



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

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

Operations and Reporting



March 25th, 2013

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

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

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

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

Company	Facility	LSD	AENV Approval Number
Advantage Oil & Gas Ltd.	Glacier	05-02-076-13-W6	262479-00-00
Alberta Power (2000) Ltd.	Sturgeon	SW-06-69-21-W5	10283-02-02
AltaGas Ltd.	Pouce Coupe	03-03-081-13-W6	247673-00-00
	Ante Creek	02-26-068-25-W5	266694-00-00
	Gordondale	16-31-78-11-W6M	287474-00-00
Apache	House Mountain	01-08-70-10-W5	10137-02-02
Barrick Energy Inc.	Sturgeon/Valleyview	02-02-069-22-W5	1633-02-00
Birchcliff Energy Ltd.	Pouce Coupe	03-22-078-12-W6	252529-00-00
Canadian Natural Resources Limited	Bonanza	11-25-081-11-W6	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
Canfor Forest Products (CFP)	Grande Prairie	SW-23-71-06-W6	152645-01-00

Company	Facility	LSD	AENV Approval Number
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
Enerplus Resources	Pouce Coupe	SW-06-69-21-W5	1464-02-03
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	238762-00-02
Long Run Exploration	Eaglesham	01-25-076-01-W6	241532-00-00
	Kakut	14-12-075-03-W6	248469-00-01
	Donnelly	06-01-077-21-W5	87-02-00
Longview Oil Corp.	Sunset House	06-22-70-20-W5	138884-01-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	1746-02-01
	Pouce Coupe	16-07-078-11-W6	614-01-00
Petrus Resources	Rycroft	08-25-077-06-W6	11351-02-00
	Spirit River	08-34-077-06-W6	11096-02-00
Spectra Energy Midstream Corporation	Fourth Creek	16-11-082-09-W6	263-01-00

Company	Facility	LSD	AENV Approval Number
Suncor Energy Inc.	Progress	07-22-078-09-W6	11428-02-00
Taqa North Ltd.	Valhalla	13-21-076-09-W6	17620-01-01
Veresen Energy Infrastructure Inc.	Hythe Brainard	11-18-074-12-W6	10910-02-02
Weyerhaeuser Canada	Grande Prairie Pulp and Wood Plant	01-14-070-05-W6	113-02-00

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

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

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

Henry Pirker Station:

- ◆ The measured ambient air quality was within the AAAQO for the Henry Pirker station.
- ◆ All analyzers and sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of February with the exception of the THC analyzer, which was returned to service on February 8th and after continued failure was replaced on February 24th. **AE Reference #268261.**

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 February.

Smoky Heights Station:

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

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 February.

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 February.

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 February except for the O₃ analyzer, which had a flow sensor failure on February 19th that was repaired on February 25th. **AE Reference #268262.**

Falher Station:

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

Passive Monitoring - 46 Stations throughout the PAZA zone:

There were seven duplicate sites sampled in the month of February: Jean Cote (carried over from December), Shaftesbury (carried over from January), Clairmont Lake, Wembley (carried over from January), Fitzsimmons, Valleyview and Girouxville 4 (carried over from January). Carried over samples were not accessible in the normal time frames and were collected at the end of February sampling. 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 0.7 ppb, with a mean of 0.3 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.1 ppb to 7.8 ppb, with a mean of 1.0 ppb.
- Monthly average concentrations for O₃ passives ranged from 29.6 ppb to 56.1 ppb, with a mean of 43.2 ppb.
- Monthly average concentrations for H₂S were 0.2 ppb at all sites.

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

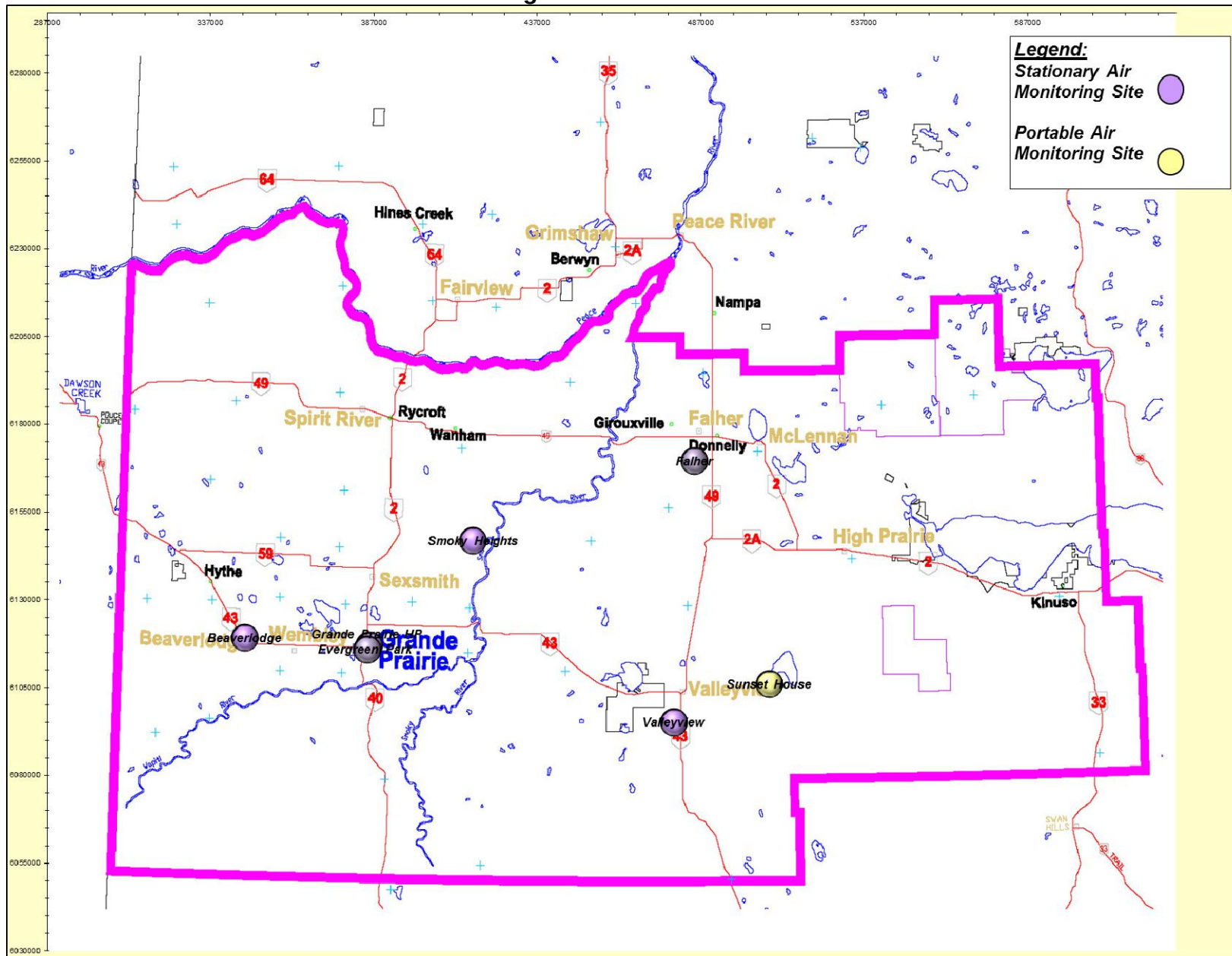


Patrick Andersen, B.Sc.
FOCUS AQM Data Specialist



Jeff Cooper, C.Tech.
AQM Operations Manager

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Feb-2013Peace 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	0.3	0	0	6.7	Feb-17 13:00	1.2	Feb-17	100%
SO ₂ (ppb)	172	48	Evergreen Park	0.1	0	0	2.4	Feb-17 12:00	0.5	Feb-17	100%
SO ₂ (ppb)	172	48	Smoky Heights	0.7	0	0	11.3	Feb-01 14:00	3.2	Feb-01	100%
SO ₂ (ppb)	172	48	Beaverlodge	0.2	0	0	2.0	Feb-20 15:00	0.7	Feb-07	100%
SO ₂ (ppb)	172	48	Valleyview	0.6	0	0	10.6	Feb-10 23:00	2.3	Feb-11	100%
SO ₂ (ppb)	172	48	Sunset House	0.3	0	0	1.6	Feb-07 16:00	0.6	Feb-07	100%
SO ₂ (ppb)	172	48	Falher	0.3	0	0	4.0	Feb-01 04:00	0.9	Feb-01	100%
NO (ppb)			Henry Pirker	6.9	0	0	130.8	Feb-07 23:00	48.4	Feb-07	100%
NO ₂ (ppb)	159	106	Henry Pirker	15.2	0	0	57.8	Feb-08 10:00	31.1	Feb-07	100%
NO _x (ppb)			Henry Pirker	22.1	0	0	186.8	Feb-08 10:00	79.4	Feb-07	100%
NO (ppb)			Beaverlodge	0.8	0	0	28.2	Feb-20 08:00	7.5	Feb-07	100%
NO ₂ (ppb)	159	106	Beaverlodge	3.9	0	0	23.4	Feb-07 19:00	16.9	Feb-07	100%
NO _x (ppb)			Beaverlodge	4.7	0	0	47.4	Feb-07 11:00	24.5	Feb-07	100%
NO (ppb)			Sunset House	0.2	0	0	14.9	Feb-07 15:00	1.0	Feb-07	100%
NO ₂ (ppb)	159	106	Sunset House	2.0	0	0	13.6	Feb-07 21:00	5.8	Feb-07	100%
NO _x (ppb)			Sunset House	2.2	0	0	24.4	Feb-07 15:00	6.8	Feb-07	100%
O ₃ (ppb)	82		Henry Pirker	25.6	0	-	44.9	Feb-13 16:00	38.9	Feb-11	100%
O ₃ (ppb) - 8-hr			Henry Pirker		0				43.1	Feb-11	
O ₃ (ppb)	82		Beaverlodge	37.0	0	-	47.8	Feb-28 17:00	44.2	Feb-11	100%
O ₃ (ppb) - 8-hr			Beaverlodge		0				45.9	Feb-02	
O ₃ (ppb)	82		Sunset House	39.6	0	-	50.1	Feb-28 17:00	46.0	Feb-28	78%
O ₃ (ppb) - 8-hr			Sunset House		0				49.4	Feb-28	
CO (ppm)	13		Henry Pirker	0.28	0	-	1.9	Feb-08 09:00	0.5	Feb-07	100%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.8	Feb-08	

PAZA Monthly Continuous Data Summary – continued

Feb-2013Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
THC (ppm)			Henry Pirker	2.1	-	-	3.0	Feb-10 05:00	2.4	Feb-10	64%
CH4 (ppm)			Henry Pirker	2.0	-	-	2.7	Feb-10 06:00	2.2	Feb-10	64%
NMHC (ppm)			Henry Pirker	0.03	-	-	0.4	Feb-10 04:00	0.2	Feb-10	64%
TRS (ppb)			Henry Pirker	0.4	-	-	1.6	Feb-07 23:00	0.9	Feb-07	100%
TRS (ppb)			Evergreen Park	0.3	-	-	1.4	Feb-07 10:00	0.7	Feb-07	100%
TRS (ppb)			Smoky Heights	0.1	-	-	0.6	Feb-22 02:00	0.3	Feb-07	100%
TRS (ppb)			Sunset House	0.3	-	-	1.3	Feb-12 18:00	0.4	Feb-06	100%
H ₂ S (ppb)	10	3	Valleyview	0.2	0	0	6.3	Feb-06 11:00	0.6	Feb-06	100%
H ₂ S (ppb)	10	3	Falher	0.2	0	0	0.9	Feb-08 10:00	0.4	Feb-25	100%
PM2.5 (µg/m3)	80	30	Henry Pirker	5.2	0	0	32.6	Feb-07 21:00	21.0	Feb-07	100%
PM2.5 (µg/m3)	80	30	Evergreen Park	2.5	0	0	22.3	Feb-07 11:00	13.6	Feb-07	100%
PM2.5 (µg/m3)	80	30	Smoky Heights	3.2	1	0	81.6	Feb-13 19:00	10.2	Feb-02	100%
PM2.5 (µg/m3)	80	30	Beaverlodge	5.8	0	0	22.3	Feb-06 19:00	15.0	Feb-07	100%
PM2.5 (µg/m3)	80	30	Sunset House	1.5	0	0	14.4	Feb-12 19:00	4.8	Feb-06	99%
RH (%)			Henry Pirker	64.7	-	-	84.1	Feb-26 02:00	77.7	Feb-06	100%
RH (%)			Evergreen Park	65.4	-	-	92.7	Feb-23 01:00	85.8	Feb-06	100%
RH (%)			Beaverlodge	74.6	-	-	100.0	Feb-06 03:00	98.4	Feb-06	100%
RH (%)			Valleyview	66.8	-	-	94.2	Feb-23 07:00	83.1	Feb-06	100%
SR (W/m ²)			Henry Pirker	61.0	-	-	437.6	Feb-28 13:00	105.8	Feb-27	100%
Temp (°C)			Henry Pirker	-1.9	-	-	8.1	Feb-28 15:00	4.5	Feb-15	100%
Temp (°C)			Evergreen Park	-1.0	-	-	8.9	Feb-10 16:00	5.4	Feb-15	100%
Temp (°C)			Smoky Heights	-3.8	-	-	5.5	Feb-15 16:00	3.5	Feb-15	100%
Temp (°C)			Beaverlodge	-1.1	-	-	6.8	Feb-15 16:00	5.1	Feb-15	100%
Temp (°C)			Valleyview	-1.1	-	-	9.9	Feb-15 16:00	4.4	Feb-11	100%
Temp (°C)			Sunset House	-1.5	-	-	7.1	Feb-15 12:00	3.0	Feb-15	100%
Temp (°C)			Falher	-5.7	-	-	6.3	Feb-15 14:00	1.9	Feb-15	100%

PAZA Monthly Continuous Data Summary – continued

Feb-2013 Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
WSPD s (km/hr)			Henry Pirker	8.7	-	-	31.0	Feb-08 19:00	16.8	Feb-11	100%
WSPD s (km/hr)			Evergreen Park	13.5	-	-	50.0	Feb-08 18:00	32.8	Feb-11	100%
WSPD s (km/hr)			Smoky Heights	15.0	-	-	50.0	Feb-16 02:00	32.3	Feb-15	100%
WSPD s (km/hr)			Beaverlodge	11.7	-	-	47.0	Feb-15 19:00	31.7	Feb-11	100%
WSPD s (km/hr)			Valleyview	5.2	-	-	25.0	Feb-13 06:00	12.3	Feb-13	100%
WSPD s (km/hr)			Sunset House	11.9	-	-	34.0	Feb-13 08:00	22.3	Feb-18	100%
WSPD s (km/hr)			Falher	18.5	-	-	55.0	Feb-13 07:00	27.5	Feb-18	100%
WSPD v (km/hr)			Henry Pirker	5.0	-	-	31.0	Feb-08 19:00	16.5	Feb-11	100%
WSPD v (km/hr)			Evergreen Park	9.0	-	-	49.0	Feb-08 18:00	32.2	Feb-11	100%
WSPD v (km/hr)			Smoky Heights	9.6	-	-	50.0	Feb-16 02:00	31.2	Feb-15	100%
WSPD v (km/hr)			Beaverlodge	7.0	-	-	47.0	Feb-15 19:00	31.5	Feb-11	100%
WSPD v (km/hr)			Valleyview	2.2	-	-	25.0	Feb-13 06:00	11.1	Feb-13	100%
WSPD v (km/hr)			Sunset House	6.6	-	-	33.0	Feb-13 08:00	22.1	Feb-18	100%
WSPD v (km/hr)			Falher	3.3	-	-	55.0	Feb-13 07:00	26.4	Feb-18	100%
WDIR			Henry Pirker	W	-	-	-	-	-	-	100%
WDIR			Evergreen Park	W	-	-	-	-	-	-	100%
WDIR			Smoky Heights	W	-	-	-	-	-	-	100%
WDIR			Beaverlodge	W	-	-	-	-	-	-	100%
WDIR			Valleyview	W	-	-	-	-	-	-	100%
WDIR			Sunset House	SSW	-	-	-	-	-	-	100%
WDIR			Falher	SE	-	-	-	-	-	-	100%

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on February 13th (CO, TRS) and February 14th (SO₂, NO_x, O₃). Station experienced datalogger failure on February 5th, causing the loss of 1 hour of data.

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
NO _x /NO/NO ₂	TEI	42C	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC/CH ₄ /NMHC	TEI	55I	Analyzer repaired on February 8 th . Maintenance on February 13 th to repair trouble and analyzer replaced on February 24 th . AE Reference #268261.
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 February 21st (SO₂, TRS).

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

PAZA – Smoky Heights Station

General Station Issues

Routine monthly calibration performed on February 22nd (SO₂ and TRS).

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM _{2.5}	R&P	1400AB	One hour was invalidated due to negative swings.
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 February 17th (SO₂, NO_x, O₃).

Parameter	Make	Model	Notes
SO ₂	TEI	43CTL	No operational issues observed.
NOx/NO/NO ₂	TEI	42C	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
PM _{2.5}	R&P	1400AB	No operational issues observed.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS / WD	Blue Sky	857	No operational issues observed.

PAZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed on February 25th (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 February 26th (SO₂, O₃, NO_x, TRS). Two hours were lost due to datalogger error on February 12th.

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
O ₃	TEI	49C	Flow sensor failed on February 19 th , repaired February 25 th . AE Reference #268262
TRS	TEI	39C	No operational issues observed.
PM _{2.5}	R&P	1400AB	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA – Falher Station

General Station Issues

Routine monthly calibrations were performed on February 27th (SO₂ & H₂S).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
H ₂ S	Thermo	450i	No operational issues observed.
ET	Gill	RM Young 5103	No operational issues observed.
WS / WD	Gill	RM Young 5103	No operational issues observed.

PAZA

Henry Pirker Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

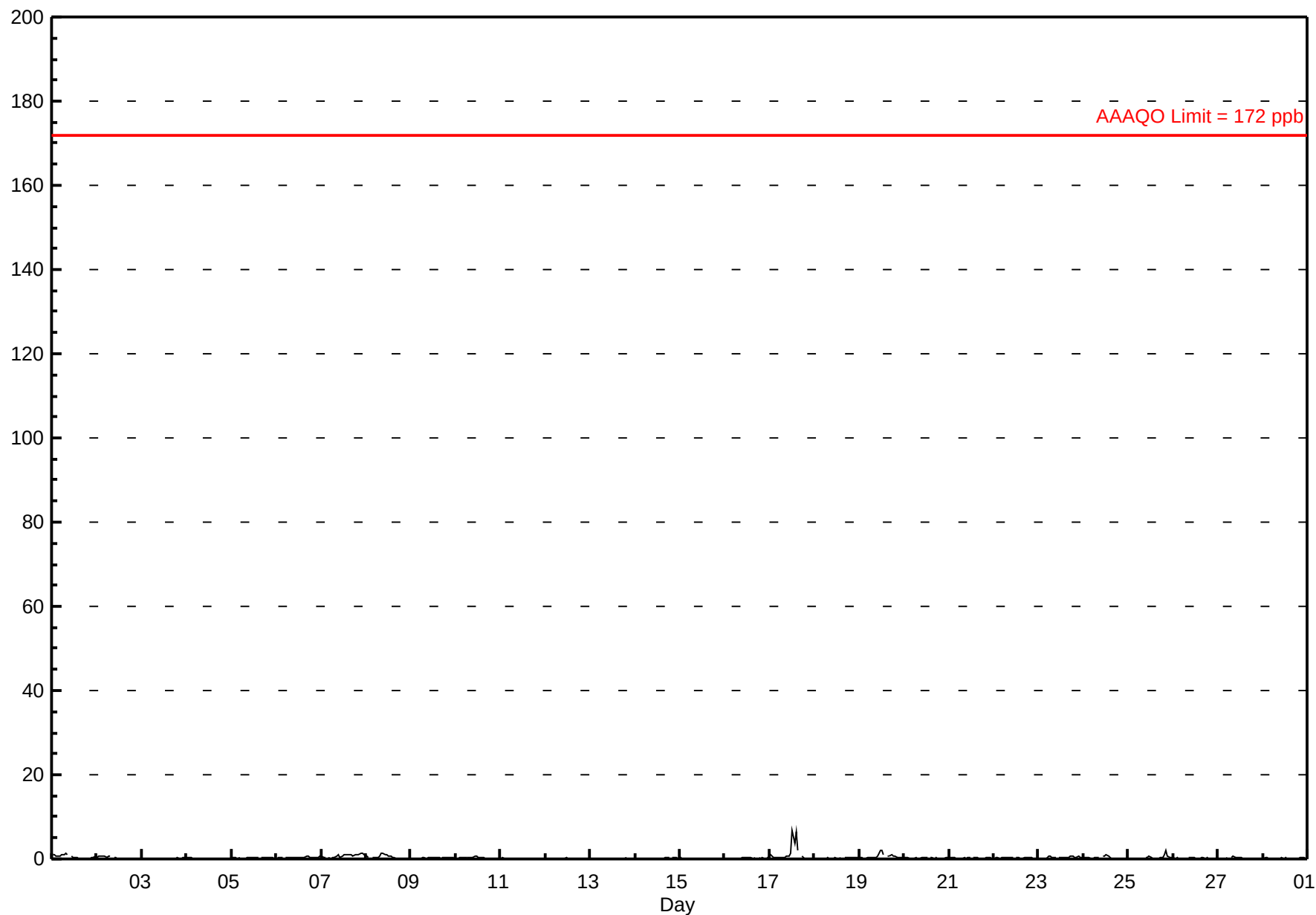
Sulphur Dioxide (SO₂) - ppb

Henry Pirker - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6.7 ppb on Feb 17 13:00 Maximum Daily Average: 1.2 ppb on Feb 17																				Hours in Service: 672 Hours of Data: 637 Hours of Missing Data: 35 Hours of Calibration: 34 Percent Operational Time: 99.9							
Minimum Value: 0 ppb on Feb 1 17:00 Maximum Diurnal Average: 0.6 ppb at hour 13 Monthly Average: 0.28 ppb										Minimum Daily Average: 0.0 ppb on Feb 13 Minimum Diurnal Average: 0.2 ppb at hour 5 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 1.8																	
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-Feb	1	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	1.4
2-Feb	0	1	1	1	1	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
3-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
4-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
5-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	D	0	0	0	0	0	0	0	0	0	0.3	0.4
6-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0.4	0.8	
7-Feb	1	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3	
8-Feb	1	0	A	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	1.5	
9-Feb	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-Feb	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.7
11-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.2	
12-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.3	
14-Feb	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.5	
15-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.5	
17-Feb	1	1	0	0	0	0	0	0	0	1	1	1	7	4	6	2	A	1	0	0	0	0	0	0	1.2	6.7	
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.5	
19-Feb	0	0	0	0	0	0	0	0	0	1	1	2	2	1	A	1	1	1	1	1	0	0	0	0	0.6	2.1	
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
21-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
22-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
23-Feb	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	1	1	0	0	1	0	0	0	0.4	0.6	
24-Feb	0	0	0	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0	
25-Feb	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	1	2	1	0	0	0.3	2.0	
26-Feb	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	0.4	
27-Feb	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
28-Feb	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	
Diurnal Average																									Diurnal Maximum		
C - Calibration D - DAS Failure A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																											

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Henry Pirker - February 2013



Hourly Maximums

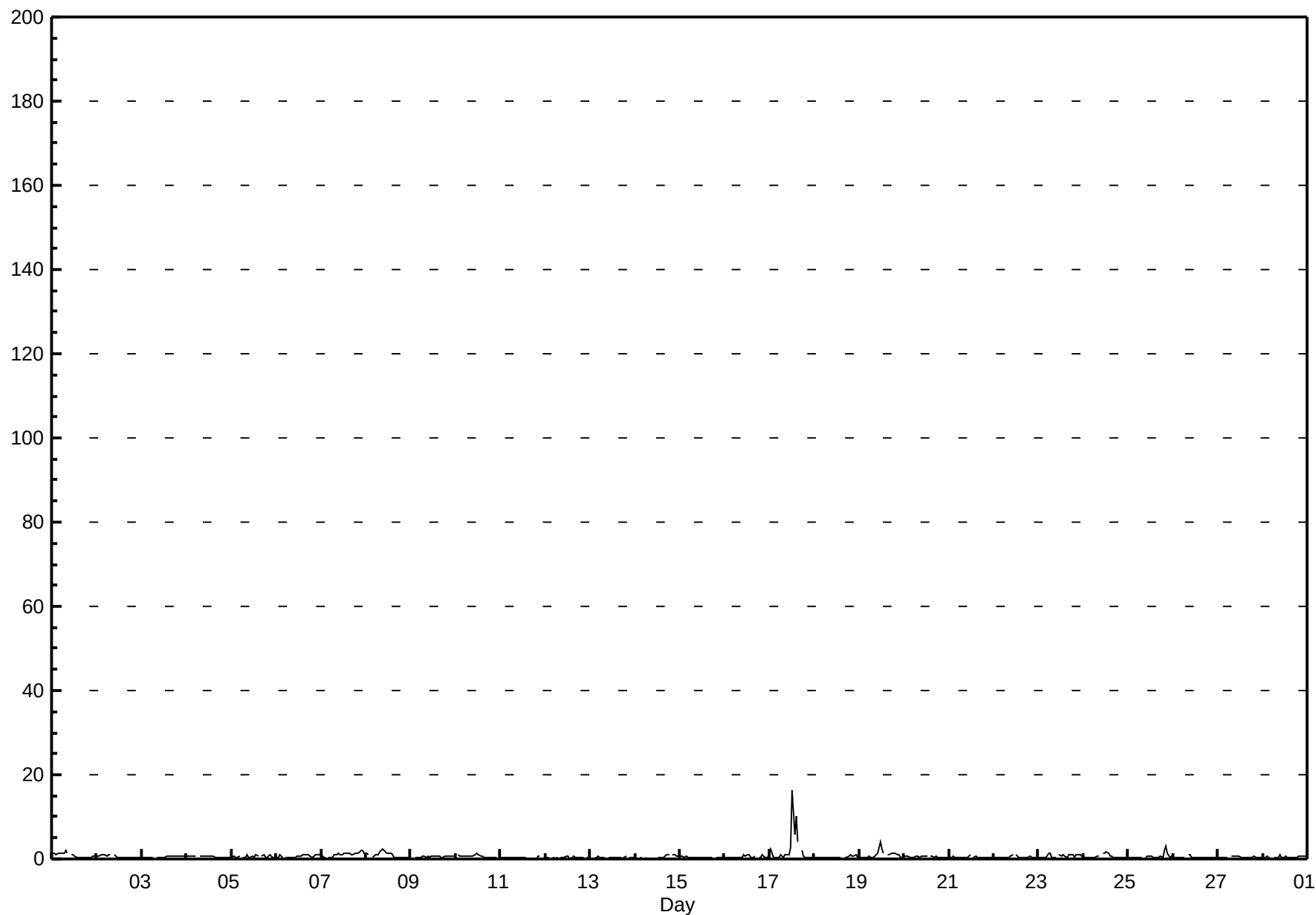
Sulphur Dioxide (SO₂) - ppb

Henry Pirker - February 2013

Maximum Value: 16.3 ppb on Feb 17 13:00																				Maximum Daily Average: 2.3 ppb on Feb 17					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 14 02:00																				Minimum Daily Average: 0.3 ppb on Feb 11					Hours of Data: 637	
Maximum Diurnal Average: 1.3 ppb at hour 13																				Minimum Diurnal Average: 0.5 ppb at hour 5					Hours of Missing Data: 35	
Monthly Average: 0.64 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.7 P ₉₀ = 1.0 P ₉₉ = 2.0					Hours of Calibration: 34	
																				Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	1	1	1	1	1	1	1	2	1	A	1	1	1	1	0	0	0	0	0	0	0	0	1	1	0.8	1.9
2-Feb	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.2
3-Feb	0	0	0	0	0	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5	0.6
4-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.5	0.6
5-Feb	0	1	0	0	1	A	0	0	1	0	0	1	0	1	1	D	1	1	0	0	1	1	0	0	0.6	0.9
6-Feb	0	0	1	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.1
7-Feb	1	0	0	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1.1	2.0
8-Feb	1	1	A	0	1	1	1	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0.9	2.4
9-Feb	0	A	0	0	0	0	1	1	0	1	0	1	1	1	1	1	0	0	1	1	1	1	1	1	0.6	0.8
10-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0.7	1.3
11-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0.3	0.6
12-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	A	0	0	0.3	0.7
13-Feb	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0.3	0.8
14-Feb	0	0	0	0	0	0	0	C	C	C	C	C	1	1	0	1	1	1	1	A	1	1	1	1	0.5	1.0
15-Feb	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.7
16-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	A	0	0	1	0	0	0	0.6	1.0
17-Feb	2	1	0	0	0	0	1	0	1	1	1	3	16	6	10	4	A	2	1	0	0	0	0	0	2.3	16.3
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	1	0	0.5	0.9
19-Feb	0	0	0	0	0	1	0	0	1	1	1	4	2	2	A	1	1	1	1	1	1	1	0	0	1.0	3.9
20-Feb	1	1	1	0	0	0	1	1	0	1	1	1	1	A	1	1	0	1	0	0	0	0	0	0	0.5	0.8
21-Feb	0	0	1	0	0	0	0	0	0	0	0	1	A	0	1	0	0	0	0	0	0	0	0	0	0.5	1.0
22-Feb	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	1	0	0	0	0	0.5	0.9
23-Feb	0	0	0	0	0	1	1	0	0	0	A	1	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.5
24-Feb	0	0	0	0	0	0	0	1	1	A	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0.6	1.8
25-Feb	0	0	0	0	0	0	0	0	A	0	1	1	1	0	0	0	0	1	0	2	3	1	0	1	0.6	2.9
26-Feb	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9
27-Feb	0	0	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0.5	0.8
28-Feb	0	0	1	0	0	A	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1	1	1	1	0.4	1.1
0.6 0.5 0.5 0.5 0.5 0.5 0.6 0.6 0.6 0.7 0.7 0.9 1.3 0.8 0.9 0.7 0.5 0.6 0.5 0.6 0.7 0.6 0.6 0.5																									Diurnal Average	
2.5 1.5 1.2 1.2 1.4 1.5 1.4 1.9 1.9 2.4 1.6 3.9 16.3 5.8 10.2 3.9 1.0 1.9 1.5 1.9 2.9 2.0 2.0 1.5																									Diurnal Maximum	
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										

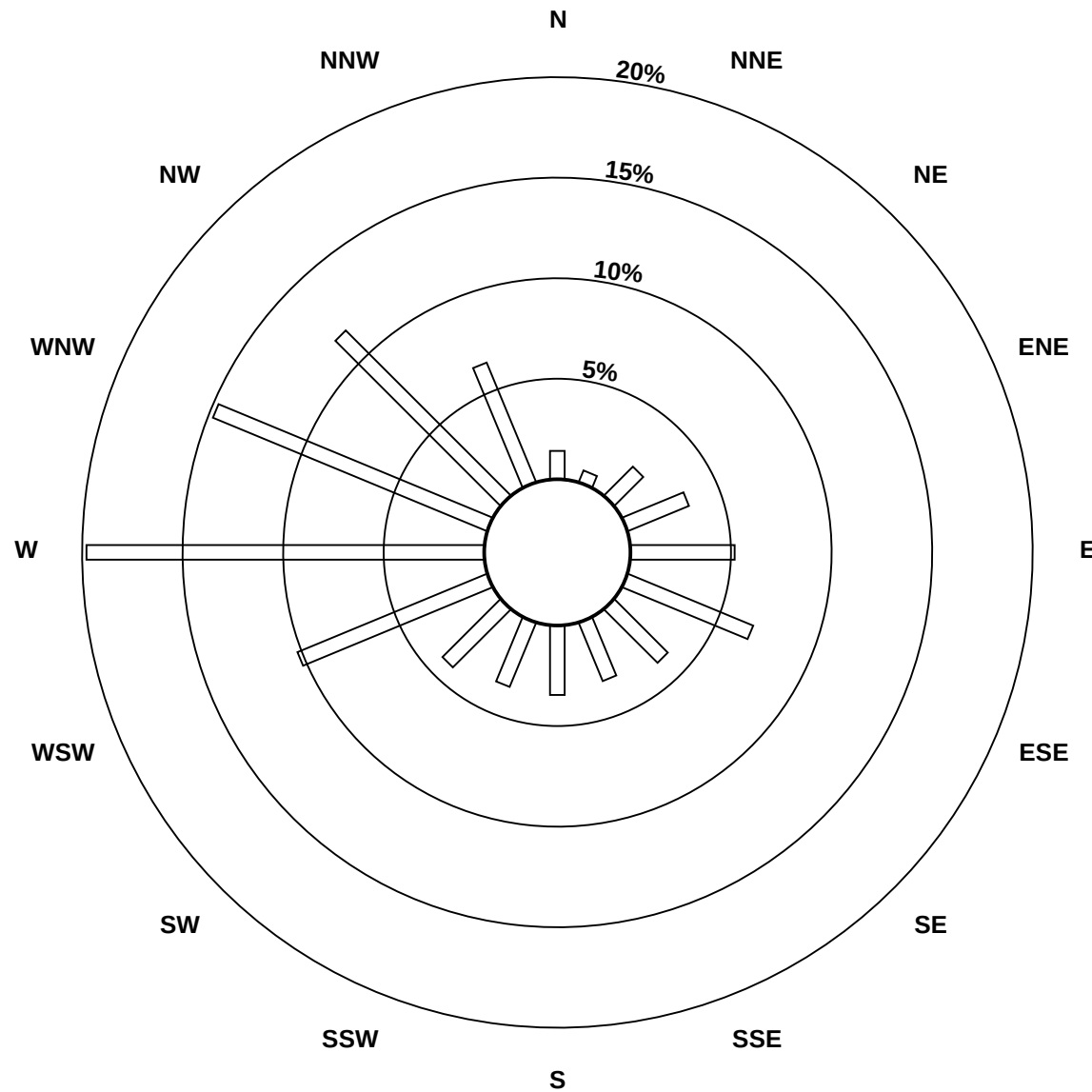
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Henry Pirker - February 2013

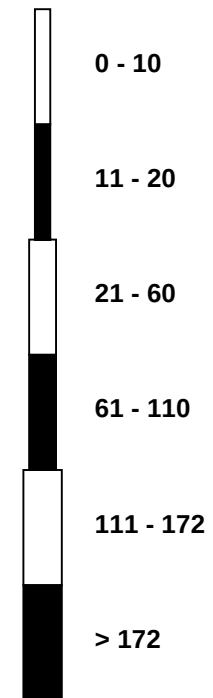


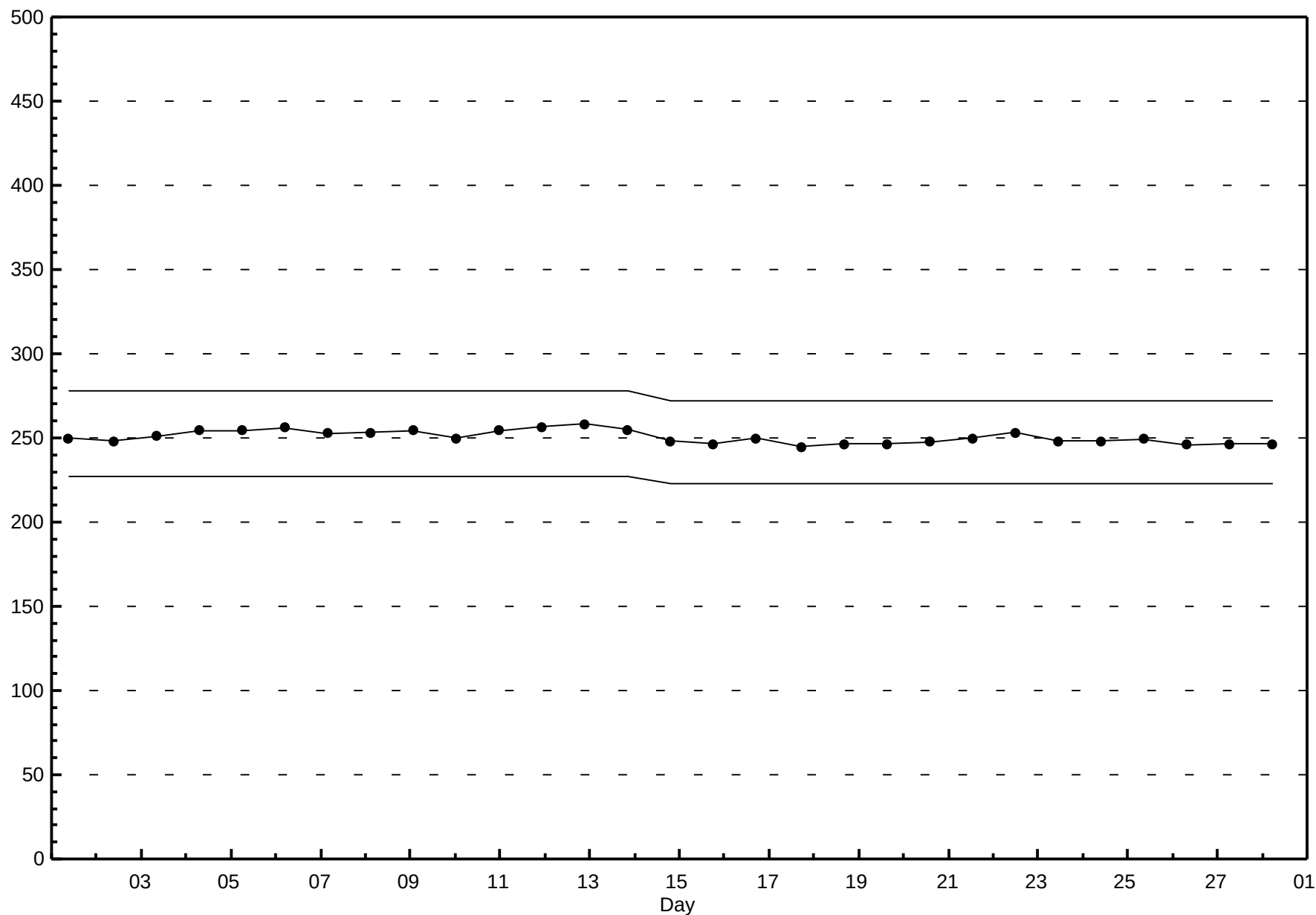
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Henry Pirker - February 2013



Pollutant Classes (ppb)





Hourly Averages

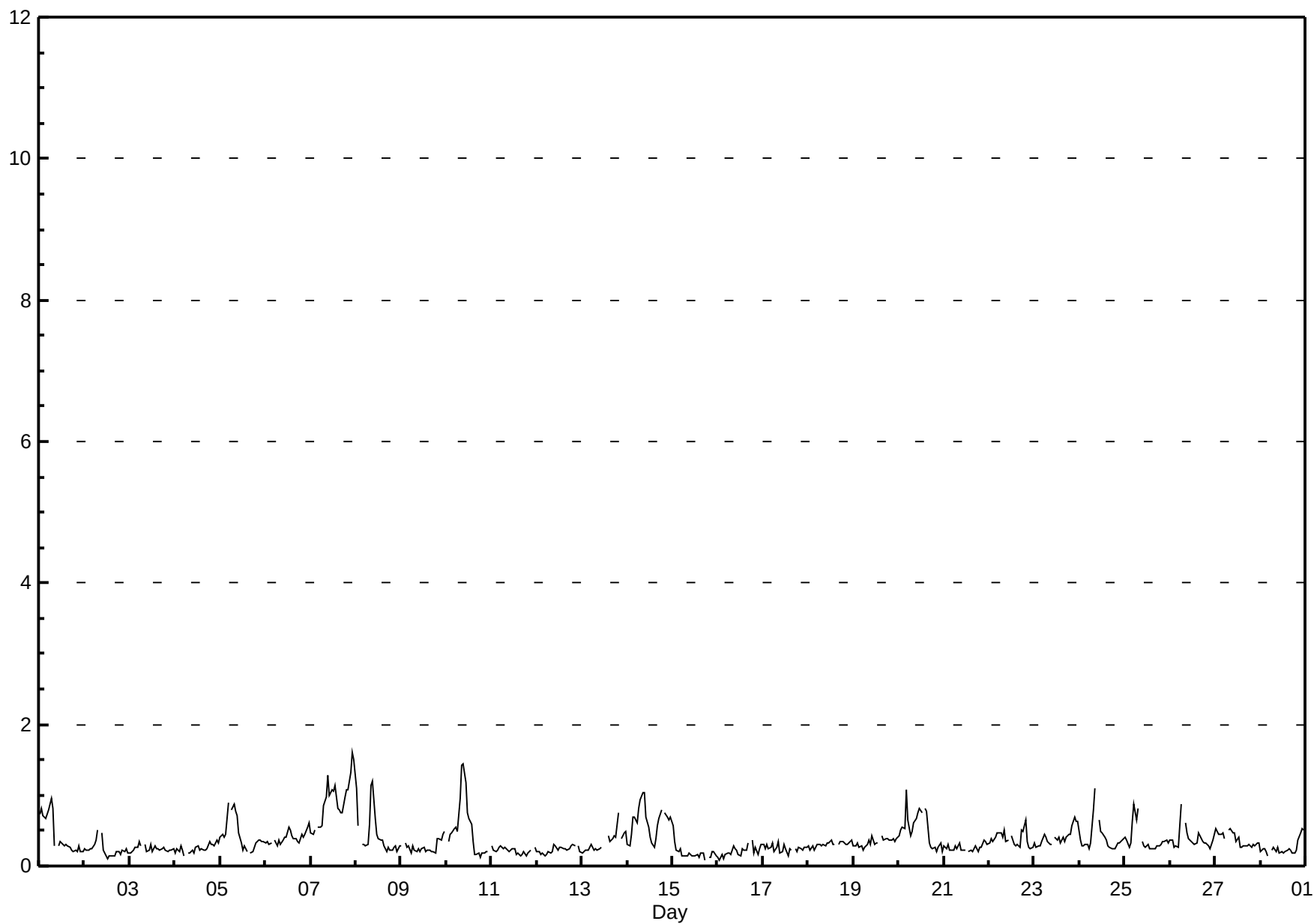
Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.6 ppb on Feb 7 23:00 Maximum Daily Average: 0.9 ppb on Feb 7																			Hours in Service: 672 Hours of Data: 639 Hours of Missing Data: 33 Hours of Calibration: 32 Percent Operational Time: 99.9							
Minimum Value: 0 ppb on Feb 16 02:00 Maximum Diurnal Average: 0.5 ppb at hour 9 Monthly Average: 0.37 ppb																			Minimum Daily Average: 0.2 ppb on Feb 15 Minimum Diurnal Average: 0.3 ppb at hour 17 Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.7 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-Feb	1	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
2-Feb	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
3-Feb	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-Feb	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
5-Feb	0	0	0	0	1	A	1	1	1	1	0	0	0	0	0	D	0	0	0	0	0	0	0	0	0.4	0.9
6-Feb	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0.4	0.6
7-Feb	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	0.9	1.6
8-Feb	1	1	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2
9-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
10-Feb	A	0	0	0	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0.5	1.4
11-Feb	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-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	1	A	0	0	0	0.3	0.8
14-Feb	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	A	1	1	1	1	0.6	1.0
15-Feb	1	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	0.6
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.4
17-Feb	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-Feb	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-Feb	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-Feb	0	1	1	1	1	1	0	0	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0.5	1.1
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
22-Feb	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	1	0	1	0	0	0	0	0.4	0.7
23-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	0.7
24-Feb	0	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1
25-Feb	0	0	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
26-Feb	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
27-Feb	1	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
28-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	0.5
0.4 0.3 0.3 0.3 0.4 0.4 0.4 0.5 0.5 0.5 0.4 0.4 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.4 0.4																									Diurnal Average	
1.1 0.8 0.7 0.7 1.1 0.9 1.0 1.0 1.0 1.4 1.4 1.2 1.1 1.1 1.1 0.8 0.8 0.8 0.7 1.0 1.1 1.1 1.3 1.6 1.5																									Diurnal Maximum	
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

Hourly Averages

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



Hourly Maximums

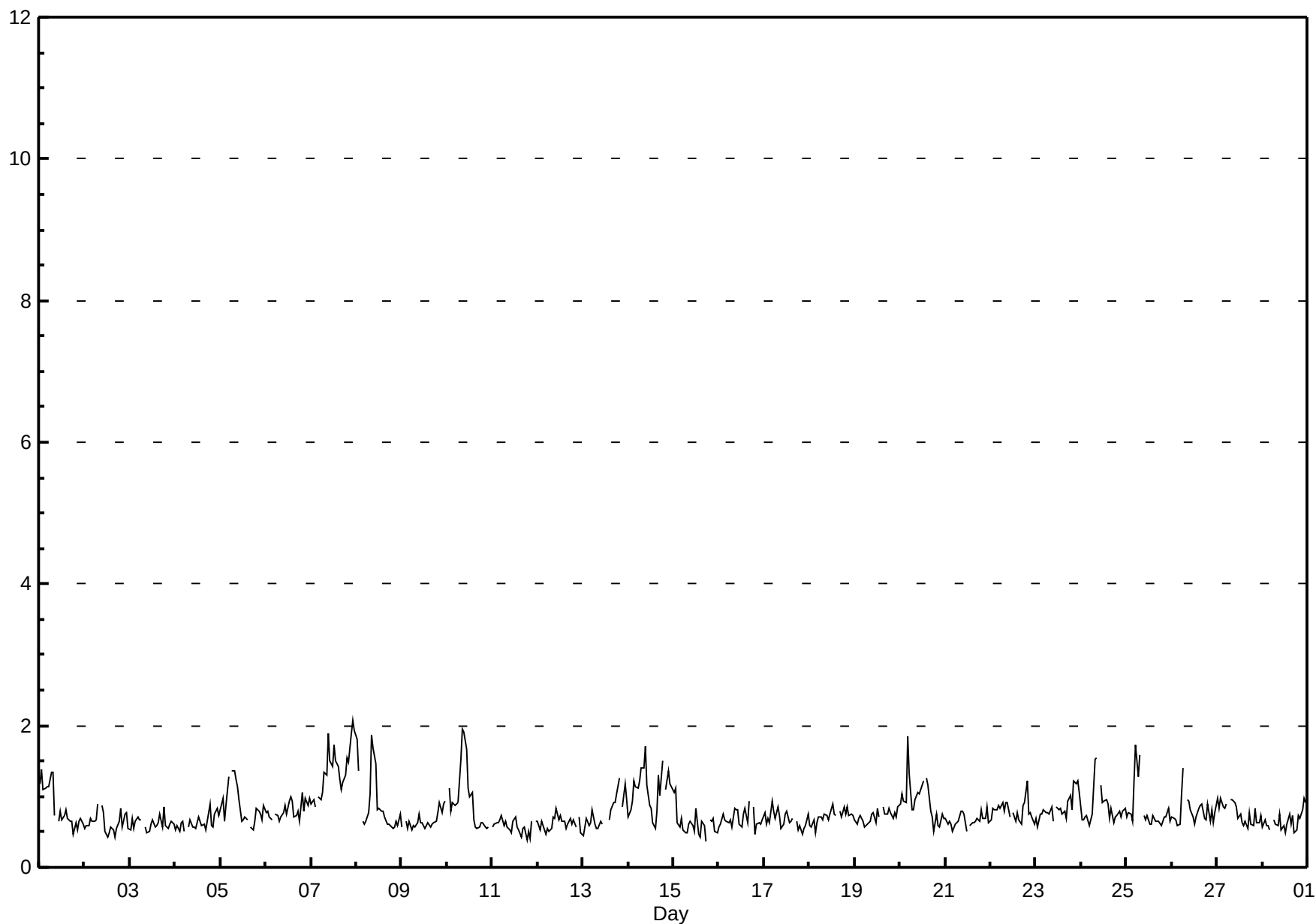
Total Reduced Sulphur (TRS) - ppb

Henry Pirker - February 2013

Maximum Value: 2.1 ppb on Feb 7 23:00																			Maximum Daily Average: 1.4 ppb on Feb 7							Hours in Service: 672	
Minimum Value: 0 ppb on Feb 15 18:00																			Minimum Daily Average: 0.6 ppb on Feb 11							Hours of Data: 639	
Maximum Diurnal Average: 0.9 ppb at hour 9																			Minimum Diurnal Average: 0.7 ppb at hour 18							Hours of Missing Data: 33	
Monthly Average: 0.78 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.9 P ₉₀ = 1.1 P ₉₉ = 1.9							Hours of Calibration: 32	
																										Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.9	1.4	
2-Feb	1	1	1	1	1	1	1	1	A	1	1	0	0	0	1	1	0	1	1	1	1	1	1	1	0.6	0.9	
3-Feb	1	1	1	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8	
4-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9	
5-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	D	1	1	1	1	1	1	1	1	0.9	1.4	
6-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1	
7-Feb	1	1	1	A	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	2	1	2	2	2	1.4	2.1	
8-Feb	2	1	A	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.9	
9-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9	
10-Feb	A	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1.0	2.0	
11-Feb	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	0	1	0	1	A	1	0.6	0.7	
12-Feb	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0.6	0.8	
13-Feb	0	1	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	A	1	1	1	0.8	1.3	
14-Feb	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1.1	1.7	
15-Feb	1	1	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	0	A	1	1	1	1	0	0.6	1.1	
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	0.7	0.9	
17-Feb	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	0.9	
18-Feb	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	0.9	
19-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.9	
20-Feb	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	1.8	
21-Feb	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	0.9	
22-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2	
23-Feb	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	1.2	
24-Feb	1	1	1	1	1	1	1	2	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.6	
25-Feb	1	1	1	1	1	2	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.7	
26-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4	
27-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0	
28-Feb	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	0	1	1	1	1	1	1	0.7	1.0	
0.8		0.8	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.8	0.8	Diurnal Average		
1.8		1.4	1.1	1.2	1.8	1.7	1.4	1.6	2.0	1.9	1.7	1.4	1.7	1.5	1.4	1.2	1.3	1.2	1.5	1.6	1.5	1.9	2.1	1.9	Diurnal Maximum		
C - Calibration				D - DAS Failure				A - Automated Daily Zero Span																			

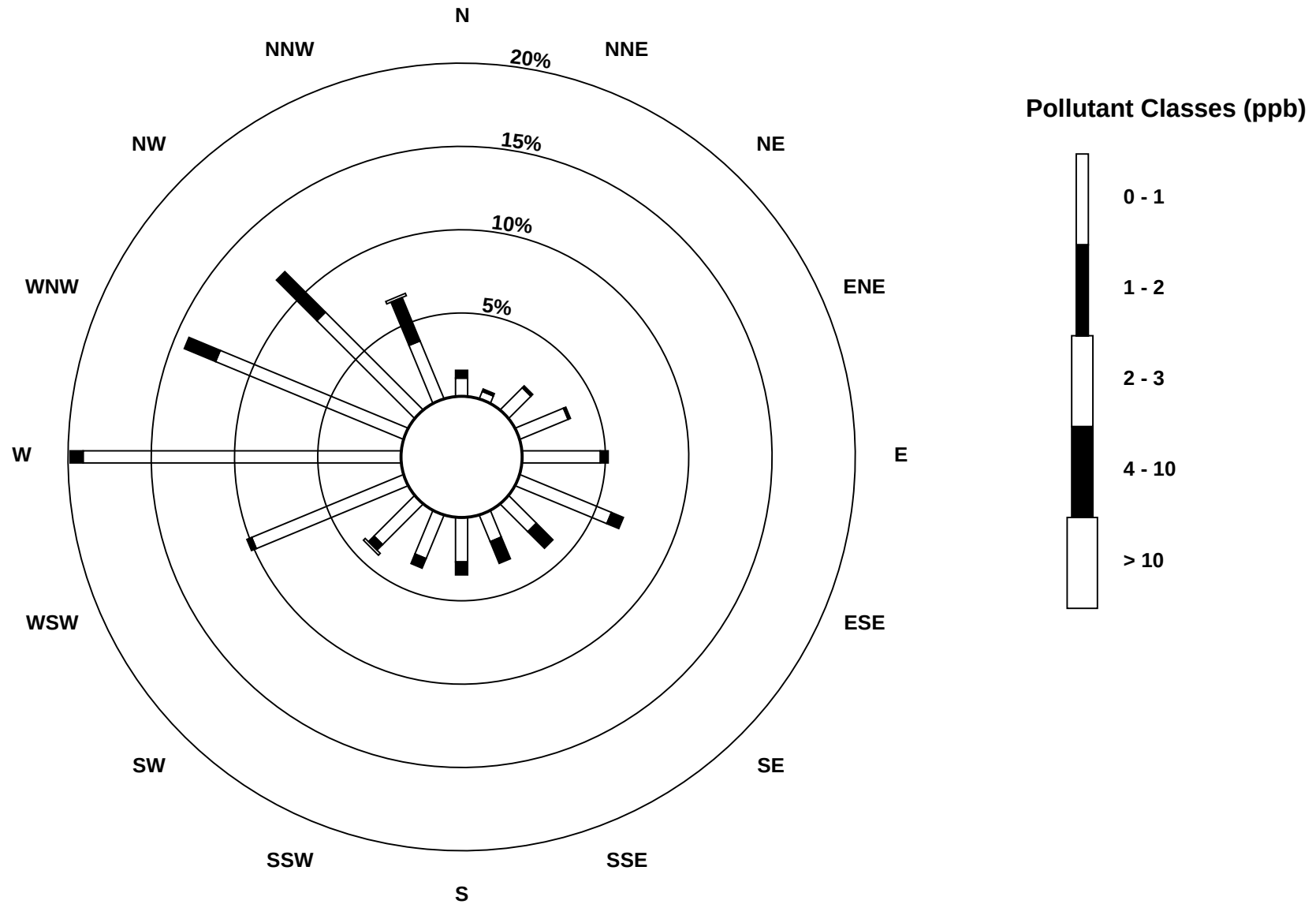
Hourly Maximums

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



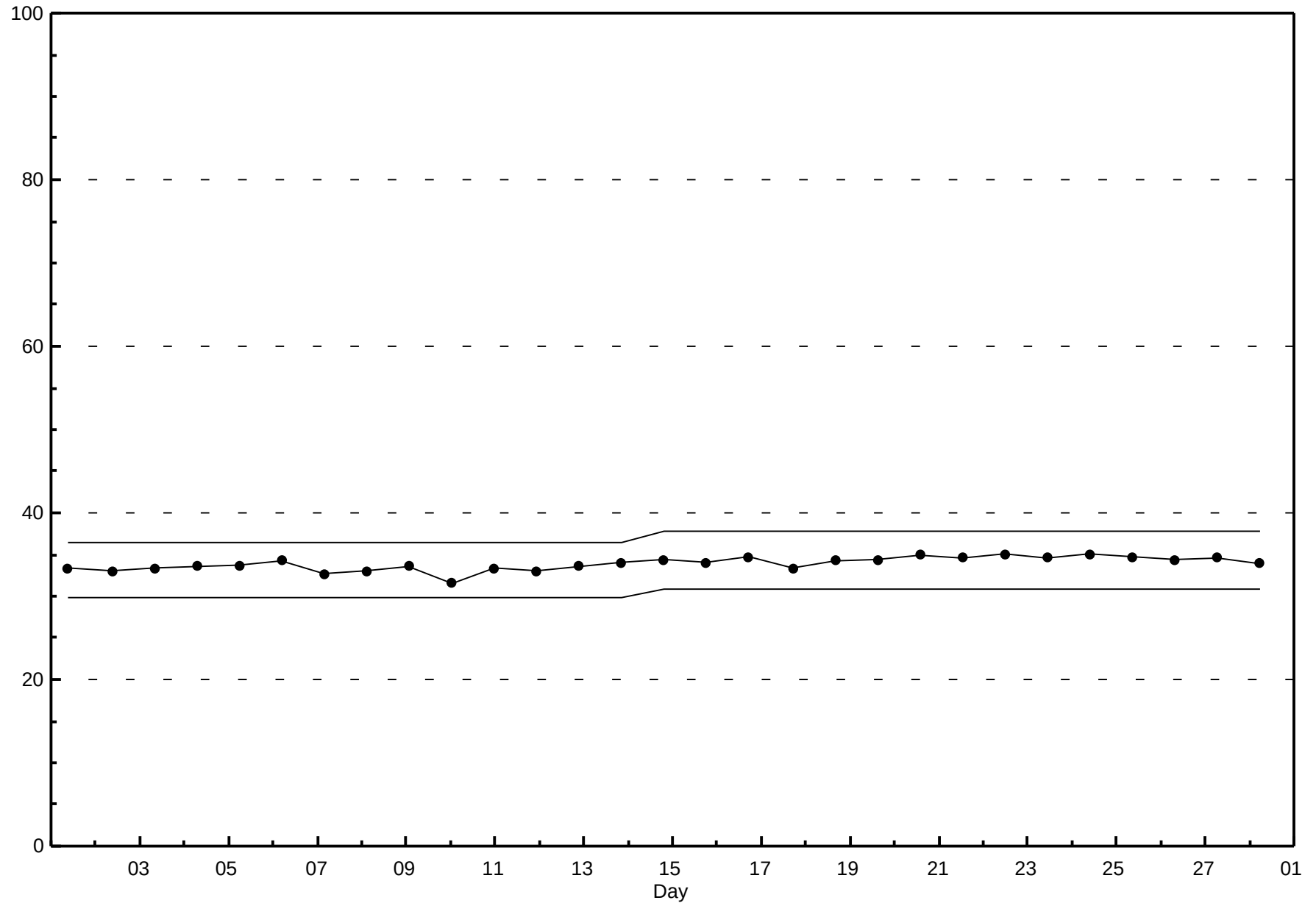
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Henry Pirker - February 2013



Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

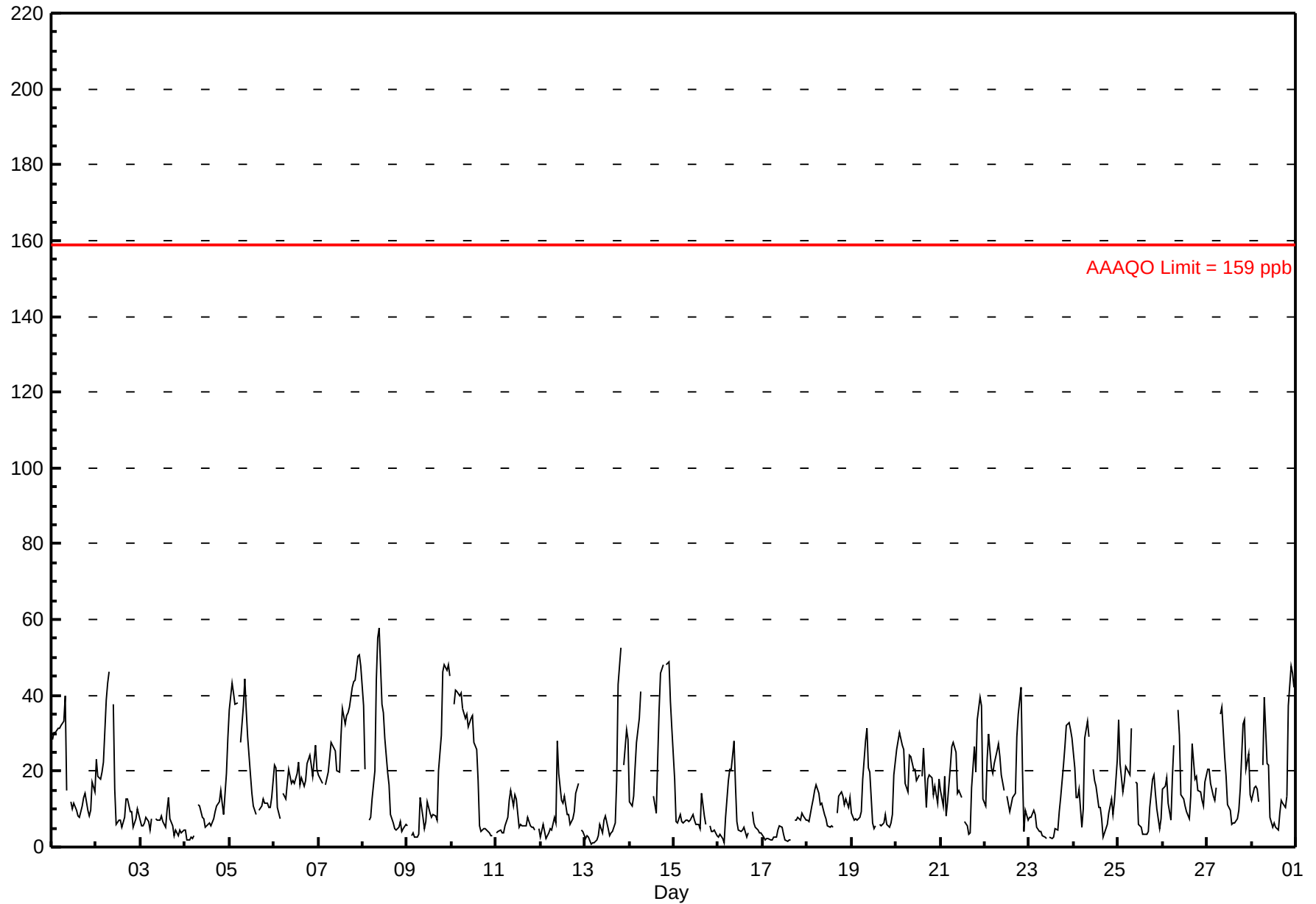
Henry Pirker - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 57.8 ppb on Feb 8 10:00 Maximum Daily Average: 31.1 ppb on Feb 7																				Hours in Service: 672 Hours of Data: 636 Hours of Missing Data: 36 Hours of Calibration: 35 Percent Operational Time: 99.9						
Minimum Value: 1 ppb on Feb 13 04:00 Maximum Diurnal Average: 23.3 ppb at hour 8 Monthly Average: 15.23 ppb										Minimum Daily Average: 4.2 ppb on Feb 17 Minimum Diurnal Average: 9.1 ppb at hour 15 Percentiles: P ₁ = 1.7 P ₁₀ = 3.8 Q ₁ = 6.0 Median = 11.5 Q ₃ = 20.6 P ₉₀ = 33.9 P ₉₉ = 47.7																
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-Feb	28	30	30	31	31	32	33	40	15	A	12	10	11	10	8	8	11	13	14	10	8	10	17	15	18.6	39.9
2-Feb	23	19	18	20	22	39	43	46	A	38	15	6	7	7	5	8	13	13	9	9	5	8	10	9	17.0	46.1
3-Feb	6	5	6	8	7	4	7	A	8	7	7	8	7	5	10	13	8	5	3	5	3	5	4	5	6.3	13.1
4-Feb	5	2	2	2	2	3	A	11	11	8	7	5	6	6	6	7	9	11	12	15	11	9	19	29	8.6	28.8
5-Feb	36	43	41	38	38	A	27	37	44	36	29	19	14	11	8	D	10	11	13	12	11	10	10	13	23.3	44.3
6-Feb	22	21	10	7	A	14	13	17	21	17	18	17	20	22	16	18	16	18	22	24	22	19	27	21	18.2	26.8
7-Feb	19	17	17	A	16	20	24	28	26	25	20	20	29	37	32	35	35	37	42	44	44	50	51	48	31.1	50.9
8-Feb	37	20	A	7	8	13	20	44	55	58	38	36	29	20	16	8	6	5	4	5	7	4	5	6	19.6	57.8
9-Feb	5	A	3	4	2	3	3	13	8	5	7	12	9	8	9	8	7	20	29	46	48	47	48	45	16.9	48.1
10-Feb	A	38	41	41	40	41	37	34	35	32	34	35	28	26	17	6	4	5	5	5	4	3	3	A	23.2	41.4
11-Feb	4	4	4	4	4	5	8	12	15	11	14	13	5	6	6	5	6	8	6	5	5	5	A	5	6.9	14.7
12-Feb	3	6	4	2	4	5	4	8	6	28	19	12	12	13	9	8	6	8	9	14	17	A	4	4	8.9	28.1
13-Feb	2	3	3	1	1	1	2	3	6	4	7	8	5	3	4	4	6	18	43	53	A	22	31	28	11.2	52.6
14-Feb	12	11	13	21	28	34	41	C	C	C	C	C	C	13	9	23	36	46	48	A	48	49	39	31	--	48.9
15-Feb	18	7	6	9	7	6	7	7	7	7	9	7	6	6	5	14	8	6	A	6	4	4	5	3	7.1	18.0
16-Feb	3	3	2	1	8	18	21	20	28	16	7	4	4	4	5	3	4	A	9	6	5	5	4	4	8.0	27.9
17-Feb	3	2	2	2	2	2	2	2	4	6	5	3	2	1	2	2	A	7	7	8	7	9	8	7	4.2	8.9
18-Feb	7	7	11	13	15	16	14	11	12	8	7	6	5	5	5	A	9	14	15	13	11	13	10	13	10.5	16.3
19-Feb	9	7	8	7	8	9	18	28	31	21	20	6	5	6	A	6	6	6	8	6	5	6	8	19	11.1	31.5
20-Feb	26	28	30	27	26	17	14	24	24	20	21	17	19	A	19	26	11	18	19	18	14	16	12	18	20.1	30.1
21-Feb	15	11	19	8	12	21	27	28	25	14	15	13	A	7	6	3	4	16	26	20	33	40	37	13	17.9	39.6
22-Feb	11	23	30	21	19	22	25	27	24	19	15	A	13	9	11	13	14	29	35	42	20	4	10	7	19.4	42.2
23-Feb	8	8	10	9	5	4	4	3	3	2	A	3	2	2	5	4	9	13	22	26	32	33	31	29	11.6	33.0
24-Feb	21	13	13	15	5	10	29	33	29	A	21	17	16	11	10	7	2	5	6	9	13	9	12	23	14.3	33.1
25-Feb	34	22	15	17	21	21	19	31	A	17	17	6	5	3	3	3	4	10	18	19	14	10	5	8	14.0	33.6
26-Feb	15	16	18	12	7	18	27	A	36	29	14	13	11	9	7	13	27	18	19	15	15	12	11	17	16.6	36.2
27-Feb	21	21	17	13	12	16	A	35	37	24	19	11	10	6	6	7	7	10	15	32	33	21	24	14	17.9	36.8
28-Feb	12	16	16	15	12	A	22	39	22	22	8	5	6	5	4	9	12	11	10	13	37	48	46	42	18.9	47.7
14.9 14.9 14.4 13.2 13.5 15.1 18.9 23.3 21.2 18.9 15.5 12.0 11.0 9.7 9.1 10.1 10.8 14.0 17.4 17.8 17.7 17.3 18.2 17.5																								Diurnal Average		
37.3 43.4 41.4 41.2 39.9 40.8 43.4 46.1 55.2 57.8 37.7 35.6 29.1 36.5 32.4 34.7 36.1 45.9 48.2 52.6 48.1 50.3 50.9 47.8																								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

Henry Pirker - February 2013



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

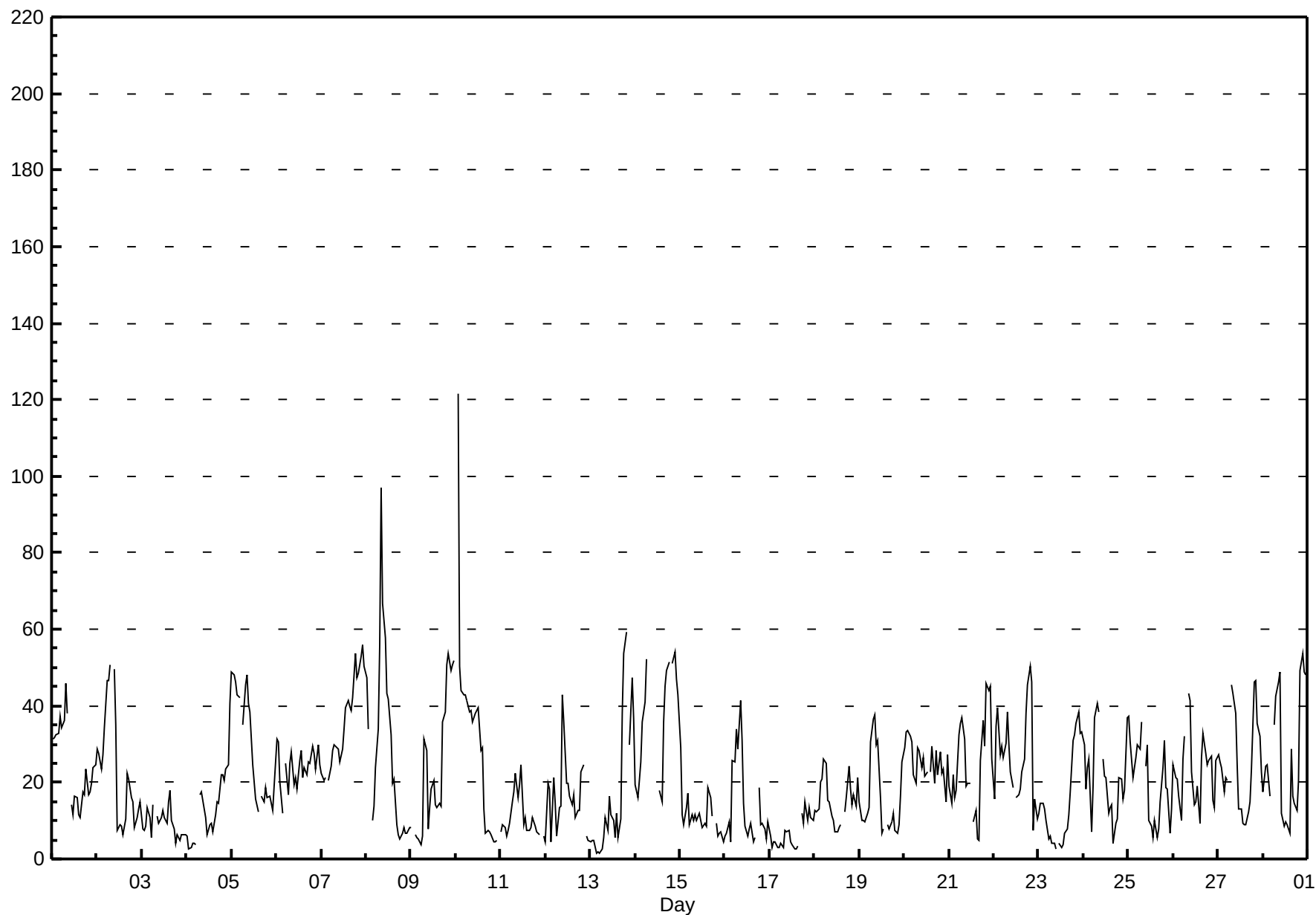
Henry Pirker - February 2013

Maximum Value: 121.5 ppb on Feb 10 02:00																								Maximum Daily Average: 35.8 ppb on Feb 7										Hours in Service: 672	
Minimum Value: 2 ppb on Feb 13 06:00																								Minimum Daily Average: 6.6 ppb on Feb 17										Hours of Data: 636	
Maximum Diurnal Average: 30.4 ppb at hour 9																								Minimum Diurnal Average: 13.5 ppb at hour 15										Hours of Missing Data: 36	
Monthly Average: 21.07 ppb																								Percentiles: P ₁ = 2.6 P ₁₀ = 6.0 Q ₁ = 9.4 Median = 17.7 Q ₃ = 29.4 P ₉₀ = 42.2 P ₉₉ = 54.4										Hours of Calibration: 35	
																								Percent Operational Time: 99.9											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Feb	31	32	32	33	37	34	36	46	38	A	14	12	16	16	12	11	18	17	24	17	18	20	24	25	24.4	45.8									
2-Feb	29	28	23	27	34	47	46	51	A	50	35	7	9	8	6	10	22	21	16	15	8	11	13	15	23.2	50.6									
3-Feb	8	7	8	13	11	6	14	A	11	9	11	12	11	9	15	18	10	8	4	6	5	6	6	6	9.5	18.0									
4-Feb	6	3	3	4	4	4	A	17	17	13	11	6	9	9	7	12	15	15	22	22	21	24	24	41	13.4	40.5									
5-Feb	49	48	46	43	42	A	35	46	48	41	38	25	20	16	12	D	17	15	19	16	16	14	13	19	28.9	48.8									
6-Feb	31	31	20	12	A	25	17	25	28	19	21	18	26	28	21	24	22	25	25	29	27	23	30	24	24.1	31.3									
7-Feb	22	20	21	A	20	24	28	30	29	29	25	29	34	39	41	40	39	42	54	47	48	53	56	51	35.8	56.0									
8-Feb	47	34	A	10	14	24	34	56	97	67	58	43	42	33	20	21	9	6	5	7	8	7	7	8	28.5	97.1									
9-Feb	8	A	6	6	5	4	6	31	28	8	13	18	20	14	13	14	14	36	38	51	54	49	51	52	23.5	53.6									
10-Feb	A	122	50	44	43	43	41	38	39	36	38	39	39	28	29	13	7	7	7	6	4	5	5	A	31.1	121.5									
11-Feb	7	9	8	6	7	9	15	18	22	16	19	24	9	11	7	7	8	11	8	7	7	6	A	6	10.9	24.5									
12-Feb	4	20	18	5	21	15	6	14	14	43	36	20	20	17	14	17	11	13	13	23	25	A	6	5	16.3	42.9									
13-Feb	5	5	5	2	2	2	3	5	11	7	17	12	10	6	12	6	11	38	54	59	A	30	47	37	16.6	59.2									
14-Feb	19	16	21	25	36	41	52	C	C	C	C	C	C	18	15	36	45	49	52	A	51	54	47	43	--	54.2									
15-Feb	29	11	9	13	17	9	11	10	12	10	12	10	8	9	9	19	16	11	A	9	6	7	7	5	11.3	28.9									
16-Feb	6	7	10	5	26	25	34	29	41	31	15	9	6	8	9	5	6	A	19	9	9	8	5	10	14.3	41.2									
17-Feb	6	3	5	5	3	3	4	3	8	7	8	5	4	3	3	3	A	12	9	15	10	13	11	10	6.6	15.1									
18-Feb	13	12	13	20	21	26	25	15	15	11	10	7	7	8	9	A	12	16	24	18	14	17	14	21	15.2	26.0									
19-Feb	15	10	10	10	12	13	30	37	37	30	31	16	7	8	A	9	8	10	12	7	7	9	16	25	16.0	37.5									
20-Feb	29	33	34	32	30	22	20	29	28	24	27	22	23	A	23	29	20	28	22	28	22	23	15	27	25.7	33.6									
21-Feb	19	15	22	16	18	33	35	37	31	19	20	20	A	10	13	5	5	26	36	30	46	44	45	26	24.7	45.7									
22-Feb	16	35	40	27	29	27	30	39	30	23	19	A	16	17	18	23	26	38	45	50	46	8	16	11	27.2	50.4									
23-Feb	12	15	15	13	10	5	6	4	4	3	A	4	3	4	7	8	11	18	31	33	35	38	33	33	15.0	38.3									
24-Feb	30	18	24	26	7	19	37	41	38	A	26	22	21	12	13	14	4	9	11	21	21	16	18	37	21.1	40.7									
25-Feb	37	30	21	24	27	30	29	36	A	24	30	10	9	5	10	6	8	15	24	31	19	18	7	13	20.0	37.2									
26-Feb	24	21	21	16	10	26	32	A	43	41	23	14	15	19	9	27	33	28	25	26	27	15	14	26	23.3	43.3									
27-Feb	27	25	24	18	21	21	A	46	43	38	25	13	13	9	9	9	12	15	24	46	47	35	32	23	25.0	46.7									
28-Feb	18	24	25	21	16	A	35	43	46	49	12	9	10	9	7	29	16	15	13	20	49	54	49	48	26.7	53.8									
20.3 23.5 19.8 17.6 19.5 20.6 25.5 29.7 30.4 25.9 22.8 16.3 15.6 13.8 13.5 15.9 15.7 20.1 23.5 24.1 24.1 22.5 22.5 23.9																									Diurnal Average										
48.8 121.5 50.5 44.0 42.9 46.6 52.2 55.9 97.1 66.7 57.9 43.1 41.6 39.5 41.4 39.8 45.1 49.2 53.8 59.2 53.6 54.2 56.0 52.0																									Diurnal Maximum										
C - Calibration D - DAS Failure A - Automated Daily Zero Span																																			

Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

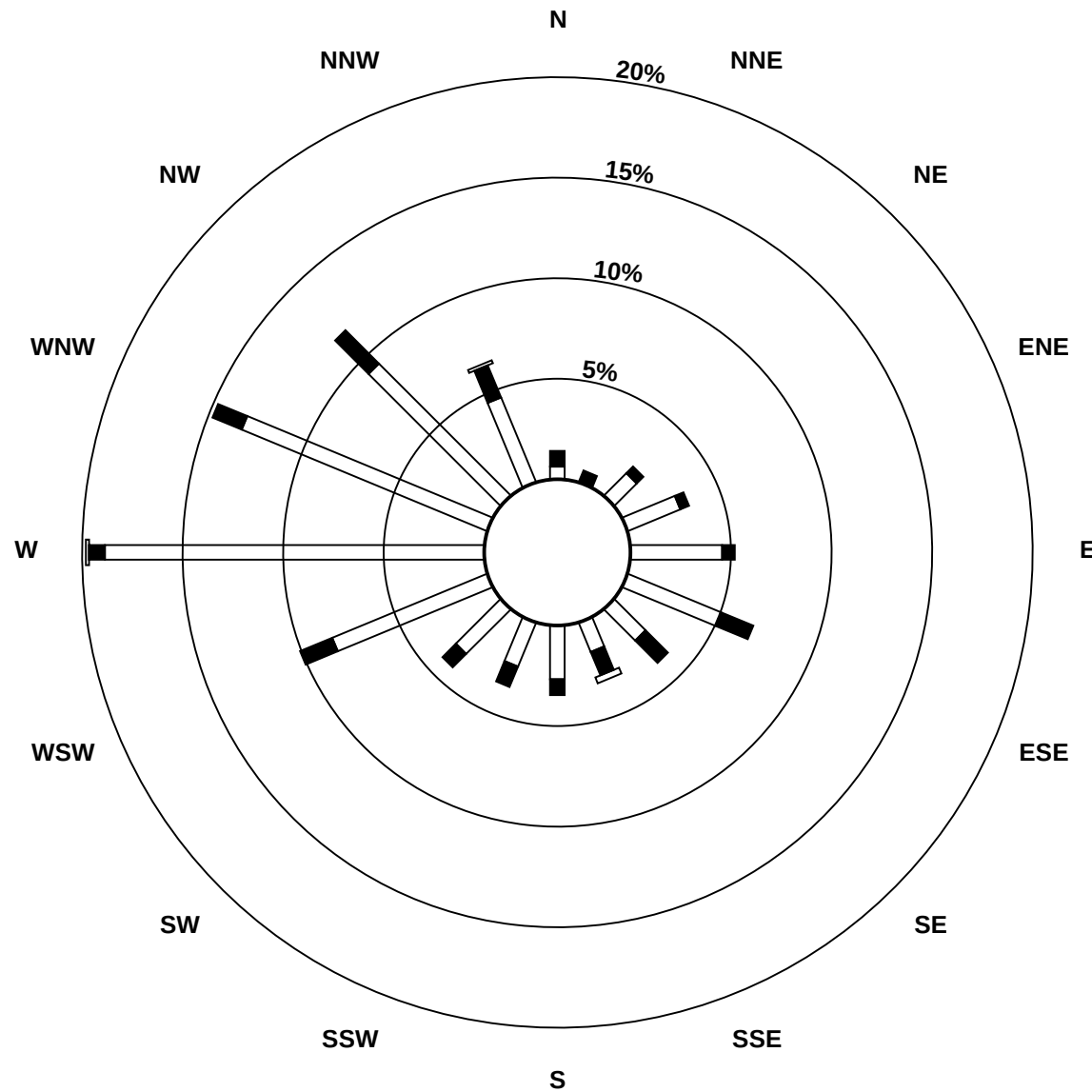
Henry Pirker - February 2013



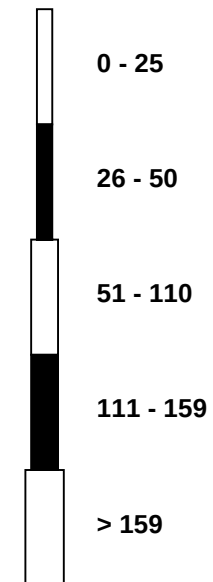
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - February 2013

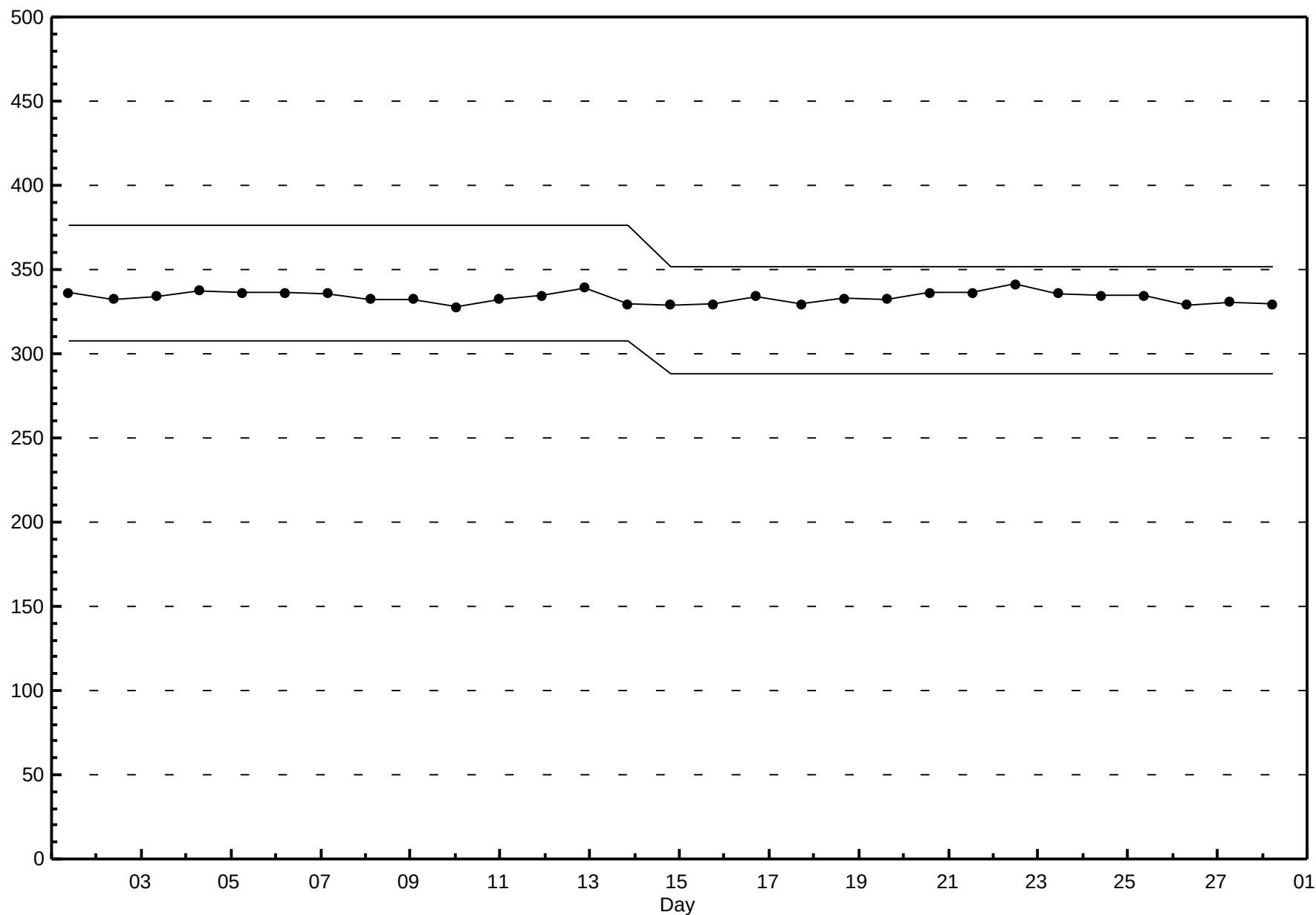


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Henry Pirker - February 2013



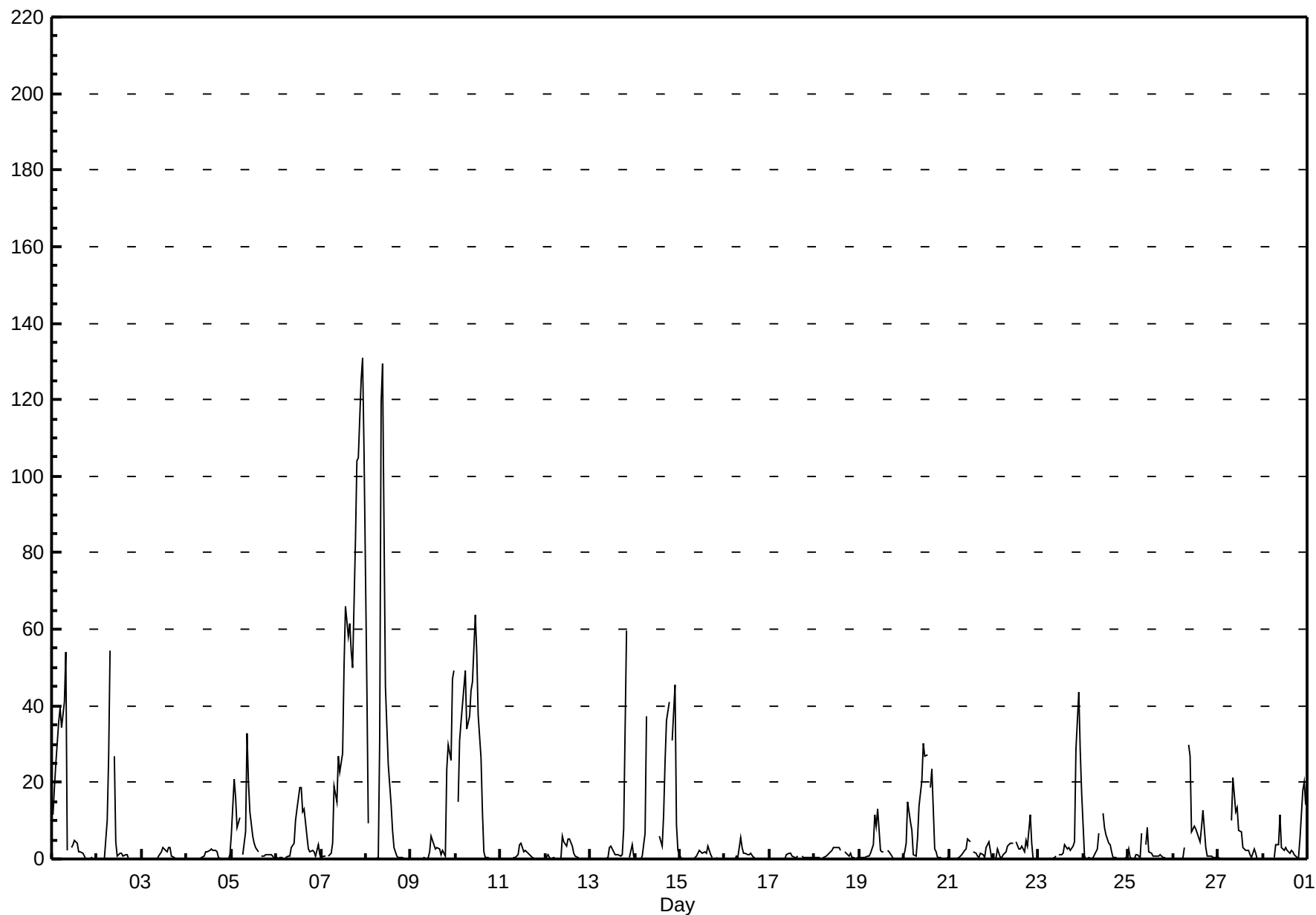
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 130.8 ppb on Feb 7 23:00 Maximum Daily Average: 48.4 ppb on Feb 7																								Hours in Service: 672 Hours of Data: 636 Hours of Missing Data: 36 Hours of Calibration: 35 Percent Operational Time: 99.9		
Minimum Value: 0 ppb on Feb 1 20:00 Maximum Diurnal Average: 14.4 ppb at hour 10 Monthly Average: 6.90 ppb												Minimum Daily Average: 0.4 ppb on Feb 17 Minimum Diurnal Average: 2.6 ppb at hour 1 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 1.0 Q ₃ = 3.8 P ₉₀ = 23.5 P ₉₉ = 103.1														
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-Feb	12	19	25	36	40	34	41	54	2	A	3	4	5	4	2	2	1	1	0	0	0	0	0	0	12.3	54.0
2-Feb	0	0	0	0	0	10	26	55	A	27	5	1	2	1	1	1	1	0	0	0	0	0	0	0	5.6	54.5
3-Feb	0	0	0	0	0	0	0	0	A	0	1	2	3	3	2	3	3	1	0	0	0	0	0	0	0.7	2.9
4-Feb	0	0	0	0	0	0	A	0	0	1	2	2	2	3	2	2	2	0	0	0	0	0	0	1	0.8	2.6
5-Feb	6	21	16	8	11	A	1	7	33	20	12	6	4	3	2	D	1	1	1	1	1	1	1	0	7.2	32.8
6-Feb	0	0	0	0	A	1	1	1	3	4	10	13	19	19	12	13	6	3	2	2	2	1	4	1	5.0	18.8
7-Feb	0	1	1	A	1	1	4	19	15	27	23	28	50	66	58	62	55	50	83	104	105	125	131	107	48.4	130.8
8-Feb	45	9	A	0	0	0	0	32	119	129	45	35	25	14	8	3	1	0	0	0	0	0	0	0	20.3	129.4
9-Feb	0	A	0	0	0	0	0	0	0	0	2	6	4	3	3	3	1	2	1	24	30	26	47	49	8.7	49.3
10-Feb	A	15	31	36	45	49	34	37	44	46	64	54	38	27	12	2	1	0	0	0	0	0	0	A	24.3	63.6
11-Feb	0	0	0	0	0	0	0	0	1	1	4	4	2	2	2	1	1	0	0	0	0	0	A	0	0.8	4.2
12-Feb	0	1	0	0	0	0	0	0	0	6	4	3	5	5	3	1	1	1	0	0	0	A	0	0	1.4	5.8
13-Feb	0	0	0	0	0	0	0	0	0	0	3	3	2	1	1	1	1	8	60	A	0	4	1	3.7	59.5	
14-Feb	0	0	0	0	1	7	37	C	C	C	C	C	C	6	3	11	25	36	41	A	31	46	9	2	--	45.5
15-Feb	0	0	0	0	0	0	0	0	0	1	2	2	2	2	2	4	1	0	A	0	0	0	0	0	0.7	3.5
16-Feb	0	0	0	0	0	0	1	0	6	3	2	1	1	1	1	1	1	A	0	0	0	0	0	0	0.8	5.6
17-Feb	0	0	0	0	0	0	0	0	0	1	2	1	1	0	0	1	A	1	0	1	0	0	0	0	0.4	1.7
18-Feb	0	0	0	0	0	0	1	1	1	2	3	3	3	3	2	A	2	1	1	1	0	0	0	1	1.2	3.1
19-Feb	0	0	0	0	1	1	1	4	12	8	13	2	2	2	A	2	2	1	0	0	0	0	0	0	2.3	13.0
20-Feb	2	4	15	10	7	1	1	6	14	21	30	27	27	A	19	24	3	2	0	0	0	0	0	0	9.2	30.1
21-Feb	0	0	0	0	0	0	1	1	2	3	5	4	A	2	1	1	0	2	1	0	3	5	2	0	1.5	5.3
22-Feb	0	0	3	0	0	1	2	3	4	4	4	A	4	2	3	3	2	5	3	12	4	0	0	0	2.6	11.7
23-Feb	0	0	0	0	0	0	0	0	0	1	A	1	1	2	4	3	3	2	4	4	29	44	28	17	6.2	43.5
24-Feb	1	0	0	0	0	0	1	3	7	A	12	8	6	4	4	2	0	0	0	0	0	0	1	1	2.2	12.0
25-Feb	2	1	0	0	1	1	0	7	A	4	8	2	1	1	1	1	1	1	0	0	0	0	0	0	1.4	8.2
26-Feb	0	0	0	0	0	0	3	A	30	27	7	8	8	7	4	8	13	3	1	1	1	0	0	0	5.3	30.0
27-Feb	0	0	0	0	0	0	A	10	21	12	13	7	7	3	3	2	2	1	0	2	2	0	0	0	3.8	21.2
28-Feb	0	0	0	0	0	A	0	4	4	12	3	2	3	2	1	2	2	1	0	0	5	18	20	14	4.1	20.0
2.6 2.7 3.4 3.4 4.0 4.1 6.0 9.7 12.7 14.4 10.9 8.9 8.7 6.9 5.9 6.1 4.8 4.3 5.5 7.9 7.9 9.9 9.1 7.2																								Diurnal Average		
44.6 21.0 30.9 35.8 44.8 49.0 41.0 54.5 119.3 129.4 63.6 54.1 50.5 66.1 58.3 61.5 54.6 50.1 83.2 104.2 104.8 125.1 130.8 106.8																								Diurnal Maximum		
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										

Hourly Averages

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



Hourly Maximums

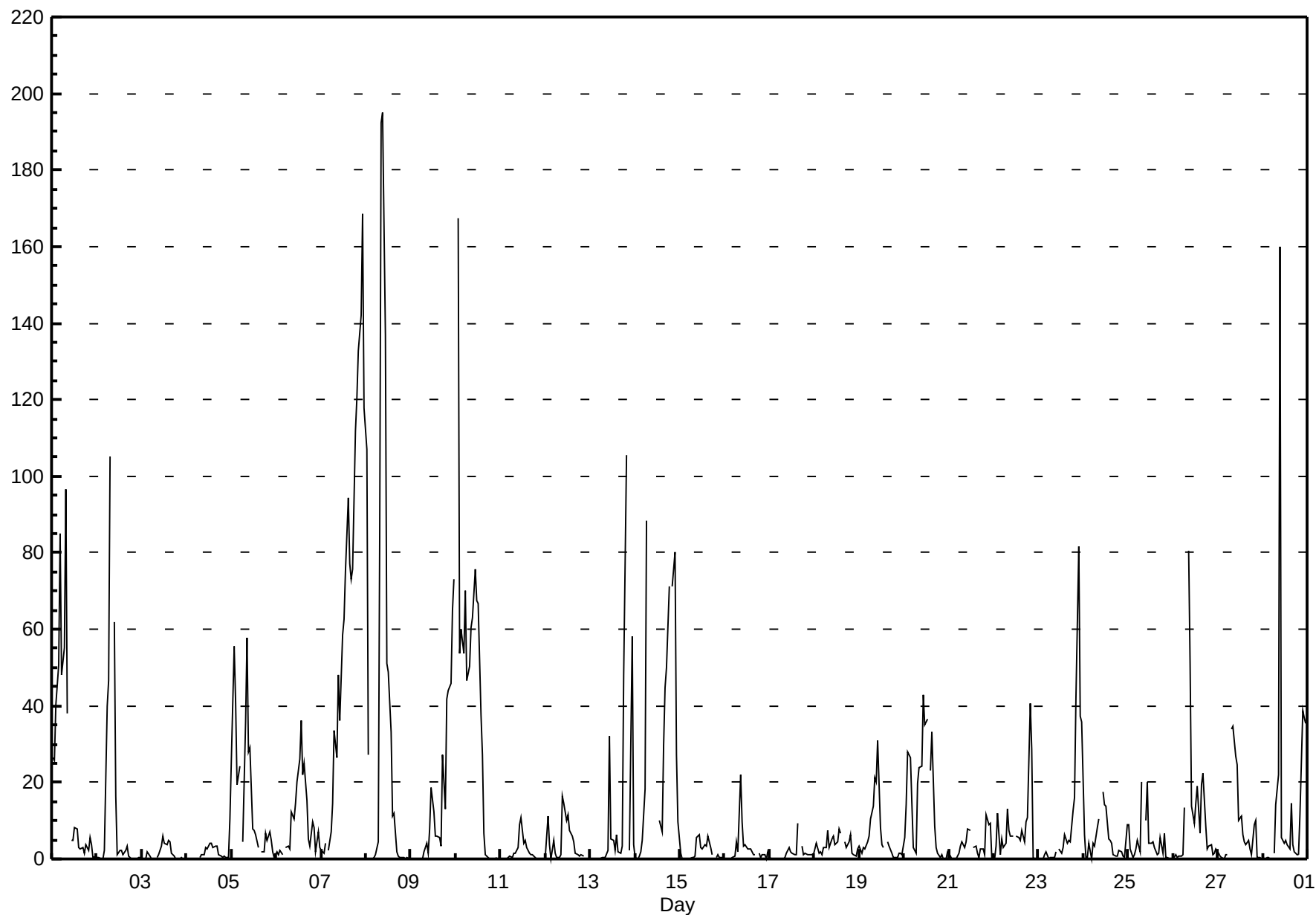
Nitrogen Oxide (NO) - ppb

Henry Pirker - February 2013

Maximum Value: 195.0 ppb on Feb 8 10:00																				Maximum Daily Average: 64.6 ppb on Feb 7					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 2 03:00																				Minimum Daily Average: 1.3 ppb on Feb 17					Hours of Data: 636	
Maximum Diurnal Average: 30.3 ppb at hour 10																				Minimum Diurnal Average: 6.5 ppb at hour 4					Hours of Missing Data: 36	
Monthly Average: 13.20 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.6 Median = 3.0 Q ₃ = 10.5 P ₉₀ = 40.9 P ₉₉ = 126.6					Hours of Calibration: 35	
																				Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	26	26	40	51	85	48	55	96	38	A	5	5	8	8	3	3	3	2	4	2	6	4	0	1	22.6	96.5
2-Feb	0	0	0	0	2	40	47	105	A	62	16	1	2	2	1	2	3	1	0	0	0	0	0	0	12.5	105.1
3-Feb	0	0	0	2	1	0	0	A	0	1	3	6	4	4	5	5	2	1	0	0	0	1	0	0	1.5	5.8
4-Feb	0	0	0	0	0	0	A	1	1	1	3	3	4	4	3	4	3	1	1	1	1	1	0	11	1.8	10.6
5-Feb	26	56	41	19	24	A	5	36	58	28	29	8	7	6	3	D	2	2	7	5	7	5	2	0	17.1	57.8
6-Feb	2	1	2	1	A	3	3	3	12	10	14	20	26	36	22	25	15	5	3	10	8	2	7	3	10.3	36.3
7-Feb	2	1	4	A	2	7	14	33	27	48	36	59	62	75	94	77	73	76	112	121	133	142	169	118	64.6	168.7
8-Feb	107	27	A	0	1	1	4	85	192	195	137	51	49	33	11	12	2	1	1	1	1	0	0	0	39.6	195.0
9-Feb	0	A	0	0	0	0	0	2	4	1	8	19	12	6	6	6	3	27	13	42	44	46	65	73	16.4	73.1
10-Feb	A	168	54	60	54	70	47	50	60	63	76	68	67	38	27	7	1	1	0	0	0	0	0	A	41.3	167.6
11-Feb	0	0	0	0	1	1	1	1	2	3	9	11	4	5	3	2	1	1	0	0	0	0	A	0	1.9	10.9
12-Feb	0	11	4	0	5	1	0	1	1	17	15	10	12	7	6	4	1	1	1	1	1	A	0	0	4.3	16.6
13-Feb	0	0	0	0	0	0	0	0	0	2	32	5	5	2	6	2	1	3	48	106	A	2	58	4	12.1	105.6
14-Feb	0	0	1	2	5	18	88	C	C	C	C	C	C	10	7	30	45	50	71	A	71	80	27	10	--	88.3
15-Feb	1	0	0	0	0	0	0	1	1	6	6	3	2	4	4	6	3	1	A	1	1	0	1	0	1.8	6.2
16-Feb	0	0	0	0	1	1	4	2	22	10	3	4	3	3	3	1	1	A	1	0	1	1	0	2	2.7	22.0
17-Feb	0	0	0	0	0	0	0	0	1	2	3	2	1	1	1	9	A	3	1	1	1	1	1	1	1.3	9.3
18-Feb	2	4	1	2	1	3	3	7	3	5	6	4	4	8	7	A	4	3	5	6	1	1	1	3	3.7	7.6
19-Feb	3	1	3	3	4	6	10	14	21	20	31	8	4	3	A	4	3	2	1	0	1	1	1	1	6.4	30.8
20-Feb	6	14	28	27	14	3	2	20	24	24	43	35	36	A	23	33	9	3	1	1	1	0	0	2	15.2	43.0
21-Feb	1	0	0	0	0	1	3	4	3	5	8	7	A	3	4	1	1	3	2	1	11	9	9	1	3.4	11.5
22-Feb	0	4	12	1	5	3	4	13	8	6	6	A	6	5	5	7	4	10	11	40	29	0	0	0	7.8	40.5
23-Feb	0	0	0	1	2	0	1	1	1	2	A	2	2	3	6	4	5	4	13	16	42	82	37	36	11.3	81.7
24-Feb	6	0	0	4	0	4	3	8	10	A	17	14	14	5	5	4	1	1	1	2	2	1	1	9	5.0	17.5
25-Feb	9	2	0	1	2	5	2	20	A	10	20	4	4	4	3	1	2	5	1	7	1	0	0	0	4.6	20.0
26-Feb	0	1	0	1	1	1	13	A	80	51	14	10	14	19	7	19	22	8	2	3	4	1	1	3	12.1	80.5
27-Feb	1	1	1	0	1	1	A	34	35	27	25	10	11	6	4	4	5	3	1	9	10	1	0	0	8.3	34.8
28-Feb	0	0	1	0	0	A	2	14	22	160	5	4	5	4	3	15	4	2	1	1	11	39	37	35	15.8	160.0
7.3 11.8 7.1 6.5 7.8 8.4 12.1 22.1 25.1 30.3 22.0 14.3 14.2 11.3 10.0 11.0 8.2 8.1 11.2 14.0 14.4 15.5 15.5 11.6																									Diurnal Average	
107.1 167.6 53.5 60.1 85.1 70.1 88.3 105.1 192.4 195.0 136.8 67.5 66.8 75.5 94.2 77.1 73.1 75.8 111.8 120.5 132.8 142.0 168.7 117.8																									Diurnal Maximum	
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										

Hourly Maximums

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



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

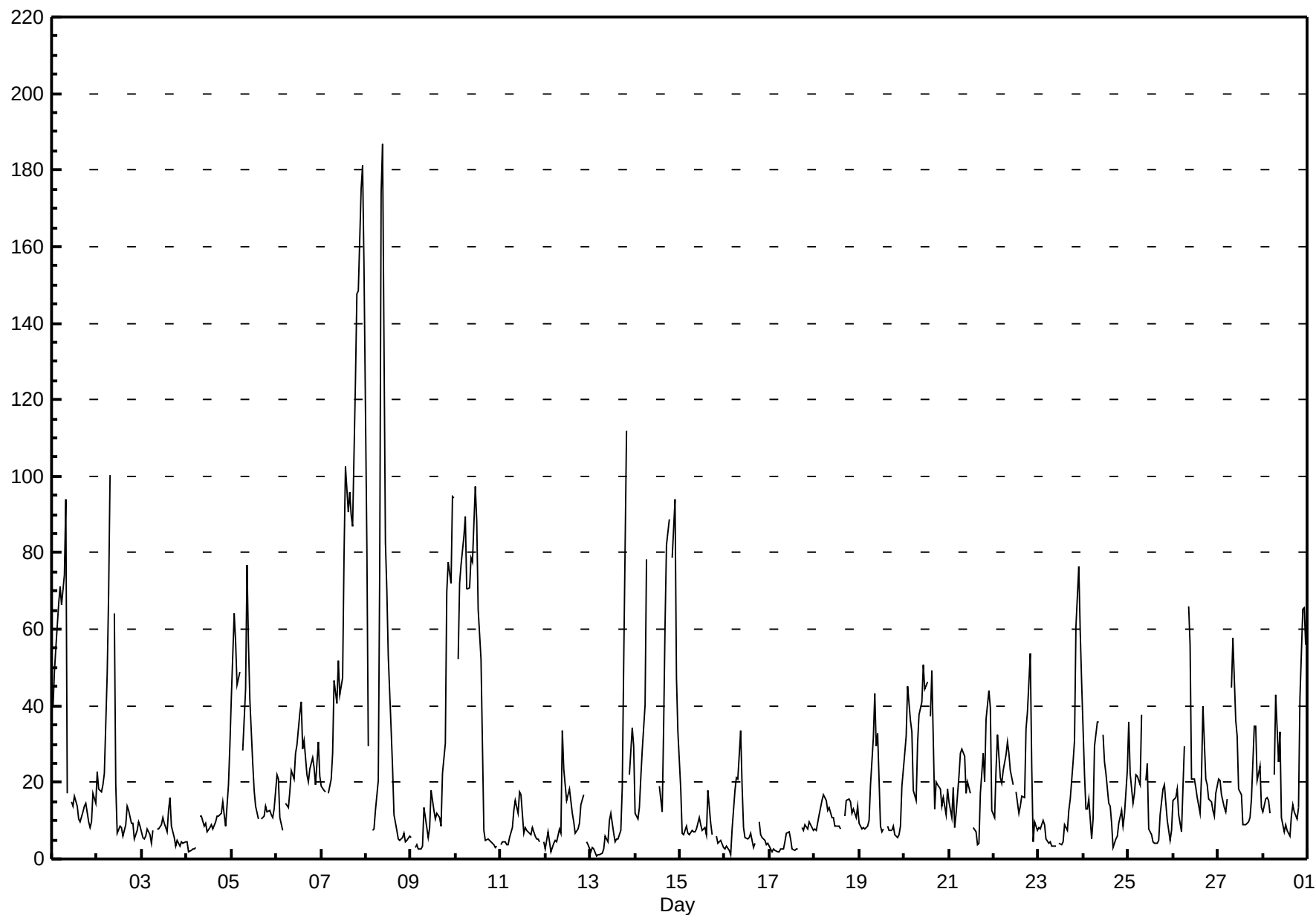
Henry Pirker - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 186.8 ppb on Feb 8 10:00 Maximum Daily Average: 79.4 ppb on Feb 7																								Hours in Service: 672 Hours of Data: 636 Hours of Missing Data: 36 Hours of Calibration: 35 Percent Operational Time: 99.9		
Minimum Value: 1 ppb on Feb 13 04:00 Minimum Daily Average: 4.8 ppb on Feb 17 Maximum Diurnal Average: 33.9 ppb at hour 9 Minimum Diurnal Average: 15.0 ppb at hour 15 Monthly Average: 22.12 ppb Percentiles: P ₁ = 2.0 P ₁₀ = 4.2 Q ₁ = 7.3 Median = 12.7 Q ₃ = 24.2 P ₉₀ = 53.7 P ₉₉ = 143.6																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Feb	40	49	55	67	71	66	74	94	17	A	15	14	16	14	10	10	12	14	14	10	8	10	17	15	30.9	93.9
2-Feb	23	18	18	19	22	49	69	100	A	64	20	7	9	8	6	9	14	13	9	9	5	7	10	8	22.4	100.3
3-Feb	5	5	6	8	6	4	7	A	8	8	9	11	9	7	13	16	8	6	3	5	3	5	4	5	7.0	16.1
4-Feb	5	2	2	3	3	3	A	11	11	9	9	7	8	9	8	10	11	11	12	15	12	9	19	30	9.5	29.9
5-Feb	42	64	57	45	49	A	28	44	77	56	41	25	18	14	10	D	10	11	14	12	13	11	11	13	30.3	76.8
6-Feb	22	21	11	8	A	14	13	18	23	21	28	30	38	41	29	31	22	20	24	26	24	19	30	22	23.2	41.0
7-Feb	19	18	18	A	17	21	28	46	41	52	43	47	79	102	90	96	90	87	125	148	149	175	181	154	79.4	181.4
8-Feb	82	30	A	7	8	13	20	75	174	187	83	70	53	34	24	11	7	5	5	5	7	4	5	6	39.8	186.8
9-Feb	6	A	3	4	3	3	3	13	8	5	8	18	13	10	12	11	8	22	30	70	78	72	95	94	25.6	94.5
10-Feb	A	52	72	77	84	90	70	71	79	78	97	88	65	52	30	8	5	5	5	5	4	3	3	A	47.4	97.4
11-Feb	4	4	4	4	4	6	8	13	15	12	18	17	7	8	7	7	6	8	6	5	5	5	A	5	7.7	17.5
12-Feb	2	7	4	2	4	5	4	8	7	34	23	15	17	18	12	10	7	8	9	14	17	A	4	4	10.3	33.7
13-Feb	2	3	2	1	1	1	2	3	6	4	10	12	7	4	5	5	7	19	51	112	A	22	34	29	14.9	111.9
14-Feb	12	11	13	21	28	40	78	C	C	C	C	C	C	19	12	34	61	82	89	A	79	94	47	33	--	94.1
15-Feb	18	7	6	9	7	6	7	7	7	8	11	9	7	8	7	18	9	6	A	6	4	4	5	3	7.8	18.2
16-Feb	3	3	2	1	8	18	21	21	33	19	8	6	5	6	7	3	4	A	10	6	6	5	4	4	8.8	33.4
17-Feb	3	2	2	2	2	2	3	3	5	7	7	5	3	2	2	3	A	8	8	9	8	10	9	8	4.8	9.5
18-Feb	8	8	11	13	15	17	15	13	13	11	11	9	9	9	8	A	11	15	16	15	12	13	11	14	12.0	16.8
19-Feb	9	8	8	8	9	10	19	32	43	30	33	9	7	8	A	9	8	7	9	6	5	6	9	19	13.5	43.2
20-Feb	27	32	45	36	33	18	15	30	38	41	51	44	46	A	37	49	13	20	19	18	14	16	12	18	29.3	50.6
21-Feb	15	11	19	8	12	22	27	29	27	17	20	17	A	8	7	4	4	17	27	20	36	44	40	13	19.3	44.0
22-Feb	11	23	32	21	20	23	27	31	27	23	19	A	18	12	14	16	16	34	38	54	24	4	10	7	22.0	53.9
23-Feb	8	8	10	9	5	4	5	3	3	3	A	4	4	4	9	7	13	16	25	31	61	76	59	46	18.0	76.4
24-Feb	22	13	13	16	5	10	29	36	36	A	33	25	22	15	14	9	3	5	6	9	13	9	12	23	16.4	35.9
25-Feb	36	22	14	17	22	22	19	38	A	21	25	8	7	4	4	4	5	11	18	19	14	10	5	8	15.4	37.8
26-Feb	15	16	18	12	7	19	30	A	66	56	21	21	19	16	12	21	40	21	19	16	15	13	11	17	21.8	65.9
27-Feb	21	21	17	13	12	16	A	45	58	36	32	18	17	9	9	9	10	11	16	35	35	21	24	14	21.6	57.8
28-Feb	12	16	16	15	12	A	22	43	25	33	11	7	9	7	6	11	14	12	11	13	42	65	65	56	22.8	65.5
17.5 17.6 17.8 16.5 17.4 19.2 24.9 33.0 33.9 33.3 26.4 20.9 19.7 16.7 15.0 16.2 15.5 18.4 22.9 25.7 25.6 27.1 27.3 24.7																								Diurnal Average		
81.7 64.2 72.1 76.7 84.5 89.7 78.3 100.3 174.2 186.8 97.4 88.5 79.5 102.5 90.5 96.0 89.8 86.9 124.9 147.8 148.6 175.2 181.4 154.4																								Diurnal Maximum		
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - February 2013



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

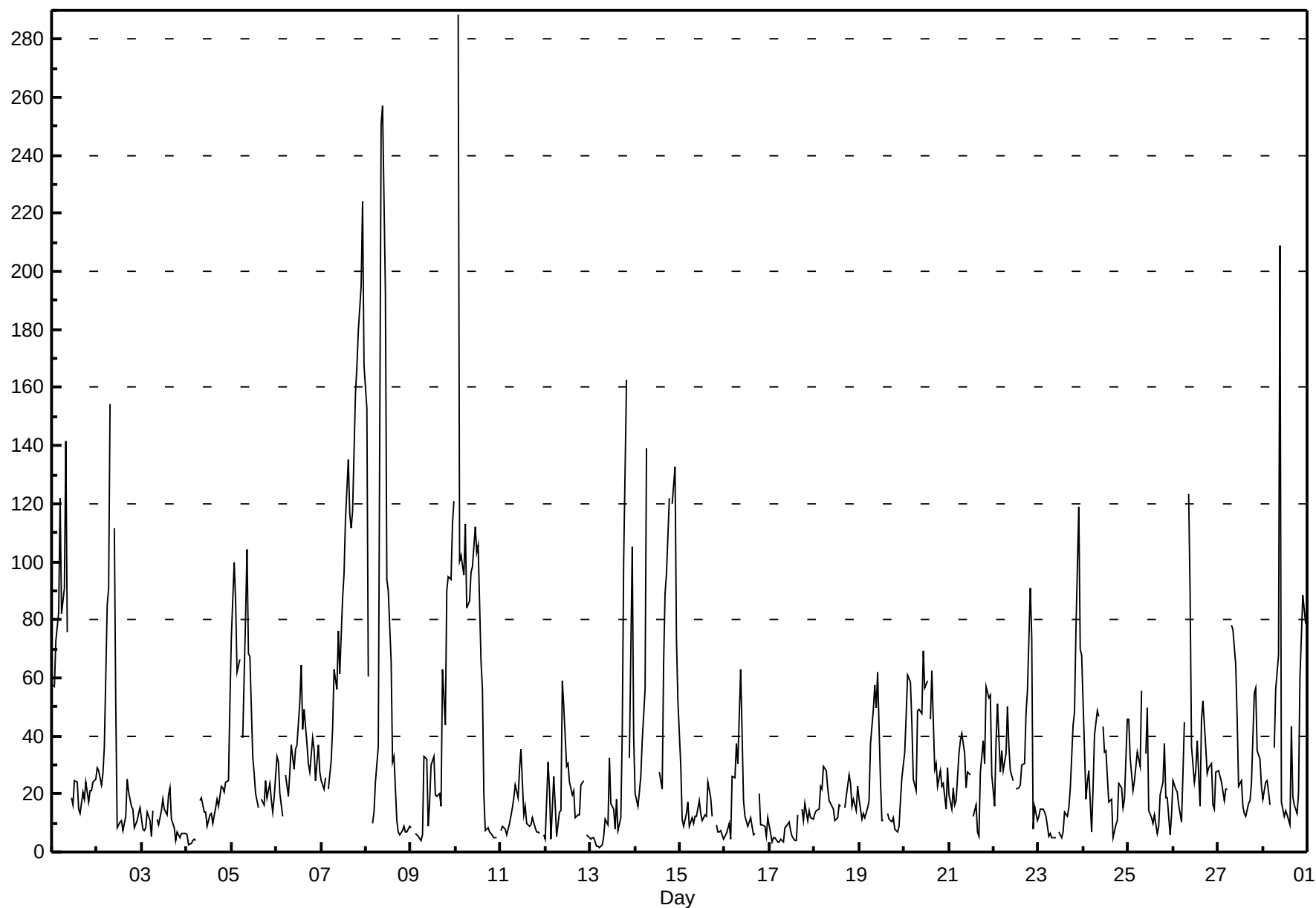
Henry Pirker - February 2013

Maximum Value: 288.6 ppb on Feb 10 02:00																					Maximum Daily Average: 99.7 ppb on Feb 7					Hours in Service: 672	
Minimum Value: 1 ppb on Feb 13 06:00																					Minimum Daily Average: 8.0 ppb on Feb 17					Hours of Data: 636	
Maximum Diurnal Average: 55.5 ppb at hour 10																					Minimum Diurnal Average: 23.4 ppb at hour 15					Hours of Missing Data: 36	
Monthly Average: 33.69 ppb																					Percentiles: P ₁ = 3.2 P ₁₀ = 6.5 Q ₁ = 11.7 Median = 21.0 Q ₃ = 38.3 P ₉₀ = 82.5 P ₉₉ = 183.2					Hours of Calibration: 35	
																					Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	58	57	73	83	122	82	91	142	75	A	19	16	25	24	15	13	21	18	24	17	21	21	24	25	46.3	141.6	
2-Feb	29	28	23	27	36	85	91	155	A	111	51	9	11	11	7	12	25	21	16	15	8	11	13	15	35.2	154.5	
3-Feb	8	7	8	14	11	5	14	A	11	9	14	18	15	13	20	22	11	9	4	7	5	7	7	7	10.7	22.0	
4-Feb	6	3	3	4	4	4	A	18	19	14	14	9	13	13	10	15	18	16	22	22	20	24	24	51	15.1	51.1	
5-Feb	74	100	87	62	66	A	39	81	104	68	67	33	27	20	15	D	18	16	25	19	23	18	14	19	45.3	104.1	
6-Feb	33	31	20	12	A	26	19	27	37	29	35	37	52	64	42	49	37	31	27	39	35	24	37	28	33.6	64.3	
7-Feb	25	22	25	A	22	31	43	63	56	76	61	87	96	115	135	117	111	118	158	167	180	195	224	167	99.7	224.1	
8-Feb	153	61	A	10	14	24	37	141	251	257	193	94	90	66	31	33	11	7	6	7	9	7	7	9	65.8	257.1	
9-Feb	8	A	6	6	5	4	6	33	32	9	17	30	33	20	19	20	16	63	44	90	95	94	113	121	38.4	121.0	
10-Feb	A	289	100	102	95	113	84	87	96	98	112	103	106	66	56	20	8	8	7	6	5	5	5	A	71.4	288.6	
11-Feb	7	9	8	6	8	10	15	19	23	19	28	35	13	16	10	9	9	12	8	7	7	6	A	6	12.6	35.3	
12-Feb	4	31	22	5	26	16	6	14	14	59	50	29	31	24	19	21	12	13	13	23	25	A	6	5	20.4	59.0	
13-Feb	4	5	5	2	2	1	2	6	11	9	32	17	15	8	18	7	12	41	101	163	A	32	105	40	27.8	162.6	
14-Feb	20	16	21	26	39	56	139	C	C	C	C	C	C	28	22	65	89	96	122	A	120	132	73	52	--	139.1	
15-Feb	30	11	9	13	17	9	12	10	12	13	18	13	11	13	12	24	19	12	A	10	7	7	8	5	12.8	29.8	
16-Feb	6	6	10	5	26	26	37	30	63	41	18	12	9	11	12	6	6	A	20	9	9	9	5	12	16.8	62.8	
17-Feb	6	3	5	5	3	3	4	3	8	9	10	7	5	4	4	13	A	15	11	17	11	14	12	11	8.0	16.6	
18-Feb	13	14	15	23	22	30	28	22	18	16	15	11	12	16	16	A	15	19	27	24	16	18	14	23	18.5	29.6	
19-Feb	18	11	13	12	15	18	37	49	57	50	62	24	11	11	A	13	12	10	12	8	7	9	18	26	21.9	61.8	
20-Feb	34	47	61	59	44	25	21	49	49	48	69	57	59	A	46	62	29	31	23	28	22	24	15	29	40.4	69.3	
21-Feb	20	15	22	16	18	34	38	41	34	22	27	27	A	12	16	7	6	28	38	30	57	53	54	27	27.9	57.0	
22-Feb	16	38	51	27	35	28	34	50	36	28	24	A	22	22	23	30	30	48	55	91	74	8	16	11	34.7	90.8	
23-Feb	12	15	15	14	12	5	6	5	5	5	A	7	5	7	14	12	15	22	44	48	77	119	70	68	26.1	118.7	
24-Feb	36	18	24	28	7	22	40	48	46	A	43	34	35	17	18	18	5	9	11	23	22	15	18	46	25.5	48.5	
25-Feb	46	32	21	25	29	34	30	55	A	34	50	14	12	10	13	6	9	20	24	38	19	18	6	13	24.3	55.4	
26-Feb	24	21	21	16	11	27	45	A	124	89	36	24	28	38	16	46	52	36	27	29	30	16	15	27	34.7	123.5	
27-Feb	28	26	24	17	22	21	A	78	77	64	46	23	24	16	13	12	17	18	24	55	57	35	32	23	32.7	78.4	
28-Feb	18	24	24	20	16	A	36	56	68	209	17	12	14	13	9	43	19	16	13	20	60	88	83	79	41.8	208.7	
27.3 34.8 26.5 23.6 27.0 28.6 36.8 51.2 53.1 55.5 43.4 30.1 29.7 25.0 23.4 26.8 23.4 27.8 33.5 37.5 37.8 37.4 37.7 34.9																								Diurnal Average			
152.6 288.6 100.4 102.0 121.7 113.0 139.1 154.5 250.8 257.1 192.9 103.2 105.9 114.6 135.3 116.7 111.4 117.7 157.6 167.3 179.5 195.0 224.1 167.4																								Diurnal Maximum			
C - Calibration D - DAS Failure A - Automated Daily Zero Span																											

Hourly Maximums

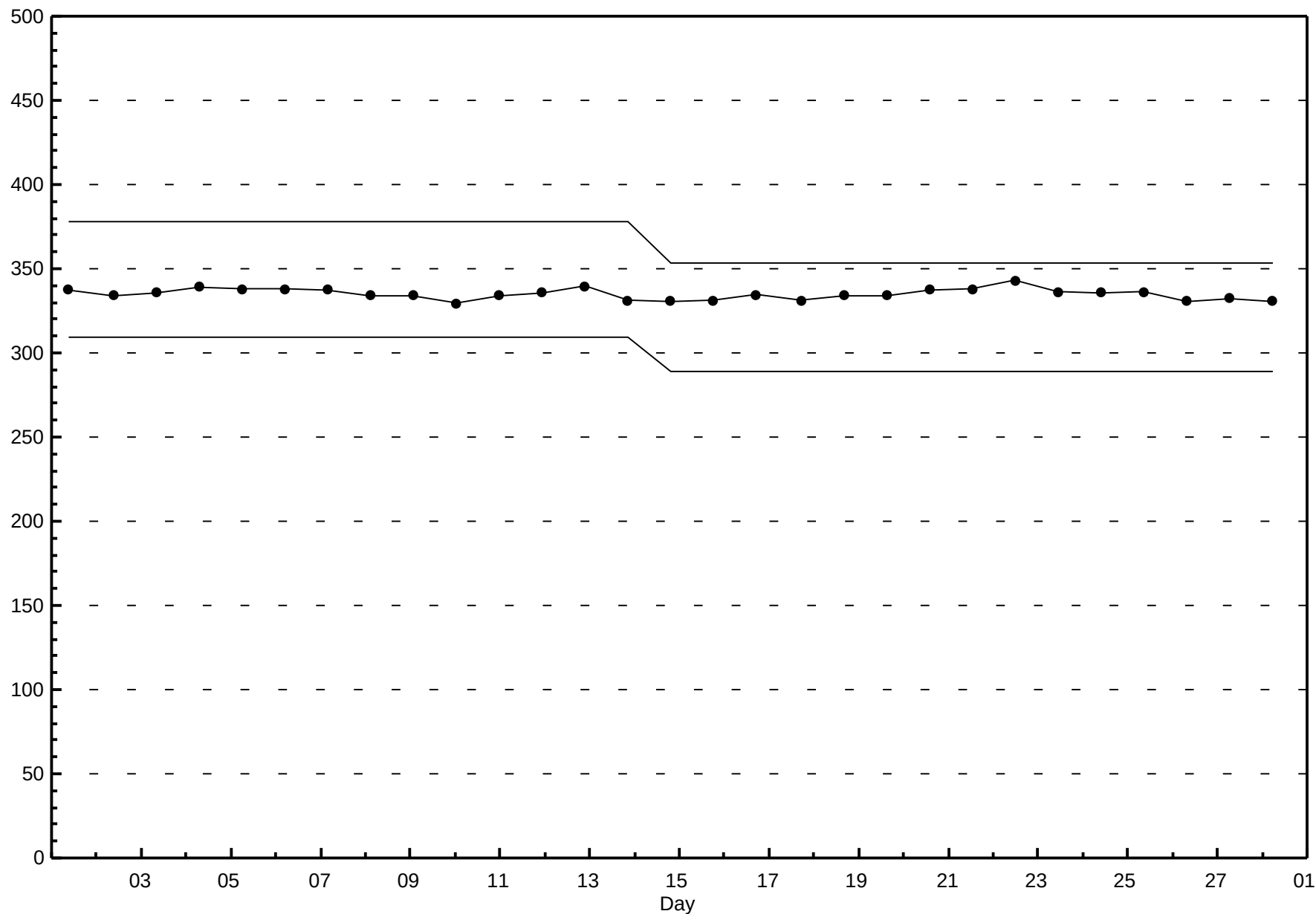
Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - February 2013



Span Responses

Oxides of Nitrogen (NO_x)
Henry Pirker - February 2013



Hourly Averages

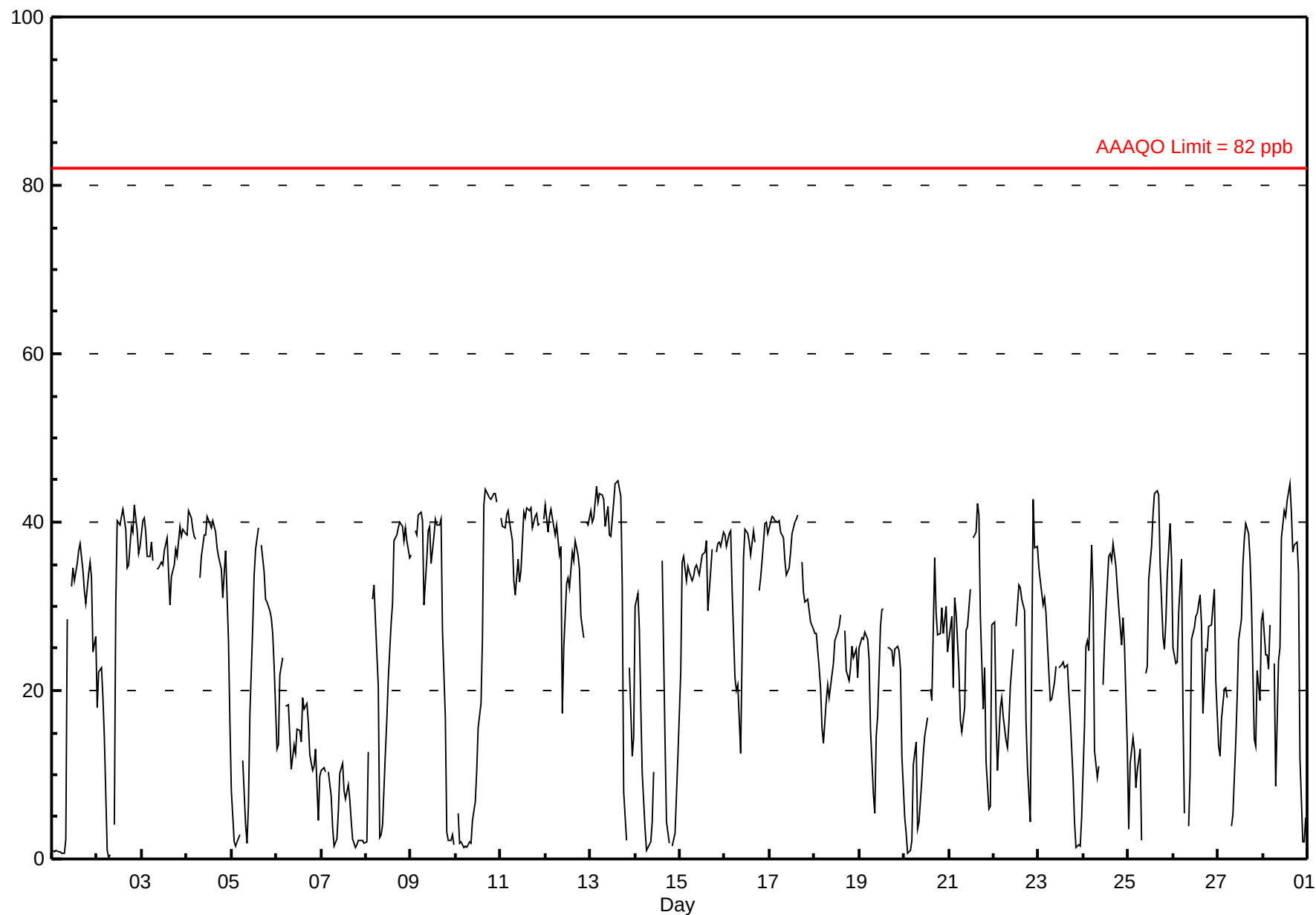
Ozone (O₃) - ppb

Henry Pirker - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 44.9 ppb on Feb 13 16:00 Maximum Daily Average: 38.9 ppb on Feb 11																								Hours in Service: 672 Hours of Data: 639 Hours of Missing Data: 33 Hours of Calibration: 32 Percent Operational Time: 99.9		
Minimum Value: 0 ppb on Feb 2 07:00 Maximum Diurnal Average: 34.2 ppb at hour 15 Monthly Average: 25.64 ppb												Minimum Daily Average: 5.8 ppb on Feb 7 Minimum Diurnal Average: 15.4 ppb at hour 8 Percentiles: P ₁ = 0.9 P ₁₀ = 4.1 Q ₁ = 15.3 Median = 28.1 Q ₃ = 37.2 P ₉₀ = 40.2 P ₉₉ = 43.7														
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-Feb	1	1	1	1	1	1	1	2	28	A	32	35	33	35	37	37	34	32	30	34	35	33	25	26	21.6	37.4
2-Feb	18	22	23	19	14	1	0	0	A	4	30	40	40	41	42	39	35	35	40	39	42	39	36	37	27.7	42.0
3-Feb	40	40	39	36	36	38	35	A	34	35	35	35	37	38	34	30	34	35	37	36	40	38	39	39	36.5	40.5
4-Feb	39	41	41	39	38	38	A	33	36	39	38	41	40	39	40	39	37	36	34	31	34	37	26	16	36.2	41.3
5-Feb	8	2	2	2	3	A	12	4	2	6	17	28	34	37	39	D	37	34	31	31	30	29	27	23	19.8	39.3
6-Feb	13	14	22	24	A	18	18	15	11	14	12	15	15	14	19	18	18	16	12	10	11	13	5	10	14.7	23.9
7-Feb	11	11	10	A	10	7	4	2	2	6	10	11	8	7	9	7	5	2	1	2	2	2	2	2	5.8	11.4
8-Feb	2	13	A	31	33	28	20	2	3	4	13	17	21	28	30	38	39	39	40	39	38	39	38	36	25.7	39.9
9-Feb	36	A	39	38	41	41	40	30	36	39	39	35	38	40	40	40	40	27	17	3	2	2	3	2	29.1	41.2
10-Feb	A	5	2	2	1	2	1	2	2	5	7	10	16	19	26	42	44	43	43	43	43	43	42	A	20.2	43.9
11-Feb	41	39	39	41	41	40	38	33	31	36	33	34	41	40	42	41	42	39	41	41	40	40	A	40	38.9	41.7
12-Feb	42	39	41	42	40	38	40	36	37	17	25	33	33	32	36	35	38	36	34	29	26	A	40	40	35.2	42.0
13-Feb	41	40	40	44	42	43	43	43	40	42	38	38	42	45	45	45	43	32	8	2	A	23	12	14	35.1	44.9
14-Feb	30	31	27	18	10	4	1	1	2	4	10	C	C	C	35	25	14	4	2	A	1	3	8	12	12.2	35.4
15-Feb	22	35	36	33	35	34	33	34	35	35	34	35	36	36	38	30	34	37	A	36	38	38	37	39	34.7	38.7
16-Feb	38	37	39	39	32	22	20	21	13	24	36	39	39	38	36	39	38	A	32	33	35	40	40	39	33.3	40.0
17-Feb	40	41	41	40	40	40	39	38	35	34	35	36	39	40	40	41	A	35	32	31	31	30	28	27	36.2	40.8
18-Feb	27	27	23	20	16	14	19	21	19	22	23	26	27	28	29	A	27	22	21	23	25	24	25	22	23.0	28.9
19-Feb	25	26	26	27	26	24	15	8	5	15	17	28	30	30	A	25	25	25	23	25	25	25	22	12	22.1	29.7
20-Feb	5	3	1	1	2	11	14	4	4	9	13	15	17	A	20	19	36	29	27	27	30	27	30	25	16.0	35.8
21-Feb	26	29	20	31	29	22	16	15	18	27	28	32	A	38	39	42	41	29	18	23	12	6	6	28	25.0	42.2
22-Feb	28	17	11	18	19	17	14	13	16	21	25	A	28	33	32	31	29	16	11	4	24	43	37	37	22.7	42.6
23-Feb	35	33	30	31	29	22	19	19	21	23	A	23	23	23	23	20	17	10	4	1	2	1	5	19.0	34.5	
24-Feb	16	25	26	25	37	32	13	10	11	A	21	26	29	36	36	35	38	35	32	30	25	29	25	13	26.3	37.5
25-Feb	4	11	14	13	8	10	13	2	A	22	23	33	37	41	43	44	43	35	26	25	28	34	40	36	25.5	43.8
26-Feb	25	23	23	29	36	18	5	A	4	10	26	27	29	29	31	28	17	25	25	28	28	30	32	21	23.9	35.6
27-Feb	13	12	17	20	20	19	A	4	5	14	19	26	28	35	38	40	39	36	30	14	13	22	19	28	22.3	39.8
28-Feb	29	24	24	22	28	A	23	9	24	25	38	41	41	43	45	41	36	37	38	34	12	2	2	5	27.1	44.6
24.2 23.8 24.3 25.5 24.8 22.5 19.1 15.4 18.2 20.4 25.1 29.2 30.8 33.2 34.2 33.6 32.7 29.3 25.7 25.1 24.9 25.6 24.0 23.5																								Diurnal Average		
42.0 41.3 40.6 44.2 42.4 43.4 43.2 42.7 39.6 41.8 39.4 41.3 42.3 44.6 44.7 44.9 43.9 43.3 42.9 42.8 43.3 43.4 42.5 40.4																								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
Henry Pirker - February 2013



Hourly Maximums

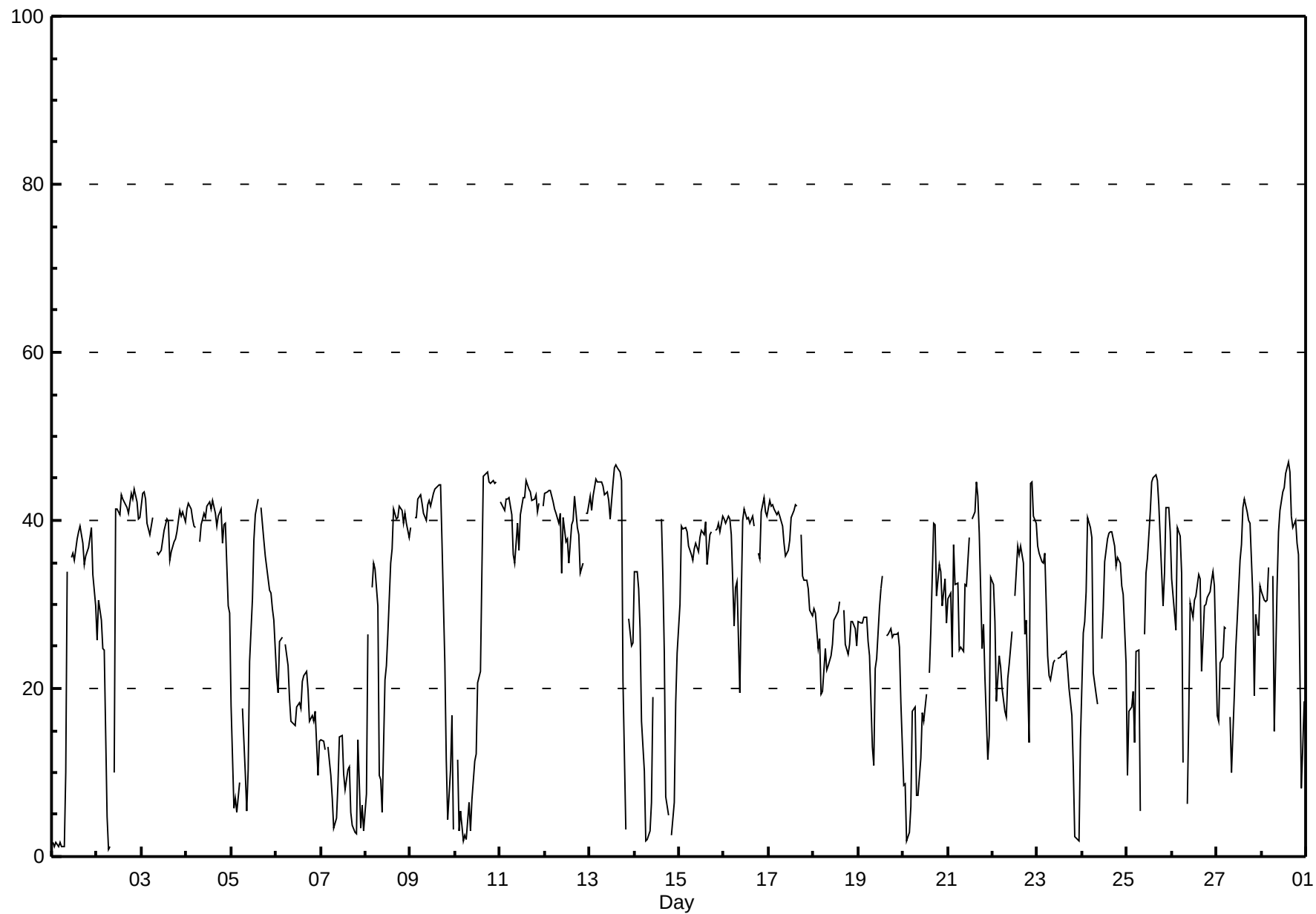
Ozone (O₃) - ppb

Henry Pirker - February 2013

Maximum Value: 46.9 ppb on Feb 28 15:00																								Maximum Daily Average: 41.4 ppb on Feb 11										Hours in Service: 672	
Minimum Value: 1 ppb on Feb 2 07:00																								Minimum Daily Average: 8.5 ppb on Feb 7										Hours of Data: 639	
Maximum Diurnal Average: 37.1 ppb at hour 15																								Minimum Diurnal Average: 20.3 ppb at hour 8										Hours of Missing Data: 33	
Monthly Average: 29.71 ppb																								Percentiles: P ₁ = 1.7 P ₁₀ = 9.7 Q ₁ = 22.1 Median = 33.4 Q ₃ = 40.2 P ₉₀ = 42.6 P ₉₉ = 45.6										Hours of Calibration: 32	
																								Percent Operational Time: 99.9											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Feb	2	1	2	1	2	1	1	10	34	A	36	36	35	38	39	39	37	35	36	37	38	39	33	30	24.4	39.4									
2-Feb	26	30	28	25	25	5	1	1	A	10	41	41	41	43	43	42	42	41	43	43	44	42	40	40	32.0	43.8									
3-Feb	43	43	43	40	38	39	40	A	36	36	36	38	39	40	40	35	36	37	38	39	41	41	41	40	39.1	43.3									
4-Feb	41	42	41	40	39	39	A	37	39	41	40	42	42	41	42	41	39	40	41	37	39	40	30	29	39.4	42.4									
5-Feb	18	6	7	5	9	A	18	10	5	10	23	31	38	41	43	D	41	38	36	34	32	31	29	28	24.2	42.6									
6-Feb	21	20	26	26	A	25	23	19	16	16	16	18	18	18	21	21	22	20	16	17	16	17	10	14	18.9	26.1									
7-Feb	14	14	13	A	13	10	7	3	4	9	14	14	10	8	10	11	5	4	3	3	14	3	6	3	8.5	14.5									
8-Feb	7	26	A	32	35	34	30	10	9	5	21	23	26	35	37	41	40	40	42	41	40	41	40	38	30.2	41.7									
9-Feb	39	A	40	40	42	43	42	41	40	42	42	42	43	44	44	44	44	37	23	12	4	10	17	3	33.9	44.3									
10-Feb	A	11	3	5	2	3	2	6	3	7	11	12	21	22	34	45	45	46	45	44	45	44	45	A	22.8	45.7									
11-Feb	42	42	41	42	42	43	41	36	35	40	36	41	43	43	45	44	43	42	43	43	41	42	A	42	41.4	44.8									
12-Feb	43	43	43	43	42	41	41	40	41	34	40	38	38	35	39	40	43	39	38	34	35	A	41	41	39.7	43.5									
13-Feb	43	41	43	45	45	45	45	44	43	43	42	40	44	46	47	46	46	45	21	3	A	28	25	25	38.9	46.5									
14-Feb	34	34	32	27	16	10	2	2	3	7	19	C	C	C	40	33	24	7	5	A	3	6	18	24	17.3	40.2									
15-Feb	30	39	39	39	39	37	36	35	37	37	36	38	39	38	40	35	38	39	A	39	39	40	39	41	37.7	40.5									
16-Feb	40	40	41	40	38	27	32	33	20	31	40	41	40	40	40	40	39	A	36	35	41	43	41	41	37.4	42.7									
17-Feb	42	42	42	41	41	41	40	39	37	36	37	38	40	41	42	42	A	38	33	33	33	32	29	29	37.8	42.4									
18-Feb	29	29	25	26	19	20	25	22	23	24	25	28	29	29	30	A	29	25	24	25	28	28	27	25	25.9	30.3									
19-Feb	28	28	28	28	28	26	24	13	11	22	24	30	32	33	A	26	26	27	26	26	26	27	25	18	25.3	33.4									
20-Feb	9	9	2	3	6	17	18	7	7	12	17	16	19	A	22	27	40	40	31	35	34	30	33	28	20.0	39.7									
21-Feb	31	31	24	37	32	33	25	25	24	32	32	38	A	40	41	44	43	38	25	28	21	11	14	33	30.6	44.5									
22-Feb	32	28	18	24	23	20	17	17	21	23	27	A	31	37	36	37	35	26	28	14	44	45	40	40	28.8	44.6									
23-Feb	37	36	35	35	36	24	21	21	23	23	A	24	24	24	24	24	22	20	17	11	2	2	2	14	21.8	37.0									
24-Feb	27	28	31	40	39	38	22	19	18	A	26	30	35	38	38	39	39	37	35	36	35	32	31	23	32.0	40.3									
25-Feb	10	17	18	20	13	24	25	5	A	26	34	35	41	45	45	45	45	42	34	30	34	42	41	39	30.9	45.4									
26-Feb	33	29	27	39	38	34	11	A	6	17	30	28	30	31	33	33	22	30	30	31	31	33	34	32	28.9	39.1									
27-Feb	17	16	23	24	27	27	A	17	10	19	25	28	35	37	41	42	41	40	40	31	19	29	26	32	28.2	42.5									
28-Feb	31	31	30	30	34	A	33	15	32	39	41	43	44	46	47	46	41	39	40	37	36	8	13	18	33.7	46.9									
28.5 28.0 27.6 29.6 28.3 27.1 23.9 20.3 22.3 24.6 30.1 32.0 33.8 35.9 37.1 37.1 35.9 33.8 30.6 29.5 30.2 29.1 28.6 28.5																								Diurnal Average											
43.2 43.4 43.5 44.9 44.6 44.5 44.5 44.0 43.0 43.3 42.5 43.4 44.4 46.2 46.9 46.4 45.7 45.7 44.7 44.4 44.7 44.6 44.5 41.6																								Diurnal Maximum											
C - Calibration																																			
D - DAS Failure																																			
A - Automated Daily Zero Span																																			

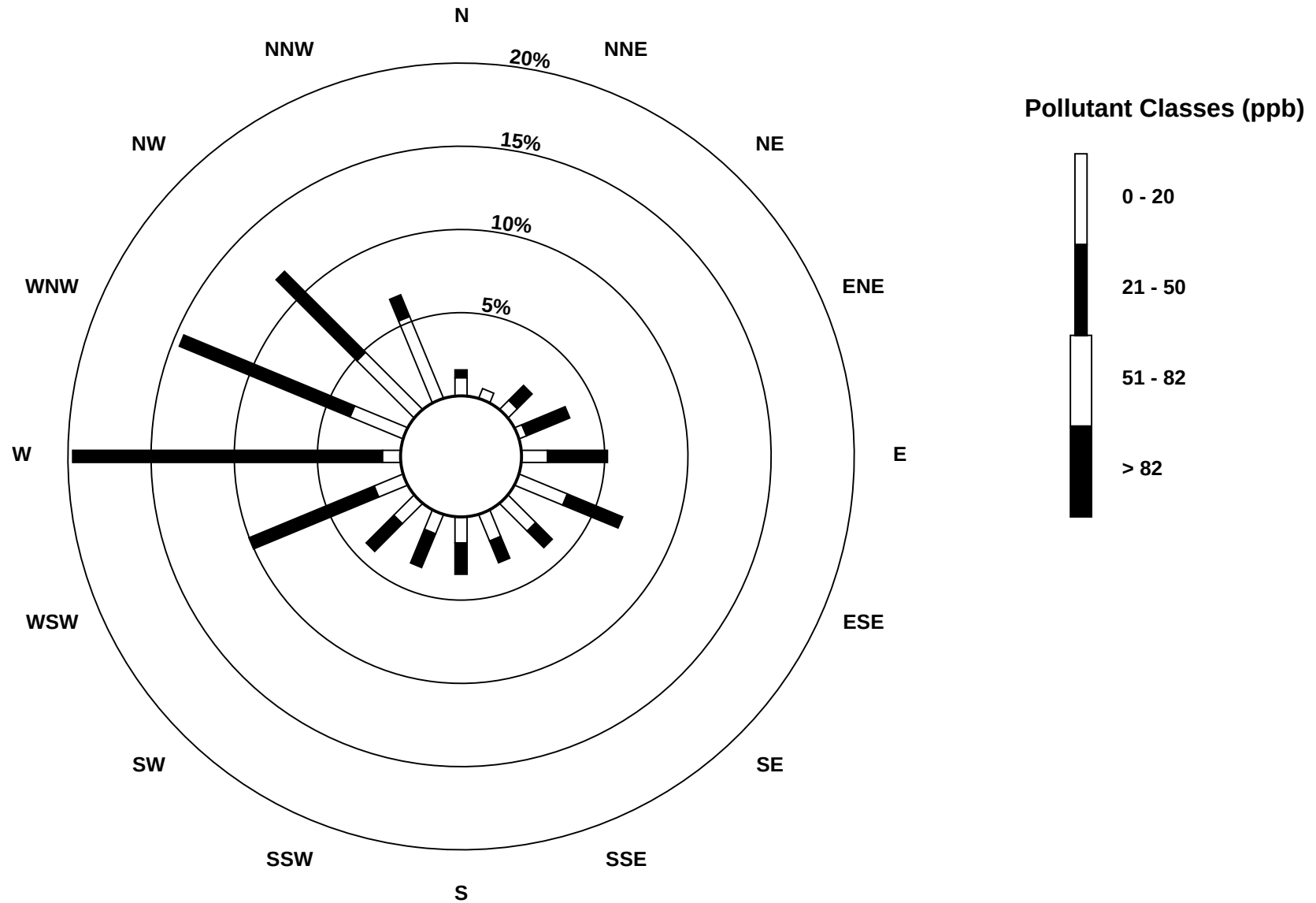
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - February 2013



Pollutant Rose

Ozone (O₃) - ppb
Henry Pirker - February 2013



Eight Hour Running Averages

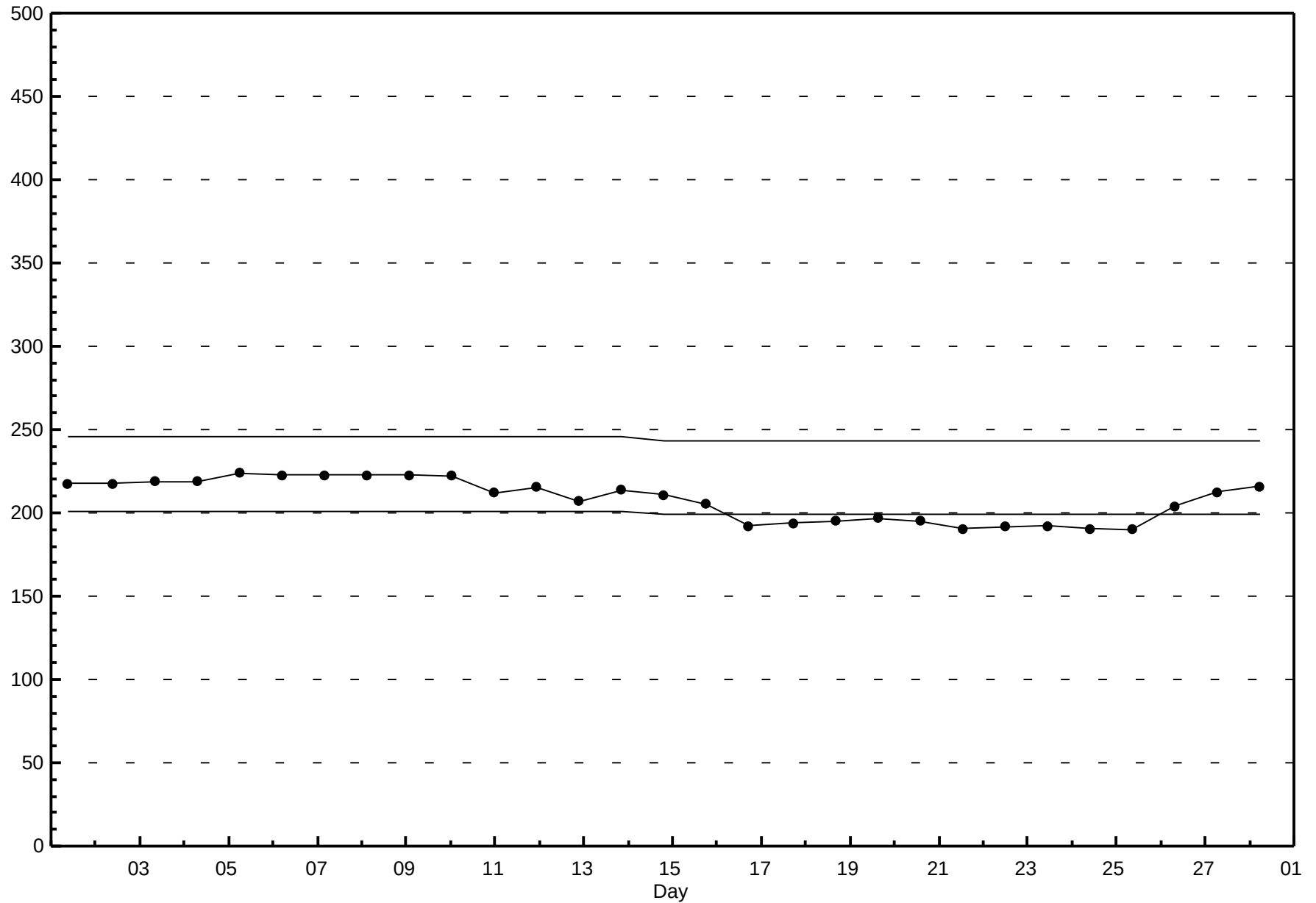
Ozone (O₃) - ppb

Henry Pirker - February 2013

Maximum Value: 43.1 ppb on Feb 11 00:00																								Hours in Service: 672	
Minimum Value: 0.9 ppb on Feb 1 07:00																								Hours of Data: 665	
																								Hours of Missing Data: 7	
Percentiles: P ₁ = 1.6 P ₁₀ = 8.5 Q ₁ = 17.6 Median = 26.0 Q ₃ = 35.7 P ₉₀ = 38.7 P ₉₉ = 42.1																								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-Feb	2	2	2	1	1	1	1	1	4	5	9	14	19	24	29	34	35	34	34	34	34	34	33	31	34.7
2-Feb	29	28	27	25	23	19	16	12	12	9	10	13	17	22	28	34	34	38	39	39	39	39	38	38	38.9
3-Feb	39	39	39	39	38	38	38	38	37	36	36	35	36	36	35	35	35	35	35	35	35	35	36	37	39.2
4-Feb	38	39	39	39	39	39	39	38	38	38	37	38	38	38	38	39	39	39	38	37	36	36	34	31	39.4
5-Feb	28	24	19	16	12	8	6	5	4	4	7	10	15	17	21	23	28	32	34	35	34	33	31	30	34.7
6-Feb	27	24	23	23	22	20	19	18	17	17	16	15	15	14	14	15	16	16	16	15	15	15	13	12	27.0
7-Feb	11	10	10	10	10	9	9	8	7	6	6	7	6	6	7	8	8	7	6	5	4	4	3	2	11.0
8-Feb	2	3	4	8	12	16	18	18	19	17	17	15	14	14	15	19	24	28	31	34	36	38	39	38	38.7
9-Feb	38	38	38	38	38	38	39	38	38	38	38	38	37	37	37	38	39	37	35	31	26	21	17	12	39.0
10-Feb	8	5	3	3	2	2	2	2	2	2	3	4	6	8	11	16	21	26	30	34	38	41	43	43	43.1
11-Feb	43	42	42	41	41	41	40	39	38	37	37	36	36	36	36	37	39	39	40	41	41	41	41	40	42.7
12-Feb	40	40	40	40	40	40	40	40	39	36	34	33	32	32	31	31	31	34	35	34	33	34	34	35	40.4
13-Feb	35	36	37	39	41	41	42	42	42	42	41	41	41	42	42	42	42	41	37	33	31	28	24	19	42.3
14-Feb	17	17	20	22	21	18	17	15	12	8	6	5	4	N	N	N	N	N	N	N	14	12	8	6	22.3
15-Feb	8	12	17	19	23	27	30	33	34	34	34	34	34	35	35	35	35	35	35	35	36	36	36	37	36.9
16-Feb	38	38	38	38	37	35	33	31	28	26	26	26	27	29	31	33	36	38	37	36	36	36	37	37	38.0
17-Feb	37	37	39	39	40	40	40	40	39	38	38	37	37	37	37	38	38	38	38	37	36	34	32	30	40.0
18-Feb	30	29	28	27	25	23	22	21	20	19	19	20	21	23	24	25	26	26	26	25	25	25	24	24	30.0
19-Feb	23	24	24	25	25	25	24	22	20	18	17	17	18	18	19	21	24	26	26	26	25	25	24	23	26.4
20-Feb	20	18	15	12	9	7	6	5	5	6	7	9	11	11	12	14	18	21	23	25	27	27	28	29	28.7
21-Feb	27	27	27	27	27	27	25	24	23	22	23	23	23	25	28	32	35	36	34	33	30	26	22	20	35.5
22-Feb	19	17	16	16	17	18	19	17	16	16	18	18	19	21	24	26	28	28	26	23	23	24	24	25	28.3
23-Feb	26	28	30	34	34	32	29	27	26	24	23	22	21	22	22	23	23	22	20	18	15	12	10	8	34.3
24-Feb	7	8	10	13	17	21	22	23	22	22	21	21	20	21	24	28	32	32	33	34	33	33	31	28	33.9
25-Feb	24	21	19	17	15	12	11	10	10	12	13	16	20	25	29	35	36	37	38	37	36	35	34	33	37.9
26-Feb	31	30	29	30	31	29	24	23	20	18	18	18	17	19	22	23	25	27	26	26	26	26	27	26	31.1
27-Feb	25	24	23	22	21	19	18	15	14	14	15	15	17	19	21	26	30	33	34	33	31	29	27	25	34.0
28-Feb	24	23	22	23	25	25	26	23	22	22	24	27	29	30	33	37	39	40	40	39	36	31	25	21	40.3
42.7 42.1 41.6 41.3 41.2 41.4 41.8 42.2 42.0 42.2 42.0 41.2 41.2 41.4 41.6 41.8 42.3 41.1 40.2 40.9 40.7 41.0 43.0 43.1																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - February 2013



Hourly Averages

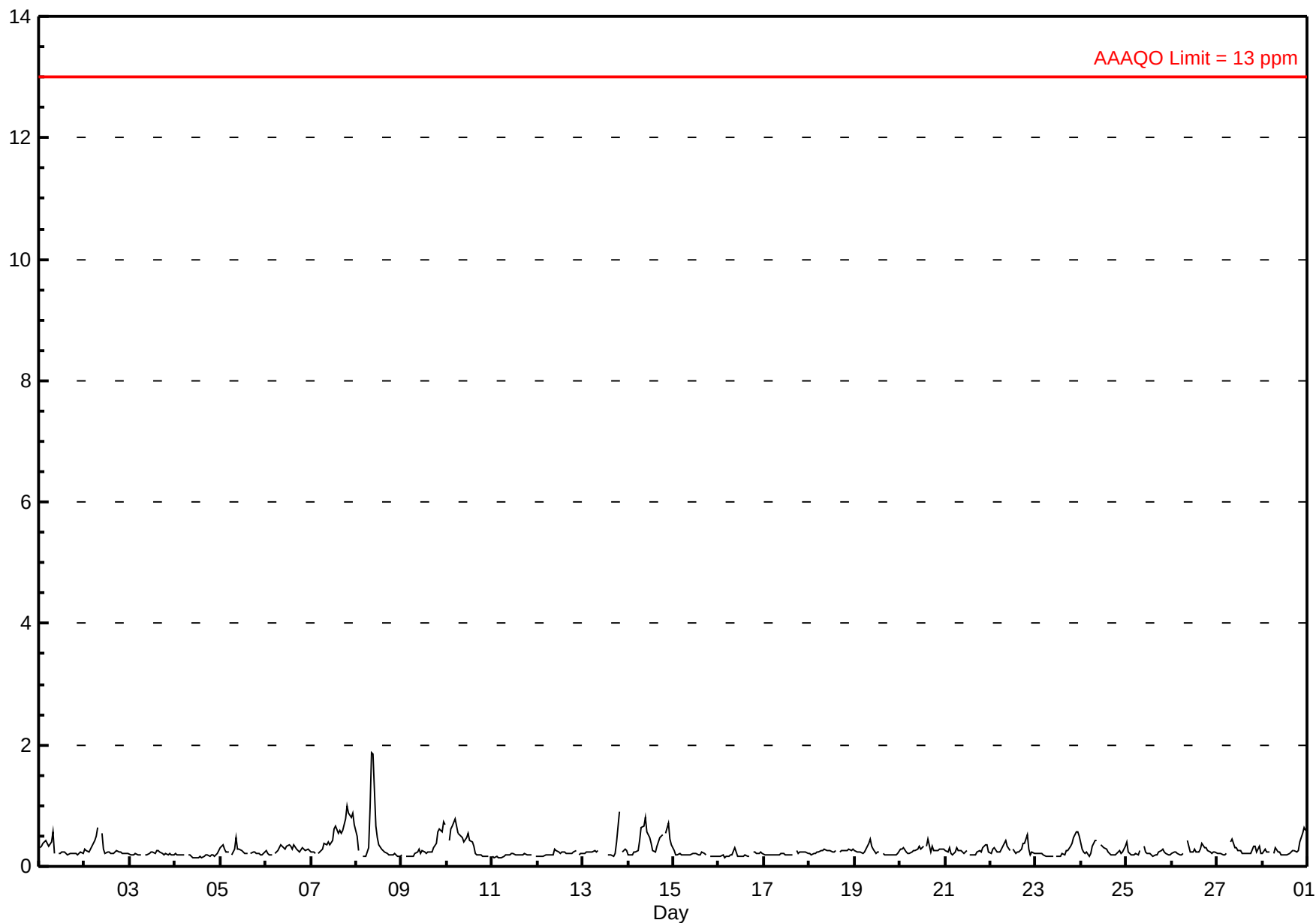
Carbon Monoxide (CO) - ppm

Henry Pirker - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.87 ppm on Feb 8 09:00 Maximum Daily Average: 0.52 ppm on Feb 7																					Hours in Service: 672 Hours of Data: 638 Hours of Missing Data: 34 Hours of Calibration: 33 Percent Operational Time: 99.9					
Minimum Value: 0.1 ppm on Feb 16 04:00 Minimum Daily Average: 0.18 ppm on Feb 11 Maximum Diurnal Average: 0.38 ppm at hour 9 Minimum Diurnal Average: 0.23 ppm at hour 4 Monthly Average: 0.276 ppm Percentiles: P ₁ = 0.15 P ₁₀ = 0.18 Q ₁ = 0.20 Median = 0.23 Q ₃ = 0.29 P ₉₀ = 0.43 P ₉₉ = 0.85																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.6	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	0.28	0.56
2-Feb	0.3	0.3	0.2	0.3	0.3	0.4	0.5	0.6	A	0.5	0.3	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	0.29	0.63
3-Feb	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.26
4-Feb	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.25
5-Feb	0.3	0.4	0.3	0.2	0.2	A	0.2	0.3	0.5	0.3	0.3	0.3	0.2	0.2	0.2	D	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26	0.48
6-Feb	0.3	0.2	0.2	0.2	A	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.28	0.37
7-Feb	0.2	0.2	0.2	A	0.2	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.6	0.7	0.5	0.6	0.5	0.6	0.8	1.0	0.9	0.8	0.9	0.7	0.52	0.99
8-Feb	0.5	0.3	A	0.2	0.2	0.2	0.3	1.0	1.9	1.8	0.7	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.44	1.87
9-Feb	0.2	A	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	0.3	0.4	0.6	0.6	0.6	0.7	0.7	0.31	0.74
10-Feb	A	0.4	0.6	0.7	0.8	0.7	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.40	0.79
11-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.18	0.22
12-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.2	0.2	0.21	0.29
13-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.4	0.9	A	0.2	0.3	0.3	0.27	0.91
14-Feb	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.6	0.7	0.8	0.6	0.5	0.4	0.3	0.2	0.3	0.4	0.5	0.5	A	0.6	0.7	0.4	0.4	0.42	0.80
15-Feb	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	A	0.2	0.2	0.2	0.2	0.2	0.19	0.27
16-Feb	0.2	0.2	0.2	0.1	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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.30
17-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.25
18-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	A	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.25	0.29
19-Feb	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.3	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	0.25	0.46
20-Feb	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.5	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.28	0.45
21-Feb	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	A	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.2	0.25	0.37
22-Feb	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.3	A	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.3	0.2	0.2	0.2	0.29	0.51
23-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.6	0.6	0.5	0.27	0.57
24-Feb	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	A	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.27	0.43
25-Feb	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.23	0.41
26-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.26	0.42
27-Feb	0.2	0.2	0.2	0.2	0.2	0.2	A	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.26	0.45
28-Feb	0.2	0.3	0.2	0.2	0.2	A	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.4	0.5	0.6	0.6	0.29	0.63
0.25 0.24 0.24 0.23 0.23 0.24 0.27 0.35 0.38 0.37 0.29 0.27 0.27 0.25 0.24 0.25 0.24 0.26 0.28 0.31 0.30 0.30 0.31 0.29																								Diurnal Average		
0.50 0.44 0.61 0.67 0.79 0.67 0.55 0.97 1.87 1.84 0.67 0.54 0.61 0.66 0.54 0.58 0.54 0.59 0.79 0.99 0.88 0.81 0.87 0.70																								Diurnal Maximum		
C - Calibration D - DAS Failure 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 - February 2013



Hourly Maximums

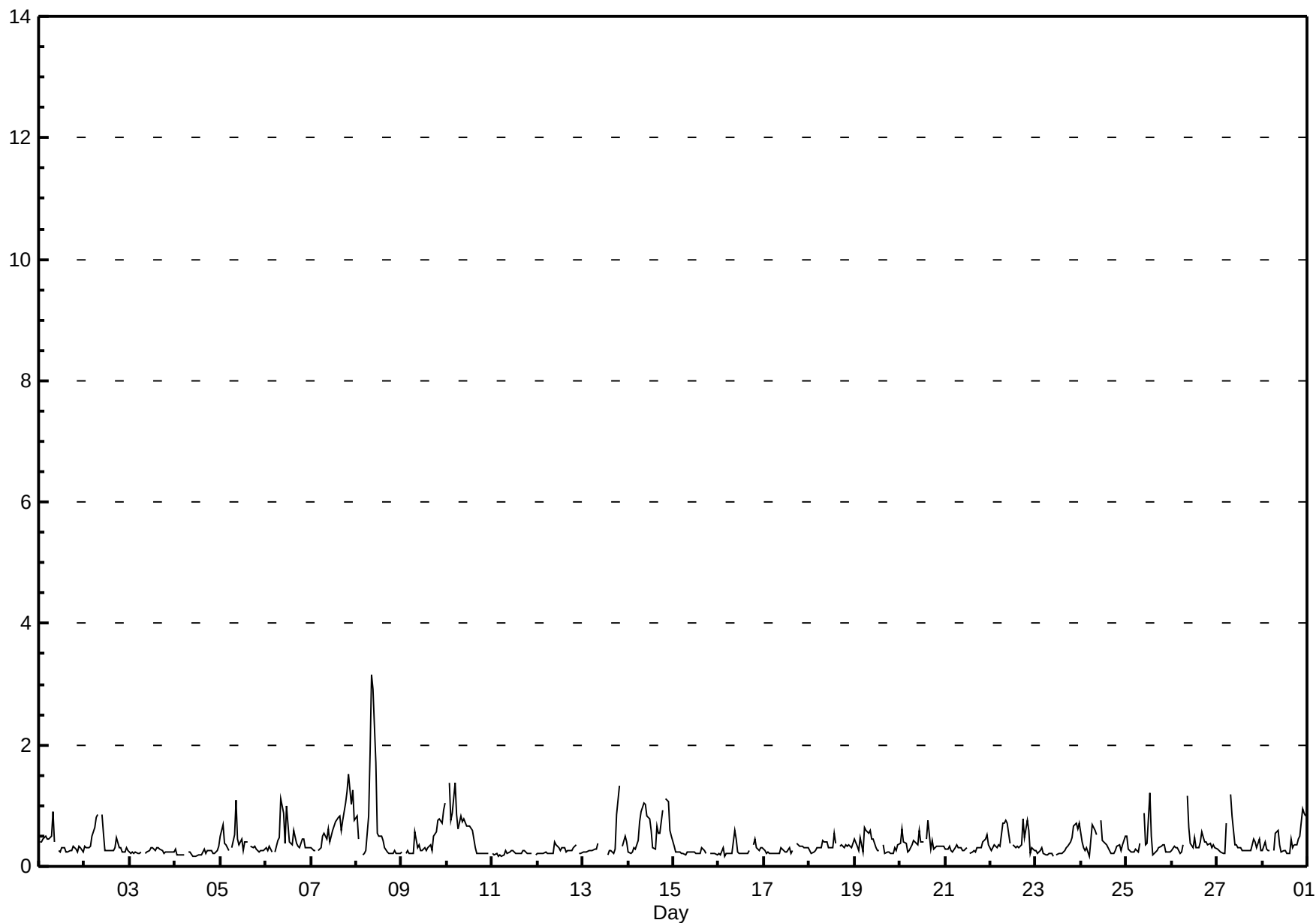
Carbon Monoxide (CO) - ppm

Henry Pirker - February 2013

Maximum Value: 3.15 ppm on Feb 8 09:00																					Maximum Daily Average: 0.72 ppm on Feb 8					Hours in Service: 672	
Minimum Value: 0.2 ppm on Feb 4 11:00																					Minimum Daily Average: 0.21 ppm on Feb 11					Hours of Data: 638	
Maximum Diurnal Average: 0.63 ppm at hour 9																					Minimum Diurnal Average: 0.29 ppm at hour 3					Hours of Missing Data: 34	
Monthly Average: 0.386 ppm																					Percentiles: P ₁ = 0.17 P ₁₀ = 0.20 Q ₁ = 0.25 Median = 0.30 Q ₃ = 0.41 P ₉₀ = 0.72 P ₉₉ = 1.24					Hours of Calibration: 33	
																										Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.9	0.4	A	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.36	0.89	
2-Feb	0.3	0.3	0.3	0.3	0.5	0.6	0.8	0.8	A	0.8	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.40	0.85
3-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	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	0.25	0.30	
4-Feb	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.22	0.34	
5-Feb	0.5	0.7	0.4	0.4	0.3	A	0.3	0.5	1.1	0.5	0.4	0.5	0.3	0.4	0.4	D	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.40	1.10	
6-Feb	0.3	0.3	0.3	0.2	A	0.2	0.4	0.5	1.1	0.9	0.4	1.0	0.4	0.4	0.4	0.6	0.4	0.3	0.3	0.5	0.5	0.3	0.3	0.3	0.44	1.12	
7-Feb	0.3	0.3	0.3	A	0.3	0.3	0.5	0.6	0.5	0.6	0.4	0.6	0.7	0.7	0.8	0.8	0.6	0.8	1.1	1.2	1.5	1.0	1.3	0.8	0.68	1.52	
8-Feb	0.8	0.4	A	0.2	0.2	0.3	0.8	1.9	3.1	2.9	1.7	0.5	0.5	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.72	3.15	
9-Feb	0.2	A	0.2	0.3	0.2	0.2	0.2	0.6	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.6	0.8	0.8	0.7	0.9	1.1	0.43	1.05	
10-Feb	A	1.4	0.8	0.9	1.4	0.8	0.6	0.8	0.7	0.8	0.7	0.7	0.7	0.6	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.59	1.37	
11-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	A	0.2	0.21	0.25	
12-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	A	0.2	0.2	0.26	0.40	
13-Feb	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	C	C	C	C	0.2	0.3	0.3	0.2	0.3	0.9	1.3	A	0.3	0.5	0.4	0.37	1.32	
14-Feb	0.2	0.2	0.2	0.3	0.3	0.4	0.7	0.9	1.1	1.0	0.8	0.8	0.6	0.3	0.3	0.7	0.5	0.5	0.9	A	1.1	1.1	0.6	0.5	0.62	1.12	
15-Feb	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	0.3	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.23	0.34	
16-Feb	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.6	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.4	0.5	0.3	0.3	0.3	0.3	0.27	0.59	
17-Feb	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.3	A	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.26	0.38	
18-Feb	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.4	A	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.33	0.55	
19-Feb	0.4	0.3	0.3	0.5	0.2	0.6	0.6	0.6	0.6	0.4	0.4	0.3	0.3	0.3	A	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.36	0.65	
20-Feb	0.4	0.6	0.4	0.4	0.2	0.3	0.3	0.4	0.4	0.3	0.6	0.4	0.4	A	0.4	0.7	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.39	0.75	
21-Feb	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.4	0.31	0.52	
22-Feb	0.3	0.3	0.4	0.3	0.4	0.3	0.7	0.7	0.8	0.7	0.4	A	0.4	0.3	0.3	0.3	0.4	0.8	0.5	0.8	0.6	0.2	0.3	0.3	0.45	0.79	
23-Feb	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.7	0.7	0.6	0.7	0.33	0.71	
24-Feb	0.4	0.3	0.3	0.3	0.2	0.4	0.7	0.6	0.5	A	0.8	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.38	0.77	
25-Feb	0.5	0.3	0.2	0.2	0.2	0.3	0.2	0.4	A	0.9	0.3	0.4	1.2	0.5	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.37	1.20	
26-Feb	0.3	0.3	0.3	0.3	0.2	0.2	0.3	A	1.2	0.6	0.4	0.3	0.5	0.3	0.3	0.4	0.6	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.39	1.17	
27-Feb	0.3	0.2	0.2	0.2	0.2	0.7	A	1.2	0.8	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.3	0.5	0.3	0.37	1.19	
28-Feb	0.3	0.4	0.3	0.3	0.3	A	0.3	0.5	0.6	0.4	0.2	0.3	0.3	0.2	0.2	0.5	0.3	0.4	0.4	0.5	0.5	1.0	0.9	0.8	0.41	0.96	
0.32 0.34 0.29 0.30 0.30 0.34 0.40 0.56 0.63 0.58 0.43 0.37 0.38 0.32 0.31 0.35 0.31 0.35 0.38 0.42 0.42 0.39 0.41 0.38																								Diurnal Average			
0.83 1.37 0.77 0.87 1.37 0.85 0.83 1.88 3.15 2.93 1.72 1.00 1.20 0.74 0.80 0.83 0.60 0.79 1.05 1.32 1.52 1.06 1.25 1.05																								Diurnal Maximum			
C - Calibration D - DAS Failure A - Automated Daily Zero Span																											

Hourly Maximums

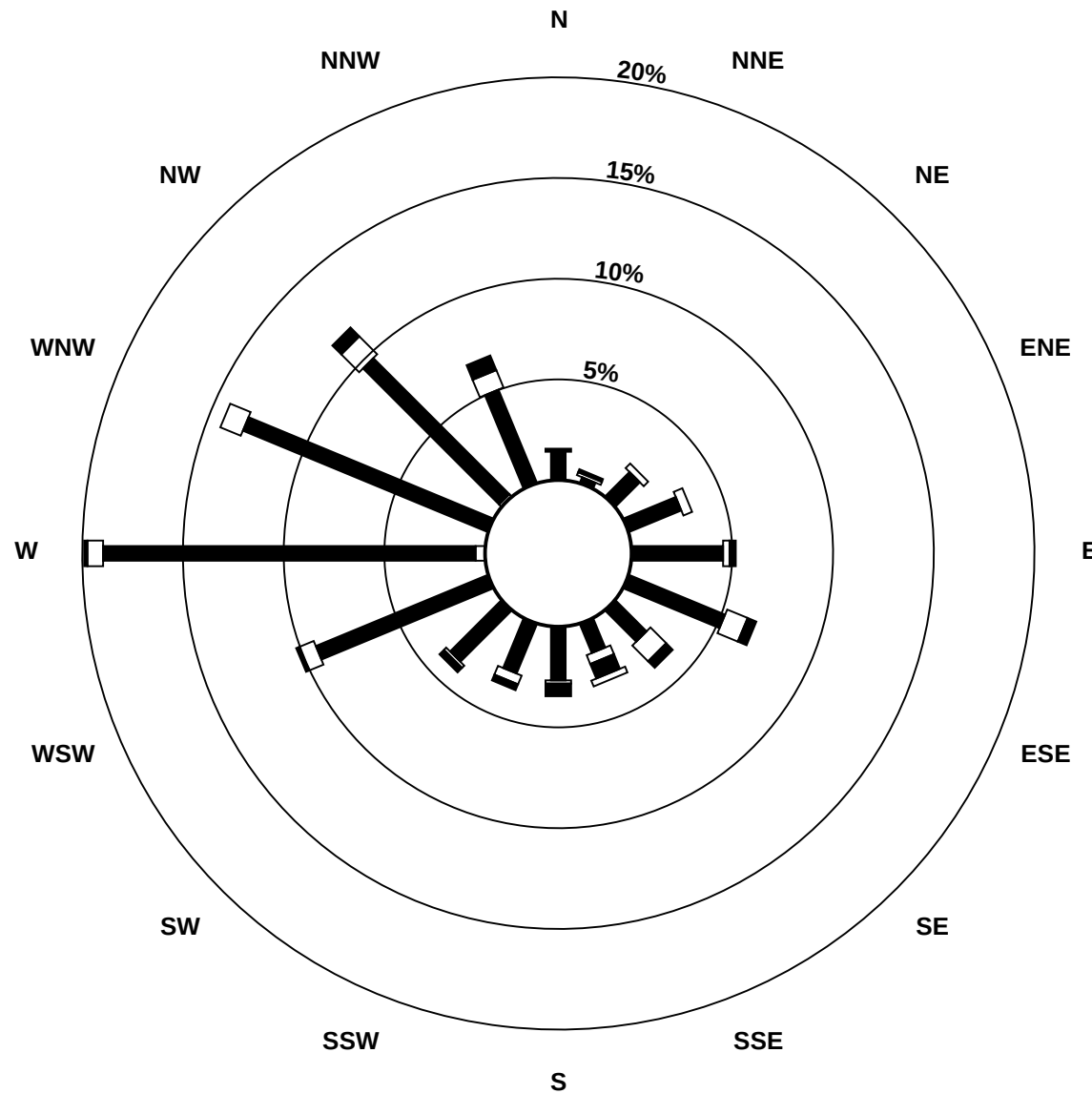
Carbon Monoxide (CO) - ppm
Henry Pirker - February 2013



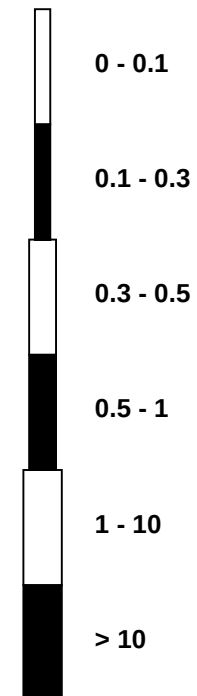
Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - February 2013



Pollutant Classes (ppm)



Eight Hour Running Averages

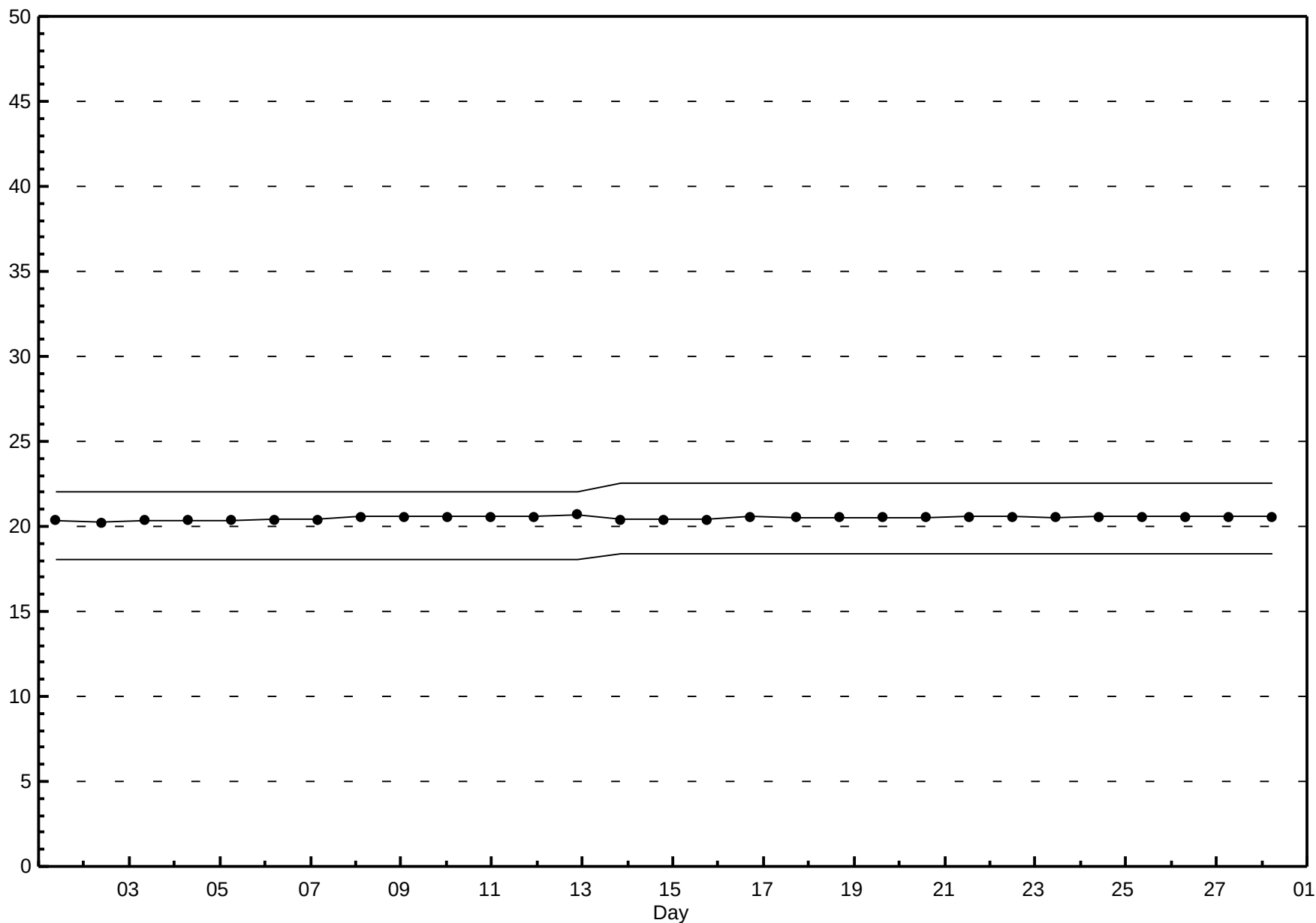
Carbon Monoxide (CO) - ppm

Henry Pirker - February 2013

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.84 ppm on Feb 8 14:00																								Hours in Service: 672 Hours of Data: 665	
Minimum Value: 0.15 ppm on Feb 11 07:00																								Hours of Missing Data: 7 Hours of Calibration: 7	
Percentiles: P ₁ = 0.16 P ₁₀ = 0.19 Q ₁ = 0.21 Median = 0.24 Q ₃ = 0.30 P ₉₀ = 0.41 P ₉₉ = 0.77																								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-Feb	0.5	0.5	0.5	0.5	0.5	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	0.48
2-Feb	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.42
3-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
4-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
5-Feb	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.30
6-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
7-Feb	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.8	0.8	0.77
8-Feb	0.8	0.7	0.7	0.6	0.5	0.4	0.3	0.4	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.84
9-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.4	0.5	0.5	0.51
10-Feb	0.5	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.66
11-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
12-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
13-Feb	0.2	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	0.3	0.3	0.3	0.3	0.4	0.36
14-Feb	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.53
15-Feb	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.48
16-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
17-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
18-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.26
19-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.31
20-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
21-Feb	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.28
22-Feb	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
23-Feb	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	0.3	0.3	0.4	0.4	0.42
24-Feb	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	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.42
25-Feb	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	0.2	0.26
26-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.28
27-Feb	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.32
28-Feb	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	0.3	0.3	0.4	0.4	0.40
0.77 0.73 0.72 0.62 0.64 0.66 0.63 0.60 0.59 0.78 0.77 0.81 0.83 0.84 0.84 0.75 0.54 0.54 0.59 0.66 0.70 0.72 0.76 0.77																									
Diurnal Maximums																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

Span Responses

Carbon Monoxide (CO)
Henry Pirker - February 2013



Hourly Averages

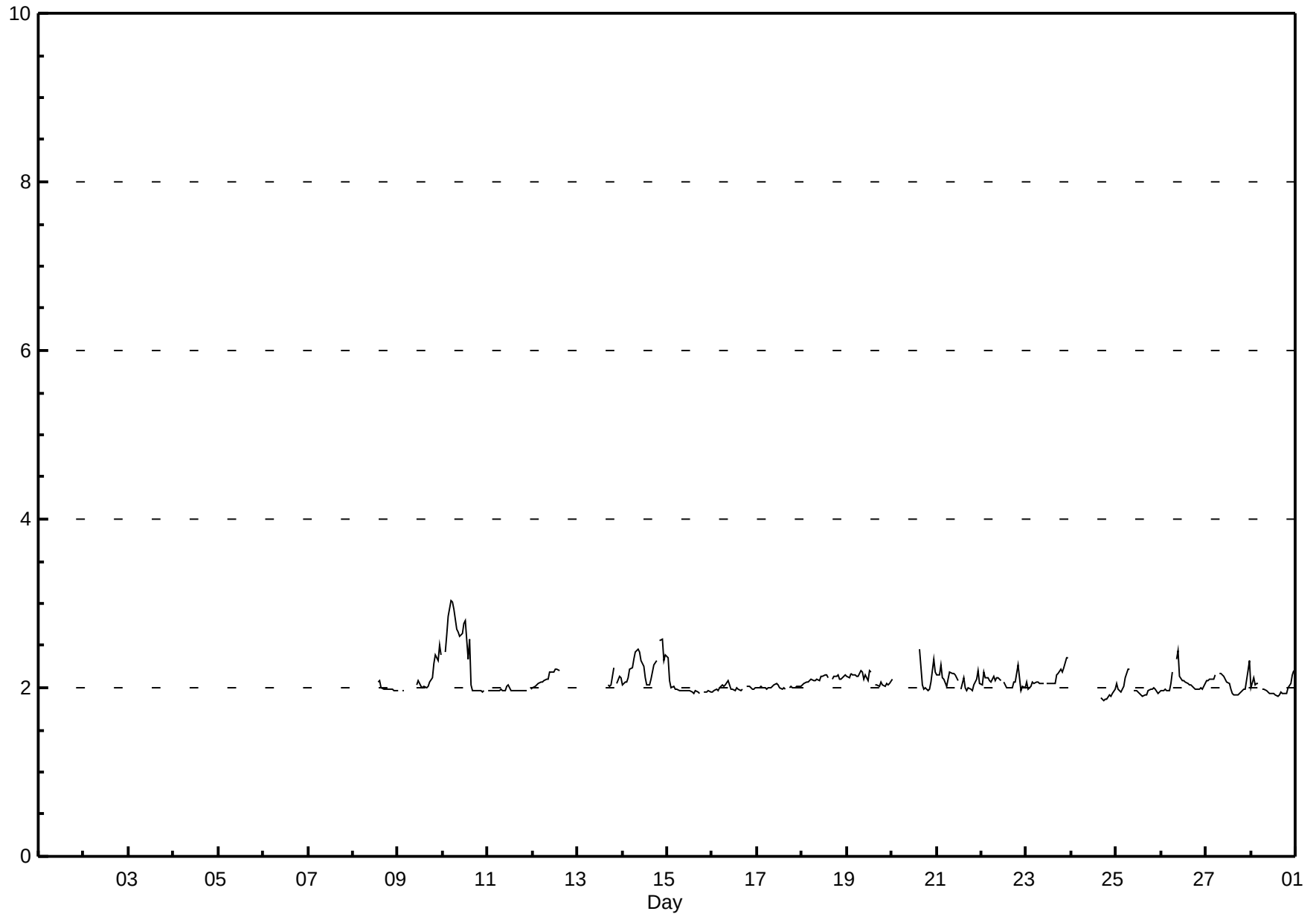
Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.03 ppm on Feb 10 05:00 Maximum Daily Average: 2.44 ppm on Feb 10																								Hours in Service: 672 Hours of Data: 411 Hours of Missing Data: 261 Hours of Calibration: 22 Percent Operational Time: 64.4			
Minimum Value: 1.8 ppm on Feb 24 18:00 Maximum Diurnal Average: 2.16 ppm at hour 9 Monthly Average: 2.081 ppm												Minimum Daily Average: 1.97 ppm on Feb 11 Minimum Diurnal Average: 2.00 ppm at hour 17 Percentiles: P ₁ = 1.90 P ₁₀ = 1.96 Q ₁ = 1.98 Median = 2.03 Q ₃ = 2.12 P ₉₀ = 2.26 P ₉₉ = 2.81															
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
2-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
3-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
4-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
5-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
6-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
7-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
8-Feb	N	N	N	N	N	N	N	N	N	N	C	C	C	C	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	--	2.08
9-Feb	2.0	A	2.0	2.0	N	N	N	N	N	N	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.4	2.3	2.5	2.4	--	2.50	
10-Feb	A	2.4	2.6	2.9	3.0	3.0	2.9	2.7	2.7	2.6	2.7	2.8	2.8	2.3	2.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.44	3.03	
11-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	1.97	2.03	
12-Feb	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	N	N	N	N	M	M	M	M	--	2.22	
13-Feb	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	2.0	2.0	2.0	2.2	A	2.0	2.1	2.1	--	2.24	
14-Feb	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.4	2.3	2.3	2.1	2.0	2.0	2.1	2.2	2.3	2.3	A	2.6	2.6	2.3	2.4	2.25	2.57	
15-Feb	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	1.9	1.9	2.0	2.0	1.9	A	2.0	1.9	2.0	1.9	1.99	2.35		
16-Feb	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	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.00	2.08	
17-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.01	2.05	
18-Feb	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.11	2.16	
19-Feb	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.2	A	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.11	2.20	
20-Feb	2.1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2.5	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.2	--	2.46	
21-Feb	2.2	2.2	2.3	2.1	2.1	2.0	2.1	2.2	2.2	2.2	2.2	2.1	A	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.09	2.28	
22-Feb	2.0	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.1	2.0	2.0	2.0	2.08	2.28	
23-Feb	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.4	N	2.11	2.36	
24-Feb	N	N	N	N	N	N	N	N	N	N	N	N	M	M	M	M	1.9	1.8	1.9	1.9	1.9	1.9	1.9	2.0	--	1.99	
25-Feb	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.99	2.22	
26-Feb	2.0	2.0	2.0	2.0	2.0	2.1	2.2	A	2.3	2.4	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.06	2.44	
27-Feb	2.1	2.1	2.1	2.1	2.1	2.2	A	2.2	2.2	2.1	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.2	2.3	2.06	2.32	
28-Feb	2.0	2.1	2.0	2.0	2.0	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.2	1.99	2.20	
2.05 2.07 2.08 2.09 2.12 2.13 2.15 2.14 2.16 2.14 2.12 2.11 2.09 2.05 2.05 2.02 2.00 2.01 2.03 2.04 2.06 2.07 2.11 2.10																								Diurnal Average			
2.35 2.42 2.63 2.85 3.03 3.02 2.93 2.70 2.65 2.61 2.65 2.77 2.79 2.34 2.57 2.46 2.19 2.27 2.32 2.29 2.56 2.57 2.50 2.39																								Diurnal Maximum			
C - Calibration M - Maintenance N - Not Valid A - Automated Daily Zero Span																											

Hourly Averages

Total Hydrocarbons (THC) - ppm
Henry Pirker - February 2013



Hourly Maximums

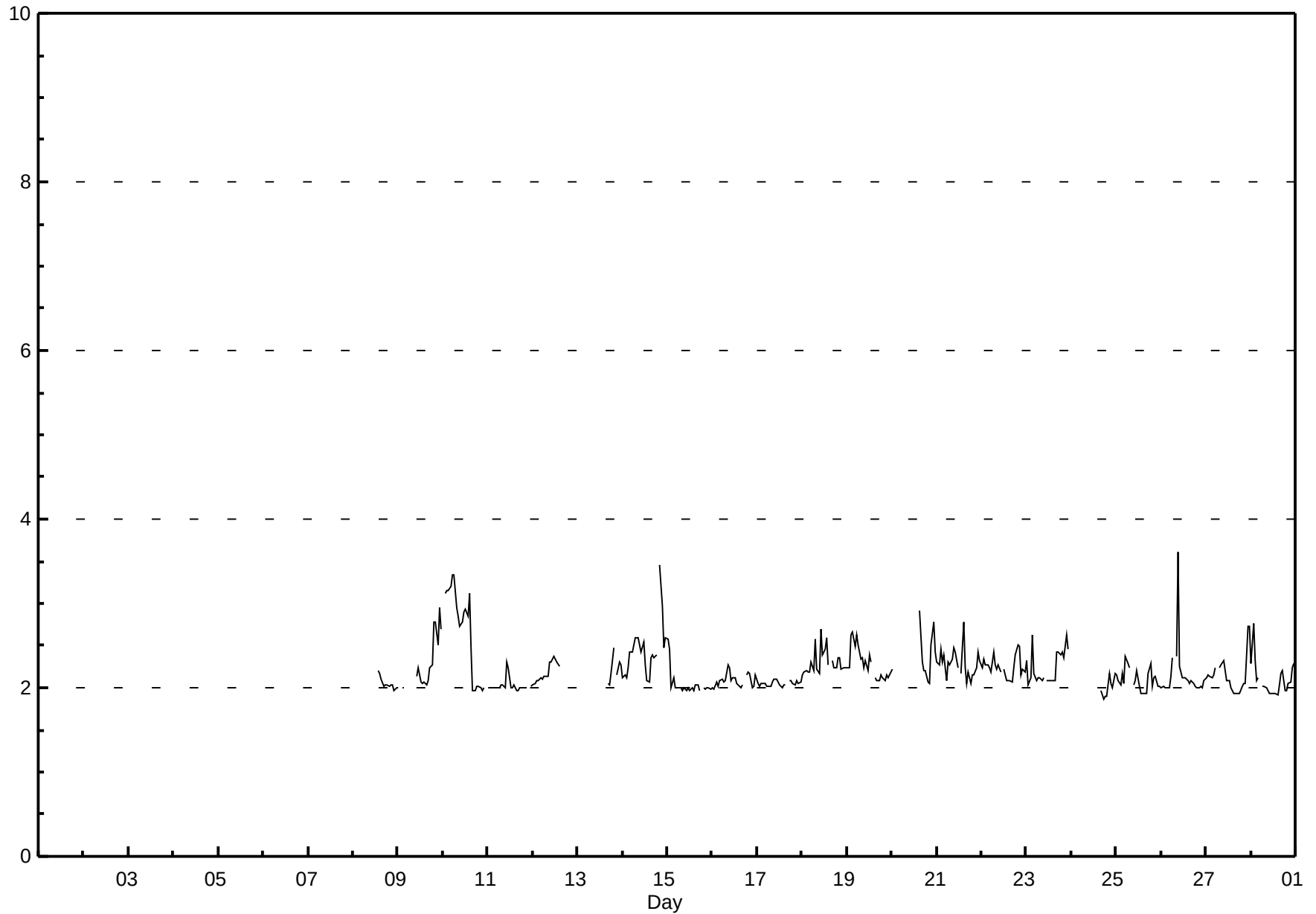
Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2013

Maximum Value: 3.61 ppm on Feb 26 10:00																								Hours in Service: 672		
Maximum Daily Average: 2.68 ppm on Feb 10																								Hours of Data: 411		
Minimum Value: 1.9 ppm on Feb 24 18:00																								Hours of Missing Data: 261		
Maximum Diurnal Average: 2.32 ppm at hour 10																								Hours of Calibration: 22		
Monthly Average: 2.209 ppm																								Percent Operational Time: 64.4		
Minimum Daily Average: 2.03 ppm on Feb 11																										
Minimum Diurnal Average: 2.10 ppm at hour 17																										
Percentiles: P ₁ = 1.93 P ₁₀ = 2.00 Q ₁ = 2.03 Median = 2.12 Q ₃ = 2.30 P ₉₀ = 2.50 P ₉₉ = 3.33																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
2-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
3-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
4-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
5-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
6-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
7-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
8-Feb	N	N	N	N	N	N	N	N	N	C	C	C	C	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	--	2.20
9-Feb	2.0	A	2.0	2.0	N	N	N	N	N	N	2.1	2.2	2.1	2.1	2.1	2.0	2.1	2.2	2.3	2.8	2.8	2.5	2.9	2.7	--	2.94
10-Feb	A	3.1	3.1	3.2	3.2	3.3	3.3	2.9	2.9	2.7	2.8	2.9	2.9	2.9	3.1	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.68	3.33
11-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.03	2.30
12-Feb	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.4	2.3	2.3	2.3	N	N	N	N	N	M	M	M	M	--	2.37
13-Feb	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	2.1	2.0	2.2	2.5	A	2.1	2.3	2.3	--	2.48
14-Feb	2.1	2.2	2.1	2.2	2.4	2.4	2.5	2.6	2.6	2.5	2.4	2.5	2.3	2.1	2.1	2.4	2.4	2.4	2.4	A	3.5	3.0	2.5	2.6	2.44	3.46
15-Feb	2.6	2.5	2.0	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	2.0	A	2.0	2.0	2.0	2.0	2.0	2.04	2.57
16-Feb	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	A	2.2	2.2	2.2	2.0	2.0	2.1	2.09	2.26
17-Feb	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	A	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.05	2.10
18-Feb	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.6	2.2	2.2	2.7	2.4	2.5	2.6	2.3	A	2.3	2.2	2.2	2.4	2.4	2.2	2.2	2.2	2.30	2.69
19-Feb	2.2	2.2	2.6	2.7	2.5	2.6	2.5	2.3	2.4	2.2	2.3	2.2	2.4	2.3	A	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.29	2.66
20-Feb	2.2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2.9	2.3	2.2	2.2	2.1	2.1	2.5	2.8	2.4	--	2.91
21-Feb	2.3	2.3	2.5	2.3	2.4	2.1	2.3	2.3	2.3	2.5	2.4	2.2	A	2.2	2.8	2.2	2.1	2.2	2.1	2.1	2.2	2.2	2.4	2.3	2.29	2.78
22-Feb	2.2	2.3	2.3	2.3	2.2	2.2	2.4	2.3	2.2	2.3	2.2	A	2.2	2.1	2.1	2.1	2.1	2.2	2.4	2.5	2.5	2.1	2.2	2.2	2.24	2.51
23-Feb	2.3	2.0	2.1	2.6	2.2	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.4	2.4	2.4	2.4	2.4	2.6	2.5	N	2.24	2.63
24-Feb	N	N	N	N	N	N	N	N	N	N	N	N	M	M	M	M	2.0	1.9	1.9	1.9	2.2	2.1	2.0	2.2	--	2.18
25-Feb	2.2	2.1	2.0	2.2	2.0	2.4	2.3	2.2	A	2.0	2.1	2.2	2.0	1.9	1.9	1.9	1.9	1.9	2.2	2.3	2.0	2.1	2.1	2.0	2.10	2.37
26-Feb	2.0	2.0	2.0	2.0	2.0	2.1	2.3	A	2.4	3.6	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.15	3.61	
27-Feb	2.1	2.1	2.1	2.1	2.1	2.2	A	2.2	2.3	2.3	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.7	2.7	2.15	2.74
28-Feb	2.3	2.8	2.3	2.1	2.1	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.2	2.0	2.0	2.1	2.1	2.2	2.3	2.10	2.77
2.16 2.24 2.22 2.24 2.23 2.27 2.29 2.26 2.25 2.32 2.26 2.23 2.19 2.16 2.17 2.14 2.10 2.12 2.14 2.16 2.23 2.20 2.26 2.24																								Diurnal Average		
2.57 3.12 3.15 3.15 3.21 3.33 3.33 2.94 2.85 3.61 2.78 2.91 2.93 2.85 3.12 2.91 2.42 2.42 2.39 2.78 3.46 2.97 2.94 2.74																								Diurnal Maximum		
C - Calibration M - Maintenance N - Not Valid A - Automated Daily Zero Span																										

Hourly Maximums

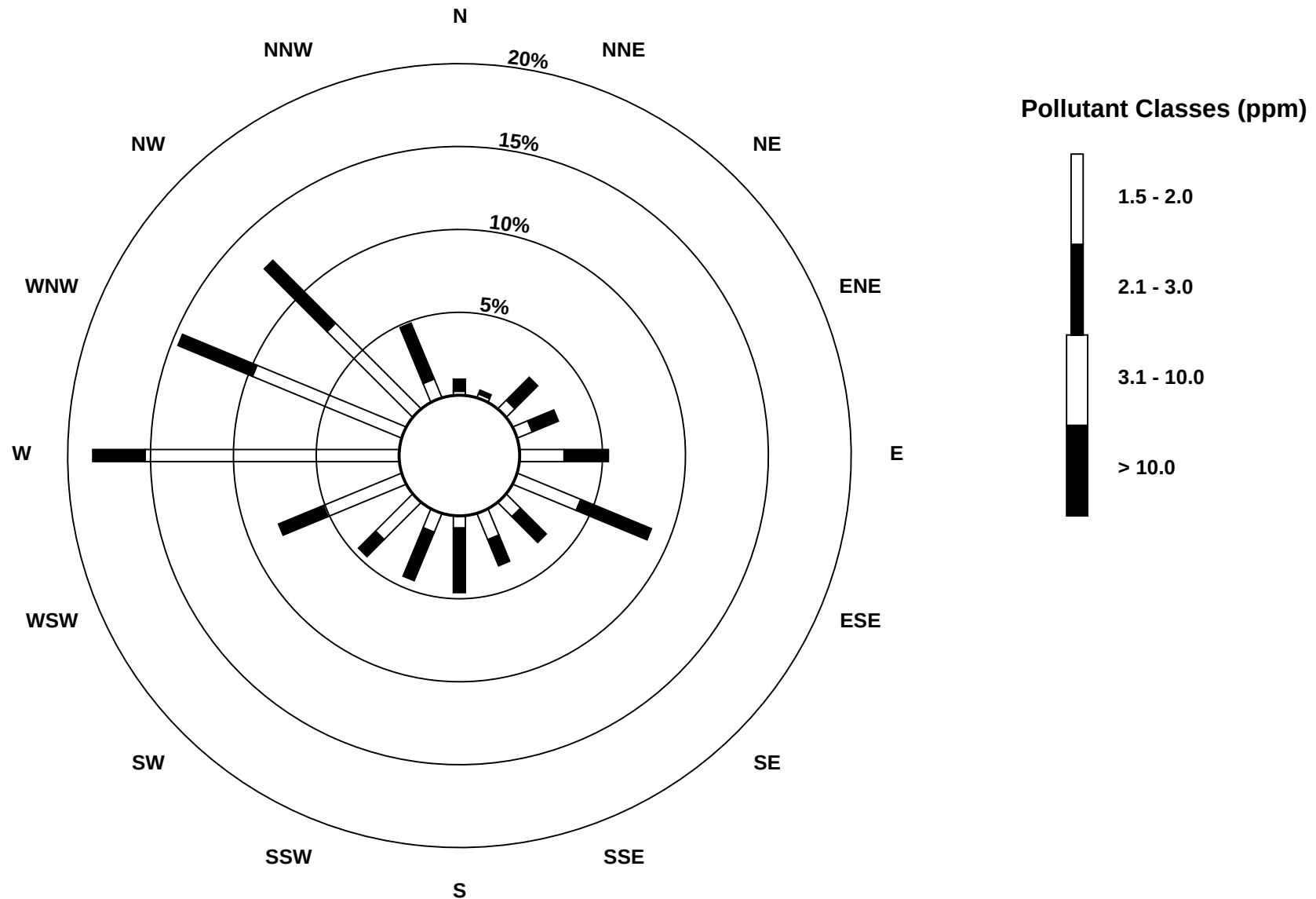
Total Hydrocarbons (THC) - ppm
Henry Pirker - February 2013



Pollutant Rose

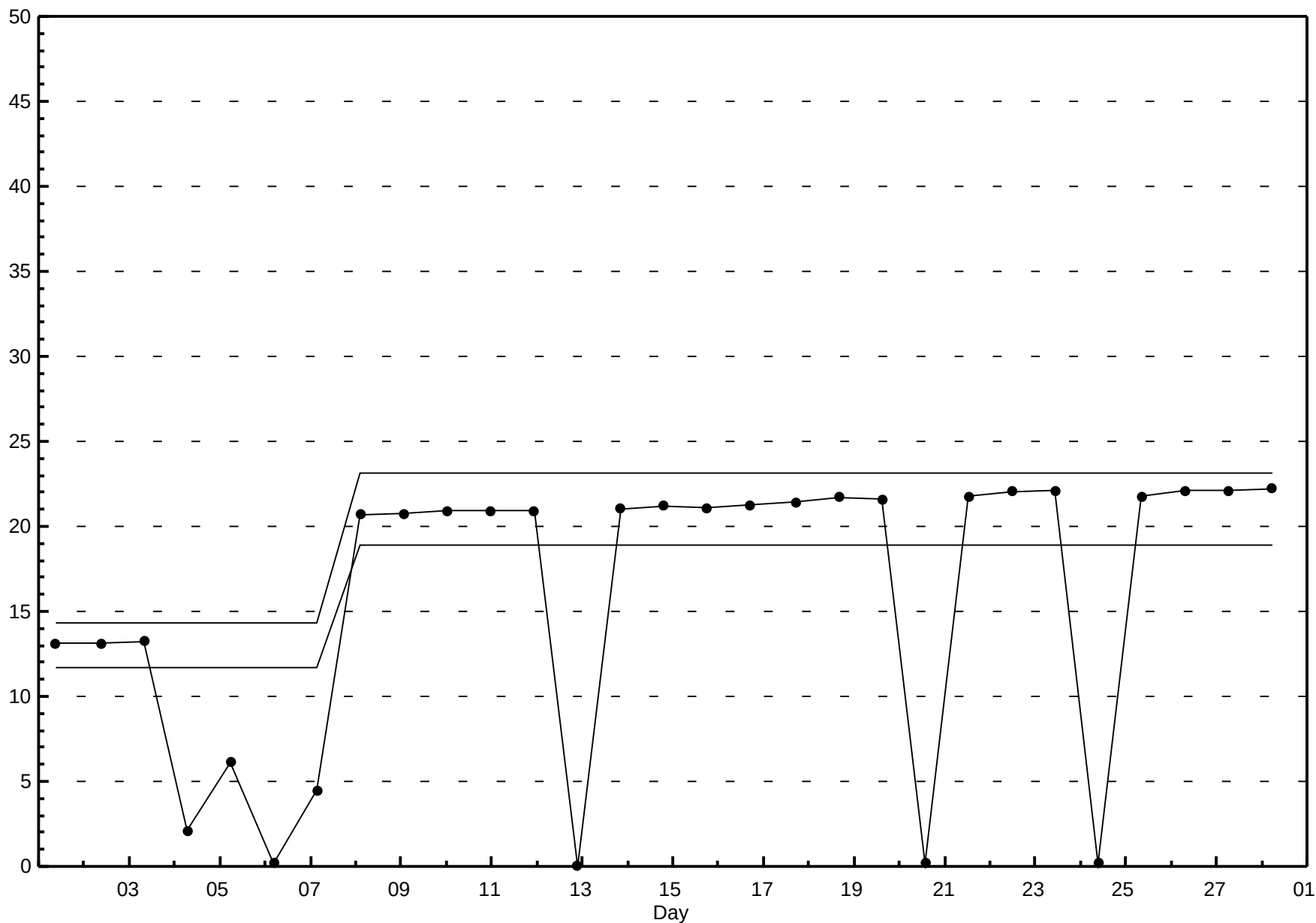
Total Hydrocarbons (THC) - ppm

Henry Pirker - February 2013



Span Responses

Total Hydrocarbons (THC)
Henry Pirker - February 2013



Hourly Averages

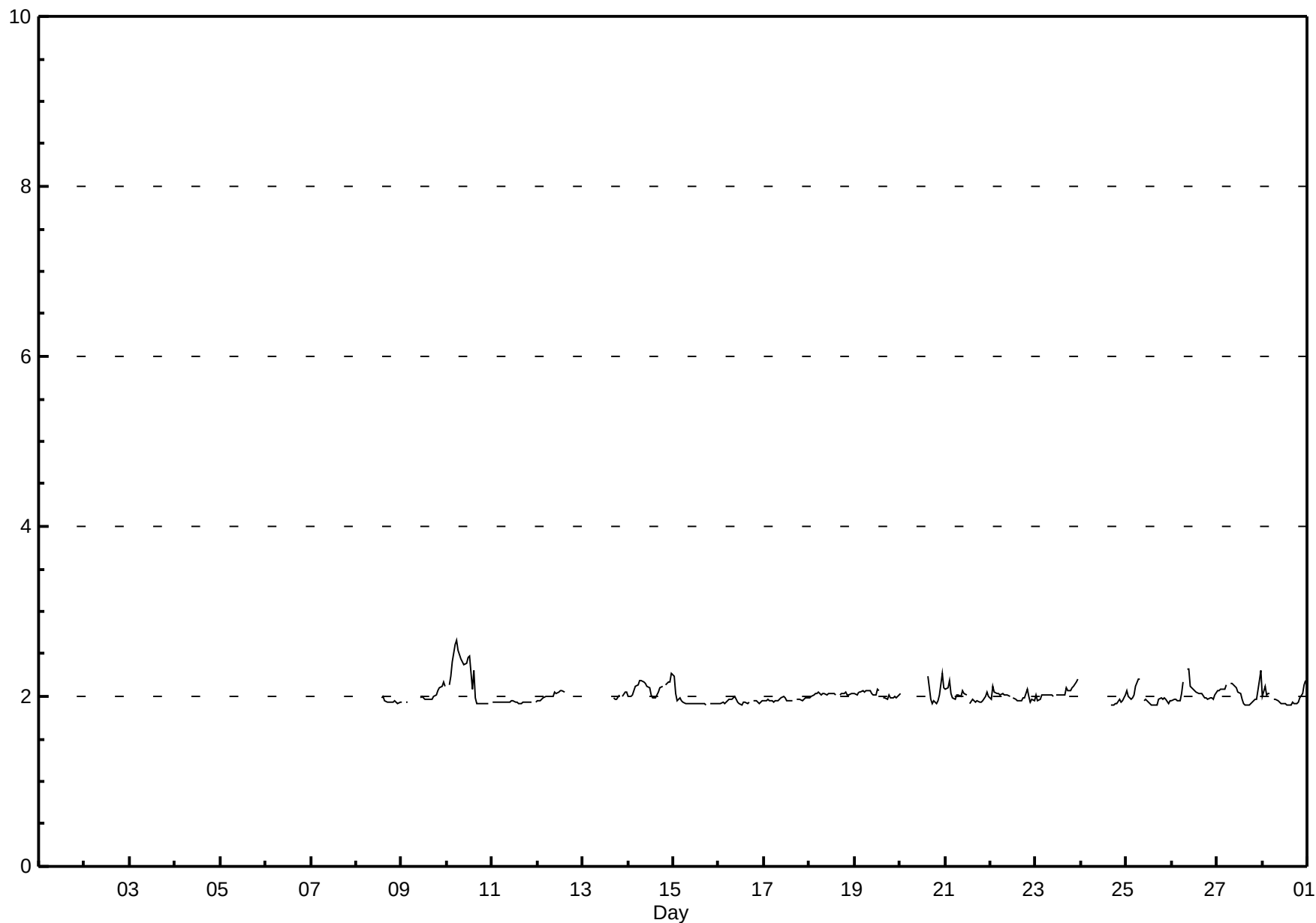
Methane (CH₄) - ppm

Henry Pirker - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.65 ppm on Feb 10 06:00 Maximum Daily Average: 2.22 ppm on Feb 10																								Hours in Service: 672 Hours of Data: 412 Hours of Missing Data: 260 Hours of Calibration: 22 Percent Operational Time: 64.6			
Minimum Value: 1.9 ppm on Feb 24 17:00 Minimum Daily Average: 1.93 ppm on Feb 11 Maximum Diurnal Average: 2.07 ppm at hour 7 Minimum Diurnal Average: 1.96 ppm at hour 17 Monthly Average: 2.013 ppm Percentiles: P ₁ = 1.90 P ₁₀ = 1.92 Q ₁ = 1.94 Median = 1.98 Q ₃ = 2.04 P ₉₀ = 2.13 P ₉₉ = 2.43																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Feb	2.4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	2.38	
2-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
3-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
4-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
5-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
6-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
7-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
8-Feb	N	N	N	N	N	N	N	N	N	N	C	C	C	C	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	--	2.01	
9-Feb	1.9	A	1.9	1.9	N	N	N	N	N	N	N	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.1	--	2.18	
10-Feb	A	2.1	2.2	2.4	2.6	2.7	2.5	2.4	2.4	2.4	2.4	2.5	2.5	2.1	2.3	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.22	2.65	
11-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.93	1.95	
12-Feb	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	N	N	N	N	N	M	M	M	M	--	2.07	
13-Feb	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	2.0	2.0	2.0	2.0	A	2.1	2.0	2.1	2.0	--	2.06
14-Feb	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	A	2.1	2.2	2.2	2.3	2.10	2.27
15-Feb	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.94	2.25	
16-Feb	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.0	2.0	2.0	1.9	1.9	1.94	2.00	
17-Feb	1.9	1.9	2.0	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	2.00	
18-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.03	2.05	
19-Feb	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.03	2.09	
20-Feb	2.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2.2	2.0	1.9	1.9	1.9	1.9	2.0	2.3	2.1	--	2.26
21-Feb	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	A	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.00	2.19	
22-Feb	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	1.9	2.0	2.0	2.1	2.0	1.9	2.0	2.0	2.00	2.11	
23-Feb	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.04	2.21	
24-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	M	M	M	M	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	--	2.02
25-Feb	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.2	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.99	2.20
26-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.2	A	2.3	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.04	2.32	
27-Feb	2.1	2.1	2.1	2.1	2.1	2.1	A	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.2	2.3	2.05	2.31	
28-Feb	2.0	2.1	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	1.9	1.9	1.9	2.0	2.0	2.1	2.2	1.98	2.19	
2.03 2.01 2.01 2.02 2.05 2.06 2.07 2.06 2.06 2.05 2.03 2.03 2.02 1.98 1.98 1.97 1.96 1.96 1.97 1.97 1.99 1.99 2.04 2.04																								Diurnal Average			
2.38 2.13 2.23 2.40 2.61 2.65 2.54 2.44 2.40 2.38 2.38 2.46 2.47 2.09 2.31 2.24 2.09 2.10 2.13 2.10 2.13 2.17 2.26 2.31																								Diurnal Maximum			
C - Calibration M - Maintenance N - Not Valid A - Automated Daily Zero Span																											

Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - February 2013



Hourly Maximums

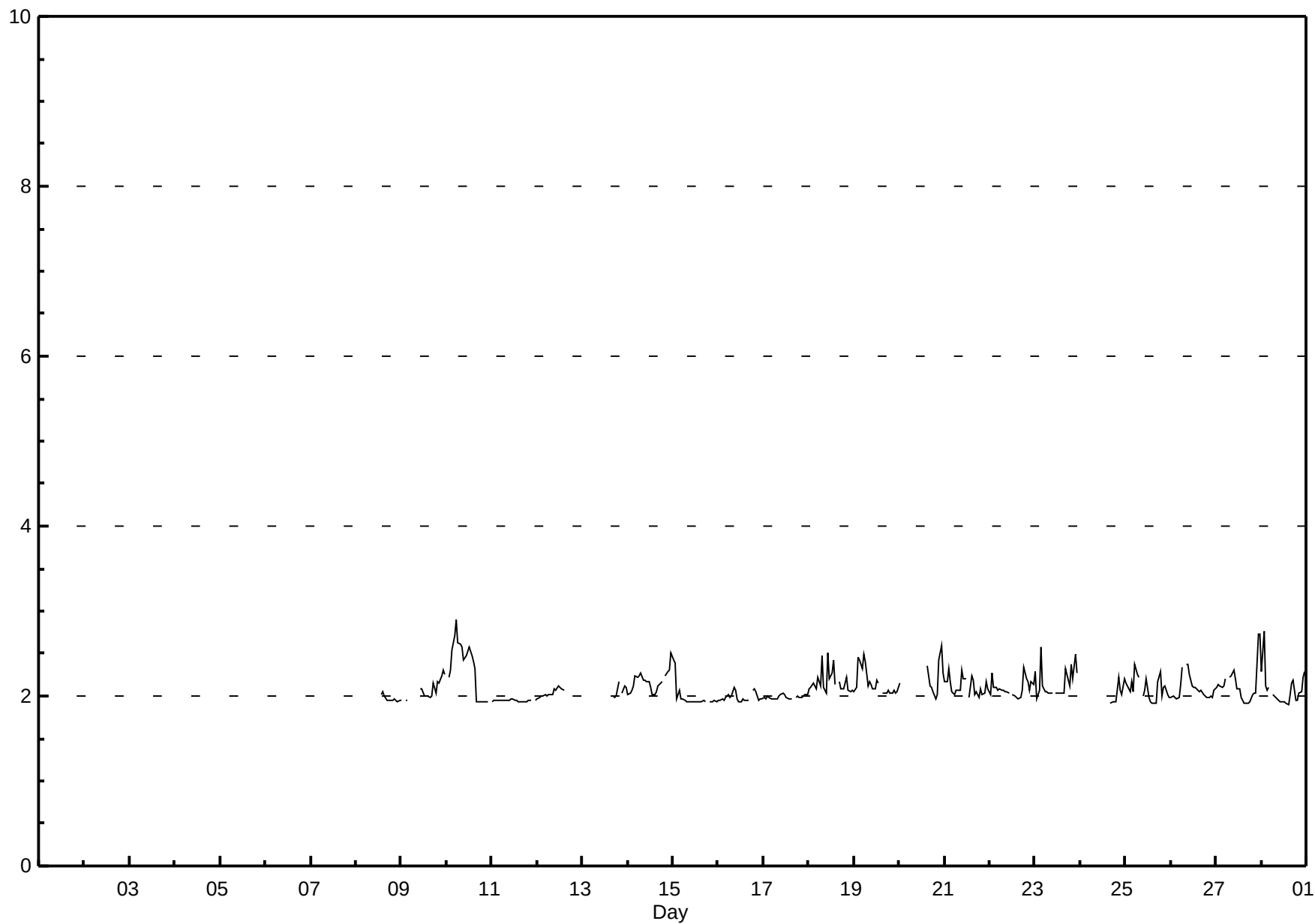
Methane (CH₄) - ppm

Henry Pirker - February 2013

Maximum Value: 2.89 ppm on Feb 10 06:00																								Maximum Daily Average: 2.33 ppm on Feb 10																								Hours in Service: 672	
Minimum Value: 1.9 ppm on Feb 28 15:00																								Minimum Daily Average: 1.95 ppm on Feb 11																								Hours of Data: 412	
Maximum Diurnal Average: 2.17 ppm at hour 6																								Minimum Diurnal Average: 2.02 ppm at hour 17																								Hours of Missing Data: 260	
Monthly Average: 2.093 ppm																								Percentiles: P ₁ = 1.92 P ₁₀ = 1.94 Q ₁ = 1.97 Median = 2.04 Q ₃ = 2.16 P ₉₀ = 2.32 P ₉₉ = 2.72																								Hours of Calibration: 22	
																								Percent Operational Time: 64.6																									
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-Feb	2.4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	2.40																							
2-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																							
3-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																							
4-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																							
5-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																							
6-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																							
7-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--																							
8-Feb	N	N	N	N	N	N	N	N	N	C	C	C	C	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	--	2.04																							
9-Feb	2.0	A	2.0	2.0	N	N	N	N	N	N	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.2	2.1	2.2	2.3	2.2	--	2.31																							
10-Feb	A	2.2	2.3	2.5	2.7	2.9	2.6	2.6	2.6	2.4	2.5	2.5	2.6	2.5	2.4	2.3	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.33	2.89																							
11-Feb	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	2.0	1.95	1.97																							
12-Feb	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	2.1	2.1	N	N	N	N	N	M	M	M	M	--	2.13																							
13-Feb	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	2.0	2.0	2.0	2.2	A	2.0	2.1	2.1	--	2.16																							
14-Feb	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.1	2.1	2.1	2.2	A	2.2	2.3	2.3	2.5	2.17	2.50																							
15-Feb	2.4	2.4	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.99	2.43																							
16-Feb	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.0	1.9	1.9	2.0	1.9	1.9	1.9	A	2.1	2.1	2.1	1.9	2.0	2.0	1.99	2.10																							
17-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.03																							
18-Feb	2.1	2.1	2.2	2.1	2.1	2.2	2.1	2.5	2.1	2.0	2.5	2.2	2.3	2.4	2.1	A	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.17	2.50																							
19-Feb	2.1	2.1	2.5	2.4	2.3	2.5	2.4	2.1	2.2	2.1	2.1	2.1	2.2	2.2	A	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.16	2.49																							
20-Feb	2.1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2.4	2.1	2.1	2.0	2.0	2.0	2.4	2.6	2.3	--	2.60																						
21-Feb	2.2	2.2	2.3	2.2	2.1	2.0	2.1	2.1	2.1	2.3	2.2	2.2	A	2.0	2.2	2.2	2.0	2.1	2.0	2.1	2.0	2.0	2.2	2.1	2.12	2.32																							
22-Feb	2.0	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.2	2.2	2.1	2.2	2.1	2.09	2.34																							
23-Feb	2.3	2.0	2.1	2.6	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.3	2.3	2.1	2.4	2.2	2.5	2.3	N	2.15	2.58																							
24-Feb	N	N	N	N	N	N	N	N	N	N	N	N	M	M	M	M	1.9	1.9	1.9	1.9	2.2	2.1	2.0	2.2	--	2.22																							
25-Feb	2.2	2.1	2.0	2.2	2.0	2.4	2.3	2.2	A	2.0	2.1	2.2	2.0	1.9	1.9	1.9	1.9	2.2	2.3	2.0	2.1	2.1	2.0	2.0	2.09	2.38																							
26-Feb	2.0	2.0	2.0	2.0	2.0	2.1	2.3	A	2.4	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.09	2.38																							
27-Feb	2.1	2.1	2.1	2.1	2.1	2.2	A	2.2	2.2	2.3	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.7	2.7	2.14	2.73																							
28-Feb	2.3	2.8	2.1	2.1	2.1	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.2	2.0	1.9	2.0	2.1	2.2	2.3	2.08	2.75																							
2.11 2.13 2.10 2.14 2.11 2.17 2.14 2.13 2.12 2.12 2.12 2.10 2.07 2.05 2.03 2.04 2.02 2.04 2.04 2.05 2.06 2.09 2.15 2.14																									Diurnal Average																								
2.43 2.75 2.46 2.58 2.72 2.89 2.63 2.61 2.58 2.43 2.50 2.53 2.57 2.47 2.41 2.35 2.32 2.26 2.34 2.37 2.23 2.49 2.73 2.72																									Diurnal Maximum																								
C - Calibration M - Maintenance N - Not Valid A - Automated Daily Zero Span																																																	

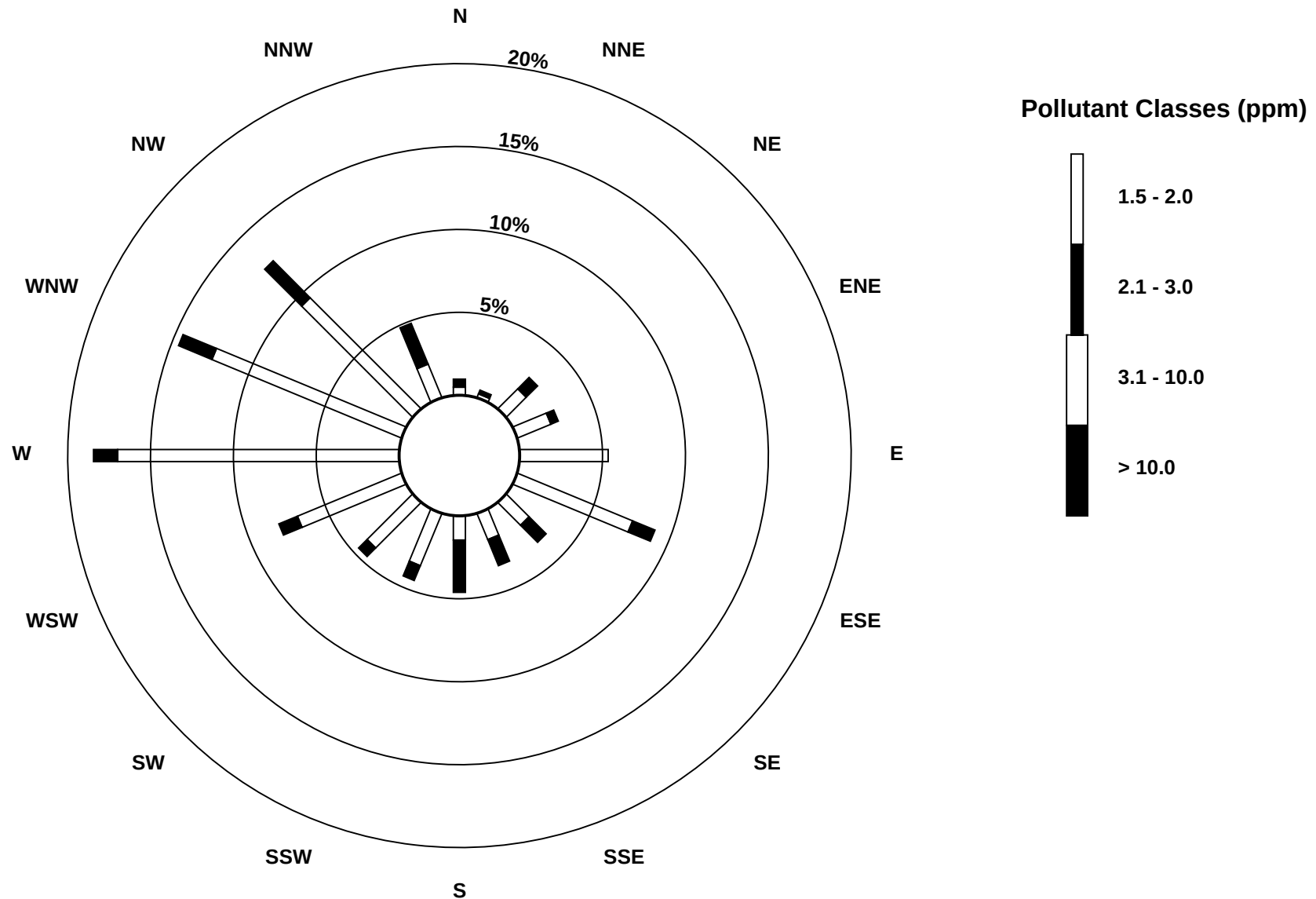
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - February 2013



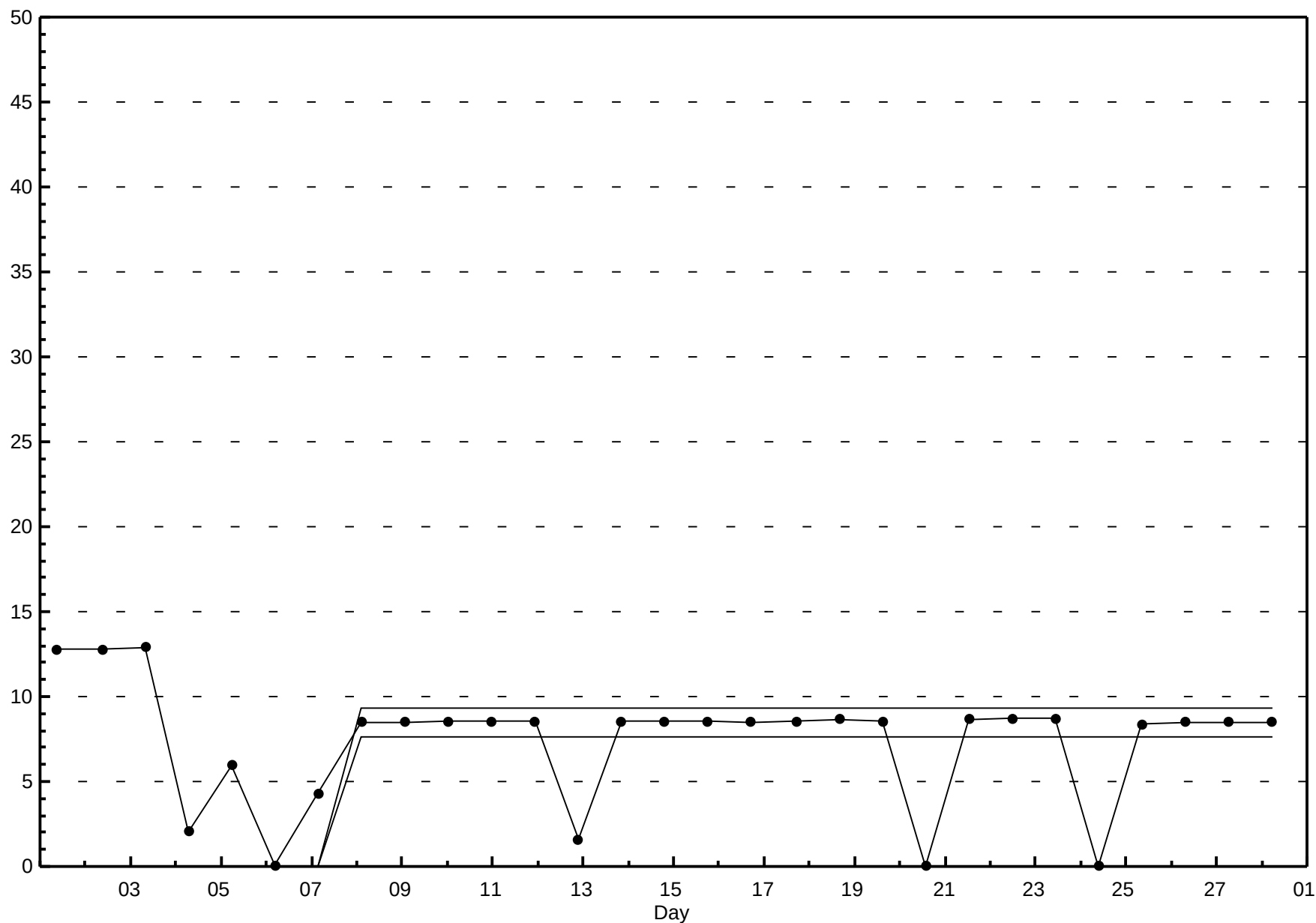
Pollutant Rose

Methane (CH₄) - ppm
Henry Pirker - February 2013



Span Responses

Methane (CH₄)
Henry Pirker - February 2013

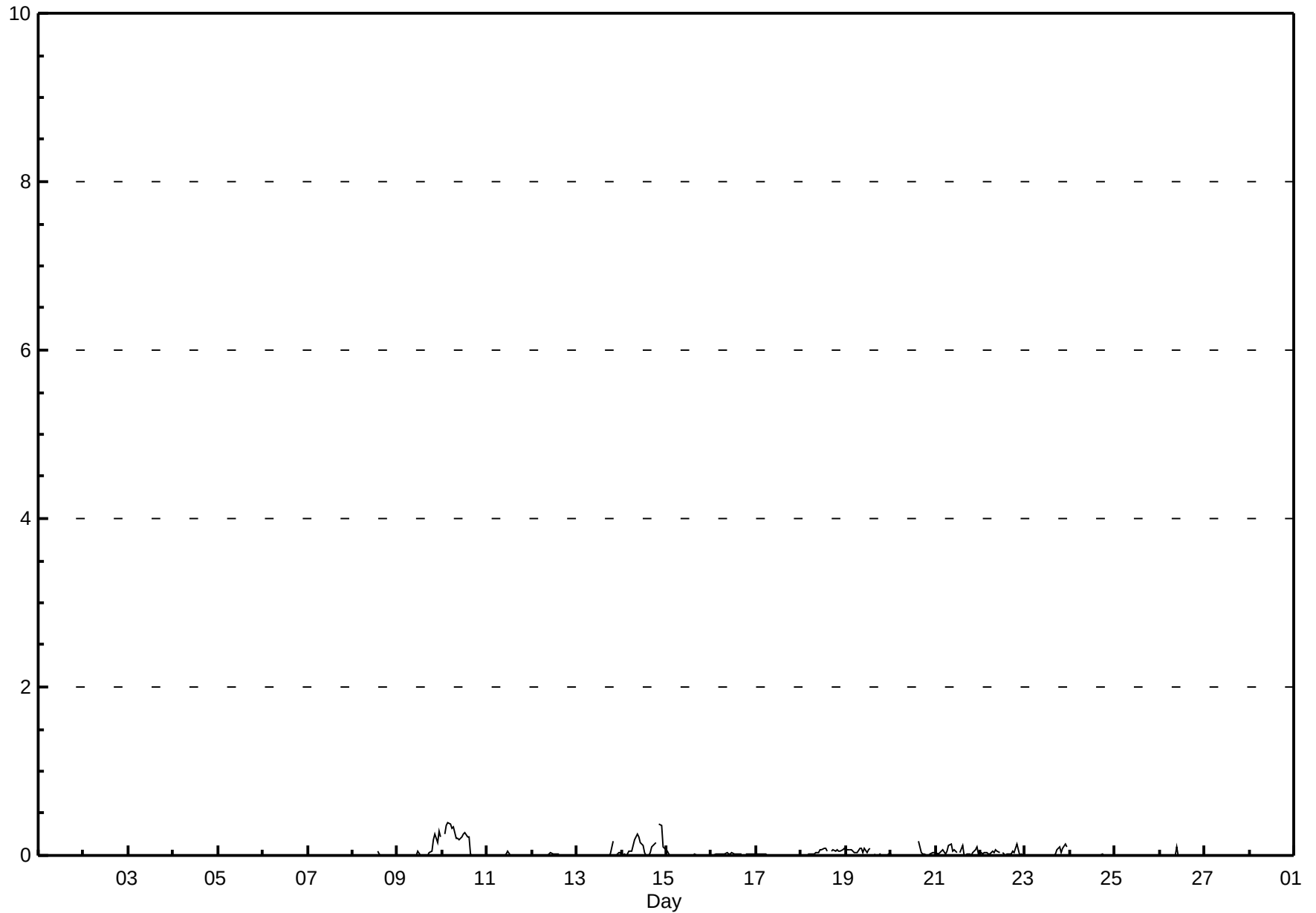


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.40 ppm on Feb 10 04:00 Maximum Daily Average: 0.17 ppm on Feb 10																								Hours in Service: 672 Hours of Data: 412 Hours of Missing Data: 260 Hours of Calibration: 22 Percent Operational Time: 64.6			
Minimum Value: 0.0 ppm on Feb 11 03:00 Minimum Daily Average: 0.00 ppm on Feb 27 Maximum Diurnal Average: 0.05 ppm at hour 9 Minimum Diurnal Average: 0.01 ppm at hour 17 Monthly Average: 0.033 ppm Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.03 P ₉₀ = 0.10 P ₉₉ = 0.35																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	0.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.02
2-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
3-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
4-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
5-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
6-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
7-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
8-Feb	N	N	N	N	N	N	N	N	N	N	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.04
9-Feb	0.0	A	0.0	0.0	N	N	N	N	N	N	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.2	0.3	0.2	--	0.28
10-Feb	A	0.2	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.17	0.40
11-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.04	
12-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N	N	N	N	M	M	M	M	--	0.03	
13-Feb	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	0.0	0.0	0.0	0.2	A	0.4	0.0	0.0	0.0	--	0.16
14-Feb	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	A	0.4	0.4	0.1	0.1	0.11	0.38
15-Feb	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.06	
16-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.04	
17-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.01	
18-Feb	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	A	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.04	0.08
19-Feb	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.08
20-Feb	0.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.17
21-Feb	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	A	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.05	0.13	
22-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.03	0.14	
23-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.03	0.14	
24-Feb	N	N	N	N	N	N	N	N	N	N	N	N	M	M	M	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.01
25-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
26-Feb	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.11	
27-Feb	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
28-Feb	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
0.01 0.03 0.03 0.03 0.04 0.03 0.04 0.04 0.05 0.05 0.04 0.04 0.03 0.03 0.03 0.02 0.01 0.02 0.02 0.03 0.05 0.04 0.04 0.03																								Diurnal Average			
0.07 0.25 0.36 0.40 0.37 0.32 0.34 0.21 0.25 0.22 0.22 0.26 0.26 0.21 0.21 0.17 0.09 0.12 0.15 0.18 0.38 0.36 0.28 0.22																								Diurnal Maximum			
C - Calibration M - Maintenance N - Not Valid A - Automated Daily Zero Span																											

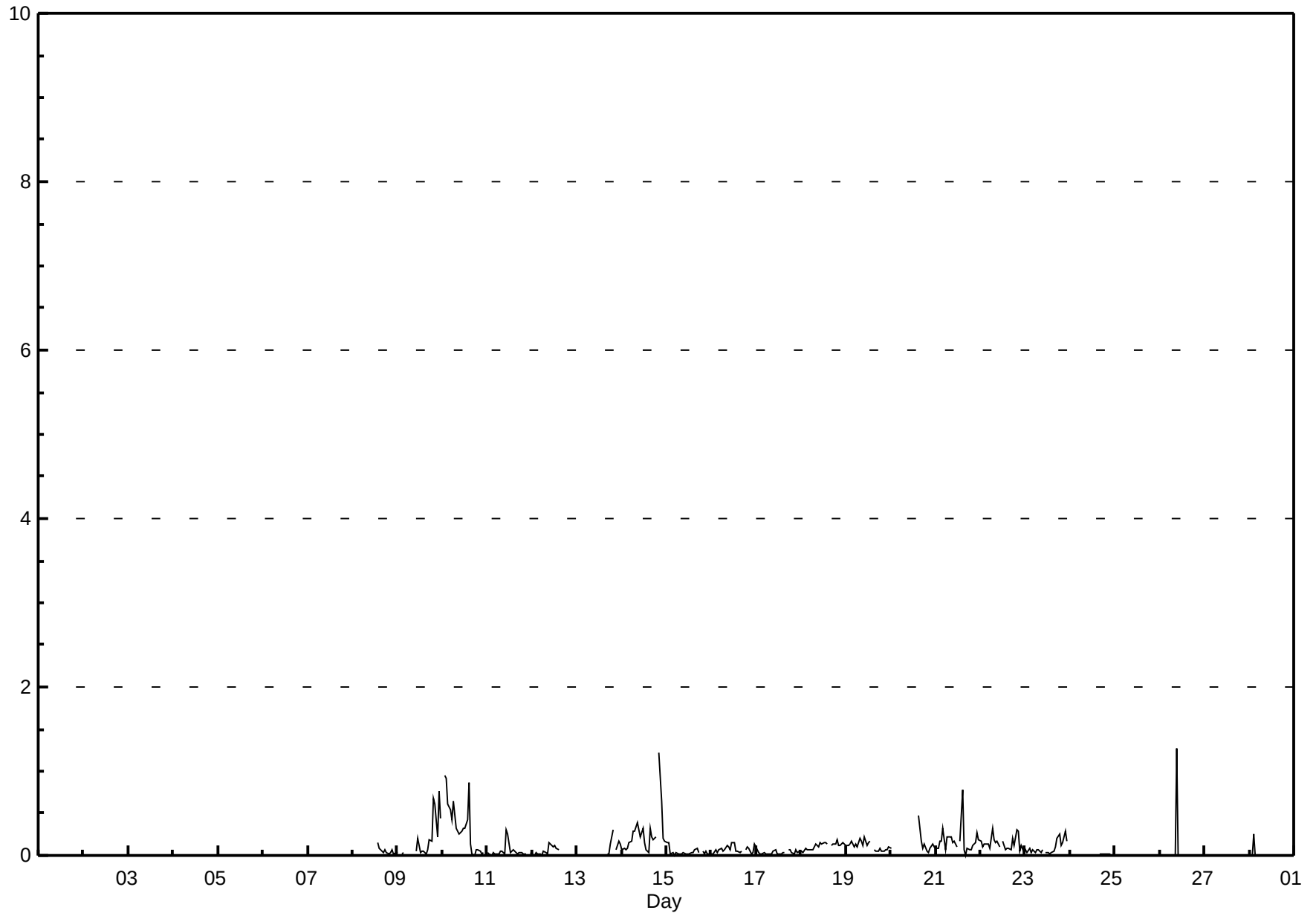


Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

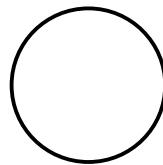
Henry Pirker - February 2013

Maximum Value: 1.26 ppm on Feb 26 10:00																					Maximum Daily Average: 0.34 ppm on Feb 10				Hours in Service: 672		
Minimum Value: 0.0 ppm on Feb 12 06:00																					Minimum Daily Average: 0.00 ppm on Feb 27				Hours of Data: 412		
Maximum Diurnal Average: 0.17 ppm at hour 10																					Minimum Diurnal Average: 0.05 ppm at hour 17				Hours of Missing Data: 260		
Monthly Average: 0.101 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.01 Median = 0.05 Q ₃ = 0.13 P ₉₀ = 0.20 P ₉₉ = 0.91				Hours of Calibration: 22		
																									Percent Operational Time: 64.6		
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-Feb	0.1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.09	
2-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
3-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
4-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
5-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
6-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
7-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
8-Feb	N	N	N	N	N	N	N	N	N	C	C	C	C	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	--	0.15	
9-Feb	0.0	A	0.0	0.0	N	N	N	N	N	N	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.7	0.6	0.2	0.8	0.4	--	0.76	
10-Feb	A	1.0	0.9	0.6	0.5	0.4	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.9	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	A	0.34	0.95	
11-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.05	0.31	
12-Feb	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	N	N	N	N	N	M	M	M	M	--	0.15	
13-Feb	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	0.0	0.0	0.1	0.3	A	A	0.1	0.2	0.1	--	0.30
14-Feb	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.3	0.2	0.3	0.2	0.1	0.0	0.3	0.2	0.2	0.2	A	1.2	0.6	0.2	0.2	0.26	1.22	
15-Feb	0.1	0.2	0.0	0.0	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	0.0	A	0.0	0.0	0.0	0.0	0.0	0.04	0.16	
16-Feb	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	A	0.1	0.1	0.1	0.0	0.0	0.1	0.07	0.16	
17-Feb	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	A	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.04	0.07	
18-Feb	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.11	0.18	
19-Feb	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	A	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.11	0.22	
20-Feb	0.1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.5	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	--	0.48	
21-Feb	0.1	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.2	0.1	0.2	0.1	A	0.2	0.8	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.17	0.77	
22-Feb	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.2	0.1	A	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.3	0.0	0.1	0.0	0.14	0.31	
23-Feb	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	A	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.1	0.1	0.3	0.2	N	0.09	0.29	
24-Feb	N	N	N	N	N	N	N	N	N	N	N	N	M	M	M	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.01	
25-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	
26-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	1.26	
27-Feb	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
28-Feb	0.0	0.0	0.3	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.25	
0.06 0.10 0.12 0.09 0.10 0.08 0.12 0.11 0.11 0.17 0.11 0.11 0.08 0.08 0.14 0.09 0.05 0.07 0.08 0.11 0.15 0.10 0.11 0.09																									Diurnal Average		
0.16 0.95 0.92 0.62 0.54 0.42 0.65 0.31 0.39 1.26 0.31 0.33 0.33 0.42 0.86 0.48 0.22 0.21 0.26 0.68 1.22 0.65 0.76 0.43																									Diurnal Maximum		
C - Calibration M - Maintenance N - Not Valid A - Automated Daily Zero Span																											

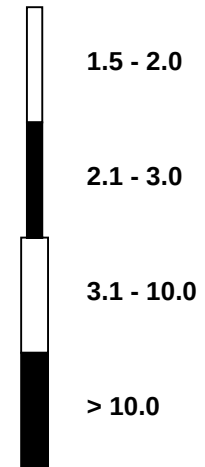


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm
Henry Pirker - February 2013

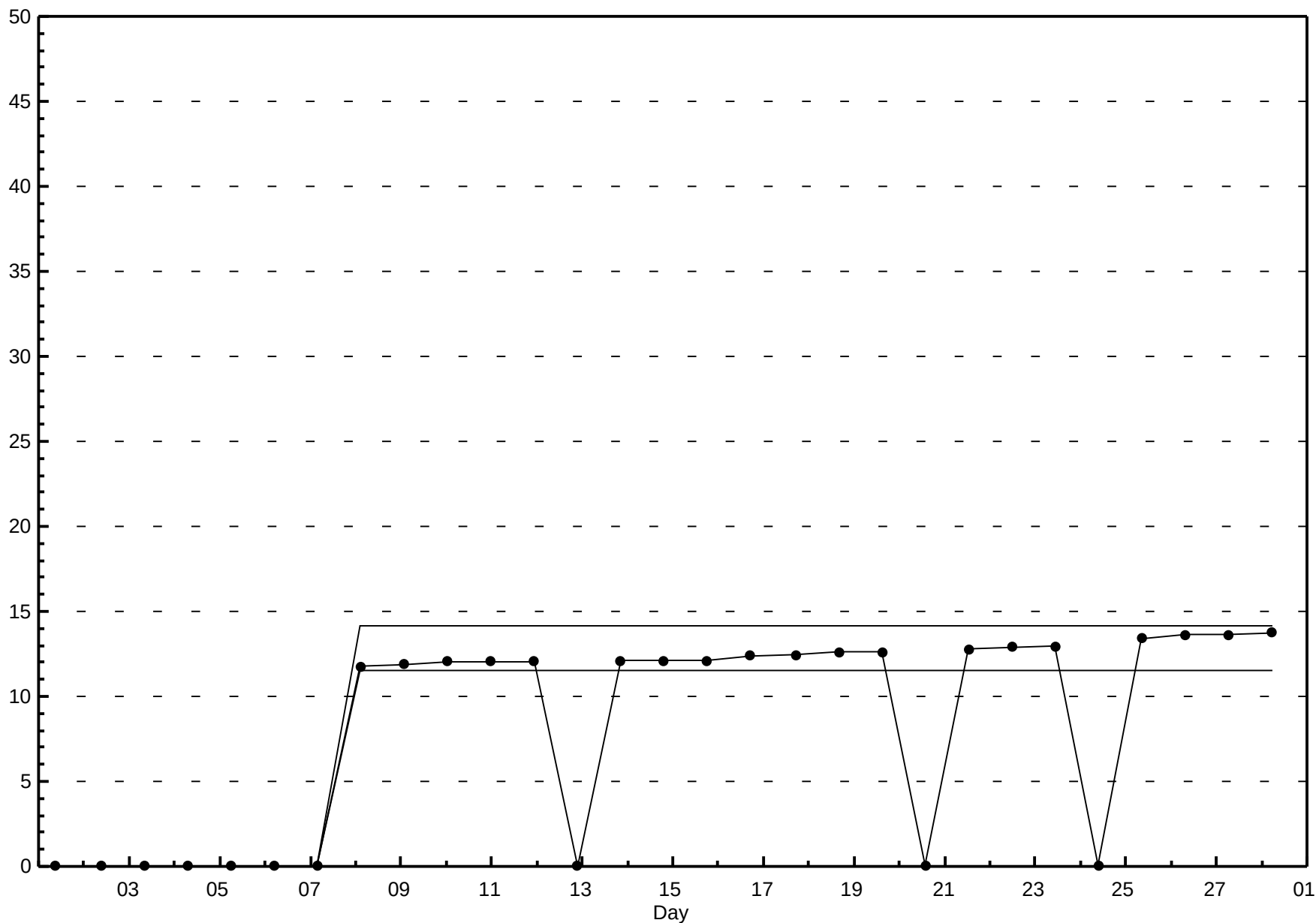


Pollutant Classes (ppm)



Span Responses

Non Methane Hydrocarbon (NMHC)
Henry Pirker - February 2013

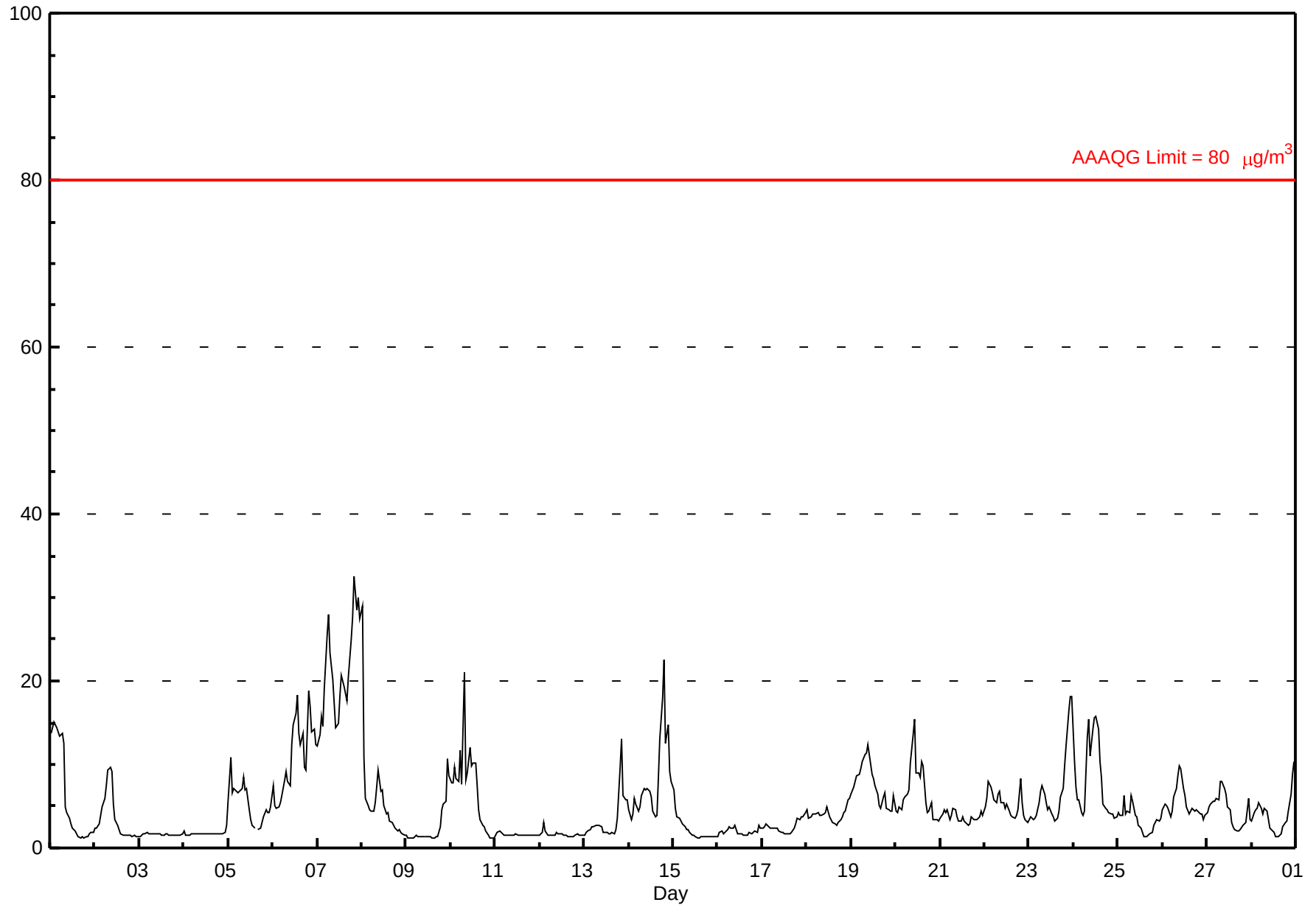


Hourly Averages

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

Henry Pirker - February 2013

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 32.6 µg/m³ on Feb 7 21:00 Maximum Daily Average: 21.0 µg/m³ on Feb 7																								Hours in Service: 672 Hours of Data: 671 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9		
Minimum Value: 1 µg/m³ on Feb 11 00:00 Maximum Diurnal Average: 6.8 µg/m³ at hour 8 Monthly Average: 5.23 µg/m³												Minimum Daily Average: 1.6 µg/m³ on Feb 11 Minimum Diurnal Average: 3.7 µg/m³ at hour 17 Percentiles: P ₁ = 1.3 P ₁₀ = 1.5 Q ₁ = 1.8 Median = 3.8 Q ₃ = 6.3 P ₉₀ = 11.6 P ₉₉ = 27.3														
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-Feb	14	14	15	14	14	13	14	12	5	4	4	3	2	2	2	1	1	1	1	1	1	2	2	2	6.1	15.0
2-Feb	2	2	3	4	5	6	7	9	10	9	5	3	3	2	2	2	2	2	2	2	1	1	1	1	3.6	9.6
3-Feb	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	1	2	2	2	1.6	1.8
4-Feb	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	1.7	2.7
5-Feb	6	11	7	7	7	7	7	7	9	7	7	5	3	3	2	D	2	2	3	4	5	4	4	5	5.3	10.8
6-Feb	7	5	5	5	5	6	8	9	8	7	12	15	16	18	14	12	14	10	9	19	17	14	14	12	10.9	18.7
7-Feb	12	14	16	15	19	25	28	23	20	17	14	15	18	21	19	19	18	21	25	28	33	29	30	27	21.0	32.6
8-Feb	29	11	6	5	5	4	4	5	7	9	7	7	5	4	4	3	3	3	2	2	2	2	2	2	5.6	28.9
9-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	5	5	6	11	9	2.6	10.7
10-Feb	8	8	10	8	8	12	8	21	8	9	12	10	10	10	7	5	3	3	2	2	1	1	1	1	7.0	20.9
11-Feb	2	2	2	2	2	2	1	1	2	2	2	2	1	1	1	1	1	1	2	2	2	2	1	1	1.6	2.0
12-Feb	2	2	3	2	2	2	1	1	1	2	2	2	2	2	1	1	1	1	1	2	2	1	1	1	1.6	3.0
13-Feb	1	2	2	2	2	3	3	3	3	2	2	2	2	2	2	2	2	2	4	10	13	6	6	6	3.4	13.0
14-Feb	5	3	4	6	5	4	5	6	7	7	7	7	6	4	4	4	8	13	18	23	13	15	9	8	8.0	22.6
15-Feb	7	5	4	4	3	3	3	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2.2	7.0
16-Feb	1	2	2	2	2	2	2	2	2	3	2	2	2	2	2	1	2	2	2	2	2	2	3	2	2.0	2.8
17-Feb	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	3	4	4	4	2.5	4.2
18-Feb	5	4	4	4	4	4	4	4	4	4	4	5	4	3	3	3	3	3	3	4	4	4	6	6	4.0	6.0
19-Feb	6	7	8	9	9	10	10	11	11	12	11	9	8	8	6	5	5	6	7	5	5	4	4	6	7.6	12.3
20-Feb	4	4	5	5	6	6	6	7	10	14	15	9	9	8	10	10	5	4	4	5	3	3	3	3	6.8	15.3
21-Feb	4	4	5	4	5	3	4	5	5	4	3	3	4	3	3	3	3	4	3	3	3	4	4	4	3.7	4.8
22-Feb	5	6	8	7	7	6	5	6	7	5	5	5	5	4	4	4	4	4	5	8	6	4	3	3	5.3	8.4
23-Feb	3	4	3	4	4	5	7	7	7	6	5	5	4	4	3	3	4	6	7	10	12	17	18	18	6.9	18.2
24-Feb	10	7	6	6	4	4	4	13	15	11	14	16	16	14	10	8	5	5	5	4	4	4	4	4	8.1	15.7
25-Feb	4	4	4	6	4	4	4	6	6	4	4	3	2	2	1	1	1	2	2	3	3	3	3	4	3.4	6.2
26-Feb	5	5	5	5	4	4	6	7	9	10	10	7	6	5	4	4	5	4	5	4	4	4	3	4	5.4	9.8
27-Feb	4	5	5	6	6	6	6	8	8	7	6	5	5	3	3	2	2	2	2	3	3	3	6	3	4.5	8.0
28-Feb	3	4	5	5	5	5	4	5	4	3	2	2	2	1	1	1	2	2	3	3	4	6	9	10	3.9	10.3
5.6 5.1 5.1 5.1 5.1 5.5 5.7 6.8 6.3 6.0 5.9 5.2 5.1 4.8 4.2 3.9 3.7 4.0 4.5 5.7 5.6 5.4 5.7 5.5																								Diurnal Average		
28.9 14.4 15.7 14.5 19.2 25.4 28.0 23.4 20.1 17.3 15.3 15.5 18.1 20.7 19.4 18.6 17.6 20.6 25.0 27.7 32.6 28.5 30.1 27.4																								Diurnal Maximum		
D - DAS Failure																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

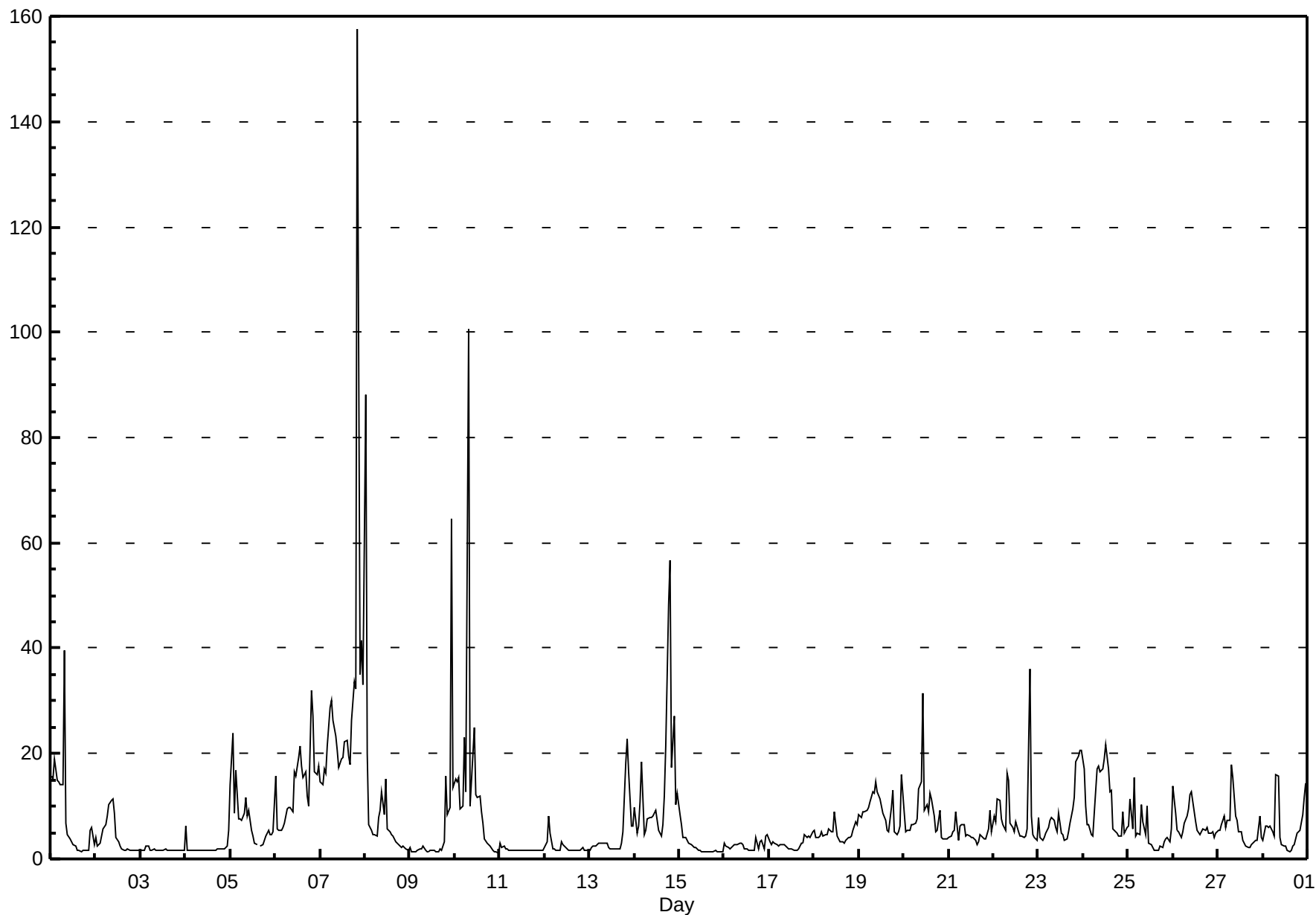


Hourly Maximums

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

Henry Pirker - February 2013

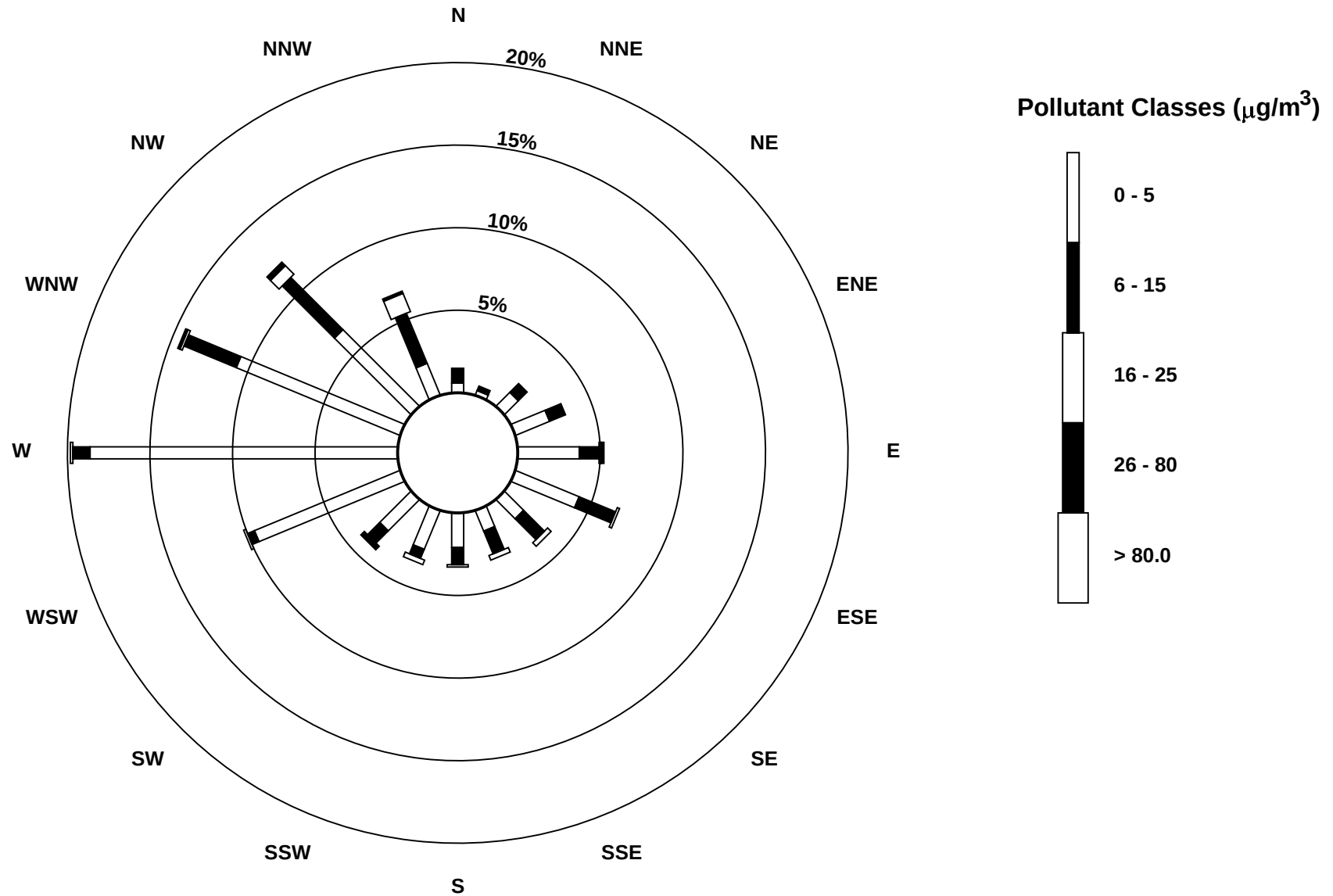
Maximum Value: 157.5 $\mu\text{g}/\text{m}^3$ on Feb 7 21:00																				Maximum Daily Average: 29.6 $\mu\text{g}/\text{m}^3$ on Feb 7					Hours in Service: 672		
Minimum Value: 1 $\mu\text{g}/\text{m}^3$ on Feb 11 00:00																				Minimum Daily Average: 1.7 $\mu\text{g}/\text{m}^3$ on Feb 11					Hours of Data: 671		
Maximum Diurnal Average: 12.7 $\mu\text{g}/\text{m}^3$ at hour 8																				Minimum Diurnal Average: 4.3 $\mu\text{g}/\text{m}^3$ at hour 17					Hours of Missing Data: 1		
Monthly Average: 7.34 $\mu\text{g}/\text{m}^3$																				Percentiles: $P_1 = 1.4$ $P_{10} = 1.6$ $Q_1 = 2.1$ Median = 4.6 $Q_3 = 8.6$ $P_{90} = 16.0$ $P_{99} = 40.2$					Hours of Calibration: 0		
																				Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	16	15	19	15	15	14	14	40	7	5	4	3	3	2	2	2	1	1	1	2	2	6	6	3	8.2	39.5	
2-Feb	4	2	3	4	6	7	8	10	11	11	9	4	3	2	2	2	2	2	2	2	2	2	2	2	4.3	11.3	
3-Feb	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.7	2.5	
4-Feb	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	2.1	6.1	
5-Feb	14	24	9	17	7	8	7	9	12	8	9	6	4	3	3	D	2	3	4	4	5	5	5	5	7.5	23.9	
6-Feb	16	6	6	5	6	7	9	10	10	9	17	16	19	21	18	16	16	12	10	32	27	16	16	18	14.0	31.9	
7-Feb	15	14	17	16	21	29	30	26	23	21	17	19	19	22	23	19	18	26	34	32	158	35	42	33	29.6	157.5	
8-Feb	88	20	6	5	5	5	4	8	9	13	8	15	6	5	5	4	3	3	3	2	2	2	2	2	9.4	88.1	
9-Feb	2	1	1	1	1	2	2	2	2	1	1	2	2	1	1	1	2	2	3	16	8	10	65	14	6.0	64.5	
10-Feb	15	15	16	9	10	23	13	101	10	15	25	12	12	12	9	7	4	3	3	2	2	1	1	1	13.3	100.7	
11-Feb	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.7	3.0	
12-Feb	2	3	8	5	2	2	2	2	2	3	3	2	2	2	2	2	1	2	2	2	2	2	2	2	2.3	8.2	
13-Feb	2	2	2	2	3	3	3	3	3	3	2	2	2	2	2	2	3	5	18	23	17	6	6	4.9	22.9		
14-Feb	10	5	6	11	18	5	6	8	8	8	8	9	7	5	4	7	12	21	48	57	17	27	10	13	13.8	56.6	
15-Feb	8	7	4	4	3	3	3	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2.5	8.5	
16-Feb	3	2	2	2	2	3	3	3	3	3	3	2	2	2	2	2	2	4	2	3	4	2	4	5	2.6	4.7	
17-Feb	3	3	3	3	3	2	3	3	3	2	2	2	2	2	2	2	2	3	3	5	4	4	4	5	2.9	5.0	
18-Feb	6	4	4	4	5	4	5	5	6	5	5	9	4	4	3	3	3	3	4	4	4	5	7	7	4.8	9.1	
19-Feb	8	8	9	9	9	10	11	13	12	15	13	11	10	9	7	5	5	10	13	5	5	5	6	16	9.3	15.9	
20-Feb	9	5	5	5	7	7	7	7	13	15	32	9	10	9	12	11	8	5	5	9	4	4	4	4	8.6	31.6	
21-Feb	4	4	5	5	9	4	6	6	7	4	5	4	4	4	3	3	3	5	4	4	4	6	9	5	4.9	9.2	
22-Feb	8	7	12	11	8	7	6	16	15	7	6	5	7	5	4	4	4	4	6	36	8	5	4	3	8.2	36.2	
23-Feb	8	4	4	4	5	6	7	8	7	6	5	9	5	5	4	4	5	7	10	12	18	20	21	21	8.4	20.7	
24-Feb	17	10	6	7	5	4	9	17	18	17	17	19	22	17	13	13	6	5	5	4	4	9	5	6	10.6	21.8	
25-Feb	6	11	6	16	4	5	5	10	7	5	10	3	3	2	2	2	2	2	2	3	4	4	3	6	5.1	15.5	
26-Feb	14	9	6	5	4	5	7	8	10	12	13	9	7	5	5	5	6	5	6	5	5	5	4	5	6.8	13.8	
27-Feb	5	6	6	8	6	7	7	18	16	8	7	5	5	4	3	2	2	2	3	3	4	4	8	4	6.0	18.0	
28-Feb	4	6	6	6	6	5	4	16	16	4	3	2	2	2	1	2	2	3	5	5	5	8	12	14	5.9	16.1	
																								Diurnal Average			
																								Diurnal Maximum			
D - DAS Failure																											



Pollutant Rose

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

Henry Pirker - February 2013



Hourly Averages

External Temperature (ET) - °C

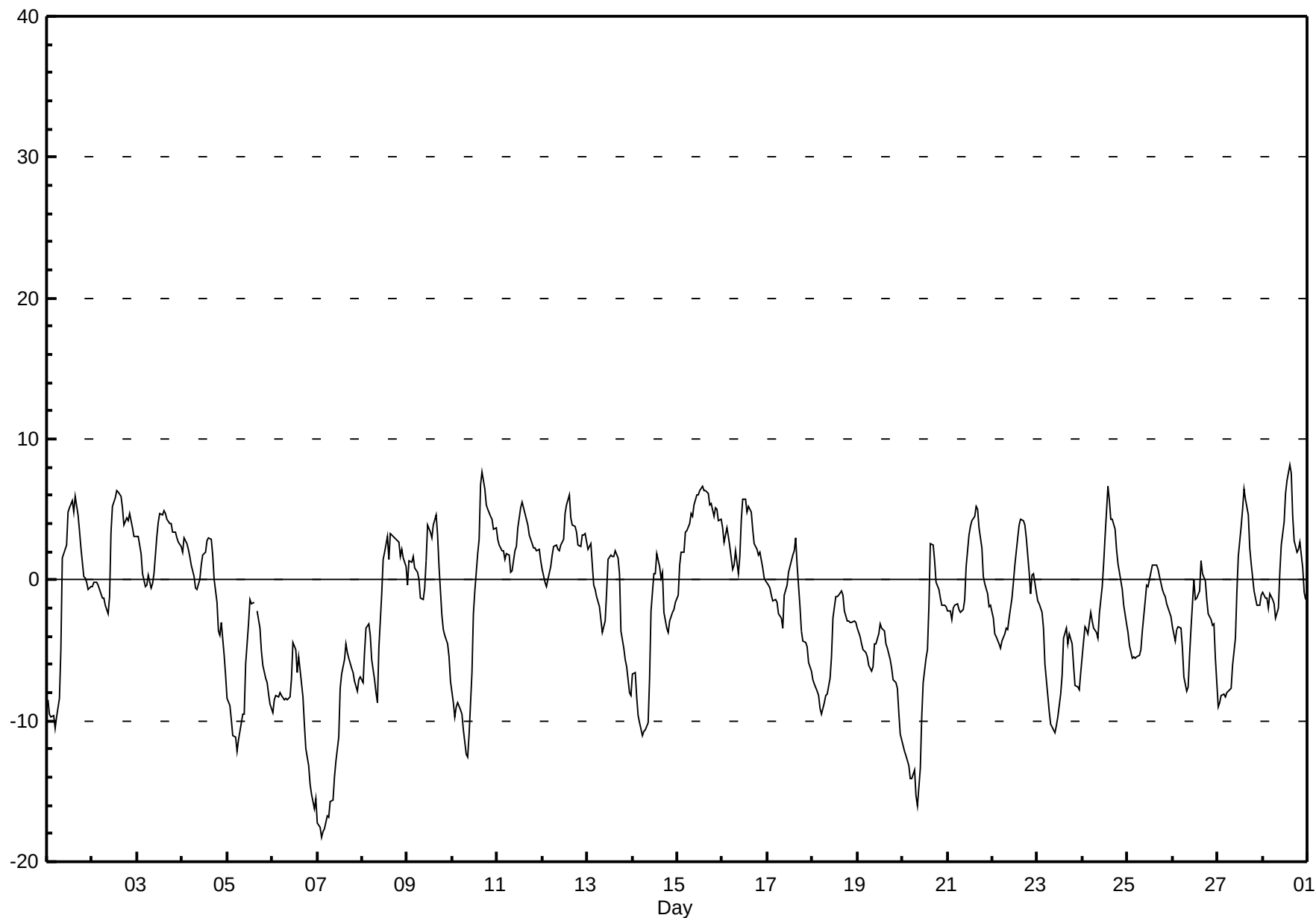
Henry Pirker - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8.1 °C on Feb 28 15:00 Maximum Daily Average: 4.5 °C on Feb 15																								Hours in Service: 672 Hours of Data: 671 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9		
Minimum Value: -18 °C on Feb 7 03:00 Maximum Diurnal Average: 2.6 °C at hour 16 Monthly Average: -1.89 °C												Minimum Daily Average: -11.2 °C on Feb 7 Minimum Diurnal Average: -5.1 °C at hour 8 Percentiles: P ₁ = -16.3 P ₁₀ = -9.1 Q ₁ = -5.4 Median = -1.2 Q ₃ = 2.2 P ₉₀ = 4.3 P ₉₉ = 6.7														
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-Feb	-8	-10	-10	-10	-11	-10	-8	-5	2	2	2	5	5	6	5	6	5	3	2	0	0	0	-1	0	-1.2	5.9
2-Feb	0	0	0	0	-1	-1	-1	-2	-2	-1	3	5	6	6	6	6	5	4	4	4	5	4	3	3	2.3	6.3
3-Feb	3	2	2	0	-1	0	0	-1	0	0	3	4	5	5	5	5	4	4	4	3	3	3	3	2	2.5	5.0
4-Feb	2	3	3	2	2	1	0	-1	-1	0	1	2	2	3	3	3	2	0	-2	-4	-4	-3	-5	-7	0.1	3.0
5-Feb	-8	-9	-10	-11	-11	-12	-11	-10	-9	-10	-6	-3	-1	-2	-2	D	-2	-3	-5	-6	-7	-7	-8	-9	-7.1	-1.4
6-Feb	-9	-8	-8	-8	-8	-8	-9	-8	-8	-8	-7	-4	-5	-7	-5	-6	-8	-10	-12	-13	-15	-15	-16	-16	-9.3	-4.4
7-Feb	-17	-18	-18	-18	-18	-17	-17	-16	-16	-14	-13	-11	-8	-7	-6	-5	-5	-6	-6	-7	-7	-8	-7	-7	-11.2	-4.6
8-Feb	-7	-5	-3	-3	-4	-6	-7	-8	-9	-5	-1	1	2	3	1	3	3	3	3	3	2	2	2	1	-1.2	3.2
9-Feb	0	1	1	2	1	1	0	-1	-1	-1	1	4	3	3	4	5	3	1	-3	-4	-4	-5	-5	-7	0.0	4.6
10-Feb	-9	-10	-9	-9	-9	-9	-11	-12	-13	-11	-7	-2	-1	2	3	7	8	6	5	5	4	4	4	4	-2.5	7.6
11-Feb	3	2	2	2	2	2	2	1	1	2	2	4	5	5	5	4	4	3	3	2	2	2	2	1	2.7	5.5
12-Feb	1	0	0	0	1	2	2	2	2	2	3	3	5	5	6	4	4	4	3	3	2	3	3	3	2.6	6.0
13-Feb	2	2	3	0	-1	-1	-2	-3	-4	-3	-1	1	2	2	2	2	2	0	-4	-5	-6	-6	-8	-8	-1.4	2.6
14-Feb	-7	-7	-8	-10	-10	-11	-11	-11	-10	-7	-2	0	0	2	1	0	1	-2	-3	-4	-3	-2	-2	-2	-4.5	1.8
15-Feb	-1	1	2	2	3	4	4	5	5	5	6	6	6	7	6	6	6	5	5	4	5	5	4	4	4.5	6.7
16-Feb	4	3	4	3	2	1	1	2	0	2	4	6	6	5	5	5	4	3	2	2	2	1	0	0	2.7	5.8
17-Feb	0	-1	-1	-1	-1	-2	-2	-3	-3	-1	0	1	1	2	2	3	1	-2	-4	-4	-4	-5	-6	-6	-1.6	2.9
18-Feb	-7	-7	-8	-8	-9	-9	-9	-8	-8	-7	-5	-3	-1	-1	-1	-1	-1	-2	-3	-3	-3	-3	-3	-3	-4.8	-0.8
19-Feb	-3	-4	-5	-5	-5	-5	-6	-7	-6	-5	-5	-4	-3	-3	-4	-5	-5	-6	-6	-7	-7	-8	-9	-11	-5.5	-3.1
20-Feb	-12	-12	-13	-13	-14	-14	-13	-15	-16	-13	-10	-7	-6	-5	-2	3	3	1	0	-1	-1	-2	-2	-2	-6.9	2.5
21-Feb	-2	-2	-3	-2	-2	-2	-2	-2	-2	-1	1	3	4	4	4	5	5	4	2	0	0	-1	-2	-2	0.3	5.2
22-Feb	-3	-4	-4	-5	-5	-4	-4	-3	-3	-3	-1	0	1	3	4	4	4	4	3	1	-1	0	0	-1	-0.7	4.3
23-Feb	-2	-2	-2	-3	-6	-8	-9	-10	-11	-11	-10	-10	-8	-7	-4	-3	-4	-4	-5	-6	-7	-8	-8	-7	-6.5	-1.5
24-Feb	-4	-3	-4	-4	-2	-3	-3	-4	-4	-2	0	1	3	7	6	4	4	4	2	1	0	-1	-2	-3	-0.3	6.7
25-Feb	-4	-5	-6	-5	-6	-5	-5	-5	-4	-1	0	0	0	1	1	1	1	0	-1	-1	-1	-2	-2	-3	-2.1	1.1
26-Feb	-3	-4	-4	-3	-3	-5	-7	-8	-8	-5	-3	0	-1	-1	-1	1	0	0	-1	-2	-3	-3	-3	-6	-3.1	1.4
27-Feb	-9	-9	-8	-8	-8	-8	-8	-8	-6	-4	-1	2	4	5	6	6	5	2	1	-1	-1	-2	-2	-1	-2.2	6.4
28-Feb	-1	-1	-1	-2	-1	-1	-2	-3	-2	0	2	4	6	7	8	8	5	3	2	2	3	1	-1	-1	1.4	8.1
-3.7 -3.8 -3.9 -4.2 -4.5 -4.8 -4.9 -5.1 -4.9 -3.5 -1.6 0.3 1.2 1.8 2.1 2.6 1.8 0.7 -0.4 -1.3 -1.7 -1.9 -2.5 -2.9 3.7 3.0 3.7 3.1 3.4 3.5 4.0 4.7 4.6 5.4 6.0 6.1 6.4 7.1 8.1 7.5 7.6 6.5 5.4 5.0 5.2 5.0 4.2 4.3																								Diurnal Average	Diurnal Maximum	
D - DAS Failure																										

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - February 2013



Hourly Averages

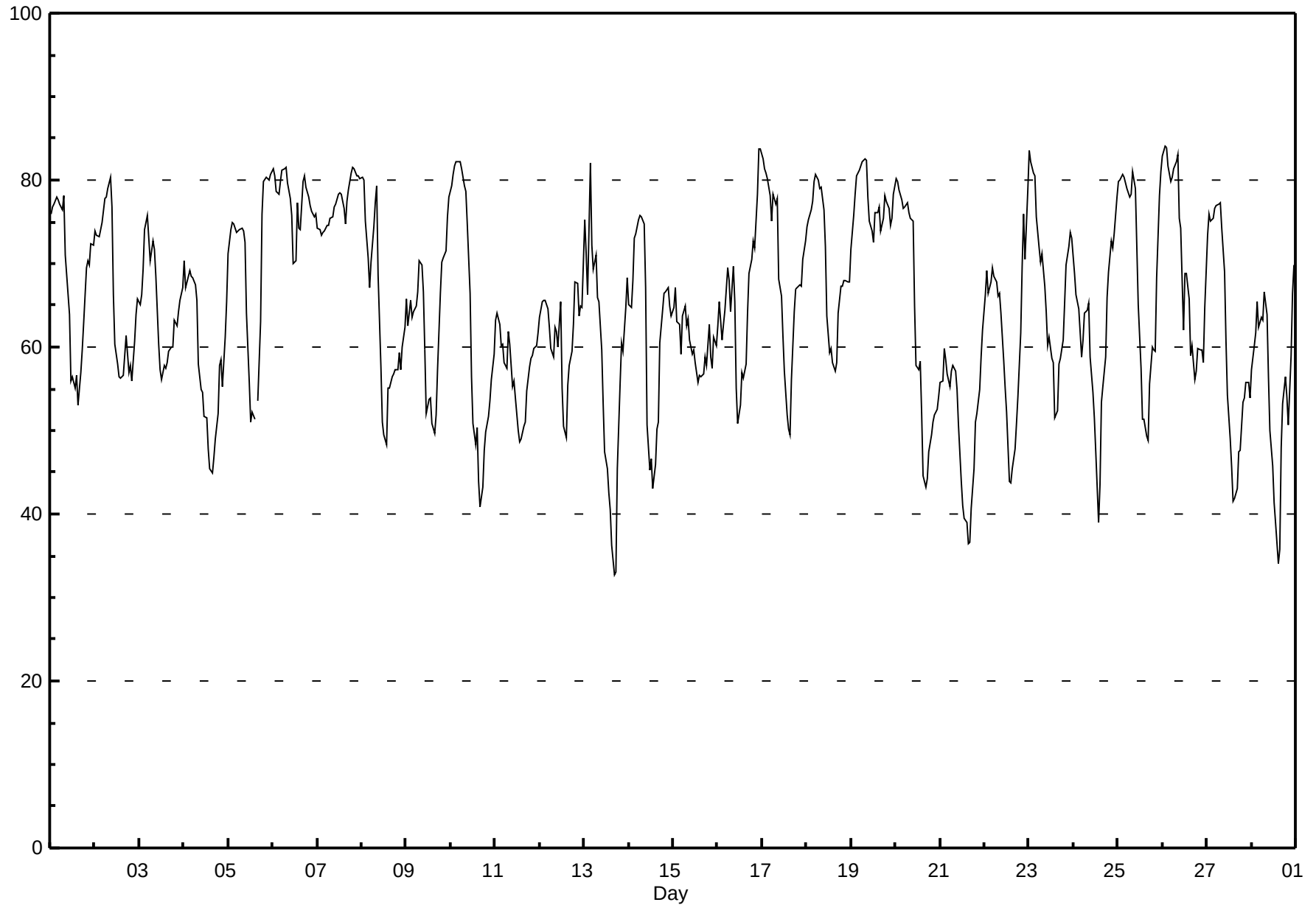
Relative Humidity (RH) - %

Henry Pirker - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 84.1 % on Feb 26 02:00 Maximum Daily Average: 77.7 % on Feb 6																								Hours in Service: 672 Hours of Data: 671 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9		
Minimum Value: 33 % on Feb 13 17:00 Maximum Diurnal Average: 72.7 % at hour 4 Monthly Average: 64.72 %												Minimum Daily Average: 50.9 % on Feb 21 Minimum Diurnal Average: 52.5 % at hour 16 Percentiles: P ₁ = 38.9 P ₁₀ = 50.1 Q ₁ = 56.9 Median = 64.9 Q ₃ = 74.8 P ₉₀ = 79.6 P ₉₉ = 82.8														
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-Feb	76	77	77	78	78	77	77	78	71	69	64	56	56	55	57	53	57	60	63	69	70	70	72	72	68.0	78.1
2-Feb	74	73	73	74	75	78	78	79	80	77	66	60	58	56	56	57	59	61	57	58	56	61	64	66	66.5	80.4
3-Feb	65	66	69	74	76	73	70	73	72	68	60	57	56	58	57	58	59	60	60	63	63	64	66	67	64.8	75.8
4-Feb	70	67	68	69	69	68	67	66	58	55	55	52	51	48	45	45	47	49	52	58	58	55	61	65	58.3	70.4
5-Feb	71	74	75	75	74	74	74	74	74	72	64	56	51	52	51	D	53	63	76	80	80	80	80	81	69.8	80.7
6-Feb	81	80	79	78	80	81	81	81	80	78	76	70	70	77	74	74	80	80	79	78	77	76	76	76	77.7	81.5
7-Feb	74	74	73	74	74	75	75	75	76	77	77	78	78	78	77	75	77	79	81	82	81	80	81	80	77.1	81.6
8-Feb	80	80	75	71	67	70	74	77	79	69	58	51	49	48	55	55	56	57	57	57	59	57	60	62	63.6	80.4
9-Feb	66	63	66	64	64	65	67	70	70	67	60	52	54	54	51	50	52	57	66	70	71	72	76	78	63.4	78.0
10-Feb	79	81	82	82	82	82	81	79	79	75	66	57	51	48	50	44	41	43	48	50	52	54	56	59	63.4	82.3
11-Feb	63	64	63	60	60	58	58	62	60	55	56	54	50	49	49	51	51	55	58	59	59	60	60	62	57.3	64.1
12-Feb	64	65	66	66	65	62	60	59	62	62	60	65	55	50	49	55	58	60	63	68	68	64	65	65	61.4	67.8
13-Feb	75	71	66	82	72	69	71	66	65	60	53	47	45	43	41	36	33	33	45	56	61	59	65	68	57.7	82.1
14-Feb	65	65	68	73	74	75	76	76	75	67	51	45	47	43	46	50	51	61	64	66	67	67	65	64	62.5	75.8
15-Feb	65	67	63	63	59	64	65	63	63	61	59	60	58	56	57	56	57	59	58	63	59	57	61	60	60.5	67.1
16-Feb	62	65	61	63	64	70	68	64	70	65	55	51	53	57	56	58	64	69	70	73	72	78	84	84	65.7	83.7
17-Feb	83	81	81	80	78	75	78	77	78	68	66	61	57	52	50	49	56	64	67	67	67	67	70	73	68.7	82.6
18-Feb	74	75	76	77	80	81	80	79	79	76	72	64	59	60	58	57	58	64	67	67	68	68	68	68	69.9	80.7
19-Feb	72	76	78	81	81	82	82	83	82	78	75	74	72	76	76	77	74	75	78	78	77	75	75	78	77.3	82.6
20-Feb	80	80	79	78	77	77	77	76	75	75	65	58	57	58	52	45	43	44	48	50	51	52	53	54	62.6	80.2
21-Feb	56	56	60	59	57	55	57	58	57	55	51	44	41	39	39	36	37	41	45	51	52	55	59	62	50.9	62.1
22-Feb	66	69	66	68	70	69	68	66	66	64	58	55	52	44	44	45	48	51	54	62	70	76	71	79	61.7	78.8
23-Feb	84	82	81	81	76	72	70	71	67	64	60	61	59	58	52	52	58	59	61	65	70	72	74	73	67.5	83.6
24-Feb	69	66	65	65	59	61	64	64	65	59	55	51	47	39	44	53	55	59	66	69	73	72	74	78	61.3	78.0
25-Feb	80	80	81	80	80	79	78	78	81	79	72	65	57	51	51	49	49	56	60	60	59	68	78	81	68.9	81.0
26-Feb	83	84	84	82	80	80	81	82	83	75	74	62	69	69	66	59	60	56	57	60	60	60	58	65	70.4	84.1
27-Feb	73	76	75	75	77	77	77	77	74	69	61	54	49	46	41	42	43	47	48	53	54	56	56	54	60.6	77.3
28-Feb	57	60	62	65	62	64	63	67	64	56	50	46	41	39	34	36	48	53	56	54	51	59	66	70	55.2	69.7
																								Diurnal Average		
																								Diurnal Maximum		
D - DAS Failure																										

Hourly Averages

Relative Humidity (RH) - %
Henry Pirker - February 2013



Hourly Averages

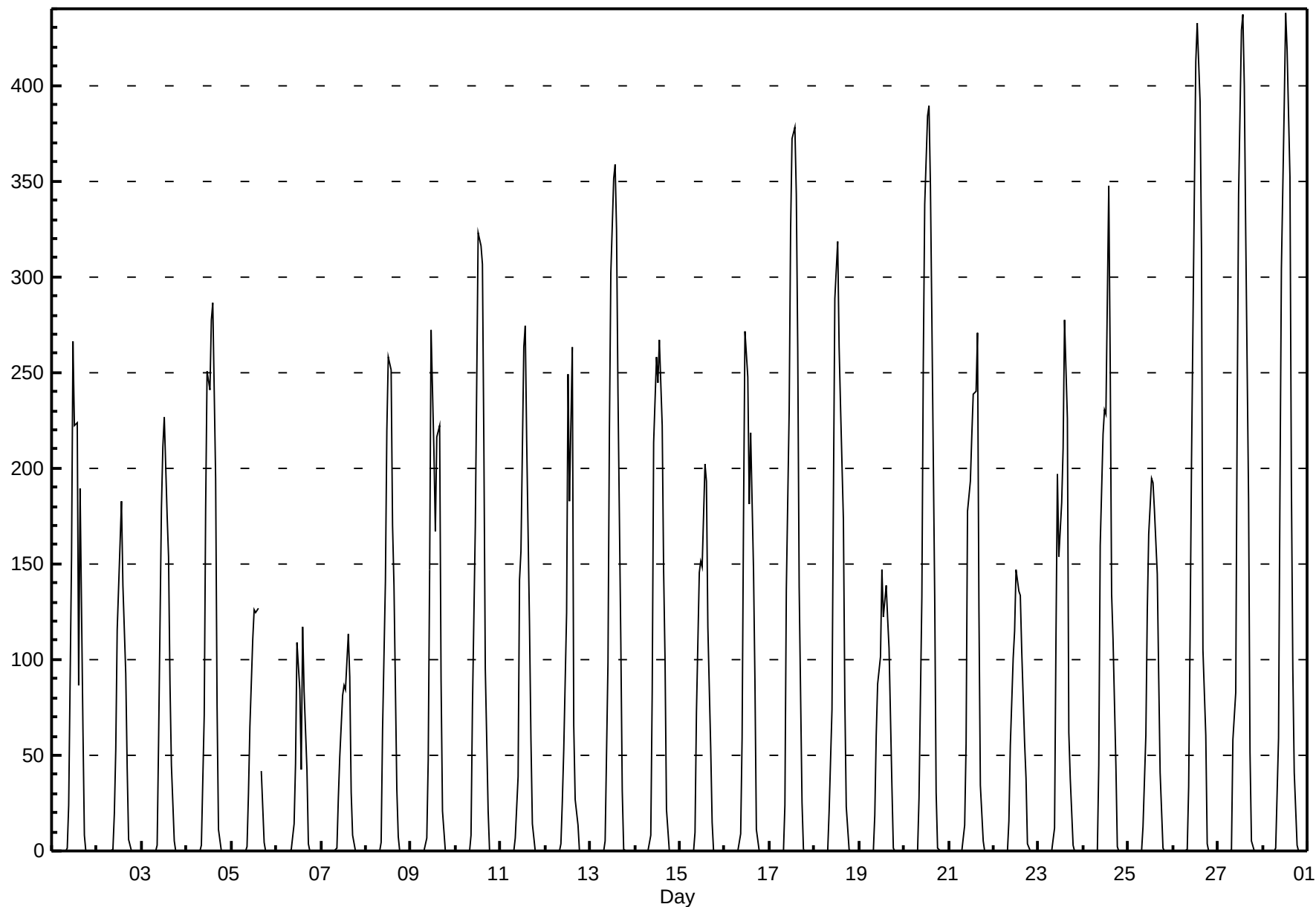
Solar Radiation (SR) - W/m²

Henry Pirker - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 437.6 W/m ² on Feb 28 13:00 Maximum Daily Average: 105.8 W/m ² on Feb 27																								Hours in Service: 672 Hours of Data: 671 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9		
Minimum Value: 0 W/m ² on Feb 1 01:00 Maximum Diurnal Average: 246.8 W/m ² at hour 13 Monthly Average: 61.00 W/m ²												Minimum Daily Average: 22.7 W/m ² on Feb 6 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 = 0.0 Q ₃ = 95.2 P ₉₀ = 226.5 P ₉₉ = 397.3														
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-Feb	0	0	0	0	0	0	0	0	1	24	154	266	223	224	86	189	63	8	0	0	0	0	0	0	51.6	266.4
2-Feb	0	0	0	0	0	0	0	0	1	20	53	115	160	183	139	92	43	6	0	0	0	0	0	0	33.9	182.7
3-Feb	0	0	0	0	0	0	0	0	3	57	179	211	227	175	154	87	45	5	0	0	0	0	0	0	47.6	226.5
4-Feb	0	0	0	0	0	0	0	0	3	71	179	250	241	278	286	195	76	11	0	0	0	0	0	0	66.3	286.3
5-Feb	0	0	0	0	0	0	0	0	2	30	65	111	126	124	127	D	42	4	0	0	0	0	0	0	27.4	126.7
6-Feb	0	0	0	0	0	0	0	0	1	14	45	109	85	42	117	83	43	4	0	0	0	0	0	0	22.7	117.2
7-Feb	0	0	0	0	0	0	0	0	2	28	49	81	87	84	113	91	30	8	0	0	0	0	0	0	23.9	113.3
8-Feb	0	0	0	0	0	0	0	0	5	63	141	220	258	252	170	139	32	8	0	0	0	0	0	0	53.6	258.2
9-Feb	0	0	0	0	0	0	0	0	7	48	147	272	209	167	216	223	89	21	0	0	0	0	0	0	58.3	272.2
10-Feb	0	0	0	0	0	0	0	0	9	75	169	245	323	316	306	213	95	21	0	0	0	0	0	0	73.9	322.8
11-Feb	0	0	0	0	0	0	0	0	6	39	142	156	263	275	215	118	58	14	0	0	0	0	0	0	53.6	274.6
12-Feb	0	0	0	0	0	0	0	0	3	26	53	125	249	183	263	66	27	14	0	0	0	0	0	0	42.0	262.9
13-Feb	0	0	0	0	0	0	0	0	5	99	220	302	351	359	325	239	109	31	0	0	0	0	0	0	85.0	358.9
14-Feb	0	0	0	0	0	0	0	0	9	83	214	258	245	267	222	146	99	22	0	0	0	0	0	0	65.2	267.1
15-Feb	0	0	0	0	0	0	0	0	10	72	146	151	149	202	193	117	54	15	0	0	0	0	0	0	46.2	202.2
16-Feb	0	0	0	0	0	0	0	0	9	59	175	272	247	181	219	147	89	11	0	0	0	0	0	0	58.7	271.7
17-Feb	0	0	0	0	0	0	0	0	24	137	231	324	372	378	343	263	138	25	1	0	0	0	0	0	93.1	378.3
18-Feb	0	0	0	0	0	0	0	0	21	74	184	289	318	264	232	173	80	23	1	0	0	0	0	0	69.1	318.1
19-Feb	0	0	0	0	0	0	0	0	18	60	87	101	147	123	138	122	106	34	1	0	0	0	0	0	39.1	146.6
20-Feb	0	0	0	0	0	0	0	0	27	133	254	338	384	389	347	279	133	31	2	0	0	0	0	0	96.6	389.2
21-Feb	0	0	0	0	0	0	0	0	14	56	178	193	217	239	240	271	126	34	5	0	0	0	0	0	65.5	271.1
22-Feb	0	0	0	0	0	0	0	0	16	55	101	115	147	136	133	105	57	38	4	0	0	0	0	0	37.7	146.6
23-Feb	0	0	0	0	0	0	0	0	12	111	197	154	182	210	278	226	62	38	3	0	0	0	0	0	61.4	277.5
24-Feb	0	0	0	0	0	0	0	0	44	160	218	231	228	347	256	134	110	45	2	0	0	0	0	0	74.0	347.4
25-Feb	0	0	0	0	0	0	0	0	13	60	125	166	195	192	179	144	91	41	2	0	0	0	0	0	50.3	194.8
26-Feb	0	0	0	0	0	0	0	1	34	113	204	344	412	433	391	314	105	60	4	0	0	0	0	0	100.6	432.8
27-Feb	0	0	0	0	0	0	0	1	58	82	227	343	429	437	400	322	184	52	5	0	0	0	0	0	105.8	436.8
28-Feb	0	0	0	0	0	0	0	1	59	190	304	390	438	418	352	193	95	41	3	0	0	0	0	0	103.5	437.6
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 14.8 72.8 158.5 219.1 246.8 245.7 230.0 173.8 81.5 23.8 1.2 0.0 0.0 0.0 0.0 0.0 0.0																								Diurnal Average		
0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.4 59.1 189.7 304.2 390.2 437.6 436.8 399.9 321.8 183.6 60.3 5.2 0.0 0.0 0.0 0.0 0.0 0.0																								Diurnal Maximum		
D - DAS Failure																										

Hourly Averages

Solar Radiation (SR) - W/m^2
Henry Pirker - February 2013



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	5	5	3	2	2	3	0	7	13	15	9	10	14	17	18	21	16	16	11	10	12	9	5	5	7.4	20.7
Dir	123	132	118	64	303	322	87	346	268	260	290	275	255	254	259	263	265	278	277	301	293	348	323	335	276.2	262.9
2 Spd	3	4	3	2	1	1	1	2	3	2	12	19	17	18	16	13	10	5	11	13	16	11	11	11	7.8	19.0
Dir	247	235	230	153	129	66	90	128	157	237	270	255	252	257	267	270	272	271	255	247	260	250	262	274	256.8	254.6
3 Spd	12	11	10	6	5	8	9	8	12	11	11	9	11	10	10	8	14	20	22	16	22	15	14	8	11.5	22.3
Dir	273	270	251	278	284	286	270	255	251	248	255	269	270	294	252	236	252	252	259	246	254	243	240	254	257.9	259.2
4 Spd	8	19	15	18	20	20	19	14	17	19	17	20	19	18	19	16	15	15	13	9	13	13	5	5	14.9	20.0
Dir	259	251	261	262	261	258	259	257	259	263	269	263	273	274	273	265	262	262	253	243	255	263	246	359	262.5	260.9
5 Spd	2	0	1	1	4	5	3	3	4	4	5	2	5	6	6	D	6	9	5	5	5	5	5	2	2.5	9.0
Dir	355	74	352	276	353	304	320	328	338	308	22	61	54	66	86	D	128	101	77	66	63	62	79	148	51.7	100.8
6 Spd	1	2	3	3	4	3	5	3	4	4	1	0	3	5	4	6	7	5	5	4	4	4	3	4	1.9	6.5
Dir	223	300	74	87	96	91	124	100	122	120	89	142	321	343	334	353	344	340	333	336	330	333	336	335	7.2	343.8
7 Spd	3	3	3	3	2	2	1	1	1	1	2	1	0	0	1	1	1	1	1	1	3	1	3	1	1.3	3.4
Dir	299	331	321	325	320	331	321	347	302	346	295	325	95	199	314	317	336	175	135	80	319	229	334	232	318.4	299.2
8 Spd	2	8	12	12	8	5	2	2	3	3	3	1	2	8	8	17	22	27	31	25	15	23	19	13	10.3	30.8
Dir	287	234	234	243	264	313	313	181	158	149	152	296	309	281	299	276	263	257	249	250	251	262	268	270	258.2	249.5
9 Spd	8	21	15	12	10	9	12	6	9	12	12	8	11	10	9	10	7	6	2	2	2	2	1	3	7.8	21.1
Dir	300	277	287	269	292	301	322	293	296	293	283	266	284	292	284	289	295	340	295	238	307	12	119	334	290.8	276.8
10 Spd	2	0	3	2	4	1	2	1	3	3	1	2	4	3	7	22	21	19	18	22	24	25	19	18	8.3	25.1
Dir	282	215	171	121	126	108	120	237	324	326	345	288	306	275	290	261	262	269	258	256	266	269	250	257	262.6	268.9
11 Spd	16	14	12	14	15	14	17	13	15	17	12	12	18	19	22	24	27	20	19	19	17	15	18	11	16.5	26.9
Dir	254	265	268	263	278	272	275	284	280	273	264	273	271	267	269	272	273	262	266	265	260	257	261	266	268.3	272.6
12 Spd	10	9	7	6	8	13	18	16	13	7	8	3	7	7	11	15	20	19	13	6	4	15	17	19	10.6	19.8
Dir	285	302	316	306	286	266	260	262	282	218	247	212	198	245	269	274	278	275	271	274	269	266	263	264	268.5	278.1
13 Spd	24	17	22	30	30	29	25	19	16	15	9	6	11	15	14	10	5	3	2	1	3	7	4	5	13.0	30.2
Dir	268	264	272	299	305	302	296	297	291	303	308	290	289	290	292	301	316	299	250	279	290	296	313	245	291.6	298.9
14 Spd	6	6	5	3	4	1	1	3	1	2	2	2	4	3	4	4	2	2	5	3	3	4	6	6	1.6	6.3
Dir	247	243	286	227	246	359	141	338	6	341	316	270	246	297	309	357	200	286	272	337	148	163	161	168	254.1	246.8
15 Spd	7	8	8	7	10	12	13	16	18	18	16	17	20	19	20	9	16	18	23	19	23	18	18	23	14.9	22.9
Dir	171	226	236	230	260	273	269	264	260	258	267	280	278	283	285	247	268	277	279	281	270	270	275	277	268.8	279.4
16 Spd	12	7	13	7	5	6	9	9	4	8	15	19	12	10	10	14	11	9	11	8	12	11	9	6	8.9	18.9
Dir	292	294	308	312	290	291	261	266	243	247	271	266	285	299	294	305	303	301	287	298	336	9	311	321	293.8	266.2
17 Spd	7	9	13	14	15	15	12	14	9	5	6	8	9	5	4	1	6	9	10	10	9	7	8	7	3.8	14.9
Dir	299	297	312	311	309	320	312	310	315	307	322	285	304	320	310	257	114	92	95	106	111	107	92	94	329.1	319.7
18 Spd	4	4	3	3	1	2	5	5	6	8	7	4	6	7	8	7	5	6	5	5	5	4	5	5	4.7	7.9
Dir	77	64	48	81	97	108	107	106	97	110	91	91	61	69	91	83	60	41	52	64	85	93	105	89	81.7	91.0
19 Spd	6	6	5	4	5	4	3	3	3	3	6	6	9	9	10	12	11	8	8	8	7	7	5	3	4.1	11.9
Dir	93	87	56	60	69	69	43	44	54	44	334	293	314	333	319	320	318	311	314	307	302	304	304	313	336.6	320.2
20 Spd	3	3	3	3	5	5	6	4	4	2	4	4	6	6	3	2	11	9	8	9	5	6	5	6	2.1	10.9
Dir	338	47	32	334	307	324	331	325	315	302	293	302	319	324	294	185	207	212	223	232	180	177	174	124	262.3	206.8
21 Spd	6	5	5	9	8	8	8	8	7	8	5	7	10	11	10	11	9	7	7	9	7	5	4	7	7.1	11.2
Dir	170	168	175	200	211	219	203	197	196	186	176	194	211	208	186	178	168	207	240	230	229	245	197	219	200.9	207.7
22 Spd	4	5	5	6	5	6	7	8	7	8	9	8	9	8	9	8	7	6	5	1	14	14	8	10	5.0	14.4
Dir	171	140	111	124	119	120	119	121	111	115	119	117	116	145	142	147	141	124	146	266	262	231	222	216	148.9	261.8

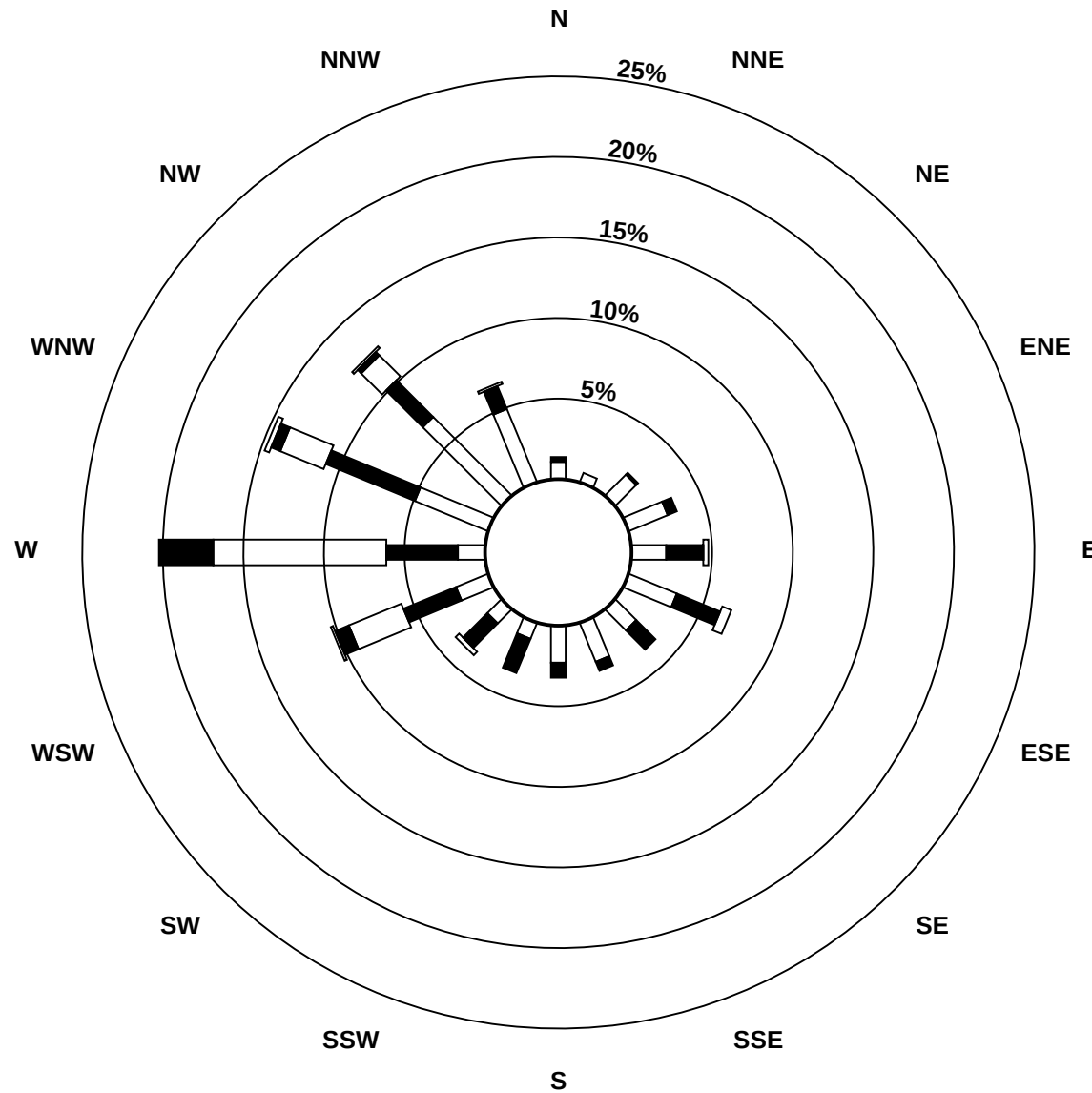
Hourly Averages

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

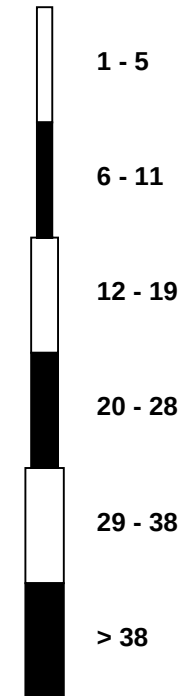
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
23 Spd	10	8	7	5	14	21	19	21	18	22	18	11	7	7	5	5	2	2	3	3	3	2	5	7	6.7	21.6								
Dir	210	243	236	281	314	316	303	300	303	306	306	313	310	307	294	275	177	169	114	137	146	149	166	194	291.3	305.6								
24 Spd	5	6	5	4	8	2	4	5	5	8	7	7	4	2	8	18	28	16	12	7	4	5	2	0	3.3	28.1								
Dir	225	199	148	204	242	173	119	113	130	132	133	127	105	9	289	280	281	269	283	275	281	300	299	342	252.1	281.4								
25 Spd	2	3	2	2	3	3	3	3	3	5	4	9	12	14	15	15	13	6	2	3	4	5	5	1	3.7	15.4								
Dir	272	341	307	322	349	290	332	300	60	87	50	79	96	110	114	104	105	73	69	44	117	163	163	296	93.1	113.9								
26 Spd	3	1	4	4	6	1	4	2	3	4	3	3	6	7	6	4	5	4	6	8	8	8	7	2	1.5	8.2								
Dir	339	42	130	112	116	308	306	347	318	301	309	319	332	337	334	319	25	98	110	111	113	109	98	292	44.9	111.5								
27 Spd	3	2	3	3	4	3	4	3	2	4	4	7	6	9	9	13	15	13	11	6	3	4	5	4	4.6	14.5								
Dir	339	302	311	328	298	311	308	344	285	174	215	257	246	263	273	278	284	285	275	249	231	169	176	205	269.8	284.0								
28 Spd	4	4	3	3	3	4	8	5	7	7	10	10	7	7	5	1	9	12	11	9	4	1	1	5	1.9	11.8								
Dir	234	189	279	154	203	258	242	241	276	274	276	269	288	275	257	102	88	95	108	125	122	150	194	184	224.2	94.7								
Spd	3.9	4.4	4.0	3.9	4.8	5.4	5.2	4.4	4.5	4.4	4.7	5.1	5.5	5.9	6.4	7.2	6.8	5.9	6.3	5.0	5.4	5.0	4.2	4.2	Diurnal Average									
Dir	261.3	259.0	270.8	273.9	285.3	291.1	282.1	282.7	276.6	266.6	278.1	269.6	276.6	280.7	277.5	273.2	269.2	269.2	262.9	259.0	262.7	260.3	252.1	257.5	Diurnal Maximum									
Spd	24.4	21.1	21.5	30.2	30.0	28.7	25.1	20.8	18.1	21.6	18.4	20.0	19.8	19.0	22.0	24.0	28.1	27.3	30.8	24.9	23.6	25.1	18.9	22.5	Diurnal Maximum									
Dir	268.1	276.8	271.9	298.9	305.4	301.5	296.1	300.2	260.1	305.6	305.8	263.0	278.1	267.1	269.4	272.3	281.4	257.1	249.5	249.7	266.5	268.9	268.0	277.0										
Maximum Speed Value: 31 km/h on Feb 8 19:00																				Minimum Speed Value: 0 km/h on Feb 7 13:00										Hours in Service:				672
Maximum Daily Speed Average: 16.5 km/h on Feb 11																				Minimum Daily Speed Average: 1.3 km/h on Feb 7										Hours of Data:				671
Maximum Diurnal Speed Average: 7.2 km/h at hour 16																				Minimum Diurnal Speed Average: 3.9 km/h at hour 4										Hours of Missing Data:				1
Monthly Average Velocity: 5.03 km/h 271.12 deg																				Speed Percentiles: P ₁ = 0.5 P ₁₀ = 2.0 Q ₁ = 3.6 Median = 6.7 Q ₃ = 11.6 P ₉₀ = 17.8 P ₉₉ = 26.8										Percent Operational Time:				99.9
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	25		6		1		0		0		0														32									
NorthEast	20		8		0		0		0		0														28									
East	27		32		6		0		0		0														65									
SouthEast	31		28		1		0		0		0														60									
South	24		18		1		0		0		0														43									
SouthWest	23		37		8		0		0		0														68									
West	25		53		101		36		2		0														217									
NorthWest	77		52		20		6		3		0														158									
Total	252		234		138		42		5		0														671									

Wind Rose

Wind Speed (WS) (km/h)
Henry Pirker - February 2013



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - February 2013

Maximum Speed: 31 km/h on Feb 8 19:00																					Maximum Daily Speed Average: 16.8 km/h on Feb 11					Hours in Service: 672	
Minimum Speed: 1 km/h on Feb 6 12:00																					Minimum Daily Speed Average: 2.0 km/h on Feb 7					Hours of Data: 671	
Maximum Diurnal Speed Average: 11.8 km/h at hour 17																					Minimum Diurnal Speed Average: 6.9 km/h at hour 1					Hours of Missing Data: 1	
Monthly Average Speed: 8.71 km/h																					Percentiles: P ₁ = 1.5 P ₁₀ = 2.9 Q ₁ = 4.1 Median = 7.0 Q ₃ = 11.7 P ₉₀ = 17.8 P ₉₉ = 26.9					Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	5	5	4	2	3	3	2	7	13	15	9	11	14	17	19	21	17	16	11	10	12	9	5	6	9.9	20.8	
2-Feb	4	4	3	2	2	3	3	3	4	4	12	19	17	18	16	13	11	6	11	13	17	12	11	11	9.1	19.2	
3-Feb	12	12	10	7	6	9	10	8	12	11	11	10	11	10	11	8	15	20	22	17	22	15	14	8	12.0	22.5	
4-Feb	8	19	15	18	20	20	19	14	17	19	17	20	19	19	20	16	15	15	13	10	13	13	5	5	15.4	20.1	
5-Feb	4	3	2	3	4	5	4	4	5	4	5	3	5	7	7	D	6	9	6	5	6	5	5	3	4.8	9.4	
6-Feb	2	3	4	4	4	3	5	4	5	4	2	1	3	5	5	6	7	6	5	4	5	4	3	4	4.1	6.7	
7-Feb	4	3	3	3	2	2	2	1	1	2	2	2	1	1	1	2	1	2	2	2	3	2	3	2	2.0	3.6	
8-Feb	3	9	12	12	9	5	4	3	3	3	3	1	2	9	9	18	22	28	31	25	15	23	19	13	11.7	30.9	
9-Feb	8	21	15	13	11	9	13	6	9	12	12	8	11	10	9	10	7	6	4	4	3	2	2	3	8.7	21.2	
10-Feb	2	3	4	3	4	2	2	1	3	3	2	3	4	4	8	22	21	19	19	22	24	25	19	19	9.9	25.4	
11-Feb	16	14	12	14	15	14	18	13	15	18	13	12	18	19	22	24	27	20	19	19	17	15	18	11	16.8	27.0	
12-Feb	10	9	7	6	8	13	19	16	14	7	9	5	8	7	11	15	20	19	13	6	5	15	17	19	11.7	20.0	
13-Feb	25	18	22	31	30	29	25	19	16	15	9	6	11	15	14	10	6	4	2	3	4	7	4	5	13.7	30.8	
14-Feb	6	6	5	4	4	2	2	3	2	2	2	2	4	4	5	5	3	3	5	3	3	5	6	6	3.9	6.4	
15-Feb	7	9	9	8	10	12	13	16	18	18	16	17	20	19	21	9	17	18	23	19	23	19	18	23	15.9	23.0	
16-Feb	12	7	14	7	6	6	9	9	5	9	15	19	14	11	11	15	11	9	11	9	13	11	9	7	10.3	19.3	
17-Feb	7	9	13	15	15	15	12	14	9	5	6	8	9	6	5	3	7	9	10	10	9	8	9	7	9.2	15.0	
18-Feb	5	4	3	3	3	3	5	6	6	8	8	5	6	7	8	7	5	6	6	5	5	4	5	5	5.4	8.0	
19-Feb	6	6	5	5	5	4	4	4	3	3	6	6	9	9	11	12	11	8	8	8	7	7	5	3	6.4	12.0	
20-Feb	3	3	3	3	5	5	6	4	5	2	4	4	6	6	3	2	11	9	9	9	5	7	5	6	5.3	11.1	
21-Feb	7	5	5	10	8	8	8	8	8	8	5	7	10	11	10	11	10	8	8	9	7	6	5	7	7.8	11.3	
22-Feb	5	5	5	6	5	6	7	8	7	8	9	8	10	8	9	8	7	6	5	6	15	15	8	10	7.8	15.2	
23-Feb	10	8	7	7	14	21	20	21	18	22	19	11	7	7	5	5	3	3	4	4	4	3	5	7	9.8	21.7	
24-Feb	6	6	5	7	9	4	4	5	5	8	7	7	5	3	8	18	28	16	12	8	5	5	3	3	7.9	28.2	
25-Feb	3	4	2	3	3	4	4	3	4	5	6	10	12	15	16	15	13	6	3	4	5	5	5	2	6.3	15.7	
26-Feb	4	3	4	4	6	3	5	3	4	4	4	3	6	7	7	5	5	5	6	8	8	8	8	4	5.1	8.2	
27-Feb	4	4	4	3	4	3	4	4	3	4	4	7	7	9	10	13	15	13	11	6	4	5	6	6	6.4	14.6	
28-Feb	5	4	5	3	3	5	8	5	7	7	10	10	8	8	5	4	9	12	11	9	4	2	3	5	6.5	11.9	
6.9 7.4 7.2 7.3 7.8 7.9 8.4 7.6 7.8 8.2 8.1 8.1 9.2 9.7 10.2 11.0 11.8 10.7 10.4 9.2 9.3 9.2 8.1 7.5																									Diurnal Average		
24.6 21.2 21.9 30.8 30.2 29.0 25.3 20.9 18.3 21.7 18.6 20.1 20.0 19.2 22.2 24.1 28.2 27.5 30.9 25.0 23.9 25.4 19.0 22.7																									Diurnal Maximum		
D - DAS Failure																											
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

Hourly Standard Deviations

Wind Direction (WD) - deg
Henry Pirker - February 2013

Maximum Value: 98.4 deg on Feb 28 16:00																								Hours in Service: 672	
Minimum Value: 3.7 deg on Feb 13 15:00																								Hours of Data: 671	
																								Hours of Missing Data: 1	
Percentiles: P ₁ = 5.0 P ₁₀ = 6.5 Q ₁ = 8.8 Median = 14.7 Q ₃ = 27.5 P ₉₀ = 54.1 P ₉₉ = 87.7																								Hours of Calibration: 0	
																								Percent Operational Time: 99.9	
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-Feb	9	16	27	51	30	26	87	20	14	7	17	22	7	6	5	6	8	7	17	14	14	24	9	41	87.4
2-Feb	33	24	26	20	51	76	74	62	29	65	20	7	6	6	8	9	22	54	9	9	6	10	11	11	75.7
3-Feb	11	7	6	24	31	23	20	11	6	8	8	13	10	13	18	9	7	7	6	7	7	10	6	19	30.7
4-Feb	24	10	12	8	6	5	6	7	7	7	9	6	7	6	6	9	7	10	14	8	6	13	24	15	23.8
5-Feb	66	88	84	90	18	16	43	23	21	22	16	56	27	25	28	D	14	16	16	18	11	15	15	59	90.5
6-Feb	85	48	55	31	17	39	17	29	30	21	62	80	40	28	25	14	15	17	11	31	17	21	24	23	85.5
7-Feb	22	9	13	10	14	20	23	47	30	14	23	41	89	85	44	39	29	85	68	86	18	67	33	86	89.4
8-Feb	48	20	7	7	34	27	78	51	32	15	14	59	24	12	10	7	7	7	6	6	8	6	6	8	78.1
9-Feb	17	7	6	11	21	20	13	26	10	6	6	15	11	11	7	6	9	19	77	70	66	52	76	16	77.2
10-Feb	29	81	27	35	13	55	21	62	39	16	93	51	35	55	29	10	11	12	9	11	8	8	9	16	93.3
11-Feb	8	7	10	8	5	7	5	9	9	9	12	8	6	8	7	7	6	7	6	6	5	10	5	11	12.3
12-Feb	21	34	17	26	11	15	7	8	13	18	25	56	23	11	18	15	8	7	10	21	43	8	6	6	55.7
13-Feb	7	7	10	10	7	8	7	4	5	7	11	16	5	4	4	10	18	14	37	73	58	9	34	20	73.0
14-Feb	9	14	20	25	22	75	58	31	82	46	60	43	22	40	21	37	57	54	27	37	21	30	6	12	81.6
15-Feb	10	22	12	16	11	8	8	9	8	6	10	9	8	6	5	16	14	10	6	6	7	7	7	7	22.0
16-Feb	12	24	12	49	25	12	12	14	44	18	9	12	30	9	7	5	7	8	7	12	15	13	12	22	49.4
17-Feb	12	5	6	5	5	6	7	5	7	27	21	6	13	39	37	75	35	10	7	10	8	10	7	12	75.2
18-Feb	21	17	21	34	87	71	26	23	14	10	12	39	24	14	12	14	21	14	14	12	22	17	17	10	86.9
19-Feb	8	13	18	18	11	14	19	20	37	31	22	11	10	12	13	8	9	7	8	7	6	9	11	20	36.9
20-Feb	21	33	29	33	12	13	6	20	21	39	10	11	14	10	54	18	10	8	13	6	27	9	24	13	54.5
21-Feb	10	14	10	22	8	6	17	12	14	9	21	19	10	9	9	10	11	32	9	13	8	17	30	11	31.7
22-Feb	19	15	12	6	11	9	9	12	6	6	7	8	10	13	12	15	11	18	16	73	21	32	15	6	72.8
23-Feb	8	10	9	42	19	5	9	7	7	7	8	8	18	15	19	23	56	53	61	48	39	54	40	21	61.2
24-Feb	32	20	17	58	17	60	18	9	11	8	12	13	37	69	11	11	4	8	11	39	45	37	42	90	90.1
25-Feb	52	25	49	50	37	53	66	26	39	18	63	16	11	9	11	12	11	19	60	32	24	19	9	63	66.1
26-Feb	19	84	10	15	8	77	29	51	35	18	27	36	16	22	19	34	25	33	11	7	8	11	21	86	85.6
27-Feb	39	75	27	20	29	16	20	30	48	17	33	19	33	12	15	8	5	6	5	16	63	18	23	39	75.2
28-Feb	43	21	48	54	65	50	17	32	21	10	10	15	15	27	31	98	8	7	7	23	27	69	88	8	98.4
85.5 87.8 84.4 90.5 86.9 76.6 87.4 62.3 81.6 65.4 93.3 80.5 89.4 84.5 54.5 98.4 56.5 85.3 77.2 86.3 65.7 69.1 87.9 90.1																									
D - DAS Failure																									

PAZA

Evergreen Park Station

Monthly Summary Tables, Graphs and
Roses

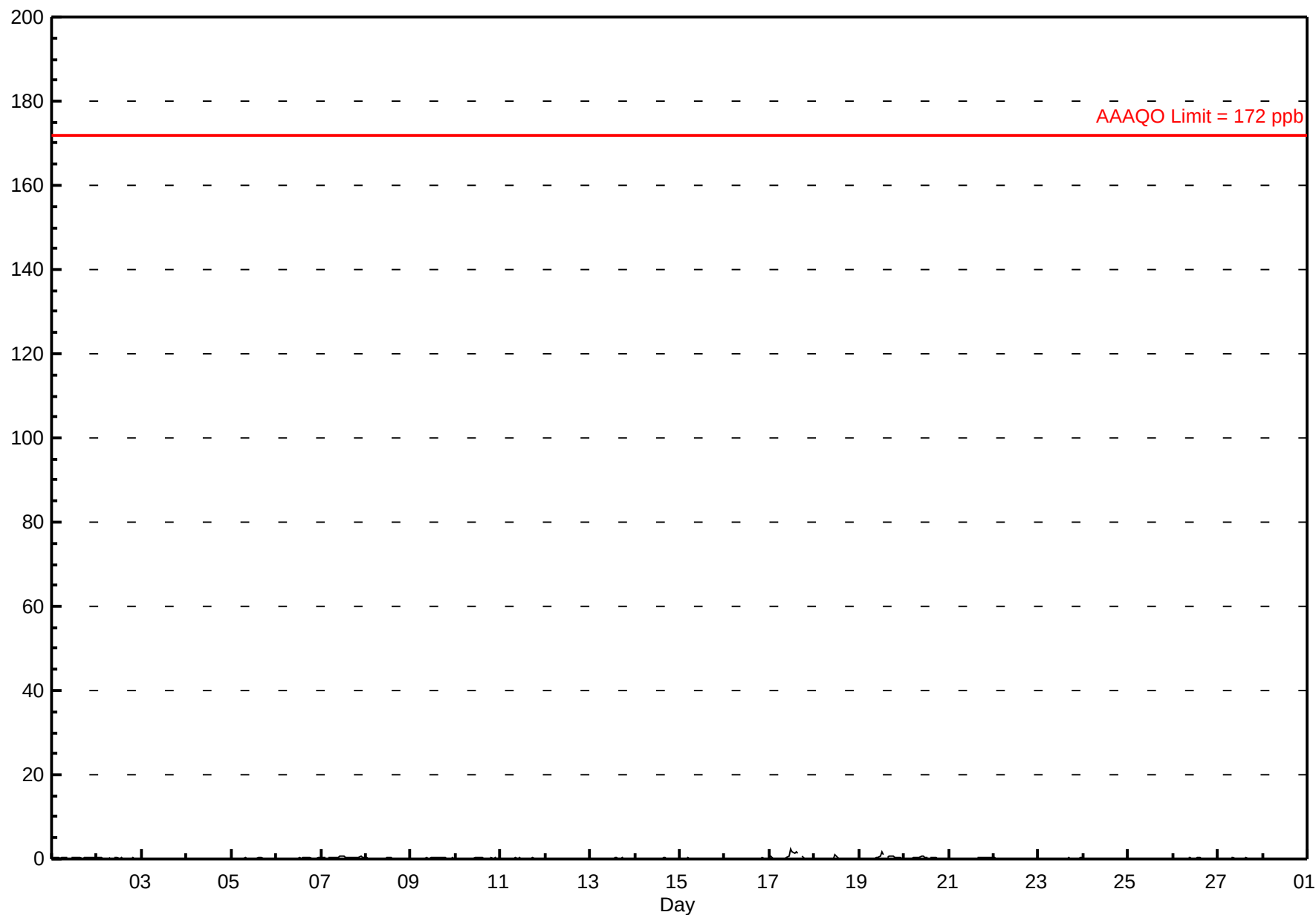
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0		Hours in Service: 672																									
Maximum Value: 2.4 ppb on Feb 17 12:00		Hours of Data: 641																									
Minimum Value: 0 ppb on Feb 4 19:00		Hours of Missing Data: 31																									
Maximum Diurnal Average: 0.3 ppb at hour 12		Hours of Calibration: 31																									
Monthly Average: 0.14 ppb		Percent Operational Time: 100.0																									
Minimum Daily Average: 0.0 ppb on Feb 13																											
Minimum Diurnal Average: 0.1 ppb at hour 4																											
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 = 1.0																											
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-Feb	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-Feb	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-Feb	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-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
5-Feb	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	
6-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
7-Feb	0	0	0	A	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0.4	0.7	
8-Feb	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	
9-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
10-Feb	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-Feb	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-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.2	
14-Feb	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-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.2	
17-Feb	1	0	0	0	0	0	0	0	0	0	1	2	2	1	2	2	A	1	0	0	0	0	0	0	0.5	2.4	
18-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0.1	1.0	
19-Feb	0	0	0	0	0	0	0	0	0	0	0	1	2	1	A	1	1	1	1	0	0	0	0	0	0.4	1.6	
20-Feb	0	0	0	0	0	0	0	0	0	1	1	0	0	A	1	0	0	0	0	0	0	0	0	0	0.2	0.6	
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.2	0.4	
22-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
24-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
25-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
26-Feb	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	
27-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
28-Feb	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	
		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	Diurnal Average		
		0.5	0.5	0.3	0.2	0.3	0.4	0.4	0.3	0.4	0.6	0.7	2.4	1.6	1.3	1.8	1.5	0.6	0.7	0.5	0.5	0.3	0.5	0.5	0.4	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																											

Hourly Averages

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



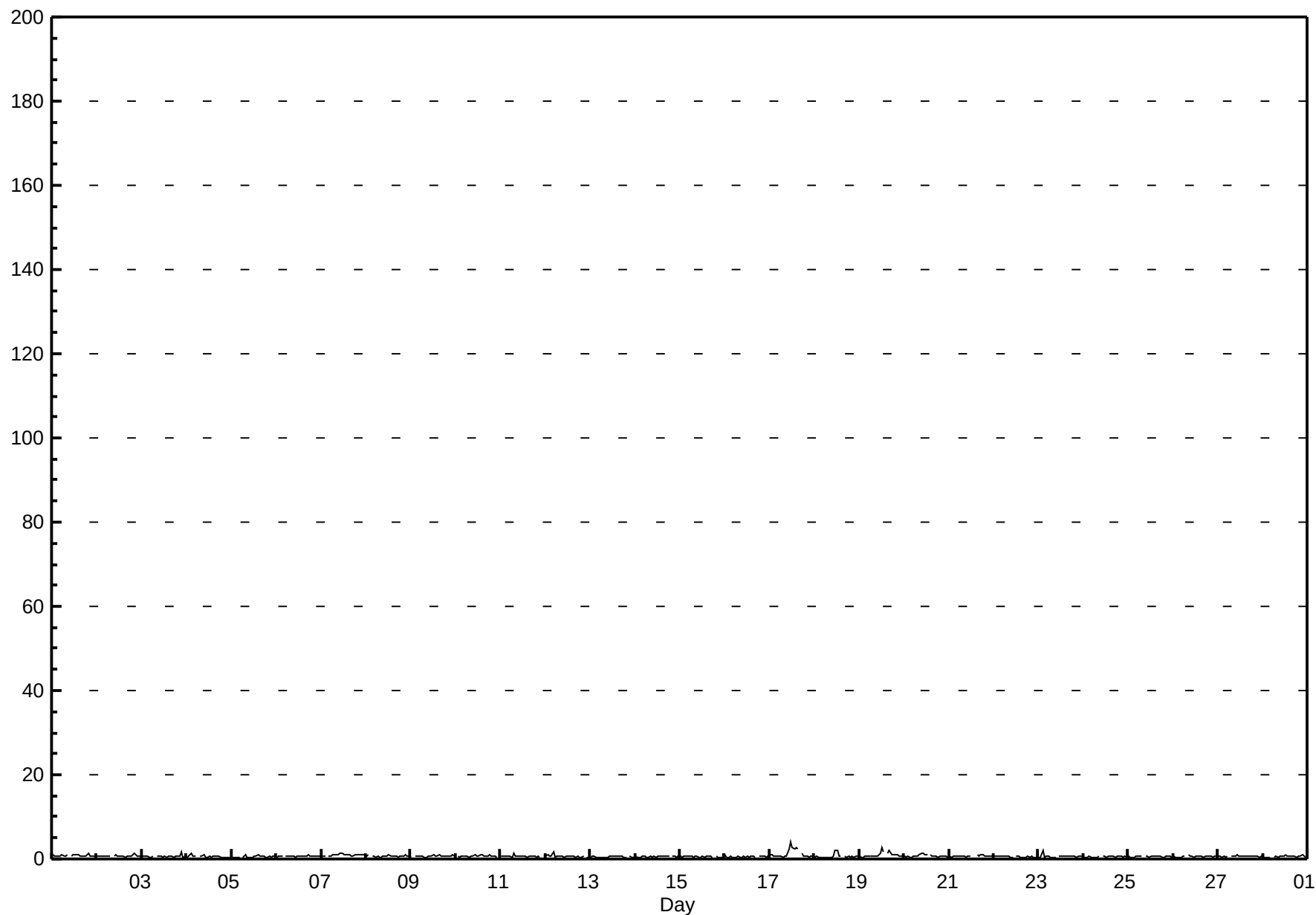
Hourly Maximums

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

Maximum Value: 4.1 ppb on Feb 17 12:00																				Maximum Daily Average: 1.3 ppb on Feb 17					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 5 02:00																				Minimum Daily Average: 0.5 ppb on Feb 13					Hours of Data: 641	
Maximum Diurnal Average: 0.9 ppb at hour 13																				Minimum Diurnal Average: 0.5 ppb at hour 4					Hours of Missing Data: 31	
Monthly Average: 0.65 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 2.3					Hours of Calibration: 31	
																				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-Feb	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	1.3
2-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.2
3-Feb	1	1	1	1	0	1	1	A	1	1	1	0	1	1	1	1	1	0	1	1	1	2	0	1	0.6	1.6
4-Feb	0	1	1	1	1	1	A	1	1	1	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0.6	1.4
5-Feb	0	0	0	0	0	A	0	1	0	0	0	1	1	1	1	1	1	1	0	1	1	0	1	1	0.5	0.9
6-Feb	0	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0
7-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
8-Feb	1	1	A	1	1	0	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.6	1.0
9-Feb	0	A	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
10-Feb	A	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	0.7	1.0
11-Feb	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0	A	1	0.6	1.3
12-Feb	1	1	1	1	2	0	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	A	0	0	0.6	1.7
13-Feb	0	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	A	1	0	0	0.5	0.8
14-Feb	1	0	0	0	1	1	0	0	1	0	1	0	1	1	1	1	1	1	1	A	1	1	0	1	0.5	0.8
15-Feb	1	0	1	1	1	1	1	0	1	1	0	0	1	0	1	1	1	0	A	1	1	0	0	0	0.5	0.8
16-Feb	1	0	0	1	0	0	0	1	0	0	1	0	1	0	1	1	0	A	1	1	1	1	0	1	0.5	1.0
17-Feb	1	1	1	1	1	1	1	0	1	1	2	4	3	2	3	2	A	2	1	1	1	0	1	1	1.3	4.1
18-Feb	0	1	0	0	1	0	0	0	0	0	1	2	2	1	1	A	1	0	1	0	1	0	1	1	0.6	2.0
19-Feb	1	0	0	1	1	1	1	1	1	1	1	3	2	A	1	2	1	1	1	1	1	1	1	1	0.9	2.6
20-Feb	1	0	1	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0.8	1.4
21-Feb	1	0	1	1	1	1	1	1	1	0	1	1	C	C	C	1	1	1	1	1	1	1	1	1	0.7	1.0
22-Feb	1	1	1	1	1	1	1	1	1	0	0	A	1	1	0	0	0	0	1	0	1	0	0	0	0.5	0.7
23-Feb	0	0	2	0	1	1	0	0	0	0	A	1	1	1	1	1	1	1	1	1	0	1	1	1	0.6	2.0
24-Feb	0	0	0	1	0	0	0	0	1	A	1	1	0	1	1	1	1	0	1	1	1	1	1	0	0.5	0.8
25-Feb	1	1	0	0	1	1	1	1	A	1	1	0	1	1	1	1	1	1	0	0	1	1	1	1	0.6	0.7
26-Feb	1	0	0	0	0	1	1	A	1	1	1	0	1	1	1	1	0	1	1	1	1	0	1	1	0.6	0.9
27-Feb	1	1	0	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6	1.0
28-Feb	0	0	0	0	0	A	0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0.6	1.0
0.6 0.6 0.6 0.5 0.6 0.6 0.6 0.6 0.6 0.6 0.7 0.8 0.9 0.8 0.7 0.7 0.7 0.7 0.6 0.7 0.6 0.6 0.6 0.6 0.6																									Diurnal Average	
1.2 1.1 2.0 0.8 1.7 0.9 0.9 1.3 1.2 1.4 2.4 4.1 2.6 2.3 2.8 2.2 2.0 1.5 1.1 1.3 1.2 1.6 0.9 0.9																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

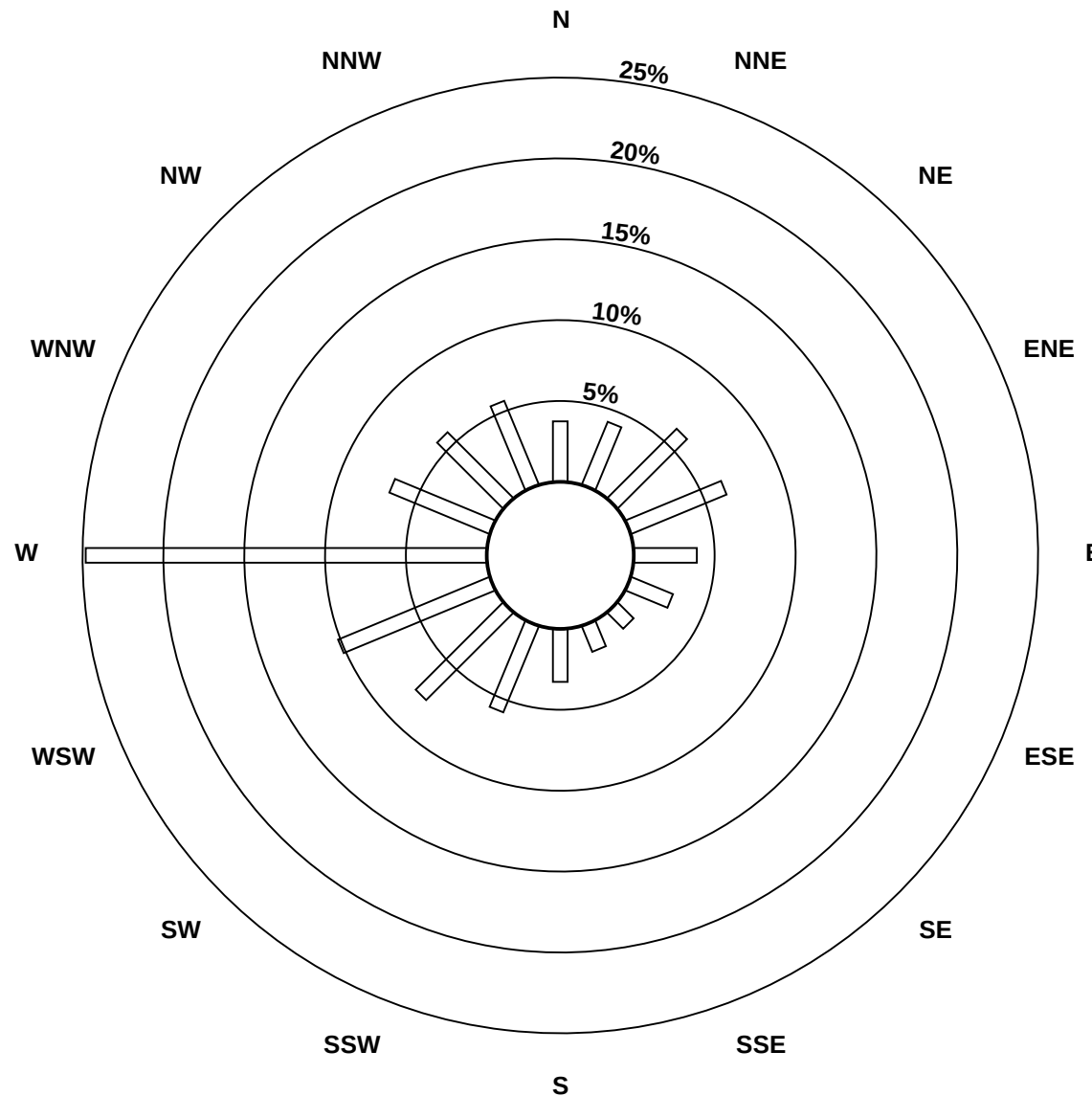
Hourly Maximums

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

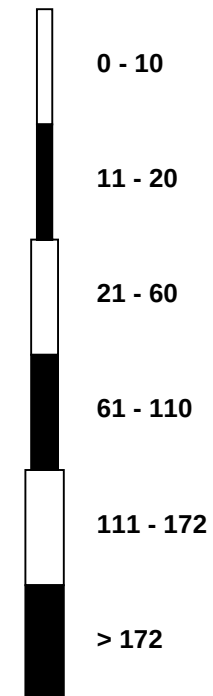


Pollutant Rose

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

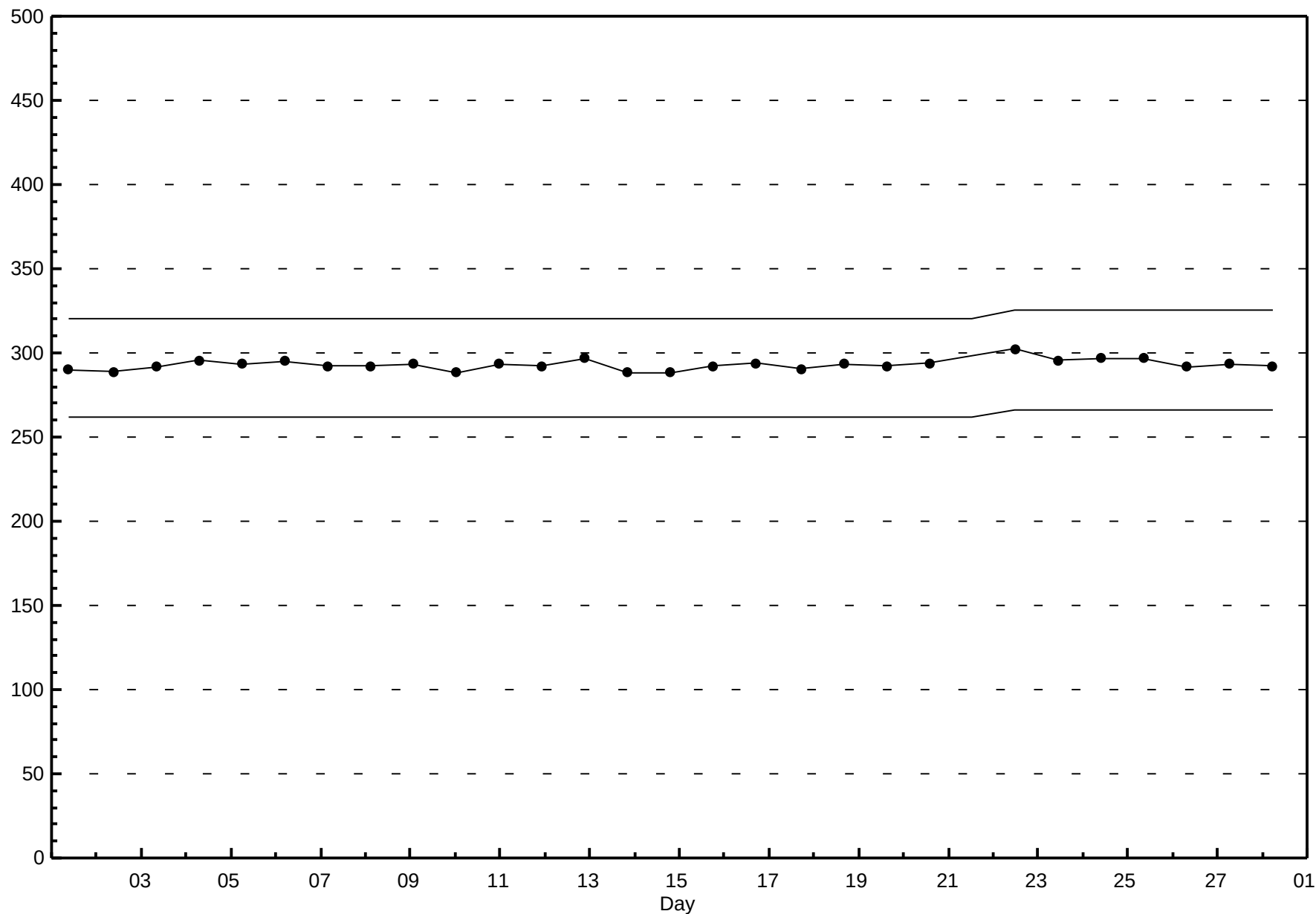


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - February 2013



Hourly Averages

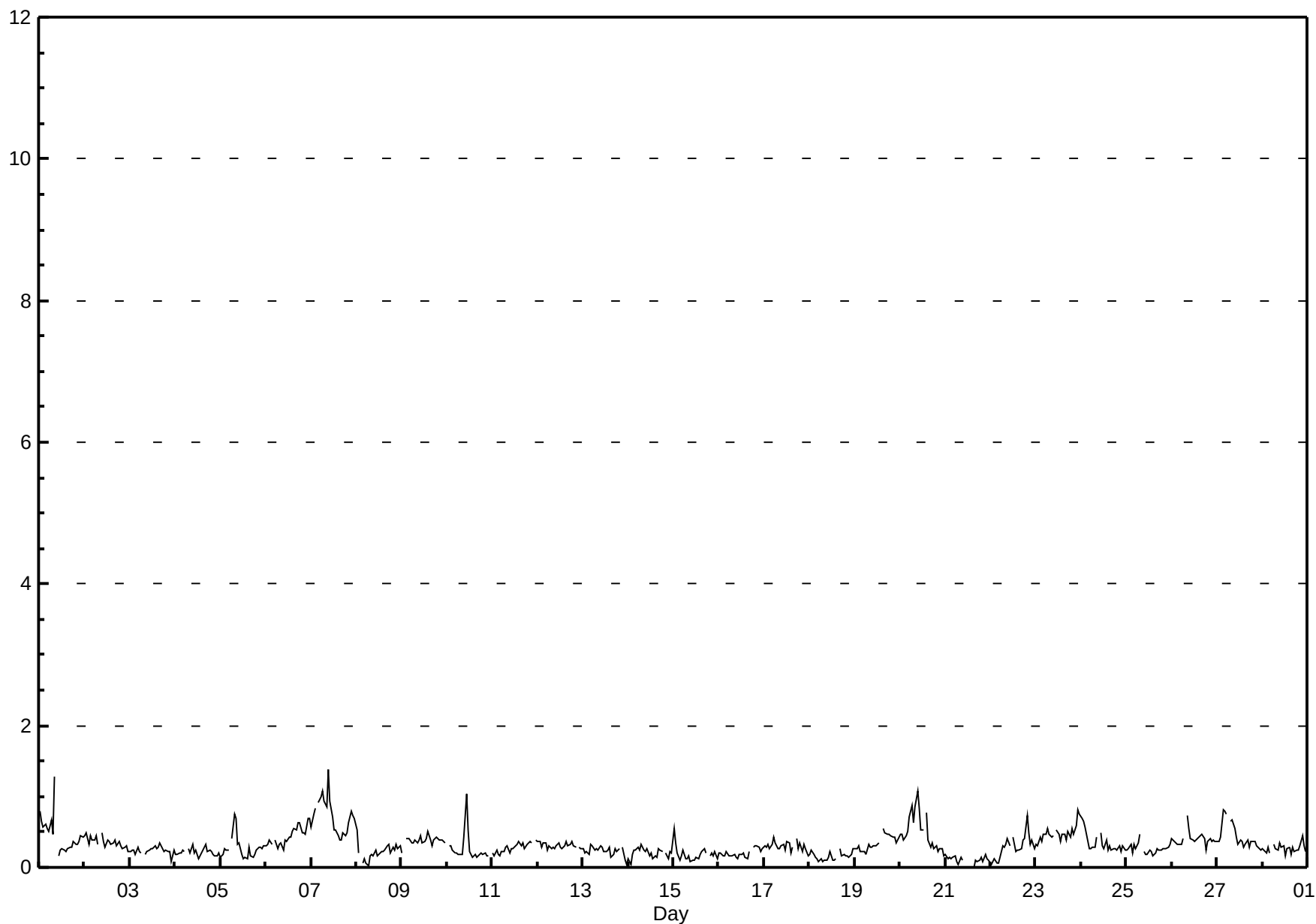
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0										Maximum Value: 1.4 ppb on Feb 7 10:00										Maximum Daily Average: 0.7 ppb on Feb 7										Hours in Service: 672	
Minimum Value: 0 ppb on Feb 21 16:00										Minimum Daily Average: 0.1 ppb on Feb 21										Hours of Data: 639											
Maximum Diurnal Average: 0.4 ppb at hour 9										Minimum Diurnal Average: 0.3 ppb at hour 14										Hours of Missing Data: 33											
Monthly Average: 0.32 ppb										Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 1.0										Hours of Calibration: 33											
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Feb	1	1	1	1	1	1	1	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.3					
2-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5					
3-Feb	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-Feb	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-Feb	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8					
6-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1	1	0.4	0.7					
7-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	0.7	1.4					
8-Feb	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5					
9-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5					
10-Feb	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0.3	1.0					
11-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.4					
12-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.4					
13-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3					
14-Feb	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-Feb	1	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	0.5					
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.3					
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.4					
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3					
19-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0.3	0.6					
20-Feb	0	0	0	0	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0.5	1.1					
21-Feb	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.1	0.2					
22-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0.3	0.7					
23-Feb	0	0	0	0	0	0	1	0	0	0	A	1	0	0	0	0	0	1	0	1	0	1	1	1	0.5	0.8					
24-Feb	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7					
25-Feb	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-Feb	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7					
27-Feb	0	0	0	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8					
28-Feb	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					
Diurnal Average																									0.3	0.8					
Diurnal Maximum																									0.3	0.8					
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 - February 2013



Hourly Maximums

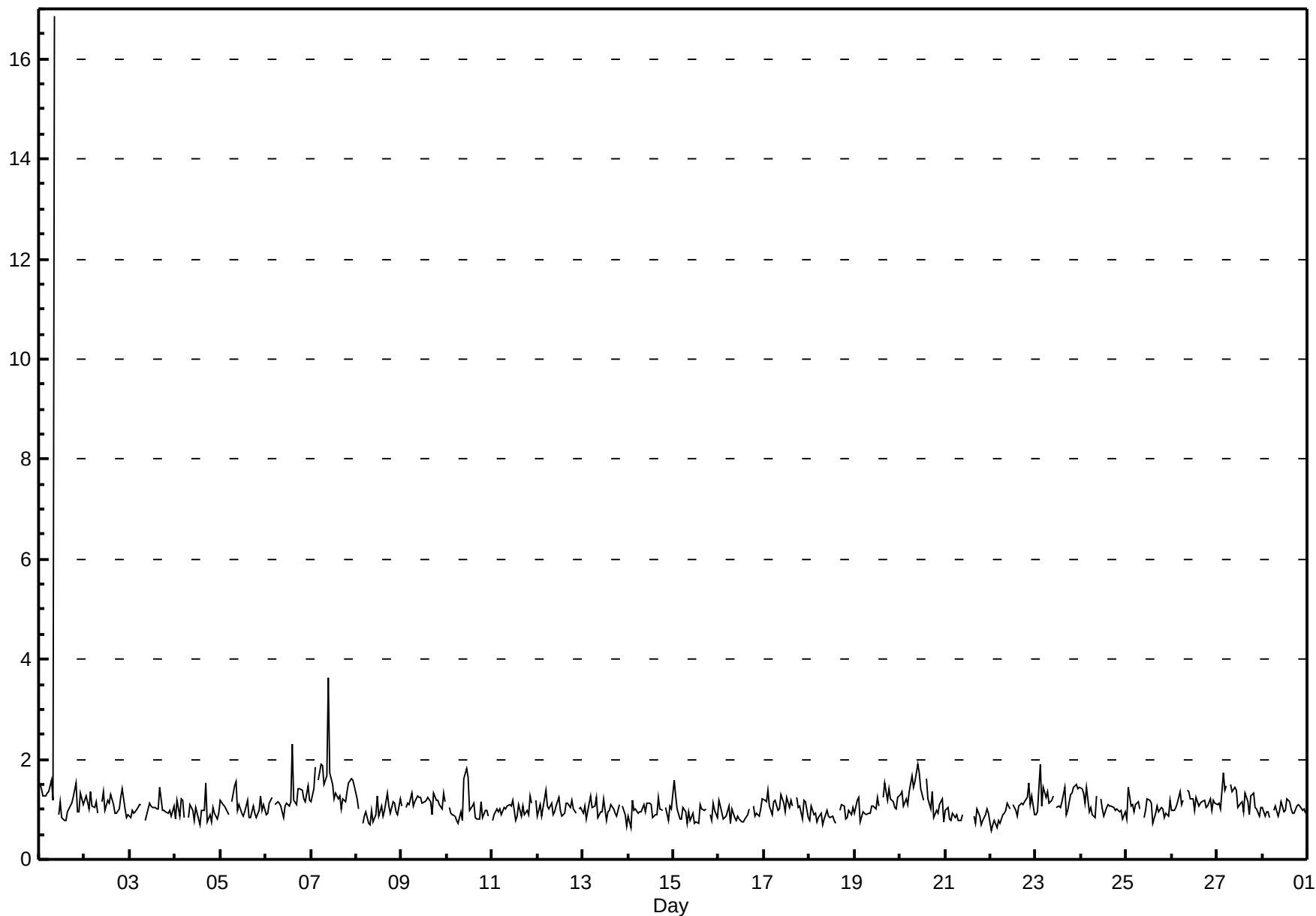
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - February 2013

Maximum Value: 16.9 ppb on Feb 1 09:00																				Maximum Daily Average: 1.8 ppb on Feb 1					Hours in Service: 672	
Minimum Value: 1 ppb on Feb 22 01:00																				Minimum Daily Average: 0.9 ppb on Feb 21					Hours of Data: 639	
Maximum Diurnal Average: 1.7 ppb at hour 9																				Minimum Diurnal Average: 1.0 ppb at hour 13					Hours of Missing Data: 33	
Monthly Average: 1.09 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 0.8 Q ₁ = 0.9 Median = 1.0 Q ₃ = 1.2 P ₉₀ = 1.4 P ₉₉ = 1.9					Hours of Calibration: 33	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	1	1	1	1	1	1	2	1	17	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1.8	16.9
2-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4
3-Feb	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-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1.0	1.5
5-Feb	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5
6-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1.2	2.3
7-Feb	1	1	2	A	2	2	2	2	2	4	2	2	1	1	1	1	1	1	1	1	2	2	2	1	1.6	3.6
8-Feb	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
9-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.3
10-Feb	A	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	1.0	1.8
11-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.3
12-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.4
13-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.3
14-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.0	1.2
15-Feb	2	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	1.6
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.2
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	1.4
18-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.1
19-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1.1	1.5
20-Feb	1	1	1	1	1	1	2	1	2	2	2	1	1	A	2	1	1	1	1	1	1	1	1	1	1.3	1.9
21-Feb	1	1	1	1	1	1	1	1	1	1	C	C	C	C	C	1	1	1	1	1	1	1	1	1	0.9	1.0
22-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	1	1	1	1.0	1.5
23-Feb	1	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1.2	1.9
24-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4
25-Feb	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
26-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4
27-Feb	1	1	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.7
28-Feb	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
1.0 1.1 1.1 1.0 1.1 1.1 1.1 1.0 1.7 1.2 1.1 1.1 1.0 1.0 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.0																								Diurnal Average		
1.6 1.5 1.9 1.7 1.6 1.9 1.9 1.5 16.9 3.6 1.8 1.6 1.2 1.3 2.3 1.4 1.5 1.4 1.4 1.5 1.5 1.6 1.6 1.5																								Diurnal Maximum		
C - Calibration																								A - Automated Daily Zero Span		

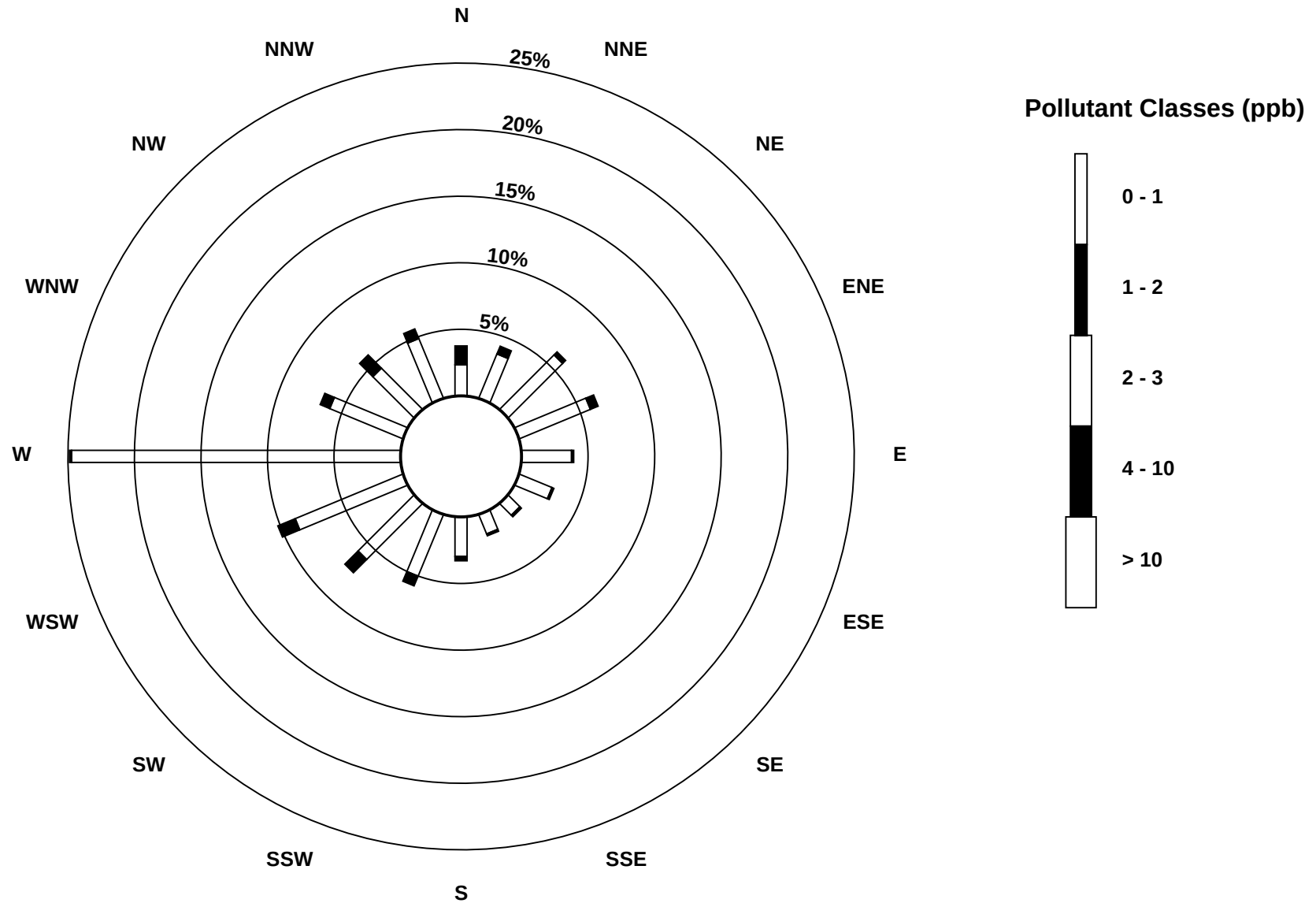
Hourly Maximums

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



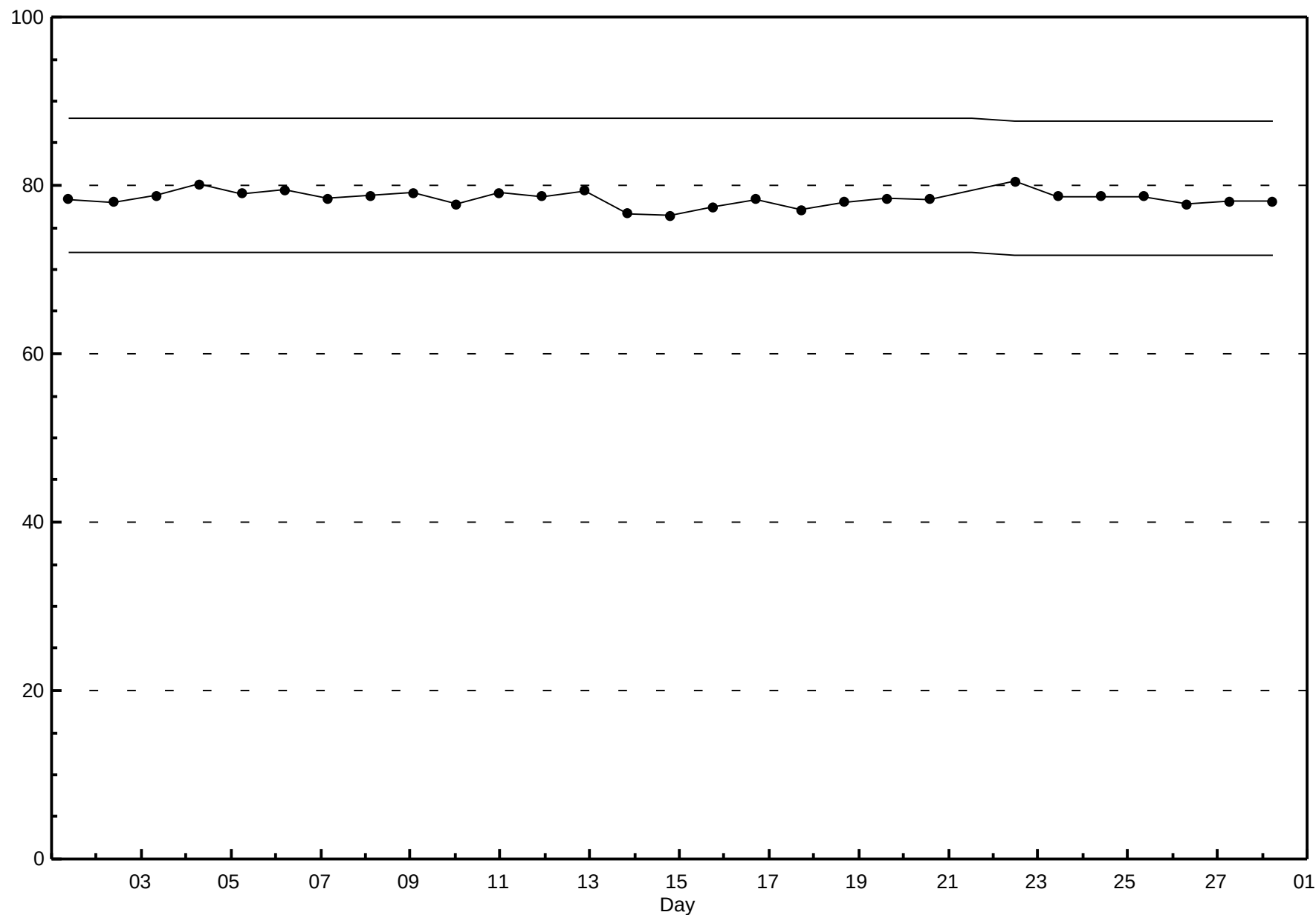
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - February 2013

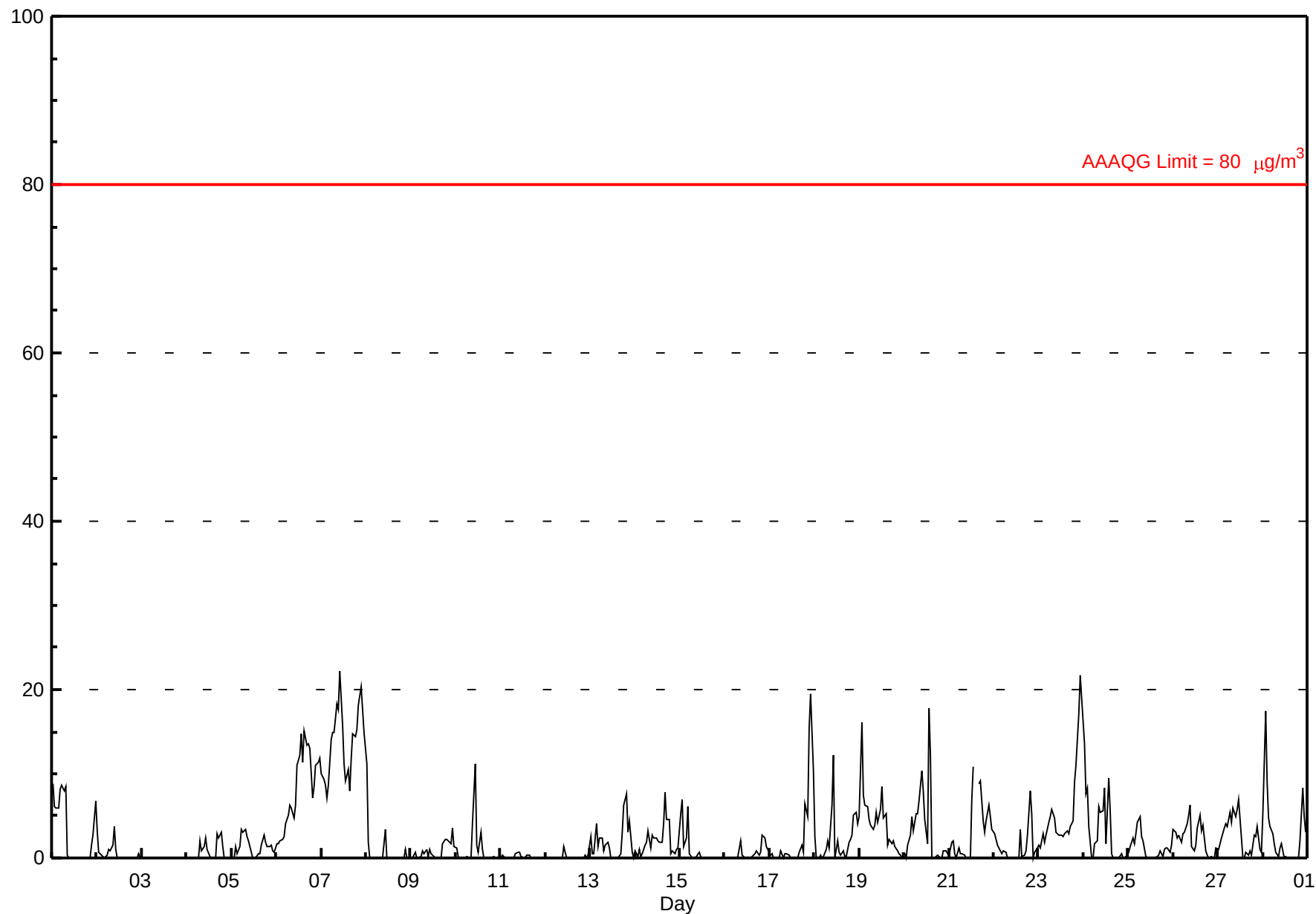


Hourly Averages

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

Evergreen Park - February 2013

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 22.3 µg/m³ on Feb 7 11:00 Maximum Daily Average: 13.6 µg/m³ on Feb 7																								Hours in Service: 672 Hours of Data: 670 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7		
Minimum Value: 0 µg/m³ on Feb 1 10:00 Maximum Diurnal Average: 3.7 µg/m³ at hour 22 Monthly Average: 2.53 µg/m³ Minimum Daily Average: 0.0 µg/m³ on Feb 3 Minimum Diurnal Average: 1.4 µg/m³ at hour 16 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.8 Q ₃ = 3.2 P ₉₀ = 7.9 P ₉₉ = 18.1																										
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-Feb	9	6	6	6	8	9	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	7	3.0	8.8
2-Feb	3	1	0	0	0	0	1	1	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.7
3-Feb	0	0	0	0	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-Feb	0	0	0	0	0	0	0	2	1	1	2	1	0	0	0	0	3	2	3	1	0	0	0	0	0.7	3.1
5-Feb	0	0	1	0	1	3	3	3	3	2	1	0	0	0	0	1	1	3	2	1	1	1	1	1	1.3	3.4
6-Feb	2	2	2	2	2	4	5	6	6	5	6	11	12	15	11	15	13	14	13	7	9	11	11	12	8.2	15.1
7-Feb	10	9	9	7	9	14	15	15	18	18	22	16	11	9	10	8	12	15	14	15	18	20	18	15	13.6	22.3
8-Feb	11	2	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0.7	11.2
9-Feb	0	0	1	0	0	0	1	1	1	0	1	0	0	0	0	0	0	2	2	2	2	2	4	1	0.8	3.5
10-Feb	1	0	0	0	0	0	0	0	0	4	11	1	1	3	1	0	0	0	0	0	0	0	0	0	1.0	11.1
11-Feb	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
12-Feb	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.4
13-Feb	2	0	1	4	1	2	2	1	2	2	1	0	0	0	0	0	1	3	6	8	3	4	1	0	1.9	7.6
14-Feb	1	0	1	0	0	1	2	3	1	3	2	2	2	2	2	4	8	5	4	1	1	1	1	1	2.0	7.8
15-Feb	5	7	1	2	6	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	6.9
16-Feb	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	1	3	2	1	1	0.5	2.7
17-Feb	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2	1	6	5	15	20	10	2.6	19.6
18-Feb	3	0	0	0	0	0	1	2	1	6	12	0	2	1	0	1	0	0	2	2	3	5	6	4	2.1	12.2
19-Feb	5	16	8	6	6	5	4	3	4	5	4	6	8	5	5	1	2	2	2	1	1	0	0	0	4.2	16.1
20-Feb	1	0	2	3	5	3	5	5	7	10	8	5	2	18	12	0	0	0	0	0	0	1	1	0	3.6	17.8
21-Feb	0	2	2	0	0	1	0	0	0	0	0	0	7	11	M	M	9	9	4	3	4	6	5	3	3.1	10.9
22-Feb	3	2	1	1	0	1	1	0	0	0	0	0	0	0	3	0	0	1	3	8	5	0	1	1	1.3	7.9
23-Feb	2	1	3	2	3	4	5	6	5	3	3	3	3	3	3	3	3	4	4	9	11	17	22	19	5.8	21.6
24-Feb	14	8	8	4	0	0	2	2	6	5	6	8	2	9	6	1	0	0	0	0	1	0	0	0	3.4	13.5
25-Feb	1	1	2	2	3	4	5	2	2	0	0	0	0	0	0	0	0	1	0	1	1	1	1	2	1.3	4.9
26-Feb	3	3	2	3	2	3	3	4	5	6	1	1	1	4	5	3	4	1	0	0	0	0	0	1	2.4	6.3
27-Feb	1	2	2	4	4	4	5	4	6	5	6	7	2	0	0	1	0	1	0	3	3	4	1	1	2.7	7.0
28-Feb	5	17	9	5	4	3	2	1	0	1	2	0	0	0	0	0	0	0	0	0	2	8	5	3	2.8	17.4
2.9 2.9 2.2 1.8 2.0 2.3 2.5 2.6 2.6 3.0 3.5 2.2 1.9 2.8 2.2 1.4 2.1 2.3 2.2 2.5 2.6 3.7 3.6 3.0																								Diurnal Average		
13.5 17.4 8.9 7.1 8.6 14.1 14.9 14.9 18.2 17.6 22.3 15.8 12.2 17.8 12.2 15.1 13.4 14.7 14.5 15.3 18.1 20.3 21.6 19.1																								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

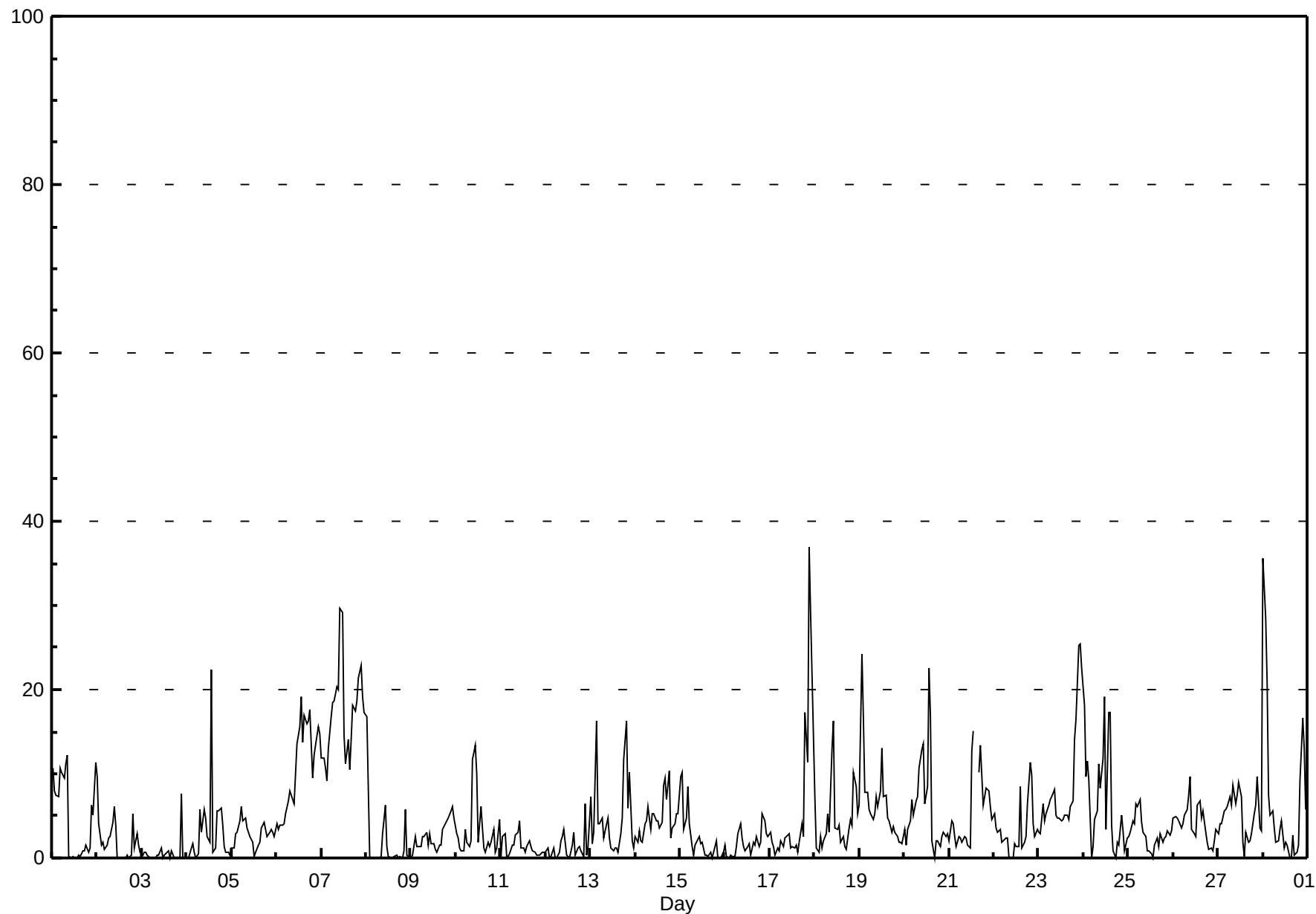
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - February 2013

Maximum Value: 37.0 μg/m ³ on Feb 17 22:00																								Hours in Service: 672		
Maximum Daily Average: 17.0 μg/m ³ on Feb 7																								Hours of Data: 670		
Minimum Value: 0 μg/m ³ on Feb 1 11:00																								Hours of Missing Data: 2		
Maximum Diurnal Average: 7.8 μg/m ³ at hour 22																								Hours of Calibration: 0		
Monthly Average: 4.72 μg/m ³																								Percent Operational Time: 99.7		
Minimum Daily Average: 0.6 μg/m ³ on Feb 3																										
Minimum Diurnal Average: 3.0 μg/m ³ at hour 16																										
Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 1.1 Median = 2.8 Q ₃ = 6.0 P ₉₀ = 11.8 P ₉₉ = 24.8																										
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-Feb	11	8	7	7	11	10	9	11	12	0	0	0	0	0	0	0	1	1	2	1	1	6	5	11	4.8	12.2
2-Feb	10	4	2	2	1	2	2	3	4	6	4	0	0	0	0	0	0	0	0	5	1	3	2	1	2.1	9.6
3-Feb	0	1	1	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0	0	0	8	0	0	0.6	7.6
4-Feb	0	0	1	2	1	0	1	6	3	6	5	3	2	22	1	1	6	6	6	4	1	1	1	0	3.2	22.3
5-Feb	1	1	3	3	4	6	4	5	4	3	3	2	0	1	2	2	4	4	3	3	3	3	3	3	2.9	6.0
6-Feb	4	3	4	4	4	5	7	8	7	7	10	14	16	19	14	17	16	16	18	9	12	13	16	15	10.7	19.2
7-Feb	12	12	11	9	13	17	18	19	20	20	30	29	15	11	14	10	14	18	17	19	21	23	19	17	17.0	29.7
8-Feb	17	8	0	0	0	0	0	0	0	3	6	1	0	0	0	0	0	0	0	0	1	6	0	0	1.8	16.7
9-Feb	0	0	3	1	1	1	3	3	3	2	3	2	2	1	1	2	2	3	4	4	5	6	6	5	2.5	6.0
10-Feb	3	2	1	1	1	3	2	1	2	12	13	10	2	6	4	1	1	2	1	2	3	1	1	5	3.3	13.4
11-Feb	0	3	3	0	0	1	2	2	3	3	4	1	1	1	1	2	1	1	1	0	0	0	1	1	1.3	4.3
12-Feb	1	1	0	0	1	0	0	1	2	3	3	0	0	0	2	3	0	1	1	1	0	6	0	1	1.2	6.5
13-Feb	7	2	3	16	4	4	5	2	3	5	2	1	1	1	1	3	5	12	16	6	10	2	1	1	4.7	16.2
14-Feb	3	2	3	2	2	4	4	6	3	5	5	4	4	4	4	9	9	7	10	2	4	4	5	5	4.7	10.4
15-Feb	10	10	3	5	8	4	1	0	2	2	3	2	2	0	0	0	1	0	1	2	0	0	0	1	2.4	10.1
16-Feb	2	0	0	0	0	0	1	3	4	2	1	1	1	2	0	2	2	3	1	2	5	4	3	3	1.8	5.3
17-Feb	3	2	1	0	1	1	2	1	2	3	3	1	1	1	2	1	2	4	3	17	11	37	29	15	6.0	37.0
18-Feb	7	1	1	3	1	2	3	5	3	13	16	4	3	4	2	3	1	1	4	5	4	10	8	5	4.5	16.3
19-Feb	6	24	17	8	8	6	5	5	5	7	6	8	13	7	7	5	4	3	4	3	3	2	2	2	6.7	24.3
20-Feb	3	2	3	4	7	5	7	7	11	13	14	7	8	23	17	2	0	2	2	1	3	3	3	3	6.2	22.6
21-Feb	2	4	4	3	1	3	2	2	3	2	2	1	13	15	M	M	10	13	6	7	8	8	6	5	5.5	15.1
22-Feb	5	4	3	3	2	2	2	2	0	0	0	2	1	1	8	1	2	3	7	11	10	4	3	3	3.3	11.4
23-Feb	3	3	6	4	5	6	7	7	8	5	5	5	4	5	5	5	6	7	14	16	25	25	23	23	8.6	25.4
24-Feb	18	10	12	9	0	1	5	6	11	8	12	19	3	17	17	4	1	0	2	2	5	3	1	2	7.0	19.2
25-Feb	3	3	4	4	7	6	7	4	3	3	1	1	0	0	2	2	1	3	2	2	3	3	3	3	2.9	7.0
26-Feb	5	5	5	4	4	4	5	6	7	10	3	3	3	6	7	5	6	3	2	1	1	1	2	3	4.2	9.7
27-Feb	3	4	4	6	6	6	7	6	9	7	7	9	7	2	0	3	2	2	3	5	6	10	4	3	5.0	9.7
28-Feb	36	28	21	7	5	6	4	2	2	3	4	1	2	2	0	0	3	0	1	2	9	17	13	6	7.2	35.5
6.2 5.3 4.5 3.9 3.5 3.8 4.1 4.4 5.0 5.4 6.0 4.6 3.8 5.4 4.1 3.0 3.5 3.8 4.2 5.0 5.1 7.8 5.8 5.0																								Diurnal Average		
35.5 28.4 20.9 16.2 13.1 16.7 18.4 18.7 20.4 19.9 29.7 29.2 15.5 22.6 17.2 17.0 16.0 18.2 17.7 18.7 21.4 37.0 29.2 22.6																								Diurnal Maximum		
M - Maintenance																										

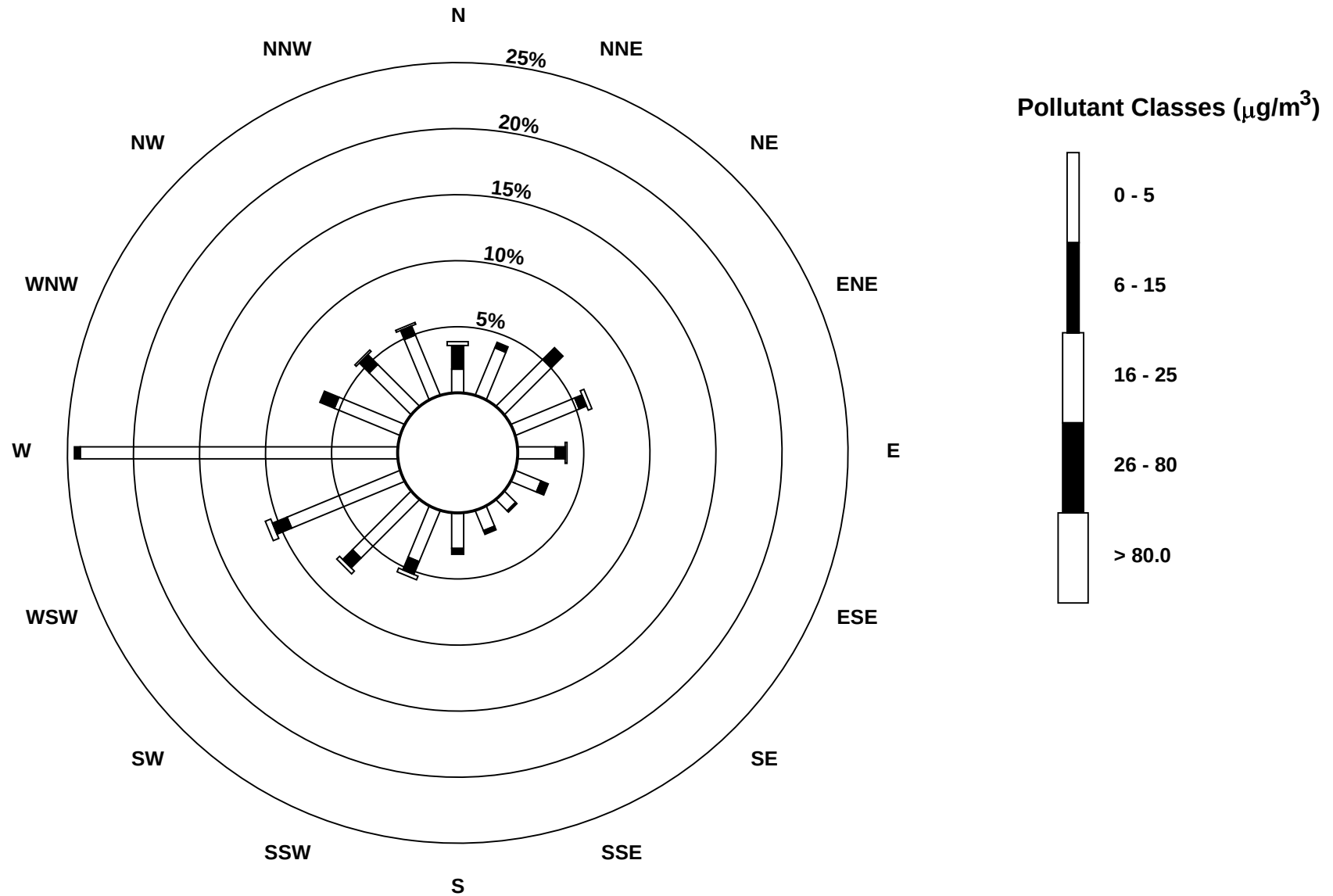
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - February 2013



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - February 2013



Hourly Averages

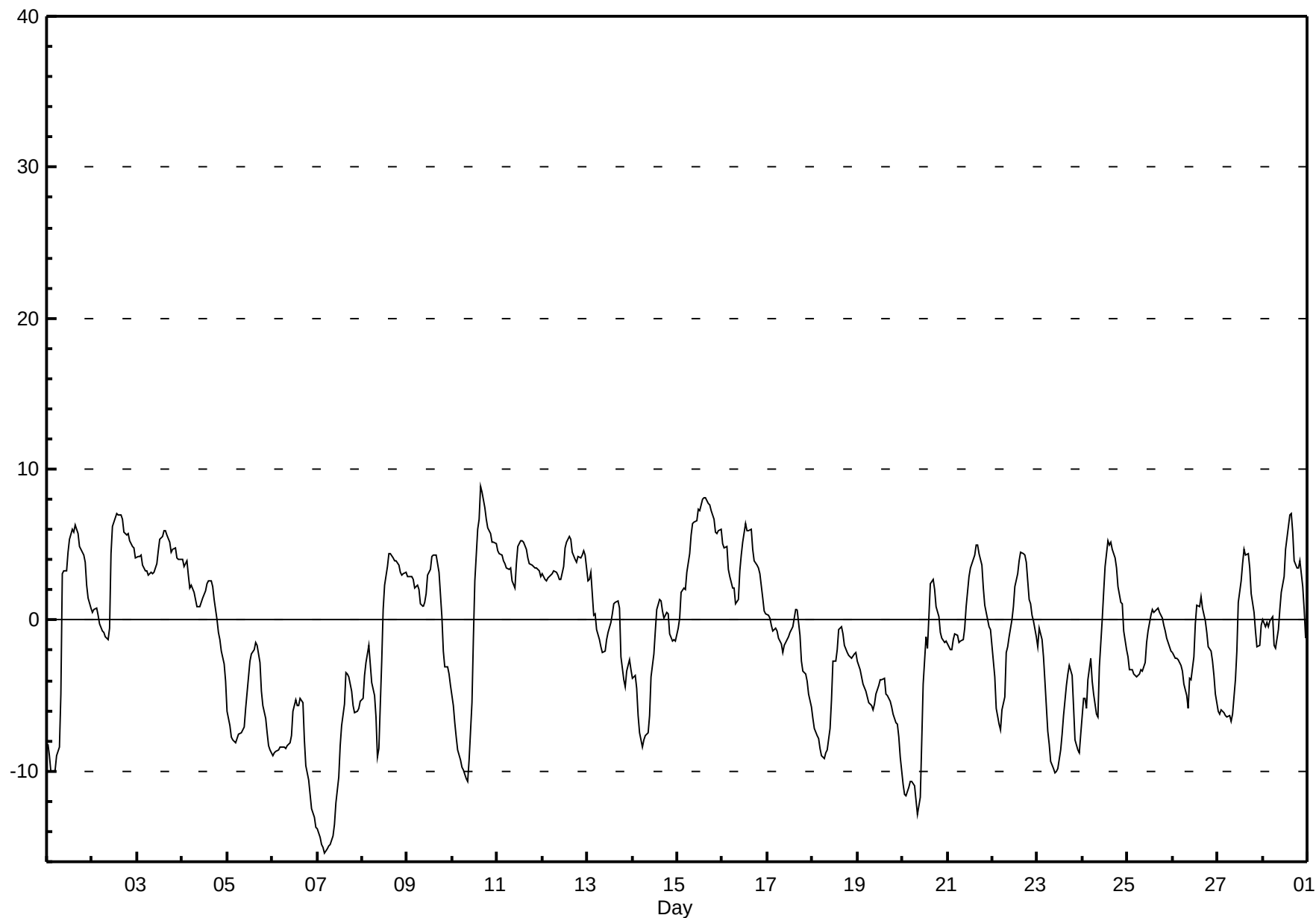
External Temperature (ET) - °C

Evergreen Park - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8.9 °C on Feb 10 16:00 Maximum Daily Average: 5.4 °C on Feb 15																								Hours in Service: 672 Hours of Data: 672 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: -15 °C on Feb 7 05:00 Maximum Diurnal Average: 2.8 °C at hour 16 Monthly Average: -1.02 °C												Minimum Daily Average: -9.8 °C on Feb 7 Minimum Diurnal Average: -3.9 °C at hour 8 Percentiles: P ₁ = -14.6 P ₁₀ = -8.3 Q ₁ = -4.7 Median = -0.6 Q ₃ = 3.3 P ₉₀ = 5.1 P ₉₉ = 7.6														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Feb	-8	-9	-10	-10	-10	-9	-8	-5	3	3	3	5	5	6	6	6	6	5	5	4	4	2	2	1	-0.2	6.3
2-Feb	1	1	1	0	0	-1	-1	-1	-1	-1	4	6	7	7	7	7	6	6	6	5	5	5	5	4	3.3	7.0
3-Feb	4	4	4	4	3	3	3	3	3	3	4	5	5	6	6	6	6	5	4	5	5	4	4	4	4.3	5.9
4-Feb	4	4	4	3	2	2	2	1	1	1	1	1	2	2	3	3	2	1	0	-1	-1	-2	-3	-4	1.2	4.0
5-Feb	-6	-7	-8	-8	-8	-8	-8	-7	-7	-7	-6	-4	-3	-2	-2	-1	-2	-3	-5	-6	-7	-7	-8	-9	-5.7	-1.5
6-Feb	-9	-9	-9	-9	-8	-8	-8	-8	-8	-8	-8	-6	-5	-6	-6	-5	-5	-8	-10	-11	-12	-12	-13	-14	-8.5	-5.2
7-Feb	-14	-14	-15	-15	-15	-15	-15	-15	-14	-14	-12	-10	-8	-7	-6	-4	-4	-4	-5	-6	-6	-6	-6	-5	-9.8	-3.5
8-Feb	-5	-4	-3	-2	-3	-4	-5	-6	-9	-8	-3	1	2	4	4	4	4	4	4	4	3	3	3	3	-0.4	4.4
9-Feb	3	3	3	3	2	2	2	1	1	1	2	3	3	4	4	4	4	3	0	-2	-3	-3	-4	-4	1.4	4.3
10-Feb	-6	-7	-8	-9	-9	-10	-10	-10	-11	-9	-5	-1	3	6	7	9	8	7	7	6	6	5	5	5	-0.9	8.9
11-Feb	5	4	4	4	4	3	3	3	3	2	4	5	5	5	5	4	4	4	4	4	3	3	3	3	3.9	5.3
12-Feb	3	3	3	3	3	3	3	3	3	3	3	4	5	5	6	5	4	4	4	4	4	4	5	4	3.8	5.5
13-Feb	3	3	3	0	0	-1	-1	-2	-2	-2	-1	-1	0	0	1	1	1	1	-2	-4	-4	-3	-3	-3	-0.7	3.2
14-Feb	-4	-4	-4	-6	-8	-8	-8	-8	-7	-6	-4	-2	-1	1	1	1	1	0	1	0	-1	-1	-1	-1	-2.9	1.4
15-Feb	0	0	2	2	2	3	4	6	6	6	7	7	7	8	8	8	8	8	7	7	6	6	6	6	5.4	8.1
16-Feb	5	5	5	3	3	2	2	1	1	3	4	5	6	6	6	6	5	4	4	3	3	1	1	0	3.6	6.4
17-Feb	0	0	0	-1	-1	-1	-1	-2	-2	-2	-1	-1	-1	0	0	1	1	-1	-3	-3	-4	-4	-5	-6	-1.5	0.8
18-Feb	-6	-7	-8	-8	-9	-9	-9	-9	-9	-7	-5	-3	-3	-2	-1	0	-1	-2	-2	-2	-2	-2	-2	-2	-4.6	-0.5
19-Feb	-3	-3	-4	-4	-5	-5	-5	-6	-6	-6	-5	-4	-4	-4	-4	-5	-5	-5	-6	-6	-7	-7	-8	-9	-5.2	-2.7
20-Feb	-11	-12	-12	-11	-11	-11	-11	-12	-13	-12	-8	-4	-1	-2	0	2	3	2	1	0	-1	-1	-2	-1	-5.2	2.7
21-Feb	-2	-2	-2	-1	-1	-1	-1	-1	-1	-1	1	3	3	4	4	5	5	4	4	2	1	0	0	-1	0.9	5.0
22-Feb	-3	-4	-6	-7	-7	-6	-5	-2	-2	-1	0	1	2	3	4	5	4	4	4	1	1	0	0	-1	-0.6	4.5
23-Feb	-2	-1	-1	-2	-4	-7	-8	-9	-10	-10	-10	-9	-8	-6	-4	-4	-3	-4	-6	-8	-9	-9	-8	-8	-6.3	-0.6
24-Feb	-5	-5	-6	-4	-2	-4	-5	-6	-6	-3	0	2	4	5	5	5	5	4	3	2	1	1	-1	-2	-0.5	5.3
25-Feb	-2	-3	-3	-4	-4	-4	-4	-3	-3	-3	-1	-1	0	1	1	1	1	1	0	0	-1	-1	-2	-2	-1.6	0.8
26-Feb	-2	-3	-3	-3	-3	-3	-4	-5	-6	-4	-4	-2	0	1	1	2	1	0	-1	-2	-2	-3	-4	-5	-2.2	1.5
27-Feb	-6	-6	-6	-6	-6	-6	-6	-7	-6	-4	-2	1	3	4	5	4	4	3	2	0	-1	-2	-2	0	-1.7	4.7
28-Feb	0	0	0	0	0	0	-2	-2	-1	1	2	3	5	5	7	7	6	4	3	3	4	2	1	-1	2.0	7.1
-2.4 -2.6 -2.8 -3.1 -3.4 -3.6 -3.8 -3.9 -3.7 -3.0 -1.5 0.1 1.2 1.9 2.4 2.8 2.5 1.8 0.9 0.1 -0.4 -1.0 -1.3 -1.7																								Diurnal Average		
5.1 4.8 4.8 4.0 3.7 3.4 4.4 5.6 6.4 6.5 6.6 7.4 7.2 8.0 8.1 8.9 8.5 7.6 7.3 6.7 5.9 5.8 5.9 6.0																								Diurnal Maximum		

Hourly Averages

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



Hourly Averages

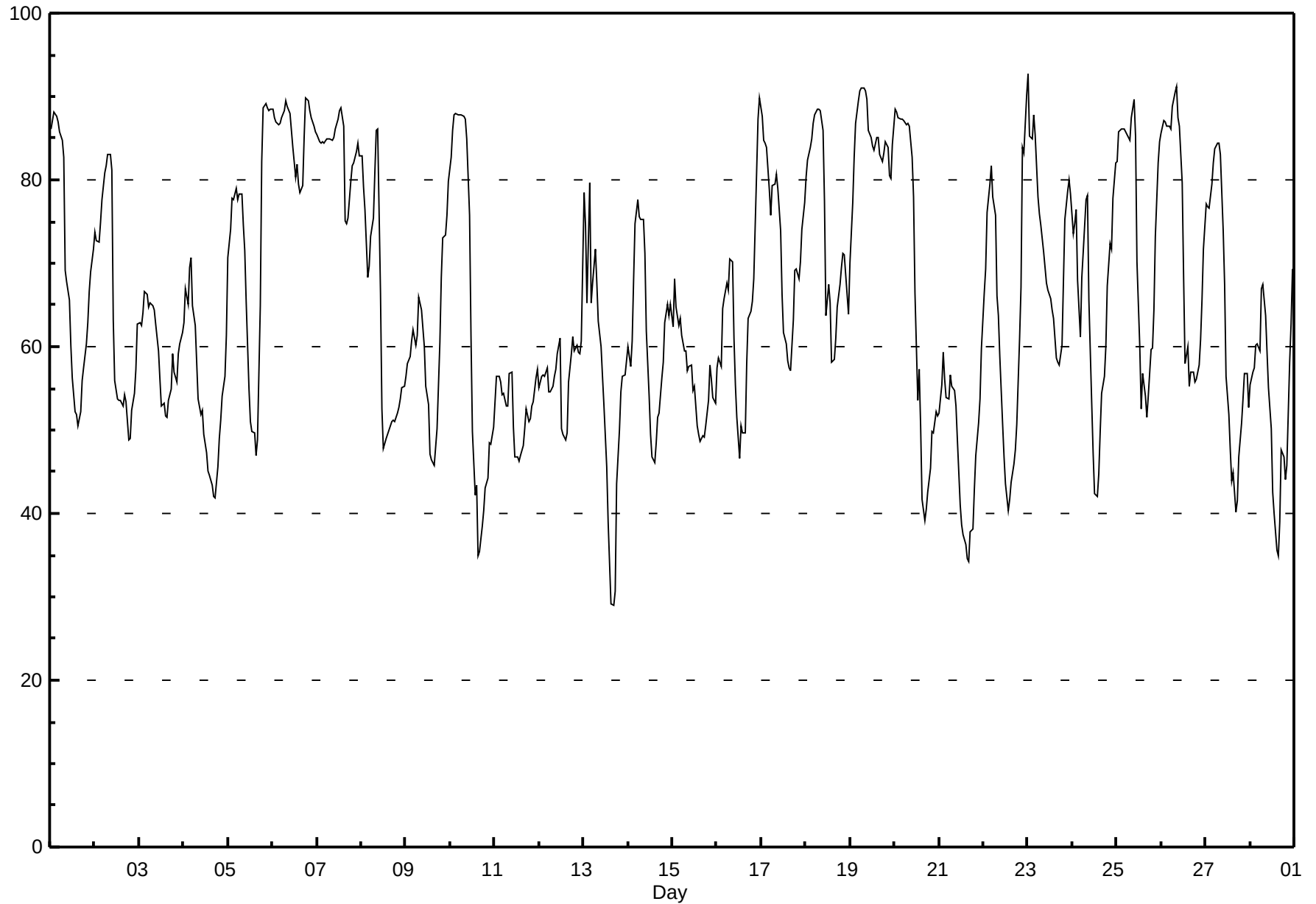
Relative Humidity (RH) - %

Evergreen Park - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 92.7 % on Feb 23 01:00 Maximum Daily Average: 85.8 % on Feb 6																								Hours in Service: 672 Hours of Data: 672 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 29 % on Feb 13 17:00 Maximum Diurnal Average: 75.1 % at hour 8 Monthly Average: 65.37 %												Minimum Daily Average: 48.0 % on Feb 21 Minimum Diurnal Average: 50.8 % at hour 16 Percentiles: P ₁ = 34.6 P ₁₀ = 47.0 Q ₁ = 53.6 Median = 63.1 Q ₃ = 79.5 P ₉₀ = 86.6 P ₉₉ = 90.4														
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-Feb	86	87	88	88	87	86	85	83	69	68	66	60	56	52	52	50	52	56	57	60	63	67	69	72	69.1	88.1
2-Feb	74	73	73	75	78	81	82	83	83	81	63	56	54	54	54	53	54	53	49	49	52	54	57	63	64.4	83.1
3-Feb	63	63	64	67	66	65	65	65	64	63	60	56	53	53	52	52	54	55	59	57	56	59	60	62	59.6	66.6
4-Feb	63	67	65	70	71	65	62	58	54	52	52	50	47	45	45	43	42	42	46	49	51	54	56	61	54.6	70.7
5-Feb	71	74	78	78	79	78	78	78	75	71	65	55	51	50	50	47	49	65	82	89	89	89	88	88	71.5	89.2
6-Feb	89	87	87	87	87	87	88	89	89	88	86	84	80	82	80	78	79	85	90	89	88	87	87	86	85.8	89.8
7-Feb	85	85	84	84	84	85	85	85	85	85	86	87	88	89	86	75	75	75	80	82	82	83	84	83	83.5	88.7
8-Feb	83	79	77	68	70	73	75	81	86	86	66	53	48	49	50	50	51	51	51	52	53	54	55	55	63.2	86.1
9-Feb	56	58	59	61	62	60	61	66	64	62	60	55	53	47	46	46	48	50	61	68	73	73	76	80	60.3	79.9
10-Feb	83	86	88	88	88	88	88	88	87	85	76	61	50	42	43	35	35	39	40	43	44	49	48	50	63.5	87.9
11-Feb	53	56	56	56	54	54	53	53	57	57	50	47	47	46	47	48	50	53	51	51	53	53	56	57	52.5	57.2
12-Feb	55	56	57	56	58	55	55	55	56	57	59	61	50	50	49	50	56	59	61	59	60	59	59	61	56.4	61.2
13-Feb	78	75	65	80	65	68	72	68	63	60	57	53	46	39	34	29	29	31	44	50	55	56	57	58	55.4	79.6
14-Feb	60	58	61	68	75	78	76	75	75	71	62	54	50	47	46	49	51	52	56	58	63	65	64	65	61.6	77.6
15-Feb	62	68	65	63	63	61	60	60	57	58	58	55	55	51	50	49	49	49	50	54	58	56	54	53	56.5	68.1
16-Feb	57	59	58	65	66	68	67	70	70	61	55	51	47	51	50	50	58	63	64	65	68	81	87	90	63.4	89.9
17-Feb	88	85	84	84	79	76	79	80	81	79	74	66	62	60	58	57	57	63	69	69	68	70	74	77	72.5	87.6
18-Feb	80	82	84	85	87	88	88	88	88	86	78	64	67	65	58	58	61	65	67	69	71	71	66	64	74.3	88.4
19-Feb	70	77	83	87	90	91	91	91	91	90	86	85	84	83	85	85	83	82	83	85	84	80	80	84	84.6	91.1
20-Feb	88	88	87	87	87	87	87	87	86	83	78	66	54	57	51	42	39	41	43	45	50	50	52	52	66.1	88.4
21-Feb	52	55	59	56	54	54	57	55	55	53	49	41	39	37	36	35	34	38	38	43	47	51	54	60	48.0	59.9
22-Feb	66	69	76	79	82	78	76	66	64	59	51	47	44	40	42	44	46	48	51	61	67	84	83	90	63.0	90.1
23-Feb	93	85	85	88	85	78	76	75	71	70	68	67	66	64	63	59	58	58	60	68	75	79	80	78	72.8	92.7
24-Feb	74	75	76	68	61	68	71	78	78	66	53	47	42	42	45	50	54	56	60	67	72	72	78	82	64.0	82.0
25-Feb	82	86	86	86	86	86	85	85	87	90	85	70	60	53	57	54	52	54	60	60	64	73	82	85	73.6	89.7
26-Feb	86	87	87	86	86	86	89	90	91	87	86	80	68	58	60	55	57	57	56	56	58	61	66	72	73.6	91.2
27-Feb	77	77	77	80	82	84	84	84	83	74	67	56	52	48	44	45	40	42	47	51	54	57	57	53	63.0	84.4
28-Feb	55	57	57	60	60	60	67	67	64	59	55	50	43	40	36	35	39	48	47	44	46	58	63	69	53.3	69.3
72.5 73.4 73.8 74.9 74.7 74.5 75.1 75.1 74.1 71.4 66.1 59.9 55.5 53.4 52.4 50.8 51.9 54.6 57.9 60.5 63.0 65.9 67.6 69.7																								Diurnal Average		
92.7 88.1 88.1 87.9 89.5 90.7 91.1 91.0 91.2 89.7 86.4 87.4 88.3 88.7 86.4 85.1 83.1 85.1 89.8 89.5 89.2 88.6 88.3 90.1																								Diurnal Maximum		

Hourly Averages

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



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	3	1	3	3	3	0	1	3	27	29	28	32	31	35	34	36	30	21	21	21	21	9	3	3	15.2	36.4
Dir	77	99	69	41	6	315	107	289	255	255	261	263	261	261	261	263	266	268	267	269	267	338	324	267	265.5	263.4
2 Spd	6	3	4	1	0	1	2	0	2	3	20	34	37	36	28	26	8	6	9	19	19	16	16	12	12.3	36.7
Dir	218	259	201	117	206	14	67	60	205	282	261	264	264	261	261	253	262	266	264	245	252	256	265	272	258.4	264.4
3 Spd	20	17	21	24	26	28	21	26	32	28	30	24	26	21	22	17	15	24	23	27	35	25	27	23	24.0	34.8
Dir	265	270	265	260	262	260	254	254	256	251	253	261	267	269	263	261	264	264	258	247	252	243	244	245	257.1	252.3
4 Spd	22	22	29	26	25	34	30	31	26	32	34	39	39	34	29	25	24	22	19	21	22	14	7	2	25.0	39.3
Dir	252	256	251	257	267	262	259	264	273	266	269	266	267	275	265	269	267	261	257	259	262	267	244	84	263.5	266.5
5 Spd	3	1	3	1	6	2	3	6	5	4	4	8	11	11	9	6	8	9	9	8	9	9	7	1	5.6	11.3
Dir	47	58	45	222	48	328	12	35	27	24	31	51	60	58	58	86	93	58	51	61	64	55	85	104	56.2	60.0
6 Spd	4	6	8	4	3	4	4	4	2	2	4	4	5	7	7	7	6	5	7	3	5	4	3	4	3.7	7.6
Dir	53	51	75	82	50	46	57	40	79	84	352	322	5	8	356	1	16	22	351	338	342	316	294	350	17.7	75.2
7 Spd	2	2	4	4	4	3	2	2	1	2	3	5	2	2	2	3	2	2	0	3	3	4	2	1	1.6	4.6
Dir	281	321	325	297	298	297	297	4	311	332	252	255	257	242	279	254	7	34	41	55	357	216	237	237	293.2	255.0
8 Spd	4	11	15	20	10	3	2	2	2	2	5	10	11	32	36	37	36	49	47	33	31	35	39	39	20.4	49.3
Dir	235	253	245	247	258	281	327	68	63	55	204	224	261	266	268	269	268	264	258	248	248	263	262	259	259.3	263.5
9 Spd	23	32	31	18	17	17	17	11	15	17	15	18	18	20	18	21	17	2	4	1	3	1	0	2	12.7	31.8
Dir	268	269	270	285	288	310	303	278	276	279	272	286	291	321	312	329	335	292	221	201	216	204	332	190	289.0	269.3
10 Spd	1	1	0	1	1	1	1	2	2	2	1	7	10	14	24	35	33	20	28	37	42	33	41	38	14.5	41.6
Dir	246	179	116	33	53	14	175	45	40	359	2	218	217	261	271	268	268	275	261	266	266	259	246	254	261.4	266.4
11 Spd	35	33	28	31	31	28	31	32	21	14	23	37	35	36	32	38	37	28	39	38	38	40	38	34	32.2	39.9
Dir	253	262	267	266	266	264	269	272	269	268	266	280	278	276	279	279	272	267	265	261	261	263	265	266	268.1	262.8
12 Spd	36	32	31	30	23	28	31	25	9	6	11	2	16	15	13	29	19	13	4	15	16	30	44	38	21.2	44.4
Dir	269	264	262	260	259	253	262	260	273	199	239	253	236	259	272	265	281	270	273	250	250	260	262	264	260.8	262.3
13 Spd	31	27	34	39	39	35	26	23	19	15	14	17	21	25	17	20	12	4	3	2	5	8	11	9	17.4	39.2
Dir	278	258	269	299	312	314	300	303	279	284	285	288	283	278	296	323	323	344	203	203	50	262	259	238	290.3	311.5
14 Spd	8	10	6	5	1	3	3	2	0	2	2	7	8	5	9	6	5	2	9	6	2	2	3	2	2.6	10.1
Dir	234	243	279	349	278	30	30	51	114	357	232	292	288	299	291	331	17	50	260	237	116	200	178	155	282.8	242.8
15 Spd	8	16	12	10	6	17	13	26	36	31	26	32	30	32	31	23	32	25	25	22	32	28	31	34	23.0	35.6
Dir	187	211	241	215	244	241	233	253	262	266	270	267	267	264	266	274	258	252	266	287	272	269	263	273	260.7	261.6
16 Spd	12	16	12	7	10	10	10	7	9	15	21	31	31	18	22	22	18	9	13	12	12	15	11	6	11.7	31.3
Dir	303	279	286	259	261	243	248	202	244	245	256	258	270	284	287	316	331	327	276	279	341	30	342	319	283.7	269.9
17 Spd	11	10	15	15	18	22	17	13	9	7	14	15	15	11	9	4	4	7	7	8	6	5	6	5	7.2	21.7
Dir	286	280	299	313	319	329	312	278	321	297	327	325	334	337	317	344	23	71	78	98	97	83	72	76	327.0	329.0
18 Spd	5	4	3	1	1	2	3	2	4	5	6	4	11	10	9	8	7	8	8	6	3	3	4	4	4.2	11.0
Dir	33	42	52	74	32	44	61	80	67	97	105	97	355	1	37	14	19	34	39	46	48	67	106	111	44.3	354.7
19 Spd	6	6	5	7	7	5	5	5	5	4	7	6	9	16	12	20	18	13	10	10	7	8	5	1	6.3	20.3
Dir	110	87	52	50	54	52	44	43	46	12	349	5	336	333	351	337	336	334	320	316	314	309	331	241	352.4	337.4
20 Spd	2	3	1	3	3	5	4	3	5	3	6	9	10	8	4	20	24	16	15	9	4	8	12	9	5.2	24.5
Dir	210	63	27	53	17	327	322	317	330	245	226	216	221	351	317	222	224	220	228	217	180	193	207	194	228.8	224.2
21 Spd	3	3	6	9	6	10	5	12	14	16	17	21	23	22	17	16	11	10	16	16	13	7	8	10	11.9	23.4
Dir	151	193	211	216	219	231	221	213	210	208	217	219	219	220	206	205	186	226	231	232	219	221	224	227	216.2	218.9
22 Spd	4	3	3	1	1	2	3	9	9	9	12	13	11	11	9	12	10	7	6	6	27	27	9	9	6.4	26.6
Dir	189	78	61	74	101	81	121	172	170	162	165	164	182	178	186	173	169	165	175	211	269	249	202	225	193.5	249.4

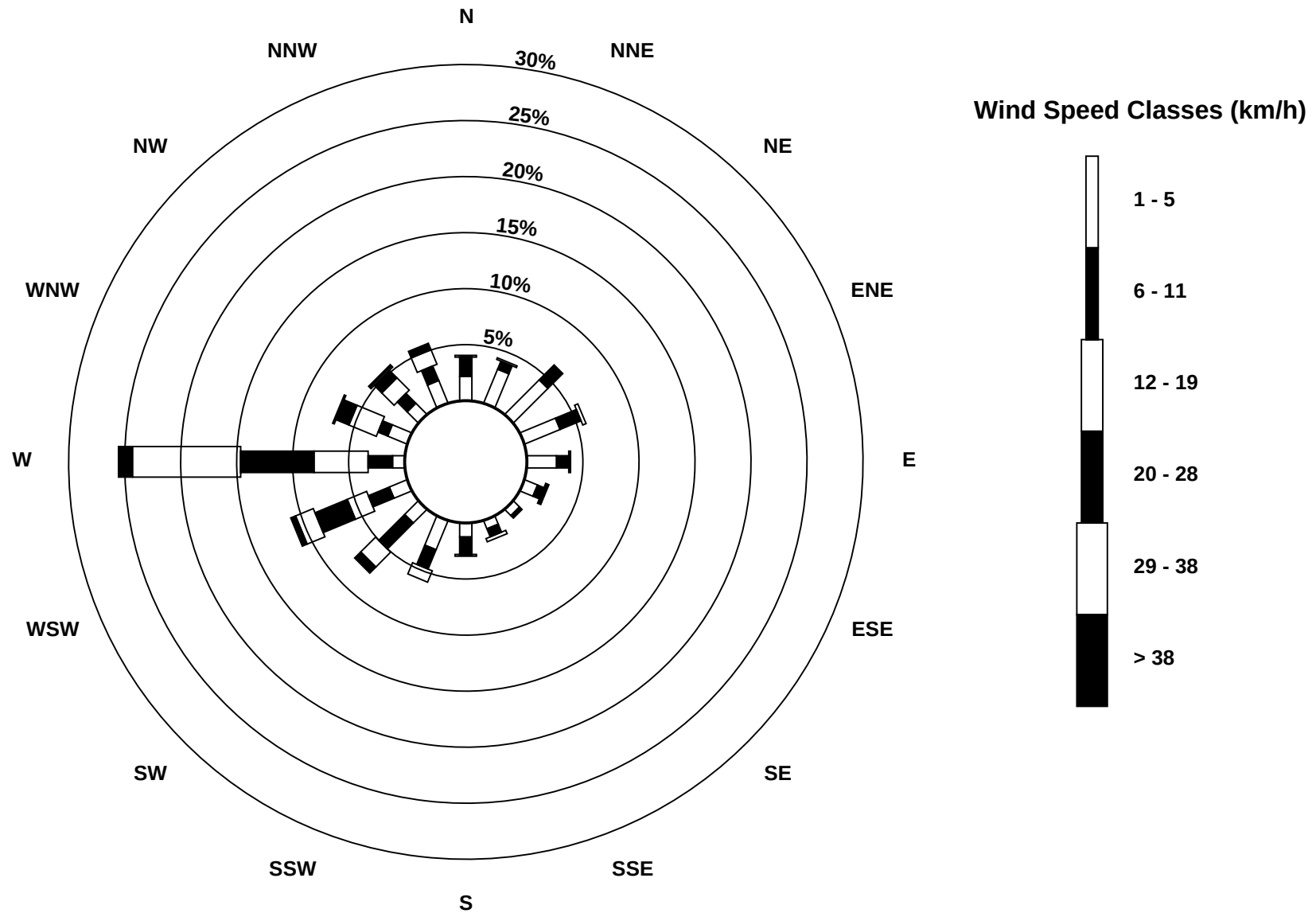
Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
23 Spd	13	13	1	1	17	27	22	22	21	19	18	12	14	14	12	6	2	2	2	1	1	1	0	8	8.0	27.2								
Dir	215	232	218	208	327	328	315	314	311	311	325	318	261	271	285	327	336	6	67	133	74	236	77	199	301.3	328.0								
24 Spd	6	1	3	14	9	2	5	4	1	4	2	4	6	5	14	25	27	27	19	13	4	3	2	4	5.4	27.2								
Dir	191	158	195	221	216	175	64	59	115	161	169	164	155	349	286	282	286	283	272	251	334	295	69	198	263.0	286.3								
25 Spd	0	2	2	1	3	2	4	2	4	5	8	12	13	21	20	20	11	10	4	3	4	7	2	3	5.4	20.6								
Dir	128	25	192	114	22	7	30	14	38	63	57	65	74	99	104	110	125	135	140	91	142	154	151	16	94.8	99.1								
26 Spd	2	2	2	3	3	0	1	0	2	3	7	6	6	6	9	9	8	7	5	6	5	5	4	2	2.6	9.1								
Dir	47	136	118	80	95	133	305	349	223	286	344	355	334	324	8	19	42	71	93	106	99	91	57	357	37.1	8.4								
27 Spd	2	1	2	2	2	0	2	1	4	4	8	4	12	15	14	12	15	12	7	6	6	3	6	11	5.0	15.4								
Dir	45	330	322	330	228	257	258	78	210	208	255	256	282	278	294	272	273	281	285	270	219	180	203	204	263.7	273.3								
28 Spd	3	3	6	3	9	6	4	14	17	15	22	19	19	18	4	1	8	10	8	6	4	6	2	1	5.4	22.1								
Dir	236	205	222	202	211	241	215	222	245	261	271	269	274	279	299	22	96	73	105	157	169	208	206	144	244.1	271.2								
Spd	7.0	7.5	7.8	7.4	7.1	7.9	6.8	7.1	7.9	7.6	9.7	11.5	12.9	13.0	12.1	12.5	10.3	8.1	9.2	9.4	9.7	8.9	9.4	9.0	Diurnal Average									
Dir	257.9	259.0	264.1	268.7	281.7	283.7	281.8	269.7	266.5	262.8	267.3	267.8	269.6	277.8	278.6	278.4	278.1	272.1	262.1	256.1	261.8	259.8	254.7	253.4	Diurnal Maximum									
Spd	35.9	33.1	33.9	38.7	39.2	35.2	31.1	32.3	35.6	32.4	33.5	39.3	39.2	36.0	35.7	38.5	37.4	49.3	47.2	37.7	41.6	39.9	44.4	39.1	Diurnal Maximum									
Dir	269.4	262.2	268.7	298.7	311.5	314.0	269.4	271.9	261.6	265.8	268.6	266.5	267.1	276.5	268.4	278.7	272.4	263.5	258.3	260.5	266.4	262.8	262.3	258.5										
Maximum Speed Value: 49 km/h on Feb 8 18:00																				Minimum Speed Value: 0 km/h on Feb 10 03:00										Hours in Service:				672
Maximum Daily Speed Average: 32.2 km/h on Feb 11																				Minimum Daily Speed Average: 1.6 km/h on Feb 7										Hours of Data:				672
Maximum Diurnal Speed Average: 13.0 km/h at hour 14																				Minimum Diurnal Speed Average: 6.8 km/h at hour 7										Hours of Missing Data:				0
Monthly Average Velocity: 9.04 km/h 268.41 deg																				Speed Percentiles: P ₁ = 0.4 P ₁₀ = 1.9 Q ₁ = 3.6 Median = 8.9 Q ₃ = 20.4 P ₉₀ = 31.3 P ₉₉ = 39.2										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	27		21		3		0		0		0		51																					
NorthEast	49		27		3		0		0		0		79																					
East	28		21		1		3		0		0		53																					
SouthEast	18		5		0		0		0		0		23																					
South	21		17		4		0		0		0		42																					
SouthWest	30		37		24		11		0		1		103																					
West	19		20		48		59		77		14		237																					
NorthWest	30		15		23		13		1		2		84																					
Total	222		163		106		86		78		17		672																					

Wind Rose

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



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - February 2013

Maximum Speed: 50 km/h on Feb 8 18:00																					Maximum Daily Speed Average: 32.8 km/h on Feb 11					Hours in Service: 672																								
Minimum Speed: 1 km/h on Feb 7 09:00																					Minimum Daily Speed Average: 3.3 km/h on Feb 7					Hours of Data: 672																								
Maximum Diurnal Speed Average: 19.0 km/h at hour 16																					Minimum Diurnal Speed Average: 10.6 km/h at hour 1					Hours of Missing Data: 0																								
Monthly Average Speed: 13.48 km/h																					Percentiles: P ₁ = 1.8 P ₁₀ = 3.0 Q ₁ = 4.4 Median = 9.4 Q ₃ = 20.7 P ₉₀ = 31.6 P ₉₉ = 40.0					Percent Operational Time: 100.0																								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																										
1-Feb	4	3	4	3	3	2	4	10	27	29	28	33	32	35	34	37	30	21	21	21	21	14	4	4	17.7	36.5																								
2-Feb	6	4	4	2	2	2	3	2	2	4	20	34	37	36	29	27	9	9	9	20	19	17	16	12	13.5	37.0																								
3-Feb	20	17	22	24	26	28	22	26	32	28	30	24	26	21	22	17	15	25	23	27	35	25	27	23	24.4	35.1																								
4-Feb	22	22	29	26	25	34	30	32	26	33	34	40	40	34	30	26	24	23	19	21	22	14	8	4	25.7	39.6																								
5-Feb	4	3	3	2	6	2	4	6	5	4	4	8	12	11	9	7	9	10	10	9	9	10	8	3	6.7	11.8																								
6-Feb	5	7	8	5	4	4	4	4	4	3	5	5	6	9	8	7	6	6	7	4	6	5	4	4	5.4	8.6																								
7-Feb	3	2	4	4	4	3	3	2	1	2	3	5	3	3	3	3	3	3	3	4	4	4	5	2	3.3	4.9																								
8-Feb	4	11	15	20	10	6	5	3	2	3	5	11	12	32	36	37	37	50	48	33	31	35	40	39	21.9	49.6																								
9-Feb	23	32	32	20	18	19	19	12	15	17	15	19	19	22	19	21	17	4	4	3	4	2	1	2	14.9	32.0																								
10-Feb	3	1	1	3	2	2	2	2	2	3	2	7	10	16	25	35	33	21	28	37	42	33	42	39	16.3	41.8																								
11-Feb	36	33	28	32	31	28	31	32	21	15	23	38	35	36	33	39	38	29	39	38	39	40	38	35	32.8	40.1																								
12-Feb	36	32	32	31	24	28	31	25	11	6	12	4	17	15	14	30	20	14	5	15	16	30	45	39	22.1	44.6																								
13-Feb	33	27	34	42	40	36	27	23	19	16	15	18	22	25	18	22	12	4	3	4	6	9	11	9	19.9	41.8																								
14-Feb	8	10	7	6	2	3	3	3	2	3	4	8	9	6	10	7	6	4	10	7	3	3	4	4	5.5	10.5																								
15-Feb	9	17	13	11	7	17	14	26	36	31	27	33	30	32	31	24	32	25	25	23	32	28	31	34	24.4	35.8																								
16-Feb	14	17	13	8	10	11	11	7	9	15	21	31	32	18	22	24	19	10	13	12	13	15	12	8	15.2	32.2																								
17-Feb	12	10	16	16	18	22	18	14	9	8	15	16	16	13	11	8	7	7	7	9	7	6	6	5	11.5	22.2																								
18-Feb	6	4	4	3	2	4	3	3	4	6	7	6	12	11	10	9	7	8	8	6	3	3	5	4	5.8	11.6																								
19-Feb	6	6	5	7	7	5	5	5	5	5	7	6	10	17	13	21	18	13	11	11	7	8	5	3	8.6	20.8																								
20-Feb	3	3	3	3	3	5	5	4	5	4	7	9	12	8	6	22	25	16	15	10	4	8	12	9	8.3	24.8																								
21-Feb	4	3	7	10	6	11	5	12	14	16	17	22	24	23	17	17	11	11	16	16	13	7	8	10	12.5	23.7																								
22-Feb	5	4	3	2	3	3	6	9	9	9	12	14	12	11	10	12	10	8	6	6	27	28	9	9	9.6	28.0																								
23-Feb	13	13	5	4	19	28	23	23	22	20	19	14	15	15	13	7	4	3	4	5	4	3	2	8	11.9	27.7																								
24-Feb	6	3	4	15	10	3	5	4	2	4	4	5	7	7	15	26	28	28	20	13	9	6	4	7	9.8	27.8																								
25-Feb	3	3	3	5	4	3	4	3	4	5	8	13	14	21	21	21	12	11	5	4	6	7	3	4	7.8	21.5																								
26-Feb	3	3	3	3	3	2	3	2	3	4	8	7	7	8	10	10	8	7	6	7	5	5	4	3	5.1	10.1																								
27-Feb	2	3	3	3	3	2	3	2	5	5	8	6	12	16	16	12	16	12	7	6	6	5	7	11	7.2	15.8																								
28-Feb	5	4	7	6	9	8	5	14	17	15	23	19	20	18	6	5	9	10	8	8	4	6	3	3	9.7	22.6																								
																									10.6	10.7	11.1	11.3	10.7	11.6	10.7	11.1	11.3	11.2	13.7	16.2	17.9	18.6	17.5	19.0	16.6	13.9	13.5	13.6	14.2	13.4	13.0	12.0	Diurnal Average	
																									36.2	33.5	34.5	41.8	40.3	36.2	31.3	32.5	35.8	32.7	33.7	39.6	39.5	36.4	36.1	38.9	37.8	49.6	47.5	38.0	41.8	40.1	44.6	39.2	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																																																		

Hourly Standard Deviations

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

Maximum Value: 98.4 deg on Feb 13 20:00																				Hours in Service: 672					
Minimum Value: 4.0 deg on Feb 3 09:00																				Hours of Data: 672					
Percentiles: P ₁ = 5.2 P ₁₀ = 6.9 Q ₁ = 10.3 Median = 20.0 Q ₃ = 39.9 P ₉₀ = 69.5 P ₉₉ = 90.9																				Hours of Missing Data: 0					
																				Hours of Calibration: 0					
																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	45	72	47	36	36	80	84	75	5	5	6	6	6	6	6	6	6	8	7	7	7	51	44	29	84.2
2-Feb	10	39	30	80	86	89	80	86	66	67	11	5	7	6	7	6	44	71	11	6	10	23	8	8	89.0
3-Feb	6	8	6	5	5	6	5	4	4	5	5	9	8	10	9	9	13	11	7	7	8	7	7	8	12.8
4-Feb	5	8	7	7	8	6	6	7	9	7	6	7	8	9	10	10	8	7	6	5	6	10	30	58	58.3
5-Feb	52	83	39	88	10	45	29	13	13	20	30	25	18	21	24	36	23	18	11	19	18	15	30	80	88.0
6-Feb	48	27	23	46	33	30	32	35	56	61	37	38	31	34	23	27	26	40	23	50	38	41	53	40	60.9
7-Feb	52	39	24	21	25	30	43	69	68	43	21	23	27	70	73	46	42	53	89	47	65	35	74	87	88.9
8-Feb	37	8	8	9	9	67	73	55	59	55	40	35	26	7	8	7	7	7	6	8	7	7	6	6	72.8
9-Feb	9	7	9	28	20	23	28	25	12	11	10	14	19	20	20	14	16	76	44	81	78	89	84	40	88.8
10-Feb	88	82	93	72	89	73	89	27	69	65	56	9	13	28	16	7	11	21	8	9	7	9	7	14	93.3
11-Feb	7	9	7	7	7	7	6	7	6	9	12	10	9	8	9	9	8	8	9	7	6	6	6	7	12.0
12-Feb	8	7	7	8	8	7	7	7	37	11	25	82	21	10	15	13	18	13	59	33	10	9	6	6	81.7
13-Feb	18	5	11	21	14	13	13	13	11	18	19	21	18	11	24	19	16	26	60	98	31	55	7	8	98.4
14-Feb	8	6	30	24	67	38	27	50	84	49	96	28	18	33	29	38	31	66	20	35	51	66	56	62	95.6
15-Feb	13	13	30	13	33	8	11	6	7	8	9	8	8	8	7	10	7	9	14	18	8	7	6	9	33.4
16-Feb	23	16	26	16	20	22	29	13	22	14	11	8	15	14	13	23	13	21	12	12	22	14	21	37	36.8
17-Feb	16	18	19	18	13	12	19	15	18	33	30	22	28	33	42	65	59	15	14	23	19	19	28	33	64.6
18-Feb	27	21	33	69	63	68	37	53	27	33	35	55	28	32	25	20	21	11	8	13	36	27	31	17	68.7
19-Feb	19	19	20	16	20	15	11	14	15	29	18	25	27	14	24	14	12	15	17	20	16	22	27	73	72.8
20-Feb	91	72	68	28	29	34	19	22	22	52	24	17	36	20	49	21	9	6	6	36	38	13	7	13	91.0
21-Feb	24	45	33	22	17	9	18	8	7	9	7	9	9	10	10	18	21	25	8	13	10	19	33	20	44.9
22-Feb	50	42	38	81	76	54	68	11	11	13	14	18	19	23	29	15	14	18	36	34	24	37	11	18	80.7
23-Feb	7	13	92	90	35	11	19	16	20	20	20	32	17	16	18	51	69	33	59	77	82	91	90	9	91.5
24-Feb	11	81	67	16	20	60	24	39	61	43	76	71	34	49	31	12	11	13	17	14	64	72	85	73	84.8
25-Feb	91	54	75	77	47	53	16	24	22	24	17	19	25	17	20	20	27	32	45	60	51	26	72	23	90.5
26-Feb	45	55	32	35	44	90	68	82	47	63	25	32	44	46	26	29	14	19	15	13	19	13	29	27	89.6
27-Feb	50	89	50	58	71	93	64	90	61	37	22	52	17	17	23	15	12	17	19	10	30	66	48	10	93.5
28-Feb	69	70	49	73	7	54	70	13	6	9	12	11	13	17	63	92	33	11	10	42	33	24	83	75	92.3
91.0 89.1 93.3 90.1 88.9 93.5 88.8 89.8 84.4 66.6 95.6 81.7 43.8 69.8 72.7 92.3 68.8 76.0 88.9 98.4 82.5 90.8 90.0 86.7																									

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

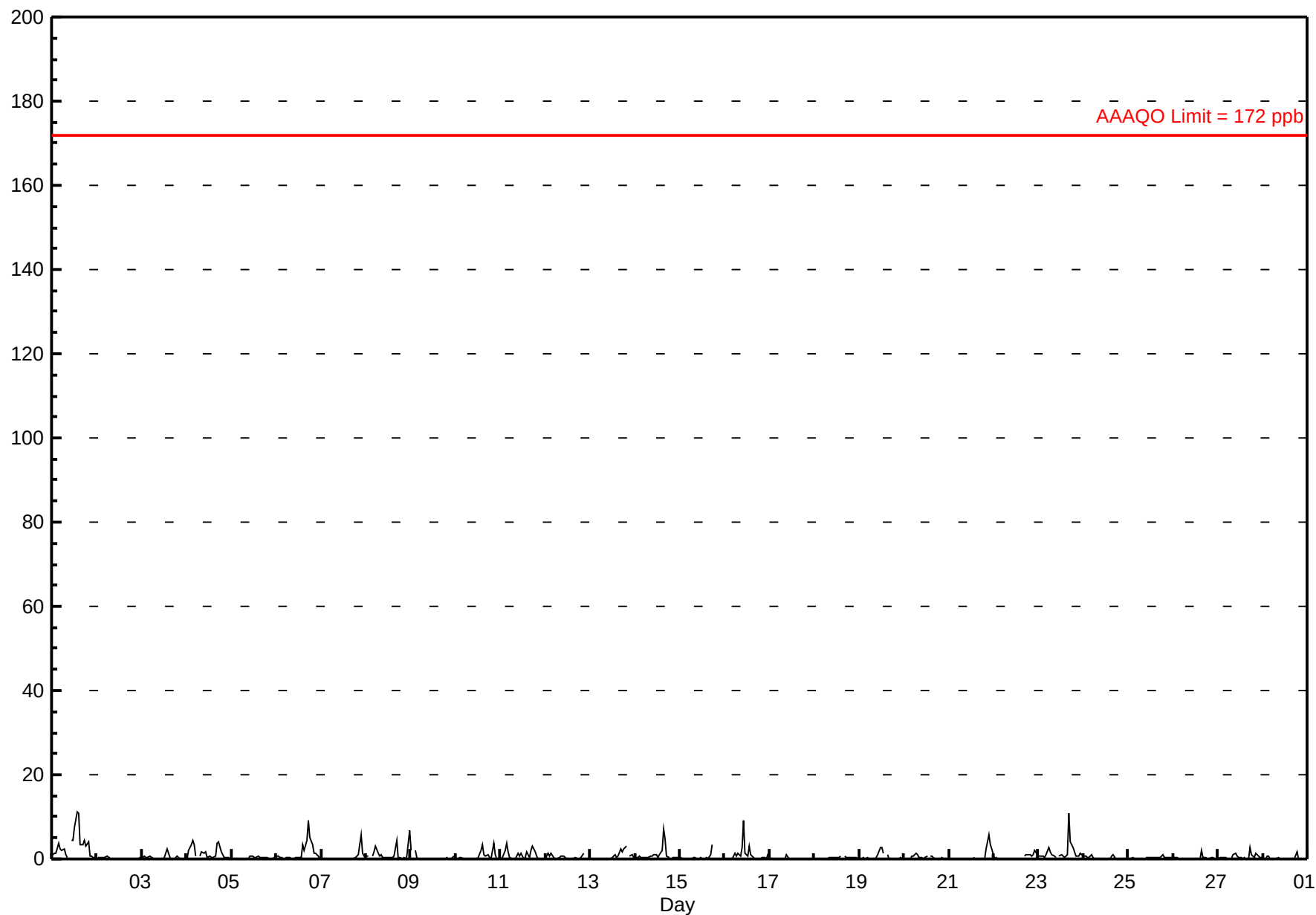
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11.3 ppb on Feb 1 14:00 Maximum Daily Average: 3.2 ppb on Feb 1																								Hours in Service: 672 Hours of Data: 640 Hours of Missing Data: 32 Hours of Calibration: 32 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Feb 22 13:00 Minimum Daily Average: 0.1 ppb on Feb 17 Maximum Diurnal Average: 1.5 ppb at hour 17 Minimum Diurnal Average: 0.3 ppb at hour 1 Monthly Average: 0.69 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.7 P ₉₀ = 1.8 P ₉₉ = 6.0																										
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-Feb	1	1	1	4	2	2	2	1	1	A	4	4	7	11	11	3	3	4	3	4	1	1	0	0	3.2	11.3
2-Feb	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
3-Feb	0	1	1	0	1	0	0	A	0	0	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0.4	2.4
4-Feb	0	2	3	5	3	1	A	1	2	1	2	0	1	0	0	1	4	4	2	1	0	0	0	0	1.5	4.5
5-Feb	0	0	0	0	0	A	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.8
6-Feb	1	1	0	0	A	0	0	0	0	0	0	0	0	0	3	2	4	9	5	3	1	1	1	0	1.5	9.0
7-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	6	1	1	0.5	5.8
8-Feb	1	1	A	1	2	3	1	1	1	1	0	0	0	0	0	1	4	0	0	0	0	0	1	7	1.1	6.7
9-Feb	2	A	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	2.2
10-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	2	4	1	1	1	0	0	4	1	0	A	0.7	3.7
11-Feb	0	0	2	4	2	0	0	0	0	1	1	1	0	0	2	0	2	3	2	1	0	0	A	0	1.0	3.8
12-Feb	0	2	1	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	A	0	0	0.4	1.5
13-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	2	2	2	3	A	1	0	0	0.6	3.2
14-Feb	0	0	1	0	0	0	0	0	1	1	1	1	1	1	2	7	5	1	0	A	0	0	0	0	1.1	7.2
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	A	0	0	0	0	0	0.3	3.4
16-Feb	0	0	0	0	0	1	1	1	1	3	9	2	1	3	1	0	0	A	0	0	0	0	0	1	1.1	9.0
17-Feb	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.9
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	0	0	0	0	0	0.3	0.5
19-Feb	0	0	0	0	0	0	0	0	0	0	1	3	3	1	A	1	0	0	0	0	0	0	0	0	0.5	2.7
20-Feb	0	0	0	0	1	1	1	1	0	0	0	0	1	A	1	1	0	0	0	0	0	0	0	0	0.3	1.4
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	3	6	3	2	0.7	5.9	
22-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	C	C	C	1	1	1	1	1	2	1	0.4	2.0	
23-Feb	1	1	1	0	1	3	2	1	1	0	A	1	1	1	0	1	11	4	3	2	1	1	1	1	1.6	10.8
24-Feb	1	1	0	1	1	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0.3	1.1
25-Feb	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.3	0.9
26-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0.2	1.9
27-Feb	0	0	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	3	1	0	1	1	0	0	0.6	2.7
28-Feb	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0.2	1.7
0.3 0.4 0.5 0.7 0.5 0.5 0.4 0.3 0.3 0.5 0.8 0.6 0.6 1.0 1.1 0.9 1.5 1.4 0.9 0.7 0.6 0.8 0.5 0.6																								Diurnal Average		
2.2 1.9 3.4 4.5 3.3 3.1 2.4 1.5 1.8 2.7 9.0 4.4 7.4 11.3 10.9 7.2 10.8 9.0 5.2 4.0 3.7 5.9 3.4 6.7																								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 - February 2013



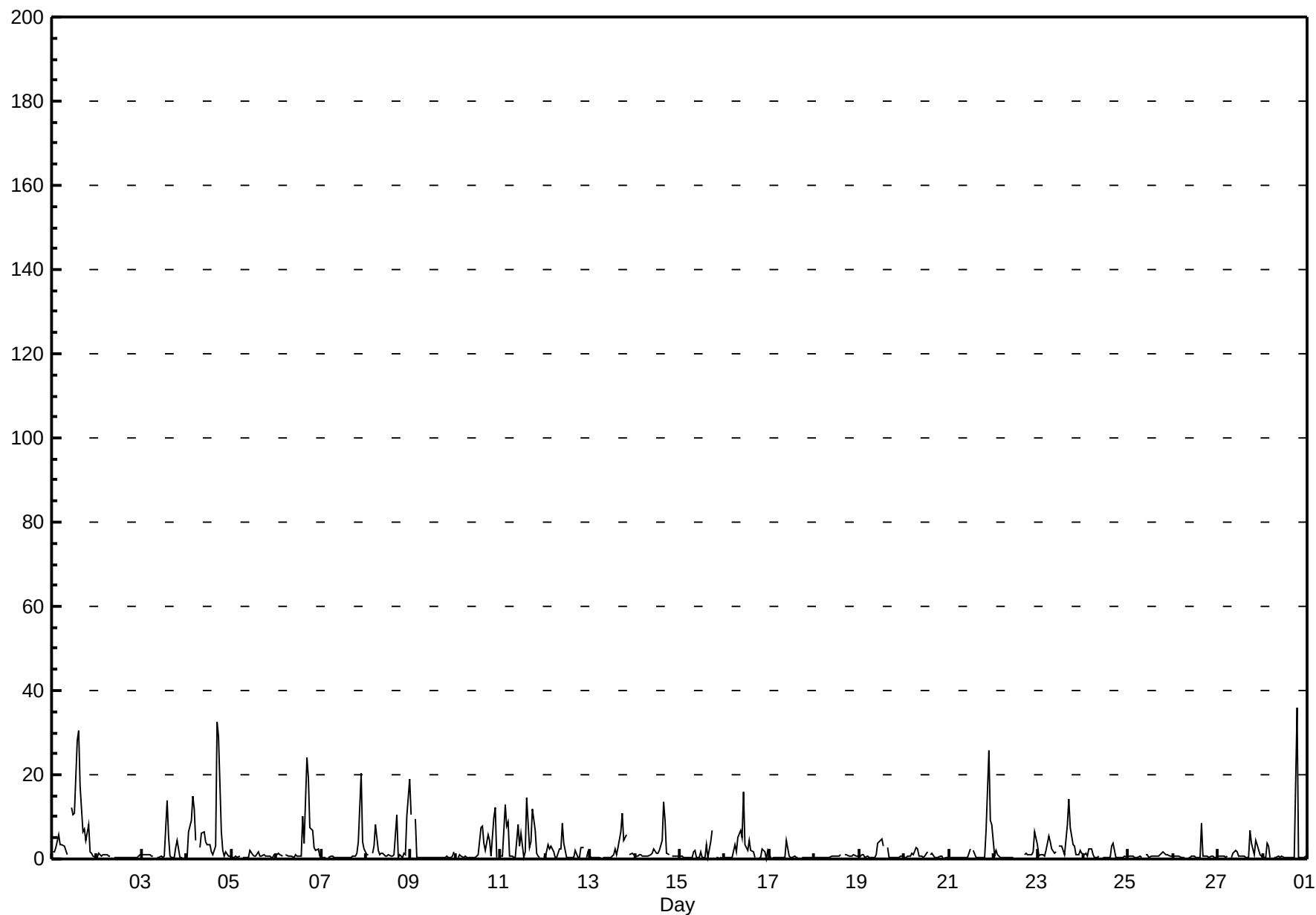
Hourly Maximums

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

Maximum Value: 36.0 ppb on Feb 28 19:00																				Maximum Daily Average: 7.2 ppb on Feb 1					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 3 23:00																				Minimum Daily Average: 0.5 ppb on Feb 17					Hours of Data: 640	
Maximum Diurnal Average: 4.7 ppb at hour 17																				Minimum Diurnal Average: 0.9 ppb at hour 7					Hours of Missing Data: 32	
Monthly Average: 2.10 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.6 Q ₃ = 1.8 P ₉₀ = 5.7 P ₉₉ = 23.9					Hours of Calibration: 32	
																									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-Feb	2	2	3	6	3	3	3	2	1	A	12	10	11	28	31	17	6	7	4	8	2	1	1	0	7.2	30.6
2-Feb	0	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.5	1.4
3-Feb	1	1	1	1	1	1	1	A	0	0	1	0	1	14	5	1	1	0	3	4	0	0	0	0	1.6	13.8
4-Feb	0	7	9	15	12	4	A	3	6	6	4	3	3	2	1	3	33	29	6	2	1	2	1	1	6.6	32.7
5-Feb	0	0	1	0	1	A	0	0	0	0	2	1	1	1	2	1	1	1	1	1	1	0	0	1	0.7	1.9
6-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	10	4	24	19	8	7	3	2	2	1	3.9	24.0
7-Feb	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	4	20	4	2	1.8	20.5
8-Feb	1	1	A	1	3	8	2	1	1	1	1	1	1	1	1	1	11	0	1	0	1	1	10	19	3.0	19.1
9-Feb	10	A	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	1.2	10.4
10-Feb	A	0	1	1	1	1	0	0	0	0	0	1	1	7	8	4	2	6	4	1	10	12	0	A	2.7	12.3
11-Feb	1	1	13	8	9	1	1	0	0	8	3	6	0	2	15	3	4	12	7	1	1	0	A	1	4.1	14.7
12-Feb	0	3	2	3	2	0	0	2	2	8	4	0	0	0	0	0	2	0	0	3	3	A	0	2	1.7	8.5
13-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	3	6	11	5	6	A	1	1	1	1.8	10.8
14-Feb	1	1	1	1	1	1	1	1	1	1	2	1	1	2	4	14	9	1	1	A	1	1	1	1	2.1	13.6
15-Feb	1	1	0	0	0	0	0	2	2	0	0	2	0	0	3	0	4	7	A	0	0	0	0	0	1.1	6.9
16-Feb	0	0	0	0	0	3	2	5	7	5	16	4	2	4	2	2	0	A	0	0	2	2	0	2	2.6	16.1
17-Feb	0	0	0	0	0	0	0	0	0	4	1	0	0	1	0	0	A	0	0	0	0	0	0	0	0.5	4.3
18-Feb	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.6	1.0
19-Feb	0	1	1	0	1	0	0	0	0	1	4	5	5	3	A	3	0	0	0	0	0	0	1	1	1.2	4.9
20-Feb	0	0	1	1	1	1	3	2	1	1	0	1	2	A	1	1	0	0	0	1	1	0	0	0	0.8	2.7
21-Feb	0	0	0	0	0	0	0	0	0	0	0	2	A	2	0	0	0	0	0	0	7	26	9	8	2.6	25.9
22-Feb	1	2	1	0	0	0	0	0	0	0	0	A	0	C	C	C	1	1	1	1	1	2	6	3	1.2	6.3
23-Feb	1	1	1	1	2	5	4	2	1	2	A	3	3	2	1	8	14	7	3	3	1	1	2	1	3.1	14.3
24-Feb	1	1	1	2	2	1	0	0	1	A	0	0	0	0	0	3	4	0	0	0	0	0	1	0	0.9	3.6
25-Feb	1	1	1	1	0	0	1	0	A	1	1	0	1	1	1	1	1	1	2	1	1	1	1	1	0.7	1.8
26-Feb	1	1	1	1	0	0	0	A	0	0	1	1	0	0	0	9	1	1	1	1	1	1	0	0	0.9	8.6
27-Feb	1	1	1	1	0	1	A	0	1	2	2	1	1	1	1	0	0	7	4	1	4	4	1	1	1.5	6.6
28-Feb	1	0	4	3	0	A	0	0	1	0	1	0	0	1	0	0	0	0	36	0	0	0	0	1	2.2	36.0
0.9 1.1 2.0 1.8 1.6 1.4 0.9 1.0 1.1 1.8 2.1 1.7 1.4 2.9 3.4 3.0 4.7 4.2 3.3 1.7 1.7 3.0 1.7 1.9																									Diurnal Average	
10.4 6.6 13.0 15.0 11.8 8.0 4.0 5.2 6.7 8.5 16.1 10.4 10.9 28.2 30.6 17.3 32.7 29.2 36.0 8.2 9.9 25.9 10.3 19.1																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

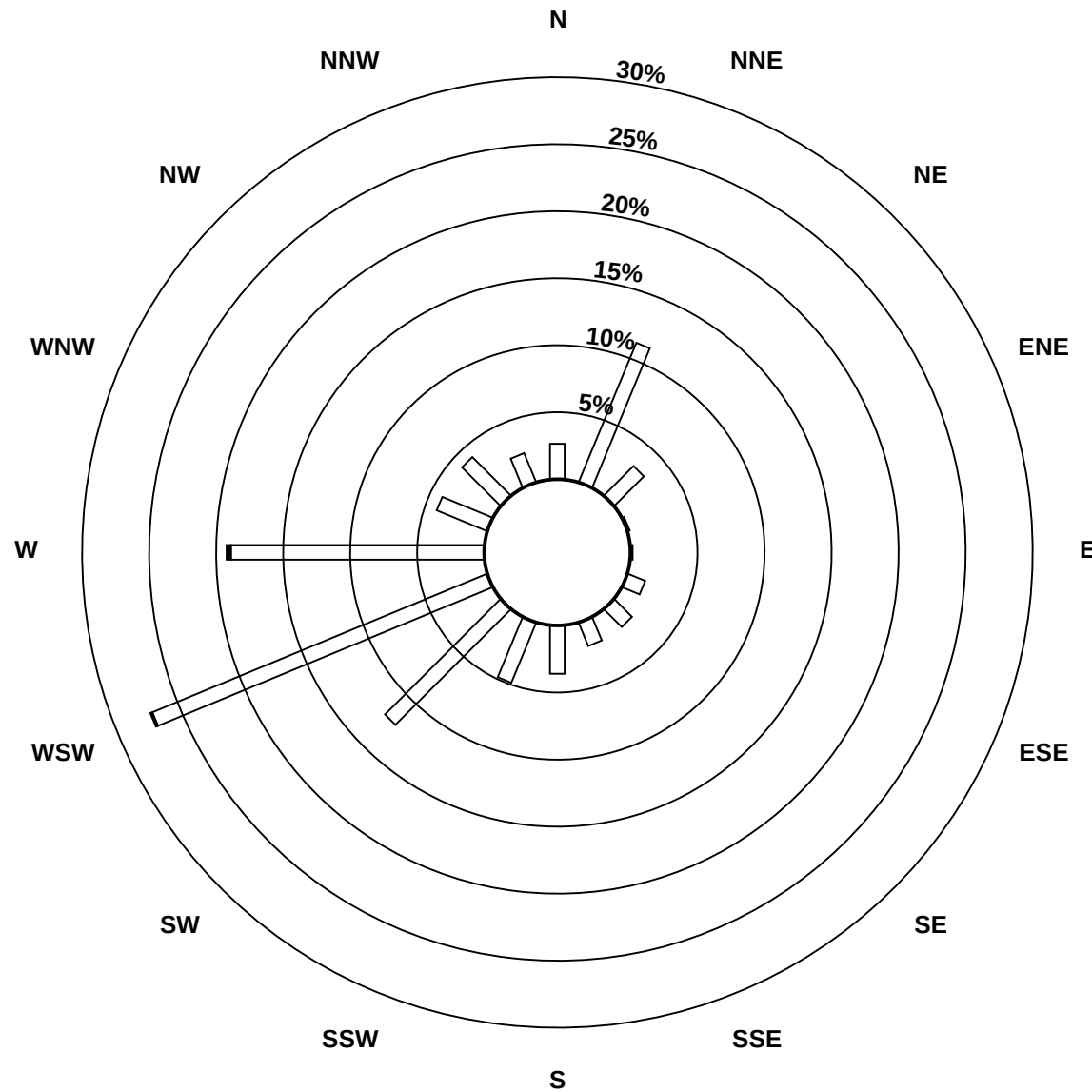
Hourly Maximums

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

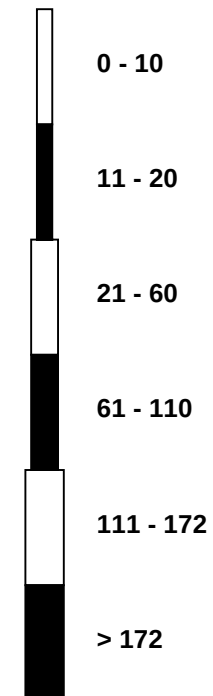


Pollutant Rose

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

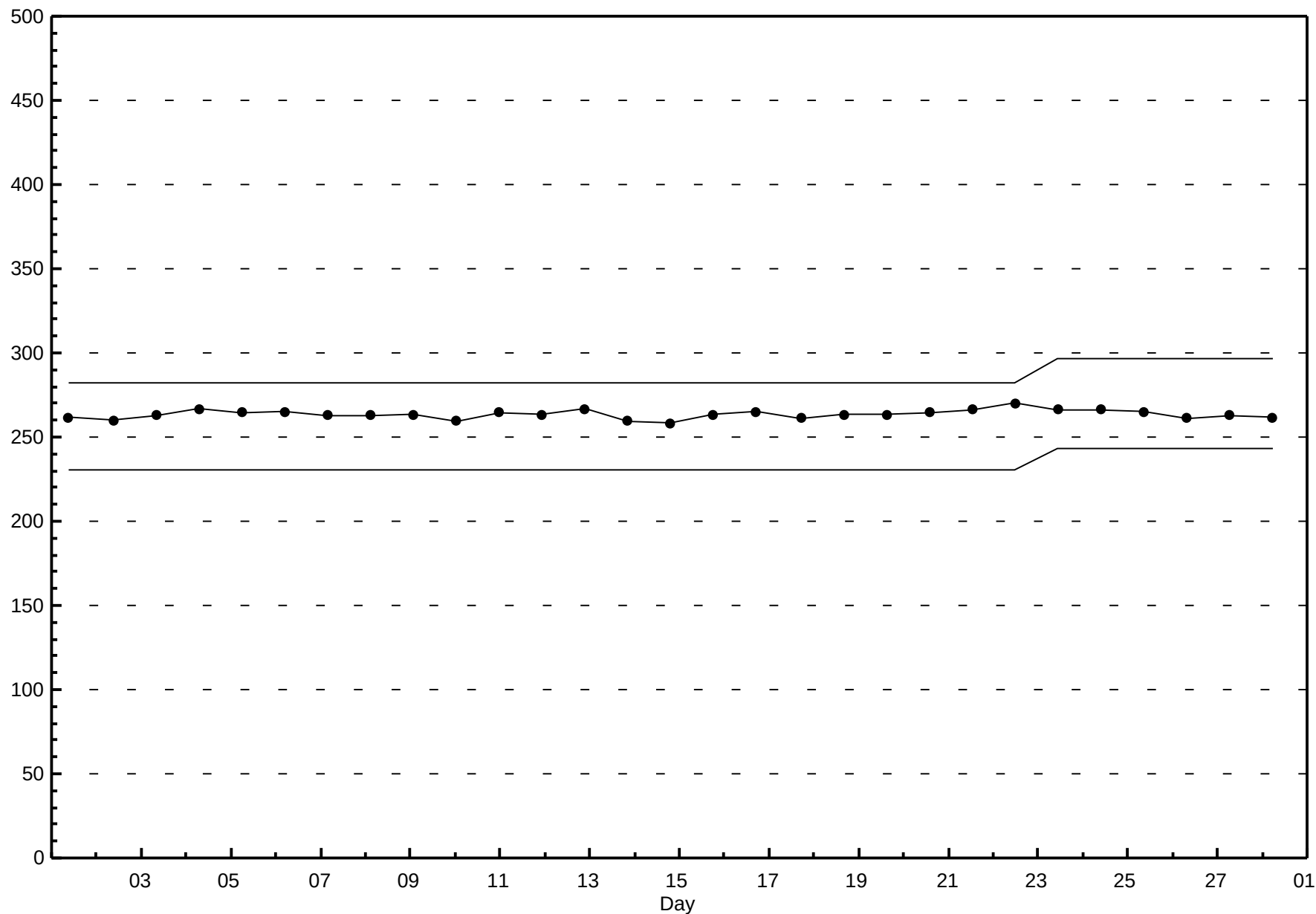


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - February 2013



Hourly Averages

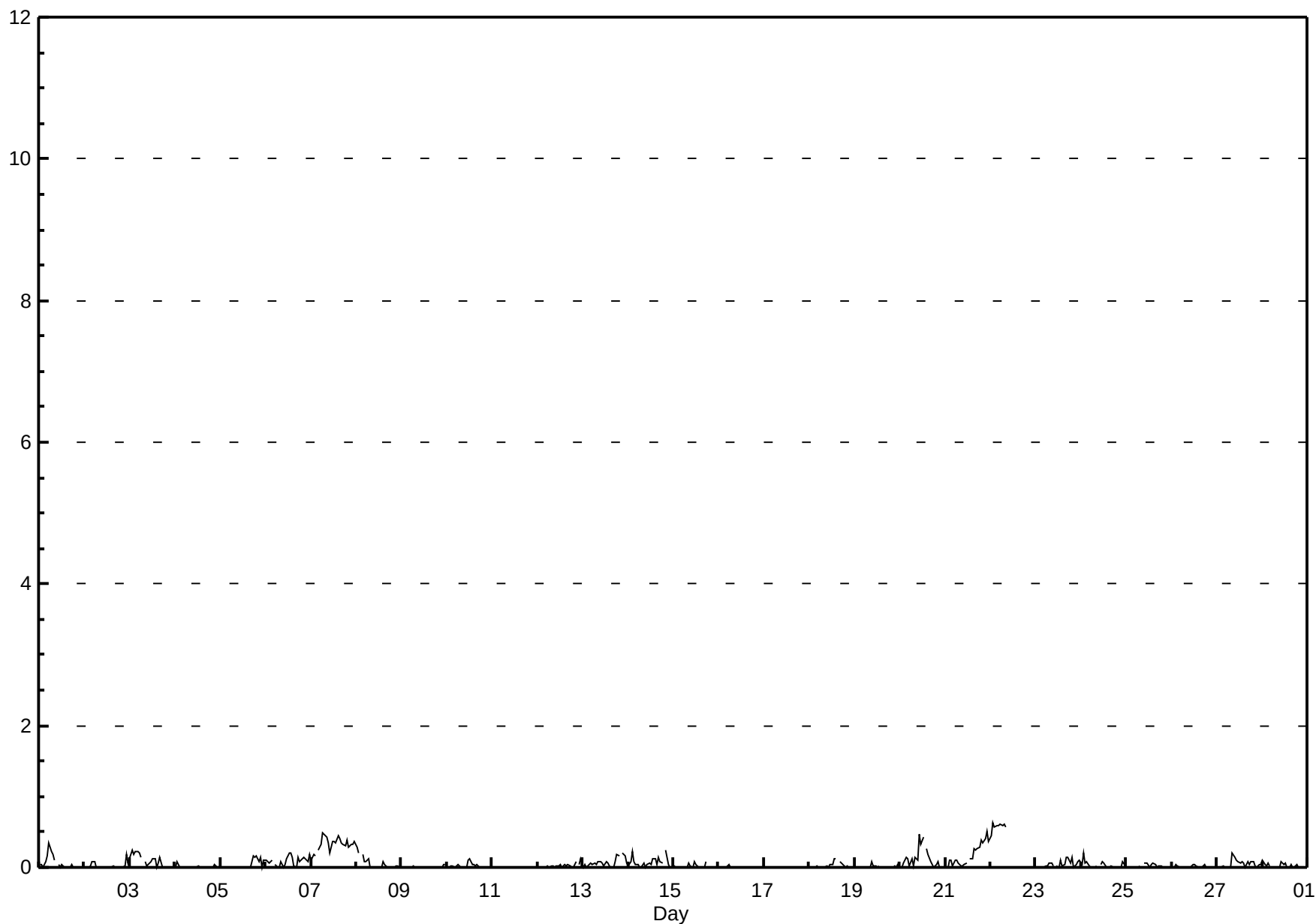
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 672							
Maximum Value: 0.6 ppb on Feb 22 02:00																				Maximum Daily Average: 0.3 ppb on Feb 7		Hours of Data: 639					
Minimum Value: 0 ppb on Feb 1 03:00																				Minimum Daily Average: 0.0 ppb on Feb 11		Hours of Missing Data: 33					
Maximum Diurnal Average: 0.1 ppb at hour 6																				Minimum Diurnal Average: 0.0 ppb at hour 10		Hours of Calibration: 33					
Monthly Average: 0.06 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.6		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-Feb	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-Feb	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	
3-Feb	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	
4-Feb	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-Feb	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	
6-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
7-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
8-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3	
9-Feb	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-Feb	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-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1	
13-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2	
14-Feb	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-Feb	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-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.0	
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.1	
19-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.0	0.1	
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0.2	0.5	
22-Feb	0	1	1	1	1	1	1	1	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
23-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	
24-Feb	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-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
26-Feb	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-Feb	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-Feb	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	
																									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
Smoky Heights - February 2013



Hourly Maximums

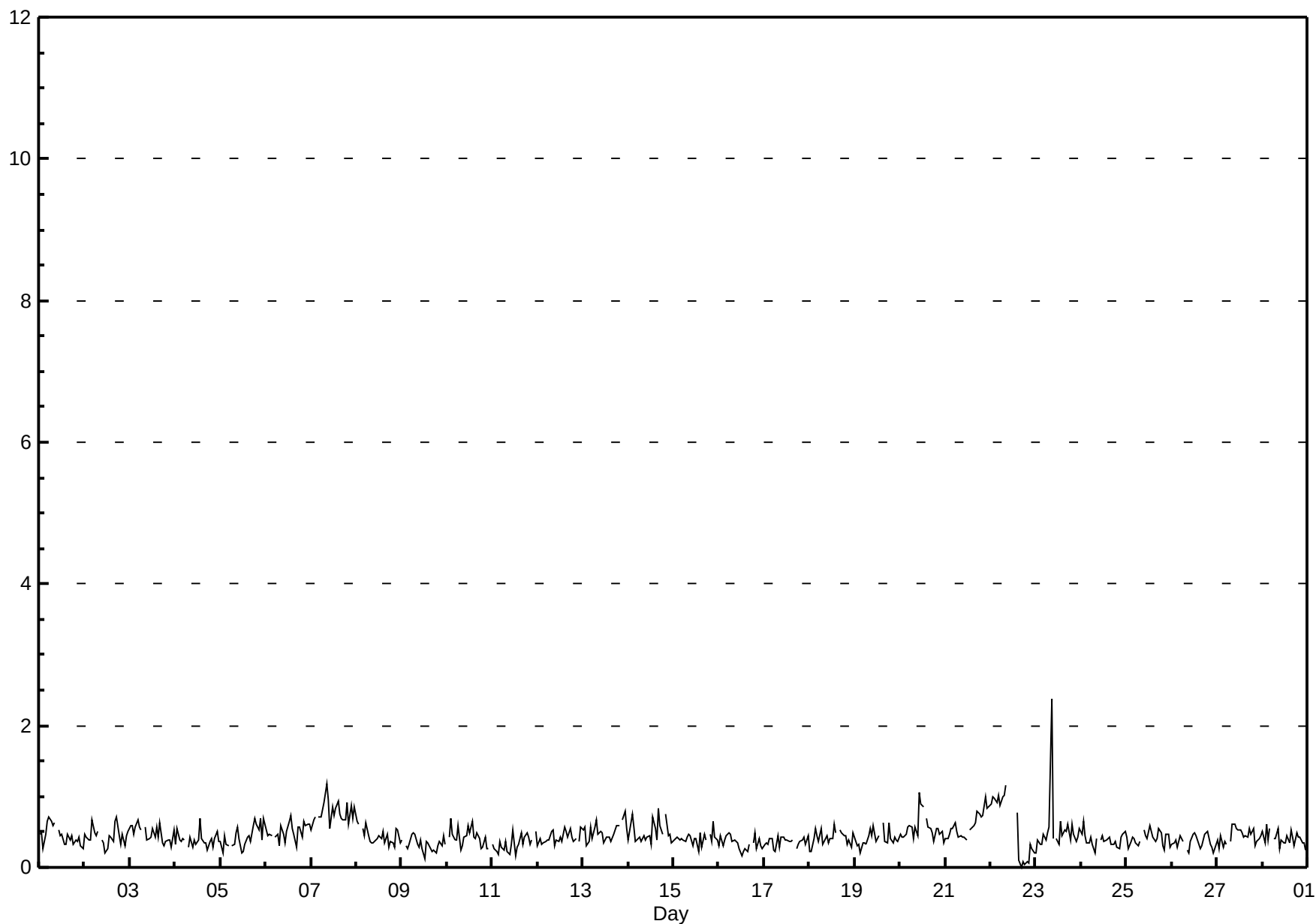
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - February 2013

Maximum Value: 2.4 ppb on Feb 23 09:00																				Maximum Daily Average: 0.8 ppb on Feb 7					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 22 17:00																				Minimum Daily Average: 0.3 ppb on Feb 9					Hours of Data: 639	
Maximum Diurnal Average: 0.6 ppb at hour 9																				Minimum Diurnal Average: 0.4 ppb at hour 21					Hours of Missing Data: 33	
Monthly Average: 0.45 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.6 P ₉₉ = 1.0					Hours of Calibration: 33	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	0	0	0	0	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.7
2-Feb	0	0	0	0	1	0	0	1	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0.4	0.7
3-Feb	1	1	0	1	1	1	1	A	1	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0.5	0.7
4-Feb	0	1	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0.4	0.7
5-Feb	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	0	1	0.4	0.7
6-Feb	1	0	0	0	A	0	0	0	1	0	0	1	1	1	1	0	0	1	1	0	1	1	1	1	0.5	0.7
7-Feb	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-Feb	1	1	A	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0.4	0.6
9-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
10-Feb	A	0	1	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	A	0.4	0.7
11-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	1	0.3	0.5
12-Feb	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	1	0	0	0	A	0	1	0.4	0.6
13-Feb	1	1	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	1	1	1	A	1	1	1	0.5	0.8
14-Feb	0	1	1	1	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	A	1	0	0	0	0.5	0.8
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0.4	0.7
16-Feb	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	0.5
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.5
18-Feb	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	A	1	0	0	0	0	0	0	0	0.4	0.6
19-Feb	0	0	0	0	0	0	0	0	1	0	1	0	0	0	A	1	0	0	1	0	0	0	0	0	0.4	0.6
20-Feb	0	0	0	0	1	1	1	0	1	0	1	1	1	A	1	1	1	0	0	1	1	0	1	0	0.6	1.1
21-Feb	0	0	0	1	1	1	1	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0
22-Feb	1	1	1	1	1	1	1	1	1	C	C	C	C	C	1	0	0	0	0	0	0	0	0	0	0.6	1.2
23-Feb	0	0	0	0	0	0	0	1	2	0	A	0	0	1	0	1	1	1	0	1	0	0	0	1	0.5	2.4
24-Feb	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.7
25-Feb	0	0	0	0	0	0	0	0	A	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0.4	0.6
26-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	0.5
27-Feb	0	0	0	0	0	0	A	0	1	1	1	1	1	0	0	0	0	1	0	1	0	0	0	0	0.4	0.6
28-Feb	1	0	1	0	1	A	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.4	0.6
0.4 0.4 0.4 0.4 0.5 0.5 0.5 0.5 0.6 0.4 0.4 0.4 0.4 0.5 0.5 0.4 0.4 0.5 0.4 0.4 0.4 0.5 0.4 0.4																									Diurnal Average	
0.9 1.0 1.0 0.9 1.0 0.9 1.0 1.0 1.0 2.4 1.0 1.1 0.9 0.9 0.8 0.9 0.7 0.8 0.8 0.8 0.9 0.8 1.0 0.8 0.9																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

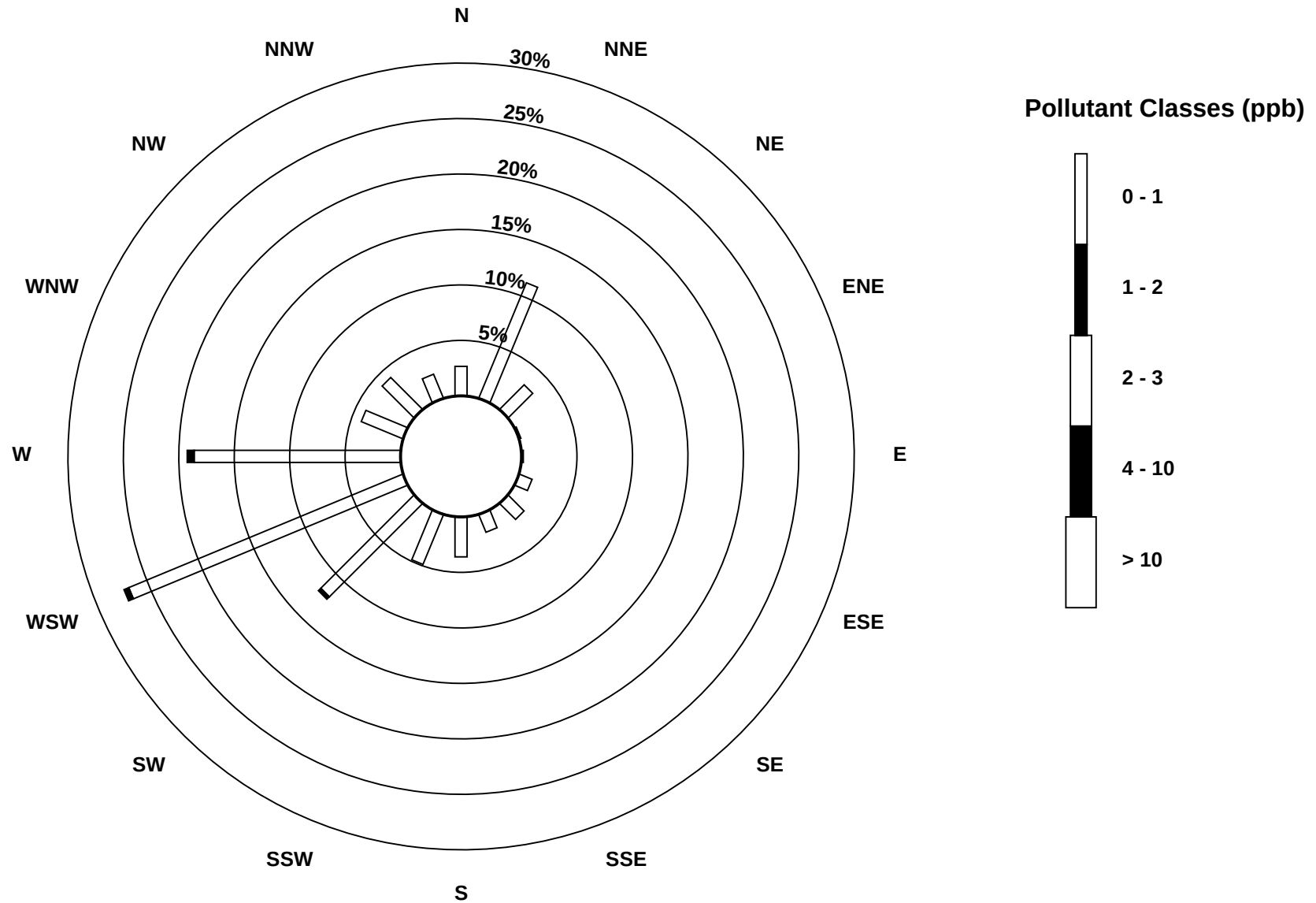
Hourly Maximums

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



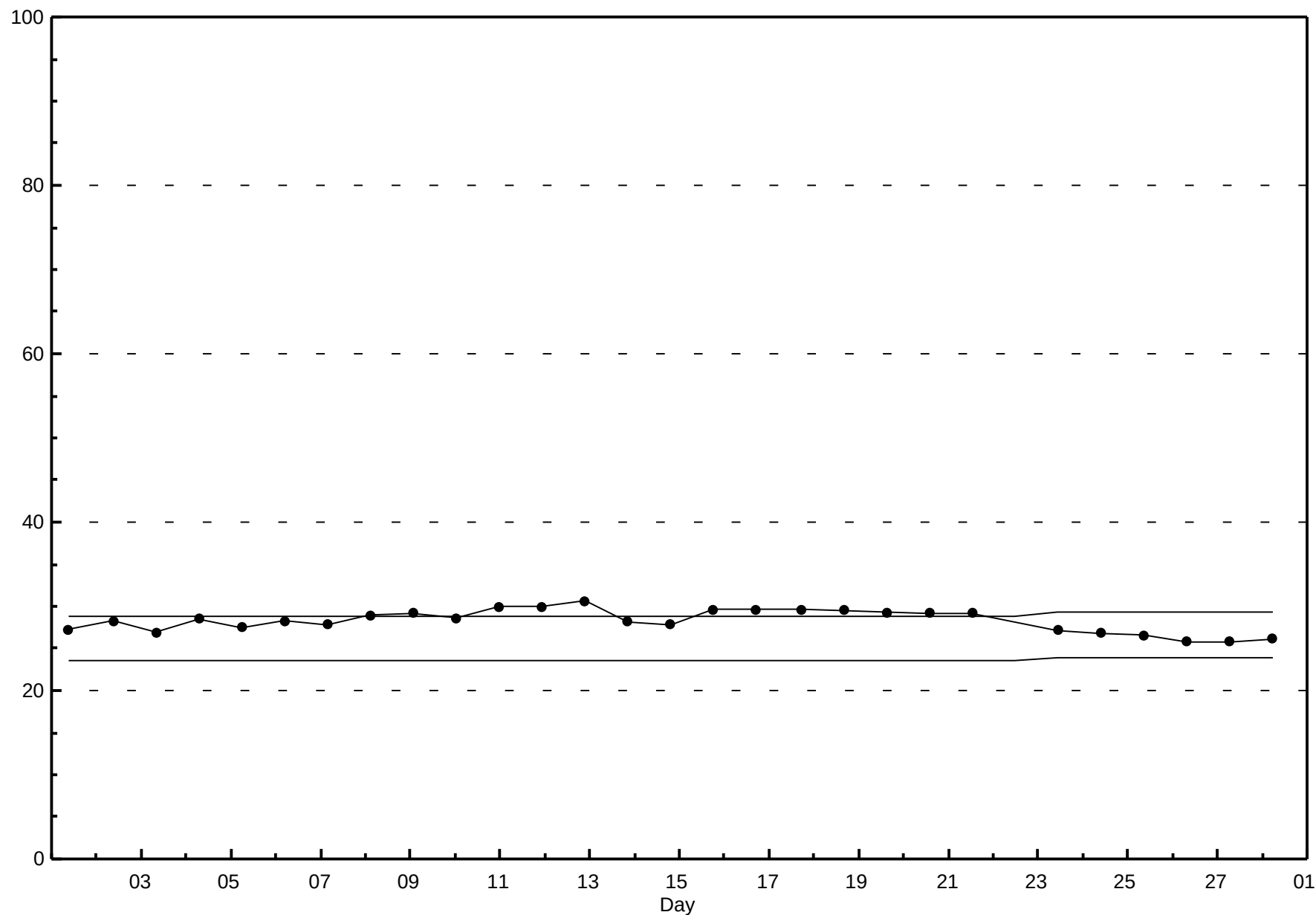
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - February 2013

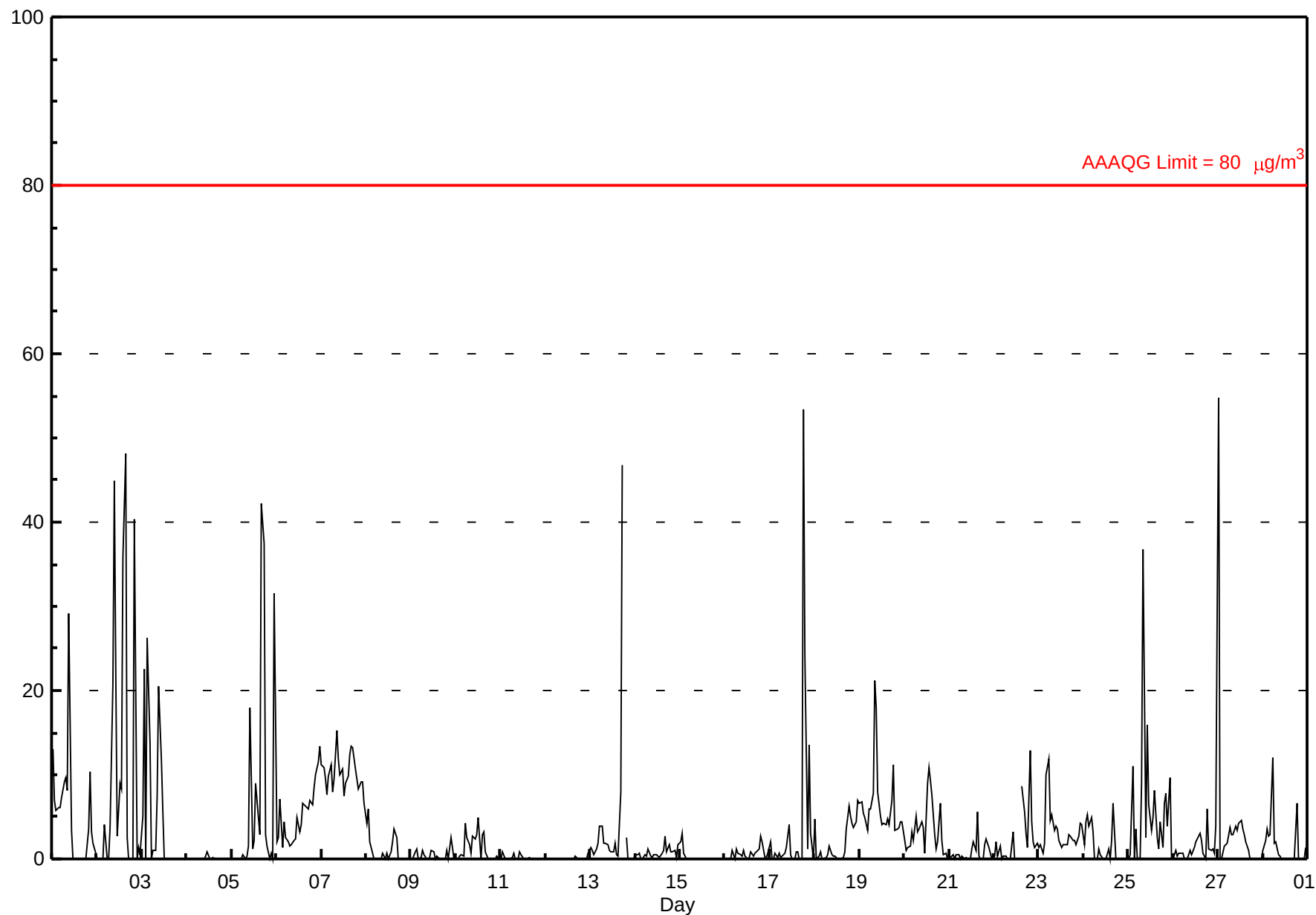


Hourly Averages

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

Smoky Heights - February 2013

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 54.8 µg/m³ on Feb 27 01:00 Maximum Daily Average: 10.2 µg/m³ on Feb 2																								Hours in Service: 672 Hours of Data: 670 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7		
Minimum Value: 0 µg/m³ on Feb 1 12:00 Maximum Diurnal Average: 5.4 µg/m³ at hour 10 Monthly Average: 3.11 µg/m³ Minimum Daily Average: 0.0 µg/m³ on Feb 12 Minimum Diurnal Average: 1.9 µg/m³ at hour 7 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.8 Q ₃ = 3.5 P ₉₀ = 8.2 P ₉₉ = 40.0																										
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-Feb	13	7	6	6	6	7	9	10	8	29	3	0	0	0	0	0	0	0	0	4	10	3	2	1	5.2	29.1
2-Feb	0	0	0	0	4	0	0	4	21	45	22	3	9	8	36	48	3	0	0	0	40	0	1	0	10.2	48.1
3-Feb	5	23	0	26	14	0	1	1	7	20	12	6	0	0	0	0	0	0	0	0	0	0	0	0	4.8	26.3
4-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
5-Feb	0	0	0	0	0	0	1	0	0	1	18	1	2	9	5	3	42	37	3	2	0	1	0	32	6.5	42.2
6-Feb	2	3	7	1	4	3	2	2	2	2	2	5	3	4	7	6	6	6	7	6	8	10	12	13	5.2	13.3
7-Feb	11	11	9	8	10	11	8	10	15	12	10	11	7	9	10	12	13	13	11	9	8	9	9	7	10.2	15.2
8-Feb	4	6	2	1	0	0	0	0	0	1	0	1	0	1	2	4	3	0	0	0	0	0	0	0	1.0	5.9
9-Feb	0	0	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	1	0	3	1	0	0.5	2.5
10-Feb	0	0	0	1	0	4	3	2	1	3	2	3	5	0	3	3	1	0	0	0	0	0	0	0	1.3	5.0
11-Feb	0	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9
12-Feb	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	0.6
13-Feb	1	1	1	1	2	4	4	2	2	2	1	1	1	2	1	0	8	47	N	2	0	0	0	0	3.6	46.8
14-Feb	1	1	1	0	0	0	0	1	0	0	1	1	0	0	1	1	3	1	2	1	1	1	0	2	0.7	2.7
15-Feb	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	3.0
16-Feb	0	0	0	0	1	0	1	1	0	0	1	0	0	0	1	0	1	1	1	3	2	0	0	1	0.6	2.7
17-Feb	2	0	0	1	0	1	0	0	1	1	4	1	0	0	1	1	0	0	53	24	1	14	3	0	4.5	53.4
18-Feb	5	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	3	6	5	4	4	4	7	1.8	6.9
19-Feb	7	7	5	5	3	6	6	8	21	18	8	5	4	4	4	5	4	7	11	3	4	4	4	4	6.6	21.1
20-Feb	2	1	1	1	3	2	5	3	4	4	4	1	9	11	9	8	3	1	2	7	2	0	1	0	3.5	10.8
21-Feb	0	0	0	0	0	1	0	0	0	0	0	0	1	2	1	6	0	0	0	2	2	1	1	0	0.8	5.5
22-Feb	0	2	0	2	0	0	0	0	0	0	3	0	0	0	M	9	6	3	1	13	4	2	1	2	2.2	12.9
23-Feb	1	2	1	2	10	12	5	5	3	4	4	2	1	2	2	2	3	3	2	2	2	3	4	4	3.3	11.8
24-Feb	2	4	5	4	5	3	0	0	1	1	0	0	0	1	0	2	7	0	0	0	0	0	0	0	1.5	6.6
25-Feb	0	1	11	0	4	0	0	9	37	3	16	6	3	5	8	3	1	4	1	7	8	4	10	0	5.8	36.7
26-Feb	0	1	0	1	1	1	0	0	0	1	0	1	2	2	3	2	1	0	6	1	1	1	1	4	1.3	6.0
27-Feb	55	0	0	2	2	2	4	3	3	4	3	4	5	3	3	2	1	0	0	0	0	0	0	0	3.9	54.8
28-Feb	1	2	4	3	3	12	2	2	1	0	0	0	0	0	0	0	0	0	7	0	0	0	0	1	1.5	12.0
4.1 2.7 2.0 2.3 2.6 2.5 1.9 2.3 4.6 5.4 4.2 1.9 2.0 2.3 3.5 4.2 3.8 4.5 4.2 3.3 3.5 2.1 2.0 2.8																								Diurnal Average		
54.8 22.6 11.1 26.3 13.9 12.0 9.2 9.6 36.7 45.0 22.4 10.8 9.0 10.8 35.7 48.1 42.2 46.8 53.4 24.0 40.3 13.6 11.6 31.6																								Diurnal Maximum		
M - Maintenance N - Not Valid																										
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

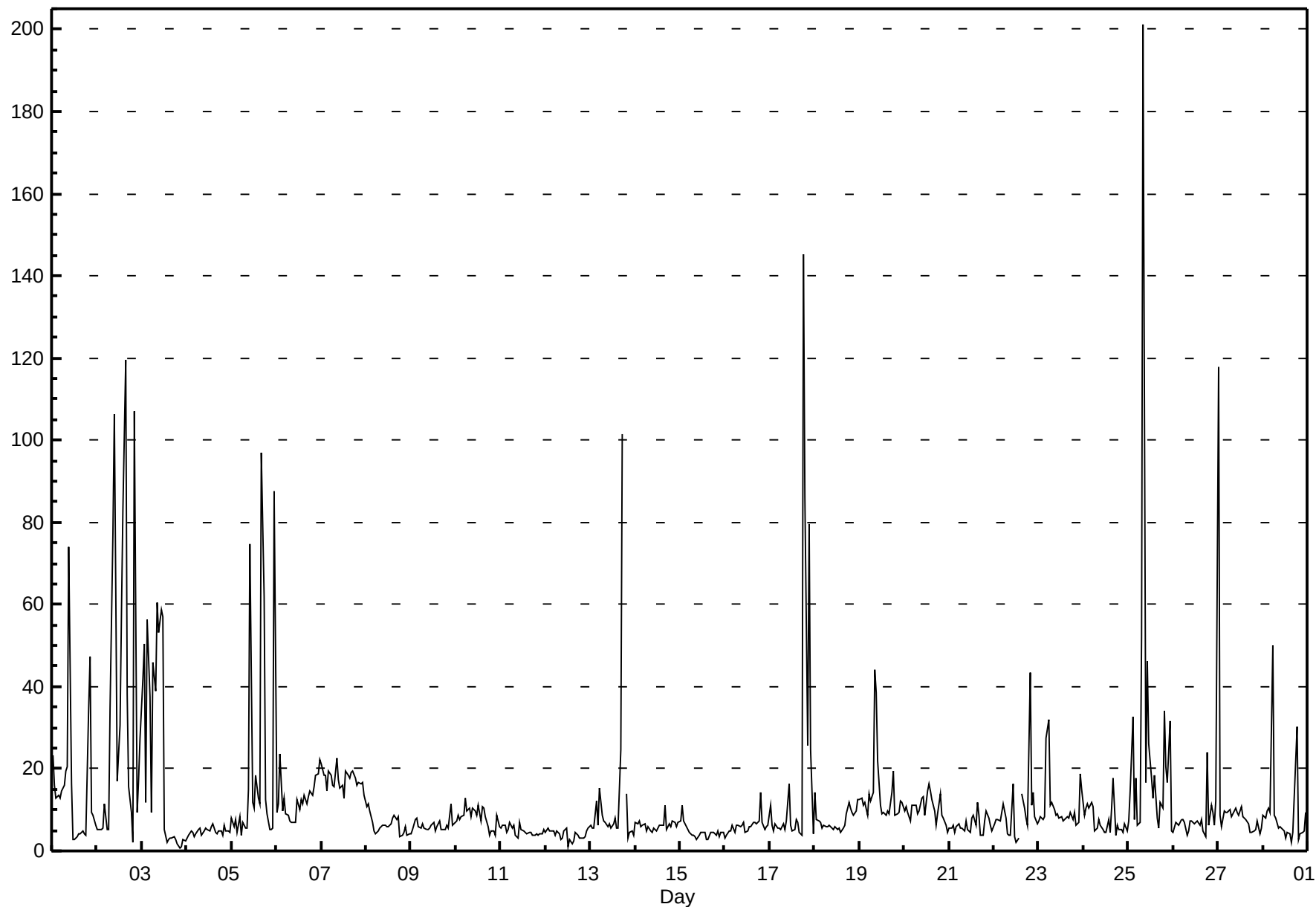
Smoky Heights - February 2013

Maximum Value: 201.3 μg/m ³ on Feb 25 09:00																					Maximum Daily Average: 35.8 μg/m ³ on Feb 2					Hours in Service: 672	
Minimum Value: 1 μg/m ³ on Feb 3 21:00																					Minimum Daily Average: 3.9 μg/m ³ on Feb 12					Hours of Data: 670	
Maximum Diurnal Average: 19.9 μg/m ³ at hour 9																					Minimum Diurnal Average: 8.0 μg/m ³ at hour 13					Hours of Missing Data: 2	
Monthly Average: 11.80 μg/m ³																					Percentiles: P ₁ = 1.8 P ₁₀ = 3.9 Q ₁ = 5.0 Median = 7.1 Q ₃ = 11.3 P ₉₀ = 18.8 P ₉₉ = 100.3					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-Feb	23	16	13	14	13	14	16	19	20	74	16	3	3	3	4	4	5	4	4	35	47	9	9	6	15.6	73.9	
2-Feb	5	5	5	6	12	5	5	35	77	106	64	17	31	58	83	120	38	16	9	2	107	9	17	28	35.8	119.5	
3-Feb	42	50	12	56	38	9	46	39	60	53	59	57	5	2	3	3	3	3	3	2	1	1	3	2	23.0	60.4	
4-Feb	3	4	5	5	3	4	5	5	4	5	6	5	5	6	7	5	4	5	5	4	6	5	5	5	4.8	6.6	
5-Feb	8	6	8	5	8	4	7	6	6	15	75	12	10	18	13	12	97	62	12	9	5	5	6	88	20.6	97.1	
6-Feb	9	12	24	10	13	9	9	7	7	7	7	13	10	12	12	14	11	13	15	13	16	19	19	22	12.6	23.7	
7-Feb	21	19	18	15	20	18	16	16	23	17	15	16	13	19	18	18	19	20	18	16	17	16	17	14	17.4	22.5	
8-Feb	11	12	10	7	5	4	5	6	6	6	6	6	6	7	8	9	8	8	3	4	5	6	4	4	6.4	11.6	
9-Feb	4	5	8	8	6	5	7	5	5	5	6	6	7	5	6	7	5	5	5	6	5	12	6	7	6.1	11.5	
10-Feb	7	9	8	8	9	13	10	11	8	11	10	9	11	7	11	10	8	6	4	5	5	4	9	6	8.2	13.0	
11-Feb	6	6	6	4	5	7	5	6	4	3	7	5	5	4	4	4	5	4	4	4	4	4	4	5	4.9	7.1	
12-Feb	5	5	5	5	5	4	5	4	3	3	5	6	1	3	2	2	4	4	3	3	3	3	5	5	3.9	5.7	
13-Feb	6	6	5	12	6	15	9	7	7	6	7	5	7	8	6	6	25	101	N	14	3	5	5	4	11.9	101.3	
14-Feb	7	7	7	6	6	7	5	6	5	5	6	5	6	6	6	6	11	5	7	6	7	7	6	7	6.3	11.0	
15-Feb	7	11	7	6	5	5	4	4	3	3	4	5	5	4	3	3	5	5	4	4	5	3	5	4	4.7	11.0	
16-Feb	3	4	5	5	6	4	6	6	6	6	7	4	5	6	6	7	7	7	7	14	7	5	6	6	6.1	14.3	
17-Feb	11	6	5	6	5	6	5	7	5	7	16	6	5	5	8	7	5	4	145	86	26	79	25	4	20.2	145.1	
18-Feb	14	8	7	7	6	6	6	6	6	5	5	6	5	6	5	5	6	9	12	10	9	9	10	13	7.6	14.2	
19-Feb	13	13	11	12	9	14	12	14	44	39	22	11	9	10	9	10	9	14	20	9	9	9	12	12	14.3	44.2	
20-Feb	10	11	9	7	11	11	11	9	10	13	13	9	15	16	15	13	10	6	9	14	9	8	6	5	10.4	16.4	
21-Feb	5	5	6	4	6	7	6	6	5	7	5	4	8	9	6	12	9	4	4	7	10	8	6	5	6.4	12.0	
22-Feb	7	8	8	7	9	12	8	4	4	4	16	3	2	3	M	14	11	8	6	44	11	14	8	7	9.4	43.5	
23-Feb	7	8	8	8	28	32	11	12	10	9	9	8	8	7	8	8	8	9	8	9	6	7	19	15	11.0	32.0	
24-Feb	9	10	11	11	12	11	5	6	8	6	5	5	4	8	5	11	18	4	6	5	5	4	7	5	7.5	17.6	
25-Feb	7	15	33	7	18	6	7	52	201	17	46	26	18	13	19	8	6	12	11	34	21	17	32	5	26.2	201.3	
26-Feb	5	7	7	6	8	8	7	4	5	7	7	7	7	7	6	8	5	3	24	6	11	9	6	12	7.6	24.0	
27-Feb	118	9	6	10	9	10	10	8	9	11	9	9	11	8	8	8	7	4	5	5	5	7	4	5	12.3	117.8	
28-Feb	9	8	10	10	9	50	9	8	5	6	6	5	3	5	4	2	5	13	30	3	4	4	5	9	9.3	50.1	
13.6 10.1 9.5 9.6 10.4 10.7 9.1 11.4 19.9 16.3 16.4 9.7 8.0 9.5 10.4 11.9 12.6 12.8 14.2 13.3 13.2 10.4 9.4 11.0																									Diurnal Average		
117.8 50.4 32.6 56.4 37.6 50.1 45.7 52.2 201.3 106.4 74.6 57.0 30.5 58.1 83.0 119.5 97.1 101.3 145.1 86.3 106.9 79.4 31.8 87.5																									Diurnal Maximum		
M - Maintenance N - Not Valid																											

Hourly Maximums

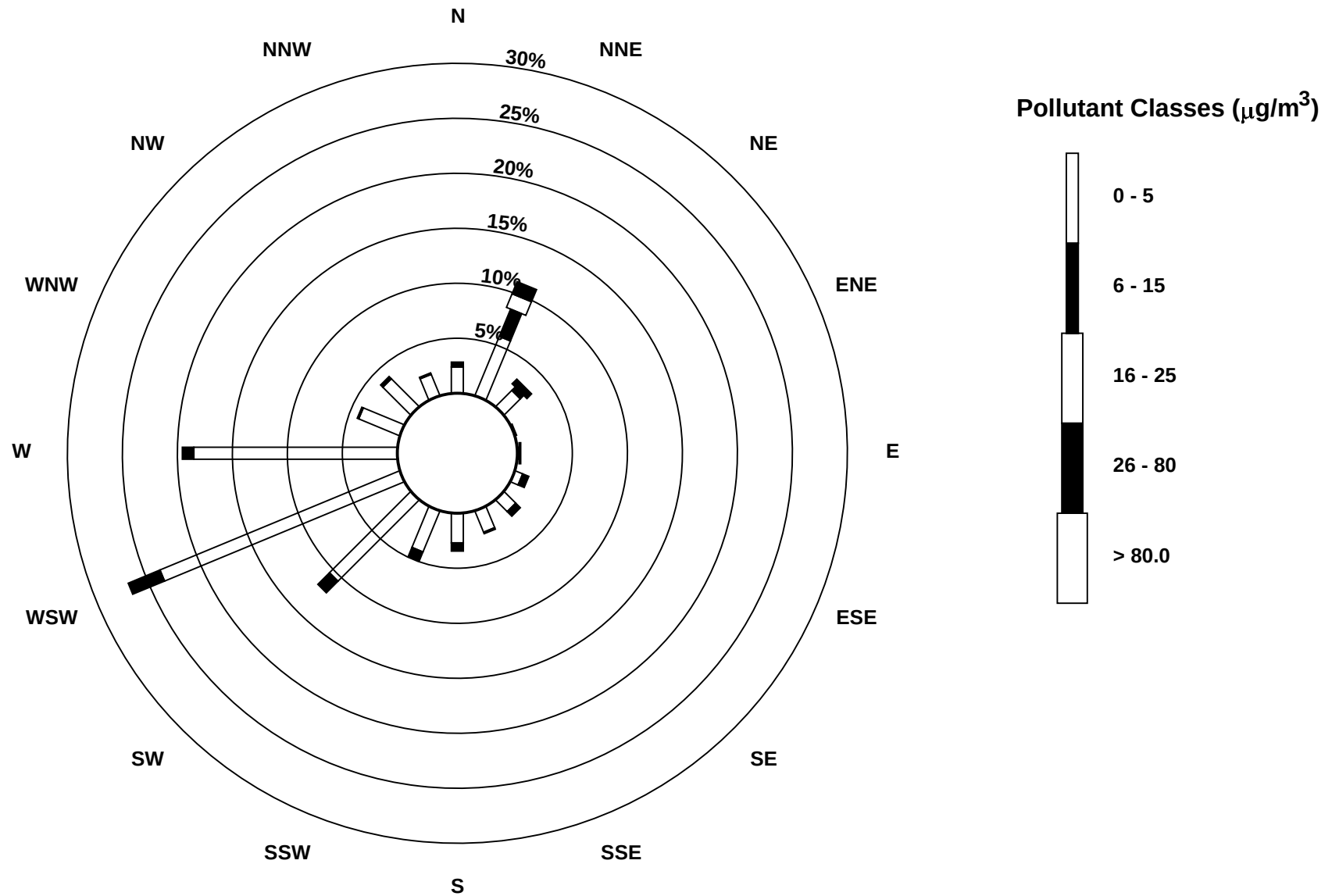
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Smoky Heights - February 2013



Pollutant Rose

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



Hourly Averages

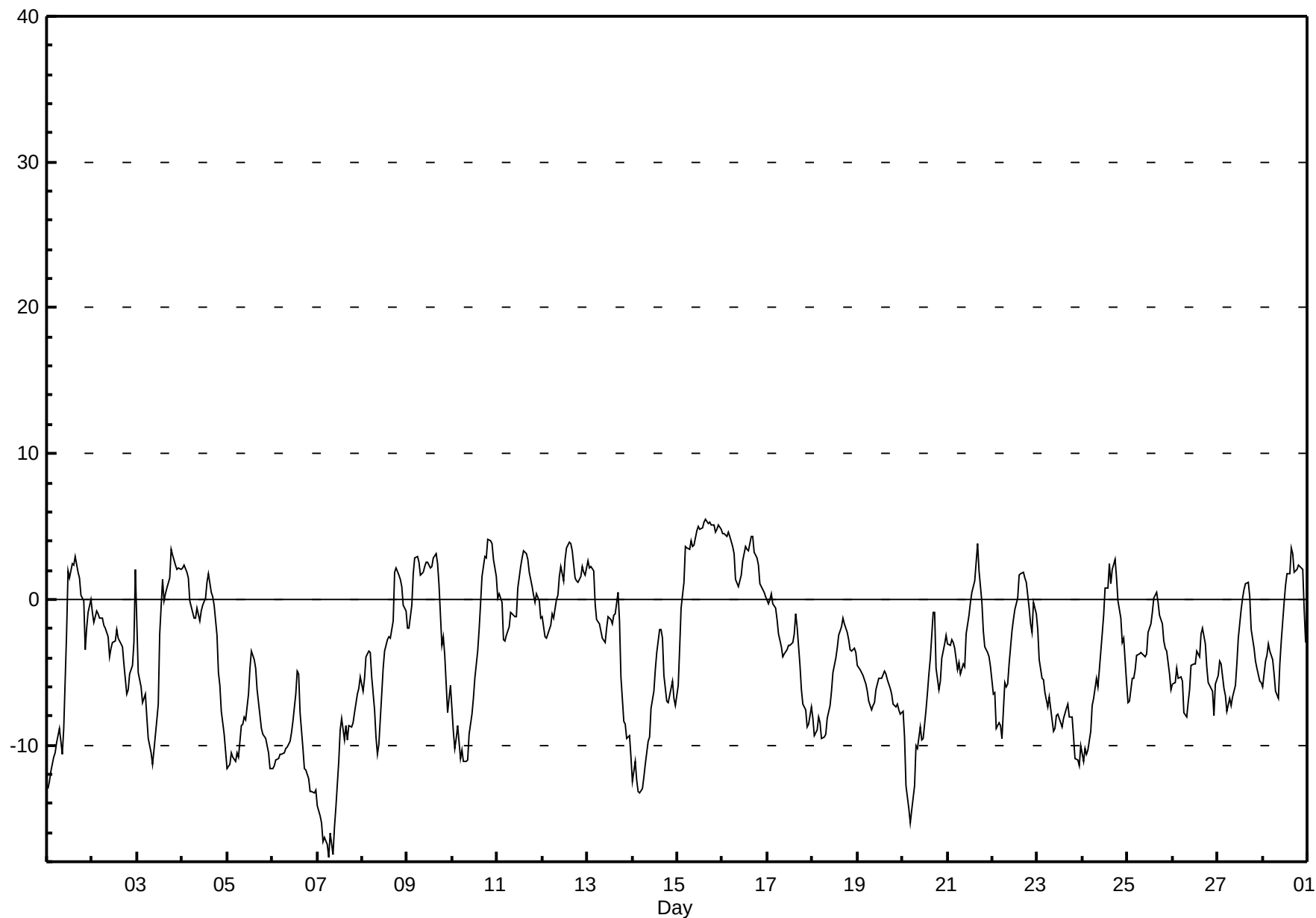
External Temperature (ET) - °C

Smoky Heights - February 2013

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.5 °C on Feb 15 16:00 Maximum Daily Average: 3.5 °C on Feb 15																								Hours in Service: 672 Hours of Data: 672 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: -18 °C on Feb 7 07:00 Maximum Diurnal Average: -0.6 °C at hour 17 Monthly Average: -3.82 °C												Minimum Daily Average: -11.8 °C on Feb 7 Minimum Diurnal Average: -6.0 °C at hour 9 Percentiles: P ₁ = -15.4 P ₁₀ = -10.4 Q ₁ = -7.4 Median = -3.6 Q ₃ = 0.1 P ₉₀ = 2.5 P ₉₉ = 5.1														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Feb	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	-13	-12	-12	-11	-11	-10	-9	-10	-11	-9	-2	2	1	2	2	3	2	1	0	0	-3	-2	-1	0	-4.2	3.0
2-Feb	-1	-2	-1	-1	-1	-1	-2	-2	-3	-4	-3	-3	-3	-2	-3	-3	-3	-4	-7	-6	-5	-5	-3	2	-2.7	2.0
3-Feb	-5	-6	-6	-7	-6	-8	-10	-11	-11	-10	-8	-7	-2	1	0	0	1	1	3	3	2	2	2	2	-3.3	3.5
4-Feb	2	2	2	1	0	-1	-1	-1	-1	-2	-1	0	0	1	2	0	0	0	-2	-5	-6	-8	-9	-10	-1.5	2.3
5-Feb	-12	-11	-11	-11	-11	-11	-11	-9	-9	-8	-8	-6	-5	-4	-4	-5	-6	-8	-9	-9	-10	-10	-11	-12	-8.7	-3.6
6-Feb	-12	-11	-11	-11	-11	-11	-11	-10	-10	-10	-9	-8	-7	-5	-5	-8	-10	-12	-12	-12	-13	-13	-13	-13	-10.3	-4.9
7-Feb	-14	-15	-15	-17	-16	-17	-18	-16	-18	-16	-14	-11	-9	-8	-10	-9	-10	-9	-9	-8	-8	-7	-6	-5	-11.8	-5.3
8-Feb	-6	-5	-4	-4	-4	-5	-8	-9	-11	-10	-6	-5	-4	-3	-3	-3	-2	2	2	2	1	1	0	-1	-3.5	2.1
9-Feb	-2	-2	0	2	3	3	3	2	2	2	3	3	2	2	3	3	2	1	-3	-3	-4	-8	-7	-6	0.0	3.1
10-Feb	-9	-10	-10	-9	-11	-10	-11	-11	-11	-9	-8	-7	-5	-4	-2	0	2	3	3	4	4	4	3	2	-4.3	4.1
11-Feb	0	0	0	-3	-3	-2	-2	-1	-1	-1	-1	1	2	3	3	3	3	2	1	0	0	0	0	-1	0.1	3.4
12-Feb	-1	-3	-3	-2	-2	-1	-1	0	0	2	2	1	3	4	4	4	3	2	1	1	2	2	2	2	0.9	3.9
13-Feb	3	2	2	2	0	-1	-2	-2	-3	-3	-2	-1	-1	-2	-1	-1	0	-1	-5	-8	-9	-10	-9	-11	-2.6	2.6
14-Feb	-13	-11	-12	-13	-13	-13	-12	-11	-10	-9	-8	-6	-5	-4	-2	-2	-3	-5	-7	-7	-7	-6	-7	-7	-8.0	-2.1
15-Feb	-6	-3	-1	1	4	4	3	4	4	4	5	5	5	5	5	6	5	5	5	5	5	5	5	5	3.5	5.5
16-Feb	5	5	4	5	4	4	3	1	1	1	2	3	4	3	3	4	4	3	3	2	1	1	1	0	2.8	4.6
17-Feb	0	0	0	0	-1	-1	-2	-3	-4	-4	-3	-3	-3	-3	-2	-1	-2	-5	-6	-7	-8	-9	-9	-7	-3.5	0.4
18-Feb	-8	-9	-9	-8	-8	-10	-9	-9	-8	-7	-6	-5	-4	-3	-3	-2	-1	-2	-2	-3	-3	-4	-3	-4	-5.5	-1.3
19-Feb	-4	-5	-5	-5	-6	-6	-7	-8	-7	-7	-6	-5	-5	-5	-5	-5	-5	-6	-7	-7	-7	-7	-8	-8	-6.2	-4.5
20-Feb	-8	-9	-13	-14	-15	-14	-13	-10	-10	-9	-10	-10	-8	-6	-5	-4	-1	-1	-5	-6	-6	-4	-3	-3	-7.8	-0.9
21-Feb	-3	-3	-3	-3	-3	-5	-4	-5	-4	-5	-2	-1	0	0	1	3	4	2	0	-2	-3	-4	-4	-5	-2.1	3.8
22-Feb	-7	-6	-9	-8	-9	-10	-6	-6	-6	-4	-2	-1	-1	0	2	2	2	1	1	-1	-2	-2	0	-1	-3.0	1.9
23-Feb	-2	-4	-5	-5	-6	-7	-7	-7	-9	-9	-8	-8	-8	-9	-8	-8	-7	-8	-8	-9	-11	-11	-11	-10	-7.8	-2.0
24-Feb	-11	-10	-11	-10	-9	-7	-7	-5	-6	-5	-2	-1	1	1	2	1	2	3	1	0	-1	-3	-3	-6	-3.6	2.7
25-Feb	-7	-7	-5	-5	-5	-4	-4	-4	-4	-4	-4	-2	-2	-1	0	1	0	-1	-2	-3	-3	-4	-5	-6	-3.4	0.5
26-Feb	-6	-6	-5	-5	-5	-6	-8	-8	-7	-6	-5	-4	-4	-4	-4	-2	-2	-3	-5	-6	-6	-6	-8	-6	-5.3	-2.0
27-Feb	-5	-4	-4	-6	-7	-8	-7	-7	-7	-6	-4	-3	-1	0	1	1	1	0	-2	-3	-4	-5	-6	-6	-3.8	1.2
28-Feb	-6	-4	-4	-3	-4	-4	-5	-6	-7	-4	-3	0	1	2	2	4	3	2	2	2	2	2	-1	-3	-1.4	3.5
-5.4 -5.4 -5.3 -5.4 -5.6 -5.8 -5.9 -5.9 -6.0 -5.4 -4.2 -3.1 -2.1 -1.3 -0.9 -0.6 -0.6 -1.3 -2.4 -3.1 -3.6 -3.9 -4.1 -4.2																								Diurnal Average		
4.6 4.5 4.3 4.6 4.3 3.6 3.4 4.0 3.7 3.7 4.7 5.0 4.8 5.0 5.3 5.5 5.2 5.3 5.1 5.1 4.6 4.8 5.1 4.8																								Diurnal Maximum		

Hourly Averages

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



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1 Spd	6	7	8	6	8	11	10	5	6	4	17	24	26	27	25	24	22	23	24	13	2	7	10	11	11.8	27.0	
Dir	252	271	272	237	229	218	213	94	47	81	259	255	261	261	262	252	252	252	243	272	246	272	285	311	256.4	260.8	
2 Spd	9	10	12	11	5	6	5	7	7	9	9	11	11	10	10	11	9	7	3	4	6	3	11	16	3.1	15.8	
Dir	284	266	240	246	228	187	190	10	26	28	30	31	28	25	24	27	33	348	344	305	34	236	230	267	335.4	266.7	
3 Spd	12	11	8	5	6	4	6	3	2	5	1	4	13	16	13	12	10	14	24	20	19	24	24	24	6.9	24.3	
Dir	36	29	47	35	27	14	18	5	329	24	295	127	235	244	250	238	254	239	251	242	237	234	239	236	251.7	251.0	
4 Spd	24	26	24	26	23	26	29	29	27	26	28	29	27	14	4	10	14	16	14	16	19	20	17	17	20.6	29.3	
Dir	236	244	255	255	253	260	260	266	261	259	259	265	258	278	46	239	259	247	260	262	267	266	267	273	258.9	265.3	
5 Spd	18	17	12	11	9	6	6	8	5	6	9	13	10	10	16	18	18	18	14	12	14	15	16	14	7.0	18.4	
Dir	267	274	227	233	242	280	253	268	305	9	32	31	31	26	23	21	19	18	24	24	25	27	28	23	359.1	18.7	
6 Spd	15	14	15	14	14	13	11	11	11	8	9	7	3	6	8	14	15	11	16	11	10	9	9	9	3.4	16.4	
Dir	26	26	26	29	29	27	28	28	34	37	32	33	48	194	210	245	264	260	240	249	243	254	244	239	338.5	240.4	
7 Spd	10	9	10	9	7	8	7	5	5	3	3	3	4	3	4	5	7	7	7	7	10	9	9	7	5.8	9.9	
Dir	246	246	220	211	190	226	232	227	204	191	119	206	222	146	170	182	178	207	237	241	241	226	239	241	219.7	245.5	
8 Spd	11	15	18	17	17	18	18	17	14	12	11	11	15	13	14	16	22	33	35	34	39	32	23	23	19.8	38.6	
Dir	251	267	260	263	268	260	273	266	262	255	244	257	248	254	250	261	260	253	252	248	255	249	240	257	255.6	255.3	
9 Spd	25	25	28	23	23	32	34	24	26	26	31	26	24	17	18	16	15	11	9	8	6	4	16	12	18.2	33.9	
Dir	262	263	264	264	291	298	308	295	304	306	316	321	325	328	327	329	319	301	271	310	334	227	276	274	297.9	308.4	
10 Spd	7	13	8	9	9	10	10	10	12	11	10	13	13	13	14	23	22	22	25	27	30	36	33	27	16.5	36.5	
Dir	222	212	234	234	225	211	208	220	231	234	223	239	250	254	236	240	247	249	250	236	254	246	249	249	240.2	246.3	
11 Spd	22	24	21	13	18	21	22	21	20	18	14	15	20	17	21	19	21	18	18	15	14	17	15	15	15	18.0	23.6
Dir	256	257	252	246	246	259	259	256	262	241	249	262	258	234	236	232	252	254	223	235	235	241	255	261	248.8	257.4	
12 Spd	19	16	18	14	11	10	12	15	18	18	25	22	14	17	21	22	37	28	15	8	10	11	13	14	15.9	36.9	
Dir	256	261	254	239	240	231	223	240	238	237	246	232	187	189	209	230	257	263	265	232	254	246	250	280	241.7	257.4	
13 Spd	21	16	22	36	45	46	45	35	33	28	26	19	13	15	15	11	6	8	2	6	14	15	13	13	19.3	46.3	
Dir	283	267	279	292	293	295	298	306	305	306	304	300	244	252	272	255	30	24	13	245	269	266	263	258	289.2	294.6	
14 Spd	18	13	12	12	16	19	16	15	15	15	16	12	11	11	12	15	13	12	18	14	10	10	9	8	13.0	18.8	
Dir	269	278	271	270	267	268	265	264	238	232	233	252	247	256	247	263	278	262	266	262	244	222	234	249	257.1	267.6	
15 Spd	7	12	20	25	32	29	34	36	25	26	37	41	36	34	32	32	37	35	40	40	33	40	45	44	31.2	45.2	
Dir	240	209	210	226	241	244	246	251	239	243	253	251	249	255	251	251	259	260	266	265	261	268	274	272	253.3	273.8	
16 Spd	48	50	50	49	43	36	25	16	17	22	18	20	24	26	20	17	21	23	24	17	15	13	16	11	23.1	50.4	
Dir	266	267	264	264	262	257	259	278	239	241	264	253	261	262	265	296	298	292	304	330	344	341	342	352	273.7	266.6	
17 Spd	11	15	21	20	28	28	25	20	14	15	13	14	14	11	9	3	5	8	4	7	8	2	5	3	9.3	28.4	
Dir	302	284	307	310	312	308	315	328	328	349	5	21	32	33	22	27	34	124	38	28	35	359	174	145	335.7	312.5	
18 Spd	4	4	5	6	7	6	10	19	22	17	12	13	15	16	14	14	14	11	13	14	13	11	11	13	9.6	21.8	
Dir	52	310	266	212	193	194	224	194	173	174	161	156	148	151	147	146	135	115	110	126	123	131	132	142	154.4	173.3	
19 Spd	9	7	9	8	8	10	8	8	7	8	8	10	11	12	10	11	10	8	5	1	2	5	2	3	6.2	12.0	
Dir	116	54	53	39	31	23	15	9	12	25	14	12	359	0	5	4	2	14	23	327	270	257	299	145	17.4	0.4	
20 Spd	6	7	9	10	7	5	9	6	7	7	8	10	12	13	12	8	13	13	11	13	16	17	17	14	9.1	17.5	
Dir	125	195	255	260	253	238	255	224	248	229	227	226	251	257	256	224	182	192	203	255	215	222	207	180	224.6	221.9	
21 Spd	10	11	7	7	13	9	8	8	14	12	7	14	9	8	9	11	13	10	8	11	11	15	12	11	8.9	14.8	
Dir	178	182	191	201	223	229	222	208	197	190	235	231	252	242	239	225	183	159	181	264	268	263	235	231	218.9	263.1	
22 Spd	12	8	8	8	6	8	7	3	3	6	4	6	11	9	3	10	13	15	10	3	5	8	25	20	5.3	25.5	
Dir	260	259	262	261	279	244	242	245	221	163	104	167	168	162	160	128	148	154	157	56	288	251	247	256	216.5	247.3	

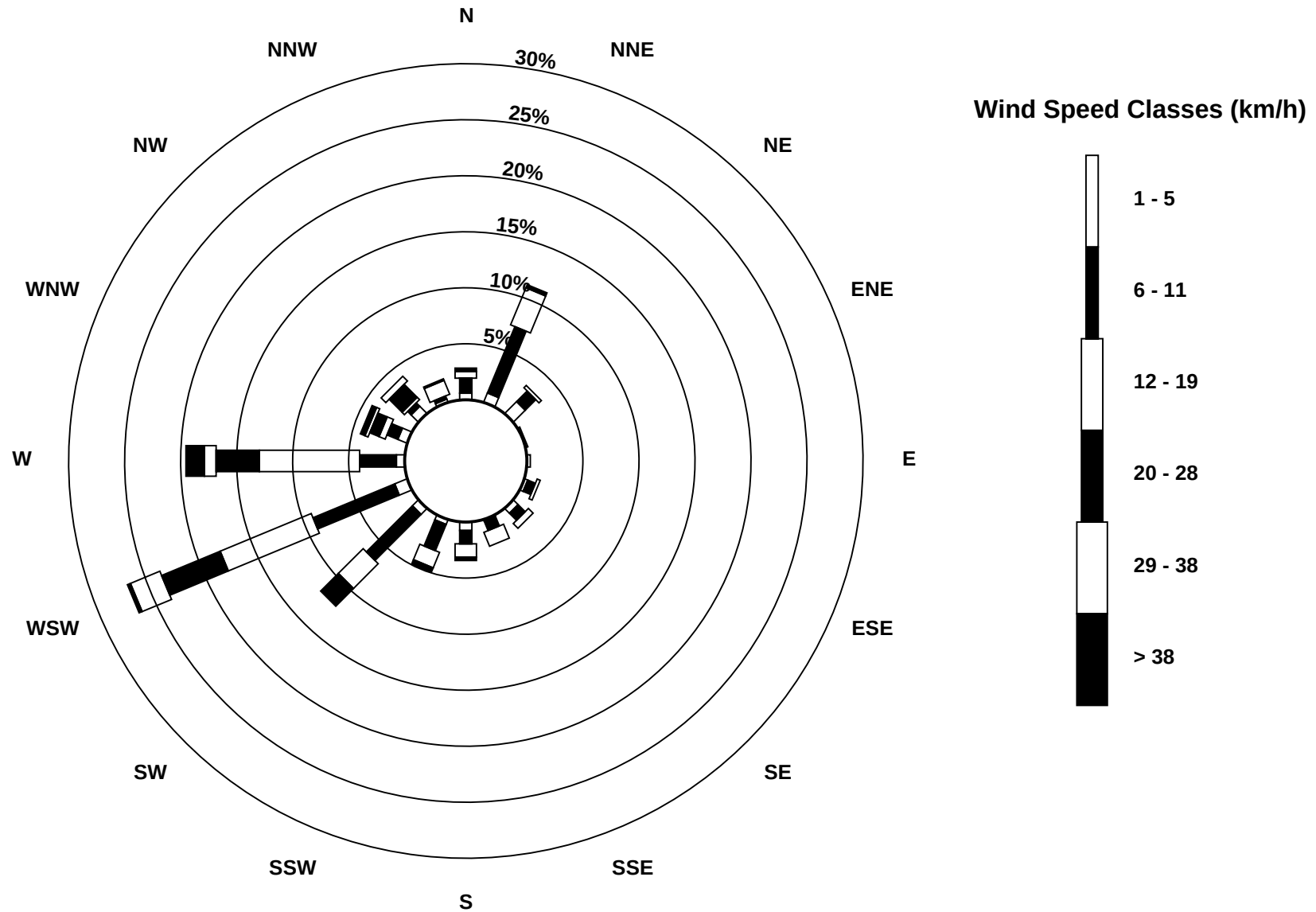
Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
23 Spd	27	22	22	17	9	4	8	14	8	11	10	11	22	18	16	12	8	6	4	6	8	14	9	11	10.2	27.0								
Dir	252	247	260	270	15	316	25	316	14	296	293	266	241	242	249	250	255	261	257	228	239	258	239	239	262.7	251.8								
24 Spd	10	10	9	7	7	13	14	17	17	16	25	23	16	19	26	28	37	39	32	28	25	13	8	4	15.8	38.9								
Dir	243	262	232	220	195	225	225	210	198	196	190	193	198	274	215	259	265	267	255	265	254	261	307	298	239.2	267.1								
25 Spd	3	4	4	4	6	8	4	4	10	13	15	9	11	17	26	23	25	11	17	20	14	15	3	5	10.6	26.2								
Dir	291	300	27	34	32	25	357	3	25	23	25	26	27	17	22	6	360	6	2	19	20	9	320	262	12.2	21.9								
26 Spd	14	27	20	10	7	12	6	17	4	5	18	15	14	16	18	14	10	13	9	5	15	11	15	6	6.0	26.8								
Dir	235	269	263	239	183	66	218	168	250	236	241	266	259	262	269	279	273	299	21	46	50	21	29	33	270.5	269.1								
27 Spd	3	2	11	19	10	14	22	23	26	26	23	12	13	14	15	11	13	14	12	13	13	10	9	6	13.2	26.1								
Dir	39	209	223	257	246	236	225	233	218	229	229	233	245	243	255	260	268	251	254	257	249	261	227	290	241.2	228.9								
28 Spd	10	6	8	8	8	2	5	11	11	11	13	16	21	14	12	5	6	7	10	11	12	12	8	9	6.9	21.0								
Dir	269	238	252	216	212	260	271	229	228	246	238	240	230	244	271	305	123	115	106	141	181	166	200	258	223.9	230.5								
Spd	10.1	11.4	11.7	11.4	10.1	10.3	10.8	9.6	8.0	7.6	8.8	9.0	9.6	9.3	8.6	9.1	9.5	9.7	9.5	8.8	8.5	10.0	10.3	9.7	Diurnal Average									
Dir	260.3	261.1	259.0	259.8	264.3	267.8	266.5	263.2	256.5	256.8	261.0	258.9	252.7	258.4	258.9	261.6	266.6	260.1	258.2	261.9	260.1	255.9	255.7	259.9	Diurnal Maximum									
Spd	47.9	50.4	49.5	48.9	45.2	46.3	44.6	36.0	32.9	28.0	36.6	40.8	36.2	34.0	32.0	32.3	37.3	38.9	40.1	39.9	38.6	40.1	45.2	43.8	Diurnal Maximum									
Dir	266.3	266.6	263.7	263.6	292.5	294.6	297.9	250.9	304.8	305.6	253.2	250.8	249.4	254.7	251.1	251.0	265.0	267.1	265.7	265.5	255.3	268.3	273.8	272.2										
Maximum Speed Value: 50 km/h on Feb 16 02:00																				Minimum Speed Value: 1 km/h on Feb 19 20:00										Hours in Service:				672
Maximum Daily Speed Average: 31.2 km/h on Feb 15																				Minimum Daily Speed Average: 3.1 km/h on Feb 7										Hours of Data:				672
Maximum Diurnal Speed Average: 11.7 km/h at hour 3																				Minimum Diurnal Speed Average: 7.6 km/h at hour 10										Hours of Missing Data:				0
Monthly Average Velocity: 9.62 km/h 260.29 deg																				Speed Percentiles: P ₁ = 2.4 P ₁₀ = 5.2 Q ₁ = 8.4 Median = 12.6 Q ₃ = 18.1 P ₉₀ = 26.3 P ₉₉ = 45.2										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	7		18		17		4		0		0		46																					
NorthEast	13		39		24		0		0		0		76																					
East	2		2		1		0		0		0		5																					
SouthEast	5		11		11		0		0		0		27																					
South	6		20		16		4		0		0		46																					
SouthWest	10		77		61		32		4		0		184																					
West	6		43		95		53		25		13		235																					
NorthWest	12		6		11		15		6		3		53																					
Total	61		216		236		108		35		16		672																					

Wind Rose

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



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - February 2013

Maximum Speed: 50 km/h on Feb 16 02:00																				Maximum Daily Speed Average: 32.3 km/h on Feb 15					Hours in Service: 672	
Minimum Speed: 3 km/h on Feb 13 19:00																				Minimum Daily Speed Average: 7.0 km/h on Feb 7					Hours of Data: 672	
Maximum Diurnal Speed Average: 16.6 km/h at hour 17																				Minimum Diurnal Speed Average: 13.6 km/h at hour 24					Hours of Missing Data: 0	
Monthly Average Speed: 15.03 km/h																				Percentiles: P ₁ = 3.5 P ₁₀ = 6.1 Q ₁ = 8.9 Median = 13.0 Q ₃ = 18.4 P ₉₀ = 26.4 P ₉₉ = 45.2					Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	6	7	8	6	8	11	11	9	6	5	18	24	26	27	25	24	22	23	24	19	6	7	10	12	14.4	27.0
2-Feb	11	10	12	11	8	7	7	8	8	9	9	11	11	10	10	11	9	8	5	5	7	5	12	18	9.3	17.5
3-Feb	12	11	8	6	6	5	6	5	5	6	6	6	13	17	13	12	10	15	25	20	19	24	24	24	12.4	24.6
4-Feb	24	26	25	26	23	26	29	29	27	26	29	29	27	16	8	11	14	17	14	16	19	20	17	17	21.5	29.3
5-Feb	18	17	13	11	9	7	7	8	6	6	9	13	10	10	16	18	18	18	14	12	15	15	16	14	12.6	18.5
6-Feb	15	14	15	14	14	13	11	11	11	9	9	8	4	6	8	14	15	11	17	11	10	9	10	9	11.1	16.7
7-Feb	10	9	11	9	8	9	8	5	5	4	3	3	4	4	5	5	7	7	7	7	10	10	9	7	7.0	10.5
8-Feb	12	15	18	18	17	18	18	17	14	12	11	12	15	13	14	16	22	33	35	34	39	32	24	23	20.1	38.7
9-Feb	25	25	28	24	23	32	34	24	26	27	31	27	24	17	18	17	16	11	9	8	7	7	16	12	20.2	34.0
10-Feb	7	14	8	9	9	10	10	10	12	11	10	13	13	13	15	23	22	23	25	28	30	37	33	28	17.2	36.8
11-Feb	22	24	21	13	19	21	22	21	20	18	14	15	20	17	22	19	21	18	18	15	14	17	15	15	18.5	23.7
12-Feb	19	16	18	15	11	10	12	15	18	19	25	22	14	17	22	22	37	28	15	10	11	11	13	14	17.3	37.2
13-Feb	21	17	23	37	46	46	45	35	33	28	26	20	13	15	16	12	6	8	3	7	14	15	13	13	21.3	46.5
14-Feb	18	14	12	12	16	19	16	15	15	15	16	12	11	11	12	15	14	13	19	14	10	10	9	8	13.6	18.8
15-Feb	8	13	21	26	32	29	34	36	25	26	37	41	36	34	32	33	37	35	40	40	33	40	45	44	32.3	45.3
16-Feb	48	50	50	49	43	36	26	17	17	22	18	20	24	26	20	18	21	23	24	18	15	13	16	12	26.1	50.5
17-Feb	11	16	21	20	29	28	26	20	15	16	13	14	14	11	9	5	7	9	5	7	8	4	6	4	13.2	28.6
18-Feb	4	5	6	6	8	7	10	20	22	17	12	13	15	16	14	14	14	11	13	14	13	11	11	13	12.1	21.9
19-Feb	9	8	9	8	8	10	9	8	7	8	8	10	12	12	11	11	10	8	5	3	3	5	4	4	8.0	12.3
20-Feb	6	8	9	10	7	5	9	6	7	8	8	10	13	13	12	8	13	13	12	13	16	18	17	14	10.6	17.5
21-Feb	10	11	7	7	13	9	8	8	14	12	8	14	9	9	9	11	13	10	10	11	11	15	13	12	10.6	14.9
22-Feb	12	9	8	8	6	8	7	4	3	6	4	7	11	9	5	10	13	15	10	4	6	9	26	20	9.2	25.6
23-Feb	27	22	22	17	12	8	11	15	10	12	10	12	22	18	17	12	8	7	4	6	9	14	10	11	13.2	27.1
24-Feb	10	10	10	7	7	13	14	17	17	16	25	24	18	20	27	28	38	39	32	28	26	14	8	4	18.8	39.2
25-Feb	4	5	5	4	6	8	4	5	10	13	15	9	11	18	26	24	26	11	17	21	14	16	5	6	11.7	26.2
26-Feb	15	27	24	12	11	17	16	17	4	5	18	15	14	16	18	14	11	14	9	5	16	11	16	7	13.8	27.4
27-Feb	4	4	17	19	10	15	23	23	26	26	24	12	13	14	15	11	13	14	13	14	13	11	10	6	14.6	26.5
28-Feb	10	8	9	9	8	6	6	11	11	11	13	16	21	14	13	5	6	8	11	11	12	12	9	9	10.4	21.1
																									Diurnal Average	
																									Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																										

Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - February 2013

Maximum Value: 84.6 deg on Feb 9 22:00																		Hours in Service: 672									
Minimum Value: 2.1 deg on Feb 4 08:00																		Hours of Data: 672									
Percentiles: P ₁ = 2.6 P ₁₀ = 4.0 Q ₁ = 5.7 Median = 9.1 Q ₃ = 16.6 P ₉₀ = 32.9 P ₉₉ = 75.0																		Hours of Missing Data: 0									
																		Hours of Calibration: 0									
																		Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																										Daily Maximum
1-Feb	13	17	13	15	7	5	18	55	22	33	27	4	3	2	3	5	4	5	4	54	84	25	8	22			83.9
2-Feb	38	22	11	6	74	36	53	32	31	13	12	8	6	10	5	7	11	23	62	43	49	73	23	40			74.1
3-Feb	5	8	15	26	21	50	22	46	70	50	78	57	5	9	10	11	8	7	9	6	3	5	3	3			77.5
4-Feb	4	5	7	4	5	3	2	2	3	4	4	3	3	24	83	18	7	7	16	4	4	3	5	3			83.0
5-Feb	4	9	23	10	14	15	19	7	31	18	7	7	6	4	5	6	6	5	5	5	4	5	4	5			31.1
6-Feb	4	4	7	6	7	5	6	6	6	8	5	9	59	21	16	8	4	10	12	10	13	25	17	17			59.2
7-Feb	20	15	25	10	18	30	31	27	20	48	49	38	11	42	20	24	20	11	11	11	13	26	24	17			48.9
8-Feb	11	9	5	7	8	8	4	5	5	5	11	12	2	6	7	4	3	3	3	3	4	5	8	7			12.0
9-Feb	3	3	3	5	7	5	5	8	9	5	5	9	8	10	12	13	11	15	11	16	42	85	6	10			84.6
10-Feb	20	16	7	9	12	12	7	5	7	6	10	5	5	5	11	12	9	5	9	6	5	8	13	9			19.6
11-Feb	5	3	5	7	13	3	4	3	4	7	7	6	3	12	5	7	7	10	7	5	3	3	8	5			13.3
12-Feb	3	5	11	7	5	4	8	7	16	12	9	11	6	6	9	5	7	6	6	36	25	5	7	7			35.9
13-Feb	6	9	16	8	8	4	5	5	5	5	9	11	11	8	21	17	31	6	68	18	6	3	9	12			68.3
14-Feb	5	5	7	7	4	3	4	6	6	3	4	10	7	9	10	7	27	16	12	14	10	8	7	18			26.7
15-Feb	16	20	9	10	4	4	3	4	8	5	4	5	3	4	5	7	3	3	3	4	5	4	3	3			19.7
16-Feb	3	3	2	3	3	4	4	9	13	6	9	6	6	3	7	21	6	4	6	11	11	11	8	14			20.9
17-Feb	14	8	6	6	6	8	13	9	12	12	11	11	7	8	9	75	43	28	43	14	8	65	52	44			75.5
18-Feb	12	30	20	24	28	36	10	16	7	7	8	9	5	4	5	6	6	12	7	8	6	11	11	7			36.2
19-Feb	16	20	8	8	7	6	6	9	10	9	16	12	12	13	13	10	11	11	19	80	41	13	73	58			79.6
20-Feb	18	19	13	8	14	13	9	13	17	13	10	8	8	3	5	17	8	8	12	13	7	4	11	6			19.4
21-Feb	6	5	10	20	6	8	6	14	5	5	23	13	9	21	14	15	5	8	41	11	5	7	24	19			41.1
22-Feb	17	17	10	10	10	13	22	36	25	30	32	38	7	21	64	8	4	6	20	49	33	51	6	7			64.3
23-Feb	6	11	13	6	42	55	49	27	41	11	14	29	10	6	4	6	6	11	25	11	13	4	26	14			55.0
24-Feb	12	11	18	15	27	10	10	7	10	5	5	8	26	17	19	13	7	7	9	7	6	10	17	30			29.5
25-Feb	33	39	27	24	20	5	20	15	6	4	5	10	6	7	4	14	11	6	7	15	6	22	49	39			49.0
26-Feb	19	12	35	37	50	50	82	35	24	18	12	9	7	8	4	6	9	19	16	15	14	11	8	11			82.0
27-Feb	55	52	61	11	11	14	19	10	7	10	9	5	5	4	15	8	5	3	13	6	7	19	36	44			61.0
28-Feb	16	47	34	32	20	62	29	12	9	9	5	7	4	9	11	18	51	27	21	12	10	8	23	13			61.8
	55.1	51.8	61.0	37.1	74.1	61.8	82.0	54.8	70.2	50.5	77.5	57.2	59.2	41.8	83.0	75.5	51.4	28.2	68.3	79.6	83.9	84.6	72.6	57.8			

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

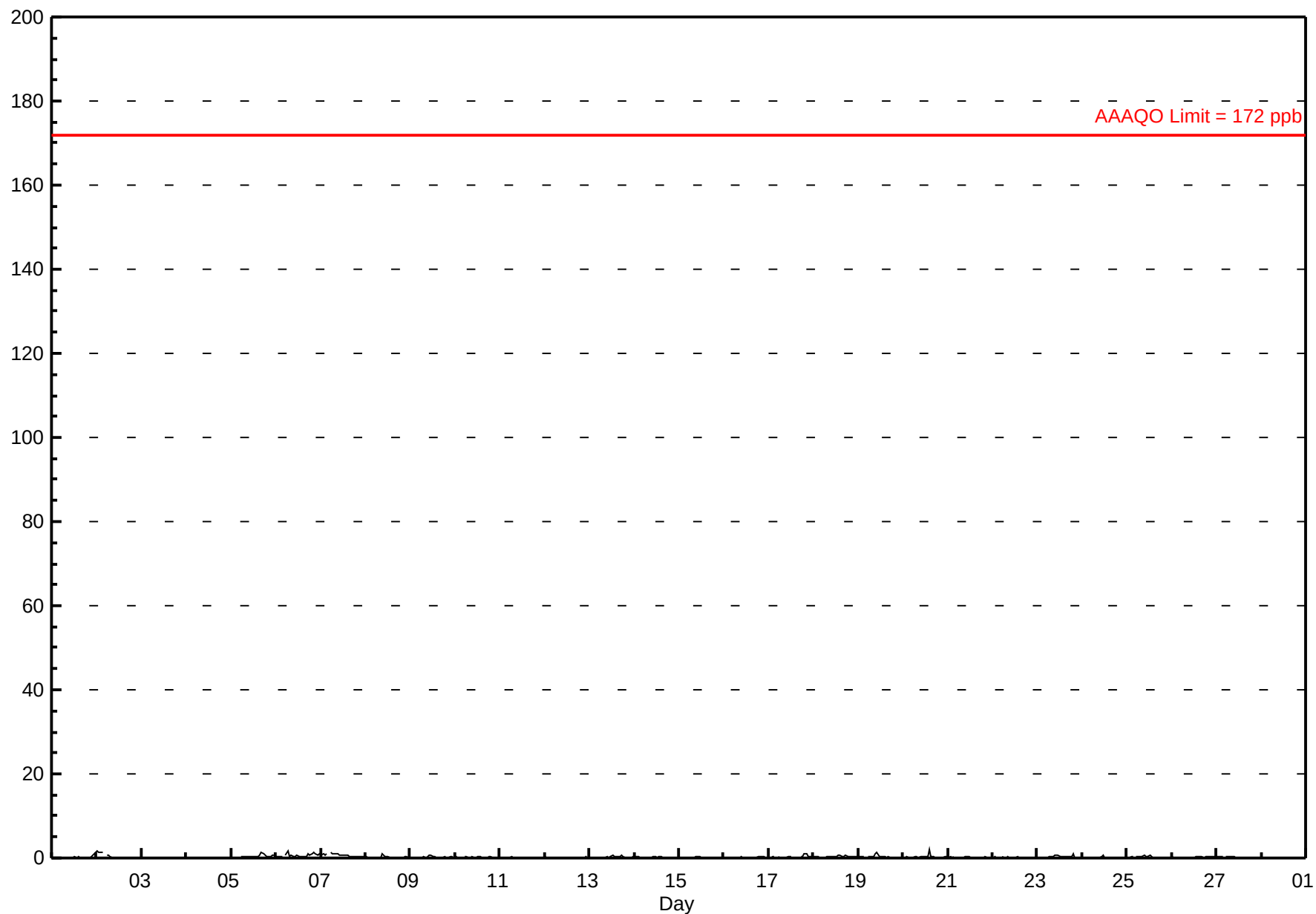
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.0 ppb on Feb 20 15:00 Maximum Daily Average: 0.7 ppb on Feb 7																				Hours in Service: 672 Hours of Data: 640 Hours of Missing Data: 32 Hours of Calibration: 32 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Feb 27 16:00 Maximum Diurnal Average: 0.3 ppb at hour 10 Monthly Average: 0.22 ppb										Minimum Daily Average: 0.1 ppb on Feb 4 Minimum Diurnal Average: 0.2 ppb at hour 16 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 1.3																
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-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2	1.4
2-Feb	2	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.6
3-Feb	0	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
4-Feb	0	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
5-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	1	0.4	1.2
6-Feb	0	0	0	0	A	1	2	0	1	0	0	1	0	0	0	0	0	1	1	1	1	1	1	1	0.6	1.6
7-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.7	1.2
8-Feb	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
9-Feb	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
10-Feb	0	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-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
12-Feb	0	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
13-Feb	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0.2	0.7
14-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
15-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
16-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
17-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	C	C	C	C	0	0	1	1	0	0	0	0.3	0.9
18-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0.3	0.6
19-Feb	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	1.2
20-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0.3	2.0
21-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
22-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
23-Feb	0	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0.3	0.9
24-Feb	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
25-Feb	0	0	0	0	A	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
26-Feb	0	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
27-Feb	0	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
28-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
0.2 0.2 0.2 0.2 -- 0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2																									Diurnal Average	
1.6 1.2 1.3 1.4 -- 1.2 1.6 1.0 1.2 1.0 1.2 0.8 0.7 0.6 2.0 0.8 1.2 1.1 0.8 0.9 1.5 1.2 0.7 1.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - February 2013



Hourly Maximums

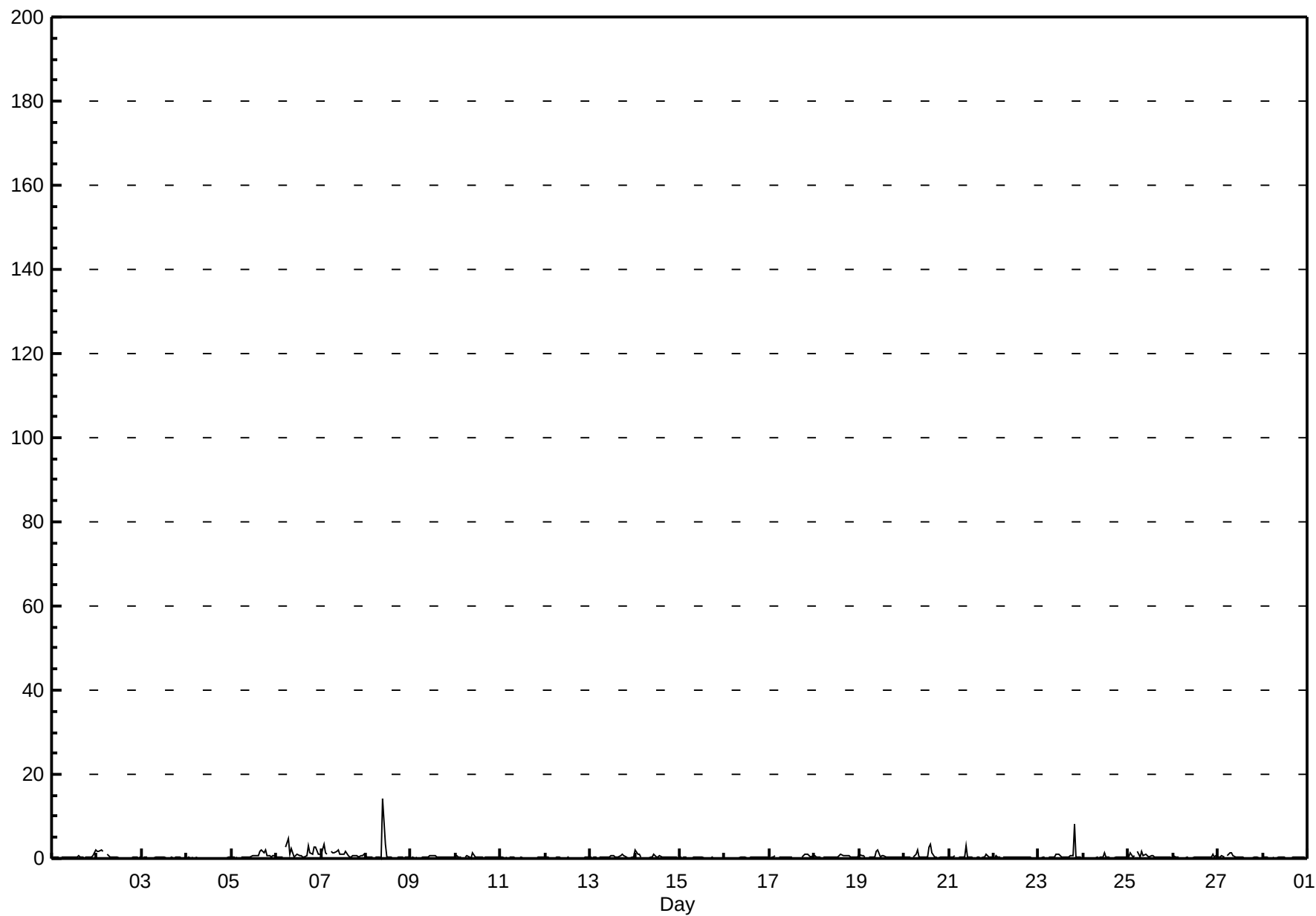
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - February 2013

Maximum Value: 14.1 ppb on Feb 8 10:00																				Maximum Daily Average: 1.3 ppb on Feb 6										Hours in Service: 672	
Minimum Value: 0 ppb on Feb 27 16:00																				Minimum Daily Average: 0.2 ppb on Feb 4										Hours of Data: 640	
Maximum Diurnal Average: 1.1 ppb at hour 10																				Minimum Diurnal Average: 0.3 ppb at hour 16										Hours of Missing Data: 32	
Monthly Average: 0.46 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.9 P ₉₉ = 3.3										Hours of Calibration: 32	
																														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-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	0.4	2.1					
2-Feb	2	2	2	2	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.1					
3-Feb	0	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-Feb	0	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					
5-Feb	0	0	0	0	A	1	0	0	0	0	0	1	1	1	1	2	2	2	2	1	1	1	1	1	0.7	2.1					
6-Feb	0	0	0	0	A	3	5	1	2	0	1	1	1	1	0	0	1	3	1	1	3	3	1	1	1.3	4.6					
7-Feb	1	4	1	1	A	2	2	1	2	2	1	1	1	2	1	0	0	1	1	1	0	1	1	1	1.1	3.5					
8-Feb	0	0	0	0	A	0	0	0	0	14	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	14.1					
9-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.8					
10-Feb	1	0	0	0	A	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5					
11-Feb	0	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					
12-Feb	0	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					
13-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	0	0	0.4	1.0					
14-Feb	2	1	1	0	A	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0.4	2.0					
15-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5					
16-Feb	0	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					
17-Feb	0	0	0	1	A	0	0	0	0	0	0	0	0	C	C	C	C	0	1	1	1	1	0	1	0.5	1.2					
18-Feb	1	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0.5	0.9					
19-Feb	1	1	1	0	A	0	0	0	0	2	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0.5	2.1					
20-Feb	0	0	0	0	A	0	1	2	0	0	0	0	0	3	3	1	0	0	0	0	0	0	0	0	0.7	3.4					
21-Feb	0	0	0	1	A	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.4	3.1					
22-Feb	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7					
23-Feb	0	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	1	1	8	0	0	0	0	0.8	8.2					
24-Feb	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5					
25-Feb	0	1	0	1	A	2	0	2	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0.6	1.7					
26-Feb	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.3	1.0					
27-Feb	0	0	1	0	A	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.5					
28-Feb	0	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					
0.4 0.5 0.4 0.4 -- 0.5 0.5 0.5 0.4 1.1 0.6 0.4 0.4 0.5 0.4 0.3 0.3 0.4 0.4 0.6 0.4 0.4 0.3 0.4																									Diurnal Average						
2.0 3.5 2.1 1.5 -- 2.7 4.6 2.0 2.3 14.1 3.4 1.5 0.9 2.8 3.4 1.7 2.0 3.1 2.1 8.2 2.5 2.8 1.1 2.1																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

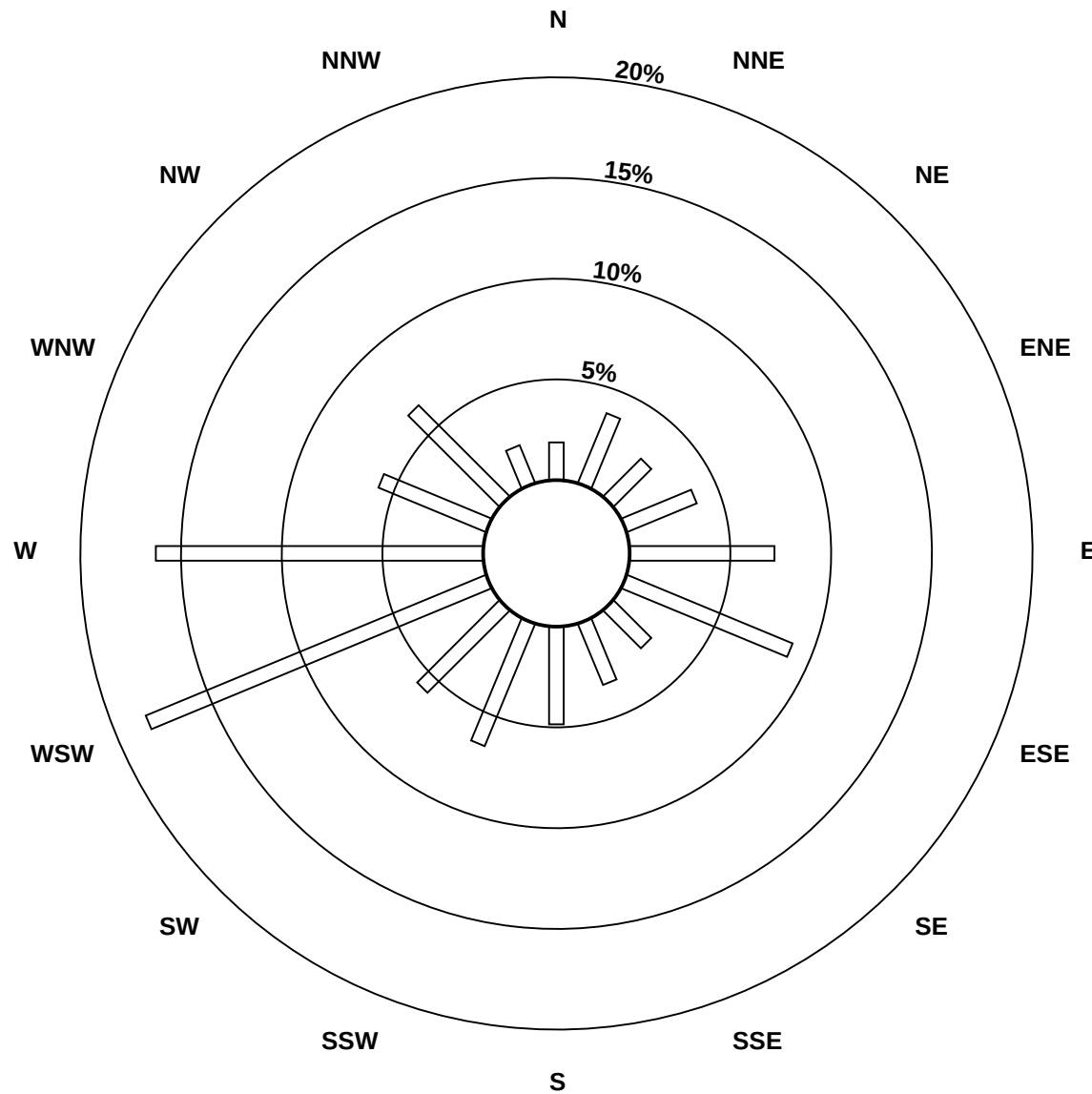
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - February 2013

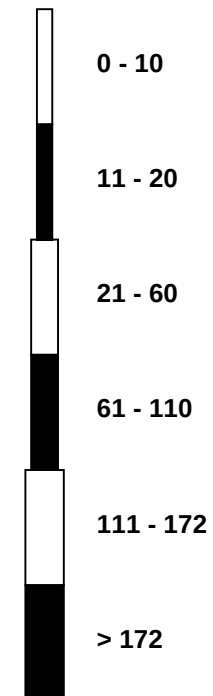


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - February 2013

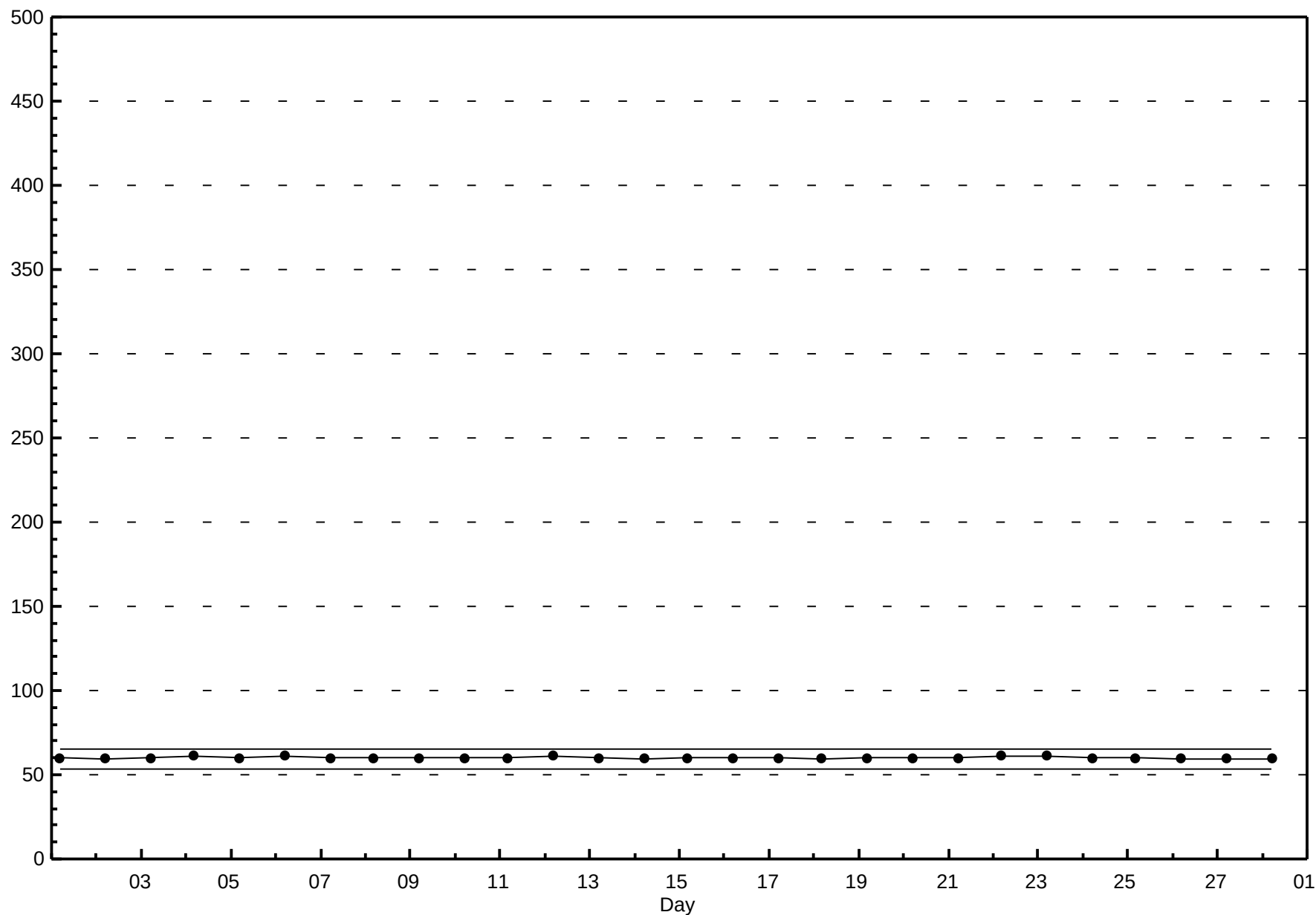


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - February 2013



Hourly Averages

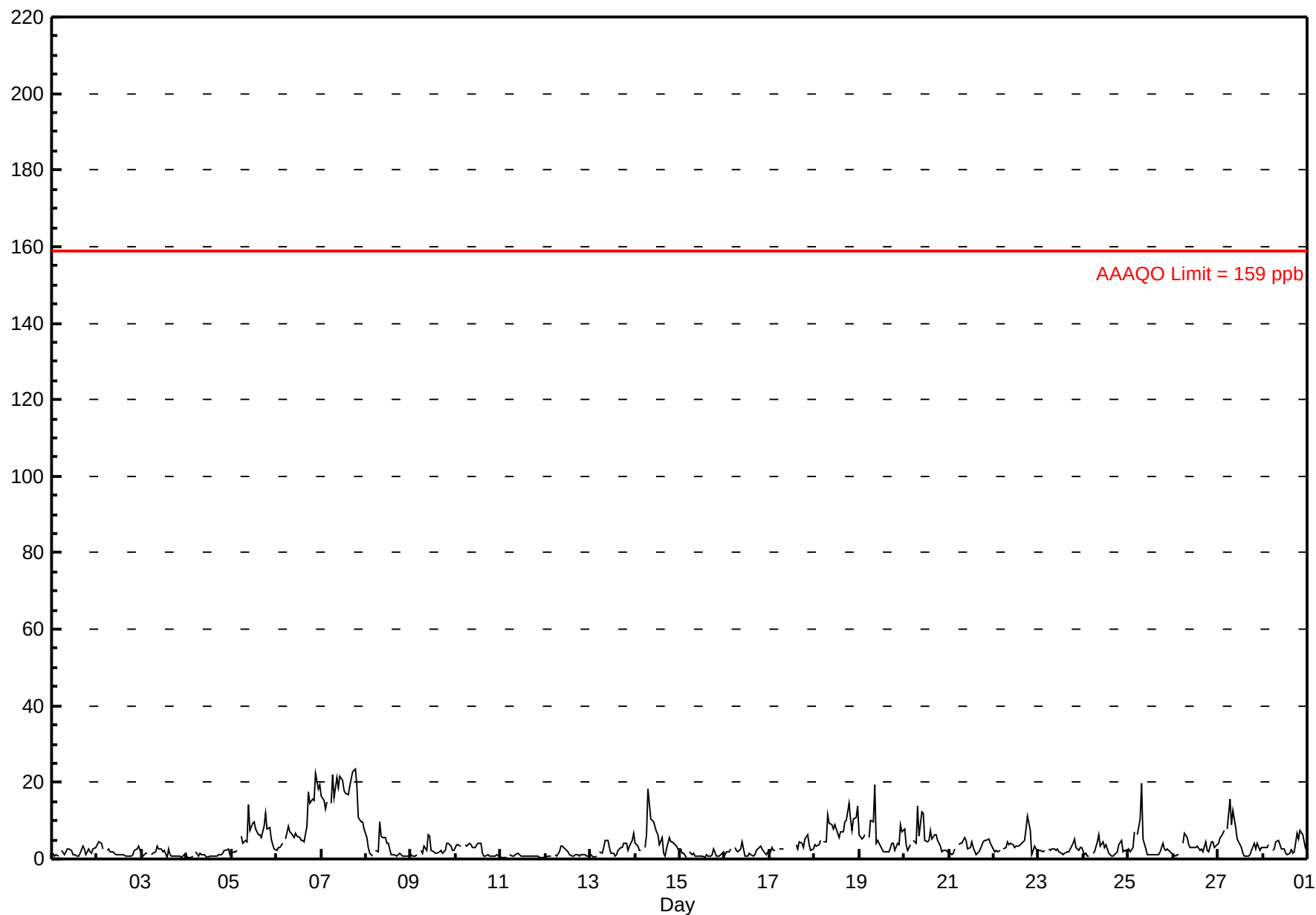
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 23.4 ppb on Feb 7 19:00 Maximum Daily Average: 16.9 ppb on Feb 7																								Hours in Service: 672 Hours of Data: 638 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Feb 4 03:00 Maximum Diurnal Average: 6.2 ppb at hour 8 Monthly Average: 3.86 ppb												Minimum Daily Average: 0.7 ppb on Feb 11 Minimum Diurnal Average: 2.6 ppb at hour 3 Percentiles: P ₁ = 0.5 P ₁₀ = 0.7 Q ₁ = 1.3 Median = 2.5 Q ₃ = 4.6 P ₉₀ = 8.6 P ₉₉ = 21.2														
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-Feb	2	1	1	1	A	2	1	2	3	3	2	1	1	1	1	2	4	3	1	3	2	2	2	3	1.8	3.5
2-Feb	4	4	4	3	A	2	3	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	3	2	1.9	4.3
3-Feb	1	1	1	2	A	1	1	2	3	3	3	2	2	1	3	1	1	1	1	1	1	1	1	2	1.4	3.2
4-Feb	0	0	0	1	A	2	1	2	1	1	1	0	1	1	1	1	1	1	1	1	2	2	3	1	1.1	2.5
5-Feb	1	2	2	2	A	6	4	5	4	14	7	9	10	8	6	6	6	9	12	8	8	5	4	3	6.1	14.1
6-Feb	2	3	3	4	A	5	9	7	7	6	7	6	6	5	5	4	9	18	14	16	15	22	18	19	9.1	22.3
7-Feb	16	15	13	15	A	15	22	16	21	19	22	21	18	17	17	19	21	23	23	19	11	10	10	8	16.9	23.4
8-Feb	6	3	1	1	A	2	2	10	6	5	5	4	4	1	1	1	1	1	1	1	1	1	1	1	2.6	9.8
9-Feb	1	1	1	1	A	2	2	4	2	6	6	2	2	1	2	2	2	2	2	4	4	3	2	2	2.5	6.4
10-Feb	4	4	3	3	A	4	3	4	4	3	3	4	4	4	1	1	1	1	1	1	1	1	1	1	2.4	4.2
11-Feb	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.3
12-Feb	0	1	1	1	A	1	1	2	3	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1.3	3.5
13-Feb	1	1	1	1	A	2	1	3	5	5	3	2	2	1	1	2	3	3	4	4	2	3	5	7	2.6	6.5
14-Feb	4	3	2	2	A	3	6	18	10	10	10	7	6	4	6	1	1	3	5	5	5	4	3	3	5.3	18.4
15-Feb	3	1	2	0	A	2	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	2	1.1	2.7
16-Feb	1	2	2	3	A	3	2	2	2	5	2	1	1	2	1	1	1	2	3	3	3	1	1	2	2.0	4.6
17-Feb	2	3	2	2	A	2	2	3	C	C	C	C	C	C	4	3	5	4	3	5	6	4	2	3	--	6.4
18-Feb	4	3	4	5	A	5	5	12	9	9	8	9	7	6	7	7	10	10	14	10	8	10	11	14	8.0	14.5
19-Feb	6	5	6	6	A	6	10	10	19	4	5	4	2	2	2	2	2	4	4	4	2	4	9	7	5.5	19.4
20-Feb	8	4	2	4	A	5	4	14	6	12	12	5	4	5	8	5	6	6	5	3	2	2	2	2	5.5	13.6
21-Feb	2	1	2	2	A	4	4	4	5	5	3	3	4	3	1	2	2	3	5	5	5	5	4	3	3.3	5.4
22-Feb	2	2	2	2	A	3	3	4	4	4	4	3	3	3	4	4	5	8	11	7	1	2	3	2	3.7	11.0
23-Feb	2	2	2	2	A	3	2	2	2	2	3	2	2	1	2	2	2	2	4	5	3	2	3	3	2.5	5.4
24-Feb	1	1	1	1	A	1	2	4	6	3	5	3	4	2	1	1	1	1	2	4	5	2	2	2	2.3	6.5
25-Feb	3	2	3	7	A	6	10	20	5	3	1	1	1	1	1	1	1	2	4	3	2	3	2	1	3.6	19.6
26-Feb	1	1	1	1	A	4	7	6	4	3	3	3	3	3	2	2	2	5	2	2	4	4	3	3	3.1	6.7
27-Feb	4	5	6	7	A	8	16	9	13	8	5	4	3	1	1	1	1	1	2	4	3	4	2	3	4.9	15.6
28-Feb	3	3	3	4	A	2	3	4	5	4	3	3	2	1	2	2	1	2	7	5	7	6	4	3	3.4	7.4
3.0 2.7 2.6 3.0 -- 3.6 4.5 6.2 5.8 5.3 4.7 3.8 3.5 2.8 2.9 2.7 3.2 4.2 5.0 4.5 3.9 3.9 3.7 3.6																								Diurnal Average		
16.4 15.3 13.1 14.8 -- 14.7 21.8 19.6 21.4 18.8 21.6 20.6 18.1 17.0 16.8 19.0 20.8 22.9 23.4 19.1 15.2 22.3 18.1 19.4																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - February 2013



Hourly Maximums

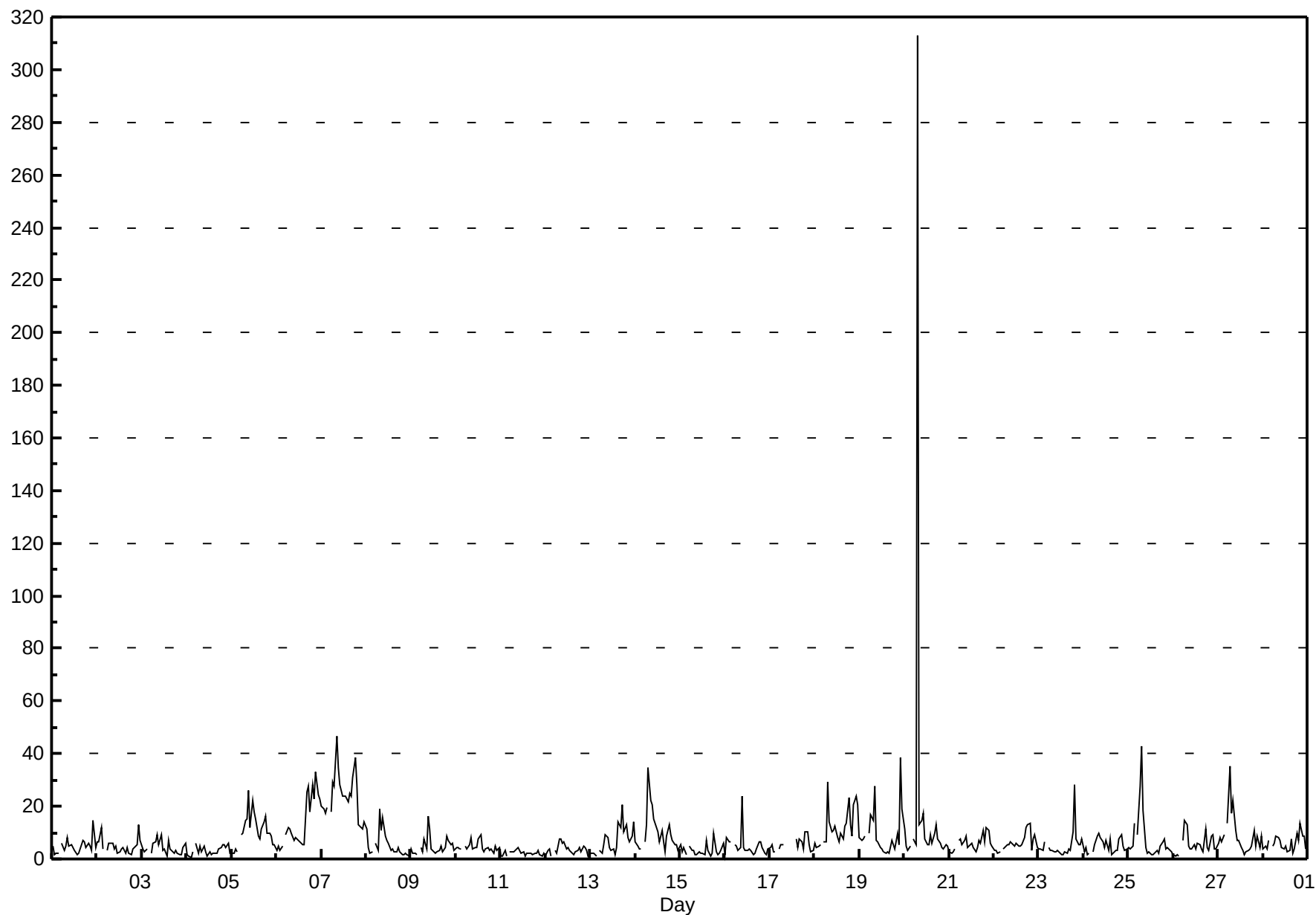
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - February 2013

Maximum Value: 312.9 ppb on Feb 20 08:00																				Maximum Daily Average: 23.9 ppb on Feb 7					Hours in Service: 672	
Minimum Value: 1 ppb on Feb 4 03:00																				Minimum Daily Average: 2.3 ppb on Feb 11					Hours of Data: 638	
Maximum Diurnal Average: 22.6 ppb at hour 8																				Minimum Diurnal Average: 4.3 ppb at hour 3					Hours of Missing Data: 34	
Monthly Average: 7.52 ppb																				Percentiles: P ₁ = 1.1 P ₁₀ = 2.0 Q ₁ = 3.1 Median = 4.8 Q ₃ = 8.3 P ₉₀ = 14.7 P ₉₉ = 32.4					Hours of Calibration: 34	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	5	2	2	2	A	6	3	5	8	5	5	4	3	2	2	4	7	6	4	6	5	3	15	5	4.8	14.7
2-Feb	7	7	12	4	A	3	6	6	6	4	5	2	3	4	4	2	4	2	2	4	4	5	13	7	5.1	13.2
3-Feb	4	3	3	4	A	2	6	7	9	6	9	3	4	1	7	4	3	2	3	2	1	1	4	6	4.2	9.5
4-Feb	1	1	1	3	A	6	2	5	3	5	3	1	3	2	2	2	2	4	5	6	5	4	6	2	3.1	5.8
5-Feb	2	2	4	3	A	9	10	15	15	26	12	22	18	15	8	8	12	14	16	10	9	9	5	6	10.9	25.8
6-Feb	3	5	3	5	A	9	12	11	10	7	8	8	6	6	6	5	25	27	18	28	23	33	25	23	13.3	33.4
7-Feb	20	19	17	19	A	18	29	28	47	35	28	24	24	24	22	25	24	31	38	28	13	12	11	14	23.9	46.7
8-Feb	11	4	2	3	A	6	3	19	11	16	9	7	6	3	4	3	3	4	3	2	2	2	2	1	5.4	18.9
9-Feb	4	2	2	2	A	4	3	8	4	16	12	4	3	2	3	3	5	3	4	9	7	5	6	3	4.9	16.3
10-Feb	4	4	4	4	A	5	4	5	8	4	4	4	8	9	4	3	4	5	3	4	2	5	3	4	4.5	9.1
11-Feb	1	1	3	1	A	3	3	3	3	5	3	2	3	1	2	2	2	2	2	2	3	2	1	2	2.3	4.5
12-Feb	1	3	4	1	A	3	2	8	8	6	6	4	5	3	2	2	2	3	4	3	5	4	3	1	3.7	7.8
13-Feb	2	2	2	1	A	3	2	5	9	8	4	3	4	2	5	14	12	21	11	13	8	6	9	14	7.0	20.8
14-Feb	7	5	4	4	A	6	13	35	22	21	15	12	10	6	11	6	3	9	13	9	7	6	5	3	10.1	34.9
15-Feb	5	3	4	2	A	5	3	3	2	2	3	2	2	1	7	3	1	2	10	3	1	2	3	6	3.3	9.6
16-Feb	2	8	7	6	A	5	5	3	4	24	5	3	3	4	3	2	2	4	6	6	4	2	2	4	5.0	24.0
17-Feb	4	5	3	3	A	4	5	5	C	C	C	C	C	C	8	5	8	7	4	10	10	6	3	3	--	10.5
18-Feb	6	4	5	5	A	7	6	29	14	10	11	13	8	6	10	8	13	13	23	13	9	21	24	21	12.2	29.4
19-Feb	8	7	7	9	A	10	17	15	28	7	6	4	4	3	2	3	2	7	6	4	10	5	39	19	9.6	38.7
20-Feb	12	5	3	5	A	7	5	313	13	15	17	8	6	6	9	6	10	13	8	6	4	4	5	5	21.1	312.9
21-Feb	3	2	3	4	A	7	8	5	7	9	4	5	6	4	3	4	7	6	11	7	12	11	6	5	6.1	11.9
22-Feb	3	3	2	3	A	4	5	6	5	7	6	5	6	5	5	5	8	12	13	14	3	8	9	5	6.1	13.7
23-Feb	4	4	3	6	A	4	3	3	3	3	3	3	2	1	3	2	4	3	10	28	8	5	5	8	5.2	28.1
24-Feb	3	4	2	2	A	3	5	9	10	8	7	4	7	4	8	1	2	3	3	8	9	5	3	4	4.9	9.6
25-Feb	4	4	5	13	A	9	28	43	19	4	2	3	2	2	2	3	2	5	6	8	4	5	3	3	7.7	43.0
26-Feb	2	1	2	1	A	7	15	13	5	4	4	5	4	6	6	4	3	11	4	3	8	9	4	4	5.4	14.8
27-Feb	6	8	7	9	A	13	35	17	22	11	7	7	5	3	2	3	3	4	5	11	5	9	4	9	8.9	35.2
28-Feb	4	5	4	7	A	5	6	9	8	7	4	4	5	2	3	8	2	4	10	7	14	9	9	4	6.0	13.7
4.9 4.4 4.3 4.7 -- 6.2 8.8 22.6 11.2 10.1 7.5 6.2 5.8 4.7 5.4 5.0 6.3 8.1 8.8 9.0 7.0 7.1 8.1 6.7																									Diurnal Average	
20.2 18.7 17.4 19.5 -- 18.0 35.2 312.9 46.7 34.7 28.2 23.8 24.0 24.0 21.5 24.7 25.5 30.7 38.4 28.4 22.6 33.4 38.7 22.8																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

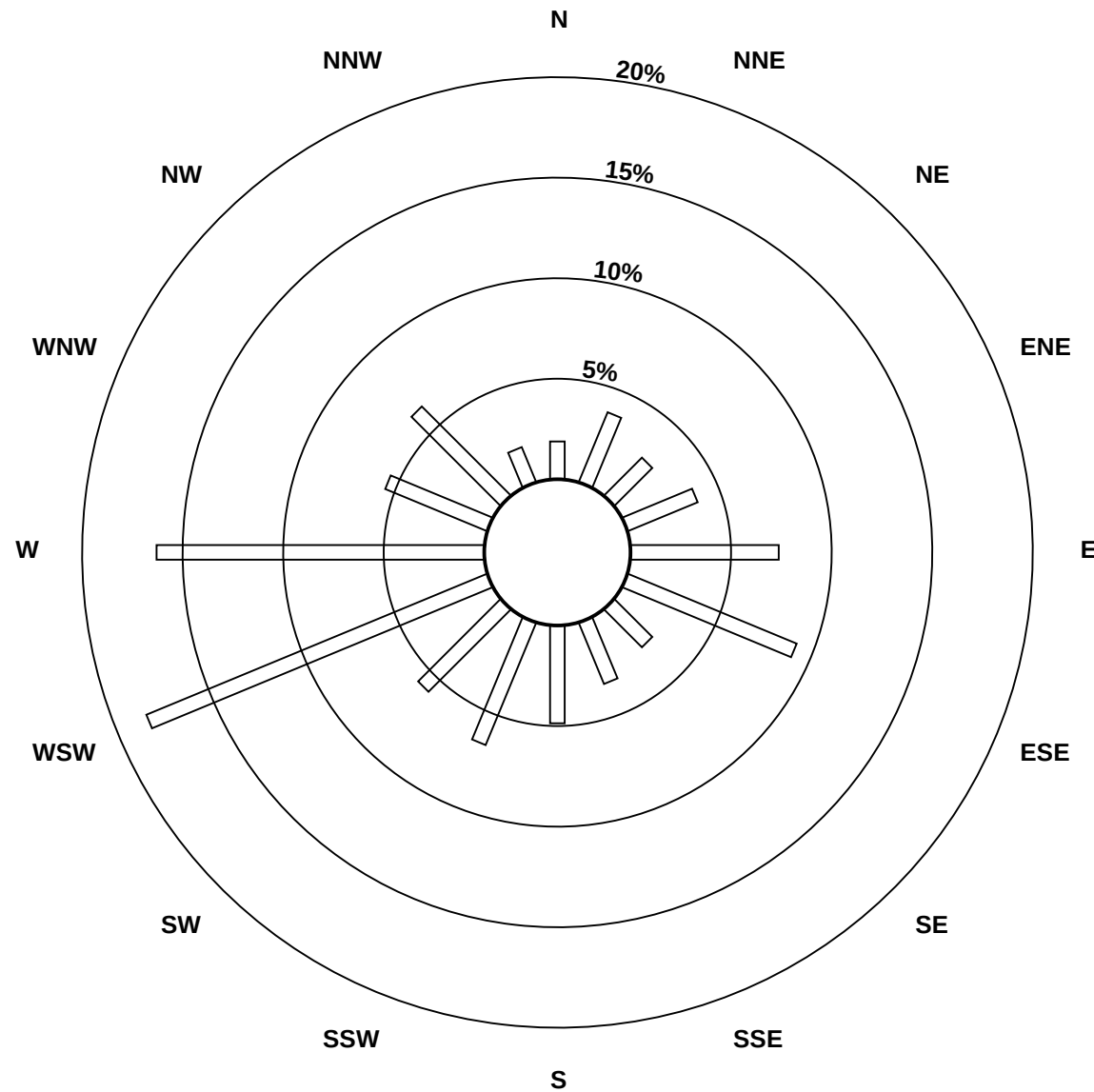
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - February 2013

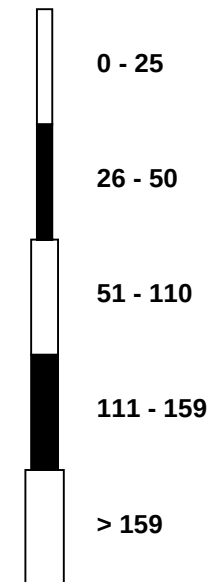


Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - February 2013

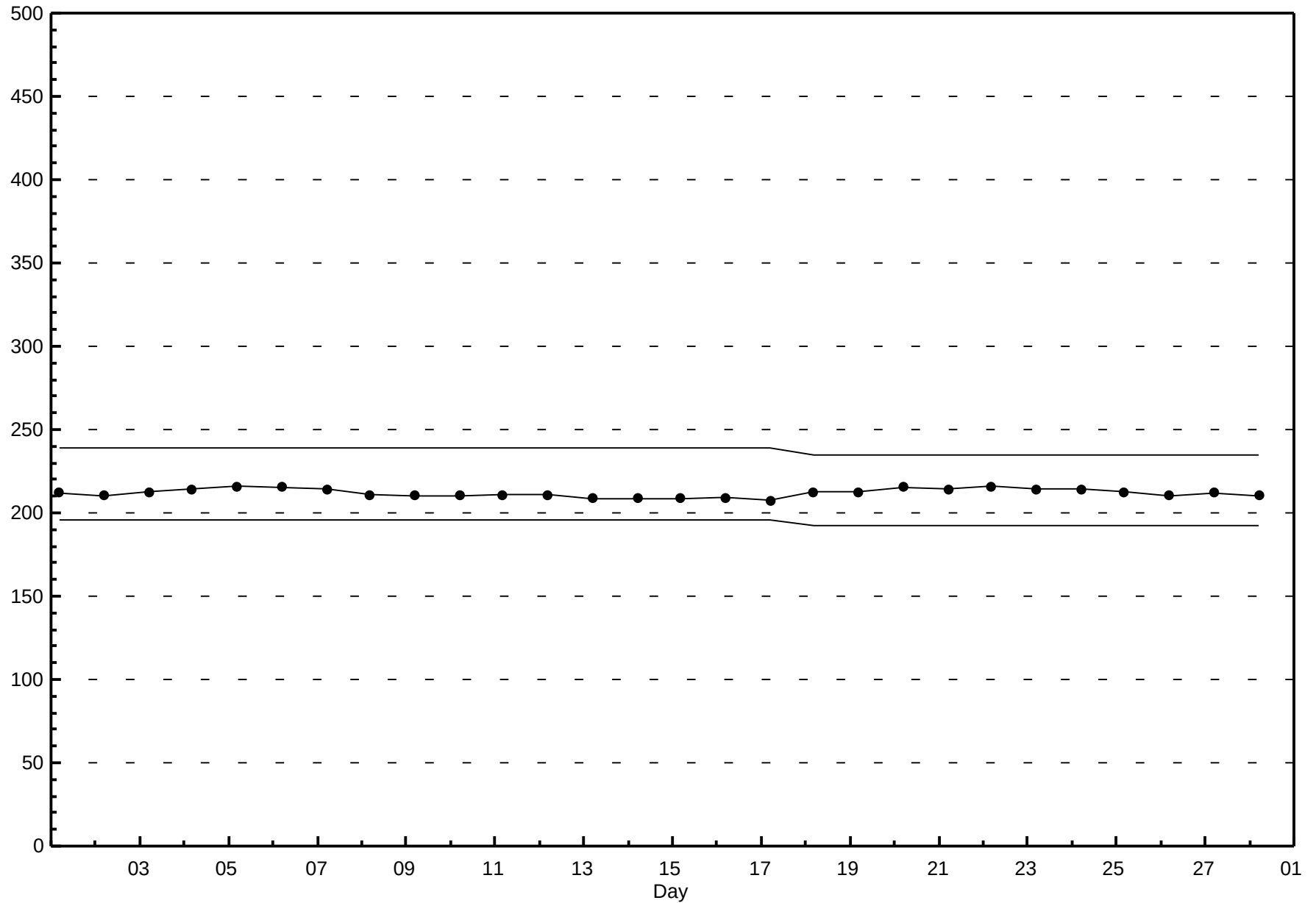


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - February 2013



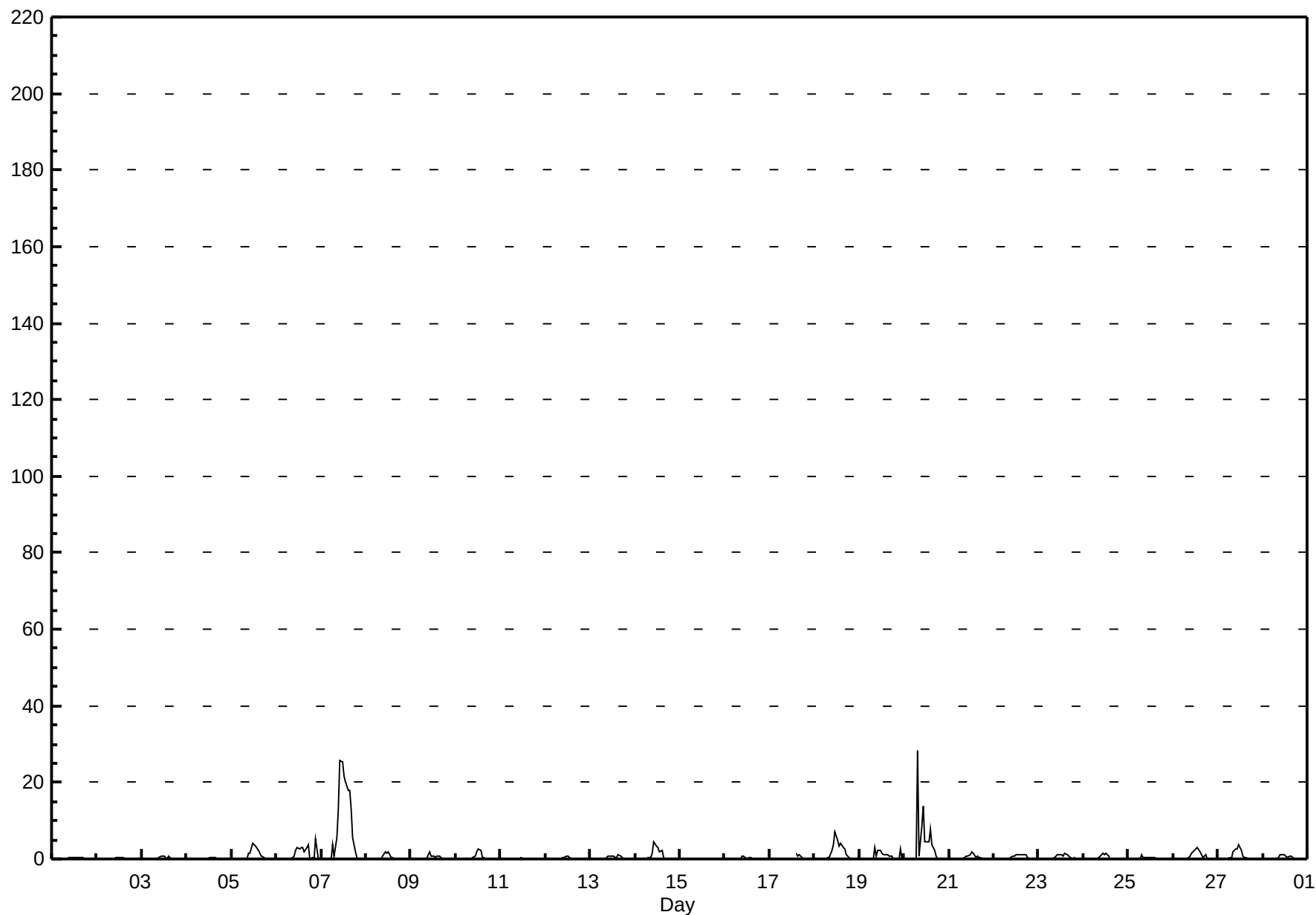
Hourly Averages

Nitrogen Oxide (NO) - ppb Beaverlodge - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.2 ppb on Feb 20 08:00 Maximum Daily Average: 7.5 ppb on Feb 7																								Hours in Service: 672 Hours of Data: 638 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Feb 1 03:00 Maximum Diurnal Average: 2.7 ppb at hour 11 Monthly Average: 0.78 ppb												Minimum Daily Average: 0.0 ppb on Feb 15 Minimum Diurnal Average: 0.0 ppb at hour 3 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.4 P ₉₀ = 1.8 P ₉₉ = 16.2														
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-Feb	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
2-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
3-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0.2	0.8
4-Feb	0	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
5-Feb	0	0	0	0	A	0	0	0	0	2	1	4	4	3	2	1	1	0	0	0	0	0	0	0	0.8	4.1
6-Feb	0	0	0	0	A	0	0	0	0	1	2	3	3	3	3	2	3	4	0	0	0	5	0	0	1.3	5.3
7-Feb	0	0	0	0	A	0	4	1	6	13	26	26	22	20	18	18	13	6	2	0	0	0	0	0	7.5	25.9
8-Feb	0	0	0	0	A	0	0	0	0	1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0.3	1.9
9-Feb	0	0	0	0	A	0	0	0	0	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	2.0
10-Feb	0	0	0	0	A	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0.4	2.4
11-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
12-Feb	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
13-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0.2	0.9
14-Feb	0	0	0	0	A	0	0	0	0	1	4	4	3	2	2	0	0	0	0	0	0	0	0	0	0.8	4.4
15-Feb	0	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
16-Feb	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
17-Feb	0	0	0	0	A	0	0	0	C	C	C	C	C	C	2	1	1	0	0	0	0	0	0	0	--	1.6
18-Feb	0	0	0	0	A	0	0	0	0	2	4	7	5	3	4	3	3	1	0	0	0	0	0	0	1.5	6.9
19-Feb	0	0	0	0	A	0	0	0	3	1	2	2	2	1	1	1	1	1	0	0	0	0	3	0	0.7	3.0
20-Feb	0	0	0	0	A	0	0	28	1	9	14	5	4	4	8	4	2	1	0	0	0	0	0	0	3.5	28.2
21-Feb	0	0	0	0	A	0	0	0	0	1	1	1	2	2	0	1	0	0	0	0	0	0	0	0	0.4	2.0
22-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.4	1.3
23-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.4
24-Feb	0	0	0	0	A	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.5
25-Feb	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
26-Feb	0	0	0	0	A	0	0	0	0	1	1	2	3	3	2	1	1	1	0	0	0	0	0	0	0.6	2.8
27-Feb	0	0	0	0	A	0	0	0	2	3	3	4	2	1	0	0	0	0	0	0	0	0	0	0	0.7	3.6
28-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0.3	1.2
0.0 0.0 0.0 0.0 -- 0.0 0.2 1.1 0.6 1.5 2.7 2.5 2.3 1.9 1.8 1.4 1.1 0.6 0.1 0.1 0.0 0.2 0.1 0.0																								Diurnal Average		
0.1 0.1 0.1 0.1 -- 0.1 3.6 28.2 5.7 13.2 25.9 25.5 21.5 20.1 17.7 18.0 13.0 5.7 1.8 0.4 0.2 5.3 2.6 0.1																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - February 2013



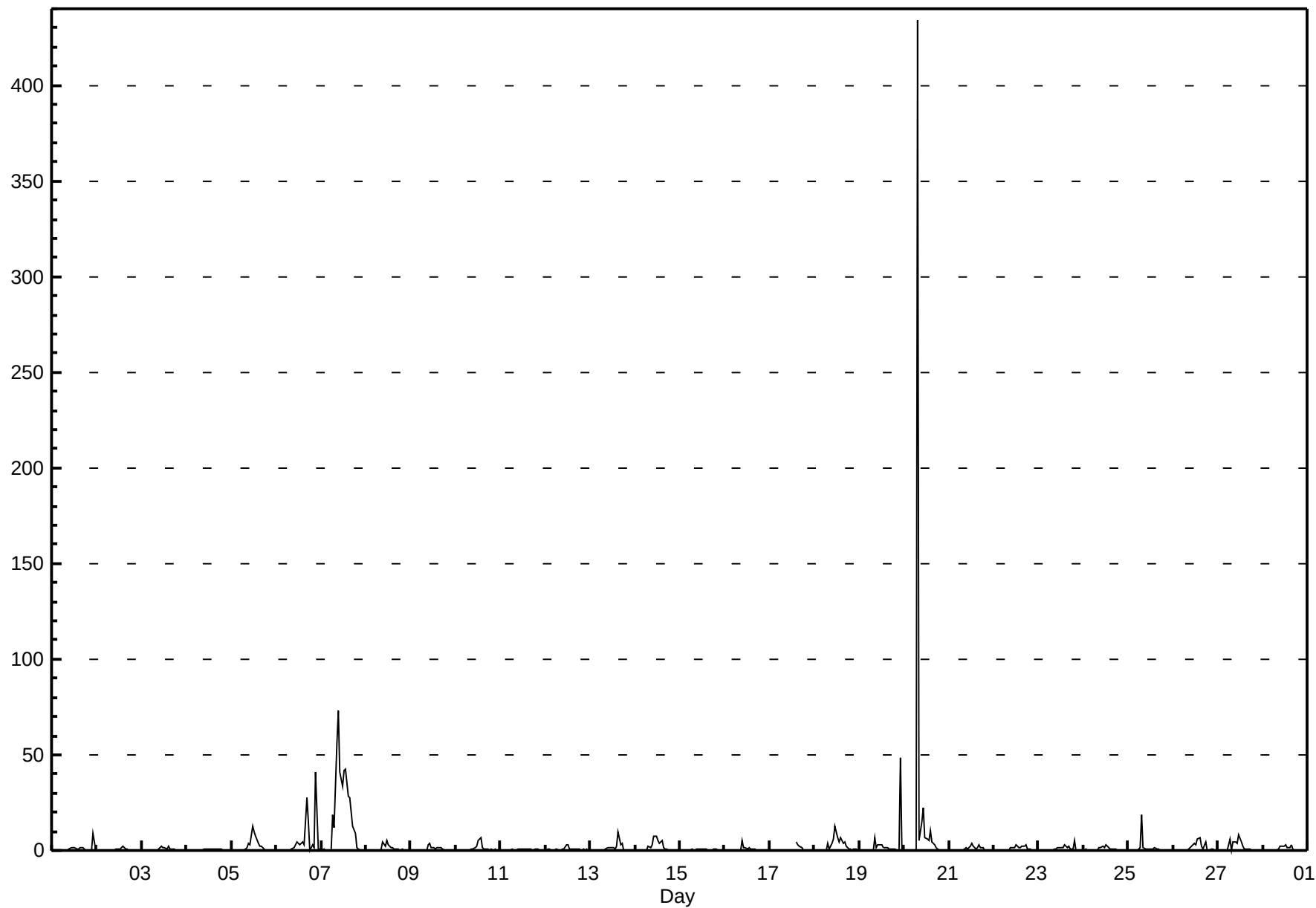
Hourly Maximums

Nitrogen Oxide (NO) - ppb Beaverlodge - February 2013

Maximum Value: 434.3 ppb on Feb 20 08:00																				Maximum Daily Average: 22.5 ppb on Feb 20					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 14 03:00																				Minimum Daily Average: 0.3 ppb on Feb 15					Hours of Data: 638	
Maximum Diurnal Average: 17.0 ppb at hour 8																				Minimum Diurnal Average: 0.1 ppb at hour 1					Hours of Missing Data: 34	
Monthly Average: 2.64 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.3 Q ₃ = 1.4 P ₉₀ = 3.9 P ₉₉ = 41.7					Hours of Calibration: 34	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	0	0	0	0	A	0	0	0	0	1	2	2	2	1	1	1	1	0	0	0	0	0	9	0	1.0	9.1
2-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	1	2	1	1	0	0	0	0	0	0	0	0.4	2.0
3-Feb	0	0	0	0	A	0	0	0	0	1	2	1	1	0	2	1	1	0	0	0	0	0	0	0	0.5	2.3
4-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.4	1.1
5-Feb	0	0	0	0	A	0	0	0	2	3	3	13	9	7	3	2	2	1	0	0	0	0	0	0	2.1	12.9
6-Feb	0	0	0	0	A	0	0	0	1	2	3	5	3	4	4	3	28	15	0	3	2	41	0	0	5.0	40.8
7-Feb	0	1	0	0	A	1	19	12	56	73	41	33	42	42	28	28	20	12	9	2	0	0	0	0	18.3	72.8
8-Feb	0	0	0	0	A	0	0	0	1	4	2	5	3	1	1	1	0	1	0	0	0	0	0	0	1.0	5.0
9-Feb	0	0	0	0	A	0	0	0	0	3	4	1	1	1	1	1	1	1	0	0	0	0	0	0	0.7	4.1
10-Feb	0	0	0	0	A	0	0	0	1	1	2	2	5	7	2	1	1	0	0	1	0	0	0	1	1.1	6.9
11-Feb	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0.4	1.1
12-Feb	0	0	1	0	A	0	0	0	0	1	1	3	3	1	1	1	1	1	1	0	1	0	1	0	0.7	3.0
13-Feb	0	0	0	0	A	0	0	0	1	2	1	2	2	1	2	10	3	4	0	0	0	0	0	0	1.2	10.0
14-Feb	0	0	0	0	A	0	0	2	2	3	8	8	5	4	5	1	1	1	0	0	0	0	0	0	1.8	7.7
15-Feb	0	0	0	0	A	0	1	0	0	0	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0.3	0.7
16-Feb	0	0	0	0	A	0	0	0	0	5	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.6	4.9
17-Feb	0	0	0	0	A	0	0	0	C	C	C	C	C	C	4	3	2	1	0	0	0	0	0	0	--	4.3
18-Feb	0	0	0	0	A	0	0	3	1	4	6	12	6	5	6	4	4	2	0	0	0	1	1	0	2.5	12.5
19-Feb	0	0	0	0	A	0	0	0	7	1	3	3	3	2	2	1	1	1	0	0	0	0	49	1	3.3	48.7
20-Feb	0	0	0	0	A	0	0	434	5	15	22	7	6	5	11	5	3	2	1	0	0	0	0	0	22.5	434.3
21-Feb	0	0	0	0	A	0	0	0	1	2	1	2	4	2	1	2	3	1	1	0	0	0	0	0	0.9	3.8
22-Feb	0	0	0	0	A	0	0	0	0	1	1	1	3	1	2	2	2	3	1	0	0	0	0	0	0.9	3.1
23-Feb	0	0	0	0	A	0	0	0	1	1	2	2	2	1	3	1	2	1	1	5	0	0	0	0	1.0	5.0
24-Feb	0	0	0	0	A	0	0	0	2	1	2	1	3	2	1	1	1	0	0	0	0	0	0	0	0.7	2.9
25-Feb	0	0	0	0	A	0	2	19	2	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	1.3	19.0
26-Feb	0	0	0	0	A	0	0	0	0	1	2	4	3	6	7	2	1	4	0	0	1	1	0	0	1.5	6.6
27-Feb	0	0	0	0	A	0	6	0	5	4	4	8	4	2	1	1	1	1	0	0	0	0	0	0	1.7	7.9
28-Feb	0	0	0	0	A	0	0	0	1	2	2	2	3	1	1	3	0	0	0	0	0	0	0	0	0.8	3.1
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - February 2013



Hourly Averages

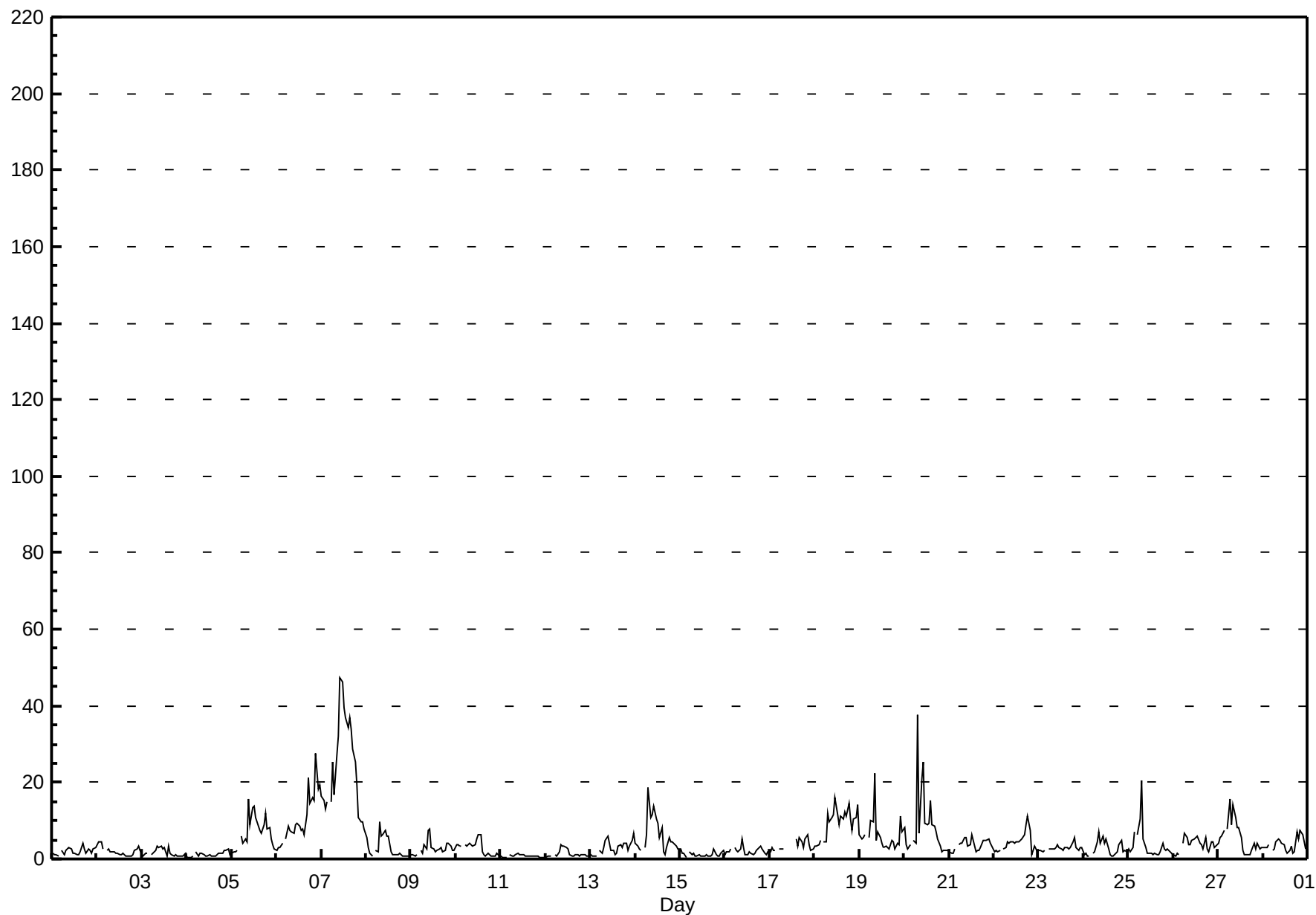
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 47.4 ppb on Feb 7 11:00 Maximum Daily Average: 24.5 ppb on Feb 7																				Hours in Service: 672 Hours of Data: 638 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Feb 4 03:00 Maximum Diurnal Average: 7.4 ppb at hour 11 Monthly Average: 4.65 ppb										Minimum Daily Average: 0.8 ppb on Feb 11 Minimum Diurnal Average: 2.6 ppb at hour 3 Percentiles: P ₁ = 0.5 P ₁₀ = 0.9 Q ₁ = 1.4 Median = 2.8 Q ₃ = 5.3 P ₉₀ = 10.3 P ₉₉ = 36.9																
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-Feb	2	1	1	1	A	2	1	2	3	3	3	2	1	1	1	2	4	3	1	3	2	2	3	3	2.0	4.0
2-Feb	4	4	4	3	A	2	3	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	3	2	2.1	4.3
3-Feb	1	1	1	2	A	1	2	2	3	3	3	3	3	1	3	1	1	1	1	1	1	1	1	2	1.6	3.4
4-Feb	0	0	0	1	A	2	1	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	1	1.2	2.6
5-Feb	1	2	2	2	A	6	4	5	4	16	9	13	14	11	8	8	7	9	12	8	8	5	4	3	7.0	15.8
6-Feb	2	3	3	4	A	5	9	7	7	7	9	9	8	8	8	6	12	21	14	16	15	28	18	20	10.4	27.6
7-Feb	16	15	13	15	A	15	25	17	27	32	47	46	40	37	34	37	34	29	25	19	11	10	10	8	24.5	47.4
8-Feb	6	3	1	1	A	2	2	10	6	6	7	6	6	2	1	1	1	1	1	1	1	1	1	1	3.0	9.9
9-Feb	1	1	1	1	A	2	2	4	2	7	8	3	3	2	2	3	3	2	2	4	4	3	2	2	2.8	7.9
10-Feb	4	4	3	3	A	4	3	4	4	3	4	5	6	6	2	1	1	1	1	1	1	1	1	1	2.8	6.5
11-Feb	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.8	1.4
12-Feb	0	1	1	1	A	1	1	2	4	4	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1.4	3.5
13-Feb	1	1	1	1	A	2	1	3	5	6	4	2	2	1	2	3	4	3	4	4	2	3	5	7	2.9	6.6
14-Feb	4	3	2	2	A	3	6	19	11	12	14	11	9	6	8	2	1	3	5	5	5	4	3	3	6.1	18.7
15-Feb	3	1	2	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	2	1.2	2.7
16-Feb	1	2	2	3	A	3	2	2	3	5	3	1	1	2	1	1	1	2	3	3	3	1	1	2	2.1	5.3
17-Feb	2	3	2	2	A	2	3	3	C	C	C	C	C	C	5	3	5	4	3	5	6	4	2	3	--	6.3
18-Feb	4	3	4	5	A	5	5	12	10	11	12	16	12	9	11	10	12	11	15	10	8	11	11	14	9.5	15.9
19-Feb	6	5	6	6	A	6	10	10	22	5	7	6	4	3	3	3	2	5	4	2	4	4	11	7	6.2	22.3
20-Feb	8	4	2	4	A	5	4	38	7	21	26	9	9	9	15	9	9	7	5	3	2	2	2	2	8.8	37.8
21-Feb	2	1	2	2	A	4	4	4	6	6	3	4	6	5	2	2	2	3	5	5	5	5	4	3	3.7	6.4
22-Feb	2	2	2	2	A	3	3	4	4	5	4	4	4	5	5	5	6	9	11	7	1	2	3	2	4.2	11.2
23-Feb	2	2	2	2	A	3	2	3	3	3	4	3	3	2	3	3	3	3	4	6	3	2	3	3	2.9	5.6
24-Feb	1	1	1	1	A	2	2	4	7	4	6	4	5	2	1	1	1	1	2	4	5	2	2	2	2.7	7.0
25-Feb	3	2	3	7	A	6	11	21	5	3	1	2	1	1	1	1	1	2	4	3	2	3	2	1	3.8	20.7
26-Feb	1	1	1	1	A	4	7	6	4	4	5	5	6	6	4	4	3	6	2	2	4	4	3	3	3.7	6.7
27-Feb	4	5	6	8	A	8	16	9	14	11	8	8	6	2	1	1	1	1	2	4	3	4	2	3	5.6	15.8
28-Feb	3	3	3	4	A	2	3	5	5	5	4	4	2	1	2	3	2	2	7	5	7	6	4	3	3.7	7.4
3.0 2.7 2.6 3.0 -- 3.7 4.7 7.1 6.3 6.8 7.4 6.4 5.9 4.7 4.7 4.1 4.3 4.8 5.1 4.5 3.9 4.1 3.9 3.7 16.5 15.3 13.2 14.8 -- 14.8 25.4 37.8 27.1 32.0 47.4 46.1 39.5 37.0 34.5 37.0 33.8 28.6 25.2 19.4 15.3 27.6 18.1 19.5																								Diurnal Average	Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb
Beaverlodge - February 2013



Hourly Maximums

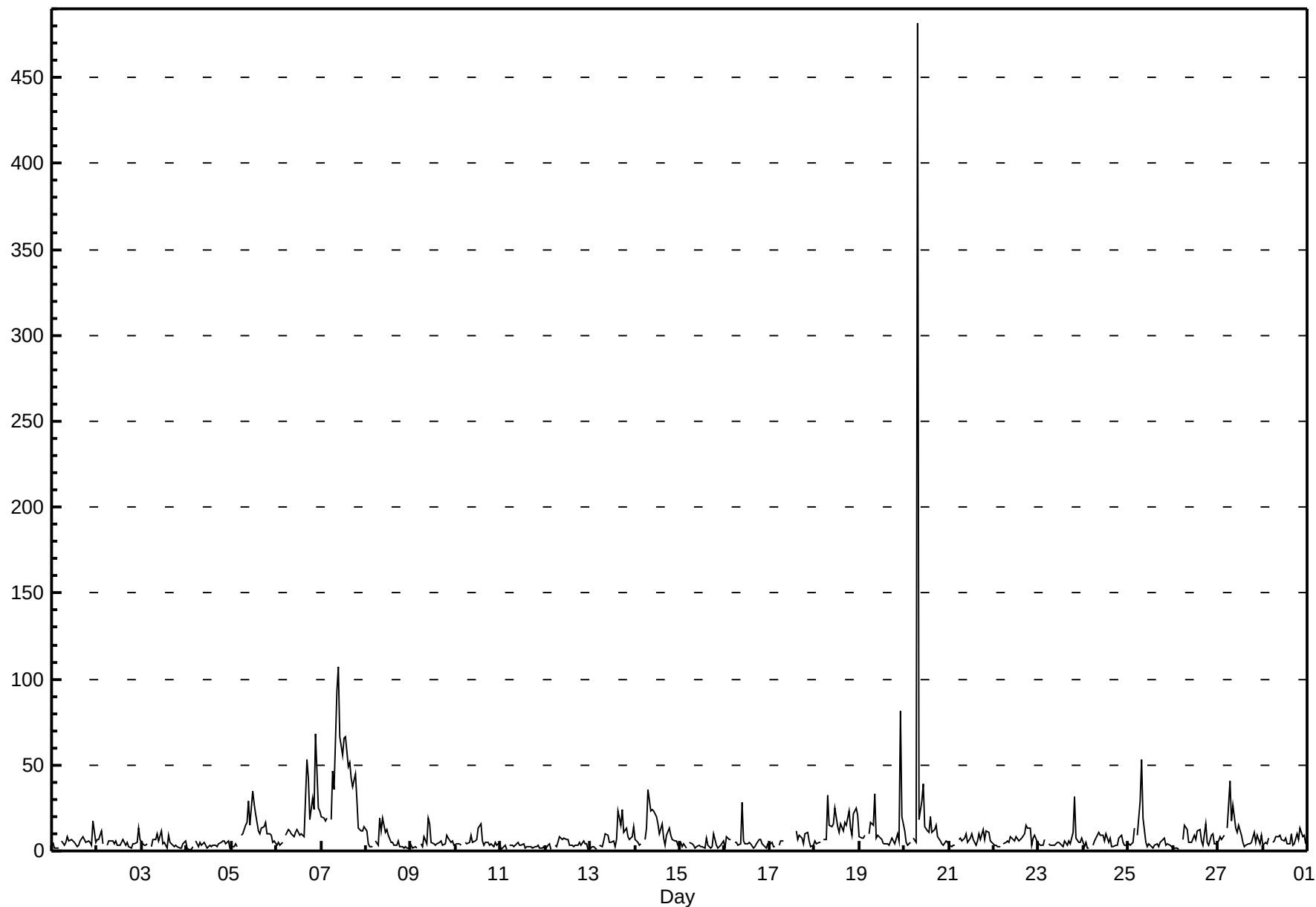
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - February 2013

Maximum Value: 481.9 ppb on Feb 20 08:00																				Maximum Daily Average: 40.7 ppb on Feb 7					Hours in Service: 672	
Minimum Value: 1 ppb on Feb 4 03:00																				Minimum Daily Average: 2.6 ppb on Feb 11					Hours of Data: 638	
Maximum Diurnal Average: 29.5 ppb at hour 8																				Minimum Diurnal Average: 4.4 ppb at hour 3					Hours of Missing Data: 34	
Monthly Average: 9.54 ppb																				Percentiles: P ₁ = 1.2 P ₁₀ = 2.4 Q ₁ = 3.5 Median = 5.4 Q ₃ = 9.5 P ₉₀ = 17.2 P ₉₉ = 65.6					Hours of Calibration: 34	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	5	2	2	2	A	6	3	5	8	6	7	6	5	3	3	5	8	6	5	6	5	4	18	5	5.4	17.8
2-Feb	7	7	12	4	A	3	6	6	6	4	6	3	4	5	7	3	5	2	2	4	4	5	13	7	5.5	13.3
3-Feb	4	3	4	4	A	2	6	7	10	6	12	4	5	2	9	5	4	3	4	2	2	2	5	6	4.8	11.7
4-Feb	2	1	1	3	A	6	2	5	3	5	3	2	4	3	3	3	3	4	5	6	6	4	6	2	3.5	6.1
5-Feb	2	2	4	3	A	9	10	15	17	29	15	35	27	22	12	10	14	14	16	10	10	9	5	6	12.8	35.2
6-Feb	3	5	3	5	A	9	12	11	10	9	11	12	10	10	9	8	53	43	18	31	24	68	25	23	17.9	67.8
7-Feb	20	19	17	19	A	18	46	36	93	107	67	55	66	66	49	52	42	38	45	30	13	12	11	14	40.7	106.9
8-Feb	11	4	2	3	A	6	4	19	11	19	11	12	9	5	5	3	3	5	3	2	2	2	2	1	6.4	19.2
9-Feb	4	2	2	2	A	5	3	8	4	19	16	5	4	3	4	5	6	3	4	9	7	5	6	3	5.6	19.2
10-Feb	5	4	4	4	A	5	4	5	9	5	6	6	13	16	6	3	5	5	4	4	2	5	3	5	5.5	15.9
11-Feb	1	1	3	1	A	3	3	3	3	5	3	3	4	2	3	3	3	2	2	3	4	2	1	2	2.6	5.2
12-Feb	1	4	4	1	A	3	3	8	8	7	7	6	7	3	3	2	3	4	5	3	6	4	4	1	4.2	8.0
13-Feb	2	2	2	1	A	3	2	5	10	9	5	5	6	2	7	23	15	24	11	13	8	7	9	14	8.1	24.2
14-Feb	7	5	4	4	A	6	13	36	23	24	23	20	16	10	16	8	4	10	13	9	7	6	5	3	11.8	35.7
15-Feb	5	3	4	2	A	5	4	3	2	2	3	3	3	2	7	3	2	3	10	3	2	3	3	6	3.6	9.8
16-Feb	2	8	7	6	A	5	5	3	4	28	6	5	4	5	4	2	2	4	6	6	4	2	2	4	5.5	28.4
17-Feb	4	5	3	3	A	4	5	6	C	C	C	C	C	C	12	7	9	8	4	10	10	6	3	3	--	11.9
18-Feb	6	4	5	5	A	7	6	32	15	14	16	25	14	11	16	11	17	15	23	13	9	21	25	21	14.5	32.4
19-Feb	8	7	7	9	A	10	17	15	34	8	9	7	7	4	4	4	3	8	6	4	10	5	81	20	12.5	81.2
20-Feb	12	5	3	5	A	8	5	482	18	29	39	15	12	11	20	11	13	15	8	6	4	4	5	5	31.9	481.9
21-Feb	3	2	3	4	A	7	8	5	7	10	5	8	10	6	4	6	10	7	12	7	12	11	6	5	6.9	12.3
22-Feb	3	3	2	3	A	4	5	6	5	8	7	6	9	6	7	7	10	15	13	14	3	7	9	5	6.8	14.7
23-Feb	4	4	3	6	A	4	3	3	3	4	5	5	4	3	6	4	6	4	11	31	8	5	5	8	6.0	31.4
24-Feb	3	5	2	2	A	3	5	9	11	9	9	6	10	5	8	2	3	4	3	8	9	5	3	4	5.5	11.2
25-Feb	4	4	5	13	A	9	29	53	19	5	2	4	2	2	4	4	2	5	6	8	4	5	3	3	8.5	53.5
26-Feb	2	1	2	1	A	7	15	13	5	5	5	9	7	12	12	6	4	16	5	3	9	10	4	4	6.7	15.5
27-Feb	6	8	7	9	A	13	40	17	27	13	11	15	9	5	2	3	4	4	5	11	5	9	4	9	10.4	40.4
28-Feb	4	5	4	7	A	5	6	9	8	9	6	6	8	4	4	10	3	4	10	7	14	9	9	4	6.7	13.7
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

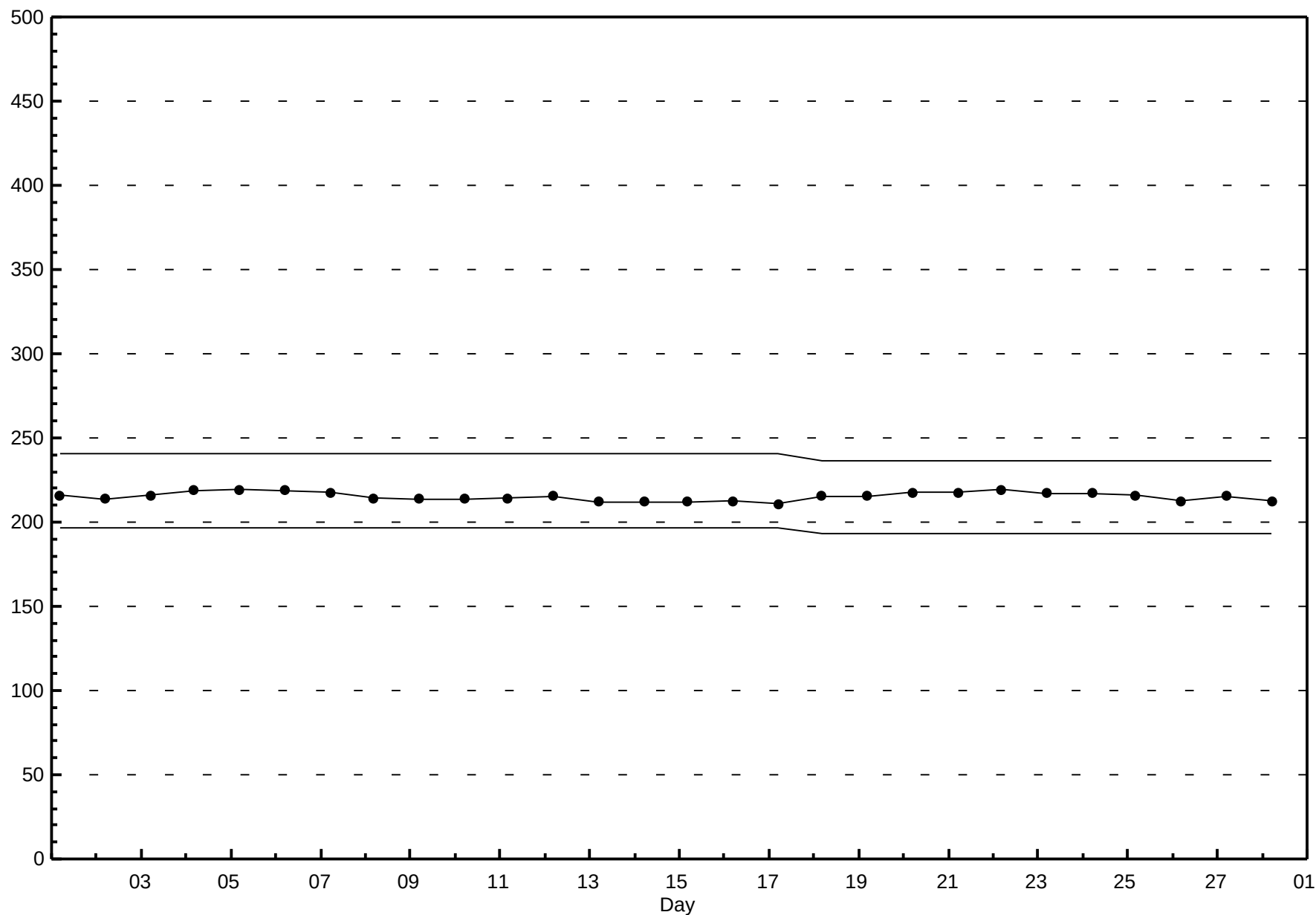
Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb
Beaverlodge - February 2013



Span Responses

Oxides of Nitrogen (NO_x)
Beaverlodge - February 2013



Hourly Averages

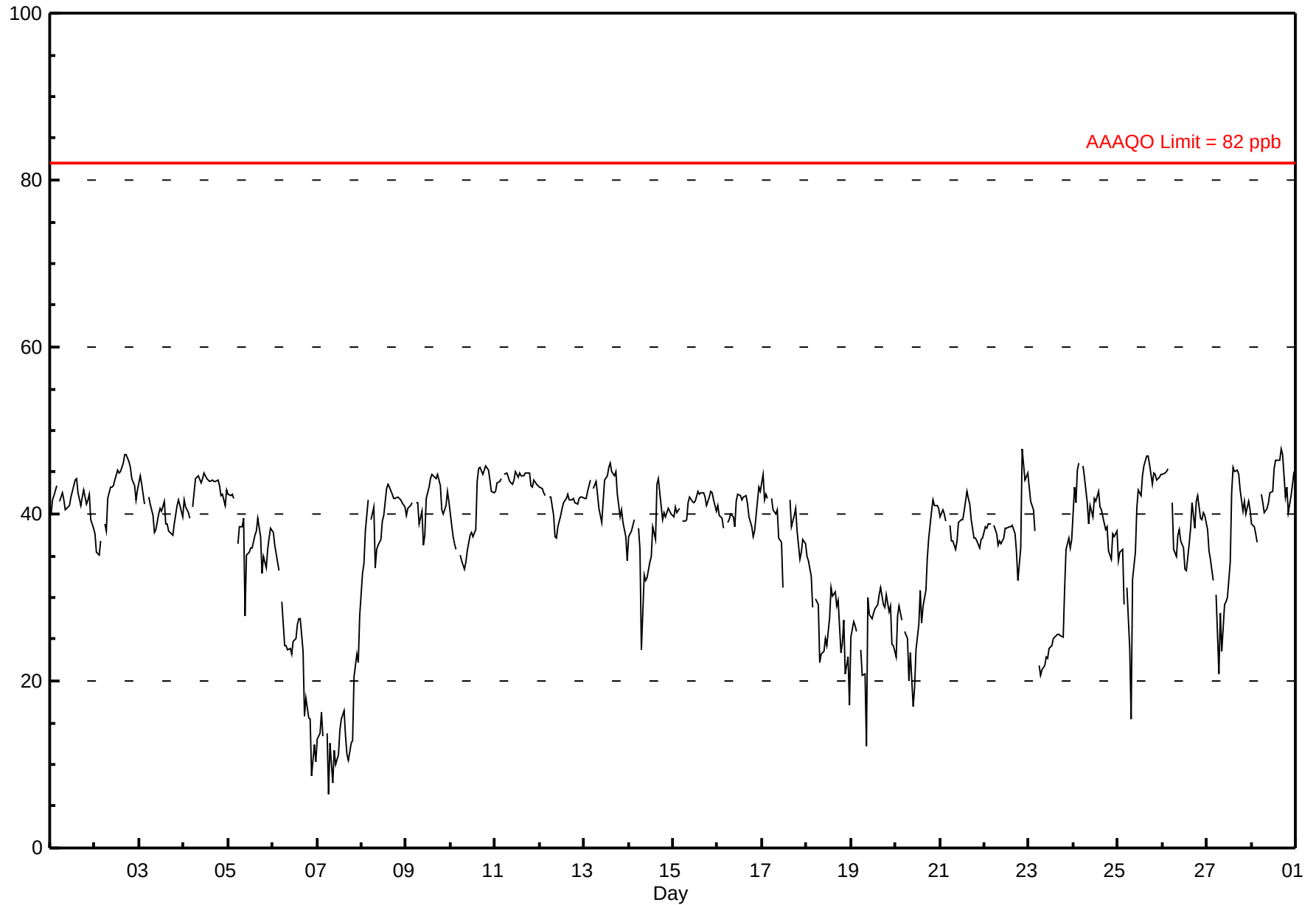
Ozone (O₃) - ppb

Beaverlodge - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 47.8 ppb on Feb 28 17:00 Maximum Daily Average: 44.2 ppb on Feb 11																								Hours in Service: 672 Hours of Data: 641 Hours of Missing Data: 31 Hours of Calibration: 31 Percent Operational Time: 100.0		
Minimum Value: 6 ppb on Feb 7 07:00 Maximum Diurnal Average: 39.2 ppb at hour 16 Monthly Average: 37.03 ppb												Minimum Daily Average: 14.4 ppb on Feb 7 Minimum Diurnal Average: 33.4 ppb at hour 8 Percentiles: P ₁ = 11.2 P ₁₀ = 24.3 Q ₁ = 34.9 Median = 39.7 Q ₃ = 42.4 P ₉₀ = 44.5 P ₉₉ = 46.9														
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-Feb	40	42	42	43	A	41	43	42	41	41	41	42	43	44	44	43	41	42	43	41	42	42	39	38	41.7	44.2
2-Feb	38	35	35	37	A	39	38	42	43	43	43	44	45	45	45	46	47	47	46	46	44	43	42	43	42.5	47.2
3-Feb	45	44	42	41	A	42	41	40	38	38	40	41	40	42	39	39	38	38	38	39	41	42	41	40	40.3	44.6
4-Feb	42	41	40	40	A	41	44	44	45	44	44	45	44	44	44	44	44	44	44	43	42	42	41	43	43.0	44.8
5-Feb	42	42	42	42	A	36	38	38	39	28	35	35	36	36	37	38	40	37	33	35	34	36	37	38	37.2	42.4
6-Feb	38	36	35	33	A	30	24	24	24	24	23	25	25	27	28	27	24	16	18	16	15	9	12	10	23.6	37.7
7-Feb	13	14	16	13	A	14	6	13	8	12	10	11	14	15	16	13	11	10	13	13	20	23	22	28	14.4	27.9
8-Feb	33	34	38	42	A	39	41	33	36	36	37	39	40	43	44	43	42	42	42	42	42	41	41	41	39.6	43.6
9-Feb	40	41	41	41	A	41	41	39	40	36	38	42	43	44	45	44	44	45	43	41	40	41	43	41	41.5	44.7
10-Feb	39	37	36	36	A	35	34	33	34	36	37	38	37	38	44	45	46	45	45	46	45	44	43	43	39.9	45.8
11-Feb	43	44	44	44	A	45	45	44	44	44	44	45	44	45	45	45	45	45	45	43	43	44	44	43	44.2	45.0
12-Feb	43	43	43	42	A	42	42	40	37	37	38	40	41	41	42	42	42	42	42	41	41	42	42	42	41.2	43.3
13-Feb	42	42	43	44	A	43	44	42	41	39	41	44	45	46	46	45	45	45	42	40	41	39	37	34	42.1	46.0
14-Feb	37	38	39	39	A	38	36	24	33	32	32	34	35	39	37	44	44	43	39	40	40	41	40	40	37.5	44.3
15-Feb	40	41	40	41	A	39	39	39	41	42	42	41	42	43	42	43	43	42	41	42	43	43	42	40	41.3	42.8
16-Feb	41	40	40	38	A	39	39	40	40	38	41	42	42	42	42	42	41	40	39	37	38	41	43	43	40.4	43.2
17-Feb	45	42	42	42	A	42	40	40	41	37	37	31	C	C	C	42	39	40	41	38	35	35	37	36	39.0	44.8
18-Feb	35	34	32	29	A	30	29	22	23	23	25	24	28	31	30	31	29	30	23	25	27	21	23	17	27.1	34.9
19-Feb	25	27	27	26	A	24	21	21	12	30	28	27	28	29	29	30	31	29	29	30	28	29	24	24	26.5	31.2
20-Feb	23	28	29	27	A	26	25	20	23	17	19	24	27	31	27	29	31	35	37	40	42	41	41	41	29.7	41.7
21-Feb	40	41	40	39	A	39	37	37	36	37	39	39	39	40	43	42	41	39	37	37	37	36	37	37	38.6	42.7
22-Feb	38	38	39	39	A	39	38	36	37	36	37	38	38	38	39	39	38	35	32	36	48	46	44	45	38.8	47.8
23-Feb	43	42	41	38	A	22	21	21	22	23	23	24	24	25	25	26	26	25	25	31	36	37	36	37	29.2	43.3
24-Feb	43	41	45	46	A	46	44	41	39	41	40	42	42	43	41	40	40	38	38	36	35	38	37	38	40.6	46.1
25-Feb	34	35	36	29	A	31	24	15	32	35	41	43	42	45	46	47	47	46	44	45	45	44	44	45	38.9	47.0
26-Feb	45	45	45	45	A	41	36	35	37	38	37	36	33	33	36	38	41	38	42	42	40	39	40	40	39.3	45.4
27-Feb	38	36	35	32	A	30	21	28	24	29	29	30	34	43	46	45	45	45	43	40	41	40	42	41	36.4	45.5
28-Feb	39	39	38	37	A	42	41	40	41	41	43	43	45	46	46	46	48	47	42	43	40	42	44	45	42.6	47.8
37.9 37.9 38.0 37.4 -- 36.3 34.8 33.4 33.9 34.2 35.2 36.1 36.9 38.4 38.8 39.2 39.0 38.2 37.3 37.4 38.0 37.9 37.8 37.6																								Diurnal Average		
44.8 44.9 45.3 46.1 -- 45.8 44.9 44.5 44.6 43.8 44.2 45.0 45.5 46.5 46.5 46.9 47.8 47.2 46.2 45.8 47.8 45.9 44.4 45.2																								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
Beaverlodge - February 2013



Hourly Maximums

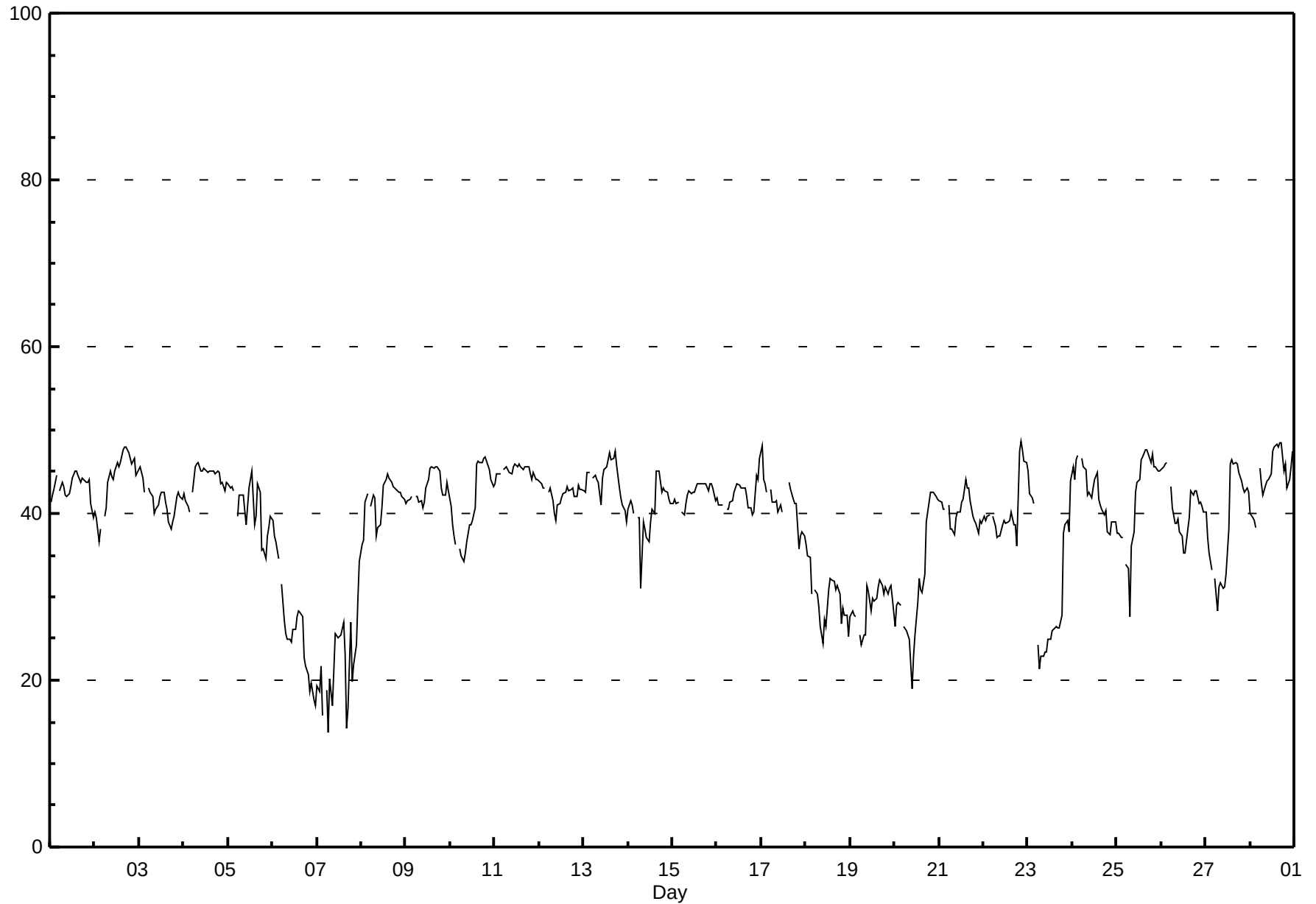
Ozone (O₃) - ppb

Beaverlodge - February 2013

Maximum Value: 48.7 ppb on Feb 22 21:00																					Maximum Daily Average: 45.0 ppb on Feb 11				Hours in Service: 672	
Minimum Value: 14 ppb on Feb 7 07:00																					Minimum Daily Average: 22.0 ppb on Feb 7				Hours of Data: 641	
Maximum Diurnal Average: 40.7 ppb at hour 16																					Minimum Diurnal Average: 36.7 ppb at hour 8				Hours of Missing Data: 31	
Monthly Average: 39.15 ppb																					Percentiles: P ₁ = 17.6 P ₁₀ = 27.0 Q ₁ = 37.2 Median = 41.6 Q ₃ = 43.9 P ₉₀ = 45.6 P ₉₉ = 48.0				Hours of Calibration: 31	
																					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-Feb	41	42	43	45	A	43	44	43	42	42	42	43	44	45	45	45	44	44	44	44	44	44	41	39	43.2	45.1
2-Feb	40	40	37	38	A	40	41	44	45	44	44	45	46	46	46	48	48	48	47	47	46	47	45	45	44.1	48.0
3-Feb	46	45	44	43	A	43	43	42	40	41	41	42	43	43	41	40	39	38	39	40	42	43	42	42	41.7	45.5
4-Feb	42	42	41	40	A	43	46	46	46	45	45	46	45	45	45	45	45	45	45	45	44	44	43	44	44.1	46.1
5-Feb	44	43	43	43	A	40	42	42	42	40	39	43	44	45	39	40	43	43	36	36	35	37	38	40	40.7	45.1
6-Feb	39	37	37	35	A	32	27	26	25	25	25	26	26	28	28	28	28	23	22	21	19	20	18	17	26.4	39.1
7-Feb	19	19	22	16	A	19	14	20	17	21	26	25	25	25	27	23	14	17	27	20	22	24	30	34	22.0	34.3
8-Feb	36	37	41	42	A	41	42	42	37	38	39	41	43	44	45	44	44	43	43	43	43	43	42	42	41.5	44.7
9-Feb	41	42	42	42	A	42	42	41	42	41	41	43	44	45	46	45	46	46	45	43	42	42	44	43	43.0	45.6
10-Feb	41	39	37	36	A	36	35	34	35	37	39	39	39	41	46	46	46	46	47	47	46	45	44	43	41.0	46.8
11-Feb	44	45	45	45	A	45	46	45	45	45	46	46	46	46	46	45	46	46	46	45	44	45	44	44	45.0	45.9
12-Feb	44	44	43	43	A	43	43	42	40	39	41	41	42	42	43	43	43	43	43	42	42	43	43	43	42.3	43.9
13-Feb	43	43	45	45	A	44	45	44	44	41	44	45	46	47	47	46	47	47	46	43	42	41	40	39	44.0	47.5
14-Feb	40	41	41	40	A	40	40	31	39	38	37	37	39	41	40	45	45	45	43	43	43	43	42	41	40.5	45.1
15-Feb	41	42	41	41	A	40	40	41	42	43	42	43	43	44	44	44	44	44	44	43	44	44	43	42	42.4	43.6
16-Feb	42	41	41	41	A	41	41	41	42	43	43	44	43	43	43	43	42	41	41	40	40	45	44	47	42.1	46.6
17-Feb	48	44	44	43	A	43	41	41	42	40	41	40	C	C	C	44	43	42	41	41	36	37	38	37	41.3	48.1
18-Feb	36	35	35	30	A	31	30	29	26	24	27	26	31	32	32	32	31	31	30	27	29	28	28	25	29.8	36.2
19-Feb	28	28	28	28	A	25	24	25	25	31	31	28	30	30	30	31	32	31	30	31	30	31	31	30	29.1	32.1
20-Feb	26	29	29	29	A	26	26	25	25	19	23	25	29	32	31	30	33	39	40	43	43	43	42	42	31.7	42.6
21-Feb	41	41	41	41	A	41	38	38	37	40	40	40	41	42	44	43	43	42	40	39	39	38	39	39	40.3	44.0
22-Feb	40	39	40	40	A	40	38	37	37	37	39	39	39	39	39	40	39	39	36	48	49	48	46	46	40.6	48.7
23-Feb	45	42	42	41	A	24	21	23	23	23	23	25	25	26	26	26	26	26	28	38	39	39	38	44	31.0	45.1
24-Feb	46	44	47	47	A	47	46	45	42	43	42	43	44	45	42	41	41	40	40	38	37	39	39	39	42.4	46.9
25-Feb	38	38	37	37	A	34	33	28	36	38	43	44	44	47	47	48	48	47	46	47	46	46	45	45	41.7	47.7
26-Feb	45	46	46	46	A	43	41	39	39	39	38	37	35	35	38	39	43	42	43	43	41	41	41	40	40.9	46.1
27-Feb	40	37	35	33	A	32	28	31	32	31	31	33	38	46	46	46	46	46	45	44	43	43	43	43	38.8	46.5
28-Feb	40	40	39	38	A	45	44	42	43	44	44	45	47	48	48	48	48	48	45	46	43	44	46	47	44.5	48.5
39.9 39.4 39.4 38.8 -- 37.9 37.1 36.7 36.8 36.9 37.7 38.3 39.3 40.4 40.5 40.7 40.5 40.4 40.0 40.1 39.6 40.1 39.9 40.0																									Diurnal Average	
48.1 45.6 46.5 46.9 -- 46.6 45.6 45.9 46.1 45.1 45.5 45.9 47.5 47.9 48.3 47.9 48.5 48.4 47.2 47.5 48.7 47.6 46.2 47.5																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

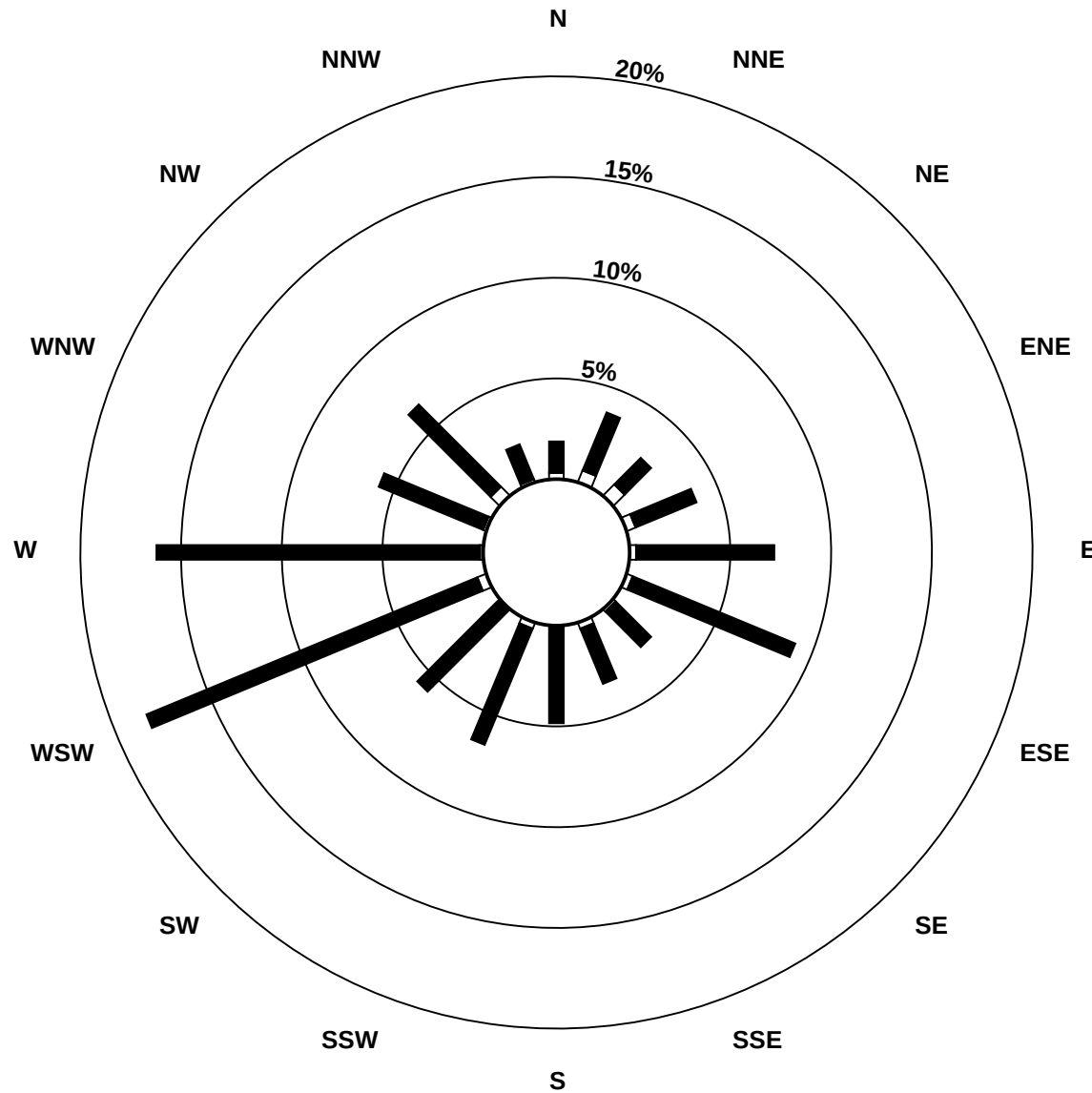
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - February 2013

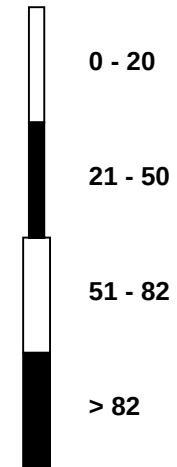


Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - February 2013



Pollutant Classes (ppb)



Eight Hour Running Averages

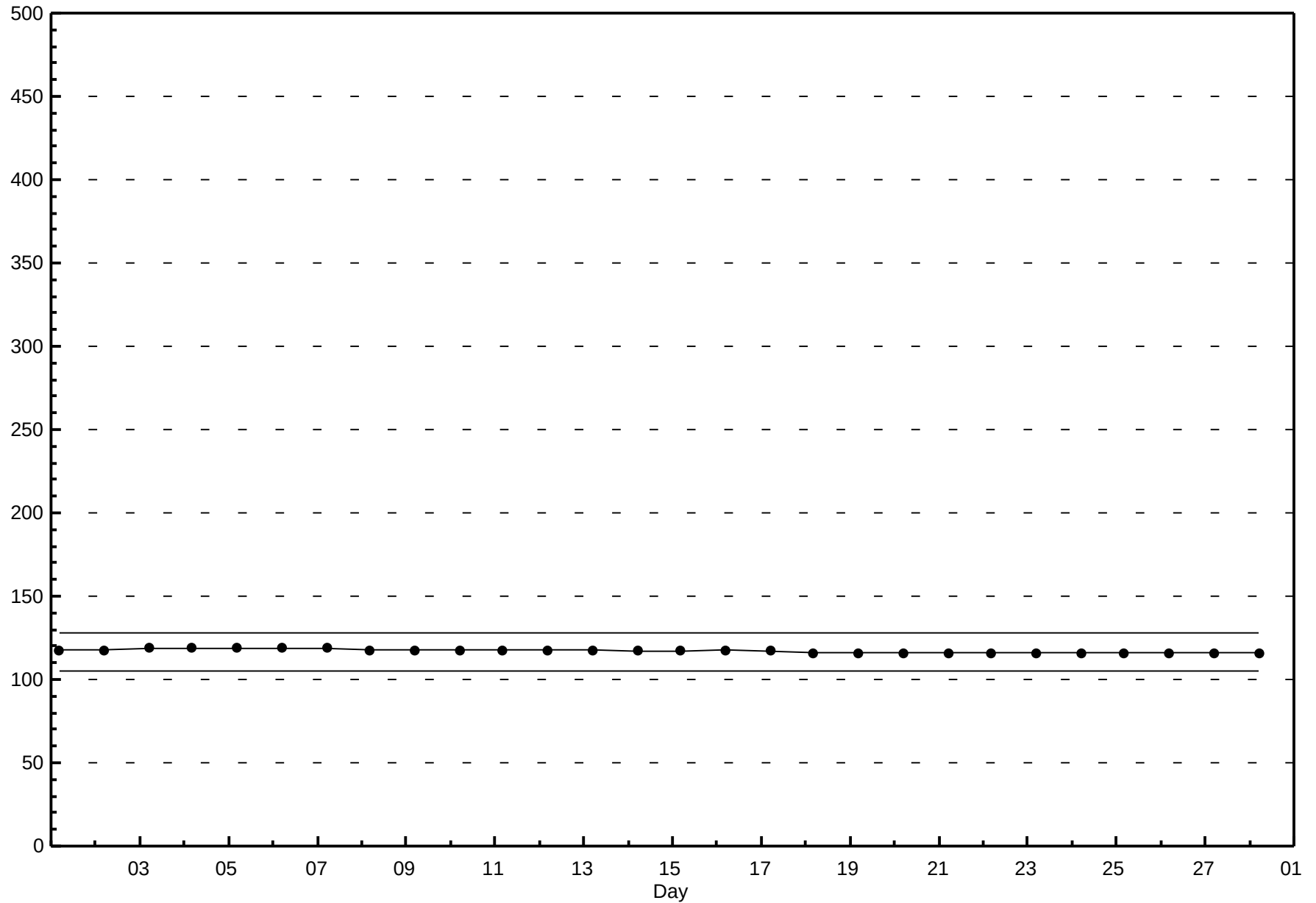
Ozone (O₃) - ppb

Beaverlodge - February 2013

Maximum Value: 45.9 ppb on Feb 2 20:00																								Hours in Service: 672	
Minimum Value: 10.5 ppb on Feb 7 12:00																								Hours of Data: 666	
																								Hours of Missing Data: 6	
Percentiles: P ₁ = 12.4 P ₁₀ = 24.8 Q ₁ = 35.4 Median = 39.7 Q ₃ = 42.1 P ₉₀ = 43.9 P ₉₉ = 45.6																								Hours of Calibration: 6	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	35	37	39	40	41	41	41	42	42	42	42	41	42	42	42	42	42	42	43	43	42	42	42	41	42.7
2-Feb	41	40	39	38	38	37	37	38	38	40	41	42	42	43	44	44	45	45	46	46	46	46	45	45	45.9
3-Feb	44	44	44	43	43	43	43	42	41	40	40	40	40	40	40	40	40	39	39	39	39	39	39	39	44.5
4-Feb	40	40	41	41	41	41	41	42	42	43	43	44	44	44	44	44	44	44	44	44	44	43	43	43	44.3
5-Feb	43	43	42	42	42	41	41	40	40	38	37	36	36	36	36	36	36	37	37	37	36	36	36	36	42.7
6-Feb	36	36	36	36	36	35	34	32	30	28	26	25	25	25	25	25	25	24	24	22	21	19	17	15	36.2
7-Feb	14	13	13	13	13	13	12	13	12	12	11	10	11	11	12	13	13	13	13	13	14	15	16	18	17.6
8-Feb	20	23	26	30	31	34	36	37	38	38	38	37	38	38	39	40	41	41	42	42	42	42	42	42	42.5
9-Feb	41	41	41	41	41	41	41	41	41	40	40	40	40	40	41	42	42	43	44	44	43	43	43	42	43.8
10-Feb	42	41	40	39	39	38	37	36	35	35	35	35	36	36	37	39	40	41	42	43	44	45	45	45	45.0
11-Feb	44	44	44	44	43	44	44	44	44	44	44	44	44	44	44	44	45	45	45	45	44	44	44	44	44.8
12-Feb	44	44	43	43	43	43	43	42	41	40	40	40	40	40	40	40	40	41	41	42	42	42	42	42	43.8
13-Feb	42	42	42	42	42	42	43	43	43	42	42	42	42	43	43	43	44	45	45	44	44	43	42	40	44.7
14-Feb	39	39	38	38	38	38	37	36	35	34	33	33	33	33	33	36	37	38	39	40	41	41	41	41	41.3
15-Feb	40	40	40	40	40	40	40	40	40	40	40	41	41	41	42	42	42	42	42	42	42	42	42	42	42.3
16-Feb	42	41	41	41	40	40	40	40	39	39	39	40	40	41	41	41	41	42	41	41	40	40	40	40	41.7
17-Feb	41	41	41	42	43	43	42	42	41	41	40	38	38	38	N	N	N	N	N	N	39	38	38	38	42.7
18-Feb	37	36	35	34	34	33	32	30	29	27	26	25	26	26	26	27	28	28	28	28	28	27	26	24	37.1
19-Feb	24	24	24	24	24	24	24	24	22	23	23	23	24	24	26	27	29	29	29	29	30	30	29	28	29.6
20-Feb	27	27	27	27	26	26	26	25	25	24	23	22	23	23	23	25	26	28	30	32	34	35	37	38	38.4
21-Feb	40	40	41	40	40	40	39	39	38	38	38	38	38	38	39	39	40	40	40	40	40	39	38	38	40.6
22-Feb	37	37	37	38	38	38	38	38	38	38	37	37	37	37	38	38	38	38	37	37	38	39	40	40	40.5
23-Feb	41	42	43	43	43	39	36	32	29	27	24	22	22	23	23	24	24	25	25	26	27	29	30	32	43.2
24-Feb	34	36	38	40	41	42	43	44	43	43	42	42	42	41	41	41	41	41	40	40	39	38	38	37	43.9
25-Feb	37	36	36	35	35	34	33	29	29	29	30	32	33	35	37	41	43	44	45	45	45	45	45	45	45.4
26-Feb	45	45	45	45	45	44	43	42	41	40	39	37	37	36	36	36	37	37	37	38	39	40	40	40	44.8
27-Feb	40	40	39	37	37	36	33	31	29	28	28	27	28	30	33	35	38	40	41	43	43	43	43	42	43.5
28-Feb	41	41	40	39	39	39	39	39	40	40	41	42	42	43	43	44	45	46	46	46	45	44	44	44	45.6
44.7 44.5 44.7 44.8 44.8 44.4 43.8 44.1 44.3 44.2 44.2 44.3 44.4 44.4 44.4 44.4 44.9 45.6 45.8 45.9 45.8 45.6 45.2 44.9																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Beaverlodge - February 2013

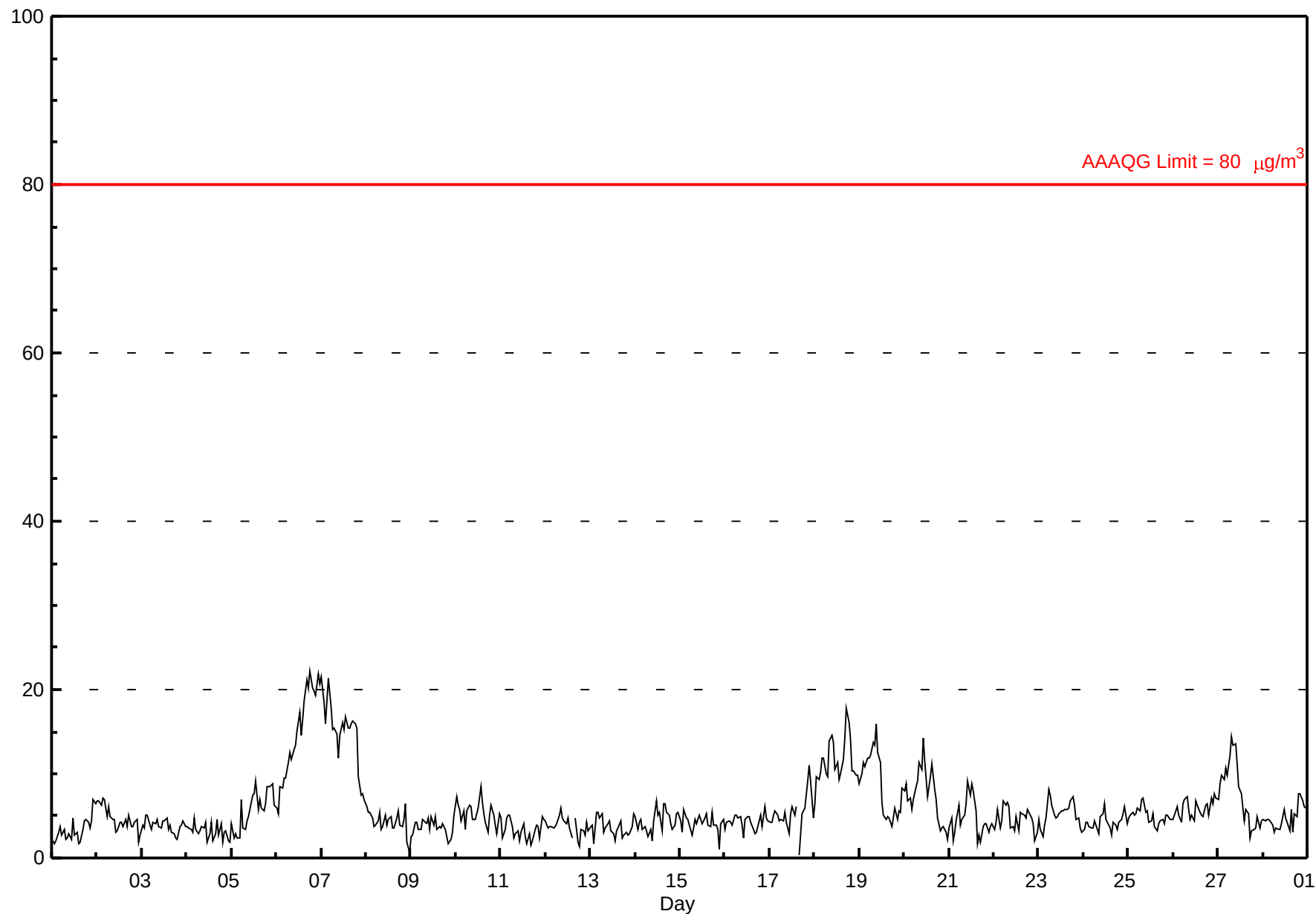


Hourly Averages

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

Beaverlodge - February 2013

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 22.3 µg/m³ on Feb 6 19:00 Maximum Daily Average: 15.0 µg/m³ on Feb 7																								Hours in Service: 672 Hours of Data: 670 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7		
Minimum Value: 0 µg/m³ on Feb 17 17:00 Maximum Diurnal Average: 6.3 µg/m³ at hour 9 Monthly Average: 5.81 µg/m³												Minimum Daily Average: 3.2 µg/m³ on Feb 4 Minimum Diurnal Average: 5.3 µg/m³ at hour 24 Percentiles: P ₁ = 1.7 P ₁₀ = 2.9 Q ₁ = 3.6 Median = 4.7 Q ₃ = 6.3 P ₉₀ = 11.2 P ₉₉ = 20.1														
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-Feb	2	2	2	3	4	3	3	2	2	3	2	5	3	3	2	2	3	4	5	4	4	4	7	6	3.3	7.0
2-Feb	7	7	6	7	7	5	6	5	5	5	3	3	4	4	4	5	4	5	4	4	4	5	2	3	4.7	7.1
3-Feb	4	4	5	5	4	3	4	4	5	4	3	4	4	5	3	4	3	3	2	2	4	4	4	4	3.8	5.1
4-Feb	4	4	3	3	5	3	3	3	4	3	4	2	3	4	2	3	5	3	4	2	3	3	2	2	3.2	4.8
5-Feb	4	2	3	2	2	7	4	3	4	5	6	8	8	9	6	7	6	6	6	8	8	9	9	6	5.8	9.2
6-Feb	6	5	9	8	10	9	11	13	12	13	13	15	17	15	16	19	21	20	22	20	20	19	22	21	14.8	22.3
7-Feb	21	18	16	19	21	18	15	15	15	12	15	16	15	17	15	15	16	16	16	15	10	7	8	7	15.0	21.5
8-Feb	6	5	5	5	4	4	4	5	3	4	5	4	5	5	4	4	5	6	4	4	5	6	2	1	4.3	6.4
9-Feb	2	3	4	4	3	3	5	4	4	5	3	5	4	5	3	4	4	4	3	3	2	2	3	5	3.7	5.0
10-Feb	7	6	6	4	6	3	6	6	6	5	5	5	6	8	7	5	4	3	5	6	5	4	3	5	5.3	8.5
11-Feb	5	2	3	5	5	5	4	2	3	3	2	3	4	2	2	3	1	2	3	4	4	2	5	5	3.3	5.1
12-Feb	4	3	4	4	4	4	4	5	6	5	4	4	5	4	2	N	5	2	1	3	3	3	4	3	3.7	5.9
13-Feb	4	4	2	5	5	5	5	3	4	4	4	3	3	2	3	4	4	2	3	3	3	3	4	5	3.7	5.5
14-Feb	5	3	4	5	3	4	3	2	3	2	4	7	5	5	3	6	6	5	5	4	3	4	5	5	4.4	6.8
15-Feb	4	3	6	5	5	4	3	4	5	4	5	5	4	5	5	4	4	5	4	4	3	1	4	5	4.1	5.7
16-Feb	3	4	4	4	4	5	5	5	5	4	2	5	5	5	4	3	3	3	4	5	4	6	5	4	4.3	6.1
17-Feb	4	4	5	6	5	4	5	4	5	4	3	5	6	5	6	M	0	5	6	6	9	11	9	5	5.4	10.9
18-Feb	6	10	9	10	12	12	10	10	14	15	14	11	11	9	10	12	14	18	16	14	10	10	10	10	11.5	17.9
19-Feb	9	10	11	11	12	12	12	14	13	16	12	11	7	5	5	5	5	4	5	6	5	6	5	8	8.7	15.9
20-Feb	8	9	7	7	6	7	8	9	11	11	14	12	7	9	10	11	8	7	5	3	3	4	3	2	7.5	14.2
21-Feb	4	5	2	3	4	6	4	5	5	6	9	7	9	8	6	2	3	2	4	4	4	3	4	4	4.7	9.1
22-Feb	3	4	6	4	4	7	6	7	6	4	4	3	5	3	5	5	5	5	6	5	5	4	2	3	4.6	6.8
23-Feb	5	3	3	4	5	8	7	6	5	5	5	5	6	6	6	6	6	7	7	6	5	5	4	3	5.2	8.1
24-Feb	3	4	4	4	4	4	4	3	3	5	5	6	5	4	4	3	4	4	3	4	5	5	6	4	4.2	6.4
25-Feb	5	5	6	5	5	6	6	7	7	6	6	4	4	5	4	3	4	4	5	4	5	5	5	5	5.0	7.2
26-Feb	4	6	6	5	4	6	7	7	6	5	5	4	7	6	5	5	5	6	6	5	7	6	8	7	5.9	7.6
27-Feb	7	9	10	9	11	10	12	14	13	14	11	9	8	6	4	6	5	2	3	3	3	5	4	4	7.6	14.4
28-Feb	5	4	5	5	4	4	3	4	3	3	4	6	5	4	3	6	3	5	5	8	8	7	6	6	4.8	7.6
5.5 5.4 5.6 5.7 6.0 6.1 6.1 6.2 6.3 6.1 6.2 6.3 6.2 6.0 5.3 5.8 5.6 5.7 5.8 5.7 5.4 5.5 5.5 5.3																								Diurnal Average		
21.5 18.5 15.9 18.7 21.3 17.8 15.2 15.4 14.7 15.9 14.5 16.1 17.3 16.7 16.4 18.6 21.3 20.2 22.3 20.2 19.8 19.2 21.9 20.7																								Diurnal Maximum		
M - Maintenance N - Not Valid																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

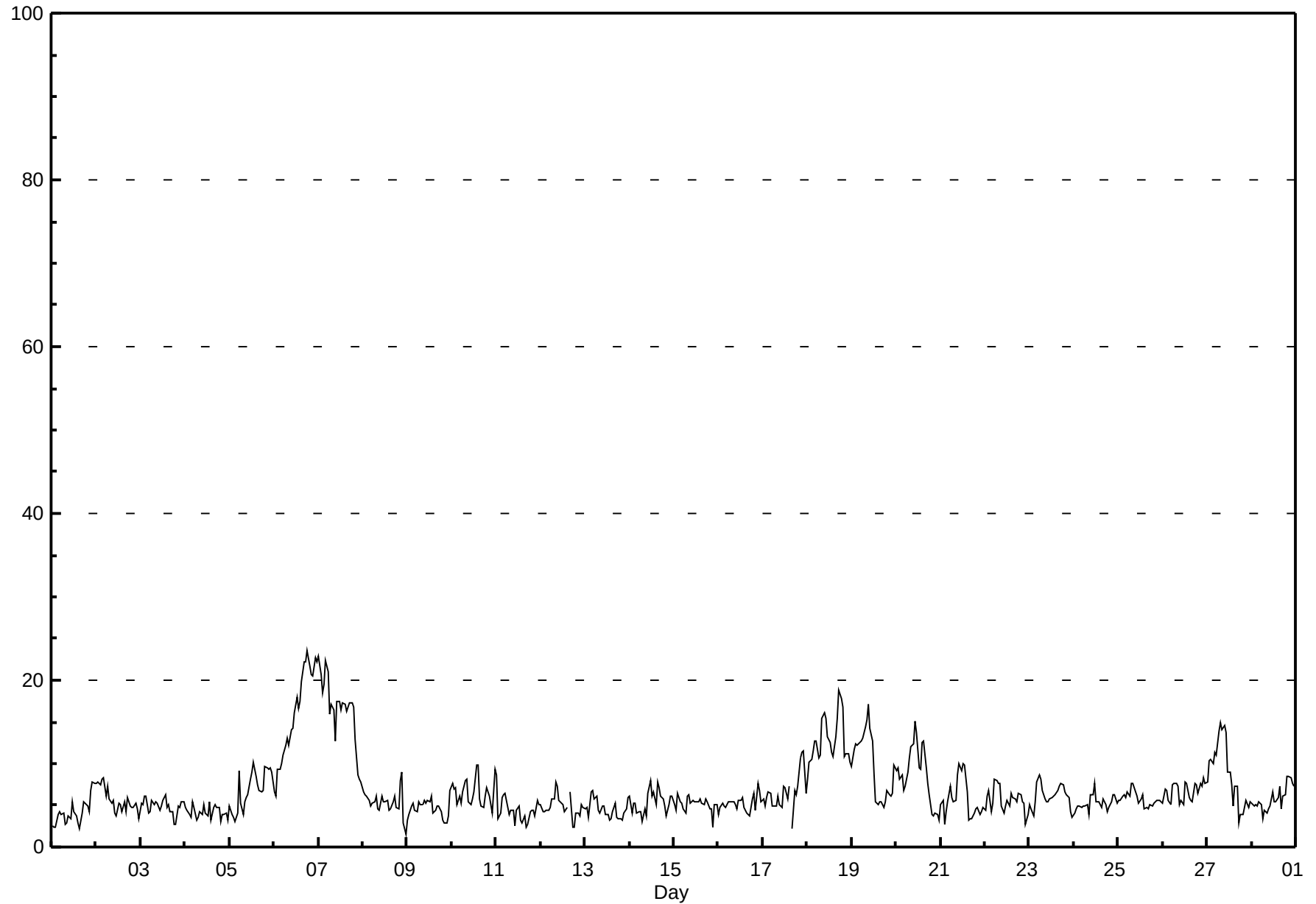


Hourly Maximums

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

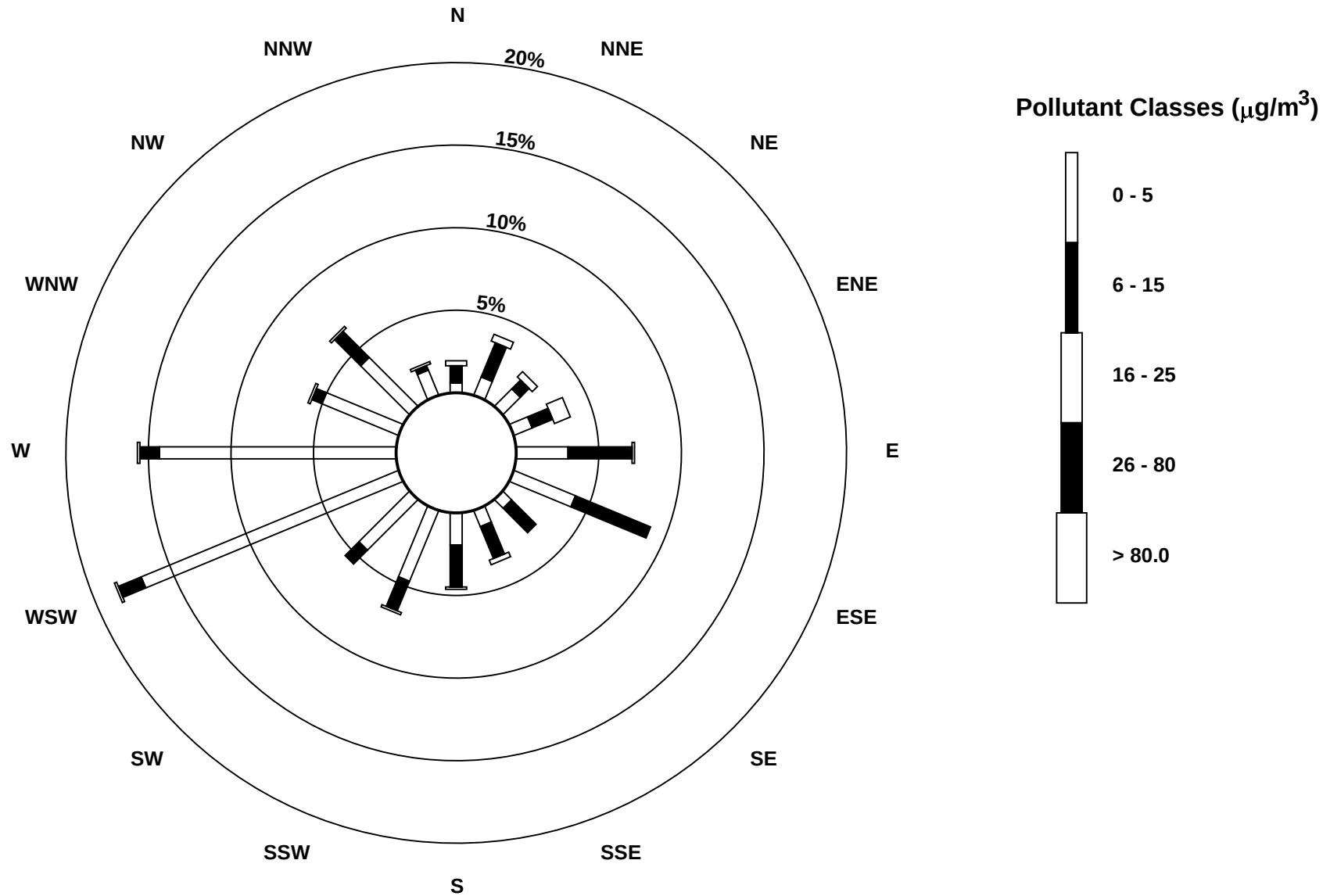
Beaverlodge - February 2013

Maximum Value: 23.6 μg/m³ on Feb 6 19:00																								Maximum Daily Average: 16.4 μg/m³ on Feb 7						Hours in Service: 672	
Minimum Value: 2 μg/m³ on Feb 9 00:00																								Minimum Daily Average: 4.2 μg/m³ on Feb 1						Hours of Data: 670	
Maximum Diurnal Average: 7.5 μg/m³ at hour 12																								Minimum Diurnal Average: 6.3 μg/m³ at hour 2						Hours of Missing Data: 2	
Monthly Average: 6.85 μg/m³																								Percentiles: P ₁ = 2.4 P ₁₀ = 3.8 Q ₁ = 4.7 Median = 5.5 Q ₃ = 7.6 P ₉₀ = 12.3 P ₉₉ = 22.2						Hours of Calibration: 0	
																								Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Feb	3	2	2	4	4	4	4	3	3	4	3	5	4	4	3	2	4	5	5	5	4	7	8	8	4.2	7.8					
2-Feb	8	8	8	8	8	6	7	6	5	6	4	4	5	5	4	5	4	6	5	5	5	5	5	3	5.6	8.4					
3-Feb	5	5	6	6	4	4	6	5	5	5	4	5	6	6	5	5	4	4	3	3	5	5	5	5	4.9	6.3					
4-Feb	5	4	4	4	5	5	3	4	4	4	5	4	4	5	3	5	5	5	5	3	4	4	4	3	4.2	5.4					
5-Feb	5	4	4	3	4	9	5	4	5	6	6	8	9	10	8	8	7	7	7	10	10	9	10	9	6.9	10.3					
6-Feb	7	6	9	9	10	11	12	13	12	14	14	16	18	17	17	20	22	22	24	22	21	20	23	22	15.9	23.6					
7-Feb	23	21	18	19	22	21	16	17	16	13	17	17	16	17	17	16	17	17	17	17	13	9	8	8	16.4	23.0					
8-Feb	7	6	6	6	5	5	5	6	5	4	6	5	5	6	4	5	5	6	5	5	8	9	3	2	5.4	9.0					
9-Feb	3	4	5	5	4	4	5	5	5	6	5	6	5	6	4	4	5	5	4	3	3	3	4	7	4.6	6.7					
10-Feb	8	7	7	5	6	5	7	8	8	5	5	6	7	10	10	6	5	5	6	7	6	5	4	9	6.5	9.8					
11-Feb	9	3	4	6	6	6	5	4	4	4	3	4	5	3	3	4	2	3	4	4	4	4	6	5	4.4	8.7					
12-Feb	5	4	4	4	4	5	6	6	8	7	6	5	5	4	5	N	7	2	2	4	4	4	5	5	4.9	7.8					
13-Feb	5	5	4	7	7	6	6	4	4	5	5	4	4	3	3	4	5	4	3	3	3	4	5	6	4.5	6.8					
14-Feb	6	4	5	5	4	4	4	3	5	4	7	8	6	7	5	8	7	6	6	5	4	5	6	6	5.4	8.0					
15-Feb	5	4	6	5	5	5	4	6	6	5	6	6	5	5	6	5	5	6	5	5	5	2	5	5	5.2	6.4					
16-Feb	4	5	5	5	5	5	5	5	5	5	5	6	6	6	5	4	4	4	6	6	4	8	7	6	5.2	7.6					
17-Feb	6	5	6	7	6	5	5	5	6	5	5	7	7	6	7	M	2	7	6	7	11	11	11	7	6.5	11.5					
18-Feb	8	10	11	12	13	13	11	11	15	16	15	13	13	11	11	13	15	19	18	17	11	11	11	10	12.8	18.8					
19-Feb	10	12	12	12	13	13	13	14	15	17	14	13	9	5	5	5	5	5	5	7	6	6	6	10	9.7	17.0					
20-Feb	9	10	8	9	7	7	9	11	12	12	15	14	9	9	12	13	10	8	6	4	4	4	4	3	8.7	15.1					
21-Feb	5	6	3	4	5	7	6	5	6	9	10	9	10	10	7	3	3	3	4	5	5	4	4	5	5.7	10.1					
22-Feb	4	6	7	4	5	8	8	8	8	5	4	5	6	5	6	6	6	5	6	6	5	5	3	4	5.7	8.1					
23-Feb	5	5	4	5	8	9	8	7	6	5	5	6	6	6	6	7	7	8	8	7	6	6	4	4	6.1	8.6					
24-Feb	4	5	5	5	5	5	5	5	4	6	6	8	5	5	5	5	6	5	4	5	5	6	6	5	5.2	7.6					
25-Feb	6	6	6	6	6	7	6	8	8	7	6	5	6	6	5	5	5	5	5	5	5	6	6	5	5.8	7.7					
26-Feb	5	7	7	6	5	8	8	8	7	5	6	5	8	8	6	6	5	8	7	6	8	7	8	8	6.7	8.3					
27-Feb	8	10	10	10	11	11	14	15	14	15	14	9	9	7	5	7	7	3	4	4	5	6	5	5	8.7	14.8					
28-Feb	5	5	5	5	5	5	3	4	4	5	5	7	5	5	6	7	5	6	6	9	8	8	8	7	5.8	8.5					
6.5 6.3 6.5 6.6 7.0 7.2 7.0 7.1 7.4 7.3 7.4 7.5 7.3 7.1 6.6 6.8 6.6 6.7 6.7 6.7 6.5 6.6 6.5 6.5																								Diurnal Average							
23.0 20.6 18.4 19.4 22.3 21.1 16.0 17.1 16.4 17.0 17.5 17.4 18.1 17.3 17.4 19.9 22.2 22.2 23.6 21.7 20.8 20.5 22.8 22.2																								Diurnal Maximum							
M - Maintenance N - Not Valid																															



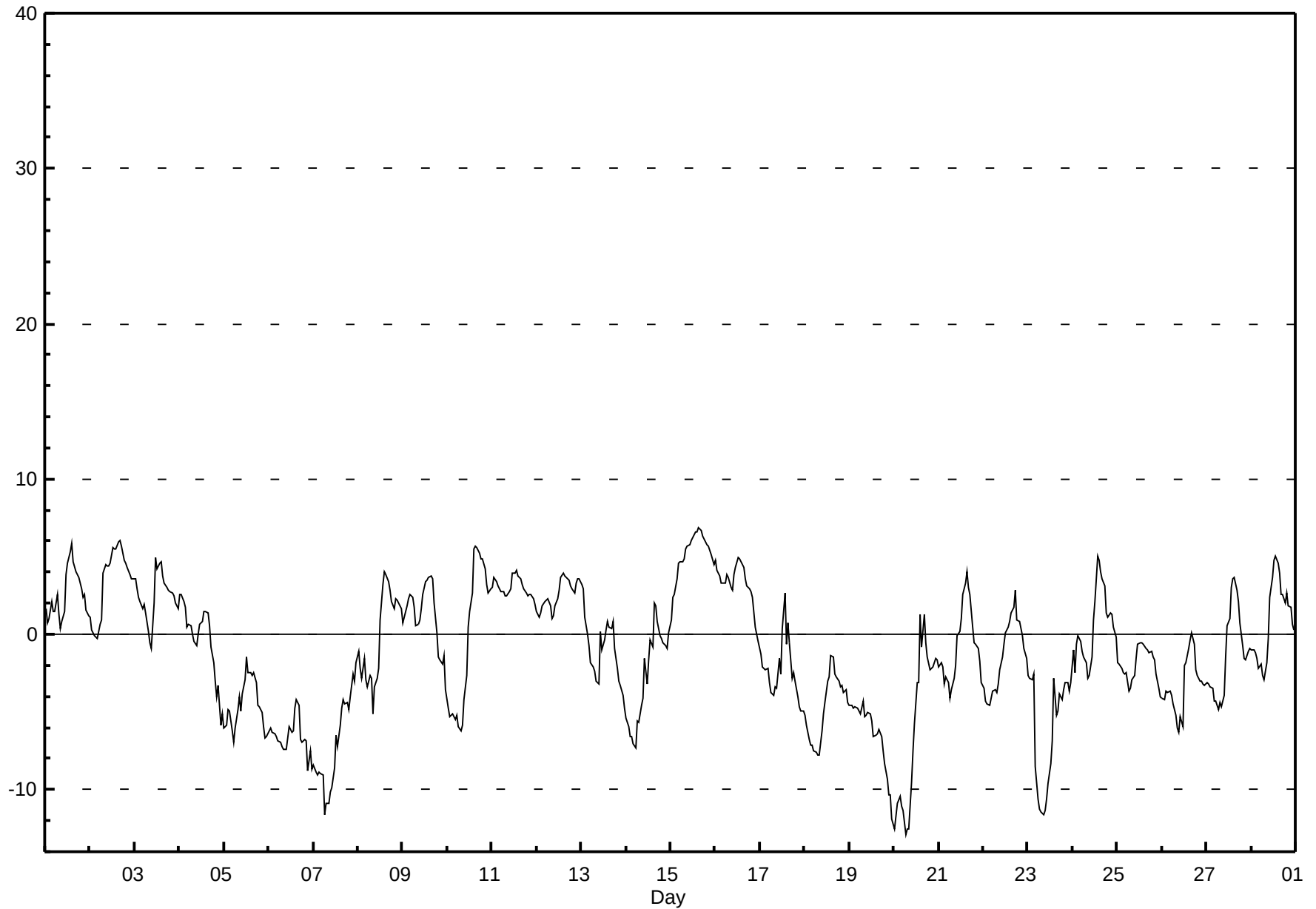
Pollutant Rose

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



Hourly Averages

External Temperature (ET) - °C
Beaverlodge - February 2013



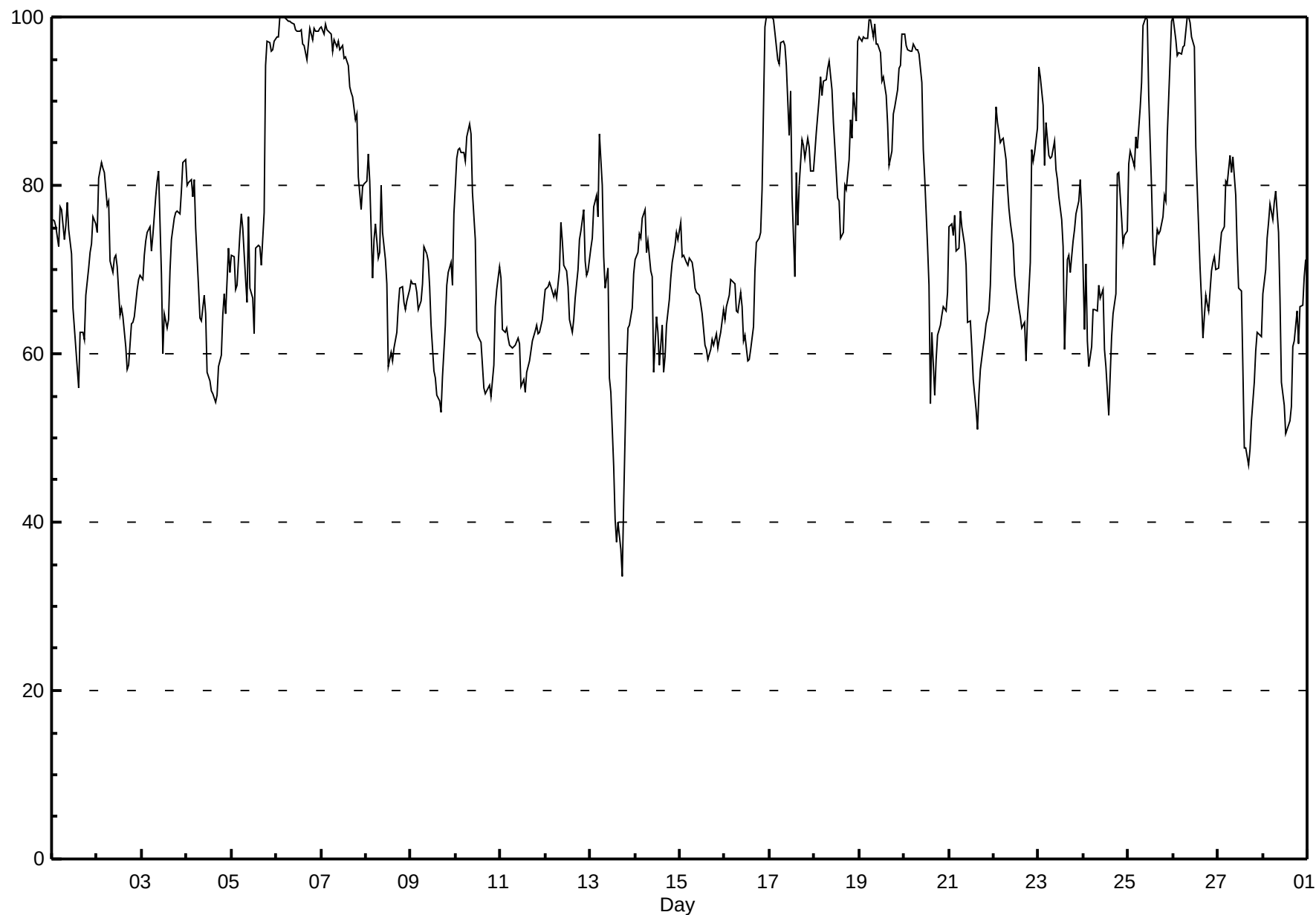
Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100.0 % on Feb 6 03:00 Maximum Daily Average: 98.4 % on Feb 6																								Hours in Service: 672 Hours of Data: 672 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 34 % on Feb 13 18:00 Maximum Diurnal Average: 80.7 % at hour 6 Monthly Average: 74.59 %												Minimum Daily Average: 61.0 % on Feb 13 Minimum Diurnal Average: 64.1 % at hour 15 Percentiles: P ₁ = 45.4 P ₁₀ = 59.1 Q ₁ = 64.7 Median = 72.6 Q ₃ = 83.7 P ₉₀ = 96.7 P ₉₉ = 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-Feb	76	76	75	73	78	77	74	75	78	75	72	65	63	58	56	63	63	62	67	70	72	73	76	76	70.4	77.9
2-Feb	74	81	83	82	82	78	78	71	70	71	72	70	65	65	64	61	58	59	64	64	64	68	69	69	70.0	82.8
3-Feb	69	72	73	74	75	72	74	79	81	82	69	60	65	63	64	70	74	76	77	77	77	79	83	83	73.6	83.0
4-Feb	80	80	81	79	81	75	68	64	64	67	65	58	57	56	55	54	55	58	60	65	67	65	73	70	66.4	80.8
5-Feb	72	71	68	68	74	77	75	69	66	76	68	67	62	73	73	73	71	77	94	97	97	96	96	97	77.3	97.2
6-Feb	98	98	100	100	100	100	100	100	99	99	98	98	98	98	97	97	95	97	99	97	99	98	98	99	98.4	100.0
7-Feb	99	98	99	98	98	98	96	97	96	97	96	97	95	95	94	92	91	91	88	88	81	77	80	80	92.6	99.1
8-Feb	81	84	81	69	74	75	71	72	80	74	71	68	58	60	59	61	63	66	68	68	66	65	66	68	69.5	83.7
9-Feb	69	68	68	67	65	66	68	73	72	71	68	63	58	57	55	54	53	57	63	68	70	71	68	77	65.5	76.6
10-Feb	83	84	84	84	84	83	86	87	86	79	74	63	62	61	59	56	55	56	56	55	59	66	68	70	70.8	87.3
11-Feb	69	63	63	63	62	61	61	61	61	62	61	56	57	55	58	59	60	61	63	63	62	63	64	66	61.4	69.1
12-Feb	68	68	68	68	67	68	67	70	76	73	70	70	68	64	63	64	67	70	74	75	77	71	69	70	69.3	77.1
13-Feb	73	74	77	79	76	86	80	72	68	70	57	55	47	40	38	40	37	34	42	58	63	63	65	70	61.0	86.1
14-Feb	71	72	74	74	76	77	72	73	70	69	58	64	63	59	63	58	60	63	66	69	71	73	74	74	68.5	77.1
15-Feb	76	72	72	71	70	71	71	70	68	67	67	66	65	61	60	59	61	62	61	62	61	62	63	65	65.9	75.6
16-Feb	64	66	67	69	69	68	65	65	67	66	62	62	59	59	61	63	70	73	74	74	79	99	100	100	70.9	100.0
17-Feb	100	100	100	98	95	94	97	97	97	94	86	91	79	69	81	75	80	85	85	83	86	85	82	82	88.4	100.0
18-Feb	84	86	90	93	91	92	92	94	95	91	87	85	78	78	74	74	80	79	83	88	86	91	88	97	86.6	97.1
19-Feb	98	97	98	97	98	100	100	98	99	97	97	96	92	93	91	87	82	84	88	89	91	94	94	98	94.1	99.7
20-Feb	98	97	96	96	96	97	96	96	96	92	84	81	73	68	54	63	55	59	62	63	65	66	65	67	78.5	98.0
21-Feb	75	75	74	76	72	73	77	75	73	70	64	64	61	57	53	51	55	58	61	62	64	65	68	75	66.6	77.0
22-Feb	84	89	87	85	85	86	83	80	77	76	73	69	68	65	64	63	64	59	64	71	84	83	84	87	76.3	89.3
23-Feb	94	93	89	82	88	84	83	83	85	82	81	79	76	73	61	71	72	70	73	75	77	78	81	77	79.4	94.0
24-Feb	63	71	62	58	61	65	65	65	68	67	68	61	59	53	57	62	65	67	81	82	76	73	74	75	66.5	81.5
25-Feb	83	84	83	82	86	84	89	92	99	100	100	91	80	73	71	75	74	75	76	79	78	86	95	99	84.7	100.0
26-Feb	100	97	96	96	96	96	97	100	100	99	98	96	85	80	70	66	62	67	66	65	70	71	71	70	83.9	100.0
27-Feb	70	72	74	75	80	80	84	82	83	79	73	68	68	58	49	49	47	49	52	57	60	62	62	62	66.5	83.5
28-Feb	67	70	74	76	78	76	78	79	74	67	57	54	50	51	52	54	61	62	65	61	66	66	69	71	65.7	79.4
79.8 80.6 80.6 79.8 80.5 80.7 80.2 80.0 80.3 79.0 74.8 72.0 68.2 65.9 64.1 64.8 65.3 67.0 70.4 72.4 73.8 75.3 76.6 78.3																								Diurnal Average		
100.0 100.0 100.0 100.0 100.0 99.8 99.6 100.0 100.0 100.0 99.7 98.3 98.4 98.4 96.8 96.6 94.9 96.8 98.7 97.4 98.6 98.7 100.0 100.0																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - February 2013



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	15	15	12	17	14	11	17	13	12	11	13	17	20	30	30	15	7	14	21	8	12	10	9	4	13.5	30.4
Dir	249	242	257	259	247	249	251	248	254	253	253	254	255	264	264	259	263	267	264	259	262	331	11	322	260	264
2 Spd	5	2	2	3	4	2	4	15	18	19	21	22	27	20	25	23	27	31	24	13	9	10	11	14	13.4	30.6
Dir	349	183	70	131	92	143	247	263	268	253	251	249	257	252	250	258	259	255	250	255	266	258	266	275	256	255
3 Spd	19	11	7	11	11	12	13	13	7	4	10	3	1	25	8	19	22	22	24	25	23	22	12	10	13.6	25.2
Dir	268	272	269	257	247	252	250	243	234	246	272	243	199	264	251	245	243	239	241	241	241	240	231	219	248	264
4 Spd	20	24	27	21	14	22	28	19	16	21	29	33	29	24	24	23	22	21	21	14	14	8	4	2	19.3	33.2
Dir	239	241	249	257	258	268	264	262	257	255	259	267	268	262	260	261	250	248	256	253	251	263	67	97	257	267
5 Spd	3	5	5	3	2	1	4	1	7	3	6	4	2	4	5	5	5	8	9	10	7	8	5	8	3.0	9.5
Dir	104	53	46	48	346	156	50	31	32	11	17	19	32	196	231	202	30	128	111	104	84	91	103	106	80	104
6 Spd	5	6	9	6	6	5	3	5	5	4	2	1	2	3	3	2	1	0	4	2	2	2	1	2	2.5	9.4
Dir	89	118	101	120	135	158	167	177	175	164	91	66	68	46	58	61	189	17	55	101	54	162	76	68	117	101
7 Spd	1	1	2	0	1	2	1	3	1	3	6	5	1	4	4	5	1	3	3	3	5	1	0	8	0.9	7.7
Dir	252	270	39	318	23	32	112	44	247	16	285	340	320	11	2	259	203	69	156	95	44	102	122	264	346	264
8 Spd	8	4	11	19	13	9	15	11	3	1	2	2	1	20	27	22	22	27	22	29	32	34	30	18	15.5	33.8
Dir	260	200	256	258	255	248	260	269	201	212	216	62	193	261	268	263	256	251	243	246	253	263	264	256	256	263
9 Spd	7	10	20	21	24	21	11	9	9	7	8	10	11	15	13	9	9	11	12	4	3	5	2	3	8.4	24.3
Dir	236	251	273	286	289	293	319	305	323	301	292	301	304	307	320	334	354	12	21	240	270	47	103	82	304	289
10 Spd	3	4	3	4	5	3	5	4	3	4	4	3	2	1	16	24	27	19	25	33	30	25	21	24	8.8	33.5
Dir	111	107	82	87	102	114	122	121	135	114	109	119	178	182	237	232	236	252	258	253	256	251	248	251	240	253
11 Spd	21	21	26	31	32	33	34	30	25	25	24	33	39	45	42	39	37	35	35	32	29	31	31	27	31.5	44.6
Dir	248	271	267	264	264	264	266	268	270	269	265	272	273	268	264	261	262	264	260	259	267	265	262	254	265	268
12 Spd	26	21	20	24	30	37	34	17	10	8	12	15	17	33	36	33	26	26	26	22	16	21	27	23	22.8	36.6
Dir	254	259	254	257	256	255	260	256	231	236	230	224	216	241	249	258	245	245	247	243	240	256	257	269	250	255
13 Spd	19	28	34	31	32	23	24	16	10	3	2	13	14	14	8	8	7	3	7	15	12	11	8	9	12.9	33.8
Dir	278	274	284	299	305	301	302	297	295	285	237	272	287	302	345	34	29	44	262	268	247	253	269	244	289	284
14 Spd	3	1	2	2	3	1	7	9	8	3	2	3	5	3	4	23	30	17	3	7	3	4	2	3	3.5	30.0
Dir	244	200	35	78	33	8	286	279	289	272	133	87	177	90	47	265	263	269	200	215	158	100	119	191	260	263
15 Spd	8	12	7	18	20	17	19	21	31	31	23	26	29	38	41	36	27	21	47	38	40	29	20	11	24.7	47.3
Dir	212	221	212	229	239	238	254	264	262	265	261	262	255	254	252	257	264	259	252	264	267	274	279	282	257	252
16 Spd	13	11	15	14	16	13	8	10	10	11	12	22	20	19	20	21	12	10	9	6	11	11	8	11	11.9	21.8
Dir	303	278	286	292	284	291	296	311	310	276	279	254	261	282	288	299	310	304	281	278	325	356	358	332	293	254
17 Spd	9	10	12	12	11	7	4	4	6	2	5	6	4	3	7	4	2	7	8	11	11	10	8	7	1.9	11.9
Dir	311	307	312	314	324	309	299	343	342	294	307	289	147	123	93	103	151	78	103	117	103	88	83	100	18	314
18 Spd	2	2	3	2	2	3	5	5	4	2	2	3	3	3	2	3	4	1	5	5	5	5	2	1	0.9	4.8
Dir	122	129	159	160	168	115	118	130	146	169	209	224	227	217	171	121	73	58	302	349	27	282	273	324	156	282
19 Spd	3	6	5	4	1	5	3	1	3	6	9	12	17	17	14	13	12	12	10	9	5	7	2	2	6.7	17.1
Dir	28	18	28	16	2	265	306	251	317	7	324	320	317	321	322	314	320	330	334	351	330	32	348	303	332	317
20 Spd	5	4	6	4	2	2	0	2	2	4	5	2	2	4	3	6	4	7	7	8	9	7	8	6	3.2	9.1
Dir	58	97	116	140	203	220	179	193	147	131	120	92	61	79	152	176	193	212	194	185	194	193	202	217	169	194
21 Spd	6	8	4	3	4	6	5	4	5	7	4	6	3	4	11	10	19	13	11	4	4	2	4	3	5.7	19.3
Dir	220	233	191	174	202	210	177	200	191	190	188	199	121	126	191	209	214	222	230	204	222	185	172	160	202	214
22 Spd	4	4	5	4	4	5	7	7	8	10	12	11	12	13	15	11	7	4	1	12	21	7	9	6	5.1	21.2
Dir	173	103	123	132	112	101	105	83	93	106	110	115	107	116	109	116	112	114	141	262	229	230	213	209	132	229

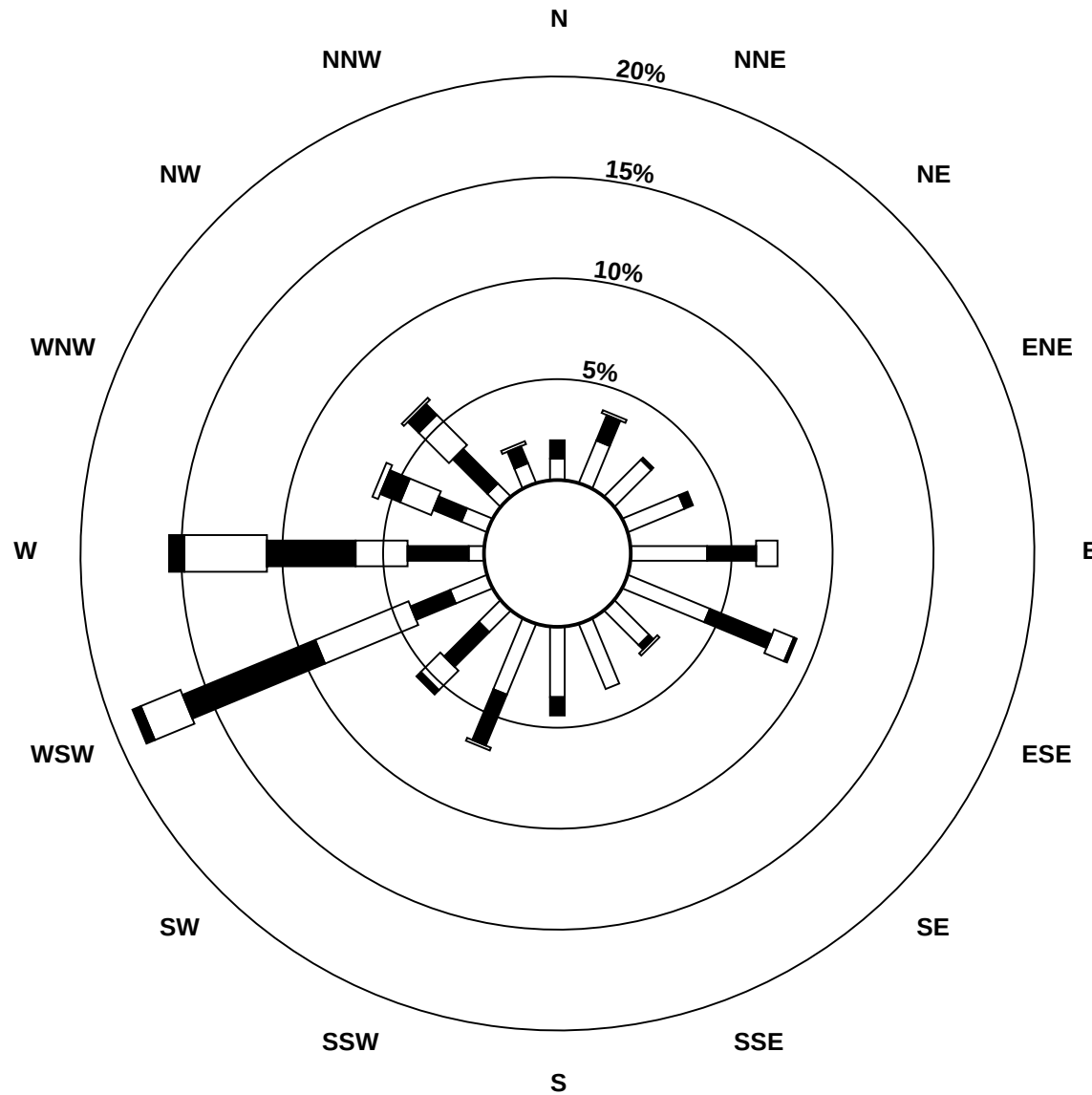
Hourly Averages

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

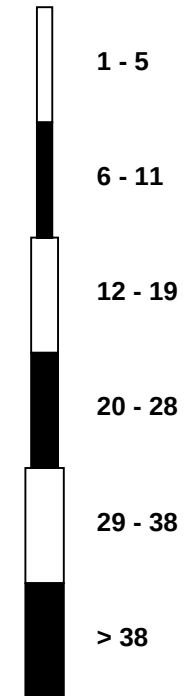
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
23 Spd	6	2	5	15	22	28	25	25	21	15	13	13	8	7	1	5	5	3	1	5	6	6	5	10	7.8	27.8			
Dir	194	208	240	291	319	317	316	313	309	320	314	308	319	324	141	69	60	79	89	245	220	246	215	234	304	317			
24 Spd	12	17	21	24	17	12	7	2	4	6	6	4	3	7	40	35	33	18	13	6	5	6	5	7	9.8	39.7			
Dir	254	229	257	271	254	238	221	189	124	80	111	97	89	269	256	256	263	273	296	277	301	305	341	24	261	256			
25 Spd	2	1	4	1	2	3	2	3	7	10	12	11	18	19	19	20	19	10	5	4	3	7	5	5	6.5	19.8			
Dir	163	20	29	265	244	315	353	33	14	25	84	90	81	91	114	103	99	94	146	122	99	117	100	101	90	103			
26 Spd	6	7	8	8	4	4	4	4	3	3	2	5	4	4	5	7	5	11	8	8	14	15	14	8	5.8	15.5			
Dir	71	90	109	114	138	113	195	214	176	199	99	52	87	55	61	72	84	115	88	86	102	100	101	100	99	100			
27 Spd	5	3	3	1	2	1	1	1	2	3	3	6	9	18	23	19	25	21	9	2	3	4	5	6	5.5	24.8			
Dir	128	176	155	178	49	239	302	270	105	79	144	199	205	229	244	249	244	255	252	287	74	157	201	213	231	244			
28 Spd	3	5	4	6	4	6	7	8	3	4	3	5	5	9	10	8	10	12	17	12	6	4	6	5	4.5	17.2			
Dir	189	211	195	220	198	244	210	211	192	234	154	170	203	221	180	107	95	96	105	145	110	162	175	161	163	105			
Spd	5.4	5.5	5.9	7.6	7.5	7.9	7.6	6.5	5.1	4.4	4.6	6.3	6.3	9.5	10.8	10.4	9.8	8.4	8.8	8.4	7.4	5.7	4.8	4.7	Diurnal Average				
Dir	252	250	263	267	270	267	268	269	271	266	261	263	261	263	256	256	255	255	251	247	252	258	253	250	Diurnal Maximum				
Spd	26.3	28.5	33.8	31.4	32.3	36.6	33.7	30.0	30.6	30.9	28.6	33.4	38.8	44.6	42.5	39.4	37.1	35.5	47.3	37.6	39.9	33.8	31.3	26.9	Diurnal Maximum				
Dir	254	274	284	264	264	255	266	268	262	265	259	272	273	268	264	261	262	264	252	264	267	263	262	254	Diurnal Maximum				
Maximum Speed Value: 47 km/h on Feb 15 19:00																				Minimum Speed Value: 0 km/h on Feb 7 23:00				Hours in Service:				672	
Maximum Daily Speed Average: 31.5 km/h on Feb 11																				Minimum Daily Speed Average: 0.9 km/h on Feb 7				Hours of Data:				672	
Maximum Diurnal Speed Average: 10.8 km/h at hour 15																				Minimum Diurnal Speed Average: 4.4 km/h at hour 10				Hours of Missing Data:				0	
Monthly Average Velocity: 7.00 km/h 259.0 deg																				Speed Percentiles: P ₁ = 0.7 P ₁₀ = 2.2 Q ₁ = 3.8 Median = 7.8 Q ₃ = 17.0 P ₉₀ = 25.9 P ₉₉ = 39.4				Percent Operational Time:				100.0	
All monthly, daily, and diurnal averages have been calculated using vector methods																													
Frequency Distribution																													
		Speed Range (km/h)																											
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																						
North	17	13	1	0	0	0	31																						
NorthEast	33	11	0	0	0	0	44																						
East	44	37	11	2	0	0	94																						
SouthEast	45	7	7	0	0	0	59																						
South	51	17	0	0	0	0	68																						
SouthWest	25	34	19	20	2	0	100																						
West	12	32	48	66	40	9	207																						
NorthWest	14	22	22	9	2	0	69																						
Total	241	173	108	97	44	9	672																						

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - February 2013

Maximum Speed: 47 km/h on Feb 15 19:00																				Maximum Daily Speed Average: 31.7 km/h on Feb 11					Hours in Service: 672																								
Minimum Speed: 1 km/h on Feb 20 07:00																				Minimum Daily Speed Average: 3.7 km/h on Feb 18					Hours of Data: 672																								
Maximum Diurnal Speed Average: 16.7 km/h at hour 15																				Minimum Diurnal Speed Average: 8.7 km/h at hour 10					Hours of Missing Data: 0																								
Monthly Average Speed: 11.72 km/h																				Percentiles: P ₁ = 2.0 P ₁₀ = 3.2 Q ₁ = 4.4 Median = 8.1 Q ₃ = 17.2 P ₉₀ = 26.0 P ₉₉ = 39.5					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-Feb	15	15	13	17	14	11	17	13	12	11	13	17	20	30	31	16	7	14	21	9	12	16	9	4	14.9	30.6																							
2-Feb	5	3	2	4	4	3	5	15	18	19	21	22	27	20	25	24	27	31	24	13	10	11	11	14	14.8	30.6																							
3-Feb	19	11	8	11	11	12	13	13	7	6	10	4	4	25	9	19	22	22	24	25	23	22	12	10	14.3	25.3																							
4-Feb	21	24	27	21	14	22	28	19	16	21	29	33	29	24	24	23	22	21	21	15	14	8	5	3	20.1	33.3																							
5-Feb	4	5	5	3	6	3	4	3	7	4	7	6	3	6	5	5	7	8	9	10	7	8	5	9	5.8	9.6																							
6-Feb	7	7	9	7	6	5	4	5	5	4	2	2	3	3	3	2	2	4	4	3	3	3	2	3	4.1	9.4																							
7-Feb	3	3	3	2	4	4	4	4	3	4	7	8	4	6	6	5	2	4	5	4	5	2	3	8	4.3	8.4																							
8-Feb	9	5	12	19	14	9	15	11	4	2	3	2	4	20	27	22	23	27	22	29	32	34	30	19	16.4	33.8																							
9-Feb	7	11	21	21	24	21	11	9	9	7	8	10	11	15	13	9	9	11	12	5	7	5	3	4	11.0	24.4																							
10-Feb	3	4	3	5	5	4	5	4	3	4	5	3	4	5	16	24	27	19	25	34	30	25	21	24	12.6	33.5																							
11-Feb	22	21	26	31	32	33	34	30	25	26	24	34	39	45	43	40	37	36	35	32	29	31	31	27	31.7	44.8																							
12-Feb	26	21	20	24	30	37	34	17	10	8	12	15	17	33	36	33	27	26	26	22	16	21	27	23	23.4	36.7																							
13-Feb	20	29	36	31	32	23	24	16	10	5	4	13	14	14	9	8	7	4	8	15	12	11	8	9	15.1	35.5																							
14-Feb	4	4	4	3	3	3	7	9	8	4	3	3	5	4	4	23	30	17	4	7	4	4	3	4	6.8	30.0																							
15-Feb	8	12	7	18	20	17	19	21	31	31	23	26	29	38	41	36	28	22	47	38	40	29	20	12	25.6	47.3																							
16-Feb	13	11	15	14	17	13	8	11	10	12	12	22	21	19	20	21	12	10	9	6	12	12	8	12	13.3	21.9																							
17-Feb	9	10	12	12	11	7	5	4	6	4	6	6	5	3	7	4	5	7	8	11	11	10	8	7	7.5	12.0																							
18-Feb	3	3	3	3	3	4	5	5	5	3	3	4	3	4	3	3	4	3	6	6	5	6	3	2	3.7	6.1																							
19-Feb	3	6	5	4	3	5	3	1	4	6	9	12	17	17	14	13	12	12	10	9	5	8	3	4	7.8	17.3																							
20-Feb	6	4	6	4	2	3	1	2	3	4	5	3	2	5	3	6	4	7	7	9	9	7	8	6	4.9	9.1																							
21-Feb	6	8	5	5	4	6	6	5	6	7	4	6	4	5	11	11	19	13	11	4	6	3	4	4	6.7	19.3																							
22-Feb	5	4	5	5	4	5	7	7	8	10	12	11	12	13	15	11	7	4	3	13	22	7	9	6	8.6	21.6																							
23-Feb	6	4	6	17	23	28	25	25	21	15	13	14	9	7	3	5	5	3	2	7	7	7	6	10	11.0	27.9																							
24-Feb	13	17	22	24	17	12	7	3	5	6	6	4	4	8	40	35	33	18	14	7	6	6	6	7	13.3	39.8																							
25-Feb	3	2	5	3	3	5	4	4	7	10	13	11	18	19	19	20	19	10	5	5	4	7	5	6	8.6	20.0																							
26-Feb	6	7	8	8	4	4	4	4	4	3	3	6	4	4	5	7	5	12	8	8	14	15	14	8	6.9	15.5																							
27-Feb	5	3	3	2	4	3	4	3	3	3	3	6	9	18	23	20	25	21	9	3	4	5	5	6	7.9	24.9																							
28-Feb	3	6	4	6	6	9	7	8	3	4	3	5	5	9	10	8	10	13	17	12	6	5	6	6	7.2	17.2																							
																									9.1	9.3	10.5	11.5	11.3	11.1	11.0	9.6	9.1	8.7	9.4	11.0	11.7	15.1	16.7	16.2	15.5	14.2	14.2	12.9	12.6	11.6	9.9	9.1	Diurnal Average
																									26.3	28.6	35.5	31.4	32.3	36.7	33.7	30.1	30.7	31.0	28.7	33.6	38.9	44.8	42.6	39.5	37.1	35.6	47.3	38.0	40.0	33.8	31.4	27.0	Diurnal Maximum
All monthly, daily, and diurnal averages have been calculated using scalar methods																																																	

Hourly Standard Deviations

Wind Direction (WD) - deg
Beaverlodge - February 2013

Maximum Value: 97.8 deg on Feb 7 04:00																			Hours in Service: 672						
Minimum Value: 1.7 deg on Feb 3 18:00																			Hours of Data: 672						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 2.5 P ₁₀ = 4.0 Q ₁ = 6.0 Median = 12.4 Q ₃ = 30.4 P ₉₀ = 59.3 P ₉₉ = 88.3																			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-Feb	4	4	6	5	4	3	4	5	5	5	4	10	10	4	8	11	15	6	2	58	36	53	29	31	57.8
2-Feb	29	30	31	32	17	46	69	6	14	2	3	3	5	5	5	6	3	3	7	13	27	14	6	3	68.6
3-Feb	3	10	16	15	7	7	8	5	19	78	7	51	80	4	18	8	3	2	2	4	4	3	11	12	79.8
4-Feb	4	4	5	4	6	7	4	9	8	6	4	5	4	5	5	5	7	2	6	7	9	9	34	40	40.4
5-Feb	45	13	9	43	83	73	28	68	17	67	40	68	90	61	23	11	71	24	13	3	8	11	11	23	89.8
6-Feb	58	60	3	11	13	13	19	11	11	17	28	68	50	14	15	37	72	97	21	59	75	55	75	80	96.9
7-Feb	74	89	74	98	75	77	77	55	80	55	36	53	97	46	57	24	47	51	47	52	20	56	89	34	97.8
8-Feb	33	30	45	4	8	6	4	23	24	56	77	20	72	12	4	5	13	6	6	5	5	4	3	9	76.8
9-Feb	21	47	9	6	5	9	11	8	14	16	6	7	7	7	7	14	8	3	5	66	73	17	53	37	72.8
10-Feb	35	19	26	24	12	23	16	22	42	38	28	23	56	86	11	3	6	7	8	3	4	6	12	8	86.4
11-Feb	6	9	7	3	3	3	3	4	5	4	3	5	4	5	4	5	4	4	4	4	5	4	5	5	8.6
12-Feb	4	4	3	3	3	2	4	12	9	9	6	7	13	8	4	6	5	5	3	4	6	14	3	11	13.8
13-Feb	12	4	20	6	5	7	5	5	12	67	72	12	6	7	25	10	7	46	29	7	6	10	11	13	72.3
14-Feb	87	87	64	26	39	61	5	17	12	61	62	29	14	39	15	22	3	9	43	13	47	15	54	19	86.8
15-Feb	11	7	21	5	5	5	7	6	4	6	5	5	6	3	3	5	10	9	3	9	4	4	10	11	20.7
16-Feb	7	19	4	7	8	7	8	9	20	19	9	4	15	4	6	4	11	7	12	19	19	23	18	16	23.4
17-Feb	17	11	4	6	5	7	14	27	17	52	25	14	42	15	14	30	58	16	11	8	12	10	9	11	58.2
18-Feb	56	38	18	35	22	21	14	15	24	41	41	35	20	31	28	22	7	87	66	32	10	44	22	66	86.6
19-Feb	9	7	5	8	64	12	22	87	41	9	11	6	7	6	6	7	8	5	7	7	16	14	63	82	87.3
20-Feb	16	11	10	15	23	25	78	41	39	12	10	33	36	24	10	10	21	7	18	8	5	16	21	15	78.3
21-Feb	16	4	25	52	35	25	20	18	19	31	20	22	34	22	7	10	4	5	12	38	73	68	40	39	73.2
22-Feb	42	20	11	26	9	11	9	8	6	4	4	6	5	6	4	13	14	19	75	58	12	18	8	21	75.1
23-Feb	15	83	42	26	6	4	4	4	4	9	8	8	14	15	76	12	14	27	65	76	34	53	32	20	83.0
24-Feb	31	7	13	6	9	20	13	53	25	11	22	19	39	66	5	5	4	7	16	37	36	19	30	17	65.8
25-Feb	60	70	38	88	41	59	75	53	6	4	26	10	16	5	6	7	7	19	18	24	31	14	7	15	88.2
26-Feb	8	6	8	4	30	28	19	13	30	38	33	14	9	7	4	5	5	6	9	8	3	3	3	13	38.4
27-Feb	26	35	41	55	81	88	84	70	55	34	25	15	9	14	8	6	5	5	8	80	27	16	28	11	88.3
28-Feb	23	25	33	15	57	70	12	9	39	47	32	13	39	18	20	11	8	7	3	23	18	12	4	35	70.4
86.8 88.6 74.2 97.8 83.3 88.3 84.4 87.3 80.0 78.3 76.8 68.3 96.6 86.4 76.5 37.4 72.3 96.9 75.1 80.3 74.7 67.8 89.3 81.8																									

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

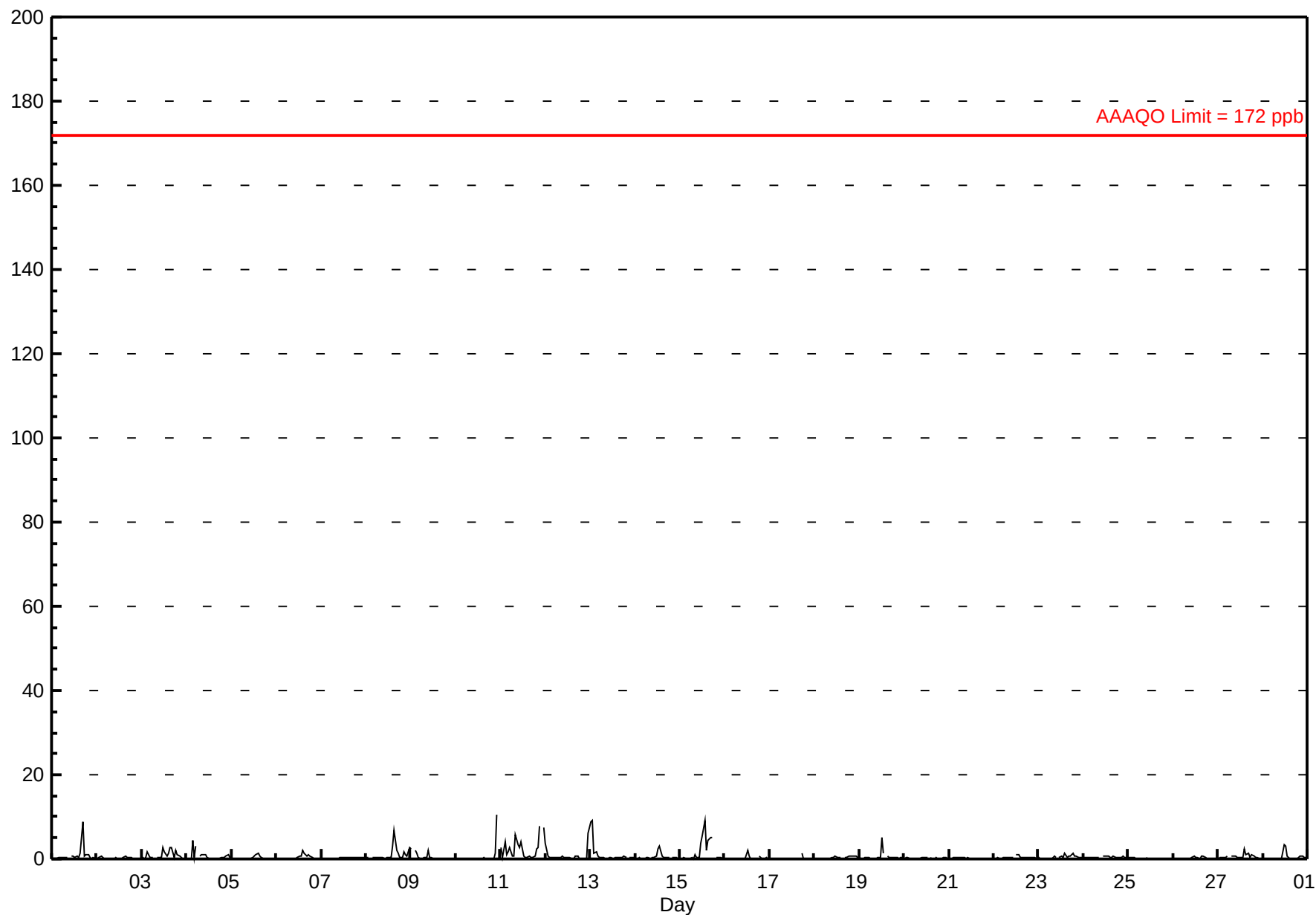
Sulphur Dioxide (SO₂) - ppb

Valleyview - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10.6 ppb on Feb 10 23:00 Maximum Daily Average: 2.3 ppb on Feb 11																								Hours in Service: 672 Hours of Data: 640 Hours of Missing Data: 32 Hours of Calibration: 32 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Feb 2 07:00 Maximum Diurnal Average: 1.1 ppb at hour 13 Monthly Average: 0.56 ppb												Minimum Daily Average: 0.1 ppb on Feb 25 Minimum Diurnal Average: 0.2 ppb at hour 7 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.5 P ₉₀ = 1.2 P ₉₉ = 6.7														
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-Feb	0	0	0	0	0	0	0	0	0	A	1	1	0	1	0	1	9	1	1	1	0	0	0	0	0.8	8.8
2-Feb	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.7
3-Feb	0	0	0	2	0	0	0	A	0	0	0	3	2	1	1	3	3	0	2	1	1	0	0	0	0.9	2.8
4-Feb	0	0	0	4	0	3	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0.6	4.3
5-Feb	0	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0.2	1.2
6-Feb	0	0	0	0	A	0	0	0	0	0	0	0	1	1	2	1	1	1	1	0	0	0	0	0	0.4	2.1
7-Feb	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-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	3	7	2	1	0	0	2	1	1	3	1.0	6.6
9-Feb	2	A	2	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.4
10-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11	A	0.6	10.6
11-Feb	3	0	4	1	2	3	1	1	6	3	3	4	1	0	0	1	0	0	1	2	3	8	A	7	2.3	7.7
12-Feb	4	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	A	0	6	0.7	6.2
13-Feb	9	9	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	1.1	9.2
14-Feb	0	0	0	0	0	0	0	0	0	0	0	1	2	3	1	0	0	0	0	A	0	0	0	0	0.5	3.1
15-Feb	0	0	0	0	0	0	0	0	1	0	0	4	5	9	2	4	5	5	A	0	0	0	0	0	1.7	9.1
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	A	1	0	0	0	0	0	0.2	2.2
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0.1	1.4
18-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	1	1	1	1	1	0	0.3	0.8
19-Feb	0	0	0	0	0	0	0	0	0	0	0	0	5	1	A	1	0	0	0	0	0	0	0	0	0.5	5.2
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.5
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
22-Feb	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0.3	0.9
23-Feb	0	0	0	0	0	0	0	0	1	0	A	0	1	0	1	0	1	1	1	1	1	0	0	0	0.4	1.5
24-Feb	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0	0	1	1	0	0	0	1	0	0	0.4	0.6
25-Feb	0	0	0	0	0	0	0	0	A	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.4
26-Feb	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0.2	0.8
27-Feb	0	0	0	0	0	1	A	1	1	1	0	0	0	0	2	1	1	1	1	1	0	0	0	0	0.6	2.3
28-Feb	0	0	0	0	0	A	0	0	0	0	0	3	3	1	0	0	0	0	0	0	1	1	0	0	0.5	3.4
0.8 0.5 0.4 0.5 0.3 0.4 0.2 0.2 0.5 0.4 0.4 0.8 1.1 0.9 0.7 0.9 1.0 0.6 0.4 0.4 0.4 0.6 0.6 0.7																								Diurnal Average		
9.0 9.2 4.0 4.3 1.8 3.1 0.6 0.6 5.7 3.5 2.8 4.2 5.3 9.1 3.2 6.6 8.8 5.2 1.9 2.3 2.8 7.7 10.6 7.5																								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 - February 2013



Hourly Maximums

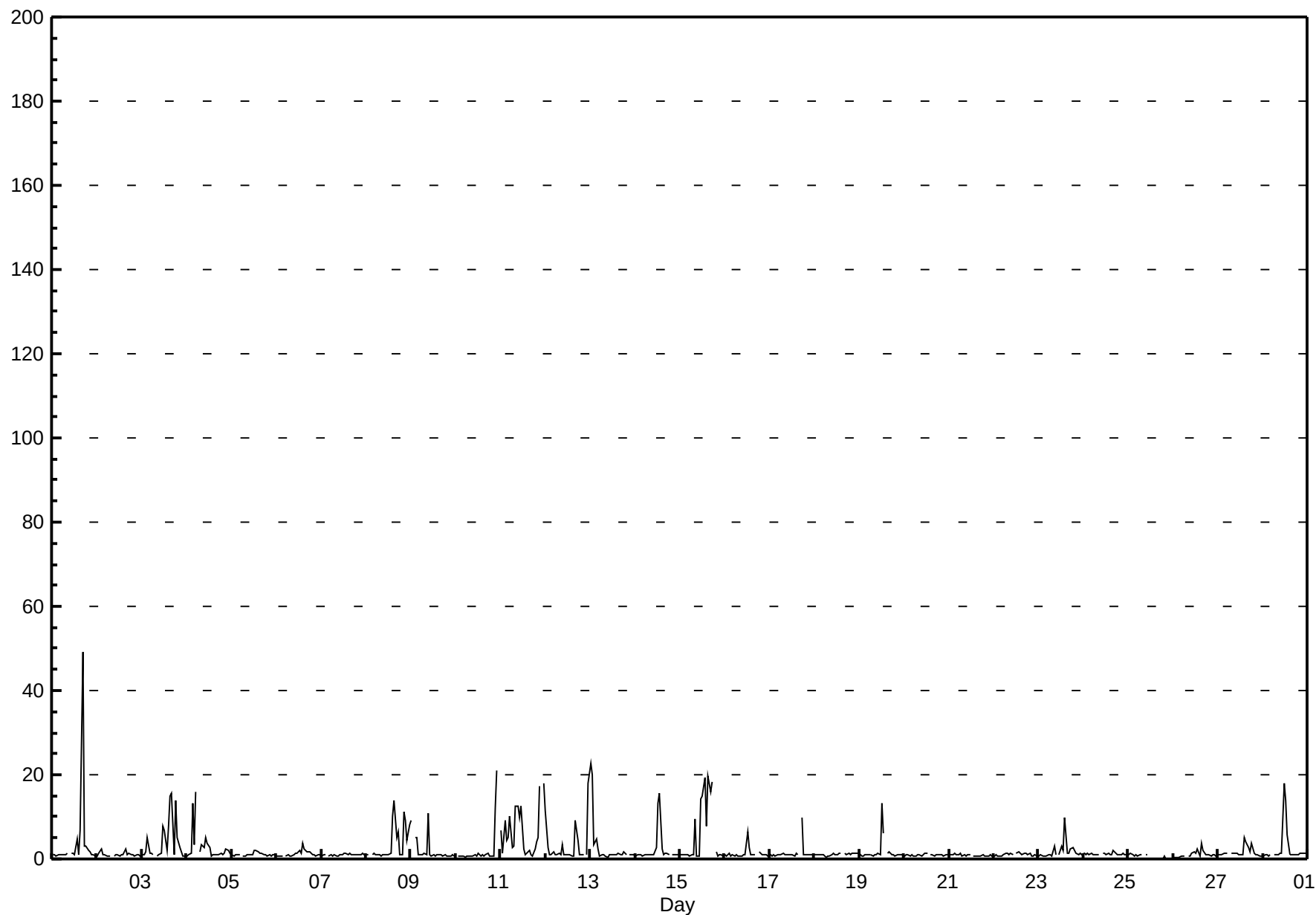
Sulphur Dioxide (SO₂) - ppb

Valleyview - February 2013

Maximum Value: 49.2 ppb on Feb 1 17:00																				Maximum Daily Average: 6.3 ppb on Feb 11					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 25 16:00																				Minimum Daily Average: 0.5 ppb on Feb 25					Hours of Data: 640	
Maximum Diurnal Average: 4.5 ppb at hour 17																				Minimum Diurnal Average: 1.0 ppb at hour 7					Hours of Missing Data: 32	
Monthly Average: 2.18 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.7 Q ₁ = 0.9 Median = 1.0 Q ₃ = 1.3 P ₉₀ = 4.3 P ₉₉ = 18.7					Hours of Calibration: 32	
																				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-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	5	1	7	49	3	3	2	2	1	1	1	3.8	49.2
2-Feb	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1.1	2.4
3-Feb	1	1	2	5	1	1	1	A	1	1	1	8	7	2	8	15	16	1	14	5	3	2	1	1	4.2	15.7
4-Feb	1	1	1	13	3	16	A	2	3	3	5	4	3	1	1	1	1	1	1	1	1	2	2	1	3.0	15.9
5-Feb	1	1	1	1	1	A	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1.1	2.0
6-Feb	1	1	1	1	A	1	1	1	1	1	1	1	2	1	4	2	2	2	2	1	1	1	1	1	1.2	3.7
7-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
8-Feb	1	1	A	1	1	1	1	1	1	1	1	1	1	1	10	14	5	6	1	1	11	9	4	8	3.7	14.0
9-Feb	9	A	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2.1	11.0
10-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	21	A	2.3	21.1
11-Feb	7	1	9	4	5	10	3	3	12	12	10	13	2	1	1	2	1	1	2	4	5	17	A	18	6.3	18.0
12-Feb	12	3	1	1	2	1	1	1	1	3	1	1	1	1	1	1	9	4	1	1	1	A	1	18	2.9	18.0
13-Feb	23	20	3	5	2	1	1	1	1	0	1	1	1	1	1	1	1	1	2	1	A	1	1	1	3.1	22.7
14-Feb	1	1	1	1	1	1	1	1	1	1	1	3	13	15	2	1	1	1	1	A	1	1	1	1	2.2	15.5
15-Feb	1	1	1	1	1	1	1	1	10	1	1	14	15	19	8	20	16	18	A	2	1	1	1	1	5.8	19.8
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	7	3	1	1	1	A	2	1	1	1	1	1	1.3	6.6
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	10	1	1	1	1	1	1	1.3	9.8
18-Feb	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	2	1.1	1.5
19-Feb	1	1	1	1	1	1	1	1	1	1	1	1	13	6	A	1	2	1	1	1	1	1	1	1	1.8	13.3
20-Feb	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	1.3
21-Feb	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-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1.1	1.6
23-Feb	1	1	1	1	1	1	1	1	3	1	A	1	3	2	10	1	1	2	3	2	1	1	1	1	1.8	9.8
24-Feb	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1.2	1.9
25-Feb	1	1	1	1	1	1	1	1	A	1	1	C	C	C	0	0	0	0	0	1	0	0	0	0	0.5	1.3
26-Feb	0	0	0	0	1	1	1	A	1	1	1	2	1	2	1	4	2	1	1	1	1	1	1	1	1.0	3.8
27-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	5	4	3	2	4	1	1	1	1	1	1.6	5.0
28-Feb	1	1	1	1	1	A	1	1	1	1	1	18	14	6	1	1	1	1	1	1	1	1	1	1	2.5	17.9
2.6 1.7 1.6 1.9 1.3 1.8 1.0 1.1 1.9 1.9 1.6 3.1 3.7 3.1 2.5 3.3 4.5 2.4 1.8 1.3 1.6 2.3 1.9 2.4																									Diurnal Average	
22.7 19.9 9.2 13.1 5.1 15.9 2.7 2.9 12.4 12.4 10.0 17.9 14.8 19.2 10.2 19.8 49.2 18.3 14.1 5.0 11.3 17.1 21.1 18.0																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

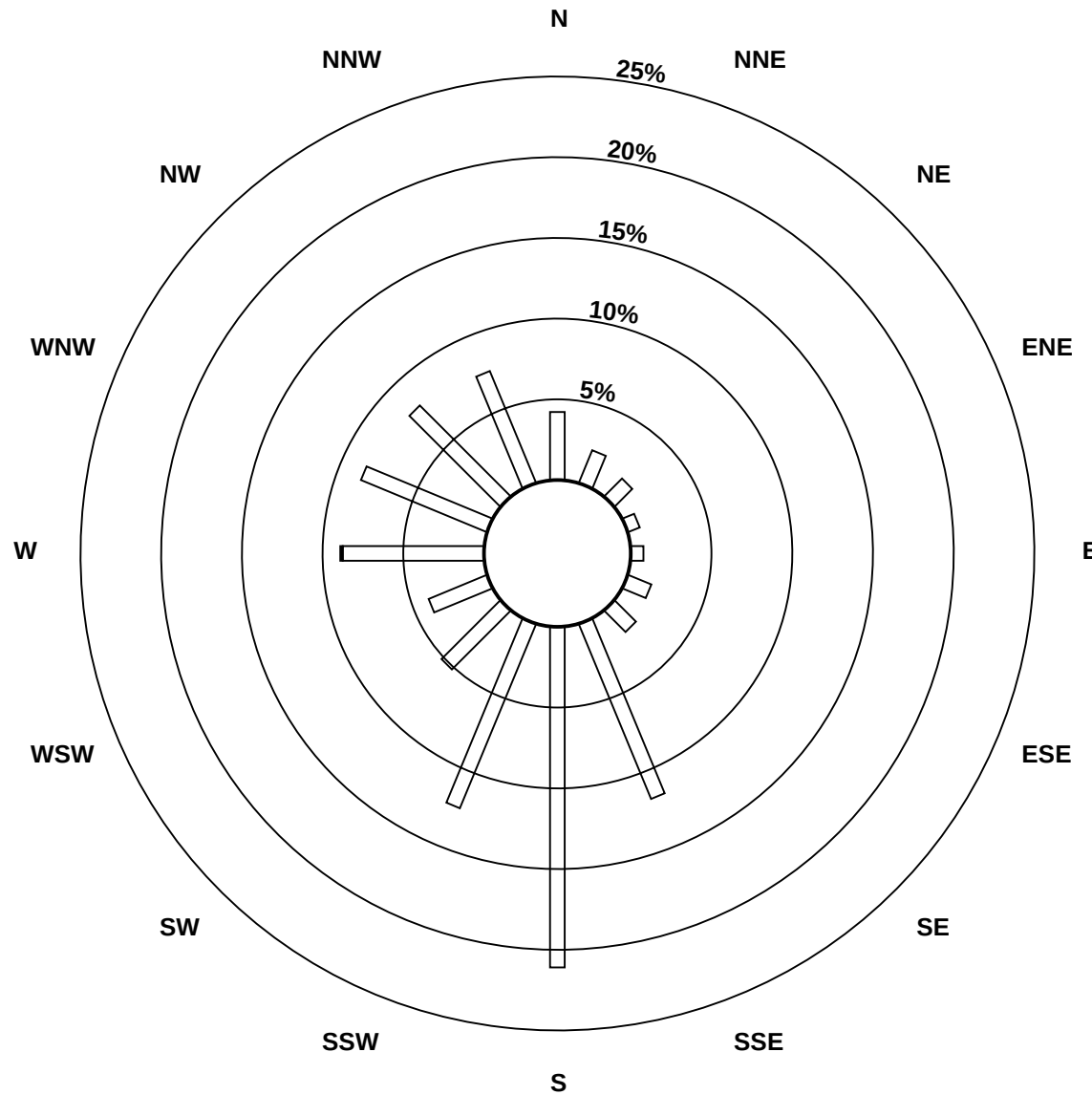
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - February 2013

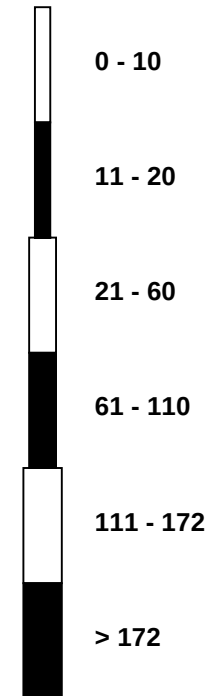


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - February 2013

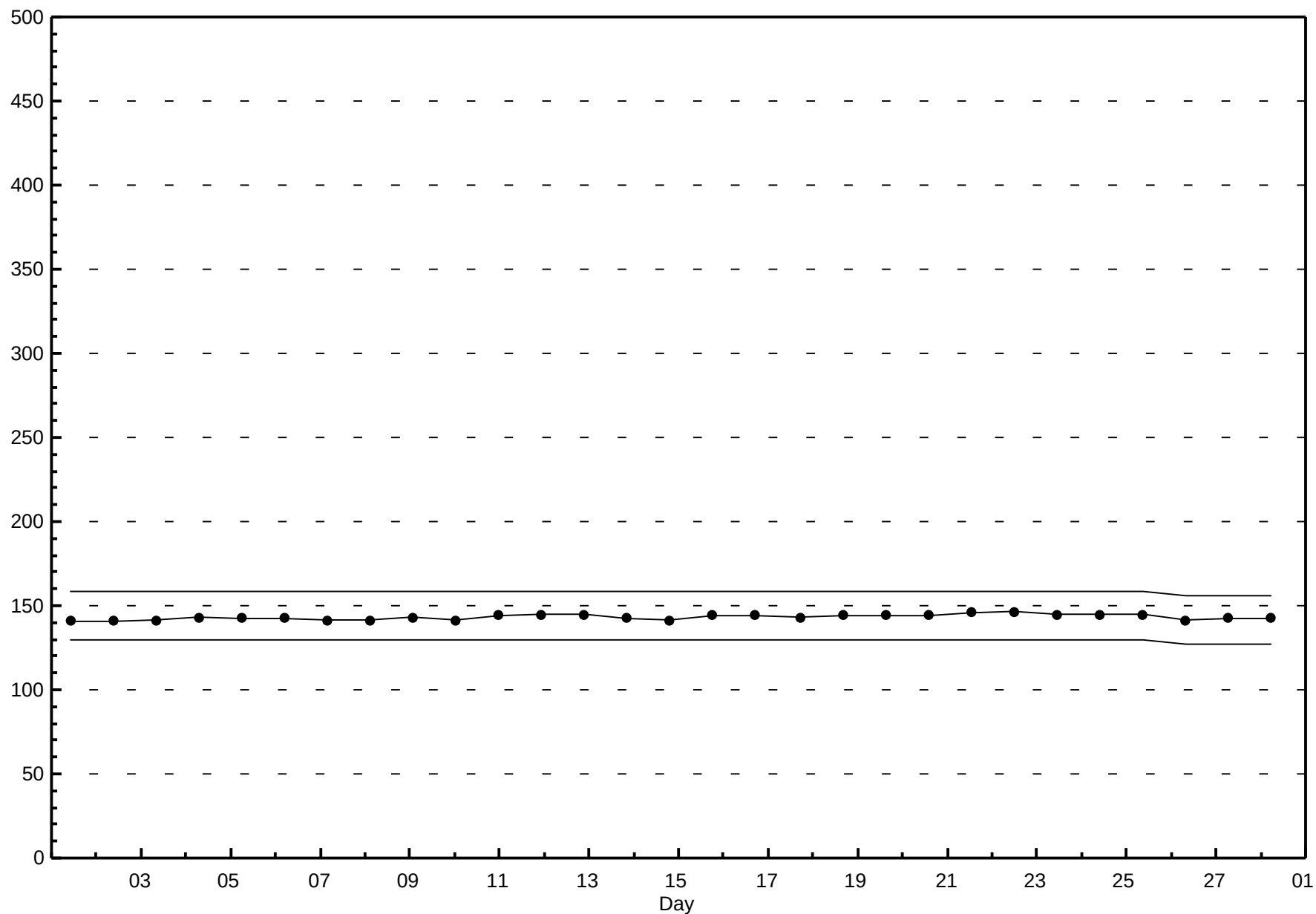


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - February 2013



Hourly Averages

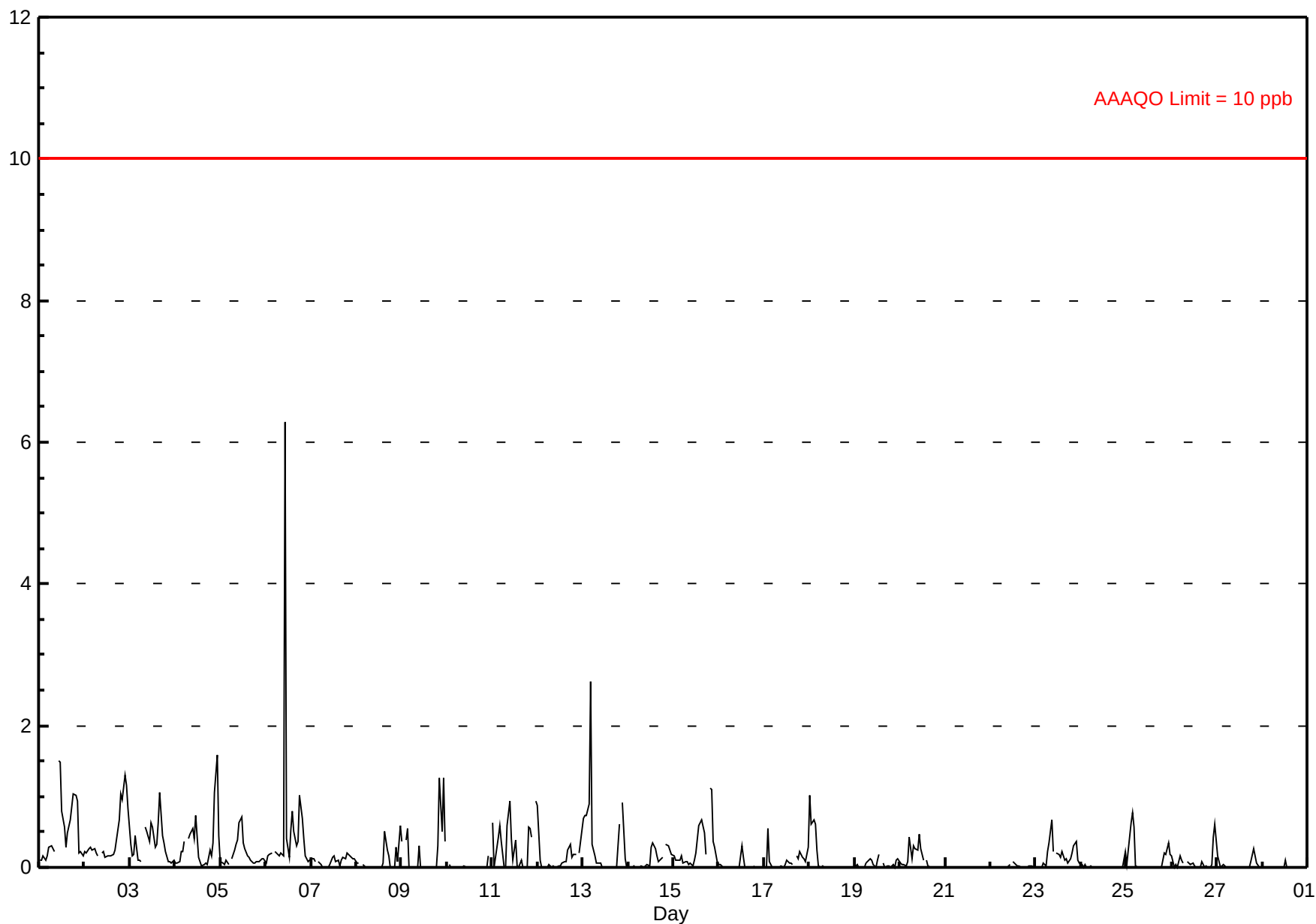
Hydrogen Sulphide (H₂S) - ppb

Valleyview - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 672									
Maximum Value: 6.3 ppb on Feb 6 11:00																			Maximum Daily Average: 0.6 ppb on Feb 6					Hours of Data: 640				
Minimum Value: 0 ppb on Feb 7 07:00																			Minimum Daily Average: 0.0 ppb on Feb 21					Hours of Missing Data: 32				
Maximum Diurnal Average: 0.4 ppb at hour 11																			Minimum Diurnal Average: 0.1 ppb at hour 7					Hours of Calibration: 32				
Monthly Average: 0.18 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.5 P ₉₉ = 1.2					Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Feb	0	0	0	0	0	0	0	0	0	A	2	1	1	1	0	0	1	1	1	1	1	0	0	0	0.5	1.5		
2-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.4	1.3		
3-Feb	0	0	0	0	0	0	0	A	1	1	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0.3	1.1		
4-Feb	0	0	0	0	0	0	A	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	2	0	0.3	1.6		
5-Feb	0	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7		
6-Feb	0	0	0	0	A	0	0	0	0	0	6	0	0	1	1	1	0	0	1	1	0	0	0	0	0.6	6.3		
7-Feb	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		
8-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.1	0.6		
9-Feb	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0.2	1.3		
10-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.2		
11-Feb	1	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	A	1	0.3	0.9		
12-Feb	1	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	0.9		
13-Feb	1	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0	0	0.3	2.6		
14-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	A	1	1	0	0	0	0.3	1.1		
16-Feb	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-Feb	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.5		
18-Feb	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	1.0		
19-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.0	0.2		
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.5		
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0		
22-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1		
23-Feb	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7		
24-Feb	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-Feb	0	0	1	1	1	0	0	0	A	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8		
26-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.6			
27-Feb	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	0.3		
28-Feb	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		
0.2 0.1 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.4 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.2 0.3 0.3 0.2 0.3 0.2																									Diurnal Average			
1.0 0.7 0.7 0.9 2.6 0.4 0.3 0.4 0.7 0.9 6.3 1.5 0.8 0.6 0.8 0.7 1.1 0.9 1.0 1.1 1.3 1.3 1.6 0.9																									Diurnal Maximum			
C - Calibration										A - Automated Daily Zero Span																		
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																												

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Valleyview - February 2013



Hourly Maximums

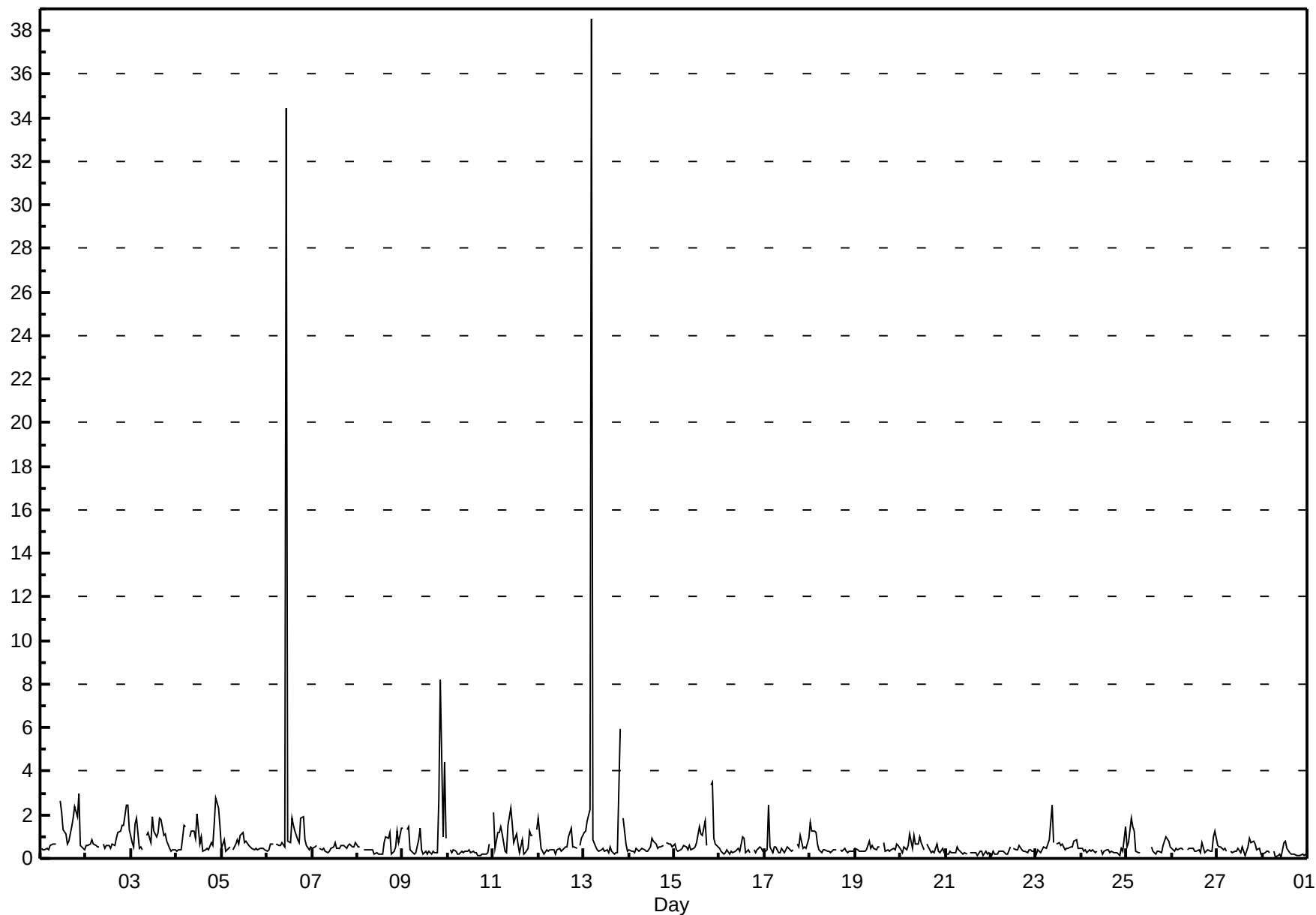
Hydrogen Sulphide (H₂S) - ppb

Valleyview - February 2013

Maximum Value: 38.6 ppb on Feb 13 05:00																				Maximum Daily Average: 2.6 ppb on Feb 13					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 28 08:00																				Minimum Daily Average: 0.3 ppb on Feb 28					Hours of Data: 640	
Maximum Diurnal Average: 2.0 ppb at hour 5																				Minimum Diurnal Average: 0.4 ppb at hour 7					Hours of Missing Data: 32	
Monthly Average: 0.75 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.7 P ₉₀ = 1.3 P ₉₉ = 2.6					Hours of Calibration: 32	
																				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-Feb	0	0	0	0	0	1	1	1	1	A	3	2	1	1	1	1	1	2	2	2	3	1	1	0	1.1	3.0
2-Feb	1	1	1	1	1	1	1	1	A	1	0	1	1	0	1	1	1	1	1	2	2	2	2	1	0.9	2.4
3-Feb	1	1	2	2	0	1	0	A	1	1	1	2	1	1	1	2	2	1	1	1	0	0	0	0	1.0	1.9
4-Feb	0	0	0	1	2	1	A	1	1	1	1	2	1	1	0	0	0	0	1	1	2	3	2	1	1.1	2.8
5-Feb	0	1	0	0	1	A	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.6	1.2
6-Feb	0	0	1	1	A	1	1	1	1	1	34	1	1	2	1	1	1	1	2	2	1	1	0	1	2.3	34.4
7-Feb	0	1	1	A	0	0	0	0	0	0	0	1	1	0	0	1	1	1	0	1	1	1	1	1	0.5	0.7
8-Feb	1	1	A	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	1	0.5	1.4
9-Feb	1	A	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	3	8	1	4	1	1.2	8.2
10-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0.3	0.6
11-Feb	2	0	1	1	1	1	0	0	2	2	2	1	1	1	0	1	0	0	0	1	1	1	A	1	1.0	2.3
12-Feb	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	A	1	1	0.6	1.8
13-Feb	1	1	2	2	39	1	1	0	0	0	0	0	0	0	0	0	0	0	0	6	A	2	1	0	2.6	38.6
14-Feb	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	1	A	1	1	1	0	0.5	0.9
15-Feb	1	0	0	0	0	1	1	0	1	0	0	1	1	1	1	1	2	1	A	3	3	1	1	1	0.9	3.5
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0.4	1.0
17-Feb	0	0	2	1	0	1	1	0	0	0	0	0	1	0	0	0	A	1	1	1	0	1	0	1	0.6	2.5
18-Feb	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.5	1.6
19-Feb	0	0	0	0	0	0	0	1	0	1	0	0	1	1	A	1	0	0	0	0	0	0	1	1	0.5	0.8
20-Feb	0	0	1	0	1	1	0	1	1	1	1	1	0	A	1	0	0	0	0	1	0	0	0	0	0.5	1.1
21-Feb	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
22-Feb	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	1	0	0	0	0	0	0	0	0	0.3	0.6
23-Feb	0	0	0	0	1	0	1	1	2	1	A	1	1	1	1	0	0	0	1	1	1	1	0	0	0.6	2.4
24-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	1.4
25-Feb	1	1	2	1	1	0	0	0	A	0	C	C	C	1	0	0	0	0	0	1	1	1	1	1	0.6	1.8
26-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0.5	1.2
27-Feb	1	1	1	0	0	0	A	0	0	0	0	0	0	1	0	0	1	1	1	1	1	0	0	0	0.5	0.9
28-Feb	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
0.7 0.5 0.7 0.7 2.0 0.5 0.4 0.5 0.6 0.6 1.9 0.7 0.6 0.6 0.5 0.6 0.6 0.6 0.6 1.0 1.1 0.8 0.8 0.7																									Diurnal Average	
2.1 1.2 2.5 2.3 38.6 1.5 0.7 1.0 2.4 2.3 34.4 2.1 1.3 1.9 1.5 1.8 1.8 1.8 2.4 6.0 8.2 2.8 4.4 1.4																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

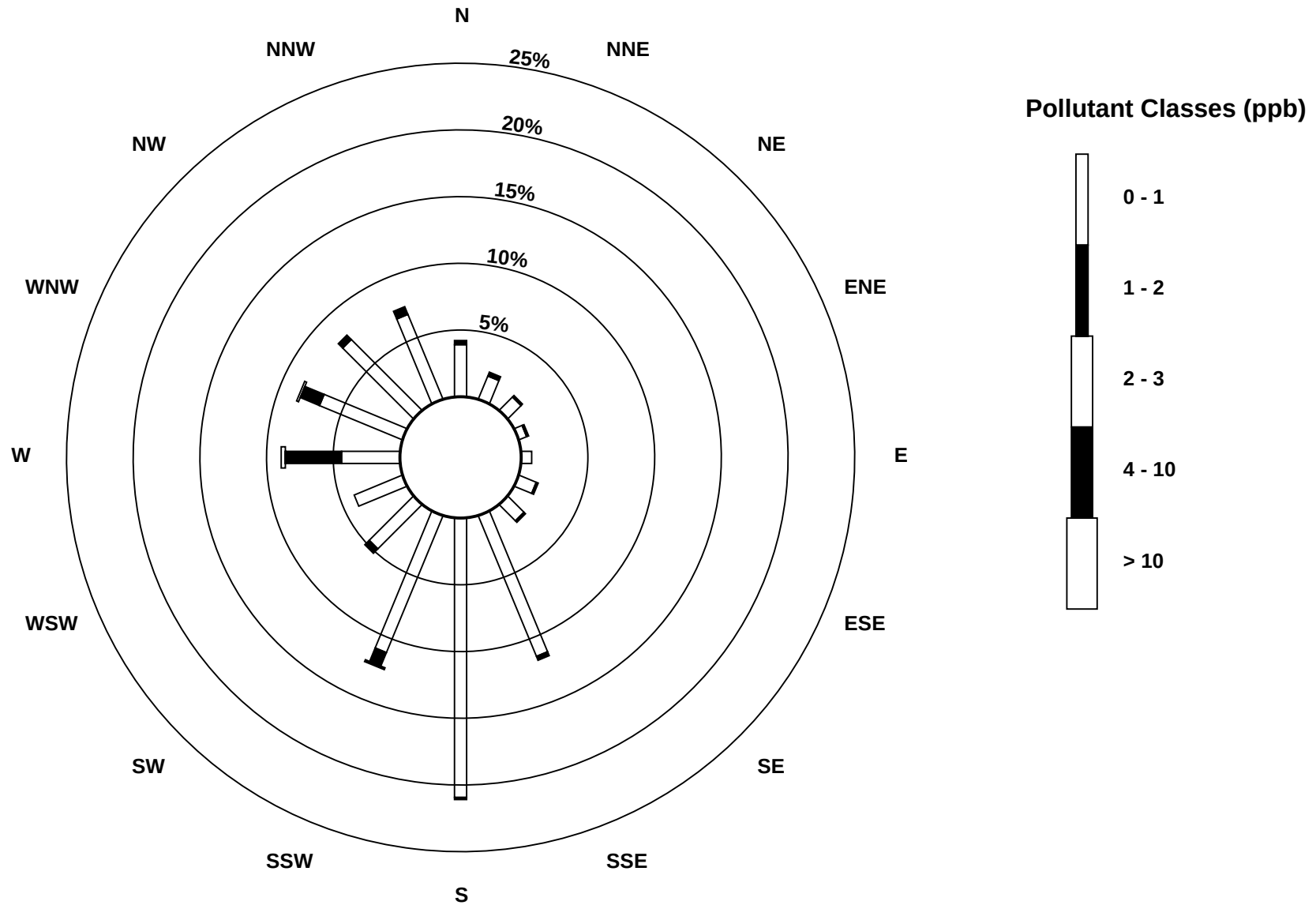
Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb
Valleyview - February 2013



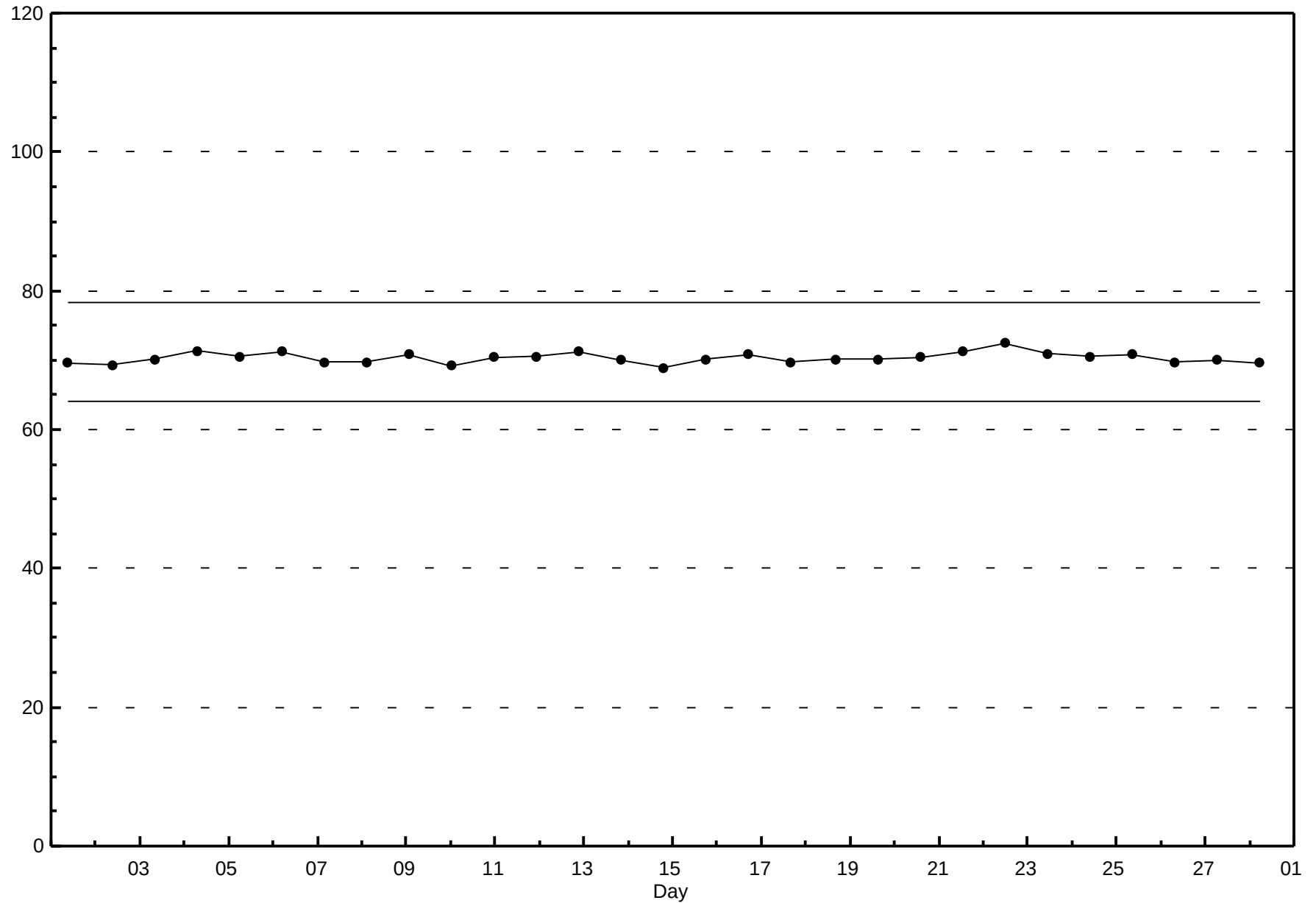
Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb
Valleyview - February 2013



Span Responses

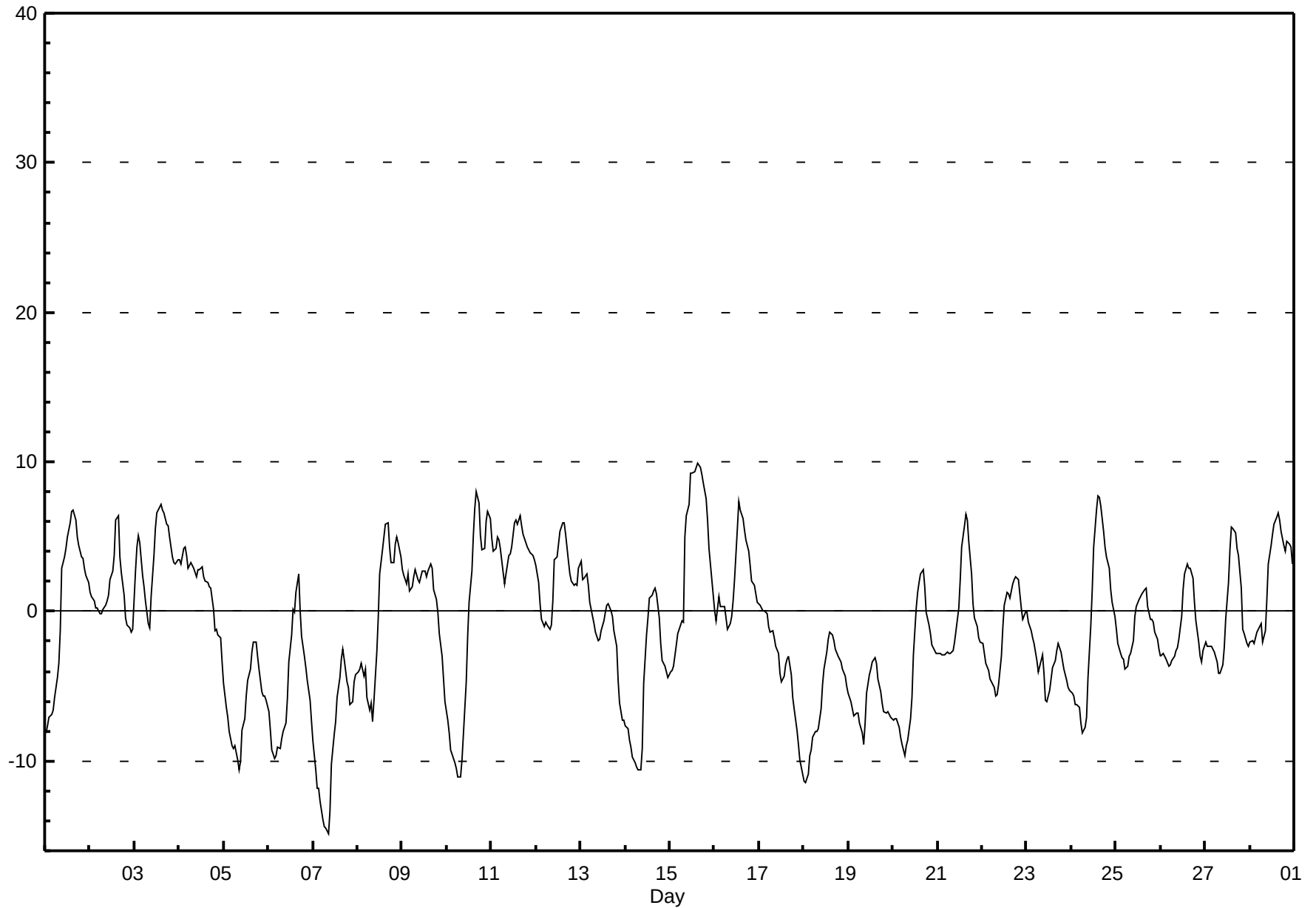
Hydrogen Sulphide (H_2S)
Valleyview - February 2013





Hourly Averages

External Temperature (ET) - °C
Valleyview - February 2013



Hourly Averages

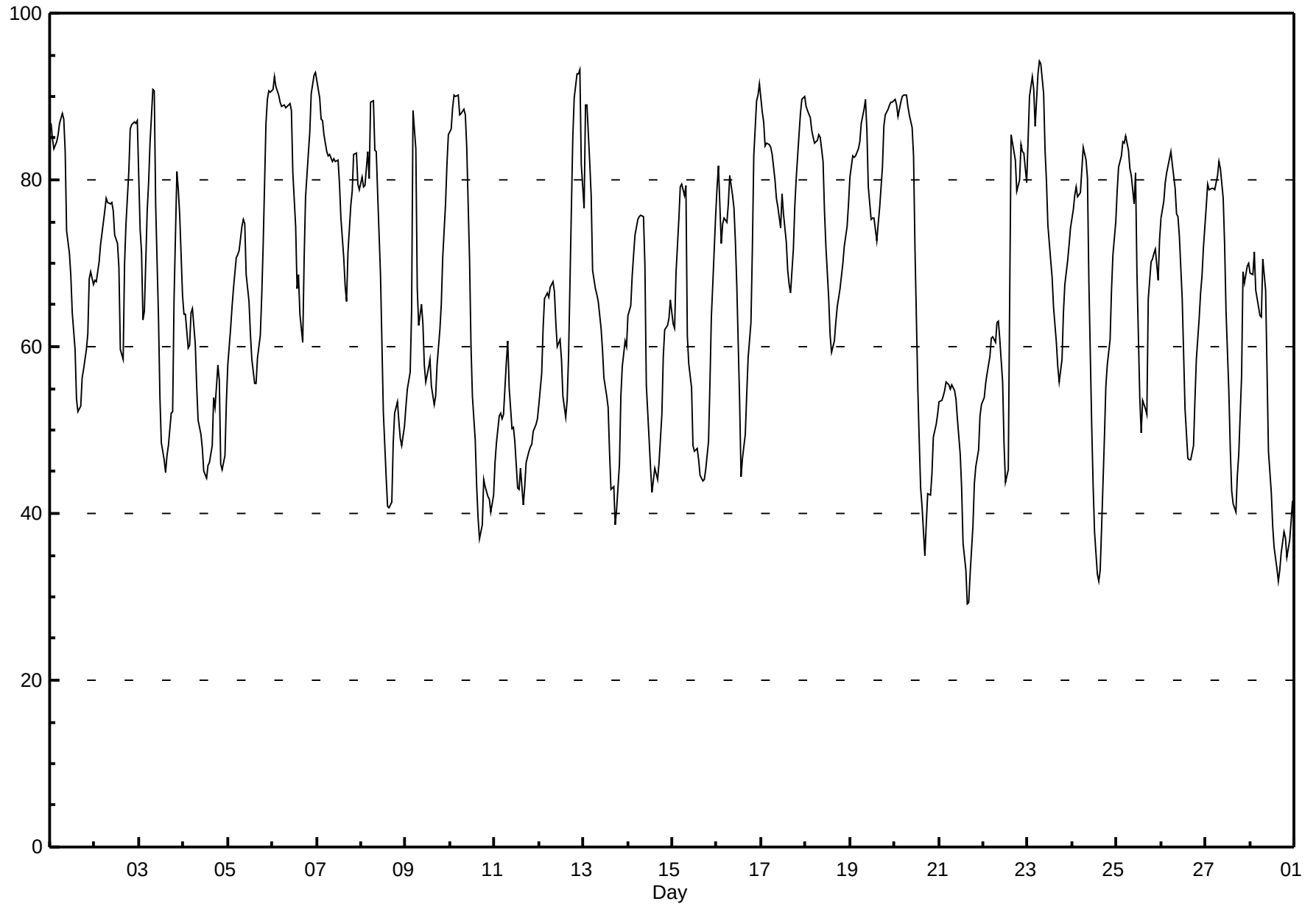
Relative Humidity (RH) - %

Valleyview - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 94.2 % on Feb 23 07:00 Maximum Daily Average: 83.1 % on Feb 6																								Hours in Service: 672 Hours of Data: 672 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 29 % on Feb 21 16:00 Maximum Diurnal Average: 77.6 % at hour 6 Monthly Average: 66.84 %												Minimum Daily Average: 47.0 % on Feb 21 Minimum Diurnal Average: 50.9 % at hour 16 Percentiles: P ₁ = 33.2 P ₁₀ = 44.7 Q ₁ = 53.7 Median = 67.8 Q ₃ = 80.7 P ₉₀ = 87.8 P ₉₉ = 92.6														
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-Feb	87	85	84	85	85	87	88	87	83	74	71	68	64	60	54	52	53	56	57	60	61	68	69	67	71.1	87.9
2-Feb	68	68	70	72	74	76	78	77	77	77	76	73	72	70	60	58	70	75	81	86	87	87	87	87	75.3	87.0
3-Feb	74	71	63	64	76	80	84	91	91	77	63	54	48	46	45	47	48	52	52	66	81	79	76	66	66.5	90.8
4-Feb	64	64	60	60	64	65	60	55	51	50	48	45	44	46	46	48	54	53	58	56	46	45	47	53	53.4	64.5
5-Feb	58	62	65	67	71	71	72	74	75	75	69	65	62	58	56	56	59	61	66	72	87	90	91	91	69.6	90.6
6-Feb	91	92	91	90	89	89	89	89	89	89	88	81	74	67	69	64	60	71	78	83	86	90	93	93	83.1	92.9
7-Feb	92	90	87	87	85	83	83	83	82	83	82	82	80	75	71	67	65	71	77	79	83	83	79	79	80.4	91.9
8-Feb	80	79	79	83	80	89	90	83	83	78	69	61	52	44	41	41	41	49	52	53	51	49	48	50	63.7	89.5
9-Feb	53	55	57	64	88	84	67	62	65	63	58	56	57	58	55	53	54	58	62	65	71	77	82	86	64.6	88.2
10-Feb	86	89	90	90	90	88	88	88	88	84	70	60	54	49	43	39	37	39	44	43	42	42	40	42	63.6	90.2
11-Feb	46	48	52	52	51	52	58	61	55	50	50	49	43	43	45	41	43	46	47	48	48	50	51	51	49.2	60.6
12-Feb	53	57	62	66	66	66	67	68	67	63	60	61	58	54	51	54	59	77	85	90	93	93	93	82	68.5	93.3
13-Feb	77	89	89	82	78	69	67	66	65	62	60	56	54	53	47	43	43	39	40	46	54	58	61	60	60.8	89.0
14-Feb	64	65	68	71	73	75	76	76	76	70	55	49	45	42	45	45	44	46	52	59	62	63	63	66	60.4	75.8
15-Feb	63	62	69	75	79	80	78	79	61	58	55	48	47	48	46	45	44	44	45	49	56	64	67	76	59.9	79.5
16-Feb	79	82	72	75	75	75	77	80	78	77	73	67	53	44	47	49	54	59	63	72	83	89	90	92	71.1	91.5
17-Feb	88	87	84	84	84	84	83	80	78	77	74	78	76	73	69	67	66	72	77	80	85	88	90	90	79.8	90.0
18-Feb	89	88	87	86	85	84	85	85	85	82	76	72	66	61	59	61	63	65	67	68	70	72	74	77	75.4	88.7
19-Feb	80	83	83	83	84	85	87	88	90	86	79	75	75	75	73	75	77	82	86	88	89	89	89	89	82.9	89.7
20-Feb	90	89	88	89	90	90	90	89	88	86	83	72	55	49	43	41	35	39	42	42	45	49	51	52	66.1	90.1
21-Feb	53	54	54	55	56	55	55	55	55	54	51	47	43	36	33	29	29	33	38	44	46	48	52	53	47.0	55.7
22-Feb	54	56	57	59	61	61	61	63	63	61	56	48	44	45	66	85	83	82	79	80	84	83	83	80	66.4	85.4
23-Feb	85	90	92	91	87	93	94	94	90	83	80	75	70	68	65	61	58	56	58	64	67	70	72	74	76.6	94.2
24-Feb	76	78	79	78	79	81	84	82	80	68	51	43	38	33	32	33	38	49	55	58	61	67	71	75	62.0	83.9
25-Feb	79	82	83	85	84	85	84	81	81	77	81	69	54	50	54	53	52	66	70	70	71	72	68	73	71.7	85.3
26-Feb	75	77	80	81	83	83	82	79	76	76	73	66	59	53	47	46	47	48	54	58	63	66	68	72	67.2	83.3
27-Feb	77	79	79	79	79	79	80	82	81	78	72	64	55	48	43	41	40	45	47	56	69	68	70	70	65.9	82.2
28-Feb	69	69	71	67	66	64	63	71	67	57	48	43	38	36	33	32	33	35	38	37	35	37	39	42	49.5	71.3
73.2 74.6 74.9 75.7 77.3 77.6 77.5 77.6 75.7 71.9 66.8 61.7 56.5 53.0 51.4 50.9 51.8 55.9 59.7 63.3 67.0 69.1 70.1 70.9																								Diurnal Average		
91.9 92.3 92.3 90.8 90.2 92.6 94.2 93.9 90.7 89.1 88.3 82.4 79.5 75.5 72.7 85.4 83.3 82.4 86.4 89.8 92.8 92.7 93.3 92.9																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Valleyview - February 2013



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	4	1	0	0	1	2	2	1	3	11	11	12	12	13	16	15	13	7	8	10	10	14	10	9	6.7	16.2
Dir	341	341	122	109	197	179	170	162	246	274	278	280	279	279	282	277	277	259	270	276	305	337	334	326	288	282
2 Spd	5	1	3	1	1	1	1	2	1	0	1	1	2	2	2	2	3	1	1	1	0	1	1	2	0.5	4.9
Dir	310	206	242	216	119	165	174	149	184	192	191	168	178	163	146	22	332	329	328	219	133	337	164	193	209	310
3 Spd	8	6	12	3	3	1	0	1	2	2	2	5	11	12	12	8	4	1	9	11	2	3	3	3	3.8	12.2
Dir	300	333	309	323	48	55	50	173	202	208	169	275	285	287	283	282	278	216	271	275	193	153	169	189	282	287
4 Spd	2	2	9	10	5	9	17	21	19	16	17	20	18	18	16	14	10	2	1	4	7	8	9	2	9.7	20.8
Dir	183	207	257	272	308	263	278	283	282	284	280	284	295	307	305	321	340	345	221	238	256	264	275	218	285	283
5 Spd	3	2	2	1	1	1	1	2	3	3	0	3	4	3	4	3	4	3	7	4	6	4	3	5	2.1	7.4
Dir	196	180	187	198	165	119	282	32	344	332	59	6	6	334	343	352	352	343	342	340	351	22	13	342	349	342
6 Spd	4	6	4	4	2	2	5	1	1	1	1	3	2	1	2	1	1	2	1	1	1	1	1	0	1.0	5.7
Dir	6	339	357	343	43	4	343	228	123	321	192	172	224	315	322	349	164	329	223	210	196	232	243	275	333	339
7 Spd	0	1	1	0	1	1	1	1	1	1	0	1	1	1	2	1	1	1	1	1	1	2	2	2	0.8	2.5
Dir	234	178	168	199	126	184	183	200	212	171	235	278	287	339	269	213	233	243	170	230	179	200	197	212	216	212
8 Spd	2	3	3	3	3	3	2	3	3	4	4	4	4	4	4	4	5	3	3	2	8	13	16	11	3.4	16.5
Dir	190	185	191	165	199	175	189	211	205	196	190	175	159	184	243	262	253	228	192	209	253	285	284	273	234	284
9 Spd	9	6	5	14	13	6	11	14	9	12	15	16	20	17	13	11	7	7	6	6	1	1	1	1	8.4	20.3
Dir	268	265	256	281	290	290	293	308	295	290	309	325	328	338	334	330	317	307	293	294	202	112	220	174	305	328
10 Spd	2	1	1	1	1	0	1	2	1	1	6	7	7	7	7	6	4	3	2	2	3	12	18	8	3.3	17.5
Dir	180	197	187	229	196	202	253	183	184	212	173	171	169	166	169	173	175	209	189	210	220	253	263	253	208	263
11 Spd	1	4	7	16	16	12	9	7	10	11	8	7	12	14	11	14	13	13	12	11	13	10	9	9	10.0	16.0
Dir	212	235	266	281	278	272	253	248	266	270	254	253	284	294	308	286	298	293	287	280	275	265	267	270	277	281
12 Spd	7	4	2	2	2	2	2	3	2	4	2	3	3	4	4	3	8	9	4	2	4	4	4	10	2.4	10.3
Dir	264	234	202	211	212	202	201	201	167	232	196	181	181	170	171	162	271	295	354	14	173	163	170	264	224	264
13 Spd	14	13	8	12	21	25	25	24	20	16	14	15	13	13	12	13	11	8	3	0	1	1	3	3	11.1	24.7
Dir	272	271	280	286	285	290	292	304	304	308	309	316	317	307	309	324	336	340	335	274	176	189	196	182	300	290
14 Spd	3	2	2	3	2	1	1	1	1	2	2	5	6	3	5	3	3	1	1	2	2	2	2	2	1.2	5.6
Dir	193	202	193	173	176	206	198	214	202	179	154	239	264	293	300	9	42	54	158	197	182	184	205	203	218	264
15 Spd	3	4	4	6	4	4	3	2	10	3	2	3	12	10	14	12	10	7	3	3	1	1	1	2	3.9	13.8
Dir	195	188	171	174	177	187	183	178	256	216	158	246	260	270	281	275	265	256	256	287	289	117	199	167	244	281
16 Spd	2	3	3	3	2	2	3	2	3	3	2	2	7	8	12	15	10	7	7	12	6	6	14	12	3.8	14.9
Dir	189	162	192	169	178	177	186	189	194	196	183	195	267	295	318	314	312	305	292	307	307	299	339	351	299	314
17 Spd	12	3	6	8	8	7	8	10	14	15	13	11	10	7	5	6	5	4	3	1	1	0	0	2	5.5	15.3
Dir	350	328	300	291	295	309	314	320	321	327	334	12	13	17	14	9	47	85	79	343	316	54	285	328	339	327
18 Spd	1	1	1	1	3	3	5	5	5	5	14	14	14	14	13	12	10	11	10	11	10	9	5	4	7.1	14.1
Dir	329	341	295	201	173	175	170	164	165	167	167	167	166	168	168	163	152	158	158	163	167	166	161	157	165	167
19 Spd	6	4	3	4	1	0	1	1	2	0	2	3	1	2	4	8	9	8	5	4	3	0	1	0	1.0	8.6
Dir	164	155	163	168	180	156	38	336	346	257	182	190	259	360	29	357	0	3	5	354	350	139	189	148	10	0
20 Spd	1	2	2	1	1	2	2	0	0	0	0	0	4	4	6	5	4	4	4	5	6	6	6	7	2.6	7.2
Dir	179	158	151	193	113	355	344	313	152	227	5	173	175	175	173	168	179	166	167	173	173	169	172	171	171	171
21 Spd	7	8	6	4	5	4	6	5	6	6	7	6	7	7	6	5	6	2	2	3	3	3	2	3	4.7	7.5
Dir	167	170	173	175	168	176	175	170	169	166	165	166	164	168	170	197	228	181	149	197	195	183	173	179	175	170
22 Spd	3	3	3	3	2	3	4	3	2	2	2	7	6	4	4	3	5	5	5	1	2	3	3	2	3.3	7.3
Dir	182	174	183	181	180	184	175	162	182	176	171	173	176	208	178	158	162	145	152	99	170	215	198	173	174	173

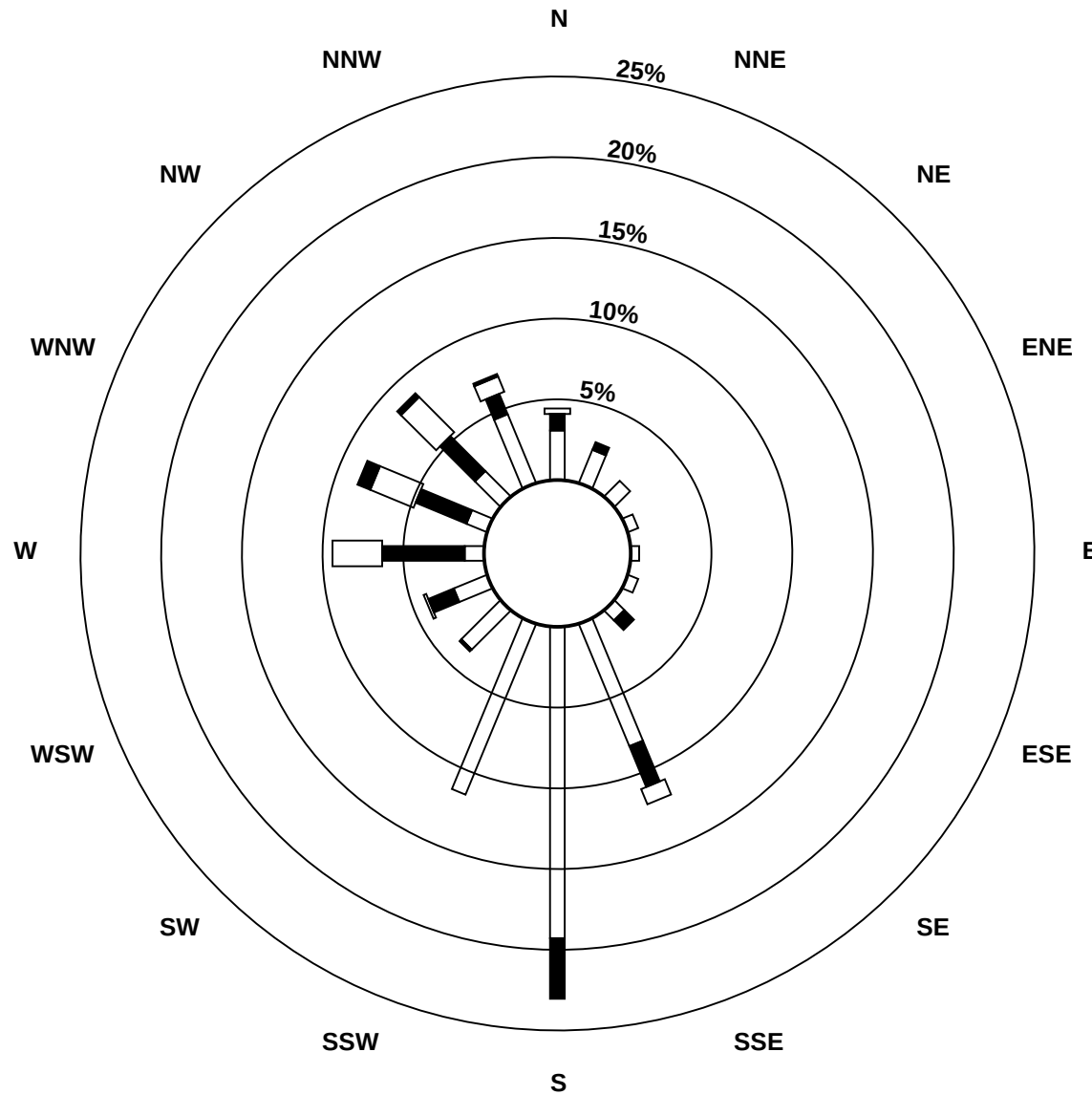
Hourly Averages

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

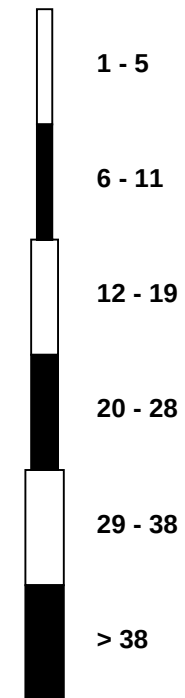
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
23 Spd	2	3	3	3	2	1	2	3	8	11	9	9	8	7	7	5	3	1	0	0	0	2	2	3	2.7	11.3				
Dir	176	205	199	231	182	137	343	304	286	312	310	309	305	302	290	316	351	24	97	284	231	181	192	188	291	312				
24 Spd	3	3	4	4	2	1	2	2	1	3	6	4	3	5	4	3	6	9	9	6	5	4	1	2	1.4	9.2				
Dir	188	194	195	197	207	221	174	203	198	182	169	168	175	170	149	155	292	322	312	311	304	324	275	19	239	322				
25 Spd	1	1	1	2	2	6	2	1	3	1	6	8	7	9	6	5	4	4	3	1	1	2	2	0	1.1	8.5				
Dir	218	218	38	32	23	350	313	292	15	60	134	135	133	125	138	158	175	236	258	275	249	264	281	142	144	125				
26 Spd	1	2	1	0	2	1	3	4	5	7	7	5	4	1	2	3	3	3	2	2	1	1	1	1	1.3	7.3				
Dir	273	164	225	334	133	167	140	159	173	169	171	178	181	260	199	10	25	74	66	352	343	333	324	152	159	169				
27 Spd	1	1	4	4	4	5	5	6	5	5	4	2	3	3	2	2	1	3	2	1	1	2	1	2	2.2	5.5				
Dir	169	159	171	171	177	174	173	173	171	170	164	154	152	136	38	73	114	349	322	220	193	190	197	196	167	173				
28 Spd	3	1	1	3	2	3	2	1	2	3	4	6	9	5	4	3	3	3	3	4	7	8	4	5	1.8	9.0				
Dir	178	168	210	187	204	172	191	201	198	187	218	263	287	304	344	56	83	109	105	147	172	172	181	180	194	287				
Spd	1.7	1.7	2.0	2.4	2.0	2.0	2.4	2.4	2.9	3.0	2.4	2.6	3.4	3.1	3.3	3.0	2.6	1.7	1.6	2.2	1.9	2.0	2.4	1.9	Diurnal Average					
Dir	251	225	238	251	255	259	261	267	267	267	242	251	269	280	285	299	297	294	278	270	245	246	260	249	Diurnal Maximum					
Spd	14.1	13.3	11.8	16.0	21.3	24.7	24.7	24.5	19.5	16.5	16.7	19.8	20.3	18.0	16.4	15.2	13.1	12.6	12.4	12.0	12.7	14.1	17.5	11.6	Diurnal Maximum					
Dir	272	271	309	281	285	290	292	304	304	284	280	284	328	307	305	277	277	293	287	307	275	337	263	351						
Maximum Speed Value: 25 km/h on Feb 13 06:00																			Minimum Speed Value: 0 km/h on Feb 7 11:00										Hours in Service: 672	
Maximum Daily Speed Average: 11.1 km/h on Feb 13																			Minimum Daily Speed Average: 0.5 km/h on Feb 7										Hours of Data: 672	
Maximum Diurnal Speed Average: 3.4 km/h at hour 13																			Minimum Diurnal Speed Average: 1.6 km/h at hour 19										Hours of Missing Data: 0	
Monthly Average Velocity: 2.24 km/h 264.7 deg																			Speed Percentiles: P ₁ = 0.2 P ₁₀ = 0.8 Q ₁ = 1.7 Median = 3.3 Q ₃ = 6.9 P ₉₀ = 11.9 P ₉₉ = 19.7										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	42		16		4		0		0		0		62																	
NorthEast	20		1		0		0		0		0		21																	
East	11		0		0		0		0		0		11																	
SouthEast	32		8		0		0		0		0		40																	
South	206		50		6		0		0		0		262																	
SouthWest	66		1		0		0		0		0		67																	
West	26		48		34		6		0		0		114																	
NorthWest	29		34		29		3		0		0		95																	
Total	432		158		73		9		0		0		672																	

Wind Rose

Wind Speed (WS) (km/h)
Valleyview - February 2013



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - February 2013

Maximum Speed: 25 km/h on Feb 13 06:00																				Maximum Daily Speed Average: 12.3 km/h on Feb 13						Hours in Service: 672	
Minimum Speed: 1 km/h on Feb 7 09:00																				Minimum Daily Speed Average: 1.4 km/h on Feb 7						Hours of Data: 672	
Maximum Diurnal Speed Average: 7.8 km/h at hour 13																				Minimum Diurnal Speed Average: 3.4 km/h at hour 2						Hours of Missing Data: 0	
Monthly Average Speed: 5.21 km/h																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.2 Q ₁ = 2.0 Median = 3.5 Q ₃ = 7.1 P ₉₀ = 12.2 P ₉₉ = 20.0						Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	4	1	1	1	1	2	2	2	4	11	11	12	12	13	16	15	13	7	9	10	12	14	10	10	8.0	16.3	
2-Feb	5	2	3	1	1	1	1	2	1	1	1	1	2	2	3	2	4	2	2	2	1	1	1	2	1.8	5.0	
3-Feb	9	7	12	6	3	1	1	1	2	2	2	6	12	12	8	4	1	9	12	3	3	3	3	3	5.5	12.4	
4-Feb	2	3	9	10	5	9	17	21	19	17	17	20	18	18	17	14	10	2	1	5	7	8	9	4	10.9	20.9	
5-Feb	3	2	2	1	1	1	1	2	3	3	1	3	4	3	4	4	5	4	8	5	6	4	3	5	3.2	7.5	
6-Feb	4	6	5	5	2	2	5	1	1	3	2	3	3	3	2	2	1	2	1	1	1	1	1	1	2.4	5.9	
7-Feb	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	3	1.4	2.8	
8-Feb	4	3	3	3	3	3	2	3	3	4	4	4	4	4	4	5	5	3	3	3	8	13	17	11	5.0	16.6	
9-Feb	9	6	6	15	13	7	11	14	10	12	15	16	20	17	13	11	7	7	6	6	2	1	1	1	9.5	20.4	
10-Feb	2	1	1	1	1	1	1	2	1	1	6	7	7	7	7	6	4	3	3	2	4	13	18	9	4.4	17.7	
11-Feb	2	4	7	16	16	13	9	7	10	11	8	8	13	14	11	14	13	13	13	12	13	10	9	9	10.6	16.2	
12-Feb	7	4	2	2	2	2	2	3	2	5	2	3	4	4	4	3	9	9	5	3	4	4	4	11	4.2	10.8	
13-Feb	14	13	8	13	21	25	25	25	20	17	15	16	13	13	12	14	11	8	3	2	1	1	3	3	12.3	25.0	
14-Feb	3	2	2	3	2	1	1	1	1	2	2	5	6	4	5	4	3	1	1	2	2	2	2	2	2.6	6.0	
15-Feb	3	4	5	6	4	4	3	2	10	5	3	5	13	11	14	12	10	7	3	3	2	2	2	2	5.6	14.0	
16-Feb	2	3	4	3	2	2	3	3	3	3	2	3	7	8	12	15	10	7	7	12	6	6	14	12	6.2	15.0	
17-Feb	12	4	6	8	8	7	8	10	14	15	14	11	10	8	5	6	6	5	3	2	2	1	1	2	7.1	15.4	
18-Feb	1	1	1	1	3	3	5	5	5	5	14	14	14	14	13	12	11	11	10	11	10	9	5	4	7.5	14.3	
19-Feb	6	4	3	4	2	1	1	2	2	1	2	3	2	3	4	8	9	9	5	4	3	1	1	1	3.4	8.7	
20-Feb	1	2	2	1	1	2	2	1	1	1	2	2	4	5	6	5	4	4	4	5	6	7	6	7	3.3	7.2	
21-Feb	7	8	6	4	6	4	6	5	6	6	7	6	7	7	6	6	6	2	2	3	3	3	2	3	5.0	7.6	
22-Feb	3	3	3	3	2	3	4	3	2	2	2	7	6	4	4	3	5	5	6	2	3	4	3	2	3.7	7.3	
23-Feb	2	3	3	4	3	1	2	4	8	11	9	10	8	7	7	6	3	2	1	1	1	3	2	3	4.4	11.5	
24-Feb	3	3	4	4	2	2	2	2	2	3	6	4	3	5	4	3	8	9	9	6	6	5	1	3	4.1	9.3	
25-Feb	1	2	1	2	2	6	2	2	3	2	6	8	7	9	6	5	4	5	3	1	1	2	2	1	3.5	8.7	
26-Feb	2	2	1	1	2	1	3	4	5	7	7	5	4	3	3	4	3	3	2	2	1	1	1	2	3.0	7.4	
27-Feb	1	1	4	4	4	5	5	6	6	5	4	3	3	3	3	3	2	3	3	1	2	2	1	2	3.1	5.5	
28-Feb	3	2	2	4	3	3	2	2	2	3	5	7	9	6	4	3	4	3	3	4	7	8	4	5	4.1	9.3	
																									Diurnal Average		
																									Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using scalar methods																											

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - February 2013

Maximum Value: 98.3 deg on Feb 3 07:00																		Hours in Service: 672							
Minimum Value: 3.5 deg on Feb 8 11:00																		Hours of Data: 672							
Percentiles: P ₁ = 5.4 P ₁₀ = 7.7 Q ₁ = 9.9 Median = 16.4 Q ₃ = 35.9 P ₉₀ = 61.0 P ₉₉ = 93.2																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	22	20	76	97	36	50	56	74	77	8	8	9	10	10	8	8	6	11	11	10	26	4	7	11	96.9
2-Feb	15	57	15	57	63	39	17	21	16	70	29	33	20	23	35	36	51	67	87	58	82	81	52	21	86.7
3-Feb	33	32	19	61	23	26	98	50	11	15	12	52	12	10	10	14	26	41	21	19	44	14	13	14	98.3
4-Feb	7	47	11	10	18	12	8	7	7	7	10	11	9	9	9	12	9	90	15	28	15	13	6	48	89.6
5-Feb	6	11	16	58	38	63	45	17	18	27	95	23	18	8	12	50	79	60	10	64	17	12	14	14	95.4
6-Feb	12	19	17	14	39	26	10	69	57	67	60	28	41	78	30	50	61	43	61	12	52	26	59	81	81.3
7-Feb	90	47	57	69	45	48	24	17	28	31	94	58	48	31	37	48	61	51	64	51	24	38	27	26	93.6
8-Feb	56	16	7	16	36	14	10	17	7	6	4	13	16	12	33	23	19	35	15	30	20	9	8	10	56.2
9-Feb	9	10	10	12	8	16	8	9	14	10	9	6	6	7	7	7	6	8	6	8	85	65	15	22	85.1
10-Feb	14	22	23	20	49	66	75	29	36	32	8	7	7	8	9	9	9	19	18	34	22	10	9	25	75.1
11-Feb	73	18	12	9	8	13	7	13	9	9	15	13	13	13	11	9	12	10	10	9	9	12	9	10	73.3
12-Feb	13	13	10	12	6	9	13	25	22	47	27	16	27	14	17	18	47	21	66	88	8	15	34	27	88.1
13-Feb	11	9	16	17	8	9	8	8	8	8	9	9	11	11	10	10	6	14	31	69	43	16	7	24	68.8
14-Feb	8	6	11	9	14	21	38	24	24	8	17	42	21	38	18	30	13	89	27	16	19	16	14	22	89.0
15-Feb	8	11	20	12	18	13	15	39	12	52	40	66	12	17	10	10	9	10	18	35	56	61	51	24	65.6
16-Feb	19	16	36	26	43	41	12	14	15	11	23	25	21	14	11	8	8	9	11	9	12	13	17	10	43.5
17-Feb	9	41	14	10	10	8	9	8	8	7	16	11	12	17	23	16	30	21	40	68	72	86	90	30	90.4
18-Feb	40	39	60	40	7	12	12	14	16	15	7	8	7	9	8	11	10	9	8	8	8	7	13	11	59.7
19-Feb	8	11	12	10	33	64	25	20	32	83	28	25	72	28	23	11	9	7	13	10	20	92	12	75	92.1
20-Feb	24	20	30	48	36	36	25	87	66	71	93	95	16	18	12	14	13	10	5	5	6	6	5	6	95.0
21-Feb	5	7	6	10	13	20	7	7	7	9	6	7	7	9	13	17	15	28	14	11	13	8	8	9	27.7
22-Feb	13	10	11	9	16	15	6	14	18	19	39	8	13	22	20	11	13	21	32	82	46	41	23	42	81.5
23-Feb	41	15	16	16	47	52	76	21	9	9	12	13	17	16	15	15	13	33	70	86	61	20	50	11	85.6
24-Feb	8	18	4	5	19	58	38	39	44	12	9	19	20	13	14	23	55	12	9	10	17	16	72	74	73.6
25-Feb	57	56	60	46	16	10	32	61	30	75	10	9	12	14	17	16	21	19	37	52	31	37	43	82	81.6
26-Feb	75	23	38	97	22	46	8	10	9	9	7	12	26	83	52	47	29	17	12	32	61	34	26	89	97.4
27-Feb	36	56	9	10	9	7	7	7	7	8	13	21	16	24	74	39	47	66	48	56	74	30	19	11	74.0
28-Feb	22	79	59	23	22	21	37	35	10	9	31	29	15	31	21	29	23	11	13	21	7	6	10	5	79.4
	89.7	79.4	75.7	97.4	63.0	65.6	98.3	86.9	76.5	83.3	95.4	95.0	72.4	83.0	74.0	49.7	79.1	89.6	86.7	88.1	85.1	92.1	90.4	88.5	

PAZA

Portable – Sunset House Station

Monthly Summary Tables, Graphs and Roses

Hourly Averages

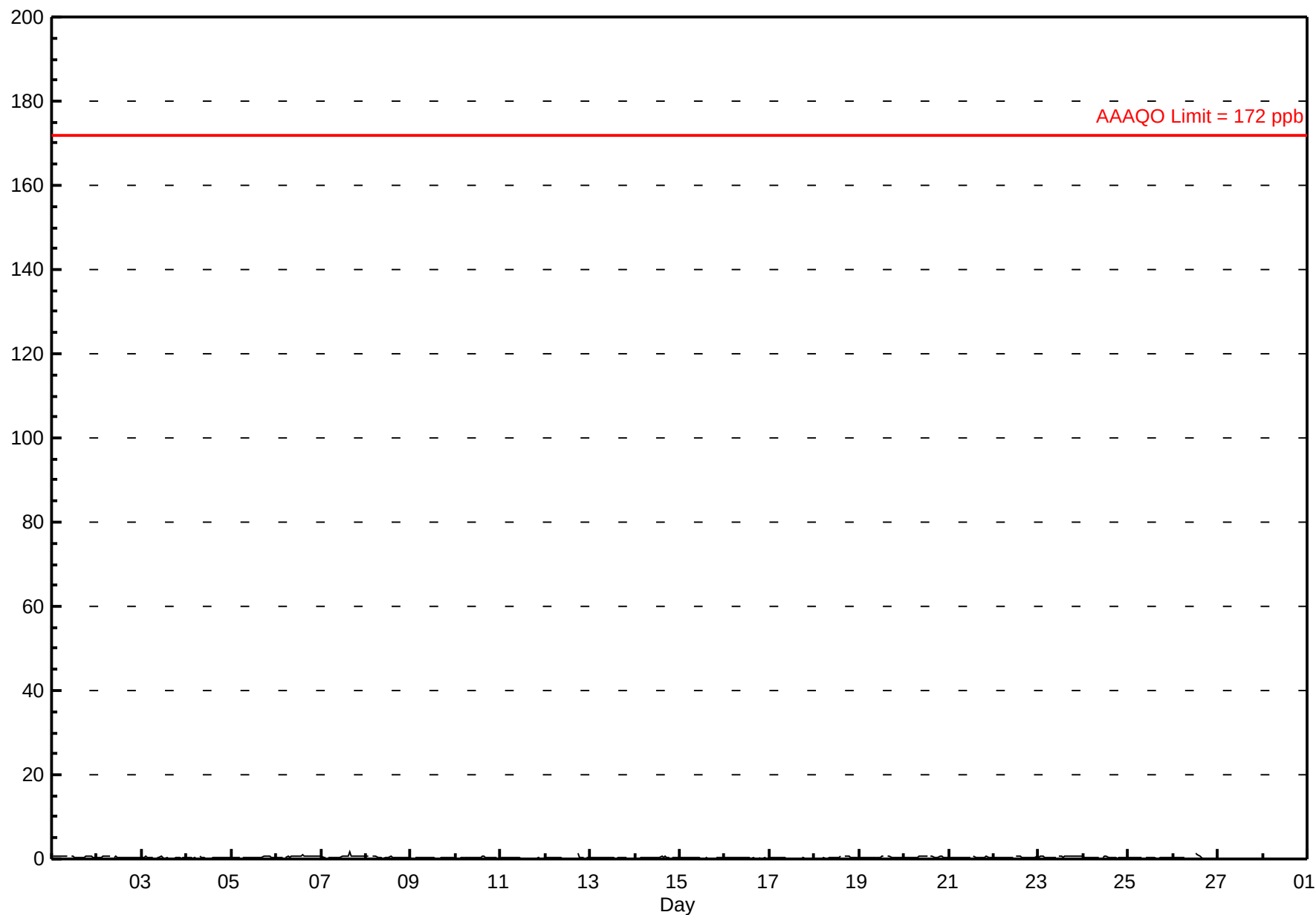
Sulphur Dioxide (SO₂) - ppb

Sunset House - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.6 ppb on Feb 7 16:00 Maximum Daily Average: 0.6 ppb on Feb 7																			Hours in Service: 672							
Minimum Value: 0 ppb on Feb 11 14:00 Maximum Diurnal Average: 0.4 ppb at hour 13 Monthly Average: 0.34 ppb																			Hours of Data: 637							
Minimum Daily Average: 0.0 ppb on Feb 27 Minimum Diurnal Average: 0.3 ppb at hour 24 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.6 P ₉₉ = 0.8																			Hours of Missing Data: 35							
																			Hours of Calibration: 33							
																			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-Feb	1	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0	1	1	1	1	0	0	0.6	0.8
2-Feb	0	0	0	1	1	1	1	1	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
3-Feb	0	0	1	0	0	0	0	A	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
4-Feb	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
5-Feb	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	1	1	1	1	0	0	0	0.4	0.6
6-Feb	0	0	0	0	A	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
7-Feb	1	0	0	A	0	0	0	0	0	0	0	1	1	1	1	2	1	1	1	1	1	1	1	1	0.6	1.6
8-Feb	1	1	A	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.4	0.7
9-Feb	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
10-Feb	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0.3	0.6
11-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	D	D	1	0	0	0	A	0	0	0.3	1.4
13-Feb	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	0.4
14-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	A	0	0	0	0	0.3	0.6
15-Feb	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-Feb	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-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	1	1	0	0	0	0	0	0.3	0.6
19-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	1	1	0	0	0	0	0	0	0	0.4	0.7
20-Feb	0	0	0	0	0	0	0	0	1	1	1	1	1	A	1	1	0	0	0	1	1	0	0	0	0.4	0.8
21-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	1	1	0	1	0.4	0.5
22-Feb	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	1	0	1	0.4	0.6
23-Feb	1	1	1	0	1	0	0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
24-Feb	0	0	0	0	0	0	0	0	1	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
25-Feb	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-Feb	0	0	0	0	0	0	0	A	C	C	C	C	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.2
27-Feb	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
28-Feb	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
0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.3 0.4 0.4 0.3 0.4 0.3 0.3 0.3																									Diurnal Average	
0.8 0.7 0.7 0.7 0.7 0.7 0.6 0.8 0.6 0.6 0.7 0.7 1.2 0.8 0.9 1.6 0.8 1.4 0.8 0.7 0.7 0.8 0.8 0.7																									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
Sunset House - February 2013



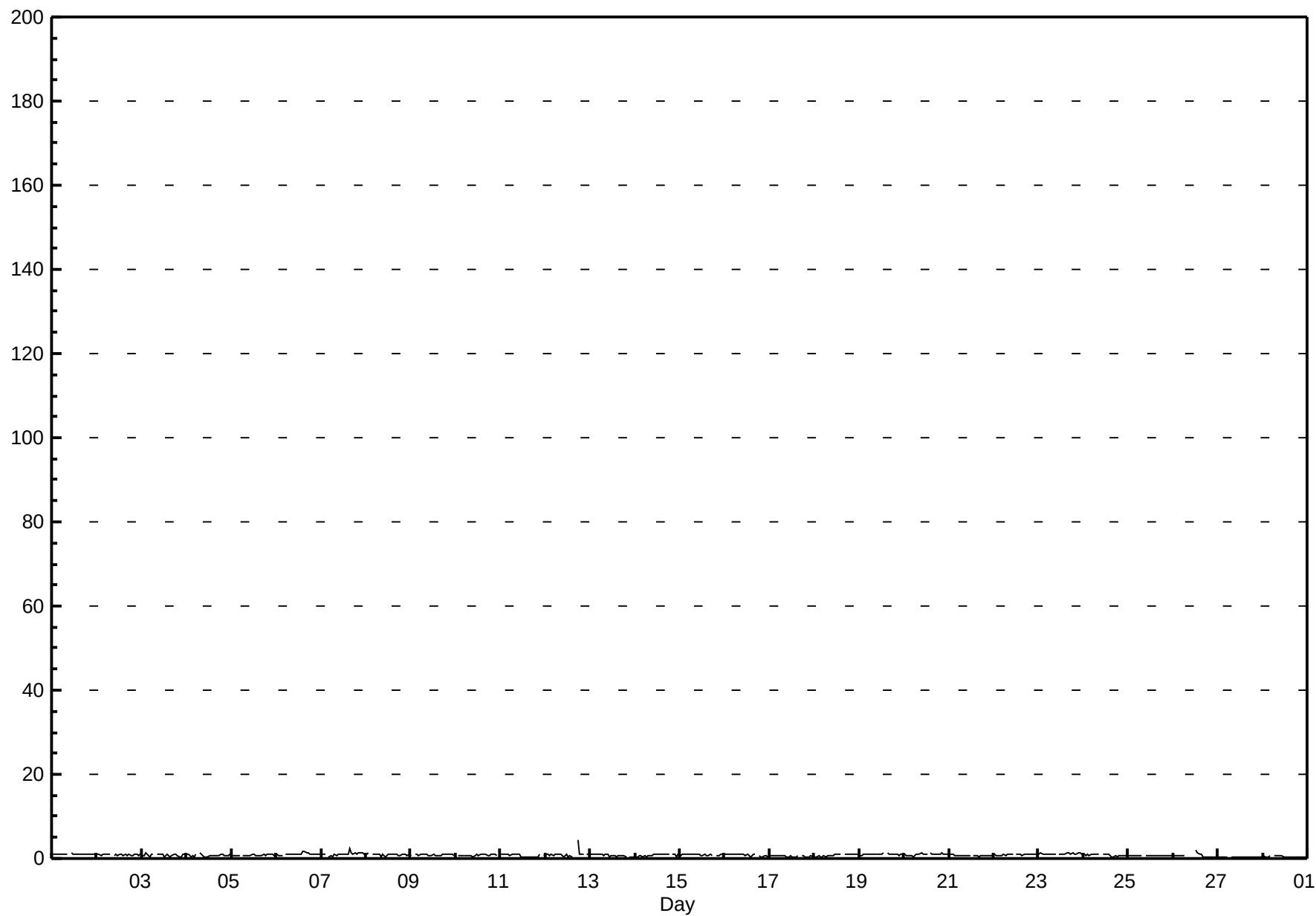
Hourly Maximums

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

Maximum Value: 4.4 ppb on Feb 12 18:00																				Maximum Daily Average: 1.1 ppb on Feb 1					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 28 04:00																				Minimum Daily Average: 0.4 ppb on Feb 27					Hours of Data: 637	
Maximum Diurnal Average: 1.0 ppb at hour 18																				Minimum Diurnal Average: 0.8 ppb at hour 5					Hours of Missing Data: 35	
Monthly Average: 0.81 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.9 Q ₃ = 0.9 P ₉₀ = 1.1 P ₉₉ = 1.4					Hours of Calibration: 33	
																									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-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4
2-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
3-Feb	1	1	1	1	0	1	1	A	1	1	1	1	0	1	1	0	1	1	1	1	0	0	1	1	0.8	1.5
4-Feb	1	1	0	1	0	1	A	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
5-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
6-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1.1	1.5
7-Feb	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1.1	2.5
8-Feb	1	1	A	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
9-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
10-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.0
11-Feb	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	A	1	0.7	0.9
12-Feb	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	D	D	4	1	1	1	A	1	1	0.9	4.4
13-Feb	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	0	A	0	0	0	0.7	1.0
14-Feb	0	0	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	0.8	1.1
15-Feb	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	0.9
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	0	0	1	1	0	0.7	0.9
17-Feb	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	1	A	1	1	0	0	0	1	0	0.6	0.8
18-Feb	0	0	1	1	0	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	1.0
19-Feb	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-Feb	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	1.4
21-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	1	1	1	1	0.8	0.9
22-Feb	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	1.0
23-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
24-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	1	0	1	1	1	1	1	0.8	1.0
25-Feb	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
26-Feb	1	1	1	1	1	1	1	A	C	C	C	C	2	1	1	1	0	0	0	0	0	0	0	0	0.7	2.0
27-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
28-Feb	1	0	0	0	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.5	0.5
0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.9 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.9 0.8 1.0 0.8 0.8 0.8 0.8 0.8 0.8																								Diurnal Average		
1.1 1.3 1.5 1.1 1.1 1.1 1.1 1.3 1.0 1.2 1.4 1.0 2.0 1.3 1.5 2.5 1.5 4.4 1.4 1.1 1.5 1.3 1.5 1.1																								Diurnal Maximum		
C - Calibration				D - DAS Failure				A - Automated Daily Zero Span																		

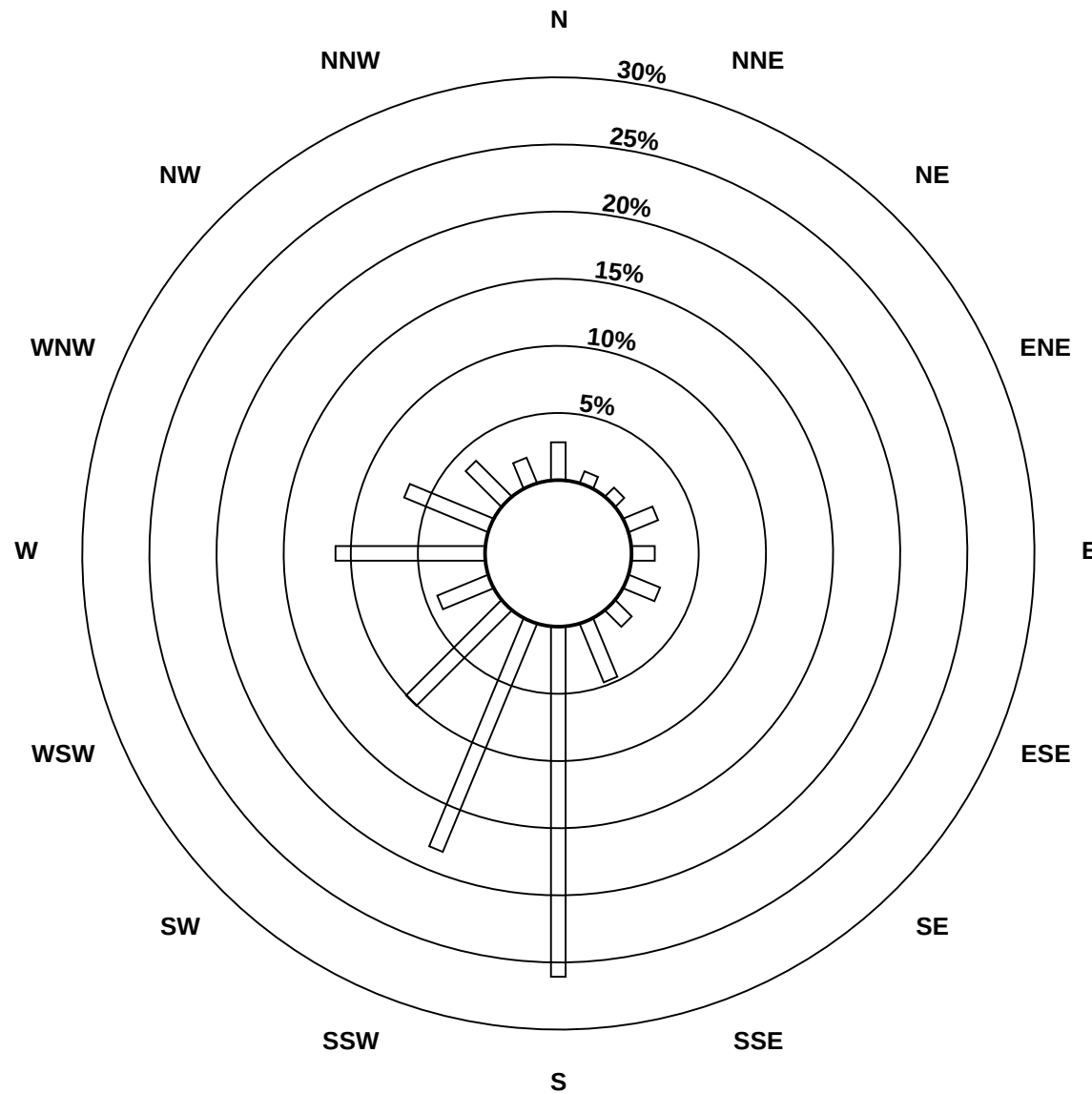
Hourly Maximums

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

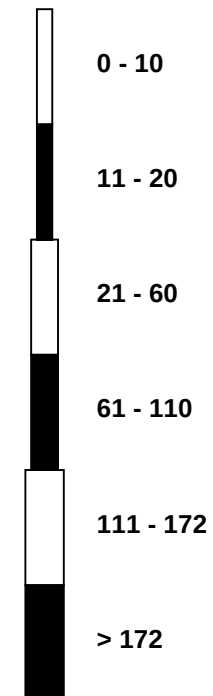


Pollutant Rose

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

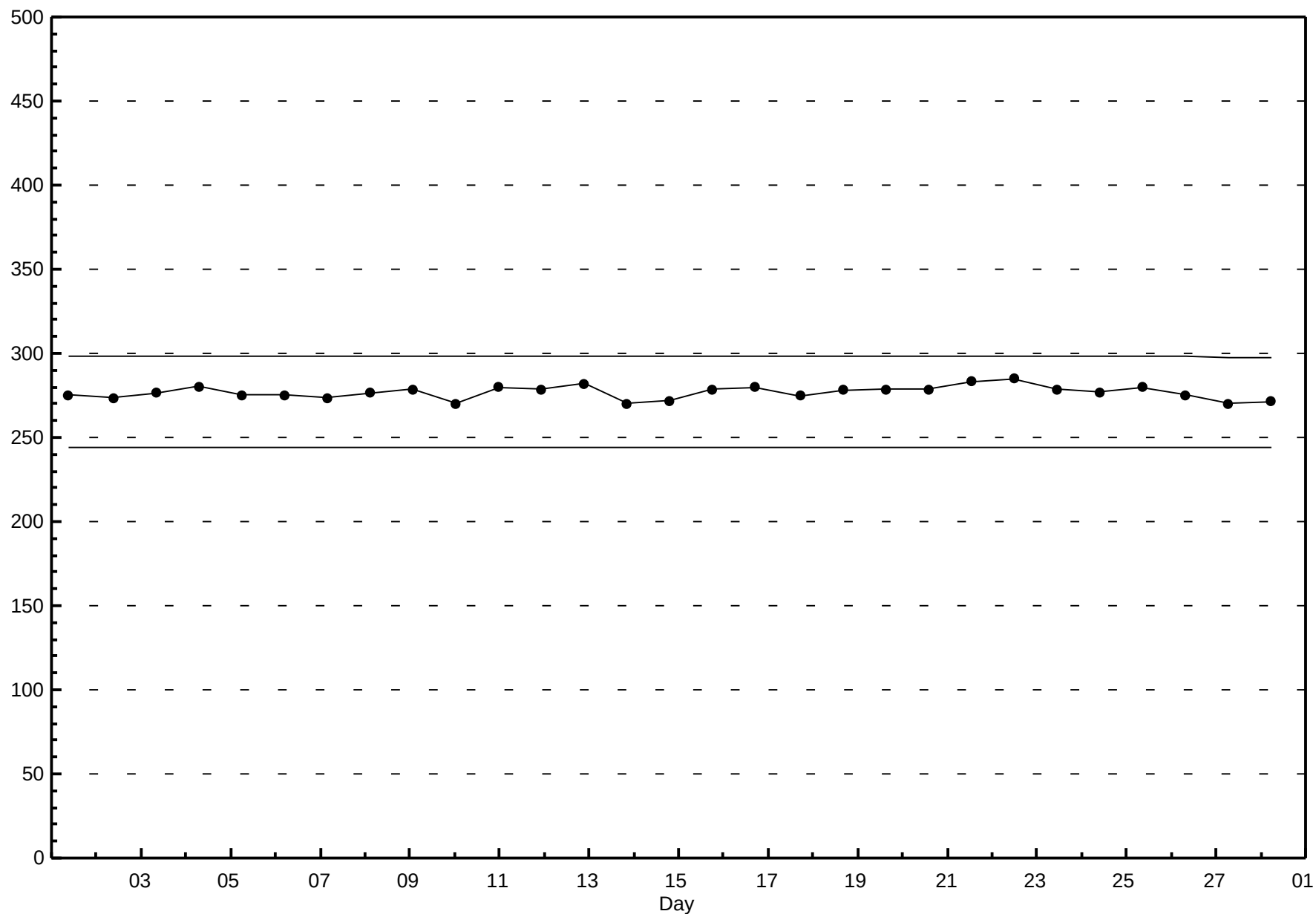


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Sunset House - February 2013



Hourly Averages

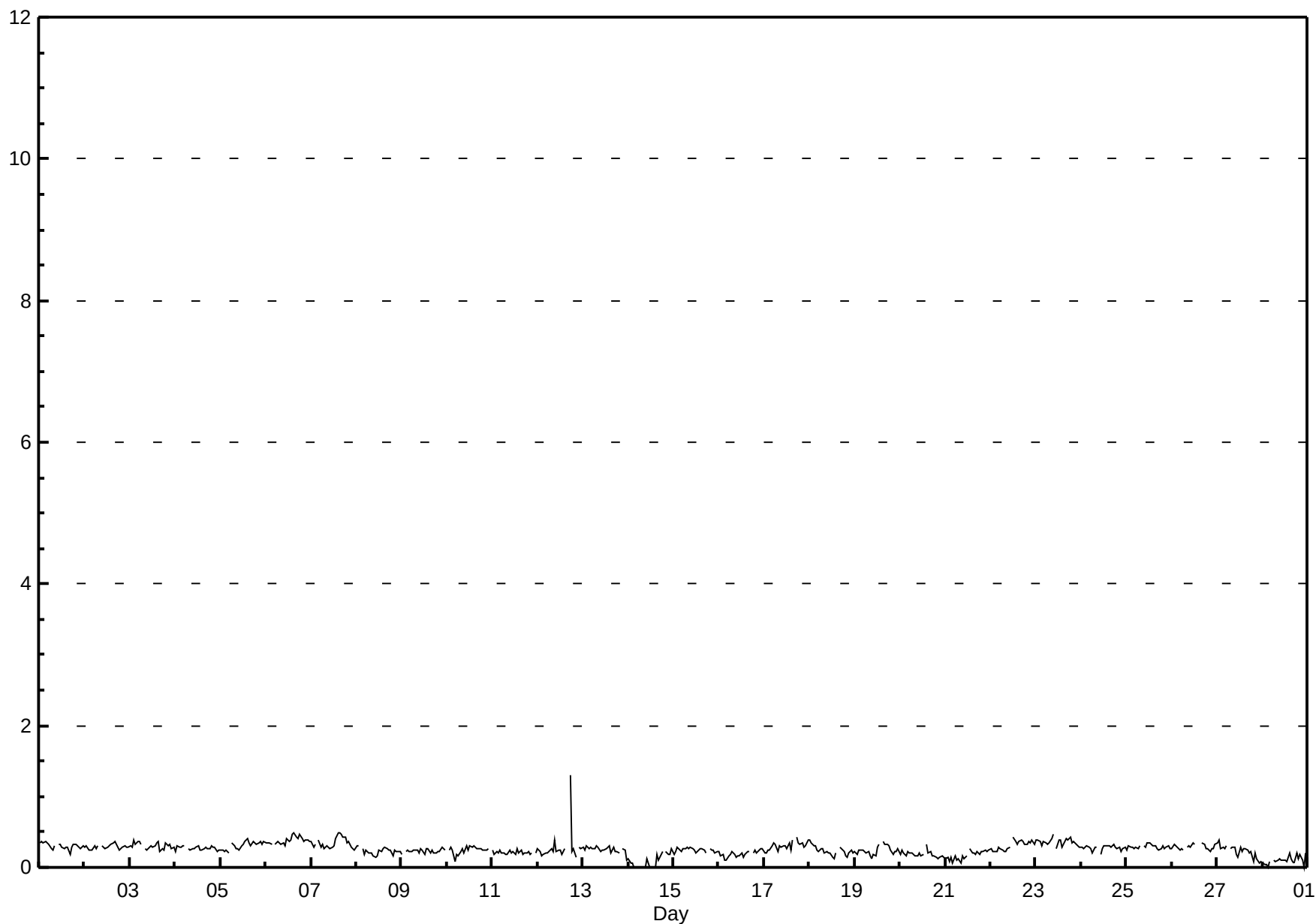
Total Reduced Sulphur (TRS) - ppb

Sunset House - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 672											
Maximum Value: 1.3 ppb on Feb 12 18:00																			Maximum Daily Average: 0.4 ppb on Feb 6						Hours of Data: 638					
Minimum Value: 0 ppb on Feb 14 05:00																			Minimum Daily Average: 0.1 ppb on Feb 14						Hours of Missing Data: 34					
Maximum Diurnal Average: 0.3 ppb at hour 18																			Minimum Diurnal Average: 0.2 ppb at hour 5						Hours of Calibration: 32					
Monthly Average: 0.25 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 0.5						Percent Operational Time: 99.7					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4			
2-Feb	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	0.3	0.4			
3-Feb	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	0.4			
4-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3			
5-Feb	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	0.3	0.4			
6-Feb	0	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	0.5			
7-Feb	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	0.5			
8-Feb	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	0.3			
9-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3			
10-Feb	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	0.2	0.3			
11-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3			
12-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	D	D	1	0	0	0	A	0	0	0.3	1.3				
13-Feb	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	0.3	0.3			
14-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.3			
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.3			
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.3			
17-Feb	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	0.4			
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.4			
19-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.4			
20-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3			
21-Feb	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	0.3			
22-Feb	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4			
23-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5			
24-Feb	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3			
25-Feb	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	0.3	0.3			
26-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.3	0.4			
27-Feb	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	0.4			
28-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2			
																									Diurnal Average					
																									Diurnal Maximum					
C - Calibration D - DAS Failure A - Automated Daily Zero Span																														
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																														

Hourly Averages

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



Hourly Maximums

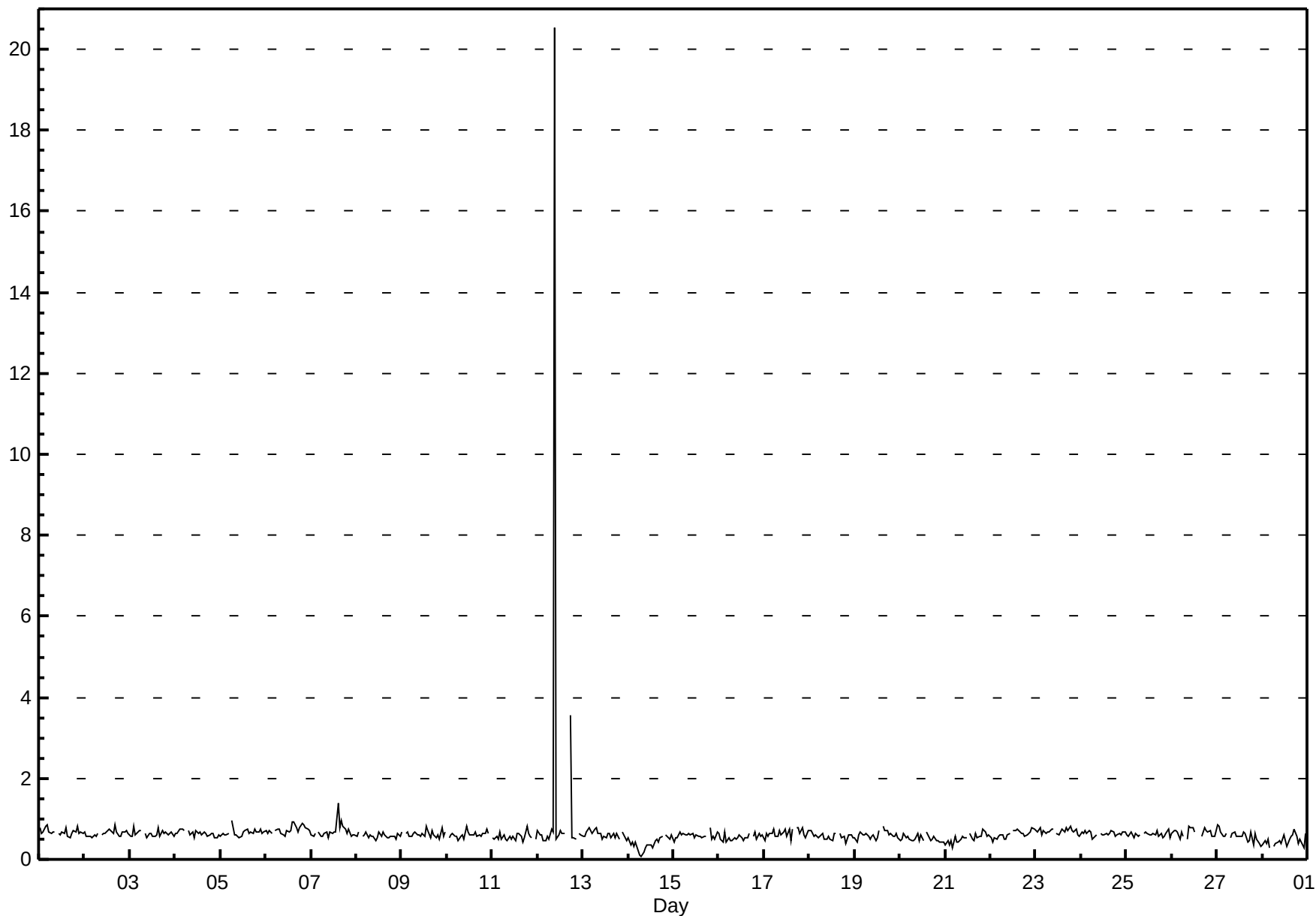
Total Reduced Sulphur (TRS) - ppb

Sunset House - February 2013

Maximum Value: 20.5 ppb on Feb 12 10:00																				Maximum Daily Average: 1.7 ppb on Feb 12					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 14 08:00																				Minimum Daily Average: 0.4 ppb on Feb 14					Hours of Data: 638	
Maximum Diurnal Average: 1.4 ppb at hour 10																				Minimum Diurnal Average: 0.6 ppb at hour 9					Hours of Missing Data: 34	
Monthly Average: 0.64 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.7 P ₉₉ = 0.9					Hours of Calibration: 32	
																				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-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
2-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
3-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
4-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
5-Feb	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	1.0
6-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
7-Feb	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.4
8-Feb	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
9-Feb	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.6	0.8
10-Feb	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.6	0.8
11-Feb	1	0	1	1	1	0	1	0	0	1	0	1	0	1	1	1	0	1	1	1	1	1	A	0	0.6	0.8
12-Feb	1	1	1	0	0	1	0	1	1	21	1	1	1	1	1	D	D	4	1	1	1	A	1	1	1.7	20.5
13-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0.6	0.8
14-Feb	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	1	1	1	1	0.4	0.6
15-Feb	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.6	0.8
16-Feb	1	1	0	1	0	1	0	0	1	0	1	1	1	0	1	1	1	A	1	1	1	1	1	1	0.6	0.7
17-Feb	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	0.6	0.8
18-Feb	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	A	1	1	1	0	0	1	1	1	0.6	0.7
19-Feb	1	0	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	0.6	0.8
20-Feb	0	1	1	1	1	1	0	0	1	1	0	1	0	A	1	1	0	1	1	0	0	0	0	0	0.5	0.7
21-Feb	0	0	0	0	0	1	0	0	0	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	0.5	0.7
22-Feb	1	0	1	0	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
23-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
24-Feb	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
25-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
26-Feb	1	1	1	1	0	1	1	A	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	0.7	0.8
27-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	0	0	0.6	0.9
28-Feb	0	0	0	1	0	A	0	0	0	0	0	1	0	0	0	1	1	1	1	0	1	0	0	1	0.5	0.7
0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 1.4 0.6 0.6 0.6 0.6 0.7 0.6 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6																									Diurnal Average	
0.9 0.8 0.8 0.8 0.9 0.7 1.0 0.8 0.7 20.5 0.8 0.8 0.7 0.8 1.4 0.9 1.0 3.6 0.8 0.9 0.9 0.8 0.8 0.7																									Diurnal Maximum	
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										

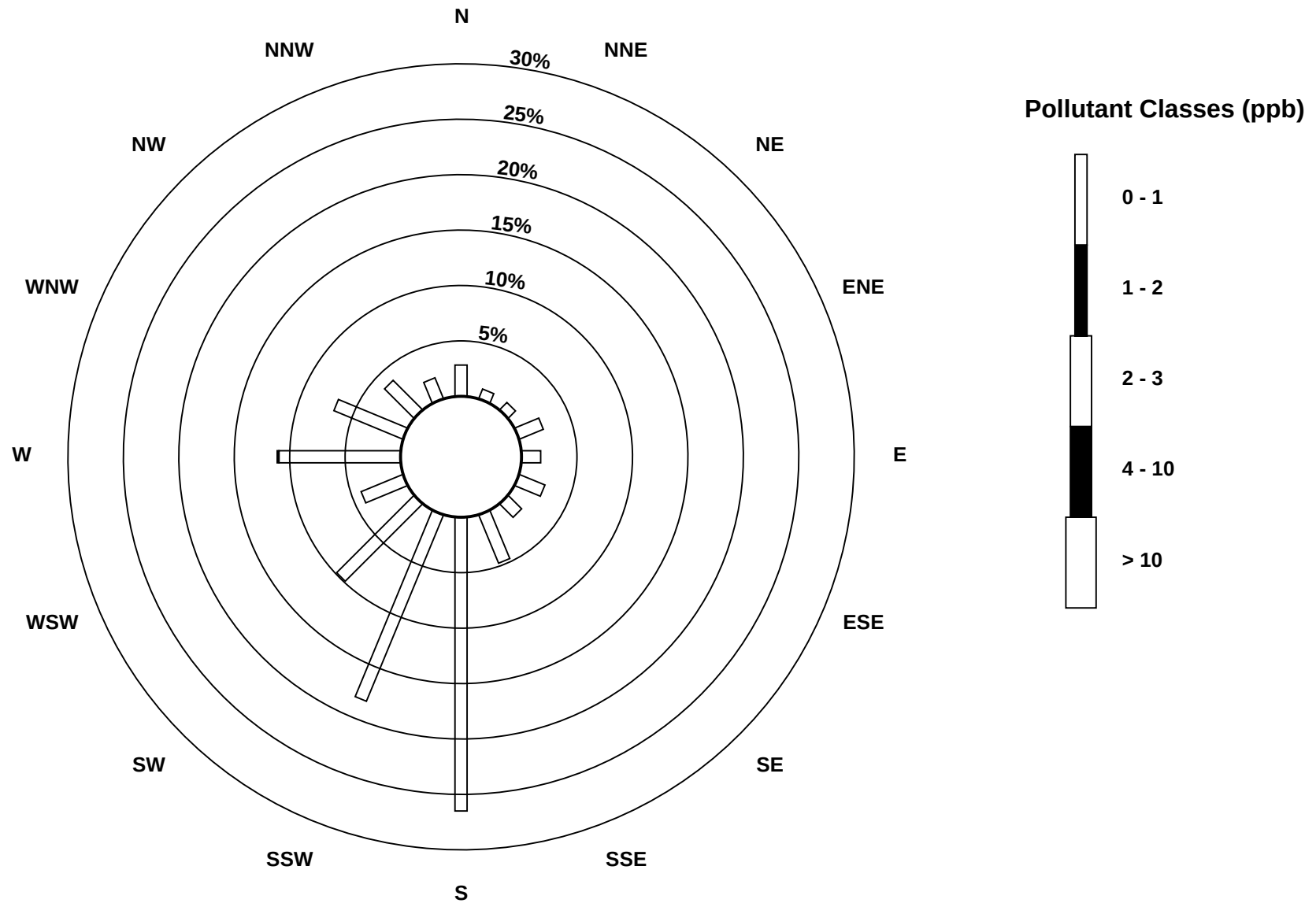
Hourly Maximums

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



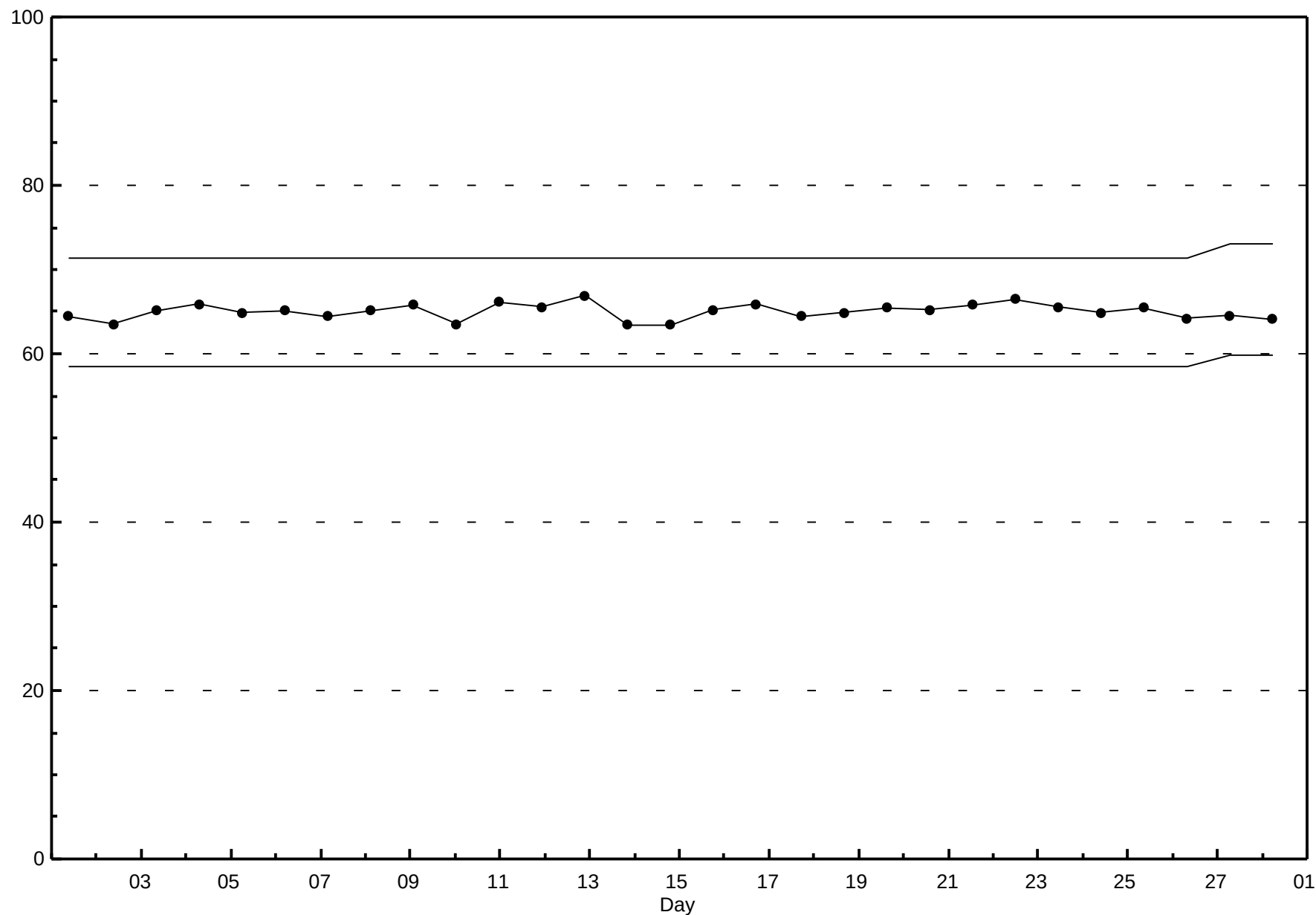
Pollutant Rose

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



Span Responses

Total Reduced Sulphur (TRS)
Sunset House - February 2013



Hourly Averages

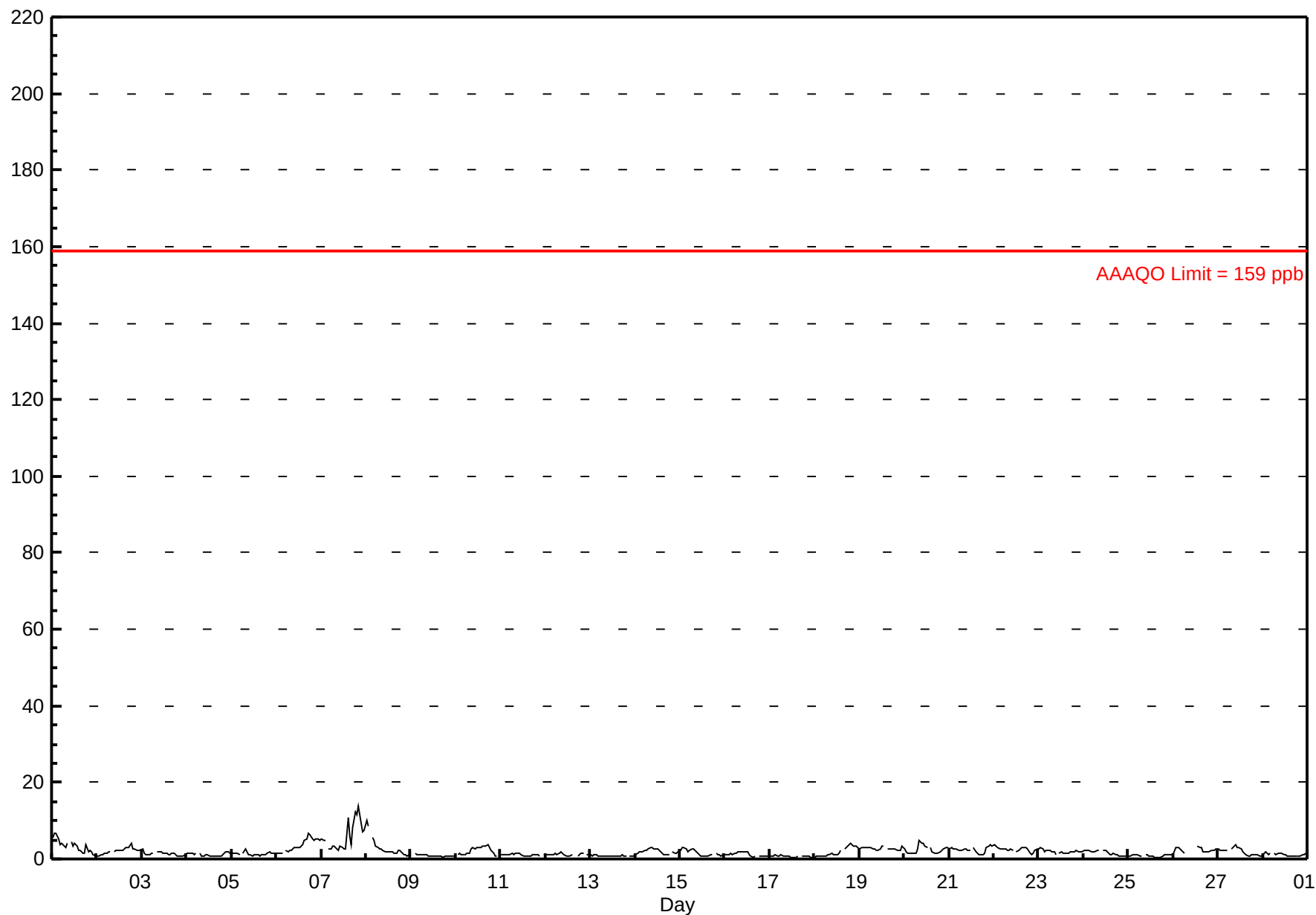
Nitrogen Dioxide (NO₂) - ppb

Sunset House - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13.6 ppb on Feb 7 21:00 Maximum Daily Average: 5.8 ppb on Feb 7																								Hours in Service: 672 Hours of Data: 636 Hours of Missing Data: 36 Hours of Calibration: 34 Percent Operational Time: 99.7		
Minimum Value: 0 ppb on Feb 9 18:00 Minimum Daily Average: 0.7 ppb on Feb 17 Maximum Diurnal Average: 2.3 ppb at hour 2 Minimum Diurnal Average: 1.7 ppb at hour 14 Monthly Average: 1.96 ppb Percentiles: P ₁ = 0.5 P ₁₀ = 0.8 Q ₁ = 1.0 Median = 1.5 Q ₃ = 2.5 P ₉₀ = 3.3 P ₉₉ = 8.3																										
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-Feb	5	7	7	5	4	4	3	3	4	A	4	3	4	3	2	2	2	2	4	2	2	2	1	1	3.4	6.9
2-Feb	1	1	1	1	1	1	2	2	A	2	2	2	2	2	2	3	3	3	4	3	2	2	2	2	2.1	3.9
3-Feb	3	2	1	1	1	1	1	A	2	2	2	2	2	1	1	1	1	2	1	1	1	1	1	1	1.4	2.8
4-Feb	1	2	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.2	1.9
5-Feb	1	1	1	2	1	A	1	3	2	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1.4	2.5
6-Feb	1	2	1	1	A	2	2	2	2	3	3	3	3	3	4	5	5	7	6	5	5	5	5	5	3.6	6.7
7-Feb	5	5	5	A	3	3	3	3	3	2	3	3	3	3	11	6	4	8	12	11	14	9	7	8	5.8	13.6
8-Feb	10	9	A	6	5	4	3	3	3	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	2.9	10.2
9-Feb	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.9	1.6
10-Feb	A	1	2	1	1	1	1	1	3	3	3	3	3	3	3	3	3	4	3	2	1	1	1	A	2.2	3.7
11-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.1	1.5
12-Feb	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	D	D	1	1	1	1	A	1	1	1.2	1.7
13-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.2
14-Feb	1	2	2	2	2	2	2	3	3	3	3	3	3	2	1	1	1	1	1	A	2	2	1	2	1.9	3.0
15-Feb	2	3	3	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1.6	3.1
16-Feb	1	1	1	2	1	2	2	2	2	2	2	2	2	1	1	1	1	A	1	1	1	1	1	1	1.2	1.9
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	0.7	1.1
18-Feb	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	3	3	4	4	4	3	3	3	1.8	4.0
19-Feb	3	3	3	3	3	3	3	3	3	2	2	3	3	3	A	3	3	3	3	2	2	2	2	3	2.7	3.4
20-Feb	3	2	2	2	2	1	2	3	5	4	4	3	3	A	3	2	1	2	2	2	2	3	3	3	2.5	4.9
21-Feb	3	3	3	3	3	2	2	2	3	2	2	2	A	3	2	1	1	1	1	2	3	3	4	3	2.3	3.6
22-Feb	4	4	3	3	3	3	2	2	2	3	2	A	2	2	3	3	3	3	3	2	1	1	2	3	2.5	3.8
23-Feb	3	3	2	2	2	2	2	2	2	1	A	1	2	1	1	1	2	2	2	2	2	2	2	2	1.9	2.8
24-Feb	2	2	2	2	2	2	2	2	2	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1.6	2.4
25-Feb	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0.9	1.3
26-Feb	1	3	3	3	2	2	1	A	C	C	C	C	C	3	3	3	2	2	2	2	2	2	2	2	2.3	3.4
27-Feb	3	2	2	2	2	2	A	2	3	4	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1.9	3.6
28-Feb	1	2	2	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.9
2.3 2.3 2.0 2.0 1.8 1.9 1.8 2.0 2.2 1.9 2.0 1.8 1.8 1.7 1.9 1.7 1.7 2.0 2.2 2.0 2.2 2.0 1.9 1.9																								Diurnal Average		
10.2 8.6 6.9 5.6 4.8 4.0 3.5 3.3 4.9 3.9 4.4 3.4 4.0 3.4 10.7 5.8 5.4 8.2 12.4 11.4 13.6 9.2 7.0 7.6																								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
Sunset House - February 2013



Hourly Maximums

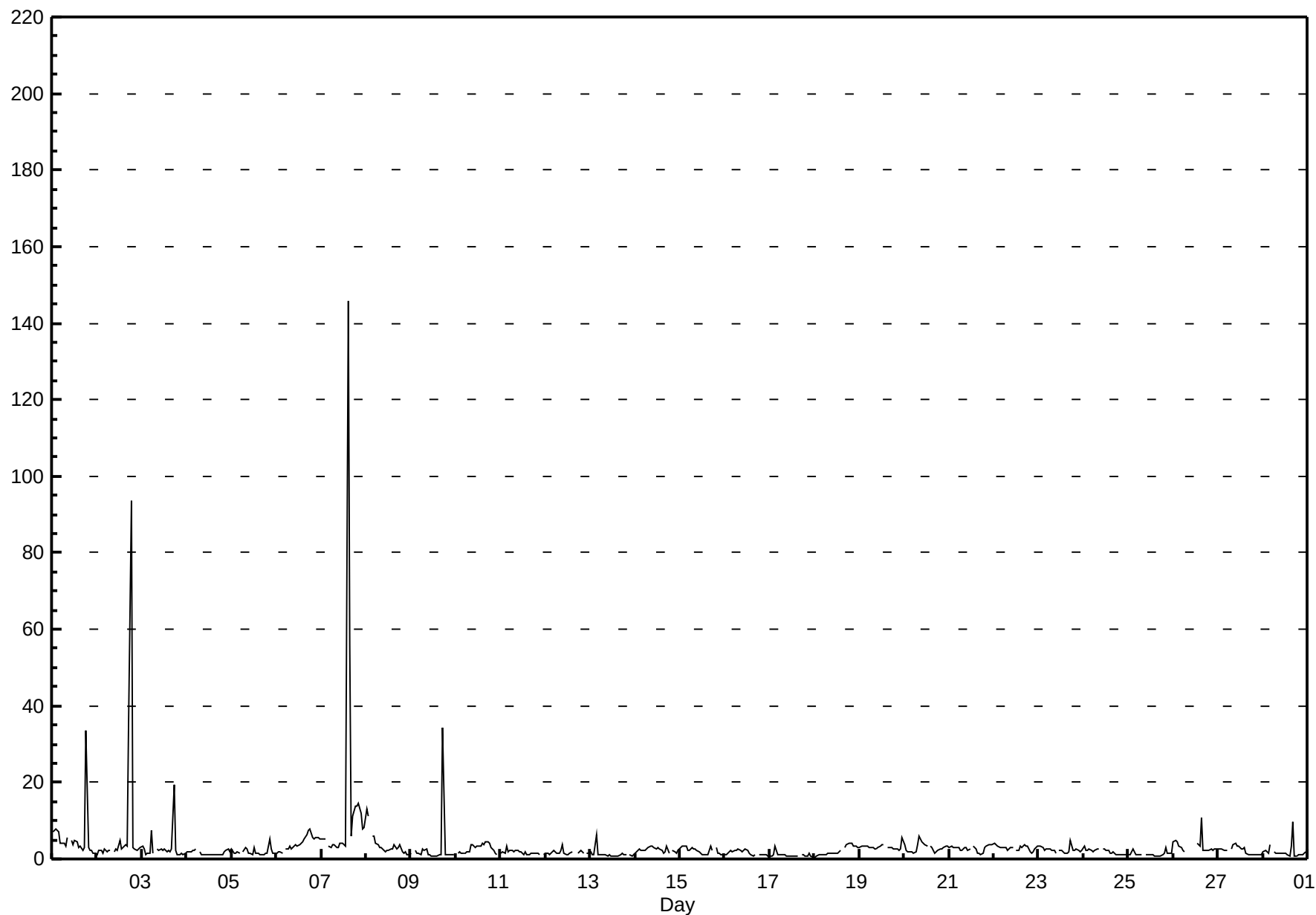
Nitrogen Dioxide (NO₂) - ppb

Sunset House - February 2013

Maximum Value: 145.8 ppb on Feb 7 15:00																				Maximum Daily Average: 14.7 ppb on Feb 7					Hours in Service: 672	
Minimum Value: 1 ppb on Feb 18 00:00																				Minimum Daily Average: 1.1 ppb on Feb 17					Hours of Data: 636	
Maximum Diurnal Average: 7.4 ppb at hour 15																				Minimum Diurnal Average: 2.2 ppb at hour 23					Hours of Missing Data: 36	
Monthly Average: 3.10 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.0 Q ₁ = 1.4 Median = 2.2 Q ₃ = 3.1 P ₉₀ = 4.0 P ₉₉ = 32.7					Hours of Calibration: 34	
																				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-Feb	7	7	8	7	4	4	4	4	5	A	5	4	5	4	3	3	2	3	33	3	2	2	2	2	5.4	33.4
2-Feb	1	2	2	1	2	2	2	2	A	2	2	2	5	3	3	4	3	36	94	3	3	2	3	3	8.0	93.6
3-Feb	3	3	1	1	2	7	2	A	3	2	3	2	2	2	2	2	3	19	2	1	1	1	1	1	2.9	19.2
4-Feb	2	2	2	2	2	3	A	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	2	1.6	2.8
5-Feb	3	2	2	2	1	A	2	3	2	1	1	1	3	2	1	1	1	1	1	2	5	3	2	1	1.9	5.2
6-Feb	2	2	2	2	A	3	3	3	3	4	4	4	4	4	4	5	6	7	8	6	5	6	6	5	4.1	7.8
7-Feb	5	5	5	A	3	3	4	4	3	3	4	4	4	3	146	56	6	11	14	14	14	12	8	8	14.7	145.8
8-Feb	13	11	A	6	6	4	4	3	3	3	2	2	2	2	2	4	3	3	4	2	1	2	1	1	3.7	13.0
9-Feb	2	A	2	2	1	1	3	2	2	1	1	1	1	1	1	1	1	34	1	1	1	1	1	1	2.7	34.2
10-Feb	A	2	2	2	1	1	2	2	4	4	3	3	3	3	4	4	5	5	4	3	2	1	1	A	2.7	4.7
11-Feb	1	2	2	3	2	2	2	2	2	2	2	2	1	2	1	1	1	2	2	2	2	1	A	1	1.7	3.2
12-Feb	2	2	1	2	2	2	2	2	2	4	2	1	1	1	2	D	D	1	2	2	2	A	2	2	1.8	3.6
13-Feb	2	1	1	7	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	1	1	1	1.3	6.5
14-Feb	1	2	3	2	2	2	3	3	3	3	3	3	3	3	2	2	2	3	1	A	2	2	2	2	2.4	3.5
15-Feb	3	3	3	3	2	2	3	3	3	2	2	2	1	1	1	1	3	2	A	3	2	2	1	1	2.2	3.5
16-Feb	1	1	2	2	2	2	2	3	2	2	2	3	2	1	1	1	1	A	1	1	1	1	1	1	1.6	2.6
17-Feb	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	3.3
18-Feb	1	1	1	1	1	1	1	1	1	2	2	1	1	2	2	A	3	4	4	4	4	4	3	3	2.1	4.2
19-Feb	3	3	3	3	3	3	3	3	3	2	3	3	4	4	A	3	3	3	3	3	2	2	2	6	3.1	5.6
20-Feb	4	2	2	2	2	2	2	4	6	4	4	4	3	A	3	3	2	2	2	3	3	3	3	3	2.9	5.8
21-Feb	3	3	3	3	3	3	2	2	3	3	2	3	A	3	3	2	1	1	2	3	3	4	4	4	2.7	3.8
22-Feb	4	4	3	3	3	3	3	2	3	3	3	A	2	2	3	3	4	3	3	2	1	2	3	3	2.9	4.0
23-Feb	3	3	3	2	3	3	3	2	2	2	A	2	2	2	2	2	2	5	2	2	3	2	2	2	2.4	4.9
24-Feb	3	2	2	3	2	2	2	3	3	A	3	3	2	2	1	1	2	1	1	1	1	1	1	1	1.9	3.3
25-Feb	1	1	2	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	3	2	2	2	1.3	2.8
26-Feb	5	5	4	3	3	2	2	A	C	C	C	C	C	4	3	11	2	2	2	2	2	3	3	3	3.4	10.7
27-Feb	3	3	3	2	2	2	A	3	4	4	4	3	3	2	3	2	1	1	1	1	1	1	1	1	2.2	4.0
28-Feb	2	2	2	1	4	A	2	2	2	2	2	1	1	1	1	3	10	1	1	1	1	1	2	2	2.0	9.7
2.9 2.9 2.5 2.7 2.3 2.4 2.3 2.4 2.7 2.3 2.3 2.2 2.3 2.2 7.4 4.5 2.7 5.8 7.1 2.6 2.7 2.4 2.2 2.4																									Diurnal Average	
13.0 11.1 7.8 6.9 5.9 7.3 4.2 3.9 5.8 4.4 5.0 3.9 4.9 4.3 145.8 55.8 9.7 36.1 93.6 13.9 14.4 12.0 7.7 8.1																									Diurnal Maximum	
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										

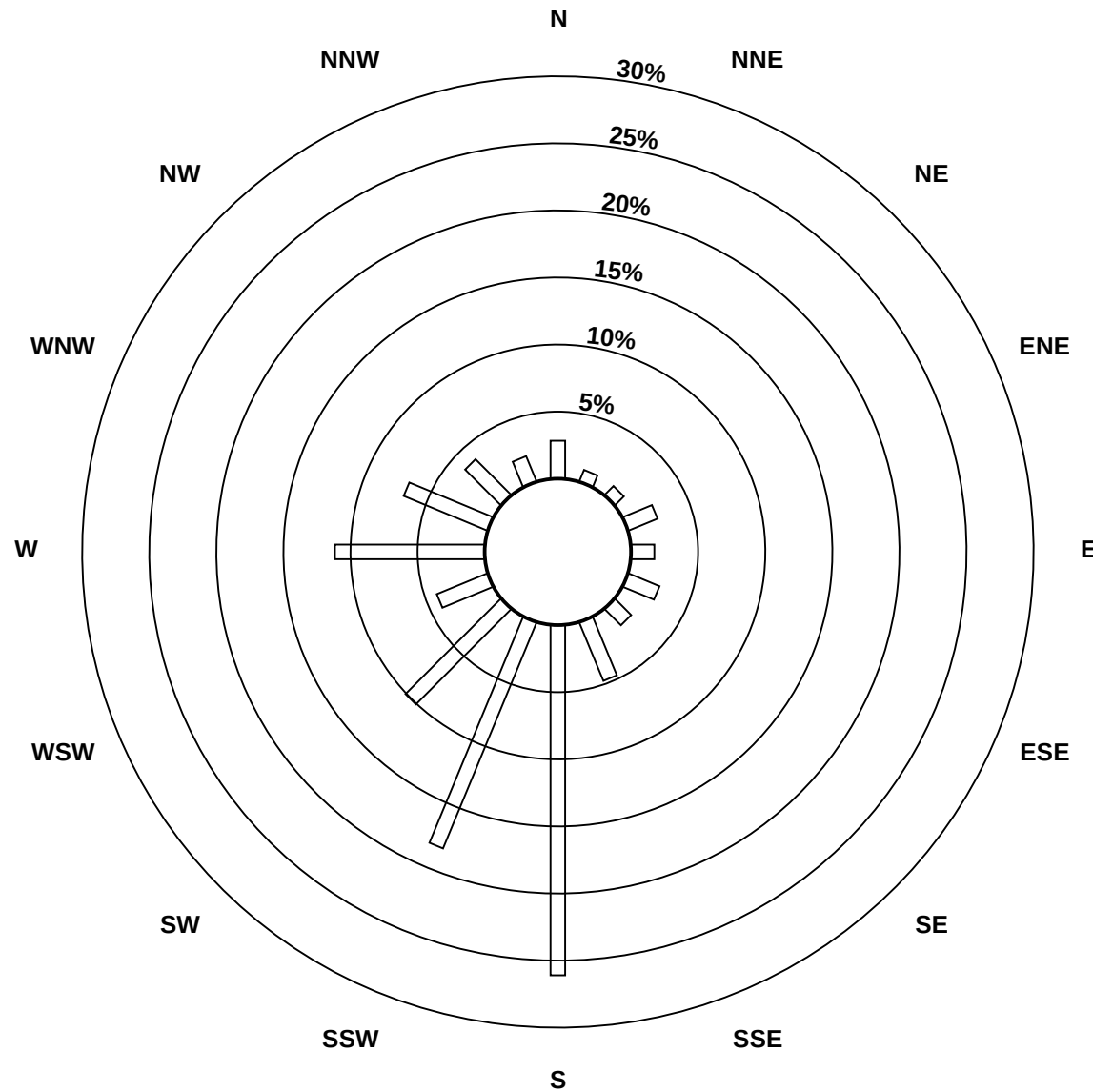
Hourly Maximums

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

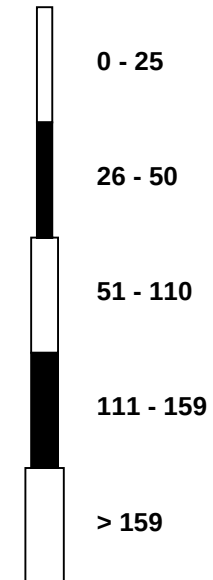


Pollutant Rose

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

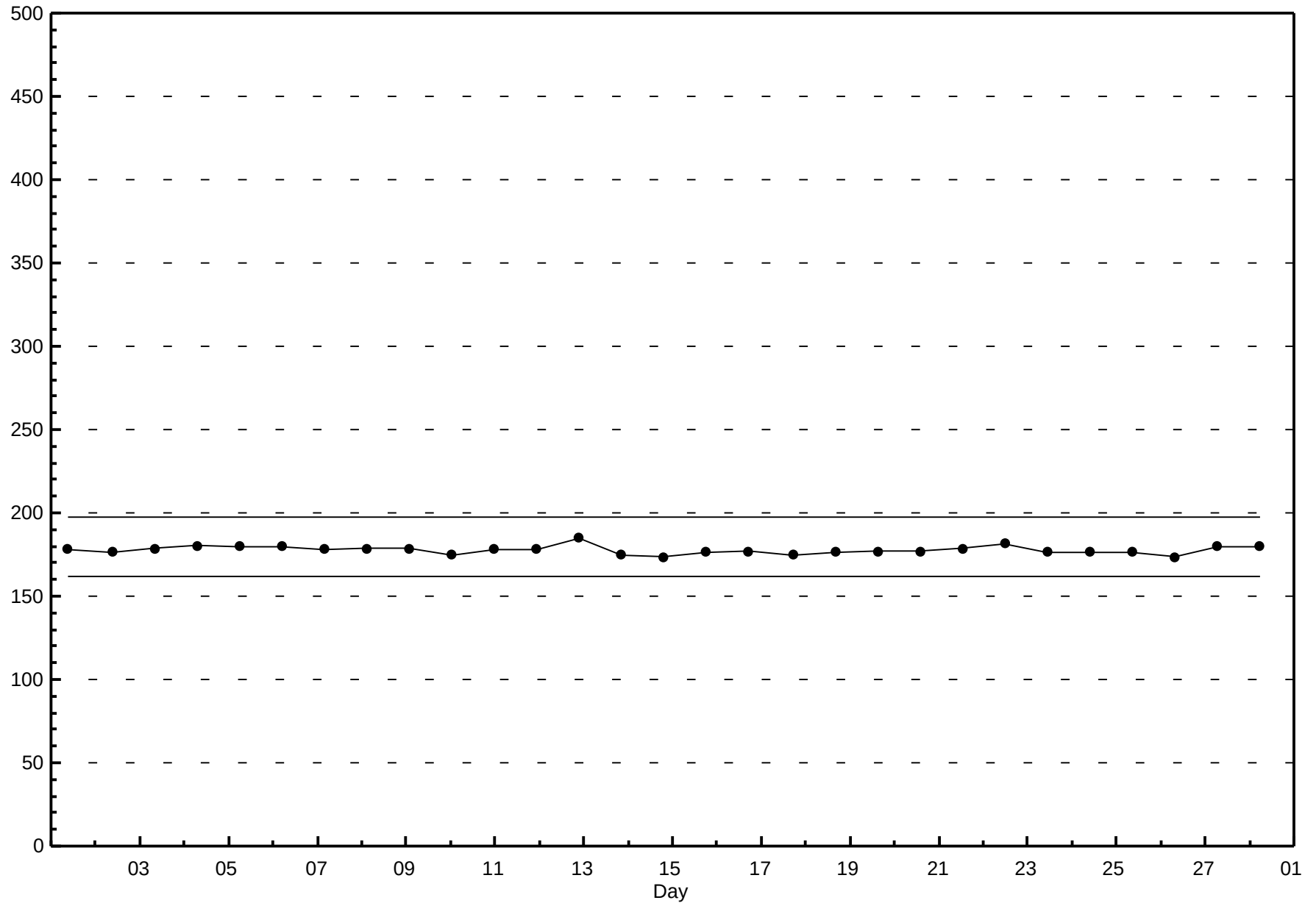


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Sunset House - February 2013



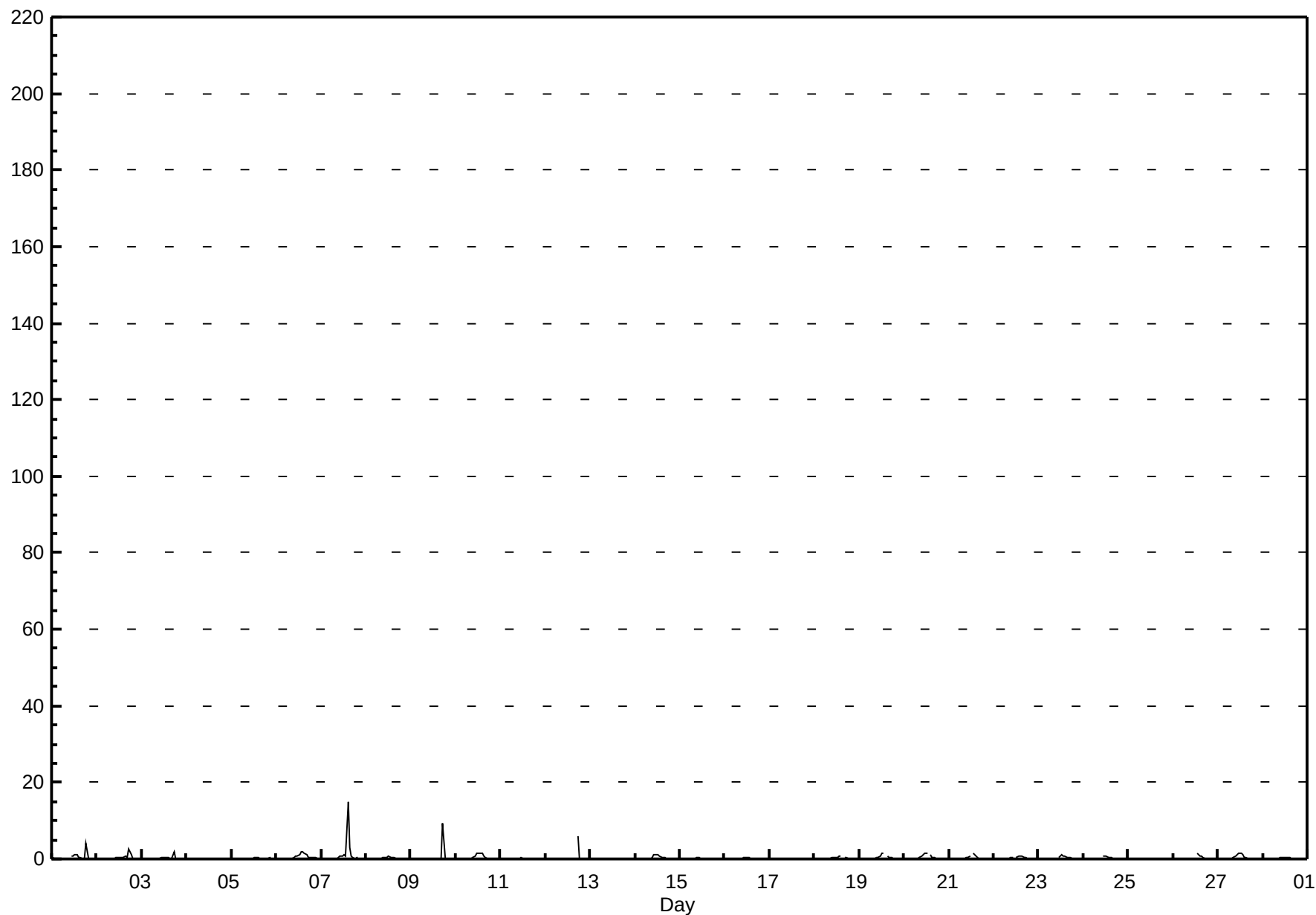
Hourly Averages

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 14.9 ppb on Feb 7 15:00 Maximum Daily Average: 1.0 ppb on Feb 7																								Hours in Service: 672 Hours of Data: 636 Hours of Missing Data: 36 Hours of Calibration: 34 Percent Operational Time: 99.7		
Minimum Value: 0 ppb on Feb 1 22:00 Maximum Diurnal Average: 1.0 ppb at hour 15 Monthly Average: 0.24 ppb																								Minimum Daily Average: 0.0 ppb on Feb 25 Minimum Diurnal Average: 0.0 ppb at hour 6 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 = 2.3		
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-Feb	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0	0	0	0	4	0	0	0	0	0	0.4	4.2
2-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	3	1	0	0	0	0	0	0.3	2.6
3-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0.2	1.9
4-Feb	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-Feb	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
6-Feb	0	0	0	0	A	0	0	0	0	0	1	1	1	2	2	1	1	0	0	0	0	0	0	0	0.5	1.8
7-Feb	0	0	0	A	0	0	0	0	0	0	1	1	1	1	15	3	1	0	0	0	0	0	0	0	1.0	14.9
8-Feb	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
9-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0.5	9.2
10-Feb	A	0	0	0	0	0	0	0	0	0	1	1	1	2	1	1	1	0	0	0	0	0	0	A	0.4	1.5
11-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2
12-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	D	D	6	0	0	0	A	0	0	0.3	6.0
13-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.1
14-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0.2	1.1
15-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.2
16-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0.1	0.5
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0.2	0.9
19-Feb	0	0	0	0	0	0	0	0	0	0	1	1	2	1	A	1	1	0	0	0	0	0	0	0	0.3	1.5
20-Feb	0	0	0	0	0	0	0	0	0	1	1	2	2	A	1	1	0	0	0	0	0	0	0	0	0.3	1.6
21-Feb	0	0	0	0	0	0	0	0	0	0	0	1	A	1	1	0	0	0	0	0	0	0	0	0	0.2	1.4
22-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0.2	0.6
23-Feb	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0.2	1.1
24-Feb	0	0	0	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
25-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
26-Feb	0	0	0	0	0	0	0	A	C	C	C	C	C	1	1	1	0	0	0	0	0	0	0	0	0.2	1.4
27-Feb	0	0	0	0	0	0	A	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.4
28-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.2 0.4 0.5 0.6 0.6 1.0 0.5 0.3 0.9 0.3 0.1 0.1 0.0 0.0 0.0																								Diurnal Average		
0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.7 1.3 1.5 1.6 1.8 14.9 2.9 1.0 9.2 4.2 0.2 0.2 0.2 0.2 0.1																								Diurnal Maximum		
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										

Hourly Averages

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



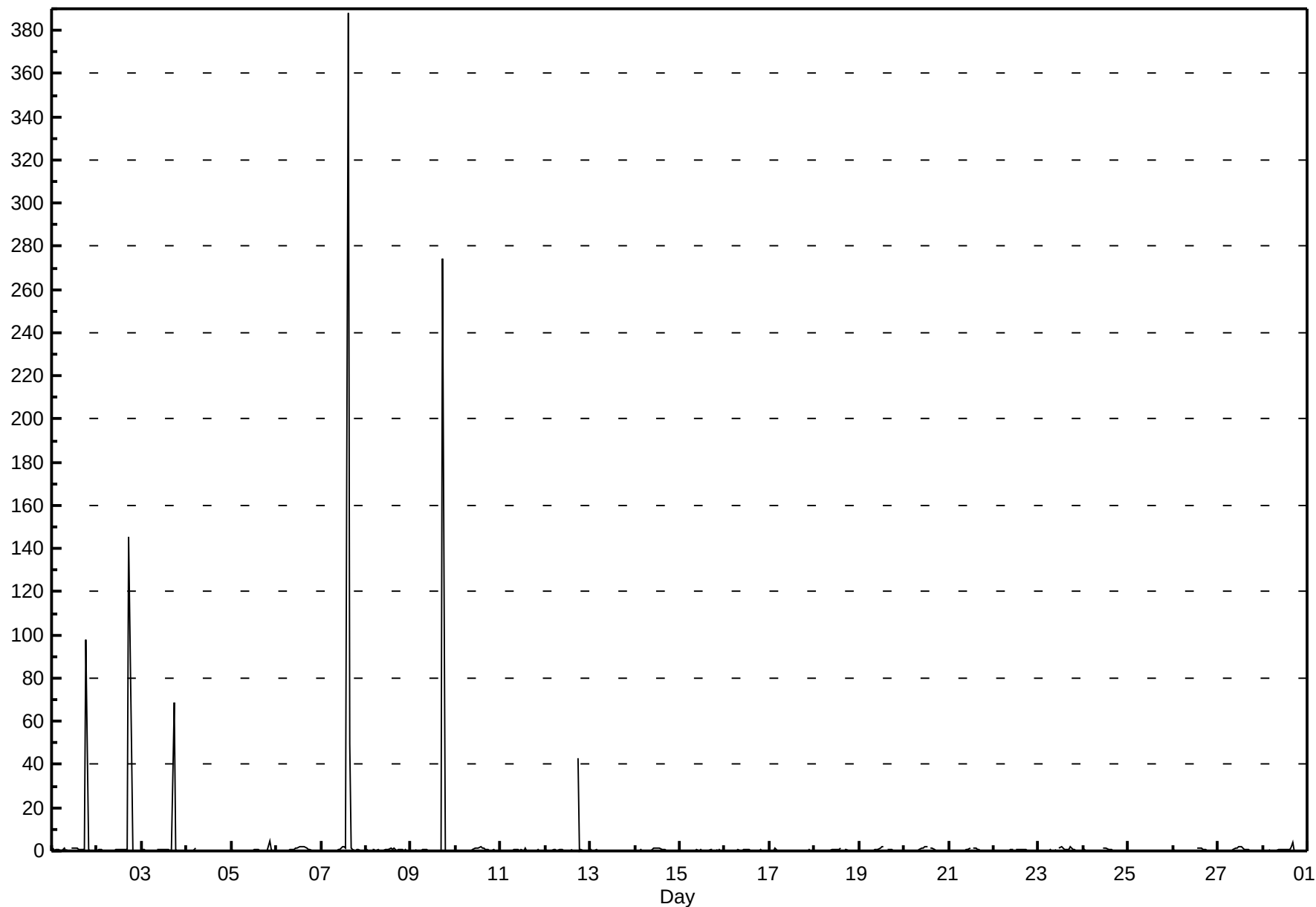
Hourly Maximums

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

Maximum Value: 387.9 ppb on Feb 7 15:00																				Maximum Daily Average: 19.6 ppb on Feb 7					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 15 01:00																				Minimum Daily Average: 0.2 ppb on Feb 25					Hours of Data: 636	
Maximum Diurnal Average: 20.1 ppb at hour 18																				Minimum Diurnal Average: 0.2 ppb at hour 2					Hours of Missing Data: 36	
Monthly Average: 2.16 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.5 P ₉₀ = 1.1 P ₉₉ = 35.7					Hours of Calibration: 34	
																									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-Feb	1	0	0	0	0	0	2	0	1	A	1	1	2	2	1	1	1	1	98	1	0	0	0	0	4.9	98.1
2-Feb	0	0	1	0	0	0	0	0	A	0	0	0	1	0	1	1	0	145	51	0	0	0	0	0	8.9	145.2
3-Feb	0	0	0	0	0	0	0	A	0	0	1	1	1	1	0	0	1	69	1	0	0	0	0	0	3.4	69.0
4-Feb	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
5-Feb	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	1	0	0	0.4	4.4
6-Feb	0	0	0	0	A	0	0	0	0	1	2	1	2	2	2	2	1	1	1	0	0	0	0	0	0.8	2.2
7-Feb	0	0	0	A	0	0	0	0	0	0	1	2	2	1	388	50	2	1	0	1	0	0	0	0	19.6	387.9
8-Feb	1	0	A	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0	1	0	0	1	0	0	0.5	1.2
9-Feb	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	275	0	0	0	0	0	0	12.2	274.6
10-Feb	A	0	0	0	0	0	0	0	0	1	1	2	2	2	2	1	1	0	0	0	1	0	0	A	0.6	1.7
11-Feb	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0.4	1.2
12-Feb	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	D	D	43	0	0	0	A	0	0	2.4	42.9
13-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4
14-Feb	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0.4	1.4
15-Feb	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0.3	0.8
16-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0.2	0.8
17-Feb	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0.2	1.1
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	1	0	0	0	0	0	0	0	0.3	1.1
19-Feb	0	0	0	0	0	0	0	0	0	1	1	1	2	2	A	1	1	0	0	0	0	0	0	0	0.4	1.9
20-Feb	0	0	0	0	0	0	0	0	0	1	2	2	2	A	2	1	0	0	0	0	0	0	0	0	0.5	1.9
21-Feb	0	0	0	0	0	0	0	0	0	0	1	1	A	2	1	1	0	0	0	0	0	0	0	0	0.4	1.6
22-Feb	0	0	0	0	0	0	0	0	0	1	1	A	1	1	1	1	1	0	0	0	0	0	0	0	0.3	1.0
23-Feb	0	0	0	0	0	0	0	0	0	0	A	1	2	1	1	1	1	2	0	0	0	0	0	0	0.5	2.1
24-Feb	1	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.4	1.2
25-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
26-Feb	1	0	0	0	0	0	0	A	C	C	C	C	C	2	1	1	0	0	0	0	0	0	0	0	0.4	1.6
27-Feb	0	0	0	0	0	0	A	0	1	1	1	2	2	1	1	1	0	0	0	0	0	0	0	0	0.5	1.7
28-Feb	0	0	0	0	1	A	0	0	0	0	1	1	1	0	0	2	4	0	0	0	0	0	0	0	0.5	4.1
0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.5 0.7 0.8 0.9 0.9 15.0 2.6 0.7 20.1 5.8 0.3 0.4 0.2 0.2 0.2																									Diurnal Average	
1.1 0.5 0.6 1.1 0.7 1.1 1.5 0.6 0.6 1.2 1.6 1.7 2.0 2.2 387.9 49.9 4.1 274.6 98.1 0.9 4.4 0.6 0.3 0.3																									Diurnal Maximum	
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										

Hourly Maximums

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



Hourly Averages

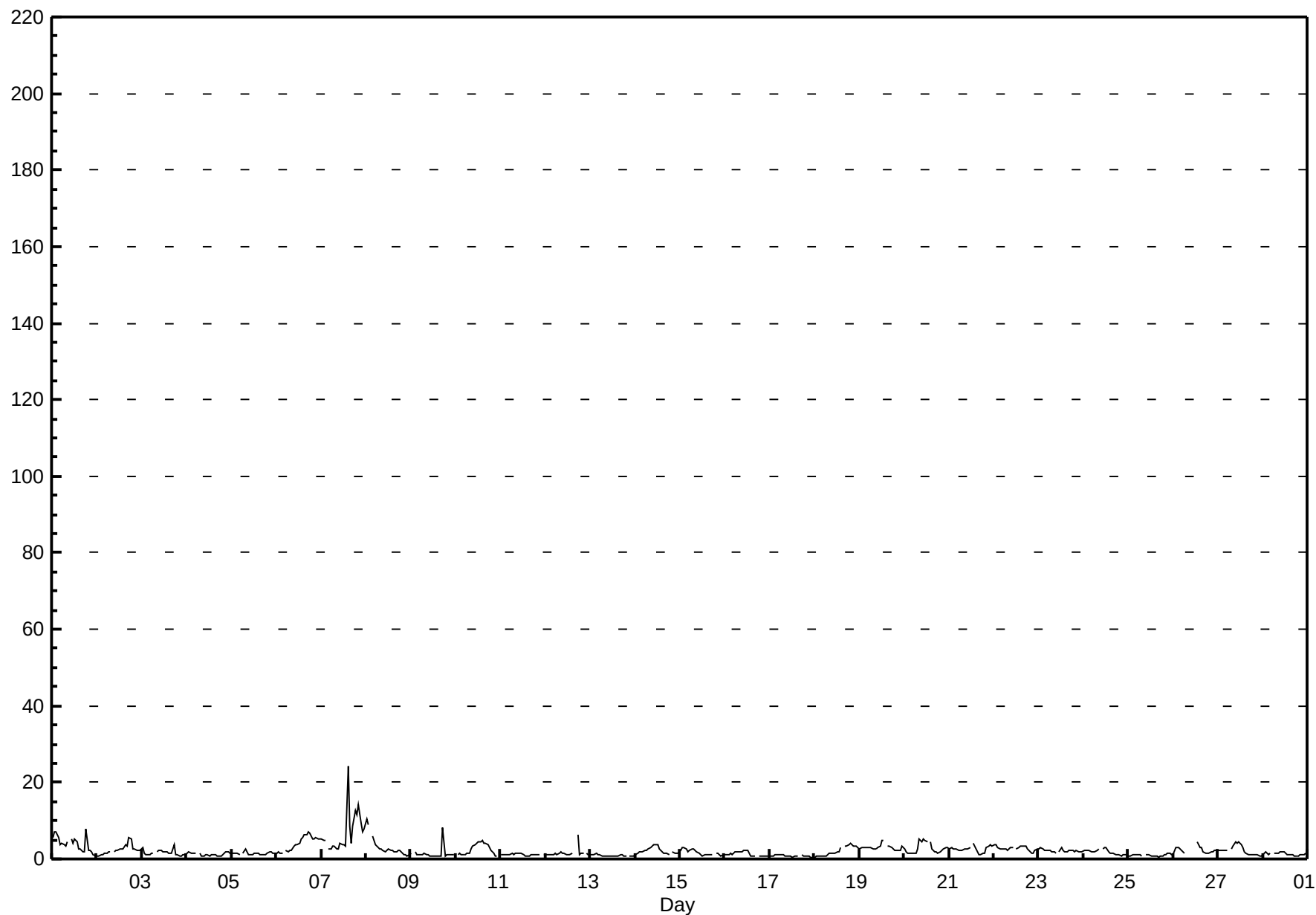
Oxides of Nitrogen (NO_x) - ppb

Sunset House - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 24.4 ppb on Feb 7 15:00 Maximum Daily Average: 6.8 ppb on Feb 7																								Hours in Service: 672 Hours of Data: 636 Hours of Missing Data: 36 Hours of Calibration: 34 Percent Operational Time: 99.7		
Minimum Value: 0 ppb on Feb 18 00:00 Minimum Daily Average: 0.7 ppb on Feb 17 Maximum Diurnal Average: 2.9 ppb at hour 15 Minimum Diurnal Average: 1.9 ppb at hour 7 Monthly Average: 2.20 ppb Percentiles: P ₁ = 0.6 P ₁₀ = 0.9 Q ₁ = 1.1 Median = 1.7 Q ₃ = 2.7 P ₉₀ = 4.0 P ₉₉ = 8.5																										
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-Feb	6	7	7	6	4	4	4	3	4	A	5	4	5	4	3	3	2	2	8	2	2	2	1	1	3.8	7.9
2-Feb	1	1	1	1	1	2	2	2	A	2	2	2	3	2	3	4	3	6	5	3	3	2	2	2	2.4	5.7
3-Feb	3	2	1	1	1	2	1	A	2	2	2	2	2	2	1	1	2	4	1	1	1	1	1	1	1.6	3.6
4-Feb	1	2	2	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1.3	1.9
5-Feb	2	1	1	2	1	A	1	3	2	1	1	1	2	2	1	1	1	1	1	1	2	2	2	1	1.5	2.6
6-Feb	2	2	2	1	A	2	2	2	2	3	4	4	4	5	6	6	6	7	7	5	5	5	5	5	4.1	7.2
7-Feb	5	5	5	A	3	3	3	3	3	3	4	4	4	3	24	9	4	9	13	12	14	9	7	8	6.8	24.4
8-Feb	10	9	A	6	5	4	3	3	3	2	2	2	3	2	2	2	2	2	2	1	1	1	1	1	3.0	10.4
9-Feb	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1.3	8.1
10-Feb	A	1	2	1	1	1	1	1	3	3	4	4	4	5	5	4	4	4	3	2	1	1	1	A	2.6	4.7
11-Feb	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1.2	1.6
12-Feb	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	D	D	7	1	2	1	A	1	1	1.5	6.5
13-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.3
14-Feb	1	2	2	2	2	2	2	3	3	3	4	4	4	3	2	1	2	1	1	A	2	2	1	2	2.2	3.8
15-Feb	2	3	3	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1.7	3.1
16-Feb	1	1	1	2	1	2	2	2	2	2	2	2	2	2	1	1	1	A	1	1	1	1	1	1	1.3	2.3
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	0.7	1.3
18-Feb	0	1	1	1	1	1	1	1	1	2	2	2	2	2	3	A	3	3	4	4	4	3	3	3	2.0	4.0
19-Feb	3	3	3	3	3	3	3	3	3	3	3	4	5	5	A	3	3	3	3	2	2	2	2	3	3.0	4.8
20-Feb	3	2	2	2	1	1	2	3	5	5	5	5	5	A	4	2	2	2	2	2	2	3	3	3	2.8	5.2
21-Feb	3	3	3	3	3	2	2	2	3	3	3	3	A	4	3	2	1	1	1	2	3	3	4	4	2.6	4.3
22-Feb	4	4	3	3	3	3	2	2	3	3	3	A	2	3	3	3	3	3	3	2	1	2	2	3	2.7	3.8
23-Feb	3	3	3	2	2	2	2	2	2	1	A	2	3	2	2	2	2	2	2	2	2	2	2	2	2.2	2.9
24-Feb	2	2	2	2	2	2	2	2	3	A	3	3	3	2	1	1	2	1	1	1	1	1	1	1	1.8	3.1
25-Feb	1	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	1.3
26-Feb	1	3	3	3	2	2	1	A	C	C	C	C	C	4	3	3	2	2	2	2	2	2	2	2	2.3	4.3
27-Feb	2	2	2	2	2	2	A	2	3	4	4	4	4	3	2	1	1	1	1	1	1	1	1	1	2.2	4.3
28-Feb	1	2	2	1	2	A	2	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1.3	1.9
2.3 2.4 2.1 2.0 1.9 1.9 1.9 2.0 2.3 2.2 2.4 2.4 2.4 2.3 2.9 2.2 2.0 2.8 2.5 2.1 2.2 2.0 1.9 2.0																								Diurnal Average		
10.4 8.8 7.1 5.8 4.9 4.1 3.6 3.3 5.1 4.7 5.4 5.0 5.1 5.2 24.4 8.7 6.4 8.7 12.7 11.7 14.0 9.4 7.2 7.8																								Diurnal Maximum		
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										

Hourly Averages

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



Hourly Maximums

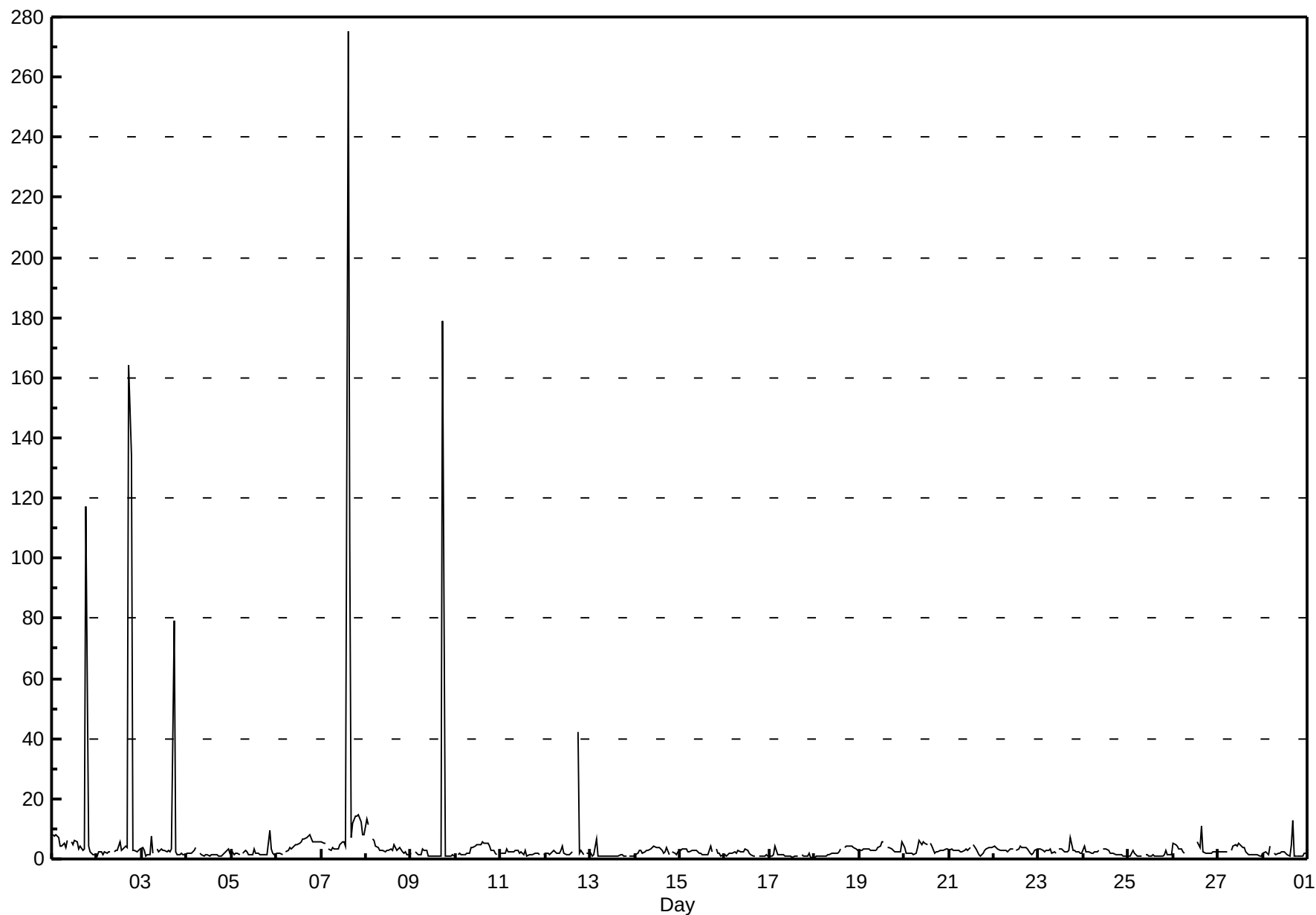
Oxides of Nitrogen (NO_x) - ppb

Sunset House - February 2013

Maximum Value: 275.4 ppb on Feb 7 15:00																				Maximum Daily Average: 22.9 ppb on Feb 7					Hours in Service: 672	
Minimum Value: 1 ppb on Feb 18 00:00																				Minimum Daily Average: 1.2 ppb on Feb 17					Hours of Data: 636	
Maximum Diurnal Average: 19.9 ppb at hour 18																				Minimum Diurnal Average: 2.3 ppb at hour 23					Hours of Missing Data: 36	
Monthly Average: 4.44 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.1 Q ₁ = 1.4 Median = 2.3 Q ₃ = 3.4 P ₉₀ = 5.1 P ₉₉ = 95.5					Hours of Calibration: 34	
																									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-Feb	8	8	8	7	4	4	5	4	6	A	6	5	6	6	3	4	3	3	117	4	2	2	2	2	9.5	117.2
2-Feb	1	3	3	1	3	2	2	2	A	2	3	3	6	3	3	4	4	164	134	3	3	2	3	3	15.6	164.4
3-Feb	4	3	1	1	1	8	2	A	3	2	3	3	3	2	3	2	3	79	2	1	1	2	1	1	5.8	79.1
4-Feb	2	2	2	3	3	4	A	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	2	1.7	3.6
5-Feb	3	2	2	2	1	A	2	3	3	2	1	1	3	2	2	1	1	1	1	2	9	3	2	2	2.2	9.5
6-Feb	2	2	2	2	A	3	3	4	3	4	5	5	5	6	6	7	7	8	8	6	6	6	6	6	4.7	8.0
7-Feb	6	5	5	A	3	3	4	4	3	3	5	6	6	4	275	106	7	12	14	14	15	12	8	8	22.9	275.4
8-Feb	13	11	A	7	6	4	4	3	3	3	2	3	3	3	3	5	3	3	4	2	2	2	1	2	4.0	13.3
9-Feb	2	A	3	2	1	1	3	3	3	1	1	1	1	1	1	1	1	179	1	1	1	1	1	1	9.2	179.0
10-Feb	A	2	2	2	1	1	2	2	4	4	4	5	5	5	6	5	5	5	4	3	3	2	1	A	3.2	5.7
11-Feb	2	2	2	3	2	2	2	2	3	3	2	2	1	3	1	2	1	2	2	2	2	1	A	1	2.0	3.4
12-Feb	2	2	1	2	3	2	2	2	3	4	2	1	1	2	3	D	D	42	2	3	2	A	2	2	3.9	42.2
13-Feb	2	1	1	7	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	1	1	1	1.3	6.8
14-Feb	1	2	3	3	2	2	3	3	3	4	4	4	4	4	3	2	2	4	1	A	2	2	2	2	2.7	4.1
15-Feb	3	3	4	3	2	2	3	3	3	3	2	2	1	1	1	1	4	3	A	3	2	2	1	1	2.3	4.2
16-Feb	1	1	2	2	2	2	2	3	2	2	2	3	3	2	1	1	1	A	1	1	1	1	1	1	1.7	3.3
17-Feb	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1.2	4.4
18-Feb	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	A	4	4	4	4	4	4	3	3	2.3	4.2
19-Feb	3	3	3	3	3	3	3	3	3	3	4	4	6	6	A	4	4	3	3	2	2	2	2	5	3.4	5.7
20-Feb	4	2	2	2	2	2	2	4	6	5	6	5	5	A	5	4	2	2	2	3	3	3	3	3	3.3	6.2
21-Feb	3	3	3	3	3	3	2	2	3	3	3	4	A	5	4	2	1	1	2	3	3	4	4	4	2.9	4.7
22-Feb	4	4	3	3	3	3	3	2	3	3	3	A	3	3	4	4	4	4	3	2	2	2	3	3	3.1	4.2
23-Feb	3	3	3	2	3	3	3	2	2	2	A	3	3	3	2	2	3	7	3	3	3	2	2	2	2.8	6.9
24-Feb	4	2	2	3	2	2	2	3	3	A	3	3	3	3	2	2	2	1	1	1	1	1	1	1	2.2	4.1
25-Feb	1	1	3	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	3	2	2	2	1.3	2.9
26-Feb	5	5	4	3	3	2	2	A	C	C	C	C	C	6	4	11	2	2	2	2	2	2	2	2	3.4	11.1
27-Feb	3	3	2	2	2	2	A	3	4	5	5	5	4	4	4	2	1	1	1	1	1	1	1	1	2.6	5.1
28-Feb	2	2	2	1	4	A	2	2	2	2	2	2	2	1	1	5	13	1	1	1	1	1	2	2	2.4	12.9
3.1 2.9 2.6 2.8 2.4 2.5 2.4 2.4 2.9 2.6 2.9 2.9 3.1 3.0 12.8 7.0 3.2 19.9 11.8 2.7 2.9 2.5 2.3 2.4																									Diurnal Average	
13.3 11.2 8.2 7.2 6.1 7.5 5.1 3.9 6.2 4.9 5.9 5.6 6.1 5.8 275.4 105.5 12.9 179.0 134.5 14.3 14.8 12.3 7.9 8.2																									Diurnal Maximum	
C - Calibration D - DAS Failure A - Automated Daily Zero Span																										

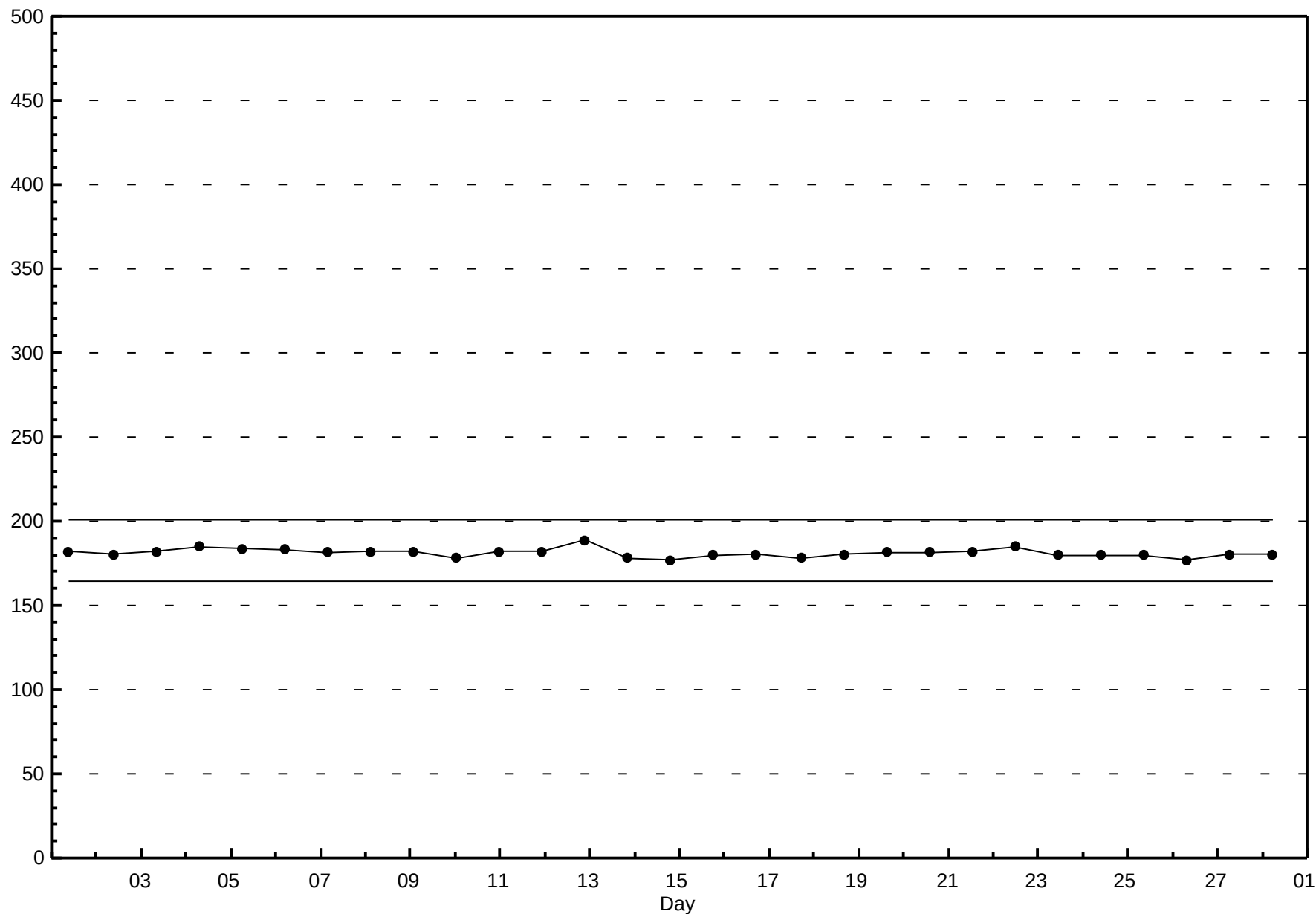
Hourly Maximums

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



Span Responses

Oxides of Nitrogen (NO_x)
Sunset House - February 2013

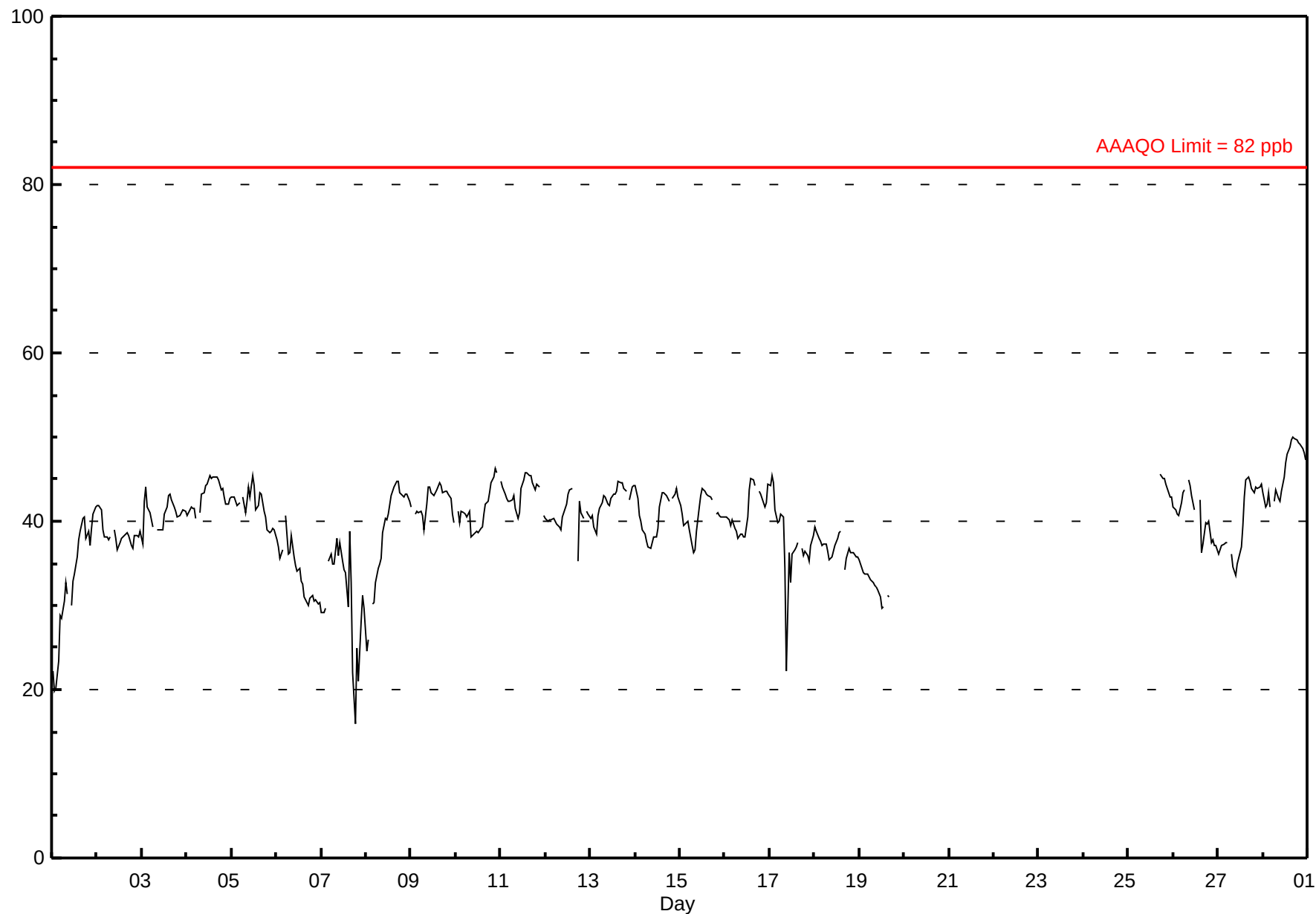


Sunset House - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 50.1 ppb on Feb 28 17:00 Maximum Daily Average: 46.0 ppb on Feb 28																								Hours in Service: 672 Hours of Data: 501 Hours of Missing Data: 171 Hours of Calibration: 25 Percent Operational Time: 78.3			
Minimum Value: 16 ppb on Feb 7 19:00 Maximum Diurnal Average: 41.5 ppb at hour 16 Monthly Average: 39.59 ppb																								Minimum Daily Average: 31.2 ppb on Feb 7 Minimum Diurnal Average: 38.3 ppb at hour 8 Percentiles: P ₁ = 22.2 P ₁₀ = 32.9 Q ₁ = 37.2 Median = 40.6 Q ₃ = 43.1 P ₉₀ = 44.4 P ₉₉ = 49.2			
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-Feb	22	20	20	23	29	29	31	33	31	A	30	33	34	36	38	39	40	40	38	39	37	39	41	42	33.2	41.7	
2-Feb	42	42	41	39	38	38	38	38	A	39	38	37	37	38	38	38	39	38	37	37	38	38	38	39	38.5	41.9	
3-Feb	37	42	44	42	41	40	39	A	39	39	39	39	41	42	43	43	42	42	41	41	41	41	41	41	40.9	44.1	
4-Feb	41	41	42	41	42	40	A	41	43	43	44	44	45	45	45	45	45	45	44	44	43	42	42	43	43.1	45.4	
5-Feb	43	43	42	42	42	A	43	41	42	44	43	45	44	41	42	43	43	41	40	39	39	39	39	39	41.8	45.4	
6-Feb	38	37	36	37	A	41	36	36	38	36	35	34	34	33	33	31	30	30	31	31	31	31	30	30	33.8	40.7	
7-Feb	29	29	30	A	35	36	35	35	38	36	37	35	34	34	30	39	33	22	16	25	21	28	31	30	31.2	38.9	
8-Feb	25	26	A	30	30	33	34	35	36	39	40	40	41	43	44	44	45	45	43	43	43	43	43	42	38.6	44.8	
9-Feb	42	A	41	41	41	41	41	39	42	44	44	43	43	43	44	45	44	43	44	43	43	43	41	40	42.4	44.5	
10-Feb	A	41	40	41	41	41	41	41	38	38	39	39	39	39	39	41	42	42	43	45	45	46	46	A	41.2	46.2	
11-Feb	45	44	43	43	42	42	43	43	41	40	41	44	45	46	46	45	45	45	44	44	44	44	A	41	43.5	45.7	
12-Feb	40	40	40	40	40	40	40	39	39	41	41	42	43	44	44	D	D	35	42	41	40	A	41	41	40.7	43.8	
13-Feb	40	41	39	38	41	42	42	43	43	42	42	43	43	43	44	45	45	45	44	44	A	43	44	44	42.5	44.8	
14-Feb	44	43	41	40	39	38	38	37	37	38	38	38	39	42	43	43	43	43	42	A	43	43	44	43	40.8	44.2	
15-Feb	42	41	39	40	40	39	37	36	37	39	42	43	44	43	43	43	43	42	A	41	41	41	40	40	40.8	43.9	
16-Feb	41	40	40	39	40	39	39	38	38	38	38	38	41	44	45	45	44	A	44	43	43	42	42	44	41.1	45.0	
17-Feb	44	45	45	41	40	40	41	41	34	22	36	33	36	37	37	37	A	37	36	36	36	35	37	38	37.6	45.4	
18-Feb	39	39	38	38	37	37	37	36	35	36	36	37	38	39	39	A	34	36	37	36	36	36	36	36	36.9	39.3	
19-Feb	35	34	34	34	34	33	33	33	32	32	32	31	30	30	A	31	31	N	N	N	N	N	N	N	--	35.5	
20-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
21-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
22-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
23-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
24-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
25-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	M	M	M	46	45	45	44	44	43	43	--	45.6
26-Feb	42	41	41	41	42	43	44	A	45	44	43	41	C	C	42	36	37	40	40	40	37	38	37	37	40.6	44.9	
27-Feb	36	37	37	37	37	37	A	36	35	34	35	36	37	40	43	45	45	45	44	43	44	44	44	44	39.8	45.2	
28-Feb	43	42	42	43	42	A	42	44	43	42	44	45	47	48	49	50	50	50	50	49	49	49	48	47	46.0	50.1	
38.6 38.5 38.8 38.6 38.8 38.5 38.6 38.3 38.4 38.4 39.0 39.1 39.8 40.4 41.4 41.5 41.1 40.5 40.2 40.5 39.9 40.4 40.5 40.2																								Diurnal Average			
44.8 45.4 44.6 43.4 42.3 43.4 43.7 43.7 44.9 44.2 44.3 45.4 47.0 48.0 48.9 49.6 50.1 49.7 49.6 49.4 49.2 48.7 48.2 47.3																								Diurnal Maximum			
C - Calibration				D - DAS Failure				M - Maintenance				N - Not Valid				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 - February 2013



Hourly Maximums

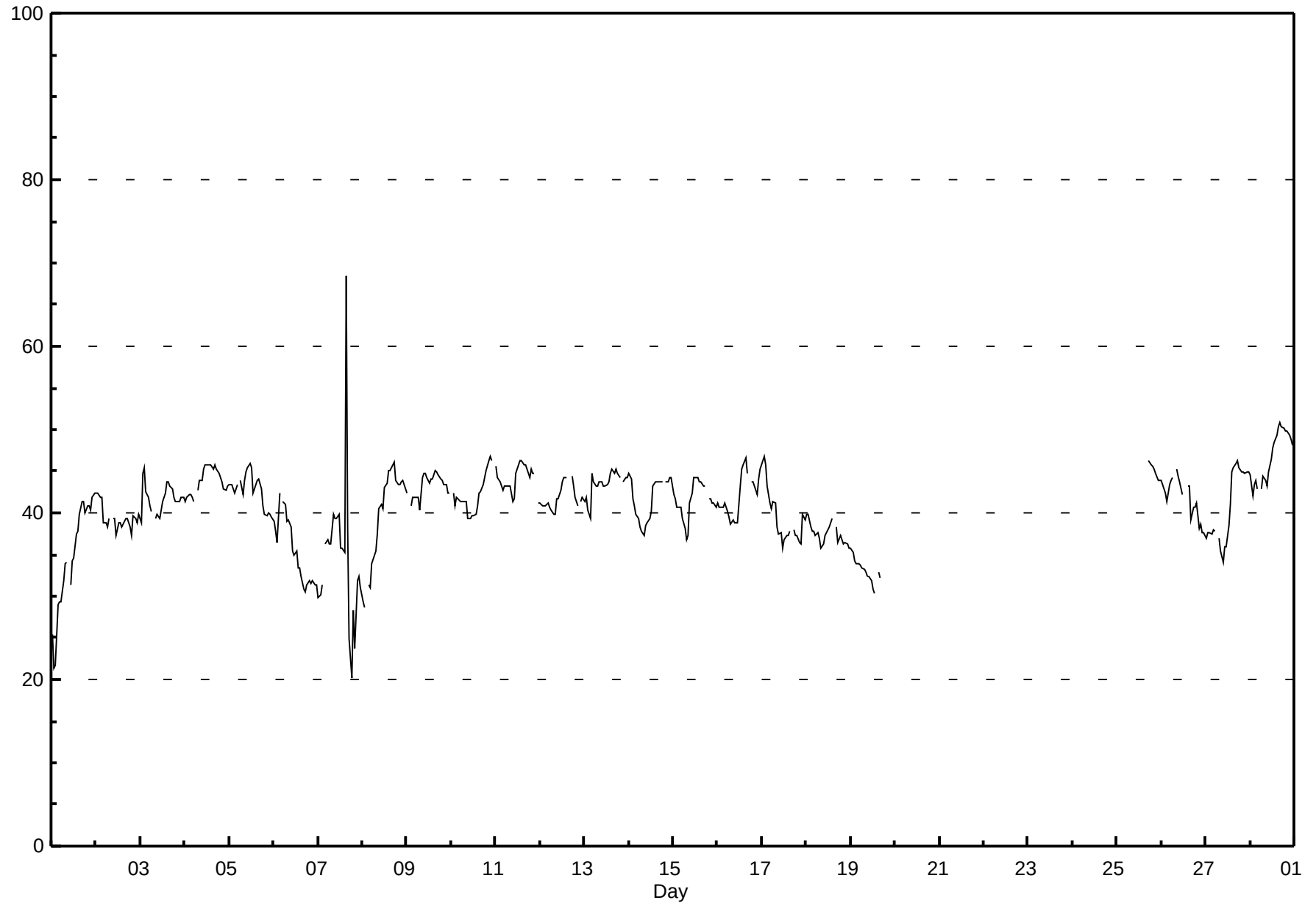
Ozone (O₃) - ppb

Sunset House - February 2013

Maximum Value: 68.5 ppb on Feb 7 16:00																								Maximum Daily Average: 46.8 ppb on Feb 28								Hours in Service: 672	
Minimum Value: 20 ppb on Feb 7 19:00																								Minimum Daily Average: 34.8 ppb on Feb 1								Hours of Data: 501	
Maximum Diurnal Average: 44.0 ppb at hour 16																								Minimum Diurnal Average: 39.1 ppb at hour 8								Hours of Missing Data: 171	
Monthly Average: 40.68 ppb																								Percentiles: P ₁ = 24.0 P ₁₀ = 34.3 Q ₁ = 38.3 Median = 41.3 Q ₃ = 43.8 P ₉₀ = 45.3 P ₉₉ = 50.1								Hours of Calibration: 25	
																								Percent Operational Time: 78.3									
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-Feb	25	21	22	29	29	29	32	34	34	A	31	34	35	38	38	40	41	41	40	41	41	40	42	42	34.8	42.3							
2-Feb	42	42	42	42	39	39	38	39	A	39	39	37	39	39	38	39	39	39	38	37	40	39	39	40	39.4	42.3							
3-Feb	39	45	45	43	42	41	40	A	39	40	39	40	41	42	44	44	43	43	42	41	41	41	42	42	41.7	45.4							
4-Feb	41	42	42	42	42	41	A	43	44	44	45	46	46	46	46	45	46	45	45	44	44	43	43	43	43.8	45.8							
5-Feb	43	43	43	42	43	A	44	42	44	45	45	46	45	42	43	44	44	43	41	40	40	40	40	39	42.7	45.9							
6-Feb	39	38	36	42	A	41	41	39	39	38	35	35	35	33	33	32	31	30	31	32	31	32	31	31	35.2	42.4							
7-Feb	30	30	31	A	36	37	36	36	40	39	39	40	36	36	35	69	38	25	20	28	24	32	32	31	34.8	68.5							
8-Feb	29	29	A	31	31	34	35	35	38	40	41	41	43	44	45	45	46	46	44	43	43	44	44	43	39.8	46.1							
9-Feb	42	A	41	42	42	42	42	40	44	45	45	44	44	44	44	45	45	45	44	44	43	43	42	42	43.2	45.0							
10-Feb	A	42	41	42	42	41	41	41	41	39	39	40	40	40	41	42	42	43	44	45	46	47	46	A	42.2	46.8							
11-Feb	46	44	44	43	43	43	43	43	43	41	42	45	46	46	46	46	46	45	44	45	45	45	A	41	44.2	46.2							
12-Feb	41	41	41	41	41	41	40	40	40	42	42	43	44	44	44	D	D	44	43	42	41	A	41	42	41.8	44.4							
13-Feb	41	42	40	39	45	44	43	43	44	44	43	43	43	44	45	45	45	45	44	A	44	44	44	44	43.5	45.3							
14-Feb	45	44	42	41	40	39	38	38	37	38	39	39	40	43	44	44	44	44	44	A	44	44	44	44	41.7	44.7							
15-Feb	42	42	41	41	41	39	38	37	37	41	42	44	44	44	44	44	43	43	A	42	42	41	41	41	41.5	44.2							
16-Feb	41	41	41	41	41	40	40	39	39	39	39	39	43	45	46	47	45	A	44	44	43	42	44	45	42.0	46.5							
17-Feb	46	47	46	43	41	41	41	41	38	38	38	36	37	37	37	38	A	38	37	37	36	36	40	39	39.5	46.7							
18-Feb	40	40	38	38	38	37	38	37	36	36	37	38	38	39	39	A	38	36	37	37	36	36	36	36	37.5	39.8							
19-Feb	36	35	34	34	34	34	33	33	33	32	32	32	31	30	A	33	32	N	N	N	N	N	N	N	--	35.8							
20-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--							
21-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--							
22-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--							
23-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--							
24-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--							
25-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	M	M	M	46	46	46	45	45	44	44	--	46.3						
26-Feb	44	43	42	41	43	44	44	A	45	44	44	42	C	C	43	43	39	41	41	41	38	39	38	38	41.8	45.3							
27-Feb	37	38	38	38	38	38	A	37	36	34	36	36	38	41	45	45	46	46	45	45	45	45	45	45	40.7	46.2							
28-Feb	45	42	43	44	43	A	43	44	44	43	45	46	48	49	49	50	51	50	50	50	50	49	49	48	46.8	50.8							
39.8 39.5 39.7 40.0 39.7 39.3 39.6 39.1 39.8 40.2 39.9 40.2 40.8 41.2 42.4 44.0 42.2 41.9 41.2 41.4 40.9 41.3 41.3 41.0																								Diurnal Average									
46.2 46.7 45.7 43.9 44.8 43.8 44.3 44.4 45.3 44.8 45.3 46.4 47.9 48.5 49.3 68.5 50.8 50.3 50.2 49.8 49.8 49.3 48.8 48.2																								Diurnal Maximum									
C - Calibration				D - DAS Failure				M - Maintenance				N - Not Valid				A - Automated Daily Zero Span																	

Hourly Maximums

Ozone (O₃) - ppb
Sunset House - February 2013



Eight Hour Running Averages

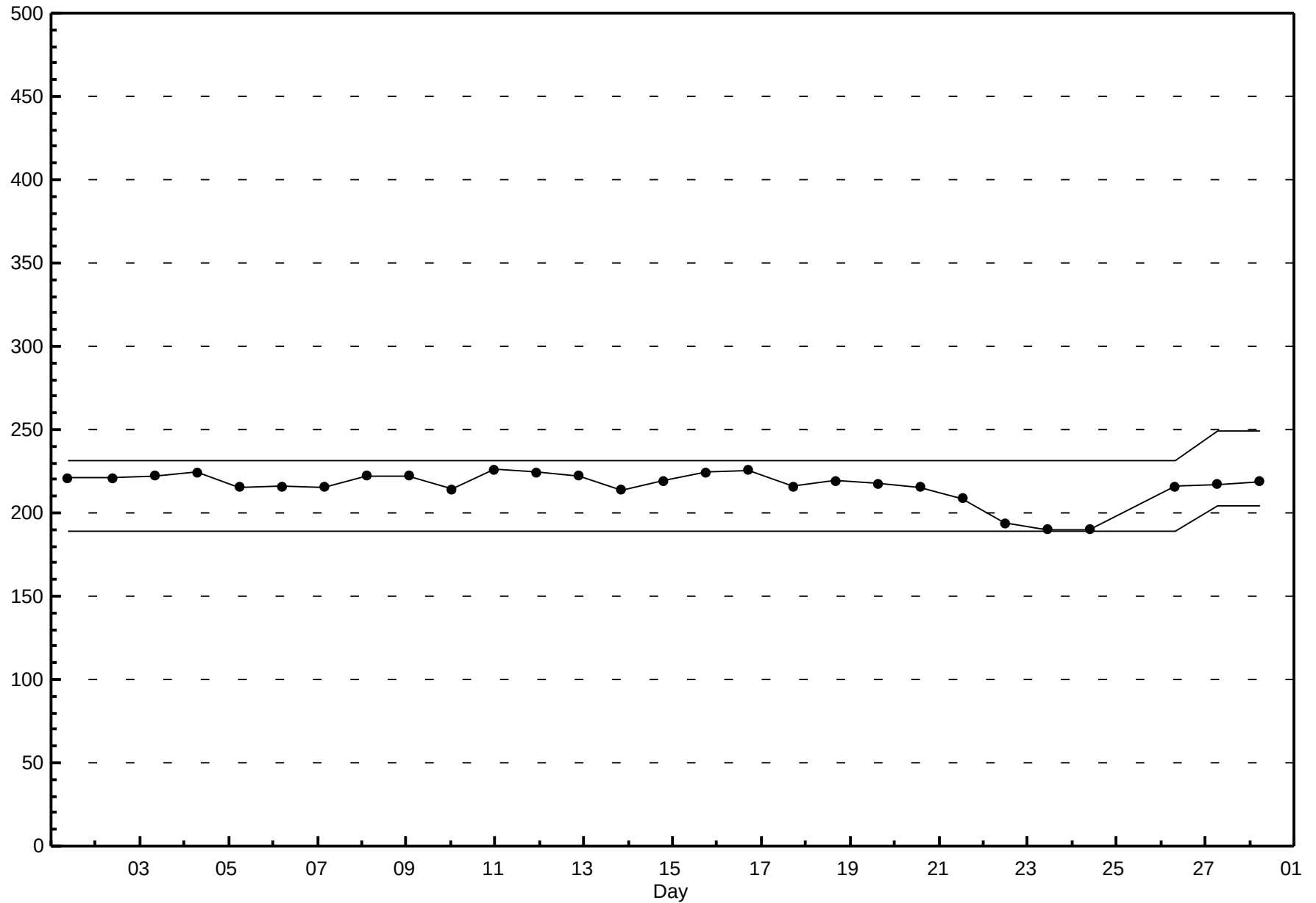
Ozone (O₃) - ppb

Sunset House - February 2013

Maximum Value: 49.4 ppb on Feb 28 22:00																								Hours in Service: 672	
Minimum Value: 20.6 ppb on Feb 1 04:00																								Hours of Data: 520	
Percentiles: P ₁ = 22.8 P ₁₀ = 33.0 Q ₁ = 37.2 Median = 40.6 Q ₃ = 42.7 P ₉₀ = 43.8 P ₉₉ = 49.0																								Hours of Missing Data: 152	
																								Hours of Calibration: 6	
																								Percent Operational Time: 78.3	
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-Feb	23	22	21	21	22	23	25	26	27	28	29	31	31	32	33	34	36	36	37	38	38	39	39	40	39.6
2-Feb	40	40	40	40	40	40	40	40	39	39	38	38	38	38	38	38	38	38	38	38	38	38	38	38	40.5
3-Feb	38	38	39	40	40	40	41	41	41	41	40	39	39	40	40	41	41	41	42	42	42	42	42	41	41.8
4-Feb	41	41	41	41	41	41	41	41	41	42	42	43	43	44	44	45	45	45	45	45	45	44	44	43	45.0
5-Feb	43	43	43	42	42	42	43	42	42	42	42	43	43	43	43	43	43	43	43	42	41	41	41	40	43.3
6-Feb	39	39	38	38	38	38	38	37	37	37	37	37	36	35	35	34	33	33	32	32	31	31	31	31	39.3
7-Feb	30	30	30	30	31	31	32	33	34	35	36	36	36	36	35	35	35	33	30	29	27	27	27	26	36.1
8-Feb	25	25	26	27	29	29	30	30	32	34	35	36	37	38	40	41	42	43	43	43	44	44	44	43	43.7
9-Feb	43	43	42	42	42	42	41	41	41	41	42	42	42	42	43	44	44	44	44	44	44	44	43	43	43.8
10-Feb	42	42	42	41	41	41	41	41	40	40	40	40	39	39	39	39	39	40	41	41	42	43	44	44	44.2
11-Feb	45	45	45	45	44	44	43	43	43	42	42	42	42	43	43	44	44	45	45	45	45	45	45	44	45.0
12-Feb	43	42	42	41	41	40	40	40	40	40	40	40	41	41	42	42	42	42	42	42	41	N	N	40	43.2
13-Feb	40	41	41	40	40	40	41	41	41	41	42	42	42	43	43	43	43	44	44	44	44	44	44	44	44.1
14-Feb	44	44	43	43	42	42	41	40	39	38	38	38	38	38	39	40	41	41	42	42	43	43	43	43	43.9
15-Feb	43	43	42	42	42	41	40	39	39	38	39	39	40	40	41	42	43	43	43	43	42	42	42	41	43.2
16-Feb	41	41	41	40	40	40	40	40	39	39	39	39	39	39	40	41	42	42	43	44	44	44	43	43	43.9
17-Feb	43	43	44	43	43	43	43	42	41	38	37	36	35	35	34	34	34	36	36	37	37	36	36	37	43.5
18-Feb	37	37	37	38	38	38	38	38	37	37	37	37	37	37	37	37	37	37	37	37	37	36	36	36	38.0
19-Feb	36	36	36	35	35	35	34	34	33	33	33	33	32	32	31	31	31	31	N	N	N	N	N	N	36.0
20-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
21-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
22-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
23-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
24-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
25-Feb	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	44	44	44.5
26-Feb	44	43	43	42	42	42	42	42	42	43	43	43	43	N	N	42	41	40	39	39	39	39	38	38	43.9
27-Feb	38	38	37	37	37	37	37	37	37	36	36	36	36	36	37	38	39	41	42	43	44	44	44	44	44.3
28-Feb	44	44	43	43	43	43	43	43	43	43	43	44	44	44	45	46	47	48	49	49	49	49	49	49	49.4
Diurnal Maximums																									
44.6 44.9 44.8 44.6 44.1 43.6 43.1 43.1 42.7 42.8 43.2 43.2 43.9 44.4 45.2 45.9 46.8 47.8 48.5 49.0 49.3 49.4 49.3 49.0																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Sunset House - February 2013



Hourly Averages

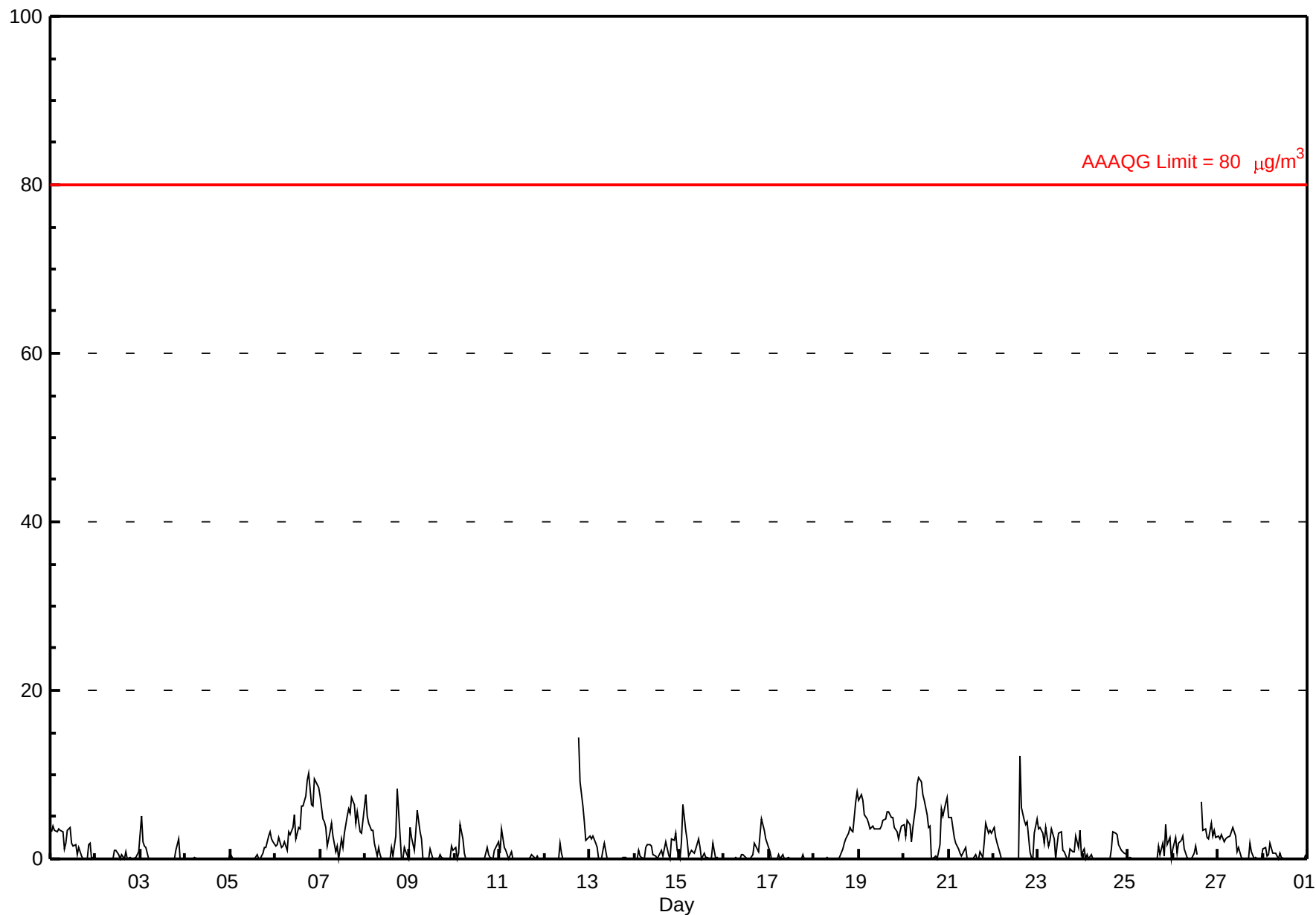
PM2.5 (PM_{2.5}) - µg/m³

Sunset House - February 2013

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 14.4 µg/m³ on Feb 12 19:00 Minimum Value: 0 µg/m³ on Feb 1 18:00 Maximum Diurnal Average: 2.3 µg/m³ at hour 19 Monthly Average: 1.52 µg/m³																							Maximum Daily Average: 4.8 µg/m³ on Feb 6 Minimum Daily Average: 0.0 µg/m³ on Feb 4 Minimum Diurnal Average: 0.7 µg/m³ at hour 14 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.5 Q ₃ = 2.5 P ₉₀ = 4.3 P ₉₉ = 9.1																							Hours in Service: 672 Hours of Data: 668 Hours of Missing Data: 4 Hours of Calibration: 0 Percent Operational Time: 99.4	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																							
1-Feb	3	4	3	3	4	3	3	1	2	3	4	2	2	2	1	1	0	0	0	0	2	2	0	0	1.9	3.9																					
2-Feb	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	1	1	0.2	1.0																					
3-Feb	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0.5	5.0																					
4-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3																					
5-Feb	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	3	3	2	2	0.6	3.1																					
6-Feb	2	2	2	1	2	2	1	3	3	4	5	2	4	4	6	6	8	9	10	6	6	9	9	8	4.8	10.2																					
7-Feb	7	5	4	4	2	3	4	3	1	2	0	2	1	3	5	6	5	7	6	4	6	3	3	5	3.9	7.5																					
8-Feb	8	5	4	3	3	2	0	1	1	0	0	0	0	0	1	0	3	8	6	0	0	1	1	0	2.0	8.4																					
9-Feb	4	3	1	3	6	3	2	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	1	1.1	5.8																					
10-Feb	1	0	1	4	2	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2	0.7	4.1																					
11-Feb	1	3	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.4	3.5																					
12-Feb	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	D	D	D	14	9	6	4	2	2	2.0	14.4																					
13-Feb	3	2	3	2	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.7																					
14-Feb	0	0	1	0	0	0	1	2	2	2	0	0	0	0	1	0	1	2	0	0	2	2	3	1	0.9	3.0																					
15-Feb	0	2	6	3	2	0	1	1	1	1	2	1	0	1	0	0	0	0	2	0	0	0	0	0	1.0	6.5																					
16-Feb	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	2	1	3	5	3	2	2	0.9	4.8																					
17-Feb	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8																					
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	3	4	3	3	7	8	1.4	7.9																					
19-Feb	7	8	7	5	5	4	3	4	4	3	4	4	4	5	5	6	6	5	5	4	3	2	3	4	4.5	7.7																					
20-Feb	4	3	5	4	2	4	6	9	10	9	8	7	5	4	4	0	0	0	0	2	6	5	7	7	4.6	9.6																					
21-Feb	5	5	4	3	2	1	1	0	1	1	0	0	0	0	1	0	0	1	0	2	4	3	3	3	1.7	4.9																					
22-Feb	4	2	2	1	0	0	0	0	0	0	0	0	0	0	12	6	5	4	4	1	0	0	3	5	2.0	12.3																					
23-Feb	3	4	3	2	4	2	2	4	2	0	2	3	3	1	1	0	0	1	1	1	3	1	3	0	1.9	3.7																					
24-Feb	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	1	1	1	0	0.7	3.3																					
25-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	4	2	3	0	0.5	4.0																					
26-Feb	1	3	1	2	2	3	1	0	0	0	0	1	1	1	M	7	3	4	3	2	4	3	3	2	2.0	6.8																					
27-Feb	3	2	3	2	2	3	3	3	4	3	1	1	0	0	0	0	0	2	1	0	0	0	0	0	1.4	3.7																					
28-Feb	1	1	0	0	2	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8																					
2.3 2.0 1.9 1.6 1.5 1.1 1.1 1.2 1.2 1.1 1.0 1.0 0.8 0.7 1.4 1.3 1.5 2.0 2.3 1.5 2.2 1.8 2.1 2.0																									Diurnal Average																						
7.7 7.7 6.9 5.3 5.8 4.2 6.2 8.8 9.6 9.1 7.7 7.0 5.2 4.6 12.3 6.8 7.5 9.3 14.4 9.2 6.3 9.4 8.8 8.4																									Diurnal Maximum																						
D - DAS Failure M - Maintenance																																															
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																																															

Hourly Averages

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



Hourly Maximums

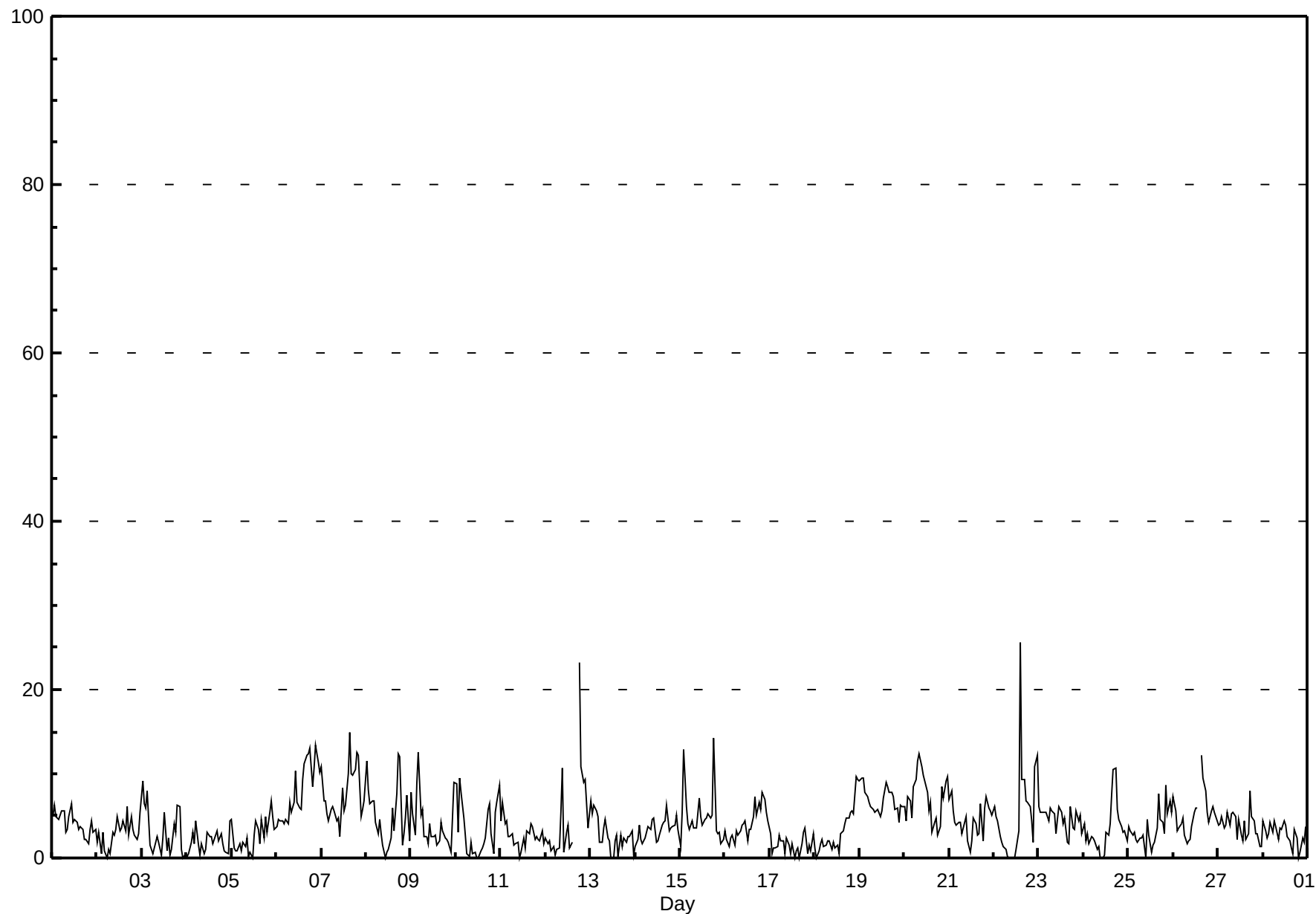
PM2.5 (PM_{2.5}) - µg/m³

Sunset House - February 2013

Maximum Value: 25.7 μg/m ³ on Feb 22 15:00																								Maximum Daily Average: 7.9 μg/m ³ on Feb 6										Hours in Service: 672	
Minimum Value: 0 μg/m ³ on Feb 2 06:00																								Minimum Daily Average: 1.5 μg/m ³ on Feb 17										Hours of Data: 668	
Maximum Diurnal Average: 6.0 μg/m ³ at hour 19																								Minimum Diurnal Average: 3.1 μg/m ³ at hour 8										Hours of Missing Data: 4	
Monthly Average: 4.16 μg/m ³																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.9 Q ₁ = 2.0 Median = 3.6 Q ₃ = 5.6 P ₉₀ = 8.0 P ₉₉ = 12.8										Hours of Calibration: 0	
																								Percent Operational Time: 99.4											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Feb	5	6	5	5	5	6	6	3	3	5	6	4	5	4	3	4	3	2	2	2	3	4	3	3	4.1	6.4									
2-Feb	2	3	1	3	1	0	1	0	3	3	3	5	3	4	4	3	6	3	5	3	3	2	3	5	2.9	6.2									
3-Feb	9	6	6	8	2	1	1	2	3	2	0	2	6	1	2	0	1	4	3	6	6	1	0	1	3.0	9.1									
4-Feb	0	1	2	3	2	4	2	0	2	0	1	3	3	2	2	3	3	2	3	2	1	1	1	4	1.9	4.5									
5-Feb	5	1	1	1	2	1	2	1	2	0	1	0	3	4	3	2	5	2	5	3	5	7	5	3	2.7	6.8									
6-Feb	4	5	4	4	4	5	4	7	5	7	10	7	6	6	9	11	12	12	13	8	11	13	11	10	7.9	13.4									
7-Feb	11	7	7	5	4	6	6	6	4	5	2	8	6	6	10	15	10	10	11	13	12	5	6	7	7.5	15.0									
8-Feb	12	8	6	7	7	4	3	5	3	2	0	1	1	2	6	3	8	12	12	2	3	5	7	2	5.0	12.4									
9-Feb	8	5	3	9	13	5	6	3	3	2	4	3	2	3	1	2	4	3	2	2	2	1	5	9	4.1	12.6									
10-Feb	9	3	10	8	5	3	0	0	2	1	1	0	0	1	1	2	2	6	6	3	0	5	7	9	3.4	9.5									
11-Feb	4	7	4	4	3	3	3	2	2	2	0	1	2	1	3	3	4	4	2	2	2	2	3	2	2.7	6.7									
12-Feb	2	2	2	1	1	0	1	1	5	11	1	3	4	1	2	D	D	D	23	11	9	9	6	4	4.8	23.1									
13-Feb	7	5	6	6	5	2	2	4	5	2	2	0	0	2	3	0	3	1	2	2	3	3	3	0	2.8	6.8									
14-Feb	1	2	4	2	2	2	3	4	3	5	5	2	2	3	4	4	4	6	3	4	4	4	5	3	3.4	6.3									
15-Feb	1	5	13	6	4	3	4	4	4	4	7	5	4	5	5	5	5	5	14	3	3	3	2	2	4.8	14.2									
16-Feb	3	2	1	2	3	2	3	3	3	4	4	4	2	3	3	5	7	5	7	6	8	7	5	4	4.1	7.8									
17-Feb	3	1	1	1	1	3	2	2	0	2	2	0	2	0	1	1	0	2	3	4	0	2	1	3	1.5	3.6									
18-Feb	1	0	1	2	2	1	2	2	2	1	2	1	2	1	3	3	4	5	5	5	6	5	10	9	3.1	9.6									
19-Feb	9	10	10	8	7	7	6	6	5	6	6	5	6	7	9	9	8	8	7	6	6	4	6	6	6.9	9.5									
20-Feb	6	4	7	7	5	9	9	11	12	11	10	9	8	6	7	3	4	5	3	4	8	7	9	10	7.2	12.4									
21-Feb	7	8	6	4	4	4	4	3	4	5	2	1	2	5	4	3	3	6	2	6	7	6	6	5	4.4	7.9									
22-Feb	6	5	4	3	2	1	1	0	0	0	0	0	1	3	26	9	9	7	7	6	4	2	11	12	5.0	25.7									
23-Feb	6	5	5	5	5	4	6	6	5	3	5	6	5	4	5	2	2	6	4	3	6	4	5	3	4.6	6.1									
24-Feb	4	2	3	2	2	2	2	1	1	0	0	0	3	3	4	8	10	11	6	5	4	3	3	2	3.4	10.7									
25-Feb	4	3	3	3	2	2	2	2	3	0	5	3	1	2	2	4	8	5	4	3	9	5	7	5	3.5	8.7									
26-Feb	7	6	3	4	4	5	3	2	2	2	4	5	6	6	M	12	9	8	5	4	6	6	5	5	5.2	12.2									
27-Feb	4	4	5	4	4	5	4	5	5	5	2	5	3	2	4	2	3	8	5	4	3	3	1	1	3.8	8.0									
28-Feb	4	3	2	3	4	3	4	4	2	4	3	4	4	3	2	1	1	3	2	0	1	2	2	4	2.8	4.5									
5.2 4.3 4.5 4.2 3.7 3.3 3.3 3.1 3.4 3.2 3.1 3.1 3.2 3.2 4.8 4.4 5.1 5.6 6.0 4.3 4.8 4.4 4.9 4.8																								Diurnal Average											
11.6 9.5 12.9 8.9 12.6 8.5 9.3 11.5 12.4 10.9 10.4 9.1 7.8 7.1 25.7 15.0 12.1 12.4 23.1 12.5 12.3 13.4 11.4 12.3																								Diurnal Maximum											
D - DAS Failure M - Maintenance																																			

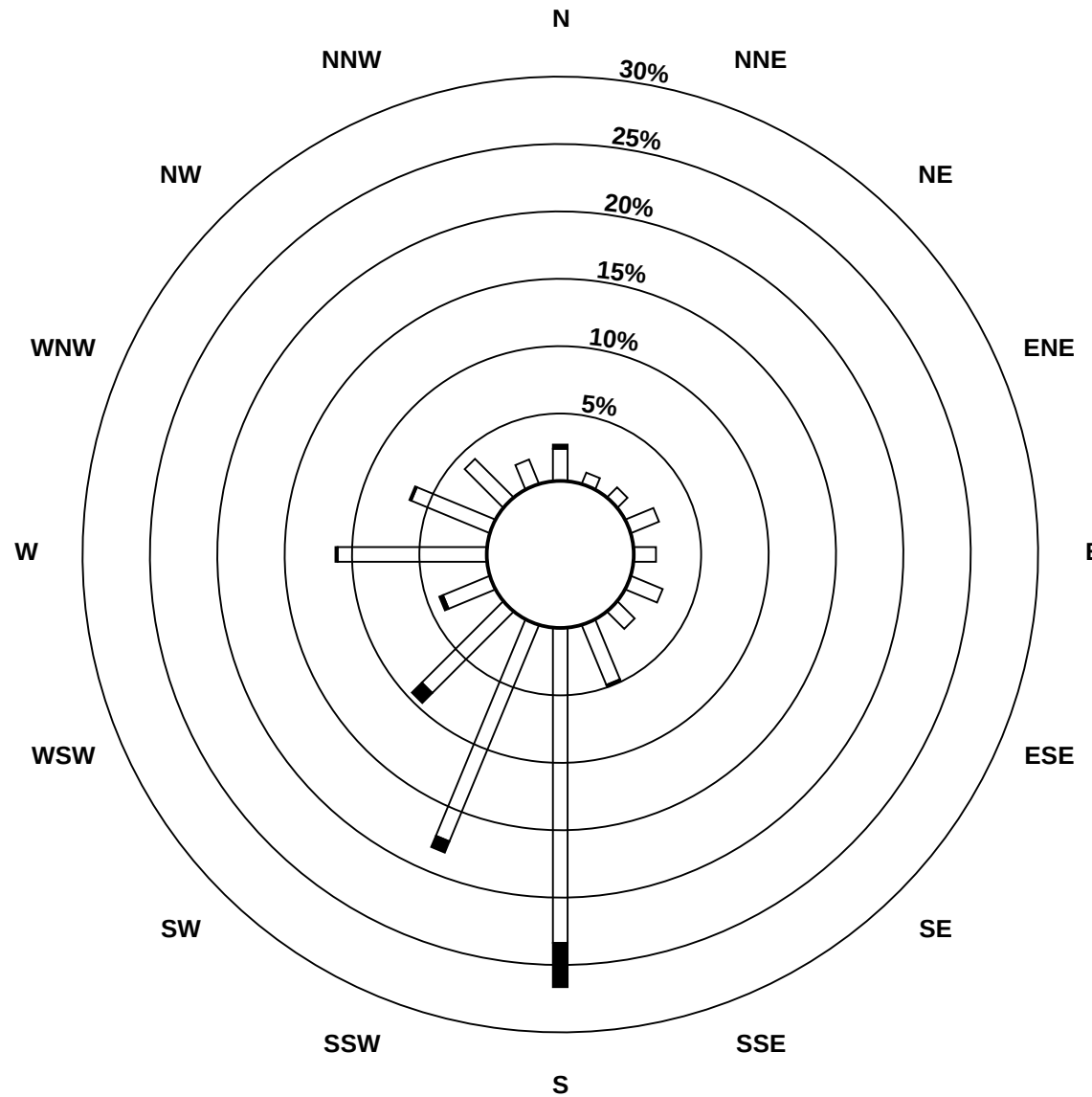
Hourly Maximums

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

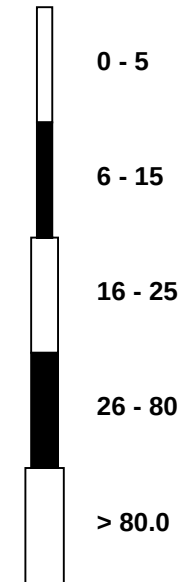


Pollutant Rose

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



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



Hourly Averages

External Temperature (ET) - °C

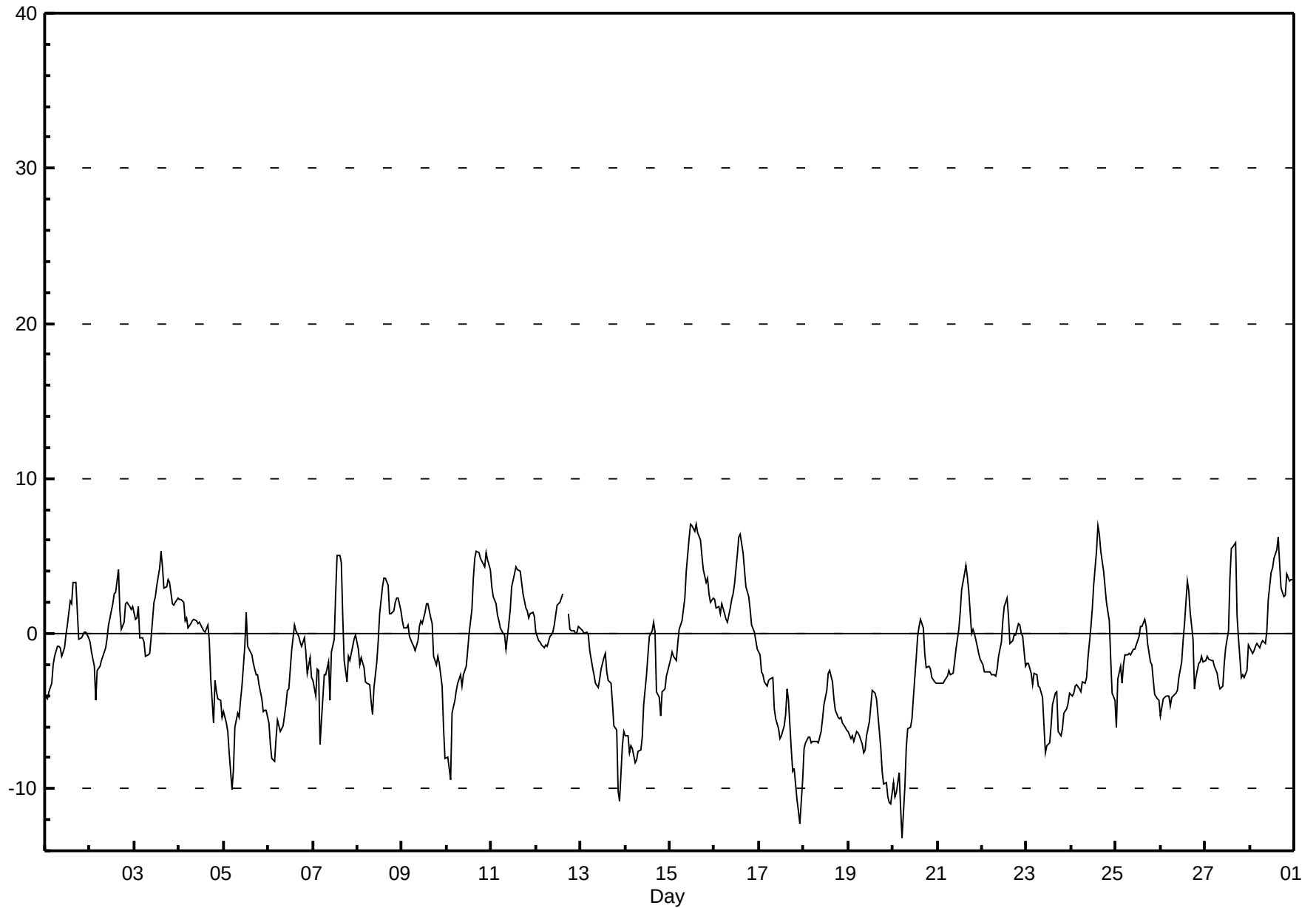
Sunset House - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7.1 °C on Feb 15 12:00 Maximum Daily Average: 3.0 °C on Feb 15																								Hours in Service: 672 Hours of Data: 670 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7			
Minimum Value: -13 °C on Feb 20 06:00 Maximum Diurnal Average: 1.9 °C at hour 15 Monthly Average: -1.49 °C												Minimum Daily Average: -7.1 °C on Feb 19 Minimum Diurnal Average: -3.2 °C at hour 5 Percentiles: P ₁ = -10.8 P ₁₀ = -6.6 Q ₁ = -3.8 Median = -1.4 Q ₃ = 1.0 P ₉₀ = 3.3 P ₉₉ = 6.4															
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-Feb	-4	-4	-4	-3	-2	-1	-1	-1	-1	-1	-1	0	1	2	2	3	3	1	0	0	0	0	0	0	-0.5	3.3	
2-Feb	-1	-1	-2	-4	-2	-2	-2	-1	-1	0	1	1	2	3	3	4	1	0	1	2	2	2	2	2	0.3	4.1	
3-Feb	1	1	2	0	0	-1	-1	-1	-1	0	2	2	3	4	5	4	3	3	3	3	2	2	2	2	1.7	5.3	
4-Feb	2	2	2	1	1	0	1	1	1	1	1	1	0	0	0	1	0	-3	-6	-3	-4	-4	-4	-5	-0.6	2.2	
5-Feb	-5	-6	-6	-8	-10	-9	-6	-5	-5	-4	-3	-1	1	-1	-1	-1	-2	-3	-3	-3	-4	-5	-5	-5	-4.2	1.3	
6-Feb	-6	-7	-8	-8	-7	-6	-6	-6	-6	-5	-4	-4	-1	0	1	0	0	-1	-1	0	-1	-3	-2	-3	-3.4	0.6	
7-Feb	-3	-4	-2	-2	-7	-4	-3	-3	-2	-4	-1	0	3	5	5	5	1	-2	-3	-2	-2	-1	0	0	-1.1	5.1	
8-Feb	-1	-2	-2	-2	-3	-3	-3	-4	-5	-3	-2	0	1	3	4	4	3	1	1	2	2	2	2	1	-0.2	3.6	
9-Feb	1	0	0	1	0	-1	-1	-1	0	0	1	1	1	2	2	1	1	-1	-2	-1	-2	-3	-6	-8	-0.7	2.0	
10-Feb	-8	-9	-9	-5	-4	-4	-3	-3	-3	-3	-2	-1	0	2	4	5	5	5	5	5	4	5	5	4	-0.2	5.3	
11-Feb	3	2	2	1	1	0	0	0	-1	1	2	3	4	4	4	4	3	3	2	1	1	1	1	1	1.8	4.3	
12-Feb	0	0	-1	-1	-1	-1	-1	0	0	0	1	2	2	2	3	D	D	1	0	0	0	0	0	0	0.3	2.6	
13-Feb	0	0	0	0	0	-1	-2	-3	-3	-3	-3	-2	-2	-1	-2	-3	-3	-5	-6	-6	-10	-11	-7	-6	-3.3	0.3	
14-Feb	-7	-7	-8	-7	-7	-8	-8	-8	-7	-7	-5	-3	-1	0	0	1	0	-4	-4	-5	-4	-4	-3	-2	-4.5	0.8	
15-Feb	-2	-1	-2	-2	-1	0	1	2	2	4	6	7	7	7	7	7	6	5	4	3	4	3	2	2	3.0	7.1	
16-Feb	2	2	2	1	2	1	1	1	2	2	3	3	5	6	6	5	4	3	2	2	1	0	0	-1	2.3	6.4	
17-Feb	-1	-3	-3	-3	-3	-3	-3	-3	-5	-5	-6	-7	-7	-6	-5	-4	-4	-8	-9	-9	-11	-11	-12	-9	-5.8	-1.3	
18-Feb	-7	-7	-7	-7	-7	-7	-7	-7	-7	-6	-6	-5	-4	-3	-2	-3	-4	-5	-5	-5	-5	-6	-6	-6	-5.6	-2.4	
19-Feb	-6	-7	-7	-7	-6	-6	-7	-7	-8	-8	-7	-6	-5	-4	-4	-4	-5	-7	-9	-10	-10	-11	-11	-11	-7.1	-3.7	
20-Feb	-10	-11	-10	-9	-11	-13	-10	-7	-6	-6	-5	-4	-2	0	0	1	0	-1	-2	-2	-2	-3	-3	-3	-5.0	0.9	
21-Feb	-3	-3	-3	-3	-3	-3	-2	-3	-3	-2	-1	0	1	3	4	4	4	3	0	0	0	-1	-1	-2	-0.6	4.4	
22-Feb	-2	-2	-2	-2	-2	-3	-3	-3	-2	-1	-1	1	2	2	1	-1	0	0	0	1	1	0	0	-2	-0.9	2.3	
23-Feb	-2	-2	-3	-3	-3	-3	-3	-3	-3	-4	-6	-8	-7	-7	-6	-5	-4	-4	-6	-7	-6	-5	-5	-4	-4	-4.6	-2.0
24-Feb	-4	-4	-3	-3	-4	-4	-3	-3	-3	-2	0	2	3	5	7	6	5	4	3	2	1	-2	-4	-4	-0.1	6.9	
25-Feb	-6	-3	-2	-3	-2	-1	-1	-1	-1	-1	-1	-1	0	0	0	1	0	-1	-2	-2	-3	-4	-4	-4	-1.8	0.9	
26-Feb	-5	-4	-4	-4	-4	-5	-4	-4	-4	-4	-3	-2	0	1	3	3	1	0	-4	-3	-2	-2	-1	-2	-2.2	3.4	
27-Feb	-2	-1	-2	-2	-2	-2	-3	-3	-4	-3	-2	-1	0	4	5	6	6	1	0	-3	-3	-3	-2	-1	-0.7	5.9	
28-Feb	-1	-1	-1	-1	-1	-1	-1	0	-1	0	2	4	4	5	5	6	5	3	2	3	4	3	3	3	1.9	6.2	
-2.7 -2.9 -2.9 -3.1 -3.2 -3.2 -2.9 -2.8 -2.8 -2.4 -1.5 -0.6 0.5 1.4 1.9 1.9 1.1 -0.4 -1.4 -1.3 -1.7 -2.1 -2.1 -2.3																								Diurnal Average			
3.0 2.4 2.0 1.3 1.9 1.3 0.9 1.5 2.3 4.1 6.2 7.1 7.0 6.6 7.1 6.5 6.1 5.2 4.9 4.7 4.3 5.3 4.8 4.1																								Diurnal Maximum			
D - DAS Failure																											

Hourly Averages

External Temperature (ET) - °C

Sunset House - February 2013



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	4	7	9	11	11	11	8	7	8	5	3	5	8	8	8	8	11	8	6	5	17	13	13	14	5.3	17.1
Dir	201	195	193	195	195	198	227	220	236	248	219	211	214	234	228	257	271	259	223	262	357	335	328	313	247.0	356.6
2 Spd	11	6	3	4	5	5	6	10	10	8	10	9	6	4	6	5	6	9	11	12	9	6	7	6	5.8	12.5
Dir	324	329	314	199	229	221	202	194	186	184	198	201	218	208	205	218	198	181	182	183	199	203	206	235	205.5	182.9
3 Spd	11	11	16	9	7	4	1	6	7	7	7	8	9	12	12	10	6	7	10	15	12	9	12	14	7.0	16.2
Dir	283	275	298	16	348	354	187	203	213	220	236	262	272	273	280	270	251	234	261	270	233	216	208	203	258.1	297.6
4 Spd	12	11	11	6	9	10	13	17	19	21	20	20	26	22	14	11	13	2	5	6	5	7	7	7	9.9	25.8
Dir	207	212	211	228	249	264	270	282	290	290	293	300	298	296	306	299	306	247	195	209	225	201	209	209	271.8	297.7
5 Spd	7	9	12	9	9	8	12	13	11	10	6	5	3	8	11	11	9	12	9	9	2	6	6	5	4.7	13.2
Dir	225	197	185	178	177	172	175	168	157	158	113	142	330	28	41	65	65	80	93	86	177	61	78	90	129.3	167.9
6 Spd	6	6	7	3	6	8	3	4	5	9	5	7	7	8	9	8	8	9	11	13	13	13	13	12	6.1	13.0
Dir	63	65	51	100	154	170	91	204	224	187	230	201	230	219	212	215	206	194	183	184	178	179	180	179	185.0	179.5
7 Spd	11	11	14	13	9	12	15	14	12	5	13	8	3	4	2	4	6	7	8	11	12	14	13	12	9.2	14.5
Dir	181	180	179	179	179	192	184	181	181	216	192	204	246	274	239	233	237	205	205	183	191	185	186	189	191.2	183.5
8 Spd	8	9	9	7	7	8	7	6	8	10	11	11	10	9	9	11	8	8	8	9	12	10	14	15	8.4	14.8
Dir	222	198	203	223	218	221	235	218	203	201	209	206	213	231	253	267	265	258	254	219	223	264	274	272	233.0	272.0
9 Spd	13	10	9	18	15	11	5	5	12	13	17	18	15	15	12	11	9	7	8	6	6	6	3	5	8.1	18.4
Dir	268	268	271	290	287	285	273	245	299	293	319	335	333	330	322	331	338	352	11	19	18	36	178	151	311.5	289.8
10 Spd	6	6	10	13	15	16	17	19	20	21	22	22	22	20	19	17	18	19	14	12	13	15	17	17	14.2	22.2
Dir	148	186	176	179	183	175	176	176	182	183	184	184	190	188	193	199	198	200	203	223	246	260	263	277	197.0	183.7
11 Spd	12	13	12	10	8	8	8	9	7	7	12	14	18	21	18	19	18	12	13	13	10	13	13	13	12.3	20.5
Dir	264	274	269	268	261	260	266	276	246	257	277	279	286	288	290	286	288	277	276	277	265	271	272	278	275.9	288.2
12 Spd	10	10	12	11	8	6	7	9	9	6	7	8	12	13	14	D	D	14	7	6	7	8	12	12	8.3	14.4
Dir	269	272	277	272	263	239	223	225	258	232	207	215	224	201	193	D	D	265	269	233	220	208	201	221	235.2	264.6
13 Spd	9	12	10	5	17	22	29	33	29	23	19	19	20	21	13	12	9	9	8	6	3	8	12	13	11.6	33.5
Dir	256	284	288	262	289	286	295	301	305	301	305	310	309	313	316	316	340	356	39	64	135	186	186	191	298.2	300.9
14 Spd	13	11	9	9	10	11	12	12	10	8	8	7	7	6	7	9	7	1	5	9	11	14	17	21	8.5	20.6
Dir	186	194	201	205	195	188	193	192	197	209	214	227	225	260	275	275	272	243	153	183	185	181	182	178	200.3	177.9
15 Spd	22	23	20	22	22	21	17	14	14	16	19	19	22	20	17	13	11	7	7	7	8	6	6	7	11.4	22.6
Dir	181	180	193	185	193	197	203	211	215	258	276	280	285	280	278	278	276	261	265	250	252	239	229	223	231.9	180.0
16 Spd	7	7	9	12	9	13	12	12	11	9	8	8	9	12	17	16	10	11	12	15	14	10	14	17	6.4	16.7
Dir	229	221	213	192	203	193	194	195	203	208	215	226	262	274	291	308	316	311	316	311	311	312	347	354	266.2	291.0
17 Spd	14	5	4	4	5	9	11	14	17	14	15	16	13	14	12	8	8	8	7	8	4	2	5	12	5.9	17.1
Dir	348	357	280	275	281	305	313	308	358	352	357	6	3	357	7	18	35	65	78	103	116	161	139	164	359.1	357.6
18 Spd	12	17	24	24	23	24	23	23	25	27	23	24	22	22	24	23	22	21	23	24	22	21	20	21	22.1	26.6
Dir	173	172	166	173	176	173	176	176	175	166	176	181	184	174	173	174	178	168	167	172	176	175	176	178	174.2	166.4
19 Spd	19	15	19	22	21	17	14	10	7	9	11	9	7	6	7	6	8	11	10	5	3	1	3	6	5.7	22.0
Dir	181	180	172	170	173	183	185	198	196	192	199	214	225	302	320	352	356	2	10	31	42	127	158	197	186.9	170.2
20 Spd	7	5	5	7	5	6	9	13	17	16	16	15	11	10	11	11	10	11	11	17	19	21	20	18	11.8	20.7
Dir	190	190	175	168	145	137	169	177	178	181	186	183	197	211	211	216	203	189	172	174	181	177	175	181	182.7	177.1
21 Spd	17	19	18	19	17	19	18	19	19	20	17	17	17	17	17	12	10	9	9	14	20	17	16	17	16.2	20.1
Dir	182	174	173	173	181	174	180	174	174	174	184	190	188	192	196	209	199	197	170	162	177	180	180	177	180.8	173.9
22 Spd	15	15	15	16	18	19	17	17	20	20	22	24	21	17	12	13	15	13	15	12	7	11	14	12	15.6	23.9
Dir	187	183	179	174	171	168	167	168	166	174	173	175	182	185	216	188	183	185	175	174	176	173	184	207	178.4	174.8

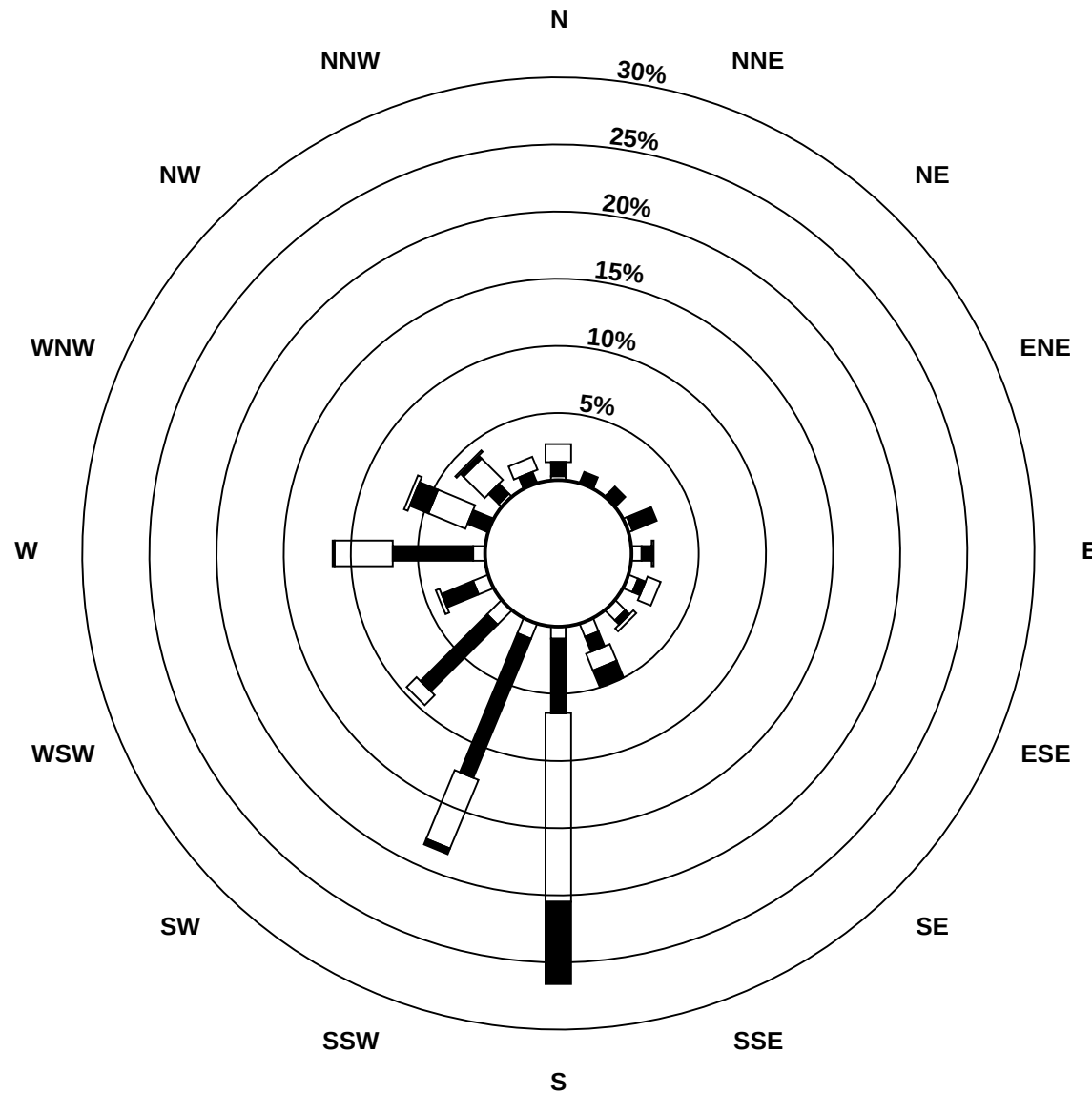
Hourly Averages

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

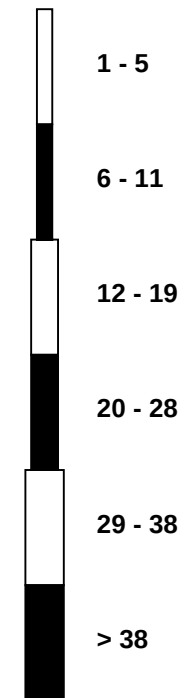
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
23 Spd	10	12	10	10	9	8	5	8	10	17	19	13	10	11	11	10	7	5	6	6	12	14	14	13	7.4	19.3		
Dir	205	205	202	194	211	213	246	303	290	300	306	299	270	261	270	271	268	242	221	197	196	189	187	187	240.8	305.8		
24 Spd	9	11	13	15	14	13	14	15	14	17	18	20	18	12	11	9	6	22	19	16	13	2	3	3	8.6	22.2		
Dir	194	189	184	180	183	181	186	179	177	176	183	190	196	213	228	224	261	299	298	300	299	325	128	119	208.8	298.6		
25 Spd	4	9	5	2	10	14	12	13	12	12	10	9	14	11	13	10	10	9	11	5	4	2	4	3	7.8	14.0		
Dir	72	63	91	79	90	103	106	105	114	115	88	124	129	109	111	93	61	48	60	116	193	97	152	123	99.7	128.5		
26 Spd	1	8	8	8	8	7	10	16	16	17	16	15	12	9	4	5	7	4	6	9	15	19	21	21	10.0	21.1		
Dir	107	179	187	199	190	189	167	157	172	181	186	198	201	193	200	217	178	160	76	125	160	159	162	161	173.6	162.2		
27 Spd	20	18	16	17	18	17	18	18	18	17	13	12	11	7	8	9	7	3	3	3	6	6	10	13	10.6	19.9		
Dir	166	170	181	180	180	187	187	192	190	192	196	209	195	221	266	282	303	190	163	128	163	188	176	178	189.4	165.6		
28 Spd	14	11	9	11	11	7	11	10	12	12	9	10	15	12	10	8	2	8	14	18	23	22	17	20	8.8	23.4		
Dir	189	195	190	192	194	194	182	190	197	203	231	265	289	278	273	293	105	114	115	130	167	179	188	187	193.2	166.5		
Spd	7.0	7.5	8.1	8.5	8.5	8.5	8.4	8.7	8.2	8.2	7.5	7.5	7.6	6.8	6.2	5.5	4.0	3.3	3.0	4.9	6.4	6.9	7.9	8.3	Diurnal Average			
Dir	204.6	199.3	198.5	193.6	197.1	196.6	198.9	201.3	203.5	207.5	218.4	223.2	237.3	248.1	250.0	257.5	251.7	228.8	196.4	191.4	200.3	195.7	195.1	198.2	Diurnal Maximum			
Spd	22.4	22.6	23.5	23.7	22.8	24.1	29.3	33.5	28.5	26.6	22.8	24.3	25.8	22.4	23.6	23.3	21.5	22.2	22.7	23.8	23.4	22.1	21.1	21.0	Diurnal Maximum			
Dir	181.0	180.0	166.1	172.8	176.4	173.3	294.5	300.9	304.7	166.4	176.0	181.4	297.7	296.0	172.5	173.5	178.0	298.6	167.3	172.3	166.5	179.1	162.2	161.1				
Maximum Speed Value: 33 km/h on Feb 13 08:00 Maximum Daily Speed Average: 22.1 km/h on Feb 18 Maximum Diurnal Speed Average: 8.7 km/h at hour 8																				Minimum Speed Value: 1 km/h on Feb 26 01:00 Minimum Daily Speed Average: 4.7 km/h on Feb 2 Minimum Diurnal Speed Average: 3.0 km/h at hour 19					Hours in Service: 672 Hours of Data: 670 Hours of Missing Data: 2			
Monthly Average Velocity: 6.58 km/h 209.69 deg All monthly, daily, and diurnal averages have been calculated using vector methods																				Speed Percentiles: P ₁ = 2.1 P ₁₀ = 5.4 Q ₁ = 7.5 Median = 11.0 Q ₃ = 15.1 P ₉₀ = 19.8 P ₉₉ = 24.2					Percent Operational Time: 99.7			
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	2	14	11	0	0	0	27																					
NorthEast	1	16	2	0	0	0	19																					
East	7	11	6	0	0	0	24																					
SouthEast	12	10	6	0	0	0	28																					
South	13	75	130	59	0	0	277																					
SouthWest	14	91	22	0	0	0	127																					
West	5	55	46	6	0	0	112																					
NorthWest	3	13	26	11	3	0	56																					
Total	57	285	249	76	3	0	670																					

Wind Rose

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



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Sunset House - February 2013

Maximum Speed: 34 km/h on Feb 13 08:00																				Maximum Daily Speed Average: 22.3 km/h on Feb 18										Hours in Service: 672	
Minimum Speed: 1 km/h on Feb 19 22:00																				Minimum Daily Speed Average: 7.5 km/h on Feb 2										Hours of Data: 670	
Maximum Diurnal Speed Average: 13.8 km/h at hour 11																				Minimum Diurnal Speed Average: 9.9 km/h at hour 18										Hours of Missing Data: 2	
Monthly Average Speed: 11.93 km/h																				Percentiles: P ₁ = 3.4 P ₁₀ = 5.7 Q ₁ = 7.8 Median = 11.1 Q ₃ = 15.3 P ₉₀ = 19.9 P ₉₉ = 24.4										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-Feb	4	7	9	11	11	11	8	7	8	5	3	6	8	8	8	8	11	9	6	7	17	13	13	14	8.9	17.4					
2-Feb	11	7	4	5	5	5	6	10	10	9	11	9	6	4	7	5	6	9	11	13	9	6	7	7	7.5	12.5					
3-Feb	11	11	17	9	7	4	3	6	7	7	7	8	9	12	10	6	7	11	15	12	9	12	14	9.5	17.2						
4-Feb	12	11	11	7	10	11	13	17	19	21	20	20	26	23	14	12	13	4	5	6	5	7	7	7	12.5	26.0					
5-Feb	8	10	12	9	9	8	12	13	11	10	7	6	4	9	11	11	10	12	9	9	6	6	6	6	8.9	13.2					
6-Feb	7	7	7	5	6	9	6	5	5	10	6	8	8	8	9	8	8	9	11	13	13	13	13	12	8.7	13.0					
7-Feb	11	11	14	13	9	12	15	14	12	6	13	9	4	4	2	4	6	8	9	11	12	14	13	12	9.9	14.6					
8-Feb	9	9	9	8	7	8	7	7	8	10	12	11	10	9	9	11	9	9	8	10	12	11	15	15	9.6	15.1					
9-Feb	13	10	10	19	15	11	6	5	12	13	17	18	15	15	13	11	9	7	8	6	6	6	4	5	10.6	18.8					
10-Feb	6	6	10	13	15	16	17	19	20	21	22	22	22	20	19	17	18	19	14	12	13	15	17	17	16.3	22.3					
11-Feb	12	13	12	10	8	8	8	9	7	7	12	14	18	21	18	19	18	12	13	13	10	13	13	13	12.7	20.7					
12-Feb	10	10	12	11	9	7	7	9	9	6	7	8	12	13	14	D	D	15	7	7	7	8	12	12	9.7	14.7					
13-Feb	10	12	10	5	17	22	30	34	29	23	19	19	21	22	13	12	9	9	9	6	4	8	12	13	15.3	33.7					
14-Feb	13	11	9	9	11	11	12	12	10	8	8	7	7	6	8	9	7	3	5	9	11	14	17	21	9.9	20.7					
15-Feb	23	23	20	22	22	22	17	14	14	17	19	19	22	20	17	13	11	7	7	7	8	6	6	7	15.2	22.7					
16-Feb	7	7	9	12	10	13	12	13	11	10	9	8	9	12	17	16	10	11	12	15	14	10	15	17	11.5	16.9					
17-Feb	14	5	5	5	5	9	11	14	17	14	16	16	13	14	12	9	9	9	7	8	4	4	5	12	9.9	17.3					
18-Feb	12	17	24	24	23	24	23	23	25	27	23	24	22	22	24	24	22	21	23	24	22	22	20	21	22.3	26.8					
19-Feb	19	16	20	22	21	17	14	10	8	9	11	9	8	6	7	7	8	11	10	6	4	1	3	6	10.5	22.1					
20-Feb	7	5	5	7	6	6	9	13	17	16	16	15	12	11	11	11	10	11	11	17	19	21	20	18	12.4	20.8					
21-Feb	17	19	18	19	17	19	18	20	19	20	18	17	17	17	17	13	10	10	9	14	20	17	16	17	16.6	20.2					
22-Feb	15	15	15	16	18	19	17	18	20	21	22	24	21	17	13	13	15	14	15	12	7	11	15	12	16.1	24.0					
23-Feb	10	12	10	10	9	8	6	8	11	18	19	13	10	12	11	10	8	5	6	7	12	14	14	13	10.7	19.3					
24-Feb	9	11	13	15	14	13	14	15	14	17	18	20	18	13	11	9	8	22	19	16	13	5	3	3	13.1	22.4					
25-Feb	4	9	6	3	11	14	12	13	12	13	10	10	15	12	14	12	10	9	11	6	4	4	4	4	9.2	14.5					
26-Feb	4	8	8	8	8	7	10	16	16	17	16	15	13	10	5	6	7	4	6	9	15	19	21	21	11.2	21.2					
27-Feb	20	18	17	17	18	17	18	18	18	17	13	12	11	7	8	9	7	4	5	4	6	6	10	13	12.3	20.0					
28-Feb	14	11	9	11	11	7	11	10	12	12	10	11	15	12	10	9	3	8	14	19	24	22	18	20	12.7	23.6					
11.2 11.2 11.6 11.6 11.8 12.0 12.2 13.3 13.6 13.7 13.8 13.6 13.5 12.8 12.0 11.0 9.9 9.9 10.0 10.8 11.2 10.9 12.0 12.6																									Diurnal Average						
22.5 22.7 23.6 23.8 22.9 24.3 29.5 33.7 28.6 26.8 22.9 24.4 26.0 22.5 23.8 23.6 21.8 22.4 22.9 24.0 23.6 22.2 21.2 21.1																									Diurnal Maximum						
D - DAS Failure																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg
Sunset House - February 2013

Maximum Value: 86.5 deg on Feb 3 07:00																			Hours in Service: 672						
Minimum Value: 3.2 deg on Feb 7 03:00																			Hours of Data: 670						
Percentiles: P ₁ = 3.8 P ₁₀ = 5.2 Q ₁ = 6.8 Median = 10.0 Q ₃ = 14.7 P ₉₀ = 22.5 P ₉₉ = 69.0																			Hours of Missing Data: 2						
																			Hours of Calibration: 0						
																			Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Feb	15	8	12	14	5	10	16	12	19	24	48	23	10	14	11	14	9	18	12	39	11	9	10	9	47.7
2-Feb	10	30	48	48	11	11	8	5	10	8	9	9	26	12	18	18	14	4	4	5	11	7	11	22	47.9
3-Feb	11	13	22	12	13	24	87	11	12	12	14	16	11	9	8	11	17	20	17	11	13	23	9	6	86.5
4-Feb	7	7	10	17	14	11	9	9	7	7	7	6	7	6	6	8	11	58	11	11	17	8	12	11	57.7
5-Feb	19	22	4	8	7	8	4	3	6	7	43	79	68	11	13	7	20	8	15	13	84	11	17	29	83.9
6-Feb	20	22	20	50	19	25	68	58	16	15	30	31	17	14	13	14	11	8	5	4	6	4	5	5	67.8
7-Feb	9	3	3	6	8	5	4	5	8	10	9	17	54	30	28	21	9	23	23	29	10	4	5	15	54.5
8-Feb	19	12	12	16	15	14	12	11	13	10	13	8	17	15	24	10	13	13	14	24	11	22	11	11	24.5
9-Feb	10	10	10	12	10	9	14	18	23	7	12	8	10	11	12	11	9	16	6	11	10	14	49	13	49.2
10-Feb	14	13	6	5	4	5	5	4	8	6	5	6	6	6	8	7	5	7	9	14	14	13	11	12	14.3
11-Feb	14	9	9	11	13	15	19	12	20	23	8	8	8	8	8	7	7	9	9	10	13	9	9	9	22.6
12-Feb	10	11	9	9	11	17	11	15	13	17	14	11	14	12	7	D	D	13	13	15	10	9	6	15	17.3
13-Feb	21	8	12	15	11	8	7	6	5	6	6	7	7	8	8	8	11	13	12	7	30	10	3	6	29.9
14-Feb	9	9	19	22	9	6	5	6	7	16	13	9	12	23	13	11	12	69	14	6	8	4	4	6	69.4
15-Feb	6	6	9	5	6	5	5	7	12	20	8	8	8	7	8	9	11	15	22	18	19	17	15	16	21.6
16-Feb	13	14	17	18	20	8	7	9	7	11	11	15	17	13	9	5	9	7	8	6	5	7	14	8	20.3
17-Feb	9	29	25	20	15	7	10	17	10	8	8	8	9	10	10	14	12	21	20	19	25	53	15	7	53.2
18-Feb	6	6	5	5	5	6	6	6	8	7	7	7	9	10	8	9	8	8	6	8	6	7	7	7	10.2
19-Feb	7	7	7	5	6	6	6	9	14	8	11	13	19	25	18	35	13	5	7	16	30	21	17	12	34.6
20-Feb	7	15	8	6	17	12	12	5	6	5	5	6	16	13	11	12	10	7	6	5	5	6	4	6	16.7
21-Feb	5	5	4	5	10	5	6	6	5	7	8	8	7	9	9	11	10	7	6	5	9	7	5	5	10.7
22-Feb	10	8	5	4	4	5	6	6	7	7	6	6	8	10	21	7	7	10	11	11	12	7	25	14	25.5
23-Feb	8	6	7	9	13	11	34	13	12	8	5	17	13	16	11	11	11	18	12	24	7	11	6	9	34.3
24-Feb	15	10	12	7	5	5	6	5	8	5	7	6	9	13	15	15	36	7	6	5	6	75	14	21	74.9
25-Feb	18	9	45	50	11	6	9	5	9	10	17	24	16	27	16	29	14	11	6	40	28	67	24	35	66.7
26-Feb	83	10	7	7	9	7	8	6	9	7	9	11	15	21	39	36	13	34	9	14	8	5	5	6	83.3
27-Feb	5	6	7	6	6	5	4	6	5	5	9	13	11	16	23	12	15	56	71	40	15	12	7	4	71.3
28-Feb	7	17	13	8	18	17	9	9	6	11	23	18	9	10	13	20	49	12	4	16	7	6	12	7	49.4
83.3 29.8 47.9 50.5 20.3 25.1 86.5 58.2 22.6 23.7 47.7 79.3 68.4 30.0 39.1 35.8 49.4 69.4 71.3 40.3 83.9 74.9 49.2 34.9																									
D - DAS Failure																									

PAZA
Falher Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

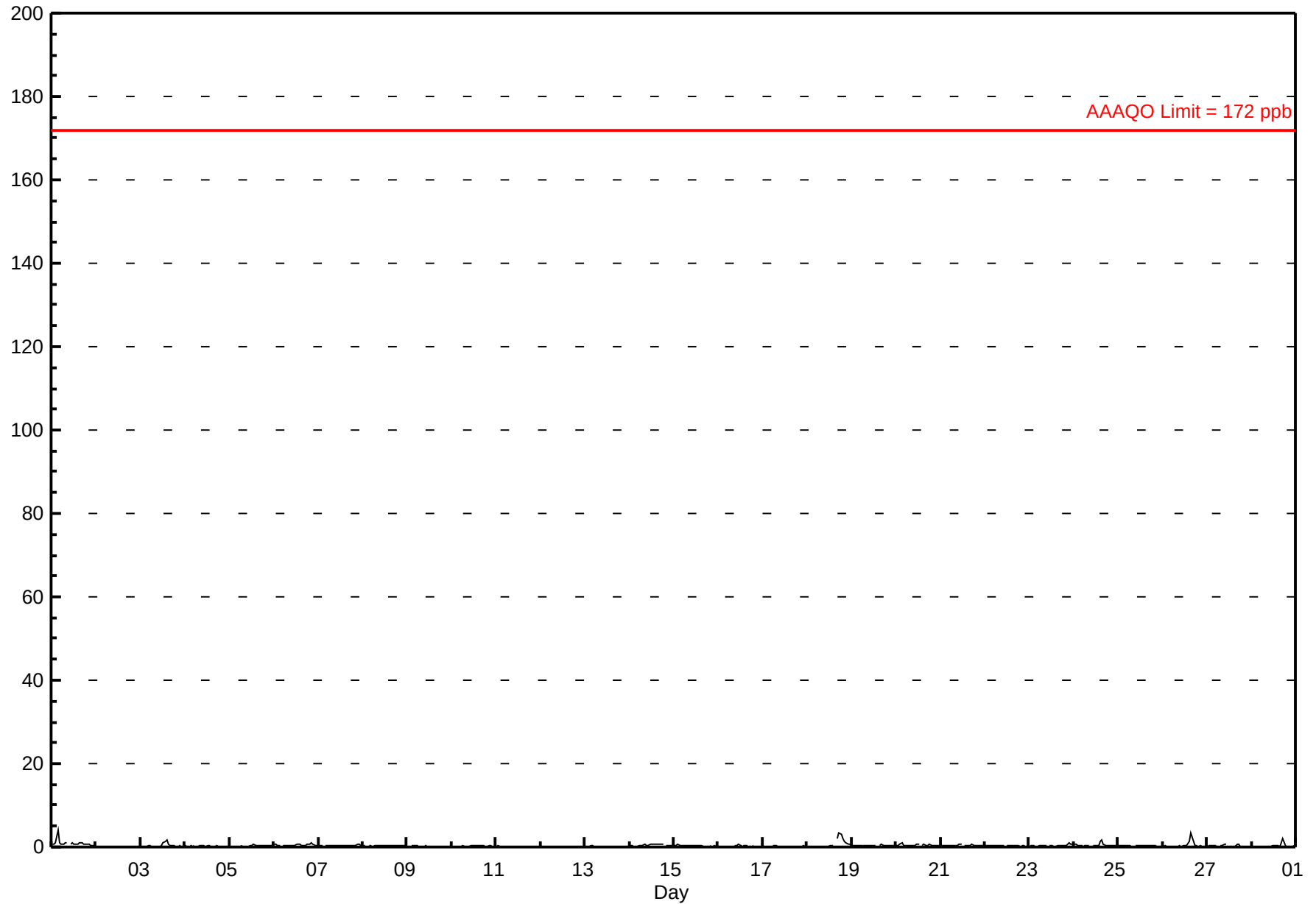
Falher - February 2013

Number of Exceedences (AAAQO): Maximum Value: 4.0 ppb on Feb 1 04:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 0.9 ppb on Feb 1					Hours in Service: 672 Hours of Data: 640				
Minimum Value: 0 ppb on Feb 2 02:00 Maximum Diurnal Average: 0.5 ppb at hour 18 Monthly Average: 0.29 ppb																			Minimum Daily Average: 0.0 ppb on Feb 2 Minimum Diurnal Average: 0.2 ppb at hour 24 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.6 P ₉₉ = 1.9					Hours of Missing Data: 32 Hours of Calibration: 32 Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
1-Feb	1	1	1	4	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.9	4.0		
2-Feb	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1		
3-Feb	0	0	0	0	0	0	0	A	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0.3	1.7		
4-Feb	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2		
5-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.5		
6-Feb	1	1	0	0	A	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	1	1	0	0	0.5	1.2		
7-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.3	0.7		
8-Feb	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4		
9-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3		
10-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.2		
12-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1		
13-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2		
14-Feb	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	A	1	0	0	0	0.4	0.6		
15-Feb	0	0	1	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		
16-Feb	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.5		
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.3		
18-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2	3	3	3	2	1	1	1	1	0.7	3.5		
19-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0.4	0.6		
20-Feb	0	0	1	1	1	0	0	0	0	0	0	1	1	A	0	1	0	0	1	0	0	0	0	0	0.5	1.0		
21-Feb	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	1	0	0	0	0	0	0	0.4	0.8		
22-Feb	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	0.5		
23-Feb	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	0.3	1.1		
24-Feb	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	1	2	1	0	0	0	0	0	0	0.4	1.6		
25-Feb	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		
26-Feb	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	3	2	0	0	0	0	0	0	0	0.5	3.5		
27-Feb	0	0	0	0	0	0	A	0	0	1	1	C	C	C	0	0	1	1	0	0	0	0	0	0	0.3	0.7		
28-Feb	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0.3	2.1		
0.2 0.2 0.2 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.3 0.4 0.4 0.5 0.5 0.4 0.3 0.3 0.3 0.2 0.2																									Diurnal Average			
0.8 0.7 1.0 4.0 1.2 0.8 0.7 0.9 1.2 0.6 0.7 0.9 1.0 1.3 1.7 3.5 2.4 3.5 3.0 1.9 1.2 1.1 0.8 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

Falher - February 2013



Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

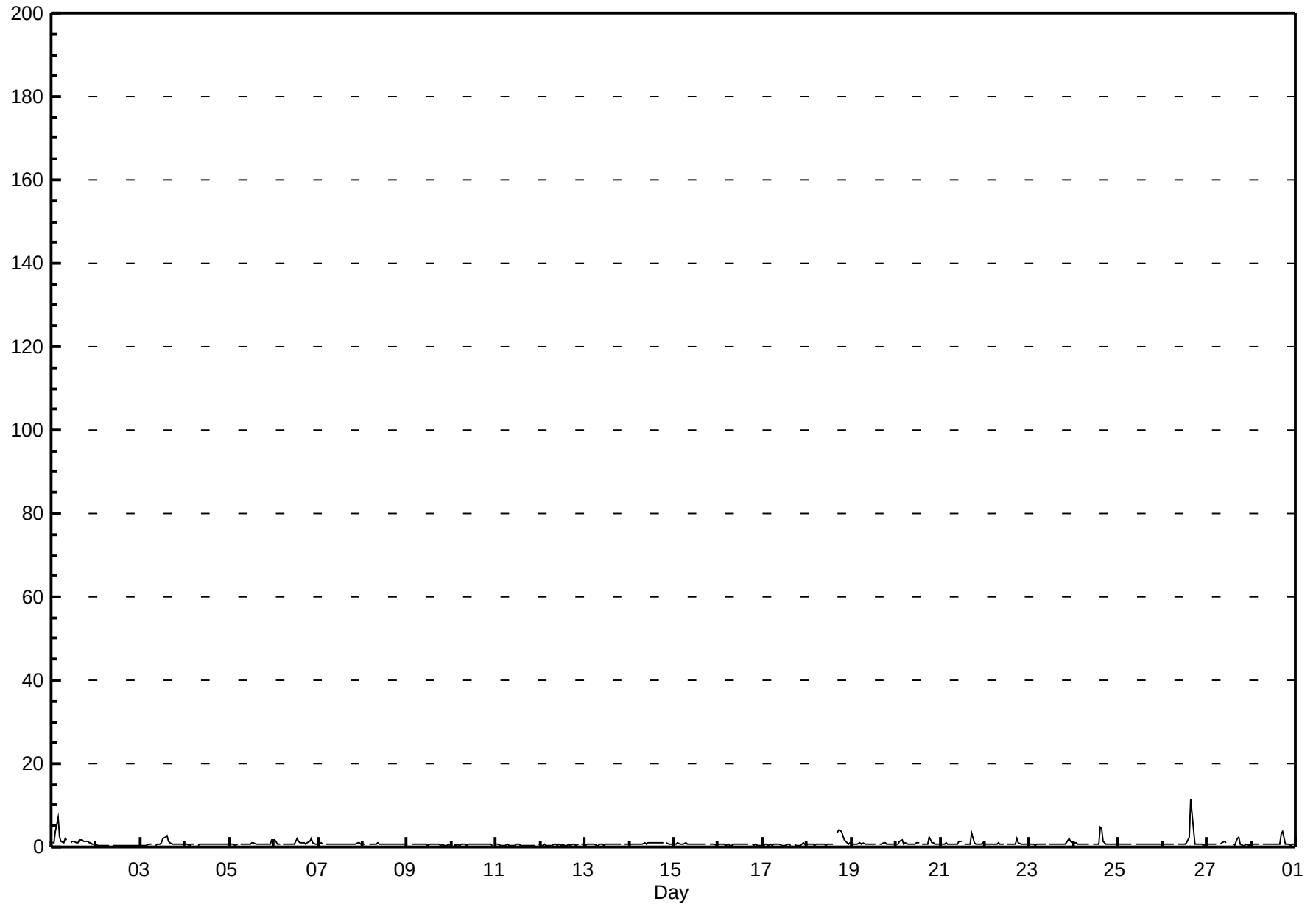
Falher - February 2013

Maximum Value: 11.6 ppb on Feb 26 16:00																				Maximum Daily Average: 1.6 ppb on Feb 1					Hours in Service: 672	
Minimum Value: 0 ppb on Feb 2 11:00																				Minimum Daily Average: 0.3 ppb on Feb 2					Hours of Data: 640	
Maximum Diurnal Average: 1.3 ppb at hour 16																				Minimum Diurnal Average: 0.7 ppb at hour 7					Hours of Missing Data: 32	
Monthly Average: 0.79 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.7 P ₉₀ = 1.0 P ₉₉ = 3.9					Hours of Calibration: 32	
																				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-Feb	1	1	4	7	2	1	1	2	2	A	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1.6	7.3
2-Feb	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
3-Feb	0	0	0	0	1	1	1	A	0	1	1	1	2	2	3	1	1	1	1	1	1	1	1	1	0.9	2.5
4-Feb	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
5-Feb	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0.7	1.7
6-Feb	2	1	1	1	A	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	1	1	1.0	2.0
7-Feb	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-Feb	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-Feb	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	0	0	1	0	0.6	0.6
10-Feb	A	1	0	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.6	0.7
11-Feb	1	1	0	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	A	1	0.5	0.6
12-Feb	0	0	1	0	0	0	0	1	1	0	1	0	1	0	0	1	0	1	1	0	1	A	1	1	0.5	0.7
13-Feb	0	1	1	1	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	0.6	0.7
14-Feb	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-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0.7	1.1
16-Feb	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	0	1	0	0	0	0	0.6	0.8
17-Feb	0	1	1	0	1	0	1	1	1	1	0	0	0	1	1	0	A	1	0	0	0	1	1	0	0.5	1.1
18-Feb	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	A	3	4	4	3	2	1	1	1	1.2	4.1
19-Feb	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-Feb	1	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	0.9	2.3
21-Feb	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	3	1	1	1	1	1	1	0.9	3.3
22-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	1	1	1	1	0.8	1.9
23-Feb	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	0.7	2.0
24-Feb	1	1	1	1	1	1	1	1	1	A	1	1	1	1	5	4	1	1	1	1	1	1	1	1	1.1	4.7
25-Feb	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
26-Feb	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	12	8	1	1	1	1	1	0	1	1.5	11.6
27-Feb	1	1	1	1	1	1	A	1	1	1	1	C	C	C	1	0	2	2	1	0	0	1	0	1	0.8	2.3
28-Feb	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	3	4	1	1	1	0	1	1	0.9	3.9
0.7 0.7 0.8 0.9 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.8 0.8 0.9 1.3 1.2 1.1 0.9 0.7 0.7 0.7 0.7 0.7																									Diurnal Average	
1.7 1.2 3.8 7.3 2.4 1.2 1.0 1.9 1.8 1.2 1.3 1.5 2.0 2.3 4.7 11.6 7.7 4.1 3.8 2.9 1.9 2.0 1.4 1.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

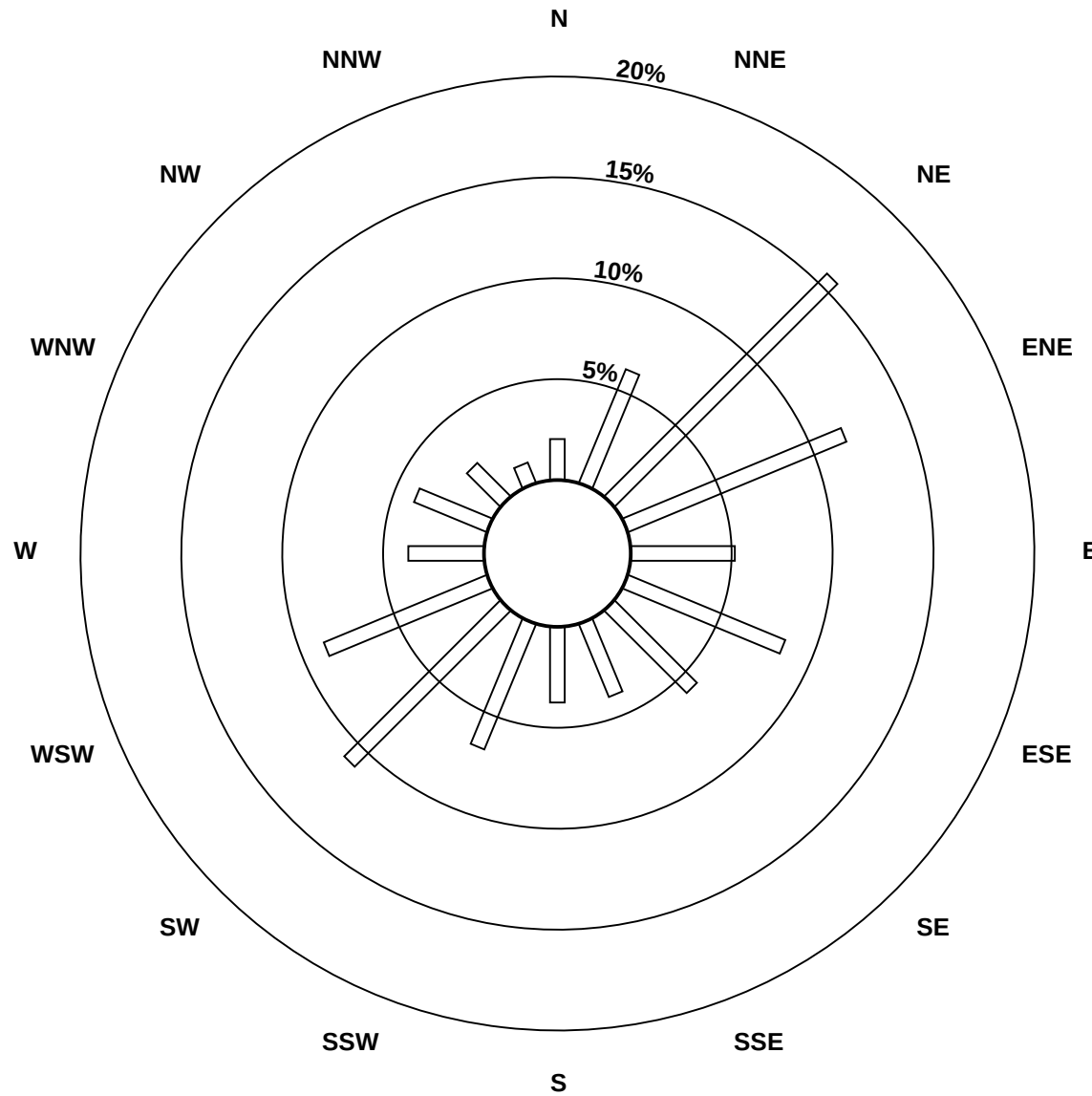
Falher - February 2013



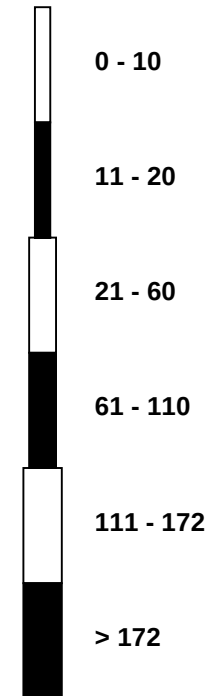
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Falher - February 2013



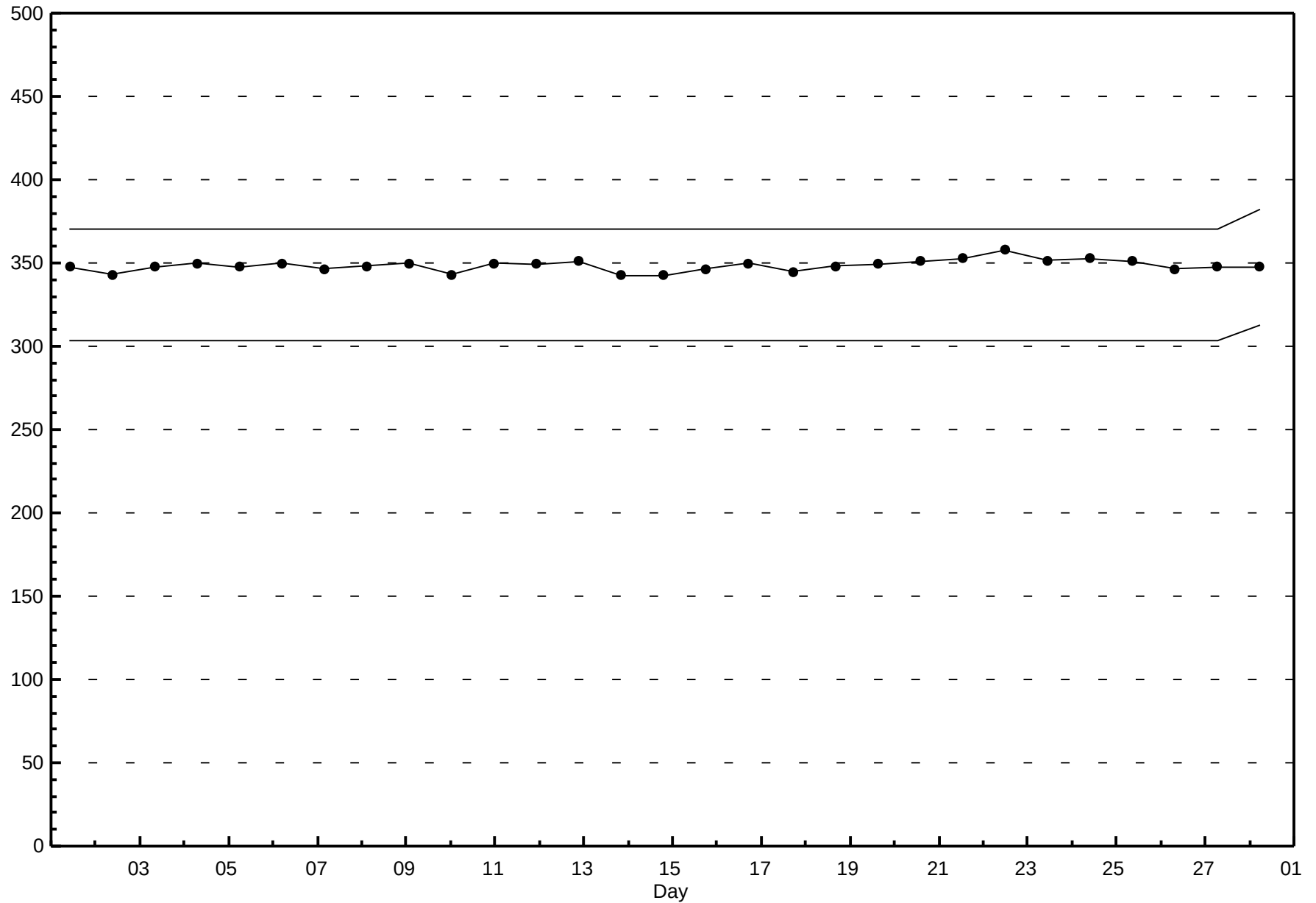
Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)

Falher - February 2013



Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

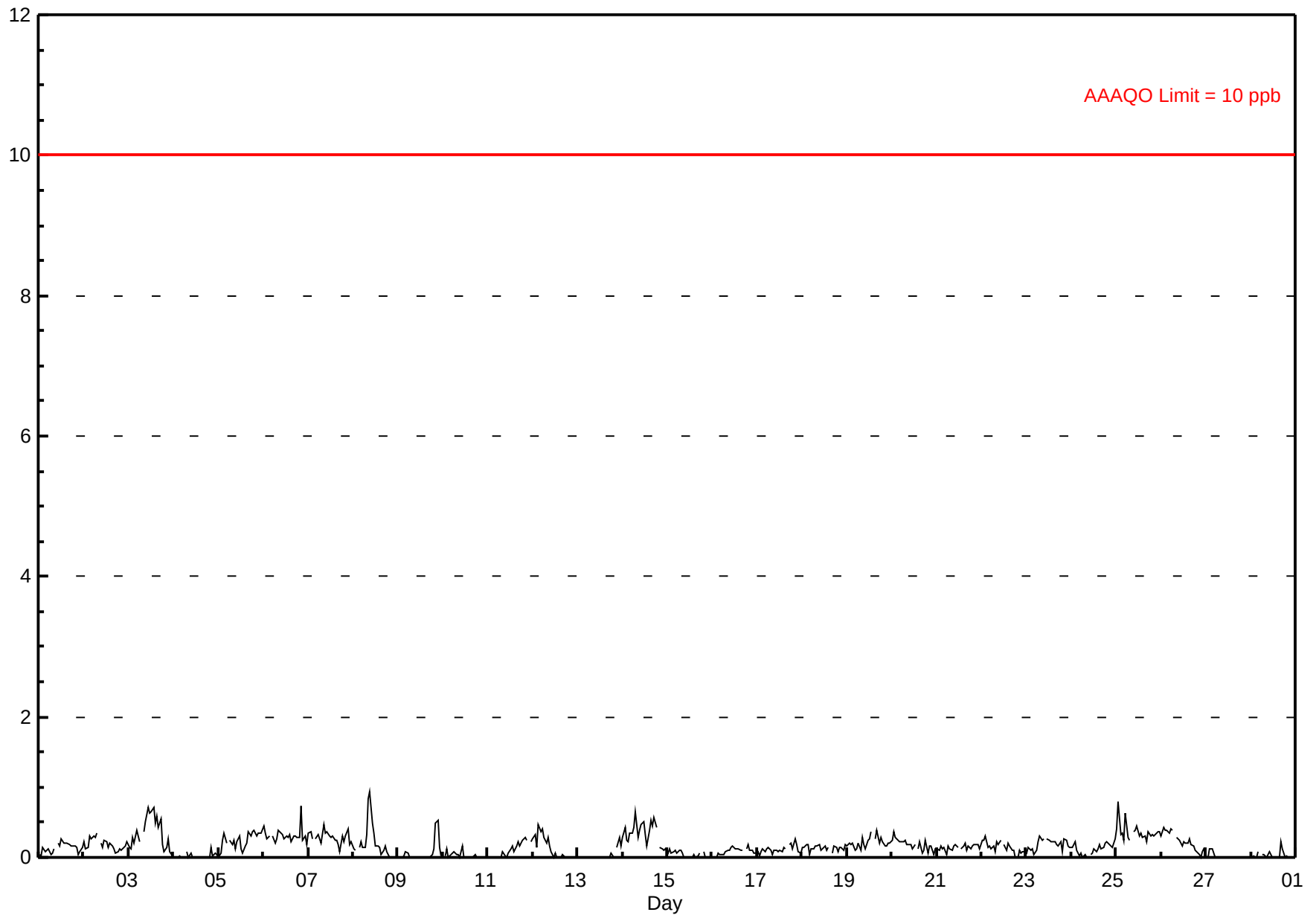
Falher - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.9 ppb on Feb 8 10:00 Maximum Daily Average: 0.4 ppb on Feb 25																			Hours in Service: 672								
Minimum Value: 0 ppb on Feb 4 01:00 Minimum Daily Average: 0.0 ppb on Feb 4 Maximum Diurnal Average: 0.2 ppb at hour 10 Minimum Diurnal Average: 0.1 ppb at hour 23 Monthly Average: 0.16 ppb 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 = 0.7																			Hours of Data: 639								
																			Hours of Missing Data: 33								
																			Hours of Calibration: 33								
																			Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Feb	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-Feb	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-Feb	0	0	0	0	0	0	0	A	0	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0.4	0.7	
4-Feb	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-Feb	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-Feb	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.3	0.7	
7-Feb	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
8-Feb	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9	
9-Feb	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.1	0.5	
10-Feb	A	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		
11-Feb	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-Feb	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	0.5	
13-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.3	
14-Feb	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0	A	0	0	0	0	0.3	0.7	
15-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.2	
17-Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3	
18-Feb	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-Feb	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-Feb	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
21-Feb	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	
22-Feb	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	
23-Feb	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-Feb	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	
25-Feb	0	1	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8	
26-Feb	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	0.4	
27-Feb	0	0	0	0	0	0	A	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
28-Feb	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	
																									Diurnal Average		
																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																											

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

Falher - February 2013



Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

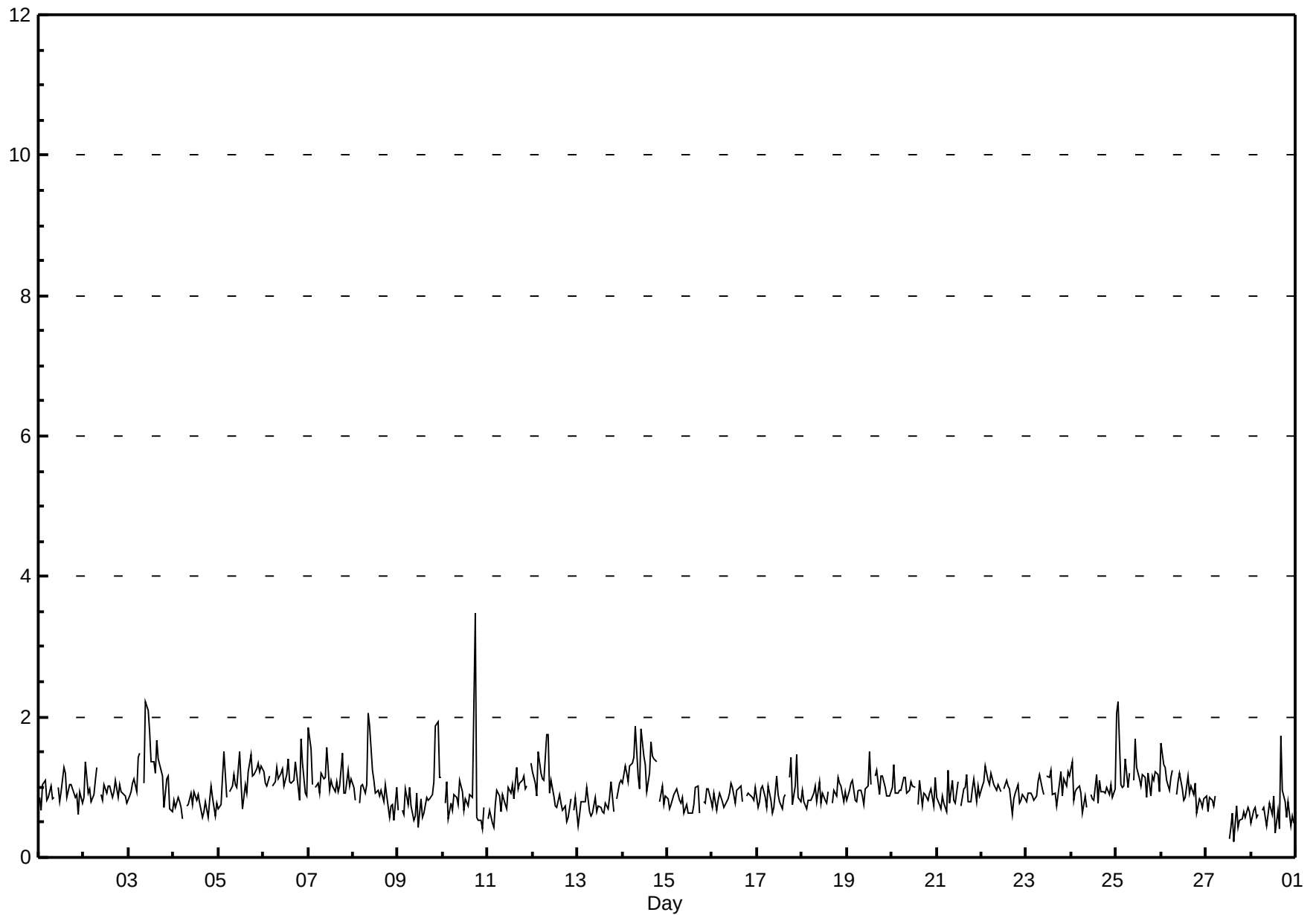
Falher - February 2013

Maximum Value: 3.5 ppb on Feb 10 18:00										Maximum Daily Average: 1.3 ppb on Feb 3										Hours in Service: 672						
Minimum Value: 0 ppb on Feb 27 16:00										Minimum Daily Average: 0.6 ppb on Feb 27										Hours of Data: 639						
Maximum Diurnal Average: 1.1 ppb at hour 11										Minimum Diurnal Average: 0.9 ppb at hour 20										Hours of Missing Data: 33						
Monthly Average: 0.96 ppb										Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 0.8 Median = 0.9 Q ₃ = 1.1 P ₉₀ = 1.3 P ₉₉ = 2.1										Hours of Calibration: 33						
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	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
2-Feb	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	1.4
3-Feb	1	1	1	1	1	1	1	A	1	2	2	2	1	1	1	2	1	1	1	1	1	1	1	1	1.3	2.2
4-Feb	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
5-Feb	1	1	1	2	1	A	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5
6-Feb	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.1	1.7
7-Feb	2	2	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.8
8-Feb	1	1	A	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.1
9-Feb	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	2	2	1	1	0.9	1.9
10-Feb	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	0	1	A	0.9	3.5
11-Feb	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.9	1.3
12-Feb	1	1	1	2	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.8
13-Feb	0	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	1.1
14-Feb	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	2	1	1	1	A	1	1	1	1	1.2	1.9
15-Feb	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	1.0
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.1
17-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.5
18-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.1
19-Feb	1	1	1	1	1	1	1	1	1	1	1	2	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.5
20-Feb	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	1.3
21-Feb	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-Feb	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
23-Feb	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
24-Feb	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	1.4
25-Feb	2	2	1	1	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.2
26-Feb	2	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	1.6
27-Feb	1	1	1	1	1	1	A	1	C	C	C	C	0	0	1	0	1	0	1	1	1	1	1	1	0.6	0.9
28-Feb	0	1	1	1	1	A	1	1	0	1	1	1	1	0	1	0	2	1	1	1	1	0	1	0	0.7	1.7
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration																									A - Automated Daily Zero Span	

Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb

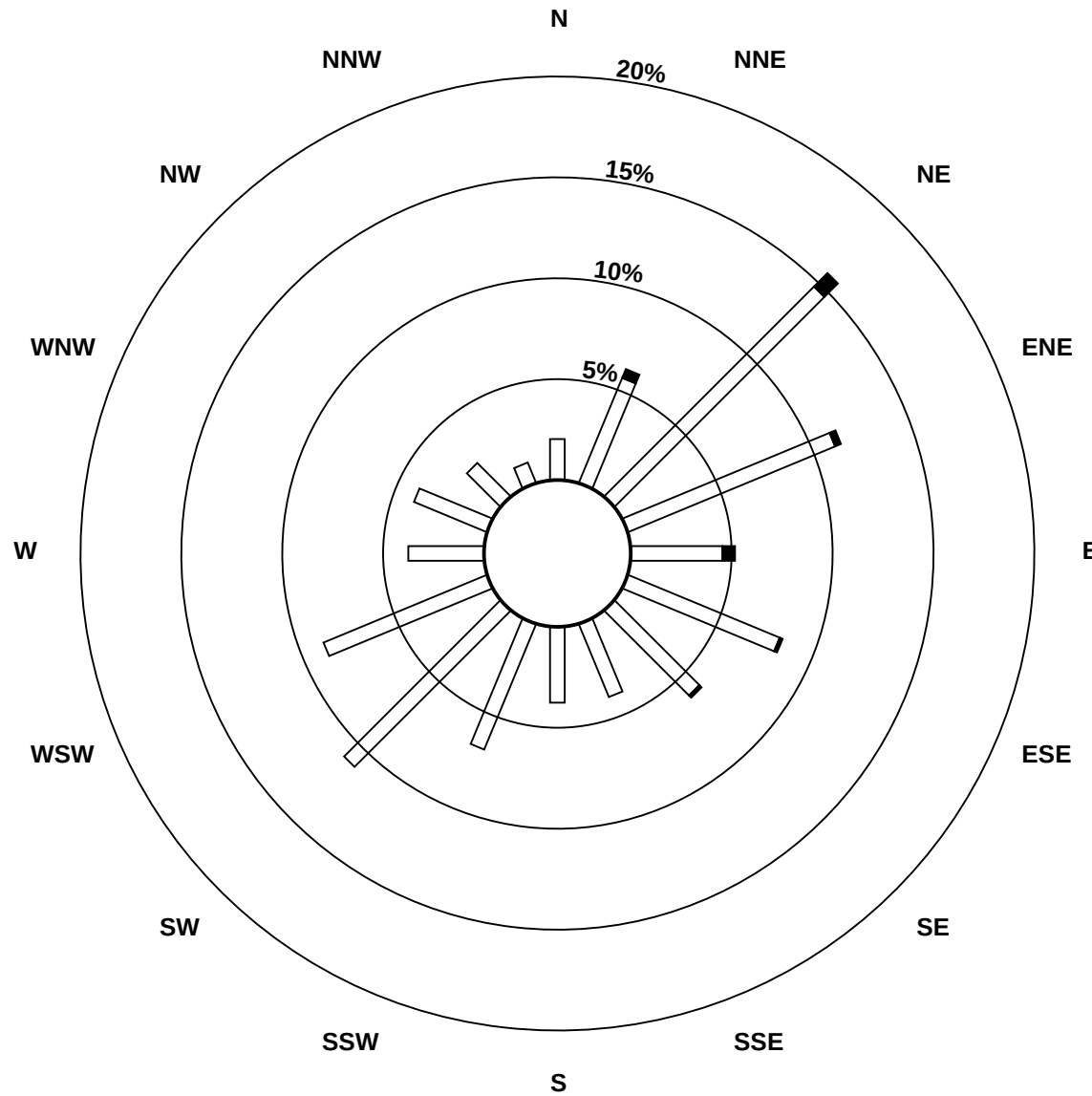
Falher - February 2013



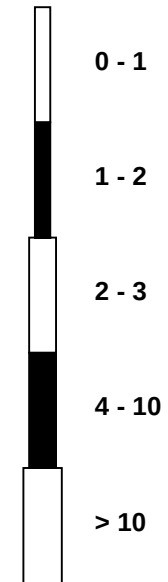
Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb

Falher - February 2013



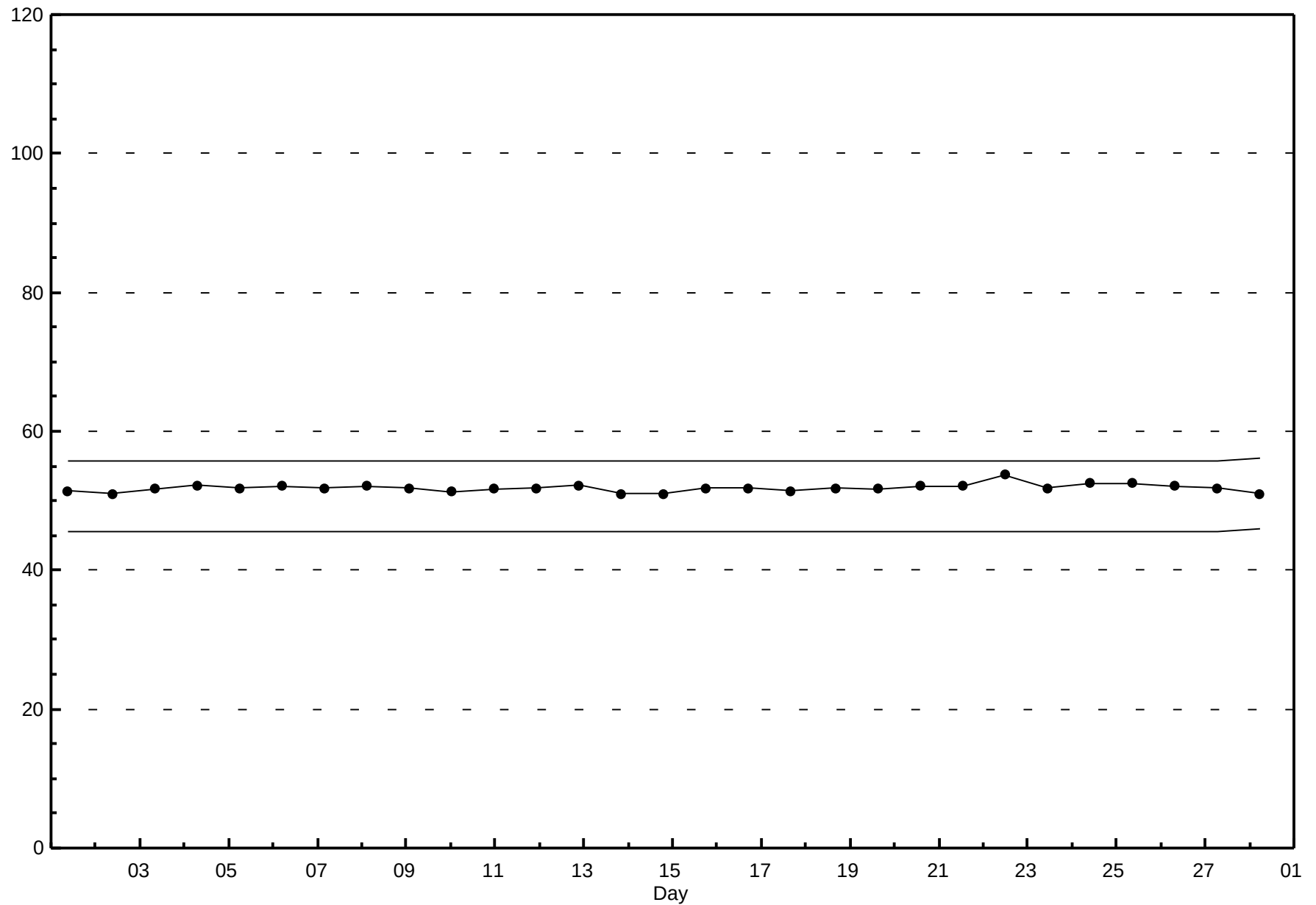
Pollutant Classes (ppb)



Span Responses

Hydrogen Sulphide (H₂S)

Falher - February 2013



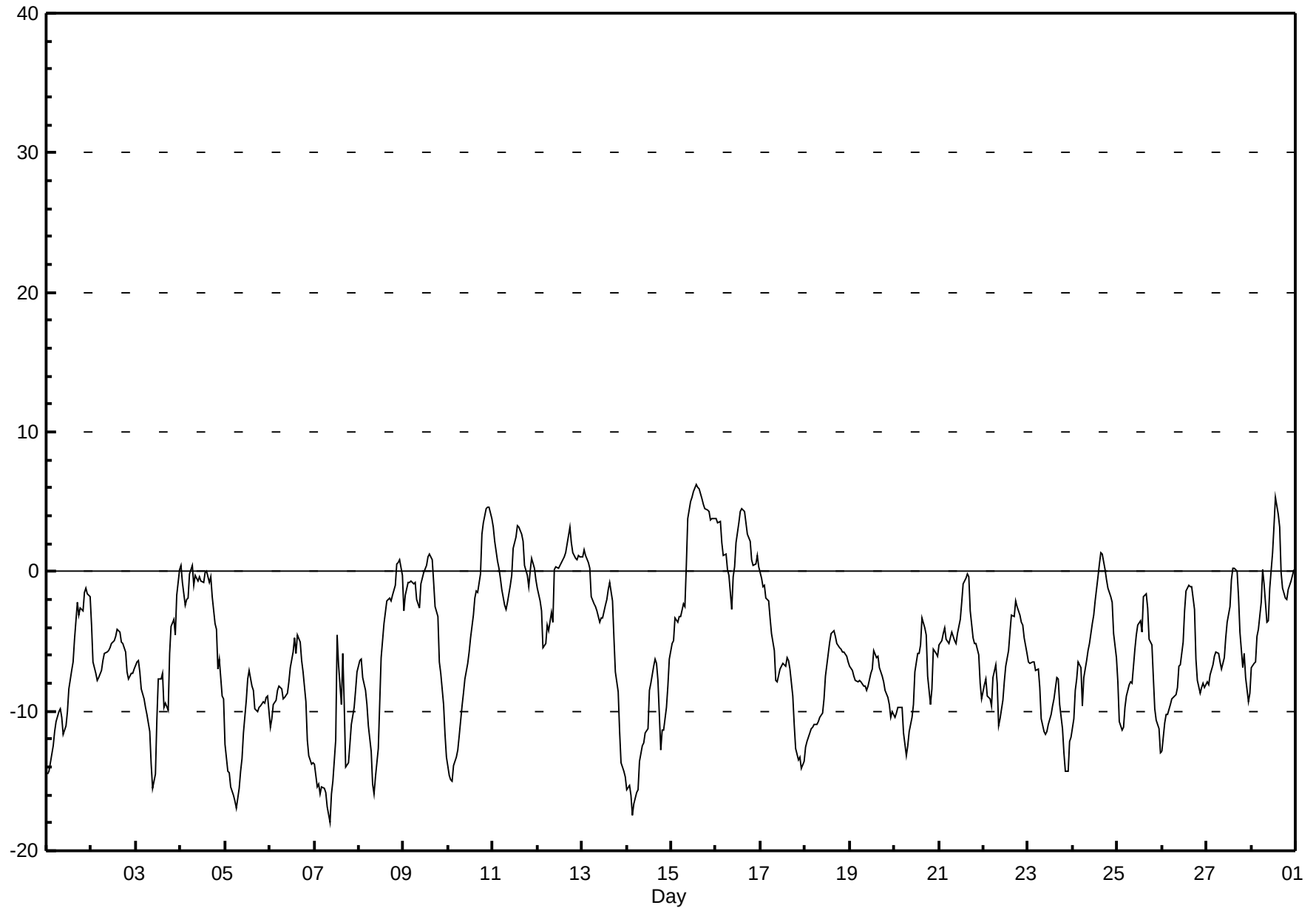
Falher - February 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6.3 °C on Feb 15 14:00 Maximum Daily Average: 1.9 °C on Feb 15																				Hours in Service: 672 Hours of Data: 672 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: -18 °C on Feb 7 09:00 Maximum Diurnal Average: -2.2 °C at hour 16 Monthly Average: -5.68 °C										Minimum Daily Average: -12.4 °C on Feb 7 Minimum Diurnal Average: -7.9 °C at hour 9 Percentiles: P ₁ = -16.0 P ₁₀ = -12.5 Q ₁ = -9.4 Median = -5.9 Q ₃ = -1.7 P ₉₀ = 0.8 P ₉₉ = 5.3																
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-Feb	-15	-14	-14	-12	-11	-11	-10	-10	-10	-12	-11	-10	-8	-7	-6	-5	-2	-3	-3	-3	-1	-1	-2	-2	-7.7	-1.2
2-Feb	-4	-6	-7	-8	-8	-7	-6	-6	-6	-6	-5	-5	-5	-5	-4	-4	-5	-5	-6	-7	-8	-7	-7	-7	-6.0	-3.8
3-Feb	-6	-6	-7	-8	-9	-10	-10	-11	-14	-16	-15	-11	-8	-8	-7	-10	-9	-10	-6	-4	-3	-5	-2	0	-8.1	0.2
4-Feb	0	-1	-2	-2	-2	0	0	-1	0	-1	0	-1	-1	0	0	-1	0	-2	-4	-4	-7	-6	-9	-9	-2.2	0.5
5-Feb	-12	-14	-14	-15	-16	-16	-17	-16	-14	-13	-12	-9	-8	-7	-8	-8	-10	-10	-10	-10	-9	-9	-9	-9	-11.6	-7.1
6-Feb	-11	-11	-10	-9	-9	-8	-8	-9	-9	-9	-8	-7	-6	-5	-6	-5	-5	-6	-7	-9	-12	-13	-14	-14	-8.7	-4.6
7-Feb	-14	-15	-15	-16	-15	-16	-16	-17	-18	-16	-15	-12	-5	-7	-10	-6	-10	-14	-14	-12	-11	-10	-9	-7	-12.4	-4.6
8-Feb	-6	-6	-8	-9	-10	-11	-13	-15	-16	-15	-13	-9	-6	-4	-3	-2	-2	-2	-2	-1	1	1	1	0	-6.2	0.9
9-Feb	-3	-2	-1	-1	-1	-1	-1	-2	-3	-1	0	0	0	1	1	1	-1	-3	-3	-6	-7	-10	-12	-13	-2.7	1.3
10-Feb	-15	-15	-15	-14	-13	-13	-12	-10	-9	-8	-7	-6	-5	-3	-2	-1	-1	0	3	4	4	5	5	4	-5.2	4.6
11-Feb	3	2	1	0	0	-1	-2	-3	-2	-1	0	2	2	3	3	3	2	0	0	-1	0	1	0	-1	0.5	3.3
12-Feb	-1	-2	-3	-5	-5	-4	-4	-3	-4	0	0	0	0	1	1	1	2	3	2	1	1	1	1	1	-0.6	3.2
13-Feb	1	2	1	1	0	-2	-2	-2	-3	-4	-3	-3	-2	-2	-1	-1	-2	-5	-7	-9	-11	-14	-14	-15	-4.1	1.5
14-Feb	-16	-15	-16	-17	-17	-16	-16	-14	-12	-12	-12	-11	-9	-8	-7	-6	-7	-8	-13	-11	-11	-10	-8	-6	-11.6	-6.3
15-Feb	-5	-5	-3	-4	-3	-3	-2	-2	0	4	5	5	6	6	6	6	5	5	5	4	4	4	4	4	1.9	6.3
16-Feb	4	4	4	2	1	1	0	0	-3	0	0	2	4	4	5	4	4	3	2	1	0	1	1	0	1.8	4.6
17-Feb	0	-1	-1	-2	-2	-3	-4	-6	-8	-8	-7	-7	-7	-7	-6	-6	-7	-9	-11	-13	-14	-13	-14	-14	-7.0	-0.5
18-Feb	-13	-12	-12	-11	-11	-11	-11	-11	-10	-10	-9	-7	-6	-5	-4	-4	-5	-5	-5	-6	-6	-6	-6	-6	-8.0	-4.2
19-Feb	-7	-7	-8	-8	-8	-8	-8	-8	-8	-8	-8	-7	-7	-6	-6	-6	-7	-7	-8	-8	-9	-10	-10	-10	-7.8	-5.6
20-Feb	-10	-10	-10	-10	-10	-12	-13	-13	-11	-10	-9	-7	-6	-6	-5	-3	-4	-5	-7	-10	-8	-6	-6	-6	-8.2	-3.3
21-Feb	-5	-5	-4	-4	-5	-5	-5	-4	-5	-5	-4	-3	-2	-1	0	0	0	-3	-5	-5	-5	-6	-8	-9	-4.2	-0.1
22-Feb	-8	-8	-9	-9	-10	-8	-7	-8	-11	-11	-9	-8	-7	-6	-4	-3	-3	-2	-3	-3	-4	-4	-5	-6	-6.4	-2.1
23-Feb	-6	-7	-6	-7	-7	-7	-8	-11	-11	-12	-11	-11	-10	-10	-9	-8	-8	-10	-11	-13	-14	-14	-12	-12	-9.8	-6.4
24-Feb	-11	-9	-8	-6	-7	-10	-8	-6	-6	-5	-4	-3	-2	0	1	1	1	0	-1	-1	-2	-2	-4	-6	-4.0	1.3
25-Feb	-8	-11	-11	-11	-10	-9	-8	-8	-8	-6	-5	-4	-4	-4	-2	-2	-3	-5	-5	-8	-10	-11	-11	-13	-7.2	-1.6
26-Feb	-13	-11	-10	-10	-10	-9	-9	-9	-8	-7	-7	-5	-3	-1	-1	-1	-1	-3	-6	-8	-9	-8	-8	-8	-6.9	-1.0
27-Feb	-8	-8	-7	-7	-6	-6	-6	-6	-7	-6	-5	-4	-2	-1	0	0	0	-2	-4	-7	-6	-8	-9	-9	-5.1	0.3
28-Feb	-7	-7	-7	-5	-4	-2	0	-1	-4	-3	-1	1	3	5	4	3	0	-1	-2	-2	-1	-1	0	0	-1.3	5.3
																									Diurnal Average	
																									Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C

Falher - February 2013



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	7	9	15	14	14	15	9	9	12	15	13	13	11	9	0	22	18	10	10	15	20	23	23	21	5.9	23.1
Dir	276	21	47	31	36	45	55	183	200	183	182	158	145	141	278	195	216	216	243	228	222	233	225	238	203	233
2 Spd	18	18	14	12	6	10	13	16	16	17	16	19	22	20	23	24	22	26	33	27	24	22	3	9	14.4	33.1
Dir	310	321	328	337	21	45	9	20	36	52	37	50	49	59	62	71	73	55	56	49	50	56	159	282	40	56
3 Spd	5	9	14	13	10	12	10	10	7	7	8	8	8	8	4	10	10	10	12	9	12	1	18	20	1.4	20.3
Dir	14	236	264	283	230	232	226	278	337	54	14	49	94	96	147	63	68	48	64	133	204	306	175	192	186	192
4 Spd	20	17	21	18	19	21	27	27	27	29	37	35	27	26	24	19	21	17	8	12	18	16	19	18	19.5	37.0
Dir	194	195	196	203	206	217	235	235	249	240	245	244	226	233	228	222	238	240	231	212	162	167	158	157	219	245
5 Spd	12	10	11	14	15	13	13	13	15	12	11	11	15	16	17	16	21	16	15	12	12	11	11	9	7.5	20.9
Dir	149	37	68	74	72	41	13	355	28	9	10	2	323	318	304	287	276	282	302	281	294	286	315	36	339	276
6 Spd	10	11	7	5	12	16	17	11	12	13	14	14	7	7	7	6	6	4	9	9	9	10	10	7	6.8	17.0
Dir	8	343	19	353	5	28	41	48	45	30	40	73	150	212	157	154	238	94	38	36	35	36	37	35	38	41
7 Spd	7	6	6	7	6	8	6	5	5	6	4	4	4	1	5	2	6	7	10	13	11	8	8	10	3.0	12.6
Dir	52	349	355	7	8	8	2	19	14	34	155	205	217	188	231	263	245	293	35	39	49	75	126	114	32	39
8 Spd	13	10	10	6	9	3	8	11	10	10	12	13	17	21	18	19	21	20	19	25	23	17	27	22	9.5	27.5
Dir	137	184	255	198	173	173	15	28	31	53	59	77	139	144	145	161	179	175	181	192	190	205	214	214	170	214
9 Spd	15	14	13	11	8	14	23	21	22	25	28	22	23	21	22	18	8	7	8	7	13	11	11	11	10.8	28.4
Dir	211	234	276	282	232	251	248	241	238	256	258	263	256	261	267	288	293	285	289	34	70	77	54	39	261	258
10 Spd	11	13	16	19	17	19	20	22	30	32	34	33	30	28	29	27	23	20	31	34	35	38	38	29	12.7	38.5
Dir	47	42	38	31	41	43	63	87	100	109	112	120	119	131	135	127	127	181	201	200	215	221	233	232	138	233
11 Spd	34	29	25	24	23	22	21	22	24	21	18	22	28	28	28	24	29	24	22	18	23	25	21	23	23.6	34.0
Dir	229	225	219	215	215	213	216	218	225	221	219	226	237	239	244	241	245	240	224	212	219	220	219	214	226	229
12 Spd	24	23	20	15	19	18	18	15	13	24	20	18	17	18	18	19	17	20	24	18	16	17	19	19	15.7	24.1
Dir	215	215	214	187	173	173	163	162	149	194	195	178	160	133	133	129	154	250	237	222	178	184	221	210	187	215
13 Spd	19	24	17	25	33	44	55	47	36	36	31	28	29	31	30	29	22	10	14	8	8	12	13	13	21.6	55.4
Dir	228	243	233	243	248	235	244	249	241	237	240	227	239	243	248	251	247	211	206	211	75	65	100	42	239	244
14 Spd	14	11	8	11	12	7	5	6	10	7	11	13	14	10	7	9	12	17	13	17	19	22	24	26	11.5	25.6
Dir	70	110	88	40	48	59	118	104	124	128	127	94	129	111	154	144	101	100	59	100	101	97	113	117	101	117
15 Spd	26	28	29	30	27	22	20	17	17	25	26	22	21	29	35	31	23	21	23	27	28	21	21	29	16.4	35.3
Dir	124	114	128	119	125	118	139	174	211	237	237	235	232	236	243	245	234	226	231	234	226	221	220	219	204	243
16 Spd	28	25	21	18	18	18	9	3	11	13	19	18	21	26	18	16	22	18	18	18	16	16	30	16	14.9	30.2
Dir	224	226	224	196	202	211	272	73	158	190	190	206	239	246	251	256	266	257	275	295	287	255	271	298	240	271
17 Spd	21	22	23	23	19	20	23	22	19	22	19	18	16	15	13	12	13	13	17	16	15	16	18	21	10.2	23.5
Dir	238	241	244	249	288	315	303	297	286	295	304	294	293	319	346	14	45	66	34	46	38	40	23	22	316	244
18 Spd	22	24	30	26	28	31	29	30	30	28	28	26	25	25	26	27	31	26	28	28	26	26	30	29	26.4	31.3
Dir	26	22	30	32	37	35	36	36	39	46	49	63	75	73	74	71	67	62	61	62	62	56	56	56	51	67
19 Spd	29	29	31	31	28	27	26	25	23	21	16	9	10	10	14	13	15	13	12	11	8	7	7	4	9.2	31.3
Dir	52	48	47	48	46	47	47	45	43	44	62	33	319	278	255	261	263	261	268	278	284	273	229	270	26	47
20 Spd	8	9	15	13	17	20	22	23	26	25	25	18	20	19	17	17	24	26	24	25	24	29	29	28	17.4	29.3
Dir	34	66	56	40	41	31	23	28	37	45	55	90	103	99	105	117	119	112	83	55	83	119	118	108	77	119
21 Spd	27	28	30	30	30	28	24	26	27	27	22	25	24	22	22	22	20	18	25	28	29	25	16	18	22.7	30.0
Dir	112	114	121	125	120	114	113	108	107	113	98	110	114	124	130	133	131	101	69	63	66	70	51	63	104	125
22 Spd	19	18	17	17	19	17	28	24	26	30	30	29	29	28	26	21	21	20	21	24	27	27	23	20	22.5	30.2
Dir	78	88	82	73	73	68	101	64	36	38	46	54	64	70	76	88	79	99	79	69	64	70	74	68	69	46

Hourly Averages

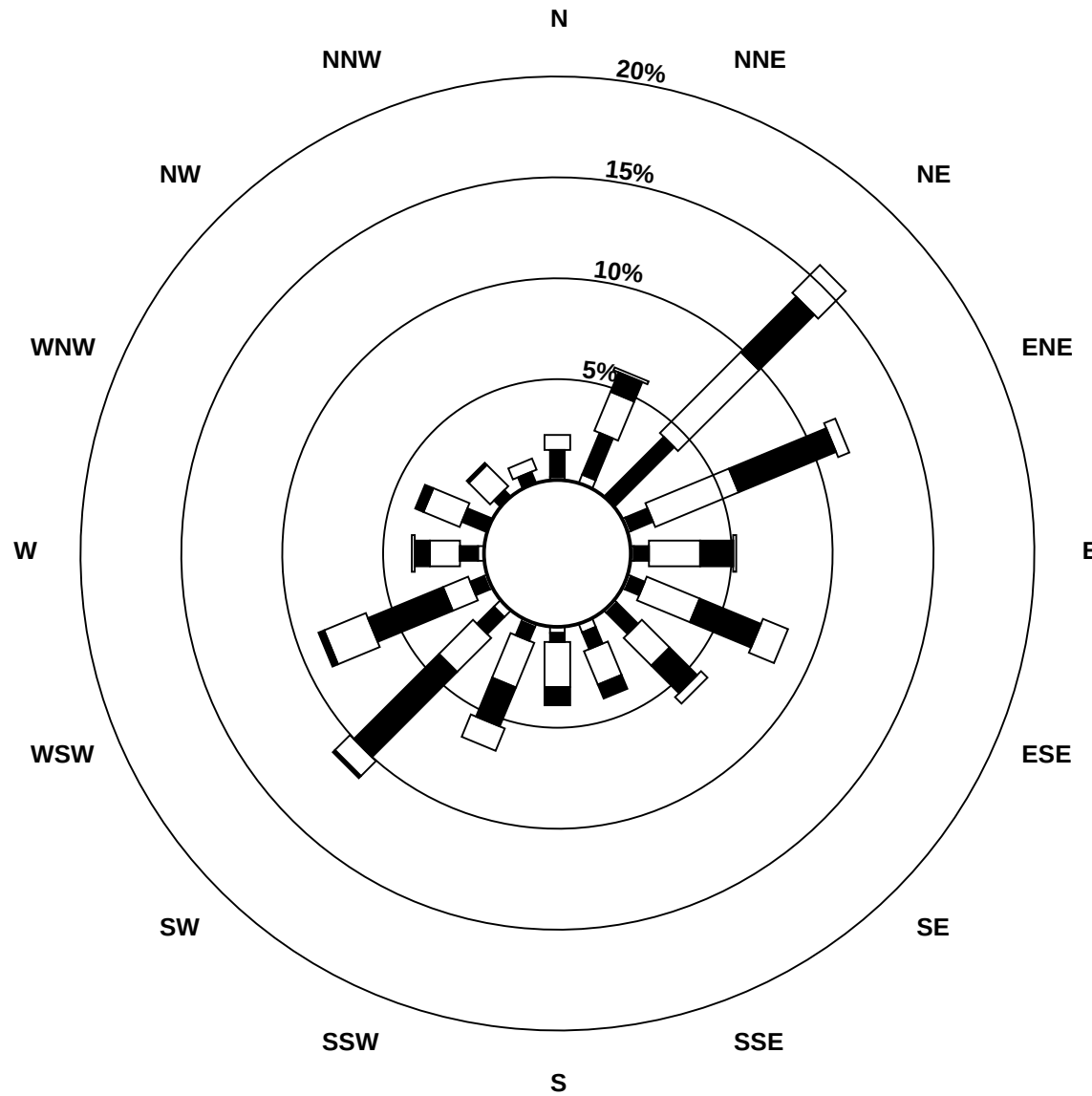
Wind Speed (km/h)
Wind Direction (deg)
Falher - February 2013

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
23 Spd	20	13	9	13	21	24	30	32	32	29	29	29	25	25	22	13	13	8	3	14	15	16	15	17	10.9	31.8		
Dir	63	77	164	219	216	211	207	200	196	195	198	200	205	207	213	216	226	222	126	68	55	39	38	41	193	200		
24 Spd	16	13	19	24	21	15	19	19	20	21	23	22	22	18	16	13	19	16	15	14	12	10	11	4	11.8	24.2		
Dir	64	119	145	153	149	114	120	126	119	116	128	128	122	123	106	116	177	229	260	271	223	246	133	225	139	153		
25 Spd	11	12	11	10	11	13	13	14	13	17	18	16	11	10	9	11	14	15	14	11	11	7	10	3	9.4	17.6		
Dir	29	48	56	22	24	21	24	352	347	39	44	45	19	19	11	329	317	324	307	293	313	35	41	237	9	44		
26 Spd	11	13	13	13	13	13	13	12	12	15	20	16	13	11	12	14	11	11	12	13	15	19	20	21	12.7	21.5		
Dir	341	43	62	59	96	64	64	31	25	58	66	68	88	89	99	101	79	53	52	45	40	43	40	43	58	43		
27 Spd	25	26	26	26	26	25	24	24	19	16	15	18	17	15	14	14	15	17	18	15	16	11	13	17	16.3	26.5		
Dir	49	49	48	54	60	60	59	64	65	78	102	124	134	137	119	119	110	95	110	114	141	116	81	89	84	60		
28 Spd	19	16	20	24	24	21	18	22	22	23	22	19	18	12	7	11	19	19	23	27	27	28	21	14	12.5	28.3		
Dir	113	91	114	137	148	168	190	169	163	185	206	228	240	239	200	142	104	95	79	79	75	81	97	68	133	81		
Spd	3.5	2.9	3.8	3.7	4.7	3.6	2.1	1.9	2.9	3.1	3.5	5.0	5.5	5.1	4.8	5.1	4.7	2.9	1.8	2.9	4.2	4.7	4.3	3.3	Diurnal Average			
Dir	106	98	102	100	110	89	96	90	97	122	132	142	163	173	178	165	171	161	91	96	109	108	135	118	Diurnal Maximum			
Spd	34.0	29.4	31.3	31.2	33.1	44.0	55.4	46.6	36.3	36.4	37.0	35.0	30.4	30.9	35.3	30.8	31.3	26.3	33.1	33.7	34.7	38.3	38.5	28.7	Diurnal Maximum			
Dir	229	225	47	48	248	235	244	249	241	237	245	244	119	243	243	245	67	62	56	200	215	221	233	219	Diurnal Maximum			
Maximum Speed Value: 55 km/h on Feb 13 07:00																				Minimum Speed Value: 0 km/h on Feb 1 15:00				Hours in Service:				672
Maximum Daily Speed Average: 26.4 km/h on Feb 18																				Minimum Daily Speed Average: 1.4 km/h on Feb 7				Hours of Data:				672
Maximum Diurnal Speed Average: 5.5 km/h at hour 13																				Minimum Diurnal Speed Average: 1.8 km/h at hour 19				Hours of Missing Data:				0
Monthly Average Velocity: 3.26 km/h 128.0 deg																				Speed Percentiles: P ₁ = 3.2 P ₁₀ = 8.4 Q ₁ = 12.2 Median = 17.8 Q ₃ = 23.7 P ₉₀ = 28.4 P ₉₉ = 36.2				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	2		19		14		2		0		0		37															
NorthEast	0		34		65		46		21		0		166															
East	2		10		40		37		6		0		95															
SouthEast	3		13		27		34		11		0		88															
South	3		7		23		19		7		0		59															
SouthWest	4		16		29		66		21		4		140															
West	3		10		25		12		5		1		56															
NorthWest	1		6		19		5		0		0		31															
Total	18		115		242		221		71		5		672															

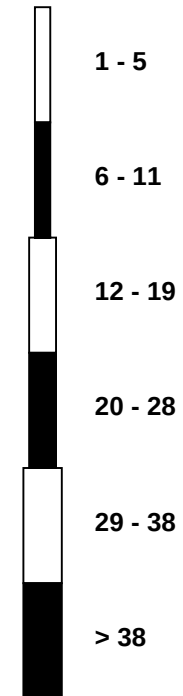
Wind Rose

Wind Speed (WS) (km/h)

Falher - February 2013



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Falher - February 2013

Maximum Speed: 55 km/h on Feb 13 07:00																			Maximum Daily Speed Average: 27.5 km/h on Feb 18										Hours in Service: 672	
Minimum Speed: 5 km/h on Feb 7 12:00																			Minimum Daily Speed Average: 7.3 km/h on Feb 7										Hours of Data: 672	
Maximum Diurnal Speed Average: 20.7 km/h at hour 11																			Minimum Diurnal Speed Average: 16.7 km/h at hour 18										Hours of Missing Data: 0	
Monthly Average Speed: 18.51 km/h																			Percentiles: P ₁ = 5.5 P ₁₀ = 9.7 Q ₁ = 12.5 Median = 18.0 Q ₃ = 23.9 P ₉₀ = 28.5 P ₉₉ = 36.3										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-Feb	7	10	15	15	14	15	10	9	13	15	13	13	11	11	8	22	18	10	11	16	20	23	23	21	14.3	23.4				
2-Feb	20	18	14	13	7	10	13	16	16	17	17	19	22	20	23	24	22	26	33	27	24	22	12	11	18.6	33.1				
3-Feb	6	11	15	13	11	12	11	10	9	7	9	9	8	9	7	11	11	10	13	10	13	8	19	20	10.9	20.3				
4-Feb	20	17	21	18	19	21	27	28	27	29	38	35	27	26	25	19	22	18	10	12	18	16	19	18	22.1	37.7				
5-Feb	13	10	11	14	15	13	13	13	15	12	12	12	15	16	17	16	21	17	15	12	12	12	11	9	13.6	21.0				
6-Feb	10	11	12	7	12	16	17	11	12	13	14	14	10	8	8	7	6	7	9	9	9	10	10	8	10.4	17.1				
7-Feb	7	7	6	7	7	8	6	6	6	6	5	5	5	5	5	6	8	10	12	13	11	9	8	11	7.3	13.1				
8-Feb	14	11	10	7	10	6	8	11	10	10	12	14	18	21	18	20	21	20	19	25	23	18	28	22	15.6	27.5				
9-Feb	15	15	15	12	9	14	23	21	22	25	28	22	23	21	23	18	11	8	10	8	13	12	11	12	16.3	28.4				
10-Feb	11	13	16	19	17	19	20	22	30	32	34	33	30	28	29	27	23	22	31	34	35	39	39	29	26.3	38.6				
11-Feb	34	29	25	24	23	22	21	22	24	21	18	22	28	28	28	24	29	24	22	18	23	25	21	23	24.0	34.0				
12-Feb	24	23	20	16	19	18	18	15	14	24	20	18	17	18	18	19	19	22	24	19	16	18	19	19	19.0	24.2				
13-Feb	20	24	17	25	34	44	55	47	37	36	32	28	29	31	30	29	22	10	14	9	11	13	13	13	25.9	55.5				
14-Feb	15	12	10	11	12	10	11	8	11	9	12	13	14	10	9	10	13	17	15	18	19	22	24	26	13.7	25.6				
15-Feb	26	28	29	30	27	22	20	18	18	25	26	22	21	29	35	31	23	21	23	27	28	21	21	29	25.1	35.3				
16-Feb	28	25	21	18	18	18	11	8	12	13	19	19	21	26	18	16	22	18	19	18	17	16	31	17	18.7	31.0				
17-Feb	21	22	24	23	22	20	23	22	19	22	19	19	17	15	13	12	13	14	18	16	15	16	18	21	18.5	23.5				
18-Feb	22	24	30	26	28	31	29	30	30	28	28	26	25	25	26	27	31	26	28	28	26	26	30	29	27.5	31.4				
19-Feb	29	29	31	31	28	27	26	25	23	21	17	10	10	11	14	13	15	13	12	11	8	7	7	5	17.6	31.3				
20-Feb	9	10	15	13	17	20	22	23	26	25	25	19	21	19	17	17	24	26	25	25	26	29	29	28	21.2	29.4				
21-Feb	27	28	30	30	30	28	24	26	27	27	23	25	24	22	22	22	20	19	25	28	29	25	16	19	24.9	30.1				
22-Feb	19	18	18	17	19	18	29	25	26	30	30	29	29	28	26	21	21	20	21	24	27	27	23	20	23.6	30.2				
23-Feb	20	14	12	13	21	24	30	32	32	29	29	29	25	25	22	13	13	10	7	15	15	16	15	18	19.9	31.9				
24-Feb	16	14	19	24	22	15	19	19	20	21	23	22	22	18	16	14	20	17	16	15	12	10	12	8	17.3	24.3				
25-Feb	11	12	12	10	11	13	13	14	14	17	18	16	12	10	9	11	14	15	14	12	12	10	10	9	12.5	17.7				
26-Feb	12	13	13	14	13	13	13	13	12	15	20	17	13	11	12	14	11	11	12	13	15	19	20	21	14.2	21.5				
27-Feb	25	26	26	26	27	25	25	24	19	16	16	18	17	15	15	14	15	17	18	15	16	12	14	17	19.1	26.5				
28-Feb	19	16	21	24	24	23	20	22	22	23	22	19	18	12	8	13	19	20	23	27	27	28	22	14	20.3	28.5				
17.9 17.5 18.1 17.9 18.4 18.7 19.9 19.2 19.4 20.3 20.7 19.5 19.0 18.4 17.9 17.6 18.2 16.7 17.8 17.9 18.6 18.1 18.8 17.7																									Diurnal Average					
34.0 29.4 31.3 31.2 33.6 44.2 55.5 46.6 36.5 36.4 37.7 35.1 30.4 30.9 35.3 30.9 31.4 26.3 33.1 33.7 34.8 38.6 38.6 28.8																									Diurnal Maximum					
All monthly, daily, and diurnal averages have been calculated using scalar methods																														

Hourly Standard Deviations

Wind Direction (WD) - deg

Falher - February 2013

Maximum Value: 86.9 deg on Feb 3 22:00																		Hours in Service: 672									
Minimum Value: 1.1 deg on Feb 18 19:00																		Hours of Data: 672									
Percentiles: P ₁ = 1.3 P ₁₀ = 2.2 Q ₁ = 3.5 Median = 7.0 Q ₃ = 13.3 P ₉₀ = 25.6 P ₉₉ = 77.1																		Hours of Missing Data: 0									
																		Hours of Calibration: 0									
																		Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																										Daily Maximum
1-Feb	28	34	8	8	4	2	18	22	16	13	12	6	14	43	86	15	5	11	30	10	5	9	4	5			85.9
2-Feb	25	5	7	14	45	9	15	7	8	5	9	7	3	4	4	7	5	5	3	4	3	7	76	35			76.1
3-Feb	57	37	17	11	22	8	8	18	42	18	29	26	8	22	63	24	6	11	17	33	18	87	17	4			86.9
4-Feb	3	4	4	7	4	2	10	4	5	12	11	5	4	5	5	7	9	16	37	6	11	5	5	5			37.0
5-Feb	10	29	10	19	15	12	14	7	8	12	9	25	5	8	4	6	3	9	5	10	11	10	10	12			29.3
6-Feb	19	18	80	63	11	5	4	9	7	9	13	6	52	24	16	26	30	55	11	13	16	9	17	25			79.7
7-Feb	12	27	23	12	19	7	8	18	16	14	27	17	40	81	24	85	66	43	32	18	13	16	15	13			85.5
8-Feb	15	35	8	35	22	71	6	7	5	8	8	20	12	5	2	11	4	3	7	3	2	14	2	2			70.7
9-Feb	5	15	37	12	29	13	4	5	11	4	2	4	2	3	6	7	57	15	35	36	6	15	13	12			56.9
10-Feb	9	12	11	4	10	3	10	8	3	4	4	2	3	4	2	4	7	27	3	3	3	7	5	5			27.0
11-Feb	2	2	2	2	2	2	2	2	1	4	5	4	3	2	3	4	2	5	2	4	3	2	1	1			4.8
12-Feb	1	1	1	13	5	6	1	13	23	13	8	7	10	6	4	2	27	29	7	10	13	13	8	6			29.5
13-Feb	4	5	8	5	9	6	3	3	6	2	3	5	6	3	3	3	14	8	3	13	46	12	10	10			46.4
14-Feb	19	12	28	9	4	41	63	36	11	48	9	8	7	10	38	22	22	8	25	25	10	4	3	2			62.8
15-Feb	5	7	4	5	6	5	14	20	12	2	4	3	2	2	2	3	7	3	8	5	2	3	4	2			20.4
16-Feb	2	2	5	7	10	6	40	78	26	11	5	12	5	2	3	6	3	4	14	4	6	11	13	23			77.8
17-Feb	8	4	4	3	27	6	4	5	6	8	9	9	15	10	13	12	17	10	14	9	5	13	5	3			26.7
18-Feb	2	4	3	2	2	2	2	2	1	1	4	5	4	2	1	2	3	2	1	1	1	3	2	2			4.7
19-Feb	2	2	2	2	2	2	2	2	2	3	5	34	9	14	3	6	5	7	3	9	6	11	11	44			44.0
20-Feb	13	32	14	9	3	4	2	4	3	3	4	20	6	6	6	2	3	4	15	3	19	3	4	2			31.8
21-Feb	1	2	2	3	4	2	3	2	1	3	18	7	4	3	2	4	4	21	4	2	2	5	15	10			20.8
22-Feb	2	3	8	6	4	11	7	16	3	2	2	3	4	2	6	4	4	10	4	6	3	4	3	12			15.9
23-Feb	3	18	39	6	7	6	4	3	3	2	4	3	4	5	7	16	10	32	68	11	10	11	7	9			67.6
24-Feb	9	23	2	4	11	6	7	4	3	6	2	3	2	14	13	20	16	15	10	7	18	25	19	61			61.1
25-Feb	13	14	20	11	12	14	10	19	21	6	5	3	18	14	12	8	7	6	4	7	19	44	20	77			77.2
26-Feb	27	10	4	12	16	9	8	9	11	10	5	4	7	11	7	5	16	7	4	9	3	2	1	3			27.3
27-Feb	1	2	1	4	3	2	1	4	6	11	19	3	8	9	7	13	5	3	3	3	13	24	17	12			24.1
28-Feb	8	4	12	9	5	26	23	5	11	6	8	5	8	11	27	38	5	12	4	2	2	7	11	18			38.0
	57.4	36.9	79.7	62.8	45.1	70.7	62.8	77.8	42.1	48.4	28.5	34.0	52.3	81.1	85.9	85.5	65.6	54.5	67.6	36.1	46.4	86.9	76.1	77.2			

PAZA

ALBERTA ENVIRONMENT AND SUSTAINABLE RESOURCES INCIDENCE REPORT

February 2013

Air Monitoring Directive Exceedence Report

Alberta Environment and Sustainable Resource Development
 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:	268261	Reported To (AENV Contact):	Nancy
Date & Time Incident Reported to AENV:	March 21 st , 2013	Reported By:	Focus-Patrick Andersen
Reported on Behalf of:	PAZA	Approval Number (if applicable):	Not applicable
Location(s) of Incident:	Henry Pirker Air Quality Station		
Start Date & Time of Incident:	February 1, 2012 00:00 MST	End Date & Time of Incident:	March 1, 2013 01:00 MST
Reason or Nature of Incident:			
The THC analyzer was repaired on February 8 th and replaced on February 24 th .			
Immediate Actions Taken:			
Analyzer replacement and repair.			
Investigation Details:			
Not applicable			
Actions Taken to Prevent Reoccurrence (if any):			
Not applicable			
Additional Actions Required (if any):			
Not applicable			
Report Completed By:	Patrick	Date Report Submitted:	March 21 st , 2013
7-Day Letter Due Date:	March 28 th , 2013		

Air Monitoring Directive Exceedence Report

Alberta Environment and Sustainable Resource Development
 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:	268262	Reported To (AENV Contact):	Nancy
Date & Time Incident Reported to AENV:	March 21 st , 2013	Reported By:	Focus-Patrick Andersen
Reported on Behalf of:	PAZA	Approval Number (if applicable):	Not applicable
Location(s) of Incident:	Sunset House Air Quality Station		
Start Date & Time of Incident:	February 1, 2012 00:00 MST	End Date & Time of Incident:	March 1, 2013 01:00 MST
Reason or Nature of Incident:			
The Ozone analyzer flow sensor failed on February 19 th and was repaired on February 25 th .			
Immediate Actions Taken:			
Repair of part. Replacement is scheduled when part received.			
Investigation Details:			
Not applicable			
Actions Taken to Prevent Reoccurrence (if any):			
Not applicable			
Additional Actions Required (if any):			
Not applicable			
Report Completed By:	Patrick	Date Report Submitted:	March 21 st , 2013
7-Day Letter Due Date:	March 28 th , 2013		

PAZA

Monthly Passive Data Summary

[illegible]

PAZA Passive Results for February 2013

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
20a	Shaftesbury	0.5	32.3	0.2		
20b	Shaftesbury	0.5	35.4	0.2		
24a	Wembley	0.1	44.2	0.8		
24b	Wembley	0.2	46.0	0.5		
28a	Clairmont Lake	0.3	52.5	0.8		
28b	Clairmont Lake	0.3	47.8	0.5		
30a	Fitzsimmons	0.2	39.4	0.6		
30b	Fitzsimmons	0.2	45.0	0.4		
35a	Jean Cote	0.5	42.3	0.3		
35b	Jean Cote	0.5	44.0	BDL		
41a	Valleyview	0.1	43.1	0.5		
41b	Valleyview	0.2	41.9	0.4		
64a	Girouxville 4				0.2	
64b	Girouxville 4				0.1	

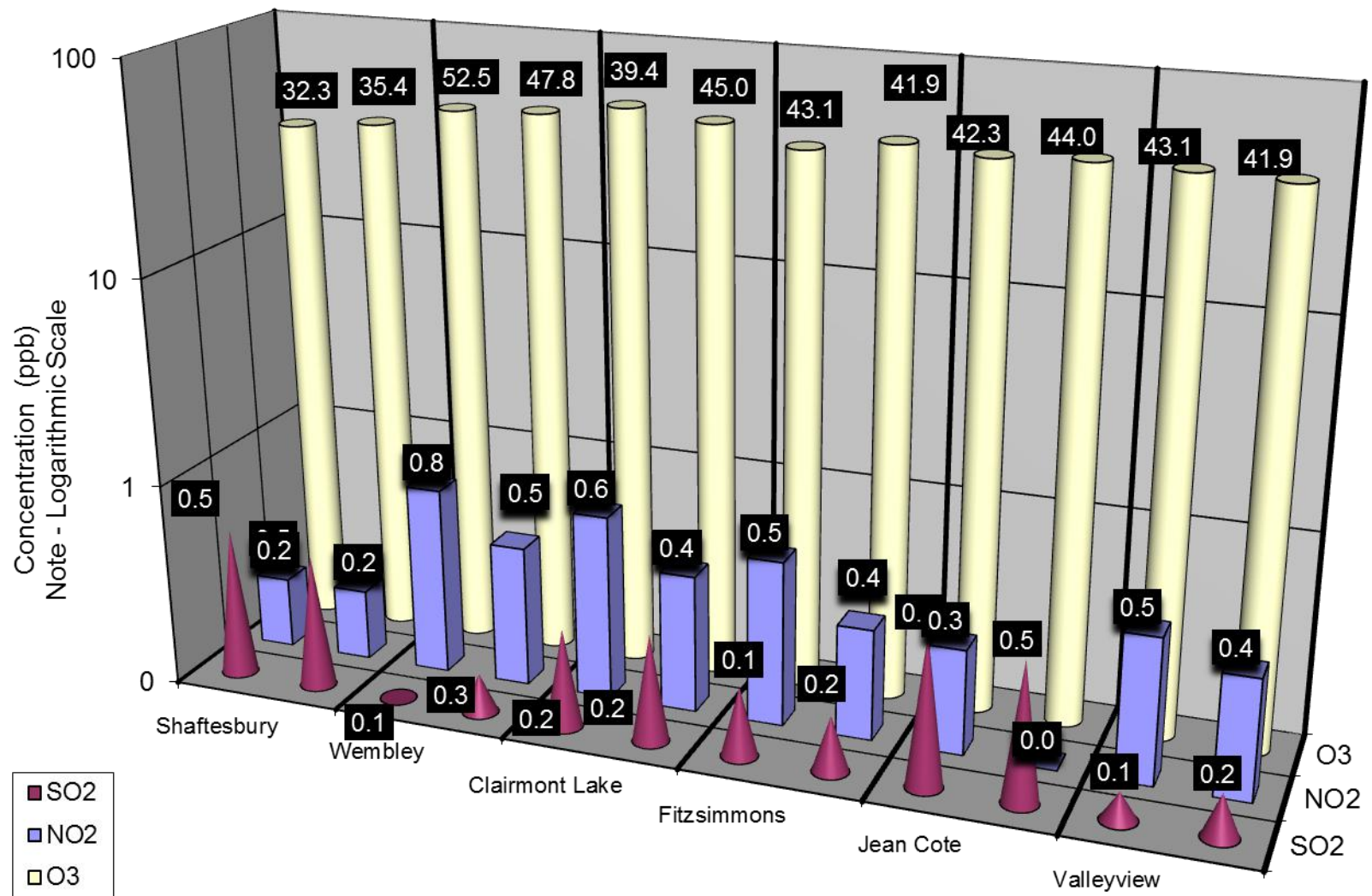
1	Silver Valley	0.3	56.1	0.4		08-27-081-11 W6M
2	Bay Tree	0.2	44.6	BDL		13-16-078-13 W6M
3	Fourth Creek	0.2	43.6	BDL		04-13-082-07 W6M
4	Gordondale	0.3	48.8	BDL		04-34-078-10 W6M
5	Boone Creek	0.2	48.1	BDL		16-36-074-11 W6M
7	Steeprock Creek	0.2	48.2	BDL		09-35-072-13 W6M
9	Spirit River	0.3	41.4	0.3		08-12-079-07 W6M
10	Woking	0.5	41.2	BDL		01-13-076-07 W6M
11	Webber Creek	0.4	41.8	1.6		09-36-074-09 W6M
12	Hythe	0.2	43.8	0.4		14-36-072-11 W6M
14	Sylvester	BDL	37.8	BDL		08-06-069-12 W6M
16	Beaverlodge	0.2	38.5	0.8		15-36-071-10 W6M
17	Poplar	0.3	44.3	0.6		13-06-073-08 W6M
18	Saddle Hills	0.5	51.6	0.2		04-25-074-07 W6M
19	Wanham	0.3	51.4	BDL		16-22-077-03 W6M
20	Shaftesbury	0.5	33.8	0.2		04-03-082-23 W5M
21	Eaglesham	0.3	41.2	BDL		16-21-079-25 W5M
23	Bear Lake	0.4	48.1	0.6		15-31-072-06 W6M

PAZA Passive Results for February 2013 (Continued)

24	Wembley	0.1	45.1	0.7		12-31-070-08 W6M
25	Pinto Creek	0.2	38.4	0.2		04-24-069-11 W6M
26	Flyingshot	0.1	39.8	1.3		15-36-070-07 W6M
27	Grande Prairie I	0.2	31.6	5.9		08-15-071-06 W6M
28	Clairmont Lake	0.3	50.1	0.6		09-06-073-04 W6M
29	Smoky Heights	0.7	46.1	0.8		04-06-075-02 W6M
30	Fitzsimmons	0.2	42.2	0.5		15-36-072-03 W6M
32	Gold Creek	0.2	35.4	1.2		06-33-067-05 W6M
33	Wapiti	0.1	46.7	0.5		02-25-071-03 W6M
34	Puskwaskau	0.2	43.1	0.1		15-35-074-25 W5M
35	Jean Cote	0.5	43.1	0.3		12-35-079-21 W5M
36	Guy	0.3	46.5	0.3		03-04-076-22 W5M
37	Crooked Creek	0.1	47.9	0.5		16-01-071-26 W5M
38	Karr Creek	BDL	38.6	0.5		10-16-065-02 W6M
39	Clouston Creek	0.1	43.0	0.3		12-01-073-22 W5M
40	McLennan	0.5	43.5	0.3		03-29-077-19 W5M
41	Valleyview	0.1	42.5	0.5		09-30-069-22 W5M
42	Sunset House	0.3	48.0	0.2		05-32-070-19 W5M
43	High Prairie	0.2	47.4	1.0		16-13-074-17 W5M
44	Peavine	0.2	46.6	BDL		03-05-079-15 W5M
45	Gift Lake	0.1	39.6	0.6	0.2	10-07-079-12 W5M
46	Little Smoky	0.2	35.4	2.3		12-01-065-21 W5M
47	Kinuso	0.1	40.7	0.4		12-10-073-10 W5M
48	Deer Mountain	0.2	44.2	0.3		15-22-068-09 W5M
49	Grande Prairie HP	0.2	29.6	7.8		17-26-071-06 W6M
62	East Prairie	0.1	41.4	BDL		13-02-072-15 W5M
63	Girouxville 3				0.2	14-02-077-23 W5M
64	Girouxville 4				0.2	4-08-077-22 W5M

*BDL = Below Detection Level

*N/S - No sample



Duplicate Summary Chart

Passive Summary for February 2013

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

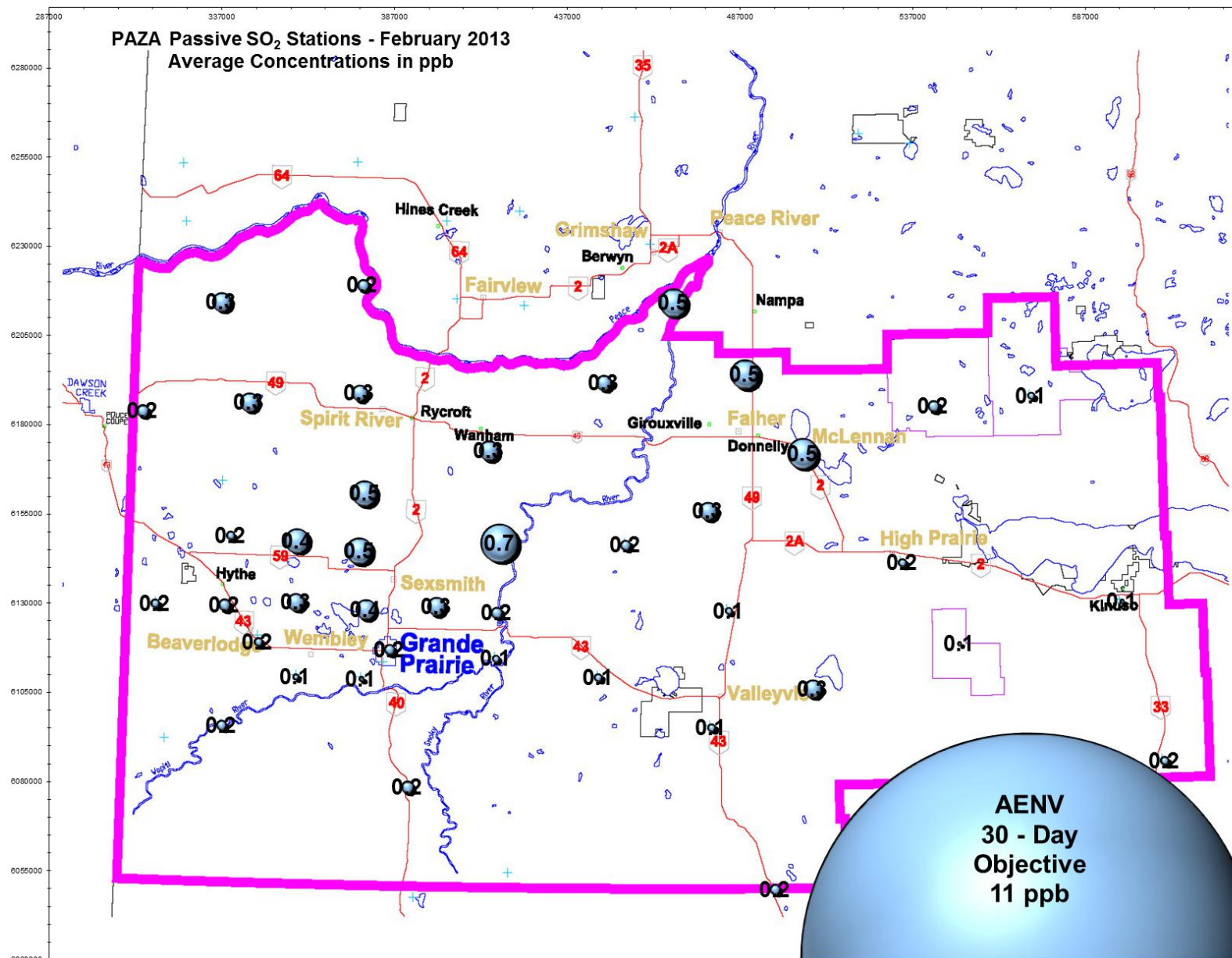
Passive Summary for February 2013 (PAZA Zone)				
Mean	0.3	43.2	1.0	0.2
Standard Deviation	0.1	5.4	1.6	0.0
Minimum	0.1	29.6	0.1	0.2
Minimum At	East Prairie (#62)	Grande Prairie HP	Puskwaskau (#34)	Gift Lake (#45)
Maximum	0.7	56.1	7.8	0.2
Maximum At	Smoky Heights (#29)	Silver Valley (#1)	Grande Prairie HP	Girouxville 3 (#63)

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

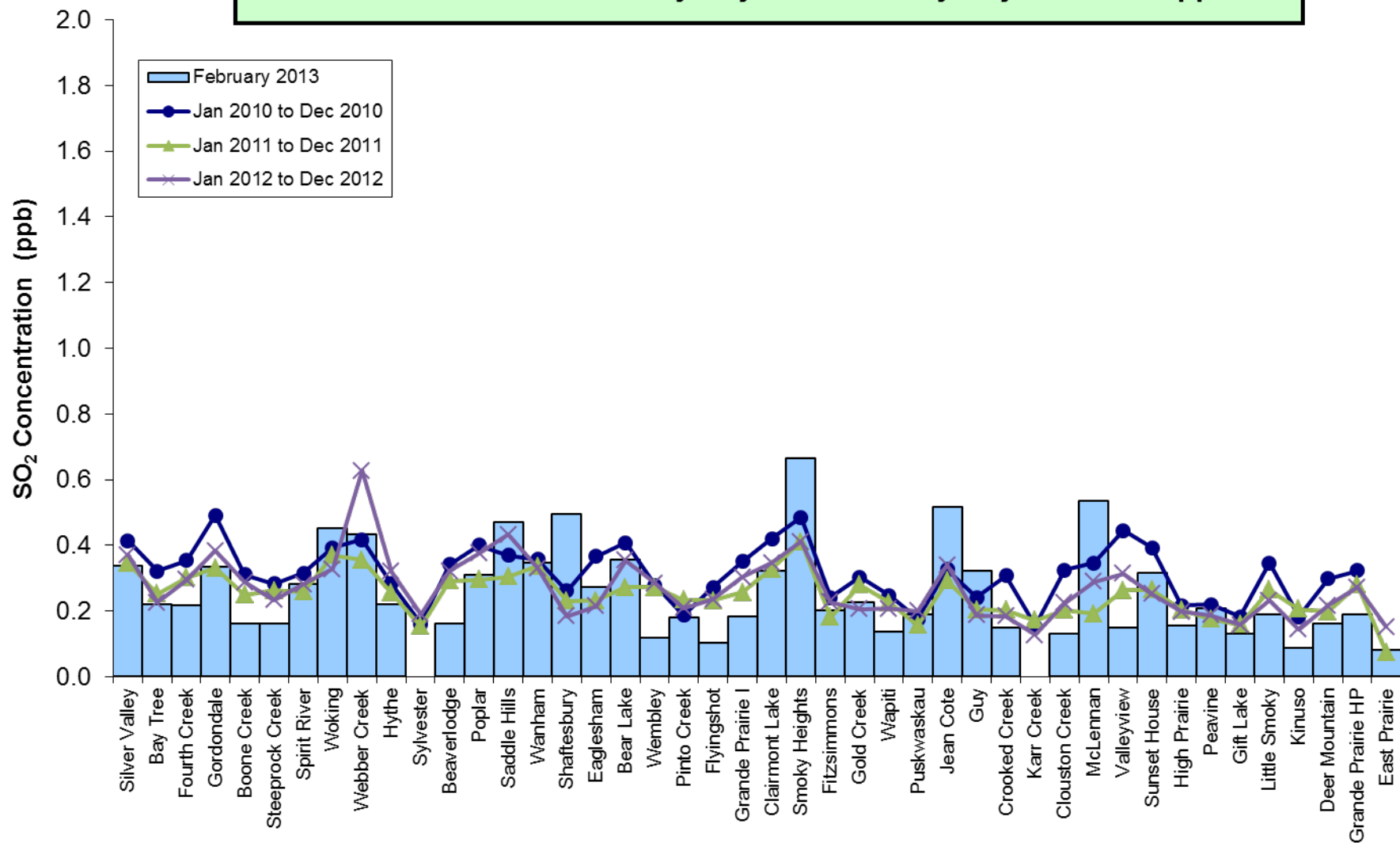
	SO ₂	O ₃	NO ₂
PAZA Beaverlodge station	0.2	37.0	3.9
PAZA Beaverlodge passive	0.2	38.5	0.8

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

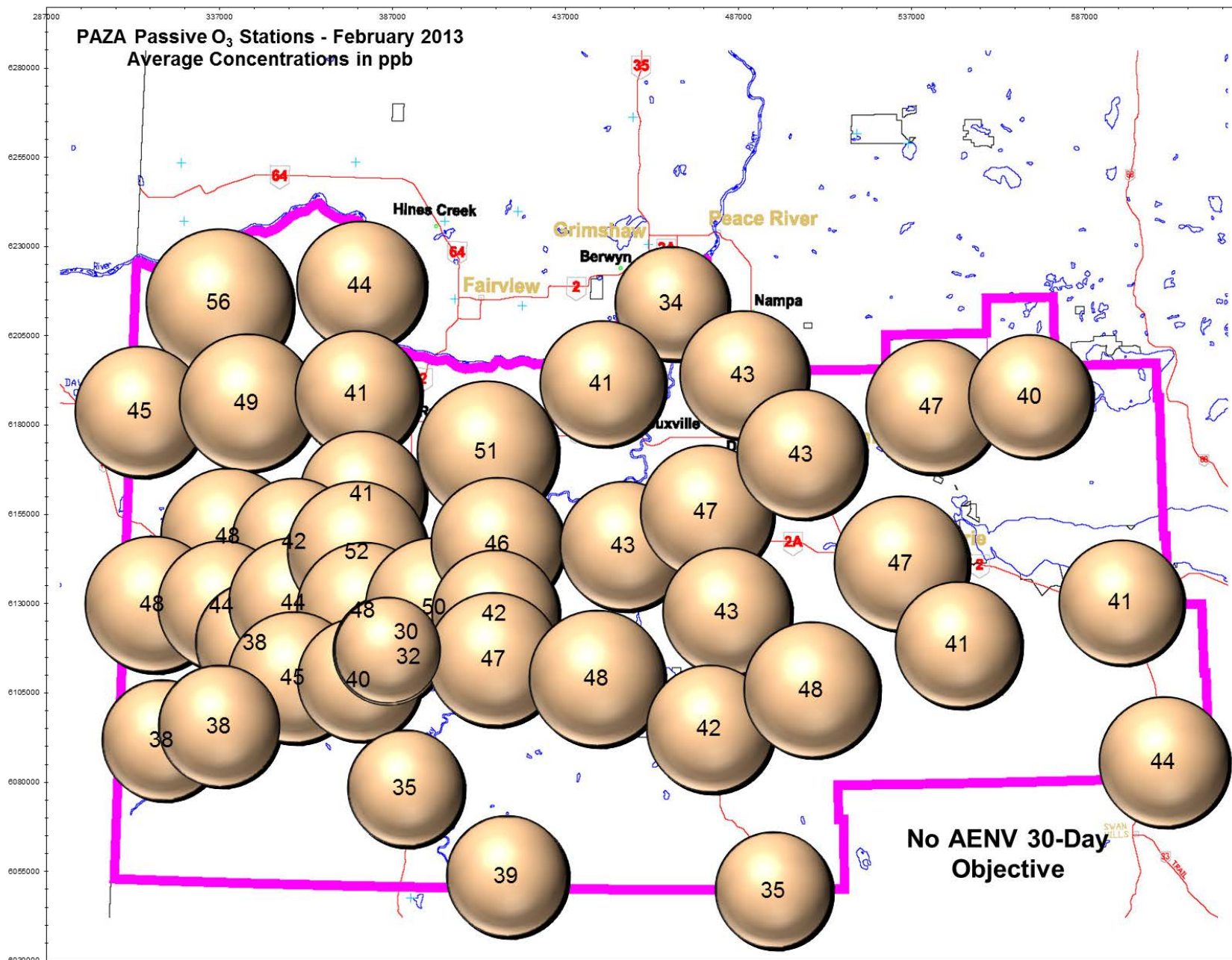
	SO ₂	O ₃	NO ₂
PAZA Henry Pirker station	0.3	25.6	15.2
PAZA Grande Prairie passive	0.2	29.6	7.8



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

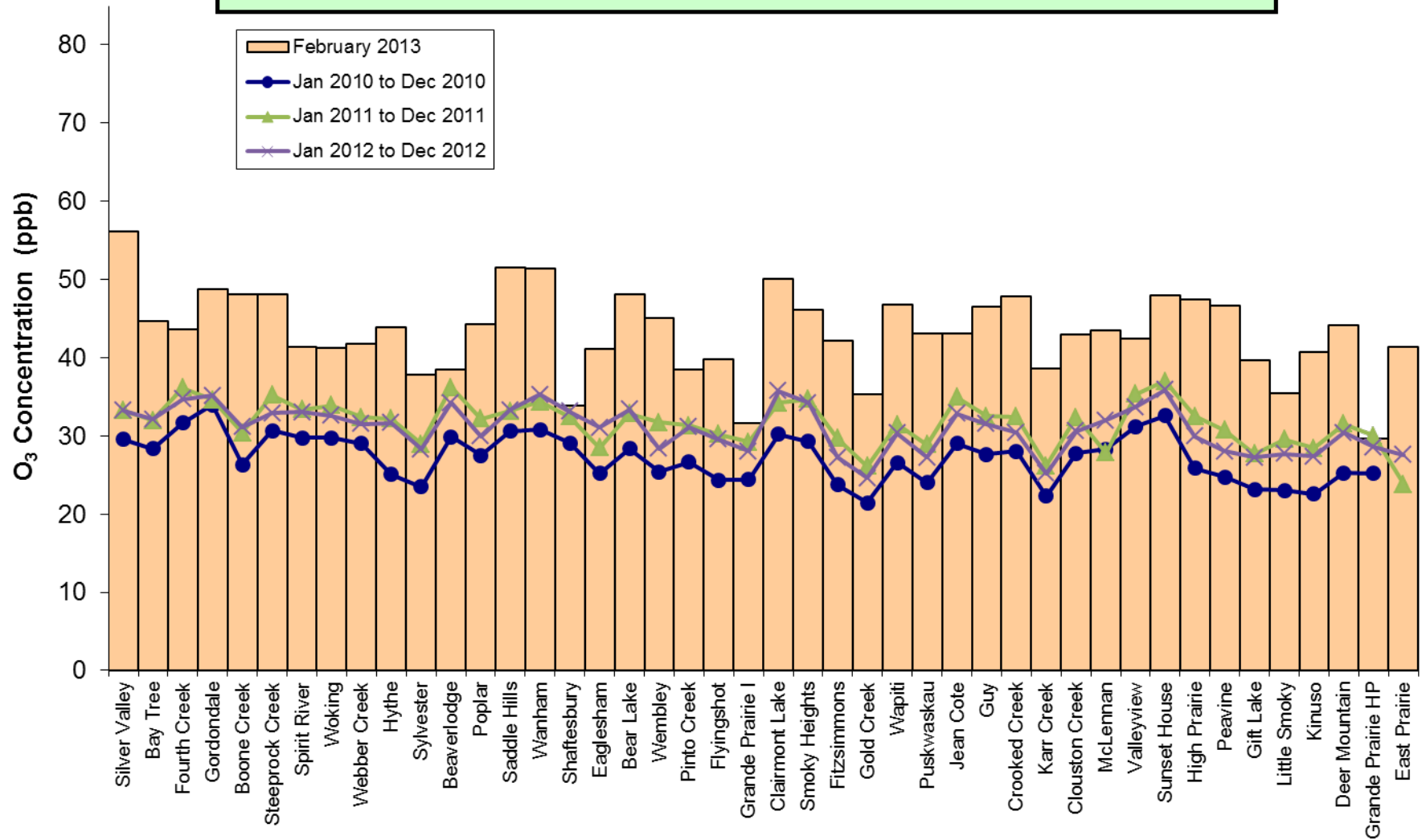


SO₂ Summary Chart

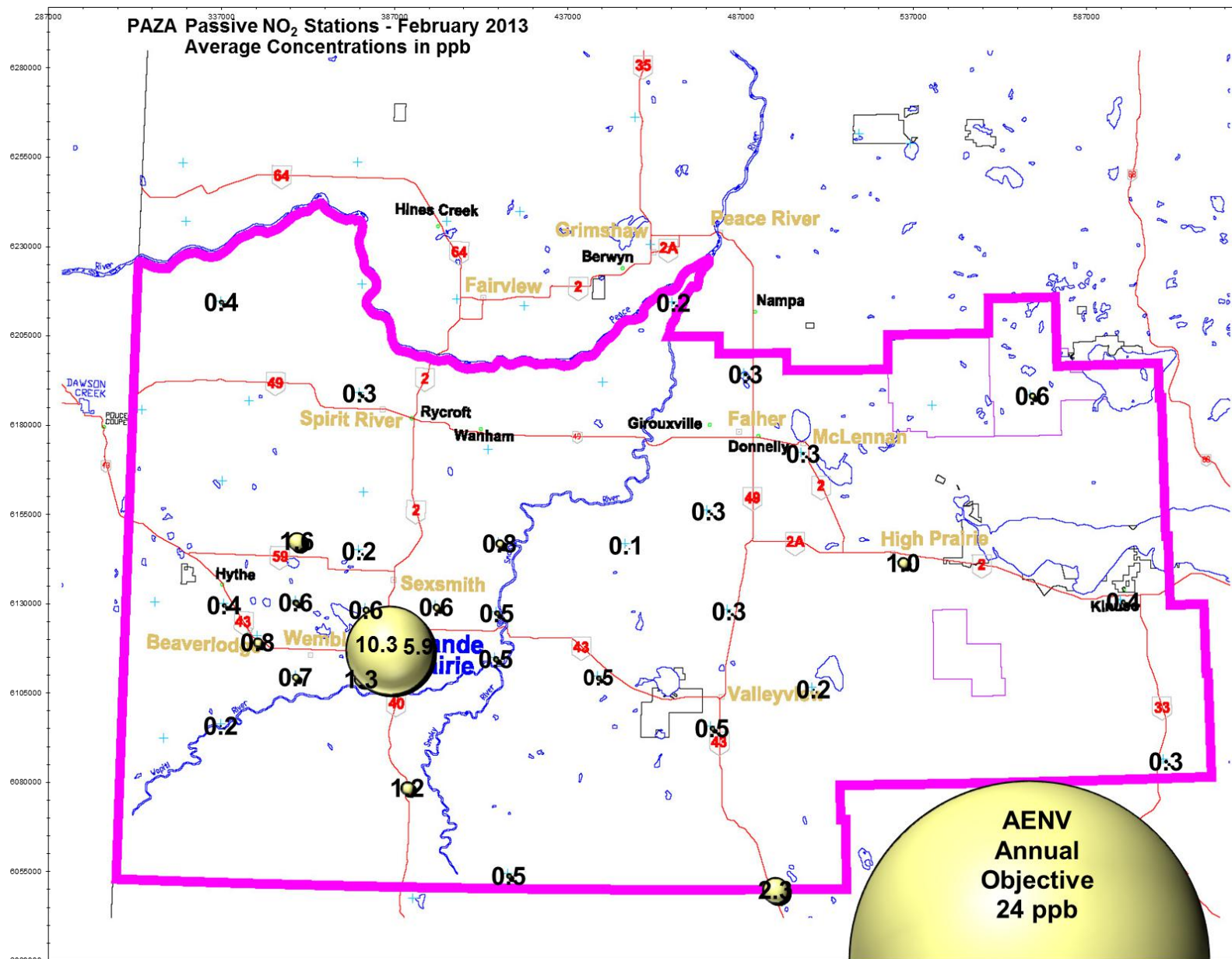


O₃ Bubble Chart

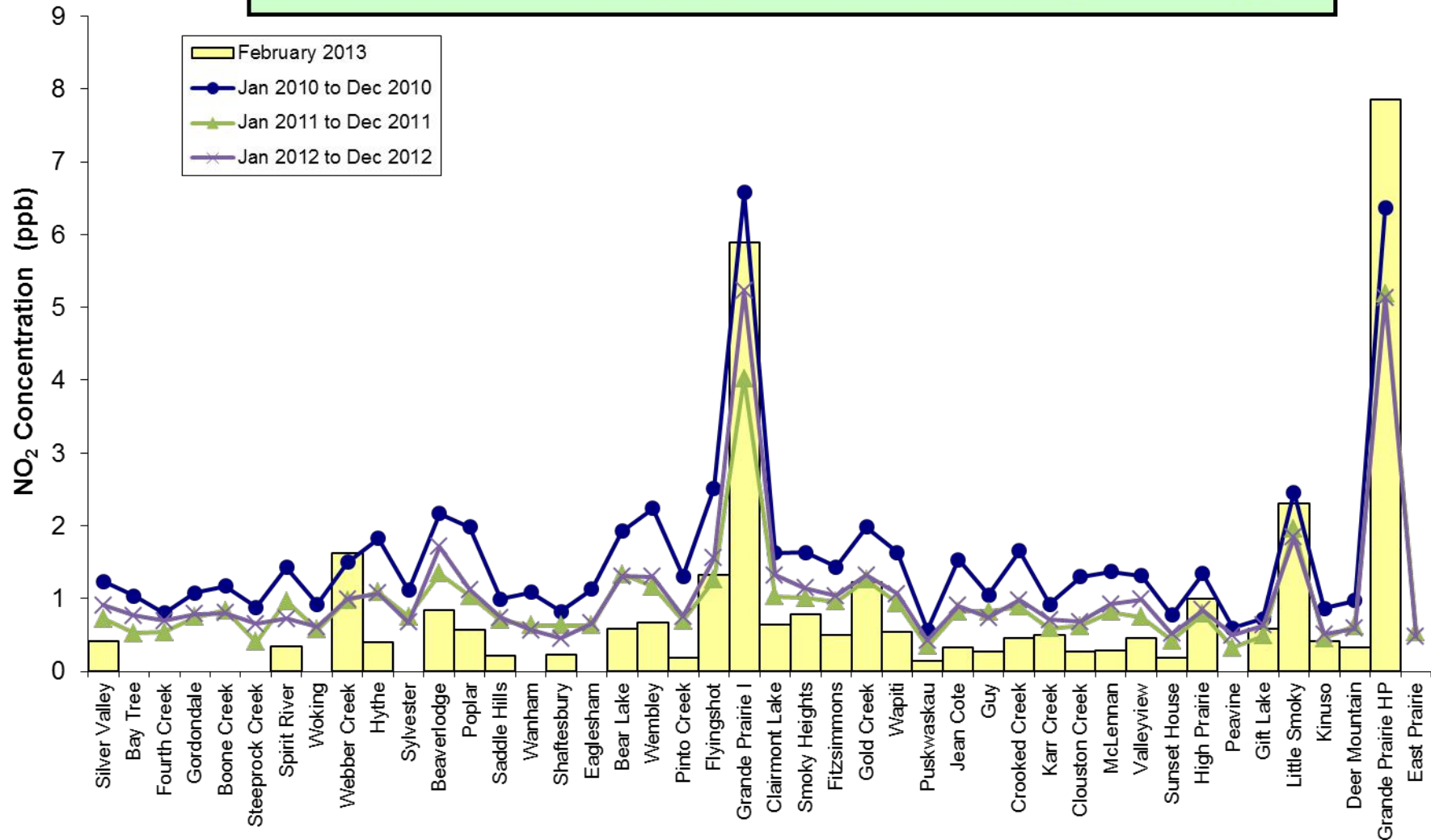
Alberta Ambient Air Quality Objective - No Annual O₃ Objective



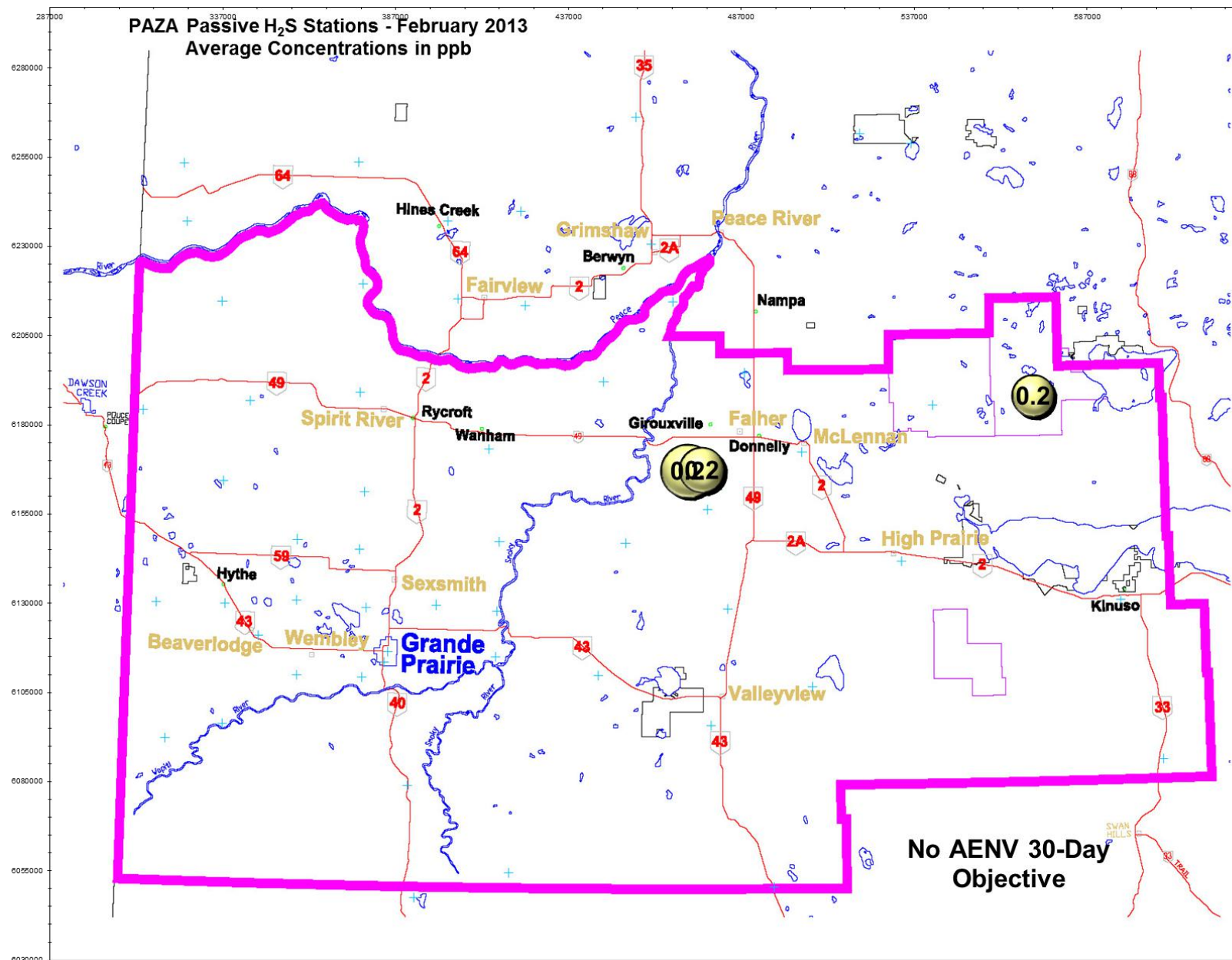
O₃ Summary Chart



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



NO₂ Summary Chart



H₂S Bubble Chart

February 2013 Calibration Reports

PAZA - Henry Pirker Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃, CO, THC, TRS

PAZA – Evergreen Park Station with the following calibrations:

SO₂, TRS

PAZA – Smoky Heights Station with the following calibrations:

SO₂, TRS

PAZA – Beaverlodge Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃

PAZA – Valleyview Station with the following calibrations:

SO₂ & H₂S

PAZA – Sunset House Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃, TRS

PAZA – Falher Station with the following calibrations:

SO₂ & H₂S

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	February 14, 2013	Previous Calibration	January 9, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	7:40	End Time (MST)	11:45
Barometric Pressure	na ATM	Station Temperature	20.5 Deg C
Calibrator	Enviroics 6100	Serial Number	3016
Cal Gas Conc	50.8 ppm	Cal Gas Cert Date	March 12, 2014
		Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.994870	Calculated slope	0.999787
Calculated intercept	1.586867	Calculated intercept	1.835736
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	9.2		8.9	
Coefficient	0.808		0.785	
Pressure	650.9	mm Hg	646.8	mm Hg
Flow	0.496	lpm	0.493	lpm
Lamp Voltage	44382	Hz	44399	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4990	0.00	0.0	0.5	N/A
4990	39.92	403.2	402.7	1.0012
4990	19.98	202.6	199.2	1.0168
4990	9.98	101.4	97.6	1.0394
4990	0.00	0.0	0.5	As Found Zero
4990	39.94	403.4	414.0	As Found Span
Average Correction Factor				1.0192

Calculated value of As Found Response: 412.9 ppb Percent Change of As Found: -2.4%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	247.2	ppb	247.3	ppb

Notes: Slight span adjustment made

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



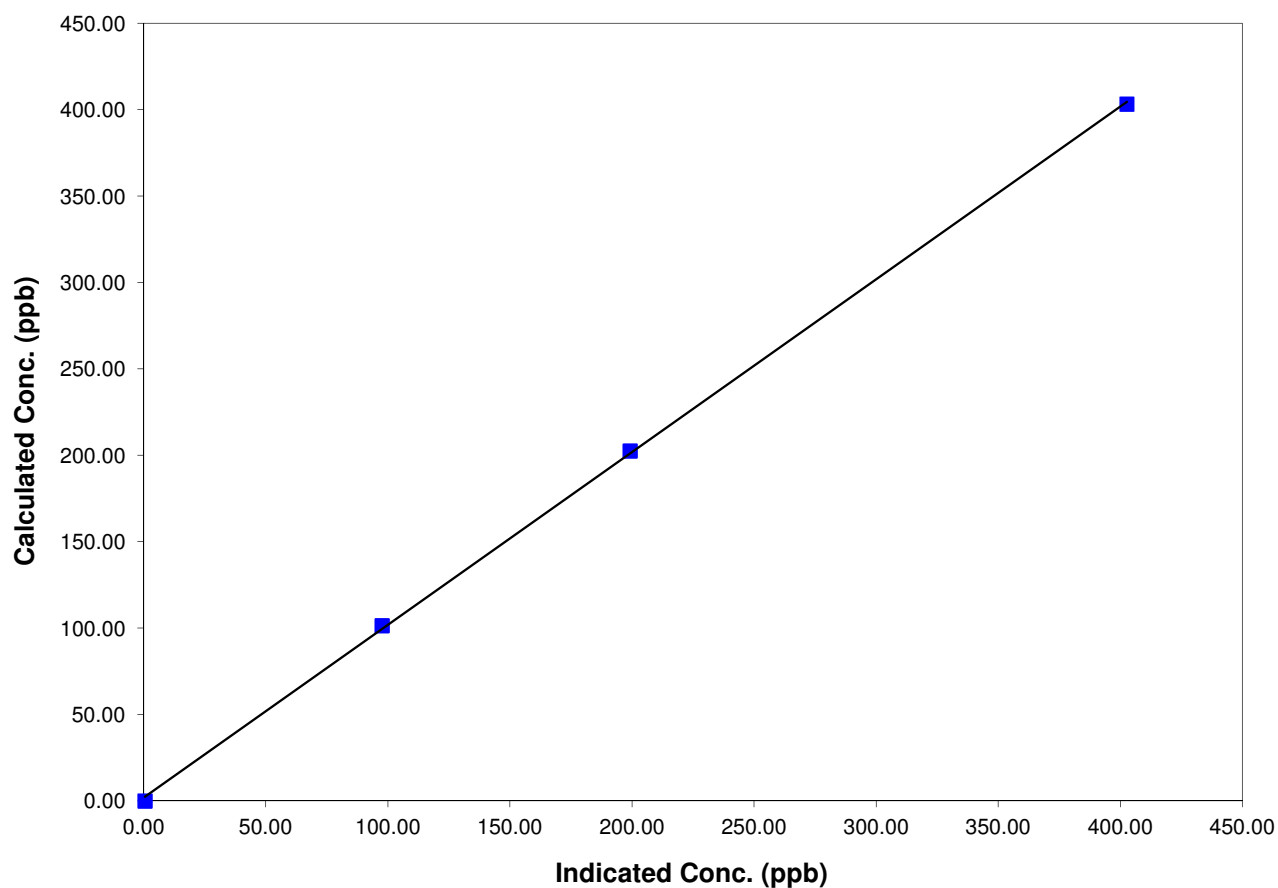
Station Information

Calibration Date	February 14, 2013	Previous Calibration	January 9, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:40	End Time (MST)	11:45
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

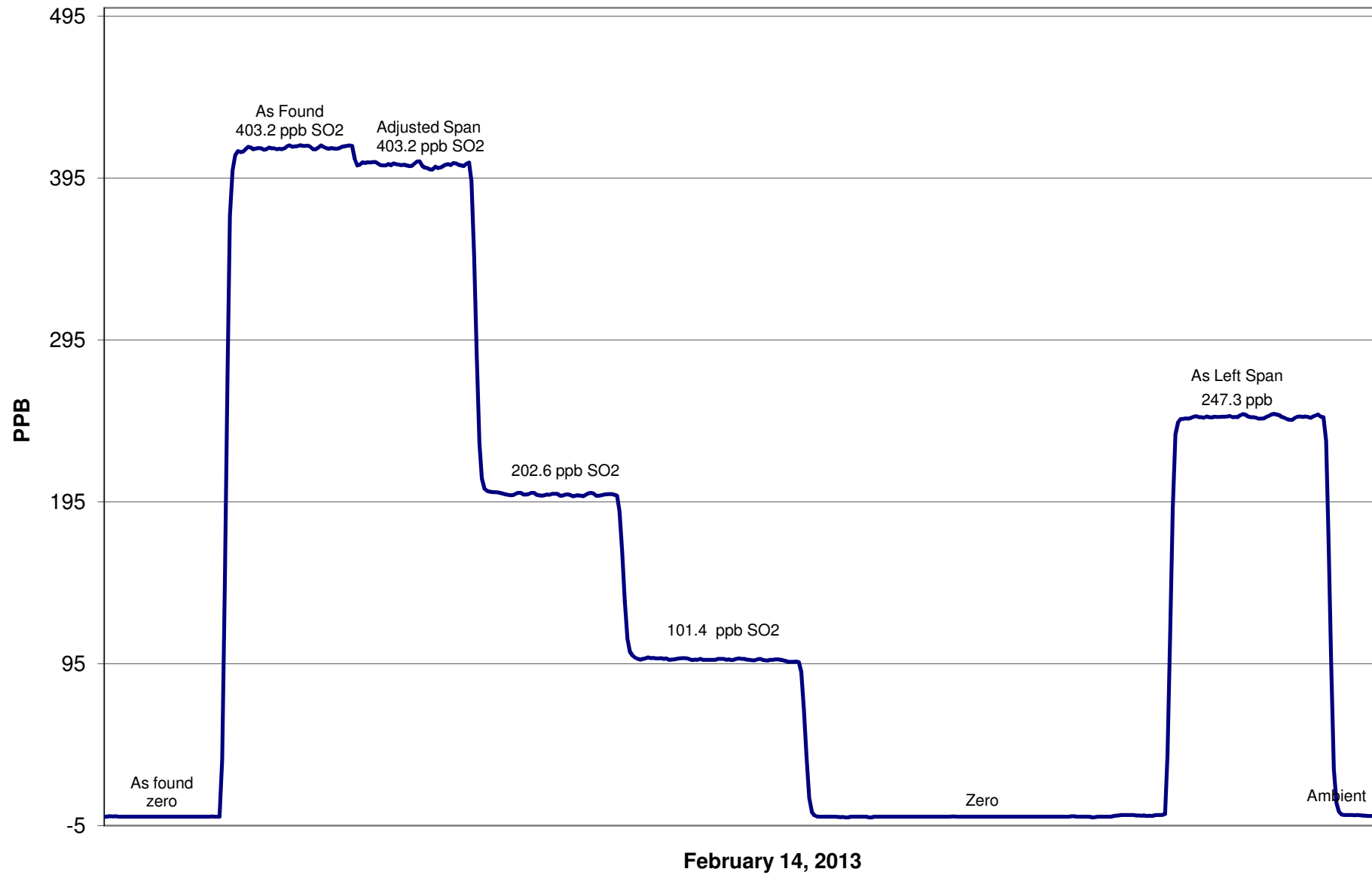
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
403.2	402.7	1.0012	Correlation Coefficient	0.999847
202.6	199.2	1.0168		
101.4	97.6	1.0394	Slope	0.999787
			Intercept	1.835736

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	February 14, 2013	Previous Calibration	January 9, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Installation	Removal
Other:			
Start Time (MST)	7:40	End Time (MST)	13:21
Barometric Pressure	na	Atm	Station Temperature
Calibrator	EnviroNics 6100	Serial Number	3016
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
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	Parameter	NO2	NOx	NO
Before	Data Slope	0.999922	0.995051	0.995031
	Data Offset	-0.612596	0.884984	1.363407
After	Data Slope	1.003329	0.999007	1.000434
	Data Offset	0.277220	1.444484	1.274344
	Channel #	8	6	7
	Voltage Range	0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42C	Analyzer serial #	508011073
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Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	12.5	mV	12.5	mV
NOx bkgnd	12.9	mV	12.9	mV
NO coefficient	1.063		1.065	
NOx coefficient	1.001		1.001	
NO2 conv temp	319.0	Deg C	319.0	Deg C
PMT Temp	-2.4	Deg C	-2.4	Deg C
PMT Volt	-768.0	mV	-768.0	mV
R Cell Press	174.1	in Hg	171.1	in Hg

Calibration Report

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



Calibration Date: February 14, 2013 Station Location: Henry Pirker

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NO _x conc (ppb)	Calculated NO conc (ppb)	Calculated NO ₂ conc (ppb)	Indicated NO _x conc (ppb)	Indicated NO conc (ppb)	Indicated NO ₂ conc (ppb)	NO _x Correction factor	NO Correction factor
zero	4990	0.00	0.0	0.0	0.0	0.1	0.3	0.0	N/A	N/A
1	4990	39.92	406.3	406.3	0.0	406.2	405.8	0.4	1.0004	1.0013
2	4990	19.98	204.2	204.2	0.0	201.8	201.6	0.1	1.0121	1.0126
3	4990	9.98	102.2	102.2	0.0	99.6	99.6	-0.1	1.0261	1.0262
AFZ	4990	0.00	0.0	0.0	0.0	0.1	0.3	0.0	0.0000	0.0000
AFS	4990	39.94	406.6	406.6	0.0	406.1	405.8	1.5	1.0010	1.0019
Average Correction Factor									1.0128	1.0134

As Found Concentrations: NO_x= 406.9 NO= 406.9 As Found Percent Change NO_x= 0.1% NO= 0.1%

Dilution Flow		4990	ccm	Source Gas Flow		39.94	ccm			
O ₃ Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO ₂ conc (ppb)	Indicated NO _x conc (ppb)	Indicated NO conc (ppb)	Indicated NO ₂ conc (ppb)	NO _x Correction factor	NO Correction factor	NO ₂ Correction factor	Converter Efficiency
0	0.3	0.3	0.0	0.1	0.3	0.0	N/A	N/A	N/A	N/A
NO point	406.3	406.3	0.0	406.3	406.3	0.0	0.9998	1.0000	N/A	N/A
300	406.3	113.2	293.1	404.6	113.2	291.6	1.0041	1.0000	1.0049	99.5%
200	406.3	206.2	200.0	405.9	206.2	199.8	1.0008	1.0000	1.0013	99.9%
100	406.3	298.8	107.5	404.9	298.8	106.1	1.0034	1.0000	1.0130	98.7%
Average Correction Factor							1.0028	1.0000	1.0064	99.4%

	Previous calibration				Current calibration			
Parameter	NO _x	NO ₂	NO		NO _x	NO ₂	NO	
Auto zero	0.0	-0.3	0.0	ppb	0.1	-0.2	0.0	ppb
Auto span	328.3	326.9	1.6	ppb	321.4	319.7	2.0	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



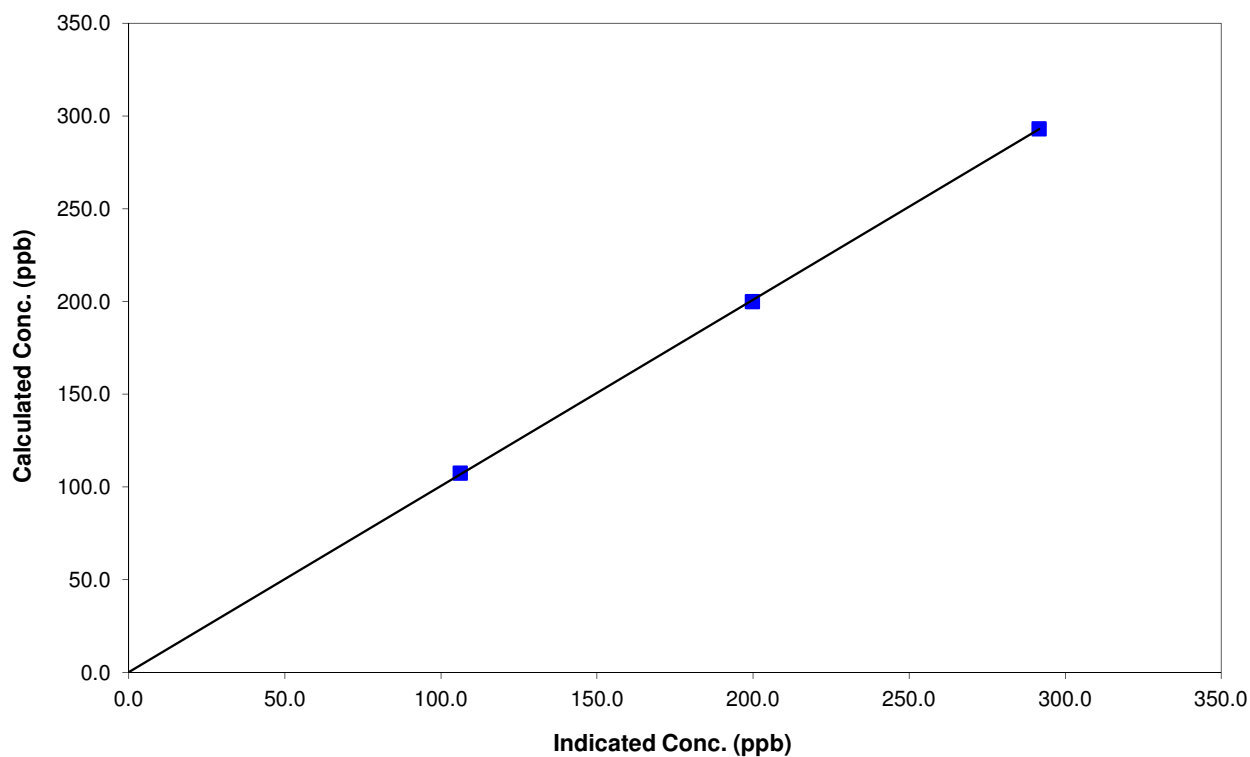
Station Information

Calibration Date	February 14, 2013	Previous Calibration	January 9, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:40	End Time (MST)	13:21
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	0.999976
293.1	291.6	1.0049		
200.0	199.8	1.0013		
107.5	106.1	1.0130	Slope	1.003329
			Intercept	0.277220

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



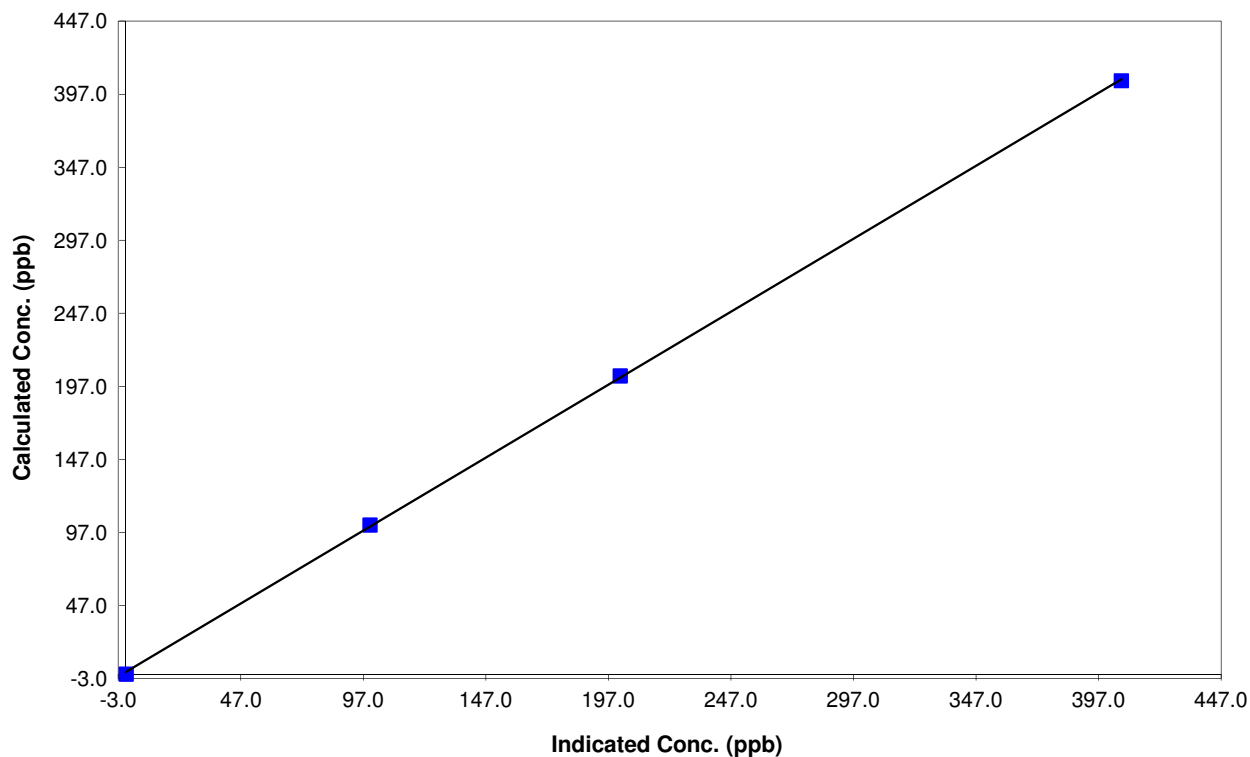
Station Information

Calibration Date	February 14, 2013	Previous Calibration	January 9, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:40	End Time (MST)	13:21
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	0.999932
406.3	406.2	1.0004		
204.2	201.8	1.0121		
102.2	99.6	1.0261	Slope	0.999007
			Intercept	1.444484

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



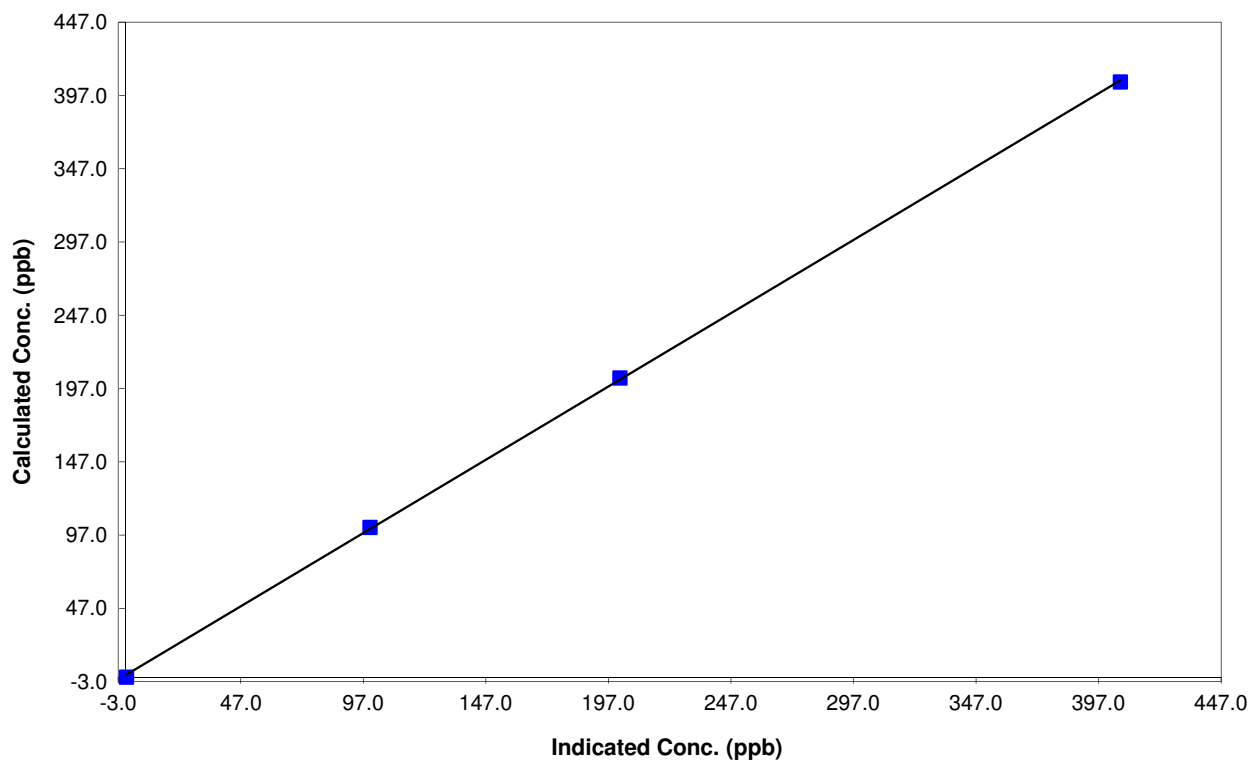
Station Information

Calibration Date	February 14, 2013	Previous Calibration	January 9, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:40	End Time (MST)	13:21
Analyzer make	TEI 42C	Analyzer serial #	508011073

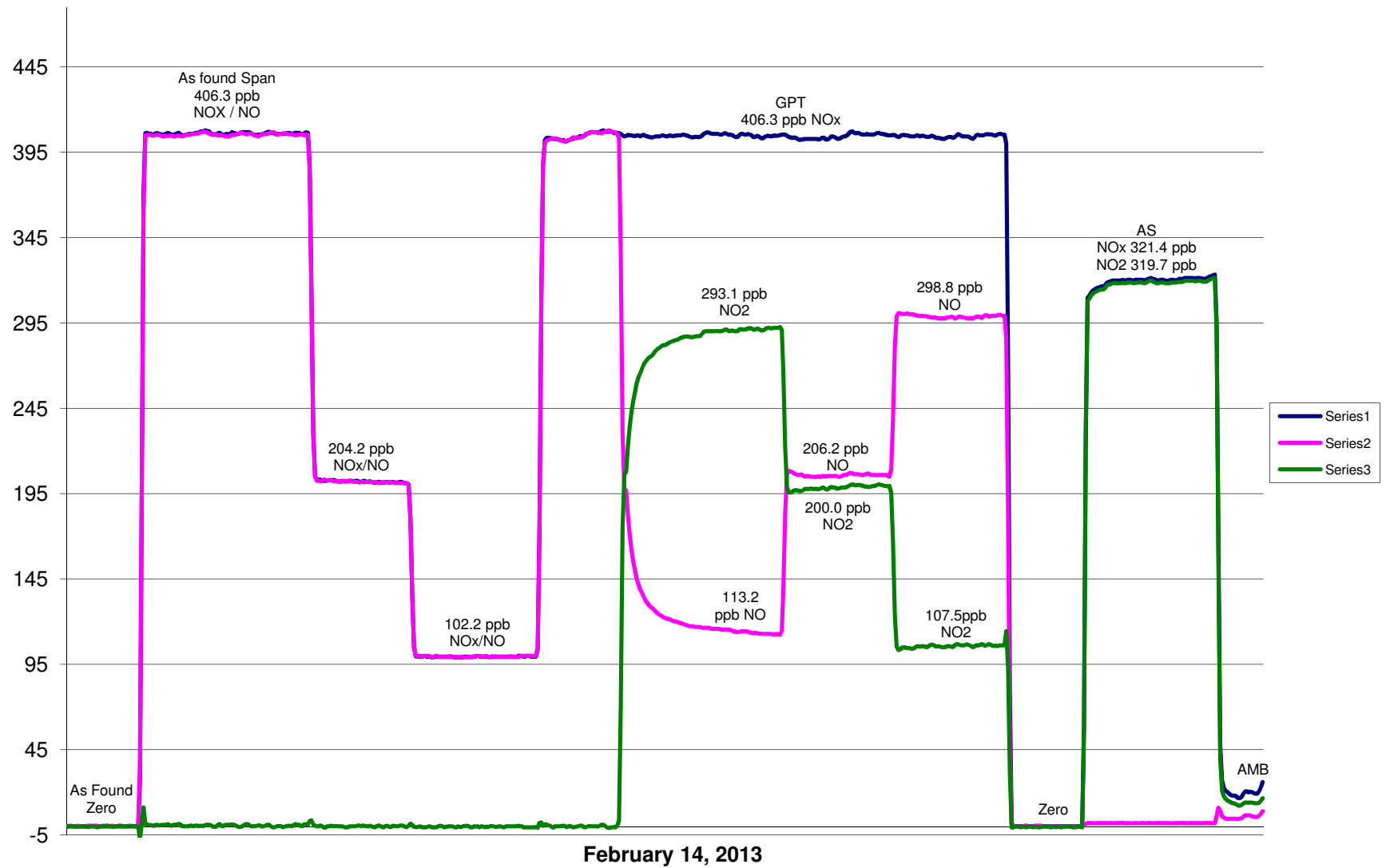
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999929
406.3	405.8	1.0013		
204.2	201.6	1.0126		
102.2	99.6	1.0262	Slope	1.000434
			Intercept	1.274344

NO Calibration Curve



PAZA NO_x Calibration



Calibration Report

Parameter 03

Air Monitoring Network PAZA



Station Information

Calibration Date	February 14, 2013	Previous Calibration	January 9, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	12:09	End Time (MST)	13:46
Barometric Pressure	na atm	Station Temperature	20.5 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
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	0.988416	Calculated slope	0.957593
Calculated intercept	-0.444458	Calculated intercept	-0.045469
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.6	ppb	-0.7	ppb
slope	1.083		1.083	
O3 Lamp temp	71.1	Deg C	71.1	Deg C
Intensities	73439/67195	mV	74630/68280	mV
Pressure	705.8	inches Hg	683.3	inches Hg
Flow A	0.730	ccm	0.719	ccm
Flow B	0.740	ccm	0.726	ccm

Calibration Data

Dilution air flow rate (cc/min)	Referenced concentration (ppb)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0	0.0	0.4	N/A
4990	300	293.1	306.4	0.9567
4990	200	200.0	208.8	0.9578
4990	100	107.5	111.8	0.9613
4990	0	0.0	0.4	As found zero
4990	300	293.1	306.2	As found span
Average Correction Factor				0.9586

Calculated value of As Found Response: 301.9 ppm Percent Change of As Found: 3.0%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	157.9	ppb	221.0	ppb

Notes: No adjust. Will replace solinoid next cal.

Had to leave for dentist. Next daily span following calibration was used as after span.

Calibration Performed By: Grover Christiansen.

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



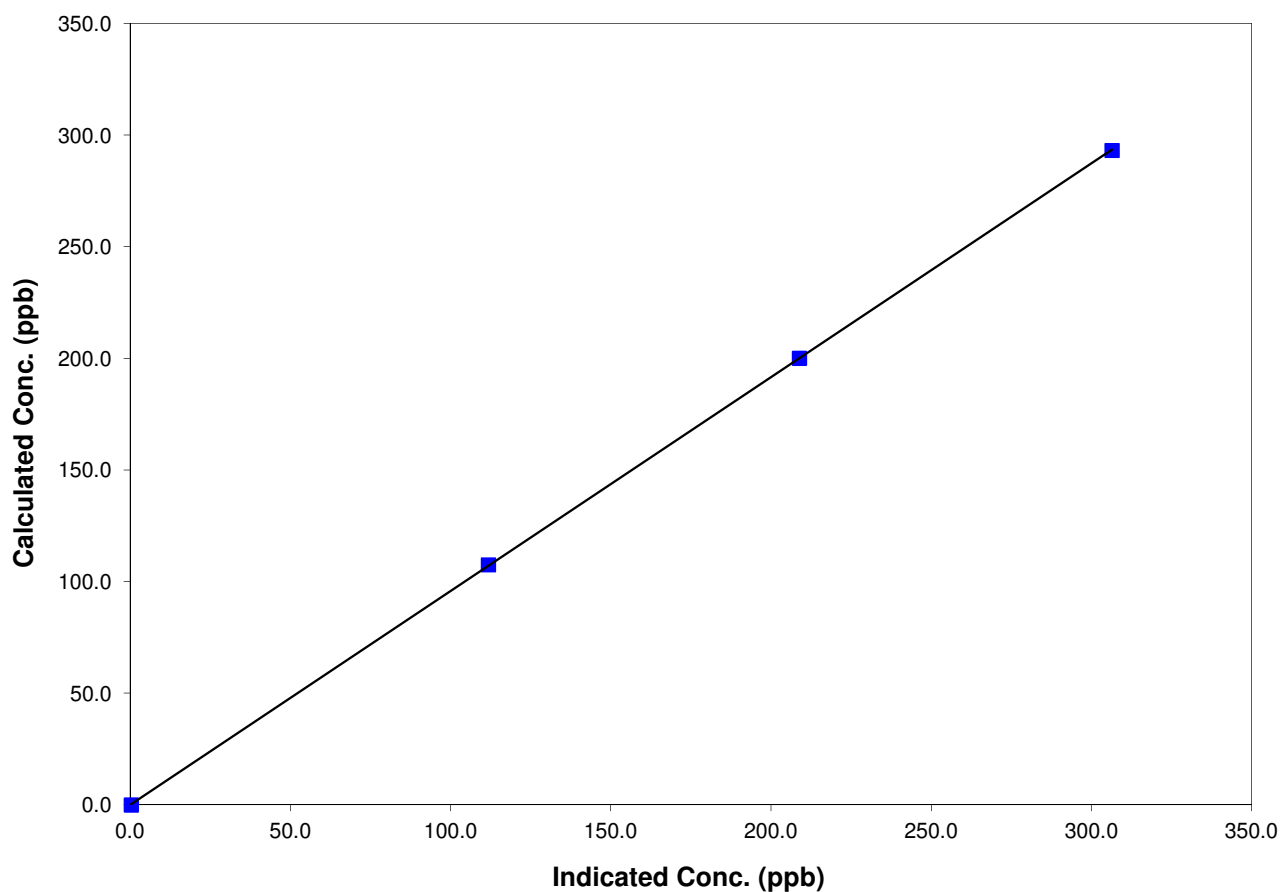
Station Information

Calibration Date	February 14, 2013	Previous Calibration	January 9, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:09	End Time (MST)	13:46
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

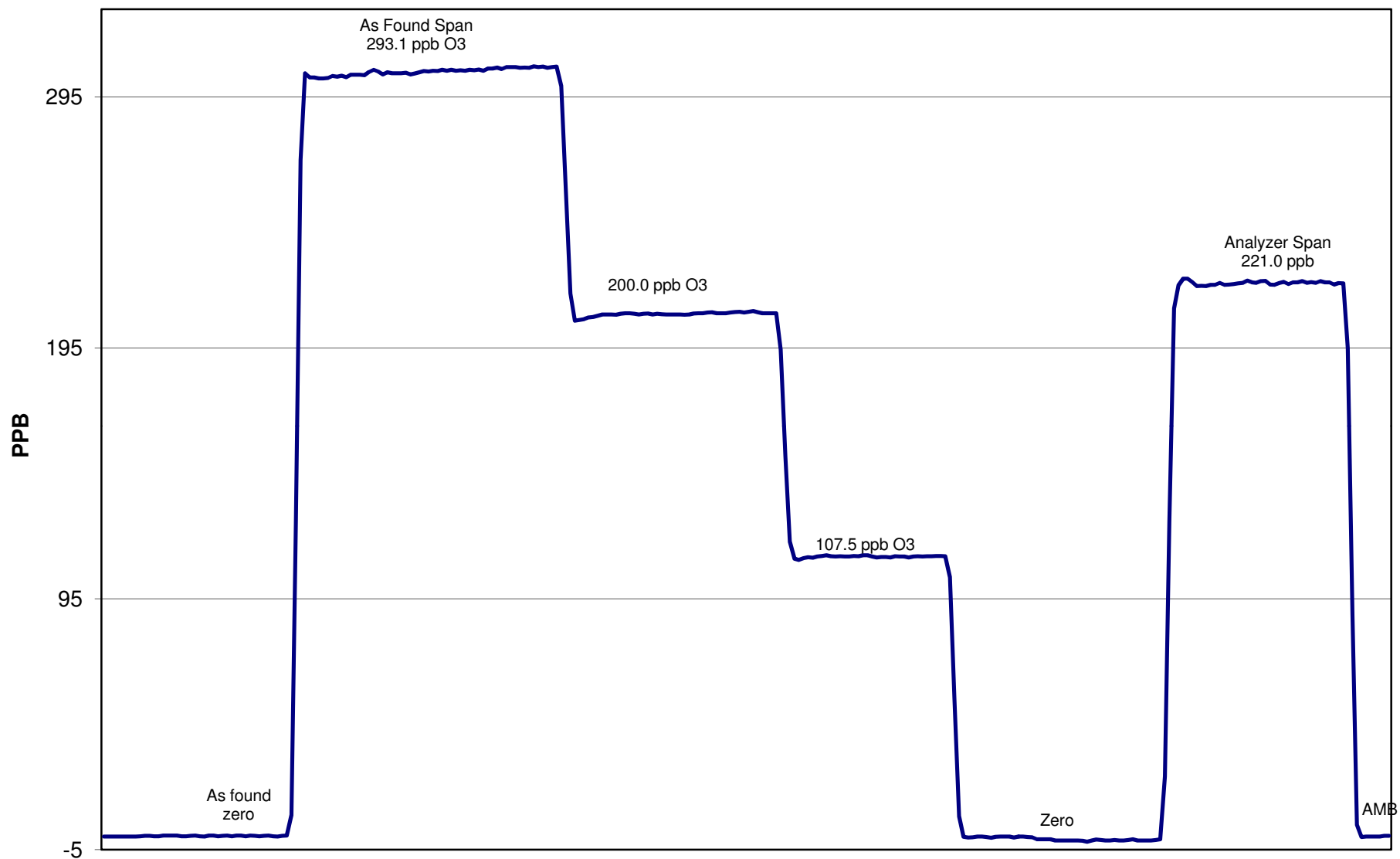
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	NA	Correlation Coefficient	0.999992
293.1	306.4	0.9567		
200.0	208.8	0.9578		
107.5	111.8	0.9613	Slope	0.957593
			Intercept	-0.045469

O3 Calibration Curve



O3 Calibration



February 14, 2013

Calibration Report

Parameter CO

Air Monitoring Network PAZA



Station Information

Calibration Date	February 13, 2013	Previous Calibration	January 8, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	9:40	End Time (MST)	12:33
Barometric Pressure	0.922 ATM	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Conc	2898 ppm	Cal Gas Expiry Date	04/02/2013
		Cal Gas Cylinder #	LL83909
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.996229	Calculated slope	0.993801
Calculated intercept	-0.511367	Calculated intercept	-0.691025
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.110		1.11	
CO zero setting	4.199		4.199	
Sample pressure	688.2	mm Hg	683.8	mm Hg
Sample Flow	1.130	LPM	1.125	LPM

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.76	N/A
4995	69.94	40.02	40.98	0.9764
4995	34.96	20.14	20.96	0.9609
4995	17.96	10.38	11.06	0.9387
4995	0.00	0.00	0.76	As Found Zero
4995	69.94	40.02	40.98	As Found Span
Average Correction Factor				0.9587

Calculated value of As Found Response: 39.562 ppm Percent Change of As Found: 1.1%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.96	ppm	20.48	ppm

Notes: Datalogger reads 0.4 ppm high.

No adjustments made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter CO

Air Monitoring Network PAZA



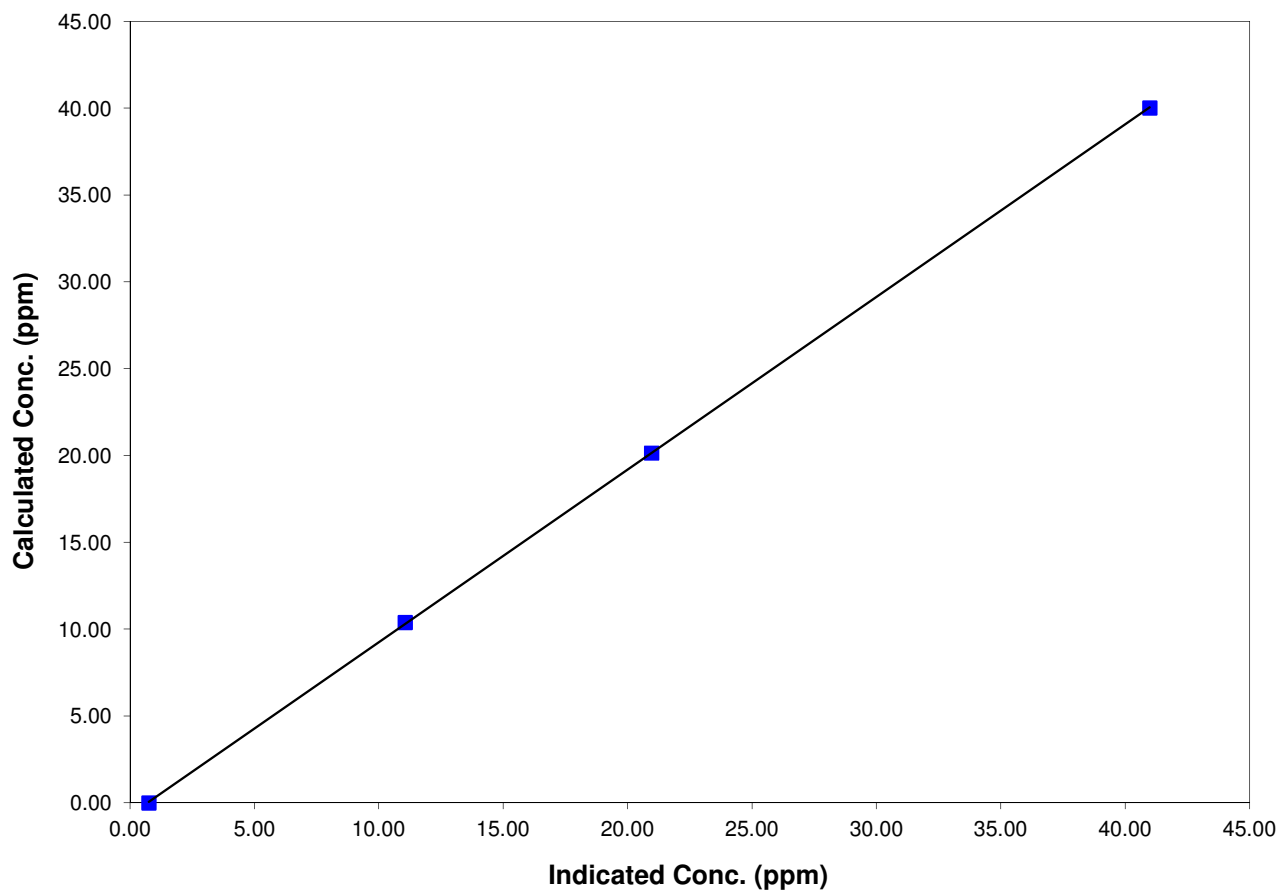
Station Information

Calibration Date	February 13, 2013	Previous Calibration	January 8, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:40	End Time (MST)	12:33
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

Calibration Data

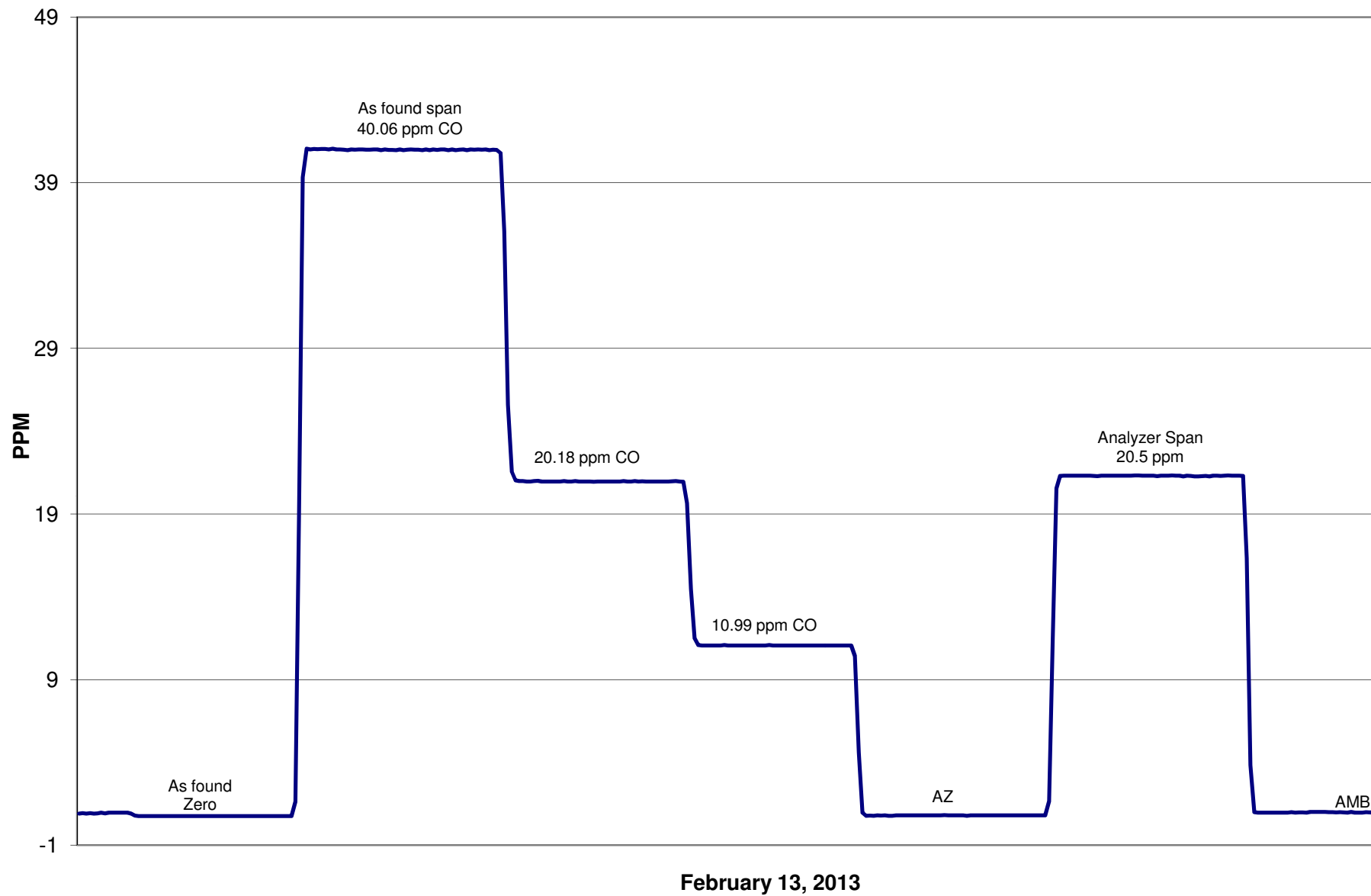
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.757	N/A	Correlation Coefficient	0.999988
40.017	40.984	0.9764		
20.142	20.962	0.9609		
10.383	11.061	0.9387	Slope	0.993801
			Intercept	-0.691025

CO Calibration Curve



11.15 ppm CO

CO Calibration



Calibration Report

Parameter CH4 / NMHC / THC

Air Monitoring Network

PAZA



Station Information

Calibration Date	February 8, 2013	Previous Calibration	December 18, 2012
Station Number	1	Station Location	Henry Pirker
Reason:	☐ Routine	☐ Install	☐ Removal
			☐ Other: Maintenance

Start Time (MST)	8:10	End Time (MST)	
Barometric Pressure	inches Hg	Station Temperature	Deg C
Calibrator	EnviroNics 6100	Serial Number	
Cal Gas CH4 Conc	404 ppm CH4	Cal Gas Expiry Date	
Cal Gas C3H8 Conc	201x2.75= 552.75 ppm CH4	Cal Gas Cylinder #	LL28503
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	

Analyzer make	TEI 551	Analyzer serial #	
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	before		after	
Concentration range	0-20 (CH4, NMHC); 0-40 (THC)	ppm	0-20 (CH4, NMHC); 0-40 (THC)	ppm
Air pressure	23.8	PSI	23.8	PSI
Fuel pressure	34.8	PSI	34.8	PSI
Carrier pressure	29.3	PSI	29.3	PSI
CH4 cal factor	3.70		3.70	
NMHC cal factor	9.63		9.63	
Rt	12.20	Sec	12.20	Sec
Pk Index	16.00		16.00	

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2000	0.00	0.00	0.02	N/A
1995	64.93	12.73	12.75	0.9985
1995	39.93	7.93	7.90	1.0038
1995	14.95	3.00	2.97	1.0113
			0.06	As Found Zero
			12.75	As Found Span
Average Correction Factor				1.0045

Calculated value of As Found Response: #VALUE! Percent Change of As Found: NA

	Before		After
Calculated slope	N/A	Calculated slope	0.999614
Calculated intercept	N/A	Calculated intercept	0.007873

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	N/A	ppm	0.09	ppm
Auto span	N/A	ppm	FALSE	ppm

NMHC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2000	0.00	0.00	0.06	N/A
1995	64.93	17.42	17.49	0.9961
1995	39.93	10.85	10.86	0.9991
1995	14.93	4.11	4.07	1.0076
			0.06	As Found Zero
			17.49	As Found Span
Average Correction Factor				1.0010

Calculated value of As Found Response: 17.610 ppm Percent Change of As Found: NA

	<u>Before</u>		<u>After</u>
Calculated slope	1.010433	Calculated slope	0.998156
Calculated intercept	0.000693	Calculated intercept	-0.011118

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	NA	ppm	0.06	ppm
Auto span	NA	ppm	11.66	ppm

THC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2000	0.00	0.00	0.10	N/A
2000	64.93	30.08	30.22	0.9955
2000	40.00	18.76	18.74	1.0011
2000	15.00	7.12	7.05	1.0106
			0.13	As Found Zero
			30.22	As Found Span
Average Correction Factor				1.0024

Calculated value of As Found Response: 30.079 ppm Percent Change of As Found: NA

	<u>Before</u>		<u>After</u>
Calculated slope	1.004140	Calculated slope	0.997695
Calculated intercept	-0.136843	Calculated intercept	-0.003127

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	NA	ppm	0.02	ppm
Auto span	NA	ppm	8.39	ppm

Notes:

Calibration Performed By: _____

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



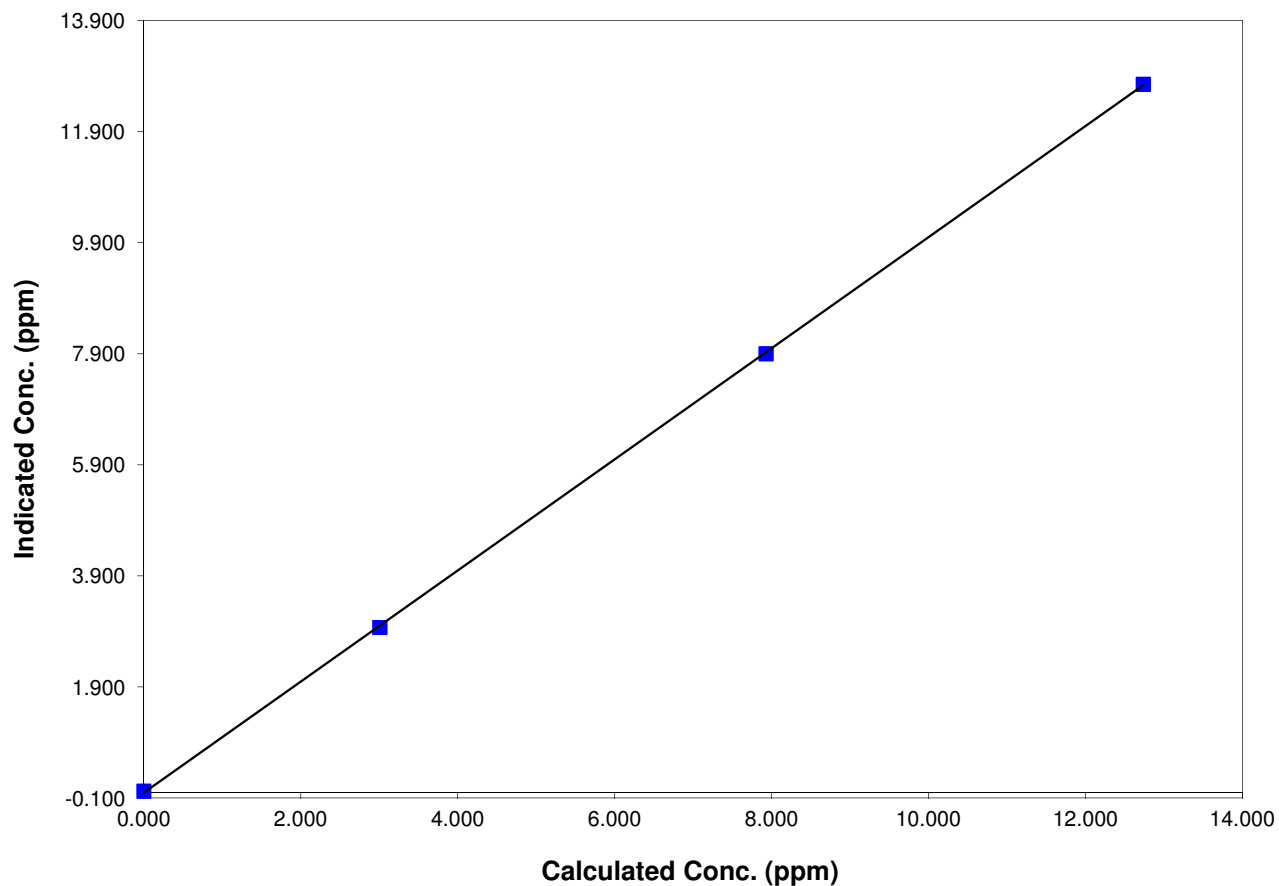
Station Information

Calibration Date	February 8, 2013	Previous Calibration	December 18, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:10	End Time (MST)	0:00
Analyzer make/model	TEI 55I	Analyzer serial #	0

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.022	N/A	Correlation Coefficient	0.999971
12.734	12.753	0.9985		
7.927	7.898	1.0038		
3.005	2.971	1.0113	Slope	0.999614
			Intercept	0.007873

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



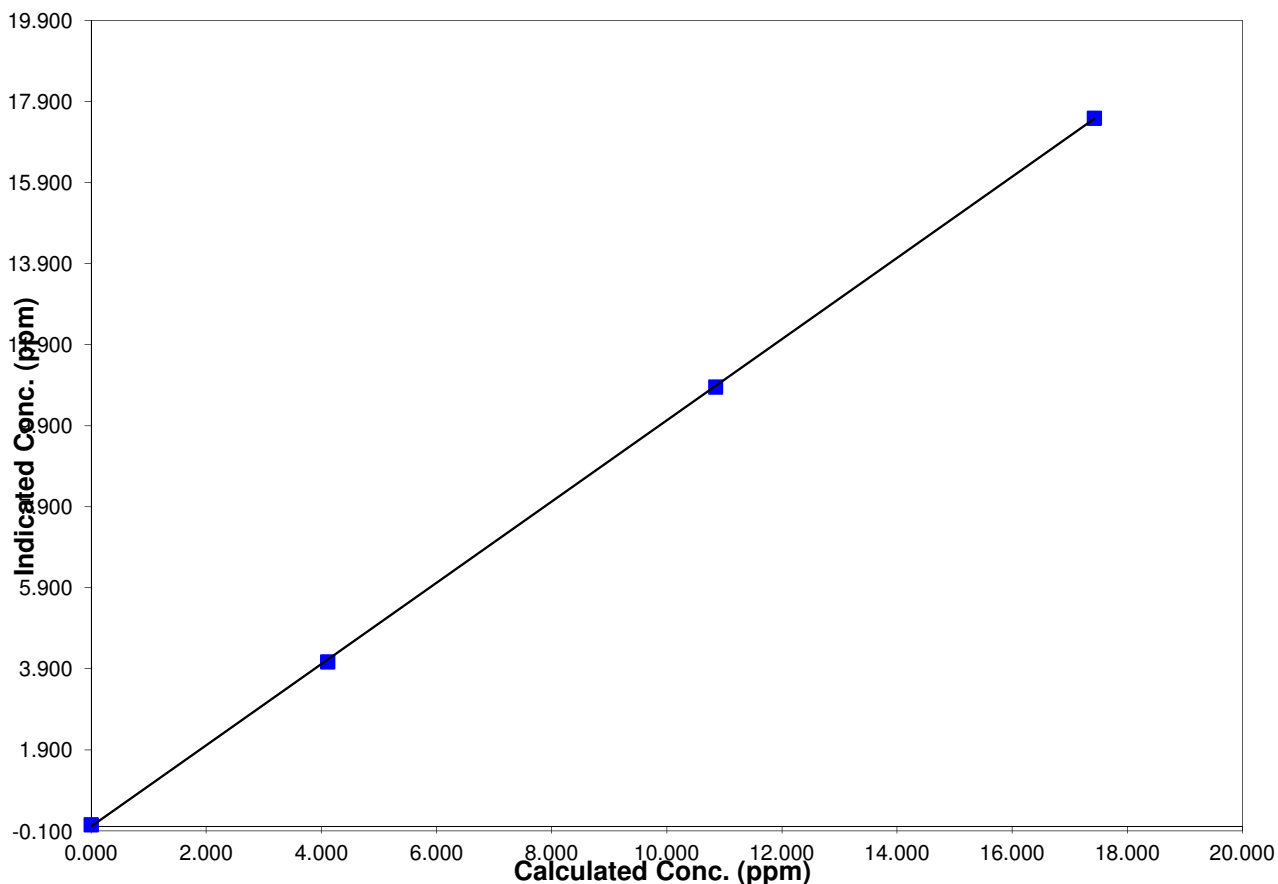
Station Information

Calibration Date	February 8, 2013	Previous Calibration	December 18, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:10	End Time (MST)	0:00
Analyzer make/model	TEI 55I	Analyzer serial #	0

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.058	N/A	Correlation Coefficient	0.999967
17.423	17.491	0.9961		
10.846	10.856	0.9991		
4.106	4.075	1.0076	Slope	0.998156
			Intercept	-0.011118

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



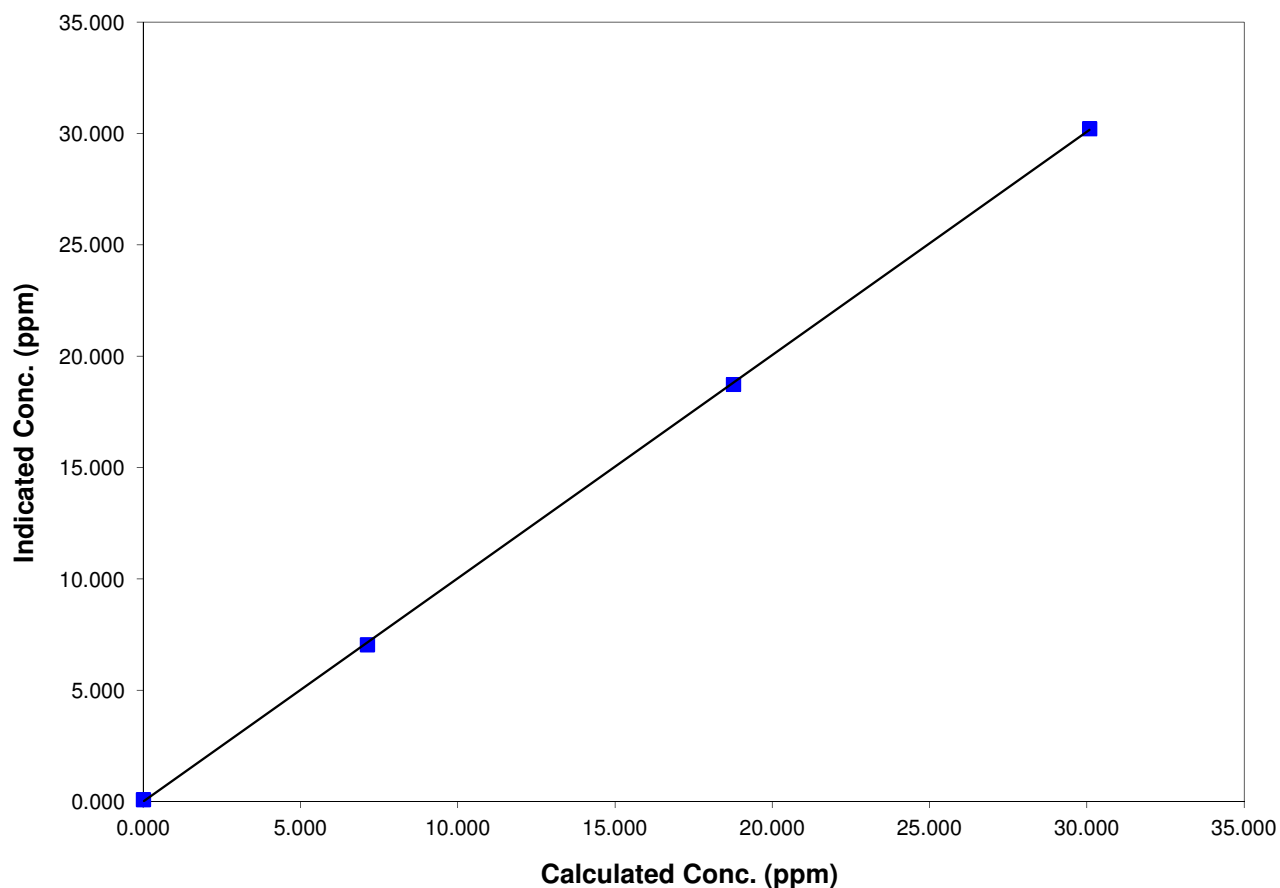
Station Information

Calibration Date	February 8, 2013	Previous Calibration	December 18, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:10	End Time (MST)	0:00
Analyzer make/model	TEI 55I	Analyzer serial #	0

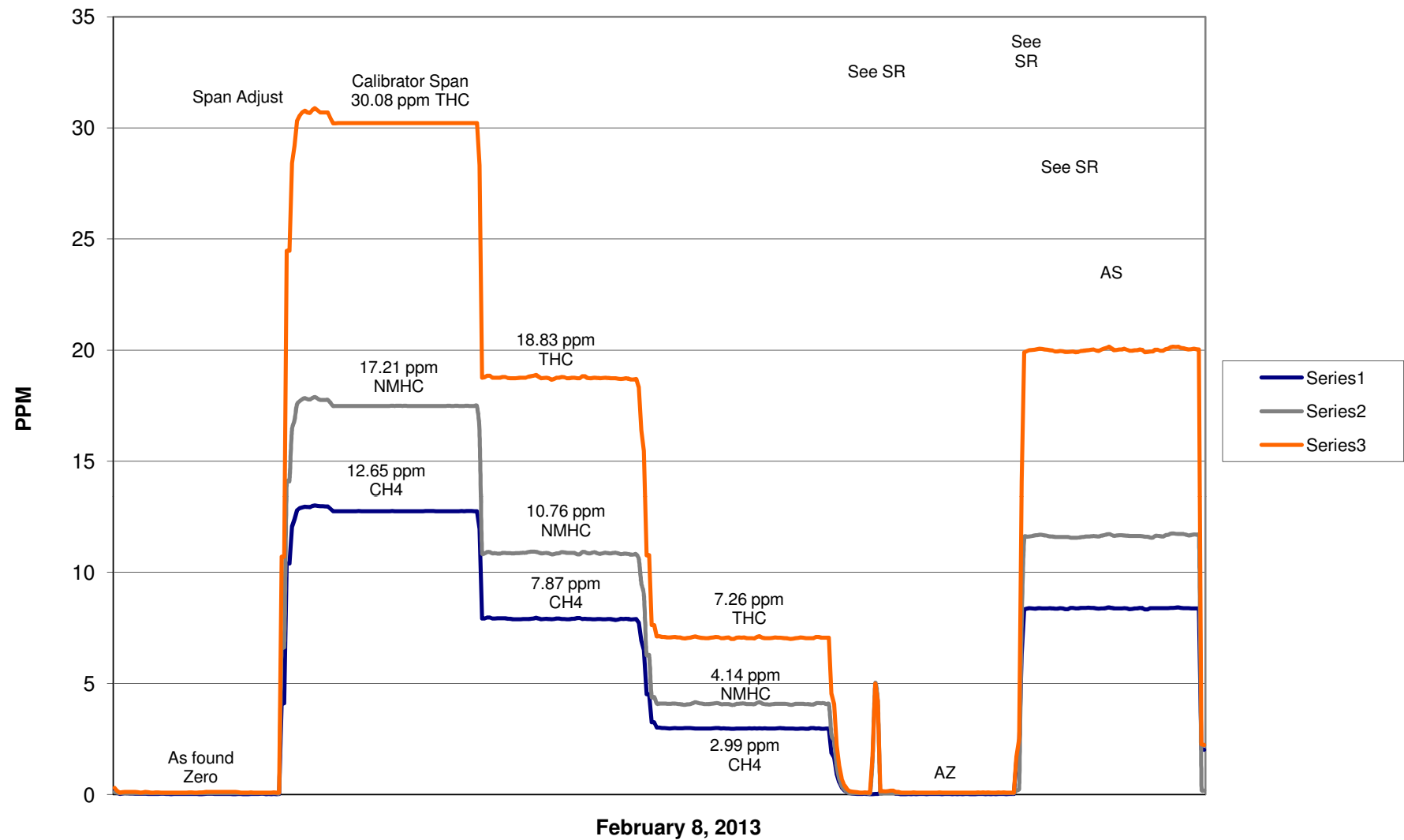
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.101	N/A	Correlation Coefficient	0.999949
30.084	30.220	0.9955		
18.760	18.739	1.0011		
7.122	7.048	1.0106	Slope	0.997695
			Intercept	-0.003127

THC Calibration Data



PAMU 2 - THC/CH₄/NMHC Calibration



Calibration Report

Parameter CH4 / NMHC / THC

Air Monitoring Network

PAZA



Station Information

Calibration Date	February 24, 2013	Previous Calibration	February 8, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	☐ Routine	☒ Install	☐ Removal
			☐ Other:

Start Time (MST)	11:59	End Time (MST)	16:23
Barometric Pressure	inches Hg	Station Temperature	Deg C
Calibrator	EnviroNics 6100	Serial Number	
Cal Gas CH4 Conc	404 ppm CH4	Cal Gas Expiry Date	
Cal Gas C3H8 Conc	201x2.75= 552.75 ppm CH4	Cal Gas Cylinder #	LL28503
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 11,12,13

Analyzer make TEI 55I Analyzer serial # _____

	before		after	
Concentration range	0-20 (CH4, NMHC); 0-40 (THC)	ppm	0-20 (CH4, NMHC); 0-40 (THC)	ppm
Air pressure	23.8	PSI	23.8	PSI
Fuel pressure	34.8	PSI	34.8	PSI
Carrier pressure	29.3	PSI	29.3	PSI
CH4 cal factor	3.70		3.70	
NMHC cal factor	9.63		9.63	
Rt	12.20	Sec	12.20	Sec
Pk Index	16.00		16.00	

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2000	0.00	0.00	0.02	N/A
2000	64.93	12.70	12.75	0.9964
2000	39.93	7.91	7.85	1.0078
2000	14.95	3.00	2.92	1.0254
			0.02	As Found Zero
			12.75	As Found Span
Average Correction Factor				1.0099

Calculated value of As Found Response: 12.699 ppm Percent Change of As Found: NA

	Before		After
Calculated slope	0.997194	Calculated slope	0.996870
Calculated intercept	0.007746	Calculated intercept	0.035866

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	N/A	ppm	0.05	ppm
Auto span	N/A	ppm	21.69	ppm

NMHC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2000	0.00	0.00	0.06	N/A
2000	64.93	17.38	17.46	0.9954
2000	39.93	10.82	10.78	1.0036
2000	14.95	4.10	4.04	1.0162
			0.06	As Found Zero
			17.46	As Found Span
Average Correction Factor				1.0050

Calculated value of As Found Response: 17.320 ppm Percent Change of As Found: NA

	<u>Before</u>		<u>After</u>
Calculated slope	0.995615	Calculated slope	0.997378
Calculated intercept	-0.008864	Calculated intercept	0.012932

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.06	ppm	0.04	ppm
Auto span	11.66	ppm	13.33	ppm

THC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2000	0.00	0.00	0.08	N/A
2000	64.93	30.08	30.18	0.9968
2000	39.93	18.73	18.62	1.0058
2000	14.95	7.10	6.96	1.0201
			0.08	As Found Zero
			30.18	As Found Span
Average Correction Factor				1.0076

Calculated value of As Found Response: 30.011 ppm Percent Change of As Found: NA

	<u>Before</u>		<u>After</u>
Calculated slope	0.997720	Calculated slope	0.998327
Calculated intercept	-0.017406	Calculated intercept	0.039843

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.00	ppm
Auto span	8.39	ppm	8.39	ppm

Notes: Replumb carrier to zero air supply. Going through too many Nitrogen tanks to supply carrier gas.
Analyzer has been leak checked to rotor valve. Thermo has requested that original 55i be shipped back to the factory. Calibration went well confirming collection of valid data.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



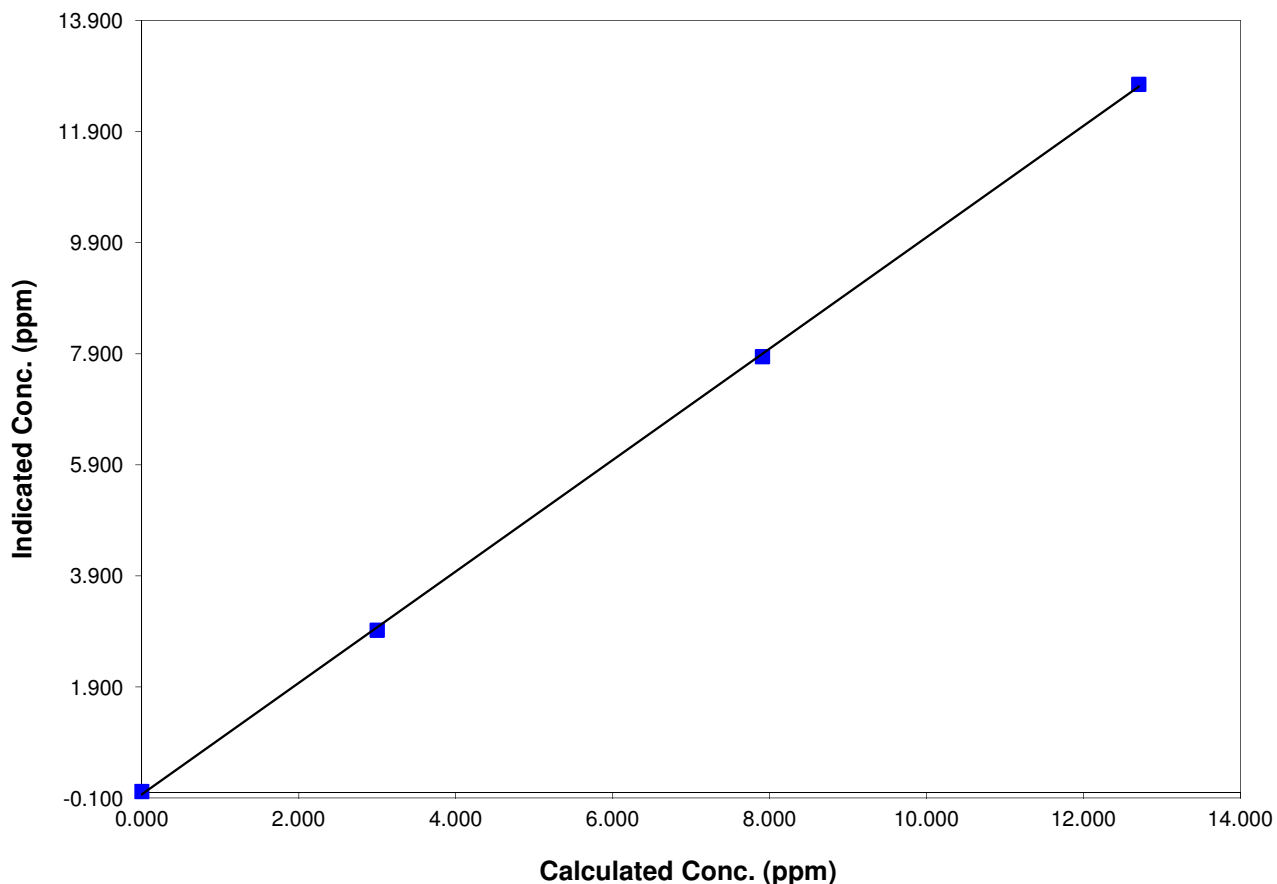
Station Information

Calibration Date	February 24, 2013	Previous Calibration	February 8, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:59	End Time (MST)	16:23
Analyzer make/model	TEI 55I	Analyzer serial #	0

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.020	N/A	Correlation Coefficient	0.999897
12.703	12.749	0.9964		
7.908	7.846	1.0078		
2.997	2.923	1.0254	Slope	0.996870
			Intercept	0.035866

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



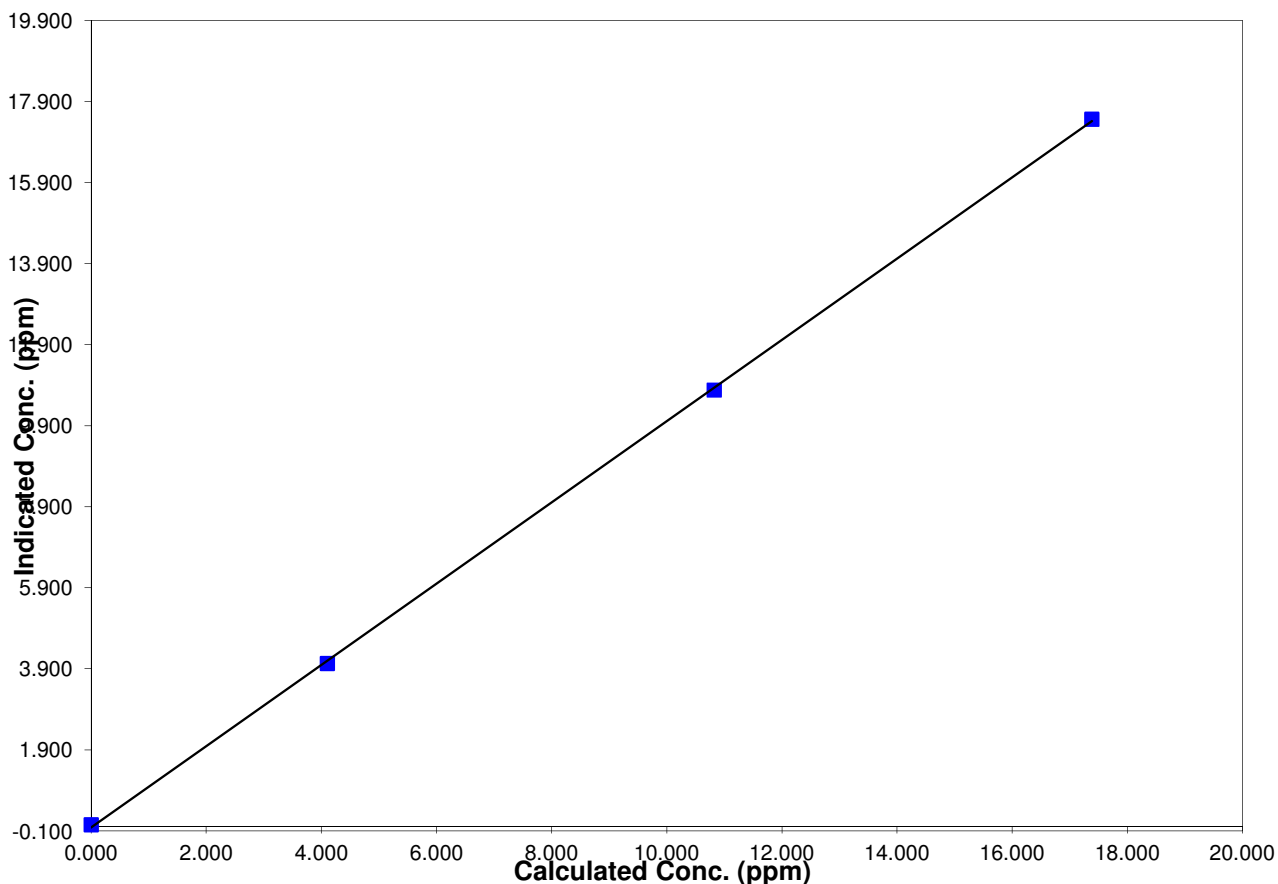
Station Information

Calibration Date	February 24, 2013	Previous Calibration	February 8, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:59	End Time (MST)	16:23
Analyzer make/model	TEI 55I	Analyzer serial #	0

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.056	N/A	Correlation Coefficient	0.999921
17.381	17.461	0.9954		
10.820	10.781	1.0036		
4.101	4.036	1.0162	Slope	0.997378
			Intercept	0.012932

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



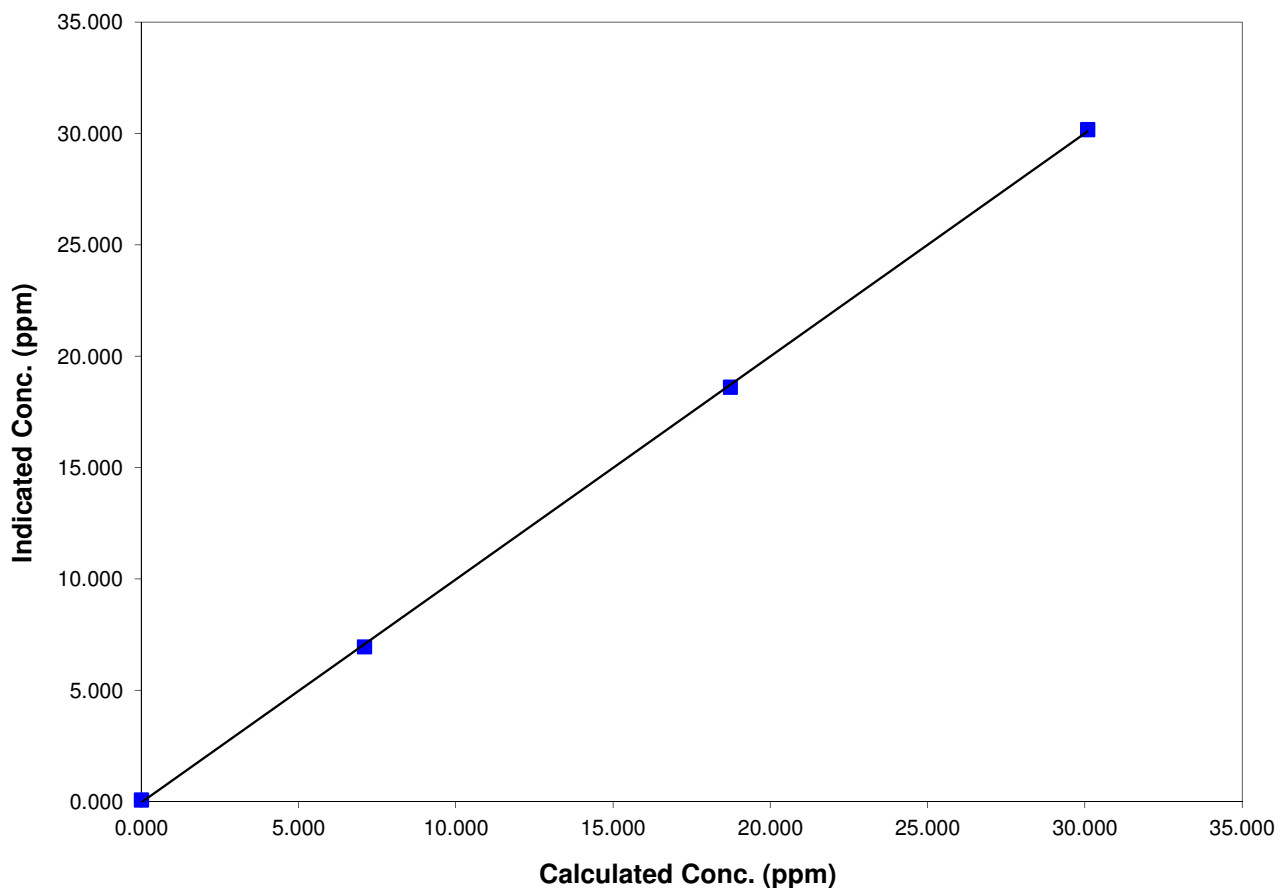
Station Information

Calibration Date	February 24, 2013	Previous Calibration	February 8, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:59	End Time (MST)	16:23
Analyzer make/model	TEI 55I	Analyzer serial #	0

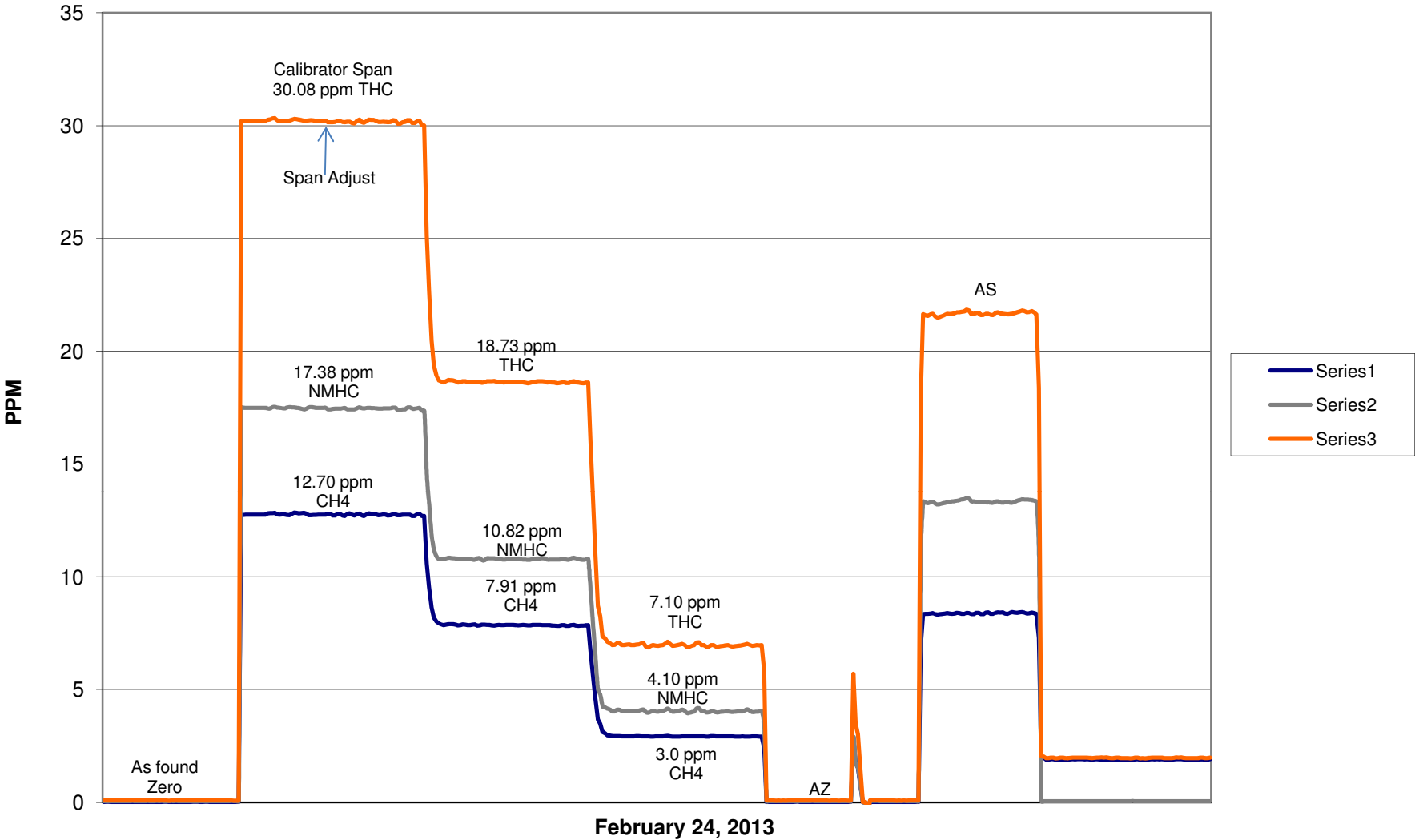
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.085	N/A		
30.084	30.182	0.9968	Correlation Coefficient	0.999914
18.728	18.620	1.0058		
7.099	6.959	1.0201	Slope	0.998327
			Intercept	0.039843

THC Calibration Data



PAMU 2 - THC/CH₄/NMHC Calibration



Calibration Report

Parameter TR5

Air Monitoring Network PAZA



Station Information

Calibration Date	February 13,2013	Previous Calibration	January 16,2013
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	11:20	End Time (MST)	14:00
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	10.1 ppb	Cal Gas Expiry Date	05/11/2013
		Cal Gas Cylinder #	LL160692
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.967818	Calculated slope	1.000311
Calculated intercept	-0.199013	Calculated intercept	-0.128344
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.132		1.132	
Background	11.4		11.4	
Pressure	661.9	mm Hg	666.6	mm Hg
Flow	0.451	ccm	0.453	ccm
Lamp Voltage	824	V	824	V

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)		Correction factor (Cc/lc)
4995	0.00	0.00	0.18	N/A
4995	39.93	80.10	80.22	0.9985
4995	19.95	40.18	40.27	0.9978
8995	8.94	10.03	10.11	0.9916
4995	0.00	0.00	0.18	As Found Zero
4995	39.93	80.10	80.22	As Found Span
Average Correction Factor				0.9960

Calculated value of As Found Response: 77.3 ppb Percent Change of As Found: 3.5%

	before calibration		after calibration	
Auto zero	-0.29	ppb	0.08	ppb
Auto span	33.10	ppb	34.32	ppb

Notes: Sox scrubber checked with 403 ppb SO2. No adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



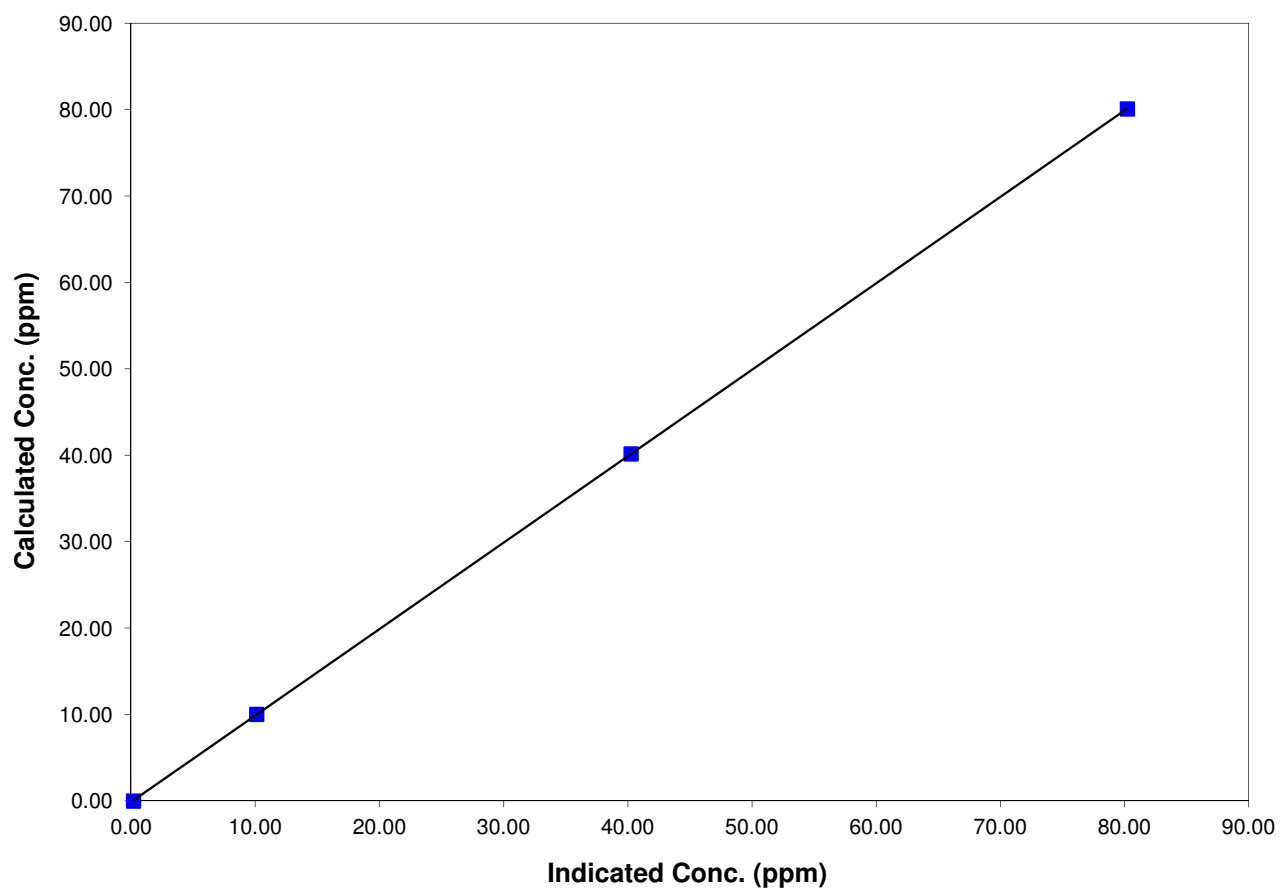
Station Information

Calibration Date	February 13, 2013	Previous Calibration	January 16, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:20	End Time (MST)	14:00
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

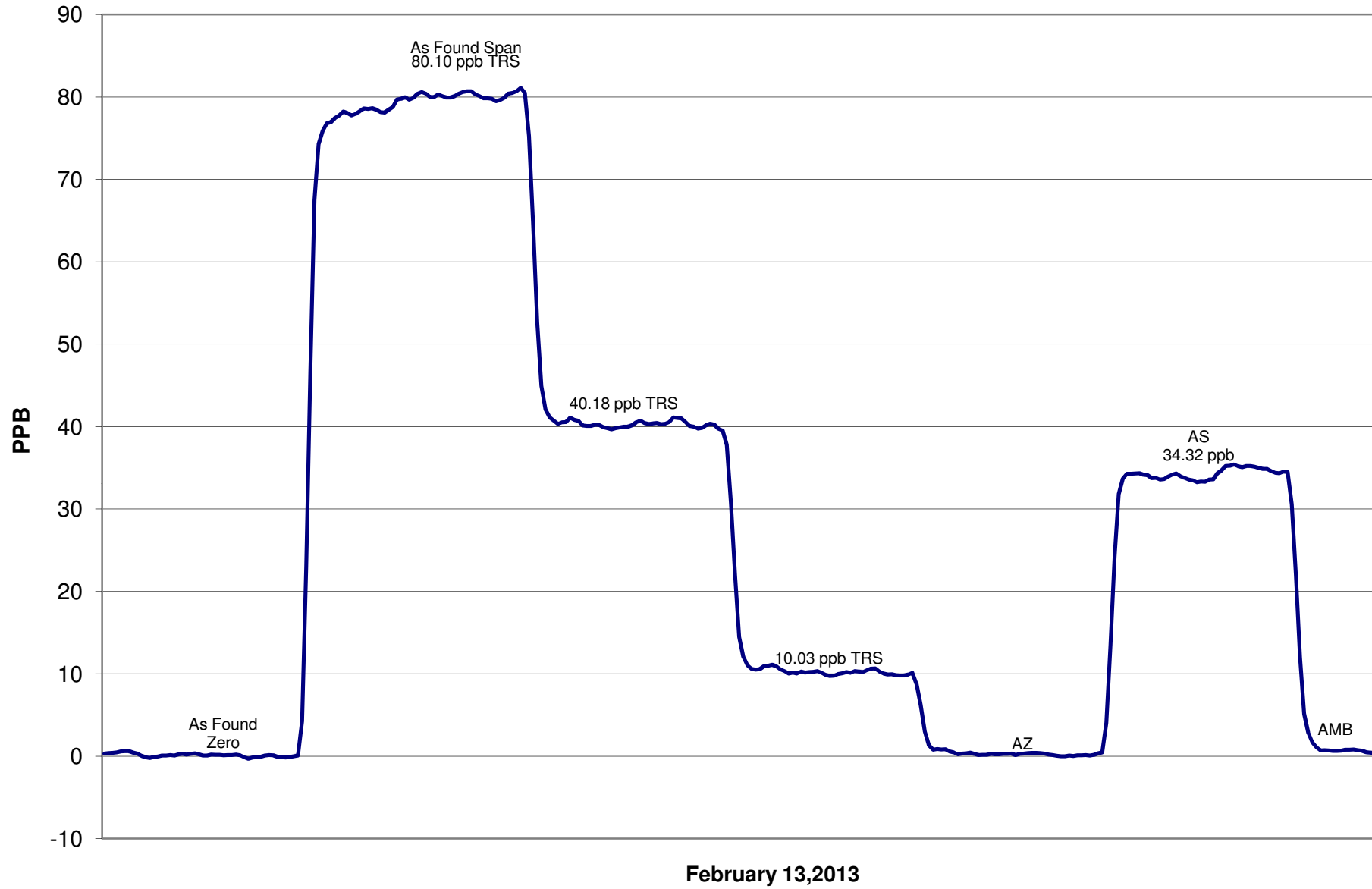
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.178	N/A		
80.099	80.222	0.9985	Correlation Coefficient	0.999999
40.179	40.266	0.9978		
10.028	10.113	0.9916	Slope	1.000311
			Intercept	-0.128344

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter TR5

Air Monitoring Network PAZA

Station Information

Calibration Date	February 22, 2013	Previous Calibration	January 30, 2013
Station Number	3	Station Location	Smokey Heights
Reason:	☐ Routine	☐ Install	☐ Removal
		☒ Other:	Maintenance

Start Time (MST)	10:45	End Time (MST)	14:15
Barometric Pressure	0.903 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	10.1 ppm	Cal Gas Expiry Date	11/05/2013
Correction factor	0.030696	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	0.994081	Calculated slope	1.003031
Calculated intercept	0.917322	Calculated intercept	0.294300

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005
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	before		after	
Concentration range	100	ppb	100	ppb
Background	19.9	ppb	19.3	ppb
coefficient	0.991		0.935	
Lamp Voltage	822	volts	822	volts
Chamber Temp	43.5	Deg C	43.5	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	589,0	mm Hg	567,3	mm Hg
Sample Flow	0.634	ccm	0.621	ccm
Lamp Intensity	35,148	mv	35,426	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	0.6	N/A
4995	39.94	80.12	80.0	1.0015
4995	19.97	40.22	39.1	1.0290
8995	8.96	10.05	9.1	1.1040
4995	0.0	0.00	0.6	As Found Zero
4995	39.94	80.12	85.3	As Found Span
Average Correction Factor				1.0448

Calculated value of As Found Response: 85.05 ppm Percent Change of As Found: **-6.2%**

	before calibration		after calibration	
Auto zero	0.0	ppm	0.3	ppm
Auto span	52.9	ppm	29.6	ppm

Notes: Replace oxidizer thermocouple & one eight line from quartz tube to bulkhead union
Slight adjust, run adjustment point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



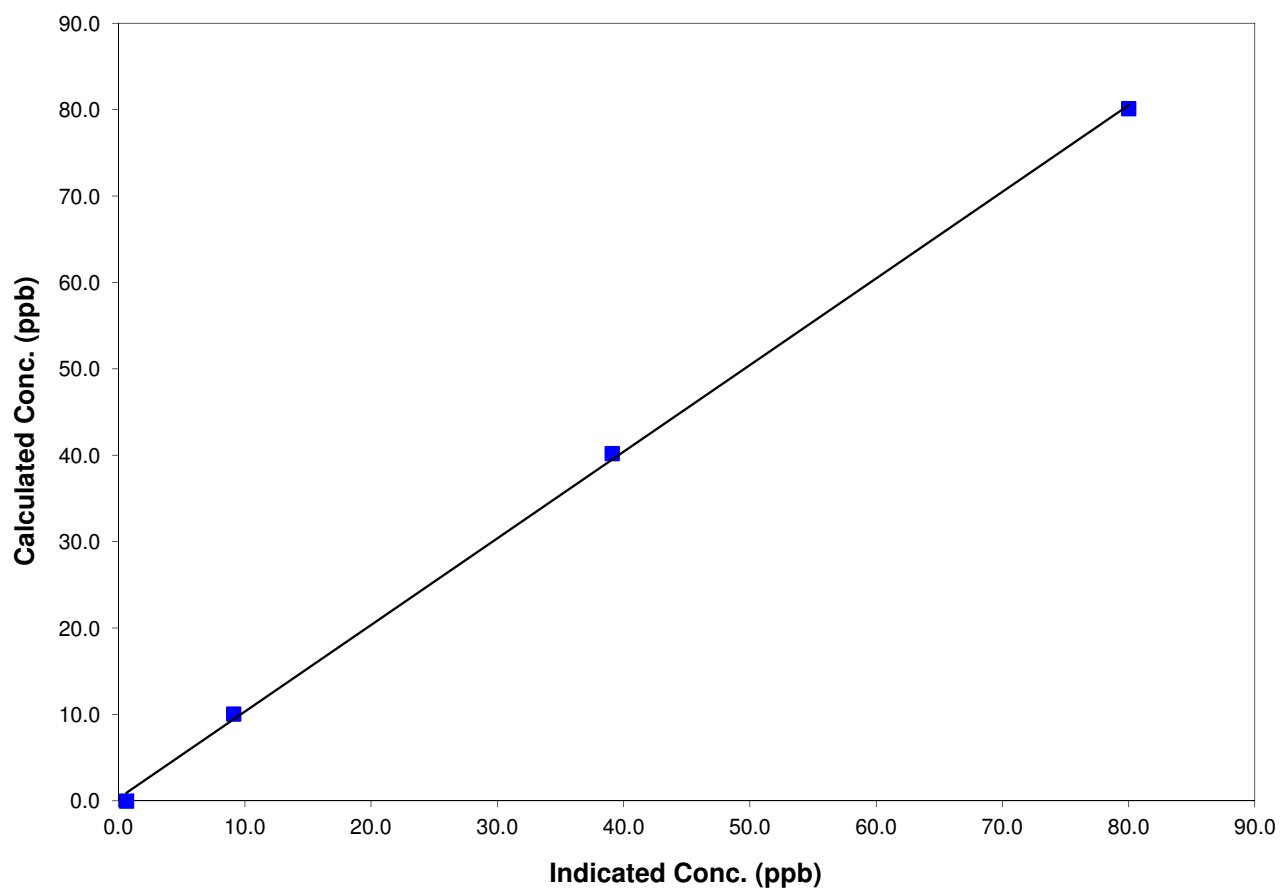
Station Information

Calibration Date	February 22, 2013	Previous Calibration	January 30, 2013
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:45	End Time (MST)	14:15
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

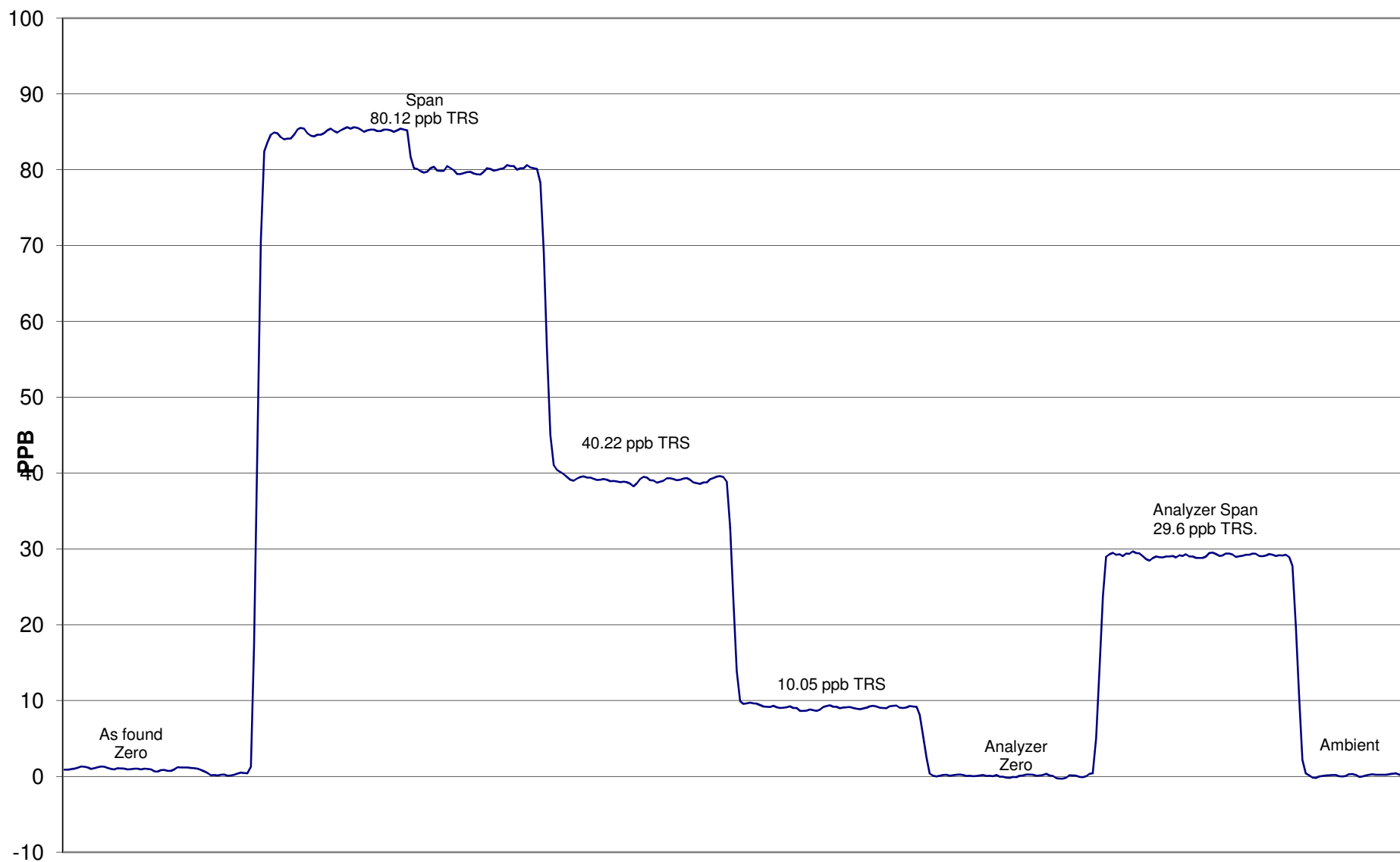
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A	Correlation Coefficient	0.999499
80.1	80.0	1.0015		
40.2	39.1	1.0290		
10.1	9.1	1.1040	Slope	1.003031
			Intercept	0.294300

TRS Calibration Curve



Smokey Heights TRS Calibration



February 22, 2013

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	February 21, 2013	Previous Calibration	January 24, 2013
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	11:35	End Time (MST)	15:06
Barometric Pressure	0.914 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Concentration	50.8 ppm	Cal Gas Expiry Date	12/03/2014
Correction factor	0.031069	Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.997725	Calculated slope	1.003095
Calculated intercept	1.472884	Calculated intercept	1.899308
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.5		11.5	
coefficient	1.228		1.228	
Lamp Voltage	828	volts	830	volts
Chamber Temp	45.2	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	660.7	mm Hg	665.9	mm Hg
Sample Flow	0.444	ccm	0.447	ccm
Lamp Intensity	90	%	89	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.3	N/A
4995	39.93	402.9	400.9	1.0050
4995	19.97	202.3	198.5	1.0193
4995	9.97	101.2	96.9	1.0439
4995	0.0	0.0	0.5	As Found Zero
4995	39.93	402.9	400.9	As Found Span
Average Correction Factor				1.0227

Calculated value of As Found Response: 401.032 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.4	ppm
Auto span	287.4	ppm	295.5	ppm

Notes: No adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



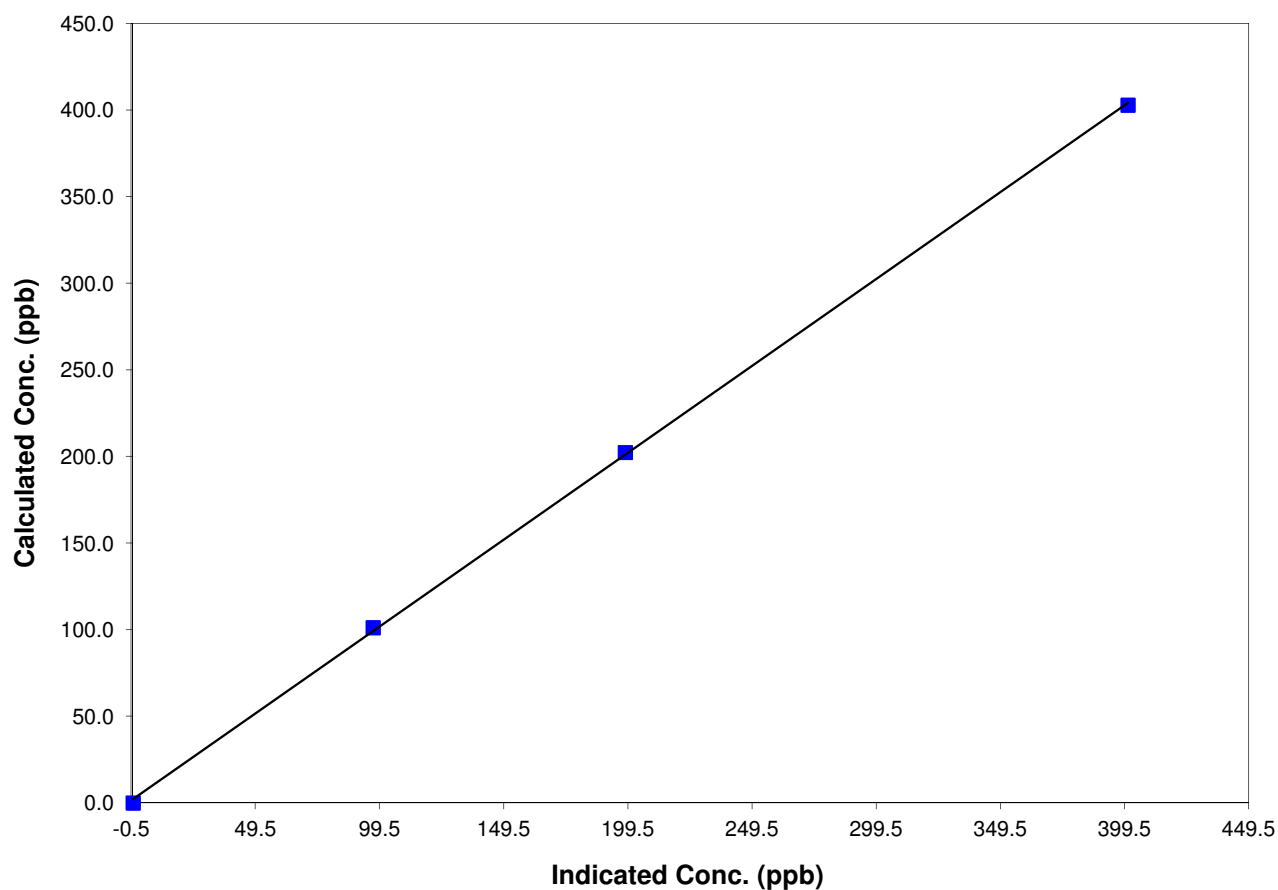
Station Information

Calibration Date	February 21, 2013	Previous Calibration	January 24, 2013
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	11:35	End Time (MST)	15:06
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

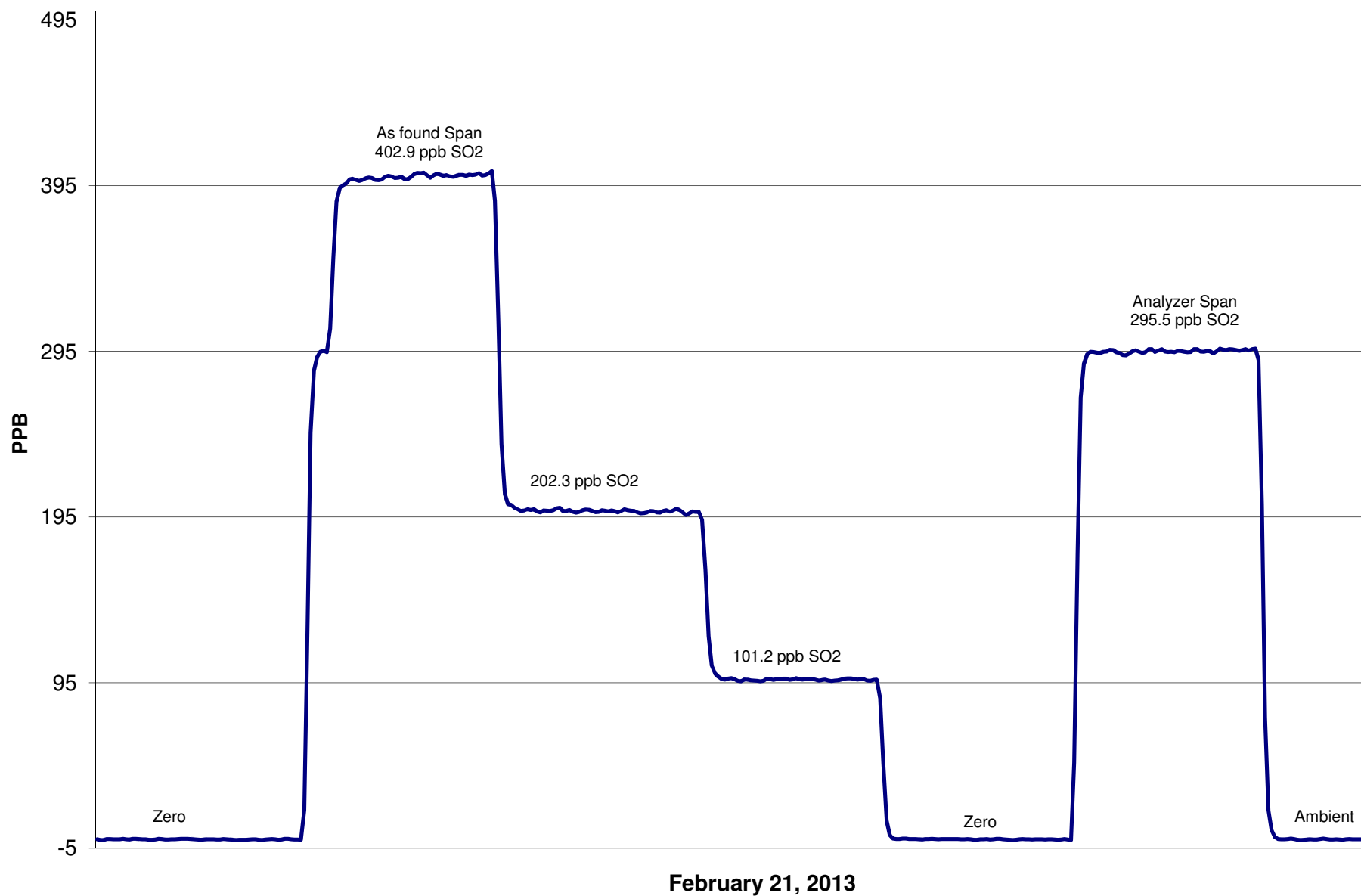
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
402.9	400.9	1.0050	Correlation Coefficient	0.999861
202.3	198.5	1.0193		
101.2	96.9	1.0439	Slope	1.003095
			Intercept	1.899308

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	February 21, 2013	Previous Calibration	January 24, 2013
Station Number	2	Station Location	Evergreen Park
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	

Start Time (MST)	10:10	End Time (MST)	14:03
Barometric Pressure	0.913 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Conc	10.1 ppm	Cal Gas Expiry Date	11/05/2013
Correction factor	0.031035	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	0.992035	Calculated slope	0.992236
Calculated intercept	-0.119076	Calculated intercept	-0.255062

Analyzer make	TEI Model 43C	Analyzer serial #	3.199E+13
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	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	35.7	ppb	35.5	ppb
coefficient	1.058		1.058	
Lamp Voltage	1028	volts	1028	volts
Chamber Temp	44.1	Deg C	44.1	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	628.8	mm Hg	629.3	mm Hg
Sample Flow	0.634	ccm	0.630	ccm
Lamp Intensity	31,402	mv	31,566	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	0.6	N/A
4995	39.93	80.10	81.2	0.9863
4995	19.96	40.20	40.3	0.9964
8995	8.97	10.06	10.2	0.9837
4995	0.00	0.00	0.6	As Found Zero
4995	39.95	80.14	81.2	As Found Span
Average Correction Factor				0.9888

Calculated value of As Found Response: 79.89 ppm Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	81.6	ppm	79.6	ppm

Notes: No adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



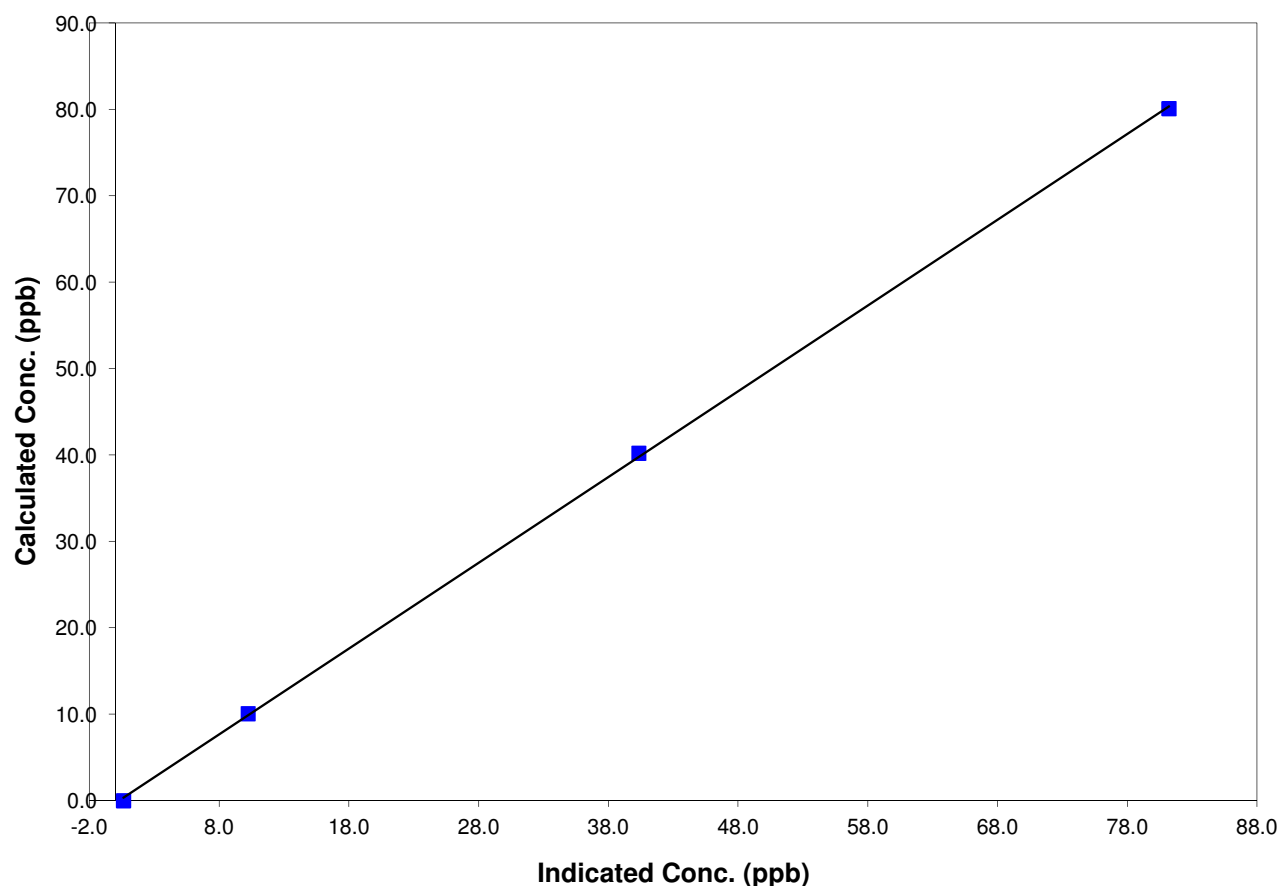
Station Information

Calibration Date	February 21, 2013	Previous Calibration	January 24, 2013
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:10	End Time (MST)	14:03
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

Calibration Data

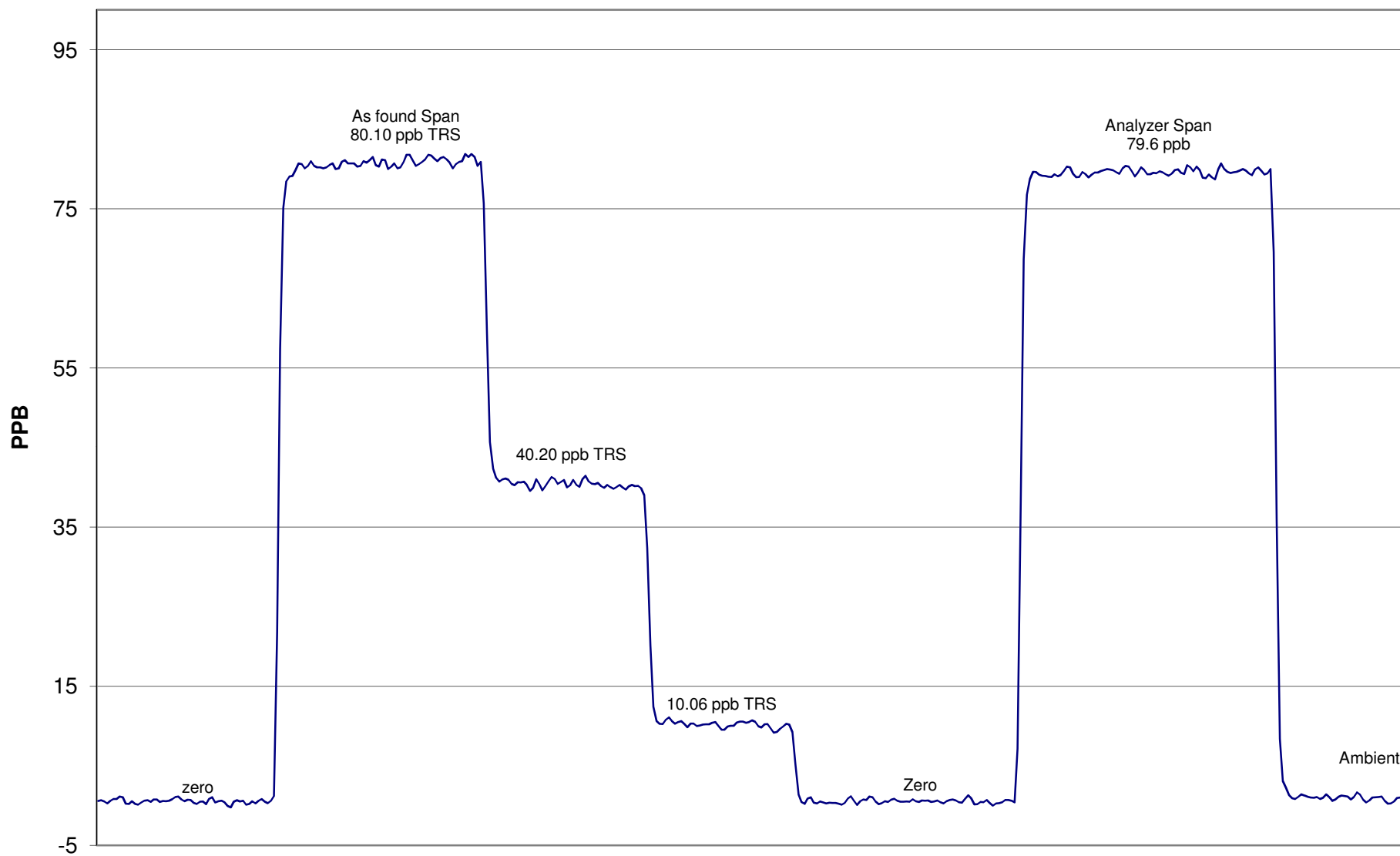
Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A	Correlation Coefficient	0.999900
80.1	81.2	0.9863		
40.2	40.3	0.9964		
10.1	10.2	0.9837	Slope	0.992236
			Intercept	-0.255062

TRS Calibration Curve



As found Span
80.10 ppb TRS

TRS Calibration



February 21, 2013

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	February 22, 2013	Previous Calibration	January 30, 2013
Station Number	3	Station Location	Smokey Heights
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:45	End Time (MST)	16:25
Barometric Pressure	0.904 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	50.8 ppm	Cal Gas Cert Date	12/03/2014
Correction factor	0.030729	Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.000087	Calculated slope	0.999795
Calculated intercept	0.737909	Calculated intercept	2.096017
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.5		11.5	
coefficient	0.985		0.985	
Lamp Voltage	923	volts	924	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	653.6	mm Hg	651.5	mm Hg
Sample Flow	0.438	ccm	0.436	ccm
Lamp Intensity	88	%	89	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.2	N/A
4995	39.93	402.87	402.1	1.0020
4995	19.97	202.29	198.8	1.0173
4995	9.97	101.19	97.0	1.0432
4995	0.0	0.00	0.2	As Found Zero
4995	39.93	402.87	402.1	As Found Span
Average Correction Factor				1.0209

Calculated value of As Found Response: 402.624 ppm Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.2	ppb
Auto span	304.5	ppb	269.8	ppb

Notes: No adjust

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



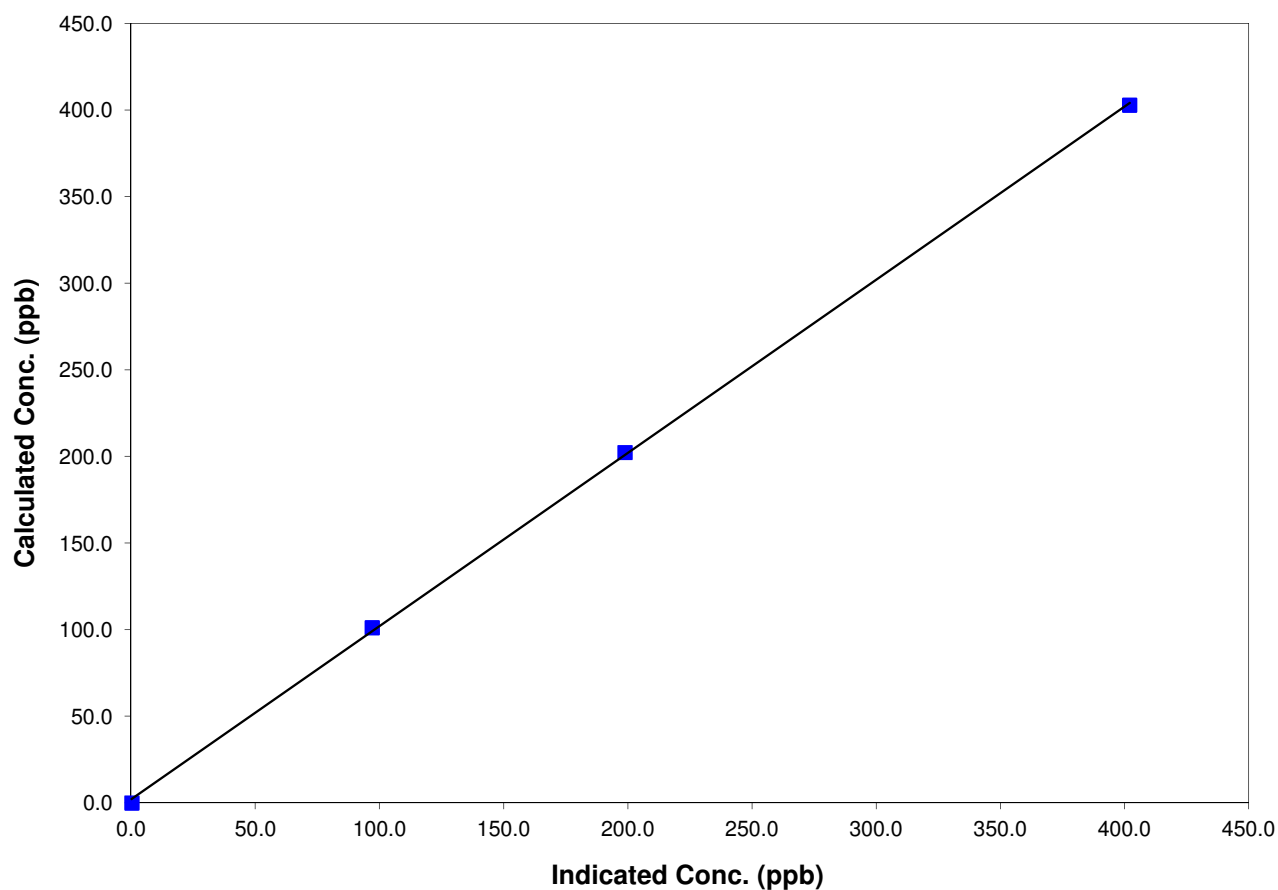
Station Information

Calibration Date	February 22, 2013	Previous Calibration	January 30, 2013
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	12:45	End Time (MST)	16:25
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

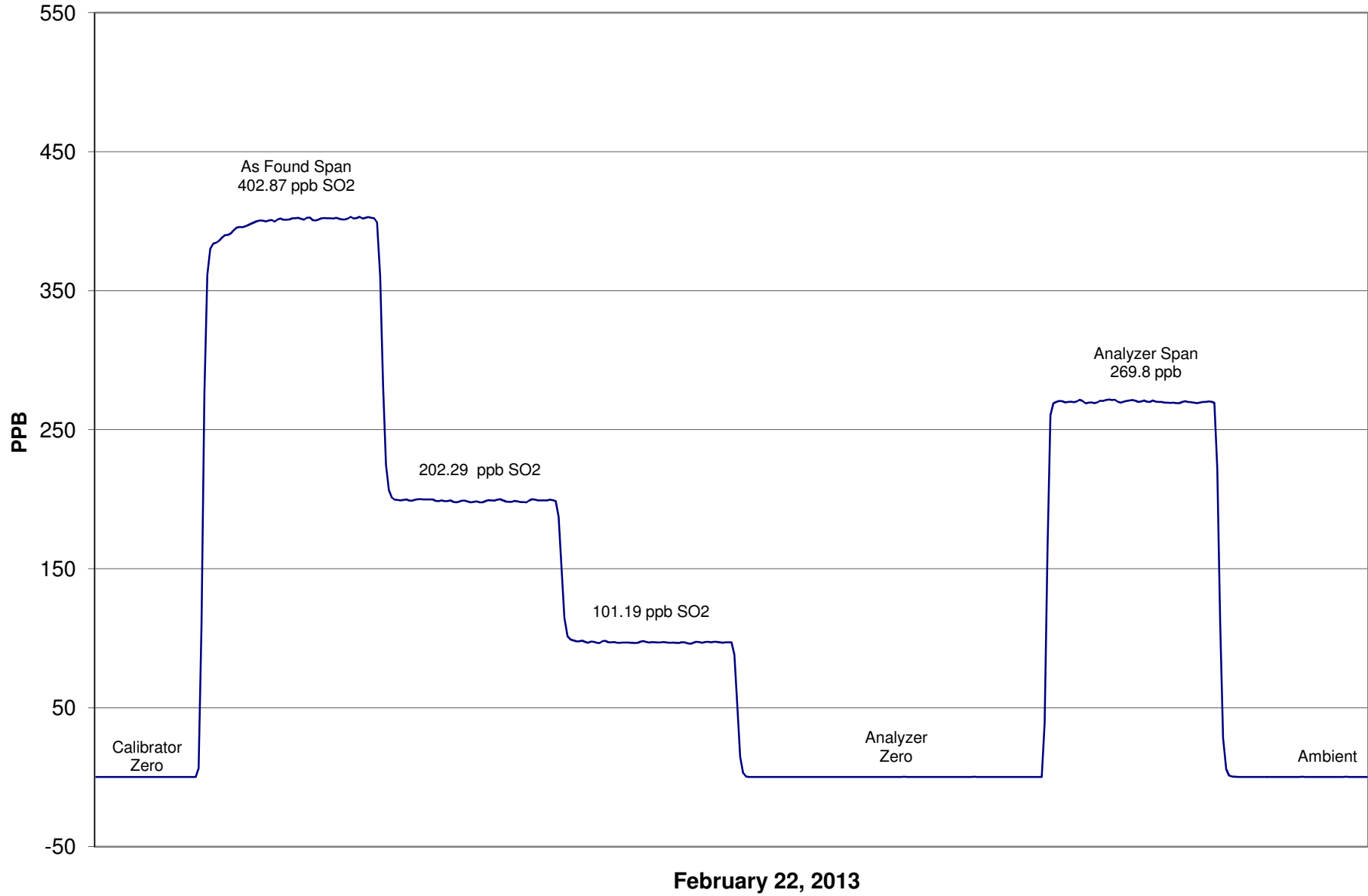
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999852
402.9	402.1	1.0020		
202.3	198.8	1.0173		
101.2	97.0	1.0432	Slope	0.999795
			Intercept	2.096017

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	February 22, 2013	Previous Calibration	January 30, 2013
Station Number	3	Station Location	Smokey Heights
Reason:	☐ Routine	☐ Install	☐ Removal
		☒ Other:	Maintenance

Start Time (MST)	10:45	End Time (MST)	14:15
Barometric Pressure	0.903 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	10.1 ppm	Cal Gas Expiry Date	11/05/2013
Correction factor	0.030696	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	0.994081	Calculated slope	1.003031
Calculated intercept	0.917322	Calculated intercept	0.294300

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005
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	before		after	
Concentration range	100	ppb	100	ppb
Background	19.9	ppb	19.3	ppb
coefficient	0.991		0.935	
Lamp Voltage	822	volts	822	volts
Chamber Temp	43.5	Deg C	43.5	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	589,0	mm Hg	567,3	mm Hg
Sample Flow	0.634	ccm	0.621	ccm
Lamp Intensity	35,148	mv	35,426	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	0.6	N/A
4995	39.94	80.12	80.0	1.0015
4995	19.97	40.22	39.1	1.0290
8995	8.96	10.05	9.1	1.1040
4995	0.0	0.00	0.6	As Found Zero
4995	39.94	80.12	85.3	As Found Span
Average Correction Factor				1.0448

Calculated value of As Found Response: 85.05 ppm Percent Change of As Found: **-6.2%**

	before calibration		after calibration	
Auto zero	0.0	ppm	0.3	ppm
Auto span	52.9	ppm	29.6	ppm

Notes: Replace oxidizer thermocouple & one eight line from quartz tube to bulkhead union
Slight adjust, run adjustment point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



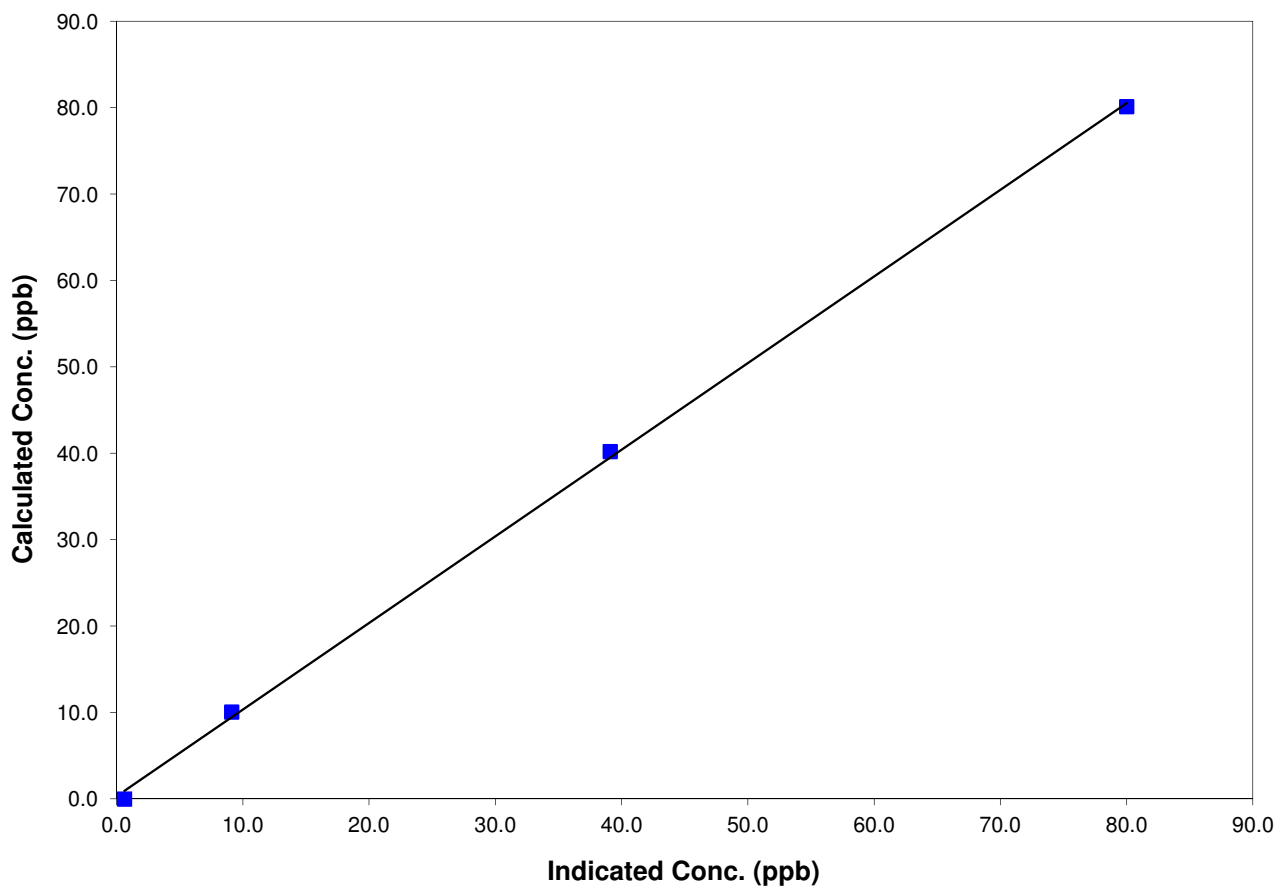
Station Information

Calibration Date	February 22, 2013	Previous Calibration	January 30, 2013
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:45	End Time (MST)	14:15
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

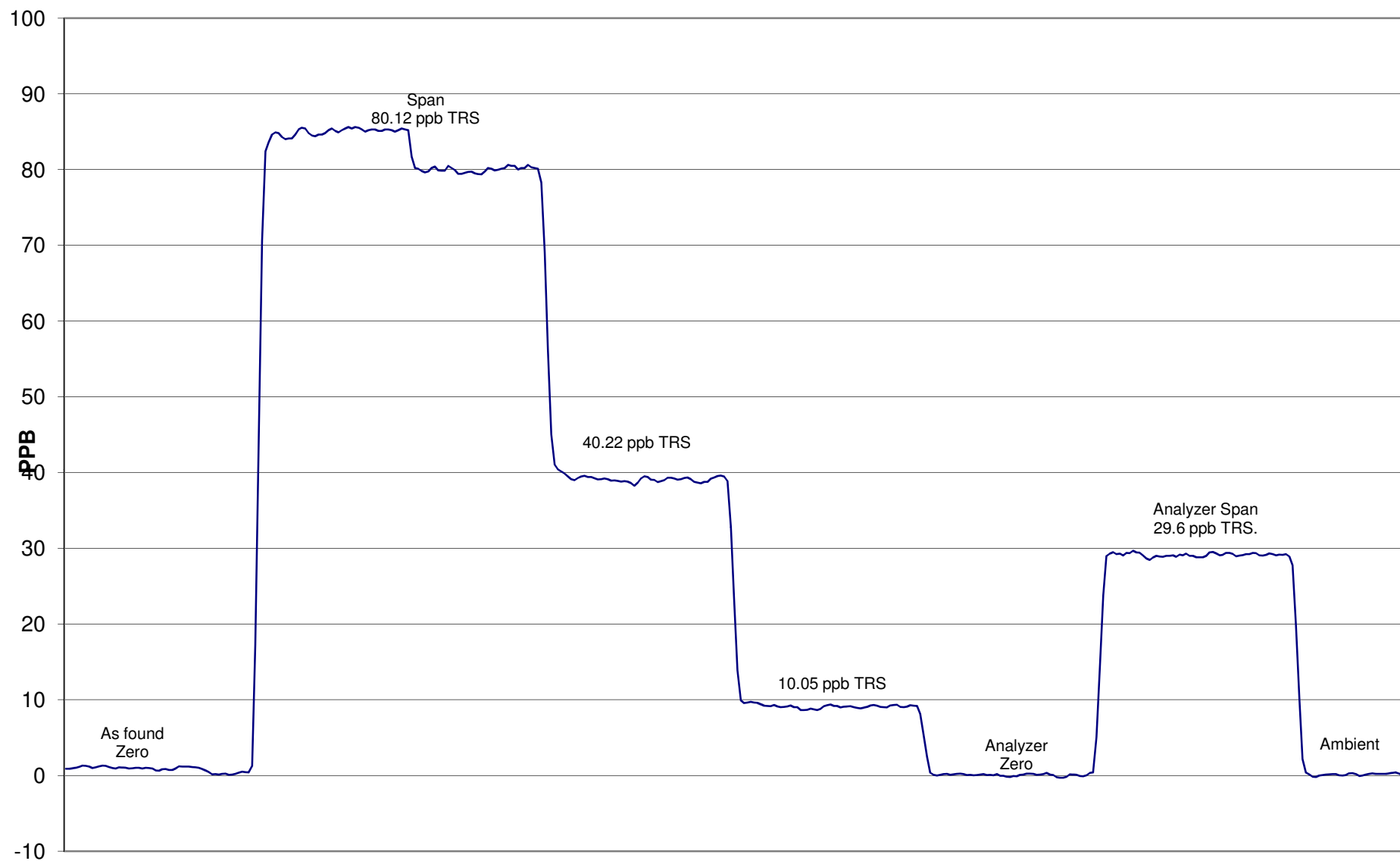
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A	Correlation Coefficient	0.999499
80.1	80.0	1.0015		
40.2	39.1	1.0290		
10.1	9.1	1.1040	Slope	1.003031
			Intercept	0.294300

TRS Calibration Curve



Smokey Heights TRS Calibration



February 22, 2013

Calibration Report

Parameter SO2
Air Monitoring Network PAZA



Station Information

Calibration Date	February 17, 2013	Previous Calibration	January 28, 2013
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
Start Time (MST)	13:29	End Time (MST)	16:21
Barometric Pressure	0.913 atm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	10.8 ppm	Cal Gas Expiry Date	28/09/2012
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	1.016320	Calculated slope	1.004489
Calculated intercept	-0.193783	Calculated intercept	-0.075879
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.4		2.38	
Coefficient	1.071		1.071	
PMT	-767.6	V	-767.6	V
UV Lamp Voltage	1062	V	1059	V
Chamber Temp	45.2	Deg C	45.2	Deg C
Pressure	664.2	mm Hg	669.1	mm Hg
Sample Flow	0.483	LPM	0.488	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	0.3	N/A
4995	39.93	85.7	85.4	1.0028
4995	19.97	43.0	42.9	1.0029
4995	9.97	21.5	21.2	1.0138
4995	0.00	0.0	0.3	As found zero
4995	39.93	85.7	85.4	As found span
Average Correction Factor				1.0065

Calculated value of As Found Response: 86.325 ppm Percent Change of As Found: -0.8%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.2	ppb
Auto span	58.5	ppb	59.6	ppb

Notes: No adjustments made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



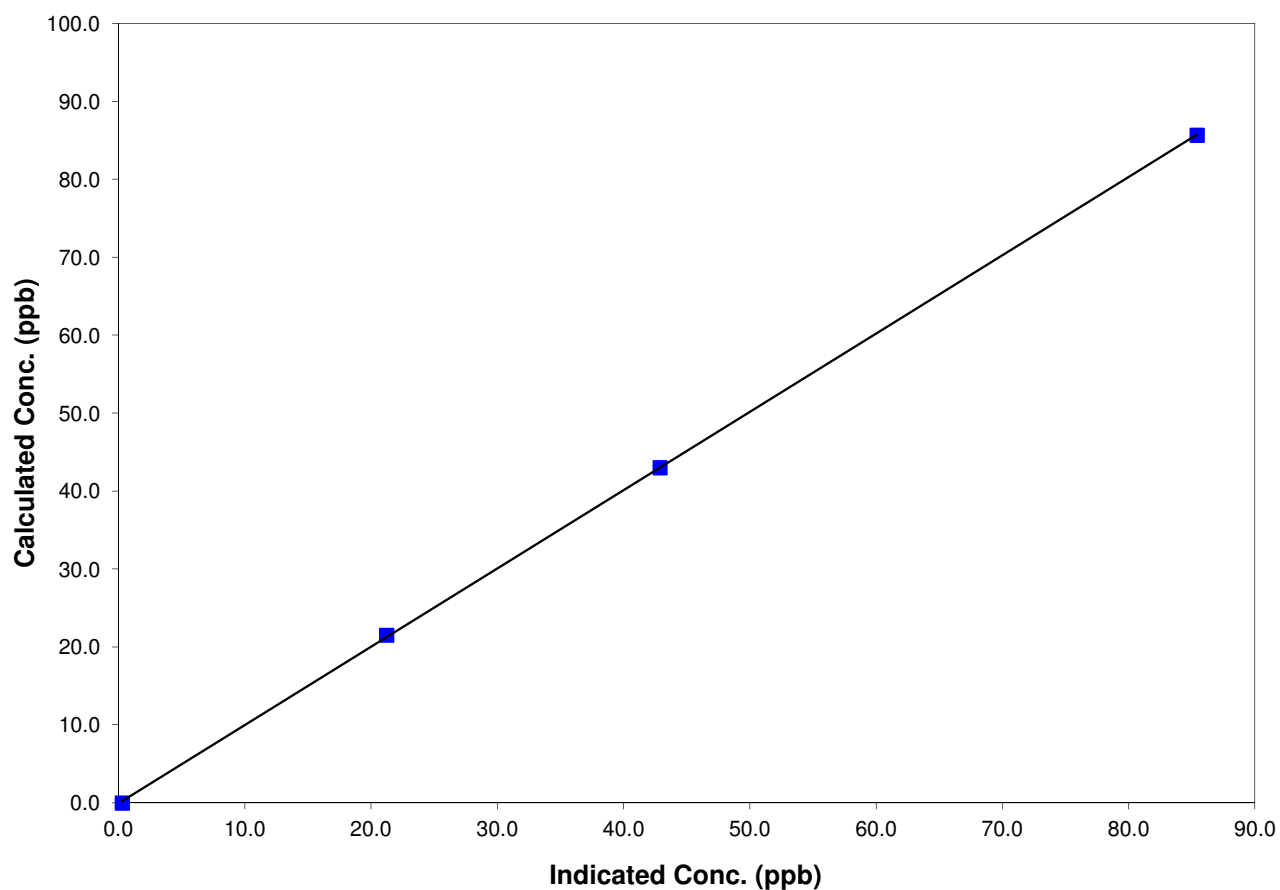
Station Information

Calibration Date	February 17, 2013	Previous Calibration	January 28, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:29	End Time (MST)	16:21
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

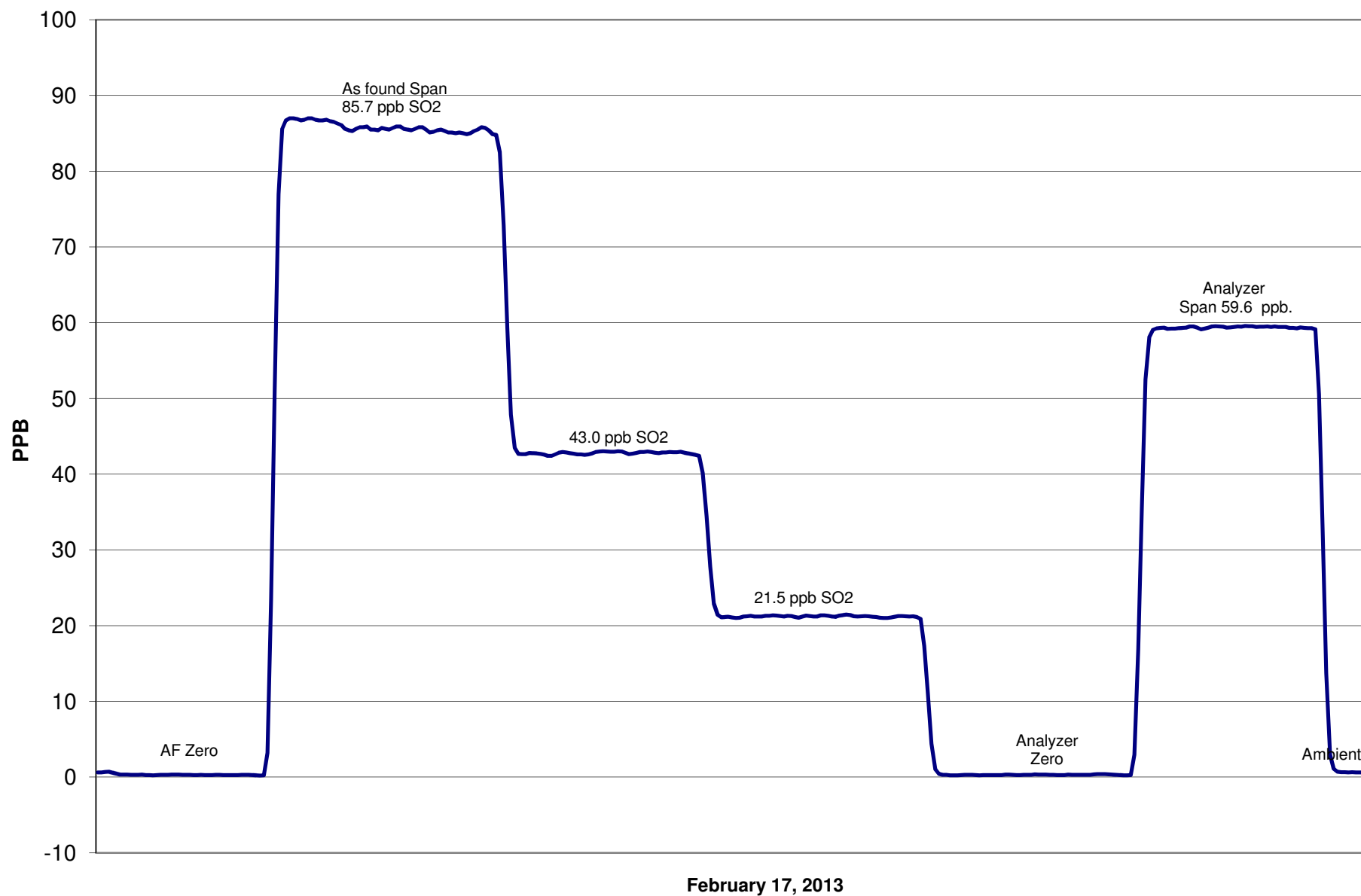
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999969
85.7	85.4	1.0028		
43.0	42.9	1.0029		
21.5	21.2	1.0138	Slope	1.004489
			Intercept	-0.075879

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	February 17, 2013	Previous Calibration	January 28, 2013		
Station Number	4	Station Location	Beaverlodge		
Reason:	Routine	Installation	Removal		
Other:					
Start Time (MST)	8:35	End Time (MST)	13:33		
Barometric Pressure	0.913	Atm	Station Temperature	23.0	Deg C
Calibrator	Envionics	Serial Number	2844		
NO Cal Gas Conc	51.2	ppm	Cal Gas Expiry Date	March 12, 2014	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL107272	

DACS Information

DACS make	CR3000	DACS serial No.	5237	
Parameter		NO2	NOx	NO
Before	Data Slope	0.996931	0.997242	0.999145
	Data Offset	-0.166485	1.762485	1.947973
After	Data Slope	0.997749	0.995289	0.998173
	Data Offset	0.183612	1.827336	2.075134
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	906535068	
Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	2.1	mV	2.1	mV
NOx bkgnd	2.3	mV	2.4	mV
NO coefficient	1.426		1.446	
NOx coefficient	1.002		1.001	
NO2 conv temp	326.0	Deg C	326.0	Deg C
PMT Temp	-2.8	Deg C	-2.8	Deg C
PMT Volt	-671.9	mV	-671.9	mV
R Cell Press	173.5	in Hg	173.8	in Hg
Sample Flow	0.786	ccm	0.783	ccm

Notes: Slight adjustment.

Calibration Report

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



Station Information

Calibration Date: February 17, 2013 Station Location: Beaverlodge

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.0	-0.1	-0.1	N/A	N/A
1	4995	39.94	406.1	406.1	0.0	407.1	405.9	0.4	0.9977	1.0007
2	4995	19.97	203.9	203.9	0.0	202.2	201.0	0.4	1.0084	1.0146
3	4995	9.97	102.0	102.0	0.0	98.8	98.3	0.4	1.0323	1.0380
AFZ	4995	0.00	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0000	0.0000
AFS	4995	39.94	406.1	406.1	0.8	401.0	399.8	0.5	1.0129	1.0160
Average Correction Factor									1.0128	1.0178

As Found Concentrations: NO_x= 402.8 NO= 401.8 As Found Percent Change NO_x= -0.8% NO= -1.1%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.1	-0.1	0.0	0.0	-0.1	-0.1	N/A	N/A	N/A	N/A
NO point	405.1	405.1	0.0	406.2	405.1	0.3	0.9973	1.0000	N/A	N/A
300	405.1	112.0	293.1	406.4	112.0	293.7	0.9968	1.0000	0.9979	100.2%
200	405.1	204.3	200.8	406.1	204.3	200.8	0.9977	1.0000	0.9998	100.0%
100	405.1	298.2	106.9	405.8	298.2	107.0	0.9984	1.0000	0.9994	100.1%
Average Correction Factor							0.9976	1.0000	0.9990	100.1%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	-0.1	0.0	ppb	-0.1	-0.2	-0.1	ppb
Auto span	205.5	203.2	1.6	ppb	215.0	213.3	1.0	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



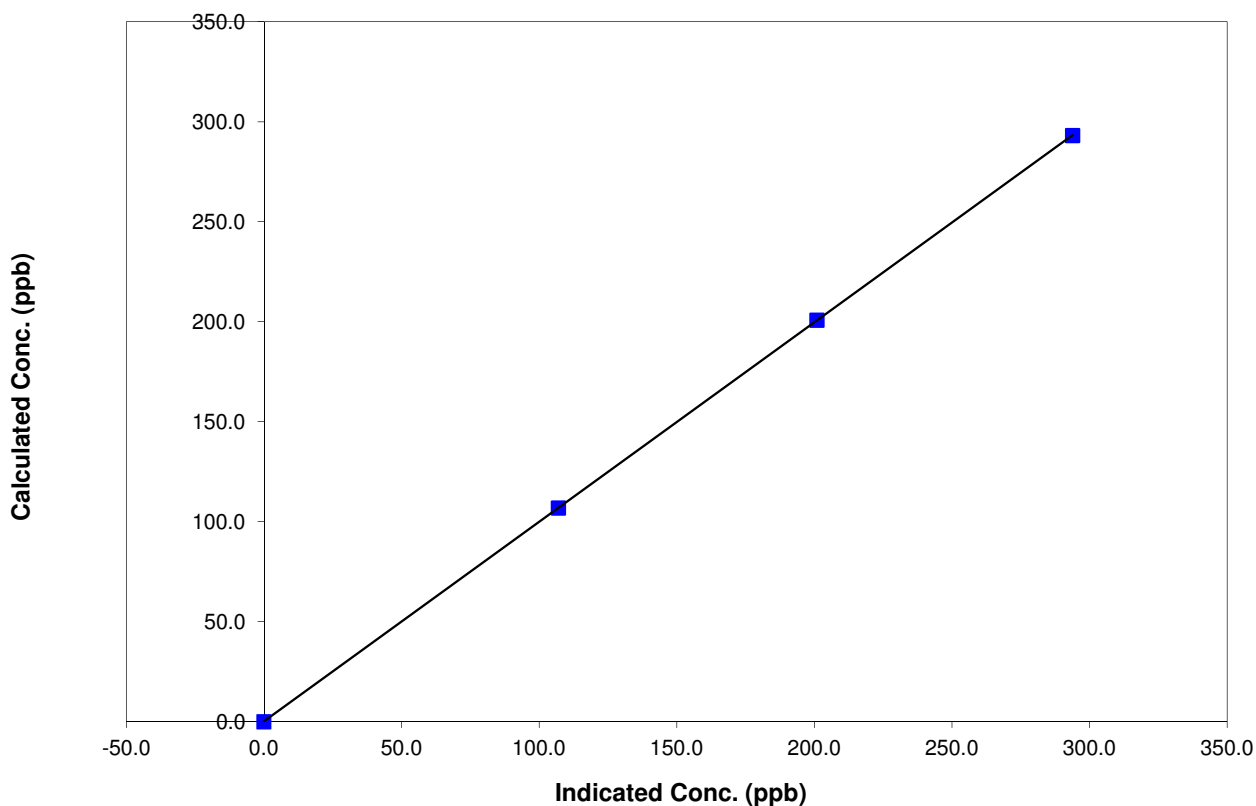
Station Information

Calibration Date	February 17, 2013	Previous Calibration	January 28, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:35	End Time (MST)	13:33
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	0.999998
293.1	293.7	0.9979		
200.8	200.8	0.9998		
106.9	107.0	0.9994	Slope	0.997749
			Intercept	0.183612

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



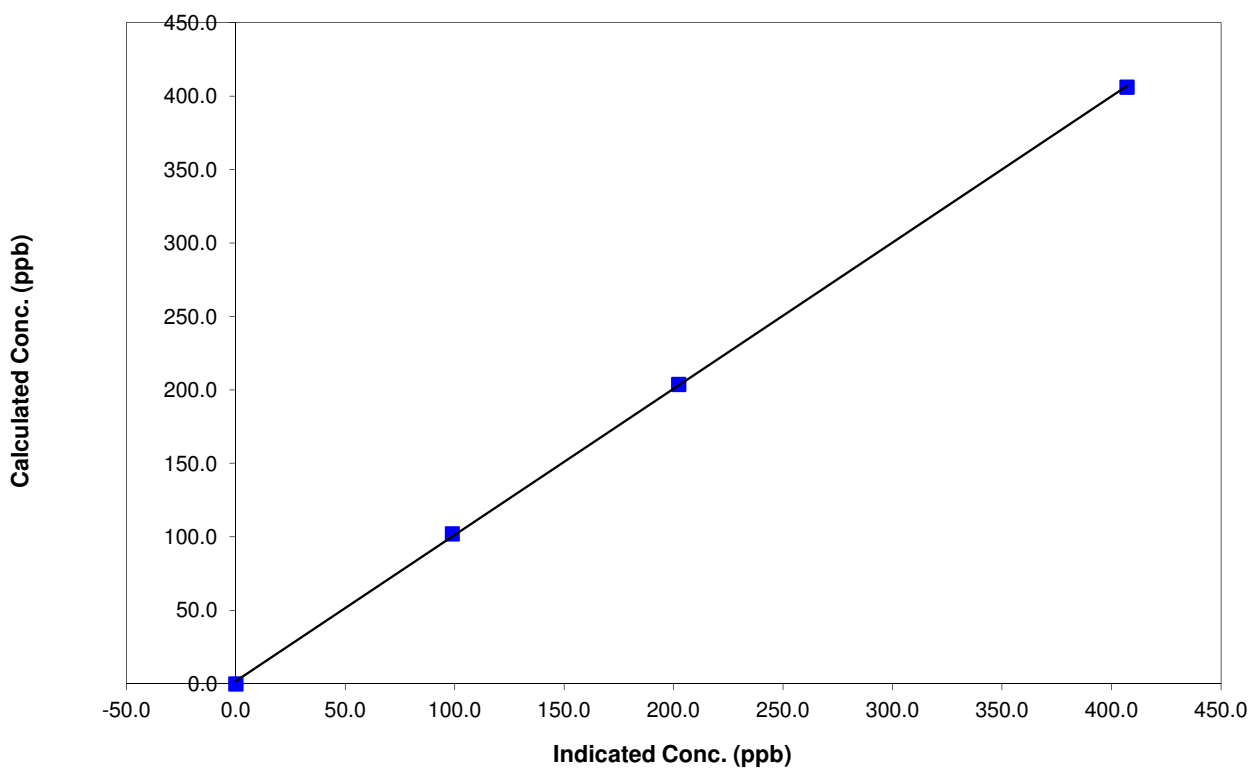
Station Information

Calibration Date	February 17, 2013	Previous Calibration	January 28, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:35	End Time (MST)	13:33
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999912
406.1	407.1	0.9977		
203.9	202.2	1.0084		
102.0	98.8	1.0323	Slope	0.995289
			Intercept	1.827336

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



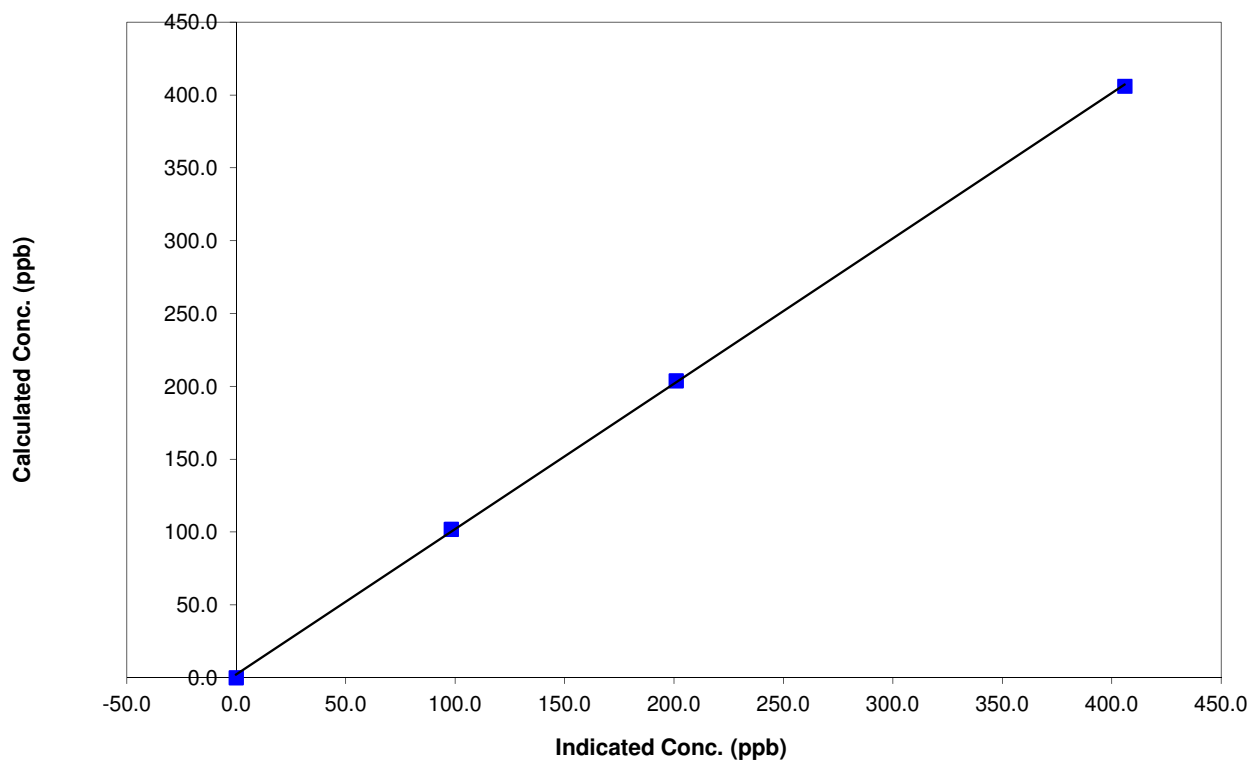
Station Information

Calibration Date	February 17, 2013	Previous Calibration	January 28, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:35	End Time (MST)	13:33
Analyzer make	TEI 42i	Analyzer serial #	906535068

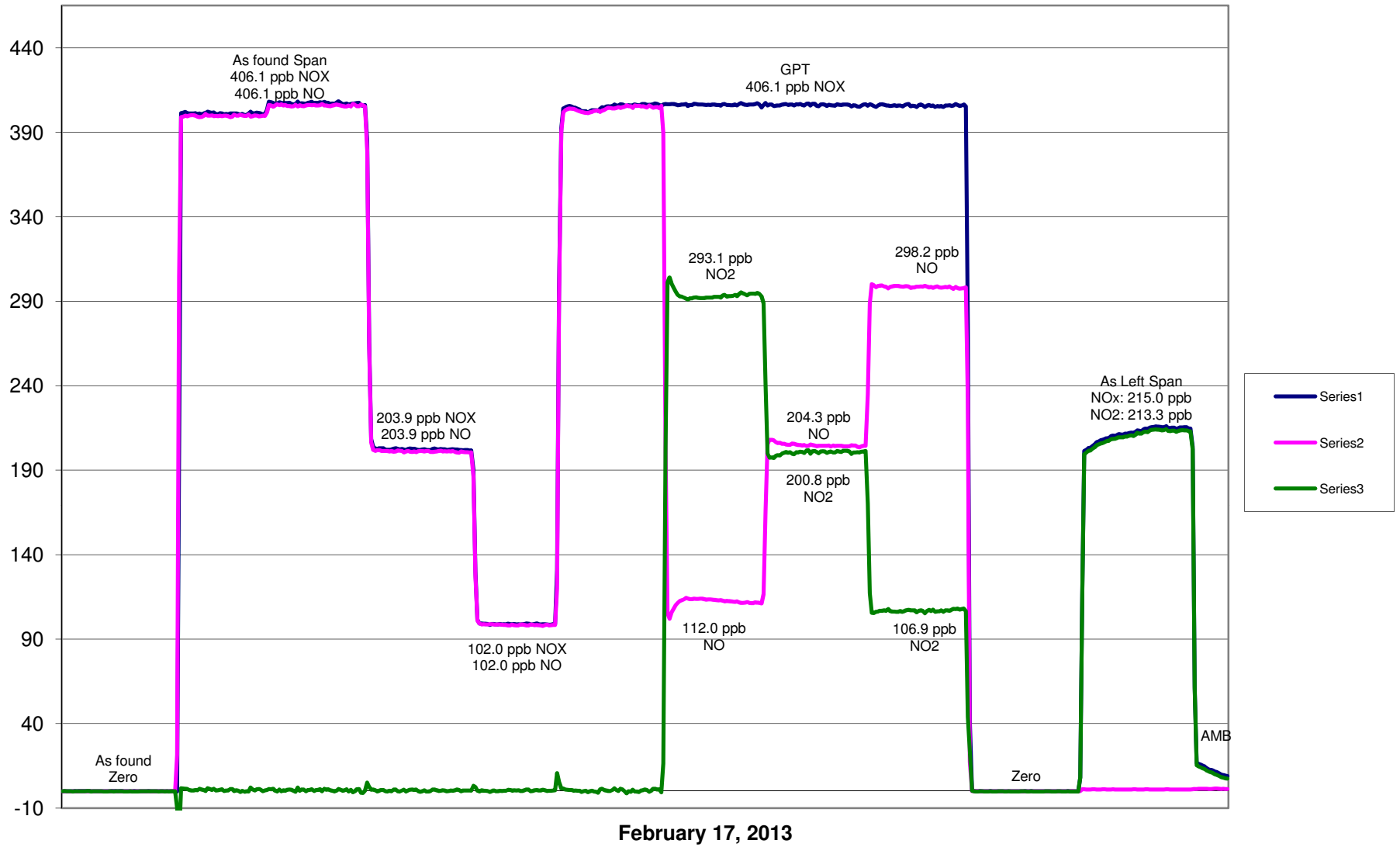
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999889
406.1	405.9	1.0007		
203.9	201.0	1.0146		
102.0	98.3	1.0380	Slope	0.998173
			Intercept	2.075134

NO Calibration Curve



PAZA Beaverlodge NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	February 17, 2013	Previous Calibration	January 28, 2013
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	12:08	End Time (MST)	14:49
Barometric Pressure	0.913 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	0.996335	Calculated slope	0.984377
Calculated intercept	0.500088	Calculated intercept	0.638713

Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.50	ppb	-1.60	ppb
slope	1.036		1.036	
Lamp temp	56.4	mV	56.4	mV
Lamp Intensity A/B	51217/55233	mV	51008/54793	mV
Pressure	693.5	mm Hg	658	mm Hg
Flow A	0.767	ccm	0.749	ccm
Flow B	0.716	ccm	0.706	ccm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5035	0.0	0.0	0.3	N/A
5035	0.3	293.1	298.2	0.9830
5035	0.2	200.8	202.2	0.9930
5035	0.1	106.9	107.1	0.9983
5035	0.0	0.0	0.3	As found zero
5035	0.3	293.1	298.2	As found span
Average Correction Factor				0.9914

Calculated value of As Found Response: 297.3 ppm Percent Change of As Found: 1.4%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.9	ppb
Auto span	110.0	ppb	116.4	ppb

Notes: No adjust

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



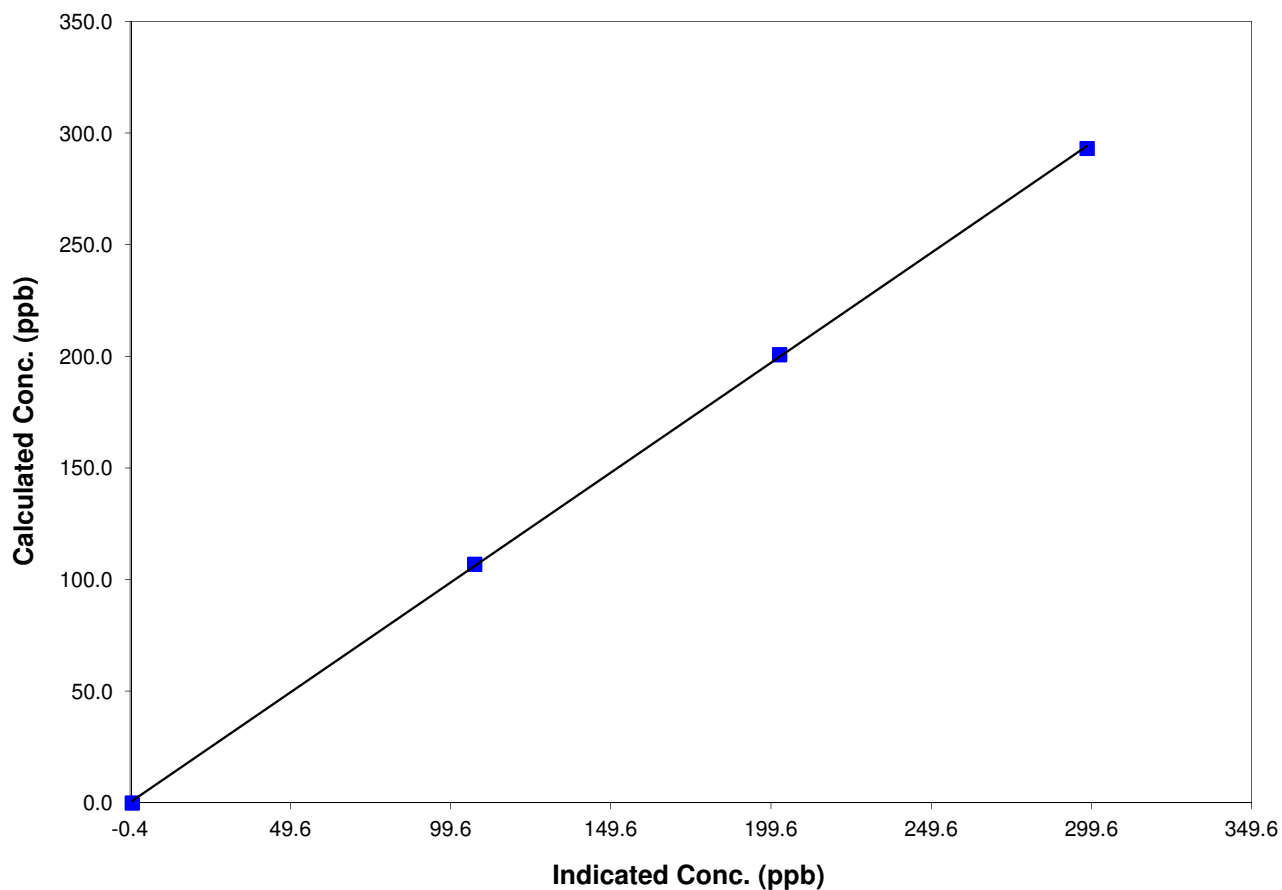
Station Information

Calibration Date	February 17, 2013	Previous Calibration	January 28, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:08	End Time (MST)	14:49
Analyzer make/model	Teco 49C	Analyzer serial #	49C-76443-383

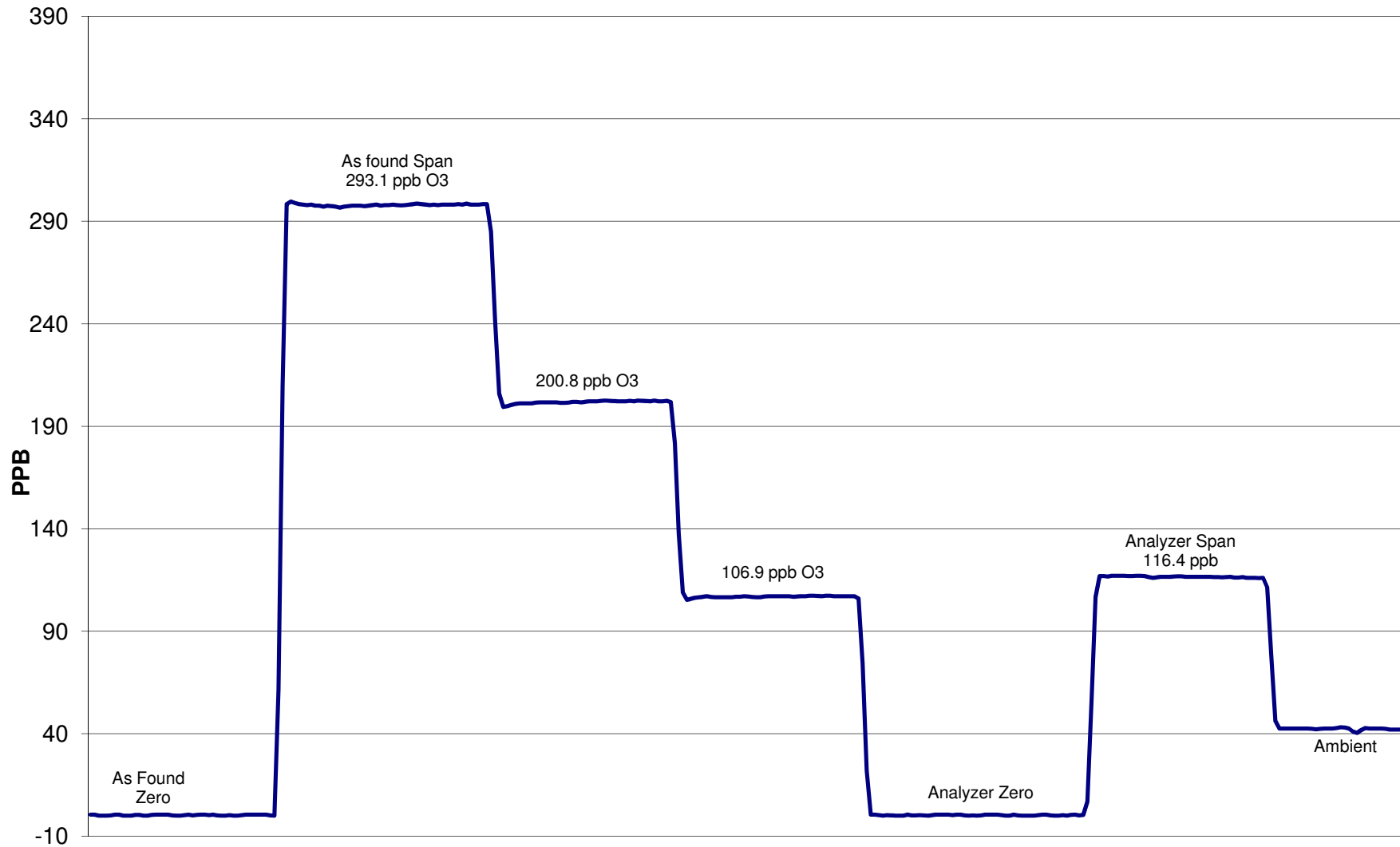
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	NA	Correlation Coefficient	0.999918
293.1	298.2	0.9830		
200.8	202.2	0.9930		
106.9	107.1	0.9983	Slope	0.984377
			Intercept	0.638713

O3 Calibration Curve



O3 Calibration



February 17, 2013

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	February 25, 2013	Previous Calibration	January 17, 2013
Station Number	6	Station Location	Valleyview
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	11:36	End Time (MST)	14:13
Barometric Pressure	702.00 mmHg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Concentration	50.8 ppm	Cal Gas Cert Date	12/03/2013
Gas Cylinder Num.	LL107272	Cal gas Exp. Date	12/03/2014
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.997200	Calculated slope	1.001309
Calculated intercept	1.788751	Calculated intercept	0.897617
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	<u>before</u>		<u>after</u>	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	37		35.9	
Coefficient	0.882		0.882	
UV Lamp Voltage	982	LPM	982	LPM
Chamber Temp	43.9	V	43.9	V
Perm Gas Temp	32.3	C	32.3	C
Pressure	602.8	in Hg	603.1	in Hg
Sample Flow	0.556	LPM	0.556	LPM
Lamp Intensity	48143	Hz	48432	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	1.5	N/A
4995	39.94	403.0	402.7	1.0006
4995	19.97	202.3	199.9	1.0121
4995	9.94	100.9	97.5	1.0347
4995	0.00	0.0	1.0	As found zero
4995	39.94	403.0	402.7	As found span
Average Correction Factor				1.0158

Calculated value of As Found Response: 402.4 ppm Percent Change of As Found: 0.1%

	<u>before calibration</u>		<u>after calibration</u>	
Auto zero	0.0	ppm	0.0	ppm
Auto span	144.4	ppm	141.4	ppm

Notes: No adjustment to span.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



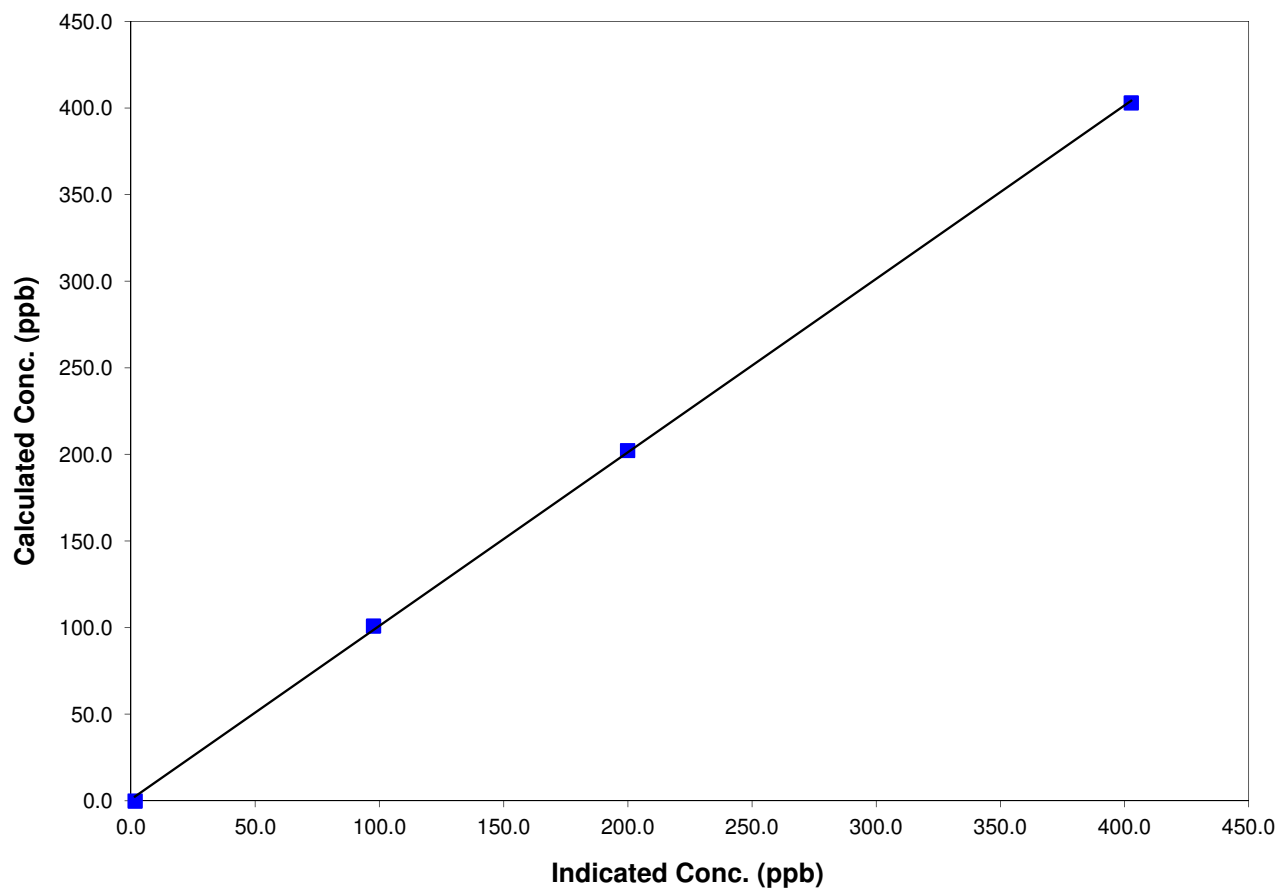
Station Information

Calibration Date	February 25, 2013	Previous Calibration	January 17, 2013
Station Number	6	Station Location	Valleyview
Start Time (MST)	11:36	End Time (MST)	14:13
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

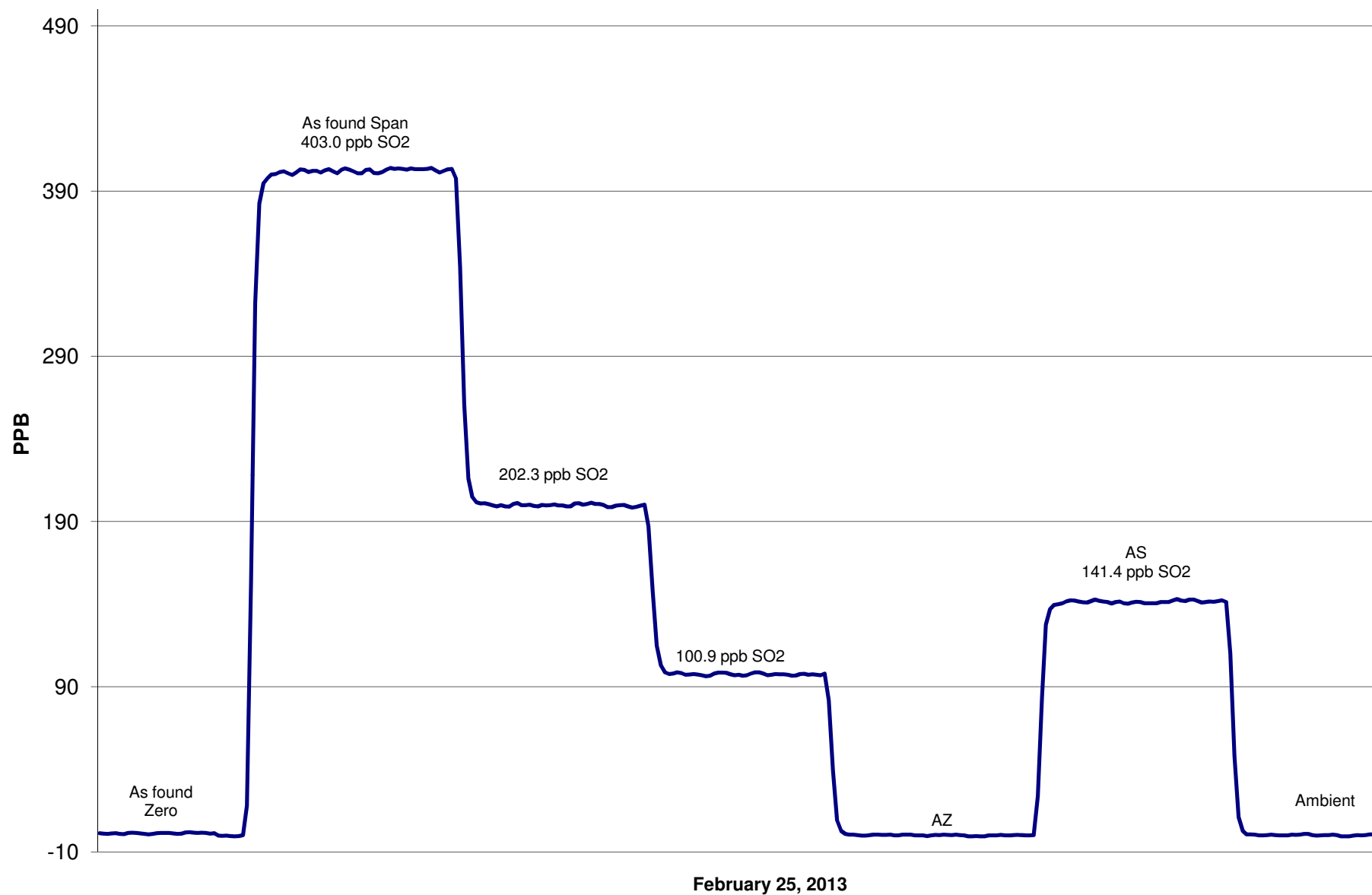
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.5	N/A	Correlation Coefficient	0.999838
403.0	402.7	1.0006		
202.3	199.9	1.0121		
100.9	97.5	1.0347	Slope	1.001309
			Intercept	0.897617

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter H2S
Air Monitoring Network

PAZA



Station Information

Calibration Date	February 25, 2013	Previous Calibration	January 17, 2013
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	9:40	End Time (MST)	13:17
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	11/05/2013
Gas Cert Reference	15/05/2012		
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	0.966051	Calculated slope	0.968209
Calculated intercept	0.310649	Calculated intercept	0.215544
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	7.8	ppb	7.8	ppb
Coefficient	1.040		1.040	
Lamp Voltage	790	V	790	V
Chamber Temp	45.1	c	45.1	c
Perm Oven Temp	44.33	c	44.33	c
Pressure	606.40	mm Hg	607.30	mm Hg
Sample Flow	0.411	ccm	0.412	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	0.2	N/A
4995	39.93	80.1	82.7	0.9685
4995	19.97	40.2	41.0	0.9811
8979	8.97	10.1	9.9	1.0178
4995	0.00	0.0	0.6	As found zero
4995	39.95	80.1	82.7	As found span
Average Correction Factor				0.9892

Calculated value of As Found Response: 79.60 ppm Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.7	ppm
Auto span	70.6	ppm	71.2	ppm

Notes: No adjust 80% point. Replace zero air cannister & activated carbon.

Calibration Performed By:

Grover Christiansen

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



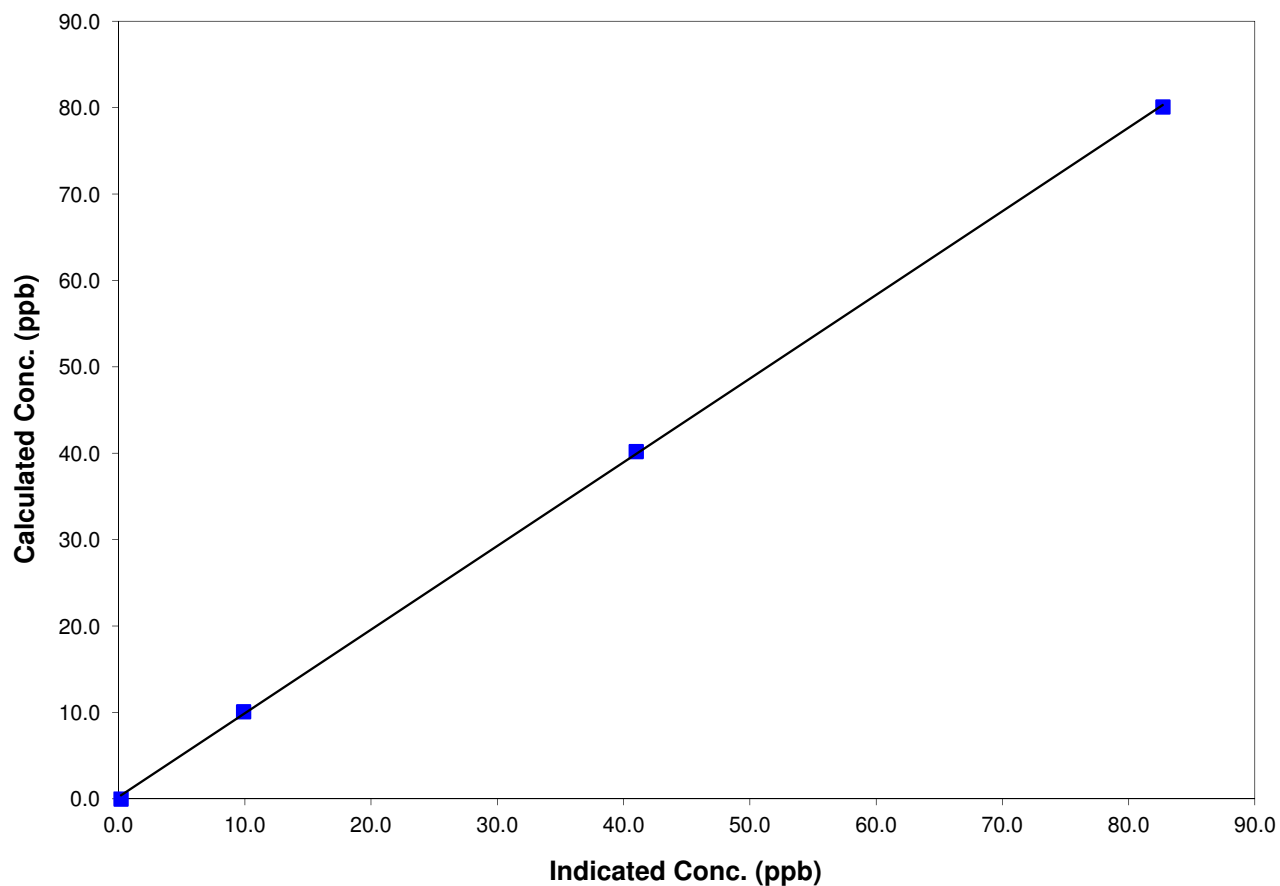
Station Information

Calibration Date	February 25, 2013	Previous Calibration	January 17, 2013
Station Number	6	Station Location	Valleyview
Start Time (MST)	9:40	End Time (MST)	13:17
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	0.2	N/A	Correlation Coefficient	0.999905
80.1	82.7	0.9685		
40.2	41.0	0.9811	Slope	0.968209
10.1	9.9	1.0178		
			Intercept	0.215544

H2S Calibration Curve



Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	February 26, 2013	Previous Calibration	January 18, 2013
Station Number	9	Station Location	Sunset House
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	8:25	End Time (MST)	11:33
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	06/04/2012
Gas Cert Reference	LL85275		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.997080	Calculated slope	0.997875
Calculated intercept	1.956906	Calculated intercept	2.236173
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	18.7		18.3	
Coefficient	1.013		0.991	
UV Lamp Voltage	840	V	839	V
Chamber Temp	44.9	C	44.9	C
Perm Gas Temp	45	C	45	C
Pressure	665.1	mm Hg	663.5	mm Hg
Sample Flow	0.483	LPM	0.482	LPM
Lamp Intesity	37317	Hz	37284	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.1	N/A
4995	39.93	402.9	402.8	1.0002
4995	19.97	202.3	198.9	1.0173
4995	9.96	101.1	97.0	1.0420
4995	0.00	0.0	0.1	As found zero
4995	39.93	402.9	410.5	As found span
Average Correction Factor				1.0198

Calculated value of As Found Response: 411.142 ppm Percent Change of As Found: -2.1%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	264.0	ppm	270.8	ppm

Notes: Slight span adjust. Run adjustment point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



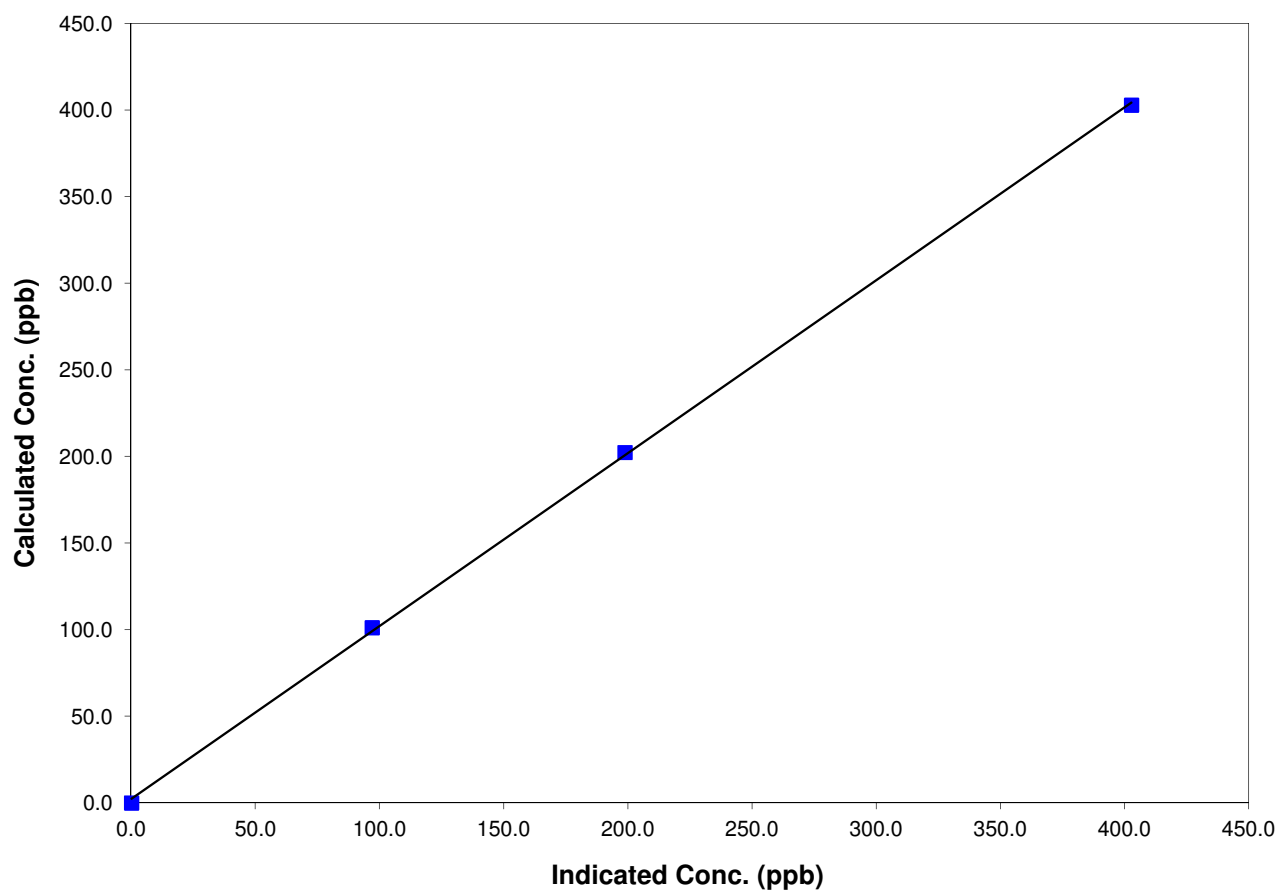
Station Information

Calibration Date	February 26, 2013	Previous Calibration	January 18, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	8:25	End Time (MST)	11:33
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

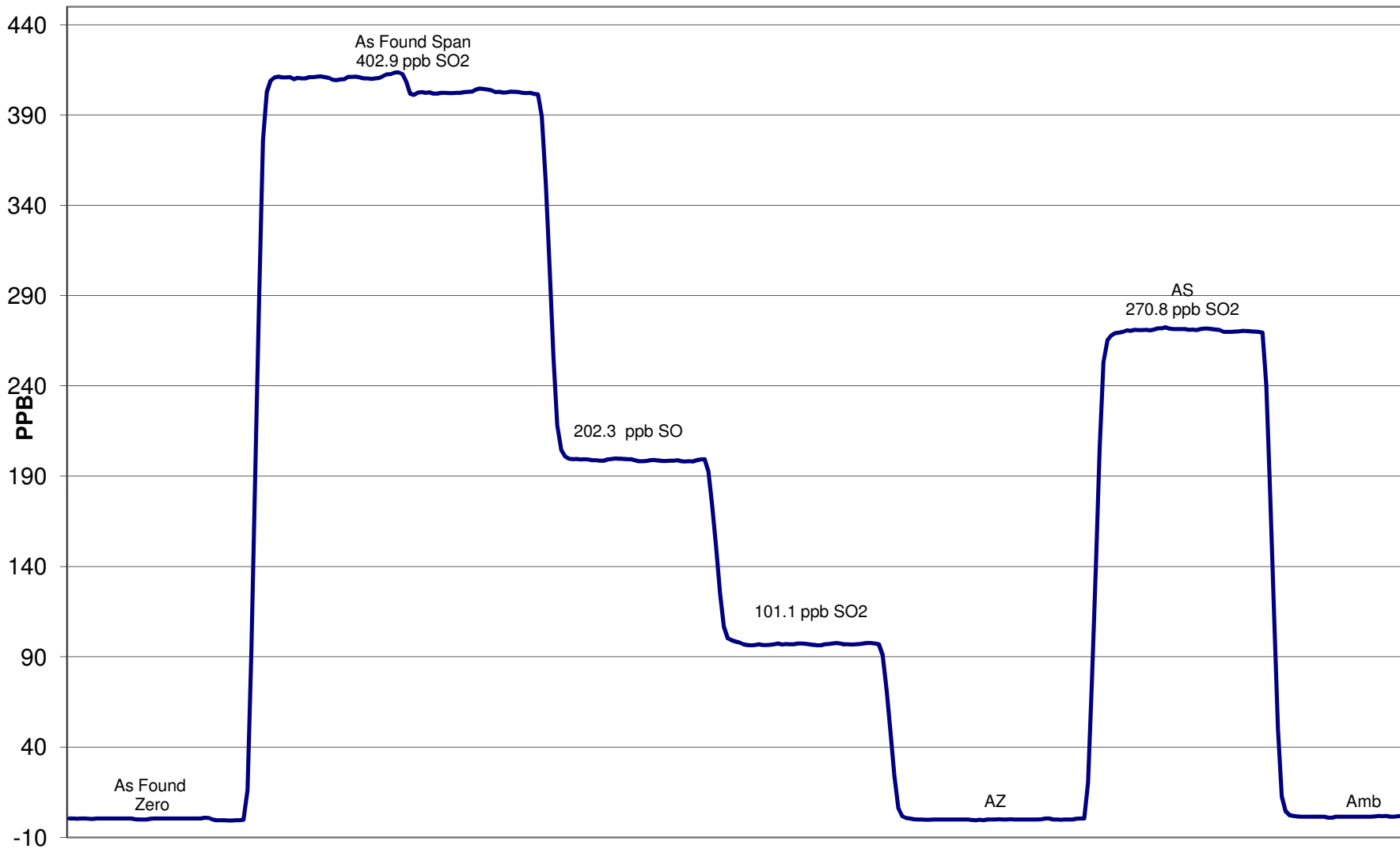
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999841
402.9	402.8	1.0002		
202.3	198.9	1.0173		
101.1	97.0	1.0420	Slope	0.997875
			Intercept	2.236173

SO2 Calibration Curve



SO2 Calibration



February 26, 2013

Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	February 26, 2013		Previous Calibration	January 18, 2013	
Station Number	9		Station Location	Sunset House	
Reason:	Routine	Install	Removal	Other:	
Start Time (MST)	8:25		End Time (MST)	13:17	
Barometric Pressure	0.914	Atm	Station Temperature	20.0	Deg C
Calibrator	EnviroNics		Serial Number	3016	
NO Cal Gas Conc	51.2	ppm	Cal Gas Expiry Date	March 12, 2014	
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	0.996890	0.992468	0.997794
	Data Offset	-0.753323	0.914649	0.772844
After	Data Slope	1.005703	0.994631	0.998893
	Data Offset	0.233219	1.021412	0.792131
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	4.6	mV	4.8	mV
NOx bkgnd	4.9	mV	5.0	mV
NO coefficient	1.064		1.093	
NOx coefficient	1.001		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	-805.2	mV	-805.2	mV
R Cell Press	173.5	in Hg	175.7	in Hg
Sample Flow	0.784	ccm	0.794	ccm

NOTES: Slight span adjust. Run adjustment point.

Calibration Report

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



Station Information

Calibration Date: February 26, 2013 Station Location: Sunset House

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.8	0.8	0.2	N/A	N/A
1	4995	39.93	406.0	406.0	0.0	408.2	406.6	0.0	0.9948	0.9987
2	4995	19.97	203.9	203.9	0.0	202.8	202.3	-0.3	1.0052	1.0078
3	4995	9.96	101.9	101.9	0.0	99.7	99.7	0.2	1.0215	1.0215
AFZ	4995	0.00	0.0	0.0	0.0	0.9	0.8	0.2	0.0000	0.0000
AFS	4995	39.93	406.0	406.0	0.0	398.2	396.1	0.5	1.0197	1.0250
Average Correction Factor									1.0072	1.0094

As Found Concentrations: NO_x= 398.3 NO= 396.1 As Found Percent Change NO_x= -1.9% NO= -2.5%

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	0.8	0.8	0.0	0.8	0.8	0.2	N/A	N/A	N/A	N/A
NO point	406.6	406.6	0.0	406.9	406.6	-1.7	0.9994	1.0000	N/A	N/A
300	406.6	112.4	294.3	406.5	112.4	292.7	1.0003	1.0000	1.0054	99.5%
200	406.6	205.6	201.0	407.1	205.6	199.5	0.9988	1.0000	1.0077	99.2%
100	406.6	300.2	106.4	407.2	300.2	105.0	0.9986	1.0000	1.0134	98.7%
Average Correction Factor							0.9992	1.0000	1.0088	99.1%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.8	0.2	0.7	ppb	0.8	0.1	0.9	ppb
Auto span	169.8	167.0	2.2	ppb	182.4	179.4	2.1	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



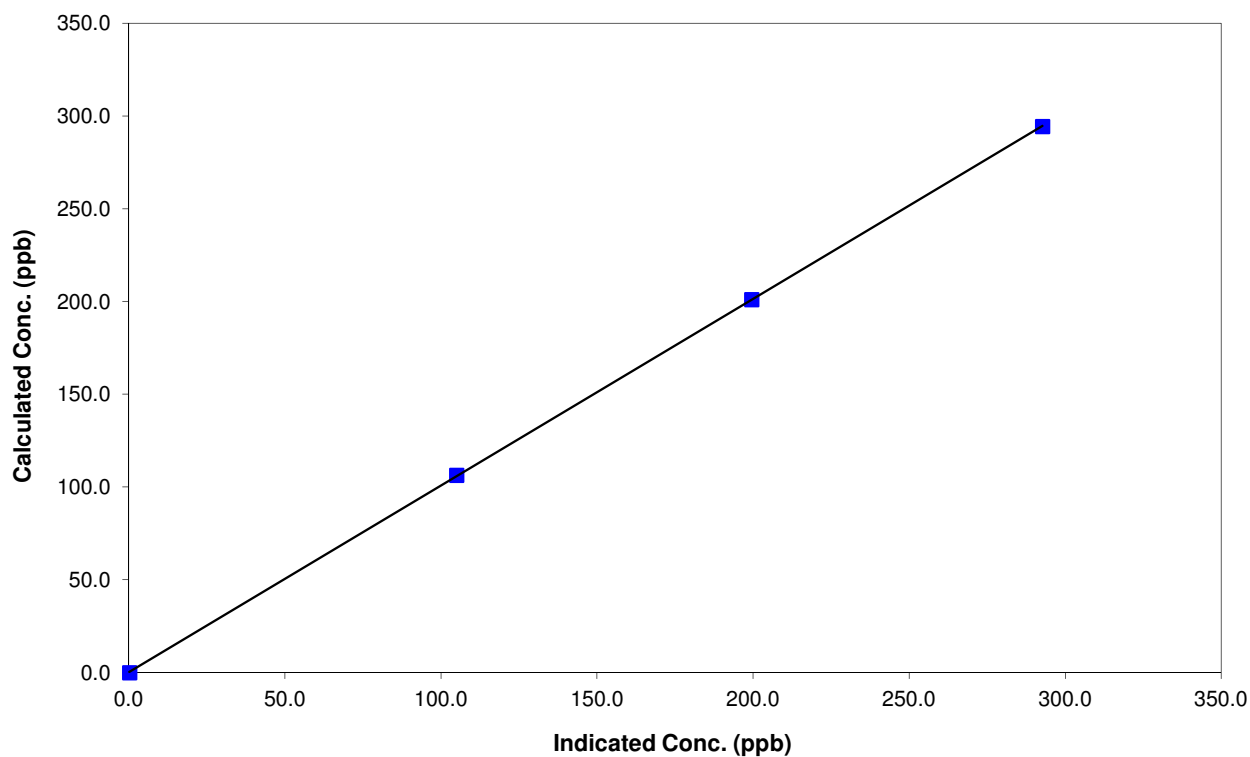
Station Information

Calibration Date	February 26, 2013	Previous Calibration	January 18, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	8:25	End Time (MST)	13:17
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	0.2	N/A	Correlation Coefficient	0.999987
294.3	292.7	1.0054		
201.0	199.5	1.0077		
106.4	105.0	1.0134	Slope	1.005703
			Intercept	0.233219

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



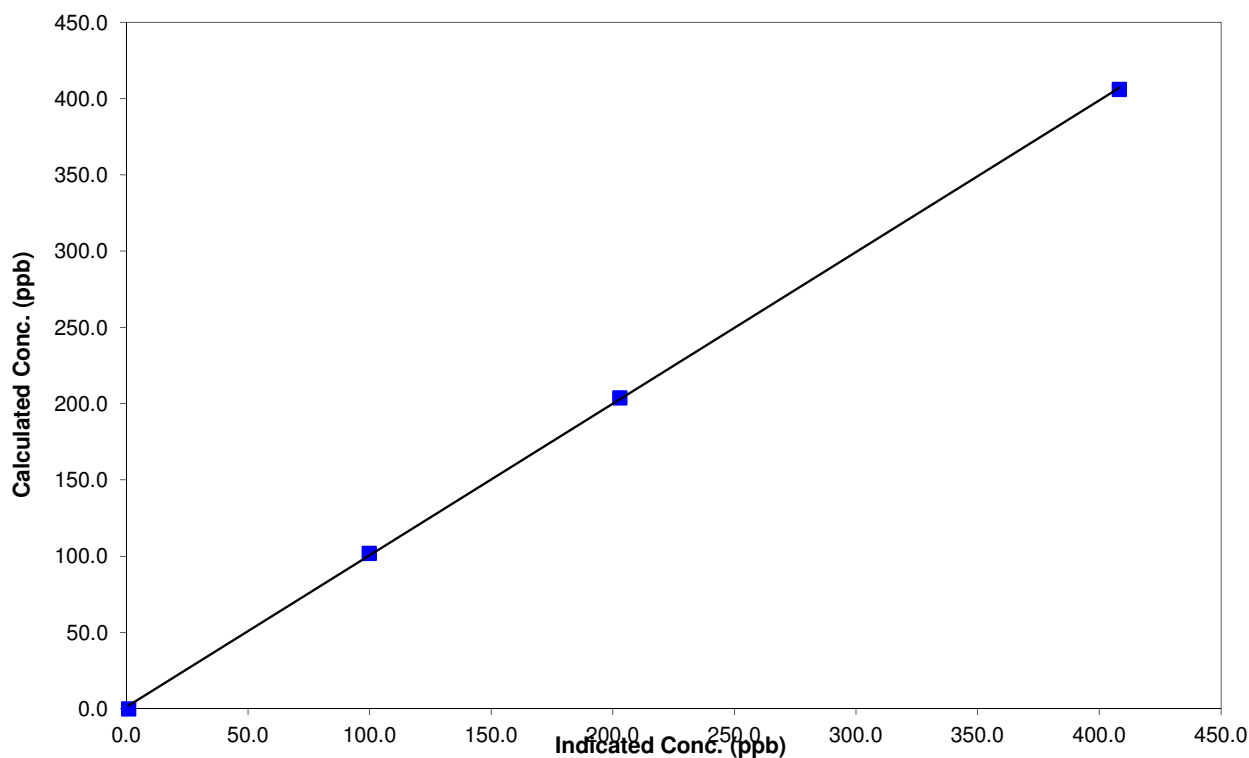
Station Information

Calibration Date	February 26, 2013	Previous Calibration	January 18, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	8:25	End Time (MST)	13:17
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.8	N/A	Correlation Coefficient	0.999908
406.0	408.2	0.9948		
203.9	202.8	1.0052		
101.9	99.7	1.0215	Slope	0.994631
			Intercept	1.021412

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



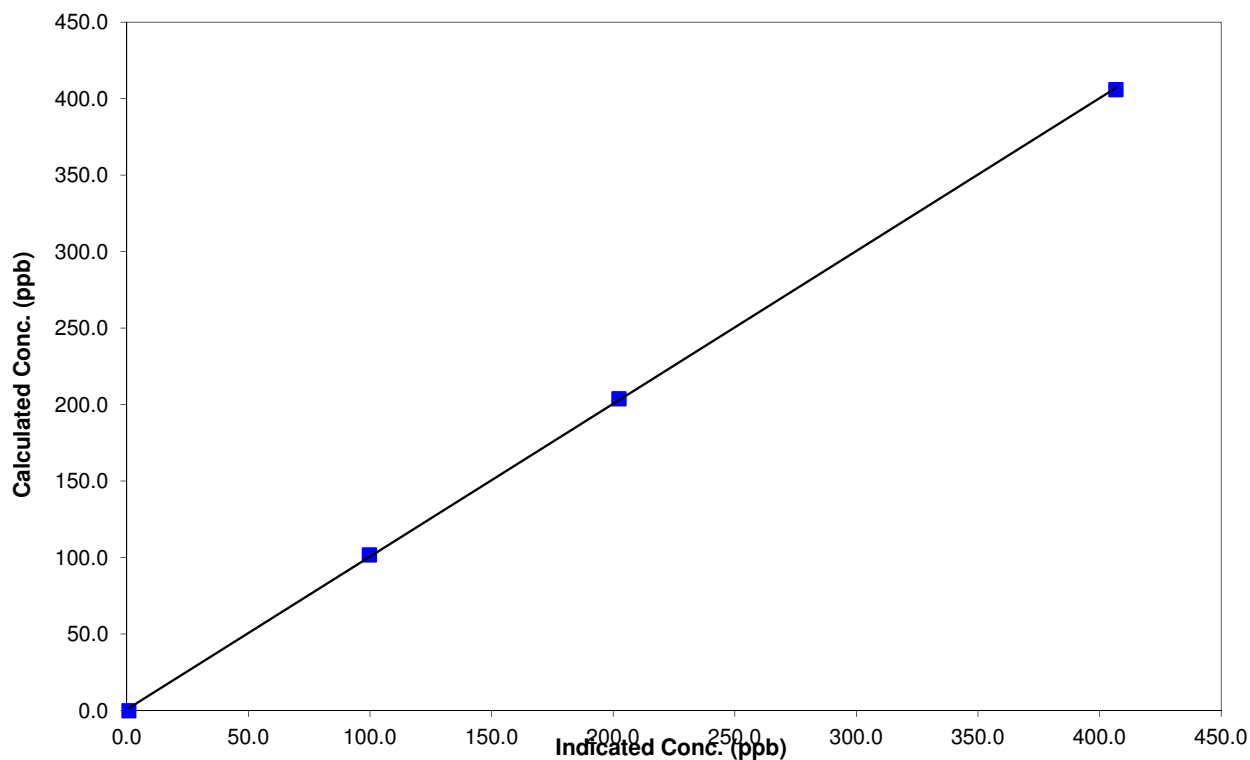
Station Information

Calibration Date	February 26, 2013	Previous Calibration	January 18, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	8:25	End Time (MST)	13:17
Analyzer make	TEI 42i	Analyzer serial #	0701120011

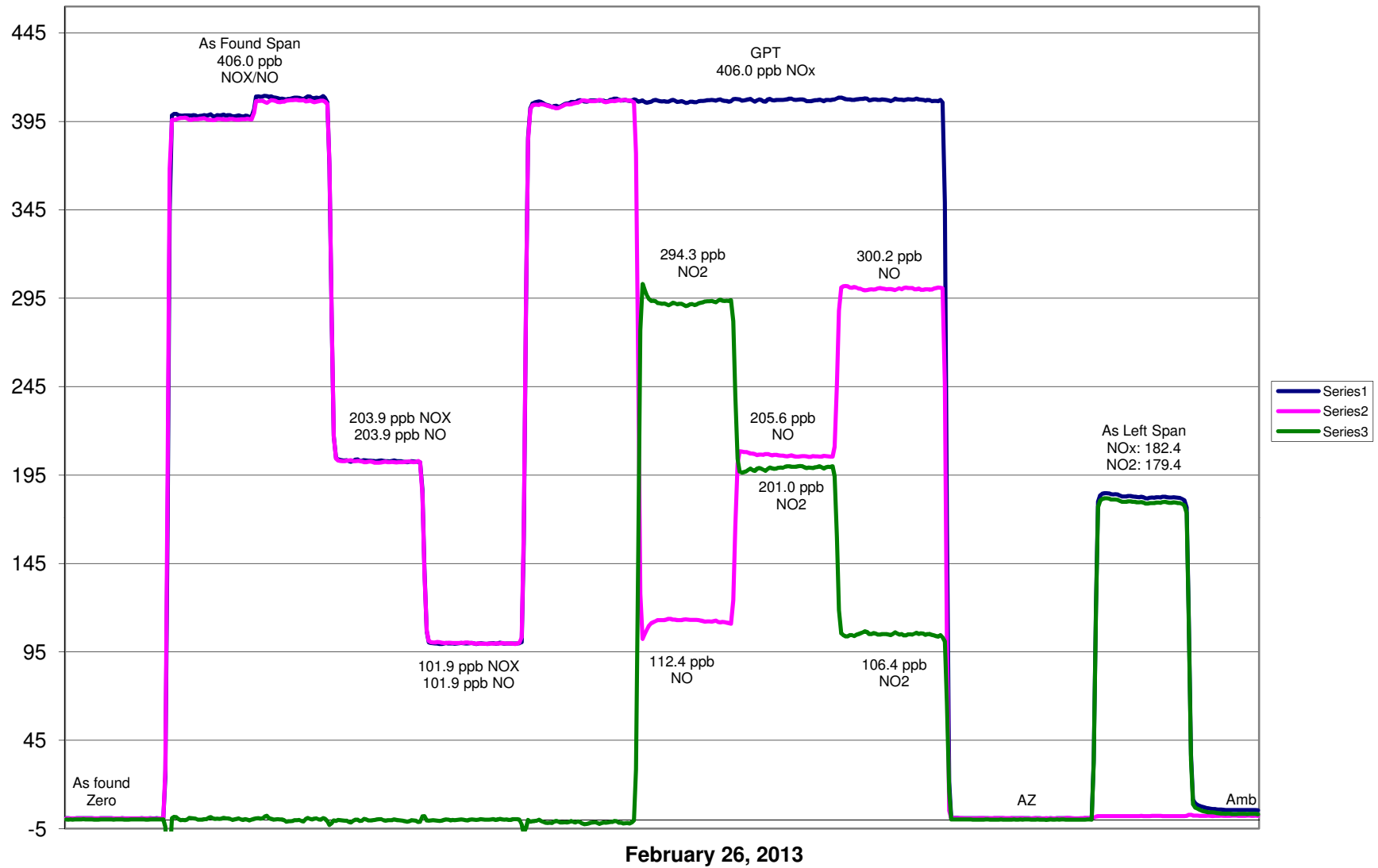
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.8	N/A	Correlation Coefficient	0.999928
406.0	406.6	0.9987		
203.9	202.3	1.0078		
101.9	99.7	1.0215	Slope	0.998893
			Intercept	0.792131

NO Calibration Curve



PASZA Sunset House NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	February 26, 2013	Previous Calibration	January 18, 2013
Station Number	9	Station Location	Sunset House
Reason:	Routine	☐ Install	☐ Removal remove ☐ Other:
Start Time (MST)	11:45	End Time (MST)	14:31
Barometric Pressure	0.916 atm	Station Temperature	15.7 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	0.998578	Calculated slope	0.990708
Calculated intercept	0.178529	Calculated intercept	0.509952
Analyzer make	TEI Model 49C	Analyzer serial #	49C-0609716240

	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	82802	Hz	84375	Hz
Cell B intensity	78578	Hz	78698	Hz
Pressure	687.10	in Hg	682.70	in Hg
Cell A Flow	0.917	ccm	0.917	ccm
Cell B Flow	0.738	cmm	0.739	cmm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5040	0.00	0.0	0.1	N/A
5040	0.30	294.3	297.6	0.9889
5040	0.20	201.0	201.0	1.0001
5040	0.10	106.4	106.6	0.9985
5040	0.00	0.0	0.1	As found zero
5040	0.30	294.3	297.6	As found span
Average Correction Factor				0.9958

Calculated value of As Found Response: 297.2 ppm Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	0.6	ppb	0.6	ppb
Auto span	137.7	ppb	226.5	ppb

Notes: 2013-02-26: No adjust. Data should be good from yesterday's sensor adjustment onwards.
 2013-02-25: Cell A flow sensor is shot. Adjust to bottom range on span & zero pots sensor Cell A.
 May hold until new sensor is received

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



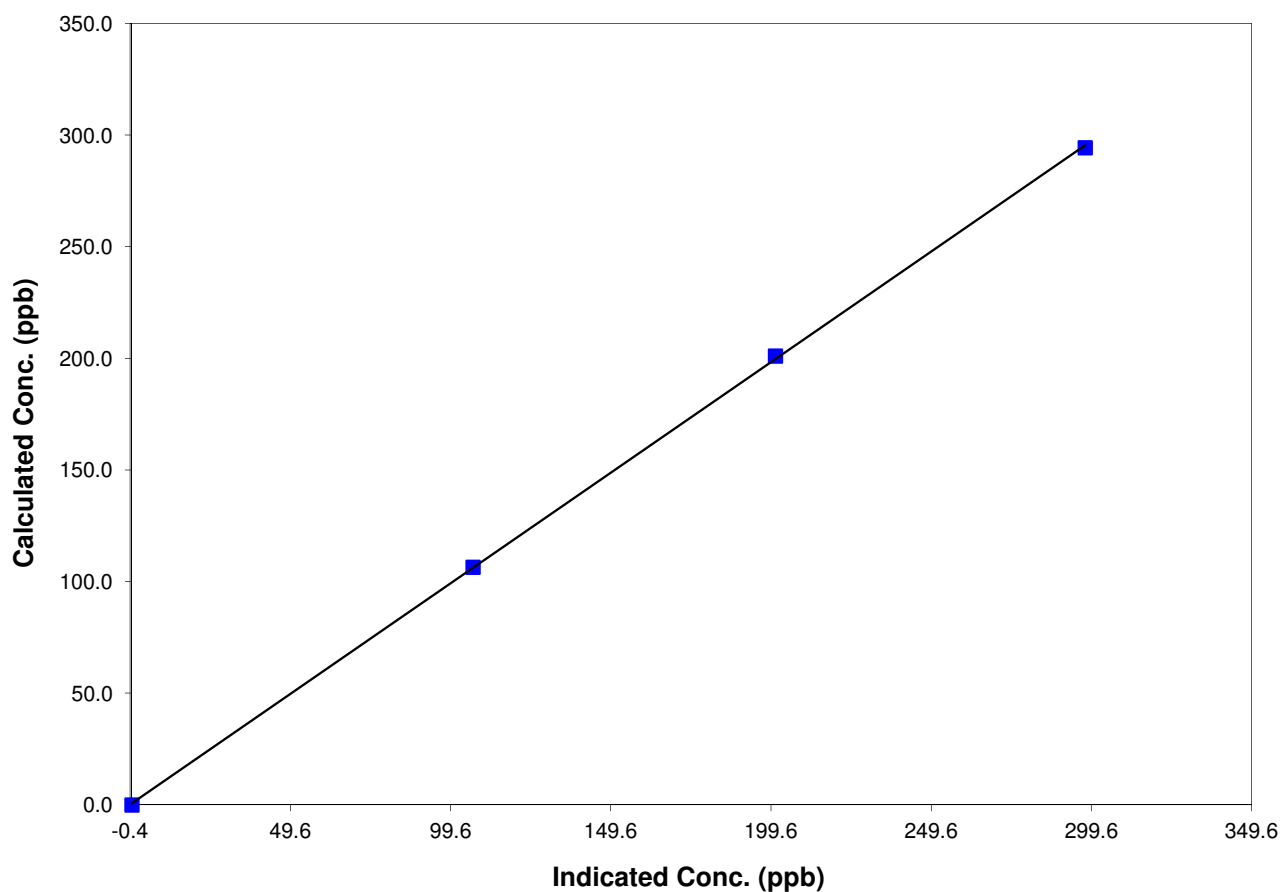
Station Information

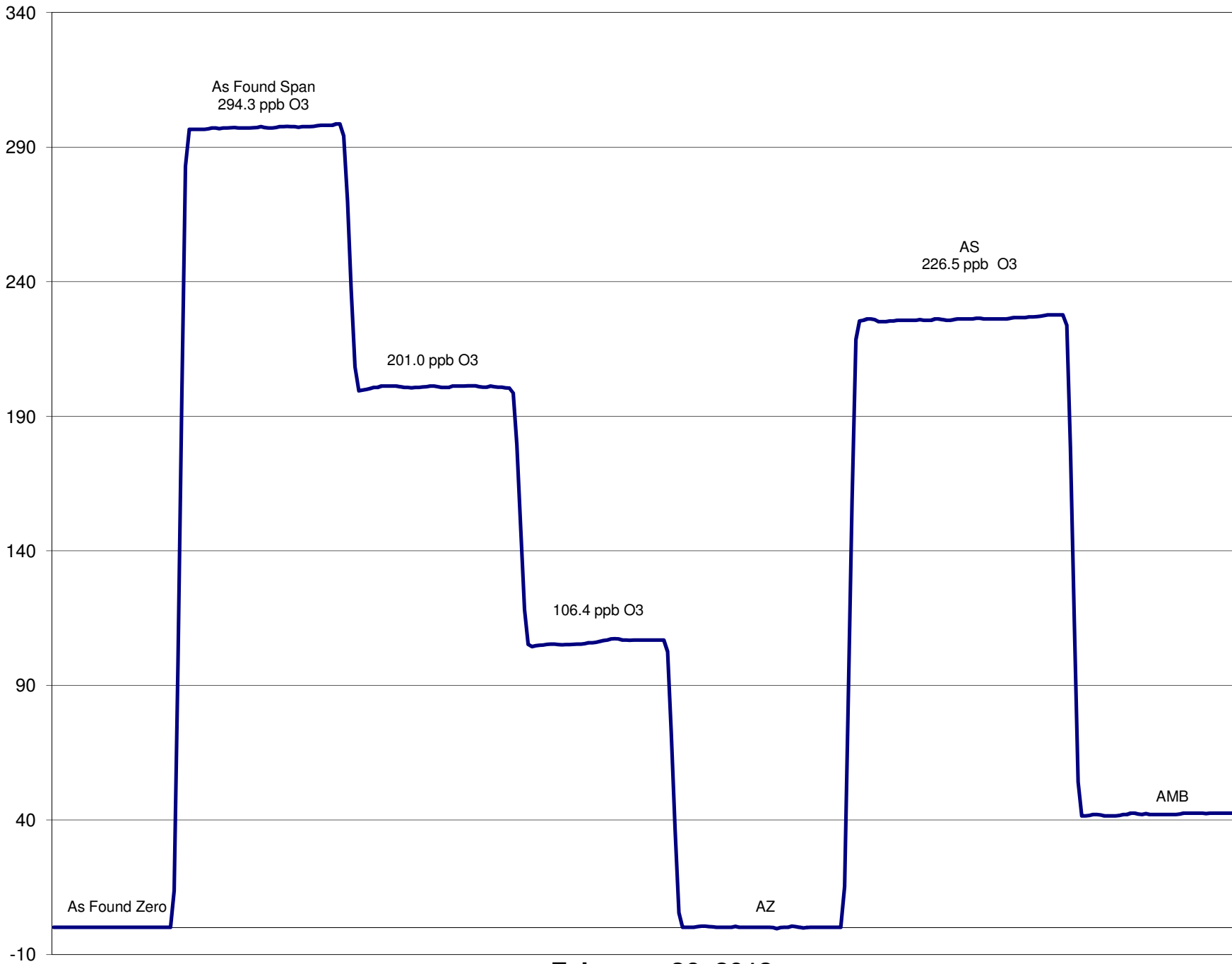
Calibration Date	February 26, 2013	Previous Calibration	January 18, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	11:45	End Time (MST)	14:31
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-0609716240

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999926
294.3	297.6	0.9889		
201.0	201.0	1.0001		
106.4	106.6	0.9985	Slope	0.990708
			Intercept	0.509952

O3 Calibration Curve





February 26, 2013

Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	February 26, 2013	Previous Calibration	January 18, 2013
Station Name	PAZA Rover	Station Location	Sunset House
Reason:	Routine	Install	Removal
Start Time (MST)	13:02:00 PM	End Time (MST)	16:03
Barometric Pressure	27.5 inches Hg	Station Temperature	20.0 Deg C
Calibrator	Enviroics 6100	Serial Number	3474
Cal Gas Concentration	10.1 ppm	Cal Gas Expiry Date	03/09/2011
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	0.983499	Calculated slope	0.982520
Calculated intercept	0.161806	Calculated intercept	0.128000
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.5	ppb	15.5	ppb
Coefficient	1.399		1.399	
Lamp Voltage	841	V	845	V
Chamber Temp	43.8	C	43.8	C
Perm gas Temp	45.0	C	45.0	C
Pressure	645.1	mmHg	650.2	mmHg
Sample Flow	0.437	ccm	0.438	ccm
Lamp Intensity	39817.0	Hz	38744.0	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.0	0.2	N/A
4995	39.94	80.1	81.6	0.9814
4995	19.96	40.2	40.4	0.9956
8995	8.94	10.0	9.9	1.0148
4995	0.00	0.0	0.3	As found zero
4995	39.94	80.1	81.6	As found span
Average Correction Factor				0.9973

Calculated value of As Found Response: 80.15 ppm Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	-0.6	ppm	0.4	ppm
Auto span	69.6	ppm	66.4	ppm

Notes: No span adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



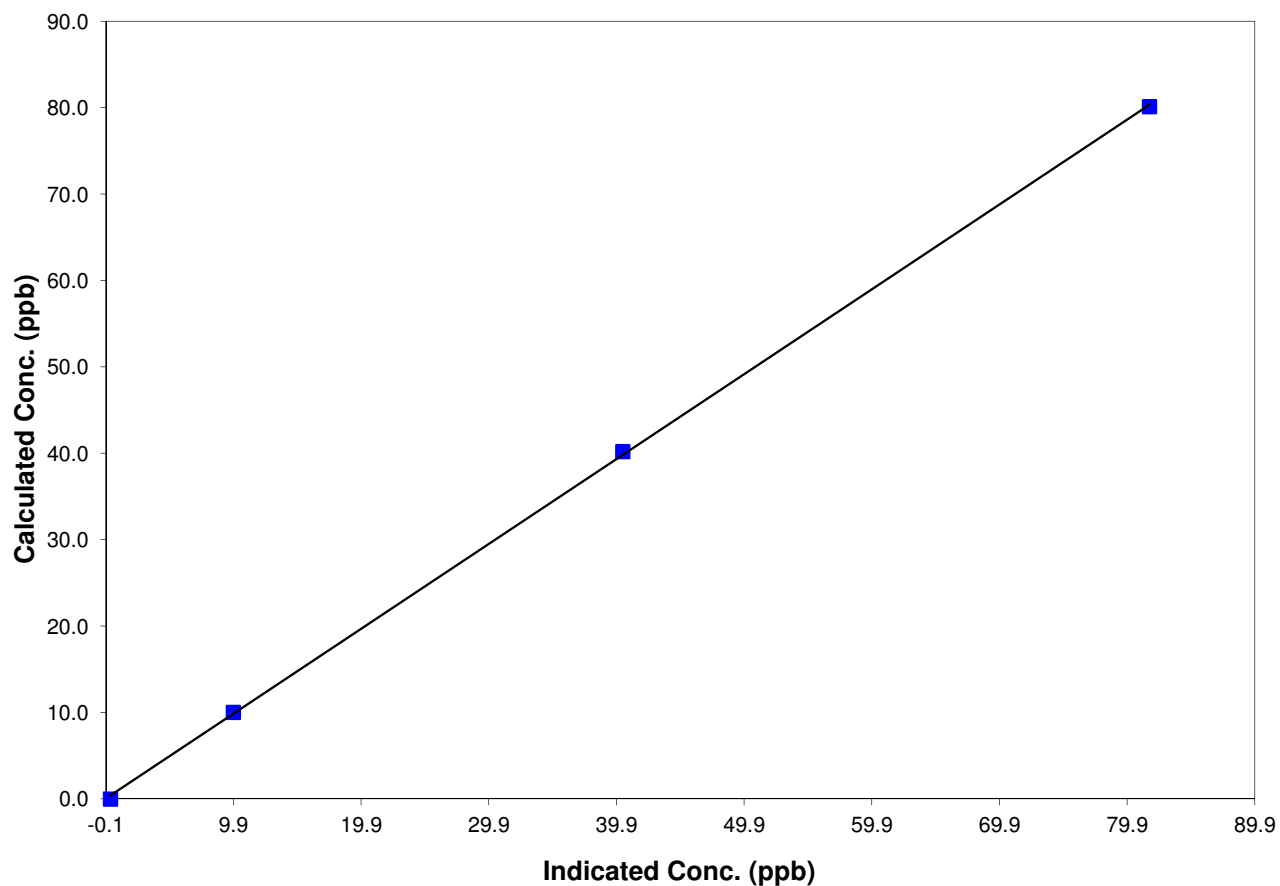
Station Information

Calibration Date	February 26, 2013	Previous Calibration	January 18, 2013
Station Number	PAZA Rover	Station Location	Sunset House
Start Time (MST)	13:02:00 PM	End Time (MST)	16:03
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

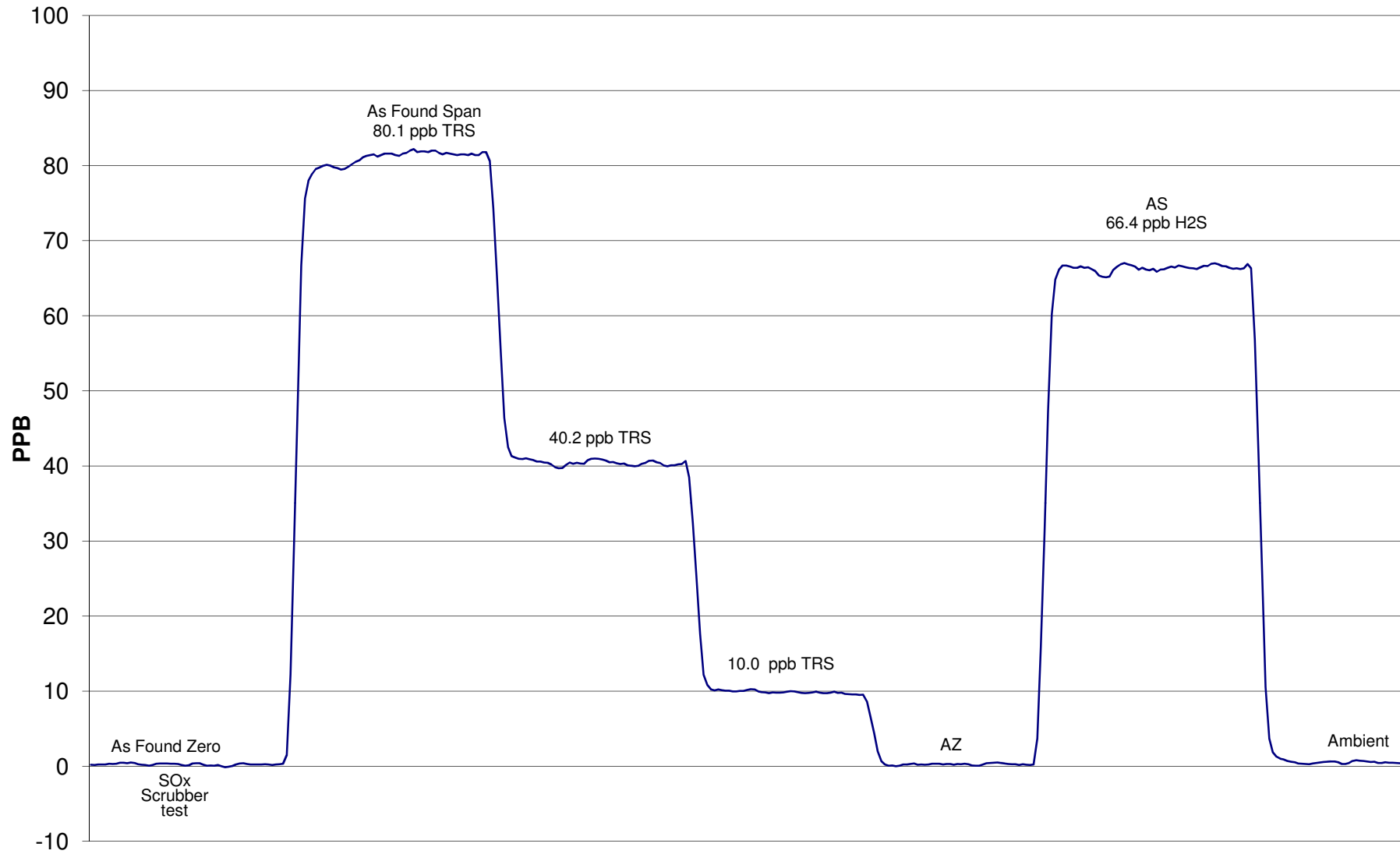
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999901
80.1	81.6	0.9814		
40.2	40.4	0.9956		
10.0	9.9	1.0148	Slope	0.982520
			Intercept	0.128000

TRS Calibration Curve



TRS Calibration



February 26, 2013

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	February 27, 2013	Previous Calibration	January 19, 2013
Station Number	1	Station Location	Falher
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	11:10	End Time (MST)	13:43
Barometric Pressure	0.917 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Concentration	50.8 ppm	Cal Gas Expiry Date	12/03/2014
Correction factor	0.031171	Cal Gas Cylinder #	LL107272
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.993325	Calculated slope	0.997348
Calculated intercept	0.662278	Calculated intercept	0.399998
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	7.1		7.1	
coefficient	0.932		0.932	
Lamp Voltage	851	volts	849	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	681.2	mm Hg	679.7	mm Hg
Sample Flow	0.426	ccm	0.424	ccm
Lamp Intensity	97	%	97	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.1	N/A
4995	39.93	402.9	404.0	0.9973
4995	19.98	202.4	201.7	1.0033
4995	9.84	99.9	99.6	1.0024
4995	0.0	0.0	0.1	As Found Zero
4995	39.93	402.9	404.0	As Found Span
Average Correction Factor				1.0010

Calculated value of As Found Response: 401.814 ppm Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.2	ppm
Auto span	359.4	ppm	347.7	ppm

Notes: No span adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



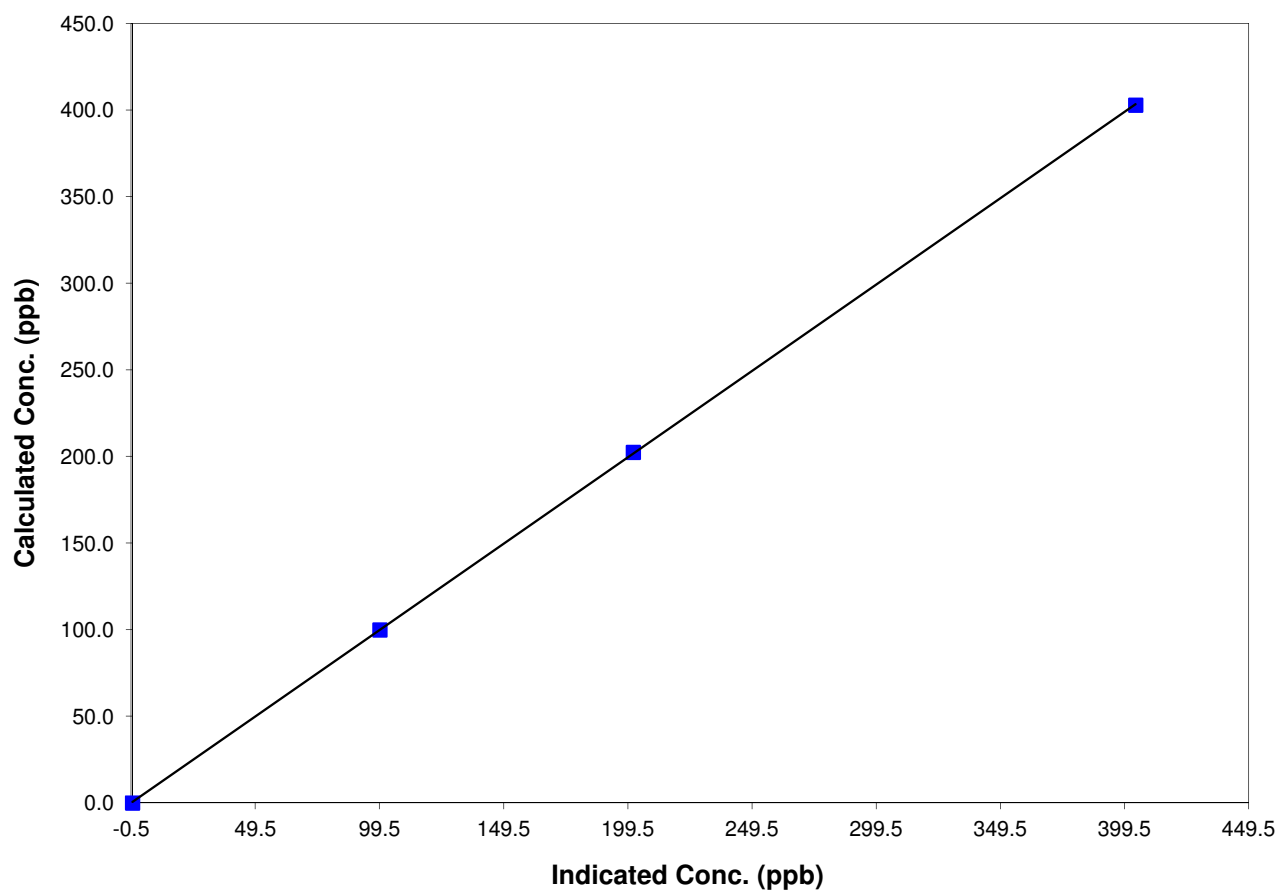
Station Information

Calibration Date	February 27, 2013	Previous Calibration	
Station Number	1	Station Location	Falher
Start Time (MST)	11:10	End Time (MST)	13:43
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

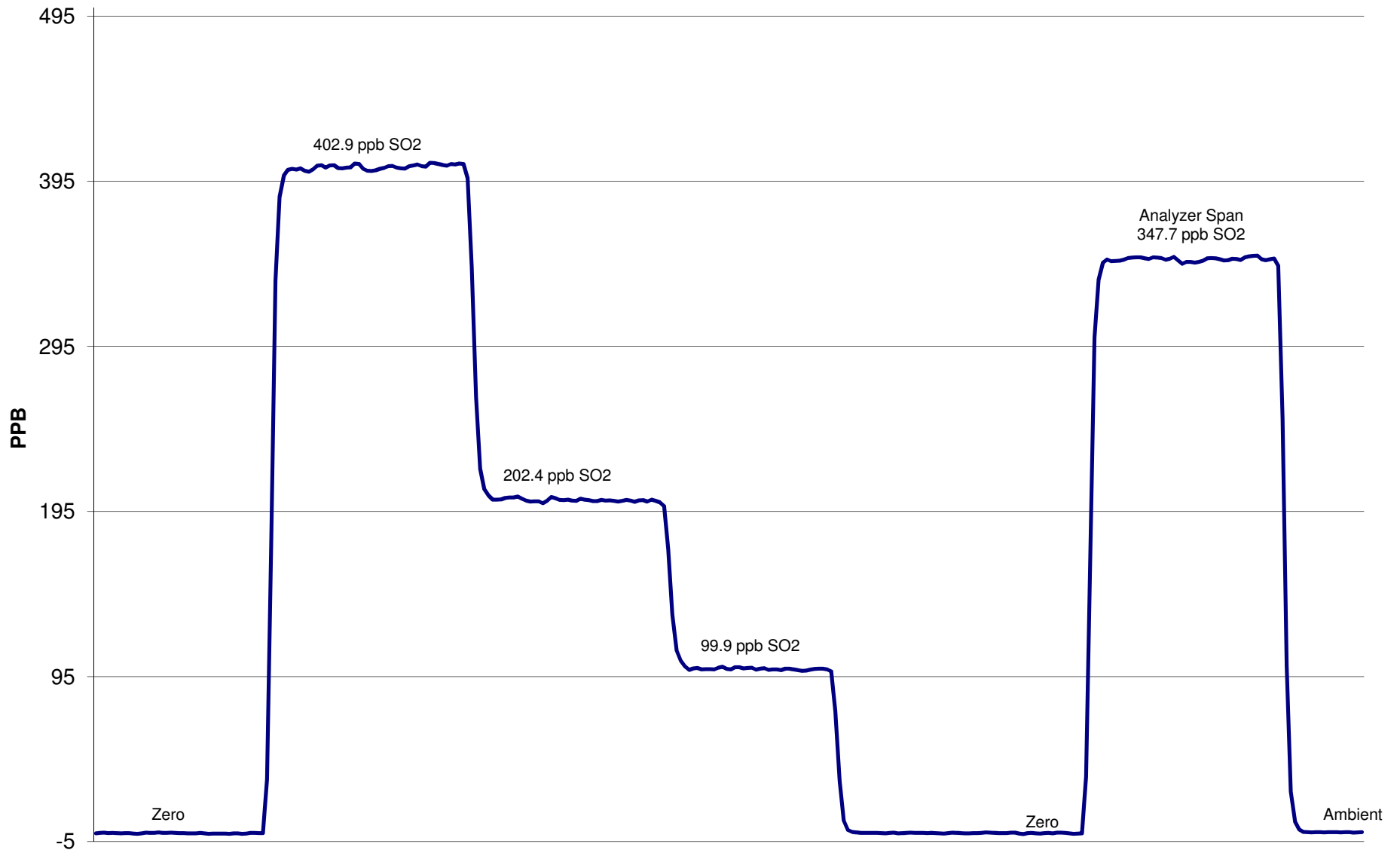
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
402.9	404.0	0.9973	Correlation Coefficient	0.999988
202.4	201.7	1.0033		
99.9	99.6	1.0024	Slope	0.997348
			Intercept	0.399998

SO2 Calibration Curve



SO2 Calibration



February 27, 2013

Calibration Report



Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	February 27, 2013	Previous Calibration	January 19, 2013
Station Number	1	Station Location	Falher
Reason:	☒ Routine	☐ Install	☐ Removal
			Other:
Start Time (MST)	8:25	End Time (MST)	12:04
Barometric Pressure	0.917 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Conc	10.1 ppm	Cal Gas Expiry Date	05/11/2013
Correction factor	0.031171	Cal Gas Cylinder #	LL160692
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	1.003014	Calculated slope	0.996773
Calculated intercept	-0.482345	Calculated intercept	0.134828
Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	12.3	ppb	12.6	ppb
coefficient	1.071		1.169	
Lamp Voltage	711	volts	803	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	569.1	mm Hg	569.1	mm Hg
Sample Flow	0.954	ccm	0.955	ccm
Lamp Intensity	91	mv	90	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.0	N/A
4995	39.97	80.18	80.4	0.9974
4995	19.97	40.22	40.0	1.0042
8994	8.97	10.06	9.9	1.0126
4995	0.00	0.00	0.0	As Found Zero
4995	39.95	80.14	80.4	As Found Span
Average Correction Factor				1.0048

Calculated value of As Found Response: 80.07 ppm Percent Change of As Found: **0.1%**

	before calibration		after calibration	
Auto zero	0.0	ppm	0.1	ppm
Auto span	51.2	ppm	51.1	ppm

Notes: **Had some calibrator power issues. UV lamp had not been reset properly following last months replacement. Reset lamp & calibrate.**

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



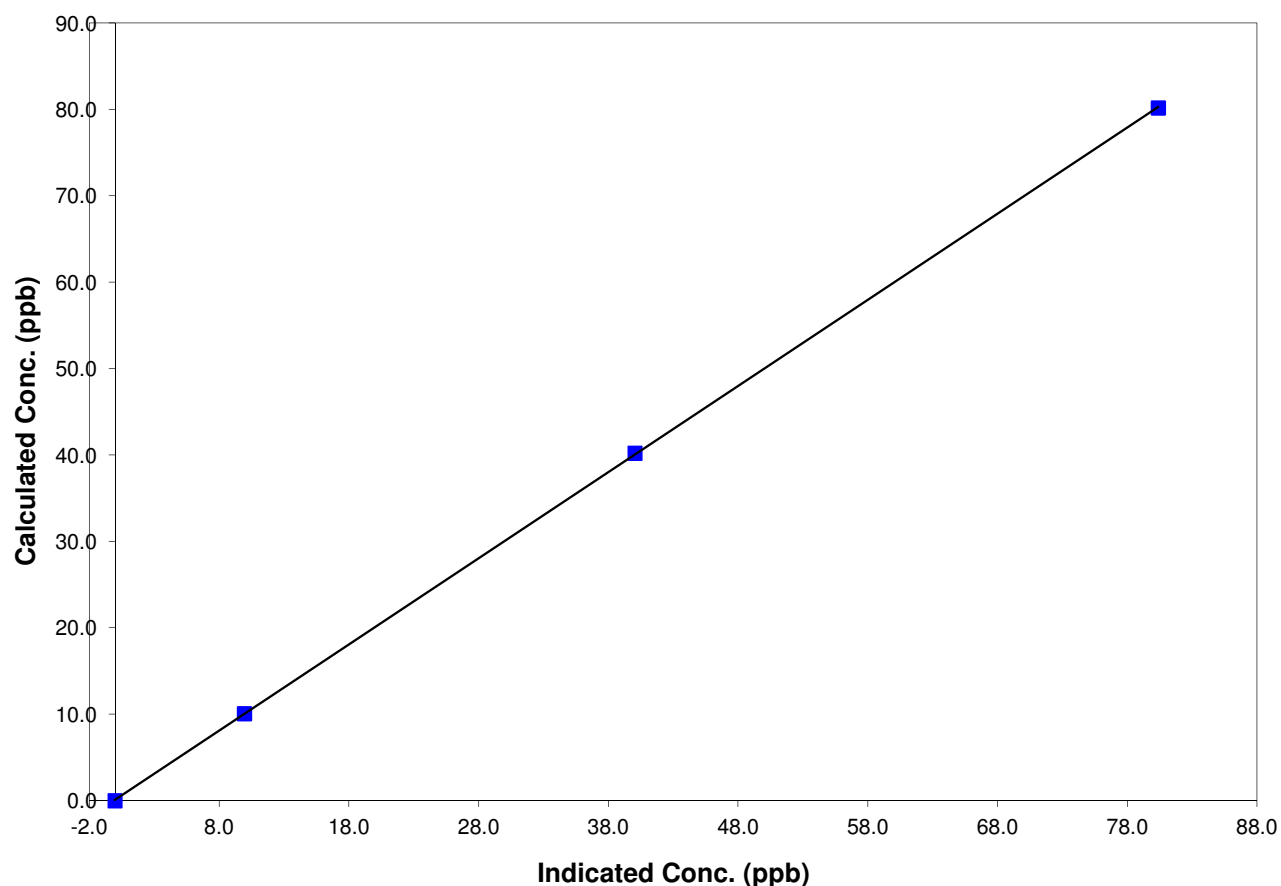
Station Information

Calibration Date	February 27, 2013	Previous Calibration	January 19, 2013
Station Number	1	Station Location	Falher
Start Time (MST)	8:25	End Time (MST)	12:04
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

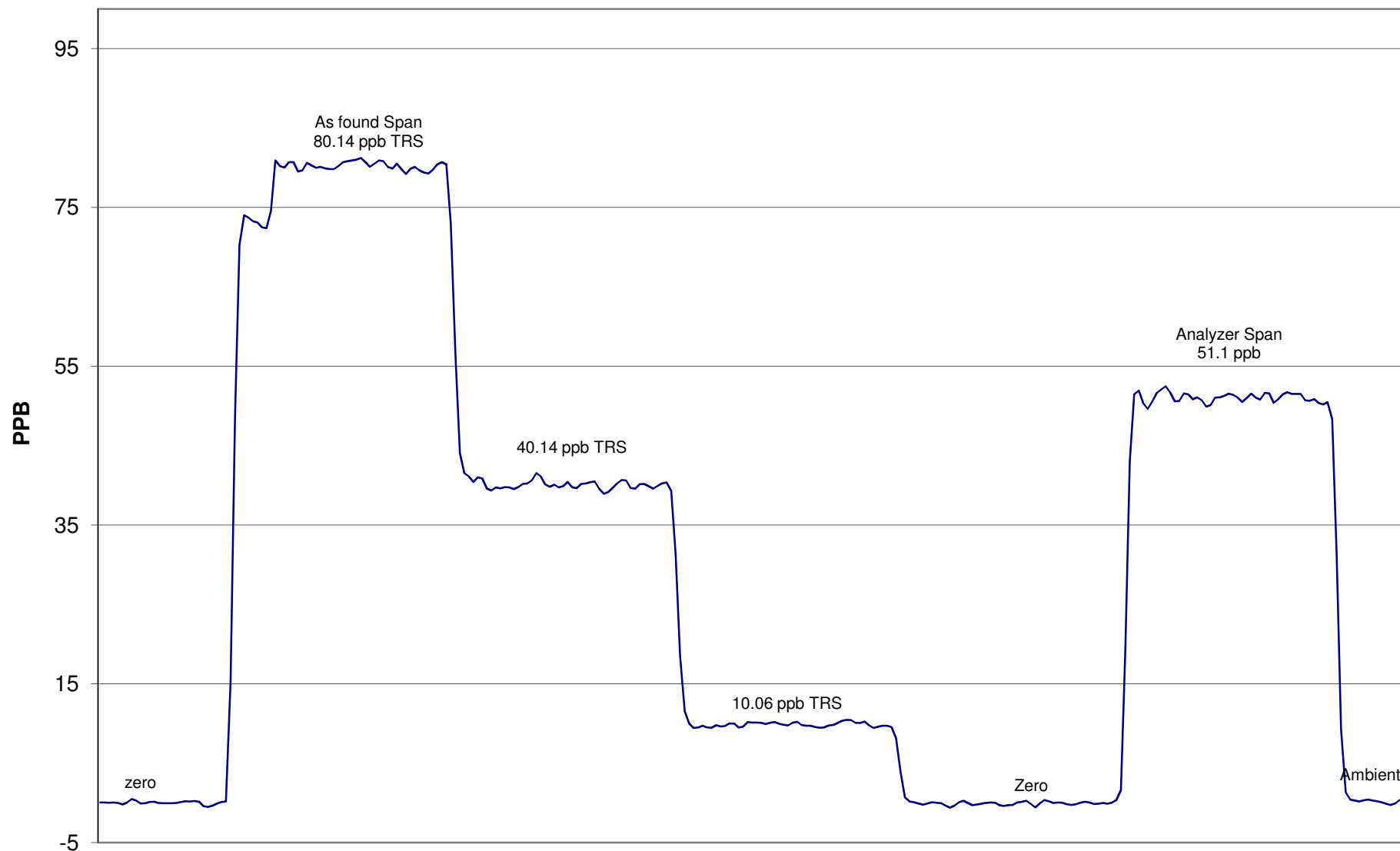
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
80.2	80.4	0.9974	Correlation Coefficient	0.999988
40.2	40.0	1.0042		
10.1	9.9	1.0126	Slope	0.996773
			Intercept	0.134828

TRS Calibration Curve



H2S Calibration



February 27, 2013