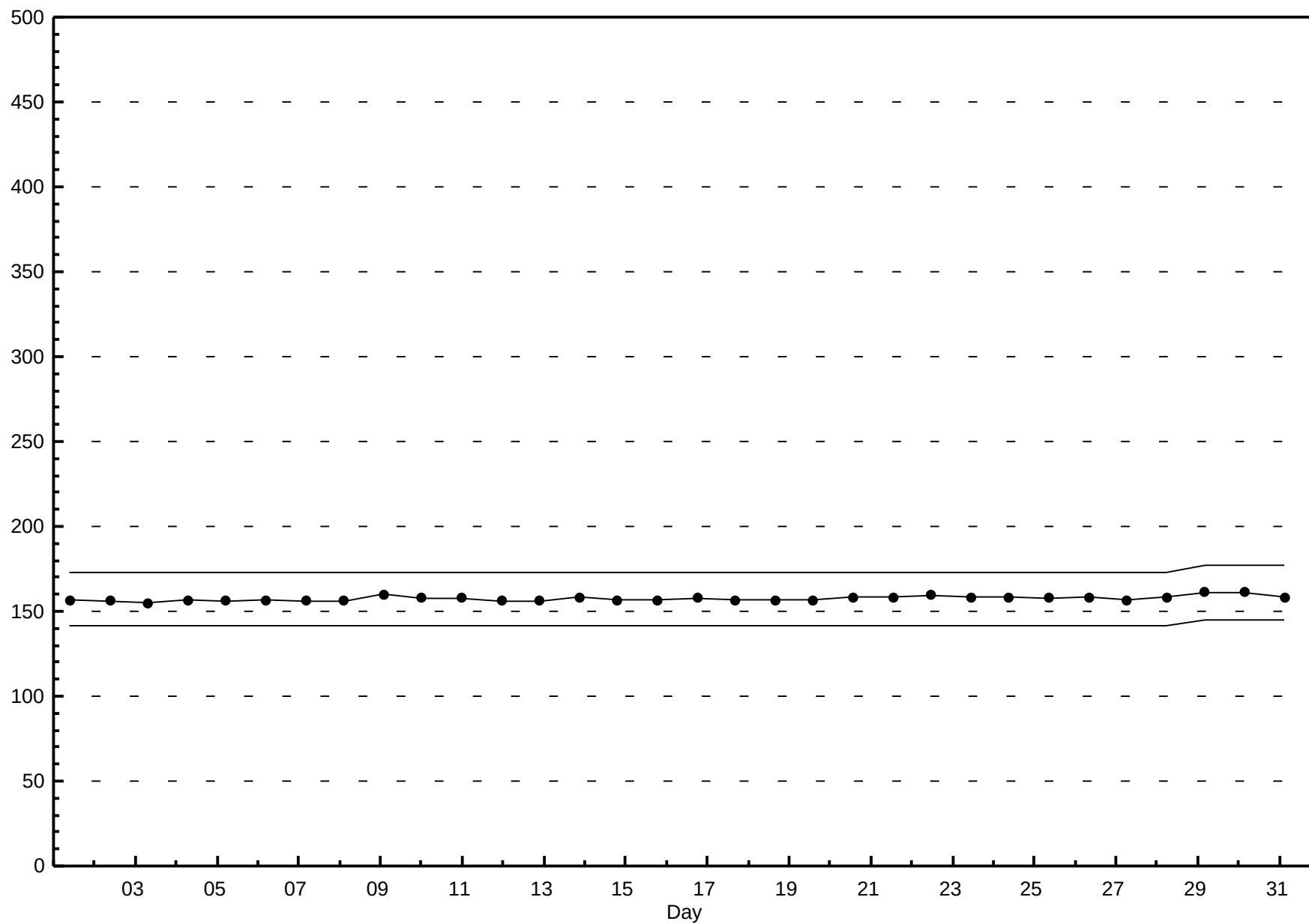


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - August 2012



Hourly Averages

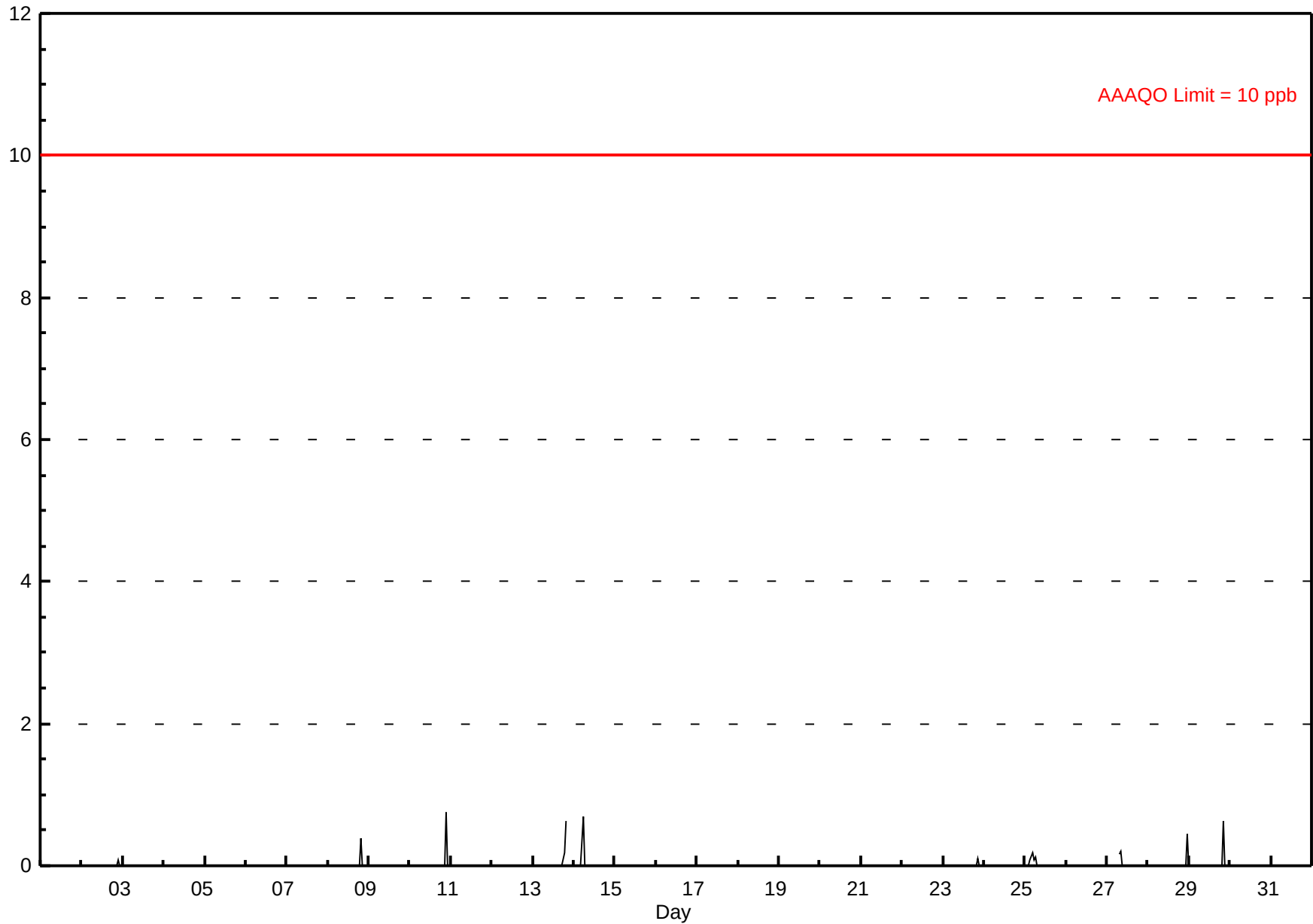
Hydrogen Sulphide (H₂S) - ppb

Valleyview - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.8 ppb on Aug 10 22:00 Maximum Daily Average: 0.0 ppb on Aug 13																				Hours in Service: 744 Hours of Data: 706						
Minimum Value: 0 ppb on Aug 1 01:00 Minimum Daily Average: 0.0 ppb on Aug 1 Maximum Diurnal Average: 0.0 ppb at hour 20 Minimum Diurnal Average: 0.0 ppb at hour 1 Monthly Average: 0.01 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.1																				Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	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
2-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
4-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
6-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
7-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
8-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4
9-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
10-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0.0	0.8
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.0
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.0
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0.0	0.6
14-Aug	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.7
15-Aug	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
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.0
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.0
18-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.0
19-Aug	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
20-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.0
21-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
22-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
23-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
24-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
25-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
26-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
27-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
28-Aug	0	0	0	0	0	A	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	--	0.5
29-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.0	0.6
30-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
31-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
0.0 0.0																									Diurnal Average	
0.0 0.0 0.0 0.1 0.2 0.7 0.1 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2 0.6 0.6 0.8 0.0 0.5																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb
Valleyview - August 2012



Hourly Maximums

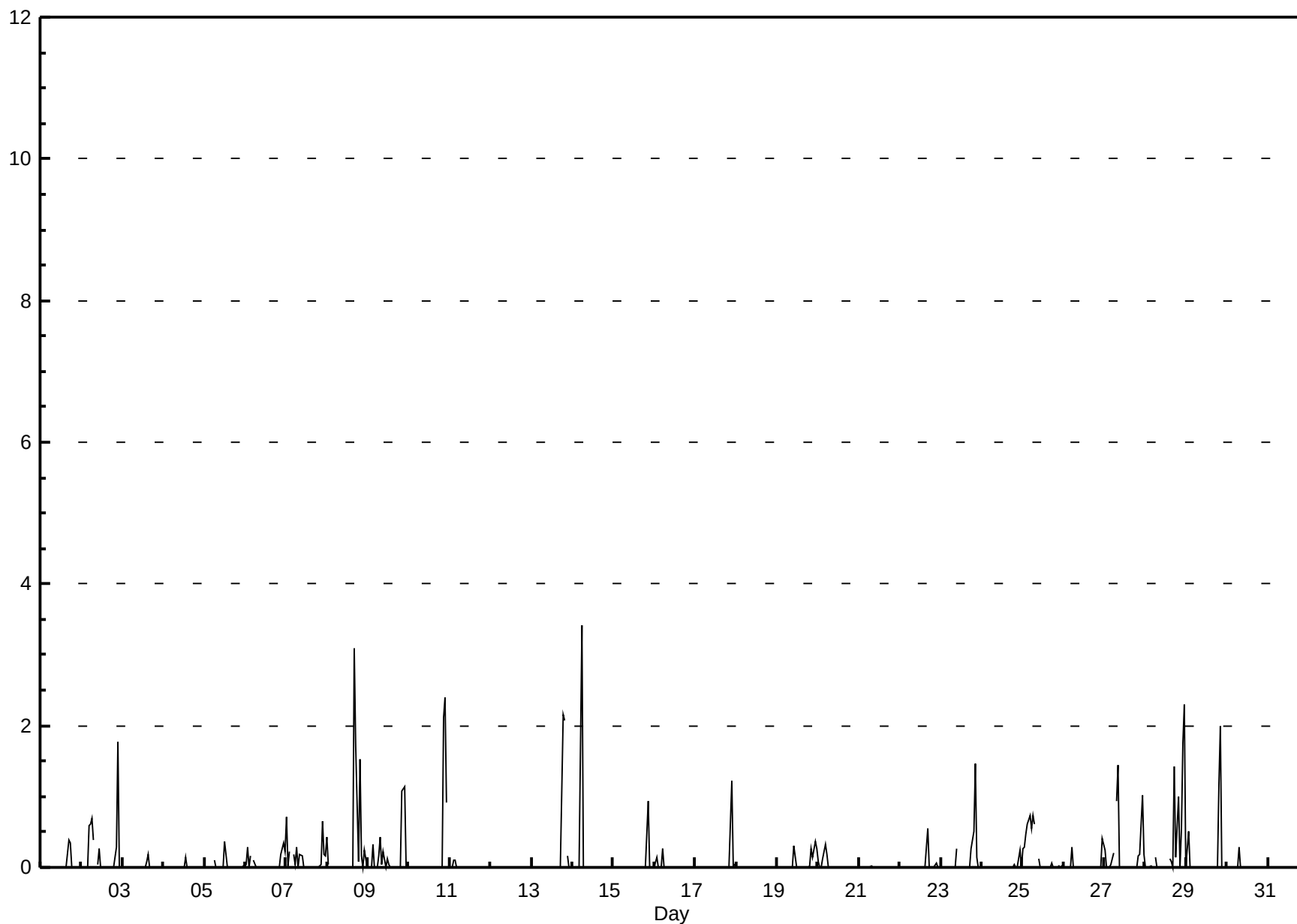
Hydrogen Sulphide (H₂S) - ppb

Valleyview - August 2012

Maximum Value: 3.4 ppb on Aug 14 06:00																				Maximum Daily Average: 0.3 ppb on Aug 8										Hours in Service: 744									
Minimum Value: 0 ppb on Aug 1 01:00																				Minimum Daily Average: 0.0 ppb on Aug 12										Hours of Data: 706									
Maximum Diurnal Average: 0.3 ppb at hour 22																				Minimum Diurnal Average: 0.0 ppb at hour 12										Hours of Missing Data: 38									
Monthly Average: 0.09 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.2 P ₉₉ = 2.0										Hours of Calibration: 38									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Aug	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	0.4													
2-Aug	0	0	0	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0.2	1.8													
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2													
4-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1													
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4													
6-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3													
7-Aug	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.1	0.7													
8-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	2	0	0	0	0	0.3	3.1													
9-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.2	1.1													
10-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	A	0.2	2.4													
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.1													
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.0													
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	A	0	0	0	0.2	2.1													
14-Aug	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	3.4													
15-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0.0	0.9													
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.3													
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0.1	1.2													
18-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.0													
19-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.4													
20-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.3													
21-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0													
22-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0.0	0.5													
23-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0.1	1.5													
24-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2													
25-Aug	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7													
26-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4													
27-Aug	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.2	1.4													
28-Aug	0	0	0	0	0	A	0	0	C	C	C	C	C	C	0	0	0	1	0	1	0	1	2	2	--	2.3													
29-Aug	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0.2	2.0													
30-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3													
31-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0													
0.1 0.0 0.0 0.0 0.1 0.2 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.1 0.2 0.3 0.3 0.2 0.1																									Diurnal Average														
0.7 0.5 0.5 0.6 0.7 3.4 0.7 0.9 1.4 0.3 0.3 0.1 0.4 0.1 0.1 0.2 3.1 1.7 2.1 2.1 2.1 2.4 1.7 2.3																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

Hourly Maximums

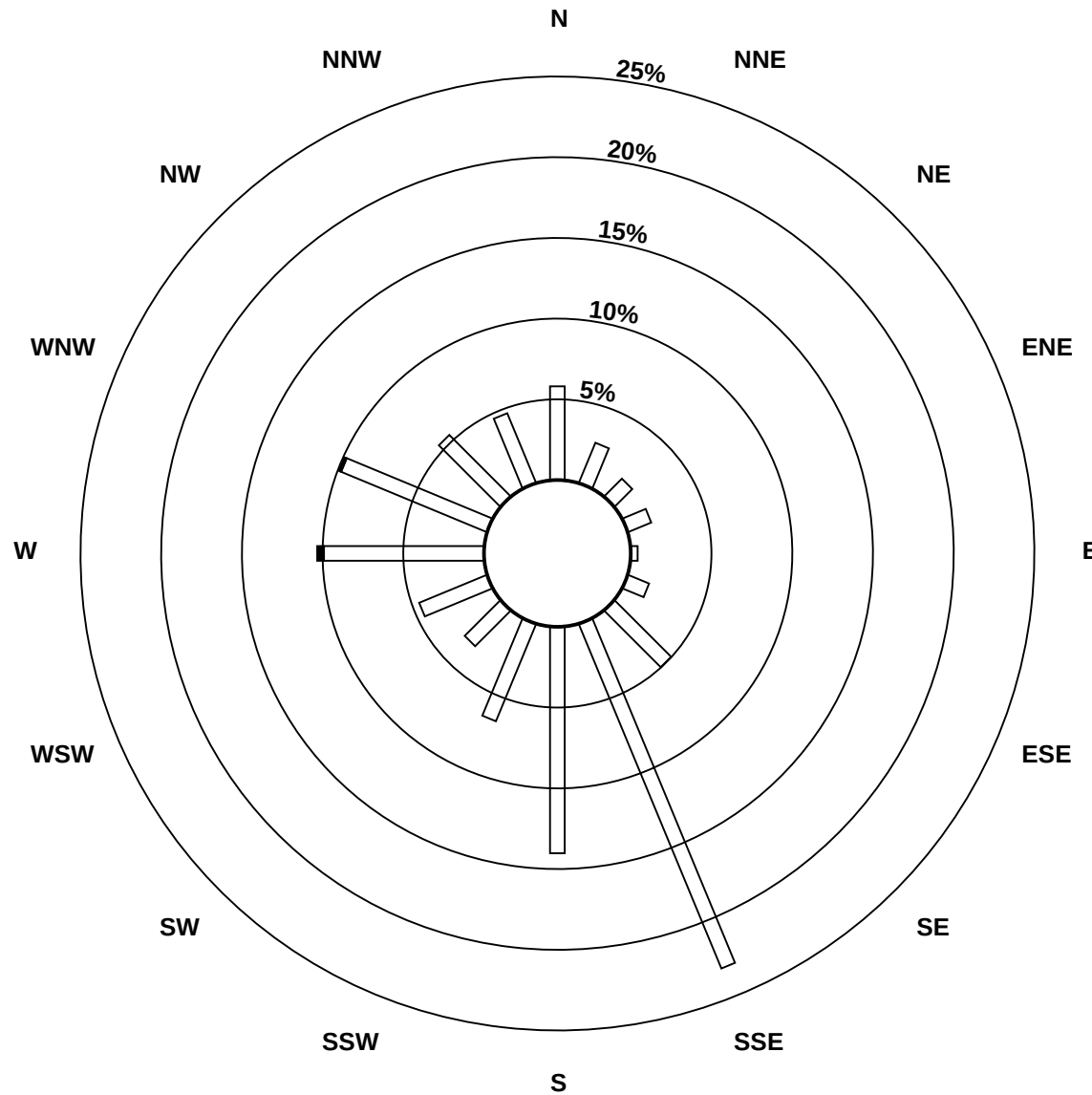
Hydrogen Sulphide (H₂S) - ppb
Valleyview - August 2012



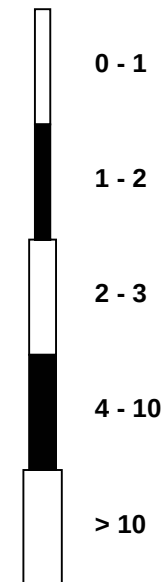
Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb

Valleyview - August 2012

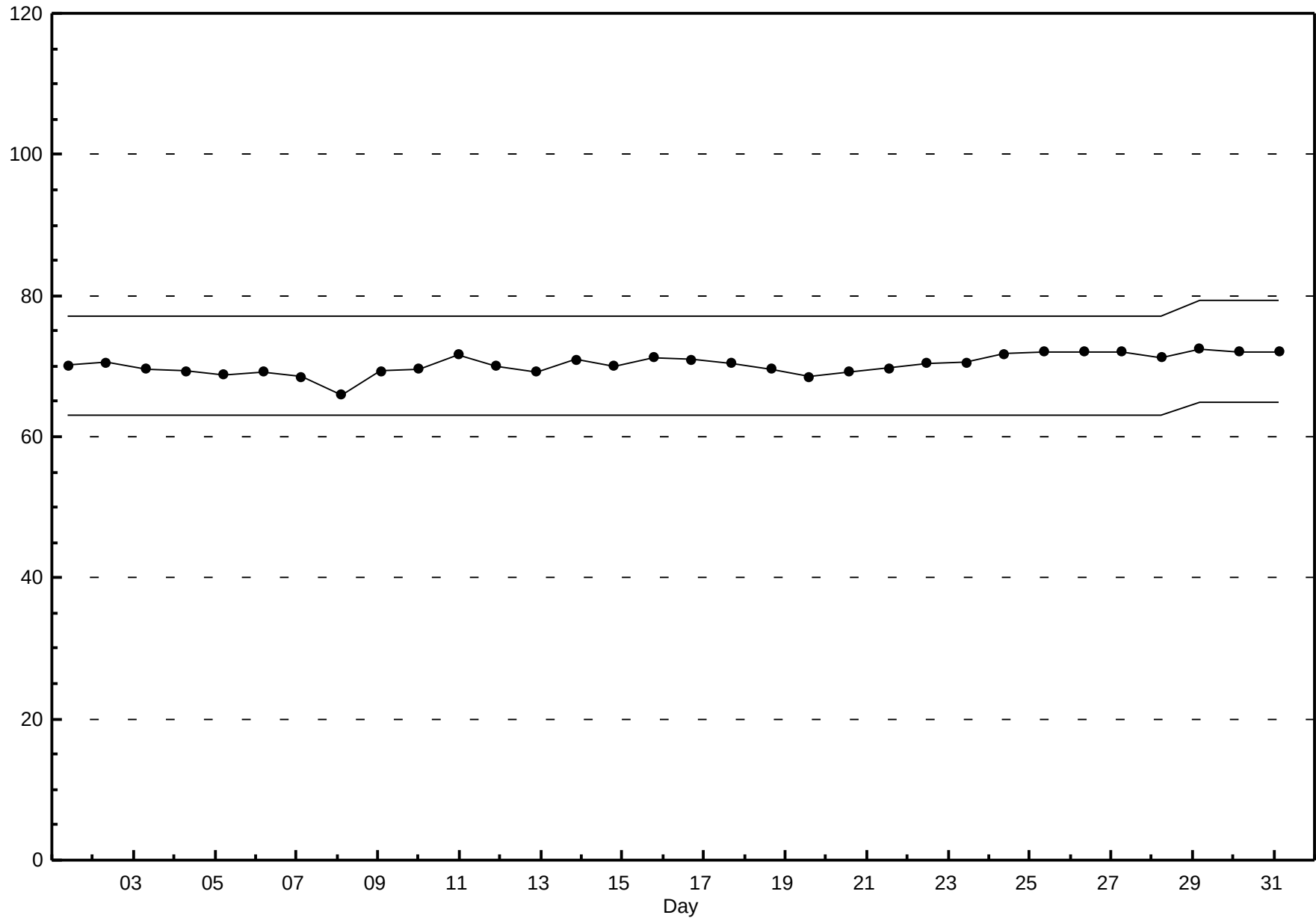


Pollutant Classes (ppb)



Span Responses

Hydrogen Sulphide (H₂S)
Valleyview - August 2012



Hourly Averages

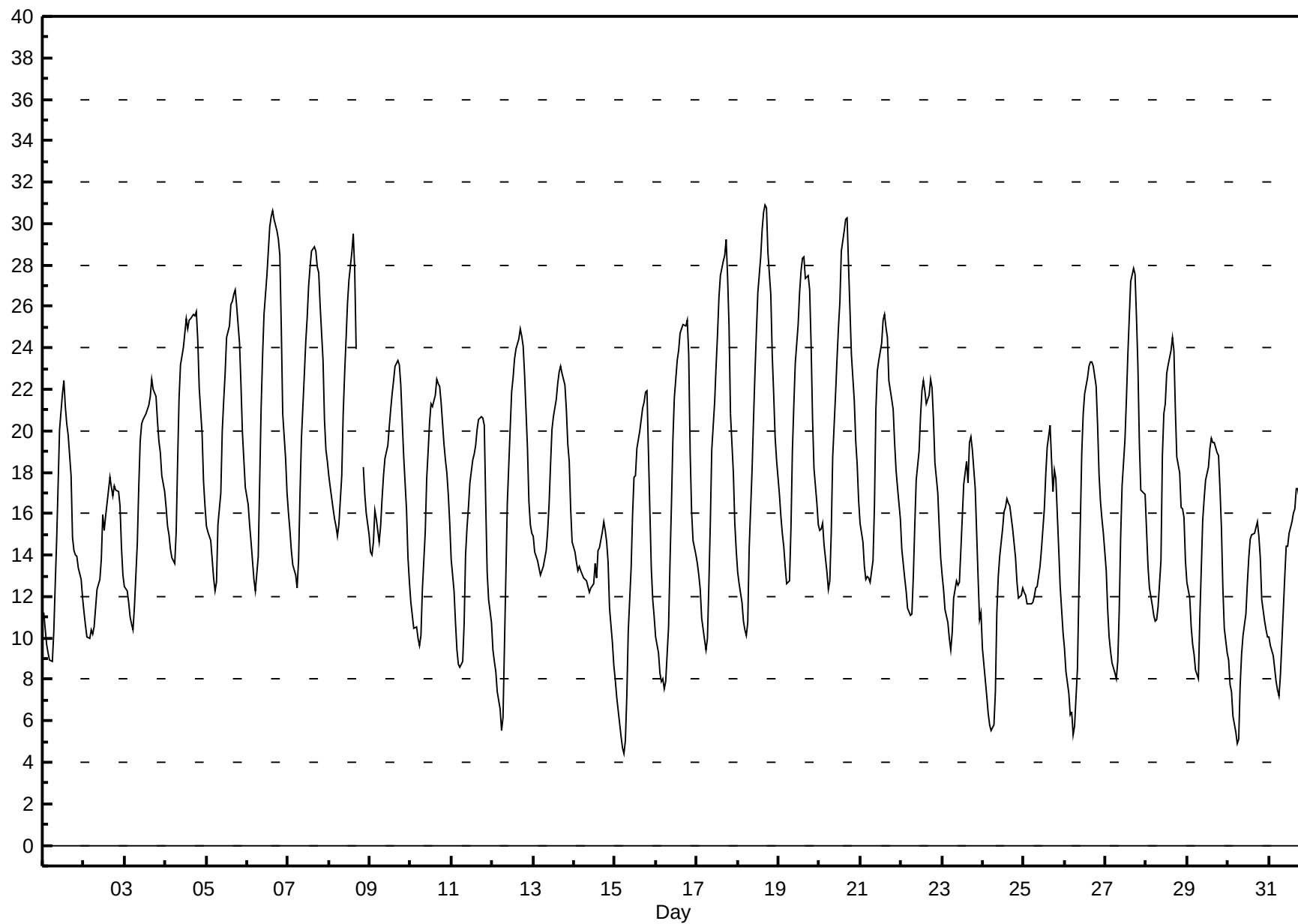
External Temperature (ET) - °C

Valleyview - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 30.9 °C on Aug 18 17:00 Maximum Daily Average: 22.2 °C on Aug 6																								Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 0 Percent Operational Time: 99.6		
Minimum Value: 4 °C on Aug 15 06:00 Maximum Diurnal Average: 23.0 °C at hour 16 Monthly Average: 16.82 °C												Minimum Daily Average: 10.8 °C on Aug 30 Minimum Diurnal Average: 10.1 °C at hour 6 Percentiles: P ₁ = 5.5 P ₁₀ = 9.7 Q ₁ = 12.6 Median = 16.0 Q ₃ = 21.2 P ₉₀ = 25.1 P ₉₉ = 30.1														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	11	10	10	9	9	9	10	13	15	17	20	22	22	21	20	20	18	15	14	14	14	13	13	12	14.7	22.4
2-Aug	11	11	10	10	10	10	11	11	12	13	14	16	15	16	17	18	17	17	17	17	17	16	14	13	13.9	17.7
3-Aug	12	12	12	11	11	10	11	15	17	19	20	21	21	21	21	22	23	22	22	20	20	19	18	17	17.4	22.5
4-Aug	16	15	15	14	14	14	15	19	22	23	24	25	25	25	25	25	26	26	26	24	22	20	18	16	20.6	25.7
5-Aug	15	15	15	14	13	12	13	15	17	20	21	23	24	25	26	26	27	27	26	24	22	20	19	17	19.9	26.8
6-Aug	16	15	15	14	13	12	14	18	21	24	26	28	29	30	30	31	30	30	29	28	25	21	19	17	22.2	30.6
7-Aug	16	15	14	14	13	12	14	17	20	23	24	25	27	28	29	29	29	28	28	26	23	21	19	19	21.3	28.9
8-Aug	18	17	16	16	15	15	15	18	21	23	24	26	27	29	29	28	24	N	N	N	18	17	16	15	20.4	29.5
9-Aug	14	14	15	16	16	15	15	17	18	19	19	20	21	22	22	23	23	23	22	20	19	16	14	13	18.2	23.4
10-Aug	12	11	10	11	10	10	10	12	15	18	19	20	21	21	22	22	22	22	21	19	19	18	17	16	16.6	22.5
11-Aug	14	12	11	9	9	9	9	11	14	15	16	18	19	19	19	20	21	21	21	20	16	13	12	11	14.9	20.7
12-Aug	9	9	8	7	7	6	6	10	13	16	20	22	23	23	24	24	25	25	24	23	19	17	15	15	16.3	24.9
13-Aug	15	14	14	13	13	13	13	14	15	16	18	20	21	22	22	23	23	23	22	21	19	19	16	15	17.7	23.1
14-Aug	14	14	13	13	13	13	13	13	12	12	12	13	14	13	14	14	15	16	15	15	14	11	10	9	13.1	15.6
15-Aug	8	7	6	5	5	4	5	7	10	13	16	18	18	19	20	21	21	21	22	22	16	13	12	11	13.4	21.9
16-Aug	10	9	8	8	8	8	8	11	14	16	20	22	23	24	25	25	25	25	25	24	19	16	15	14	16.7	25.4
17-Aug	14	13	12	11	10	9	10	13	16	19	21	23	25	26	27	28	28	29	27	25	21	18	16	14	19.0	29.3
18-Aug	13	13	12	11	10	10	11	14	18	21	23	25	27	28	30	31	31	31	29	27	24	22	20	19	20.7	30.9
19-Aug	17	16	15	14	13	13	13	15	19	21	23	25	27	28	28	28	27	28	27	24	21	18	16	15	20.5	28.4
20-Aug	15	15	16	14	13	12	13	15	19	22	23	25	26	29	30	30	30	28	26	24	21	19	18	17	20.9	30.3
21-Aug	16	15	13	13	13	13	13	14	16	21	23	23	24	25	26	25	25	22	22	21	19	18	17	16	18.9	25.6
22-Aug	14	14	13	12	11	11	11	13	15	18	19	21	22	22	22	21	22	22	22	21	18	17	15	14	17.1	22.5
23-Aug	13	12	11	11	10	9	10	12	13	13	13	14	16	17	19	17	19	20	19	17	15	13	11	11	14.0	19.7
24-Aug	9	8	7	6	6	6	6	7	11	13	14	15	16	16	17	16	16	15	15	14	13	12	12	12	11.8	16.7
25-Aug	12	12	12	12	12	12	12	12	12	13	14	15	16	18	19	20	19	17	18	18	14	12	11	10	14.4	20.2
26-Aug	10	8	7	6	6	5	6	9	12	16	19	21	22	23	23	23	23	23	22	20	18	17	16	15	15.4	23.3
27-Aug	13	11	10	9	9	8	8	9	11	15	17	20	22	24	25	27	28	28	25	23	19	17	17	17	17.2	27.8
28-Aug	15	13	12	12	11	11	11	12	14	19	21	21	23	23	24	25	24	21	19	18	16	16	16	14	17.1	24.5
29-Aug	13	12	11	10	9	8	8	11	13	16	17	18	18	19	20	19	19	19	19	17	15	12	10	9	14.3	19.6
30-Aug	9	8	7	6	5	5	5	8	9	10	11	13	14	15	15	15	15	16	15	14	12	11	10	10	10.8	15.6
31-Aug	10	10	9	9	8	7	7	8	11	13	14	14	15	16	16	16	17	17	17	16	14	13	11	11	12.5	17.2
13.1 12.3 11.6 11.0 10.5 10.1 10.5 12.6 15.1 17.3 19.0 20.3 21.4 22.2 22.8 23.0 23.0 22.5 21.8 20.6 18.2 16.3 15.0 14.0																								Diurnal Average		
17.8 17.3 16.2 16.2 15.8 14.9 15.4 18.5 21.6 23.6 25.6 27.5 28.7 29.9 30.4 30.6 30.9 30.8 29.2 28.5 25.0 21.8 19.7 18.6																								Diurnal Maximum		
N - Not Valid																										

Hourly Averages

External Temperature (ET) - °C
Valleyview - August 2012



Hourly Averages

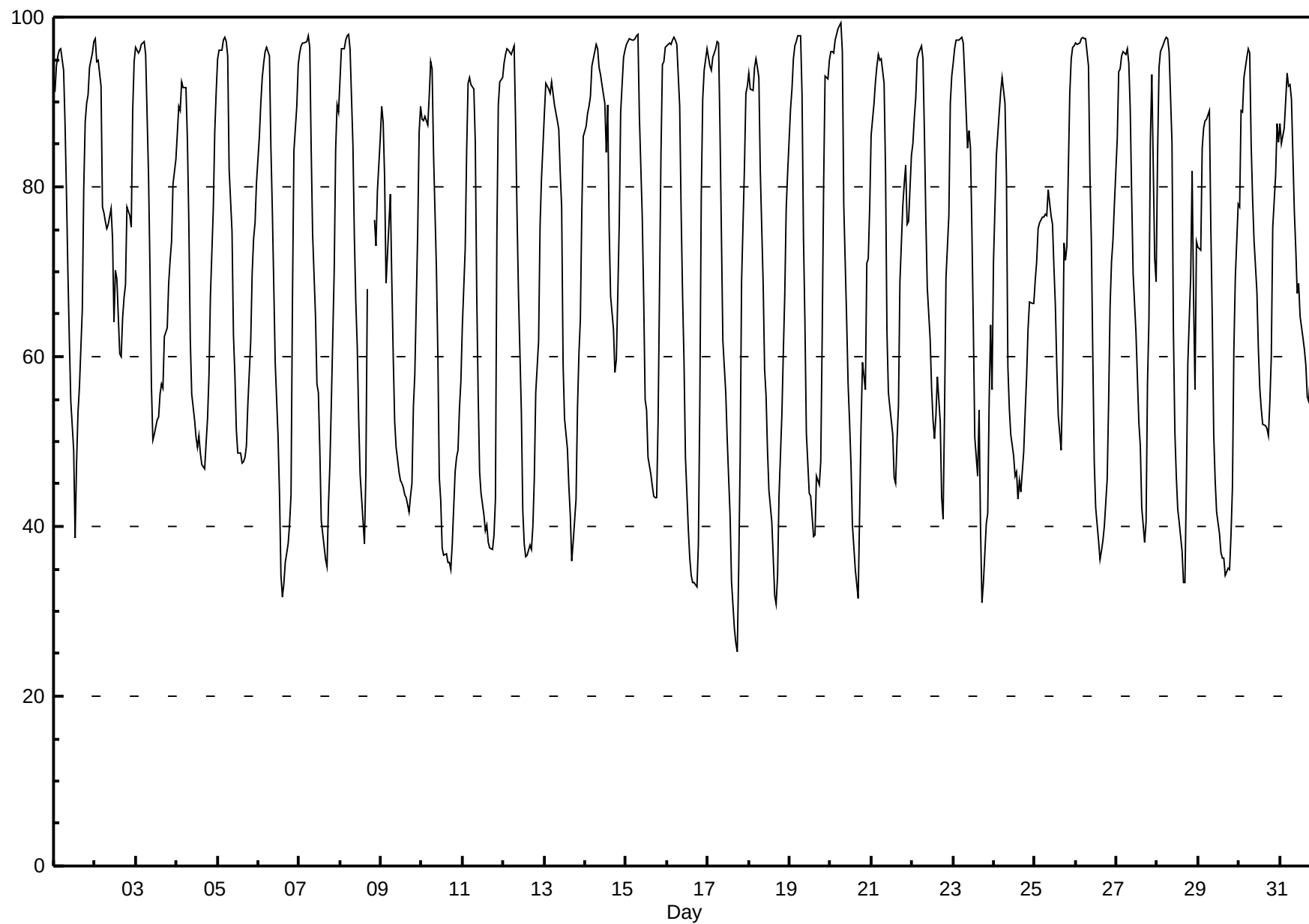
Relative Humidity (RH) - %

Valleyview - August 2012

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 99.3 % on Aug 20 07:00 Maximum Daily Average: 84.6 % on Aug 14																					Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 0 Percent Operational Time: 99.6					
Minimum Value: 25 % on Aug 17 18:00 Maximum Diurnal Average: 93.7 % at hour 6 Monthly Average: 70.35 %										Minimum Daily Average: 58.5 % on Aug 29 Minimum Diurnal Average: 44.3 % at hour 16 Percentiles: P ₁ = 31.8 P ₁₀ = 40.2 Q ₁ = 51.0 Median = 73.5 Q ₃ = 91.1 P ₉₀ = 96.2 P ₉₉ = 97.9																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	91	94	95	96	96	94	88	79	70	62	55	49	39	47	53	56	66	80	88	90	91	94	96	97	77.7	97.2
2-Aug	98	95	95	92	78	77	76	75	76	78	74	64	70	69	60	60	65	67	68	78	77	75	89	95	77.0	97.5
3-Aug	96	96	96	97	97	97	96	81	70	57	50	51	52	53	56	57	56	62	63	69	71	74	80	83	73.4	97.1
4-Aug	86	90	89	92	92	92	86	76	62	56	53	51	49	51	49	47	47	50	53	58	67	78	86	91	68.7	92.4
5-Aug	95	96	96	97	98	97	95	82	75	62	58	51	49	49	47	48	48	50	54	62	70	74	76	81	71.2	97.6
6-Aug	86	90	93	95	96	97	95	85	77	69	59	51	44	34	32	33	36	38	40	44	67	84	89	94	67.8	96.5
7-Aug	96	97	97	97	97	98	96	84	74	65	57	56	49	41	39	36	35	43	47	55	70	84	90	89	70.5	97.7
8-Aug	93	96	96	97	98	98	96	85	74	66	61	53	46	41	38	46	68	N	N	N	76	73	79	86	74.6	98.0
9-Aug	89	88	81	69	72	79	69	60	52	49	46	45	45	44	43	42	44	45	54	58	75	86	90		61.3	89.5
10-Aug	88	88	88	87	91	95	94	84	70	60	46	43	37	37	37	36	36	35	38	46	48	49	54	57	60.1	94.7
11-Aug	64	73	84	92	93	92	91	85	67	56	46	44	41	39	40	38	37	37	39	43	74	90	92	93	64.7	92.9
12-Aug	95	96	96	96	96	96	97	88	77	67	53	42	38	36	37	38	37	40	46	56	62	75	81	85	67.8	96.6
13-Aug	89	92	92	91	92	91	90	88	87	82	78	59	53	49	45	41	36	38	43	54	60	64	77	86	69.9	92.3
14-Aug	87	89	90	91	94	96	97	96	94	93	92	90	84	90	75	67	63	58	60	67	76	89	95	96	84.6	96.9
15-Aug	97	97	97	97	97	97	98	98	88	77	67	55	54	48	46	45	44	43	43	52	84	94	95	96	75.4	98.0
16-Aug	97	97	97	97	98	97	97	89	77	67	60	48	40	36	34	33	33	33	38	55	79	90	94	96	70.1	97.6
17-Aug	95	94	94	95	96	97	97	87	74	62	56	50	46	41	34	28	26	25	35	48	69	82	91	92	67.3	97.1
18-Aug	93	91	91	94	95	94	93	82	68	59	55	49	44	41	36	32	31	34	44	53	60	67	77	82	65.3	95.1
19-Aug	89	92	95	97	97	98	98	91	74	64	51	44	44	41	39	39	46	45	48	63	80	93	93	95	71.4	97.7
20-Aug	96	96	96	97	99	99	99	96	78	64	57	52	47	40	35	33	32	42	52	59	56	71	72	78	68.5	99.3
21-Aug	86	90	92	94	96	95	95	92	82	63	56	54	51	46	45	50	54	69	78	80	83	76	76	84	74.4	95.6
22-Aug	85	88	91	95	96	97	95	86	76	68	62	56	53	50	53	58	52	43	41	54	69	77	90	93	72.0	96.6
23-Aug	95	96	97	97	97	98	97	93	85	87	85	75	64	50	46	54	40	31	33	40	42	55	64	56	69.8	97.7
24-Aug	71	84	86	89	91	93	90	81	59	54	51	48	46	46	43	45	44	49	53	58	63	66	66	66	64.3	92.9
25-Aug	69	71	75	76	76	76	77	77	80	77	76	70	66	59	53	49	57	73	71	73	91	95	96	97	74.2	96.6
26-Aug	97	97	97	97	98	97	97	94	82	74	60	48	42	38	36	37	38	40	46	55	66	71	74	78	69.1	97.6
27-Aug	86	94	94	95	96	96	96	95	89	79	70	63	57	52	49	42	38	40	57	64	86	93	71	69	73.8	96.3
28-Aug	84	94	96	97	97	98	97	96	85	63	51	46	42	41	37	33	33	45	59	70	82	67	56	74	68.4	97.7
29-Aug	73	73	85	87	88	88	89	75	64	51	45	42	39	37	36	36	34	35	35	39	45	61	69	78	58.5	88.9
30-Aug	78	89	89	93	95	96	96	85	79	74	68	61	56	54	52	52	52	51	55	60	75	81	87	85	73.4	96.3
31-Aug	87	85	87	90	93	92	92	90	77	73	67	69	65	62	61	59	55	55	58	66	75	80	89	93	75.9	93.5
88.1 90.5 91.9 92.8 93.4 93.7 92.5 85.7 75.6 66.9 60.1 54.2 50.1 47.2 44.8 44.3 44.6 46.5 51.0 58.8 70.0 77.4 81.7 85.0 97.5 97.1 97.4 97.4 98.6 98.9 99.3 98.0 94.1 93.3 92.1 89.9 84.2 89.7 75.2 67.1 68.0 79.8 87.6 89.9 90.9 95.1 96.4 97.2																									Diurnal Average Diurnal Maximum	
N - Not Valid																										

Hourly Averages

Relative Humidity (RH) - %
Valleyview - August 2012



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	1	1	1	1	2	2	3	3	4	3	3	2	6	6	10	7	10	10	3	1	3	3	2	2	1.4	10.2
Dir	170	166	165	157	165	162	158	158	160	163	163	170	264	314	334	308	299	273	216	153	162	163	181	180	242	273
2 Spd	2	2	1	1	10	6	6	7	6	6	8	10	8	8	12	10	9	10	3	1	1	2	1	1	4.6	12.0
Dir	186	205	167	198	275	275	273	293	306	264	268	290	307	301	305	314	327	324	295	155	249	243	171	162	291	305
3 Spd	2	2	2	2	2	1	1	2	2	4	8	7	6	7	7	3	2	2	2	2	3	2	2	2	2.0	7.6
Dir	157	160	151	154	157	163	153	157	155	240	274	261	249	256	263	249	182	156	161	163	164	166	167	170	218	274
4 Spd	1	2	2	2	2	2	2	2	6	11	14	14	13	11	10	9	9	7	2	2	4	1	2	1	4.0	13.8
Dir	164	162	162	166	165	162	153	159	266	289	291	290	300	322	316	309	316	341	4	246	357	327	342	349	301	291
5 Spd	3	4	2	2	2	1	1	1	3	1	3	4	2	3	3	6	6	5	5	5	3	5	3	2	2.8	5.8
Dir	352	8	340	319	333	330	346	63	11	37	15	41	60	37	59	30	21	20	10	11	8	356	9	336	14	30
6 Spd	0	1	0	0	1	1	2	1	2	3	3	3	3	3	0	1	1	5	4	2	0	0	1	1	0.4	5.2
Dir	338	343	303	202	186	187	164	170	158	162	161	165	161	155	358	197	15	19	355	352	214	184	172	289	145	19
7 Spd	0	1	0	0	0	1	1	0	0	2	2	3	3	6	6	5	3	3	4	2	0	1	1	1	1.2	5.7
Dir	171	245	218	202	178	334	164	50	339	143	13	350	356	341	355	30	84	62	54	75	17	346	348	268	20	355
8 Spd	1	1	1	1	1	1	1	2	2	4	5	5	5	3	2	0	1	3	1	1	7	7	3	2	1.7	7.3
Dir	103	163	204	172	164	177	158	152	159	162	164	157	155	166	181	332	215	196	179	178	271	288	220	180	190	271
9 Spd	3	3	4	5	3	2	7	10	14	14	14	11	10	10	11	10	9	7	6	2	1	1	1	1	5.9	13.9
Dir	164	191	230	267	232	194	271	278	274	277	284	276	260	260	265	262	281	302	304	351	260	199	182	178	269	277
10 Spd	1	2	1	1	1	1	2	2	3	2	6	6	7	7	6	8	9	7	7	5	4	6	4	6	3.3	8.9
Dir	179	174	178	185	176	170	161	156	165	179	253	253	251	256	268	280	293	295	299	311	288	279	249	300	266	293
11 Spd	4	2	1	1	1	1	1	1	1	3	4	6	7	9	10	7	6	6	4	2	1	0	2	1	2.4	10.2
Dir	315	350	200	172	172	201	162	155	40	45	291	310	279	301	330	312	322	323	324	307	172	125	157	198	312	330
12 Spd	1	1	0	0	0	0	1	1	1	1	1	3	2	2	3	2	2	2	1	2	2	1	2	4	1.2	3.8
Dir	176	174	167	269	307	4	252	212	136	179	147	143	119	122	143	138	137	98	58	117	166	157	160	171	144	171
13 Spd	4	4	4	3	2	3	3	2	2	2	2	7	9	10	9	10	9	7	3	1	4	2	12	4	2.2	11.8
Dir	166	166	165	168	163	164	166	166	164	165	177	263	289	302	289	277	281	297	281	272	6	302	9	24	279	9
14 Spd	3	3	4	1	2	2	3	9	14	15	14	13	14	11	16	12	12	11	8	3	1	0	1	1	6.9	16.4
Dir	14	356	13	69	303	295	322	5	5	5	1	4	4	3	1	10	358	7	3	5	283	161	161	161	3	1
15 Spd	1	1	1	1	1	0	1	2	3	3	2	3	3	5	3	3	2	2	1	1	1	1	1	1	1.6	4.5
Dir	166	167	164	195	184	297	169	168	160	160	168	174	157	155	168	156	155	153	145	170	179	177	190	175	164	155
16 Spd	1	1	1	2	1	0	0	1	2	3	3	3	3	3	3	5	6	7	1	1	1	1	1	1	1.2	6.7
Dir	172	179	193	178	176	209	244	170	159	163	162	216	209	245	276	299	282	299	308	130	185	185	182	167	237	299
17 Spd	2	1	0	0	1	1	0	1	2	2	2	2	3	2	2	2	3	1	2	1	1	0	1	0	0.9	3.0
Dir	163	164	212	221	194	180	217	180	146	146	138	109	131	134	170	242	285	168	121	145	127	259	213	202	160	131
18 Spd	1	1	0	0	1	0	1	1	3	5	3	4	3	3	2	2	2	2	1	2	3	1	0	1	1.6	4.8
Dir	202	269	240	339	302	187	228	162	163	165	162	163	162	166	170	151	140	150	141	150	158	166	204	192	166	165
19 Spd	1	1	1	0	1	1	1	1	2	2	2	1	2	2	3	4	3	4	3	1	0	1	1	0	0.3	4.0
Dir	212	236	192	193	193	179	171	178	164	218	302	205	141	76	26	28	36	38	30	356	267	227	178	342	55	38
20 Spd	1	1	0	2	3	0	1	1	2	3	3	3	3	2	3	3	2	3	3	4	4	1	2	2	0.9	4.1
Dir	170	169	288	348	333	261	173	182	156	160	168	168	325	205	220	278	289	252	241	169	164	163	150	340	213	164
21 Spd	1	0	0	1	1	0	1	0	3	2	2	3	4	3	5	5	2	1	1	1	2	2	1	1	0.3	5.4
Dir	203	205	247	186	174	189	344	60	160	168	164	340	337	32	28	23	346	202	169	163	207	153	87	208	49	28
22 Spd	2	1	0	1	1	1	1	2	2	2	8	10	11	11	9	8	8	11	9	2	3	2	1	2	3.3	11.3
Dir	181	201	59	177	191	175	150	115	145	213	250	288	284	275	266	276	273	305	324	350	299	279	170	166	276	305

Hourly Averages

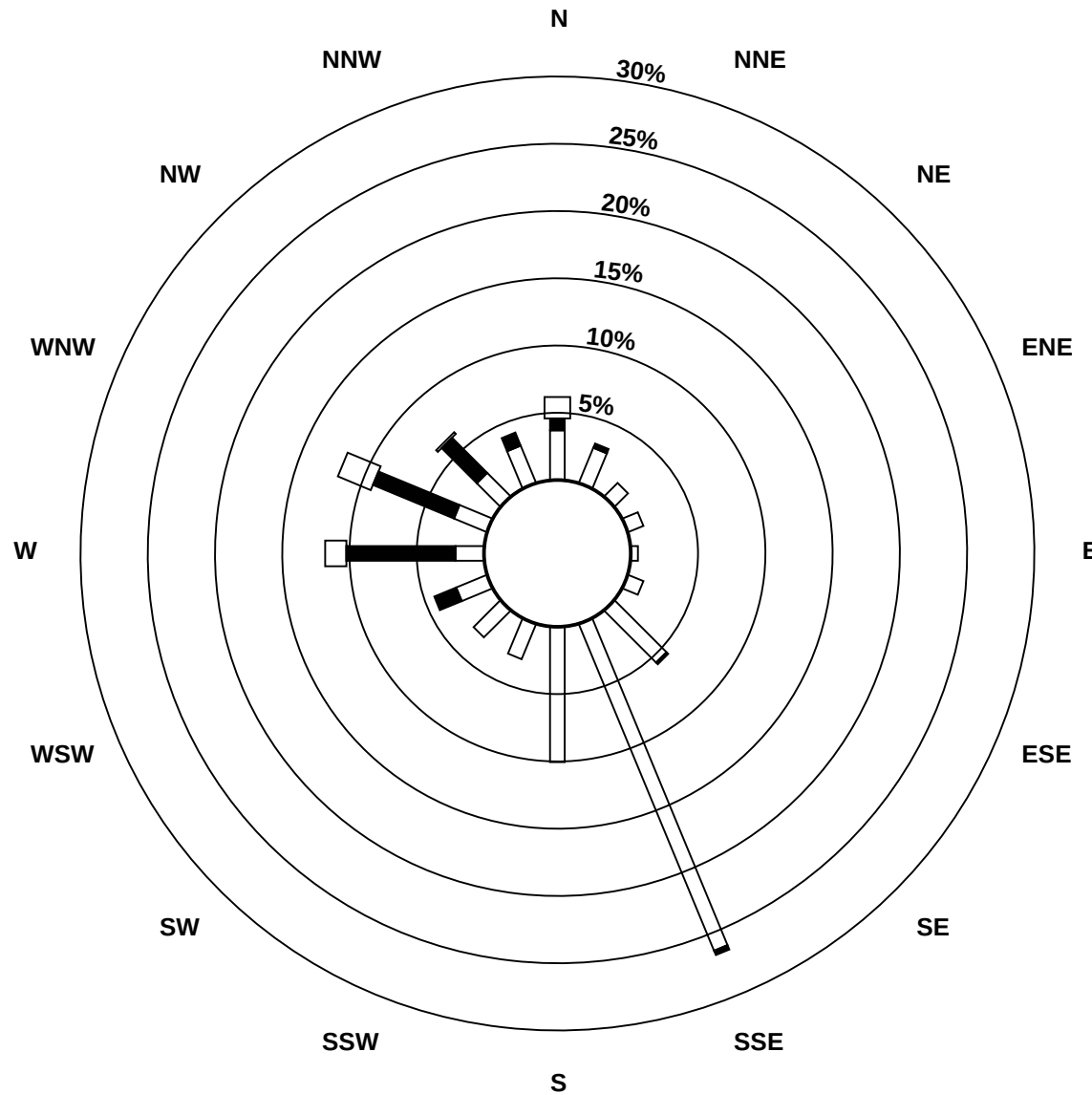
Wind Speed (km/h)
Wind Direction (deg)
Valleyview - August 2012

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	2	1	1	1	1	1	2	1	2	3	3	3	4	5	4	3	4	9	8	7	6	2	2	6	2.6	9.0	
Dir	168	168	169	169	183	172	156	172	207	162	220	229	226	232	243	231	275	281	280	285	269	230	244	254	245	281	
24 Spd	2	1	1	2	1	1	2	2	9	12	15	13	13	12	14	17	14	14	10	11	6	7	12	8	7.5	16.8	
Dir	177	162	161	157	146	153	161	174	269	286	287	286	287	288	279	289	292	280	289	286	252	260	272	280	279	289	
25 Spd	9	10	10	9	7	8	8	8	10	11	8	11	11	9	6	4	7	1	1	0	1	1	1	1	6.0	10.9	
Dir	281	275	275	274	270	280	278	288	289	287	288	284	293	285	284	280	300	198	157	196	192	179	182	169	281	287	
26 Spd	1	1	1	1	1	0	0	1	0	1	2	5	6	5	6	6	5	4	3	2	1	1	2	1	2.1	5.8	
Dir	245	178	306	165	228	294	245	179	153	151	166	145	149	142	155	137	134	136	133	137	133	160	160	205	149	137	
27 Spd	0	0	0	1	0	0	0	1	0	2	3	3	3	2	3	2	2	1	1	2	1	0	3	1	0.6	3.5	
Dir	172	356	187	15	245	341	307	354	184	161	163	164	161	168	162	148	166	108	358	326	174	179	313	310	170	163	
28 Spd	1	1	1	1	1	1	1	1	1	2	3	3	2	2	0	1	4	6	5	1	1	4	4	1	1.0	6.1	
Dir	150	174	178	171	169	194	163	165	174	156	161	169	170	174	288	8	306	267	303	196	174	280	290	221	227	267	
29 Spd	2	1	1	2	2	1	2	3	5	11	15	16	16	16	14	17	18	12	10	8	4	2	1	1	6.7	18.2	
Dir	207	223	180	164	167	170	165	166	249	258	276	266	283	285	283	287	271	272	280	267	273	210	197	193	269	271	
30 Spd	2	2	1	1	1	1	1	4	8	7	8	7	8	7	9	8	5	6	4	3	1	1	0	1	3.2	9.3	
Dir	203	155	188	175	164	159	229	281	305	305	309	331	293	297	326	303	305	290	311	314	349	167	3	318	302	326	
31 Spd	0	1	0	1	1	1	2	1	2	2	2	3	3	3	4	5	4	4	3	1	1	0	0	1	1.2	4.8	
Dir	275	292	242	42	335	344	336	337	152	164	101	133	139	141	161	145	145	145	139	132	55	60	282	122	141	145	
Spd	0.7	0.7	0.6	0.7	0.9	0.7	0.9	0.7	1.2	1.9	2.9	3.1	3.4	3.4	3.7	3.5	3.7	3.3	2.1	0.9	0.9	1.0	0.6	0.7	Diurnal Average		
Dir	207	213	217	209	228	222	225	234	257	255	271	275	278	285	297	298	299	301	308	288	252	250	265	246	Diurnal Maximum		
Spd	9.5	10.0	10.1	8.8	10.2	7.9	8.0	10.5	14.2	15.2	15.4	16.0	16.0	16.1	16.4	17.2	18.2	13.7	10.5	10.5	7.3	7.0	12.1	8.2	Diurnal Maximum		
Dir	281	275	275	274	275	280	278	278	5	5	287	266	283	285	1	287	271	280	289	286	271	288	272	280			
Maximum Speed Value: 18 km/h on Aug 29 17:00							Minimum Speed Value: 0 km/h on Aug 18 04:00													Hours in Service:				744			
Maximum Daily Speed Average: 7.5 km/h on Aug 24							Minimum Daily Speed Average: 0.3 km/h on Aug 17													Hours of Data:				744			
Maximum Diurnal Speed Average: 3.7 km/h at hour 17							Minimum Diurnal Speed Average: 0.6 km/h at hour 23													Hours of Missing Data:				0			
Monthly Average Velocity: 1.56 km/h 276.0 deg							Speed Percentiles: P ₁ = 0.2 P ₁₀ = 0.6 Q ₁ = 1.0 Median = 2.1 Q ₃ = 4.6 P ₉₀ = 9.3 P ₉₉ = 16.0													Percent Operational Time:				100.0			
All monthly, daily, and diurnal averages have been calculated using vector methods																											
Frequency Distribution																											
Speed Range (km/h)																											
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total														
North	54		8		11		0		0		0		73														
NorthEast	26		2		0		0		0		0		28														
East	10		0		0		0		0		0		10														
SouthEast	82		7		0		0		0		0		89														
South	261		0		0		0		0		0		261														
SouthWest	62		0		0		0		0		0		62														
West	36		76		23		0		0		0		135														
NorthWest	40		43		3		0		0		0		86														
Total	571		136		37		0		0		0		744														

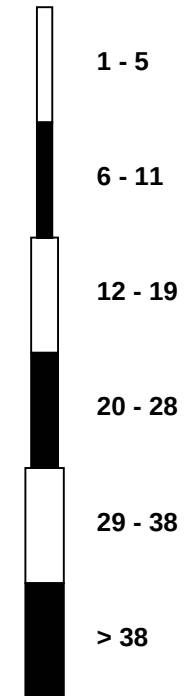
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - August 2012



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - August 2012

Maximum Speed: 19 km/h on Aug 29 17:00																				Maximum Daily Speed Average: 8.6 km/h on Aug 24										Hours in Service: 744	
Minimum Speed: 1 km/h on Aug 18 00:00																				Minimum Daily Speed Average: 1.7 km/h on Aug 27										Hours of Data: 744	
Maximum Diurnal Speed Average: 7.1 km/h at hour 15																				Minimum Diurnal Speed Average: 1.7 km/h at hour 6										Hours of Missing Data: 0	
Monthly Average Speed: 3.92 km/h																				Percentiles: P ₁ = 0.6 P ₁₀ = 0.9 Q ₁ = 1.4 Median = 2.6 Q ₃ = 5.1 P ₉₀ = 9.9 P ₉₉ = 16.5										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-Aug	1	1	1	1	2	2	3	3	4	3	3	4	7	6	10	7	10	11	4	2	3	3	2	2	4.0	10.6					
2-Aug	2	2	1	2	10	6	7	8	6	6	8	11	9	9	12	11	10	10	4	1	1	2	1	1	5.9	12.3					
3-Aug	2	2	2	2	2	1	1	2	2	4	8	7	6	7	7	3	2	2	2	2	3	2	2	2	3.2	8.1					
4-Aug	1	2	2	2	2	2	2	2	6	11	14	14	14	11	11	10	10	8	2	2	6	2	3	2	5.9	14.2					
5-Aug	3	4	3	2	2	1	2	1	3	2	3	5	4	4	5	6	6	5	5	5	3	5	3	3	3.6	6.2					
6-Aug	1	1	1	1	1	1	2	2	2	3	3	3	3	3	3	3	3	5	4	2	1	1	1	2	2.1	5.5					
7-Aug	1	1	1	1	1	1	1	1	2	2	3	4	4	6	6	6	4	3	4	2	1	1	1	1	2.4	6.4					
8-Aug	1	1	1	1	1	1	1	3	2	4	5	5	5	3	3	1	6	4	3	2	8	7	4	2	3.2	8.4					
9-Aug	3	3	4	5	3	2	7	11	14	14	14	11	11	11	11	10	10	8	6	2	2	1	1	1	6.9	14.2					
10-Aug	1	2	2	1	1	1	2	2	3	3	6	7	7	7	7	9	9	8	7	5	4	6	4	6	4.6	9.2					
11-Aug	4	3	1	1	1	1	1	1	2	4	6	7	8	10	10	8	7	7	5	2	1	1	2	1	3.8	10.5					
12-Aug	1	1	1	1	1	1	1	1	1	2	2	3	3	3	4	3	3	2	2	2	2	1	2	5	2.0	5.4					
13-Aug	4	4	4	3	2	3	3	3	2	2	2	7	10	10	9	10	9	8	3	2	5	3	12	4	5.2	12.0					
14-Aug	3	3	4	1	2	2	4	10	14	15	14	14	14	11	17	13	12	12	8	3	1	1	1	1	7.5	16.7					
15-Aug	1	1	1	1	1	1	2	2	3	3	3	4	4	5	4	4	3	3	2	1	1	1	1	1	2.0	4.9					
16-Aug	1	1	1	2	1	1	1	2	2	3	3	4	4	4	5	6	7	7	2	1	1	1	1	1	2.5	7.2					
17-Aug	2	2	1	1	1	1	1	1	2	2	2	3	3	3	3	3	3	1	2	1	1	1	1	1	1.7	3.5					
18-Aug	1	1	1	1	1	1	2	1	3	5	3	4	3	3	3	2	2	2	2	2	3	1	1	1	2.0	4.9					
19-Aug	1	2	1	1	1	1	1	2	2	3	3	2	3	3	4	4	3	4	3	2	1	1	1	1	2.0	4.3					
20-Aug	1	1	2	2	3	2	1	1	2	3	3	3	4	3	3	4	3	3	3	4	4	1	2	3	2.6	4.3					
21-Aug	1	1	1	1	1	1	2	2	3	2	2	4	5	4	6	5	3	2	1	2	2	2	2	2	2.4	5.8					
22-Aug	3	2	1	1	2	2	1	3	2	3	9	10	11	12	10	10	9	12	9	2	5	3	1	2	5.1	11.9					
23-Aug	2	1	1	1	1	2	2	2	3	3	4	4	5	6	5	4	6	10	9	7	6	2	3	6	3.9	9.6					
24-Aug	2	1	1	2	1	1	2	3	10	13	16	13	14	13	15	17	15	14	11	11	6	7	12	9	8.6	17.2					
25-Aug	10	10	10	9	7	8	8	8	10	11	9	11	11	10	7	5	7	2	1	1	1	1	1	1	6.6	11.3					
26-Aug	1	1	1	1	1	1	1	1	1	2	3	5	6	5	6	6	5	5	3	2	2	1	2	1	2.6	6.1					
27-Aug	1	1	1	1	1	1	1	1	1	2	4	3	3	2	3	3	2	1	1	2	1	1	3	3	1.7	3.6					
28-Aug	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	2	5	7	5	2	1	5	4	2	2.6	6.7					
29-Aug	2	3	1	2	2	1	2	3	6	11	15	17	17	17	15	18	19	13	11	8	4	2	1	1	7.9	18.7					
30-Aug	2	2	1	1	1	1	1	4	8	7	9	8	9	9	10	8	6	6	4	3	2	1	1	1	4.5	10.0					
31-Aug	1	1	1	1	2	2	2	1	2	3	3	3	3	3	4	5	4	4	3	1	1	1	1	1	2.2	5.1					
2.0 2.0 1.8 1.7 1.9 1.7 2.2 2.8 4.1 4.9 6.0 6.5 6.9 6.7 7.1 6.7 6.5 6.0 4.2 2.8 2.6 2.3 2.5 2.3																									Diurnal Average						
9.8 10.1 10.2 8.9 10.5 8.1 8.2 10.7 14.4 15.4 15.8 16.6 16.5 16.8 16.7 17.9 18.7 14.0 10.7 10.9 8.4 7.4 12.2 8.7																									Diurnal Maximum						

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - August 2012

Maximum Value: 96.4 deg on Aug 20 03:00																			Hours in Service: 744						
Minimum Value: 6.8 deg on Aug 13 02:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 7.7 P ₁₀ = 12.7 Q ₁ = 17.3 Median = 29.3 Q ₃ = 51.5 P ₉₀ = 71.7 P ₉₉ = 91.3																			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-Aug	15	16	32	14	10	7	8	11	9	14	24	57	44	18	12	19	15	18	48	52	8	7	40	31	56.8
2-Aug	22	38	29	25	19	48	31	26	25	25	29	22	27	21	15	17	21	13	21	63	60	23	34	29	63.4
3-Aug	15	15	12	11	14	16	9	14	24	47	23	23	24	15	20	42	35	13	13	8	10	8	23	28	46.5
4-Aug	12	8	7	10	7	15	14	26	25	13	13	14	21	18	28	16	35	19	84	29	59	46	50	88	88.0
5-Aug	11	11	22	23	23	79	30	70	35	77	51	42	74	65	52	22	22	20	16	9	29	20	28	47	79.0
6-Aug	78	59	76	76	39	44	13	35	17	20	20	29	23	30	93	78	83	20	13	16	75	83	62	78	93.5
7-Aug	68	76	74	73	79	57	44	91	90	28	73	57	44	25	32	39	32	27	31	28	78	51	57	79	91.1
8-Aug	65	38	42	12	14	22	25	23	26	22	13	14	17	35	50	84	76	40	76	94	43	23	44	28	94.0
9-Aug	12	23	37	31	32	32	26	11	11	11	12	16	16	19	19	16	17	15	23	32	35	55	40	20	54.9
10-Aug	14	15	14	39	48	14	11	19	20	45	29	33	31	17	31	22	15	17	12	11	13	12	15	19	47.9
11-Aug	17	80	60	46	58	49	28	64	52	56	48	40	35	26	16	25	32	20	24	18	19	64	29	15	80.5
12-Aug	36	65	84	72	66	89	73	74	67	77	76	40	71	58	60	49	46	46	41	25	59	28	15	44	88.6
13-Aug	11	7	7	12	9	10	9	13	15	19	39	19	14	18	16	21	23	13	15	37	57	56	12	27	57.1
14-Aug	25	46	15	45	50	21	28	9	8	8	8	10	13	14	11	10	14	10	9	17	34	61	30	13	60.6
15-Aug	39	38	21	29	42	89	45	34	17	29	40	46	50	22	40	30	44	43	47	61	75	59	46	27	89.4
16-Aug	24	41	46	13	14	54	70	38	17	13	19	51	46	57	53	32	24	22	84	39	26	17	40	9	83.9
17-Aug	7	68	85	63	50	35	83	69	18	38	44	38	24	54	53	68	65	63	15	19	42	56	45	85	84.7
18-Aug	50	42	78	93	77	42	53	37	16	10	16	17	23	26	27	32	25	16	16	14	9	25	64	50	93.2
19-Aug	53	54	48	49	23	47	54	39	30	55	46	77	40	60	45	29	20	23	18	38	68	67	43	83	82.6
20-Aug	64	77	96	53	25	79	20	48	39	16	17	39	59	62	48	65	51	17	25	24	9	48	36	75	96.4
21-Aug	57	72	62	43	12	70	74	84	16	37	52	62	44	55	25	21	37	55	61	53	34	19	61	32	84.3
22-Aug	31	34	80	57	45	22	51	51	34	57	39	18	16	22	35	48	43	19	13	54	64	62	18	16	79.5
23-Aug	22	37	28	30	35	70	29	39	49	15	50	51	38	45	48	62	61	20	14	11	13	37	42	14	70.0
24-Aug	27	28	36	11	14	21	21	27	20	16	12	21	22	17	18	12	13	13	13	16	21	17	10	25	36.2
25-Aug	15	10	10	10	13	15	12	16	12	14	18	18	15	22	32	49	28	29	15	52	23	36	31	56	56.5
26-Aug	38	31	53	58	48	68	52	59	89	74	71	20	19	22	20	23	20	14	10	22	36	29	13	54	89.2
27-Aug	71	84	72	67	81	92	77	55	88	23	15	28	22	23	12	19	18	54	47	61	43	57	32	92	92.3
28-Aug	38	19	27	29	37	74	26	27	57	42	20	21	50	60	89	83	41	34	19	60	53	52	19	68	89.5
29-Aug	34	60	37	17	9	23	11	12	47	13	15	15	14	17	18	16	13	12	13	12	16	36	69	31	68.7
30-Aug	40	15	59	39	57	19	49	30	18	22	25	35	24	39	25	22	31	21	12	20	90	56	94	77	93.7
31-Aug	88	70	68	71	66	26	22	72	25	43	51	39	28	28	16	19	22	25	14	26	72	83	92	60	91.7
88.1 83.5 96.4 93.2 81.0 92.3 83.5 91.1 89.7 77.3 76.2 76.8 74.0 65.2 93.5 83.9 83.3 63.0 84.1 94.0 90.2 83.4 93.7 91.8																									

PAZA

Portable – Sunset House Station

Monthly Summary Tables, Graphs and Roses

Hourly Averages

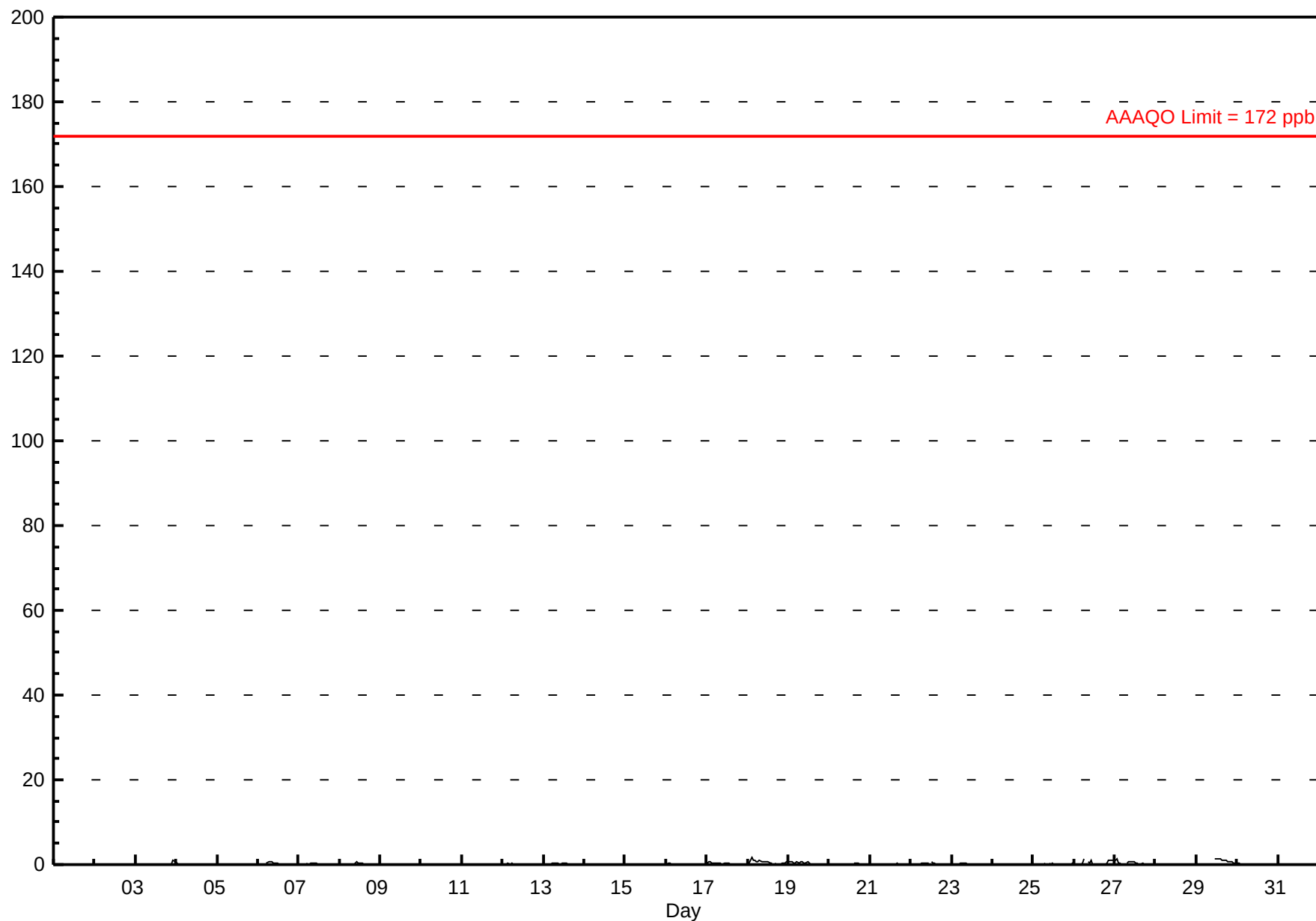
Sulphur Dioxide (SO₂) - ppb

Sunset House - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.6 ppb on Aug 18 03:00 Maximum Daily Average: 0.6 ppb on Aug 29																				Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Aug 1 01:00 Maximum Diurnal Average: 0.2 ppb at hour 12 Monthly Average: 0.11 ppb										Minimum Daily Average: 0.0 ppb on Aug 5 Minimum Diurnal Average: 0.0 ppb at hour 20 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.4 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-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
2-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	1.1
4-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
6-Aug	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
7-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
8-Aug	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
9-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
10-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.0
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.5
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.4
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.0
15-Aug	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
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.3
17-Aug	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.7
18-Aug	0	0	2	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	1	0.6	1.6
19-Aug	1	1	1	0	0	1	0	1	1	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.8
20-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3
21-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
22-Aug	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
23-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
24-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
25-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
26-Aug	0	0	0	0	0	0	1	A	1	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	1.3
27-Aug	1	1	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
28-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
29-Aug	0	0	0	0	A	0	0	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	0	0	0.6	1.4
30-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
31-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.1 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.1 0.1 0.1 0.1																									Diurnal Average	
1.1 1.2 1.6 1.0 0.9 0.6 1.3 1.1 0.8 0.6 1.0 1.4 1.3 1.3 1.2 1.0 0.9 0.9 0.8 0.7 1.2 1.2 1.1 0.9																									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 - August 2012



Hourly Maximums

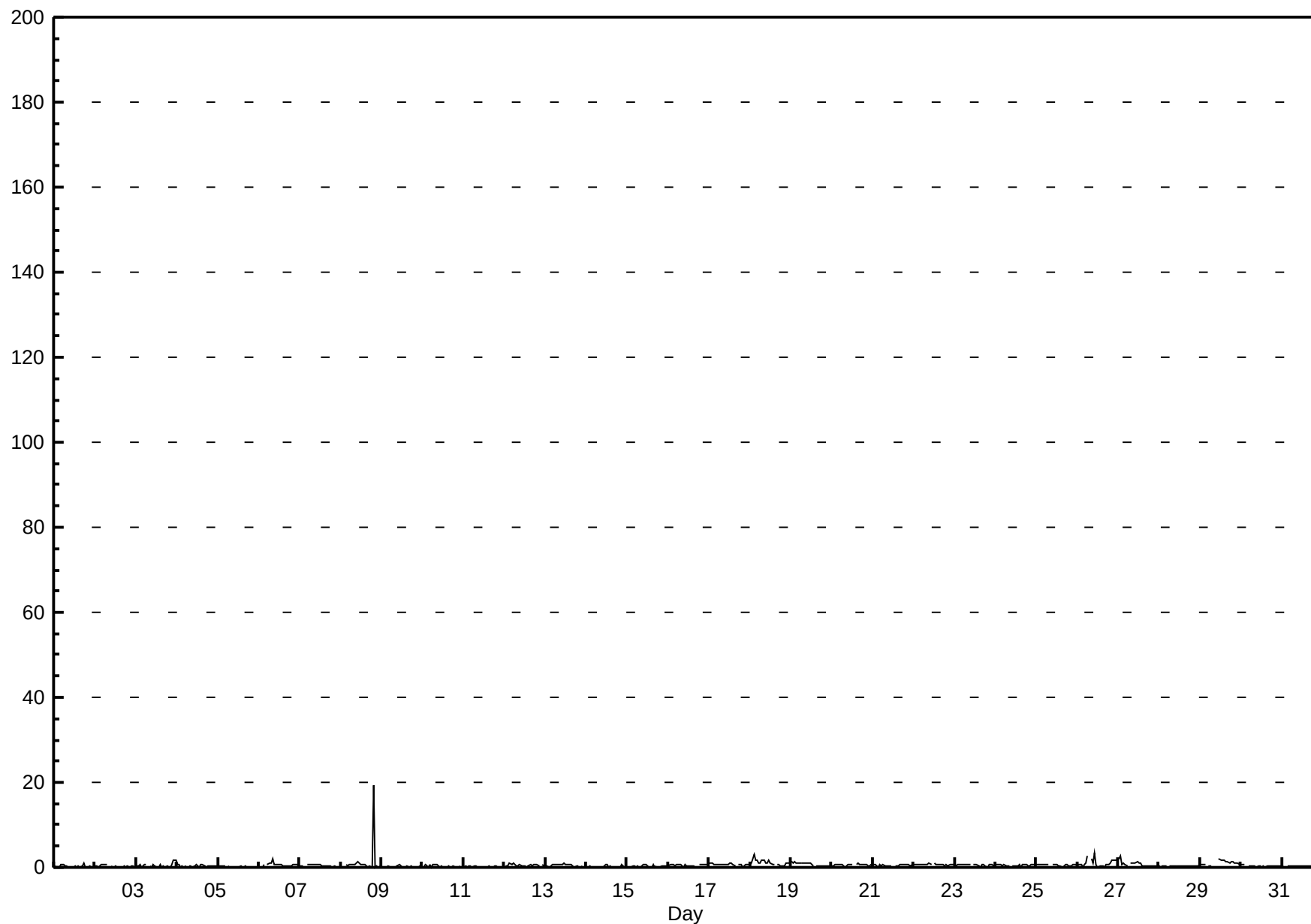
Sulphur Dioxide (SO₂) - ppb

Sunset House - August 2012

Maximum Value: 19.2 ppb on Aug 8 20:00																			Maximum Daily Average: 1.3 ppb on Aug 8										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 10 14:00																			Minimum Daily Average: 0.2 ppb on Aug 11										Hours of Data: 708	
Maximum Diurnal Average: 1.0 ppb at hour 20																			Minimum Diurnal Average: 0.4 ppb at hour 17										Hours of Missing Data: 36	
Monthly Average: 0.51 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.9 P ₉₉ = 2.1										Hours of Calibration: 36	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Aug	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	1.1				
2-Aug	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6				
3-Aug	0	0	1	0	0	1	1	A	0	0	1	0	0	0	1	0	0	0	0	0	0	1	2	2	0.4	1.6				
4-Aug	1	1	0	0	0	0	A	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0.3	0.7				
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5				
6-Aug	0	0	0	1	A	1	1	1	2	1	1	1	1	1	0	0	0	0	0	1	1	1	1	0	0.6	1.9				
7-Aug	0	0	0	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0.4	0.7				
8-Aug	0	0	A	1	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	19	0	0	0	0	1.3	19.2				
9-Aug	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6				
10-Aug	A	0	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.8				
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.5				
12-Aug	0	1	1	1	1	1	1	1	0	1	0	0	0	0	0	1	0	1	1	1	0	A	1	0	0.5	1.0				
13-Aug	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0.5	1.0				
14-Aug	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	1	0	0	0.2	0.6				
15-Aug	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	A	0	0	0	0	0	0.3	0.6				
16-Aug	0	1	1	1	0	1	1	1	0	0	1	0	1	0	0	0	0	A	1	1	1	1	1	1	0.5	0.7				
17-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	0.7	1.1				
18-Aug	1	1	3	2	2	1	1	2	2	1	1	2	1	1	1	A	1	1	1	1	1	1	1	1	1.1	3.1				
19-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0.7	1.3				
20-Aug	1	1	1	1	1	1	1	0	0	1	1	1	1	A	1	1	1	1	1	1	1	0	0	1	0.5	0.9				
21-Aug	1	1	0	0	1	1	1	1	0	0	0	0	A	0	0	1	1	1	1	1	1	1	0	1	0.5	0.7				
22-Aug	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	0	1	1	1	0.7	1.1				
23-Aug	1	0	1	1	1	1	1	1	1	1	A	1	1	1	0	0	1	1	0	0	1	1	1	0	0.5	0.6				
24-Aug	1	1	1	1	0	1	0	0	1	A	0	1	1	0	1	0	1	1	1	0	0	1	1	1	0.4	0.6				
25-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	0	0	1	1	0	0	1	1	1	0.5	0.6				
26-Aug	0	1	1	0	1	1	3	A	2	1	3	1	0	0	0	0	0	1	1	1	2	2	2	2	1.0	3.2				
27-Aug	2	3	1	1	1	0	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.8	2.6				
28-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.5				
29-Aug	1	1	1	1	A	0	0	C	C	C	C	2	2	2	2	1	1	1	1	1	1	1	1	1	1.1	2.0				
30-Aug	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7				
31-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.6				
0.5		0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	1.0	0.4	0.5	0.5	0.5	Diurnal Average					
2.1		2.6	3.1	1.6	1.6	1.1	2.8	1.6	2.1	1.1	3.2	2.0	1.7	1.8	1.7	1.2	1.4	1.1	1.3	19.2	1.6	1.6	1.6	1.6	Diurnal Maximum					
C - Calibration		A - Automated Daily Zero Span																												

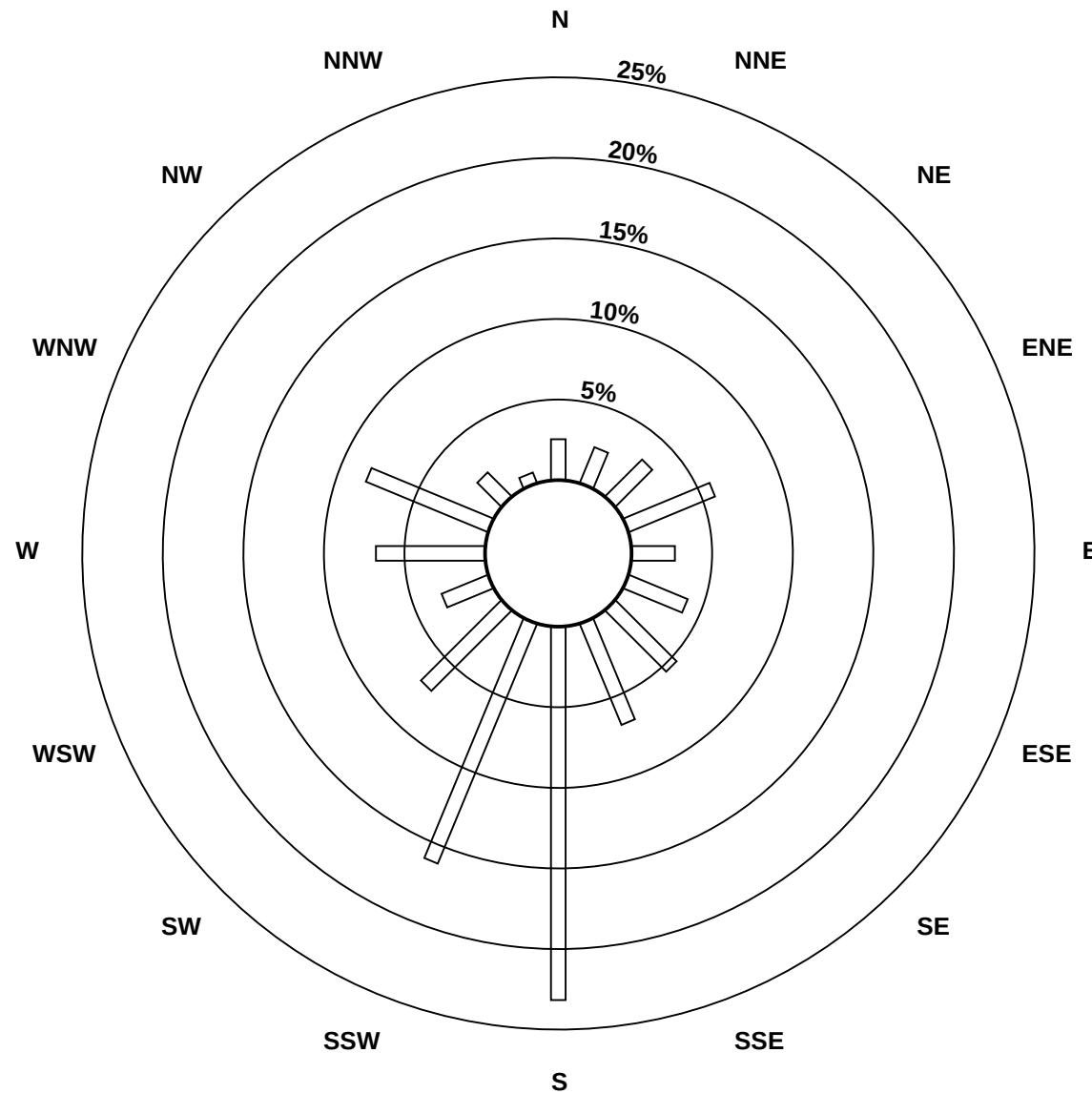
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Sunset House - August 2012

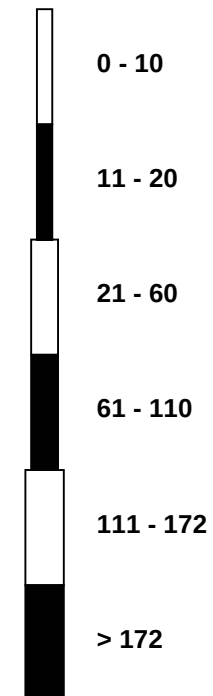


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Sunset House - August 2012

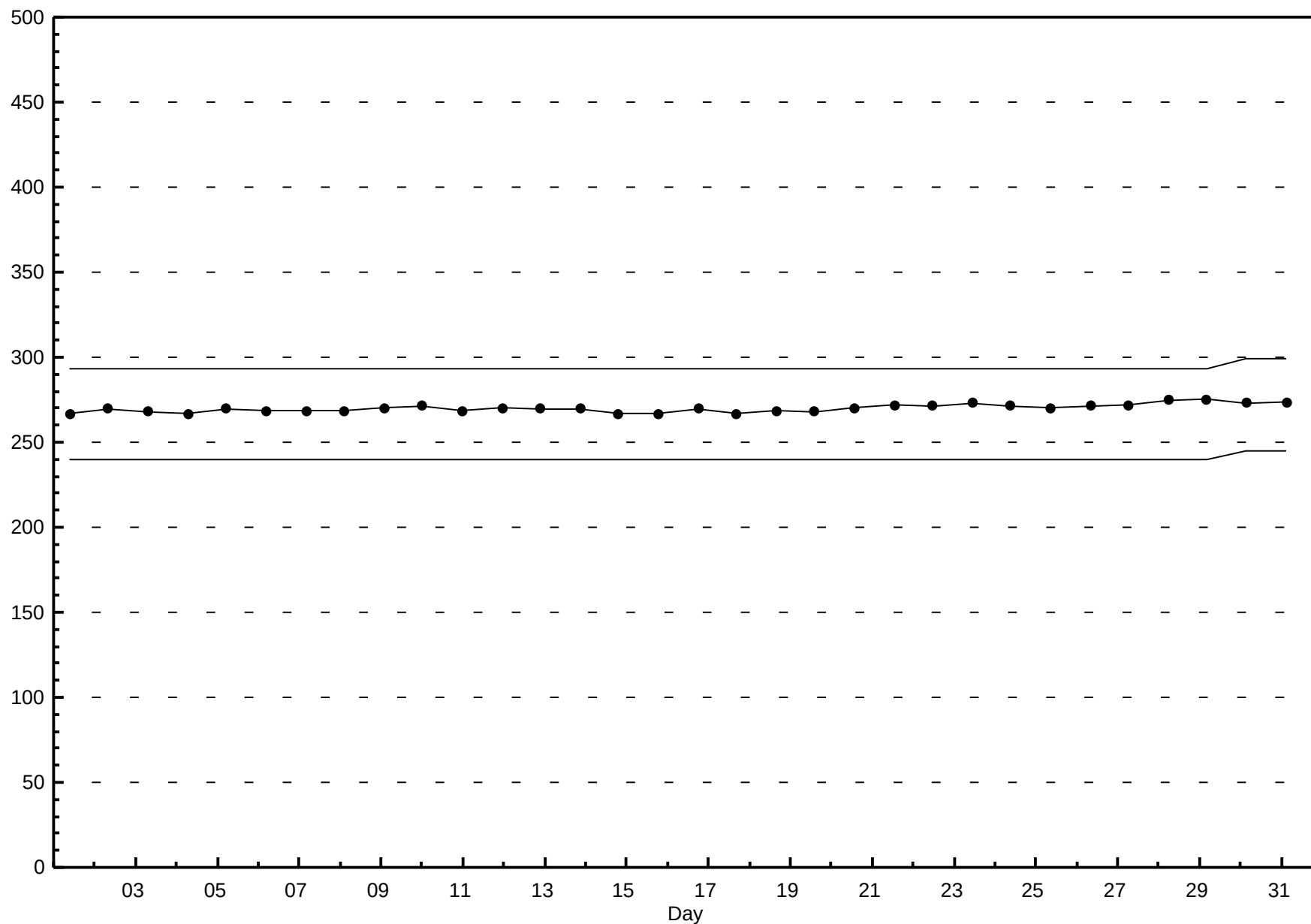


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Sunset House - August 2012



Hourly Averages

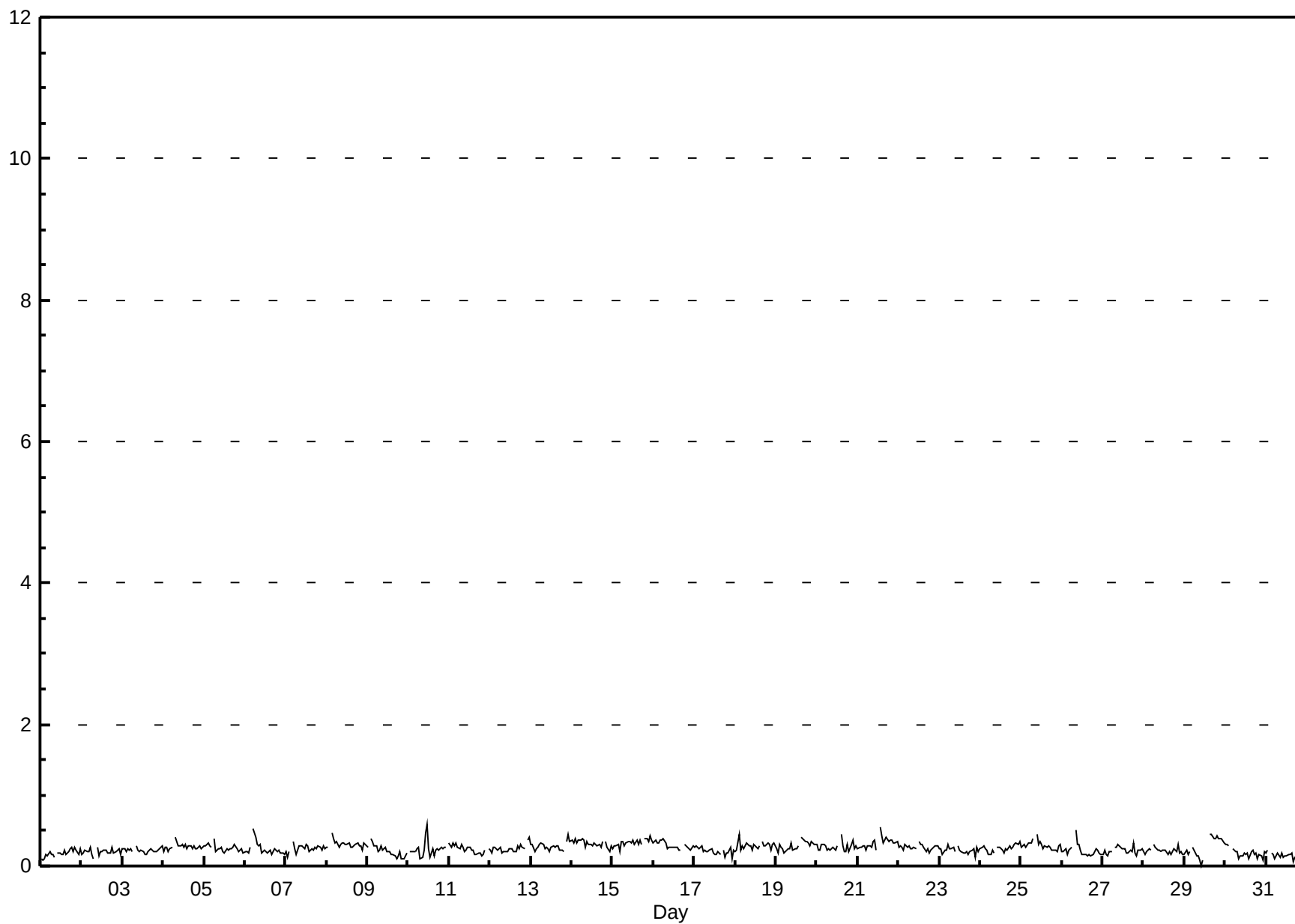
Total Reduced Sulphur (TRS) - ppb

Sunset House - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.6 ppb on Aug 10 12:00 Maximum Daily Average: 0.3 ppb on Aug 15																				Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Aug 29 11:00 Maximum Diurnal Average: 0.3 ppb at hour 6 Monthly Average: 0.25 ppb										Minimum Daily Average: 0.1 ppb on Aug 31 Minimum Diurnal Average: 0.2 ppb at hour 16 Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.3 P ₉₉ = 0.4																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
2-Aug	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
4-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
6-Aug	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
7-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
8-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
9-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
10-Aug	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.6
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.5
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.4
15-Aug	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
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.4
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.3
18-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.4
19-Aug	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
20-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
21-Aug	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
22-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
23-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
24-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3
25-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
26-Aug	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
27-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
28-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
29-Aug	0	0	0	0	A	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0.3	0.4
30-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
31-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
																									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 - August 2012



Hourly Maximums

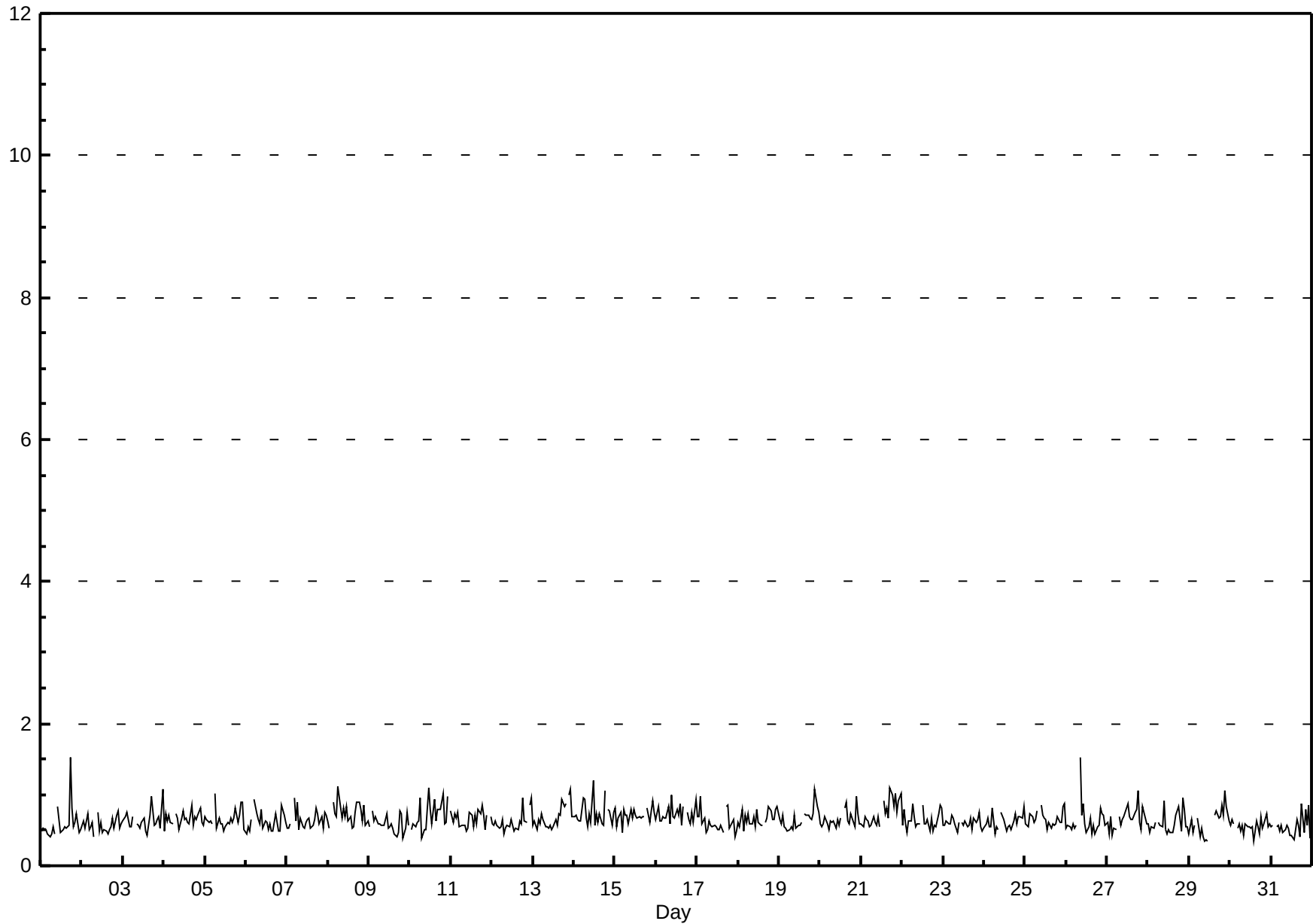
Total Reduced Sulphur (TRS) - ppb

Sunset House - August 2012

Maximum Value: 1.5 ppb on Aug 26 09:00																			Maximum Daily Average: 0.7 ppb on Aug 21										Hours in Service: 744	
Minimum Value: 0 ppb on Aug 30 15:00																			Minimum Daily Average: 0.5 ppb on Aug 31										Hours of Data: 709	
Maximum Diurnal Average: 0.8 ppb at hour 19																			Minimum Diurnal Average: 0.6 ppb at hour 14										Hours of Missing Data: 35	
Monthly Average: 0.64 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.8 P ₉₉ = 1.1										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-Aug	0	1	1	1	0	0	0	1	0	A	1	0	0	1	1	1	1	2	1	1	1	1	0	1	0.6	1.5				
2-Aug	1	1	1	1	1	1	1	0	A	1	0	1	0	1	0	0	1	1	1	1	1	1	1	1	0.6	0.8				
3-Aug	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0.6	1.1				
4-Aug	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
5-Aug	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0				
6-Aug	0	1	0	1	A	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	1	1	1	0.6	0.9				
7-Aug	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0				
8-Aug	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1				
9-Aug	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	1	1	1	0.6	0.8				
10-Aug	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	1.1				
11-Aug	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	0.8				
12-Aug	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	0.6	1.0				
13-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.1				
14-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.2				
15-Aug	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	0.9				
16-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.0				
17-Aug	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	0	A	1	1	1	1	1	0	0	0.6	1.0				
18-Aug	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	0.8				
19-Aug	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	1.1				
20-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.0				
21-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1				
22-Aug	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	1	1	1	1	1	0.6	0.9				
23-Aug	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0.6	0.7				
24-Aug	1	1	1	1	1	1	0	1	1	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	0.8				
25-Aug	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
26-Aug	1	1	1	1	1	1	1	A	2	1	1	1	0	1	1	0	1	0	1	1	1	1	1	1	0.6	1.5				
27-Aug	1	0	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1				
28-Aug	1	0	1	1	1	A	1	1	1	1	1	0	1	0	0	1	1	1	1	0	1	1	1	1	0.6	0.9				
29-Aug	0	1	0	1	A	1	0	1	0	0	0	0	C	C	C	1	1	1	1	1	1	1	1	1	0.6	1.1				
30-Aug	1	1	1	A	1	1	0	1	0	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	0.6	0.7				
31-Aug	1	1	A	1	1	0	1	0	0	1	1	0	0	0	1	1	1	0	1	0	1	1	0	0	0.5	0.9				
																									Diurnal Average					
																									Diurnal Maximum					
C - Calibration																									A - Automated Daily Zero Span					

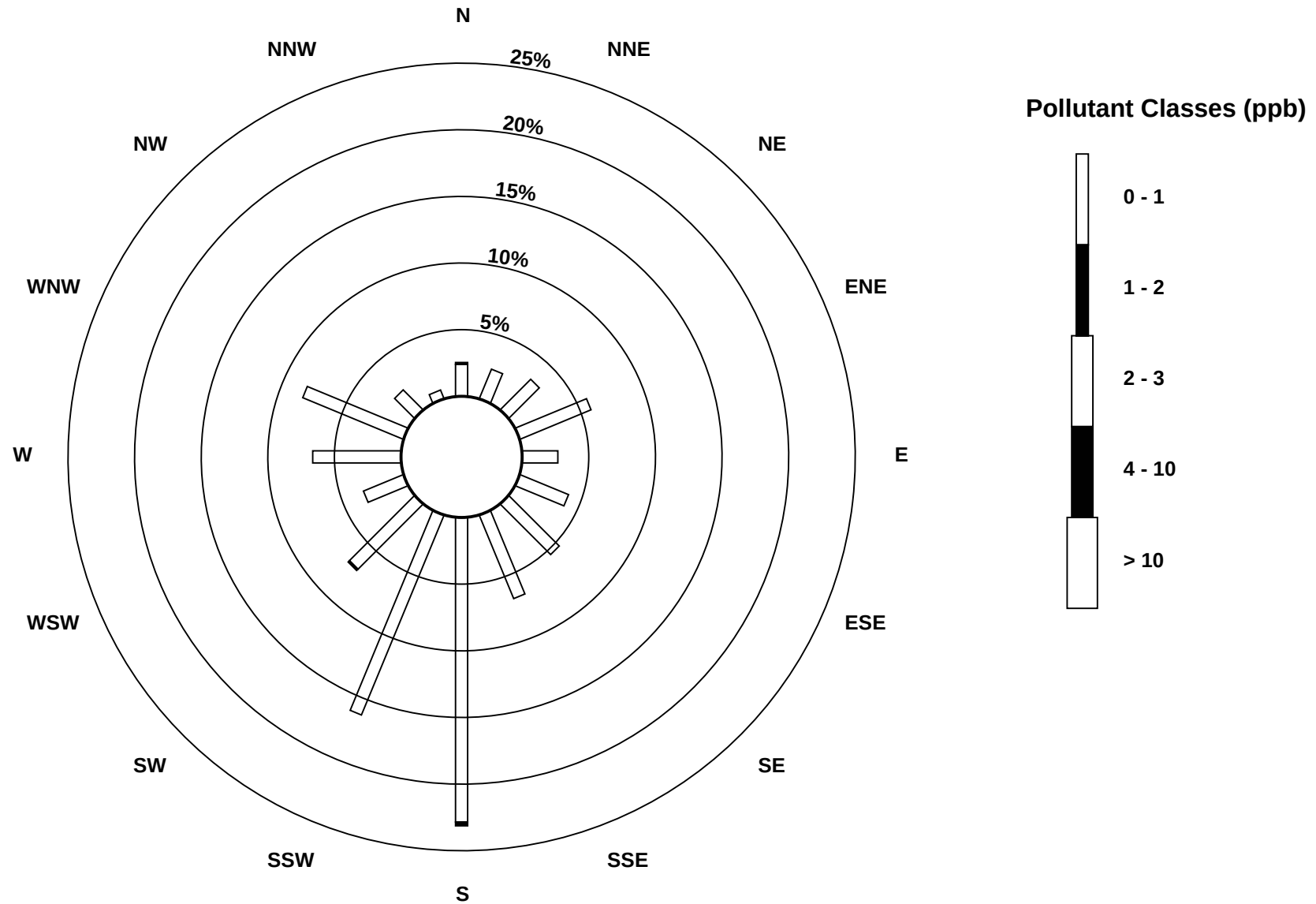
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Sunset House - August 2012



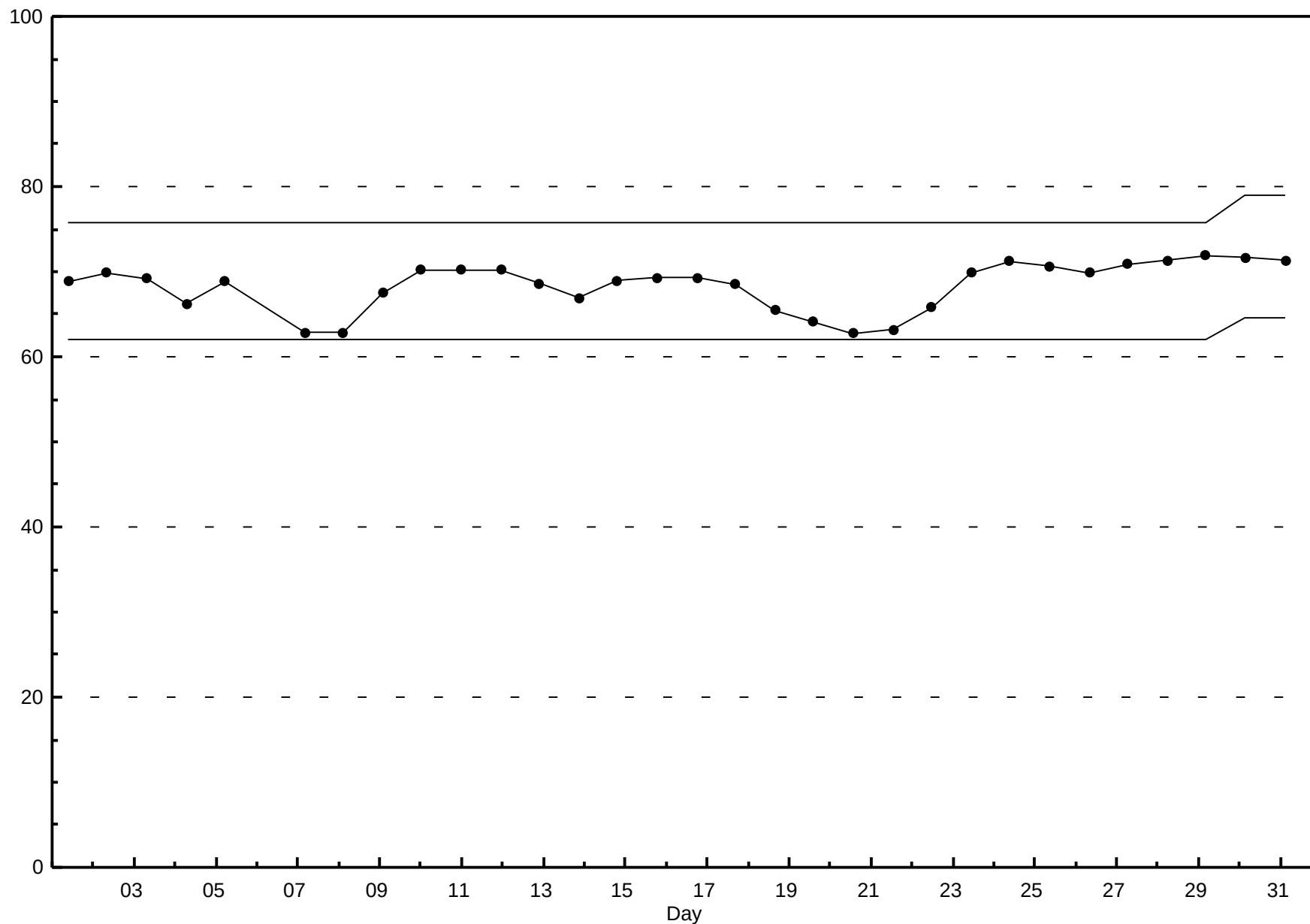
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Sunset House - August 2012



Span Responses

Total Reduced Sulphur (TRS)
Sunset House - August 2012



Hourly Averages

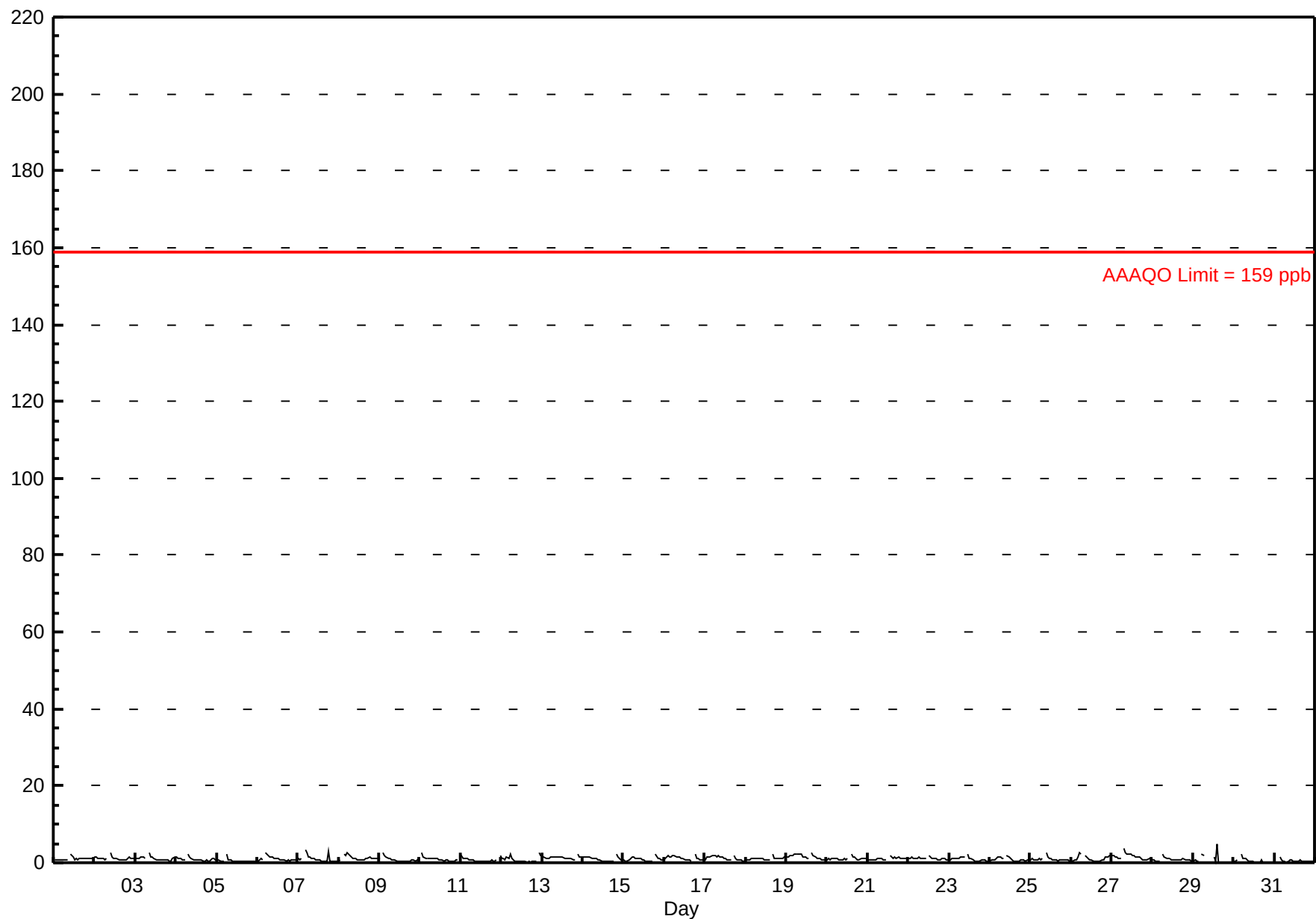
Nitrogen Dioxide (NO₂) - ppb

Sunset House - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.0 ppb on Aug 29 15:00 Maximum Daily Average: 1.6 ppb on Aug 27																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0							
Minimum Value: 0 ppb on Aug 29 16:00 Maximum Diurnal Average: 1.5 ppb at hour 6 Monthly Average: 0.98 ppb										Minimum Daily Average: 0.4 ppb on Aug 31 Minimum Diurnal Average: 0.7 ppb at hour 16 Percentiles: P ₁ = 0.0 P ₁₀ = 0.3 Q ₁ = 0.6 Median = 0.9 Q ₃ = 1.2 P ₉₀ = 1.7 P ₉₉ = 2.6																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.3	
2-Aug	1	1	1	1	1	1	1	1	A	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.7	
3-Aug	1	1	1	1	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1.1	2.5	
4-Aug	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0.9	2.2	
5-Aug	1	1	0	0	0	A	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.1	
6-Aug	0	1	1	1	A	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.6	
7-Aug	1	1	1	A	3	3	1	2	1	1	1	1	1	1	1	1	0	1	3	0	0	0	0	0	1.0	3.3	
8-Aug	1	1	A	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1.2	2.4	
9-Aug	1	A	3	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.8	2.6	
10-Aug	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	A	0.9	2.5	
11-Aug	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0	1	1	A	2	0.7	2.3	
12-Aug	1	1	1	2	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	3	2	0.8	2.6	
13-Aug	2	2	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	A	2	2	1	1.3	2.4	
14-Aug	2	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	2	1	1	1	0.9	2.3	
15-Aug	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	0	0	0	A	2	1	1	1	1	0.9	2.2	
16-Aug	1	1	2	1	1	2	2	2	1	1	1	1	1	1	1	1	0	A	2	1	1	1	1	1	1.2	2.1	
17-Aug	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1.2	2.0	
18-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1	1	1	1	1	1.1	2.1	
19-Aug	2	2	2	2	2	2	2	2	2	2	2	1	1	1	A	2	2	1	1	1	1	1	1	1	1.6	2.5	
20-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1.1	2.3	
21-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	2	1	1	1	1	1	1.0	2.0	
22-Aug	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1.1	2.0	
23-Aug	1	1	1	1	1	1	1	2	2	2	A	2	1	1	1	1	1	1	0	1	1	1	1	0	0.9	2.1	
24-Aug	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	0	0	0	1	1	1	1	1	1	0.9	2.0	
25-Aug	1	1	1	1	1	1	1	1	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.6	
26-Aug	0	1	1	1	2	3	2	A	2	1	1	1	1	1	0	0	0	1	1	1	2	1	1	2	1.1	2.7	
27-Aug	2	2	2	1	1	1	A	4	3	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1.6	3.6	
28-Aug	1	1	0	0	0	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.2	
29-Aug	1	1	1	1	A	2	2	C	C	C	C	C	2	0	5	0	0	0	0	0	0	0	0	0	0.7	5.0	
30-Aug	0	1	1	A	2	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.4	2.1	
31-Aug	0	0	A	2	1	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0.4	1.5	
		1.0	1.0	1.1	1.1	1.2	1.5	1.3	1.3	1.2	1.2	1.1	0.9	0.9	0.7	0.9	0.7	0.8	0.7	0.9	0.7	0.8	0.8	0.9	0.9	Diurnal Average	
		2.3	2.5	2.6	2.2	3.3	2.7	2.2	3.6	2.6	2.7	2.3	2.1	2.0	2.0	5.0	2.5	2.1	2.0	3.1	2.2	2.3	2.4	2.6	2.0	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 - August 2012



Hourly Maximums

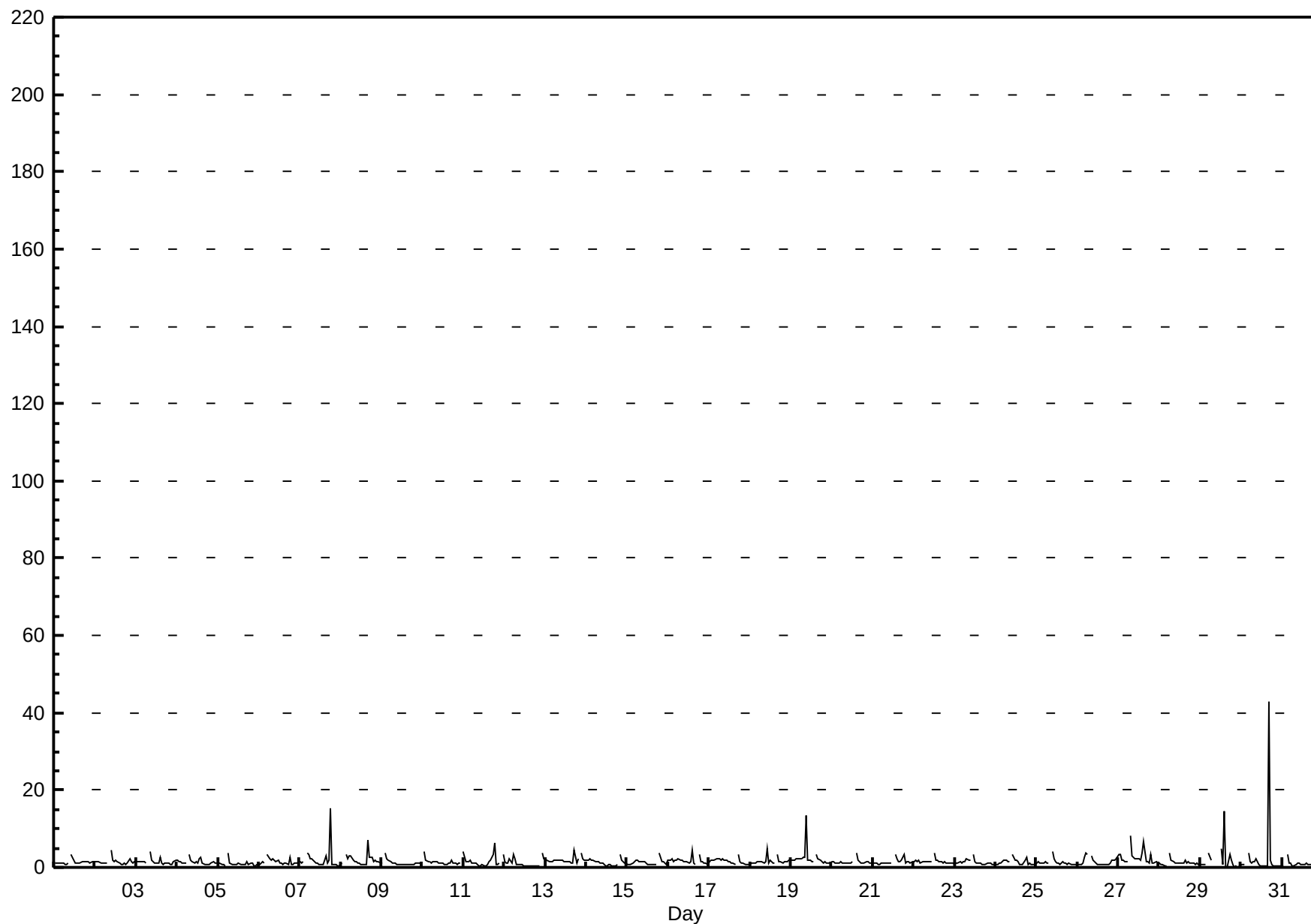
Nitrogen Dioxide (NO₂) - ppb

Sunset House - August 2012

Maximum Value: 43.0 ppb on Aug 30 17:00																				Maximum Daily Average: 2.7 ppb on Aug 30					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 29 16:00																				Minimum Daily Average: 0.8 ppb on Aug 31					Hours of Data: 707	
Maximum Diurnal Average: 2.7 ppb at hour 17																				Minimum Diurnal Average: 1.1 ppb at hour 14					Hours of Missing Data: 37	
Monthly Average: 1.54 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.6 Q ₁ = 0.9 Median = 1.2 Q ₃ = 1.7 P ₉₀ = 2.3 P ₉₉ = 6.7					Hours of Calibration: 37	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Aug	1	1	1	1	1	1	1	1	1	A	4	2	1	1	1	1	1	2	1	1	1	1	2	1.3	3.5	
2-Aug	2	2	1	1	1	1	1	1	A	4	2	1	2	2	1	1	1	1	1	2	2	1	2	1.5	4.4	
3-Aug	2	2	1	2	2	2	1	A	4	2	2	1	1	1	3	1	1	1	1	1	1	2	2	1.5	3.9	
4-Aug	2	1	1	1	1	1	A	3	2	2	1	2	1	2	3	1	1	1	1	1	2	1	1	1.4	3.4	
5-Aug	1	1	1	1	0	A	4	1	1	1	1	1	1	1	1	1	1	2	1	1	1	0	1	0.9	3.8	
6-Aug	1	1	1	1	A	3	2	2	2	2	2	2	1	1	1	1	1	1	3	1	1	1	2	1.4	3.4	
7-Aug	1	1	1	A	4	3	2	2	2	1	1	1	1	1	1	3	1	2	15	1	1	1	1	2.1	15.4	
8-Aug	1	1	A	3	2	3	3	2	1	1	1	1	1	1	1	1	7	2	2	2	2	2	1	1.9	7.1	
9-Aug	1	A	4	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	3.9	
10-Aug	A	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1.4	4.3	
11-Aug	4	2	2	2	2	1	1	1	1	0	0	1	0	0	1	2	2	3	6	1	1	1	A	4	1.6	6.4
12-Aug	1	1	1	2	1	3	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	4	2	1.1	3.9
13-Aug	2	2	2	1	1	2	2	2	2	2	2	2	2	1	1	1	1	5	1	2	A	4	2	2	1.9	4.7
14-Aug	2	2	2	2	2	1	1	1	1	1	1	0	0	1	1	0	0	1	1	A	3	2	1	1	1.3	3.4
15-Aug	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	4	2	1	1	1	1.2	3.6
16-Aug	2	2	2	2	2	2	2	2	2	2	2	1	1	2	4	1	1	A	3	2	1	1	1	1	1.7	4.4
17-Aug	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	A	3	2	1	1	1	1	1	1.6	3.3
18-Aug	1	1	1	1	1	1	1	2	1	1	5	1	2	1	1	A	4	2	1	1	1	2	2	2	1.6	5.0
19-Aug	2	2	2	2	2	2	2	3	2	13	2	2	1	1	A	3	2	2	1	1	2	1	1	1	2.4	13.3
20-Aug	1	2	1	1	1	2	1	1	1	1	1	1	1	A	4	2	2	1	1	1	1	1	1	1	1.4	3.8
21-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	3	2	2	2	2	3	1	1	1	1	1	1.4	3.5
22-Aug	1	2	2	2	1	2	2	1	2	1	2	A	4	2	2	1	1	1	1	1	1	1	1	1	1.5	3.7
23-Aug	1	1	1	1	1	1	1	2	2	2	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1.3	3.4
24-Aug	1	1	1	1	2	2	2	1	1	A	3	2	2	2	1	1	1	2	2	1	1	1	1	1	1.3	3.3
25-Aug	1	1	1	1	1	2	1	1	A	4	2	2	1	1	1	2	1	1	1	1	1	1	1	1	1.3	4.0
26-Aug	1	1	1	1	2	4	3	A	3	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.5	3.6
27-Aug	3	4	2	2	2	1	A	8	3	3	2	2	2	2	4	7	2	2	1	3	1	1	2	1	2.6	8.2
28-Aug	1	1	1	1	1	A	4	2	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1.2	3.7
29-Aug	1	1	1	1	A	4	2	C	C	C	C	C	5	1	15	0	0	3	2	1	0	0	0	0	2.0	14.7
30-Aug	1	1	1	A	4	2	1	1	1	2	1	0	0	0	0	0	43	2	1	0	0	0	0	0	2.7	43.0
31-Aug	0	0	A	3	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0.8	3.2
1.4 1.4 1.4 1.5 1.6 1.9 1.8 1.8 1.6 2.0 1.6 1.3 1.3 1.1 1.8 1.3 2.7 1.6 2.0 1.2 1.2 1.2 1.2 1.2 1.2																								Diurnal Average		
4.3 4.3 3.9 3.4 3.8 3.6 3.8 8.2 3.9 13.3 5.0 3.4 4.7 3.5 14.7 6.9 43.0 4.7 15.4 3.6 3.4 3.8 3.9 3.5																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

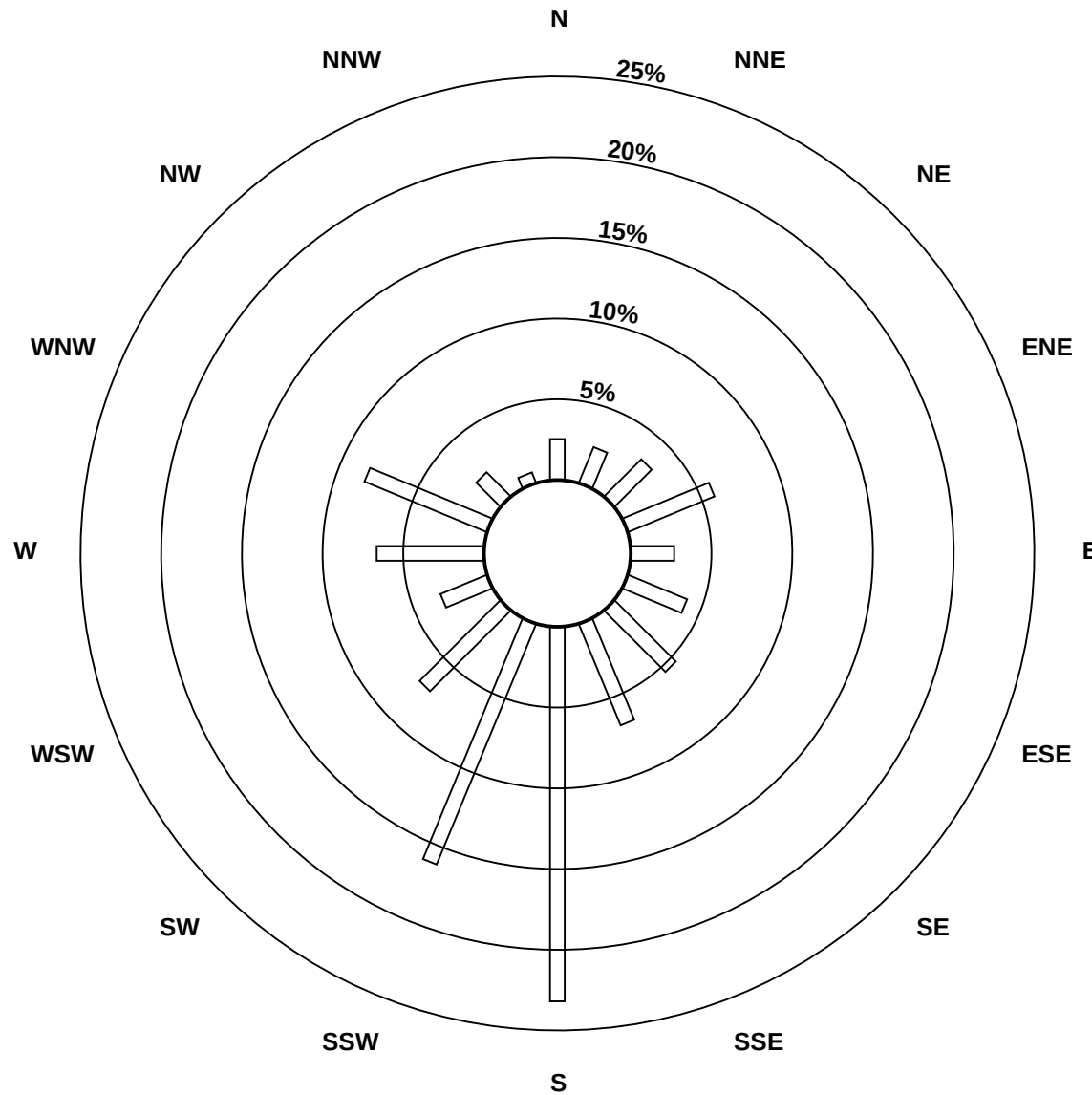
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Sunset House - August 2012

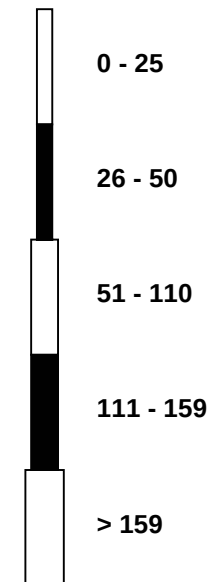


Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Sunset House - August 2012

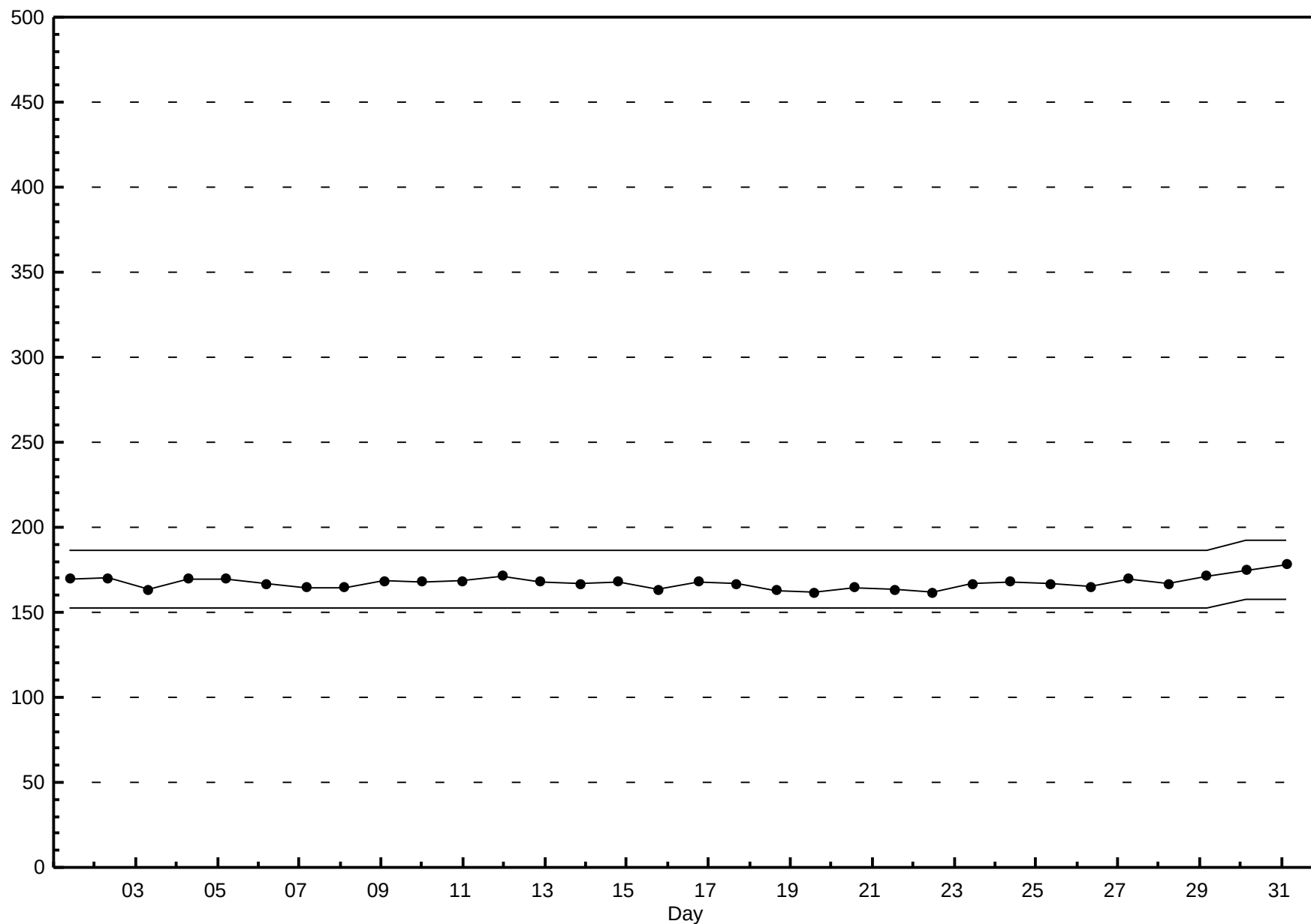


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Sunset House - August 2012



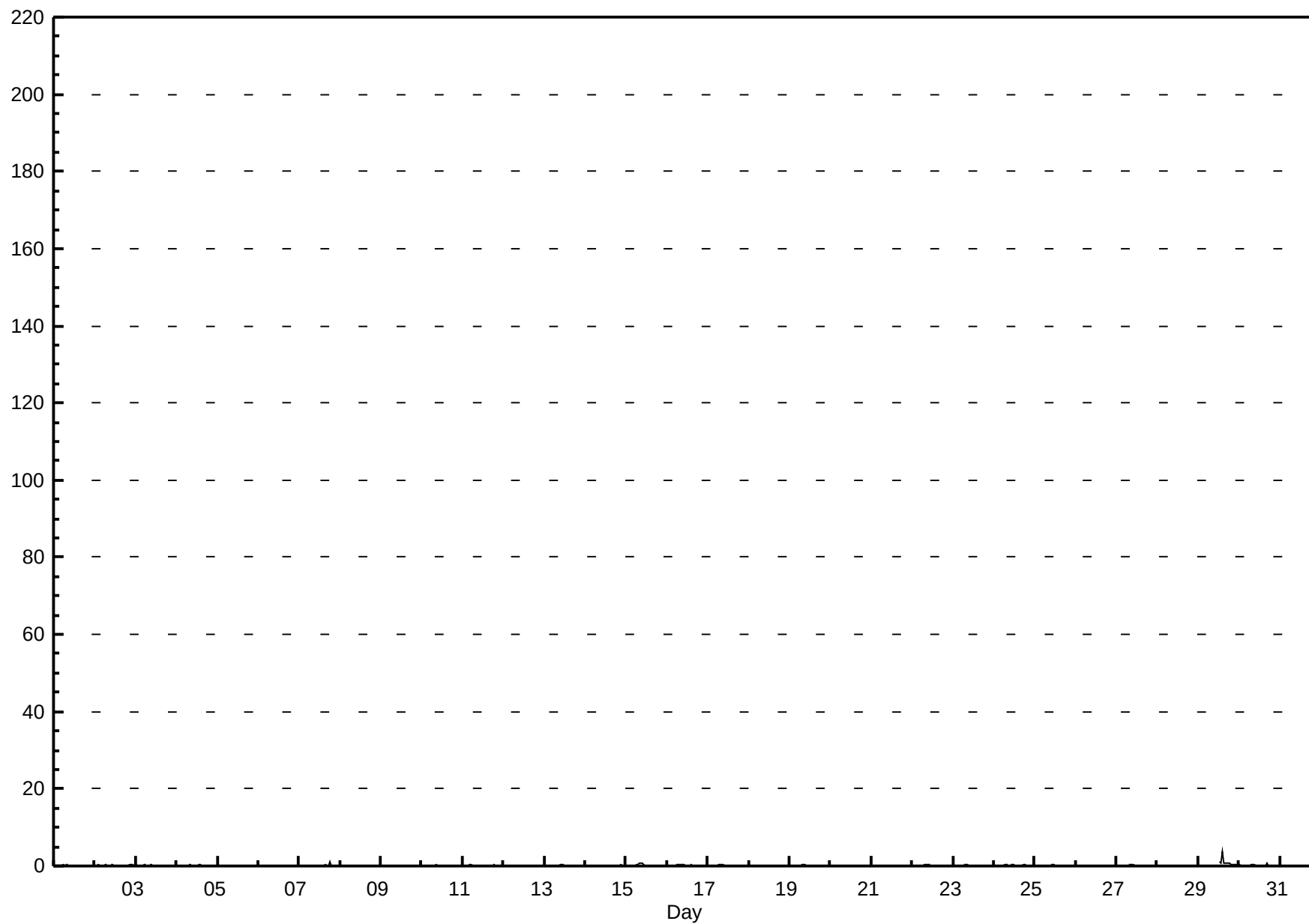
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.6 ppb on Aug 29 15:00 Maximum Daily Average: 0.6 ppb on Aug 29																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Aug 3 13:00 Maximum Diurnal Average: 0.2 ppb at hour 9 Monthly Average: 0.09 ppb										Minimum Daily Average: 0.0 ppb on Aug 28 Minimum Diurnal Average: 0.1 ppb at hour 20 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 = 0.7																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
2-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
3-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
4-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
6-Aug	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
7-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.1	1.0
8-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
9-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
10-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.3
11-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.3
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.1
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.3
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3
15-Aug	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.6
16-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.4
17-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0.1	0.4
18-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
19-Aug	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	0.5
20-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
21-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
22-Aug	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
23-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
24-Aug	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
25-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
26-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
27-Aug	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
28-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
29-Aug	0	0	0	0	A	0	0	C	C	C	C	C	1	1	4	1	1	1	1	1	0	0	0	0	0.6	3.6
30-Aug	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	0.8
31-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.2 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 0.3 0.2 0.3 0.5 0.6 0.6 0.3 0.2 1.0 0.9 3.6 0.7 0.8 0.8 1.0 0.5 0.5 0.4 0.4 0.3																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

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



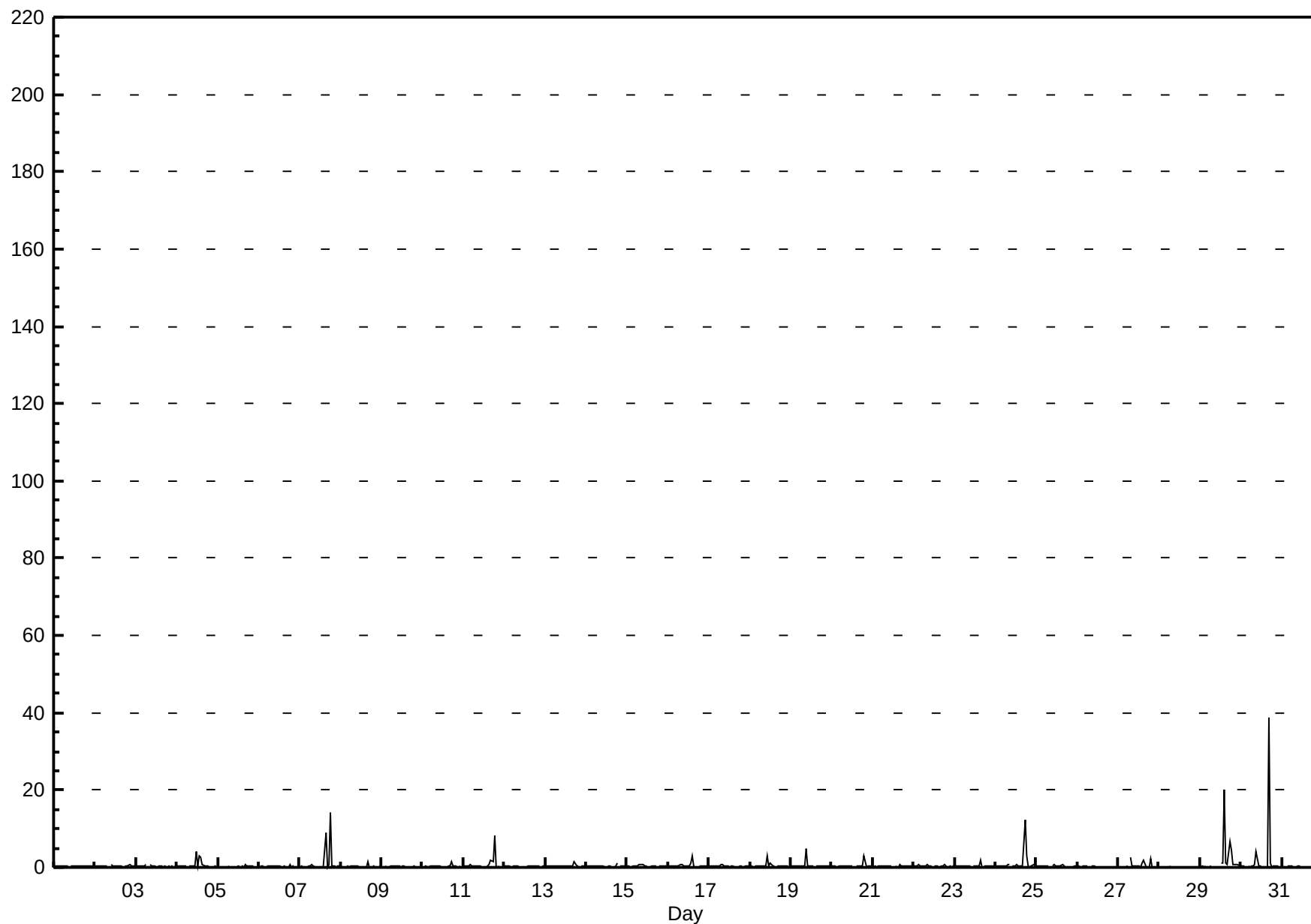
Hourly Maximums

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

Maximum Value: 38.8 ppb on Aug 30 17:00																				Maximum Daily Average: 2.2 ppb on Aug 29					Hours in Service: 744	
Minimum Value: 0 ppb on Aug 30 16:00																				Minimum Daily Average: 0.1 ppb on Aug 28					Hours of Data: 707	
Maximum Diurnal Average: 1.6 ppb at hour 17																				Minimum Diurnal Average: 0.2 ppb at hour 24					Hours of Missing Data: 37	
Monthly Average: 0.49 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 5.5					Hours of Calibration: 37	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
2-Aug	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.4	0.6
3-Aug	0	0	0	0	0	0	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
4-Aug	0	0	0	0	0	0	A	1	1	0	0	4	0	3	3	1	0	0	0	0	0	0	0	0	0.7	3.9
5-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2	0.6
6-Aug	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.2	0.6
7-Aug	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	9	0	1	14	0	0	0	0	0	1.2	14.1
8-Aug	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0.2	1.6
9-Aug	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
10-Aug	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0.3	1.4
11-Aug	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	2	2	8	0	0	0	A	0	0.8	8.4
12-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3
13-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	A	0	0	0	0.3	1.6
14-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0.3	1.2
15-Aug	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.8
16-Aug	0	0	0	0	0	0	1	1	1	1	0	0	0	1	3	0	0	A	0	0	0	0	0	0	0.5	3.2
17-Aug	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	A	A	0	0	0	0	0	0	0.3	0.6
18-Aug	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	A	0	0	0	0	0	0	0	0	0.4	2.8
19-Aug	0	0	0	0	0	0	0	0	0	5	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.5	4.9
20-Aug	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	3	0	0	0	0	0.4	2.9
21-Aug	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0.3	0.6
22-Aug	0	0	0	1	0	0	0	0	1	1	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0.4	0.9
23-Aug	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	2	0	0	0	0	0	0	0	0	0.3	1.7
24-Aug	0	0	0	0	0	0	0	1	1	A	0	0	1	1	0	0	0	12	3	0	0	0	1	0	1.0	12.1
25-Aug	0	0	0	0	0	1	0	0	A	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0.3	0.6
26-Aug	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
27-Aug	0	0	0	0	0	0	A	3	0	1	0	0	0	0	1	2	0	0	0	2	0	0	0	0	0.5	2.7
28-Aug	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
29-Aug	0	0	0	0	A	0	0	C	C	C	C	C	1	1	20	1	1	7	5	1	1	1	1	0	2.2	20.3
30-Aug	0	0	0	A	0	0	0	0	1	4	0	0	0	0	0	0	39	1	0	0	0	0	0	0	2.1	38.8
31-Aug	0	0	A	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.3	1.2
0.2 0.2 0.2 0.3 0.2 0.3 0.3 0.5 0.4 0.6 0.4 0.4 0.3 0.4 1.1 0.7 1.6 1.0 1.2 0.4 0.2 0.2 0.3 0.2																									Diurnal Average	
0.5 0.4 0.5 0.6 0.6 0.5 0.6 2.7 0.9 4.9 2.8 3.9 1.3 3.1 20.3 8.9 38.8 12.1 14.1 2.9 0.6 0.6 0.6 0.5																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

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



Hourly Averages

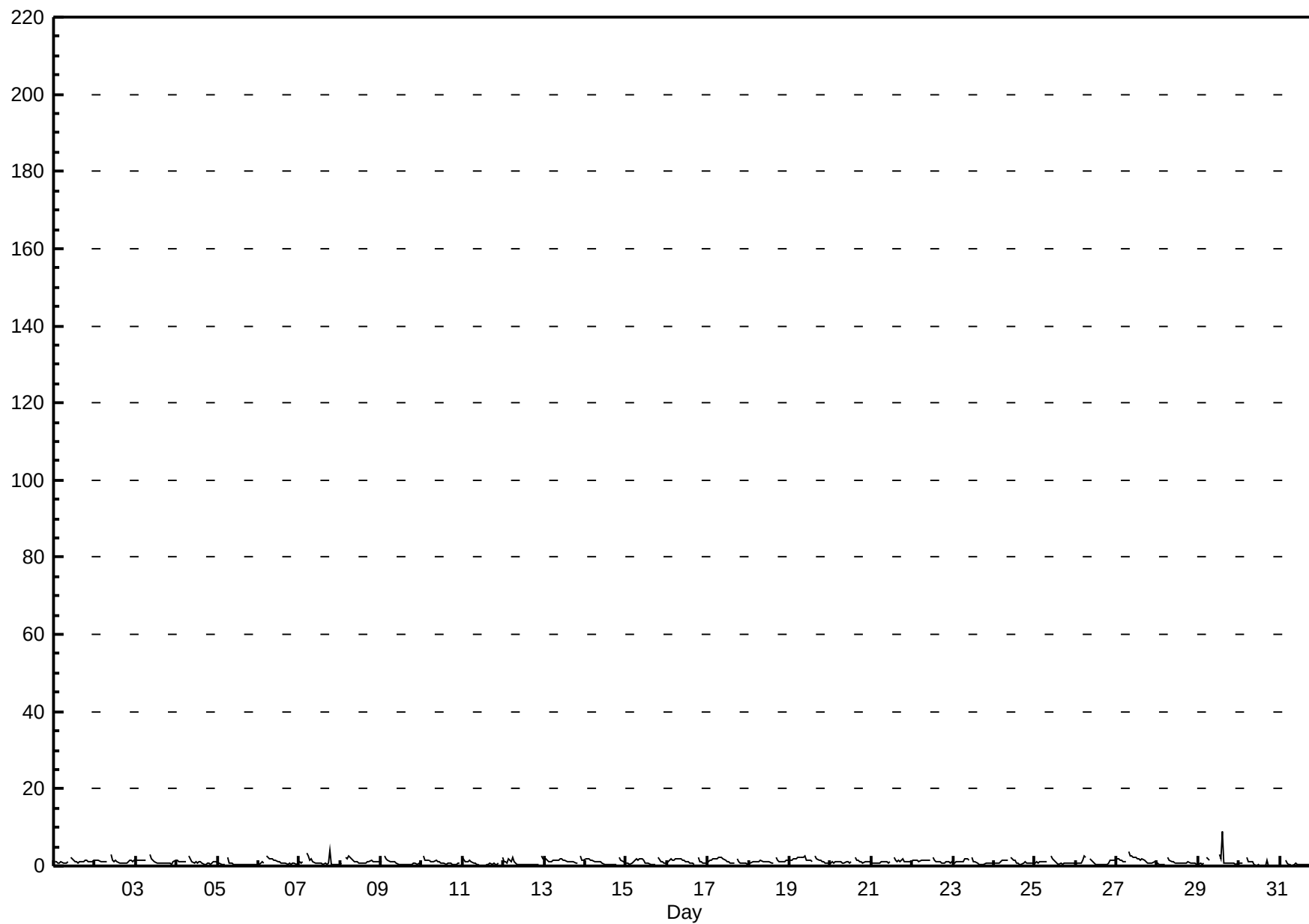
Oxides of Nitrogen (NO_x) - ppb

Sunset House - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9.1 ppb on Aug 29 15:00 Maximum Daily Average: 1.7 ppb on Aug 19																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Aug 30 15:00 Minimum Daily Average: 0.4 ppb on Aug 31 Maximum Diurnal Average: 1.5 ppb at hour 6 Minimum Diurnal Average: 0.8 ppb at hour 16 Monthly Average: 1.06 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.0 Q ₃ = 1.4 P ₉₀ = 1.8 P ₉₉ = 2.7																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.4
2-Aug	2	2	1	1	1	1	1	1	A	3	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1.2	3.1
3-Aug	1	1	1	1	1	2	1	A	3	2	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1.2	2.8
4-Aug	1	1	1	1	1	1	A	3	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1.0	2.5
5-Aug	1	1	0	0	0	A	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.1
6-Aug	0	1	1	1	A	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.6
7-Aug	1	1	1	A	3	3	2	2	1	1	1	1	1	1	1	1	0	1	4	0	0	0	0	0	1.1	4.1
8-Aug	1	1	A	2	2	3	2	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1.2	2.5
9-Aug	1	A	3	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.8	2.7
10-Aug	A	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.0	2.5
11-Aug	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0	1	1	A	2	0.8	2.4
12-Aug	1	1	1	2	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	3	2	0.8	2.7
13-Aug	2	2	1	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	A	2	2	1	1.5	2.5
14-Aug	2	2	2	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	2	2	1	1	1.0	2.4
15-Aug	1	1	1	1	1	2	2	2	2	2	1	1	1	1	1	1	0	0	A	2	1	1	1	1	1.0	2.2
16-Aug	1	2	2	1	2	2	2	2	2	2	1	1	1	1	1	1	0	A	2	1	1	1	1	1	1.3	2.2
17-Aug	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1.3	2.2
18-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	2	1.1	2.2
19-Aug	2	2	2	2	2	2	2	2	2	3	2	2	1	1	A	3	2	2	1	1	1	1	1	1	1.7	2.6
20-Aug	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1	1	1	1	1	1	1	1.1	2.4
21-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	2	1	1	1	1	1.1	2.1
22-Aug	1	1	1	1	1	1	2	1	2	2	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1.3	2.1
23-Aug	1	1	1	1	1	1	1	2	2	2	A	2	1	1	1	1	1	1	0	1	1	1	1	1	1.0	2.2
24-Aug	1	1	1	1	1	2	2	1	2	A	2	2	1	1	1	1	0	1	1	1	1	1	1	1	1.0	2.2
25-Aug	1	1	1	1	1	1	1	1	A	3	2	1	1	1	1	1	0	1	1	1	1	1	1	1	0.9	2.8
26-Aug	0	1	1	1	2	3	2	A	2	1	1	1	1	0	0	0	0	0	1	1	1	1	1	2	1.0	2.7
27-Aug	2	2	2	1	1	1	A	4	3	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1.6	3.8
28-Aug	1	1	0	0	0	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.3
29-Aug	1	1	0	1	A	2	2	C	C	C	C	C	3	2	9	1	1	1	1	1	1	0	1	1	1.5	9.1
30-Aug	1	1	1	A	2	1	1	1	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0.5	2.1
31-Aug	0	0	A	2	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0.4	1.6
1.0 1.1 1.1 1.2 1.3 1.5 1.5 1.5 1.4 1.4 1.2 1.0 0.9 0.8 1.0 0.8 0.8 0.8 0.9 0.8 0.9 0.9 0.9 1.0																									Diurnal Average	
2.4 2.5 2.7 2.2 3.4 2.7 2.3 3.8 2.8 3.1 2.4 2.2 3.1 2.1 9.1 2.5 2.2 2.0 4.1 2.2 2.4 2.5 2.7 2.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb
Sunset House - August 2012



Hourly Maximums

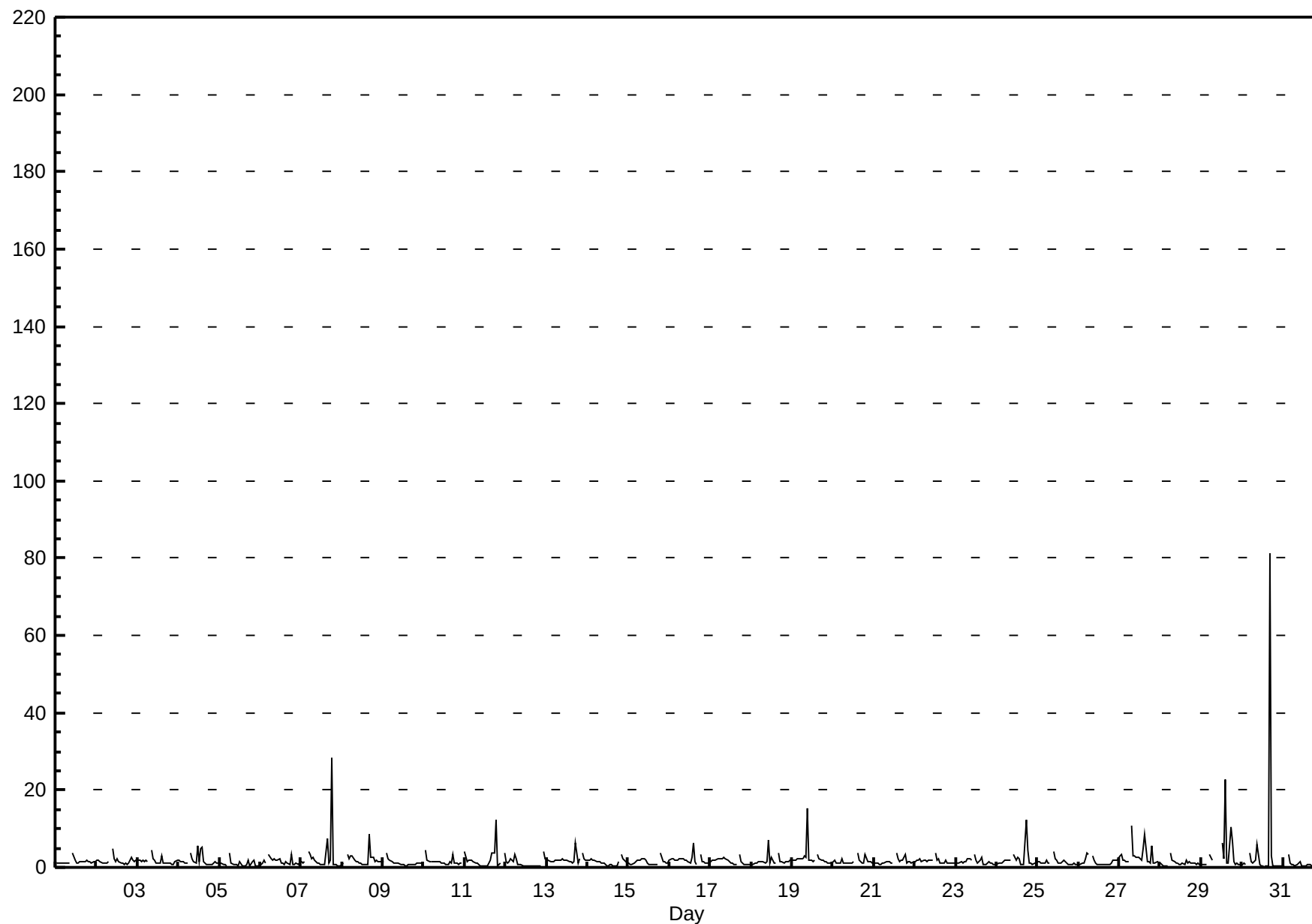
Oxides of Nitrogen (NO_x) - ppb

Sunset House - August 2012

Maximum Value: 81.4 ppb on Aug 30 17:00																				Maximum Daily Average: 4.7 ppb on Aug 30					Hours in Service: 744				
Minimum Value: 0 ppb on Aug 30 14:00																				Minimum Daily Average: 0.7 ppb on Aug 31					Hours of Data: 707				
Maximum Diurnal Average: 4.2 ppb at hour 17																				Minimum Diurnal Average: 1.2 ppb at hour 22					Hours of Missing Data: 37				
Monthly Average: 1.81 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.6 Q ₁ = 0.9 Median = 1.3 Q ₃ = 1.9 P ₉₀ = 2.8 P ₉₉ = 10.1					Hours of Calibration: 37				
																									Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Aug	1	1	1	1	1	1	1	1	1	A	4	2	1	1	1	1	1	2	2	2	2	1	1	2	1.5	3.6			
2-Aug	2	2	2	1	1	1	1	1	A	5	2	2	2	2	1	1	1	1	1	1	3	2	2	2	1.6	4.8			
3-Aug	2	2	2	2	2	2	2	A	5	2	2	1	1	1	3	1	1	1	1	1	1	1	2	2	1.6	4.5			
4-Aug	2	1	1	1	1	1	A	4	2	2	1	5	1	5	5	2	1	1	1	1	1	2	1	1	1.9	5.4			
5-Aug	1	1	1	1	1	A	4	1	1	1	1	1	2	1	0	1	1	2	1	1	2	0	0	1	1.0	3.9			
6-Aug	1	1	2	1	A	3	2	2	2	2	2	2	1	1	1	1	1	1	3	1	1	1	1	2	1.5	3.5			
7-Aug	2	1	1	A	4	4	2	3	2	1	1	1	1	1	1	7	1	2	28	1	1	0	0	0	2.9	28.5			
8-Aug	1	1	A	3	2	3	3	2	1	1	1	1	1	1	1	1	9	3	2	2	2	2	2	1	2.0	8.7			
9-Aug	1	A	4	2	2	2	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1.1	3.9			
10-Aug	A	4	2	2	1	1	2	1	2	1	1	1	1	1	1	1	1	3	1	1	1	1	1	A	1.5	4.3			
11-Aug	4	2	2	2	2	1	1	1	1	0	0	0	1	0	1	2	4	4	12	1	1	1	A	4	2.0	12.4			
12-Aug	1	1	1	2	1	3	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	4	2	1.1	4.0			
13-Aug	2	2	2	1	1	2	2	2	2	2	2	2	2	1	2	1	1	6	1	2	A	4	2	2	2.1	6.4			
14-Aug	2	2	2	2	2	1	1	2	1	1	1	1	0	1	1	1	0	0	2	A	3	2	1	1	1.4	3.4			
15-Aug	1	1	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	1	A	4	2	1	1	1	1.4	3.6			
16-Aug	2	2	2	2	2	2	2	2	2	2	2	1	1	2	6	1	1	A	3	2	1	1	1	1	2.0	6.5			
17-Aug	2	2	2	2	2	2	2	2	3	2	2	2	1	1	1	1	A	3	2	1	1	1	1	1	1.6	3.3			
18-Aug	1	1	1	1	1	1	1	2	1	1	7	1	2	1	1	A	4	2	1	1	1	1	2	2	1.7	7.1			
19-Aug	2	2	2	2	2	2	2	3	3	15	2	2	2	2	A	3	2	2	2	1	2	1	1	1	2.5	15.4			
20-Aug	1	2	1	1	1	2	1	1	1	1	1	1	2	A	4	2	2	1	1	3	1	1	1	1	1.5	3.9			
21-Aug	1	1	1	1	1	1	1	1	1	1	1	1	A	4	2	2	2	2	3	1	1	1	1	1	1.5	3.6			
22-Aug	2	2	2	2	2	2	2	2	2	2	2	A	4	2	2	1	1	1	2	1	1	1	1	1	1.7	3.9			
23-Aug	1	1	1	1	1	1	2	2	2	2	A	3	2	1	2	3	1	1	1	1	1	1	1	1	1.5	3.5			
24-Aug	1	1	1	1	2	2	2	2	2	A	3	2	3	2	1	1	1	12	5	1	1	1	1	1	2.0	12.2			
25-Aug	1	1	1	1	1	2	1	1	A	4	2	2	1	1	1	2	2	1	1	1	1	1	1	1	1.4	4.2			
26-Aug	1	1	1	1	2	4	3	A	3	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.4	3.8			
27-Aug	3	3	2	2	2	1	A	11	3	3	3	3	2	2	5	9	2	2	1	5	1	1	2	1	3.0	10.9			
28-Aug	1	1	1	1	0	A	4	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1.2	3.8			
29-Aug	1	1	1	1	A	4	2	C	C	C	C	C	6	2	23	1	1	10	7	2	1	1	1	1	3.6	22.7			
30-Aug	1	1	1	A	4	2	1	2	2	6	1	0	1	0	0	0	81	3	0	0	1	0	0	0	4.7	81.4			
31-Aug	0	0	A	3	1	1	1	0	1	1	1	1	0	1	1	1	1	1	0	1	0	0	0	0	0.7	3.3			
1.4 1.5 1.5 1.6 1.7 2.0 1.9 2.0 1.8 2.4 1.7 1.4 1.5 1.3 2.3 1.7 4.2 2.3 2.9 1.4 1.2 1.2 1.2 1.3																									Diurnal Average				
4.3 4.3 3.9 3.4 3.9 3.8 3.9 10.9 4.5 15.4 7.1 5.4 6.3 5.0 22.7 8.8 81.4 12.2 28.5 5.5 3.4 3.8 4.0 3.6																									Diurnal Maximum				
C - Calibration A - Automated Daily Zero Span																													

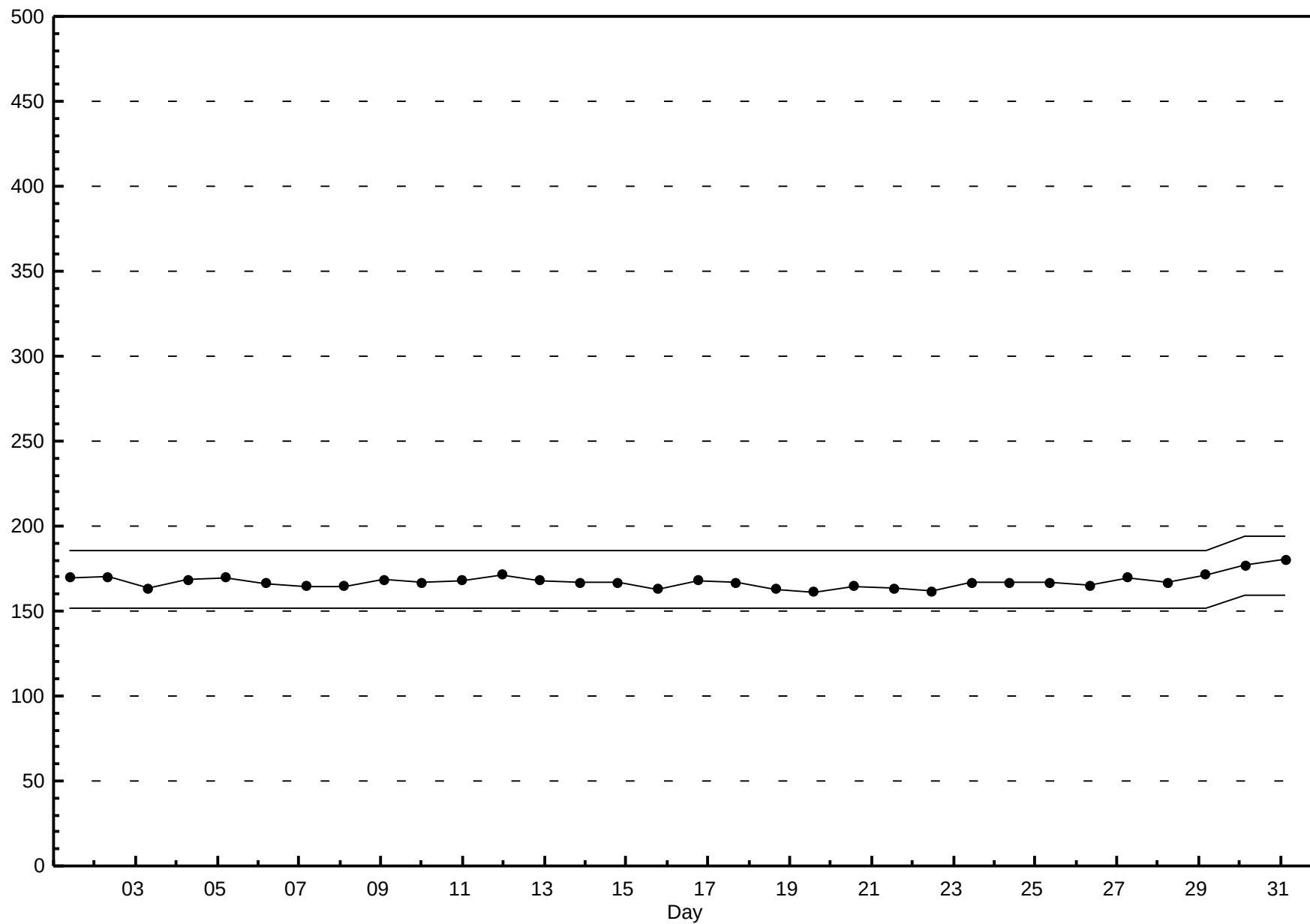
Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb
Sunset House - August 2012



Span Responses

Oxides of Nitrogen (NO_x)
Sunset House - August 2012



Hourly Averages

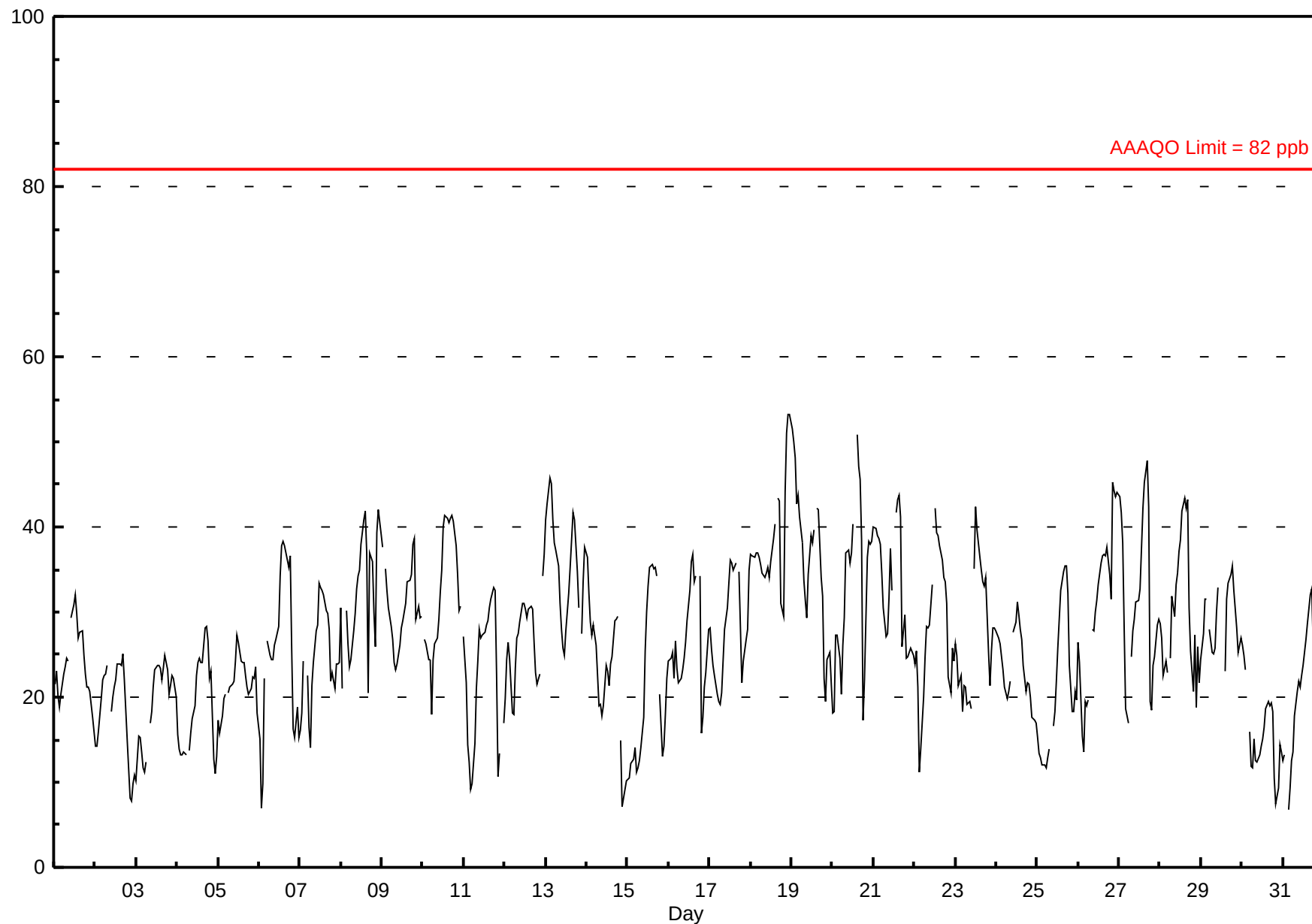
Ozone (O₃) - ppb

Sunset House - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 53.3 ppb on Aug 18 23:00 Maximum Daily Average: 38.8 ppb on Aug 18																								Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0			
Minimum Value: 7 ppb on Aug 31 04:00 Maximum Diurnal Average: 33.5 ppb at hour 17 Monthly Average: 26.74 ppb												Minimum Daily Average: 15.8 ppb on Aug 30 Minimum Diurnal Average: 21.5 ppb at hour 6 Percentiles: P ₁ = 9.0 P ₁₀ = 14.9 Q ₁ = 21.0 Median = 26.0 Q ₃ = 33.2 P ₉₀ = 38.4 P ₉₉ = 47.0															
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Aug	22	23	20	19	20	23	23	25	24	A	29	31	32	30	27	28	28	25	23	21	21	21	18	16	23.8	32.0	
2-Aug	14	14	16	20	22	23	23	24	A	18	20	21	22	24	24	24	25	22	18	15	8	8	10	11	18.5	25.0	
3-Aug	10	15	15	14	12	11	12	A	17	18	21	23	24	24	23	22	23	25	23	20	21	22	22	20	19.1	25.0	
4-Aug	16	14	13	13	14	13	A	14	16	17	19	23	24	25	24	24	28	28	27	22	23	13	11	13	18.8	28.3	
5-Aug	17	16	18	20	20	A	21	21	21	22	24	27	26	24	24	24	23	21	20	21	22	22	24	18	21.6	27.3	
6-Aug	15	7	10	22	A	27	25	24	24	26	27	28	34	38	38	38	37	35	37	26	16	15	19	15	25.4	38.3	
7-Aug	16	18	24	A	22	16	14	21	24	28	28	33	33	33	32	30	30	28	22	23	21	24	24	24	24.8	33.3	
8-Aug	30	21	A	30	26	24	24	28	30	33	34	35	38	41	42	37	21	37	36	30	26	39	42	39	32.3	42.0	
9-Aug	38	A	35	33	30	28	27	24	23	24	26	28	29	30	31	34	34	34	38	39	29	31	29	29	30.6	38.7	
10-Aug	A	27	26	24	24	18	24	26	27	29	32	35	40	41	41	41	41	41	41	38	34	30	31	A	32.4	41.4	
11-Aug	27	22	14	12	9	10	15	21	24	28	27	27	28	28	29	31	32	33	33	23	11	13	A	17	22.3	32.9	
12-Aug	20	24	26	25	18	18	23	27	28	29	31	31	30	29	30	31	30	26	23	21	23	A	34	37	26.8	36.7	
13-Aug	41	43	46	45	41	38	37	35	31	28	26	25	28	32	35	38	42	41	35	31	A	27	33	38	35.5	45.7	
14-Aug	37	32	29	27	28	26	23	19	19	18	19	24	23	21	24	25	29	29	29	A	15	7	9	10	22.7	36.5	
15-Aug	10	10	12	13	14	11	12	12	14	18	25	30	33	35	36	35	35	34	A	20	13	14	18	22	20.8	35.7	
16-Aug	24	25	25	22	27	23	22	22	23	25	27	29	32	36	37	34	34	A	34	16	18	21	23	28	26.3	36.8	
17-Aug	28	26	24	22	20	20	19	21	24	28	31	33	36	36	35	36	A	35	28	22	24	27	28	35	27.7	36.2	
18-Aug	37	37	36	37	37	36	36	35	34	35	35	34	36	39	40	A	43	43	31	29	44	51	53	53	38.8	53.3	
19-Aug	52	50	48	43	44	41	38	34	31	29	34	39	38	40	A	42	42	34	32	22	19	24	25	21	35.8	51.5	
20-Aug	18	18	27	27	25	20	26	29	37	37	36	37	40	A	51	47	46	39	17	22	37	38	38	38	32.7	50.8	
21-Aug	40	40	39	39	38	35	30	27	27	32	38	33	A	42	43	44	41	26	30	25	25	25	26	25	33.4	43.7	
22-Aug	24	25	21	11	14	20	25	28	28	28	33	A	42	39	39	38	36	34	34	31	22	20	26	24	28.0	42.3	
23-Aug	26	25	21	22	18	21	21	19	20	19	A	35	42	40	36	35	34	33	34	25	21	25	28	28	27.4	42.4	
24-Aug	28	27	26	25	23	21	20	21	22	A	28	29	31	30	28	27	24	21	22	22	20	18	17	17	23.7	31.1	
25-Aug	15	13	13	12	12	12	13	14	A	17	18	22	26	29	33	35	35	35	32	24	18	18	21	20	21.2	35.4	
26-Aug	27	24	15	14	19	19	20	A	28	28	30	31	33	36	37	37	37	38	34	32	45	44	44	44	31.1	45.3	
27-Aug	43	42	38	28	19	17	A	25	28	29	31	31	33	37	42	45	48	42	19	18	24	25	28	29	31.4	47.8	
28-Aug	29	27	23	24	23	A	25	32	29	33	35	37	38	42	43	42	43	30	25	21	27	19	26	22	30.2	43.3	
29-Aug	24	27	31	31	A	28	25	25	26	30	33	C	C	C	23	32	33	34	35	33	30	28	25	27	29.1	35.4	
30-Aug	26	25	23	A	16	12	12	15	13	12	13	14	15	17	19	19	19	19	18	11	8	9	14	14	15.8	26.1	
31-Aug	13	13	A	7	9	12	14	18	21	22	21	23	24	27	29	30	32	33	26	25	26	23	22	26	21.5	32.7	
25.6 24.4 24.7 23.5 22.3 21.5 22.3 23.7 24.6 25.5 27.7 29.3 31.5 32.5 33.2 33.4 33.5 31.9 28.6 24.2 23.1 23.5 25.6 25.4																								Diurnal Average			
51.5 50.0 48.1 45.1 43.8 41.1 38.2 35.4 37.0 37.2 37.5 39.0 42.4 41.9 50.8 47.2 47.8 43.1 40.6 38.7 45.3 51.1 53.3 53.2																								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 - August 2012



Hourly Maximums

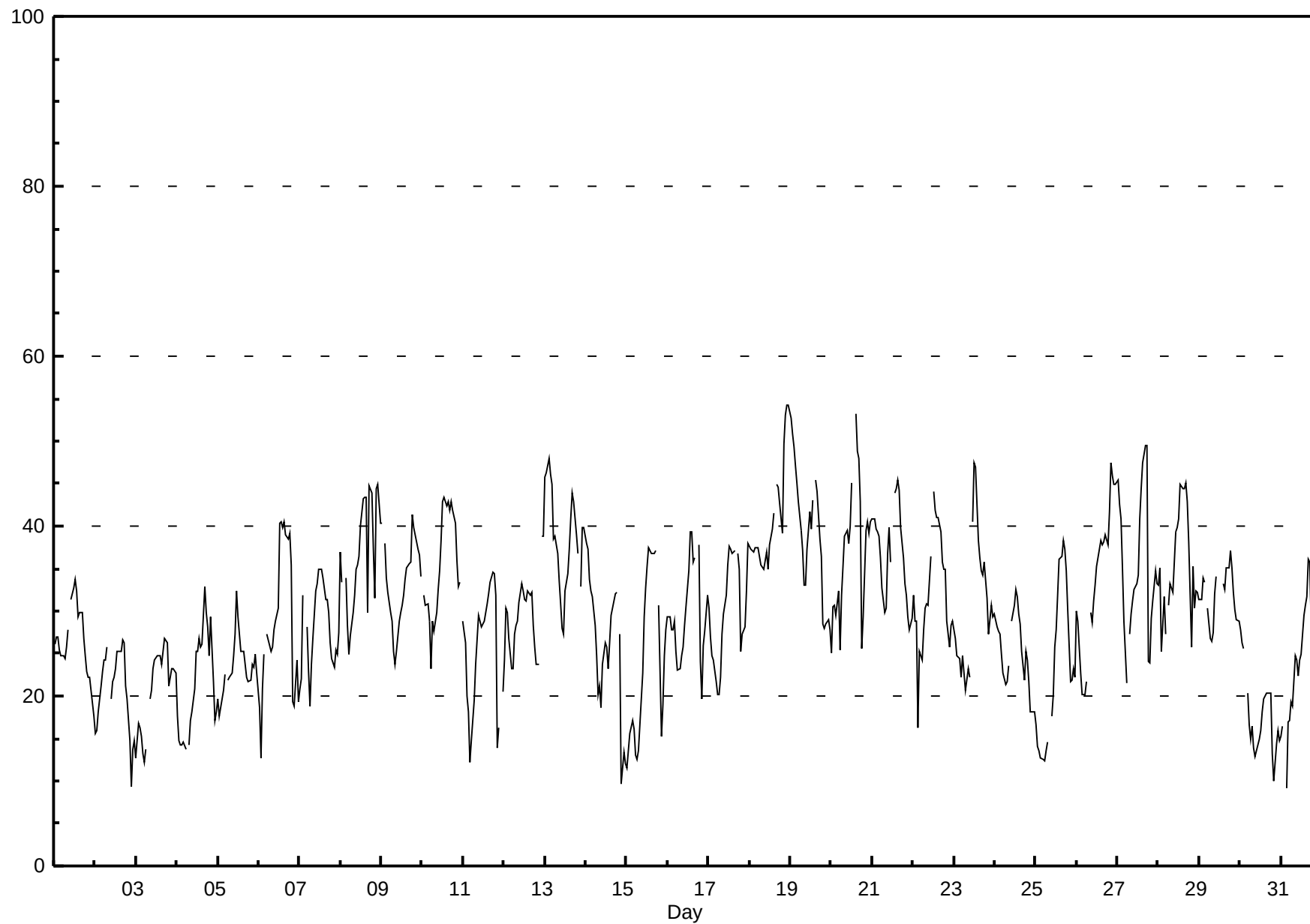
Ozone (O₃) - ppb

Sunset House - August 2012

Maximum Value: 54.2 ppb on Aug 18 23:00																					Maximum Daily Average: 40.9 ppb on Aug 18				Hours in Service: 744	
Minimum Value: 9 ppb on Aug 31 04:00																					Minimum Daily Average: 17.7 ppb on Aug 30				Hours of Data: 709	
Maximum Diurnal Average: 35.8 ppb at hour 17																					Minimum Diurnal Average: 24.1 ppb at hour 6				Hours of Missing Data: 35	
Monthly Average: 29.69 ppb																					Percentiles: P ₁ = 12.1 P ₁₀ = 18.2 Q ₁ = 23.7 Median = 29.3 Q ₃ = 36.1 P ₉₀ = 41.0 P ₉₉ = 48.9				Hours of Calibration: 35	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	26	27	27	25	25	25	24	26	28	A	31	33	34	32	29	30	30	27	25	23	22	22	19	18	26.4	33.7
2-Aug	16	16	18	21	23	24	24	26	A	20	22	22	23	25	25	25	27	26	21	20	15	9	14	15	20.7	26.6
3-Aug	13	17	16	15	13	12	14	A	20	21	23	24	25	25	25	24	25	27	26	21	22	23	23	23	20.7	26.8
4-Aug	18	15	14	14	15	14	A	14	17	18	21	25	25	27	26	26	33	30	28	25	29	22	17	18	21.3	32.8
5-Aug	20	18	20	21	23	A	22	22	23	25	27	32	29	25	25	25	24	22	22	22	24	23	25	23	23.5	32.3
6-Aug	19	13	21	25	A	27	26	25	26	28	29	30	40	40	40	40	39	38	39	35	19	19	24	19	28.8	40.4
7-Aug	21	22	32	A	28	23	19	24	27	32	33	35	35	35	34	31	31	30	26	24	23	25	25	27	28.0	34.9
8-Aug	37	33	A	34	28	25	27	30	32	35	35	36	40	43	43	43	30	45	44	37	32	44	45	40	36.5	44.9
9-Aug	40	A	38	34	32	30	29	25	24	25	29	30	31	32	34	35	36	36	41	40	39	37	37	34	33.3	41.4
10-Aug	A	32	31	31	29	23	29	28	30	32	35	38	43	43	42	43	42	43	42	40	36	33	33	A	35.4	43.4
11-Aug	29	26	20	18	12	15	19	24	27	30	29	28	29	30	31	32	33	35	34	32	14	16	A	21	25.3	34.6
12-Aug	24	30	30	27	23	23	27	28	29	31	33	32	31	31	32	32	32	28	26	24	24	A	39	39	29.4	38.9
13-Aug	46	46	48	46	45	39	39	37	34	31	28	27	32	34	37	41	44	43	39	37	A	33	40	40	38.5	48.0
14-Aug	38	37	34	32	32	28	25	20	21	19	24	26	26	23	26	29	31	32	32	A	27	10	13	12	26.0	37.9
15-Aug	12	14	16	17	16	13	13	14	17	23	29	33	35	37	37	37	37	37	A	31	15	19	25	28	24.0	37.5
16-Aug	29	29	28	28	29	25	23	23	25	26	28	30	35	39	39	36	36	A	38	24	20	26	28	32	29.4	39.3
17-Aug	30	27	25	24	22	20	20	22	27	30	32	35	38	37	37	37	A	37	35	25	27	28	32	38	29.8	37.9
18-Aug	38	37	37	37	37	37	36	35	35	36	37	35	38	40	42	A	45	45	45	43	39	50	53	54	40.9	54.2
19-Aug	53	51	49	47	45	43	40	37	33	33	37	42	40	43	A	45	44	39	37	28	28	28	29	28	39.1	52.7
20-Aug	25	30	31	29	32	25	32	35	39	39	38	40	45	A	53	49	48	43	26	29	39	40	39	40	36.9	53.2
21-Aug	41	41	40	39	39	36	33	30	30	37	40	36	A	44	44	45	44	40	36	33	32	29	28	29	36.8	45.4
22-Aug	32	29	29	16	25	24	28	30	31	31	36	A	44	42	41	41	39	36	35	35	29	26	28	29	32.0	44.0
23-Aug	28	27	25	24	22	25	23	21	23	22	A	41	47	47	38	36	35	34	36	32	27	29	31	29	30.5	47.4
24-Aug	30	28	28	27	25	23	21	22	24	A	29	31	33	32	30	28	25	22	25	24	22	18	18	18	25.3	32.6
25-Aug	17	14	14	13	13	12	14	15	A	18	20	26	28	32	36	36	38	37	35	30	22	22	23	22	23.3	38.3
26-Aug	30	29	23	20	20	20	22	A	30	29	31	33	35	37	38	38	38	39	38	42	47	46	45	45	33.7	47.4
27-Aug	45	43	41	35	29	22	A	27	30	31	33	33	34	41	44	47	50	49	24	24	29	31	35	33	35.2	49.6
28-Aug	33	35	25	32	27	A	31	33	32	36	39	40	41	45	44	44	45	43	38	26	35	30	32	32	35.7	45.1
29-Aug	31	31	34	33	A	30	27	26	27	32	34	C	C	C	33	33	35	35	37	35	32	30	29	29	31.8	37.1
30-Aug	28	26	26	A	20	17	15	16	14	13	14	15	16	18	20	20	20	20	20	13	10	14	16	15	17.7	27.8
31-Aug	15	16	A	9	17	17	19	19	25	24	22	24	25	30	31	32	36	36	28	28	28	27	29	29	24.6	36.2
28.7 28.0 28.1 26.8 25.7 24.1 24.8 25.3 26.8 27.8 30.0 31.5 33.7 34.8 35.3 35.4 35.8 35.1 32.5 29.3 27.3 27.2 29.2 28.6																									Diurnal Average	
52.7 50.8 49.4 47.1 45.1 42.9 39.5 37.1 38.9 39.5 39.8 41.7 47.4 46.9 53.2 48.9 49.6 49.4 44.0 41.7 49.6 53.1 54.2 54.2																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

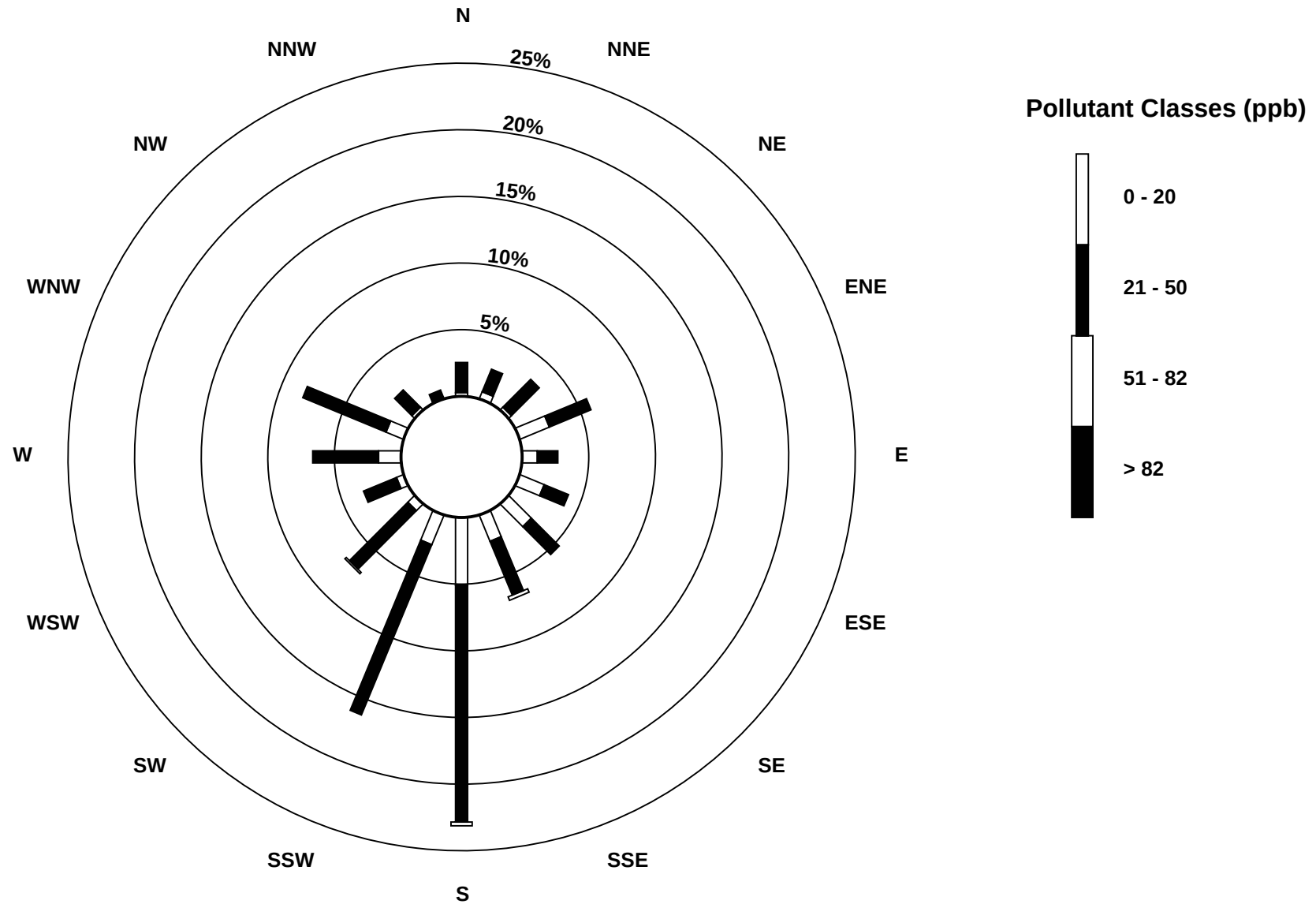
Hourly Maximums

Ozone (O₃) - ppb
Sunset House - August 2012



Pollutant Rose

Ozone (O₃) - ppb
Sunset House - August 2012



Eight Hour Running Averages

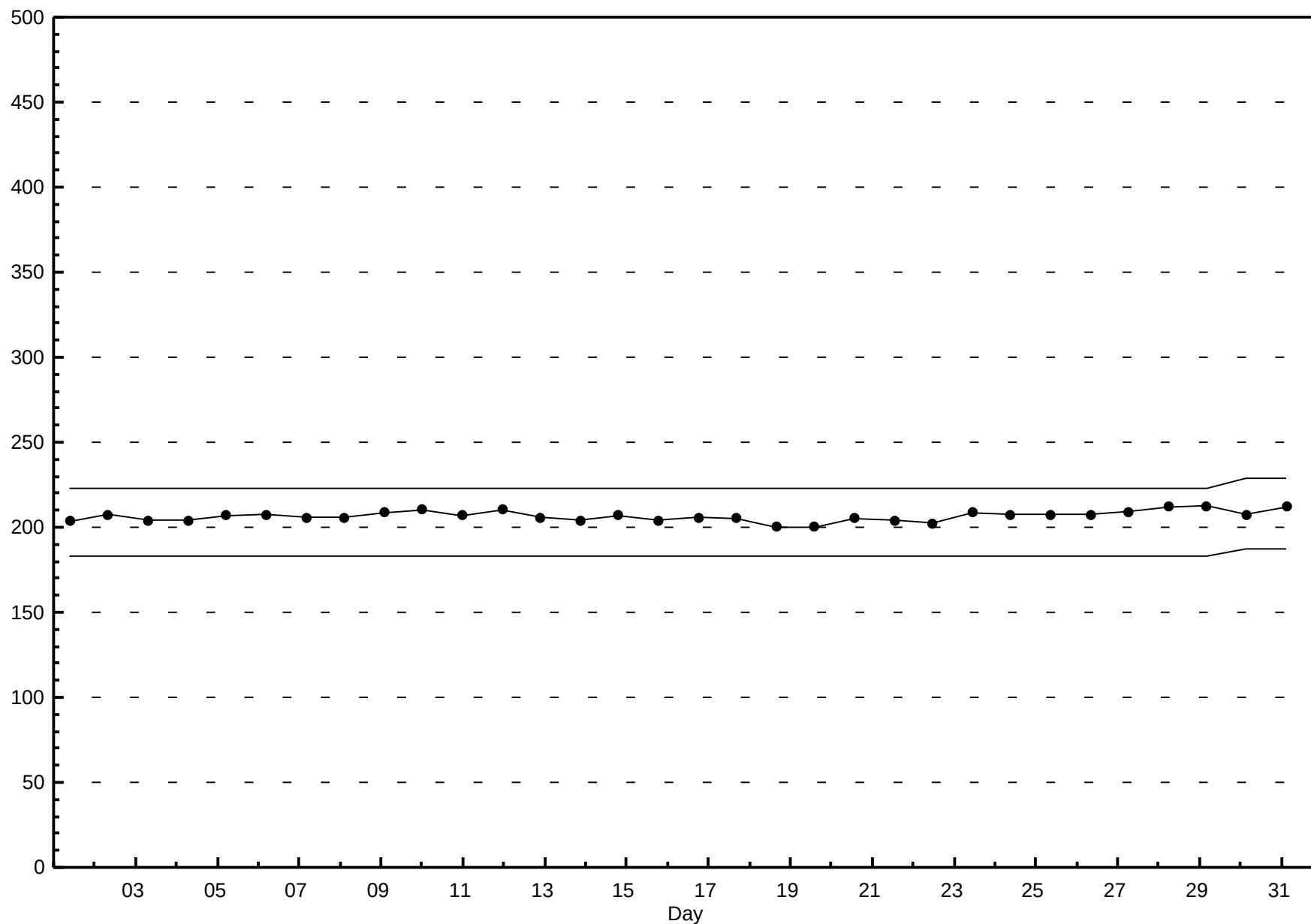
Ozone (O₃) - ppb

Sunset House - August 2012

Maximum Value: 49.2 ppb on Aug 19 04:00																				Hours in Service: 744					
Minimum Value: 10.6 ppb on Aug 15 03:00																				Hours of Data: 738					
																				Hours of Missing Data: 6					
Percentiles: P ₁ = 11.5 P ₁₀ = 16.8 Q ₁ = 21.6 Median = 26.2 Q ₃ = 32.4 P ₉₀ = 36.6 P ₉₉ = 43.8																				Hours of Calibration: 6					
																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
1-Aug	29	27	25	23	22	22	22	22	22	22	23	25	27	28	28	29	29	29	28	27	25	24	23	22	29.2
2-Aug	20	18	18	17	18	18	18	19	20	21	21	22	22	22	22	22	22	23	23	22	20	18	16	15	22.7
3-Aug	13	12	12	11	12	12	13	13	14	14	15	16	18	20	22	22	22	23	23	23	23	23	22	22	23.5
4-Aug	21	20	19	18	17	16	15	14	14	14	15	16	18	20	20	21	23	24	25	25	25	24	22	21	25.3
5-Aug	19	18	17	16	16	16	18	19	20	20	21	22	23	23	24	24	24	24	24	23	22	22	22	21	24.4
6-Aug	20	19	17	18	17	17	18	19	20	23	25	26	27	28	30	32	33	34	36	35	33	30	28	25	35.7
7-Aug	22	20	19	18	19	19	18	19	20	22	22	24	25	27	29	30	31	31	30	29	27	26	25	24	30.9
8-Aug	25	24	24	25	26	26	26	26	26	28	29	29	31	33	35	36	35	36	36	35	34	33	33	34	36.2
9-Aug	36	36	36	36	37	35	33	31	29	28	27	26	26	26	27	28	29	31	32	34	34	34	33	33	36.6
10-Aug	33	32	30	28	27	26	25	24	25	25	26	27	29	32	34	36	38	39	40	40	40	38	37	37	40.5
11-Aug	35	32	28	24	21	18	16	16	16	17	18	20	22	25	27	28	29	29	30	29	27	25	25	23	34.6
12-Aug	21	20	19	19	21	21	21	23	24	24	25	26	27	29	29	30	30	30	29	28	27	26	27	28	30.2
13-Aug	29	32	35	38	41	41	41	41	40	38	35	33	31	30	30	30	32	33	34	35	36	36	35	35	40.9
14-Aug	34	33	32	32	31	31	30	28	25	24	22	22	21	21	21	22	23	24	26	26	25	23	21	18	34.4
15-Aug	16	13	11	11	11	11	12	12	12	13	15	17	19	22	25	28	31	33	34	33	30	27	24	22	34.1
16-Aug	21	20	20	20	22	23	24	24	24	24	24	25	25	27	29	30	32	33	34	32	30	28	26	25	33.7
17-Aug	24	24	23	24	24	24	23	22	22	22	23	24	26	28	30	32	33	34	34	32	31	29	28	28	34.5
18-Aug	29	30	31	33	34	35	36	36	36	36	36	35	35	35	36	36	37	39	38	37	39	40	42	44	43.5
19-Aug	45	45	48	49	49	48	46	44	41	39	37	36	36	35	35	36	38	38	38	36	33	31	30	28	49.2
20-Aug	25	23	22	23	23	23	23	24	26	29	30	31	33	35	38	41	42	42	40	37	37	37	35	34	42.2
21-Aug	34	34	36	39	39	38	37	36	34	33	33	32	32	33	34	37	39	38	37	36	34	32	30	28	38.8
22-Aug	26	26	24	23	21	21	21	21	22	22	24	25	29	32	34	35	37	37	37	37	34	32	30	28	37.4
23-Aug	27	26	25	24	23	23	23	22	21	20	20	22	25	28	30	32	34	36	36	35	32	30	29	29	36.4
24-Aug	28	27	26	26	26	26	25	24	23	23	23	23	24	26	27	28	28	27	26	25	24	22	21	20	28.0
25-Aug	19	18	17	16	15	14	13	13	13	13	14	15	17	20	23	26	27	29	31	31	30	29	27	25	31.1
26-Aug	24	23	21	20	20	20	20	20	20	20	22	25	27	29	32	32	34	35	35	35	37	38	39	40	39.7
27-Aug	41	41	42	41	38	34	33	30	28	26	25	26	28	31	32	35	37	39	37	36	35	33	31	29	41.5
28-Aug	27	25	25	26	26	26	26	26	26	26	27	29	31	33	34	36	38	39	39	38	36	34	31	29	39.2
29-Aug	24	24	25	26	26	27	27	28	28	28	28	28	28	N	N	N	N	N	N	32	32	31	31	31	31.7
30-Aug	30	29	27	26	24	22	20	18	16	15	13	13	13	14	15	15	16	17	18	17	16	15	15	14	29.9
31-Aug	13	12	12	11	11	12	12	12	13	15	15	17	19	21	23	24	26	27	28	28	29	28	27	27	28.5
44.6 45.4 47.6 49.2 49.2 48.0 46.1 43.6 41.1 38.5 36.8 36.4 35.7 35.5 38.2 40.8 42.0 42.2 40.1 40.5 39.8 40.3 42.2 43.5																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

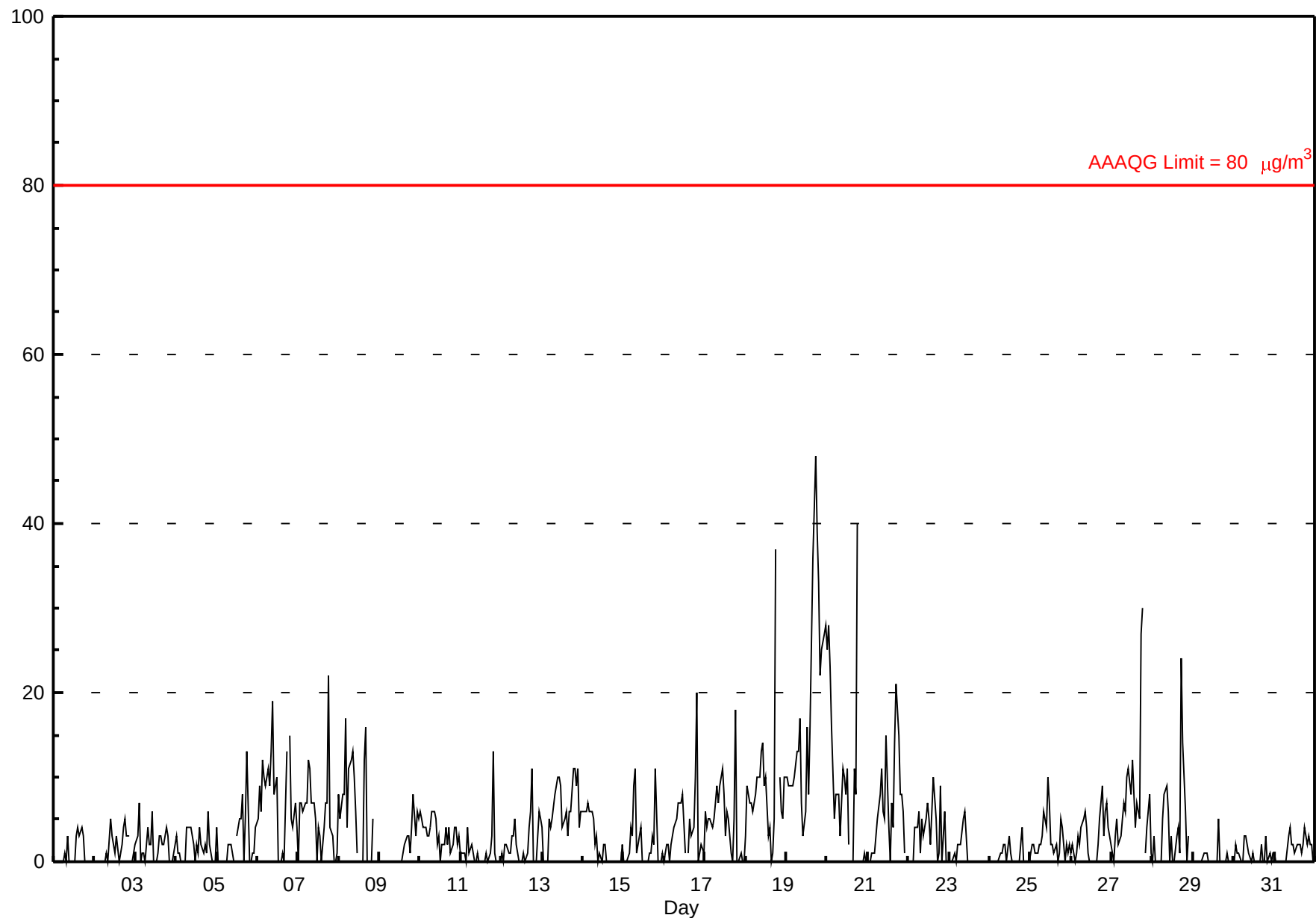
Ozone (O₃)
Sunset House - August 2012



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Hourly Averages

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Sunset House - August 2012



Hourly Maximums

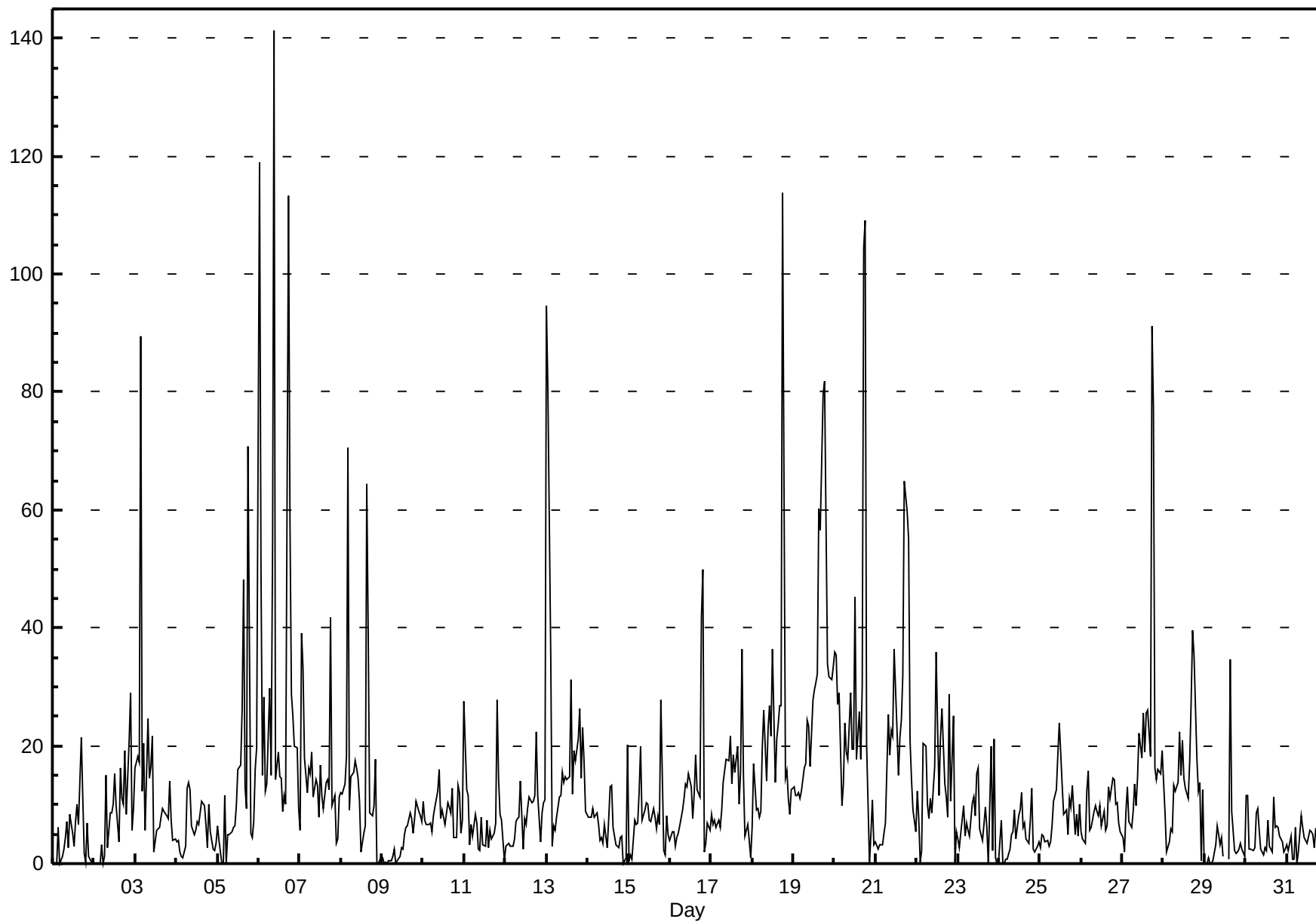
PM2.5 (PM_{2.5}) - µg/m³

Sunset House - August 2012

Maximum Value: 141.3 μg/m ³ on Aug 6 10:00																								Maximum Daily Average: 35.2 μg/m ³ on Aug 6						Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Aug 1 01:00																								Minimum Daily Average: 3.8 μg/m ³ on Aug 29						Hours of Data: 742	
Maximum Diurnal Average: 28.7 μg/m ³ at hour 19																								Minimum Diurnal Average: 6.7 μg/m ³ at hour 6						Hours of Missing Data: 2	
Monthly Average: 12.80 μg/m ³																								Percentiles: P ₁ = 0.0 P ₁₀ = 2.0 Q ₁ = 4.6 Median = 8.7 Q ₃ = 14.9 P ₉₀ = 25.9 P ₉₉ = 85.5						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-Aug	0	0	0	6	0	1	2	4	7	3	8	5	3	7	10	7	21	11	2	0	7	1	0	0	4.5	21.4					
2-Aug	0	0	0	0	3	0	1	15	3	9	9	10	15	10	4	16	11	10	19	8	21	29	6	9	8.7	29.0					
3-Aug	16	18	17	89	12	20	6	25	14	16	22	2	6	6	6	8	9	9	8	8	14	7	4	4	14.5	89.4					
4-Aug	4	4	2	1	1	3	13	14	13	6	5	6	7	7	9	10	10	7	3	10	6	3	2	3	6.1	13.8					
5-Aug	6	4	0	0	12	0	5	5	5	6	6	10	16	17	26	48	13	9	71	5	4	7	16	20	13.0	70.8					
6-Aug	119	50	15	28	12	14	30	15	54	141	14	19	15	15	9	11	10	113	58	29	25	20	20	9	35.2	141.3					
7-Aug	6	39	33	18	12	16	15	19	11	14	13	8	17	12	9	14	14	13	42	10	12	3	4	11	15.2	41.9					
8-Aug	12	12	13	18	71	9	15	16	17	16	14	11	2	5	6	64	39	9	8	10	18	0	0	1	16.1	70.5					
9-Aug	1	0	0	0	0	0	1	3	0	0	1	3	2	5	6	6	9	8	5	8	11	9	8	7	3.9	10.6					
10-Aug	11	7	7	7	7	6	8	10	12	16	8	9	8	7	10	10	9	13	4	4	13	12	5	7	8.7	15.9					
11-Aug	28	13	11	3	7	5	8	7	3	2	8	3	3	7	3	6	4	5	7	28	14	8	7	1	7.9	27.8					
12-Aug	3	3	3	3	3	4	7	8	8	14	2	8	7	9	11	10	11	12	22	11	4	9	10	11	8.1	22.5					
13-Aug	95	81	35	3	6	6	8	11	12	16	14	15	14	15	31	12	19	17	21	26	15	23	17	9	21.7	94.6					
14-Aug	8	8	8	9	8	9	7	4	4	3	7	3	8	13	13	6	3	3	3	4	5	0	1	20	6.5	20.1					
15-Aug	0	1	1	7	7	7	12	20	7	9	10	10	7	7	9	8	6	8	7	28	2	1	8	5	7.9	27.7					
16-Aug	4	5	5	3	4	5	6	9	11	13	13	15	13	8	12	18	13	11	42	50	2	3	7	6	11.6	49.9					
17-Aug	8	7	7	6	7	6	9	14	16	18	18	22	13	18	16	20	10	15	36	15	5	7	4	1	12.4	36.4					
18-Aug	6	17	9	9	8	9	20	26	14	23	27	22	36	14	21	24	27	27	114	14	16	11	8	12	21.4	113.8					
19-Aug	13	12	12	12	11	12	16	17	24	23	16	28	30	31	32	60	57	80	82	58	34	32	31	33	31.5	81.8					
20-Aug	36	35	27	29	10	13	24	19	18	29	19	19	45	18	26	18	30	105	109	20	0	5	11	3	27.9	109.2					
21-Aug	4	2	3	3	3	5	7	25	18	23	22	36	23	15	21	24	32	65	60	55	21	14	9	5	20.7	64.8					
22-Aug	12	8	0	2	20	20	10	8	11	9	16	36	23	11	21	26	14	11	8	29	11	25	0	6	14.1	35.9					
23-Aug	4	3	5	10	5	7	6	5	10	11	8	15	16	6	4	7	10	6	0	20	2	21	1	0	7.5	21.0					
24-Aug	0	7	0	0	1	1	2	5	6	9	4	8	9	12	6	7	4	3	7	13	2	2	3	4	4.8	12.9					
25-Aug	3	5	5	4	4	3	4	6	11	13	19	24	19	13	8	9	5	11	9	13	5	8	5	10	9.0	23.8					
26-Aug	5	4	3	12	16	6	6	9	10	9	8	10	6	9	6	6	13	11	15	14	10	10	7	5	8.8	15.8					
27-Aug	4	2	9	13	7	6	9	13	10	15	22	18	26	19	26	26	18	91	77	16	14	16	15	19	20.5	91.2					
28-Aug	14	9	2	4	6	5	13	12	14	22	15	21	15	13	11	17	27	40	35	18	12	14	0	13	14.7	39.5					
29-Aug	0	0	1	0	0	0	3	6	5	3	4	1	M	M	1	35	9	2	2	2	2	3	3	1	3.8	34.8					
30-Aug	12	12	2	2	2	3	9	9	6	3	2	3	2	7	3	2	11	6	6	6	5	4	2	2	5.0	11.6					
31-Aug	3	2	5	1	1	6	0	2	8	6	4	4	3	6	5	5	3	6	6	4	6	5	5	9	4.4	9.0					
14.1 11.9 7.8 9.8 8.6 6.7 9.1 11.6 11.7 16.1 11.6 13.0 13.7 11.3 12.3 17.4 15.2 23.8 28.7 17.4 10.2 10.1 7.1 8.0																									Diurnal Average						
118.9 80.8 35.2 89.4 70.5 20.4 29.7 26.1 54.0 141.3 26.8 36.4 45.1 30.7 32.2 64.5 56.6 113.2 113.8 57.7 33.9 31.7 31.1 33.4																									Diurnal Maximum						
M - Maintenance																															

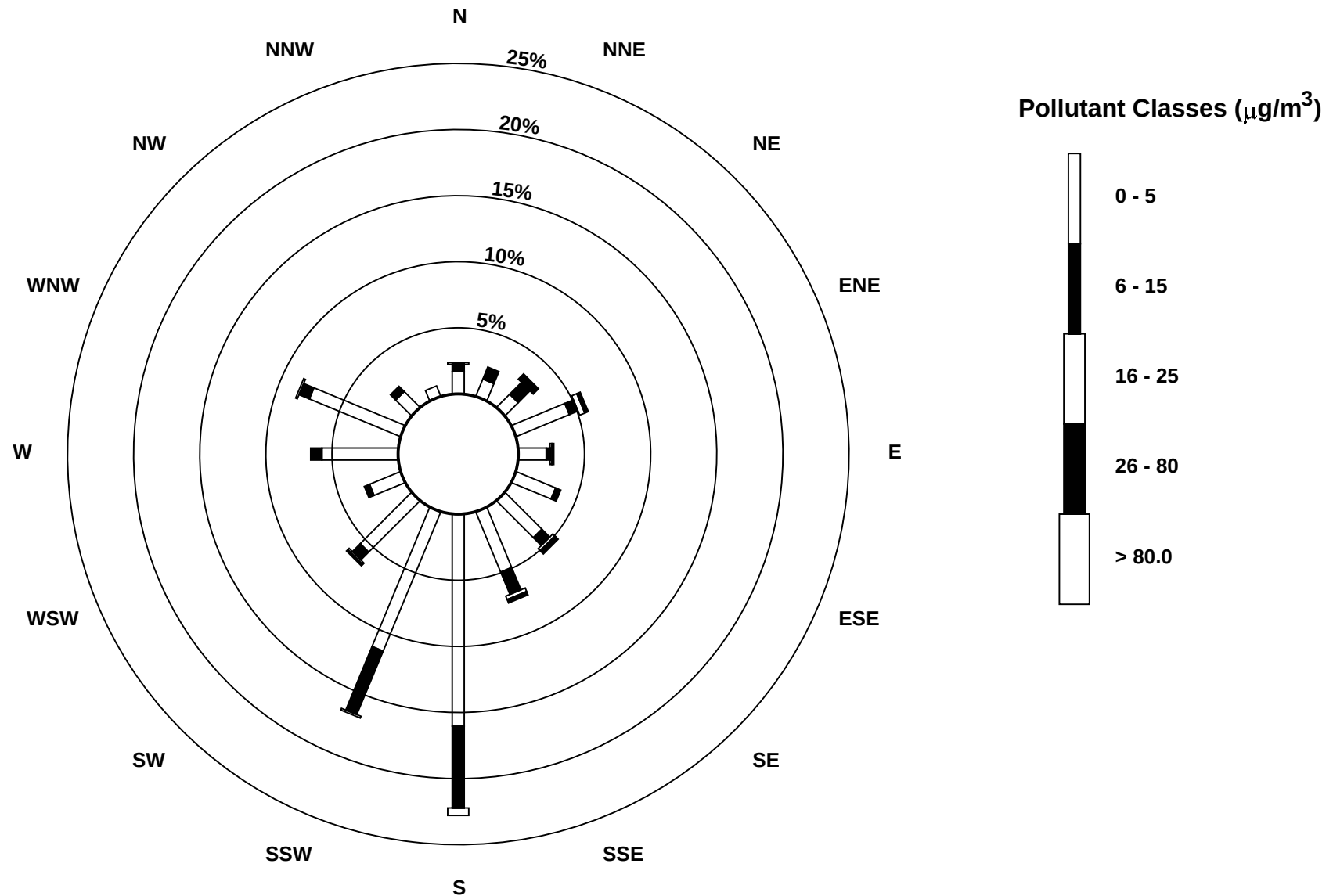
Hourly Maximums

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Sunset House - August 2012



Pollutant Rose

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Sunset House - August 2012



Hourly Averages

External Temperature (ET) - °C

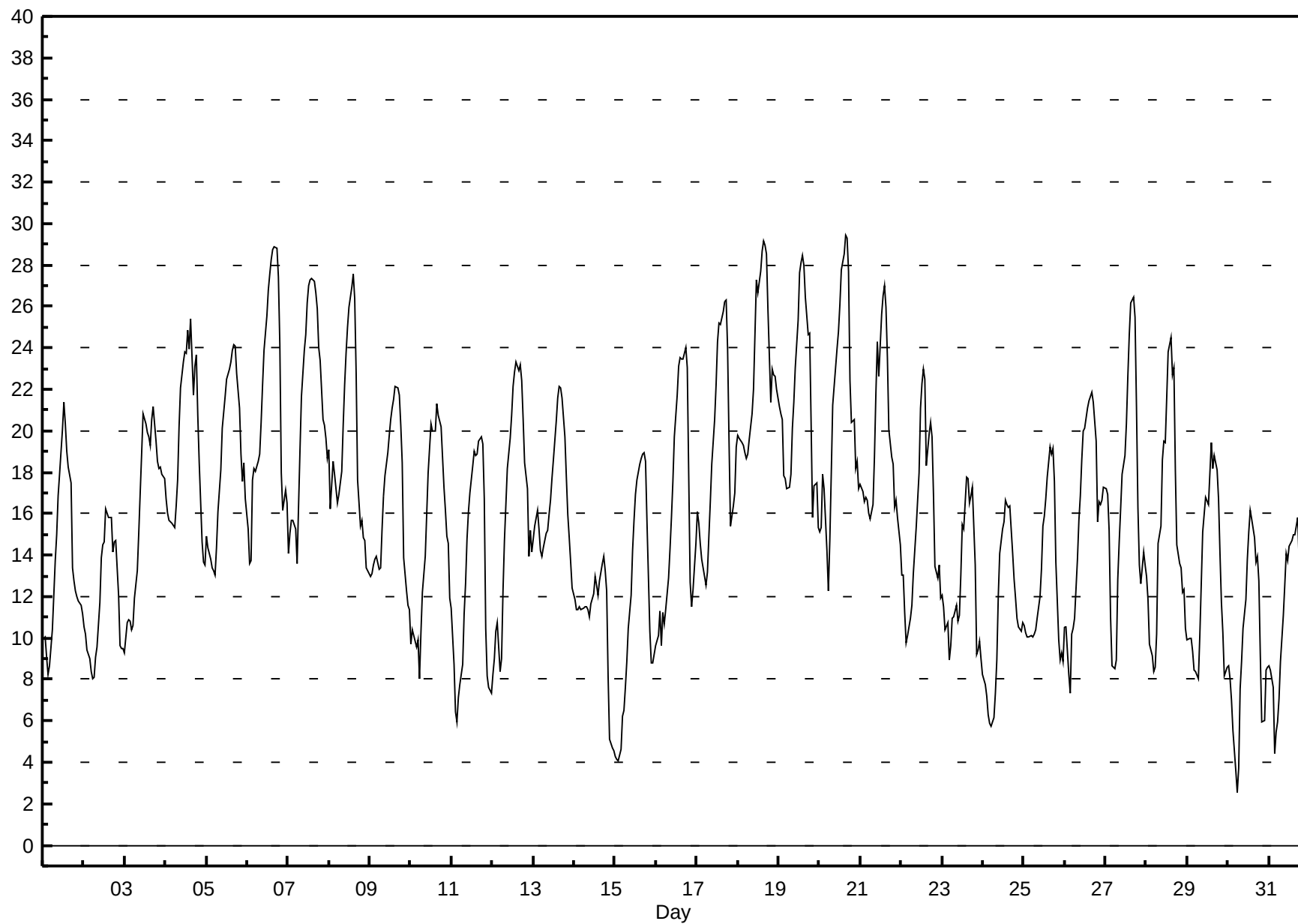
Sunset House - August 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 29.5 °C on Aug 20 16:00 Maximum Daily Average: 23.2 °C on Aug 18																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 3 °C on Aug 30 06:00 Minimum Daily Average: 9.7 °C on Aug 30 Maximum Diurnal Average: 21.8 °C at hour 15 Minimum Diurnal Average: 11.1 °C at hour 6 Monthly Average: 16.05 °C Percentiles: P ₁ = 4.5 P ₁₀ = 8.9 Q ₁ = 11.6 Median = 15.8 Q ₃ = 19.9 P ₉₀ = 23.8 P ₉₉ = 28.6																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Aug	10	10	9	8	9	10	12	14	15	17	18	20	21	20	19	18	18	13	13	12	12	12	12	11	13.9	21.4
2-Aug	11	10	9	9	8	8	8	9	10	12	14	14	15	16	16	16	16	14	15	15	12	10	9	9	11.9	16.2
3-Aug	9	11	11	11	10	11	12	13	15	17	19	21	20	20	20	19	21	21	20	19	18	18	18	18	16.3	21.2
4-Aug	17	16	16	16	16	15	16	18	20	22	23	24	24	25	24	25	22	23	24	21	18	15	14	14	19.4	25.4
5-Aug	15	14	14	13	13	13	14	16	18	20	21	22	22	23	23	24	24	24	23	21	19	18	18	17	18.8	24.2
6-Aug	15	14	14	18	18	18	19	19	20	22	24	26	27	28	28	29	29	29	27	24	18	16	17	16	21.4	28.9
7-Aug	14	15	16	16	15	14	16	19	22	24	25	26	27	27	27	27	27	26	24	23	21	20	20	19	21.2	27.4
8-Aug	19	16	19	18	17	17	17	18	20	22	24	25	26	27	28	26	23	18	15	16	15	15	13	13	19.4	27.6
9-Aug	13	13	13	14	14	13	13	15	17	18	19	20	21	21	21	22	22	20	18	14	12	12	11	11	16.6	22.1
10-Aug	10	10	10	10	10	8	10	12	14	16	18	19	20	20	20	21	21	20	20	17	16	15	15	12	15.2	21.3
11-Aug	11	9	6	6	7	8	9	11	13	15	16	17	18	19	19	19	19	20	19	17	10	8	8	7	13.0	19.7
12-Aug	8	9	10	11	8	9	12	15	16	18	20	21	22	23	23	23	23	22	21	18	17	14	15	14	16.4	23.3
13-Aug	15	15	16	15	14	14	14	15	15	16	17	18	19	20	22	22	22	22	20	18	16	15	14	12	16.9	22.1
14-Aug	12	11	11	12	11	11	12	12	11	11	12	12	13	13	12	13	14	14	13	12	8	5	5	5	11.0	13.9
15-Aug	4	4	4	5	6	7	8	9	10	12	14	16	17	18	18	19	19	19	19	16	10	9	9	9	11.6	19.0
16-Aug	10	10	11	10	11	11	11	13	14	16	18	20	22	23	24	23	23	24	23	18	13	11	12	15	16.1	24.0
17-Aug	16	16	15	14	13	13	13	15	17	18	21	22	24	25	25	26	26	26	24	19	15	16	17	19	19.0	26.3
18-Aug	20	20	19	19	19	19	19	20	21	22	25	27	27	28	29	29	29	29	26	21	23	23	23	22	23.2	29.2
19-Aug	21	21	21	18	18	17	17	18	20	21	23	25	28	28	28	28	26	25	25	20	16	17	18	15	21.4	28.5
20-Aug	15	15	18	17	14	12	15	18	21	23	24	25	26	28	29	29	29	28	22	20	21	18	19	17	21.0	29.5
21-Aug	17	17	17	17	17	16	16	16	19	22	24	23	26	27	27	26	24	20	19	18	16	17	16	15	19.5	27.0
22-Aug	13	13	11	10	10	11	12	13	14	15	18	21	22	23	22	18	20	20	20	17	13	13	14	12	15.7	23.0
23-Aug	12	12	10	11	9	10	11	11	12	11	11	13	15	15	18	18	17	17	17	14	9	9	10	9	12.5	17.8
24-Aug	8	8	7	6	6	6	6	7	9	12	14	15	16	17	16	16	16	14	13	12	11	11	10	11	11.2	16.7
25-Aug	11	10	10	10	10	10	10	10	11	12	13	15	16	17	18	19	19	19	19	18	14	10	9	9	12.9	19.2
26-Aug	11	11	8	7	10	10	11	14	16	17	19	20	20	21	21	22	22	21	19	16	17	16	17	17	16.0	21.9
27-Aug	17	17	15	11	9	9	9	13	15	16	18	19	20	23	25	26	26	25	21	16	14	13	14	14	16.8	26.5
28-Aug	13	12	10	9	8	9	10	15	15	19	20	19	22	24	24	23	23	18	14	14	13	12	12	10	15.4	24.5
29-Aug	10	10	10	9	8	8	8	10	13	15	16	17	16	18	19	18	19	18	17	14	12	10	8	9	13.0	19.4
30-Aug	9	8	7	6	4	3	4	8	9	10	12	14	15	16	16	15	14	14	13	9	6	6	8	9	9.7	16.2
31-Aug	9	8	8	4	5	6	7	9	11	13	14	14	14	15	15	15	15	16	14	12	12	11	10	10	11.1	15.8
12.7 12.4 12.1 11.5 11.3 11.1 12.0 13.7 15.3 16.9 18.4 19.6 20.7 21.5 21.8 21.8 21.5 20.7 19.2 16.8 14.4 13.4 13.4 12.9																								Diurnal Average		
21.2 20.8 20.6 19.3 18.9 18.6 18.9 19.6 21.6 23.9 24.6 27.3 27.6 28.1 28.6 29.5 29.3 28.8 27.4 24.2 23.0 22.7 22.6 22.0																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Sunset House - August 2012



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	8	6	8	8	8	11	13	13	16	15	15	11	8	7	9	6	9	7	8	10	10	13	14	12	8.4	15.5
Dir	192	199	188	182	180	180	182	187	188	194	193	201	228	288	306	301	285	246	223	185	186	189	191	195	201.8	187.7
2 Spd	11	11	11	11	9	9	8	7	7	6	9	7	7	11	12	10	11	5	4	2	4	7	7	7	4.7	12.0
Dir	191	194	195	203	207	211	207	216	212	244	269	248	274	279	308	317	315	341	354	217	183	141	148	160	230.5	308.4
3 Spd	7	10	11	11	11	12	12	11	12	11	9	7	11	9	8	7	9	10	9	10	13	14	16	16	9.9	15.7
Dir	177	186	188	186	189	189	193	195	203	210	234	260	222	231	242	220	227	220	200	183	175	177	184	189	199.8	189.2
4 Spd	12	12	13	14	14	14	12	10	8	11	10	12	14	15	11	10	12	9	5	8	6	4	7	10	4.0	15.4
Dir	192	191	191	192	194	193	199	210	245	280	283	287	301	296	315	306	341	315	270	48	66	117	75	65	248.4	295.7
5 Spd	10	13	12	11	10	10	11	12	7	6	10	12	12	14	14	14	13	11	12	12	11	12	11	5	10.8	14.3
Dir	64	64	73	77	84	85	74	77	89	108	90	76	77	66	70	63	68	68	58	57	73	63	95	68	73.1	69.9
6 Spd	4	3	6	11	15	15	17	17	15	12	11	9	9	10	7	5	5	6	7	5	2	5	8	3	5.4	16.7
Dir	82	81	149	174	177	180	185	193	192	195	205	206	181	164	169	59	30	353	354	66	97	59	124	106	170.2	185.4
7 Spd	6	7	8	7	4	6	4	3	2	8	10	9	11	11	13	13	10	9	8	9	7	11	12	10	5.3	12.8
Dir	139	162	155	156	202	151	142	263	38	29	61	51	42	50	52	35	47	44	60	83	114	116	122	153	85.4	35.5
8 Spd	8	7	13	15	15	15	15	15	15	14	14	16	15	10	9	6	4	20	5	6	11	9	6	12	10.7	19.9
Dir	170	176	177	189	188	182	185	188	189	194	187	179	175	184	185	184	127	181	129	122	214	257	231	207	186.0	181.4
9 Spd	15	16	11	9	10	9	9	9	12	13	15	17	13	14	14	14	15	11	11	5	3	2	3	5	8.8	16.6
Dir	195	198	210	215	226	229	235	243	266	271	278	286	268	260	259	280	293	286	291	290	152	202	197	197	252.7	286.3
10 Spd	7	8	8	8	6	8	8	8	9	10	9	10	10	9	10	10	10	8	9	6	7	5	4	4	6.3	10.4
Dir	181	193	191	192	196	187	199	196	212	223	249	229	234	267	281	284	286	280	284	274	298	237	227	225	236.4	233.6
11 Spd	5	7	6	3	3	4	4	1	8	7	8	8	11	10	9	8	10	7	7	2	4	4	8	7	2.2	11.4
Dir	351	64	64	79	148	158	161	254	339	294	293	300	298	278	299	290	302	303	302	45	122	120	127	125	309.5	298.2
12 Spd	8	10	11	12	9	10	10	11	11	8	7	6	6	7	0	6	4	11	8	11	12	3	13	11	5.7	12.7
Dir	160	178	180	179	182	182	175	174	181	186	175	167	71	47	132	179	137	40	59	86	102	152	202	216	159.5	201.6
13 Spd	21	18	20	18	19	20	20	18	16	13	11	8	7	6	8	9	9	8	4	6	8	7	12	20	6.8	21.2
Dir	177	183	178	184	189	182	180	188	191	204	208	214	226	254	270	284	289	294	235	22	59	55	13	18	197.7	176.8
14 Spd	14	4	1	2	3	4	10	16	19	19	23	25	22	21	21	16	19	14	11	7	3	3	4	5	10.6	25.1
Dir	38	23	297	293	281	310	355	22	18	4	20	27	16	356	6	3	3	354	353	346	28	110	129	127	10.9	26.6
15 Spd	8	7	7	8	10	10	12	12	11	12	10	10	9	10	9	8	10	9	8	5	6	6	8	8	7.9	11.9
Dir	129	139	159	176	185	183	187	190	207	201	208	198	214	193	213	202	199	190	195	158	126	127	139	146	182.7	200.5
16 Spd	9	9	10	9	13	13	14	14	14	12	12	11	8	9	7	4	8	7	3	4	6	9	10	12	7.9	13.7
Dir	175	185	189	189	190	189	188	194	204	207	205	210	226	234	220	285	290	290	252	129	125	138	177	181	197.8	187.8
17 Spd	14	12	13	12	12	12	11	10	9	7	6	7	4	4	6	3	5	3	7	10	11	12	11	15	7.8	15.4
Dir	180	182	187	181	187	188	188	189	201	210	217	207	185	168	151	189	61	179	159	136	124	121	135	160	171.7	160.3
18 Spd	20	22	21	21	19	18	19	19	17	16	13	13	13	12	10	8	9	8	6	11	19	22	23	20	15.4	23.4
Dir	169	170	169	168	169	172	172	173	182	193	196	197	199	201	200	202	193	200	158	151	160	163	168	173	176.5	167.8
19 Spd	17	18	17	10	11	11	10	10	6	7	5	4	5	6	8	6	8	5	5	5	5	9	7	5	3.3	17.8
Dir	177	173	179	197	181	191	192	184	217	221	257	266	293	358	5	46	47	59	51	84	76	78	72	51	164.3	173.1
20 Spd	3	6	13	12	4	4	7	7	8	7	8	7	6	8	8	6	6	4	6	8	12	10	15	13	5.8	14.9
Dir	97	150	184	190	167	115	157	154	190	211	209	210	263	285	221	271	310	326	139	169	207	188	192	186	195.6	191.9
21 Spd	15	16	16	17	17	14	10	4	5	5	1	5	5	5	5	9	6	2	1	4	9	13	10	8	4.7	16.8
Dir	183	184	172	184	184	187	190	189	27	35	15	218	324	353	355	353	352	176	25	138	179	180	187	181	183.8	183.6
22 Spd	8	7	3	3	3	10	9	8	7	9	7	9	11	13	12	10	8	7	8	10	5	7	9	9	4.1	12.9
Dir	192	187	155	106	169	195	201	205	227	230	242	248	279	280	285	308	241	330	354	24	90	183	194	183	236.2	280.3

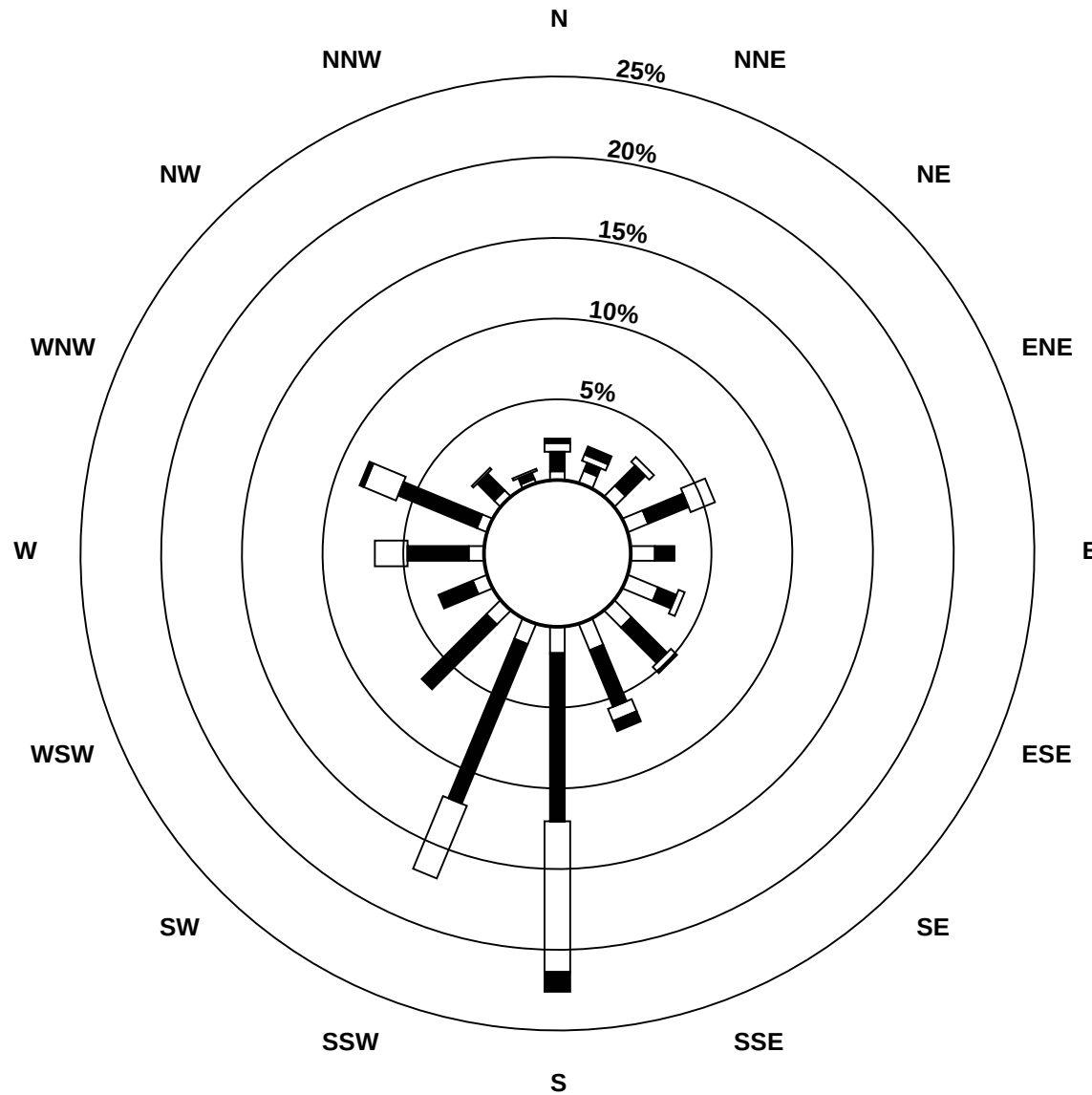
Hourly Averages

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

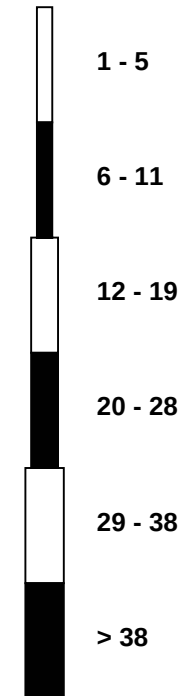
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	10	10	8	11	8	7	8	8	8	11	13	8	9	10	9	8	13	10	10	1	4	3	7	7	7.4	13.3
Dir	186	189	180	191	177	204	206	215	218	204	201	214	231	221	246	258	196	192	300	252	179	190	203	198	208.4	200.7
24 Spd	10	11	10	9	11	11	13	11	10	10	14	14	13	15	15	17	17	15	13	10	6	8	7	7	9.0	17.4
Dir	196	196	193	199	195	197	193	203	220	260	277	288	284	280	282	280	287	283	286	278	245	224	229	263	250.0	287.2
25 Spd	8	8	7	7	8	6	8	10	8	8	7	8	8	8	8	7	8	7	6	6	9	9	8	8	4.9	9.7
Dir	266	262	274	266	283	266	278	287	282	279	263	251	276	295	306	295	274	272	226	175	136	135	141	156	260.6	287.2
26 Spd	11	10	9	9	12	12	11	10	12	13	12	11	11	12	10	14	10	12	9	12	16	17	20	23	11.8	23.0
Dir	179	173	175	182	178	176	163	164	178	188	176	176	165	160	180	154	160	149	140	133	141	134	141	149	161.0	149.2
27 Spd	20	16	7	1	3	3	3	5	13	15	10	10	11	12	9	6	5	2	2	3	4	4	1	7	5.6	19.8
Dir	151	155	186	188	73	108	160	192	183	188	197	207	196	193	219	226	236	228	128	119	106	125	111	36	177.6	151.5
28 Spd	6	4	4	6	6	6	6	12	11	10	8	9	5	4	5	4	4	4	2	6	5	3	3	3	3.3	11.9
Dir	23	84	121	124	129	151	172	189	189	203	219	197	205	221	313	280	261	155	87	134	117	123	268	142	174.6	188.7
29 Spd	5	6	9	10	10	10	12	10	9	13	19	18	17	18	19	21	20	17	13	5	4	5	7	8	9.1	20.8
Dir	192	195	198	197	193	199	193	209	242	271	283	281	278	288	281	293	289	283	283	249	225	209	186	199	255.4	293.1
30 Spd	7	8	5	5	4	3	2	4	6	9	9	9	8	9	10	8	7	8	5	3	4	6	8	7	2.8	10.0
Dir	211	205	209	206	181	153	190	238	266	291	289	286	283	301	302	309	313	304	342	55	77	66	42	63	288.4	302.4
31 Spd	5	6	0	4	5	1	4	8	7	7	1	7	1	6	9	10	5	3	7	9	9	6	8	8	4.4	10.0
Dir	86	99	64	105	109	72	84	105	163	198	164	64	43	186	184	179	163	101	94	112	114	116	150	158	130.6	179.3
Spd	7.1	7.9	8.2	8.1	8.0	8.4	8.1	7.6	6.9	6.6	5.6	4.9	4.5	4.6	4.5	4.1	3.8	2.7	1.2	2.8	4.8	5.5	6.2	5.9	Diurnal Average	
Dir	171.4	175.0	179.0	182.4	183.5	184.1	185.3	190.8	204.1	220.6	231.0	233.7	250.8	262.7	274.8	287.2	293.6	278.5	300.6	118.5	140.1	146.8	159.3	164.3	Diurnal Maximum	
Spd	21.2	21.8	21.0	20.5	18.9	19.9	20.2	19.0	18.6	19.4	23.4	25.1	22.3	20.5	21.2	20.8	20.4	19.9	13.2	12.2	18.6	21.7	23.4	23.0	Diurnal Maximum	
Dir	176.8	170.1	169.2	167.8	169.3	181.9	180.2	173.4	17.8	3.6	20.1	26.6	16.0	356.5	6.4	293.1	288.5	181.4	282.6	133.1	160.1	162.6	167.8	149.2		
Maximum Speed Value: 25 km/h on Aug 14 12:00																									Hours in Service: 744	
Maximum Daily Speed Average: 15.4 km/h on Aug 18																									Hours of Data: 744	
Maximum Diurnal Speed Average: 8.4 km/h at hour 6																									Hours of Missing Data: 0	
Minimum Speed Value: 0 km/h on Aug 31 03:00																									Percent Operational Time: 100.0	
Minimum Daily Speed Average: 2.2 km/h on Aug 28																										
Minimum Diurnal Speed Average: 1.2 km/h at hour 19																										
Monthly Average Velocity: 4.33 km/h 196.24 deg																										
Speed Percentiles: P ₁ = 1.3 P ₁₀ = 4.2 Q ₁ = 6.5 Median = 8.8 Q ₃ = 11.7 P ₉₀ = 15.3 P ₉₉ = 21.6																										
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	5		13		8		6		0		0		32													
NorthEast	11		34		10		1		0		0		56													
East	21		20		11		0		0		0		52													
SouthEast	23		43		11		3		0		0		80													
South	24		127		111		14		0		0		276													
SouthWest	12		85		10		0		0		0		107													
West	12		56		30		2		0		0		100													
NorthWest	6		28		6		1		0		0		41													
Total	114		406		197		27		0		0		744													

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Sunset House - August 2012

Maximum Speed: 25 km/h on Aug 14 12:00																				Maximum Daily Speed Average: 16.0 km/h on Aug 18										Hours in Service: 744	
Minimum Speed: 2 km/h on Aug 14 03:00																				Minimum Daily Speed Average: 6.7 km/h on Aug 31										Hours of Data: 744	
Maximum Diurnal Speed Average: 11.1 km/h at hour 14																				Minimum Diurnal Speed Average: 7.5 km/h at hour 20										Hours of Missing Data: 0	
Monthly Average Speed: 9.88 km/h																				Percentiles: P ₁ = 2.9 P ₁₀ = 4.9 Q ₁ = 7.1 Median = 9.4 Q ₃ = 11.9 P ₉₀ = 15.5 P ₉₉ = 21.9										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-Aug	8	6	8	8	8	11	13	13	16	15	15	11	9	8	9	7	9	8	8	10	11	14	14	12	10.4	15.7					
2-Aug	11	11	11	11	9	9	8	8	8	7	9	8	8	12	12	10	12	5	5	3	5	7	7	7	8.4	12.4					
3-Aug	7	10	11	11	11	12	12	12	12	12	9	8	11	9	8	7	9	10	9	11	13	15	16	16	10.8	15.9					
4-Aug	12	12	13	14	14	14	12	10	9	11	11	13	14	16	12	11	13	10	5	8	8	5	7	10	11.0	15.8					
5-Aug	10	13	12	11	10	10	11	12	7	7	11	13	12	14	15	15	13	12	12	12	11	13	11	6	11.3	14.8					
6-Aug	5	4	6	11	15	16	17	17	15	13	11	10	10	10	8	7	7	7	8	5	3	6	8	3	9.2	16.8					
7-Aug	6	7	8	7	5	7	5	3	3	8	10	9	11	11	13	13	11	9	8	9	7	11	12	10	8.6	13.2					
8-Aug	9	9	13	15	15	15	16	15	15	15	15	17	15	11	11	7	5	22	9	6	11	10	7	12	12.3	21.7					
9-Aug	16	16	11	9	10	10	9	10	13	14	16	17	14	15	15	15	12	12	12	6	4	3	4	5	11.2	16.9					
10-Aug	7	8	8	8	7	8	8	8	9	10	9	11	11	10	11	11	11	9	10	7	8	5	5	5	8.5	11.3					
11-Aug	8	8	7	3	3	4	4	3	8	7	9	9	12	11	10	9	10	8	7	4	4	4	8	7	7.0	11.9					
12-Aug	8	10	11	12	9	10	10	11	11	8	8	8	8	9	7	8	7	11	8	12	12	7	13	11	9.6	12.7					
13-Aug	22	19	20	18	19	20	20	18	16	13	12	9	8	7	9	10	10	9	4	7	8	7	13	20	13.2	21.8					
14-Aug	14	5	2	2	4	5	10	16	19	20	24	25	23	21	22	16	19	14	11	7	4	3	4	5	12.3	25.3					
15-Aug	8	8	7	8	10	10	12	12	11	12	11	11	9	11	10	9	11	10	8	6	6	6	8	8	9.1	12.3					
16-Aug	9	9	10	9	13	13	14	14	14	12	13	11	9	10	9	6	8	7	4	4	6	9	10	12	9.9	13.8					
17-Aug	14	12	13	13	12	12	11	11	9	7	7	7	5	6	8	5	6	5	8	10	11	12	11	16	9.6	15.6					
18-Aug	20	22	21	21	19	19	19	19	17	16	14	14	13	13	10	9	9	8	7	11	19	22	23	20	16.0	23.5					
19-Aug	18	18	18	10	11	11	10	11	7	7	5	5	6	8	9	7	8	5	5	5	5	9	8	5	8.7	17.9					
20-Aug	4	7	13	12	5	5	7	7	8	7	8	8	8	9	9	7	8	6	6	8	13	11	15	13	8.5	15.1					
21-Aug	15	16	16	17	17	14	10	4	6	7	4	6	7	7	7	10	7	3	5	5	9	14	10	8	9.3	16.9					
22-Aug	8	8	5	4	5	10	9	8	8	10	8	10	12	14	13	11	10	11	8	12	6	7	9	9	9.0	13.6					
23-Aug	10	10	8	11	8	7	8	8	9	11	14	8	10	11	10	9	14	10	11	5	4	4	7	7	8.9	13.6					
24-Aug	10	11	10	10	11	11	13	12	11	11	14	15	14	16	16	18	18	16	13	10	7	8	7	7	12.0	17.8					
25-Aug	8	8	8	7	8	7	8	10	8	8	7	9	9	9	9	8	9	8	6	6	9	9	8	8	8.1	9.9					
26-Aug	11	11	9	9	12	12	11	10	12	13	13	12	12	13	12	15	11	12	9	12	16	17	20	23	12.7	23.1					
27-Aug	20	16	8	3	4	4	4	5	13	15	10	11	12	12	10	8	6	4	2	4	4	4	6	7	8.0	19.9					
28-Aug	6	4	4	7	6	7	7	12	11	10	9	9	7	7	8	5	5	6	5	7	7	4	5	4	6.7	12.0					
29-Aug	6	6	10	10	10	10	12	10	10	14	20	18	17	19	19	21	21	17	13	6	4	6	7	8	12.3	21.2					
30-Aug	7	8	5	5	4	3	3	4	7	10	10	10	9	10	11	9	8	8	6	4	5	6	8	7	7.0	10.8					
31-Aug	6	6	3	5	5	4	5	8	8	8	5	7	5	7	10	11	6	4	8	9	9	6	8	8	6.7	10.6					
10.4 10.3 9.9 9.6 9.7 9.9 10.2 10.4 10.6 10.9 11.0 10.9 10.7 11.1 11.0 10.1 10.1 9.2 7.8 7.5 8.0 8.5 9.7 9.7																									Diurnal Average						
21.8 21.9 21.1 20.6 19.0 20.0 20.3 19.1 18.8 19.5 23.6 25.3 22.7 20.9 22.0 21.2 20.8 21.7 13.5 12.2 18.6 21.8 23.5 23.1																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

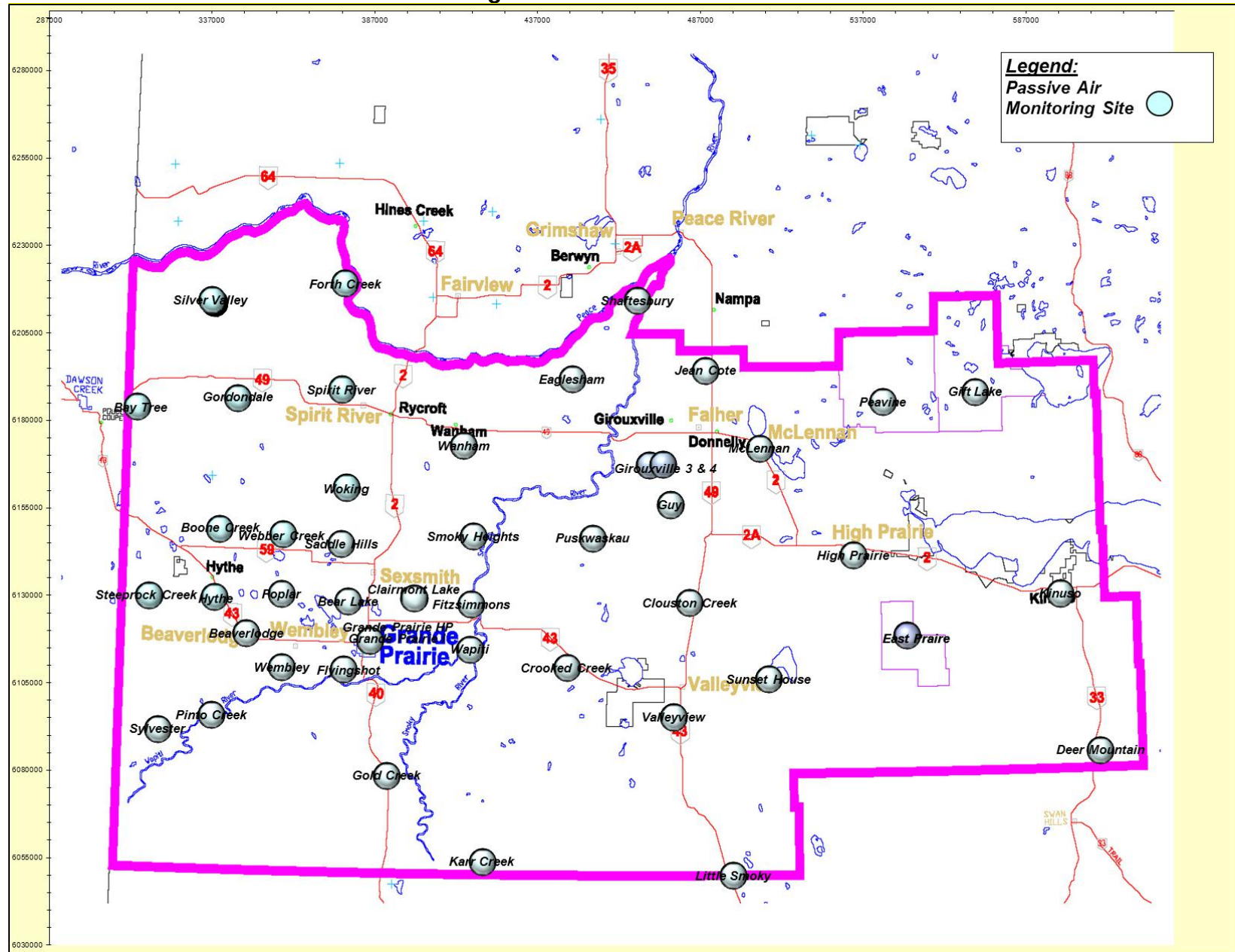
Wind Direction (WD) - deg
Sunset House - August 2012

Maximum Value: 91.1 deg on Aug 31 06:00																			Hours in Service: 744						
Minimum Value: 3.1 deg on Aug 15 01:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 3.6 P ₁₀ = 5.5 Q ₁ = 8.6 Median = 15.6 Q ₃ = 26.1 P ₉₀ = 41.2 P ₉₉ = 87.4																			Hours of Calibration: 0						
																			Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Aug	7	21	11	13	14	5	4	8	8	9	15	18	35	27	11	14	14	23	16	14	7	5	6	6	35.4
2-Aug	10	11	7	6	9	11	13	14	13	29	25	32	28	29	16	19	13	26	19	49	18	9	7	12	48.6
3-Aug	10	6	4	5	5	4	7	10	15	14	21	26	18	15	21	18	19	15	10	6	4	5	5	9	26.3
4-Aug	8	6	6	8	7	6	14	15	26	19	22	17	13	14	20	26	21	20	29	64	47	36	11	7	64.0
5-Aug	14	10	7	6	6	8	10	7	26	29	20	14	20	12	16	13	15	12	7	7	8	13	21	36	36.3
6-Aug	40	35	23	4	4	5	6	6	10	14	19	23	23	18	46	50	42	45	18	24	25	28	7	26	50.2
7-Aug	15	15	10	9	38	32	34	52	73	27	17	23	16	17	13	15	14	8	5	15	19	5	5	12	72.7
8-Aug	41	39	6	5	6	5	5	7	9	13	16	16	18	25	29	19	34	27	69	29	19	23	24	8	69.0
9-Aug	9	7	10	15	15	13	17	27	18	18	16	13	25	20	20	16	13	13	12	30	59	47	35	14	59.3
10-Aug	11	9	10	10	10	8	7	10	12	16	23	19	23	27	20	27	20	20	15	25	39	25	34	30	38.6
11-Aug	68	11	13	23	20	24	26	65	24	30	23	34	19	28	33	21	21	36	15	61	8	15	5	7	68.4
12-Aug	15	5	10	4	6	4	4	4	9	18	31	42	40	40	91	56	61	12	8	11	10	68	5	21	90.8
13-Aug	17	15	5	6	8	6	5	6	10	10	15	12	28	30	26	25	17	26	23	71	14	26	20	7	71.2
14-Aug	9	49	63	53	27	24	15	6	8	7	9	7	11	10	16	14	8	10	7	8	30	18	11	14	63.3
15-Aug	3	6	7	13	9	4	4	8	12	15	21	23	26	29	30	28	25	15	8	29	8	7	11	10	30.2
16-Aug	7	6	4	6	4	3	4	6	7	12	13	15	26	31	34	54	21	25	53	8	4	12	4	5	53.7
17-Aug	5	6	6	7	3	4	5	6	14	20	22	20	52	69	49	72	41	66	14	6	6	3	10	7	72.2
18-Aug	6	5	5	5	5	5	5	5	8	7	14	12	14	13	16	19	17	12	28	6	4	5	5	5	27.9
19-Aug	5	6	7	23	4	6	9	14	22	14	28	35	45	42	27	42	16	14	18	19	9	14	37	20	44.9
20-Aug	66	21	5	10	42	26	22	15	12	19	21	23	43	27	34	33	39	59	7	19	8	10	10	9	66.4
21-Aug	5	5	4	5	6	9	6	50	24	44	89	48	55	60	60	23	21	61	91	39	18	13	13	13	90.5
22-Aug	17	29	47	53	66	8	8	15	20	18	31	34	19	18	19	21	41	58	19	32	34	30	13	6	65.6
23-Aug	7	8	14	8	5	15	12	17	20	9	10	22	22	16	31	28	14	16	14	74	26	24	22	11	74.3
24-Aug	8	6	9	11	8	10	6	9	17	26	17	13	21	19	16	17	13	13	13	21	28	12	17	24	28.0
25-Aug	28	18	19	21	17	32	16	15	15	18	21	26	32	19	21	31	27	24	30	16	3	5	4	14	31.9
26-Aug	4	4	8	5	4	4	5	6	11	13	17	25	22	18	43	26	26	16	13	7	5	4	6	4	42.9
27-Aug	4	4	41	62	33	36	41	12	9	8	15	18	19	14	21	35	31	66	15	27	24	11	87	19	86.6
28-Aug	18	34	23	22	11	21	32	9	11	16	21	20	49	70	62	39	49	62	60	26	48	43	70	69	70.2
29-Aug	37	16	9	10	11	7	8	11	24	22	13	12	14	14	15	11	11	13	12	32	36	28	7	18	36.5
30-Aug	17	16	19	22	29	25	59	21	30	27	30	27	35	26	24	32	19	15	49	32	17	14	14	15	59.4
31-Aug	15	20	90	36	20	91	48	12	27	32	88	24	88	32	31	20	46	49	14	8	9	12	20	9	91.1
68.4 48.7 90.0 61.9 65.6 91.1 59.4 65.5 72.7 43.7 89.0 47.9 87.8 69.5 90.8 72.2 60.9 65.8 90.5 74.3 59.3 68.1 86.6 68.6																									

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for August 2012

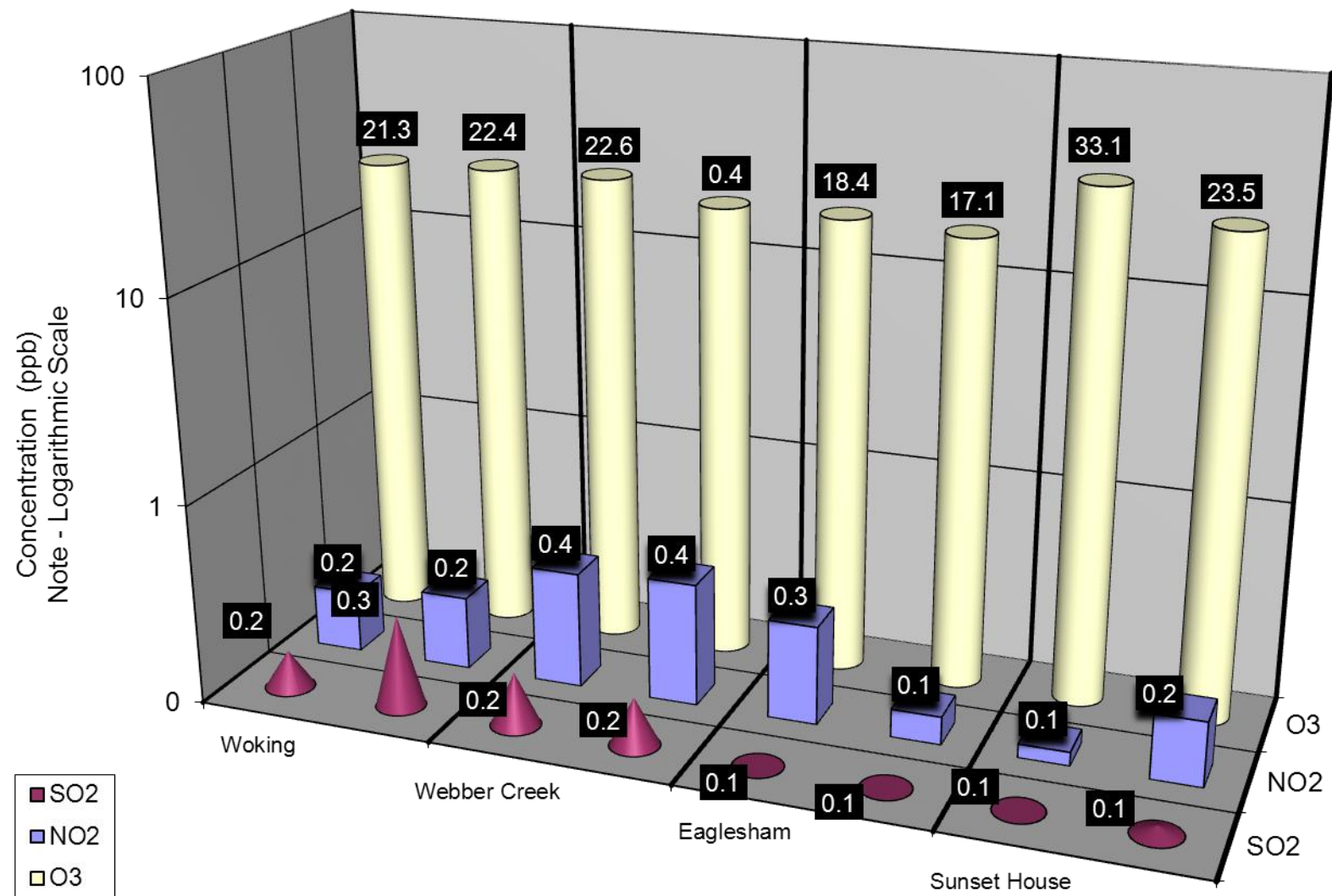
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
10a	Woking	0.2	21.3	0.2		
10b	Woking	0.3	22.4	0.2		
11a	Webber Creek	0.2	22.6	0.4		
11b	Webber Creek	0.2	18.4	0.4		
21a	Eaglesham	0.1	18.4	0.3		
21b	Eaglesham	0.1	17.1	0.1		
42a	Sunset House	0.1	33.1	0.1		
42b	Sunset House	0.1	23.5	0.2		
64a	Girouxville 4				0.0	
64b	Girouxville 4				0.0	
1	Silver Valley	0.2	22.9	0.3		08-27-081-11 W6M
2	Bay Tree	0.1	24.8	0.3		13-16-078-13 W6M
3	Fourth Creek	0.1	23.6	0.1		04-13-082-07 W6M
4	Gordondale	0.2	27.3	0.4		04-34-078-10 W6M
5	Boone Creek	0.1	21.1	0.2		16-36-074-11 W6M
7	Steeprock Creek	BDL	24.5	0.3		09-35-072-13 W6M
9	Spirit River	0.2	24.3	0.5		08-12-079-07 W6M
10	Woking	0.2	21.9	0.2		01-13-076-07 W6M
11	Webber Creek	0.2	20.5	0.4		09-36-074-09 W6M
12	Hythe	0.1	25.5	0.6		14-36-072-11 W6M
14	Sylvester	BDL	16.8	0.3		08-06-069-12 W6M
16	Beaverlodge	0.1	27.0	0.5		15-36-071-10 W6M
17	Poplar	BDL	20.5	0.4		13-06-073-08 W6M
18	Saddle Hills	0.3	20.4	0.4		04-25-074-07 W6M
19	Wanham	0.1	28.0	0.3		16-22-077-03 W6M
20	Shaftesbury	0.1	22.9	0.1		04-03-082-23 W5M
21	Eaglesham	0.1	17.7	0.2		16-21-079-25 W5M
23	Bear Lake	0.1	23.8	0.5		15-31-072-06 W6M

PAZA Passive Results for August 2012 (Continued)

24	Wembley	BDL	20.4	0.5	12-31-070-08 W6M
25	Pinto Creek	BDL	19.7	0.3	04-24-069-11 W6M
26	Flyingshot	0.1	20.3	0.3	15-36-070-07 W6M
27	Grande Prairie I	0.1	23.2	1.2	08-15-071-06 W6M
28	Clairmont Lake	0.2	26.8	0.4	09-06-073-04 W6M
29	Smoky Heights	0.2	30.9	0.4	04-06-075-02 W6M
30	Fitzsimmons	0.1	19.8	0.4	15-36-072-03 W6M
32	Gold Creek	0.2	15.7	0.5	06-33-067-05 W6M
33	Wapiti	0.1	21.1	0.6	02-25-071-03 W6M
34	Puskwaskau	BDL	15.6	0.2	15-35-074-25 W5M
35	Jean Cote	0.5	19.3	0.3	12-35-079-21 W5M
36	Guy	0.1	23.5	0.4	03-04-076-22 W5M
37	Crooked Creek	0.1	24.9	0.4	16-01-071-26 W5M
38	Karr Creek	BDL	13.9	BDL	10-16-065-02 W6M
39	Clouston Creek	0.1	19.2	0.2	12-01-073-22 W5M
40	McLennan	0.2	19.3	0.2	03-29-077-19 W5M
41	Valleyview	0.1	24.2	0.1	09-30-069-22 W5M
42	Sunset House	0.1	28.3	0.2	05-32-070-19 W5M
43	High Prairie	0.1	21.3	0.2	16-13-074-17 W5M
44	Peavine	0.1	15.4	BDL	03-05-079-15 W5M
45	Gift Lake	0.1	21.2	0.1	0.0 10-07-079-12 W5M
46	Little Smoky	0.1	16.1	1.1	12-01-065-21 W5M
47	Kinuso	0.1	17.5	BDL	12-10-073-10 W5M
48	Deer Mountain	BDL	20.9	0.3	15-22-068-09 W5M
49	Grande Prairie HP	0.1	24.9	1.5	17-26-071-06 W6M
62	East Prairie	BDL	18.3	0.4	13-02-072-15 W5M
63	Girouxville 3			0.0	14-02-077-23 W5M
64	Girouxville 4			0.0	4-08-077-22 W5M

*BDL = Below Detection Level

*NS - No sample



Duplicate Summary Chart

Passive Summary for August 2012

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

Passive Summary for August 2012 (PAZA Zone)				
Mean	0.1	21.7	0.4	0.0
Standard Deviation	0.1	3.9	0.3	0.0
Minimum	0.1	13.9	0.1	0.0
Minimum At	Eaglesham (#21a)	Karr Creek (#38)	Shaftesbury (#20)	Gift Lake (#45)
Maximum	0.5	30.9	1.5	0.0
Maximum At	Jean Cote (#35)	Smoky Heights (#29)	Grande Prairie HP	Girouxville 4

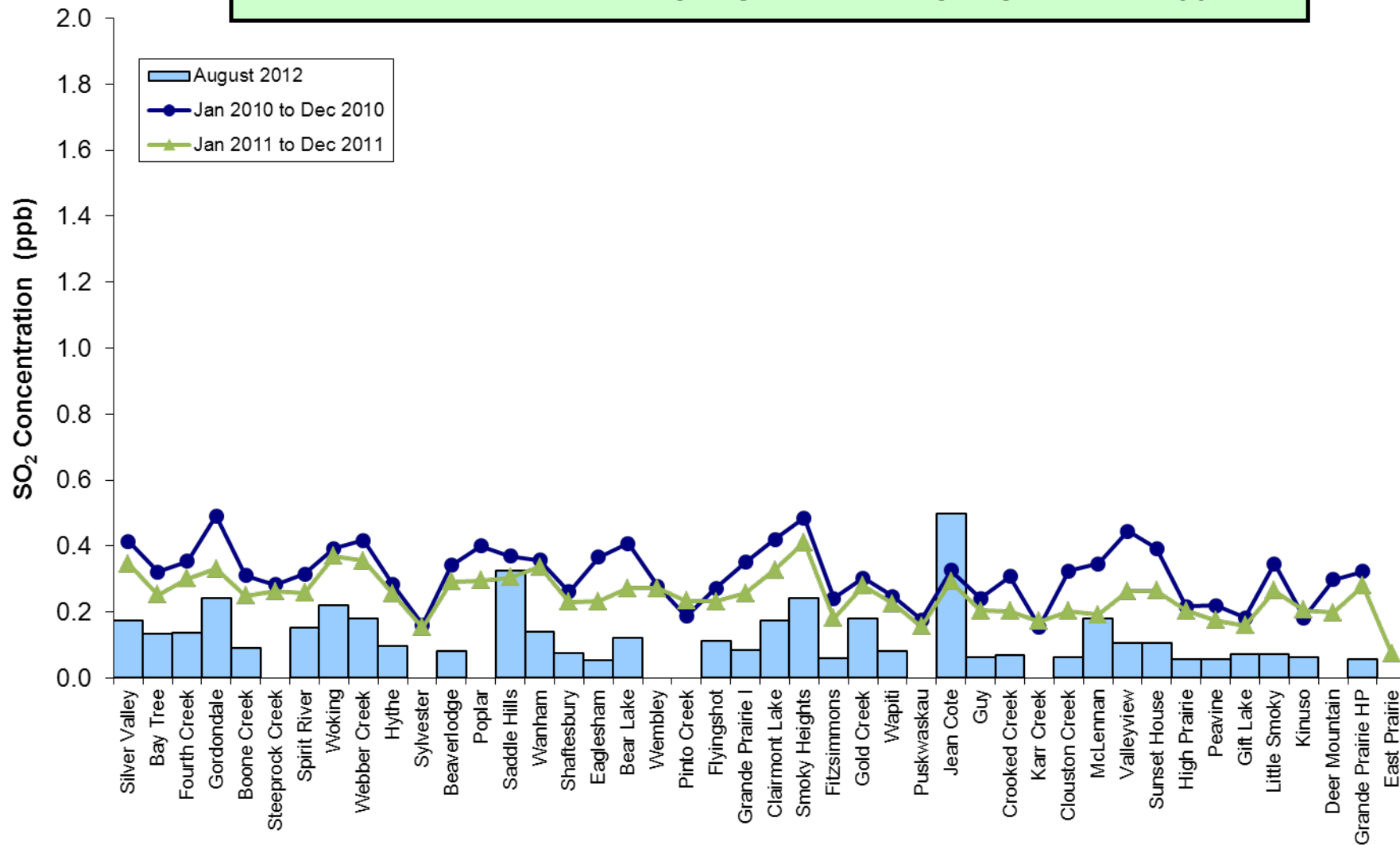
Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

	SO ₂	O ₃	NO ₂
PAZA Beaverlodge station	0.2	31.0	2.2
PAZA Beaverlodge passive	0.1	27.0	0.5

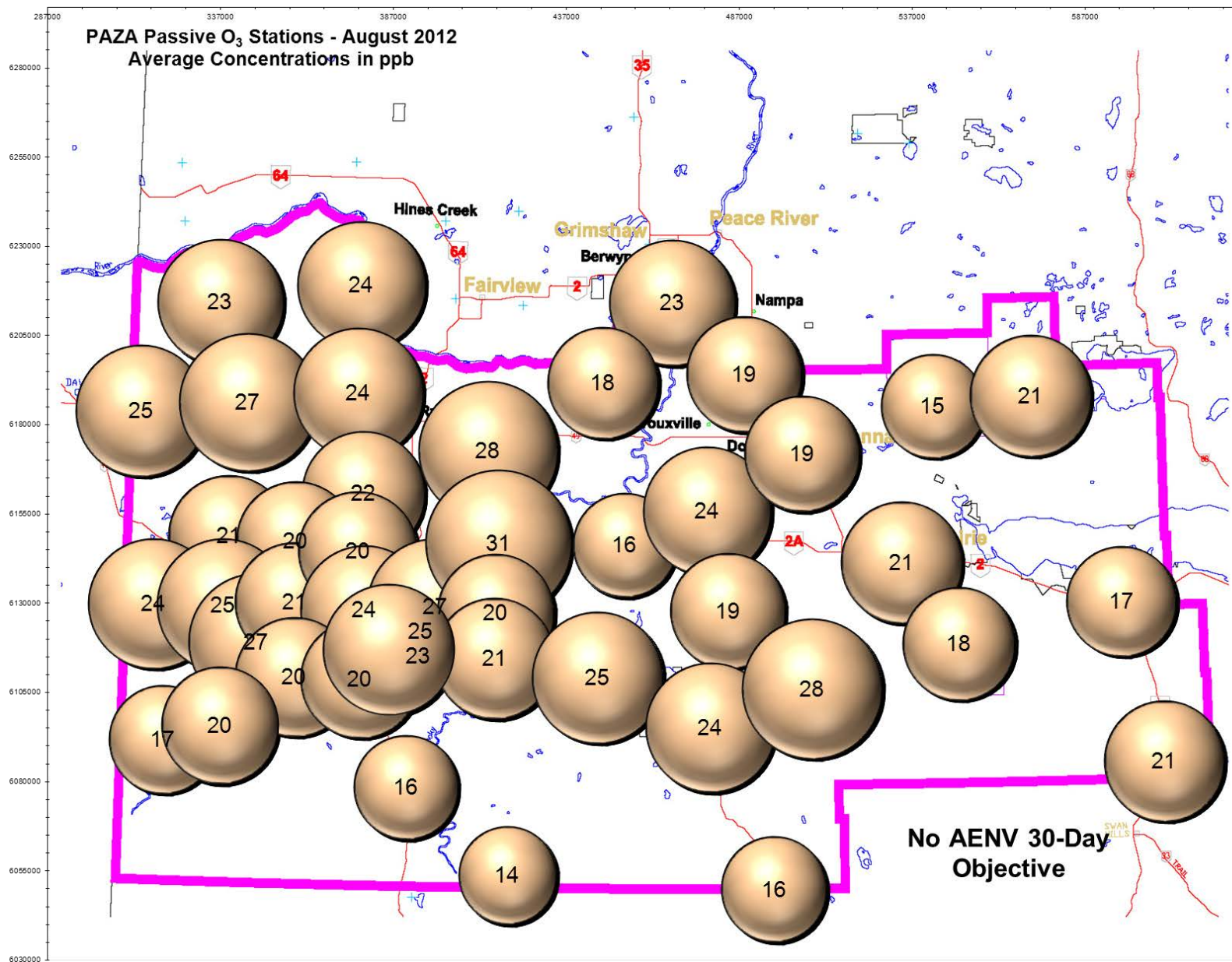
Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO ₂	O ₃	NO ₂
PAZA Henry Pirker station	0.1	22.5	3.7
PAZA Grande Prairie passive	0.1	24.9	1.5

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

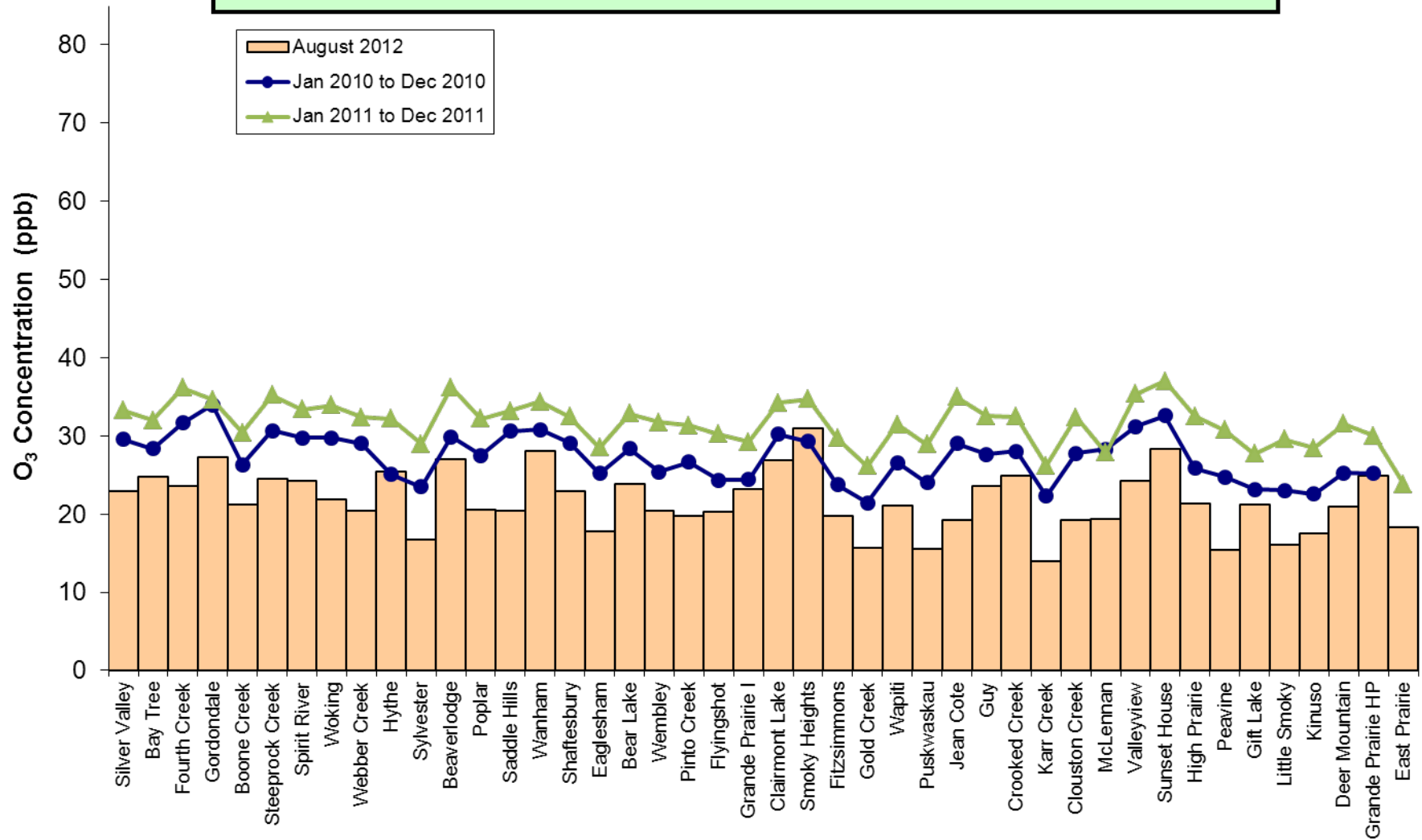


SO₂ Summary Chart

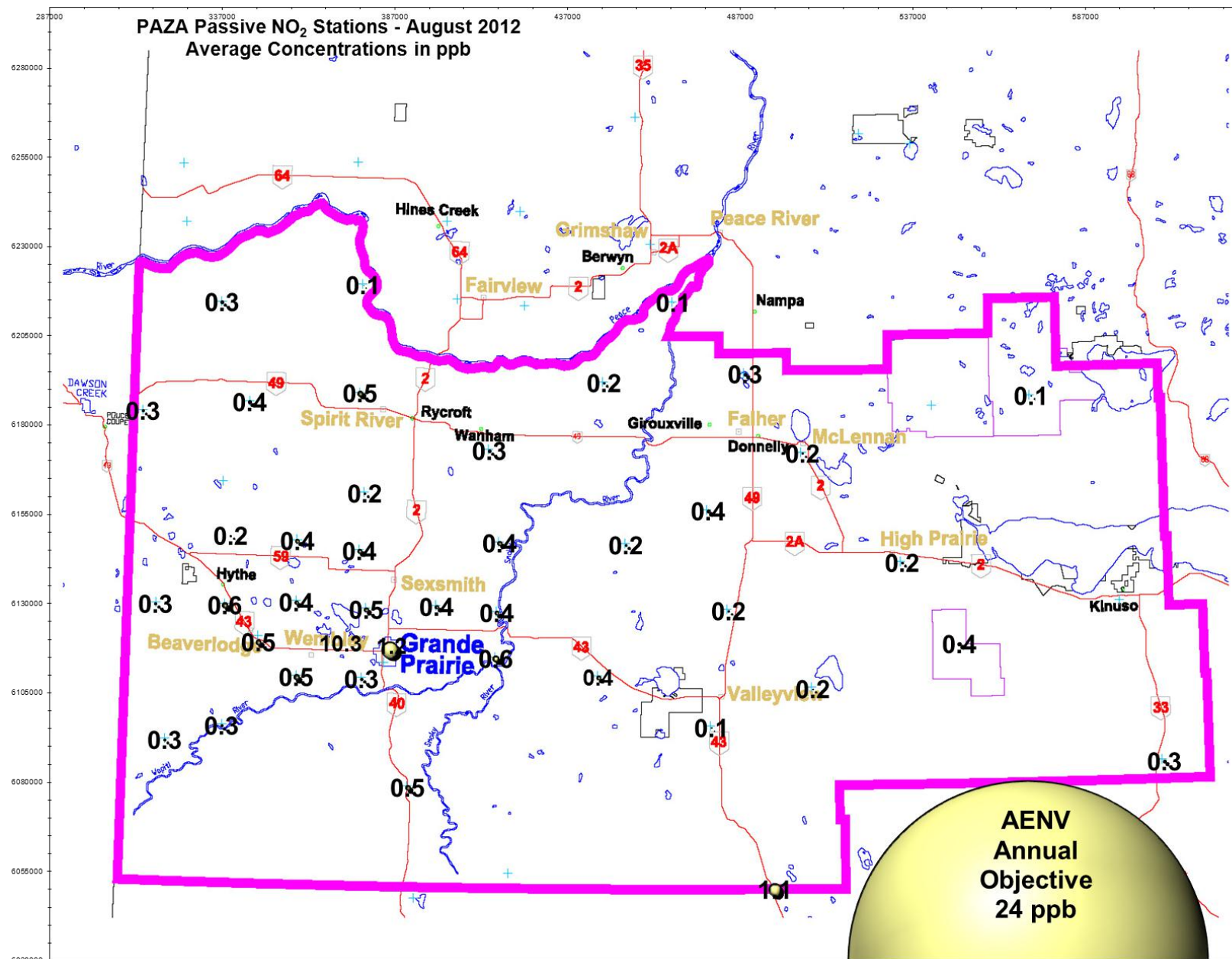


O₃ Bubble Chart

Alberta Ambient Air Quality Objective - No Annual O₃ Objective

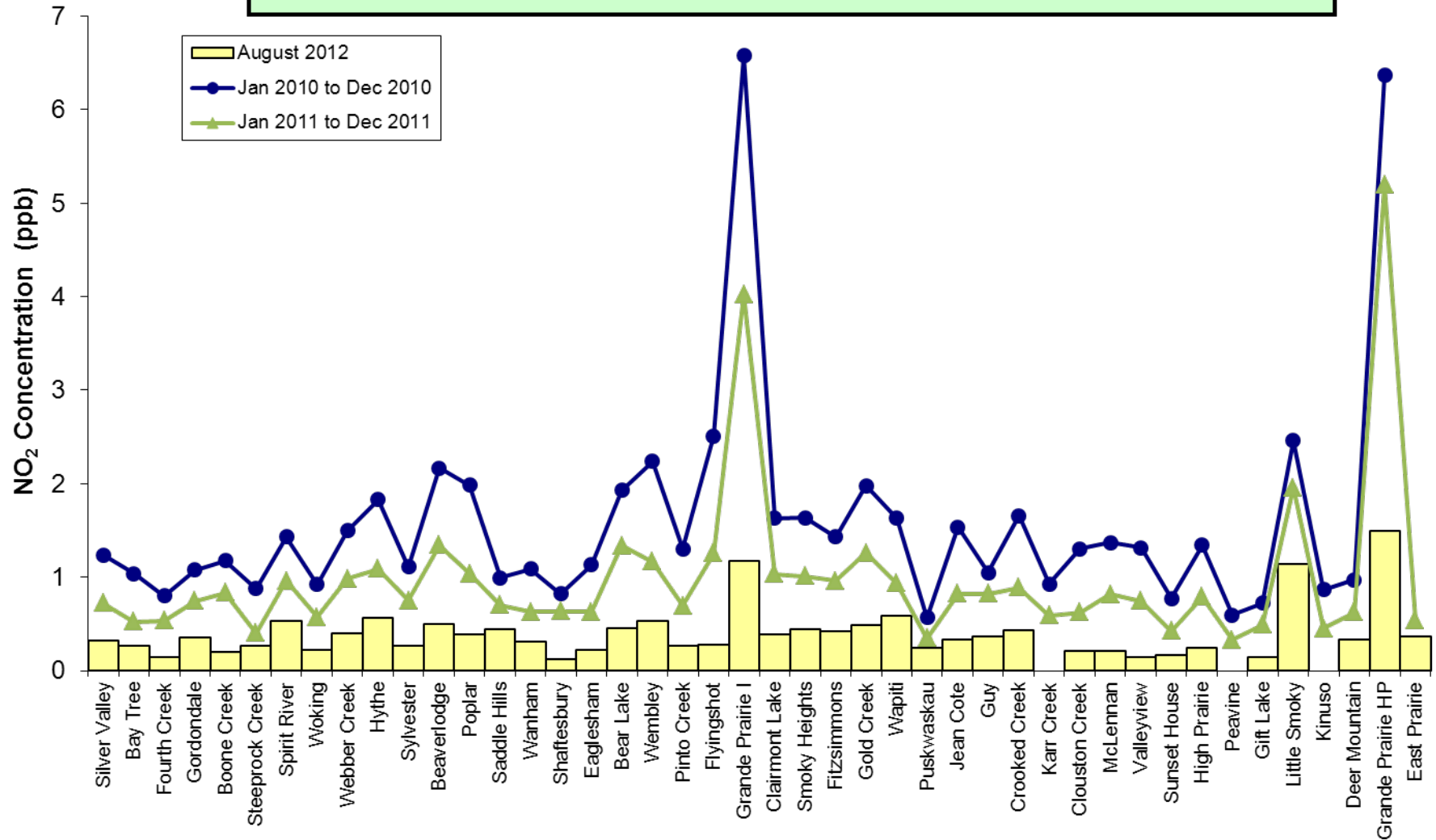


O₃ Summary Chart

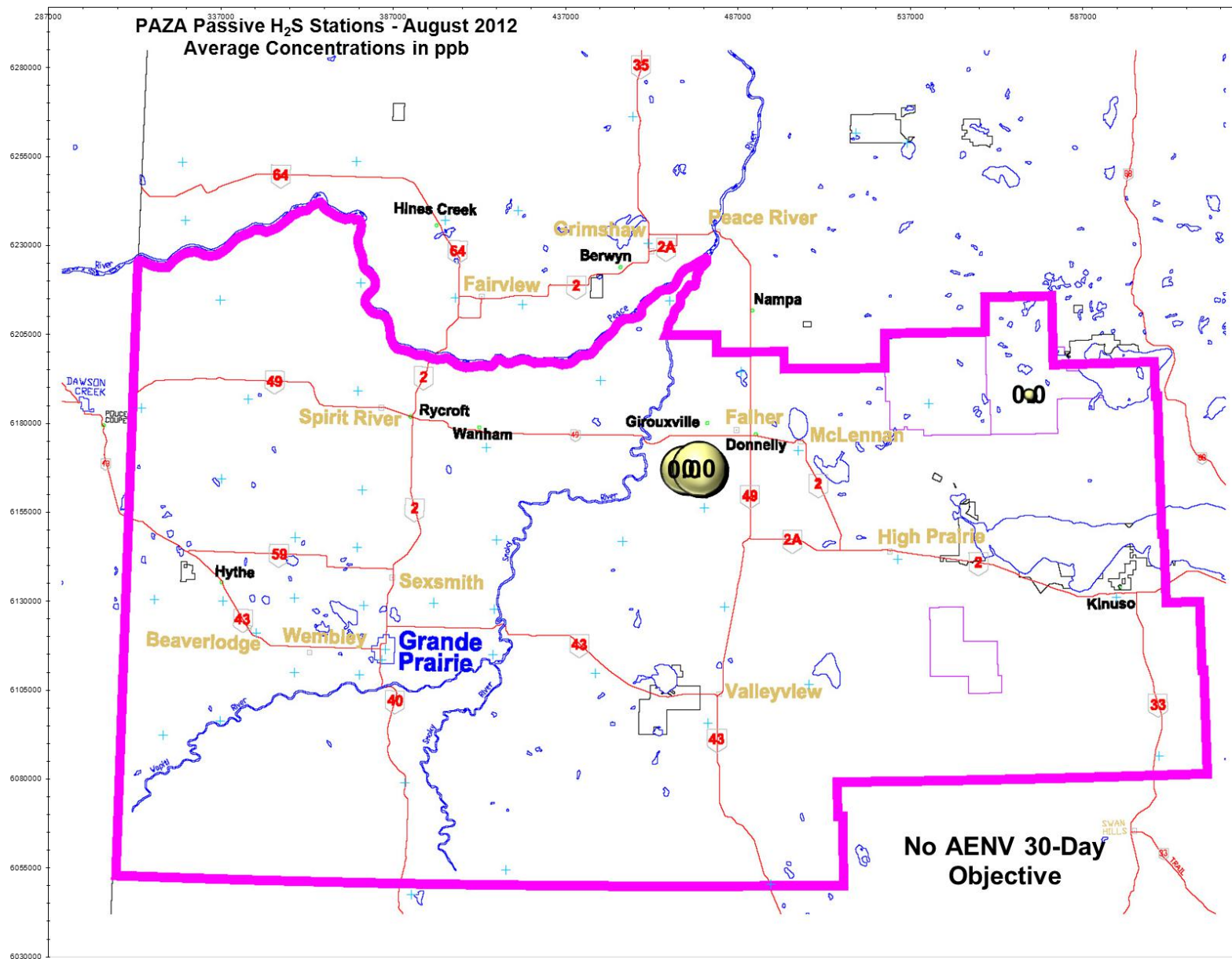


NO₂ Bubble Chart

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



NO₂ Summary Chart



H₂S Bubble Chart

PAZA

ALBERTA ENVIRONMENT AND SUSTAINABLE RESOURCES INCIDENT REPORT

August 2012

Air Monitoring Directive Notification Report

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

Reference Number:	261997	Reported To (AENV Contact):	Christie
Date & Time Incident Reported to AENV:	Aug 11, 2012 21:45MST	Reported By:	Tosh Hayashi
Reported on Behalf of:	PAZA	Approval Number (if applicable):	Not Applicable
Location(s) of Incident:	Smoky Heights		
Start Date & Time of Incident:	Aug 11, 2012 20:00MST	End Date & Time of Incident:	Aug 11, 2012 21:00MST
Reason or Nature of Incident:			
20:00 – 21:00 MST PM 2.5 100.7 µg/m ³ 2.3 km/hr 299.3 deg			
Immediate Actions Taken:			
Reviewed and confirmed validity of data, called exceedence to AESRD			
Investigation Details:			
A review of the data shows no evidence of false readings.			
Actions Taken to Prevent Reoccurrence (if any):			
NA			
Additional Actions Required (if any):			
NA			
Report Completed By:	Tosh Hayashi	Date Report Submitted:	Aug 17, 2012
7-Day Letter Due Date:	Aug 18, 2012		

August 2012 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, PM_{2.5}

PAZA – Beaverlodge Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃, PM_{2.5}

PAZA – Valleyview Station with the following calibrations:

SO₂ & H₂S

PAZA – Sunset House Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃, TRS

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	August 7, 2012	Previous Calibration	July 22, 2012
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	7:15	End Time (MST)	10:45
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Conc	50.8 ppm	Cal Gas Cert Date	March 12, 2014
		Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.998838	Calculated slope	0.999712
Calculated intercept	0.485427	Calculated intercept	0.247861
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	8.9		9.0	
Coefficient	0.776		0.790	
Pressure	641.6	mm Hg	642.1	mm Hg
Flow	0.503	lpm	0.504	lpm
Lamp Voltage	44068	Hz	44108	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4989	0.00	0.0	0.1	N/A
4989	39.87	402.8	402.6	1.0003
4989	19.91	201.9	202.0	0.9998
4989	9.94	101.0	100.2	1.0077
4989	0.00	0.0	0.1	As Found Zero
4989	39.84	402.5	394.3	As Found Span
Average Correction Factor				1.0026

Calculated value of As Found Response: 394.3 ppb Percent Change of As Found: 2.0%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	235.4	ppb	241.5	ppb

Notes: Slight span adjust

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



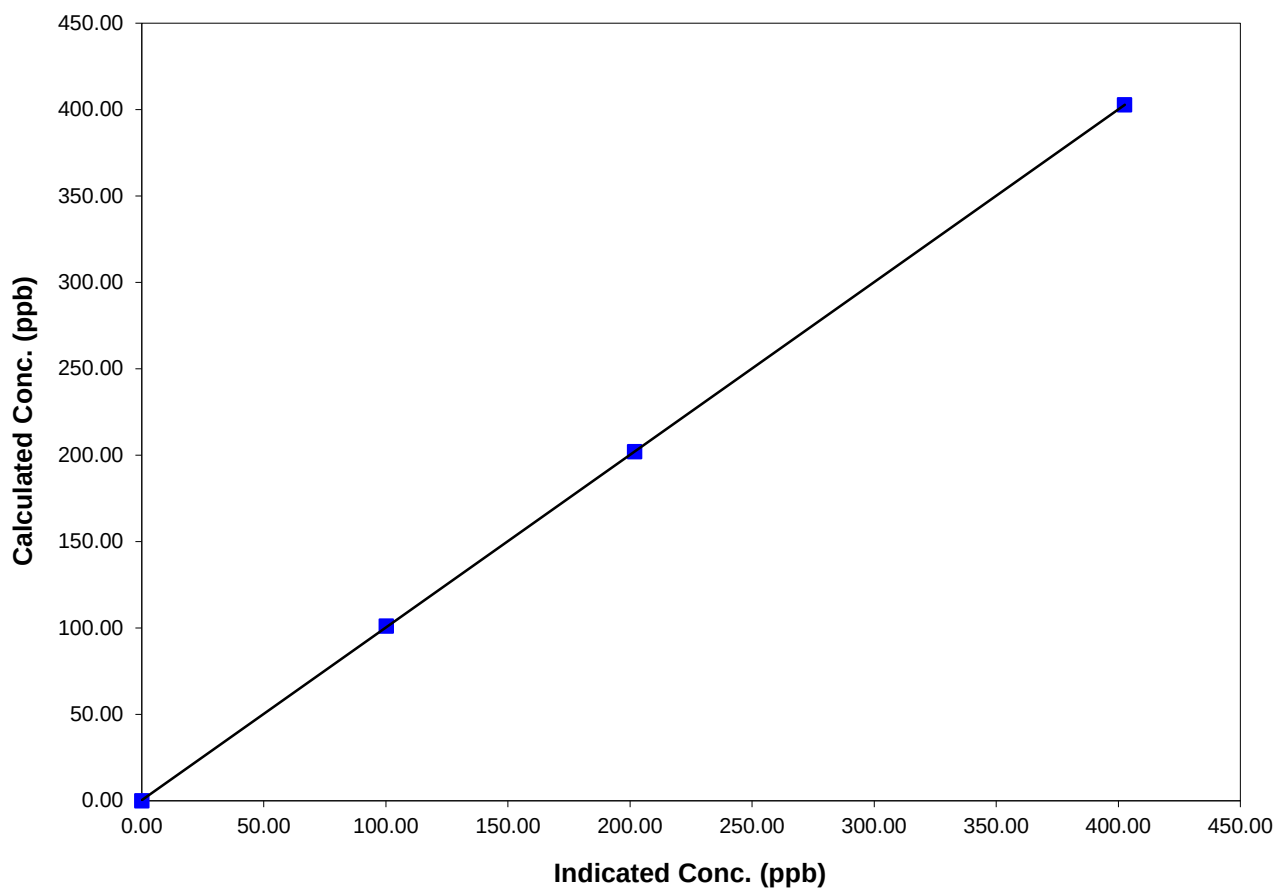
Station Information

Calibration Date	August 7, 2012	Previous Calibration	July 22, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:15	End Time (MST)	10:45
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

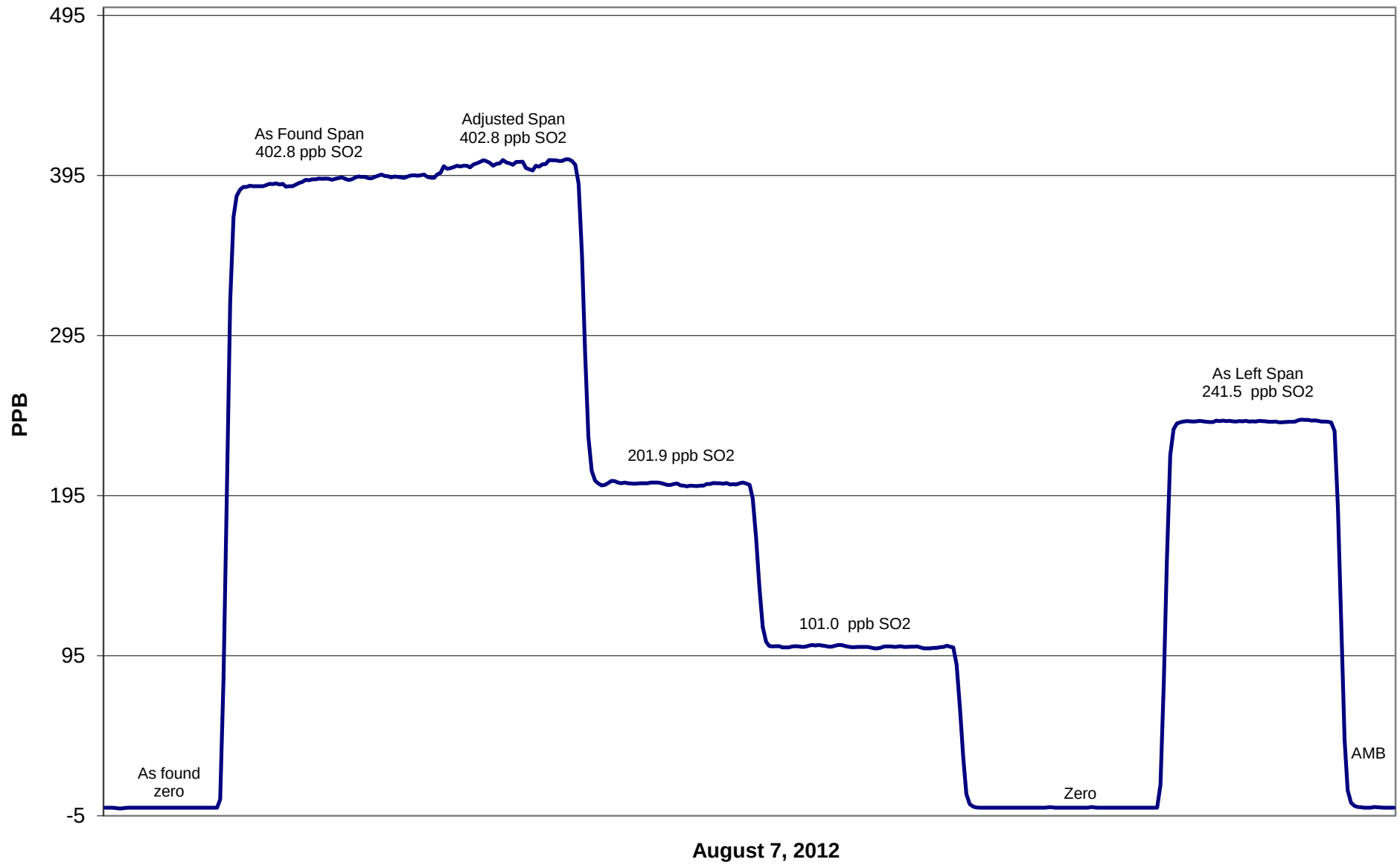
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999995
402.8	402.6	1.0003		
201.9	202.0	0.9998		
101.0	100.2	1.0077	Slope	0.999712
			Intercept	0.247861

SO2 Calibration Curve



SO2 Calibration



Parameter

Air Monitoring Network

NO_x-NO-NO₂

PAZA



Station Information

Calibration Date	August 7, 2012		Previous Calibration	July 22, 2012		
Station Number	1		Station Location	Henry Pirker		
Reason:	Routine Installation Removal	Other: _____				
Start Time (MST)	7:15		End Time (MST)	12:45		
Barometric Pressure	0.922	Atm	Station Temperature	20.0	Deg C	
Calibrator	EnviroNics		Serial Number	3474		
NO Cal Gas Conc	51.2	ppm	Cal Gas Expiry Date	March 12, 2014		
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL107272		

DACS Information

DACS make	CR3000	DACS serial No.	5408	
	Parameter	NO2	NOx	NO
Before	Data Slope	0.999227	1.003344	1.002207
	Data Offset	-2.166148	-0.563140	-0.489000
After	Data Slope	1.000934	0.997516	0.996998
	Data Offset	-0.667957	0.927438	0.843107
	Channel #	8	6	7
	Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42C	Analyzer serial #	508011073	
Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	11.1	mV	11.4	mV
NOx bkgnd	11.6	mV	11.7	mV
NO coefficient	0.806		0.987	
NOx coefficient	1.016		1.000	
NO2 conv temp	318.0	Deg C	318.0	Deg C
PMT Temp	-2.5	Deg C	-2.5	Deg C
PMT Volt	-786.0	mV	-768.0	mV
R Cell Press	176.6	in Hg	174.6	in Hg

Calibration Report

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



Calibration Date: August 7, 2012 Station Location: Henry Pirker

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4989	0.00	0.0	0.0	0.0	0.1	0.0	0.0	N/A	N/A
1	4989	39.87	405.9	405.9	0.0	406.4	406.6	-0.2	0.9988	0.9983
2	4989	19.93	203.7	203.7	0.0	203.1	203.4	-0.4	1.0032	1.0018
3	4989	9.94	101.8	101.8	0.0	99.9	100.3	-0.4	1.0186	1.0154
AFZ	4989	0.00	0.0	0.0	0.0	0.1	0.0	0.0	0.0000	0.0000
AFS	4989	39.87	405.9	405.9	0.0	415.1	419.3	-4.2	0.9779	0.9682
Average Correction Factor									1.0069	1.0052

As Found Concentrations: NO_x= 414.5 NO= 418.8 As Found Percent Change NO_x= 2.1% NO= 3.2%

Dilution Flow		4989	ccm	Source Gas Flow		39.85	ccm			
O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.1	0.0	0.0	N/A	N/A	N/A	N/A
NO point	405.5	405.5	0.0	405.1	405.5	-0.5	1.0012	1.0000	N/A	N/A
300	405.5	60.0	345.5	405.6	60.0	345.9	0.9997	1.0000	0.9991	100.1%
200	405.5	201.1	204.5	405.7	201.1	204.7	0.9996	1.0000	0.9989	100.1%
100	405.5	341.1	64.4	407.1	341.1	65.9	0.9961	1.0000	0.9769	102.4%
Average Correction Factor							0.9985	1.0000	0.9916	100.9%

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	0.1	0.0	0.0	ppb
Auto span	168.4	169.5	1.2	ppb	325.6	323.0	3.0	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



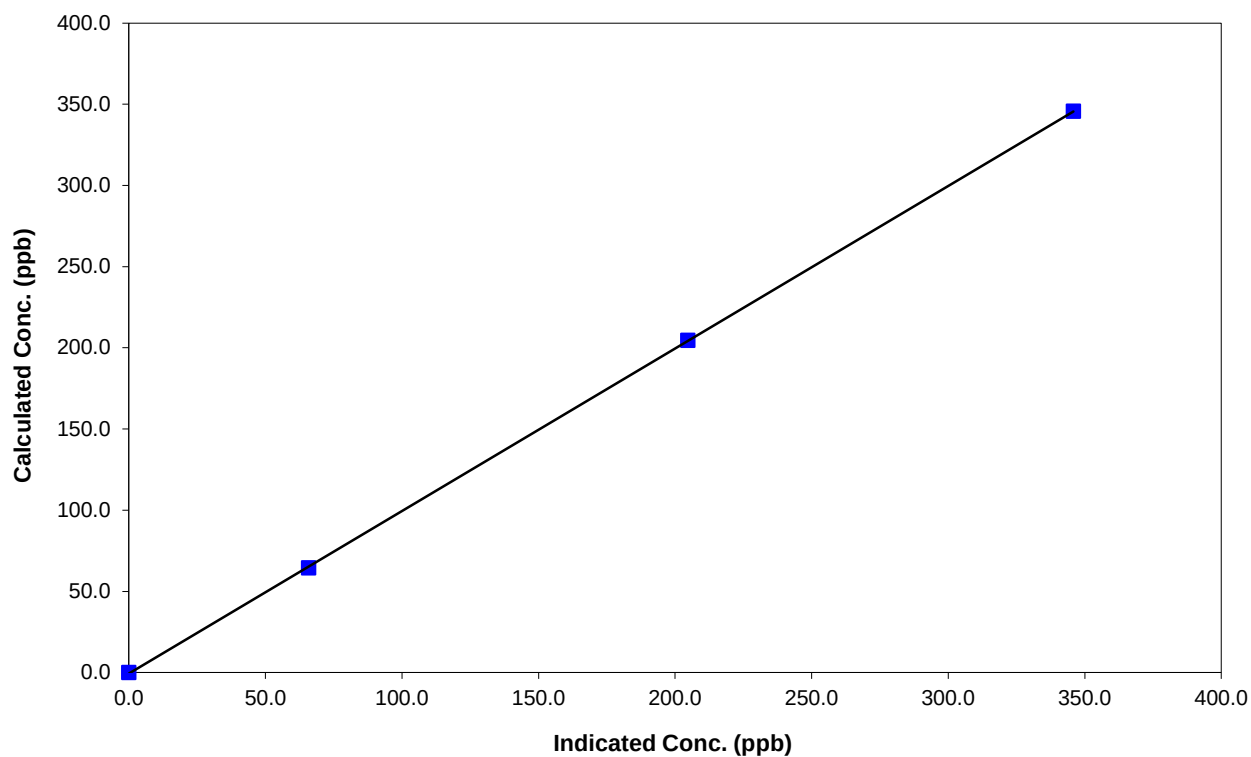
Station Information

Calibration Date	August 7, 2012	Previous Calibration	July 22, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:15	End Time (MST)	12:45
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	0.999982
345.5	345.9	0.9991		
204.5	204.7	0.9989		
64.4	65.9	0.9769	Slope	1.000934
			Intercept	-0.667957

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



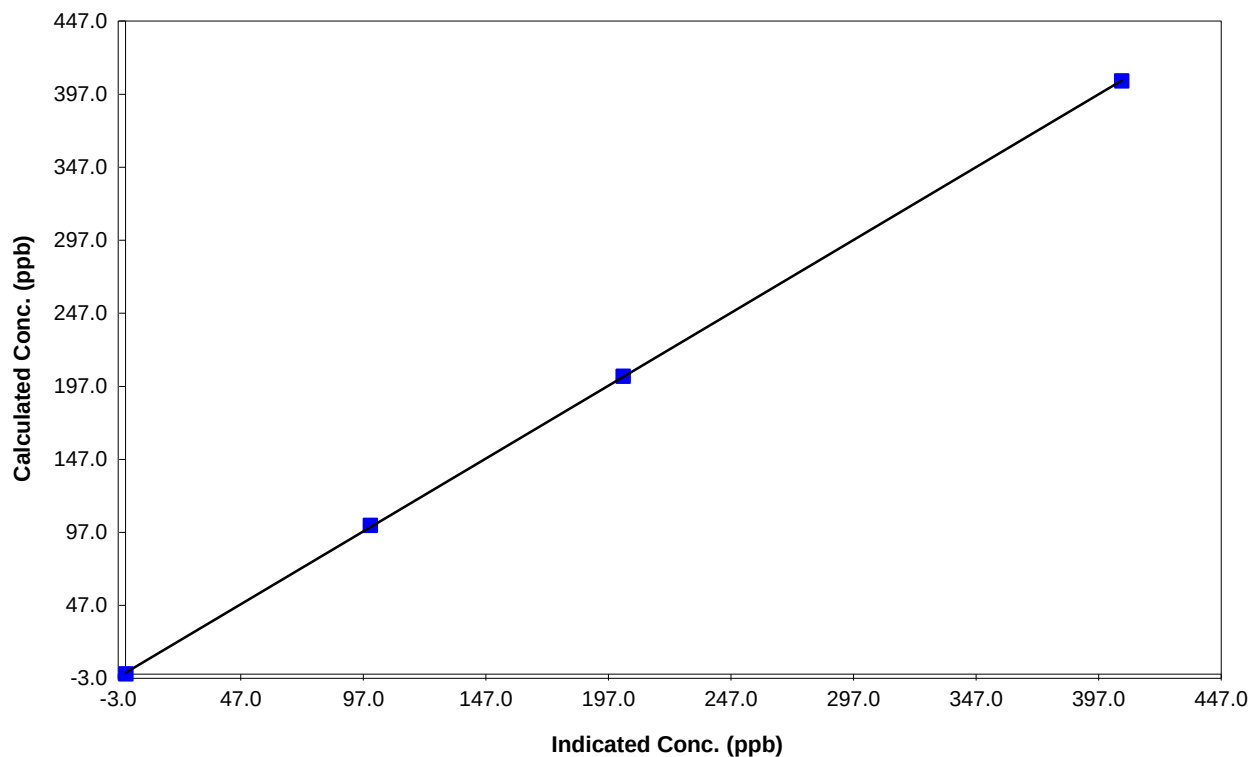
Station Information

Calibration Date	August 7, 2012	Previous Calibration	July 22, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:15	End Time (MST)	12:45
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	0.999971
405.9	406.4	0.9988		
203.7	203.1	1.0032		
101.8	99.9	1.0186	Slope	0.997516
			Intercept	0.927438

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



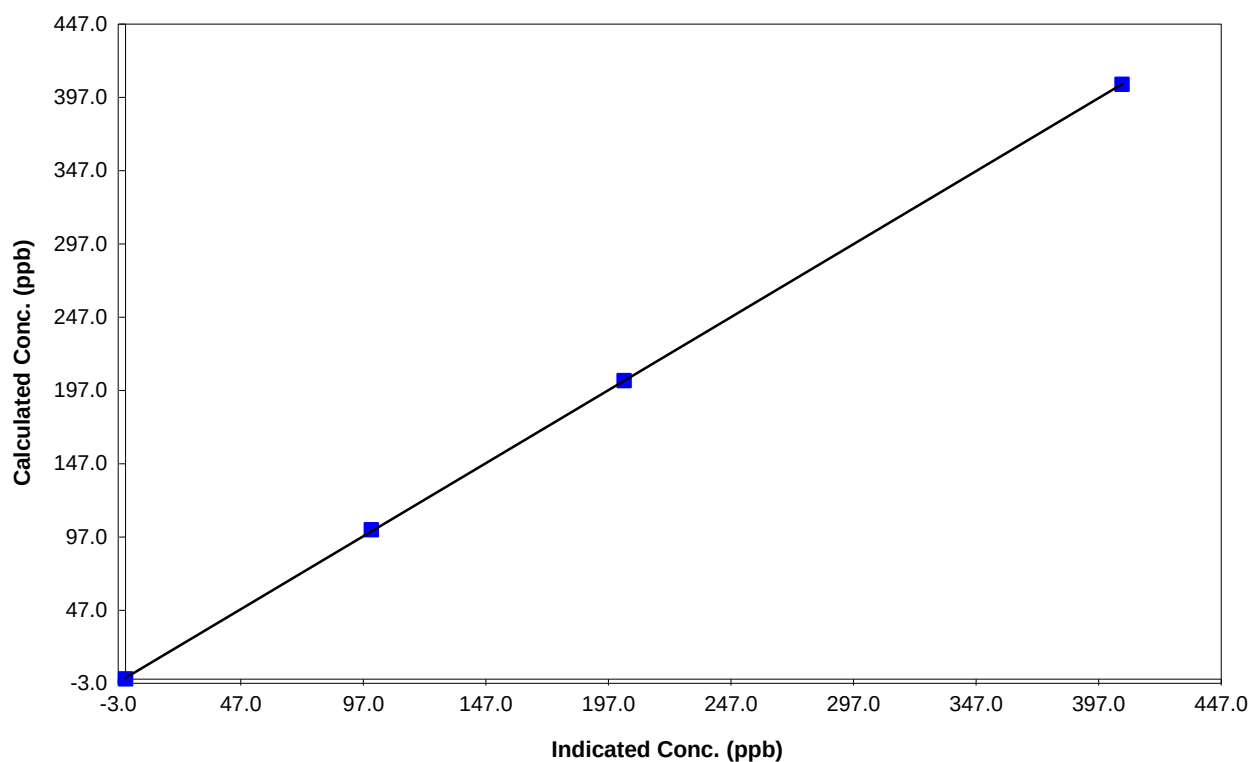
Station Information

Calibration Date	August 7, 2012	Previous Calibration	July 22, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:15	End Time (MST)	12:45
Analyzer make	TEI 42C	Analyzer serial #	508011073

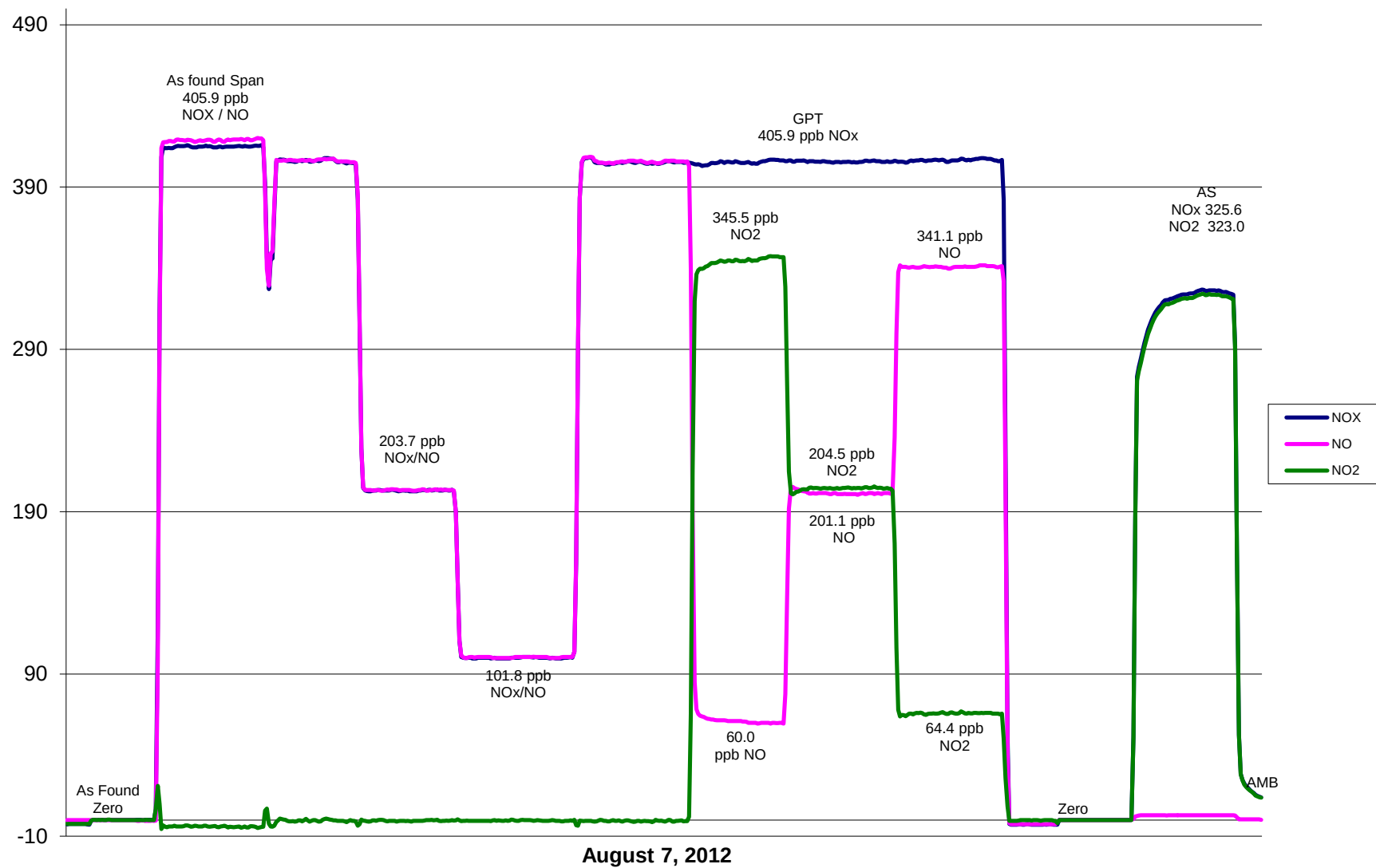
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999980
405.9	406.6	0.9983		
203.7	203.4	1.0018		
101.8	100.3	1.0154	Slope	0.996998
			Intercept	0.843107

NO Calibration Curve



PAZA NO_x Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	August 24, 2012	Previous Calibration	August 7, 2012
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Installation	Removal
	Other:	Trouble shoot Nox	
Start Time (MST)	16:50:00 PM	End Time (MST)	21:20
Barometric Pressure	0.922	Atm	Station Temperature
Calibrator	EnviroNics	Serial Number	3474
NO Cal Gas Conc	51.2	ppm	Cal Gas Expiry Date
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #
			March 12, 2014
			LL107272

DACS Information

DACS make	CR3000	DACS serial No.	5408
Parameter	NO2	NOx	NO
Before	Data Slope	1.000934	0.999049
	Data Offset	-0.667957	0.807045
After	Data Slope	1.010759	0.997921
	Data Offset	0.261913	2.346872
Channel #	8	6	7
Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42C	Analyzer serial #	508011073
Test Point	before	after	
Concentration range	0 - 500	ppb	0 - 500
NO offset	11.4	mV	12.9
NOx bkgnd	11.7	mV	15.2
NO coefficient	0.987		1.106
NOx coefficient	1.000		1.003
NO2 conv temp	318.0	Deg C	318.0
PMT Temp	-2.5	Deg C	-2.5
PMT Volt	-768.0	mV	-768.0
R Cell Press	174.6	in Hg	178.1

Calibration Report

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



Calibration Date: August 24, 2012 Station Location: Henry Pirker

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.1	0.0	0.0	N/A	N/A
1	4995	39.93	406.0	406.0	0.0	405.8	405.5	0.3	1.0007	1.0013
2	4995	19.97	203.9	203.9	0.0	200.6	201.1	-0.5	1.0165	1.0139
3	4995	9.94	101.7	101.7	0.0	97.3	98.1	-0.8	1.0455	1.0367
AFZ	4995	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0000	0.0000
AFS	4995	39.93	406.0	406.0	0.0	362.3	362.8	-0.7	1.1209	1.1191
Average Correction Factor									1.0209	1.0173

As Found Concentrations: NO_x= 363.1 NO= 363.6 As Found Percent Change NO_x= -10.6% NO= -10.5%

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	0.0	0.0	0.0	0.1	0.0	0.0	N/A	N/A	N/A	N/A
NO point	405.6	405.6	0.0	405.3	405.6	-0.3	1.0007	1.0000	N/A	N/A
300	405.6	104.3	301.3	402.0	104.3	298.0	1.0088	1.0000	1.0112	98.9%
200	405.6	200.3	205.3	403.1	200.3	202.9	1.0062	1.0000	1.0117	98.8%
100	405.6	298.8	106.8	403.7	298.8	104.9	1.0047	1.0000	1.0180	98.2%
Average Correction Factor							1.0066	1.0000	1.0136	98.7%

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	0.0	-0.1	0.0	ppb
Auto span	168.4	169.5	1.2	ppb	290.7	288.2	2.7	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



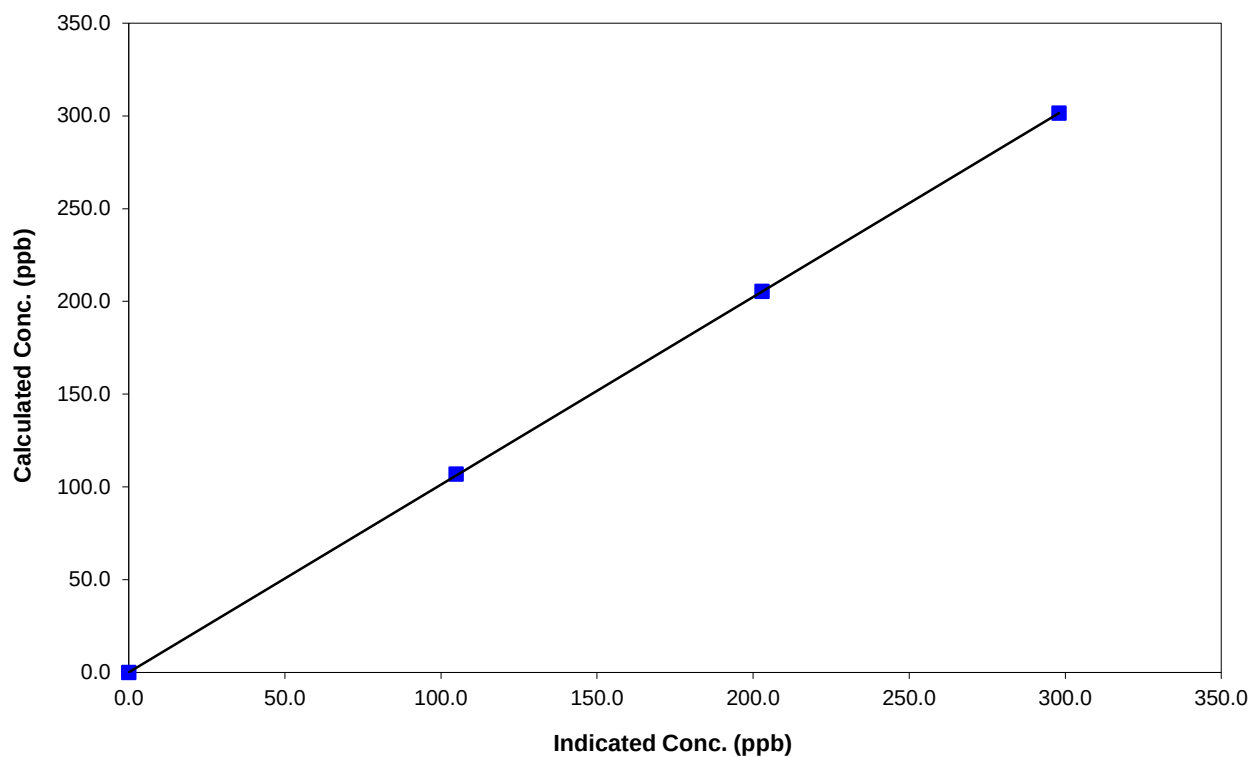
Station Information

Calibration Date	August 24, 2012	Previous Calibration	August 7, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	16:50:00 PM	End Time (MST)	21:20
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	0.999993
301.3	298.0	1.0112		
205.3	202.9	1.0117		
106.8	104.9	1.0180	Slope	1.010759
			Intercept	0.261913

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



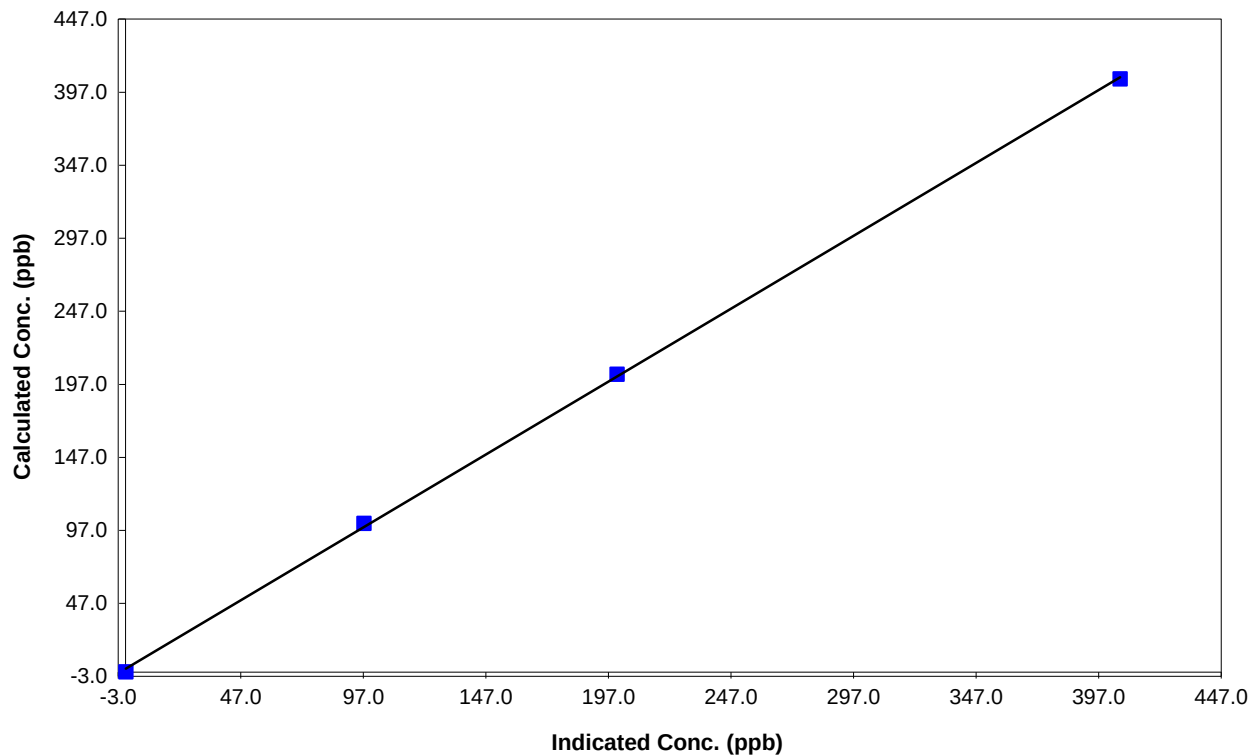
Station Information

Calibration Date	August 24, 2012	Previous Calibration	August 7, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	16:50:00 PM	End Time (MST)	21:20
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	0.999839
406.0	405.8	1.0007		
203.9	200.6	1.0165		
101.7	97.3	1.0455	Slope	0.997921
			Intercept	2.346872

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



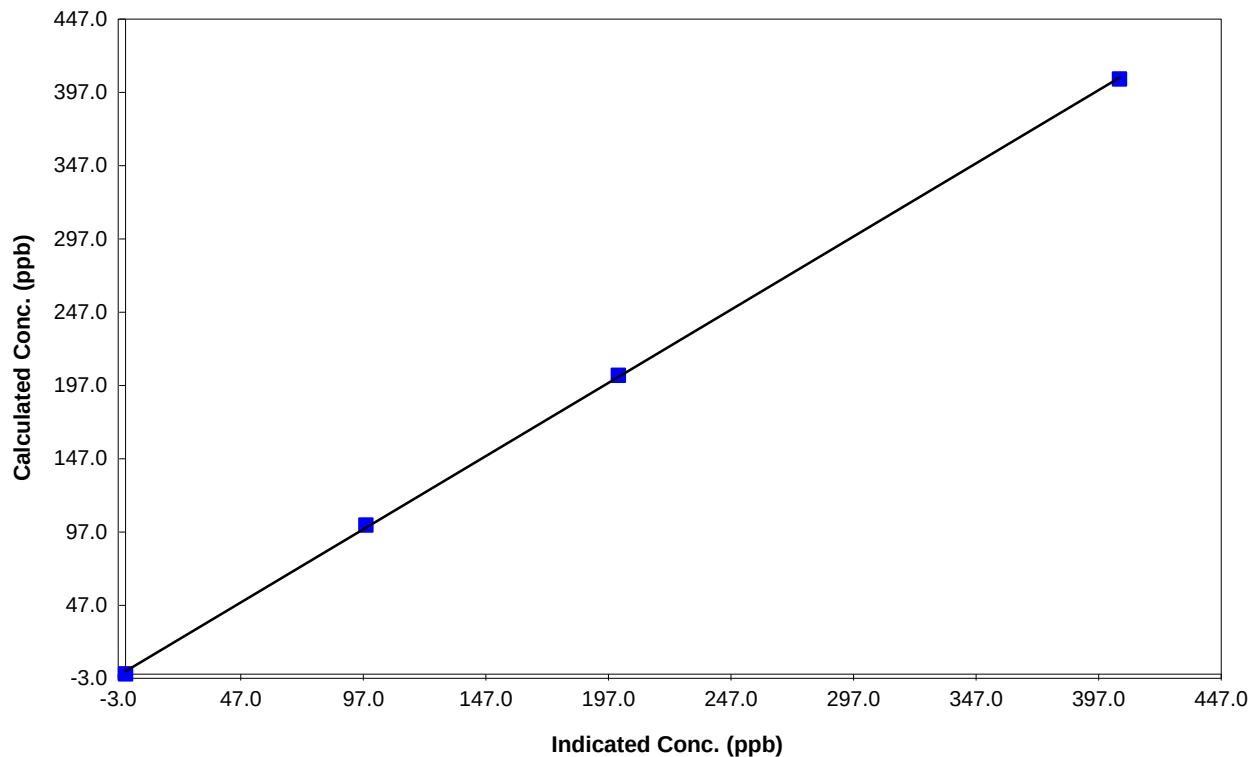
Station Information

Calibration Date	August 24, 2012	Previous Calibration	August 7, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	16:50:00 PM	End Time (MST)	21:20
Analyzer make	TEI 42C	Analyzer serial #	508011073

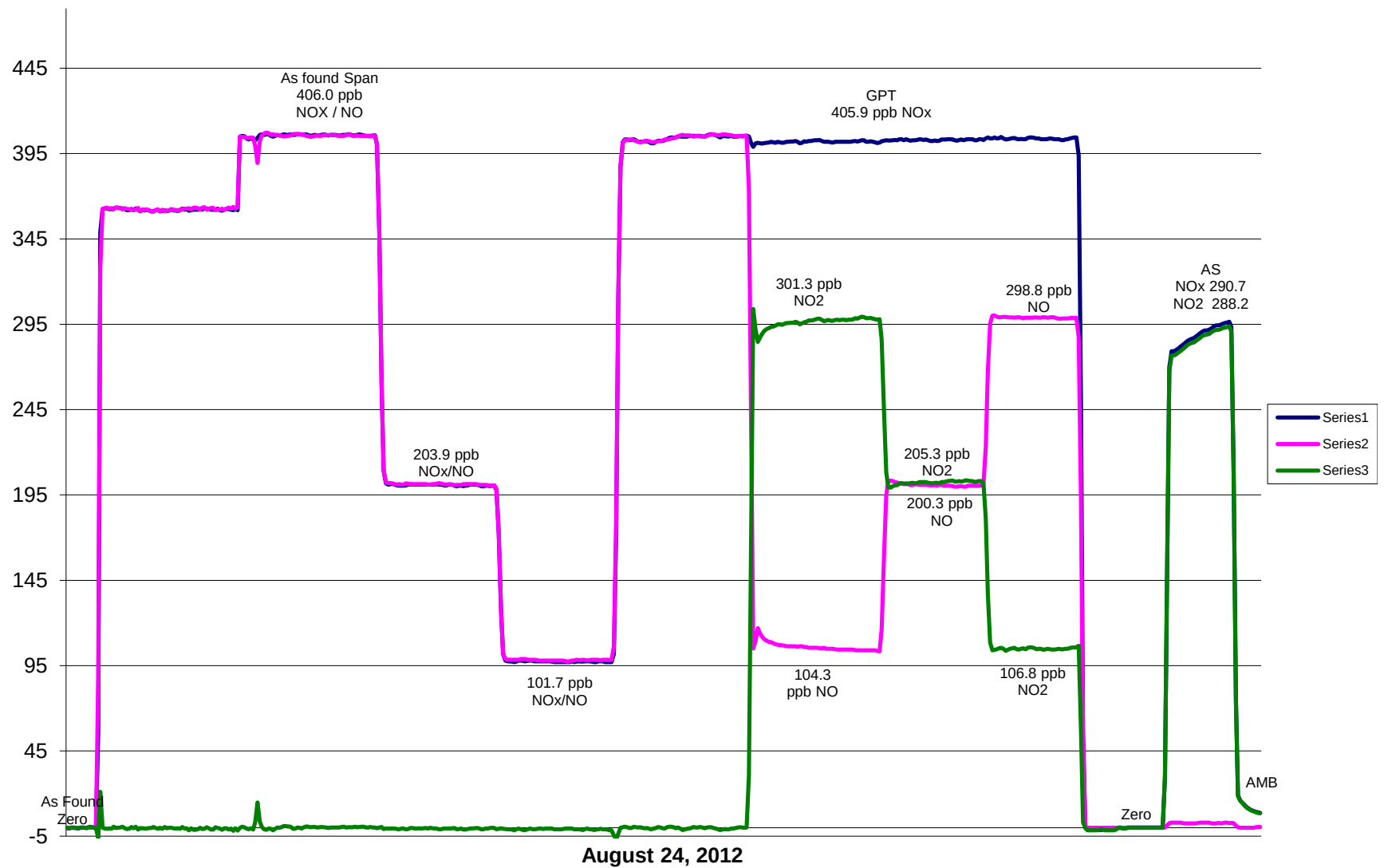
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999901
406.0	405.5	1.0013		
203.9	201.1	1.0139		
101.7	98.1	1.0367	Slope	0.998992
			Intercept	1.912338

NO Calibration Curve



PAZA NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	August 7, 2012	Previous Calibration	July 22, 2012
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	11:44	End Time (MST)	15:52
Barometric Pressure	0.922 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
Calculated slope	1.000694	Calculated slope	1.028197
Calculated intercept	-0.558368	Calculated intercept	-0.675329
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.7	ppb	-0.7	ppb
slope	1.146		1.146	
O3 Lamp temp	71.1	Deg C	71.1	Deg C
Intensities	78085/68662	mV	77540/68410	mV
Pressure	695.6	inches Hg	699	inches Hg
Flow A	0.726	ccm	0.723	ccm
Flow B	0.741	ccm	0.738	ccm

Calibration Data

Dilution air flow rate (cc/min)	Referenced concentration (ppb)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5026	0	0.0	0.3	N/A
5026	300	345.5	337.2	1.0245
5026	200	204.5	198.3	1.0315
5026	100	64.4	64.4	1.0006
5026	0	0.0	0.3	As found zero
5026	300	345.5	337.2	As found span
Average Correction Factor				1.0189

Calculated value of As Found Response: 336.6 ppm Percent Change of As Found: -2.6%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	161.8	ppb	154.9	ppb

Notes: No adjust

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter O3

Air Monitoring Network PAZA



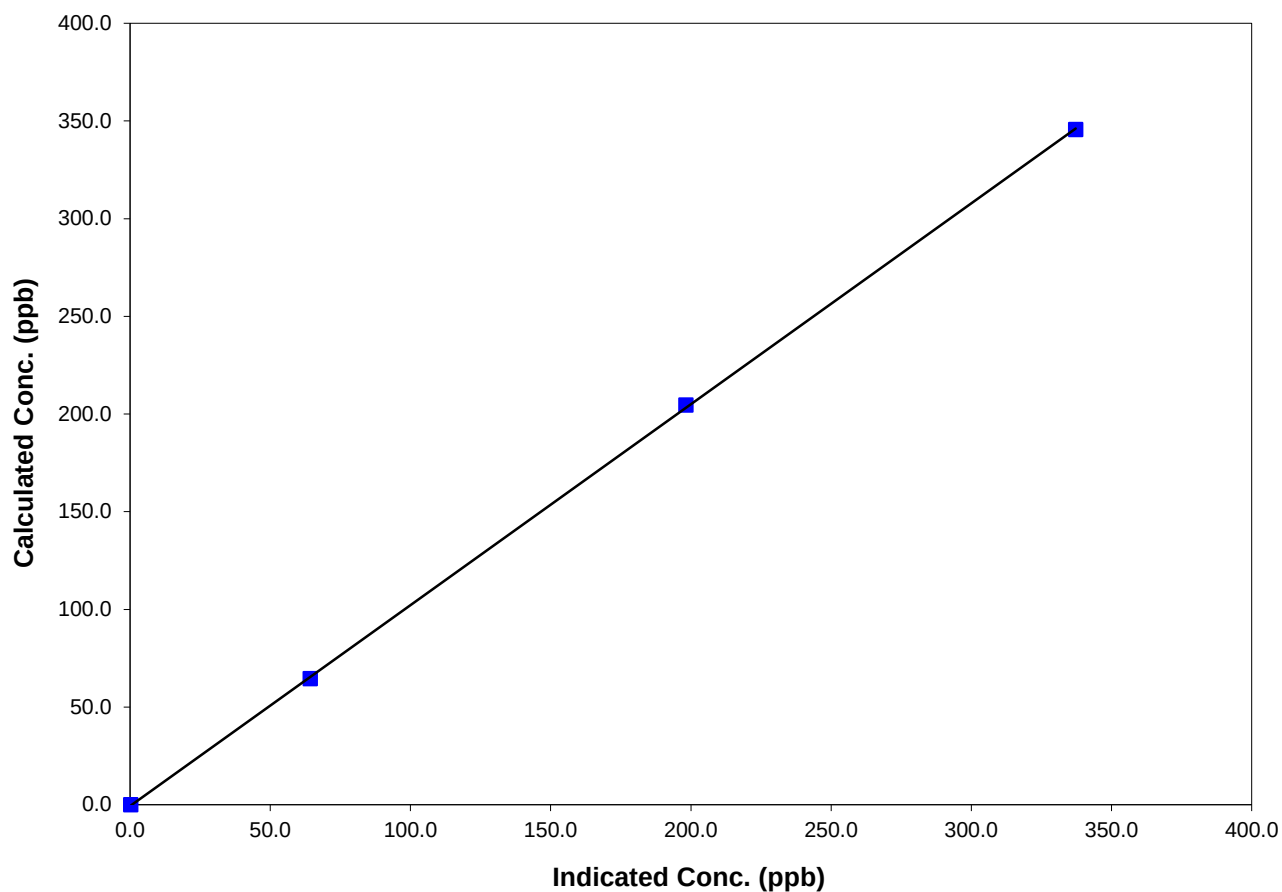
Station Information

Calibration Date	August 7, 2012	Previous Calibration	July 22, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:44	End Time (MST)	15:52
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

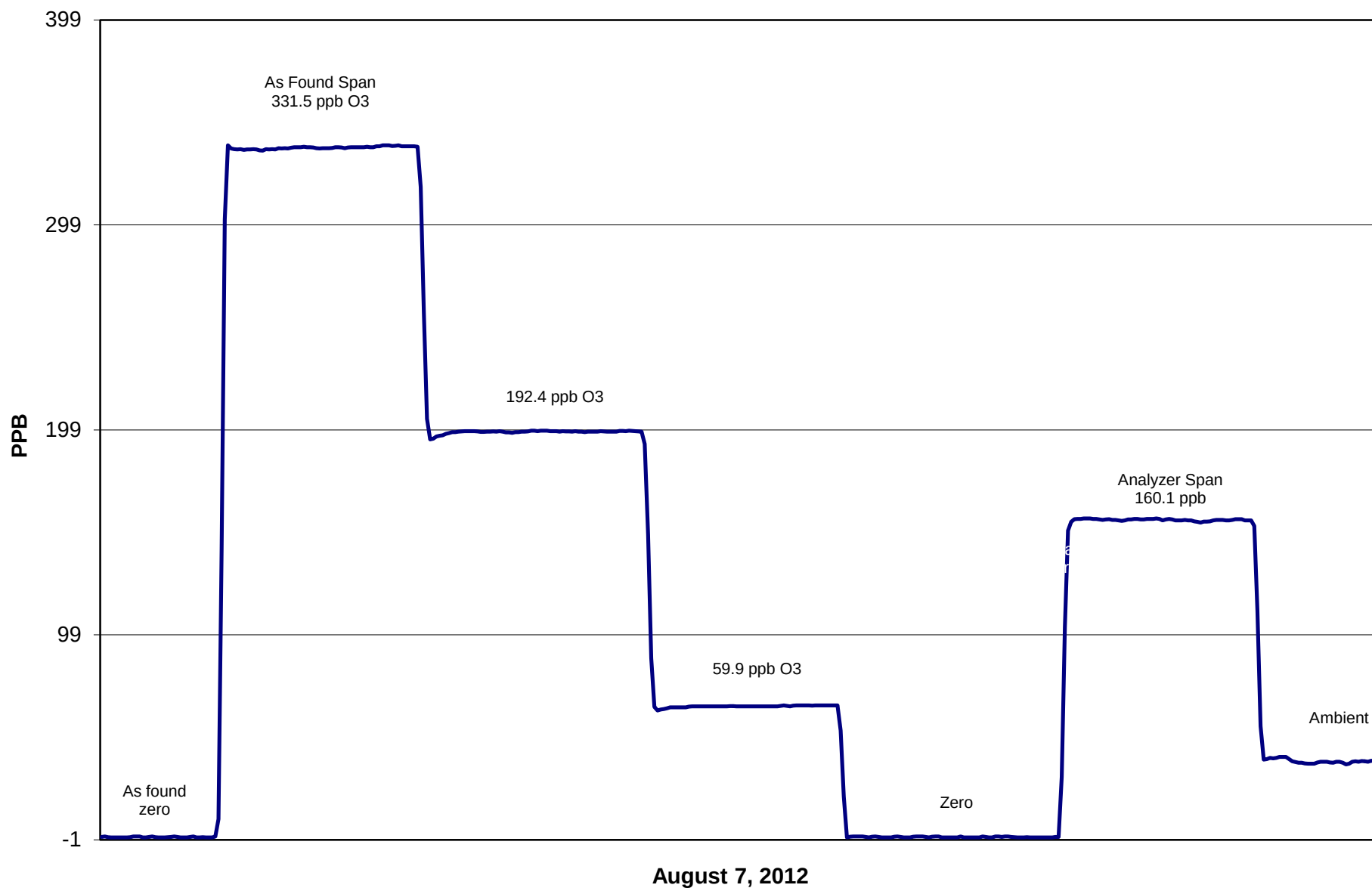
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	NA	Correlation Coefficient	0.999952
345.5	337.2	1.0245		
204.5	198.3	1.0315		
64.4	64.4	1.0006	Slope	1.028197
			Intercept	-0.675329

O3 Calibration Curve



O3 Calibration



Calibration Report

Parameter CO

Air Monitoring Network PAZA



Station Information

Calibration Date	August 8, 2012	Previous Calibration	July 22, 2012
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	8:00	End Time (MST)	11:08
Barometric Pressure	0.922 ATM	Station Temperature	21.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Conc	2898 ppm	Cal Gas Expiry Date	2/4/2013
		Cal Gas Cylinder #	LL83909
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.039842	Calculated slope	0.999390
Calculated intercept	-0.390597	Calculated intercept	-0.399581
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.088		1.088	
CO zero setting	3.016		3.057	
Sample pressure	687	mm Hg	673.4	mm Hg
Sample Flow	1.130	LPM	1.135	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)
4990	0.00	0.00	0.41	N/A
4990	69.80	39.98	40.40	0.9896
4990	34.89	20.12	20.56	0.9787
4990	18.93	10.95	11.33	0.9667
4990	0.00	0.00	0.41	As Found Zero
4990	69.80	39.98	39.06	As Found Span
Average Correction Factor				0.9783

Calculated value of As Found Response: 39.799 ppm Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.56	ppm	20.24	ppm

Notes: Slight adjust 80% point

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter CO

Air Monitoring Network PAZA



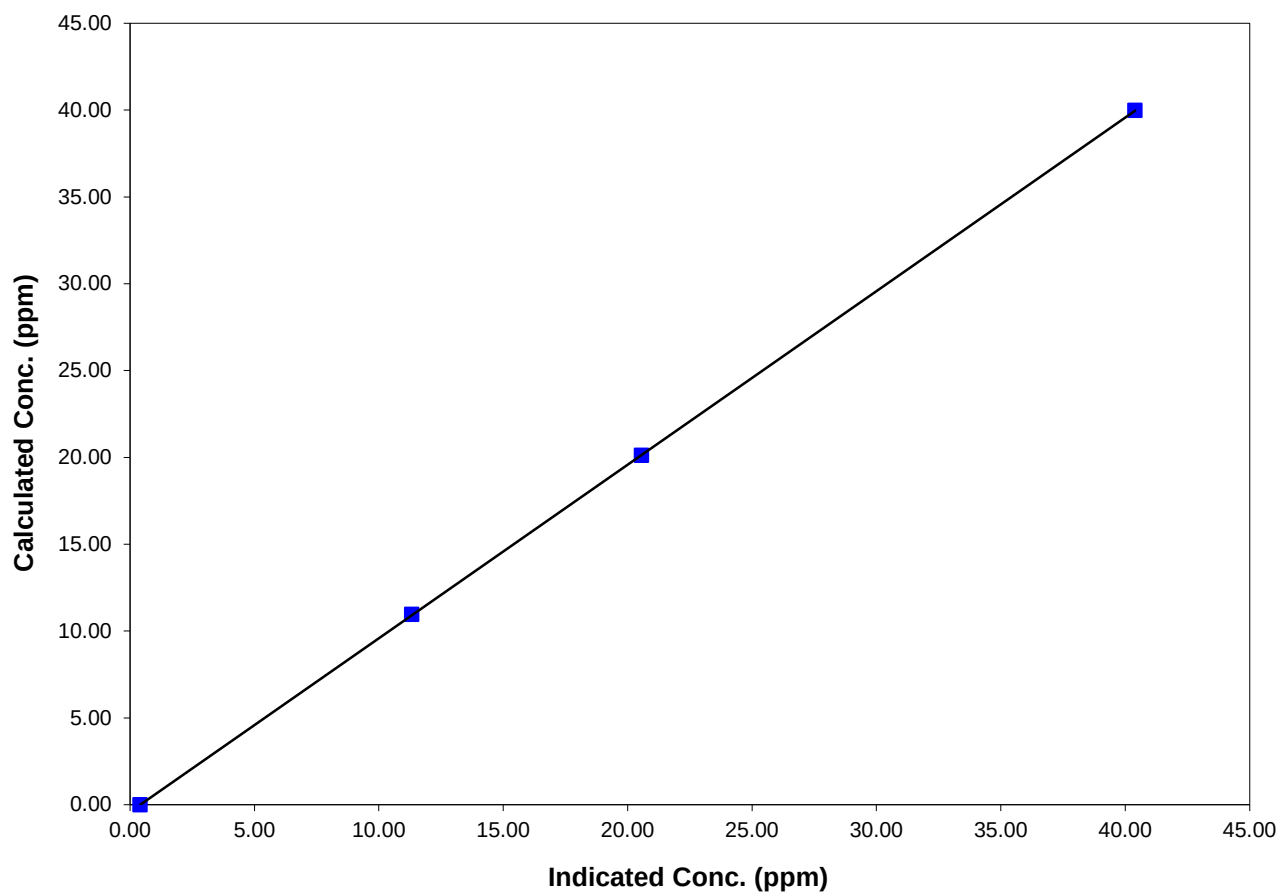
Station Information

Calibration Date	August 8, 2012	Previous Calibration	July 22, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	11:08
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

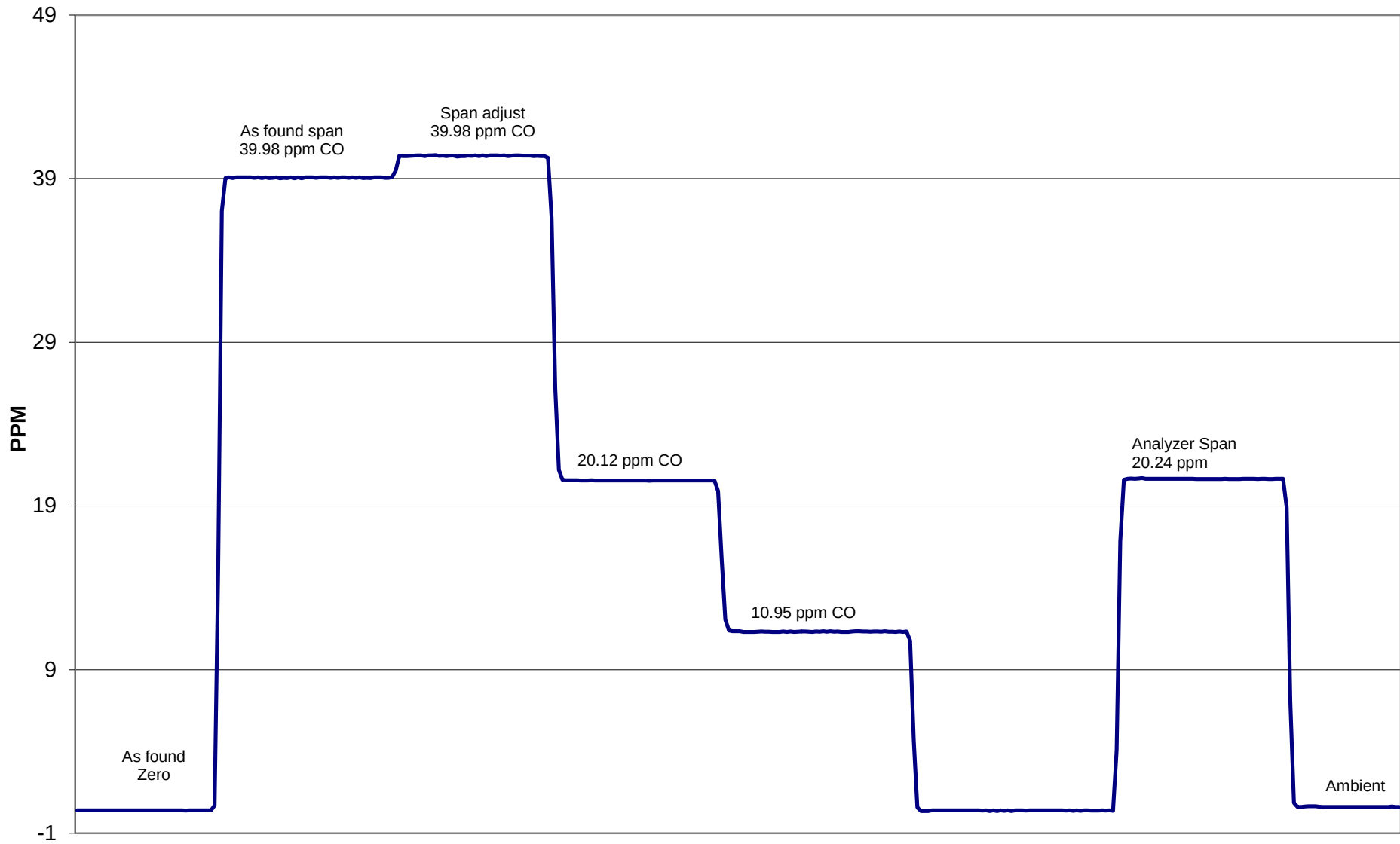
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.408	N/A	Correlation Coefficient	0.999998
39.978	40.397	0.9896		
20.122	20.560	0.9787		
10.952	11.330	0.9667	Slope	0.999390
			Intercept	-0.399581

CO Calibration Curve



CO Calibration



August 8, 2012

Calibration Report



Parameter THC

Air Monitoring Network PAZA

Station Information

Calibration Date	August 7, 2012	Previous Calibration	July 23, 2012
Station Number	1	Station Location	Henry Pirker
Reason:	☐ Routine	☐ Install	☐ Removal
		☒ Other:	Maintenance
Start Time (MST)	13:45	End Time (MST)	16:45
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	404 ppm CH4/ 201 ppm C3H8	Cal Gas Expiry Date	2/4/2010
Cal Gas CH4 equiv	956.75 ppm	Cal Gas Cylinder #	ALM 004476
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
Calculated slope	0.988922	Calculated slope	1.029716
Calculated intercept	0.207816	Calculated intercept	0.170969
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.50	psi	6.50	psi
THC span counts	9616	capture	9616	capture
THC zero counts	447	capture	447	capture

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2996	0.00	0.00	-0.14	N/A
2996	69.77	21.77	20.99	1.0376
2996	29.88	9.45	9.00	1.0493
2996	9.92	3.16	2.87	1.0984
2996	0.00	0.00	-0.14	As Found Zero
2996	69.77	21.77	20.99	As Found Span
Average Correction Factor				1.0617

Calculated value of As Found Response: 21.100 ppm Percent Change of As Found: 3.1%

	before calibration		after calibration	
Auto zero	0.10	ppm	0.02	ppm
Auto span	21.83	ppm	25.29	ppm

Notes: New cal gas cylinder.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter THC

Air Monitoring Network PAZA



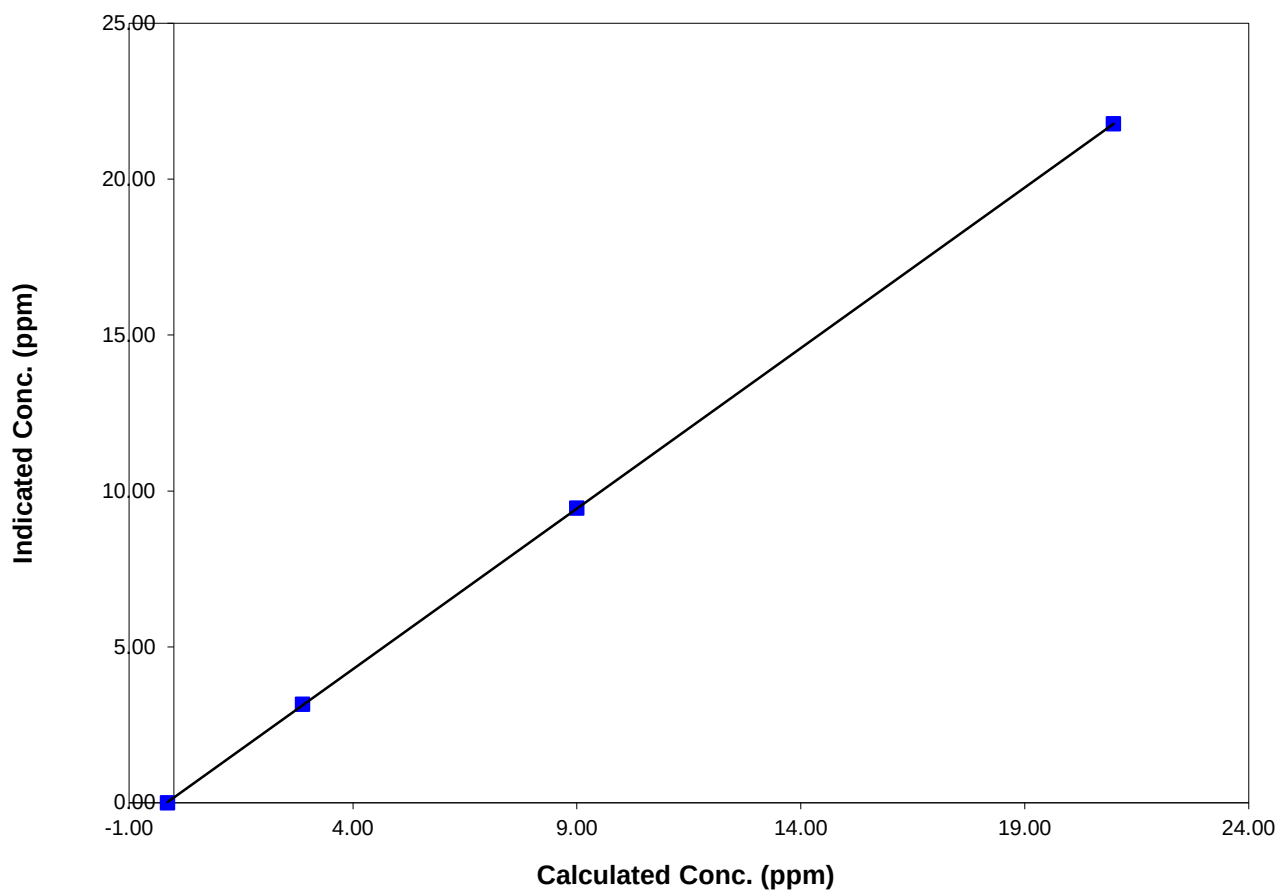
Station Information

Calibration Date	August 7, 2012	Previous Calibration	July 23, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:45	End Time (MST)	16:45
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

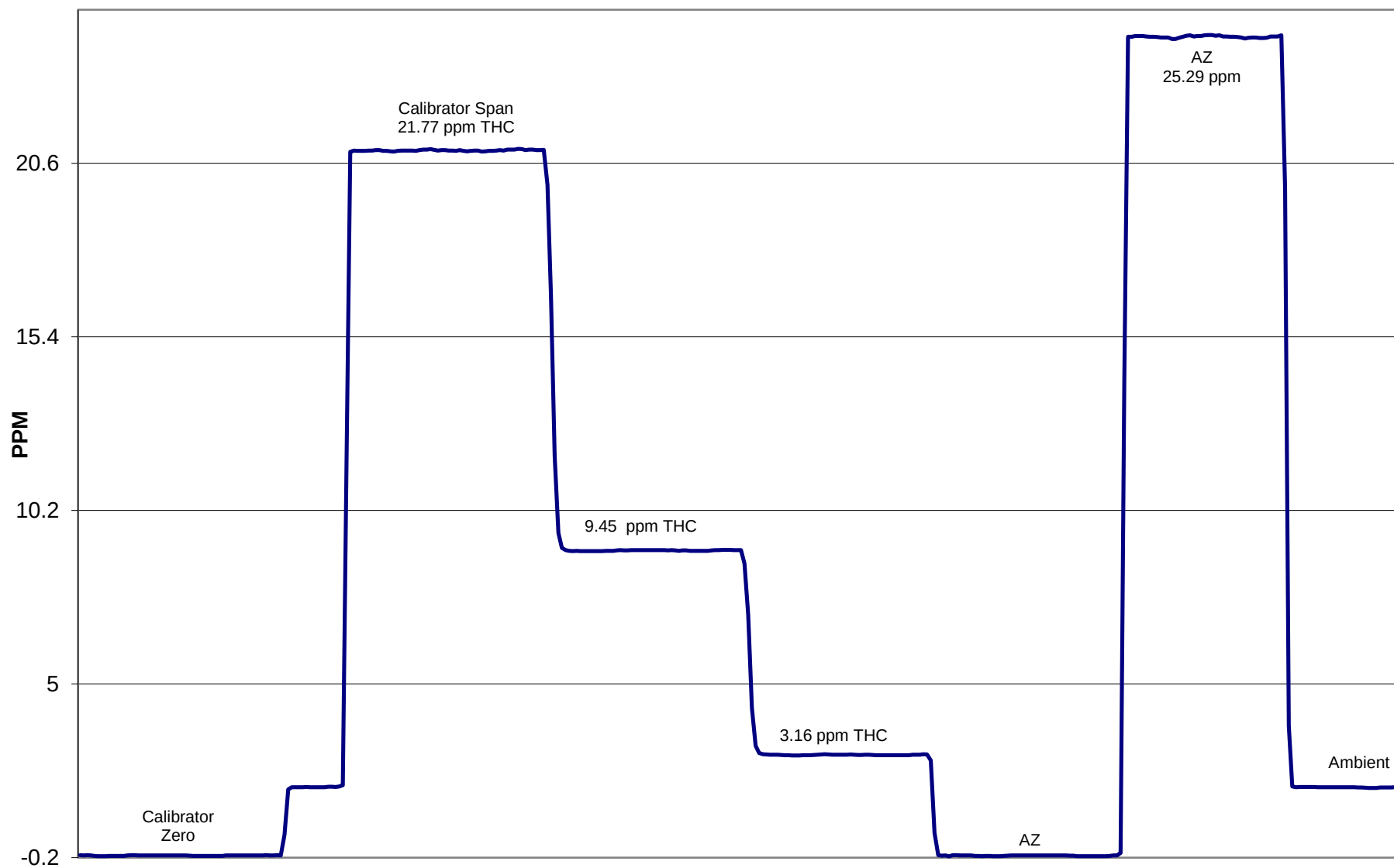
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.141	N/A		
21.773	20.985	1.0376	Correlation Coefficient	0.999995
9.448	9.004	1.0493		
3.157	2.875	1.0984	Slope	1.029716
			Intercept	0.170969

THC Calibration Curve



THC Calibration



August 7, 2012

Calibration Report



Parameter TR5

Air Monitoring Network PAZA

Station Information

Calibration Date	August 08, 2012		Previous Calibration	July 22, 2012	
Station Number	1		Station Location	Henry Pirker	
Reason:	Routine	☐ Install	☐ Removal	☐ Other:	
Start Time (MST)	10:30		End Time (MST)	14:15	
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	11/5/2013	
			Cal Gas Cylinder #	LL160692	
DACS make	CR3000		DACS serial No.	5408	
DACS voltage range	0 - 1 volt		DACS channel #	9	
	Before			After	
Calculated slope	0.994265		Calculated slope	0.996323	
Calculated intercept	0.057174		Calculated intercept	0.159892	
Analyzer make	TEI 45C		Analyzer serial #	630718528	

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.135		1.32	
Background	11.5		11.4	
Pressure	658.9	mm Hg	660.8	mm Hg
Flow	0.455	ccm	0.456	ccm
Lamp Voltage	820	v	819	v

Calibration Data

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	-0.31	N/A
4990	39.87	80.06	80.12	0.9992
4990	19.88	40.08	40.19	0.9972
8990	8.94	10.03	10.01	1.0027
4990	0.00	0.00	-0.31	As Found Zero
4990	39.87	80.06	77.44	As Found Span
Average Correction Factor				0.9997

Calculated value of As Found Response: 77.4 ppb Percent Change of As Found: 3.4%

	before calibration		after calibration	
Auto zero	-0.29	ppb	0.01	ppb
Auto span	33.10	ppb	34.12	ppb

Notes: Slight span adjust

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



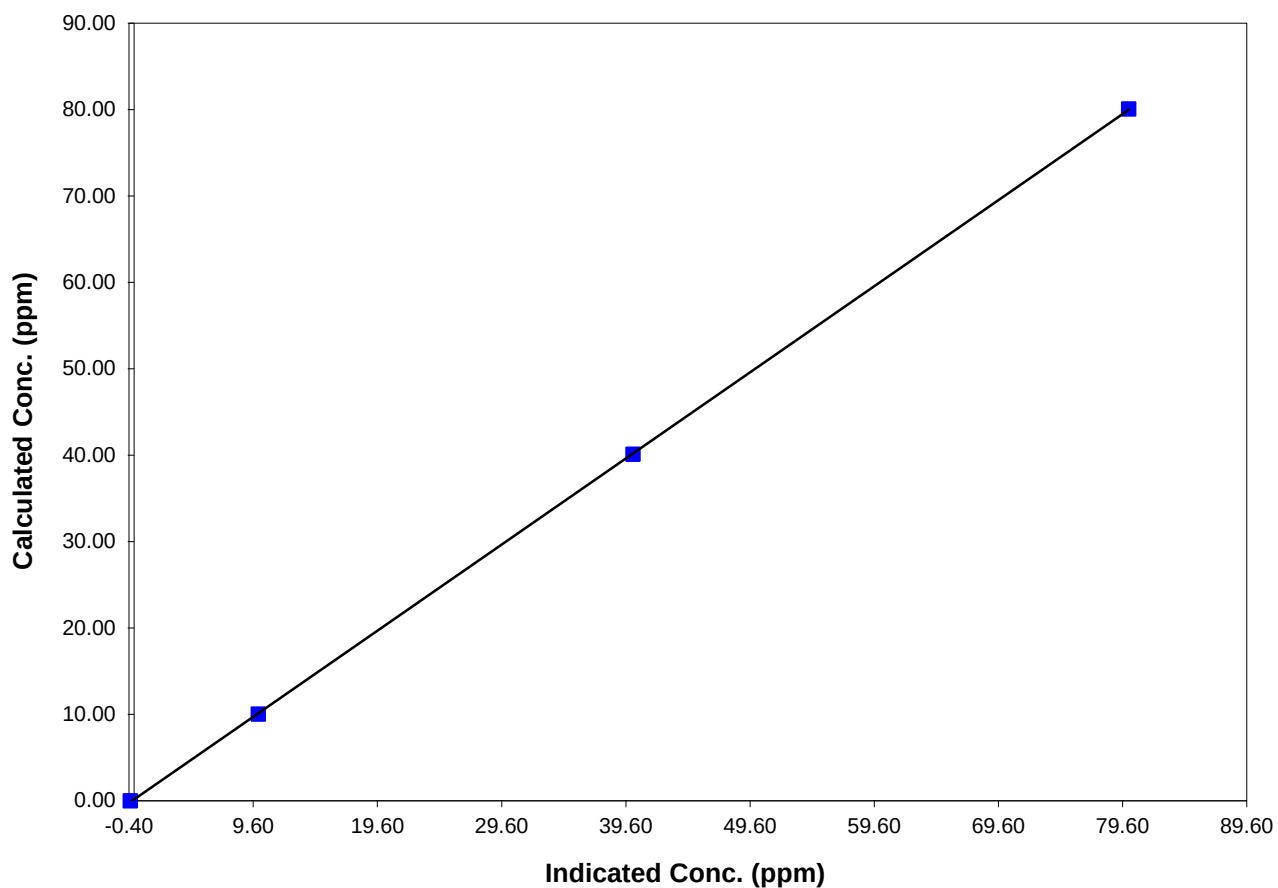
Station Information

Calibration Date	August 08, 2012	Previous Calibration	July 22, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:30	End Time (MST)	14:15
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

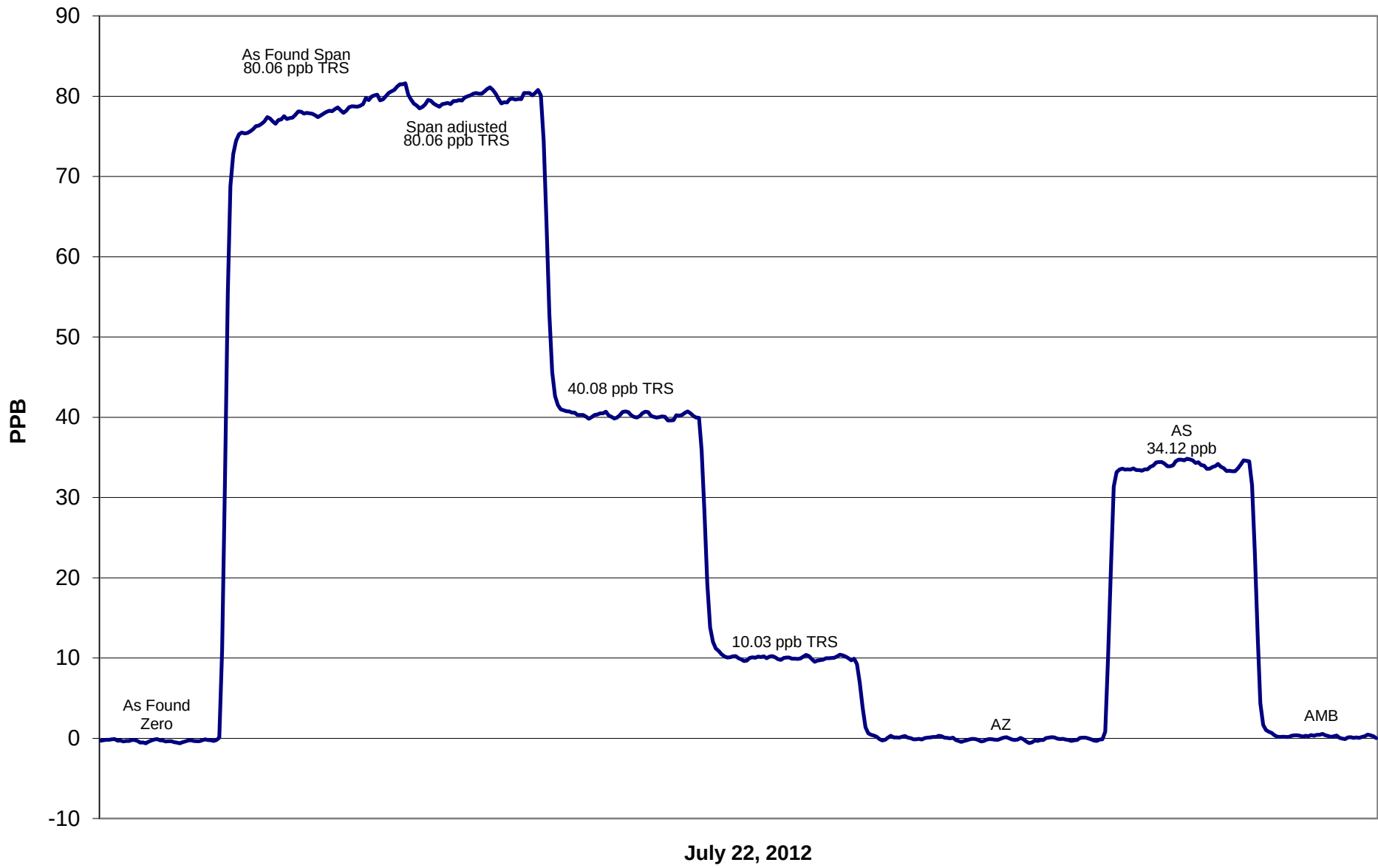
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.306	N/A		
80.059	80.119	0.9992	Correlation Coefficient	0.999987
40.078	40.190	0.9972		
10.034	10.007	1.0027	Slope	0.996323
			Intercept	0.159892

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	August 23, 2012	Previous Calibration	July 27, 2012
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	10:53	End Time (MST)	15:40
Barometric Pressure	0.920 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Concentration	50.8 ppm	Cal Gas Expiry Date	3/12/2014
Correction factor	0.031273	Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.006636	Calculated slope	0.993508
Calculated intercept	0.150176	Calculated intercept	1.345122
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.1		11.1	
coefficient	1.171		1.171	
Lamp Voltage	823	volts	824	volts
Chamber Temp	45.2	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	666.2	mm Hg	667.7	mm Hg
Sample Flow	0.446	ccm	0.446	ccm
Lamp Intensity	90	%	90	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.1	N/A
4995	39.95	403.1	405.2	0.9948
4995	19.93	201.9	200.7	1.0059
4995	9.84	99.9	98.0	1.0188
4995	0.0	0.0	0.1	As Found Zero
4995	39.95	403.1	395.0	As Found Span
Average Correction Factor				1.0065

Calculated value of As Found Response: 397.701 ppm Percent Change of As Found: 1.3%

	before calibration		after calibration	
Auto zero	0.6	ppm	0.0	ppm
Auto span	285.4	ppm	287.2	ppm

Notes: As found was taken from first 80% point SO₂. Cal points were re submitted to check possible calibrator conditioning.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



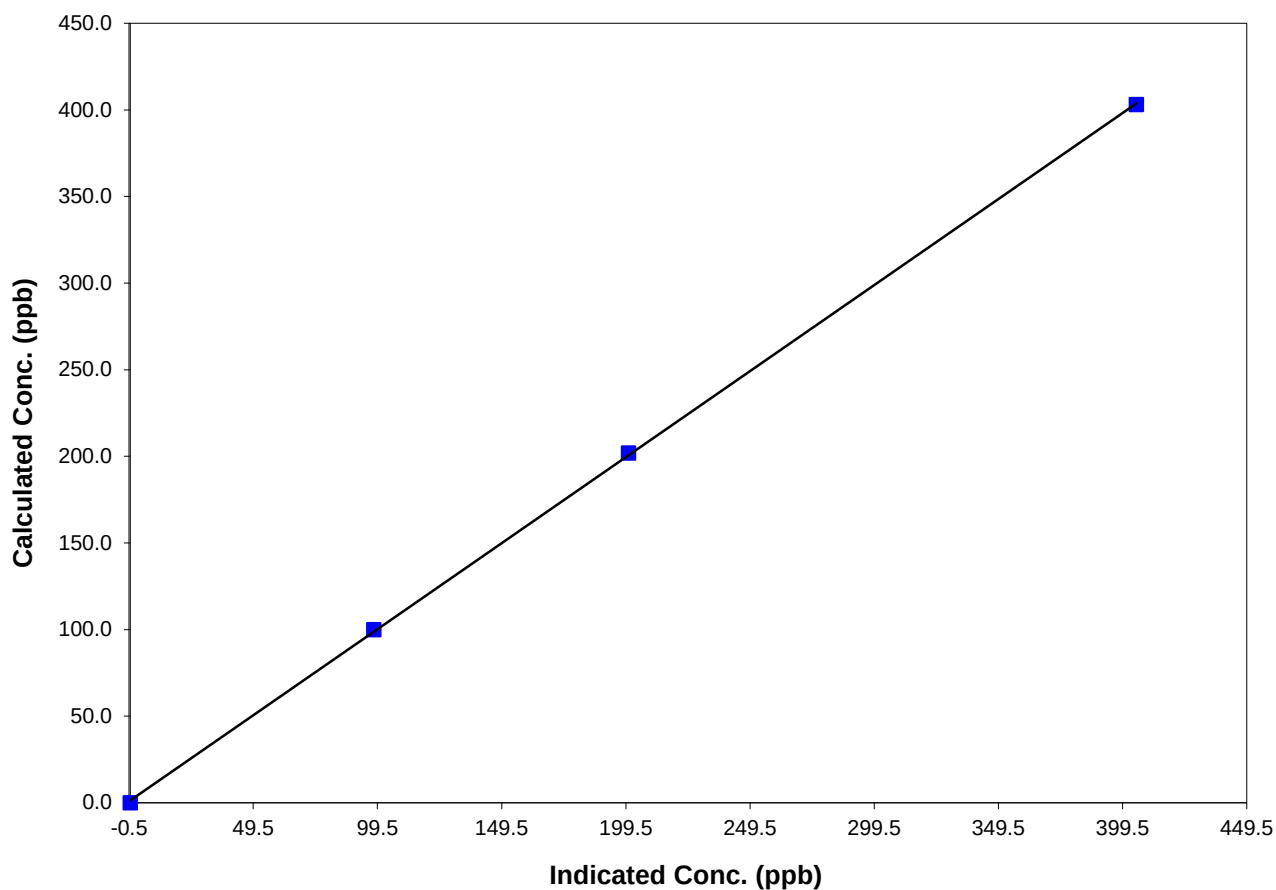
Station Information

Calibration Date	August 23, 2012	Previous Calibration	July 27, 2012
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:53	End Time (MST)	15:40
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

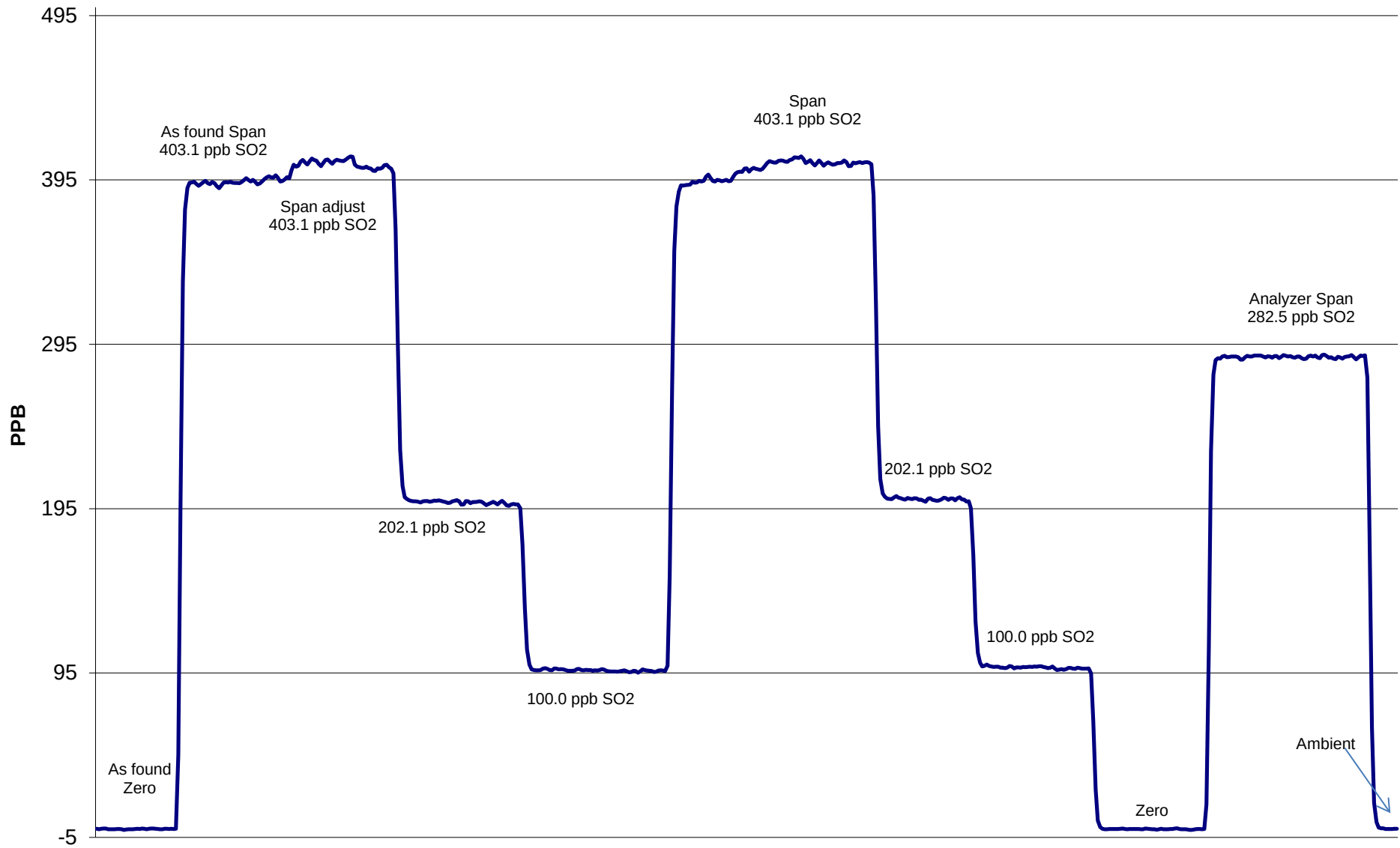
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999940
403.1	405.2	0.9948		
201.9	200.7	1.0059		
99.9	98.0	1.0188	Slope	0.993508
			Intercept	1.345122

SO2 Calibration Curve



SO2 Calibration



August 23, 2012

Calibration Report

Parameter TRIS

Air Monitoring Network PAZA



Station Information

Calibration Date	August 23, 2012	Previous Calibration	July 27, 2012
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	8:30	End Time (MST)	11:32
Barometric Pressure	0.920 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Conc	10.1 ppm	Cal Gas Expiry Date	5/11/2013
Correction factor	0.031273	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	0.994313	Calculated slope	1.018364
Calculated intercept	-0.445507	Calculated intercept	0.059929

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	32	ppb	32	ppb
coefficient	1.019		1.019	
Lamp Voltage	993	volts	993	volts
Chamber Temp	44.1	Deg C	44.1	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	640.5	mm Hg	640.5	mm Hg
Sample Flow	0.600	ccm	0.589	ccm
Lamp Intensity	32,271	mv	32,271	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	39.95	80.14	78.7	1.0183
4995	19.96	40.20	39.4	1.0214
8995	8.97	10.06	9.6	1.0528
4995	0.00	0.00	0.2	As Found Zero
4995	39.95	80.14	78.7	As Found Span
Average Correction Factor				1.0308

Calculated value of As Found Response: 77.60 ppm Percent Change of As Found: 3.2%

	before calibration		after calibration	
Auto zero	0.2	ppm	0.2	ppm
Auto span	71.9	ppm	81.5	ppm

Notes: No adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



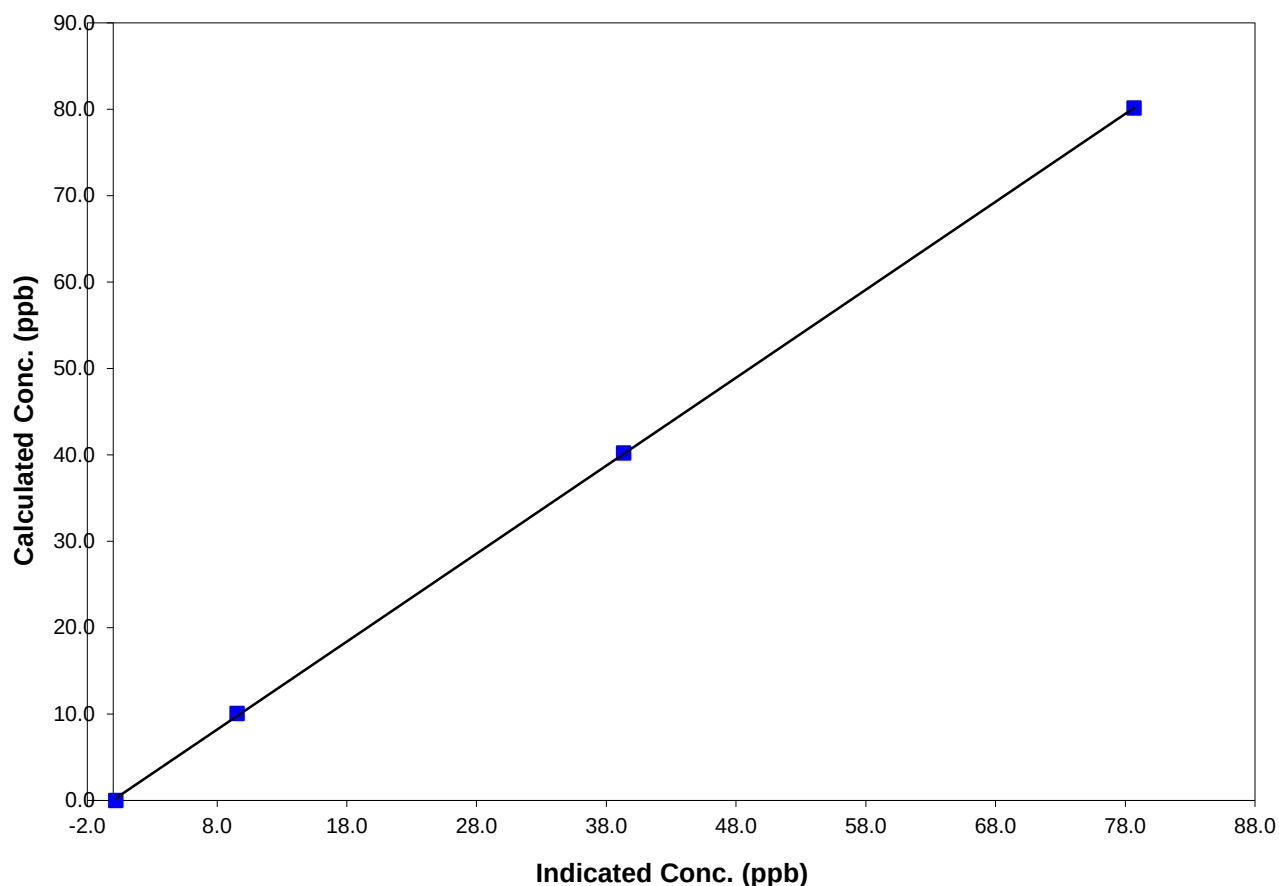
Station Information

Calibration Date	August 23, 2012	Previous Calibration	July 27, 2012
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	8:30	End Time (MST)	11:32
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

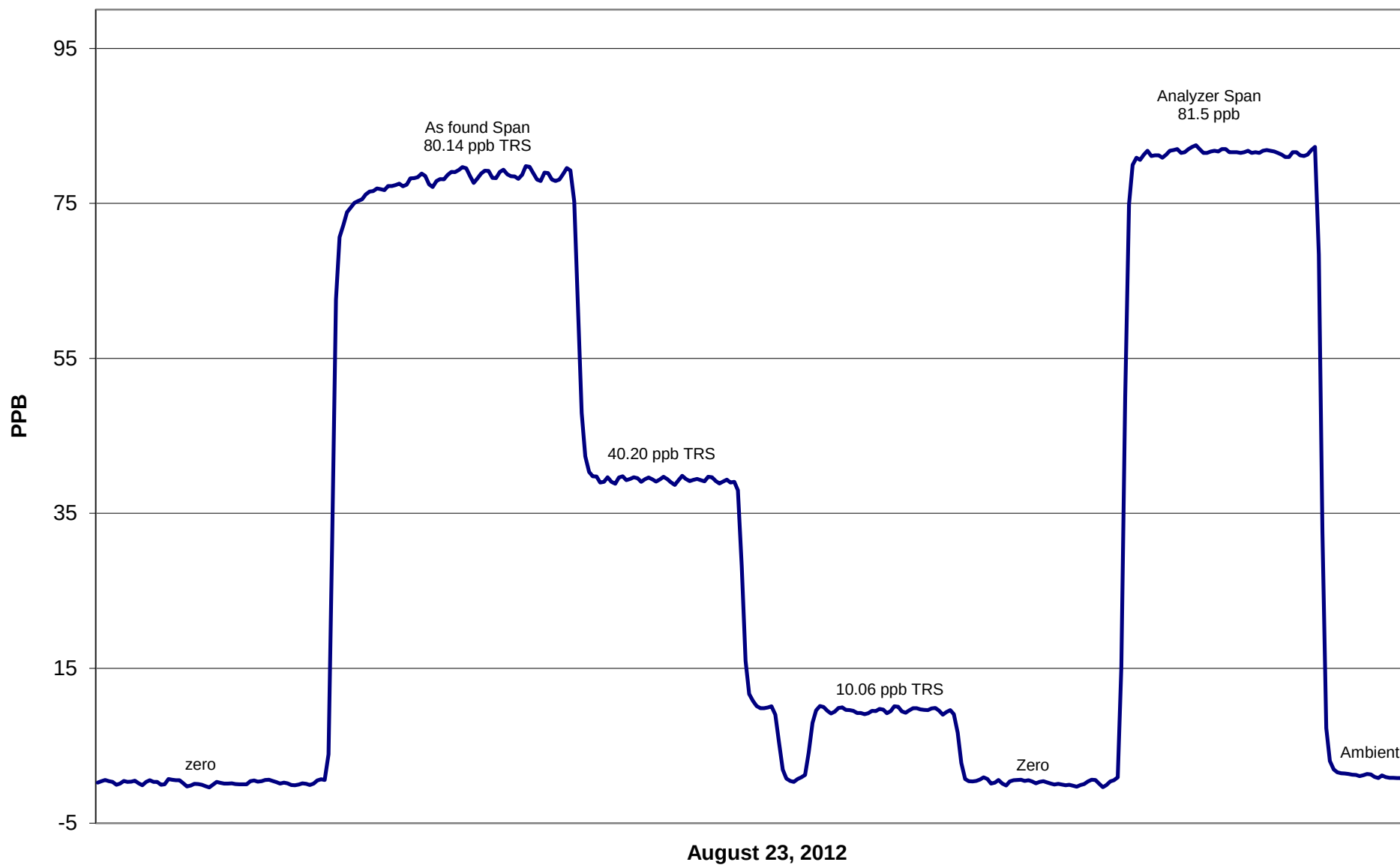
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999961
80.1	78.7	1.0183		
40.2	39.4	1.0214		
10.1	9.6	1.0528	Slope	1.018364
			Intercept	0.059929

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	August 24, 2012	Previous Calibration	July 29, 2012
Station Number	3	Station Location	Smokey Heights
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	10:46	End Time (MST)	14:03
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	Enviroics 6100	Serial Number	3474
Cal Gas Concentration	50.8 ppm	Cal Gas Cert Date	3/12/2014
Correction factor	0.031511	Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	1.000619	Calculated slope	0.996559
Calculated intercept	0.805271	Calculated intercept	2.189114
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	10.7		10.8	
coefficient	0.963		0.975	
Lamp Voltage	922	volts	918	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	668.4	mm Hg	671.4	mm Hg
Sample Flow	0.447	ccm	0.449	ccm
Lamp Intensity	89	%	88	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.2	N/A
4995	39.93	402.87	403.1	0.9994
4995	19.97	202.29	200.0	1.0117
4995	9.97	101.19	96.7	1.0461
4995	0.0	0.00	0.2	As Found Zero
4995	39.93	402.87	397.4	As Found Span
Average Correction Factor				1.0191

Calculated value of As Found Response: 398.266 ppm Percent Change of As Found: 1.1%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.2	ppb
Auto span	304.5	ppb	263.8	ppb

Notes: Slight adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



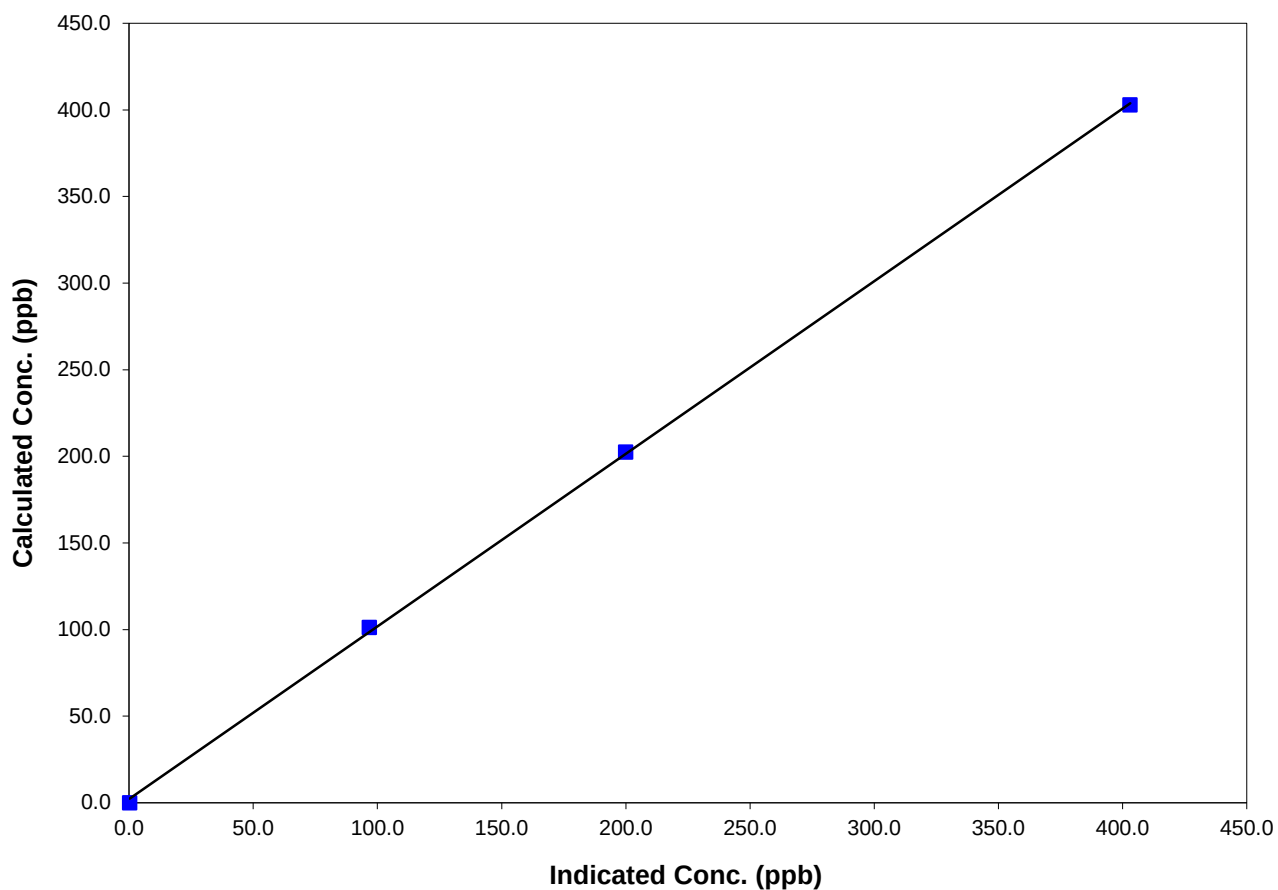
Station Information

Calibration Date	August 24, 2012	Previous Calibration	July 29, 2012
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:46	End Time (MST)	14:03
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

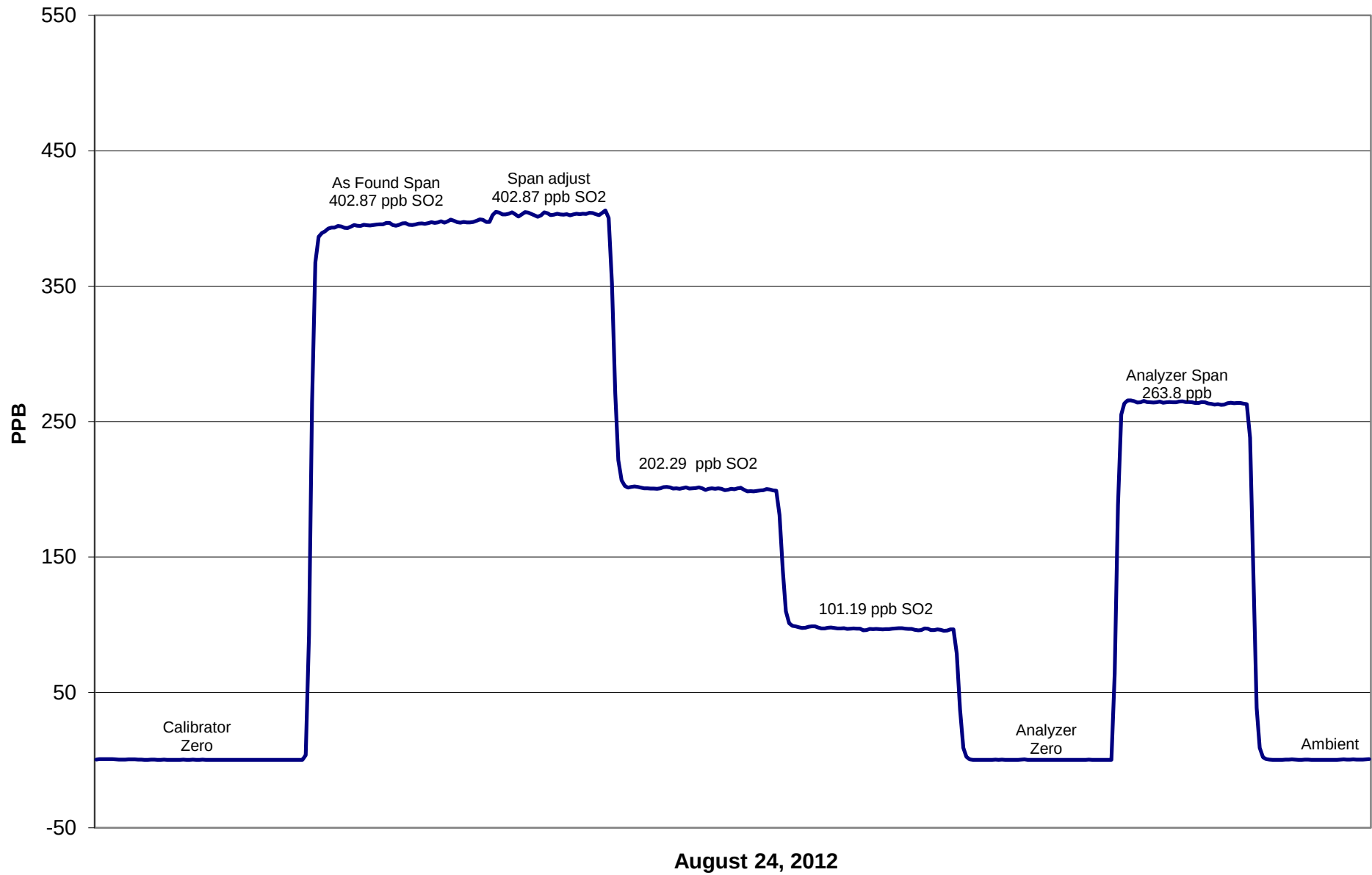
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999839
402.9	403.1	0.9994		
202.3	200.0	1.0117		
101.2	96.7	1.0461	Slope	0.996559
			Intercept	2.189114

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	August 24, 2012	Previous Calibration	July 29, 2012
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	8:30	End Time (MST)	11:56
Barometric Pressure	0.925 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	10.1 ppm	Cal Gas Expiry Date	5/11/2013
Correction factor	0.031443	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	0.991275	Calculated slope	0.988649
Calculated intercept	-0.155732	Calculated intercept	0.386148

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005
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	before		after	
Concentration range	100	ppb	100	ppb
Background	17.9	ppb	17.8	ppb
coefficient	0.929		0.933	
Lamp Voltage	805	volts	805	volts
Chamber Temp	43.5	Deg C	43.5	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	540.2	mm Hg	541	mm Hg
Sample Flow	0.581	ccm	0.582	ccm
Lamp Intensity	35,211	mv	35,472	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	81.0	0.9892
4995	19.97	40.22	39.6	1.0149
8995	8.96	10.05	9.6	1.0490
4995	0.0	0.00	0.1	As Found Zero
4995	39.94	80.12	78.7	As Found Span
Average Correction Factor				1.0177

Calculated value of As Found Response: 77.69 ppm Percent Change of As Found: 3.0%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.7	ppm
Auto span	52.9	ppm	31.8	ppm

Notes: Slight adjust 80% point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



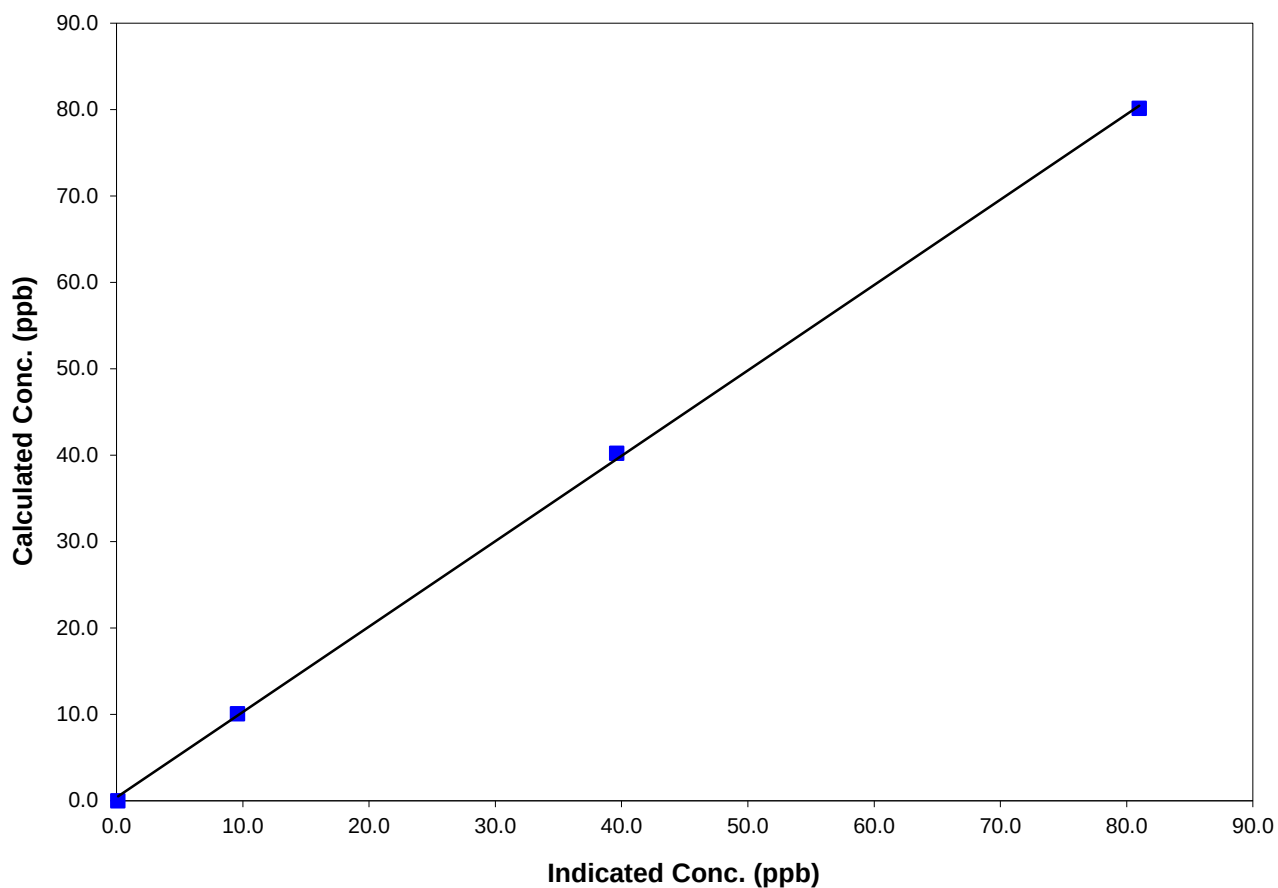
Station Information

Calibration Date	August 24, 2012	Previous Calibration	July 29, 2012
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	8:30	End Time (MST)	11:56
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

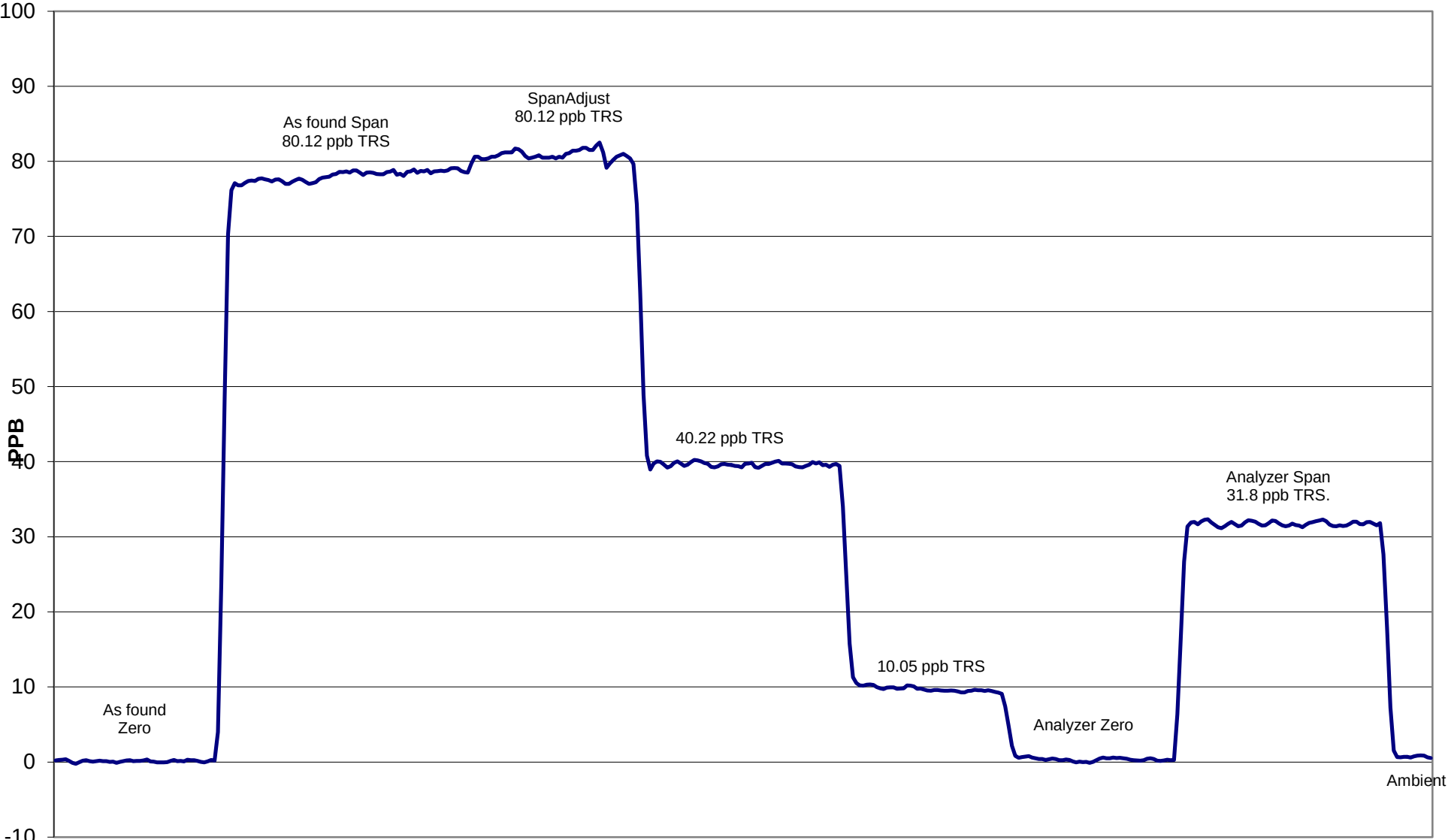
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999784
80.1	81.0	0.9892		
40.2	39.6	1.0149		
10.1	9.6	1.0490	Slope	0.988649
			Intercept	0.386148

TRS Calibration Curve



Smokey Heights TRS Calibration



August 24, 2012

AB TEOM PM2.5 Calibration



STATION: **Smokey Heights**
 LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christensen
 DATE: 27-Aug-12

MONITOR INFO / PARAMETER VALUES:

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

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

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	4-May-12
Previous Calibration	NA

PUMP CAPACITY CHECK *	PASS
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* capacity test or pump on timed test utilized to verify pump integrity

"FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.010	0.030
PUMP OFF	0.010	0.010
NET	0.000	0.020
LIMITS	<0.15	<0.60

	Ambient Temp. (° C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
SET POINT (S)	na	na	12122	13.67	3.000
INDICATED (I)	28.4	0.920	X	13.67	3.000
MEASURED (AF)	28.2	0.921		13.74	3.010
MEASURED (M)	28.2	0.921	12265	13.67	3.010
DIFFERENCE (M-I)	-0.2	0.001	1.2%	0.00	0.01
LIMITS	± 2 ° C	± 0.005 atm	± 2.5 %	± 1.0 L/min	± 0.2 L/min

As Found Data
 Adjusted Data

Ko Audit Filter data

Weight: 0.11251

Serial #: CVK 3316

COMMENTS: PASS

KO was not performed as a new KO filter has been ordered.

Electronics hard calibration completed. Indicated value for Ambient Pressure was adjusted via hard calibration to match the external stan

Slight adjustment made to Auxiliary flow.

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

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	August 16, 2012	Previous Calibration	July 28, 2012
Station Number	4	Station Location	Beaverlodge
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	14:08	End Time (MST)	17:19
Barometric Pressure	0.918 atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	10.8 ppm	Cal Gas Expiry Date	9/28/2012
Gas Cert Reference	FF14871		
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.979955	Calculated slope	0.981885
Calculated intercept	-0.223902	Calculated intercept	0.105477
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.4		2.39	
Coefficient	1.071		1.071	
PMT	-767.6	V	-767.6	V
UV Lamp Voltage	1046	V	1046	V
Chamber Temp	45.2	Deg C	45.2	Deg C
Pressure	666.1	mm Hg	668.8	mm Hg
Sample Flow	0.485	LPM	0.487	LPM
Lamp Intesity	96%	%	96%	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.2	N/A
4995	39.93	85.7	87.3	0.9814
4995	19.97	43.0	43.5	0.9889
4995	9.97	21.5	21.6	0.9966
4995	0.00	0.0	0.2	As found zero
4995	39.93	85.7	87.3	As found span
Average Correction Factor				0.9890

Calculated value of As Found Response: 85.149 ppm Percent Change of As Found: 0.6%

	before calibration		after calibration	
Auto zero	-0.3	ppb	0.3	ppb
Auto span	58.2	ppb	58.5	ppb

Notes: No adjustments made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



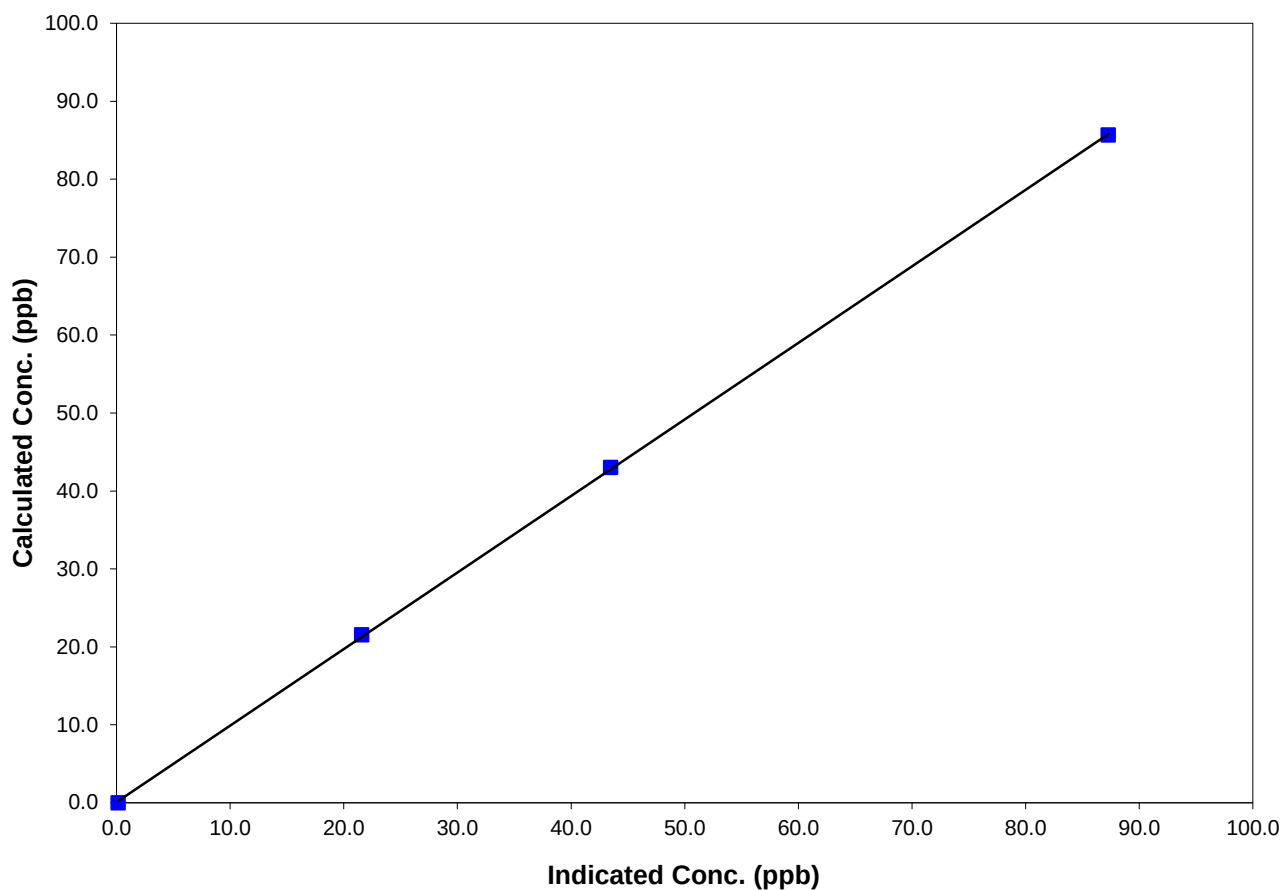
Station Information

Calibration Date	August 16, 2012	Previous Calibration	July 28, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	14:08	End Time (MST)	17:19
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

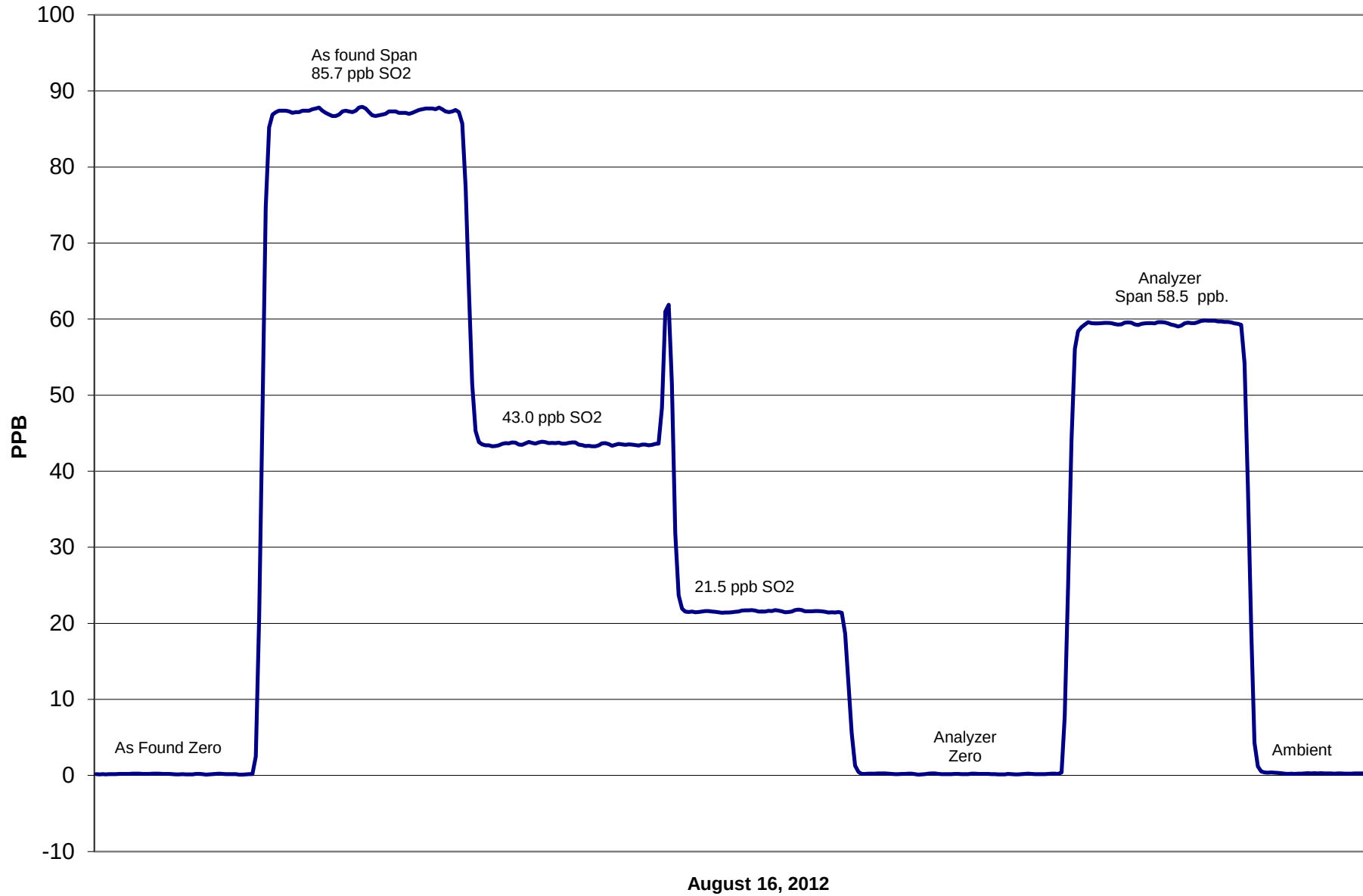
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999956
85.7	87.3	0.9814		
43.0	43.5	0.9889		
21.5	21.6	0.9966	Slope	0.981885
			Intercept	0.105477

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	August 16, 2012	Previous Calibration	July 28, 2012
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Installation	Removal
Other:			
Start Time (MST)	8:40	End Time (MST)	13:51
Barometric Pressure	0.916	Atm	Station Temperature
Calibrator	EnviroNics	Serial Number	2844
NO Cal Gas Conc	51.2	ppm	Cal Gas Expiry Date
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #
			March 12, 2014
			LL107272

DACS Information

DACS make	CR3000	DACS serial No.	5237
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Parameter		NO2	NOx	NO
Before	Data Slope	0.994113	0.999008	0.999590
	Data Offset	-1.615889	-0.348087	-0.036766
After	Data Slope	0.997105	0.997494	0.999148
	Data Offset	0.132207	1.653389	1.525301
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
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Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	2.1	mV	2.0	mV
NOx bkgnd	2.9	mV	2.5	mV
NO coefficient	1.398		1.357	
NOx coefficient	0.996		1.002	
NO2 conv temp	326.8	Deg C	326.8	Deg C
PMT Temp	-2.9	Deg C	-2.9	Deg C
PMT Volt	-671.2	mV	-671.2	mV
R Cell Press	169.6	in Hg	167.8	in Hg
Sample Flow	0.821	ccm	0.810	ccm

Notes:

Adjust 80% point. Using new calibrator.

Calibration Report

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



Station Information

Calibration Date: August 16, 2012 Station Location: Beaverlodge

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	-0.1	-0.1	-0.3	N/A	N/A
1	4995	39.94	406.1	406.1	0.0	406.2	405.7	0.2	1.0000	1.0011
2	4995	19.97	203.9	203.9	0.0	202.3	201.7	-0.2	1.0080	1.0108
3	4995	9.97	102.0	102.0	0.0	98.9	99.2	-0.4	1.0314	1.0285
AFZ	4995	0.00	0.0	0.0	0.0	-0.1	-0.1	-0.3	0.0000	0.0000
AFS	4995	39.94	406.1	406.1	0.8	416.1	417.7	-1.9	0.9761	0.9724
Average Correction Factor									1.0131	1.0134

As Found Concentrations: NO_x= 415.9 NO= 417.7 As Found Percent Change NO_x= 2.4% NO= 2.8%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.1	-0.1	0.0	-0.1	-0.1	-0.3	N/A	N/A	N/A	N/A
NO point	406.0	406.0	0.0	406.6	406.0	0.3	0.9986	1.0000	N/A	N/A
300	406.0	101.5	304.5	407.2	101.5	305.3	0.9972	1.0000	0.9974	100.3%
200	406.0	199.4	206.7	406.9	199.4	206.9	0.9980	1.0000	0.9989	100.1%
100	406.0	298.6	107.4	406.9	298.6	107.9	0.9980	1.0000	0.9951	100.5%
Average Correction Factor							0.9977	1.0000	0.9971	100.3%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	-0.3	-0.2	ppb	0.0	-0.1	0.0	ppb
Auto span	238.0	235.5	1.6	ppb	205.5	203.2	1.6	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



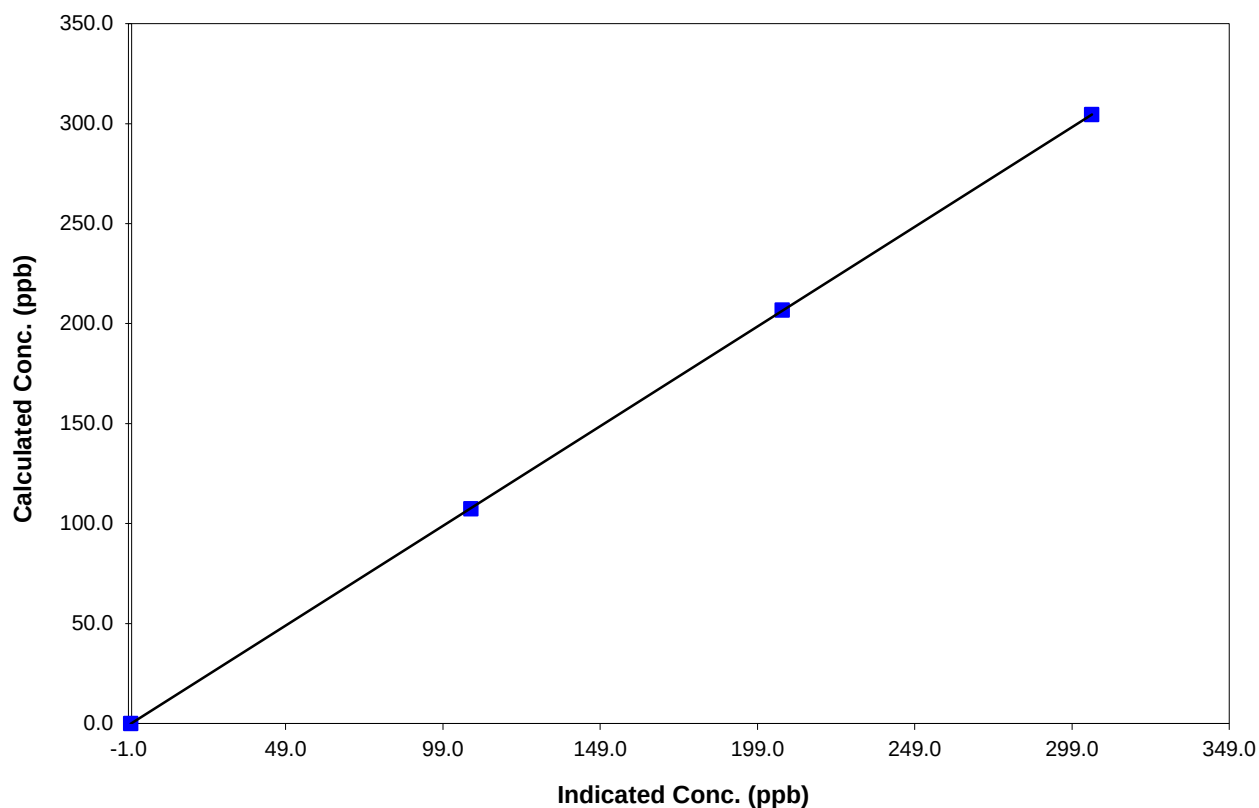
Station Information

Calibration Date	August 16, 2012	Previous Calibration	July 28, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:40	End Time (MST)	13:51
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	0.999996
304.5	305.3	0.9974		
206.7	206.9	0.9989		
107.4	107.9	0.9951	Slope	0.997105
			Intercept	0.132207

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



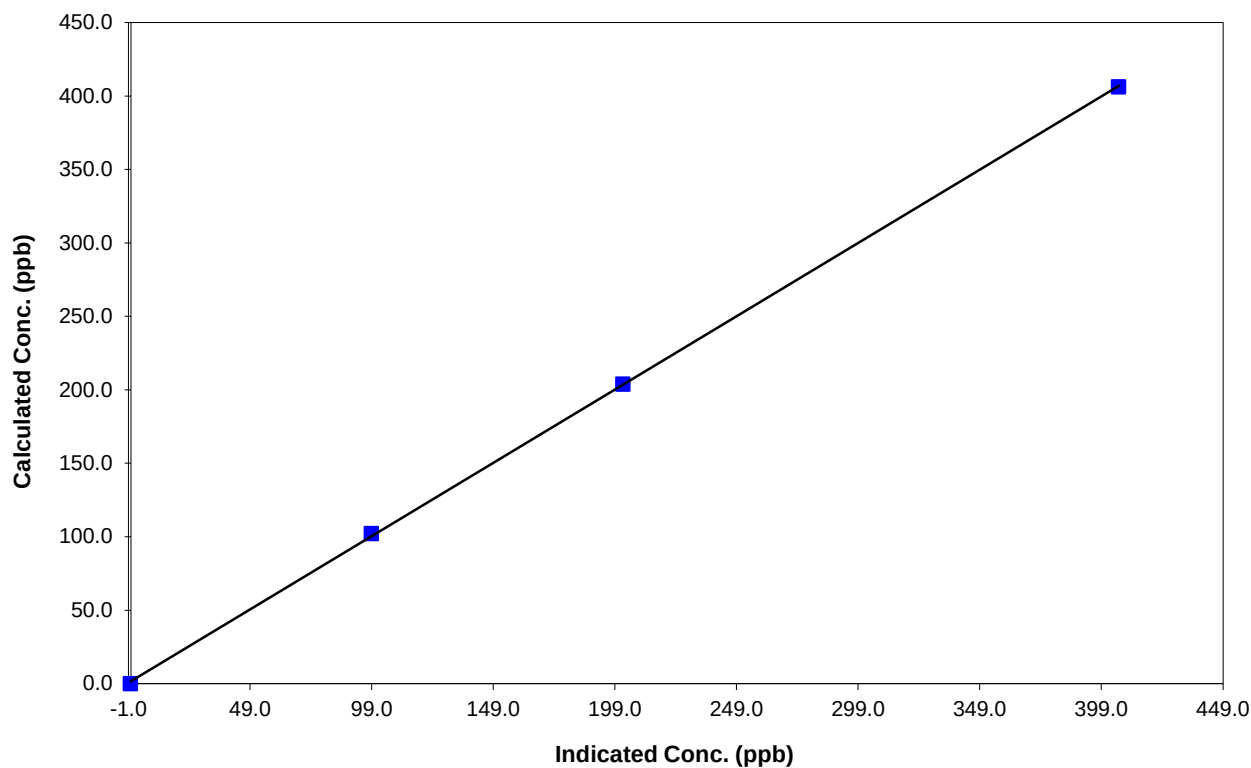
Station Information

Calibration Date	August 16, 2012	Previous Calibration	July 28, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:40	End Time (MST)	13:51
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999935
406.1	406.2	1.0000		
203.9	202.3	1.0080		
102.0	98.9	1.0314	Slope	0.997494
			Intercept	1.653389

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



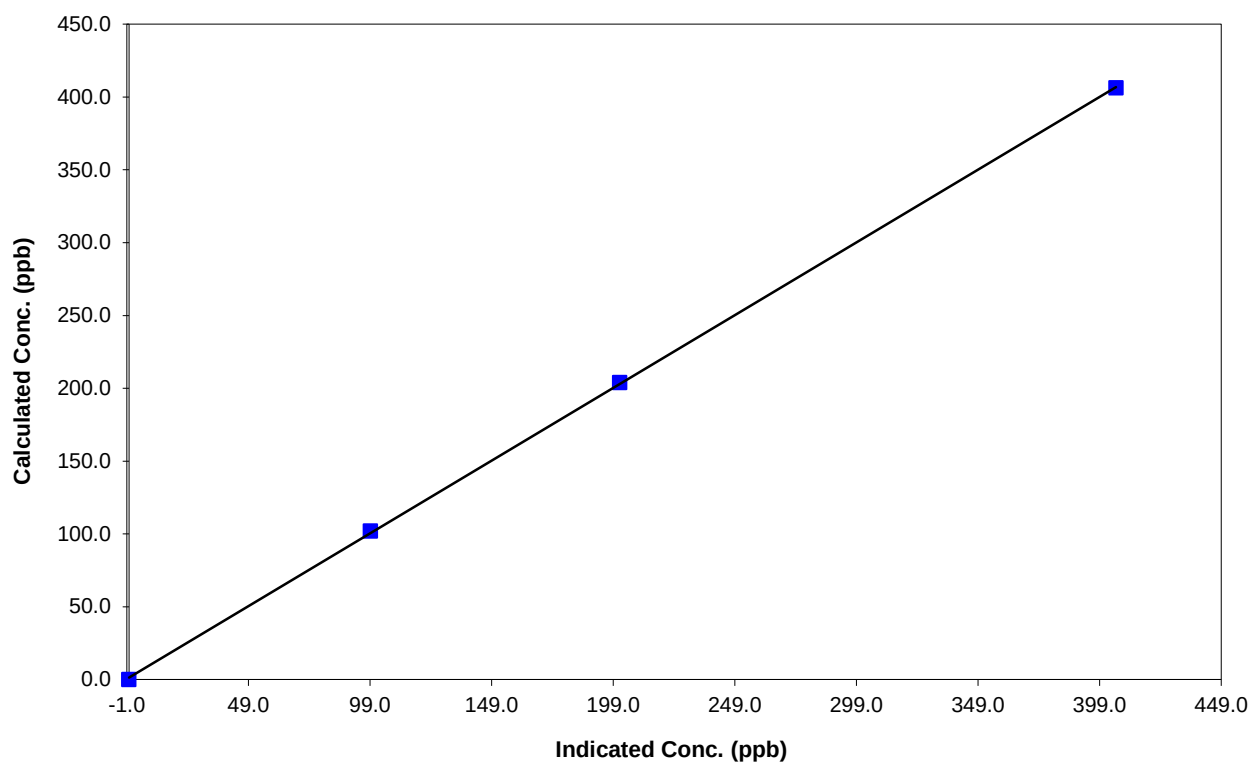
Station Information

Calibration Date	August 16, 2012	Previous Calibration	July 28, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:40	End Time (MST)	13:51
Analyzer make	TEI 42i	Analyzer serial #	906535068

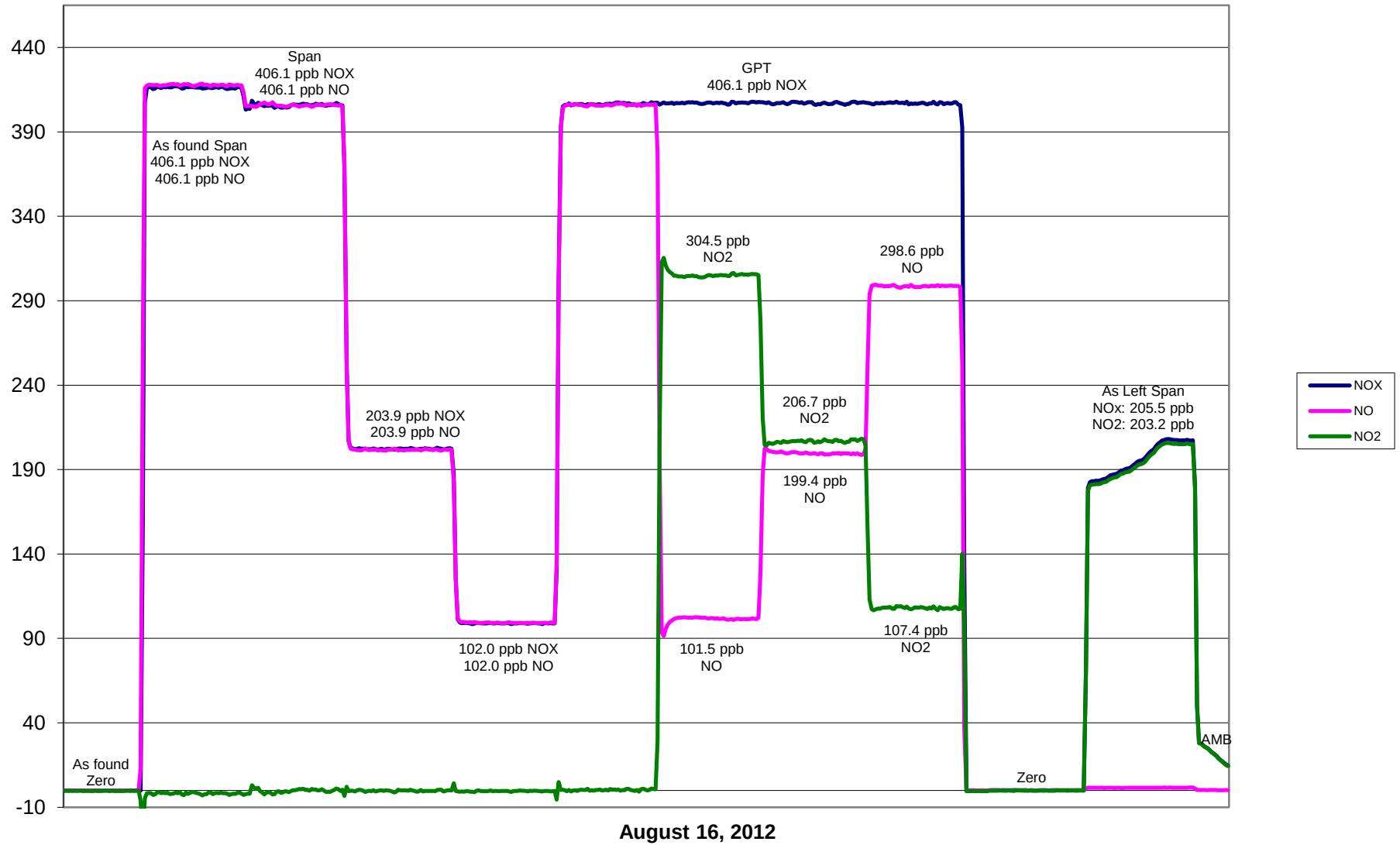
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999941
406.1	405.7	1.0011		
203.9	201.7	1.0108		
102.0	99.2	1.0285	Slope	0.999148
			Intercept	1.525301

NO Calibration Curve



PAZA Beaverlodge NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	August 16, 2012	Previous Calibration	July 28, 2012
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	12:00	End Time (MST)	15:59
Barometric Pressure	0.916 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	0.993712	Calculated slope	0.981508
Calculated intercept	-0.598827	Calculated intercept	0.772552

Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383
---------------	----------	-------------------	---------------

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.00	ppb	-1.50	ppb
slope	1.036		1.036	
Lamp temp	56.3	mV	56.3	mV
Lamp Intensity A/B	53821/57810	mV	53899/57933	mV
Pressure	681.3	mm Hg	686.5	mm Hg
Flow A	0.76	ccm	0.762	ccm
Flow B	0.709	ccm	0.711	ccm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.0	-0.5	N/A
4995	0.3	304.5	310.0	0.9822
4995	0.2	206.7	209.0	0.9890
4995	0.1	107.4	108.6	0.9893
4995	0.0	0.0	-0.5	As found zero
4995	0.3	304.5	310.0	As found span
Average Correction Factor				0.9868

Calculated value of As Found Response: 307.9 ppm Percent Change of As Found: 1.1%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.7	ppb
Auto span	114.3	ppb	#REF!	ppb

Notes: No adjustments made

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



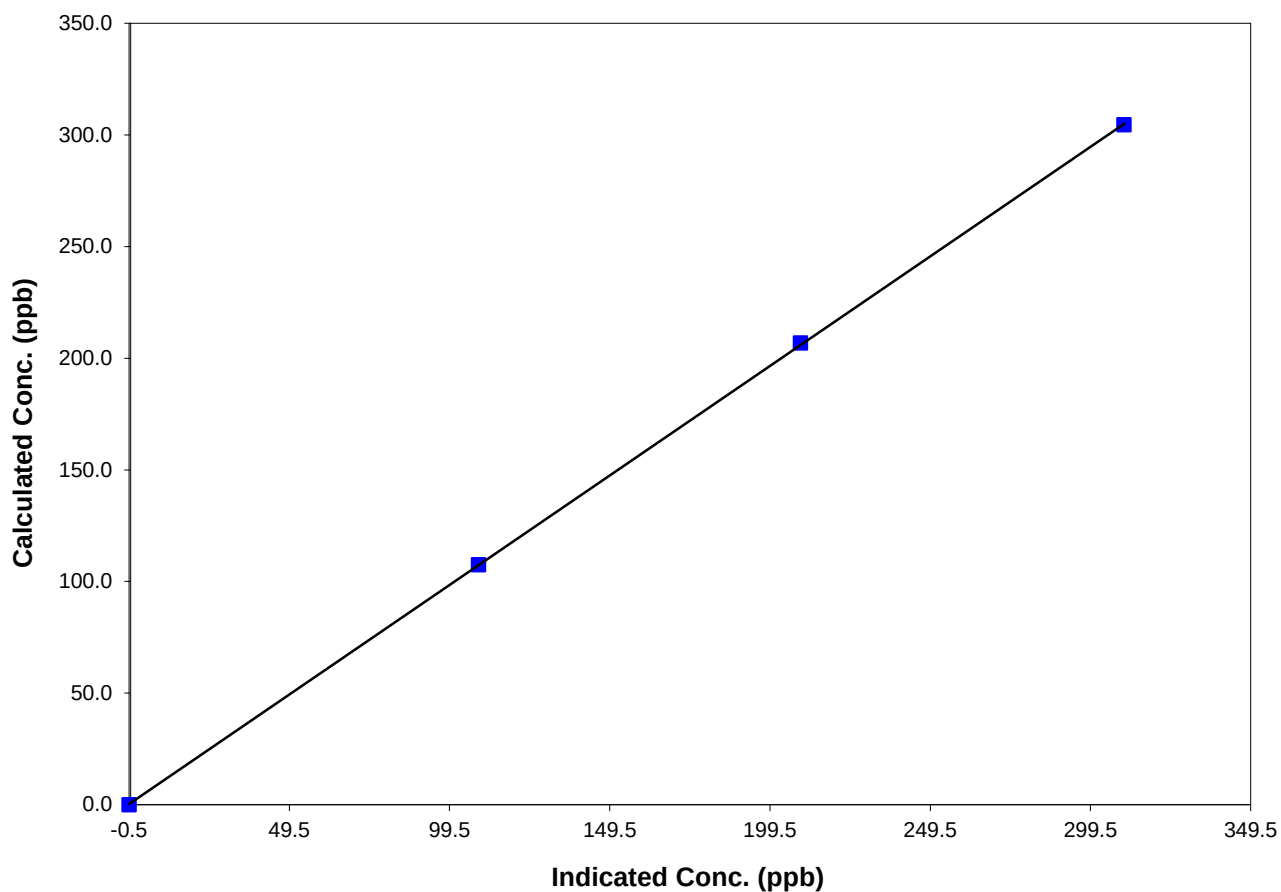
Station Information

Calibration Date	August 16, 2012	Previous Calibration	July 28, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:00	End Time (MST)	15:59
Analyzer make/model	Teco 49C	Analyzer serial #	49C-76443-383

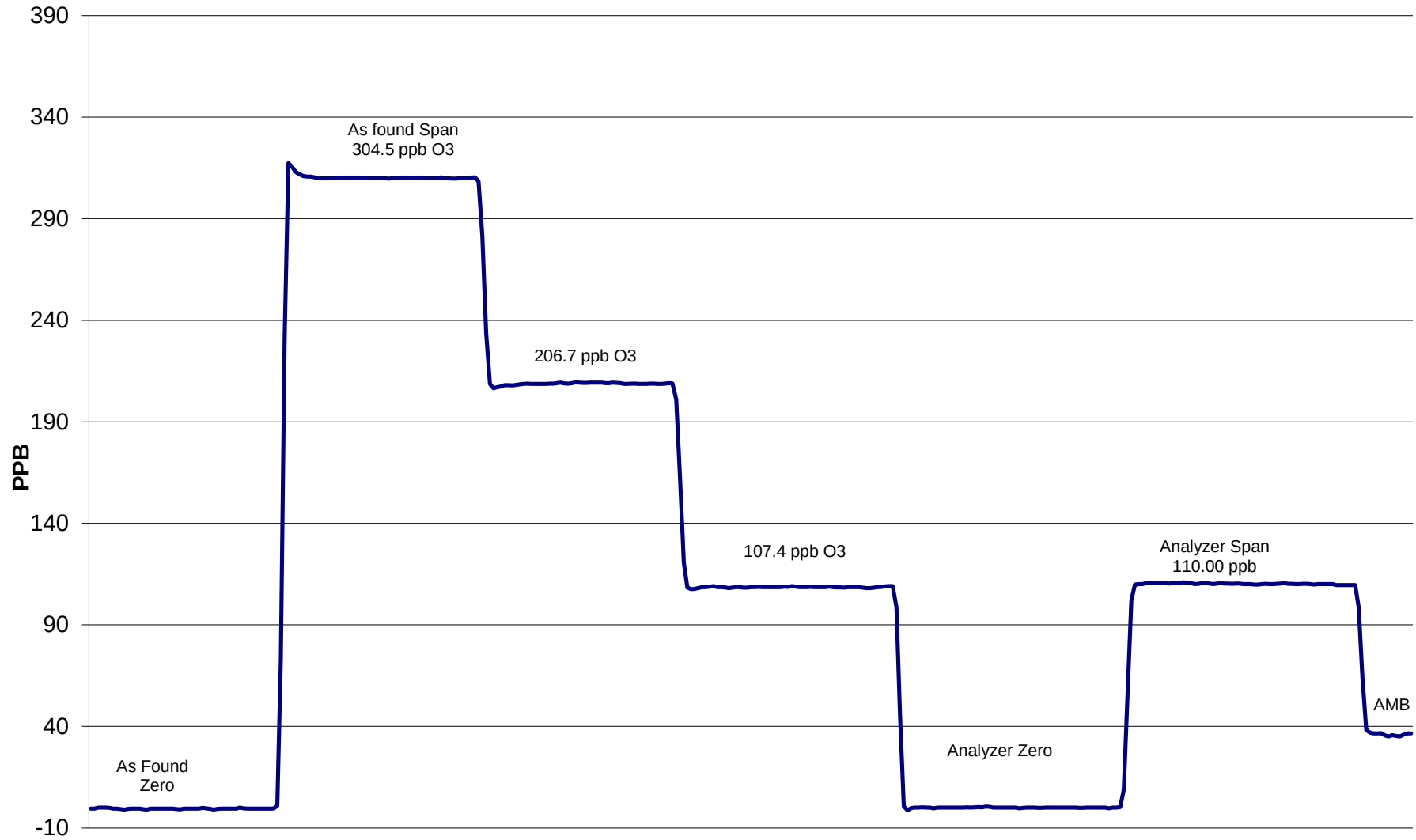
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.5	NA	Correlation Coefficient	0.999980
304.5	310.0	0.9822		
206.7	209.0	0.9890		
107.4	108.6	0.9893	Slope	0.981508
			Intercept	0.772552

O3 Calibration Curve



O3 Calibration



August 16, 2012

FDMS TEOM PM2.5 AUDIT



STATION: BeaverLodge
 LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christiansen
 DATE: 30-May-12

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	AMU1649
Site Number	4
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
T-Case Indicated / Set Point	30/30
T-Air Indicated / Set Point	30/30
T-Cap Indicated / Set Point	30/30
Splitter Assembly Alignment (cm)	15.5

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

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	16-Aug-12
Previous Calibration	

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

* capacity test or pump on timed test utilized to verify pump integrity

"FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	-0.11	0.11
PUMP OFF	0.01	0.01
NET	-0.12	0.10
LIMITS	<0.15	<0.60

	Ambient Temp. (^o C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
SET POINT (S)	na	na	14287	13.67	3.00
INDICATED (I)	25.9	0.914		13.68	3.00
MEASURED (AF)	25.8	0.915		13.69	3.01
MEASURED (M)	25.8	0.915	14164	13.69	3.01
DIFFERENCE (M-I)	-0.1	0.001	-0.9%	0.01	0.01
LIMITS	± 2^o C	± 0.005 atm	± 2.5 %	± 1.0 L/min	± 0.2 L/min

As Found Data
 Adjusted Data

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

COMMENTS: PASS

Sample heads were cleaned.

Reference leak check: Main: -0.10 Aux: 0.13

PASS

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

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	August 28, 2012	Previous Calibration	July 30, 2012
Station Number	6	Station Location	Valleyview
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:04	End Time (MST)	15:00
Barometric Pressure	702.00 mmHg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Concentration	50.8 ppm	Cal Gas Cert Date	3/12/2013
Gas Cylinder Num.	LL107272	Cal gas Exp. Date	3/12/2014
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	1.002218	Calculated slope	0.997926
Calculated intercept	0.817463	Calculated intercept	2.049293
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	31.3		31	
Coefficient	0.871		0.871	
UV Lamp Voltage	963	LPM	964	LPM
Chamber Temp	43.7	V	44.2	V
Perm Gas Temp	26.8	C	26.8	C
Pressure	601.3	in Hg	610.5	in Hg
Sample Flow	0.557	LPM	0.560	LPM
Lamp Intensity	47805	Hz	48426	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.4	N/A
4995	39.94	403.0	403.2	0.9995
4995	19.97	202.3	198.7	1.0180
4995	9.94	100.9	97.2	1.0381
4995	0.00	0.0	0.4	As found zero
4995	39.94	403.0	397.3	As found span
Average Correction Factor				1.0186

Calculated value of As Found Response: 398.6 ppm Percent Change of As Found: 1.1%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	155.5	ppm	160.1	ppm

Notes: Slight adjust.

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



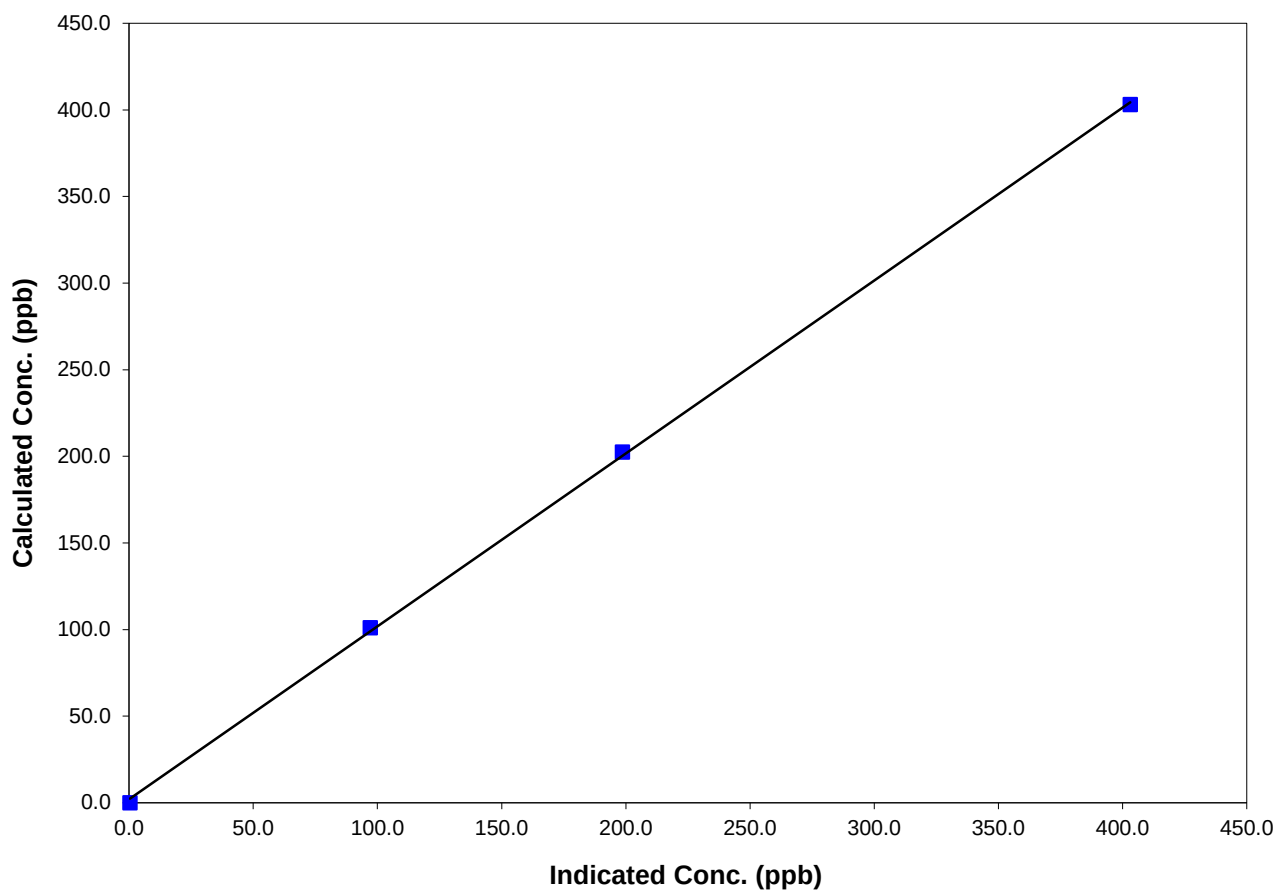
Station Information

Calibration Date	August 28, 2012	Previous Calibration	July 30, 2012
Station Number	6	Station Location	Valleyview
Start Time (MST)	12:04	End Time (MST)	14:42
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

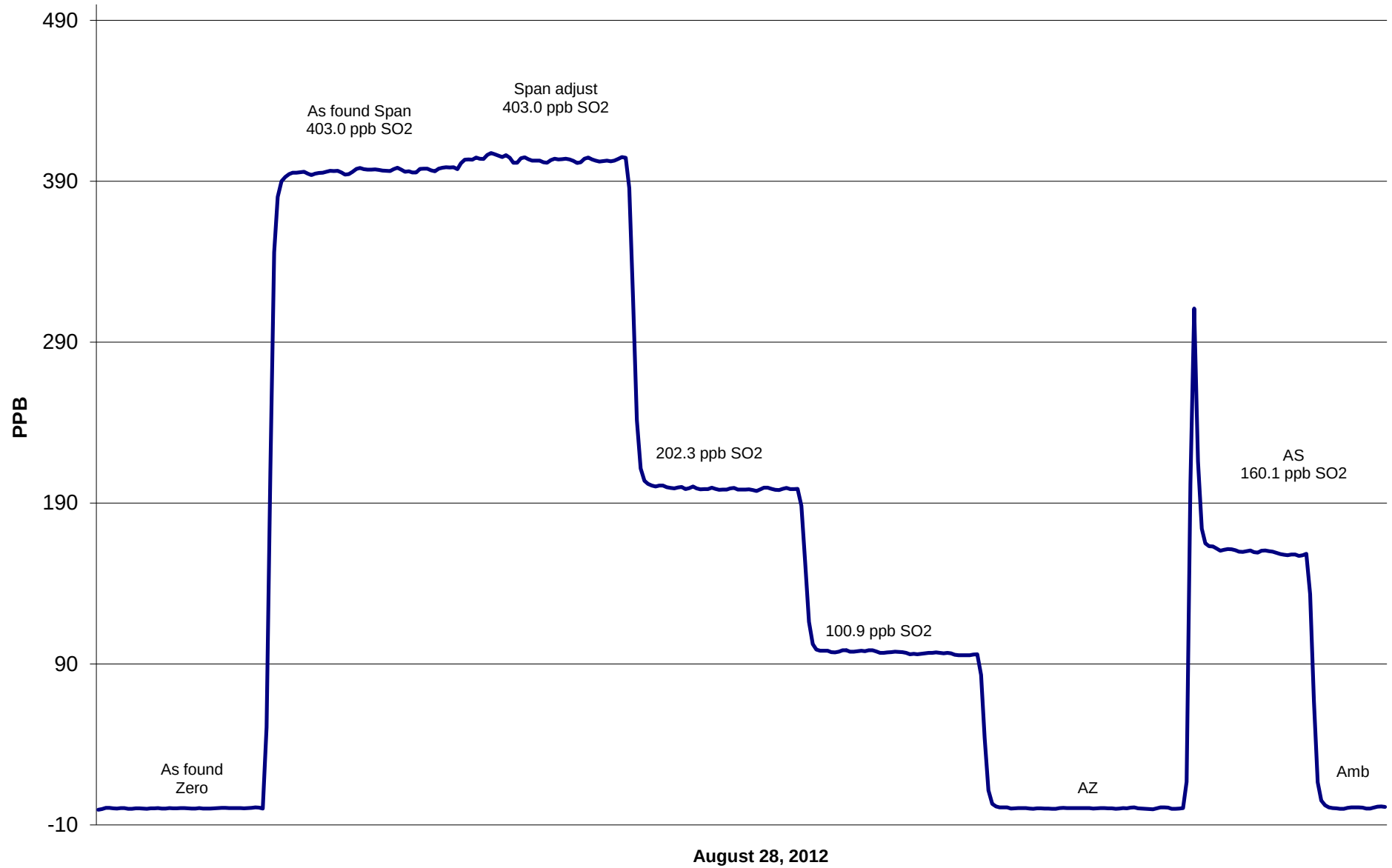
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999832
403.0	403.2	0.9995		
202.3	198.7	1.0180		
100.9	97.2	1.0381	Slope	0.997926
			Intercept	2.049293

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter H2S

Air Monitoring Network PAZA



Station Information

Calibration Date	August 28, 2012	Previous Calibration	July 30, 2012
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	9:06	End Time (MST)	13:33
Barometric Pressure	702.00 mm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	LL160692
Cal Gas Concentration	10.1 ppm	Cal Gas Expiry Date	5/11/2013
Gas Cert Reference	5/15/2012		
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	0.997908	Calculated slope	0.998226
Calculated intercept	-0.094527	Calculated intercept	0.662543
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	7.1	ppb	7.9	ppb
Coefficient	1.348		1.056	
Lamp Voltage	781	v	780	v
Chamber Temp	45.1	c	45.1	c
Perm Oven Temp	44.33	c	44.9	c
Pressure	613.10	mm Hg	613.10	mm Hg
Sample Flow	0.415	ccm	0.416	ccm
Lamp Intensity	91.0	%	91.0	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.0	N/A
4995	39.93	80.1	79.9	1.0027
4995	19.97	40.2	39.1	1.0284
8979	8.96	10.1	9.0	1.1229
4995	0.00	0.0	0.0	As found zero
4995	39.88	80.0	77.7	As found span
Average Correction Factor				1.0513

Calculated value of As Found Response: 77.40 ppm Percent Change of As Found: 3.3%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.4	ppm
Auto span	70.6	ppm	73.6	ppm

Notes: Adjust PMT following as found to bring slope down. Slight adjust 80% point.

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



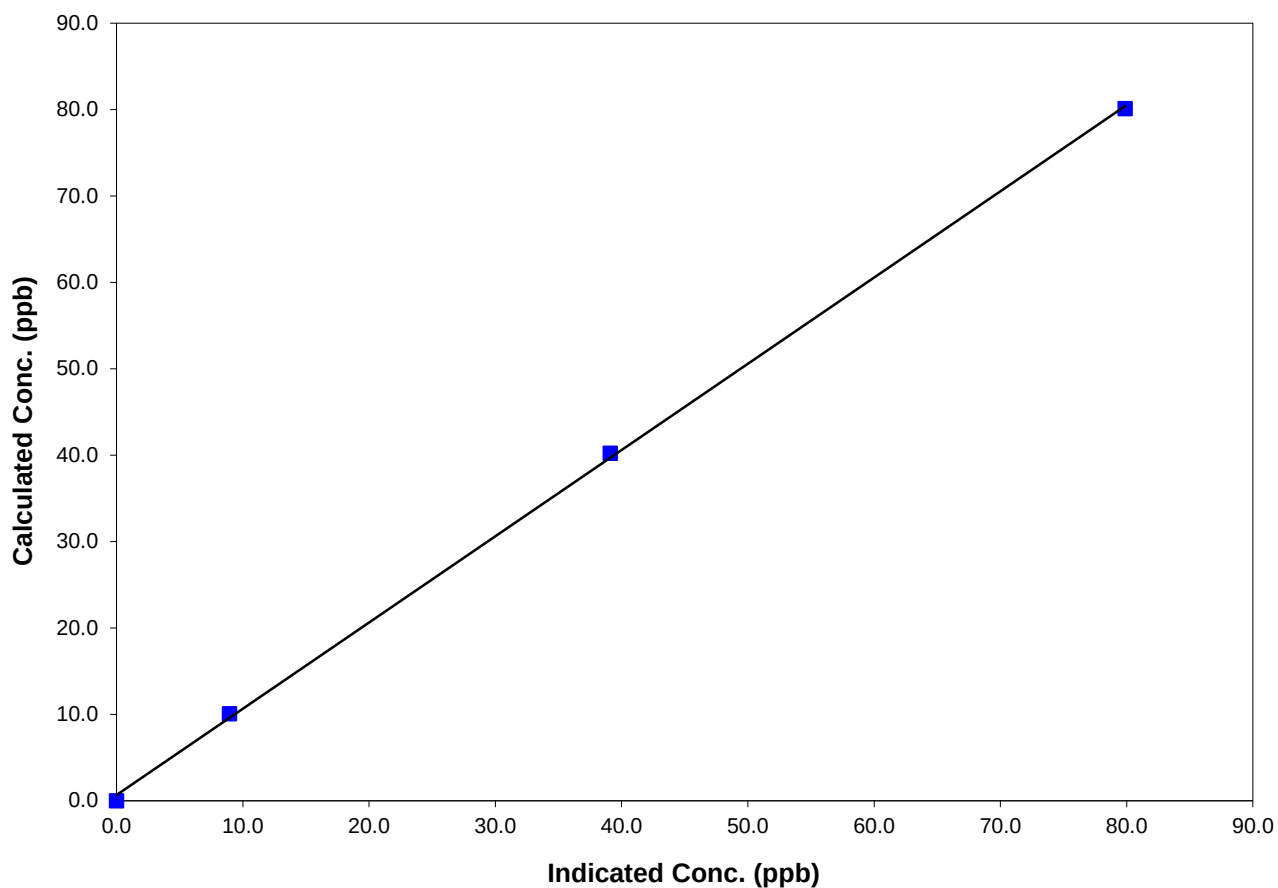
Station Information

Calibration Date	August 28, 2012	Previous Calibration	July 30, 2012
Station Number	6	Station Location	Valleyview
Start Time (MST)	9:06	End Time (MST)	13:33
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

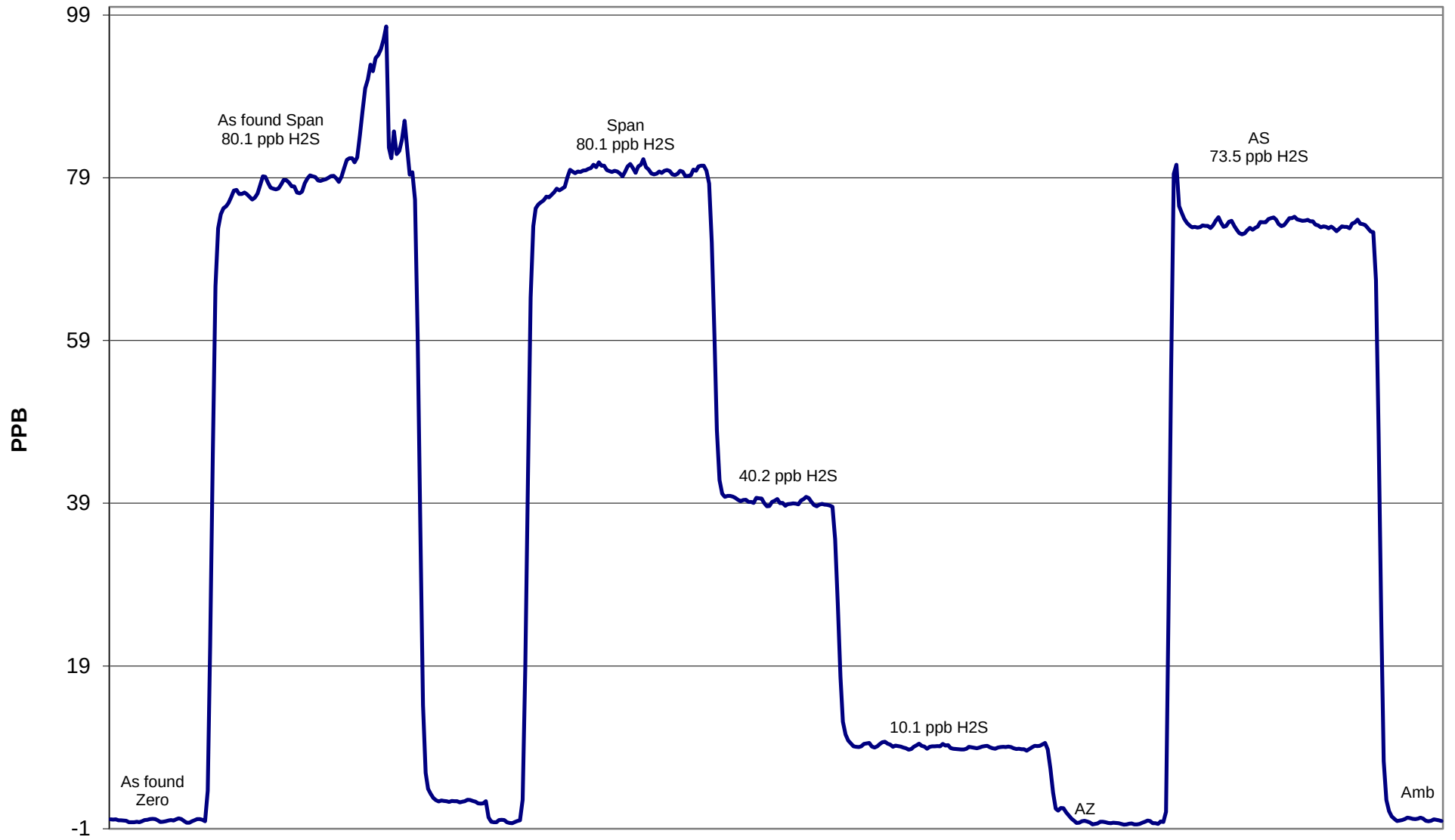
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999740
80.1	79.9	1.0027		
40.2	39.1	1.0284		
10.1	9.0	1.1229	Slope	0.998226
			Intercept	0.662543

H2S Calibration Curve



H2S Calibration



August 28, 2012

Calibration Report



Parameter SO2

Air Monitoring Network PAZA

Station Information

Calibration Date	August 29, 2011	Previous Calibration	July 31, 2011
Station Number	9	Station Location	Sunset House
Reason:	Routine	Install	Removal
			Other:

Start Time (MST)	7:15	End Time (MST)	10:43
Barometric Pressure	31.70 inches Hg	Station Temperature	19.7 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Concentration	50.8 ppm	Cal Gas Expiry Date	4/6/2012
Gas Cert Reference	LL85275		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.996522	Calculated slope	0.996059
Calculated intercept	0.415969	Calculated intercept	2.674875

Analyzer make TEI 43C Analyzer serial # 609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	17.5		17.3	
Coefficient	0.995		0.983	
UV Lamp Voltage	826	V	826	V
Chamber Temp	44.8	C	44.8	C
Perm Gas Temp	45	C	45	C
Pressure	659.1	mm Hg	657.7	mm Hg
Sample Flow	0.479	LPM	0.479	LPM
Lamp Intesity	36925	Hz	37000	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	0.0	N/A
4995	39.93	402.9	403.3	0.9990
4995	19.97	202.3	198.5	1.0193
4995	9.96	101.1	96.5	1.0472
4995	0.00	0.0	0.0	As found zero
4995	39.93	402.9	405.4	As found span
Average Correction Factor				1.0218

Calculated value of As Found Response: 404.410 ppm Percent Change of As Found: -0.4%

Auto zero
Auto span

before calibration		after calibration	
0.3	ppm	0.3	ppm
264.0	ppm	270.0	ppm

Notes: Slow response on initial 80% point. Dropped to zero and checked calibrator conditioning.
Re submit 80% point SO2.

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



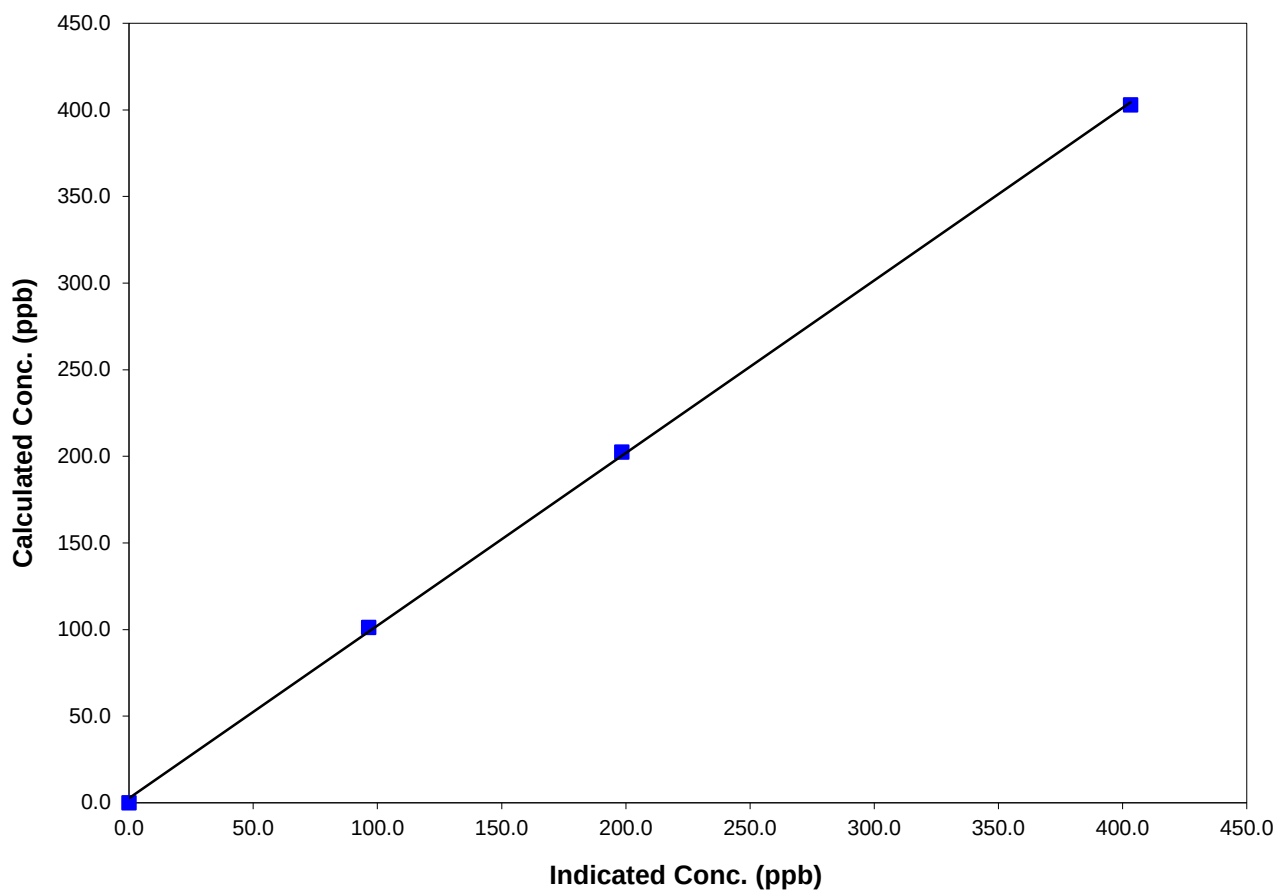
Station Information

Calibration Date	August 29, 2011	Previous Calibration	July 31, 2011
Station Number	9	Station Location	Sunset House
Start Time (MST)	7:15	End Time (MST)	10:43
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

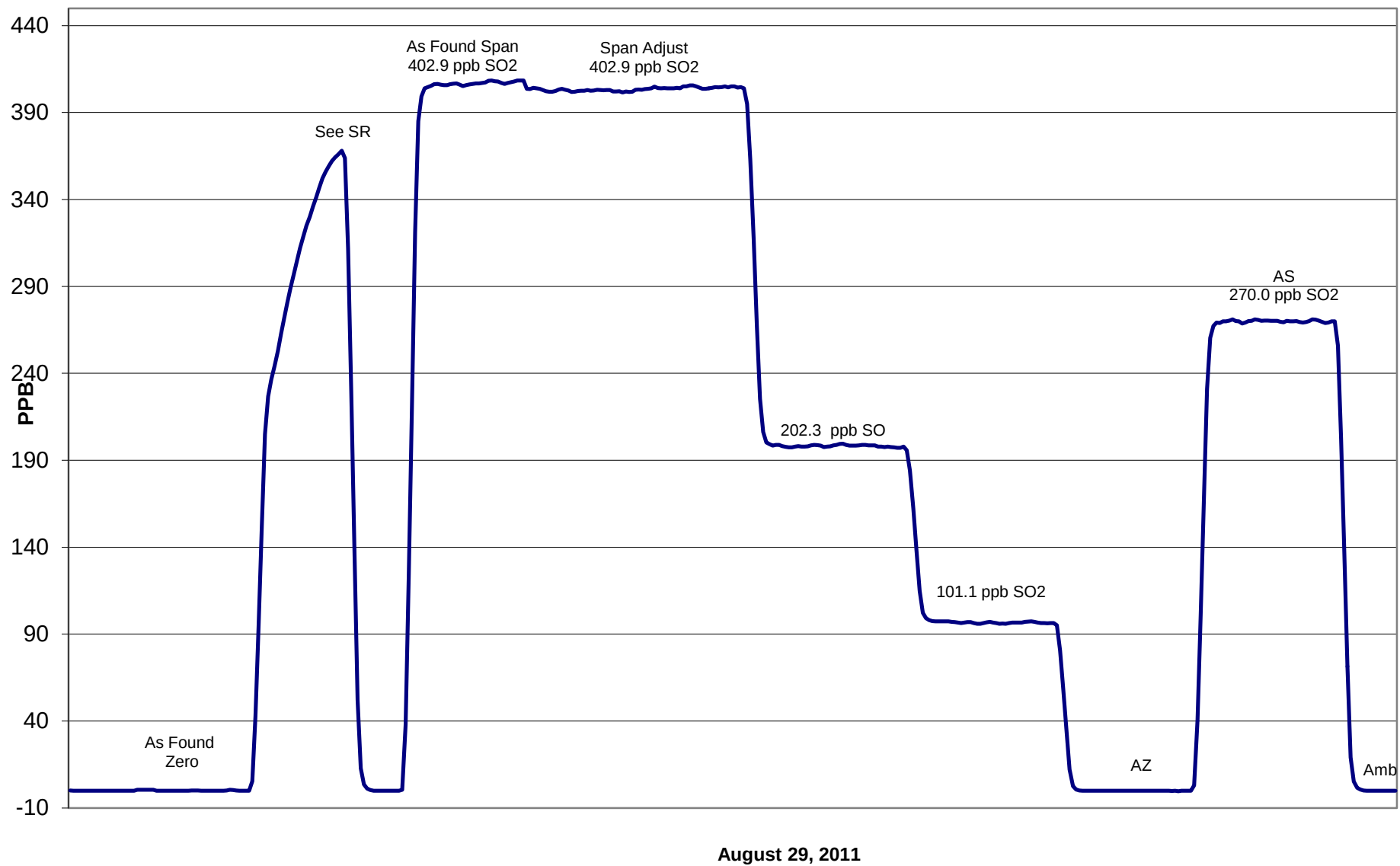
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999792
402.9	403.3	0.9990		
202.3	198.5	1.0193		
101.1	96.5	1.0472	Slope	0.996059
			Intercept	2.674875

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	August 29, 2012	Previous Calibration	July 31, 2012
Station Number	9	Station Location	Sunset House
Reason:	Routine	Install	Removal
Other:			
Start Time (MST)	7:15	End Time (MST)	12:02
Barometric Pressure	0.913	Atm	Station Temperature
Calibrator	EnviroNics	Serial Number	3016
NO Cal Gas Conc	51.2	ppm	Cal Gas Expiry Date
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #
			LL107272

DACS Information

DACS make	CR3000	DACS serial No.	5407
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Parameter		NO2	NOx	NO
Before	Data Slope	1.004714	0.996292	0.999051
	Data Offset	0.774703	-0.723299	-0.924792
After	Data Slope	1.005163	0.996340	1.001437
	Data Offset	-0.331816	0.738560	0.690118
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	4.7	mV	4.7	mV
NOx bkgnd	5.0	mV	5.0	mV
NO coefficient	1.138		1.138	
NOx coefficient	1.000		0.997	
NO2 conv temp	325.0	Deg C	325.0	Deg C
PMT Temp	-2.8	Deg C	-2.8	Deg C
PMT Volt	-797.4	mV	-797.4	mV
R Cell Press	173.2	in Hg	171.4	in Hg
Sample Flow	0.771	ccm	0.784	ccm

Slow response on initial 80% point. Dropped to zero and checked calibrator conditioning.

NOTES: Slight span adjust

Calibration Report

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



Station Information

Calibration Date: August 29, 2012 Station Location: Sunset House

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	1.4	0.6	0.7	N/A	N/A
1	4995	39.93	406.0	406.0	0.0	407.9	405.5	0.6	0.9955	1.0012
2	4995	19.97	203.9	203.9	0.0	202.7	201.9	-0.1	1.0059	1.0099
3	4995	9.96	101.9	101.9	0.0	99.6	100.0	-0.4	1.0235	1.0190
AFZ	4995	0.00	0.0	0.0	0.0	1.4	0.6	0.7	0.0000	0.0000
AFS	4995	39.93	406.0	406.0	0.0	389.2	388.8	-1.3	1.0434	1.0445
Average Correction Factor									1.0083	1.0101

As Found Concentrations: NO_x= 387.1 NO= 387.2 As Found Percent Change NO_x= -4.7% NO= -4.6%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.6	0.6	0.0	1.4	0.6	0.7	N/A	N/A	N/A	N/A
NO point	407.4	407.4	0.0	408.1	407.4	-1.3	0.9982	1.0000	N/A	N/A
300	407.4	106.6	300.8	408.3	106.6	300.0	0.9979	1.0000	1.0026	99.7%
200	407.4	202.7	204.7	408.4	202.7	203.6	0.9977	1.0000	1.0057	99.4%
100	407.4	300.7	106.7	408.9	300.7	106.1	0.9964	1.0000	1.0060	99.4%
Average Correction Factor							0.9973	1.0000	1.0048	99.5%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.8	0.2	0.7	ppb	0.3	-0.2	0.5	ppb
Auto span	169.8	167.0	2.2	ppb	175.4	172.4	2.0	ppb

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



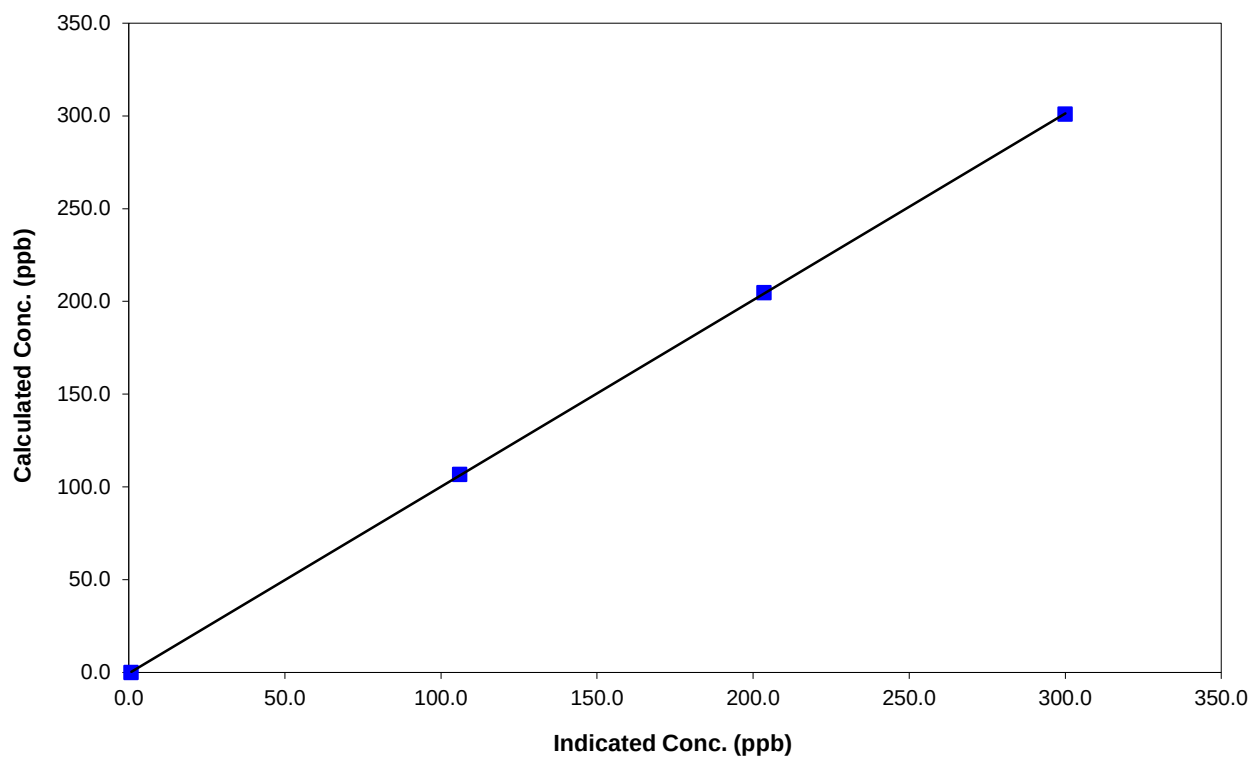
Station Information

Calibration Date	August 29, 2012	Previous Calibration	July 31, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	7:15	End Time (MST)	12:02
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	0.999985
300.8	300.0	1.0026		
204.7	203.6	1.0057		
106.7	106.1	1.0060	Slope	1.005163
			Intercept	-0.331816

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



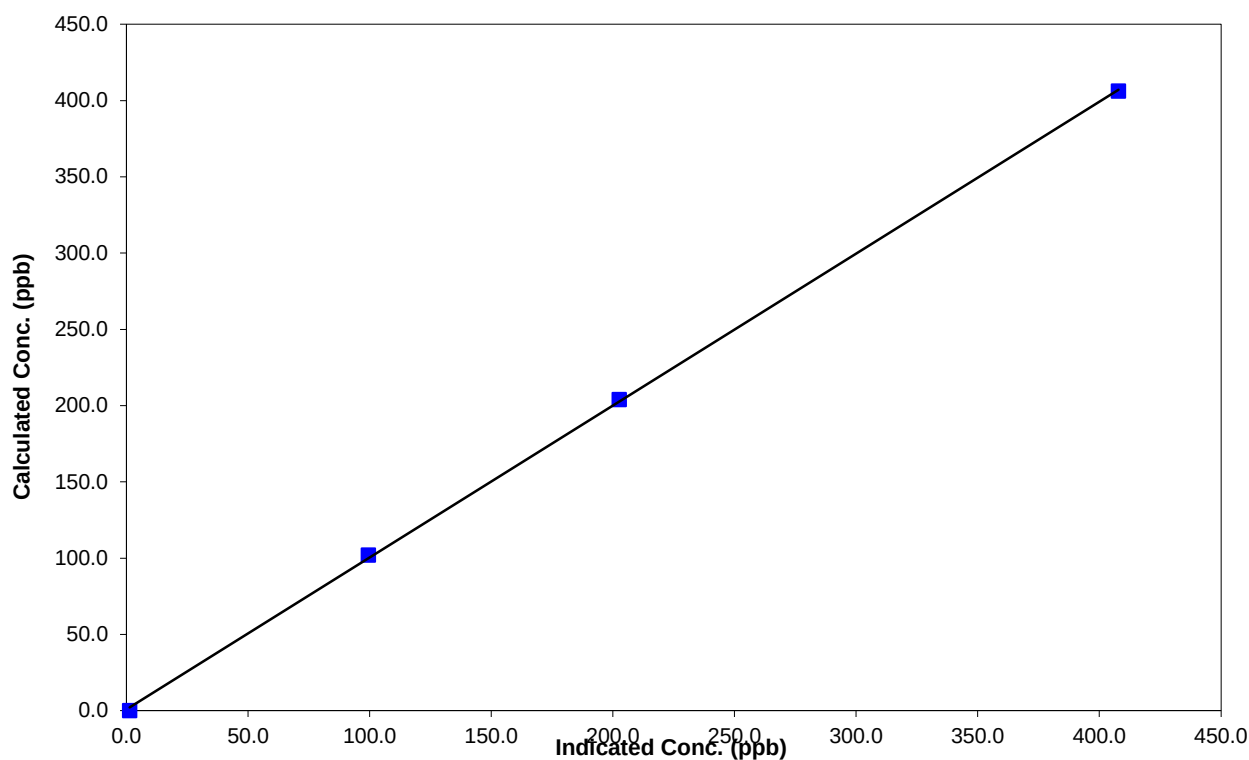
Station Information

Calibration Date	August 29, 2012	Previous Calibration	July 31, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	7:15	End Time (MST)	12:02
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	1.4	N/A	Correlation Coefficient	0.999880
406.0	407.9	0.9955		
203.9	202.7	1.0059		
101.9	99.6	1.0235	Slope	0.996340
			Intercept	0.738560

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



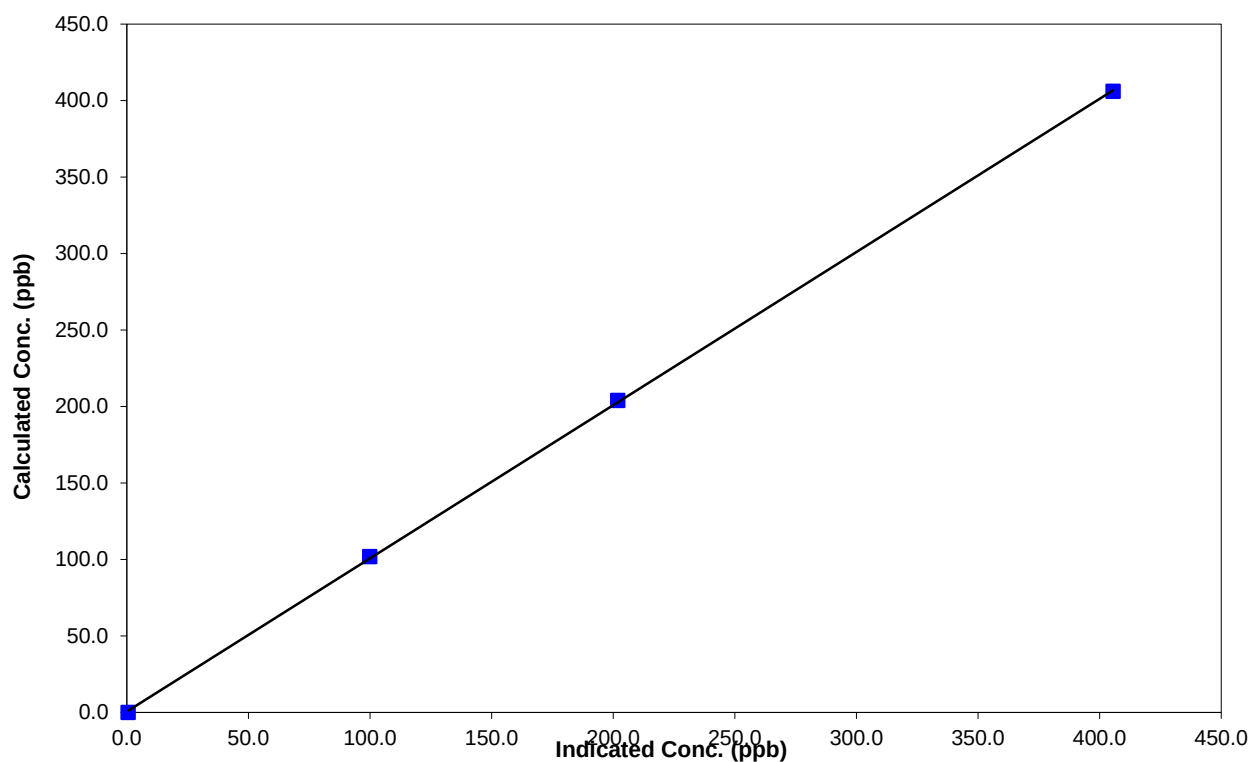
Station Information

Calibration Date	August 29, 2012	Previous Calibration	July 31, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	7:15	End Time (MST)	12:02
Analyzer make	TEI 42i	Analyzer serial #	0701120011

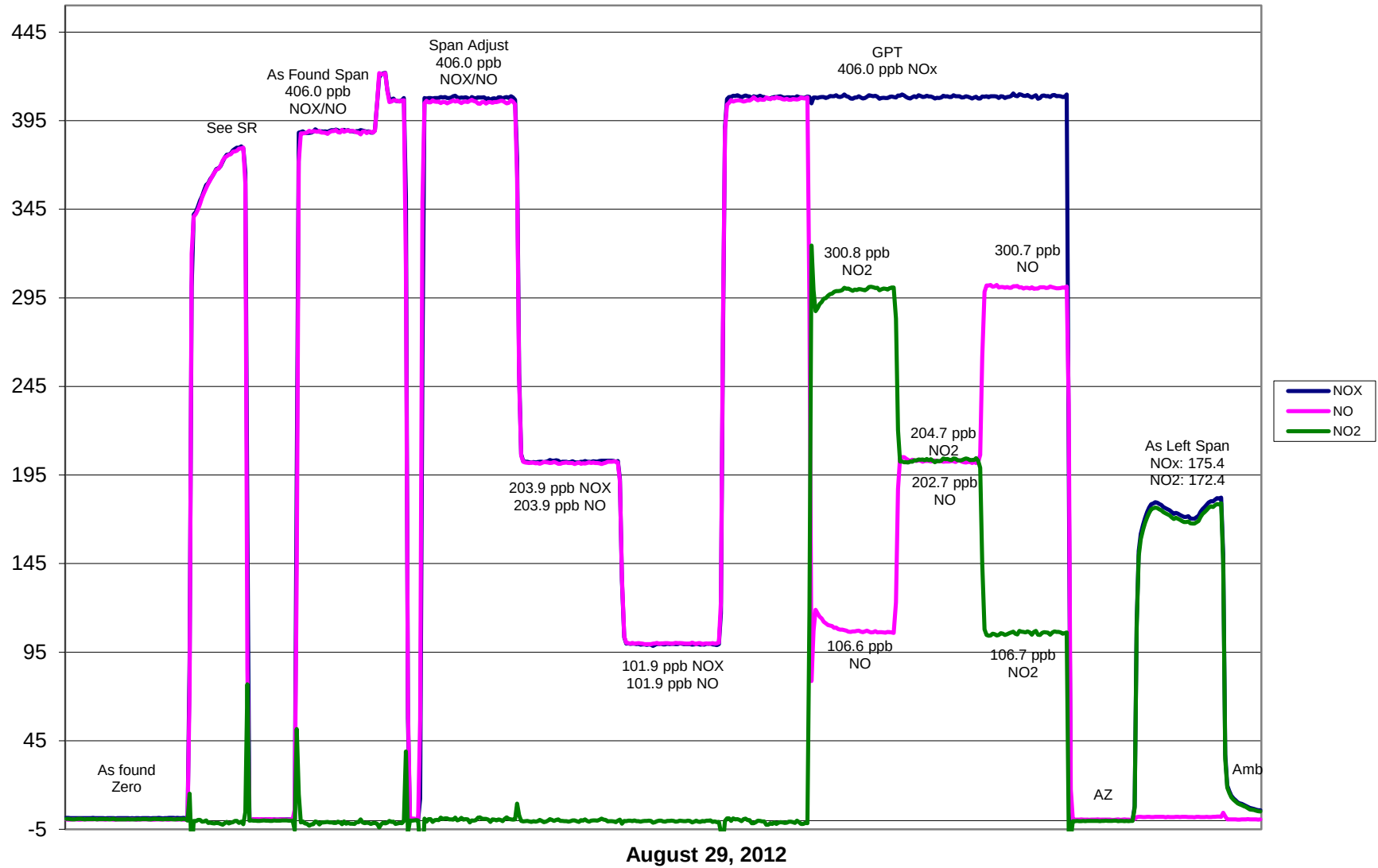
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A	Correlation Coefficient	0.999950
406.0	405.5	1.0012		
203.9	201.9	1.0099		
101.9	100.0	1.0190	Slope	1.001437
			Intercept	0.690118

NO Calibration Curve



PASZA Sunset House NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	August 29, 2012	Previous Calibration	July 31, 2012
Station Number	9	Station Location	Sunset House
Reason:	Routine	☐ Install	☐ Removal remove ☐ Other:

Start Time (MST)	11:15	End Time (MST)	13:55
Barometric Pressure	0.913 atm	Station Temperature	15.7 Deg C
Calibrator	Envionics 6100	Serial Number	3474

DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.010327	Calculated slope	0.993081
Calculated intercept	1.053528	Calculated intercept	0.635250

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	90260	Hz	91101	Hz
Cell B intensity	83377	Hz	84258	Hz
Pressure	674.00	in Hg	678.50	in Hg
CellA Flow	0.931	ccm	0.938	ccm
Cell B Flow	0.716	cmm	0.719	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)
4995	0.00	0.0	0.1	N/A
4995	0.30	300.8	303.2	0.9921
4995	0.20	204.7	204.4	1.0014
4995	0.10	106.7	106.2	1.0051
4995	0.00	0.0	0.1	As found zero
4995	0.30	300.8	303.2	As found span
Average Correction Factor				0.9995

Calculated value of As Found Response: 307.3 ppm Percent Change of As Found: 2.1%

	before calibration		after calibration	
Auto zero	0.6	ppb	0.7	ppb
Auto span	137.7	ppb	204.3	ppb

Notes: No adjust.

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter O3

Air Monitoring Network PAZA



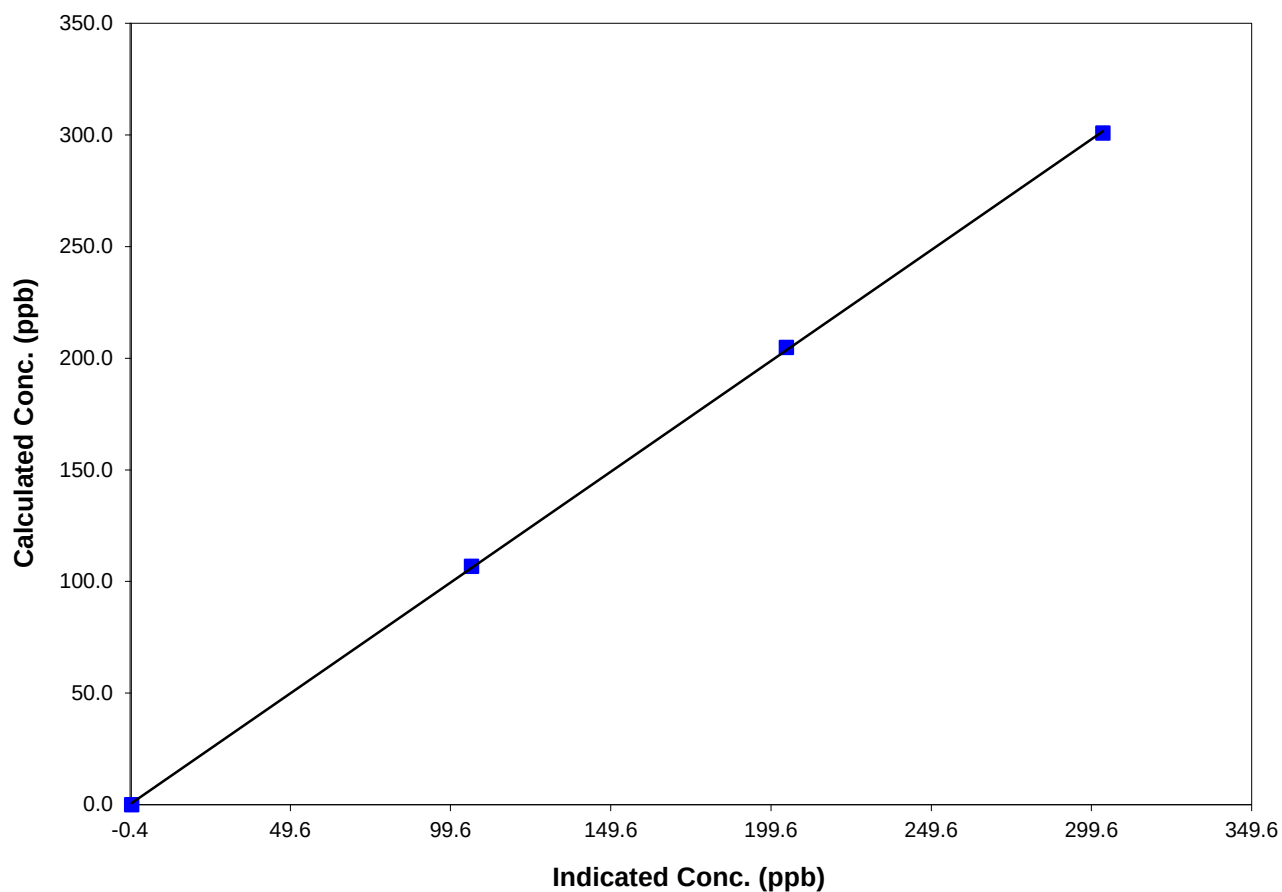
Station Information

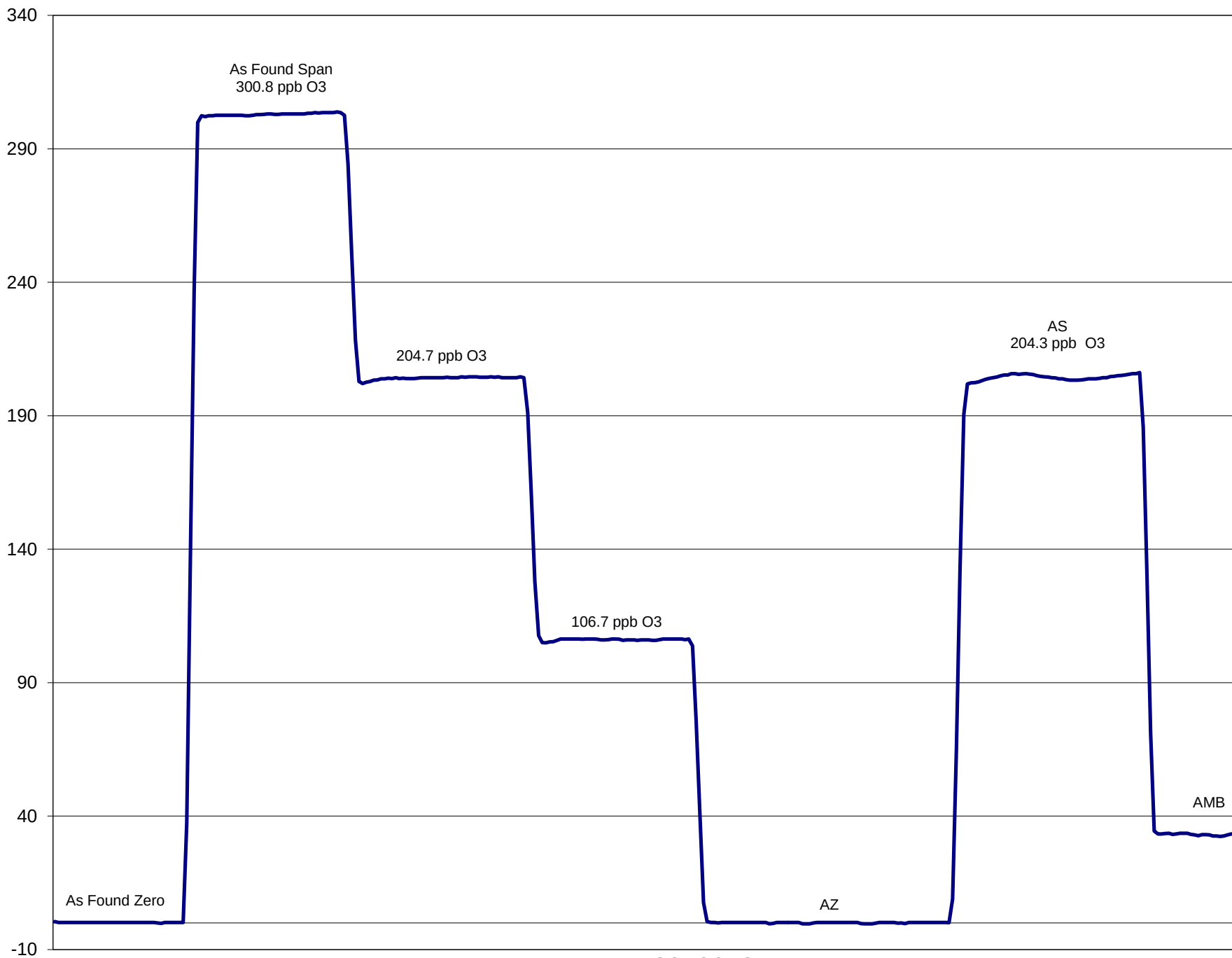
Calibration Date	August 29, 2012	Previous Calibration	July 31, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	11:15	End Time (MST)	13:55
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-0609716240

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999939
300.8	303.2	0.9921		
204.7	204.4	1.0014		
106.7	106.2	1.0051	Slope	0.993081
			Intercept	0.635250

O3 Calibration Curve





Parameter	TRS
Air Monitoring Network	



Calibration Date		August 29, 2012		Previous Calibration		July 31, 2012	
Station Name		PAZA Rover		Station Location		Sunset House	
Reason:	Routine	Install		Removal		Other:	
Start Time (MST)	12:20			End Time (MST)	14:54		
Barometric Pressure	27.5	inches Hg		Station Temperature	20.0	Deg C	
Calibrator	EnviroNics 6100			Serial Number	3474		
Cal Gas Concentration	10.1	ppm		Cal Gas Expiry Date	9/3/2011		
Gas Cert Reference	BLM001434						
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	1.005691			Calculated slope	0.992682		
Calculated intercept	0.206766			Calculated intercept	0.662489		
Analyzer make	TEI 43C			Analyzer serial #	609716238		

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	14.3	ppb	14.2	ppb
Coefficient	1.424		1.424	
Lamp Voltage	790	V	790	V
Chamber Temp	44.1	C	44.1	C
Perm gas Temp	45.0	C	45.0	C
Pressure	643.2	mmHg	651.1	mmHg
Sample Flow	0.420	ccm	0.423	ccm
Lamp Intensity	39050.0	Hz	38432.0	Hz

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	-0.5	N/A
4995	39.94	80.1	80.1	1.0006
4995	19.94	40.2	39.8	1.0094
8995	8.94	10.0	9.2	1.0902
4995	0.00	0.0	-0.5	As found zero
4995	39.94	80.1	80.1	As found span
Average Correction Factor				1.0334

Calculated value of As Found Response: 81.20 ppm Percent Change of As Found: -1.3%

	before calibration		after calibration	
Auto zero	-0.6	ppm	0.3	ppm
Auto span	69.6	ppm	71.5	ppm

Notes:

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Air Monitoring Network PAZA

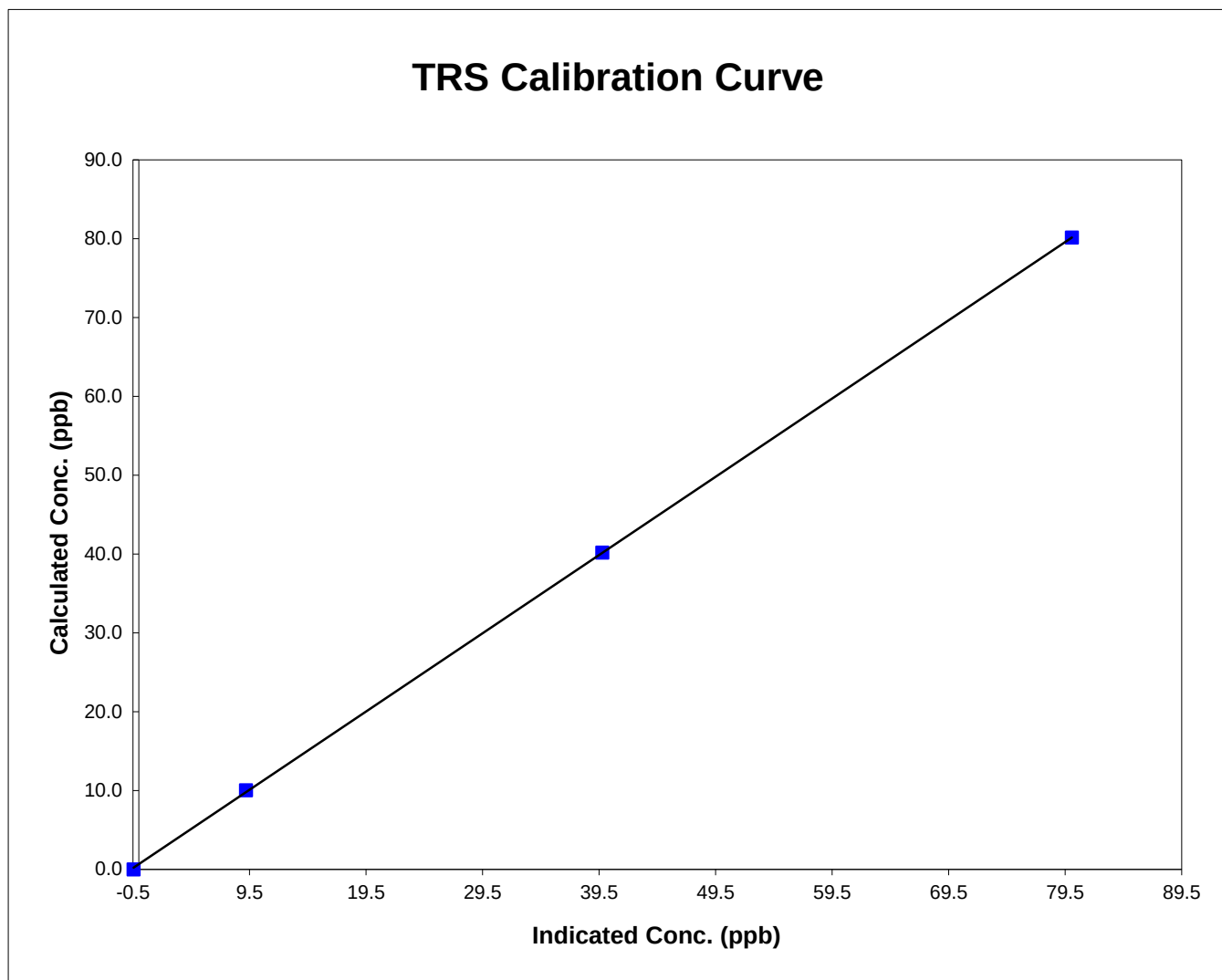


Station Information

Calibration Date	August 29, 2012	Previous Calibration	July 31, 2012
Station Number	PAZA Rover	Station Location	Sunset House
Start Time (MST)	12:20	End Time (MST)	14:54
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	-0.5	N/A		
80.1	80.1	1.0006	Correlation Coefficient	0.999974
40.2	39.8	1.0094		
10.0	9.2	1.0902		
			Slope	0.992682
			Intercept	0.662489



TRS Calibration

