Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program
Monthly Report
October 2013

Operations and Reporting

FOCUS
AIR QUALITY MONITORING

Peace Airshed Zone Association
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November 27th, 2013

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

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

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

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

Company	Facility	LSD	EPEA Approval Number
Advantage Oil & Gas Ltd.	Glacier	05-02-076-13-W6	262479-00-00
Alberta Power (2000) Ltd. (an ATCO company)	Sturgeon	SW-06-069-21-W5	10283-02-02
ATCO Power Canada	Poplar Hill	11-19-073-08-W6	67774-01-01
ATCO Power Canada	Valleyview	SW-06-069-21-W5	147709-01-01
AltaGas Ltd.	Pouce Coupe	03-03-081-13-W6	247673-00-00
	Ante Creek	02-26-068-25-W5	266694-00-00
	Gordondale	16-31-78-11-W6M	287474-00-00
Apache Canada Ltd.	House Mountain	01-08-070-10-W5	10137-02-02
Barrick Energy Inc.	Sturgeon/Valleyview	02-02-069-22-W5	1633-02-00
Birchcliff Energy Ltd.	Pouce Coupe	03-22-078-12-W6	252529-00-00
Canadian Natural Resources Limited	Bonanza	11-25-081-11-W6	00000029-01-00
	Progress/Gordondale	01-01-077-10-W6	00010036-02-00

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

Company	Facility	LSD	EPEA Approval Number
Petrus Resources	Rycroft	08-25-077-06-W6	11351-02-00
	Spirit River	08-34-077-06-W6	11096-02-00
Spectra Energy Midstream Corporation	Fourth Creek	16-11-082-09-W6	00000263-01-00
	Gordondale	11-26-079-09-W6	00011495-01-01
	Pouce Coupe/Bonanza	3-23-080-13-W6	00070203-01-01
Suncor Energy Inc.	Progress	07-22-078-09-W6	00011428-02-00
TAQA North Ltd.	Valhalla	13-21-076-09-W6	00017620-01-00
Veresen Energy	Hythe Brainard	11-18-074-12-W6	00010910-02-00
Weyerhaeuser Canada	Grande Prairie Pulp and Wood Plant	01-14-070-05-W6	00000113-02-00

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

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

During the month of **October** 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 October.
- The station was audited on October 9th.

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 October.
- The station was audited on October 8th.

Smoky Heights Station:

- The measured ambient air quality was within the AAAQO for the Smoky Heights station except for $PM_{2.5}$, which had one (1) 1-hour exceedence of the AAAQO guideline:
  - Oct 25 18:00 129.4 μg/m^3 Alberta Environment Reference # 276886
- All analyzers and sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of October.
- The station was audited on October 10th.

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 October.
- The station was audited on October 8th.

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 October.
- The station was audited on October 7th.

Sunset House Station:

- The measured ambient air quality was within the AAAQO for the Sunset House station.
- All analyzers and sensors at the Sunset House station had an operational uptime greater than 90% for the month of October with the exception of the NO_x, O_3, $PM_{2.5}$ and meteorological instrumentation, which experienced extended power failure due to a faulty power bar. **AE Reference#277969.**
- The station was audited on October 11th.
- The station was shut down on October 29th and relocated to the Reno area on October 30th. Reporting at the new location will begin with November data.

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 October.
- The station was audited on October 10th.

Passive Monitoring - 46 Stations throughout the PAZA zone:

There were five duplicate sites sampled in the month of October: Fourth Creek, Spirit River, Hythe, Peavine, and Girouxville 4. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO_2 passives ranged from 0.1 ppb to 0.4 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.3 ppb to 6.9 ppb, with a mean of 1.5 ppb.
- Monthly average concentrations for O_3 passives ranged from 12.4 ppb to 26.6 ppb, with a mean of 19.2 ppb.
- Monthly average concentrations for H_2S were between 0.2 And 0.3 pbb, with a mean of 0.2 ppb.

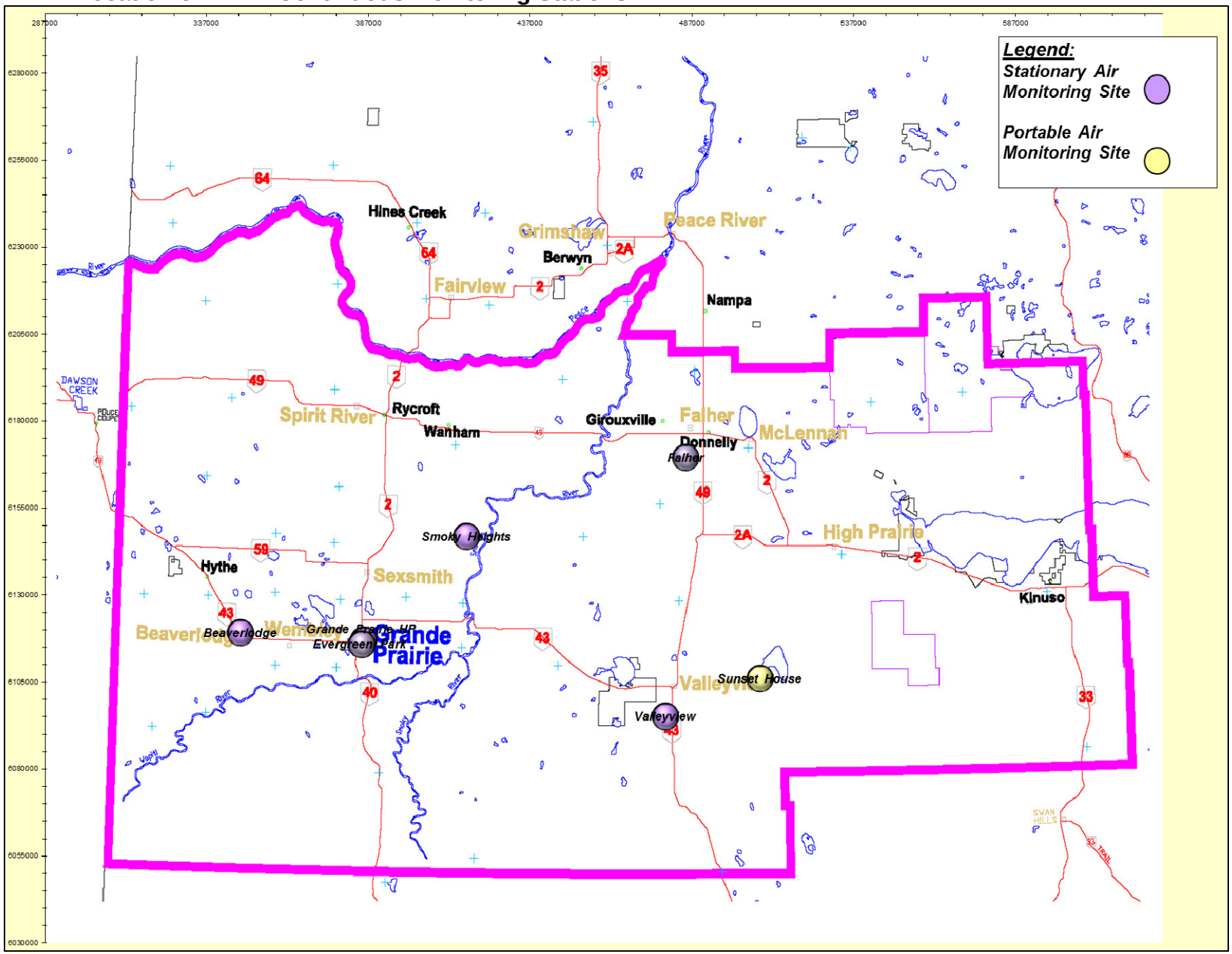
If you have any questions or concerns, please contact Patrick Andersen at 403.505.1041 or the PAZA office at 780.833.4343.

On Behalf of the
Peace Airshed Zone Association

Patrick Andersen, B.Sc.
Program Manager

Jeff Cooper, C.Tech.
AQM Operations Manager

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Oct-2013	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
Pollutant (units)	Objectives 1-hr	Objectives 24-hr	Station	Monthly Average	Exceedence 1-hr	Exceedence 24-hr	Conc	Day	Conc	Day	Operational Time (%)
SO_2 (ppb)	172	48	Henry Pirker	0.1	0	0	1.2	Oct-30 09:00	0.3	Oct-19	100%
SO_2 (ppb)	172	48	Evergreen Park	0.1	0	0	1.0	Oct-19 11:00	0.2	Oct-19	100%
SO_2 (ppb)	172	48	Smoky Heights	0.5	0	0	8.0	Oct-11 06:00	1.5	Oct-11	100%
SO_2 (ppb)	172	48	Beaverlodge	0.2	0	0	3.4	Oct-25 01:00	0.6	Oct-25	100%
SO_2 (ppb)	172	48	Valleyview	0.7	0	0	13.7	Oct-31 22:00	3.2	Oct-31	100%
SO_2 (ppb)	172	48	Sunset House	0.3	0	0	11.3	Oct-07 02:00	1.3	Oct-07	96%
SO_2 (ppb)	172	48	Falher	0.1	0	0	1.9	Oct-25 12:00	0.4	Oct-26	100%
NO (ppb)			Henry Pirker	5.3	0	0	153.9	Oct-30 09:00	26.4	Oct-25	99%
NO_2 (ppb)	159	106	Henry Pirker	9.3	0	0	41.3	Oct-30 09:00	21.3	Oct-30	99%
NO_X (ppb)			Henry Pirker	14.6	0	0	196.0	Oct-30 09:00	44.1	Oct-25	99%
NO (ppb)			Beaverlodge	0.3	0	0	11.7	Oct-18 09:00	1.4	Oct-04	99%
NO_2 (ppb)	159	106	Beaverlodge	2.8	0	0	25.2	Oct-18 09:00	6.7	Oct-18	99%
NO_X (ppb)			Beaverlodge	3.1	0	0	36.8	Oct-18 09:00	7.6	Oct-18	99%
NO (ppb)			Sunset House	0.1	0	0	1.4	Oct-07 12:00	0.3	Oct-07	85%
NO_2 (ppb)	159	106	Sunset House	1.3	0	0	17.6	Oct-07 02:00	3.4	Oct-07	85%
NO_X (ppb)			Sunset House	1.4	0	0	18.1	Oct-07 02:00	3.7	Oct-07	85%
O_3 (ppb)	82		Henry Pirker	17.4	0	-	40.1	Oct-19 15:00	28.6	Oct-31	100%
O_3 (ppb) - 8-hr			Henry Pirker		0				35.0	Oct-19	
O_3 (ppb)	82		Beaverlodge	25.2	0	-	43.2	Oct-19 15:00	34.4	Oct-26	100%
O_3 (ppb) - 8-hr			Beaverlodge		0				40.9	Oct-19	
O_3 (ppb)	82		Sunset House	26.5	0	-	40.1	Oct-22 14:00	34.1	Oct-14	85%
O_3 (ppb) - 8-hr			Sunset House		0				38.2	Oct-14	
CO (ppm)	13		Henry Pirker	0.15	0	-	1.3	Oct-30 09:00	0.3	Oct-30	100%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.5	Oct-30	

PAZA Monthly Continuous Data Summary – continued

Oct-2013	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
THC (ppm)			Henry Pirker	1.9	-	-	3.4	Oct-29 07:00	2.2	Oct-29	97%
CH_4 (ppm)			Henry Pirker	1.9	-	-	3.4	Oct-29 07:00	2.2	Oct-29	97%
NMHC (ppm)			Henry Pirker	0.00	-	-	1.0	Oct-19 21:00	0.0	Oct-19	97%
TRS (ppb)			Henry Pirker	0.4	-	-	3.1	Oct-13 10:00	0.7	Oct-25	100%
TRS (ppb)			Evergreen Park	0.2	-	-	1.3	Oct-25 08:00	0.6	Oct-25	100%
TRS (ppb)			Smoky Heights	0.1	-	-	0.3	Oct-29 04:00	0.2	Oct-29	100%
TRS (ppb)			Sunset House	0.2	-	-	0.8	Oct-16 07:00	0.5	Oct-06	96%
H_2S (ppb)	10	3	Valleyview	0.2	0	0	2.1	Oct-31 11:00	0.5	Oct-31	100%
H_2S (ppb)	10	3	Falher	0.2	0	0	5.2	Oct-03 02:00	1.3	Oct-03	100%
$PM_{2.5}$ (µg/m3)	80	30	Henry Pirker	5.0	0	0	32.9	Oct-30 09:00	11.6	Oct-30	100%
$PM_{2.5}$ (µg/m3)	80	30	Evergreen Park	3.4	0	0	35.5	Oct-18 17:00	7.6	Oct-18	100%
$PM_{2.5}$ (µg/m3)	80	30	Smoky Heights	4.2	1	0	129.4	Oct-25 18:00	18.3	Oct-25	100%
$PM_{2.5}$ (µg/m3)	80	30	Beaverlodge	13.8	0	0	55.7	Oct-10 08:00	17.9	Oct-14	93%
$PM_{2.5}$ (µg/m3)	80	30	Sunset House	1.7	0	0	18.8	Oct-14 23:00	5.2	Oct-21	85%
RH (%)			Henry Pirker	65.1	-	-	91.3	Oct-07 07:00	85.5	Oct-06	100%
RH (%)			Evergreen Park	67.1	-	-	98.4	Oct-07 09:00	92.8	Oct-01	100%
RH (%)			Beaverlodge	72.9	-	-	100.0	Oct-01 01:00	99.6	Oct-27	100%
RH (%)			Valleyview	65.7	-	-	98.5	Oct-07 03:00	89.6	Oct-06	100%
SR (W/m^2)			Henry Pirker	65.9	-	-	463.1	Oct-10 14:00	108.0	Oct-03	100%
Temp (°C)			Henry Pirker	6.1	-	-	19.6	Oct-24 15:00	11.3	Oct-21	100%
Temp (°C)			Evergreen Park	6.4	-	-	19.8	Oct-24 15:00	12.9	Oct-21	100%
Temp (°C)			Smoky Heights	5.3	-	-	19.0	Oct-24 16:00	10.9	Oct-21	100%
Temp (°C)			Beaverlodge	6.3	-	-	19.2	Oct-24 15:00	12.4	Oct-21	100%
Temp (°C)			Valleyview	6.5	-	-	18.6	Oct-24 15:00	12.6	Oct-21	100%
Temp (°C)			Sunset House	5.7	-	-	18.1	Oct-24 15:00	10.4	Oct-21	85%
Temp (°C)			Falher	4.7	-	-	16.5	Oct-24 16:00	10.5	Oct-21	100%

PAZA Monthly Continuous Data Summary – continued

Oct-2013	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
WSPD s (km/hr)			Henry Pirker	9.6	-	-	33.0	Oct-31 13:00	22.1	Oct-31	100%
WSPD s (km/hr)			Evergreen Park	11.4	-	-	46.0	Oct-05 14:00	34.9	Oct-31	100%
WSPD s (km/hr)			Smoky Heights	21.8	-	-	49.0	Oct-07 16:00	33.4	Oct-29	100%
WSPD s (km/hr)			Beaverlodge	10.5	-	-	39.0	Oct-31 11:00	27.4	Oct-31	100%
WSPD s (km/hr)			Valleyview	4.9	-	-	22.0	Oct-31 10:00	12.3	Oct-31	100%
WSPD s (km/hr)			Sunset House	10.2	-	-	29.0	Oct-27 04:00	16.7	Oct-04	85%
WSPD s (km/hr)			Falher	12.8	-	-	35.0	Oct-31 11:00	20.4	Oct-08	100%
WSPD v (km/hr)			Henry Pirker	5.5	-	-	33.0	Oct-31 13:00	21.4	Oct-31	100%
WSPD v (km/hr)			Evergreen Park	7.9	-	-	45.0	Oct-05 14:00	34.1	Oct-31	100%
WSPD v (km/hr)			Smoky Heights	13.3	-	-	49.0	Oct-07 16:00	31.9	Oct-29	100%
WSPD v (km/hr)			Beaverlodge	5.7	-	-	39.0	Oct-31 11:00	26.7	Oct-31	100%
WSPD v (km/hr)			Valleyview	2.2	-	-	22.0	Oct-31 10:00	11.6	Oct-31	100%
WSPD v (km/hr)			Sunset House	4.1	-	-	29.0	Oct-27 04:00	16.2	Oct-04	85%
WSPD v (km/hr)			Falher	5.3	-	-	35.0	Oct-31 11:00	19.5	Oct-08	100%
WDIR			Henry Pirker	W	-	-	-	-	-	-	100%
WDIR			Evergreen Park	W	-	-	-	-	-	-	100%
WDIR			Smoky Heights	WSW	-	-	-	-	-	-	100%
WDIR			Beaverlodge	W	-	-	-	-	-	-	100%
WDIR			Valleyview	W	-	-	-	-	-	-	100%
WDIR			Sunset House	SSW	-	-	-	-	-	-	85%
WDIR			Falher	SSW	-	-	-	-	-	-	85%

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on October 17th (CO, TRS, THC), 21st (SO_2) and 24th (NO_X, O_3). Station was audited on October 9th.

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed.
NOx/NO/NO_2	TEI	42C	Calibration attempted October 21st, failed to stabilize GPT. Repairs completed and analyzer calibrated October 24th.
O_3	TEI	49C	Analyzer channel disabled during NOx calibration attempt on October 21st.
CO	TEI	48C	No operational issues observed.
THC/CH_4/NMHC	TEI	55I	Hydrogen cylinder expired on October 14th, replaced October 15th.
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 October 28th (SO_2, TRS). Station was audited on October 8th.

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 October 25th (SO_2, TRS). Station was audited on October 10th. Datalogger failed to collect three (3) hours of data on October 6th.

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 (1) exceedence of the 1-hour guideline recorded. **AE Reference #276886.**
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 October 23rd (NO_X , O_3, SO_2). Station was audited on October 8th.

Parameter	Make	Model	Notes
SO_2	TEI	43CTL	No operational issues observed.
NOx/NO/NO_2	TEI	42C	Calibrator issues aborted attempted calibration on October 22nd. Calibrator repaired and calibration completed October 23rd.
O_3	TEI	49C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Analyzer failed on October 3rd, repaired on October 5th.
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 October 30th (SO_2 & H_2S). Station was audited October 7th.

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
H_2S	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 October 29th (SO_2, NO_x, O_3, TRS). Station was audited on October 11th. Station shut down for relocation on October 29th. Power bar failure on October 9th put NO_x, O_3, $PM_{2.5}$ analyzers as well as ET and Wind head out of service. Reset during audit on October 11th, tripped again after technicians left station. Power bar replaced on October 12th. Station wide power outage also affected SO2 and TRS analyzers on October 10th and 11th.

Parameter	Make	Model	Notes
SO_2	TEI	43i	No further operational issues observed.
NO_x	TEI	42i	No further operational issues observed. **AE Reference #.**
O_3	TEI	49C	No further operational issues observed. **AE Reference #.**
TRS	TEI	39C	No further operational issues observed.
$PM_{2.5}$	R&P	1400AB	No further operational issues observed. **AE Reference #.**
ET	Gill	Met Pak 3	No further operational issues observed.
WS / WD	Gill	Met Pak 3	No further operational issues observed.

PAZA – Falher Station

General Station Issues

Routine monthly calibrations were performed on October 26th (SO_2 & H_2S). Station audited October 10th.

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
H_2S	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 (SO_2) - ppb

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.2 ppb on Oct 30 09:00 Maximum Daily Average: 0.3 ppb on Oct 19

Minimum Value: 0 ppb on Oct 2 00:00 Minimum Daily Average: 0.0 ppb on Oct 27
Maximum Diurnal Average: 0.2 ppb at hour 9 Minimum Diurnal Average: 0.1 ppb at hour 5
Monthly Average: 0.10 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.1 $Q_3 = 0.1$ $P_{90} = 0.2$ $P_{99} = 0.7$

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	42
Percent Operational Time:	100.0

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

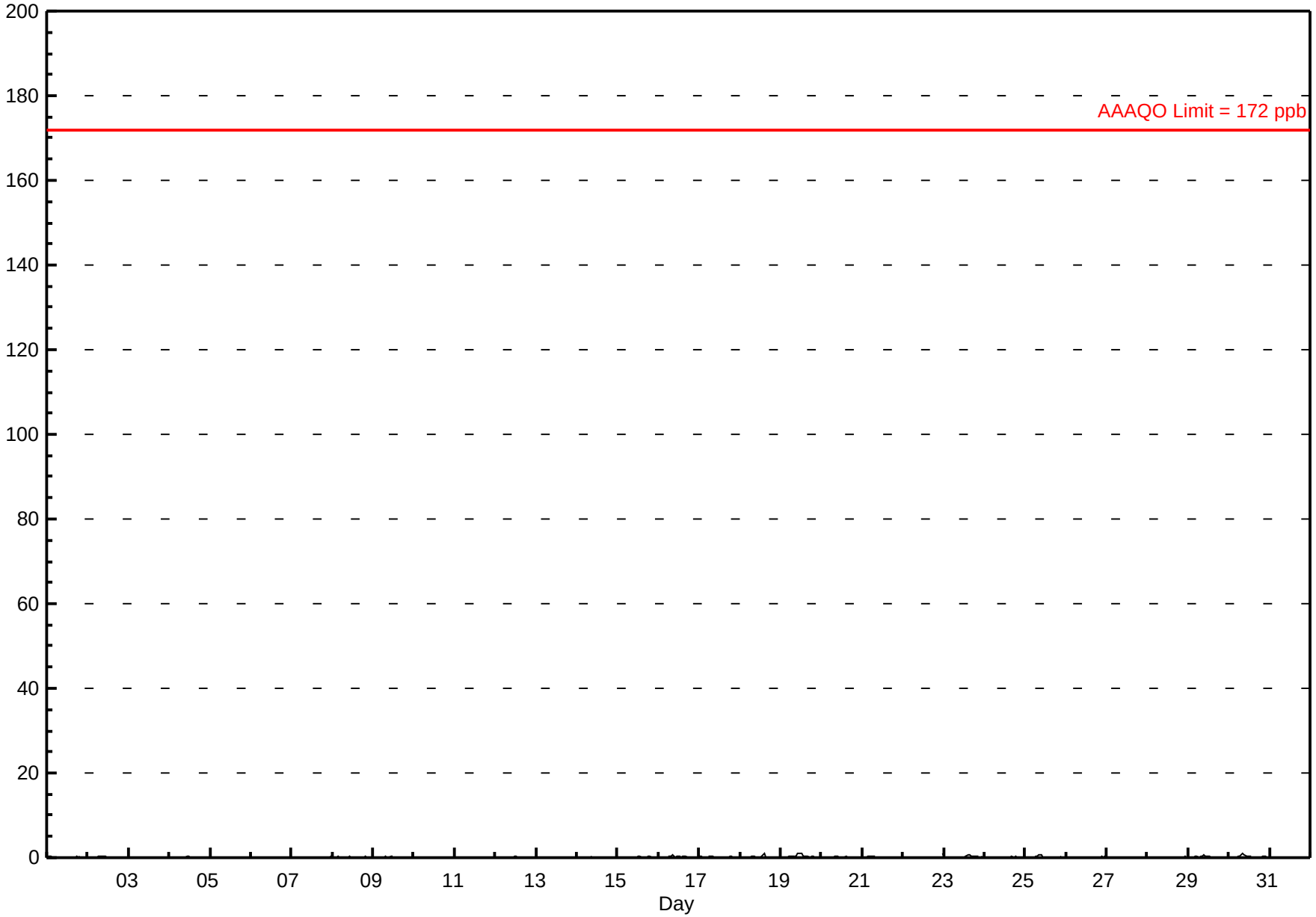
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - October 2013



Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - October 2013

Maximum Value: 2.1 ppb on Oct 19 13:00

Maximum Daily Average: 0.8 ppb on Oct 19

Minimum Value: 0 ppb on Oct 13 14:00

Minimum Daily Average: 0.2 ppb on Oct 27

Maximum Diurnal Average: 0.5 ppb at hour 8

Minimum Diurnal Average: 0.3 ppb at hour 5

Monthly Average: 0.42 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.5 $Q_3 = 0.5$ $P_{90} = 0.6$ $P_{99} = 1.6$

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	42
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.5	0.7
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.5	0.5
3-Oct	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	A	1	0	1	1	1	0.4	0.5
4-Oct	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	1	0.5	0.5
5-Oct	1	1	1	1	1	0	1	1	1	1	1	1	0	0	0	1	A	1	0	0	1	1	0	0	0.4	0.5
6-Oct	1	1	1	1	0	0	0	0	1	1	1	1	1	0	1	A	1	1	1	1	0	1	1	1	0.5	0.5
7-Oct	1	0	0	0	0	1	0	1	1	1	0	1	0	0	A	0	1	0	0	0	0	0	0	1	0.4	1.0
8-Oct	2	1	1	1	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	1	0	1	0	0	0.6	1.9
9-Oct	1	1	1	0	0	1	1	1	1	1	1	1	A	C	C	1	0	1	1	1	0	1	0	0	0.4	0.6
10-Oct	1	0	1	1	0	1	0	0	1	1	1	A	0	1	0	0	1	1	0	0	0	0	1	0	0.4	0.6
11-Oct	0	1	1	0	0	1	0	0	1	0	A	1	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.6
12-Oct	0	0	1	1	1	1	1	1	1	A	1	1	0	0	0	1	0	1	1	1	1	1	0	0	0.5	0.5
13-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
14-Oct	0	0	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0.3	0.5
15-Oct	0	0	0	0	0	0	A	0	0	0	1	0	1	2	0	0	0	0	1	1	1	0	0	0	0.4	1.6
16-Oct	0	0	0	0	0	A	1	1	1	1	0	1	1	0	1	1	1	0	0	1	0	0	0	0	0.4	1.0
17-Oct	1	1	0	1	A	1	1	1	1	0	1	0	0	0	0	0	0	0	1	1	0	1	0	0	0.4	0.7
18-Oct	0	0	0	A	0	1	1	1	1	1	1	0	1	2	2	1	1	0	0	0	0	0	1	0	0.5	2.1
19-Oct	0	0	A	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	0	0	0.8	2.1
20-Oct	1	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	0	0.4	0.7
21-Oct	A	0	0	0	0	0	0	1	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	A	--	0.8
22-Oct	0	0	0	0	0	1	0	1	0	0	0	1	1	1	0	0	0	1	1	1	0	1	A	2	0.4	1.5
23-Oct	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	A	1	0	0.5	1.1
24-Oct	0	0	0	0	0	1	1	1	1	0	0	1	0	0	0	0	2	1	1	1	A	1	1	1	0.5	1.6
25-Oct	1	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0.5	1.0
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	1	1	1	1	1	0.3	0.6
27-Oct	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6
28-Oct	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	1	0	0	1	0	1	0	0.3	0.6
29-Oct	1	0	1	1	1	1	0	1	1	1	1	1	1	0	1	A	0	0	0	0	0	0	0	0	0.5	1.1
30-Oct	0	0	0	0	1	1	1	2	2	1	1	1	1	1	A	0	0	1	1	1	1	1	0	0	0.6	1.6
31-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.2
	0.5	0.4	0.3	0.4	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	Diurnal Average	
	1.9	0.7	0.6	1.0	0.6	0.6	1.0	1.6	1.6	1.1	1.6	1.6	2.1	1.6	2.1	1.1	1.6	0.6	1.1	1.0	0.9	0.6	0.6	1.5	Diurnal Maximum	

C - Calibration

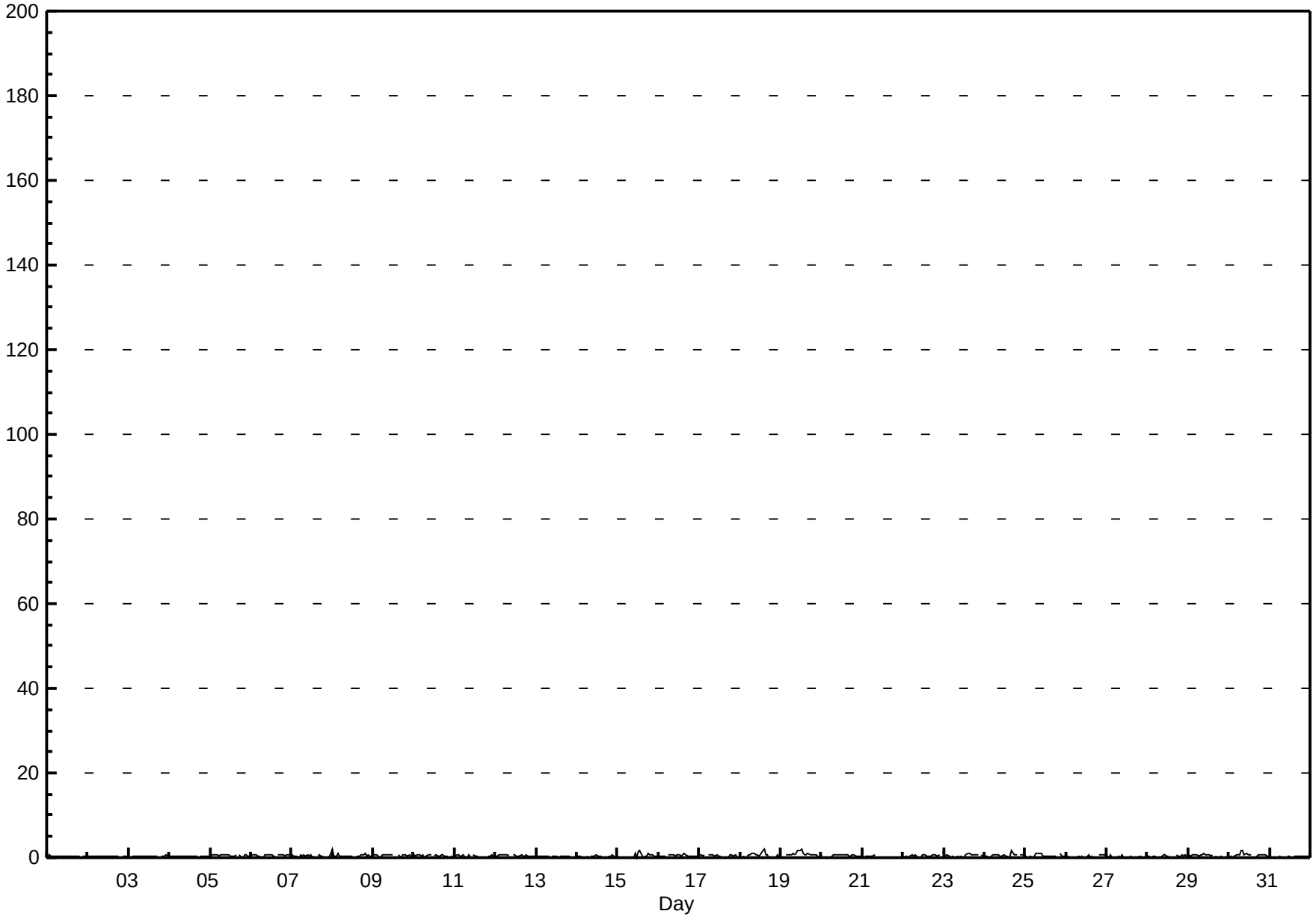
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - October 2013

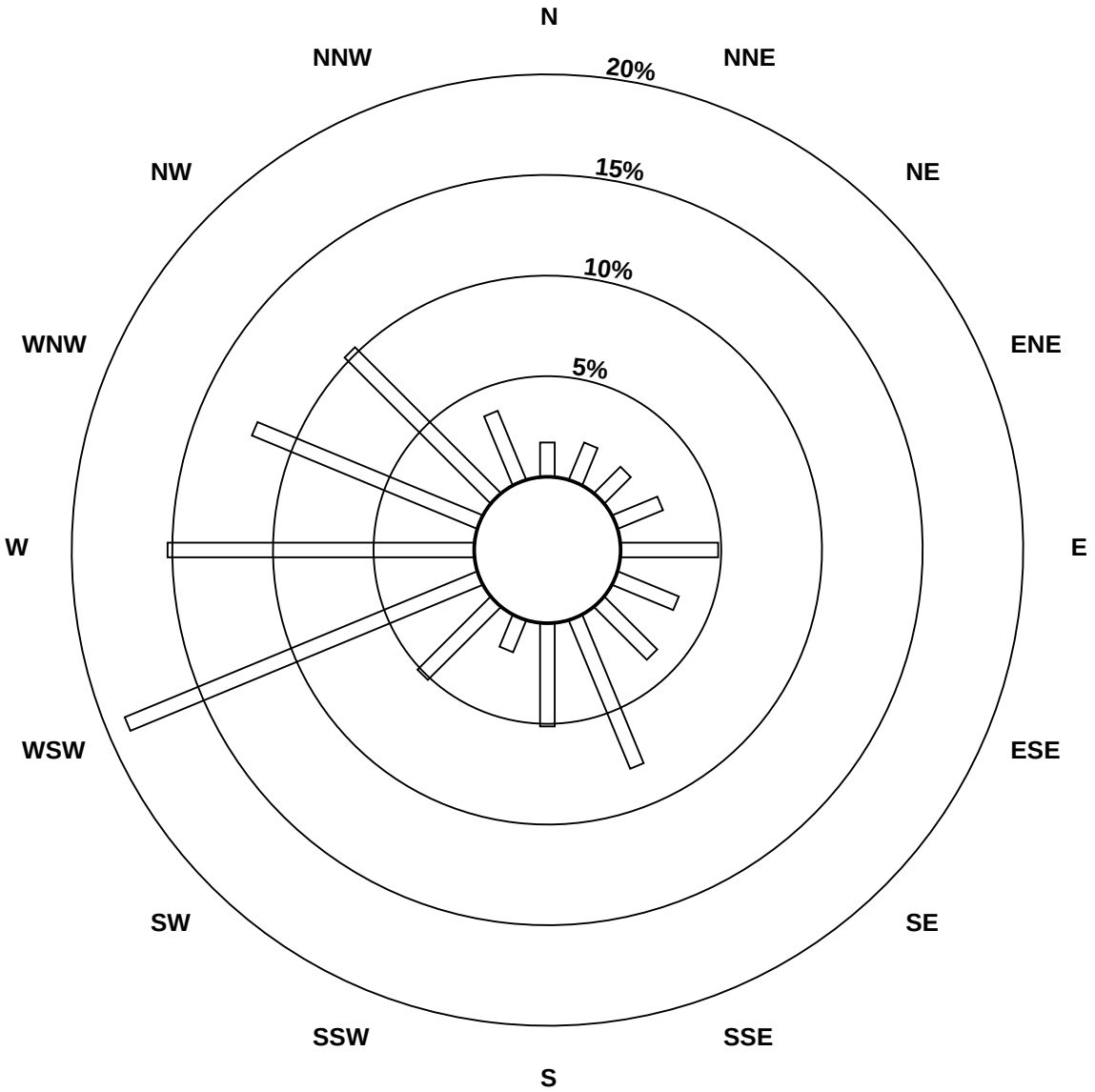


Peace Airshed Zone Association

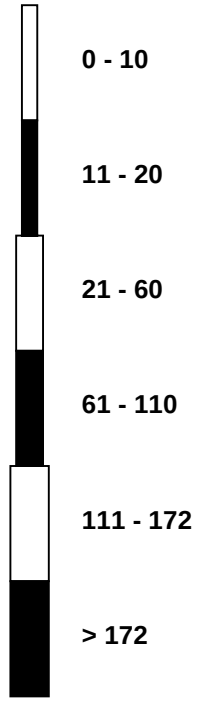
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - October 2013



Pollutant Classes (ppb)

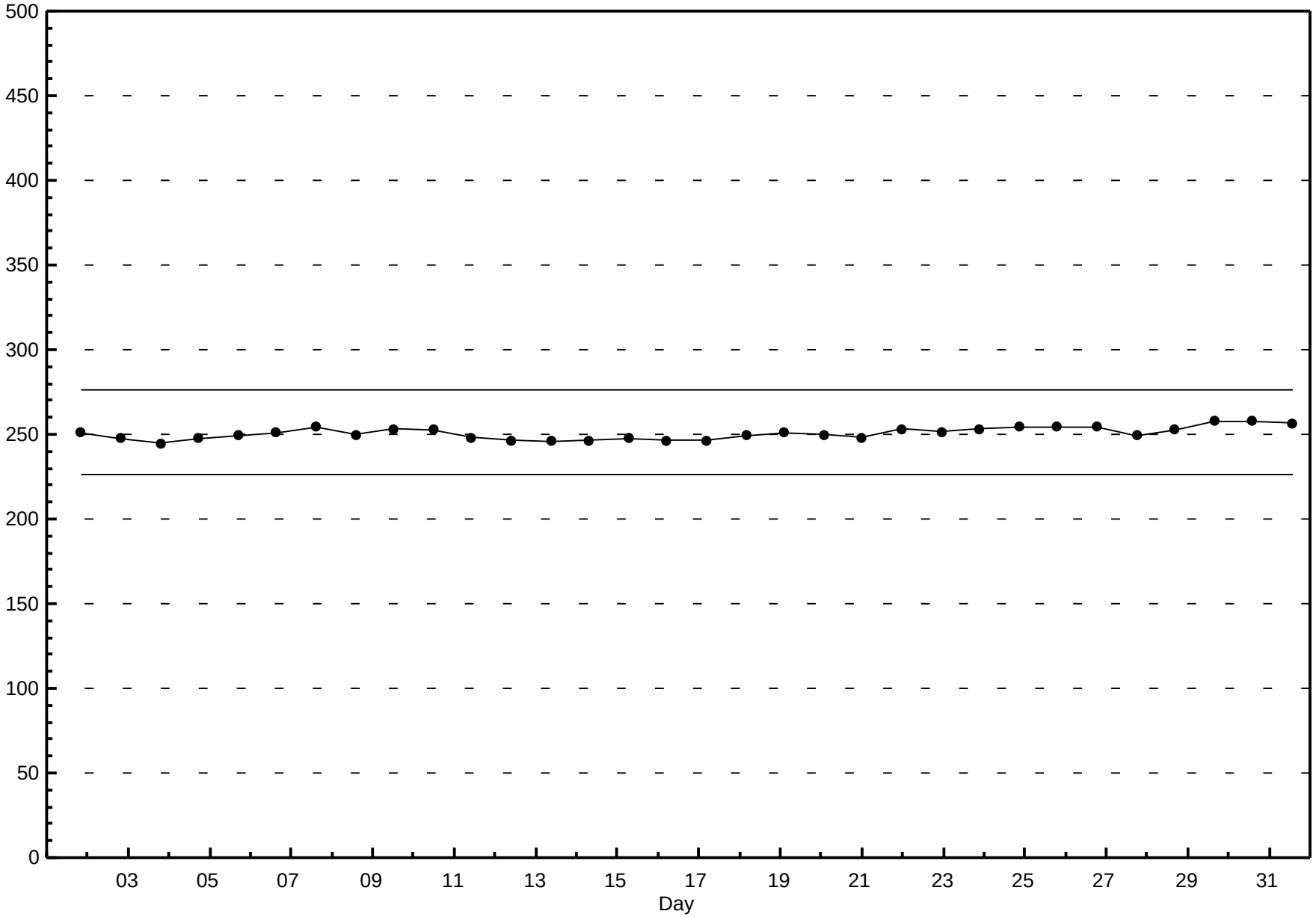


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Henry Pirker - October 2013



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.1 ppb on Oct 13 10:00 Maximum Daily Average: 0.7 ppb on Oct 25

Minimum Value: 0 ppb on Oct 8 06:00 Minimum Daily Average: 0.2 ppb on Oct 8
Maximum Diurnal Average: 0.6 ppb at hour 10 Minimum Diurnal Average: 0.3 ppb at hour 15
Monthly Average: 0.41 ppb Percentiles: $P_1 = 0.1$ $P_{10} = 0.3$ $Q_1 = 0.3$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 0.6$ $P_{99} = 1.1$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

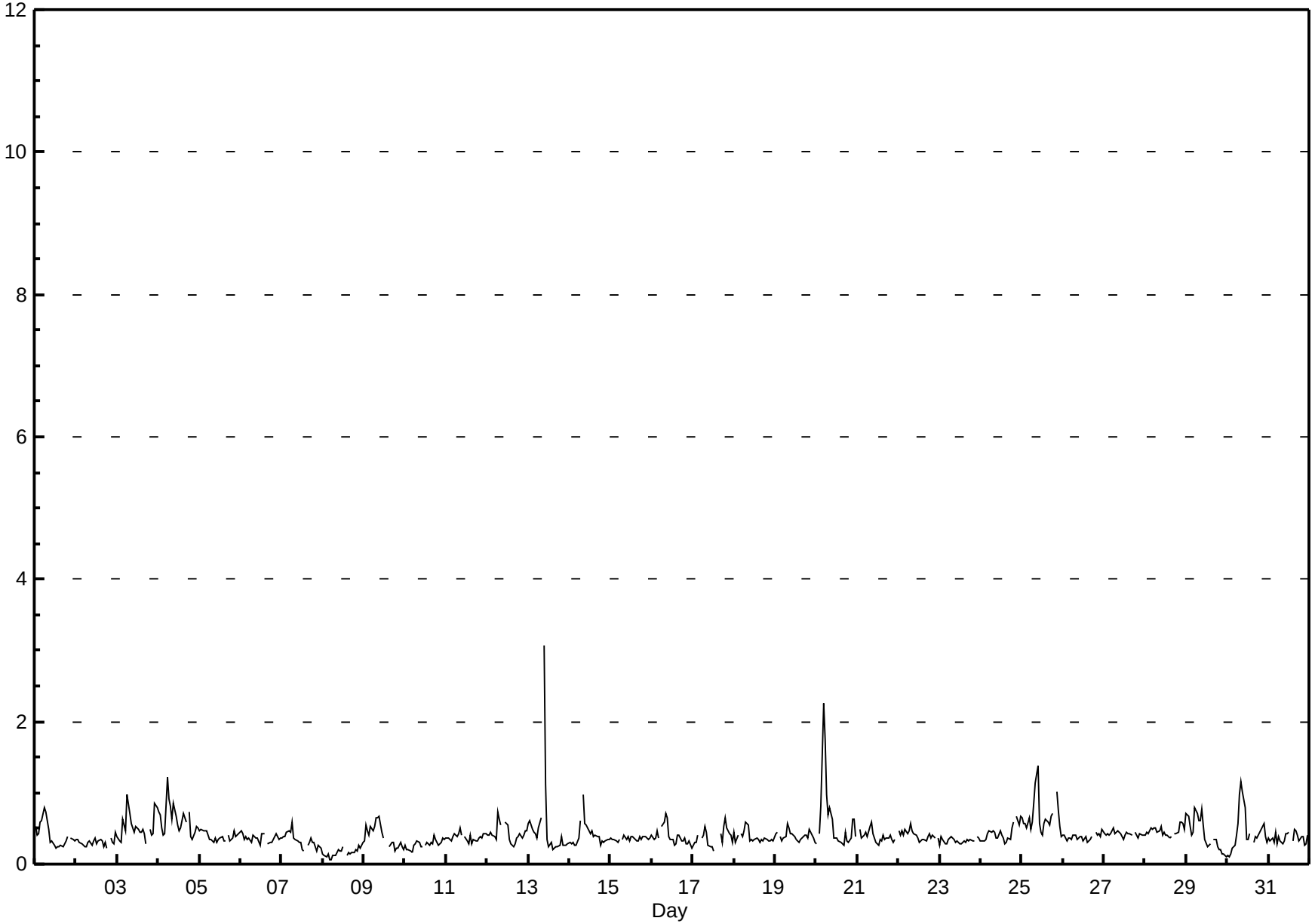
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.4	0.8
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.4
3-Oct	0	0	0	1	1	0	1	1	1	1	0	1	0	0	0	0	0	0	A	0	0	0	1	1	0.5	1.0
4-Oct	1	1	1	0	0	1	1	1	1	1	1	1	0	1	1	1	1	A	1	0	0	0	1	1	0.6	1.2
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.5
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.5
7-Oct	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.6
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.3
9-Oct	0	1	0	0	1	0	1	1	1	1	0	0	A	C	C	0	0	0	0	0	0	0	0	0	0.4	0.7
10-Oct	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
11-Oct	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
12-Oct	0	0	0	0	0	0	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
13-Oct	1	1	0	0	0	0	1	1	A	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.1
14-Oct	0	0	0	0	0	0	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
15-Oct	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4
16-Oct	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
17-Oct	0	0	0	0	A	0	0	1	0	0	0	0	0	C	C	C	0	0	1	1	0	0	0	0	0.4	0.7
18-Oct	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
19-Oct	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
20-Oct	0	A	0	1	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.6	2.3
21-Oct	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.6
22-Oct	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.6
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.4
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	1	1	1	0.4	0.7
25-Oct	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1	1	1	1	1	A	1	1	1	0	0.7	1.4
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.5
27-Oct	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.5
28-Oct	0	0	0	1	0	1	1	0	0	1	0	0	0	0	0	0	A	0	0	0	1	1	1	0	0.5	0.6
29-Oct	1	1	1	0	0	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.8
30-Oct	0	0	0	0	0	0	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	1	0	0	0.5	1.2
31-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.5
	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
	0.7	0.7	0.6	0.8	2.3	1.8	1.0	1.0	1.2	3.1	1.1	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.7	0.7	1.0	0.8	0.9	0.8	Diurnal Maximum	

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

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - October 2013



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - October 2013

Maximum Value: 4.2 ppb on Oct 13 10:00

Maximum Daily Average: 1.2 ppb on Oct 25

Minimum Value: 0 ppb on Oct 8 05:00

Minimum Daily Average: 0.6 ppb on Oct 8

Maximum Diurnal Average: 1.0 ppb at hour 9

Minimum Diurnal Average: 0.8 ppb at hour 15

Monthly Average: 0.86 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.8 $Q_3 = 0.9$ $P_{90} = 1.1$ $P_{99} = 1.8$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.7
2-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	0.9
3-Oct	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.5
4-Oct	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.1	1.9
5-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.1
6-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.1
7-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.1
8-Oct	1	1	0	1	0	0	1	0	1	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1	0.6	0.9
9-Oct	1	1	1	1	1	1	1	1	1	1	1	1	A	C	C	1	1	1	0	1	1	1	1	1	0.8	1.3
10-Oct	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
11-Oct	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
12-Oct	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
13-Oct	1	1	1	1	1	1	1	1	A	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	4.2
14-Oct	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5
15-Oct	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
16-Oct	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
17-Oct	1	1	1	1	A	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	1	1	1	0.8	1.1
18-Oct	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5
19-Oct	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
20-Oct	1	A	1	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	3.3
21-Oct	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.0
22-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.1
23-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	0.9
24-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.1
25-Oct	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	A	2	1	1	1	1.2	2.0
26-Oct	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
27-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	0.9
28-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.1
29-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.4
30-Oct	1	1	1	1	1	1	1	2	2	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.0	2.3
31-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	1.1
	0.9	0.8	0.8	0.8	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	Diurnal Average	
	1.4	1.0	1.1	1.5	3.3	2.5	1.9	1.6	2.3	4.2	2.3	1.2	1.0	1.1	1.0	1.0	1.1	1.4	1.4	1.1	1.6	1.3	1.5	1.3	Diurnal Maximum	

C - Calibration

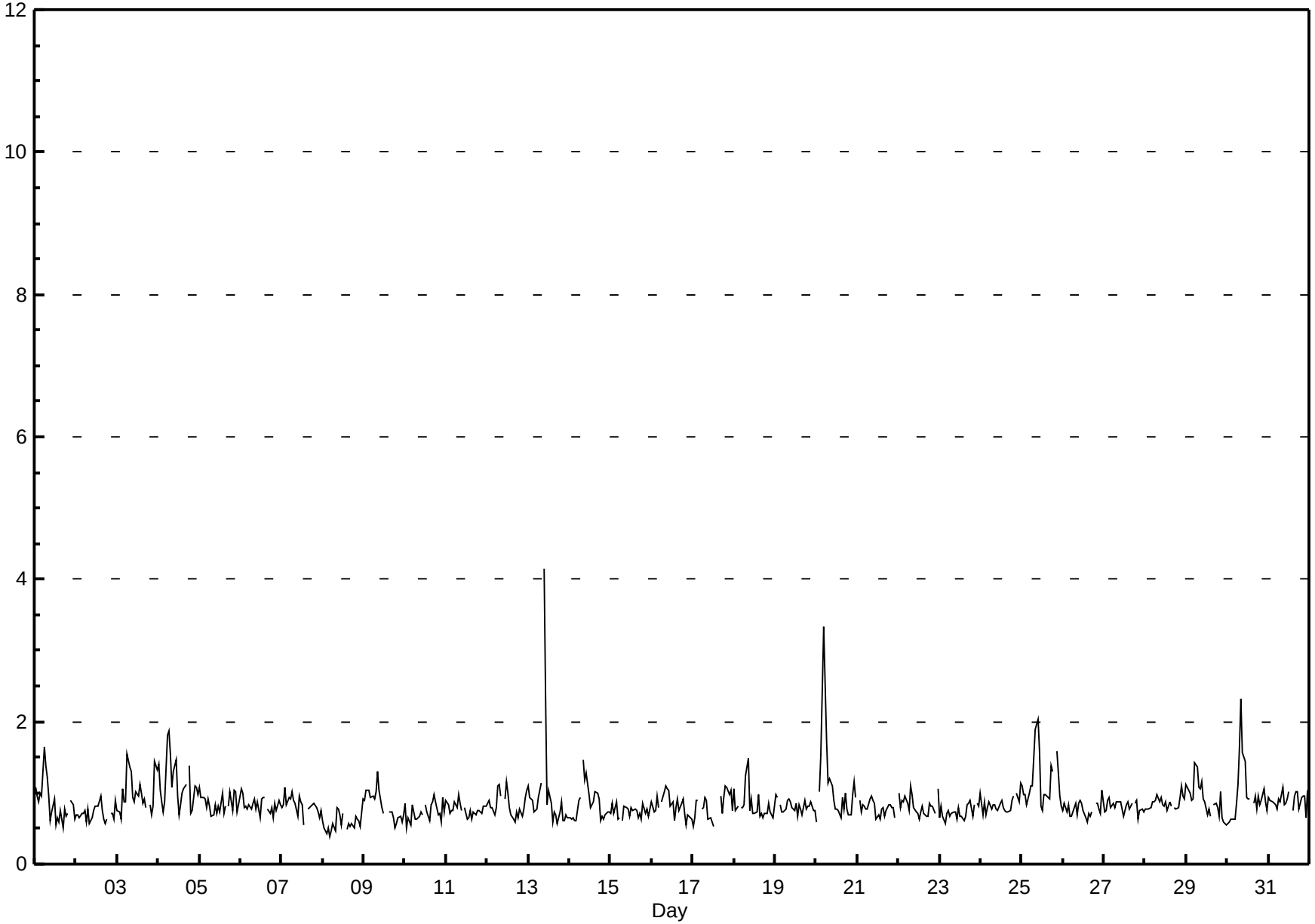
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - October 2013

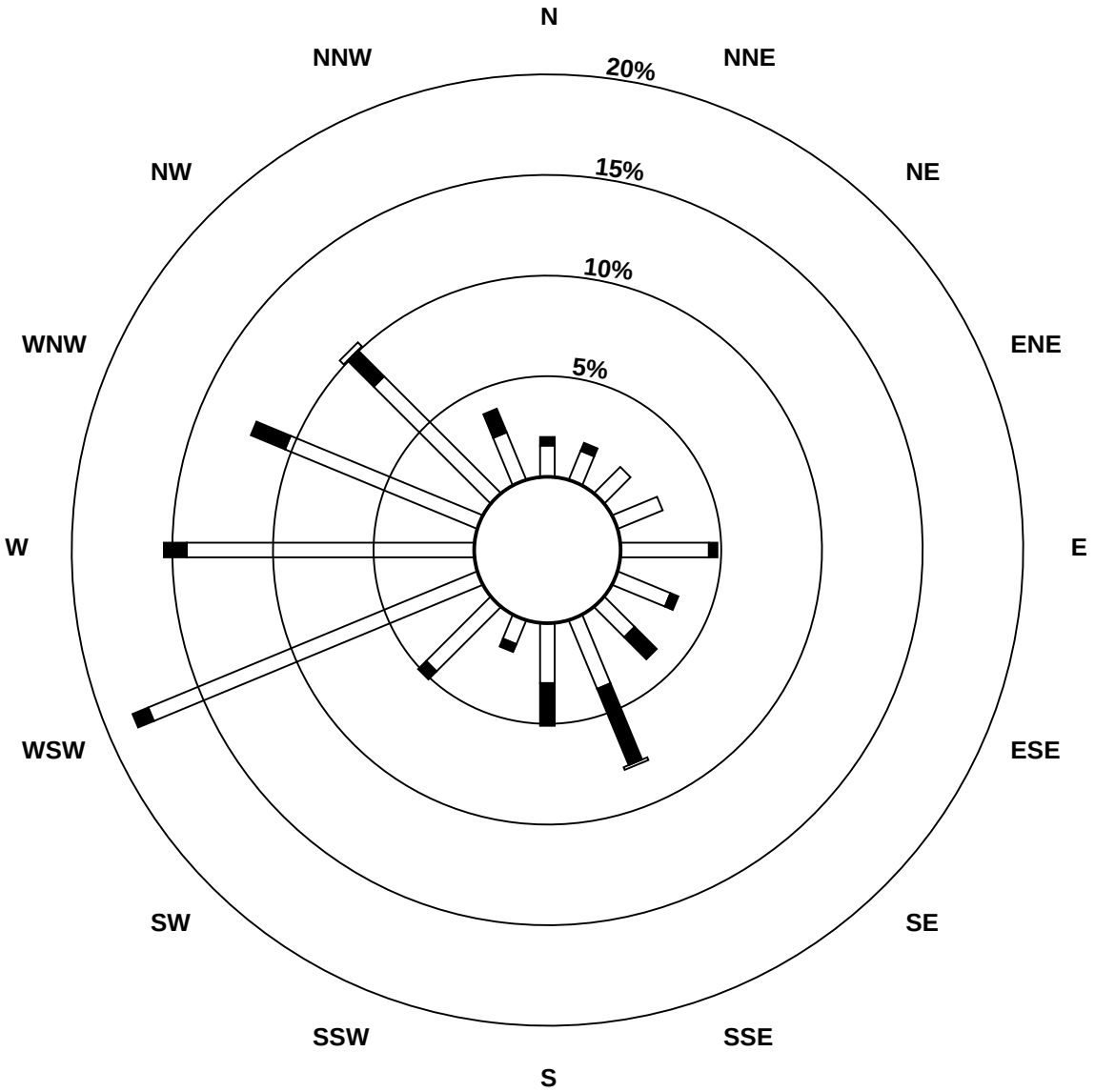


Peace Airshed Zone Association

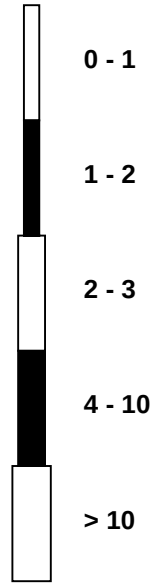
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - October 2013



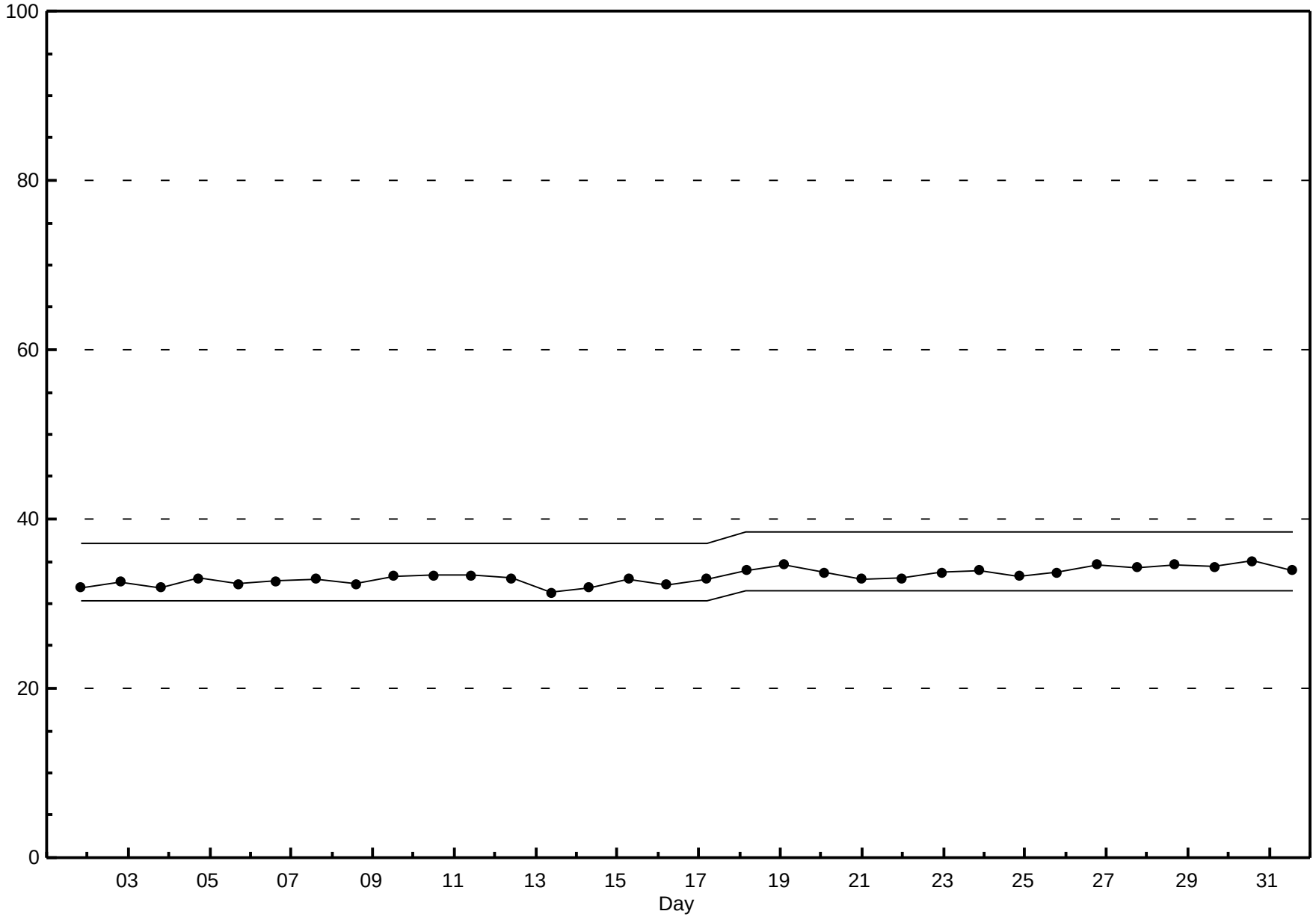
Pollutant Classes (ppb)



Span Responses

Total Reduced Sulphur (TRS)

Henry Pirker - October 2013



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 41.3 ppb on Oct 30 09:00 Maximum Daily Average: 21.3 ppb on Oct 30

Minimum Value: 1 ppb on Oct 8 05:00 Minimum Daily Average: 2.9 ppb on Oct 27
Maximum Diurnal Average: 16.7 ppb at hour 8 Minimum Diurnal Average: 4.8 ppb at hour 14
Monthly Average: 9.26 ppb Percentiles: P_1 = 1.2 P_{10} = 2.6 Q_1 = 3.8 Median = 6.6 Q_3 = 12.8 P_{90} = 20.0 P_{99} = 34.4

Hours in Service:	744
Hours of Data:	694
Hours of Missing Data:	50
Hours of Calibration:	43
Percent Operational Time:	99.1

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-Oct	3	3	4	4	5	9	11	11	6	5	4	3	3	3	3	4	4	6	9	8	A	5	5	3	5.2	11.4
2-Oct	2	2	2	3	3	5	8	8	7	5	6	7	5	3	3	3	4	2	3	A	9	6	6	7	4.8	9.4
3-Oct	10	7	7	8	8	9	10	15	13	6	5	4	3	2	2	3	3	5	A	18	16	18	18	14	8.8	18.3
4-Oct	12	11	10	8	9	11	12	12	12	13	11	14	9	11	16	21	18	A	20	12	6	7	9	9	11.9	20.5
5-Oct	6	4	3	3	4	4	4	5	5	4	3	3	2	3	3	4	A	5	3	4	4	4	6	6	4.0	6.1
6-Oct	6	5	7	5	4	6	7	11	7	5	4	4	4	5	7	A	8	6	6	5	5	5	6	5	5.8	11.1
7-Oct	5	5	5	6	6	9	9	7	7	6	5	5	3	3	A	5	5	4	4	4	4	3	3	2	5.0	9.4
8-Oct	1	1	1	1	1	1	3	5	4	2	2	1	1	A	3	3	3	2	3	4	9	13	10	12	3.8	13.1
9-Oct	15	14	13	9	10	13	16	C	C	C	C	7	A	11	15	10	11	13	8	5	8	7	6	3	10.2	15.7
10-Oct	1	1	2	2	4	6	10	18	11	4	3	A	4	3	4	5	4	4	5	5	5	4	4	3	4.9	17.8
11-Oct	3	2	2	2	3	6	14	16	20	7	A	4	3	3	2	3	6	6	7	8	7	6	7	9	6.4	19.6
12-Oct	11	18	17	12	12	15	14	15	16	A	18	23	22	8	3	3	3	6	21	25	19	21	19	19	14.8	24.7
13-Oct	17	15	15	14	12	11	13	17	A	20	11	5	2	2	2	2	2	8	16	23	10	5	6	7	10.2	23.0
14-Oct	13	14	11	10	13	20	24	A	25	14	13	11	4	3	2	3	4	5	4	3	5	4	4	4	9.3	24.8
15-Oct	4	5	4	4	5	6	A	7	6	6	4	4	3	8	10	4	10	16	20	10	8	6	7	9	7.2	20.5
16-Oct	9	5	9	16	12	A	22	24	26	25	10	5	3	3	3	3	5	10	16	26	15	8	5	4	11.4	25.9
17-Oct	2	2	3	3	A	14	17	26	24	10	6	5	4	3	4	4	8	19	35	34	17	11	10	8	11.6	34.6
18-Oct	11	14	12	A	23	25	34	34	26	15	16	7	6	7	6	4	5	8	7	5	4	2	2	3	12.1	34.4
19-Oct	2	2	A	3	6	11	26	29	20	9	3	3	3	3	2	3	7	15	24	28	23	22	14	11	11.6	28.8
20-Oct	9	A	11	13	14	17	16	18	22	22	6	6	4	3	3	6	10	7	7	5	5	4	4	5	9.4	22.2
21-Oct	A	6	3	5	11	16	18	28	M	M	M	M	M	M	M	11	16	18	8	11	7	4	4	A	--	27.6
22-Oct	6	6	6	10	11	13	17	19	18	11	11	4	4	8	10	7	7	8	12	12	11	11	A	7	10.0	18.8
23-Oct	6	5	4	4	5	8	13	17	13	11	7	5	4	3	3	3	4	8	11	8	9	A	9	8	7.3	17.0
24-Oct	11	14	14	14	15	18	20	16	C	C	C	C	C	C	C	6	5	12	14	25	A	28	19	9	--	27.8
25-Oct	14	12	16	21	20	18	19	23	27	26	12	6	6	7	11	12	15	31	33	A	31	27	15	7	17.7	32.7
26-Oct	9	10	6	3	4	15	20	17	16	8	3	2	2	2	3	3	3	7	A	13	6	3	3	2	6.9	20.1
27-Oct	2	2	1	1	2	3	3	3	4	4	4	2	3	2	2	3	4	A	4	4	5	3	3	3	2.9	4.6
28-Oct	3	5	5	5	10	10	11	14	14	9	5	3	3	4	3	4	A	15	22	23	28	25	26	23	11.7	27.8
29-Oct	23	21	21	17	17	17	18	23	25	23	20	12	10	8	7	A	13	10	6	4	3	2	2	4	13.3	25.1
30-Oct	4	4	10	17	21	31	32	40	41	34	23	12	13	9	A	8	16	24	28	34	35	35	13	5	21.3	41.3
31-Oct	3	1	1	2	3	7	7	8	7	6	5	3	2	A	5	4	5	5	5	5	5	4	4	4	4.3	8.3
	7.4	7.2	7.5	7.5	9.1	11.7	15.0	16.7	15.6	11.6	8.2	6.0	4.8	4.8	5.1	5.3	7.2	9.8	12.4	12.8	10.9	10.1	8.2	7.1	Diurnal Average	
	23.0	20.6	20.6	20.9	23.2	31.3	34.4	39.9	41.3	33.6	23.4	22.8	22.1	11.2	16.4	20.5	18.2	30.9	34.6	34.1	35.0	34.9	25.9	22.8	Diurnal Maximum	

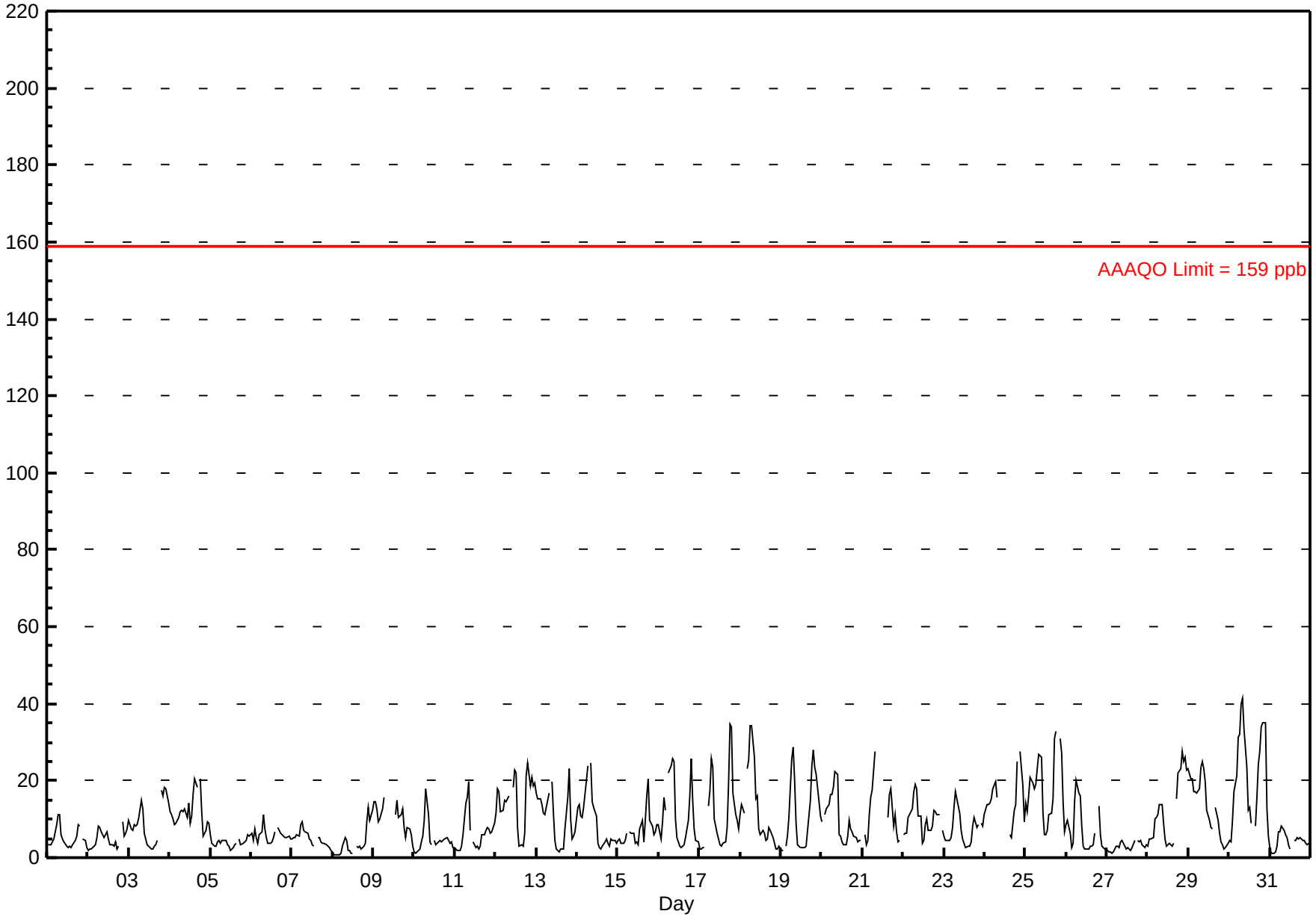
C - Calibration M - Maintenance A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - October 2013



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - October 2013

Maximum Value: 57.6 ppb on Oct 30 08:00

Maximum Daily Average: 28.1 ppb on Oct 30

Minimum Value: 2 ppb on Oct 8 03:00

Minimum Daily Average: 5.1 ppb on Oct 27

Maximum Diurnal Average: 22.8 ppb at hour 8

Minimum Diurnal Average: 7.6 ppb at hour 13

Monthly Average: 13.22 ppb

Percentiles: P_1 = 2.1 P_{10} = 4.5 Q_1 = 6.0 Median = 10.3 Q_3 = 18.0 P_{90} = 26.8 P_{99} = 40.4

Hours in Service:	744
Hours of Data:	694
Hours of Missing Data:	50
Hours of Calibration:	43
Percent Operational Time:	99.1

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-Oct	4	5	4	6	5	11	15	15	11	7	5	5	4	6	5	6	7	8	13	13	A	7	8	5	7.7	15.4
2-Oct	4	5	3	5	4	10	12	13	10	7	7	8	6	5	7	8	6	4	4	A	13	7	7	10	7.2	13.0
3-Oct	14	10	8	10	10	10	12	18	16	10	6	5	4	3	5	4	6	9	A	21	18	22	19	17	11.3	21.9
4-Oct	13	12	11	10	12	12	13	13	14	15	14	19	12	15	23	23	20	A	23	16	11	11	16	15	15.1	23.5
5-Oct	8	6	4	5	6	6	6	6	6	6	5	4	3	4	5	5	A	7	5	5	6	7	13	12	6.2	13.1
6-Oct	13	6	12	9	6	8	9	20	12	8	6	5	5	8	9	A	12	8	8	6	7	10	10	7	8.9	20.2
7-Oct	7	6	6	8	7	11	12	9	9	9	9	6	5	5	A	8	7	6	5	5	5	4	4	3	6.8	12.0
8-Oct	3	2	2	2	2	2	5	10	6	4	4	5	3	A	5	5	6	4	7	6	16	17	13	17	6.3	17.4
9-Oct	18	17	14	12	12	15	18	C	C	C	C	9	A	12	20	15	15	22	14	7	17	14	12	5	14.1	22.1
10-Oct	4	2	3	5	6	8	16	25	39	8	5	A	16	15	12	7	7	13	11	7	6	5	5	4	10.1	38.5
11-Oct	4	3	3	4	7	13	19	25	28	14	A	7	7	6	6	6	10	8	9	11	10	8	8	22	10.4	28.1
12-Oct	15	22	21	16	16	17	15	21	19	A	34	26	26	14	5	5	8	9	29	31	31	24	22	21	19.6	34.2
13-Oct	19	17	18	16	14	13	17	22	A	23	17	9	3	2	8	4	6	18	32	32	25	7	8	11	14.9	32.2
14-Oct	28	17	12	13	21	24	27	A	30	20	15	15	6	4	3	5	6	6	5	4	8	8	7	7	12.9	30.5
15-Oct	8	10	5	6	7	9	A	8	9	10	8	7	7	12	20	12	14	29	32	14	12	10	9	12	11.9	31.9
16-Oct	10	8	14	19	16	A	25	31	28	32	17	8	4	4	5	7	11	15	20	29	24	10	7	7	15.5	31.8
17-Oct	3	3	3	6	A	18	25	34	30	16	8	7	6	5	6	8	15	31	41	37	33	19	15	13	16.7	40.6
18-Oct	16	20	22	A	29	32	38	47	46	19	25	13	15	17	12	8	8	10	9	9	5	4	4	5	18.0	46.7
19-Oct	3	3	A	5	17	23	34	34	24	19	5	5	4	6	6	8	22	25	32	35	32	30	21	13	17.7	35.4
20-Oct	12	A	14	16	19	20	19	25	26	25	19	11	7	6	7	11	20	15	11	9	7	6	6	6	13.7	26.1
21-Oct	A	11	6	8	21	23	28	36	M	M	M	M	M	M	M	26	25	23	16	17	11	5	8	A	--	35.9
22-Oct	7	8	12	14	15	16	20	28	24	14	16	6	6	13	14	9	9	15	17	16	16	15	A	10	13.9	28.2
23-Oct	10	7	6	7	9	13	22	23	18	17	11	7	5	4	4	6	6	12	20	11	12	A	12	10	11.0	23.5
24-Oct	15	18	16	16	19	21	21	20	C	C	C	C	C	C	C	10	8	20	29	33	A	32	33	18	--	33.3
25-Oct	24	21	23	24	23	22	22	30	30	32	24	8	8	12	14	13	26	34	34	A	36	41	24	11	23.3	41.0
26-Oct	11	22	8	3	6	28	29	28	23	25	5	3	4	5	6	5	7	13	A	24	10	5	4	4	12.2	29.0
27-Oct	2	2	2	2	3	4	4	4	6	7	11	3	5	4	7	5	8	A	8	5	7	5	4	5	5.1	11.3
28-Oct	4	6	6	7	14	13	13	16	18	15	7	3	5	5	4	5	A	19	25	27	31	30	29	25	14.3	30.7
29-Oct	25	23	22	21	19	18	19	27	30	27	26	17	12	10	11	A	16	14	11	6	4	3	5	5	16.3	30.3
30-Oct	7	8	16	23	26	49	36	58	51	38	30	17	16	14	A	11	19	30	36	37	38	38	38	10	28.1	57.6
31-Oct	7	2	2	2	5	11	9	12	10	7	7	5	4	A	7	7	8	6	8	6	6	5	5	5	6.4	12.3
	10.6	10.1	10.0	10.0	12.5	16.1	18.6	22.8	21.3	16.1	12.9	8.8	7.6	8.2	8.7	8.8	11.8	15.0	17.7	16.6	15.8	13.7	12.6	10.6	Diurnal Average	
	27.7	22.9	22.5	24.2	28.6	48.7	38.1	57.6	51.0	38.3	34.2	25.9	26.3	17.4	23.3	26.1	26.5	33.5	40.6	37.3	37.8	41.0	37.8	25.4	Diurnal Maximum	

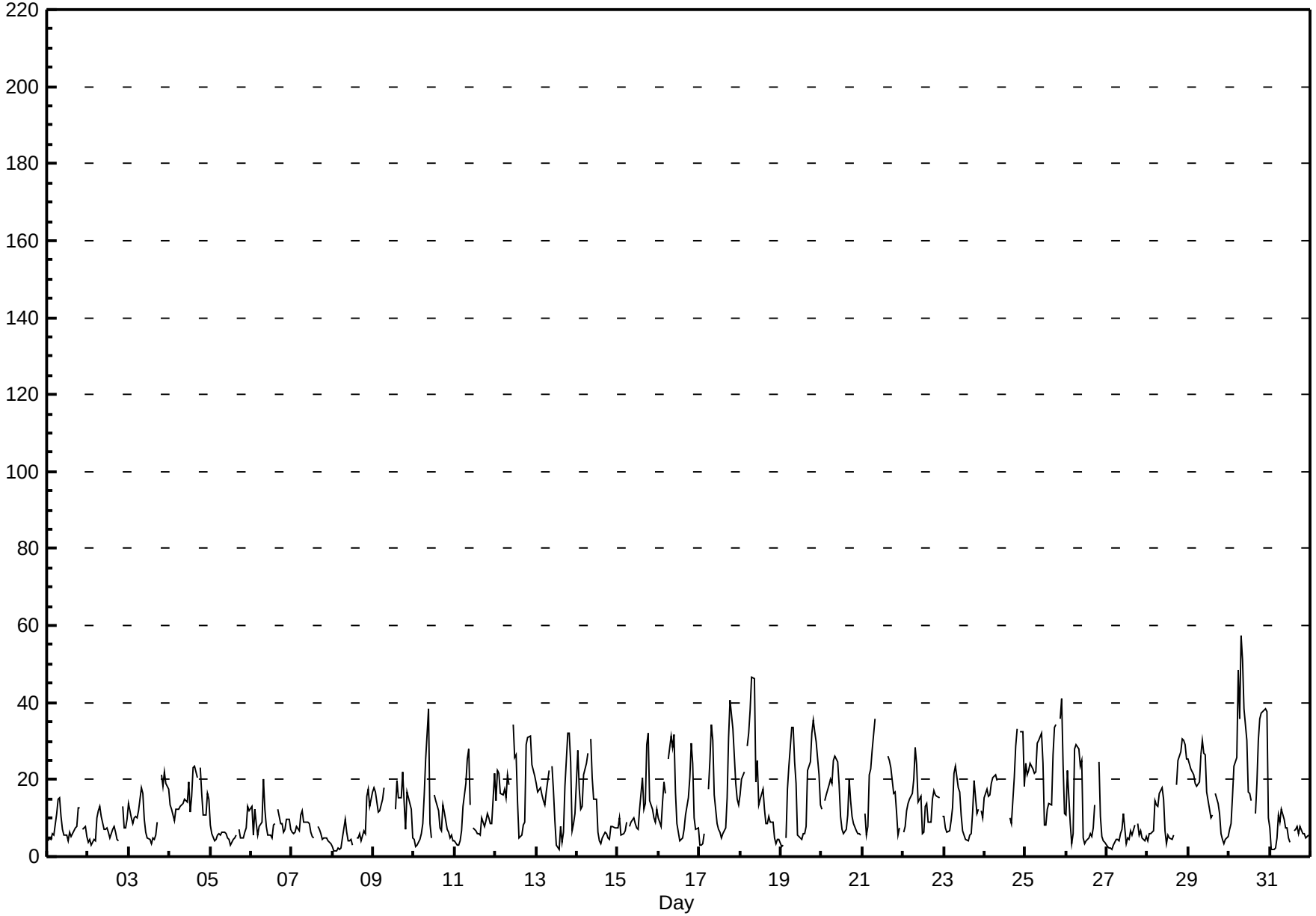
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

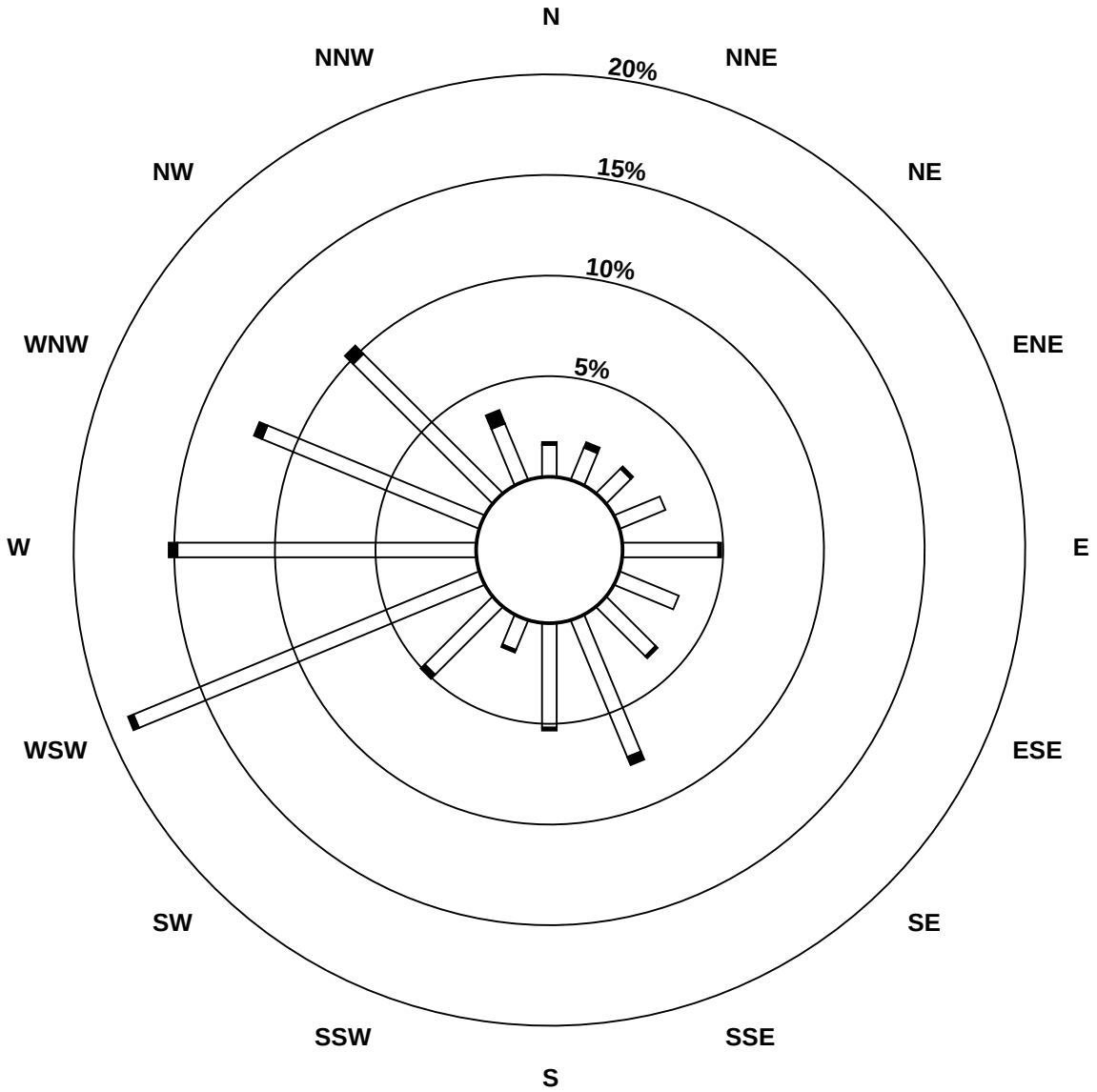
Henry Pirker - October 2013



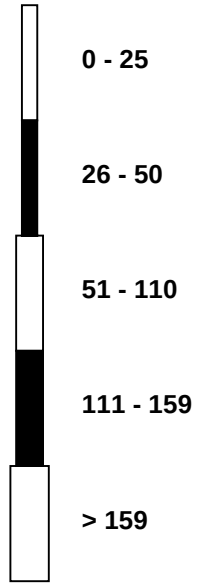
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - October 2013



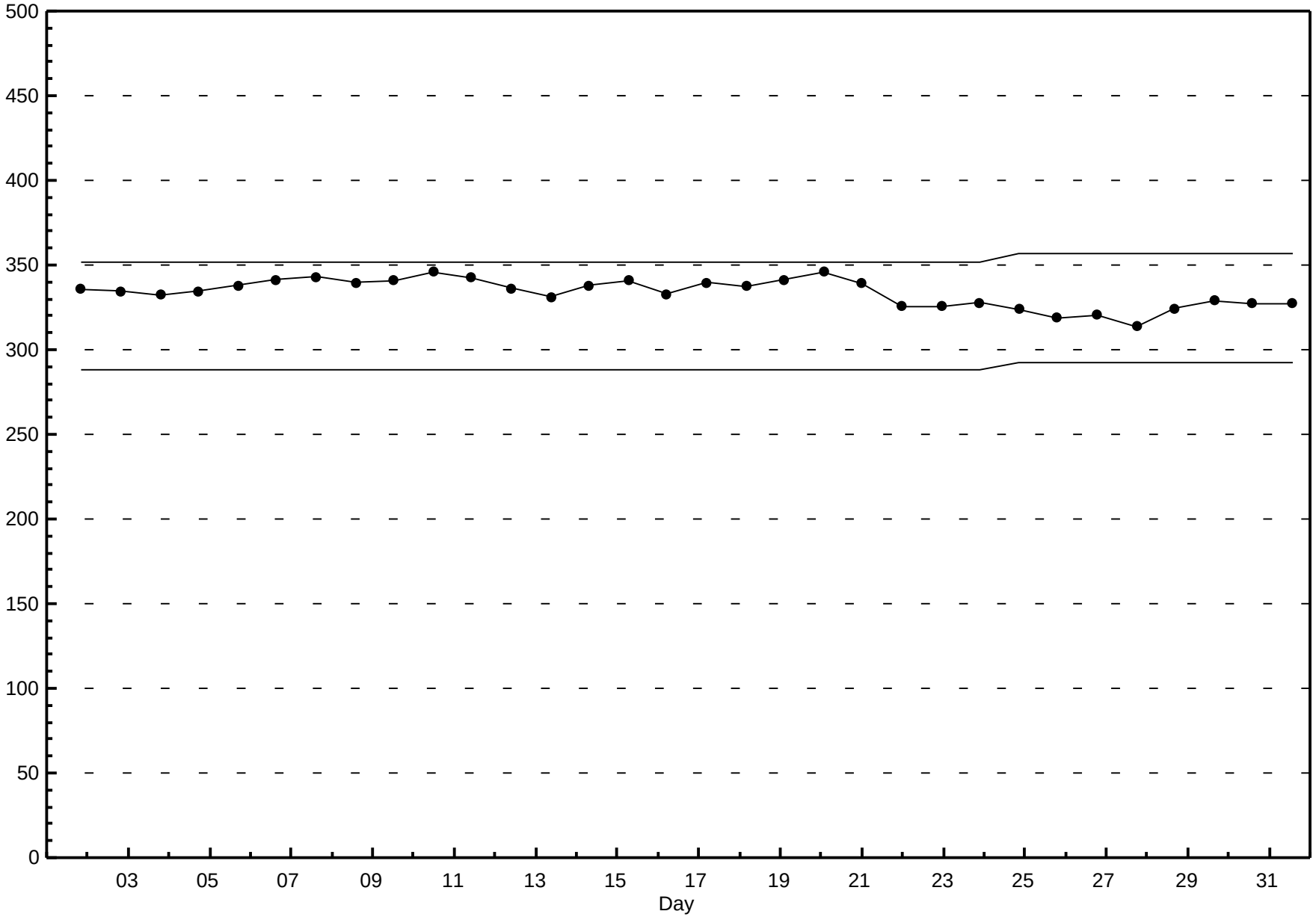
Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO_2)

Henry Pirker - October 2013



PAZA
Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 153.9 ppb on Oct 30 09:00 Maximum Daily Average: 26.4 ppb on Oct 25

Minimum Value: 0 ppb on Oct 5 01:00
Maximum Diurnal Average: 27.3 ppb at hour 9
Monthly Average: 5.32 ppb

Minimum Daily Average: 0.3 ppb on Oct 5
Minimum Diurnal Average: 1.0 ppb at hour 24
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.2 Median = 0.8 Q_3 = 2.9 P_{90} = 13.4 P_{99} = 73.5

Hours in Service:	744
Hours of Data:	694
Hours of Missing Data:	50
Hours of Calibration:	43
Percent Operational Time:	99.1

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-Oct	0	0	0	0	0	1	2	3	1	2	1	2	1	1	1	1	1	0	1	1	A	1	1	1	0.9	2.8
2-Oct	1	0	0	0	0	0	1	1	1	1	1	2	1	1	1	1	1	0	0	A	0	0	0	0	0.7	1.7
3-Oct	2	1	0	1	9	15	31	27	24	8	5	3	1	1	1	1	1	1	A	3	3	6	7	7	7.0	30.6
4-Oct	4	8	7	5	8	19	18	19	20	20	12	19	7	4	6	13	9	A	8	1	0	0	0	0	9.0	19.8
5-Oct	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0.3	0.9
6-Oct	0	0	0	0	0	0	0	0	1	1	1	1	1	2	2	A	2	1	2	1	1	2	2	1	0.9	2.2
7-Oct	1	1	1	1	1	6	13	11	13	14	8	4	1	1	A	1	0	0	0	0	0	0	0	0	3.4	13.8
8-Oct	0	0	0	0	0	0	1	3	3	1	1	1	1	A	1	1	1	0	0	0	1	1	0	2	0.8	3.1
9-Oct	5	8	4	1	1	4	9	C	C	C	C	2	A	2	4	2	1	1	0	0	0	1	0	0	2.4	9.3
10-Oct	0	0	0	0	0	0	1	4	4	2	2	A	2	1	2	2	1	1	1	0	0	0	0	0	1.0	3.9
11-Oct	0	0	0	0	0	0	1	4	14	4	A	1	1	1	1	1	1	0	0	0	0	0	0	0	1.3	14.4
12-Oct	0	0	1	0	0	4	15	31	31	A	21	44	28	5	0	0	0	0	7	10	4	14	10	10	10.1	43.8
13-Oct	11	10	7	11	11	13	22	36	A	19	6	1	0	0	0	0	0	0	0	0	0	0	0	0	6.4	35.6
14-Oct	1	0	0	0	0	3	21	A	31	9	7	7	1	0	0	0	0	0	0	0	0	0	0	0	3.5	31.5
15-Oct	0	0	0	0	0	0	A	0	1	1	1	1	1	1	3	1	1	0	1	0	0	0	0	0	0.5	3.0
16-Oct	0	0	0	4	1	A	30	58	77	61	11	3	1	1	1	1	1	1	1	9	1	0	0	0	11.4	76.7
17-Oct	0	0	0	0	A	1	4	29	34	6	4	3	2	1	1	1	1	2	30	59	6	0	0	0	8.1	59.1
18-Oct	0	1	1	A	3	6	18	45	39	8	11	3	2	2	2	1	1	1	0	0	0	0	0	0	6.3	45.3
19-Oct	0	0	A	0	1	0	10	38	14	4	1	1	1	1	0	0	1	1	1	1	0	1	0	0	3.2	38.0
20-Oct	0	A	0	1	2	10	12	31	66	48	3	1	1	1	1	1	1	0	0	0	0	0	0	0	7.8	65.6
21-Oct	A	0	0	0	1	2	2	23	M	M	M	M	M	M	M	2	2	1	0	0	0	0	0	A	--	23.4
22-Oct	0	0	0	0	1	1	5	15	6	2	3	1	1	2	2	1	0	0	1	0	0	0	A	0	1.8	15.0
23-Oct	0	0	0	0	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0.9	2.5
24-Oct	0	2	2	5	9	11	19	33	C	C	C	C	C	C	C	1	0	0	2	9	A	12	9	0	--	33.4
25-Oct	0	0	1	4	5	16	48	97	131	114	7	2	2	2	4	2	1	16	37	A	84	35	1	0	26.4	130.7
26-Oct	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	1	0	1	1	0	0.4	0.9
27-Oct	0	0	0	0	0	1	1	0	1	1	2	1	1	1	1	1	1	A	0	0	1	0	0	0	0.6	1.8
28-Oct	0	0	0	0	1	1	1	2	11	8	3	1	2	2	1	1	A	0	1	1	11	17	18	5	3.8	18.2
29-Oct	11	10	11	15	20	22	16	46	59	63	31	10	6	4	2	A	1	0	0	0	0	0	0	0	14.3	63.4
30-Oct	0	0	0	1	1	16	34	111	154	63	15	3	5	3	A	1	2	1	3	11	28	20	2	0	20.7	153.9
31-Oct	0	0	0	0	0	0	1	1	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0.5	1.4
	1.3	1.5	1.3	1.7	2.6	5.1	11.1	23.2	27.3	17.2	6.1	4.3	2.5	1.5	1.5	1.3	1.1	1.1	3.4	3.8	4.9	3.7	1.7	1.0	Diurnal Average	
	11.1	10.4	10.7	15.4	20.5	22.2	47.9	111.2	153.9	113.6	30.9	43.8	27.8	4.6	6.2	13.3	8.9	15.6	37.0	59.1	84.1	34.9	18.2	9.9	Diurnal Maximum	

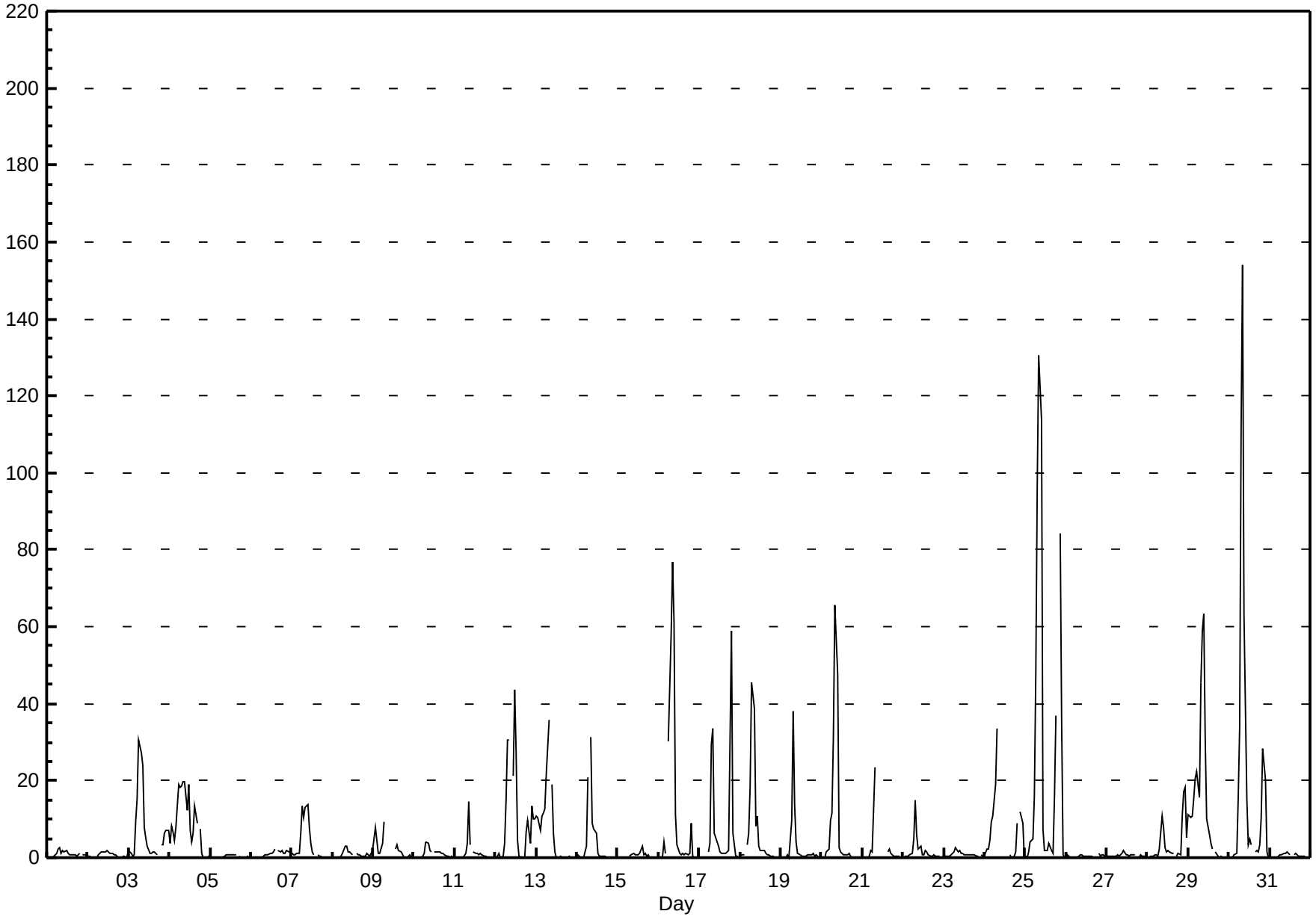
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - October 2013



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - October 2013

Maximum Value: 240.7 ppb on Oct 30 09:00

Maximum Daily Average: 46.8 ppb on Oct 25

Minimum Value: 0 ppb on Oct 13 22:00

Minimum Daily Average: 0.9 ppb on Oct 5

Maximum Diurnal Average: 46.6 ppb at hour 9

Minimum Diurnal Average: 2.9 ppb at hour 3

Monthly Average: 11.12 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.4 Q_1 = 0.9 Median = 2.5 Q_3 = 9.2 P_{90} = 30.6 P_{99} = 149.1

Hours in Service:	744
Hours of Data:	694
Hours of Missing Data:	50
Hours of Calibration:	43
Percent Operational Time:	99.1

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-Oct	0	0	0	0	1	5	8	7	5	5	3	6	4	8	2	2	2	1	5	4	A	4	7	5	3.8	8.3
2-Oct	2	1	2	0	0	1	2	5	5	4	3	2	4	3	7	4	4	1	1	A	1	1	0	2	2.4	6.9
3-Oct	5	5	1	2	19	21	40	42	39	16	8	5	2	2	6	2	2	2	A	6	7	15	9	10	11.8	42.3
4-Oct	8	10	9	7	17	34	28	24	30	31	25	33	10	6	24	25	15	A	15	3	1	1	0	2	15.6	34.0
5-Oct	0	0	0	0	1	1	0	1	1	1	1	2	1	1	1	1	A	1	1	1	0	0	4	1	0.9	4.0
6-Oct	1	0	0	0	0	0	0	2	5	2	2	2	1	3	3	A	4	3	7	2	3	7	6	5	2.6	7.4
7-Oct	2	2	2	3	4	15	24	21	20	20	17	9	2	2	A	1	1	1	0	0	0	0	0	0	6.4	24.3
8-Oct	0	0	0	1	1	1	2	7	5	3	3	4	2	A	2	2	2	1	2	1	8	2	2	9	2.7	9.2
9-Oct	12	12	8	3	3	8	21	C	C	C	C	4	A	3	5	8	3	2	0	1	1	7	1	0	5.3	20.9
10-Oct	0	0	0	0	0	1	2	33	34	11	11	A	11	11	14	11	8	19	13	1	1	1	1	1	8.0	34.0
11-Oct	0	0	0	0	1	1	2	17	54	6	A	3	4	2	3	3	10	1	1	0	0	0	0	14	5.4	54.0
12-Oct	4	1	7	3	3	9	30	51	37	A	56	56	39	13	1	1	0	0	26	41	21	31	18	19	20.3	56.2
13-Oct	18	17	12	13	17	16	37	46	A	32	14	4	1	0	12	1	4	2	3	3	1	0	0	0	10.9	46.0
14-Oct	17	4	0	0	3	13	31	A	46	21	9	12	3	1	1	1	1	0	0	0	0	0	0	0	7.0	46.5
15-Oct	0	0	0	0	0	1	A	1	3	2	2	2	2	5	20	3	5	1	3	1	1	0	0	0	2.3	19.8
16-Oct	1	0	1	12	4	A	51	93	103	86	26	7	2	2	2	2	3	2	2	30	2	0	1	0	18.8	102.9
17-Oct	0	0	0	0	A	5	16	57	60	12	6	5	4	2	4	3	3	5	116	79	64	1	1	0	19.4	116.1
18-Oct	3	7	3	A	10	17	36	154	150	11	28	7	5	13	4	3	2	2	1	1	1	1	0	0	19.9	153.7
19-Oct	0	0	A	0	12	3	35	62	32	14	2	2	1	1	1	1	2	2	3	6	4	6	1	0	8.4	62.1
20-Oct	1	A	1	6	19	17	24	68	86	82	20	3	2	1	1	2	3	1	1	0	0	0	0	0	14.8	86.3
21-Oct	A	1	0	1	2	10	18	67	M	M	M	M	M	M	M	22	7	2	2	2	1	0	0	A	--	66.7
22-Oct	0	0	0	1	8	5	11	57	23	9	7	1	2	3	3	1	1	0	7	1	2	3	A	1	6.5	56.5
23-Oct	1	2	4	2	5	9	6	7	5	10	2	2	2	1	1	1	1	2	3	2	3	A	5	3	3.4	9.7
24-Oct	2	6	5	10	13	18	35	49	C	C	C	C	C	C	C	2	1	2	43	61	A	34	33	3	--	60.8
25-Oct	13	4	8	11	16	30	86	171	149	150	44	4	4	5	6	3	6	31	69	A	108	143	9	4	46.8	170.5
26-Oct	0	14	0	0	0	1	1	2	3	4	1	1	1	1	1	1	1	1	A	13	2	4	3	3	2.6	14.3
27-Oct	1	1	1	1	1	1	3	1	2	5	8	1	1	1	6	3	4	A	1	1	2	1	1	1	2.1	8.0
28-Oct	1	1	1	1	2	2	1	6	24	17	4	2	3	2	2	1	A	1	2	2	40	29	30	11	8.1	39.9
29-Oct	22	22	17	20	25	28	20	76	97	91	66	16	9	6	4	A	2	1	1	1	1	0	0	0	22.8	96.7
30-Oct	1	0	1	3	6	33	68	188	241	112	30	8	8	7	A	2	4	3	12	31	43	35	12	0	36.9	240.7
31-Oct	0	0	1	0	1	1	1	2	2	2	2	2	2	A	2	2	1	1	1	1	1	1	0	0	1.0	2.3
	3.9	3.8	2.9	3.5	6.4	10.2	21.4	45.4	46.6	28.2	14.9	7.3	4.7	4.0	5.2	4.0	3.5	3.1	11.8	10.2	11.0	11.0	4.9	3.3	Diurnal Average	
	22.4	21.5	16.9	20.4	24.8	34.0	86.1	188.5	240.7	150.4	65.7	56.0	38.7	13.4	24.0	24.5	14.8	31.0	116.1	78.9	108.3	142.9	32.8	18.5	Diurnal Maximum	

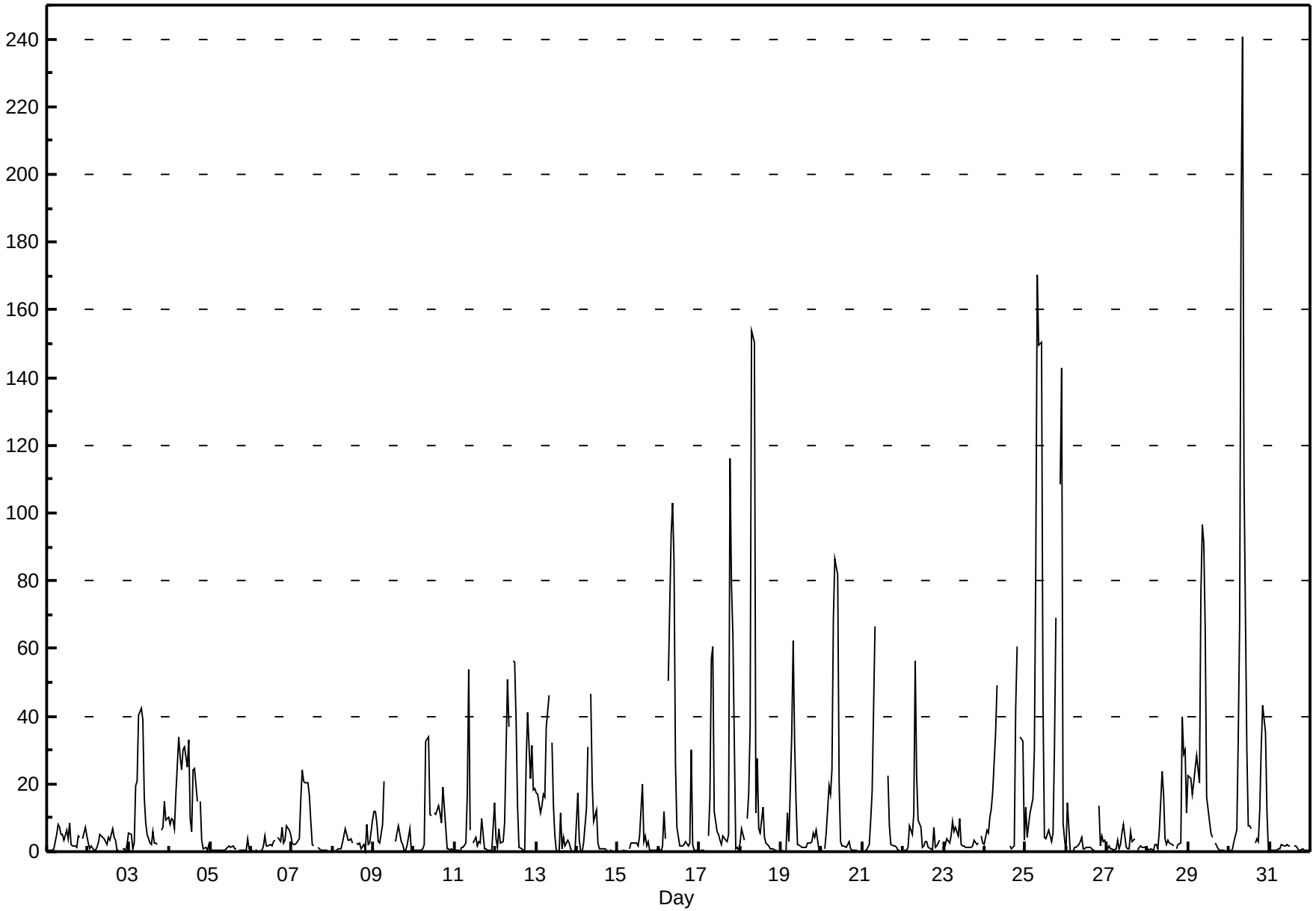
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - October 2013



PAZA
Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 196.0 ppb on Oct 30 09:00 Maximum Daily Average: 44.1 ppb on Oct 25

Minimum Value: 1 ppb on Oct 8 03:00 Minimum Daily Average: 3.5 ppb on Oct 27
Maximum Diurnal Average: 43.0 ppb at hour 9 Minimum Diurnal Average: 6.3 ppb at hour 14
Monthly Average: 14.58 ppb Percentiles: P_1 = 1.4 P_{10} = 3.1 Q_1 = 4.3 Median = 7.5 Q_3 = 16.4 P_{90} = 33.5 P_{99} = 96.9

Hours in Service:	744
Hours of Data:	694
Hours of Missing Data:	50
Hours of Calibration:	43
Percent Operational Time:	99.1

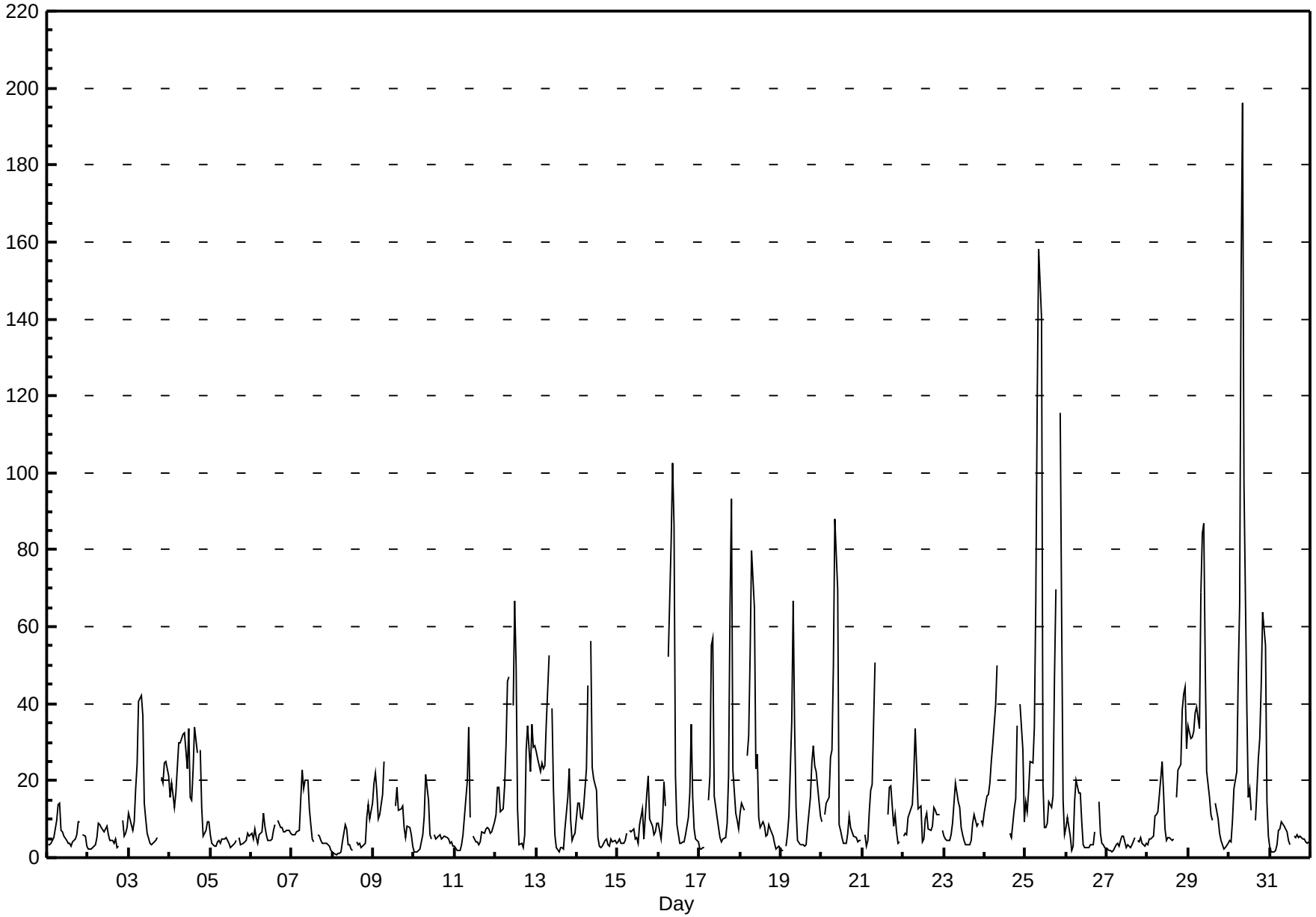
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	3	3	4	4	5	10	14	14	7	7	5	5	4	4	3	4	5	6	9	9	A	6	5	3	6.1	14.1
2-Oct	2	2	2	3	3	5	9	9	8	7	7	8	6	5	4	4	5	3	3	A	10	6	6	8	5.4	9.7
3-Oct	11	8	7	9	18	24	41	42	37	14	10	6	4	4	4	4	5	5	A	21	19	24	25	21	15.8	42.3
4-Oct	16	19	17	13	17	30	30	31	32	32	23	33	16	15	23	34	27	A	28	13	6	7	9	9	20.9	33.8
5-Oct	6	4	3	3	4	4	4	5	5	5	4	4	3	3	4	4	A	5	3	4	4	5	6	6	4.3	6.4
6-Oct	6	5	7	5	4	6	7	12	8	6	4	5	5	7	9	A	10	8	8	7	7	7	7	6	6.7	11.5
7-Oct	6	6	6	7	7	15	23	18	20	20	13	9	5	4	A	6	6	4	4	4	4	3	3	2	8.4	22.9
8-Oct	2	1	1	1	1	1	4	8	7	3	3	2	2	A	4	3	4	3	3	4	10	14	10	14	4.6	14.1
9-Oct	19	22	17	10	11	16	25	C	C	C	C	10	A	13	18	12	13	13	8	5	8	8	6	3	12.6	25.0
10-Oct	1	1	2	2	4	6	11	22	15	6	5	A	6	5	6	6	5	5	6	5	5	4	4	3	5.8	21.7
11-Oct	3	2	2	2	3	6	15	20	34	11	A	6	4	4	3	4	7	7	8	8	7	6	7	9	7.7	34.0
12-Oct	11	18	18	12	13	19	29	46	47	A	40	67	50	13	3	4	3	6	28	34	22	35	29	29	25.0	66.8
13-Oct	28	26	22	25	23	24	35	53	A	39	18	6	2	2	3	2	2	8	15	23	10	4	5	7	16.6	52.6
14-Oct	14	14	11	10	13	23	45	A	56	23	21	17	5	3	3	3	5	5	4	3	5	4	4	4	12.8	56.4
15-Oct	4	5	4	4	5	6	A	7	7	7	5	5	4	9	13	5	11	17	21	10	8	6	7	9	7.7	21.3
16-Oct	9	5	10	20	14	A	52	82	103	86	21	9	4	4	4	4	6	10	17	35	16	8	5	4	22.9	102.6
17-Oct	2	2	3	3	A	15	21	55	57	16	11	8	5	4	5	5	9	21	65	93	23	11	10	8	19.6	93.0
18-Oct	12	14	12	A	27	32	53	80	65	23	27	10	8	9	8	5	6	9	8	5	4	2	2	3	18.4	79.8
19-Oct	2	2	A	3	6	11	35	67	34	13	4	3	3	3	3	3	8	16	25	29	24	22	14	11	14.9	66.8
20-Oct	9	A	11	14	16	26	28	49	88	70	9	7	5	4	4	6	11	8	7	6	5	4	4	5	17.2	87.8
21-Oct	A	6	3	5	12	17	19	51	M	M	M	M	M	M	M	11	18	19	8	11	7	4	4	A	--	50.8
22-Oct	6	6	6	10	12	14	22	34	23	13	14	4	5	10	11	8	7	8	13	12	11	11	A	7	11.6	33.7
23-Oct	6	5	5	5	6	9	14	19	15	13	8	6	5	3	4	4	4	9	11	8	9	A	10	9	8.0	19.2
24-Oct	12	16	17	19	25	30	39	50	C	C	C	C	C	C	C	6	5	13	15	34	A	40	28	9	--	50.0
25-Oct	15	12	17	25	24	34	67	120	158	140	19	8	8	9	15	13	16	47	70	A	115	62	15	6	44.1	158.0
26-Oct	8	10	6	2	3	14	20	17	17	9	3	3	3	3	3	3	3	7	A	14	6	4	3	3	7.1	20.2
27-Oct	2	2	2	2	2	3	4	3	5	6	6	3	3	3	3	3	5	A	5	4	5	4	3	4	3.5	5.6
28-Oct	3	5	5	6	11	11	12	16	25	17	8	4	5	5	4	5	A	16	23	24	39	42	44	28	15.6	44.3
29-Oct	34	31	31	33	38	39	33	69	84	87	51	22	16	11	10	A	14	10	6	4	3	2	2	4	27.7	86.9
30-Oct	5	4	10	18	22	47	66	152	196	97	39	16	18	12	A	10	18	26	31	45	64	55	15	6	42.2	196.0
31-Oct	3	1	1	2	3	7	7	9	8	7	7	4	3	A	6	5	6	5	6	5	5	4	4	4	4.9	9.2
	8.6	8.6	8.7	9.2	11.7	16.9	26.1	40.0	43.0	28.8	14.2	10.3	7.3	6.3	6.6	6.5	8.3	10.9	15.8	16.6	15.9	13.9	10.0	8.1	Diurnal Average	
	34.2	31.0	31.4	32.7	37.7	47.3	67.0	151.7	196.0	140.2	50.8	66.8	50.0	15.0	22.7	33.8	27.1	46.5	69.7	93.0	115.5	62.3	44.3	29.2	Diurnal Maximum	

C - Calibration M - Maintenance A - Automated Daily Zero Span

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - October 2013



Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - October 2013

Maximum Value: 292.8 ppb on Oct 30 09:00

Maximum Daily Average: 68.2 ppb on Oct 25

Minimum Value: 2 ppb on Oct 8 02:00

Minimum Daily Average: 6.8 ppb on Oct 5

Maximum Diurnal Average: 66.9 ppb at hour 8

Minimum Diurnal Average: 11.2 ppb at hour 16

Monthly Average: 23.69 ppb

Percentiles: $P_1 = 2.6$ $P_{10} = 5.1$ $Q_1 = 7.3$ Median = 13.0 $Q_3 = 27.0$ $P_{90} = 52.6$ $P_{99} = 177.1$

Hours in Service:	744
Hours of Data:	694
Hours of Missing Data:	50
Hours of Calibration:	43
Percent Operational Time:	99.1

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-Oct	4	5	4	6	6	16	23	23	16	11	8	12	8	15	7	7	9	9	14	14	A	11	15	10	11.1	22.8
2-Oct	6	5	4	5	4	11	14	18	15	10	10	9	9	8	14	12	7	5	4	A	14	8	7	10	9.1	17.7
3-Oct	20	15	8	12	30	30	52	55	54	26	14	10	6	5	11	6	8	10	A	27	25	37	27	26	22.3	54.7
4-Oct	18	22	20	16	29	46	41	38	44	44	38	52	22	20	47	48	35	A	38	20	11	12	17	17	30.2	52.1
5-Oct	8	6	4	4	6	6	5	7	6	6	6	6	4	6	5	6	A	7	5	5	7	8	17	12	6.8	17.2
6-Oct	13	6	12	8	5	8	9	22	15	10	6	7	7	11	12	A	16	11	16	9	10	17	16	12	11.2	21.8
7-Oct	9	8	8	11	9	26	36	30	29	29	25	15	7	6	A	9	8	7	5	6	5	4	4	3	13.0	36.1
8-Oct	3	2	2	3	3	3	8	17	11	7	8	8	5	A	7	7	9	5	9	6	22	19	15	25	8.8	24.7
9-Oct	30	26	22	15	14	22	39	C	C	C	C	13	A	15	25	23	17	24	14	7	18	21	13	5	19.1	38.8
10-Oct	4	3	3	5	6	9	17	57	70	12	13	A	23	26	25	14	15	33	25	7	7	5	6	4	17.0	70.2
11-Oct	4	3	3	4	8	14	21	42	78	20	A	10	11	8	9	8	20	8	10	12	10	9	8	36	15.4	77.9
12-Oct	18	24	28	19	18	24	46	72	53	A	89	80	64	28	6	6	9	9	54	67	53	53	38	39	38.9	89.3
13-Oct	36	33	30	30	30	29	54	67	A	55	31	14	4	2	20	5	10	19	35	35	26	6	8	11	25.6	66.7
14-Oct	44	21	13	13	24	36	58	A	73	41	23	27	9	5	4	5	7	6	5	4	8	8	7	7	19.5	73.4
15-Oct	7	10	5	6	7	9	A	8	11	12	11	9	8	15	40	14	16	31	34	14	12	10	9	13	13.6	39.9
16-Oct	11	8	15	29	20	A	76	125	130	115	43	16	6	6	7	9	12	17	22	56	26	10	7	7	33.7	129.6
17-Oct	3	3	3	6	A	21	41	87	90	28	14	12	10	7	8	10	18	36	157	111	94	20	16	13	35.2	157.0
18-Oct	19	26	25	A	34	47	74	201	197	31	52	20	20	23	17	11	10	11	10	10	5	4	4	5	37.3	200.5
19-Oct	2	3	A	5	29	24	68	91	55	33	7	7	6	8	7	9	25	27	35	38	34	36	22	13	25.4	90.7
20-Oct	13	A	15	21	35	34	42	93	110	104	38	14	8	7	8	13	22	16	11	9	7	6	6	6	27.7	110.1
21-Oct	A	11	5	9	23	31	43	95	M	M	M	M	M	M	M	16	30	25	18	18	12	6	8	A	--	95.3
22-Oct	7	8	12	14	20	18	31	84	46	21	22	7	8	15	16	10	9	15	24	17	17	18	A	10	19.5	84.4
23-Oct	10	9	8	9	12	21	25	29	22	25	12	9	7	6	6	6	7	13	22	13	15	A	16	11	13.6	28.8
24-Oct	17	24	21	25	31	36	55	68	C	C	C	C	C	C	C	11	8	22	65	91	A	67	65	22	--	90.8
25-Oct	30	24	30	36	36	48	106	196	176	179	68	12	12	18	20	16	32	63	103	A	138	184	29	14	68.2	196.4
26-Oct	10	36	8	3	5	29	30	29	25	29	5	4	5	6	7	6	8	14	A	38	11	10	6	7	14.5	37.9
27-Oct	4	4	3	3	3	5	7	5	7	13	20	5	6	5	11	6	12	A	9	7	8	6	5	6	6.9	19.6
28-Oct	4	6	6	7	16	15	13	22	42	32	10	5	9	7	6	7	A	19	27	29	69	56	56	35	21.8	68.6
29-Oct	46	43	38	40	43	46	38	102	125	117	92	32	21	16	14	A	18	15	11	6	5	3	5	5	38.3	124.5
30-Oct	7	8	16	26	30	82	104	245	293	149	60	23	23	21	A	13	22	33	44	67	80	69	50	10	64.2	292.8
31-Oct	7	2	2	3	5	12	10	14	11	9	9	7	5	A	8	9	9	7	8	7	6	5	5	5	7.3	14.4
	13.9	13.4	12.5	13.1	18.1	25.3	39.6	66.9	66.8	43.2	27.3	15.9	11.9	11.7	13.6	11.2	14.8	17.7	28.8	25.9	26.1	24.2	17.0	13.4	Diurnal Average	
	46.3	42.9	37.9	40.2	42.9	81.8	106.3	244.7	292.8	179.3	91.9	79.6	63.7	27.9	47.0	48.0	34.9	62.6	157.0	110.8	138.1	184.1	65.2	38.6	Diurnal Maximum	

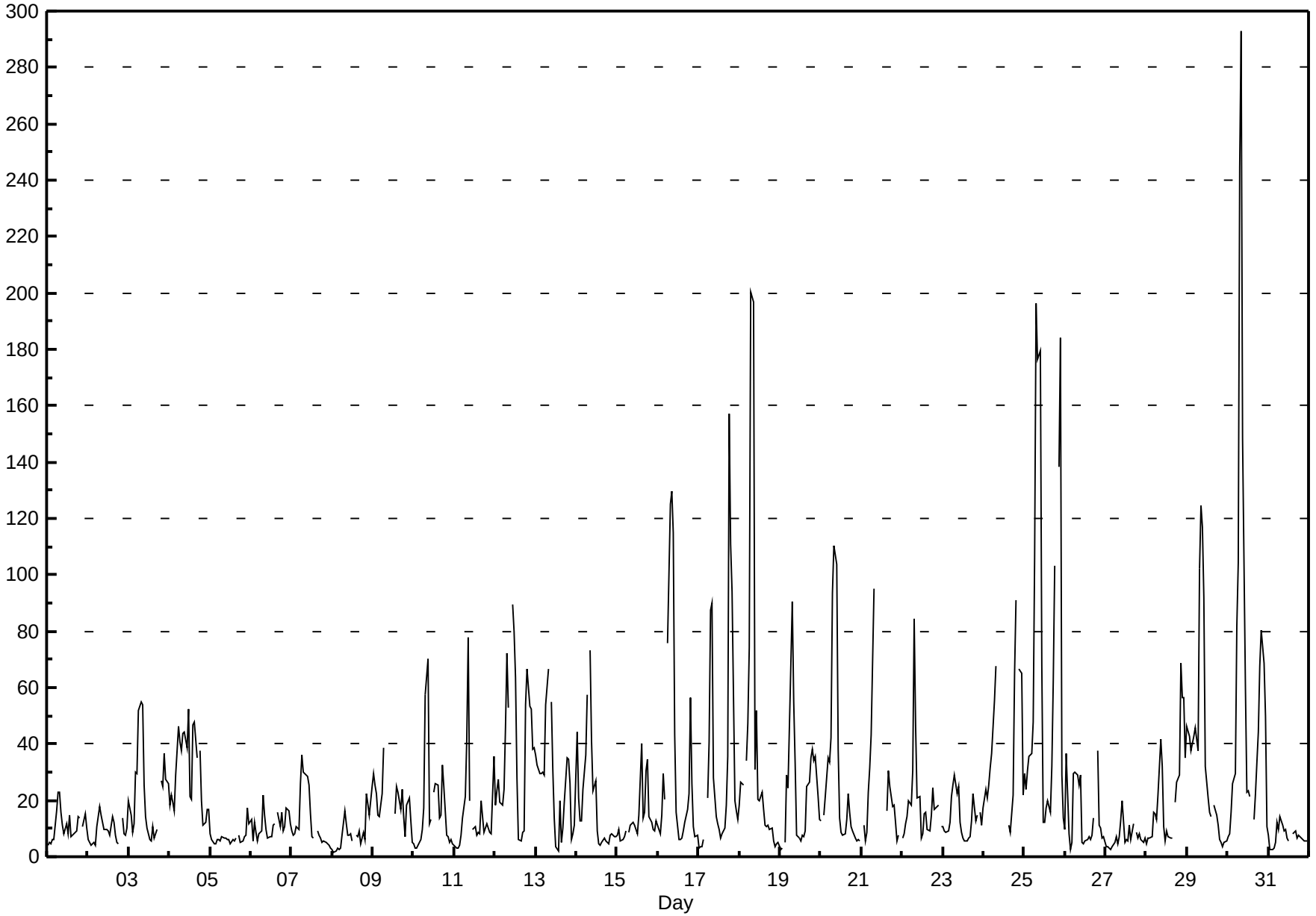
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - October 2013

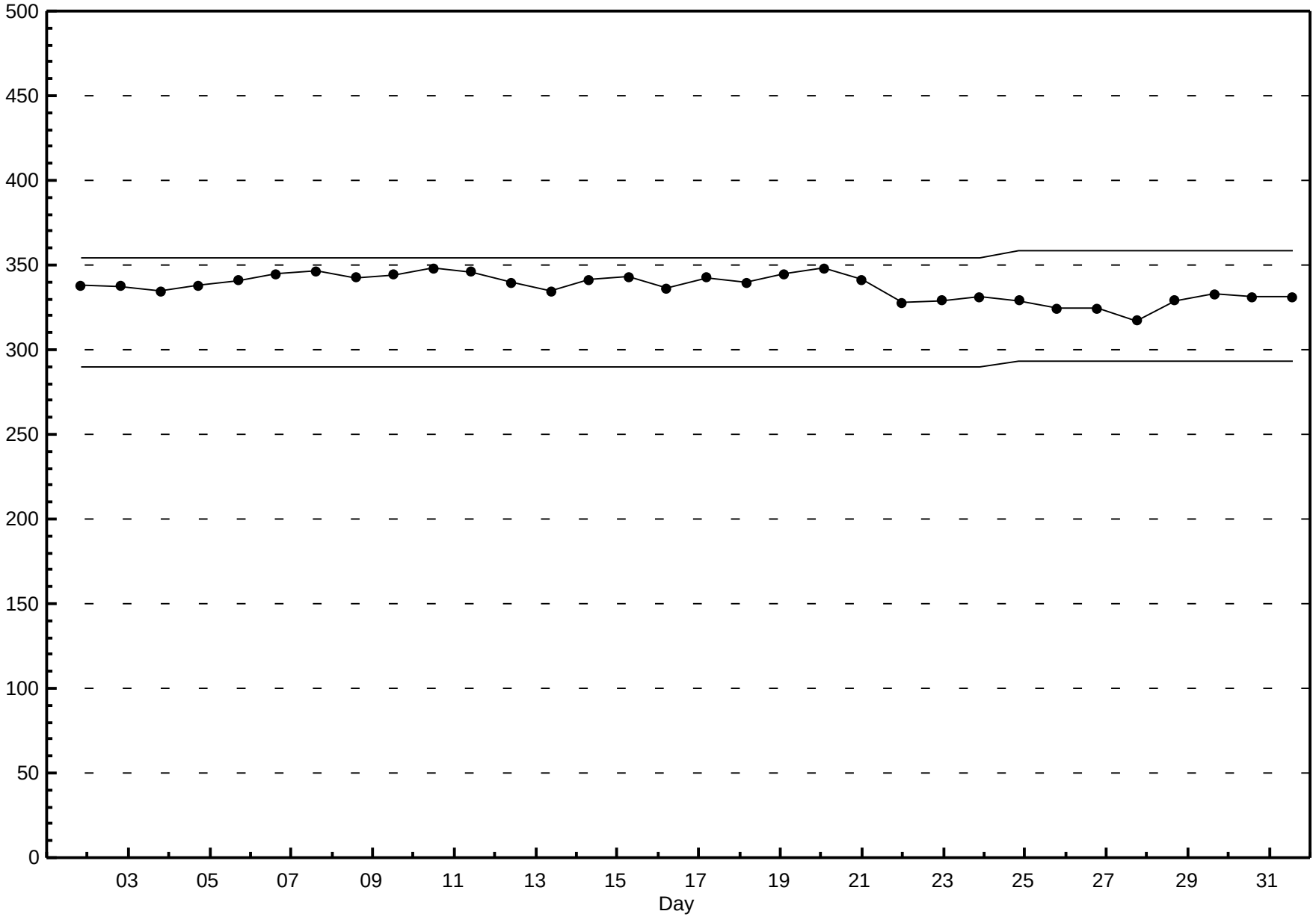


Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Henry Pirker - October 2013



PAZA
Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 40.1 ppb on Oct 19 15:00 Maximum Daily Average: 28.6 ppb on Oct 31

Minimum Value: 0 ppb on Oct 3 07:00 Minimum Daily Average: 6.3 ppb on Oct 4
Maximum Diurnal Average: 27.9 ppb at hour 16 Minimum Diurnal Average: 7.4 ppb at hour 7
Monthly Average: 17.39 ppb Percentiles: P_1 = 0.5 P_{10} = 1.8 Q_1 = 8.1 Median = 19.5 Q_3 = 25.5 P_{90} = 30.3 P_{99} = 36.2

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	37
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	19	15	13	10	7	5	4	5	10	10	13	17	19	23	25	24	22	19	13	10	A	12	12	14	14.0	24.5
2-Oct	17	18	18	17	15	12	11	13	13	15	14	14	15	18	19	19	17	18	16	A	12	13	11	7	14.9	18.9
3-Oct	4	3	3	2	0	0	0	1	2	8	9	14	19	20	22	21	20	18	A	6	6	2	1	1	7.9	21.5
4-Oct	1	0	1	1	1	1	1	1	2	3	6	6	10	12	9	3	4	A	4	12	19	18	15	15	6.3	18.9
5-Oct	18	21	22	22	22	22	23	23	24	25	26	28	32	32	32	31	A	32	33	31	28	26	23	22	26.0	32.6
6-Oct	21	23	19	23	28	27	22	20	21	26	27	24	20	17	14	A	10	9	8	8	8	7	6	6	17.0	27.7
7-Oct	5	5	5	3	2	1	0	1	1	2	7	17	30	35	A	34	34	33	32	30	30	27	26	26	16.9	35.5
8-Oct	22	20	18	16	16	16	14	12	12	13	15	16	18	A	19	19	20	21	19	16	10	7	8	5	15.3	21.9
9-Oct	2	1	2	4	4	2	2	C	C	10	14	15	A	13	13	20	21	20	25	25	21	20	21	23	13.2	25.1
10-Oct	23	22	26	24	21	23	20	14	20	27	28	A	29	28	26	26	26	25	23	23	22	21	19	20	23.4	28.7
11-Oct	21	22	23	23	21	18	10	10	7	18	A	24	26	26	28	27	24	23	22	21	20	20	19	16	20.5	27.5
12-Oct	12	7	5	8	5	2	1	1	1	A	3	3	7	21	27	26	26	22	7	2	6	1	2	1	8.5	26.5
13-Oct	1	1	1	0	0	1	1	1	A	6	16	24	27	29	30	31	32	26	17	10	23	24	21	18	14.7	31.8
14-Oct	11	7	12	15	8	2	1	A	4	13	15	18	29	34	36	36	34	31	31	31	28	29	29	28	21.0	36.5
15-Oct	27	27	27	27	26	26	A	29	28	26	28	27	27	27	30	34	27	20	14	20	22	23	18	13	24.9	33.6
16-Oct	10	17	8	2	5	A	1	1	2	4	11	20	30	31	28	29	28	22	14	4	14	19	20	19	14.7	31.4
17-Oct	23	22	20	21	A	11	6	1	4	13	17	21	27	31	33	32	27	15	2	1	12	17	16	17	16.8	32.9
18-Oct	11	8	11	A	5	3	1	2	5	11	14	24	27	27	29	31	28	24	23	25	27	30	30	29	18.4	30.8
19-Oct	30	30	A	27	24	18	4	1	6	17	30	35	38	39	40	39	34	24	14	8	13	14	18	17	22.6	40.1
20-Oct	16	A	12	5	4	1	1	1	1	3	21	24	27	33	33	30	27	25	22	23	23	24	22	21	17.4	33.5
21-Oct	A	20	21	20	13	10	9	2	2	6	8	20	27	M	M	M	18	15	23	19	23	26	24	A	16.1	26.7
22-Oct	23	21	20	13	12	11	6	5	11	19	21	32	34	32	30	32	31	29	25	25	25	24	A	27	22.0	34.1
23-Oct	27	28	26	25	24	23	17	13	18	21	26	29	32	35	35	35	34	28	24	26	25	A	22	20	25.8	35.1
24-Oct	11	3	2	1	0	1	0	0	1	3	4	10	21	C	C	C	33	23	20	8	A	2	12	17	8.6	33.0
25-Oct	11	12	7	3	2	1	1	1	1	2	18	23	23	26	22	22	19	4	2	A	3	4	14	23	10.7	26.2
26-Oct	21	20	24	32	33	21	14	18	18	25	34	36	36	36	36	34	32	25	A	17	24	24	24	23	26.4	36.2
27-Oct	19	22	19	19	20	20	21	23	23	22	23	23	22	25	26	26	24	A	23	22	21	22	23	22	22.0	26.0
28-Oct	21	18	16	14	10	8	7	5	4	10	20	25	25	25	27	27	A	17	10	8	3	1	1	2	13.2	27.2
29-Oct	1	1	1	1	0	1	1	1	2	3	9	15	20	24	27	A	24	26	29	32	33	36	36	31	15.3	35.7
30-Oct	29	29	21	13	8	2	1	2	2	3	10	20	20	27	A	32	24	15	11	2	2	2	23	29	14.3	31.5
31-Oct	32	31	30	27	26	23	22	22	22	24	28	32	35	A	34	33	32	31	29	29	29	29	30	30	28.6	34.6
	16.3	15.8	14.4	13.9	12.1	10.3	7.4	7.8	9.2	12.9	17.2	21.2	25.0	26.9	27.0	27.9	25.2	22.0	18.4	17.1	18.4	17.5	18.2	18.1	Diurnal Average	
	31.6	31.1	29.7	31.7	32.5	26.8	22.9	29.0	27.9	26.8	33.7	35.7	38.2	39.3	40.1	39.3	34.4	33.0	32.6	32.0	33.0	35.6	35.7	31.2	Diurnal Maximum	

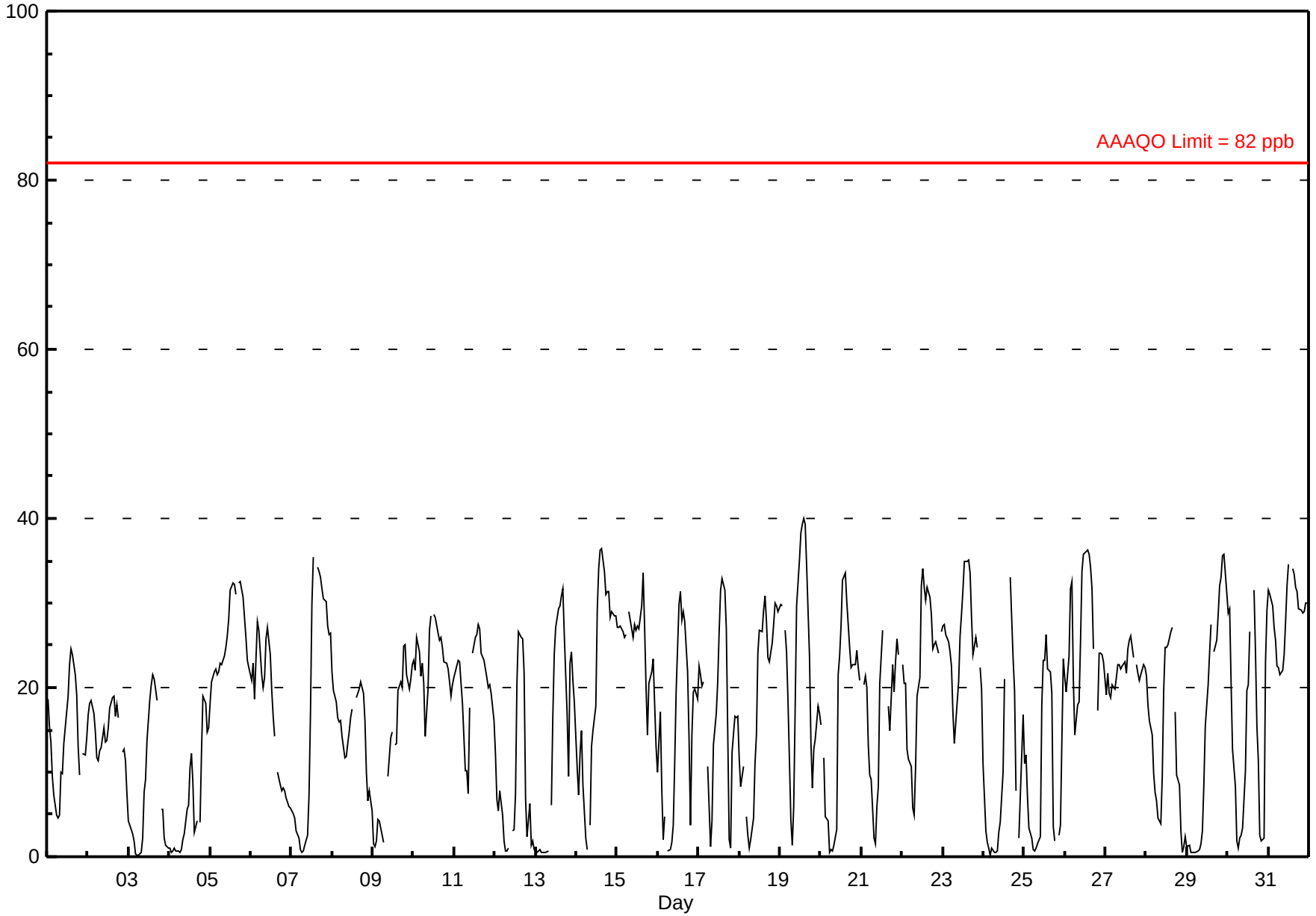
C - Calibration M - Maintenance A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - October 2013



FOCUS AIR QUALITY MONITORING

PAZA
Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Henry Pirker - October 2013

Maximum Value: 41.8 ppb on Oct 19 15:00

Maximum Daily Average: 30.4 ppb on Oct 31

Minimum Value: 0 ppb on Oct 3 06:00

Minimum Daily Average: 9.2 ppb on Oct 4

Maximum Diurnal Average: 29.9 ppb at hour 16

Minimum Diurnal Average: 9.7 ppb at hour 7

Monthly Average: 20.23 ppb

Percentiles: P_1 = 0.9 P_{10} = 3.5 Q_1 = 12.8 Median = 22.3 Q_3 = 27.9 P_{90} = 32.8 P_{99} = 38.2

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	37
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	23	16	15	13	8	7	7	7	13	12	16	20	22	25	27	26	24	23	18	12	A	15	14	17	16.5	26.9
2-Oct	18	20	20	19	17	16	14	18	17	19	15	15	17	19	21	22	18	20	19	A	15	14	13	13	17.3	21.5
3-Oct	7	5	4	4	1	0	1	1	8	10	11	18	20	22	23	22	21	20	A	8	8	5	2	2	9.7	22.6
4-Oct	2	1	1	2	2	9	1	1	3	3	8	11	13	15	14	6	7	A	16	17	20	20	19	19	9.2	20.4
5-Oct	20	23	24	24	24	24	24	24	26	26	28	30	33	33	34	32	A	34	33	32	31	28	27	25	27.8	33.8
6-Oct	24	24	22	29	29	29	23	24	25	28	29	27	22	19	16	A	12	10	9	9	9	8	7	7	19.2	29.3
7-Oct	6	6	5	4	3	2	1	2	2	3	12	24	37	38	A	36	36	36	35	32	32	29	28	30	19.0	37.6
8-Oct	23	21	20	17	17	17	16	14	14	15	16	17	19	A	20	21	23	22	21	19	13	9	10	10	17.2	23.2
9-Oct	6	2	4	6	5	4	6	C	C	14	16	16	A	15	18	22	25	24	28	26	26	24	26	25	16.2	28.3
10-Oct	25	23	27	26	23	25	24	17	23	29	29	A	30	30	29	28	27	26	24	25	25	22	20	21	25.2	29.8
11-Oct	22	23	25	24	22	21	14	15	16	22	A	27	27	28	29	28	28	25	25	23	22	21	21	19	23.0	29.2
12-Oct	15	9	10	12	8	3	1	1	2	A	4	5	14	25	28	27	28	25	20	8	12	2	4	1	11.7	27.9
13-Oct	5	1	1	1	1	1	1	1	A	9	21	27	29	34	31	32	35	32	22	16	27	26	22	21	17.2	34.8
14-Oct	17	12	15	17	15	4	1	A	11	21	16	24	34	36	38	38	36	34	33	33	31	31	31	32	24.4	38.3
15-Oct	32	30	30	29	29	31	A	31	29	28	30	29	29	32	35	36	31	27	21	24	25	26	21	19	28.4	35.7
16-Oct	14	20	14	4	8	A	1	1	3	6	17	26	33	32	32	32	31	26	19	12	21	22	21	21	18.2	32.8
17-Oct	24	24	21	22	A	13	10	2	9	16	19	25	30	34	35	34	32	21	6	2	18	19	21	19	19.8	34.7
18-Oct	17	11	21	A	18	7	2	5	11	14	21	29	29	30	32	33	31	26	24	27	29	31	31	30	22.1	33.3
19-Oct	30	31	A	28	28	23	15	6	13	27	34	38	40	41	42	42	39	32	24	13	18	23	20	18	27.1	41.8
20-Oct	21	A	15	10	8	1	2	1	2	6	24	25	32	35	36	34	32	28	26	24	25	25	24	24	20.0	35.7
21-Oct	A	22	23	21	20	15	14	7	3	10	16	25	30	M	M	M	22	18	25	26	25	27	25	A	19.8	30.3
22-Oct	24	22	23	20	14	13	9	9	19	21	30	37	35	35	34	33	33	32	28	28	27	27	A	28	25.3	37.1
23-Oct	29	29	28	27	26	25	22	19	24	24	28	31	35	36	36	37	36	32	26	28	27	A	25	23	28.3	37.0
24-Oct	18	6	3	3	1	3	1	1	1	4	7	15	29	C	C	C	36	30	30	18	A	7	24	22	12.9	35.8
25-Oct	16	17	12	8	4	2	1	1	2	7	22	24	27	27	24	24	23	8	2	A	6	8	21	26	13.7	27.5
26-Oct	25	25	28	35	35	30	21	24	24	31	35	37	37	38	38	37	35	29	A	22	28	27	25	24	30.0	38.2
27-Oct	21	24	22	20	21	21	22	24	24	24	24	24	23	27	27	28	26	A	25	24	23	23	24	24	23.8	28.0
28-Oct	23	20	18	16	14	9	10	7	6	17	25	26	26	26	28	28	A	22	15	13	8	1	2	5	15.9	27.9
29-Oct	3	3	1	1	1	1	1	1	2	4	16	19	24	26	30	A	28	28	31	33	34	37	38	35	17.3	37.9
30-Oct	32	34	25	21	16	7	1	5	5	6	15	22	24	31	A	34	30	22	23	6	4	8	31	34	19.0	34.2
31-Oct	34	32	31	28	27	26	24	24	24	26	31	34	37	A	37	36	34	33	31	30	30	30	31	31	30.4	36.6
	19.3	17.9	17.0	16.4	14.8	13.1	9.7	10.2	12.5	16.1	20.5	24.2	27.9	29.3	29.4	29.9	28.2	25.7	22.8	20.4	21.3	19.9	20.9	20.8	Diurnal Average	
	33.7	34.0	31.1	34.6	34.9	30.7	24.2	30.7	29.0	31.3	35.3	37.8	39.8	41.3	41.8	41.5	39.3	35.9	35.1	33.2	34.2	36.9	37.9	34.7	Diurnal Maximum	

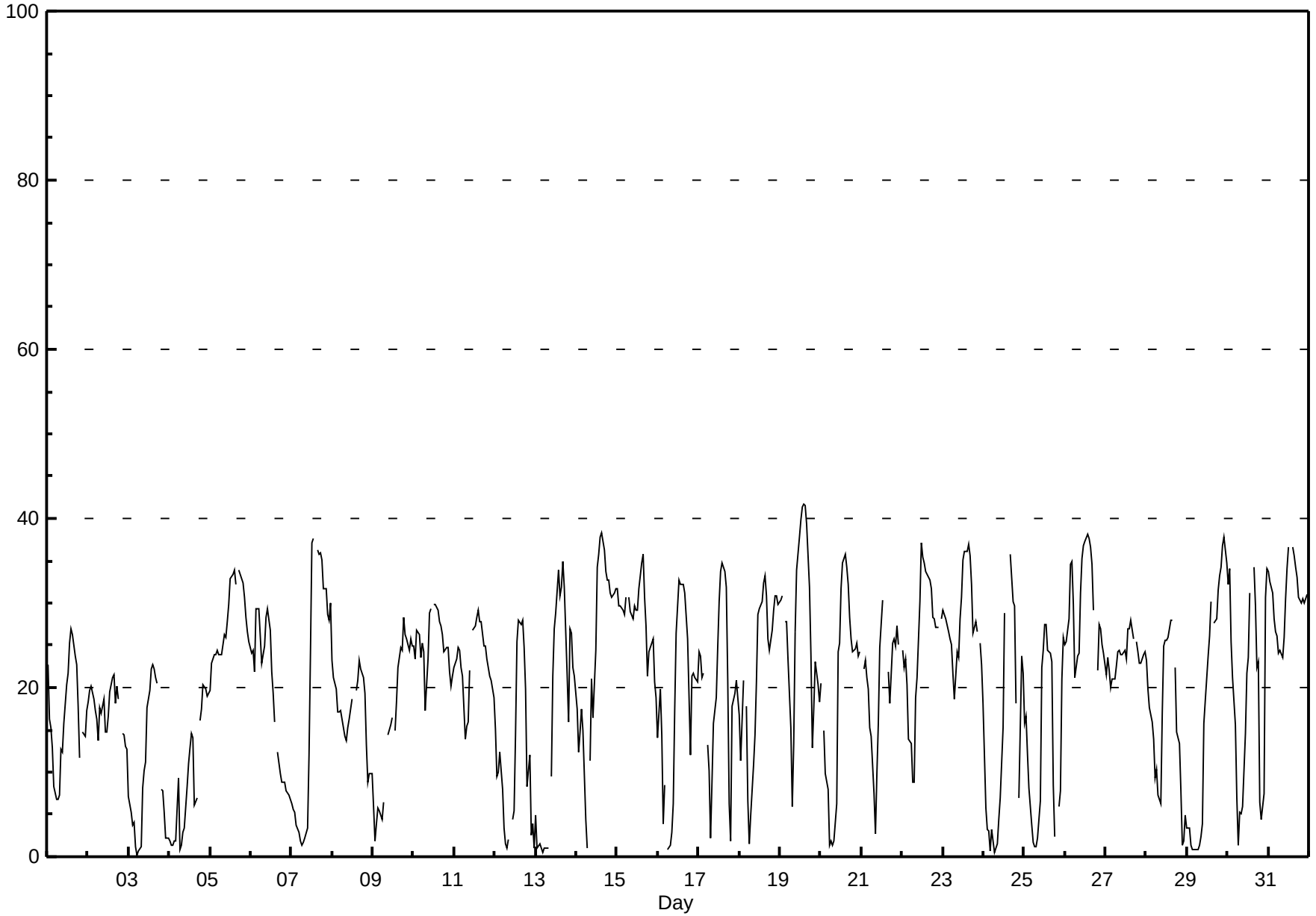
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

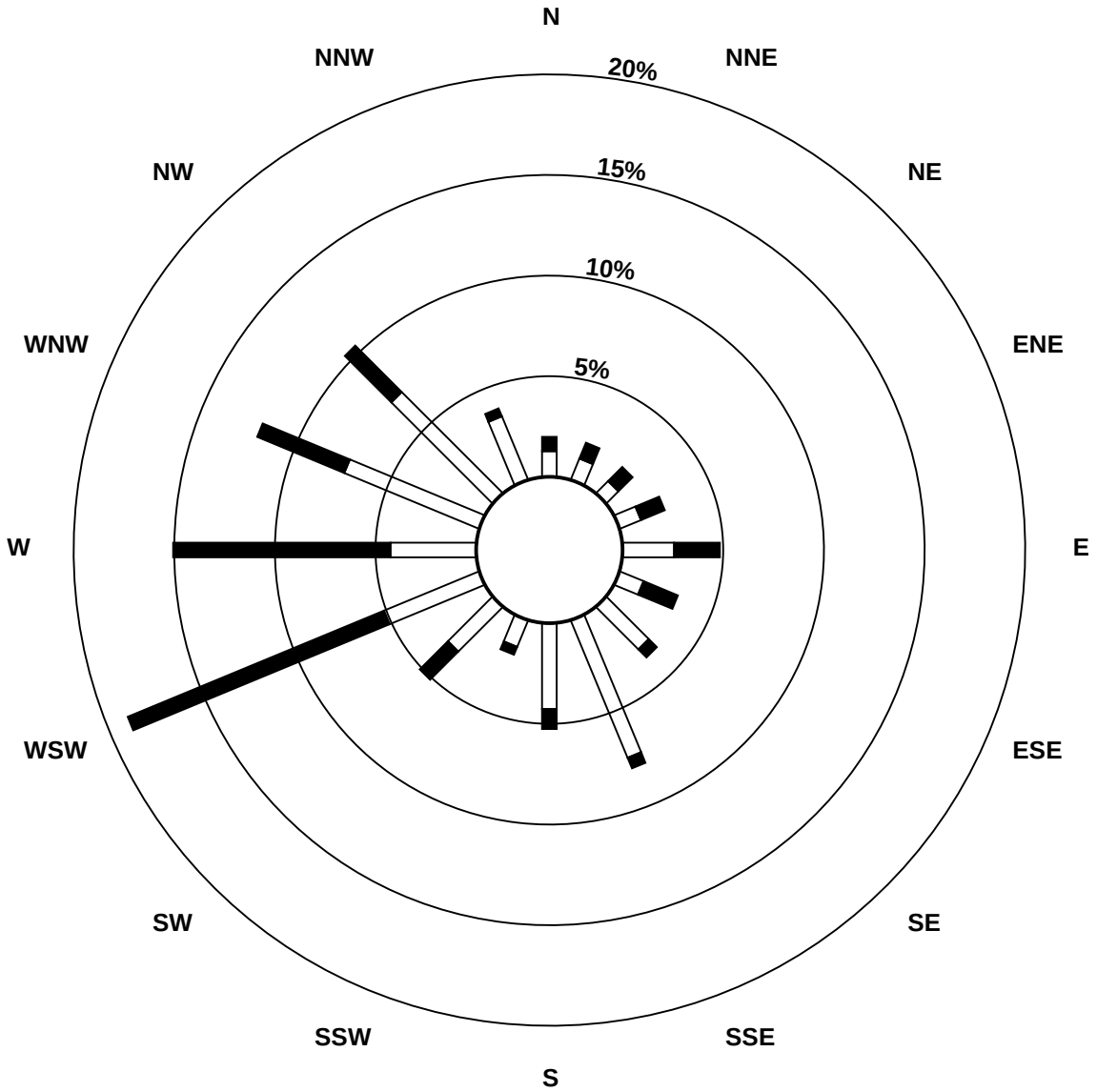
Henry Pirker - October 2013



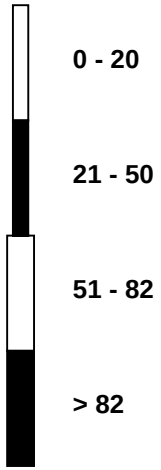
Pollutant Rose

Ozone (O_3) - ppb

Henry Pirker - October 2013



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Henry Pirker - October 2013

Maximum Value: 35.0 ppb on Oct 19 18:00

Minimum Value: 0.6 ppb on Oct 13 09:00

Percentiles: P_1 = 0.8 P_{10} = 4.8 Q_1 = 10.7 Median = 17.8 Q_3 = 23.8 P_{90} = 27.9 P_{99} = 32.9

Hours in Service:	744
Hours of Data:	728
Hours of Missing Data:	16
Hours of Calibration:	10
Percent Operational Time:	99.2

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Oct	19	19	19	18	16	15	12	10	9	8	8	9	10	13	15	18	19	20	20	19	19	18	16	15	20.2
2-Oct	14	14	14	16	15	15	15	15	15	14	14	13	13	14	15	16	16	17	17	17	17	16	15	14	17.4
3-Oct	12	10	8	7	5	4	3	2	1	2	3	4	7	9	12	14	16	18	19	18	16	13	11	8	19.1
4-Oct	5	2	2	2	1	1	1	1	1	1	2	2	4	5	6	6	7	7	7	8	9	10	11	12	12.5
5-Oct	14	15	18	19	19	20	21	22	22	23	23	24	25	27	28	29	29	31	31	32	31	30	29	28	31.8
6-Oct	27	26	24	23	23	23	23	23	23	23	24	24	23	22	21	21	20	17	14	12	10	9	8	8	27.0
7-Oct	7	7	6	6	5	4	3	3	2	2	2	4	7	12	13	18	23	27	31	33	33	32	31	30	32.7
8-Oct	28	27	25	23	22	20	19	17	16	15	14	14	15	14	15	16	17	18	19	19	18	16	15	13	28.4
9-Oct	11	8	6	5	4	4	3	3	3	4	6	8	N	N	N	14	15	16	18	20	20	21	22	22	22.0
10-Oct	22	23	23	23	23	23	23	22	21	22	22	22	23	24	25	26	27	27	26	26	25	24	23	22	27.2
11-Oct	22	21	22	22	21	21	20	19	17	16	15	15	16	17	20	22	25	25	25	25	24	23	22	21	25.4
12-Oct	19	17	15	13	12	9	7	5	4	3	3	2	3	5	9	13	16	17	17	17	17	15	12	8	19.3
13-Oct	5	3	2	2	1	1	1	1	1	1	4	7	11	15	19	23	24	27	27	25	25	24	23	21	27.0
14-Oct	19	16	16	16	15	12	9	8	7	8	8	9	12	16	21	23	27	29	31	33	33	32	31	30	32.9
15-Oct	29	29	28	28	27	27	27	27	27	27	27	27	27	27	28	28	28	27	26	25	24	24	22	20	29.4
16-Oct	18	17	17	14	12	10	8	6	5	3	4	6	10	12	16	19	23	25	25	23	21	20	19	17	25.2
17-Oct	17	17	18	20	20	19	17	15	12	11	10	10	12	15	18	22	25	25	23	21	19	17	15	13	25.2
18-Oct	11	11	12	13	12	10	8	6	5	5	6	8	11	14	17	21	24	25	26	27	27	27	27	27	27.2
19-Oct	27	28	29	29	28	27	23	19	16	14	16	17	19	21	26	31	34	35	33	30	26	23	20	18	35.0
20-Oct	15	14	14	13	12	10	8	5	3	3	5	7	10	14	18	22	25	28	28	28	27	26	25	23	27.8
21-Oct	23	22	22	22	20	18	16	14	12	10	9	9	11	11	11	N	N	N	N	N	N	21	21	21	22.9
22-Oct	22	23	22	21	20	18	15	14	12	12	12	14	17	20	23	26	29	30	30	30	29	28	27	26	30.5
23-Oct	26	26	26	26	26	26	25	23	22	21	21	21	22	24	26	29	31	32	31	31	30	30	28	26	31.6
24-Oct	22	19	16	12	8	8	5	2	1	1	1	2	5	6	6	N	N	N	N	N	N	N	16	16	22.3
25-Oct	13	12	10	9	8	8	7	5	4	2	4	6	9	12	15	17	20	20	18	17	14	11	10	10	19.7
26-Oct	10	12	15	17	21	23	23	23	22	23	24	25	25	27	30	32	34	33	33	31	29	27	26	24	33.6
27-Oct	22	22	22	22	21	21	20	20	21	21	21	22	22	23	23	24	24	24	24	24	24	23	23	22	23.9
28-Oct	22	21	21	20	18	17	15	12	10	9	10	11	13	15	17	20	23	24	22	20	17	13	10	6	23.6
29-Oct	5	3	2	1	1	1	1	1	1	1	2	4	6	9	13	14	18	21	24	26	28	30	31	31	30.8
30-Oct	31	32	31	28	25	21	17	13	10	7	5	6	8	11	12	16	19	21	21	19	16	13	14	14	31.8
31-Oct	15	17	19	22	25	27	27	26	25	24	24	25	26	26	28	30	31	32	32	32	31	31	30	30	32.4
	31.3	31.8	30.8	28.9	28.4	27.5	27.4	27.0	27.1	27.0	27.0	27.0	27.2	27.3	29.9	31.9	34.2	35.0	33.5	32.9	32.8	32.2	31.2	30.8	
	Diurnal Maximums																								

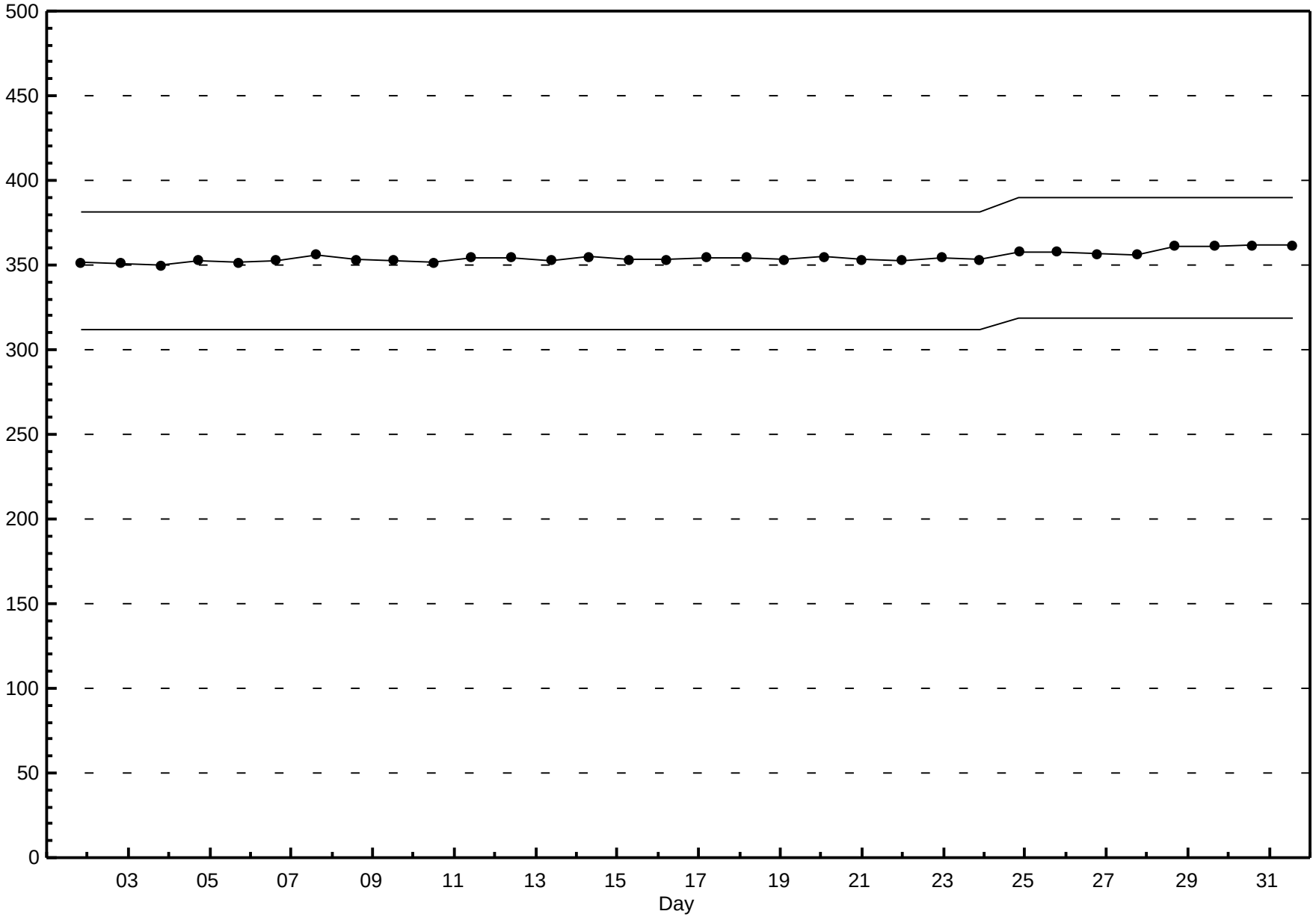
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Henry Pirker - October 2013



Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.27 ppm on Oct 30 09:00
Maximum Daily Average: 0.33 ppm on Oct 30

Minimum Value: 0.0 ppm on Oct 17 14:00
Minimum Daily Average: 0.07 ppm on Oct 8
Maximum Diurnal Average: 0.26 ppm at hour 9
Minimum Diurnal Average: 0.10 ppm at hour 4
Monthly Average: 0.145 ppm
Percentiles: P_1 = 0.05 P_{10} = 0.07 Q_1 = 0.10 Median = 0.12 Q_3 = 0.16 P_{90} = 0.23 P_{99} = 0.62

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.11	0.18
2-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.08	0.10
3-Oct	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.3	0.2	0.3	0.2	0.2	0.16	0.26
4-Oct	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.3	0.2	A	0.2	0.1	0.1	0.1	0.1	0.1	0.17	0.31
5-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.08	0.10
6-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.13	0.18
7-Oct	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.20
8-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.07	0.14
9-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	C	C	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.23
10-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.13
11-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.16
12-Oct	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	A	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.2	0.2	0.17	0.33
13-Oct	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	A	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.16	0.32
14-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.17	0.31
15-Oct	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.13	0.20
16-Oct	0.1	0.1	0.1	0.1	0.1	A	0.2	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.16	0.44
17-Oct	0.1	0.1	0.1	0.1	A	0.1	0.2	0.3	C	C	C	C	0.1	0.0	0.1	0.1	0.1	0.2	0.4	0.6	0.2	0.1	0.1	0.1	0.14	0.65
18-Oct	0.1	0.1	0.1	A	0.2	0.2	0.2	0.5	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	0.54
19-Oct	0.1	0.1	A	0.1	0.1	0.1	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.16	0.36
20-Oct	0.1	A	0.2	0.1	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.17	0.35
21-Oct	A	0.1	0.1	0.1	0.2	0.2	0.2	0.5	0.7	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	A	0.21	0.66
22-Oct	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	A	0.1	0.15	0.24
23-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	A	0.1	0.1	0.14	0.20
24-Oct	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.2	0.2	0.1	0.14	0.27
25-Oct	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.4	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.6	A	1.0	0.4	0.1	0.1	0.24	0.95
26-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.08	0.14
27-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.07	0.10
28-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.14	0.31
29-Oct	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.6	0.5	0.2	0.2	0.1	0.1	0.2	A	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.21	0.63
30-Oct	0.1	0.1	0.1	0.2	0.3	0.3	0.4	1.0	1.3	0.6	0.2	0.2	0.2	0.1	A	0.1	0.2	0.3	0.3	0.4	0.5	0.5	0.1	0.1	0.33	1.27
31-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.13	0.15
	0.11	0.11	0.11	0.10	0.12	0.13	0.17	0.25	0.26	0.20	0.14	0.13	0.11	0.11	0.11	0.11	0.12	0.14	0.17	0.18	0.19	0.16	0.13	0.11	Diurnal Average	
	0.26	0.23	0.20	0.22	0.30	0.33	0.38	0.96	1.27	0.64	0.27	0.33	0.29	0.20	0.24	0.31	0.21	0.40	0.59	0.65	0.95	0.48	0.31	0.24	Diurnal Maximum	

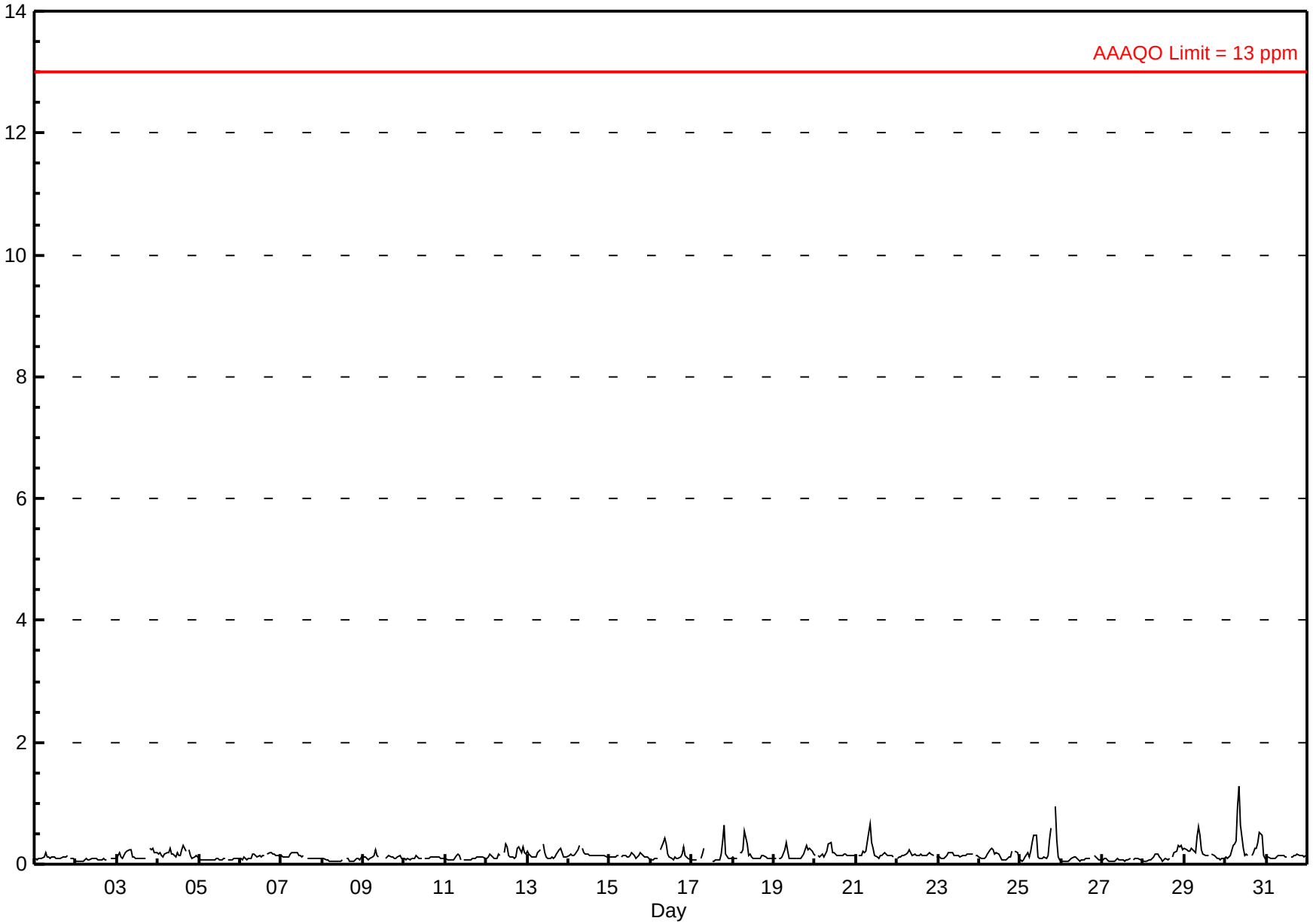
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na

Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - October 2013



Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - October 2013

Maximum Value: 3.77 ppm on Oct 30 05:00

Maximum Daily Average: 0.65 ppm on Oct 30

Minimum Value: 0.1 ppm on Oct 2 03:00

Minimum Daily Average: 0.11 ppm on Oct 8

Maximum Diurnal Average: 0.49 ppm at hour 8

Minimum Diurnal Average: 0.15 ppm at hour 4

Monthly Average: 0.246 ppm

Percentiles: P_1 = 0.06 P_{10} = 0.10 Q_1 = 0.13 Median = 0.16 Q_3 = 0.25 P_{90} = 0.45 P_{99} = 1.26

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0.1	0.1	0.1	0.1	0.1	0.2	0.6	0.2	0.2	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	A	0.1	0.2	0.1	0.18	0.60
2-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.1	0.1	0.1	0.12	0.25
3-Oct	0.1	1.6	0.2	0.1	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.3	0.3	0.5	0.4	0.2	0.28	1.62
4-Oct	0.2	0.2	0.2	0.1	1.0	0.4	0.4	1.0	0.2	0.2	0.2	0.3	0.2	0.2	0.6	0.5	0.2	A	0.3	0.2	0.1	0.1	0.2	0.2	0.31	0.98
5-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.24
6-Oct	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.7	0.2	0.2	0.2	0.1	0.2	0.2	A	0.6	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.23	0.68
7-Oct	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.18	0.27
8-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.11	0.32
9-Oct	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.8	0.2	0.2	C	C	A	0.2	0.2	1.3	0.2	0.2	0.2	0.1	0.2	0.8	0.2	0.1	0.28	1.34
10-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	A	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.17
11-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.13	0.18
12-Oct	0.1	0.1	1.0	0.3	0.1	0.1	0.2	0.4	0.2	A	0.3	0.4	0.4	0.2	0.1	0.1	0.1	0.2	0.8	0.7	0.5	0.5	0.3	0.2	0.32	0.98
13-Oct	0.5	0.2	0.2	0.2	0.2	0.2	0.3	0.4	A	0.4	0.3	0.2	0.1	0.1	0.3	0.1	0.2	0.3	0.6	0.4	0.3	0.2	0.2	0.2	0.24	0.57
14-Oct	0.2	0.2	0.2	0.2	0.3	0.4	0.4	A	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.36
15-Oct	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	1.5	0.7	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.1	0.26	1.50
16-Oct	0.1	0.1	0.2	0.2	0.1	A	0.4	0.5	0.7	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.2	0.1	0.1	0.1	0.23	0.70
17-Oct	0.1	0.1	0.1	0.1	A	0.2	0.6	0.9	C	C	C	C	0.1	0.1	0.5	0.2	0.1	0.3	0.6	1.2	0.7	0.2	0.1	0.2	0.34	1.21
18-Oct	0.1	0.1	0.2	A	0.6	0.6	0.4	1.8	0.8	0.3	0.2	0.2	0.2	0.2	0.7	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.33	1.83
19-Oct	0.1	0.1	A	0.1	0.1	0.2	0.4	0.5	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.4	0.8	0.3	0.5	0.3	0.2	0.26	0.78
20-Oct	0.2	A	0.5	0.3	0.3	0.2	0.4	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.25	0.50
21-Oct	A	0.2	0.2	0.2	0.5	0.3	1.1	1.3	1.1	0.9	0.4	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	A	0.38	1.31
22-Oct	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.4	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.3	0.2	0.3	0.2	0.2	A	0.2	0.22	0.38
23-Oct	0.1	0.2	0.1	0.1	0.2	0.3	0.6	0.3	0.3	0.2	0.4	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.3	A	0.2	0.2	0.24	0.58
24-Oct	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.3	0.2	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.4	A	0.5	0.5	0.2	0.24	0.45
25-Oct	0.2	0.1	0.1	0.2	0.7	0.3	0.6	0.8	0.8	0.8	0.3	0.1	0.1	0.1	0.7	0.1	0.3	0.6	0.9	A	1.3	1.3	0.4	0.1	0.47	1.28
26-Oct	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.2	0.2	0.1	0.1	0.1	0.14	0.30
27-Oct	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.2	A	0.1	0.2	0.1	0.1	0.1	0.2	0.15	0.32
28-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.3	0.3	0.8	0.5	0.4	0.3	0.20	0.79
29-Oct	0.4	0.3	0.6	0.3	0.3	0.3	0.3	0.7	1.3	0.7	0.4	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.31	1.30
30-Oct	0.2	0.2	0.2	0.3	3.8	0.5	0.6	1.9	2.0	0.9	0.4	0.2	0.2	0.2	A	0.2	0.2	0.5	0.3	0.5	0.7	0.6	0.3	0.2	0.65	3.77
31-Oct	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.20
	0.17	0.19	0.19	0.15	0.34	0.21	0.33	0.49	0.43	0.29	0.22	0.18	0.15	0.19	0.25	0.21	0.19	0.21	0.27	0.30	0.29	0.28	0.20	0.17	Diurnal Average	
	0.47	1.62	0.98	0.33	3.77	0.60	1.06	1.90	2.01	0.92	0.44	0.38	0.38	1.50	0.69	1.34	0.65	0.55	0.85	1.21	1.26	1.28	0.45	0.34	Diurnal Maximum	

C - Calibration

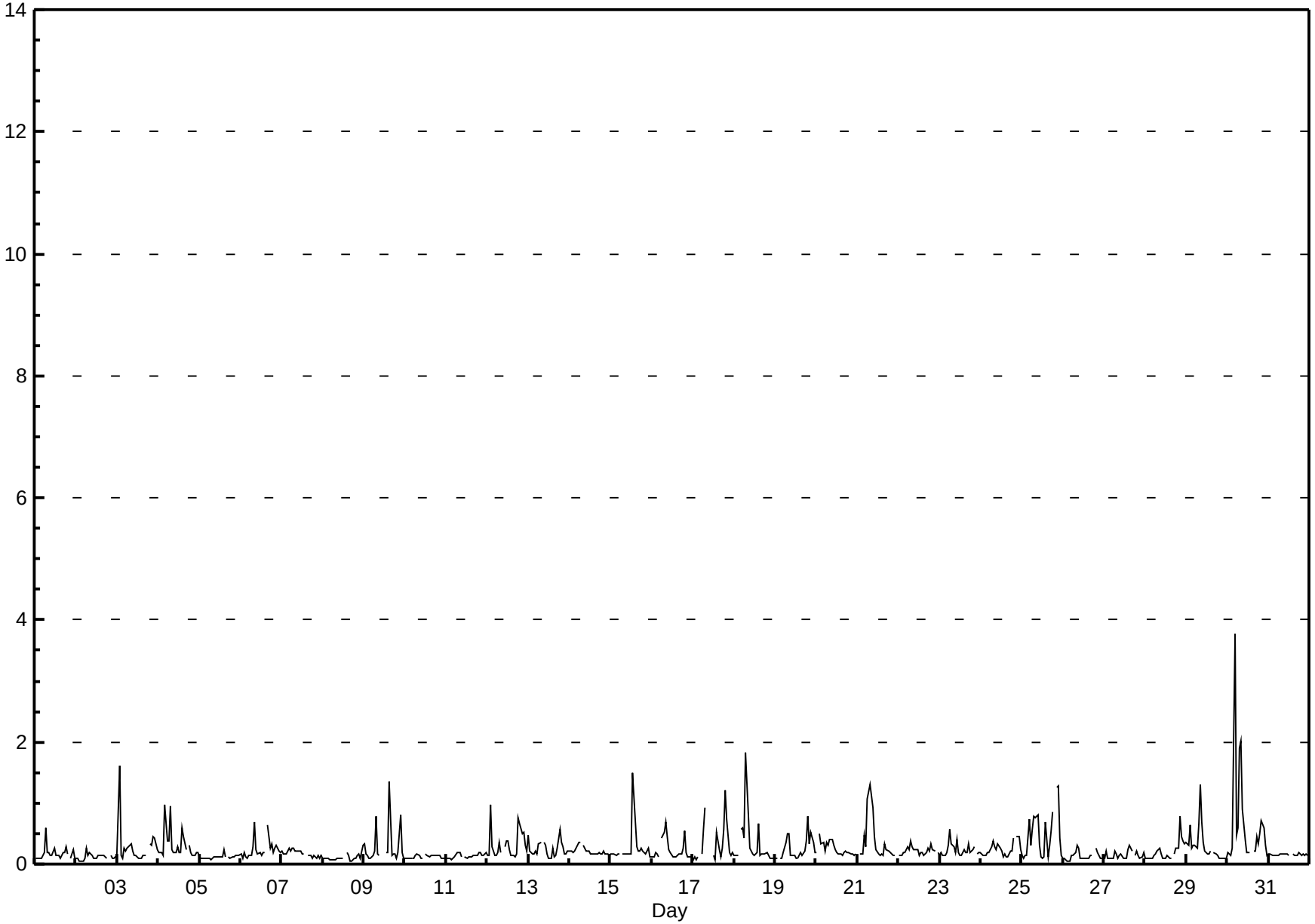
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - October 2013

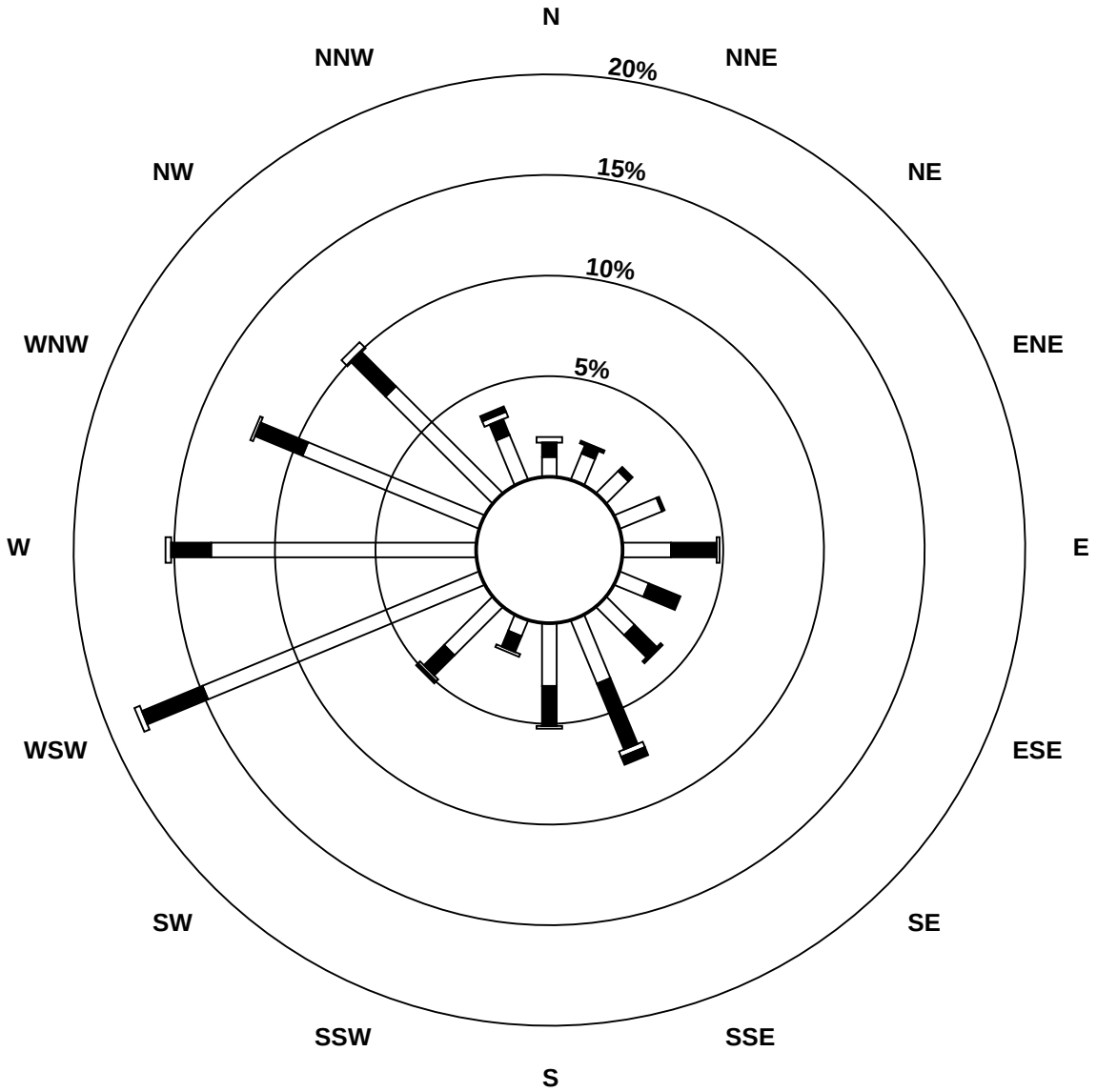


Peace Airshed Zone Association

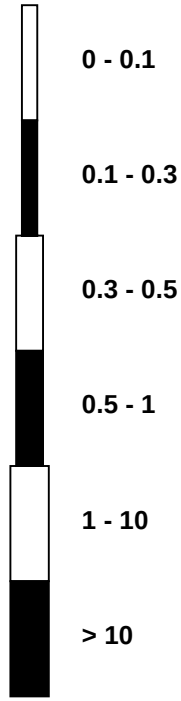
Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - October 2013



Pollutant Classes (ppm)



Eight Hour Running Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 0.54 ppm on Oct 30 12:00

Minimum Value: 0.05 ppm on Oct 8 12:00

Percentiles: P_1 = 0.06 P_{10} = 0.08 Q_1 = 0.10 Median = 0.13 Q_3 = 0.17 P_{90} = 0.22 P_{99} = 0.42

Hours in Service:	744
Hours of Data:	730
Hours of Missing Data:	14
Hours of Calibration:	14
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12
2-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10
3-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.19
4-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.21
5-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13
6-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.17
7-Oct	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.17
8-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10
9-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	N	N	N	N	N	N	0.1	0.1	0.1	0.1	0.1	0.1	0.14
10-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11
11-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11
12-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
13-Oct	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.22
14-Oct	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.22
15-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.15
16-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.25
17-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	N	N	N	N	N	N	N	N	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.22
18-Oct	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.25
19-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.21
20-Oct	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.22
21-Oct	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.32
22-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.18
23-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.16
24-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.19
25-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.39
26-Oct	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.37
27-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10
28-Oct	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.24
29-Oct	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.34
30-Oct	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.54
31-Oct	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.28
	0.37	0.32	0.26	0.26	0.25	0.25	0.23	0.31	0.45	0.52	0.54	0.54	0.52	0.49	0.51	0.39	0.24	0.20	0.21	0.22	0.34	0.39	0.39	0.38	
	Diurnal Maximums																								

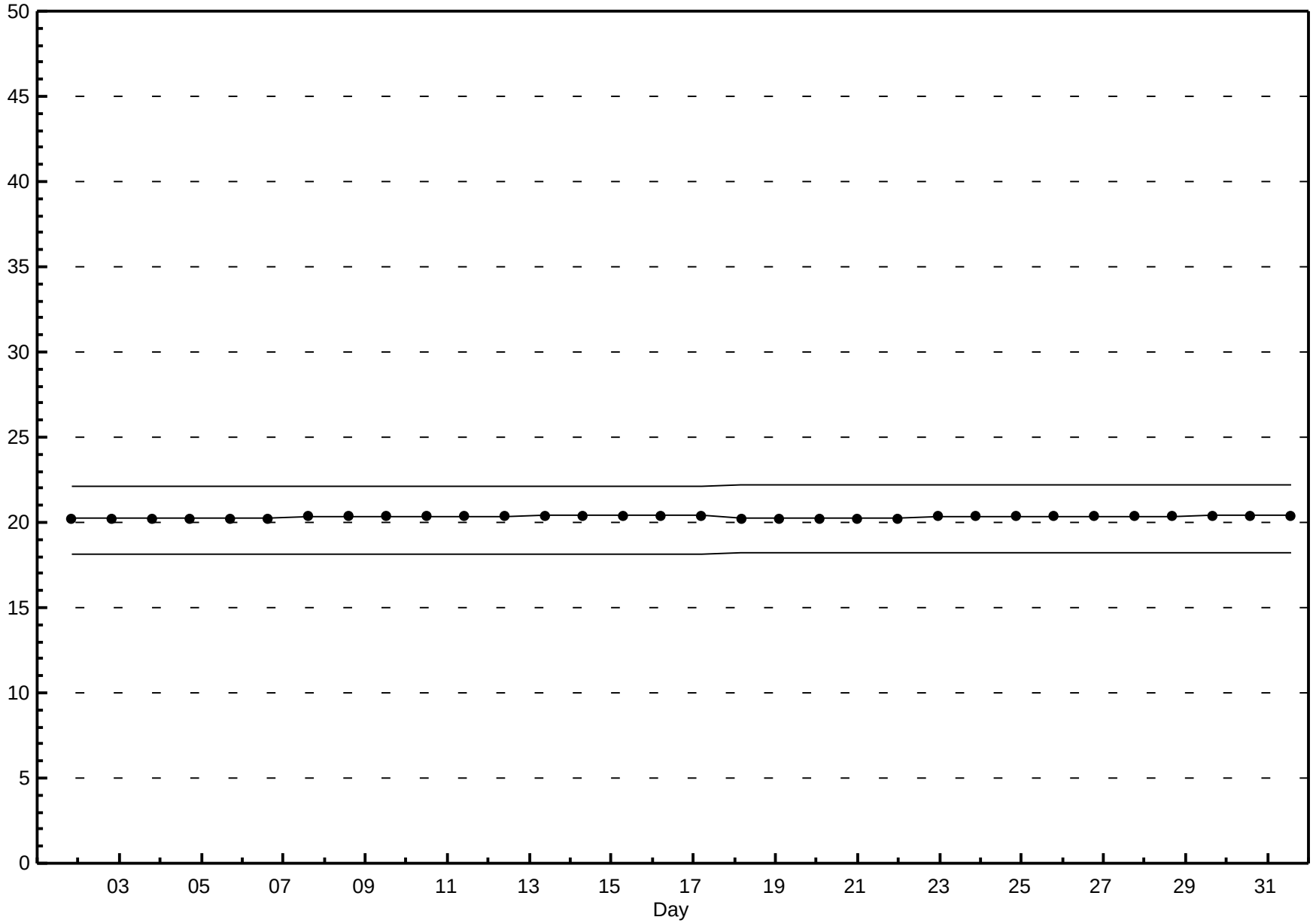
N - Not Valid
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm

Peace Airshed Zone Association

Span Responses

Carbon Monoxide (CO)

Henry Pirker - October 2013



Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.44 ppm on Oct 29 07:00
Maximum Daily Average: 2.23 ppm on Oct 29

Minimum Value: 1.8 ppm on Oct 31 02:00
Minimum Daily Average: 1.81 ppm on Oct 31
Maximum Diurnal Average: 2.04 ppm at hour 7
Minimum Diurnal Average: 1.85 ppm at hour 16
Monthly Average: 1.937 ppm
Percentiles: P_1 = 1.79 P_{10} = 1.82 Q_1 = 1.84 Median = 1.89 Q_3 = 1.96 P_{90} = 2.10 P_{99} = 2.69

Hours in Service:	744
Hours of Data:	681
Hours of Missing Data:	63
Hours of Calibration:	38
Percent Operational Time:	96.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.9	1.9	1.87	1.93
2-Oct	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.9	1.88	2.02
3-Oct	1.9	2.1	2.2	2.6	2.4	2.4	2.3	2.1	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	2.0	2.0	2.1	2.06	2.59
4-Oct	2.3	2.7	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.0	1.9	1.9	A	2.1	2.0	2.0	2.0	2.1	1.9	2.07	2.67
5-Oct	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.85	1.92
6-Oct	2.0	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.88	2.03
7-Oct	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.86	1.97
8-Oct	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	1.9	2.0	1.85	1.98
9-Oct	2.1	2.2	2.1	2.0	2.1	2.0	2.0	1.9	C	C	C	1.8	A	1.9	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.92	2.20
10-Oct	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.82	1.85
11-Oct	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.85	1.90
12-Oct	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.1	A	2.1	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.1	1.99	2.17
13-Oct	2.2	2.2	2.2	2.3	2.3	2.2	2.6	2.5	A	2.3	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	1.9	1.9	2.07	2.58
14-Oct	2.0	2.0	2.1	2.1	2.1	2.2	2.2	A	2.8	2.5	2.2	2.1	N	N	N	N	N	N	N	N	N	N	N	N	--	2.84
15-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	--	1.92
16-Oct	2.0	1.9	2.0	2.1	2.1	A	2.1	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.19
17-Oct	1.9	1.9	1.9	1.9	A	2.0	2.0	2.0	2.0	1.9	1.9	C	C	C	C	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.92	2.02
18-Oct	1.9	2.0	2.0	A	2.1	2.1	1.9	2.0	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.90	2.09
19-Oct	1.8	1.8	A	1.8	1.9	1.9	1.9	2.2	2.1	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	2.0	3.0	2.0	1.9	2.0	1.96	3.00
20-Oct	2.0	A	1.9	2.1	2.2	2.3	2.3	2.4	2.4	2.2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.98	2.38
21-Oct	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.8	1.8	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.88	2.02
22-Oct	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	A	1.9	1.89	2.02
23-Oct	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	1.9	1.89	1.93
24-Oct	2.0	2.0	2.1	2.2	2.4	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	2.0	2.0	1.9	1.97	2.36
25-Oct	1.9	1.9	2.1	2.3	2.2	2.0	2.0	2.0	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.4	2.1	2.1	A	2.3	2.2	2.0	1.9	2.04	2.36
26-Oct	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.87	1.96
27-Oct	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.90
28-Oct	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.1	2.1	2.2	1.95	2.22
29-Oct	2.7	2.5	2.4	2.5	2.5	2.9	3.4	2.8	2.4	2.7	2.2	2.0	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.23	3.44
30-Oct	1.8	1.8	1.9	2.0	2.0	2.1	2.1	2.2	2.3	2.0	1.9	2.0	1.9	1.9	A	1.8	1.8	1.8	1.8	1.9	2.0	2.4	1.9	1.8	1.97	2.43
31-Oct	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.85
	1.95	1.96	1.97	2.00	2.01	2.01	2.04	2.04	2.02	2.00	1.93	1.90	1.87	1.86	1.86	1.85	1.86	1.86	1.88	1.89	1.94	1.93	1.91	1.91	Diurnal Average	
	2.70	2.67	2.39	2.59	2.45	2.90	3.44	2.83	2.84	2.69	2.24	2.20	2.09	1.99	2.02	1.93	2.36	2.10	2.14	2.05	3.00	2.43	2.11	2.22	Diurnal Maximum	

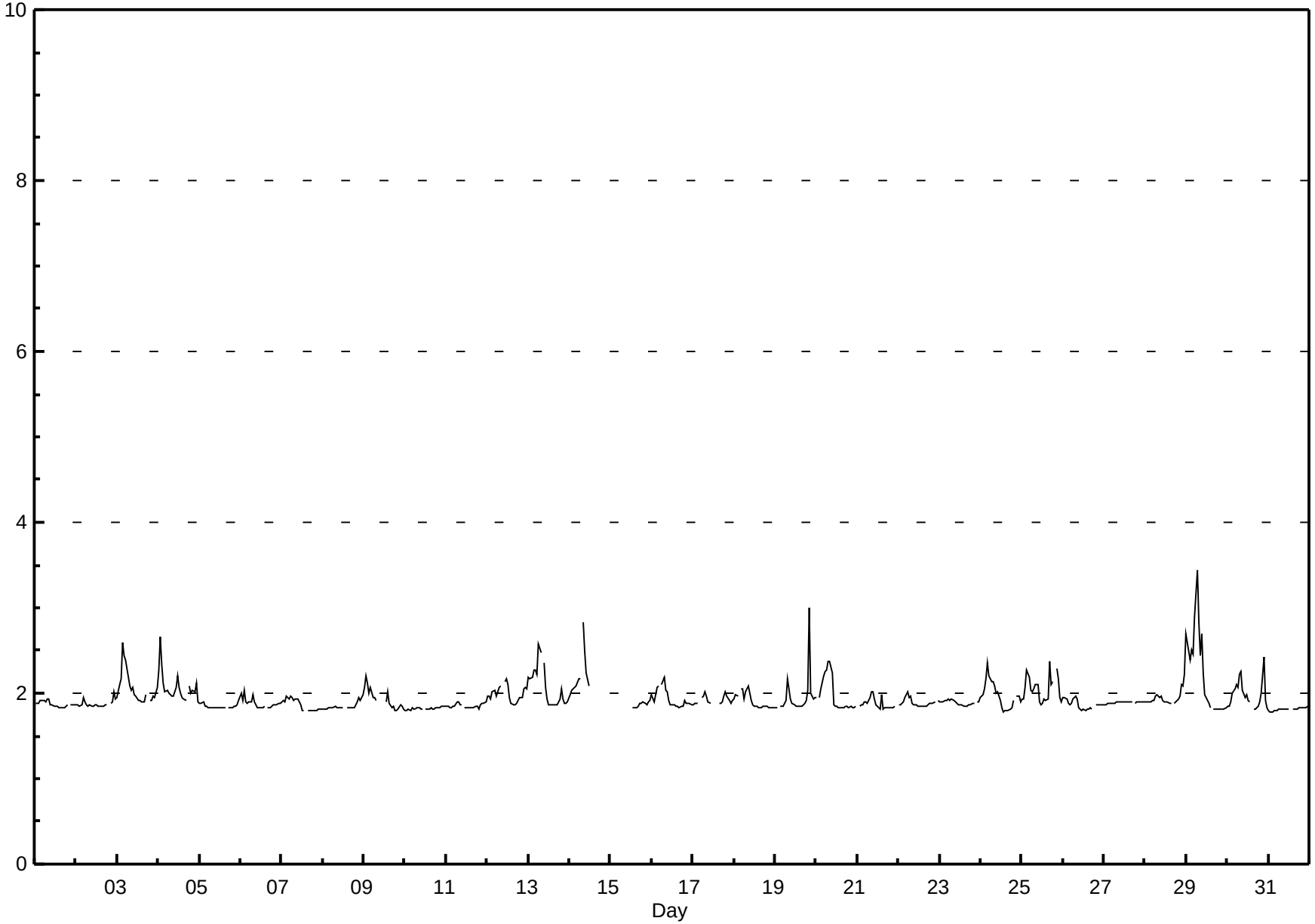
C - Calibration N - Not Valid A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - October 2013



Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - October 2013

Maximum Value: 6.31 ppm on Oct 19 21:00

Maximum Daily Average: 2.43 ppm on Oct 29

Minimum Value: 1.8 ppm on Oct 31 02:00

Minimum Daily Average: 1.83 ppm on Oct 31

Maximum Diurnal Average: 2.19 ppm at hour 8

Minimum Diurnal Average: 1.88 ppm at hour 16

Monthly Average: 2.057 ppm

Percentiles: P_1 = 1.81 P_{10} = 1.84 Q_1 = 1.86 Median = 1.94 Q_3 = 2.14 P_{90} = 2.41 P_{99} = 3.22

Hours in Service:	744
Hours of Data:	681
Hours of Missing Data:	63
Hours of Calibration:	38
Percent Operational Time:	96.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.8	1.9	1.9	1.9	1.9	A	2.0	2.1	2.2	1.96	2.16
2-Oct	2.1	2.1	1.9	1.9	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.4	2.2	1.97	2.38
3-Oct	2.3	3.0	3.2	3.2	3.2	2.9	2.6	2.2	2.1	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	2.7	A	1.9	1.9	2.5	2.0	2.7	2.38	3.24
4-Oct	2.7	3.0	2.6	2.7	2.1	2.1	2.0	2.0	2.0	2.1	2.2	2.4	2.2	2.2	2.1	2.0	2.1	A	2.5	2.1	2.3	2.3	2.8	1.9	2.28	3.02
5-Oct	2.1	2.4	2.2	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.9	1.9	2.0	2.7	1.95	2.69
6-Oct	2.8	2.4	2.9	2.2	2.0	2.1	2.1	2.2	2.0	2.0	1.9	1.8	1.8	1.9	1.9	A	1.8	1.8	2.1	1.9	2.0	1.9	2.0	1.9	2.06	2.87
7-Oct	1.9	2.1	2.0	2.6	2.0	2.3	2.1	2.1	2.2	2.1	1.9	1.9	1.8	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.97	2.62
8-Oct	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.8	1.9	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.2	2.3	2.5	1.92	2.52
9-Oct	2.6	2.5	2.3	2.3	2.3	2.0	2.0	2.0	C	C	C	2.6	A	2.1	2.3	2.0	1.9	2.0	1.8	1.9	1.9	2.2	2.4	1.8	2.14	2.59
10-Oct	1.8	1.8	1.8	1.8	2.0	1.8	1.8	1.9	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.85	2.01
11-Oct	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	A	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	2.06
12-Oct	2.2	2.1	2.0	2.2	2.1	2.0	2.1	2.2	2.1	A	2.2	2.3	2.2	2.1	2.2	2.0	1.9	2.0	2.1	2.2	2.0	2.2	2.2	2.2	2.12	2.28
13-Oct	2.3	2.3	2.2	2.4	2.3	2.6	3.1	3.0	A	3.0	2.3	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.4	2.2	1.9	1.9	1.9	2.23	3.14
14-Oct	2.2	2.3	2.1	2.1	2.2	2.3	2.3	A	3.3	2.9	2.5	2.3	N	N	N	N	N	N	N	N	N	N	N	N	--	3.28
15-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.9	2.0	2.1	--	2.05
16-Oct	2.2	1.9	2.1	2.2	2.2	A	2.2	2.3	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	1.9	1.9	2.00	2.34
17-Oct	1.9	1.9	1.9	1.9	A	2.0	2.0	2.1	2.2	1.9	1.9	C	C	C	C	1.9	1.9	1.9	2.0	2.1	2.4	2.0	1.9	2.0	2.00	2.44
18-Oct	2.0	2.0	2.1	A	2.2	2.2	2.0	2.3	2.2	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.96	2.27
19-Oct	1.8	1.8	A	1.9	1.9	1.9	2.0	2.4	2.4	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	6.3	2.1	2.0	2.0	2.16	6.31
20-Oct	2.0	A	2.0	2.1	2.3	2.3	2.3	2.4	2.5	2.7	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.9	2.04	2.71
21-Oct	A	2.1	1.9	1.9	2.1	2.0	2.0	2.0	2.2	2.4	2.0	1.9	1.9	1.8	3.6	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.9	A	2.03	3.63
22-Oct	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	1.9	1.9	2.0	A	2.3	1.96	2.26
23-Oct	2.0	2.3	2.2	2.2	2.2	2.2	2.0	2.2	2.3	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	A	2.1	2.0	2.02	2.30
24-Oct	2.1	2.0	2.1	2.5	2.8	2.6	2.4	2.4	2.2	2.0	2.2	2.0	1.9	1.8	1.8	1.8	1.8	1.9	1.9	2.2	A	2.2	2.3	1.9	2.12	2.78
25-Oct	2.2	2.2	2.2	2.4	2.3	2.1	2.1	2.5	2.1	2.1	2.0	1.9	1.9	2.0	2.0	2.1	2.6	2.4	2.5	A	2.5	2.6	2.0	1.9	2.20	2.65
26-Oct	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.2	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	A	1.9	2.4	2.0	2.0	2.0	1.95	2.41
27-Oct	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	1.9	1.94	2.07
28-Oct	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.1	2.1	2.3	2.2	2.9	2.02	2.89
29-Oct	2.9	2.8	2.8	2.9	2.7	3.7	3.7	3.4	3.0	2.8	2.7	2.1	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.43	3.74
30-Oct	1.9	1.9	2.2	2.2	2.5	2.5	2.2	2.4	2.7	2.3	2.0	2.1	2.0	2.0	A	1.8	1.8	1.8	2.0	2.0	2.8	2.9	2.2	1.9	2.18	2.93
31-Oct	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.83	1.87
	2.11	2.14	2.14	2.17	2.15	2.17	2.14	2.19	2.16	2.14	2.02	1.99	1.91	1.91	1.97	1.88	1.90	1.93	1.97	1.97	2.18	2.06	2.05	2.07	Diurnal Average	
	2.94	3.02	3.18	3.24	3.22	3.69	3.74	3.37	3.28	2.98	2.68	2.59	2.21	2.20	3.63	2.08	2.65	2.69	2.51	2.37	6.31	2.93	2.77	2.89	Diurnal Maximum	

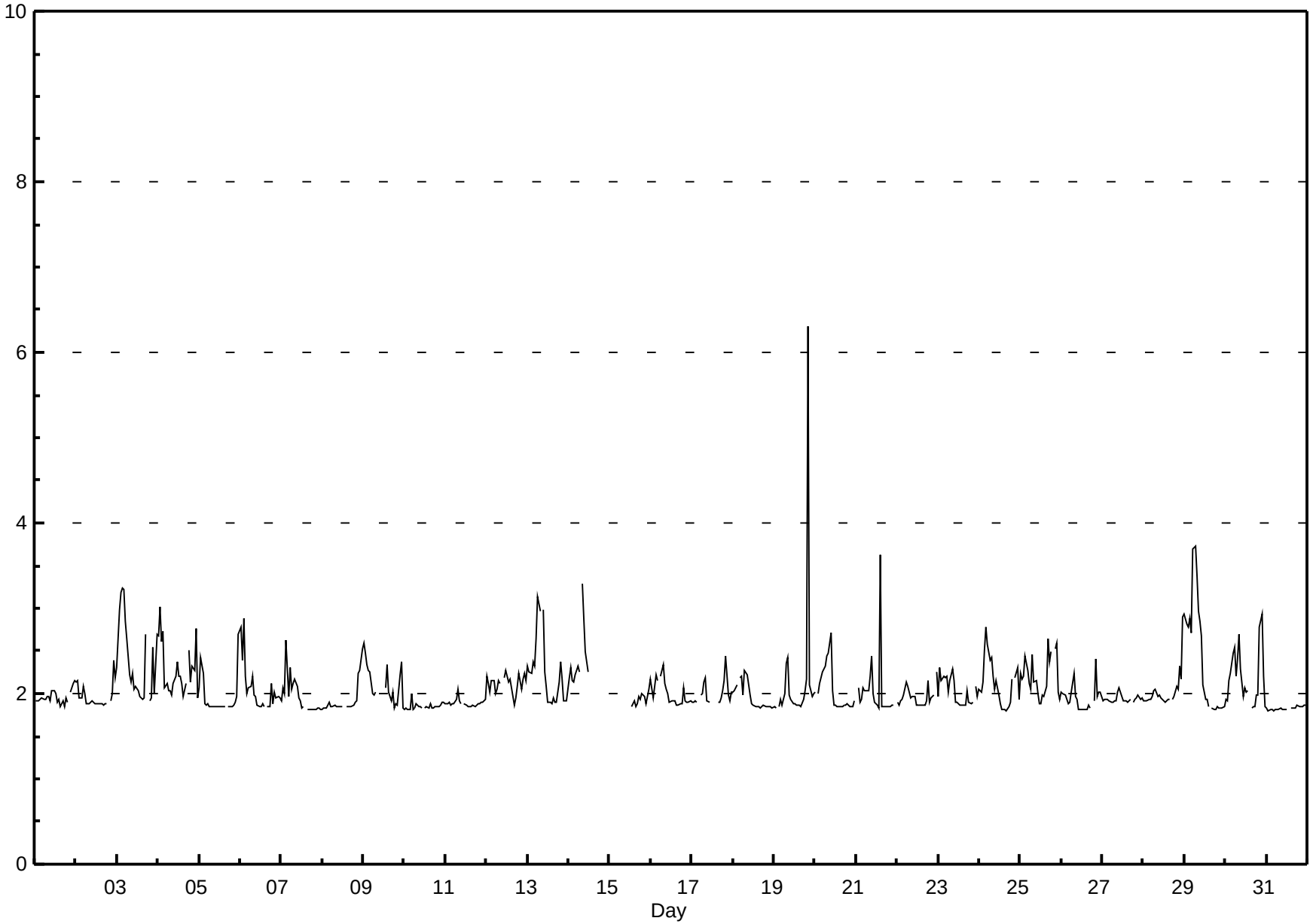
C - Calibration N - Not Valid A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - October 2013



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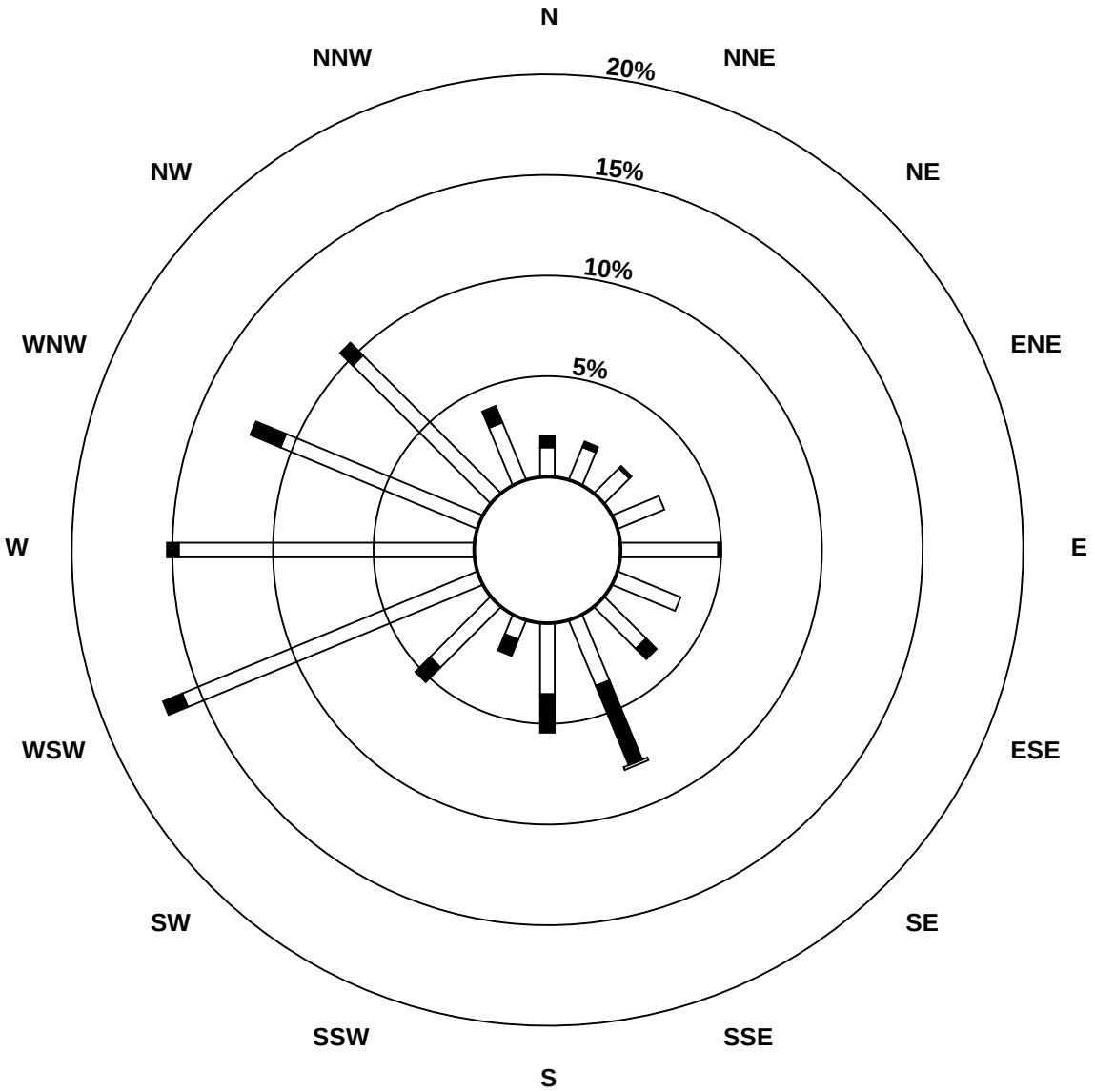
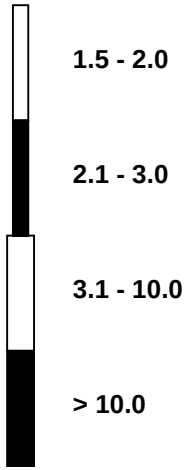
Pollutant Rose

Total Hydrocarbons (THC) - ppm

Henry Pirker - October 2013



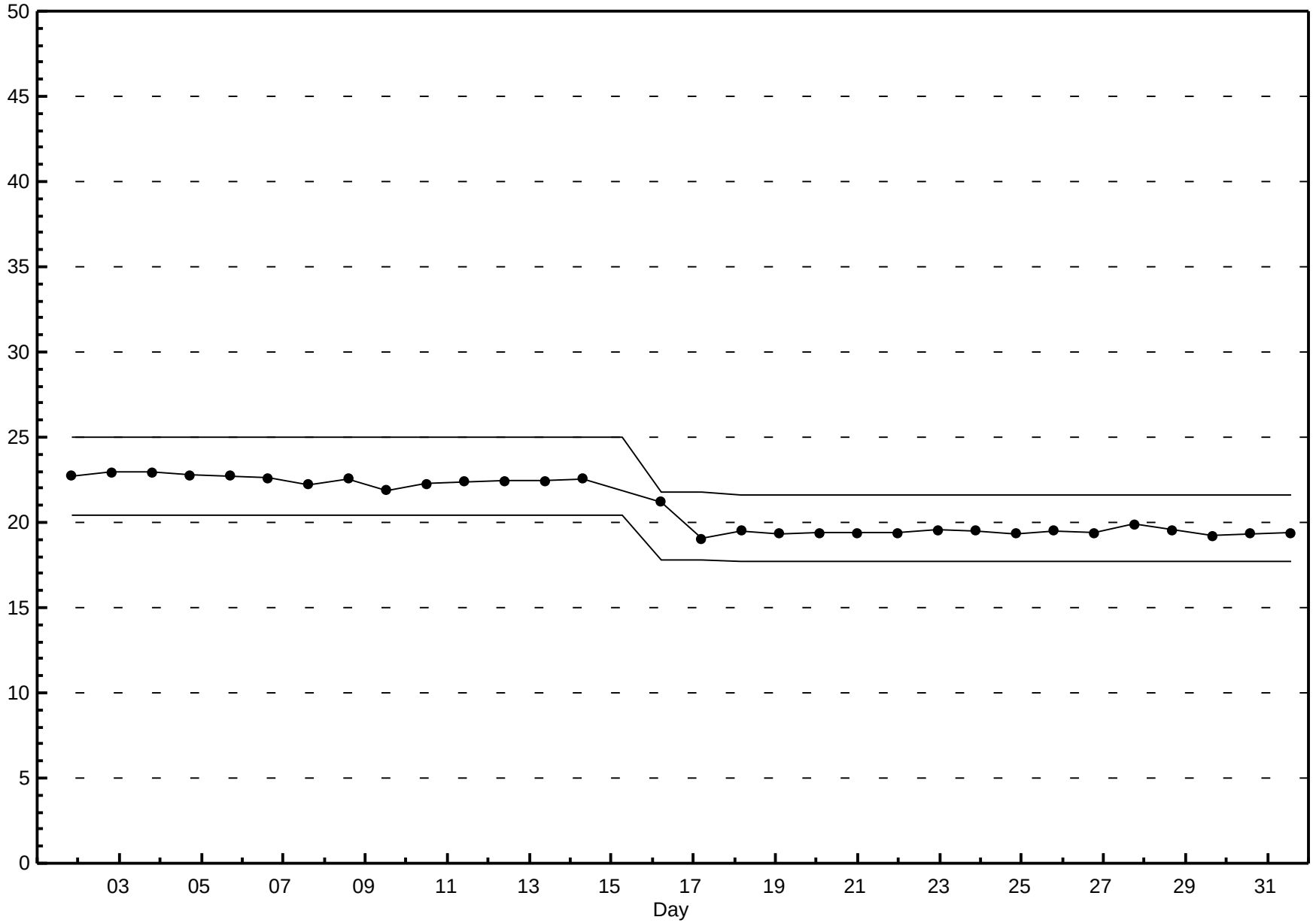
Pollutant Classes (ppm)



Span Responses

Total Hydrocarbons (THC)

Henry Pirker - October 2013



Peace Airshed Zone Association

Hourly Averages

Methane (CH_4) - ppm

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.44 ppm on Oct 29 07:00
Maximum Daily Average: 2.23 ppm on Oct 29

Minimum Value: 1.8 ppm on Oct 7 17:00
Minimum Daily Average: 1.81 ppm on Oct 10
Maximum Diurnal Average: 2.04 ppm at hour 7
Minimum Diurnal Average: 1.85 ppm at hour 16
Monthly Average: 1.933 ppm
Percentiles: P_1 = 1.79 P_{10} = 1.82 Q_1 = 1.84 Median = 1.88 Q_3 = 1.96 P_{90} = 2.10 P_{99} = 2.65

Hours in Service:	744
Hours of Data:	681
Hours of Missing Data:	63
Hours of Calibration:	38
Percent Operational Time:	96.6

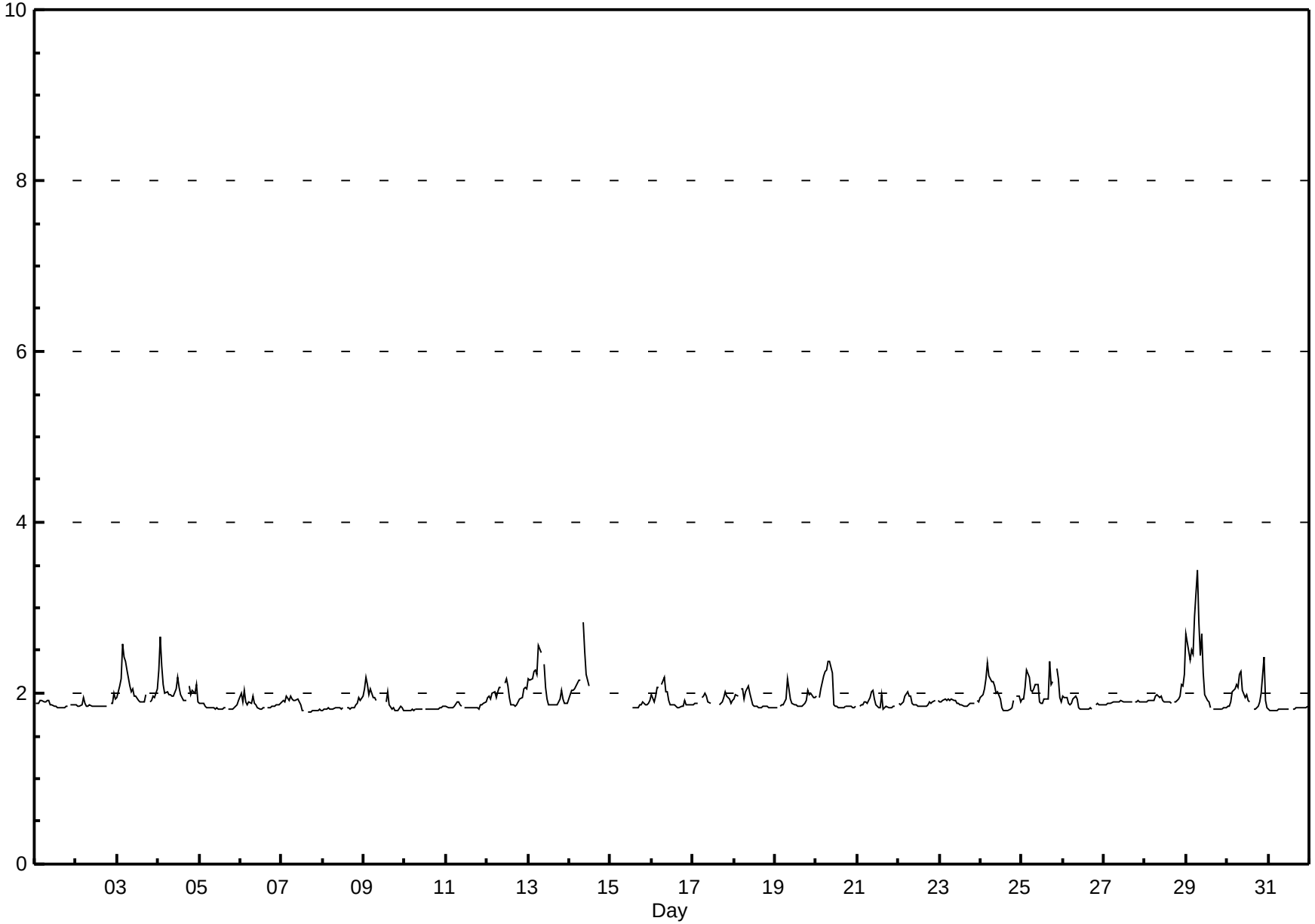
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.9	1.9	1.9	1.87	1.92
2-Oct	1.9	1.9	1.8	1.9	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.9	2.0	1.9	1.87	2.01
3-Oct	1.9	2.1	2.2	2.6	2.4	2.4	2.3	2.1	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	2.0	1.9	2.1	2.05	2.57
4-Oct	2.3	2.7	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	1.9	1.9	1.9	A	2.1	2.0	2.0	2.0	2.1	1.9	2.06	2.66
5-Oct	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.84	1.92
6-Oct	2.0	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.88	2.03
7-Oct	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.86	1.97
8-Oct	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	1.84	1.97
9-Oct	2.1	2.2	2.1	2.0	2.1	2.0	1.9	1.9	C	C	C	1.8	A	1.9	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.92	2.19
10-Oct	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.85
11-Oct	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.85	1.90
12-Oct	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.1	A	2.1	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.0	1.99	2.16
13-Oct	2.2	2.2	2.2	2.3	2.3	2.2	2.6	2.5	A	2.3	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.06	2.56
14-Oct	2.0	2.0	2.0	2.1	2.1	2.2	2.2	A	2.8	2.5	2.2	2.1	N	N	N	N	N	N	N	N	N	N	N	N	--	2.82
15-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	--	1.91
16-Oct	2.0	1.9	2.0	2.1	2.1	A	2.1	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.93	2.18
17-Oct	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	1.9	1.9	C	C	C	C	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.92	2.02
18-Oct	1.9	2.0	2.0	A	2.1	2.1	1.9	2.0	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.91	2.09
19-Oct	1.8	1.8	A	1.8	1.9	1.9	1.9	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	1.9	2.0	1.91	2.17
20-Oct	2.0	A	2.0	2.1	2.2	2.3	2.3	2.4	2.4	2.2	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.98	2.38
21-Oct	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.8	1.8	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.88	2.03
22-Oct	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.89	2.02
23-Oct	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	1.9	1.89	1.93
24-Oct	2.0	2.0	2.1	2.2	2.4	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	2.0	2.0	1.9	1.97	2.36
25-Oct	1.9	1.9	2.1	2.3	2.2	2.0	2.0	2.0	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.4	2.1	2.1	A	2.3	2.2	2.0	1.9	2.04	2.36
26-Oct	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.87	1.97
27-Oct	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.91
28-Oct	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.1	2.1	2.2	1.95	2.22
29-Oct	2.7	2.5	2.4	2.5	2.5	2.9	3.4	2.8	2.4	2.7	2.2	2.0	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.23	3.44
30-Oct	1.9	1.8	1.9	2.0	2.0	2.1	2.1	2.2	2.3	2.0	1.9	2.0	1.9	1.9	A	1.8	1.8	1.8	1.8	1.9	2.0	2.4	1.9	1.8	1.98	2.43
31-Oct	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.85
	1.95	1.96	1.97	2.00	2.01	2.01	2.04	2.03	2.02	2.00	1.93	1.90	1.87	1.86	1.86	1.85	1.86	1.86	1.87	1.89	1.90	1.93	1.90	1.90	Diurnal Average	
	2.70	2.66	2.39	2.57	2.45	2.90	3.44	2.83	2.82	2.70	2.24	2.19	2.08	1.98	2.01	1.93	2.36	2.10	2.13	2.04	2.28	2.43	2.10	2.22	Diurnal Maximum	

C - Calibration N - Not Valid A - Automated Daily Zero Span

Hourly Averages

Methane (CH_4) - ppm

Henry Pirker - October 2013



Peace Airshed Zone Association

Hourly Maximums

Methane (CH_4) - ppm

Henry Pirker - October 2013

Maximum Value: 3.74 ppm on Oct 29 07:00

Maximum Daily Average: 2.43 ppm on Oct 29

Minimum Value: 1.8 ppm on Oct 24 16:00

Minimum Daily Average: 1.83 ppm on Oct 31

Maximum Diurnal Average: 2.19 ppm at hour 8

Minimum Diurnal Average: 1.88 ppm at hour 16

Monthly Average: 2.046 ppm

Percentiles: P_1 = 1.80 P_{10} = 1.84 Q_1 = 1.86 Median = 1.94 Q_3 = 2.13 P_{90} = 2.38 P_{99} = 3.19

Hours in Service:	744
Hours of Data:	681
Hours of Missing Data:	63
Hours of Calibration:	38
Percent Operational Time:	96.6

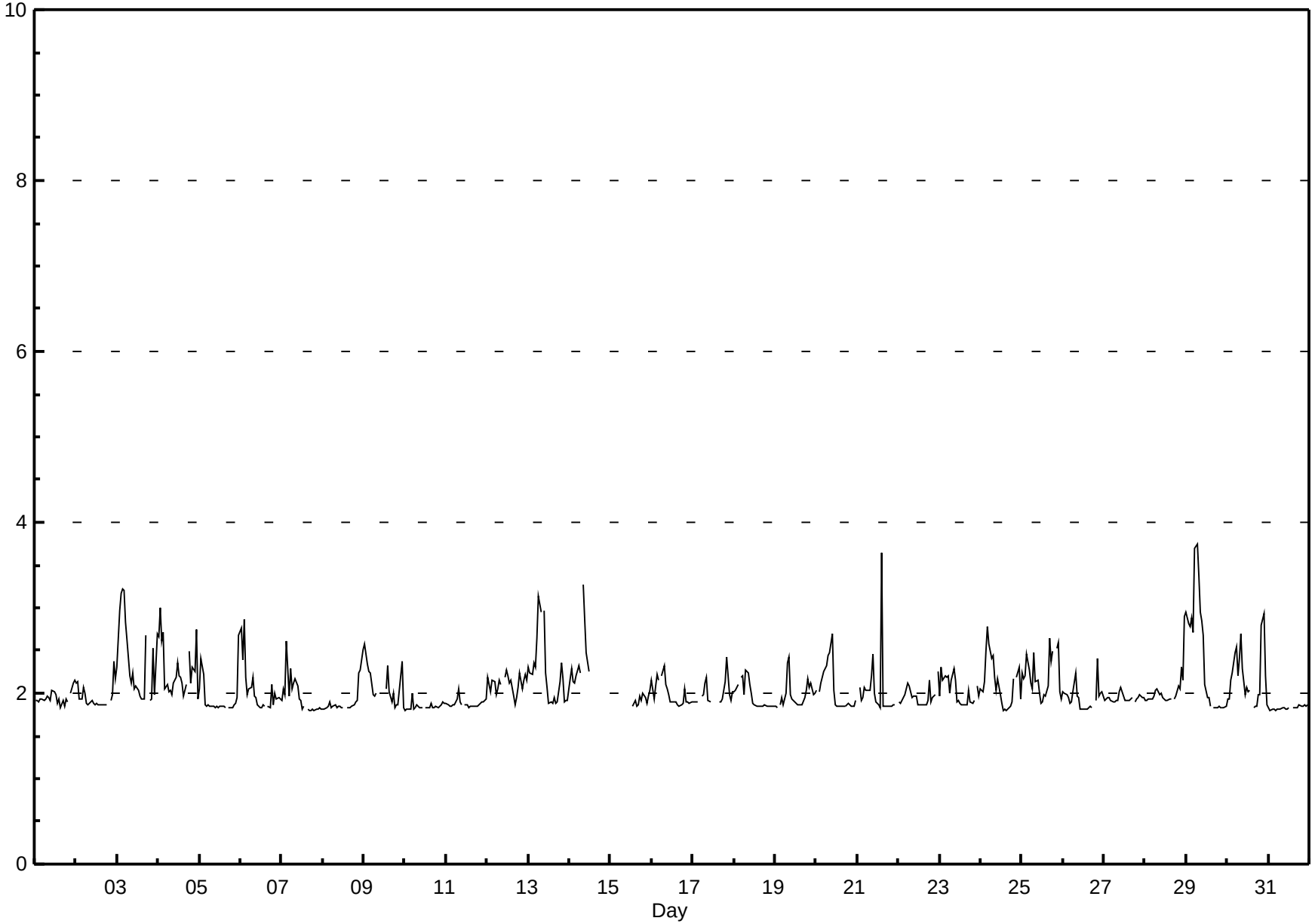
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.8	1.9	1.8	1.9	1.9	A	2.0	2.1	2.2	1.95	2.16
2-Oct	2.1	2.1	1.9	1.9	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.4	2.2	1.96	2.37
3-Oct	2.3	3.0	3.2	3.2	3.2	2.8	2.6	2.2	2.1	2.2	2.0	2.1	2.0	2.0	1.9	1.9	1.9	2.7	A	1.9	1.9	2.5	2.0	2.7	2.37	3.22
4-Oct	2.7	3.0	2.6	2.7	2.1	2.1	2.0	2.0	2.0	2.1	2.2	2.4	2.2	2.2	2.1	2.0	2.1	A	2.5	2.1	2.3	2.3	2.8	1.9	2.27	3.01
5-Oct	2.1	2.4	2.2	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.9	2.0	2.7	1.94	2.68
6-Oct	2.8	2.4	2.9	2.2	2.0	2.1	2.1	2.2	2.0	2.0	1.9	1.8	1.8	1.9	1.9	A	1.8	1.8	2.1	1.9	2.0	1.9	2.0	1.9	2.05	2.86
7-Oct	1.9	2.1	2.0	2.6	2.0	2.3	2.1	2.1	2.2	2.1	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.96	2.61
8-Oct	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.2	2.3	2.5	1.91	2.51
9-Oct	2.6	2.5	2.3	2.3	2.2	2.0	2.0	2.0	C	C	C	1.9	A	2.1	2.3	2.0	1.9	2.0	1.8	1.9	1.9	2.2	2.4	1.8	2.10	2.58
10-Oct	1.8	1.8	1.8	1.8	2.0	1.8	1.8	1.9	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.84	2.00
11-Oct	1.9	1.9	1.8	1.9	1.9	1.9	1.9	2.0	1.9	1.9	A	1.9	1.9	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.88	2.04
12-Oct	2.2	2.1	2.0	2.2	2.1	2.0	2.0	2.2	2.1	A	2.2	2.3	2.2	2.1	2.2	2.0	1.9	1.9	2.1	2.2	2.0	2.2	2.2	2.1	2.11	2.27
13-Oct	2.3	2.2	2.2	2.4	2.3	2.6	3.1	2.9	A	3.0	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.4	2.2	1.9	1.9	1.9	2.23	3.13
14-Oct	2.2	2.3	2.1	2.1	2.2	2.3	2.2	A	3.3	2.9	2.5	2.2	N	N	N	N	N	N	N	N	N	N	N	N	--	3.27
15-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	1.8	1.9	1.8	1.9	2.0	1.9	2.0	2.0	1.9	2.0	2.0	--	2.04
16-Oct	2.2	1.9	2.1	2.2	2.1	A	2.2	2.3	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	1.9	1.9	2.00	2.32
17-Oct	1.9	1.9	1.9	1.9	A	2.0	2.0	2.1	2.2	1.9	1.9	C	C	C	C	1.9	1.9	1.9	2.0	2.1	2.4	2.0	1.9	2.0	1.99	2.43
18-Oct	2.0	2.0	2.1	A	2.2	2.2	2.0	2.3	2.2	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.97	2.27
19-Oct	1.8	1.8	A	1.9	1.9	1.9	2.0	2.4	2.4	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	2.1	2.0	2.0	1.98	2.42
20-Oct	2.0	A	2.0	2.1	2.3	2.3	2.3	2.4	2.5	2.7	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.9	2.04	2.70
21-Oct	A	2.1	1.9	1.9	2.1	2.0	2.0	2.0	2.2	2.5	2.0	1.9	1.9	1.8	3.6	1.8	1.8	1.9	1.9	1.8	1.8	1.9	1.9	A	2.04	3.64
22-Oct	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	1.9	2.0	2.0	A	2.3	1.96	2.25
23-Oct	2.0	2.3	2.2	2.2	2.2	2.2	2.0	2.2	2.3	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	A	2.1	2.0	2.02	2.31
24-Oct	2.1	2.0	2.1	2.5	2.8	2.6	2.4	2.4	2.2	2.0	2.2	2.0	1.9	1.8	1.8	1.8	1.8	1.9	1.9	2.2	A	2.2	2.3	1.9	2.12	2.78
25-Oct	2.2	2.2	2.2	2.4	2.3	2.1	2.0	2.5	2.1	2.1	2.0	1.9	1.9	2.0	2.0	2.1	2.6	2.4	2.5	A	2.5	2.6	2.0	1.9	2.20	2.64
26-Oct	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.2	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	A	1.9	2.4	2.0	2.0	2.0	1.95	2.40
27-Oct	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	2.0	1.94	2.07
28-Oct	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.1	2.1	2.3	2.2	2.9	2.03	2.89
29-Oct	2.9	2.8	2.8	2.9	2.7	3.7	3.7	3.4	3.0	2.9	2.7	2.1	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.43	3.74
30-Oct	1.9	1.9	2.2	2.2	2.5	2.5	2.2	2.4	2.7	2.3	2.0	2.1	2.0	2.0	A	1.8	1.8	1.8	2.0	2.0	2.8	2.9	2.2	1.9	2.18	2.94
31-Oct	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.83	1.87
	2.11	2.14	2.13	2.16	2.15	2.16	2.14	2.19	2.16	2.14	2.02	1.96	1.91	1.91	1.97	1.88	1.90	1.93	1.97	1.97	2.03	2.06	2.04	2.06	Diurnal Average	
	2.94	3.01	3.16	3.22	3.20	3.69	3.74	3.37	3.27	2.96	2.68	2.36	2.20	2.19	3.64	2.08	2.64	2.68	2.49	2.36	2.79	2.94	2.75	2.89	Diurnal Maximum	

C - Calibration N - Not Valid A - Automated Daily Zero Span

Hourly Maximums

Methane (CH_4) - ppm

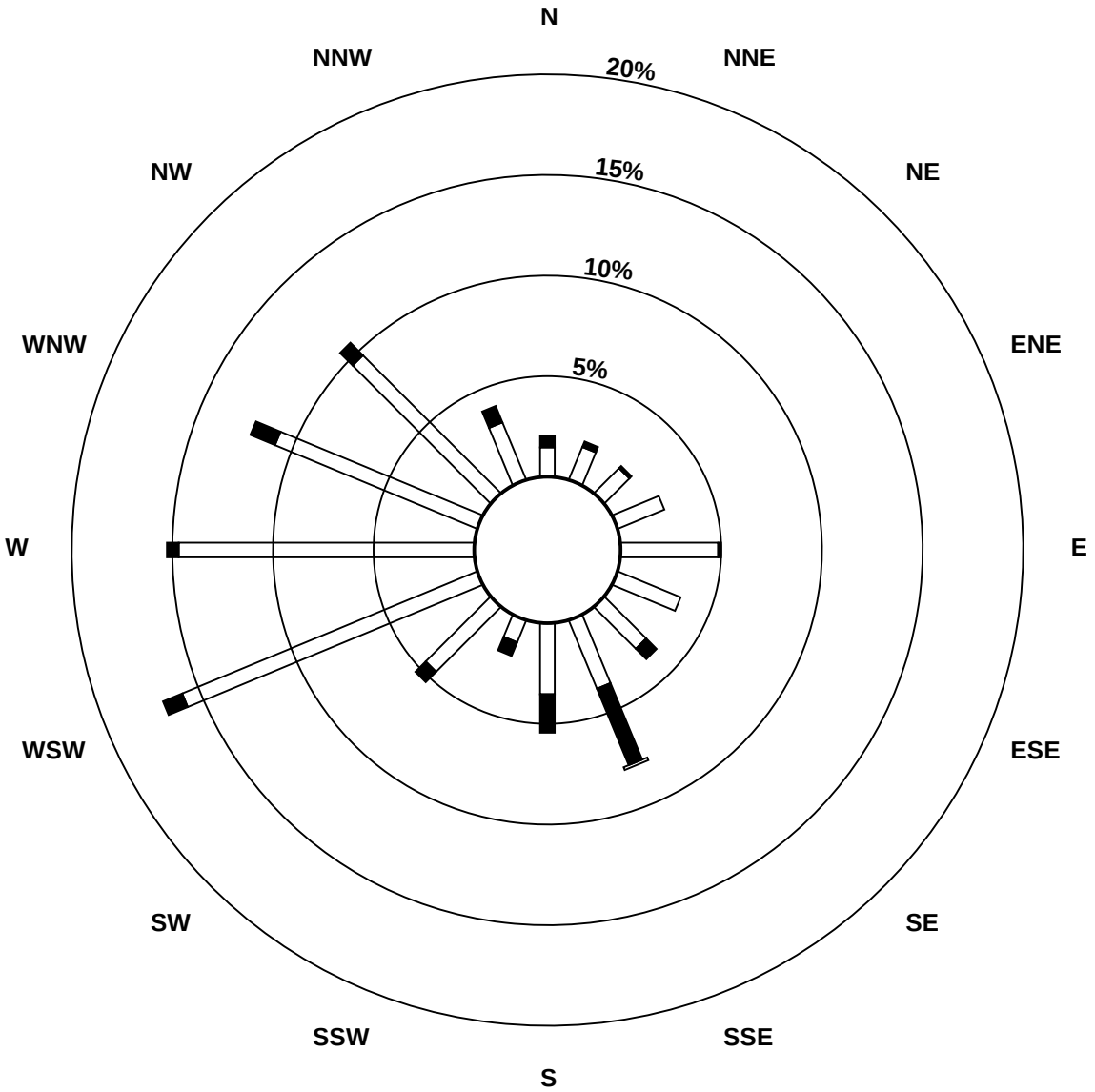
Henry Pirker - October 2013



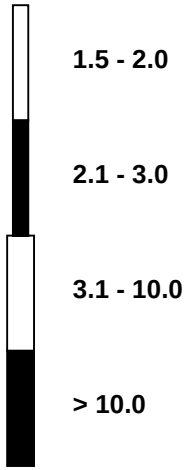
Pollutant Rose

Methane (CH_4) - ppm

Henry Pirker - October 2013



Pollutant Classes (ppm)

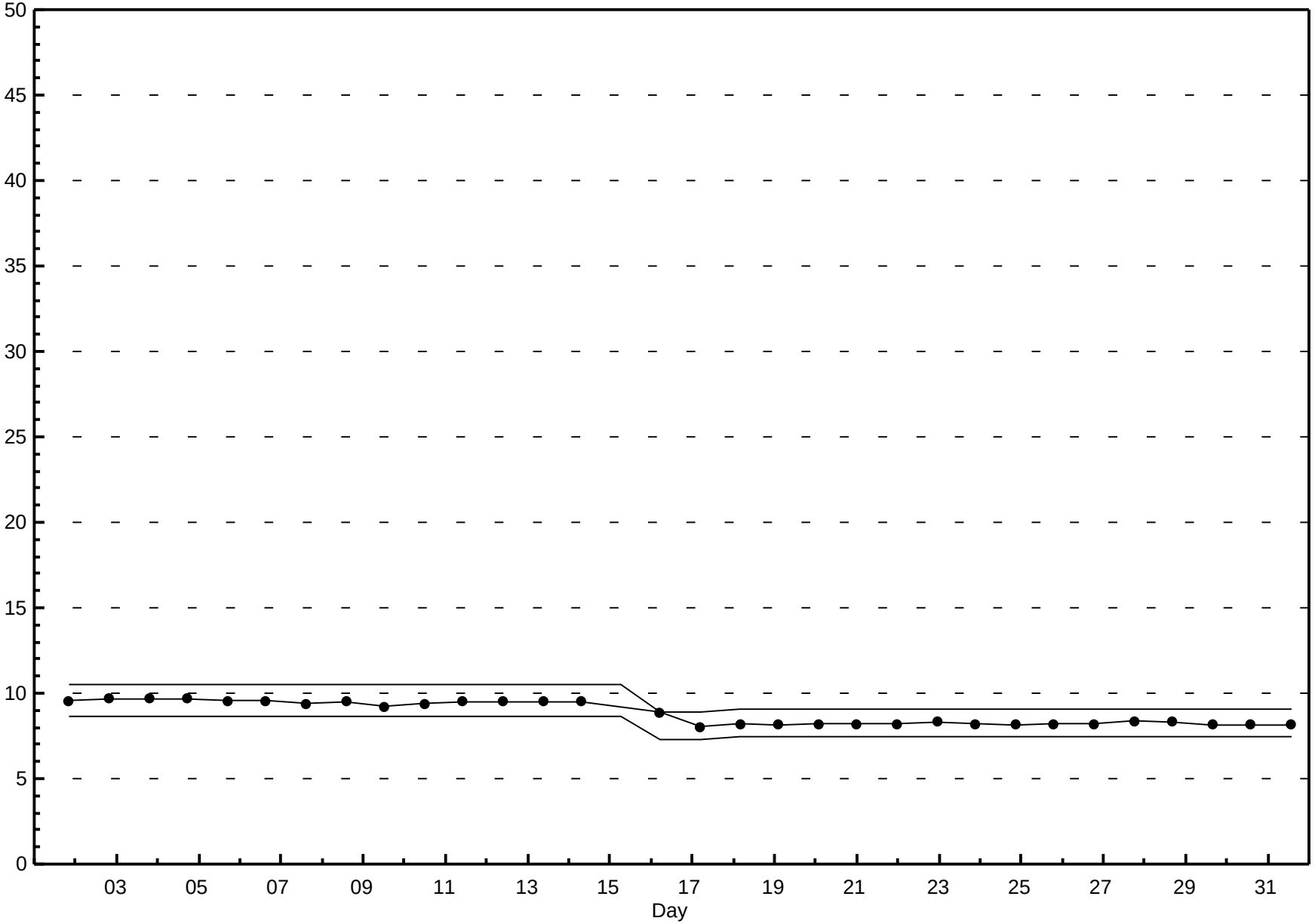


Peace Airshed Zone Association

Span Responses

Methane (CH_4)

Henry Pirker - October 2013



Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.01 ppm on Oct 19 21:00 Maximum Daily Average: 0.04 ppm on Oct 19

Minimum Value: 0.0 ppm on Oct 1 04:00 Minimum Daily Average: 0.00 ppm on Oct 16
Maximum Diurnal Average: 0.04 ppm at hour 21 Minimum Diurnal Average: 0.00 ppm at hour 13
Monthly Average: 0.002 ppm Percentiles: P_1 = 0.00 P_{10} = 0.00 Q_1 = 0.00 Median = 0.00 Q_3 = 0.00 P_{90} = 0.00 P_{99} = 0.00

Hours in Service:	744
Hours of Data:	681
Hours of Missing Data:	63
Hours of Calibration:	38
Percent Operational Time:	96.6

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
2-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00
3-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00
4-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
5-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
6-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
7-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
8-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
9-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01
10-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
12-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
13-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
14-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	N	N	N	N	N	N	N	N	N	N	N	N	--	0.00
15-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.00
16-Oct	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
17-Oct	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01
18-Oct	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-Oct	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.04	1.01
20-Oct	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
21-Oct	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00
22-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00
23-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
24-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
25-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00
26-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00
27-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
28-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
29-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
30-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
31-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	Diurnal Average	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	1.01	0.00	0.00	0.00	Diurnal Maximum	

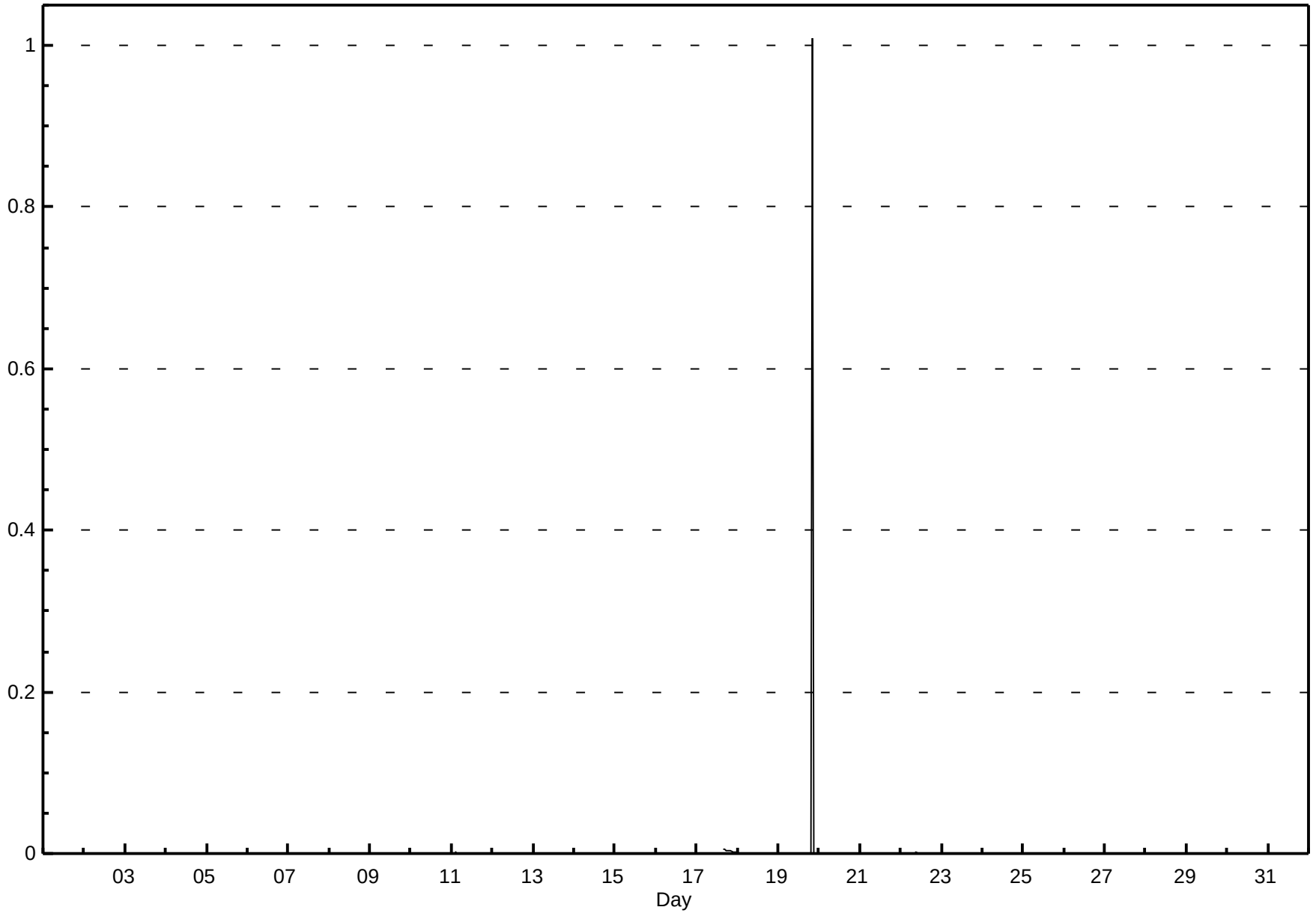
C - Calibration N - Not Valid A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - October 2013



Peace Airshed Zone Association

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - October 2013

Maximum Value: 4.22 ppm on Oct 19 21:00

Maximum Daily Average: 0.18 ppm on Oct 19

Minimum Value: 0.0 ppm on Oct 16 21:00

Minimum Daily Average: 0.00 ppm on Oct 20

Maximum Diurnal Average: 0.15 ppm at hour 21

Minimum Diurnal Average: 0.00 ppm at hour 15

Monthly Average: 0.009 ppm

Percentiles: P_1 = 0.00 P_{10} = 0.00 Q_1 = 0.00 Median = 0.00 Q_3 = 0.00 P_{90} = 0.00 P_{99} = 0.01

Hours in Service:	744
Hours of Data:	681
Hours of Missing Data:	63
Hours of Calibration:	38
Percent Operational Time:	96.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
2-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00
3-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00
4-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
5-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
6-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
7-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
8-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
9-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	0.7	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.73
10-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Oct	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.11
12-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01
13-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
14-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	N	N	N	N	N	N	N	N	N	N	N	N	--	0.00
15-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.00
16-Oct	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
17-Oct	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01
18-Oct	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-Oct	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.18	4.22
20-Oct	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
21-Oct	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00
22-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.01	0.13
23-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
24-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.02
25-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00
26-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00
27-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.02
28-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
29-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01
30-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
31-Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	Diurnal Average	
	0.02	0.00	0.11	0.00	0.00	0.00	0.01	0.00	0.00	0.13	0.00	0.73	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	4.22	0.01	0.00	0.00	Diurnal Maximum	

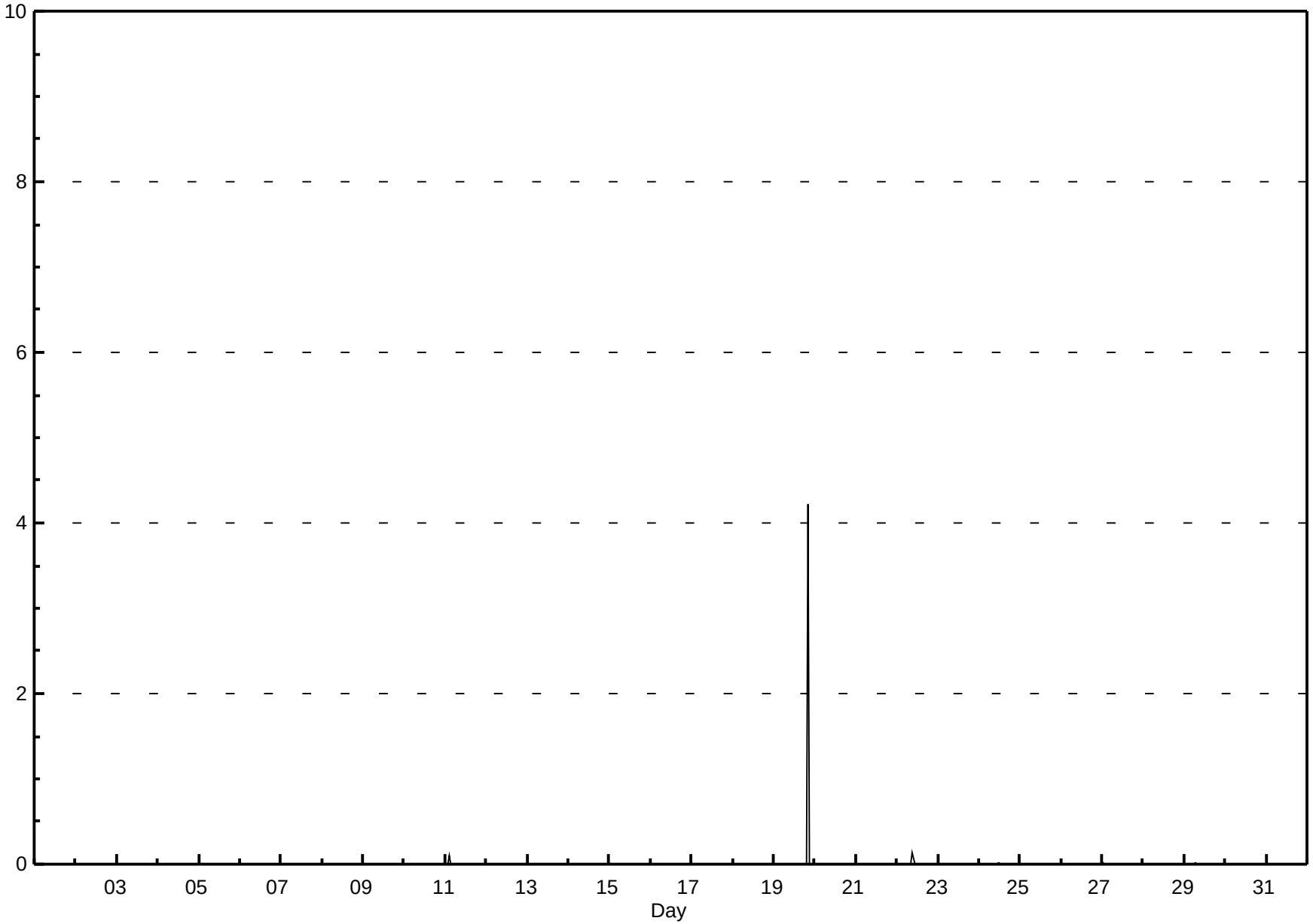
C - Calibration N - Not Valid A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - October 2013

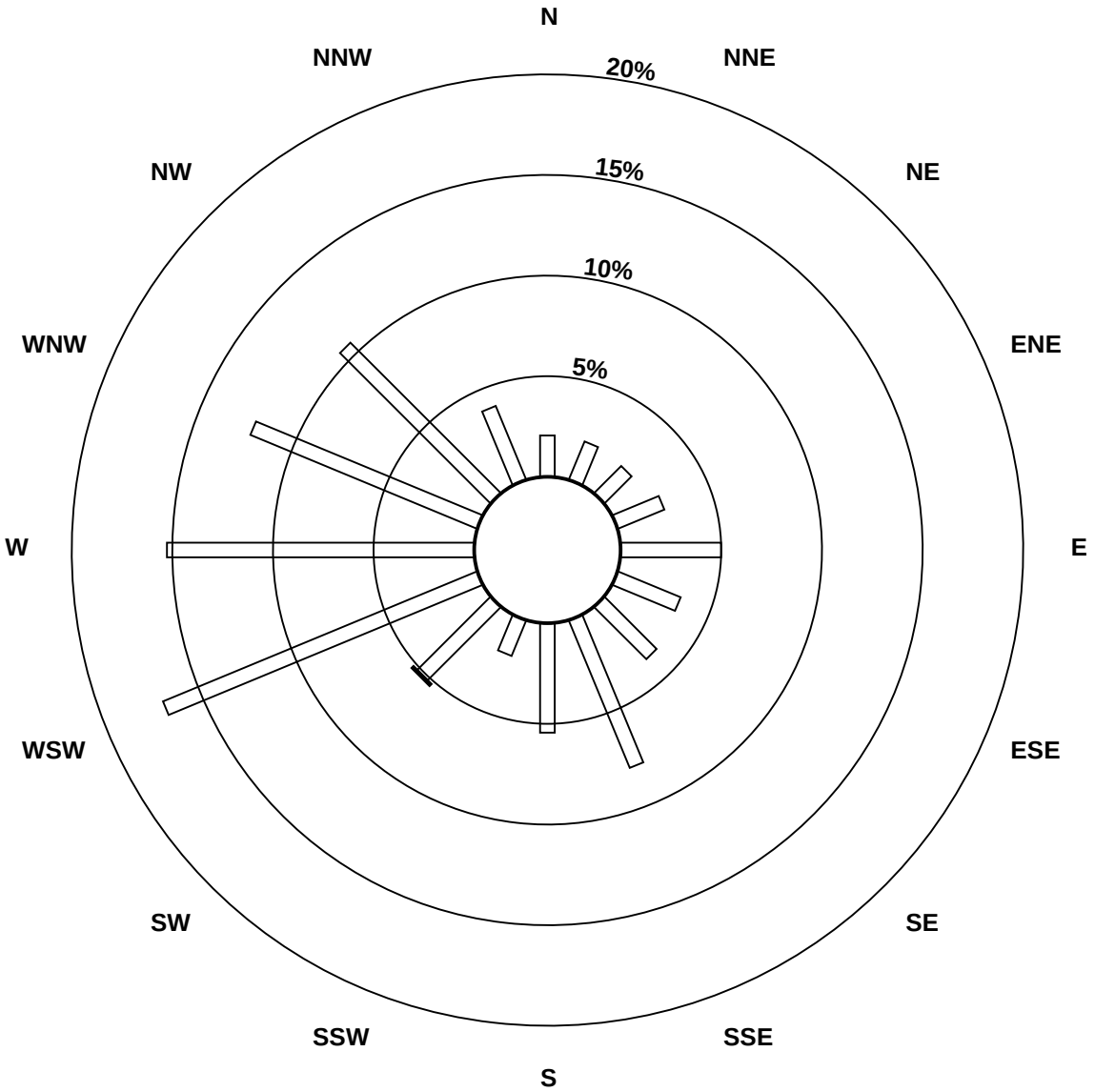


Peace Airshed Zone Association

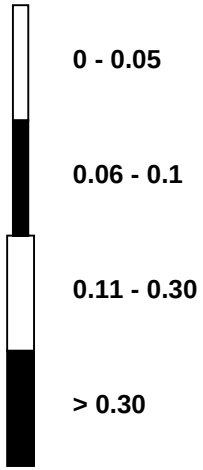
Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - October 2013



Pollutant Classes (ppm)

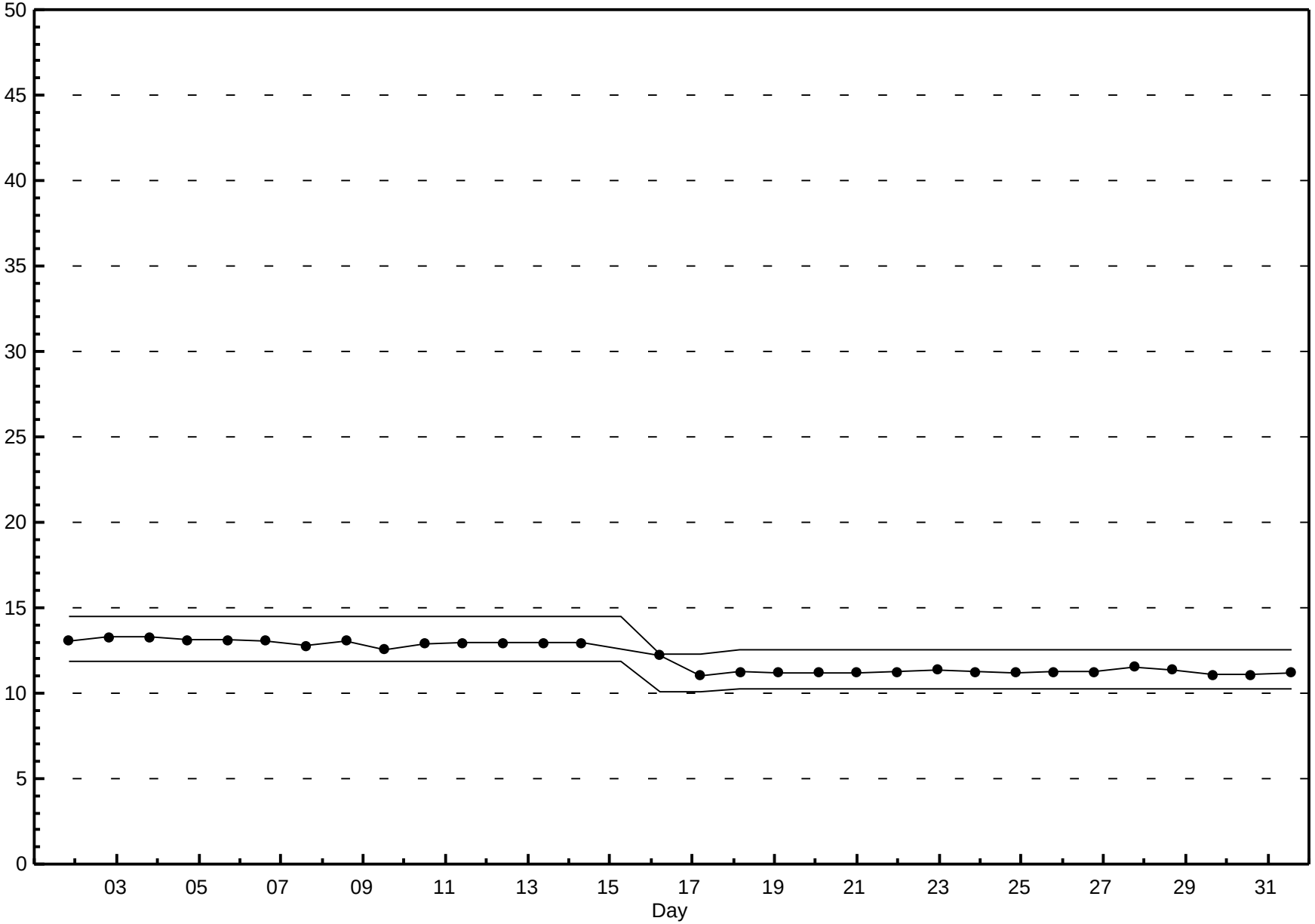


Peace Airshed Zone Association

Span Responses

Non Methane Hydrocarbon (NMHC)

Henry Pirker - October 2013



Hourly Averages

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

Henry Pirker - October 2013

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 32.9 $\mu g/m^3$ on Oct 30 09:00
Maximum Daily Average: 11.6 $\mu g/m^3$ on Oct 30

Minimum Value: 1 $\mu g/m^3$ on Oct 8 02:00
Maximum Diurnal Average: 8.4 $\mu g/m^3$ at hour 9
Monthly Average: 5.03 $\mu g/m^3$
Minimum Daily Average: 1.3 $\mu g/m^3$ on Oct 5
Minimum Diurnal Average: 2.6 $\mu g/m^3$ at hour 16
Percentiles: $P_1 = 0.8$ $P_{10} = 1.5$ $Q_1 = 2.1$ Median = 3.9 $Q_3 = 6.6$ $P_{90} = 10.4$ $P_{99} = 20.7$

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	2	2	2	2	3	4	5	5	4	4	4	3	2	2	1	1	1	1	2	2	2	1	2	1	2.4	4.9
2-Oct	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	1.9	3.0
3-Oct	3	4	5	5	7	8	6	8	8	6	4	3	3	2	1	1	1	1	3	5	6	7	7	7	4.6	8.0
4-Oct	7	8	6	5	5	8	5	6	10	11	7	6	3	6	12	5	3	5	5	3	2	2	2	1	5.4	12.4
5-Oct	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	1.8
6-Oct	1	1	1	1	1	1	1	3	3	2	2	1	2	3	4	3	2	3	3	4	4	3	2	2	2.2	4.3
7-Oct	3	5	5	3	4	4	5	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2.2	4.8
8-Oct	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	2	2	2	2	2	2	3	2	13	2.1	12.8
9-Oct	7	8	6	5	5	4	4	12	8	9	8	7	3	3	3	3	2	2	2	1	2	2	1	1	4.5	11.7
10-Oct	1	1	1	1	1	1	1	2	2	2	1	2	1	1	1	2	2	2	2	3	4	3	3	3	1.7	3.7
11-Oct	2	2	2	2	2	3	3	4	4	3	2	2	2	1	1	1	2	2	3	3	3	3	3	4	2.6	4.0
12-Oct	5	7	8	7	9	9	14	14	13	11	9	12	13	6	4	4	4	4	6	9	13	19	14	11	9.4	19.5
13-Oct	11	10	11	11	11	10	12	13	18	21	11	6	5	4	4	4	4	5	8	11	10	9	9	9	9.4	21.0
14-Oct	10	10	10	10	10	12	15	18	18	10	8	8	5	4	3	3	3	4	4	4	5	6	5	5	8.0	18.3
15-Oct	5	6	6	6	6	6	5	5	5	4	3	3	3	4	3	2	3	4	3	3	3	3	4	4	4.0	5.9
16-Oct	4	4	4	5	5	6	8	11	12	11	6	4	2	2	2	2	2	2	4	5	4	4	4	4	4.8	11.8
17-Oct	3	4	4	3	4	4	5	7	7	5	4	4	2	2	1	1	2	2	7	13	10	8	6	5	4.7	12.6
18-Oct	6	7	7	7	8	8	10	13	11	8	8	6	4	4	4	4	4	5	5	5	5	4	4	4	6.2	12.8
19-Oct	3	3	3	3	4	5	8	8	7	6	5	4	3	3	3	2	3	11	12	7	8	9	7	7	5.6	12.0
20-Oct	7	6	7	9	10	11	11	12	14	13	10	8	7	4	4	4	3	4	5	4	4	4	4	4	7.0	13.6
21-Oct	4	4	5	5	6	7	8	9	12	12	10	6	4	4	4	4	4	5	4	4	4	3	4	4	5.6	12.3
22-Oct	5	5	6	7	8	10	12	14	10	7	6	5	4	4	4	4	4	4	5	4	4	6	4	4	6.0	13.5
23-Oct	4	4	4	4	5	5	4	6	5	5	4	3	3	2	2	2	2	3	4	3	4	4	4	5	3.8	6.5
24-Oct	7	8	9	10	10	10	10	10	9	7	7	7	4	3	2	2	3	4	5	7	9	12	10	8	7.2	12.5
25-Oct	7	7	7	7	7	8	9	15	17	19	8	6	5	8	7	6	7	11	15	22	32	19	11	7	11.2	32.4
26-Oct	7	7	6	5	5	5	5	5	5	5	5	4	4	3	3	3	3	5	4	7	8	6	6	5	5.1	8.0
27-Oct	4	5	5	5	4	4	4	3	3	3	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2.8	4.8
28-Oct	2	2	2	2	2	2	2	3	4	3	2	2	2	2	1	2	2	3	4	5	7	8	11	10	3.3	11.3
29-Oct	11	11	9	10	11	10	9	10	9	12	7	5	5	4	3	4	3	3	3	3	2	2	3	3	6.3	11.6
30-Oct	4	5	7	9	10	15	14	26	33	26	26	8	21	7	4	4	5	5	6	8	12	12	6	4	11.6	32.9
31-Oct	4	4	3	3	3	3	3	3	3	2	2	2	2	1	1	1	2	2	3	3	4	5	4	5	2.8	5.2
	4.7	4.9	5.0	5.0	5.5	6.1	6.6	8.1	8.4	7.5	5.7	4.3	3.9	3.1	3.0	2.6	2.6	3.6	4.3	5.1	5.8	5.6	4.8	4.7	Diurnal Average	
	11.4	11.0	10.5	11.0	11.0	14.6	15.0	25.8	32.9	25.9	26.1	12.2	21.1	8.4	12.4	6.4	7.4	11.5	15.2	21.5	32.4	19.5	14.1	12.8	Diurnal Maximum	

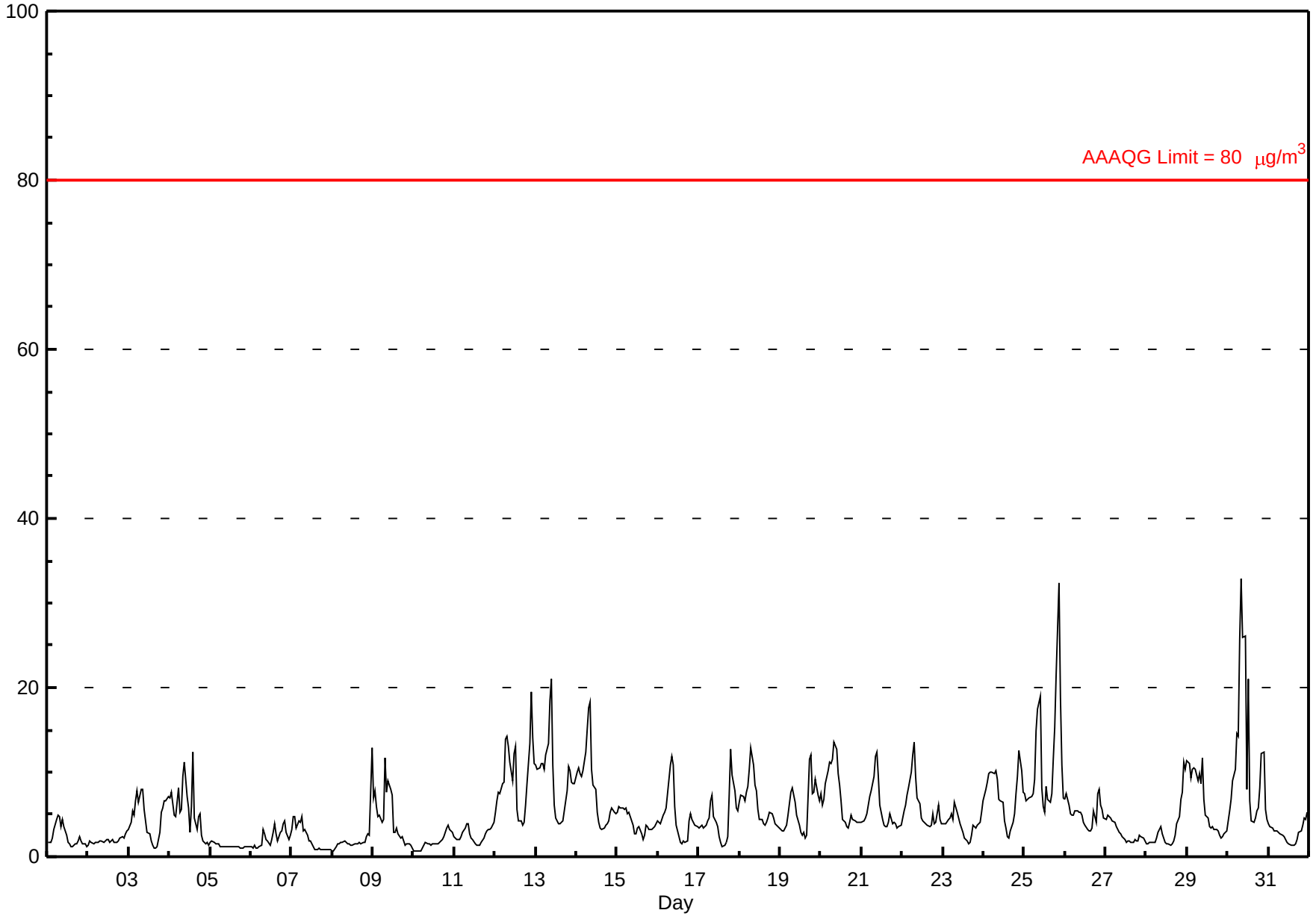
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - October 2013



Hourly Maximums

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

Henry Pirker - October 2013

Maximum Value: 63.3 $\mu g/m^3$ on Oct 30 09:00

Maximum Daily Average: 18.3 $\mu g/m^3$ on Oct 30

Minimum Value: 1 $\mu g/m^3$ on Oct 7 23:00

Minimum Daily Average: 1.5 $\mu g/m^3$ on Oct 5

Maximum Diurnal Average: 11.6 $\mu g/m^3$ at hour 9

Minimum Diurnal Average: 3.2 $\mu g/m^3$ at hour 16

Monthly Average: 6.59 $\mu g/m^3$

Percentiles: $P_1 = 0.9$ $P_{10} = 1.8$ $Q_1 = 2.6$ Median = 4.6 $Q_3 = 8.0$ $P_{90} = 13.4$ $P_{99} = 41.0$

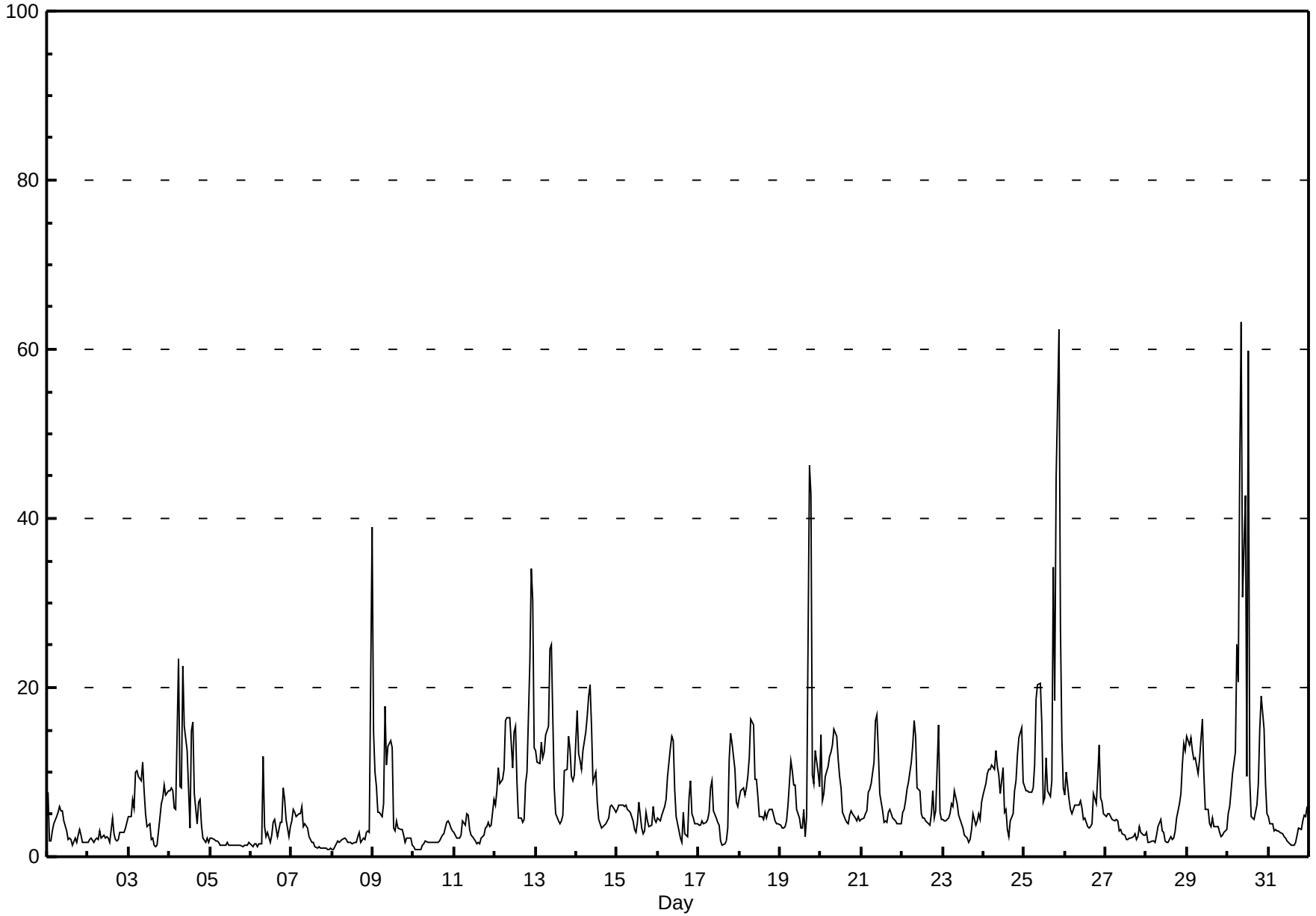
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	8	2	2	3	4	5	5	6	5	5	4	3	2	2	2	1	2	2	3	3	3	2	2	2	3.3	7.6
2-Oct	2	2	2	2	2	2	2	3	2	3	2	2	2	2	5	3	2	2	2	3	3	3	3	4	2.5	4.7
3-Oct	5	5	7	6	10	10	10	9	11	8	5	4	4	2	2	1	1	1	5	6	7	8	7	8	5.9	11.3
4-Oct	8	8	8	6	6	23	8	8	22	15	13	8	3	15	16	7	4	6	7	4	2	2	2	2	8.5	23.4
5-Oct	2	2	2	2	2	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.5	2.1
6-Oct	1	1	2	2	1	2	2	12	4	2	3	2	2	4	4	3	2	4	4	8	7	4	2	3	3.4	11.9
7-Oct	4	6	5	5	5	5	6	4	4	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2.7	5.9
8-Oct	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	3	3	3	39	3.5	38.9
9-Oct	15	10	8	5	5	5	6	18	11	13	14	13	3	3	4	3	3	3	2	2	2	2	2	1	6.5	17.8
10-Oct	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	3	3	4	4	4	3	3	2.0	4.2
11-Oct	3	2	2	2	3	4	4	5	5	3	2	2	2	2	2	2	2	3	3	4	4	4	4	7	3.1	6.8
12-Oct	6	8	11	9	9	10	16	16	16	16	11	15	15	9	5	5	4	4	9	10	23	34	30	13	12.7	34.0
13-Oct	12	11	11	14	12	12	14	15	25	25	16	8	5	4	4	4	5	10	10	14	13	10	9	10	11.4	25.0
14-Oct	17	12	11	10	12	15	17	19	20	15	9	10	6	4	4	3	4	4	4	5	6	6	6	5	9.4	20.4
15-Oct	6	6	6	6	6	6	6	5	5	4	3	3	4	6	3	3	3	5	4	4	4	6	4	4	4.7	6.5
16-Oct	5	4	5	5	6	7	10	13	14	14	8	5	3	2	2	5	3	2	7	9	5	5	4	4	6.1	14.2
17-Oct	4	4	4	4	4	4	5	8	9	5	5	4	4	2	1	2	2	3	11	15	13	10	6	6	5.7	14.6
18-Oct	7	8	8	7	8	9	12	16	16	9	9	7	5	5	4	5	5	5	6	6	5	4	4	4	7.3	16.3
19-Oct	4	3	3	4	4	6	11	10	8	8	6	5	3	3	6	2	5	46	43	10	9	12	10	8	9.6	46.2
20-Oct	14	7	7	9	11	12	12	13	15	14	12	10	8	5	4	4	4	5	5	5	5	4	5	4	8.1	15.2
21-Oct	4	5	5	5	8	8	9	11	16	17	13	7	5	4	4	4	5	6	5	4	4	4	4	4	6.7	16.9
22-Oct	5	6	7	8	9	11	13	16	14	8	8	5	5	5	4	4	4	5	8	5	5	16	5	4	7.5	16.1
23-Oct	4	4	4	5	5	6	6	8	6	5	4	4	3	3	2	2	2	3	5	4	4	5	4	7	4.4	7.7
24-Oct	7	9	10	10	10	11	10	12	11	10	7	11	5	6	3	2	4	5	8	9	12	14	15	9	8.8	15.3
25-Oct	8	8	8	8	8	8	11	19	20	21	16	6	7	12	8	7	9	34	18	45	62	27	14	8	16.3	62.4
26-Oct	7	10	7	6	5	6	6	6	6	7	6	4	5	4	3	3	4	7	6	9	13	7	6	5	6.2	13.2
27-Oct	5	5	5	5	4	4	4	4	3	3	3	2	2	2	2	2	2	3	2	2	3	3	3	3	3.2	5.1
28-Oct	3	2	2	2	2	2	3	4	4	3	3	2	2	2	2	2	2	3	5	6	7	11	13	13	4.1	13.5
29-Oct	14	13	14	13	12	12	10	12	14	16	10	6	6	4	4	5	4	3	4	3	2	3	3	3	7.8	16.3
30-Oct	5	6	8	10	12	25	21	45	63	31	43	10	60	9	5	4	5	6	9	15	19	15	9	5	18.3	63.3
31-Oct	5	4	4	3	3	3	3	3	3	2	2	2	2	1	1	1	2	2	3	3	4	5	5	6	3.1	5.9
	6.2	5.6	5.8	5.7	6.1	7.7	7.9	10.5	11.6	9.4	7.8	5.3	5.8	4.1	3.7	3.2	3.3	6.2	6.6	7.1	8.3	7.6	6.2	6.3	Diurnal Average	
	17.3	13.2	14.1	13.6	12.5	25.0	20.8	45.5	63.3	30.6	42.7	14.7	59.8	14.9	15.9	7.5	9.0	46.2	42.9	45.0	62.4	34.0	30.3	38.9	Diurnal Maximum	

Hourly Maximums

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

Henry Pirker - October 2013

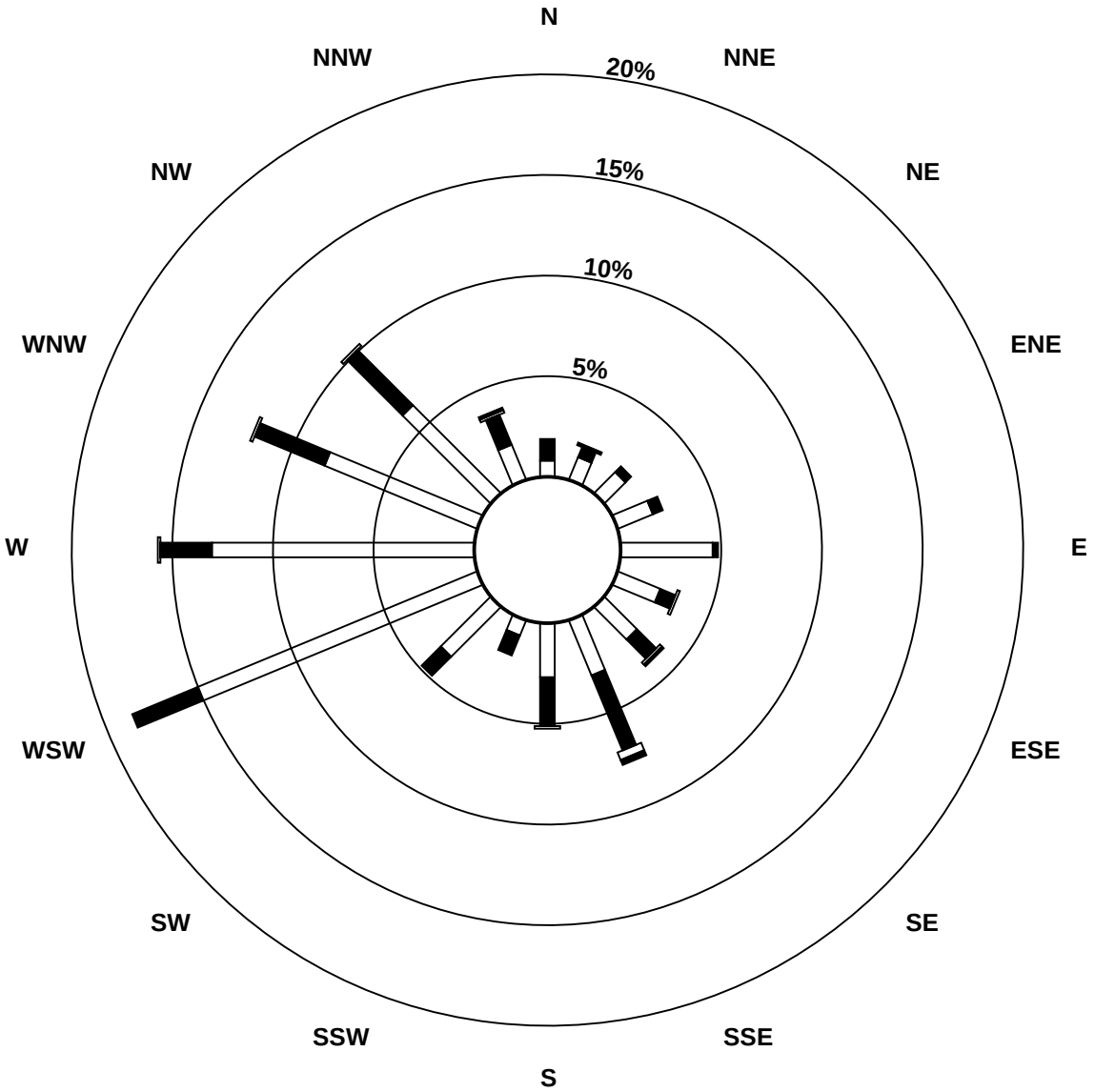


Peace Airshed Zone Association

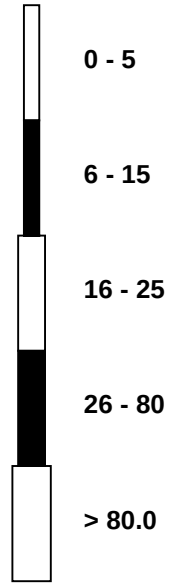
Pollutant Rose

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

Henry Pirker - October 2013



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



Hourly Averages

External Temperature (ET) - °C

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 19.6 °C on Oct 24 15:00 Maximum Daily Average: 11.3 °C on Oct 21

Minimum Value: -5 °C on Oct 12 07:00 Minimum Daily Average: -1.0 °C on Oct 28
Maximum Diurnal Average: 11.2 °C at hour 15 Minimum Diurnal Average: 2.2 °C at hour 7
Monthly Average: 6.09 °C Percentiles: P_1 = -3.6 P_{10} = -0.6 Q_1 = 2.6 Median = 6.1 Q_3 = 9.4 P_{90} = 12.1 P_{99} = 16.9

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

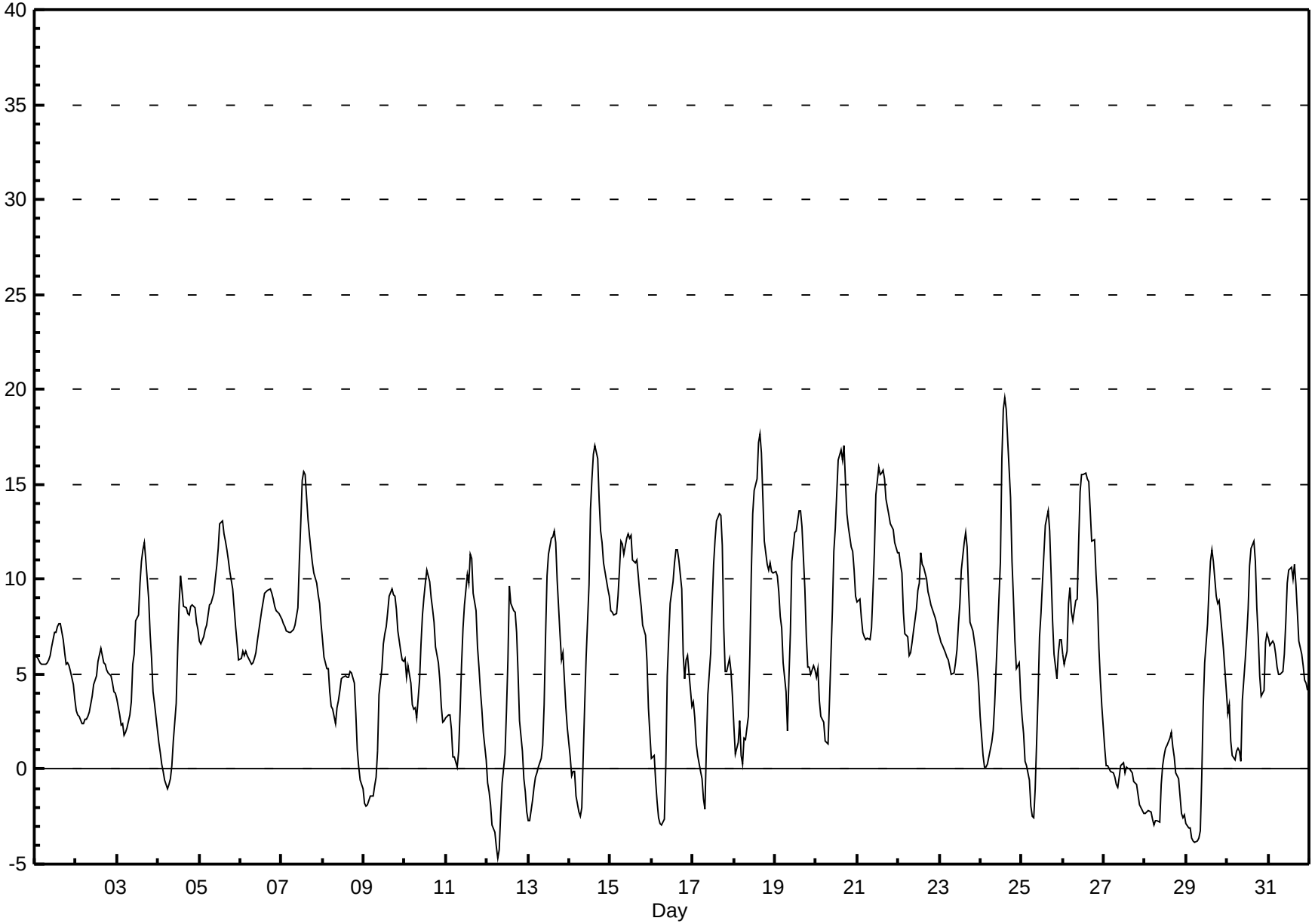
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	6	6	6	6	6	6	6	6	6	6	6	7	7	7	8	8	7	6	6	6	5	5	4	4	6.0	7.7
2-Oct	3	3	3	2	2	3	3	3	3	4	4	5	5	6	6	6	6	6	5	5	5	5	4	4	4.1	6.4
3-Oct	4	3	2	2	2	2	2	3	4	6	6	8	8	10	11	12	12	11	9	7	6	4	3	2	5.7	11.9
4-Oct	1	1	0	0	-1	-1	-1	0	0	1	3	6	9	10	9	9	8	8	8	9	9	9	8	7	4.7	10.2
5-Oct	7	7	7	7	8	8	9	9	9	10	11	12	13	13	12	12	12	11	10	10	9	7	7	6	9.3	13.1
6-Oct	6	6	6	6	6	6	6	6	6	6	7	8	8	9	9	9	9	9	9	9	9	8	8	8	7.5	9.5
7-Oct	8	8	7	7	7	7	7	7	8	8	11	13	15	16	16	13	12	12	11	10	10	9	9	8	10.0	15.7
8-Oct	7	6	5	5	4	3	3	2	3	4	4	5	5	5	5	5	5	5	5	3	1	0	-1	-1	3.7	6.8
9-Oct	-2	-2	-2	-2	-1	-1	-1	0	1	4	5	7	7	7	8	9	9	9	9	8	7	6	6	6	4.1	9.5
10-Oct	6	5	5	5	3	3	3	3	5	7	8	9	10	10	10	9	8	8	6	6	5	3	2	3	5.9	10.5
11-Oct	3	3	3	2	1	1	0	1	3	6	7	9	10	10	11	11	9	8	6	5	4	3	2	0	5.0	11.3
12-Oct	-1	-1	-2	-3	-3	-4	-5	-4	-2	-1	1	3	6	10	9	8	8	7	5	3	1	-1	-1	-2	1.3	9.6
13-Oct	-3	-3	-2	-1	0	0	0	1	1	3	7	10	11	12	12	13	12	10	7	6	6	5	3	2	4.7	12.6
14-Oct	1	0	0	0	-1	-2	-2	-2	1	3	6	10	14	15	17	17	16	14	13	12	11	10	9	9	7.0	17.0
15-Oct	8	8	8	8	9	10	12	12	11	12	12	12	12	11	11	11	10	9	9	8	7	6	3	2	9.3	12.4
16-Oct	1	1	-1	-2	-3	-3	-3	-3	0	5	7	9	10	11	12	12	11	10	6	5	6	6	5	3	4.3	11.5
17-Oct	4	3	1	1	0	0	-2	-2	1	4	6	9	11	12	13	13	13	12	7	5	5	6	5	4	5.5	13.5
18-Oct	2	1	1	3	1	0	2	2	3	6	10	13	15	15	17	18	17	14	12	11	11	11	10	10	8.5	17.7
19-Oct	10	10	9	8	7	6	4	2	5	7	11	12	13	13	14	14	13	10	7	5	5	5	5	5	8.4	13.6
20-Oct	5	5	4	3	3	1	1	1	4	8	11	13	14	16	17	16	17	15	13	13	12	12	11	9	9.3	17.0
21-Oct	9	9	8	7	7	7	7	7	7	9	11	14	16	16	16	16	15	14	13	13	13	13	12	11	11.3	15.9
22-Oct	11	11	10	8	7	7	6	6	7	7	8	9	10	11	11	11	10	9	9	9	8	8	8	7	8.7	11.4
23-Oct	7	7	6	6	6	6	5	5	5	6	6	8	9	10	12	12	12	9	8	7	7	6	5	4	7.3	12.5
24-Oct	3	1	0	0	0	1	1	2	3	5	7	11	16	19	20	19	17	14	11	9	7	5	6	4	7.6	19.6
25-Oct	3	2	0	0	-1	-2	-2	-3	-1	4	7	8	10	11	13	14	13	10	8	6	5	6	7	7	5.2	13.6
26-Oct	6	6	6	9	10	8	8	9	9	12	15	16	16	16	15	15	14	12	12	10	9	6	5	3	10.2	15.6
27-Oct	1	0	0	0	0	0	0	-1	-1	0	0	0	0	0	0	0	0	-1	-1	-1	-1	-2	-2	-2	-0.5	1.1
28-Oct	-2	-2	-2	-2	-3	-3	-3	-3	-3	-1	0	1	1	1	2	2	1	1	0	-1	-1	-2	-3	-2	-1.0	1.9
29-Oct	-3	-3	-3	-4	-4	-4	-4	-4	-3	0	3	6	8	9	11	12	11	9	9	9	8	7	6	4	3.4	11.5
30-Oct	3	3	1	1	0	1	1	1	0	4	6	7	8	11	12	12	11	8	7	5	4	4	7	7	5.2	12.0
31-Oct	7	6	7	7	6	5	5	5	5	6	8	10	10	11	10	11	10	8	7	6	5	5	5	4	7.0	10.8
	3.9	3.5	3.1	2.9	2.5	2.2	2.2	2.2	3.2	5.2	7.0	8.6	9.9	10.8	11.2	11.2	10.6	9.3	8.0	7.0	6.3	5.7	5.1	4.4	Diurnal Average	
	11.4	10.8	10.3	8.7	9.6	10.5	12.0	11.8	11.3	12.1	14.6	15.5	16.3	18.9	19.6	18.9	17.3	15.2	13.5	12.9	12.8	12.6	12.0	11.4	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - October 2013



Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 91.3 % on Oct 7 07:00

Maximum Daily Average: 85.5 % on Oct 6

Minimum Value: 24 % on Oct 24 15:00

Minimum Daily Average: 46.2 % on Oct 26

Maximum Diurnal Average: 77.1 % at hour 8

Minimum Diurnal Average: 48.7 % at hour 15

Monthly Average: 65.05 %

Percentiles: P_1 = 32.0 P_{10} = 44.0 Q_1 = 53.3 Median = 65.9 Q_3 = 77.8 P_{90} = 85.9 P_{99} = 91.1

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

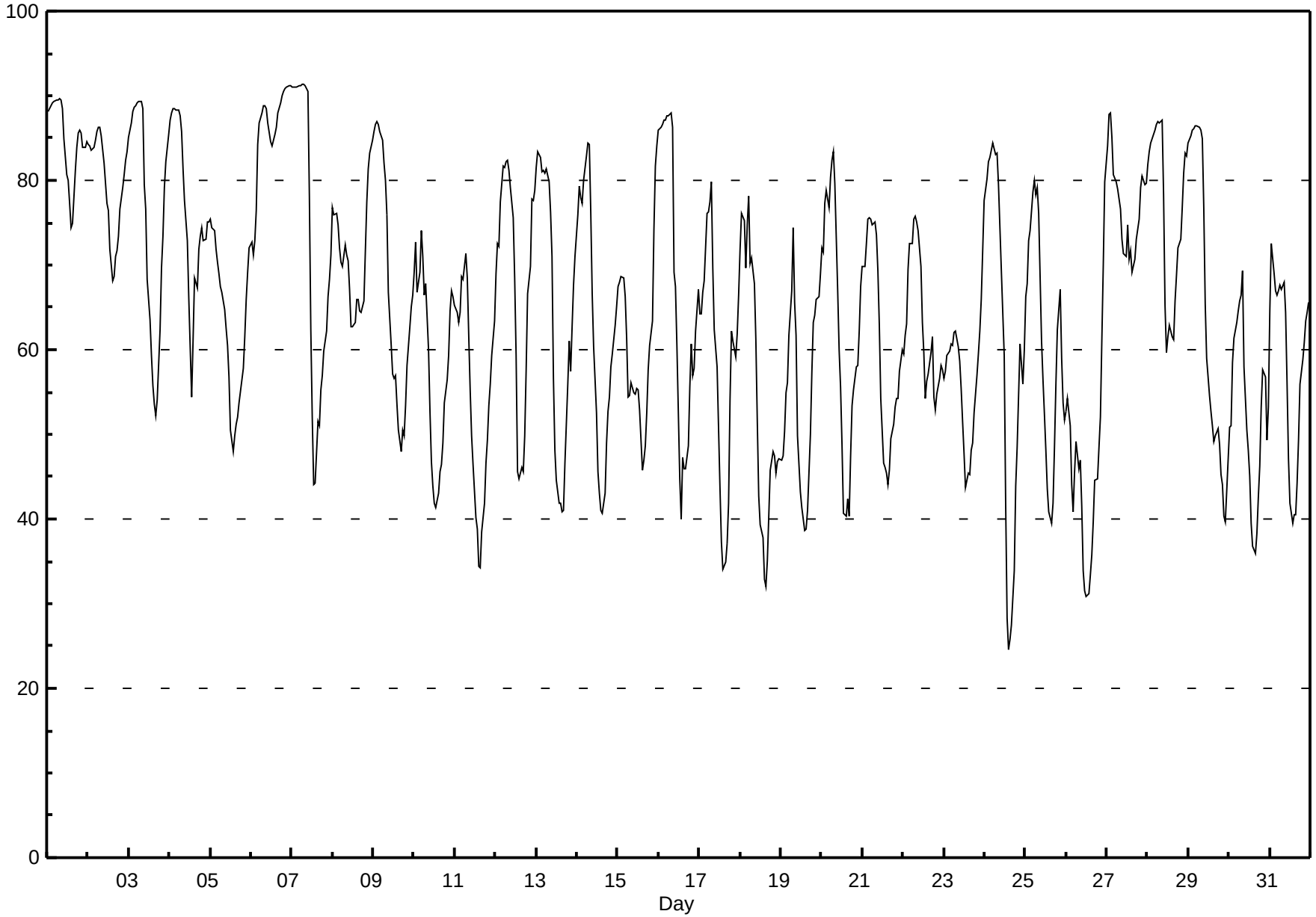
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	88	89	89	89	89	89	90	90	90	88	85	81	80	77	74	75	81	84	86	86	86	84	84	85	84.9	89.6
2-Oct	84	84	83	84	85	86	86	86	85	82	80	77	76	72	68	69	71	72	73	77	79	81	82	83	79.4	86.2
3-Oct	85	87	88	89	89	89	89	89	88	80	77	68	64	59	56	54	52	54	62	70	73	79	82	85	75.4	89.3
4-Oct	87	88	88	88	88	88	88	86	81	78	73	66	60	54	61	68	67	72	73	74	73	73	75	75	76.1	88.4
5-Oct	75	74	74	72	70	69	67	67	65	62	61	57	51	48	50	51	52	54	55	58	62	66	69	72	62.5	75.4
6-Oct	73	71	73	76	84	87	88	89	89	88	87	85	84	85	85	86	88	89	90	91	91	91	91	91	85.5	91.1
7-Oct	91	91	91	91	91	91	91	91	91	91	78	62	52	44	44	51	51	55	57	60	62	66	68	71	72.3	91.3
8-Oct	77	76	76	75	72	70	70	72	71	71	67	63	63	63	66	66	65	64	66	72	77	81	83	85	71.3	84.8
9-Oct	86	87	87	87	86	85	82	80	76	67	61	57	57	57	54	51	48	51	50	53	58	63	65	66	67.1	86.9
10-Oct	69	73	67	69	74	71	67	68	60	53	47	44	42	41	43	46	46	49	54	56	59	64	67	66	58.1	74.1
11-Oct	65	64	63	64	69	68	71	68	62	55	50	46	40	39	34	34	39	42	47	49	53	56	59	63	54.3	71.3
12-Oct	69	73	72	78	82	82	82	82	81	79	76	68	59	46	45	46	46	50	58	67	70	78	78	79	68.4	82.3
13-Oct	82	83	83	81	81	81	81	80	76	71	57	48	45	42	42	41	41	47	56	61	57	63	68	71	64.0	83.4
14-Oct	76	79	78	77	80	83	84	84	76	67	60	53	46	43	41	41	43	49	53	54	58	60	63	65	63.0	84.5
15-Oct	68	68	69	69	66	61	54	55	56	55	55	55	55	53	46	47	49	53	58	61	63	74	82	84	60.6	84.0
16-Oct	86	86	87	87	87	88	88	88	86	69	67	61	45	40	47	46	46	49	56	61	57	58	62	67	67.2	87.9
17-Oct	64	64	67	68	76	76	77	80	70	62	58	51	44	37	34	35	37	42	54	62	61	59	62	67	58.6	79.9
18-Oct	72	76	75	70	75	78	70	71	68	61	51	43	39	38	33	32	35	40	46	48	48	45	47	47	54.5	78.1
19-Oct	47	47	50	55	56	62	67	74	66	62	50	43	41	40	39	39	41	50	57	63	64	66	66	69	54.8	74.4
20-Oct	72	72	77	79	77	80	82	83	80	67	60	56	49	41	40	42	40	47	53	55	58	58	62	67	62.5	83.4
21-Oct	70	70	73	75	76	75	75	75	74	69	63	54	47	46	45	44	46	49	51	53	54	54	57	60	60.7	75.6
22-Oct	60	62	63	70	72	73	75	76	75	74	70	63	60	54	56	57	60	62	54	53	55	57	58	58	63.1	75.8
23-Oct	57	58	59	60	61	60	62	62	60	59	55	52	48	44	45	45	48	49	53	57	59	62	66	72	56.4	71.7
24-Oct	78	80	82	83	84	84	83	83	79	74	69	59	42	28	24	26	28	34	44	48	55	61	56	60	60.2	84.3
25-Oct	66	68	73	74	79	80	78	79	76	61	56	52	48	44	41	39	42	48	56	62	67	59	54	52	60.6	80.0
26-Oct	53	54	51	44	41	46	49	46	47	42	34	31	31	31	33	36	40	45	45	49	52	61	70	80	46.2	79.8
27-Oct	84	88	88	85	81	80	79	78	77	73	71	71	75	71	72	69	71	73	74	75	79	81	79	80	77.2	87.9
28-Oct	82	83	84	85	86	87	87	87	87	78	65	60	61	63	61	61	66	69	72	73	77	81	83	83	75.9	87.1
29-Oct	84	85	86	86	86	86	86	86	85	77	65	59	54	53	51	49	50	51	49	45	44	40	40	47	64.4	86.4
30-Oct	51	51	58	61	63	65	66	66	69	58	51	48	45	40	37	36	38	43	46	53	58	57	49	53	52.6	69.3
31-Oct	65	73	69	67	67	67	68	67	68	64	56	47	42	39	41	40	44	49	56	59	61	63	64	66	58.4	72.6
	73.0	74.3	75.0	75.4	76.5	77.0	76.9	77.1	74.7	68.9	63.0	57.4	53.0	49.4	48.7	49.1	50.6	54.3	58.2	61.5	63.6	65.8	67.5	70.0	Diurnal Average	
	91.0	91.0	91.0	91.0	91.2	91.2	91.3	91.3	91.3	90.6	86.9	84.6	84.1	84.8	85.4	86.3	88.0	89.2	90.0	90.6	90.9	91.0	91.1	91.1	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - October 2013



Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 463.1 W/m^2 on Oct 10 14:00

Maximum Daily Average: 108.0 W/m^2 on Oct 3

Minimum Value: 0 W/m^2 on Oct 1 01:00

Minimum Daily Average: 18.8 W/m^2 on Oct 27

Maximum Diurnal Average: 260.1 W/m^2 at hour 13

Minimum Diurnal Average: 0.0 W/m^2 at hour 1

Monthly Average: 65.93 W/m^2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 100.6 P_{90} = 249.7 P_{99} = 406.4

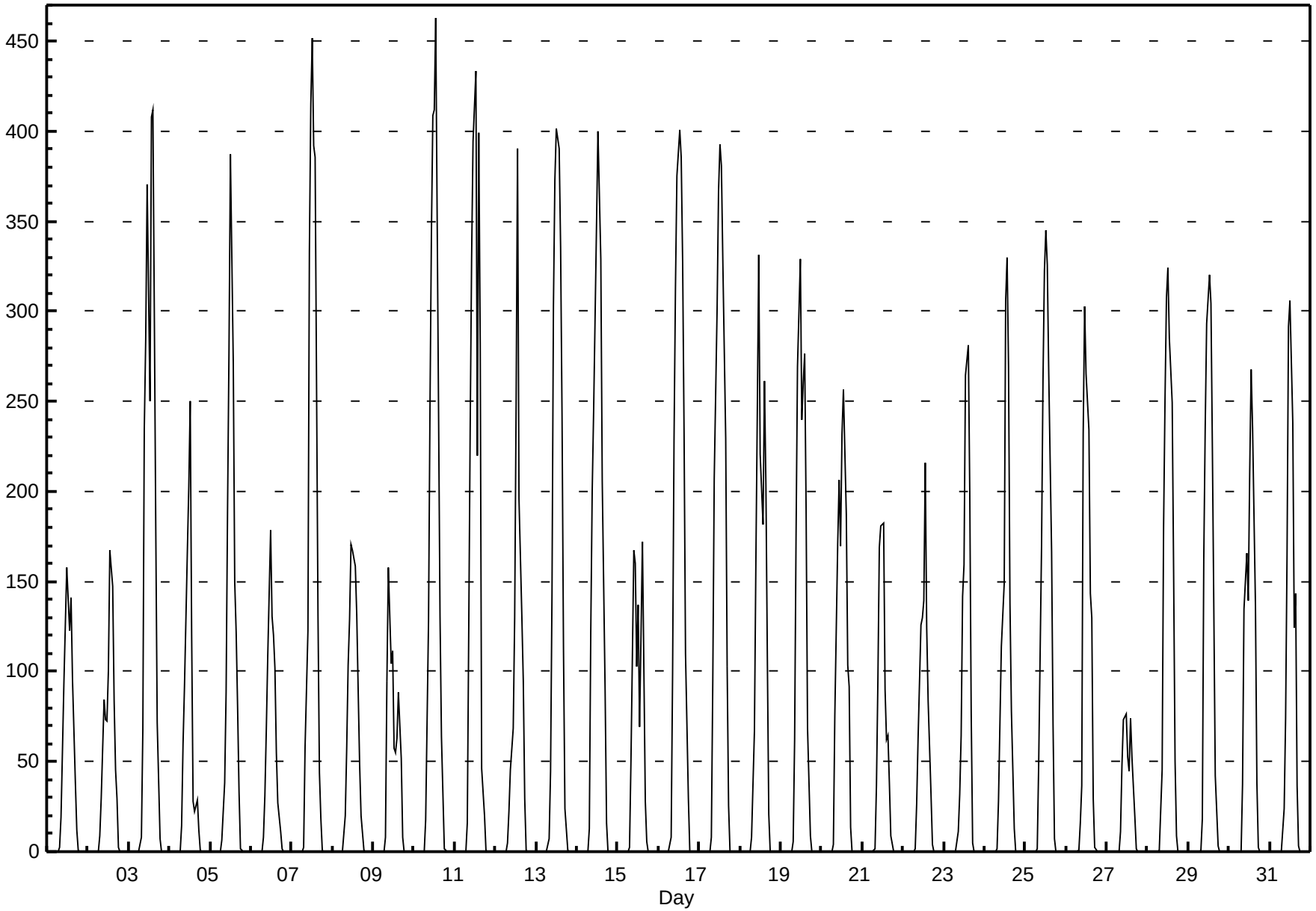
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	0	0	0	0	0	0	0	2	19	56	93	157	140	123	141	96	39	12	1	0	0	0	0	0	36.6	157.4
2-Oct	0	0	0	0	0	0	0	9	29	85	73	73	101	167	147	84	46	29	2	0	0	0	0	0	35.2	166.9
3-Oct	0	0	0	0	0	0	0	8	68	234	285	371	250	408	412	299	180	72	7	0	0	0	0	0	108.0	411.7
4-Oct	0	0	0	0	0	0	0	14	60	92	166	202	250	121	28	22	29	12	1	0	0	0	0	0	41.5	249.8
5-Oct	0	0	0	0	0	0	0	6	38	88	190	277	387	271	150	122	81	33	2	0	0	0	0	0	68.5	386.8
6-Oct	0	0	0	0	0	0	0	8	31	67	108	179	130	120	102	55	27	11	2	0	0	0	0	0	35.1	178.8
7-Oct	0	0	0	0	0	0	0	2	58	123	333	415	452	392	385	132	44	18	1	0	0	0	0	0	98.1	451.6
8-Oct	0	0	0	0	0	0	0	20	57	103	129	171	167	158	132	89	49	20	1	0	0	0	0	0	45.7	170.8
9-Oct	0	0	0	0	0	0	0	8	95	158	105	112	57	55	63	89	51	8	0	0	0	0	0	0	33.3	157.8
10-Oct	0	0	0	0	0	0	0	17	128	246	343	409	412	463	243	131	63	33	1	0	0	0	0	0	103.7	463.1
11-Oct	0	0	0	0	0	0	0	16	122	234	329	395	434	220	399	282	47	20	1	0	0	0	0	0	104.0	433.5
12-Oct	0	0	0	0	0	0	0	5	22	45	68	130	248	391	196	131	94	30	1	0	0	0	0	0	56.7	390.7
13-Oct	0	0	0	0	0	0	0	7	45	143	302	373	401	390	336	241	113	24	1	0	0	0	0	0	99.0	401.3
14-Oct	0	0	0	0	0	0	0	13	122	200	245	347	400	365	329	205	89	16	0	0	0	0	0	0	97.1	399.9
15-Oct	0	0	0	0	0	0	0	2	50	167	160	103	137	69	172	101	28	6	0	0	0	0	0	0	41.5	171.7
16-Oct	0	0	0	0	0	0	0	8	99	229	313	375	400	385	327	232	110	29	0	0	0	0	0	0	104.5	400.4
17-Oct	0	0	0	0	0	0	0	8	95	207	301	366	393	381	327	230	103	26	0	0	0	0	0	0	101.5	392.9
18-Oct	0	0	0	0	0	0	0	8	67	160	244	331	221	182	261	203	107	21	0	0	0	0	0	0	75.2	331.0
19-Oct	0	0	0	0	0	0	0	5	62	175	269	329	239	260	277	190	68	9	0	0	0	0	0	0	78.5	328.7
20-Oct	0	0	0	0	0	0	0	4	76	171	206	170	232	256	187	103	92	14	0	0	0	0	0	0	62.9	256.4
21-Oct	0	0	0	0	0	0	0	2	37	95	169	181	182	90	62	65	38	9	0	0	0	0	0	0	38.7	182.2
22-Oct	0	0	0	0	0	0	0	2	26	63	126	130	140	216	125	84	32	4	0	0	0	0	0	0	39.4	215.6
23-Oct	0	0	0	0	0	0	0	0	11	32	65	142	159	265	281	199	76	4	0	0	0	0	0	0	51.5	281.5
24-Oct	0	0	0	0	0	0	0	2	28	71	114	149	306	329	269	138	78	13	0	0	0	0	0	0	62.4	329.4
25-Oct	0	0	0	0	0	0	0	2	48	170	261	322	345	326	266	166	71	7	0	0	0	0	0	0	82.7	344.6
26-Oct	0	0	0	0	0	0	0	0	16	36	232	303	266	234	144	130	30	2	0	0	0	0	0	0	58.0	302.5
27-Oct	0	0	0	0	0	0	0	0	11	48	74	76	52	44	74	51	19	2	0	0	0	0	0	0	18.8	76.1
28-Oct	0	0	0	0	0	0	0	1	45	180	251	308	324	285	250	154	50	9	0	0	0	0	0	0	77.4	324.0
29-Oct	0	0	0	0	0	0	0	1	18	162	236	293	321	305	223	135	43	3	0	0	0	0	0	0	72.5	320.6
30-Oct	0	0	0	0	0	0	0	0	37	135	166	139	211	268	235	136	38	2	0	0	0	0	0	0	57.0	267.8
31-Oct	0	0	0	0	0	0	0	0	24	74	165	292	306	238	124	144	37	3	0	0	0	0	0	0	58.6	305.7
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	53.1	130.6	197.4	245.7	260.1	250.9	215.1	143.2	63.6	16.1	0.6	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	0.0	0.1	19.6	128.2	245.6	342.7	415.2	451.6	463.1	411.7	298.6	179.7	72.1	7.1	0.0	0.0	0.0	0.0	0.0	Diurnal Maximum	

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - October 2013



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	6	7	6	3	4	3	3	3	1	5	5	6	6	4	1	4	4	5	3	4	4	6	6	7	2.3	7.0
Dir	295	298	327	301	323	339	325	316	334	68	81	66	61	65	230	303	327	323	42	71	60	68	88	72	16.2	298.3
2 Spd	7	6	4	2	1	1	4	4	4	2	2	2	4	4	5	5	7	5	4	6	7	4	3	1	1.7	7.1
Dir	74	90	98	141	175	264	320	314	344	24	301	279	325	354	324	332	334	306	297	267	260	233	169	342	320.4	74.2
3 Spd	3	1	3	2	4	3	0	2	5	7	7	6	5	5	5	3	3	4	6	7	6	4	6	6	3.7	7.5
Dir	139	165	175	158	162	176	262	162	168	185	187	170	179	164	187	200	225	171	129	114	115	124	131	155	159.9	184.7
4 Spd	5	4	6	6	4	3	7	6	8	6	5	3	5	7	3	4	5	4	4	10	8	7	6	9	4.7	9.5
Dir	154	147	141	148	117	98	125	121	136	152	164	168	164	175	135	89	138	196	190	190	173	186	211	227	160.1	190.5
5 Spd	6	8	7	9	10	9	14	14	19	21	22	27	30	30	29	24	25	23	23	18	15	10	5	4	16.5	30.4
Dir	235	241	231	234	238	245	256	257	258	253	252	259	261	258	254	253	250	259	262	260	255	250	260	225	253.7	257.7
6 Spd	4	3	3	4	8	5	4	4	6	8	10	10	7	5	6	8	8	6	7	7	6	7	7	6	4.5	10.4
Dir	237	244	181	245	216	203	160	118	92	92	112	126	151	141	128	135	126	111	96	100	95	91	92	86	125.4	112.4
7 Spd	6	5	5	3	4	3	5	7	7	6	9	12	16	22	24	23	24	25	23	20	18	15	14	13	11.0	25.3
Dir	96	95	105	183	310	224	247	243	221	243	260	259	242	242	272	274	261	256	264	258	259	254	252	304	257.5	256.2
8 Spd	15	19	15	18	23	22	22	19	22	25	26	26	26	23	21	19	20	16	13	10	5	4	3	4	16.7	26.4
Dir	310	313	307	296	303	309	304	294	298	305	305	308	316	312	309	322	308	312	308	296	294	218	232	148	305.8	308.1
9 Spd	4	6	7	7	7	7	5	7	7	9	11	9	8	7	9	9	9	7	10	8	8	3	8	11	5.6	11.0
Dir	144	157	160	165	158	158	148	120	125	147	162	166	169	173	199	202	223	230	225	250	245	294	248	269	189.1	268.6
10 Spd	18	16	17	13	7	15	15	12	14	26	29	28	25	24	22	23	25	23	18	17	17	13	12	11	18.3	29.4
Dir	251	244	248	242	234	239	238	231	238	252	258	264	260	259	257	248	250	248	245	252	251	243	242	245	249.7	258.1
11 Spd	12	12	10	9	9	9	7	9	7	9	12	15	14	14	14	18	17	19	15	12	11	9	6	3	11.0	18.7
Dir	244	241	256	281	303	285	267	265	277	279	268	272	282	267	273	267	263	259	259	261	249	242	245	287	265.2	259.2
12 Spd	4	4	3	2	3	3	3	2	3	2	1	2	4	3	1	4	4	3	3	5	3	3	2	3	2.4	5.1
Dir	269	270	305	302	280	286	285	299	271	306	299	172	192	207	172	312	318	302	323	293	321	283	287	302	286.5	292.6
13 Spd	3	3	2	2	1	1	3	3	3	4	5	6	7	4	4	4	3	6	3	4	7	9	9	6	1.4	9.2
Dir	292	313	335	9	276	297	150	133	136	168	175	246	263	259	25	63	33	114	134	205	238	275	284	289	247.8	274.7
14 Spd	2	3	4	3	3	3	3	3	5	5	5	4	8	14	14	14	15	14	18	20	14	14	11	10	7.4	20.3
Dir	175	179	216	190	152	146	155	155	158	171	176	233	247	254	252	256	248	247	254	259	253	256	272	271	242.6	258.9
15 Spd	8	11	10	14	13	19	26	23	21	14	20	20	16	12	8	7	6	5	9	8	10	8	5	5	10.0	25.7
Dir	266	249	239	245	252	251	256	265	271	286	301	289	322	6	37	358	7	285	284	285	271	296	288	314	280.6	256.4
16 Spd	5	6	3	2	3	2	4	4	1	3	7	9	9	8	11	15	15	10	7	4	8	10	11	8	6.1	15.2
Dir	290	293	280	342	338	282	242	244	313	275	259	239	215	219	264	288	291	283	292	301	266	256	257	278	269.5	288.0
17 Spd	15	12	10	10	7	7	4	4	6	10	13	12	13	13	13	12	10	6	3	3	6	9	8	6	7.6	14.5
Dir	313	308	310	313	329	340	317	299	248	261	248	255	255	249	253	272	279	286	220	228	242	260	276	246	275.9	312.8
18 Spd	4	3	6	3	2	4	3	5	6	4	6	13	17	12	16	24	24	20	21	21	22	23	19	20	11.7	24.4
Dir	305	301	248	263	352	245	268	332	328	318	258	256	281	313	286	276	271	256	256	256	256	261	275	273	271.5	276.0
19 Spd	18	15	11	11	8	6	2	4	5	12	19	19	21	19	20	19	13	9	1	2	5	2	3	3	9.5	21.0
Dir	273	279	292	285	298	289	15	6	307	313	317	308	308	304	309	307	299	300	303	244	229	212	247	275	298.6	307.6
20 Spd	2	5	3	4	3	3	4	3	2	2	12	10	14	21	19	13	13	13	14	14	11	13	10	5	8.4	21.2
Dir	351	309	292	292	315	319	300	294	255	242	270	264	276	296	293	299	293	263	254	262	265	264	270	241	278.5	296.1
21 Spd	7	4	5	5	4	6	4	2	4	2	4	7	14	17	14	13	11	9	11	10	12	12	10	9	7.4	17.0
Dir	274	294	312	294	313	309	333	302	346	1	355	323	283	274	267	266	257	255	288	274	253	253	254	246	277.5	273.8
22 Spd	9	7	6	3	6	9	8	11	7	6	4	1	2	3	2	2	2	2	5	5	5	4	5	7	1.8	10.9
Dir	253	242	255	300	332	340	330	351	12	28	39	95	246	269	309	266	294	316	81	84	102	106	95	86	348.9	350.7

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
23 Spd	7	7	6	7	6	6	5	6	7	8	10	12	12	12	12	11	12	9	9	11	9	9	6	5	8.1	12.4
Dir	95	79	61	72	63	71	80	73	85	80	93	95	106	115	119	109	108	90	87	95	88	95	79	80	92.2	119.3
24 Spd	3	3	3	1	2	3	4	4	6	6	5	7	13	28	29	21	13	10	7	6	4	3	5	6	6.8	28.9
Dir	296	311	282	236	224	217	206	205	214	256	204	258	270	276	294	288	299	294	316	325	303	311	341	323	282.2	294.5
25 Spd	2	4	1	5	4	4	3	3	1	1	6	8	7	7	4	2	3	3	1	1	2	6	8	8	0.5	8.4
Dir	338	298	313	11	356	308	325	265	337	266	118	129	144	183	183	191	160	99	156	121	338	324	304	309	283.9	128.7
26 Spd	6	10	11	13	13	7	6	10	10	16	27	31	28	27	25	23	17	9	16	5	8	13	14	14	10.5	30.6
Dir	324	328	321	274	257	264	252	231	243	279	277	274	275	273	274	279	292	296	291	46	63	59	63	49	285.7	274.3
27 Spd	14	13	16	18	13	9	8	7	2	1	4	5	8	8	8	8	4	2	4	2	9	9	9	8	5.6	18.0
Dir	40	51	39	34	33	26	20	20	21	42	48	331	295	333	352	10	41	46	294	17	107	114	118	119	36.1	34.1
28 Spd	6	6	6	6	6	4	3	5	6	10	14	15	13	13	12	12	8	6	7	5	1	0	4	4	6.9	14.6
Dir	128	135	132	141	137	156	161	154	126	152	166	173	161	161	168	172	175	164	161	161	336	143	169	161	158.1	172.9
29 Spd	4	4	1	2	4	6	4	4	4	5	4	6	9	13	13	15	13	14	16	23	22	24	17	8	8.0	23.6
Dir	169	186	216	169	155	168	162	152	151	173	187	216	225	246	255	253	261	259	264	255	259	259	270	301	245.2	259.5
30 Spd	7	7	3	3	2	0	2	1	4	5	5	6	8	9	15	15	10	8	6	4	3	4	7	9	4.2	15.1
Dir	284	281	315	323	262	53	258	25	142	155	152	169	173	231	252	252	235	251	259	305	151	203	238	251	238.9	252.5
31 Spd	17	30	26	24	19	16	19	20	21	22	23	27	33	30	25	27	27	26	21	21	18	13	11	10	21.4	33.1
Dir	251	260	252	256	266	262	256	255	256	261	264	272	278	279	281	273	262	257	252	250	245	229	224	243	260.6	278.2
Spd	3.5	4.2	3.3	3.5	3.1	3.4	3.7	3.3	3.2	4.1	5.6	7.3	8.6	9.2	9.4	9.3	8.5	7.7	6.9	6.1	5.6	5.0	4.1	3.3	Diurnal Average	
Dir	273.8	273.7	271.5	271.0	279.8	272.6	265.5	264.1	254.1	259.6	257.7	261.2	265.2	266.0	271.4	272.8	268.3	262.2	262.2	257.2	249.5	250.6	254.6	269.1		
Spd	18.2	29.9	25.7	24.1	23.2	22.4	25.7	23.4	21.7	25.7	29.4	30.6	33.1	30.4	28.9	26.5	27.3	26.5	23.1	22.9	22.3	23.6	19.1	20.0	Diurnal Maximum	
Dir	251.3	259.9	252.1	255.8	302.7	309.1	256.4	264.8	298.1	252.0	258.1	274.3	278.2	257.7	254.4	273.1	262.0	257.2	262.2	255.2	256.3	259.5	274.6	272.7		

Maximum Speed Value: 33 km/h on Oct 31 13:00
Maximum Daily Speed Average: 21.4 km/h on Oct 31
Maximum Diurnal Speed Average: 9.4 km/h at hour 15

Minimum Speed Value: 0 km/h on Oct 30 06:00
Minimum Daily Speed Average: 0.5 km/h on Oct 12
Minimum Diurnal Speed Average: 3.1 km/h at hour 5

Monthly Average Velocity: 5.45 km/h 264.63 deg

Speed Percentiles: P_1 = 0.8 P_{10} = 2.7 Q_1 = 3.9 Median = 7.1 Q_3 = 12.9 P_{90} = 20.3 P_{99} = 29.3

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Frequency Distribution

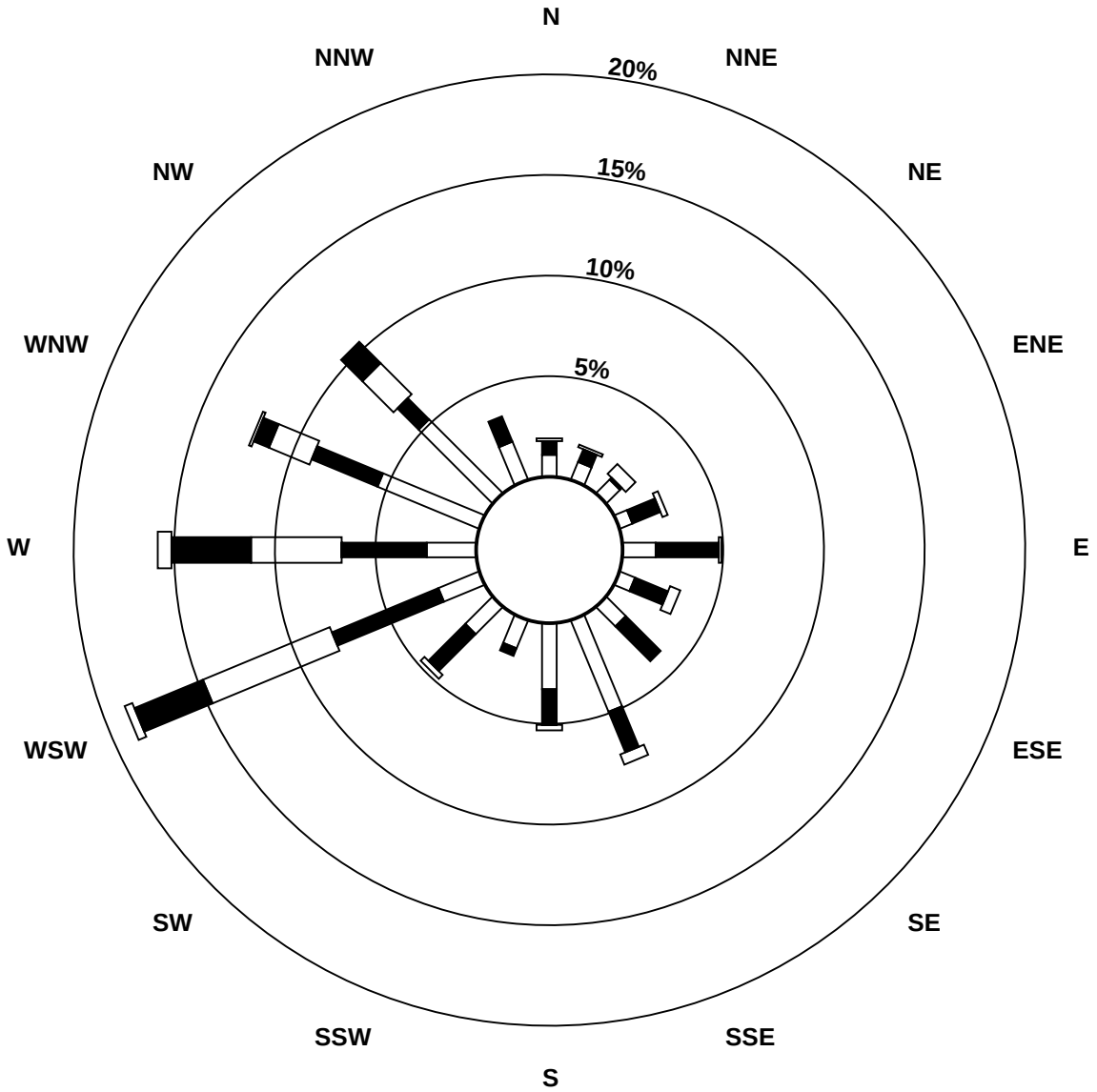
Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	20	11	1	0	0	0	32
NorthEast	14	9	8	0	0	0	31
East	13	36	4	0	0	0	53
SouthEast	29	38	2	0	0	0	69
South	41	29	6	0	0	0	76
SouthWest	33	43	18	1	0	0	95
West	35	62	78	59	8	0	242
NorthWest	70	37	18	20	1	0	146
Total	255	265	135	80	9	0	744

Peace Airshed Zone Association

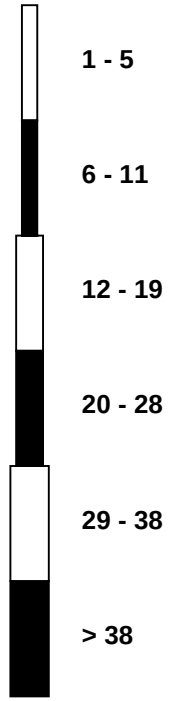
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - October 2013



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - October 2013

Maximum Speed: 33 km/h on Oct 31 13:00

Maximum Daily Speed Average: 22.1 km/h on Oct 31

Minimum Speed: 1 km/h on Oct 28 22:00

Minimum Daily Speed Average: 3.6 km/h on Oct 12

Maximum Diurnal Speed Average: 14.1 km/h at hour 14

Minimum Diurnal Speed Average: 6.8 km/h at hour 6

Monthly Average Speed: 9.61 km/h

Percentiles: P_1 = 2.0 P_{10} = 3.2 Q_1 = 4.6 Median = 7.3 Q_3 = 13.2 P_{90} = 20.5 P_{99} = 29.5

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	7	7	6	3	4	4	3	4	3	5	5	6	6	5	3	4	4	5	4	4	4	6	6	7	4.8	7.1
2-Oct	7	6	4	2	2	2	4	4	5	3	3	3	5	4	5	6	7	5	4	6	7	5	4	3	4.4	7.3
3-Oct	4	2	3	2	4	3	3	3	5	8	7	7	6	7	7	5	6	4	6	7	6	4	6	6	5.1	8.0
4-Oct	5	5	6	6	4	4	7	6	8	6	5	4	6	7	5	5	6	5	6	10	8	7	6	9	6.0	9.7
5-Oct	7	8	8	9	10	9	14	14	19	21	22	28	30	31	29	24	25	23	23	18	15	10	7	5	17.0	30.7
6-Oct	4	3	3	6	8	5	4	4	6	9	11	10	7	6	6	8	8	6	7	7	7	7	7	6	6.5	10.7
7-Oct	6	5	5	4	7	5	6	8	8	7	10	12	17	23	24	23	25	26	23	20	18	15	14	13	13.4	25.6
8-Oct	15	19	16	18	24	23	23	20	22	25	26	27	26	23	21	20	20	16	14	10	5	4	3	4	17.6	26.8
9-Oct	4	6	7	7	7	7	5	7	7	9	11	9	8	7	10	9	9	8	10	10	9	6	9	13	8.2	12.5
10-Oct	18	16	17	13	8	16	16	12	15	26	30	28	26	25	23	23	26	23	18	17	17	13	12	11	18.7	29.7
11-Oct	12	13	11	9	9	9	7	9	8	9	12	15	15	15	15	19	17	19	16	13	11	10	6	4	11.7	18.8
12-Oct	4	4	3	3	3	3	4	3	3	2	2	2	4	5	4	7	5	3	4	5	3	4	3	3	3.6	7.3
13-Oct	3	3	2	2	2	2	3	3	3	4	6	6	8	6	6	5	4	6	4	5	7	9	9	6	4.7	9.5
14-Oct	2	4	5	3	3	3	3	3	5	5	6	4	9	15	14	14	15	14	19	20	14	14	11	10	9.0	20.4
15-Oct	8	11	11	14	13	19	26	24	21	14	20	20	16	13	8	8	6	6	9	9	10	8	5	5	12.6	25.9
16-Oct	5	6	3	3	3	3	4	4	2	3	7	9	10	9	12	16	15	10	7	4	8	10	11	9	7.2	15.7
17-Oct	15	12	10	10	7	7	5	5	6	10	13	13	13	13	13	12	10	6	3	3	7	9	8	6	9.0	14.6
18-Oct	4	3	6	4	3	5	4	5	7	5	7	14	17	12	17	25	24	21	21	21	22	23	19	20	12.8	24.6
19-Oct	18	15	11	11	8	6	3	4	5	12	19	19	21	20	20	19	13	9	2	3	5	3	4	4	10.6	21.3
20-Oct	3	6	3	4	3	3	4	3	3	3	12	11	14	21	19	13	13	13	14	14	11	14	10	6	9.2	21.4
21-Oct	7	6	5	5	5	6	4	3	4	3	4	7	14	17	14	13	11	9	12	10	12	12	10	9	8.6	17.1
22-Oct	9	7	6	4	6	9	8	11	7	6	5	3	3	4	3	3	3	3	5	5	5	4	5	7	5.5	11.1
23-Oct	7	7	6	7	6	6	5	6	8	8	10	12	12	12	13	11	12	9	9	11	9	9	6	5	8.5	12.6
24-Oct	4	3	3	2	3	3	5	5	7	7	7	8	14	28	29	21	13	11	8	7	4	4	6	6	8.7	29.1
25-Oct	4	4	3	5	4	4	3	3	2	3	6	9	8	8	4	3	3	3	4	3	3	6	9	8	4.7	8.8
26-Oct	7	10	11	15	13	8	6	10	10	16	28	31	28	27	26	23	17	10	16	6	8	13	14	14	15.2	30.8
27-Oct	14	14	16	18	13	10	8	7	2	1	4	6	8	9	8	8	4	4	4	5	9	9	9	8	8.3	18.3
28-Oct	6	6	6	6	6	4	4	5	6	10	14	15	14	13	12	13	9	6	7	5	3	1	4	4	7.4	14.9
29-Oct	4	4	2	3	4	6	4	4	4	5	5	6	9	13	14	16	13	14	16	23	22	24	18	9	10.0	23.7
30-Oct	8	8	4	5	3	3	3	3	5	5	5	6	8	10	15	15	10	8	7	5	4	5	7	9	6.8	15.4
31-Oct	18	30	26	24	19	16	19	20	21	22	23	27	33	30	25	27	28	27	21	21	18	13	11	10	22.1	33.4
	7.7	8.1	7.3	7.4	6.9	6.8	7.0	7.1	7.6	8.8	11.1	12.2	13.4	14.1	13.7	13.5	12.2	10.7	10.5	9.9	9.4	9.1	8.4	7.7	Diurnal Average	
	18.5	30.1	25.8	24.2	23.6	22.6	25.9	23.7	21.9	25.9	29.7	30.8	33.4	30.7	29.1	27.1	27.5	26.6	23.3	23.1	22.4	23.7	19.3	20.4	Diurnal Maximum	

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - October 2013

Maximum Value: 95.3 deg on Oct 30 06:00

Minimum Value: 4.7 deg on Oct 9 04:00

Percentiles: P_1 = 5.3 P_{10} = 7.4 Q_1 = 9.1 Median = 13.6 Q_3 = 25.1 P_{90} = 47.0 P_{99} = 85.4

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Oct	12	9	14	15	17	13	16	20	60	22	17	19	21	28	77	36	43	19	44	19	21	17	16	14	77.4
2-Oct	12	16	41	32	24	59	8	10	30	50	40	52	24	34	24	30	14	20	9	19	13	20	19	84	83.5
3-Oct	30	82	12	32	13	28	93	58	18	21	26	39	54	61	56	66	62	21	21	5	7	14	8	8	92.9
4-Oct	12	26	7	12	24	48	12	17	13	23	19	70	27	12	44	35	36	39	61	11	11	52	24	8	69.7
5-Oct	24	15	13	10	10	18	9	8	8	10	9	7	9	8	7	9	7	10	7	7	8	12	78	38	78.5
6-Oct	28	31	28	49	11	18	11	21	11	10	14	15	17	21	17	15	11	13	11	10	13	12	9	12	49.4
7-Oct	9	14	16	57	69	72	36	20	19	27	26	12	15	17	11	8	8	8	7	8	8	8	9	15	71.7
8-Oct	8	8	9	8	10	8	9	7	8	8	9	9	8	9	9	16	10	8	9	8	26	20	41	23	40.7
9-Oct	13	11	7	5	6	14	12	13	20	12	10	10	9	9	12	11	13	23	14	34	27	65	33	30	64.7
10-Oct	10	9	9	11	26	9	9	10	8	8	8	10	11	12	13	10	8	8	7	8	9	6	7	8	26.5
11-Oct	9	8	16	26	21	13	7	8	14	13	14	14	17	15	19	14	9	7	11	9	11	9	12	39	39.2
12-Oct	29	14	20	17	11	14	16	28	18	26	67	70	38	52	76	78	27	18	27	9	46	18	77	10	77.9
13-Oct	19	21	34	50	46	51	20	13	18	14	30	32	25	51	53	57	44	12	47	36	12	14	8	20	56.8
14-Oct	60	21	15	16	25	19	12	8	5	9	16	34	45	10	14	11	8	8	7	6	7	6	18	13	59.5
15-Oct	15	11	11	10	7	9	6	8	7	8	12	7	8	26	25	19	17	28	14	13	16	24	13	12	28.4
16-Oct	20	7	20	37	11	43	11	18	78	36	18	19	23	23	25	15	8	10	5	31	11	11	7	26	78.3
17-Oct	5	5	5	6	7	8	25	58	16	10	9	10	14	13	14	15	11	10	23	28	10	8	11	10	58.5
18-Oct	17	15	11	36	41	14	46	13	15	17	31	13	13	13	12	8	9	7	6	6	5	8	8	12	46.2
19-Oct	9	11	9	7	13	18	47	13	27	10	5	9	8	11	9	9	8	9	90	67	16	57	20	37	89.7
20-Oct	63	27	29	15	22	35	20	31	35	54	8	12	9	8	7	8	11	11	9	7	8	7	7	23	62.6
21-Oct	15	41	36	11	37	8	14	47	19	30	22	19	14	8	9	7	12	15	18	11	13	8	10	9	46.8
22-Oct	8	8	12	34	9	7	9	13	33	24	39	82	65	49	52	63	29	47	13	13	14	21	18	11	82.3
23-Oct	15	13	18	13	14	15	19	14	11	11	10	9	10	13	11	13	9	9	8	7	8	7	9	14	19.2
24-Oct	65	26	20	59	53	43	38	54	24	31	63	38	31	9	7	10	9	12	16	19	33	48	46	23	65.5
25-Oct	61	28	70	14	20	15	8	30	79	64	17	18	21	26	35	44	32	32	85	83	69	17	14	11	85.4
26-Oct	17	9	14	24	6	22	19	8	10	21	6	7	7	7	6	7	5	11	20	38	19	14	12	22	38.2
27-Oct	12	11	13	10	10	10	9	10	13	21	29	41	11	18	17	21	37	74	15	71	12	12	11	12	74.3
28-Oct	15	10	11	9	9	26	23	16	12	10	9	11	13	14	14	14	13	11	5	11	87	85	17	18	87.4
29-Oct	12	23	73	52	19	8	9	9	20	12	27	26	14	9	8	6	10	8	11	7	7	5	12	19	73.3
30-Oct	19	27	37	48	72	95	41	86	24	12	18	13	14	25	13	9	12	24	44	36	68	30	13	10	95.3
31-Oct	15	7	6	6	9	12	5	5	6	7	7	8	7	7	8	12	7	6	7	6	7	12	8	9	15.1
	65.5	82.0	73.3	58.7	72.0	95.3	92.9	86.4	79.1	63.8	66.9	82.3	65.3	61.2	77.4	77.9	62.3	74.3	89.7	82.8	87.4	85.4	78.5	83.5	

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.0 ppb on Oct 19 11:00 Maximum Daily Average: 0.2 ppb on Oct 19

Minimum Value: 0 ppb on Oct 1 15:00 Minimum Daily Average: 0.0 ppb on Oct 6
Maximum Diurnal Average: 0.1 ppb at hour 11 Minimum Diurnal Average: 0.0 ppb at hour 23
Monthly Average: 0.08 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.1 $Q_3 = 0.1$ $P_{90} = 0.2$ $P_{99} = 0.4$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

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

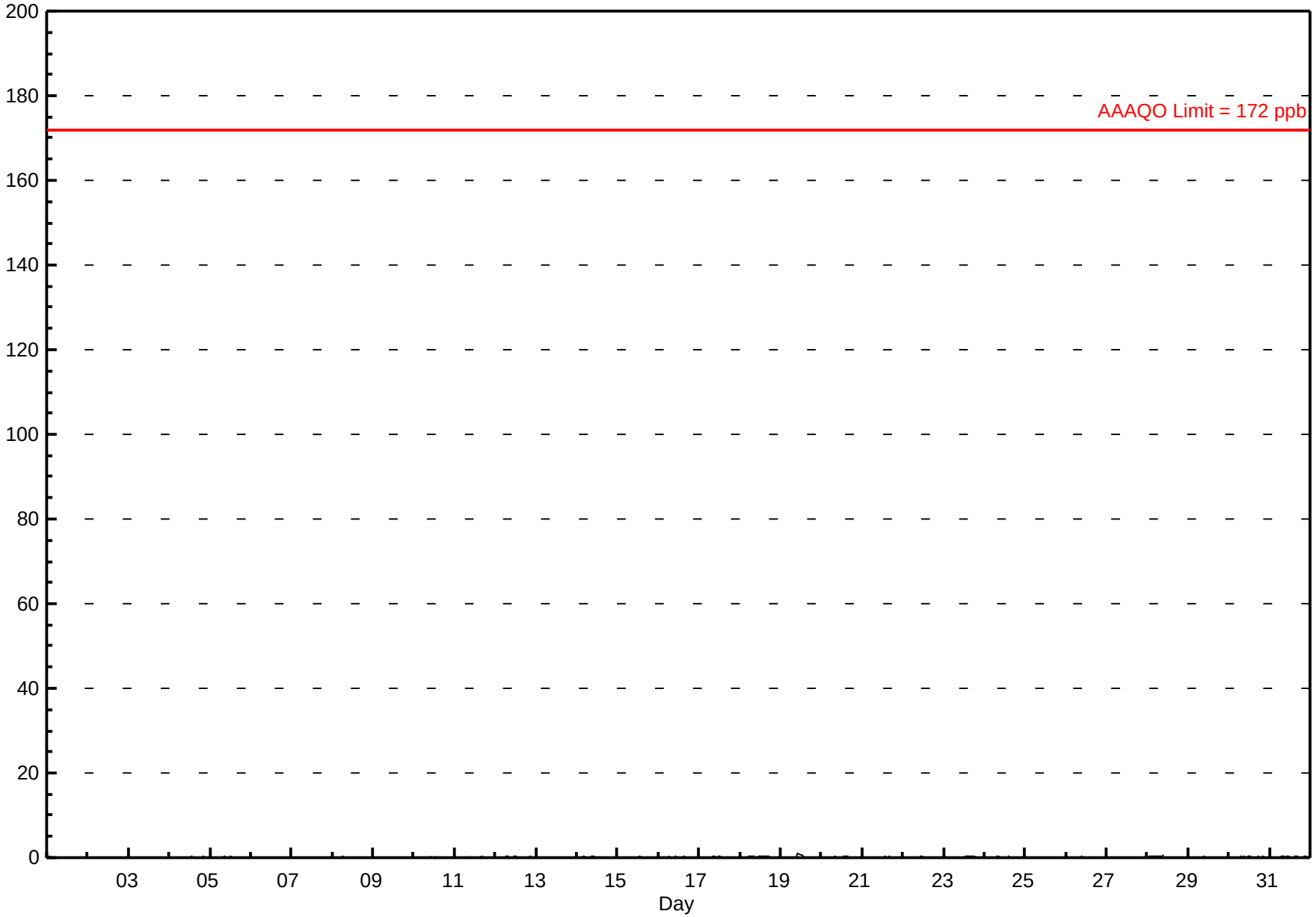
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - October 2013



FOCUS AIR QUALITY MONITORING

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - October 2013

Maximum Value: 2.6 ppb on Oct 24 18:00

Maximum Daily Average: 0.7 ppb on Oct 31

Minimum Value: 0 ppb on Oct 28 14:00

Minimum Daily Average: 0.4 ppb on Oct 6

Maximum Diurnal Average: 0.7 ppb at hour 21

Minimum Diurnal Average: 0.5 ppb at hour 4

Monthly Average: 0.58 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.5 $Q_3 = 0.7$ $P_{90} = 0.8$ $P_{99} = 1.3$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	1	1	1	1	1	0	1	1	0	0	0	1	1	0	0	0	0	1	0	A	0	0	0	0.5	0.7
2-Oct	0	0	0	1	0	0	0	0	1	0	0	1	0	1	0	0	1	1	1	A	0	1	0	0	0.5	0.9
3-Oct	0	0	1	0	0	1	0	0	0	1	1	0	0	1	0	1	1	0	A	0	0	1	1	0	0.5	0.8
4-Oct	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	0	1	1	0.6	1.2
5-Oct	1	1	1	0	1	0	0	1	1	1	1	1	1	1	0	0	A	0	1	1	1	0	1	1	0.6	0.9
6-Oct	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	A	0	0	0	0	0	0	0	0	0.4	0.6
7-Oct	0	0	1	1	0	1	1	1	0	0	0	1	1	1	A	1	0	0	0	1	0	1	0	0	0.5	1.0
8-Oct	1	1	1	1	0	1	1	0	0	1	0	C	C	C	0	0	1	1	1	1	1	1	0	1	0.6	1.0
9-Oct	1	1	1	0	1	1	0	0	1	0	1	0	A	0	1	1	1	1	1	0	1	1	0	1	0.6	1.0
10-Oct	0	1	0	1	1	1	0	1	1	1	1	A	1	1	0	0	1	1	0	1	1	0	0	1	0.6	1.4
11-Oct	0	0	1	0	0	0	0	0	0	1	A	0	0	0	1	2	1	1	0	0	1	0	0	0	0.6	1.5
12-Oct	0	0	0	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0.6	0.9
13-Oct	1	1	0	1	0	0	0	0	A	0	1	1	1	1	1	1	0	1	1	0	1	1	1	1	0.6	1.1
14-Oct	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.6	1.0
15-Oct	0	1	0	1	1	1	A	0	1	0	0	1	1	1	1	0	1	1	1	1	1	0	0	0	0.6	1.1
16-Oct	0	1	1	0	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	2	1	0	0	0.7	1.7
17-Oct	1	1	1	0	A	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	1	1	0	1	0.6	0.9
18-Oct	0	0	0	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.7	1.1
19-Oct	1	1	A	1	1	0	1	0	1	1	2	1	1	1	0	1	1	1	1	1	1	0	0	0	0.7	1.9
20-Oct	1	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.7	1.3
21-Oct	A	0	1	1	0	0	0	0	1	0	0	1	1	1	0	1	1	0	1	1	1	1	1	A	0.6	1.0
22-Oct	1	0	1	1	1	1	1	1	1	0	1	1	0	1	0	0	1	0	0	0	1	0	A	0	0.5	0.9
23-Oct	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1	1	1	1	0	A	0	1	0.6	0.9
24-Oct	1	1	1	0	1	0	1	1	1	1	0	1	0	1	1	0	1	3	1	1	A	1	1	1	0.7	2.6
25-Oct	1	1	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	0	1	A	0	1	1	0	0.5	0.9
26-Oct	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	1	1	0	A	1	0	1	1	1	0.5	0.9
27-Oct	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	1	1	1	0	1	0.4	0.7
28-Oct	1	1	1	1	1	1	1	1	1	1	C	C	C	0	0	0	A	0	0	0	0	0	0	0	0.6	1.1
29-Oct	0	0	0	0	1	1	0	0	0	1	1	0	0	1	1	A	0	1	1	1	0	1	1	0	0.5	1.0
30-Oct	0	0	1	0	0	1	0	1	1	1	1	1	1	1	A	1	1	1	0	0	1	1	0	1	0.7	1.0
31-Oct	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.3
	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.7	0.5	0.5	0.5	Diurnal Average	
	1.0	1.1	0.8	0.7	0.8	0.8	0.8	1.0	1.3	1.1	1.9	1.2	1.1	0.9	0.9	1.5	1.4	2.6	0.8	1.0	1.7	0.9	0.7	1.3	Diurnal Maximum	

C - Calibration

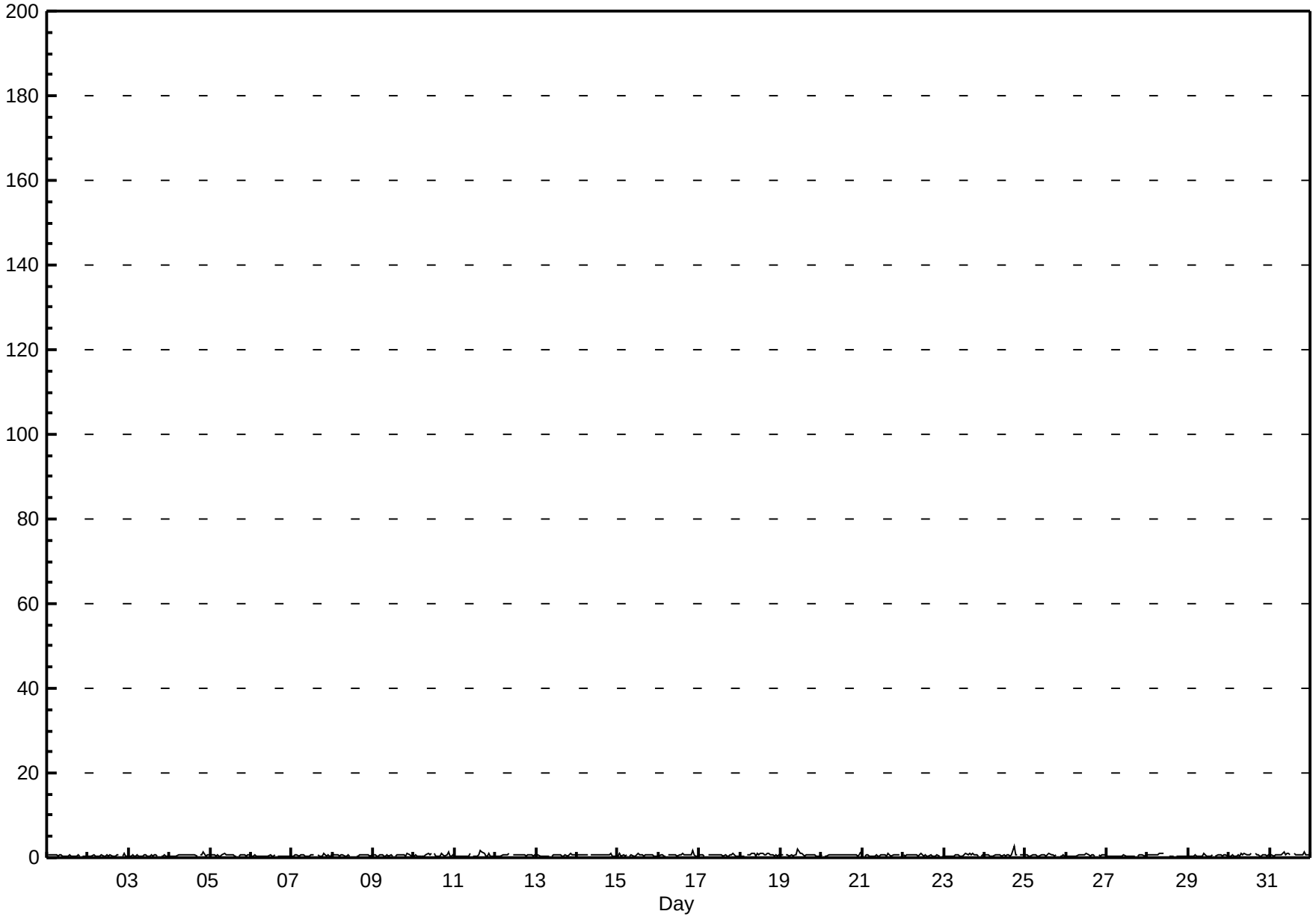
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - October 2013

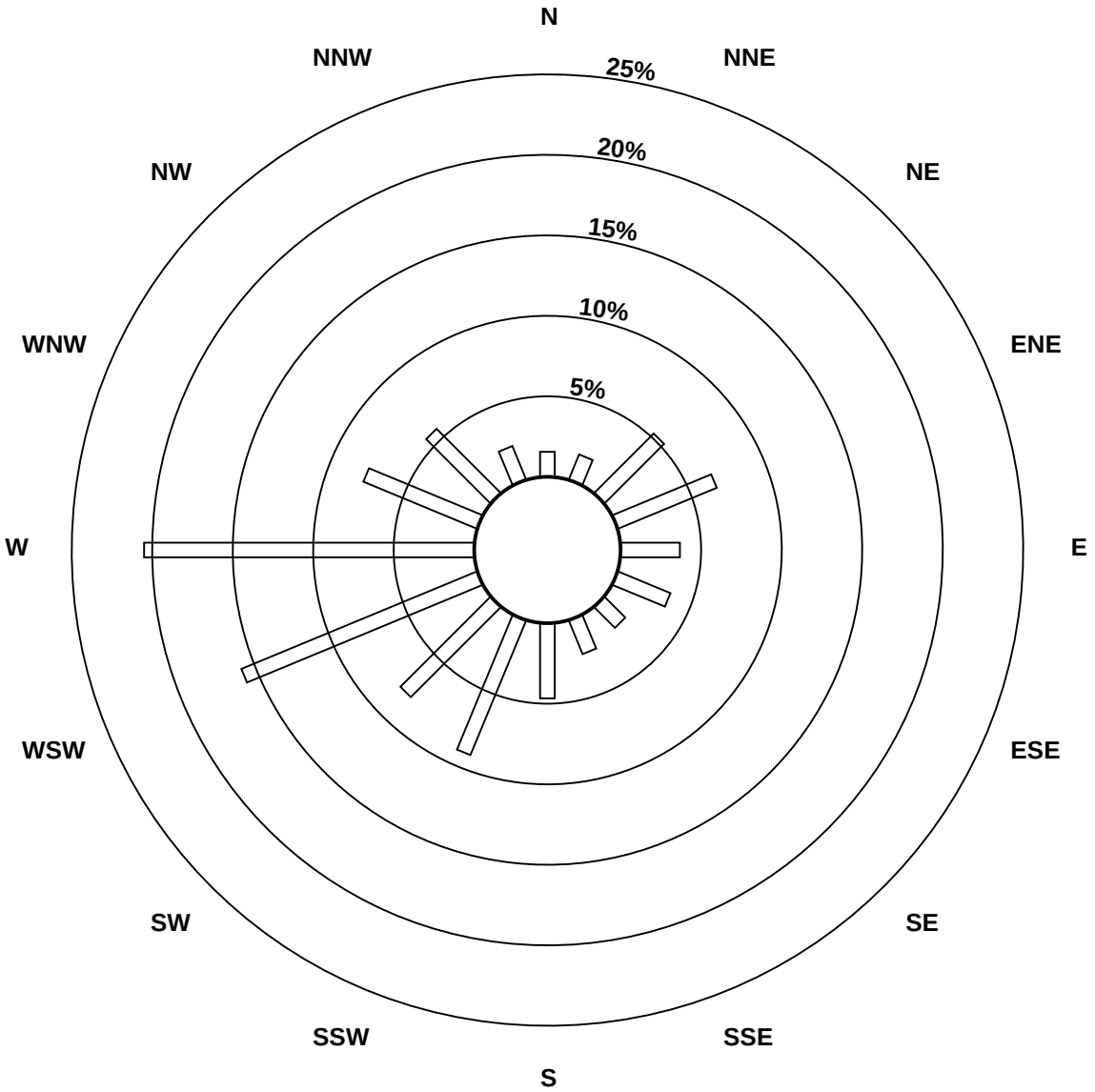


Peace Airshed Zone Association

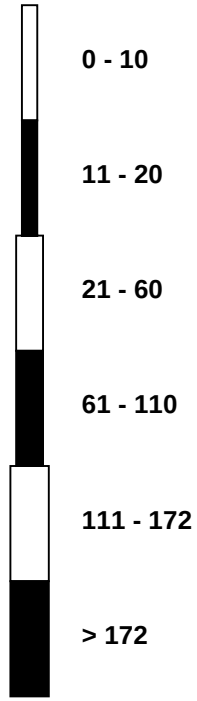
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - October 2013



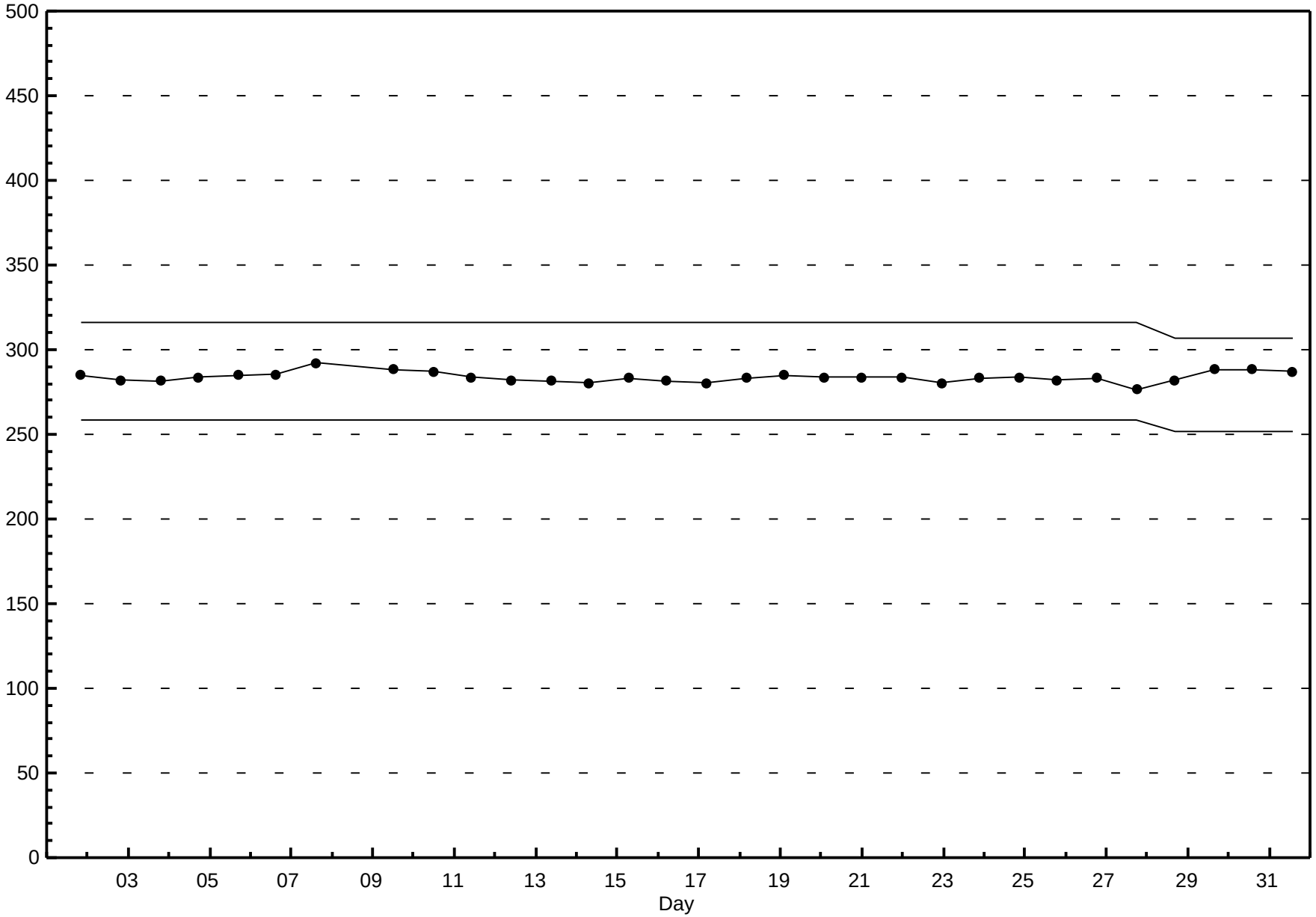
Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO_2)

Evergreen Park - October 2013



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.3 ppb on Oct 25 08:00 Maximum Daily Average: 0.6 ppb on Oct 25

Minimum Value: 0 ppb on Oct 1 12:00 Minimum Daily Average: 0.1 ppb on Oct 19
Maximum Diurnal Average: 0.3 ppb at hour 10 Minimum Diurnal Average: 0.2 ppb at hour 1
Monthly Average: 0.24 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.3$ $P_{90} = 0.4$ $P_{99} = 0.8$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

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

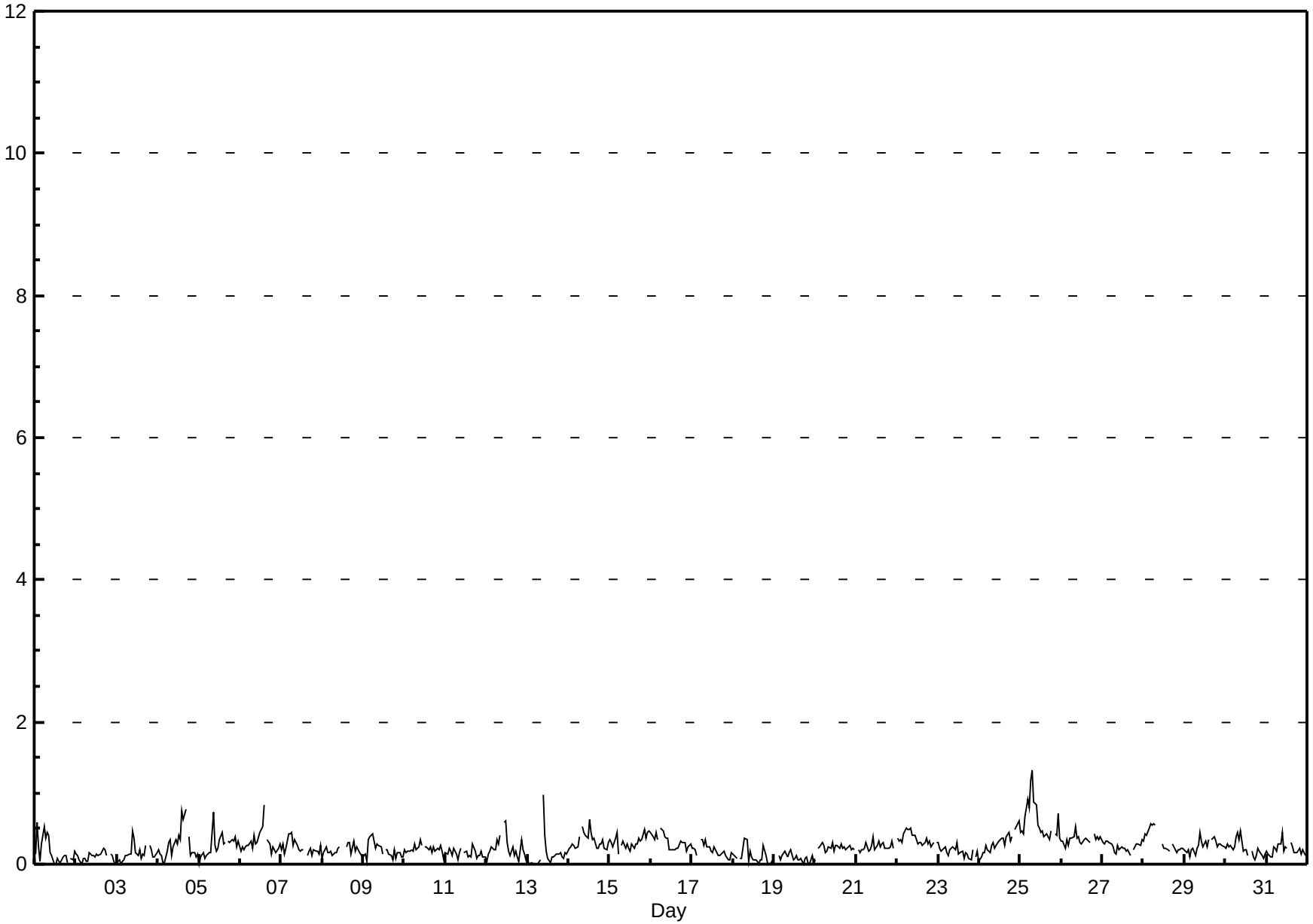
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - October 2013



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - October 2013

Maximum Value: 5.4 ppb on Oct 5 09:00

Maximum Daily Average: 1.4 ppb on Oct 25

Minimum Value: 0 ppb on Oct 13 06:00

Minimum Daily Average: 0.8 ppb on Oct 19

Maximum Diurnal Average: 1.2 ppb at hour 9

Minimum Diurnal Average: 0.9 ppb at hour 23

Monthly Average: 1.01 ppb

Percentiles: $P_1 = 0.6$ $P_{10} = 0.8$ $Q_1 = 0.9$ Median = 1.0 $Q_3 = 1.1$ $P_{90} = 1.2$ $P_{99} = 2.0$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.7
2-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	1.2
3-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.9	1.3
4-Oct	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	1	2	A	1	1	1	1	1	1	1.0	2.0
5-Oct	1	1	1	1	1	1	1	1	5	1	1	1	1	2	1	1	A	1	1	1	1	1	1	1	1.2	5.4
6-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.1	1.4
7-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.0	1.4
8-Oct	1	1	1	1	1	1	1	1	1	1	1	C	C	C	4	1	1	1	1	1	1	1	1	1	1.1	4.1
9-Oct	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
10-Oct	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
11-Oct	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
12-Oct	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
13-Oct	1	1	1	1	1	0	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.8
14-Oct	1	1	1	1	1	1	1	A	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1.1	2.0
15-Oct	1	1	1	2	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.8
16-Oct	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.1	1.5
17-Oct	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
18-Oct	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
19-Oct	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
20-Oct	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.2
21-Oct	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.0	1.3
22-Oct	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	1.3
23-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.2
24-Oct	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	1	1	A	1	1	2	1.1	2.4
25-Oct	1	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	A	1	1	2	1	1.4	2.1
26-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.1	1.4
27-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.2
28-Oct	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	1.5
29-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1	1.0	1.5
30-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.0	1.4
31-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.3
	0.9	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.2	1.1	1.1	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0	0.9	1.0	1.0	0.9	1.0	Diurnal Average	
	1.3	1.7	1.4	1.8	1.8	2.0	2.1	2.0	5.4	1.8	1.6	1.4	1.7	2.0	4.1	1.5	2.0	2.4	1.3	1.3	1.5	1.4	1.6	1.6	Diurnal Maximum	

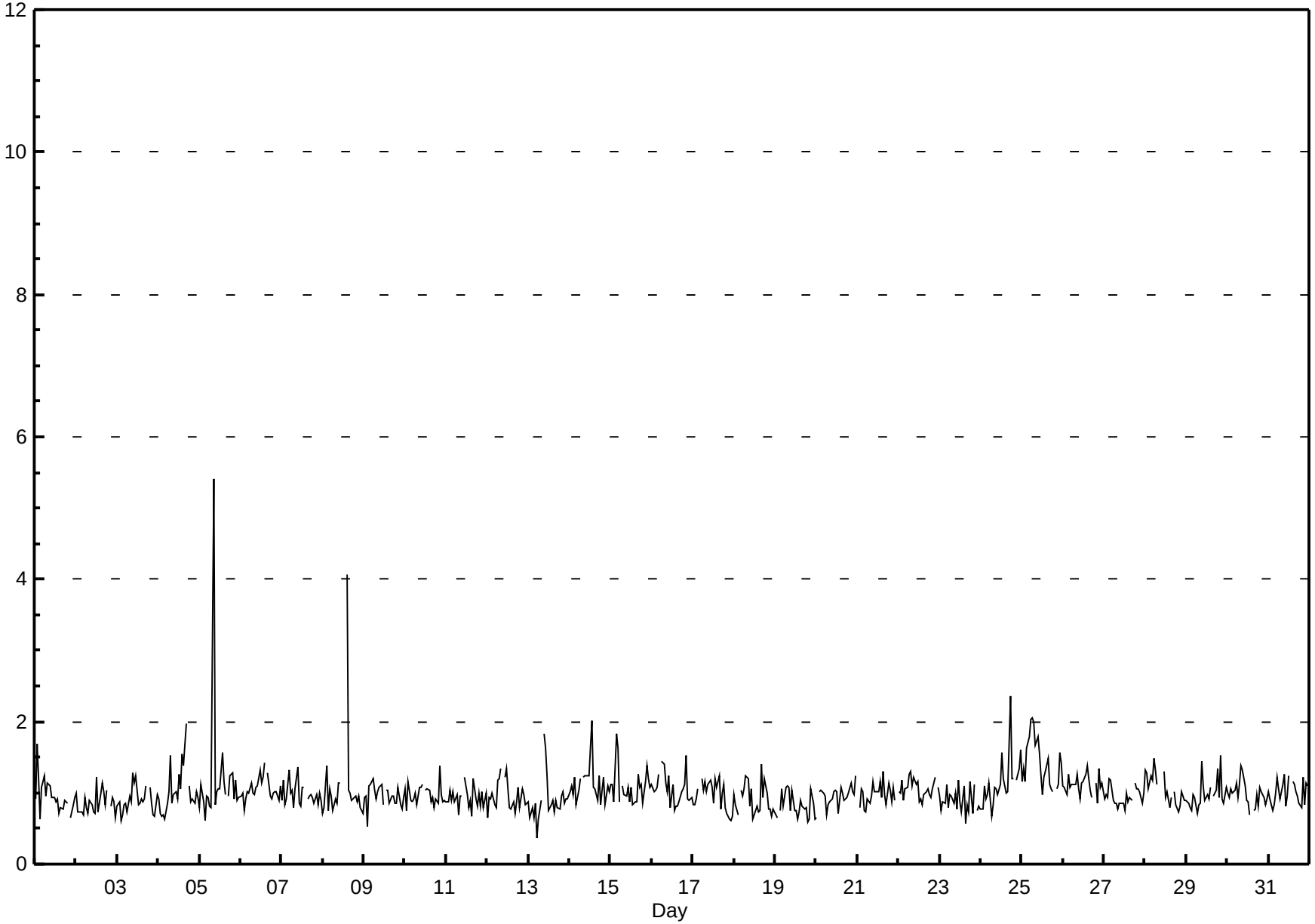
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - October 2013

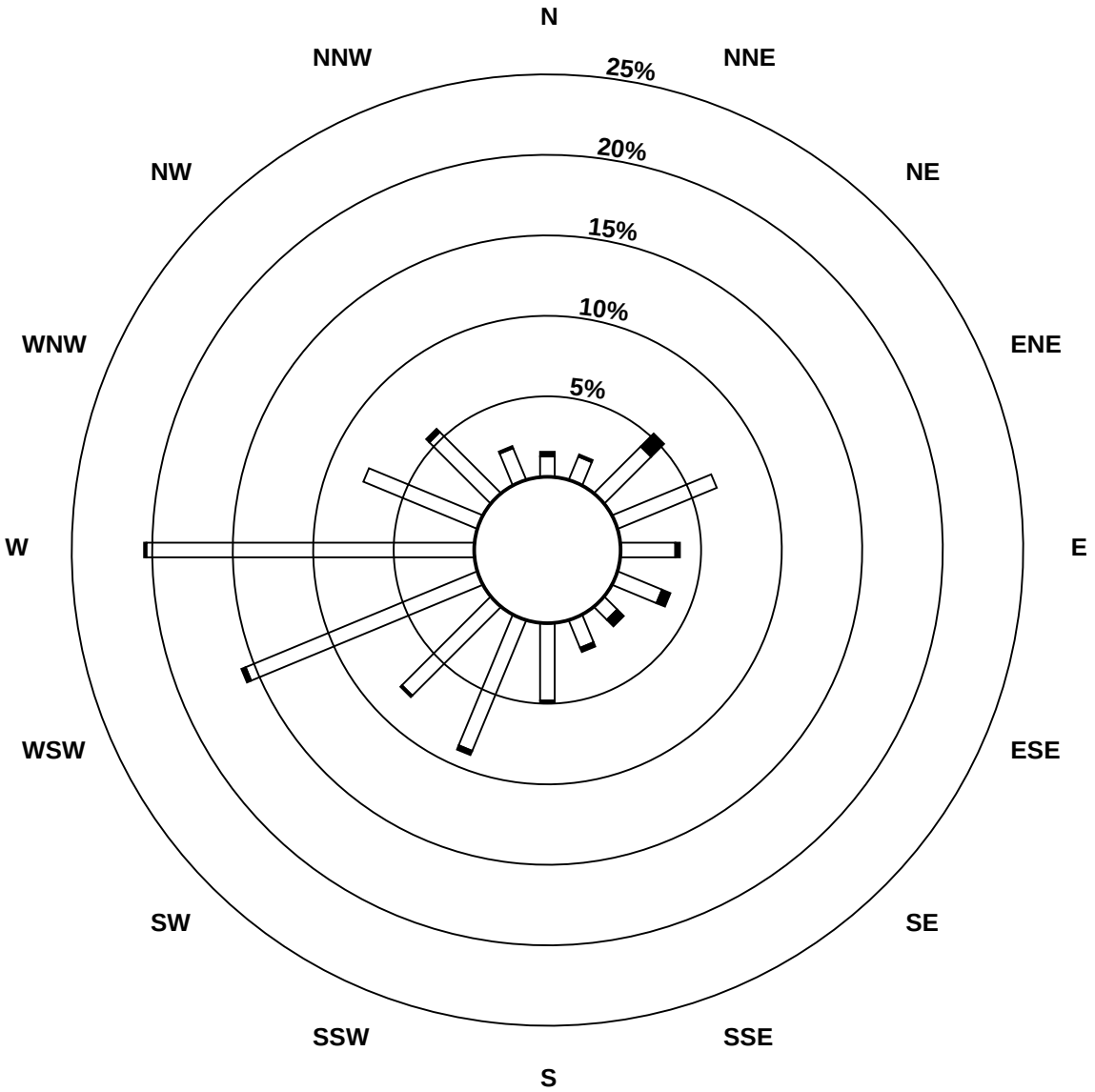


Peace Airshed Zone Association

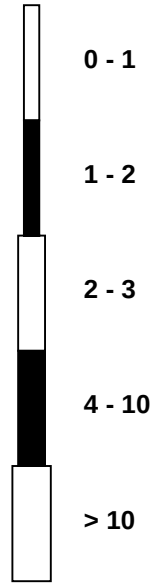
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - October 2013



Pollutant Classes (ppb)

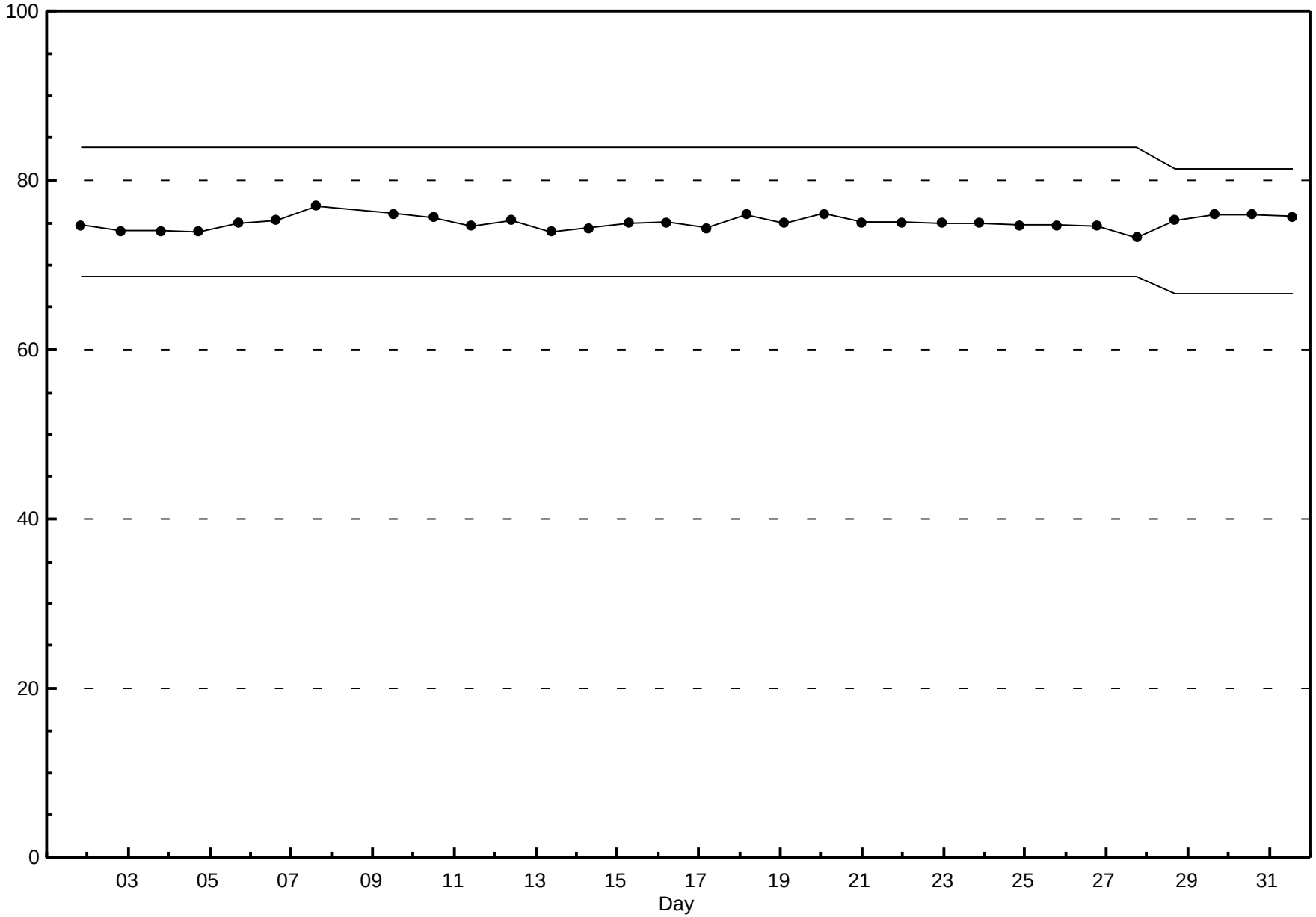


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Evergreen Park - October 2013



Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - October 2013

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 35.5 $\mu g/m^3$ on Oct 18 17:00
Maximum Daily Average: 7.6 $\mu g/m^3$ on Oct 18

Minimum Value: 0 $\mu g/m^3$ on Oct 2 00:00
Maximum Diurnal Average: 6.3 $\mu g/m^3$ at hour 10
Monthly Average: 3.36 $\mu g/m^3$
Minimum Daily Average: 0.2 $\mu g/m^3$ on Oct 6
Minimum Diurnal Average: 1.5 $\mu g/m^3$ at hour 1
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.3 Median = 1.8 Q_3 = 4.6 P_{90} = 8.3 P_{99} = 22.2

Hours in Service:	744
Hours of Data:	740
Hours of Missing Data:	4
Hours of Calibration:	4
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	2	1	2	2	2	3	3	3	3	2	2	2	1	1	1	2	2	1	1	1	2	1	0	1.7	3.4
2-Oct	0	0	0	0	0	0	0	1	2	1	0	0	0	0	1	2	1	1	2	2	1	2	1	0	0.7	1.8
3-Oct	0	0	1	0	1	1	2	2	2	3	2	2	0	1	1	2	1	1	1	1	1	4	2	0	1.3	4.0
4-Oct	2	2	0	0	1	0	0	2	1	1	2	2	5	5	2	2	3	5	3	1	2	0	0	0	1.6	5.1
5-Oct	0	0	0	0	0	0	0	1	15	0	0	8	17	1	0	0	0	0	1	0	1	0	0	0	1.9	17.3
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	0	0	0	0	0	0	0	0	0.2	3.0
7-Oct	0	0	0	0	0	2	1	0	1	2	0	6	3	4	4	2	1	0	0	1	0	1	0	1	1.2	5.8
8-Oct	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	0	0	0	0	0	0	0	0	0	0.5	1.3
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	4	3	2	1	2	0	0	0	0	0	0	1	0.6	3.7
10-Oct	0	0	0	0	0	1	1	3	3	2	12	27	3	0	0	3	8	9	0	1	1	0	0	0	3.1	26.7
11-Oct	0	0	0	0	1	1	1	0	7	28	10	0	0	0	0	12	30	5	0	0	0	0	0	0	4.0	30.5
12-Oct	0	1	0	1	2	4	5	6	10	8	11	12	8	3	2	5	3	4	6	6	11	7	6	6	5.2	11.6
13-Oct	4	4	3	4	4	3	3	4	7	6	5	4	3	3	3	4	5	4	7	7	8	6	5	5	4.6	8.5
14-Oct	5	5	4	4	5	6	8	10	12	9	6	6	7	3	6	5	4	5	3	4	4	3	4	3	5.5	12.2
15-Oct	4	4	3	4	4	3	4	7	7	5	4	1	2	1	0	0	2	9	4	2	1	1	0	0	3.0	9.1
16-Oct	0	0	0	0	0	2	5	5	6	6	9	5	0	0	10	0	0	1	9	4	4	1	1	1	3.0	10.3
17-Oct	2	1	1	2	2	3	5	7	9	12	2	2	17	4	0	1	3	6	5	6	15	6	2	2	4.8	17.3
18-Oct	2	1	1	1	1	3	5	9	13	10	19	21	23	1	8	17	36	10	0	0	1	0	0	0	7.6	35.5
19-Oct	0	1	1	2	1	2	2	3	5	7	3	1	0	0	1	1	1	2	19	8	4	5	3	2	3.1	19.2
20-Oct	2	3	3	4	5	5	5	6	12	12	12	8	10	13	11	8	7	7	6	3	4	2	3	4	6.4	13.2
21-Oct	5	5	6	5	5	4	4	5	13	11	4	3	8	14	3	6	14	6	5	4	3	2	4	2	5.9	13.8
22-Oct	3	3	3	5	7	7	10	11	6	4	1	0	0	8	1	1	2	2	1	1	2	2	2	1	3.5	10.9
23-Oct	1	1	1	0	2	0	1	1	2	2	1	1	0	0	0	1	0	0	0	0	0	0	1	2	0.8	2.2
24-Oct	2	2	1	2	1	3	5	7	7	8	8	10	7	20	17	0	3	6	6	16	9	10	9	7	7.0	20.5
25-Oct	5	5	4	6	6	5	6	4	5	7	3	1	3	3	3	4	3	4	7	6	5	8	9	2	4.7	9.2
26-Oct	1	2	2	2	3	3	3	4	12	13	16	25	14	4	8	10	4	4	2	3	4	4	3	3	6.2	24.5
27-Oct	1	2	4	4	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	3.9
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	C	4	1	1	0	0	0	0	1	3	3	2	0.6	3.6
29-Oct	1	1	1	1	1	1	4	4	4	12	0	0	0	2	8	3	3	21	0	0	1	1	3	3	3.1	21.3
30-Oct	3	5	7	7	8	8	10	9	14	21	4	6	4	5	3	4	0	4	6	2	7	6	3	4	6.3	20.7
31-Oct	2	1	0	0	0	1	2	15	10	0	26	19	0	0	5	5	0	1	3	3	4	3	5	7	4.6	25.5
	1.5	1.7	1.6	1.8	2.1	2.4	3.2	4.2	6.2	6.3	5.3	5.5	4.8	3.5	3.5	3.2	4.4	3.9	3.2	2.6	3.1	2.6	2.2	1.9	Diurnal Average	
	5.3	5.5	7.4	7.3	7.5	8.4	10.1	14.8	15.2	28.4	25.5	26.7	23.3	20.5	17.4	17.4	35.5	21.3	19.2	15.7	15.5	10.4	9.2	7.0	Diurnal Maximum	

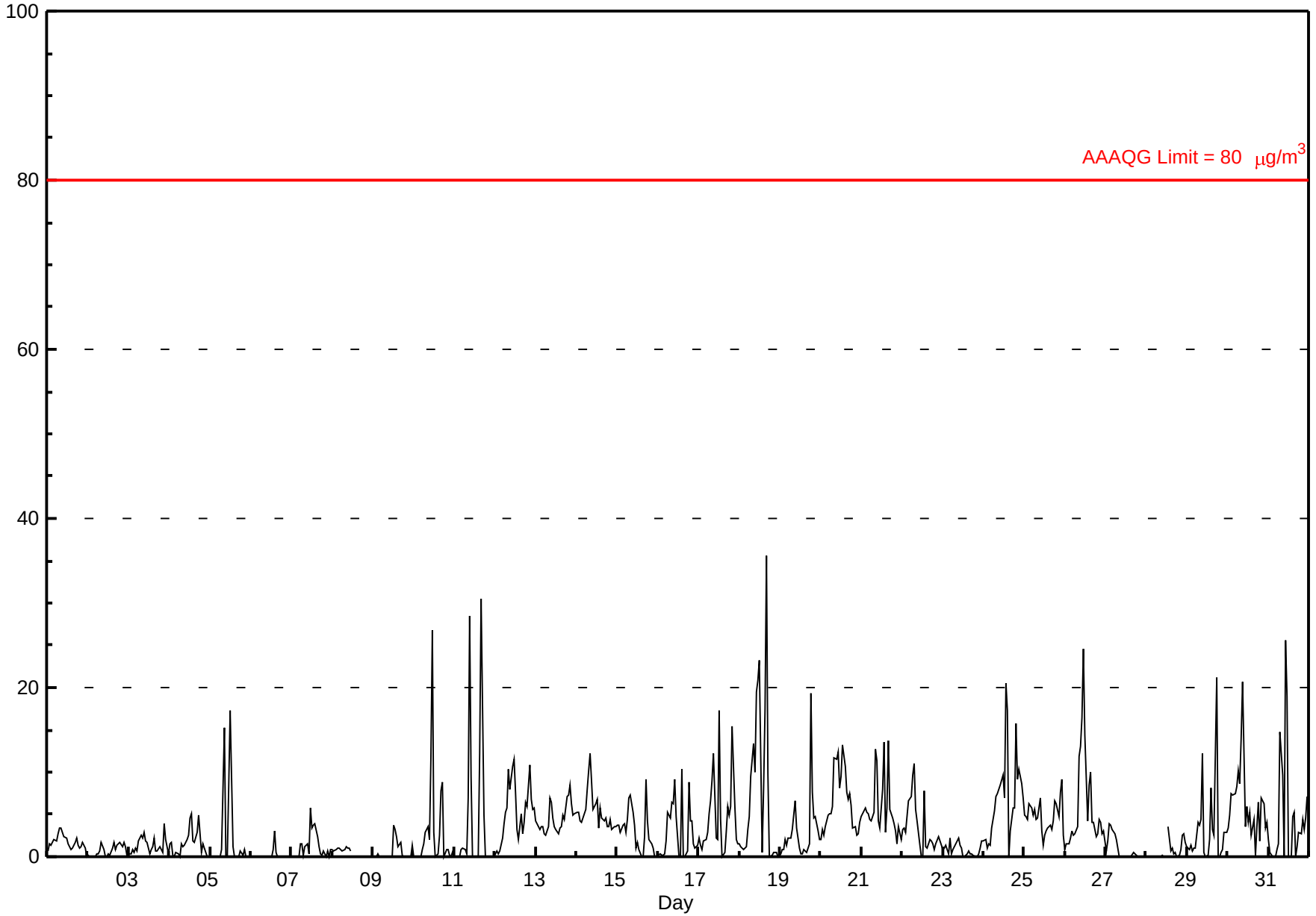
C - Calibration
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - October 2013



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

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

Evergreen Park - October 2013

Maximum Value: 77.0 $\mu g/m^3$ on Oct 18 18:00

Maximum Daily Average: 17.8 $\mu g/m^3$ on Oct 18

Minimum Value: 0 $\mu g/m^3$ on Oct 5 10:00

Minimum Daily Average: 0.8 $\mu g/m^3$ on Oct 6

Maximum Diurnal Average: 11.4 $\mu g/m^3$ at hour 18

Minimum Diurnal Average: 3.1 $\mu g/m^3$ at hour 3

Monthly Average: 6.93 $\mu g/m^3$

Percentiles: P_1 = 0.0 P_{10} = 0.9 Q_1 = 2.1 Median = 4.1 Q_3 = 7.7 P_{90} = 14.6 P_{99} = 49.2

Hours in Service:	744
Hours of Data:	740
Hours of Missing Data:	4
Hours of Calibration:	4
Percent Operational Time:	100.0

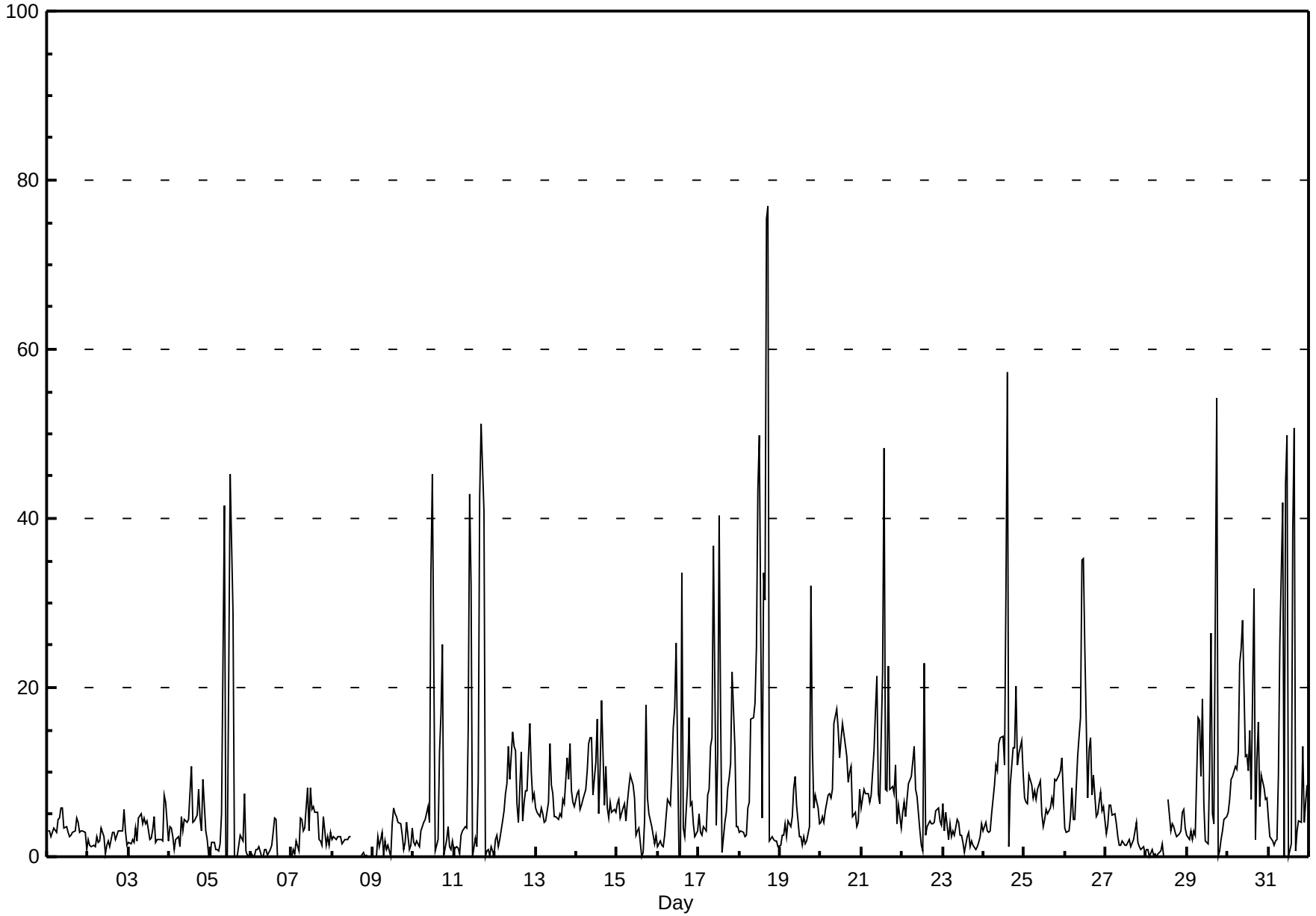
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	3	3	2	3	3	3	4	5	6	6	3	4	3	2	3	3	3	5	4	3	3	3	3	1	3.3	5.8
2-Oct	2	1	1	1	1	2	2	2	3	2	0	1	2	1	3	3	2	3	3	3	3	6	3	1	2.2	5.5
3-Oct	2	2	2	2	3	2	5	5	4	5	4	4	2	2	3	5	2	2	2	2	2	7	6	2	3.2	7.2
4-Oct	4	3	2	1	2	2	1	5	3	4	4	4	8	11	4	4	5	8	5	3	9	3	2	0	4.1	10.6
5-Oct	0	2	2	1	1	1	2	5	42	0	0	21	45	29	0	0	0	1	3	2	7	1	0	0	6.8	45.2
6-Oct	0	0	0	1	1	1	0	0	1	1	0	1	1	3	5	4	0	0	0	0	0	0	0	0	0.8	4.6
7-Oct	0	1	0	2	1	5	4	3	3	8	3	8	6	6	5	5	2	2	1	5	1	2	1	3	3.3	8.2
8-Oct	2	2	2	2	2	2	2	2	2	2	2	2	C	C	C	0	0	0	0	0	0	0	0	0	1.3	2.4
9-Oct	0	0	0	2	1	3	0	2	1	1	0	4	6	5	5	4	4	3	1	2	4	1	1	3	2.2	5.8
10-Oct	2	1	2	1	3	4	4	4	6	4	33	45	23	1	2	12	17	25	0	2	4	1	1	2	8.3	45.2
11-Oct	1	1	1	0	3	3	4	3	15	43	32	0	2	1	9	43	51	41	0	1	1	0	1	0	10.7	51.2
12-Oct	2	3	1	2	4	6	7	9	13	9	15	13	13	6	4	12	4	6	8	8	16	10	7	7	7.7	15.8
13-Oct	6	5	5	6	5	4	4	6	13	8	7	5	5	4	5	5	7	6	12	9	13	8	6	6	6.7	13.3
14-Oct	7	8	6	6	7	8	10	13	14	14	7	11	16	5	10	18	6	11	6	5	7	5	6	5	8.8	18.4
15-Oct	6	7	5	6	6	4	6	8	10	8	7	3	3	3	0	0	4	18	7	5	4	3	2	3	5.3	18.0
16-Oct	1	2	1	1	3	5	7	6	10	15	18	25	0	0	34	3	2	8	17	6	6	4	2	3	7.5	33.5
17-Oct	5	3	3	4	3	7	8	13	14	37	4	12	40	17	0	4	5	8	9	11	22	13	4	4	10.4	40.4
18-Oct	3	3	3	2	3	6	6	16	16	18	25	43	50	5	34	30	76	77	2	2	2	2	2	1	17.8	77.0
19-Oct	1	3	3	4	2	4	4	5	8	9	6	2	2	1	2	2	2	4	32	13	6	7	6	4	5.5	32.0
20-Oct	4	5	4	5	7	7	7	8	16	17	15	12	14	16	13	12	9	10	11	5	5	4	4	8	9.1	17.5
21-Oct	6	8	7	7	7	7	7	13	17	21	7	6	22	48	8	8	23	8	8	7	11	4	6	3	11.3	48.4
22-Oct	5	6	5	7	9	9	11	13	8	7	3	1	1	23	3	4	4	4	4	4	5	6	4	4	6.3	22.8
23-Oct	6	3	5	2	4	2	3	3	4	4	3	3	2	0	2	3	1	2	1	1	1	2	2	4	2.6	6.3
24-Oct	3	4	3	3	3	5	8	11	10	13	14	14	11	31	57	1	8	13	13	20	11	12	14	10	12.3	57.2
25-Oct	7	6	6	10	8	7	8	7	8	9	5	4	4	6	5	6	7	6	9	9	10	10	12	7	7.3	11.7
26-Oct	3	3	3	5	8	4	4	12	14	16	35	35	25	7	13	14	7	10	5	5	7	8	5	6	10.6	35.3
27-Oct	3	4	6	6	5	5	4	2	1	1	2	1	1	2	2	1	2	3	4	2	1	1	1	0	2.6	6.2
28-Oct	1	1	0	1	0	0	0	0	1	2	0	0	C	7	3	4	4	3	2	3	3	5	6	3	2.1	6.7
29-Oct	3	2	3	2	3	3	16	16	9	19	6	2	2	10	27	5	4	54	0	1	2	3	4	5	8.4	54.3
30-Oct	5	7	9	9	11	10	12	23	25	28	12	12	10	15	7	32	2	11	16	6	10	8	7	7	12.2	31.6
31-Oct	5	2	2	1	2	2	10	25	42	0	44	50	0	2	38	51	1	3	4	4	13	4	7	8	13.3	50.6
	3.2	3.3	3.1	3.4	3.9	4.3	5.5	7.9	11.0	10.8	10.3	11.3	11.0	9.0	10.2	9.6	8.5	11.4	6.1	4.8	6.1	4.6	4.0	3.6	Diurnal Average	
	7.5	8.0	9.2	9.7	10.7	10.4	16.5	25.3	41.9	42.9	44.3	49.9	49.9	48.4	57.2	50.6	75.5	77.0	32.0	20.2	21.9	12.9	13.8	9.9	Diurnal Maximum	

C - Calibration

Hourly Maximums

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

Evergreen Park - October 2013

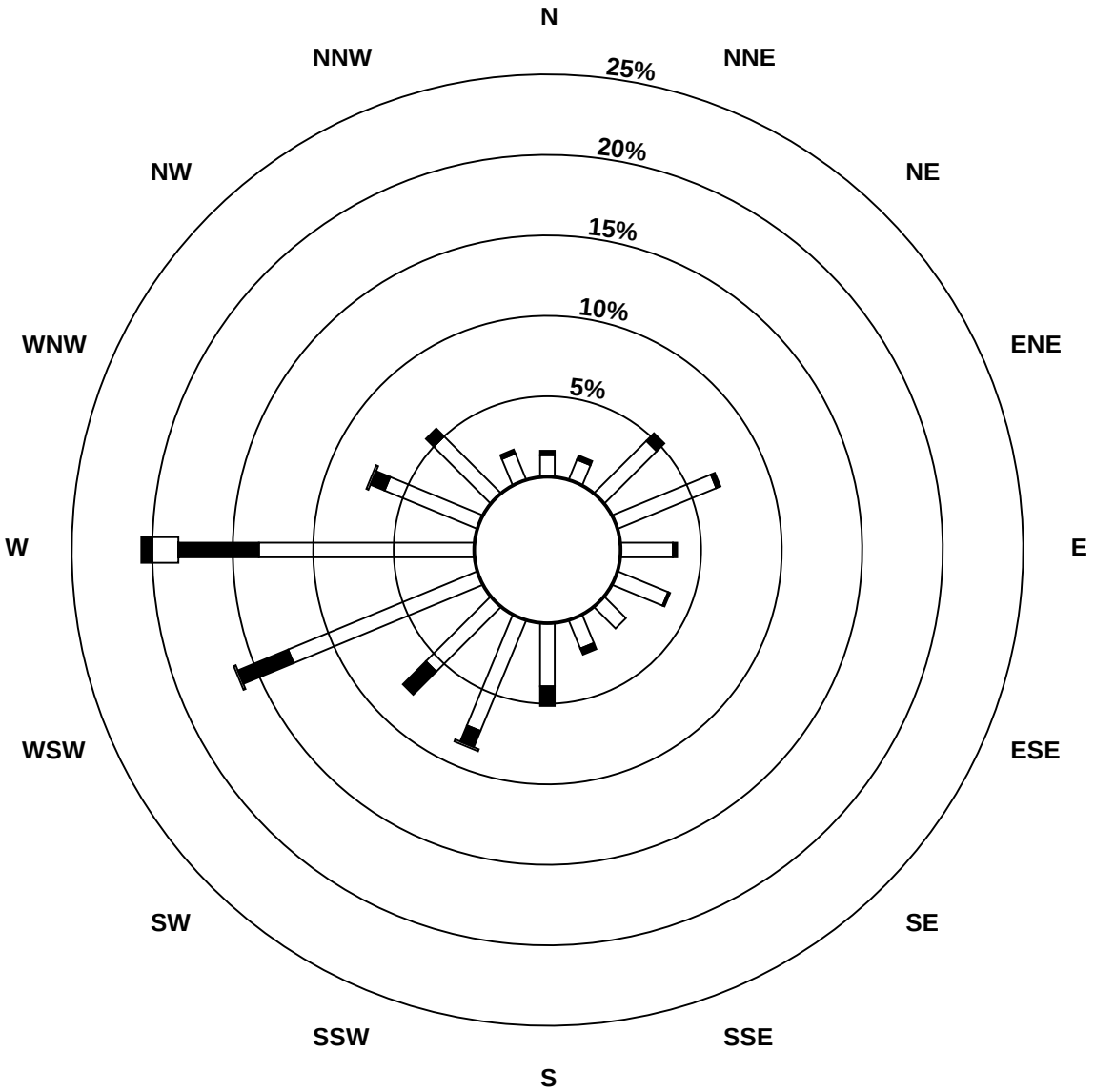


Peace Airshed Zone Association

Pollutant Rose

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

Evergreen Park - October 2013



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

- 0 - 5
- 6 - 15
- 16 - 25
- 26 - 80
- > 80.0

Hourly Averages

External Temperature (ET) - °C

Evergreen Park - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 19.8 °C on Oct 24 15:00 Maximum Daily Average: 12.9 °C on Oct 21

Minimum Value: -4 °C on Oct 29 05:00 Minimum Daily Average: -0.9 °C on Oct 28
Maximum Diurnal Average: 11.1 °C at hour 16 Minimum Diurnal Average: 2.7 °C at hour 8
Monthly Average: 6.43 °C Percentiles: P_1 = -3.5 P_{10} = -0.8 Q_1 = 3.2 Median = 6.6 Q_3 = 9.9 P_{90} = 12.6 P_{99} = 16.8

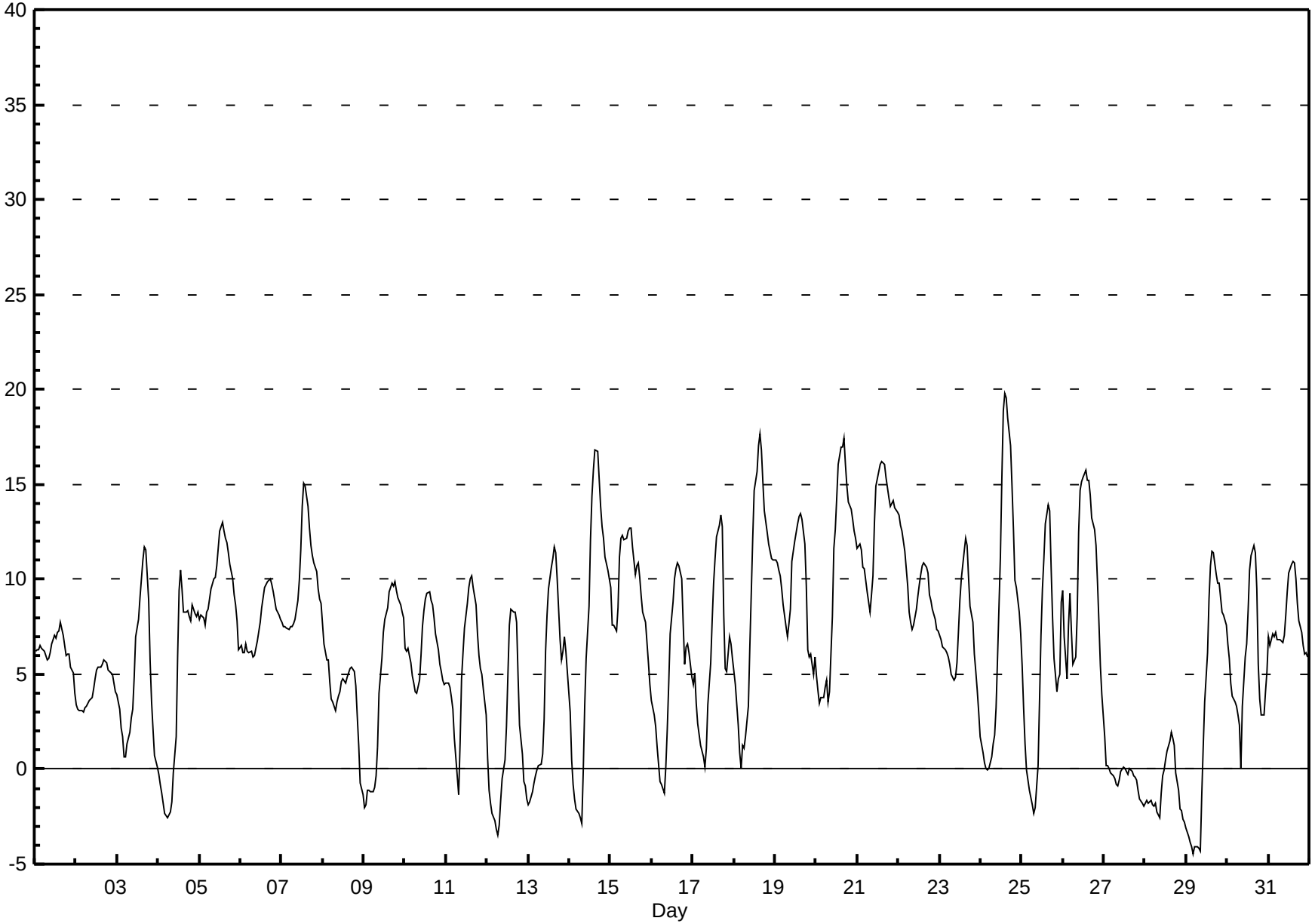
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	8	7	7	6	6	6	5	5	4	6.3	7.7
2-Oct	3	3	3	3	3	3	3	3	4	4	4	5	5	5	5	6	6	6	6	5	5	5	5	4	4.4	5.8
3-Oct	4	3	2	2	1	1	1	2	3	3	5	7	8	9	10	11	12	12	9	6	4	2	1	0	4.8	11.7
4-Oct	0	-1	-1	-2	-2	-3	-2	-2	-2	0	2	6	9	10	10	8	8	8	8	8	9	8	8	8	4.0	10.5
5-Oct	8	8	8	8	8	8	9	9	10	10	11	12	13	13	13	12	12	11	11	10	9	9	8	6	9.8	13.0
6-Oct	6	6	6	7	6	6	6	6	6	6	7	8	8	9	10	10	10	10	10	9	9	8	8	8	7.7	10.0
7-Oct	8	7	8	7	7	8	8	8	8	9	10	12	14	15	15	14	13	12	11	11	10	9	9	9	10.0	15.1
8-Oct	8	7	6	6	5	4	4	3	4	4	4	5	5	5	5	5	5	5	5	4	3	1	-1	-1	4.1	7.6
9-Oct	-2	-2	-1	-1	-1	-1	-1	0	1	4	6	7	8	8	9	9	10	10	10	9	9	9	8	8	4.8	9.9
10-Oct	6	6	6	6	5	5	4	4	5	6	8	8	9	9	9	9	9	8	7	6	5	5	5	4	6.4	9.4
11-Oct	5	5	4	4	3	2	0	-1	1	5	6	7	9	10	10	10	10	9	7	6	5	5	4	3	5.3	10.2
12-Oct	1	-1	-2	-2	-3	-3	-4	-3	-2	-1	0	2	5	8	8	8	8	8	5	2	1	-1	-1	-2	1.4	8.4
13-Oct	-2	-2	-1	-1	0	0	0	0	1	3	6	8	9	11	11	12	11	10	7	6	6	7	6	5	4.7	11.7
14-Oct	3	0	-1	-2	-2	-2	-3	-3	0	3	6	9	12	14	16	17	17	15	14	13	12	11	11	10	7.1	16.8
15-Oct	10	8	8	7	8	11	12	12	12	12	13	13	13	12	10	11	11	10	9	8	8	7	6	4	9.7	12.7
16-Oct	4	3	2	1	0	-1	-1	-1	0	2	4	7	9	10	11	11	11	10	8	6	6	7	6	5	5.0	10.9
17-Oct	4	5	3	2	1	1	1	0	1	3	6	8	10	11	12	13	13	13	8	5	5	7	7	6	6.1	13.4
18-Oct	5	4	2	1	0	1	1	2	3	6	9	12	15	16	17	18	17	15	14	12	12	11	11	11	9.0	17.7
19-Oct	11	11	10	10	9	9	8	7	8	8	11	12	12	13	13	13	13	12	10	6	6	6	5	6	9.6	13.5
20-Oct	5	4	3	4	4	4	5	4	4	8	12	13	14	16	17	17	17	16	15	14	14	13	13	12	10.3	17.4
21-Oct	12	12	12	11	11	10	9	8	9	10	13	15	16	16	16	16	16	15	14	14	14	14	14	14	12.9	16.2
22-Oct	13	13	13	12	11	10	8	8	7	8	8	9	10	10	11	11	11	10	9	9	8	8	7	7	9.7	13.4
23-Oct	7	7	6	6	6	6	5	5	5	5	6	7	9	10	11	12	12	10	9	8	6	5	4	3	7.1	12.2
24-Oct	2	1	0	0	0	0	1	1	2	3	6	11	15	19	20	20	19	17	15	13	10	10	8	7	8.3	19.8
25-Oct	5	3	1	0	-1	-1	-2	-2	-2	0	4	7	9	11	13	14	14	11	8	6	4	5	5	9	5.0	13.9
26-Oct	9	7	5	8	9	7	6	6	8	12	15	15	15	16	15	15	14	13	13	12	10	8	5	4	10.3	15.7
27-Oct	2	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	-1	-1	-2	-2	-2	-0.4	1.7
28-Oct	-2	-2	-2	-2	-2	-2	-2	-2	-3	-1	0	0	1	1	2	2	2	1	0	-1	-2	-2	-3	-3	-0.9	2.0
29-Oct	-3	-4	-4	-4	-4	-4	-4	-4	-4	-1	1	4	6	9	11	11	11	10	10	10	9	8	8	8	3.3	11.4
30-Oct	7	6	5	4	4	3	3	2	0	3	6	7	8	10	11	12	11	10	6	4	3	3	4	5	5.7	11.8
31-Oct	7	7	7	7	7	7	7	7	7	7	8	9	10	11	11	11	10	9	8	7	7	6	6	6	7.8	10.9
	4.9	4.2	3.7	3.5	3.2	3.0	2.8	2.7	3.2	4.8	6.5	8.1	9.5	10.4	10.9	11.1	10.9	10.1	8.7	7.5	6.8	6.4	5.8	5.4	Diurnal Average	
	13.4	12.8	12.5	12.0	11.5	11.2	12.2	12.3	12.1	12.5	14.7	15.2	15.7	18.9	19.8	19.6	18.5	17.0	14.9	14.1	14.0	14.2	13.8	13.5	Diurnal Maximum	

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - October 2013



Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 98.4 % on Oct 7 09:00 Maximum Daily Average: 92.8 % on Oct 1

Minimum Value: 23 % on Oct 24 16:00 Minimum Daily Average: 45.6 % on Oct 26
Maximum Diurnal Average: 80.3 % at hour 8 Minimum Diurnal Average: 50.3 % at hour 15
Monthly Average: 67.11 % Percentiles: P_1 = 30.6 P_{10} = 42.3 Q_1 = 51.4 Median = 65.2 Q_3 = 85.1 P_{90} = 93.1 P_{99} = 97.2

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

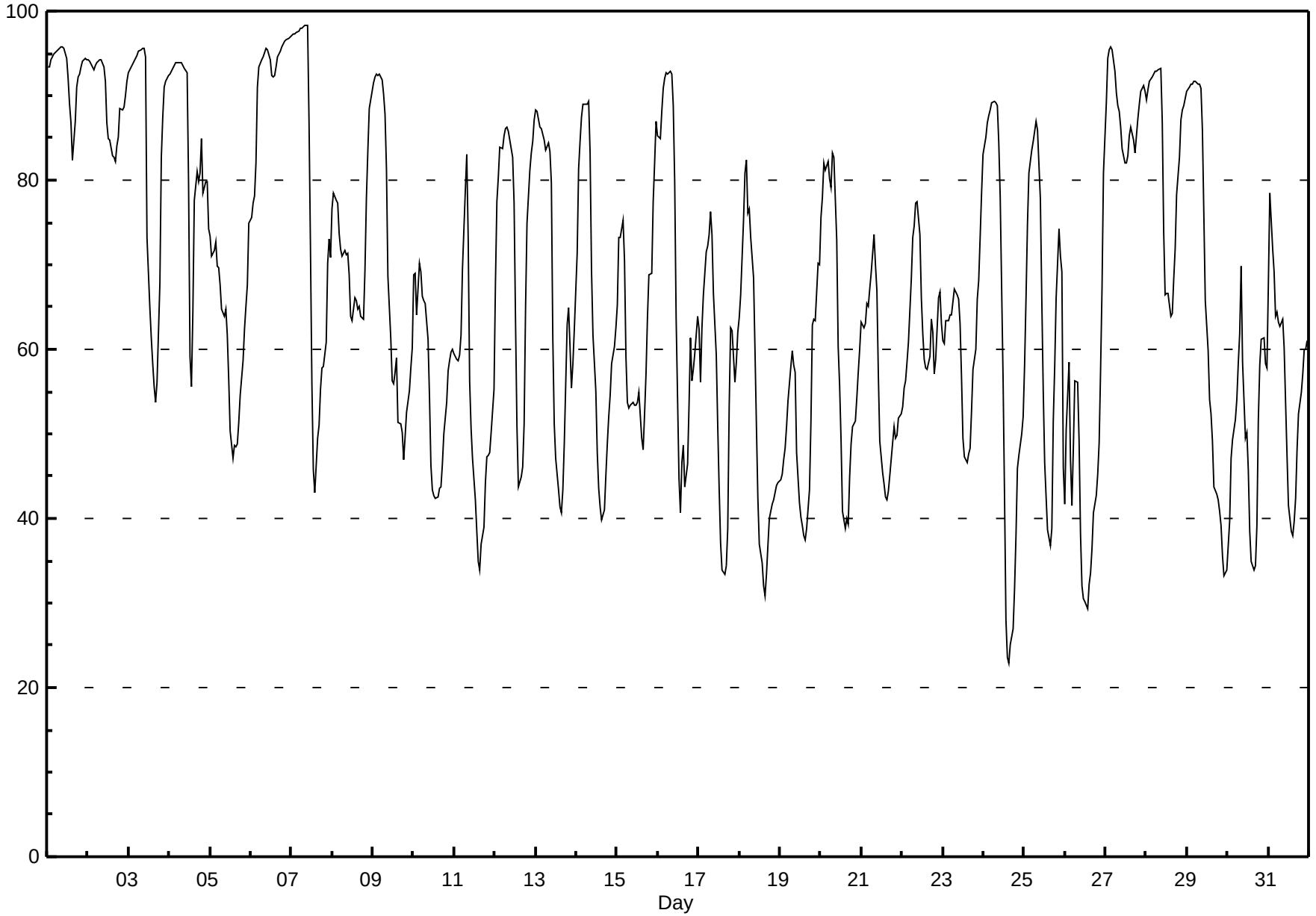
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	93	93	94	95	95	95	95	96	96	96	96	94	92	89	87	82	87	91	92	93	93	94	94	94	92.8	95.8
2-Oct	94	94	94	93	94	94	94	94	94	93	92	87	85	85	83	83	82	84	85	88	88	89	90	92	89.6	94.2
3-Oct	93	93	94	94	94	95	95	95	96	96	95	73	65	61	58	56	54	56	68	83	87	91	92	92	82.3	95.6
4-Oct	93	93	93	94	94	94	94	94	94	93	93	80	59	56	64	78	81	80	81	85	78	80	80	74	83.4	93.9
5-Oct	73	71	72	73	70	70	68	65	64	65	62	56	50	47	49	48	49	51	55	59	62	65	68	75	61.9	74.9
6-Oct	76	77	78	82	91	93	94	95	95	96	95	94	92	92	92	93	95	95	96	96	96	97	97	97	91.9	97.0
7-Oct	97	97	97	97	98	98	98	98	98	98	87	72	56	46	43	49	51	55	58	58	61	70	73	71	76.2	98.4
8-Oct	77	78	78	77	74	72	71	72	71	71	69	64	63	66	66	65	65	64	64	69	78	83	88	90	72.3	90.4
9-Oct	91	92	93	92	93	92	90	88	81	69	61	56	56	57	59	51	51	50	47	50	53	55	58	60	68.6	92.6
10-Oct	69	69	64	70	69	66	66	65	61	54	46	43	43	42	43	44	44	46	50	54	57	59	60	60	56.0	70.2
11-Oct	60	59	59	59	62	69	79	83	73	56	51	47	42	38	35	34	37	39	44	47	47	48	50	55	53.1	83.0
12-Oct	68	77	80	84	84	85	86	86	86	85	83	77	63	51	44	45	46	51	65	75	81	83	85	87	73.2	87.1
13-Oct	88	88	86	86	85	85	84	84	83	80	61	51	47	43	41	41	43	49	63	65	60	55	58	62	66.3	88.4
14-Oct	71	81	85	87	89	89	89	89	83	69	62	55	48	43	41	40	41	45	49	52	55	58	60	63	64.4	89.4
15-Oct	65	73	73	75	70	59	54	53	53	54	53	53	54	55	50	48	52	57	64	69	69	77	82	87	62.5	86.9
16-Oct	85	85	88	91	92	93	92	93	93	89	80	64	45	41	47	49	44	46	53	61	56	58	60	64	69.4	92.9
17-Oct	62	56	63	66	72	72	74	76	74	67	59	51	44	37	34	33	34	39	53	63	62	56	58	62	57.0	76.3
18-Oct	64	66	75	81	82	76	77	73	69	60	51	42	37	35	32	31	33	37	40	42	42	43	44	44	53.2	82.4
19-Oct	45	45	47	48	51	54	58	60	58	57	48	42	40	39	38	37	39	43	51	63	64	63	70	70	51.3	70.2
20-Oct	76	78	82	81	82	80	79	83	83	73	60	56	49	41	39	40	39	45	49	51	51	54	57	60	62.0	83.3
21-Oct	63	63	63	65	65	67	69	74	70	67	57	49	45	44	43	42	43	45	49	51	50	50	52	52	55.8	73.6
22-Oct	53	55	56	58	61	68	73	75	77	77	74	66	62	59	58	58	59	64	62	57	59	66	67	63	63.6	77.4
23-Oct	61	61	63	63	64	64	66	67	66	66	63	57	49	47	47	48	48	53	58	60	66	68	73	78	60.7	78.4
24-Oct	83	85	87	88	88	89	89	89	89	84	78	56	43	28	24	23	25	27	32	38	46	47	50	52	60.0	89.3
25-Oct	58	66	75	81	83	85	86	87	86	78	66	55	47	43	39	37	39	52	58	66	74	71	69	46	64.4	87.0
26-Oct	42	51	58	47	42	48	56	56	49	38	32	31	30	29	32	34	36	41	43	45	49	58	67	81	45.6	80.9
27-Oct	89	94	95	96	95	93	90	89	88	86	84	82	82	83	85	86	85	83	85	87	89	91	91	90	88.3	95.8
28-Oct	90	91	92	92	93	93	93	93	93	87	74	66	67	67	64	64	68	72	78	83	87	88	89	90	82.2	93.2
29-Oct	90	91	91	91	92	92	91	91	91	86	76	66	60	54	52	49	44	43	42	41	39	36	33	34	65.7	91.7
30-Oct	37	40	47	49	52	54	58	62	70	58	50	50	46	39	35	34	34	39	52	58	61	61	58	58	50.1	69.8
31-Oct	68	79	72	69	64	64	63	63	64	60	54	47	42	38	38	40	42	48	52	55	57	60	60	61	56.7	78.5
	73.3	75.6	77.2	78.3	78.7	79.0	79.7	80.3	79.0	74.5	68.1	60.8	54.9	51.5	50.3	50.3	51.4	54.5	59.2	63.3	65.2	66.9	68.8	69.9	Diurnal Average	
	97.1	97.2	97.3	97.4	97.7	97.9	98.0	98.2	98.4	98.4	95.5	94.5	92.3	92.2	92.4	93.4	94.5	95.3	95.8	96.2	96.4	96.6	96.8	97.0	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - October 2013



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	11	7	5	2	3	3	4	6	4	2	2	4	7	4	2	1	3	6	5	0	1	2	4	7	1.8	10.5
Dir	299	318	338	304	288	310	275	263	272	110	82	62	64	65	11	292	305	316	8	350	37	69	87	88	340.5	299.0
2 Spd	6	4	1	1	0	0	0	0	0	0	2	1	1	1	5	5	0	3	4	6	4	3	2	1	0.7	6.2
Dir	72	86	148	223	40	103	59	2	274	117	160	213	96	268	255	317	67	215	218	244	256	226	184	74	224.4	243.9
3 Spd	0	0	1	0	3	0	0	1	1	7	5	7	6	6	5	5	3	2	2	0	0	0	0	0	1.9	7.3
Dir	360	21	207	178	207	219	113	120	186	215	206	153	196	180	212	230	211	140	119	114	328	29	50	288	192.7	153.2
4 Spd	0	0	1	1	2	2	2	2	2	2	2	2	7	3	2	2	1	2	10	11	11	10	6	11	2.5	11.3
Dir	200	191	129	72	64	49	91	88	68	61	62	192	179	168	118	56	145	267	213	208	198	205	215	222	192.1	222.2
5 Spd	14	15	11	18	14	20	22	24	24	24	31	36	44	45	38	38	35	33	28	15	17	12	6	1	23.1	45.4
Dir	227	242	228	222	232	233	249	250	261	258	252	255	262	260	259	259	256	257	255	267	255	244	241	127	252.4	259.6
6 Spd	1	1	3	7	8	5	1	2	4	5	10	7	6	4	4	5	4	3	4	4	4	4	3	3	2.5	9.8
Dir	206	148	209	234	224	209	169	88	71	79	108	130	161	143	126	130	109	91	74	81	66	66	67	68	123.7	108.1
7 Spd	1	1	1	1	6	3	6	8	10	8	12	10	23	31	31	25	26	28	24	27	29	21	20	14	14.3	31.1
Dir	62	27	64	222	323	284	225	225	242	229	250	246	250	244	264	281	269	265	263	261	258	250	249	294	259.0	264.0
8 Spd	20	25	21	17	23	28	24	21	23	26	30	33	31	31	29	26	21	20	18	10	3	2	1	0	19.6	32.7
Dir	327	327	322	302	310	322	315	299	299	310	312	321	326	326	329	329	315	321	314	289	247	212	208	190	316.7	321.0
9 Spd	0	2	3	3	4	2	3	2	6	8	8	8	5	3	5	11	13	15	18	23	16	12	19	20	7.7	23.4
Dir	196	200	184	208	187	193	175	127	175	175	177	181	185	188	196	216	224	227	240	233	245	249	245	263	223.4	233.3
10 Spd	25	30	29	22	17	24	26	26	31	39	43	44	39	38	40	39	42	35	30	27	25	21	19	16	30.2	43.5
Dir	259	257	251	241	244	241	239	246	250	254	263	262	256	260	253	256	251	256	260	262	255	252	251	250	253.8	261.5
11 Spd	22	22	24	26	19	5	0	1	2	16	22	21	21	19	22	24	21	28	19	15	14	16	11	5	15.6	27.8
Dir	247	251	253	255	262	315	11	90	309	273	279	278	265	281	315	277	267	265	265	263	260	252	245	216	266.5	264.8
12 Spd	0	1	0	0	2	1	2	0	1	0	1	1	3	4	8	9	6	1	3	1	1	3	1	0	1.5	9.2
Dir	288	222	200	108	208	213	217	250	191	152	45	108	188	225	246	250	319	337	212	225	216	218	210	180	238.6	250.4
13 Spd	0	1	0	0	0	1	0	0	1	1	4	10	10	6	10	7	6	3	1	4	4	18	13	8	3.4	17.9
Dir	202	205	102	50	129	83	73	157	57	183	198	252	275	285	267	288	34	73	233	222	243	260	261	269	264.0	259.8
14 Spd	1	0	1	0	0	2	0	0	0	3	6	6	15	23	26	20	22	22	22	19	14	7	8	7	9.1	26.3
Dir	25	216	204	106	158	212	245	227	151	217	215	232	253	255	255	257	256	251	257	261	261	237	245	260	252.6	254.9
15 Spd	5	6	6	4	12	30	33	30	33	32	25	19	18	17	14	6	3	7	8	9	13	10	8	7	11.7	33.2
Dir	275	224	248	299	229	250	255	262	262	270	288	299	315	19	46	35	320	261	258	261	279	283	285	291	275.6	262.1
16 Spd	7	6	8	6	4	4	2	3	5	7	8	9	12	9	18	19	17	9	3	4	7	13	16	16	7.9	18.9
Dir	274	275	284	315	289	257	251	215	248	268	251	236	219	223	261	279	317	296	247	237	255	260	272	281	267.7	279.3
17 Spd	12	11	9	9	8	8	6	3	6	15	15	17	17	20	18	16	10	3	3	4	3	8	7	6	9.3	19.7
Dir	286	301	272	269	274	285	284	246	273	267	268	262	267	256	257	270	272	270	205	217	234	258	300	290	269.0	256.2
18 Spd	6	4	1	0	1	4	1	1	1	1	11	12	22	15	18	29	31	31	28	30	32	30	27	23	14.6	32.1
Dir	315	310	172	72	173	234	280	244	219	157	251	269	273	283	281	278	268	263	261	261	263	261	262	264	266.6	262.7
19 Spd	24	27	23	17	11	10	6	8	13	11	18	24	22	22	23	20	16	7	3	2	4	2	1	2	11.5	27.2
Dir	266	264	264	271	281	301	327	323	282	293	320	332	322	311	311	311	307	298	266	207	200	198	180	196	294.6	263.8
20 Spd	2	1	0	3	1	3	3	2	2	7	17	16	17	21	16	10	8	18	20	21	21	21	19	19	10.6	21.5
Dir	52	6	159	216	247	271	291	249	259	275	277	267	276	289	305	305	286	258	263	267	276	279	273	267	275.8	267.3
21 Spd	17	15	14	11	10	9	2	1	2	2	10	15	22	20	17	16	13	12	8	9	16	15	12	13	11.2	21.7
Dir	268	262	269	284	276	267	289	135	235	69	301	300	279	279	278	274	261	273	262	264	251	250	249	247	270.0	279.1
22 Spd	9	7	9	9	7	3	3	9	4	2	4	4	1	3	3	2	2	1	4	2	1	2	4	7	1.6	9.0
Dir	253	261	262	284	290	6	348	23	45	348	25	52	147	272	350	5	346	51	72	82	90	61	73	69	341.1	262.1

Peace Airshed Zone Association

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
23 Spd	6	6	6	7	6	5	5	8	8	7	7	8	9	11	11	12	11	7	7	6	6	4	2	1	6.5	11.7
Dir	74	65	58	68	63	75	69	68	72	72	78	83	103	109	120	110	98	79	76	82	65	68	32	50	82.9	110.2
24 Spd	1	0	1	2	2	0	1	5	3	5	1	17	21	34	29	25	17	11	7	3	1	4	5	4	7.2	34.1
Dir	222	20	207	205	204	310	246	207	190	233	83	259	267	276	286	298	311	302	300	276	244	279	342	4	281.0	276.0
25 Spd	3	3	0	0	0	0	0	1	2	5	6	4	6	8	4	3	2	1	3	1	2	1	2	13	1.0	13.3
Dir	336	210	341	37	23	201	38	195	45	50	51	91	178	209	236	231	211	94	212	174	22	271	230	253	219.4	252.7
26 Spd	4	4	4	3	5	1	0	2	3	21	35	41	34	33	32	31	17	10	14	9	12	17	17	18	9.8	41.2
Dir	268	65	84	287	269	279	182	233	237	271	271	271	275	280	269	271	279	307	313	334	56	59	55	53	287.7	270.8
27 Spd	21	21	22	26	23	22	18	16	9	6	5	3	3	8	4	3	3	1	2	2	5	6	6	6	8.6	26.3
Dir	46	52	45	43	44	41	37	39	38	44	53	51	305	290	54	78	63	54	212	127	108	109	102	115	48.2	43.5
28 Spd	2	2	2	1	2	1	1	2	2	7	10	14	12	11	12	11	7	2	2	0	2	2	2	0	4.0	14.4
Dir	115	100	107	100	116	161	125	109	139	168	170	182	186	164	181	179	176	180	172	353	41	201	198	200	169.6	182.3
29 Spd	0	0	1	1	1	3	1	1	0	1	5	7	13	16	23	24	21	28	29	33	37	32	29	24	12.9	37.4
Dir	47	238	75	156	197	212	33	202	58	210	202	203	204	237	251	253	269	259	266	261	260	261	263	255	254.3	259.7
30 Spd	11	12	7	4	4	2	1	0	2	4	4	4	7	12	24	21	15	3	1	1	0	2	1	4	4.9	23.6
Dir	299	295	281	311	316	300	281	242	188	204	198	173	193	241	255	249	240	243	96	76	189	212	177	223	251.1	254.7
31 Spd	26	39	44	31	33	27	36	40	38	43	42	42	42	40	34	36	40	36	34	32	28	24	27	16	34.1	43.5
Dir	253	264	256	257	265	260	255	256	256	261	264	272	277	273	272	264	265	259	256	253	247	235	242	241	260.0	256.4
Spd	5.2	5.6	5.3	4.7	4.6	4.5	4.4	4.2	5.3	7.2	8.9	9.9	12.0	12.7	13.0	12.9	11.1	10.5	9.5	9.1	8.4	7.9	6.8	5.5	Diurnal Average	
Dir	277.4	275.3	267.5	268.8	271.4	271.5	268.6	263.5	263.3	263.6	268.4	268.2	265.2	268.6	271.4	271.2	270.2	266.1	261.7	257.4	256.6	253.4	257.0	262.1		
Spd	26.3	39.4	43.5	31.5	33.3	30.5	35.9	39.6	38.3	43.1	43.5	43.5	44.3	45.4	39.8	38.6	42.3	35.8	34.1	33.3	37.4	32.1	28.5	23.6	Diurnal Maximum	
Dir	253.0	263.6	256.4	257.2	265.2	249.6	254.9	255.8	256.2	261.5	262.8	261.5	261.5	259.6	252.9	255.6	251.5	259.0	256.4	261.3	259.7	261.4	263.1	254.8		

Maximum Speed Value: 45 km/h on Oct 5 14:00
Minimum Speed Value: 0 km/h on Oct 28 20:00
Maximum Daily Speed Average: 34.1 km/h on Oct 31
Minimum Daily Speed Average: 0.7 km/h on Oct 12
Maximum Diurnal Speed Average: 13.0 km/h at hour 15
Minimum Diurnal Speed Average: 4.2 km/h at hour 8

Monthly Average Velocity: 7.85 km/h 266.13 deg
Speed Percentiles: P_1 = 0.1 P_{10} = 0.7 Q_1 = 2.2 Median = 6.6 Q_3 = 17.5 P_{90} = 28.0 P_{99} = 41.6
All monthly, daily, and diurnal averages have been calculated using vector methods

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

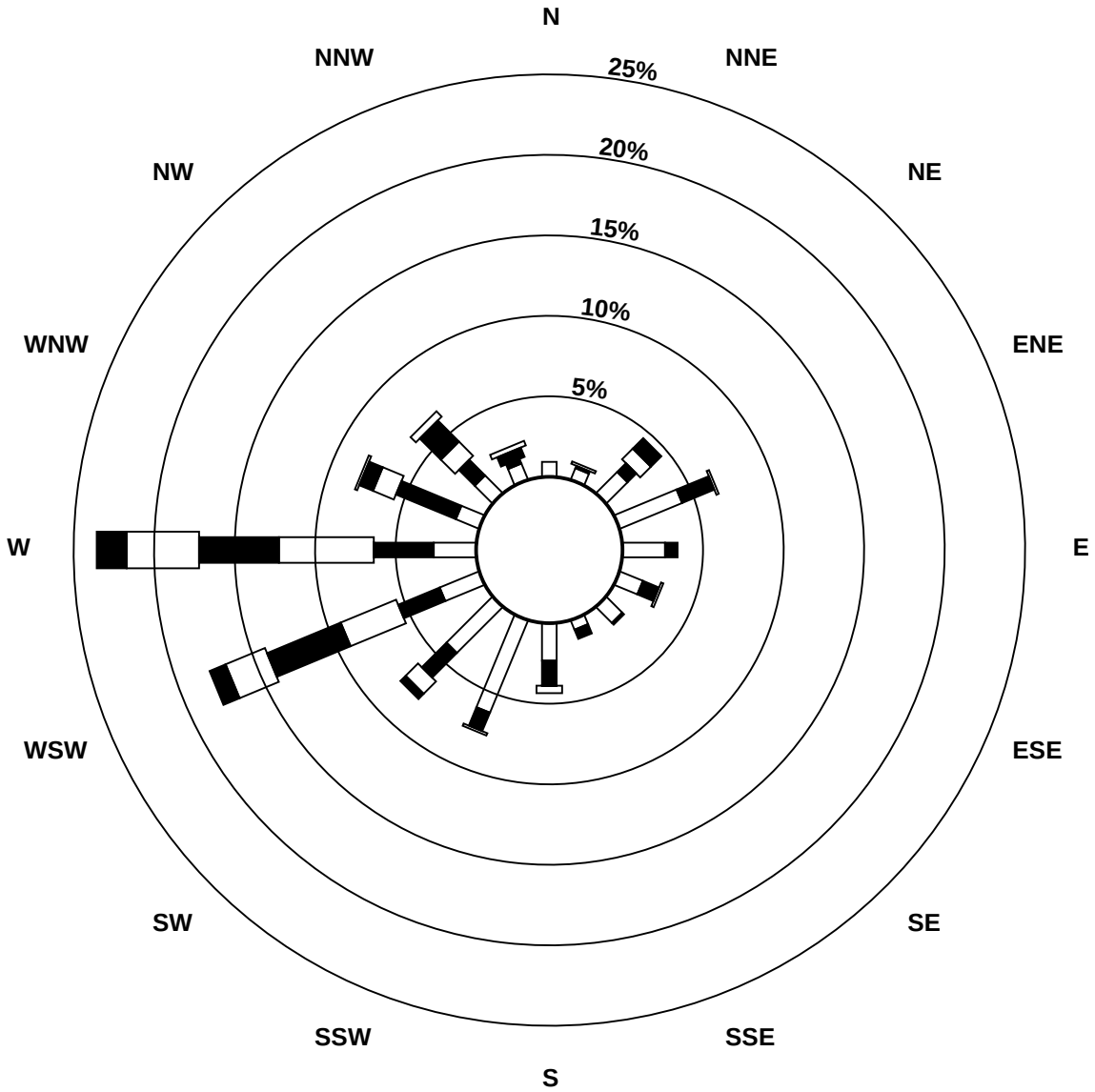
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	20	1	1	0	0	0	22
NorthEast	45	12	7	6	0	0	70
East	47	22	1	0	0	0	70
SouthEast	28	4	1	0	0	0	33
South	52	16	4	0	0	0	72
SouthWest	77	28	21	11	1	0	138
West	35	46	55	58	46	23	263
NorthWest	17	21	13	20	5	0	76
Total	321	150	103	95	52	23	744

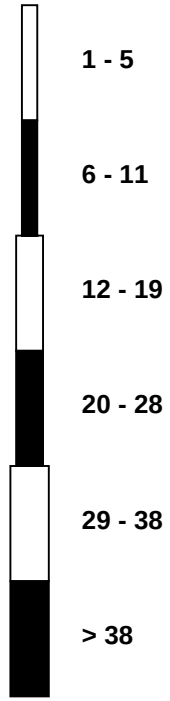
Wind Rose

Wind Speed (WS) (km/h)

Evergreen Park - October 2013



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - October 2013

Maximum Speed: 46 km/h on Oct 5 14:00

Maximum Daily Speed Average: 34.9 km/h on Oct 31

Minimum Speed: 0 km/h on Oct 13 00:00

Minimum Daily Speed Average: 2.5 km/h on Oct 12

Maximum Diurnal Speed Average: 18.0 km/h at hour 15

Minimum Diurnal Speed Average: 7.3 km/h at hour 7

Monthly Average Speed: 11.44 km/h

Percentiles: $P_1 = 0.2$ $P_{10} = 1.2$ $Q_1 = 2.8$ Median = 7.2 $Q_3 = 17.9$ $P_{90} = 28.4$ $P_{99} = 42.1$

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 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-Oct	11	7	5	2	3	3	5	6	5	3	2	4	7	4	3	2	4	6	6	0	1	2	4	7	4.3	10.9
2-Oct	6	5	2	2	0	0	0	0	1	2	2	2	2	2	5	5	2	4	4	6	4	3	3	1	2.7	6.4
3-Oct	1	0	1	1	3	1	3	2	3	8	6	9	9	8	8	7	4	2	2	1	1	1	0	1	3.4	9.3
4-Oct	1	1	1	1	2	3	3	3	2	2	3	4	8	4	3	2	1	3	10	11	11	10	6	11	4.5	11.3
5-Oct	14	16	12	18	14	20	22	25	24	24	31	37	45	46	38	39	36	33	29	16	17	12	7	4	24.1	45.7
6-Oct	2	2	4	8	8	5	2	2	4	6	10	8	6	5	4	5	5	3	4	5	4	4	3	3	4.6	10.2
7-Oct	2	1	1	2	9	7	6	8	10	9	13	11	24	31	32	25	26	28	24	27	29	22	20	16	15.9	32.0
8-Oct	21	26	22	18	24	29	25	22	24	27	31	34	32	32	29	27	22	21	18	10	4	2	1	0	20.9	33.9
9-Oct	0	2	3	3	4	2	3	3	7	8	9	8	5	3	5	11	14	15	18	24	17	13	20	21	9.1	23.6
10-Oct	26	30	30	23	18	24	26	26	31	40	44	44	40	39	40	39	43	36	31	27	26	21	19	16	30.7	44.2
11-Oct	22	22	24	26	20	6	0	1	2	16	23	22	22	21	24	25	21	28	19	15	14	16	11	5	16.9	28.1
12-Oct	0	1	0	1	2	1	2	0	1	0	1	2	3	6	11	10	6	2	3	2	1	4	1	0	2.5	10.6
13-Oct	0	1	0	0	0	1	0	1	1	1	4	11	13	8	12	9	6	4	1	5	5	18	13	8	5.1	18.0
14-Oct	2	1	1	0	0	2	0	1	0	3	6	7	15	23	27	20	22	22	22	20	14	7	8	7	9.6	26.6
15-Oct	5	6	6	5	13	31	33	31	33	33	26	20	20	19	14	6	3	7	9	10	14	11	9	7	15.4	33.4
16-Oct	7	7	8	6	4	4	2	3	5	8	9	10	13	12	19	20	17	9	4	4	7	13	17	17	9.3	19.9
17-Oct	12	11	9	9	9	8	6	4	6	15	16	17	18	20	19	16	10	3	3	4	3	8	7	6	10.0	20.3
18-Oct	6	4	1	1	2	4	2	2	1	1	11	13	23	16	19	30	32	32	28	30	32	30	27	23	15.4	32.3
19-Oct	24	27	23	18	12	10	7	8	13	12	18	25	23	23	24	21	17	8	3	2	4	3	3	2	13.7	27.4
20-Oct	3	1	1	3	1	3	3	2	3	7	18	16	17	22	17	11	10	18	20	22	21	21	19	20	11.5	21.6
21-Oct	17	15	15	12	11	9	3	2	2	2	11	16	22	20	18	16	13	13	9	10	16	15	12	13	12.2	22.1
22-Oct	9	7	9	9	7	3	3	9	5	3	5	5	3	5	4	3	2	1	4	2	2	2	4	7	4.7	9.4
23-Oct	7	6	6	7	6	5	5	8	8	7	8	9	9	11	12	12	11	7	7	6	6	4	2	2	7.2	12.5
24-Oct	1	0	1	2	2	1	2	5	5	9	5	17	22	35	31	26	18	12	9	4	2	5	7	5	9.4	34.9
25-Oct	4	4	1	1	1	1	1	1	2	5	6	6	7	8	5	4	3	3	4	3	3	3	2	13	3.8	13.4
26-Oct	5	5	4	6	5	2	1	3	3	22	36	42	35	34	32	32	17	11	14	11	12	17	18	19	16.1	41.5
27-Oct	21	22	22	27	24	22	18	17	10	6	5	4	5	9	5	3	3	2	2	3	6	6	6	6	10.5	26.7
28-Oct	3	2	2	1	2	1	1	2	3	8	10	15	13	12	13	12	7	2	2	0	3	3	3	1	5.0	15.1
29-Oct	1	1	2	2	2	3	1	1	0	1	5	7	13	17	23	24	21	28	29	34	38	32	29	24	14.0	37.6
30-Oct	11	12	8	5	4	3	3	2	3	4	5	5	8	14	24	22	16	4	3	3	2	3	2	5	7.0	24.0
31-Oct	27	40	44	32	33	27	36	40	39	43	42	42	43	41	35	37	40	36	34	32	28	24	27	16	34.9	44.2
	8.7	9.2	8.6	8.0	7.9	7.8	7.3	7.6	8.3	10.8	13.6	15.1	16.9	17.7	18.0	16.8	14.6	13.0	12.1	11.2	11.1	10.7	9.9	9.2	Diurnal Average	
	26.6	39.8	44.2	31.7	33.5	30.7	36.1	39.8	38.5	43.3	43.9	44.2	44.8	45.7	40.2	39.0	42.7	36.0	34.3	33.5	37.6	32.3	28.7	23.8	Diurnal Maximum	

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - October 2013

Maximum Value: 97.7 deg on Oct 13 04:00

Minimum Value: 5.0 deg on Oct 31 07:00

Percentiles: P_1 = 5.6 P_{10} = 7.3 Q_1 = 11.5 Median = 20.7 Q_3 = 50.1 P_{90} = 73.8 P_{99} = 92.2

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Oct	16	14	28	40	17	22	19	10	41	43	47	28	19	32	35	63	41	24	44	71	42	17	16	14	70.9
2-Oct	17	22	59	74	70	75	73	81	89	94	53	64	75	67	31	25	82	24	27	16	33	19	33	67	94.4
3-Oct	66	84	50	71	23	73	93	75	87	19	39	50	57	49	70	52	62	50	22	77	81	56	61	76	92.5
4-Oct	66	77	63	49	58	53	53	77	41	29	45	84	29	36	57	36	90	54	15	7	9	9	11	6	89.8
5-Oct	12	16	8	6	9	9	9	6	9	8	9	9	8	7	7	10	7	7	7	25	8	13	60	63	63.4
6-Oct	86	75	52	36	12	11	30	14	15	25	17	29	31	36	27	22	22	27	17	19	15	13	15	21	86.2
7-Oct	42	49	44	76	69	72	31	19	19	24	20	16	11	12	15	12	9	8	8	7	8	8	7	28	75.6
8-Oct	11	13	16	15	16	16	15	14	16	15	15	16	15	13	13	17	16	16	13	18	28	54	55	67	66.9
9-Oct	77	51	15	16	12	57	44	41	21	28	19	21	21	19	20	12	9	9	10	7	11	17	14	16	76.7
10-Oct	12	6	6	10	25	9	7	6	7	8	8	9	9	12	8	9	8	8	7	5	6	6	6	6	25.5
11-Oct	6	5	5	7	21	35	59	77	40	14	16	16	15	28	23	12	10	7	7	10	9	7	10	11	76.9
12-Oct	64	74	81	78	9	55	31	96	59	63	57	50	40	63	46	25	30	78	18	71	40	23	73	88	96.0
13-Oct	97	60	81	98	85	87	35	71	25	71	32	22	38	65	38	49	28	14	66	55	61	6	6	11	97.7
14-Oct	65	84	54	78	77	64	69	61	73	61	16	23	14	10	8	12	10	7	6	6	7	19	7	18	84.2
15-Oct	22	14	18	30	38	8	6	8	6	9	16	18	28	26	14	29	49	24	24	24	14	23	17	16	49.5
16-Oct	15	14	17	12	22	18	31	15	24	21	23	29	20	41	22	19	15	20	37	11	18	8	9	12	40.7
17-Oct	18	13	10	8	10	15	31	68	16	10	14	12	15	14	15	17	15	40	62	60	28	11	22	19	67.7
18-Oct	17	43	64	74	59	16	64	44	75	61	12	21	16	18	24	12	9	6	6	6	6	6	6	7	75.0
19-Oct	7	7	8	11	18	18	20	9	18	19	18	17	19	19	17	18	16	16	62	50	33	66	74	64	73.9
20-Oct	37	61	65	26	81	29	26	41	38	38	11	11	13	17	18	25	29	6	7	7	10	10	9	7	81.5
21-Oct	8	7	18	19	14	31	57	48	42	50	40	20	11	16	13	10	9	16	26	13	7	7	7	6	56.8
22-Oct	11	14	7	18	24	20	27	25	56	79	46	39	82	65	79	59	67	40	13	27	37	57	14	10	81.9
23-Oct	16	10	11	13	15	14	14	13	13	16	19	24	21	28	33	26	19	13	9	12	7	15	31	74	73.9
24-Oct	57	81	38	23	55	92	49	50	77	72	80	22	10	12	18	15	18	18	36	75	76	17	44	33	92.3
25-Oct	59	71	85	87	83	87	79	86	26	10	13	52	31	27	44	52	67	87	71	86	51	71	63	9	87.0
26-Oct	53	44	39	73	36	80	90	84	64	11	9	7	11	12	8	9	12	32	17	47	20	12	16	15	89.7
27-Oct	11	9	9	10	9	10	10	10	15	20	27	43	69	26	43	33	27	32	75	42	24	19	22	21	74.8
28-Oct	32	25	29	30	47	56	66	54	57	18	17	18	25	28	21	19	19	84	58	87	33	74	53	71	86.8
29-Oct	49	87	64	68	65	32	51	77	87	66	16	15	12	16	8	7	11	7	7	7	5	6	6	6	87.5
30-Oct	22	21	27	30	30	64	58	85	80	44	44	31	26	28	11	12	17	23	67	82	93	46	84	46	92.7
31-Oct	11	9	9	7	6	7	5	5	6	6	7	9	11	11	12	10	7	6	6	6	6	7	7	11	12.1
	96.6	87.2	84.9	97.7	84.8	92.3	92.5	96.0	89.1	94.4	80.3	84.5	81.9	67.0	79.2	63.5	89.8	86.7	74.8	86.8	92.7	73.8	84.3	87.7	

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.0 ppb on Oct 11 06:00
Maximum Daily Average: 1.5 ppb on Oct 11

Minimum Value: 0 ppb on Oct 1 23:00
Maximum Diurnal Average: 0.9 ppb at hour 6
Monthly Average: 0.47 ppb
Minimum Daily Average: 0.0 ppb on Oct 28
Minimum Diurnal Average: 0.2 ppb at hour 20
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.1 $Q_3 = 0.5$ $P_{90} = 1.4$ $P_{99} = 3.1$

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	38
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0.9	2.2
2-Oct	0	0	0	0	1	0	1	3	3	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0.5	3.0
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.3
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.1
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	2	3	2	2	0.4	3.4
6-Oct	3	3	1	0	0	N	N	N	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	3.3
7-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	3	5	1	0	0.4	4.8
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
10-Oct	0	0	0	0	0	0	0	0	0	0	0	A	C	C	C	0	0	0	0	0	1	4	6	1	0.7	5.9
11-Oct	5	0	0	2	3	8	2	1	2	2	A	1	1	0	0	0	0	0	2	0	0	0	2	2	1.5	8.0
12-Oct	0	0	1	0	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.4	1.3
13-Oct	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.3	0.9
14-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Oct	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3
16-Oct	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0.3	1.4
17-Oct	1	0	0	0	A	0	0	0	1	4	1	3	1	1	0	0	0	2	1	0	0	0	0	0	0.8	4.5
18-Oct	0	0	0	A	0	0	1	0	0	0	0	1	1	1	1	1	1	1	0	1	1	2	0	0	0.6	1.5
19-Oct	2	1	A	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.9
20-Oct	0	A	0	3	3	3	3	2	1	1	1	2	2	2	2	1	1	1	0	0	0	1	2	0	1.4	3.3
21-Oct	A	0	1	1	1	2	2	1	1	2	1	2	1	1	1	1	0	0	0	0	0	0	0	A	0.8	2.3
22-Oct	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0.3	2.2
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.2
24-Oct	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	3	3	1	0.5	2.9
25-Oct	1	2	3	2	3	2	1	1	1	1	1	C	C	C	0	0	0	0	0	A	0	1	0	0	1.1	3.4
26-Oct	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	1.4
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.4
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.0
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	0	0	0	1	0.3	1.4
30-Oct	1	3	2	1	1	1	0	0	0	0	1	0	0	0	A	2	0	0	0	0	0	1	0	0	0.6	2.8
31-Oct	0	0	0	0	1	2	1	1	3	1	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0.6	3.0
	0.6	0.5	0.5	0.5	0.6	0.9	0.5	0.5	0.5	0.6	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.4	0.7	0.6	0.4	Diurnal Average	
	5.1	2.8	3.4	3.3	3.2	8.0	3.1	3.0	3.0	4.5	1.4	2.7	2.2	1.9	1.9	1.5	1.4	2.2	1.5	1.4	3.2	4.8	5.9	1.9	Diurnal Maximum	

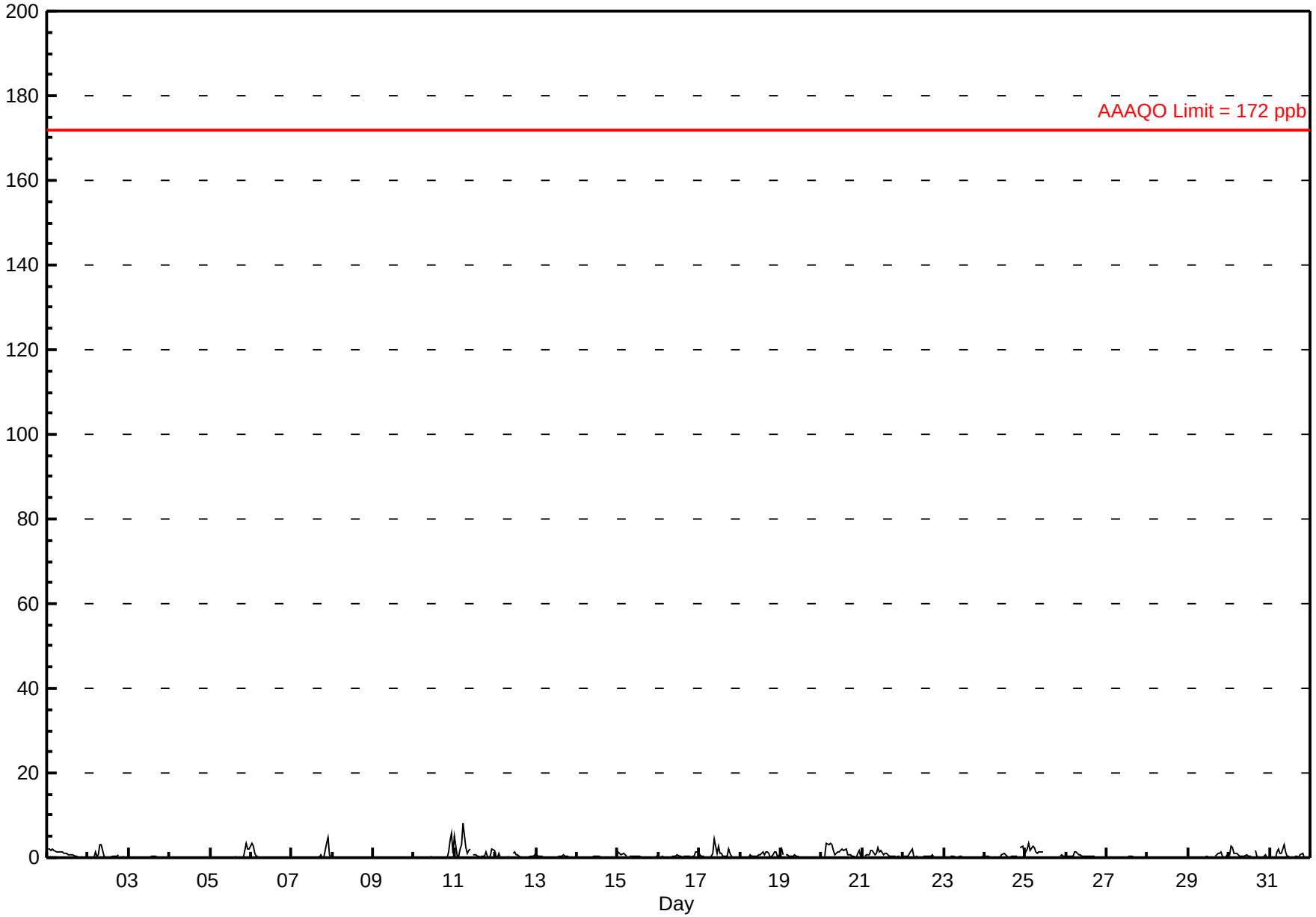
C - Calibration N - Not Valid A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - October 2013



Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - October 2013

Maximum Value: 14.2 ppb on Oct 10 23:00

Maximum Daily Average: 3.6 ppb on Oct 11

Minimum Value: 0 ppb on Oct 7 14:00

Minimum Daily Average: 0.3 ppb on Oct 28

Maximum Diurnal Average: 2.0 ppb at hour 6

Minimum Diurnal Average: 0.8 ppb at hour 17

Monthly Average: 1.24 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 1.1$ $P_{90} = 2.9$ $P_{99} = 8.9$

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	38
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	3	2	2	3	2	2	2	2	1	2	1	1	1	1	1	1	1	1	0	0	A	0	0	0	1.3	2.9
2-Oct	0	0	0	0	3	1	2	6	6	1	0	0	0	0	1	1	1	1	1	A	2	1	0	0	1.3	6.2
3-Oct	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	1	0	0	A	0	0	0	0	0	0.5	0.7
4-Oct	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.5
5-Oct	0	0	0	0	0	1	0	0	0	0	0	1	1	1	1	1	A	0	0	0	5	7	6	3	1.3	7.4
6-Oct	9	9	4	1	0	N	N	N	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	1.4	8.9
7-Oct	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	1	0	3	1	1	7	9	2	1	1.3	9.2
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	1	0	1	0	0.4	0.6
9-Oct	0	0	1	0	1	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0.4	0.5
10-Oct	0	1	1	0	0	0	0	0	0	0	1	A	C	C	C	1	0	0	0	0	5	10	14	6	2.1	14.2
11-Oct	11	1	1	4	12	13	5	2	3	3	A	1	1	1	1	0	2	1	4	1	0	2	7	6	3.6	12.8
12-Oct	1	1	4	0	0	0	0	0	1	A	2	2	1	1	1	1	1	1	1	0	1	1	1	1	0.9	4.2
13-Oct	1	1	1	1	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	0	0	1	1	1	0.7	1.5
14-Oct	1	1	1	0	0	1	0	A	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0.5	0.6
15-Oct	6	4	2	3	1	2	A	2	1	1	0	1	1	1	0	0	0	0	0	0	0	0	1	1	1.2	5.6
16-Oct	1	0	1	0	0	A	1	1	1	1	1	2	1	1	0	1	1	1	1	0	1	1	3	3	0.9	3.0
17-Oct	1	1	1	1	A	0	0	1	3	9	2	4	3	2	1	1	1	6	4	1	1	0	0	0	1.9	9.1
18-Oct	0	0	0	A	1	0	2	1	1	1	1	2	2	3	2	2	2	2	1	2	2	3	2	1	1.5	2.8
19-Oct	3	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0.8	3.3
20-Oct	0	A	2	7	8	10	8	2	1	2	2	2	4	3	4	2	2	1	1	1	0	3	6	1	3.2	9.9
21-Oct	A	1	1	1	2	2	3	1	2	3	2	3	4	3	2	1	1	1	1	1	0	1	1	A	1.6	3.7
22-Oct	1	0	0	1	3	6	0	0	1	0	1	1	2	1	1	2	1	2	0	1	0	1	A	0	1.1	5.8
23-Oct	0	0	1	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	A	0	1	0.5	0.7
24-Oct	1	1	1	0	1	0	0	0	0	1	4	4	1	1	0	1	1	1	1	1	A	8	7	1	1.5	8.3
25-Oct	3	3	9	5	3	4	2	1	8	2	2	C	C	C	0	0	0	0	1	A	1	1	1	1	2.4	9.1
26-Oct	1	1	1	1	1	3	2	1	2	1	1	1	1	1	1	1	1	1	A	1	0	0	0	1	0.9	2.7
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	A	0	0	1	0	0	0	0.5	1.4
28-Oct	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.6
29-Oct	0	0	0	1	0	0	0	0	0	0	1	1	1	1	1	A	1	2	2	3	1	1	1	2	0.9	3.3
30-Oct	1	8	5	2	2	2	1	1	1	1	1	1	1	1	A	3	1	1	1	0	0	7	0	0	1.7	7.7
31-Oct	0	0	0	1	2	7	3	3	5	2	1	1	1	A	1	1	1	0	5	6	0	1	1	0	1.8	6.6
	1.6	1.3	1.4	1.2	1.6	2.0	1.3	1.0	1.4	1.2	1.0	1.1	1.0	1.0	0.8	0.9	0.8	1.0	1.0	0.8	1.2	2.0	1.9	1.1	Diurnal Average	
	11.4	8.9	9.1	7.1	11.6	12.8	8.0	6.2	7.9	9.1	4.1	4.4	3.7	3.2	4.3	2.8	2.1	6.0	4.7	6.1	7.0	9.8	14.2	6.4	Diurnal Maximum	

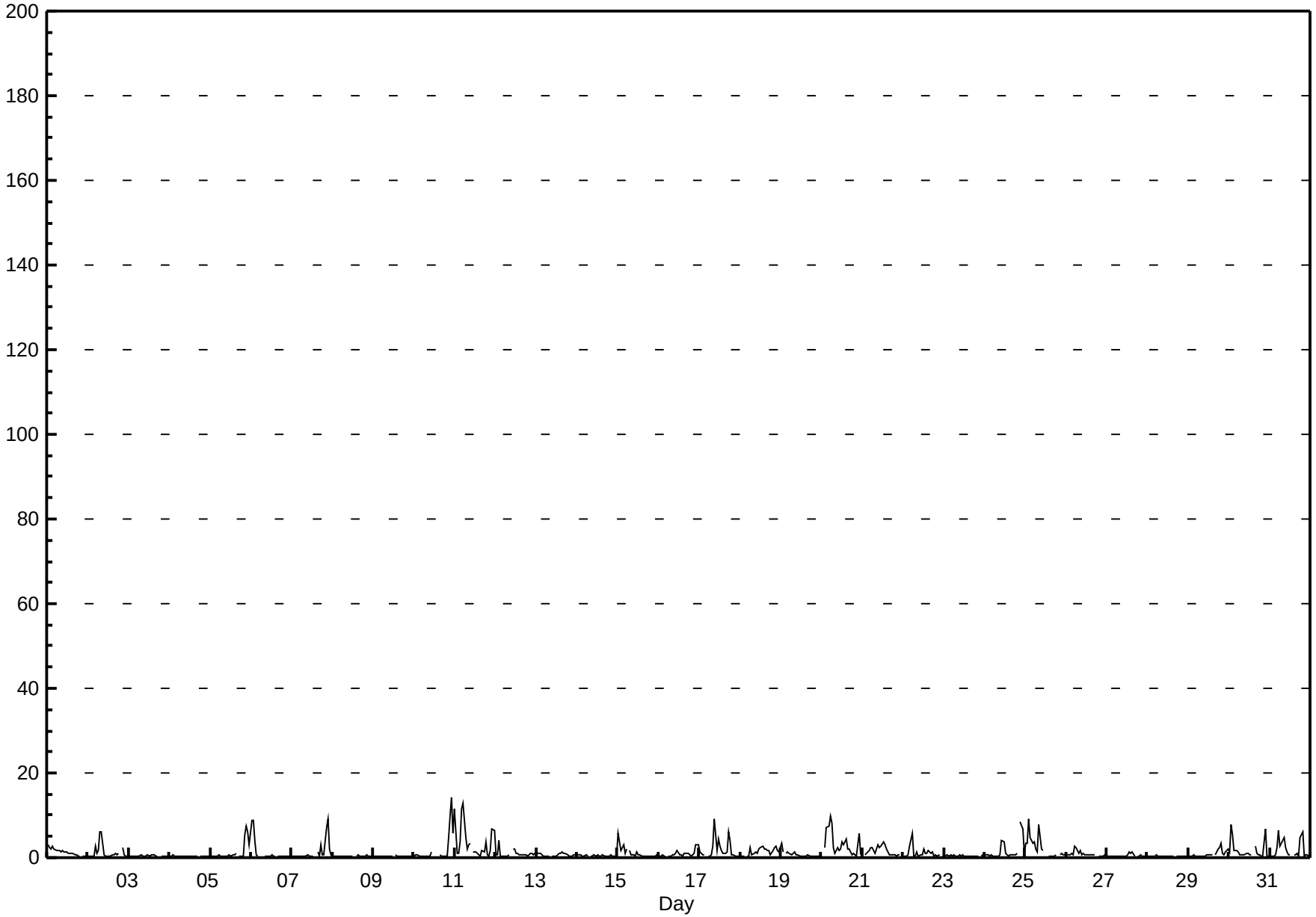
C - Calibration N - Not Valid A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - October 2013

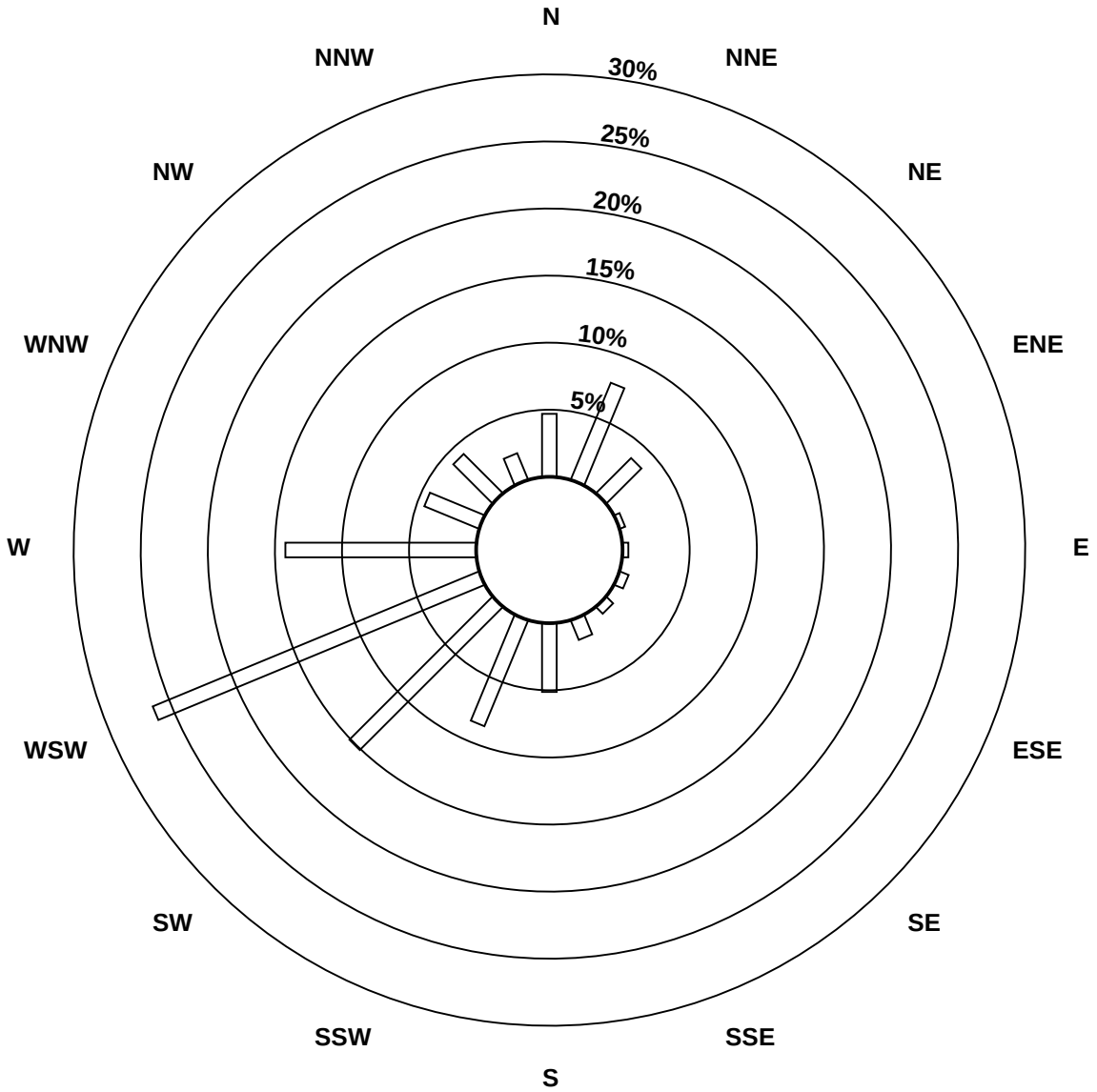


Peace Airshed Zone Association

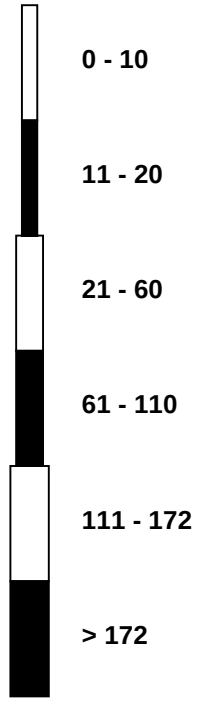
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - October 2013



Pollutant Classes (ppb)

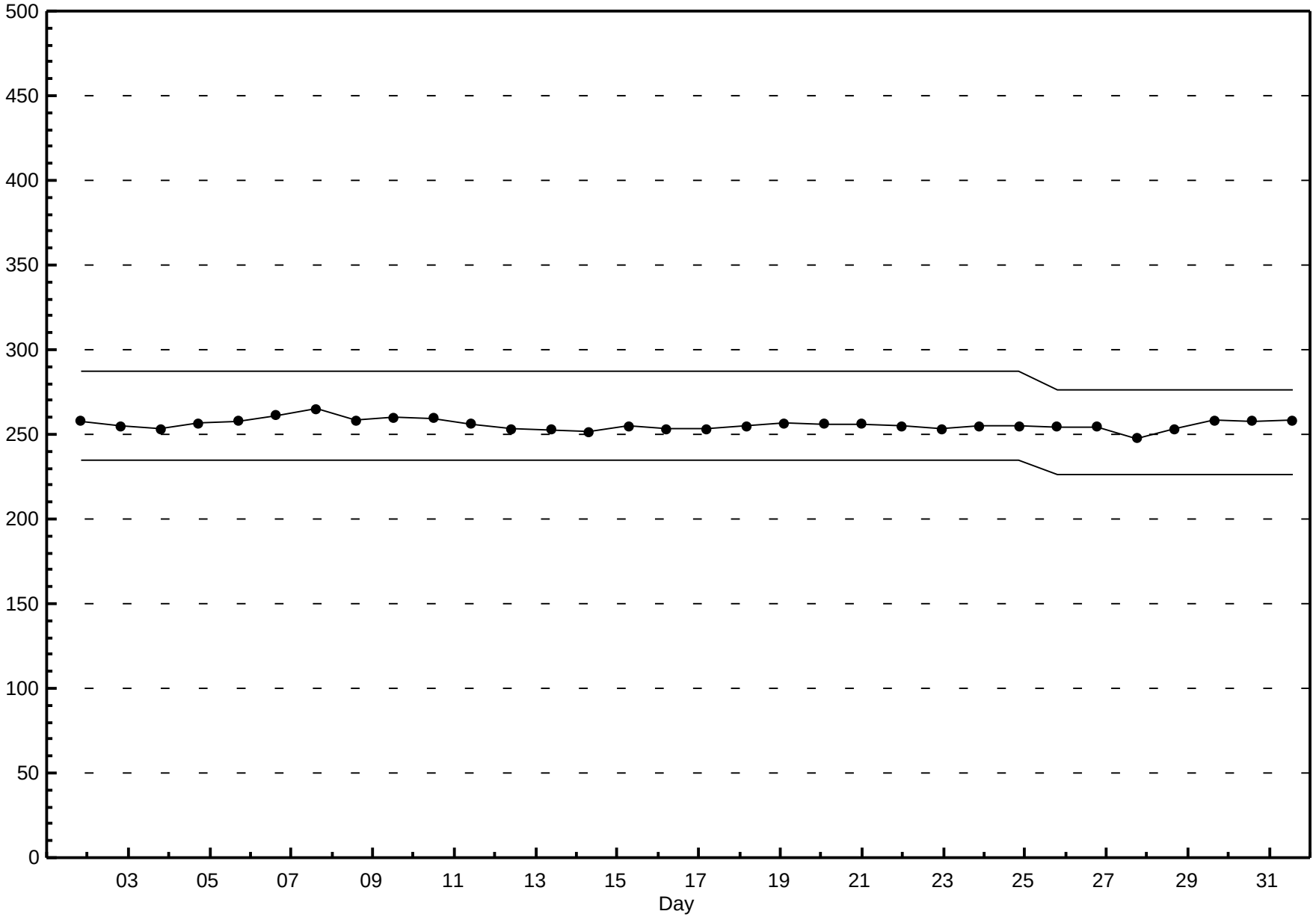


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Smoky Heights - October 2013



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.3 ppb on Oct 29 04:00 Maximum Daily Average: 0.2 ppb on Oct 29

Minimum Value: 0 ppb on Oct 2 00:00 Minimum Daily Average: 0.0 ppb on Oct 31
Maximum Diurnal Average: 0.1 ppb at hour 14 Minimum Diurnal Average: 0.0 ppb at hour 22
Monthly Average: 0.05 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.0 $Q_3 = 0.1$ $P_{90} = 0.1$ $P_{99} = 0.2$

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	39
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.2
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.1
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.1
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.2
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.1
6-Oct	0	0	0	0	0	N	N	N	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.1
7-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.0	0.1
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.0
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
10-Oct	0	0	0	0	0	0	0	0	0	0	0	A	C	C	C	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
12-Oct	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
13-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
14-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Oct	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
16-Oct	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
17-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
18-Oct	0	0	0	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
19-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
20-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
21-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
22-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.1
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.1
25-Oct	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.1
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.1
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.1
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3
30-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.1
31-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	Diurnal Average	
	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	Diurnal Maximum	

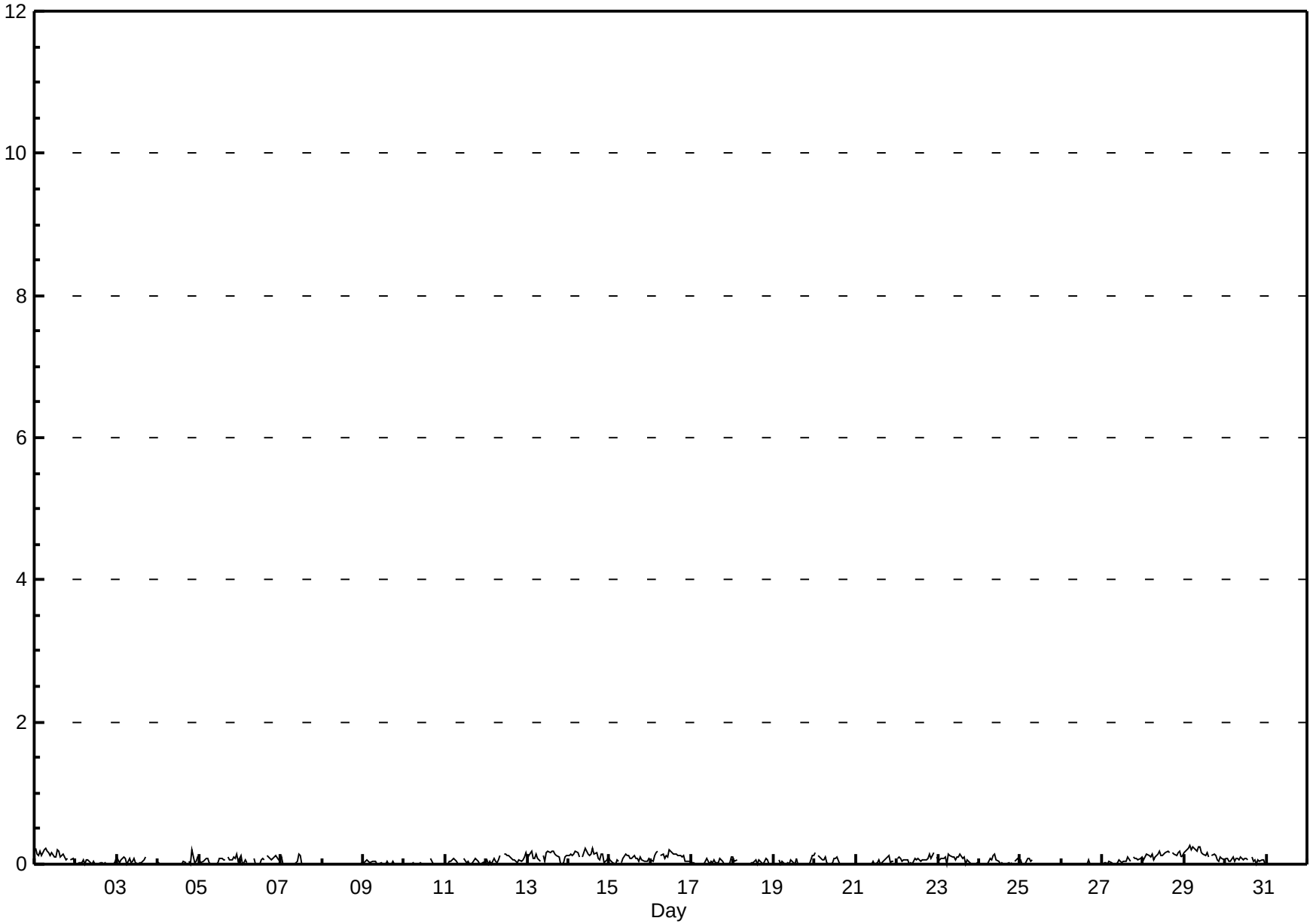
C - Calibration N - Not Valid A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - October 2013



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - October 2013

Maximum Value: 0.8 ppb on Oct 14 09:00

Maximum Daily Average: 0.5 ppb on Oct 14

Minimum Value: 0 ppb on Oct 8 08:00

Minimum Daily Average: 0.3 ppb on Oct 8

Maximum Diurnal Average: 0.5 ppb at hour 1

Minimum Diurnal Average: 0.4 ppb at hour 7

Monthly Average: 0.42 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 0.6$ $P_{99} = 0.7$

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	39
Percent Operational Time:	99.6

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

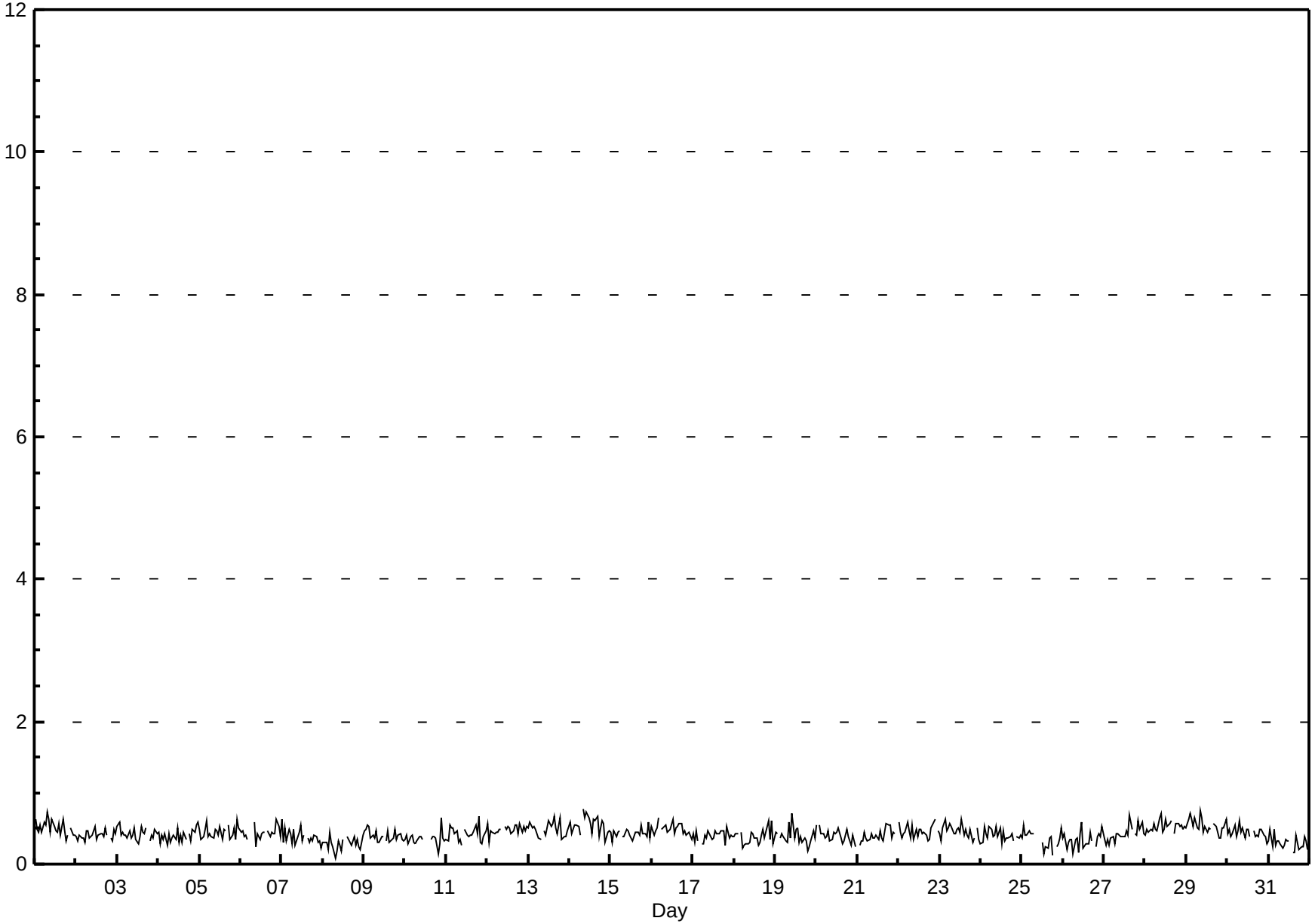
C - Calibration N - Not Valid A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - October 2013

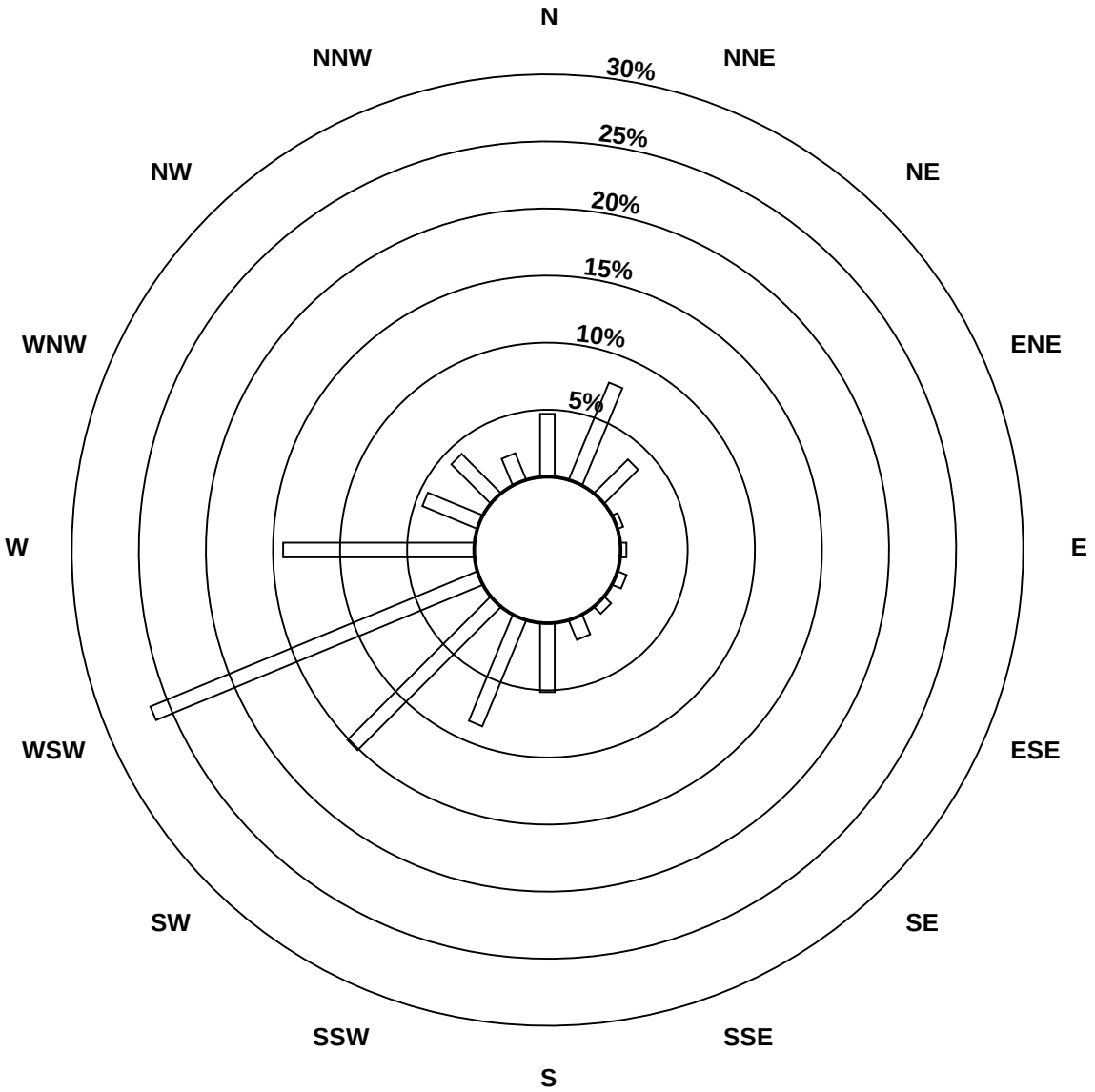


Peace Airshed Zone Association

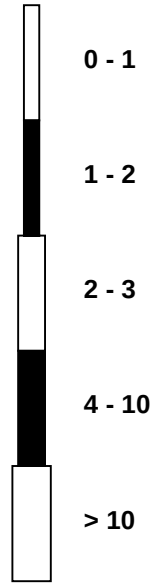
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - October 2013



Pollutant Classes (ppb)

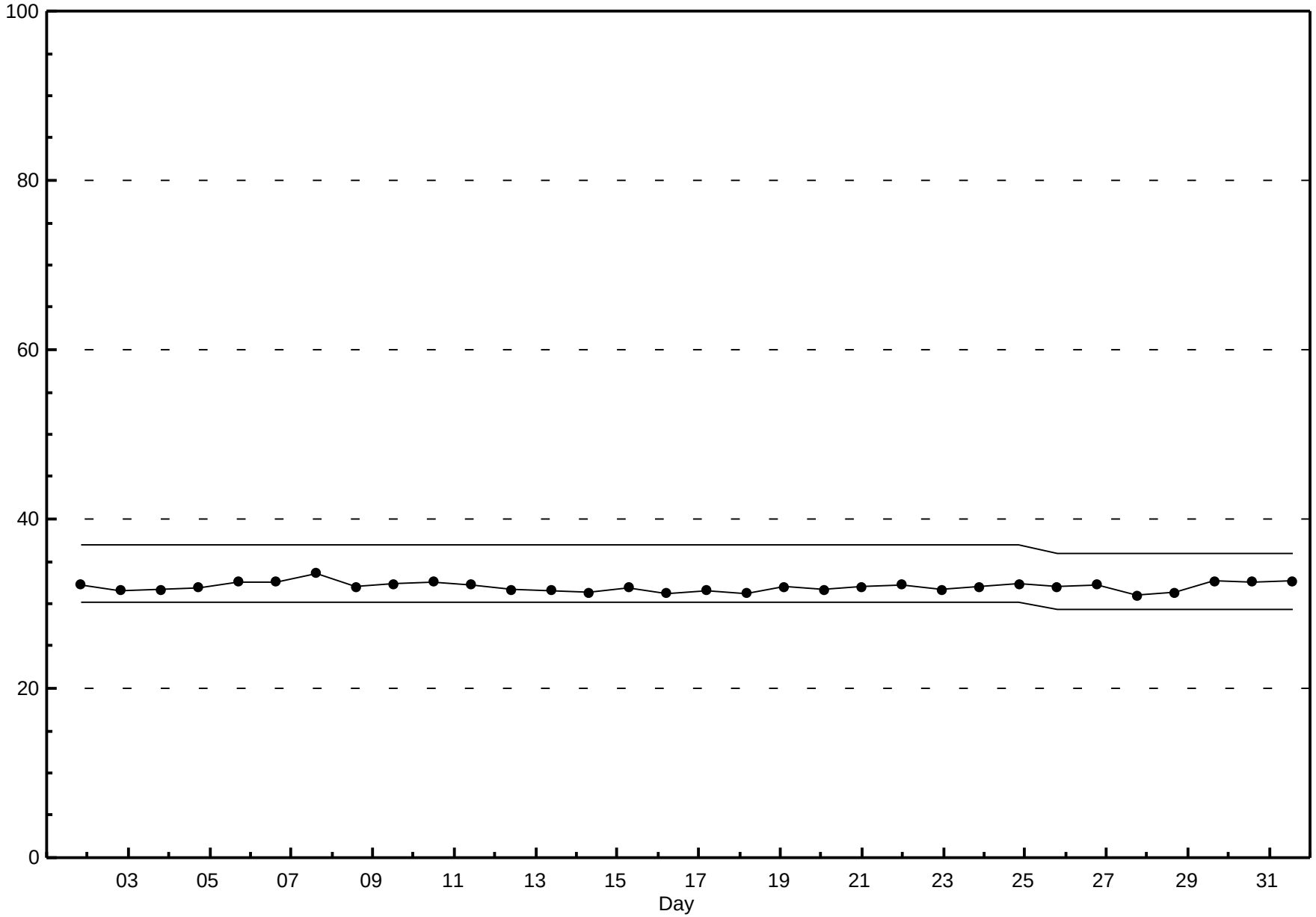


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Smoky Heights - October 2013



Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - October 2013

Number of Exceedences: 1-hr: 1 24-hr: 0
Maximum Value: 129.4 $\mu g/m^3$ on Oct 25 18:00
Maximum Daily Average: 18.3 $\mu g/m^3$ on Oct 25

Minimum Value: 0 $\mu g/m^3$ on Oct 2 11:00
Maximum Diurnal Average: 10.4 $\mu g/m^3$ at hour 18
Monthly Average: 4.16 $\mu g/m^3$
Minimum Daily Average: 0.0 $\mu g/m^3$ on Oct 28
Minimum Diurnal Average: 1.9 $\mu g/m^3$ at hour 14
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.5$ Median = 2.4 $Q_3 = 4.7$ $P_{90} = 8.8$ $P_{99} = 35.7$

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Hours of Calibration:	4
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	4	4	3	4	3	3	3	3	2	3	2	2	2	3	2	2	2	2	1	1	1	1	1	0	2.2	4.0
2-Oct	0	0	0	0	1	0	0	1	1	1	0	0	0	0	1	2	1	1	1	1	1	1	2	2	0.8	2.5
3-Oct	2	1	1	1	1	2	3	4	3	3	3	2	1	2	3	3	2	2	3	3	3	6	3	1	2.4	5.6
4-Oct	1	1	0	0	2	1	1	2	2	3	3	0	0	0	4	3	0	2	1	2	1	1	0	0	1.3	3.9
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.1	0.5
6-Oct	0	0	0	0	0	N	N	N	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	4.4
7-Oct	0	0	0	0	1	1	1	2	2	2	2	2	0	0	0	0	0	0	0	0	1	1	0	1	0.7	2.4
8-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0	0	0	0.7	1.3
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	0	1	1	0.3	1.6
10-Oct	1	0	0	0	1	0	2	3	3	4	4	2	C	C	C	23	13	9	6	5	5	5	6	6	4.7	22.9
11-Oct	5	5	4	4	4	3	3	3	4	3	1	1	1	1	1	1	1	1	8	3	4	4	2	2	2.9	8.3
12-Oct	2	2	1	2	2	2	1	3	4	4	3	2	2	3	2	2	7	4	9	7	5	18	6	5	4.0	17.7
13-Oct	4	5	4	5	6	7	5	4	4	4	4	4	5	6	5	5	5	5	7	6	7	7	6	8	5.4	7.7
14-Oct	7	7	7	6	7	7	7	8	10	9	8	6	6	5	4	3	4	3	5	4	4	4	5	4	5.8	9.5
15-Oct	4	3	2	2	3	3	4	5	6	5	3	1	0	0	0	0	7	18	8	5	1	1	0	0	3.3	17.6
16-Oct	0	0	0	0	1	1	5	7	9	4	1	0	0	0	0	0	1	1	18	22	9	6	2	3	3.8	21.5
17-Oct	3	2	1	2	2	2	0	2	2	2	1	0	0	0	0	0	2	1	43	23	6	8	10	6	4.9	42.6
18-Oct	4	4	3	2	3	2	3	4	5	4	4	3	5	3	4	10	12	11	5	4	4	3	3	3	4.5	12.2
19-Oct	3	4	3	4	3	3	5	5	7	3	2	1	2	2	1	3	2	11	11	56	29	8	6	5	7.5	56.0
20-Oct	6	5	5	3	3	3	3	4	7	6	5	5	5	3	3	5	2	30	17	5	3	3	3	2	5.7	30.1
21-Oct	2	4	3	2	4	5	6	11	11	9	11	13	5	9	7	17	21	43	28	13	6	3	4	3	9.9	42.6
22-Oct	3	2	3	4	6	7	4	3	3	4	1	1	0	1	8	7	16	21	32	9	9	39	30	10	9.4	38.6
23-Oct	5	9	32	29	39	20	8	4	19	3	0	0	0	0	2	5	0	2	14	0	11	3	1	0	8.5	38.9
24-Oct	0	0	0	0	0	2	2	3	4	5	5	5	2	0	4	6	4	9	6	5	4	5	6	3	3.4	9.1
25-Oct	3	2	2	7	4	10	5	4	21	9	2	0	2	C	11	9	22	129	47	23	26	54	16	11	18.3	129.4
26-Oct	12	10	7	7	4	3	2	3	5	6	9	27	15	8	7	10	5	6	6	2	8	3	3	0	7.0	27.0
27-Oct	3	4	4	3	3	3	2	1	1	0	0	0	0	0	0	1	3	1	0	0	0	0	0	0	1.1	4.1
28-Oct	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.9
29-Oct	0	2	2	2	2	2	1	1	2	2	2	4	7	7	5	4	3	4	3	3	3	2	2	3	2.9	7.4
30-Oct	5	7	7	8	9	8	10	10	10	10	10	10	5	1	2	3	2	2	2	1	1	1	2	2	5.3	10.4
31-Oct	2	2	2	0	0	0	1	2	3	3	2	1	1	1	0	2	2	1	2	3	5	6	6	6	2.2	6.5
	2.7	2.7	3.2	3.1	3.6	3.4	3.0	3.5	5.0	3.6	2.9	3.0	2.2	1.9	2.6	4.1	4.5	10.4	9.2	6.7	5.1	6.2	4.0	2.9	Diurnal Average	
	12.3	9.6	32.3	29.2	38.9	19.9	9.7	10.8	20.7	9.6	10.9	27.0	15.1	8.9	11.0	22.9	21.6	129.4	47.0	56.0	29.3	53.6	30.2	11.1	Diurnal Maximum	

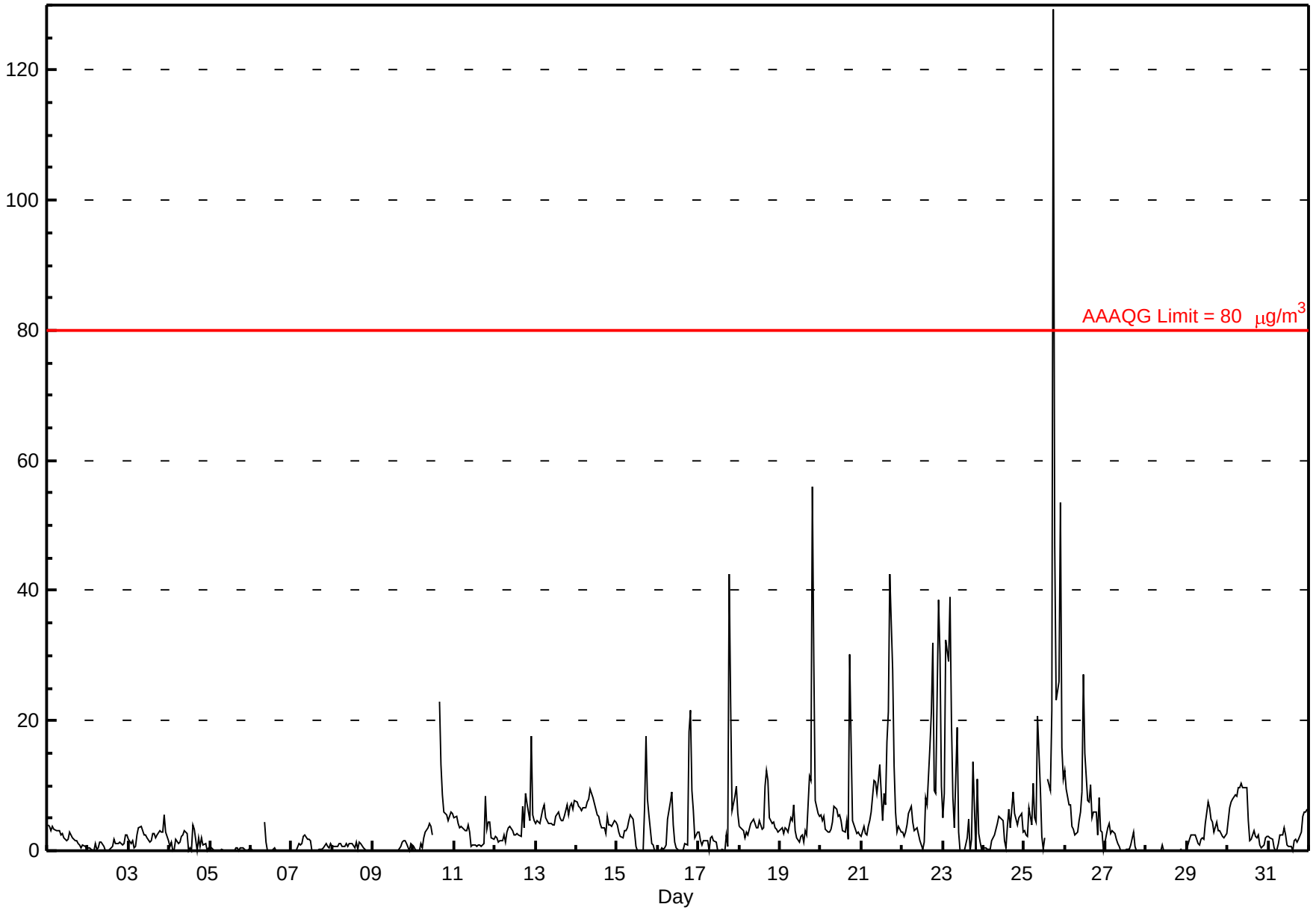
C - Calibration N - Not Valid
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - October 2013



Peace Airshed Zone Association

Hourly Maximums

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

Smoky Heights - October 2013

Maximum Value: 323.3 $\mu g/m^3$ on Oct 25 18:00

Maximum Daily Average: 43.8 $\mu g/m^3$ on Oct 25

Minimum Value: 0 $\mu g/m^3$ on Oct 9 11:00

Minimum Daily Average: 1.6 $\mu g/m^3$ on Oct 6

Maximum Diurnal Average: 29.4 $\mu g/m^3$ at hour 18

Minimum Diurnal Average: 4.5 $\mu g/m^3$ at hour 14

Monthly Average: 9.69 $\mu g/m^3$

Percentiles: $P_1 = 0.3$ $P_{10} = 1.5$ $Q_1 = 2.7$ Median = 4.7 $Q_3 = 7.9$ $P_{90} = 18.5$ $P_{99} = 97.6$

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Hours of Calibration:	4
Percent Operational Time:	99.6

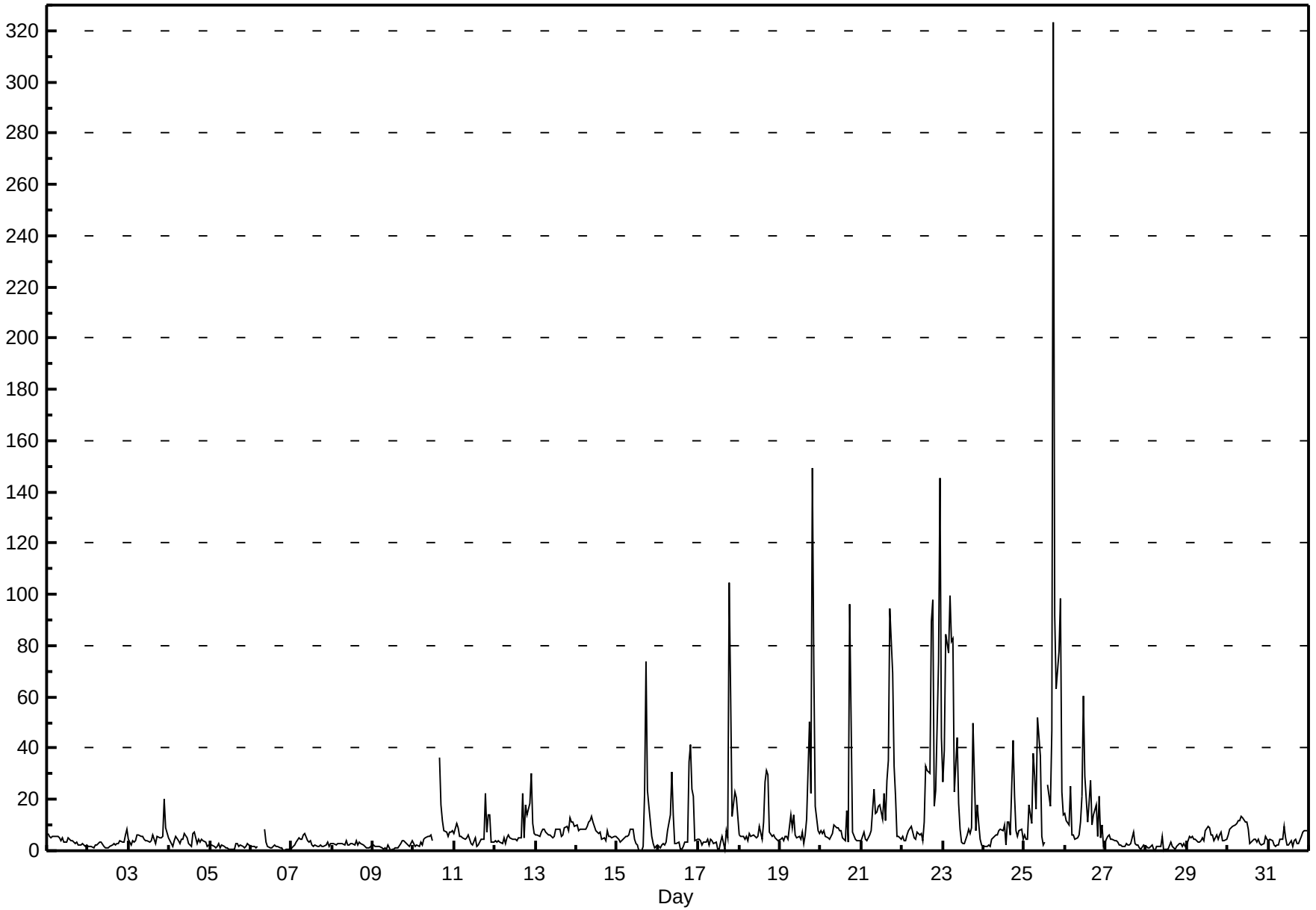
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	7	6	5	5	6	6	6	5	4	5	3	3	5	4	4	4	3	3	2	2	2	3	2	2	4.1	6.6
2-Oct	2	2	2	1	2	2	3	3	3	2	1	1	1	2	2	3	2	3	3	4	3	3	6	9	2.7	8.6
3-Oct	5	3	4	3	4	6	6	5	5	5	4	4	3	4	6	5	3	6	5	5	6	20	9	5	5.4	20.1
4-Oct	4	3	2	4	5	4	3	5	5	7	5	3	2	2	7	7	3	4	3	5	4	3	2	2	3.9	7.1
5-Oct	2	2	1	1	2	3	1	2	2	1	1	1	1	0	1	3	3	2	2	2	1	2	3	2	1.7	2.9
6-Oct	2	2	1	1	1	N	N	N	8	3	2	1	1	1	2	1	2	1	1	0	0	0	1	0	1.6	8.4
7-Oct	1	2	2	3	5	5	4	6	7	4	3	4	2	1	2	1	1	2	2	2	2	3	2	3	2.9	6.8
8-Oct	3	3	2	3	3	3	3	2	4	2	2	3	3	2	4	2	3	3	2	1	1	1	1	2	2.5	4.1
9-Oct	2	1	2	2	1	1	1	1	1	2	0	1	1	1	1	1	3	4	4	3	3	2	3	4	1.9	3.9
10-Oct	3	1	2	1	3	2	4	5	6	5	6	4	C	C	C	36	18	12	8	7	6	7	7	8	7.3	36.5
11-Oct	7	11	9	5	5	5	5	5	6	4	3	2	5	2	2	3	5	5	22	7	14	14	3	3	6.4	22.3
12-Oct	4	3	4	3	3	5	3	5	6	5	5	4	5	4	5	5	23	5	18	14	19	30	11	7	8.1	30.4
13-Oct	6	6	6	7	8	9	7	6	6	5	5	5	8	8	8	6	6	9	9	8	13	11	11	9	7.7	13.1
14-Oct	10	8	9	8	9	9	9	11	12	13	11	8	7	7	7	4	5	4	8	6	5	5	6	5	7.8	13.2
15-Oct	5	5	3	4	5	5	6	6	8	9	4	3	3	0	0	2	22	74	23	17	6	3	1	2	9.0	73.6
16-Oct	2	1	2	3	2	3	8	14	31	14	3	3	3	1	1	2	3	3	34	42	24	21	4	4	9.5	41.6
17-Oct	4	4	2	3	3	4	2	4	4	3	3	1	0	4	6	1	8	5	105	61	13	23	21	13	12.4	104.6
18-Oct	6	5	5	4	6	4	7	6	6	6	5	6	10	5	11	27	31	30	7	5	6	5	5	4	8.9	31.4
19-Oct	5	5	4	5	6	5	14	9	14	6	5	6	4	8	3	6	12	50	22	149	73	17	8	7	18.5	149.3
20-Oct	8	7	8	6	5	5	5	7	10	9	9	8	8	5	4	15	3	96	52	7	5	4	4	4	12.2	96.0
21-Oct	4	7	5	4	5	6	8	24	15	15	18	18	12	22	12	27	35	95	69	33	21	6	6	5	19.6	94.8
22-Oct	5	4	4	6	8	10	7	5	5	7	6	7	4	11	33	31	30	90	98	17	23	74	146	44	28.1	145.6
23-Oct	27	39	84	77	99	81	83	23	44	19	8	4	3	3	6	9	7	9	50	8	18	11	4	2	29.9	99.4
24-Oct	2	2	2	2	2	5	6	6	6	8	8	8	10	2	11	11	6	43	21	8	5	8	8	4	8.1	43.3
25-Oct	6	5	4	18	11	38	29	16	52	37	5	2	3	C	25	17	47	323	92	63	78	99	23	14	43.8	323.3
26-Oct	15	12	10	25	6	6	4	5	6	11	21	60	29	11	19	27	10	14	18	5	21	5	10	2	14.8	60.4
27-Oct	5	5	6	4	5	4	4	3	2	2	2	1	3	2	2	3	7	3	2	2	1	1	2	2	3.1	7.4
28-Oct	2	1	1	2	1	0	2	1	2	6	0	1	0	1	3	2	1	1	1	3	3	2	3	2	1.7	5.6
29-Oct	2	5	5	5	4	4	3	3	4	5	4	8	10	9	6	6	4	6	4	6	7	4	4	4	5.2	9.7
30-Oct	6	8	9	10	10	11	12	12	14	13	11	11	9	3	3	4	4	3	4	3	2	3	6	5	7.3	13.5
31-Oct	4	4	4	2	2	2	2	4	5	10	5	2	2	4	1	4	4	3	3	5	7	8	8	8	4.3	9.8
	5.3	5.6	6.8	7.5	7.7	8.4	8.5	7.1	9.8	7.8	5.5	6.2	5.2	4.5	6.7	8.9	10.2	29.4	22.5	16.2	12.7	12.8	10.5	6.1	Diurnal Average	
	26.7	39.4	84.3	77.2	99.4	81.4	82.9	24.1	52.1	36.7	21.0	60.4	29.2	22.3	33.0	36.5	47.3	323.3	104.6	149.3	77.8	98.5	145.6	44.1	Diurnal Maximum	

C - Calibration N - Not Valid

Hourly Maximums

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

Smoky Heights - October 2013

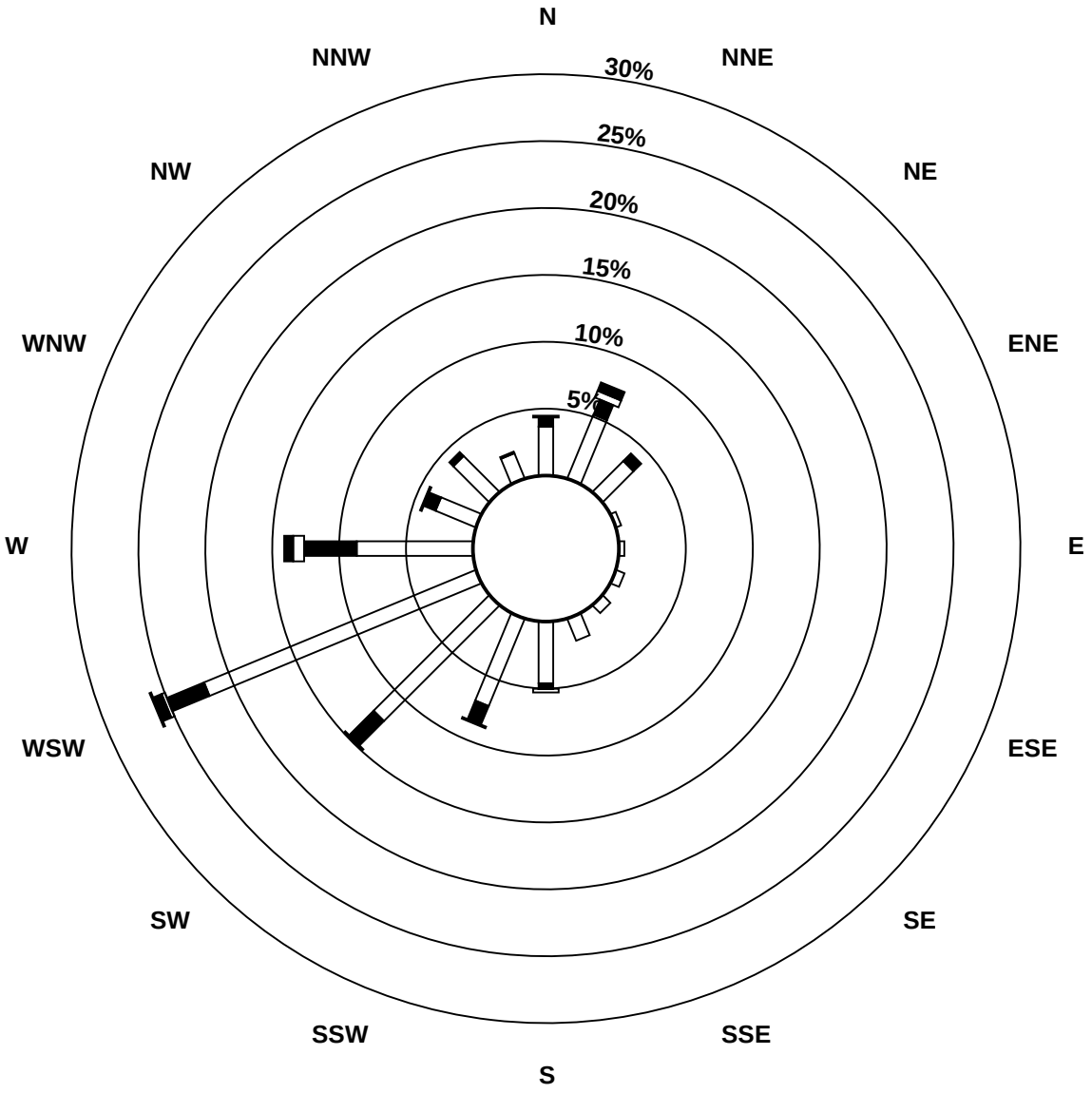


Peace Airshed Zone Association

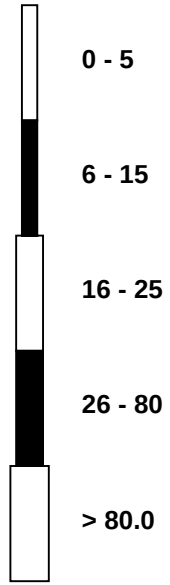
Pollutant Rose

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

Smoky Heights - October 2013



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



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - °C

Smoky Heights - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 19.0 °C on Oct 24 16:00

Maximum Daily Average: 10.9 °C on Oct 21

Minimum Value: -6 °C on Oct 12 08:00

Minimum Daily Average: -2.0 °C on Oct 28

Maximum Diurnal Average: 10.7 °C at hour 16

Minimum Diurnal Average: 1.1 °C at hour 8

Monthly Average: 5.34 °C

Percentiles: P_1 = -4.9 P_{10} = -1.8 Q_1 = 1.7 Median = 5.6 Q_3 = 9.0 P_{90} = 11.6 P_{99} = 16.1

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

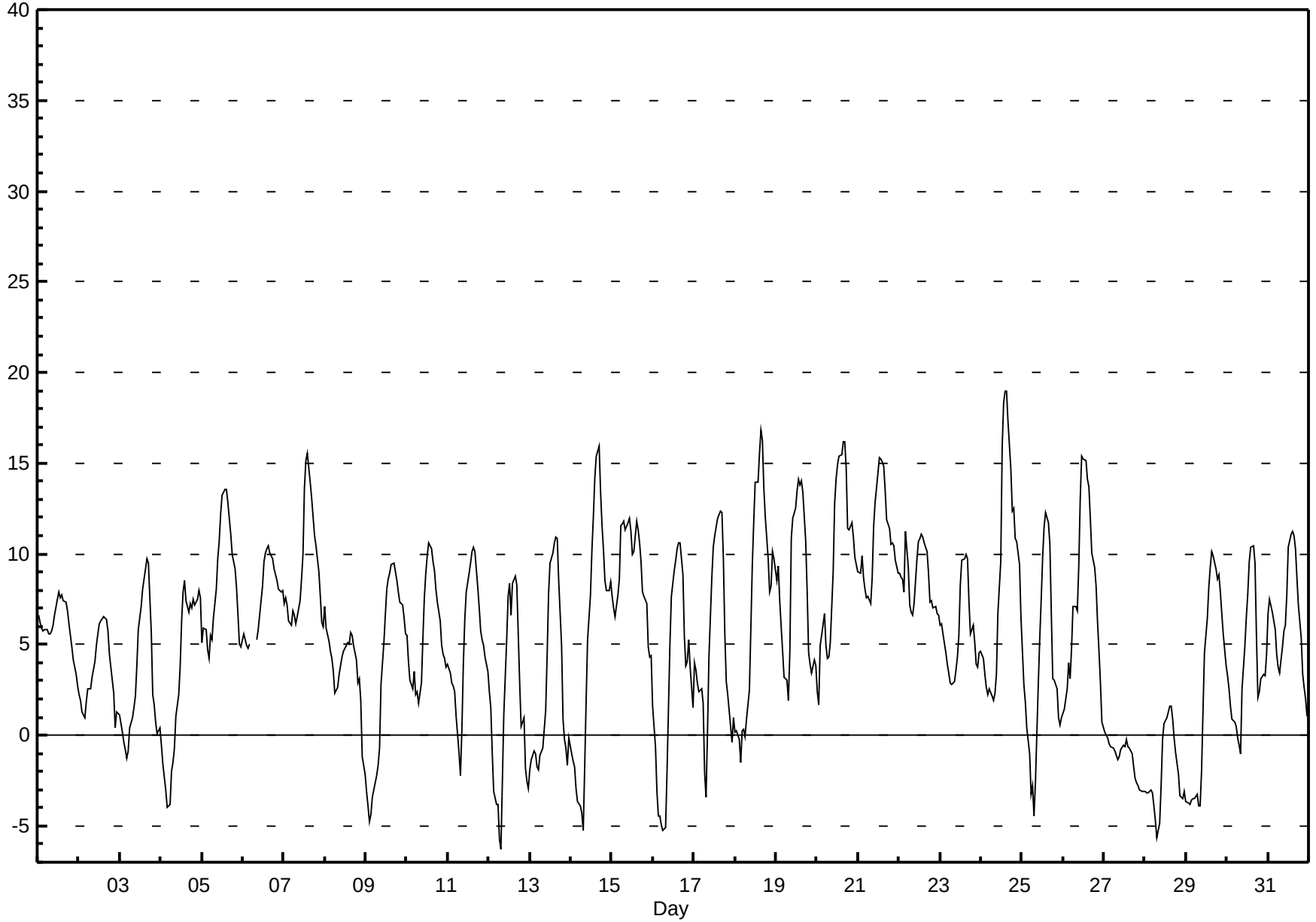
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	7	6	6	6	6	6	6	6	6	6	7	8	8	8	8	7	7	7	6	5	5	4	3	3	6.0	7.9
2-Oct	2	2	1	1	2	3	3	3	3	4	5	6	6	6	7	7	6	6	4	4	2	0	1	1	3.5	6.6
3-Oct	1	0	0	-1	-1	-1	0	1	2	2	4	6	7	8	9	9	10	10	6	2	2	1	0	0	3.2	9.7
4-Oct	-1	-2	-2	-3	-4	-4	-2	-1	-1	1	2	4	6	8	9	7	7	7	7	8	7	7	8	8	3.2	8.6
5-Oct	5	6	6	5	4	5	5	6	8	10	11	12	13	14	14	13	12	11	10	9	8	7	5	5	8.5	13.5
6-Oct	6	5	5	5	5	N	N	N	5	6	7	8	10	10	10	10	10	10	9	9	9	8	8	8	7.7	10.4
7-Oct	7	8	7	6	6	7	7	6	7	7	9	10	14	15	16	14	13	12	11	10	9	8	6	6	9.2	15.5
8-Oct	7	6	5	5	4	4	2	3	3	4	4	5	5	5	5	6	6	5	4	3	3	2	-1	-2	3.8	7.1
9-Oct	-3	-4	-5	-4	-3	-3	-2	-2	-1	3	5	7	8	9	9	9	9	9	9	8	7	7	6	6	3.5	9.5
10-Oct	5	4	3	3	4	2	2	2	3	5	8	9	10	11	10	10	9	8	7	6	5	4	4	4	5.8	10.6
11-Oct	4	3	3	3	2	1	-1	-2	0	4	6	8	9	10	10	10	10	8	7	6	5	5	4	4	5.0	10.4
12-Oct	2	1	-1	-3	-4	-4	-6	-6	-3	1	5	8	8	7	8	9	8	6	3	0	1	-2	-3	-3	1.4	8.8
13-Oct	-2	-1	-1	-1	-2	-2	-1	-1	0	1	4	8	9	10	11	11	11	9	5	1	0	-1	-2	0	2.8	10.9
14-Oct	-1	-1	-2	-3	-4	-4	-4	-5	-2	2	5	8	10	12	14	15	16	13	12	10	9	8	8	8	5.2	15.9
15-Oct	8	7	7	8	9	12	12	12	11	12	12	11	10	10	12	11	11	10	8	8	7	5	4	4	9.1	11.9
16-Oct	2	-1	-3	-4	-4	-5	-5	-5	-2	2	5	8	9	10	10	11	11	9	5	4	4	5	4	2	2.9	10.6
17-Oct	4	4	3	2	3	2	-2	-3	0	4	9	10	11	12	12	12	12	10	6	3	2	1	0	1	4.8	12.4
18-Oct	0	0	0	-2	0	0	0	1	2	6	9	12	14	14	16	17	16	14	12	10	8	8	10	10	7.4	16.8
19-Oct	9	9	7	6	5	3	3	2	5	11	12	12	13	14	14	14	13	11	8	5	4	3	4	4	8.0	14.1
20-Oct	2	2	5	6	7	5	4	4	5	9	13	14	15	15	15	16	16	15	11	11	12	11	10	9	9.7	16.2
21-Oct	9	9	10	9	8	8	8	7	9	11	13	14	15	15	15	15	13	12	11	11	11	10	10	9	10.9	15.3
22-Oct	9	9	9	8	11	9	7	7	7	7	10	11	11	11	11	11	10	9	7	7	7	7	7	7	8.7	11.2
23-Oct	6	6	6	5	4	3	3	3	3	4	4	6	8	10	10	10	10	7	6	6	5	4	4	5	5.7	10.0
24-Oct	5	4	3	3	2	3	2	2	2	3	7	10	16	18	19	19	17	15	12	12	11	11	9	6	8.8	19.0
25-Oct	5	3	2	0	-1	-3	-3	-4	-3	3	5	7	10	12	12	12	11	7	3	3	3	1	1	1	3.5	12.3
26-Oct	1	1	3	4	3	5	7	7	7	9	13	15	15	15	14	14	12	10	9	8	6	5	3	1	7.8	15.4
27-Oct	0	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-1	-1	-1	-2	-2	-3	-3	-3	-3	-3	-1.2	0.2
28-Oct	-3	-3	-3	-3	-3	-4	-5	-6	-5	-3	0	1	1	1	2	2	1	0	-1	-2	-3	-3	-3	-3	-2.0	1.6
29-Oct	-4	-4	-4	-4	-3	-3	-3	-4	-4	-2	1	5	6	8	9	10	10	9	9	9	8	7	6	4	2.7	10.1
30-Oct	3	3	2	1	1	1	0	-1	-1	3	5	7	8	10	10	10	9	5	2	2	3	3	3	4	3.9	10.4
31-Oct	7	8	7	6	6	4	4	3	5	6	6	8	10	11	11	11	10	9	7	5	3	3	2	1	6.4	11.2
	3.3	2.9	2.5	2.0	2.0	1.6	1.3	1.1	2.3	4.5	6.6	8.2	9.6	10.2	10.7	10.7	10.2	8.6	6.9	5.8	5.1	4.4	3.8	3.5	Diurnal Average	
	9.0	9.3	9.9	8.7	11.2	11.5	11.6	11.8	11.3	11.8	13.0	15.4	15.9	18.3	19.0	19.0	17.3	14.7	12.4	12.5	11.7	10.9	10.1	9.7	Diurnal Maximum	

N - Not Valid

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - October 2013



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	10	11	7	7	6	5	6	7	10	9	7	7	12	11	9	13	14	12	10	8	11	11	8	7	8.8	14.5
Dir	25	27	11	352	8	357	10	27	37	39	38	39	33	28	29	31	44	47	43	49	40	44	40	31	31.9	44.4
2 Spd	4	2	5	3	8	8	7	7	8	8	10	14	9	10	11	12	10	17	15	21	16	9	3	11	8.4	21.0
Dir	347	328	275	307	343	344	349	356	353	17	353	359	12	349	18	356	3	354	1	343	316	322	289	247	345.7	343.3
3 Spd	10	5	13	9	11	10	8	7	6	12	12	10	12	11	15	11	7	6	5	2	8	9	13	17	7.8	17.4
Dir	274	188	254	243	227	234	196	176	191	165	169	172	156	176	174	186	163	184	143	165	219	235	247	226	202.0	225.6
4 Spd	17	16	14	17	21	22	21	20	14	14	18	20	20	15	11	6	8	12	16	20	23	21	22	21	16.3	23.1
Dir	247	223	212	223	223	225	200	202	238	232	233	208	192	191	191	175	149	180	213	209	198	211	215	216	211.2	197.6
5 Spd	13	14	15	6	7	14	5	12	16	26	23	31	35	45	44	37	37	38	28	24	19	16	16	13	21.8	44.7
Dir	234	214	220	245	226	215	218	236	250	242	241	246	251	259	262	247	240	243	245	248	251	251	259	247	245.4	259.3
6 Spd	12	10	9	6	5	N	N	N	5	6	10	14	23	20	22	13	15	8	7	14	14	15	5	5	5.1	23.5
Dir	256	253	240	235	200	N	N	N	146	109	89	114	146	156	178	175	179	188	32	119	41	24	31	30	148.7	146.2
7 Spd	3	18	18	16	25	2	17	21	15	27	24	25	25	36	43	49	44	39	33	33	27	17	17	14	20.6	48.8
Dir	37	140	191	199	231	238	143	219	203	200	218	168	213	241	245	255	248	251	248	252	252	250	270	273	231.5	255.3
8 Spd	18	20	21	27	23	23	20	38	39	42	44	41	39	33	33	35	28	27	23	8	4	8	14	15	25.5	44.2
Dir	312	310	310	306	300	291	287	297	295	299	301	308	305	308	313	313	311	310	296	275	325	288	267	267	301.8	301.4
9 Spd	13	8	6	8	8	7	9	12	10	16	19	28	27	24	19	31	31	25	18	19	19	18	15	17	16.2	31.4
Dir	253	216	228	229	213	198	202	205	206	193	182	183	194	202	203	208	210	209	217	239	241	236	227	231	211.3	208.0
10 Spd	23	16	12	16	22	22	22	19	20	23	31	33	28	28	24	22	27	23	23	27	21	24	24	20	22.8	32.8
Dir	245	246	252	251	251	246	248	248	244	251	258	262	261	255	250	250	240	243	247	247	251	252	255	245	250.4	261.8
11 Spd	22	20	16	17	16	15	11	7	12	24	20	25	20	28	25	31	20	11	13	22	17	14	17	16	18.1	31.3
Dir	257	259	261	256	249	249	251	222	242	249	245	243	243	256	252	261	254	270	284	269	269	259	249	249	254.6	260.6
12 Spd	13	10	9	12	8	6	6	7	8	14	19	17	25	23	26	28	24	26	25	26	27	29	31	30	16.8	30.8
Dir	241	263	241	268	254	241	216	211	209	210	232	224	234	220	209	222	196	243	264	280	282	265	267	265	243.3	266.7
13 Spd	27	21	23	24	24	24	24	23	23	25	24	24	16	21	29	29	26	21	1	16	23	22	26	31	20.6	30.5
Dir	258	225	220	205	205	208	202	212	212	207	195	208	224	226	236	243	258	195	251	294	273	247	249	262	228.6	262.2
14 Spd	32	32	30	25	24	25	23	21	20	26	22	26	25	32	32	35	28	27	30	32	29	27	25	35	25.8	34.7
Dir	267	266	258	229	223	229	220	229	221	199	191	181	208	234	238	242	233	214	237	252	242	223	227	241	231.6	240.7
15 Spd	33	35	35	38	39	47	45	48	41	33	32	29	31	29	27	26	29	25	25	27	27	24	28	26	25.3	47.6
Dir	243	234	234	243	239	250	254	259	267	267	328	354	353	329	339	322	300	295	275	280	307	313	322	327	282.4	258.8
16 Spd	23	17	22	26	21	25	18	14	7	11	23	23	24	31	34	33	27	27	24	25	25	26	31	32	21.0	33.8
Dir	305	255	219	217	227	210	213	236	193	226	203	187	196	237	243	246	239	242	274	262	268	263	264	269	240.1	243.3
17 Spd	28	30	33	33	33	32	22	29	31	27	26	38	41	39	38	32	28	22	20	22	8	7	5	6	25.0	41.3
Dir	281	280	282	284	282	283	234	247	246	246	238	239	253	255	237	243	257	247	255	262	271	237	232	246	257.4	253.5
18 Spd	4	6	5	7	9	5	2	9	11	7	16	36	40	28	18	24	24	22	35	33	32	33	39	38	19.1	39.8
Dir	239	209	225	224	231	248	94	213	206	195	224	234	253	253	257	268	275	248	260	240	245	234	257	245	245.5	253.3
19 Spd	32	26	34	31	26	30	28	26	22	27	33	39	42	41	39	42	36	27	27	22	16	17	16	14	24.7	42.4
Dir	237	250	219	239	250	257	272	272	290	318	317	313	299	305	303	302	312	291	280	270	265	247	215	217	278.4	301.8
20 Spd	9	8	14	15	12	9	14	14	14	17	28	35	34	32	27	21	20	16	20	26	30	31	32	34	21.1	35.2
Dir	232	244	245	260	253	229	258	268	266	249	247	259	247	252	254	266	263	274	260	267	262	258	262	264	257.3	259.4
21 Spd	36	36	36	34	34	33	31	27	26	21	6	13	30	26	18	17	16	9	10	12	12	11	11	8	20.1	36.1
Dir	263	268	266	259	265	264	264	267	273	287	262	204	294	272	246	209	221	251	246	259	265	250	243	241	261.2	263.4
22 Spd	10	13	10	11	11	10	12	20	19	25	15	8	18	14	15	8	7	5	3	5	18	23	22	18	10.0	24.9
Dir	262	256	251	258	324	359	10	20	21	28	25	298	344	356	10	356	20	19	356	20	36	26	29	23	4.3	27.7

Peace Airshed Zone Association

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
23 Spd	16	21	22	22	19	21	23	21	21	22	23	21	20	13	16	14	12	12	13	24	24	18	20	26	15.6	25.9
Dir	19	21	27	32	21	22	25	28	24	30	31	34	52	41	35	30	41	58	53	61	32	46	171	172	38.5	171.6
24 Spd	22	28	26	27	28	28	28	30	29	27	28	28	40	36	34	32	17	17	17	19	18	28	30	23	15.6	40.4
Dir	183	177	199	218	222	221	221	215	195	199	228	249	263	267	293	302	334	320	317	306	320	339	2	359	254.9	262.8
25 Spd	14	18	14	5	13	12	20	9	11	11	20	22	21	16	22	22	1	2	12	16	12	12	16	15	2.9	22.2
Dir	356	32	123	11	18	337	339	9	182	39	149	148	154	170	194	199	174	259	245	266	274	248	258	257	215.1	199.2
26 Spd	11	12	17	17	16	14	19	20	17	23	33	44	13	29	29	27	25	25	25	32	31	29	34	35	8.4	44.1
Dir	227	204	223	245	249	252	246	245	256	257	264	271	12	44	26	22	42	51	51	40	30	33	26	24	349.5	270.5
27 Spd	38	35	29	31	30	23	22	18	14	12	11	6	11	15	14	22	21	22	8	3	4	4	2	7	15.4	38.2
Dir	35	33	28	30	29	24	18	11	8	14	19	353	344	346	353	1	16	47	51	63	85	124	214	305	21.6	35.5
28 Spd	7	12	12	16	20	11	19	17	11	12	28	31	32	28	31	30	20	25	27	23	21	21	25	29	17.3	32.1
Dir	297	122	153	165	175	218	262	277	242	178	180	183	177	168	181	189	181	174	190	250	253	219	229	225	198.5	177.1
29 Spd	29	29	28	30	30	30	30	28	28	30	30	34	37	29	32	31	34	40	40	45	40	40	37	36	31.9	45.5
Dir	232	223	237	226	227	225	231	229	230	234	226	231	227	229	230	220	222	245	258	258	264	267	263	265	239.0	257.9
30 Spd	38	36	32	28	29	31	28	19	21	16	8	8	11	19	30	32	22	13	18	17	14	11	7	11	19.4	37.8
Dir	261	256	262	264	267	271	269	226	224	215	198	180	205	223	247	242	227	222	239	240	254	242	272	236	246.0	261.2
31 Spd	20	44	46	35	41	23	20	19	24	21	27	21	28	29	27	42	35	37	32	36	33	37	34	32	30.5	45.7
Dir	242	249	248	247	254	254	257	263	254	268	283	267	267	269	276	269	269	264	259	254	252	247	246	252	258.0	247.7
Spd	13.2	11.4	13.6	13.7	13.9	13.6	12.0	12.8	11.7	11.0	11.8	13.8	14.4	15.9	15.9	17.1	13.2	12.0	13.1	14.8	13.1	12.2	13.4	14.2	Diurnal Average	
Dir	263.3	249.3	243.8	248.0	250.0	252.4	250.5	251.8	248.6	246.7	244.5	239.2	248.2	254.2	254.6	258.3	255.6	252.2	260.9	264.6	272.3	263.6	261.5	258.7		
Spd	38.2	44.0	45.7	38.1	41.3	47.0	44.8	47.6	40.9	41.8	44.2	44.1	42.1	44.7	43.9	48.8	44.2	40.4	39.8	45.5	40.0	39.8	39.5	37.6	Diurnal Maximum	
Dir	35.5	248.7	247.7	242.6	253.8	249.7	254.5	258.8	267.4	298.5	301.4	270.5	298.6	259.3	261.7	255.3	248.4	245.0	257.7	257.9	264.0	267.4	256.6	245.0		

Maximum Speed Value: 49 km/h on Oct 7 16:00
Minimum Speed Value: 1 km/h on Oct 13 19:00
Maximum Daily Speed Average: 31.9 km/h on Oct 29
Minimum Daily Speed Average: 2.9 km/h on Oct 1
Maximum Diurnal Speed Average: 17.1 km/h at hour 16
Minimum Diurnal Speed Average: 11.0 km/h at hour 10

Monthly Average Velocity: 13.29 km/h 254.05 deg
Speed Percentiles: P_1 = 2.5 P_{10} = 7.8 Q_1 = 12.6 Median = 21.1 Q_3 = 28.2 P_{90} = 34.2 P_{99} = 44.5
All monthly, daily, and diurnal averages have been calculated using vector methods

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Percent Operational Time:	99.6

N - Not Valid

Frequency Distribution

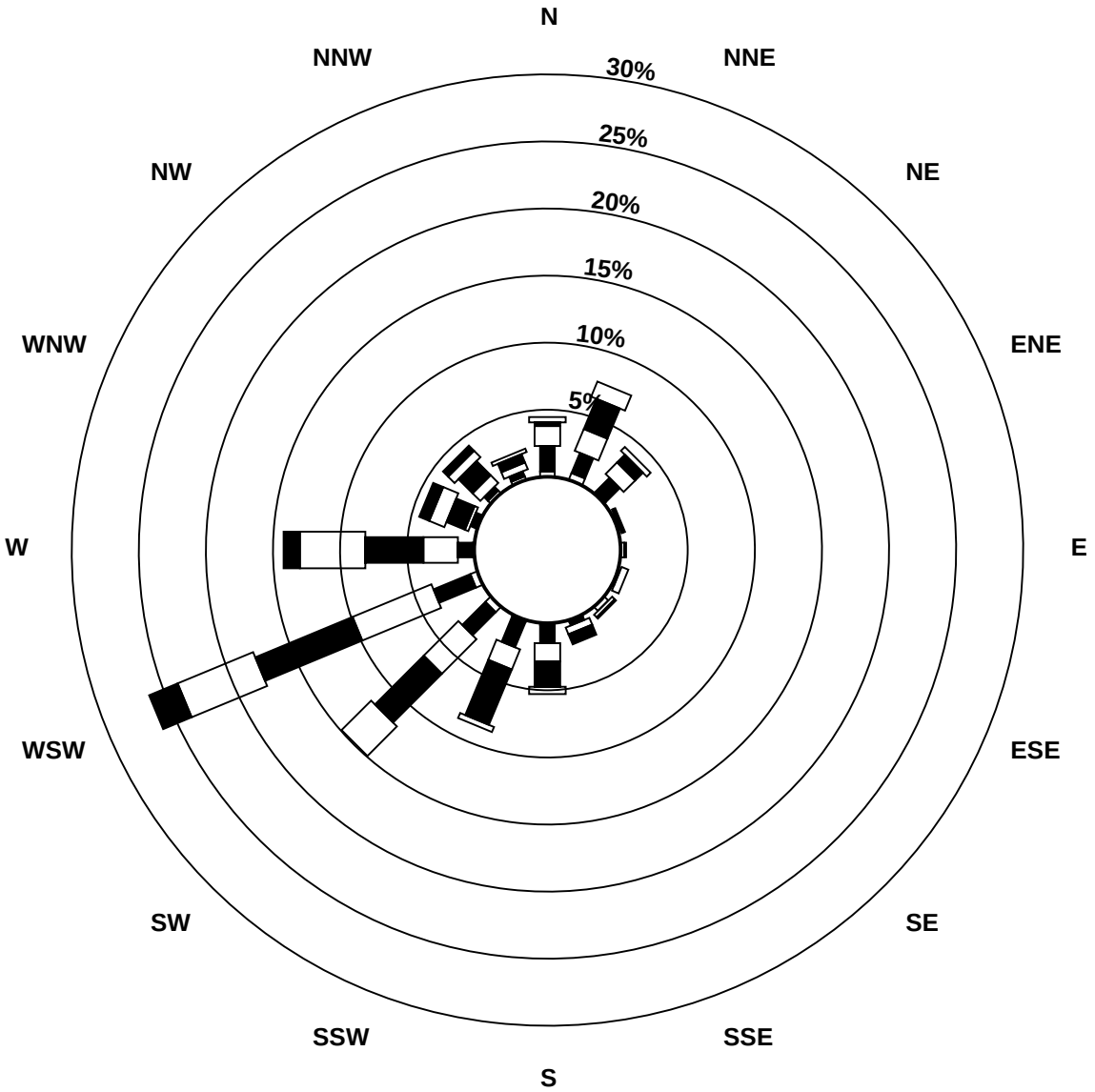
Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	4	23	20	12	3	0	62
NorthEast	2	19	18	19	11	1	70
East	2	2	0	0	0	0	4
SouthEast	1	3	8	5	0	0	17
South	3	16	16	32	7	0	74
SouthWest	4	37	56	78	58	7	240
West	3	17	48	69	60	23	220
NorthWest	3	5	8	16	12	10	54
Total	22	122	174	231	151	41	741

Peace Airshed Zone Association

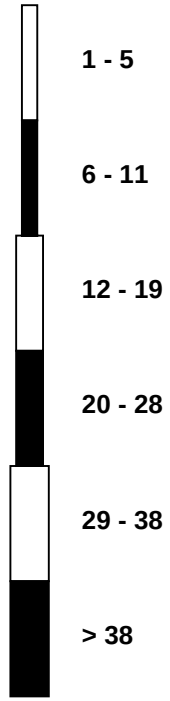
Wind Rose

Wind Speed (WS) (km/h)

Smoky Heights - October 2013



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - October 2013

Maximum Speed: 49 km/h on Oct 7 16:00

Maximum Daily Speed Average: 33.4 km/h on Oct 29

Minimum Speed: 1 km/h on Oct 25 17:00

Minimum Daily Speed Average: 9.3 km/h on Oct 1

Maximum Diurnal Speed Average: 26.9 km/h at hour 13

Minimum Diurnal Speed Average: 18.9 km/h at hour 9

Monthly Average Speed: 21.77 km/h

Percentiles: $P_1 = 3.6$ $P_{10} = 8.2$ $Q_1 = 13.9$ Median = 22.1 $Q_3 = 28.8$ $P_{90} = 34.5$ $P_{99} = 44.9$

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	10	11	8	8	6	5	6	7	10	9	7	7	12	11	9	13	15	12	10	8	11	11	9	7	9.3	14.8
2-Oct	4	2	5	4	8	8	7	7	8	8	11	16	11	12	12	13	11	17	16	21	16	9	6	11	10.2	21.3
3-Oct	11	7	15	12	12	11	8	7	7	12	13	10	13	13	19	14	9	6	5	2	9	9	13	18	10.7	18.8
4-Oct	17	17	14	19	22	23	21	20	15	16	18	21	20	15	12	9	9	13	16	20	23	21	22	21	17.7	23.3
5-Oct	13	14	15	7	8	14	6	12	16	26	23	31	35	45	44	38	37	38	28	24	19	16	16	13	22.5	45.1
6-Oct	12	10	9	6	5	N	N	N	6	6	10	14	24	21	23	14	15	8	10	17	17	16	5	5	12.0	24.3
7-Oct	3	19	22	21	25	24	24	23	25	27	25	26	28	36	44	49	44	39	33	33	27	17	17	14	26.9	49.0
8-Oct	19	20	22	27	24	23	21	38	39	42	45	42	39	33	34	36	28	27	24	8	5	9	14	15	26.4	44.5
9-Oct	15	9	6	8	8	7	9	13	10	16	19	28	28	24	20	32	32	25	18	19	19	18	15	18	17.3	31.6
10-Oct	23	16	12	16	22	22	23	19	20	23	31	33	28	28	25	22	27	23	23	27	21	24	24	20	23.1	33.0
11-Oct	22	20	17	17	16	15	11	7	12	24	21	25	21	29	26	32	20	12	13	22	17	14	17	16	18.6	31.7
12-Oct	13	10	9	12	9	6	7	7	8	14	20	18	26	23	27	28	26	26	25	26	27	29	31	30	19.0	30.8
13-Oct	27	23	23	24	24	24	24	24	24	25	24	25	16	23	30	30	27	23	19	18	23	23	26	31	24.2	30.6
14-Oct	32	32	30	25	24	25	23	22	21	26	22	26	29	32	33	35	29	28	31	33	29	27	26	35	28.0	34.9
15-Oct	33	35	36	39	39	47	45	48	41	34	35	30	32	29	28	27	29	26	25	27	27	24	28	26	32.9	47.7
16-Oct	23	23	23	26	21	25	20	15	10	12	24	24	26	32	35	34	28	27	25	25	25	26	31	32	24.8	35.2
17-Oct	29	30	33	33	33	32	26	29	31	27	27	39	42	40	39	32	28	22	22	23	8	7	5	6	26.8	41.7
18-Oct	4	6	5	7	9	5	4	9	12	7	16	37	40	28	18	24	26	22	35	34	32	33	40	38	20.4	40.1
19-Oct	33	29	34	32	26	30	29	27	23	27	34	40	43	42	39	43	36	27	27	23	17	17	17	14	29.6	43.4
20-Oct	10	8	14	15	12	10	14	14	14	18	28	35	34	32	27	22	20	16	21	26	30	31	32	34	21.5	35.5
21-Oct	36	36	36	34	34	33	31	27	26	21	23	22	31	27	21	20	19	11	11	12	12	11	11	8	23.0	36.1
22-Oct	10	13	10	11	13	10	12	21	22	25	21	20	21	15	15	9	7	5	3	6	20	23	23	18	14.7	25.2
23-Oct	16	21	22	22	19	21	24	21	21	22	23	21	20	14	16	14	12	13	13	24	24	22	22	26	19.7	26.0
24-Oct	23	28	26	27	28	28	28	30	29	28	29	29	41	36	34	33	17	17	17	19	19	28	30	23	27.0	40.8
25-Oct	22	23	21	20	20	19	21	19	17	17	20	22	21	17	23	23	1	2	12	16	13	13	16	16	17.1	22.7
26-Oct	11	12	17	17	16	14	19	21	17	23	33	44	30	29	30	28	26	26	26	32	31	29	34	35	25.1	44.3
27-Oct	38	35	29	31	30	23	22	18	14	12	11	7	12	16	14	23	22	22	8	3	5	4	4	8	17.2	38.3
28-Oct	8	13	13	16	20	20	20	17	14	12	28	31	33	29	32	30	20	25	27	23	24	23	26	29	22.2	32.5
29-Oct	29	29	28	30	30	30	30	28	28	30	30	34	38	29	32	31	34	41	40	46	40	40	37	36	33.4	45.7
30-Oct	38	36	32	29	29	31	28	20	21	17	8	8	12	20	30	32	24	21	19	18	14	11	8	11	21.5	37.9
31-Oct	20	44	46	35	41	23	20	20	24	22	27	21	28	29	27	42	36	37	32	37	33	37	34	32	31.2	45.8
	19.5	20.3	20.4	20.3	20.4	20.4	19.4	19.6	18.9	20.2	22.8	25.4	26.9	26.1	26.3	26.8	23.0	21.2	20.5	21.7	20.6	20.1	20.6	20.9	Diurnal Average	
	38.3	44.1	45.8	38.8	41.4	47.2	45.0	47.7	41.0	42.0	44.5	44.3	42.7	45.1	44.1	49.0	44.4	41.1	39.9	45.7	40.1	40.0	39.6	38.2	Diurnal Maximum	

N - Not Valid

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

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - October 2013

Maximum Value: 94.1 deg on Oct 7 06:00

Minimum Value: 2.1 deg on Oct 20 23:00

Percentiles: P_1 = 2.6 P_{10} = 4.4 Q_1 = 5.9 Median = 9.0 Q_3 = 15.3 P_{90} = 28.3 P_{99} = 74.8

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Oct	13	8	21	9	12	13	10	15	9	11	14	21	17	15	17	10	11	9	10	8	9	10	11	10	21.0
2-Oct	28	54	12	35	8	8	9	12	12	17	26	23	39	30	26	25	20	14	9	9	11	10	65	19	64.6
3-Oct	38	55	32	46	23	25	19	15	21	18	18	25	20	32	48	40	43	30	4	32	23	21	9	12	55.2
4-Oct	10	12	16	27	12	15	8	9	22	25	13	11	10	10	27	46	17	19	18	5	9	8	6	3	46.4
5-Oct	11	6	8	22	21	9	56	12	9	6	5	7	9	8	6	8	5	5	3	4	5	5	6	4	56.2
6-Oct	6	7	7	20	24	N	N	N	17	18	8	16	16	16	18	9	9	19	75	32	30	7	9	6	75.5
7-Oct	23	18	37	42	14	94	51	25	76	9	17	11	25	8	7	5	5	6	5	6	6	6	7	14	94.1
8-Oct	10	9	11	9	9	7	7	5	6	5	7	7	9	7	10	10	8	10	9	26	32	38	7	8	37.8
9-Oct	29	21	17	4	8	10	6	5	5	6	5	4	8	6	7	6	6	7	5	5	6	11	11	11	29.1
10-Oct	5	13	12	15	5	10	6	6	5	5	6	7	10	9	9	6	4	5	5	5	5	5	5	6	14.8
11-Oct	3	4	3	6	4	3	11	31	5	5	11	10	14	12	13	9	9	15	7	7	3	8	8	8	30.9
12-Oct	7	10	20	5	8	17	17	5	4	6	17	18	12	7	14	13	24	3	14	4	6	5	3	7	23.8
13-Oct	3	27	8	6	7	5	7	11	16	5	9	16	16	19	13	14	14	18	88	34	10	12	11	4	87.8
14-Oct	2	2	5	7	8	5	5	8	16	10	12	8	31	8	10	7	10	4	9	7	7	6	9	5	31.3
15-Oct	5	9	11	11	5	5	4	4	4	8	27	12	14	13	13	15	8	18	8	10	6	5	5	5	26.9
16-Oct	16	43	22	7	10	8	29	20	34	29	19	18	21	13	16	11	12	7	16	6	5	5	4	3	43.0
17-Oct	12	10	4	3	3	3	30	7	5	9	16	8	8	8	10	8	7	6	20	20	19	20	43	9	42.8
18-Oct	26	7	8	8	6	24	61	8	15	18	5	9	7	7	8	10	22	10	3	8	3	4	5	10	61.1
19-Oct	13	26	6	9	8	8	10	8	10	11	13	11	9	10	9	12	11	10	6	16	12	16	13	5	26.2
20-Oct	13	8	7	5	28	25	5	3	4	6	11	7	8	8	7	9	7	7	15	6	2	3	2	4	28.3
21-Oct	3	5	3	6	3	3	4	5	5	5	79	57	13	14	33	34	35	39	21	4	4	7	2	13	79.2
22-Oct	8	4	10	10	37	16	9	12	33	9	56	76	32	21	13	22	15	12	32	17	24	7	9	8	76.2
23-Oct	14	6	5	5	7	7	5	5	5	6	8	7	16	20	8	9	7	7	8	9	6	35	28	5	35.5
24-Oct	13	4	12	6	9	9	7	6	6	12	16	10	7	9	8	13	10	6	7	8	24	9	10	11	24.0
25-Oct	66	41	52	90	60	66	19	65	46	65	17	11	12	14	15	11	53	36	10	9	24	7	6	14	90.1
26-Oct	11	8	10	4	4	5	4	5	6	5	7	6	64	9	11	10	11	13	12	7	7	5	6	7	63.9
27-Oct	4	4	5	5	5	5	7	8	8	8	12	30	21	9	13	15	21	6	12	11	29	20	56	27	56.3
28-Oct	32	15	24	8	6	56	18	17	39	15	5	8	9	9	10	6	9	6	10	13	29	26	7	5	55.7
29-Oct	4	5	6	4	3	3	4	3	4	8	6	5	5	7	6	7	4	10	5	6	5	5	4	3	10.4
30-Oct	3	4	5	7	5	3	8	14	8	14	9	10	19	9	12	9	28	55	22	10	6	13	35	13	55.3
31-Oct	4	5	4	8	5	5	5	4	4	19	10	6	6	8	10	7	7	3	3	8	4	3	4	9	19.3
	66.4	55.2	51.8	90.1	59.7	94.1	61.1	65.1	76.3	65.3	79.2	76.2	63.9	31.9	47.9	46.4	53.3	55.3	87.8	34.1	31.7	37.8	64.6	26.7	

N - Not Valid

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.4 ppb on Oct 25 01:00 Maximum Daily Average: 0.6 ppb on Oct 25

Minimum Value: 0 ppb on Oct 7 15:00 Minimum Daily Average: 0.0 ppb on Oct 7
Maximum Diurnal Average: 0.3 ppb at hour 1 Minimum Diurnal Average: 0.1 ppb at hour 8
Monthly Average: 0.15 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.1 $Q_3 = 0.2$ $P_{90} = 0.4$ $P_{99} = 1.1$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
2-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
3-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
4-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
5-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
6-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
7-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
8-Oct	0	0	0	0	A	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
9-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
10-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
11-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
12-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.6
13-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
15-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0.2	2.1
16-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.2	0.6
17-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.9
18-Oct	1	0	0	0	A	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0.3	0.9
19-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
20-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	0.6
21-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
22-Oct	0	0	0	0	A	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.4	0.8
23-Oct	1	1	0	0	A	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0.4	0.9
24-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0.3	1.2
25-Oct	3	1	1	1	A	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.6	3.4
26-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
27-Oct	1	0	0	0	A	0	0	0	2	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.3
28-Oct	0	0	0	0	A	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0.3	0.6
29-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
30-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
31-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
	0.3	0.2	0.1	0.1	--	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	3.4	1.5	1.2	1.0	--	0.6	0.4	0.4	1.7	3.3	1.0	0.6	0.6	0.7	2.1	0.6	0.9	0.6	1.2	0.6	0.5	0.6	0.6	1.1	Diurnal Maximum	

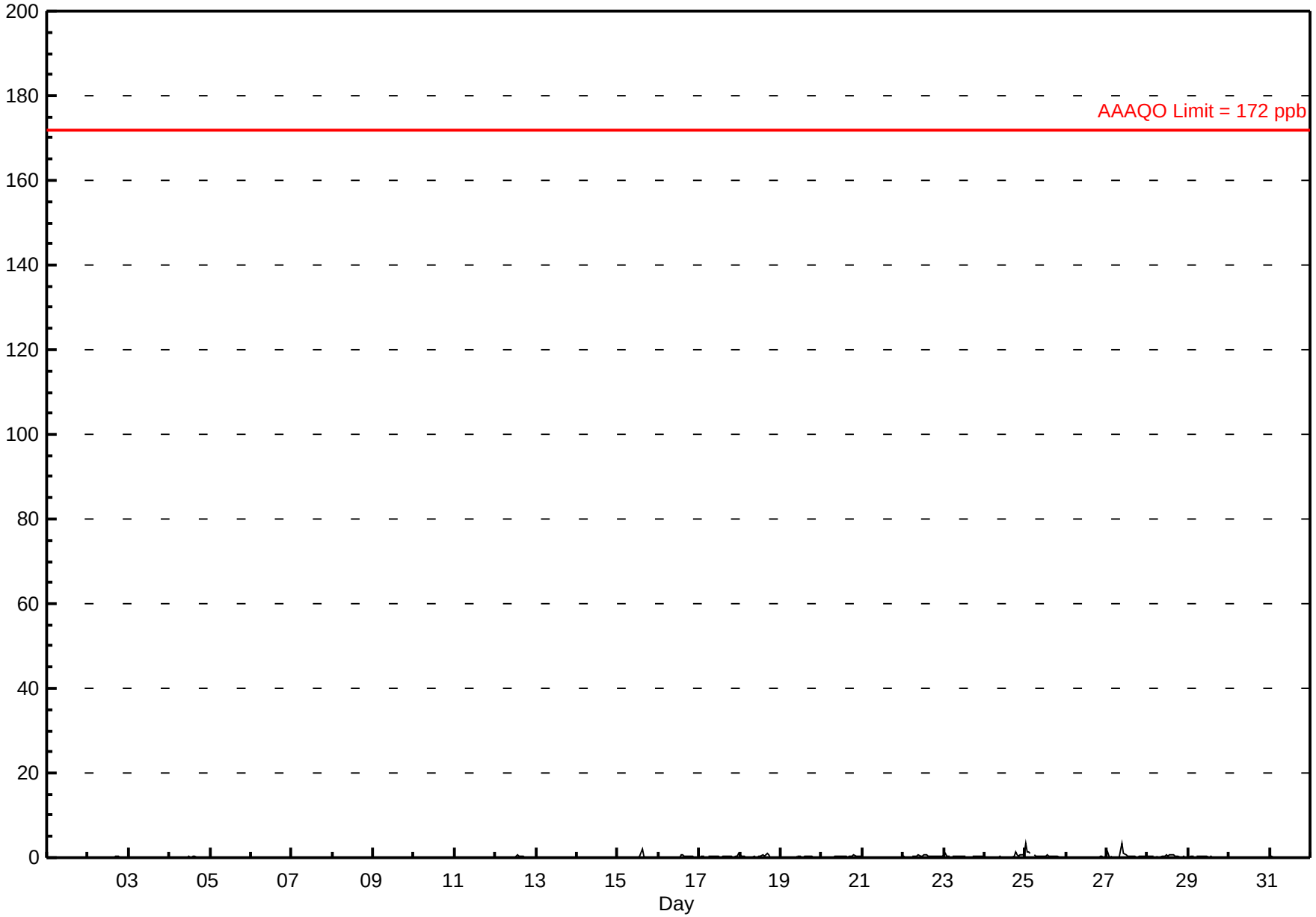
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - October 2013



Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - October 2013

Maximum Value: 5.6 ppb on Oct 27 01:00

Maximum Daily Average: 1.0 ppb on Oct 27

Minimum Value: 0 ppb on Oct 11 03:00

Minimum Daily Average: 0.1 ppb on Oct 6

Maximum Diurnal Average: 0.6 ppb at hour 1

Minimum Diurnal Average: 0.2 ppb at hour 8

Monthly Average: 0.30 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.3$ $P_{90} = 0.5$ $P_{99} = 2.6$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
2-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
3-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
4-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
5-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
6-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
7-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
8-Oct	0	0	0	0	A	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
9-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
10-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
11-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
12-Oct	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.2	0.7
13-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
14-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
15-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	1	4	3	0	0	0	0	0	0	0	0	0.5	3.8
16-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0.4	1.8
17-Oct	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	1.1
18-Oct	1	1	0	0	A	0	0	0	0	0	0	1	1	1	0	1	1	1	0	0	0	0	0	0	0.4	1.3
19-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
20-Oct	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	0	0	0	0	0.4	1.0
21-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
22-Oct	0	0	0	0	A	1	1	0	1	2	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0.5	1.6
23-Oct	2	2	1	1	A	1	0	0	0	0	0	0	1	0	C	C	C	0	0	0	0	0	0	0	0.6	1.6
24-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	1	1	4	0.6	4.2
25-Oct	5	3	2	2	A	1	1	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0.9	5.4
26-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.6
27-Oct	6	0	0	0	A	0	0	0	4	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1.0	5.6
28-Oct	0	0	0	1	A	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	0.8
29-Oct	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
30-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
31-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
	0.6	0.3	0.2	0.2	--	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	Diurnal Average	
	5.6	3.0	1.8	1.5	--	0.7	0.7	0.6	4.2	4.7	1.5	0.8	0.8	1.8	3.8	3.1	1.2	1.3	1.5	1.0	0.6	0.9	0.9	4.2	Diurnal Maximum	

C - Calibration

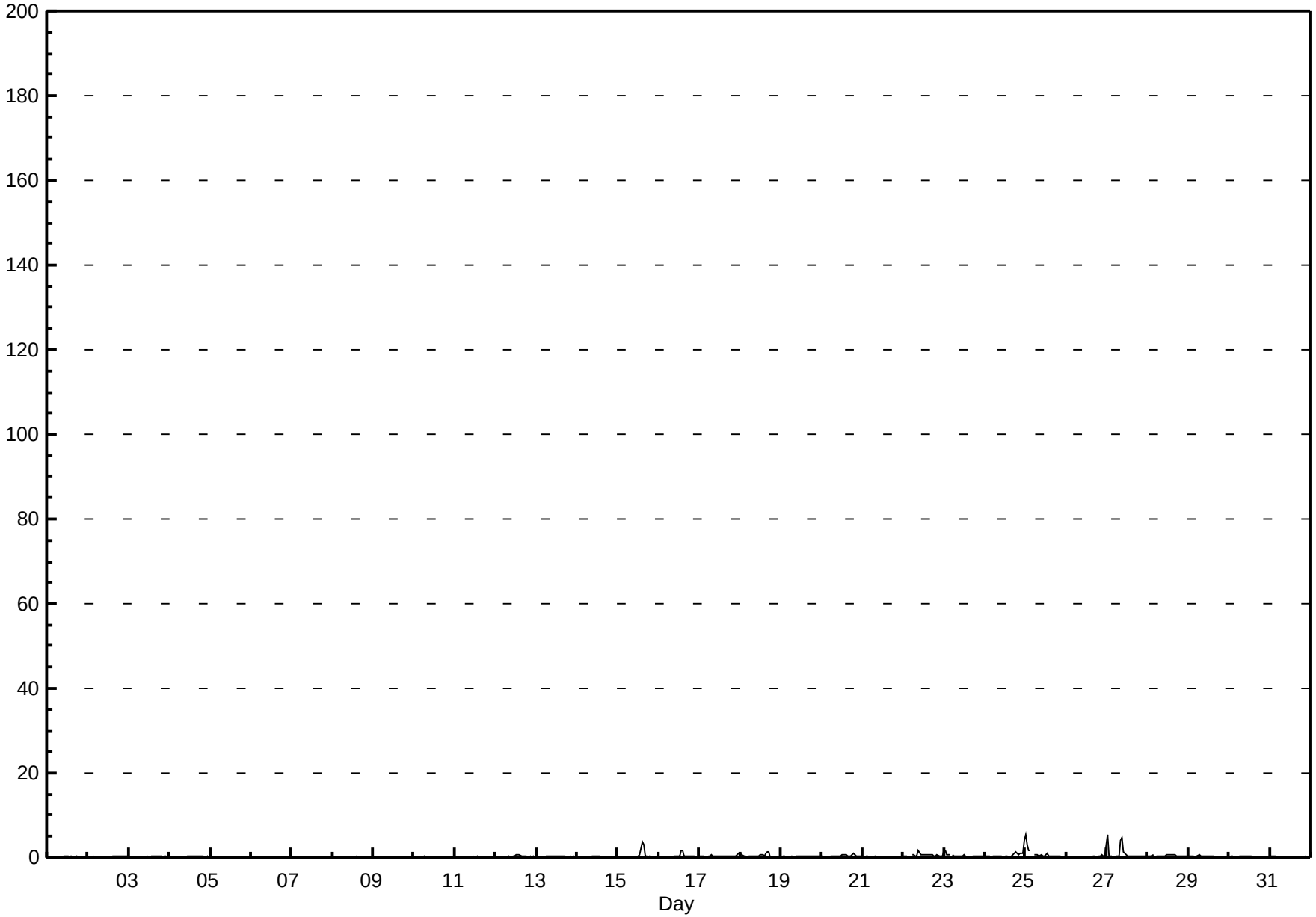
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - October 2013

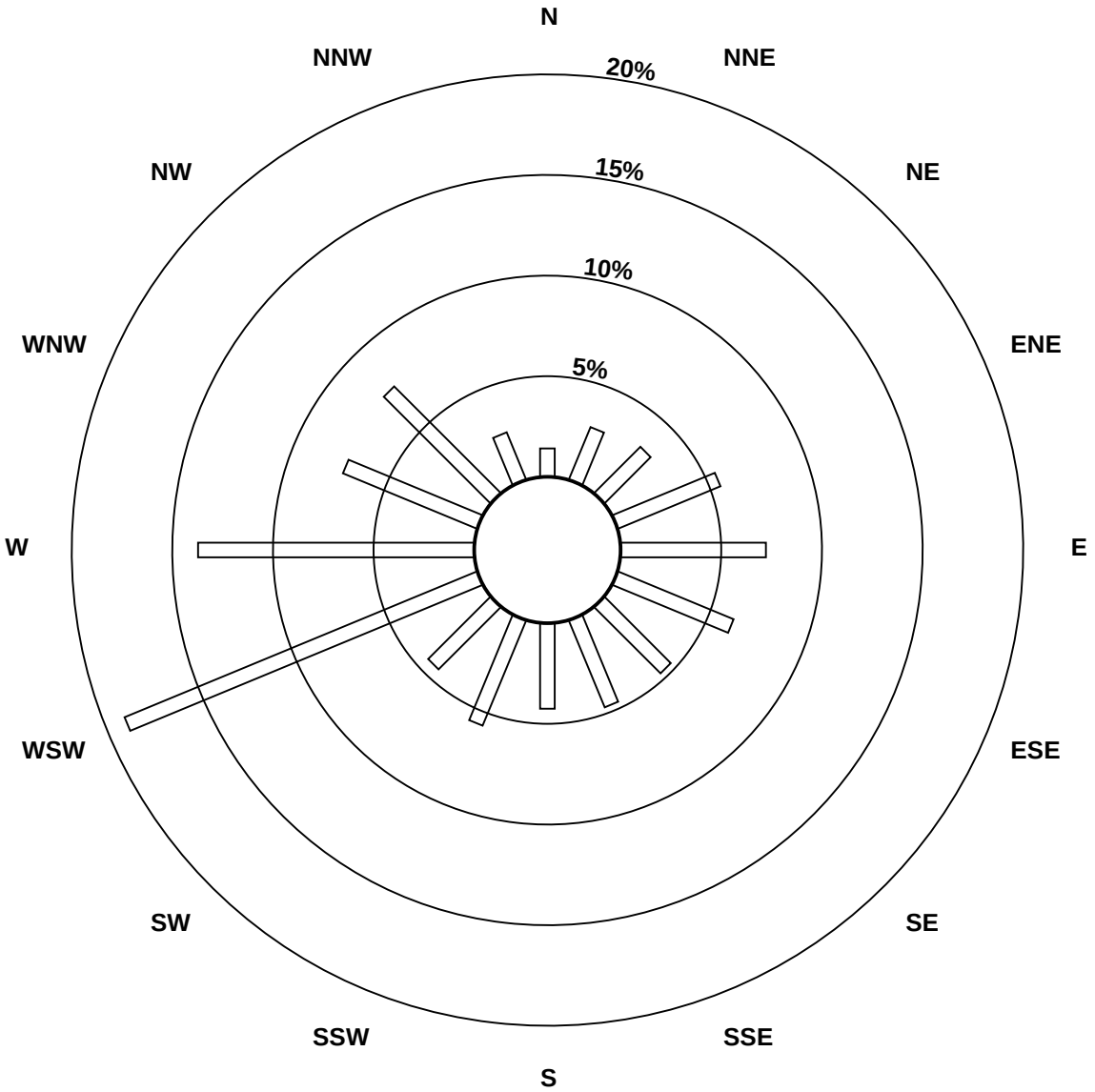


Peace Airshed Zone Association

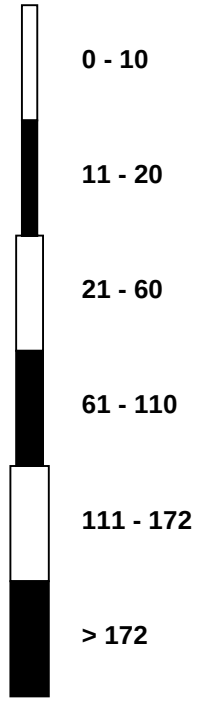
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - October 2013



Pollutant Classes (ppb)

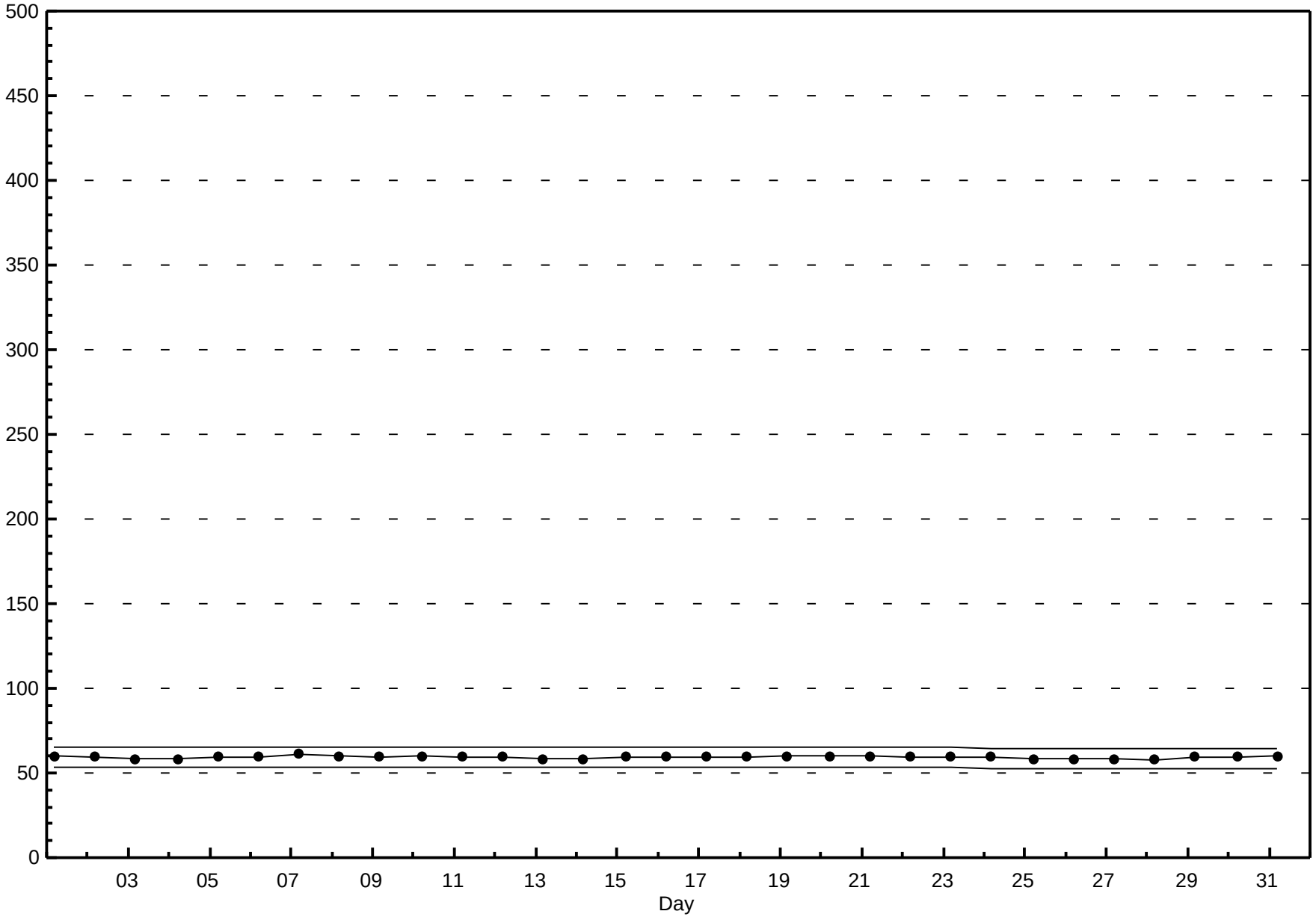


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Beaverlodge - October 2013



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 25.2 ppb on Oct 18 09:00 Maximum Daily Average: 6.7 ppb on Oct 18

Minimum Value: 0 ppb on Oct 15 04:00 Minimum Daily Average: 0.8 ppb on Oct 10
Maximum Diurnal Average: 5.5 ppb at hour 6 Minimum Diurnal Average: 1.4 ppb at hour 14
Monthly Average: 2.78 ppb Percentiles: $P_1 = 0.4$ $P_{10} = 0.7$ $Q_1 = 1.0$ Median = 1.9 $Q_3 = 3.6$ $P_{90} = 5.6$ $P_{99} = 16.5$

Hours in Service:	744
Hours of Data:	693
Hours of Missing Data:	51
Hours of Calibration:	41
Percent Operational Time:	98.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	3	3	5	3	A	7	5	5	4	4	2	1	2	1	2	1	1	2	5	6	4	2	2	2	3.2	7.1
2-Oct	1	1	1	1	A	3	2	2	2	7	4	1	1	1	1	1	1	1	2	3	3	3	2	3	2.1	6.7
3-Oct	2	2	2	2	A	6	4	4	3	2	1	1	1	2	1	1	1	2	2	2	5	3	3	4	2.3	5.7
4-Oct	3	3	3	3	A	6	8	6	6	7	7	7	4	5	4	8	6	6	5	4	1	2	1	1	4.5	8.0
5-Oct	1	1	1	1	A	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	3.7
6-Oct	2	2	1	2	A	5	7	5	2	1	3	3	3	3	3	3	3	3	4	3	4	3	3	3	3.0	6.9
7-Oct	3	4	5	3	A	5	5	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2.0	5.1
8-Oct	1	1	1	1	A	3	2	C	C	C	C	1	1	1	1	1	1	2	2	4	2	2	2	2	1.6	4.1
9-Oct	2	3	2	3	A	7	6	7	5	4	3	3	4	3	4	2	2	1	1	0	0	0	0	0	2.7	6.9
10-Oct	0	0	0	0	A	3	2	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0.8	3.1
11-Oct	0	1	1	2	A	4	3	2	5	3	1	0	0	0	0	0	1	1	2	2	1	2	2	2	1.6	5.2
12-Oct	3	3	3	3	A	4	2	2	2	3	4	3	1	1	1	0	0	2	3	3	4	6	4	2	2.5	6.3
13-Oct	2	1	1	2	A	4	4	4	3	3	2	1	1	0	0	1	1	1	1	1	1	1	1	1	1.7	4.2
14-Oct	2	1	1	2	A	4	3	3	2	3	3	2	1	1	1	1	1	1	1	1	2	2	2	1	1.7	4.3
15-Oct	1	1	1	0	A	3	1	1	1	1	1	1	1	1	1	1	2	5	3	5	2	2	1	1	1.6	4.6
16-Oct	1	1	2	1	A	4	7	9	4	3	2	2	3	1	1	1	1	2	4	4	3	3	2	1	2.7	8.6
17-Oct	1	1	1	2	A	4	3	5	8	5	1	2	2	1	1	1	1	4	6	5	4	2	1	10	3.2	10.5
18-Oct	13	16	8	15	A	18	18	16	25	5	3	1	2	2	1	1	1	2	2	2	1	1	1	1	6.7	25.2
19-Oct	1	1	1	1	A	4	3	2	2	2	3	1	1	1	1	1	3	3	4	5	14	19	6	4	3.6	18.6
20-Oct	17	10	13	15	A	17	6	9	7	7	5	1	1	1	1	1	1	1	1	2	3	2	1	1	5.3	17.2
21-Oct	1	1	1	1	A	6	5	3	4	2	1	1	1	1	3	2	1	3	3	4	1	1	1	1	2.1	6.5
22-Oct	1	2	1	2	A	5	3	3	M	M	M	M	M	M	M	M	M	M	7	4	3	3	3	6	--	7.1
23-Oct	4	4	1	2	A	4	2	2	C	C	C	C	C	C	8	4	3	4	4	4	4	4	4	5	--	7.9
24-Oct	6	7	7	6	A	12	10	11	9	5	1	1	1	1	1	1	3	3	4	2	2	2	2	2	4.2	12.0
25-Oct	2	3	3	2	A	5	2	9	6	7	8	5	4	3	3	3	7	14	17	6	3	2	2	1	5.1	17.2
26-Oct	2	4	3	3	A	4	3	2	1	1	1	1	1	1	1	0	1	1	2	2	1	1	1	1	1.6	4.2
27-Oct	1	1	1	1	A	3	1	1	1	1	2	2	1	1	1	1	1	3	2	1	1	1	3	2	1.4	3.1
28-Oct	2	2	2	2	A	5	5	3	3	4	2	2	2	2	2	3	3	6	12	6	4	4	5	5	3.8	12.3
29-Oct	3	2	2	3	A	4	4	6	4	6	5	4	3	2	2	1	2	1	1	1	1	2	1	1	2.7	6.3
30-Oct	2	1	1	1	A	5	6	10	5	5	5	5	4	2	1	2	1	2	3	3	6	4	2	1	3.4	9.6
31-Oct	1	0	1	0	A	3	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	2	2	2	1.1	2.8
	2.7	2.7	2.5	2.7	--	5.5	4.4	4.7	4.3	3.4	2.6	1.9	1.6	1.4	1.5	1.5	1.7	2.6	3.5	2.9	2.8	2.7	2.1	2.3	Diurnal Average	
	17.2	15.8	12.5	15.5	--	17.8	17.9	15.9	25.2	7.1	7.9	6.6	4.3	4.6	7.9	8.0	6.6	13.8	17.2	6.4	13.6	18.6	5.9	10.5	Diurnal Maximum	

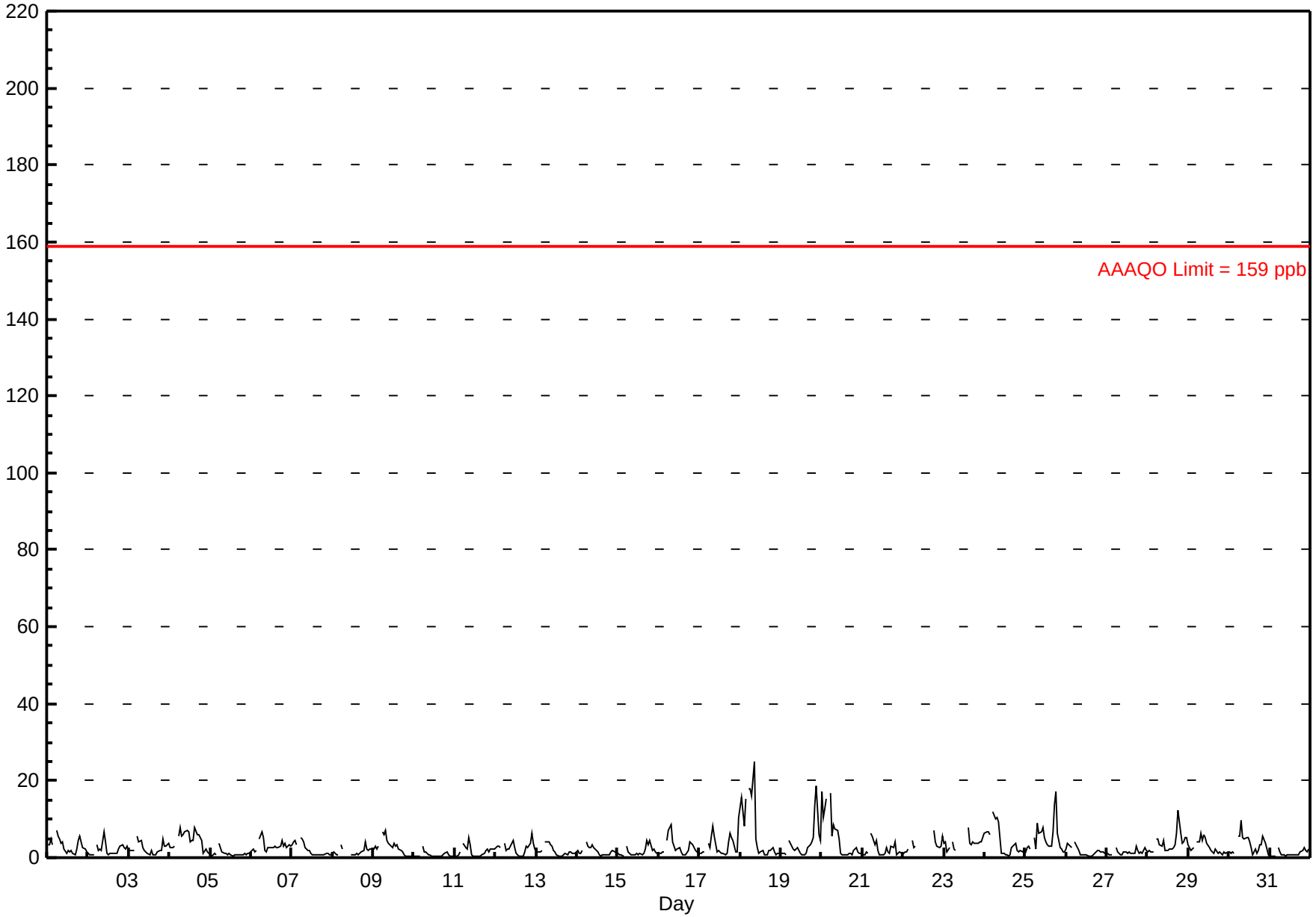
C - Calibration M - Maintenance A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - October 2013



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - October 2013

Maximum Value: 81.3 ppb on Oct 3 14:00

Maximum Daily Average: 13.1 ppb on Oct 18

Minimum Value: 1 ppb on Oct 31 04:00

Minimum Daily Average: 2.5 ppb on Oct 5

Maximum Diurnal Average: 8.9 ppb at hour 6

Minimum Diurnal Average: 2.7 ppb at hour 16

Monthly Average: 5.36 ppb

Percentiles: $P_1 = 0.7$ $P_{10} = 1.3$ $Q_1 = 2.0$ Median = 3.5 $Q_3 = 6.1$ $P_{90} = 10.1$ $P_{99} = 34.4$

Hours in Service:	744
Hours of Data:	693
Hours of Missing Data:	51
Hours of Calibration:	41
Percent Operational Time:	98.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	6	5	7	6	A	9	7	6	5	5	4	1	3	2	3	2	1	6	8	9	7	7	3	3	5.0	8.9
2-Oct	1	1	2	1	A	6	4	4	4	9	7	2	1	2	2	2	1	2	4	7	6	5	5	5	3.6	8.7
3-Oct	2	2	3	3	A	7	5	6	4	3	2	2	1	81	1	1	1	3	3	3	6	4	4	4	6.6	81.3
4-Oct	3	3	3	3	A	7	11	8	8	8	9	11	5	6	5	10	11	8	6	6	4	4	3	3	6.3	11.3
5-Oct	2	1	2	1	A	5	4	3	2	2	2	9	2	3	1	4	2	2	2	1	3	2	2	2	2.5	9.0
6-Oct	4	4	2	2	A	7	8	7	3	2	4	3	3	3	4	4	3	5	6	4	6	4	4	3	4.1	8.4
7-Oct	4	5	5	4	A	7	6	7	4	3	2	2	1	2	2	2	2	3	2	2	2	3	4	2	3.2	7.0
8-Oct	2	2	1	1	A	5	3	C	C	C	C	1	1	1	2	1	2	3	4	7	5	3	3	3	2.7	6.8
9-Oct	3	3	3	5	A	9	8	10	6	5	4	4	6	4	5	4	3	4	2	1	2	1	1	1	4.0	9.9
10-Oct	1	1	1	1	A	6	3	3	2	2	1	1	1	1	1	1	1	3	35	77	2	2	1	1	6.4	77.2
11-Oct	1	1	1	3	A	7	4	4	9	6	2	1	1	1	2	1	2	2	4	6	3	5	3	3	3.1	8.5
12-Oct	4	4	3	3	A	7	3	4	4	5	6	4	2	1	1	1	2	4	5	14	10	13	6	3	4.6	13.7
13-Oct	2	2	2	2	A	6	7	6	4	4	2	2	1	1	1	1	3	3	1	3	5	1	3	2	2.8	6.8
14-Oct	2	2	1	3	A	6	4	3	4	4	3	3	3	1	1	1	1	2	1	1	4	9	6	4	3.1	9.3
15-Oct	3	2	3	1	A	6	2	2	1	1	5	2	2	2	2	4	5	11	11	11	4	5	2	2	3.8	11.2
16-Oct	2	2	3	2	A	7	15	13	5	4	2	3	5	3	2	2	1	4	8	12	8	4	3	2	4.9	14.7
17-Oct	2	2	2	2	A	6	4	11	10	10	2	3	24	2	2	1	2	9	16	13	9	4	2	21	6.9	24.4
18-Oct	22	27	14	31	A	34	23	36	38	18	5	2	4	5	2	1	2	6	5	6	4	3	9	4	13.1	37.9
19-Oct	3	2	3	2	A	7	4	4	5	3	4	2	1	2	1	2	4	5	9	10	40	29	11	16	7.3	40.4
20-Oct	27	23	21	24	A	29	17	25	24	12	10	2	3	2	3	2	3	3	2	4	7	3	3	3	10.8	28.6
21-Oct	2	2	3	2	A	8	8	9	8	5	16	2	1	3	73	4	3	7	6	8	2	3	2	6	8.0	73.5
22-Oct	3	4	2	7	A	7	5	4	M	M	M	M	M	M	M	M	M	M	12	7	4	4	4	19	--	19.0
23-Oct	6	12	4	7	A	10	4	3	C	C	C	C	C	C	20	5	4	7	7	5	6	5	5	6	--	20.0
24-Oct	8	8	8	7	A	14	13	11	13	8	2	2	2	1	1	2	8	6	9	2	2	3	2	4	6.0	14.1
25-Oct	2	5	5	3	A	15	4	27	10	9	12	6	5	4	4	4	13	18	30	10	5	4	3	2	8.7	29.9
26-Oct	5	5	3	4	A	6	6	4	1	2	1	1	1	1	2	1	3	2	5	4	2	3	2	2	2.9	6.1
27-Oct	1	1	1	1	A	5	2	1	1	2	3	2	2	2	2	3	2	5	4	3	4	2	7	4	2.5	6.6
28-Oct	2	3	3	2	A	7	6	5	5	6	2	2	4	3	3	4	5	12	15	11	6	6	6	9	5.5	14.8
29-Oct	7	2	3	4	A	7	6	10	7	7	6	5	3	3	5	3	6	2	4	3	1	10	2	3	4.8	9.8
30-Oct	5	2	2	1	A	9	11	19	10	7	7	8	10	4	2	8	4	6	7	8	21	11	6	1	7.4	20.9
31-Oct	1	1	1	1	A	5	2	2	1	1	2	2	2	1	2	1	2	3	5	4	5	5	3	6	2.5	5.7
	4.4	4.5	3.8	4.5	--	8.9	6.7	8.5	7.0	5.4	4.6	3.1	3.6	5.0	5.2	2.7	3.4	5.2	7.7	8.4	6.3	5.3	3.9	4.7	Diurnal Average	
	26.5	27.4	21.0	30.9	--	34.4	23.4	36.1	37.9	17.7	16.2	10.7	24.4	81.3	73.5	10.2	13.4	17.9	34.9	77.2	40.4	28.7	10.8	20.7	Diurnal Maximum	

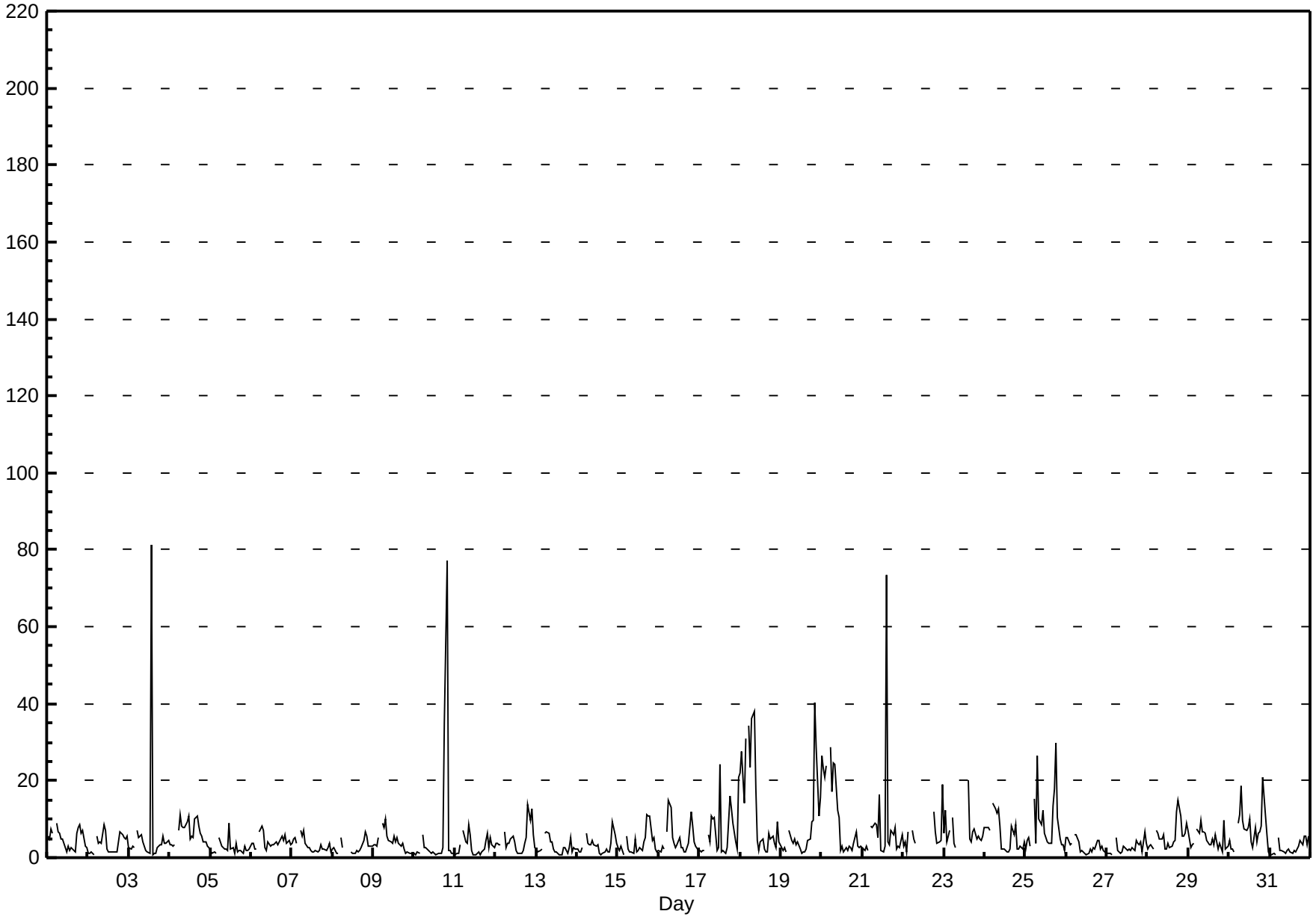
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - October 2013

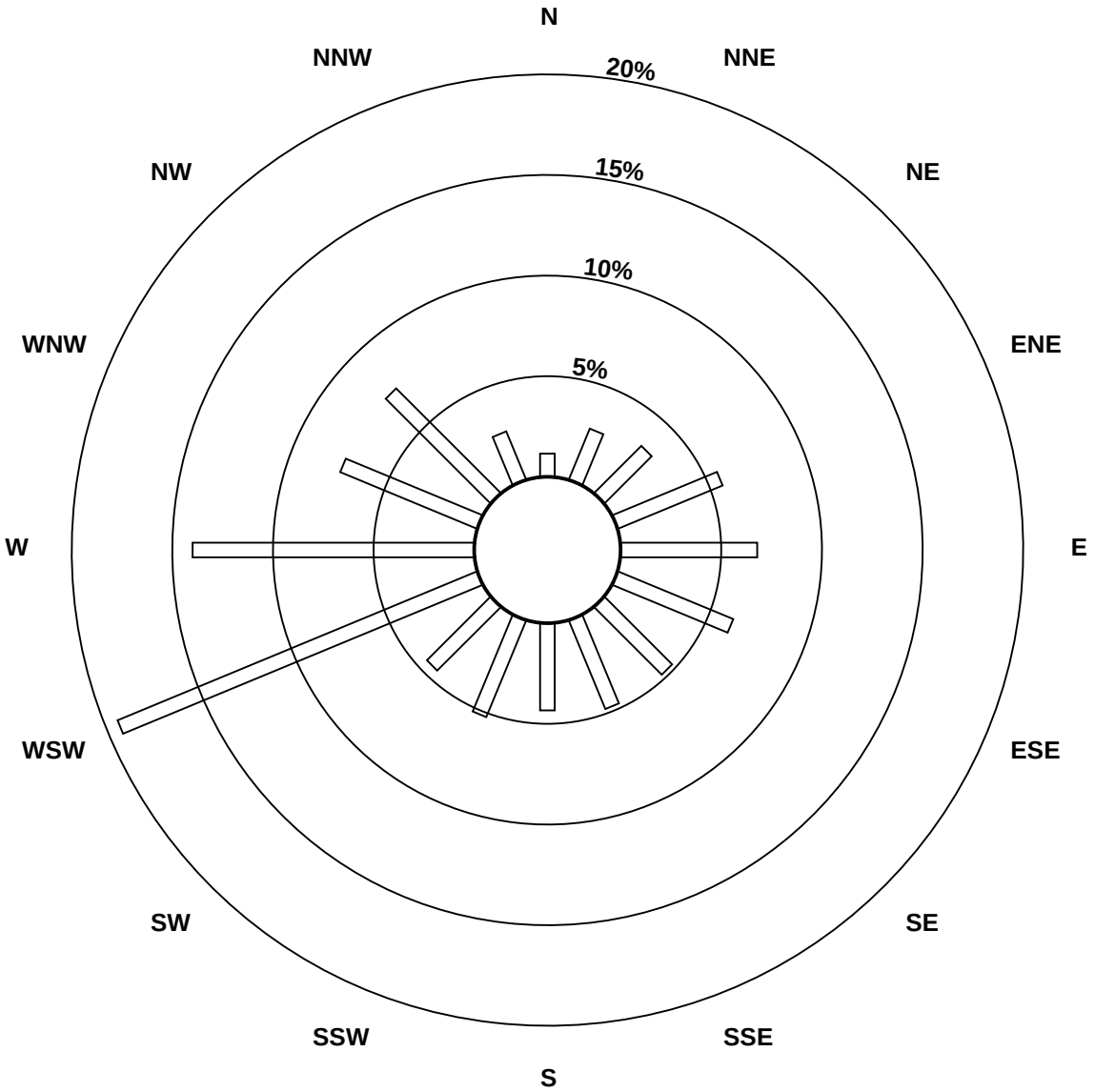


Peace Airshed Zone Association

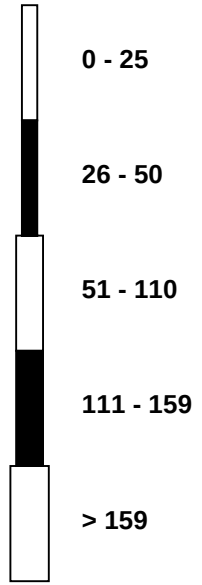
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - October 2013



Pollutant Classes (ppb)

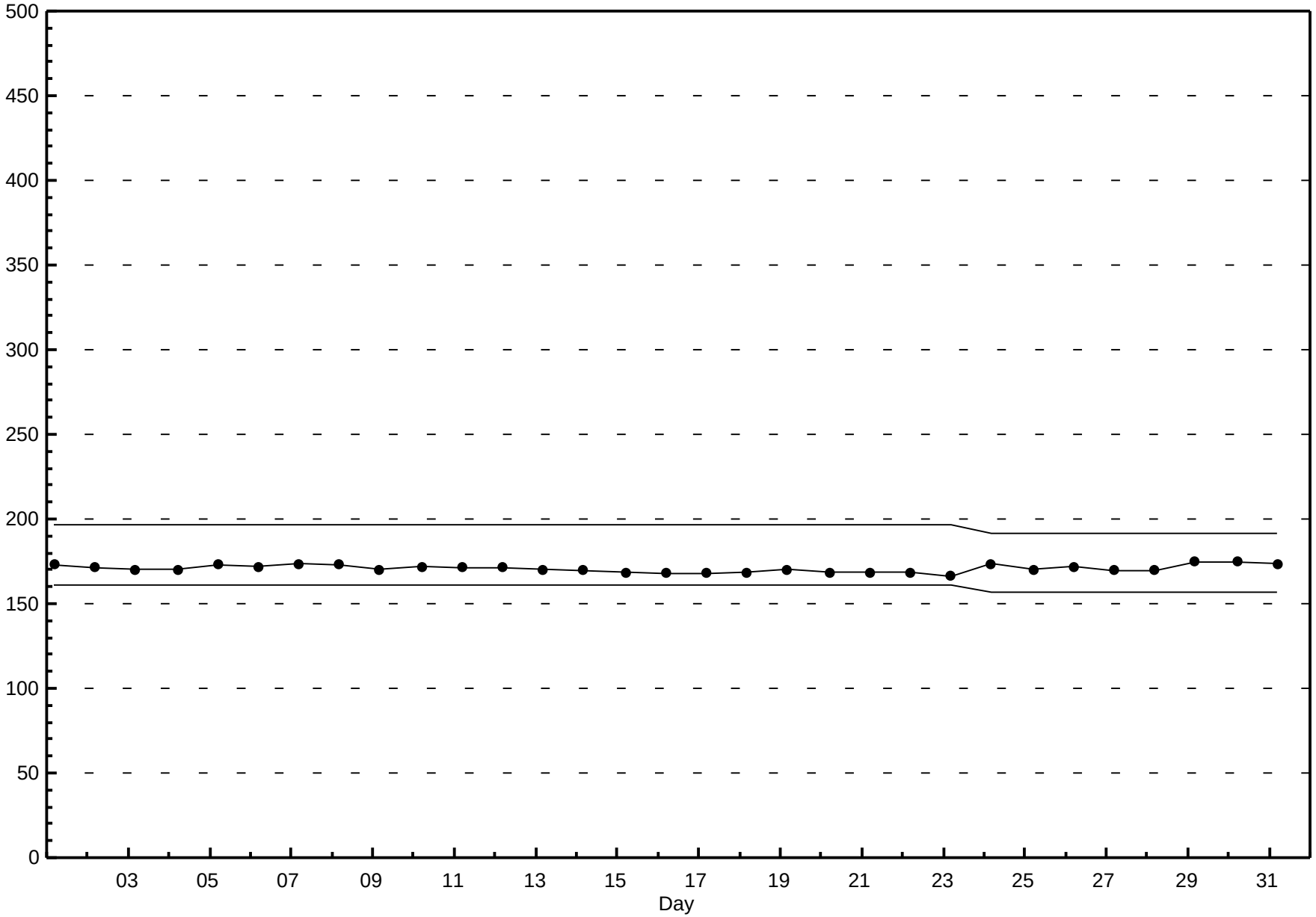


Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Beaverlodge - October 2013



Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 11.7 ppb on Oct 18 09:00 Maximum Daily Average: 1.4 ppb on Oct 4

Minimum Value: 0 ppb on Oct 1 01:00
Maximum Diurnal Average: 1.4 ppb at hour 10
Monthly Average: 0.34 ppb

Minimum Daily Average: 0.0 ppb on Oct 26
Minimum Diurnal Average: 0.0 ppb at hour 23
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.2 P_{90} = 0.9 P_{99} = 4.2

Hours in Service:	744
Hours of Data:	693
Hours of Missing Data:	51
Hours of Calibration:	41
Percent Operational Time:	98.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
2-Oct	0	0	0	0	A	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2.2
3-Oct	0	0	0	0	A	0	0	1	5	4	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0.9	4.6
4-Oct	0	0	0	0	A	0	0	1	2	5	7	4	3	1	1	4	2	1	0	0	0	0	0	0	1.4	6.8
5-Oct	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0
6-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
7-Oct	0	0	0	0	A	1	0	1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.1
8-Oct	0	0	0	0	A	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
9-Oct	0	0	0	0	A	0	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0.2	0.7
10-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Oct	0	0	0	0	A	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.8
12-Oct	0	0	0	0	A	0	0	0	0	0	1	2	1	0	0	0	1	0	0	0	0	0	0	0	0.2	1.5
13-Oct	0	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9
14-Oct	0	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
15-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
16-Oct	0	0	0	0	A	0	1	3	1	2	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0.6	3.0
17-Oct	0	0	0	0	A	0	0	0	2	4	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	4.5
18-Oct	0	1	0	1	A	1	0	2	12	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	11.7
19-Oct	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0.1	1.3
20-Oct	3	0	0	0	A	0	0	0	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.5
21-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0.2	3.7
22-Oct	0	0	0	0	A	0	0	0	M	M	M	M	M	M	M	M	M	M	0	0	0	0	0	0	--	0.1
23-Oct	0	0	0	0	A	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	--	0.5
24-Oct	0	0	0	0	A	0	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.9
25-Oct	0	0	0	0	A	0	0	3	1	2	5	3	2	1	1	1	1	1	1	0	0	0	0	0	1.0	5.0
26-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
27-Oct	0	0	0	0	A	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.7
28-Oct	0	0	0	0	A	0	0	0	0	2	1	2	3	3	2	1	1	0	0	0	0	0	0	0	0.7	2.8
29-Oct	0	0	0	0	A	0	0	0	0	2	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0.5	3.3
30-Oct	0	0	0	0	A	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0.2	1.5
31-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
	0.1	0.0	0.0	0.0	--	0.1	0.1	0.5	1.2	1.4	1.3	0.9	0.7	0.4	0.4	0.3	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	Diurnal Average	
	2.9	1.1	0.1	0.8	--	0.9	0.9	3.3	11.7	5.3	6.8	3.9	3.3	2.8	3.7	3.7	1.8	0.9	1.1	0.0	1.3	0.3	0.0	0.2	Diurnal Maximum	

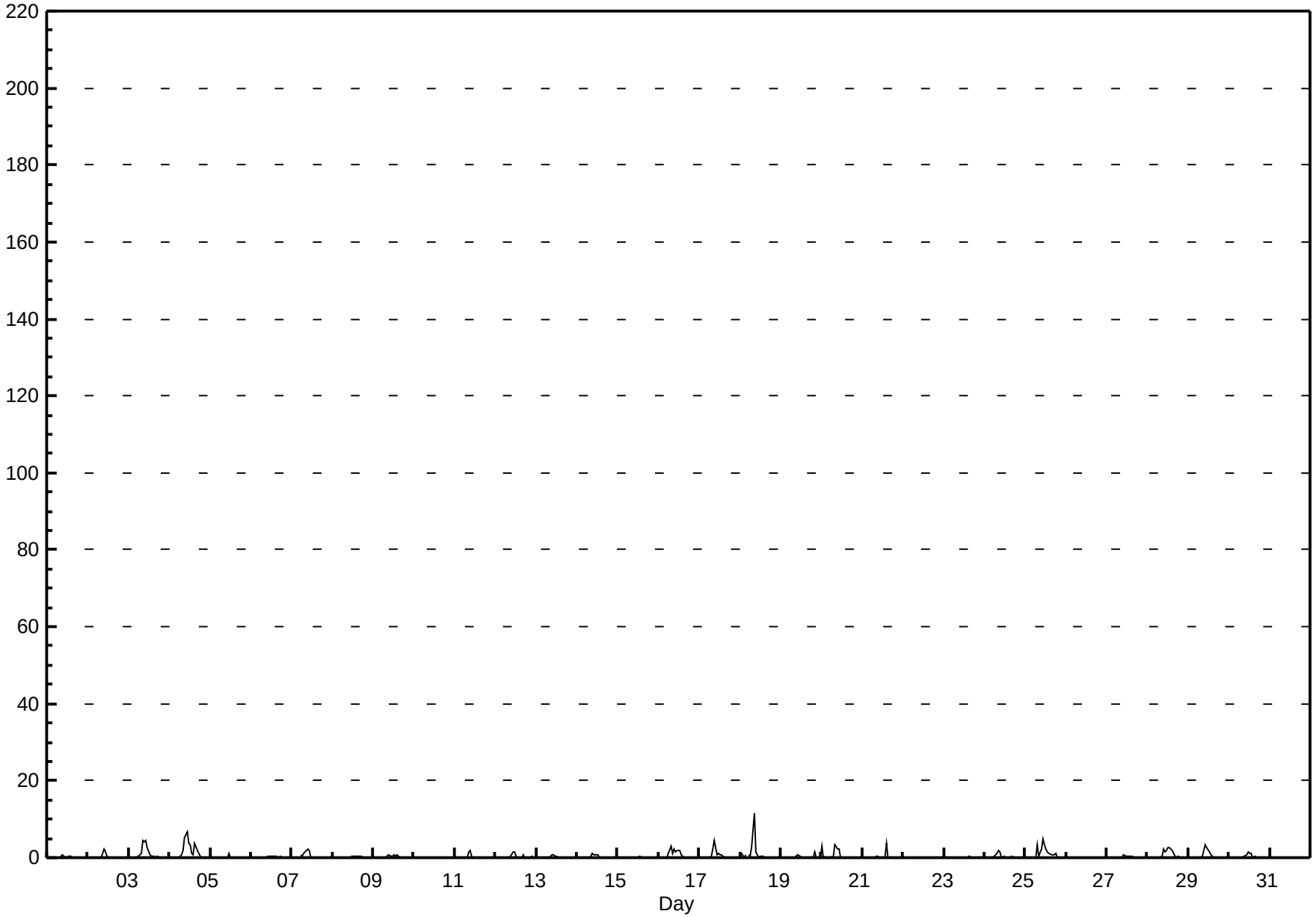
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - October 2013



Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - October 2013

Maximum Value: 44.7 ppb on Oct 21 15:00

Maximum Daily Average: 4.5 ppb on Oct 18

Minimum Value: 0 ppb on Oct 23 18:00

Minimum Daily Average: 0.2 ppb on Oct 26

Maximum Diurnal Average: 3.9 ppb at hour 9

Minimum Diurnal Average: 0.2 ppb at hour 23

Monthly Average: 1.23 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.3 $Q_3 = 0.7$ $P_{90} = 2.7$ $P_{99} = 15.5$

Hours in Service:	744
Hours of Data:	693
Hours of Missing Data:	51
Hours of Calibration:	41
Percent Operational Time:	98.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	0	0	1	0	A	0	0	1	1	1	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0.4	0.9
2-Oct	0	0	0	0	A	0	0	0	0	4	3	1	0	0	0	0	0	0	0	0	1	1	0	0	0.6	4.1
3-Oct	0	0	0	0	A	1	2	3	8	6	5	4	2	3	1	0	0	0	0	0	0	0	0	0	1.6	7.8
4-Oct	0	0	0	0	A	0	2	1	4	11	15	9	5	3	2	6	6	2	1	0	0	0	0	0	2.9	14.7
5-Oct	0	0	0	0	A	0	0	0	0	0	0	13	1	1	0	1	0	0	0	0	0	0	0	0	0.8	13.2
6-Oct	0	0	0	0	A	0	0	0	0	0	1	1	1	0	1	1	0	1	0	0	1	0	0	0	0.3	1.3
7-Oct	0	0	0	0	A	3	2	3	3	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1.0	4.8
8-Oct	0	0	0	0	A	0	0	C	C	C	C	1	1	1	1	1	1	0	1	0	0	0	0	0	0.4	1.3
9-Oct	0	0	0	0	A	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.5	1.3
10-Oct	0	0	0	0	A	0	0	0	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0.4	0.9
11-Oct	0	0	0	0	A	0	0	0	5	5	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0.7	5.2
12-Oct	0	0	0	0	A	0	0	0	0	1	2	2	1	0	0	0	38	0	0	3	0	4	0	0	2.4	38.1
13-Oct	0	0	0	0	A	0	0	0	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6
14-Oct	0	0	0	0	A	0	0	0	1	2	1	1	18	0	0	0	0	0	0	0	0	1	0	0	1.2	17.6
15-Oct	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0.3	0.8
16-Oct	0	0	0	0	A	0	5	14	3	3	2	3	8	2	1	1	0	0	0	0	0	0	0	0	1.9	14.3
17-Oct	0	0	0	0	A	0	0	4	8	9	1	2	1	18	1	0	0	0	0	0	0	0	0	1	2.1	18.0
18-Oct	2	9	0	14	A	11	2	24	28	6	2	0	1	1	0	0	0	1	0	0	0	0	1	0	4.5	28.4
19-Oct	0	0	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	12	0	0	0	0.8	12.1
20-Oct	12	3	1	3	A	4	0	2	34	5	8	0	1	1	1	0	0	0	0	0	0	0	0	0	3.3	34.5
21-Oct	0	0	0	0	A	0	0	0	1	1	1	0	0	7	45	0	0	0	0	0	0	0	0	0	2.6	44.7
22-Oct	0	0	0	0	A	0	0	1	M	M	M	M	M	M	M	M	M	M	0	0	0	0	0	0	--	0.5
23-Oct	0	0	0	0	A	0	0	0	C	C	C	C	C	C	1	1	0	0	0	0	0	0	0	0	--	1.1
24-Oct	0	0	0	0	A	0	7	2	5	4	1	1	1	0	0	0	1	0	0	0	0	0	0	0	1.0	7.0
25-Oct	0	0	0	0	A	0	0	29	1	4	11	5	3	2	1	1	2	3	8	0	0	0	0	0	3.1	29.4
26-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.6
27-Oct	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.4
28-Oct	0	0	0	0	A	0	0	0	1	4	2	3	6	4	3	2	1	0	0	0	0	0	0	2	1.3	5.8
29-Oct	1	0	0	0	A	0	0	0	1	3	4	4	2	2	2	1	0	0	0	0	0	0	0	0	0.9	3.9
30-Oct	0	0	0	0	A	0	0	1	0	1	1	4	3	2	0	1	0	0	0	0	0	0	0	0	0.7	3.6
31-Oct	0	0	0	0	A	0	0	0	0	0	1	1	1	0	1	0	1	0	0	0	0	1	0	0	0.4	0.8
	0.6	0.5	0.2	0.7	--	0.8	0.8	2.9	3.9	2.9	2.5	2.1	2.1	1.8	2.2	0.7	1.9	0.4	0.5	0.3	0.6	0.3	0.2	0.2	Diurnal Average	
	11.7	9.3	1.1	14.0	--	10.6	7.0	29.4	34.5	10.8	14.7	13.2	17.6	18.0	44.7	5.7	38.1	2.6	7.8	3.0	12.1	4.3	1.1	1.8	Diurnal Maximum	

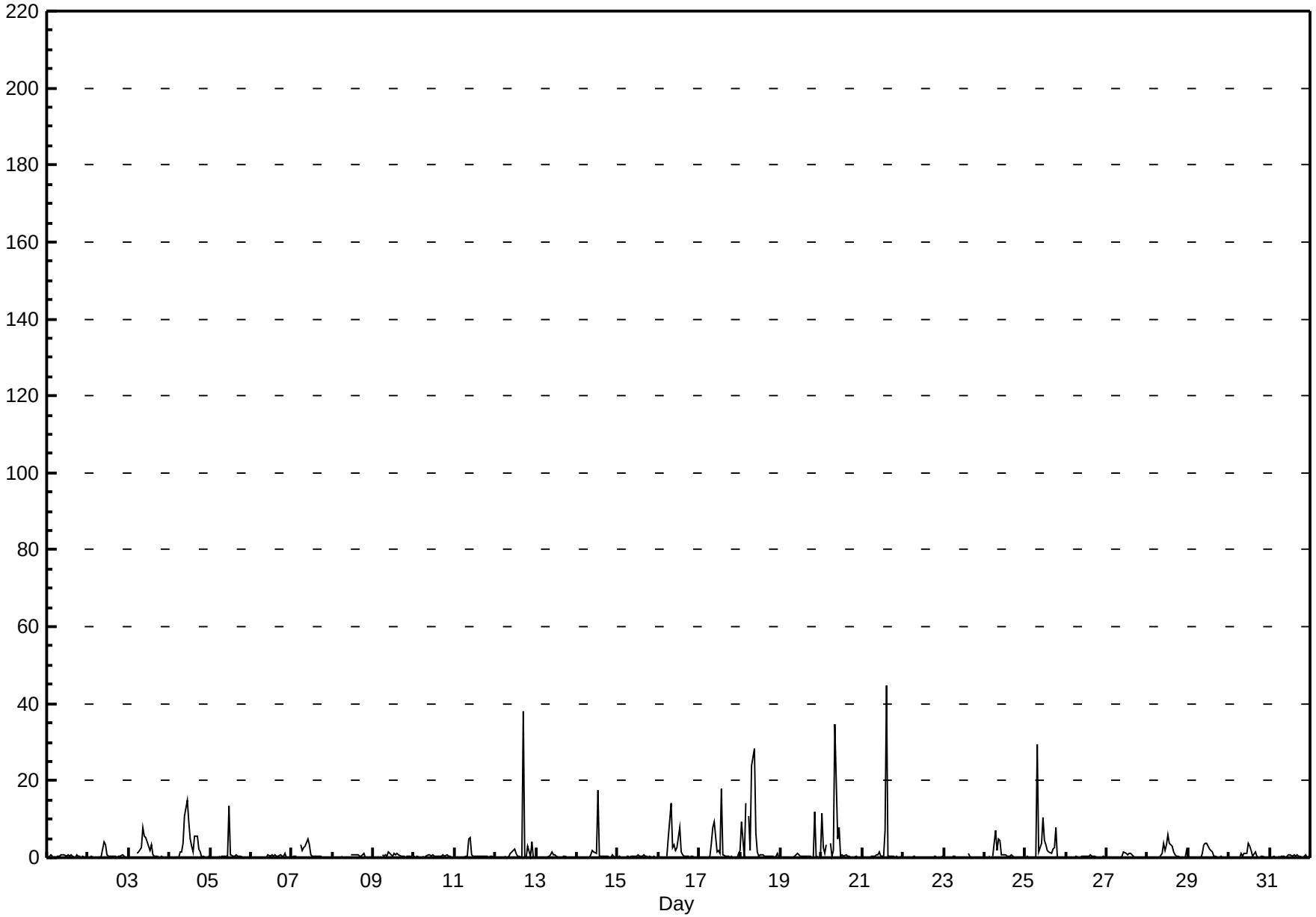
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - October 2013



Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 36.8 ppb on Oct 18 09:00 Maximum Daily Average: 7.6 ppb on Oct 18

Minimum Value: 0 ppb on Oct 15 04:00 Minimum Daily Average: 0.8 ppb on Oct 10
Maximum Diurnal Average: 5.6 ppb at hour 6 Minimum Diurnal Average: 1.8 ppb at hour 16
Monthly Average: 3.11 ppb Percentiles: $P_1 = 0.4$ $P_{10} = 0.7$ $Q_1 = 1.1$ Median = 2.1 $Q_3 = 4.0$ $P_{90} = 6.4$ $P_{99} = 18.0$

Hours in Service:	744
Hours of Data:	693
Hours of Missing Data:	51
Hours of Calibration:	41
Percent Operational Time:	98.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	3	3	5	3	A	7	5	5	4	5	2	1	2	2	2	1	1	2	5	6	4	2	2	2	3.3	7.1
2-Oct	1	1	1	1	A	3	2	2	2	9	5	2	1	1	1	1	1	1	2	3	4	3	2	3	2.3	8.8
3-Oct	2	2	2	2	A	6	5	6	7	6	6	4	2	2	1	1	1	2	2	2	5	3	3	4	3.2	7.3
4-Oct	3	3	3	3	A	5	8	6	8	12	14	10	7	6	5	12	8	7	6	4	1	2	1	1	5.9	13.8
5-Oct	1	0	1	1	A	4	3	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.1	3.7
6-Oct	2	2	1	2	A	5	7	5	2	1	3	3	3	3	3	3	3	3	4	3	4	3	3	3	3.1	6.8
7-Oct	3	4	5	3	A	6	5	5	4	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	2.4	5.9
8-Oct	1	1	1	1	A	3	2	C	C	C	C	1	1	1	1	1	1	2	2	4	2	2	2	2	1.8	4.0
9-Oct	2	3	2	3	A	7	6	7	5	4	3	3	4	4	4	3	2	1	1	0	0	0	0	0	2.9	7.0
10-Oct	0	0	0	0	A	3	2	1	1	1	1	1	0	1	1	0	0	1	1	2	1	0	0	0	0.8	3.1
11-Oct	0	0	1	2	A	4	3	2	7	5	1	0	0	1	1	0	1	1	2	2	1	2	2	2	1.8	6.6
12-Oct	3	3	3	3	A	4	2	2	2	3	6	4	2	1	1	1	1	2	3	3	4	7	4	2	2.7	6.6
13-Oct	2	1	1	2	A	4	4	4	4	4	3	2	1	1	0	1	1	1	1	1	1	1	1	1	1.8	4.2
14-Oct	2	1	1	2	A	4	3	3	3	4	3	3	2	1	1	1	1	1	1	1	2	2	2	1	1.9	4.4
15-Oct	1	1	1	0	A	3	1	1	1	1	1	1	1	1	1	1	2	5	3	5	2	2	1	1	1.6	4.7
16-Oct	1	1	2	1	A	4	8	12	5	5	3	4	5	2	1	1	1	2	4	4	3	3	2	1	3.3	11.5
17-Oct	1	1	1	2	A	4	3	6	11	10	2	3	2	2	2	1	1	4	6	5	4	2	1	11	3.7	10.6
18-Oct	13	17	8	16	A	19	18	18	37	6	4	1	2	2	1	1	1	2	2	2	1	1	1	1	7.6	36.8
19-Oct	1	1	1	1	A	4	3	2	2	2	3	1	1	1	1	1	3	3	4	5	15	19	6	4	3.7	18.6
20-Oct	20	10	13	16	A	17	6	9	11	9	7	1	1	1	1	1	1	1	1	2	3	2	1	1	5.9	20.1
21-Oct	1	1	2	1	A	6	6	4	5	2	1	1	1	1	6	2	1	3	3	4	1	1	1	1	2.4	6.5
22-Oct	1	2	1	2	A	5	3	3	M	M	M	M	M	M	M	M	M	M	7	4	3	3	3	6	--	7.1
23-Oct	4	4	1	3	A	4	2	2	C	C	C	C	C	C	8	4	3	4	4	3	4	4	4	5	--	8.4
24-Oct	6	7	7	6	A	12	11	12	11	7	1	1	1	1	1	1	3	3	4	2	2	2	2	2	4.5	12.0
25-Oct	2	3	3	2	A	5	2	12	7	9	13	8	6	5	4	4	7	14	18	6	3	2	2	1	6.1	18.2
26-Oct	2	4	3	3	A	4	3	2	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1.6	4.2
27-Oct	1	1	1	1	A	3	1	1	1	1	2	2	2	2	2	2	1	3	2	1	1	1	3	2	1.6	3.1
28-Oct	2	2	2	2	A	5	5	3	4	7	3	4	5	5	4	4	4	7	12	6	4	4	5	5	4.5	12.5
29-Oct	3	2	2	3	A	4	4	6	5	8	9	7	4	2	2	1	2	1	1	1	1	2	1	1	3.2	8.6
30-Oct	2	1	1	1	A	5	6	10	5	5	6	7	6	3	1	2	1	2	3	3	6	4	2	1	3.7	9.7
31-Oct	1	1	1	0	A	3	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	2	2	2	1.2	2.8
	2.8	2.7	2.4	2.8	--	5.6	4.5	5.2	5.5	4.8	3.9	2.8	2.2	1.9	2.0	1.8	1.9	2.8	3.5	2.9	2.8	2.7	2.1	2.3	Diurnal Average	
	20.1	16.9	12.6	16.0	--	18.7	18.1	18.3	36.8	11.7	13.8	10.5	7.4	5.8	8.4	11.6	7.8	14.5	18.2	6.4	14.9	18.6	5.9	10.6	Diurnal Maximum	

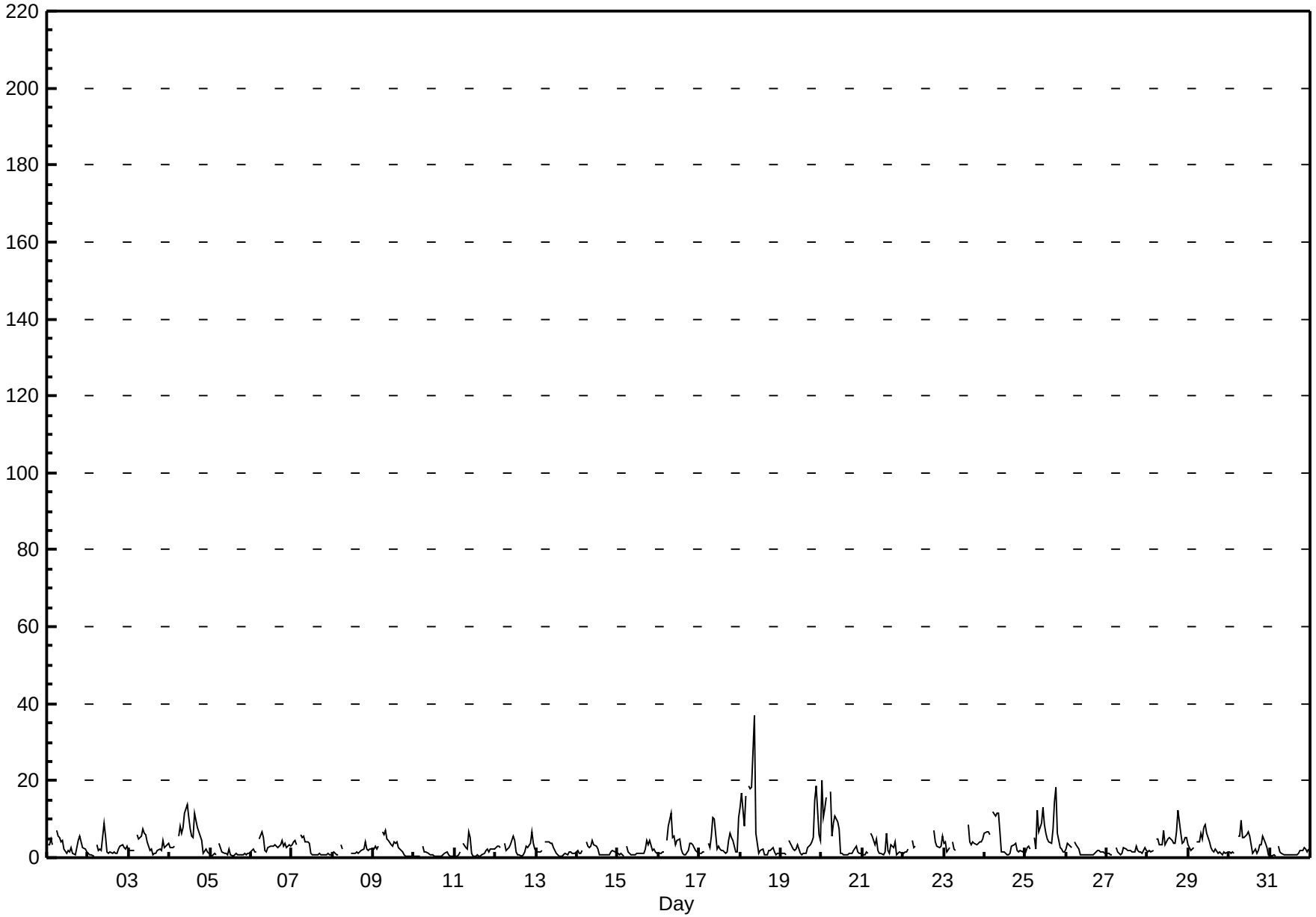
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - October 2013



Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - October 2013

Maximum Value: 82.6 ppb on Oct 3 14:00

Maximum Daily Average: 17.2 ppb on Oct 18

Minimum Value: 1 ppb on Oct 11 01:00

Minimum Daily Average: 2.8 ppb on Oct 5

Maximum Diurnal Average: 11.0 ppb at hour 8

Minimum Diurnal Average: 3.4 ppb at hour 16

Monthly Average: 6.28 ppb

Percentiles: $P_1 = 0.9$ $P_{10} = 1.6$ $Q_1 = 2.3$ Median = 3.8 $Q_3 = 6.7$ $P_{90} = 11.8$ $P_{99} = 53.3$

Hours in Service:	744
Hours of Data:	693
Hours of Missing Data:	51
Hours of Calibration:	41
Percent Operational Time:	98.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	6	5	8	6	A	9	7	6	5	5	4	2	4	2	3	3	1	7	8	9	6	7	3	3	5.2	8.8
2-Oct	1	1	2	1	A	6	4	4	4	13	10	3	2	2	2	2	2	2	4	7	7	5	5	5	4.0	12.7
3-Oct	2	2	3	3	A	8	7	8	11	9	7	6	3	83	1	1	1	3	3	4	6	4	4	4	7.9	82.6
4-Oct	3	3	3	3	A	7	13	9	11	18	22	20	10	8	7	15	16	10	8	6	4	4	3	3	9.0	22.1
5-Oct	2	1	1	1	A	5	4	3	2	2	2	11	3	3	1	4	2	2	2	1	3	2	2	2	2.8	11.1
6-Oct	4	4	2	2	A	7	8	7	3	2	5	3	4	4	4	4	3	5	6	4	7	4	5	3	4.4	8.4
7-Oct	4	5	6	4	A	10	7	9	5	8	6	2	2	2	2	2	2	4	2	2	2	3	4	2	4.1	9.7
8-Oct	2	2	1	1	A	5	3	C	C	C	C	2	2	1	2	2	2	3	6	7	5	3	3	3	3.0	6.7
9-Oct	3	3	3	5	A	9	8	11	6	6	5	4	6	5	6	5	3	4	3	1	2	1	2	1	4.4	10.6
10-Oct	1	1	2	1	A	6	3	3	2	2	2	2	2	1	1	1	2	3	35	78	2	2	1	1	6.7	78.0
11-Oct	1	1	1	3	A	7	4	4	12	11	3	1	1	2	2	1	2	3	5	7	3	6	3	3	3.7	11.9
12-Oct	4	4	3	3	A	7	2	4	4	6	7	6	3	1	1	1	2	4	5	17	10	17	6	3	5.3	16.9
13-Oct	2	2	2	2	A	6	7	6	4	6	3	2	2	1	1	1	3	3	1	3	5	1	3	2	3.0	6.8
14-Oct	2	2	1	3	A	6	4	3	4	6	5	4	14	1	1	1	2	2	2	2	4	10	6	4	3.9	14.5
15-Oct	3	2	3	1	A	6	2	2	2	1	5	2	2	3	2	5	6	11	11	11	4	6	2	2	4.1	11.3
16-Oct	2	2	3	2	A	7	19	24	8	7	4	6	13	4	3	2	2	4	8	12	9	4	3	2	6.5	23.7
17-Oct	2	2	2	2	A	6	4	14	17	20	3	4	25	5	2	2	3	10	16	13	9	4	2	21	8.2	25.1
18-Oct	24	36	14	45	A	45	24	60	63	22	6	2	5	6	3	2	2	7	5	6	4	3	10	4	17.2	63.4
19-Oct	3	2	3	2	A	7	5	4	5	4	5	3	1	2	2	2	5	5	9	10	53	29	11	16	8.0	52.5
20-Oct	37	25	22	26	A	32	17	26	54	17	18	2	4	2	3	2	3	3	2	4	7	3	3	3	13.7	53.8
21-Oct	3	2	3	2	A	8	8	9	9	6	16	2	2	10	74	5	3	7	6	8	2	3	3	6	8.6	73.9
22-Oct	3	4	2	7	A	7	5	4	M	M	M	M	M	M	M	M	M	M	12	7	4	4	4	19	--	19.3
23-Oct	6	12	4	7	A	11	4	3	C	C	C	C	C	C	21	5	4	6	7	5	6	5	5	5	--	21.1
24-Oct	8	8	8	7	A	14	19	13	18	12	3	3	3	2	2	3	9	6	9	2	2	3	2	4	7.0	19.3
25-Oct	2	5	5	3	A	15	4	53	11	13	23	11	9	6	5	4	16	20	37	10	5	4	3	2	11.6	53.4
26-Oct	5	5	3	4	A	6	6	4	2	2	2	2	1	2	3	2	3	3	5	4	2	3	2	1	3.1	6.1
27-Oct	1	1	1	1	A	5	2	1	1	2	4	3	3	3	3	4	2	5	4	3	4	2	6	4	2.9	6.5
28-Oct	2	3	3	2	A	7	6	5	6	9	4	6	10	7	6	6	5	12	15	11	6	6	6	10	6.7	15.1
29-Oct	8	2	3	4	A	7	6	10	7	10	10	8	6	5	6	4	6	2	4	3	2	10	2	3	5.6	10.1
30-Oct	5	2	2	2	A	9	11	20	10	8	8	11	13	6	3	9	4	6	7	9	21	11	6	2	8.1	21.3
31-Oct	1	1	1	1	A	5	2	2	2	1	2	3	3	2	3	2	3	3	5	4	6	6	3	6	2.9	6.2
	4.9	4.8	3.9	5.0	--	9.5	7.3	11.0	10.3	8.2	7.0	4.7	5.3	6.2	5.9	3.4	4.0	5.5	8.1	8.6	6.8	5.6	4.0	4.8	Diurnal Average	
	36.5	36.0	22.2	44.8	--	44.9	24.0	59.7	63.4	22.5	22.9	19.8	25.1	82.6	73.9	15.1	16.3	20.3	37.4	78.0	52.5	28.8	10.9	21.3	Diurnal Maximum	

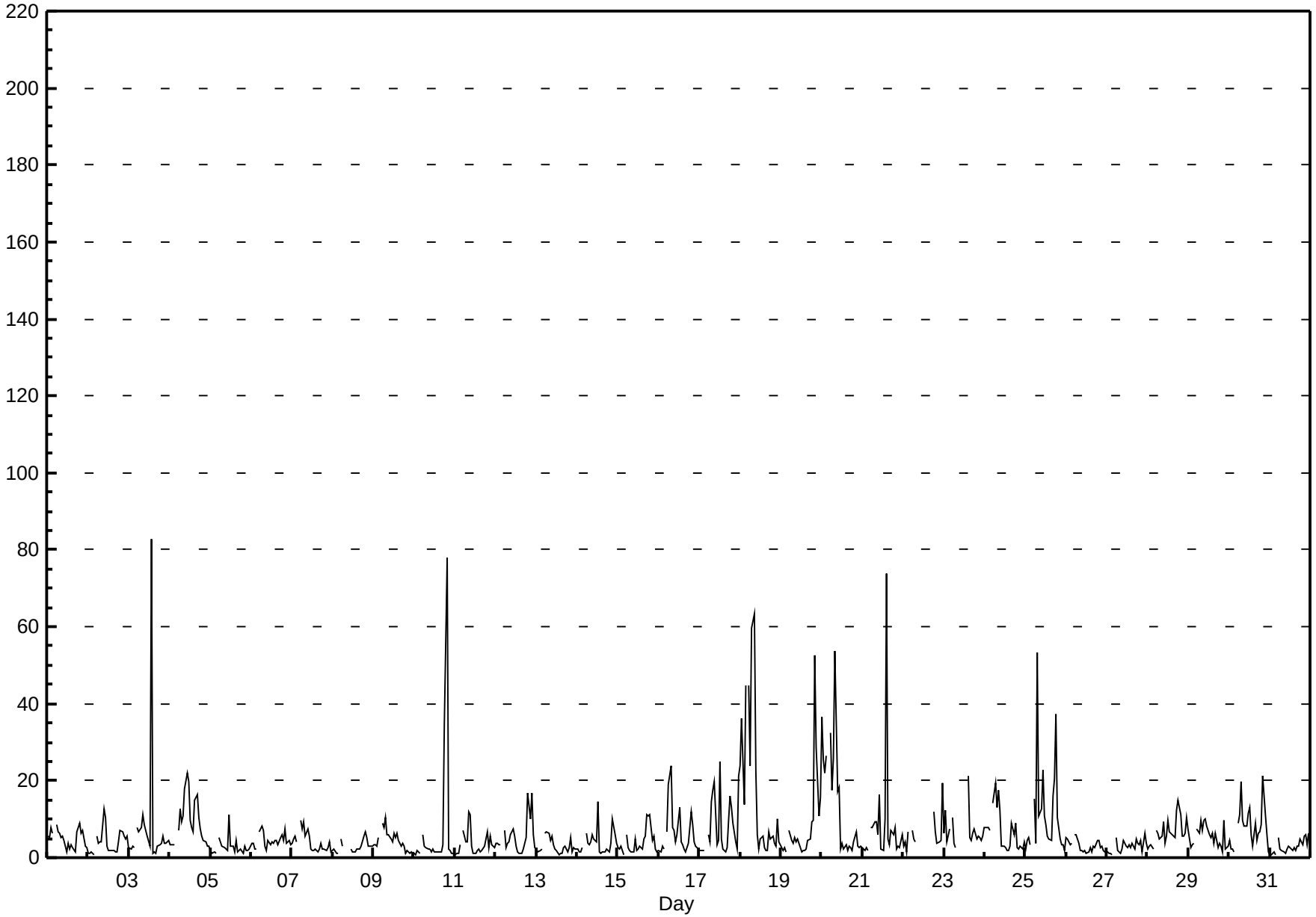
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - October 2013

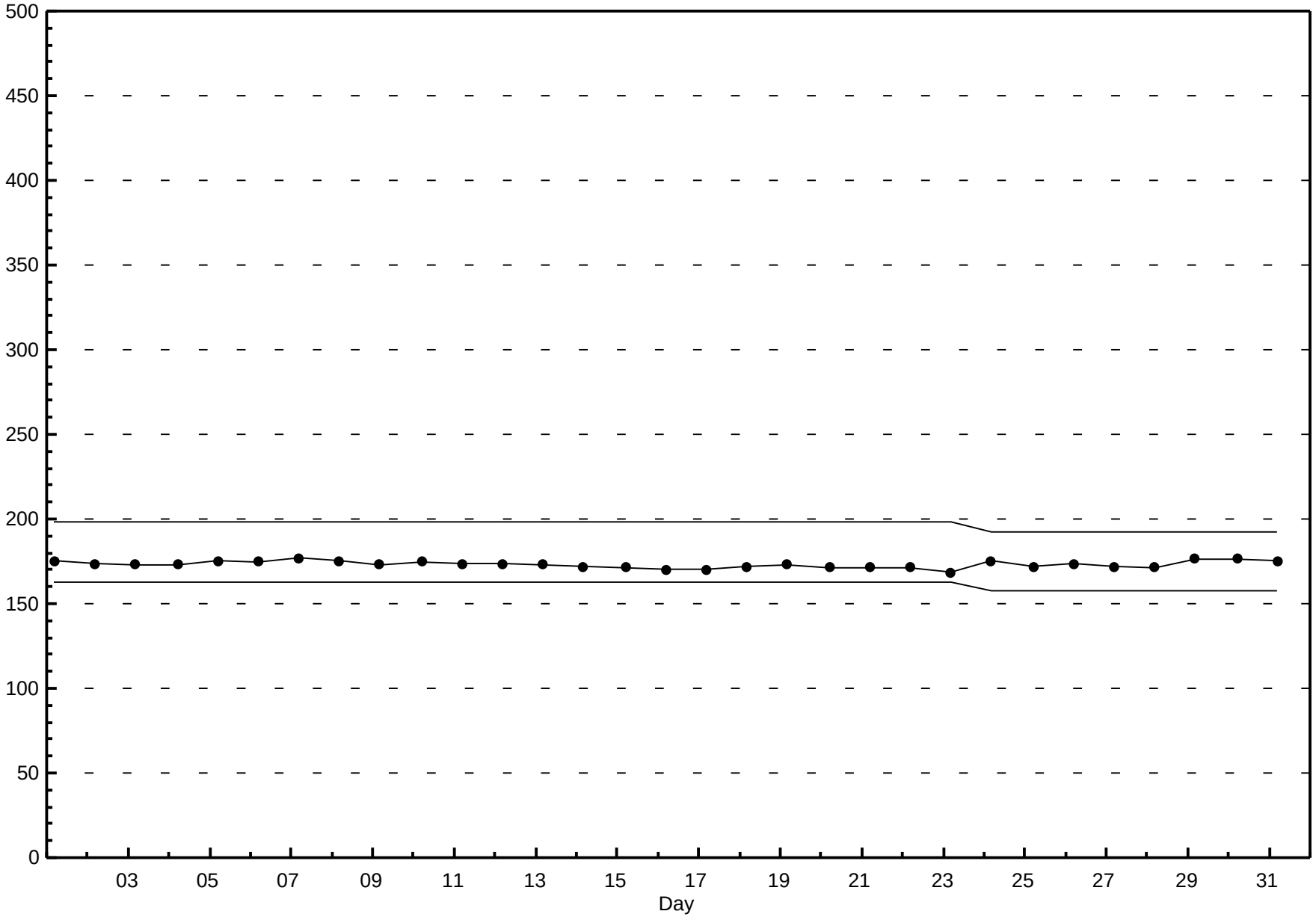


Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Beaverlodge - October 2013



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 43.2 ppb on Oct 19 15:00 Maximum Daily Average: 34.4 ppb on Oct 26

Minimum Value: 3 ppb on Oct 3 09:00 Minimum Daily Average: 12.0 ppb on Oct 4
Maximum Diurnal Average: 30.7 ppb at hour 16 Minimum Diurnal Average: 20.7 ppb at hour 8
Monthly Average: 25.22 ppb Percentiles: P_1 = 4.4 P_{10} = 12.9 Q_1 = 19.4 Median = 26.5 Q_3 = 31.8 P_{90} = 35.6 P_{99} = 39.8

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	15	14	9	10	A	9	9	10	12	13	20	28	26	23	21	24	23	21	16	13	12	13	15	15	16.1	28.0
2-Oct	15	17	20	20	A	21	22	21	19	13	17	20	21	21	24	24	23	22	19	14	13	13	13	11	18.5	24.4
3-Oct	13	14	13	13	A	7	5	4	3	3	4	7	12	16	19	19	20	20	17	18	15	16	15	12	12.6	20.3
4-Oct	13	11	10	10	A	10	8	6	6	6	7	11	9	8	12	8	7	7	7	13	27	27	28	28	12.0	28.4
5-Oct	26	25	24	23	A	25	24	28	29	29	31	30	32	34	33	33	33	34	33	33	30	31	29	29	29.5	33.9
6-Oct	26	24	24	24	A	21	19	23	34	38	34	30	27	24	22	19	16	13	10	11	10	11	9	8	20.7	37.8
7-Oct	7	6	5	5	A	3	4	3	4	6	12	31	38	39	39	38	36	35	33	32	33	33	32	29	21.8	39.3
8-Oct	22	20	18	18	A	16	17	16	C	C	16	18	20	21	21	21	23	22	22	18	19	17	15	15	18.8	22.6
9-Oct	14	12	12	12	A	11	12	12	15	16	17	19	17	18	20	25	27	30	29	28	27	27	27	26	19.7	30.1
10-Oct	27	27	29	30	A	31	31	30	30	31	32	32	31	31	31	30	30	28	27	27	27	26	27	26	29.1	31.6
11-Oct	26	25	25	21	A	22	22	22	18	18	27	28	29	29	30	30	28	28	26	25	26	25	22	23	25.0	29.9
12-Oct	23	22	21	20	A	20	20	18	19	18	19	21	26	28	29	29	29	28	27	27	23	17	24	25	23.2	29.3
13-Oct	23	21	20	20	A	19	19	20	22	23	25	26	29	35	37	38	36	35	34	32	31	30	29	27	27.4	37.7
14-Oct	24	24	24	24	A	24	24	23	22	20	25	27	32	38	40	38	36	35	34	33	32	32	33	34	29.5	39.6
15-Oct	34	34	33	36	A	36	36	35	34	34	33	31	31	30	33	35	32	29	33	28	27	24	28	26	31.8	36.2
16-Oct	26	23	22	22	A	17	13	6	13	12	16	19	22	26	32	34	34	32	30	28	27	25	26	27	23.1	33.8
17-Oct	26	26	26	27	A	27	27	22	14	13	19	21	26	30	31	33	33	30	29	29	26	30	29	19	25.8	33.3
18-Oct	16	14	21	14	A	16	14	17	10	27	28	32	34	33	35	34	33	30	29	27	30	33	33	33	25.7	34.9
19-Oct	33	33	32	32	A	31	31	32	32	31	30	39	42	42	43	43	40	40	39	32	24	17	22	22	33.1	43.2
20-Oct	10	17	16	12	A	14	22	21	20	19	19	33	34	38	38	38	35	32	31	29	29	30	29	29	25.9	38.2
21-Oct	30	30	28	29	A	25	25	27	26	30	33	33	34	35	34	34	34	31	30	27	31	29	28	29	30.1	34.7
22-Oct	29	29	29	27	A	27	27	25	23	16	11	17	19	21	20	19	17	17	20	26	27	29	29	29	23.1	29.3
23-Oct	29	30	32	32	A	31	32	32	32	33	31	32	C	C	C	34	32	30	31	31	28	27	26	25	30.5	33.8
24-Oct	23	20	19	19	A	9	6	4	6	17	31	33	38	40	41	40	37	36	36	37	36	35	35	33	27.4	40.6
25-Oct	32	29	28	28	A	30	31	22	21	20	18	22	26	28	28	28	23	16	14	23	31	33	35	35	26.2	35.4
26-Oct	34	33	32	33	A	33	34	34	37	37	38	39	39	39	39	38	36	34	32	32	31	30	27	27	34.4	39.4
27-Oct	25	22	21	22	A	24	26	27	29	28	26	26	26	25	25	26	26	24	23	25	23	24	21	21	24.5	28.9
28-Oct	21	20	19	17	A	18	17	19	19	17	18	17	17	19	23	27	25	20	13	19	22	21	18	17	19.1	26.5
29-Oct	19	24	25	25	A	28	26	25	28	26	25	26	29	32	35	38	36	37	35	35	39	38	39	39	30.8	39.3
30-Oct	37	36	36	36	A	29	28	24	28	26	22	22	25	31	40	38	39	38	37	37	34	32	33	34	32.2	39.7
31-Oct	35	31	29	30	A	33	34	34	35	36	37	37	39	39	39	38	37	37	34	31	30	32	32	31	34.3	39.3
	23.6	23.1	22.6	22.3	--	21.5	21.4	20.7	21.3	21.8	23.2	26.0	27.6	29.1	30.4	30.7	29.6	28.1	26.7	26.5	26.5	26.0	26.1	25.3	Diurnal Average	
	37.0	36.4	35.7	35.7	--	36.2	35.7	34.8	37.2	37.8	38.4	38.9	41.6	42.1	43.2	42.8	40.4	39.9	38.5	36.8	39.0	38.1	38.7	39.3	Diurnal Maximum	

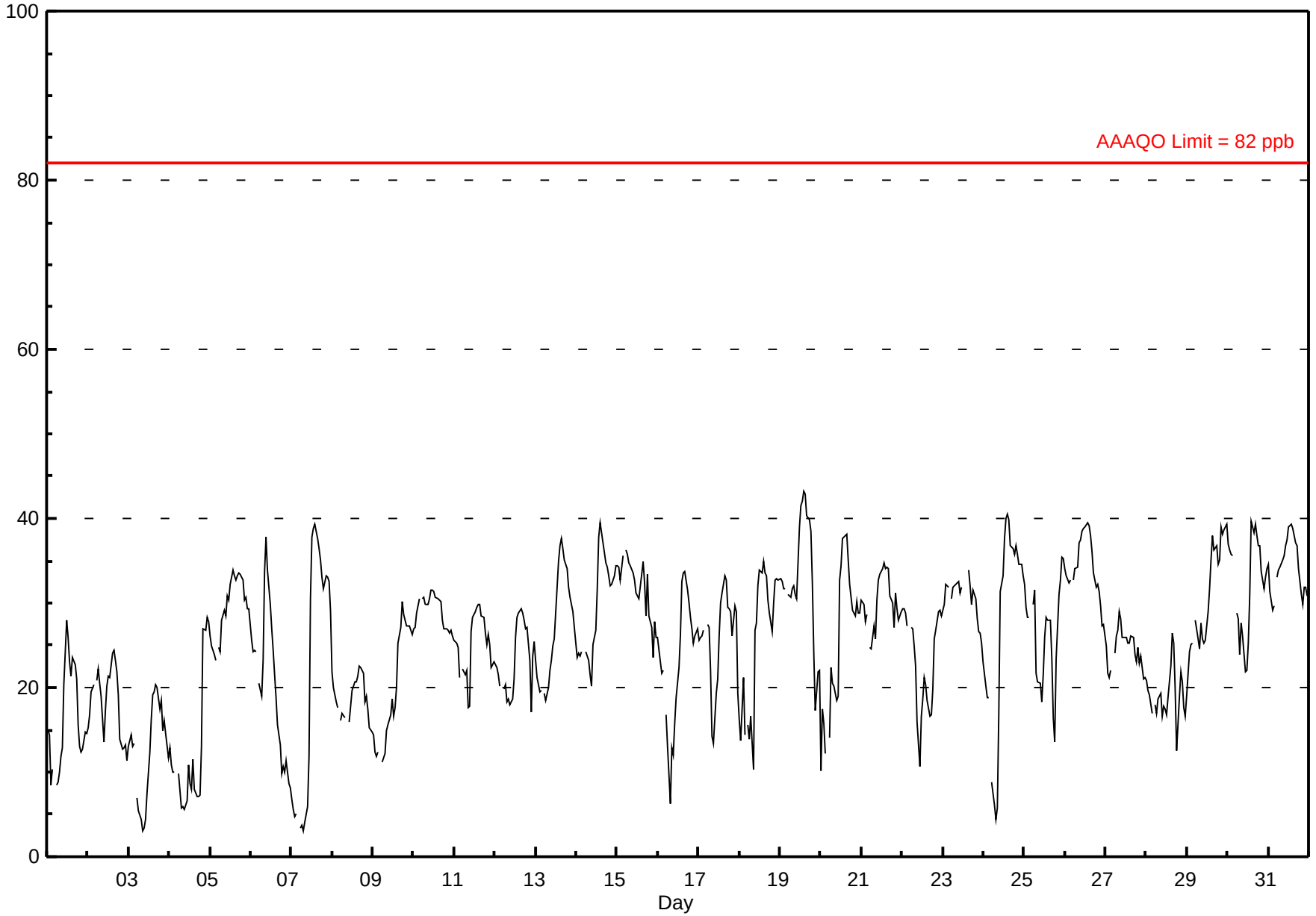
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - October 2013



PAZA
Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Beaverlodge - October 2013

Maximum Value: 44.0 ppb on Oct 19 16:00

Maximum Daily Average: 35.8 ppb on Oct 31

Minimum Value: 4 ppb on Oct 3 10:00

Minimum Daily Average: 14.0 ppb on Oct 3

Maximum Diurnal Average: 32.2 ppb at hour 16

Minimum Diurnal Average: 23.4 ppb at hour 6

Monthly Average: 27.35 ppb

Percentiles: P_1 = 5.5 P_{10} = 15.3 Q_1 = 21.7 Median = 28.6 Q_3 = 33.5 P_{90} = 37.5 P_{99} = 41.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	21	16	14	12	A	11	10	12	13	15	29	30	29	25	23	25	24	23	21	15	15	14	17	16	18.7	29.7
2-Oct	17	18	22	21	A	22	23	23	20	19	19	21	22	22	26	26	25	24	21	17	15	16	16	13	20.5	26.2
3-Oct	15	16	15	15	A	8	7	6	4	4	6	10	14	19	20	20	21	21	19	19	17	17	16	13	14.0	21.1
4-Oct	14	13	11	11	A	11	11	6	9	9	12	15	14	9	15	10	9	10	10	21	29	29	30	29	14.6	30.1
5-Oct	28	26	25	24	A	27	28	31	30	30	32	32	33	35	34	34	34	34	34	34	32	32	32	33	31.0	34.6
6-Oct	32	27	27	27	A	21	21	30	36	39	37	32	29	26	23	21	18	15	11	12	12	12	11	9	23.0	39.3
7-Oct	8	6	5	7	A	5	5	4	5	8	26	36	40	40	41	39	38	37	34	34	34	35	33	33	23.9	40.6
8-Oct	24	22	19	19	A	18	18	17	C	C	17	19	21	21	21	23	23	23	23	21	20	21	18	16	20.2	23.6
9-Oct	15	14	13	14	A	14	14	15	16	17	19	20	18	20	22	30	29	31	31	29	28	28	28	27	21.4	31.4
10-Oct	29	29	32	32	A	32	32	31	31	32	32	32	32	31	31	31	31	30	28	28	27	27	27	27	30.2	32.2
11-Oct	26	26	25	23	A	24	25	24	20	21	29	29	30	30	31	31	29	30	29	26	28	27	26	24	26.7	30.8
12-Oct	23	23	23	22	A	21	21	21	20	20	20	26	27	29	30	30	30	30	30	30	28	26	26	27	25.4	30.5
13-Oct	25	22	21	21	A	20	20	22	23	26	26	27	32	36	38	40	38	36	35	34	31	31	30	30	28.9	39.6
14-Oct	25	25	25	25	A	25	25	24	24	24	26	29	36	41	40	39	38	36	35	34	33	34	35	36	31.1	40.5
15-Oct	35	35	35	37	A	37	37	36	35	34	34	32	32	33	36	37	35	36	38	32	32	30	30	28	34.1	38.2
16-Oct	27	24	23	23	A	19	21	13	14	14	18	21	24	32	34	35	35	33	31	32	30	26	27	28	25.5	34.8
17-Oct	26	27	27	28	A	28	28	27	19	19	20	24	28	31	33	34	34	32	33	33	28	31	30	27	28.2	34.2
18-Oct	23	21	27	22	A	23	17	24	20	31	31	34	35	35	36	35	34	34	31	29	32	34	34	34	29.4	35.9
19-Oct	34	34	33	32	A	32	32	32	33	33	34	42	43	43	44	44	42	41	41	37	33	22	23	27	35.3	44.0
20-Oct	19	22	19	16	A	22	25	28	28	25	32	35	36	39	39	40	38	35	31	31	31	32	30	30	29.7	39.9
21-Oct	31	31	30	29	A	27	29	29	28	32	33	35	35	36	36	36	35	34	32	31	33	32	30	30	31.9	36.3
22-Oct	30	31	30	29	A	28	28	28	43	27	14	21	22	22	25	21	21	21	25	29	30	31	31	32	26.9	43.2
23-Oct	31	33	34	33	A	32	33	33	33	33	33	33	C	C	C	34	33	32	33	33	29	27	28	27	31.9	34.4
24-Oct	26	22	23	22	A	10	8	6	8	31	33	35	40	41	41	41	39	39	38	38	37	35	35	34	29.6	41.2
25-Oct	34	32	31	32	A	33	33	31	22	23	21	24	28	29	29	29	28	21	20	27	34	34	38	38	29.2	38.4
26-Oct	35	34	33	34	A	36	36	37	38	38	39	40	40	40	40	39	37	36	33	34	32	32	28	30	35.8	40.0
27-Oct	28	23	22	23	A	25	27	28	30	29	28	27	27	26	26	29	27	26	25	26	24	25	25	25	26.1	29.8
28-Oct	24	21	21	18	A	19	20	20	21	18	18	18	18	21	26	28	26	25	14	22	23	23	19	18	21.0	27.7
29-Oct	23	26	26	27	A	29	29	27	29	27	26	27	31	34	38	40	39	39	36	38	41	41	41	40	32.8	41.2
30-Oct	39	37	37	37	A	32	32	29	32	29	25	25	27	40	41	41	41	40	40	39	40	34	36	36	35.1	41.2
31-Oct	37	33	30	31	A	34	35	35	36	37	38	39	40	40	40	39	38	38	37	33	33	35	35	33	35.8	40.0
	26.0	24.8	24.4	24.2	--	23.4	23.5	23.5	24.0	24.9	26.0	28.1	29.5	30.9	32.0	32.2	31.3	30.4	29.1	28.9	28.7	28.2	27.9	27.4	Diurnal Average	
	38.9	37.3	36.9	37.0	--	36.8	36.6	37.0	43.2	39.3	39.5	41.8	42.8	43.2	43.9	44.0	42.4	41.0	41.4	38.6	40.8	41.2	40.8	40.1	Diurnal Maximum	

C - Calibration

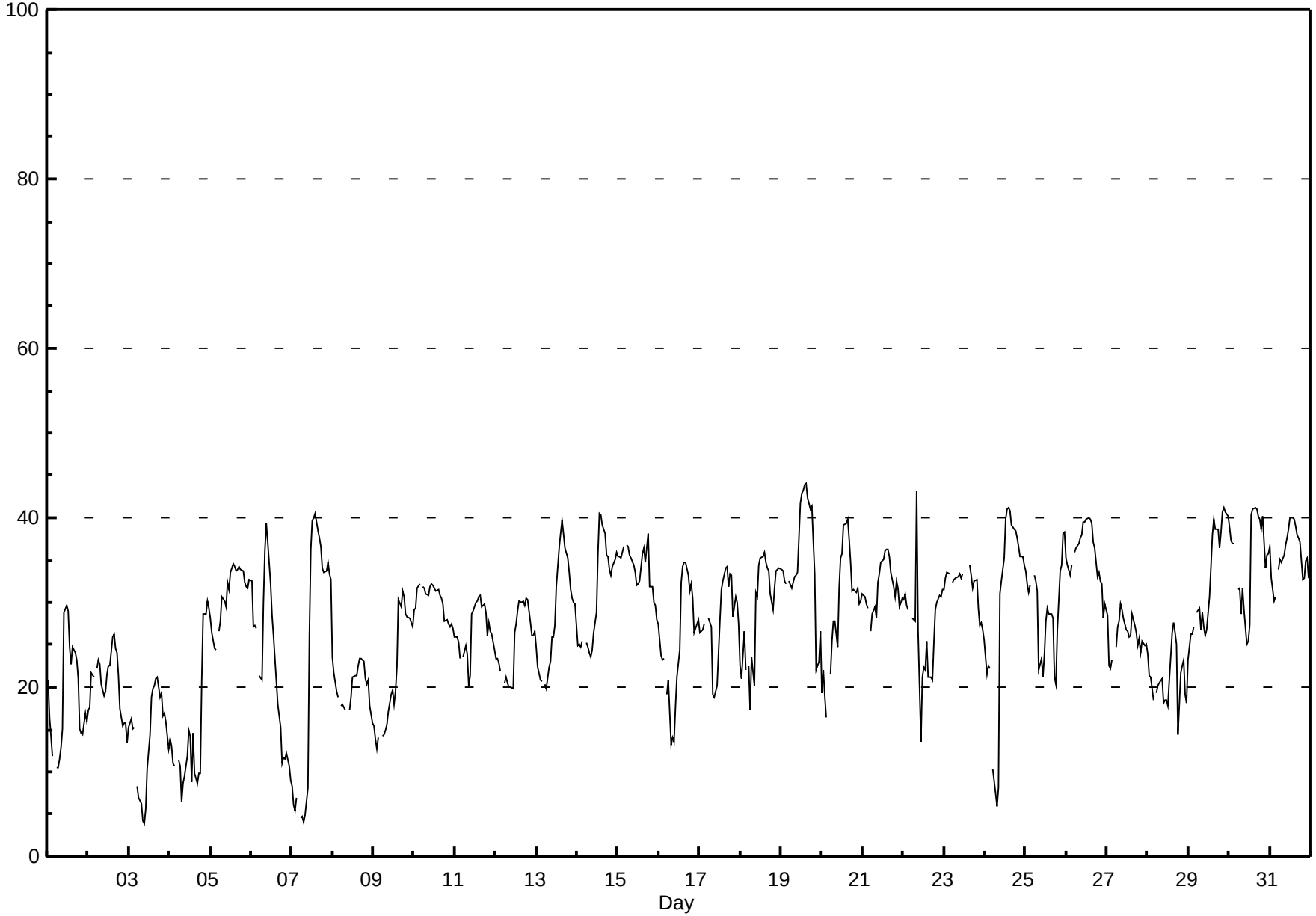
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

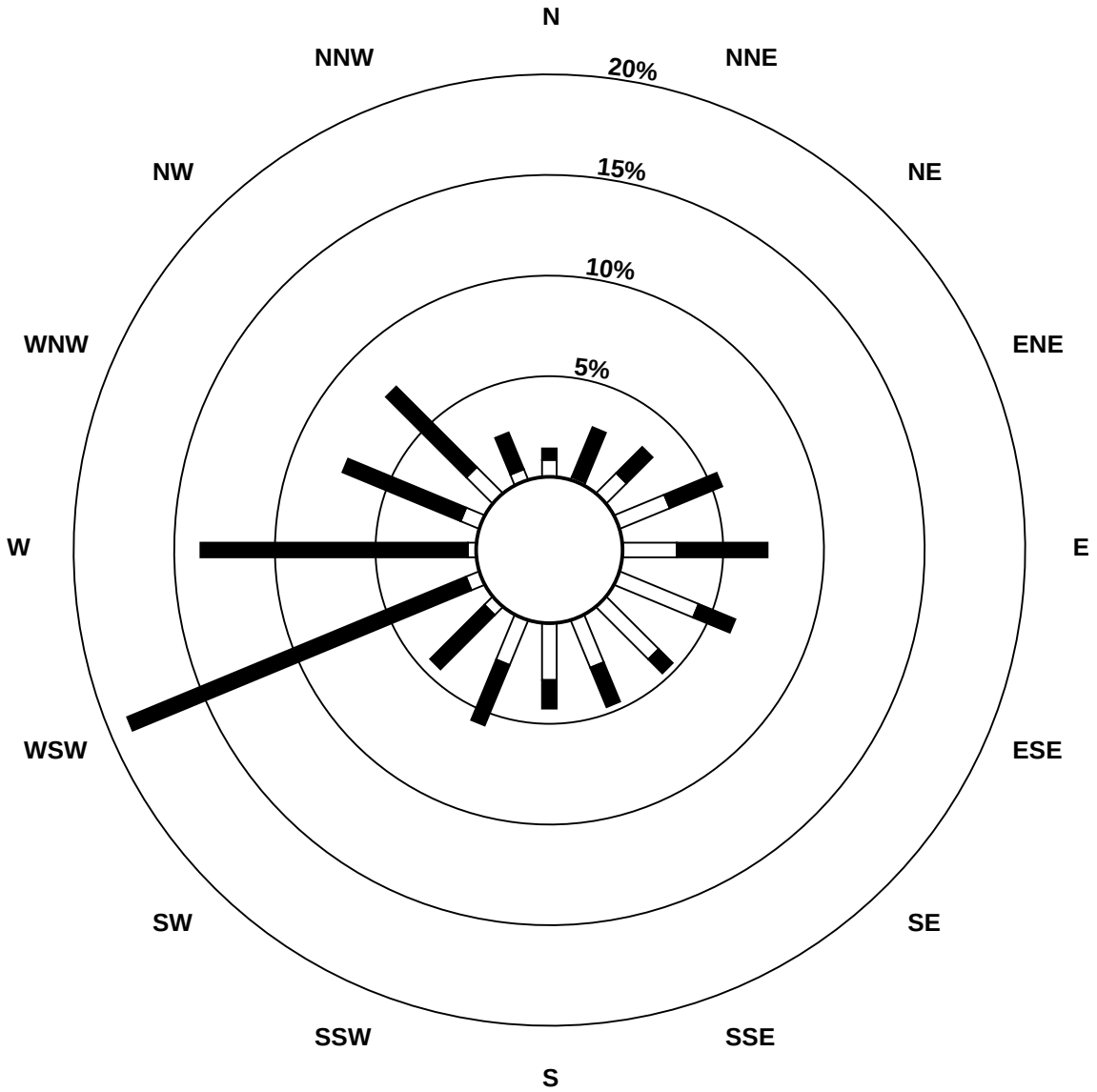
Beaverlodge - October 2013



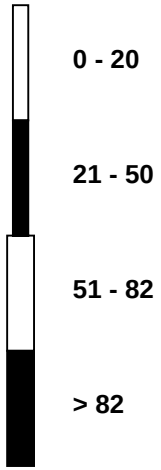
Pollutant Rose

Ozone (O_3) - ppb

Beaverlodge - October 2013



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Beaverlodge - October 2013

Maximum Value: 40.9 ppb on Oct 19 19:00

Minimum Value: 4.2 ppb on Oct 7 09:00

Percentiles: P_1 = 5.9 P_{10} = 14.4 Q_1 = 20.0 Median = 25.9 Q_3 = 31.1 P_{90} = 34.4 P_{99} = 37.7

Hours in Service:	744
Hours of Data:	735
Hours of Missing Data:	9
Hours of Calibration:	9
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Oct	20	19	17	16	15	14	12	11	10	10	12	14	16	18	19	21	22	23	23	21	19	18	17	16	23.2
2-Oct	15	14	15	16	16	17	19	19	20	19	19	19	19	19	20	20	21	22	22	21	20	19	18	16	21.9
3-Oct	15	14	13	13	13	12	11	10	9	7	6	5	6	7	9	11	13	15	17	18	18	18	18	17	18.2
4-Oct	16	15	14	13	12	11	10	10	9	8	7	7	8	7	8	8	8	8	9	9	11	13	16	18	18.0
5-Oct	20	23	25	26	26	26	25	25	25	26	27	28	28	30	31	31	32	33	33	33	33	32	32	32	33.1
6-Oct	31	29	28	27	27	25	24	23	24	26	28	28	28	29	29	28	26	23	20	18	16	14	12	11	30.6
7-Oct	10	9	8	8	7	6	5	5	4	4	5	9	13	17	21	26	30	33	36	36	36	35	34	33	36.2
8-Oct	31	29	27	26	25	22	20	18	18	N	N	N	17	18	19	19	20	20	21	21	21	20	20	19	31.2
9-Oct	18	17	15	15	14	13	13	12	12	13	14	14	15	15	17	18	20	22	23	24	25	27	28	28	27.7
10-Oct	28	27	27	28	28	28	29	29	30	30	30	31	31	31	31	31	31	31	30	29	29	28	28	27	30.8
11-Oct	27	26	26	25	25	25	24	23	22	21	21	22	23	24	25	26	27	29	29	28	28	27	26	26	28.8
12-Oct	25	24	24	23	22	22	21	21	20	20	19	19	20	21	22	24	25	26	27	28	28	26	26	25	27.9
13-Oct	24	23	23	22	21	22	21	20	20	20	21	22	23	25	27	29	31	33	34	34	35	34	33	32	34.7
14-Oct	30	29	27	26	26	25	24	24	24	23	23	24	25	26	28	30	32	34	35	36	36	35	34	34	35.7
15-Oct	34	33	33	34	34	34	35	35	35	35	35	34	34	33	33	33	32	32	32	32	31	30	29	28	34.8
16-Oct	28	27	25	25	24	23	21	18	17	15	14	14	15	16	18	22	24	27	29	30	30	30	29	29	30.4
17-Oct	28	27	26	26	26	26	27	26	24	22	21	21	21	22	22	24	26	28	29	30	30	30	30	28	30.1
18-Oct	26	24	23	21	21	19	16	16	15	17	18	20	22	24	27	29	32	32	33	32	31	31	31	31	32.5
19-Oct	31	31	32	32	32	32	32	32	32	31	31	32	33	35	36	38	39	40	41	40	38	35	32	30	40.9
20-Oct	26	23	20	18	17	16	16	16	18	18	18	21	23	26	28	30	32	33	35	34	34	33	32	30	34.9
21-Oct	30	30	29	29	29	28	28	28	27	27	28	28	29	30	32	32	33	34	33	32	32	31	31	30	33.5
22-Oct	29	29	29	29	29	28	28	28	27	25	22	21	20	20	19	18	17	17	19	20	21	22	23	24	29.4
23-Oct	26	27	29	30	30	30	31	31	32	32	32	32	32	32	N	N	N	N	N	N	31	30	30	29	32.0
24-Oct	28	26	25	23	23	20	17	14	12	11	13	15	18	22	26	31	35	37	38	38	38	37	36	36	38.0
25-Oct	35	34	33	32	32	31	30	29	27	26	24	23	24	24	23	24	24	24	23	23	24	25	25	26	34.9
26-Oct	28	30	32	33	34	34	34	33	34	34	35	36	36	37	38	38	38	38	37	36	35	34	33	31	38.4
27-Oct	30	28	27	26	25	24	24	24	24	25	26	27	26	27	27	26	26	26	25	25	25	24	24	23	29.8
28-Oct	23	22	22	21	20	20	19	19	18	18	18	18	18	18	18	19	20	21	20	20	21	21	20	19	22.7
29-Oct	18	19	21	21	21	22	23	25	26	26	26	26	26	27	28	30	31	32	33	35	36	37	37	37	37.2
30-Oct	37	37	37	37	37	36	34	32	31	29	27	25	25	26	27	29	30	32	34	36	37	37	36	35	37.5
31-Oct	35	34	33	32	32	32	32	32	32	33	34	35	36	36	37	37	38	38	38	37	36	35	34	33	37.9
	37.3	37.3	37.4	37.5	37.2	35.9	34.8	34.8	34.8	34.7	35.3	36.1	36.5	37.3	37.9	38.4	38.8	39.9	40.9	40.1	37.9	37.1	37.1	37.2	
	Diurnal Maximums																								

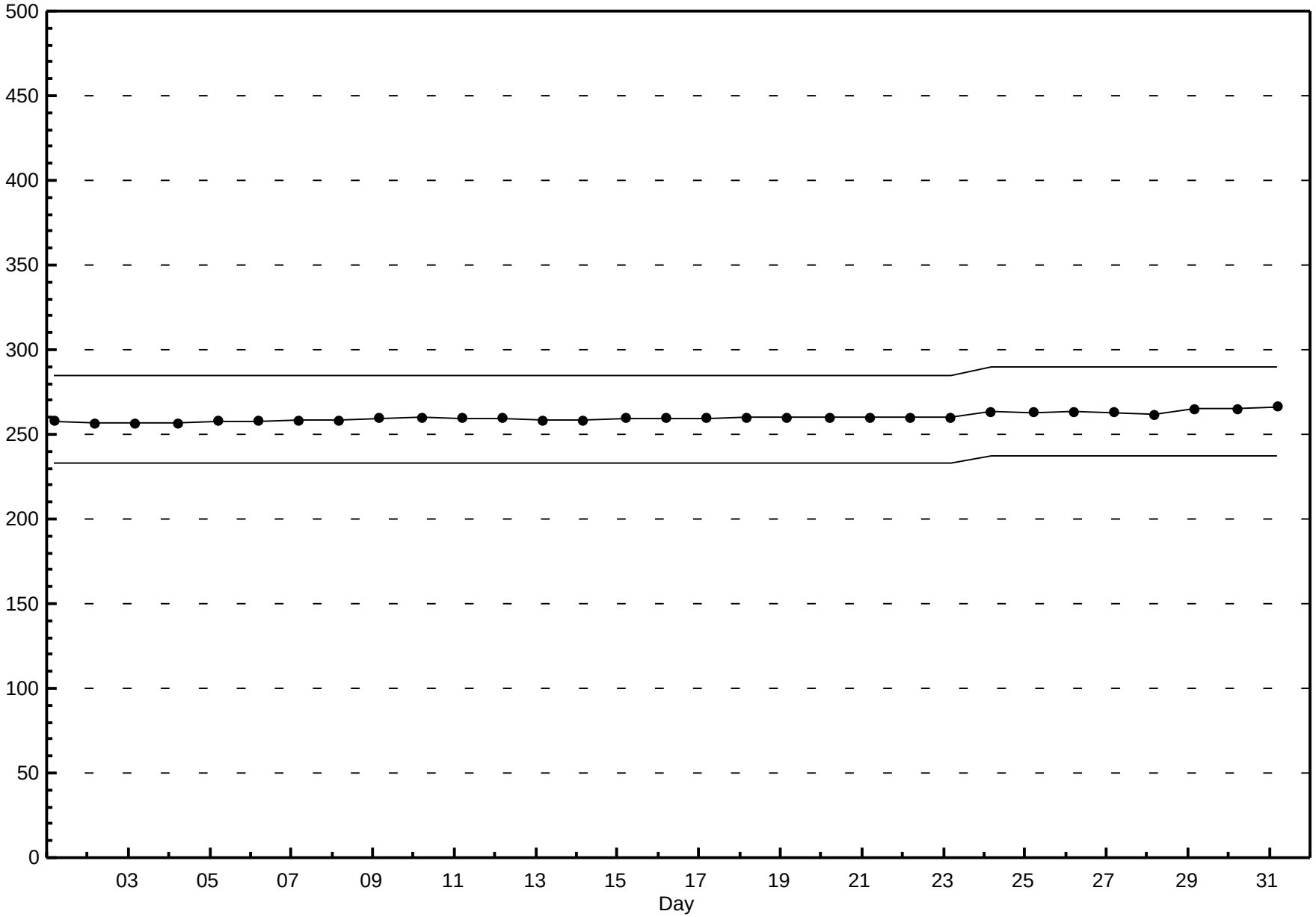
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Beaverlodge - October 2013



Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - October 2013

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 55.7 $\mu g/m^3$ on Oct 10 08:00
Maximum Daily Average: 17.9 $\mu g/m^3$ on Oct 14

Minimum Value: 0 $\mu g/m^3$ on Oct 5 18:00
Maximum Diurnal Average: 16.0 $\mu g/m^3$ at hour 6
Monthly Average: 13.76 $\mu g/m^3$
Minimum Daily Average: 5.6 $\mu g/m^3$ on Oct 7
Minimum Diurnal Average: 10.3 $\mu g/m^3$ at hour 22
Percentiles: P_1 = 0.0 P_{10} = 3.7 Q_1 = 9.7 Median = 13.7 Q_3 = 16.5 P_{90} = 22.0 P_{99} = 38.5

Hours in Service:	744
Hours of Data:	693
Hours of Missing Data:	51
Hours of Calibration:	0
Percent Operational Time:	93.2

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	13	13	12	15	14	13	14	14	15	15	15	12	12	12	11	12	12	13	12	13	14	12	12	13	13.1	15.2
2-Oct	12	13	13	13	12	12	12	12	12	11	12	12	13	13	13	13	14	13	13	14	16	16	15	15	13.1	16.1
3-Oct	15	15	13	14	14	16	15	13	12	13	11	12	12	M	M	M	M	M	M	M	M	M	M	M	--	16.3
4-Oct	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
5-Oct	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	4	0	0	3	0	0	0	0	--	4.1
6-Oct	0	0	0	0	0	0	3	8	13	18	9	14	7	3	3	15	36	4	15	7	4	0	0	5	6.9	36.0
7-Oct	0	7	2	0	6	14	2	2	1	10	7	8	9	9	3	10	5	13	6	2	6	4	4	5	5.6	13.7
8-Oct	1	4	5	7	0	8	7	7	10	0	0	0	4	4	0	0	0	0	0	32	13	11	11	13	5.8	32.4
9-Oct	14	6	23	16	0	22	2	8	7	4	0	0	2	15	13	8	7	10	11	9	14	8	11	18	9.4	23.1
10-Oct	13	8	19	14	0	37	7	56	46	15	7	13	11	6	8	15	11	17	20	23	6	0	0	0	14.7	55.7
11-Oct	15	4	11	9	12	15	12	14	11	11	28	15	21	7	8	24	17	9	30	39	14	14	13	15	15.3	39.4
12-Oct	13	11	12	13	15	15	12	13	14	10	16	6	12	14	15	13	11	13	28	52	36	13	21	15	16.4	52.0
13-Oct	14	6	13	14	17	15	17	18	19	17	16	6	11	12	16	16	11	15	26	16	24	0	0	31	14.6	31.2
14-Oct	18	25	24	27	32	29	27	24	25	21	7	17	20	15	15	12	7	11	13	13	12	14	10	11	17.9	31.6
15-Oct	10	8	16	21	11	10	17	17	15	9	8	8	6	6	14	9	14	0	8	9	6	10	39	35	12.7	38.7
16-Oct	7	15	12	11	17	15	15	15	15	22	33	17	11	8	25	17	14	16	15	11	0	0	0	25	13.9	33.0
17-Oct	33	22	19	14	14	16	15	13	13	18	0	7	19	15	12	14	14	10	32	7	13	3	18	28	15.4	33.1
18-Oct	39	22	30	23	18	25	16	15	18	6	7	12	5	16	17	19	19	35	16	11	15	15	8	8	17.3	38.8
19-Oct	4	2	4	20	17	18	12	12	15	22	5	20	15	15	12	0	6	13	9	3	15	12	13	13	11.5	22.1
20-Oct	12	27	13	2	2	3	22	21	16	15	9	15	7	15	17	0	10	8	11	10	19	16	12	10	12.2	26.8
21-Oct	13	8	13	15	16	14	15	14	24	25	18	12	7	12	14	14	13	8	10	25	28	14	14	13	15.0	28.1
22-Oct	15	15	17	20	17	19	14	16	10	13	18	11	13	52	2	0	11	15	25	10	14	11	13	13	15.2	52.4
23-Oct	13	10	13	9	19	14	11	16	9	18	16	19	19	14	18	15	12	18	21	18	15	14	14	15	15.1	20.8
24-Oct	0	0	20	14	20	19	19	22	14	3	48	23	15	15	2	13	8	10	32	19	14	13	11	15	15.4	47.6
25-Oct	8	10	25	32	30	14	19	14	21	22	14	12	19	20	17	17	13	13	11	20	20	15	11	21	17.5	32.1
26-Oct	29	16	9	14	20	18	19	17	10	21	26	7	13	17	19	7	7	15	15	16	20	14	14	11	15.7	29.2
27-Oct	7	15	16	14	16	21	14	9	16	15	15	14	12	17	15	23	6	12	16	16	15	14	15	14	14.4	23.4
28-Oct	17	16	14	14	16	12	11	17	16	13	15	16	13	24	37	6	26	25	16	16	18	13	9	13	16.3	36.8
29-Oct	14	16	15	16	14	17	16	13	17	19	25	34	26	16	7	15	14	11	14	16	11	6	19	20	16.4	33.8
30-Oct	7	1	16	31	19	22	14	15	22	32	30	26	13	6	15	18	21	23	17	14	14	14	12	21	17.7	31.8
31-Oct	11	13	14	2	9	12	16	16	17	14	15	10	19	22	19	11	10	9	15	15	17	21	25	38	15.4	37.7
	12.6	11.3	14.2	14.2	13.7	16.0	13.6	15.6	15.6	14.9	14.9	13.1	12.7	14.3	13.1	12.0	12.1	12.4	15.8	16.0	14.2	10.3	11.9	15.7	Diurnal Average	
	38.8	26.8	29.7	32.1	31.6	37.3	26.5	55.7	46.2	31.8	47.6	33.8	26.2	52.4	36.8	23.9	36.0	35.0	32.4	52.0	36.0	21.4	38.7	37.7	Diurnal Maximum	

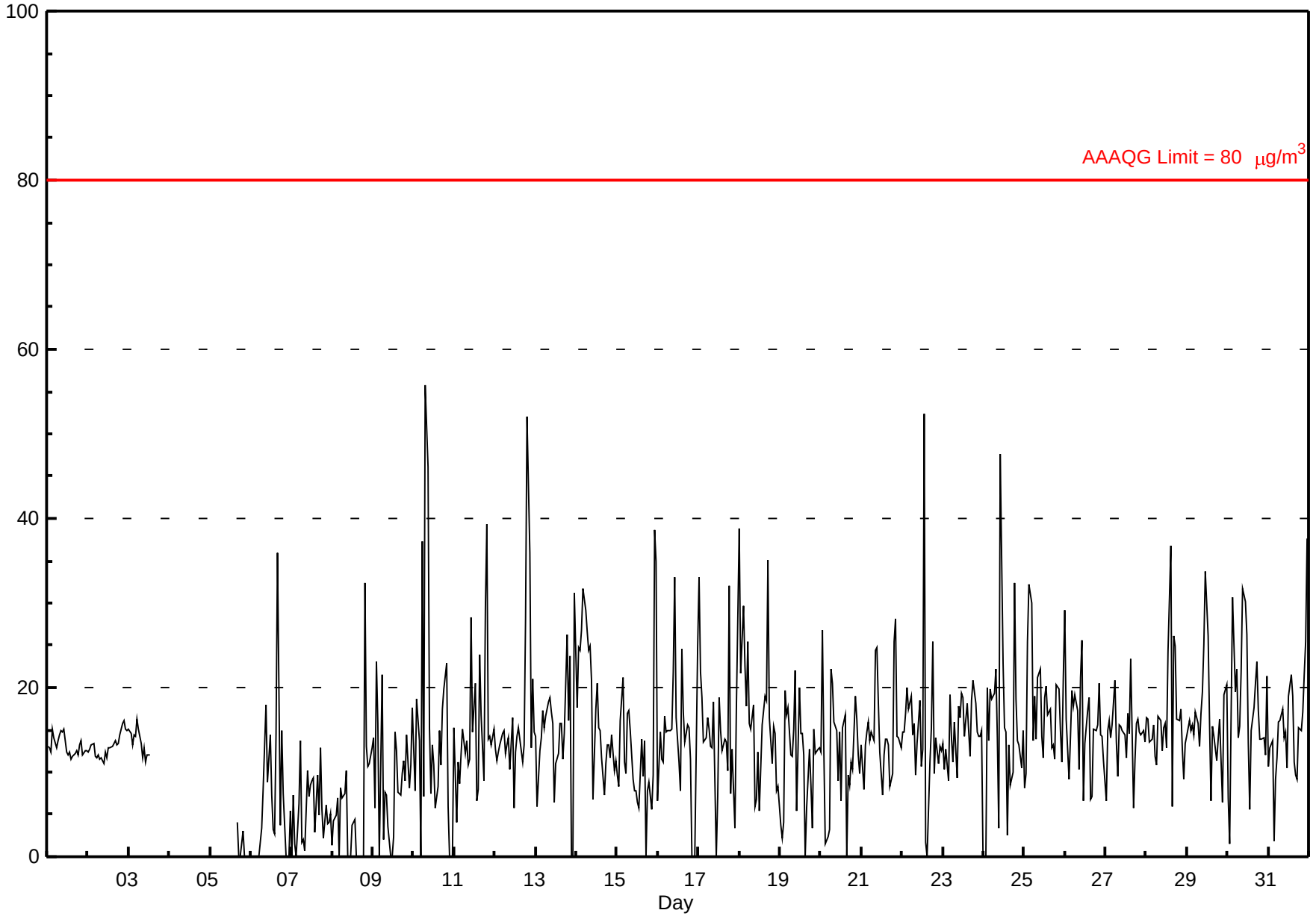
M - Maintenance
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - October 2013



PAZA
Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - October 2013

Maximum Value: 163.4 $\mu g/m^3$ on Oct 6 17:00

Maximum Daily Average: 25.2 $\mu g/m^3$ on Oct 24

Minimum Value: 0 $\mu g/m^3$ on Oct 5 18:00

Minimum Daily Average: 9.6 $\mu g/m^3$ on Oct 7

Maximum Diurnal Average: 22.4 $\mu g/m^3$ at hour 17

Minimum Diurnal Average: 15.9 $\mu g/m^3$ at hour 22

Monthly Average: 19.34 $\mu g/m^3$

Percentiles: $P_1 = 0.0$ $P_{10} = 9.5$ $Q_1 = 13.8$ Median = 17.5 $Q_3 = 22.8$ $P_{90} = 30.5$ $P_{99} = 57.3$

Hours in Service:	744
Hours of Data:	693
Hours of Missing Data:	51
Hours of Calibration:	0
Percent Operational Time:	93.2

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	13	14	14	16	15	14	14	16	16	15	16	15	13	13	12	12	13	13	13	14	15	13	13	13	14.0	16.0
2-Oct	13	13	14	14	13	12	13	12	12	13	13	13	14	14	14	14	15	14	14	15	16	17	16	16	13.9	16.5
3-Oct	16	16	14	15	15	17	16	15	13	14	12	13	13	M	M	M	M	M	M	M	M	M	M	M	--	17.0
4-Oct	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
5-Oct	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	9	0	0	8	7	0	0	0	--	8.6
6-Oct	0	0	0	0	0	0	8	9	22	22	14	17	11	6	5	73	163	6	18	14	7	1	0	9	16.8	163.4
7-Oct	5	13	8	5	10	18	9	5	6	14	12	11	12	14	9	14	13	15	9	4	8	5	5	8	9.6	17.7
8-Oct	7	7	7	12	9	13	12	12	13	11	1	0	11	13	4	9	9	0	19	53	28	24	20	17	13.1	53.3
9-Oct	23	19	34	34	7	31	18	11	10	9	2	2	14	20	20	19	13	14	16	14	17	15	18	19	16.5	34.2
10-Oct	19	20	20	19	9	50	31	66	60	30	10	16	12	10	12	18	15	22	23	27	22	1	0	0	21.4	65.9
11-Oct	28	25	17	16	15	19	16	18	15	18	36	22	26	12	18	27	24	15	36	45	30	22	26	26	23.0	45.0
12-Oct	14	17	18	17	18	18	18	19	21	21	25	25	21	20	18	14	15	18	50	57	57	22	27	29	24.1	57.4
13-Oct	24	18	23	21	27	17	18	25	30	24	20	11	12	16	17	17	16	23	31	27	41	41	6	45	23.0	45.3
14-Oct	30	37	30	31	35	32	29	26	33	30	17	25	24	17	16	14	10	12	15	16	14	19	18	22	23.0	36.6
15-Oct	20	13	23	26	13	13	21	19	17	14	11	9	8	8	19	18	20	3	12	14	13	31	43	39	17.8	42.5
16-Oct	24	17	15	16	20	17	17	18	23	25	37	27	16	19	32	18	16	18	21	19	8	0	9	37	19.6	37.2
17-Oct	37	29	20	19	19	21	19	17	17	27	15	17	26	19	14	16	17	21	35	22	24	15	25	39	22.1	39.4
18-Oct	41	40	38	28	28	35	22	20	22	22	12	17	13	17	19	21	21	40	36	14	17	15	12	12	23.4	40.9
19-Oct	7	6	10	26	25	23	16	14	28	30	12	27	19	21	18	10	11	14	14	14	20	17	17	17	17.3	30.3
20-Oct	24	30	22	5	6	13	28	26	20	20	20	20	17	18	23	12	31	13	15	17	22	18	15	15	18.7	30.9
21-Oct	19	13	15	16	18	17	17	21	26	29	29	15	13	14	17	19	19	11	11	41	41	18	17	18	19.7	41.1
22-Oct	16	16	18	22	21	21	18	18	15	16	24	22	47	63	22	11	21	22	29	21	17	12	16	16	21.8	63.3
23-Oct	18	15	15	15	20	20	20	21	16	20	19	23	25	23	24	24	16	26	26	22	18	18	18	18	20.0	26.0
24-Oct	15	1	31	28	26	34	34	32	31	13	56	52	25	31	7	18	17	17	37	33	18	15	14	21	25.2	56.1
25-Oct	20	14	41	41	36	28	23	23	23	26	26	16	23	24	18	21	16	17	17	22	22	17	14	29	23.4	41.5
26-Oct	33	20	13	17	23	22	22	22	17	29	30	19	17	20	21	16	11	17	17	19	23	17	16	15	19.8	32.7
27-Oct	13	16	17	19	21	24	20	15	18	18	20	20	15	21	19	28	16	12	17	18	16	17	17	16	18.1	28.1
28-Oct	18	17	16	15	18	13	13	21	21	15	22	22	18	39	44	15	50	47	18	19	19	16	13	15	21.8	49.9
29-Oct	18	17	16	17	16	19	19	17	18	22	30	39	38	21	10	19	18	14	16	17	14	11	30	29	20.2	38.9
30-Oct	12	6	25	32	32	27	25	27	27	34	32	29	24	10	19	19	24	28	27	16	16	18	16	25	22.9	33.7
31-Oct	17	18	19	11	14	16	18	17	19	19	17	15	20	24	23	15	13	12	20	20	21	25	26	48	19.4	47.9
	18.8	16.8	19.1	19.1	18.3	20.8	19.0	20.1	20.9	20.7	20.4	19.3	18.9	19.5	17.6	19.0	22.4	16.6	21.1	22.1	20.5	15.9	16.1	21.1	Diurnal Average	
	40.9	39.6	41.1	41.5	35.7	49.7	33.7	65.9	60.1	33.7	56.1	52.4	46.7	63.3	44.5	73.0	163.4	46.8	49.8	57.4	57.4	41.5	42.5	47.9	Diurnal Maximum	

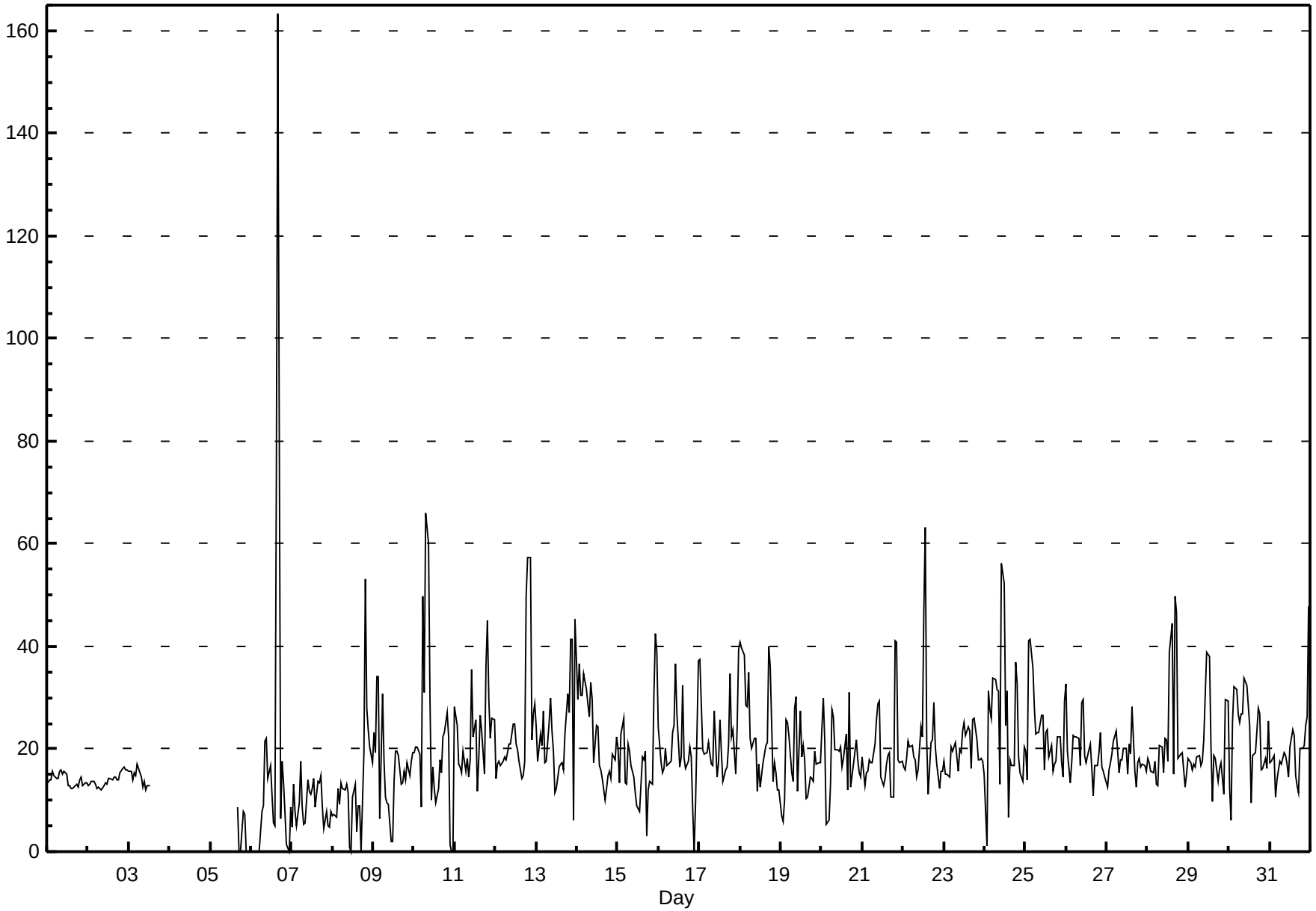
M - Maintenance

Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - October 2013

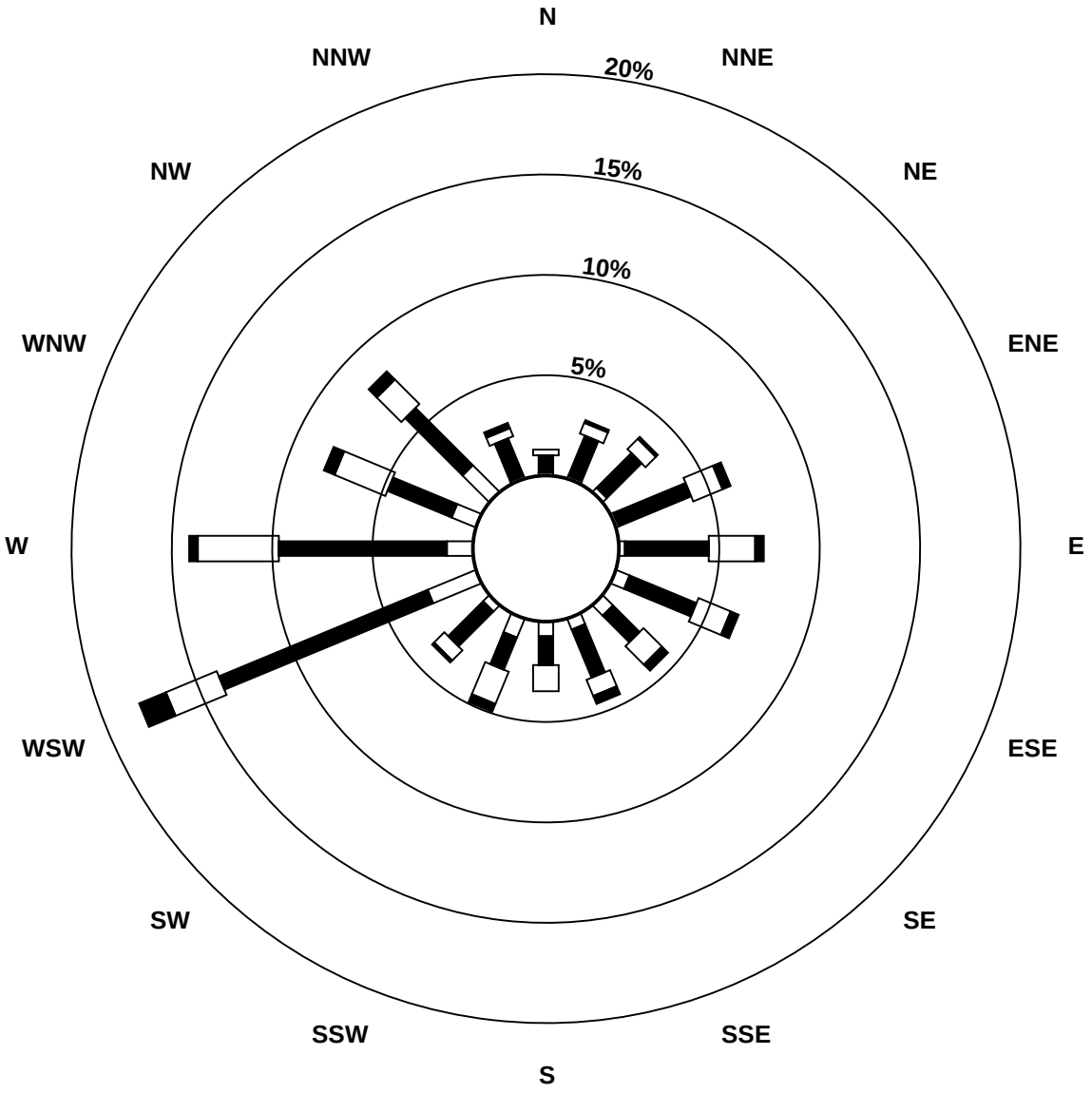


Peace Airshed Zone Association

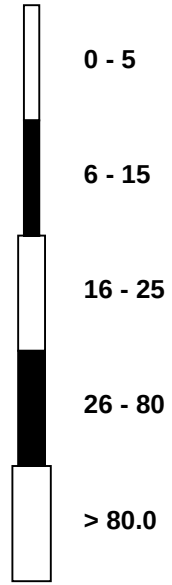
Pollutant Rose

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

Beaverlodge - October 2013



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



Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 19.2 ^{o}C on Oct 24 15:00

Maximum Daily Average: 12.4 ^{o}C on Oct 21

Minimum Value: -6 ^{o}C on Oct 28 07:00

Minimum Daily Average: -2.5 ^{o}C on Oct 28

Maximum Diurnal Average: 10.4 ^{o}C at hour 16

Minimum Diurnal Average: 3.4 ^{o}C at hour 8

Monthly Average: 6.28 ^{o}C

Percentiles: P_1 = -3.3 P_{10} = 0.1 Q_1 = 3.2 Median = 6.3 Q_3 = 9.3 P_{90} = 11.8 P_{99} = 17.0

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

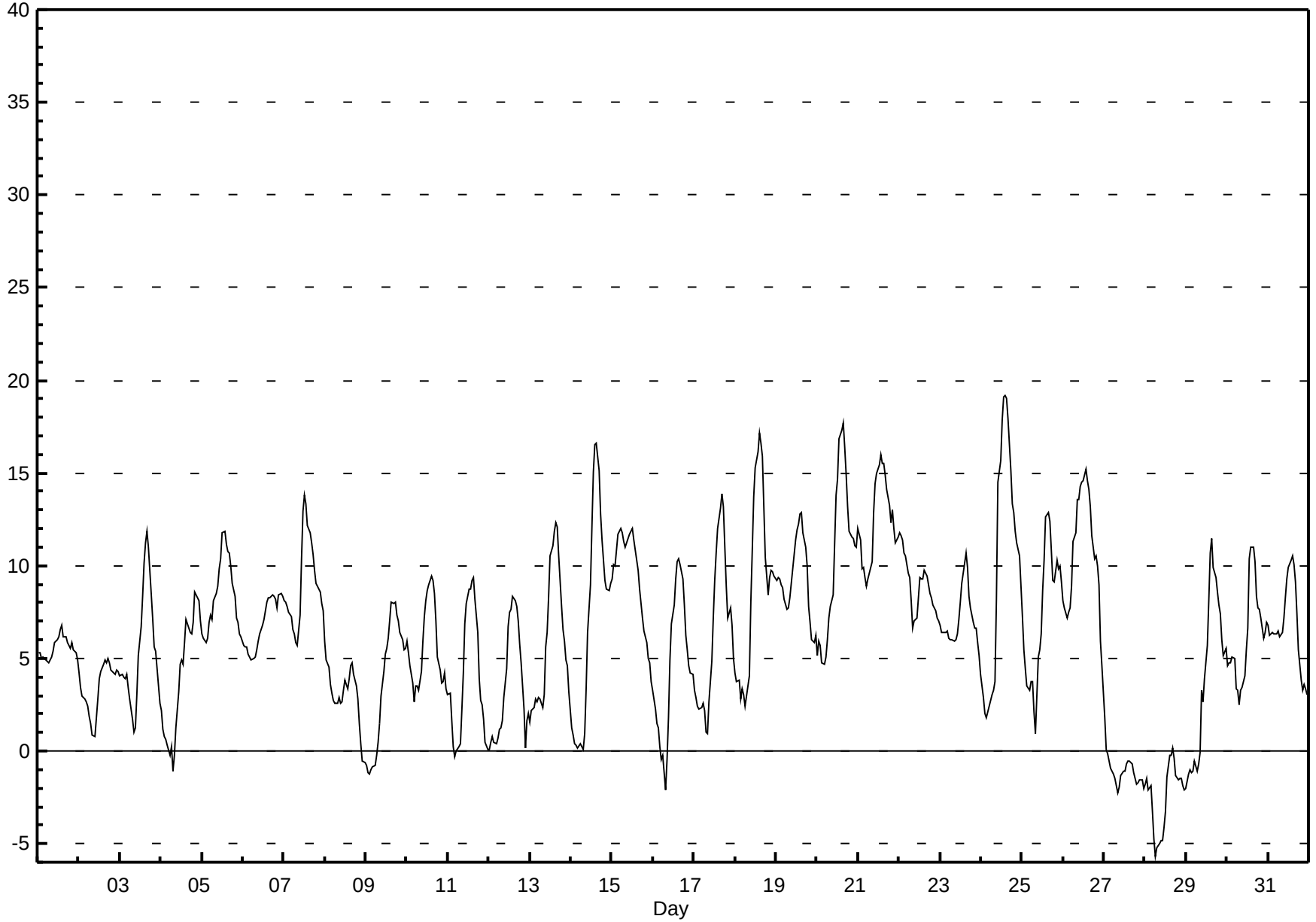
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	5	5	5	5	5	5	5	5	5	5	6	6	6	7	7	6	6	6	6	6	6	5	5	5	5.5	6.8
2-Oct	4	3	3	3	3	2	2	1	1	1	2	3	4	4	5	5	5	5	5	4	4	4	4	4	3.4	5.0
3-Oct	4	4	4	4	4	3	3	2	1	1	3	5	7	8	10	11	12	11	8	7	6	5	4	3	5.5	11.9
4-Oct	2	1	1	1	0	0	0	-1	0	1	3	5	5	5	6	7	7	6	6	7	9	8	8	7	3.9	8.6
5-Oct	6	6	6	6	7	7	7	8	9	9	10	10	12	12	11	11	11	10	9	8	7	7	6	6	8.4	11.9
6-Oct	6	6	6	5	5	5	5	5	5	6	6	7	7	8	8	8	8	8	8	8	8	8	9	8	6.8	8.5
7-Oct	8	8	8	8	7	7	6	6	6	7	10	13	14	13	12	12	11	11	10	9	9	9	8	8	9.1	13.8
8-Oct	6	5	4	4	3	3	3	3	3	3	3	3	4	3	4	5	5	4	3	3	2	0	-1	-1	3.0	5.9
9-Oct	-1	-1	-1	-1	-1	-1	0	0	1	3	4	5	6	6	7	8	8	8	7	7	6	6	5	6	3.7	8.1
10-Oct	6	5	5	4	3	4	4	3	4	6	7	8	9	9	9	9	9	7	5	4	4	4	4	3	5.6	9.4
11-Oct	3	3	2	0	0	0	0	0	2	4	7	8	9	9	9	9	8	6	4	3	3	2	1	0	3.8	9.4
12-Oct	0	0	1	0	0	1	1	1	2	3	4	7	8	8	8	8	8	7	6	5	2	0	2	2	3.5	8.3
13-Oct	2	2	2	3	3	3	3	2	3	6	6	8	11	11	12	12	12	11	8	7	6	5	5	3	6.0	12.3
14-Oct	1	1	0	0	0	0	0	0	1	3	6	9	12	15	17	17	15	13	11	10	9	9	9	9	7.0	16.6
15-Oct	9	10	10	12	12	12	12	11	11	11	12	12	12	11	10	10	9	8	7	6	6	5	5	4	9.5	12.0
16-Oct	3	2	1	1	0	0	0	-2	0	2	5	7	8	9	10	10	10	9	8	6	5	5	4	4	4.5	10.4
17-Oct	3	3	2	2	2	3	2	1	1	3	5	7	9	11	12	13	14	13	11	9	7	8	7	5	6.4	13.9
18-Oct	4	4	4	3	3	3	2	3	4	8	11	14	15	16	17	17	16	13	10	8	9	10	10	9	8.9	17.1
19-Oct	9	9	9	9	9	8	8	8	8	9	10	11	12	12	13	13	12	11	10	8	7	6	6	6	9.3	12.9
20-Oct	5	6	6	5	5	5	6	7	8	8	11	14	15	17	17	18	16	15	13	12	12	11	11	11	10.6	17.7
21-Oct	12	11	10	10	9	9	9	10	10	13	14	15	15	16	16	16	15	14	13	12	13	12	11	12	12.4	16.0
22-Oct	12	12	11	11	11	10	9	8	7	7	7	8	9	9	9	10	9	9	9	8	8	8	7	7	8.9	11.8
23-Oct	7	6	6	6	6	6	6	6	6	6	6	7	8	9	10	11	10	8	8	7	7	7	6	5	7.1	10.7
24-Oct	4	3	2	2	2	2	3	3	4	8	14	16	18	19	19	19	18	15	13	13	12	11	11	9	10.0	19.2
25-Oct	7	5	4	4	3	4	4	2	1	5	5	6	9	10	13	13	12	11	9	9	10	10	10	9	7.4	12.9
26-Oct	8	8	7	7	8	9	11	12	14	14	14	14	15	15	15	14	13	12	10	11	10	9	6	5	10.8	15.2
27-Oct	2	0	0	-1	-1	-1	-1	-2	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-2	-1.1	1.8
28-Oct	-2	-1	-2	-2	-3	-5	-6	-5	-5	-5	-5	-4	-3	-1	0	0	0	0	-1	-2	-2	-1	-2	-2	-2.5	0.2
29-Oct	-2	-1	-1	-1	-1	-1	-1	-1	0	3	3	4	6	8	11	11	10	9	9	8	7	6	5	6	4.0	11.5
30-Oct	5	5	5	5	5	3	3	2	3	3	4	5	7	10	11	11	10	8	8	8	7	6	6	7	6.2	11.0
31-Oct	7	6	6	6	6	6	6	6	6	7	8	9	10	10	10	10	9	7	5	4	3	4	3	3	6.7	10.5
	4.7	4.4	4.1	3.9	3.7	3.6	3.6	3.4	3.8	5.1	6.5	7.8	8.8	9.7	10.2	10.4	9.9	8.9	7.7	6.9	6.4	6.0	5.6	5.2	Diurnal Average	
	12.0	11.6	11.4	11.7	11.9	12.0	11.8	11.8	13.5	13.5	14.5	15.6	17.9	19.1	19.2	19.0	17.9	15.1	13.3	12.9	13.0	12.0	11.3	11.6	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - October 2013



Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 100.0 % on Oct 1 01:00 Maximum Daily Average: 99.6 % on Oct 27

Minimum Value: 27 % on Oct 24 15:00 Minimum Daily Average: 48.3 % on Oct 26

Maximum Diurnal Average: 82.0 % at hour 5 Minimum Diurnal Average: 58.7 % at hour 16

Monthly Average: 72.93 % Percentiles: P_1 = 34.7 P_{10} = 48.0 Q_1 = 59.0 Median = 72.5 Q_3 = 89.0 P_{90} = 99.9 P_{99} = 100.0

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

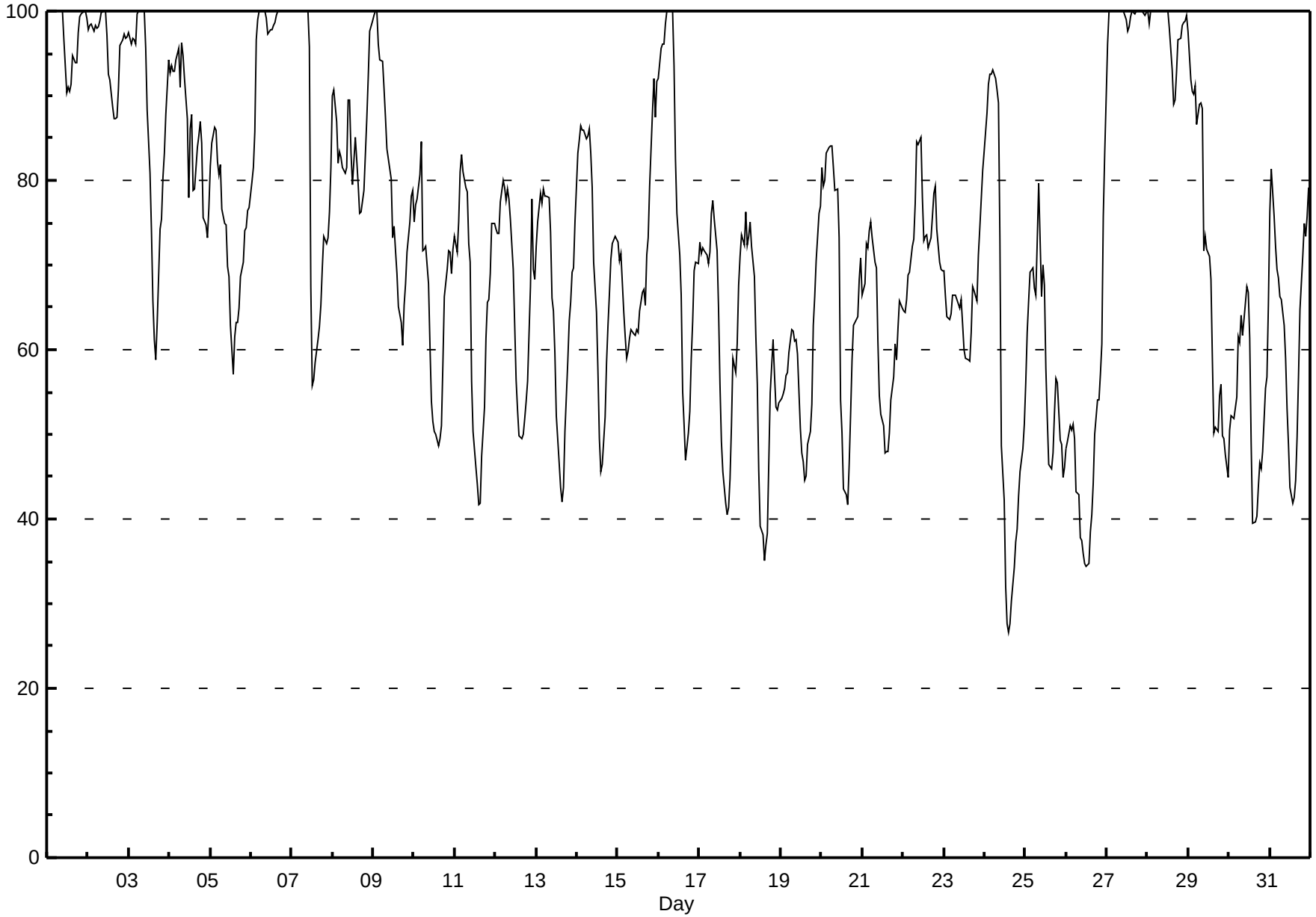
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	100	100	100	100	100	100	100	100	100	100	97	90	91	91	91	95	94	94	97	99	100	100	100	99	97.4	100.0
2-Oct	98	98	98	98	98	98	98	99	100	100	100	97	92	92	89	87	87	88	91	96	97	97	97	97	95.5	100.0
3-Oct	97	96	97	97	96	100	100	100	100	100	96	88	81	74	66	61	59	63	74	75	80	83	88	94	86.1	100.0
4-Oct	93	94	93	93	94	96	91	96	95	92	87	78	86	88	79	79	84	85	87	84	76	75	73	77	86.4	96.2
5-Oct	82	84	86	86	82	81	82	77	75	75	70	69	63	57	62	63	63	65	69	70	74	74	76	77	73.4	86.3
6-Oct	80	82	86	97	99	100	100	100	100	99	97	98	98	98	99	100	100	100	100	100	100	100	100	100	97.1	100.0
7-Oct	100	100	100	100	100	100	100	100	100	100	96	68	56	56	58	61	63	65	70	73	73	73	76	81	82.1	100.0
8-Oct	90	91	87	82	83	83	81	81	82	90	89	83	80	85	82	79	76	76	79	83	87	92	98	99	84.9	98.9
9-Oct	99	100	100	96	94	94	91	87	84	83	80	73	75	72	69	65	63	61	65	68	72	75	78	79	80.1	100.0
10-Oct	75	77	78	81	85	72	72	72	68	61	54	52	50	50	49	49	51	58	66	70	72	72	69	72	65.5	84.6
11-Oct	73	72	75	81	83	81	79	79	73	70	56	50	46	44	42	42	48	53	61	66	66	69	75	75	64.9	83.1
12-Oct	74	74	74	77	80	79	78	79	78	75	69	63	56	53	50	49	50	52	54	56	68	78	69	68	66.8	80.0
13-Oct	72	75	79	77	79	78	78	78	74	66	65	60	52	47	44	42	44	50	59	63	66	69	70	75	65.0	79.1
14-Oct	83	85	86	86	86	85	85	86	83	79	70	64	58	49	46	46	52	58	63	67	71	73	73	73	71.2	86.4
15-Oct	73	70	71	64	62	59	60	61	62	62	62	62	62	65	67	67	65	71	73	79	88	92	88	92	69.9	92.1
16-Oct	92	96	96	96	99	100	100	100	100	94	83	76	71	66	55	51	47	50	53	59	63	69	70	70	77.4	100.0
17-Oct	73	71	72	72	71	70	72	76	78	75	72	65	56	49	46	42	40	41	45	51	59	57	61	68	61.7	77.6
18-Oct	71	73	72	76	72	73	75	72	69	62	56	46	39	38	35	37	38	47	55	61	57	53	53	54	57.7	76.3
19-Oct	54	55	55	57	57	60	62	62	61	61	59	51	48	47	45	45	49	50	54	63	66	71	76	77	57.7	77.0
20-Oct	82	79	80	83	84	84	84	82	79	79	73	54	50	43	43	42	46	52	59	63	63	64	68	71	67.0	84.1
21-Oct	66	68	73	72	74	75	73	70	70	61	55	52	51	48	48	48	50	54	57	61	59	63	66	65	61.6	75.1
22-Oct	65	64	66	69	69	72	73	77	85	84	85	78	73	73	74	72	73	76	79	79	74	70	69	69	73.7	85.1
23-Oct	69	66	64	64	64	66	66	66	65	65	66	63	60	59	59	59	62	67	67	66	71	74	78	81	66.2	81.2
24-Oct	83	88	91	92	93	93	92	91	89	73	49	42	32	28	27	28	30	34	37	39	43	46	48	51	59.1	93.0
25-Oct	56	62	66	69	70	67	66	73	80	66	70	68	58	52	46	46	48	53	57	56	49	49	45	46	59.1	79.7
26-Oct	48	49	51	50	51	49	43	43	38	38	36	35	34	35	39	41	44	50	54	54	57	61	76	83	48.3	83.3
27-Oct	96	100	100	100	100	100	100	100	100	100	100	99	98	98	99	100	100	100	100	100	100	100	99	100	99.6	100.0
28-Oct	100	99	100	100	100	100	100	100	100	100	100	100	100	98	93	89	89	93	97	97	98	99	99	100	97.9	100.0
29-Oct	98	92	90	90	91	87	89	89	89	72	73	72	71	68	59	50	51	50	55	56	50	49	48	45	70.1	97.6
30-Oct	50	52	52	52	54	62	61	64	62	64	67	67	61	49	40	40	40	44	47	46	48	55	57	65	54.1	67.5
31-Oct	76	81	76	72	69	68	66	66	63	59	53	49	44	42	42	45	50	57	65	71	75	73	76	79	63.3	81.3
	79.7	80.4	81.1	81.6	82.0	81.7	81.3	81.5	80.6	77.5	73.7	68.1	64.2	61.7	59.3	58.7	59.9	63.2	67.3	70.1	71.6	73.4	74.8	76.8	Diurnal Average	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	98.3	99.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - October 2013



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	4	4	5	5	7	7	6	7	6	5	4	5	7	8	5	6	4	1	2	3	1	3	3	9	2.8	8.7
Dir	307	346	286	329	312	313	307	320	338	354	353	338	309	307	303	54	82	156	287	272	67	155	164	105	327	105
2 Spd	12	11	11	8	7	5	6	3	3	5	4	4	2	2	3	4	4	3	3	3	3	3	2	2	2.5	12.5
Dir	101	99	101	95	100	90	87	121	330	299	255	231	206	53	27	33	35	66	111	195	208	233	110	213	99	101
3 Spd	2	1	2	3	2	3	4	6	9	6	5	7	8	6	4	4	4	5	6	6	3	5	3	2	3.2	8.9
Dir	201	83	59	45	185	199	163	190	196	197	166	171	170	179	209	185	146	128	90	90	113	71	130	135	157	196
4 Spd	4	4	7	3	2	4	4	4	2	2	4	2	4	4	3	0	5	8	5	2	13	6	7	13	3.1	12.8
Dir	159	122	140	171	122	89	164	213	182	299	55	170	184	183	9	125	208	181	175	121	209	207	227	240	187	209
5 Spd	12	4	3	2	12	13	7	16	20	18	24	24	22	26	22	23	22	23	23	15	11	9	4	2	14.8	26.3
Dir	240	213	217	219	245	235	235	238	238	240	245	244	241	248	236	236	244	247	243	247	235	252	249	349	241	248
6 Spd	2	2	7	5	2	4	4	7	10	12	14	12	9	7	8	9	10	7	6	5	1	2	5	5	5.8	13.5
Dir	183	150	217	195	104	107	109	107	102	102	120	121	127	124	130	129	130	116	120	112	84	95	128	161	125	120
7 Spd	26	5	3	5	6	4	6	5	5	2	5	19	30	30	32	26	24	22	18	18	16	13	13	12	12.4	31.7
Dir	255	139	160	197	341	290	31	234	180	143	169	238	231	248	247	243	250	249	251	242	248	255	261	309	246	247
8 Spd	15	14	19	19	16	19	17	17	21	20	21	24	23	17	21	19	20	17	13	5	6	1	3	3	14.6	23.9
Dir	330	313	306	313	310	312	314	302	302	299	312	309	313	324	309	322	299	293	298	289	252	51	106	101	309	309
9 Spd	3	3	3	4	4	5	4	4	4	3	4	6	4	6	8	13	14	12	16	22	24	23	19	22	7.1	23.7
Dir	101	109	131	121	130	130	126	118	133	101	159	178	192	210	213	232	235	249	244	242	243	242	241	257	226	243
10 Spd	25	21	22	17	15	17	23	21	24	25	33	31	27	23	26	30	30	22	18	19	15	13	12	13	21.7	33.4
Dir	256	240	242	234	240	243	249	244	242	249	259	257	260	263	256	253	254	250	250	249	245	246	245	245	250	259
11 Spd	11	11	8	3	4	5	1	3	3	2	15	21	19	18	23	21	19	15	11	10	9	7	2	2	8.2	22.7
Dir	251	242	241	148	58	59	57	86	147	76	266	265	262	271	261	257	251	254	252	247	249	247	66	71	256	261
12 Spd	2	2	2	4	3	3	3	3	3	2	2	1	4	5	2	2	6	8	6	5	1	1	3	3	1.4	7.7
Dir	83	75	62	60	63	60	76	80	97	102	104	72	301	244	344	10	319	307	329	303	323	57	41	53	12	307
13 Spd	4	3	3	2	3	2	3	2	2	3	5	5	2	7	9	9	7	12	15	9	8	7	5	2	2.9	15.0
Dir	71	77	100	104	62	100	115	86	96	170	198	226	241	277	289	289	289	247	249	273	295	275	263	245	261	249
14 Spd	2	3	3	4	4	3	3	3	4	4	3	5	11	15	21	21	19	22	19	15	13	13	10	10	6.7	21.7
Dir	77	66	94	102	80	96	131	96	96	126	157	191	214	241	268	257	242	240	243	246	241	241	246	250	237	240
15 Spd	14	18	14	27	29	34	34	30	29	27	25	19	12	10	16	13	9	3	5	8	8	5	10	9	13.0	33.7
Dir	265	268	278	259	250	252	255	261	264	266	274	291	329	11	33	24	21	309	307	260	242	24	328	318	277	255
16 Spd	7	10	6	8	5	4	2	4	4	4	3	5	11	11	16	13	13	7	6	7	8	9	11	12	5.3	16.1
Dir	322	316	327	330	344	37	242	49	55	77	168	184	207	247	293	300	309	317	309	268	277	285	297	311	299	293
17 Spd	11	10	9	9	10	10	8	3	2	3	4	6	8	10	11	8	5	3	4	5	6	6	3	3	4.2	10.8
Dir	314	312	310	304	308	313	315	302	116	123	190	195	207	224	225	223	220	289	293	258	227	272	252	65	269	225
18 Spd	3	5	2	1	2	3	5	3	1	6	8	17	19	17	31	32	32	22	16	11	15	16	13	7	9.9	32.3
Dir	60	59	159	96	141	65	58	56	42	248	238	255	274	275	271	266	266	259	255	236	257	261	266	276	264	266
19 Spd	10	9	8	9	9	8	9	7	6	10	12	15	15	16	15	13	7	4	3	2	1	2	1	2	7.2	16.3
Dir	277	280	284	292	288	292	301	305	317	325	316	317	323	309	316	308	313	336	266	202	127	86	162	233	305	309
20 Spd	6	3	3	2	4	3	3	4	3	2	1	19	19	22	21	20	20	15	16	11	9	9	11	12	8.2	21.6
Dir	56	71	66	75	54	39	292	285	265	262	11	271	270	282	286	285	276	265	264	254	265	259	271	275	277	282
21 Spd	17	12	4	4	8	7	10	10	4	13	26	24	25	24	24	21	18	11	8	9	15	12	8	11	13.1	25.7
Dir	268	271	276	304	286	301	283	271	332	273	270	271	269	274	263	267	265	276	242	238	254	244	251	252	268	270
22 Spd	10	10	7	8	7	10	8	16	15	7	7	5	1	4	3	2	2	3	3	4	5	5	6	6	3.1	16.0
Dir	257	272	305	290	312	312	346	12	23	5	321	358	120	211	214	213	211	122	59	26	55	85	85	71	343	12

Peace Airshed Zone Association

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
23 Spd	9	8	9	9	10	8	8	6	9	13	15	16	16	17	15	15	14	8	10	11	13	11	5	4	10.1	16.5
Dir	89	67	81	63	78	80	77	86	84	91	95	100	116	119	114	114	115	85	79	89	94	95	94	180	96	119
24 Spd	4	4	3	3	4	3	3	2	4	7	19	22	31	34	35	26	13	12	6	6	9	5	8	16	8.1	34.9
Dir	200	181	168	124	132	91	101	103	63	249	246	254	260	275	271	273	297	289	317	329	313	329	339	14	277	271
25 Spd	14	5	6	6	3	7	8	4	4	2	4	5	4	6	3	5	4	5	3	2	9	12	9	3	1.0	14.2
Dir	28	326	357	31	46	68	70	108	209	129	218	182	165	164	164	172	152	135	119	63	246	242	238	204	155	28
26 Spd	7	12	4	2	2	3	10	15	29	30	33	31	31	35	34	29	21	16	8	7	8	8	11	19	13.1	35.2
Dir	223	213	186	89	50	226	285	260	257	256	262	261	269	270	267	264	261	249	256	290	301	47	61	48	265	270
27 Spd	23	25	19	27	27	20	18	15	12	4	4	6	8	7	6	2	3	6	5	4	3	1	1	3	7.9	26.9
Dir	39	42	41	32	32	32	29	27	36	13	300	284	282	288	284	318	258	302	359	31	51	90	223	242	22	32
28 Spd	2	2	2	3	4	4	5	4	7	4	6	6	4	7	6	9	7	6	7	5	3	2	3	1	4.2	9.4
Dir	203	177	125	160	171	126	125	135	127	153	182	171	157	154	169	156	140	129	118	109	84	81	127	112	144	156
29 Spd	2	2	2	2	2	4	2	1	2	3	4	4	8	9	12	20	12	16	11	20	20	6	11	8	6.7	20.4
Dir	157	196	189	193	188	196	179	163	109	190	209	201	211	221	253	267	270	262	250	253	254	243	251	267	245	253
30 Spd	10	9	11	16	11	3	2	2	3	3	2	3	6	6	15	13	16	13	12	6	8	11	11	15	6.7	16.2
Dir	256	284	296	290	291	160	149	128	92	101	105	85	196	248	258	268	263	270	272	277	242	224	242	242	260	290
31 Spd	31	31	23	28	29	30	32	35	34	38	39	37	37	34	30	31	36	24	18	11	12	12	14	11	26.7	38.9
Dir	255	246	256	255	262	267	270	264	264	268	269	272	275	273	269	267	263	262	242	226	219	241	238	249	262	269
Spd	4.1	2.9	2.4	2.7	2.8	2.6	2.9	3.4	3.3	4.6	7.3	8.9	9.8	10.5	11.7	10.6	9.7	8.3	6.4	5.7	6.5	4.6	4.0	3.3	Diurnal Average	
Dir	273	271	277	292	295	288	286	271	263	262	258	257	256	263	266	264	261	257	255	250	248	249	253	272		
Spd	30.5	30.9	23.0	27.7	29.1	33.6	33.7	35.4	34.5	37.5	38.9	37.0	37.3	35.2	34.9	32.3	35.6	23.9	23.2	22.0	23.7	23.2	19.0	22.4	Diurnal Maximum	
Dir	255	246	256	255	262	252	255	264	264	268	269	272	275	270	271	266	263	262	243	242	243	242	241	257		

Maximum Speed Value: 39 km/h on Oct 31 11:00
Minimum Speed Value: 0 km/h on Oct 4 16:00
Maximum Daily Speed Average: 26.7 km/h on Oct 31
Minimum Daily Speed Average: 1.0 km/h on Oct 12
Maximum Diurnal Speed Average: 11.7 km/h at hour 15
Minimum Diurnal Speed Average: 2.4 km/h at hour 3

Monthly Average Velocity: 5.68 km/h 262.6 deg
Speed Percentiles: P_1 = 1.0 P_{10} = 2.4 Q_1 = 3.7 Median = 7.2 Q_3 = 14.7 P_{90} = 23.0 P_{99} = 35.1
All monthly, daily, and diurnal averages have been calculated using vector methods

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Frequency Distribution

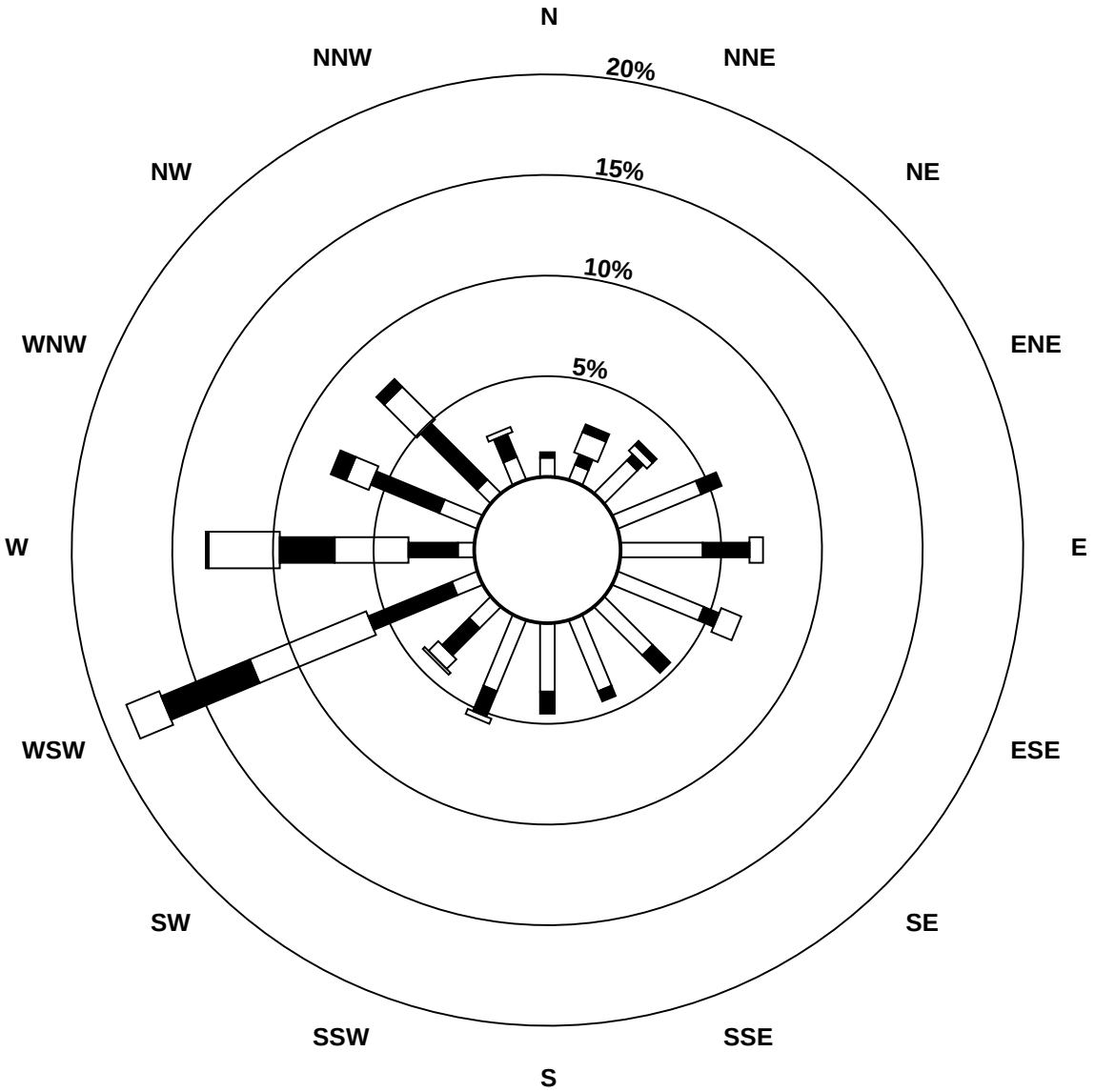
Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	11	10	2	0	0	0	23
NorthEast	45	8	10	5	0	0	68
East	63	26	7	0	0	0	96
SouthEast	49	16	7	0	0	0	72
South	49	21	0	0	0	0	70
SouthWest	29	34	38	20	3	0	124
West	15	53	49	42	37	1	197
NorthWest	16	46	24	8	0	0	94
Total	277	214	137	75	40	1	744

Peace Airshed Zone Association

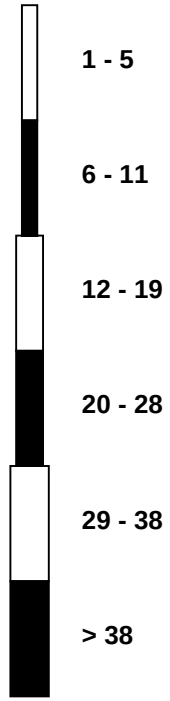
Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - October 2013



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - October 2013

Maximum Speed: 39 km/h on Oct 31 11:00

Maximum Daily Speed Average: 27.4 km/h on Oct 31

Minimum Speed: 2 km/h on Oct 8 22:00

Minimum Daily Speed Average: 4.0 km/h on Oct 12

Maximum Diurnal Speed Average: 15.9 km/h at hour 15

Minimum Diurnal Speed Average: 7.7 km/h at hour 23

Monthly Average Speed: 10.52 km/h

Percentiles: P_1 = 1.9 P_{10} = 3.0 Q_1 = 4.1 Median = 7.7 Q_3 = 15.0 P_{90} = 23.2 P_{99} = 35.4

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	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-Oct	4	4	5	5	7	7	6	7	6	5	4	6	7	8	5	6	4	3	2	3	2	4	3	9	5.1	8.9
2-Oct	13	11	11	8	7	5	7	4	3	5	4	4	3	3	3	4	4	3	4	4	4	3	2	2	5.0	12.5
3-Oct	3	2	3	3	3	4	4	7	9	7	5	7	8	7	5	5	4	5	6	7	4	5	4	3	4.9	9.1
4-Oct	4	5	7	3	3	4	5	4	2	3	4	3	5	4	4	4	6	8	5	3	13	6	8	13	5.2	13.0
5-Oct	12	5	3	4	13	13	8	16	20	18	24	24	22	26	22	23	22	23	23	15	11	9	7	4	15.4	26.5
6-Oct	3	3	8	5	2	4	4	7	10	12	14	12	9	7	8	9	10	7	7	5	2	2	5	9	6.8	13.6
7-Oct	27	5	4	8	8	11	12	8	6	3	6	19	31	31	32	26	24	22	18	18	16	13	13	13	15.5	31.9
8-Oct	15	14	19	20	17	19	17	17	21	20	21	24	23	17	22	19	20	17	13	5	6	2	4	4	15.7	24.0
9-Oct	3	4	4	4	4	5	4	4	4	4	5	6	4	6	8	13	14	12	16	22	24	23	19	23	9.8	23.7
10-Oct	25	21	22	17	15	17	24	21	24	26	34	31	27	24	27	30	30	22	18	19	15	13	12	13	22.0	33.6
11-Oct	11	11	8	4	4	5	4	3	3	2	15	21	19	19	23	22	19	16	11	10	9	7	3	3	10.5	22.9
12-Oct	2	2	2	4	3	3	3	3	3	2	2	3	5	6	5	6	6	8	6	5	4	5	4	3	4.0	7.8
13-Oct	4	3	3	3	3	3	3	3	2	4	5	5	4	8	10	9	7	12	15	9	8	7	5	3	5.8	15.0
14-Oct	3	4	3	4	4	3	3	3	4	4	4	6	11	16	21	22	19	22	19	15	13	13	10	10	9.8	21.8
15-Oct	14	18	14	27	29	34	34	30	29	27	26	19	14	11	17	14	9	6	6	8	8	6	10	9	17.4	33.8
16-Oct	7	10	6	8	6	5	5	5	4	5	3	6	11	13	16	14	13	7	6	7	8	9	11	12	8.2	16.5
17-Oct	11	10	9	9	10	10	8	5	2	3	4	6	8	11	11	8	5	4	5	7	6	6	4	3	6.8	11.0
18-Oct	3	5	3	3	2	3	5	3	3	6	8	17	19	17	31	32	32	23	16	11	15	16	13	7	12.2	32.4
19-Oct	10	9	8	9	9	8	9	7	6	10	12	15	15	17	16	14	7	4	4	2	3	3	2	3	8.4	16.6
20-Oct	6	4	3	2	4	4	3	5	4	2	4	19	19	22	21	21	20	16	16	12	9	9	11	12	10.3	21.9
21-Oct	17	12	4	4	8	7	10	10	4	13	26	24	25	24	24	21	18	11	8	9	15	12	8	11	13.6	25.8
22-Oct	10	11	7	8	7	10	9	16	15	8	7	5	3	4	3	2	2	3	3	4	5	5	6	6	6.7	16.2
23-Oct	9	8	9	9	10	8	8	6	9	13	15	16	16	17	15	16	14	9	10	11	13	11	5	4	10.8	16.8
24-Oct	4	4	4	4	4	3	4	4	5	10	19	22	31	34	35	26	13	12	8	6	9	5	9	17	12.1	35.1
25-Oct	14	6	8	6	5	7	8	7	5	2	5	6	5	6	4	6	4	5	4	3	9	12	9	4	6.2	14.4
26-Oct	8	12	5	5	4	5	10	15	30	30	33	31	31	36	34	29	21	16	8	7	8	11	12	19	17.5	35.5
27-Oct	24	25	23	27	27	20	18	15	12	4	5	6	8	7	6	5	4	6	6	4	3	2	2	3	10.9	27.0
28-Oct	2	2	2	3	5	5	5	4	7	5	7	6	5	7	6	9	8	7	7	6	3	2	3	2	4.9	9.4
29-Oct	2	3	3	3	2	4	3	2	2	3	5	4	8	9	12	20	12	16	11	20	20	7	11	8	7.9	20.4
30-Oct	10	10	12	16	12	4	3	3	3	3	3	3	6	7	15	14	16	13	12	6	8	11	11	15	9.1	16.4
31-Oct	31	31	23	28	29	30	32	35	35	38	39	37	37	34	30	31	36	24	18	11	12	12	14	11	27.4	39.0
	10.0	8.7	7.9	8.5	8.6	8.6	8.9	9.1	9.5	9.5	11.8	13.4	14.2	14.7	15.9	15.5	13.7	11.6	10.0	8.8	9.3	8.1	7.7	8.4	Diurnal Average	
	30.6	30.9	23.1	27.7	29.1	33.7	33.8	35.4	34.5	37.6	39.0	37.1	37.4	35.5	35.1	32.4	35.7	24.2	23.2	22.0	23.7	23.3	19.4	22.8	Diurnal Maximum	

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - October 2013

Maximum Value: 93.4 deg on Oct 6 21:00

Minimum Value: 2.2 deg on Oct 14 19:00

Percentiles: P_1 = 2.6 P_{10} = 4.5 Q_1 = 6.8 Median = 12.1 Q_3 = 27.1 P_{90} = 49.1 P_{99} = 85.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Oct	23	27	12	20	6	5	5	6	16	11	23	20	11	13	43	20	16	68	15	17	71	32	25	14	70.8
2-Oct	5	7	8	6	6	11	14	30	34	6	26	18	60	72	51	34	16	27	28	42	12	8	52	13	71.5
3-Oct	32	34	26	16	75	45	18	22	13	11	30	20	16	30	44	42	32	21	17	19	39	10	25	45	74.6
4-Oct	20	31	23	19	36	29	43	20	35	67	29	56	32	51	51	86	31	17	18	28	11	14	13	12	86.3
5-Oct	10	47	34	79	21	11	71	5	4	3	4	4	7	7	7	5	5	5	3	6	7	12	82	87	87.5
6-Oct	54	38	14	26	12	14	15	6	4	6	8	7	15	12	10	6	6	13	17	35	93	53	13	47	93.4
7-Oct	29	19	29	49	44	73	78	48	56	57	38	8	6	11	6	5	6	4	5	3	5	4	6	16	77.6
8-Oct	9	12	6	8	7	7	7	5	9	5	9	6	8	10	11	12	7	5	6	9	13	84	43	29	84.1
9-Oct	14	11	29	33	17	18	20	15	14	17	23	10	11	9	7	9	7	12	5	4	3	6	12	11	32.6
10-Oct	8	9	5	7	7	9	6	5	3	6	5	6	9	12	14	8	5	10	5	3	2	2	4	3	14.1
11-Oct	4	4	24	49	20	9	87	51	40	48	12	10	12	11	9	11	7	4	3	2	4	8	60	54	87.5
12-Oct	41	31	52	11	8	6	13	13	21	21	39	72	45	65	78	86	18	8	8	22	69	90	20	12	89.6
13-Oct	13	12	35	26	17	23	17	14	11	37	20	27	65	28	19	22	17	11	3	11	6	9	10	82	81.6
14-Oct	24	13	21	13	7	20	25	18	15	14	38	21	15	17	9	7	7	3	2	3	3	5	7	8	38.4
15-Oct	8	5	6	6	6	4	4	4	5	5	11	11	26	21	10	15	11	80	38	20	10	41	7	6	79.8
16-Oct	16	2	25	10	39	22	72	39	16	18	31	26	11	32	12	12	9	6	5	24	8	7	4	6	72.0
17-Oct	4	4	3	4	3	3	6	84	27	35	15	13	16	15	11	15	17	39	20	40	10	6	68	20	84.3
18-Oct	14	29	55	58	40	17	10	21	73	29	8	11	10	7	6	4	4	11	7	10	6	3	4	12	72.8
19-Oct	6	10	6	6	5	10	7	4	14	11	8	9	11	11	12	11	14	13	48	33	70	27	55	86	86.0
20-Oct	27	50	23	37	19	45	42	44	43	57	76	7	5	9	8	10	5	9	4	8	15	9	8	4	76.2
21-Oct	3	4	55	17	7	5	12	8	25	11	4	5	7	10	5	4	5	8	11	12	3	6	6	3	55.3
22-Oct	3	20	12	10	9	13	18	8	8	17	15	25	91	34	42	68	34	11	34	10	30	8	12	11	90.6
23-Oct	11	8	7	10	6	17	8	9	6	5	7	6	8	10	11	8	5	19	5	5	3	5	36	24	35.7
24-Oct	13	15	23	46	28	24	49	46	39	68	5	3	8	5	6	8	12	5	35	11	6	12	18	15	67.6
25-Oct	16	25	37	11	74	5	4	58	50	40	39	22	25	24	45	15	15	18	39	66	13	7	11	61	73.8
26-Oct	60	8	45	71	73	79	25	7	5	4	5	5	5	7	4	4	4	6	13	11	7	51	14	7	78.6
27-Oct	11	4	40	3	4	4	5	5	6	14	28	7	7	7	8	69	76	10	28	10	14	44	42	51	76.1
28-Oct	24	17	19	20	30	23	11	32	11	27	17	16	29	16	23	7	8	6	4	17	21	43	34	42	43.1
29-Oct	54	51	31	49	39	11	46	61	22	23	10	7	14	10	16	6	7	6	8	4	5	71	14	9	71.1
30-Oct	12	27	24	9	29	47	44	44	34	35	47	32	10	48	9	16	8	9	12	13	26	5	8	7	47.7
31-Oct	4	4	6	4	3	4	3	3	4	3	3	6	6	7	9	9	5	8	10	5	9	9	8	6	9.6
	60.5	50.7	55.3	78.9	74.6	78.6	87.5	84.3	72.8	67.6	76.2	72.4	90.6	71.5	77.7	86.3	76.1	79.8	48.1	66.0	93.4	89.6	82.1	87.5	

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 13.7 ppb on Oct 31 22:00 Maximum Daily Average: 3.2 ppb on Oct 31

Minimum Value: 0 ppb on Oct 1 01:00
Maximum Diurnal Average: 1.1 ppb at hour 22
Monthly Average: 0.72 ppb

Minimum Daily Average: 0.0 ppb on Oct 1
Minimum Diurnal Average: 0.4 ppb at hour 6
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.3 $Q_3 = 0.6$ $P_{90} = 2.1$ $P_{99} = 6.0$

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	39
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.0
2-Oct	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.8
3-Oct	0	0	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	0	A	0	0	0	0	0	0.3	5.3
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0.2	0.6
5-Oct	0	0	0	0	0	0	0	0	0	0	2	6	6	4	6	6	A	3	4	5	2	0	0	1	2.0	5.7
6-Oct	1	1	1	0	0	0	0	0	0	1	1	1	2	1	1	A	0	0	0	0	0	0	0	0	0.5	1.6
7-Oct	0	0	0	0	0	0	0	0	0	0	C	C	C	C	A	1	1	1	2	1	0	4	5	6	1.1	6.1
8-Oct	5	8	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	0.8	7.6
9-Oct	0	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
10-Oct	0	0	0	0	0	0	0	1	0	3	5	A	3	1	4	2	4	5	6	0	1	0	0	0	1.6	6.3
11-Oct	0	0	0	0	0	0	0	2	3	1	A	1	1	2	0	1	0	0	0	1	2	4	4	1	1.0	4.0
12-Oct	1	0	0	0	0	0	0	0	0	A	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0.2	2.2
13-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
14-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
15-Oct	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0.2	1.1
16-Oct	0	0	0	0	0	A	0	0	0	0	0	3	2	2	2	2	1	0	0	0	0	0	1	2	0.7	2.7
17-Oct	2	0	1	1	A	0	0	1	1	3	4	3	3	6	4	3	3	2	0	0	0	0	0	0	1.6	6.2
18-Oct	0	0	0	A	0	0	0	0	0	0	0	1	5	0	0	0	1	1	1	0	2	2	3	2	0.9	4.9
19-Oct	2	1	A	2	2	1	1	1	1	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	8.0
20-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	1	4	3	1	1	1	1	2	2	3	3	1.0	4.2
21-Oct	A	2	2	1	1	2	0	3	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	A	0.8	3.4
22-Oct	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	A	0	0.3	0.7
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	1	1	0.4	1.0
24-Oct	1	1	1	1	1	0	1	1	1	0	0	0	3	1	0	0	0	0	1	0	A	1	1	0	0.7	2.7
25-Oct	1	1	0	0	0	0	1	1	1	0	1	0	0	1	1	1	1	1	1	A	0	0	0	0	0.5	1.3
26-Oct	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	A	1	0	0	0	0	0.4	1.0
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0	1	1	0	0	0.2	0.7
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	4	4	1	1	2	0.6	4.1
30-Oct	2	2	3	2	2	2	2	2	C	C	C	0	0	0	A	7	3	1	0	0	0	0	0	0	1.5	7.5
31-Oct	0	1	0	1	0	1	2	7	6	3	1	1	0	A	0	0	0	11	5	5	6	14	5	3	3.2	13.7
	0.5	0.6	0.4	0.4	0.4	0.4	0.4	0.7	0.6	0.8	0.8	0.7	0.9	0.9	1.0	1.0	0.7	1.1	0.9	0.7	0.8	1.1	0.9	0.8	Diurnal Average	
	5.1	7.6	2.7	2.2	2.4	1.8	2.4	6.8	5.6	8.0	5.3	5.6	5.6	6.2	5.6	7.5	3.9	11.5	6.3	5.5	5.6	13.7	5.1	6.1	Diurnal Maximum	

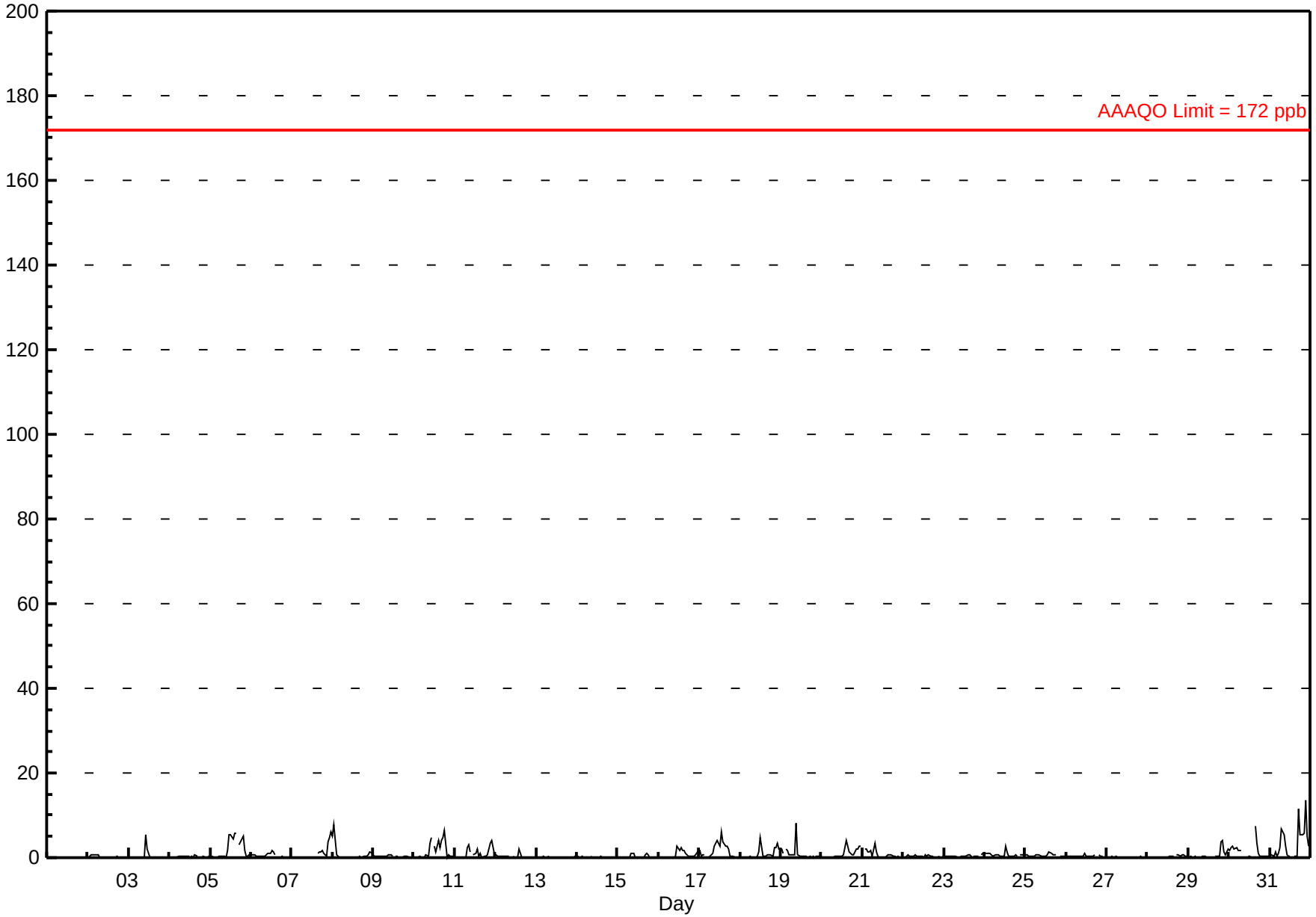
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - October 2013



Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - October 2013

Maximum Value: 55.6 ppb on Oct 31 18:00

Maximum Daily Average: 9.6 ppb on Oct 31

Minimum Value: 0 ppb on Oct 2 12:00

Minimum Daily Average: 1.0 ppb on Oct 1

Maximum Diurnal Average: 4.8 ppb at hour 13

Minimum Diurnal Average: 1.6 ppb at hour 3

Monthly Average: 3.10 ppb

Percentiles: $P_1 = 0.6$ $P_{10} = 0.9$ $Q_1 = 1.2$ Median = 1.5 $Q_3 = 2.0$ $P_{90} = 8.1$ $P_{99} = 22.3$

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	39
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	1	1	1	1	1	2	2	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.7
2-Oct	1	2	2	2	1	2	2	1	1	1	1	0	2	2	1	1	1	1	1	A	1	1	1	1	1.3	2.4
3-Oct	1	1	1	1	1	1	1	1	1	1	14	11	5	2	1	1	1	1	A	1	1	1	1	1	2.2	14.0
4-Oct	1	1	1	1	1	1	1	1	2	2	2	1	2	1	1	2	2	A	1	1	1	1	1	1	1.4	2.1
5-Oct	1	1	1	1	1	1	1	1	2	2	12	19	15	12	15	18	A	16	11	13	4	1	1	2	6.7	19.0
6-Oct	2	2	2	2	1	2	1	1	2	2	3	2	3	2	1	A	1	1	2	1	1	1	1	1	1.5	3.0
7-Oct	1	1	1	1	1	1	1	1	1	1	C	C	C	C	A	5	11	7	4	3	2	15	16	16	4.5	16.2
8-Oct	12	22	2	1	1	1	1	2	1	1	1	1	1	A	1	1	1	1	2	1	2	3	4	5	3.0	21.6
9-Oct	1	2	1	1	2	2	2	1	2	2	2	1	A	1	1	1	1	1	1	1	2	1	1	1	1.4	2.0
10-Oct	1	1	1	2	1	1	1	2	2	12	12	A	17	7	18	10	13	11	19	1	5	1	2	2	6.3	18.5
11-Oct	1	1	1	1	1	1	1	16	14	13	A	8	12	29	3	6	1	2	1	4	4	14	9	2	6.2	28.6
12-Oct	5	1	1	1	2	1	1	1	2	A	1	1	1	2	16	1	1	1	1	1	1	1	1	1	2.0	15.9
13-Oct	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.5
14-Oct	1	1	1	2	1	1	2	A	1	1	1	1	1	1	4	1	1	1	1	1	2	1	1	1	1.2	3.9
15-Oct	1	1	1	1	1	1	A	1	4	4	1	1	1	1	1	1	4	5	3	1	3	1	1	1	1.7	5.3
16-Oct	1	1	1	1	1	A	1	1	1	1	2	10	7	10	12	9	11	2	2	2	2	1	4	4	3.8	12.3
17-Oct	4	1	2	2	A	1	2	2	3	11	19	23	10	25	19	18	13	9	2	1	1	1	1	1	7.5	25.5
18-Oct	1	1	1	A	1	1	1	1	1	1	2	13	18	2	1	1	2	2	2	2	9	6	5	5	3.4	18.3
19-Oct	4	3	A	5	5	3	3	9	3	25	3	2	4	1	2	2	1	1	1	1	1	1	2	2	3.7	25.1
20-Oct	2	A	1	1	1	1	1	1	1	4	2	2	2	6	16	8	10	3	3	2	4	4	4	7	3.8	16.5
21-Oct	A	4	5	3	5	5	2	28	4	3	1	1	2	2	1	1	2	2	1	2	1	1	1	A	3.6	28.0
22-Oct	1	1	2	2	2	2	2	2	2	2	2	1	1	6	3	2	2	1	1	1	1	2	A	1	1.8	6.0
23-Oct	2	2	1	1	1	2	2	1	1	1	1	1	1	2	2	1	2	1	1	1	1	A	2	2	1.5	2.1
24-Oct	2	2	2	2	2	2	2	2	2	1	2	1	22	6	1	2	2	1	2	2	A	2	2	2	2.8	21.9
25-Oct	2	2	2	1	1	2	2	2	2	2	2	2	1	2	3	2	2	2	2	A	1	1	2	2	1.7	2.7
26-Oct	1	1	2	1	2	2	2	2	2	2	2	4	2	2	2	2	2	2	A	2	2	2	1	1	1.7	3.7
27-Oct	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.1	1.7
28-Oct	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	A	2	2	2	2	2	2	1	1.5	2.2
29-Oct	2	1	1	1	1	1	1	1	2	2	1	1	1	2	1	A	1	2	1	11	11	5	3	3	2.5	11.3
30-Oct	3	4	5	5	4	3	3	3	C	C	C	1	1	1	A	30	18	4	2	2	1	2	1	1	4.8	30.4
31-Oct	2	3	1	8	2	4	7	15	14	8	2	2	1	A	2	1	2	56	19	17	13	19	13	11	9.6	55.6
	2.0	2.2	1.6	2.0	1.6	1.6	1.7	3.5	2.5	3.7	3.4	4.0	4.8	4.7	4.7	4.6	3.8	4.8	3.1	2.8	2.8	3.2	2.8	2.7	Diurnal Average	
	12.5	21.6	4.9	7.9	5.2	4.8	7.2	28.0	14.2	25.1	19.0	23.3	21.9	28.6	18.7	30.4	17.9	55.6	19.1	16.9	12.8	19.4	16.2	16.2	Diurnal Maximum	

C - Calibration

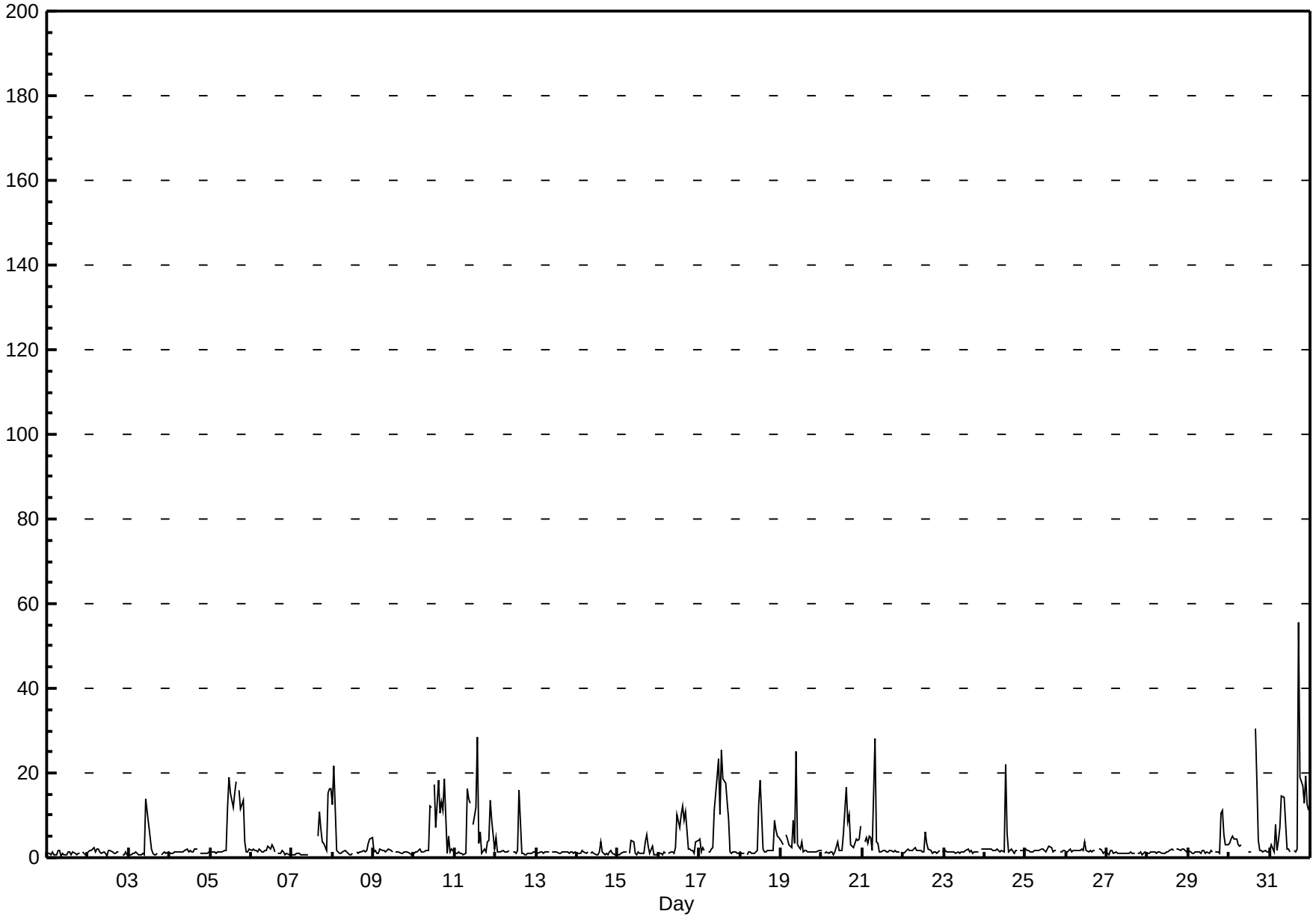
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - October 2013



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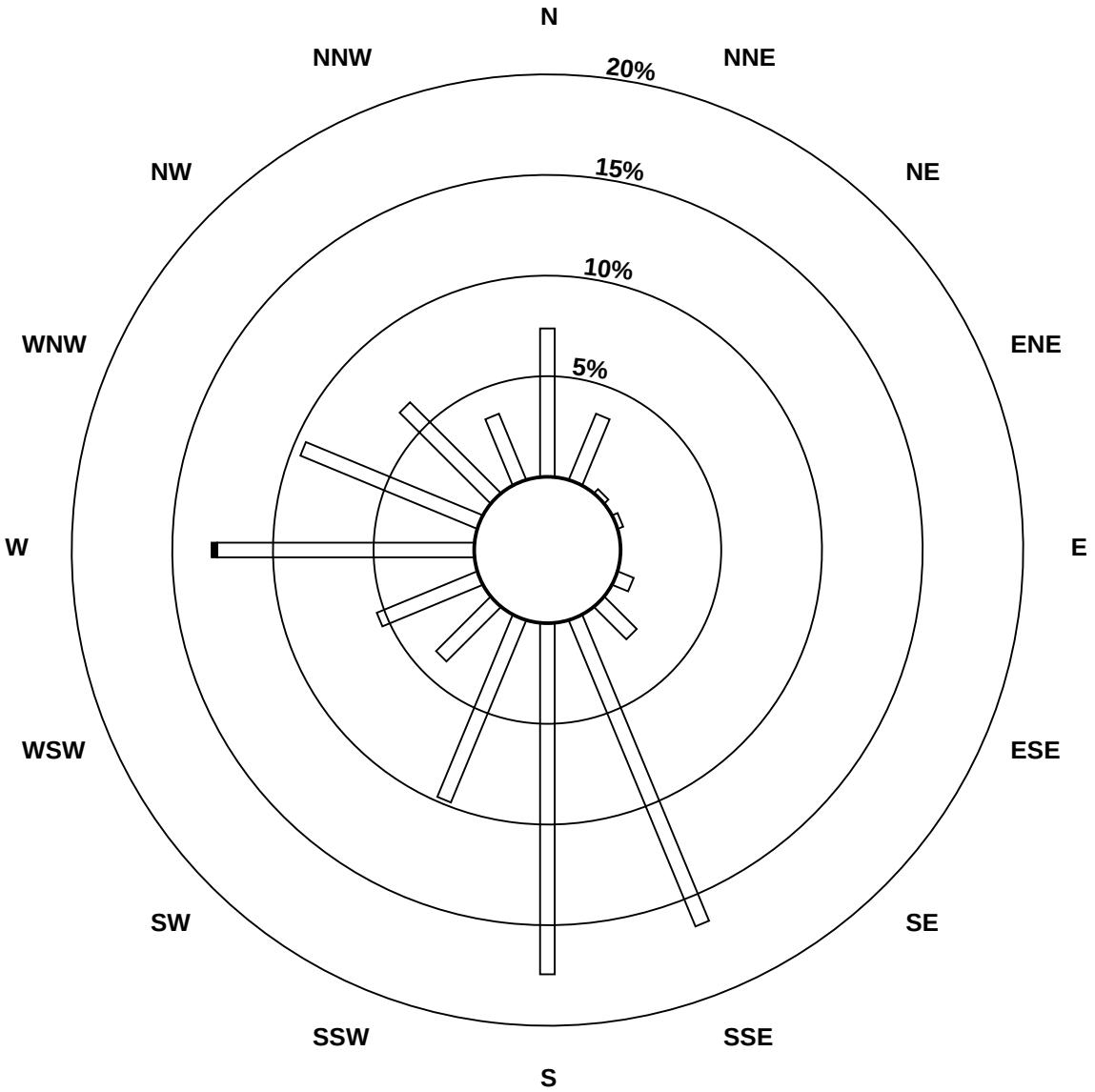
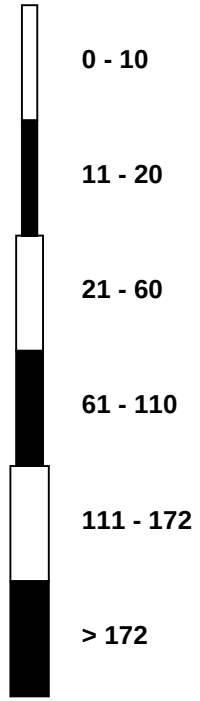
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Valleyview - October 2013



Pollutant Classes (ppb)

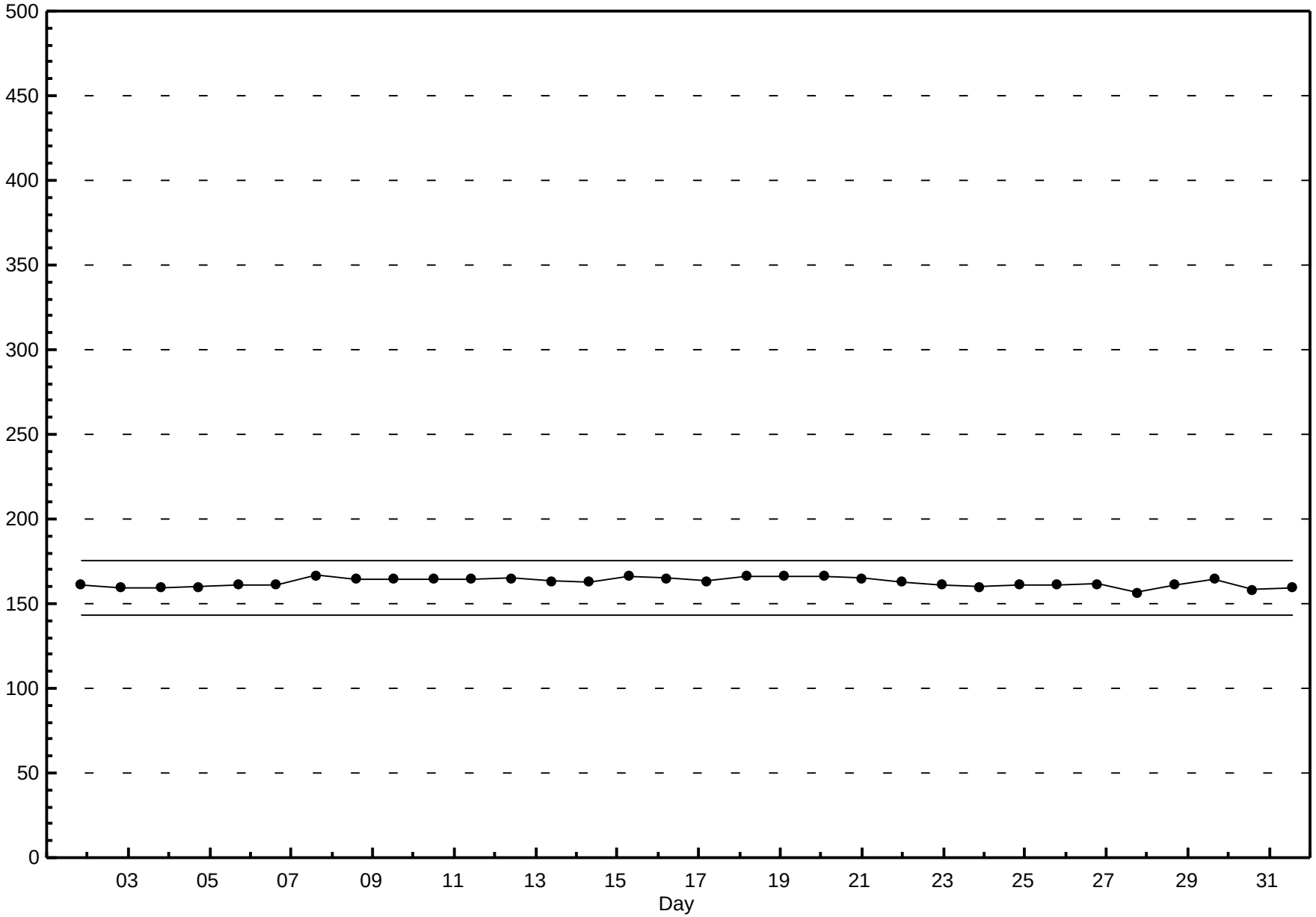


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Valleyview - October 2013



Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.1 ppb on Oct 31 11:00 Maximum Daily Average: 0.5 ppb on Oct 31

Minimum Value: 0 ppb on Oct 1 01:00 Minimum Daily Average: 0.0 ppb on Oct 1
Maximum Diurnal Average: 0.3 ppb at hour 24 Minimum Diurnal Average: 0.1 ppb at hour 13
Monthly Average: 0.20 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.2$ $P_{90} = 0.4$ $P_{99} = 1.1$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.0
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.1
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.0
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.0
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0.0	0.6
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.0
7-Oct	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	1	0	1	0	0	0	0	0	0.2	0.7
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0.2	0.8
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
10-Oct	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
11-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.7
12-Oct	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
13-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
14-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
15-Oct	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	1	1	0	1	0	0	1	0.3	0.8
16-Oct	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.3	1.0
17-Oct	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.3	1.0
18-Oct	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	1.0
19-Oct	1	0	A	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.4	0.9
20-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	0.3	0.8
21-Oct	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.5	1.4
22-Oct	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.7
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
24-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4
25-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0.2	0.8
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.3
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.2
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.2
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	1	0.2	1.0
30-Oct	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0.5	1.4
31-Oct	0	0	0	0	0	0	1	1	1	1	2	0	0	A	0	0	0	1	1	1	1	1	0	1	0.5	2.1
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	Diurnal Average	
	0.8	1.1	1.1	0.9	1.0	1.4	1.1	0.9	1.4	1.1	2.1	0.3	0.3	0.4	0.4	0.3	0.7	1.0	0.8	0.6	0.8	0.7	1.0	1.0	Diurnal Maximum	

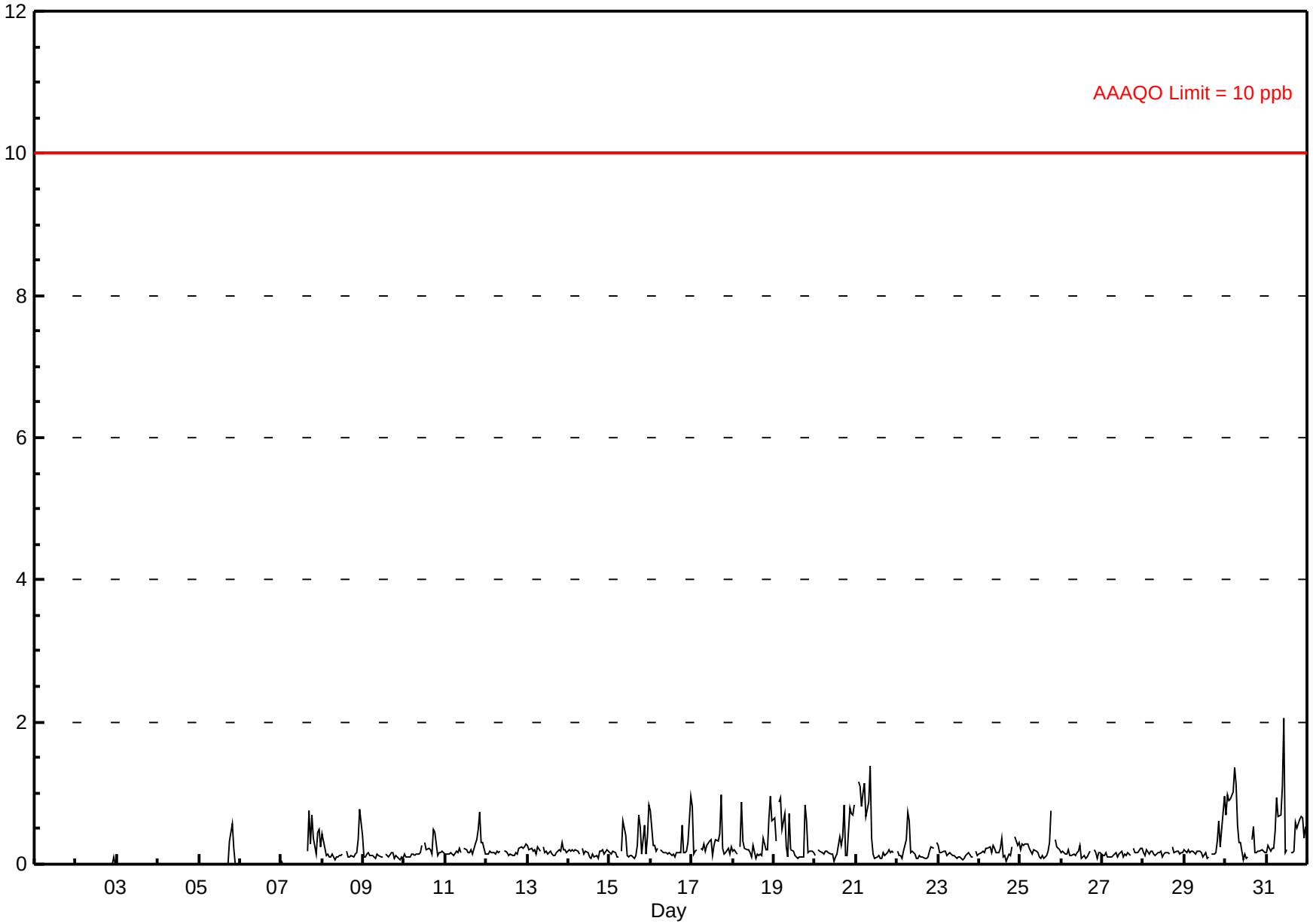
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - October 2013



Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - October 2013

Maximum Value: 37.6 ppb on Oct 31 11:00

Maximum Daily Average: 2.6 ppb on Oct 31

Minimum Value: 0 ppb on Oct 2 14:00

Minimum Daily Average: 0.1 ppb on Oct 6

Maximum Diurnal Average: 1.7 ppb at hour 11

Minimum Diurnal Average: 0.4 ppb at hour 13

Monthly Average: 0.62 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.6$ $P_{90} = 1.1$ $P_{99} = 2.1$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0.2	0.8
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.4
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	2	2	1	0	0	0	0.3	1.7
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0.1	0.6
7-Oct	1	0	0	0	0	0	0	0	0	0	C	C	C	C	C	1	3	1	1	1	1	1	1	1	0.7	3.1
8-Oct	1	1	0	0	0	0	1	0	0	0	0	1	0	A	0	0	0	0	0	1	0	1	2	1	0.6	1.6
9-Oct	0	0	1	0	0	0	0	0	0	0	0	0	A	0	1	0	1	1	0	0	0	0	0	0	0.4	0.6
10-Oct	0	0	0	1	0	0	0	1	1	0	1	A	1	1	1	1	1	1	1	0	0	1	0	0	0.6	1.0
11-Oct	0	0	0	0	1	0	0	1	1	1	A	1	0	1	0	1	1	1	1	1	1	1	1	1	0.7	1.3
12-Oct	0	0	1	0	1	0	1	0	1	A	0	0	1	0	1	0	0	0	1	1	1	1	1	1	0.5	0.7
13-Oct	1	1	1	1	1	1	1	0	A	1	0	1	0	1	0	0	1	1	1	1	1	1	1	0	0.6	1.2
14-Oct	1	0	1	0	1	1	0	A	1	0	0	0	0	0	1	0	0	0	1	1	1	1	1	1	0.5	0.7
15-Oct	0	0	1	1	0	1	A	1	1	1	0	0	0	0	0	1	1	1	1	0	1	1	1	2	0.7	1.7
16-Oct	2	1	1	0	1	A	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	1	0.6	1.8
17-Oct	1	0	0	1	A	1	1	1	0	1	1	1	0	1	1	1	1	2	1	1	0	1	1	0	0.7	1.8
18-Oct	0	0	0	A	1	4	1	1	1	1	0	1	1	0	0	0	0	0	1	1	1	1	1	1	0.8	3.9
19-Oct	1	1	A	1	2	1	1	1	1	1	1	0	0	0	0	1	0	1	3	2	1	0	0	1	0.9	2.8
20-Oct	1	A	0	1	1	1	0	1	0	0	1	0	0	0	1	1	1	2	0	1	1	1	1	1	0.7	1.5
21-Oct	A	2	1	2	2	2	1	1	2	2	0	1	0	1	0	0	0	0	1	1	1	0	1	A	0.9	2.1
22-Oct	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1	1	A	1	0.6	1.5
23-Oct	1	1	0	1	0	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	A	0	0	0.5	0.7
24-Oct	1	0	0	0	1	0	0	1	1	1	0	0	1	1	0	0	0	1	0	1	A	1	1	1	0.6	1.0
25-Oct	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	2	1	1	A	1	1	0	1	0.7	1.7
26-Oct	1	1	0	1	1	0	0	1	0	0	1	1	0	0	0	0	0	1	A	0	1	0	0	0	0.5	0.9
27-Oct	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	1	1	1	1	1	1	0.5	0.6
28-Oct	0	0	1	1	1	0	1	0	0	0	0	0	0	1	1	1	A	1	1	1	0	1	0	1	0.5	0.6
29-Oct	1	1	1	1	1	1	0	1	0	1	1	0	0	0	1	A	1	0	1	1	1	1	1	1	0.6	1.3
30-Oct	1	1	1	2	2	2	2	1	1	3	0	0	0	1	A	1	1	1	0	1	0	1	0	0	1.0	3.3
31-Oct	1	1	1	1	1	1	1	1	1	2	38	1	1	A	0	1	1	1	1	1	1	1	1	2	2.6	37.6
	0.6	0.5	0.5	0.5	0.6	0.7	0.6	0.6	0.5	0.6	1.7	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.6	0.6	0.7	0.7	Diurnal Average	
	1.8	1.6	1.5	1.6	1.8	3.9	1.7	1.4	2.1	3.3	37.6	1.0	1.0	1.0	1.3	0.9	3.1	1.8	2.8	2.2	1.5	1.4	1.6	1.7	Diurnal Maximum	

C - Calibration

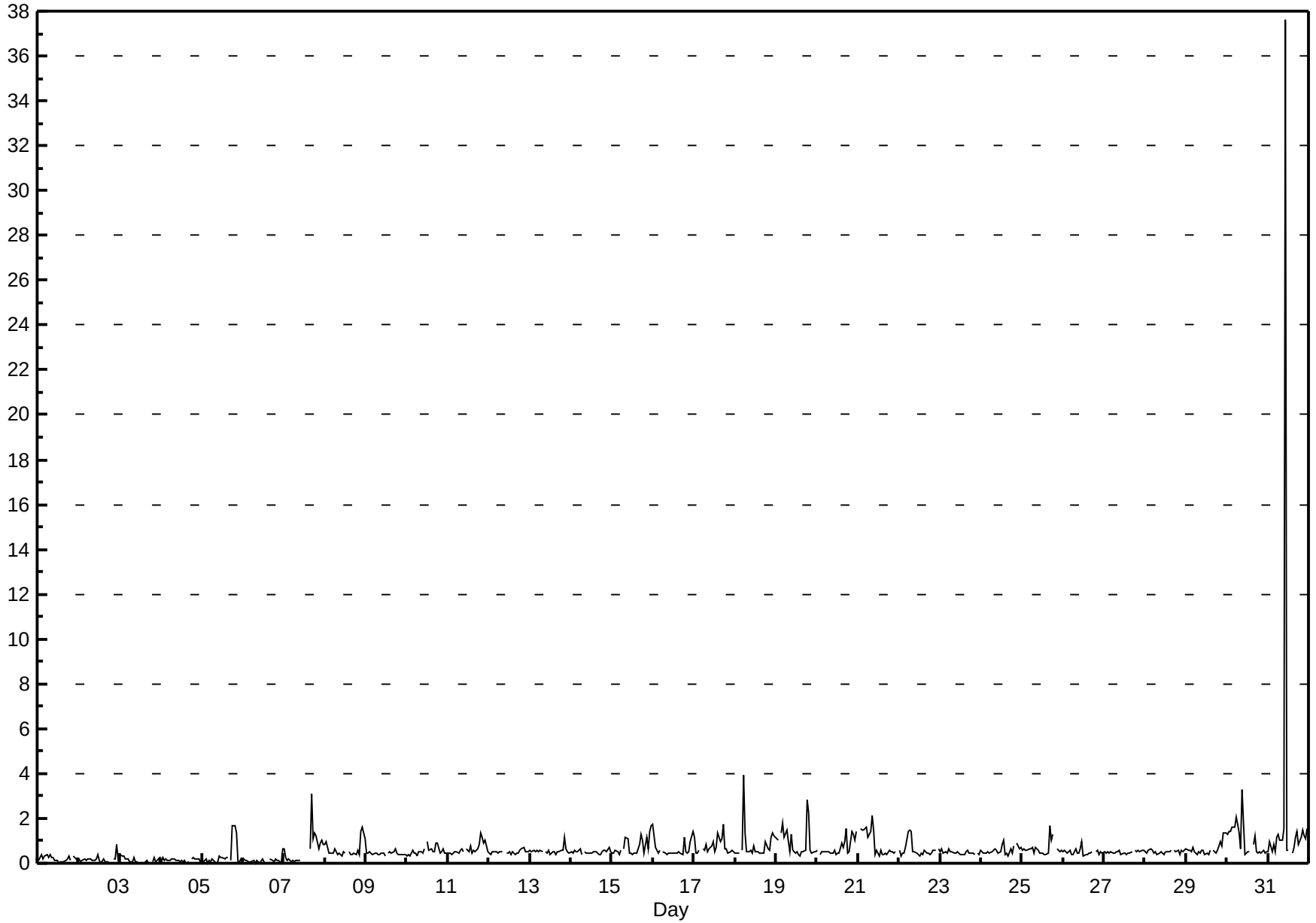
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - October 2013

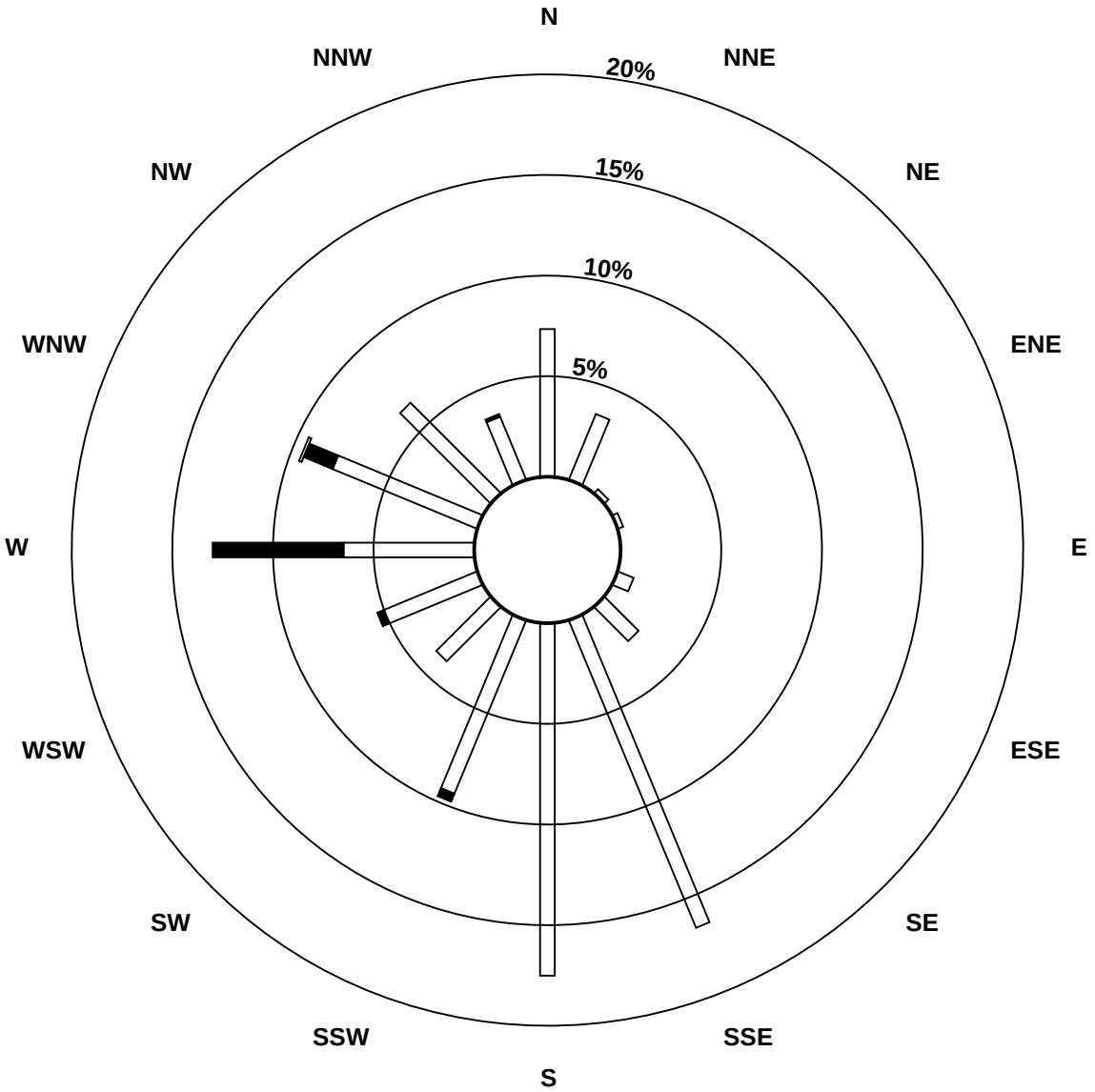


Peace Airshed Zone Association

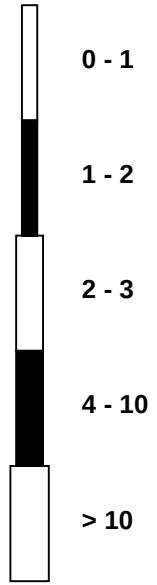
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Valleyview - October 2013



Pollutant Classes (ppb)



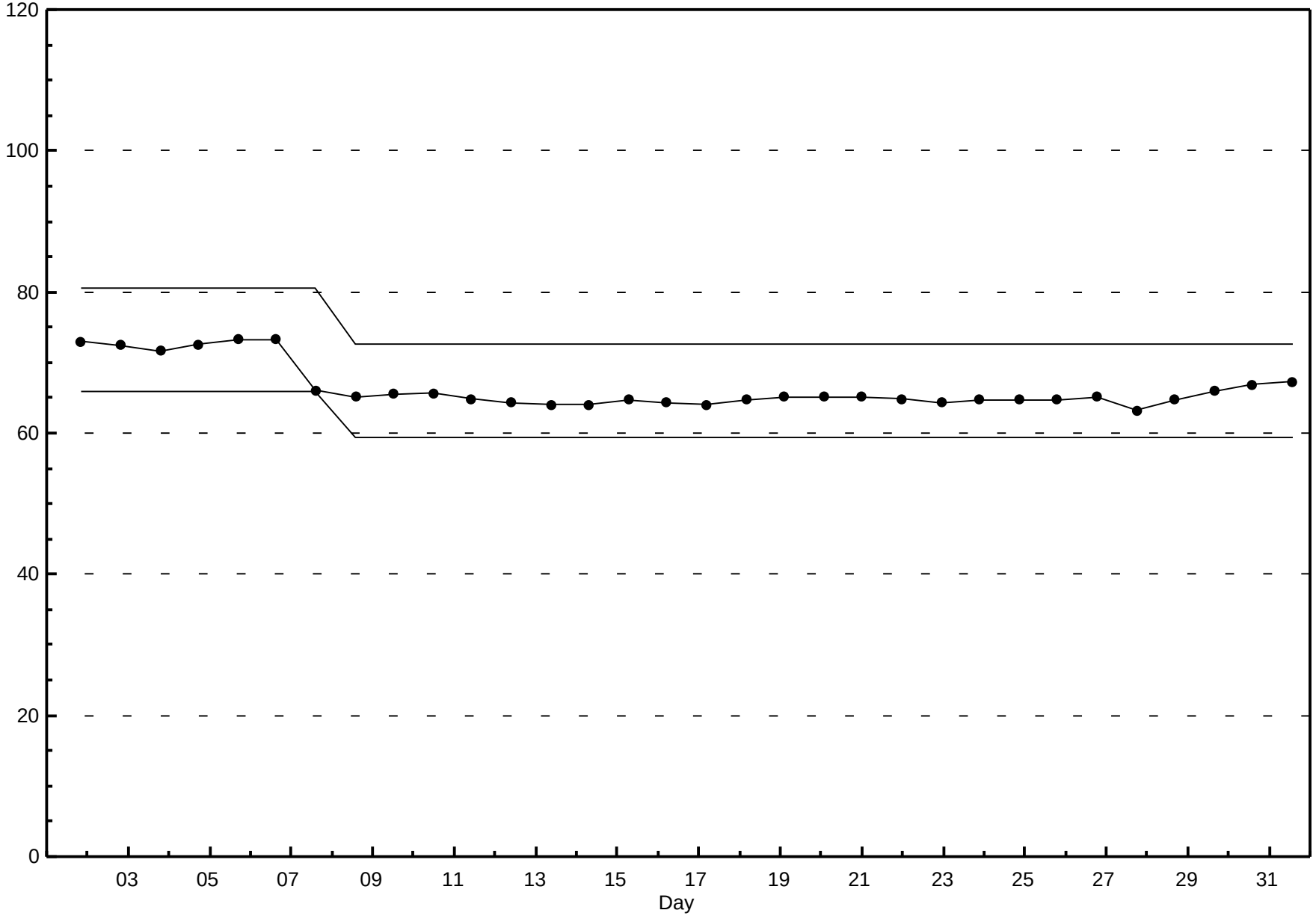
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Hydrogen Sulphide (H_2S)

Valleyview - October 2013



Hourly Averages

External Temperature (ET) - °C

Valleyview - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 18.6 °C on Oct 24 15:00

Maximum Daily Average: 12.6 °C on Oct 21

Minimum Value: -4 °C on Oct 29 08:00

Minimum Daily Average: -1.0 °C on Oct 28

Maximum Diurnal Average: 11.3 °C at hour 16

Minimum Diurnal Average: 2.8 °C at hour 7

Monthly Average: 6.48 °C

Percentiles: P_1 = -3.4 P_{10} = -0.4 Q_1 = 3.2 Median = 6.6 Q_3 = 10.1 P_{90} = 12.8 P_{99} = 16.0

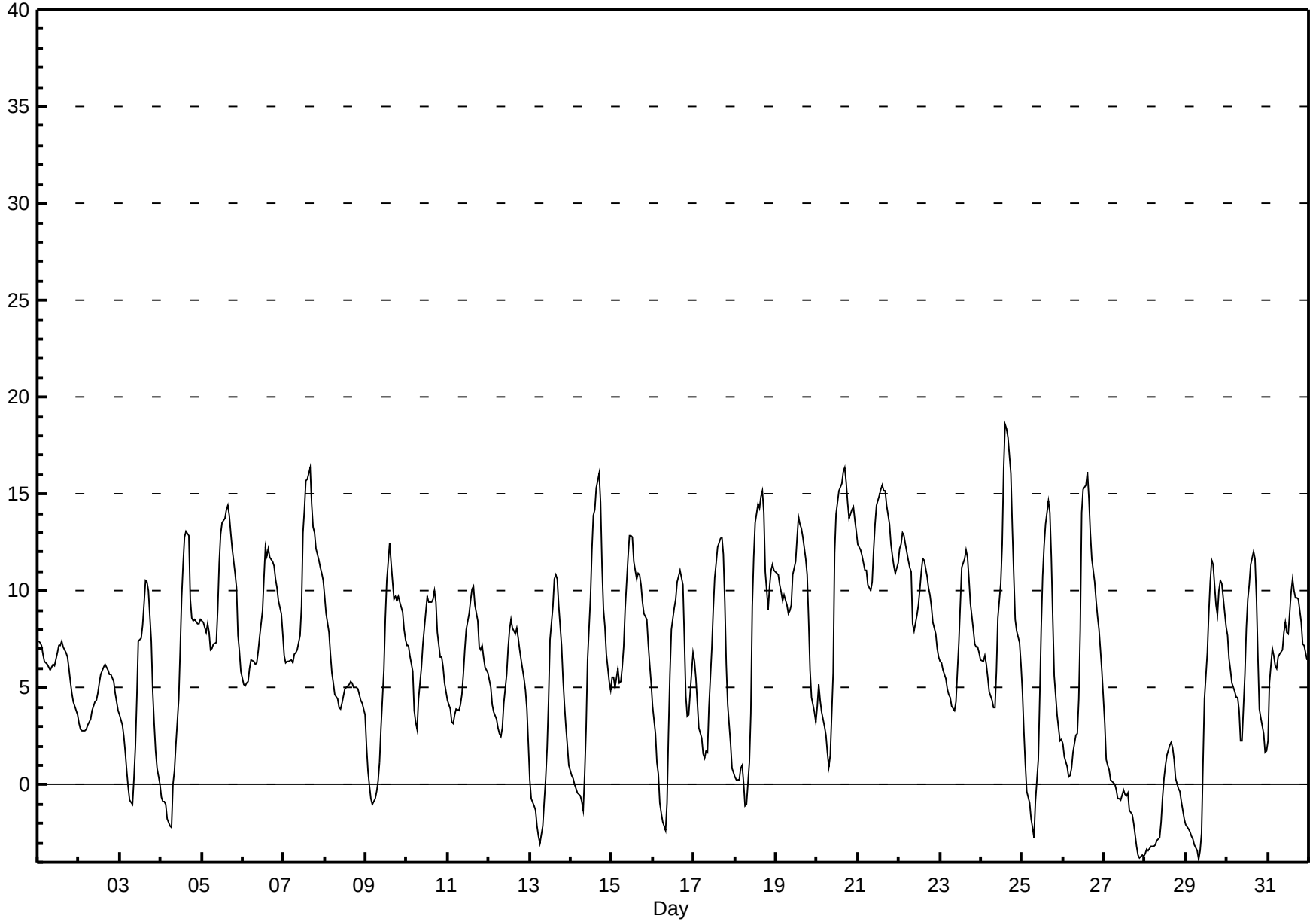
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	7	7	7	7	6	6	6	6	6	6	6	7	7	7	7	7	7	7	6	5	5	4	4	4	6.2	7.4
2-Oct	3	3	3	3	3	3	3	3	4	4	4	5	5	6	6	6	6	6	6	6	5	5	4	4	4.4	6.2
3-Oct	4	3	2	2	1	0	-1	-1	0	2	4	7	8	8	9	11	10	10	7	5	3	2	1	0	4.1	10.6
4-Oct	-1	-1	-1	-1	-2	-2	-2	0	1	2	4	7	10	11	13	13	13	10	9	8	9	8	8	9	5.2	13.1
5-Oct	8	8	8	8	8	7	7	7	7	9	11	13	13	14	14	14	14	13	12	11	10	8	7	6	10.0	14.4
6-Oct	5	5	5	5	6	6	6	6	6	7	8	9	11	12	12	12	12	12	11	11	10	10	9	8	8.5	12.2
7-Oct	7	6	6	6	6	6	7	7	7	8	9	13	14	16	16	16	14	13	13	12	12	11	11	11	10.3	16.3
8-Oct	10	9	8	7	6	5	5	4	4	4	4	5	5	5	5	5	5	5	5	5	5	4	4	4	5.3	9.7
9-Oct	2	1	0	-1	-1	-1	0	0	1	3	6	9	11	12	12	11	10	10	9	10	9	9	8	7	5.7	12.5
10-Oct	7	7	7	6	4	3	3	4	6	7	8	9	10	9	9	10	10	9	8	7	7	6	5	5	6.9	10.0
11-Oct	4	4	3	3	4	4	4	4	5	6	7	8	9	9	10	10	9	8	7	7	7	7	6	6	6.3	10.3
12-Oct	5	5	4	4	3	3	3	2	3	4	6	7	8	9	8	8	8	8	7	6	5	5	4	2	5.3	8.6
13-Oct	0	-1	-1	-1	-2	-3	-3	-2	-1	0	2	4	7	9	11	11	11	9	7	5	4	3	2	1	3.1	10.9
14-Oct	0	0	0	0	0	-1	-1	-1	1	3	6	10	12	14	14	15	16	15	11	9	8	7	5	5	6.2	16.1
15-Oct	6	6	5	6	5	5	6	7	9	12	13	13	13	12	11	11	11	10	9	9	9	7	6	5	8.5	12.9
16-Oct	4	3	1	1	-1	-1	-2	-2	-1	3	6	8	9	10	10	11	11	10	8	5	4	4	5	7	4.6	11.1
17-Oct	6	5	4	3	2	2	1	2	2	4	7	9	11	11	12	13	13	12	9	6	4	2	1	1	6.0	12.8
18-Oct	0	0	0	1	1	0	-1	-1	1	4	9	12	14	14	14	15	15	14	11	9	10	11	11	11	7.4	15.1
19-Oct	11	11	10	10	10	10	9	9	9	9	11	12	13	14	13	13	13	12	11	9	6	5	4	3	9.8	13.8
20-Oct	4	5	4	4	3	3	2	1	1	6	12	14	15	15	16	16	16	16	15	14	14	14	14	13	9.8	16.4
21-Oct	12	12	12	11	11	11	10	10	10	12	13	14	15	15	15	15	15	14	13	12	12	11	11	11	12.6	15.4
22-Oct	12	12	13	13	12	12	11	11	8	8	9	9	10	11	12	12	11	10	10	9	8	8	7	7	10.2	13.0
23-Oct	6	6	6	5	5	5	5	4	4	4	6	7	9	11	12	12	12	11	9	8	7	7	7	7	7.3	12.1
24-Oct	6	6	7	6	6	5	4	4	4	6	9	10	12	16	19	18	18	16	13	11	9	8	7	6	9.5	18.6
25-Oct	5	3	1	0	-1	-2	-2	-3	-1	1	5	8	11	12	13	15	14	12	9	6	4	3	2	2	4.8	14.6
26-Oct	2	1	1	0	0	1	2	3	3	4	8	14	15	15	16	15	13	12	10	9	9	8	7	6	7.3	16.1
27-Oct	3	1	1	1	0	0	0	0	-1	-1	-1	0	0	-1	0	-1	-2	-2	-3	-3	-4	-4	-4	-4	-1.0	3.2
28-Oct	-4	-3	-3	-3	-3	-3	-3	-3	-3	-2	-1	0	1	1	2	2	2	1	0	0	0	-1	-1	-2	-1.0	2.2
29-Oct	-2	-2	-2	-3	-3	-3	-3	-4	-3	-3	1	4	7	9	10	12	11	9	9	10	11	10	10	8	3.9	11.6
30-Oct	8	7	6	5	5	5	5	4	2	2	6	8	10	10	11	12	12	10	7	4	3	3	2	2	6.1	12.0
31-Oct	2	5	7	7	6	6	7	7	7	8	8	8	8	10	11	10	10	10	10	8	7	7	7	6	7.5	10.6
	4.7	4.4	4.0	3.7	3.2	3.0	2.8	2.9	3.3	4.6	6.7	8.5	9.7	10.6	11.1	11.3	11.0	10.0	8.7	7.5	6.8	6.2	5.6	5.2	Diurnal Average	
	12.4	12.4	13.0	12.9	12.4	11.6	11.3	11.0	10.4	12.1	13.4	14.4	15.3	16.3	18.6	18.3	17.9	16.1	14.5	13.8	14.2	14.3	13.6	13.1	Diurnal Maximum	

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - October 2013



Hourly Averages

Relative Humidity (RH) - %

Valleyview - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 98.5 % on Oct 7 03:00

Maximum Daily Average: 89.6 % on Oct 6

Minimum Value: 29 % on Oct 24 17:00

Minimum Daily Average: 48.1 % on Oct 30

Maximum Diurnal Average: 80.3 % at hour 6

Minimum Diurnal Average: 46.4 % at hour 15

Monthly Average: 65.73 %

Percentiles: P_1 = 31.4 P_{10} = 40.7 Q_1 = 50.3 Median = 65.3 Q_3 = 81.1 P_{90} = 91.8 P_{99} = 97.4

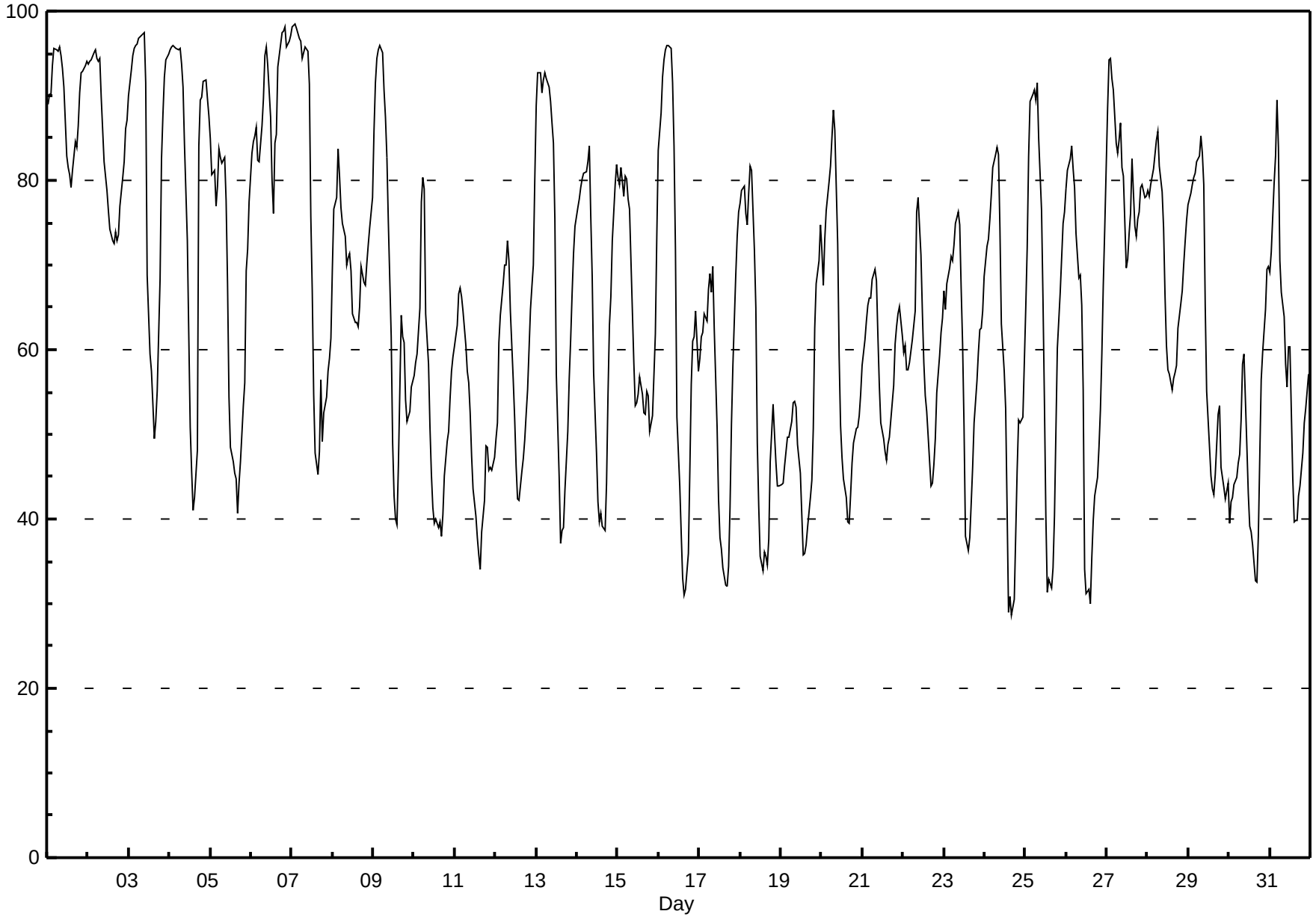
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	89	90	90	94	96	95	95	96	95	93	91	83	82	81	79	81	85	84	87	90	93	93	94	94	89.5	95.7
2-Oct	94	94	94	95	95	94	94	94	90	82	81	79	76	74	73	73	74	73	74	77	80	82	86	87	84.0	95.4
3-Oct	90	93	95	96	96	96	97	97	97	98	92	69	60	58	53	49	52	55	68	83	88	92	94	95	81.7	97.5
4-Oct	95	96	96	96	96	95	96	94	91	84	73	62	51	46	41	43	48	84	90	90	92	92	90	88	80.2	95.9
5-Oct	85	81	81	77	79	84	83	82	83	78	68	54	48	47	45	45	41	44	47	53	56	69	72	77	65.8	85.0
6-Oct	83	85	85	86	82	82	86	90	95	96	94	88	80	76	84	85	93	96	97	98	98	96	96	97	89.6	98.1
7-Oct	98	98	99	98	97	96	94	95	96	95	91	76	67	55	48	45	48	56	49	52	54	57	59	61	74.4	98.5
8-Oct	69	77	78	84	80	77	75	73	70	71	71	69	64	63	63	63	65	70	68	68	70	72	74	78	71.4	83.7
9-Oct	86	92	94	95	96	95	91	87	83	75	62	49	43	40	39	46	64	62	61	54	52	53	56	56	67.9	95.9
10-Oct	57	58	59	65	77	80	79	64	58	51	45	41	39	40	39	40	38	41	45	49	50	54	57	59	53.7	80.3
11-Oct	60	63	67	67	66	65	61	57	56	53	47	44	40	38	36	34	38	42	49	48	46	46	46	47	50.7	67.3
12-Oct	49	51	61	64	68	70	70	73	71	65	56	52	46	42	42	46	47	49	52	55	65	67	70	80	58.9	80.1
13-Oct	89	93	93	90	92	93	92	91	89	87	84	75	57	45	37	39	39	43	50	57	61	67	71	75	71.2	92.7
14-Oct	77	78	79	80	81	81	82	84	76	69	57	48	42	40	41	39	39	44	55	63	66	73	79	82	64.7	84.0
15-Oct	80	80	81	78	81	80	78	77	71	58	53	54	55	57	55	52	52	55	55	50	52	57	62	73	64.4	81.5
16-Oct	84	88	92	94	95	96	96	96	91	84	72	52	44	38	33	31	32	36	46	56	61	62	65	57	66.7	96.0
17-Oct	59	61	62	64	63	67	69	67	70	63	51	42	38	36	34	32	32	34	41	51	58	69	73	76	54.8	76.3
18-Oct	77	79	79	76	75	78	82	81	72	65	49	41	36	34	36	36	35	38	47	54	50	47	44	44	56.4	81.7
19-Oct	44	44	46	48	50	50	52	54	54	53	49	45	40	36	36	37	39	43	45	51	63	68	70	75	49.6	74.7
20-Oct	72	68	73	76	80	82	85	88	86	73	59	51	47	45	43	40	39	43	47	49	51	51	52	55	60.5	88.3
21-Oct	58	61	63	65	66	66	68	70	68	62	56	51	49	48	47	49	50	52	56	61	63	64	65	62	59.2	69.5
22-Oct	60	61	58	58	58	61	63	65	76	78	71	64	59	55	53	50	44	44	46	50	55	59	62	64	58.8	78.0
23-Oct	67	65	68	70	71	70	72	75	76	75	67	61	51	38	36	38	42	46	51	56	60	62	62	65	60.2	76.3
24-Oct	69	72	73	75	78	82	83	84	83	74	63	57	53	41	29	31	29	30	38	46	52	51	52	58	58.5	84.0
25-Oct	65	72	83	89	90	91	89	91	85	76	66	54	40	31	33	32	34	40	50	60	67	71	75	76	65.1	91.5
26-Oct	79	81	83	84	81	79	74	68	69	65	55	34	31	32	30	35	40	43	45	49	53	59	68	74	58.8	84.1
27-Oct	89	94	94	92	91	84	83	85	87	82	80	70	71	74	76	83	75	73	75	76	79	79	78	78	81.2	94.3
28-Oct	79	78	79	81	83	85	86	82	79	74	66	60	58	57	55	57	57	58	63	65	67	70	73	75	70.3	85.8
29-Oct	77	78	80	80	81	82	83	85	83	80	65	55	49	45	44	43	45	52	53	46	45	44	42	44	61.8	85.3
30-Oct	39	42	42	44	45	47	48	52	58	59	49	43	39	39	37	33	33	38	47	56	60	65	70	70	48.1	69.9
31-Oct	69	72	80	83	89	84	70	67	64	58	56	60	60	45	40	40	40	43	44	48	51	53	55	57	59.5	89.5
	73.8	75.6	77.7	78.9	80.0	80.3	79.8	79.5	78.1	73.4	65.8	57.6	52.1	48.2	46.4	46.6	48.0	52.0	56.1	60.0	63.1	66.0	68.2	70.4	Diurnal Average	
	98.2	98.4	98.5	98.0	96.7	96.4	96.7	97.1	97.3	97.5	93.5	87.5	81.5	80.6	84.4	85.5	93.3	96.2	97.4	97.6	98.1	95.8	96.5	97.2	Diurnal Maximum	

Hourly Averages

Relative Humidity (RH) - %

Valleyview - October 2013



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	4	3	4	2	4	4	4	4	5	6	6	6	6	5	8	10	7	8	8	7	6	8	6	6	5.5	9.6
Dir	307	310	347	5	10	4	8	7	2	7	11	11	1	4	5	5	5	5	6	5	1	359	357	352	1	5
2 Spd	7	6	5	2	1	2	2	1	3	5	6	4	4	3	4	4	6	5	2	0	0	1	0	1	3.0	6.9
Dir	358	357	349	318	295	323	334	335	307	340	356	333	324	324	344	353	340	4	359	44	7	299	277	336	342	358
3 Spd	0	0	0	0	0	0	0	0	0	1	0	0	2	2	2	2	2	1	0	0	0	0	0	0	0.5	2.3
Dir	194	138	203	187	192	211	175	169	240	178	195	241	260	212	168	169	185	160	159	155	218	182	198	270	190	169
4 Spd	0	0	0	0	0	0	1	4	3	6	6	5	5	4	5	4	1	1	2	2	2	4	7	4	2.6	6.5
Dir	155	151	154	188	128	162	159	163	164	161	163	164	164	166	163	164	206	166	158	209	171	163	166	165	165	166
5 Spd	2	2	1	1	1	1	1	2	1	1	3	11	17	19	17	14	18	16	9	5	2	1	1	1	5.5	18.6
Dir	156	170	160	163	184	178	178	193	175	172	246	262	266	270	266	261	252	261	265	269	254	168	198	187	256	270
6 Spd	0	1	1	1	1	1	1	1	1	2	2	4	4	3	2	1	1	1	1	1	2	2	0	0	1.4	4.0
Dir	192	176	176	167	171	177	165	147	151	135	132	150	161	168	160	165	150	148	127	160	147	156	171	327	156	161
7 Spd	0	0	1	2	1	2	2	1	0	1	1	2	3	3	6	8	8	3	7	6	5	7	9	10	2.9	9.6
Dir	260	231	220	171	181	172	184	149	227	172	188	144	162	244	266	292	294	258	282	288	279	267	272	267	264	267
8 Spd	9	8	10	7	11	11	11	13	14	13	14	14	16	15	15	14	12	8	9	8	6	5	4	4	10.2	15.8
Dir	270	269	326	324	322	317	311	306	301	301	297	303	307	310	310	307	304	290	311	311	302	285	277	254	304	307
9 Spd	2	1	1	1	1	3	5	4	5	6	6	7	6	4	2	7	2	2	2	3	2	2	1	1	2.8	7.4
Dir	235	183	172	191	175	164	164	164	165	164	166	164	165	165	173	249	166	167	168	169	169	178	180	183	175	249
10 Spd	1	1	4	6	1	1	2	6	9	12	17	17	14	13	13	10	13	9	7	6	6	2	1	1	6.7	16.9
Dir	207	223	244	250	170	178	194	245	250	262	273	274	291	287	271	278	262	272	264	251	252	215	171	162	265	274
11 Spd	2	1	1	2	1	1	2	4	5	6	10	11	10	9	10	11	5	1	0	3	6	7	8	1	4.3	10.8
Dir	168	170	169	141	143	201	236	253	249	252	275	283	288	286	291	286	297	318	202	260	275	259	270	248	273	283
12 Spd	1	1	0	1	0	1	1	1	1	2	1	1	2	3	7	4	2	1	0	0	0	0	1	0	1.1	6.6
Dir	223	223	180	165	148	165	176	172	164	161	171	200	235	249	259	242	209	212	205	179	197	213	331	180	222	259
13 Spd	1	1	1	1	0	0	0	0	0	0	1	1	2	3	4	4	4	4	2	1	1	1	1	1	1.4	4.5
Dir	159	162	163	161	167	175	348	261	248	209	179	172	161	151	153	153	152	152	159	197	192	170	168	195	160	153
14 Spd	1	1	2	2	3	2	2	2	2	4	3	4	4	3	5	5	3	0	0	1	1	1	1	1	2.0	5.3
Dir	181	176	173	174	170	174	185	185	171	163	168	165	167	215	241	234	236	183	180	222	194	182	209	184	191	241
15 Spd	1	1	2	2	2	3	2	1	6	12	14	12	10	12	11	7	5	4	4	5	5	5	4	3	4.0	14.1
Dir	186	172	159	169	188	188	194	160	272	281	298	305	306	4	2	320	291	269	290	299	285	294	284	280	297	298
16 Spd	2	0	1	1	2	1	1	1	2	2	3	1	2	6	5	7	4	2	0	1	1	1	2	7	1.2	6.7
Dir	289	105	122	129	152	161	156	157	159	158	140	224	246	260	264	295	295	289	213	183	166	193	249	277	246	277
17 Spd	9	9	11	8	8	5	5	6	2	1	6	9	8	9	9	8	6	3	1	1	1	1	1	1	4.8	11.1
Dir	280	301	315	302	302	301	297	280	160	225	267	273	261	264	264	274	275	266	220	198	209	175	188	191	279	315
18 Spd	2	1	2	3	2	1	1	2	3	4	2	2	8	10	10	10	7	2	1	1	5	8	8	5	2.7	10.5
Dir	191	189	169	169	176	207	214	198	174	163	202	239	273	296	308	320	315	351	216	201	254	282	281	286	274	296
19 Spd	9	10	8	7	7	6	6	6	8	7	7	11	15	20	21	18	16	5	4	1	1	1	1	1	7.2	20.7
Dir	280	288	284	285	284	288	277	284	289	280	294	302	302	317	335	336	335	318	293	245	177	166	161	164	305	335
20 Spd	3	3	2	1	0	1	1	1	1	2	7	12	12	11	10	11	9	5	1	2	6	7	8	6	4.1	12.2
Dir	169	173	180	187	215	217	198	180	179	163	298	307	311	298	281	282	280	269	220	229	265	277	277	275	278	307
21 Spd	7	8	8	7	6	6	7	3	2	6	9	11	11	10	9	6	1	1	0	1	1	2	2	3	4.5	11.3
Dir	267	268	272	263	269	268	262	267	269	295	311	309	315	305	318	343	17	150	312	236	194	199	210	234	287	315
22 Spd	3	4	5	5	4	3	1	3	13	8	10	8	4	4	4	5	6	4	1	1	0	0	1	1	2.5	13.4
Dir	226	239	249	249	256	264	281	327	4	8	9	359	342	296	297	26	28	25	347	322	70	32	330	14	338	4

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
23 Spd	1	2	2	2	3	3	1	2	2	3	1	1	1	3	5	4	5	3	2	3	3	6	8	8	1.4	8.3
Dir	28	346	10	11	359	346	359	358	5	2	26	42	57	148	138	137	135	128	129	148	166	168	169	168	130	169
24 Spd	6	6	8	8	8	9	8	8	7	6	4	2	1	5	15	13	12	5	4	1	2	1	3	0	2.0	15.0
Dir	169	168	173	176	175	172	172	171	172	174	171	186	250	305	306	323	331	327	352	234	213	254	343	121	217	306
25 Spd	0	0	0	0	0	1	1	1	1	1	2	3	5	7	5	3	1	1	0	0	1	1	1	2	1.4	6.6
Dir	184	313	163	190	107	197	170	170	178	165	138	162	168	169	174	172	167	356	202	185	208	176	218	206	173	169
26 Spd	2	1	2	2	3	3	3	2	2	1	1	11	15	14	11	6	7	5	4	4	7	7	10	12	2.9	14.7
Dir	195	208	201	196	198	195	192	204	193	187	217	292	309	322	312	17	23	28	22	8	10	29	29	29	342	309
27 Spd	15	11	11	13	13	14	11	12	13	11	9	6	7	7	8	11	8	5	6	5	2	1	1	2	7.8	14.6
Dir	35	31	27	33	28	27	18	8	6	6	9	31	355	335	341	7	14	21	22	31	32	123	109	155	18	35
28 Spd	1	1	2	2	4	4	4	5	4	7	8	9	10	11	10	10	9	7	8	9	9	7	6	6	6.4	10.8
Dir	192	138	148	170	165	164	162	159	159	167	167	168	168	167	169	167	168	171	166	171	170	170	171	171	167	167
29 Spd	6	6	5	5	3	3	2	2	2	3	4	4	4	4	4	3	1	2	2	6	9	6	6	7	2.8	9.3
Dir	170	170	172	174	176	185	197	195	194	183	177	177	174	176	175	174	195	196	198	254	273	292	282	273	207	273
30 Spd	11	9	10	7	8	8	7	1	1	2	4	3	4	4	3	6	7	2	1	2	2	2	3	2	3.4	10.9
Dir	277	275	278	282	277	280	278	257	144	156	173	165	170	173	176	257	270	237	197	199	206	203	197	197	250	277
31 Spd	2	7	15	10	2	5	11	11	16	22	20	19	16	19	17	9	9	11	18	13	8	11	10	8	11.6	21.9
Dir	163	265	292	287	215	267	273	271	272	275	286	310	286	292	296	289	293	271	275	272	265	266	265	261	280	275
Spd	1.4	1.6	1.7	1.3	1.0	1.1	1.4	1.4	1.6	2.0	2.8	3.7	4.3	4.8	5.0	4.4	3.5	1.9	1.6	1.6	1.8	1.6	1.7	1.5	Diurnal Average	
Dir	259	268	279	262	262	263	258	260	273	266	281	287	283	287	291	298	297	286	284	265	257	256	260	251		
Spd	14.6	10.6	14.6	12.7	12.8	14.0	11.2	13.4	15.6	21.9	20.1	18.8	16.9	19.8	20.7	17.6	18.3	15.6	17.6	13.4	9.3	10.5	9.9	12.4	Diurnal Maximum	
Dir	35	31	292	33	28	27	18	306	272	275	286	310	266	317	335	336	252	261	275	272	273	266	265	29		

Maximum Speed Value: 22 km/h on Oct 31 10:00
Minimum Speed Value: 0 km/h on Oct 13 07:00
Maximum Daily Speed Average: 11.6 km/h on Oct 31
Minimum Daily Speed Average: 0.5 km/h on Oct 3
Maximum Diurnal Speed Average: 5.0 km/h at hour 15
Minimum Diurnal Speed Average: 1.0 km/h at hour 5

Monthly Average Velocity: 2.21 km/h 278.2 deg
Speed Percentiles: P_1 = 0.0 P_{10} = 0.6 Q_1 = 1.3 Median = 3.4 Q_3 = 6.9 P_{90} = 10.8 P_{99} = 18.3
All monthly, daily, and diurnal averages have been calculated using vector methods

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

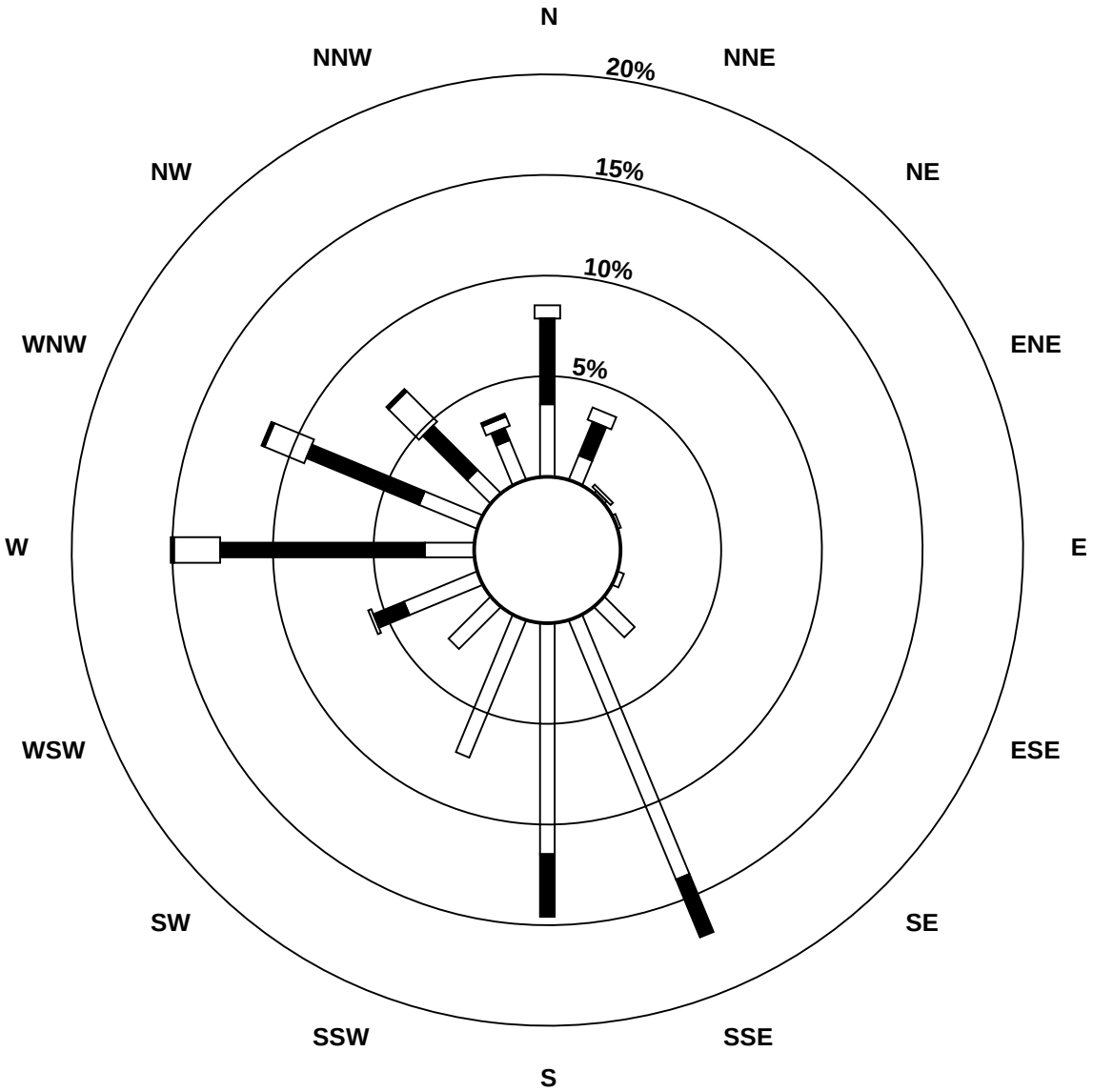
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	34	34	5	0	0	0	73
NorthEast	11	7	5	0	0	0	23
East	4	0	0	0	0	0	4
SouthEast	48	1	0	0	0	0	49
South	235	41	0	0	0	0	276
SouthWest	65	2	0	0	0	0	67
West	37	96	24	3	0	0	160
NorthWest	30	30	30	2	0	0	92
Total	464	211	64	5	0	0	744

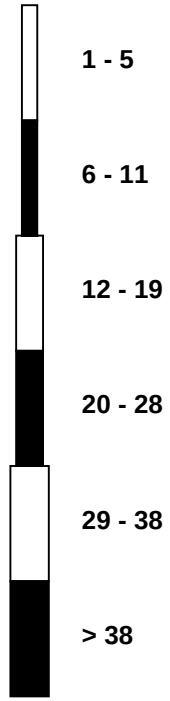
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - October 2013



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - October 2013

Maximum Speed: 22 km/h on Oct 31 10:00

Maximum Daily Speed Average: 12.3 km/h on Oct 31

Minimum Speed: 0 km/h on Oct 13 07:00

Minimum Daily Speed Average: 1.0 km/h on Oct 3

Maximum Diurnal Speed Average: 8.6 km/h at hour 15

Minimum Diurnal Speed Average: 3.3 km/h at hour 20

Monthly Average Speed: 4.89 km/h

Percentiles: P_1 = 0.1 P_{10} = 0.8 Q_1 = 1.5 Median = 3.7 Q_3 = 7.2 P_{90} = 11.0 P_{99} = 18.8

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 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-Oct	4	4	4	2	4	4	4	4	5	6	6	6	6	5	8	10	8	8	9	7	6	8	6	6	5.7	9.7
2-Oct	7	6	5	2	1	2	2	1	3	5	6	5	4	4	4	4	6	5	2	0	1	1	1	1	3.3	7.0
3-Oct	0	0	0	0	0	0	1	0	0	1	1	2	3	3	3	2	2	1	0	0	0	0	0	0	1.0	3.0
4-Oct	0	0	0	0	0	0	1	4	3	6	6	5	5	4	5	4	1	1	2	3	2	4	7	4	2.8	6.6
5-Oct	2	2	1	1	1	1	1	2	1	1	4	12	17	19	17	14	18	16	9	6	2	1	1	1	6.3	19.0
6-Oct	1	1	1	1	1	1	1	1	1	2	2	4	4	3	2	1	1	1	1	1	2	2	1	0	1.5	4.1
7-Oct	0	0	2	2	1	2	2	1	0	1	1	2	3	4	7	8	9	3	8	6	5	7	9	10	3.9	9.8
8-Oct	9	8	11	7	11	11	11	14	14	13	14	15	16	15	15	15	12	8	9	8	6	5	4	5	10.7	16.0
9-Oct	2	1	1	1	1	3	5	4	5	6	6	7	6	5	2	8	2	2	2	3	2	2	1	1	3.2	7.7
10-Oct	1	1	4	6	1	1	2	6	9	12	17	17	15	13	13	11	13	9	7	6	6	2	1	1	7.4	17.3
11-Oct	2	1	1	2	1	1	2	4	5	6	11	11	10	10	10	11	6	2	1	3	6	7	8	4	5.2	11.4
12-Oct	2	1	1	1	1	1	1	1	1	2	1	2	3	4	7	4	2	1	0	0	0	0	1	1	1.6	6.8
13-Oct	1	1	1	1	0	0	0	0	0	1	1	1	2	3	5	5	4	4	2	1	1	1	1	1	1.5	4.7
14-Oct	2	1	2	2	3	2	2	2	2	4	4	4	5	4	6	5	3	0	0	1	2	1	1	1	2.4	5.8
15-Oct	2	1	2	3	3	3	2	1	7	13	14	12	10	12	11	7	6	4	4	5	5	5	4	3	5.8	14.4
16-Oct	2	1	1	1	2	1	1	1	2	2	3	3	3	6	6	7	4	2	0	1	1	1	3	7	2.5	7.0
17-Oct	9	9	11	9	8	5	5	7	2	2	7	9	9	9	9	8	6	3	1	1	1	1	1	1	5.6	11.2
18-Oct	2	1	2	3	2	1	1	2	3	4	3	4	9	11	10	10	7	3	1	1	5	8	8	5	4.4	10.8
19-Oct	10	11	8	7	7	6	6	6	8	7	8	11	15	20	21	18	16	5	4	2	2	2	2	1	8.4	20.8
20-Oct	3	3	2	1	1	1	1	1	2	2	7	12	12	11	11	11	9	5	1	2	6	7	8	6	5.3	12.4
21-Oct	7	8	9	7	6	6	7	4	2	6	9	11	11	10	9	6	1	1	2	1	2	2	2	3	5.5	11.5
22-Oct	3	4	5	5	4	3	2	4	14	8	10	9	4	4	4	5	6	4	1	1	1	0	1	1	4.2	13.5
23-Oct	1	2	2	2	3	3	1	2	2	3	2	2	2	4	5	4	5	3	2	3	3	6	8	8	3.3	8.4
24-Oct	6	6	8	8	8	9	8	8	7	6	4	2	2	6	16	13	12	5	4	2	2	2	3	1	6.2	15.5
25-Oct	1	2	0	0	0	1	1	1	1	1	2	4	5	7	5	3	1	1	0	0	1	1	1	2	1.8	6.7
26-Oct	2	2	2	2	3	3	3	2	2	1	2	11	15	14	12	6	7	5	4	4	7	8	10	13	5.8	15.0
27-Oct	15	11	11	13	13	14	11	12	13	11	9	6	7	7	8	11	8	5	6	5	2	1	1	3	8.5	14.8
28-Oct	2	1	3	2	4	4	4	5	4	7	8	9	10	11	11	10	9	7	8	9	9	7	6	6	6.6	11.0
29-Oct	6	6	5	5	3	3	2	2	2	3	4	4	4	5	4	3	1	2	2	6	9	6	7	7	4.1	9.5
30-Oct	11	9	10	7	8	8	8	2	2	2	4	3	4	4	3	7	7	3	1	2	2	2	3	2	4.8	11.0
31-Oct	2	8	15	11	2	6	11	12	16	22	20	19	16	20	17	9	10	12	18	14	8	11	10	8	12.3	22.1
	3.7	3.6	4.3	3.6	3.4	3.5	3.5	3.7	4.5	5.2	6.3	7.3	7.6	8.3	8.6	7.8	6.6	4.3	3.7	3.3	3.5	3.6	3.9	3.7	Diurnal Average	
	14.8	10.7	14.8	12.9	13.0	14.1	11.4	13.7	15.7	22.1	20.4	19.2	17.2	20.2	20.8	17.7	18.5	15.8	17.8	13.6	9.5	10.6	10.0	12.5	Diurnal Maximum	

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - October 2013

Maximum Value: 94.7 deg on Oct 16 02:00

Minimum Value: 5.1 deg on Oct 14 06:00

Percentiles: P_1 = 5.9 P_{10} = 8.0 Q_1 = 10.5 Median = 14.5 Q_3 = 27.1 P_{90} = 46.6 P_{99} = 88.6

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Oct	13	18	27	23	13	12	13	9	11	12	12	15	14	15	13	9	10	9	9	9	8	9	8	11	27.2
2-Oct	10	10	10	15	18	17	23	23	16	22	18	25	28	30	21	21	11	11	26	45	77	32	89	57	88.6
3-Oct	50	67	72	23	50	51	41	37	68	39	76	89	65	64	68	27	34	17	12	25	64	57	64	87	89.0
4-Oct	48	45	44	72	84	81	14	7	9	8	8	9	11	10	8	7	43	32	57	43	15	6	8	10	83.7
5-Oct	24	18	14	44	19	29	34	33	13	20	50	13	11	14	12	13	8	9	10	16	29	20	36	40	49.7
6-Oct	25	11	9	22	15	42	15	10	14	12	11	16	15	16	15	13	31	32	45	26	9	14	55	43	55.3
7-Oct	68	71	31	17	20	31	31	45	90	35	49	50	17	50	26	19	24	35	15	15	23	11	14	11	89.9
8-Oct	11	13	13	14	9	11	11	12	11	11	11	12	11	11	12	10	13	11	18	11	14	11	16	16	18.4
9-Oct	16	19	6	16	20	7	6	7	7	7	9	9	11	12	15	22	29	7	10	10	9	14	11	15	29.4
10-Oct	24	47	12	9	24	24	24	14	9	15	10	12	21	14	17	14	11	12	15	8	9	33	12	10	47.5
11-Oct	8	9	14	9	43	23	14	20	28	30	14	20	17	23	20	18	17	24	45	21	14	12	18	76	75.9
12-Oct	49	31	29	33	50	34	17	17	10	11	19	39	42	47	16	17	27	21	26	45	47	39	52	40	52.1
13-Oct	18	22	11	21	31	24	89	82	71	53	46	18	18	20	23	18	13	8	13	42	21	12	18	24	89.4
14-Oct	17	7	8	5	6	5	9	14	9	9	11	15	13	42	30	27	29	19	14	20	27	21	17	18	41.7
15-Oct	8	28	12	12	12	9	18	35	27	11	12	10	11	21	11	15	18	14	26	10	11	12	11	14	34.7
16-Oct	45	95	36	28	17	12	17	12	7	28	15	80	57	27	39	22	17	13	44	15	23	11	58	12	94.7
17-Oct	9	12	9	8	8	26	17	25	39	55	21	18	23	19	21	19	18	12	35	9	7	18	20	20	54.6
18-Oct	15	18	11	8	8	25	50	20	18	9	35	57	21	16	11	11	11	74	12	33	17	12	9	18	74.3
19-Oct	11	11	15	11	10	11	10	14	9	11	13	11	14	11	7	7	5	12	9	31	54	44	21	11	53.6
20-Oct	9	7	7	40	28	14	43	32	24	22	47	12	12	15	12	12	13	15	14	19	12	11	8	11	47.4
21-Oct	11	8	8	10	10	12	9	17	20	15	13	13	11	14	14	12	66	21	90	69	28	10	17	9	90.1
22-Oct	16	11	8	8	8	36	38	36	7	10	14	17	22	36	31	36	14	17	32	26	86	93	39	31	93.2
23-Oct	86	61	36	20	20	19	15	17	19	21	38	57	59	33	21	23	10	7	9	14	10	8	7	7	86.0
24-Oct	7	9	7	7	7	5	7	8	9	10	26	52	60	46	15	8	6	19	47	22	36	60	40	94	93.6
25-Oct	87	79	39	61	60	13	8	14	45	42	20	26	14	12	14	18	41	54	47	67	32	49	34	18	86.8
26-Oct	7	19	15	10	8	7	7	10	6	39	51	13	10	13	25	17	12	10	12	7	7	18	12	9	50.6
27-Oct	8	8	8	9	10	9	9	8	8	9	14	17	15	18	13	9	11	12	13	17	19	23	53	31	52.6
28-Oct	47	69	38	13	10	12	11	8	11	8	9	11	11	10	10	10	8	8	8	7	6	8	7	7	68.5
29-Oct	6	8	7	7	8	7	11	10	7	11	10	14	13	13	12	12	23	21	15	19	11	18	12	10	22.6
30-Oct	9	7	7	10	7	6	8	81	49	17	13	15	14	13	15	38	12	20	12	14	11	12	7	31	81.2
31-Oct	39	47	11	22	22	44	7	9	8	8	10	12	9	11	11	10	12	12	8	8	10	8	8	13	46.7
	86.8	94.7	72.3	72.1	83.7	81.4	89.4	81.8	89.9	54.6	75.7	89.0	65.4	63.8	68.1	38.2	66.2	74.3	90.1	69.5	86.2	93.2	88.6	93.6	

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

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Sunset House - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 11.3 ppb on Oct 7 02:00 Maximum Daily Average: 1.3 ppb on Oct 7

Minimum Value: 0 ppb on Oct 1 01:00 Minimum Daily Average: 0.0 ppb on Oct 1
Maximum Diurnal Average: 0.7 ppb at hour 2 Minimum Diurnal Average: 0.2 ppb at hour 10
Monthly Average: 0.26 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.9

Hours in Service:	691
Hours of Data:	629
Hours of Missing Data:	62
Hours of Calibration:	36
Percent Operational Time:	96.2

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	0	0	0	0	N	N	N	N	N	0	0	0	0	0	0	0	A	0	0	0	0.0	0.0
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.0
3-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	8	2	1	0.5	7.8
4-Oct	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	1.2
5-Oct	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.5
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	1	1	0	0	0	0	0	0.3	0.7
7-Oct	1	11	3	1	3	3	2	2	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	1.3	11.3
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.1
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
10-Oct	0	0	0	0	0	0	0	0	0	0	0	A	0	P	P	P	P	P	P	P	P	P	P	P	--	0.4
11-Oct	P	P	P	P	P	P	P	P	P	P	C	0	0	0	0	1	0	0	0	1	0	0	0	0	--	0.6
12-Oct	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
13-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0	0	1	1	1	0	0	1	1	0.3	0.7
14-Oct	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
15-Oct	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
16-Oct	0	0	0	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.5
17-Oct	0	0	1	1	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0.4	0.8
18-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.5
19-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
20-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
21-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0.2	0.5
22-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	2	2	0.2	1.8
24-Oct	2	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.6	2.2
25-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	1	0	0	0	0.3	1.3
26-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.4
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.4
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.4
29-Oct	0	0	0	0	0	0	0	0	C	C	C	C	C	C	0	A	0	0	0	NS	NS	NS	NS	NS	--	0.4
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	0.3	0.7	0.4	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.2	Diurnal Average	
	1.9	11.3	3.4	1.1	3.0	2.9	2.3	1.8	1.0	0.9	0.6	0.6	0.5	0.6	0.7	0.6	1.3	1.2	1.1	0.6	0.8	7.8	2.1	1.8	Diurnal Maximum	

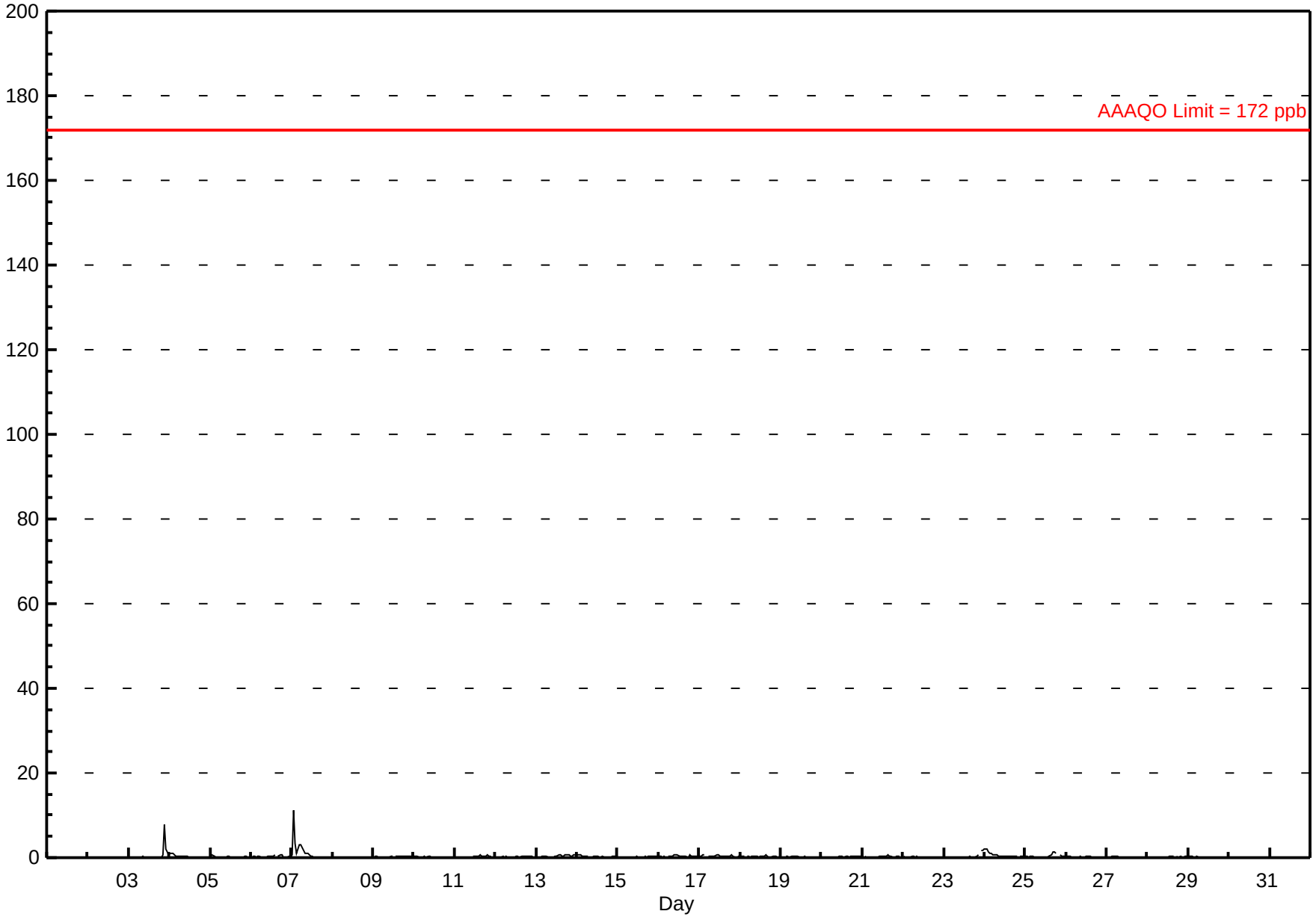
C - Calibration P - Power Failure N - Not Valid NS - Not in service A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Sunset House - October 2013



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Sunset House - October 2013

Maximum Value: 20.3 ppb on Oct 7 02:00

Maximum Daily Average: 2.5 ppb on Oct 7

Minimum Value: 0 ppb on Oct 29 15:00

Minimum Daily Average: 0.3 ppb on Oct 8

Maximum Diurnal Average: 1.5 ppb at hour 2

Minimum Diurnal Average: 0.7 ppb at hour 7

Monthly Average: 0.84 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.3$ $Q_1 = 0.5$ Median = 0.7 $Q_3 = 0.9$ $P_{90} = 1.1$ $P_{99} = 2.3$

Hours in Service:	691
Hours of Data:	629
Hours of Missing Data:	62
Hours of Calibration:	36
Percent Operational Time:	96.2

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	2	0	0	0	0	1	N	N	N	N	N	0	0	0	0	0	0	0	A	0	1	1	0.5	1.6
2-Oct	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	A	0	0	0	0	0.4	0.7
3-Oct	0	1	0	0	0	1	0	1	1	1	0	0	1	1	0	1	0	0	A	0	5	14	13	1	1.9	14.3
4-Oct	2	2	2	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	0	1	0	0	0	1	0.9	1.9
5-Oct	0	1	1	1	1	1	0	1	1	0	1	1	1	1	0	1	A	1	1	1	1	1	0	0	0.7	1.4
6-Oct	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	0	1	1	1	0.8	1.8
7-Oct	3	20	8	2	4	4	3	2	2	2	1	1	1	1	A	0	0	1	1	1	1	1	1	0	2.5	20.3
8-Oct	1	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0.3	0.7
9-Oct	0	1	1	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
10-Oct	1	1	1	1	0	1	1	1	1	1	1	A	1	P	P	P	P	P	P	P	P	P	P	P	--	0.9
11-Oct	P	P	P	P	P	P	P	P	P	P	C	1	1	1	1	1	1	1	1	1	1	1	1	0	--	1.3
12-Oct	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.7	1.3
13-Oct	1	0	1	1	1	1	1	0	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
14-Oct	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0.8	1.2
15-Oct	1	1	1	1	1	1	A	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	0.7	1.2
16-Oct	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
17-Oct	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	0	1	0.9	1.8
18-Oct	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
19-Oct	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
20-Oct	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	0.7	1.1
21-Oct	A	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.0
22-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	A	0	0.6	1.0
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	A	2	2	0.6	2.3
24-Oct	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.2	2.8
25-Oct	1	1	1	1	1	0	0	0	0	0	0	1	0	1	1	1	2	2	2	A	1	1	1	1	0.8	1.7
26-Oct	1	1	1	1	1	1	0	0	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.1
27-Oct	1	0	1	1	1	1	1	1	1	0	0	0	1	1	0	1	1	A	1	1	0	0	1	0	0.6	1.2
28-Oct	1	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	A	1	1	1	1	0	1	1	0.6	1.3
29-Oct	1	1	1	1	1	1	1	1	C	C	C	C	C	C	0	A	0	0	0	NS	NS	NS	NS	NS	--	1.0
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	0.9	1.5	1.1	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.8	0.8	1.0	1.2	1.2	0.7	Diurnal Average	
	3.2	20.3	7.8	2.2	3.7	3.6	3.2	2.5	1.6	1.5	1.3	1.1	1.1	1.2	1.2	1.3	1.7	1.8	1.7	1.8	5.4	14.3	13.4	2.3	Diurnal Maximum	

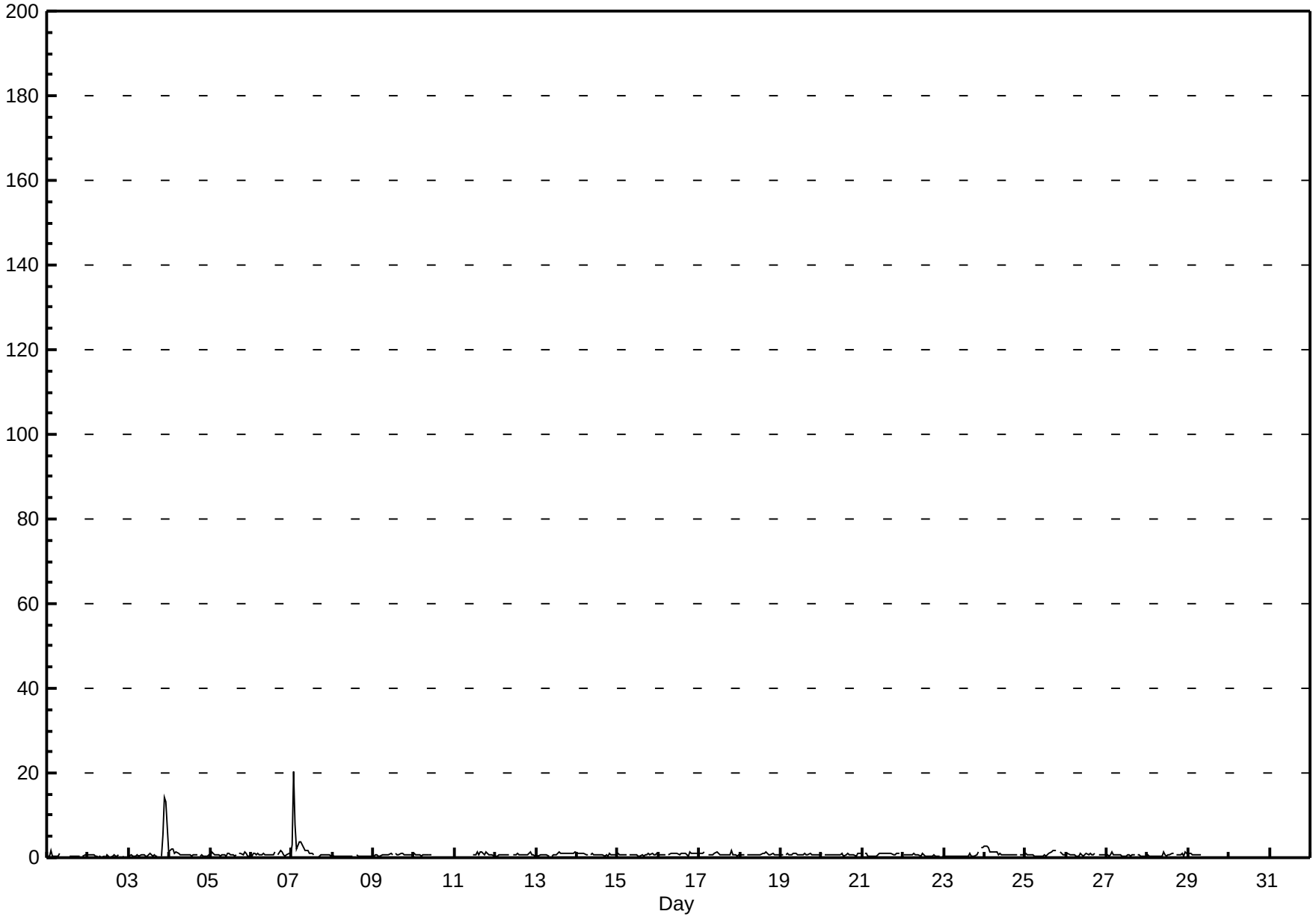
C - Calibration P - Power Failure N - Not Valid NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Sunset House - October 2013

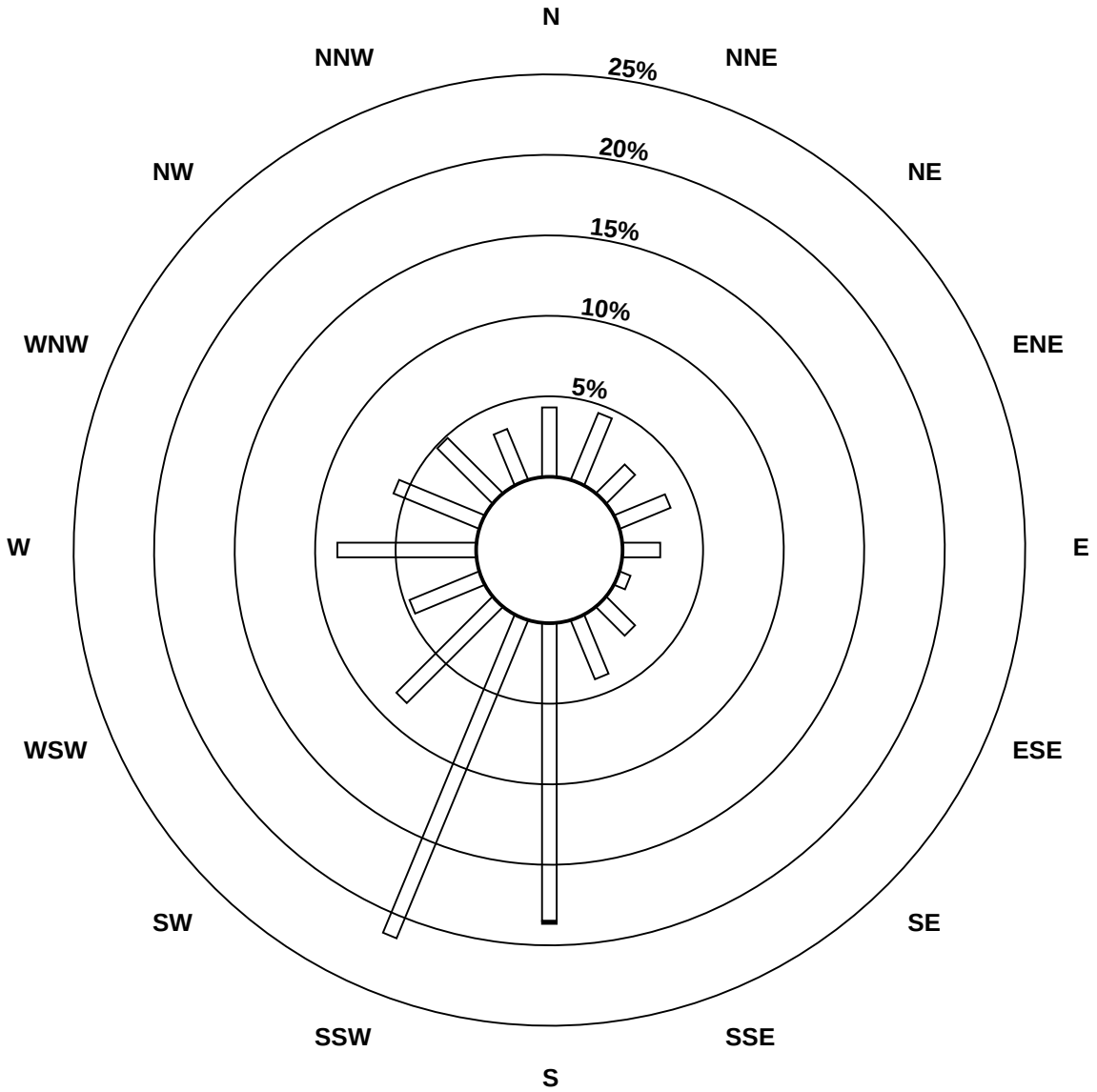


Peace Airshed Zone Association

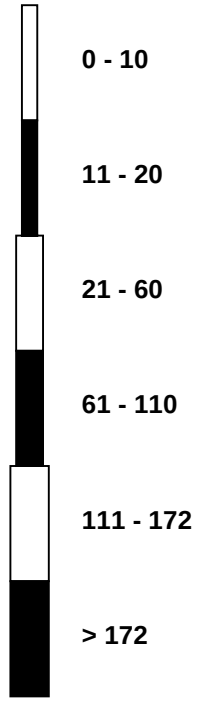
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Sunset House - October 2013



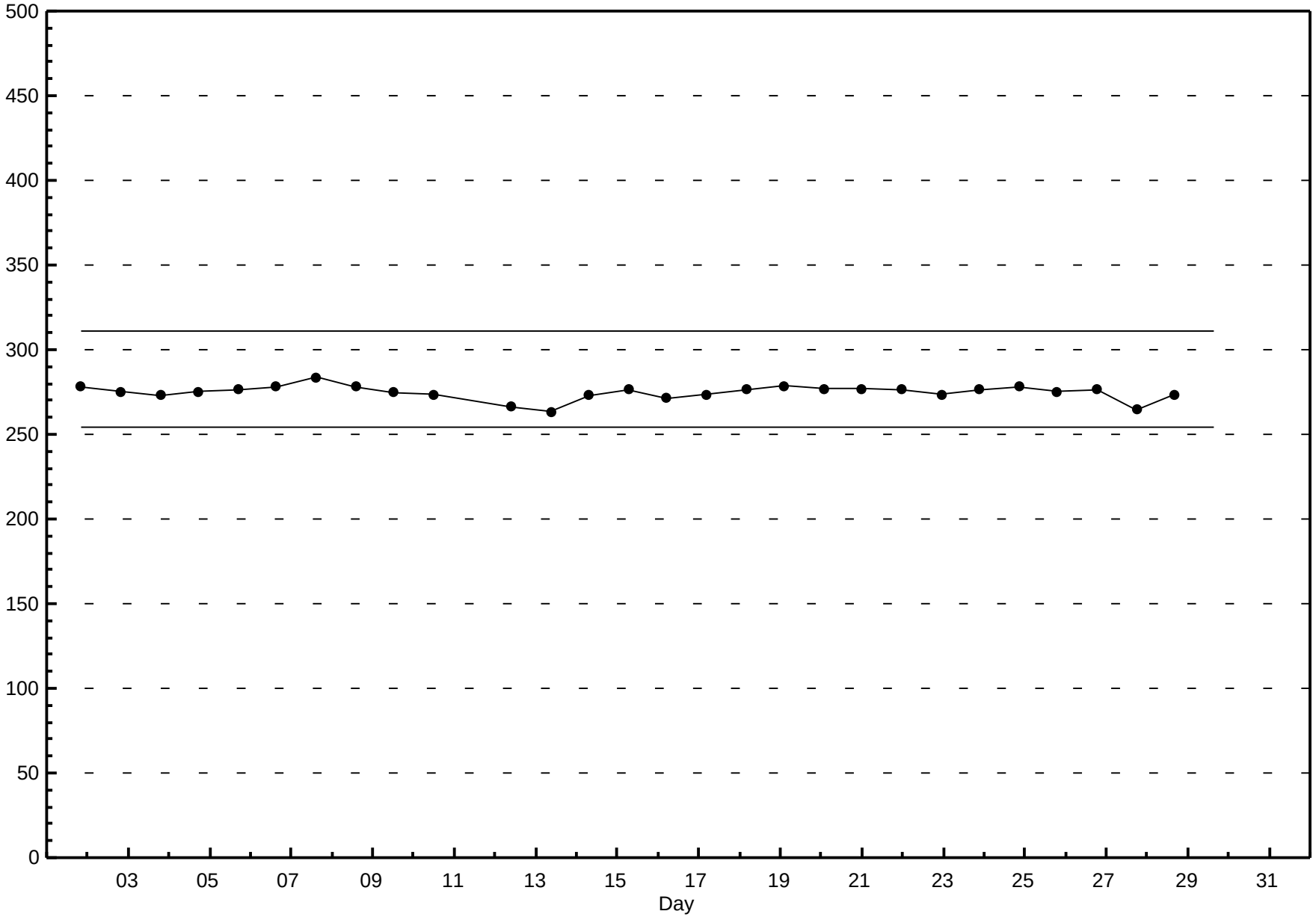
Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO_2)

Sunset House - October 2013



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Sunset House - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.8 ppb on Oct 16 07:00 Maximum Daily Average: 0.5 ppb on Oct 6

Minimum Value: 0 ppb on Oct 1 17:00 Minimum Daily Average: 0.1 ppb on Oct 17
Maximum Diurnal Average: 0.3 ppb at hour 5 Minimum Diurnal Average: 0.2 ppb at hour 13
Monthly Average: 0.20 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.3$ $P_{90} = 0.4$ $P_{99} = 0.7$

Hours in Service:	692
Hours of Data:	633
Hours of Missing Data:	59
Hours of Calibration:	33
Percent Operational Time:	96.2

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

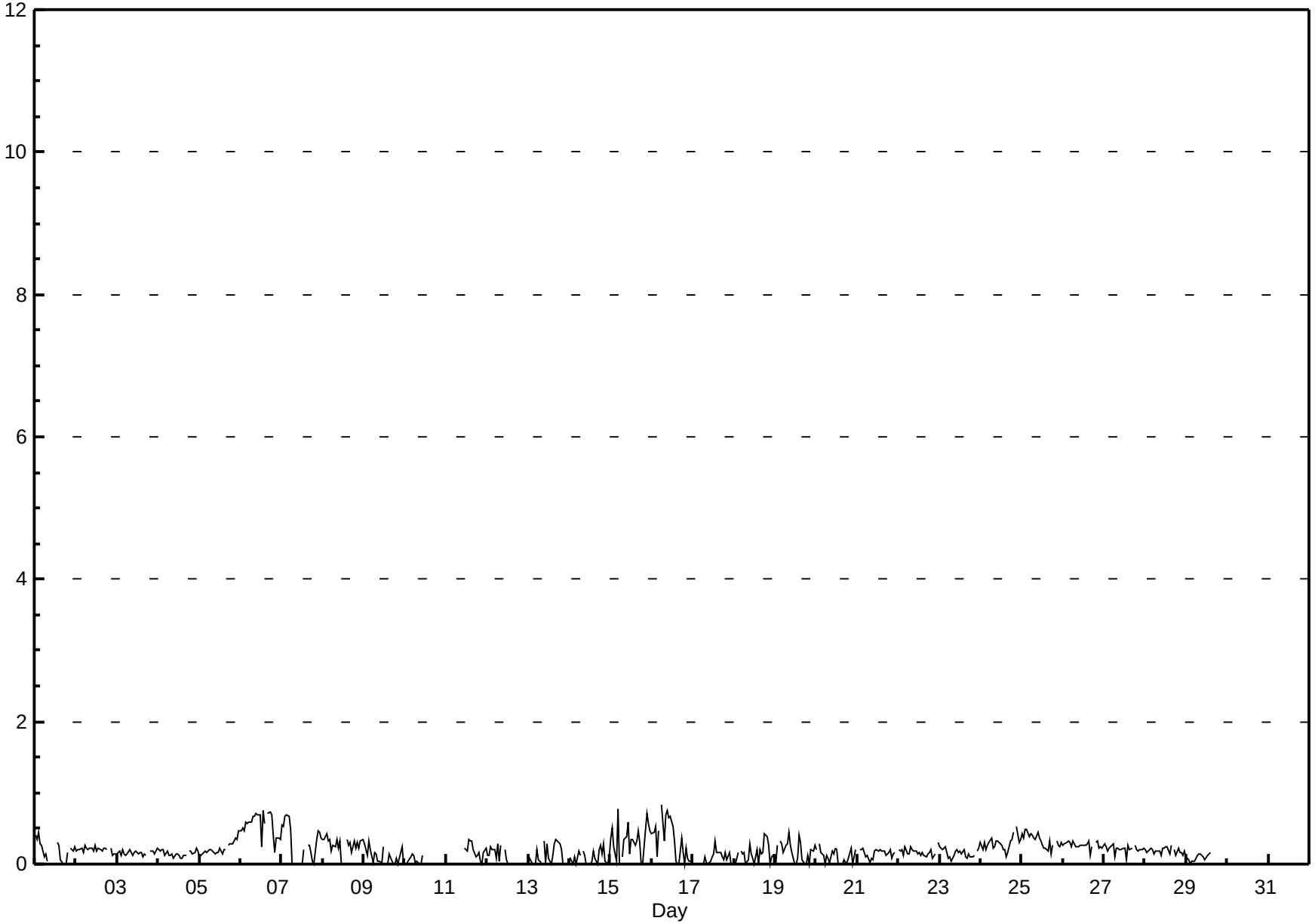
C - Calibration P - Power Failure N - Not Valid NS - Not in service A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Sunset House - October 2013



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Sunset House - October 2013

Maximum Value: 1.7 ppb on Oct 1 05:00

Maximum Daily Average: 1.1 ppb on Oct 15

Minimum Value: 0 ppb on Oct 13 00:00

Minimum Daily Average: 0.6 ppb on Oct 12

Maximum Diurnal Average: 0.8 ppb at hour 5

Minimum Diurnal Average: 0.6 ppb at hour 18

Monthly Average: 0.70 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 0.8$ $P_{90} = 0.9$ $P_{99} = 1.3$

Hours in Service:	692
Hours of Data:	633
Hours of Missing Data:	59
Hours of Calibration:	33
Percent Operational Time:	96.2

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	1	1	1	2	1	1	1	N	N	N	N	N	1	1	1	0	0	0	1	A	1	1	1	0.7	1.7
2-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	A	1	0	1	1	0.6	0.8
3-Oct	1	1	1	0	0	0	1	1	1	1	1	0	1	1	1	0	1	1	A	1	0	1	1	1	0.6	0.8
4-Oct	1	1	1	1	1	1	0	1	1	0	1	0	1	1	0	0	0	A	1	1	1	1	1	1	0.6	0.8
5-Oct	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.4
6-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.0	1.3
7-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.2
8-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	0.9
9-Oct	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	0	1	1	1	0.7	1.0
10-Oct	0	0	1	1	1	0	0	0	1	0	1	A	1	P	P	P	P	P	P	P	P	P	P	P	--	0.7
11-Oct	P	P	P	P	P	P	P	P	P	P	C	1	1	1	1	1	1	1	1	1	1	1	1	1	--	0.8
12-Oct	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	0	0	1	0	0	0	0	0	0.6	0.9
13-Oct	0	1	1	0	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0.6	0.9
14-Oct	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.7	1.0
15-Oct	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4
16-Oct	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5
17-Oct	0	0	0	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.7
18-Oct	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
19-Oct	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0.7	0.9
20-Oct	1	A	1	1	1	0	0	0	1	1	1	1	1	1	0	0	1	1	0	1	1	0	0	1	0.6	0.8
21-Oct	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.6	0.9
22-Oct	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	1	A	1	0.6	0.8
23-Oct	1	1	0	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	0.6	0.8
24-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.0
25-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.0
26-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	0.8
27-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	1	1	1	1	0.7	0.8
28-Oct	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.6	0.9
29-Oct	1	0	0	1	0	1	1	1	1	1	1	0	1	1	1	A	1	C	C	C	NS	NS	NS	NS	--	0.7
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	Diurnal Average	
	1.1	1.4	1.2	1.2	1.7	1.1	1.5	1.2	1.3	1.2	1.1	1.1	1.0	1.4	1.3	0.9	1.2	1.2	1.3	1.1	1.1	1.1	1.0	1.0	Diurnal Maximum	

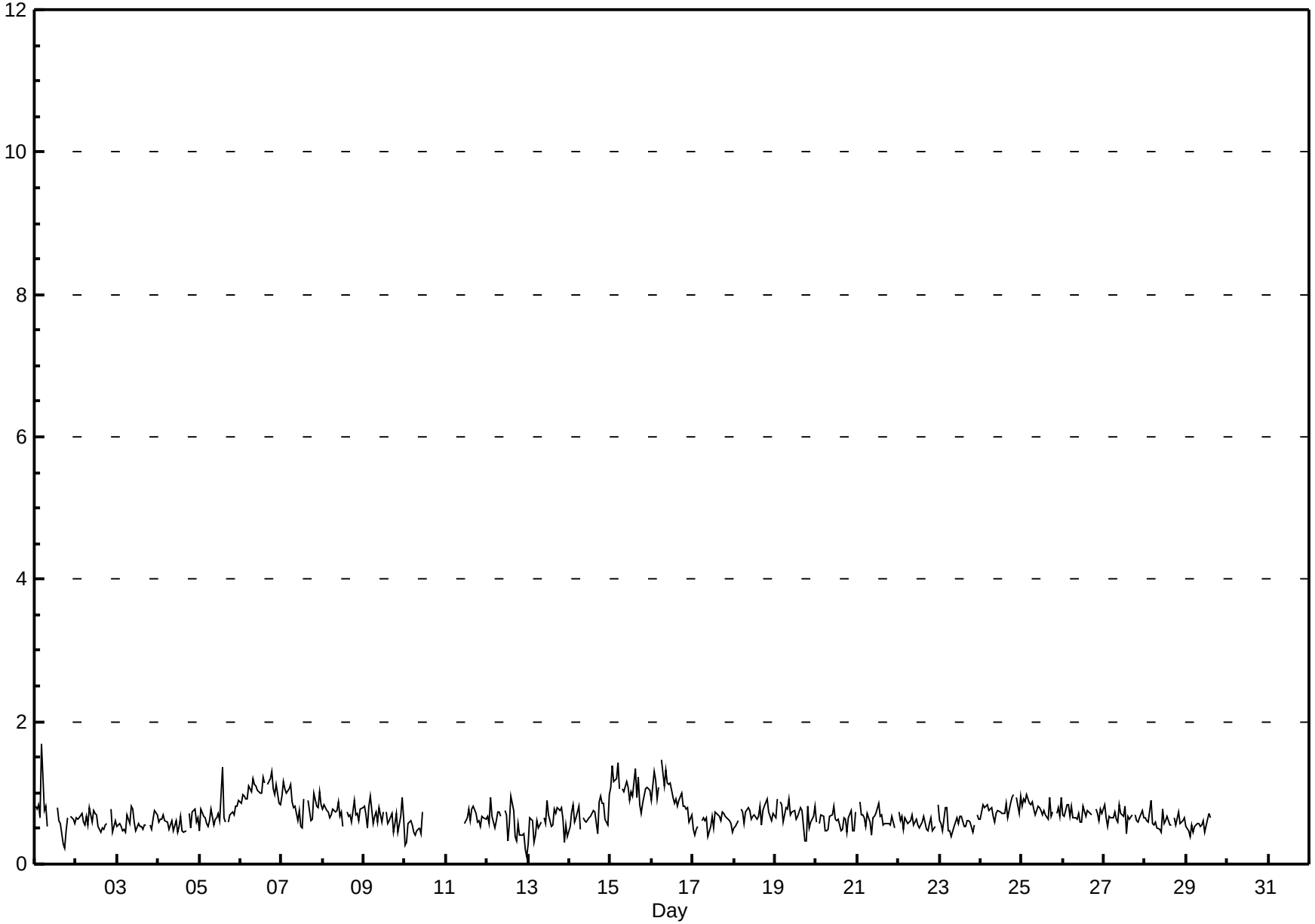
C - Calibration P - Power Failure N - Not Valid NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

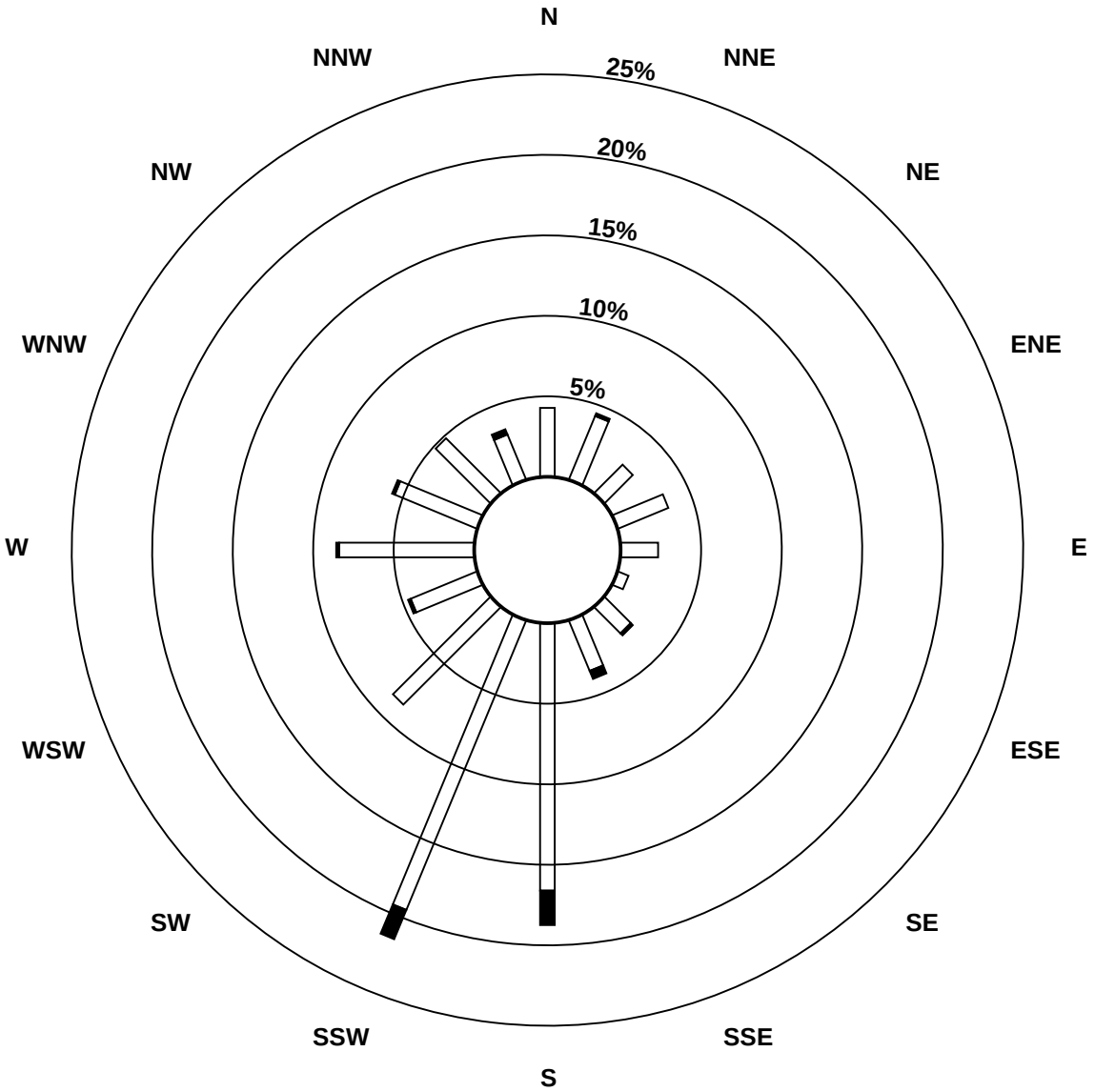
Sunset House - October 2013



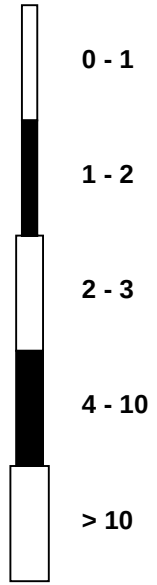
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Sunset House - October 2013



Pollutant Classes (ppb)

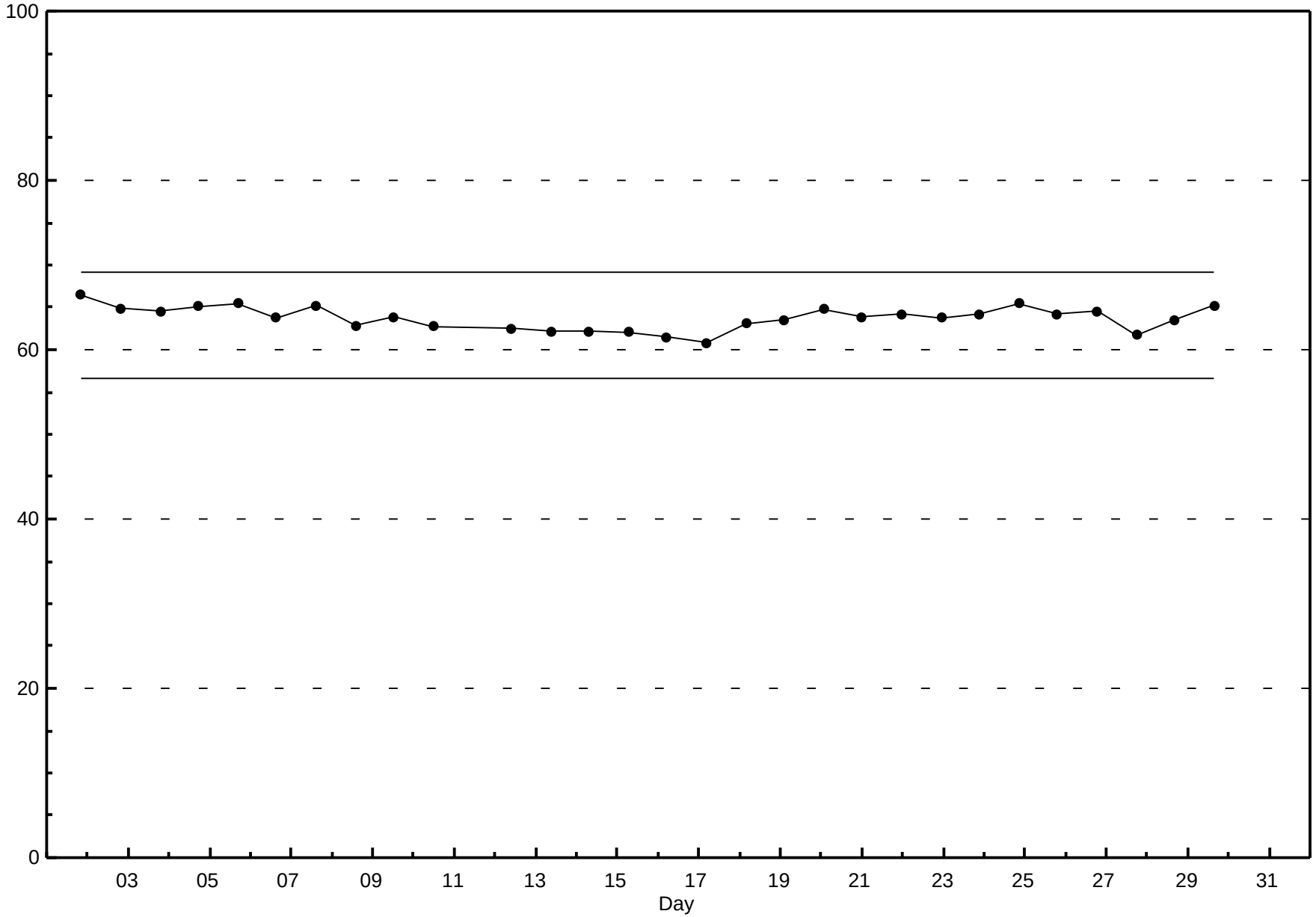


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Sunset House - October 2013



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Sunset House - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 17.6 ppb on Oct 7 02:00 Maximum Daily Average: 3.4 ppb on Oct 7

Minimum Value: 0 ppb on Oct 25 09:00 Minimum Daily Average: 0.4 ppb on Oct 8
Maximum Diurnal Average: 2.2 ppb at hour 2 Minimum Diurnal Average: 0.8 ppb at hour 15
Monthly Average: 1.30 ppb Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.6$ Median = 1.0 $Q_3 = 1.8$ $P_{90} = 2.5$ $P_{99} = 5.4$

Hours in Service:	689
Hours of Data:	550
Hours of Missing Data:	139
Hours of Calibration:	37
Percent Operational Time:	85.2

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Oct	2	2	1	1	1	1	1	1	N	N	N	N	N	1	0	0	0	1	1	0	A	1	1	0	0.9	1.8
2-Oct	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0.4	0.9
3-Oct	0	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	1	1	A	1	1	1	3	2	0.7	2.7
4-Oct	2	2	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	A	2	2	2	1	1	1	1.9	2.9
5-Oct	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	1	1	1	1	1	1	1	0.8	1.5
6-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	0	1	1	1	1.0	1.9
7-Oct	2	18	6	3	6	6	5	6	5	4	4	3	2	1	A	1	1	1	1	1	1	1	1	1	3.4	17.6
8-Oct	1	1	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0.4	1.4
9-Oct	0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.4
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--	--
11-Oct	P	P	P	P	P	P	P	P	P	P	C	C	C	C	1	1	1	1	1	N	N	N	N	N	--	0.8
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	2	2	1	1	1	1	1	1	1	0	1	1	1	--	1.7
14-Oct	2	2	2	2	2	2	2	A	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1.6	2.4
15-Oct	2	1	1	1	1	1	A	2	2	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	0.9	2.2
16-Oct	0	0	1	1	1	A	2	2	2	2	2	1	1	1	1	1	1	1	2	1	1	2	2	2	1.3	2.4
17-Oct	2	2	2	1	A	1	1	1	2	2	2	1	1	1	1	1	1	1	2	2	1	1	1	1	1.4	2.3
18-Oct	2	2	2	A	2	2	2	2	2	2	2	2	1	1	1	2	2	2	2	2	2	2	1	1	1.8	2.4
19-Oct	1	1	A	1	1	1	1	1	2	2	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0.8	1.8
20-Oct	1	A	2	2	2	2	3	3	2	2	2	2	1	1	1	2	1	1	1	1	2	2	2	2	1.8	2.7
21-Oct	A	2	1	1	1	2	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1.3	2.0
22-Oct	2	2	1	1	1	1	2	2	3	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1.1	2.6
23-Oct	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	A	4	4	0.8	4.0
24-Oct	5	5	4	3	3	3	3	3	3	3	3	3	3	3	1	1	1	2	2	2	A	2	2	1	2.6	4.7
25-Oct	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	3	3	3	A	4	4	3	3	1.4	4.0
26-Oct	3	3	2	2	2	2	2	2	2	3	3	2	1	1	1	1	1	2	A	2	1	1	1	1	1.7	2.9
27-Oct	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	A	1	1	1	1	1	1	0.5	1.1
28-Oct	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	A	2	2	2	2	2	2	2	1.1	2.2
29-Oct	2	2	3	3	3	3	3	3	C	C	C	C	C	C	C	C	C	NS	NS	NS	NS	NS	NS	NS	--	2.9
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	1.4	2.2	1.6	1.3	1.5	1.6	1.6	1.6	1.7	1.5	1.3	1.1	0.9	0.8	0.8	0.9	1.0	1.1	1.2	1.0	1.2	1.2	1.4	1.3	Diurnal Average	
	4.7	17.6	5.6	3.3	5.5	5.7	5.4	6.2	4.7	4.1	3.8	2.8	2.8	2.6	1.6	1.8	2.7	2.9	2.6	1.9	4.0	3.7	4.0	4.0	Diurnal Maximum	

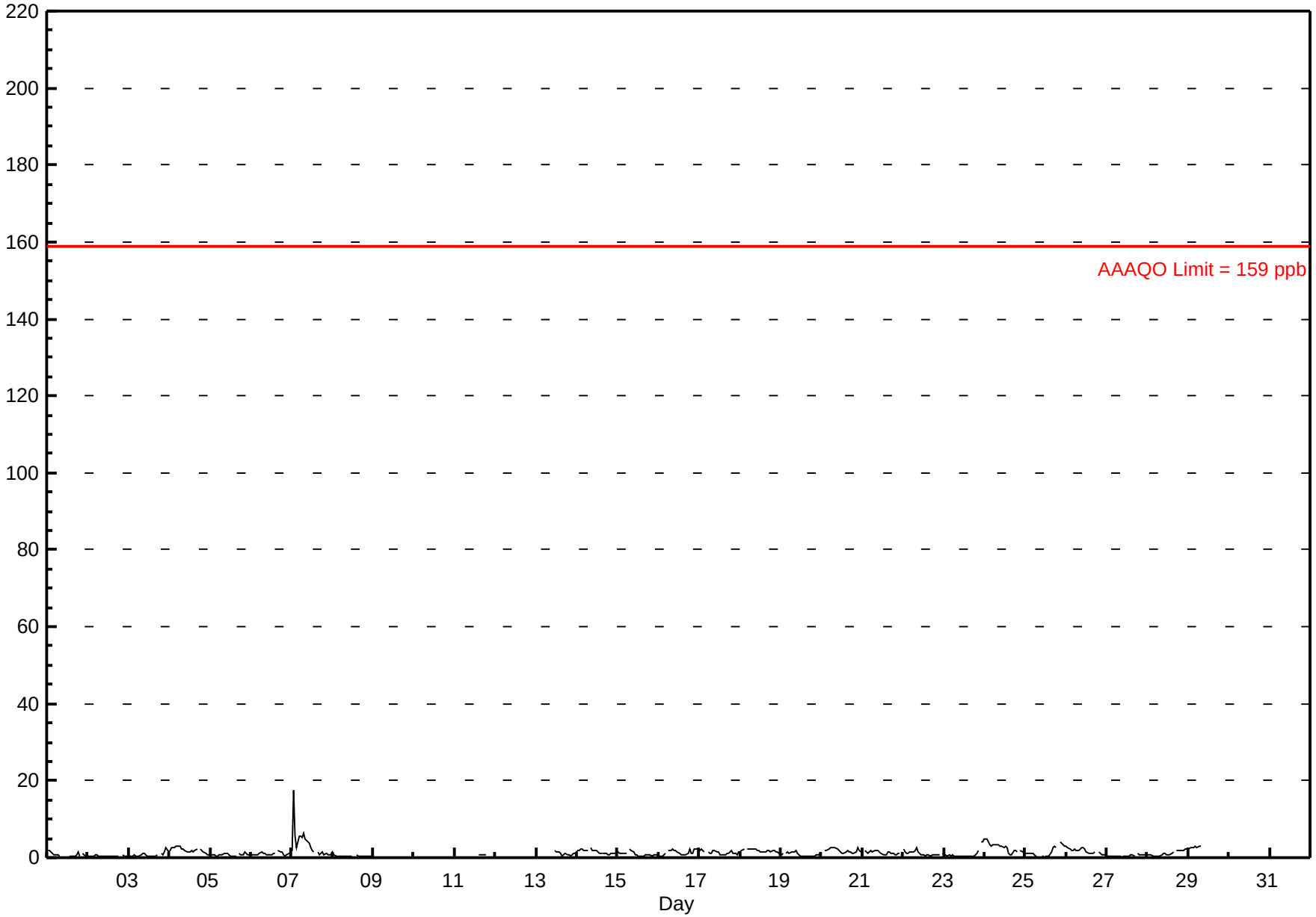
C - Calibration P - Power Failure N - Not Valid NS - Not in service A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Sunset House - October 2013



Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Sunset House - October 2013

Maximum Value: 29.8 ppb on Oct 7 02:00

Maximum Daily Average: 4.9 ppb on Oct 7

Minimum Value: 0 ppb on Oct 25 09:00

Minimum Daily Average: 0.7 ppb on Oct 8

Maximum Diurnal Average: 3.0 ppb at hour 2

Minimum Diurnal Average: 1.3 ppb at hour 14

Monthly Average: 1.76 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.6$ $Q_1 = 0.8$ Median = 1.5 $Q_3 = 2.3$ $P_{90} = 3.1$ $P_{99} = 6.1$

Hours in Service:	689
Hours of Data:	550
Hours of Missing Data:	139
Hours of Calibration:	37
Percent Operational Time:	85.2

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	2	2	2	1	1	1	1	1	N	N	N	N	N	1	1	1	1	2	3	1	A	2	1	1	1.3	2.6
2-Oct	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	A	2	1	1	1	0.7	1.6
3-Oct	1	0	1	1	1	0	0	1	1	2	1	1	1	1	1	1	1	1	A	1	1	2	5	2	1.1	5.0
4-Oct	2	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	3	A	4	3	2	1	1	1	2.4	4.0
5-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	3	1	2	4	1	1	1.2	3.6
6-Oct	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1	A	2	2	2	1	1	1	1	2	1.3	2.5
7-Oct	5	30	13	4	6	6	6	8	6	4	4	3	2	2	A	2	1	2	2	1	2	1	2	2	4.9	29.8
8-Oct	2	1	1	1	0	0	0	0	0	0	1	0	0	A	1	1	0	1	0	0	0	0	1	1	0.7	2.1
9-Oct	1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.6
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--	--
11-Oct	P	P	P	P	P	P	P	P	P	P	C	C	C	C	1	1	5	1	1	N	N	N	N	N	--	4.7
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	2	2	2	4	1	1	1	1	1	1	1	2	2	--	4.0
14-Oct	2	2	2	2	2	2	2	A	3	2	2	2	2	2	1	2	1	1	1	1	1	1	1	2	1.9	3.1
15-Oct	2	1	1	1	1	1	A	3	2	2	1	1	1	1	0	1	7	2	2	1	1	1	1	1	1.5	6.9
16-Oct	1	1	1	1	1	A	3	2	2	2	3	2	1	1	1	1	1	2	3	2	2	3	3	3	1.8	3.2
17-Oct	2	4	2	2	A	2	2	2	2	2	2	2	1	1	1	1	2	2	3	4	1	1	1	2	1.9	3.8
18-Oct	2	2	2	A	3	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2.2	2.9
19-Oct	1	2	A	2	2	2	2	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.8
20-Oct	1	A	2	2	2	3	3	3	3	3	2	2	2	1	2	2	2	2	1	1	2	4	3	2	2.2	3.6
21-Oct	A	3	2	1	2	2	2	2	2	2	2	1	1	1	2	2	2	1	1	1	1	1	1	A	1.8	2.8
22-Oct	3	2	1	2	2	2	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1.5	3.1
23-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	2	A	4	4	1.1	4.4
24-Oct	5	5	4	4	3	3	4	4	4	3	3	3	4	6	2	1	1	2	2	2	A	3	2	1	3.2	6.1
25-Oct	1	1	1	1	1	1	1	0	0	0	1	0	0	0	1	2	3	3	3	A	4	4	4	3	1.7	4.4
26-Oct	3	3	3	2	2	2	2	2	2	3	3	3	2	1	2	2	2	4	A	2	1	1	1	1	2.2	3.7
27-Oct	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	1	0.7	1.4
28-Oct	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	2	A	2	2	2	2	2	2	2	1.4	2.5
29-Oct	2	3	3	3	3	3	3	3	C	C	C	C	C	C	C	C	C	NS	NS	NS	NS	NS	NS	NS	--	3.1
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	1.9	3.0	2.2	1.8	1.9	1.9	1.9	2.1	2.0	1.9	1.7	1.4	1.3	1.3	1.3	1.3	1.8	1.7	1.8	1.5	1.6	1.7	1.9	1.7	Diurnal Average	
	5.4	29.8	12.9	4.1	6.1	6.1	5.7	7.6	5.8	4.5	4.3	3.3	3.6	6.1	4.0	2.5	6.9	3.7	4.0	3.8	4.4	4.0	5.0	4.4	Diurnal Maximum	

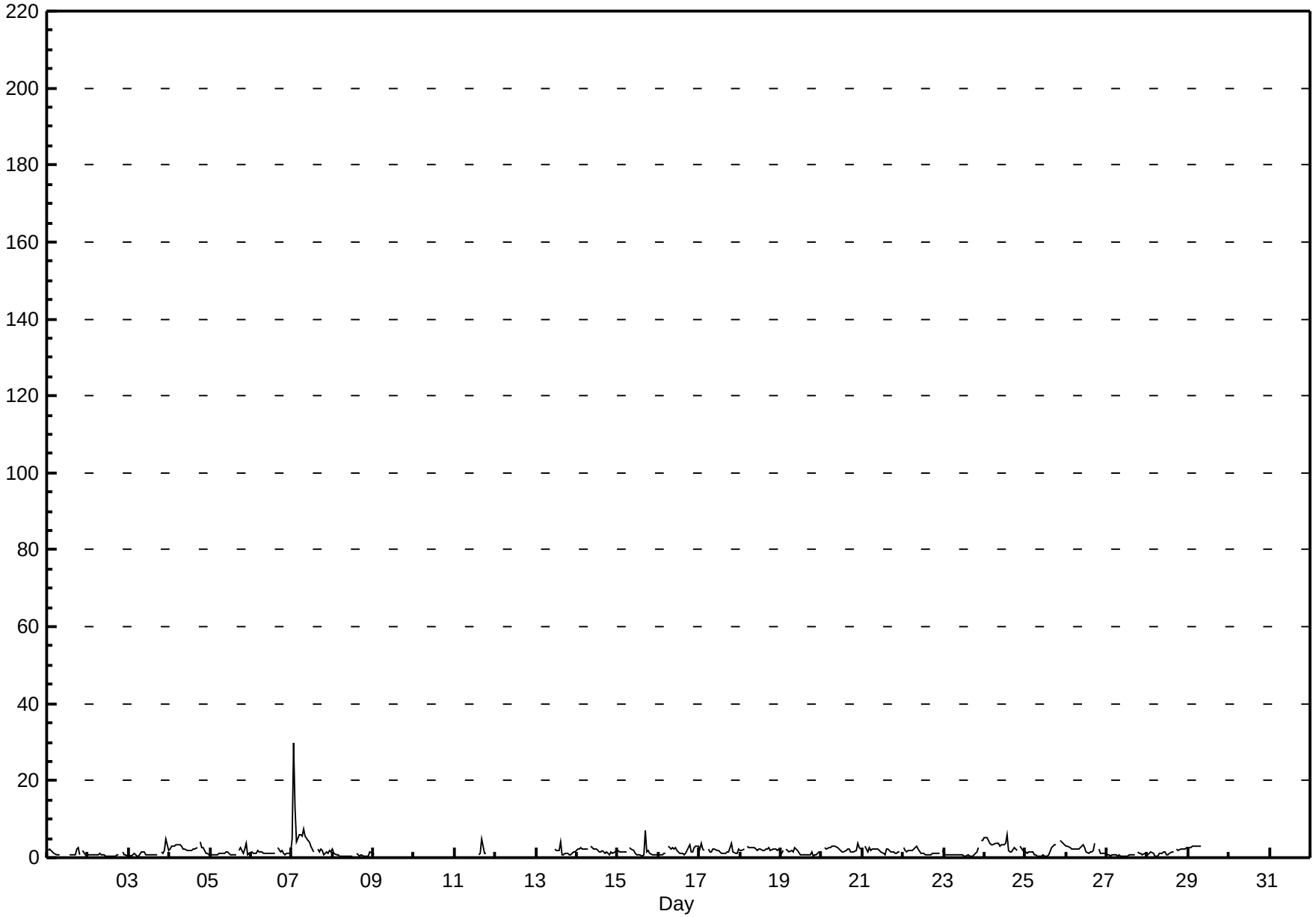
C - Calibration P - Power Failure N - Not Valid NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Sunset House - October 2013

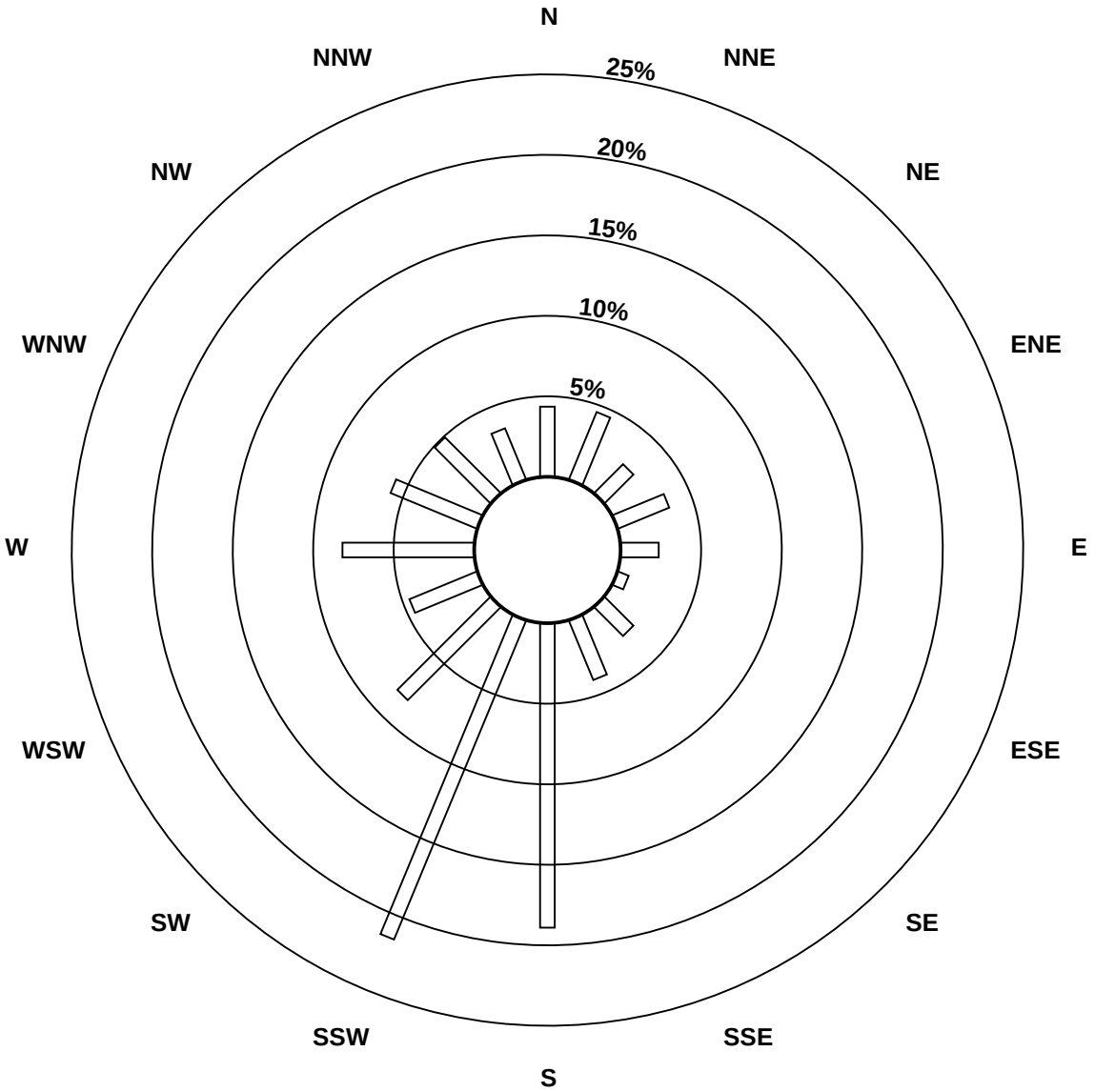


Peace Airshed Zone Association

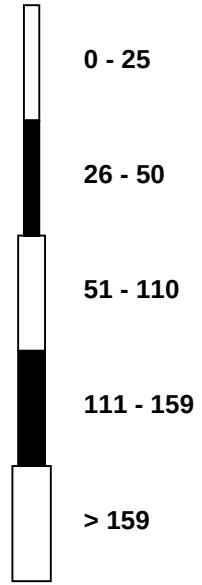
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Sunset House - October 2013



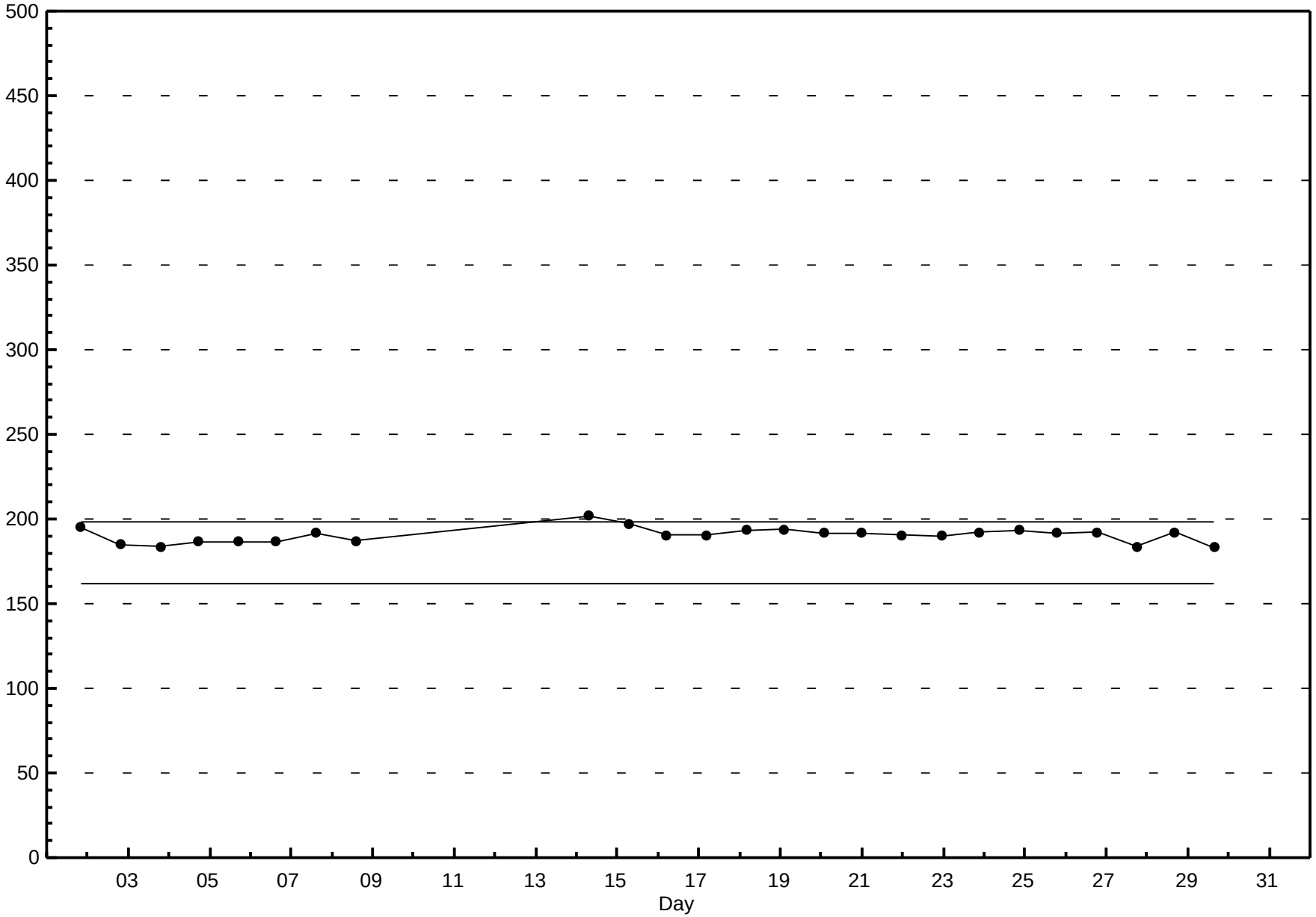
Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO_2)

Sunset House - October 2013



Hourly Averages

Nitrogen Oxide (NO) - ppb

Sunset House - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.4 ppb on Oct 7 12:00 Maximum Daily Average: 0.3 ppb on Oct 7

Minimum Value: 0 ppb on Oct 1 04:00 Minimum Daily Average: 0.0 ppb on Oct 1
Maximum Diurnal Average: 0.4 ppb at hour 11 Minimum Diurnal Average: 0.0 ppb at hour 20
Monthly Average: 0.10 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.0 $Q_3 = 0.1$ $P_{90} = 0.3$ $P_{99} = 0.9$

Hours in Service:	689
Hours of Data:	550
Hours of Missing Data:	139
Hours of Calibration:	37
Percent Operational Time:	85.2

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

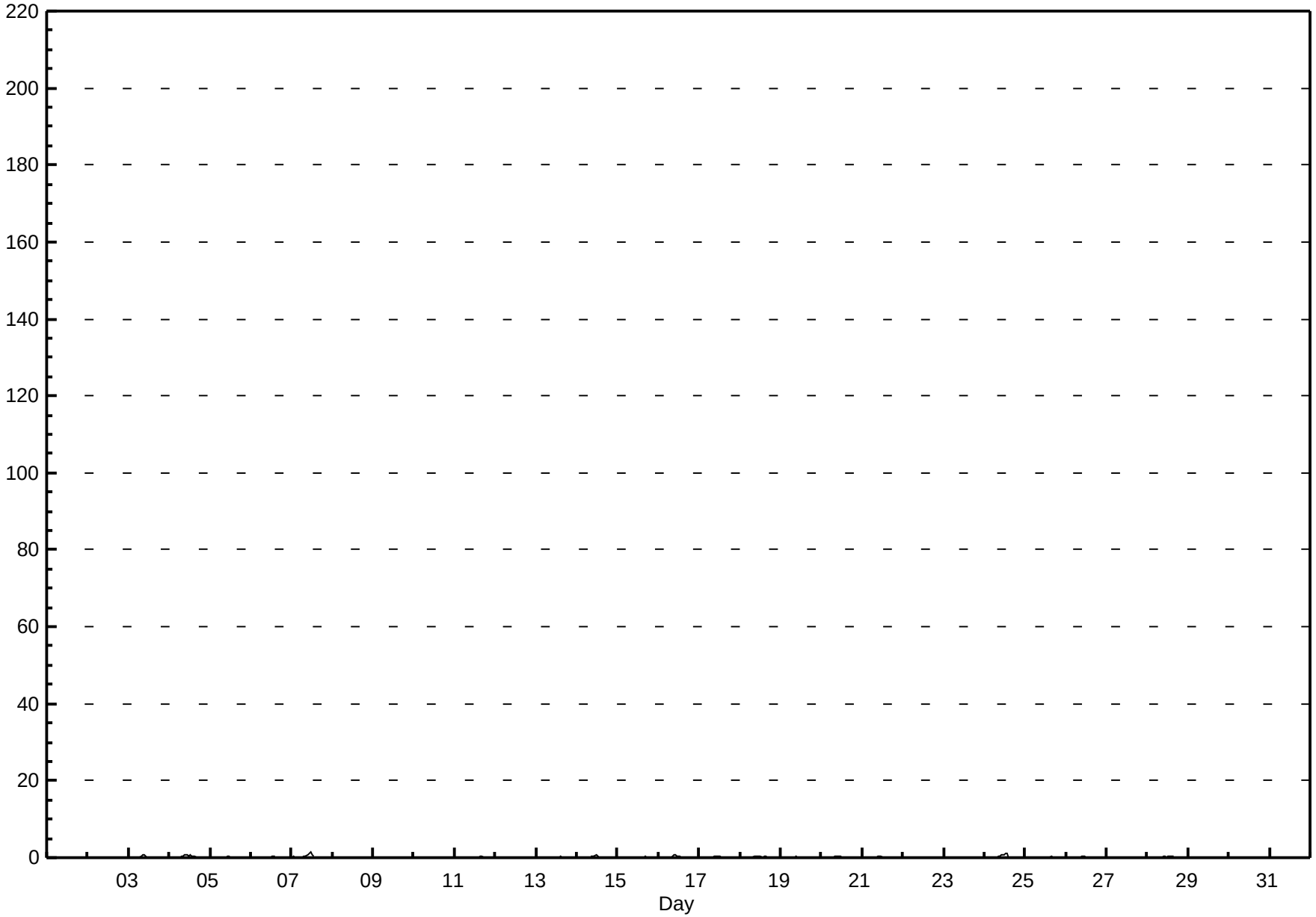
C - Calibration P - Power Failure N - Not Valid NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Sunset House - October 2013



Hourly Maximums

Nitrogen Oxide (NO) - ppb

Sunset House - October 2013

Maximum Value: 16.8 ppb on Oct 15 17:00

Maximum Daily Average: 0.9 ppb on Oct 15

Minimum Value: 0 ppb on Oct 1 14:00

Minimum Daily Average: 0.2 ppb on Oct 27

Maximum Diurnal Average: 1.6 ppb at hour 17

Minimum Diurnal Average: 0.2 ppb at hour 20

Monthly Average: 0.36 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.2 $Q_3 = 0.3$ $P_{90} = 0.6$ $P_{99} = 1.7$

Hours in Service:	689
Hours of Data:	550
Hours of Missing Data:	139
Hours of Calibration:	37
Percent Operational Time:	85.2

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Oct	0	1	0	0	0	0	0	0	N	N	N	N	N	0	0	0	0	0	0	0	A	0	0	0	0.2	0.8
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	1	0.2	0.9
3-Oct	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	1.2
4-Oct	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0.4	0.8
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	2	0	0	0	0	0	0.3	1.5
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.5
7-Oct	0	1	0	0	0	0	0	1	1	1	2	2	2	1	A	0	0	0	0	0	0	0	0	0	0.5	1.9
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0.2	0.7
9-Oct	0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.2
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--	--
11-Oct	P	P	P	P	P	P	P	P	P	P	C	C	C	C	0	0	15	0	1	N	N	N	N	N	--	14.7
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	1	0	1	3	0	0	0	0	0	0	0	0	0	--	3.3
14-Oct	0	0	0	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
15-Oct	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0.9	16.8
16-Oct	0	0	0	0	0	A	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	1.4
17-Oct	0	1	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
18-Oct	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0.3	0.7
19-Oct	0	1	A	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
20-Oct	0	A	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
21-Oct	A	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.8
22-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0.2	0.5
23-Oct	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.6
24-Oct	0	0	0	0	0	0	0	0	1	1	1	1	1	4	0	0	1	0	0	0	A	0	0	0	0.6	3.7
25-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.4
26-Oct	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.9
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.3
28-Oct	0	0	1	1	0	0	0	0	0	0	1	0	0	0	1	0	A	0	0	0	0	0	0	0	0.3	0.9
29-Oct	0	0	0	0	0	0	0	0	C	C	C	C	C	C	C	C	C	NS	NS	NS	NS	NS	NS	NS	--	0.1
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.6	0.6	0.6	0.5	0.5	0.4	0.3	1.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.6	1.1	0.9	0.6	0.5	0.3	0.7	0.6	1.0	1.2	1.5	1.9	1.7	3.7	3.3	0.4	16.8	0.3	1.5	0.2	0.3	0.9	0.7	0.6	Diurnal Maximum	

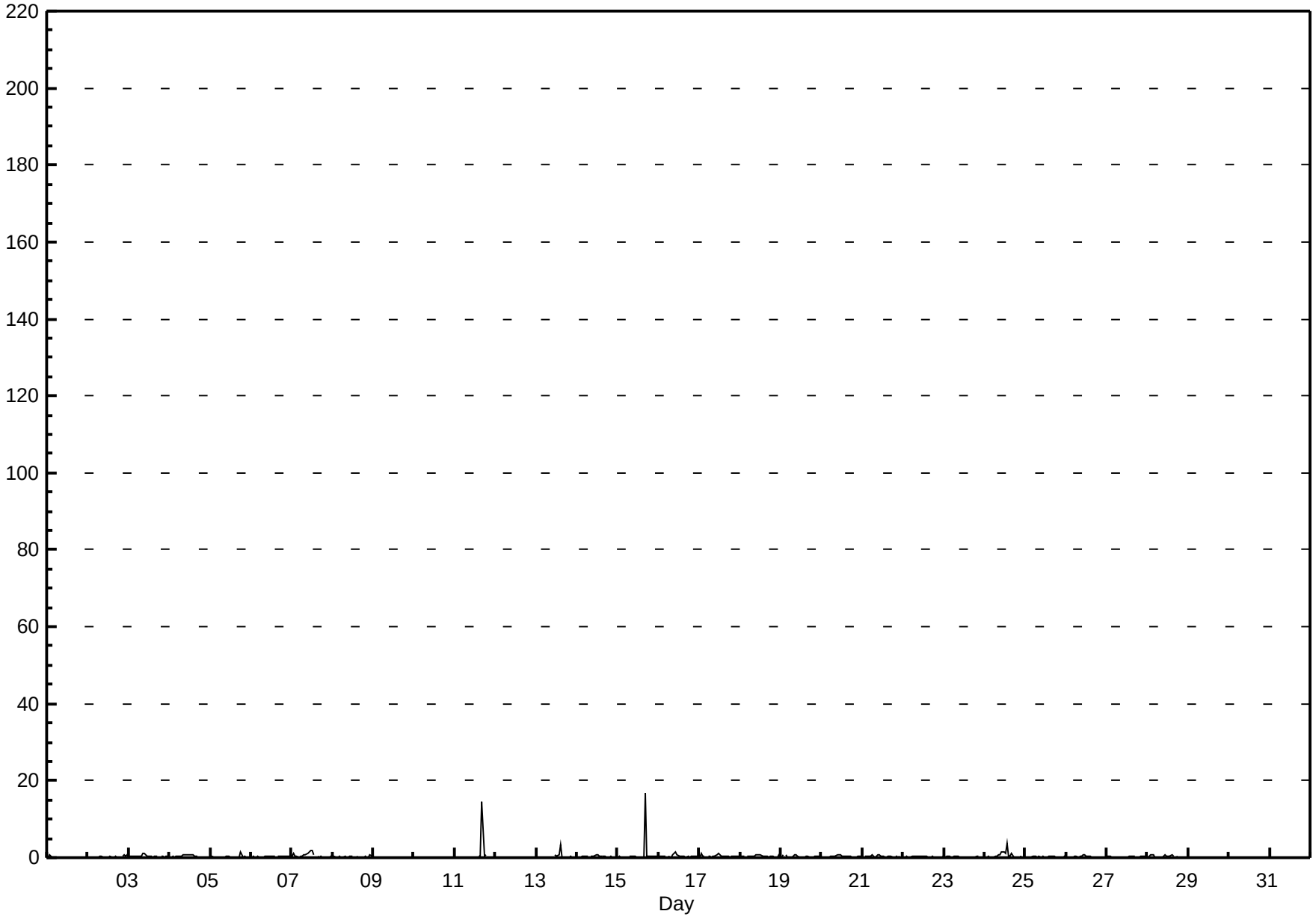
C - Calibration P - Power Failure N - Not Valid NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Sunset House - October 2013



PAZA
Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Sunset House - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 18.1 ppb on Oct 7 02:00 Maximum Daily Average: 3.7 ppb on Oct 7

Minimum Value: 0 ppb on Oct 27 10:00 Minimum Daily Average: 0.4 ppb on Oct 2
Maximum Diurnal Average: 2.2 ppb at hour 2 Minimum Diurnal Average: 0.9 ppb at hour 15
Monthly Average: 1.39 ppb Percentiles: $P_1 = 0.2$ $P_{10} = 0.4$ $Q_1 = 0.6$ Median = 1.1 $Q_3 = 1.9$ $P_{90} = 2.6$ $P_{99} = 5.5$

Hours in Service:	689
Hours of Data:	550
Hours of Missing Data:	139
Hours of Calibration:	37
Percent Operational Time:	85.2

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Oct	2	2	2	1	1	1	1	1	N	N	N	N	N	0	0	0	0	1	1	0	A	1	1	0	0.8	1.9
2-Oct	0	1	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0.4	0.9
3-Oct	0	0	0	1	1	0	0	1	2	2	1	1	1	1	0	0	1	1	A	1	1	1	3	2	0.9	2.9
4-Oct	2	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	A	2	2	2	1	1	1	2.2	3.1
5-Oct	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	A	1	1	1	1	1	1	1	0.8	1.5
6-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1	0	1	1	1	1.1	2.1
7-Oct	2	18	6	3	6	6	5	7	5	5	5	4	3	2	A	1	1	1	1	1	1	1	1	1	3.7	18.1
8-Oct	1	1	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	1	0.5	1.4
9-Oct	0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.5
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--	--
11-Oct	P	P	P	P	P	P	P	P	P	P	C	C	C	C	1	1	1	1	1	N	N	N	N	N	--	1.0
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	2	2	1	1	1	1	1	1	1	1	1	1	1	--	1.8
14-Oct	2	2	2	2	2	2	2	A	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1.7	2.7
15-Oct	2	1	1	1	1	1	A	2	2	2	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1.0	2.2
16-Oct	1	1	1	1	1	A	2	2	2	3	3	2	1	1	1	1	1	1	2	1	1	2	2	2	1.5	2.8
17-Oct	2	2	2	1	A	1	1	1	2	2	2	2	1	1	1	1	1	1	2	2	1	1	1	1	1.4	2.3
18-Oct	2	2	2	A	2	2	2	2	3	2	2	2	2	1	2	2	2	2	2	2	2	2	1	1	1.9	2.5
19-Oct	1	1	A	1	1	1	1	1	2	2	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0.9	2.1
20-Oct	1	A	2	2	2	3	3	3	3	2	2	2	1	1	2	2	1	1	1	1	2	2	2	2	1.9	2.8
21-Oct	A	2	1	1	2	2	2	2	2	2	2	1	1	1	1	2	2	1	1	1	1	1	1	A	1.4	2.0
22-Oct	2	2	1	1	1	1	2	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.2	2.8
23-Oct	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	2	A	4	4	0.9	4.0
24-Oct	5	5	4	3	3	3	3	3	3	3	4	3	4	3	1	1	1	2	2	2	A	2	2	1	2.8	4.7
25-Oct	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	2	3	3	3	A	4	4	3	3	1.5	4.0
26-Oct	3	3	2	2	2	2	2	2	2	3	3	3	2	1	1	1	1	2	A	1	1	1	1	1	1.8	3.0
27-Oct	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	A	1	1	1	1	1	1	0.5	1.1
28-Oct	1	1	1	1	0	0	0	0	1	1	1	1	1	1	2	2	A	2	2	2	2	2	2	2	1.2	2.1
29-Oct	2	2	3	3	3	3	3	3	C	C	C	C	C	C	C	C	C	NS	NS	NS	NS	NS	NS	NS	--	2.9
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	1.4	2.2	1.6	1.4	1.6	1.6	1.6	1.7	1.8	1.8	1.7	1.4	1.2	1.0	0.9	1.0	1.1	1.1	1.2	1.0	1.2	1.2	1.4	1.3	Diurnal Average	
	4.7	18.1	5.6	3.3	5.6	5.8	5.5	6.6	5.3	4.9	5.0	3.9	3.7	3.5	2.1	2.0	2.9	2.9	2.6	1.9	4.0	3.7	4.0	4.0	Diurnal Maximum	

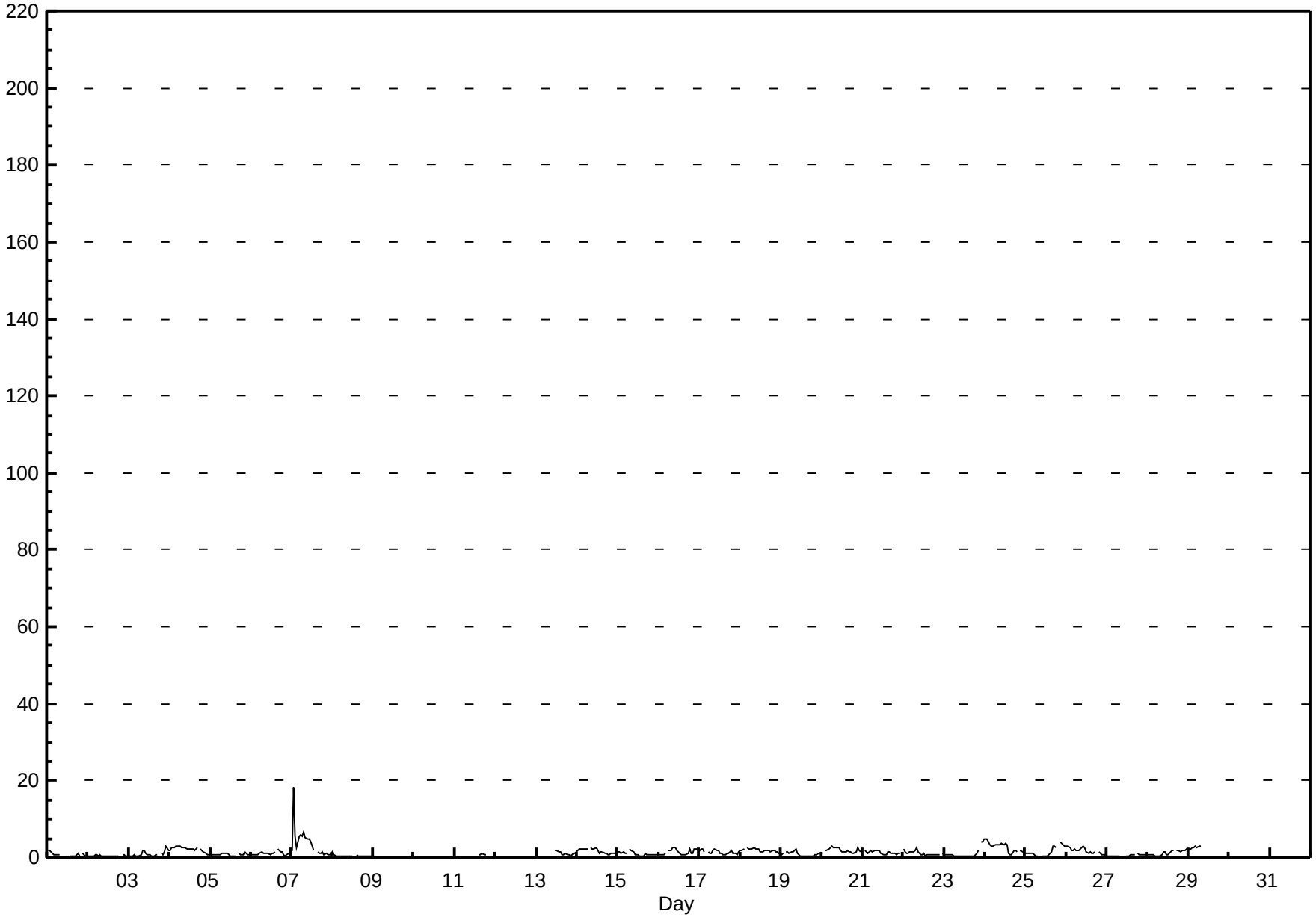
C - Calibration P - Power Failure N - Not Valid NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Sunset House - October 2013



Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Sunset House - October 2013

Maximum Value: 31.1 ppb on Oct 7 02:00

Maximum Daily Average: 5.3 ppb on Oct 7

Minimum Value: 0 ppb on Oct 27 10:00

Minimum Daily Average: 0.7 ppb on Oct 27

Maximum Diurnal Average: 3.2 ppb at hour 2

Minimum Diurnal Average: 1.3 ppb at hour 16

Monthly Average: 1.95 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.6$ $Q_1 = 0.9$ Median = 1.6 $Q_3 = 2.5$ $P_{90} = 3.2$ $P_{99} = 7.9$

Hours in Service:	689
Hours of Data:	550
Hours of Missing Data:	139
Hours of Calibration:	37
Percent Operational Time:	85.2

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Oct	2	3	2	1	1	1	1	1	N	N	N	N	N	1	1	1	1	2	3	1	A	2	1	1	1.3	2.8
2-Oct	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	A	2	2	1	1	0.7	1.7
3-Oct	1	1	1	1	1	1	1	2	2	3	2	1	1	1	1	1	1	1	A	2	1	2	5	2	1.3	5.1
4-Oct	3	3	3	3	3	3	3	3	3	3	3	2	2	2	3	2	3	A	4	3	3	1	1	1	2.6	3.9
5-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	3	1	2	4	1	1	1.3	3.5
6-Oct	2	1	1	1	2	1	2	1	1	1	1	1	1	2	2	A	3	2	2	1	1	1	1	2	1.5	2.7
7-Oct	5	31	13	4	6	6	6	8	6	5	5	4	4	2	A	2	2	2	2	1	2	1	2	2	5.3	31.1
8-Oct	2	1	1	1	1	0	1	1	0	1	1	1	0	A	1	1	1	1	1	1	0	0	2	1	0.8	2.2
9-Oct	1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.7
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--	--
11-Oct	P	P	P	P	P	P	P	P	P	P	C	C	C	C	1	1	16	1	1	N	N	N	N	N	--	15.7
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	3	2	3	7	1	1	1	1	1	1	1	2	2	--	7.1
14-Oct	2	2	2	2	2	2	2	A	3	3	2	3	2	2	2	2	1	1	1	1	1	1	1	2	2.0	3.2
15-Oct	2	1	1	2	2	1	A	3	3	2	1	1	1	1	0	1	24	2	2	1	1	1	1	1	2.3	23.7
16-Oct	1	1	1	1	1	A	3	2	3	3	4	3	2	2	1	1	1	3	3	2	2	3	3	3	2.0	3.6
17-Oct	2	5	2	2	A	2	2	2	2	3	3	3	2	1	1	1	2	2	3	4	1	1	1	2	2.1	4.6
18-Oct	2	2	2	A	3	3	3	3	3	3	2	2	3	2	2	2	2	3	2	2	2	2	2	2	2.4	3.0
19-Oct	1	3	A	3	2	2	2	2	3	3	2	1	1	1	1	0	1	1	1	1	1	1	2	1	1.4	3.2
20-Oct	1	A	2	2	2	3	3	3	3	3	3	2	2	2	2	3	2	2	1	1	2	4	3	3	2.4	3.5
21-Oct	A	3	3	2	3	2	3	2	2	3	2	2	1	1	2	2	2	2	1	1	1	1	1	A	2.0	3.0
22-Oct	3	2	1	2	2	2	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1.6	3.3
23-Oct	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	3	A	4	4	1.2	4.3
24-Oct	5	5	4	4	3	3	4	4	4	4	4	4	5	10	2	2	2	3	2	2	A	3	2	1	3.6	9.8
25-Oct	1	1	1	2	1	1	1	0	1	0	1	0	0	0	1	3	3	3	3	A	4	4	4	3	1.8	4.3
26-Oct	3	3	3	2	2	2	3	2	3	3	4	3	2	1	2	2	2	4	A	2	1	1	1	1	2.2	3.8
27-Oct	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	1	0.7	1.4
28-Oct	1	1	2	2	1	1	0	1	1	2	2	1	1	1	2	2	A	3	2	2	2	2	2	2	1.6	2.5
29-Oct	2	3	3	3	3	3	3	3	C	C	C	C	C	C	C	C	C	NS	NS	NS	NS	NS	NS	NS	--	3.1
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	1.9	3.2	2.3	1.8	2.0	1.9	2.0	2.1	2.2	2.2	2.1	1.8	1.5	1.6	1.6	1.3	3.1	1.7	1.9	1.5	1.6	1.7	1.9	1.8	Diurnal Average	
	5.3	31.1	13.2	4.2	6.2	6.2	6.1	7.9	5.9	5.3	5.4	4.5	4.9	9.8	7.1	2.7	23.7	3.7	3.9	3.9	4.3	4.0	5.1	4.3	Diurnal Maximum	

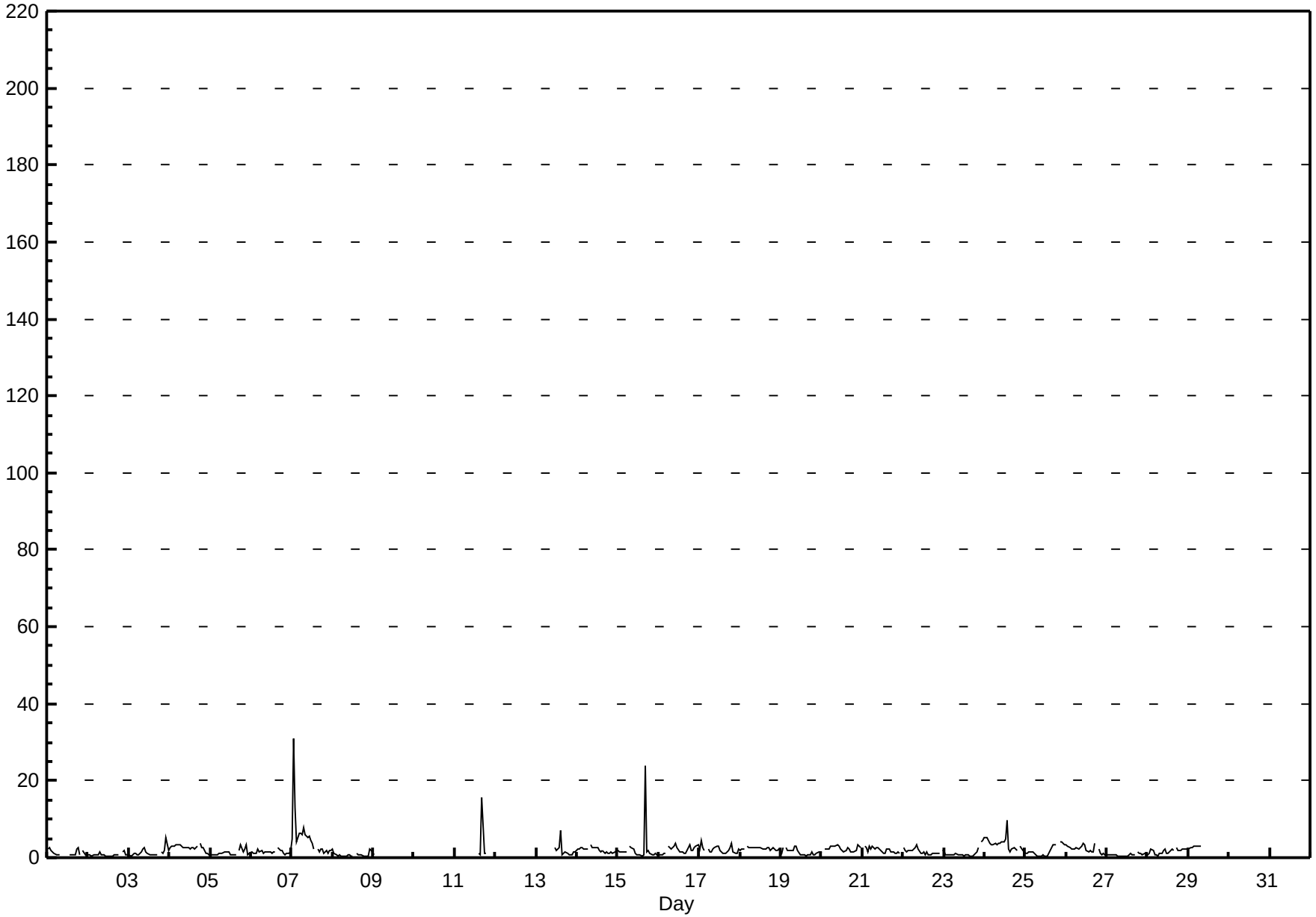
C - Calibration P - Power Failure N - Not Valid NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

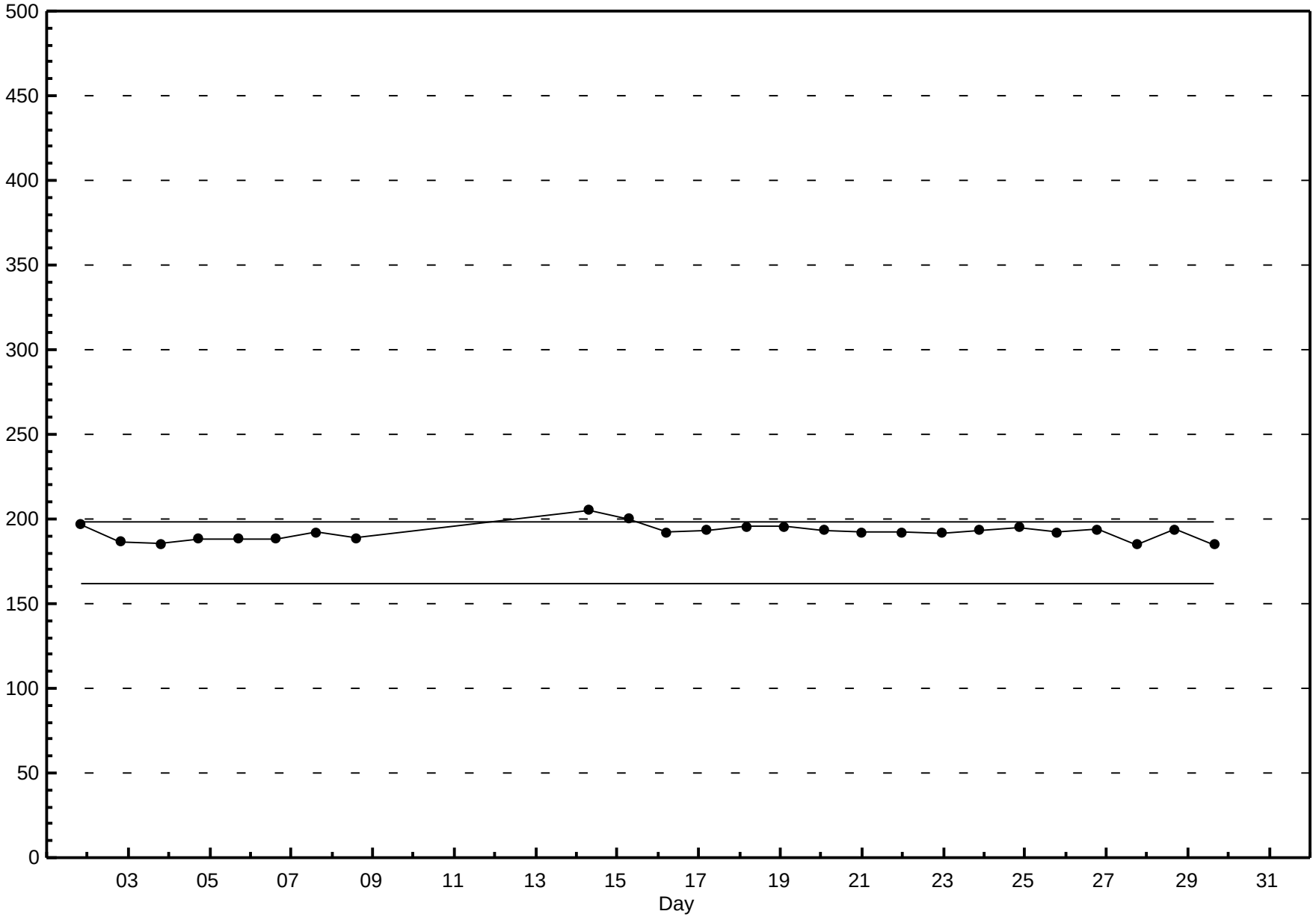
Sunset House - October 2013



Span Responses

Oxides of Nitrogen (NO_X)

Sunset House - October 2013



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Sunset House - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 40.1 ppb on Oct 22 14:00 Maximum Daily Average: 34.1 ppb on Oct 14

Minimum Value: 4 ppb on Oct 2 23:00 Minimum Daily Average: 13.3 ppb on Oct 1
Maximum Diurnal Average: 31.6 ppb at hour 16 Minimum Diurnal Average: 21.9 ppb at hour 8
Monthly Average: 26.46 ppb Percentiles: P_1 = 4.5 P_{10} = 15.8 Q_1 = 22.5 Median = 27.6 Q_3 = 31.9 P_{90} = 35.3 P_{99} = 38.9

Hours in Service:	691
Hours of Data:	560
Hours of Missing Data:	131
Hours of Calibration:	29
Percent Operational Time:	85.2

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Oct	10	7	6	7	8	11	12	12	N	N	N	N	N	24	21	21	17	16	17	15	A	11	12	13	13.3	23.7
2-Oct	12	12	15	15	15	15	17	14	15	16	17	17	17	18	18	17	16	15	13	A	11	5	4	4	13.8	18.4
3-Oct	5	4	5	4	4	6	6	7	9	11	18	25	26	28	30	30	29	27	A	16	22	21	19	19	16.2	30.5
4-Oct	18	16	15	15	14	15	15	16	16	16	18	19	21	23	24	24	23	A	23	24	23	24	24	24	19.5	24.4
5-Oct	23	23	22	21	22	22	22	22	22	22	23	28	33	33	33	35	A	35	35	33	31	29	29	28	27.2	35.0
6-Oct	29	30	30	29	29	28	26	24	23	26	27	27	27	24	23	A	18	17	18	18	21	24	26	28	24.9	30.5
7-Oct	29	14	24	23	21	20	19	13	15	15	13	14	19	26	A	33	36	35	32	34	33	32	32	30	24.5	35.7
8-Oct	28	26	22	19	21	20	17	16	14	13	13	13	14	A	15	16	17	18	18	19	20	21	20	18	18.1	27.6
9-Oct	17	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	16.6
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--	--
11-Oct	P	P	P	P	P	P	P	P	P	P	C	26	27	28	28	29	29	27	20	N	N	N	N	N	--	28.8
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	26	29	33	36	39	38	35	37	38	39	39	38	38	--	39.2
14-Oct	34	32	31	29	30	31	31	A	31	31	31	31	33	37	38	39	39	38	38	39	38	36	34	33	34.1	38.8
15-Oct	31	32	32	31	31	31	A	29	28	28	31	29	31	34	37	36	34	33	33	34	34	34	31	28	31.9	36.5
16-Oct	25	28	26	24	22	A	22	21	20	21	24	27	30	34	36	37	37	35	29	29	33	30	28	26	28.0	37.0
17-Oct	26	25	24	27	A	24	25	25	24	23	25	26	33	34	34	34	34	33	31	29	29	30	30	32	28.5	34.4
18-Oct	31	29	28	A	27	28	28	29	30	30	30	29	32	32	32	32	31	29	27	29	29	28	28	29	29.4	32.1
19-Oct	30	30	A	29	28	27	27	26	26	26	32	38	39	39	39	38	37	36	36	34	32	33	32	36	32.6	39.4
20-Oct	38	A	35	31	29	27	26	26	25	25	25	27	30	31	32	32	33	33	33	33	32	28	27	26	29.8	38.1
21-Oct	A	26	26	26	25	25	25	24	23	23	24	28	31	32	31	29	29	26	22	21	24	28	28	A	26.2	32.3
22-Oct	26	25	26	26	25	25	24	21	18	27	34	36	38	40	39	38	37	36	35	33	33	33	A	35	30.9	40.1
23-Oct	28	25	32	34	35	33	23	30	32	32	36	37	37	35	38	38	37	38	37	36	34	A	29	28	33.3	38.2
24-Oct	26	23	23	23	22	21	20	19	20	20	21	23	23	25	34	36	35	31	32	32	A	33	31	31	26.3	35.7
25-Oct	31	31	30	28	28	26	25	26	25	30	31	34	34	36	37	36	33	30	33	A	31	29	30	30	30.6	36.5
26-Oct	29	29	30	31	32	32	33	32	32	32	31	30	31	33	33	33	31	32	A	33	32	30	28	29	31.3	33.5
27-Oct	28	24	23	24	23	25	24	21	23	24	25	26	26	24	24	28	28	A	25	25	24	21	22	23	24.3	28.1
28-Oct	23	22	22	22	22	21	20	22	24	24	26	28	30	30	31	30	A	29	29	28	27	26	25	25	25.6	30.8
29-Oct	24	24	24	25	26	27	27	27	28	30	29	29	30	31	C	C	R	C	33	NS	NS	NS	NS	NS	--	32.8
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	25.0	23.4	23.9	23.7	23.4	23.4	22.3	21.9	22.8	23.8	25.4	26.9	28.8	30.6	30.9	31.6	30.4	29.7	28.6	28.9	28.8	27.2	26.4	26.5	Diurnal Average	
	38.1	32.0	35.1	34.3	35.2	33.0	33.3	32.3	32.3	32.2	36.1	38.3	38.8	40.1	38.9	39.0	38.8	38.0	37.7	38.8	39.2	38.8	37.8	37.6	Diurnal Maximum	

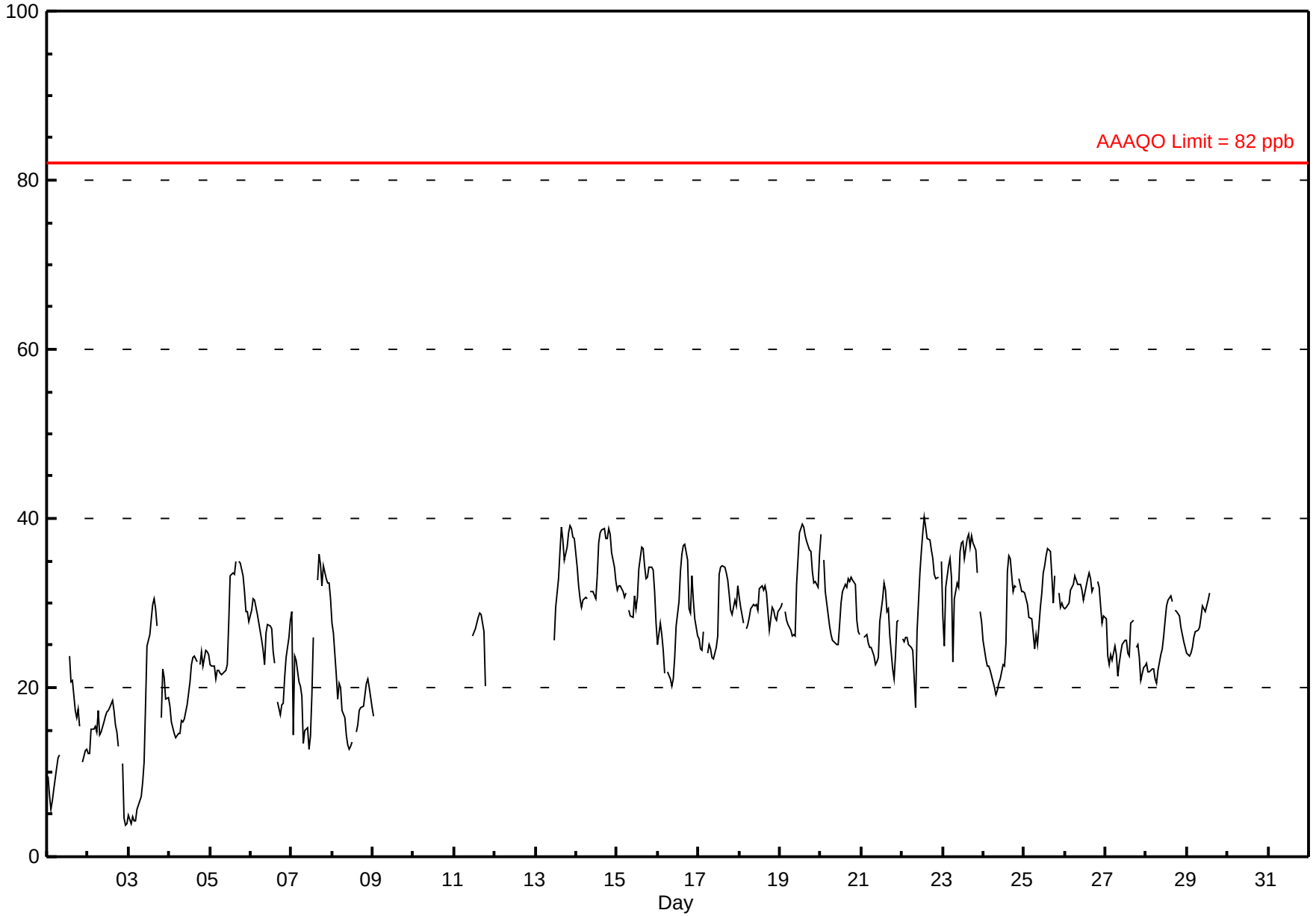
C - Calibration R - Recovery P - Power Failure N - Not Valid NS - Not in service
A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Sunset House - October 2013



Hourly Maximums

Ozone (O_3) - ppb

Sunset House - October 2013

Maximum Value: 41.6 ppb on Oct 22 14:00

Maximum Daily Average: 36.2 ppb on Oct 23

Minimum Value: 6 ppb on Oct 2 23:00

Minimum Daily Average: 15.5 ppb on Oct 1

Maximum Diurnal Average: 33.2 ppb at hour 16

Minimum Diurnal Average: 24.2 ppb at hour 8

Monthly Average: 28.44 ppb

Percentiles: P_1 = 6.9 P_{10} = 17.6 Q_1 = 24.1 Median = 29.6 Q_3 = 33.6 P_{90} = 37.5 P_{99} = 40.5

Hours in Service:	691
Hours of Data:	560
Hours of Missing Data:	131
Hours of Calibration:	29
Percent Operational Time:	85.2

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Oct	11	9	7	11	11	12	14	15	N	N	N	N	N	25	24	24	20	18	20	17	A	13	13	14	15.5	25.3
2-Oct	13	14	17	17	16	17	19	16	17	18	18	18	18	19	20	19	17	16	14	A	15	8	6	7	15.6	20.4
3-Oct	9	7	8	6	6	7	7	9	10	16	23	28	29	30	32	32	31	29	A	22	24	23	21	20	18.7	32.2
4-Oct	19	17	16	16	15	15	16	18	18	17	19	21	22	24	25	25	24	A	28	27	27	27	26	26	21.2	28.2
5-Oct	24	24	24	23	23	23	23	23	24	24	27	33	35	35	35	36	A	37	36	34	34	31	31	30	29.0	36.8
6-Oct	31	32	32	31	31	29	27	26	25	32	31	30	29	25	25	A	21	18	20	20	23	25	28	30	27.0	32.0
7-Oct	30	26	28	29	23	21	21	19	16	16	15	16	24	29	A	35	41	39	34	36	34	34	34	32	27.5	41.3
8-Oct	29	28	24	21	22	22	19	18	16	14	14	14	15	A	16	17	19	19	19	20	22	23	21	20	19.6	29.2
9-Oct	18	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	18.4
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--	--
11-Oct	P	P	P	P	P	P	P	P	P	P	C	28	29	29	30	30	30	29	24	N	N	N	N	N	--	30.2
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	29	32	37	39	40	39	37	38	39	41	40	39	39	--	40.6
14-Oct	37	33	32	30	32	32	32	A	33	32	33	32	36	39	39	40	40	39	39	40	40	37	36	34	35.5	40.4
15-Oct	33	33	33	32	32	32	A	31	29	40	32	31	34	37	38	38	36	34	35	35	35	35	34	32	34.1	40.0
16-Oct	28	33	31	29	25	A	24	23	21	22	28	30	32	36	37	37	39	36	32	33	35	33	29	28	30.6	38.8
17-Oct	27	26	26	28	A	27	27	26	24	24	26	28	35	36	36	35	35	34	34	32	32	34	35	35	30.6	35.7
18-Oct	33	32	29	A	28	29	29	31	31	31	31	31	34	34	33	33	33	32	30	32	31	30	29	30	31.1	33.9
19-Oct	31	31	A	30	29	28	28	28	30	28	39	40	40	42	40	39	39	38	38	37	36	36	37	38	34.8	41.5
20-Oct	39	A	37	34	30	29	27	27	27	26	26	30	31	33	33	33	34	34	34	34	33	31	28	28	31.2	39.1
21-Oct	A	27	27	27	27	26	26	25	24	24	26	29	32	33	33	31	31	30	29	26	29	30	29	A	28.3	33.5
22-Oct	27	26	27	27	26	26	26	25	20	32	38	39	41	42	41	40	39	38	36	36	35	35	A	38	33.0	41.6
23-Oct	32	32	36	37	37	36	33	37	36	35	38	39	39	38	40	40	38	39	38	38	35	A	30	29	36.2	39.9
24-Oct	28	25	24	24	23	22	21	20	21	23	23	25	24	30	36	37	37	33	33	33	A	35	34	33	28.0	37.3
25-Oct	32	32	31	29	30	31	29	31	29	33	35	35	36	38	38	38	35	33	34	A	33	31	31	31	32.8	38.3
26-Oct	31	30	32	33	33	34	34	34	33	33	33	31	33	34	35	34	33	35	A	34	34	31	30	31	32.8	35.0
27-Oct	31	26	24	25	24	27	26	22	24	26	27	28	27	26	26	30	29	A	27	27	27	25	24	24	26.1	30.9
28-Oct	25	24	23	23	24	22	21	24	25	25	28	29	31	32	32	32	A	30	30	30	28	27	26	26	26.9	32.0
29-Oct	25	25	25	26	28	28	28	28	30	31	31	31	31	32	C	C	R	C	34	NS	NS	NS	NS	NS	--	34.2
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	26.8	25.8	25.8	25.6	25.1	25.1	24.3	24.2	24.5	26.3	27.8	28.9	30.8	32.6	32.7	33.2	32.2	31.6	30.8	30.9	31.0	29.2	28.3	28.4	Diurnal Average	
	39.1	33.4	37.4	36.7	37.5	36.4	34.2	37.4	36.1	40.0	39.4	39.7	40.5	41.6	40.7	40.4	41.3	39.1	39.2	39.9	40.6	39.9	39.2	38.8	Diurnal Maximum	

C - Calibration R - Recovery P - Power Failure N - Not Valid NS - Not in service

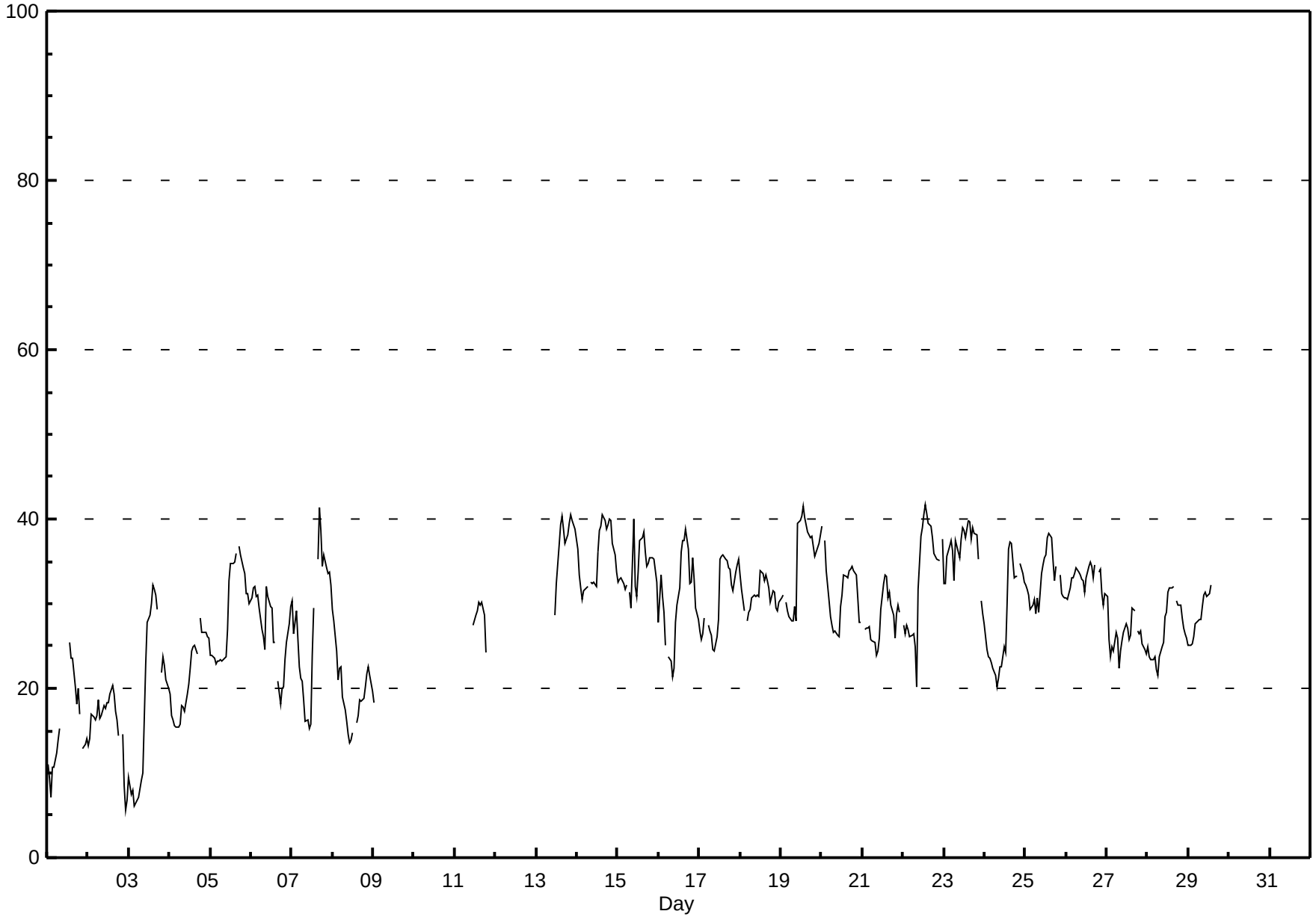
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

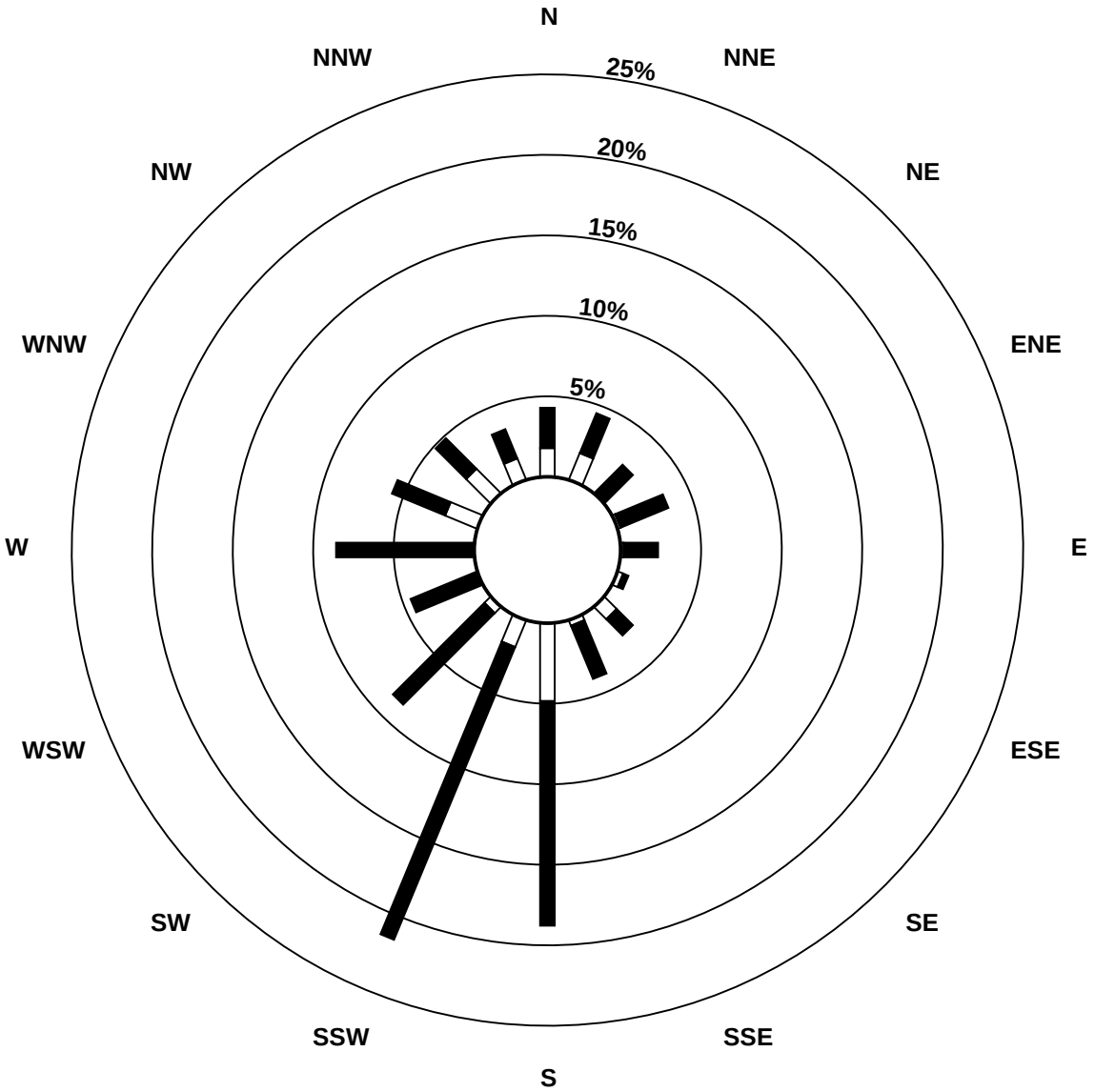
Sunset House - October 2013



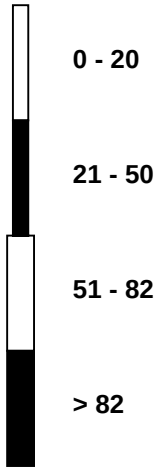
Pollutant Rose

Ozone (O_3) - ppb

Sunset House - October 2013



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Sunset House - October 2013

Maximum Value: 38.2 ppb on Oct 14 21:00

Minimum Value: 4.3 ppb on Oct 3 05:00

Percentiles: P_1 = 4.9 P_{10} = 16.3 Q_1 = 22.9 Median = 27.7 Q_3 = 31.5 P_{90} = 34.0 P_{99} = 37.6

Hours in Service:	697
Hours of Data:	576
Hours of Missing Data:	121
Hours of Calibration:	9
Percent Operational Time:	83.9

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-Oct	13	11	9	8	8	8	9	9	9	9	N	N	N	N	N	N	N	N	19	19	19	17	16	15	19.4
2-Oct	14	13	13	13	13	14	14	15	15	15	16	16	16	16	17	17	17	17	16	16	15	14	11	10	17.0
3-Oct	8	6	5	5	4	4	5	5	6	6	8	11	13	16	19	22	25	27	28	27	26	25	24	22	28.1
4-Oct	20	19	18	18	17	16	16	15	15	15	15	16	17	18	19	20	21	22	22	23	23	23	24	24	23.5
5-Oct	24	23	23	23	23	23	22	22	22	22	22	23	24	26	27	29	30	31	33	34	34	33	32	31	34.0
6-Oct	31	31	30	30	29	29	29	28	27	27	27	26	26	26	25	25	25	23	22	21	20	20	20	21	31.1
7-Oct	23	22	23	24	24	23	22	20	19	19	17	16	16	17	17	19	22	25	28	31	33	34	33	33	33.5
8-Oct	32	31	30	28	26	25	23	21	19	18	17	16	15	14	14	14	14	15	16	17	18	18	19	19	32.1
9-Oct	19	19	19	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	19.1
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
11-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	28	28	27	27	27	N	N	N	27.7
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	33	34	34	36	37	38	38	38	37.8
14-Oct	37	37	36	35	34	33	32	31	31	31	31	31	31	32	33	34	35	36	36	38	38	38	38	37	38.2
15-Oct	36	35	34	33	33	32	32	31	31	30	30	30	30	30	31	32	33	33	33	34	34	34	34	33	35.8
16-Oct	32	31	30	29	27	26	25	24	23	22	22	22	24	25	27	29	31	32	33	33	34	33	32	31	33.7
17-Oct	30	28	28	27	27	26	25	25	25	25	25	25	26	27	28	29	31	32	32	33	32	32	31	31	32.9
18-Oct	31	30	30	30	30	29	29	29	28	28	29	29	29	30	30	31	31	31	30	30	30	30	29	29	30.9
19-Oct	29	29	29	29	29	29	29	28	28	27	28	29	30	32	33	35	36	37	38	37	37	36	35	34	37.9
20-Oct	35	34	34	34	33	33	32	30	29	28	27	26	27	27	28	29	30	30	31	32	32	32	31	31	34.6
21-Oct	30	29	28	27	26	26	26	25	25	25	24	24	25	26	27	28	28	29	29	28	27	26	26	25	30.2
22-Oct	25	25	25	26	26	26	25	25	24	24	25	26	28	30	32	34	36	37	37	37	36	36	35	35	37.5
23-Oct	33	32	31	31	32	32	31	30	31	32	32	32	33	33	35	36	36	37	37	37	37	37	36	34	37.1
24-Oct	32	30	28	26	25	24	23	22	21	21	21	21	21	21	23	25	27	28	30	31	32	33	33	32	33.3
25-Oct	32	32	31	31	30	30	29	28	27	27	27	28	29	30	32	33	34	34	34	34	34	33	32	31	34.1
26-Oct	30	30	30	30	30	30	31	31	32	32	32	32	32	32	32	32	32	32	32	32	32	32	31	31	32.4
27-Oct	30	29	28	27	26	25	25	24	23	23	24	24	24	24	24	25	25	26	26	26	25	25	25	24	30.0
28-Oct	23	23	23	22	22	22	22	22	22	22	23	24	24	26	27	28	29	29	30	30	29	29	28	27	29.7
29-Oct	27	26	25	25	25	25	25	25	26	27	27	28	28	29	29	30	N	N	N	N	N	N	N	N	29.6
30-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
31-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
	37.2	36.8	36.1	34.9	33.8	32.8	31.9	31.2	31.6	31.9	32.1	32.4	32.7	32.9	34.8	35.7	36.3	37.4	37.9	37.5	38.2	38.0	37.8	37.6	
	Diurnal Maximums																								

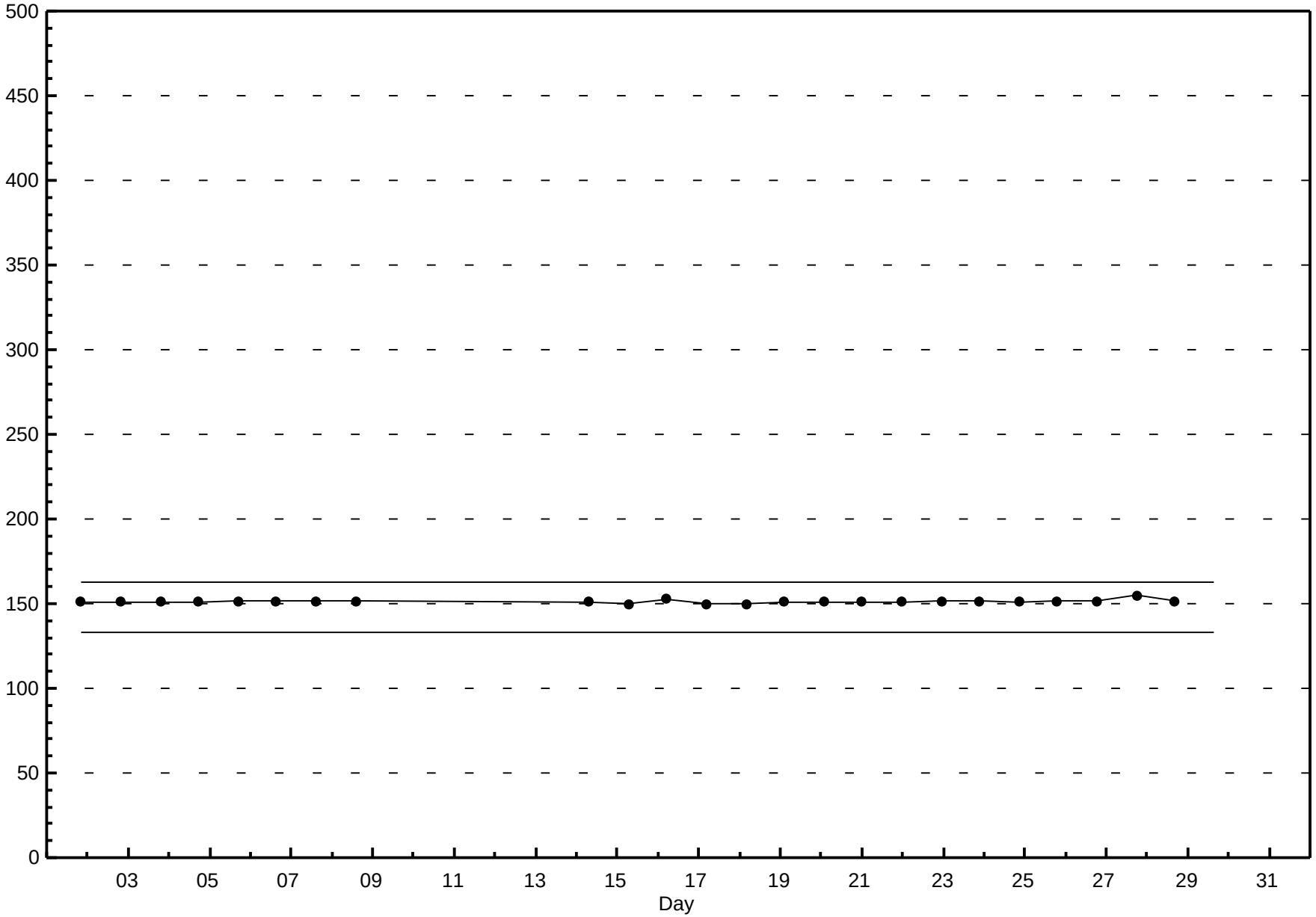
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Sunset House - October 2013



Peace Airshed Zone Association

Hourly Averages

PM2.5 ($PM_{2.5}$) - $\mu g/m^3$

Sunset House - October 2013

Number of Exceedences: 1-hr: 0 24-hr: 0
Maximum Value: 18.8 $\mu g/m^3$ on Oct 14 23:00
Maximum Daily Average: 5.2 $\mu g/m^3$ on Oct 21

Minimum Value: 0 $\mu g/m^3$ on Oct 1 21:00
Maximum Diurnal Average: 3.6 $\mu g/m^3$ at hour 9
Monthly Average: 1.74 $\mu g/m^3$
Minimum Daily Average: 0.0 $\mu g/m^3$ on Oct 28
Minimum Diurnal Average: 1.0 $\mu g/m^3$ at hour 24
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.3 $Q_3 = 2.9$ $P_{90} = 5.0$ $P_{99} = 10.3$

Hours in Service:	691
Hours of Data:	581
Hours of Missing Data:	110
Hours of Calibration:	4
Percent Operational Time:	84.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	5	5	4	3	2	1	2	2	N	N	N	N	N	10	6	4	3	1	3	0	0	1	0	0	2.7	10.2
2-Oct	0	0	0	0	2	0	1	1	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0.4	2.1
3-Oct	0	0	0	0	0	0	0	5	6	8	0	0	0	0	0	0	1	0	0	1	2	2	2	1	1.2	8.3
4-Oct	2	1	1	1	0	0	0	0	2	1	0	1	1	0	1	2	4	10	7	4	10	2	0	2	2.2	10.5
5-Oct	1	0	0	0	0	0	0	1	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.6
6-Oct	0	0	0	0	0	1	1	3	4	4	3	3	4	5	7	7	5	10	0	0	0	0	0	0	2.4	9.9
7-Oct	1	0	0	0	0	0	1	3	3	4	4	6	3	0	0	2	0	2	0	0	0	0	0	2	1.4	5.7
8-Oct	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.3
9-Oct	0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.0
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--	--
11-Oct	P	P	P	P	P	P	P	P	P	P	C	C	C	C	0	0	0	0	5	N	N	N	N	N	--	5.4
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0	1	1	0	6	0	0	0	0	--	5.7
14-Oct	1	2	3	3	3	3	4	6	9	0	1	4	3	4	4	4	5	4	4	4	5	6	19	0	4.2	18.8
15-Oct	3	3	0	0	2	1	3	6	13	1	1	3	0	0	0	0	0	0	0	0	0	0	2	0	1.6	13.1
16-Oct	0	0	0	0	0	0	1	3	8	0	0	1	0	0	0	0	0	0	0	0	0	1	2	2	0.7	8.1
17-Oct	1	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.6
18-Oct	0	1	1	1	0	0	0	0	3	3	2	3	4	4	4	3	5	4	3	4	5	5	4	2	2.5	5.4
19-Oct	2	2	2	2	2	3	2	4	4	5	1	0	0	0	1	1	0	0	0	0	0	0	0	0	1.3	4.6
20-Oct	0	1	1	2	3	2	3	4	7	9	12	11	9	8	6	6	4	3	2	4	5	6	7	6	5.0	11.8
21-Oct	5	4	4	4	6	6	8	8	10	9	9	5	3	1	3	6	3	4	9	12	4	2	2	1	5.2	11.7
22-Oct	3	2	2	2	3	5	6	6	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	6.3
23-Oct	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	3	3	0.5	3.5
24-Oct	5	5	6	6	6	5	4	3	2	2	2	3	4	1	0	1	1	5	5	6	7	3	6	1	3.7	7.3
25-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	3	4	4	3	2	0.9	4.2
26-Oct	3	2	1	0	0	0	0	0	0	2	4	5	5	5	8	7	4	2	2	3	4	4	3	4	2.9	8.3
27-Oct	1	3	2	2	3	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.1
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4
29-Oct	0	0	0	0	0	0	0	0	2	0	0	0	1	1	3	0	4	3	3	NS	NS	NS	NS	NS	0.9	4.0
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	1.3	1.5	1.1	1.1	1.4	1.2	1.6	2.5	3.6	2.2	1.8	2.0	1.6	1.7	1.7	1.7	1.6	1.9	1.7	1.9	2.0	1.7	2.2	1.0	Diurnal Average	
	4.6	5.4	6.0	6.4	6.0	5.9	7.8	8.3	13.1	9.3	11.8	11.2	9.3	10.2	8.3	7.3	5.0	10.5	8.6	11.7	9.7	6.4	18.8	5.6	Diurnal Maximum	

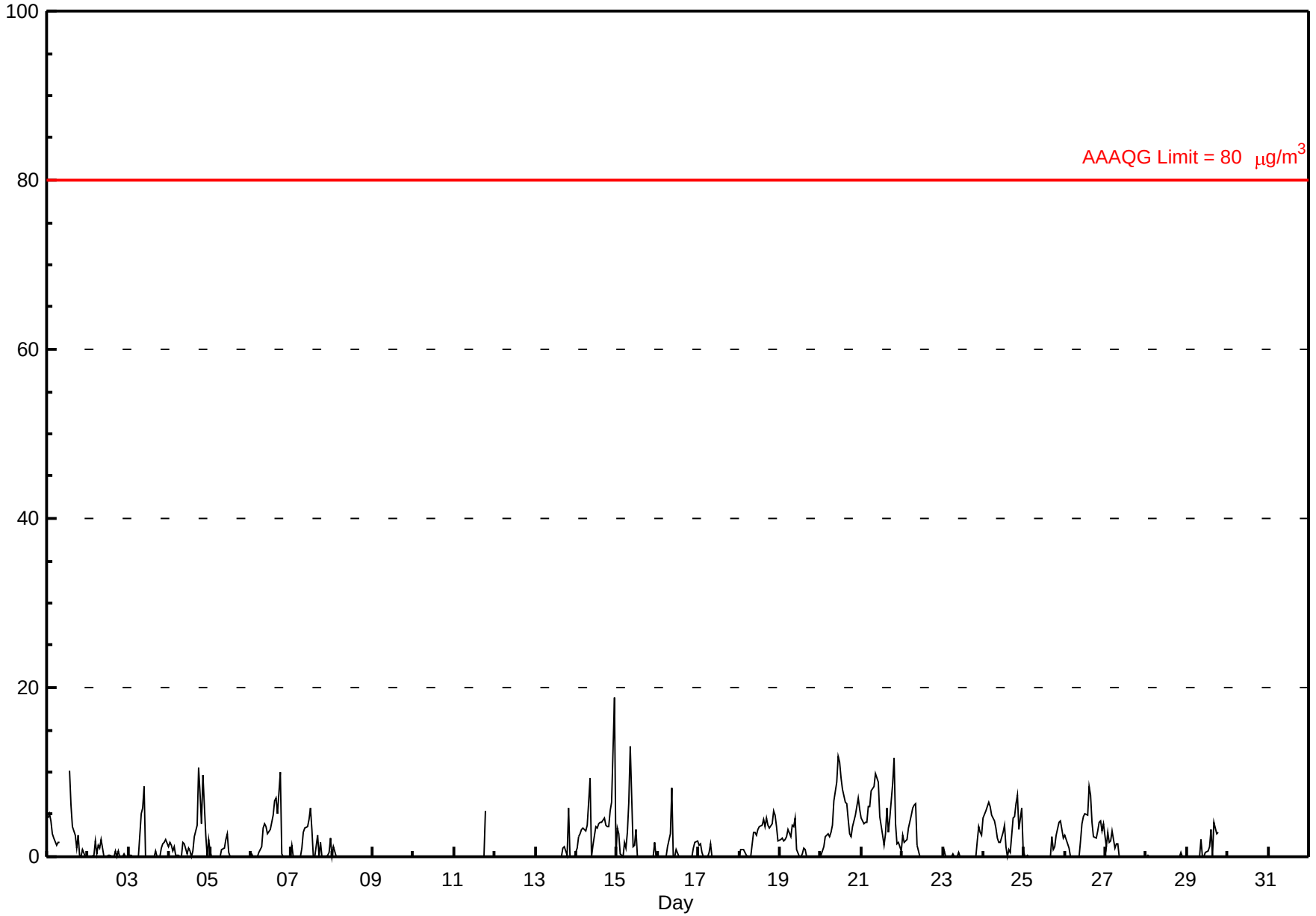
C - Calibration P - Power Failure N - Not Valid NS - Not in service
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

PM2.5 ($PM_{2.5}$) - $\mu g/m^3$

Sunset House - October 2013



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Hourly Maximums

PM2.5 ($PM_{2.5}$) - $\mu g/m^3$

Sunset House - October 2013

Maximum Value: 96.5 $\mu g/m^3$ on Oct 15 10:00

Maximum Daily Average: 14.9 $\mu g/m^3$ on Oct 15

Minimum Value: 0 $\mu g/m^3$ on Oct 3 05:00

Minimum Daily Average: 1.2 $\mu g/m^3$ on Oct 28

Maximum Diurnal Average: 11.4 $\mu g/m^3$ at hour 9

Minimum Diurnal Average: 3.4 $\mu g/m^3$ at hour 5

Monthly Average: 6.60 $\mu g/m^3$

Percentiles: $P_1 = 0.0$ $P_{10} = 0.7$ $Q_1 = 1.9$ Median = 4.2 $Q_3 = 7.4$ $P_{90} = 11.2$ $P_{99} = 73.7$

Hours in Service:	691
Hours of Data:	581
Hours of Missing Data:	110
Hours of Calibration:	4
Percent Operational Time:	84.7

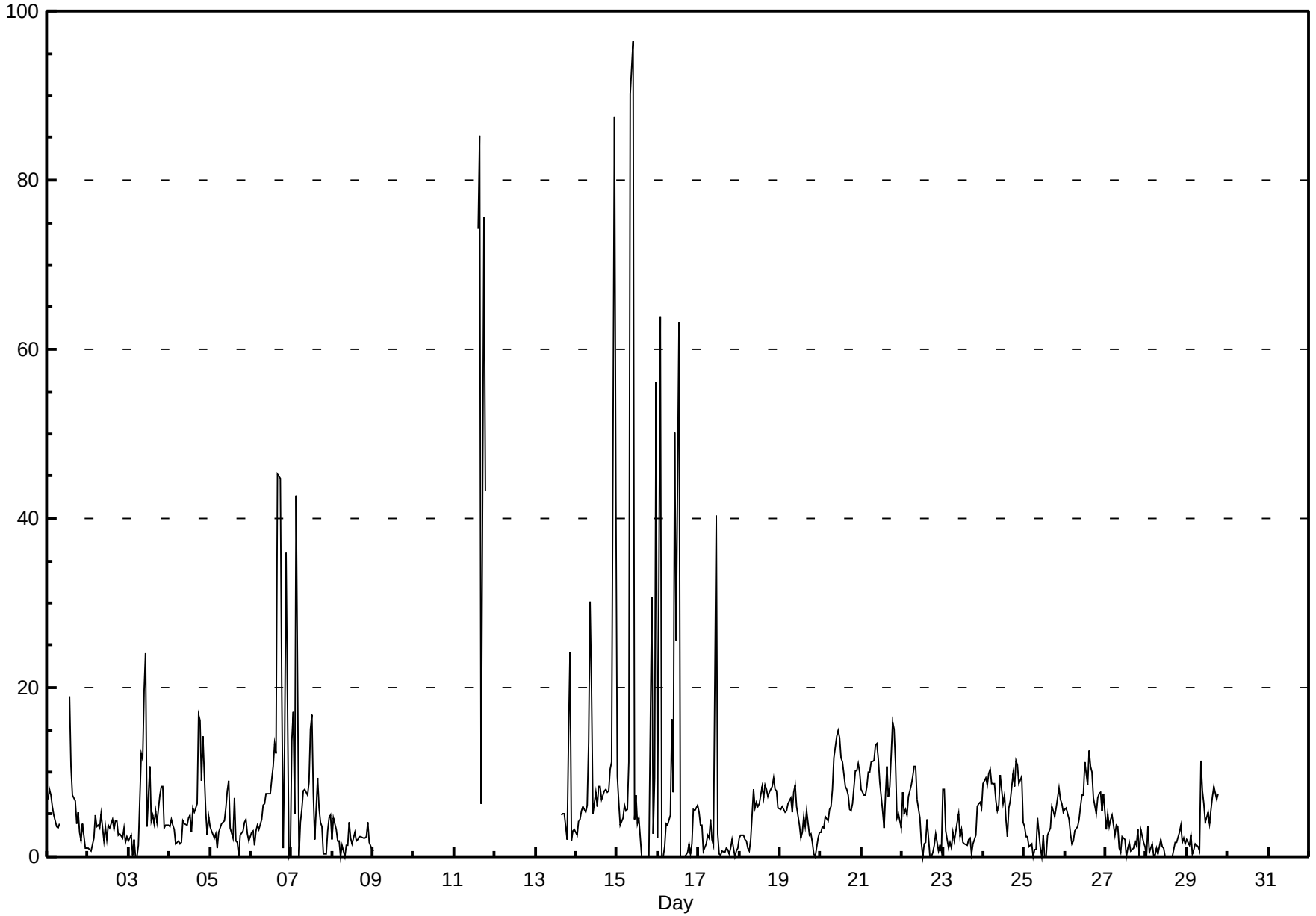
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	7	8	7	6	5	4	3	4	N	N	N	N	N	19	11	7	7	4	5	3	2	4	1	1	5.6	19.0
2-Oct	1	1	1	2	5	4	4	3	5	2	4	2	4	3	4	3	4	4	3	3	2	3	2	2	3.0	5.1
3-Oct	2	3	0	2	0	0	1	12	12	20	24	4	11	4	5	4	5	4	7	8	8	3	4	4	6.1	24.0
4-Oct	4	4	4	3	2	2	2	2	4	4	4	5	5	3	6	5	6	17	16	9	14	5	3	5	5.5	16.8
5-Oct	4	3	2	3	1	3	3	4	4	6	8	9	3	2	7	2	2	0	3	3	4	4	3	2	3.5	9.1
6-Oct	3	3	1	3	4	3	4	6	6	7	7	8	9	11	13	12	45	45	20	1	13	36	0	0	10.9	45.3
7-Oct	14	17	5	43	0	4	6	8	8	7	9	15	17	7	2	9	6	4	4	0	0	3	5	5	8.2	42.7
8-Oct	2	5	3	2	2	0	1	0	1	1	4	2	2	3	2	2	2	2	2	2	2	4	2	1	2.1	4.6
9-Oct	1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.7
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--	--
11-Oct	P	P	P	P	P	P	P	P	P	P	C	C	C	C	74	85	6	76	43	N	N	N	N	N	--	85.3
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	5	5	5	2	14	24	2	3	3	--	24.3
14-Oct	3	4	4	5	6	5	6	13	30	20	5	8	6	8	8	7	8	8	8	8	10	11	88	43	13.4	87.5
15-Oct	10	6	4	5	6	5	6	11	90	97	4	7	4	5	0	0	0	0	0	0	31	3	9	56	14.9	96.5
16-Oct	2	64	0	0	1	4	4	5	16	8	50	26	63	0	0	0	0	0	1	0	2	6	5	6	11.0	63.9
17-Oct	5	4	4	1	2	3	2	4	2	1	40	3	0	0	1	0	1	1	0	1	2	0	1	1	3.3	40.4
18-Oct	2	3	3	2	2	1	1	2	8	6	6	6	6	8	7	8	8	7	8	8	9	8	8	6	5.5	9.3
19-Oct	6	6	6	5	5	6	7	5	8	9	6	4	2	3	5	4	5	3	3	2	0	0	2	3	4.3	8.5
20-Oct	3	4	3	5	4	6	6	8	12	14	15	14	12	11	8	8	7	6	6	6	10	10	11	10	8.3	14.9
21-Oct	8	7	7	8	10	10	11	11	13	13	11	9	5	3	7	11	7	8	16	15	11	5	5	3	9.1	15.9
22-Oct	8	5	6	5	7	8	10	11	11	7	5	2	0	1	2	4	0	0	0	1	3	1	1	1	4.1	10.7
23-Oct	8	8	3	1	2	1	3	2	4	5	2	3	2	2	1	2	2	0	1	2	6	6	6	6	3.3	8.0
24-Oct	9	9	8	10	10	9	9	7	6	6	10	6	7	4	2	6	7	10	8	11	11	9	9	4	7.8	11.4
25-Oct	4	2	2	1	2	0	1	1	5	1	0	2	0	0	2	3	6	5	5	6	8	7	6	5	3.1	8.1
26-Oct	6	6	4	3	2	2	3	4	4	6	7	7	11	8	13	11	10	7	5	7	7	8	5	7	6.4	12.5
27-Oct	3	5	4	4	5	3	4	4	1	0	2	2	0	1	2	1	1	2	1	3	0	3	2	1	2.2	5.1
28-Oct	0	4	0	2	0	0	1	0	2	1	1	0	0	0	0	0	1	2	2	3	4	2	2	2	1.2	3.7
29-Oct	2	1	2	0	1	2	1	1	11	8	6	4	5	4	6	7	8	7	7	NS	NS	NS	NS	NS	4.4	11.3
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	4.5	7.6	3.5	5.0	3.4	3.5	4.1	5.3	11.4	10.8	10.1	6.4	7.6	4.7	7.5	8.0	6.2	8.7	6.8	4.9	7.7	5.9	7.6	7.4	Diurnal Average	
	13.8	63.9	8.4	42.7	10.3	10.0	11.1	13.5	90.1	96.5	50.2	25.6	63.2	19.0	74.2	85.3	45.3	75.5	43.3	15.1	30.7	35.9	87.5	56.1	Diurnal Maximum	

C - Calibration P - Power Failure N - Not Valid NS - Not in service

Hourly Maximums

PM2.5 ($PM_{2.5}$) - $\mu g/m^3$

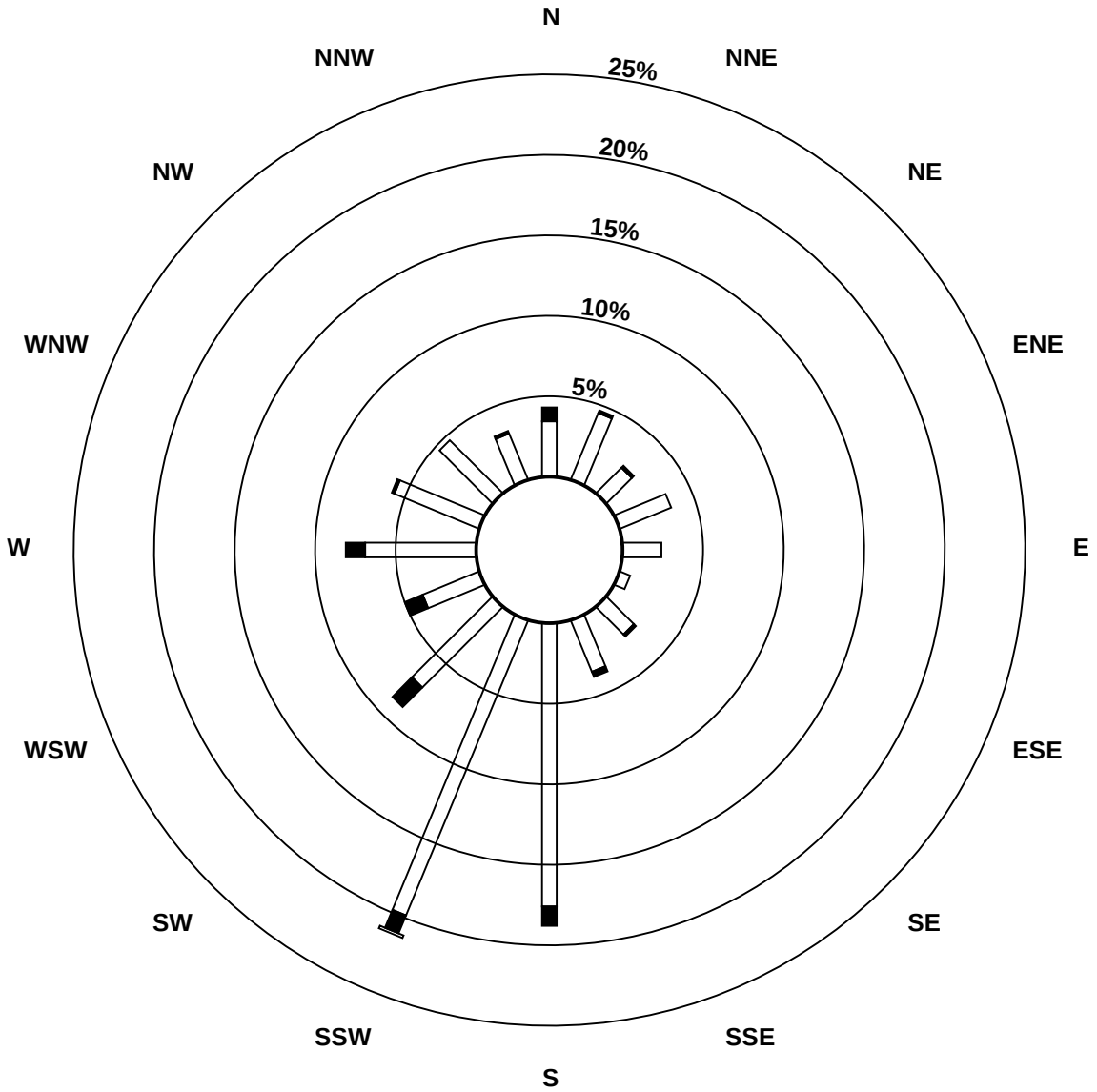
Sunset House - October 2013



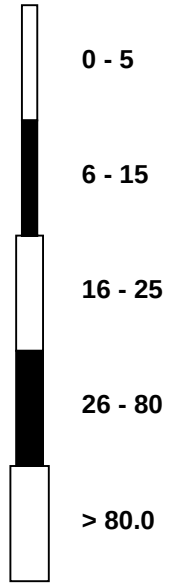
Pollutant Rose

PM2.5 ($PM_{2.5}$) - $\mu g/m^3$

Sunset House - October 2013



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



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - °C

Sunset House - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 18.1 °C on Oct 24 15:00 Maximum Daily Average: 10.4 °C on Oct 21

Minimum Value: -9 °C on Oct 27 21:00 Minimum Daily Average: -3.4 °C on Oct 27
Maximum Diurnal Average: 10.1 °C at hour 15 Minimum Diurnal Average: 2.8 °C at hour 7
Monthly Average: 5.68 °C Percentiles: P_1 = -6.5 P_{10} = -1.3 Q_1 = 2.6 Median = 6.5 Q_3 = 9.2 P_{90} = 11.1 P_{99} = 15.5

Hours in Service:	691
Hours of Data:	589
Hours of Missing Data:	102
Hours of Calibration:	0
Percent Operational Time:	85.2

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Oct	5	5	5	5	5	4	4	4	N	N	N	N	N	6	5	5	5	4	4	3	3	3	2	2	4.2	5.5
2-Oct	2	2	1	1	2	2	1	2	2	2	3	3	4	4	5	4	4	4	3	3	3	2	2	2	2.6	4.7
3-Oct	2	2	1	0	-1	-3	-3	-2	1	3	6	7	8	9	9	9	8	6	1	-1	3	4	4	4	3.2	9.4
4-Oct	4	4	3	3	3	3	3	3	3	4	6	7	9	10	11	11	11	9	8	8	8	7	8	8	6.3	11.2
5-Oct	7	8	7	7	7	7	7	8	8	9	10	12	12	12	13	13	13	11	9	8	7	5	5	4	8.7	13.2
6-Oct	5	6	6	6	6	6	5	5	5	6	7	8	9	10	11	10	10	10	10	9	9	10	11	11	8.0	11.0
7-Oct	12	11	11	9	9	9	9	7	8	9	9	10	13	14	16	13	12	10	10	10	9	9	9	8	10.3	15.8
8-Oct	7	7	6	5	4	3	3	3	2	2	2	3	3	3	3	4	3	3	3	3	3	2	2	2	3.4	7.2
9-Oct	1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	0.8
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--	--
11-Oct	P	P	P	P	P	P	P	P	P	P	8	9	10	10	10	11	9	6	0	N	N	N	N	N	--	10.5
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	6	6	7	7	9	8	6	5	5	5	5	5	4	--	8.6
14-Oct	3	3	2	2	2	2	2	2	4	5	7	9	11	12	13	13	12	10	9	10	10	9	8	8	7.0	13.0
15-Oct	8	8	8	7	7	8	8	8	8	10	11	11	10	9	9	10	9	7	7	6	5	5	2	-1	7.5	11.3
16-Oct	-3	-3	-4	-4	-5	-5	-3	-2	0	2	5	7	9	10	11	10	8	6	1	0	4	5	4	4	2.4	10.5
17-Oct	3	2	1	0	-1	-3	-2	-1	0	1	3	7	11	12	12	12	10	7	3	1	1	1	0	2	3.5	12.4
18-Oct	2	4	4	3	3	3	3	4	6	7	9	10	12	12	13	14	12	7	4	7	8	8	7	7	7.0	13.7
19-Oct	7	7	7	6	6	6	6	6	6	8	9	10	11	11	11	11	10	9	6	2	2	2	2	5	6.7	10.9
20-Oct	6	7	6	5	5	5	5	5	6	8	10	13	14	15	14	13	13	12	11	11	11	10	9	10	9.4	15.3
21-Oct	10	9	9	8	8	7	7	7	8	10	12	15	16	16	14	13	13	9	9	8	9	10	11	11	10.4	16.1
22-Oct	10	10	10	9	8	7	8	7	6	7	8	10	11	11	10	9	8	7	7	6	6	5	5	5	7.8	10.8
23-Oct	4	3	4	4	4	2	2	2	4	5	6	7	9	9	11	10	9	7	7	7	7	7	7	7	6.0	11.4
24-Oct	7	7	7	7	7	7	6	6	7	9	11	12	14	16	18	17	15	11	9	7	4	7	6	5	9.2	18.1
25-Oct	5	3	2	0	0	-1	-4	-4	-1	4	7	8	9	11	12	13	11	7	9	10	10	9	9	8	5.8	12.6
26-Oct	7	7	6	7	7	7	8	8	8	9	10	12	13	14	14	11	10	8	8	7	7	5	4	3	8.4	14.5
27-Oct	1	0	-1	-1	-1	-2	-2	-2	-3	-2	-2	-2	-2	-2	-3	-3	-5	-6	-8	-7	-9	-8	-7	-6	-3.4	0.6
28-Oct	-6	-6	-6	-6	-5	-5	-5	-5	-5	-4	-2	-1	-1	0	1	0	-1	-1	-1	-1	-2	-2	-2	-2	-2.9	0.7
29-Oct	-3	-2	-2	-2	-1	-1	-1	-1	0	1	3	5	7	10	11	11	9	8	8	NS	NS	NS	NS	NS	3.2	11.1
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	4.2	4.1	3.9	3.5	3.2	2.9	2.8	2.8	3.6	4.9	6.6	7.9	9.2	9.8	10.1	9.7	8.7	6.8	5.4	5.1	5.1	5.0	4.7	4.5	Diurnal Average	
	11.6	11.4	11.1	9.5	8.9	9.2	9.0	8.0	8.3	9.9	12.4	15.1	15.6	16.3	18.1	17.1	14.8	11.6	10.9	10.7	10.8	10.5	10.8	11.0	Diurnal Maximum	

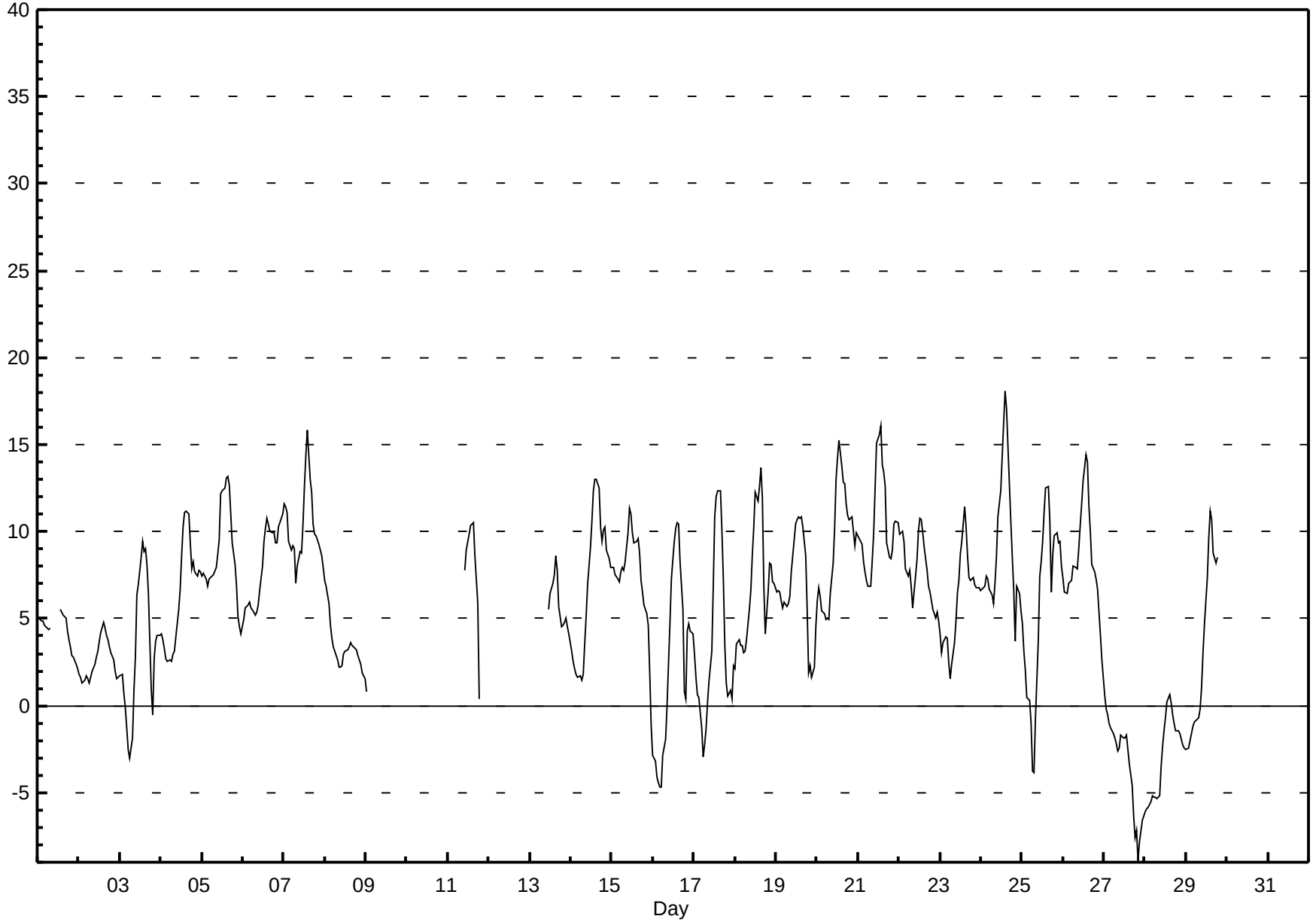
P - Power Failure N - Not Valid NS - Not in service

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Sunset House - October 2013



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	5	5	4	7	6	7	7	6	N	N	N	N	N	9	8	11	10	10	10	11	10	10	11	9	8.0	11.3
Dir	333	341	331	1	16	24	24	25	N	N	N	N	N	8	9	10	18	20	16	11	26	5	10	17	11.5	11.1
2 Spd	9	8	9	5	7	9	6	4	6	8	8	7	6	6	6	7	9	8	5	3	3	0	2	1	5.3	9.1
Dir	359	0	5	5	348	347	341	302	332	341	325	323	319	323	316	320	355	359	12	19	57	101	124	119	345.6	346.7
3 Spd	2	2	2	5	4	6	6	4	7	6	4	5	4	4	5	6	5	4	6	8	11	13	17	18	5.2	18.0
Dir	172	172	105	135	132	136	144	182	192	194	225	284	273	256	198	198	224	204	133	151	173	181	178	176	180.0	176.0
4 Spd	16	16	17	16	18	18	19	20	18	17	20	19	18	16	16	16	12	10	13	13	12	16	22	18	16.2	22.2
Dir	173	173	172	174	175	180	176	175	182	185	183	190	193	194	197	193	193	199	191	194	215	196	196	194	186.4	196.0
5 Spd	13	13	10	11	11	10	9	10	10	9	9	10	15	18	14	16	13	11	7	7	5	5	7	8	8.5	17.7
Dir	197	201	202	194	201	208	204	203	208	214	222	251	272	286	281	276	276	265	260	272	250	198	193	191	233.8	285.8
6 Spd	7	7	6	5	5	9	7	6	9	8	8	11	15	11	12	11	9	9	11	6	12	18	20	22	9.7	21.9
Dir	198	200	210	212	204	182	184	182	181	176	160	163	184	187	196	193	189	169	171	150	164	151	149	162	175.6	162.1
7 Spd	25	24	22	10	13	15	11	4	5	8	7	10	11	9	9	7	12	6	6	10	6	7	8	6	8.1	25.1
Dir	168	170	171	192	193	187	194	217	198	201	192	197	191	196	256	230	283	257	268	277	270	273	270	249	206.2	167.7
8 Spd	6	9	14	11	16	16	15	19	19	17	18	18	19	19	17	18	16	12	11	12	10	9	4	2	13.4	19.3
Dir	265	289	304	313	304	298	295	299	296	297	294	300	298	303	303	308	310	302	311	308	310	306	282	225	300.7	296.3
9 Spd	5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	5.4
Dir	198	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	198.5
10 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--	--
11 Spd	P	P	P	P	P	P	P	P	P	P	9	9	9	11	11	10	11	4	6	N	N	N	N	N	--	11.1
Dir	P	P	P	P	P	P	P	P	P	P	272	271	275	279	283	281	292	281	132	N	N	N	N	N	--	283.2
12 Spd	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
Dir	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13 Spd	N	N	N	N	N	N	N	N	N	N	N	9	9	10	11	13	11	9	13	13	14	15	16	17	--	16.8
Dir	N	N	N	N	N	N	N	N	N	N	N	203	198	194	183	178	173	165	157	167	171	174	177	177	--	176.7
14 Spd	15	13	13	11	12	12	12	11	13	13	13	12	11	11	12	10	8	8	11	14	13	8	8	10	11.1	14.8
Dir	184	192	191	196	192	196	196	195	190	194	195	205	203	228	230	232	226	198	184	186	199	214	207	205	200.2	183.8
15 Spd	13	13	13	15	13	14	12	8	7	7	19	15	13	14	12	10	5	3	4	4	7	8	3	2	5.0	19.2
Dir	200	200	203	202	213	204	209	216	228	265	299	315	353	341	331	319	282	276	311	311	323	347	19	96	264.9	298.5
16 Spd	5	5	5	5	6	6	4	4	8	6	5	4	4	6	9	8	6	3	3	4	3	3	4	4	3.7	8.5
Dir	130	142	141	166	155	188	206	206	183	205	213	237	259	258	261	271	272	264	176	188	213	231	215	229	211.0	261.1
17 Spd	5	4	5	6	4	2	4	6	7	8	9	9	11	10	10	9	6	4	3	4	5	5	5	7	4.7	10.8
Dir	214	252	316	322	287	220	210	209	217	222	209	230	265	267	274	276	280	264	192	186	187	196	179	190	239.5	264.9
18 Spd	9	10	9	9	10	12	12	11	10	9	10	10	11	9	9	9	5	3	6	7	6	6	6	6	7.5	11.8
Dir	193	199	206	204	202	194	195	201	206	210	219	226	262	263	267	276	273	166	174	207	213	211	231	244	217.5	193.9
19 Spd	6	6	6	4	5	4	4	5	5	4	9	20	17	18	16	12	12	8	2	1	4	4	7	9	5.1	19.5
Dir	229	260	267	247	230	233	235	221	251	243	290	310	318	331	332	322	304	305	328	184	183	190	183	182	285.2	309.7
20 Spd	11	14	14	13	11	12	9	7	6	7	8	8	7	8	8	6	5	5	5	5	5	5	5	6	6.7	14.4
Dir	182	185	187	189	192	192	201	213	236	244	260	261	263	255	264	262	246	223	209	210	223	232	254	254	219.0	185.2
21 Spd	5	5	6	5	4	3	4	4	4	4	5	9	12	14	10	6	3	2	5	5	7	10	8	6	4.1	14.1
Dir	239	241	252	250	241	228	230	216	231	249	263	296	301	302	294	278	270	160	153	139	170	179	195	218	245.3	302.0
22 Spd	4	5	5	4	2	3	2	13	14	16	13	10	6	10	10	11	7	5	6	5	5	7	6	2	4.5	15.6
Dir	221	207	211	234	239	276	289	354	18	29	15	1	326	327	350	0	8	31	37	60	62	70	79	79	8.6	28.9

Peace Airshed Zone Association

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
23 Spd	2	2	5	7	4	4	2	4	5	5	6	6	5	6	7	8	9	8	8	18	23	26	28	28	7.1	28.4
Dir	138	51	63	78	79	41	100	93	89	70	94	100	129	112	92	92	89	97	126	151	166	176	174	174	136.6	174.0
24 Spd	26	24	24	27	25	26	26	23	23	17	14	9	9	10	15	14	10	9	7	2	1	7	12	13	8.5	26.9
Dir	176	175	181	178	184	185	183	183	182	199	203	232	273	273	290	298	315	25	21	331	259	339	34	46	195.9	178.5
25 Spd	12	10	8	7	6	5	4	4	4	4	7	12	11	9	8	8	7	7	11	12	14	14	13	8	4.8	13.9
Dir	39	45	54	39	54	68	108	149	128	75	185	185	197	181	196	207	183	175	184	185	182	184	195	211	167.1	184.2
26 Spd	8	8	7	8	9	9	8	7	8	7	7	8	6	14	16	16	12	7	6	9	15	19	22	27	2.3	26.6
Dir	206	201	203	205	202	210	226	224	217	222	254	276	319	351	2	6	15	47	61	58	59	62	67	62	38.7	61.9
27 Spd	27	25	24	29	23	22	20	19	20	16	14	10	6	6	11	14	11	7	7	7	1	2	1	3	11.8	28.8
Dir	66	63	57	58	49	48	25	17	25	25	34	58	27	327	339	356	2	5	28	24	12	161	193	205	37.2	58.2
28 Spd	4	3	5	6	6	8	9	13	11	13	16	17	17	16	19	19	18	18	24	28	24	22	17	19	14.5	28.3
Dir	153	238	207	184	194	191	192	176	171	178	183	187	189	184	190	191	191	195	193	190	191	191	188	185	188.4	190.5
29 Spd	19	19	19	17	17	16	16	16	15	N	15	14	11	11	11	10	9	12	11	NS	NS	NS	NS	NS	13.8	19.3
Dir	186	186	188	192	190	191	193	188	187	N	201	197	215	221	242	232	222	205	214	NS	NS	NS	NS	NS	199.3	185.9
30 Spd	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Dir	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31 Spd	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Dir	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Spd	6.2	5.9	5.1	4.7	5.0	5.6	5.5	4.8	4.9	4.0	5.1	5.6	5.9	5.8	6.0	5.2	3.9	1.9	3.0	3.7	4.7	5.1	5.7	6.2	Diurnal Average	
Dir	178.1	183.9	187.7	185.2	193.1	192.6	198.5	203.0	201.9	215.9	230.1	240.6	253.0	269.4	273.3	273.9	274.4	228.1	180.7	185.8	184.4	183.7	176.3	176.7		
Spd	27.1	25.0	24.2	28.8	24.8	26.3	25.9	23.3	22.6	17.2	19.8	19.5	19.3	18.6	18.8	19.2	17.8	18.0	23.9	28.3	23.9	26.3	27.6	28.4	Diurnal Maximum	
Dir	66.2	62.9	180.6	58.2	183.6	185.0	183.1	183.1	182.0	297.0	182.6	309.7	298.4	302.7	189.6	191.3	191.2	195.3	193.3	190.5	190.8	176.0	173.6	174.0		

Maximum Speed Value: 29 km/h on Oct 27 04:00
Minimum Speed Value: 0 km/h on Oct 2 22:00
Maximum Daily Speed Average: 16.2 km/h on Oct 4
Minimum Daily Speed Average: 2.3 km/h on Oct 16
Maximum Diurnal Speed Average: 6.2 km/h at hour 1
Minimum Diurnal Speed Average: 1.9 km/h at hour 18

Monthly Average Velocity: 4.08 km/h 210.36 deg
Speed Percentiles: P_1 = 1.6 P_{10} = 4.1 Q_1 = 5.6 Median = 8.8 Q_3 = 13.1 P_{90} = 17.8 P_{99} = 26.8
All monthly, daily, and diurnal averages have been calculated using vector methods

Hours in Service:	691
Hours of Data:	588
Hours of Missing Data:	103
Percent Operational Time:	85.1

P - Power Failure N - Not Valid NS - Not in service

Frequency Distribution

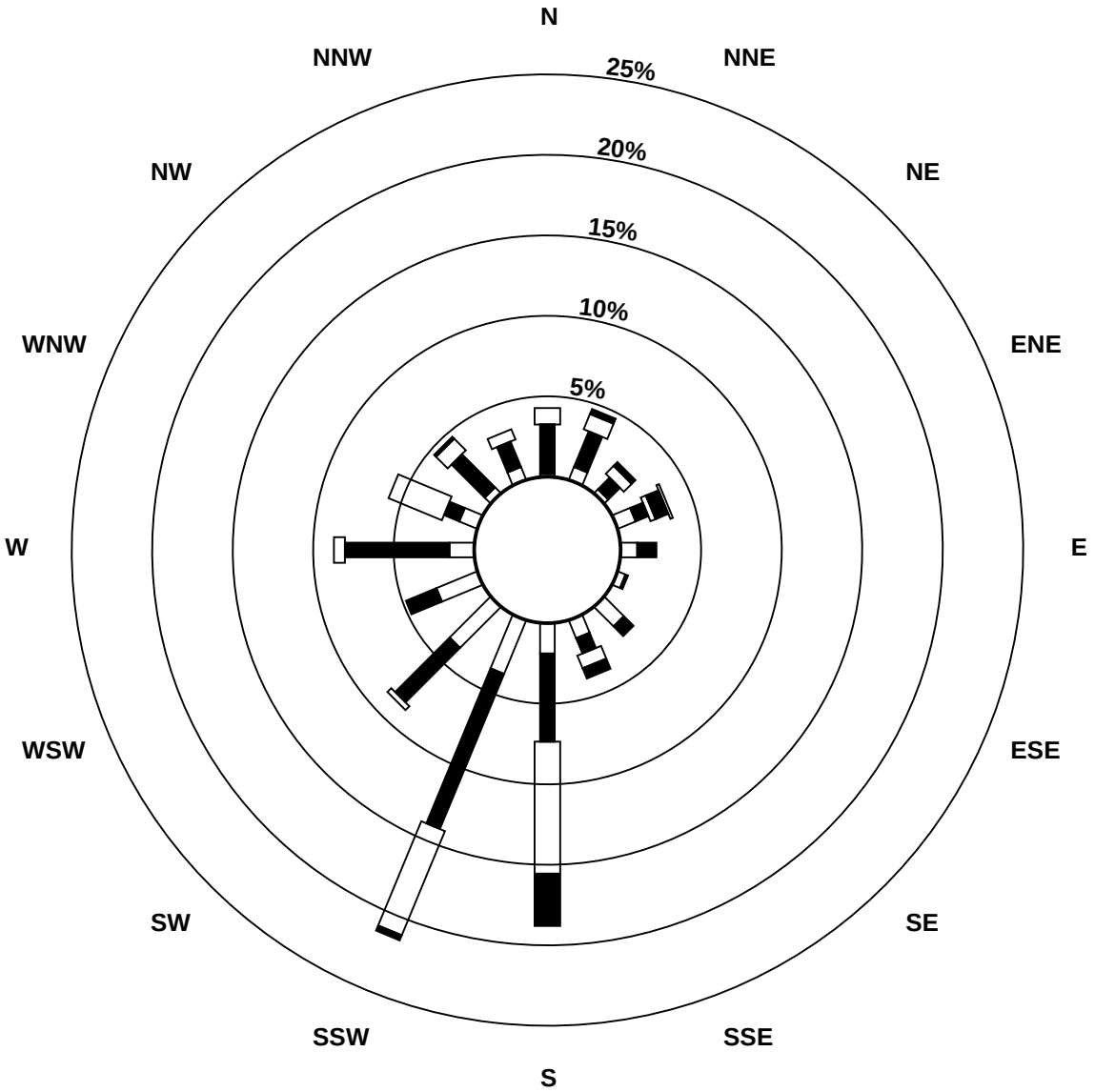
Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	5	30	13	0	0	0	48
NorthEast	4	20	8	9	1	0	42
East	11	11	0	0	0	0	22
SouthEast	10	12	3	1	0	0	26
South	18	61	91	28	2	0	200
SouthWest	39	57	15	0	0	0	111
West	20	52	9	0	0	0	81
NorthWest	7	23	24	4	0	0	58
Total	114	266	163	42	3	0	588

Peace Airshed Zone Association

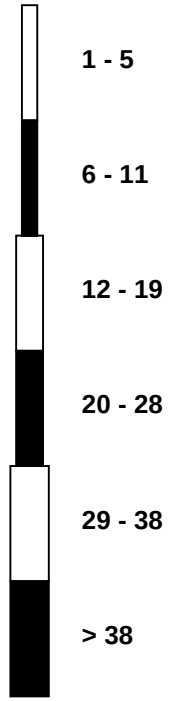
Wind Rose

Wind Speed (WS) (km/h)

Sunset House - October 2013



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Sunset House - October 2013

Maximum Speed: 29 km/h on Oct 27 04:00

Maximum Daily Speed Average: 16.7 km/h on Oct 4

Minimum Speed: 0 km/h on Oct 2 22:00

Minimum Daily Speed Average: 5.4 km/h on Oct 16

Maximum Diurnal Speed Average: 11.7 km/h at hour 15

Minimum Diurnal Speed Average: 7.6 km/h at hour 18

Monthly Average Speed: 10.19 km/h

Percentiles: P_1 = 1.8 P_{10} = 4.4 Q_1 = 5.8 Median = 9.1 Q_3 = 13.1 P_{90} = 18.0 P_{99} = 26.9

Hours in Service:	691
Hours of Data:	588
Hours of Missing Data:	103
Percent Operational Time:	85.1

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Oct	5	5	4	7	6	7	7	6	N	N	N	N	N	9	9	11	10	10	11	11	10	10	11	9	8.4	11.4
2-Oct	9	8	9	5	7	9	7	4	7	8	8	7	7	6	7	8	9	8	5	4	3	0	2	1	6.2	9.3
3-Oct	2	2	2	5	4	6	6	4	7	6	4	6	5	6	6	7	6	4	6	8	11	13	17	18	6.7	18.0
4-Oct	17	16	17	16	18	18	19	20	18	17	20	19	18	16	16	16	12	10	14	14	12	16	22	18	16.7	22.4
5-Oct	13	14	10	11	11	10	9	10	10	10	9	11	16	18	15	16	14	11	7	7	5	6	7	8	10.7	18.0
6-Oct	7	7	7	5	5	9	7	6	9	8	8	11	15	12	13	11	9	9	11	6	12	18	20	22	10.3	22.0
7-Oct	25	24	22	12	13	16	12	5	5	8	8	11	11	10	10	8	13	6	6	10	6	7	8	7	10.9	25.2
8-Oct	6	9	14	11	16	16	15	19	19	17	18	18	19	19	17	18	17	12	11	13	10	9	5	2	13.8	19.5
9-Oct	6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	5.5
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P		
	P	P	P	P	P	P	P	P	P	P	9	9	9	11	12	10	11	5	6	N	N	N	N	N	--	11.6
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	10	10	11	12	13	11	10	13	13	14	15	16	17	--	16.9
14-Oct	15	13	13	11	12	13	12	11	13	13	13	13	12	12	12	10	8	8	11	14	13	8	8	10	11.6	14.9
15-Oct	14	13	13	15	13	14	12	8	8	8	19	16	13	14	12	10	5	3	5	4	7	8	3	3	10.1	19.3
16-Oct	5	5	5	5	6	6	5	5	8	6	5	5	5	7	9	8	6	3	3	4	3	4	4	5	5.4	9.4
17-Oct	5	4	5	6	4	3	4	6	7	8	9	9	11	10	11	9	6	4	3	4	5	5	5	7	6.3	11.2
18-Oct	9	10	9	10	10	12	12	11	10	10	11	10	11	9	9	10	5	4	6	7	6	7	6	7	8.8	11.9
19-Oct	7	6	6	5	5	4	4	5	5	4	9	20	17	18	16	12	12	8	3	2	5	5	7	9	8.1	20.1
20-Oct	11	14	14	13	12	12	9	8	7	8	8	8	7	8	8	6	6	5	5	5	5	5	5	6	8.1	14.4
21-Oct	6	5	6	5	5	4	5	4	4	5	6	9	13	14	10	6	3	3	5	6	8	10	8	6	6.4	14.4
22-Oct	5	5	5	4	3	3	2	13	15	16	13	10	7	11	10	11	7	5	6	5	5	7	6	3	7.4	15.7
23-Oct	3	2	5	7	5	4	3	4	5	5	6	6	6	6	7	8	9	9	9	18	23	26	28	29	9.7	28.5
24-Oct	26	24	24	27	25	26	26	23	23	17	14	10	9	10	16	15	11	9	7	3	1	8	13	13	15.9	27.0
25-Oct	12	10	8	7	6	6	4	4	5	4	8	13	12	10	9	8	7	8	11	12	14	14	13	8	8.8	14.0
26-Oct	8	8	8	8	9	9	9	8	8	7	7	8	6	14	16	16	12	7	6	9	15	19	22	27	11.1	26.8
27-Oct	27	25	24	29	23	22	20	19	20	16	14	11	7	6	11	14	12	7	7	7	3	2	1	4	13.8	29.0
28-Oct	5	5	5	7	6	9	9	13	11	14	16	17	17	17	19	19	18	18	24	28	24	22	17	19	15.0	28.5
29-Oct	19	19	19	17	17	16	16	16	15	N	15	14	11	11	12	10	9	12	12	NS	NS	NS	NS	NS	14.5	19.4
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	10.6	10.6	10.6	10.4	10.1	10.5	9.8	9.8	10.3	9.7	10.7	11.3	11.0	11.4	11.7	11.2	9.6	7.6	8.1	8.9	9.2	10.2	10.6	10.7	Diurnal Average	
	27.2	25.2	24.4	29.0	24.9	26.3	26.0	23.4	22.8	17.3	20.0	20.1	19.4	18.9	19.1	19.4	18.0	18.1	24.0	28.5	24.1	26.5	27.7	28.5	Diurnal Maximum	

P - Power Failure N - Not Valid NS - Not in service

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

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Sunset House - October 2013

Maximum Value: 91.6 deg on Oct 19 20:00

Minimum Value: 3.0 deg on Oct 14 19:00

Percentiles: P_1 = 4.1 P_{10} = 5.6 Q_1 = 7.8 Median = 11.8 Q_3 = 17.9 P_{90} = 26.2 P_{99} = 51.8

Hours in Service:	691
Hours of Data:	589
Hours of Missing Data:	102
Hours of Calibration:	0
Percent Operational Time:	85.2

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Oct	14	35	23	11	10	4	9	8	N	N	N	N	N	10	15	10	14	11	8	8	8	8	8	16	34.9
2-Oct	7	9	9	15	11	12	22	18	16	18	19	19	19	22	20	16	12	10	10	16	25	26	12	30	30.4
3-Oct	33	15	49	7	26	5	7	17	9	21	34	40	42	52	38	28	28	21	12	12	5	5	5	5	52.4
4-Oct	5	6	4	5	4	6	5	5	6	7	8	7	7	9	7	7	8	8	18	16	10	8	7	6	18.2
5-Oct	6	8	6	6	6	7	8	8	10	13	15	27	16	12	12	15	14	17	23	19	18	14	12	7	27.0
6-Oct	7	11	19	26	19	7	5	4	6	11	13	12	13	15	11	10	11	8	7	13	8	5	5	7	26.1
7-Oct	6	6	7	31	9	10	20	42	33	17	29	23	12	25	23	29	31	21	19	17	17	21	16	18	42.3
8-Oct	17	18	9	14	9	8	8	7	7	8	8	7	8	10	9	10	12	10	16	10	10	11	31	39	38.9
9-Oct	12	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	11.7
10-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	--
11-Oct	P	P	P	P	P	P	P	P	P	P	15	22	19	19	16	17	13	54	11	N	N	N	N	N	53.9
12-Oct	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--
13-Oct	N	N	N	N	N	N	N	N	N	N	N	18	15	14	14	12	10	8	5	4	4	5	5	5	17.9
14-Oct	7	4	5	9	4	7	6	9	7	8	10	11	15	16	12	11	11	12	3	5	15	14	8	10	15.6
15-Oct	6	8	10	7	9	8	10	12	14	22	8	20	9	10	12	15	15	19	22	12	11	10	15	48	48.0
16-Oct	10	10	11	16	12	9	27	31	9	14	21	31	40	32	26	17	18	38	11	9	15	34	18	24	40.0
17-Oct	14	20	16	13	20	34	28	12	15	12	13	14	16	16	17	17	14	17	26	8	7	10	21	18	34.3
18-Oct	8	6	8	10	13	8	7	10	11	12	16	14	17	12	15	12	15	37	24	13	10	9	17	19	37.4
19-Oct	20	16	13	16	18	19	20	23	22	18	23	13	11	15	11	12	8	9	63	92	10	13	16	11	91.6
20-Oct	4	4	4	5	6	5	14	33	21	22	19	21	22	19	15	19	17	16	12	13	20	21	20	19	33.3
21-Oct	15	15	17	18	22	23	18	18	21	35	21	18	11	12	13	12	35	24	16	14	21	7	12	16	35.4
22-Oct	16	10	10	17	28	23	27	14	9	6	14	16	28	20	17	9	10	12	11	7	10	6	12	26	28.1
23-Oct	30	34	15	10	22	14	30	11	6	14	14	21	32	28	25	18	8	8	17	5	7	6	6	6	34.1
24-Oct	5	5	6	6	5	5	5	5	10	10	10	25	17	15	9	9	29	8	6	33	64	15	15	8	63.6
25-Oct	6	7	8	7	8	16	21	12	36	27	35	16	14	17	26	16	12	7	5	4	5	5	7	16	35.8
26-Oct	16	8	8	11	9	13	17	18	10	16	17	13	21	13	12	7	9	18	21	13	6	7	6	6	21.0
27-Oct	6	6	6	7	9	8	7	7	9	7	17	16	26	17	16	12	7	7	10	12	72	18	29	22	71.7
28-Oct	41	39	24	23	29	25	10	7	5	9	8	11	10	10	10	9	7	7	6	6	7	5	5	5	40.5
29-Oct	5	4	4	6	5	4	5	4	4	5	8	8	11	12	13	12	12	5	10	NS	NS	NS	NS	NS	12.6
30-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
31-Oct	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
	40.5	38.8	49.0	30.9	29.4	34.3	30.2	42.3	35.8	34.5	35.0	39.7	41.6	52.4	37.8	29.5	35.4	53.9	62.7	91.6	71.7	34.1	31.3	48.0	

P - Power Failure N - Not Valid NS - Not in service

PAZA
Falher Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Falher - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.9 ppb on Oct 25 12:00 Maximum Daily Average: 0.4 ppb on Oct 26

Minimum Value: 0 ppb on Oct 1 01:00 Minimum Daily Average: 0.0 ppb on Oct 1
Maximum Diurnal Average: 0.2 ppb at hour 12 Minimum Diurnal Average: 0.1 ppb at hour 23
Monthly Average: 0.11 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.1 $Q_3 = 0.1$ $P_{90} = 0.2$ $P_{99} = 0.9$

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

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

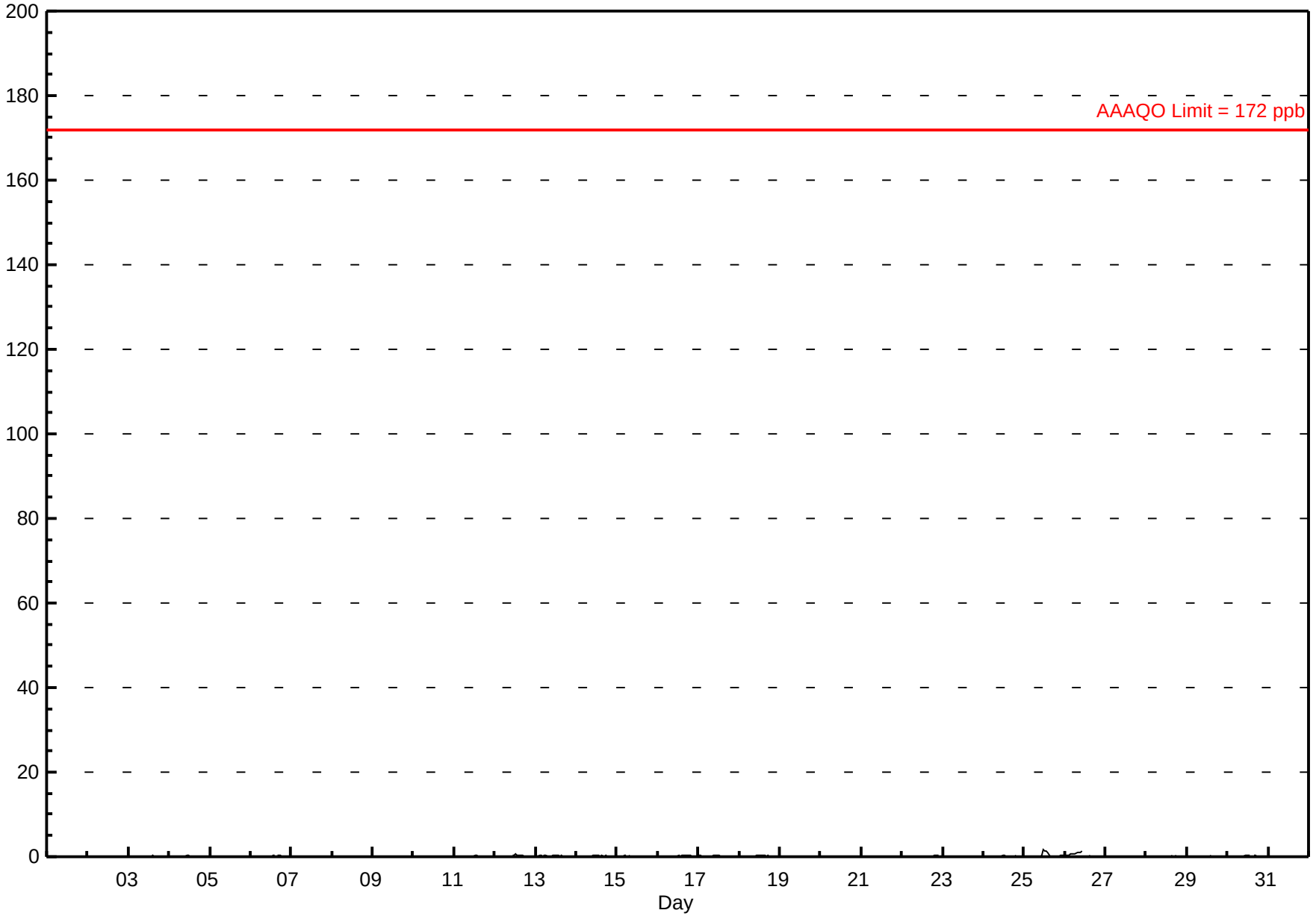
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Falher - October 2013



Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Falher - October 2013

Maximum Value: 21.6 ppb on Oct 9 10:00

Maximum Daily Average: 1.3 ppb on Oct 9

Minimum Value: 0 ppb on Oct 1 14:00

Minimum Daily Average: 0.3 ppb on Oct 1

Maximum Diurnal Average: 1.2 ppb at hour 10

Minimum Diurnal Average: 0.4 ppb at hour 24

Monthly Average: 0.51 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.4 $Q_3 = 0.5$ $P_{90} = 0.6$ $P_{99} = 1.8$

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.5
2-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.5
3-Oct	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	A	0	0	0	1	0	0.4	0.6
4-Oct	0	0	0	0	1	0	0	1	0	1	1	0	1	0	1	1	0	A	0	0	0	0	0	0	0.4	0.9
5-Oct	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	1	0	0	0	0	0	0.4	0.6
6-Oct	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	1	1	0	0	0	0	0	0	0.4	0.7
7-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.5
8-Oct	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.5
9-Oct	0	0	0	0	0	0	0	0	0	22	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1.3	21.6
10-Oct	0	1	0	0	0	0	0	0	C	C	C	A	0	0	0	0	0	0	0	1	0	0	0	0	0.3	0.5
11-Oct	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0	0	1	1	0	1	1	0	0	0.4	0.8
12-Oct	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	1	0	0	1	1	0	1	0	0.5	0.9
13-Oct	0	0	1	1	0	1	1	1	A	1	0	1	1	1	1	1	0	0	1	0	0	0	0	0	0.5	0.6
14-Oct	1	1	1	0	0	1	1	A	0	1	1	0	1	1	1	1	0	0	0	0	1	0	0	1	0.5	0.8
15-Oct	0	1	0	1	1	1	A	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0.5	0.7
16-Oct	0	0	1	0	0	A	0	1	0	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0.6	0.9
17-Oct	1	1	1	1	A	0	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0	0.5	0.7
18-Oct	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0.5	0.8
19-Oct	0	1	A	1	1	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.6
20-Oct	0	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	1	0.4	0.7
21-Oct	A	0	0	1	0	0	0	0	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	A	0.4	0.6
22-Oct	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	3	1	1	A	1	0.6	3.0
23-Oct	1	0	0	1	0	1	0	0	1	1	0	1	0	0	0	0	1	0	0	0	0	A	0	0	0.5	0.7
24-Oct	1	0	0	0	1	1	1	1	0	1	0	1	1	0	0	0	0	0	0	1	A	0	1	0	0.5	1.3
25-Oct	0	0	0	0	1	0	0	1	0	0	2	4	4	3	2	1	0	0	1	A	0	1	1	1	1.1	4.1
26-Oct	1	1	1	1	1	1	1	1	1	1	6	C	C	C	2	0	0	0	A	0	0	0	0	0	1.1	6.1
27-Oct	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	1	0	0	0	0	0.4	0.6
28-Oct	0	1	0	1	0	0	0	0	0	0	0	1	1	0	1	1	A	1	0	1	1	1	1	0	0.5	0.7
29-Oct	1	0	0	0	0	0	0	1	1	0	0	1	0	1	1	A	0	0	0	0	0	0	0	0	0.4	0.8
30-Oct	0	0	0	0	0	0	0	0	1	0	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0.5	0.8
31-Oct	0	0	0	0	1	0	0	0	1	0	1	0	0	A	0	0	0	0	1	0	0	0	0	0	0.4	0.6
	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.4	1.2	0.8	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.6	0.4	0.4	0.4	0.4	Diurnal Average	
	0.7	0.8	0.9	0.8	1.0	1.1	1.2	1.5	1.3	21.6	6.1	4.1	3.7	3.5	2.3	1.0	0.8	0.7	0.8	3.0	0.9	0.9	0.9	0.7	Diurnal Maximum	

C - Calibration

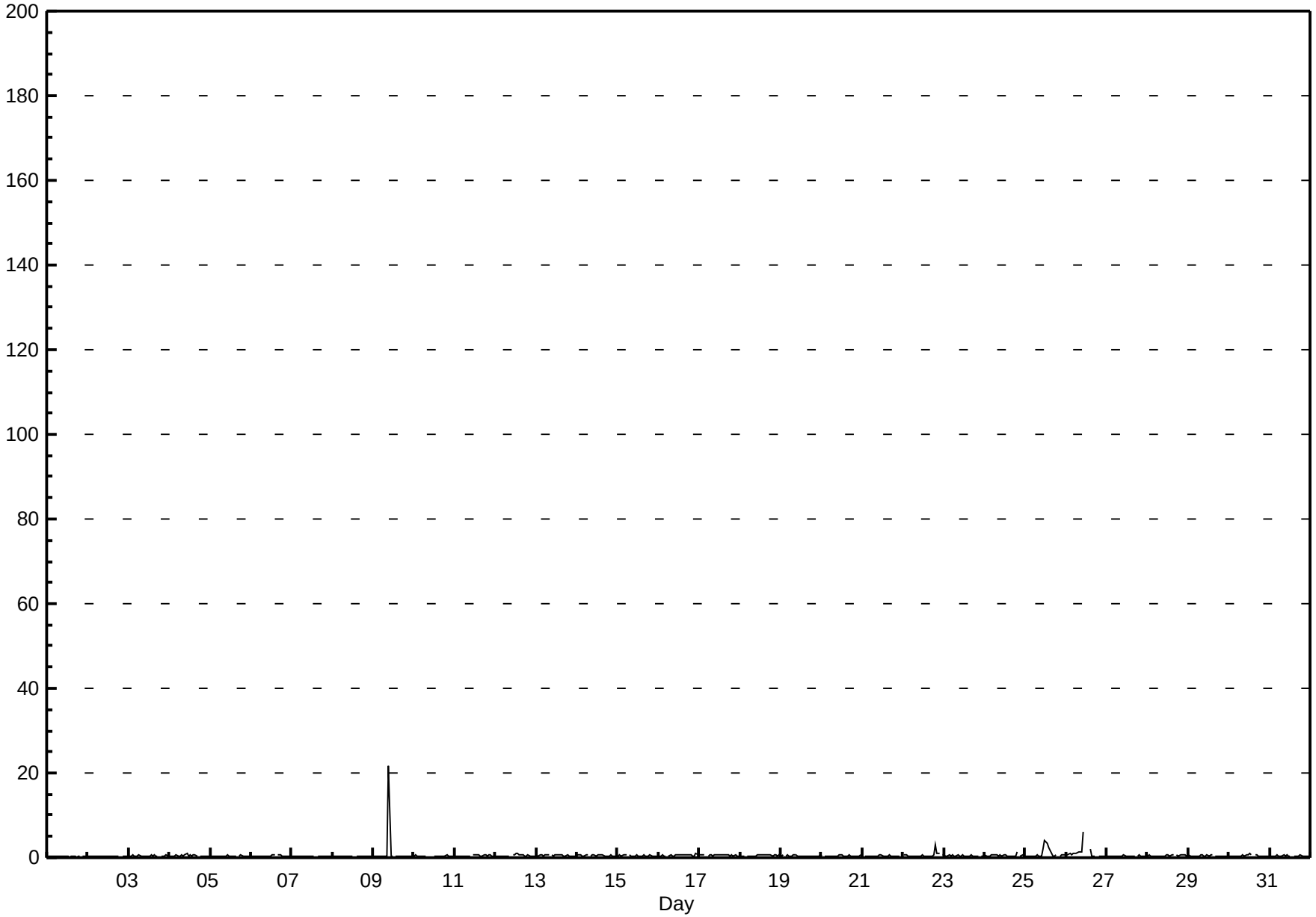
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Falher - October 2013



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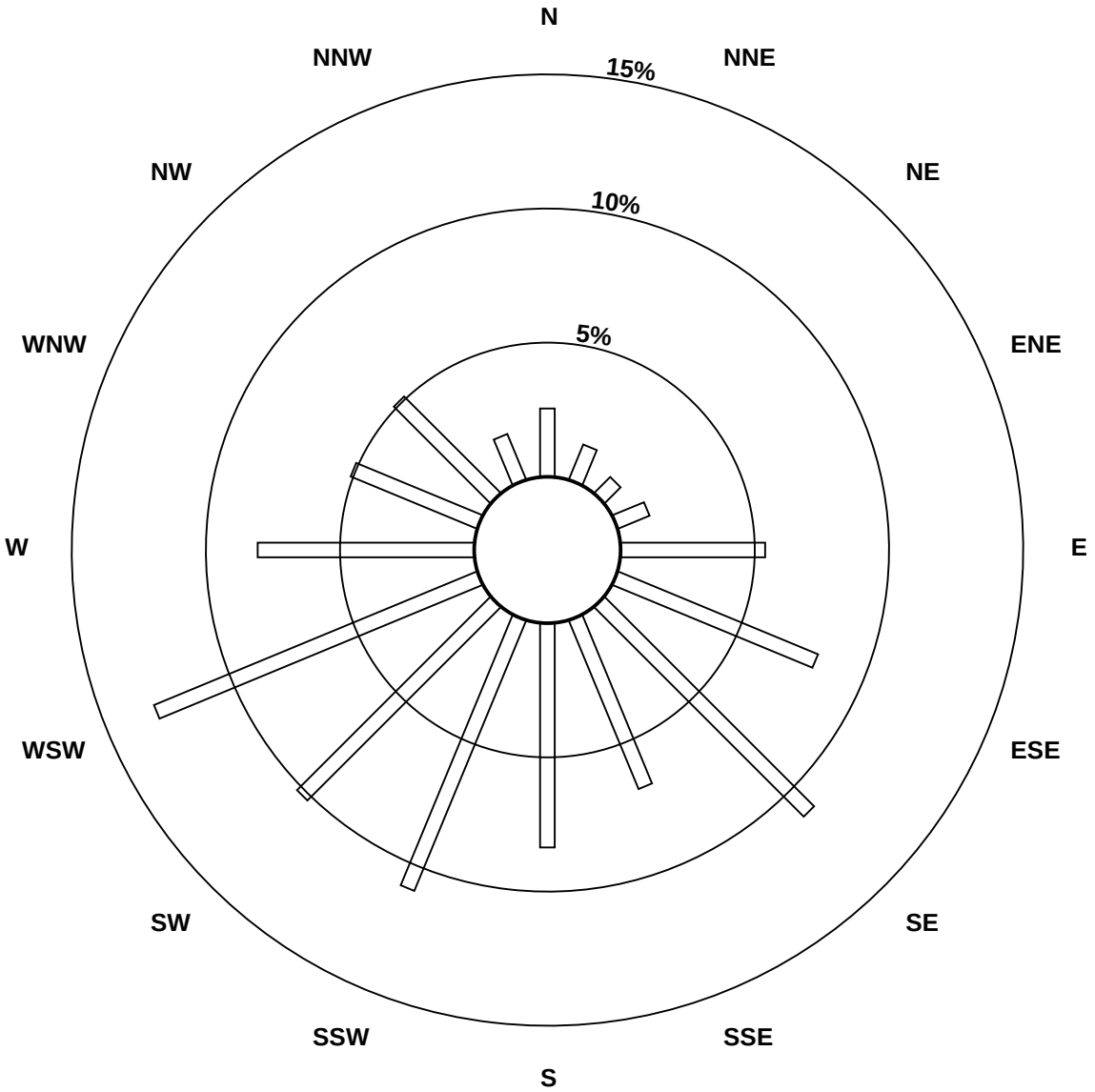
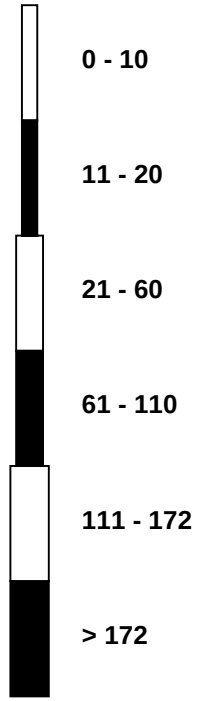
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Falher - October 2013



Pollutant Classes (ppb)

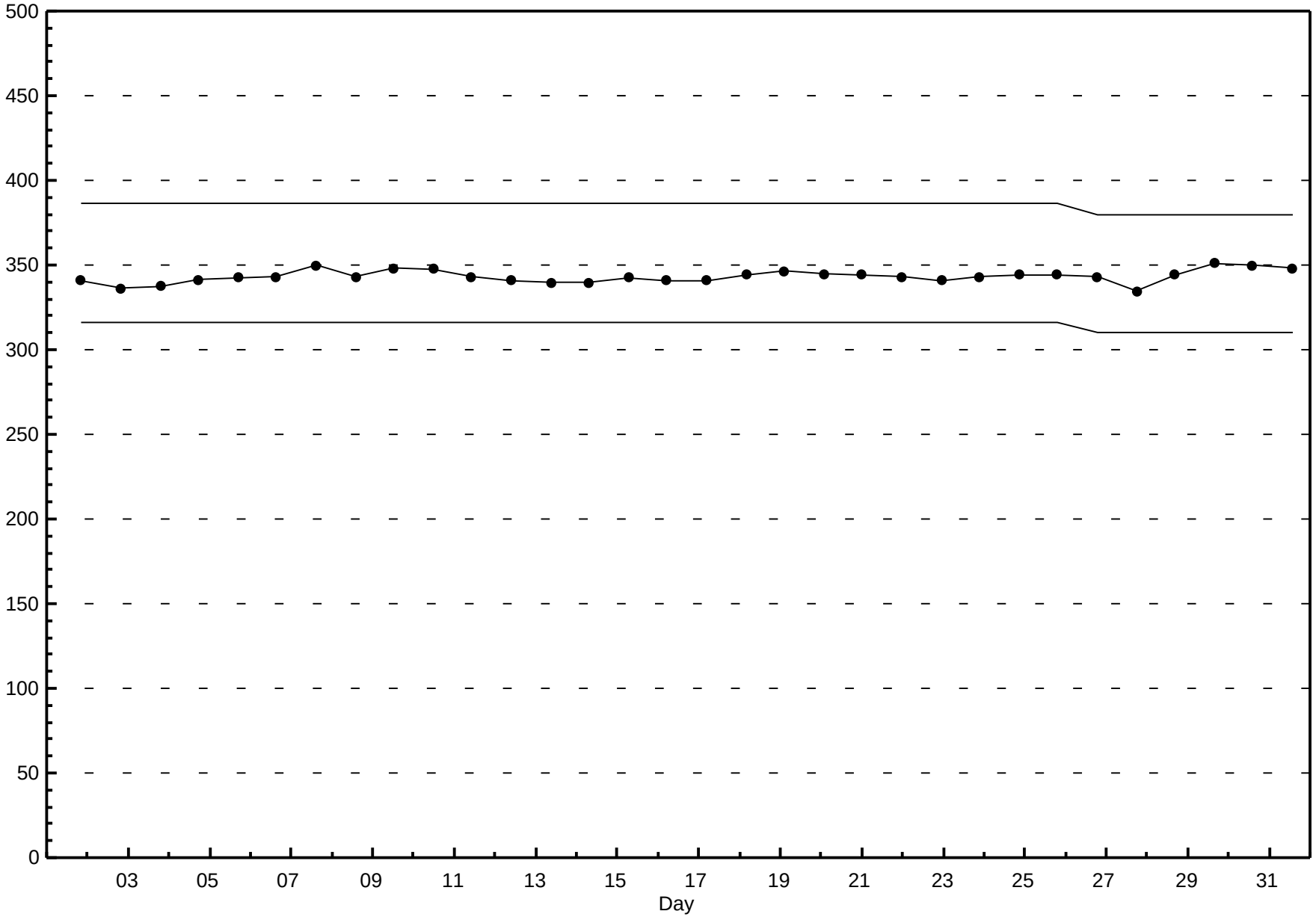


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Falher - October 2013



Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Falher - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.2 ppb on Oct 3 02:00 Maximum Daily Average: 1.3 ppb on Oct 3

Minimum Value: 0 ppb on Oct 2 15:00 Minimum Daily Average: 0.0 ppb on Oct 29
Maximum Diurnal Average: 0.4 ppb at hour 2 Minimum Diurnal Average: 0.1 ppb at hour 13
Monthly Average: 0.21 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.1 $Q_3 = 0.2$ $P_{90} = 0.4$ $P_{99} = 2.2$

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	40
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.5
2-Oct	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0.4	1.5
3-Oct	2	5	4	4	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	1	3	4	2	1.3	5.2
4-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.2
5-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.4
6-Oct	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0.3	0.7
7-Oct	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.5
8-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
9-Oct	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
10-Oct	0	0	0	0	0	0	0	0	C	C	C	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
11-Oct	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	1.4
12-Oct	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.8
13-Oct	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
14-Oct	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
15-Oct	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
16-Oct	0	1	1	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.3	1.3
17-Oct	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.6
18-Oct	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.6
19-Oct	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
20-Oct	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
21-Oct	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	A	0.2	0.9
22-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2
23-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
24-Oct	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.6
25-Oct	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0.2	0.9
26-Oct	0	0	0	1	1	1	1	1	1	C	C	C	C	C	0	0	0	0	A	0	0	0	0	0	0.4	1.1
27-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.2
28-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1
29-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.1
30-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0.1	0.5
31-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.3
	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	Diurnal Average	
	2.3	5.2	4.4	4.0	1.1	0.8	0.7	1.0	1.1	0.5	0.4	0.3	0.2	0.2	0.3	0.2	0.3	0.7	0.7	0.9	1.3	2.7	3.8	2.3	Diurnal Maximum	

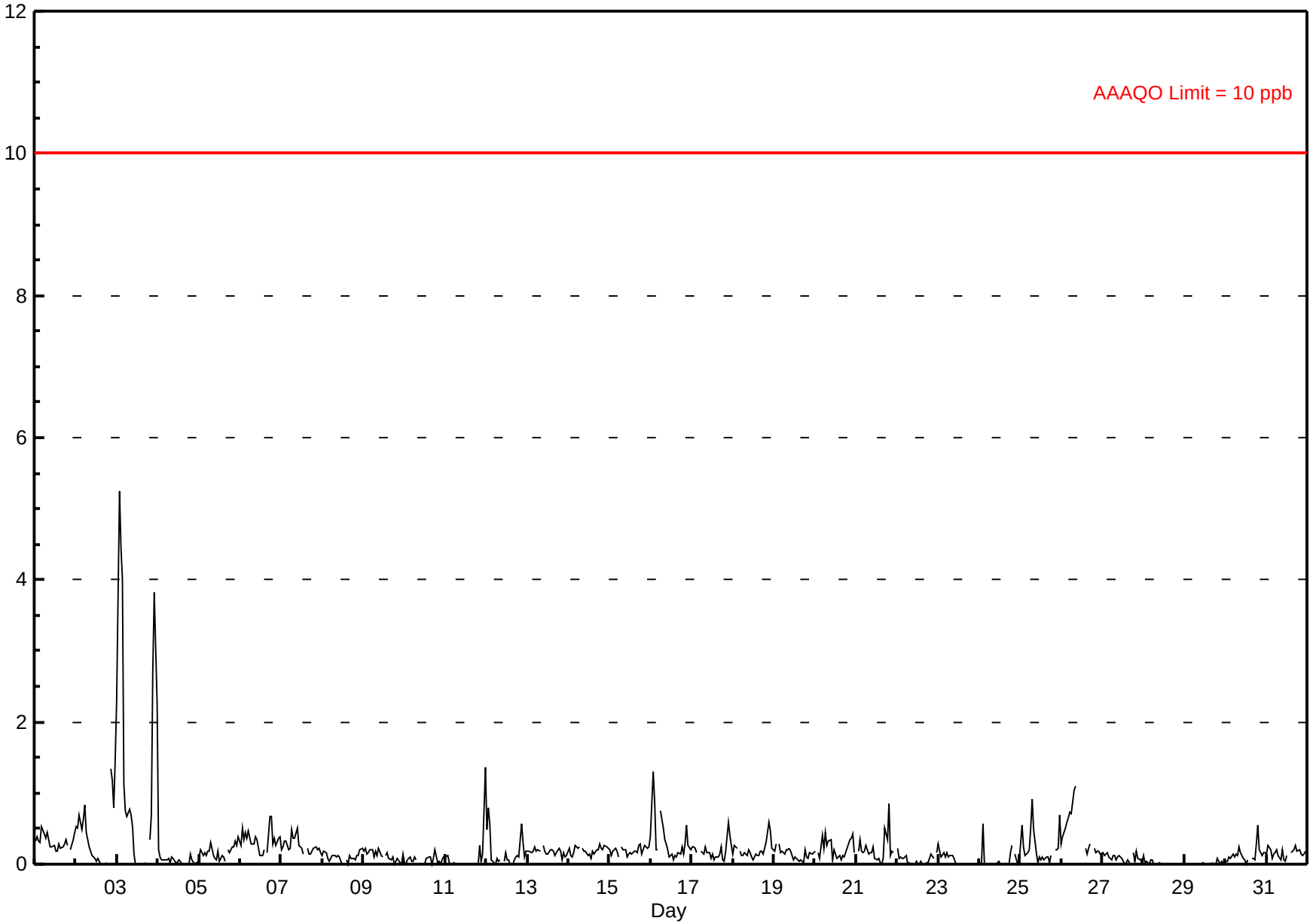
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Falher - October 2013



Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Falher - October 2013

Maximum Value: 10.3 ppb on Oct 3 02:00

Maximum Daily Average: 2.8 ppb on Oct 3

Minimum Value: 0 ppb on Oct 24 08:00

Minimum Daily Average: 0.7 ppb on Oct 29

Maximum Diurnal Average: 1.3 ppb at hour 2

Minimum Diurnal Average: 0.7 ppb at hour 14

Monthly Average: 0.95 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.8 $Q_3 = 1.0$ $P_{90} = 1.2$ $P_{99} = 4.5$

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	40
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	1.2
2-Oct	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	2	2	3	1.2	2.9
3-Oct	10	10	7	6	2	1	2	1	1	1	1	1	1	0	1	1	1	1	A	1	1	5	5	5	2.8	10.3
4-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.2
5-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.3
6-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	2	1	1	1	1	1	1.1	2.3
7-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.3
8-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.0
9-Oct	1	1	1	1	1	1	1	1	1	4	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	4.2
10-Oct	1	1	1	1	1	1	1	1	C	C	C	A	1	1	1	1	1	1	1	1	1	0	1	1	0.7	1.2
11-Oct	1	1	1	0	1	1	1	1	1	1	A	1	1	1	0	1	1	1	1	0	2	1	1	3	0.8	2.6
12-Oct	2	2	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.5
13-Oct	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
14-Oct	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
15-Oct	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.1
16-Oct	1	3	3	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	3.5
17-Oct	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
18-Oct	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
19-Oct	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
20-Oct	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.0	2.5
21-Oct	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	A	0.9	2.2
22-Oct	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	1.0
23-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	1.1
24-Oct	1	1	3	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	2.8
25-Oct	1	1	1	1	1	1	5	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	4	1.2	4.5
26-Oct	1	1	1	1	1	1	1	2	2	C	C	C	C	C	1	1	1	1	A	1	1	1	1	1	1.1	2.0
27-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.0
28-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	0.9
29-Oct	1	1	0	1	1	1	1	1	1	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	0.9
30-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	2	1	1	1	1	0.9	1.9
31-Oct	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.1
	1.2	1.3	1.3	1.0	0.9	0.9	1.0	0.9	0.9	0.9	0.8	0.7	0.7	0.7	0.8	0.7	0.8	0.9	0.9	0.9	1.0	1.1	1.1	1.2	Diurnal Average	
	9.5	10.3	7.1	5.6	2.4	1.7	4.5	2.0	1.8	4.2	1.2	0.9	1.0	1.0	1.1	1.0	1.1	2.2	2.3	2.2	2.9	4.7	5.3	5.0	Diurnal Maximum	

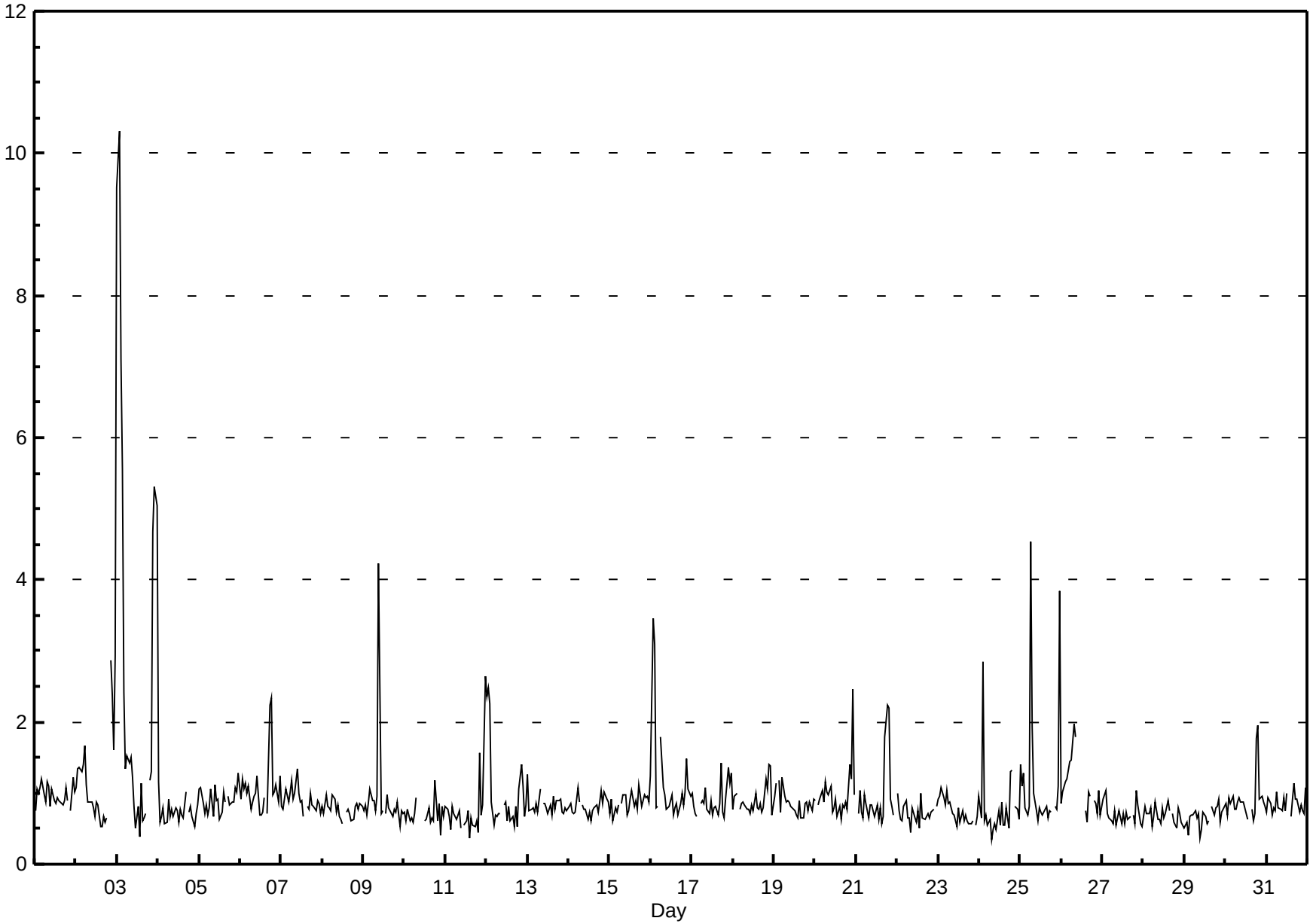
C - Calibration

A - Automated Daily Zero Span

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Falher - October 2013

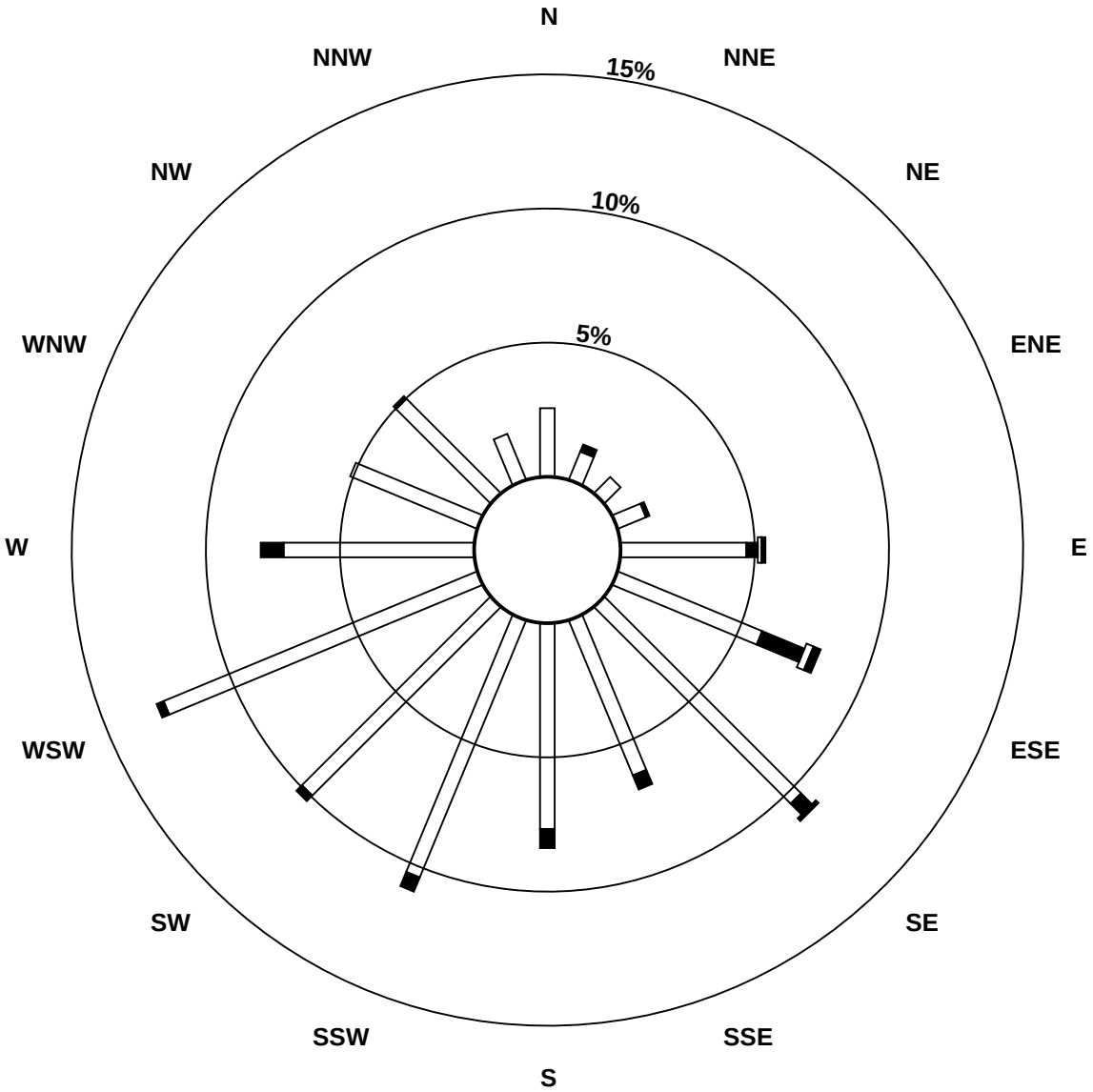


Peace Airshed Zone Association

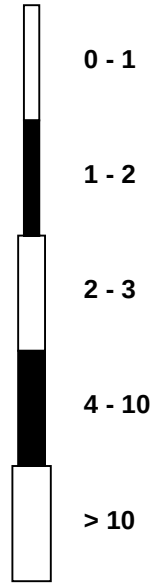
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Falher - October 2013



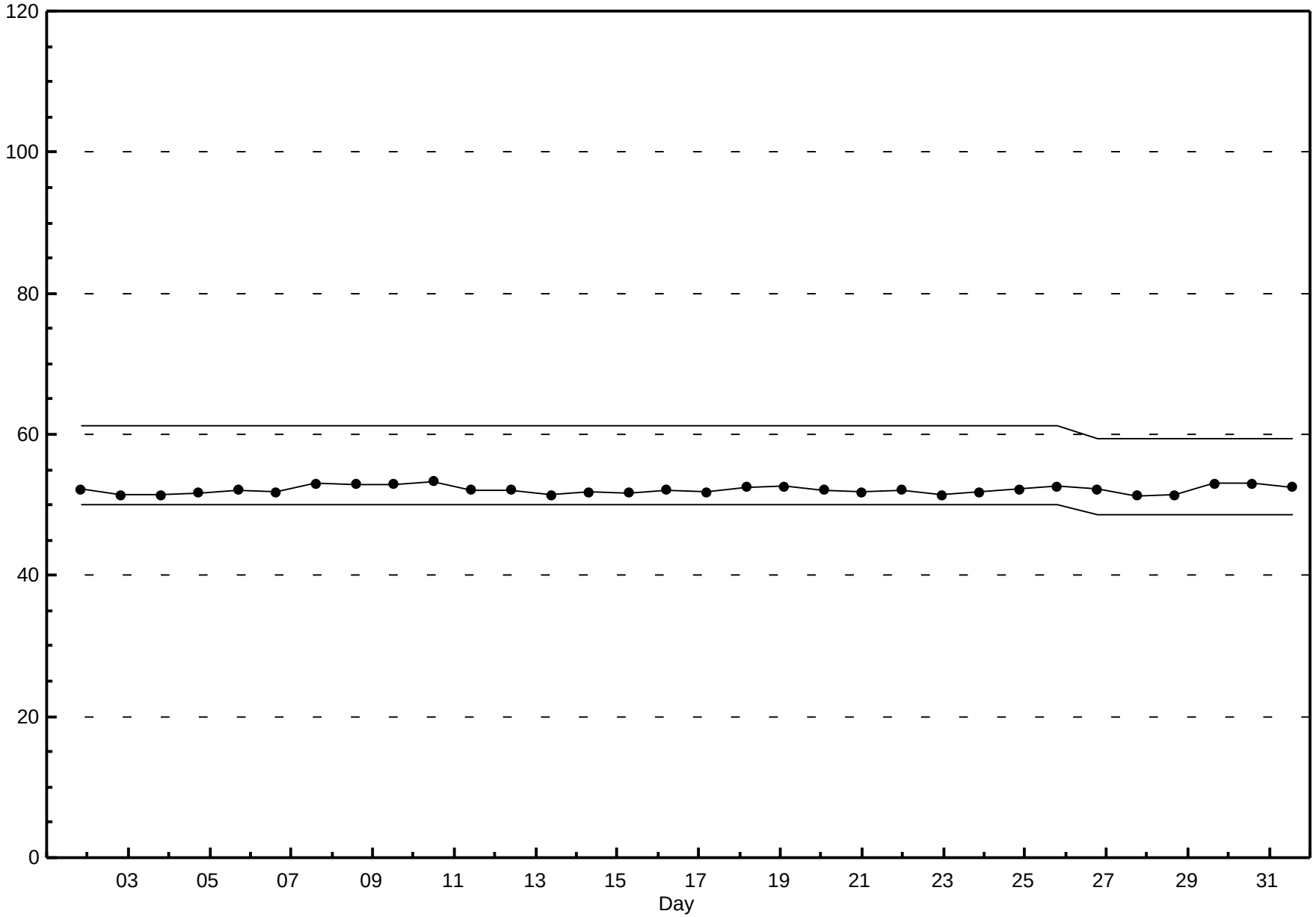
Pollutant Classes (ppb)



Span Responses

Hydrogen Sulphide (H_2S)

Falher - October 2013



Hourly Averages

External Temperature (ET) - °C

Falher - October 2013

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 16.5 °C on Oct 24 16:00 Maximum Daily Average: 10.5 °C on Oct 21

Minimum Value: -7 °C on Oct 27 20:00 Minimum Daily Average: -2.5 °C on Oct 27
Maximum Diurnal Average: 10.0 °C at hour 15 Minimum Diurnal Average: 1.2 °C at hour 7
Monthly Average: 4.70 °C Percentiles: P_1 = -5.3 P_{10} = -2.2 Q_1 = 0.9 Median = 4.7 Q_3 = 8.4 P_{90} = 10.8 P_{99} = 14.8

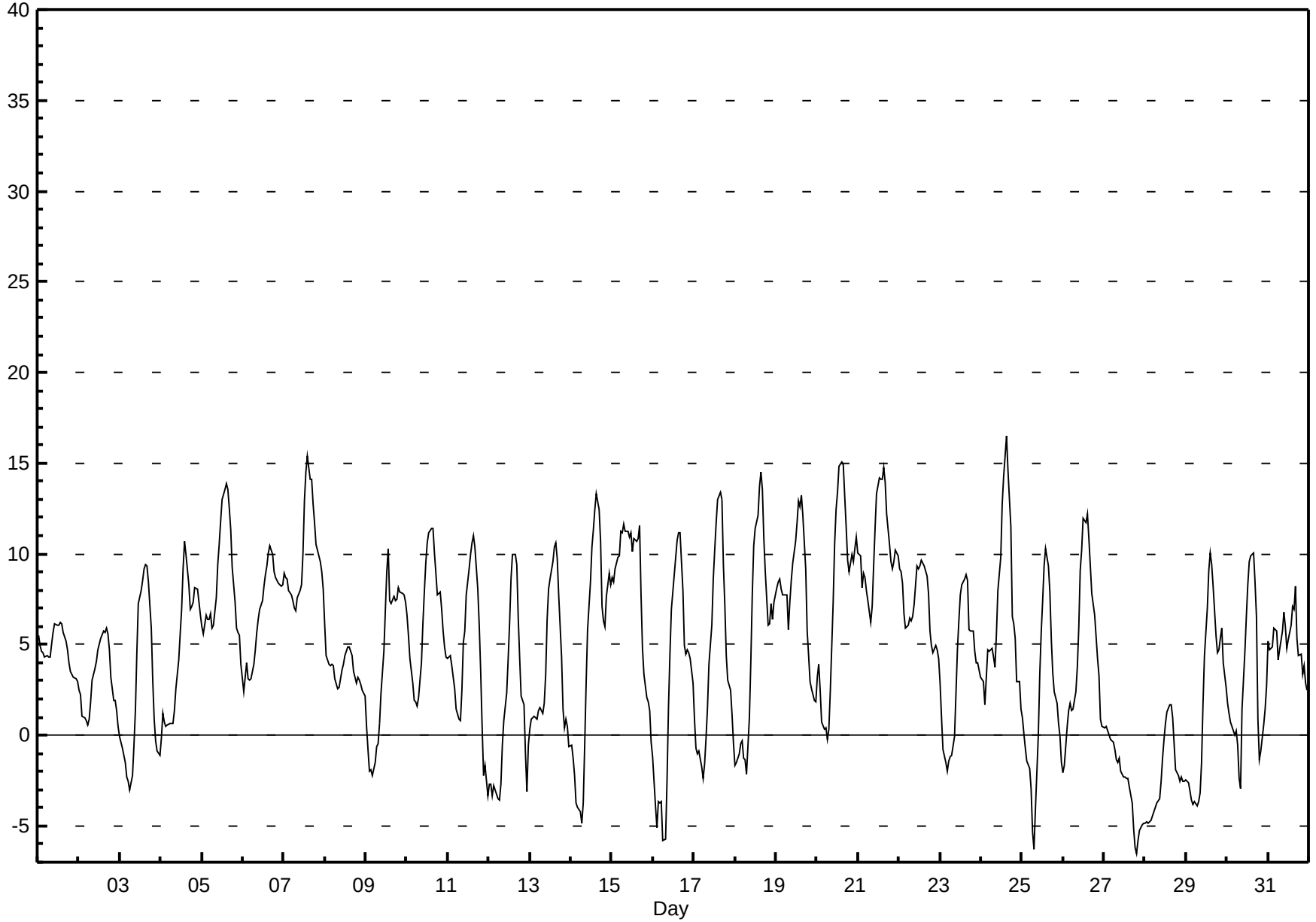
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Oct	5	5	5	5	4	4	4	4	5	6	6	6	6	6	6	6	5	5	4	4	3	3	3	3	4.8	6.2
2-Oct	2	2	1	1	1	1	1	2	3	4	4	5	5	5	6	6	6	6	5	3	2	2	1	0	3.1	5.9
3-Oct	0	-1	-1	-1	-2	-3	-3	-2	-1	1	5	7	8	9	9	9	9	8	6	3	1	0	-1	-1	2.5	9.4
4-Oct	0	1	1	0	1	1	1	1	1	3	4	6	7	9	11	10	8	7	7	7	8	8	7	7	4.8	10.7
5-Oct	6	6	7	6	6	7	6	6	8	9	10	12	13	14	14	14	13	11	9	7	6	6	6	4	8.5	13.9
6-Oct	2	3	4	3	3	3	4	5	6	6	7	7	8	9	9	10	10	10	9	9	9	8	8	8	6.7	10.4
7-Oct	9	9	9	8	8	7	7	7	8	8	8	10	13	15	15	14	14	13	12	10	10	10	9	8	10.0	15.4
8-Oct	6	4	4	4	4	4	3	3	3	3	4	4	4	5	5	5	4	4	3	3	3	3	2	2	3.7	6.1
9-Oct	0	-1	-2	-2	-2	-1	-1	0	1	2	5	7	9	10	7	7	8	7	7	8	8	8	8	7	4.2	10.3
10-Oct	7	6	4	3	2	2	2	2	4	6	8	10	11	11	11	11	10	9	8	8	7	6	5	4	6.5	11.4
11-Oct	4	4	4	3	3	1	1	1	2	5	6	8	9	10	11	11	10	8	6	3	1	-2	-2	-3	4.4	11.0
12-Oct	-3	-3	-3	-3	-3	-3	-4	-3	-1	1	2	4	6	9	10	10	9	6	4	2	2	-1	-3	-1	1.5	10.0
13-Oct	0	1	1	1	1	1	2	1	2	3	6	8	9	10	10	11	10	8	4	1	0	1	1	-1	3.8	10.6
14-Oct	-1	-1	-2	-4	-4	-4	-5	-4	-1	3	6	8	10	11	12	13	12	11	7	6	6	8	9	8	4.5	13.3
15-Oct	9	8	9	10	10	11	11	12	11	11	11	11	10	11	11	11	12	8	5	3	2	2	1	0	8.3	11.6
16-Oct	-1	-4	-5	-4	-4	-4	-6	-6	-2	2	5	7	9	10	11	11	11	8	5	4	5	5	4	3	2.6	11.2
17-Oct	1	-1	-1	-1	-2	-2	-2	0	2	4	6	9	10	12	13	13	13	9	7	4	3	2	1	0	4.2	13.4
18-Oct	-2	-1	-1	0	0	-1	-1	-2	1	4	8	10	11	12	14	14	14	11	9	6	6	7	6	7	5.5	14.5
19-Oct	8	8	9	8	8	8	8	6	7	9	10	11	12	13	13	13	12	9	6	4	3	3	2	2	7.9	13.3
20-Oct	3	4	2	1	0	0	0	0	2	7	11	12	13	15	15	15	13	11	10	9	10	10	10	11	7.8	15.1
21-Oct	10	10	8	9	9	8	7	6	7	9	11	13	14	14	14	15	14	12	10	10	9	10	10	10	10.5	14.8
22-Oct	9	9	8	7	6	6	6	6	7	7	9	9	9	10	9	9	9	8	6	5	5	5	5	4	7.2	9.6
23-Oct	3	1	-1	-2	-2	-1	-1	-1	0	2	5	6	8	8	9	9	9	6	6	6	5	4	4	4	3.5	8.9
24-Oct	3	3	2	3	5	5	5	4	4	6	8	10	13	14	15	16	15	11	7	6	5	3	3	1	7.0	16.5
25-Oct	1	0	-1	-1	-2	-3	-5	-6	-4	0	3	6	7	9	10	9	8	5	3	2	2	1	0	-2	1.8	10.3
26-Oct	-2	-2	0	1	2	1	1	2	4	6	9	10	12	12	12	11	9	8	7	5	4	3	1	1	5.0	12.2
27-Oct	0	0	0	0	0	0	-1	-1	-1	-1	-2	-2	-2	-2	-2	-3	-4	-5	-6	-7	-6	-5	-5	-5	-2.5	0.5
28-Oct	-5	-5	-5	-5	-4	-4	-4	-4	-4	-3	-1	0	1	1	2	2	1	0	-2	-2	-3	-2	-3	-3	-2.1	1.7
29-Oct	-2	-3	-3	-4	-4	-4	-4	-4	-3	-2	2	4	7	9	10	9	8	6	5	5	5	6	4	3	2.1	10.0
30-Oct	2	1	1	0	0	0	-1	-2	-3	1	5	7	8	10	10	10	8	7	1	-1	-1	1	1	3	2.8	10.0
31-Oct	5	5	5	6	6	6	4	5	6	7	6	5	5	6	7	7	8	5	4	4	3	4	3	3	5.2	8.2
	2.6	2.3	1.9	1.7	1.5	1.5	1.2	1.2	2.3	4.2	6.0	7.4	8.6	9.5	10.0	10.0	9.3	7.5	5.6	4.6	4.0	3.7	3.3	2.8	Diurnal Average	
	10.0	9.9	9.2	9.8	9.9	11.2	11.1	11.6	11.3	11.3	11.4	13.3	14.2	14.8	15.4	16.5	14.6	12.8	11.7	10.5	10.0	9.6	10.3	10.9	Diurnal Maximum	

Hourly Averages

External Temperature (ET) - ^{o}C

Falher - October 2013



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	6	6	7	6	7	7	5	4	6	13	14	16	16	17	16	15	14	14	14	14	14	13	8	6	10.4	16.6
Dir	319	292	309	316	310	318	316	292	323	349	358	339	343	337	338	330	322	322	329	323	323	329	317	275	327	337
2 Spd	8	9	8	7	8	7	9	10	12	12	14	11	11	13	12	11	11	8	5	1	4	5	2	1	7.4	13.8
Dir	268	275	270	278	272	265	259	264	278	304	322	315	315	301	315	318	306	320	339	303	230	249	254	33	293	322
3 Spd	5	5	1	4	6	6	8	6	5	6	7	5	8	9	6	9	9	6	1	6	11	12	13	14	5.1	13.6
Dir	89	86	132	110	140	169	146	121	115	120	145	162	216	186	210	180	202	214	171	71	85	104	105	104	137	104
4 Spd	14	17	17	17	19	22	20	16	14	19	23	23	21	20	18	14	10	13	16	18	23	18	13	12	16.6	22.9
Dir	116	130	131	129	132	134	135	130	123	130	140	142	140	151	161	174	181	144	138	130	166	185	172	169	144	140
5 Spd	11	15	16	19	19	19	15	15	17	18	19	20	24	27	27	25	21	17	16	14	14	14	13	9	16.4	26.9
Dir	161	185	198	195	196	199	198	201	205	223	224	233	240	242	247	244	248	235	222	217	211	218	227	226	220	242
6 Spd	11	7	12	7	6	6	9	10	10	9	6	10	14	15	14	14	14	12	11	13	14	12	13	15	9.0	14.8
Dir	183	183	192	185	178	157	160	169	185	199	175	125	117	125	126	117	121	107	104	94	98	96	95	91	133	91
7 Spd	15	18	17	13	10	8	4	3	9	14	12	15	18	18	25	25	27	18	17	12	13	13	15	22	7.0	26.6
Dir	83	90	93	95	78	82	297	66	62	169	175	158	177	207	216	221	243	243	236	239	241	234	254	271	202	243
8 Spd	18	21	20	21	20	23	21	25	25	26	28	26	27	26	27	23	21	20	16	18	15	7	8	7	19.5	27.8
Dir	270	260	254	256	252	254	246	247	248	255	256	259	266	283	283	285	283	287	273	270	272	258	208	200	263	256
9 Spd	9	12	13	13	15	17	21	21	22	27	27	27	23	22	20	18	19	18	20	21	25	23	24	23	17.0	27.4
Dir	184	170	148	130	118	121	130	130	135	144	145	146	161	200	208	189	171	163	181	203	207	216	208	213	169	145
10 Spd	23	19	16	14	16	12	13	15	19	23	26	26	23	19	18	18	15	7	10	14	23	18	15	12	15.8	25.6
Dir	212	208	199	185	192	195	181	204	210	222	233	247	254	254	262	247	242	253	214	220	224	196	191	194	220	233
11 Spd	13	13	13	10	9	11	10	6	7	14	13	9	7	8	13	16	16	9	6	1	7	7	5	8	7.1	16.2
Dir	196	194	192	195	187	201	215	220	216	239	231	234	229	234	256	257	268	283	300	91	144	151	78	108	220	268
12 Spd	4	6	6	9	11	8	7	8	8	7	7	7	3	7	12	10	8	8	11	10	10	9	7	8	6.2	12.1
Dir	114	103	154	156	163	166	164	160	164	170	186	221	226	232	254	253	258	192	200	205	197	161	143	143	185	254
13 Spd	6	9	8	6	5	6	9	7	7	10	9	11	11	10	12	9	12	10	12	14	14	17	15	12	9.3	16.5
Dir	133	167	160	153	138	161	140	124	123	132	155	179	180	171	187	186	139	124	118	117	127	135	134	125	145	135
14 Spd	14	12	9	10	9	10	11	11	9	12	15	14	14	14	14	16	12	9	14	15	15	14	17	15	10.5	17.2
Dir	137	138	129	110	114	104	113	112	137	141	172	194	185	201	197	211	204	163	138	148	174	199	201	186	164	201
15 Spd	20	21	21	18	18	29	25	21	17	19	15	22	20	22	22	23	18	12	11	7	5	11	10	2	14.9	28.6
Dir	214	209	198	192	221	236	246	252	256	294	293	283	262	252	249	252	258	254	276	299	281	267	281	280	249	236
16 Spd	1	4	4	7	6	8	6	6	4	3	4	7	12	16	16	15	12	6	10	7	6	5	9	11	6.7	16.4
Dir	235	107	133	199	203	199	173	182	171	183	215	222	241	232	245	247	244	223	209	227	253	218	222	238	222	245
17 Spd	12	9	14	10	13	12	12	12	11	18	21	23	20	20	18	17	13	10	11	10	7	9	5	8	11.7	22.7
Dir	248	254	260	251	235	217	220	226	238	253	256	257	272	271	264	263	261	253	235	228	200	179	161	156	245	257
18 Spd	6	7	14	14	13	13	10	8	9	8	13	17	19	19	23	23	17	12	13	13	16	17	12	16	11.4	22.9
Dir	154	159	185	183	172	169	170	145	162	181	227	245	246	261	255	256	252	245	218	199	216	214	211	242	218	256
19 Spd	14	17	19	17	13	14	17	19	21	23	24	24	26	25	20	17	15	8	6	9	7	6	4	10	13.5	26.1
Dir	253	254	251	243	245	260	264	264	261	256	256	265	275	301	311	299	291	269	190	211	229	241	156	137	263	275
20 Spd	8	8	10	11	8	6	6	5	6	7	16	18	20	21	17	15	11	11	7	4	7	5	6	13	6.4	20.6
Dir	117	115	126	119	117	137	150	165	176	221	243	254	260	258	250	248	236	232	231	204	251	265	256	258	225	258
21 Spd	5	7	5	10	11	6	7	2	6	7	9	6	6	3	4	2	2	7	8	9	10	8	12	10	2.8	11.5
Dir	289	259	267	289	268	257	236	248	212	240	252	279	281	276	324	29	76	108	103	116	136	138	161	185	223	161
22 Spd	12	12	8	10	8	10	10	11	12	7	13	17	17	16	15	12	7	4	3	4	4	5	3	4	7.5	17.4
Dir	220	231	251	290	276	321	349	320	315	292	303	304	290	284	284	299	297	302	311	359	6	7	33	63	297	290

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
23 Spd	4	5	6	8	7	7	8	5	4	6	10	11	12	10	12	12	16	14	18	24	21	21	22	21	10.5	23.6
Dir	35	357	357	24	45	41	44	26	35	27	44	79	92	105	100	92	83	79	89	91	89	92	90	92	77	91
24 Spd	23	21	15	18	22	20	19	14	10	9	2	8	15	12	13	10	9	11	5	6	7	4	4	6	3.8	23.2
Dir	95	96	96	113	126	131	140	154	161	153	225	235	235	302	290	277	293	285	254	310	359	10	193	202	146	95
25 Spd	8	6	7	5	5	3	3	5	5	9	13	9	12	16	15	18	18	16	18	16	14	12	11	5	7.6	17.7
Dir	246	277	321	14	341	283	27	101	136	113	120	119	114	122	125	95	92	92	88	86	84	84	82	118	98	92
26 Spd	9	8	9	6	2	2	3	3	6	7	9	9	6	8	8	16	14	15	17	17	16	21	21	22	5.7	22.3
Dir	168	192	211	211	190	141	79	155	197	240	274	335	318	301	353	357	351	5	356	359	354	12	23	17	352	17
27 Spd	17	21	22	22	21	21	21	16	10	11	17	13	14	19	17	17	13	9	5	1	4	4	3	3	11.5	22.3
Dir	2	2	357	339	334	325	319	325	322	298	310	310	320	294	306	318	327	329	340	72	137	111	155	136	328	339
28 Spd	5	6	7	7	10	13	13	15	17	19	21	23	24	26	24	21	17	15	13	13	13	13	14	15	14.8	26.2
Dir	118	99	103	93	106	103	111	118	117	127	140	145	146	147	140	142	142	137	123	123	123	134	134	131	130	147
29 Spd	17	16	14	12	13	14	10	16	15	12	14	14	18	19	21	18	14	13	12	4	8	16	14	11	10.6	20.7
Dir	136	134	127	130	121	123	123	119	128	134	159	183	194	200	209	212	200	184	179	262	247	224	218	230	171	209
30 Spd	8	8	11	12	12	10	7	6	7	5	11	9	11	11	14	13	6	6	9	12	12	13	12	13	7.6	14.2
Dir	218	262	248	245	246	225	207	153	158	134	182	190	205	233	220	232	213	182	122	104	152	186	185	183	200	220
31 Spd	15	17	16	17	14	17	7	11	19	25	35	30	21	16	8	5	6	13	14	15	13	17	17	16	14.5	34.6
Dir	199	191	195	217	245	260	226	230	238	254	267	269	264	258	243	178	216	228	222	220	220	219	210	216	235	267
Spd	4.8	5.0	5.2	4.5	4.8	5.0	4.8	4.7	5.3	6.0	7.5	7.9	8.5	9.4	9.4	8.2	6.3	3.9	3.9	3.5	4.8	5.4	5.4	5.1	Diurnal Average	
Dir	182	184	192	188	189	193	187	188	197	211	225	233	234	240	243	243	243	223	189	176	187	186	178	180		
Spd	23.3	21.2	22.2	22.3	22.0	28.6	24.8	24.9	25.3	26.7	34.6	29.7	26.5	26.9	26.9	25.3	26.6	19.9	20.0	23.6	25.1	23.4	24.1	22.5	Diurnal Maximum	
Dir	212	209	357	339	126	236	246	247	248	144	267	269	266	242	283	244	243	287	181	91	207	216	208	213		

Maximum Speed Value: 35 km/h on Oct 31 11:00
Minimum Speed Value: 1 km/h on Oct 16 01:00
Maximum Daily Speed Average: 19.5 km/h on Oct 8
Minimum Daily Speed Average: 2.8 km/h on Oct 21
Maximum Diurnal Speed Average: 9.4 km/h at hour 15
Minimum Diurnal Speed Average: 3.5 km/h at hour 20

Monthly Average Velocity: 5.26 km/h 209.4 deg
Speed Percentiles: P_1 = 1.5 P_{10} = 5.4 Q_1 = 7.6 Median = 12.2 Q_3 = 16.6 P_{90} = 21.2 P_{99} = 26.8
All monthly, daily, and diurnal averages have been calculated using vector methods

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

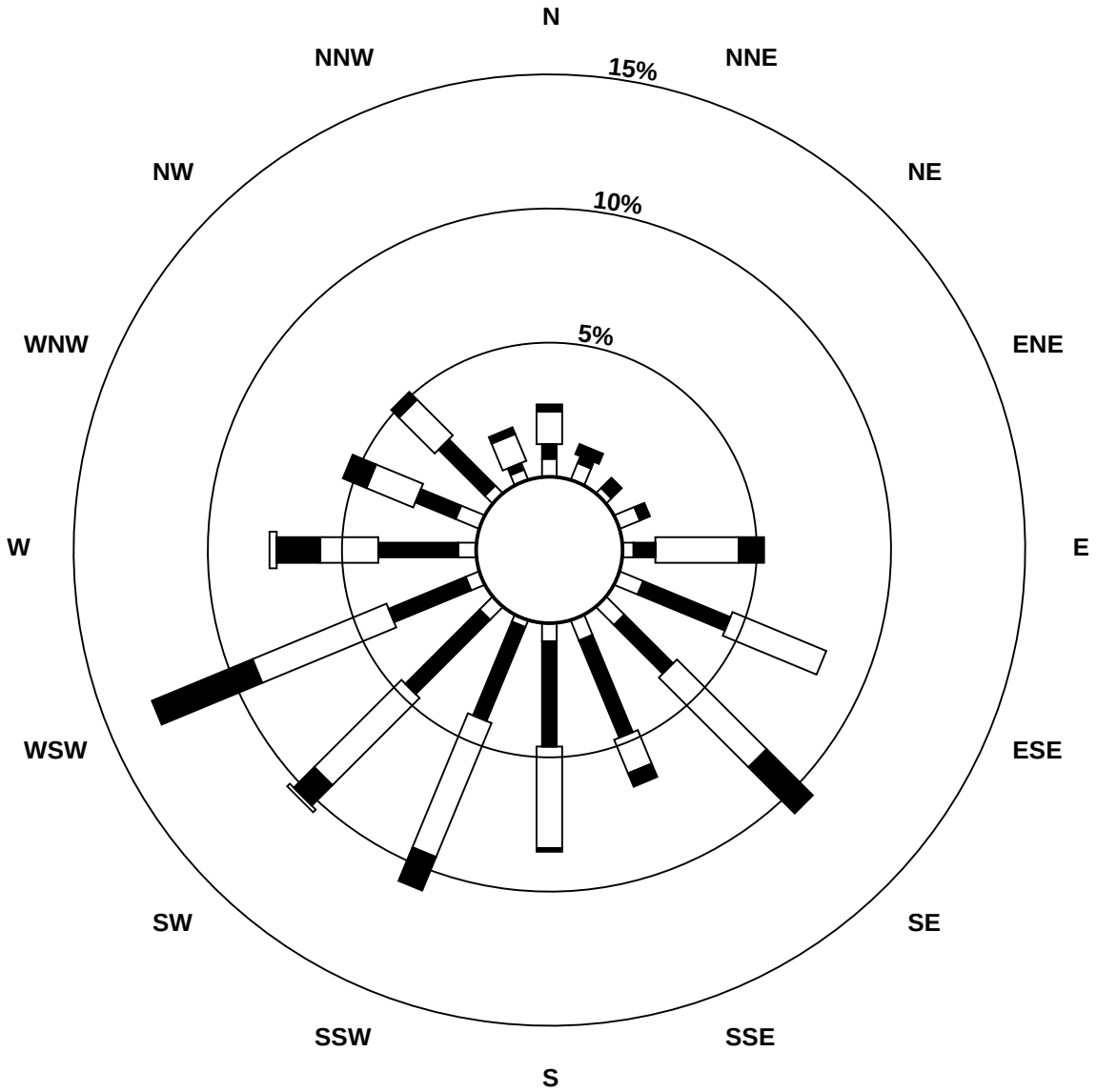
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	7	6	12	5	0	0	30
NorthEast	9	7	0	1	0	0	17
East	9	19	32	7	0	0	67
SouthEast	13	45	60	22	0	0	140
South	6	63	62	6	0	0	137
SouthWest	7	48	70	26	1	0	152
West	10	43	38	43	2	0	136
NorthWest	5	24	31	5	0	0	65
Total	66	255	305	115	3	0	744

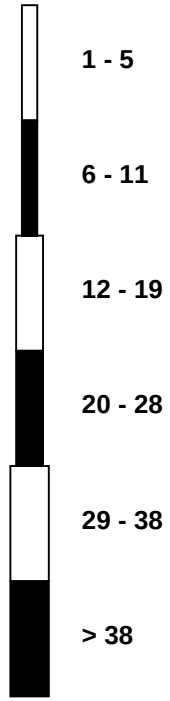
Wind Rose

Wind Speed (WS) (km/h)

Falher - October 2013



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Falher - October 2013

Maximum Speed: 35 km/h on Oct 31 11:00

Maximum Daily Speed Average: 20.4 km/h on Oct 8

Minimum Speed: 1 km/h on Oct 16 01:00

Minimum Daily Speed Average: 7.1 km/h on Oct 21

Maximum Diurnal Speed Average: 16.5 km/h at hour 15

Minimum Diurnal Speed Average: 10.9 km/h at hour 8

Monthly Average Speed: 12.84 km/h

Percentiles: P_1 = 2.3 P_{10} = 5.8 Q_1 = 7.8 Median = 12.5 Q_3 = 16.8 P_{90} = 21.2 P_{99} = 26.9

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 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-Oct	6	6	8	7	7	7	5	4	7	13	14	16	17	17	16	15	14	14	14	14	14	13	8	7	10.9	16.7
2-Oct	8	9	8	7	8	7	9	11	12	12	14	11	11	13	12	11	11	8	5	2	4	5	2	2	8.4	13.9
3-Oct	5	6	2	4	6	7	8	6	5	6	7	6	9	9	8	10	10	6	2	6	11	12	13	14	7.4	13.6
4-Oct	15	17	17	17	19	22	20	16	14	19	23	23	21	21	19	14	10	13	16	19	23	18	13	12	17.6	23.0
5-Oct	11	15	17	19	19	19	15	15	17	18	19	20	24	27	27	25	21	17	16	14	14	14	13	9	17.7	27.1
6-Oct	12	8	12	8	6	7	9	10	10	9	6	10	14	15	14	14	14	12	11	14	14	12	13	15	11.2	15.0
7-Oct	15	18	17	13	10	9	8	3	10	15	12	15	18	19	25	25	27	18	17	12	14	13	15	22	15.4	26.7
8-Oct	18	21	20	21	20	23	21	25	25	26	28	26	27	26	27	23	21	20	16	18	15	7	8	7	20.4	27.9
9-Oct	9	13	13	13	15	17	22	21	22	27	27	27	23	22	20	19	19	18	20	21	25	23	24	23	20.1	27.4
10-Oct	23	19	16	14	16	12	13	15	19	23	26	26	23	19	18	18	15	8	11	15	23	18	15	12	17.4	25.9
11-Oct	13	13	13	10	9	11	10	6	7	14	14	10	7	9	13	16	16	9	6	4	7	7	6	8	9.9	16.3
12-Oct	4	6	6	9	11	8	7	8	8	7	7	7	4	7	12	10	8	8	11	10	10	10	8	8	8.1	12.5
13-Oct	6	9	8	7	5	7	9	7	7	10	10	11	11	11	13	10	13	10	12	14	14	17	15	12	10.3	16.5
14-Oct	14	12	9	10	9	10	11	11	9	12	15	14	14	15	14	17	12	9	14	15	15	14	17	15	12.8	17.3
15-Oct	20	21	21	18	18	29	25	21	17	19	16	22	20	22	22	23	18	12	11	8	7	11	10	2	17.2	28.7
16-Oct	1	5	4	8	6	8	6	6	4	3	5	8	12	16	17	16	12	6	11	7	6	5	9	11	7.9	16.7
17-Oct	12	10	14	10	13	12	12	12	11	18	21	23	20	20	19	17	13	10	11	10	7	9	5	8	13.2	22.8
18-Oct	6	7	14	14	13	13	10	8	9	8	13	17	20	20	23	23	18	12	13	14	16	17	13	17	14.0	23.0
19-Oct	14	17	19	17	13	14	17	19	21	23	24	25	26	25	20	17	16	9	6	9	8	6	5	10	15.8	26.3
20-Oct	8	8	10	12	9	6	6	5	7	7	16	18	20	21	17	15	11	11	7	5	7	5	6	13	10.4	20.7
21-Oct	5	7	5	10	12	6	7	3	6	7	9	7	6	3	5	3	3	7	8	9	10	8	12	11	7.1	11.8
22-Oct	12	12	9	10	8	11	11	11	12	7	13	18	18	16	15	12	7	4	4	4	4	5	3	5	9.7	17.6
23-Oct	4	5	7	8	7	8	8	5	4	6	10	11	12	10	12	13	16	14	18	24	21	21	22	21	11.9	23.6
24-Oct	23	21	15	18	22	20	19	14	10	9	6	8	15	13	13	11	9	11	7	6	8	4	5	7	12.3	23.2
25-Oct	8	7	7	6	5	3	5	5	5	9	13	9	13	16	16	18	18	16	18	16	14	12	11	6	10.6	17.7
26-Oct	9	8	9	6	3	2	3	5	7	7	10	9	7	8	9	16	14	15	17	17	16	21	21	22	10.8	22.4
27-Oct	18	21	22	22	21	21	21	16	10	11	17	14	14	19	18	17	14	9	5	2	4	5	4	4	13.7	22.4
28-Oct	5	6	8	8	10	13	13	15	17	19	22	23	25	26	24	21	17	15	13	13	13	13	14	15	15.3	26.4
29-Oct	17	16	14	12	13	14	10	16	15	12	14	14	18	20	21	18	14	13	12	5	8	16	15	12	14.1	20.8
30-Oct	8	8	11	12	12	11	8	6	7	5	11	9	11	11	14	13	7	7	9	12	12	13	12	13	10.1	14.3
31-Oct	15	17	16	17	14	17	8	11	19	25	35	30	21	16	8	6	8	13	14	15	13	17	17	16	16.2	34.8
	11.1	11.9	11.9	11.8	11.6	12.0	11.5	10.9	11.5	13.1	15.3	15.7	16.2	16.5	16.5	15.6	13.7	11.4	11.4	11.4	12.2	12.0	11.4	11.5	Diurnal Average	
	23.3	21.3	22.4	22.4	22.0	28.7	24.8	25.0	25.4	26.8	34.8	29.7	26.7	27.1	27.0	25.5	26.7	20.1	20.2	23.6	25.1	23.4	24.1	22.6	Diurnal Maximum	

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

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Falher - October 2013

Maximum Value: 85.1 deg on Oct 3 00:00

Minimum Value: 1.3 deg on Oct 15 00:00

Percentiles: P_1 = 1.9 P_{10} = 3.1 Q_1 = 4.6 Median = 7.7 Q_3 = 13.0 P_{90} = 22.5 P_{99} = 66.2

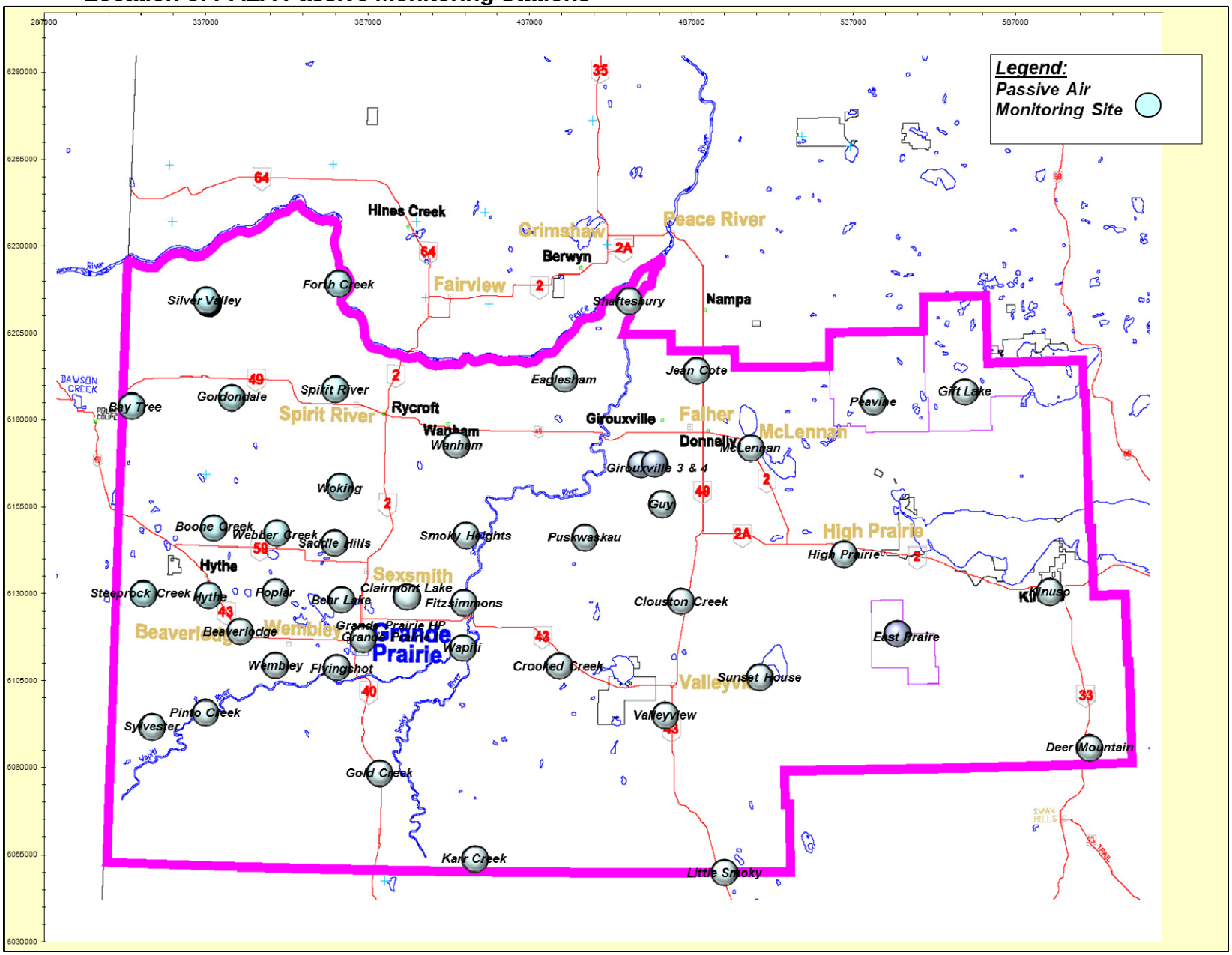
Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Oct	24	11	14	16	8	4	8	20	27	6	9	10	8	8	7	8	5	7	5	4	4	5	11	12	27.4
2-Oct	6	5	3	7	4	3	2	3	6	11	9	11	11	11	13	9	8	8	4	48	5	19	30	85	85.1
3-Oct	11	21	52	17	4	10	5	14	8	13	19	32	28	26	43	31	15	8	42	14	5	2	2	2	52.5
4-Oct	8	4	2	1	2	3	3	12	10	3	6	4	5	5	11	7	16	4	8	11	5	8	5	4	16.4
5-Oct	7	9	6	3	2	3	4	4	4	4	3	5	7	6	6	6	3	9	2	4	2	5	2	6	9.4
6-Oct	13	18	4	28	15	19	3	5	5	5	19	10	8	8	7	8	8	5	5	5	4	5	3	9	27.9
7-Oct	7	3	4	5	11	10	76	36	35	22	8	8	16	17	6	9	5	3	4	2	5	3	6	4	75.7
8-Oct	7	4	4	3	3	3	4	4	3	4	4	5	6	6	5	6	10	8	6	3	4	15	15	19	18.7
9-Oct	5	9	7	8	3	3	4	3	3	3	4	5	5	15	9	11	6	4	8	6	2	3	4	3	14.8
10-Oct	3	3	7	5	7	4	9	3	7	4	7	8	10	11	13	8	6	17	10	9	8	7	5	3	17.0
11-Oct	4	5	5	5	2	6	4	7	15	7	7	19	27	22	16	11	5	10	10	80	16	20	36	19	80.0
12-Oct	24	18	14	9	5	9	6	6	4	6	12	15	35	28	13	13	11	14	4	3	5	23	16	11	35.4
13-Oct	15	8	4	14	8	8	10	7	7	5	16	13	13	13	19	21	10	10	4	4	5	1	3	3	20.7
14-Oct	6	4	10	5	3	5	2	2	6	9	11	9	8	12	11	8	6	13	6	6	7	4	5	1	13.0
15-Oct	5	4	4	4	6	5	2	7	5	14	6	9	10	5	4	5	5	9	10	23	38	17	5	51	50.7
16-Oct	65	32	19	15	9	7	10	21	20	23	18	19	17	11	11	13	10	11	12	12	8	12	5	3	64.6
17-Oct	5	14	8	8	5	10	5	4	5	5	4	6	10	8	8	8	4	6	7	4	17	9	26	9	26.2
18-Oct	25	20	4	4	2	1	8	9	5	12	11	6	6	9	5	4	5	11	6	15	5	7	9	12	25.3
19-Oct	6	7	3	3	5	3	2	2	3	4	5	4	5	13	8	6	9	17	11	20	17	9	43	10	43.3
20-Oct	11	7	6	14	13	14	7	9	33	29	7	10	6	6	8	4	4	4	7	22	8	16	10	9	33.1
21-Oct	20	18	15	11	14	21	7	85	8	14	9	23	22	34	51	61	64	7	7	7	3	9	4	11	84.6
22-Oct	4	6	27	9	13	23	11	9	5	23	16	10	8	11	6	8	7	15	35	10	8	8	18	18	34.6
23-Oct	26	14	8	13	9	11	9	11	10	8	17	16	14	14	11	15	4	4	3	2	2	4	2	3	26.3
24-Oct	2	1	3	3	3	2	4	8	5	9	69	23	8	20	9	12	6	6	53	30	24	30	68	19	69.0
25-Oct	7	23	11	17	26	40	46	21	23	11	8	11	11	9	11	6	3	2	3	2	4	4	6	22	46.4
26-Oct	10	6	6	6	38	30	22	51	20	25	25	15	29	13	27	8	7	6	5	4	4	11	5	4	50.8
27-Oct	9	5	8	5	4	6	9	5	16	7	10	16	11	8	11	8	11	5	13	84	43	40	46	35	83.8
28-Oct	17	7	10	9	6	5	5	3	3	6	7	5	6	7	7	5	4	8	2	3	9	5	3	3	16.8
29-Oct	2	2	3	12	3	6	7	3	3	7	8	8	7	6	5	7	3	7	12	38	29	3	9	11	38.0
30-Oct	12	21	8	8	8	14	30	22	13	18	9	10	11	10	8	6	26	12	21	11	16	5	10	7	29.6
31-Oct	4	4	2	13	6	4	16	4	5	5	6	3	5	8	14	28	42	7	2	2	6	3	4	3	42.4
	64.6	31.6	52.5	27.9	37.9	40.4	75.7	84.6	35.0	28.8	69.0	32.5	35.4	34.0	51.3	60.9	64.1	17.0	53.1	83.8	43.0	40.1	67.5	85.1	

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for October 2013

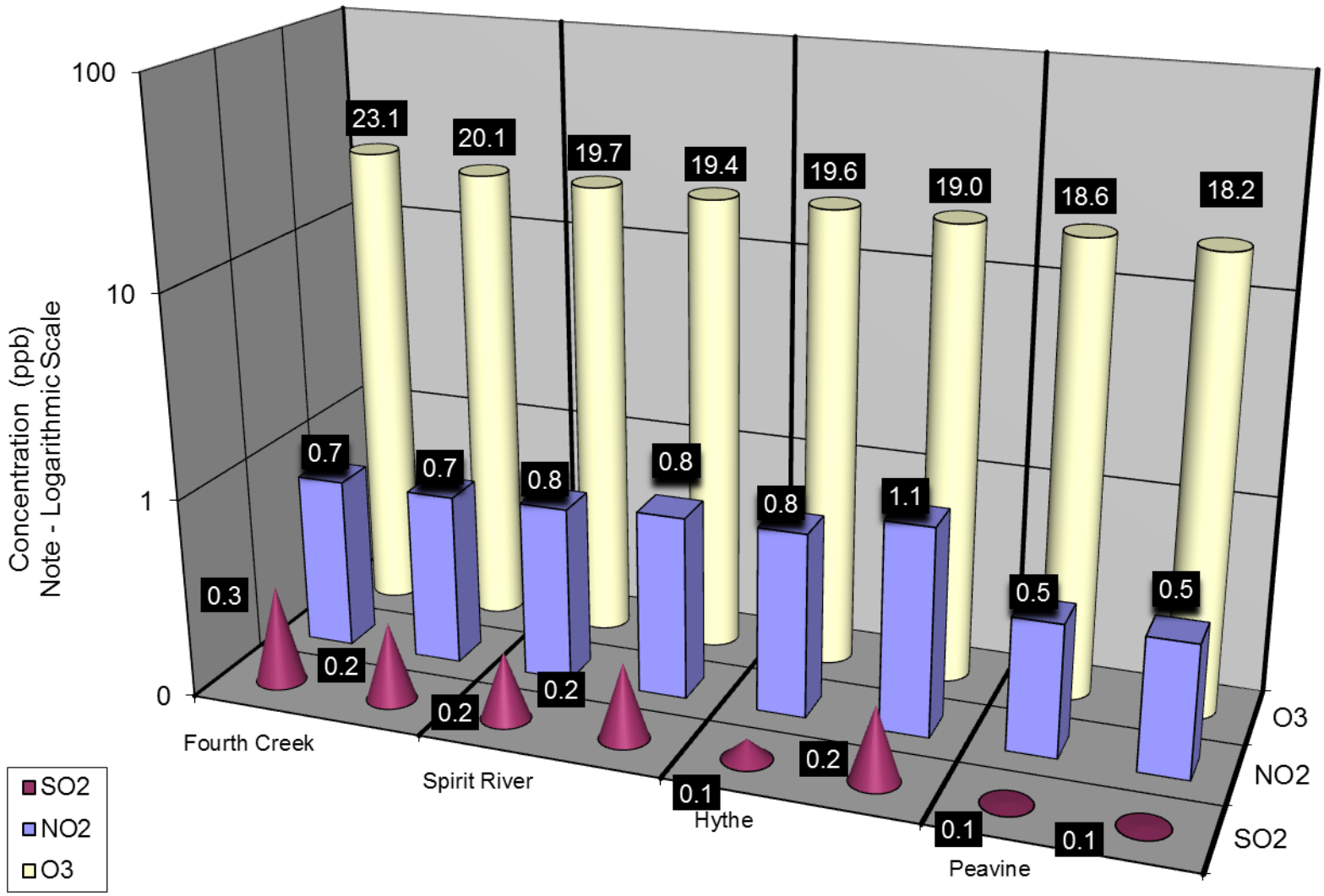
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
3a	Fourth Creek	**0.3**	**23.1**	**0.7**		
3b	Fourth Creek	**0.2**	**20.1**	**0.7**		
9a	Spirit River	**0.2**	**19.7**	**0.8**		
9b	Spirit River	**0.2**	**19.4**	**0.8**		
12a	Hythe	**0.1**	**19.6**	**0.8**		
12b	Hythe	**0.2**	**19.0**	**1.1**		
44a	Peavine	**0.1**	**18.6**	**0.5**		
44b	Peavine	**0.1**	**18.2**	**0.5**		
64a	Girouxville 4				**0.2**	
64b	Girouxville 4				**0.3**	
1	Silver Valley	**0.3**	**17.1**	**1.0**		08-27-081-11 W6M
2	Bay Tree	**0.1**	**19.2**	**1.3**		13-16-078-13 W6M
3	Fourth Creek	**0.3**	**21.6**	**0.7**		04-13-082-07 W6M
4	Gordondale	**0.3**	**24.0**	**1.0**		04-34-078-10 W6M
5	Boone Creek	**0.2**	**17.5**	**0.9**		16-36-074-11 W6M
7	Steeprock Creek	**0.1**	**21.9**	**2.8**		09-35-072-13 W6M
9	Spirit River	**0.2**	**19.6**	**0.8**		08-12-079-07 W6M
10	Woking	**0.3**	**22.0**	**0.8**		01-13-076-07 W6M
11	Webber Creek	**0.3**	**18.6**	**1.1**		09-36-074-09 W6M
12	Hythe	**0.2**	**19.3**	**1.0**		14-36-072-11 W6M
14	Sylvester	**BDL**	**21.8**	**0.6**		08-06-069-12 W6M
16	Beaverlodge	**0.2**	**24.3**	**1.5**		15-36-071-10 W6M
17	Poplar	**0.2**	**21.5**	**1.5**		13-06-073-08 W6M
18	Saddle Hills	**0.3**	**20.8**	**0.5**		04-25-074-07 W6M
19	Wanham	**0.3**	**21.6**	**0.8**		16-22-077-03 W6M
20	Shaftesbury	**0.2**	**26.1**	**0.7**		04-03-082-23 W5M
21	Eaglesham	**0.1**	**15.0**	**0.5**		16-21-079-25 W5M
23	Bear Lake	**0.2**	**15.5**	**2.4**		15-31-072-06 W6M
24	Wembley	**0.1**	**15.9**	**2.0**		12-31-070-08 W6M
25	Pinto Creek	**0.1**	**20.7**	**0.6**		04-24-069-11 W6M
26	Flyingshot	**0.2**	**20.9**	**1.2**		15-36-070-07 W6M
27	Grande Prairie I	**0.2**	**17.1**	**6.9**		08-15-071-06 W6M

PAZA Passive Results for October 2013 (Continued)

28	Clairmont Lake	**0.2**	**23.1**	**1.5**		09-06-073-04 W6M
29	Smoky Heights	**0.4**	**22.9**	**2.1**		04-06-075-02 W6M
30	Fitzsimmons	**0.2**	**14.1**	**0.9**		15-36-072-03 W6M
32	Gold Creek	**0.2**	**13.4**	**1.3**		06-33-067-05 W6M
33	Wapiti	**0.1**	**22.0**	**1.3**		02-25-071-03 W6M
34	Puskwaskau	**0.1**	**18.7**	**0.8**		15-35-074-25 W5M
35	Jean Cote	**0.2**	**17.1**	**2.3**		12-35-079-21 W5M
36	Guy	**0.2**	**16.9**	**1.0**		03-04-076-22 W5M
37	Crooked Creek	**0.1**	**18.1**	**1.9**		16-01-071-26 W5M
38	Karr Creek	**0.1**	**12.4**	**0.8**		10-16-065-02 W6M
39	Clouston Creek	**0.1**	**19.9**	**2.9**		12-01-073-22 W5M
40	McLennan	**0.3**	**19.6**	**1.7**		03-29-077-19 W5M
41	Valleyview	**0.1**	**21.9**	**0.9**		09-30-069-22 W5M
42	Sunset House	**0.2**	**26.6**	**0.8**		05-32-070-19 W5M
43	High Prairie	**0.1**	**18.1**	**0.8**		16-13-074-17 W5M
44	Peavine	**0.1**	**18.4**	**0.5**		03-05-079-15 W5M
45	Gift Lake	**0.1**	**14.9**	**1.1**	**BDL**	10-07-079-12 W5M
46	Little Smoky	**0.1**	**14.1**	**2.5**		12-01-065-21 W5M
47	Kinuso	**0.1**	**15.2**	**0.4**		12-10-073-10 W5M
48	Deer Mountain	**0.1**	**21.6**	**0.9**		15-22-068-09 W5M
49	Grande Prairie HP	**0.1**	**17.3**	**6.5**		17-26-071-06 W6M
62	East Prairie	**0.1**	**17.1**	**0.3**		13-02-072-15 W5M
63	Girouxville 3				**0.2**	14-02-077-23 W5M
64	Girouxville 4				**0.3**	4-08-077-22 W5M

*BDL = Below Detection Level

*N/S - No sample



Duplicate Summary Chart

Passive Summary for October 2013

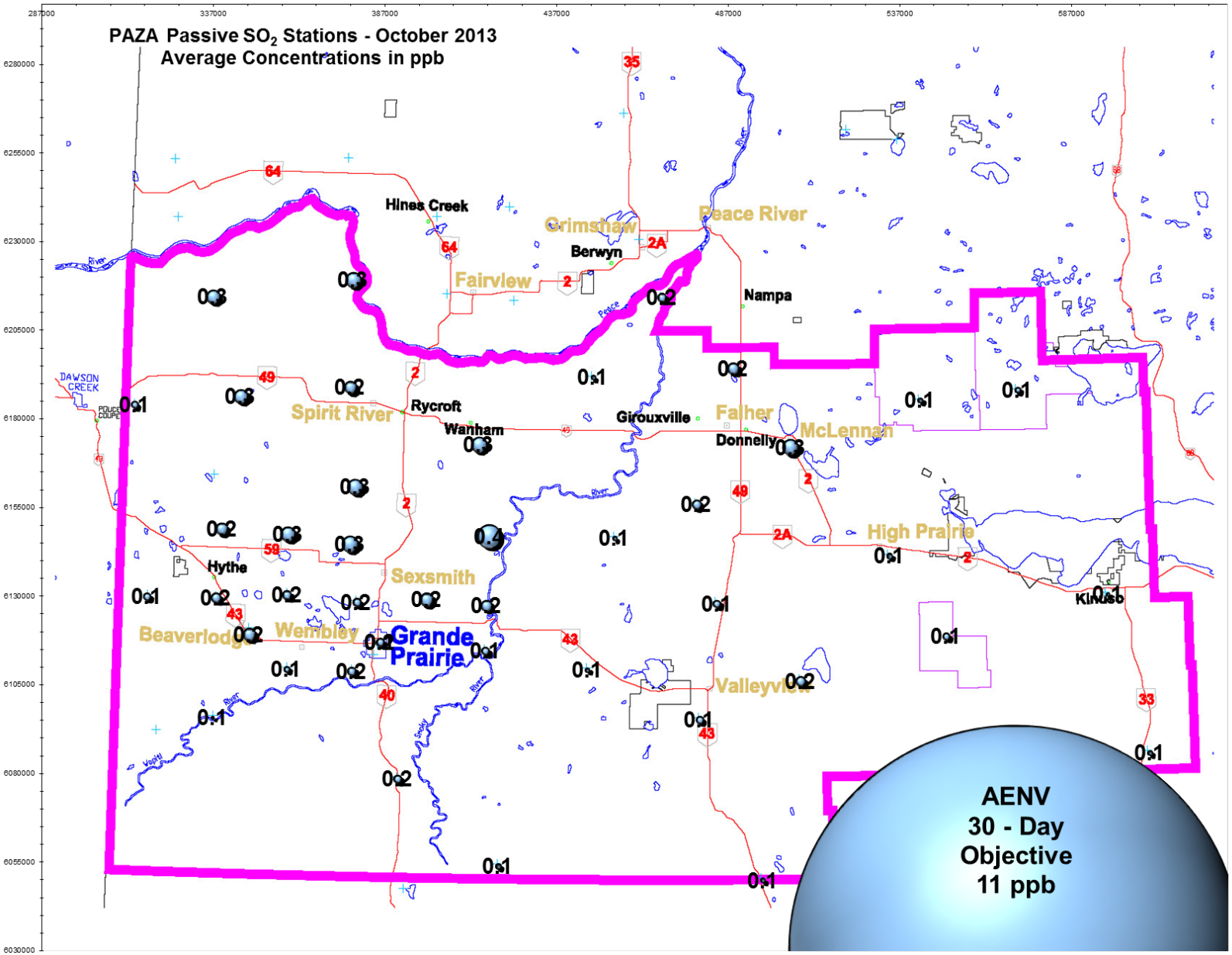
Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2	Hydrogen Sulphide H_2S
	ppb	ppb	ppb	ppb
	Passive Summary for October 2013 (PAZA Zone)			
Mean	**0.2**	**19.2**	**1.5**	**0.2**
Standard Deviation	**0.1**	**3.4**	**1.3**	**0.0**
Minimum	**0.1**	**12.4**	**0.3**	**0.2**
Minimum At	**Pinto Creek (#25)**	**Karr Creek (#38)**	**East Prairie (#62)**	**Girouxville 3 (#63)**
Maximum	**0.4**	**26.6**	**6.9**	**0.3**
Maximum At	**Smoky Heights (#29)**	**Sunset House (#42)**	**Grande Prairie I (#27)**	**Girouxville 4 (#64)**

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

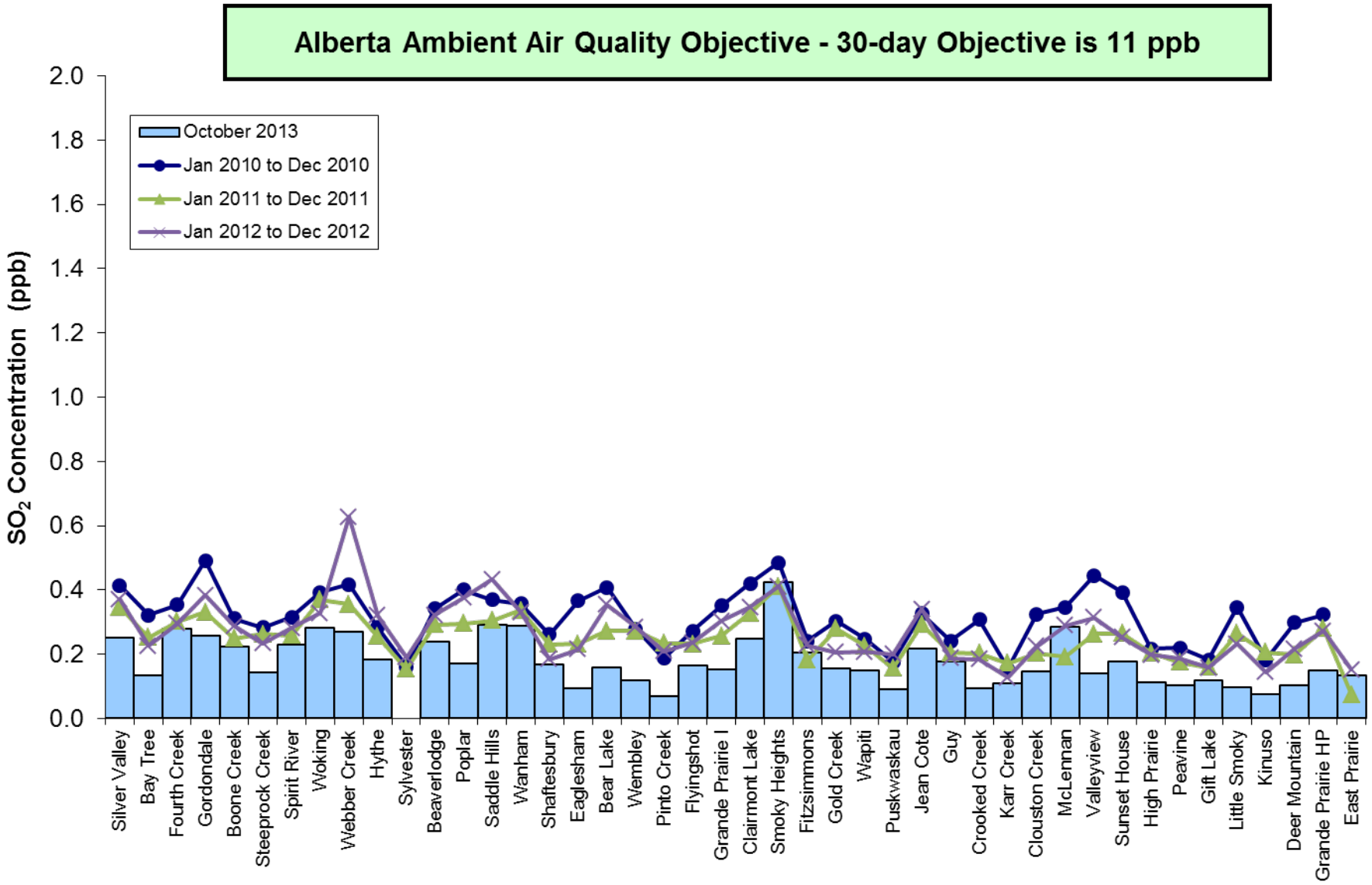
	SO_2	O_3	NO_2
PAZA Beaverlodge station	**0.2**	**25.2**	**2.8**
PAZA Beaverlodge passive	**0.2**	**24.3**	**1.5**

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

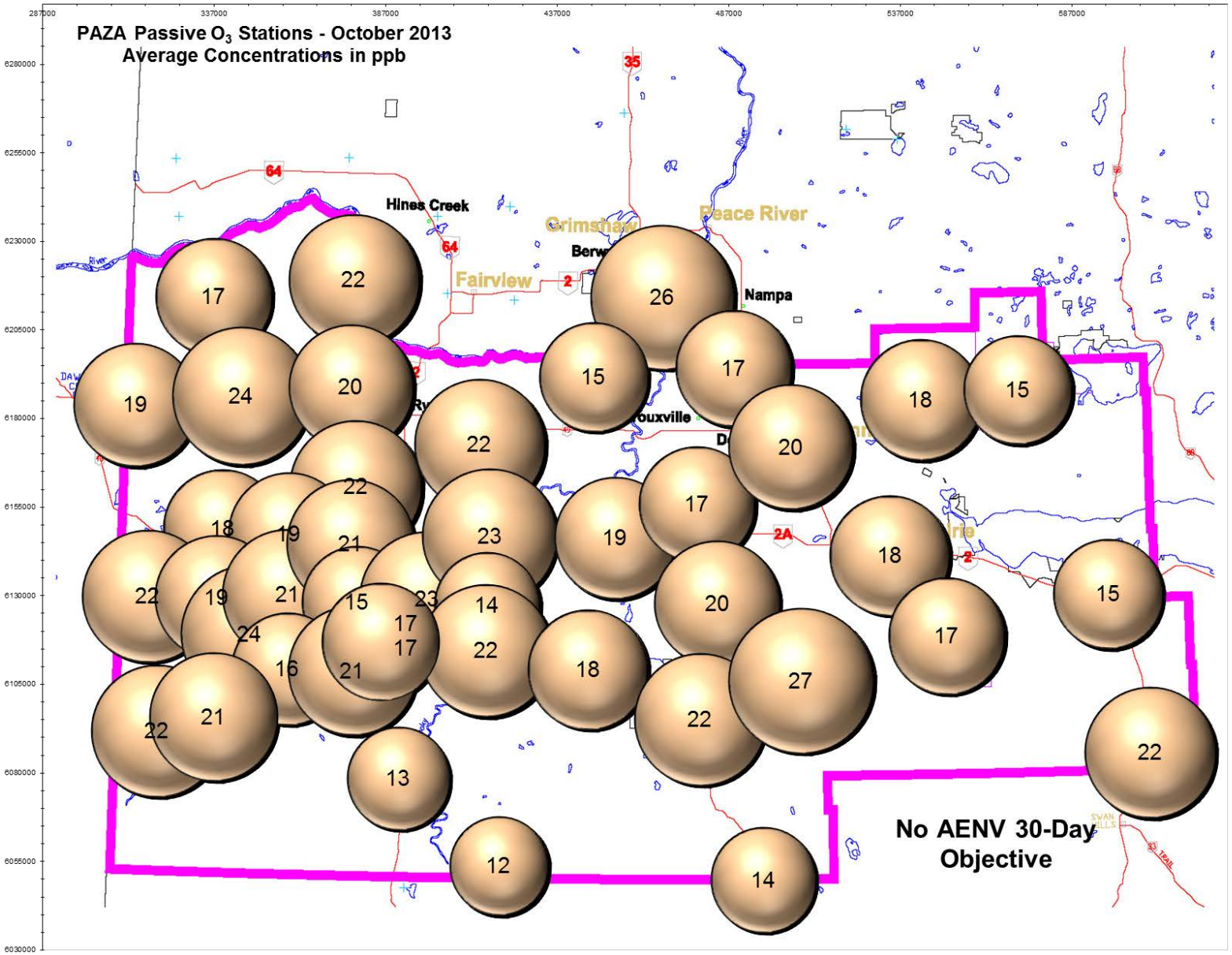
	SO_2	O_3	NO_2
PAZA Henry Pirker station	**0.1**	**17.4**	**9.3**
PAZA Grande Prairie passive	**0.1**	**17.3**	**6.5**



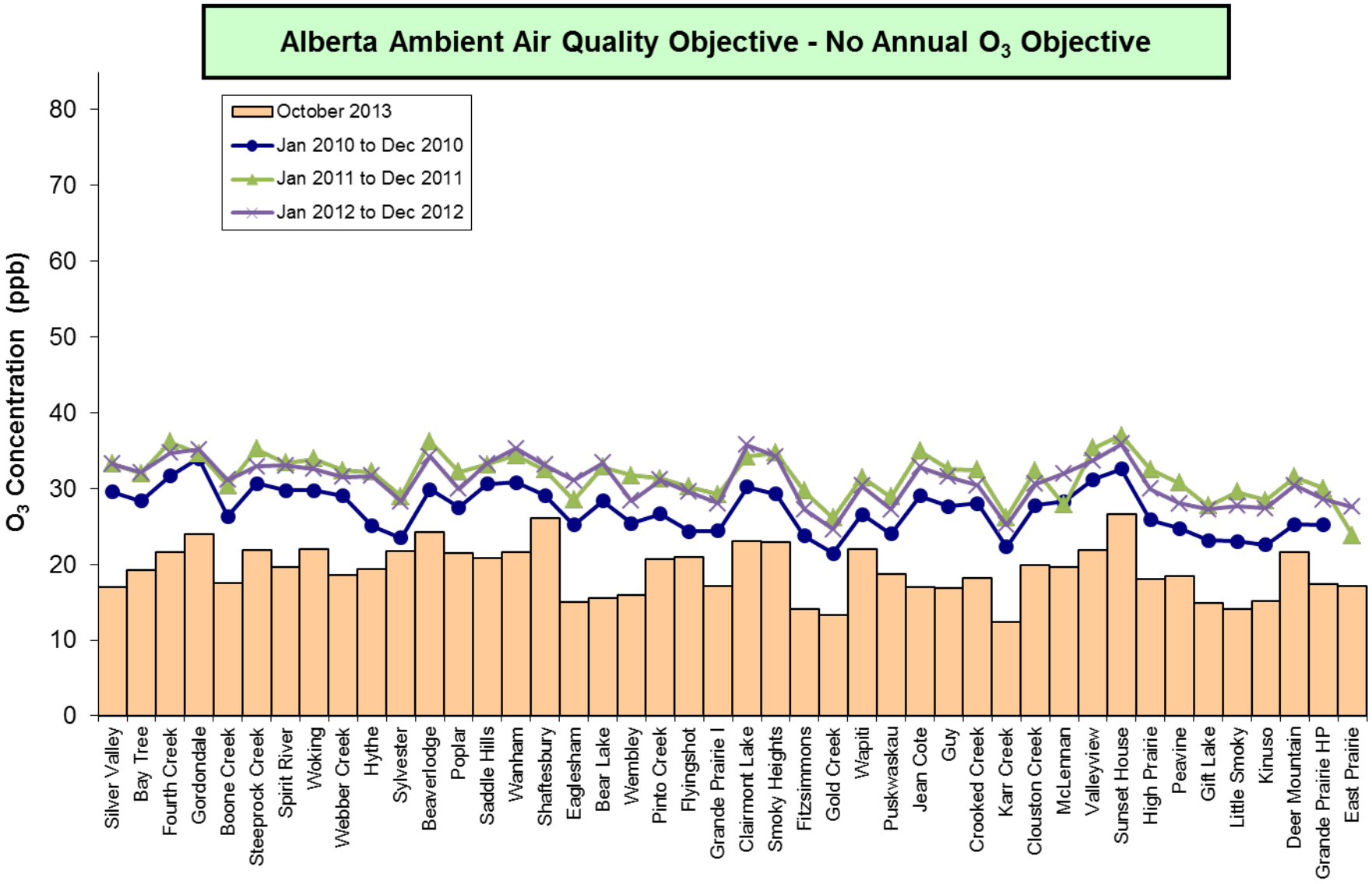
SO_2 Bubble Chart



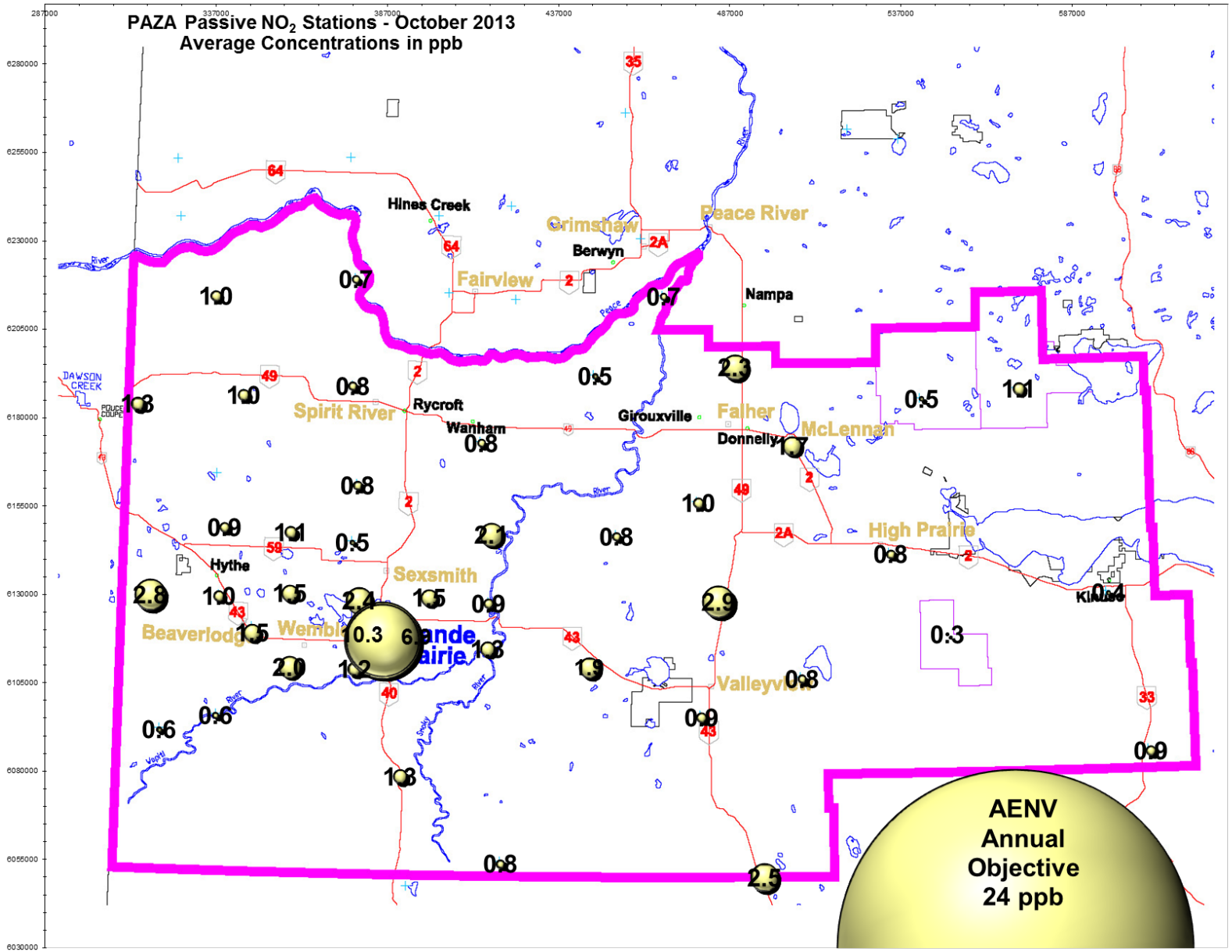
SO_2 Summary Chart



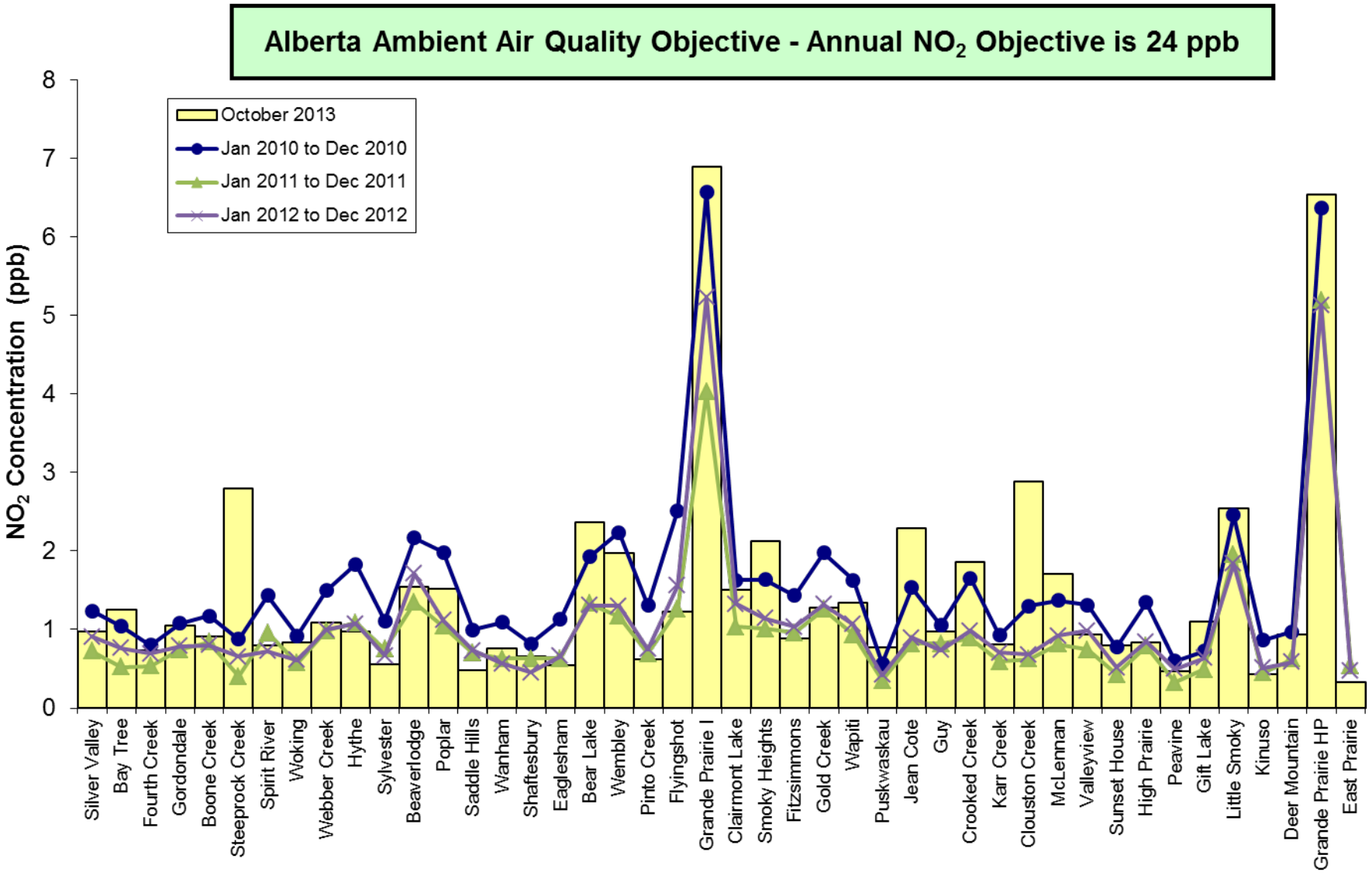
O_3 Bubble Chart



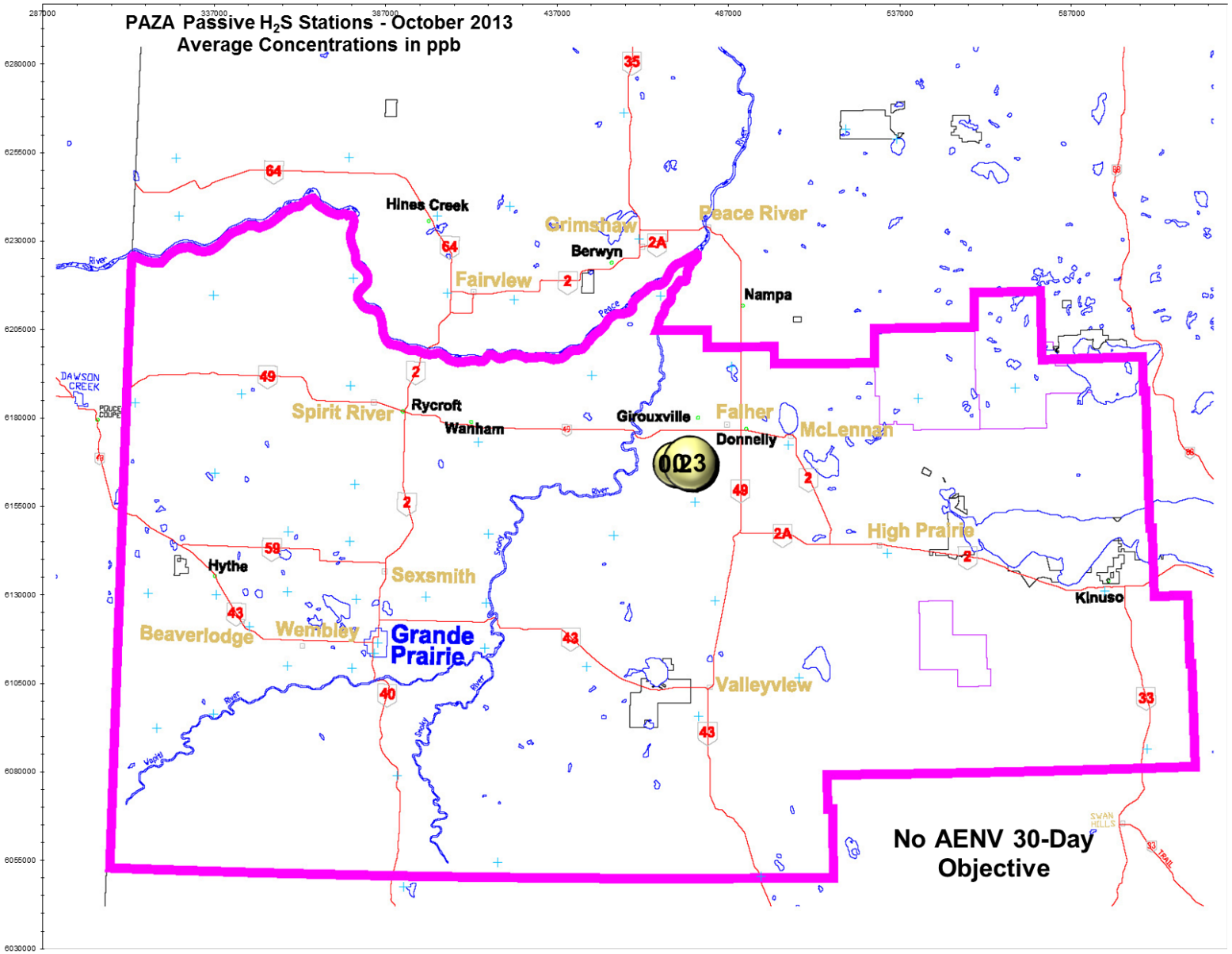
O_3 Summary Chart



NO_2 Bubble Chart



NO_2 Summary Chart



H_2S Bubble Chart

October 2013 Calibration Reports

PAZA - Henry Pirker Station with the following calibrations:
SO_2, NO, NO_2, NO_x, O_3, CO, THC, TRS

PAZA – Evergreen Park Station with the following calibrations:
SO_2, TRS

PAZA – Smoky Heights Station with the following calibrations:
SO_2, TRS

PAZA – Beaverlodge Station with the following calibrations:
SO_2, NO, NO_2, NO_x, O_3

PAZA – Valleyview Station with the following calibrations:
SO_2 & H_2S

PAZA – Sunset House Station with the following calibrations:
SO_2, NO, NO_2, NO_x, O_3, TRS

PAZA – Falher Station with the following calibrations:
SO_2 & H_2S

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 21, 2013	Previous Calibration	September 12 2013
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	7:45	End Time (MST)	14:10
Barometric Pressure	na ATM	Station Temperature	20.5 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Conc	51.5 ppm	Cal Gas Cert Date	March 12, 2014
		Cal Gas Cylinder #	LL105159
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.998002	Calculated slope	0.999073
Calculated intercept	3.033141	Calculated intercept	2.562012
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	9.3		9.4	
Coefficient	0.780		0.787	
Pressure	646.1	mm Hg	648.0	mm Hg
Flow	0.492	lpm	0.490	lpm
Lamp Voltage	44085	Hz	44324	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.0	N/A
4995	39.93	408.4	407.6	1.0020
4995	19.97	205.1	201.1	1.0199
4995	9.97	102.6	97.8	1.0485
4995	0.00	0.0	0.0	As Found Zero
4995	39.93	408.4	401.9	As Found Span
			Average Correction Factor	1.0235

Calculated value of As Found Response: 404.2 ppb Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	250.7	ppb	251.3	ppb

Notes: Slight span adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

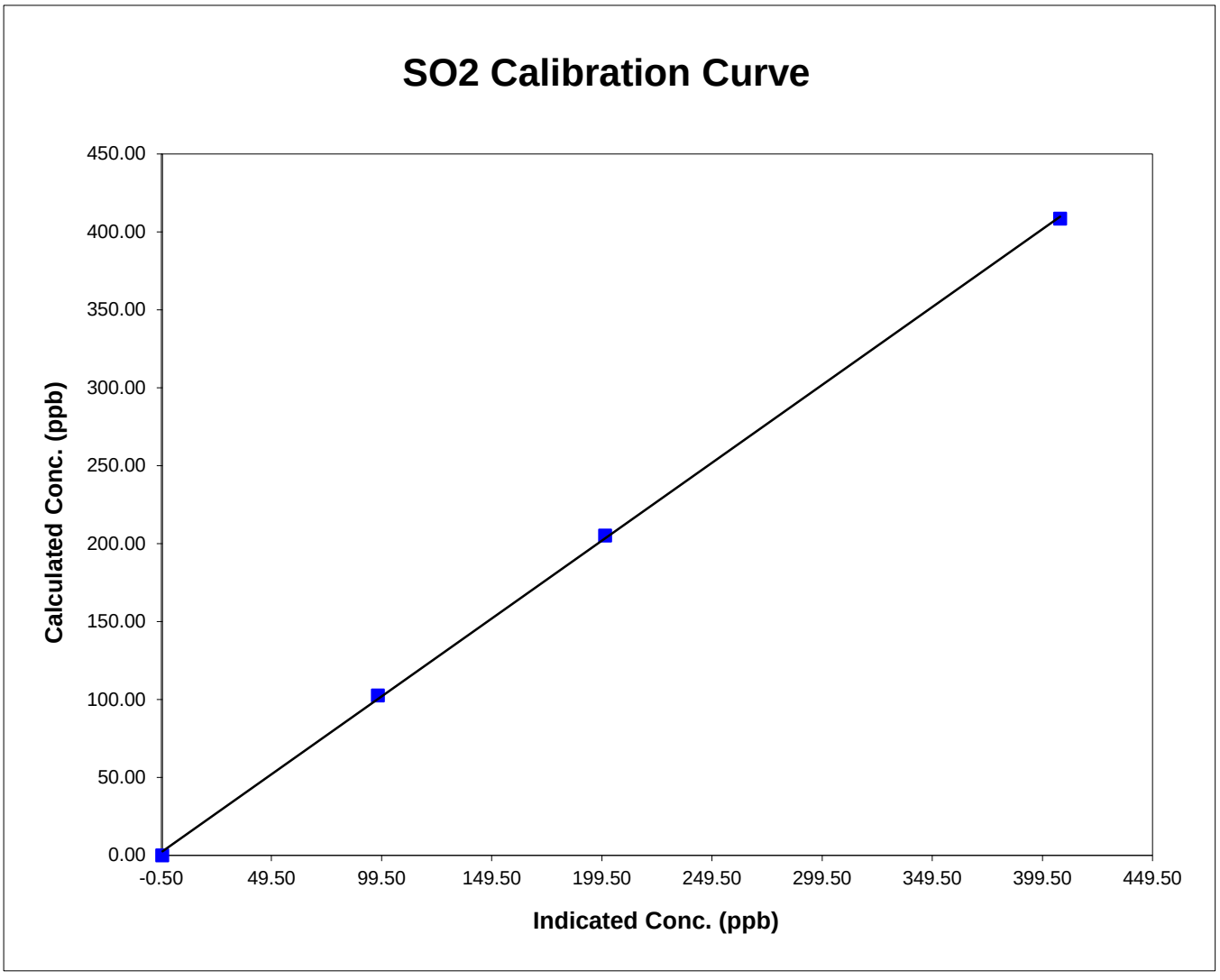
FOCUS AIR QUALITY MONITORING

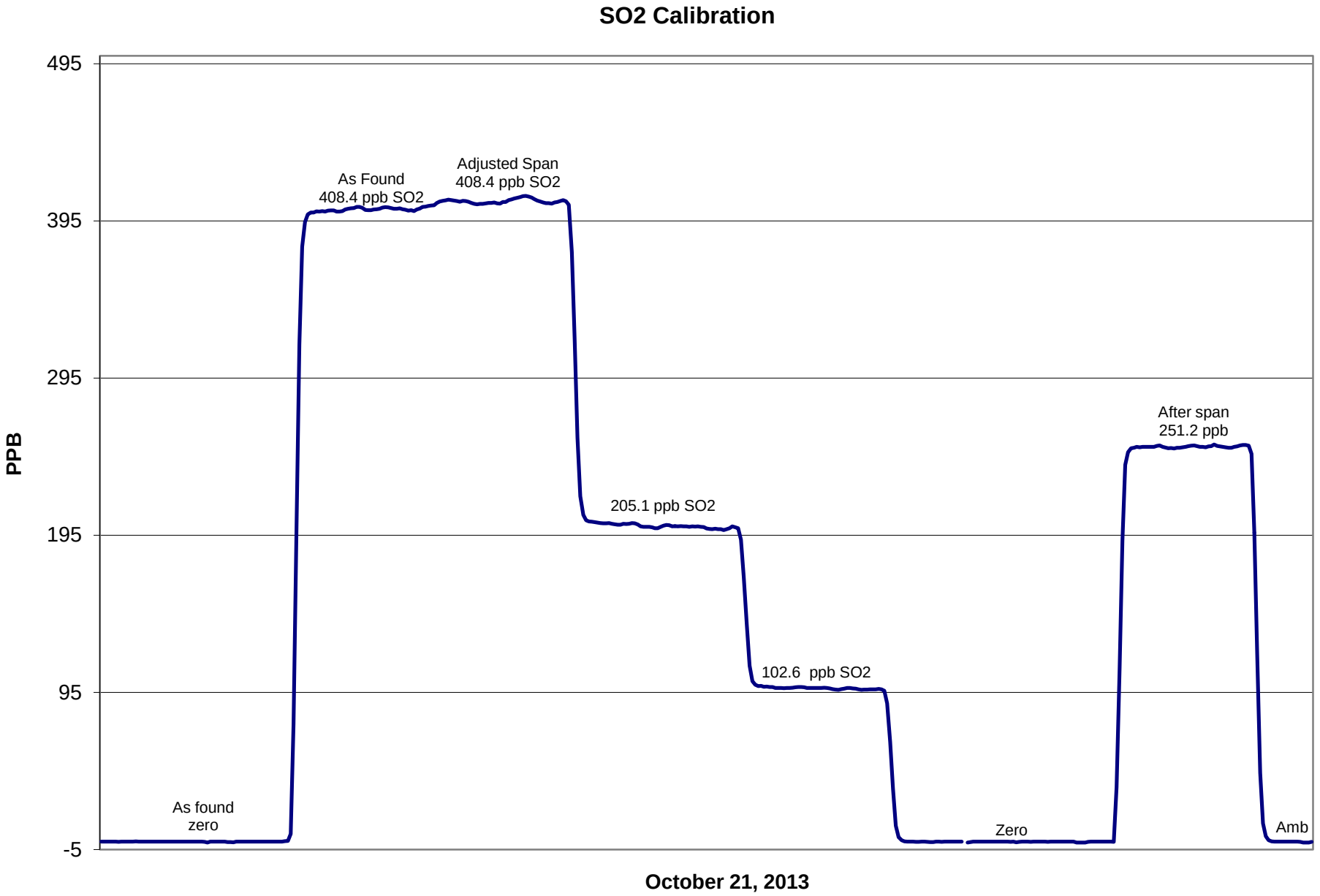
Station Information

Calibration Date	October 21, 2013	Previous Calibration	September 12 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:45	End Time (MST)	14:10
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
408.4	407.6	1.0020	Correlation Coefficient	0.999823
205.1	201.1	1.0199		
102.6	97.8	1.0485	Slope	0.999073
			Intercept	2.562012




SO2 Calibration
495
395
295
195
95
-5
PPB
As found
zero
As Found
408.4 ppb SO2
Adjusted Span
408.4 ppb SO2
205.1 ppb SO2
102.6 ppb SO2
Zero
After span
251.2 ppb
Amb
October 21, 2013

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 24, 2013	Previous Calibration	September 12 2013
Station Number	1	Station Location	Henry Pirker

Reason: Routine | Installation | Removal | Other:

Start Time (MST)	10:08		End Time (MST)	14:00	
Barometric Pressure	na	Atm	Station Temperature	20.5	Deg C
Calibrator	Environics		Serial Number	3016	
NO Cal Gas Conc	51.3	ppm	Cal Gas Expiry Date	March 12, 2014	
NOx Cal Gas Conc	51.4	ppm	Cal Gas Serial #	LL105159	

DACS Information

DACS make: CR3000 DACS serial No.: 5408

Parameter		NO2	NOx	NO
Before	Data Slope	0.996414	0.993911	0.991545
	Data Offset	-0.497272	1.164684	1.230201
After	Data Slope	0.995505	1.000050	0.995764
	Data Offset	1.129801	2.223812	2.518279
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model: TEI 42C Analyzer serial #: 508011073

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	13.9	mV	13.9	mV
NOx bkgnd	13.9	mV	13.9	mV
NO coefficient	1.086		1.086	
NOx coefficient	0.994		0.994	
NO2 conv temp	318.0	Deg C	318.0	Deg C
PMT Temp	-2.4	Deg C	-2.4	Deg C
PMT Volt	-774.0	mV	-774.0	mV
R Cell Press	190.6	in Hg	190.5	in Hg

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Calibration Date: October 24, 2013 Station Location: Henry Pirker

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	-0.2	-0.2	0.0	N/A	N/A
1	4995	39.93	407.6	406.8	0.8	406.6	407.3	-0.9	1.0026	0.9989
2	4995	19.97	204.7	204.3	0.4	200.9	201.0	-0.2	1.0188	1.0162
3	4995	9.97	102.4	102.2	0.2	98.5	98.1	0.2	1.0395	1.0413
AFZ	4995	0.00	0.0	0.0	0.0	-0.2	-0.2	0.0	0.0000	0.0000
AFS	4995	39.93	407.6	406.8	0.8	406.6	407.3	-0.9	1.0026	0.9989
							Average Correction Factor		1.0203	1.0188

As Found Concentrations: NO_X= 407.9 NO= 408.7 As Found Percent Change NO_X= 0.1% NO= 0.5%

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.2	-0.2	0.0	-0.2	-0.2	0.0	N/A	N/A	N/A	N/A
NO point	407.4	407.4	0.0	406.8	407.4	-0.8	1.0015	1.0000	N/A	N/A
300	407.4	100.8	306.6	408.1	100.8	307.4	0.9985	1.0000	0.9973	100.3%
200	407.4	201.1	206.3	407.1	201.1	206.1	1.0008	1.0000	1.0011	99.9%
100	407.4	300.8	106.7	405.1	300.8	104.3	1.0058	1.0000	1.0224	97.8%
					Average Correction Factor		1.0017	1.0000	1.0069	99.3%

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	0.0	-0.1	ppb	-0.4	0.0	-0.6	ppb
Auto span	329.9	327.5	2.4	ppb	326.0	324.4	1.9	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

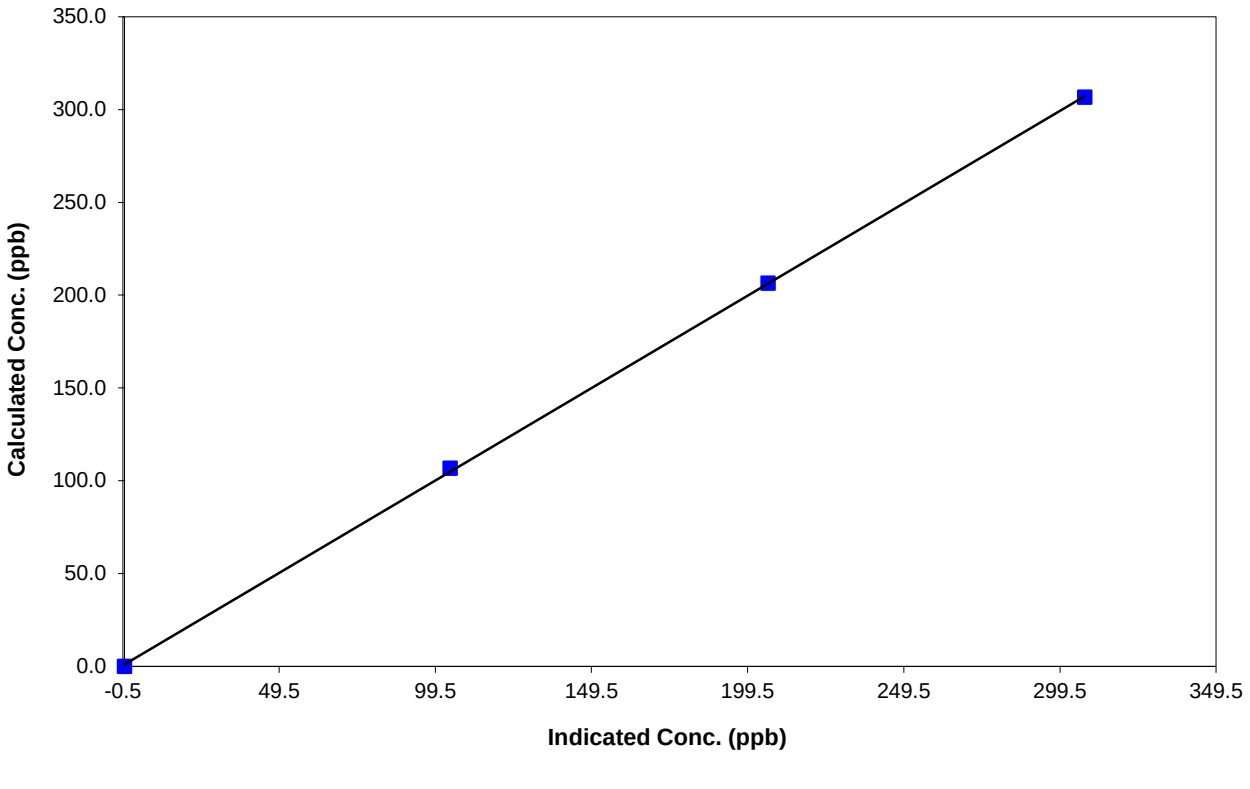
Station Information

Calibration Date	October 24, 2013	Previous Calibration	September 12 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:08	End Time (MST)	14:00
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		
306.6	307.4	0.9973	Correlation Coefficient	0.999916
206.3	206.1	1.0011		
106.7	104.3	1.0224	Slope	0.995505
			Intercept	1.129801

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

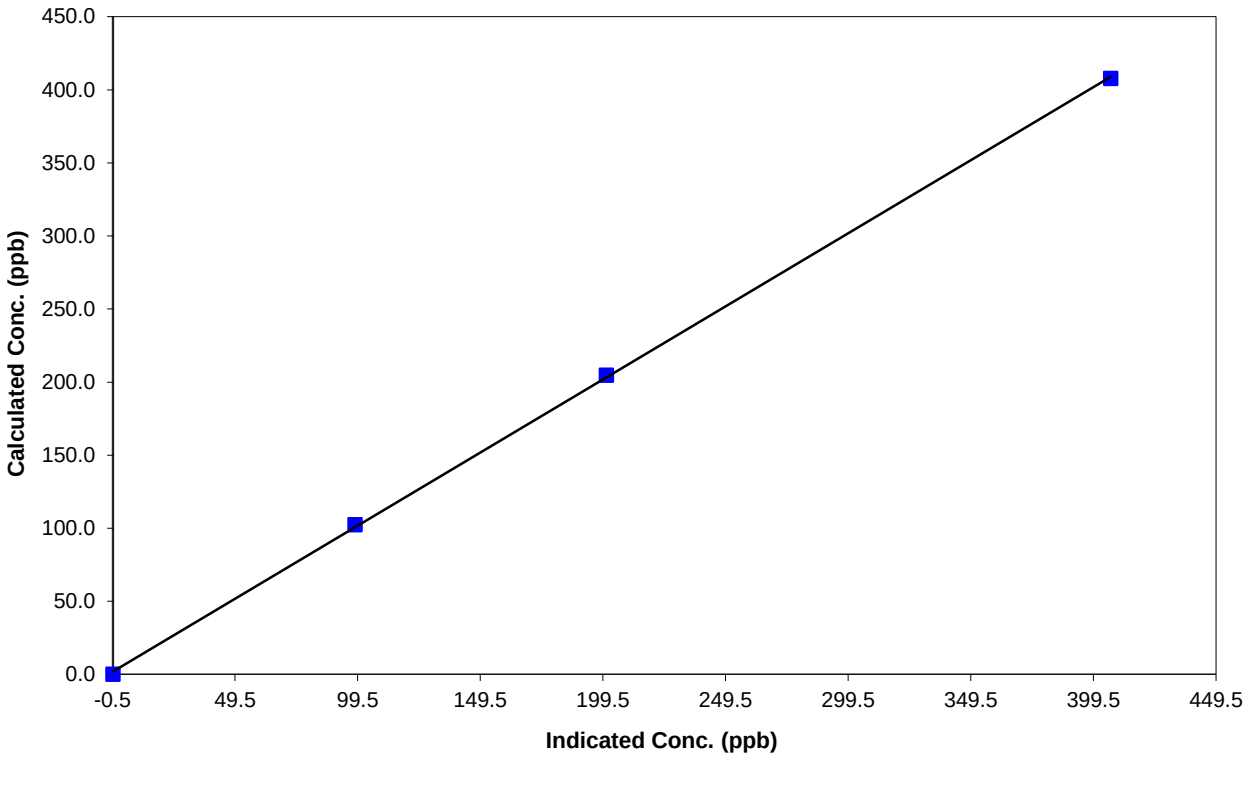
Station Information

Calibration Date	October 24, 2013	Previous Calibration	September 12 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:08	End Time (MST)	14:00
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
407.6	406.6	1.0026	Correlation Coefficient	0.999883
204.7	200.9	1.0188		
102.4	98.5	1.0395	Slope	1.000050
			Intercept	2.223812

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

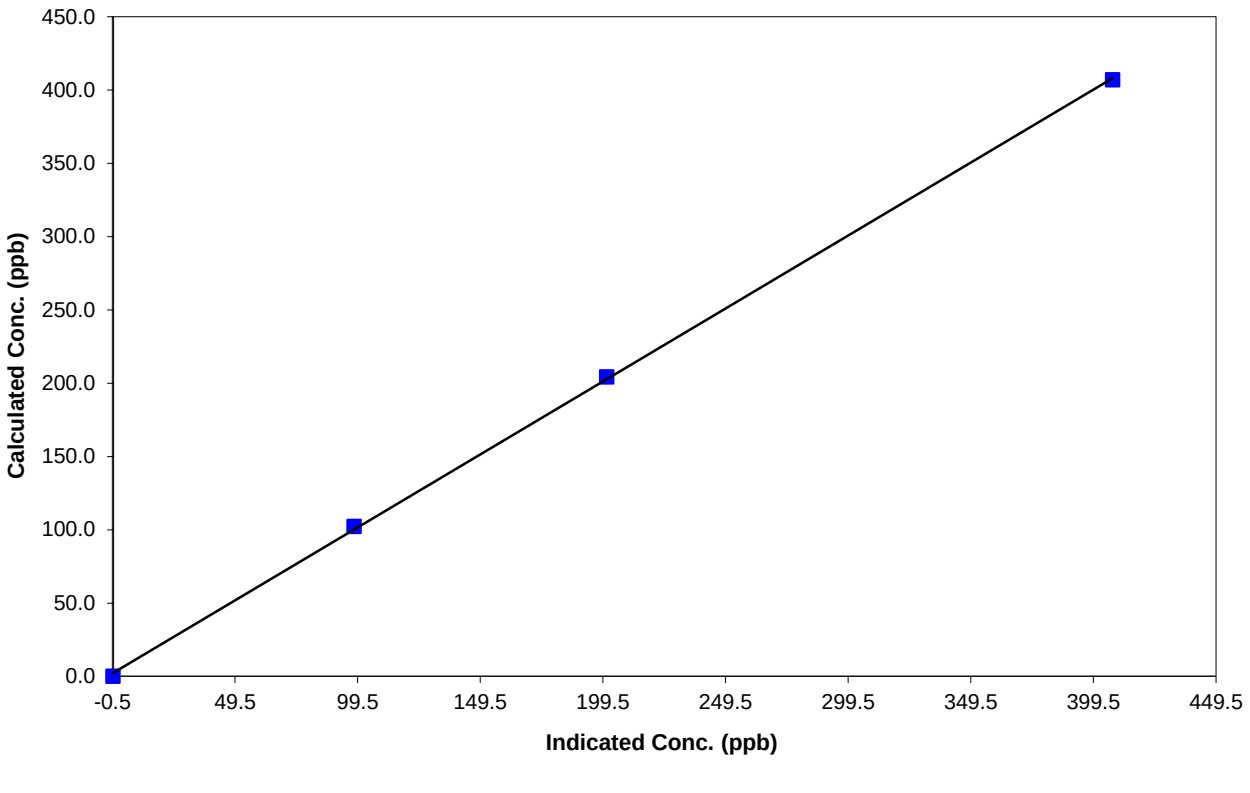
Station Information

Calibration Date	October 24, 2013	Previous Calibration	September 12 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:08	End Time (MST)	14:00
Analyzer make	TEI 42C	Analyzer serial #	508011073

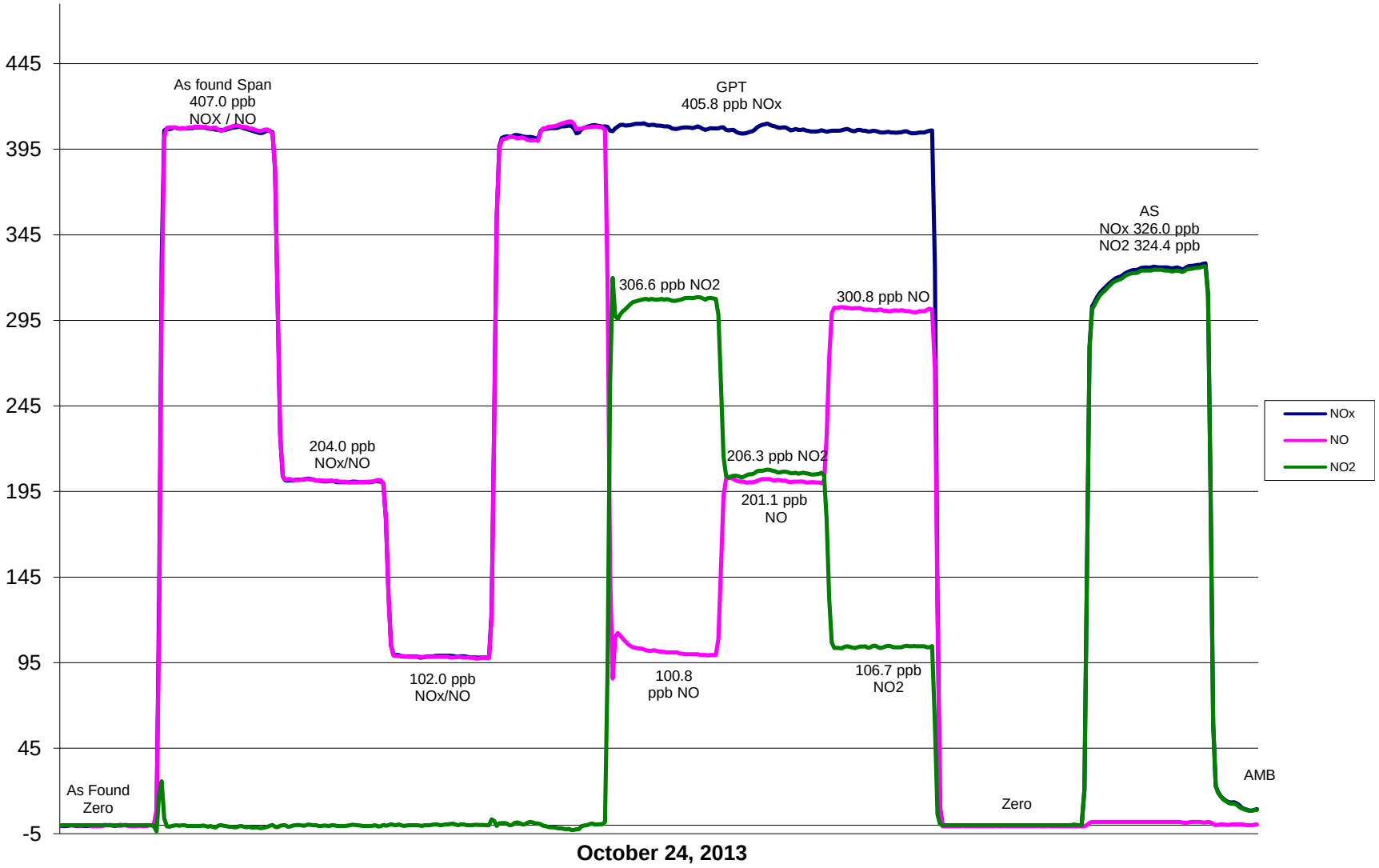
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
406.8	407.3	0.9989	Correlation Coefficient	0.999855
204.3	201.0	1.0162		
102.2	98.1	1.0413	Slope	0.995764
			Intercept	2.518279

NO Calibration Curve



PAZA
NO_X Calibration



Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 24, 2013	Previous Calibration	September 12, 2013
Station Number	1	Station Location	Henry Pirker
Reason:	Routine ☒	Install ☐	Removal ☐	Other: ☐
Start Time (MST)	13:02	End Time (MST)	15:44
Barometric Pressure	0.923 atm	Station Temperature	23.0 Deg C
Calibrator	Environics	Serial Number	3016
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	0.996477	Calculated slope	1.006152
Calculated intercept	0.135835	Calculated intercept	0.937785
Analyzer make	Teco 49C	Analyzer serial #	607415761

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.20	ppb	-0.20	ppb
slope	0.994		0.994	
Lamp temp	56.9	mV	56.9	mV
Lamp Intensity A/B	108031/96861	mV	107051/95978	mV
Pressure	673.1	mm Hg	673.4	mm Hg
Flow A	0.717	ccm	0.717	ccm
Flow B	0.721	ccm	0.721	ccm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.0	-0.1	N/A
4995	0.3	306.6	304.3	1.0075
4995	0.2	206.3	203.9	1.0116
4995	0.1	106.7	103.9	1.0269
4995	0.0	0.0	-0.1	As found zero
4995	0.3	306.6	304.3	As found span
			Average Correction Factor	1.0153

Calculated value of As Found Response: 303.5 ppm Percent Change of As Found: -1.0%

	before calibration		after calibration	
Auto zero	1.0	ppb	0.9	ppb
Auto span	355.0	ppb	354.5	ppb

Notes: No adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **O3**

Air Monitoring Network **PAZA**

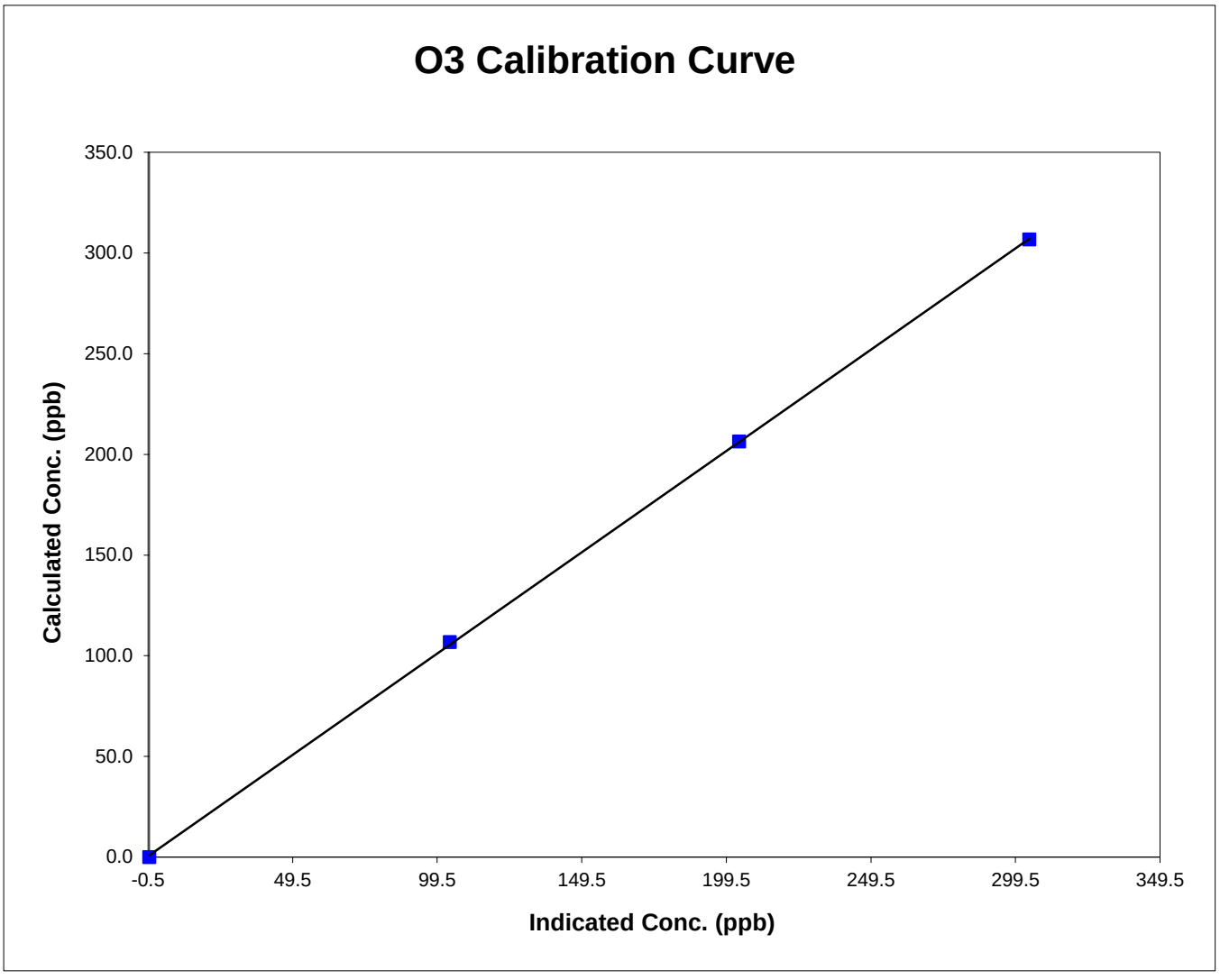
FOCUS AIR QUALITY MONITORING

Station Information

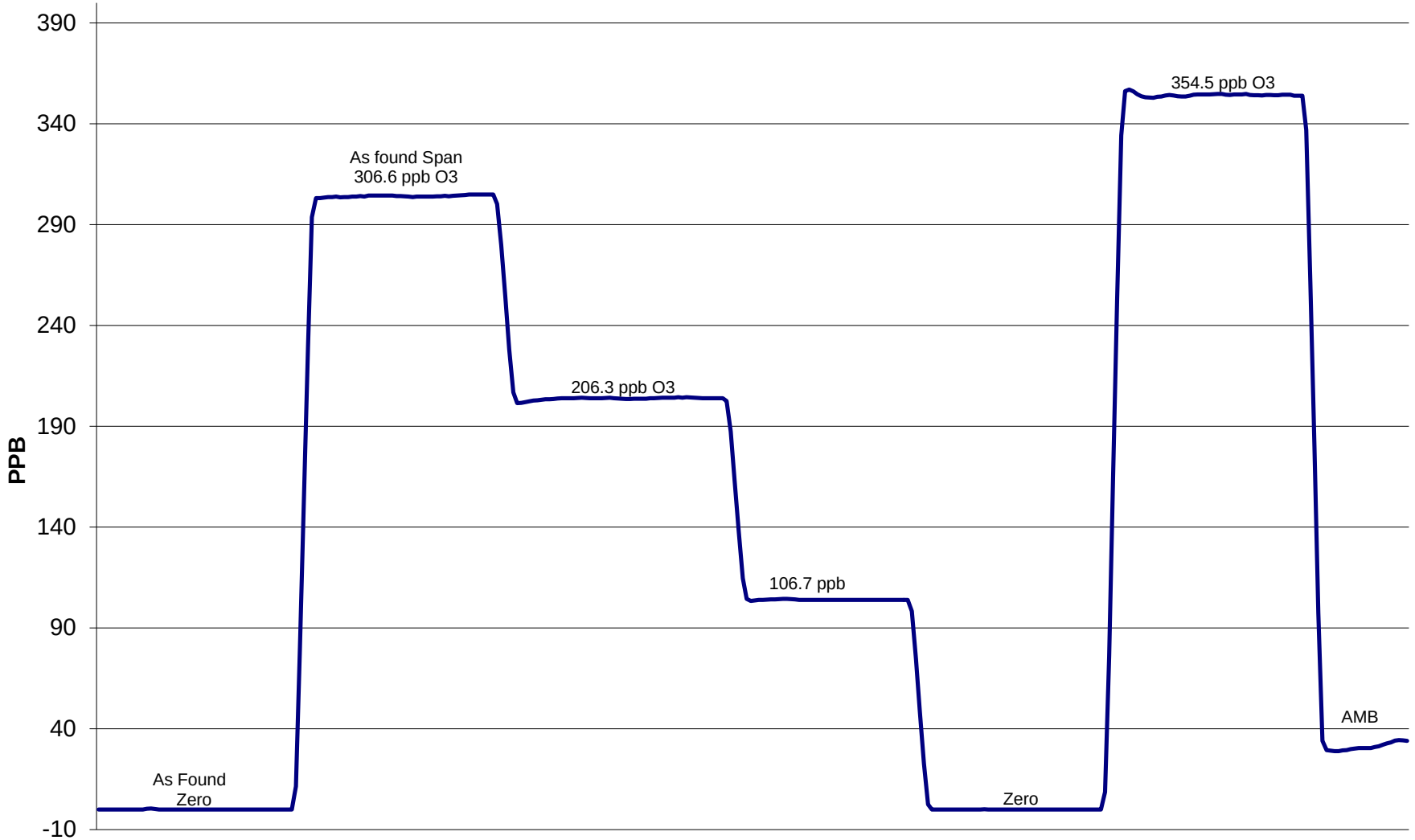
Calibration Date	October 24, 2013	Previous Calibration	September 12, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:02	End Time (MST)	15:44
Analyzer make/model	Teco 49C	Analyzer serial #	607415761

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	NA		
306.6	304.3	1.0075	Correlation Coefficient	0.999951
206.3	203.9	1.0116		
106.7	103.9	1.0269	Slope	1.006152
			Intercept	0.937785



O3 Calibration



October 24, 2013

Calibration Report

Parameter **CO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 17, 2013	Previous Calibration	September 10 2013
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	9:20	End Time (MST)	12:15
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	1.008547	Calculated slope	1.002977
Calculated intercept	0.293163	Calculated intercept	0.205006
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.005		1.005	
CO zero setting	-0.541		-0.541	
Sample pressure	690.2	mm Hg	694.5	mm Hg
Sample Flow	1.124	LPM	1.126	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	0.01	N/A
4995	69.94	40.02	39.81	1.0051
4995	34.96	20.14	19.73	1.0209
4995	17.96	10.38	9.96	1.0425
4995	0.00	0.00	0.01	As Found Zero
4995	69.94	40.02	39.81	As Found Span
			Average Correction Factor	1.0228

Calculated value of As Found Response: 40.437 ppm Percent Change of As Found: -1.0%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.81	ppm	20.22	ppm

Notes: No adjustments made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **CO**

Air Monitoring Network **PAZA**

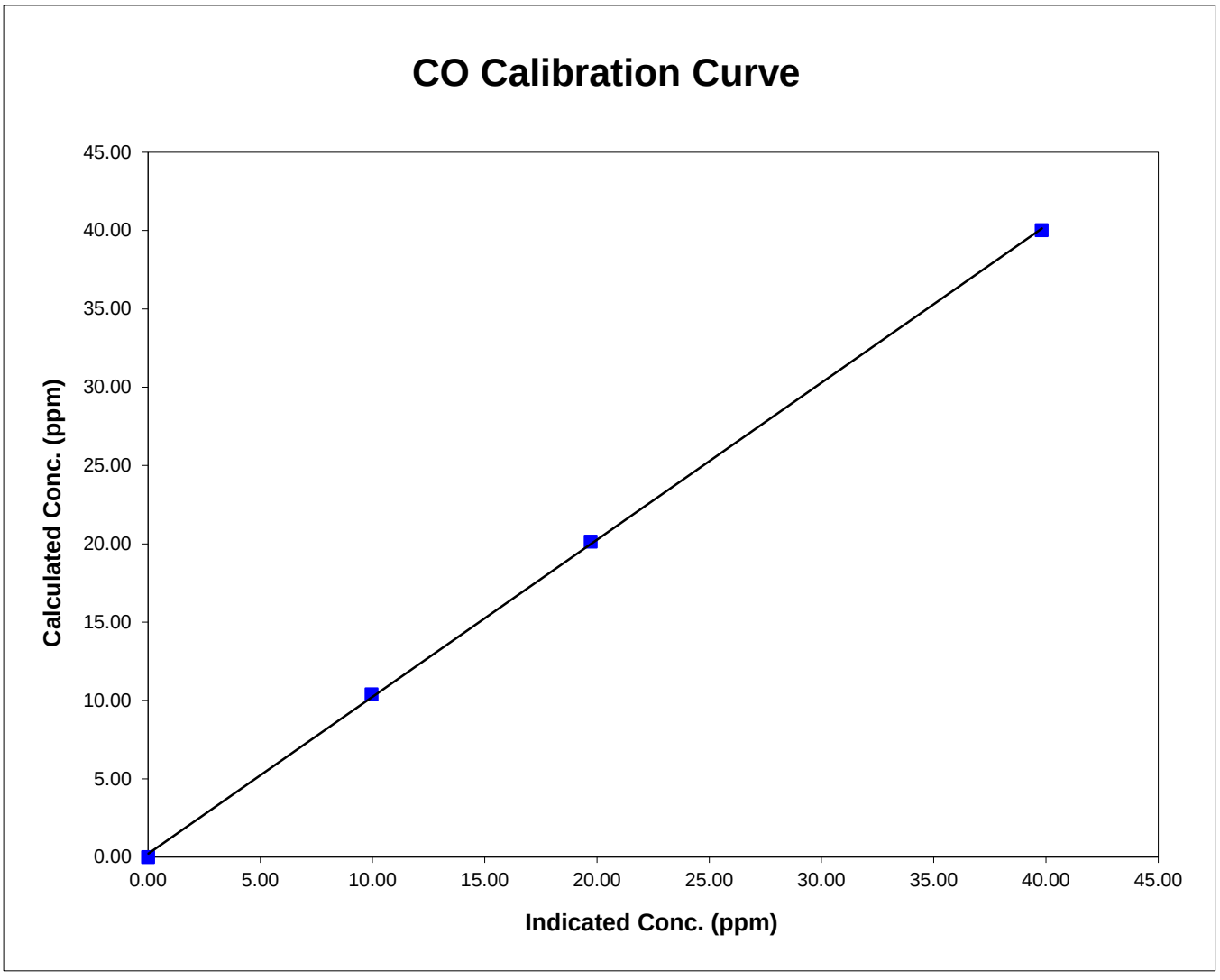
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 17, 2013	Previous Calibration	September 10 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:20	End Time (MST)	12:15
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

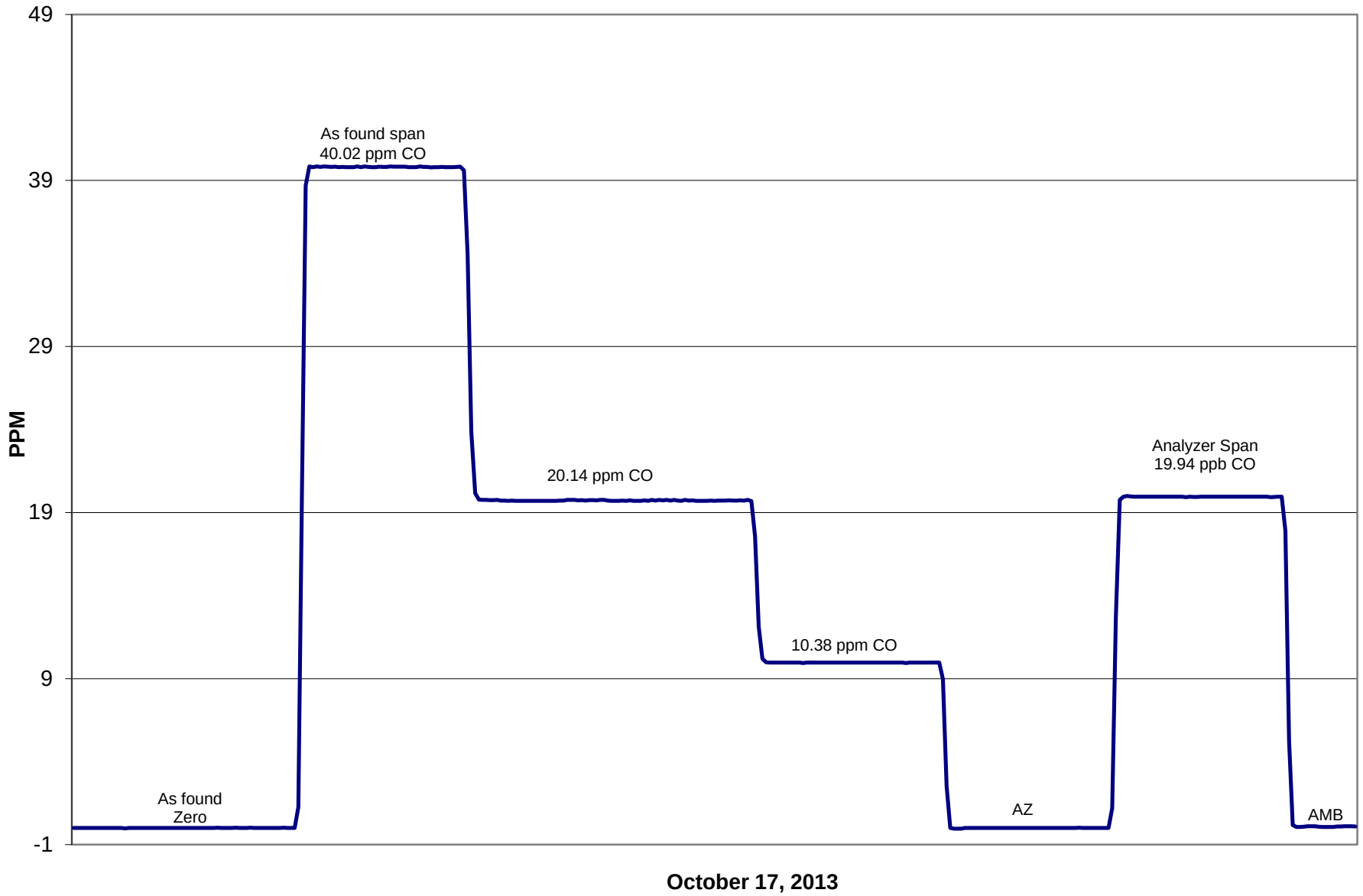
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.012	N/A		
40.017	39.815	1.0051	Correlation Coefficient	0.999863
20.142	19.730	1.0209		
10.383	9.959	1.0425	Slope	1.002977
			Intercept	0.205006



11.15 ppm CO

CO Calibration



Calibration Report

Parameter **CH4 / NMHC / THC**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 17, 2013	Previous Calibration	September 10, 2013
Station Number	1	Station Location	Henry Pirker

Reason: [Routine] [Install] [Removal] [Other:]

Start Time (MST)	11:20	End Time (MST)	14:46
Barometric Pressure	NA inches Hg	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas CH4 Conc	404 ppm CH4	Cal Gas Expiry Date	28/03/2014
Cal Gas C3H8 Conc	201 552.75 ppm CH4	Cal Gas Cylinder #	LL34989
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 #	1134650658

	before		after	
Concentration range	0-20 (CH4, NMHC); 0-40 (THC)	ppm	0-20 (CH4, NMHC); 0-40 (THC)	ppm
Air pressure	27.8	PSI	27.8	PSI
Fuel pressure	42.1	PSI	42.1	PSI
Carrier pressure	30.3	PSI	30.3	PSI
CH4 cal factor	5.68		5.68	E^{-4}
NMHC cal factor	1.64		1.64	E^{-4}
Rt	12.60	Sec	12.60	Sec
Pk Index	23.00		23.00	

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1996	0.00	0.00	0.02	N/A
1996	64.93	12.73	12.76	0.9976
1996	39.93	7.92	7.90	1.0034
1996	14.95	3.00	2.95	1.0196
1996	0.00	0.00	0.02	As Found Zero
1996	64.93	12.73	12.64	As Found Span
			Average Correction Factor	1.0069

Calculated value of As Found Response: 12.527 ppm Percent Change of As Found: 1.6%

	Before		After
Calculated slope	0.990648	Calculated slope	0.997676
Calculated intercept	0.021375	Calculated intercept	0.022699

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	9.01	ppm	8.25	ppm

NMHC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1996	0.00	0.00	0.02	N/A
1996	64.93	17.41	17.52	0.9941
1996	39.93	10.84	11.00	0.9853
1996	14.95	4.11	4.19	0.9803
1996	0.00	0.00	0.02	As Found Zero
1996	64.93	17.41	17.09	As Found Span
			Average Correction Factor	0.9866

Calculated value of As Found Response: 16.953 ppm Percent Change of As Found: 2.7%

	Before		After
Calculated slope	0.996527	Calculated slope	0.994672
Calculated intercept	-0.059542	Calculated intercept	-0.047997

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	12.54	ppm	11.42	ppm

THC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1996	0.00	0.00	0.03	N/A
1996	64.93	30.14	30.26	0.9962
1996	39.93	18.76	18.88	0.9941
1996	14.95	7.11	7.13	0.9971
1996	0.00	0.00	0.03	As Found Zero
1996	64.93	30.14	29.72	As Found Span
			Average Correction Factor	0.9958

Calculated value of As Found Response: 29.496 ppm Percent Change of As Found: 2.1%

	Before		After
Calculated slope	0.994769	Calculated slope	0.996580
Calculated intercept	-0.033005	Calculated intercept	-0.021522

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	21.54	ppm	19.65	ppm

Notes: Slight span adjust 80% point. Adjust daily span & zero flows. Daily span value is slightly lower since new span gas cylinder was installed yesterday.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **CH4**

Air Monitoring Network **PAZA**

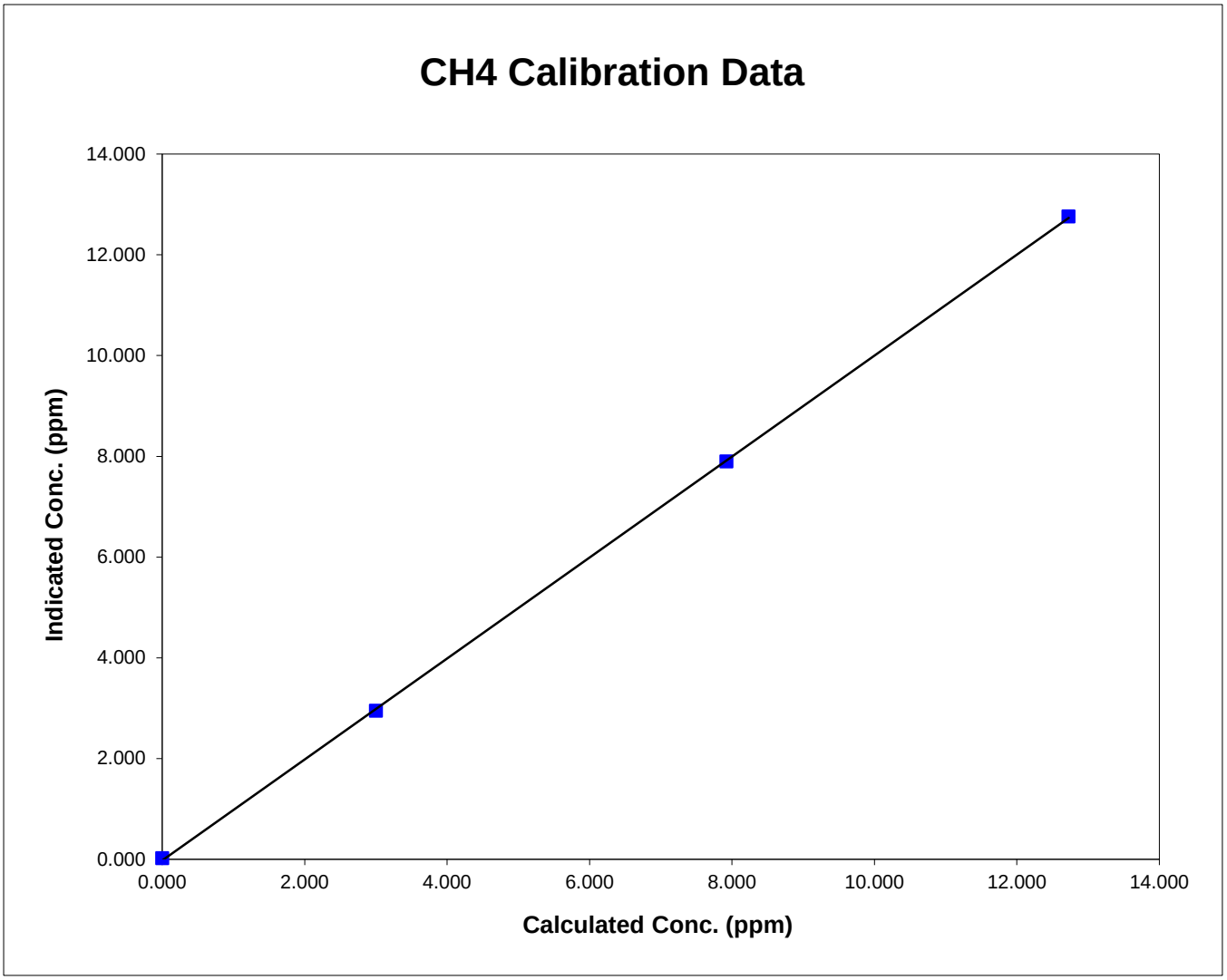
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 17, 2013	Previous Calibration	September 10, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:20	End Time (MST)	14:46
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.018	N/A		
12.728	12.758	0.9976	Correlation Coefficient	0.999952
7.924	7.897	1.0034		
3.003	2.946	1.0196	Slope	0.997676
			Intercept	0.022699



Calibration Summary

Parameter **NMHC**

Air Monitoring Network **PAZA**

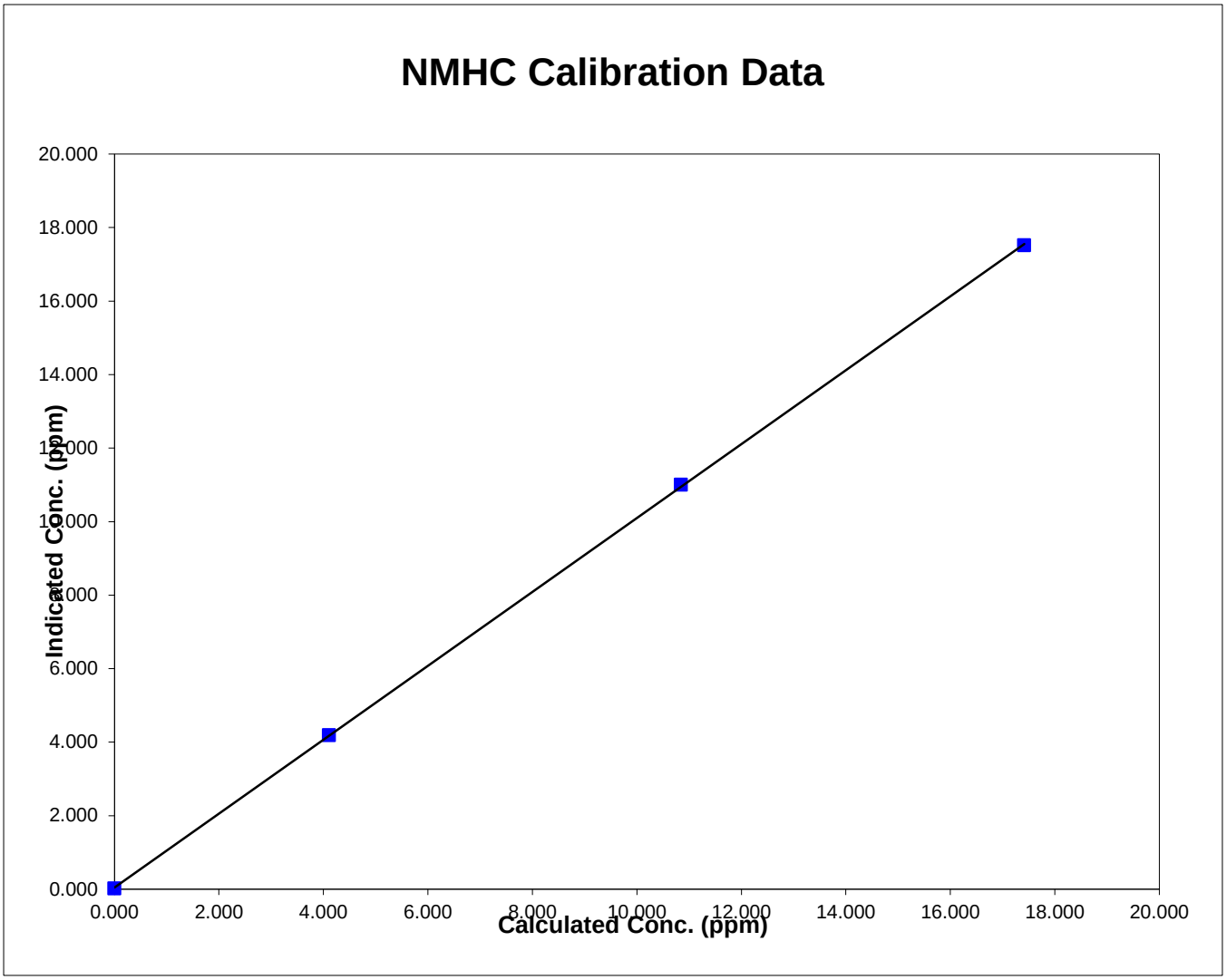
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 17, 2013	Previous Calibration	September 10, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:20	End Time (MST)	14:46
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.018	N/A		
17.414	17.518	0.9941	Correlation Coefficient	0.999968
10.841	11.003	0.9853		
4.109	4.192	0.9803	Slope	0.994672
			Intercept	-0.047997



Calibration Summary

Parameter **THC**

Air Monitoring Network **PAZA**

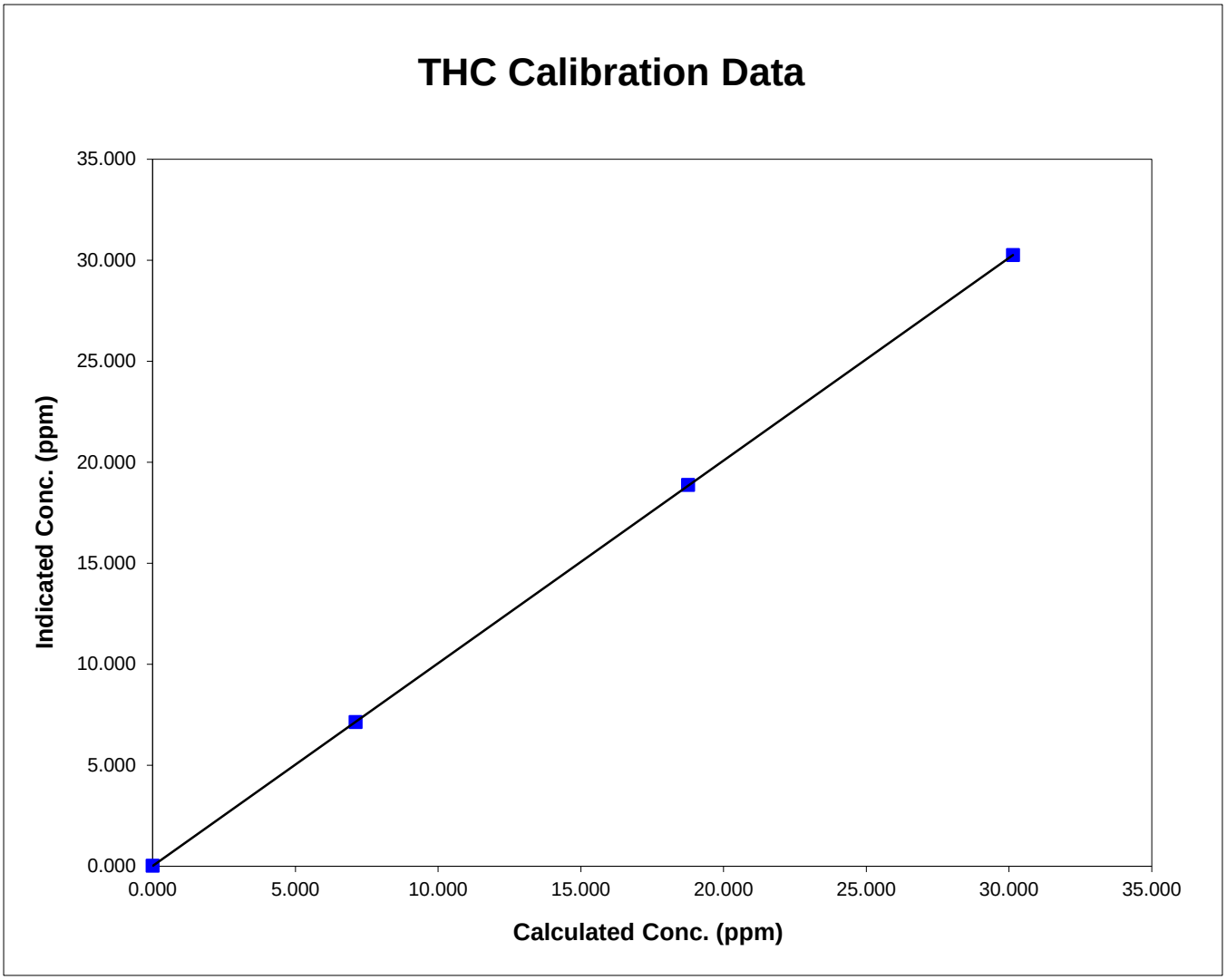
FOCUS AIR QUALITY MONITORING

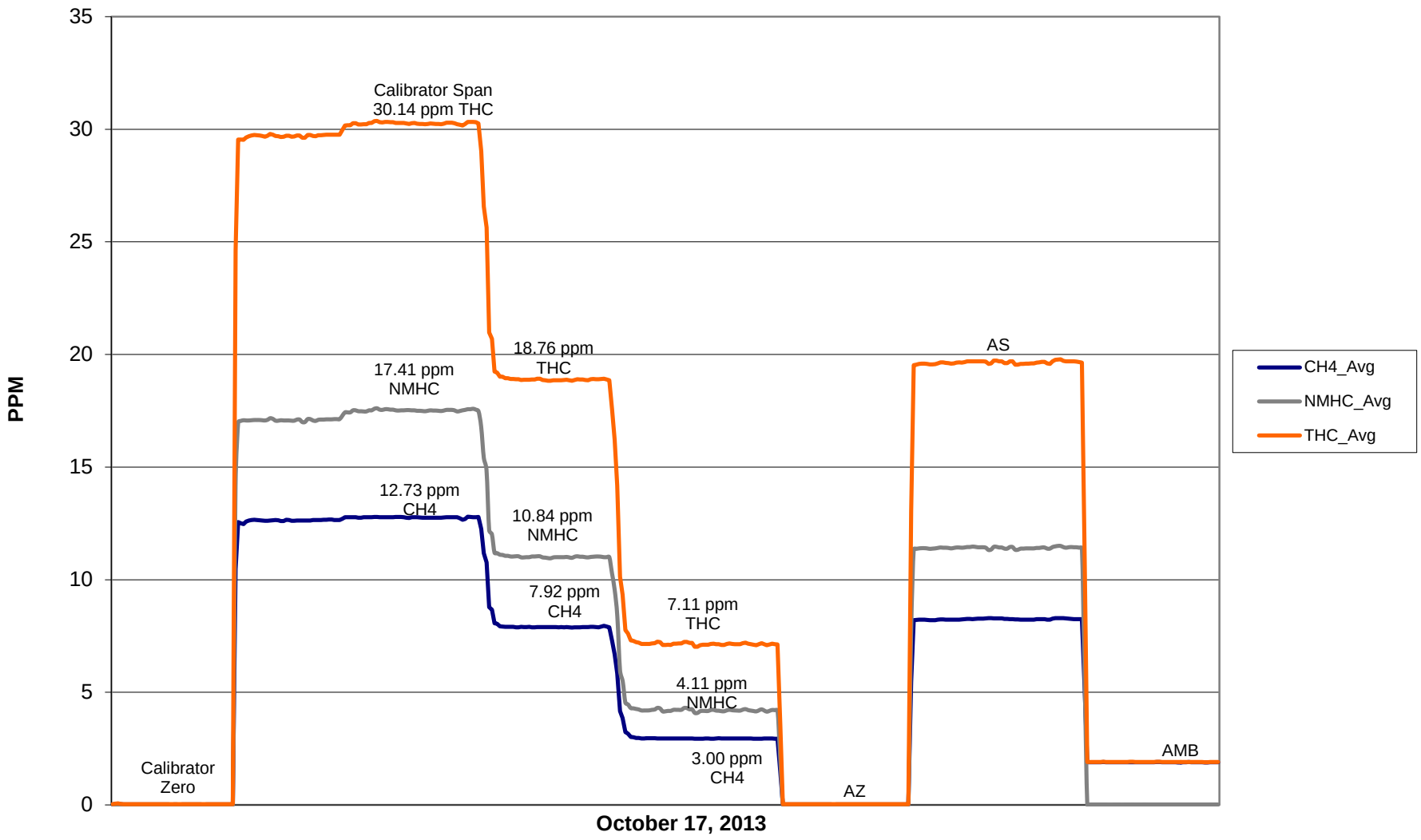
Station Information

Calibration Date	October 17, 2013	Previous Calibration	September 10, 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:20	End Time (MST)	14:46
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.031	N/A		
30.143	30.257	0.9962	Correlation Coefficient	0.999997
18.764	18.877	0.9941		
7.113	7.133	0.9971	Slope	0.996580
			Intercept	-0.021522




THC/CH4/NMHC Calibration
PPM
35
30
25
20
15
10
5
0
Calibrator Span
30.14 ppm THC
17.41 ppm
NMHC
18.76 ppm
THC
12.73 ppm
CH4
10.84 ppm
NMHC
7.92 ppm
CH4
7.11 ppm
THC
4.11 ppm
NMHC
3.00 ppm
CH4
Calibrator
Zero
AZ
AS
AMB
CH4_Avg
NMHC_Avg
THC_Avg
October 17, 2013

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 17, 2013	Previous Calibration	Sept 10 2013
Station Number	1	Station Location	Henry Pirker

Reason: Routine | Install | Removal | Other:

Start Time (MST)	13:21 PM	End Time (MST)	16:10
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	10.4 ppb	Cal Gas Expiry Date	08/07/2016
		Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.992145	Calculated slope	1.005561
Calculated intercept	0.241393	Calculated intercept	0.224980

Analyzer make	TEI 45C	Analyzer serial # 630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.128		1.145	
Background	11.5		11.5	
Pressure	671.5	mm Hg	664.7	mm Hg
Flow	0.456	ccm	0.452	ccm
Lamp Voltage	823	V	825	V

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Cc)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.25	N/A
4995	39.93	82.48	82.18	1.0037
4995	19.95	41.37	40.17	1.0300
8995	8.95	10.34	9.96	1.0382
4995	0.00	0.00	0.25	As Found Zero
4995	39.93	82.48	80.71	As Found Span
			Average Correction Factor	1.0239

Calculated value of As Found Response: 80.1 ppb Percent Change of As Found: 2.9%

	before calibration		after calibration	
Auto zero	-0.92	ppb	0.64	ppb
Auto span	33.06	ppb	35.03	ppb

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

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

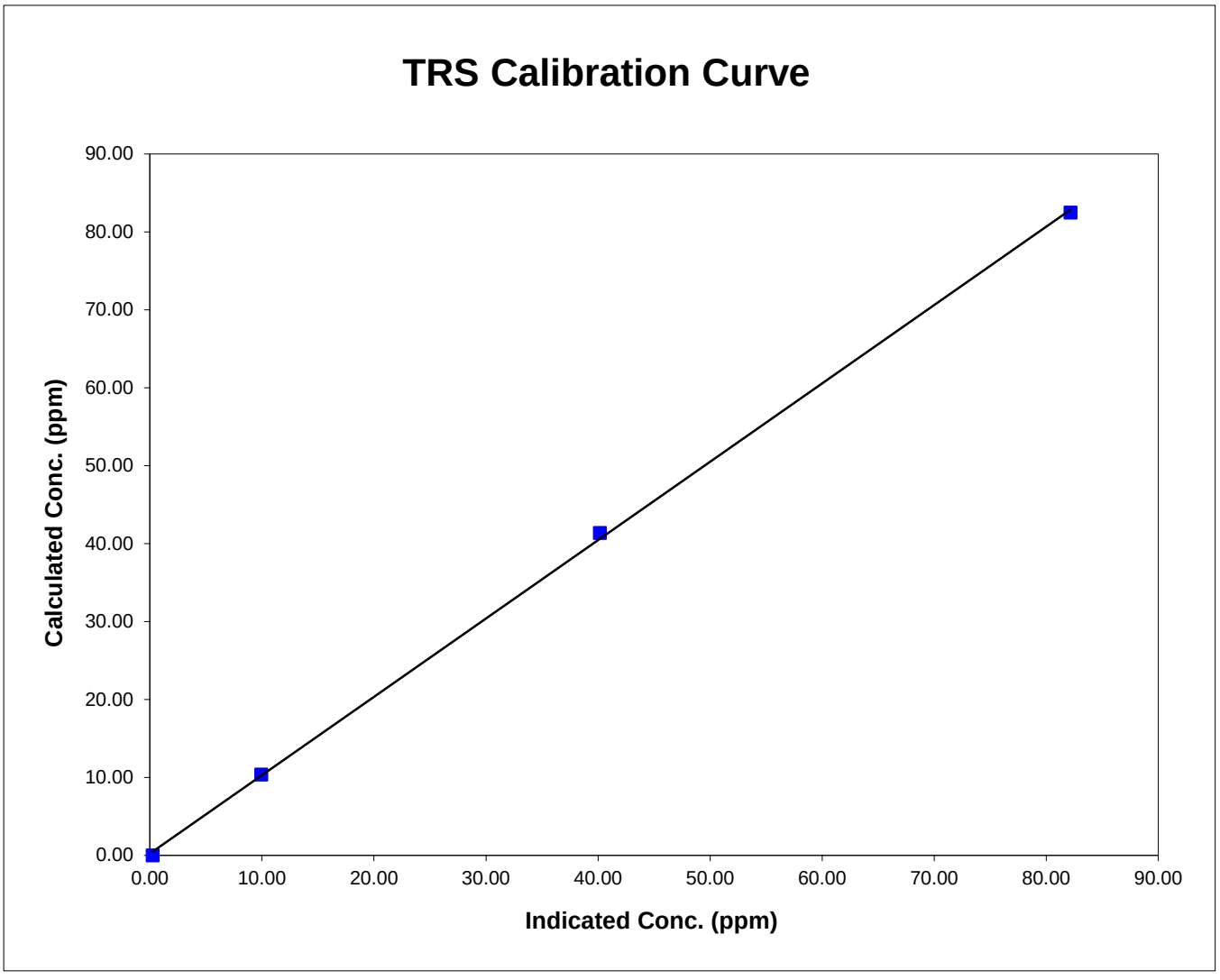
FOCUS AIR QUALITY MONITORING

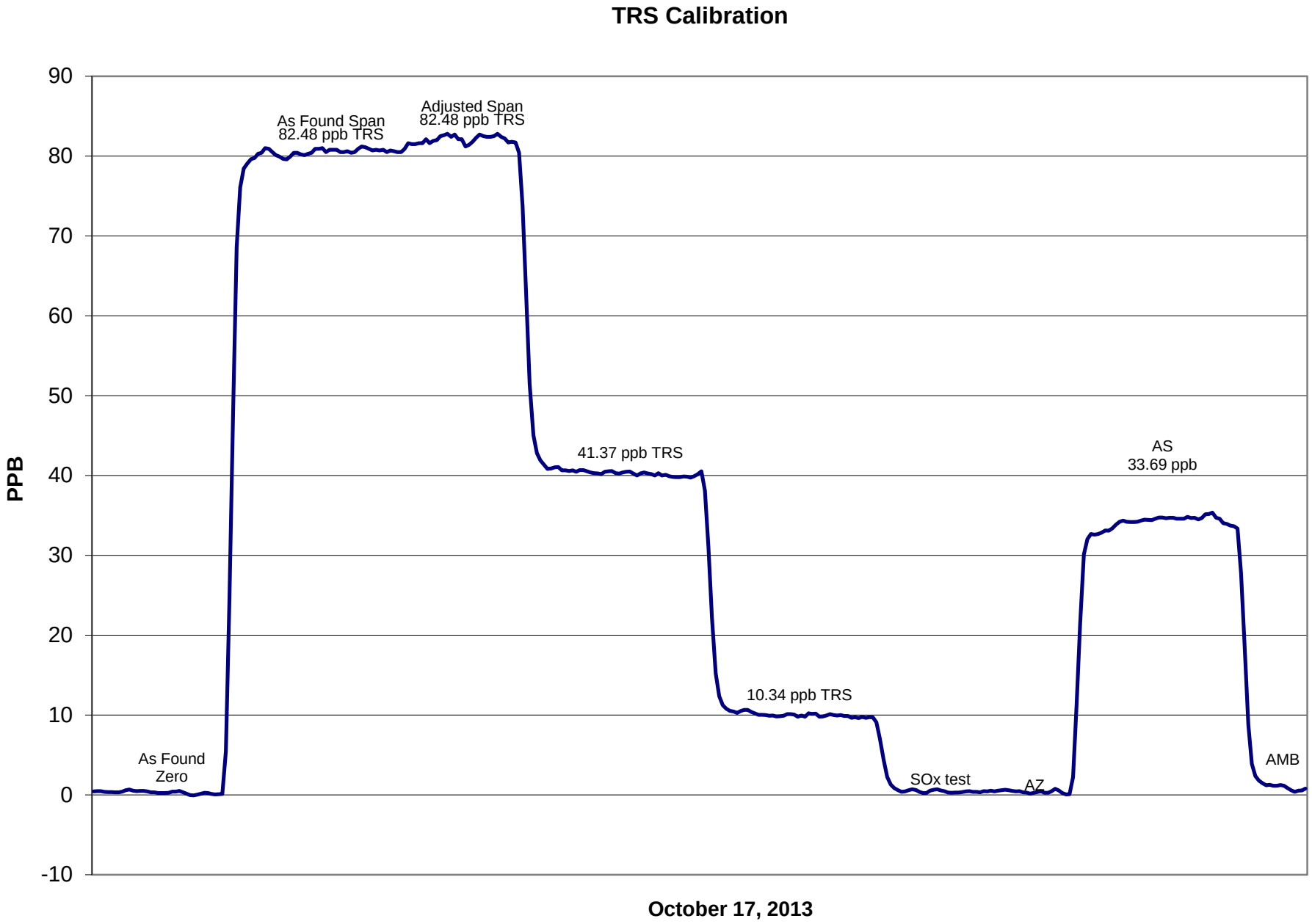
Station Information

Calibration Date	October 17, 2013	Previous Calibration	Sept 10 2013
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:21 PM	End Time (MST)	16:10
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	0.250	N/A		
82.478	82.177	1.0037	Correlation Coefficient	0.999768
41.372	40.167	1.0300		
10.338	9.958	1.0382	Slope	1.005561
			Intercept	0.224980




TRS Calibration
PPB
90
80
70
60
50
40
30
20
10
0
-10
As Found Span
82.48 ppb TRS
Adjusted Span
82.48 ppb TRS
41.37 ppb TRS
10.34 ppb TRS
SOx test
AZ
AS
33.69 ppb
AMB
As Found
Zero
October 17, 2013

Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 28 2013	Previous Calibration	September 27 2013
Station Number	2	Station Location	Evergreen Park

Reason: Routine | Install | Removal | Other:

Start Time (MST)	10:01	End Time (MST)	12:49
Barometric Pressure	0.931 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	25/02/2025
Correction factor	0.031647	Cal Gas Cylinder #	LL105159
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.995723	Calculated slope	0.999173
Calculated intercept	2.653052	Calculated intercept	1.901352

Analyzer make	Teco 43i	Analyzer serial # 701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.2		11.2	
coefficient	1.203		1.203	
Lamp Voltage	826	volts	826	volts
Chamber Temp	45.2	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	678	mm Hg	678.8	mm Hg
Sample Flow	0.458	ccm	0.458	ccm
Lamp Intensity	90	%	90	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.3	N/A
4995	39.93	408.4	408.0	1.0011
4995	19.97	205.1	202.1	1.0145
4995	9.97	102.6	98.7	1.0398
4995	0.0	0.0	0.3	As Found Zero
4995	39.93	408.4	408.0	As Found Span
			Average Correction Factor	1.0185

Calculated value of As Found Response: 408.570 ppm Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.2	ppm	0.4	ppm
Auto span	277.4	ppm	279.2	ppm

Notes: No span adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

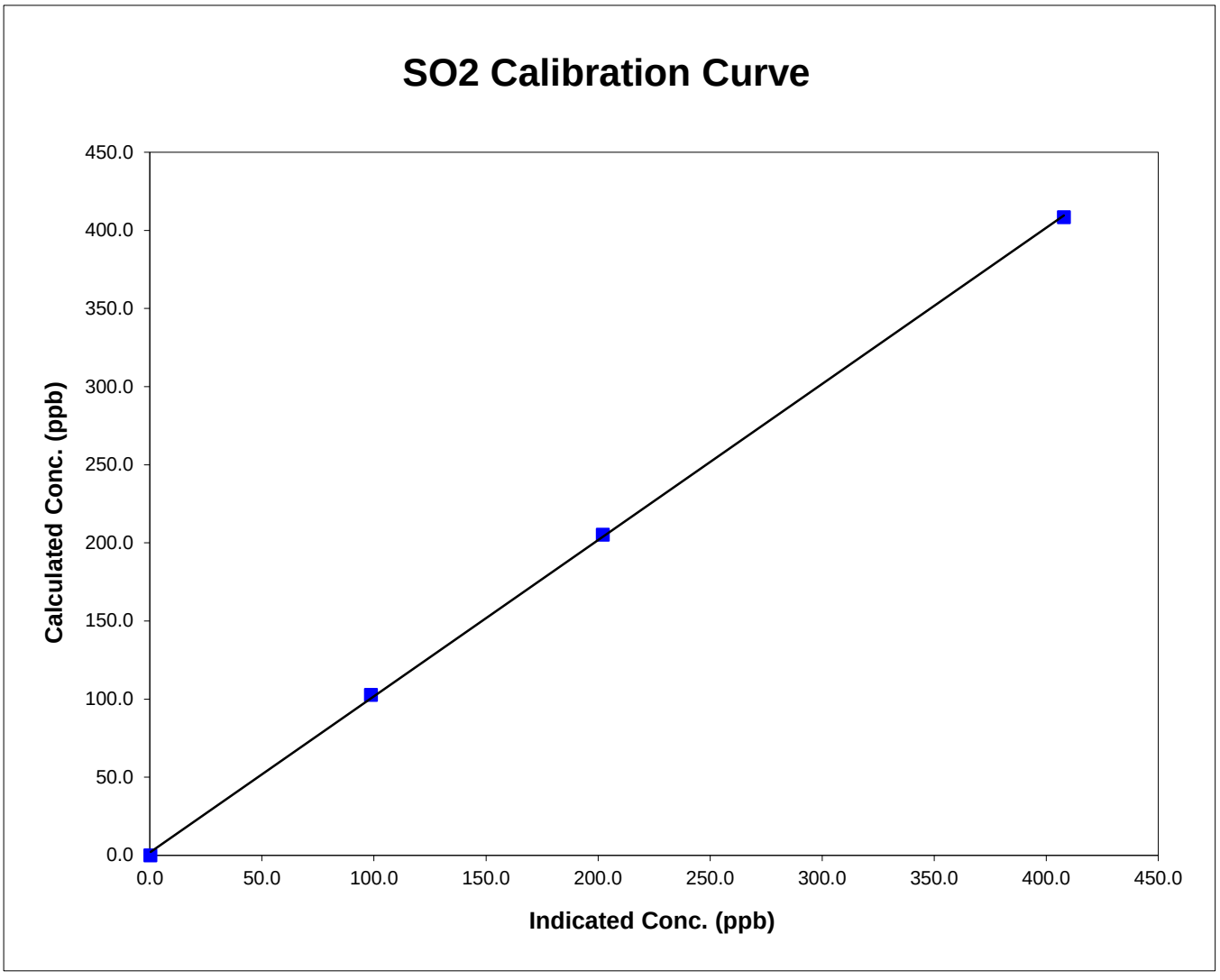
FOCUS AIR QUALITY MONITORING

Station Information

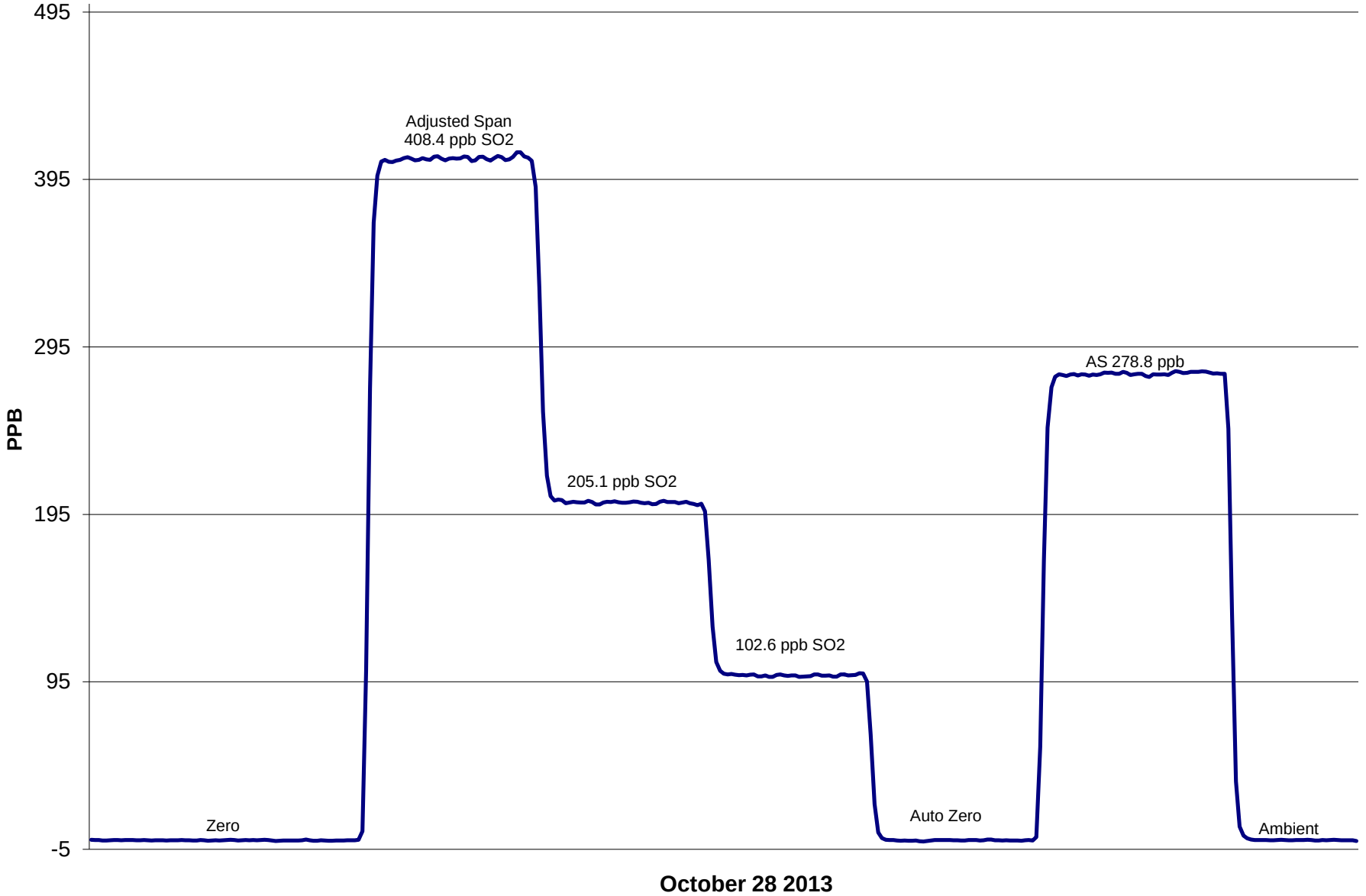
Calibration Date	October 28 2013	Previous Calibration	September 27 2013
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:01	End Time (MST)	12:49
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
408.4	408.0	1.0011	Correlation Coefficient	0.999869
205.1	202.1	1.0145		
102.6	98.7	1.0398	Slope	0.999173
			Intercept	1.901352



SO2 Calibration



Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 28 2013	Previous Calibration	September 27 2013
Station Number	2	Station Location	Evergreen Park

Reason: Routine | Install | Removal | Other:

Start Time (MST)	8:05	End Time (MST)	11:11
Barometric Pressure	0.938 ATM	Station Temperature	22.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Conc	10.4 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.031669	Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	1.004648	Calculated slope	1.011108
Calculated intercept	0.711285	Calculated intercept	0.128339

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	35.8	ppb	35.8	ppb
coefficient	1.014		1.014	
Lamp Voltage	1022	volts	1022	volts
Chamber Temp	44.2	Deg C	44.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	648.1	mm Hg	648.7	mm Hg
Sample Flow	0.632	ccm	0.632	ccm
Lamp Intensity	31,703	mv	31,508	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.1	N/A
4995	39.93	82.48	81.5	1.0115
4995	19.97	41.41	40.7	1.0184
8995	8.97	10.36	10.0	1.0373
4995	9.97	102.79	0.4	Sox Test
4995	0.00	0.00	0.1	As Found Zero
4995	39.93	82.48	81.5	As Found Span
			Average Correction Factor	1.0224

Calculated value of As Found Response: 82.56 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.4	ppm	0.3	ppm
Auto span	76.8	ppm	73.8	ppm

Notes: **No adjust 80% point.**

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

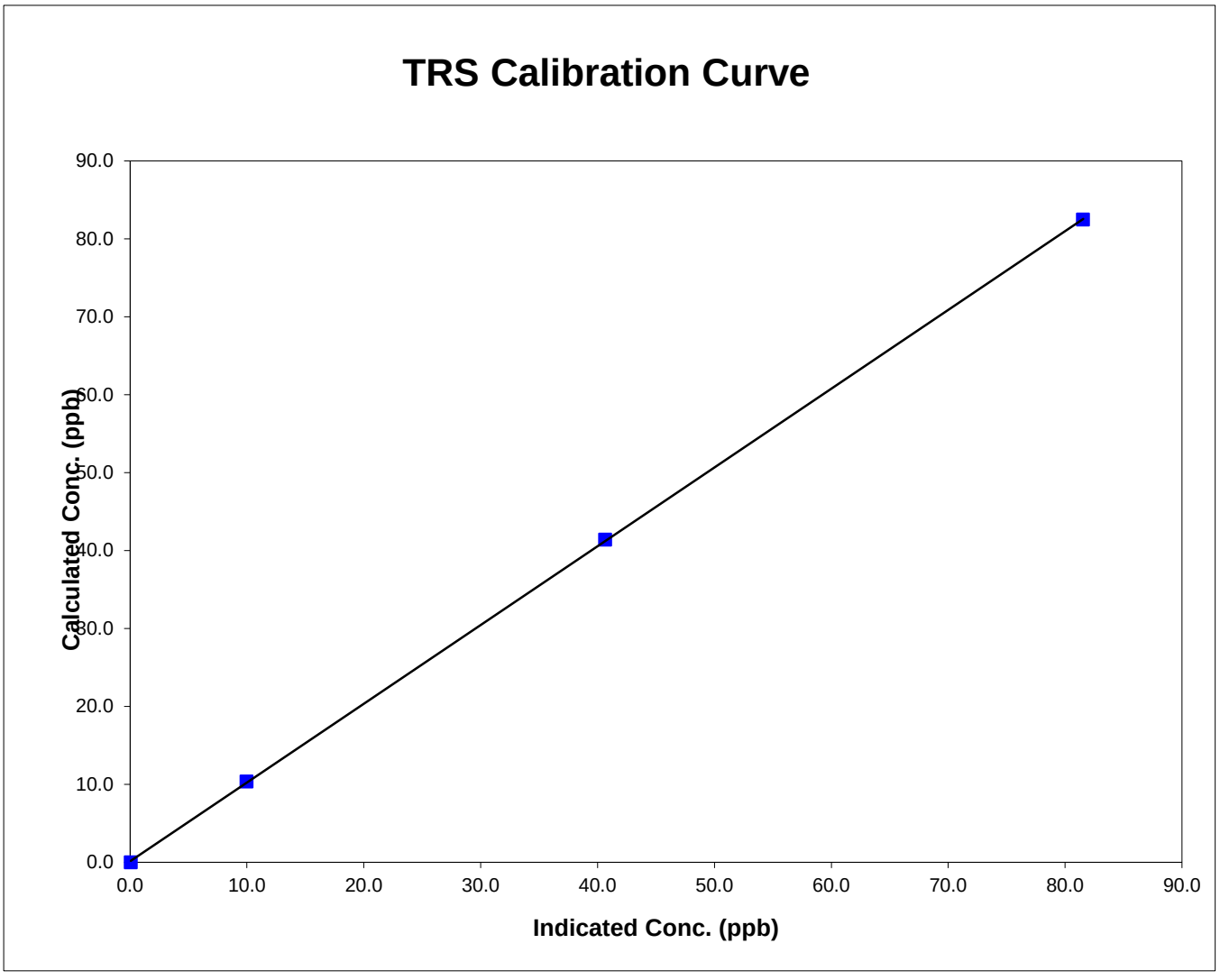
FOCUS AIR QUALITY MONITORING

Station Information

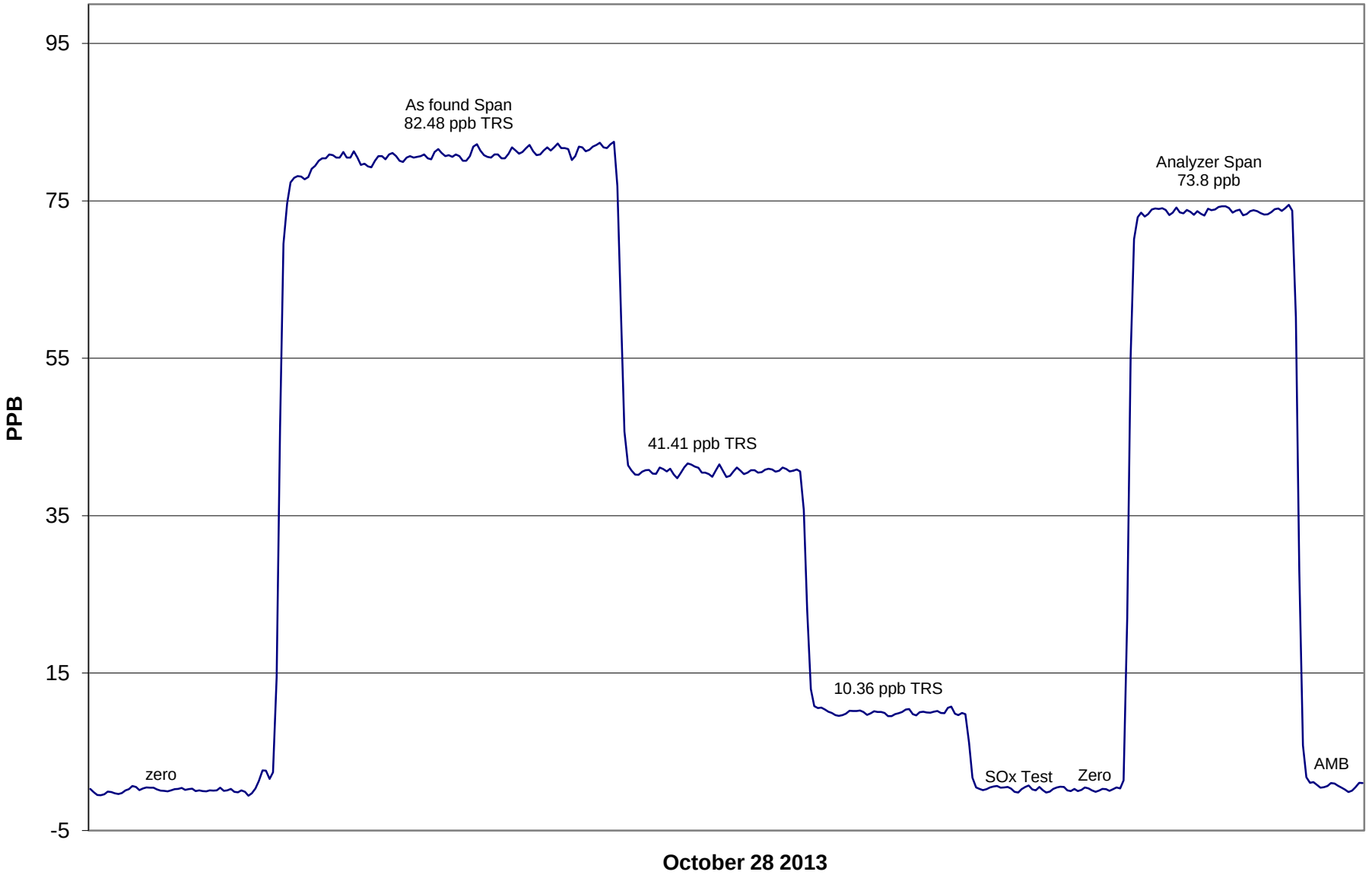
Calibration Date	October 28 2013	Previous Calibration	September 27 2013
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	8:05	End Time (MST)	11:11
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
82.5	81.5	1.0115	Correlation Coefficient	0.999977
41.4	40.7	1.0184		
10.4	10.0	1.0373	Slope	1.011108
			Intercept	0.128339



TRS Calibration



Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 25, 2013	Previous Calibration	September 30, 2013
Station Number	3	Station Location	Smokey Heights
Reason: Routine	Install	Removal	Other:
Start Time (MST)	10:56	End Time (MST)	13:44
Barometric Pressure	0.934 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentration	51.5 ppm	Cal Gas Cert Date	20/01/2016
Correction factor	0.031749	Cal Gas Cylinder #	LL1105159
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.995690	Calculated slope	0.999611
Calculated intercept	3.010477	Calculated intercept	1.337279
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.2		11.2	
coefficient	0.952		0.952	
Lamp Voltage	925	volts	925	volts
Chamber Temp	44.9	Deg C	44.9	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	671.7	mm Hg	669.6	mm Hg
Sample Flow	0.449	ccm	0.448	ccm
Lamp Intensity	88	%	88	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.3	N/A
4995	39.93	408.43	408.0	1.0011
4995	19.97	205.08	203.2	1.0094
4995	9.97	102.59	99.6	1.0303
4995	0.0	0.00	0.3	As Found Zero
4995	39.93	408.43	408.0	As Found Span
			Average Correction Factor	1.0136

Calculated value of As Found Response: 408.952 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.3	ppb
Auto span	253.7	ppb	251.5	ppb

Notes: No span adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

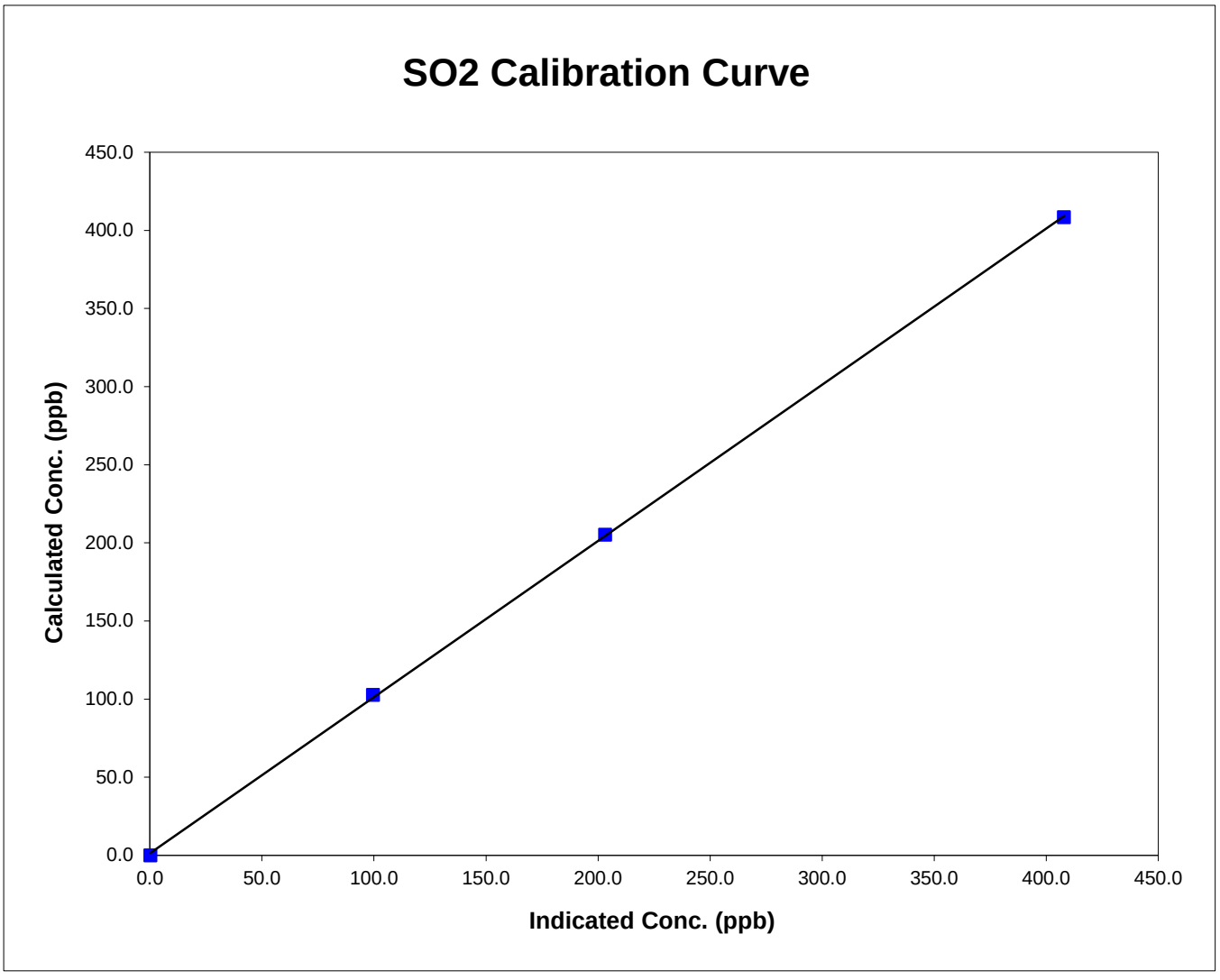
FOCUS AIR QUALITY MONITORING

Station Information

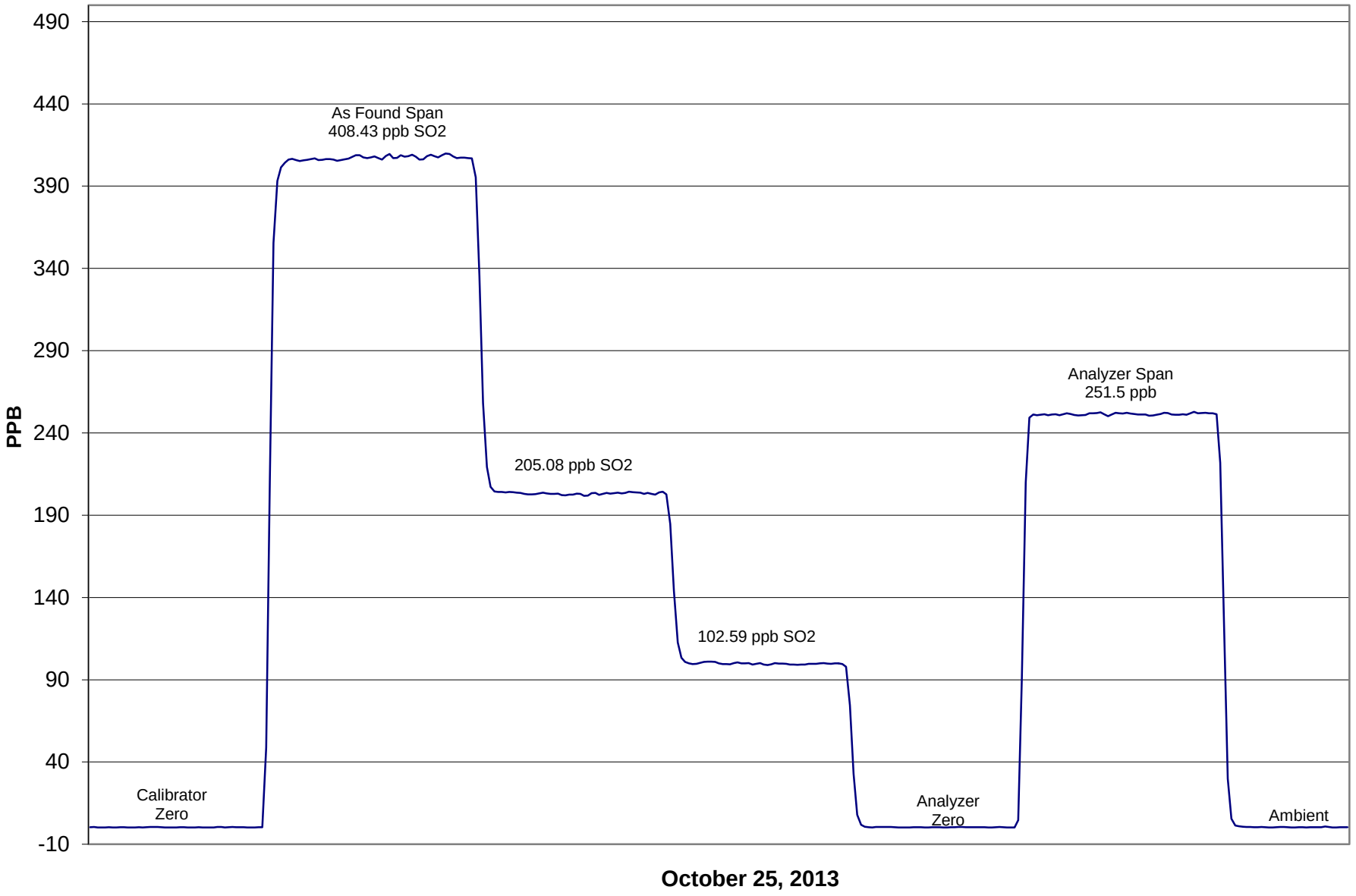
Calibration Date	October 25, 2013	Previous Calibration	September 30, 2013
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:56	End Time (MST)	13:44
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
408.4	408.0	1.0011	Correlation Coefficient	0.999928
205.1	203.2	1.0094		
102.6	99.6	1.0303	Slope	0.999611
			Intercept	1.337279



Smokey Heights SO_2 Calibration



Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 25, 2013	Previous Calibration	September 30, 2013
Station Number	3	Station Location	Smokey Heights

Reason: Routine | Install | Removal | Other:

Start Time (MST)	9:04	End Time (MST)	11:53
Barometric Pressure	0.934 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Conc	10.4 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.031749	Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.995469	Calculated slope	0.996652
Calculated intercept	0.164316	Calculated intercept	0.509498

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	16.6	ppb	17.4	ppb
coefficient	0.956		0.956	
Lamp Voltage	824	volts	824	volts
Chamber Temp	43.7	Deg C	43.7	Deg C
Perm Gas Temp	44.99	Deg C	44.99	Deg C
Pressure	609.9	mm Hg	596.5	mm Hg
Sample Flow	0.645	ccm	0.641	ccm
Lamp Intensity	35,207	mv	35,222	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	0.0	N/A
4995	39.93	82.48	82.5	0.9998
4995	19.97	41.41	40.6	1.0200
8995	8.97	10.36	9.6	1.0817
4995	0.0	0.00	0.0	As Found Zero
4995	39.93	82.48	82.5	As Found Span
			Average Correction Factor	1.0338

Calculated value of As Found Response: 82.30 ppm Percent Change of As Found: 0.2%

	before calibration		after calibration	
Auto zero	1.2	ppm	0.6	ppm
Auto span	31.0	ppm	32.6	ppm

Notes: No adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

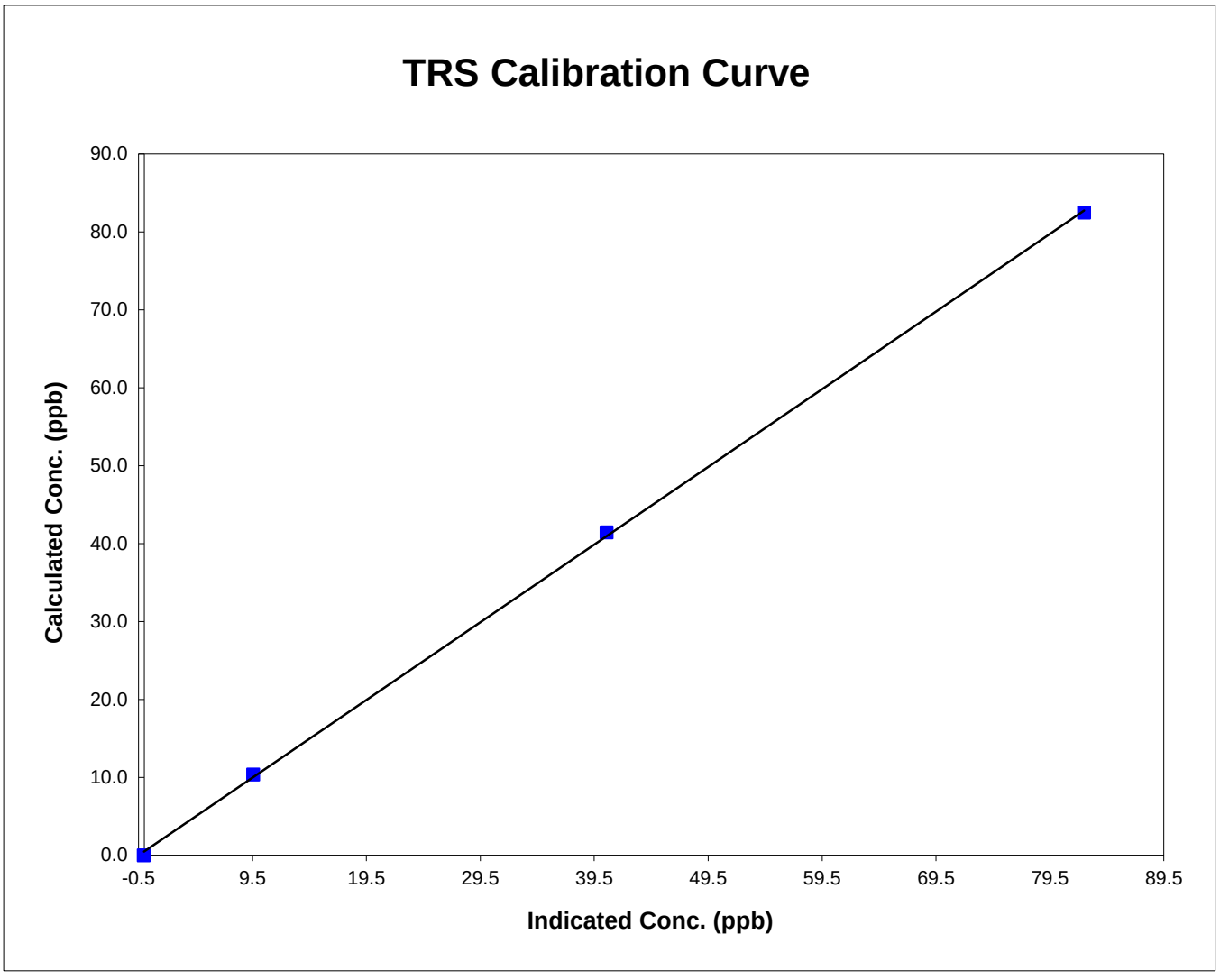
FOCUS AIR QUALITY MONITORING

Station Information

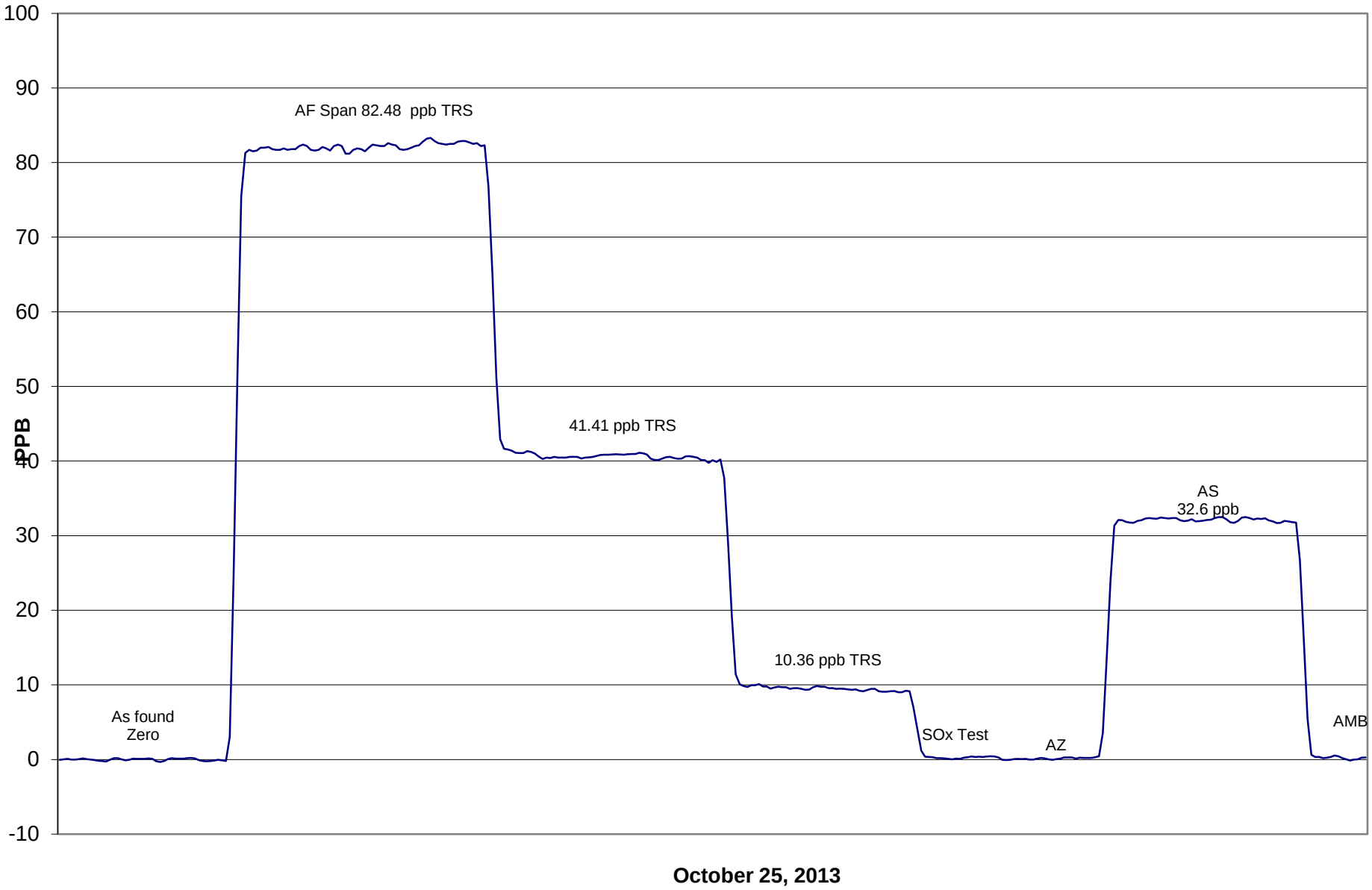
Calibration Date	October 25, 2013	Previous Calibration	September 30, 2013
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	9:04	End Time (MST)	11:53
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
82.5	82.5	0.9998	Correlation Coefficient	0.999857
41.4	40.6	1.0200		
10.4	9.6	1.0817	Slope	0.996652
			Intercept	0.509498



Smokey Heights TRS Calibration



October 25, 2013

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 23, 2013	Previous Calibration	September 26, 2013
Station Number	4	Station Location	Beaverlodge

Reason: [Routine] [Install] [Removal] [Other:]

Start Time (MST)	13:53	End Time (MST)	16:29
Barometric Pressure	0.915 atm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
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	1.010618	Calculated slope	1.000817
Calculated intercept	-0.124946	Calculated intercept	-0.388219

Analyzer make	TEI Model 43i-TLE	Analyzer serial # 713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.35		2.35	
Coefficient	1.042		1.042	
PMT	-768.5	V	-768.5	V
UV Lamp Voltage	1058	V	1058	V
Chamber Temp	45	Deg C	45	Deg C
Pressure	668.2	mm Hg	672.5	mm Hg
Sample Flow	0.485	LPM	0.489	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	85.9	0.9970
4995	19.97	43.0	43.5	0.9897
4995	9.97	21.5	21.9	0.9815
4995	0.00	0.0	0.3	As found zero
4995	39.93	85.7	85.9	As found span
			Average Correction Factor	0.9894

Calculated value of As Found Response: 86.381 ppm Percent Change of As Found: -0.9%

	before calibration		after calibration	
Auto zero	0.2	ppb	-0.1	ppb
Auto span	59.9	ppb	58.6	ppb

Notes: No adjustments made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

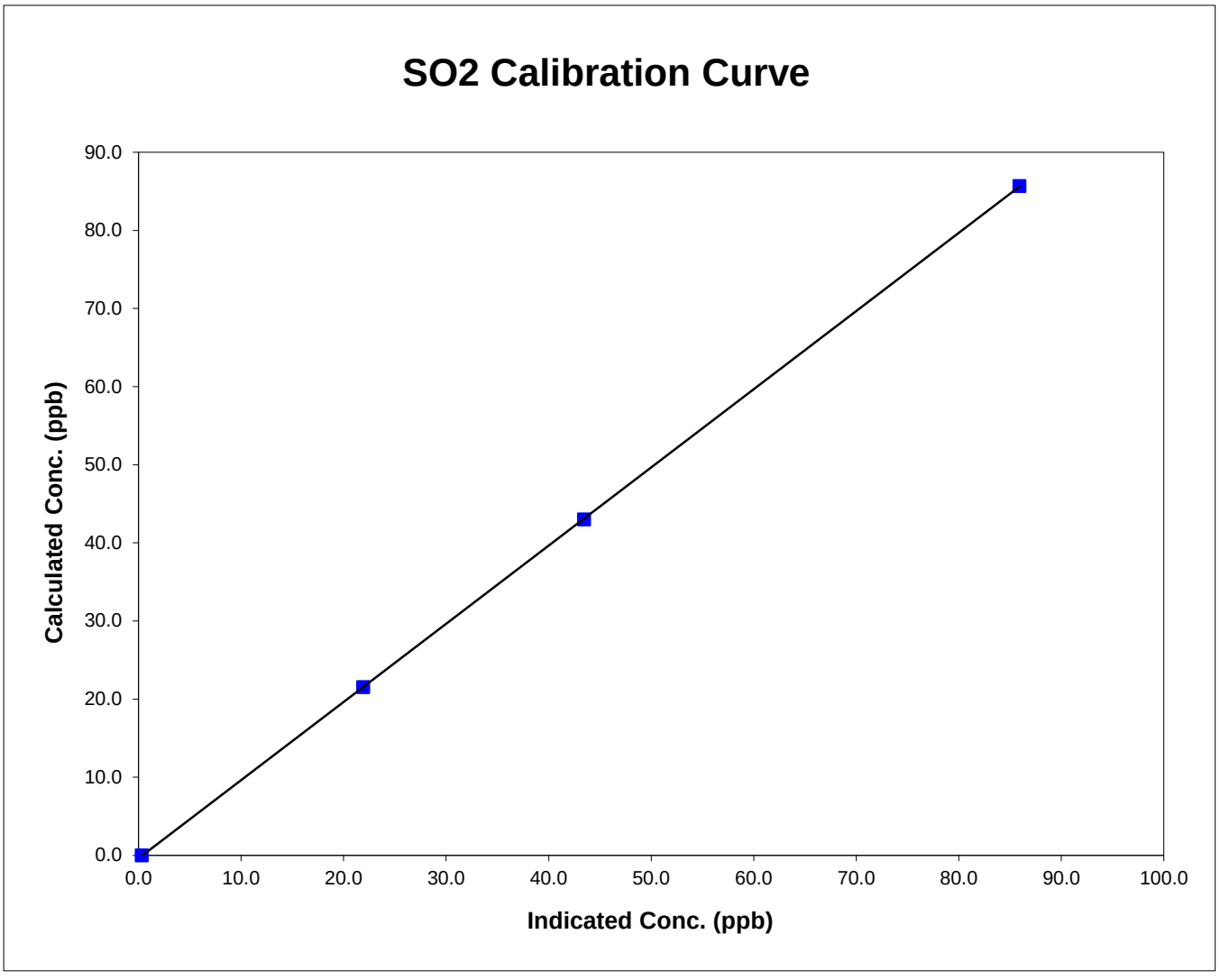
FOCUS AIR QUALITY MONITORING

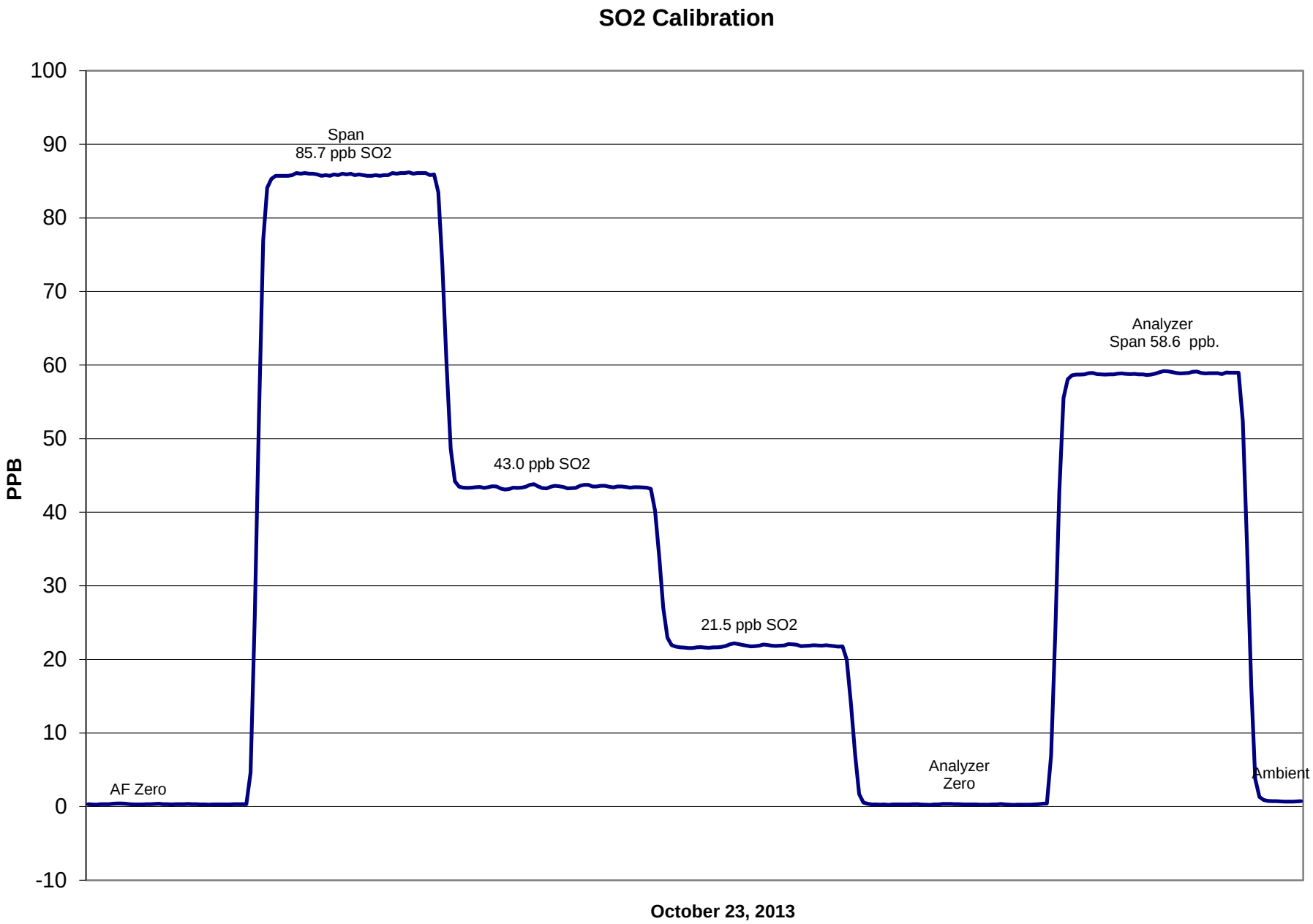
Station Information

Calibration Date	October 23, 2013	Previous Calibration	September 26, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:53	End Time (MST)	16:29
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		
85.7	85.9	0.9970	Correlation Coefficient	0.999995
43.0	43.5	0.9897		
21.5	21.9	0.9815	Slope	1.000817
			Intercept	-0.388219




SO2 Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
Span
85.7 ppb SO2
43.0 ppb SO2
21.5 ppb SO2
Analyzer
Span 58.6 ppb.
AF Zero
Analyzer
Zero
Ambient
October 23, 2013

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 23, 2013	Previous Calibration	September 23, 2013
Station Number	4	Station Location	Beaverlodge

Reason: Routine | Installation | Removal | Other:

Start Time (MST)	7:59		End Time (MST)	14:18	
Barometric Pressure	0.918	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3016	
NO Cal Gas Conc	51.3	ppm	Cal Gas Expiry Date	February 25, 2021	
NOx Cal Gas Conc	51.4	ppm	Cal Gas Serial #	LL105159	

DACS Information

DACS make: CR3000 DACS serial No.: 5237

Parameter		NO2	NOx	NO
Before	Data Slope	0.999477	0.998349	0.997372
	Data Offset	-0.000429	1.452256	1.721009
After	Data Slope	1.000351	0.996495	0.995954
	Data Offset	-0.091886	0.906868	1.065539
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	2.4	mV	2.3	mV
NOx bkgnd	2.7	mV	2.8	mV
NO coefficient	1.161		1.198	
NOx coefficient	0.999		0.999	
NO2 conv temp	326.8	Deg C	326.8	Deg C
PMT Temp	-2.9	Deg C	-2.9	Deg C
PMT Volt	-709.7	mV	-709.7	mV
R Cell Press	184.9	in Hg	184.9	in Hg
Sample Flow	0.715	LPM	0.714	LPM

Notes: Slight span adjust up 80% point.
Adjusted calibrator O3 output on first GPT point after running lamp over night. Calibrator was trouble shot yesterday following problems noted during HP Nox GPT cal attempt. Will re calibrate HP Nox & O3 analyzers tomorrow proving that repairs/adjustment to calibrator O3 supply have held.

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: October 23, 2013 Station Location: Beaverlodge

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.1	-0.1	0.1	N/A	N/A
1	4995	39.93	407.6	406.8	0.8	408.5	407.9	-0.1	0.9978	0.9974
2	4995	19.97	204.7	204.3	0.4	204.3	203.6	-0.1	1.0016	1.0033
3	4995	9.97	102.4	102.2	0.2	100.6	100.5	-0.1	1.0178	1.0167
AFZ	4995	0.00	0.0	0.0	0.0	0.1	-0.1	0.1	0.0000	0.0000
AFS	4995	39.93	407.6	406.8	0.8	395.4	394.9	-0.2	1.0311	1.0302
							Average Correction Factor		1.0057	1.0058

As Found Concentrations: NO_X= 396.7 NO= 396.7 As Found Percent Change NO_X= -2.7% 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	-0.1	-0.1	0.0	0.1	-0.1	0.1	N/A	N/A	N/A	N/A
NO point	408.2	408.2	0.0	408.4	408.2	-0.6	0.9995	1.0000	N/A	N/A
300	408.2	103.4	304.8	408.7	103.4	304.8	0.9986	1.0000	1.0001	100.0%
200	408.2	203.5	204.7	409.0	203.5	204.7	0.9980	1.0000	1.0000	100.0%
100	408.2	304.7	103.5	408.8	304.7	103.6	0.9985	1.0000	0.9988	100.1%
					Average Correction Factor		0.9984	1.0000	0.9996	100.0%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	-0.1	-0.1	ppb	0.0	-0.1	0.0	ppb
Auto span	168.3	166.9	1.1	ppb	193.0	191.2	1.3	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

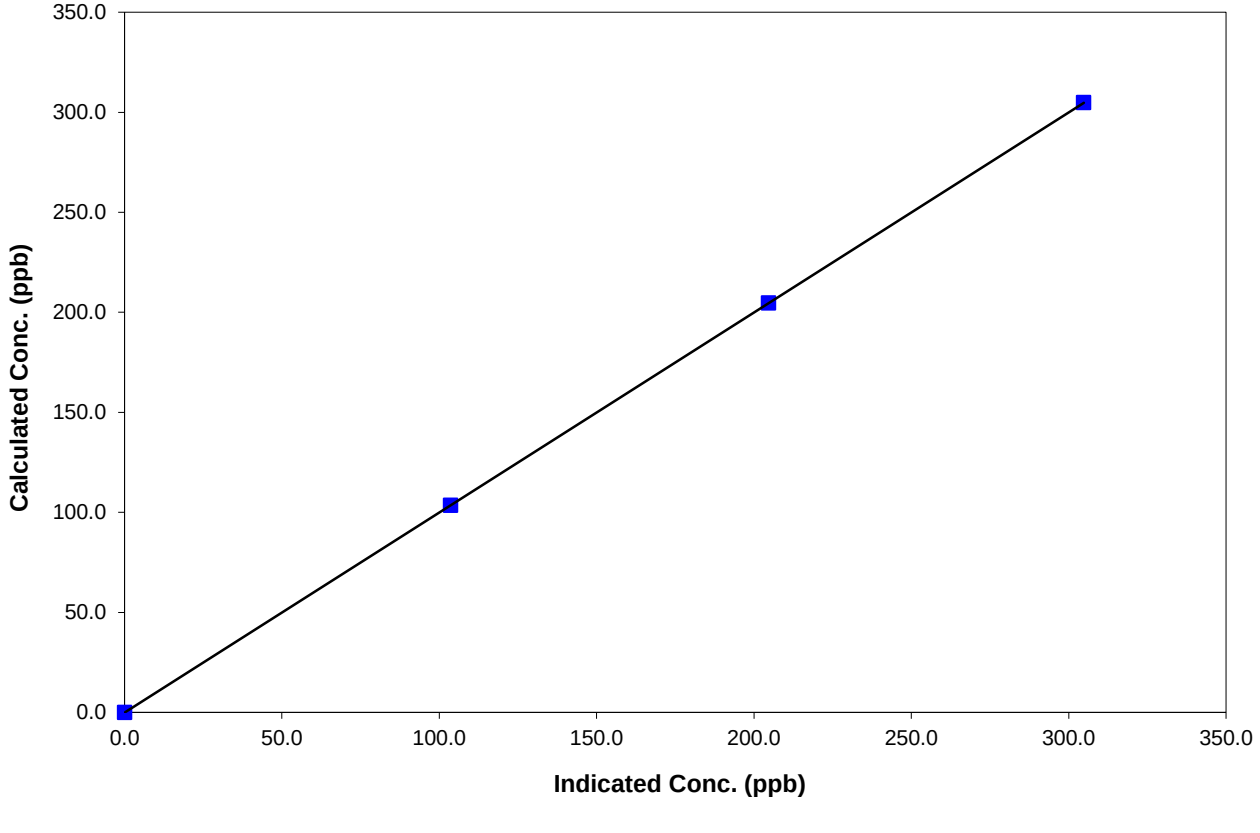
Station Information

Calibration Date	October 23, 2013	Previous Calibration	September 23, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	7:59	End Time (MST)	14:18
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		
304.8	304.8	1.0001	Correlation Coefficient	1.000000
204.7	204.7	1.0000		
103.5	103.6	0.9988	Slope	1.000351
			Intercept	-0.091886

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

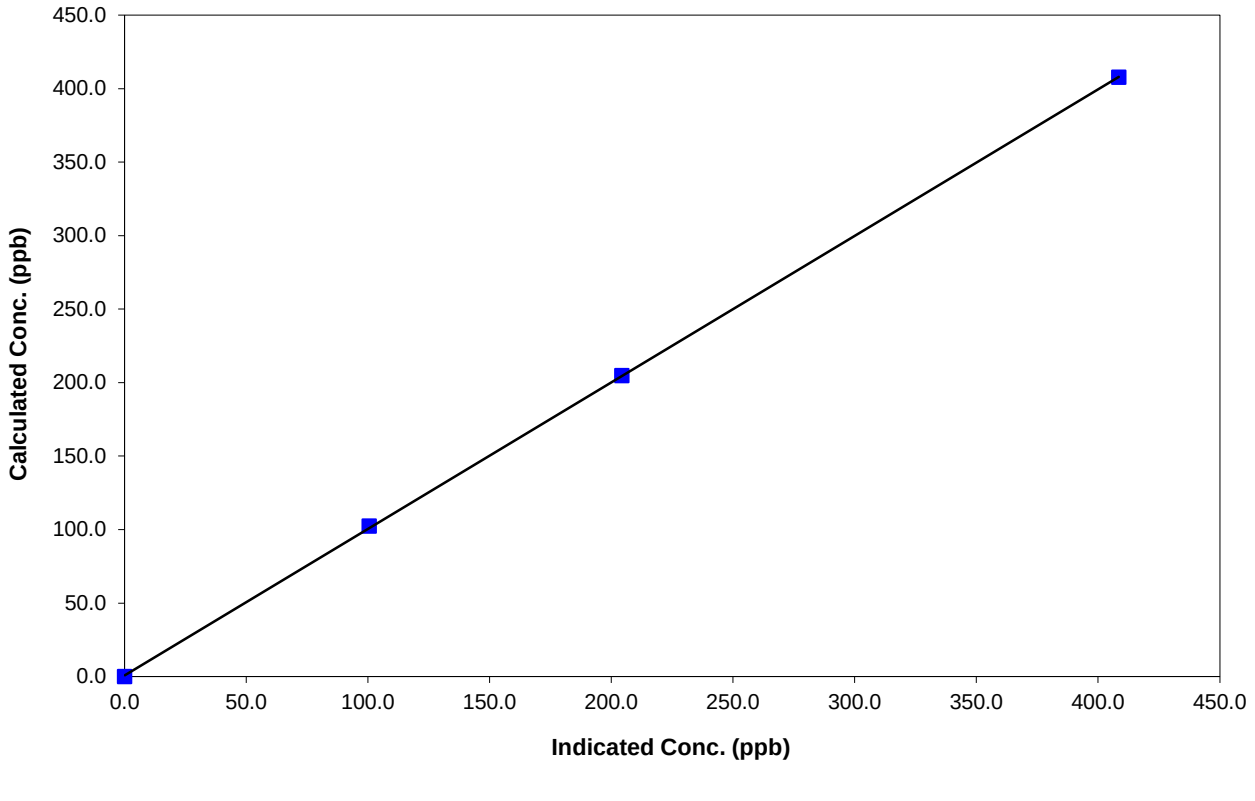
Station Information

Calibration Date	October 23, 2013	Previous Calibration	September 23, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	7:59	End Time (MST)	14:18
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		
407.6	408.5	0.9978	Correlation Coefficient	0.999970
204.7	204.3	1.0016		
102.4	100.6	1.0178	Slope	0.996495
			Intercept	0.906868

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

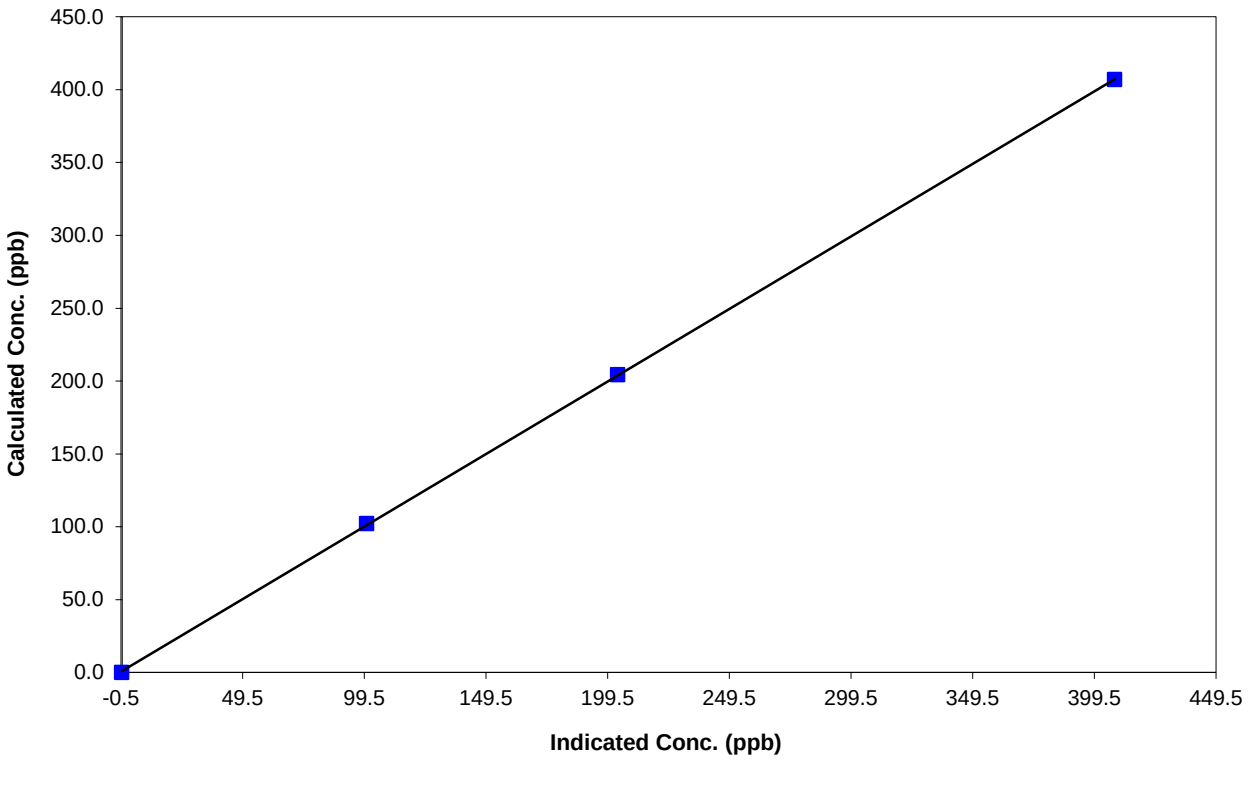
Station Information

Calibration Date	October 23, 2013	Previous Calibration	September 23, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	7:59	End Time (MST)	14:18
Analyzer make	TEI 42i	Analyzer serial #	906535068

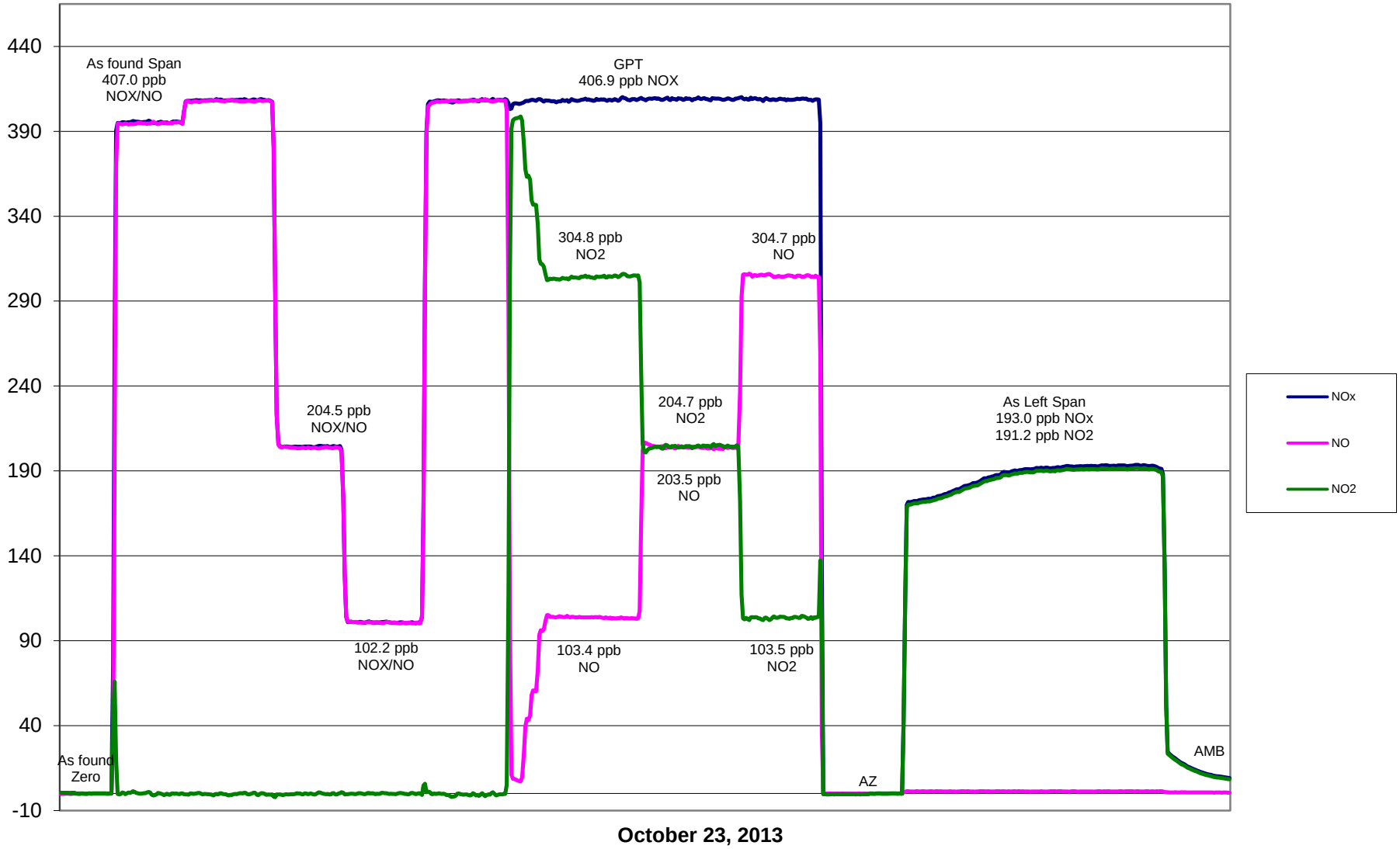
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
406.8	407.9	0.9974	Correlation Coefficient	0.999973
204.3	203.6	1.0033		
102.2	100.5	1.0167	Slope	0.995954
			Intercept	1.065539

NO Calibration Curve



PAZA Beaverlodge NO_X Calibration



October 23, 2013

Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 23, 2013	Previous Calibration	September 23, 2013
Station Number	4	Station Location	Beaverlodge
Reason:	Routine: Install	Removal	Other:
Start Time (MST)	12:00	End Time (MST)	14:53
Barometric Pressure	0.915 atm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
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	0.999866	Calculated slope	1.008342
Calculated intercept	0.247294	Calculated intercept	-0.493365
Analyzer make	Teco 49i	Analyzer serial #	1136451236

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.30	ppb	-1.20	ppb
slope	1.012		1.012	
Lamp temp	53.7	mV	53.7	mV
Lamp Intensity A/B	70850/75834	mV	70519/75005	mV
Pressure	689.3	mm Hg	672.4	mm Hg
Flow A	0.766	LPM	0.753	LPM
Flow B	0.753	LPM	0.738	LPM

Calibration Data

Dilution air flow rate (cc/min)	Calibrator Setting	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5035	0.00	0.0	0.4	N/A
5035	0.30	304.8	302.9	1.0062
5035	0.20	204.7	203.1	1.0080
5035	0.10	103.5	103.5	1.0002
5035	0.00	0.0	0.4	As found zero
5035	0.30	304.8	302.9	As found span
			Average Correction Factor	1.0048

Calculated value of As Found Response: 302.7 ppm Percent Change of As Found: -0.7%

	before calibration		after calibration	
Auto zero	1.0	ppb	0.3	ppb
Auto span	268.4	ppb	263.2	ppb

Notes: No adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **O3**

Air Monitoring Network **PAZA**

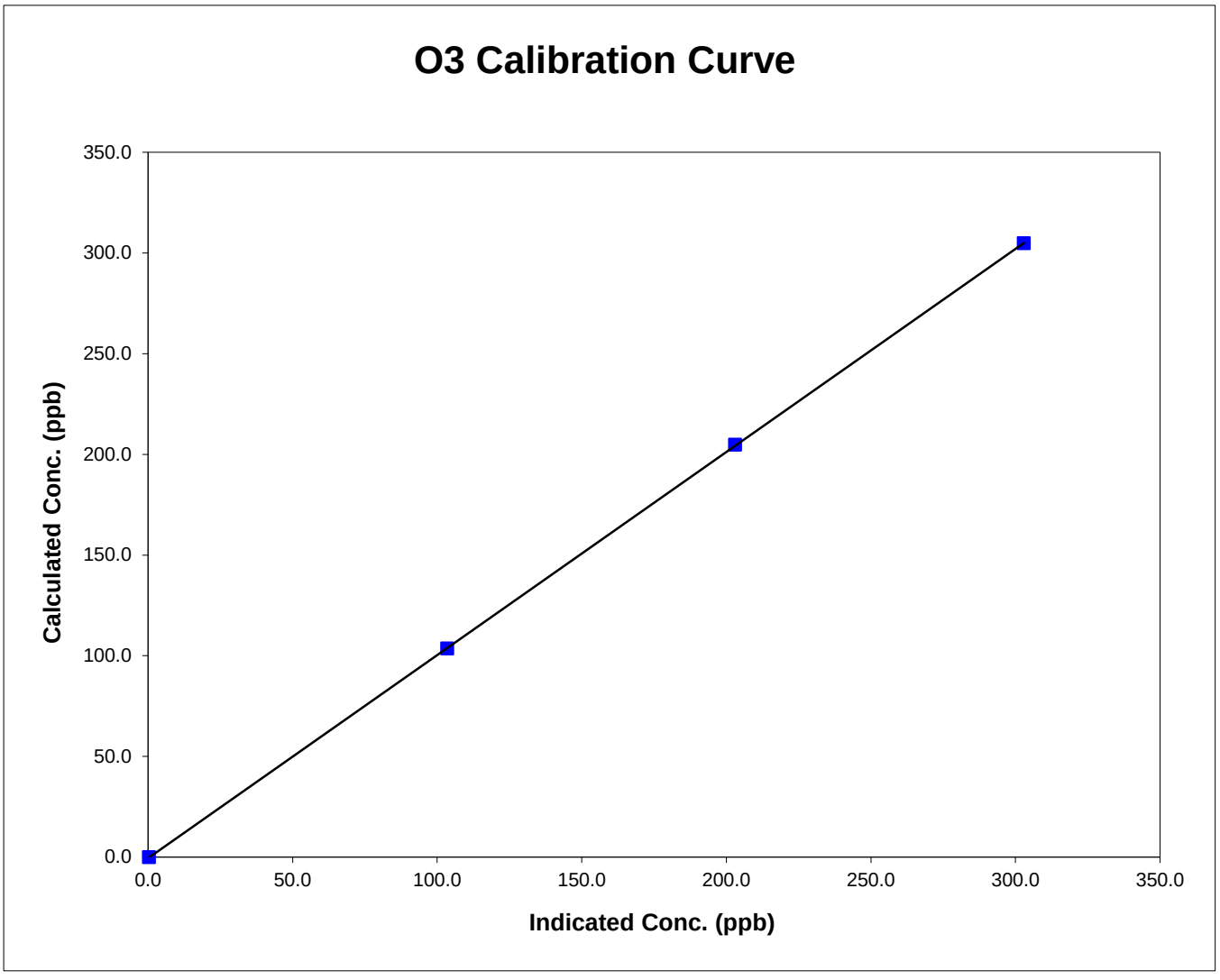
FOCUS AIR QUALITY MONITORING

Station Information

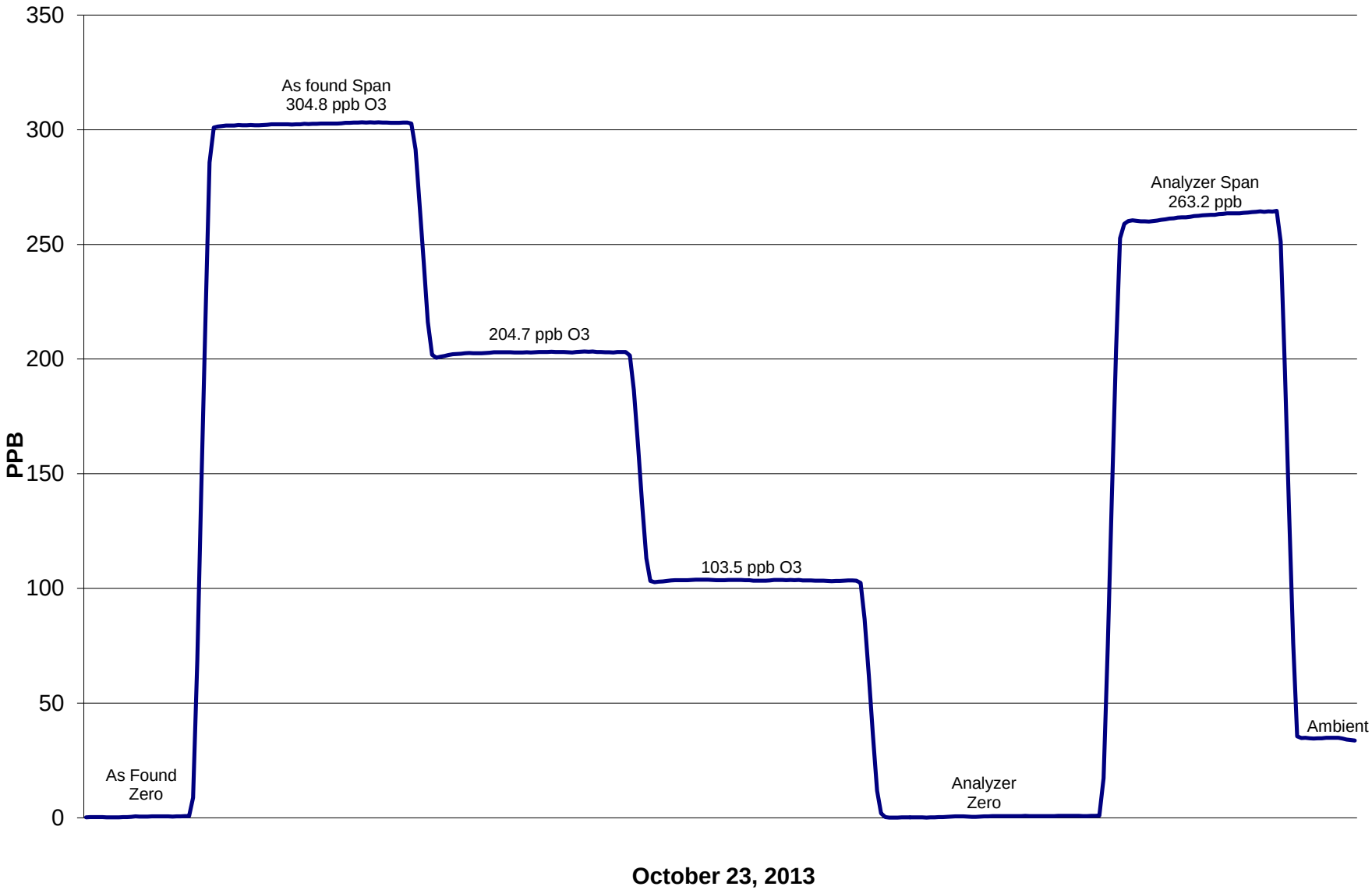
Calibration Date	October 23, 2013	Previous Calibration	September 23, 2013
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:00	End Time (MST)	14:53
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	NA		
304.8	302.9	1.0062	Correlation Coefficient	0.999993
204.7	203.1	1.0080		
103.5	103.5	1.0002	Slope	1.008342
			Intercept	-0.493365



O3 Calibration



October 23, 2013

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 30 2013	Previous Calibration	September 12 2013
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	8:05	End Time (MST)	10:46
Barometric Pressure	702.00 mmHg	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentration	51.5 ppm	Cal Gas Exp Date	February 25, 2021
Gas Cylinder Num.	LL105159		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.995174	Calculated slope	1.002519
Calculated intercept	1.237089	Calculated intercept	0.868415
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	58.5		58.2	
Coefficient	1.047		1.017	
UV Lamp Voltage	828	LPM	830	LPM
Chamber Temp	44.4	V	44.4	V
Perm Gas Temp	na	C	na	C
Pressure	596.1	in Hg	598.6	in Hg
Sample Flow	0.551	LPM	0.548	LPM
Lamp Intensity	41972	Hz	41980	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	1.2	N/A
4995	39.93	408.4	408.1	1.0008
4995	19.97	205.1	201.0	1.0202
4995	9.97	102.6	100.5	1.0209
4995	0.00	0.0	1.2	As found zero
4995	39.93	408.4	417.8	As found span
			Average Correction Factor	1.0140

Calculated value of As Found Response: 415.8 ppm Percent Change of As Found: -1.8%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	150.2	ppm	159.2	ppm

Notes: Slight span adjust down 80% SO2 point. Run adjustment point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

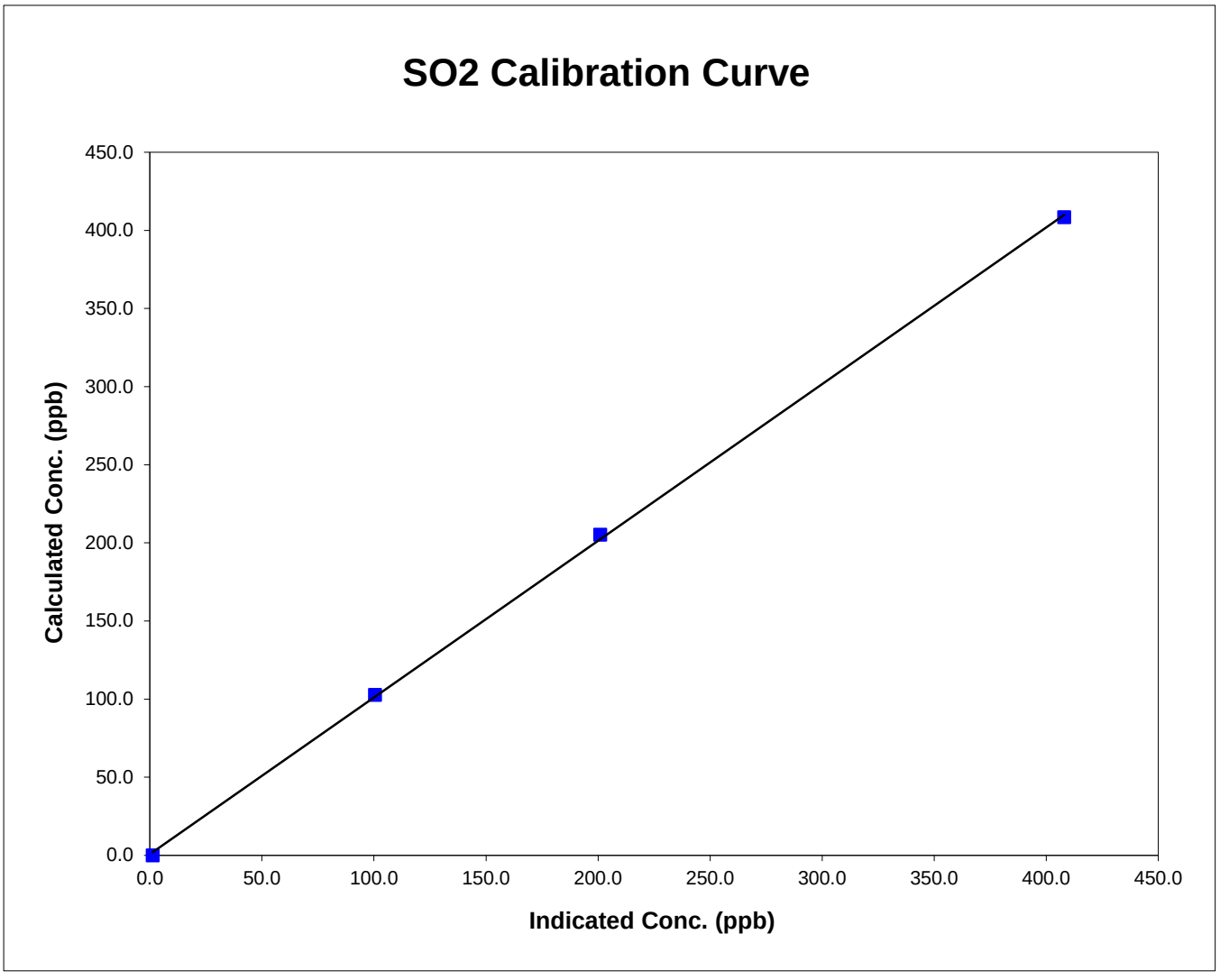
FOCUS AIR QUALITY MONITORING

Station Information

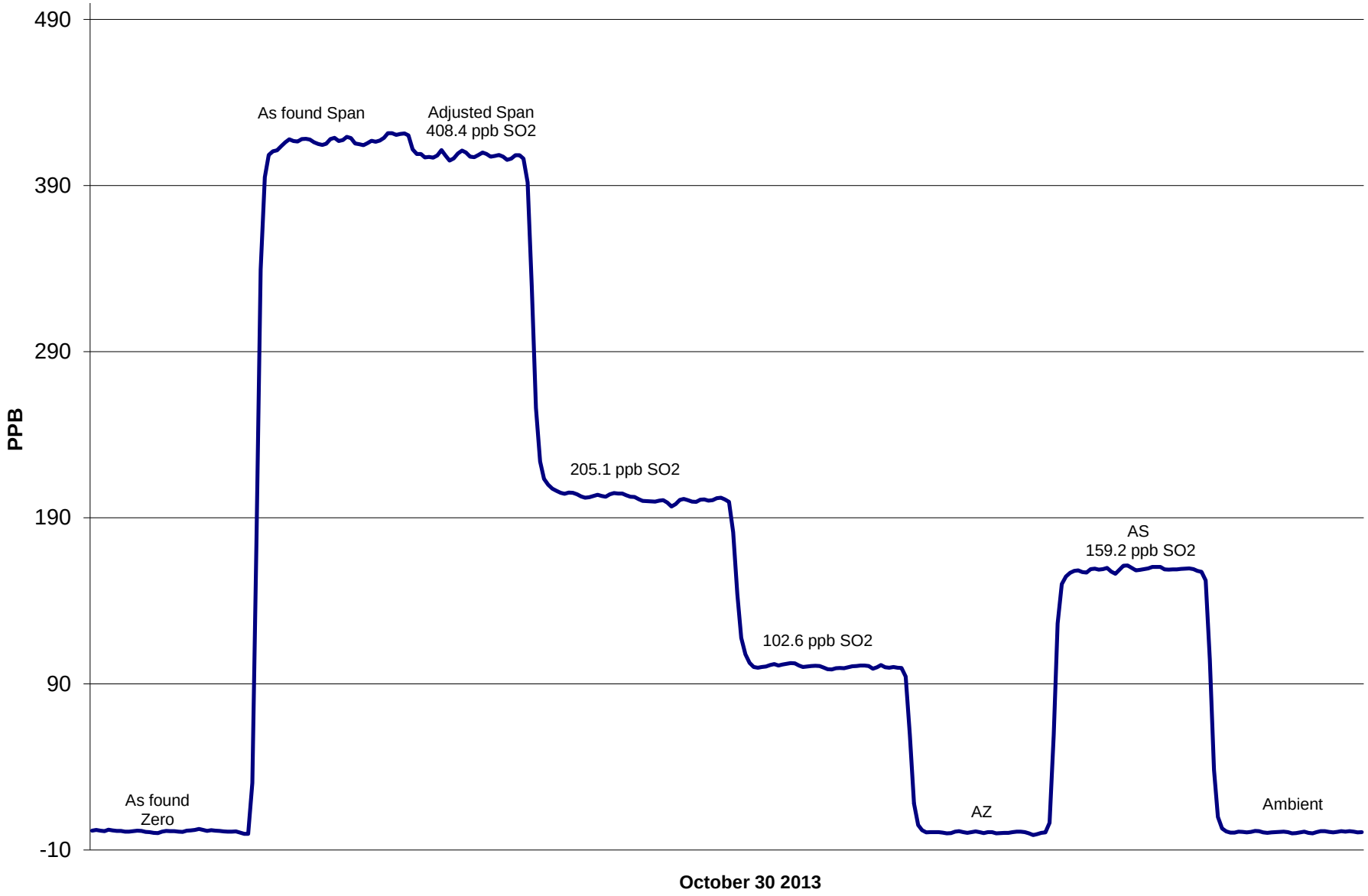
Calibration Date	October 30 2013	Previous Calibration	September 12 2013
Station Number	6	Station Location	Valleyview
Start Time (MST)	8:05	End Time (MST)	10:46
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.2	N/A		
408.4	408.1	1.0008	Correlation Coefficient	0.999834
205.1	201.0	1.0202		
102.6	100.5	1.0209	Slope	1.002519
			Intercept	0.868415



SO2 Calibration



Calibration Report

Parameter **H2S**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 07 2013	Previous Calibration	September 12 2013
Station Number	6	Station Location	Valleyview
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	11:45	End Time (MST)	14:55
Barometric Pressure	702.00 mm	Station Temperature	21.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentration	10.4 ppm	Cal Gas Expiry Date	July 03 2016
Gas Cert Reference	LL110781		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.985388	Calculated slope	0.988841
Calculated intercept	-0.387599	Calculated intercept	0.122380
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	7.8	ppb	7.2	ppb
Coefficient	1.031		0.915	
Lamp Voltage	781	V	781	V
Chamber Temp	44.9	c	44.9	c
Perm Oven Temp	45	c	45	c
Pressure	578.00	mm Hg	580.50	mm Hg
Sample Flow	0.397	ccm	0.397	lpm
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	0.4	N/A
4995	39.93	82.5	83.6	0.9866
4995	19.97	41.4	41.2	1.0059
8995	8.97	10.4	10.1	1.0233
				Sox Test
4995	0.00	0.0	0.7	As found zero
4995	39.93	82.5	93.5	As found span
			Average Correction Factor	1.0053

Calculated value of As Found Response: 91.00 ppm Percent Change of As Found: -10.3%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.3	ppm
Auto span	67.3	ppm	67.0	ppm

Notes: Span adjustment made. Found external pump had been plumbed in incorrectly. Will bring Swagelok T fitting next cal to bypass internal pump correctly. Analyzer was found reading high but linear.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PAZA**

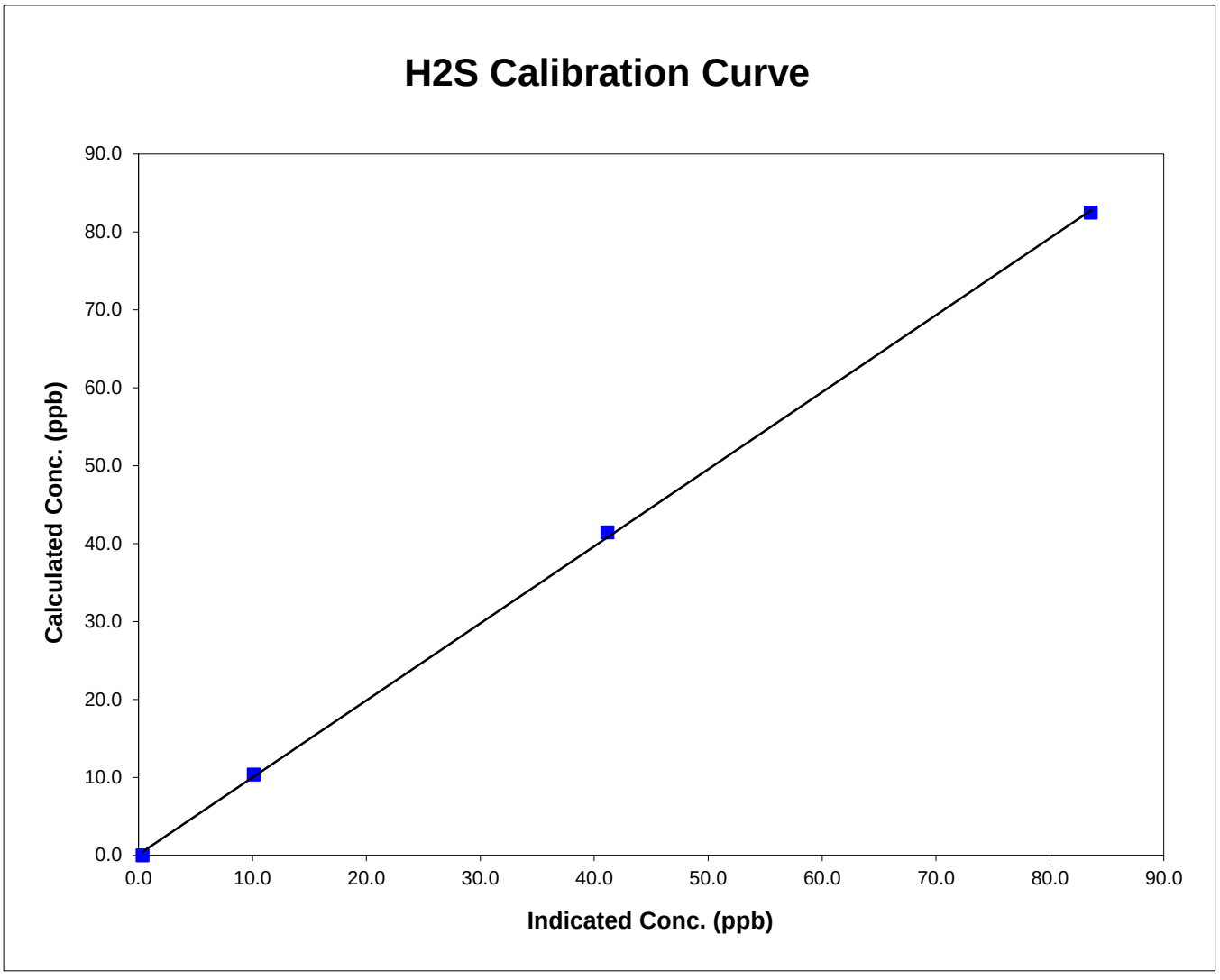
FOCUS AIR QUALITY MONITORING

Station Information

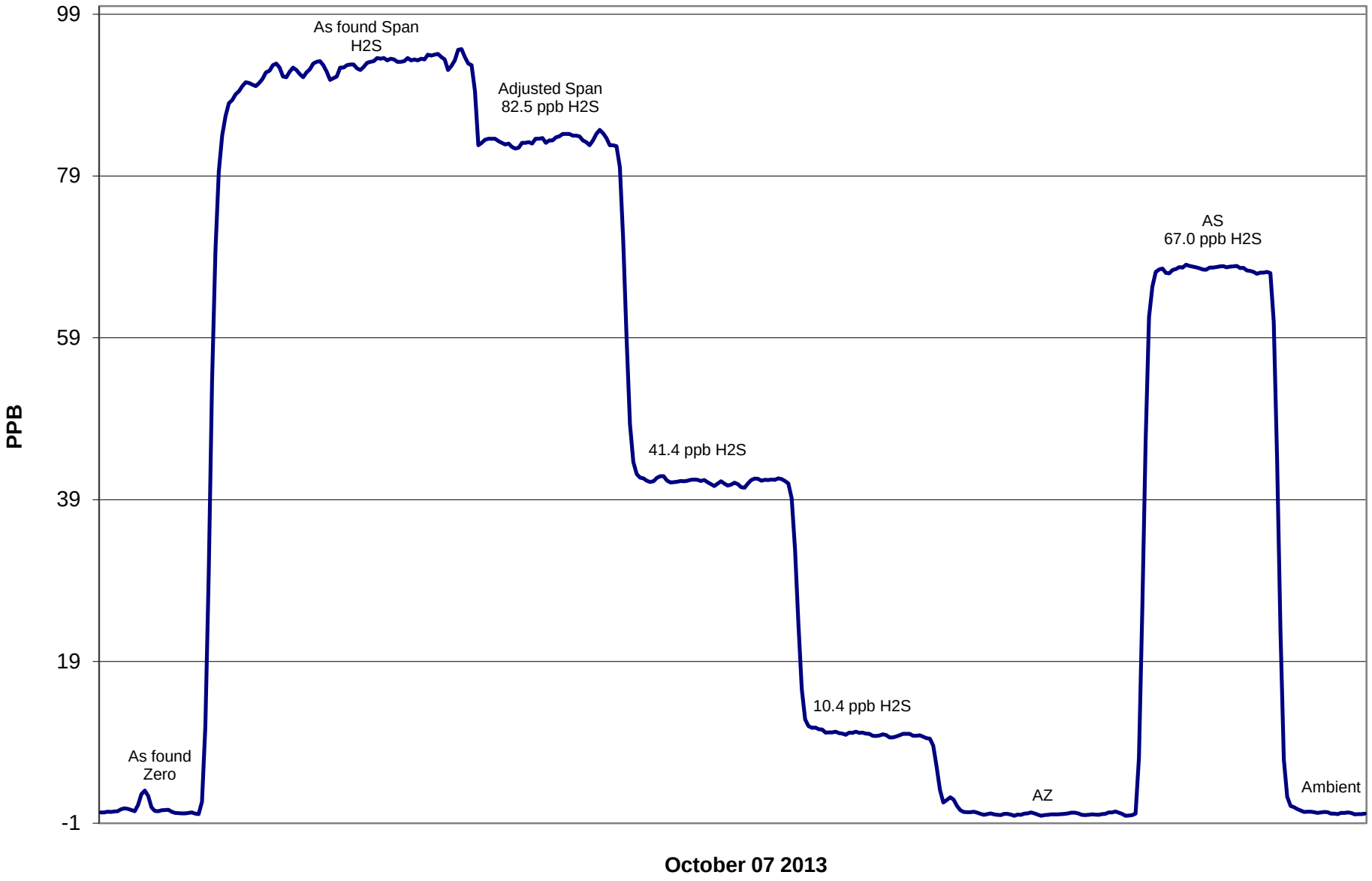
Calibration Date	October 07 2013	Previous Calibration	September 12 2013
Station Number	6	Station Location	Valleyview
Start Time (MST)	11:45	End Time (MST)	14:55
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
82.5	83.6	0.9866	Correlation Coefficient	0.999822
41.4	41.2	1.0059		
10.4	10.1	1.0233	Slope	0.988841
			Intercept	0.122380



H2S Calibration



Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 29, 2013	Previous Calibration	September 11, 2013
Station Number	9	Station Location	Sunset House
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	9:45	End Time (MST)	14:11
Barometric Pressure	0.905 Atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	12/03/2014
Gas Cert Reference	LL105159		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.997413	Calculated slope	1.003296
Calculated intercept	-4.600382	Calculated intercept	2.587888
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	31.9		34.5	
Coefficient	1.062		1.040	
UV Lamp Voltage	926	V	931	V
Chamber Temp	44.6	C	44.4	C
Perm Gas Temp	45	C	45	C
Pressure	657.7	mm Hg	652.2	mm Hg
Sample Flow	0.479	LPM	0.476	LPM
Lamp Intesity	36151	Hz	36340	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	408.4	405.8	1.0065
4995	19.97	205.1	200.3	1.0237
4995	9.97	102.6	97.4	1.0535
4995	0.00	0.0	-0.1	As found zero
4995	39.93	408.4	414.8	As found span
			Average Correction Factor	1.0279

Calculated value of As Found Response: 409.159 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	259.1	ppm	266.8	ppm

Notes: Slight span adjust 80% point. Run adjustment point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

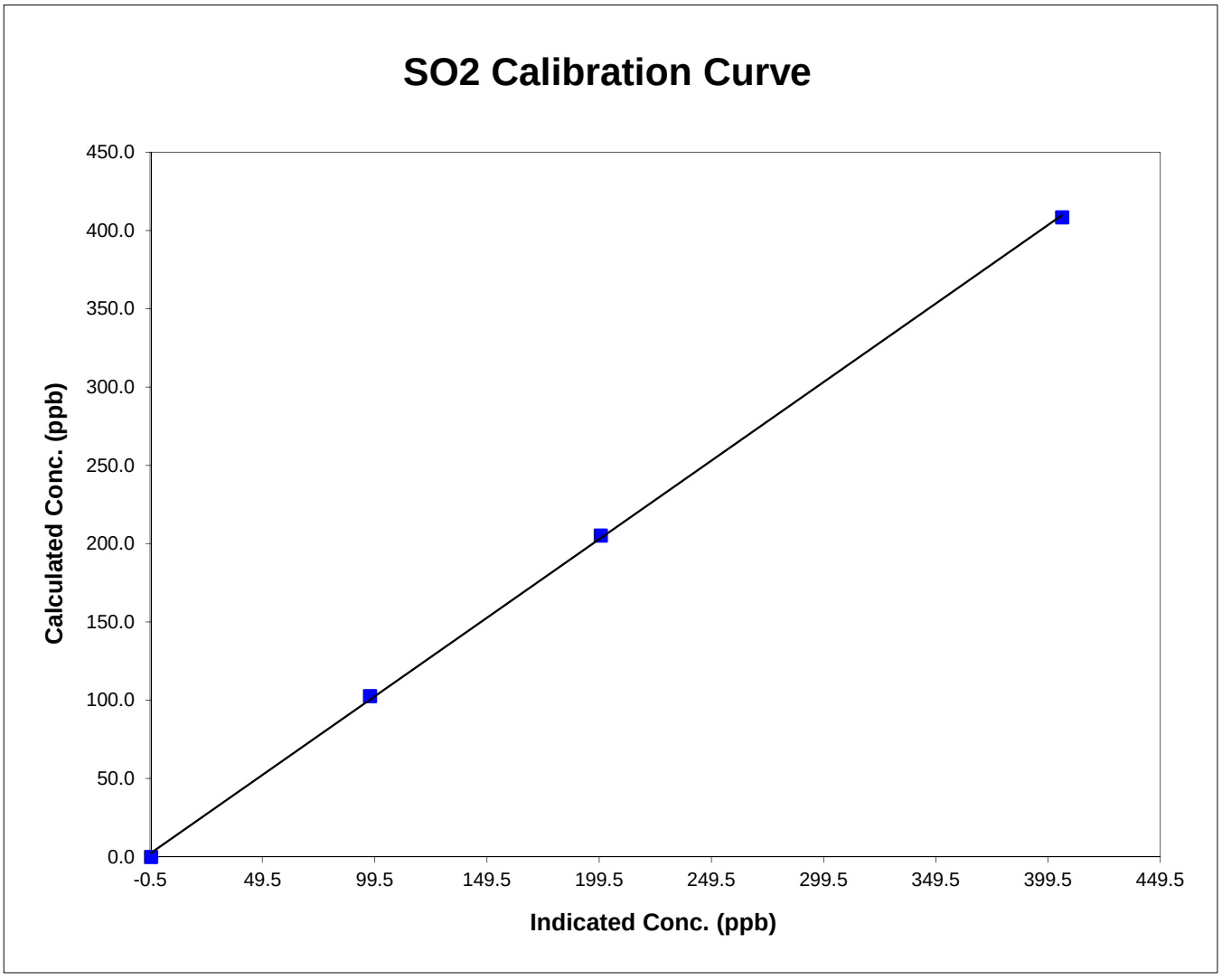
FOCUS AIR QUALITY MONITORING

Station Information

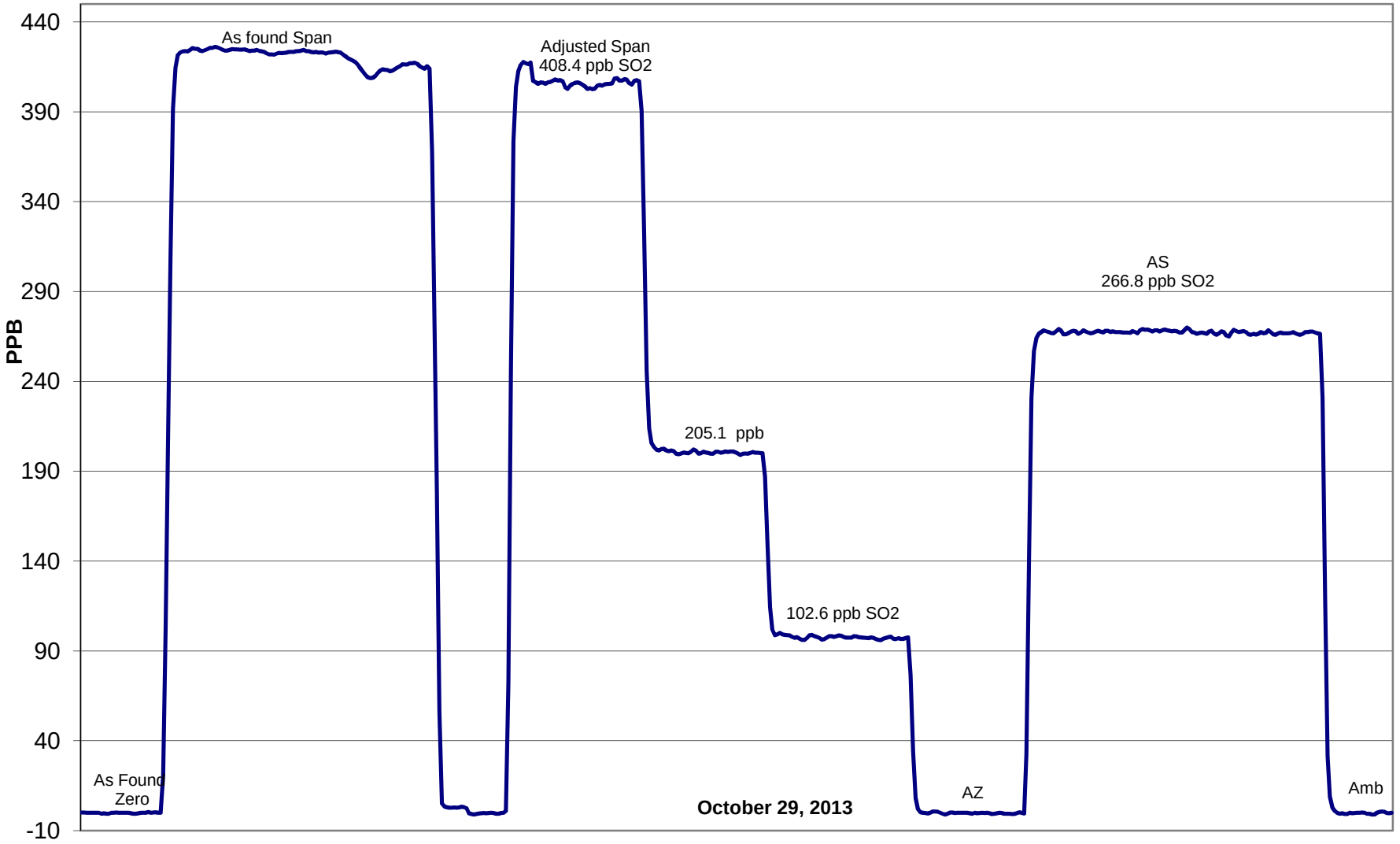
Calibration Date	October 29, 2013	Previous Calibration	September 11, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	9:45	End Time (MST)	14:11
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
408.4	405.8	1.0065	Correlation Coefficient	0.999830
205.1	200.3	1.0237		
102.6	97.4	1.0535	Slope	1.003296
			Intercept	2.587888



SO2 Calibration



Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 29, 2013	Previous Calibration	September 11, 2013
Station Number	9	Station Location	Sunset House

Reason: Routine | Install | Removal | Other:

Start Time (MST)	10:05		End Time (MST)	15:50	
Barometric Pressure	0.905	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3016	
NO Cal Gas Conc	51.3	ppm	Cal Gas Expiry Date	March 12, 2014	
NOx Cal Gas Conc	51.4	ppm	Cal Gas Serial #	LL105159	

DACS Information

DACS make: CR3000 DACS serial No.: 5407

Parameter		NO2	NOx	NO
Before	Data Slope	1.000189	0.997723	0.999245
	Data Offset	-0.468768	-0.826202	-0.958772
After	Data Slope	1.005437	0.995495	0.997307
	Data Offset	0.440163	2.032978	2.196956
Channel #		5	3	4
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model: TEI 42i Analyzer serial #: 0701120011

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	6.0	mV	5.8	mV
NOx bkgnd	6.2	mV	5.9	mV
NO coefficient	1.158		1.164	
NOx coefficient	1.000		0.997	
NO2 conv temp	323.4	Deg C	323.9	Deg C
PMT Temp	-2.9	Deg C	-2.7	Deg C
PMT Volt	-825.8	mV	-819.2	mV
R Cell Press	192.2	in Hg	192.6	in Hg
Sample Flow	0.706	ccm	0.709	ccm

NOTES: Span adjust 80% point following as found.

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: October 29, 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	0.1	0.0	0.1	N/A	N/A
1	4995	39.93	407.6	406.8	0.8	408.4	406.8	-0.1	0.9982	1.0001
2	4995	19.97	204.7	204.3	0.4	202.8	201.6	0.3	1.0094	1.0133
3	4995	9.97	102.4	102.2	0.2	98.5	98.0	0.5	1.0394	1.0425
AFZ	4995	0.00	0.0	0.0	0.0	0.1	0.0	0.1	0.0000	0.0000
AFS	4995	39.93	407.6	406.8	0.8	436.6	433.2	1.6	0.9336	0.9392
							Average Correction Factor		1.0157	1.0186

As Found Concentrations: NO_X= 435.7 NO= 432.2 As Found Percent Change NO_X= 6.9% NO= 6.2%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.1	0.0	0.1	N/A	N/A	N/A	N/A
NO point	408.1	408.1	0.0	408.6	408.1	-1.5	0.9987	1.0000	N/A	N/A
300	408.1	104.7	303.4	407.9	104.7	301.6	1.0004	1.0000	1.0059	99.4%
200	408.1	203.0	205.1	408.3	203.0	203.5	0.9994	1.0000	1.0078	99.2%
100	408.1	302.1	106.0	408.3	302.1	104.1	0.9996	1.0000	1.0175	98.3%
					Average Correction Factor		0.9998	1.0000	1.0104	99.0%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.8	0.9	0.0	ppb	-0.1	0.0	0.0	ppb
Auto span	166.3	164.3	1.4	ppb	185.9	183.7	1.3	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

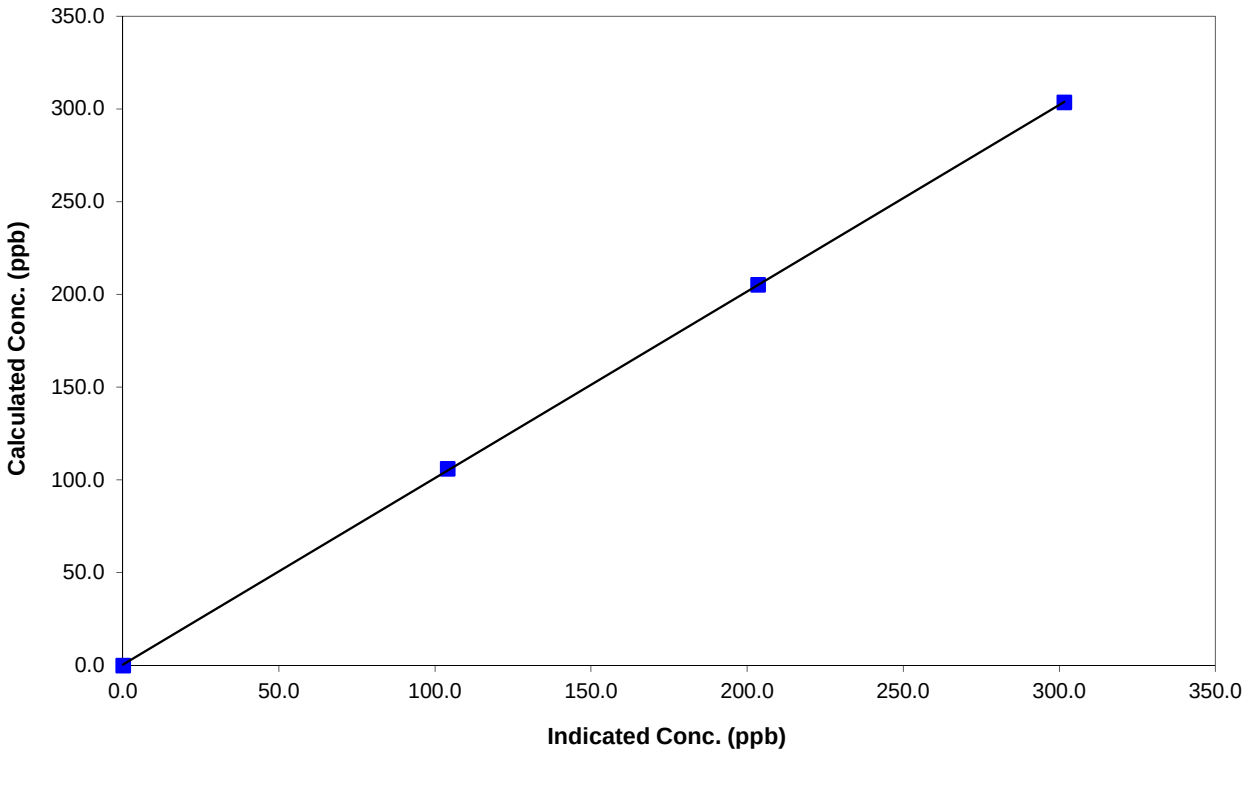
Station Information

Calibration Date	October 29, 2013	Previous Calibration	September 11, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	10:05	End Time (MST)	15:50
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
303.4	301.6	1.0059	Correlation Coefficient	0.999979
205.1	203.5	1.0078		
106.0	104.1	1.0175	Slope	1.005437
			Intercept	0.440163

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

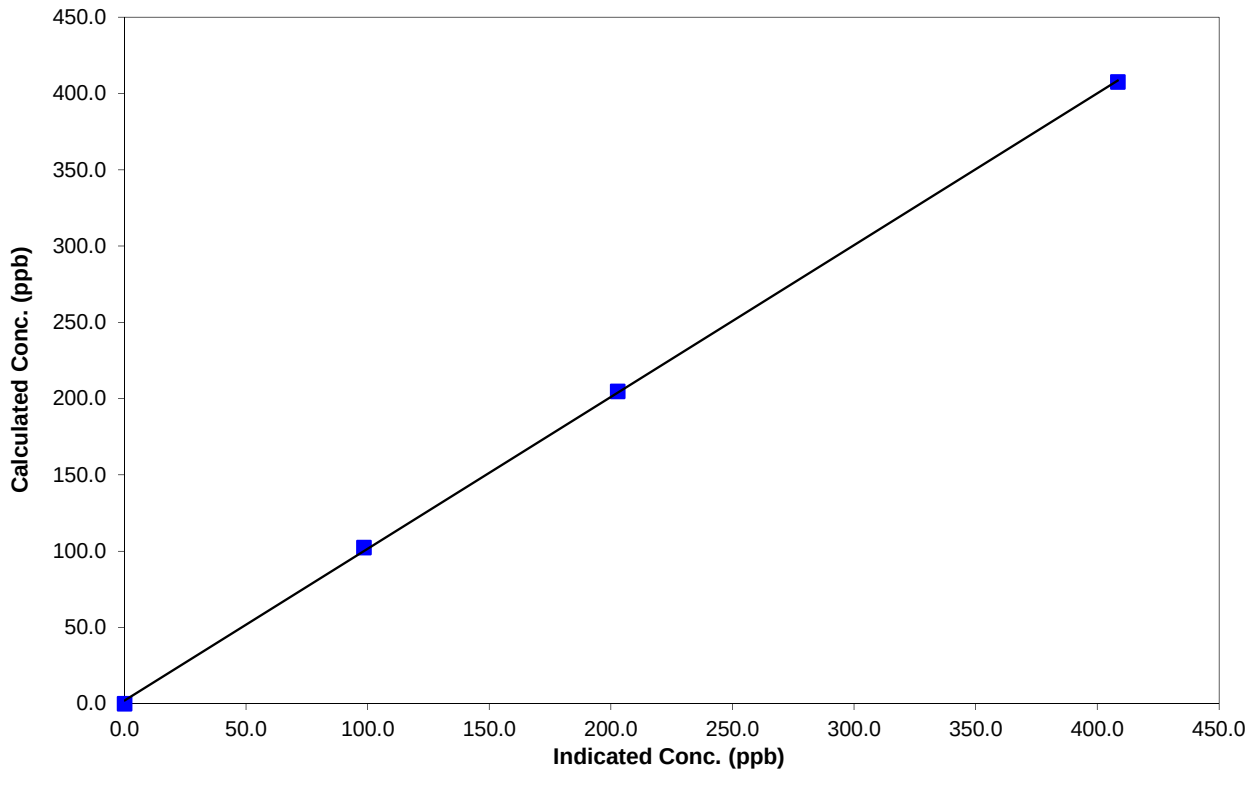
Station Information

Calibration Date	October 29, 2013	Previous Calibration	September 11, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	10:05	End Time (MST)	15:50
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
407.6	408.4	0.9982	Correlation Coefficient	0.999875
204.7	202.8	1.0094		
102.4	98.5	1.0394	Slope	0.995495
			Intercept	2.032978

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

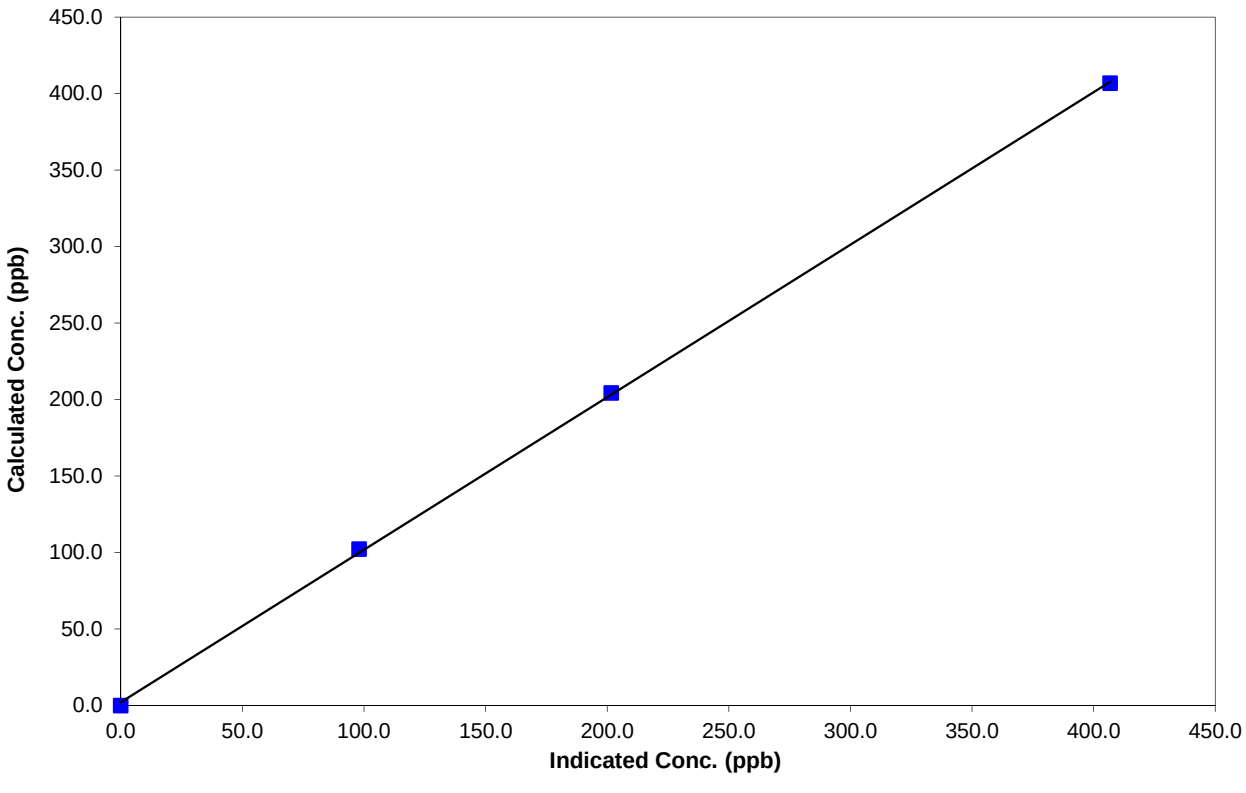
Station Information

Calibration Date	October 29, 2013	Previous Calibration	September 11, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	10:05	End Time (MST)	15:50
Analyzer make	TEI 42i	Analyzer serial #	0701120011

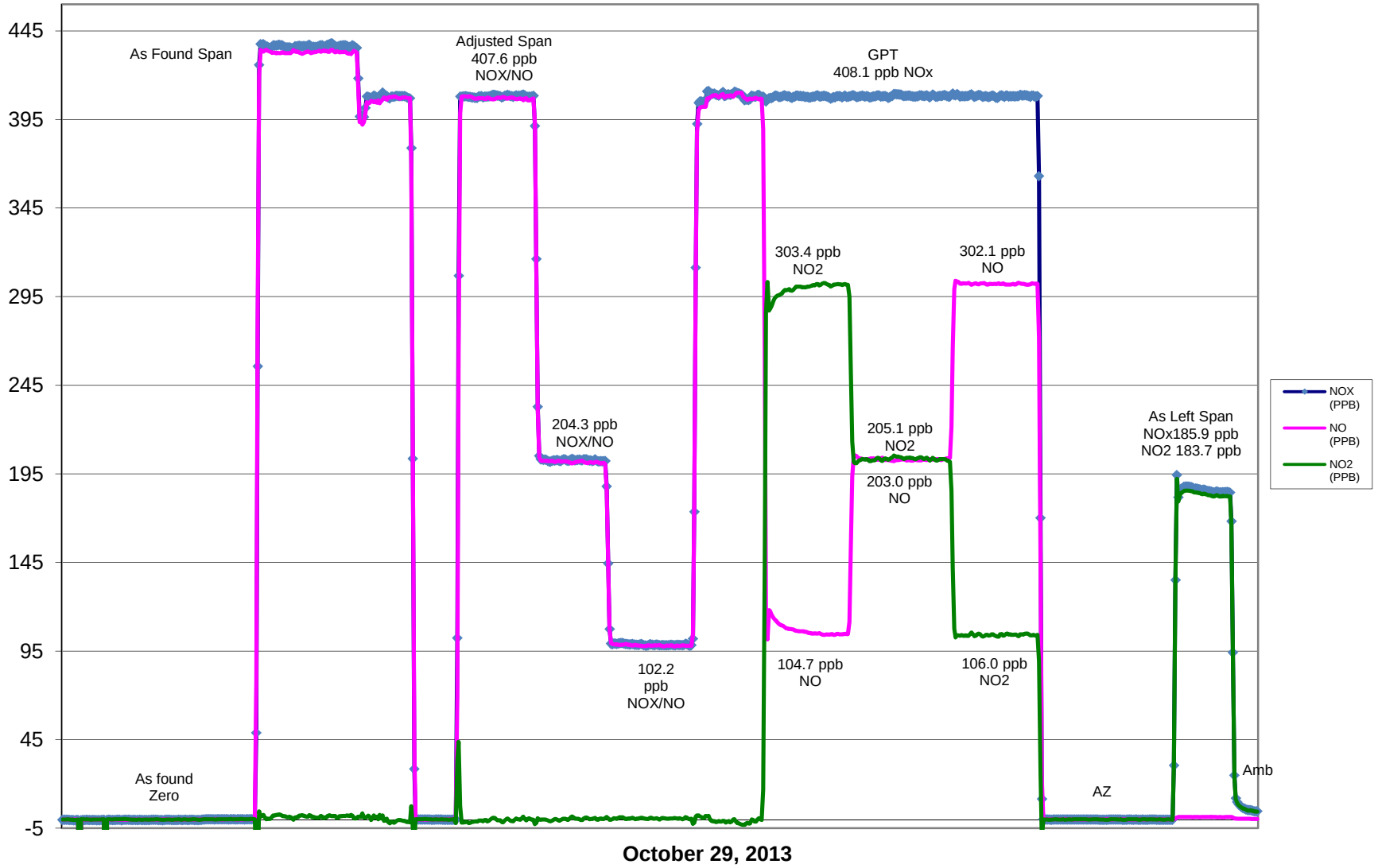
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
406.8	406.8	1.0001	Correlation Coefficient	0.999867
204.3	201.6	1.0133		
102.2	98.0	1.0425	Slope	0.997307
			Intercept	2.196956

NO Calibration Curve



PASZA Sunset House NO_X Calibration



Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 29 2013	Previous Calibration	September 12 2013
Station Number	9	Station Location	Sunset House

Reason: Routine | Install | Removal | remove | Other:

Start Time (MST)	14:05	End Time (MST)	18:09
Barometric Pressure	0.903 atm	Station Temperature	15.7 Deg C
Calibrator	Environics	Serial Number	3016
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.006062	Calculated slope	1.009435
Calculated intercept	0.493024	Calculated intercept	1.339295
Analyzer make	API Model 400a	Analyzer serial #	436

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-2.8	ppb	-2.8	ppb
Slop	1.008	1.024	1.024	
Poto lamp temp	52	Hz	52	C
O3 Gen temp	48.2	Hz	48.2	Hz
Pressure	25.60	in Hg	25.50	in Hg
Flow	671.0	ccm	671.0	ccm
	668.0	cmm	667.0	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)
5035	0.00	0.0	-0.5	N/A
5035	0.30	303.4	300.0	1.0113
5035	0.20	205.1	201.2	1.0193
5035	0.10	106.0	102.7	1.0323
5035	0.00	0.0	-0.5	As found zero
5035	0.30	303.4	293.5	As found span
			Average Correction Factor	1.0210

Calculated value of As Found Response: 296.2 ppm Percent Change of As Found: -2.4%

	before calibration		after calibration	
Auto zero	-0.4	ppb	0.8	ppb
Auto span	143.8	ppb	153.0	ppb

Notes: Slight span adjust 80% point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **O3**

Air Monitoring Network **PAZA**

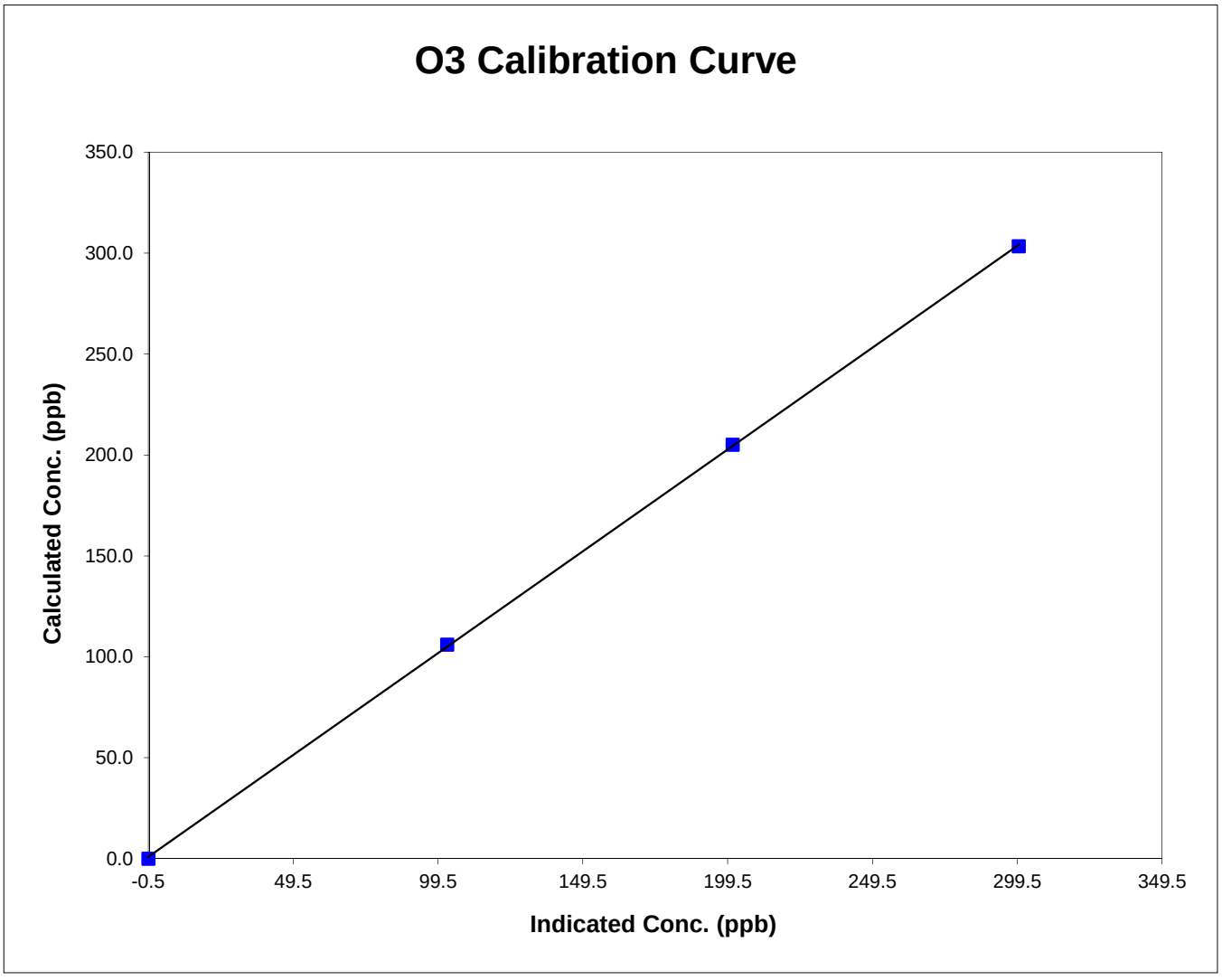
FOCUS AIR QUALITY MONITORING

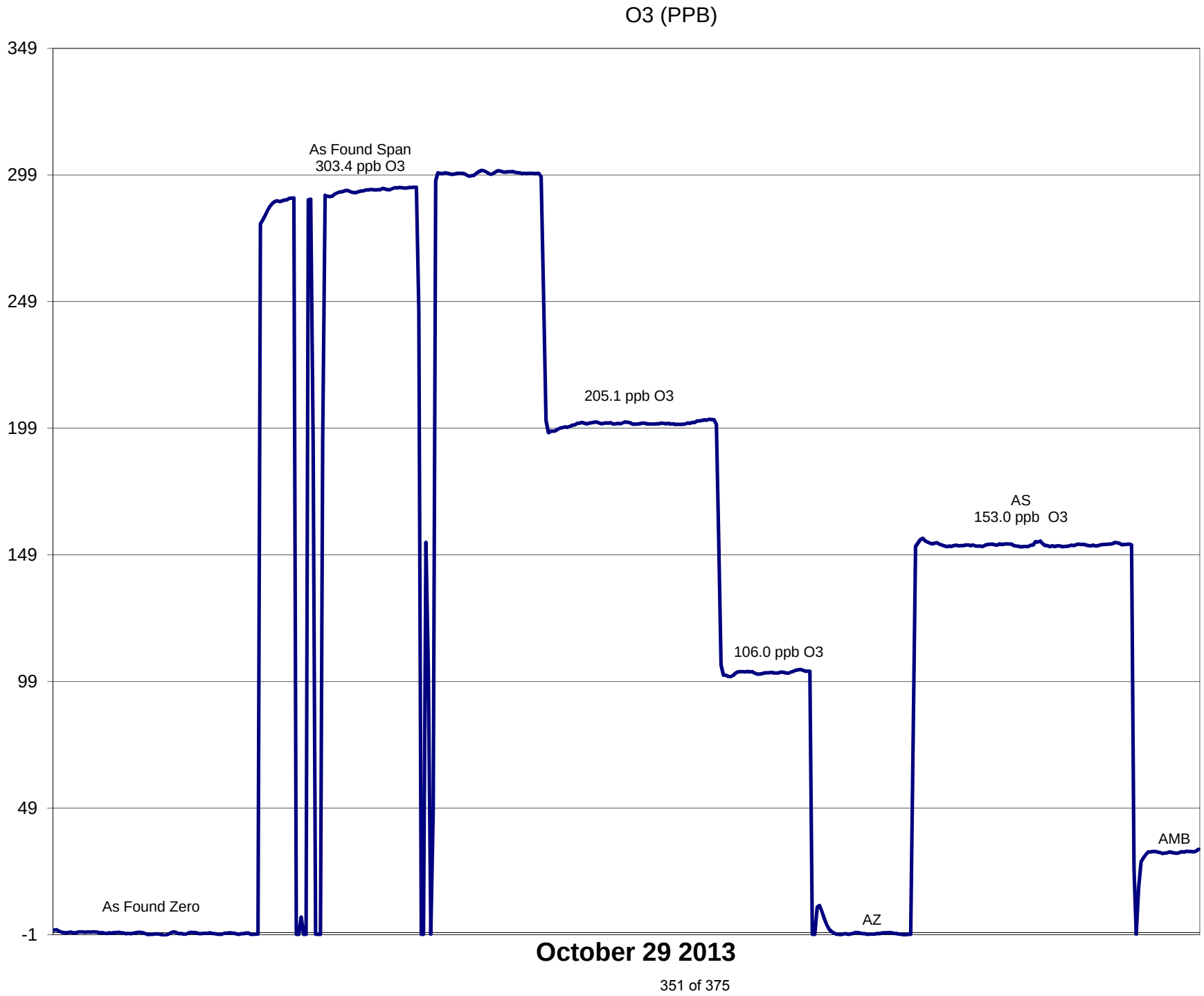
Station Information

Calibration Date	October 29 2013	Previous Calibration	September 12 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	14:05	End Time (MST)	18:09
Analyzer make/model	API Model 400a	Analyzer serial #	436

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.5	NA		
303.4	300.0	1.0113	Correlation Coefficient	0.999945
205.1	201.2	1.0193		
106.0	102.7	1.0323	Slope	1.009435
			Intercept	1.339295




O3 (PPB)
349
299
249
199
149
99
49
-1
As Found Span
303.4 ppb O3
205.1 ppb O3
106.0 ppb O3
AS
153.0 ppb O3
AMB
As Found Zero
AZ
October 29 2013

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 29 2013	Previous Calibration	September 11 2013
Station Name	PAZA Rover	Station Location	Sunset House
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	4:41 PM	End Time (MST)	19:41
Barometric Pressure	0.903 Atm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentration	10.44 ppm	Cal Gas Expiry Date	July/08/2016
Gas Cert Reference	LL110781		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.009473	Calculated slope	1.010301
Calculated intercept	-0.303910	Calculated intercept	0.377330
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.9	ppb	15.9	ppb
Coefficient	1.015		1.015	
Lamp Voltage	773	V	772	V
Chamber Temp	43.9	C	44	C
Perm gas Temp	45	C	45	C
Pressure	636.9	mmHg	641.2	mmHg
Sample Flow	0.434	lpm	0.436	lpm
Lamp Intensity	39615	Hz	39287	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.0	0.0	N/A
4995	39.93	82.8	81.8	1.0123
4995	19.97	41.6	40.4	1.0293
8995	8.97	10.4	9.8	1.0662
4995	9.97	102.8	0.4	Sox Test
4995	0.00	0.0	0.0	As found zero
4995	39.93	82.8	81.8	As found span
			Average Correction Factor	1.0359

Calculated value of As Found Response: 82.29 ppm Percent Change of As Found: 0.6%

	before calibration		after calibration	
Auto zero	0.1	ppm	0.5	ppm
Auto span	65.4	ppm	66.4	ppm

Notes: No span adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

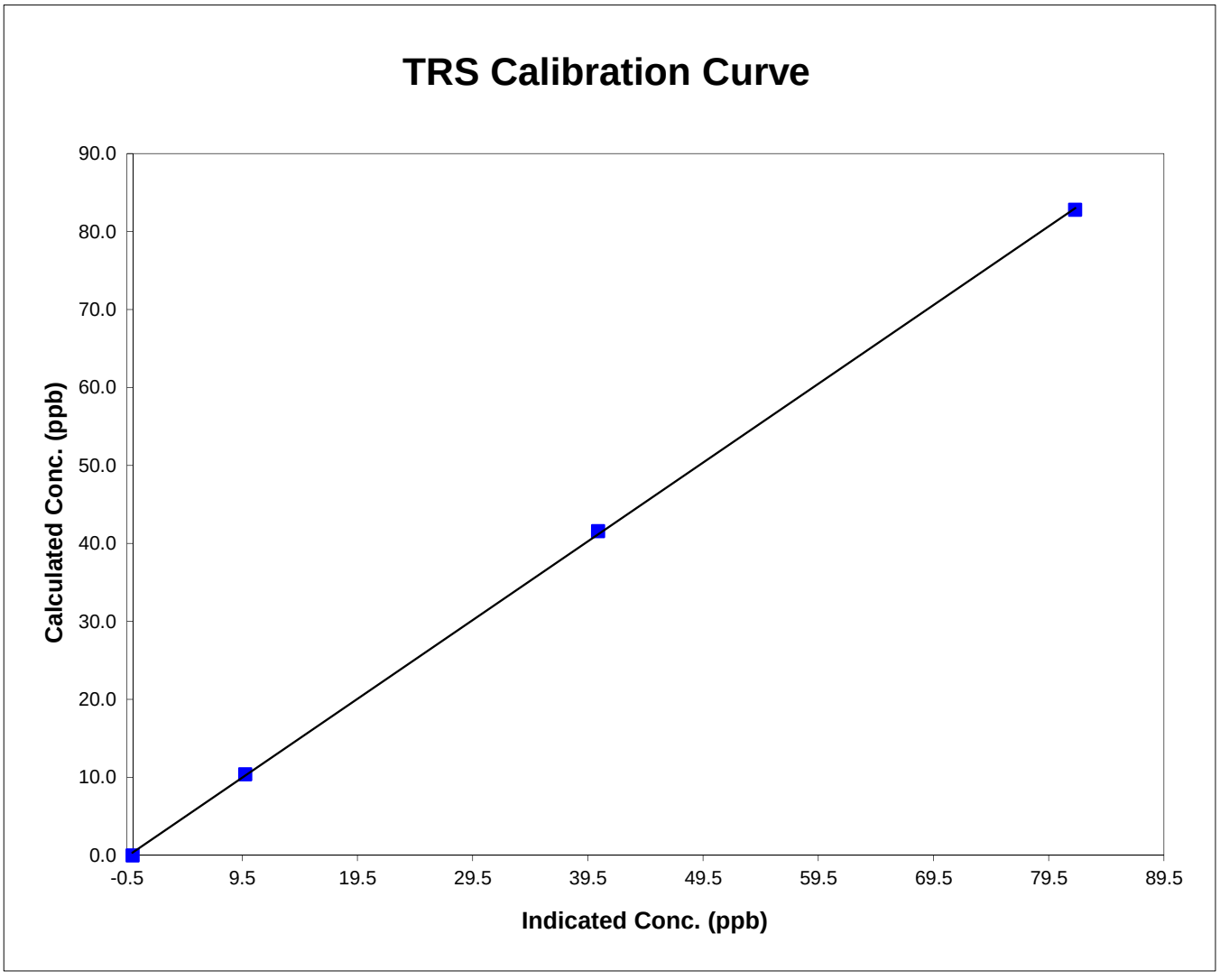
FOCUS AIR QUALITY MONITORING

Station Information

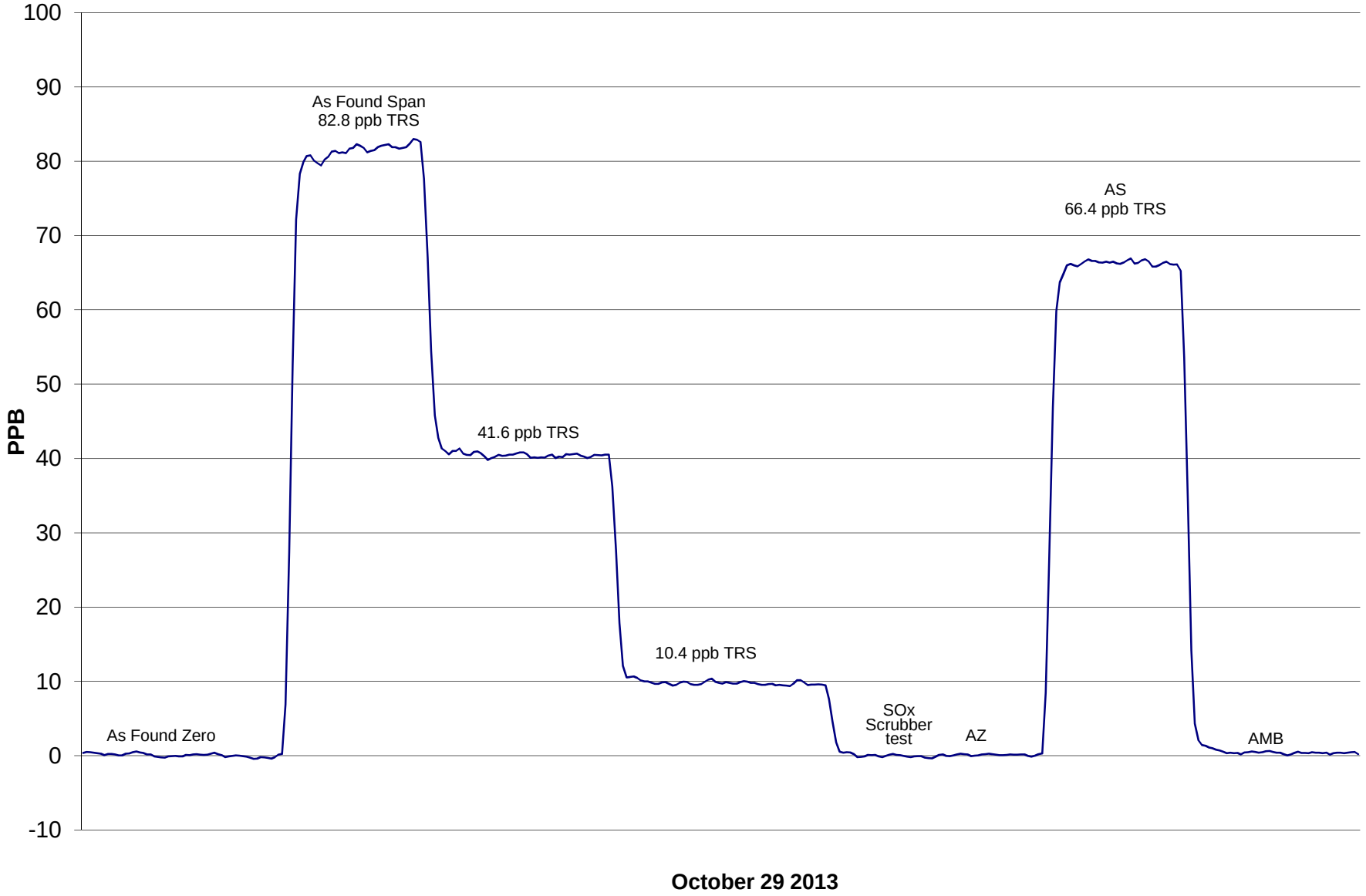
Calibration Date	October 29 2013	Previous Calibration	September 11 2013
Station Number	PAZA Rover	Station Location	Sunset House
Start Time (MST)	16:41	End Time (MST)	19:41
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
82.8	81.8	1.0123	Correlation Coefficient	0.999917
41.6	40.4	1.0293		
10.4	9.8	1.0662	Slope	1.010301
			Intercept	0.377330



TRS Calibration



Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 29, 2013	Previous Calibration	September 11, 2013
Station Number	9	Station Location	Sunset House
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	9:45	End Time (MST)	14:11
Barometric Pressure	0.905 Atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	12/03/2014
Gas Cert Reference	LL105159		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.997413	Calculated slope	1.003296
Calculated intercept	-4.600382	Calculated intercept	2.587888
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	31.9		34.5	
Coefficient	1.062		1.040	
UV Lamp Voltage	926	V	931	V
Chamber Temp	44.6	C	44.4	C
Perm Gas Temp	45	C	45	C
Pressure	657.7	mm Hg	652.2	mm Hg
Sample Flow	0.479	LPM	0.476	LPM
Lamp Intesity	36151	Hz	36340	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	408.4	405.8	1.0065
4995	19.97	205.1	200.3	1.0237
4995	9.97	102.6	97.4	1.0535
4995	0.00	0.0	-0.1	As found zero
4995	39.93	408.4	414.8	As found span
			Average Correction Factor	1.0279

Calculated value of As Found Response: 409.159 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	259.1	ppm	266.8	ppm

Notes: Slight span adjust 80% point. Run adjustment point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

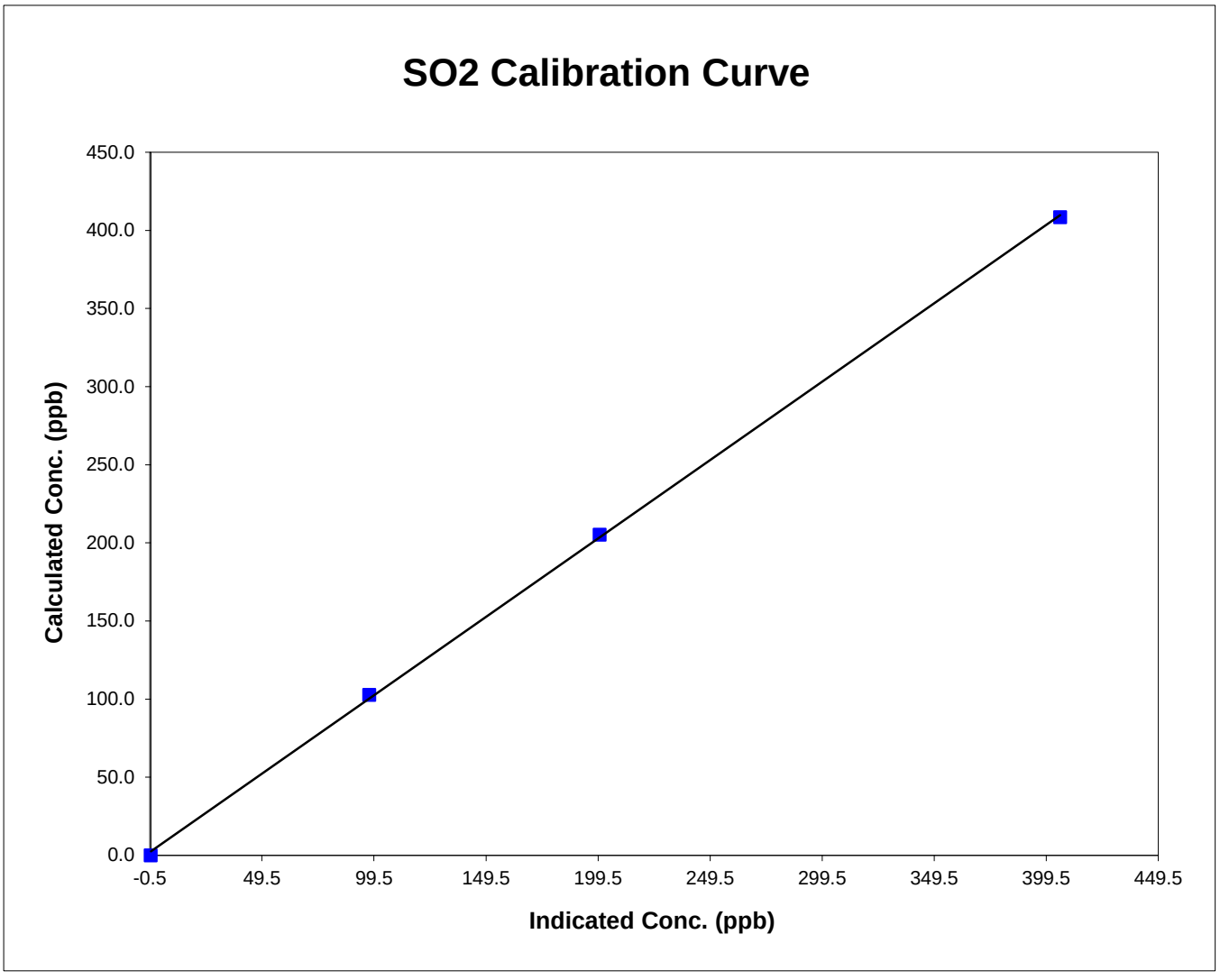
FOCUS AIR QUALITY MONITORING

Station Information

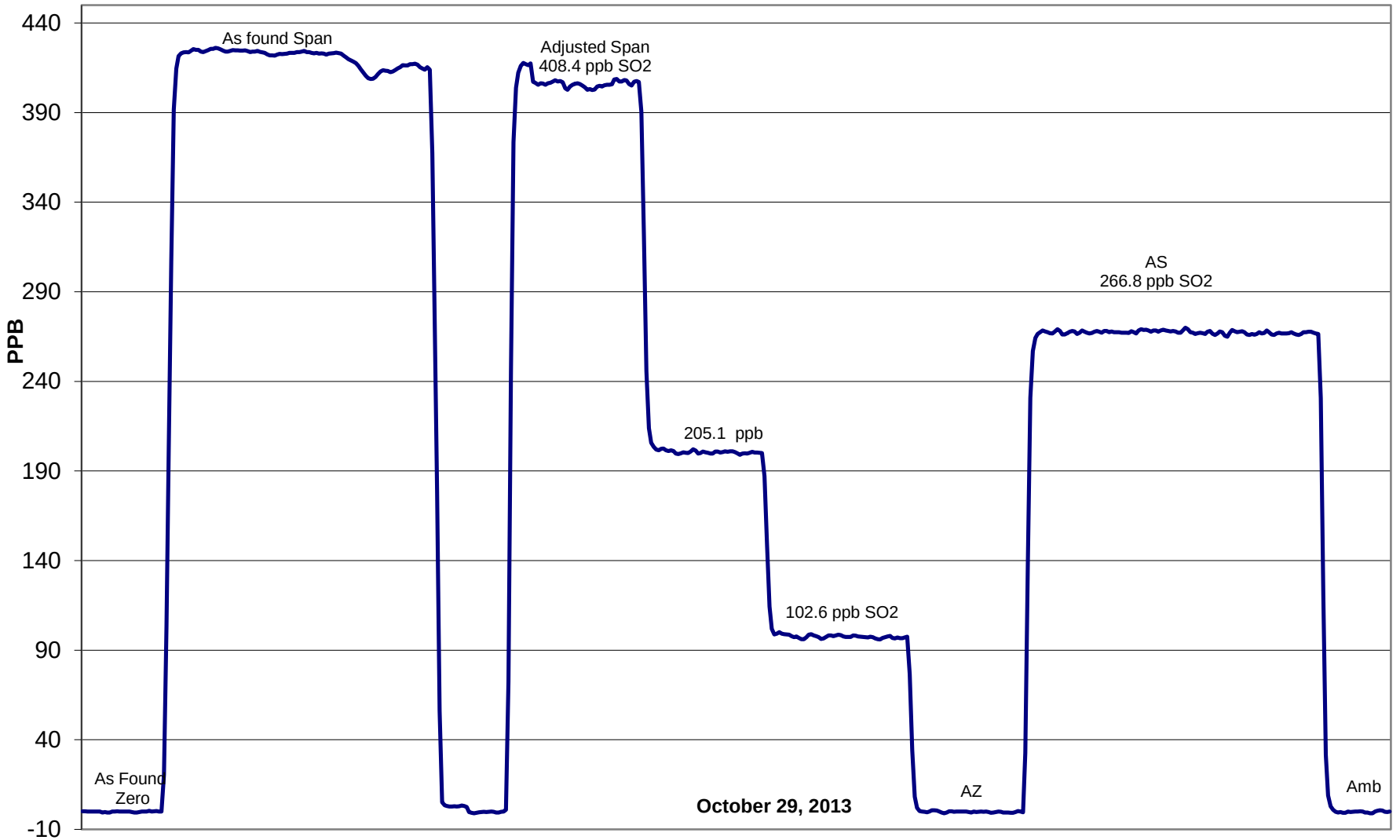
Calibration Date	October 29, 2013	Previous Calibration	September 11, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	9:45	End Time (MST)	14:11
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
408.4	405.8	1.0065	Correlation Coefficient	0.999830
205.1	200.3	1.0237		
102.6	97.4	1.0535	Slope	1.003296
			Intercept	2.587888



SO2 Calibration



Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 29, 2013	Previous Calibration	September 11, 2013
Station Number	9	Station Location	Sunset House

Reason: Routine | Install | Removal | Other:

Start Time (MST)	10:05		End Time (MST)	15:50	
Barometric Pressure	0.905	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3016	
NO Cal Gas Conc	51.3	ppm	Cal Gas Expiry Date	March 12, 2014	
NOx Cal Gas Conc	51.4	ppm	Cal Gas Serial #	LL105159	

DACS Information

DACS make: CR3000 DACS serial No.: 5407

Parameter		NO2	NOx	NO
Before	Data Slope	1.000189	0.997723	0.999245
	Data Offset	-0.468768	-0.826202	-0.958772
After	Data Slope	1.005437	0.995495	0.997307
	Data Offset	0.440163	2.032978	2.196956
Channel #		5	3	4
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model: TEI 42i Analyzer serial #: 0701120011

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	6.0	mV	5.8	mV
NOx bkgnd	6.2	mV	5.9	mV
NO coefficient	1.158		1.164	
NOx coefficient	1.000		0.997	
NO2 conv temp	323.4	Deg C	323.9	Deg C
PMT Temp	-2.9	Deg C	-2.7	Deg C
PMT Volt	-825.8	mV	-819.2	mV
R Cell Press	192.2	in Hg	192.6	in Hg
Sample Flow	0.706	ccm	0.709	ccm

NOTES: Span adjust 80% point following as found.

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: October 29, 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	0.1	0.0	0.1	N/A	N/A
1	4995	39.93	407.6	406.8	0.8	408.4	406.8	-0.1	0.9982	1.0001
2	4995	19.97	204.7	204.3	0.4	202.8	201.6	0.3	1.0094	1.0133
3	4995	9.97	102.4	102.2	0.2	98.5	98.0	0.5	1.0394	1.0425
AFZ	4995	0.00	0.0	0.0	0.0	0.1	0.0	0.1	0.0000	0.0000
AFS	4995	39.93	407.6	406.8	0.8	436.6	433.2	1.6	0.9336	0.9392
							Average Correction Factor		1.0157	1.0186

As Found Concentrations: NO_X= 435.7 NO= 432.2 As Found Percent Change NO_X= 6.9% NO= 6.2%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.1	0.0	0.1	N/A	N/A	N/A	N/A
NO point	408.1	408.1	0.0	408.6	408.1	-1.5	0.9987	1.0000	N/A	N/A
300	408.1	104.7	303.4	407.9	104.7	301.6	1.0004	1.0000	1.0059	99.4%
200	408.1	203.0	205.1	408.3	203.0	203.5	0.9994	1.0000	1.0078	99.2%
100	408.1	302.1	106.0	408.3	302.1	104.1	0.9996	1.0000	1.0175	98.3%
					Average Correction Factor		0.9998	1.0000	1.0104	99.0%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.8	0.9	0.0	ppb	-0.1	0.0	0.0	ppb
Auto span	166.3	164.3	1.4	ppb	185.9	183.7	1.3	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

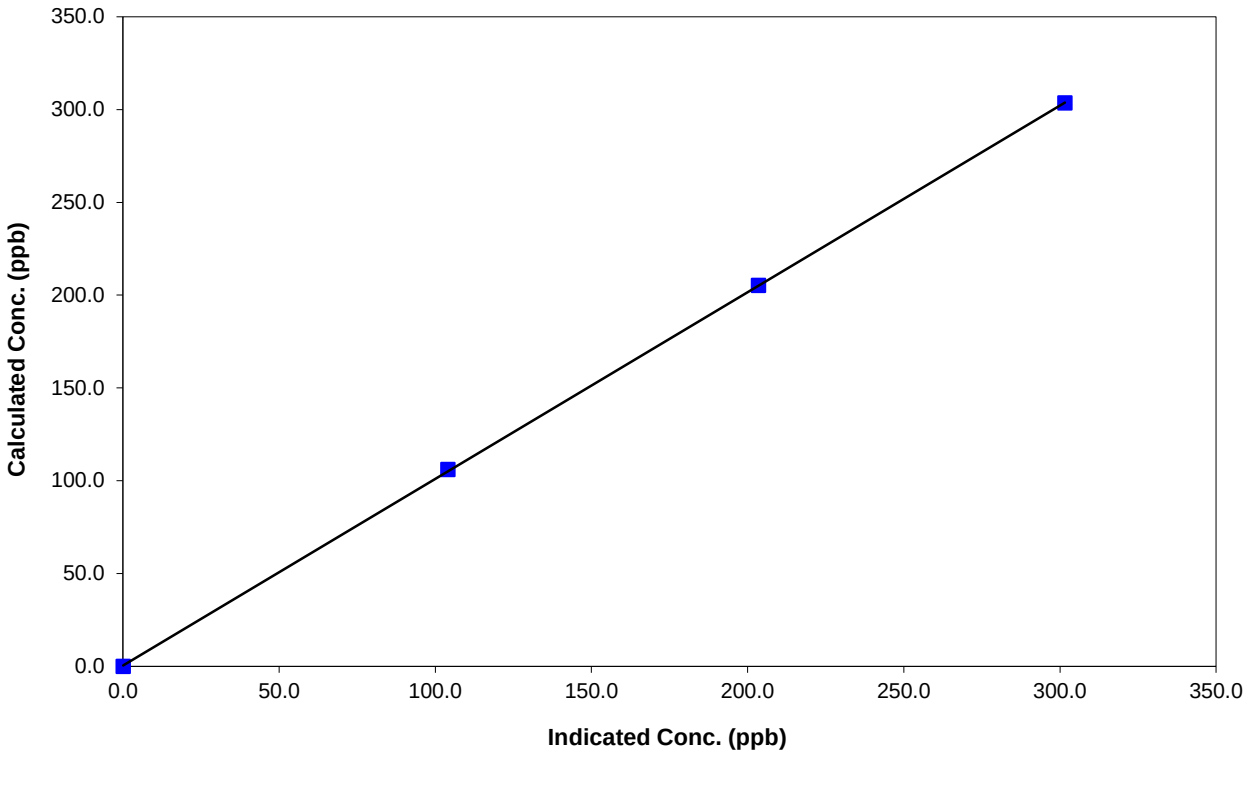
Station Information

Calibration Date	October 29, 2013	Previous Calibration	September 11, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	10:05	End Time (MST)	15:50
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
303.4	301.6	1.0059	Correlation Coefficient	0.999979
205.1	203.5	1.0078		
106.0	104.1	1.0175	Slope	1.005437
			Intercept	0.440163

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

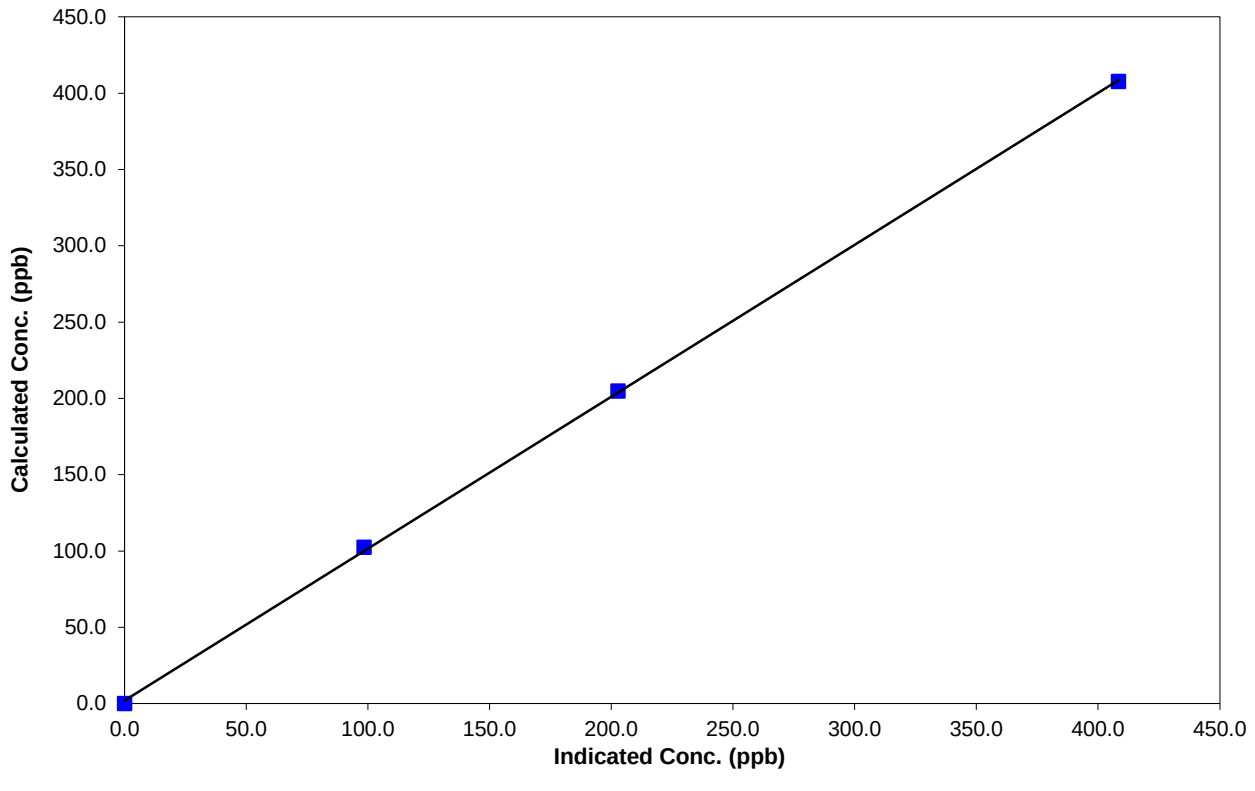
Station Information

Calibration Date	October 29, 2013	Previous Calibration	September 11, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	10:05	End Time (MST)	15:50
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
407.6	408.4	0.9982	Correlation Coefficient	0.999875
204.7	202.8	1.0094		
102.4	98.5	1.0394	Slope	0.995495
			Intercept	2.032978

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

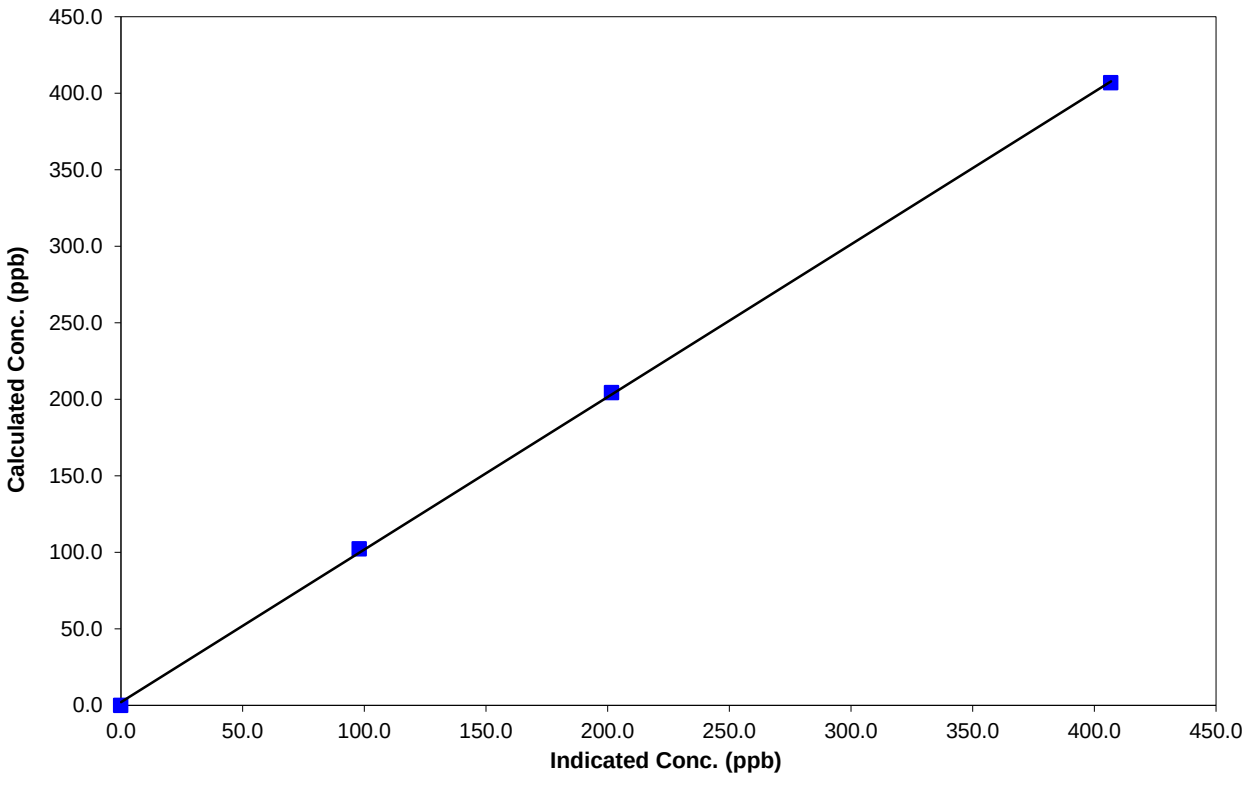
Station Information

Calibration Date	October 29, 2013	Previous Calibration	September 11, 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	10:05	End Time (MST)	15:50
Analyzer make	TEI 42i	Analyzer serial #	0701120011

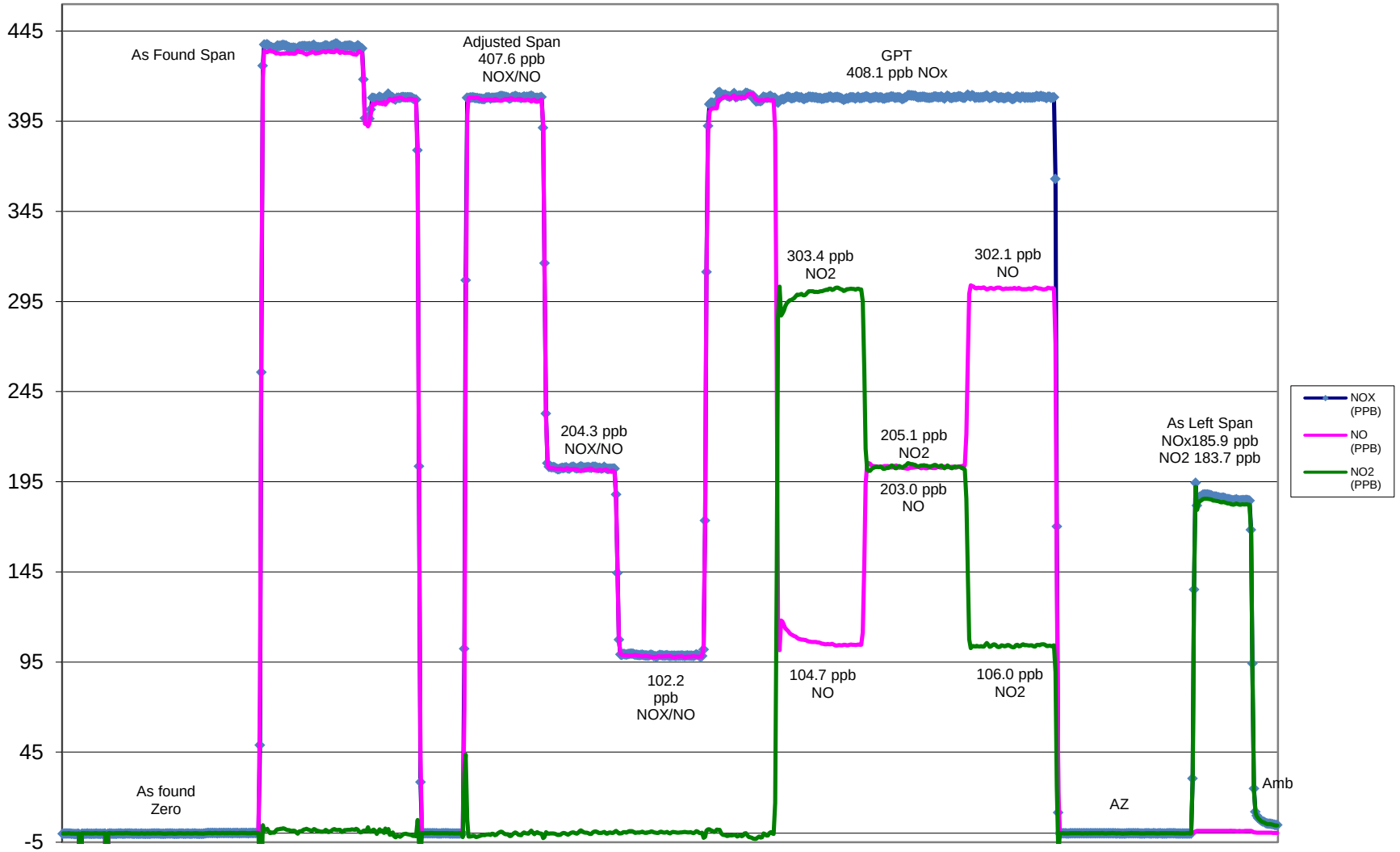
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
406.8	406.8	1.0001	Correlation Coefficient	0.999867
204.3	201.6	1.0133		
102.2	98.0	1.0425	Slope	0.997307
			Intercept	2.196956

NO Calibration Curve



PASZA Sunset House NO_X Calibration



October 29, 2013

Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 29 2013	Previous Calibration	September 12 2013
Station Number	9	Station Location	Sunset House
Reason: Routine	Install	Removal remove	Other:
Start Time (MST)	14:05	End Time (MST)	18:09
Barometric Pressure	0.903 atm	Station Temperature	15.7 Deg C
Calibrator	Environics	Serial Number	3016
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.006062	Calculated slope	1.009435
Calculated intercept	0.493024	Calculated intercept	1.339295
Analyzer make	API Model 400a	Analyzer serial #	436

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-2.8	ppb	-2.8	ppb
Slop	1.008	1.024	1.024	
Poto lamp temp	52	Hz	52	C
O3 Gen temp	48.2	Hz	48.2	Hz
Pressure	25.60	in Hg	25.50	in Hg
Flow	671.0	ccm	671.0	ccm
	668.0	cmm	667.0	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)
5035	0.00	0.0	-0.5	N/A
5035	0.30	303.4	300.0	1.0113
5035	0.20	205.1	201.2	1.0193
5035	0.10	106.0	102.7	1.0323
5035	0.00	0.0	-0.5	As found zero
5035	0.30	303.4	293.5	As found span
			Average Correction Factor	1.0210

Calculated value of As Found Response: 296.2 ppm Percent Change of As Found: -2.4%

	before calibration		after calibration	
Auto zero	-0.4	ppb	0.8	ppb
Auto span	143.8	ppb	153.0	ppb

Notes: Slight span adjust 80% point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **O3**

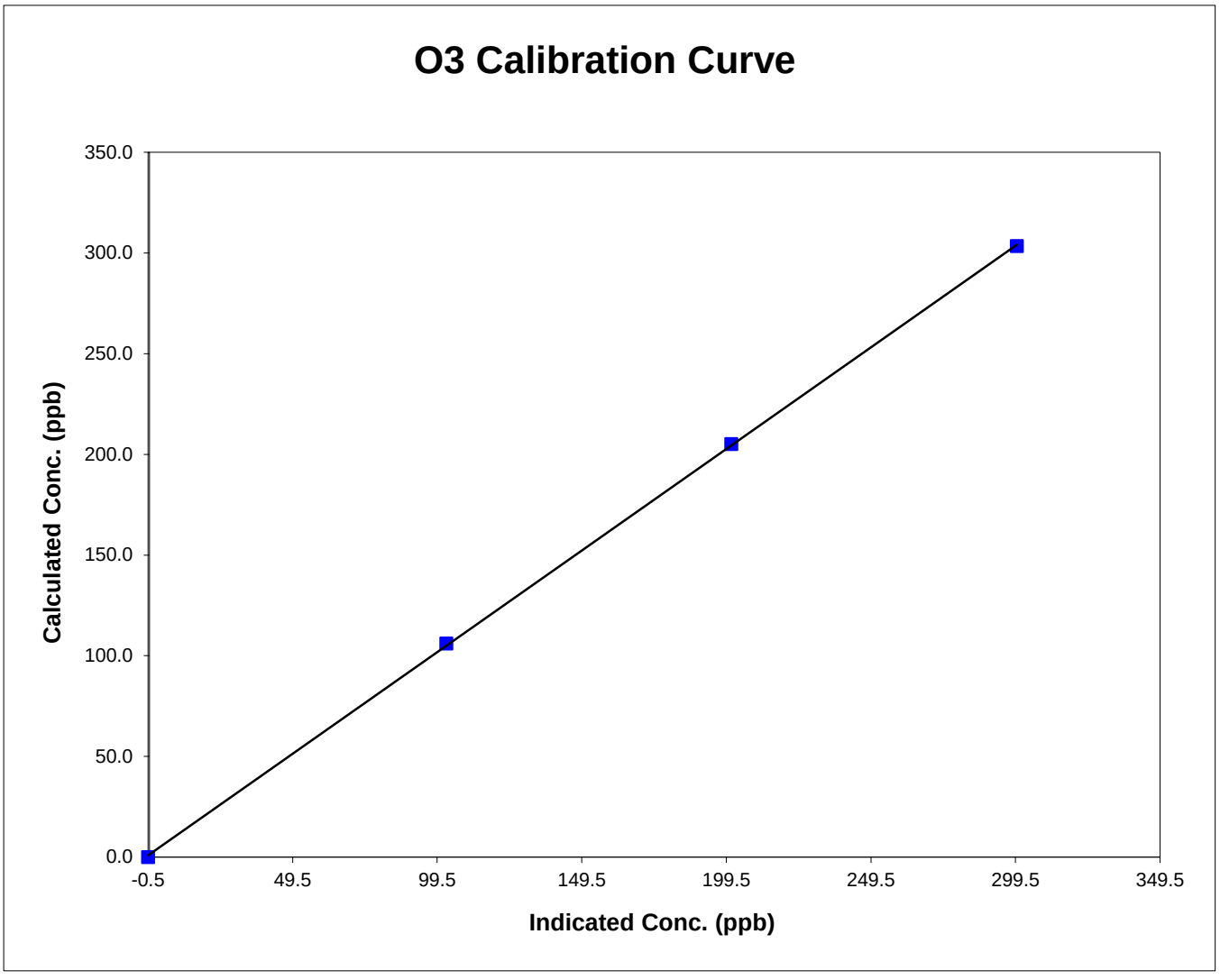
Air Monitoring Network **PAZA**

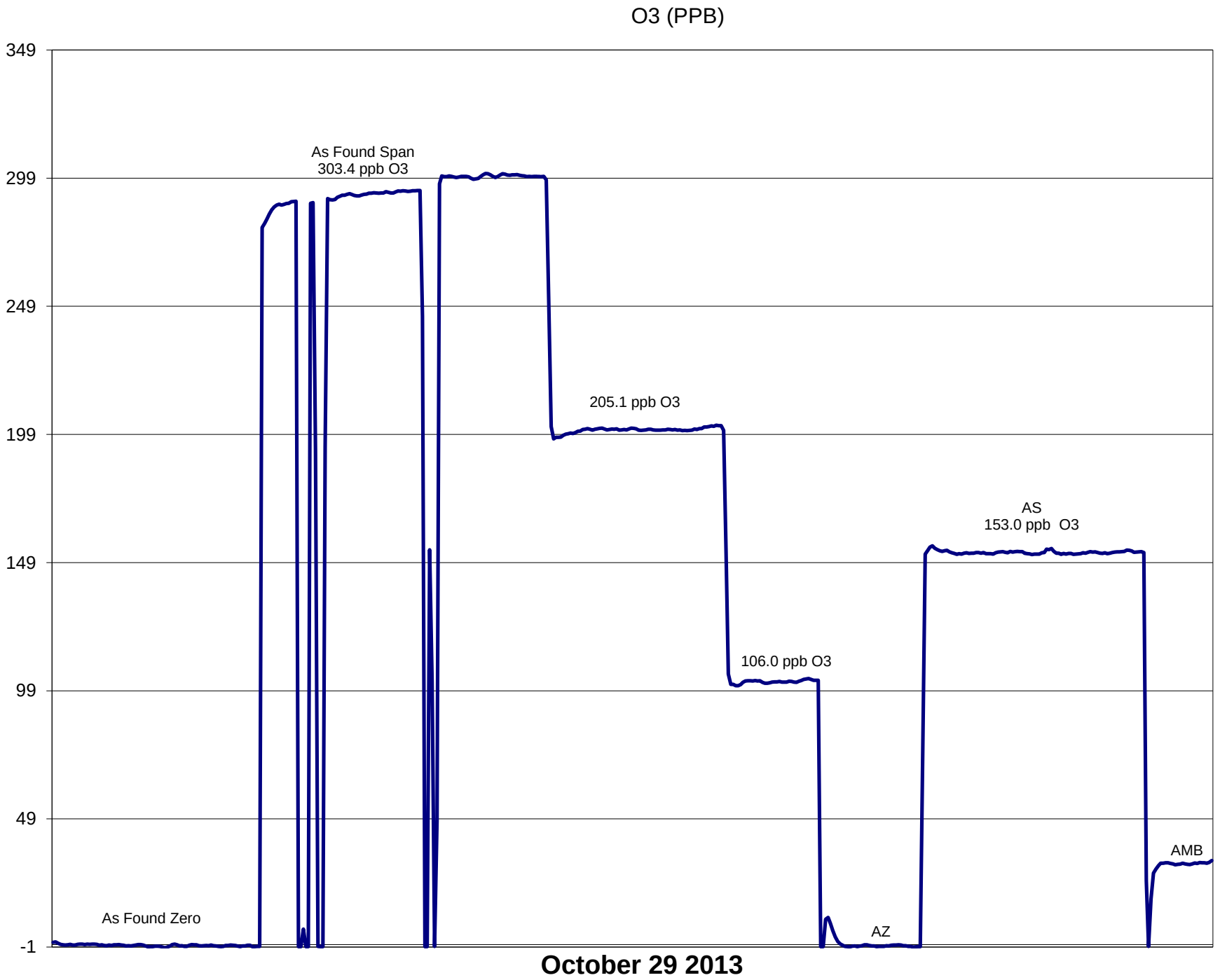
Station Information

Calibration Date	October 29 2013	Previous Calibration	September 12 2013
Station Number	9	Station Location	Sunset House
Start Time (MST)	14:05	End Time (MST)	18:09
Analyzer make/model	API Model 400a	Analyzer serial #	436

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.5	NA		
303.4	300.0	1.0113	Correlation Coefficient	0.999945
205.1	201.2	1.0193		
106.0	102.7	1.0323	Slope	1.009435
			Intercept	1.339295




O3 (PPB)
349
299
249
199
149
99
49
-1
As Found Span
303.4 ppb O3
205.1 ppb O3
106.0 ppb O3
AS
153.0 ppb O3
AMB
As Found Zero
AZ
October 29 2013

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 29 2013	Previous Calibration	September 11 2013
Station Name	PAZA Rover	Station Location	Sunset House
Reason:	Routine: Install	Removal	Other:
Start Time (MST)	4:41 PM	End Time (MST)	19:41
Barometric Pressure	0.903 Atm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentration	10.44 ppm	Cal Gas Expiry Date	July/08/2016
Gas Cert Reference	LL110781		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.009473	Calculated slope	1.010301
Calculated intercept	-0.303910	Calculated intercept	0.377330
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.9	ppb	15.9	ppb
Coefficient	1.015		1.015	
Lamp Voltage	773	V	772	V
Chamber Temp	43.9	C	44	C
Perm gas Temp	45	C	45	C
Pressure	636.9	mmHg	641.2	mmHg
Sample Flow	0.434	lpm	0.436	lpm
Lamp Intensity	39615	Hz	39287	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.0	0.0	N/A
4995	39.93	82.8	81.8	1.0123
4995	19.97	41.6	40.4	1.0293
8995	8.97	10.4	9.8	1.0662
4995	9.97	102.8	0.4	Sox Test
4995	0.00	0.0	0.0	As found zero
4995	39.93	82.8	81.8	As found span
			Average Correction Factor	1.0359

Calculated value of As Found Response: 82.29 ppm Percent Change of As Found: 0.6%

	before calibration		after calibration	
Auto zero	0.1	ppm	0.5	ppm
Auto span	65.4	ppm	66.4	ppm

Notes: No span adjust.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

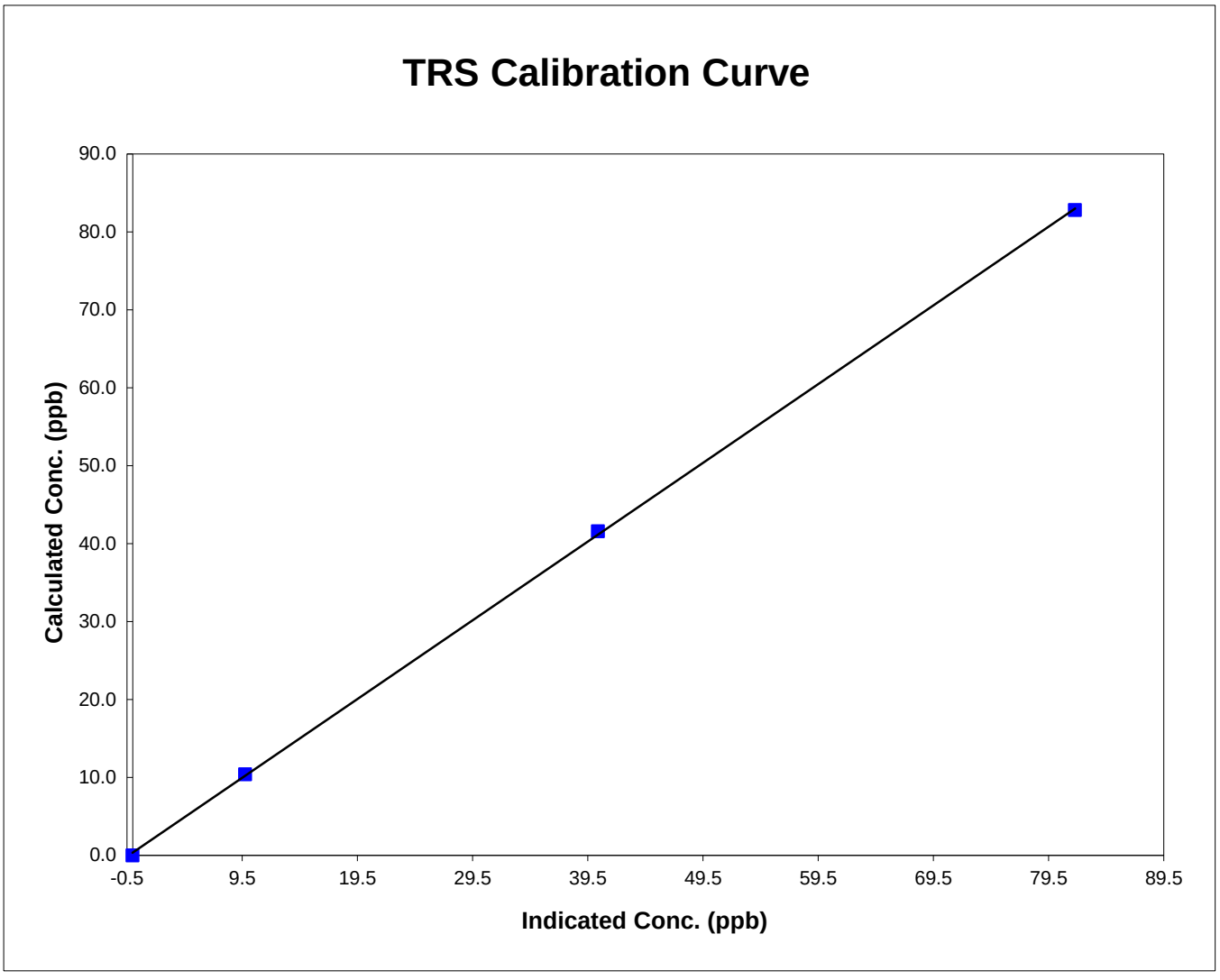
FOCUS AIR QUALITY MONITORING

Station Information

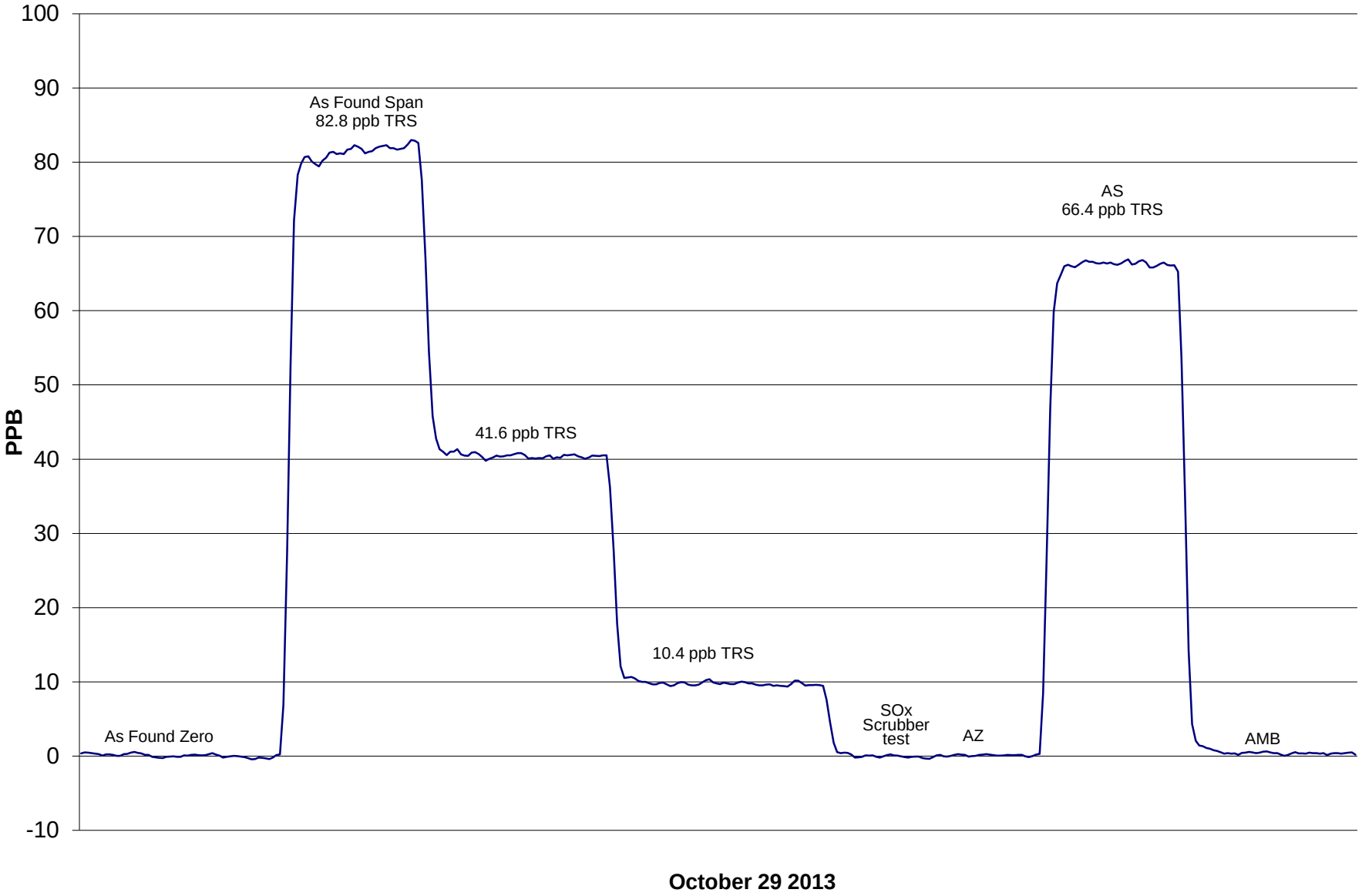
Calibration Date	October 29 2013	Previous Calibration	September 11 2013
Station Number	PAZA Rover	Station Location	Sunset House
Start Time (MST)	16:41	End Time (MST)	19:41
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
82.8	81.8	1.0123	Correlation Coefficient	0.999917
41.6	40.4	1.0293		
10.4	9.8	1.0662	Slope	1.010301
			Intercept	0.377330



TRS Calibration



Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 26, 2013	Previous Calibration	September 28, 2013
Station Number	1	Station Location	Falher

Reason: Routine | Install | Removal | Other:

Start Time (MST)	11:36	End Time (MST)	14:18
Barometric Pressure	0.931 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Concentration	51.5 ppm	Cal Gas Expiry Date	25/02/2025
Correction factor	0.031647	Cal Gas Cylinder #	LL105159
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.994783	Calculated slope	0.998241
Calculated intercept	1.978809	Calculated intercept	0.496766

Analyzer make	Teco 43i	Analyzer serial # 1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	6.3		6.3	
coefficient	0.903		0.903	
Lamp Voltage	842	volts	837	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	678.8	mm Hg	661.2	mm Hg
Sample Flow	0.418	ccm	0.42	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	0.7	N/A
4995	39.93	408.4	409.2	0.9981
4995	19.96	205.0	204.4	1.0031
4995	9.97	102.6	101.1	1.0152
4995	0.0	0.0	0.7	As Found Zero
4995	39.93	408.4	409.2	As Found Span
			Average Correction Factor	1.0055

Calculated value of As Found Response: 408.370 ppm Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.7	ppm
Auto span	359.4	ppm	345.0	ppm

Notes: No adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

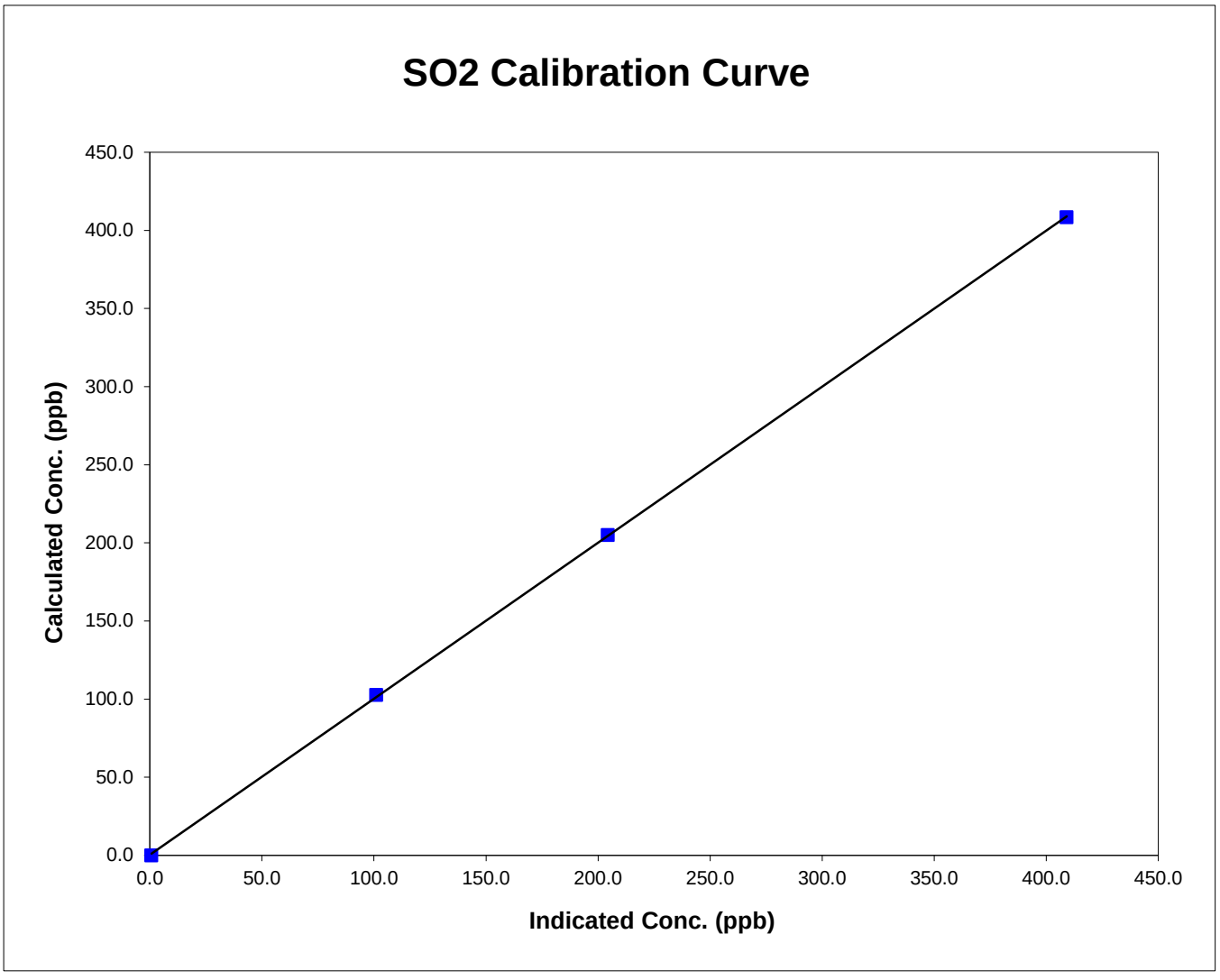
FOCUS AIR QUALITY MONITORING

Station Information

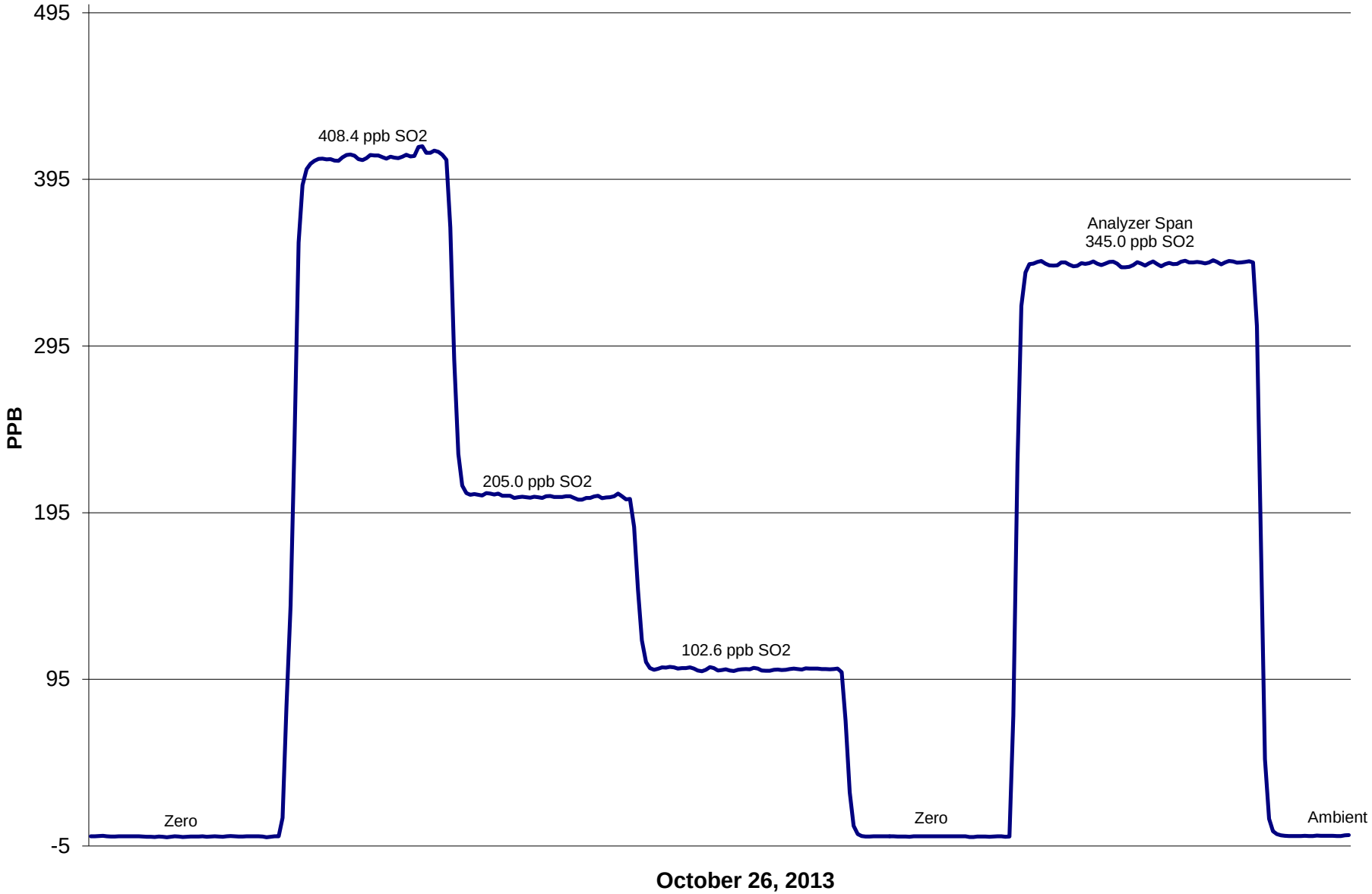
Calibration Date	October 26, 2013	Previous Calibration	September 28, 2013
Station Number	1	Station Location	Falher
Start Time (MST)	11:36	End Time (MST)	14:18
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	N/A		
408.4	409.2	0.9981	Correlation Coefficient	0.999963
205.0	204.4	1.0031		
102.6	101.1	1.0152	Slope	0.998241
			Intercept	0.496766



SO2 Calibration



Calibration Report

Parameter **H2S**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 26, 2013	Previous Calibration	September 28, 2013
Station Number	1	Station Location	Falher

Reason: Routine | Install | Removal | Other:

Start Time (MST)	9:15	End Time (MST)	12:32
Barometric Pressure	0.931 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Conc	10.4 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.031647	Cal Gas Cylinder #	LL110781
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.969632	Calculated slope	0.978289
Calculated intercept	-0.243450	Calculated intercept	-0.545598

Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	12.8	ppb	13.1	ppb
coefficient	1.169		1.169	
Lamp Voltage	796	volts	796	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	564.9	mm Hg	565.2	mm Hg
Sample Flow	0.923	ccm	0.924	ccm
Lamp Intensity	90	mv	90	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	1.0	N/A
4995	39.93	82.48	85.1	0.9694
4995	19.96	41.39	42.5	0.9740
8994	8.97	10.36	10.9	0.9542
4995	0.00	0.00	1.0	As Found Zero
4995	39.93	82.48	85.1	As Found Span
			Average Correction Factor	0.9658

Calculated value of As Found Response: 81.29 ppm Percent Change of As Found: 1.4%

	before calibration		after calibration	
Auto zero	0.0	ppm	-0.2	ppm
Auto span	51.2	ppm	53.9	ppm

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

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PAZA**

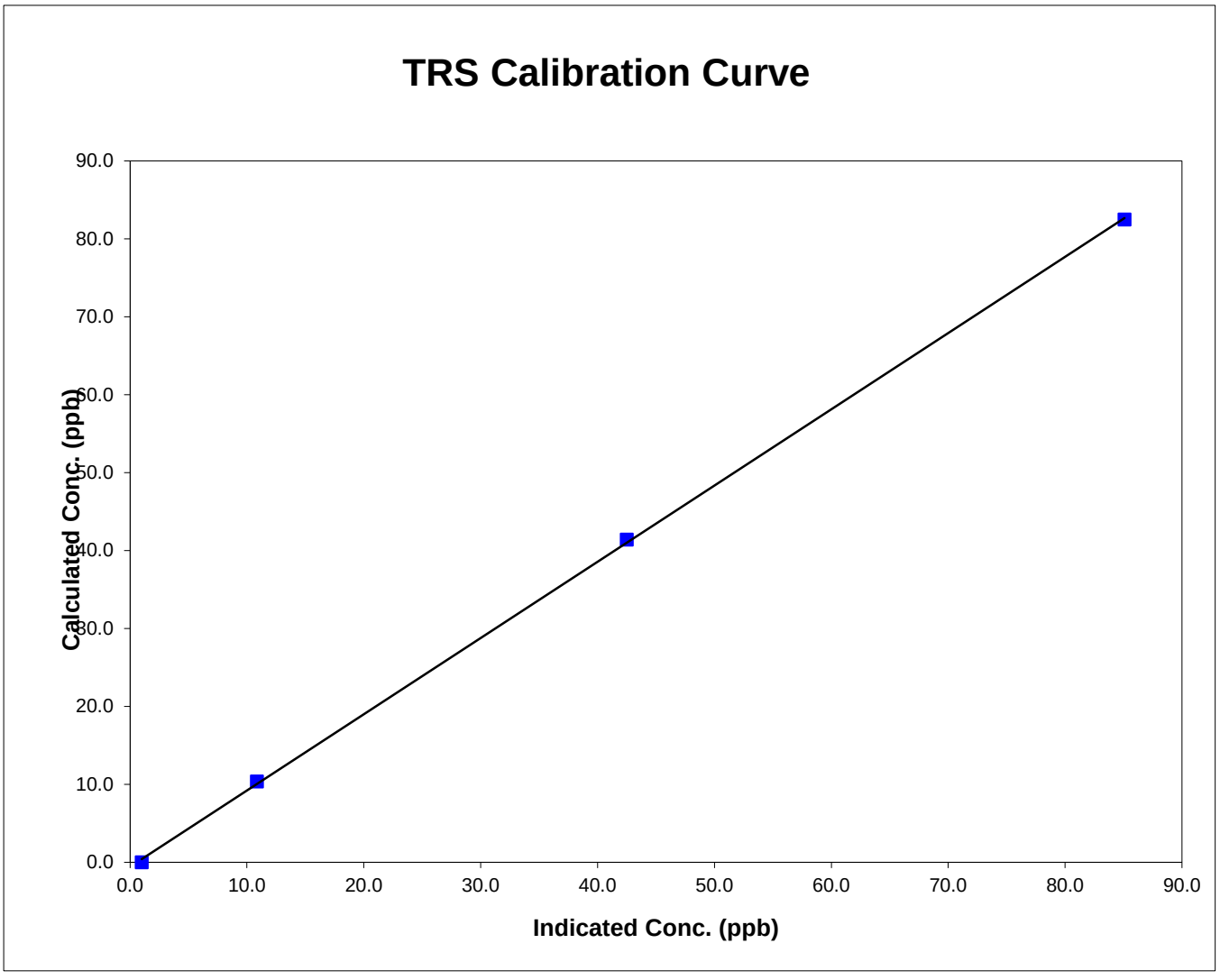
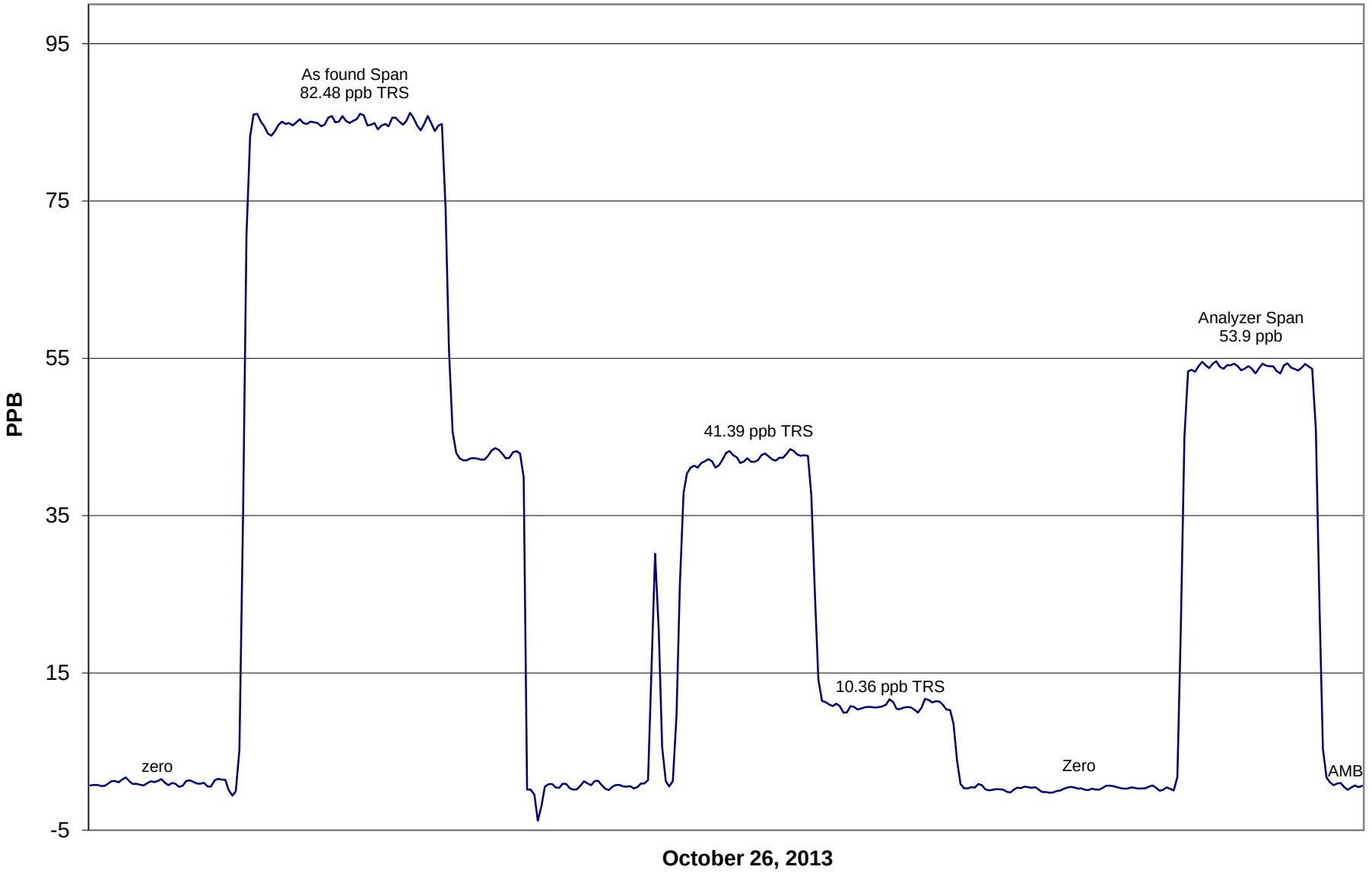
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	October 26, 2013	Previous Calibration	September 28, 2013
Station Number	1	Station Location	Falher
Start Time (MST)	9:15	End Time (MST)	12:32
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	1.0	N/A		
82.5	85.1	0.9694	Correlation Coefficient	0.999892
41.4	42.5	0.9740		
10.4	10.9	0.9542	Slope	0.978289
			Intercept	-0.545598



H2S Calibration