Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program
Monthly Report
November 2014

Peace Airshed Zone Association
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January 6th, 2015

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

RE: Peace Airshed Zone Association (PAZA) – November 2014 Ambient Air Report

Enclosed is the PAZA Ambient Monitoring Network Report for the month of **November 2014**.

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
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
	Gold Creek	13-26-067-05-W6	00010446-02-00

Company	Facility	LSD	EPEA Approval Number
	Teepee Creek	SE-2-074-04-W6	00001635-02-00
	Sturgeon/Valleyview	02-02-069-22-W5	1633-02-00
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-Clairmont.**

During the month of **November** 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 November.

Evergreen Park Station:

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

Smoky Heights Station:

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

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 November.

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 November.

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 November.

Clairmont Station:

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

Passive Monitoring - 46 Stations throughout the PAZA zone:

There were five duplicate sites sampled in the month of November: Boone Creek, Woking, Clairmont Lake, Deer Mountain, and Girouxville 3. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

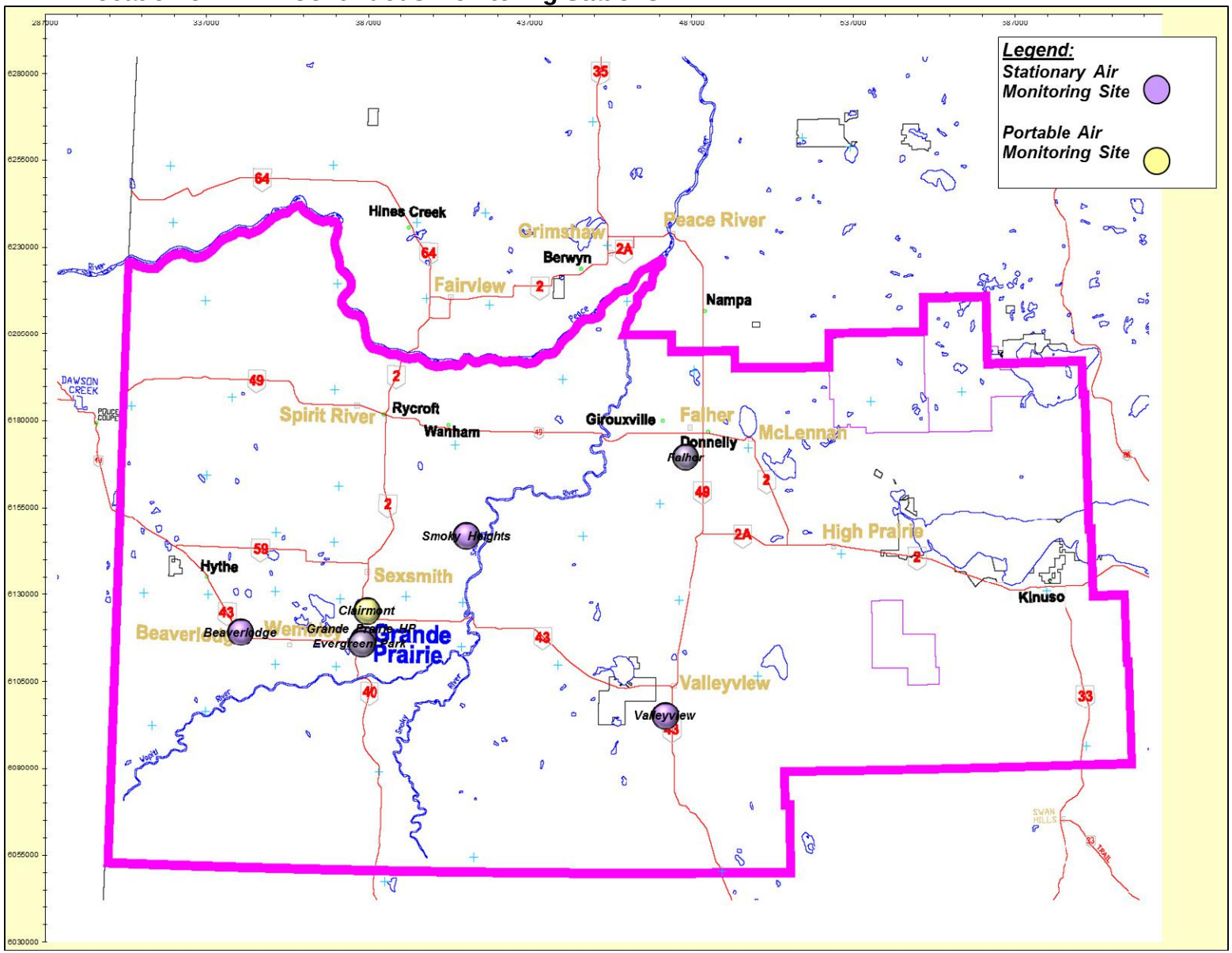
- Monthly average concentrations for SO_2 passives ranged from 0.1 ppb to 0.8 ppb, with a mean of 0.4 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.3 ppb to 14.4 ppb, with a mean of 2.6 ppb.
- Monthly average concentrations for O_3 passives ranged from 15.4 ppb to 41.8 ppb, with a mean of 30.0 ppb.
- Monthly average concentrations for H_2S ranged from 0.1 ppb to 0.3 ppb, with a mean of 0.2 pbb.

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

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Nov-2014	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
Pollutant (units)	**Objectives**		**Station**	**Monthly Average**	**Exceedence**		Conc	Day	Conc	Day	**Operational Time (%)**
	1-hr	24-hr			1-hr	24-hr					
SO_2 (ppb)	172	48	Henry Pirker	0.6	0	0	4.9	Nov-14 14:00	2.5	Nov-13	100%
SO_2 (ppb)	172	48	Evergreen Park	0.4	0	0	13.8	Nov-12 14:00	2.5	Nov-12	98%
SO_2 (ppb)	172	48	Smoky Heights	0.6	0	0	9.4	Nov-10 17:00	2.0	Nov-13	100%
SO_2 (ppb)	172	48	Beaverlodge	0.6	0	0	5.1	Nov-12 23:00	1.9	Nov-20	100%
SO_2 (ppb)	172	48	Valleyview	0.5	0	0	109.4	Nov-18 01:00	6.2	Nov-18	100%
SO_2 (ppb)	172	48	Falher	0.2	0	0	2.3	Nov-17 10:00	0.9	Nov-17	100%
SO_2 (ppb)	172	48	Clairmont	0.6	0	0	4.4	Nov-13 11:00	2.4	Nov-13	100%
NO (ppb)			Henry Pirker	17.1	0	0	175.9	Nov-17 10:00	50.9	Nov-17	100%
NO_2 (ppb)	159	106	Henry Pirker	18.5	0	0	61.3	Nov-17 15:00	38.7	Nov-30	100%
NO_X (ppb)			Henry Pirker	35.6	0	0	232.0	Nov-17 15:00	84.4	Nov-17	100%
NO (ppb)			Beaverlodge	2.2	0	0	42.7	Nov-13 12:00	9.5	Nov-13	100%
NO_2 (ppb)	159	106	Beaverlodge	7.3	0	0	28.9	Nov-13 00:00	19.2	Nov-12	100%
NO_X (ppb)			Beaverlodge	9.5	0	0	60.8	Nov-24 15:00	26.6	Nov-12	100%
NO (ppb)			Clairmont	8.3	0	0	133.5	Nov-17 14:00	36.7	Nov-20	100%
NO_2 (ppb)	159	106	Clairmont	10.6	0	0	50.6	Nov-17 14:00	31.6	Nov-30	100%
NO_X (ppb)			Clairmont	20.5	0	0	184.8	Nov-17 14:00	61.3	Nov-20	100%
O_3 (ppb)	82		Henry Pirker	13.7	0	-	37.8	Nov-15 17:00	30.4	Nov-18	100%
O_3 (ppb) - 8-hr			Henry Pirker		0				33.1	Nov-18	
O_3 (ppb)	82		Beaverlodge	23.6	0	-	42.2	Dec-01 00:00	34.7	Nov-18	100%
O_3 (ppb) - 8-hr			Beaverlodge		0				39.4	Nov-15	
O_3 (ppb)	82		Clairmont	17.6	0	-	39.1	Nov-15 17:00	33.3	Nov-18	100%
O_3 (ppb) - 8-hr			Clairmont		0				35.1	Nov-16	
CO (ppm)	13		Henry Pirker	0.23	0	-	1.4	Nov-01 23:00	0.5	Nov-01	100%
CO (ppm) - 8-hr	5		Henry Pirker		0				1.0	Nov-02	

PAZA Monthly Continuous Data Summary – continued

Nov-2014	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
THC (ppm)			Henry Pirker	2.1	-	-	4.5	Nov-29 07:00	2.5	Nov-17	100%
CH_4 (ppm)			Henry Pirker	2.1	-	-	4.5	Nov-29 07:00	2.5	Nov-17	100%
NMHC (ppm)			Henry Pirker	0.0	-	-	0.0	Nov-29 08:00	0.0	Nov-29	100%
THC (ppm)			Clairmont	2.42	-	-	4.0	Nov-14 01:00	3.1	Nov-13	100%
TRS (ppb)			Henry Pirker	0.3	-	-	1.2	Nov-10 21:00	0.5	Nov-17	100%
TRS (ppb)			Evergreen Park	0.4	-	-	3.5	Nov-13 09:00	1.1	Nov-13	98%
TRS (ppb)			Smoky Heights	0.1	-	-	1.3	Dec-01 00:00	0.3	Nov-14	100%
TRS (ppb)			Clairmont	0.4	-	-	1.5	Nov-02 01:00	0.7	Nov-20	100%
H_2S (ppb)	10	3	Valleyview	0.3	0	0	3.6	Nov-12 09:00	1.0	Nov-12	100%
H_2S (ppb)	10	3	Falher	0.1	0	0	1.2	Nov-01 20:00	0.4	Nov-06	100%
$PM_{2.5}$ (µg/m3)	80	30	Henry Pirker	10.6	0	0	47.6	Nov-13 08:00	29.5	Nov-13	100%
$PM_{2.5}$ (µg/m3)	80	30	Evergreen Park	5.9	0	0	31.8	Jan-04 15:00	15.8	Nov-20	98%
$PM_{2.5}$ (µg/m3)	80	30	Smoky Heights	7.0	0	0	67.6	Nov-11 00:00	24.2	Nov-13	100%
$PM_{2.5}$ (µg/m3)	80	30	Beaverlodge	6.5	0	0	25.9	Nov-21 19:00	14.3	Nov-12	100%
$PM_{2.5}$ (µg/m3)	80	30	Clairmont	6.4	0	0	47.8	Nov-13 15:00	13.7	Nov-20	89%
RH (%)			Henry Pirker	71.8	-	-	89.1	Nov-21 23:00	86.0	Nov-21	100%
RH (%)			Evergreen Park	77.7	-	-	97.4	Nov-22 03:00	92.4	Nov-21	98%
RH (%)			Beaverlodge	85.5	-	-	100.0	Nov-07 19:00	99.5	Nov-08	99%
RH (%)			Valleyview	77.2	-	-	100.0	Nov-21 18:00	95.7	Nov-21	100%
SR (W/m^2)			Henry Pirker	35.6	-	-	315.6	Nov-01 13:00	73.9	Nov-01	100%
Temp (°C)			Henry Pirker	-9.5	-	-	9.7	Nov-04 15:00	3.7	Nov-06	100%
Temp (°C)			Evergreen Park	-9.0	-	-	10.5	Nov-01 17:00	4.5	Nov-06	98%
Temp (°C)			Smoky Heights	-10.0	-	-	8.7	Nov-04 16:00	4.8	Nov-06	100%
Temp (°C)			Beaverlodge	-7.9	-	-	8.9	Nov-04 14:00	3.5	Nov-06	99%
Temp (°C)			Valleyview	-8.2	-	-	9.9	Nov-01 16:00	5.7	Nov-06	100%
Temp (°C)			Falher	-9.9	-	-	8.8	Nov-01 16:00	4.1	Nov-06	100%
Temp (°C)			Clairmont	-9.8	-	-	8.4	Nov-04 15:00	3.8	Nov-06	100%

PAZA Monthly Continuous Data Summary – continued

Nov-2014	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
WSPD s (km/hr)			Henry Pirker	5.4	-	-	20.0	Nov-04 15:00	12.6	Nov-22	100%
WSPD s (km/hr)			Evergreen Park	6.8	-	-	39.0	Nov-04 15:00	19.2	Nov-27	98%
WSPD s (km/hr)			Smoky Heights	16.0	-	-	40.0	Nov-18 04:00	27.7	Nov-18	78%
WSPD s (km/hr)			Beaverlodge	7.2	-	-	33.0	Nov-04 15:00	16.5	Nov-27	100%
WSPD s (km/hr)			Valleyview	3.9	-	-	38.0	Nov-29 09:00	11.9	Nov-27	100%
WSPD s (km/hr)			Falher	11.1	-	-	35.0	Nov-22 01:00	23.0	Nov-27	100%
WSPD s (km/hr)			Clairmont	7.6	-	-	31.0	Nov-21 21:00	21.8	Nov-27	100%
WSPD v (km/hr)			Henry Pirker	1.6	-	-	20.0	Nov-04 15:00	10.6	Nov-22	100%
WSPD v (km/hr)			Evergreen Park	1.9	-	-	39.0	Nov-04 15:00	18.8	Nov-27	98%
WSPD v (km/hr)			Smoky Heights	4.6	-	-	40.0	Nov-18 04:00	24.2	Nov-18	78%
WSPD v (km/hr)			Beaverlodge	2.7	-	-	33.0	Nov-04 15:00	16.3	Nov-27	100%
WSPD v (km/hr)			Valleyview	1.1	-	-	38.0	Nov-29 09:00	11.4	Nov-27	100%
WSPD v (km/hr)			Falher	0.8	-	-	34.0	Nov-22 01:00	22.9	Nov-27	100%
WSPD v (km/hr)			Clairmont	2.3	-	-	31.0	Nov-21 21:00	21.6	Nov-27	100%
WDIR			Henry Pirker	NNW	-	-	-	-	-	-	100%
WDIR			Evergreen Park	NNW	-	-	-	-	-	-	98%
WDIR			Smoky Heights	WSW	-	-	-	-	-	-	78%
WDIR			Beaverlodge	N	-	-	-	-	-	-	100%
WDIR			Valleyview	NNW	-	-	-	-	-	-	100%
WDIR			Falher	N	-	-	-	-	-	-	100%
WDIR			Clairmont	N	-	-	-	-	-	-	100%

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on November 10th (SO_2, NO_X, O_3) and 11th (CO, THC, TRS).

Parameter	Make	Model	Notes
SO_2	TEI	43C	Decay in daily spans repaired during calibration in December
NOx/NO/NO_2	TEI	42C	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC/CH_4/NMHC	TEI	55I	THC analyzer checked November 18th.
TRS	TEI	45C/43C	No operational issues observed.
$PM_{2.5}$	Sharp	5030	One hour flagged invalid due to irregular operation.
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 November 21st (SO_2, TRS). Power outage on November 14th invalidated 17 hours of data.

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 November 24th (SO_2, TRS).

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Manifold cleaned during calibration period.
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	Wind head returned invalid values in late November due to freezing conditions. Replacement wind head installed in December to mitigate.

PAZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations performed on November 17th (SO_2, NO_X, O_3).

Parameter	Make	Model	Notes
SO_2	TEI	43CTL	No operational issues observed.
NOx/NO/NO_2	TEI	42C	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Manifold cleaned during calibration period.
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 November 6th (SO_2 & H_2S).

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 – Falher Station

General Station Issues

Routine monthly calibrations were performed on November 29th (SO_2 & H_2S). Power outage November 15th invalidated four hours of SO_2 and H_2S data.

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 – Portable-Clairmont

General Station Issues

Routine monthly calibrations were performed on November 18th (SO_2, NO_X, O_3) and 19th (THC, TRS). Power outage November 18th invalidated one hour of data

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
NO_x	TEI	42i	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
TRS	TEI	39C	No operational issues observed.
THC	TEI	51C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Analyzer failed to gather valid data from November 10th through November 13th, Mass transducer repaired during service visit. Analyzer filter changed November 19th.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA
Henry Pirker Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.9 ppb on Nov 14 14:00 Maximum Daily Average: 2.5 ppb on Nov 13

Minimum Value: 0 ppb on Nov 1 01:00 Minimum Daily Average: 0.1 ppb on Nov 7
Maximum Diurnal Average: 1.0 ppb at hour 15 Minimum Diurnal Average: 0.3 ppb at hour 5
Monthly Average: 0.59 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.4 Q_3 = 0.7 P_{90} = 1.5 P_{99} = 3.5

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
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-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	1	1	1	0.3	1.0
2-Nov	0	0	0	0	0	0	1	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.8
3-Nov	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	1	0.2	1.5
4-Nov	0	0	0	0	0	0	0	0	1	1	1	1	A	0	0	0	1	0	0	0	1	0	0	0	0.4	1.2
5-Nov	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.5
6-Nov	0	0	0	0	0	0	0	0	0	0	A	1	1	1	4	2	0	0	1	0	0	0	0	0	0.5	3.7
7-Nov	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
8-Nov	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.1	0.6
9-Nov	0	0	0	0	0	1	1	A	0	0	1	2	2	1	1	1	1	1	2	2	1	1	0	0	0.8	2.1
10-Nov	0	0	0	0	0	0	A	0	1	C	C	C	C	0	0	0	0	0	0	0	1	0	0	0	0.1	1.1
11-Nov	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
12-Nov	0	0	2	2	A	0	1	2	2	3	1	1	1	2	2	2	1	1	2	2	2	1	1	1	1.4	3.1
13-Nov	2	2	3	A	1	2	4	4	3	3	3	4	3	3	3	2	3	3	2	2	1	1	1	1	2.5	4.0
14-Nov	1	1	A	1	1	1	1	1	1	1	1	1	1	5	4	2	2	1	0	0	0	0	1	1	1.2	4.9
15-Nov	1	A	0	0	0	0	1	1	2	2	2	2	1	1	1	1	1	1	0	0	0	0	0	0	0.8	2.3
16-Nov	A	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	A	0.4	0.8
17-Nov	0	0	0	1	1	1	1	1	2	2	1	1	1	2	2	1	1	1	1	1	3	1	A	1	1.1	3.3
18-Nov	2	2	1	1	1	1	1	1	2	1	2	2	2	2	1	1	0	0	0	0	0	A	0	0	1.1	2.3
19-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	A	0	0	0	0.4	0.8
20-Nov	0	0	0	0	0	0	0	1	1	1	2	4	2	2	2	1	1	0	1	A	0	0	0	0	0.9	3.7
21-Nov	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.6
22-Nov	0	0	0	0	0	1	2	3	2	1	1	0	0	0	0	0	0	A	0	3	2	0	0	0	0.8	3.4
23-Nov	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	A	1	1	1	1	2	2	1	0.6	1.9
24-Nov	1	0	0	0	0	0	0	1	1	1	0	1	1	1	1	A	1	0	0	0	0	0	0	1	0.5	0.9
25-Nov	1	1	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.7
26-Nov	0	0	0	0	0	1	0	0	0	1	1	1	2	A	1	1	1	1	1	1	1	0	0	0	0.6	1.7
27-Nov	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0	1	1	0	0	0.2	0.7
28-Nov	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	0	1	1	1	1	0	1	0.4	1.3
29-Nov	0	0	0	0	0	0	0	0	0	0	A	1	1	2	1	1	1	1	1	1	1	1	0	1	0.6	2.0
30-Nov	1	1	0	0	0	0	1	1	0	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.6	0.9
	0.4	0.3	0.4	0.3	0.3	0.4	0.5	0.6	0.8	0.7	0.7	1.0	0.9	0.9	1.0	0.7	0.6	0.5	0.6	0.6	0.6	0.5	0.4	0.4	Diurnal Average	
	2.0	2.3	2.9	1.8	1.5	2.4	3.7	3.7	3.2	3.1	3.1	4.0	3.4	4.9	3.7	2.3	3.1	2.9	1.9	3.4	3.3	1.9	1.9	1.4	Diurnal Maximum	

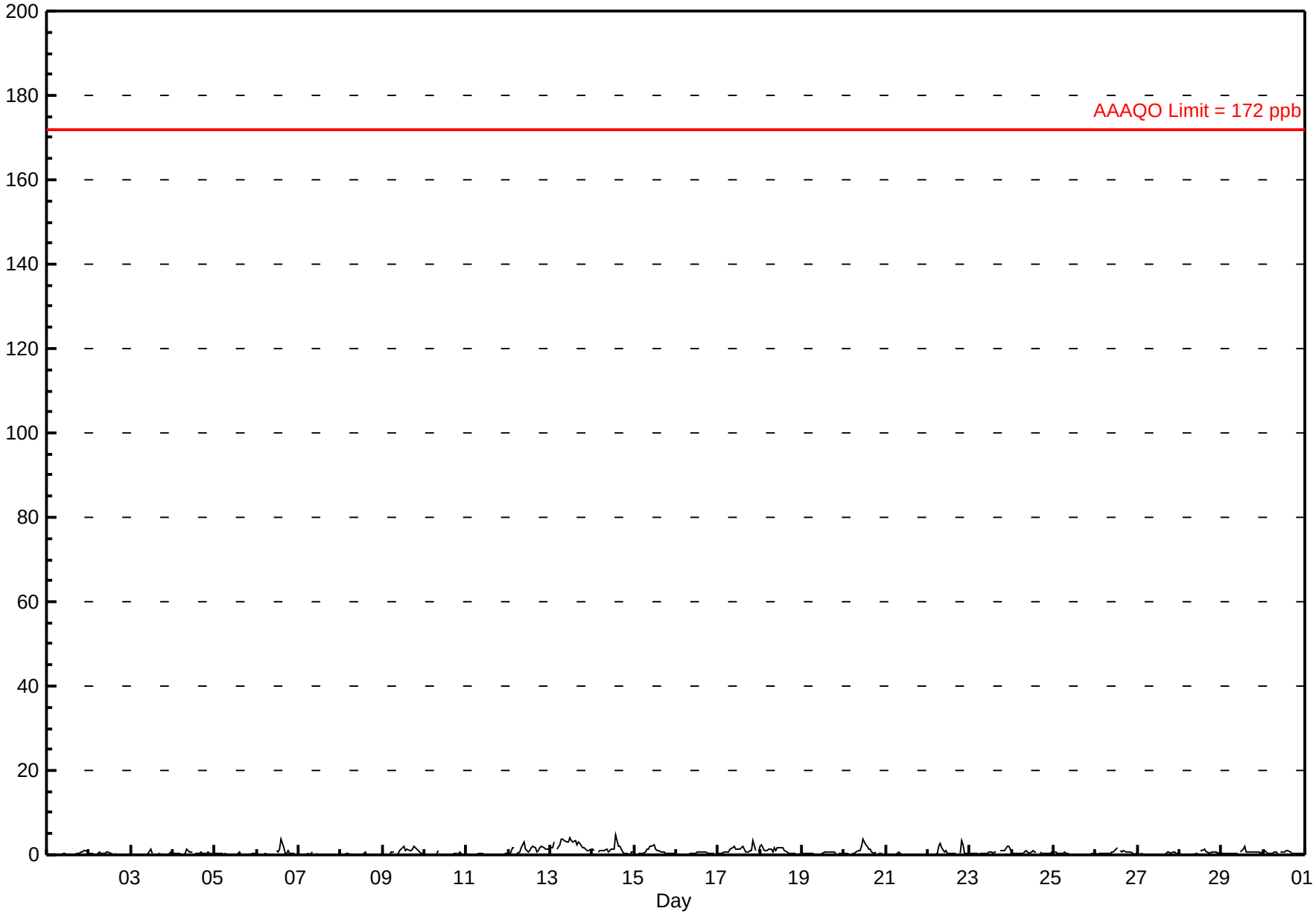
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - November 2014

Maximum Value: 8.5 ppb on Nov 22 20:00

Maximum Daily Average: 3.3 ppb on Nov 13

Minimum Value: 0 ppb on Nov 21 21:00

Minimum Daily Average: 0.4 ppb on Nov 7

Maximum Diurnal Average: 1.8 ppb at hour 15

Minimum Diurnal Average: 0.6 ppb at hour 4

Monthly Average: 1.11 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.4 Q_1 = 0.5 Median = 0.8 Q_3 = 1.3 P_{90} = 2.4 P_{99} = 5.2

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
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-Nov	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	1	1	1	0.7	1.5
2-Nov	1	0	1	0	0	0	1	0	0	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0.6	1.4
3-Nov	2	0	0	0	0	0	0	0	0	0	1	4	0	A	1	1	1	1	1	1	1	1	1	1	0.8	3.9
4-Nov	1	1	1	1	1	1	0	2	4	1	1	2	A	1	1	1	1	1	1	1	2	1	1	1	1.1	4.2
5-Nov	1	1	1	1	1	0	1	1	1	1	1	A	1	1	3	1	1	1	1	1	1	1	1	1	0.7	2.8
6-Nov	1	0	0	0	0	1	0	0	1	1	A	2	1	7	7	4	1	1	2	1	1	1	1	1	1.4	7.5
7-Nov	1	1	1	0	0	1	1	1	2	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.5
8-Nov	0	0	1	1	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.5	1.4
9-Nov	0	0	0	0	1	4	4	A	1	1	2	2	4	2	2	2	2	3	3	3	2	1	1	1	1.7	3.7
10-Nov	1	0	0	0	0	0	A	1	3	C	C	C	C	0	0	0	0	0	1	1	1	0	0	0	0.6	3.4
11-Nov	0	0	0	0	0	A	1	1	1	1	0	1	1	0	0	0	0	0	0	1	0	1	1	1	0.5	1.0
12-Nov	1	0	3	3	A	1	1	3	3	4	2	1	2	2	3	3	1	2	3	3	2	1	1	2	2.0	4.0
13-Nov	2	2	4	A	2	3	4	4	4	3	4	5	4	5	5	3	4	4	2	2	2	2	2	2	3.3	5.4
14-Nov	2	1	A	1	1	1	2	2	2	1	2	2	2	7	6	3	3	2	1	0	0	0	1	1	1.9	7.4
15-Nov	1	A	1	0	0	0	1	2	2	3	3	3	2	1	2	1	1	1	1	1	1	1	1	1	1.3	3.3
16-Nov	A	1	0	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.3
17-Nov	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	2	7	1	A	1	1.8	6.9
18-Nov	3	3	2	1	1	1	2	1	3	1	2	2	2	2	2	1	1	1	1	1	1	A	1	1	1.7	3.5
19-Nov	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.3
20-Nov	1	0	1	0	0	1	1	1	1	1	4	5	4	3	2	2	1	1	1	A	1	1	1	0	1.4	5.2
21-Nov	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0.4	0.8
22-Nov	1	1	1	0	0	2	3	4	3	2	4	1	1	1	1	1	1	A	1	9	5	1	1	1	1.7	8.5
23-Nov	1	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	A	1	1	1	1	2	3	2	1.0	2.6
24-Nov	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	0.9	1.4
25-Nov	1	1	1	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0.6	1.4
26-Nov	0	1	1	1	1	1	1	1	1	1	1	2	2	A	1	1	1	1	1	1	1	1	0	0	1.0	2.2
27-Nov	0	1	1	0	0	0	0	0	1	0	0	0	A	0	0	0	1	1	1	1	1	1	0	1	0.6	1.4
28-Nov	0	0	0	0	0	0	0	0	0	0	0	A	2	2	2	1	1	1	1	1	1	1	1	1	0.8	1.9
29-Nov	1	1	1	1	0	1	1	0	0	0	A	1	4	4	1	1	1	1	1	1	1	1	1	1	1.1	3.9
30-Nov	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1.0	1.8
	0.9	0.8	0.9	0.6	0.6	0.9	1.1	1.2	1.4	1.2	1.4	1.6	1.5	1.7	1.8	1.2	1.0	1.0	1.0	1.2	1.3	0.9	0.8	0.8	Diurnal Average	
	3.5	3.5	4.0	2.6	1.9	3.7	4.4	4.4	4.2	4.0	3.9	5.2	4.3	7.5	7.1	4.1	3.8	3.9	2.7	8.5	6.9	2.4	2.6	2.0	Diurnal Maximum	

C - Calibration

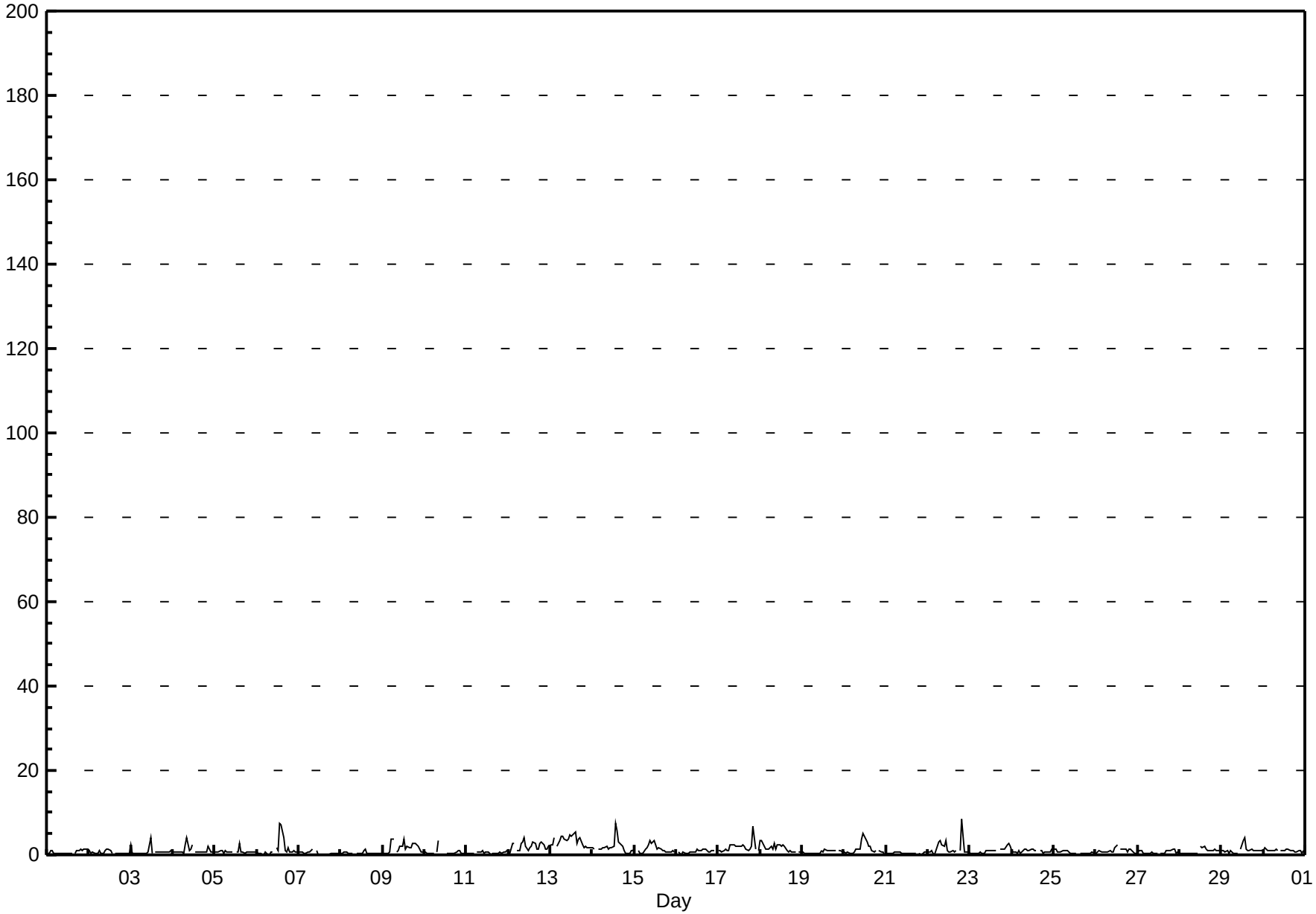
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - November 2014

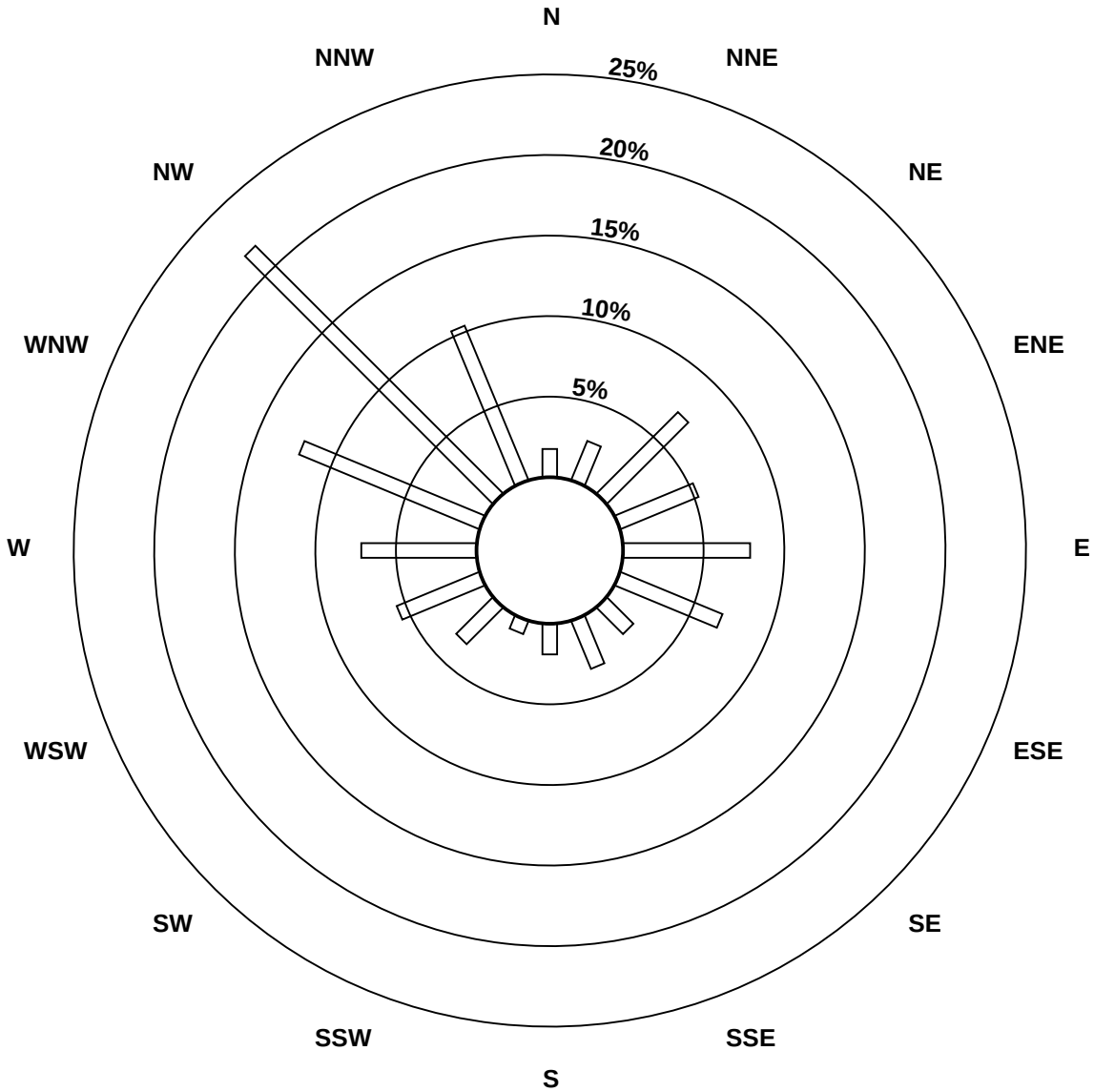


Peace Airshed Zone Association

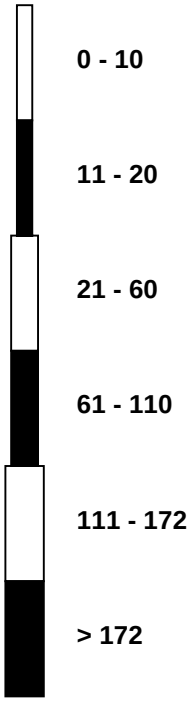
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - November 2014



Pollutant Classes (ppb)

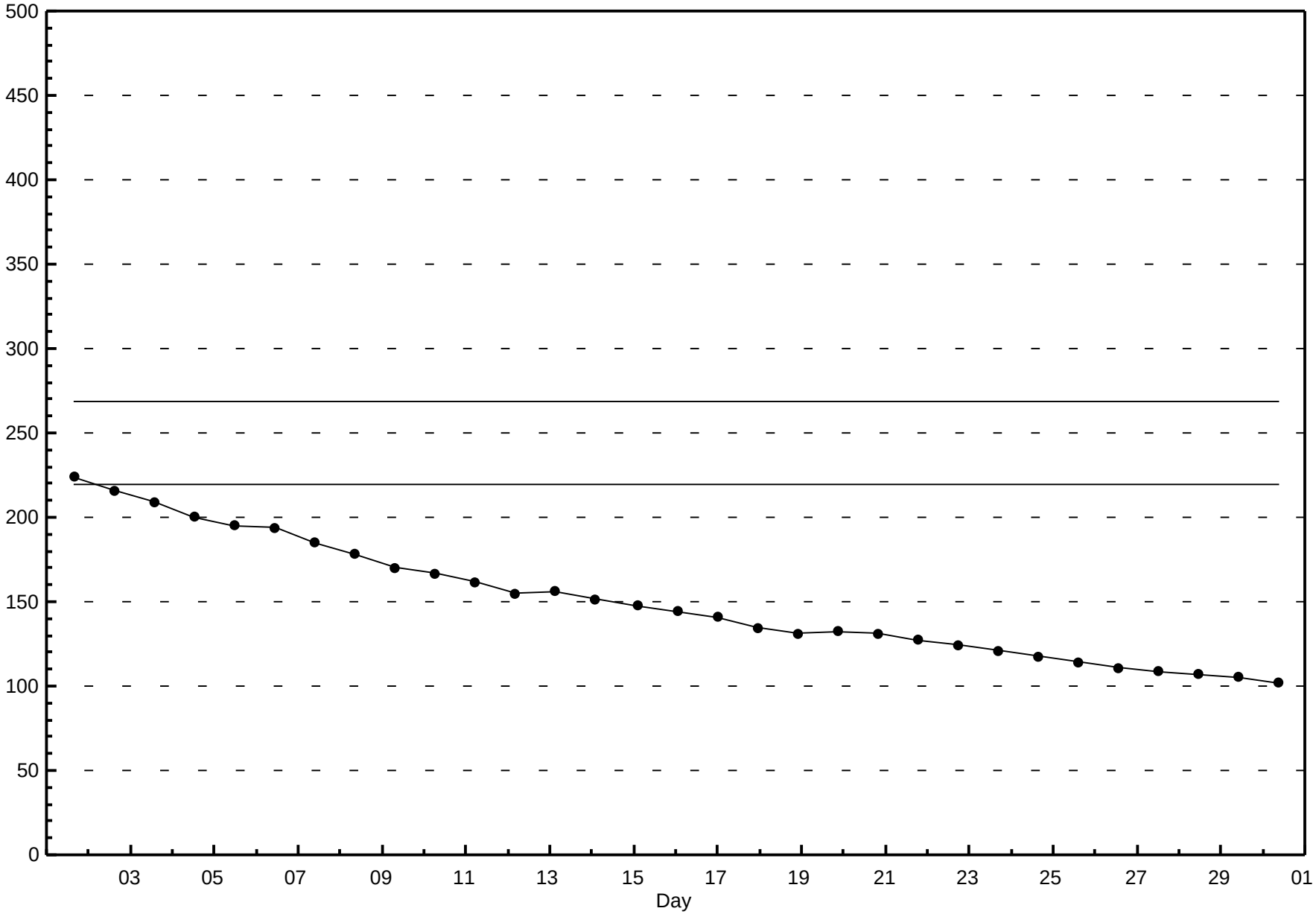


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.2 ppb on Nov 10 21:00 Maximum Daily Average: 0.5 ppb on Nov 17

Minimum Value: 0 ppb on Nov 1 01:00 Minimum Daily Average: 0.1 ppb on Nov 22
Maximum Diurnal Average: 0.3 ppb at hour 9 Minimum Diurnal Average: 0.2 ppb at hour 4
Monthly Average: 0.27 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.2 $Q_3 = 0.3$ $P_{90} = 0.5$ $P_{99} = 0.7$

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
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-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0	1	1	0	0.2	0.7
2-Nov	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
3-Nov	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
4-Nov	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
5-Nov	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
6-Nov	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
7-Nov	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	0.2
8-Nov	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
9-Nov	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
10-Nov	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	1.2
11-Nov	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
12-Nov	0	0	0	1	A	1	1	1	1	1	1	1	1	1	C	C	C	C	0	0	0	0	0	0	0.4	0.7
13-Nov	0	0	1	A	0	0	0	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0.4	0.7
14-Nov	0	0	A	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
15-Nov	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
16-Nov	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.5
17-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	A	0	0.5	0.8
18-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4
19-Nov	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	1	1	1	0.4	0.7
20-Nov	1	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.6
21-Nov	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
22-Nov	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
23-Nov	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
24-Nov	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0.4	0.6
25-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.4
26-Nov	0	0	0	0	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	0	0	0	0	0.5	0.7
27-Nov	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
28-Nov	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
29-Nov	0	0	0	0	0	0	0	0	1	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
30-Nov	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	Diurnal Average	
	0.6	0.5	0.6	0.6	0.6	0.7	0.6	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.5	0.6	0.6	0.6	0.6	1.2	0.5	0.7	0.7	Diurnal Maximum	

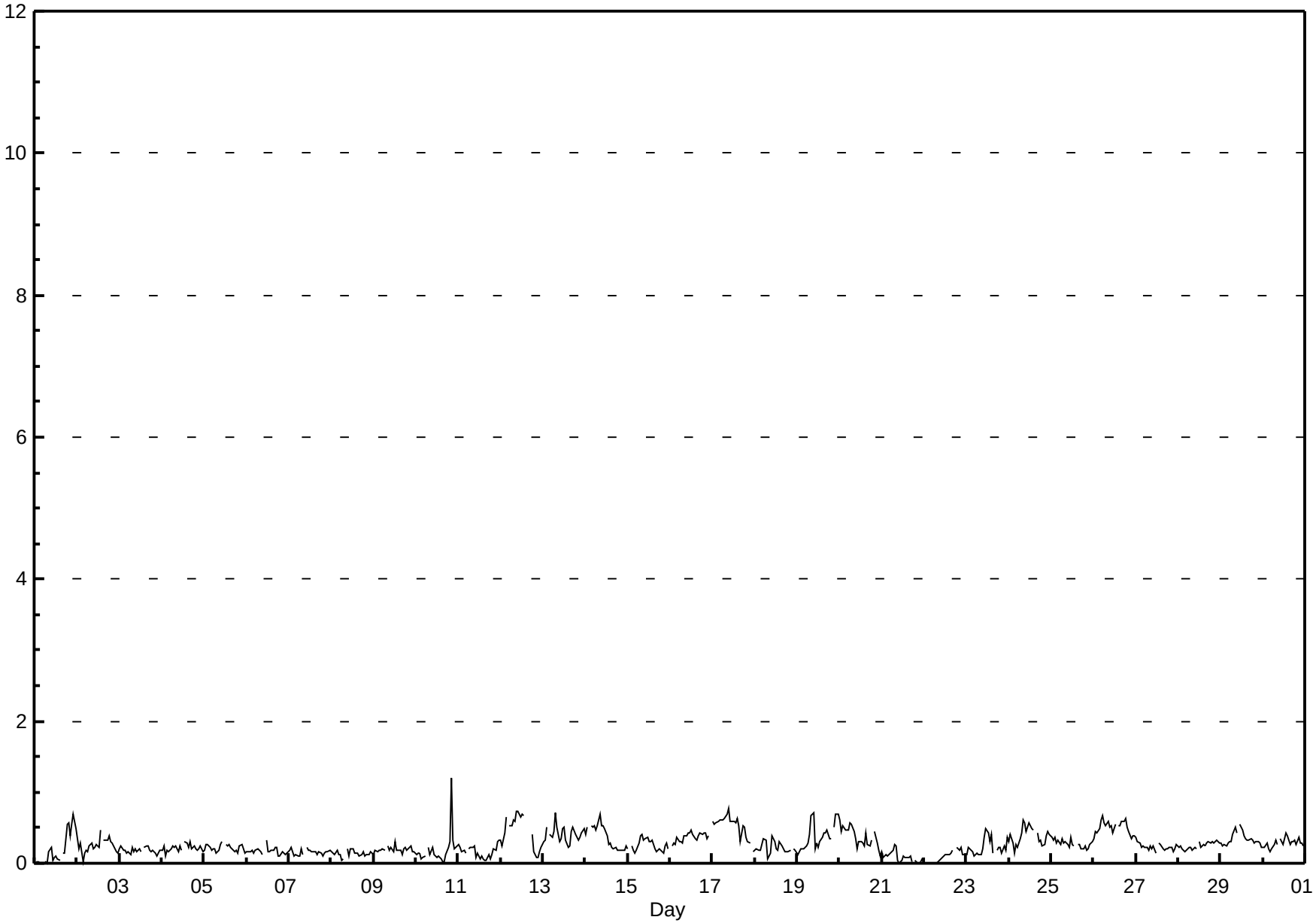
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - November 2014

Maximum Value: 2.6 ppb on Nov 10 21:00

Maximum Daily Average: 1.0 ppb on Nov 17

Minimum Value: 0 ppb on Nov 22 04:00

Minimum Daily Average: 0.5 ppb on Nov 22

Maximum Diurnal Average: 0.8 ppb at hour 10

Minimum Diurnal Average: 0.7 ppb at hour 4

Monthly Average: 0.72 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 0.8$ $P_{90} = 1.0$ $P_{99} = 1.3$

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
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-Nov	1	1	0	1	0	1	1	1	1	1	1	0	0	1	1	A	1	1	1	1	1	1	1	1	0.8	1.5
2-Nov	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	0.7	1.0
3-Nov	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	0	0	1	0.6	0.8
4-Nov	1	1	1	1	1	0	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
5-Nov	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	0	0	1	0	1	1	1	0	0.6	0.8
6-Nov	0	1	1	1	1	1	1	0	1	0	A	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6	0.7
7-Nov	1	1	1	1	0	0	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.6	0.8
8-Nov	1	1	1	1	1	0	1	0	A	1	1	1	1	1	1	0	0	1	0	0	0	1	1	0	0.5	0.6
9-Nov	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.6	0.8
10-Nov	1	1	1	0	0	0	A	1	0	1	0	1	1	0	1	1	0	1	1	1	3	1	1	1	0.7	2.6
11-Nov	1	1	1	1	1	A	1	1	1	1	0	1	0	0	0	0	0	1	0	0	1	1	1	1	0.6	0.9
12-Nov	1	1	1	1	A	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	0	1	1	0.9	1.4
13-Nov	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	1.1
14-Nov	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	1.3
15-Nov	1	A	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
16-Nov	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	A	0.8	1.5
17-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.5
18-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.1
19-Nov	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.2
20-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0.8	1.1
21-Nov	1	0	1	1	1	1	1	1	1	1	0	1	1	0	0	1	1	1	A	0	1	0	0	0	0.5	0.7
22-Nov	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	A	1	1	1	1	1	0	0.5	0.8
23-Nov	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.7	1.2
24-Nov	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.2
25-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.0
26-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.2
27-Nov	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
28-Nov	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
29-Nov	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	1.1
30-Nov	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.7	Diurnal Average	
	1.2	1.2	1.1	1.1	1.2	1.2	1.1	1.1	1.3	1.5	1.2	1.1	1.1	1.5	1.2	1.2	1.1	1.2	1.4	1.5	2.6	1.2	1.2	1.2	Diurnal Maximum	

C - Calibration

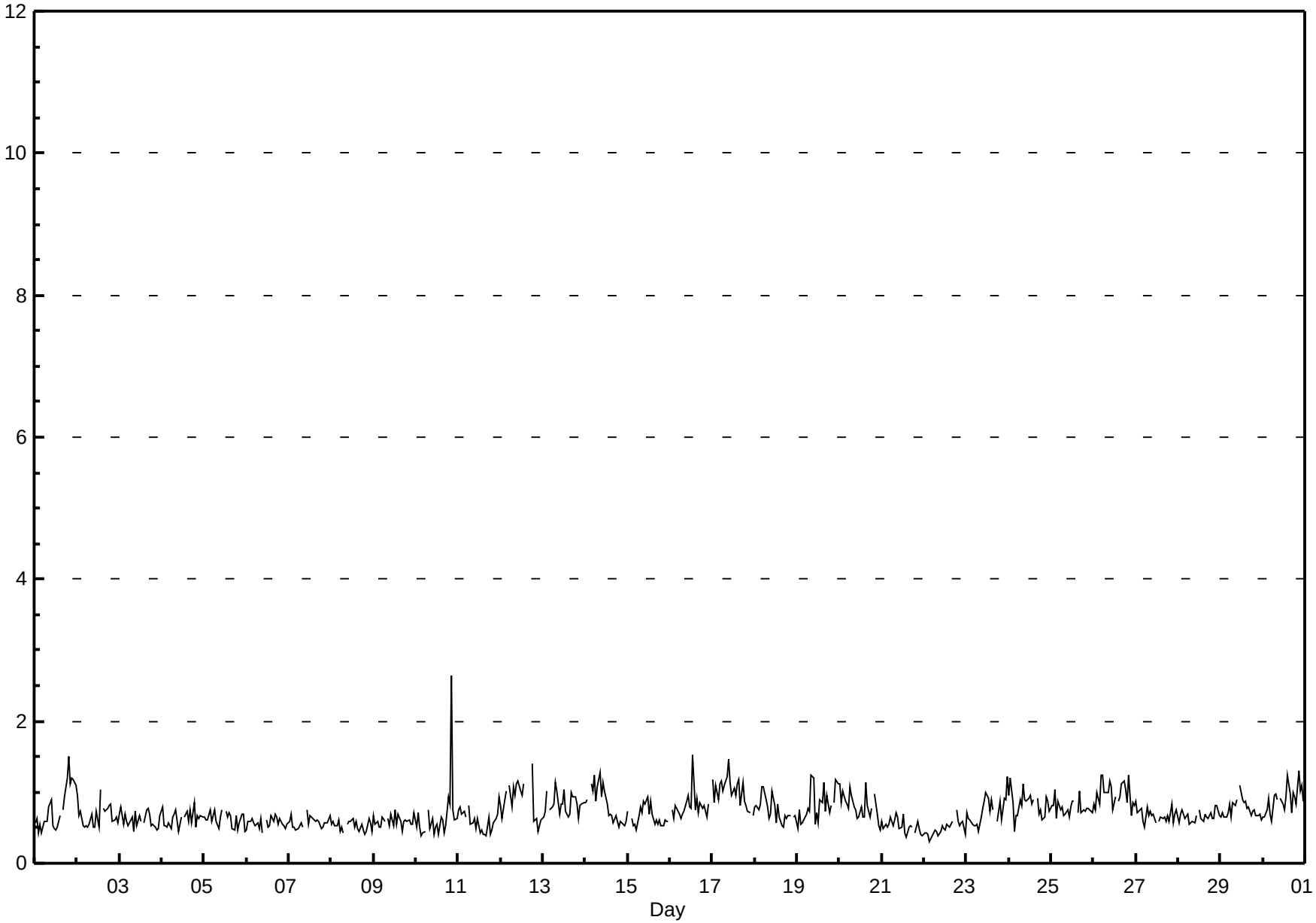
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

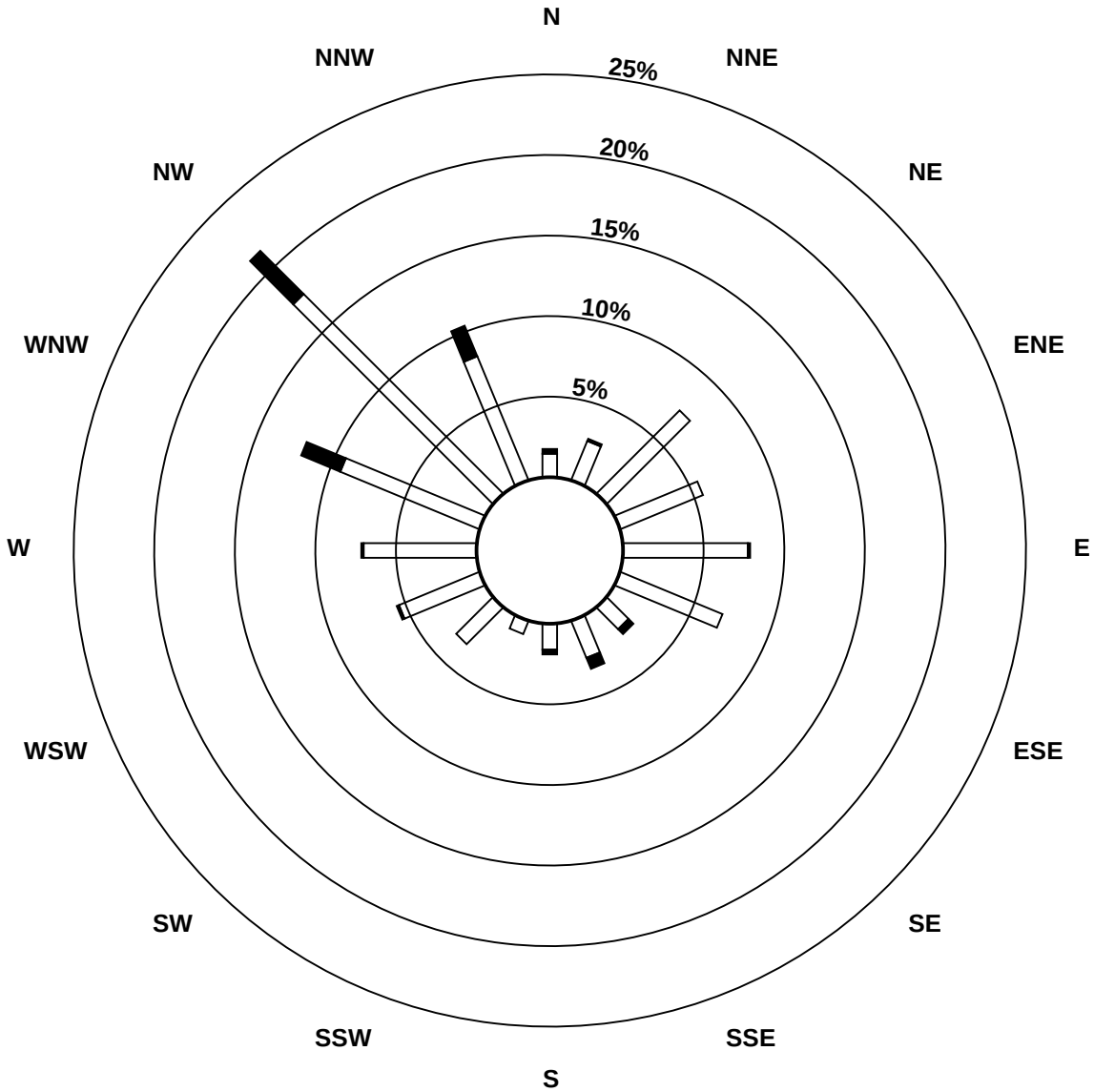
Henry Pirker - November 2014



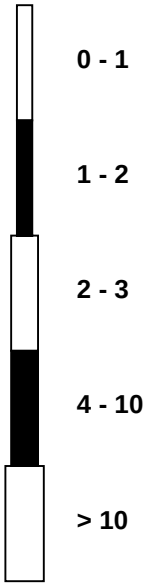
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - November 2014



Pollutant Classes (ppb)

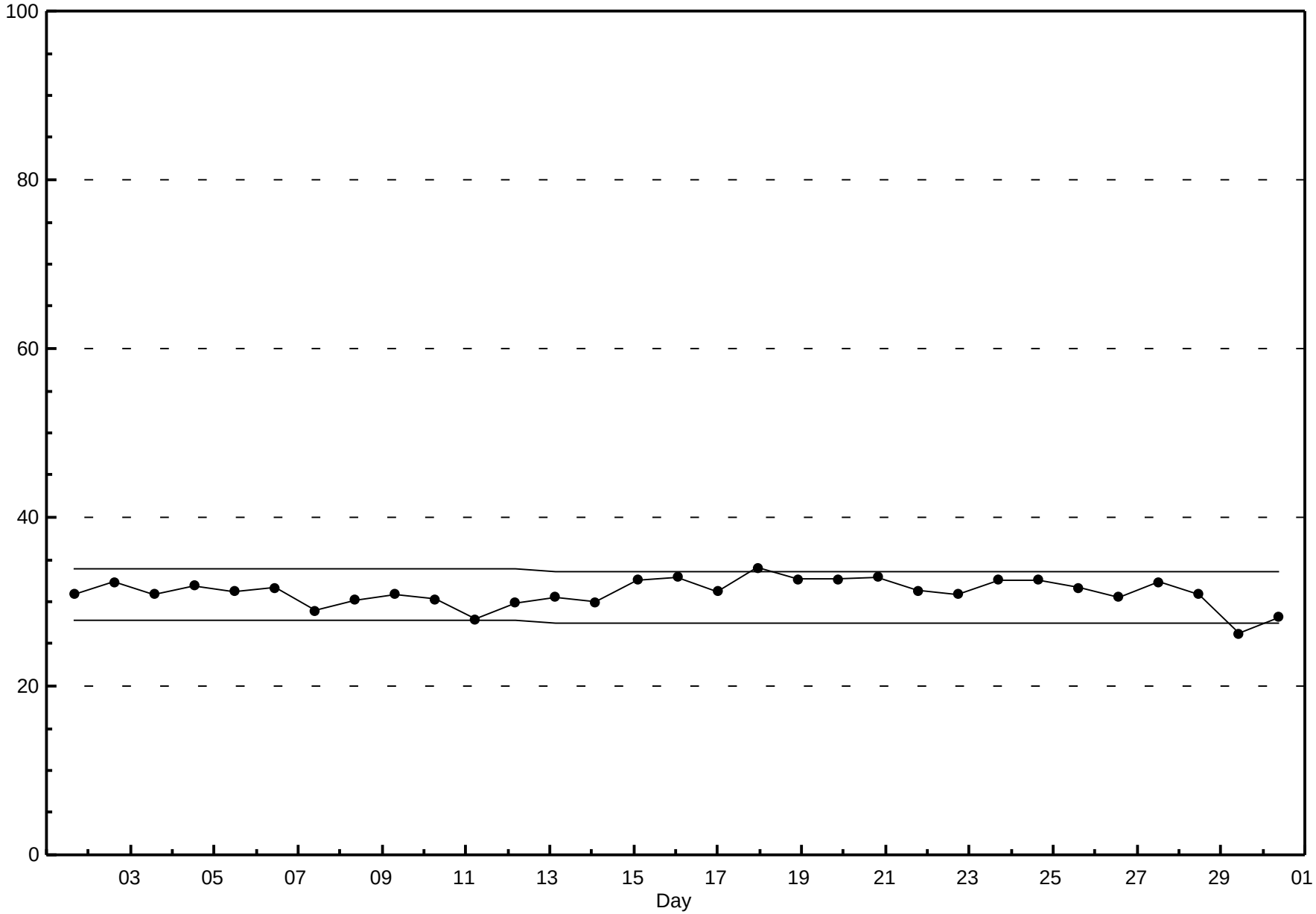


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - November 2014

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

Maximum Value: 61.3 ppb on Nov 17 15:00

Maximum Daily Average: 38.7 ppb on Nov 30

Minimum Value: 1 ppb on Nov 7 04:00

Minimum Daily Average: 4.3 ppb on Nov 7

Maximum Diurnal Average: 24.4 ppb at hour 9

Minimum Diurnal Average: 14.0 ppb at hour 4

Monthly Average: 18.49 ppb

Percentiles: P_1 = 2.6 P_{10} = 4.9 Q_1 = 7.3 Median = 16.3 Q_3 = 28.1 P_{90} = 35.2 P_{99} = 48.7

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	6	7	7	8	14	15	17	20	20	18	16	13	14	13	7	A	19	29	31	27	27	27	26	20	17.4	30.6
2-Nov	18	15	15	14	16	16	16	17	19	16	15	18	13	11	A	17	15	17	19	14	11	6	7	4	14.3	19.4
3-Nov	3	2	4	7	7	8	20	28	25	16	11	11	10	A	6	7	9	16	9	7	7	6	5	7	10.0	27.7
4-Nov	6	4	5	7	10	15	16	17	16	17	13	13	A	6	5	6	8	12	15	10	10	10	9	9	10.5	17.0
5-Nov	5	4	6	5	7	8	10	17	21	23	23	A	13	8	5	7	8	7	7	8	7	5	5	5	9.2	23.0
6-Nov	5	5	5	6	7	10	17	15	14	11	A	23	16	16	18	20	20	26	23	21	8	6	5	5	13.1	25.8
7-Nov	3	1	2	1	2	3	4	7	6	A	6	4	4	3	4	7	5	5	7	6	6	5	5	4	4.3	7.4
8-Nov	5	4	5	5	4	4	5	7	A	10	8	7	4	4	4	5	6	7	7	6	8	10	18	8	6.6	17.5
9-Nov	7	8	8	5	6	5	6	A	9	6	9	8	6	5	6	7	9	5	8	8	7	6	4	3	6.6	9.4
10-Nov	5	7	5	3	4	7	A	13	18	C	C	C	C	C	8	10	25	43	44	45	46	38	37	36	22.0	46.3
11-Nov	32	27	19	16	26	A	34	35	39	35	10	8	7	7	6	7	14	20	23	20	32	34	35	37	22.7	38.5
12-Nov	39	31	34	38	A	34	35	33	32	36	28	17	18	23	26	25	26	31	32	30	30	28	28	28	29.6	38.5
13-Nov	32	31	33	A	25	32	34	39	35	25	23	24	31	23	21	25	27	31	33	33	33	32	32	34	29.9	39.2
14-Nov	35	32	A	31	37	43	41	44	53	30	39	36	25	14	15	18	21	10	9	7	6	6	4	6	24.4	52.6
15-Nov	9	A	20	23	20	26	26	24	37	31	26	25	17	14	21	16	8	10	10	13	26	38	46	36	22.7	45.5
16-Nov	A	27	22	21	27	35	35	32	34	28	25	22	30	27	28	23	28	40	36	35	33	30	27	A	29.3	39.6
17-Nov	27	23	27	31	30	29	29	35	42	48	34	33	44	51	61	46	34	36	37	27	12	15	A	9	33.1	61.3
18-Nov	7	6	5	4	5	7	6	13	15	12	14	12	11	7	13	11	13	13	12	12	9	A	11	8	9.8	14.8
19-Nov	9	9	8	8	11	20	29	29	26	21	12	18	20	24	33	33	34	35	34	32	A	29	30	27	23.1	35.5
20-Nov	27	26	24	21	22	23	24	31	30	29	25	29	29	25	29	37	29	25	25	A	25	20	13	11	25.4	37.4
21-Nov	16	12	18	15	13	27	30	33	31	12	7	6	7	7	8	8	9	9	A	6	5	4	3	3	12.4	32.7
22-Nov	3	4	3	4	4	3	2	4	3	3	3	3	3	3	4	5	5	A	5	5	6	8	12	11	4.5	12.2
23-Nov	23	27	23	20	22	19	19	20	20	15	15	20	19	15	18	21	A	28	26	23	22	24	25	26	21.4	28.5
24-Nov	23	17	11	13	19	20	25	30	34	28	24	31	33	30	26	A	25	20	20	19	21	26	27	22	23.6	33.9
25-Nov	12	9	9	7	10	12	10	12	12	8	7	8	5	6	A	8	11	13	17	17	15	19	26	24	12.0	25.8
26-Nov	19	18	18	18	18	19	20	20	25	21	14	13	20	A	26	28	27	25	24	27	20	7	4	4	18.9	27.8
27-Nov	4	4	4	6	6	7	8	10	12	7	5	5	A	10	9	11	9	10	12	9	7	7	6	7	7.6	11.8
28-Nov	7	6	6	6	5	7	10	10	10	13	12	A	8	9	11	15	31	29	26	34	38	40	40	34	17.8	40.3
29-Nov	34	36	31	28	35	34	31	28	30	24	A	28	33	31	30	41	49	49	51	41	42	44	32	31	35.3	51.0
30-Nov	32	32	38	37	31	38	51	49	41	A	39	39	38	51	49	37	36	39	37	38	37	36	32	35	38.7	51.3
	15.5	15.0	14.3	14.0	15.2	18.1	21.0	23.1	24.4	20.0	17.2	17.6	17.7	16.4	17.8	18.0	19.3	22.1	22.1	20.0	19.2	19.5	19.0	17.0	Diurnal Average	
	38.5	36.4	37.6	37.8	36.5	42.7	50.9	49.0	52.6	47.7	38.9	39.4	43.5	51.3	61.3	46.3	49.1	49.1	51.0	45.1	46.3	43.7	45.5	36.8	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

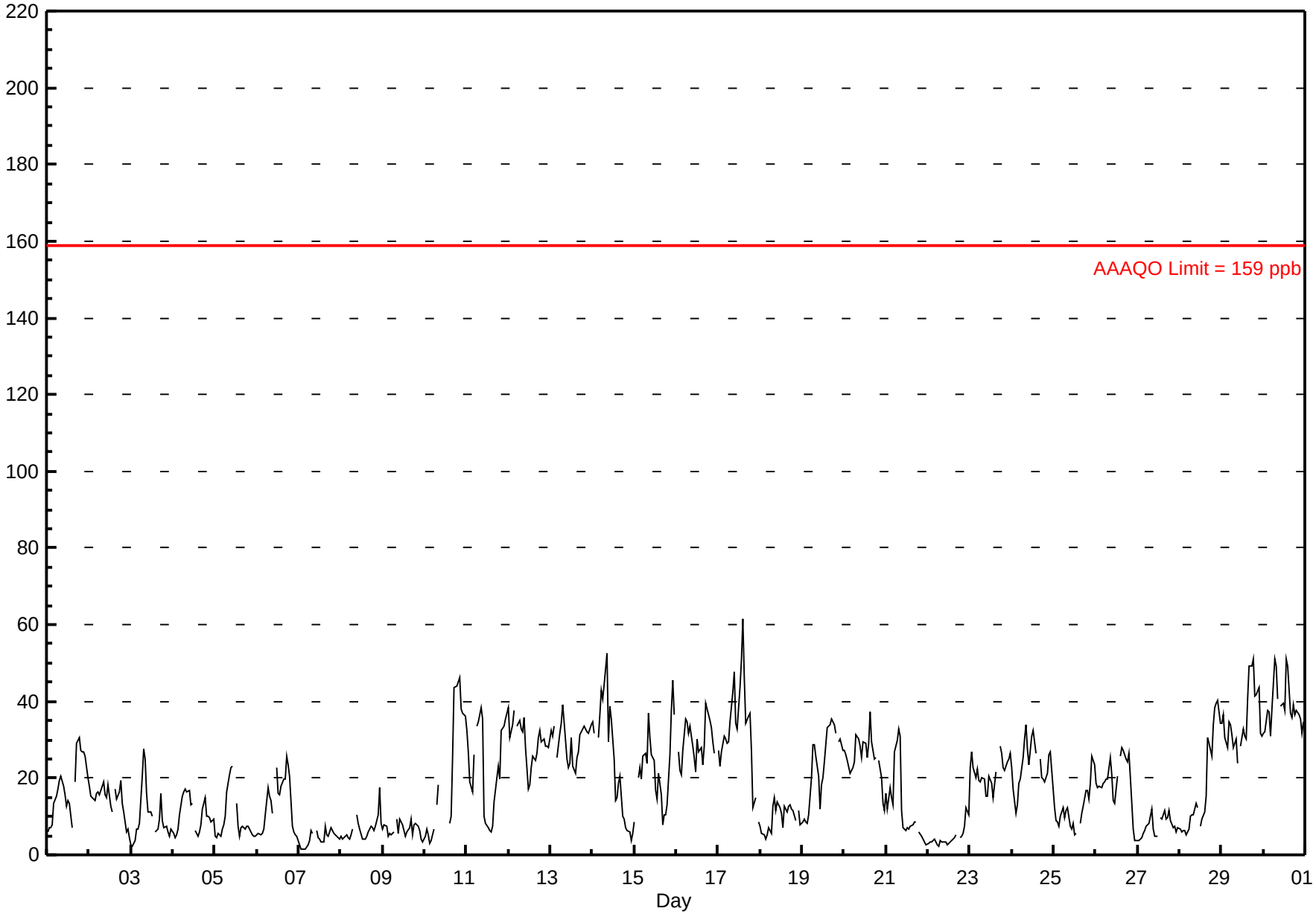
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - November 2014

Maximum Value: 73.5 ppb on Nov 14 09:00

Maximum Daily Average: 45.7 ppb on Nov 30

Minimum Value: 2 ppb on Nov 7 02:00

Minimum Daily Average: 7.3 ppb on Nov 7

Maximum Diurnal Average: 30.8 ppb at hour 9

Minimum Diurnal Average: 17.6 ppb at hour 4

Monthly Average: 23.42 ppb

Percentiles: P_1 = 3.8 P_{10} = 7.3 Q_1 = 11.2 Median = 22.2 Q_3 = 33.8 P_{90} = 40.8 P_{99} = 57.4

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	10	9	11	12	22	26	20	22	26	21	18	16	20	18	13	A	26	34	34	30	36	30	30	31	22.3	35.8
2-Nov	24	18	17	15	17	18	19	18	23	19	16	23	18	14	A	21	20	23	23	27	24	11	12	7	18.5	27.4
3-Nov	5	3	6	14	9	21	28	32	31	21	25	17	14	A	10	11	12	21	14	9	10	8	6	10	14.5	32.0
4-Nov	8	6	8	9	18	20	20	24	21	20	24	18	A	13	7	7	14	17	20	14	16	14	12	13	14.9	24.1
5-Nov	8	5	7	6	9	14	17	20	34	29	30	A	23	11	7	11	10	9	10	12	16	6	7	7	13.4	33.8
6-Nov	7	7	7	8	12	18	23	18	19	18	A	29	19	19	21	24	31	37	28	28	13	10	7	10	18.0	37.2
7-Nov	4	2	2	3	3	5	5	11	9	A	11	8	8	8	6	22	7	7	9	9	8	9	6	5	7.3	22.2
8-Nov	7	7	6	8	7	5	7	9	A	15	11	9	6	8	6	8	9	11	10	9	12	14	25	11	9.6	24.6
9-Nov	10	14	13	7	8	9	13	A	17	11	16	12	9	8	10	14	14	7	10	12	11	8	6	6	10.6	16.6
10-Nov	8	13	7	5	6	10	A	23	23	C	C	C	C	C	12	20	38	49	47	56	57	40	40	38	27.4	57.2
11-Nov	34	34	22	19	35	A	35	37	45	40	13	10	9	9	8	10	16	25	27	33	35	39	37	44	26.9	45.0
12-Nov	45	35	38	41	A	39	38	35	35	37	37	20	20	27	27	28	28	36	37	32	32	31	29	32	33.0	45.0
13-Nov	38	35	45	A	28	37	38	43	43	29	27	31	34	42	24	28	29	36	34	36	35	34	34	38	34.7	44.5
14-Nov	40	35	A	35	45	49	52	59	73	36	50	46	36	18	20	26	30	24	20	11	9	9	7	10	32.1	73.5
15-Nov	11	A	28	26	26	33	33	32	41	38	33	29	26	20	29	32	11	16	18	24	37	48	49	45	29.7	48.6
16-Nov	A	37	32	28	31	40	37	35	37	32	34	27	41	43	38	34	40	42	39	45	34	32	31	A	35.8	44.9
17-Nov	31	29	34	34	34	32	32	42	52	55	47	41	54	56	65	61	38	38	40	39	17	18	A	12	39.2	65.3
18-Nov	10	12	9	8	10	11	8	23	23	16	20	16	16	13	24	30	18	19	16	15	12	A	23	9	15.7	29.9
19-Nov	12	12	12	12	17	33	32	33	32	24	18	24	22	33	37	35	36	38	37	34	A	32	34	30	27.4	38.0
20-Nov	29	27	26	23	23	24	28	37	32	30	28	36	34	34	45	48	39	27	30	A	29	24	17	15	29.8	47.8
21-Nov	22	30	29	22	24	37	35	40	39	26	10	10	17	15	12	15	13	15	A	9	6	7	5	4	19.2	39.8
22-Nov	4	6	4	5	5	4	4	6	5	6	5	4	14	4	5	7	8	A	7	7	7	13	16	22	7.3	21.6
23-Nov	30	29	26	25	24	22	22	25	21	17	22	26	24	17	22	26	A	31	29	26	23	26	27	28	24.8	31.4
24-Nov	24	22	13	18	25	23	38	38	38	35	31	40	35	34	32	A	39	27	24	25	28	28	28	27	29.2	39.6
25-Nov	18	11	12	10	13	17	12	16	16	12	9	10	8	9	A	11	14	15	20	20	18	23	28	25	15.1	28.2
26-Nov	22	19	19	19	20	20	24	22	32	33	16	18	27	A	30	33	32	26	26	32	34	9	5	6	22.8	33.7
27-Nov	6	6	7	9	10	11	11	17	28	13	8	10	A	26	21	23	17	14	22	13	13	11	11	13	13.9	27.7
28-Nov	10	9	9	9	8	10	17	16	14	18	17	A	12	13	21	23	39	36	30	40	43	46	44	42	22.8	45.5
29-Nov	43	44	42	34	36	38	35	32	34	34	A	39	39	39	41	48	52	61	58	45	51	53	39	42	42.6	61.2
30-Nov	38	44	47	46	46	48	56	56	50	A	47	48	46	65	55	43	38	43	40	41	39	36	37	40	45.7	64.6
	19.2	19.2	18.6	17.6	19.8	23.2	25.5	28.3	30.8	25.4	23.0	22.9	23.3	22.7	23.1	25.0	24.9	27.1	26.2	25.2	24.4	23.1	22.5	21.4	Diurnal Average	
	45.0	44.1	46.7	46.4	46.3	48.5	56.1	59.3	73.5	55.1	50.2	48.3	53.5	64.6	65.3	60.9	52.3	61.2	57.9	55.7	57.2	52.9	48.6	44.7	Diurnal Maximum	

C - Calibration

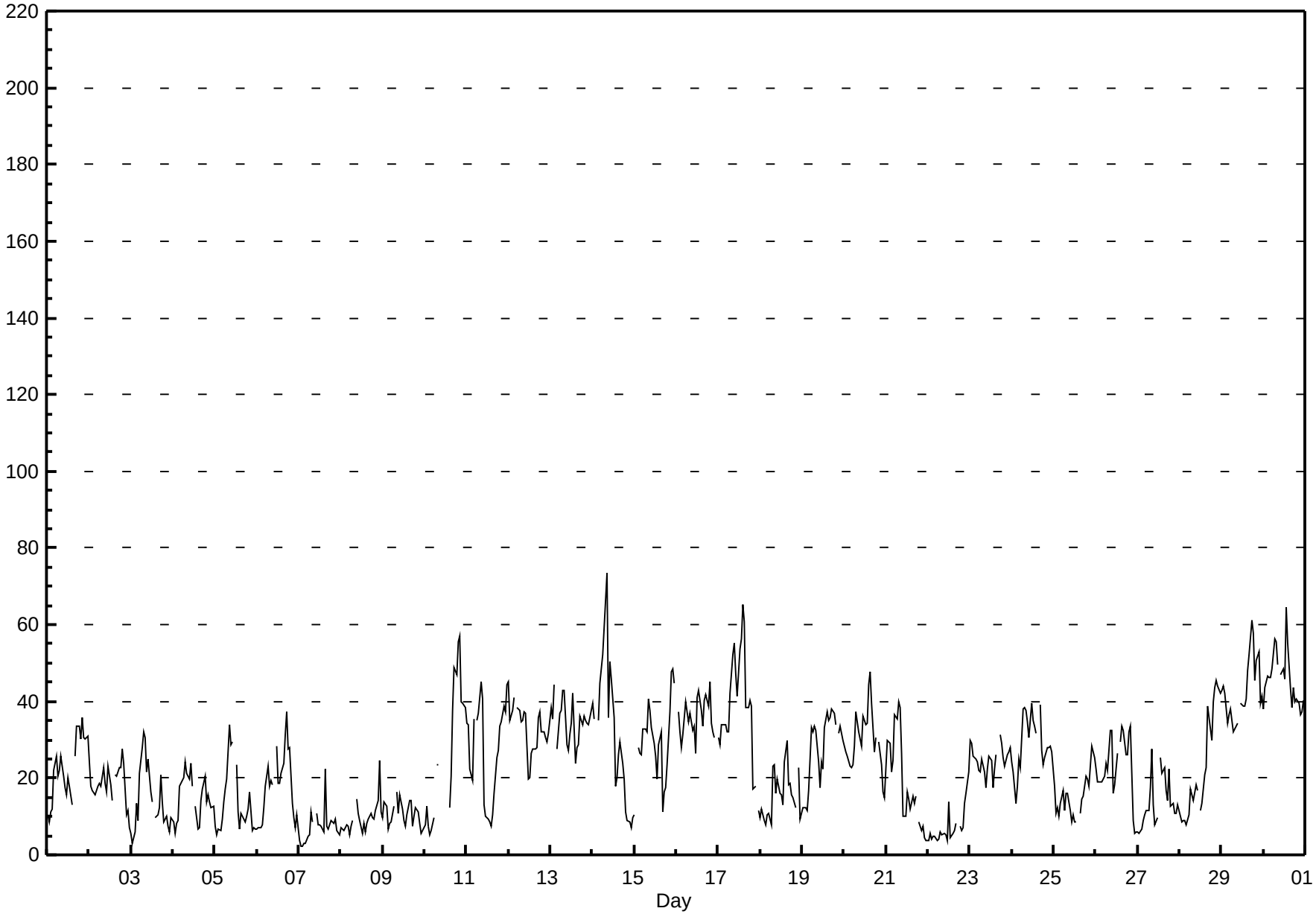
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - November 2014

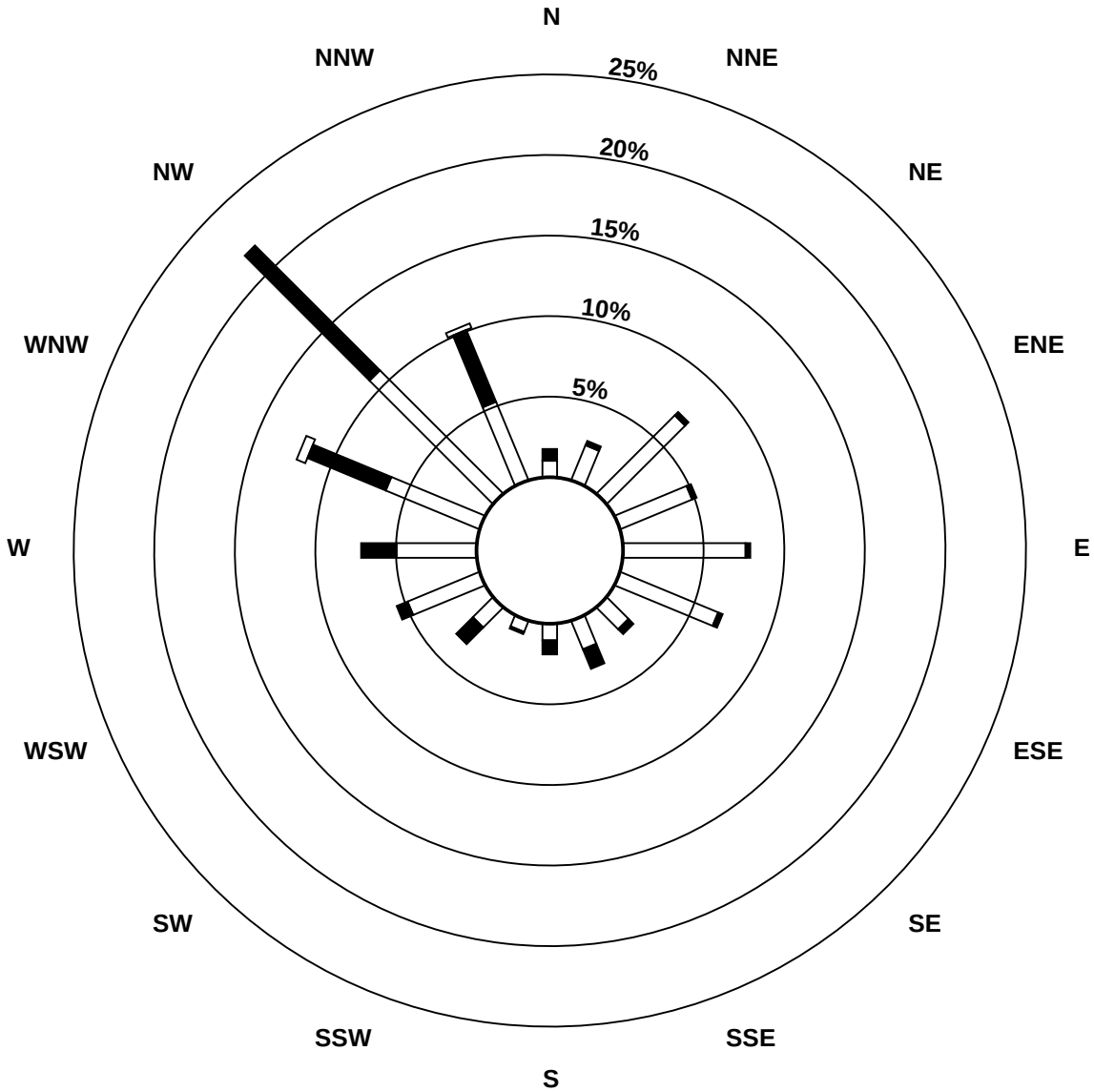


Peace Airshed Zone Association

Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - November 2014



Pollutant Classes (ppb)

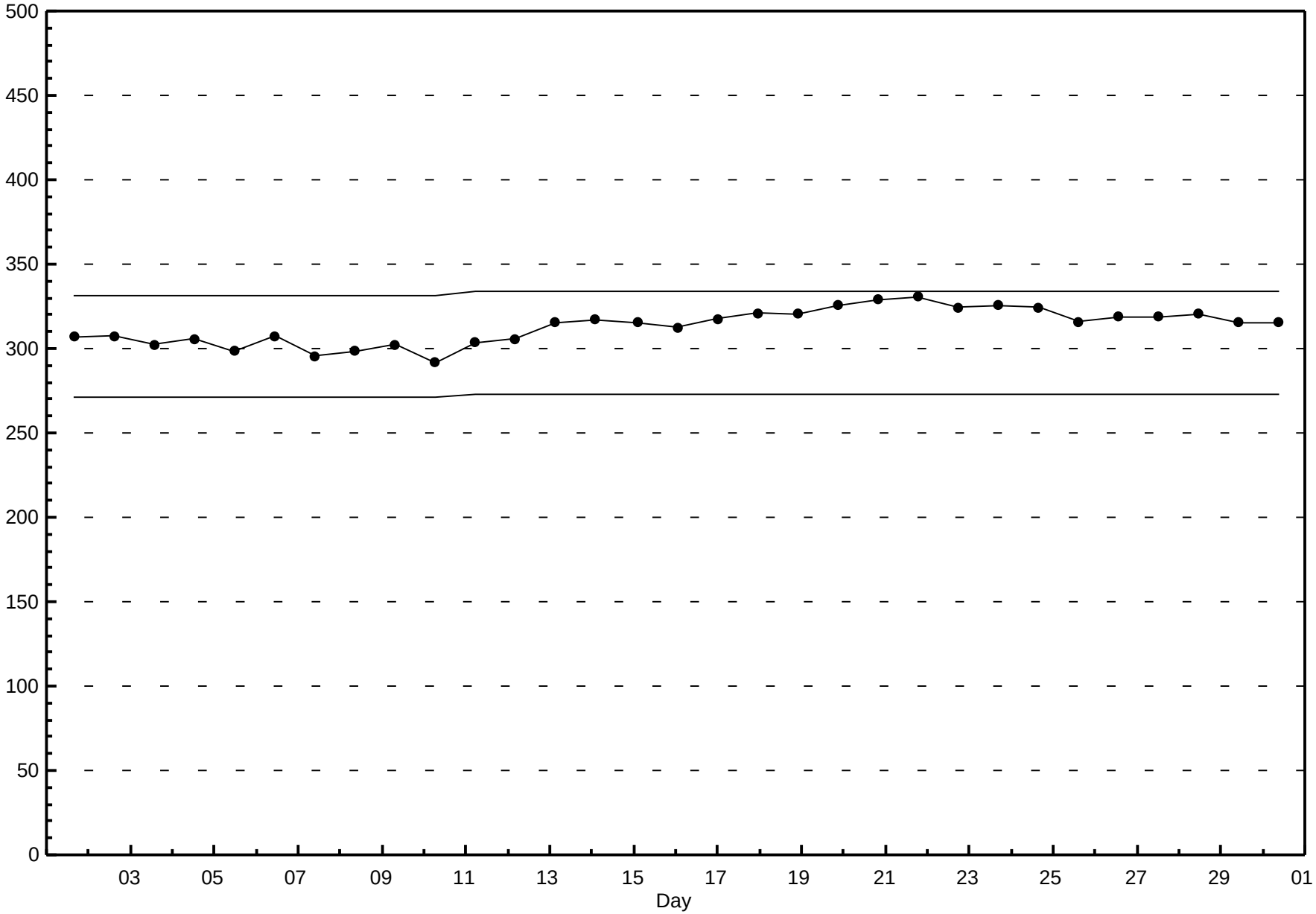
- 0 - 25
- 26 - 50
- 51 - 110
- 111 - 159
- > 159

Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - November 2014

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

Maximum Value: 175.9 ppb on Nov 17 10:00

Maximum Daily Average: 50.9 ppb on Nov 17

Minimum Value: 0 ppb on Nov 1 01:00

Minimum Daily Average: 0.8 ppb on Nov 22

Maximum Diurnal Average: 32.2 ppb at hour 9

Minimum Diurnal Average: 5.0 ppb at hour 4

Monthly Average: 17.07 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.2$ $Q_1 = 0.8$ Median = 4.1 $Q_3 = 24.5$ $P_{90} = 53.1$ $P_{99} = 123.1$

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	0	0	0	0	1	3	2	15	23	22	15	13	13	9	4	A	5	24	70	79	89	123	145	104	33.0	145.3
2-Nov	67	49	53	11	11	9	12	8	27	22	15	26	13	7	A	7	4	3	13	1	0	0	0	0	15.7	67.0
3-Nov	0	0	0	0	0	0	2	11	10	6	5	5	5	A	1	1	1	2	1	1	1	0	0	1	2.3	10.6
4-Nov	1	0	0	1	1	1	7	7	4	6	5	5	A	2	1	1	1	0	0	0	0	0	0	0	1.9	6.8
5-Nov	0	0	0	0	0	0	0	0	4	13	14	A	4	2	1	1	1	1	1	0	1	0	0	0	1.9	14.2
6-Nov	0	0	0	0	0	0	2	4	5	3	A	16	8	6	6	7	3	3	2	2	0	0	0	0	3.0	16.0
7-Nov	0	0	0	0	0	0	0	1	2	A	3	3	2	2	1	5	1	1	2	1	1	1	1	1	1.2	5.0
8-Nov	1	1	1	1	1	0	0	1	A	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1.2	3.1
9-Nov	0	1	1	1	1	0	0	A	0	1	4	4	3	3	3	2	2	0	0	1	0	0	0	0	1.3	3.8
10-Nov	0	0	0	0	0	1	A	3	3	C	C	C	C	C	3	3	7	31	51	65	100	49	25	27	20.4	100.5
11-Nov	13	6	1	0	4	A	18	32	47	64	7	6	5	4	3	2	2	2	2	3	17	30	37	44	15.2	63.8
12-Nov	52	17	25	42	A	22	34	29	31	61	42	19	25	37	38	27	18	28	49	25	31	25	20	18	31.1	61.0
13-Nov	41	45	51	A	13	37	40	79	61	26	29	35	60	41	32	39	31	58	63	55	53	47	49	69	45.7	78.6
14-Nov	67	53	A	35	74	119	111	114	171	46	86	67	27	7	6	5	3	0	0	0	0	0	0	0	43.1	171.0
15-Nov	0	A	0	0	0	2	4	3	30	28	28	29	16	12	15	7	1	0	0	0	1	9	23	5	9.3	29.6
16-Nov	A	1	0	0	1	9	11	10	27	27	30	25	46	32	28	11	11	39	35	24	15	6	3	A	17.7	45.8
17-Nov	3	2	4	24	25	24	23	67	124	176	84	64	102	129	169	89	20	20	16	4	0	0	A	0	50.9	175.9
18-Nov	0	0	0	0	0	0	0	0	1	1	3	4	3	1	3	2	1	1	1	0	0	A	0	0	1.0	3.7
19-Nov	0	0	0	0	0	10	14	7	10	11	7	25	27	36	53	52	45	55	44	39	A	25	39	13	22.2	54.9
20-Nov	15	18	11	3	5	13	25	82	74	56	39	53	62	41	50	106	67	63	83	A	79	42	1	0	42.9	106.1
21-Nov	0	0	1	0	0	12	38	73	44	3	2	2	6	5	4	5	6	7	A	2	1	1	1	1	9.2	73.1
22-Nov	1	1	1	1	0	0	0	0	0	1	1	2	2	2	2	1	1	A	0	0	0	0	0	1	0.8	1.8
23-Nov	5	12	4	4	12	4	3	5	5	7	15	28	21	9	14	18	A	18	17	11	6	13	17	24	11.8	27.6
24-Nov	7	2	1	1	4	2	20	78	126	75	49	93	100	74	55	A	20	6	2	1	2	8	5	2	31.9	125.6
25-Nov	1	1	1	1	1	1	1	3	3	2	2	4	3	3	A	3	3	3	4	3	2	3	33	34	5.1	33.9
26-Nov	13	3	3	4	6	12	16	23	60	44	25	26	50	A	55	68	58	35	36	42	24	2	1	1	26.3	67.6
27-Nov	0	0	0	1	1	1	1	2	3	2	1	2	A	5	4	5	2	1	2	1	1	1	1	1	1.7	5.2
28-Nov	1	1	1	1	0	1	2	2	2	3	5	A	4	6	8	7	20	8	5	10	26	24	26	10	7.5	26.4
29-Nov	14	16	10	5	8	20	15	7	12	16	A	39	53	41	33	46	60	51	72	22	25	36	6	4	26.6	72.0
30-Nov	4	5	5	10	4	6	52	63	25	A	52	77	62	106	83	46	24	25	14	14	14	7	5	13	31.1	105.8
	10.6	8.1	6.0	5.0	6.0	10.7	15.6	25.1	32.2	26.8	21.2	25.0	26.8	23.1	24.1	20.2	14.4	16.7	20.3	14.0	16.9	15.7	15.2	12.9	Diurnal Average	
	67.0	53.3	53.1	41.8	74.1	119.5	110.8	114.0	171.0	175.9	86.3	93.2	102.0	128.9	169.3	106.1	67.2	63.0	83.0	78.7	100.5	123.4	145.3	104.3	Diurnal Maximum	

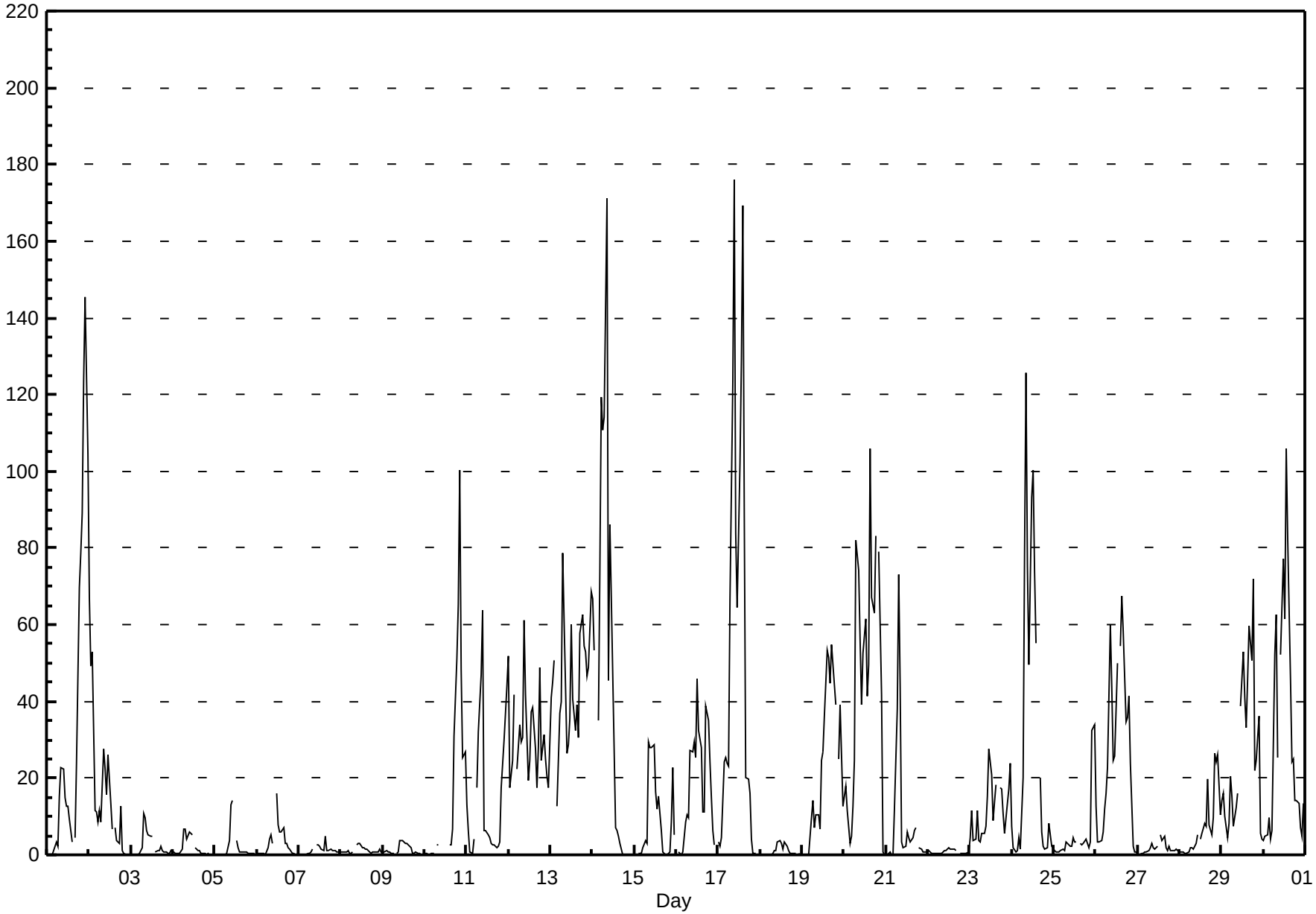
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - November 2014

Maximum Value: 274.1 ppb on Nov 14 09:00

Maximum Daily Average: 77.9 ppb on Nov 17

Minimum Value: 0 ppb on Nov 3 05:00

Minimum Daily Average: 2.2 ppb on Nov 22

Maximum Diurnal Average: 53.5 ppb at hour 9

Minimum Diurnal Average: 8.7 ppb at hour 4

Monthly Average: 29.00 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 1.0$ $Q_1 = 2.6$ Median = 10.8 $Q_3 = 40.2$ $P_{90} = 80.1$ $P_{99} = 172.9$

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	0	0	0	0	7	13	9	24	40	32	20	18	21	21	10	A	7	51	80	139	147	144	163	155	48.0	162.9
2-Nov	112	67	69	27	22	20	18	14	44	32	17	40	28	12	A	14	9	15	34	9	6	0	0	1	26.6	112.3
3-Nov	0	0	0	0	0	4	10	18	18	9	17	10	7	A	2	2	2	7	2	3	2	1	1	2	5.2	18.4
4-Nov	2	1	3	5	6	7	18	19	10	13	46	9	A	5	2	2	1	1	1	1	1	1	1	1	6.7	46.0
5-Nov	0	0	0	0	0	1	1	4	17	29	24	A	10	3	2	2	1	2	1	3	2	1	1	1	4.6	29.3
6-Nov	1	1	1	1	1	2	5	11	14	11	A	28	10	11	9	17	12	11	3	5	1	1	1	1	7.0	28.2
7-Nov	1	1	0	0	0	1	1	4	7	A	7	9	6	8	5	33	3	2	4	5	3	5	2	3	4.9	33.4
8-Nov	4	2	3	3	5	1	2	3	A	18	5	5	4	15	5	4	3	2	3	2	2	4	4	3	4.4	17.5
9-Nov	1	4	3	3	3	2	2	A	2	3	8	6	5	4	7	5	5	1	1	17	1	3	1	1	3.8	16.9
10-Nov	3	1	1	1	1	3	A	11	7	C	C	C	C	C	7	9	13	61	93	147	144	61	35	42	35.5	147.5
11-Nov	30	25	2	1	19	A	25	43	71	85	9	9	7	8	5	5	5	4	4	22	44	56	53	75	26.5	85.4
12-Nov	81	37	34	53	A	43	49	32	47	71	69	27	30	59	46	38	22	72	91	40	45	37	26	28	46.9	91.3
13-Nov	63	59	94	A	21	59	58	105	101	41	43	62	73	81	38	50	39	93	72	72	71	61	63	89	65.6	104.6
14-Nov	117	68	A	47	103	150	177	202	274	85	152	123	59	11	10	7	11	1	1	0	0	0	0	0	69.5	274.1
15-Nov	0	A	2	2	2	9	11	11	51	50	44	40	29	20	27	22	1	1	2	1	3	29	40	16	17.9	51.2
16-Nov	A	10	2	1	4	20	18	20	37	39	56	37	73	46	46	33	33	51	71	48	19	11	7	A	31.0	73.4
17-Nov	8	6	27	35	49	45	32	106	214	221	165	102	153	151	194	165	36	36	31	14	3	2	A	1	77.9	221.1
18-Nov	0	0	0	0	0	0	1	2	2	4	7	8	5	4	12	13	2	2	2	2	1	A	1	1	3.0	13.3
19-Nov	0	0	1	1	2	43	34	18	24	19	13	41	35	61	70	64	58	71	63	55	A	38	56	25	34.4	70.8
20-Nov	24	25	23	8	7	19	45	112	89	68	58	72	76	67	147	157	125	76	100	A	115	70	3	0	64.7	157.4
21-Nov	1	9	7	3	3	50	58	106	90	18	5	10	39	22	10	15	23	23	A	6	4	2	2	2	22.1	105.7
22-Nov	3	2	1	1	1	1	1	3	1	4	2	3	6	2	2	2	2	A	2	1	1	1	1	7	2.2	7.3
23-Nov	23	19	7	10	19	10	6	15	8	10	37	50	40	13	22	35	A	39	25	20	9	27	26	32	21.7	49.5
24-Nov	15	4	2	4	13	11	67	102	160	132	77	133	123	95	81	A	86	27	4	3	18	16	10	7	51.7	160.2
25-Nov	5	4	2	2	3	3	3	7	11	5	4	7	6	8	A	5	4	7	9	7	5	12	51	44	9.2	50.9
26-Nov	28	6	5	6	11	22	33	35	102	107	32	44	75	A	66	100	88	53	55	61	71	5	4	2	43.9	107.4
27-Nov	2	1	1	2	4	4	5	4	25	9	2	15	A	61	21	16	7	2	18	5	7	3	5	10	10.1	61.3
28-Nov	4	2	3	2	1	6	18	8	4	6	9	A	7	10	54	28	51	19	11	19	56	51	43	21	18.8	56.3
29-Nov	38	30	26	8	18	46	29	15	25	32	A	75	76	61	67	72	80	157	90	38	82	89	22	13	51.7	156.9
30-Nov	6	14	20	23	21	31	73	174	57	A	107	111	90	189	104	71	30	43	29	19	21	9	11	34	56.0	189.0
	19.8	13.8	11.8	8.7	11.9	21.5	27.8	42.3	53.5	42.7	38.3	40.5	40.6	38.8	38.1	35.2	26.3	32.0	31.1	26.4	30.5	25.5	21.9	21.3	Diurnal Average	
	117.5	68.4	94.3	53.1	102.9	149.6	177.0	202.3	274.1	221.1	164.9	133.4	153.3	189.0	193.7	164.9	124.9	156.9	99.9	147.5	147.1	144.0	162.9	155.3	Diurnal Maximum	

C - Calibration

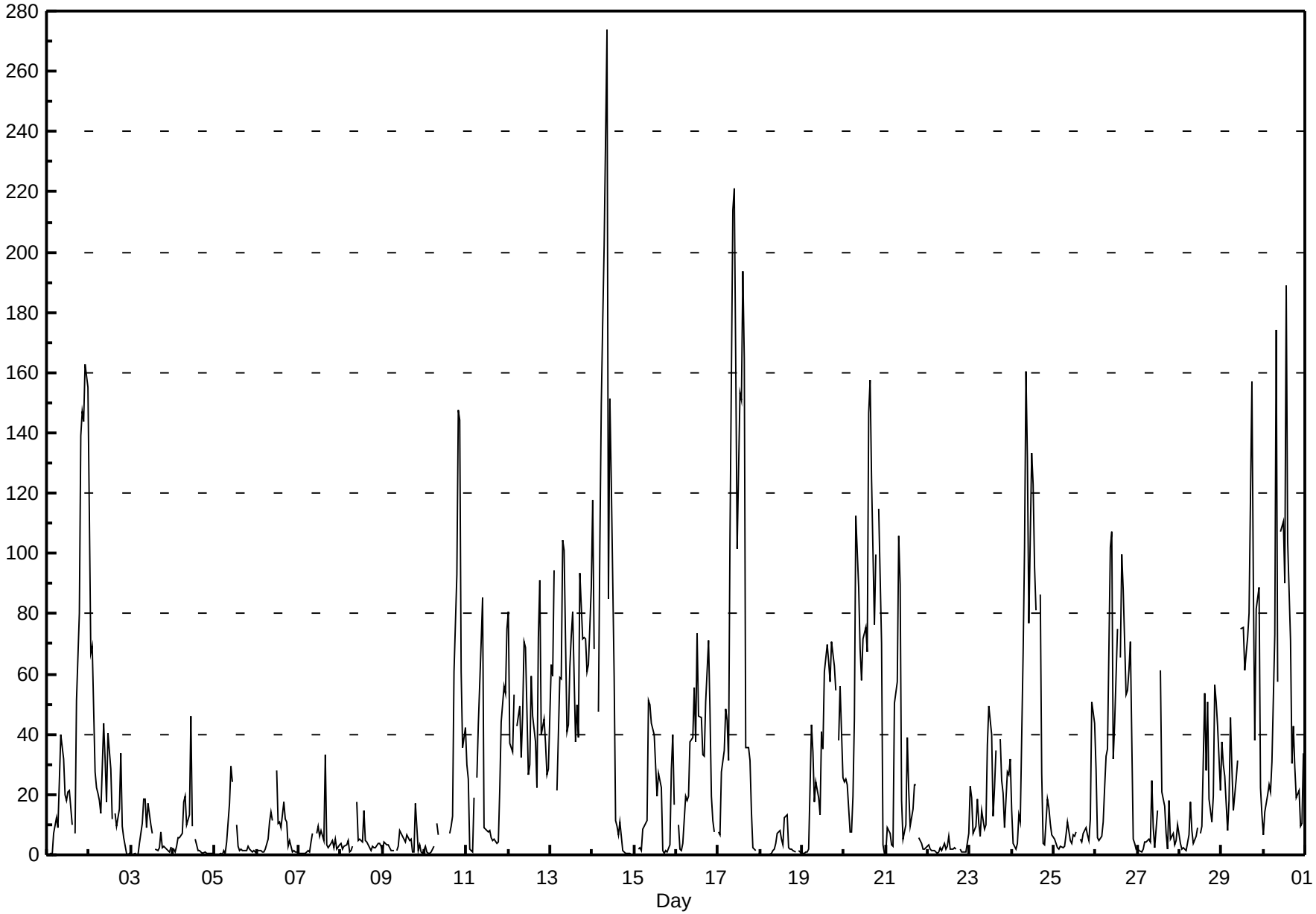
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - November 2014

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

Maximum Value: 232.0 ppb on Nov 17 15:00

Maximum Daily Average: 84.4 ppb on Nov 17

Minimum Value: 2 ppb on Nov 7 04:00

Minimum Daily Average: 5.2 ppb on Nov 22

Maximum Diurnal Average: 56.9 ppb at hour 9

Minimum Diurnal Average: 19.0 ppb at hour 4

Monthly Average: 35.64 ppb

Percentiles: $P_1 = 2.8$ $P_{10} = 5.6$ $Q_1 = 8.6$ Median = 22.1 $Q_3 = 52.7$ $P_{90} = 85.8$ $P_{99} = 161.7$

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	6	7	7	8	15	18	19	35	43	40	31	25	27	23	11	A	23	53	101	106	116	151	171	125	50.5	171.4
2-Nov	85	64	68	26	27	25	27	25	47	38	31	45	26	18	A	24	18	20	32	15	12	6	7	4	30.0	85.0
3-Nov	3	2	4	7	7	8	22	39	35	23	17	16	15	A	7	8	10	18	10	8	8	6	5	8	12.4	38.5
4-Nov	6	5	5	7	11	17	23	24	21	22	19	18	A	8	6	7	8	12	15	10	10	10	9	9	12.3	23.7
5-Nov	5	4	5	5	7	8	10	17	24	36	37	A	17	9	6	8	8	7	8	8	7	5	5	5	11.0	37.3
6-Nov	5	6	5	6	7	10	19	19	20	14	A	39	24	22	24	27	23	29	25	22	8	7	5	5	16.1	38.9
7-Nov	3	2	2	2	2	3	4	7	7	A	9	7	7	5	5	13	6	6	9	8	7	6	6	5	5.6	12.6
8-Nov	6	5	5	6	6	5	6	8	A	13	11	10	6	6	6	6	7	8	8	7	9	11	19	9	8.0	19.2
9-Nov	7	9	9	6	7	6	7	A	10	7	14	12	10	8	9	10	12	6	9	9	8	7	5	4	8.2	13.6
10-Nov	5	7	6	4	4	8	A	16	22	C	C	C	C	C	9	11	30	73	94	110	146	86	61	62	41.9	146.3
11-Nov	45	33	19	16	30	A	51	67	86	100	17	14	12	11	9	10	16	22	25	23	50	64	72	81	37.9	99.6
12-Nov	91	48	59	80	A	56	69	62	63	97	70	36	43	60	64	52	44	59	82	54	62	54	49	45	60.8	97.0
13-Nov	74	76	85	A	38	69	74	118	96	51	52	59	91	64	54	65	58	89	96	88	86	79	81	103	75.9	118.3
14-Nov	102	85	A	66	111	163	152	159	225	75	126	103	52	21	21	23	24	10	9	7	6	6	4	6	67.7	224.9
15-Nov	9	A	21	23	20	27	30	27	67	59	54	54	33	26	37	22	8	10	10	13	27	46	68	42	31.9	68.2
16-Nov	A	27	22	21	28	44	45	42	61	55	55	47	76	59	56	35	39	79	72	59	48	36	29	A	47.1	78.5
17-Nov	30	25	31	55	56	53	53	102	167	225	119	98	146	181	232	136	54	56	53	31	13	15	A	9	84.4	232.0
18-Nov	7	6	5	4	5	7	6	13	16	13	17	16	14	9	16	13	14	14	13	12	10	A	12	8	10.8	17.2
19-Nov	9	9	9	8	11	30	43	36	36	31	19	43	47	61	87	85	79	91	78	71	A	54	70	40	45.5	90.8
20-Nov	43	44	36	24	27	36	49	114	105	85	65	83	91	67	79	144	97	89	109	A	104	62	14	11	68.6	144.4
21-Nov	16	12	18	15	13	39	68	106	75	15	9	9	13	11	11	12	15	16	A	8	6	5	4	4	21.8	106.5
22-Nov	4	4	4	4	4	3	3	4	4	4	5	4	5	5	6	6	6	A	5	5	6	8	12	11	5.2	12.4
23-Nov	27	38	26	24	34	23	22	26	25	23	31	48	40	24	32	40	A	46	44	34	28	38	42	50	33.3	50.5
24-Nov	30	19	11	14	23	21	45	109	161	104	73	125	134	104	82	A	45	26	22	20	23	34	32	24	55.8	160.7
25-Nov	13	10	9	8	11	14	11	15	15	10	9	13	9	9	A	11	13	15	21	20	16	22	58	58	16.9	58.4
26-Nov	32	21	21	21	24	31	36	43	86	65	39	39	71	A	81	96	86	60	60	68	44	9	5	4	45.3	96.0
27-Nov	4	4	5	6	7	8	9	12	15	9	6	7	A	15	13	16	11	11	14	10	8	9	7	8	9.4	16.1
28-Nov	7	7	7	7	6	7	12	12	12	16	17	A	12	15	19	22	50	37	31	43	65	64	66	45	25.1	66.2
29-Nov	48	52	41	32	43	54	46	35	42	40	A	67	86	72	63	87	109	100	123	63	66	80	37	35	61.9	123.4
30-Nov	35	37	42	47	35	44	103	112	66	A	91	117	99	158	133	83	60	64	51	52	50	43	36	48	69.8	157.7
	26.1	23.1	20.3	19.0	21.3	28.9	36.7	48.4	56.9	47.0	38.6	42.8	44.7	39.7	42.0	38.3	33.7	38.8	42.4	34.0	36.1	35.2	34.2	29.9	Diurnal Average	
	102.0	85.2	84.6	79.8	111.1	163.1	152.4	159.1	224.9	225.1	125.7	125.1	146.4	180.5	232.0	144.4	108.9	100.0	123.4	109.6	146.3	150.6	171.4	124.8	Diurnal Maximum	

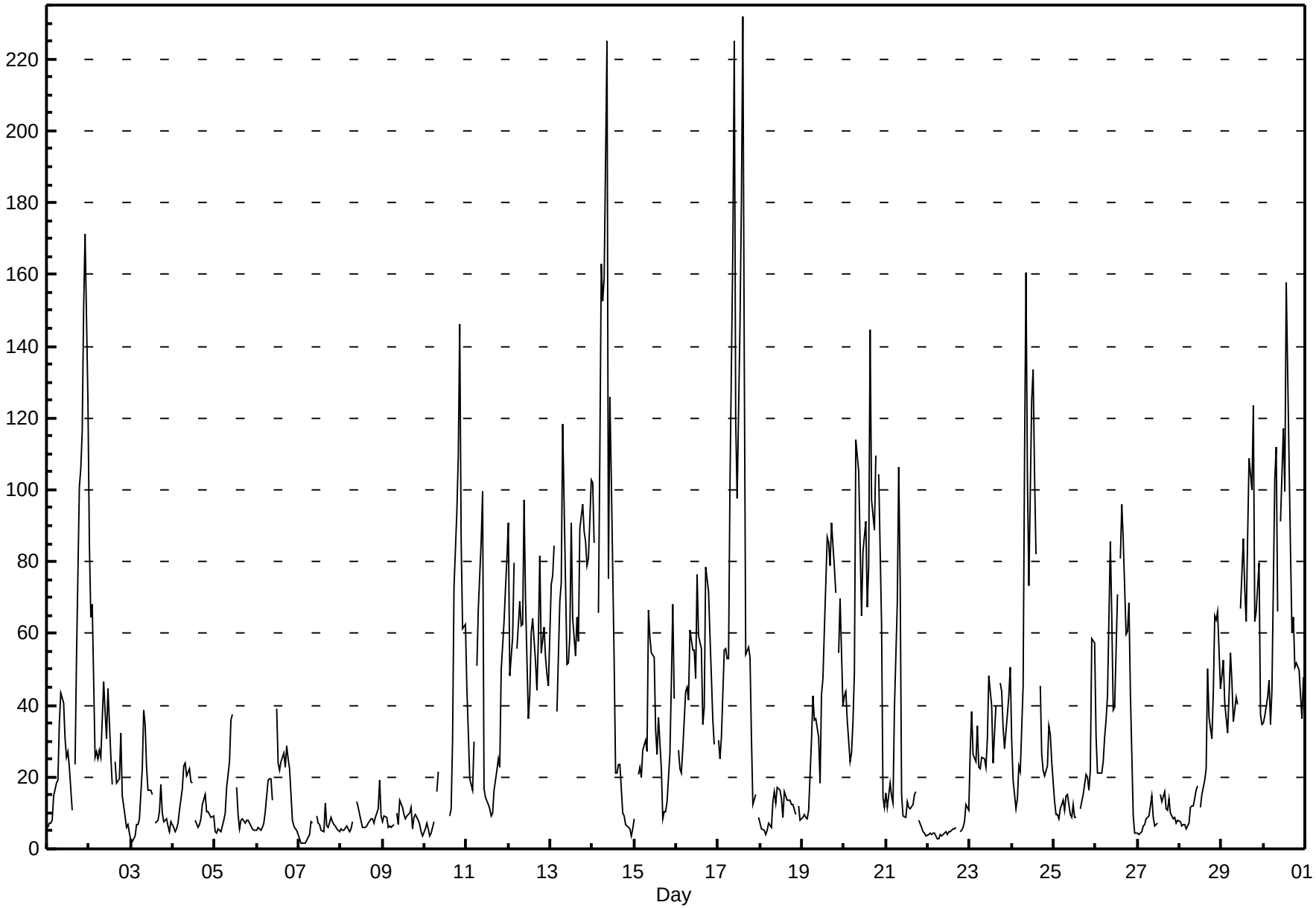
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - November 2014

Maximum Value: 347.9 ppb on Nov 14 09:00

Maximum Daily Average: 117.2 ppb on Nov 17

Minimum Value: 2 ppb on Nov 7 03:00

Minimum Daily Average: 9.2 ppb on Nov 22

Maximum Diurnal Average: 83.9 ppb at hour 9

Minimum Diurnal Average: 25.4 ppb at hour 4

Monthly Average: 51.84 ppb

Percentiles: P_1 = 4.6 P_{10} = 8.8 Q_1 = 14.2 Median = 33.4 Q_3 = 72.2 P_{90} = 118.8 P_{99} = 222.1

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	11	9	11	12	28	39	27	44	65	52	37	34	41	39	23	A	32	83	113	167	183	172	192	182	69.4	192.4
2-Nov	135	82	84	41	38	34	32	32	66	50	33	63	47	25	A	34	30	37	56	37	29	11	12	7	44.1	134.6
3-Nov	6	3	6	14	9	25	38	50	49	30	41	27	21	A	11	13	13	26	15	10	12	9	7	12	19.4	49.6
4-Nov	10	7	11	14	24	26	37	44	30	30	69	25	A	17	8	8	15	18	21	14	16	14	12	13	21.0	69.2
5-Nov	7	5	7	6	9	15	18	22	51	58	52	A	33	14	8	12	11	10	11	15	18	7	8	8	17.6	58.0
6-Nov	8	8	9	9	13	20	27	29	34	30	A	57	29	30	30	39	43	48	31	33	14	11	7	11	24.7	56.7
7-Nov	4	2	2	3	3	6	6	14	16	A	17	18	14	16	11	56	10	9	13	13	11	15	8	9	12.1	56.1
8-Nov	11	9	8	10	12	6	8	10	A	31	16	14	10	22	11	11	12	12	12	11	13	17	29	13	13.4	31.0
9-Nov	11	17	16	10	9	11	13	A	17	14	24	18	15	12	17	19	19	9	11	27	12	12	7	7	14.3	27.4
10-Nov	8	13	8	6	7	11	A	33	31	C	C	C	C	C	18	28	46	102	140	203	199	99	72	80	61.4	202.9
11-Nov	63	58	23	19	53	A	60	80	116	127	22	19	17	17	13	14	21	29	31	55	78	95	90	119	53.1	126.8
12-Nov	126	72	72	94	A	81	88	65	79	107	106	47	50	73	73	65	50	109	129	72	76	67	55	60	79.0	129.4
13-Nov	102	94	138	A	47	96	94	146	144	68	70	94	107	122	61	78	68	130	106	106	105	95	96	127	99.7	145.8
14-Nov	156	104	A	77	147	198	230	263	348	120	203	170	94	29	29	33	39	25	20	11	9	8	6	10	101.3	347.9
15-Nov	11	A	30	28	27	41	43	43	91	87	77	69	55	39	56	54	12	17	18	25	37	76	84	61	47.0	90.9
16-Nov	A	44	34	29	34	59	54	53	72	67	89	64	112	86	83	67	72	92	110	92	52	43	38	A	65.9	111.7
17-Nov	38	35	62	67	83	76	63	148	267	277	213	144	208	207	260	226	74	74	71	53	19	19	A	12	117.2	277.1
18-Nov	10	12	9	8	11	11	8	24	25	18	27	21	21	17	36	43	20	20	17	16	13	A	24	10	18.3	43.0
19-Nov	12	12	13	12	19	76	65	51	57	43	31	65	58	94	107	99	94	107	100	88	A	69	90	55	61.7	107.0
20-Nov	53	52	49	30	29	42	72	151	122	98	87	105	110	101	193	204	165	103	128	A	145	93	20	15	94.2	204.1
21-Nov	23	38	36	22	25	87	89	145	128	43	15	20	56	37	22	31	35	34	A	14	9	9	6	6	40.5	144.9
22-Nov	7	7	5	6	6	4	5	8	6	10	7	7	20	6	7	8	10	A	9	7	8	14	17	29	9.2	28.7
23-Nov	52	46	32	31	43	32	27	38	28	26	59	75	65	30	45	61	A	70	54	46	32	53	53	60	46.0	75.1
24-Nov	39	25	15	21	38	33	105	134	198	166	108	174	158	130	113	A	126	54	27	27	46	43	38	33	80.5	197.7
25-Nov	19	14	14	12	16	19	14	23	25	14	12	16	14	16	A	14	18	21	28	27	20	35	79	67	23.4	78.8
26-Nov	50	24	23	25	30	43	56	56	135	141	48	63	101	A	95	134	115	79	80	93	105	14	9	7	66.4	141.0
27-Nov	8	6	8	11	13	15	16	22	51	22	9	22	A	87	42	38	21	16	40	17	20	14	16	23	23.3	87.2
28-Nov	12	9	11	10	9	17	35	22	17	24	25	A	19	23	52	44	82	54	39	59	100	96	86	63	39.4	100.3
29-Nov	79	74	68	42	54	84	64	47	58	66	A	113	115	101	108	120	133	216	148	81	133	141	61	55	93.9	216.4
30-Nov	44	58	66	69	67	79	130	215	106	A	154	159	137	255	159	114	66	86	69	59	60	45	48	73	100.6	255.0
	38.4	32.4	30.0	25.4	31.1	44.4	52.7	69.4	83.9	67.4	61.2	63.0	63.9	60.9	60.4	59.6	50.1	58.2	56.8	51.0	54.4	48.1	43.8	42.3	Diurnal Average	
	155.5	103.9	137.7	94.0	147.2	198.4	230.4	263.5	347.9	277.1	213.3	173.6	207.9	255.0	260.3	226.3	164.7	216.4	147.7	202.9	199.3	171.9	192.4	181.7	Diurnal Maximum	

C - Calibration

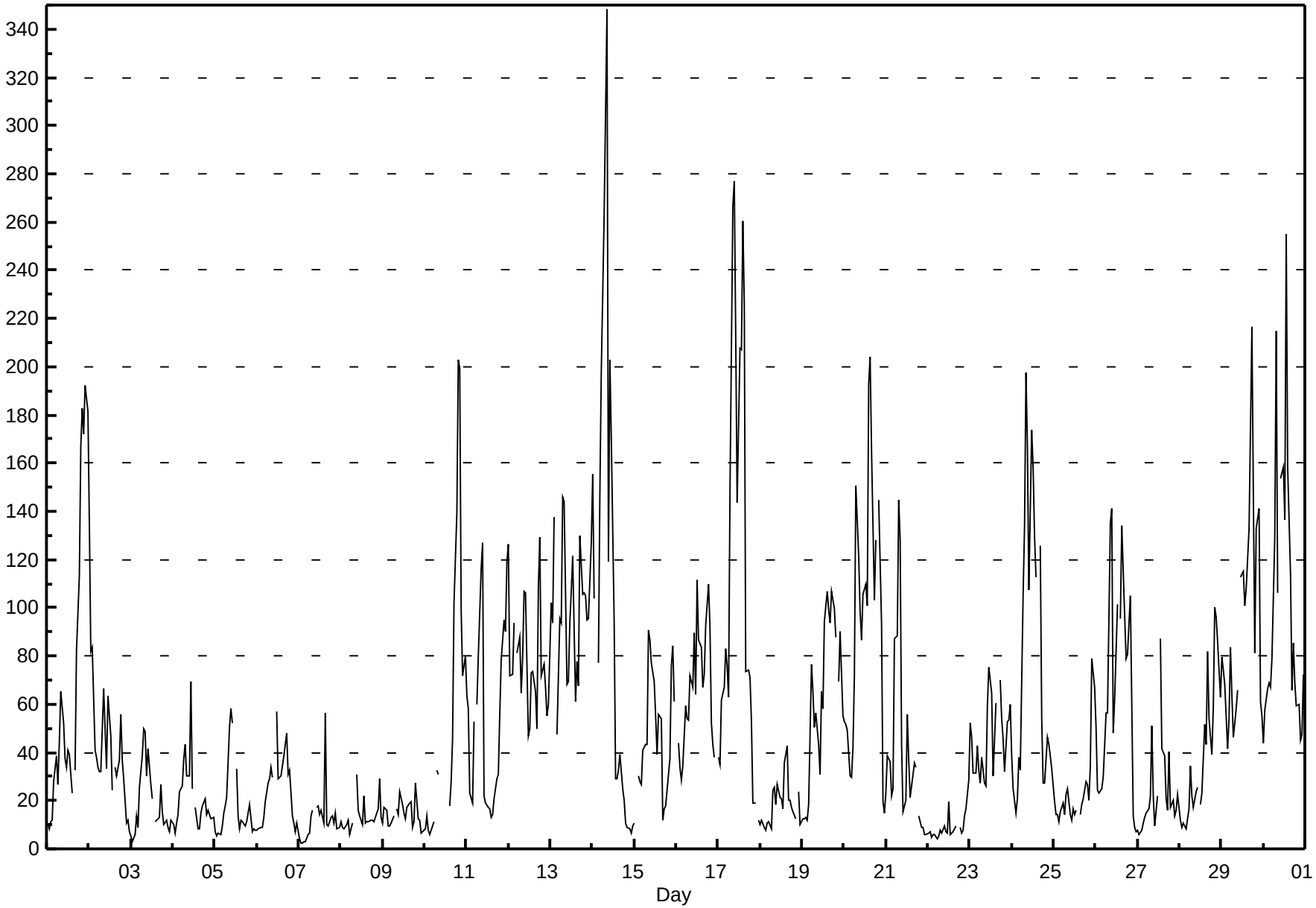
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - November 2014

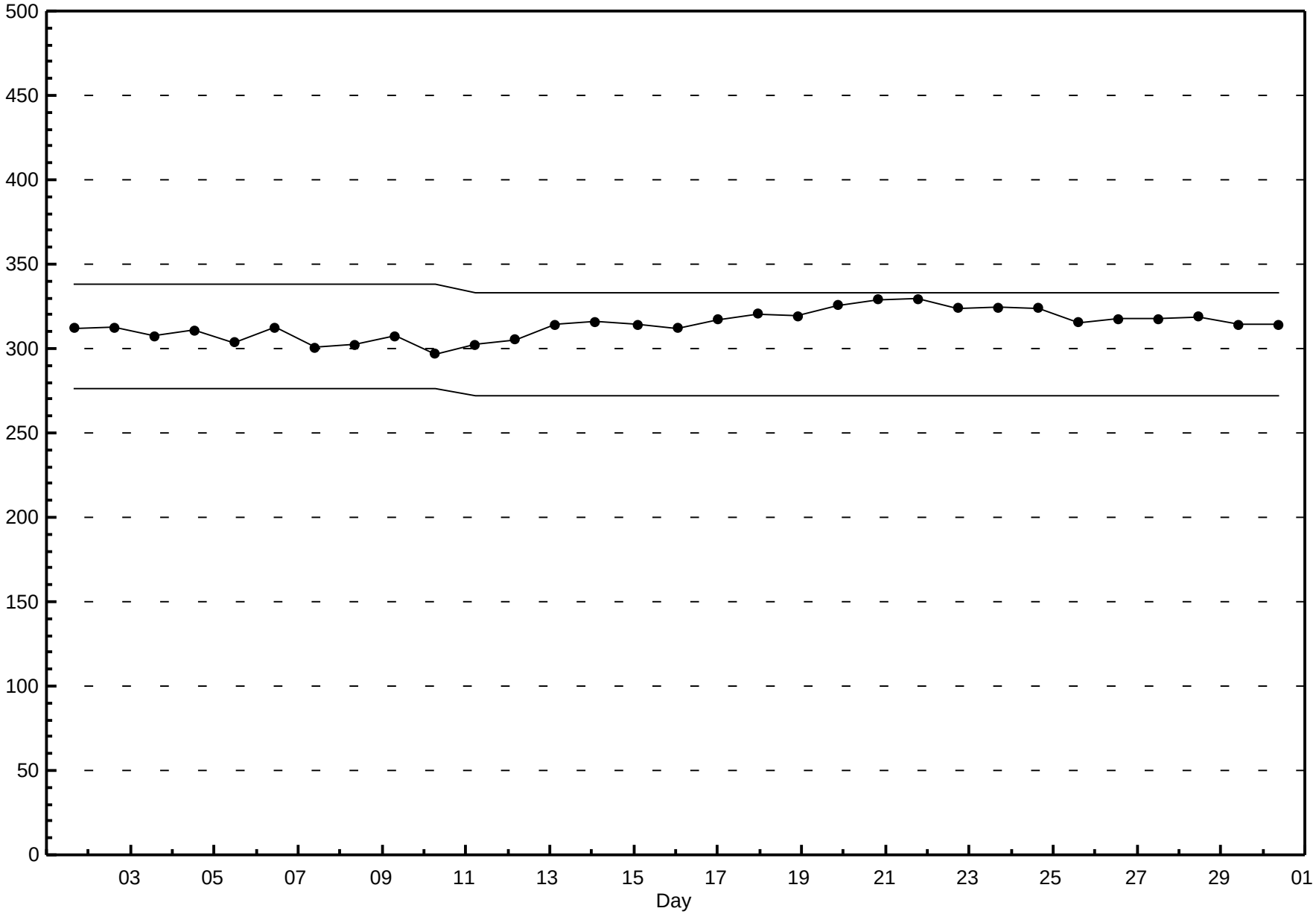


Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - November 2014

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

Maximum Value: 37.8 ppb on Nov 15 17:00

Maximum Daily Average: 30.4 ppb on Nov 18

Minimum Value: 1 ppb on Nov 2 05:00

Minimum Daily Average: 2.7 ppb on Nov 20

Maximum Diurnal Average: 18.1 ppb at hour 14

Minimum Diurnal Average: 8.2 ppb at hour 8

Monthly Average: 13.65 ppb

Percentiles: P_1 = 0.7 P_{10} = 2.0 Q_1 = 4.5 Median = 12.5 Q_3 = 22.4 P_{90} = 27.1 P_{99} = 34.3

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	24	22	20	17	10	8	4	1	2	5	11	14	15	18	22	A	12	2	2	1	1	1	1	1	9.3	23.6
2-Nov	1	1	1	1	1	1	1	1	1	4	8	9	13	18	A	10	11	8	2	11	25	29	25	25	8.9	29.3
3-Nov	27	25	23	20	20	20	9	3	6	14	20	20	23	A	30	27	23	16	22	23	22	23	25	24	20.2	29.8
4-Nov	24	25	24	21	15	7	4	4	6	7	14	15	A	34	36	35	32	27	22	25	24	25	24	22	20.5	36.0
5-Nov	27	27	24	26	24	23	22	16	12	10	12	A	23	29	32	29	28	28	27	27	28	29	29	28	24.4	32.5
6-Nov	27	26	26	27	26	23	9	5	7	13	A	5	6	8	7	10	18	11	10	11	21	21	22	18	15.6	27.1
7-Nov	21	22	21	20	19	17	17	14	15	A	15	18	18	18	17	15	16	15	12	13	14	15	14	15	16.5	21.7
8-Nov	15	16	16	16	18	19	18	17	A	17	19	21	24	25	25	25	24	23	23	24	23	20	13	22	20.1	25.1
9-Nov	23	23	23	26	26	26	26	A	22	25	20	21	23	22	20	19	16	19	17	17	17	17	15	17	20.9	26.1
10-Nov	24	27	28	30	28	26	A	22	17	20	27	30	28	C	C	C	19	3	3	3	3	3	3	3	17.4	30.1
11-Nov	3	6	13	17	8	A	3	3	4	7	23	25	27	29	30	29	24	18	13	14	4	3	4	4	13.6	29.8
12-Nov	4	4	3	3	A	4	4	4	5	7	11	16	17	15	14	12	9	5	4	4	4	4	4	5	7.0	16.7
13-Nov	5	5	5	A	5	5	5	6	6	9	12	14	12	14	13	10	7	5	5	5	5	5	5	5	7.3	14.1
14-Nov	5	5	A	5	5	5	5	5	5	6	7	10	16	23	23	20	18	29	30	32	33	33	34	32	16.6	33.9
15-Nov	28	A	16	11	14	8	8	11	3	9	14	15	20	23	20	31	38	35	34	31	18	9	2	8	17.6	37.8
16-Nov	A	14	17	16	9	3	3	4	3	7	12	15	13	15	15	18	12	2	3	2	3	4	6	A	9.0	17.8
17-Nov	5	8	4	2	2	2	2	3	3	4	6	9	8	6	5	5	4	2	3	11	26	23	A	30	7.6	30.4
18-Nov	31	34	34	36	34	32	32	27	25	29	27	30	32	35	30	30	28	27	27	27	30	A	29	31	30.4	36.1
19-Nov	29	28	29	29	25	13	2	3	4	7	14	11	12	10	7	5	3	2	2	1	A	1	1	1	10.4	29.0
20-Nov	1	1	1	2	1	1	1	1	1	2	3	3	4	5	4	2	1	1	1	A	1	1	9	14	2.7	14.2
21-Nov	14	16	12	14	13	2	1	1	1	12	17	18	14	14	12	12	11	10	A	13	17	20	19	18	12.3	20.1
22-Nov	16	14	14	14	16	19	21	21	21	21	21	22	22	23	23	24	23	A	24	23	22	20	16	16	19.9	24.1
23-Nov	5	1	4	5	1	3	4	3	3	7	8	6	9	11	8	6	A	1	1	2	2	1	1	1	4.1	10.6
24-Nov	1	6	12	12	7	4	1	1	1	2	3	3	3	4	3	A	4	6	8	10	6	1	2	5	4.6	12.4
25-Nov	10	12	12	14	11	9	11	9	10	15	16	14	16	16	A	15	11	11	7	7	9	5	1	1	10.6	16.3
26-Nov	2	2	3	2	1	1	1	1	2	4	7	9	8	A	6	3	2	1	1	1	7	14	23	22	5.4	22.5
27-Nov	23	24	23	21	22	23	22	21	20	24	26	26	A	23	24	23	24	25	24	26	27	27	29	27	24.0	28.7
28-Nov	28	28	27	26	27	25	23	23	23	20	22	A	26	25	23	20	8	8	11	5	4	3	3	5	17.9	27.7
29-Nov	6	3	6	7	3	3	3	6	5	10	A	15	15	16	17	9	4	3	4	5	4	4	11	12	7.5	16.6
30-Nov	11	12	7	9	13	7	4	4	5	A	11	12	14	11	10	9	6	4	5	4	5	4	7	5	7.7	13.9
	15.2	15.1	15.6	15.5	13.9	11.7	9.1	8.2	8.2	11.4	14.6	15.2	16.4	18.1	17.6	16.7	15.0	11.9	12.0	13.2	14.0	12.7	12.9	14.4	Diurnal Average	
	31.2	33.8	34.4	36.1	34.2	31.8	32.3	26.7	25.2	29.1	27.3	30.2	32.3	35.4	36.0	34.6	37.8	35.4	34.3	31.5	32.6	33.0	33.9	31.5	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

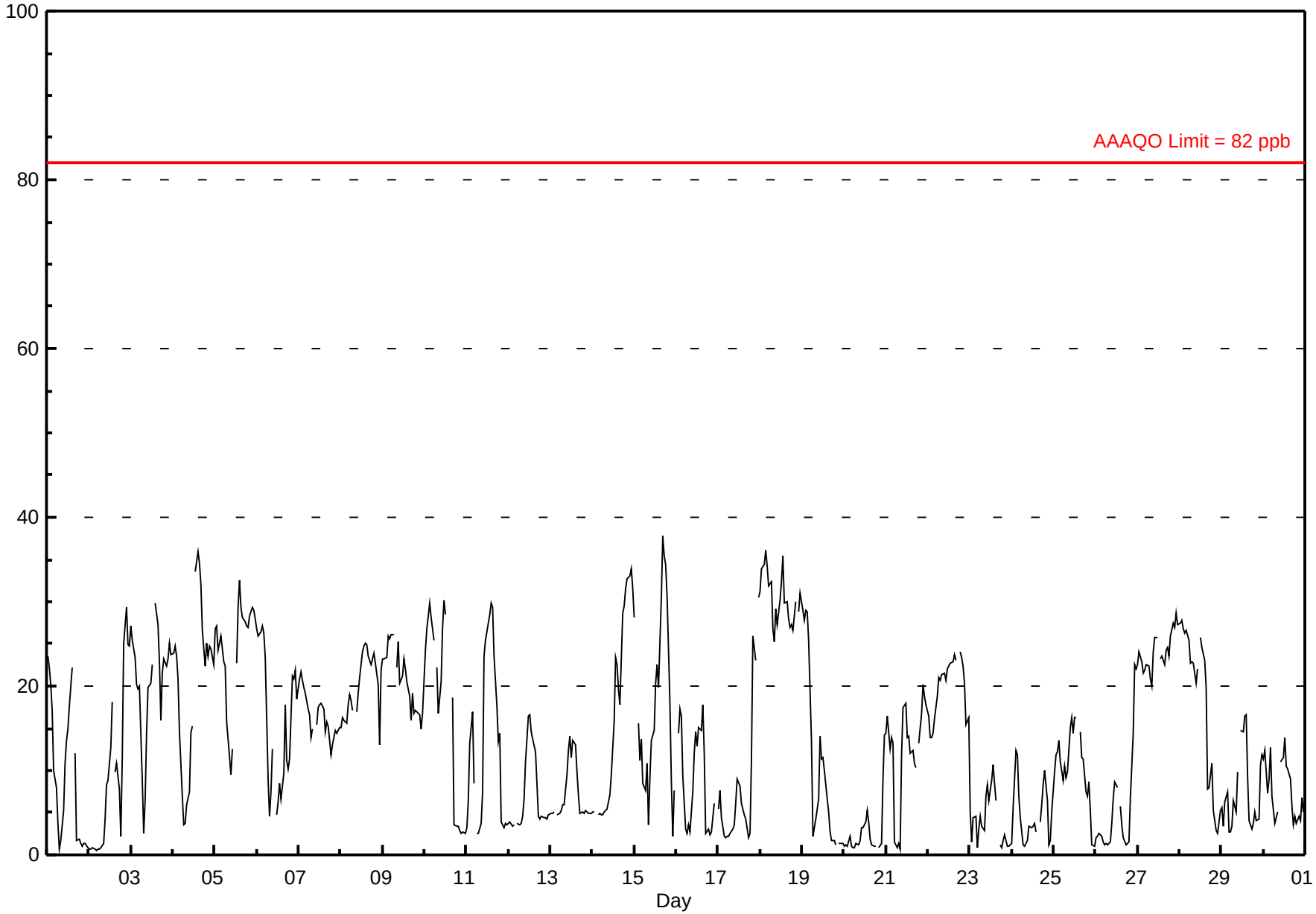
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Henry Pirker - November 2014

Maximum Value: 41.1 ppb on Nov 15 17:00

Maximum Daily Average: 33.6 ppb on Nov 18

Minimum Value: 1 ppb on Nov 2 02:00

Minimum Daily Average: 3.8 ppb on Nov 20

Maximum Diurnal Average: 20.7 ppb at hour 14

Minimum Diurnal Average: 10.9 ppb at hour 8

Monthly Average: 16.63 ppb

Percentiles: P_1 = 1.3 P_{10} = 3.3 Q_1 = 7.0 Median = 16.7 Q_3 = 25.2 P_{90} = 29.8 P_{99} = 37.3

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	29	24	23	20	17	14	7	1	3	9	13	18	17	22	26	A	15	4	4	2	2	3	2	2	12.2	28.8
2-Nov	1	1	1	1	1	1	1	1	2	7	11	12	16	21	A	12	16	14	9	16	33	33	29	27	11.7	33.2
3-Nov	28	27	26	23	23	25	17	7	12	20	23	23	27	A	32	33	26	21	24	24	25	24	27	27	23.6	32.7
4-Nov	26	25	25	22	21	11	8	8	9	10	20	20	A	37	37	37	37	30	26	29	29	28	31	29	24.1	37.3
5-Nov	29	29	26	29	28	26	28	21	17	15	17	A	30	34	35	33	30	30	29	31	31	31	30	30	27.7	34.9
6-Nov	28	28	28	30	30	29	18	7	13	17	A	7	8	12	9	26	31	23	16	19	24	23	24	23	20.5	31.0
7-Nov	24	22	22	21	20	19	18	17	17	A	17	20	20	20	19	18	17	18	14	15	16	17	16	16	18.4	23.6
8-Nov	16	18	17	18	19	20	20	19	A	20	21	24	26	26	26	27	26	26	26	26	25	23	22	24	22.4	26.7
9-Nov	26	26	26	28	28	29	29	A	25	28	24	25	25	24	22	21	20	21	18	19	19	18	16	22	23.6	29.3
10-Nov	26	30	31	31	30	29	A	26	21	23	31	33	32	C	C	C	37	8	8	5	4	4	4	3	20.8	37.3
11-Nov	5	13	20	22	16	A	3	3	5	21	27	27	29	30	31	31	28	23	18	20	8	4	5	6	17.1	30.9
12-Nov	5	6	4	4	A	5	4	4	6	8	17	18	18	16	14	14	11	6	5	6	5	5	4	5	8.3	17.9
13-Nov	5	6	7	A	5	6	6	7	8	11	16	18	12	15	14	12	9	6	6	6	6	7	5	6	8.6	18.3
14-Nov	5	7	A	5	6	5	6	6	6	7	8	13	21	26	27	26	25	35	35	35	35	36	35	34	19.4	35.9
15-Nov	30	A	20	15	18	12	12	19	9	16	19	17	23	25	25	40	41	40	38	37	27	21	3	14	22.7	41.1
16-Nov	A	23	23	25	13	7	4	7	5	17	18	19	18	21	23	20	19	10	5	3	4	8	10	A	13.8	25.1
17-Nov	9	12	7	3	2	4	4	3	5	7	8	11	11	7	7	9	9	6	5	27	29	26	A	33	10.6	32.7
18-Nov	34	36	37	37	37	34	34	33	30	32	31	33	35	38	37	34	31	30	31	29	33	A	33	33	33.6	37.9
19-Nov	31	30	32	31	29	23	8	9	9	12	16	15	12	13	8	6	4	2	5	1	A	2	2	2	13.3	31.9
20-Nov	2	2	1	4	2	1	1	2	2	3	5	4	5	6	7	2	2	1	2	A	1	6	12	16	3.8	16.2
21-Nov	20	22	20	20	19	4	3	3	3	18	19	21	17	16	15	16	13	12	A	15	20	21	20	18	15.4	22.0
22-Nov	17	15	15	15	18	20	22	21	23	23	23	23	23	24	24	25	26	A	25	25	24	23	20	21	21.4	25.5
23-Nov	9	3	10	13	3	5	8	6	6	11	10	10	13	13	11	9	A	3	2	4	4	2	2	2	6.7	13.1
24-Nov	3	13	17	15	13	8	3	2	7	3	4	4	4	5	3	A	7	9	11	15	12	3	6	11	7.5	16.6
25-Nov	13	13	14	15	15	12	13	13	13	20	18	17	18	18	A	17	15	15	11	9	12	9	3	1	13.0	19.6
26-Nov	4	3	3	3	2	2	2	2	2	7	8	10	10	A	7	5	3	2	2	2	14	17	24	23	7.0	23.9
27-Nov	24	25	25	24	24	26	25	23	24	26	27	27	A	26	27	26	28	28	27	28	30	30	30	29	26.5	30.4
28-Nov	29	30	28	28	29	27	26	26	26	23	25	A	28	28	28	24	22	16	15	9	9	5	4	16	21.7	30.3
29-Nov	16	5	10	15	4	6	7	9	8	15	A	17	24	25	22	14	6	4	9	11	7	8	20	22	12.2	24.5
30-Nov	20	24	14	21	19	12	4	9	9	A	15	15	17	11	11	10	8	4	6	5	8	6	12	10	11.7	23.7
	17.7	17.9	18.3	18.5	16.8	14.5	11.8	10.9	11.2	15.3	17.5	17.8	19.3	20.7	20.3	20.2	19.4	15.4	14.9	16.3	17.0	15.2	15.5	17.5	Diurnal Average	
	33.7	35.7	36.6	37.5	37.1	34.1	33.9	32.9	30.3	32.5	31.0	33.4	35.4	37.9	37.3	39.5	41.1	40.1	38.1	37.1	35.4	35.9	35.2	33.8	Diurnal Maximum	

C - Calibration

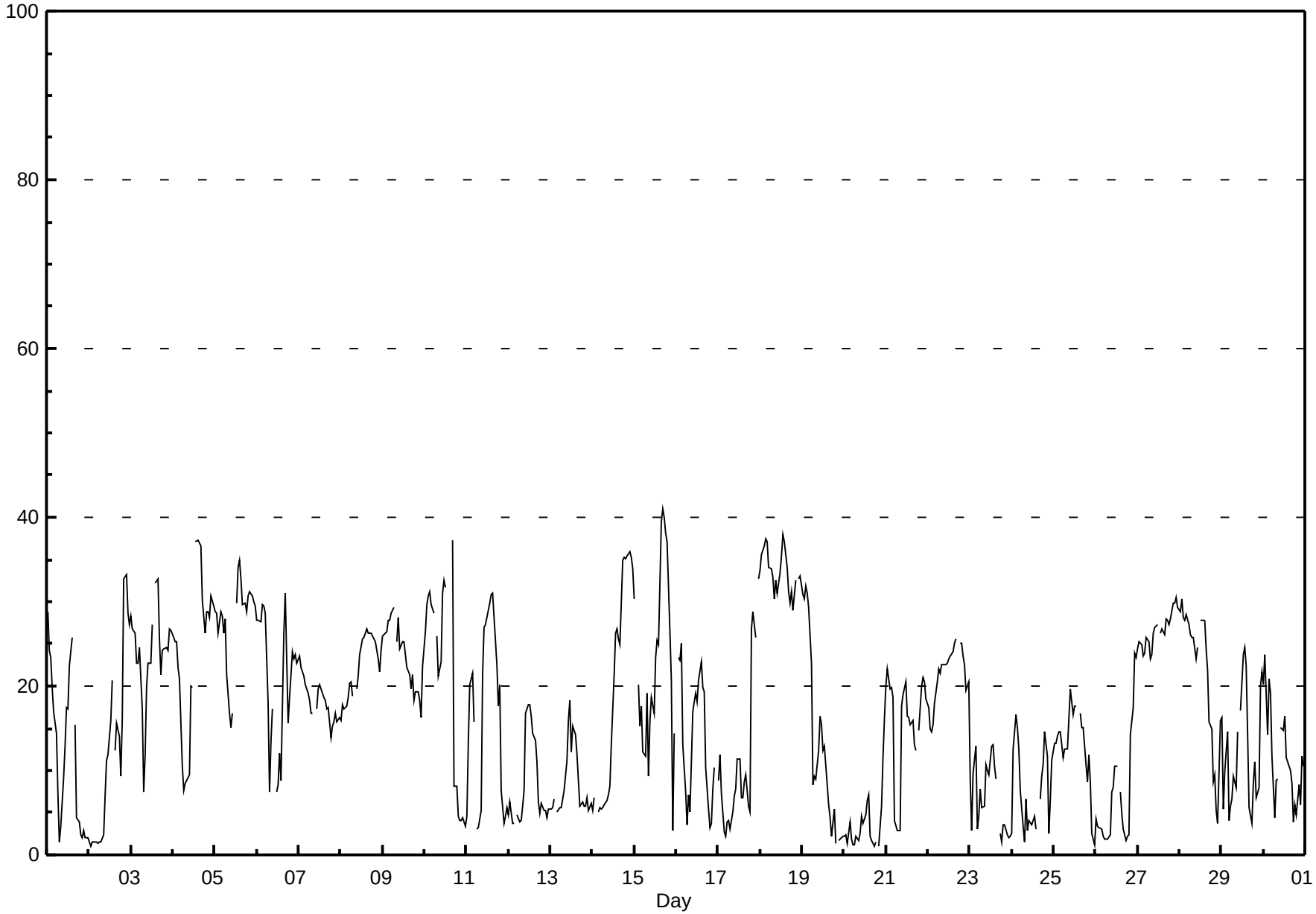
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

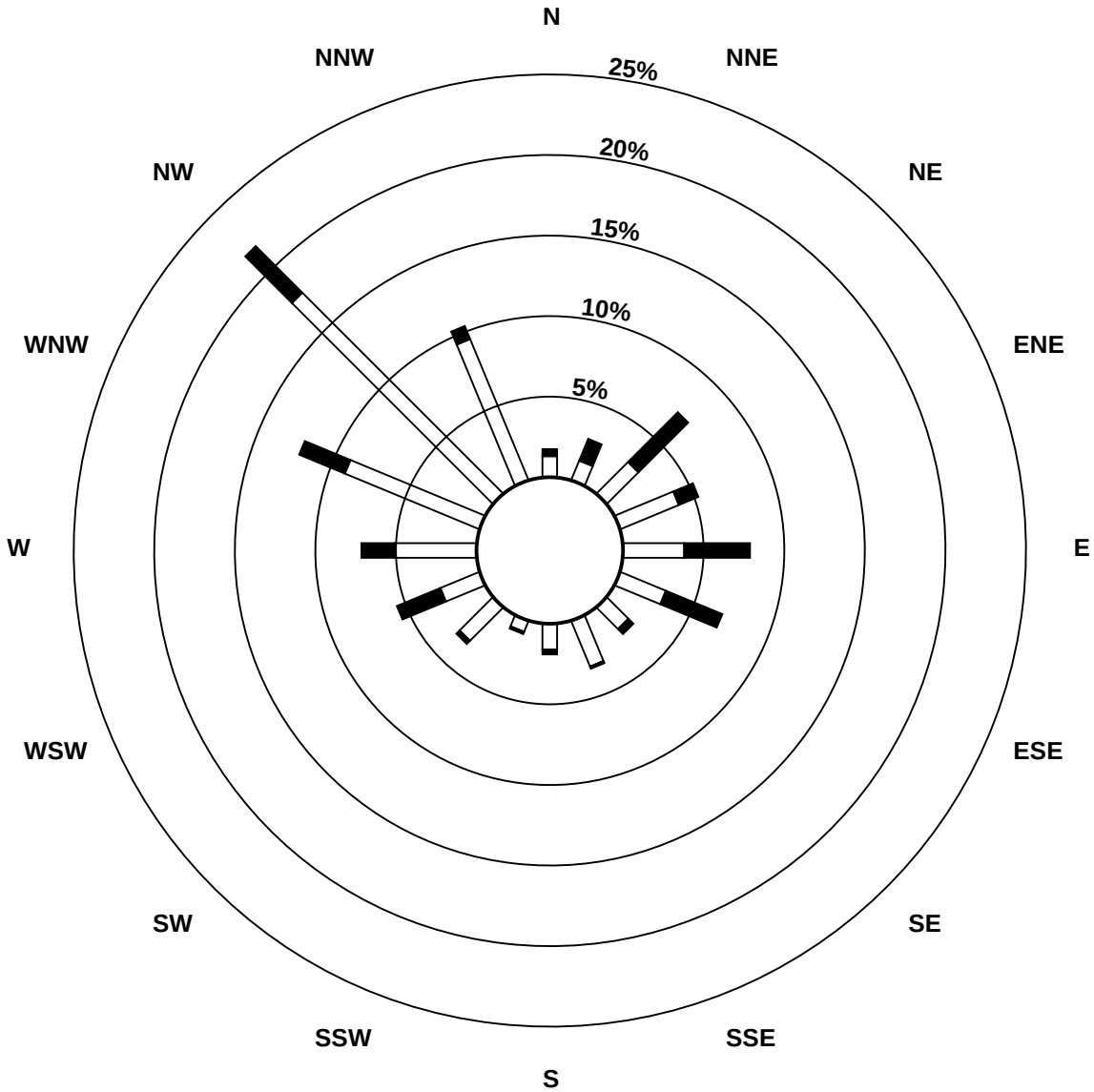
Henry Pirker - November 2014



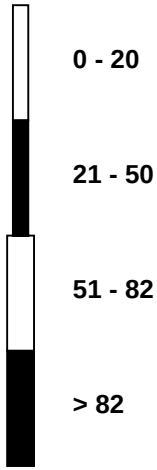
Pollutant Rose

Ozone (O_3) - ppb

Henry Pirker - November 2014



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Henry Pirker - November 2014

Maximum Value: 33.1 ppb on Nov 18 06:00

Minimum Value: 0.7 ppb on Nov 2 08:00

Percentiles: P_1 = 1.1 P_{10} = 3.6 Q_1 = 5.9 Median = 12.0 Q_3 = 21.6 P_{90} = 25.6 P_{99} = 31.1

Hours in Service:	720
Hours of Data:	714
Hours of Missing Data:	6
Hours of Calibration:	6
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Nov	10	12	14	16	17	18	16	13	10	8	7	7	7	9	11	12	14	13	12	10	8	6	3	3	17.6
2-Nov	1	1	1	1	1	1	1	1	1	1	2	3	5	7	8	9	10	11	10	10	12	14	15	17	17.0
3-Nov	19	21	24	25	24	23	21	18	16	14	14	14	14	14	17	20	22	23	23	23	23	23	23	22	25.0
4-Nov	22	23	24	23	22	20	18	15	13	11	10	9	8	12	17	21	25	27	29	30	29	28	27	25	30.0
5-Nov	25	25	25	25	25	25	25	24	22	20	18	17	17	18	19	21	23	26	28	28	29	29	28	28	28.7
6-Nov	28	28	28	28	27	27	24	21	19	17	16	13	10	8	7	8	9	9	9	10	12	14	16	17	27.9
7-Nov	17	18	20	21	20	20	19	19	18	18	17	16	16	16	16	16	17	16	16	15	15	15	14	14	20.7
8-Nov	14	14	15	15	16	16	17	17	17	17	18	18	19	20	21	22	22	23	24	24	24	23	22	21	24.0
9-Nov	21	21	21	22	22	23	24	25	25	25	25	24	23	23	22	22	21	20	20	19	18	18	17	17	25.0
10-Nov	18	19	20	22	23	24	26	26	25	24	24	24	24	24	24	N	N	N	N	N	N	6	5	5	26.4
11-Nov	3	3	5	6	7	8	8	8	8	8	9	11	13	15	19	22	24	26	24	23	20	17	14	10	25.6
12-Nov	8	6	5	4	4	4	4	4	4	4	5	7	8	10	11	12	12	12	11	10	8	7	6	5	12.5
13-Nov	5	5	5	5	5	5	5	5	5	6	7	8	9	10	11	11	11	11	10	9	8	7	6	5	11.4
14-Nov	5	5	5	5	5	5	5	5	5	5	5	6	7	10	12	14	15	18	21	24	26	27	28	30	29.8
15-Nov	31	31	29	27	24	20	17	14	10	10	10	10	11	13	14	17	21	24	27	29	29	27	25	22	31.5
16-Nov	20	17	14	12	11	10	10	10	9	8	7	7	7	9	10	12	13	13	12	10	9	7	6	5	19.6
17-Nov	4	5	5	5	5	4	4	4	3	3	3	4	5	5	5	6	6	6	5	6	8	10	11	14	14.2
18-Nov	18	23	27	31	32	33	33	33	32	31	30	30	29	30	30	30	30	30	30	30	29	28	28	28	33.1
19-Nov	29	29	29	29	29	27	23	20	17	14	12	10	8	8	8	9	9	8	6	5	4	3	2	2	29.2
20-Nov	1	1	1	1	1	1	1	1	1	1	2	2	2	3	3	3	3	3	3	3	2	2	2	4	4.0
21-Nov	6	8	10	10	12	12	11	9	8	7	8	8	8	10	11	13	14	14	13	12	13	14	15	15	15.4
22-Nov	16	17	16	17	16	16	17	17	18	18	19	20	21	22	22	22	22	22	23	23	23	23	22	21	23.2
23-Nov	18	16	14	11	9	6	5	3	3	4	4	5	6	6	7	7	8	7	6	5	5	3	2	1	18.1
24-Nov	1	2	3	5	5	6	6	6	6	5	4	3	2	2	3	3	3	4	4	5	6	5	5	5	5.9
25-Nov	6	7	7	8	8	9	10	11	11	11	12	12	13	13	14	15	15	14	13	12	11	9	8	7	14.9
26-Nov	5	4	4	3	2	2	2	2	2	2	2	3	4	4	5	5	5	5	4	3	3	5	7	9	8.9
27-Nov	12	14	17	20	21	22	22	22	22	22	22	23	23	23	23	24	24	24	24	24	24	25	26	26	26.1
28-Nov	27	27	27	27	27	27	26	26	25	24	24	23	23	23	23	23	21	19	17	16	13	10	8	6	27.4
29-Nov	6	5	4	5	5	4	5	5	5	6	5	6	8	10	12	12	12	11	10	9	8	6	6	6	12.4
30-Nov	7	8	8	9	10	10	9	8	8	7	8	8	8	9	10	10	10	9	9	8	6	6	5	5	10.3
Diurnal Maximums	31.1	31.5	29.5	30.7	31.9	33.1	33.0	32.6	31.8	31.2	30.3	29.6	29.4	29.8	29.5	29.9	30.3	30.0	30.0	30.0	29.3	28.7	28.3	29.8	

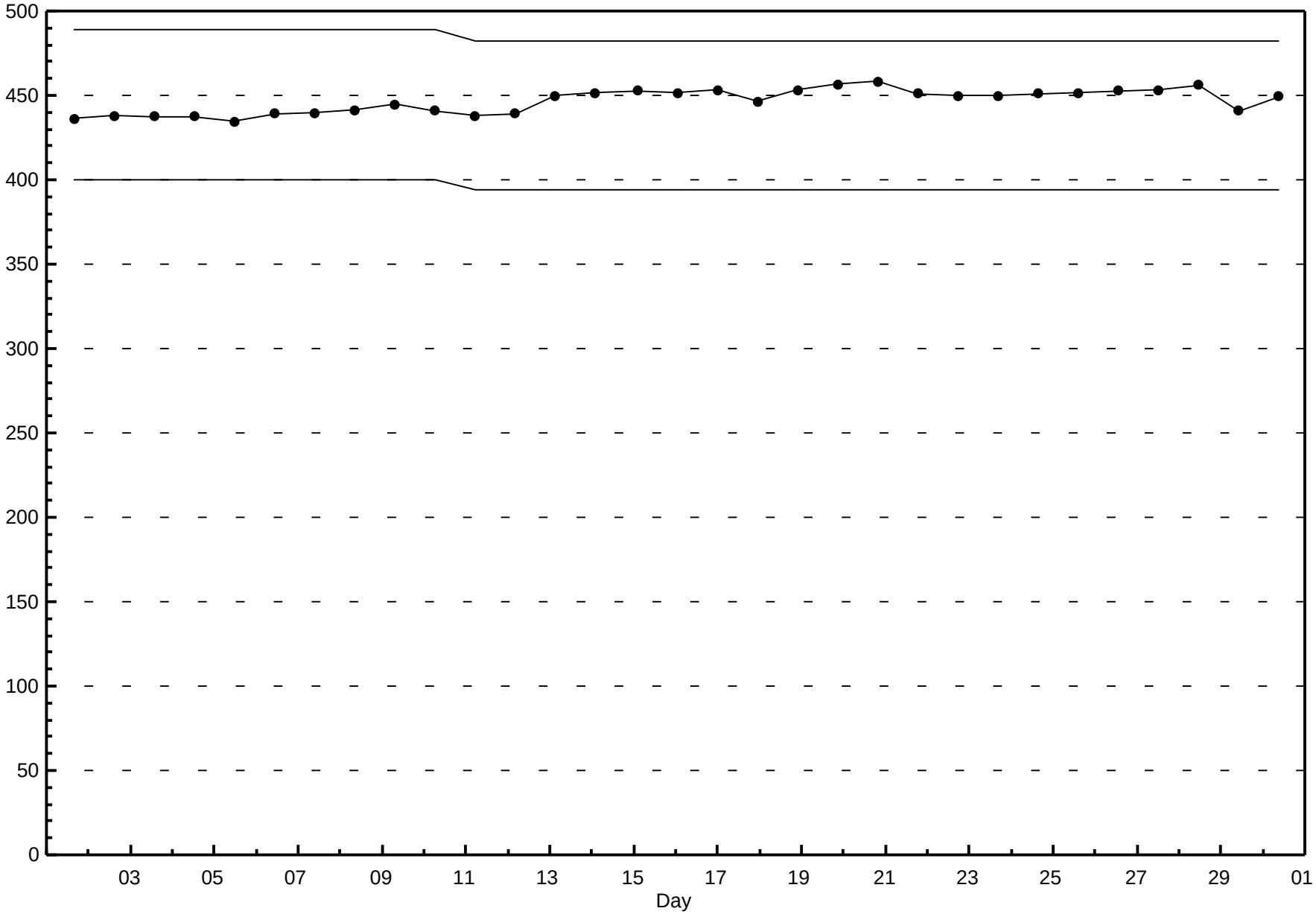
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - November 2014

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

Maximum Value: 1.42 ppm on Nov 1 23:00

Maximum Daily Average: 0.47 ppm on Nov 1

Minimum Value: 0.1 ppm on Nov 10 03:00

Minimum Daily Average: 0.12 ppm on Nov 27

Maximum Diurnal Average: 0.31 ppm at hour 9

Minimum Diurnal Average: 0.16 ppm at hour 5

Monthly Average: 0.232 ppm

Percentiles: P_1 = 0.09 P_{10} = 0.12 Q_1 = 0.14 Median = 0.18 Q_3 = 0.28 P_{90} = 0.39 P_{99} = 0.89

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	0.1	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	A	0.3	0.5	1.1	1.1	0.9	1.2	1.4	0.9	0.47	1.42
2-Nov	0.6	0.4	0.5	0.3	0.3	0.2	0.3	0.3	0.5	0.3	0.3	0.3	0.2	0.2	A	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.1	0.29	0.59
3-Nov	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.2	A	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.29
4-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	A	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.18	0.27
5-Nov	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	A	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.16	0.26
6-Nov	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	A	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.18	0.30
7-Nov	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.14	0.17
8-Nov	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.15	0.22
9-Nov	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	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.13	0.20
10-Nov	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.2	0.2	0.1	0.18	0.42
11-Nov	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.17	0.27
12-Nov	0.3	0.2	0.2	0.2	A	0.2	0.3	0.3	0.4	0.4	0.3	C	C	C	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.23	0.41
13-Nov	0.2	0.2	0.3	A	0.2	0.3	0.3	0.5	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.33	0.48
14-Nov	0.4	0.4	A	0.3	0.4	0.4	0.4	0.6	0.7	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.28	0.69
15-Nov	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.19	0.34
16-Nov	A	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.2	A	0.24	0.37
17-Nov	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.7	0.6	0.3	0.4	0.6	0.6	0.9	0.5	0.3	0.3	0.3	0.2	0.2	0.2	A	0.2	0.35	0.89
18-Nov	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.15	0.18
19-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.5	0.4	0.3	A	0.3	0.4	0.3	0.30	0.48
20-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.4	0.3	0.4	0.5	0.4	0.4	0.7	0.7	0.6	0.8	A	0.6	0.4	0.2	0.2	0.40	0.77
21-Nov	0.2	0.2	0.2	0.2	0.1	0.2	0.6	1.0	0.6	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.30	0.98
22-Nov	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	A	0.1	0.1	0.1	0.1	0.2	0.2	0.14	0.18
23-Nov	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	A	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.25	0.38
24-Nov	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.6	0.6	0.3	0.3	0.5	0.5	0.4	0.4	A	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.31	0.63
25-Nov	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.21	0.35
26-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.4	A	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.2	0.1	0.1	0.29	0.45
27-Nov	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.18
28-Nov	0.1	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	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.2	0.15	0.31
29-Nov	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	A	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.5	0.2	0.3	0.3	0.2	0.1	0.23	0.51
30-Nov	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.5	0.3	A	0.5	0.3	0.4	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.29	0.52
	0.19	0.18	0.17	0.16	0.16	0.18	0.24	0.30	0.31	0.26	0.24	0.25	0.26	0.23	0.25	0.24	0.24	0.27	0.28	0.24	0.24	0.25	0.24	0.21	Diurnal Average	
	0.59	0.42	0.54	0.33	0.38	0.43	0.58	0.98	0.74	0.62	0.51	0.51	0.56	0.58	0.89	0.74	0.71	0.63	1.07	1.11	0.90	1.23	1.42	0.92	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

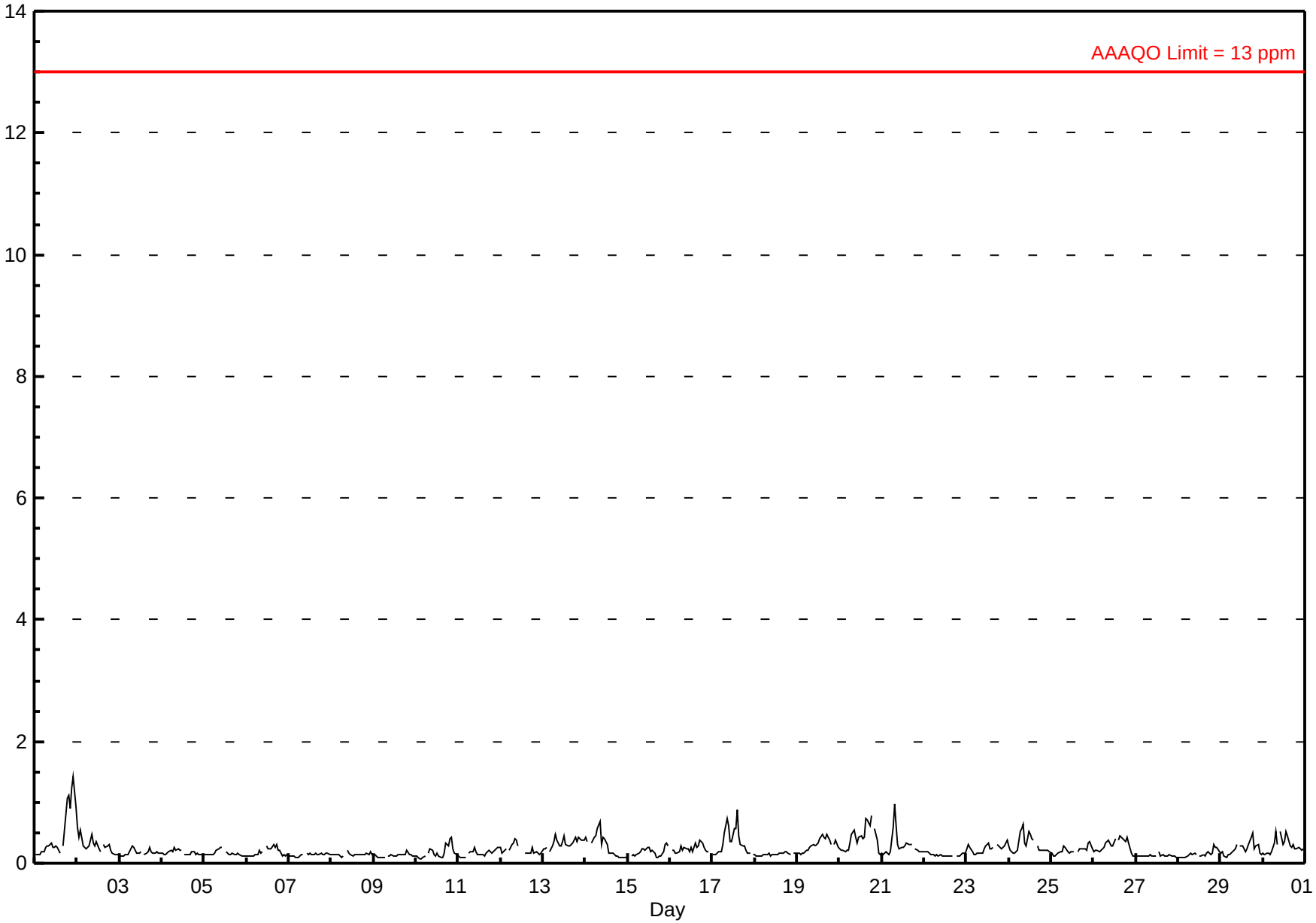
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na

Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - November 2014

Maximum Value: 3.72 ppm on Nov 30 08:00

Maximum Daily Average: 0.76 ppm on Nov 1

Minimum Value: 0.1 ppm on Nov 14 20:00

Minimum Daily Average: 0.18 ppm on Nov 22

Maximum Diurnal Average: 0.61 ppm at hour 8

Minimum Diurnal Average: 0.21 ppm at hour 5

Monthly Average: 0.376 ppm

Percentiles: $P_1 = 0.12$ $P_{10} = 0.16$ $Q_1 = 0.20$ Median = 0.28 $Q_3 = 0.45$ $P_{90} = 0.66$ $P_{99} = 1.77$

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	0.2	0.2	0.2	0.2	0.3	0.3	2.1	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.3	A	0.6	1.2	1.6	1.6	1.1	1.8	1.9	1.7	0.76	2.09
2-Nov	0.9	0.6	0.6	0.4	0.4	0.3	0.3	0.4	1.6	0.5	0.3	0.5	0.3	0.3	A	0.4	0.4	0.6	0.6	0.4	0.3	0.2	0.2	0.2	0.45	1.56
3-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.3	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.25	0.49
4-Nov	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.5	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24	0.50
5-Nov	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.5	0.4	0.4	0.3	A	0.3	0.7	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.25	0.72
6-Nov	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.4	0.3	0.4	A	0.4	0.3	0.3	0.3	0.5	0.7	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.27	0.72
7-Nov	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.3	0.2	0.2	0.2	0.5	0.8	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.24	0.79
8-Nov	0.1	0.1	0.2	0.2	0.2	0.4	0.1	0.1	A	0.9	0.7	0.5	0.2	0.3	0.2	0.3	0.6	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.30	0.93
9-Nov	0.2	0.2	0.1	0.1	0.2	0.5	0.1	A	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.20	0.55
10-Nov	0.1	0.1	0.1	0.1	0.1	1.2	A	0.4	0.4	0.4	0.3	0.2	0.4	0.2	0.1	0.2	0.3	0.8	0.4	0.7	0.9	0.5	0.2	0.2	0.36	1.16
11-Nov	0.2	0.2	0.1	0.2	0.2	A	0.5	0.3	0.3	0.3	0.5	0.2	0.3	0.3	0.9	0.2	0.3	0.4	0.4	0.3	0.4	0.4	0.3	0.4	0.32	0.86
12-Nov	0.3	0.2	0.3	0.4	A	0.3	0.5	0.4	0.6	0.7	0.5	C	C	C	0.2	0.3	0.3	0.2	0.7	0.2	0.3	0.2	0.2	0.2	0.35	0.69
13-Nov	0.3	0.3	0.3	A	0.2	0.5	0.5	0.7	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.8	0.5	0.7	0.4	0.6	0.5	0.6	0.6	0.46	0.79
14-Nov	0.5	0.5	A	0.4	0.5	0.6	0.7	0.9	1.2	0.4	0.6	0.5	0.6	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.41	1.15
15-Nov	0.2	A	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.1	0.2	0.3	0.3	0.3	0.5	0.6	0.4	0.28	0.63
16-Nov	A	0.4	0.4	0.4	0.3	0.3	0.8	0.6	0.4	0.3	0.4	0.2	0.3	0.2	0.6	0.4	0.7	1.4	0.6	0.4	0.3	0.2	0.3	A	0.44	1.38
17-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.7	1.4	1.3	0.5	0.5	0.8	0.8	1.0	0.7	0.5	0.5	0.4	0.3	0.2	0.2	A	0.2	0.51	1.39
18-Nov	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	0.3	0.2	0.5	0.2	0.3	0.2	0.2	A	0.2	0.4	0.22	0.50
19-Nov	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.4	0.4	0.4	1.1	0.4	0.4	0.5	0.6	0.6	0.6	0.9	0.6	0.4	A	0.4	0.5	0.3	0.44	1.08
20-Nov	0.5	0.3	0.3	0.2	0.3	0.3	0.9	0.7	0.7	0.5	0.4	0.5	0.5	0.6	0.9	1.1	1.0	0.8	1.0	A	0.7	0.6	0.2	0.2	0.56	1.09
21-Nov	0.3	0.2	0.3	0.2	0.2	0.2	1.8	2.0	1.0	0.9	0.3	0.5	0.3	0.6	0.4	0.4	0.4	0.3	A	0.4	0.2	0.2	0.2	0.2	0.51	2.02
22-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.23
23-Nov	0.4	0.5	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.6	0.3	0.4	A	0.4	0.4	0.4	0.3	0.9	0.4	0.5	0.39	0.94
24-Nov	0.3	0.3	0.2	0.2	0.4	0.4	3.5	1.3	1.2	0.5	0.5	0.7	0.7	0.5	0.5	A	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.60	3.50
25-Nov	0.2	0.2	0.2	0.2	0.2	0.9	0.5	0.4	0.5	0.2	0.2	0.2	0.2	0.3	A	0.2	0.3	0.4	0.3	0.3	0.3	0.5	0.5	0.3	0.34	0.93
26-Nov	0.2	0.3	0.3	0.2	0.3	0.3	0.5	0.6	0.8	0.5	0.4	0.3	0.7	A	0.5	1.1	0.5	0.5	0.4	0.5	0.6	0.2	0.1	0.2	0.43	1.09
27-Nov	0.1	0.1	0.1	0.1	0.1	0.5	0.2	0.2	0.2	0.2	0.2	0.2	A	1.4	0.4	0.5	0.2	0.2	0.2	0.6	0.2	0.2	0.1	0.1	0.27	1.37
28-Nov	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.5	0.2	0.4	0.2	A	0.3	0.2	0.2	0.2	0.3	0.4	0.2	0.3	0.5	0.5	0.4	0.4	0.26	0.50
29-Nov	0.3	0.2	0.2	0.1	0.3	0.3	0.3	0.5	0.6	0.6	A	0.7	0.6	0.5	0.4	0.4	0.4	1.4	1.1	0.4	0.7	0.5	0.2	0.2	0.47	1.45
30-Nov	0.3	0.2	0.2	0.2	0.2	0.3	0.4	3.7	0.4	A	0.7	0.4	0.5	0.7	0.5	0.3	0.3	0.6	0.4	0.3	0.4	0.2	0.3	0.3	0.52	3.72
	0.25	0.23	0.22	0.21	0.21	0.34	0.58	0.61	0.53	0.44	0.40	0.36	0.39	0.40	0.38	0.39	0.42	0.50	0.44	0.37	0.37	0.38	0.33	0.30	Diurnal Average	
	0.95	0.55	0.65	0.41	0.45	1.16	3.50	3.72	1.56	1.26	1.08	0.71	0.83	1.37	0.98	1.09	0.99	1.45	1.60	1.64	1.12	1.81	1.90	1.73	Diurnal Maximum	

C - Calibration

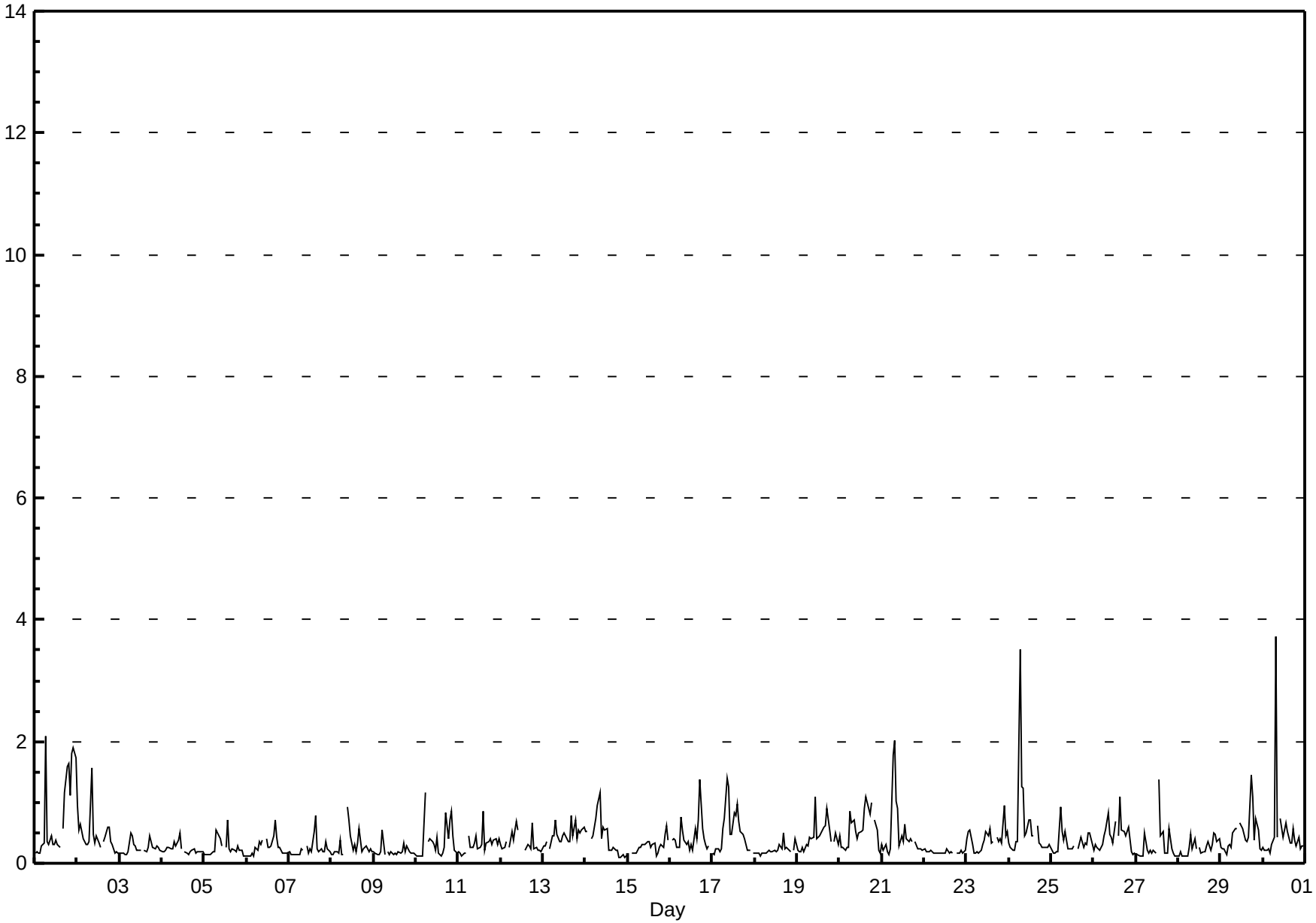
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

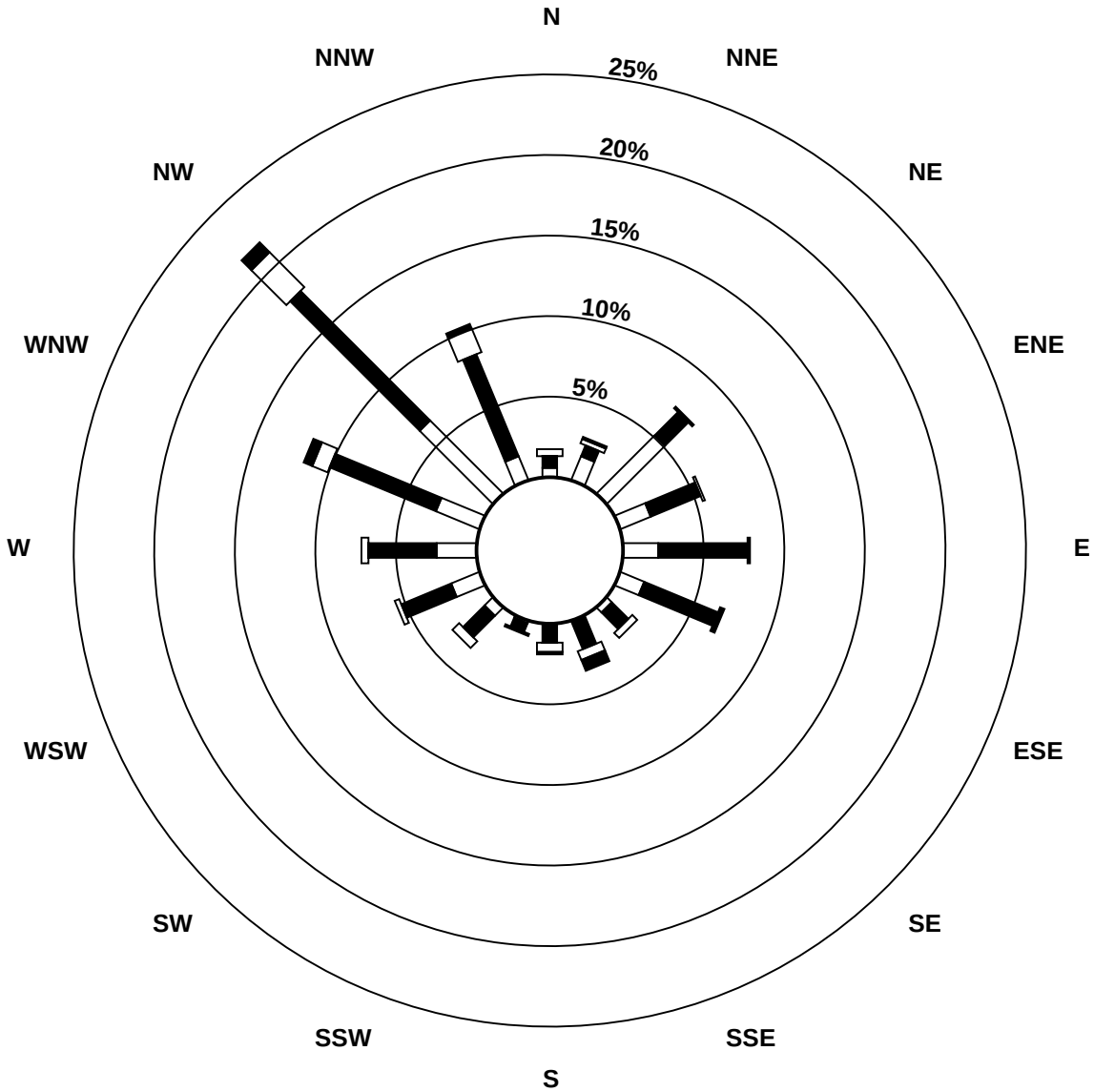
Henry Pirker - November 2014



Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - November 2014



Pollutant Classes (ppm)

- 0 - 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- 0.5 - 1
- 1 - 10
- > 10

Peace Airshed Zone Association

Eight Hour Running Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - November 2014

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 0.97 ppm on Nov 2 01:00

Minimum Value: 0.10 ppm on Nov 28 06:00

Percentiles: P_1 = 0.10 P_{10} = 0.13 Q_1 = 0.15 Median = 0.20 Q_3 = 0.28 P_{90} = 0.38 P_{99} = 0.74

Hours in Service:	720
Hours of Data:	714
Hours of Missing Data:	6
Hours of Calibration:	6
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 Maximum
1-Nov	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.8	0.9	0.9	0.94
2-Nov	1.0	1.0	0.9	0.8	0.7	0.6	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.97
3-Nov	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
4-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
5-Nov	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.21
6-Nov	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	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.26
7-Nov	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.17
8-Nov	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.16
9-Nov	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	0.1	0.1	0.15
10-Nov	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	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.27
11-Nov	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
12-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	N	N	N	N	N	N	0.2	0.2	0.2	0.2	0.2	0.32
13-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.38
14-Nov	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.46
15-Nov	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	0.2	0.2	0.2	0.23
16-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.28
17-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.58
18-Nov	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
19-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.41
20-Nov	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.61
21-Nov	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.44
22-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.21
23-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.30
24-Nov	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.47
25-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.26
26-Nov	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.40
27-Nov	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	0.1	0.25
28-Nov	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.21
29-Nov	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.31
30-Nov	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.43
Diurnal Maximums	0.97	0.96	0.89	0.79	0.71	0.58	0.44	0.42	0.46	0.45	0.45	0.45	0.46	0.50	0.58	0.57	0.52	0.51	0.57	0.59	0.62	0.76	0.94	0.93	

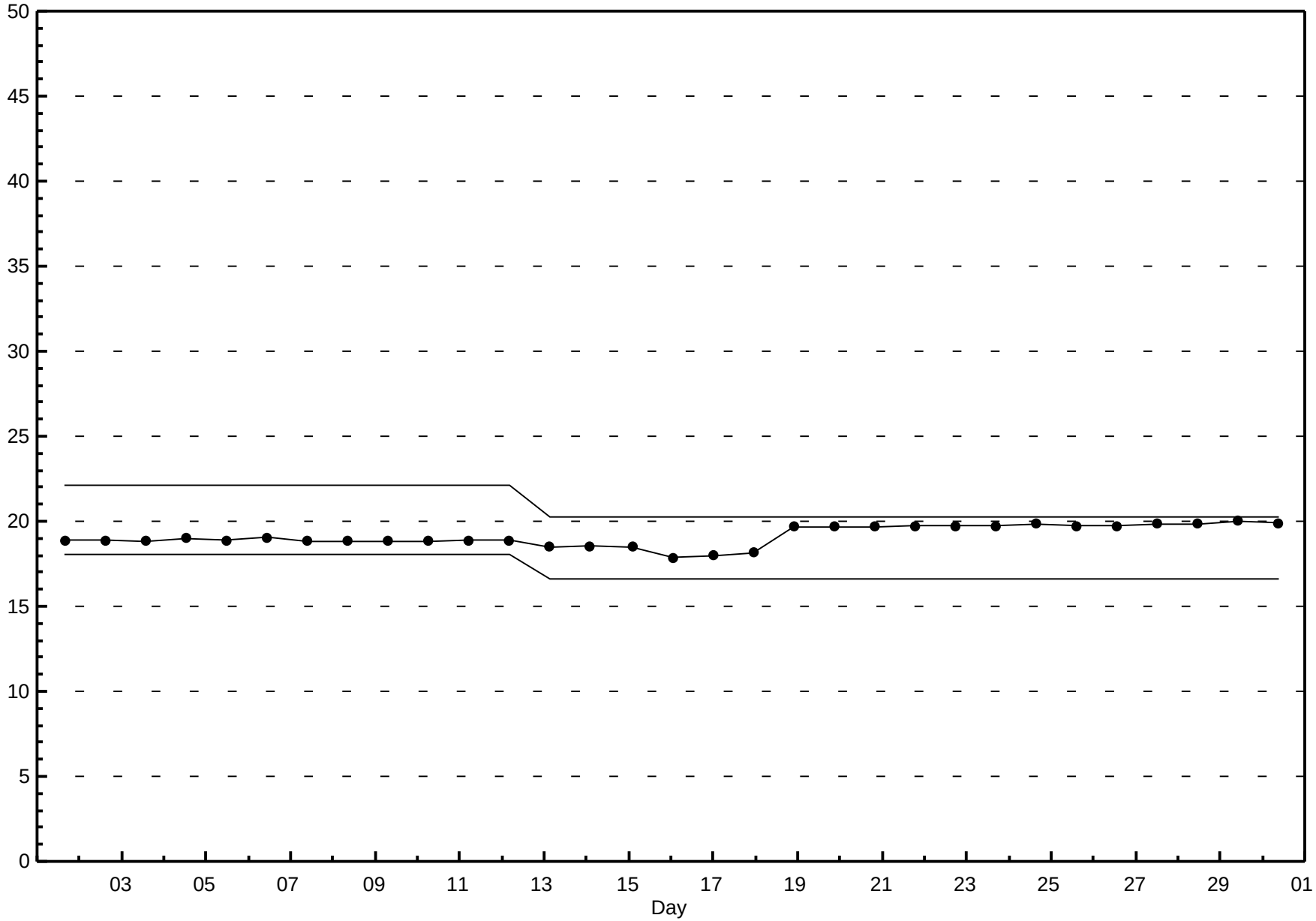
N - Not Valid
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm

Peace Airshed Zone Association

Span Responses

Carbon Monoxide (CO)

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - November 2014

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

Maximum Value: 4.51 ppm on Nov 29 07:00

Maximum Daily Average: 2.46 ppm on Nov 17

Minimum Value: 1.8 ppm on Nov 21 12:00

Minimum Daily Average: 1.86 ppm on Nov 22

Maximum Diurnal Average: 2.23 ppm at hour 7

Minimum Diurnal Average: 2.05 ppm at hour 21

Monthly Average: 2.103 ppm

Percentiles: P_1 = 1.84 P_{10} = 1.89 Q_1 = 1.93 Median = 2.01 Q_3 = 2.24 P_{90} = 2.44 P_{99} = 2.85

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

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-Nov	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	3.0	2.3	2.3	2.3	2.2	2.0	A	2.1	2.1	2.2	2.2	2.4	2.4	2.5	2.5	2.20	3.04
2-Nov	2.4	2.3	2.6	2.4	2.6	2.4	2.4	2.7	2.6	2.4	2.2	2.2	2.1	2.0	A	2.0	2.0	2.0	2.1	2.1	1.9	1.9	1.9	1.9	2.23	2.72
3-Nov	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.6	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.56
4-Nov	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.96	2.16
5-Nov	2.0	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.08
6-Nov	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	A	2.1	2.1	2.1	2.1	2.0	1.9	2.0	2.0	2.8	1.9	2.0	1.9	2.0	2.02	2.77
7-Nov	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.95	1.97
8-Nov	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.95	1.99
9-Nov	2.0	2.0	2.0	2.0	2.0	1.9	1.9	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.99	2.04
10-Nov	2.0	1.9	1.9	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.2	2.2	2.02	2.32
11-Nov	2.3	2.4	2.4	2.3	2.2	A	2.4	2.4	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.17	2.41
12-Nov	2.3	2.2	2.4	2.5	A	2.4	2.4	2.4	2.2	C	C	C	C	C	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.2	2.2	2.4	2.27	2.46
13-Nov	2.4	2.4	2.5	A	2.6	2.6	2.4	2.4	2.4	2.5	2.4	2.3	2.4	2.3	2.3	2.3	2.3	2.4	2.4	2.6	2.6	2.5	2.6	2.6	2.44	2.62
14-Nov	2.7	2.7	A	2.9	3.0	2.9	2.9	2.7	2.7	2.5	2.5	2.3	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.31	2.98
15-Nov	1.9	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.02	2.20
16-Nov	A	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.2	A	2.19	2.32
17-Nov	2.4	2.5	2.6	2.6	2.5	2.6	2.7	2.6	2.6	2.6	2.7	2.6	2.6	2.5	2.6	2.5	2.4	2.5	2.4	2.2	1.9	1.9	A	1.9	2.46	2.66
18-Nov	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	M	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	1.88	1.90
19-Nov	1.9	1.9	1.9	1.9	1.9	2.1	2.1	2.1	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.3	2.3	2.2	2.1	2.1	A	2.2	2.4	2.2	2.07	2.36
20-Nov	2.3	2.3	2.4	2.3	2.4	2.5	2.6	2.8	2.5	2.3	2.2	2.3	2.4	2.3	2.4	2.4	2.5	2.5	2.7	A	2.4	2.3	2.1	2.0	2.39	2.78
21-Nov	1.9	1.9	1.9	1.9	2.0	2.2	2.2	2.3	2.3	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.93	2.27
22-Nov	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	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	1.86	1.91
23-Nov	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.3	2.4	2.3	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.17	2.38
24-Nov	2.2	2.1	2.0	1.9	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	A	2.1	2.0	2.0	1.9	2.0	2.1	2.0	2.1	2.06	2.24
25-Nov	2.0	2.0	1.9	2.0	1.9	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	2.0	2.0	2.0	2.0	2.0	1.95	2.05
26-Nov	2.0	2.1	2.2	2.2	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.4	2.4	A	2.3	2.3	2.4	2.4	2.5	2.5	2.1	2.0	1.9	1.9	2.26	2.48
27-Nov	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.90
28-Nov	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	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	3.1	2.7	2.01	3.08
29-Nov	2.0	2.0	2.0	2.0	2.0	2.2	4.5	2.6	2.8	2.6	A	2.4	2.3	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.27	4.51
30-Nov	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.6	A	2.5	2.4	2.5	2.5	2.3	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.5	2.29	2.61
	2.06	2.07	2.07	2.08	2.10	2.12	2.23	2.18	2.18	2.19	2.13	2.13	2.12	2.07	2.08	2.06	2.06	2.07	2.09	2.08	2.05	2.07	2.11	2.09	Diurnal Average	
	2.73	2.73	2.58	2.90	2.98	2.88	4.51	2.78	2.79	3.04	2.66	2.55	2.55	2.50	2.64	2.51	2.50	2.54	2.67	2.77	2.60	2.54	3.08	2.75	Diurnal Maximum	

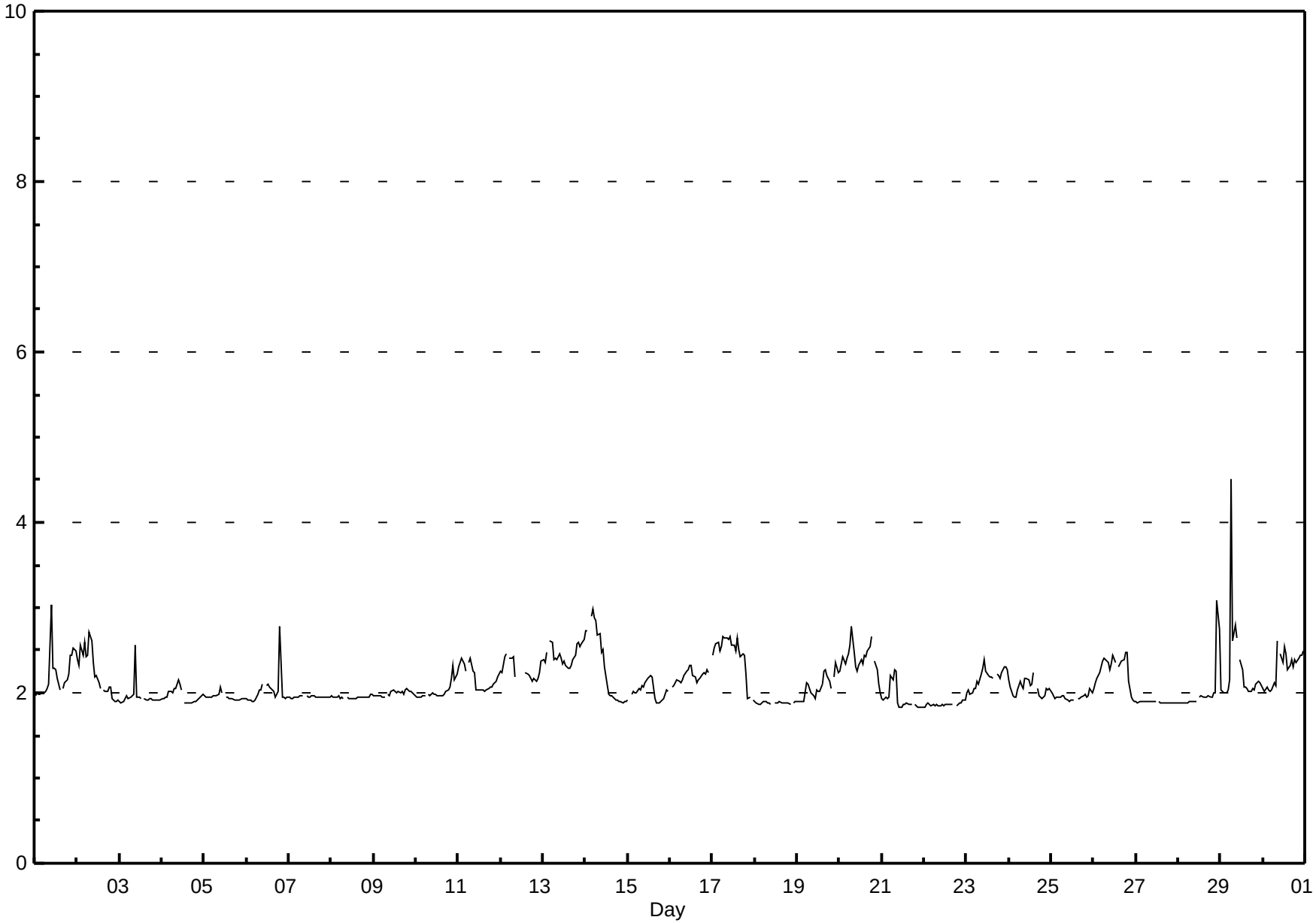
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - November 2014

Maximum Value: 9.43 ppm on Nov 6 20:00

Maximum Daily Average: 2.81 ppm on Nov 20

Minimum Value: 1.9 ppm on Nov 21 12:00

Minimum Daily Average: 1.89 ppm on Nov 22

Maximum Diurnal Average: 2.40 ppm at hour 23

Minimum Diurnal Average: 2.15 ppm at hour 14

Monthly Average: 2.239 ppm

Percentiles: P_1 = 1.88 P_{10} = 1.91 Q_1 = 1.97 Median = 2.10 Q_3 = 2.35 P_{90} = 2.62 P_{99} = 4.05

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

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-Nov	2.3	2.1	2.1	2.1	2.0	2.1	2.7	2.1	2.2	3.9	2.5	2.4	2.5	2.3	2.1	A	2.1	2.2	2.2	2.4	2.7	2.5	2.7	2.7	2.38	3.86
2-Nov	2.5	2.4	3.1	3.1	2.9	2.7	2.6	3.1	2.7	2.6	2.2	2.3	2.2	2.1	A	2.1	2.1	2.1	2.1	2.3	2.0	1.9	1.9	2.1	2.40	3.13
3-Nov	1.9	1.9	2.1	2.0	2.1	2.1	2.0	2.0	2.0	4.7	2.2	2.0	2.0	A	2.0	1.9	1.9	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.11	4.66
4-Nov	2.0	2.0	2.0	2.1	2.1	2.4	2.1	2.3	2.2	2.5	2.5	2.1	A	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.09	2.47
5-Nov	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.4	2.1	A	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.01	2.38
6-Nov	2.0	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.1	2.2	A	2.2	2.2	2.2	2.1	2.1	2.1	2.4	2.1	9.4	2.0	2.0	2.0	2.0	2.38	9.43
7-Nov	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	A	2.0	2.1	2.0	2.3	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.03	2.27
8-Nov	2.2	2.1	2.2	2.0	2.3	2.0	2.0	2.0	A	2.0	2.0	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.06	2.32
9-Nov	2.0	2.2	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.04	2.18
10-Nov	2.0	2.0	2.0	2.0	2.3	2.0	A	2.1	2.1	2.1	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.4	2.4	2.2	2.3	2.12	2.44
11-Nov	2.4	2.4	2.5	2.4	2.3	A	2.5	2.5	2.3	2.3	2.1	2.1	2.1	2.1	2.2	2.4	2.1	2.1	2.3	2.1	2.3	2.2	2.2	2.3	2.26	2.53
12-Nov	2.3	2.3	2.5	2.5	A	2.4	2.4	2.5	2.4	C	C	C	C	C	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.5	2.33	2.52
13-Nov	2.5	2.4	2.6	A	2.7	2.7	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.4	2.4	2.5	2.7	2.6	2.6	2.6	2.7	2.50	2.72
14-Nov	2.8	2.8	A	2.9	3.0	3.0	2.9	2.8	2.8	2.5	3.1	3.0	2.2	2.0	2.0	2.0	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.42	3.07
15-Nov	2.0	A	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.1	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.07	2.26
16-Nov	A	2.3	2.4	2.4	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.5	2.3	2.2	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.3	A	2.31	2.47
17-Nov	2.5	2.6	2.7	2.7	2.6	2.6	2.7	2.7	2.7	2.7	2.8	2.6	2.8	2.6	2.9	2.8	2.5	2.5	2.5	2.4	2.0	2.0	A	2.0	2.56	2.85
18-Nov	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	M	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.91	1.96
19-Nov	1.9	2.1	1.9	1.9	1.9	2.6	2.2	2.2	2.2	2.0	2.0	2.2	2.0	2.0	2.2	2.3	2.3	2.2	2.2	2.2	A	2.3	2.7	2.3	2.17	2.65
20-Nov	2.3	2.4	2.5	2.4	2.4	2.5	2.9	3.2	2.6	2.4	2.6	2.7	2.9	2.7	3.4	4.1	3.3	3.2	4.4	A	2.7	2.6	2.2	2.1	2.81	4.36
21-Nov	2.9	2.3	2.1	2.1	2.2	2.3	2.2	2.6	2.4	2.0	1.9	1.9	1.9	2.0	2.0	2.1	1.9	1.9	A	2.1	2.0	1.9	1.9	1.9	2.11	2.88
22-Nov	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	1.89	1.98
23-Nov	2.1	2.2	2.0	2.1	2.2	2.1	2.2	2.2	2.3	2.3	2.5	2.4	2.3	2.3	2.3	2.3	A	2.4	2.3	2.3	2.3	2.4	2.4	2.3	2.26	2.46
24-Nov	2.2	2.1	2.0	2.0	2.0	2.1	2.4	2.3	2.2	2.2	2.2	2.2	2.1	2.2	2.3	A	2.3	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.13	2.36
25-Nov	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.1	2.02	2.36
26-Nov	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.4	2.4	2.3	2.4	2.5	2.7	A	2.4	2.7	2.4	2.5	2.5	2.5	2.4	2.1	2.0	2.0	2.36	2.66
27-Nov	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.92	1.96
28-Nov	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	9.3	9.2	2.59	9.26
29-Nov	2.1	2.1	2.1	2.0	2.1	2.8	6.1	3.5	3.0	3.0	A	2.5	2.4	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.3	2.2	2.1	2.49	6.08
30-Nov	2.1	2.1	2.1	2.1	2.0	2.1	2.3	2.2	4.0	A	2.7	2.8	2.9	2.5	2.3	2.4	2.5	2.4	2.5	2.4	2.5	2.5	2.5	2.6	2.45	4.01
	2.17	2.15	2.16	2.17	2.19	2.24	2.39	2.32	2.32	2.39	2.25	2.25	2.23	2.15	2.18	2.21	2.15	2.15	2.20	2.39	2.15	2.15	2.40	2.39	Diurnal Average	
	2.88	2.84	3.13	3.07	3.01	2.97	6.08	3.52	4.01	4.66	3.07	3.02	2.91	2.72	3.44	4.13	3.33	3.24	4.36	9.43	2.70	2.59	9.26	9.22	Diurnal Maximum	

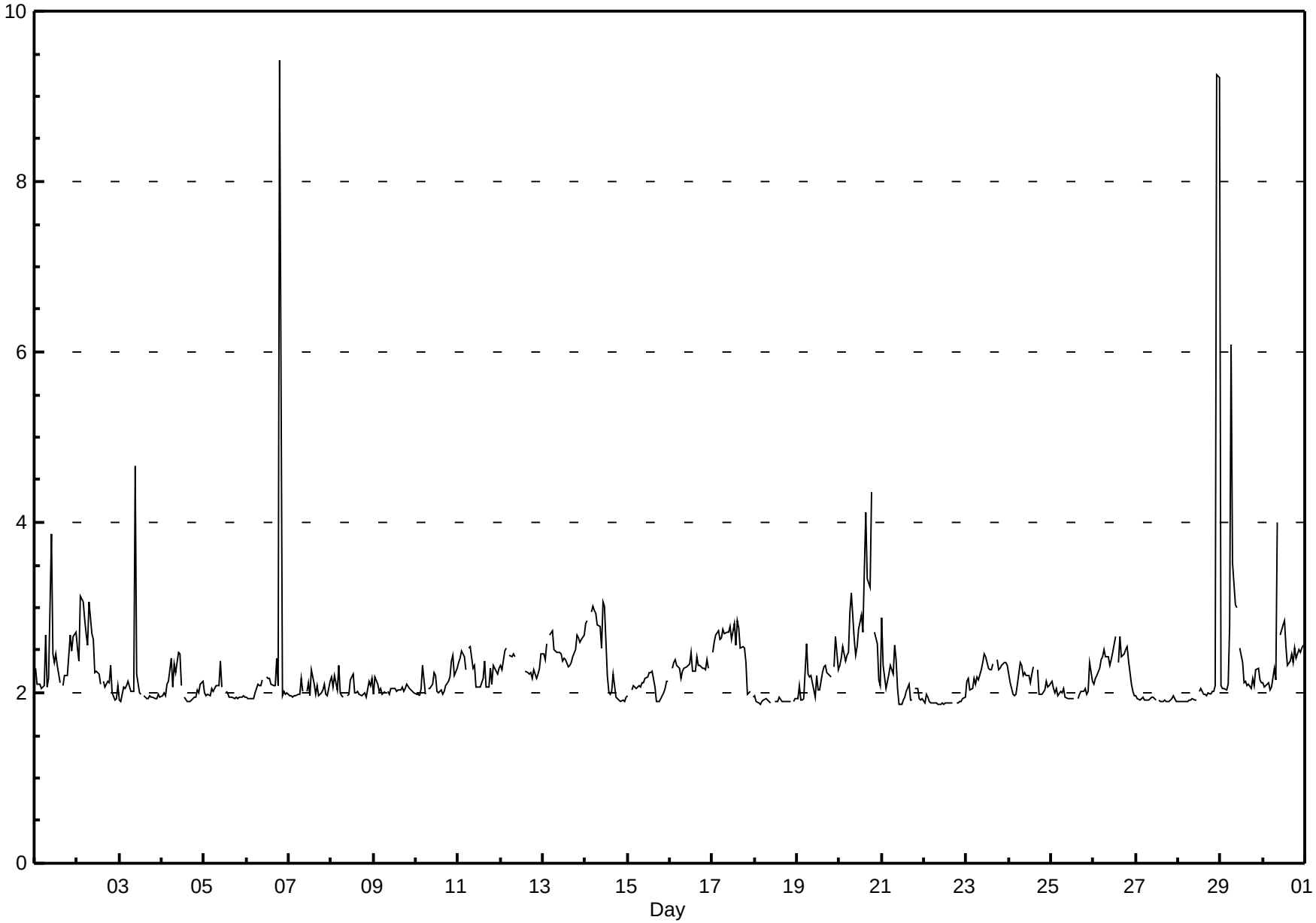
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

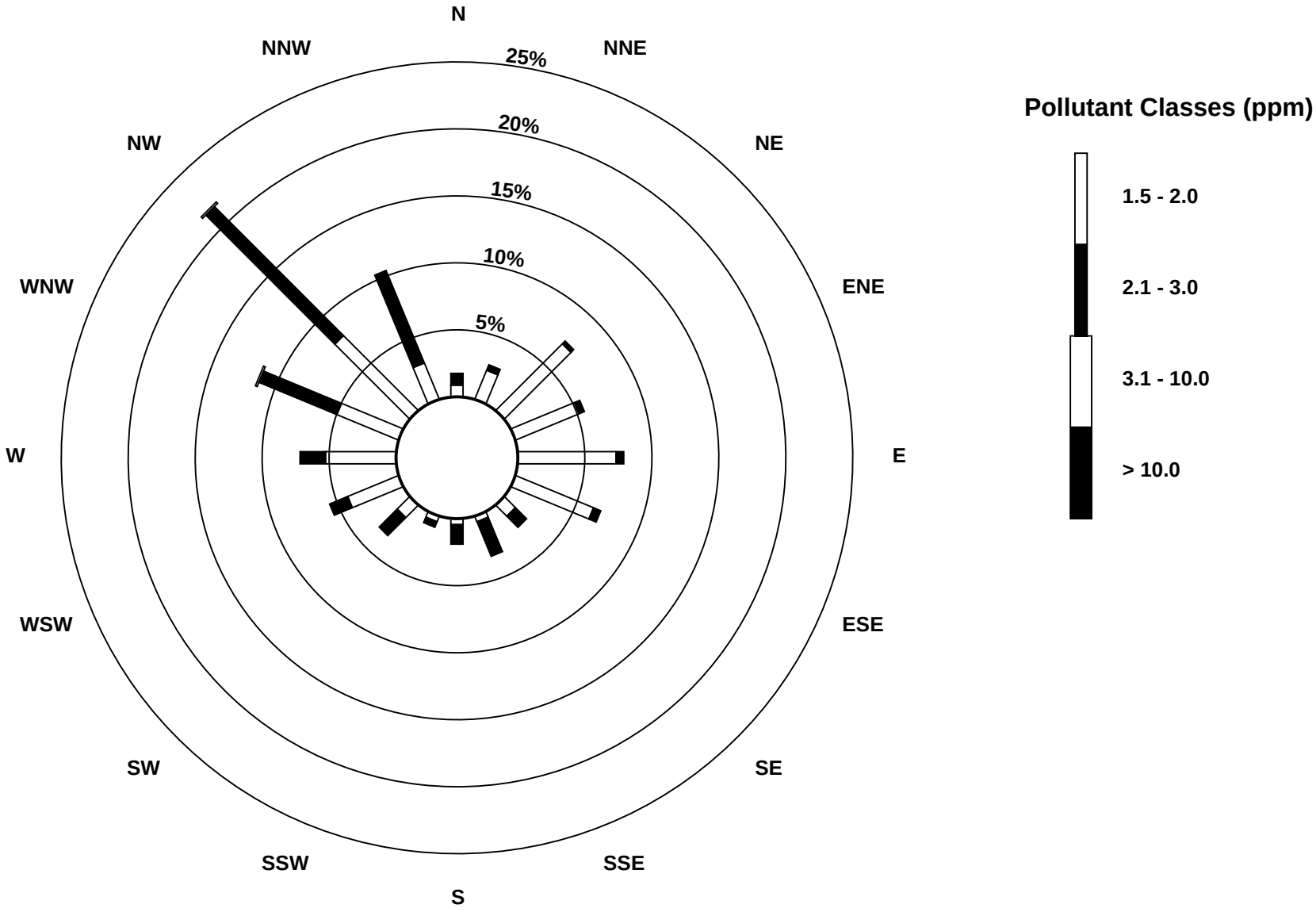
Henry Pirker - November 2014



Pollutant Rose

Total Hydrocarbons (THC) - ppm

Henry Pirker - November 2014

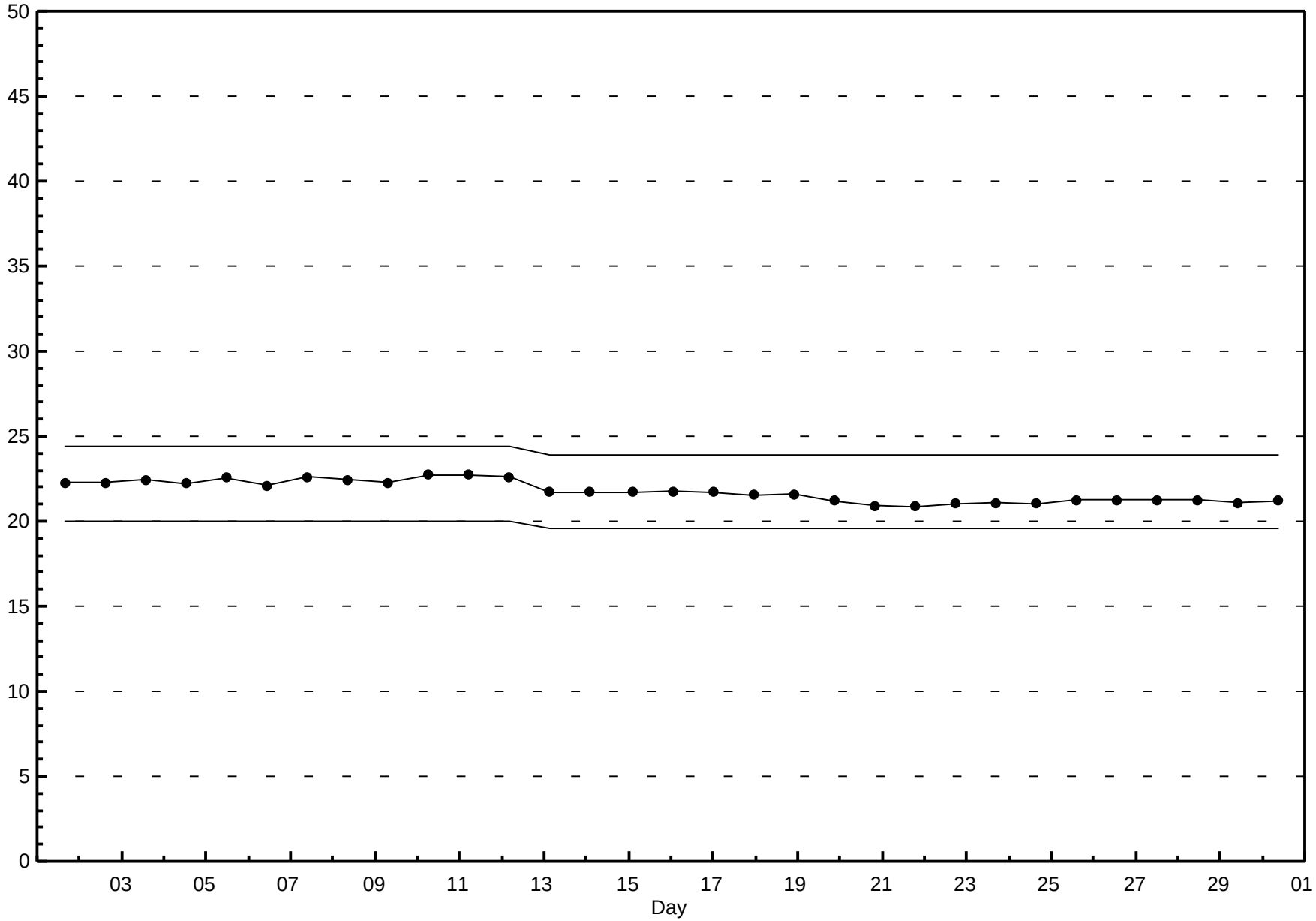


Peace Airshed Zone Association

Span Responses

Total Hydrocarbons (THC)

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

Methane (CH_4) - ppm

Henry Pirker - November 2014

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

Maximum Value: 4.50 ppm on Nov 29 07:00

Maximum Daily Average: 2.45 ppm on Nov 17

Minimum Value: 1.8 ppm on Nov 21 12:00

Minimum Daily Average: 1.86 ppm on Nov 22

Maximum Diurnal Average: 2.22 ppm at hour 7

Minimum Diurnal Average: 2.05 ppm at hour 21

Monthly Average: 2.099 ppm

Percentiles: P_1 = 1.84 P_{10} = 1.88 Q_1 = 1.93 Median = 2.00 Q_3 = 2.23 P_{90} = 2.44 P_{99} = 2.84

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

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-Nov	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	3.0	2.3	2.3	2.3	2.2	2.0	A	2.0	2.1	2.2	2.2	2.4	2.4	2.5	2.5	2.19	3.03
2-Nov	2.4	2.3	2.5	2.4	2.6	2.4	2.4	2.7	2.6	2.4	2.2	2.2	2.1	2.0	A	2.0	2.0	2.0	2.1	2.1	1.9	1.9	1.9	1.9	2.22	2.71
3-Nov	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.6	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.55
4-Nov	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.96	2.15
5-Nov	2.0	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.07
6-Nov	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	A	2.1	2.1	2.1	2.0	2.0	1.9	2.0	2.0	2.8	1.9	1.9	1.9	1.9	2.02	2.77
7-Nov	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	2.0	1.9	1.9	2.0	2.0	1.9	2.0	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.95	1.97
8-Nov	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.94	1.98
9-Nov	2.0	2.0	2.0	2.0	2.0	1.9	1.9	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.98	2.03
10-Nov	1.9	1.9	1.9	1.9	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.1	2.2	2.01	2.31
11-Nov	2.3	2.3	2.4	2.3	2.2	A	2.3	2.4	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.17	2.40
12-Nov	2.2	2.2	2.4	2.5	A	2.4	2.4	2.4	2.2	C	C	C	C	C	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.2	2.2	2.4	2.27	2.45
13-Nov	2.4	2.3	2.5	A	2.6	2.6	2.4	2.4	2.4	2.5	2.4	2.3	2.4	2.3	2.3	2.3	2.3	2.4	2.4	2.6	2.6	2.5	2.6	2.6	2.44	2.62
14-Nov	2.7	2.7	A	2.9	3.0	2.9	2.9	2.7	2.7	2.5	2.5	2.3	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.30	2.97
15-Nov	1.9	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.02	2.20
16-Nov	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.2	A	2.19	2.32
17-Nov	2.4	2.5	2.6	2.6	2.5	2.5	2.7	2.6	2.6	2.6	2.7	2.5	2.5	2.5	2.6	2.5	2.4	2.5	2.4	2.2	1.9	1.9	A	1.9	2.45	2.66
18-Nov	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	M	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	1.88	1.90
19-Nov	1.9	1.9	1.9	1.9	1.9	2.1	2.1	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.2	2.3	2.2	2.1	2.1	A	2.2	2.4	2.2	2.06	2.36
20-Nov	2.2	2.3	2.4	2.3	2.4	2.4	2.5	2.8	2.5	2.3	2.2	2.3	2.4	2.3	2.4	2.4	2.5	2.5	2.7	A	2.4	2.3	2.1	2.0	2.38	2.77
21-Nov	1.9	1.9	1.9	1.9	1.9	2.2	2.1	2.3	2.2	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.93	2.26
22-Nov	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.91
23-Nov	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.3	2.4	2.3	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.17	2.38
24-Nov	2.2	2.1	2.0	1.9	2.0	2.0	2.1	2.1	2.0	2.2	2.2	2.1	2.1	2.1	2.2	A	2.0	2.0	1.9	1.9	2.0	2.1	2.0	2.0	2.05	2.24
25-Nov	2.0	2.0	1.9	2.0	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.95	2.04
26-Nov	2.0	2.1	2.2	2.2	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.4	2.4	A	2.3	2.3	2.4	2.4	2.5	2.5	2.1	1.9	1.9	1.9	2.26	2.48
27-Nov	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.90
28-Nov	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	2.0	1.9	1.9	2.0	1.9	1.9	2.0	2.0	3.1	2.7	2.01	3.08
29-Nov	2.0	2.0	2.0	2.0	2.0	2.2	4.5	2.6	2.8	2.6	A	2.4	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.26	4.50
30-Nov	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.6	A	2.4	2.3	2.5	2.4	2.3	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.5	2.28	2.61
	2.06	2.06	2.06	2.07	2.09	2.12	2.22	2.18	2.18	2.19	2.13	2.12	2.11	2.06	2.08	2.06	2.05	2.06	2.08	2.08	2.05	2.07	2.11	2.09	Diurnal Average	
	2.72	2.73	2.57	2.90	2.97	2.88	4.50	2.77	2.79	3.03	2.66	2.55	2.55	2.49	2.64	2.51	2.49	2.53	2.66	2.77	2.59	2.53	3.08	2.74	Diurnal Maximum	

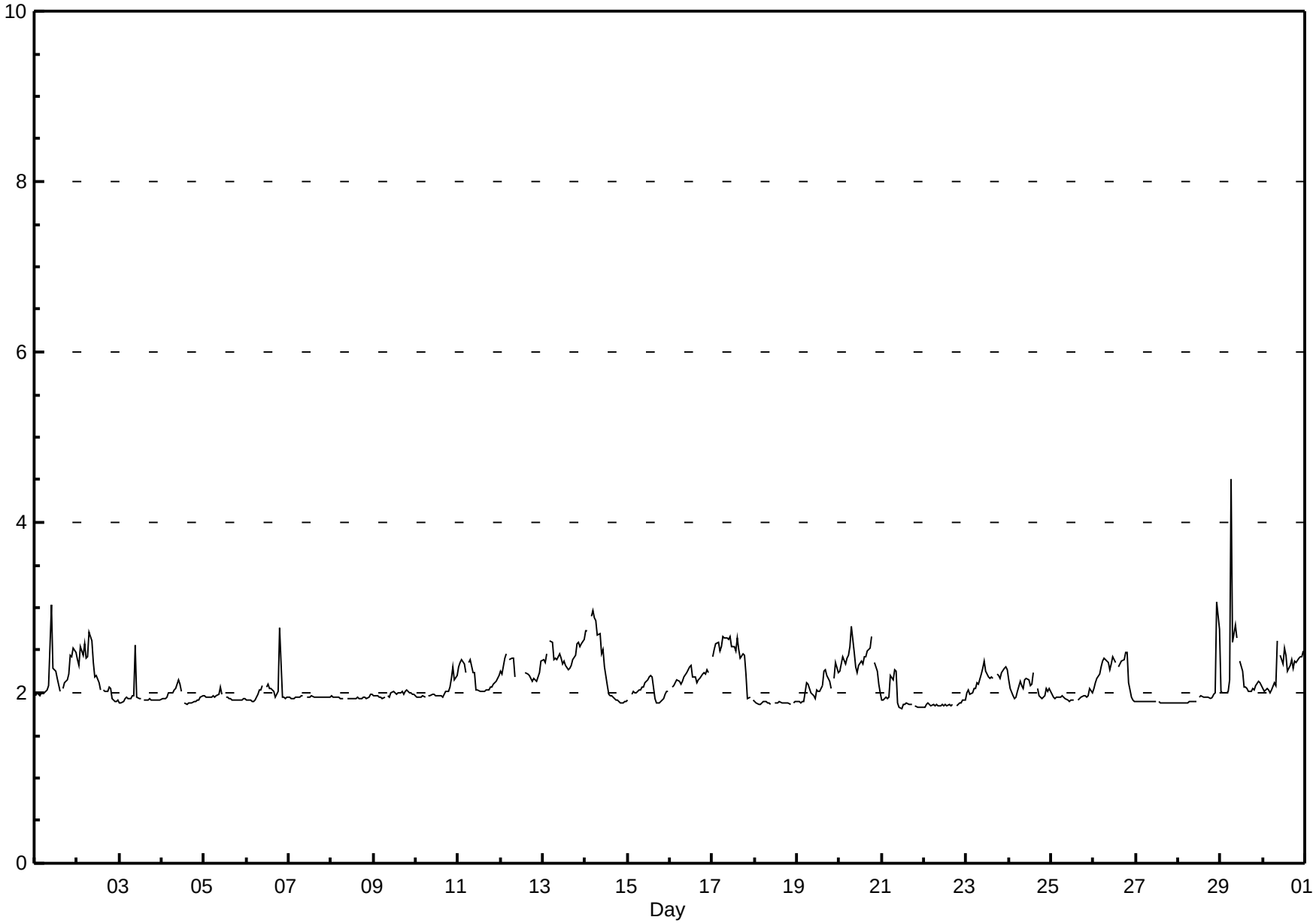
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Methane (CH_4) - ppm

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Maximums

Methane (CH_4) - ppm

Henry Pirker - November 2014

Maximum Value: 9.41 ppm on Nov 6 20:00

Maximum Daily Average: 2.81 ppm on Nov 20

Minimum Value: 1.9 ppm on Nov 21 12:00

Minimum Daily Average: 1.89 ppm on Nov 22

Maximum Diurnal Average: 2.40 ppm at hour 23

Minimum Diurnal Average: 2.14 ppm at hour 14

Monthly Average: 2.234 ppm

Percentiles: P_1 = 1.87 P_{10} = 1.91 Q_1 = 1.97 Median = 2.09 Q_3 = 2.34 P_{90} = 2.62 P_{99} = 4.05

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

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-Nov	2.3	2.1	2.1	2.1	2.0	2.1	2.7	2.1	2.2	3.8	2.5	2.4	2.5	2.3	2.1	A	2.1	2.2	2.2	2.4	2.7	2.5	2.6	2.7	2.37	3.85
2-Nov	2.5	2.4	3.1	3.1	2.9	2.7	2.5	3.1	2.7	2.6	2.2	2.3	2.2	2.1	A	2.1	2.1	2.1	2.1	2.3	2.0	1.9	1.9	2.1	2.39	3.11
3-Nov	1.9	1.9	2.1	2.0	2.1	2.1	2.0	2.0	2.0	4.7	2.2	2.0	2.0	A	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.10	4.65
4-Nov	2.0	2.0	2.0	2.1	2.1	2.4	2.1	2.3	2.2	2.5	2.5	2.1	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.08	2.46
5-Nov	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.4	2.1	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.00	2.37
6-Nov	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.1	2.1	A	2.2	2.2	2.2	2.1	2.1	2.1	2.4	2.1	9.4	2.0	2.0	2.0	2.0	2.37	9.41
7-Nov	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.2	2.0	A	2.0	2.1	2.0	2.3	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.03	2.26
8-Nov	2.2	2.0	2.2	2.0	2.3	2.0	2.0	1.9	A	2.0	2.0	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.1	2.1	2.2	2.05	2.31
9-Nov	2.0	2.2	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.03	2.17
10-Nov	2.0	2.0	2.0	2.0	2.3	2.0	A	2.0	2.1	2.1	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.4	2.4	2.2	2.3	2.11	2.42
11-Nov	2.4	2.4	2.5	2.4	2.3	A	2.5	2.5	2.3	2.3	2.1	2.1	2.0	2.1	2.2	2.4	2.1	2.1	2.3	2.1	2.3	2.2	2.2	2.3	2.25	2.52
12-Nov	2.3	2.3	2.5	2.5	A	2.4	2.4	2.4	2.4	C	C	C	C	C	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.4	2.32	2.51
13-Nov	2.5	2.4	2.6	A	2.7	2.7	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.4	2.4	2.5	2.7	2.6	2.6	2.6	2.7	2.50	2.72
14-Nov	2.8	2.8	A	2.9	3.0	3.0	2.9	2.8	2.8	2.5	3.1	3.0	2.2	2.0	2.0	2.0	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.41	3.06
15-Nov	2.0	A	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.1	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.07	2.25
16-Nov	A	2.3	2.4	2.4	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.5	2.3	2.2	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.3	A	2.31	2.46
17-Nov	2.5	2.6	2.7	2.7	2.6	2.6	2.8	2.7	2.7	2.7	2.8	2.6	2.8	2.6	2.8	2.8	2.5	2.5	2.5	2.4	2.0	2.0	A	2.0	2.56	2.85
18-Nov	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	M	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	1.91	1.97
19-Nov	1.9	2.1	1.9	1.9	1.9	2.6	2.2	2.2	2.2	2.0	1.9	2.2	2.0	2.0	2.2	2.3	2.3	2.2	2.2	2.2	A	2.3	2.7	2.3	2.17	2.66
20-Nov	2.3	2.4	2.5	2.4	2.4	2.5	2.9	3.2	2.6	2.4	2.6	2.7	2.9	2.7	3.4	4.1	3.3	3.2	4.4	A	2.7	2.6	2.1	2.1	2.81	4.36
21-Nov	2.9	2.3	2.1	2.1	2.2	2.3	2.2	2.6	2.4	2.0	1.9	1.9	1.9	2.0	2.0	2.1	1.9	1.9	A	2.1	2.0	1.9	1.9	1.9	2.11	2.87
22-Nov	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.97
23-Nov	2.1	2.2	2.0	2.1	2.2	2.1	2.2	2.1	2.3	2.3	2.5	2.4	2.3	2.3	2.3	2.3	A	2.4	2.3	2.3	2.3	2.4	2.4	2.3	2.25	2.46
24-Nov	2.2	2.1	2.0	2.0	2.0	2.1	2.4	2.3	2.2	2.2	2.2	2.2	2.1	2.2	2.3	A	2.3	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.13	2.36
25-Nov	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.1	2.01	2.36
26-Nov	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.4	2.4	2.3	2.4	2.5	2.6	A	2.4	2.7	2.4	2.4	2.5	2.5	2.4	2.1	2.0	2.0	2.35	2.65
27-Nov	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.92	1.96
28-Nov	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	9.3	9.2	2.59	9.27
29-Nov	2.1	2.1	2.1	2.0	2.1	2.8	6.1	3.5	3.0	3.0	A	2.5	2.3	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.3	2.1	2.1	2.48	6.08
30-Nov	2.1	2.1	2.1	2.1	2.0	2.1	2.3	2.1	4.0	A	2.7	2.8	2.8	2.5	2.3	2.4	2.5	2.4	2.5	2.4	2.5	2.5	2.5	2.6	2.45	4.00
	2.16	2.15	2.15	2.16	2.19	2.23	2.38	2.31	2.31	2.39	2.24	2.25	2.22	2.14	2.18	2.20	2.14	2.15	2.19	2.38	2.14	2.15	2.40	2.39	Diurnal Average	
	2.87	2.83	3.11	3.06	3.01	2.96	6.08	3.52	4.00	4.65	3.06	3.02	2.90	2.71	3.43	4.12	3.32	3.24	4.36	9.41	2.70	2.58	9.27	9.22	Diurnal Maximum	

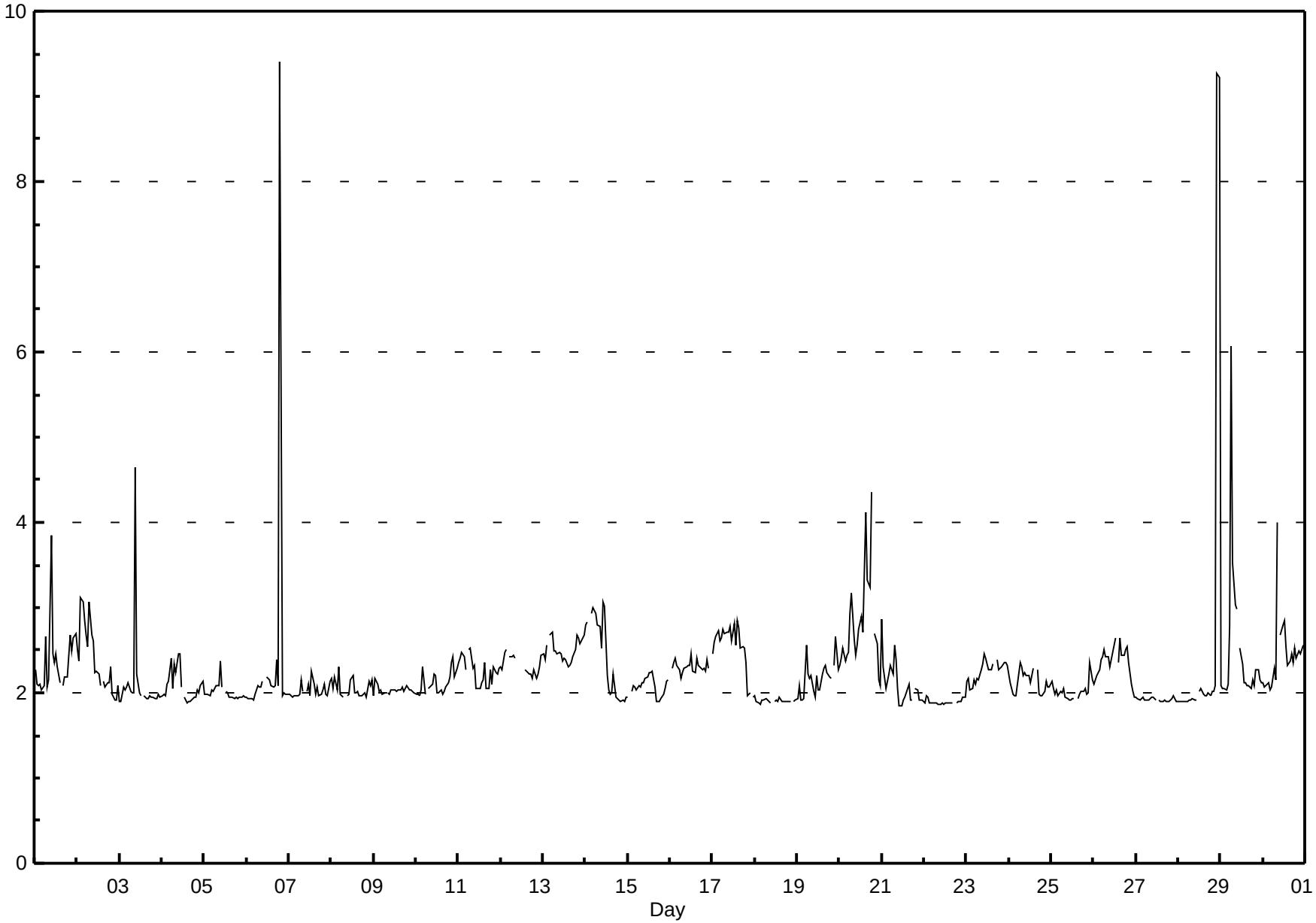
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Methane (CH_4) - ppm

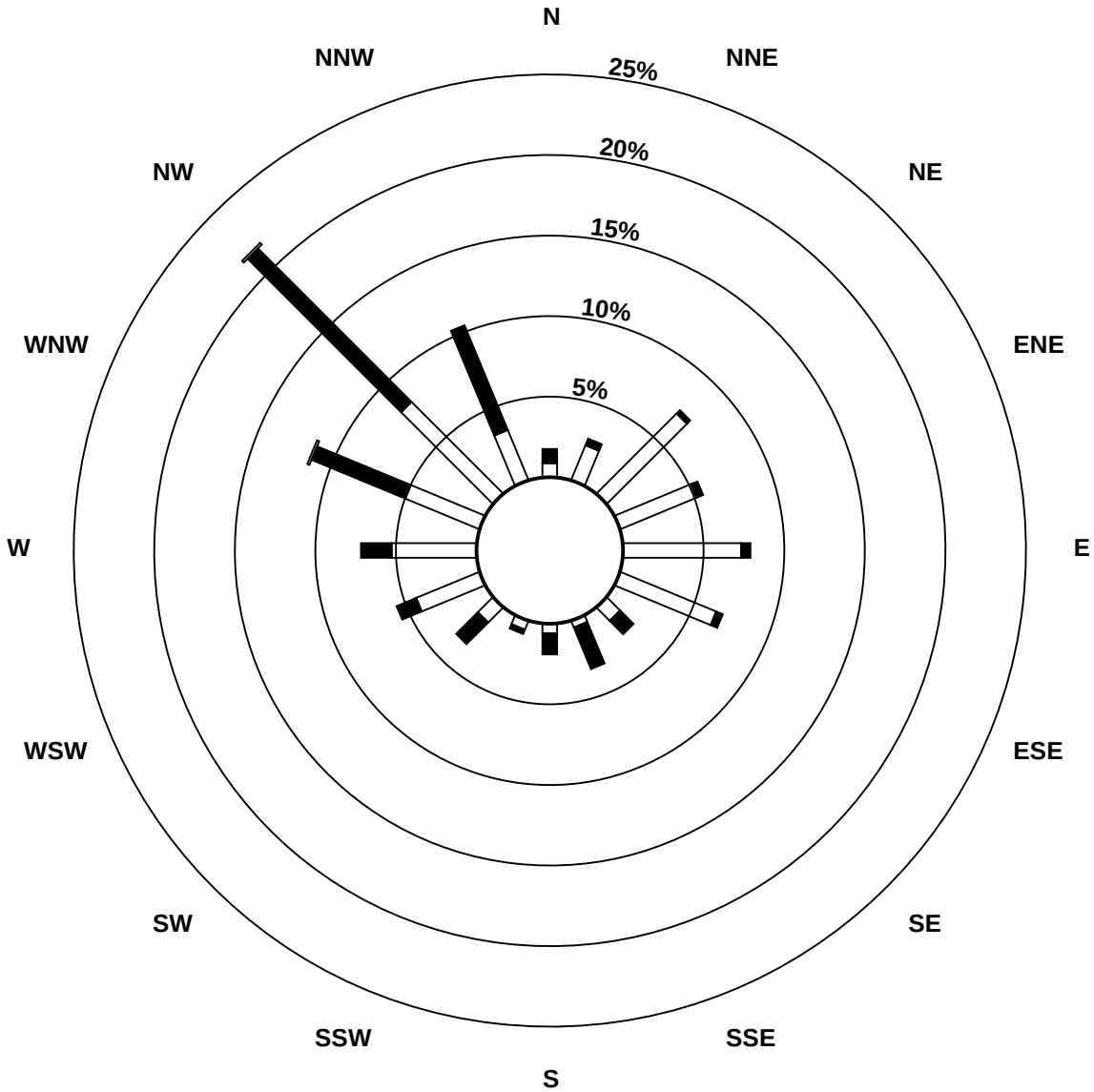
Henry Pirker - November 2014



Pollutant Rose

Methane (CH_4) - ppm

Henry Pirker - November 2014



Pollutant Classes (ppm)

- 1.5 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

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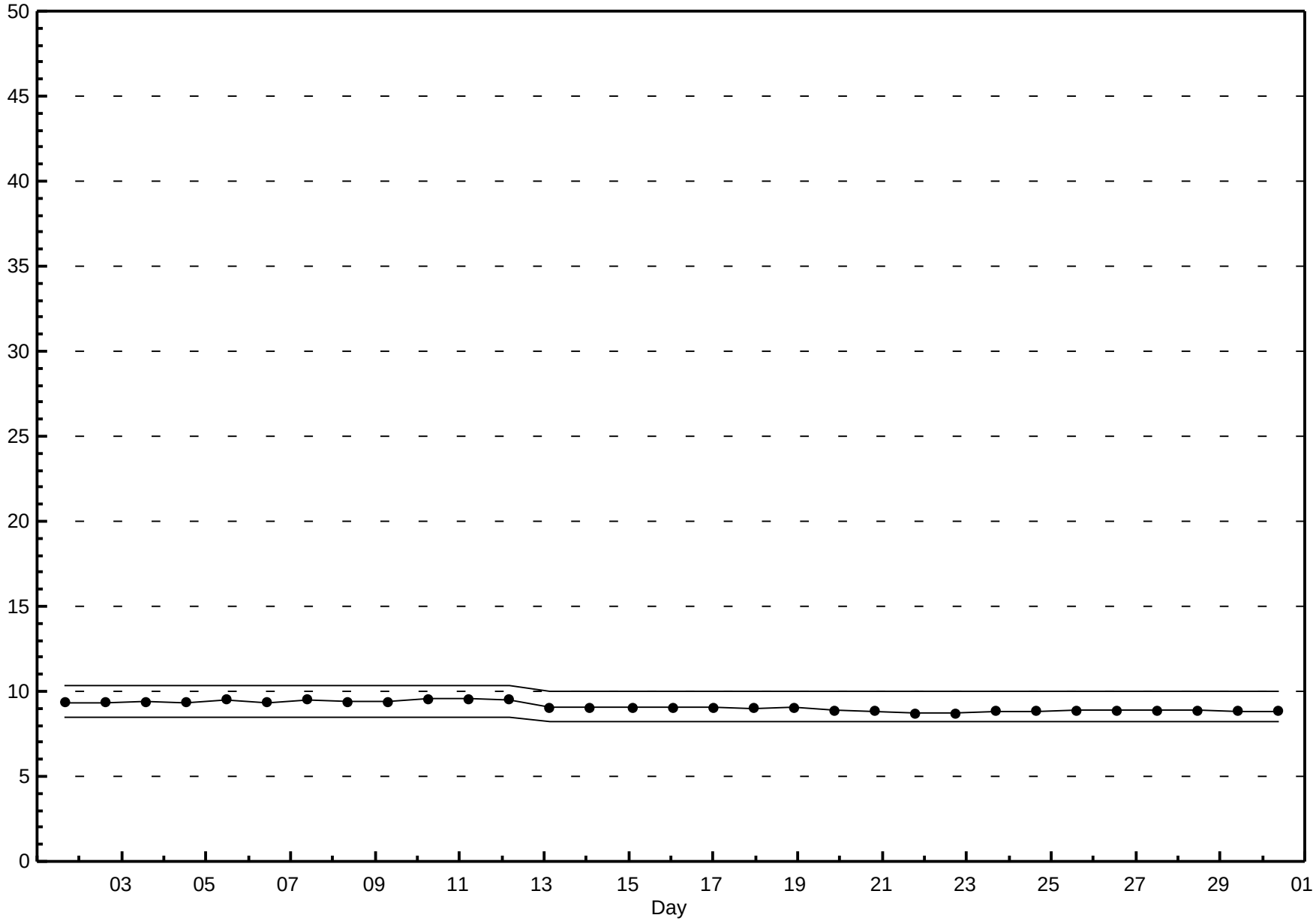
Span Responses

Methane (CH_4)

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - November 2014

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

Maximum Value: 0.00 ppm on Nov 29 08:00

Maximum Daily Average: 0.00 ppm on Nov 29

Minimum Value: 0.0 ppm on Nov 1 01:00

Minimum Daily Average: 0.00 ppm on Nov 1

Maximum Diurnal Average: 0.00 ppm at hour 15

Minimum Diurnal Average: 0.00 ppm at hour 2

Monthly Average: 0.000 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:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

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-Nov	0.0	0.0	0.0	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
2-Nov	0.0	0.0	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
3-Nov	0.0	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
4-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
5-Nov	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
6-Nov	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
7-Nov	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
8-Nov	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
9-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Nov	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Nov	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
12-Nov	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
13-Nov	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
14-Nov	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
15-Nov	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
16-Nov	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
17-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
18-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	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
19-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
20-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
21-Nov	0.0	0.0	0.0	0.0	0.0	0.0	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
22-Nov	0.0	0.0	0.0	0.0	0.0	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
23-Nov	0.0	0.0	0.0	0.0	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
24-Nov	0.0	0.0	0.0	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
25-Nov	0.0	0.0	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
26-Nov	0.0	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
27-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
28-Nov	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
29-Nov	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
30-Nov	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
	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	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Diurnal Maximum	

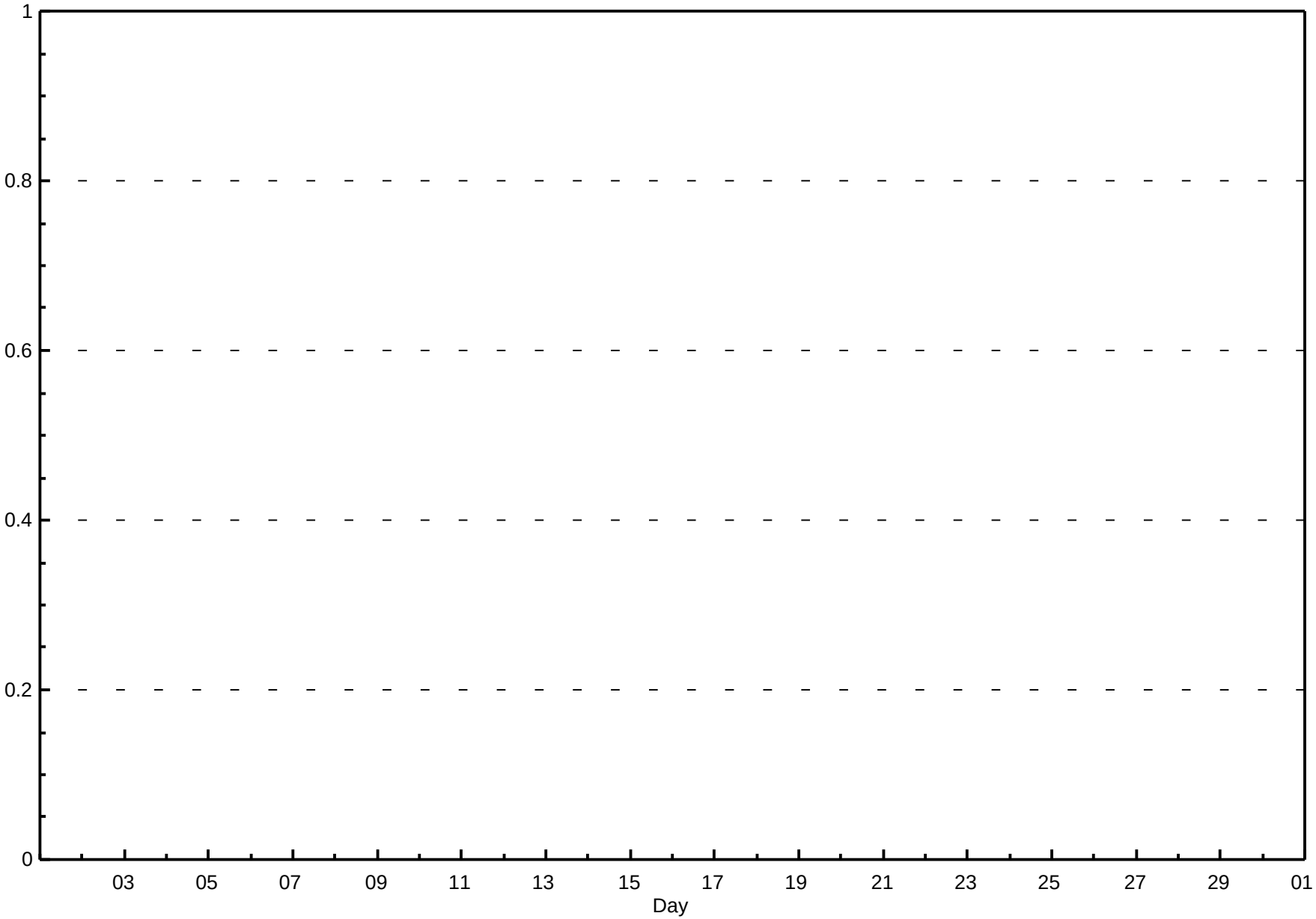
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - November 2014

Maximum Value: 0.01 ppm on Nov 26 12:00

Maximum Daily Average: 0.00 ppm on Nov 26

Minimum Value: 0.0 ppm on Nov 18 01:00

Minimum Daily Average: 0.00 ppm on Nov 14

Maximum Diurnal Average: 0.00 ppm at hour 12

Minimum Diurnal Average: 0.00 ppm at hour 8

Monthly Average: 0.000 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:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

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-Nov	0.0	0.0	0.0	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
2-Nov	0.0	0.0	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
3-Nov	0.0	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
4-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
5-Nov	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
6-Nov	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
7-Nov	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
8-Nov	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
9-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Nov	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Nov	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
12-Nov	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
13-Nov	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
14-Nov	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
15-Nov	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
16-Nov	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
17-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
18-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	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
19-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
20-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
21-Nov	0.0	0.0	0.0	0.0	0.0	0.0	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
22-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01
23-Nov	0.0	0.0	0.0	0.0	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
24-Nov	0.0	0.0	0.0	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
25-Nov	0.0	0.0	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
26-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01
27-Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
28-Nov	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
29-Nov	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
30-Nov	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
	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	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Diurnal Maximum	

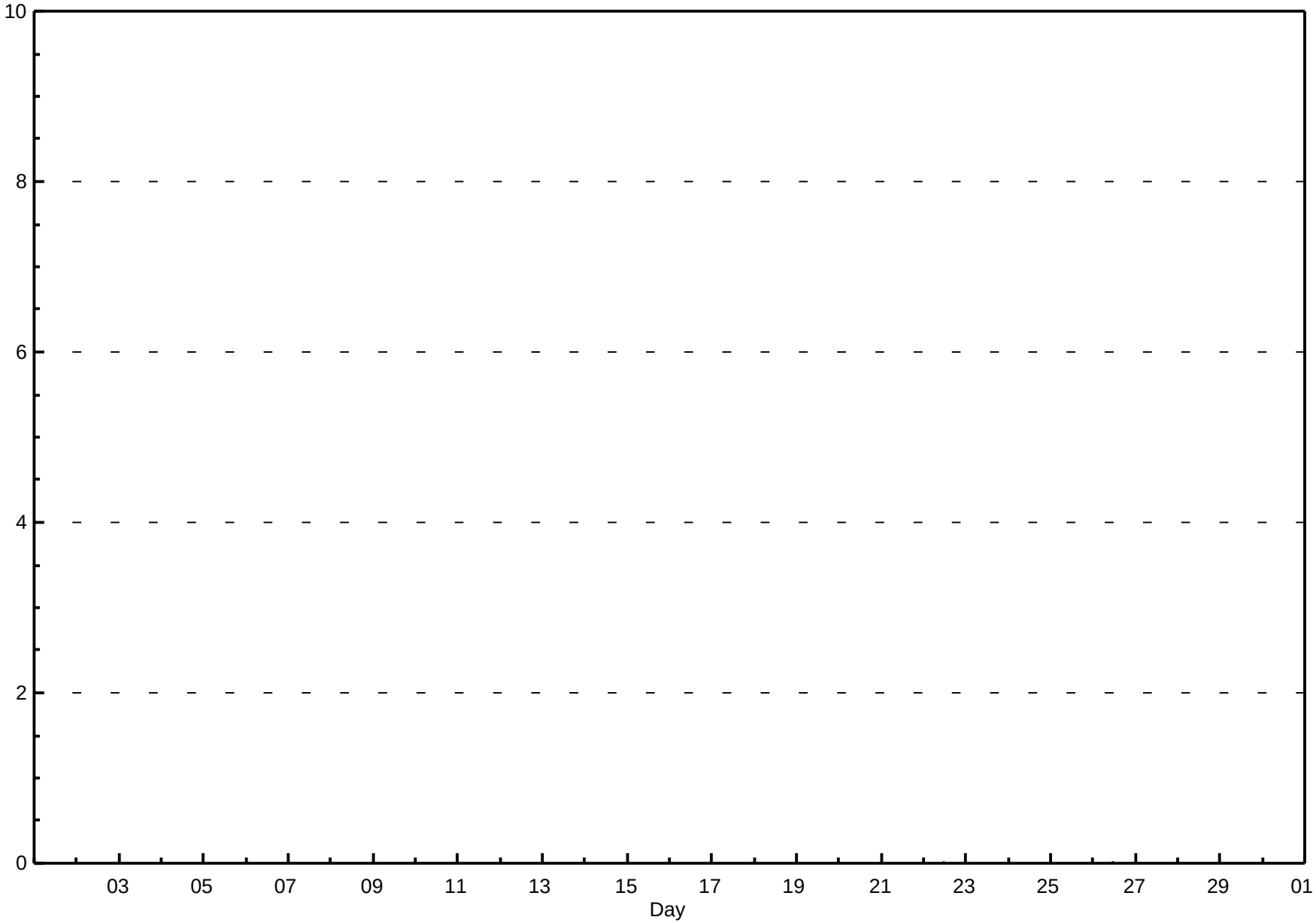
C - Calibration M - Maintenance A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - November 2014



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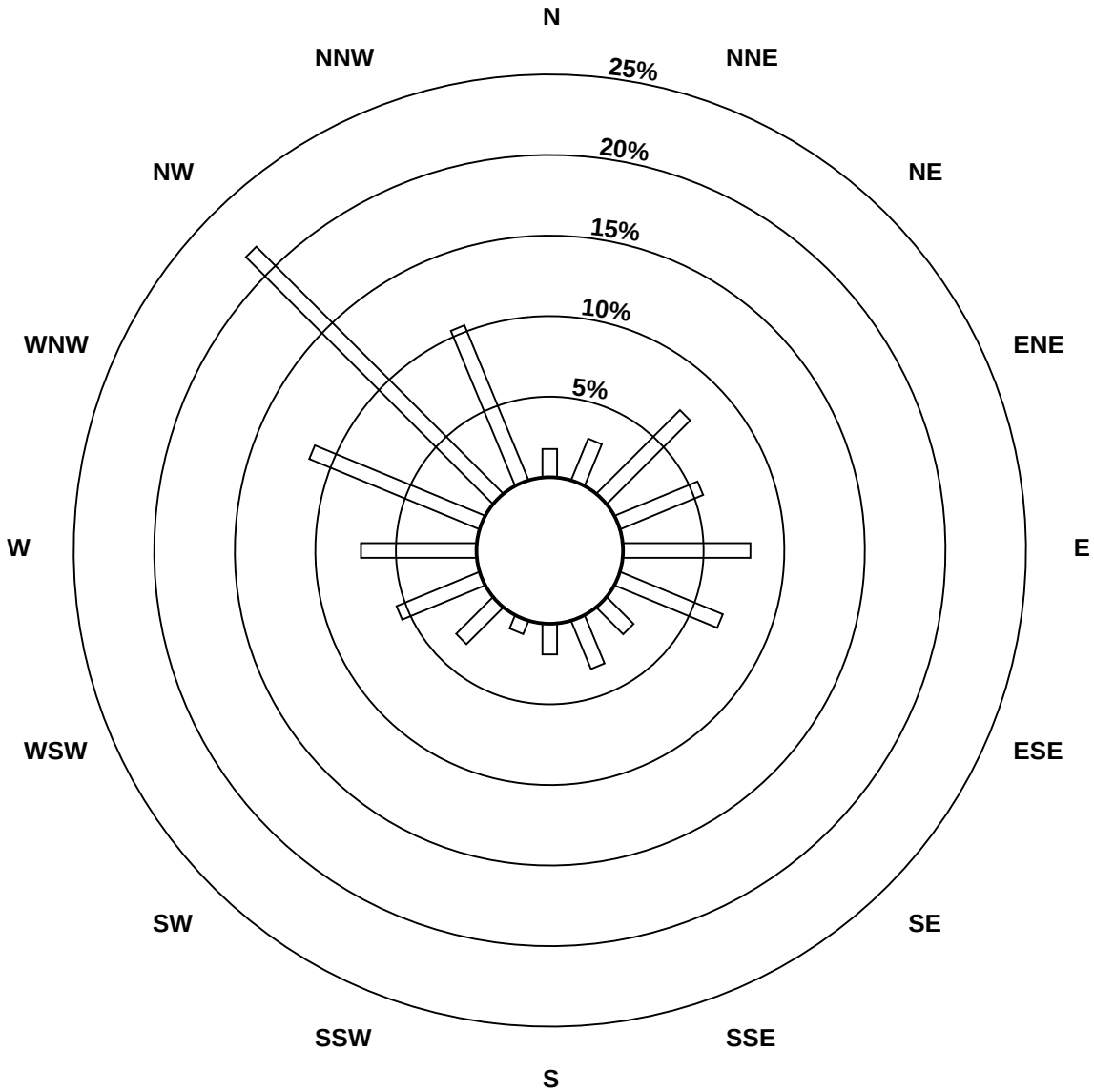
Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - November 2014



Pollutant Classes (ppm)

- 0 - 0.05
- 0.06 - 0.1
- 0.11 - 0.30
- > 0.30

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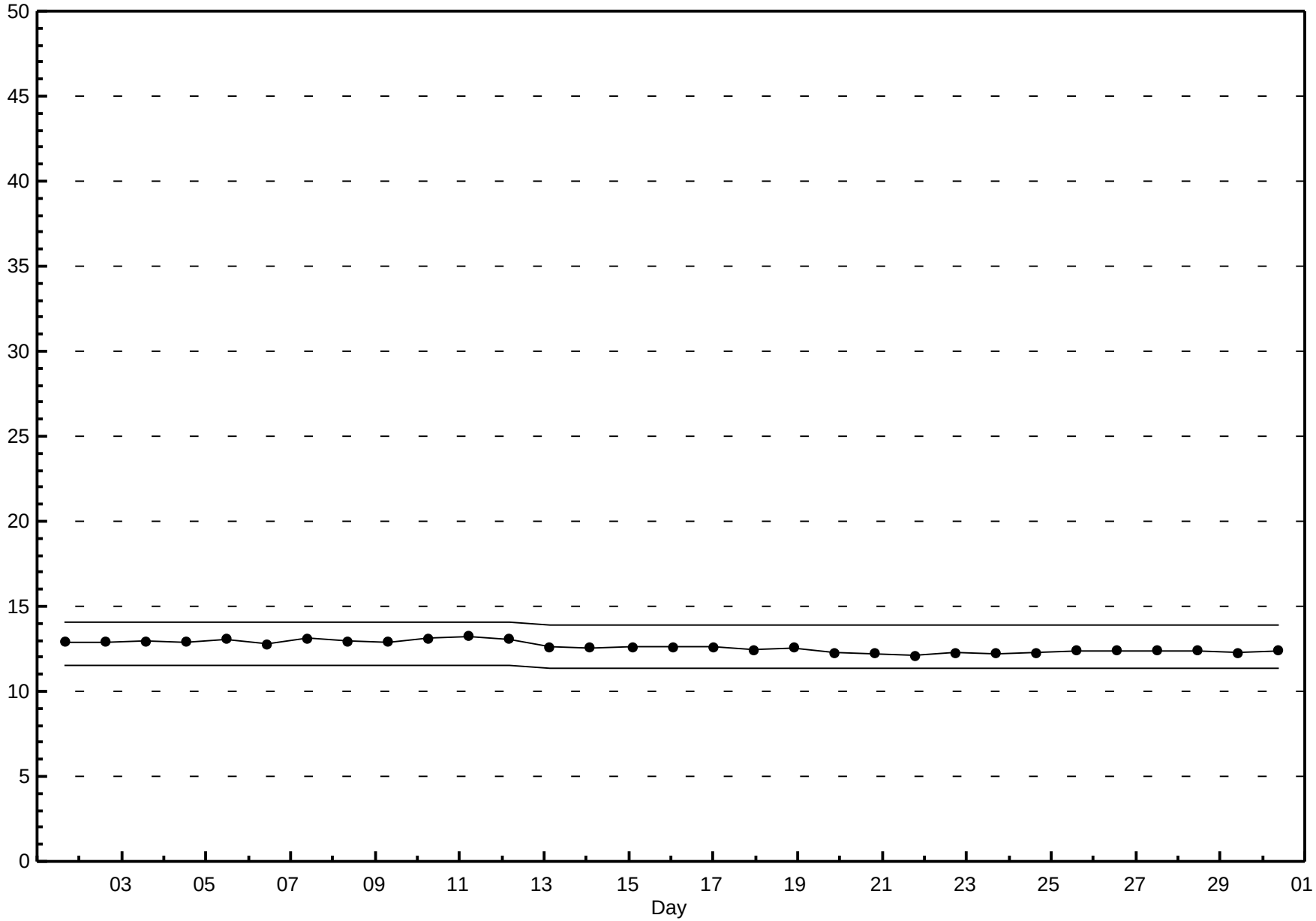
Span Responses

Non Methane Hydrocarbon (NMHC)

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - November 2014

Number of Exceedences: 1-hr: 0 24-hr: 0

Maximum Value: 47.6 $\mu g/m^3$ on Nov 13 08:00

Maximum Daily Average: 29.5 $\mu g/m^3$ on Nov 13

Minimum Value: 2 $\mu g/m^3$ on Nov 4 16:00

Maximum Diurnal Average: 13.2 $\mu g/m^3$ at hour 19

Monthly Average: 10.60 $\mu g/m^3$

Minimum Daily Average: 3.9 $\mu g/m^3$ on Nov 3

Minimum Diurnal Average: 9.4 $\mu g/m^3$ at hour 4

Percentiles: P_1 = 2.6 P_{10} = 3.9 Q_1 = 5.0 Median = 7.6 Q_3 = 14.3 P_{90} = 20.8 P_{99} = 36.9

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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-Nov	4	3	3	3	4	4	4	5	5	5	5	5	6	5	4	5	7	13	29	34	29	29	36	28	11.5	36.5
2-Nov	19	17	23	12	11	9	9	9	11	8	8	10	10	8	7	11	8	13	21	8	4	3	3	3	10.1	23.2
3-Nov	3	3	3	3	4	4	4	5	5	5	4	4	4	3	3	4	5	6	5	4	4	4	4	4	3.9	5.7
4-Nov	4	4	4	4	5	6	6	7	7	6	6	5	5	3	2	2	2	3	3	3	3	2	3	3	4.1	7.2
5-Nov	4	5	5	5	5	6	6	6	7	7	8	7	7	6	6	5	5	5	5	6	6	5	4	4	5.6	7.7
6-Nov	5	5	4	4	4	6	6	6	6	6	7	8	8	7	7	7	6	5	5	5	4	4	4	5	5.6	8.0
7-Nov	5	5	5	5	4	4	4	4	4	5	5	4	5	4	4	4	4	4	5	4	4	4	4	4	4.4	5.1
8-Nov	4	4	5	7	5	4	4	4	4	3	3	3	2	2	3	3	4	4	4	5	5	5	6	6	4.2	7.0
9-Nov	6	7	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6	5	5	18	5	7	6	6	5.9	18.2
10-Nov	7	5	4	4	4	4	4	5	6	7	5	5	5	4	4	3	4	7	35	12	13	10	12	14	7.7	35.5
11-Nov	17	10	10	7	7	8	7	8	9	9	8	7	6	5	6	7	6	9	7	7	13	13	17	16	9.1	17.4
12-Nov	16	13	17	18	26	26	30	32	35	30	25	21	22	22	22	21	19	18	18	15	20	18	16	21	21.7	34.7
13-Nov	23	24	25	17	19	34	38	48	43	41	42	35	25	17	15	16	16	19	26	32	38	42	37	34	29.5	47.6
14-Nov	36	39	35	36	36	34	29	30	30	20	22	19	14	9	8	8	7	5	5	5	4	5	4	4	18.4	38.7
15-Nov	5	7	10	9	7	8	8	9	12	10	9	10	9	9	9	6	5	5	6	5	8	7	8	9	7.9	11.6
16-Nov	7	6	7	8	7	8	8	9	11	12	10	10	11	10	12	12	12	14	31	19	20	17	16	15	12.2	31.5
17-Nov	15	14	18	18	20	19	20	24	25	27	16	17	19	21	28	21	16	18	21	11	12	11	11	9	18.0	28.2
18-Nov	9	9	8	6	7	7	7	6	6	5	6	7	6	5	5	5	4	4	4	4	4	5	6	5	5.8	9.2
19-Nov	7	9	9	9	10	11	17	16	17	19	11	18	17	15	22	24	24	25	28	19	20	20	20	19	16.9	28.3
20-Nov	18	20	19	20	19	19	19	21	22	19	15	17	20	22	20	24	24	24	24	22	20	13	7	5	18.9	24.4
21-Nov	7	5	4	4	3	4	9	15	6	6	6	6	7	10	23	19	21	18	16	11	8	5	5	4	9.3	23.0
22-Nov	6	7	7	7	5	5	4	4	4	5	3	3	3	3	3	4	4	5	4	4	4	5	5	6	4.7	7.4
23-Nov	11	13	12	10	8	10	10	10	9	9	10	11	11	10	11	11	12	15	14	13	13	13	15	19	11.6	18.9
24-Nov	14	13	11	9	9	9	10	11	19	12	13	15	18	20	17	19	13	10	10	8	8	8	11	10	12.4	20.5
25-Nov	8	10	10	11	12	12	11	12	14	10	9	9	8	8	8	8	9	9	10	10	11	13	14	11	10.3	14.1
26-Nov	12	19	19	18	23	21	21	22	24	18	21	19	14	15	16	18	17	15	16	16	15	12	5	6	16.7	24.2
27-Nov	7	6	5	6	6	7	7	6	6	5	5	5	5	5	4	4	4	4	4	4	4	3	3	3	4.9	7.3
28-Nov	4	5	5	5	5	6	7	8	6	6	6	9	7	7	6	7	8	9	6	14	18	11	8	8	7.5	17.7
29-Nov	6	6	5	5	7	9	N	17	16	13	10	9	10	7	7	7	7	7	13	9	7	12	10	11	9.2	16.9
30-Nov	10	5	5	6	5	5	8	16	6	6	10	9	10	16	15	15	11	13	15	11	16	12	11	10	10.3	16.4
	9.9	9.9	10.1	9.4	9.8	10.5	11.1	12.5	12.6	11.4	10.3	10.3	9.9	9.5	10.1	10.3	9.7	10.3	13.2	11.3	11.3	10.6	10.3	10.0	Diurnal Average	
	36.0	38.7	35.0	35.8	35.9	34.5	37.5	47.6	42.9	40.6	42.2	34.9	25.1	21.9	28.2	24.4	24.2	24.9	35.5	33.9	37.6	41.8	37.3	34.3	Diurnal Maximum	

N - Not Valid

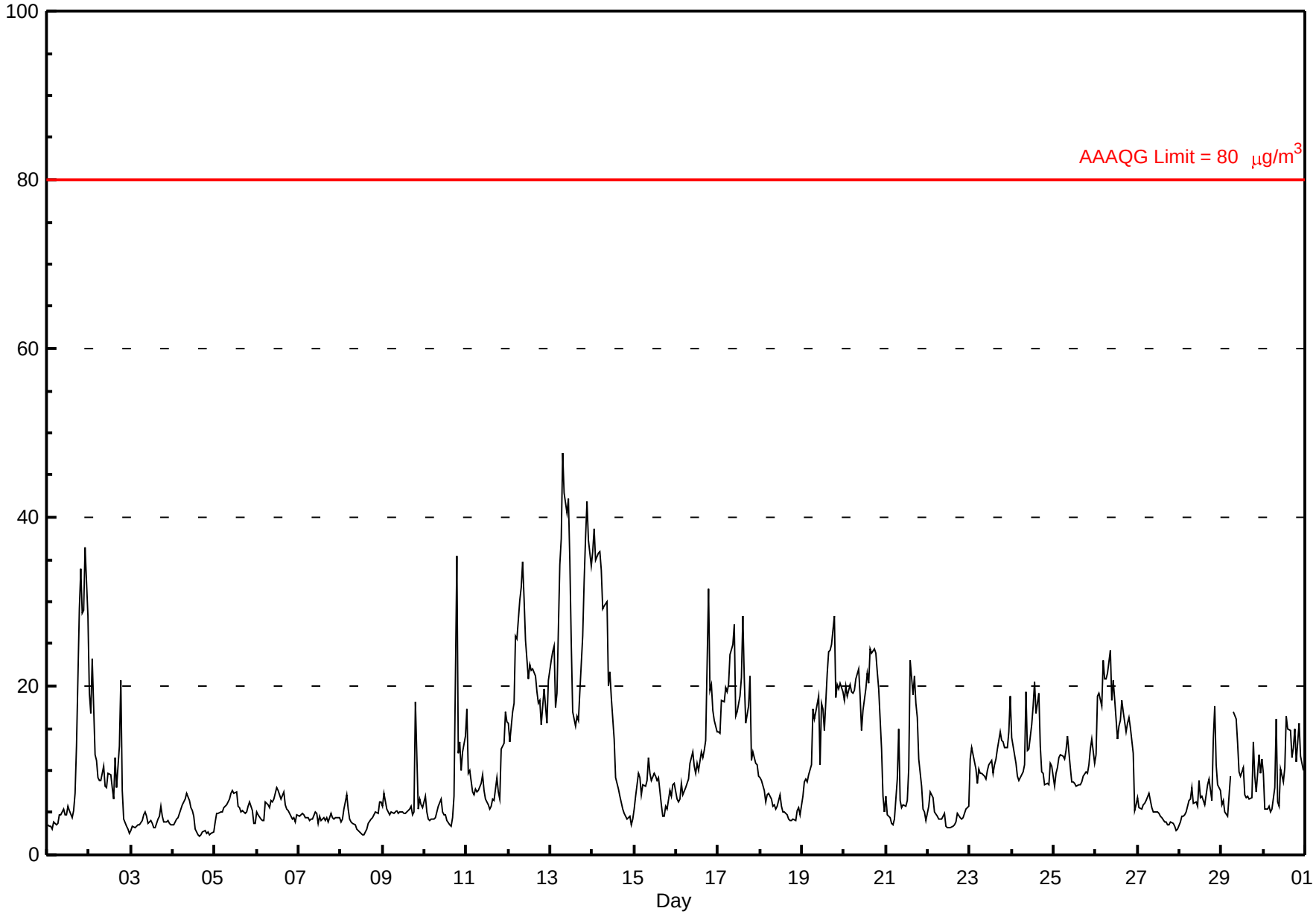
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Maximums

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

Henry Pirker - November 2014

Maximum Value: 259.1 $\mu g/m^3$ on Nov 10 19:00

Maximum Daily Average: 41.3 $\mu g/m^3$ on Nov 13

Minimum Value: 2 $\mu g/m^3$ on Nov 4 16:00

Maximum Diurnal Average: 32.4 $\mu g/m^3$ at hour 19

Monthly Average: 15.42 $\mu g/m^3$

Minimum Daily Average: 4.5 $\mu g/m^3$ on Nov 4

Minimum Diurnal Average: 11.1 $\mu g/m^3$ at hour 4

Percentiles: P_1 = 2.8 P_{10} = 4.6 Q_1 = 5.9 Median = 9.8 Q_3 = 19.9 P_{90} = 31.3 P_{99} = 64.4

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Nov	13	3	3	3	6	6	4	6	5	6	6	5	7	6	5	8	10	21	48	45	48	40	41	42	16.1	47.9
2-Nov	28	20	31	20	14	12	11	11	23	9	9	16	14	9	9	20	17	56	87	15	6	4	3	3	18.5	86.6
3-Nov	5	3	3	3	4	4	5	5	6	5	4	9	4	4	5	5	6	9	6	4	4	4	4	4	4.9	8.7
4-Nov	4	4	5	6	6	6	7	7	9	7	6	6	5	4	3	2	3	3	3	3	3	3	3	3	4.5	8.6
5-Nov	9	5	5	6	5	6	6	7	7	9	9	8	9	7	12	6	6	5	6	7	7	6	4	5	6.8	12.2
6-Nov	8	6	5	4	5	7	7	7	7	7	8	10	9	8	7	17	8	7	6	6	5	5	4	6	6.9	16.5
7-Nov	11	5	5	5	5	5	4	5	5	9	7	4	7	4	5	5	5	4	6	5	5	5	5	5	5.5	10.5
8-Nov	10	5	9	8	6	5	5	5	6	4	3	3	3	3	3	4	9	6	7	5	6	6	8	10	5.8	9.9
9-Nov	12	14	6	6	5	5	5	6	6	6	5	6	6	6	6	6	8	6	7	39	9	7	7	10	8.1	39.0
10-Nov	12	6	5	5	4	5	5	5	7	8	6	6	5	5	4	4	6	9	259	20	23	16	30	35	20.4	259.1
11-Nov	52	16	14	9	9	10	8	8	9	12	10	7	7	8	7	9	8	13	8	9	26	26	30	32	14.5	52.3
12-Nov	22	15	21	19	33	32	33	34	36	34	36	24	25	24	24	22	22	26	20	19	27	21	18	32	25.7	36.2
13-Nov	35	30	46	19	25	40	40	109	49	46	45	45	31	25	17	17	17	27	30	42	58	101	51	44	41.3	108.8
14-Nov	44	53	36	36	38	45	37	36	35	33	30	30	18	11	9	9	8	7	5	6	6	10	4	5	22.9	52.9
15-Nov	7	9	11	11	8	10	10	12	14	13	12	11	11	10	14	9	5	5	15	9	15	11	12	27	11.3	27.3
16-Nov	12	7	8	22	8	9	9	23	15	18	12	10	12	11	17	16	17	22	64	30	28	23	21	15	17.8	64.1
17-Nov	18	15	27	21	25	30	54	36	51	64	19	19	22	26	31	26	18	35	71	13	16	12	12	10	28.0	70.8
18-Nov	11	10	8	7	8	8	7	6	6	6	6	8	7	5	7	6	5	5	5	5	5	6	8	6	6.7	10.9
19-Nov	25	13	10	10	11	14	21	17	20	24	12	23	23	17	26	26	26	27	93	20	26	24	24	24	23.1	92.8
20-Nov	27	29	20	25	21	19	20	22	23	21	17	19	24	27	26	26	25	25	26	24	21	18	8	6	21.6	28.6
21-Nov	15	14	7	4	4	8	47	42	7	6	7	6	8	20	28	22	22	20	18	13	10	7	7	4	14.5	46.9
22-Nov	7	9	8	7	6	5	5	4	4	6	5	3	3	4	4	4	4	7	5	4	5	6	6	7	5.4	8.6
23-Nov	19	15	14	12	12	15	12	11	11	9	17	12	14	10	13	13	14	16	16	15	14	17	28	34	15.2	34.0
24-Nov	18	16	12	11	9	11	11	11	155	16	17	18	19	28	19	22	18	11	11	9	10	10	50	39	23.0	155.4
25-Nov	12	11	11	12	12	14	16	14	18	14	9	9	9	8	9	10	10	10	11	10	12	25	24	12	12.5	24.7
26-Nov	15	26	21	21	28	23	25	26	31	22	24	23	16	19	19	32	28	17	19	19	20	13	9	7	20.9	32.4
27-Nov	7	6	6	6	7	7	8	8	6	6	5	6	5	6	5	4	4	4	4	4	4	5	3	3	5.5	8.0
28-Nov	12	5	5	5	6	7	7	17	7	8	6	16	8	7	8	23	13	21	8	46	73	25	13	15	15.2	73.5
29-Nov	9	10	8	5	11	15	N	29	29	37	13	13	26	10	9	11	8	11	61	29	12	31	25	37	19.4	61.3
30-Nov	20	6	7	7	7	7	15	42	9	6	17	16	12	29	17	34	15	23	45	14	50	39	41	13	20.4	49.7
	16.7	12.9	12.5	11.1	11.6	13.0	15.3	19.0	20.6	15.6	12.9	13.0	12.3	12.0	12.2	13.8	12.1	15.3	32.4	16.3	18.5	17.5	16.7	16.6	Diurnal Average	
	52.3	52.9	45.7	36.5	37.8	45.1	54.3	108.8	155.4	63.7	45.5	45.0	30.7	28.6	30.6	33.5	27.9	56.3	259.1	46.2	73.5	101.2	51.2	43.6	Diurnal Maximum	

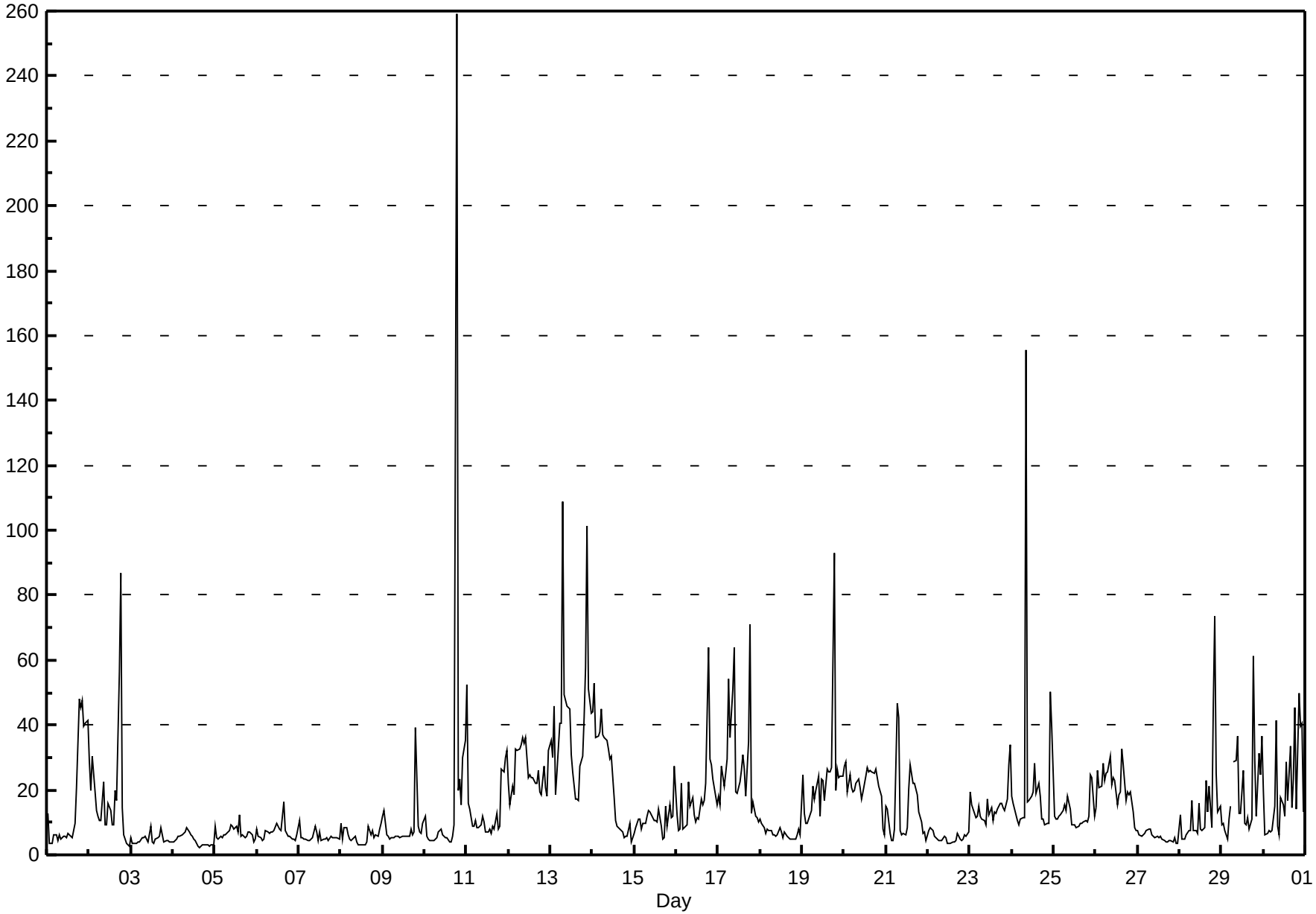
N - Not Valid

Peace Airshed Zone Association

Hourly Maximums

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

Henry Pirker - November 2014

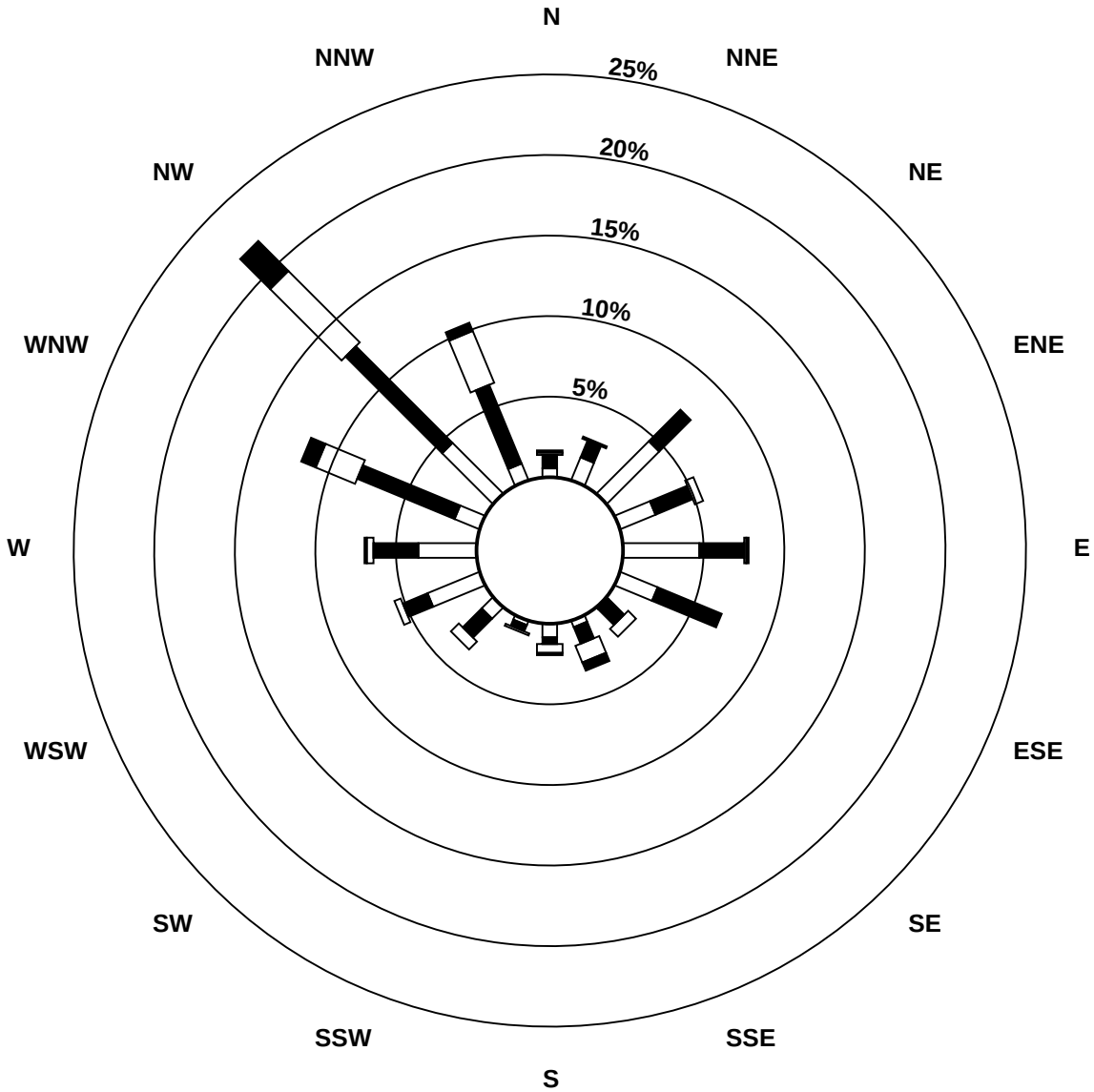


Peace Airshed Zone Association

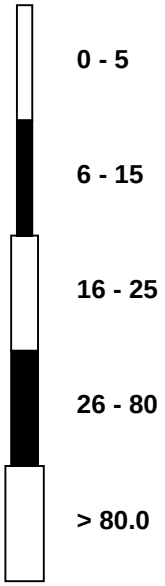
Pollutant Rose

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

Henry Pirker - November 2014



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



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - November 2014

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

Maximum Value: 9.7 ^{o}C on Nov 4 15:00

Maximum Daily Average: 3.7 ^{o}C on Nov 6

Minimum Value: -36 ^{o}C on Nov 29 07:00

Maximum Diurnal Average: -6.1 ^{o}C at hour 15

Monthly Average: -9.54 ^{o}C

Minimum Daily Average: -28.5 ^{o}C on Nov 29

Minimum Diurnal Average: -12.6 ^{o}C at hour 8

Percentiles: P_1 = -30.8 P_{10} = -24.5 Q_1 = -17.2 Median = -8.2 Q_3 = -1.3 P_{90} = 2.9 P_{99} = 7.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

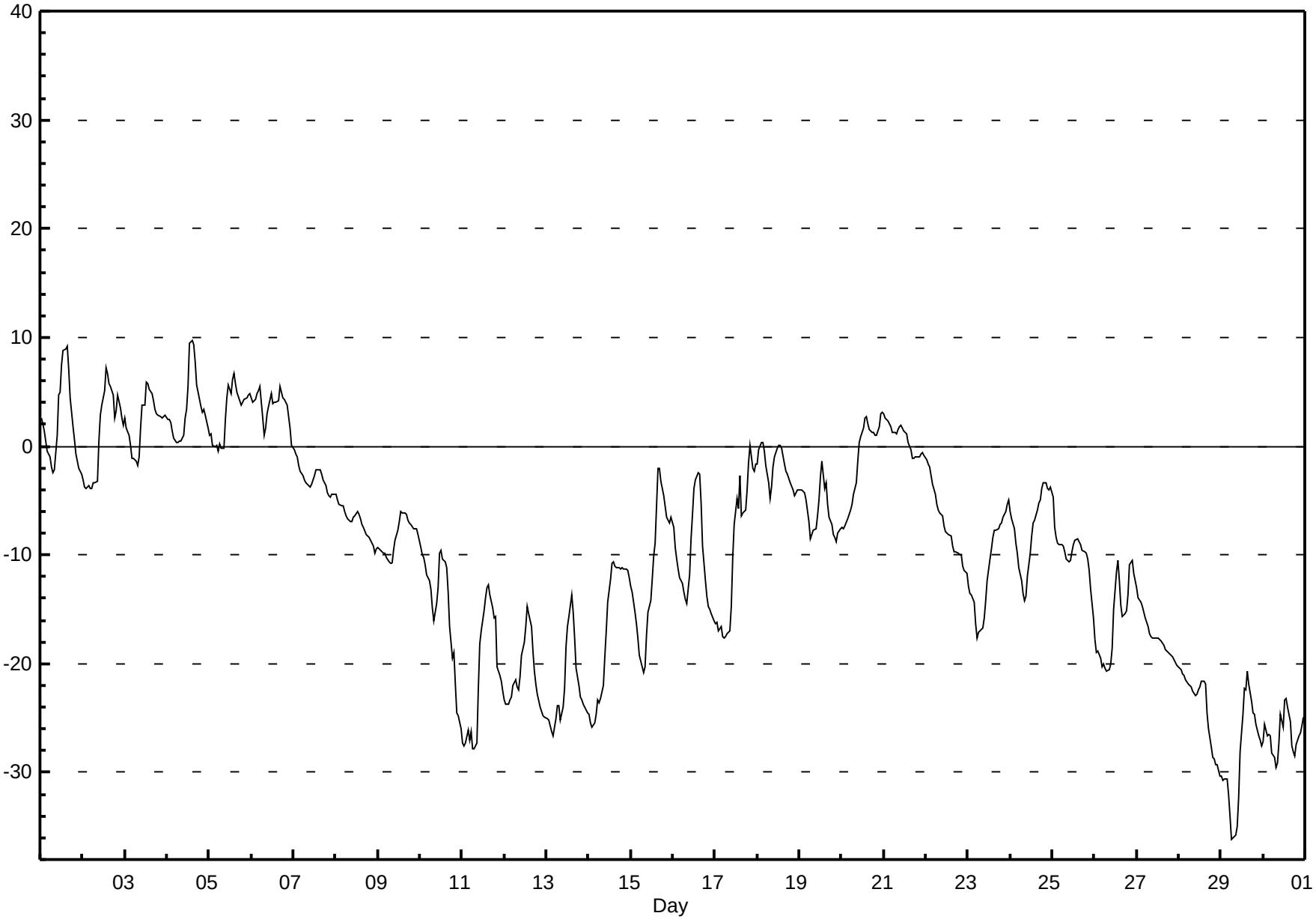
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Nov	3	2	1	0	0	-1	-2	-2	-2	1	5	5	8	9	9	9	7	4	2	1	-1	-1	-2	-3	2.1	9.3
2-Nov	-3	-4	-4	-4	-4	-4	-3	-3	-3	0	3	4	5	7	7	6	6	5	3	3	5	4	3	2	1.2	7.3
3-Nov	3	2	1	0	-1	-1	-1	-2	-1	2	4	4	6	6	5	5	4	3	3	3	3	3	3	3	2.3	5.8
4-Nov	2	2	2	1	1	0	0	0	0	1	3	3	6	9	10	9	8	6	4	4	3	3	3	2	3.5	9.7
5-Nov	1	1	0	0	0	0	0	0	0	2	4	6	5	6	7	6	5	4	4	4	4	4	5	5	3.0	6.7
6-Nov	4	4	4	5	5	6	3	1	2	3	4	5	4	4	4	4	5	5	4	4	4	3	2	0	3.7	5.5
7-Nov	0	-1	-1	-2	-2	-3	-3	-3	-3	-4	-4	-3	-3	-2	-2	-2	-3	-3	-4	-4	-5	-5	-4	-4	-2.9	-0.4
8-Nov	-4	-5	-5	-6	-6	-6	-6	-7	-7	-7	-7	-6	-6	-6	-7	-7	-8	-8	-8	-8	-9	-9	-10	-9	-7.0	-4.4
9-Nov	-9	-9	-10	-10	-10	-10	-11	-11	-11	-10	-9	-8	-7	-6	-6	-6	-6	-7	-7	-7	-8	-8	-8	-8	-8.3	-5.9
10-Nov	-9	-10	-10	-11	-12	-12	-13	-15	-16	-14	-13	-10	-10	-10	-11	-11	-13	-17	-19	-19	-22	-24	-25	-26	-14.7	-9.3
11-Nov	-27	-28	-27	-26	-27	-26	-28	-28	-27	-22	-18	-17	-15	-14	-13	-13	-14	-15	-16	-16	-20	-21	-22	-23	-20.9	-12.8
12-Nov	-23	-24	-24	-23	-23	-22	-22	-22	-22	-21	-19	-18	-17	-15	-15	-17	-19	-21	-22	-23	-24	-24	-25	-25	-21.2	-14.8
13-Nov	-25	-25	-26	-26	-27	-25	-24	-24	-25	-24	-22	-18	-17	-16	-14	-15	-18	-20	-22	-23	-23	-24	-24	-24	-22.1	-13.7
14-Nov	-25	-25	-26	-25	-25	-23	-24	-23	-22	-19	-17	-14	-12	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-12	-16.8	-10.6
15-Nov	-13	-13	-15	-16	-18	-19	-20	-21	-20	-17	-15	-14	-12	-10	-9	-2	-2	-3	-4	-5	-7	-7	-7	-7	-11.5	-2.0
16-Nov	-7	-9	-10	-11	-12	-13	-13	-14	-14	-12	-8	-6	-4	-3	-2	-3	-5	-9	-12	-14	-15	-15	-15	-16	-10.2	-2.5
17-Nov	-16	-16	-17	-17	-17	-18	-18	-17	-17	-15	-10	-7	-5	-6	-3	-6	-6	-6	-4	-2	0	-2	-2	-2	-9.5	0.0
18-Nov	-2	0	0	0	0	-2	-3	-5	-4	-2	-1	0	0	0	0	-2	-2	-3	-3	-3	-4	-5	-4	-4	-2.0	0.3
19-Nov	-4	-4	-4	-4	-5	-7	-9	-8	-8	-8	-6	-5	-3	-1	-4	-3	-5	-7	-7	-8	-8	-9	-8	-8	-6.0	-1.3
20-Nov	-7	-8	-7	-7	-6	-6	-5	-4	-3	-1	0	1	2	3	3	2	2	1	1	1	1	2	3	3	-1.3	3.1
21-Nov	3	3	2	2	2	1	1	1	1	2	2	1	1	1	0	0	-1	-1	-1	-1	-1	-1	-1	-1	0.7	2.9
22-Nov	-1	-2	-2	-3	-3	-4	-5	-6	-6	-6	-7	-8	-8	-8	-8	-9	-10	-10	-10	-10	-10	-11	-11	-12	-7.1	-1.3
23-Nov	-13	-14	-14	-14	-16	-18	-17	-17	-17	-16	-14	-12	-10	-9	-8	-8	-8	-8	-7	-7	-6	-6	-5	-5	-11.2	-4.9
24-Nov	-6	-7	-8	-9	-10	-11	-12	-14	-14	-14	-12	-10	-8	-7	-7	-6	-5	-5	-4	-3	-3	-4	-4	-4	-7.8	-3.4
25-Nov	-5	-7	-8	-9	-9	-9	-9	-10	-10	-11	-10	-10	-9	-9	-9	-9	-9	-10	-10	-10	-10	-11	-13	-16	-9.7	-4.7
26-Nov	-18	-19	-19	-19	-20	-20	-20	-21	-21	-20	-19	-15	-12	-11	-12	-15	-16	-15	-15	-14	-11	-11	-12	-12	-16.0	-10.5
27-Nov	-13	-14	-14	-15	-15	-16	-17	-17	-18	-18	-18	-18	-18	-18	-18	-18	-19	-19	-19	-19	-19	-20	-20	-20	-17.4	-13.1
28-Nov	-20	-21	-21	-21	-22	-22	-22	-22	-23	-23	-23	-22	-22	-22	-22	-22	-25	-26	-28	-29	-29	-29	-29	-30	-23.9	-20.4
29-Nov	-30	-31	-31	-31	-32	-34	-36	-36	-36	-35	-32	-28	-25	-22	-22	-21	-22	-23	-25	-25	-26	-27	-27	-28	-28.5	-20.7
30-Nov	-27	-26	-27	-27	-27	-28	-29	-30	-29	-27	-25	-26	-23	-23	-24	-25	-28	-28	-28	-27	-27	-26	-26	-25	-26.5	-23.1
	-9.8	-10.2	-10.6	-10.9	-11.4	-11.8	-12.3	-12.6	-12.5	-11.2	-9.5	-8.3	-7.0	-6.1	-6.1	-6.3	-7.2	-8.2	-8.8	-8.9	-9.3	-9.7	-9.9	-10.3	Diurnal Average	
	4.4	4.1	4.3	4.8	5.1	5.5	2.6	1.1	1.7	2.9	4.7	5.6	7.5	9.4	9.7	9.3	7.7	5.6	4.4	4.2	4.8	4.4	4.7	4.9	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - November 2014

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

Maximum Value: 89.1 % on Nov 21 23:00 Maximum Daily Average: 86.0 % on Nov 21

Minimum Value: 46 % on Nov 4 16:00 Minimum Daily Average: 58.4 % on Nov 5

Maximum Diurnal Average: 75.1 % at hour 8 Minimum Diurnal Average: 63.9 % at hour 14

Monthly Average: 71.84 % Percentiles: P_1 = 49.4 P_{10} = 60.2 Q_1 = 66.5 Median = 72.2 Q_3 = 77.9 P_{90} = 83.3 P_{99} = 88.9

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

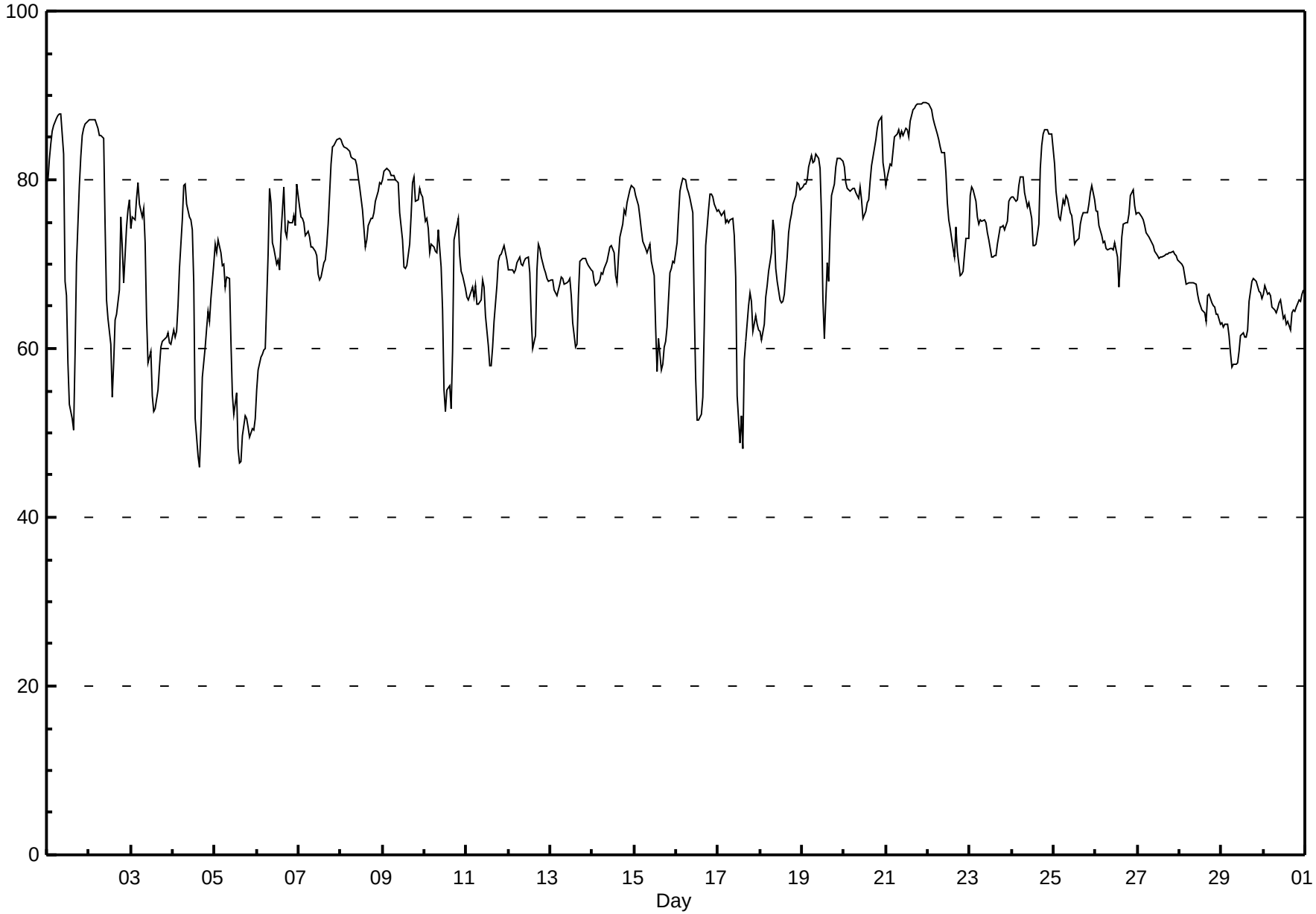
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Nov	80	82	84	86	86	87	88	88	88	83	68	66	58	53	52	50	59	70	79	83	85	86	87	87	76.5	87.8
2-Nov	87	87	87	87	87	86	85	85	85	75	66	64	60	54	58	63	64	67	76	72	68	74	76	78	74.7	87.2
3-Nov	74	76	75	78	80	77	76	77	73	64	58	60	54	52	53	55	58	60	61	61	61	62	61	61	65.2	79.7
4-Nov	62	61	62	65	70	75	79	80	77	76	75	74	68	52	47	46	51	57	60	62	64	63	66	70	65.1	79.5
5-Nov	72	71	73	71	70	70	67	69	68	61	55	52	55	48	46	47	50	52	52	51	49	50	50	52	58.4	72.9
6-Nov	55	57	59	59	60	60	71	79	77	73	72	70	70	69	73	79	74	73	75	75	75	76	75	79	70.3	79.5
7-Nov	77	76	75	75	73	74	73	72	72	72	71	69	68	68	70	71	72	75	82	84	84	84	85	85	75.3	85.0
8-Nov	85	84	84	84	84	83	83	82	82	82	80	79	76	74	72	73	75	75	75	76	77	79	80	79	79.4	84.8
9-Nov	80	81	81	81	81	80	81	80	80	80	76	73	70	69	70	72	76	80	80	77	78	79	78	78	77.6	81.4
10-Nov	75	75	74	71	72	72	72	71	74	70	65	55	52	55	56	53	60	73	75	75	71	69	69	67	67.6	75.5
11-Nov	66	66	66	67	66	68	65	65	66	68	67	64	60	58	58	60	63	67	70	71	71	72	71	71	66.2	72.3
12-Nov	69	69	69	69	69	70	71	70	70	70	71	71	69	64	60	61	69	72	72	71	69	69	68	68	68.9	72.3
13-Nov	68	68	67	67	66	68	68	68	68	68	68	68	66	63	60	61	66	70	71	71	71	70	70	69	67.5	70.7
14-Nov	69	68	68	68	68	69	69	69	70	71	72	72	71	69	68	71	73	75	77	76	77	79	79	79	72.0	79.4
15-Nov	79	78	77	76	74	73	72	71	72	72	70	69	63	57	61	57	58	60	61	63	69	70	70	70	68.4	79.0
16-Nov	73	76	79	80	80	80	79	78	78	76	65	56	52	52	52	54	63	72	76	78	78	78	77	76	71.2	80.1
17-Nov	76	76	76	76	75	75	75	75	75	73	68	54	49	52	48	59	61	65	67	66	62	64	63	62	66.4	76.4
18-Nov	62	61	63	66	68	69	71	75	74	69	68	66	66	66	66	71	74	75	76	77	78	80	79	79	70.8	79.7
19-Nov	79	79	80	80	82	83	82	82	83	83	81	76	66	61	70	68	74	78	80	82	82	83	82	82	78.2	83.0
20-Nov	82	80	79	79	79	79	79	78	78	79	78	75	76	77	78	80	82	84	85	86	87	88	82	81	80.4	87.5
21-Nov	79	80	82	82	83	85	85	86	85	86	85	86	86	85	87	88	89	89	89	89	89	89	89	89	86.0	89.1
22-Nov	89	89	88	87	87	85	85	84	83	83	81	77	75	74	72	71	74	72	69	69	69	71	73	73	78.4	88.9
23-Nov	78	79	79	78	76	75	75	75	75	75	74	73	71	71	71	71	72	74	74	75	74	75	77	78	74.8	79.1
24-Nov	78	78	77	78	79	80	80	78	78	77	77	75	72	72	72	75	81	84	85	86	86	85	85	86	79.5	86.0
25-Nov	82	79	77	76	75	78	77	78	78	76	76	74	72	73	73	75	76	76	76	76	77	78	79	78	76.5	81.8
26-Nov	76	76	75	73	72	73	72	72	72	72	72	72	71	67	70	73	75	75	75	76	78	79	77	76	73.7	78.8
27-Nov	76	76	76	75	74	74	73	73	72	72	72	71	71	71	71	71	71	71	71	71	71	71	71	70	72.4	76.2
28-Nov	70	70	70	69	68	68	68	68	68	68	66	66	65	65	64	63	66	66	65	65	65	64	64	63	66.4	70.2
29-Nov	63	63	63	63	61	60	58	58	58	58	60	62	62	61	61	62	66	68	68	68	68	67	67	66	62.9	68.3
30-Nov	66	68	66	67	66	65	65	64	65	65	66	64	64	63	63	62	64	65	64	65	66	66	67	67	65.1	67.5
	74.3	74.3	74.4	74.4	74.4	74.7	74.8	75.1	74.8	73.2	70.7	68.5	66.0	63.9	64.1	65.4	68.5	71.4	72.9	73.2	73.4	74.0	74.0	74.0	Diurnal Average	
	88.9	88.7	88.3	87.3	86.6	87.4	87.6	87.8	87.8	85.8	85.3	86.2	86.0	85.1	87.0	88.3	88.5	88.8	88.9	89.0	89.0	89.1	89.1	89.1	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - November 2014

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

Maximum Value: 315.6 W/m^2 on Nov 1 13:00

Maximum Daily Average: 73.9 W/m^2 on Nov 1

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

Minimum Daily Average: 5.0 W/m^2 on Nov 25

Maximum Diurnal Average: 172.4 W/m^2 at hour 13

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

Monthly Average: 35.59 W/m^2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 37.6 P_{90} = 137.2 P_{99} = 284.6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

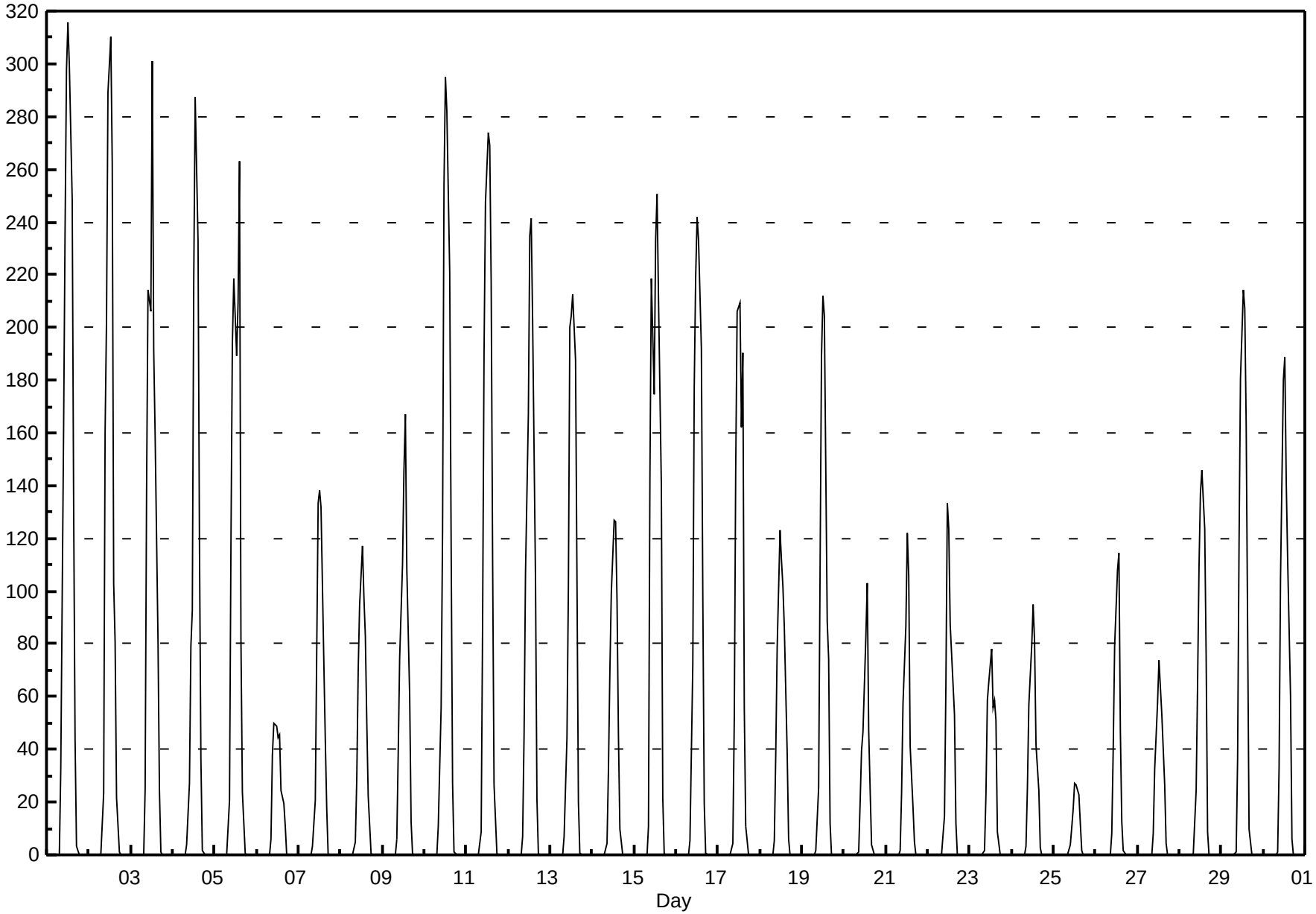
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Nov	0	0	0	0	0	0	0	0	32	163	236	298	316	300	248	133	44	3	0	0	0	0	0	0	73.9	315.6
2-Nov	0	0	0	0	0	0	0	0	23	160	203	289	310	262	103	81	22	1	0	0	0	0	0	0	60.6	310.4
3-Nov	0	0	0	0	0	0	0	0	25	137	214	206	301	192	159	82	24	1	0	0	0	0	0	0	55.9	301.0
4-Nov	0	0	0	0	0	0	0	0	4	27	79	93	218	288	233	118	36	2	0	0	0	0	0	0	45.7	287.7
5-Nov	0	0	0	0	0	0	0	0	21	117	194	218	189	209	263	82	24	0	0	0	0	0	0	0	54.9	262.8
6-Nov	0	0	0	0	0	0	0	0	6	38	50	49	45	45	24	20	11	0	0	0	0	0	0	0	12.0	49.8
7-Nov	0	0	0	0	0	0	0	0	3	21	78	134	138	132	72	43	17	0	0	0	0	0	0	0	26.6	138.1
8-Nov	0	0	0	0	0	0	0	0	5	29	70	95	117	98	83	50	22	0	0	0	0	0	0	0	23.7	117.1
9-Nov	0	0	0	0	0	0	0	0	6	39	75	110	146	167	108	60	12	0	0	0	0	0	0	0	30.2	167.1
10-Nov	0	0	0	0	0	0	0	0	11	56	123	254	295	282	221	117	27	1	0	0	0	0	0	0	57.8	295.2
11-Nov	0	0	0	0	0	0	0	0	9	87	190	247	274	269	216	112	27	1	0	0	0	0	0	0	59.6	273.7
12-Nov	0	0	0	0	0	0	0	0	7	46	107	167	235	241	202	104	21	1	0	0	0	0	0	0	47.1	241.1
13-Nov	0	0	0	0	0	0	0	0	7	44	102	200	205	213	188	104	20	1	0	0	0	0	0	0	45.1	212.8
14-Nov	0	0	0	0	0	0	0	0	4	32	69	99	127	126	97	45	10	0	0	0	0	0	0	0	25.4	126.7
15-Nov	0	0	0	0	0	0	0	0	11	143	218	175	233	251	211	140	21	0	0	0	0	0	0	0	58.5	250.6
16-Nov	0	0	0	0	0	0	0	0	6	72	177	219	242	233	192	98	20	0	0	0	0	0	0	0	52.5	242.1
17-Nov	0	0	0	0	0	0	0	0	4	51	146	206	209	162	190	56	11	0	0	0	0	0	0	0	43.2	209.2
18-Nov	0	0	0	0	0	0	0	0	5	38	78	123	112	102	86	38	6	0	0	0	0	0	0	0	24.6	123.1
19-Nov	0	0	0	0	0	0	0	0	2	25	108	189	212	205	88	75	12	0	0	0	0	0	0	0	38.2	211.9
20-Nov	0	0	0	0	0	0	0	0	1	19	39	47	82	103	47	25	4	0	0	0	0	0	0	0	15.3	103.1
21-Nov	0	0	0	0	0	0	0	0	2	24	58	87	122	106	41	18	5	0	0	0	0	0	0	0	19.2	121.8
22-Nov	0	0	0	0	0	0	0	0	1	14	64	133	124	87	64	53	12	0	0	0	0	0	0	0	23.1	133.2
23-Nov	0	0	0	0	0	0	0	0	2	23	59	66	78	56	58	51	9	0	0	0	0	0	0	0	16.7	77.9
24-Nov	0	0	0	0	0	0	0	0	3	26	57	79	95	81	42	25	3	0	0	0	0	0	0	0	17.1	95.0
25-Nov	0	0	0	0	0	0	0	0	0	4	10	18	27	26	23	12	1	0	0	0	0	0	0	0	5.0	26.9
26-Nov	0	0	0	0	0	0	0	0	0	8	40	79	108	114	47	12	2	0	0	0	0	0	0	0	17.1	114.4
27-Nov	0	0	0	0	0	0	0	0	0	8	32	57	74	63	53	27	5	0	0	0	0	0	0	0	13.3	73.8
28-Nov	0	0	0	0	0	0	0	0	1	24	65	109	137	146	124	75	9	0	0	0	0	0	0	0	28.7	145.7
29-Nov	0	0	0	0	0	0	0	0	1	37	118	181	214	207	163	86	10	0	0	0	0	0	0	0	42.3	214.3
30-Nov	0	0	0	0	0	0	0	0	1	33	104	180	188	141	112	60	6	0	0	0	0	0	0	0	34.4	188.5
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	51.5	105.5	146.9	172.4	163.6	125.3	66.7	15.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	32.5	162.6	236.1	297.7	315.6	299.5	262.8	139.7	44.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - November 2014



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - November 2014

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	6	6	4	1	3	1	4	4	3	1	3	2	1	3	1	4	2	1	1	1	1	0	1	1.3	5.9
Dir	253	218	232	249	168	322	171	162	165	185	177	170	280	214	187	250	341	9	98	163	304	11	159	316	219.7	218.1
2 Spd	2	1	3	3	3	3	5	2	2	1	1	5	6	4	3	3	4	1	5	4	10	8	7	8	0.9	10.0
Dir	312	125	162	146	158	156	155	173	21	143	167	132	127	133	56	50	93	107	321	308	264	269	280	259	205.0	264.3
3 Spd	16	12	5	4	3	6	1	5	7	6	6	4	2	2	5	7	7	7	10	10	9	10	11	10	1.3	15.6
Dir	258	257	279	262	209	259	263	273	275	282	262	247	196	176	141	110	108	93	97	99	103	96	94	97	164.9	258.1
4 Spd	9	8	7	4	2	2	5	5	7	5	5	8	4	19	20	17	15	11	7	11	9	10	8	7	6.0	19.8
Dir	91	86	87	76	2	311	290	228	200	255	258	262	247	257	259	261	253	249	251	263	244	256	250	238	252.1	259.4
5 Spd	10	12	9	10	9	6	5	4	5	2	3	3	5	4	8	8	10	11	10	10	11	12	12	11	2.9	12.4
Dir	242	247	245	245	245	271	258	296	308	304	231	234	176	147	130	114	100	100	104	108	109	113	117	117	157.5	116.8
6 Spd	9	9	10	9	8	4	3	5	7	8	3	4	5	6	5	4	7	4	6	6	8	9	7	9	1.3	9.5
Dir	111	114	114	112	120	140	326	328	329	334	284	264	219	237	236	309	270	239	241	280	319	339	343	296	292.2	113.7
7 Spd	15	14	14	13	10	8	7	5	5	7	6	7	7	6	4	5	5	8	6	7	8	7	8	7	3.5	15.0
Dir	315	318	319	316	315	312	320	354	74	87	85	77	86	99	79	43	73	98	98	93	88	91	93	84	32.0	315.0
8 Spd	4	5	5	6	6	8	9	7	7	6	5	6	5	5	6	6	5	6	6	6	7	4	3	4	5.1	8.6
Dir	66	51	44	51	57	45	36	26	28	30	34	35	44	54	76	92	99	115	88	90	93	83	47	90	59.9	36.5
9 Spd	6	5	5	6	5	7	5	4	4	4	6	7	7	9	7	8	8	11	8	7	8	9	11	11	4.4	11.3
Dir	99	76	57	58	54	46	48	340	340	314	280	286	260	274	281	272	299	319	324	342	323	319	320	332	326.0	320.4
10 Spd	7	5	7	8	7	7	7	5	3	4	4	3	3	5	4	3	1	1	2	3	3	3	3	3	3.6	7.5
Dir	35	31	24	38	46	34	47	55	70	56	66	61	14	61	68	40	6	13	318	70	316	331	315	321	35.0	37.6
11 Spd	2	4	3	3	1	2	3	2	2	1	6	6	6	6	6	8	6	5	4	2	3	2	1	2	1.7	7.7
Dir	342	312	340	317	314	93	311	333	322	85	111	116	91	82	85	86	93	89	77	99	306	279	267	311	66.3	86.2
12 Spd	3	2	2	2	2	2	2	1	2	2	2	2	3	2	4	4	4	4	4	4	4	4	3	3	2.2	4.2
Dir	303	302	244	315	308	285	161	161	174	288	305	284	285	293	290	312	317	314	334	326	327	328	329	319	305.5	314.3
13 Spd	1	0	3	3	2	2	1	2	3	3	1	2	1	2	2	3	3	4	4	3	2	2	2	3	2.1	4.3
Dir	312	233	323	324	320	293	291	268	332	321	310	296	292	252	260	321	317	308	322	317	320	339	309	309	310.4	308.4
14 Spd	3	2	2	2	1	1	2	3	2	2	2	1	3	4	4	3	3	4	3	3	5	4	5	4	2.3	5.0
Dir	314	323	313	320	354	317	316	303	333	290	305	229	230	262	243	219	278	289	295	261	272	289	246	236	279.1	246.0
15 Spd	4	3	2	1	1	1	2	2	2	1	1	2	4	6	8	17	17	13	9	9	4	3	3	2	4.6	17.2
Dir	237	229	248	276	310	313	311	293	308	296	305	298	292	295	293	285	304	306	308	315	301	267	298	274	294.3	303.9
16 Spd	3	3	2	3	3	3	3	3	2	2	3	2	2	3	2	2	2	3	4	4	4	4	3	3	2.6	4.1
Dir	339	351	294	307	296	320	322	331	344	326	301	308	286	302	324	59	35	341	316	330	326	332	319	326	324.7	316.3
17 Spd	3	4	2	1	2	2	1	1	1	2	2	1	2	2	2	4	3	4	5	8	11	9	11	12	3.8	12.2
Dir	328	330	315	303	314	311	347	340	186	322	293	283	291	295	285	304	331	327	304	296	309	325	322	322	313.8	321.9
18 Spd	11	9	12	11	8	12	11	8	11	7	6	7	7	6	3	6	5	5	7	7	7	5	4	4	3.1	12.2
Dir	306	308	296	284	292	300	310	283	301	292	300	295	300	314	89	111	104	101	96	99	108	120	105	100	309.3	296.4
19 Spd	1	3	5	4	4	2	2	2	5	2	4	3	3	2	4	3	3	4	3	2	3	3	3	1	0.1	5.1
Dir	100	105	109	102	117	165	166	176	137	125	118	275	296	261	297	306	306	329	335	311	325	296	352	329	0.1	109.2
20 Spd	2	3	4	3	1	2	1	2	2	3	3	2	1	2	1	1	1	2	1	1	1	5	9	9	1.7	9.4
Dir	313	322	335	315	305	300	251	163	227	217	211	222	159	165	179	165	212	166	168	272	304	245	244	244	246.2	243.6
21 Spd	4	3	4	3	1	1	1	2	3	7	8	8	8	7	6	7	8	9	9	11	11	12	11	12	5.2	12.0
Dir	296	313	345	326	332	225	53	120	107	111	108	102	96	96	82	72	70	71	66	59	63	69	64	57	72.1	57.4
22 Spd	11	10	13	12	11	13	15	13	13	12	18	18	18	16	17	15	14	16	14	13	9	6	3	1	10.3	17.9
Dir	64	51	50	28	345	317	315	320	320	318	304	305	306	297	298	299	303	309	314	314	307	310	346	335	320.8	305.2

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - November 2014

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
23 Spd	2	2	3	3	3	4	3	3	3	4	2	2	2	3	2	3	2	2	3	4	4	2	1	2	1.3	3.9
Dir	38	78	76	58	357	331	327	321	331	327	301	335	280	300	302	233	297	217	240	233	226	267	345	131	304.8	226.5
24 Spd	6	5	6	5	4	1	1	2	2	3	1	3	3	2	3	2	5	5	4	3	2	6	5	3	0.7	5.8
Dir	124	115	121	122	111	53	26	339	326	302	325	310	314	322	311	335	112	108	108	120	205	305	302	332	76.0	121.0
25 Spd	4	4	5	4	3	2	3	5	6	7	5	6	5	5	4	5	4	5	4	3	3	2	2	3	3.3	7.1
Dir	35	46	42	64	31	68	83	105	114	118	116	124	125	117	107	111	95	77	76	75	83	82	344	324	88.7	118.3
26 Spd	3	3	3	3	3	3	3	2	2	2	2	1	1	2	2	3	3	3	2	2	6	9	11	9	2.2	10.8
Dir	313	330	336	335	318	334	322	323	337	325	326	310	313	339	303	308	333	327	325	141	81	66	62	59	6.3	61.6
27 Spd	8	9	10	9	9	10	13	14	11	10	11	11	11	10	10	10	11	11	11	12	11	12	11	11	10.6	14.3
Dir	48	42	39	36	37	37	26	27	32	43	46	46	42	36	38	41	39	39	37	40	43	39	41	32	38.3	26.6
28 Spd	11	10	11	10	11	11	11	10	10	8	8	6	8	7	8	6	5	5	6	3	3	3	3	4	6.2	11.1
Dir	27	33	23	16	7	5	356	349	340	332	335	311	310	310	294	298	302	327	324	321	330	256	292	295	342.3	27.3
29 Spd	6	5	5	3	1	3	3	4	4	5	2	3	3	5	7	4	4	1	3	4	3	3	5	5	3.3	7.0
Dir	286	281	225	232	234	309	318	318	336	326	315	311	280	273	299	300	260	241	333	311	337	321	315	312	298.7	299.0
30 Spd	4	5	2	5	4	1	3	1	5	1	2	4	1	2	3	4	3	3	4	4	4	2	2	2	2.1	4.8
Dir	288	262	269	268	287	278	297	190	164	162	185	302	280	295	311	316	326	315	327	330	333	329	305	353	295.5	262.3
Spd	1.8	1.6	1.8	1.9	1.7	2.3	2.6	2.1	1.9	1.7	1.2	1.3	1.1	1.6	1.5	1.5	1.5	1.6	1.9	1.7	1.6	1.7	1.9	1.6	Diurnal Average	
Dir	341.7	349.1	3.1	356.4	353.3	337.9	339.3	334.3	338.6	338.2	326.4	310.3	306.7	291.1	299.7	320.1	342.5	358.8	3.0	1.6	350.9	354.1	354.4	351.5		
Spd	15.6	14.0	13.7	13.0	11.5	12.8	14.8	14.3	12.6	11.6	17.9	17.9	17.7	19.3	19.8	17.3	17.2	15.5	13.8	13.3	11.4	12.3	12.4	12.2	Diurnal Maximum	
Dir	258.1	317.7	318.5	316.0	345.5	317.3	315.4	26.6	319.9	318.0	304.5	305.2	305.9	256.7	259.4	260.9	303.9	309.4	314.0	313.5	109.2	112.9	116.8	321.9		

Maximum Speed Value: 20 km/h on Nov 4 15:00
Maximum Daily Speed Average: 10.6 km/h on Nov 22
Maximum Diurnal Speed Average: 2.6 km/h at hour 7

Minimum Speed Value: 0 km/h on Nov 1 23:00
Minimum Daily Speed Average: 0.1 km/h on Nov 13
Minimum Diurnal Speed Average: 1.1 km/h at hour 13

Monthly Average Velocity: 1.63 km/h 341.13 deg

Speed Percentiles: $P_1 = 0.8$ $P_{10} = 1.5$ $Q_1 = 2.5$ Median = 4.0 $Q_3 = 7.0$ $P_{90} = 10.6$ $P_{99} = 17.2$

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

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Percent Operational Time:	100.0

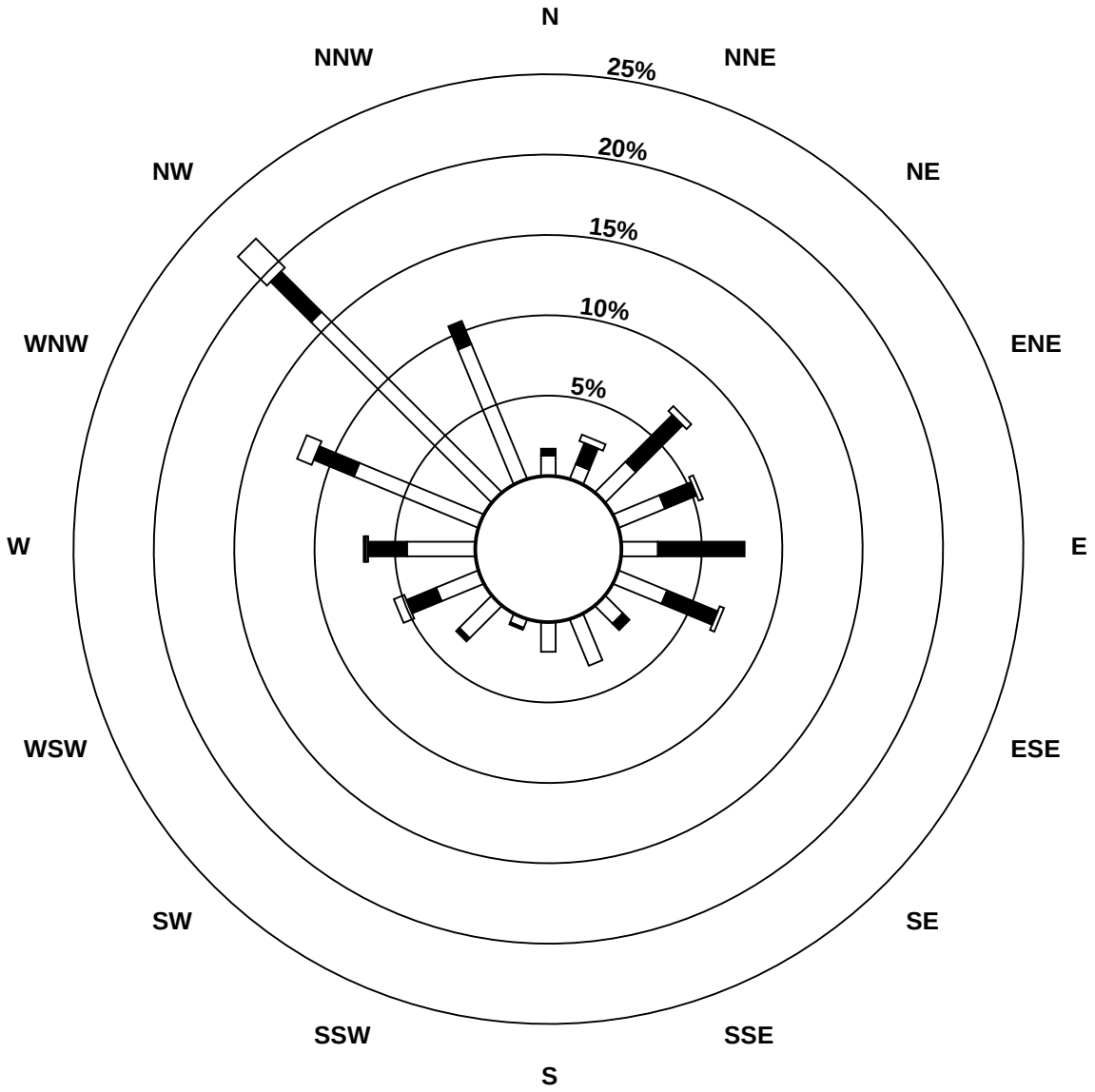
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	29	10	1	0	0	0	40
NorthEast	25	48	14	0	0	0	87
East	38	63	3	0	0	0	104
SouthEast	18	19	3	0	0	0	40
South	35	1	0	0	0	0	36
SouthWest	34	15	1	0	0	0	50
West	56	31	7	2	0	0	96
NorthWest	198	42	27	0	0	0	267
Total	433	229	56	2	0	0	720

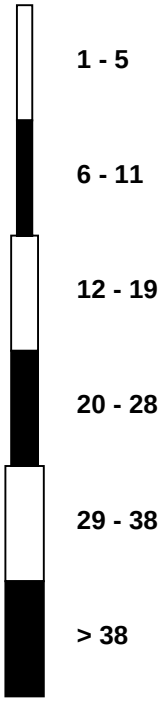
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - November 2014



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - November 2014

Maximum Speed: 20 km/h on Nov 4 15:00

Maximum Daily Speed Average: 12.6 km/h on Nov 22

Minimum Speed: 1 km/h on Nov 1 23:00

Minimum Daily Speed Average: 2.4 km/h on Nov 13

Maximum Diurnal Speed Average: 6.1 km/h at hour 16

Minimum Diurnal Speed Average: 4.6 km/h at hour 10

Monthly Average Speed: 5.43 km/h

Percentiles: P_1 = 1.2 P_{10} = 2.0 Q_1 = 2.8 Median = 4.3 Q_3 = 7.2 P_{90} = 10.8 P_{99} = 17.3

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

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-Nov	6	6	6	4	2	3	2	4	4	3	2	4	3	2	3	4	4	2	1	2	2	1	1	2	3.0	5.9
2-Nov	2	1	3	3	3	3	5	4	3	2	2	5	7	5	3	3	5	3	6	6	10	8	7	9	4.4	10.1
3-Nov	16	12	6	4	4	7	4	6	7	6	7	5	3	3	5	7	7	7	10	10	10	10	11	10	7.3	15.7
4-Nov	9	8	7	4	4	3	5	6	7	6	6	8	5	19	20	17	15	11	7	11	10	10	8	8	8.9	20.0
5-Nov	10	12	10	10	9	7	6	5	6	2	3	3	5	5	8	8	10	11	10	10	11	12	12	11	8.2	12.5
6-Nov	9	9	10	9	9	4	3	5	7	8	4	5	5	6	5	5	7	5	6	6	8	9	8	9	6.7	9.6
7-Nov	15	14	14	13	11	8	7	6	5	7	6	8	7	6	5	5	5	8	6	7	8	7	8	7	8.1	15.1
8-Nov	5	5	5	7	6	8	9	7	7	6	6	6	5	5	6	6	5	6	6	6	7	4	3	5	5.9	8.8
9-Nov	6	5	6	6	5	7	5	5	4	5	6	7	8	9	7	8	8	11	8	8	8	9	11	12	7.2	12.1
10-Nov	7	6	7	8	7	8	7	5	3	4	4	3	4	6	5	3	2	2	3	3	4	3	3	3	4.6	7.8
11-Nov	3	5	4	3	2	3	4	2	3	2	6	6	6	6	6	8	6	5	5	5	4	2	2	2	4.1	7.8
12-Nov	3	3	3	2	2	2	2	1	2	2	2	2	3	2	4	4	4	4	4	4	4	4	3	3	2.8	4.3
13-Nov	1	1	3	3	2	2	2	2	3	3	1	2	1	2	2	3	3	4	4	3	2	2	2	3	2.4	4.4
14-Nov	3	2	2	2	2	1	2	3	3	2	3	2	3	4	4	4	4	4	3	4	5	4	5	4	3.1	5.4
15-Nov	4	4	2	2	1	1	2	2	2	1	1	2	4	6	8	17	17	13	9	9	4	4	3	4	5.0	17.4
16-Nov	3	3	3	3	3	3	3	3	2	3	3	3	2	3	3	3	2	4	4	4	4	4	4	3	3.1	4.1
17-Nov	3	4	2	2	2	3	2	1	1	2	2	2	2	2	2	4	3	4	5	8	11	9	11	12	4.1	12.3
18-Nov	11	9	12	11	8	12	11	8	11	7	6	7	7	6	4	6	6	5	7	7	7	5	5	4	7.6	12.3
19-Nov	2	3	5	5	4	3	2	2	5	3	4	4	3	4	4	3	3	4	3	2	3	3	3	2	3.2	5.3
20-Nov	3	3	4	3	1	2	1	2	2	3	4	2	1	2	2	2	2	2	3	2	2	5	9	9	3.0	9.5
21-Nov	4	3	4	3	3	1	1	3	3	7	8	9	8	7	6	7	8	9	9	11	11	12	11	12	6.8	12.3
22-Nov	11	10	13	12	12	13	15	14	13	12	18	18	18	17	17	15	14	16	14	13	9	6	3	1	12.6	18.0
23-Nov	2	3	3	3	3	4	4	3	3	4	3	4	6	3	3	4	4	3	3	4	4	3	2	3	3.3	5.6
24-Nov	6	6	6	5	4	1	1	2	2	3	2	3	3	3	3	3	5	6	4	4	3	6	5	3	3.7	5.9
25-Nov	5	5	5	4	3	3	3	5	6	7	5	6	6	5	5	5	4	5	4	3	3	2	2	3	4.3	7.3
26-Nov	3	3	3	3	3	3	3	2	2	2	2	2	1	2	3	4	3	3	3	2	7	9	11	9	3.7	11.1
27-Nov	9	10	10	9	9	11	13	14	11	10	12	12	11	10	10	10	11	11	11	12	11	12	11	12	10.9	14.4
28-Nov	11	11	11	10	11	11	11	10	10	8	8	7	8	7	8	6	5	5	6	4	4	3	4	4	7.6	11.4
29-Nov	6	5	5	3	2	3	3	4	4	5	2	3	3	5	7	4	4	2	3	4	4	4	5	5	4.0	7.0
30-Nov	5	5	3	5	4	2	3	1	5	2	3	4	1	2	3	4	4	4	4	4	4	2	3	2	3.2	5.3
	6.0	5.8	5.8	5.4	4.7	4.6	4.7	4.6	4.9	4.6	4.6	5.0	5.0	5.6	5.7	6.1	5.9	5.9	5.7	5.9	6.1	5.9	5.9	5.8	Diurnal Average	
	15.7	14.1	13.8	13.1	11.8	12.9	14.8	14.4	12.7	11.7	18.0	18.0	17.8	19.4	20.0	17.4	17.4	15.6	13.9	13.4	11.5	12.4	12.5	12.3	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

Henry Pirker - November 2014

Maximum Value: 84.6 deg on Nov 20 19:00

Minimum Value: 4.5 deg on Nov 22 12:00

Percentiles: P_1 = 5.7 P_{10} = 7.8 Q_1 = 11.5 Median = 16.7 Q_3 = 29.3 P_{90} = 47.5 P_{99} = 75.3

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Nov	30	7	14	13	66	36	74	11	8	51	52	19	41	60	28	67	12	40	47	56	69	58	61	72	74.2
2-Nov	45	65	14	17	6	16	9	73	42	66	33	19	13	27	28	37	30	83	38	44	8	14	12	19	83.1
3-Nov	6	7	26	18	36	27	79	26	7	9	17	26	49	49	27	11	7	9	6	6	8	8	6	7	79.1
4-Nov	8	8	9	33	62	44	17	27	26	43	40	17	32	10	8	8	9	8	10	13	11	11	17	11	62.5
5-Nov	8	7	10	9	10	21	59	60	24	48	35	19	19	31	21	16	8	7	7	14	8	6	6	6	60.4
6-Nov	7	7	6	9	16	76	50	15	11	10	53	27	15	14	13	44	19	19	8	29	7	8	19	12	75.7
7-Nov	7	6	7	6	11	9	12	33	16	14	20	16	20	19	23	28	22	13	12	10	9	11	9	12	33.4
8-Nov	15	25	21	18	17	16	14	15	16	15	18	19	27	17	18	15	18	14	13	12	9	17	25	19	27.4
9-Nov	14	17	16	18	21	12	20	27	28	40	16	18	21	18	14	11	20	7	11	10	9	6	6	33	39.9
10-Nov	18	23	12	15	16	15	15	18	28	19	22	38	30	24	16	40	61	52	39	15	31	18	20	24	61.4
11-Nov	32	16	25	48	54	55	50	30	31	75	12	12	12	14	15	11	10	18	20	85	28	49	59	35	84.5
12-Nov	13	30	27	26	18	17	39	12	29	24	21	20	7	9	6	8	7	12	12	10	6	10	18	9	38.9
13-Nov	37	64	16	18	19	16	29	33	11	13	25	8	56	16	29	11	9	13	14	15	12	19	16	14	63.8
14-Nov	18	20	14	11	25	27	22	17	20	19	11	49	24	18	19	23	51	33	35	50	30	34	25	23	50.6
15-Nov	18	15	22	27	25	30	22	7	13	19	15	9	13	11	13	7	7	6	14	6	46	30	50	71	70.7
16-Nov	31	16	42	18	13	15	7	22	33	33	15	28	9	10	46	22	45	14	12	14	9	18	21	16	45.6
17-Nov	19	12	25	45	22	26	40	42	32	17	18	34	14	22	26	15	17	12	20	11	6	6	6	8	44.8
18-Nov	10	7	5	7	13	7	9	11	8	10	14	10	10	9	46	11	18	13	8	11	10	9	16	13	46.2
19-Nov	70	22	13	15	11	42	32	36	24	53	18	50	30	55	11	15	16	10	15	17	29	17	29	42	69.7
20-Nov	30	15	9	19	35	34	43	45	45	39	30	32	34	40	75	69	71	36	85	61	43	32	9	12	84.6
21-Nov	31	40	38	35	76	50	58	52	19	10	12	11	13	19	16	16	12	13	12	12	15	11	12	12	76.0
22-Nov	12	15	13	18	13	7	5	6	7	7	5	4	6	9	6	6	9	6	6	6	7	20	19	49	49.0
23-Nov	34	20	13	20	35	13	20	11	15	16	38	67	83	31	69	31	59	55	33	21	17	34	49	55	82.6
24-Nov	12	13	14	12	9	70	66	17	39	33	56	27	19	79	41	64	18	14	12	64	46	9	17	19	79.0
25-Nov	30	25	22	17	26	39	17	15	11	10	13	12	18	15	15	18	20	13	15	18	16	26	20	9	38.7
26-Nov	9	15	10	8	21	11	12	28	19	11	7	27	36	26	24	27	13	13	34	34	30	12	12	15	36.4
27-Nov	16	13	12	14	20	18	12	9	13	13	15	14	16	12	12	14	12	14	10	12	14	13	14	15	19.7
28-Nov	12	15	11	12	12	9	10	10	9	6	6	11	7	11	9	10	7	12	6	10	13	23	27	20	26.6
29-Nov	10	16	12	29	42	59	11	12	11	9	32	24	33	19	6	7	28	45	17	26	24	18	10	14	58.7
30-Nov	21	27	47	14	27	77	18	59	12	43	45	12	42	14	13	15	23	28	13	14	13	30	33	26	76.8
	69.7	64.6	46.6	47.6	76.0	76.8	79.1	72.8	44.6	75.4	56.5	66.5	82.6	79.0	75.0	69.4	71.1	83.1	84.6	84.5	69.0	58.0	60.9	72.0	

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 13.8 ppb on Nov 12 14:00
Maximum Daily Average: 2.5 ppb on Nov 12

Minimum Value: 0 ppb on Nov 3 23:00
Maximum Diurnal Average: 1.2 ppb at hour 14
Monthly Average: 0.44 ppb

Minimum Daily Average: 0.1 ppb on Nov 27
Minimum Diurnal Average: 0.2 ppb at hour 3
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.5 P_{90} = 0.9 P_{99} = 4.3

Hours in Service:	720
Hours of Data:	668
Hours of Missing Data:	52
Hours of Calibration:	35
Percent Operational Time:	97.6

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-Nov	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
2-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
3-Nov	0	0	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.8
4-Nov	0	0	0	0	0	0	0	0	0	0	0	1	A	1	1	1	1	0	0	0	0	0	0	0	0.3	1.5
5-Nov	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
6-Nov	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0.2	0.8
7-Nov	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
8-Nov	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.1	0.6
9-Nov	0	0	0	0	0	0	0	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	1.4
10-Nov	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
11-Nov	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	1.0
12-Nov	1	0	0	1	A	1	3	2	3	2	1	1	4	14	6	4	5	2	1	1	1	1	1	1	2.5	13.8
13-Nov	0	0	0	A	1	1	6	8	7	4	3	3	2	2	2	1	1	1	1	1	1	1	1	1	2.0	8.0
14-Nov	1	1	A	1	1	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	--	0.7
15-Nov	0	A	0	0	0	0	0	0	0	1	1	3	4	4	2	1	1	0	0	1	1	1	1	0	1.0	4.2
16-Nov	A	0	0	0	0	0	0	0	1	1	1	1	2	1	1	1	1	0	0	0	0	0	0	A	0.5	1.7
17-Nov	0	0	0	0	0	1	0	0	1	1	1	2	1	1	1	1	1	1	1	1	1	0	A	0	0.7	2.1
18-Nov	0	0	1	0	1	1	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0.5	1.2
19-Nov	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	A	0	0	0	0.3	1.2
20-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0.3	0.6
21-Nov	0	0	0	0	0	1	1	1	1	1	1	C	C	C	C	0	0	0	A	0	0	0	0	0	0.3	0.8
22-Nov	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	1.0
23-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0	0.3	1.5
24-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.5
25-Nov	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
26-Nov	0	0	0	0	0	0	0	0	0	0	0	1	2	A	1	1	0	0	1	0	0	0	0	0	0.4	1.5
27-Nov	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
28-Nov	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0.3	1.0
29-Nov	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.2
30-Nov	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	1	0	1	1	1	0	0	0	0	0.4	0.7
	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.6	0.6	0.5	0.6	0.7	0.9	1.2	0.8	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.2	Diurnal Average	
	0.8	0.7	0.5	1.1	0.7	1.3	5.6	8.0	6.9	4.3	3.5	3.1	4.0	13.8	6.1	4.4	5.3	2.3	1.3	1.4	1.4	1.5	0.8	1.0	Diurnal Maximum	

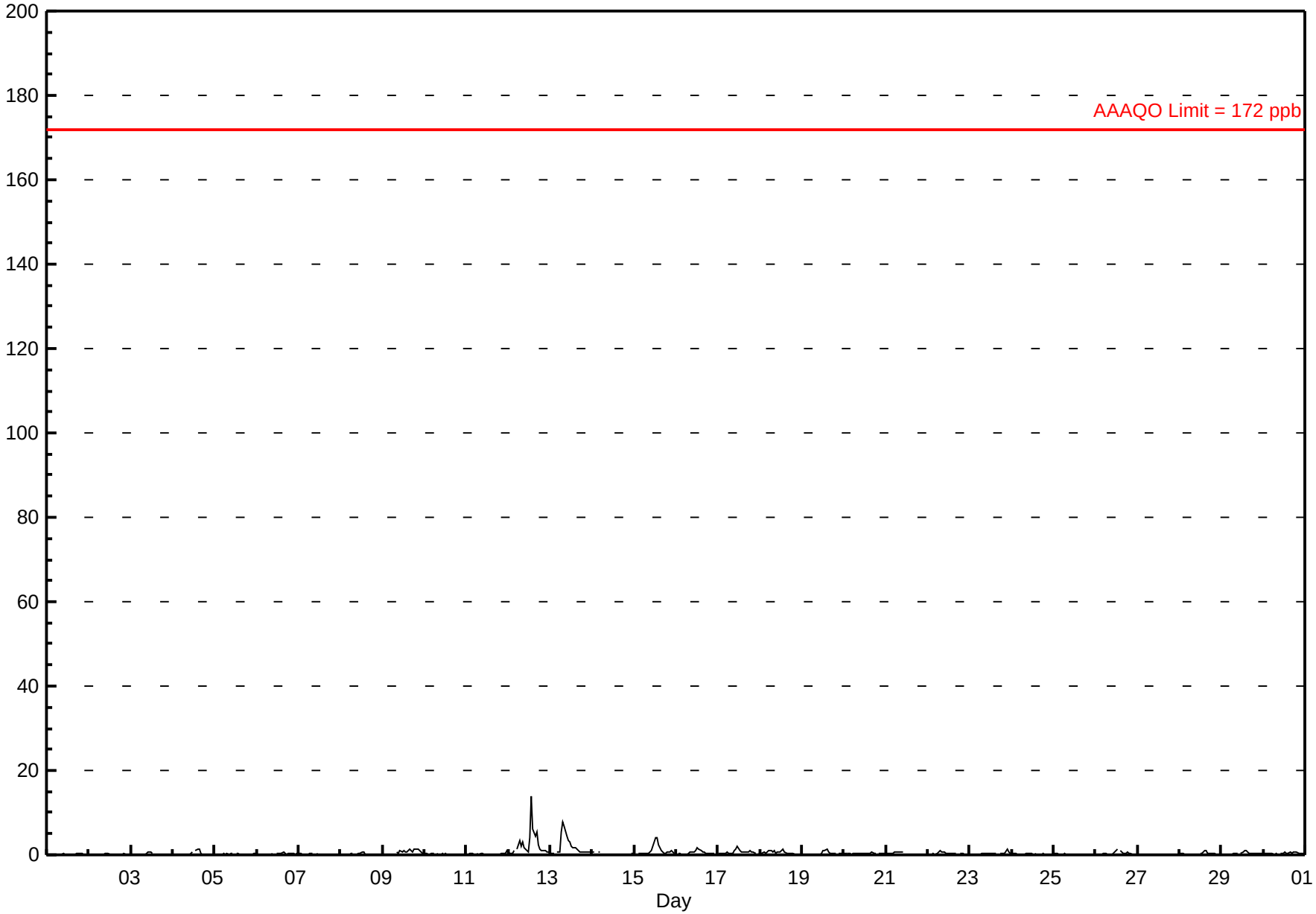
C - Calibration P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - November 2014



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - November 2014

Maximum Value: 22.5 ppb on Nov 12 14:00

Maximum Daily Average: 4.2 ppb on Nov 12

Minimum Value: 0 ppb on Nov 9 04:00

Minimum Daily Average: 0.5 ppb on Nov 27

Maximum Diurnal Average: 2.2 ppb at hour 14

Minimum Diurnal Average: 0.7 ppb at hour 4

Monthly Average: 1.09 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.5 Q_1 = 0.6 Median = 0.7 Q_3 = 1.1 P_{90} = 1.7 P_{99} = 6.2

Hours in Service:	720
Hours of Data:	668
Hours of Missing Data:	52
Hours of Calibration:	35
Percent Operational Time:	97.6

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-Nov	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	0.7	1.3
2-Nov	1	0	0	1	1	0	1	1	0	1	1	1	1	1	A	1	1	1	1	1	5	1	1	1	0.8	5.3
3-Nov	1	1	1	1	1	0	0	1	1	1	2	2	1	A	1	1	0	0	0	0	0	1	0	1	0.7	2.2
4-Nov	1	1	1	1	0	1	0	1	1	1	1	1	A	3	3	4	3	1	1	0	1	0	1	0	1.1	4.1
5-Nov	1	1	1	0	1	1	1	1	1	2	1	A	1	1	1	0	1	1	1	1	0	1	1	1	0.7	1.5
6-Nov	1	0	0	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.4
7-Nov	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	1	0	0	1	1	1	1	1	0	0.6	1.0
8-Nov	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0.7	1.4
9-Nov	1	0	1	0	1	0	1	A	1	1	2	1	2	1	2	2	2	2	2	2	2	1	1	1	1.2	2.3
10-Nov	1	1	0	0	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	1	1	0.7	1.4
11-Nov	0	1	1	1	1	A	1	1	1	1	0	0	1	0	0	0	1	0	1	1	1	1	1	1	0.7	1.4
12-Nov	1	2	1	2	A	2	5	3	4	3	2	1	11	22	9	5	7	4	2	2	1	2	2	1	4.2	22.5
13-Nov	1	1	1	A	1	2	15	12	11	6	5	4	2	2	3	2	2	1	1	2	1	1	1	2	3.4	15.4
14-Nov	1	1	A	1	1	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	1	1	--	1.1
15-Nov	1	A	1	1	1	1	1	1	1	1	2	4	6	6	4	2	1	1	1	2	2	2	1	1	1.8	5.7
16-Nov	A	1	1	1	0	1	1	1	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	A	1.1	2.9
17-Nov	1	1	1	1	1	2	1	1	1	2	2	3	2	1	1	1	2	1	2	2	2	1	A	1	1.4	2.8
18-Nov	1	1	1	1	1	1	2	1	2	1	1	1	2	2	1	1	1	1	1	1	1	A	0	0	1.1	2.1
19-Nov	1	1	1	0	0	0	0	1	0	1	0	1	2	1	2	1	1	1	1	1	A	1	1	1	0.8	1.9
20-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.3
21-Nov	1	1	1	1	1	1	1	1	1	1	1	C	C	C	C	0	0	1	A	0	0	1	0	1	0.8	1.3
22-Nov	0	0	1	1	0	1	1	2	2	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	0.9	2.2
23-Nov	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	2	1	0.9	2.2
24-Nov	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	0	1	1	1	1	1	1	0.7	1.3
25-Nov	1	1	1	1	1	1	1	1	0	1	1	0	1	1	A	1	0	1	1	1	1	1	0	1	0.6	1.0
26-Nov	1	1	0	1	1	1	1	1	1	1	1	2	2	A	1	1	1	1	1	1	1	0	1	0	0.9	2.1
27-Nov	0	0	0	0	1	1	0	0	1	1	1	1	A	1	1	1	1	0	0	0	1	1	1	0	0.5	0.7
28-Nov	1	1	1	0	1	0	1	0	1	1	1	A	1	1	2	2	1	1	1	1	1	1	1	0	0.8	1.9
29-Nov	1	1	1	1	1	0	1	1	1	1	A	1	3	3	2	1	1	2	1	1	1	1	1	1	1.1	3.2
30-Nov	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
	0.8	0.7	0.7	0.7	0.7	0.8	1.4	1.3	1.3	1.2	1.2	1.3	1.9	2.2	1.6	1.3	1.1	1.0	0.9	0.9	1.0	0.8	0.8	0.7	Diurnal Average	
	1.4	1.5	1.4	2.0	1.3	2.4	15.4	11.9	11.0	6.1	4.8	4.0	11.2	22.5	9.4	5.3	6.7	4.3	2.5	2.1	5.3	2.2	1.7	1.6	Diurnal Maximum	

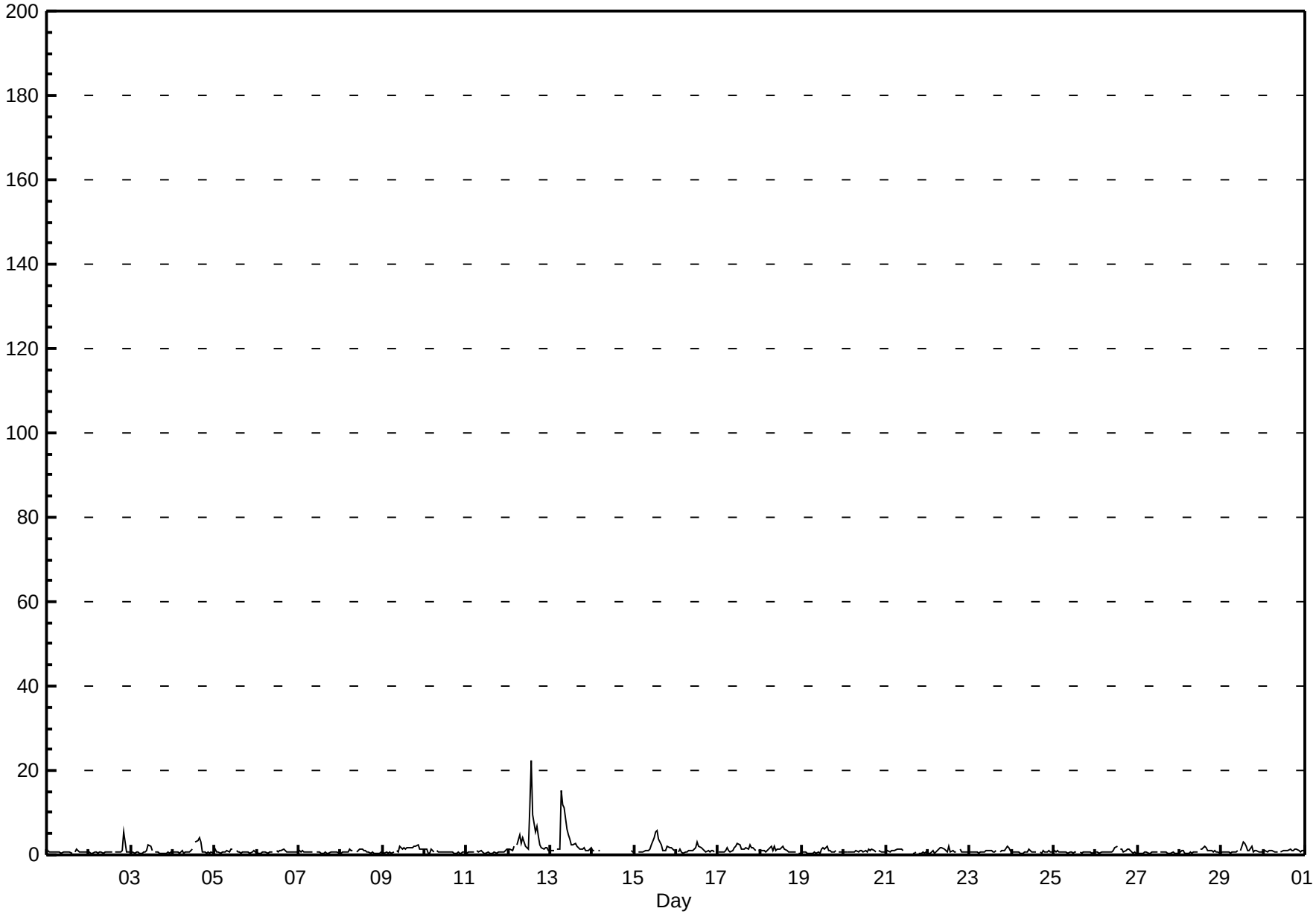
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

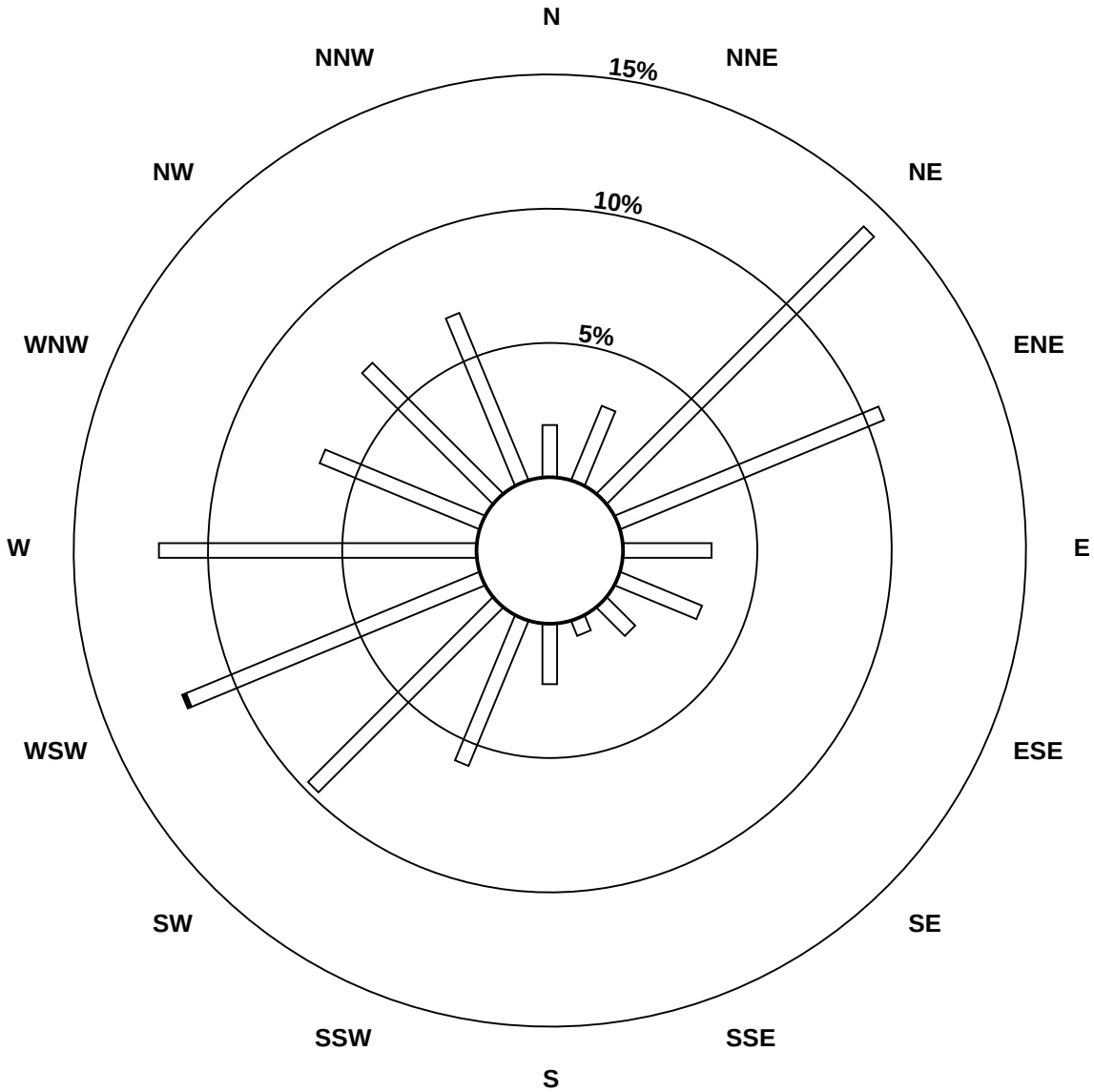
Evergreen Park - November 2014



Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - November 2014



Pollutant Classes (ppb)

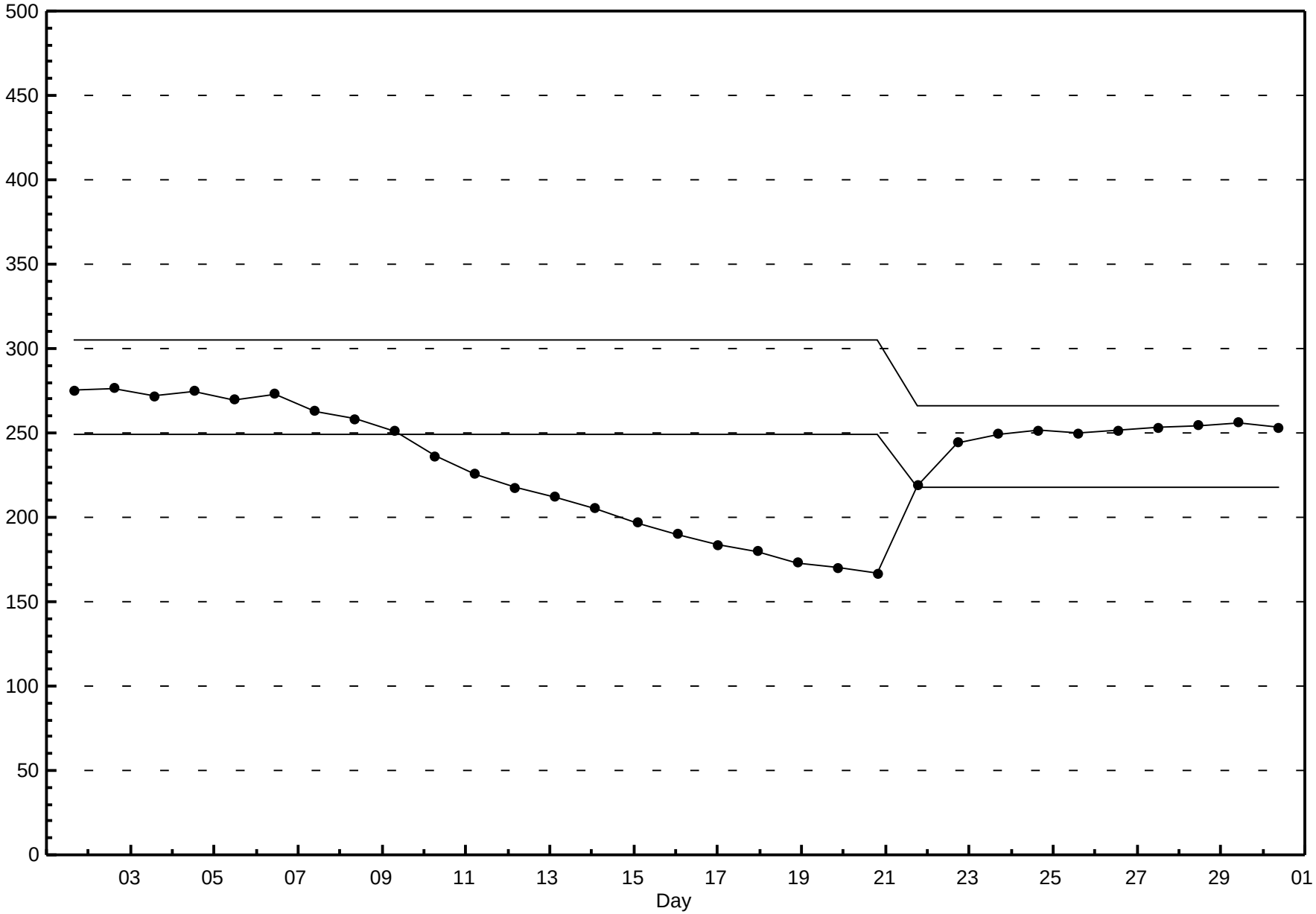
- 0 - 10
- 11 - 20
- 21 - 60
- 61 - 110
- 111 - 172
- > 172

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Evergreen Park - November 2014



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - November 2014

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

Maximum Value: 3.5 ppb on Nov 13 09:00

Maximum Daily Average: 1.1 ppb on Nov 13

Minimum Value: 0 ppb on Nov 5 05:00

Minimum Daily Average: 0.1 ppb on Nov 5

Maximum Diurnal Average: 0.6 ppb at hour 19

Minimum Diurnal Average: 0.3 ppb at hour 16

Monthly Average: 0.43 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.6$ $P_{90} = 0.8$ $P_{99} = 1.7$

Hours in Service:	720
Hours of Data:	667
Hours of Missing Data:	53
Hours of Calibration:	36
Percent Operational Time:	97.6

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-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	1	1	0	0.4	0.7
2-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	1	0	0	0	0	0.3	0.8
3-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.5
4-Nov	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
5-Nov	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Nov	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
7-Nov	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
8-Nov	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
9-Nov	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
10-Nov	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.3	0.6
11-Nov	1	1	1	2	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.7
12-Nov	0	0	0	0	A	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0.6	1.2
13-Nov	1	1	1	A	1	1	1	3	3	2	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1.1	3.5
14-Nov	1	1	A	1	1	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	1	1	--	1.2
15-Nov	1	A	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0.6	1.0
16-Nov	A	0	0	1	1	0	1	1	1	1	1	1	0	0	1	0	0	0	1	1	1	1	1	A	0.7	1.2
17-Nov	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	2	1	1	0	1	A	1	0.7	1.9
18-Nov	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.5
19-Nov	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1	A	1	0	0	0.5	0.8
20-Nov	1	1	0	1	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	A	0	0	0	0	0.5	0.7
21-Nov	0	0	1	1	1	1	1	1	1	1	C	C	C	C	C	0	0	0	A	0	0	0	0	0	0.4	0.8
22-Nov	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
23-Nov	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	A	0	1	0	1	0	0	1	0.5	0.9
24-Nov	1	1	1	1	0	0	0	1	1	1	1	1	1	1	0	A	1	1	2	1	1	1	1	1	0.8	1.9
25-Nov	1	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
26-Nov	0	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	1	0	0	0	0.7	2.3
27-Nov	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
28-Nov	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
29-Nov	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	1	1	1	1	1	0.3	0.5
30-Nov	1	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	1	1	1	1	1	1	1	1	0.5	1.2
	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.5	0.6	0.5	0.4	0.4	0.4	0.4	Diurnal Average	
	1.0	1.3	1.4	1.7	1.3	1.0	1.3	2.8	3.5	2.4	1.4	0.8	0.8	0.7	0.8	0.8	1.2	1.9	2.3	1.2	1.0	1.2	1.2	0.9	Diurnal Maximum	

C - Calibration P - Power Failure A - Automated Daily Zero Span

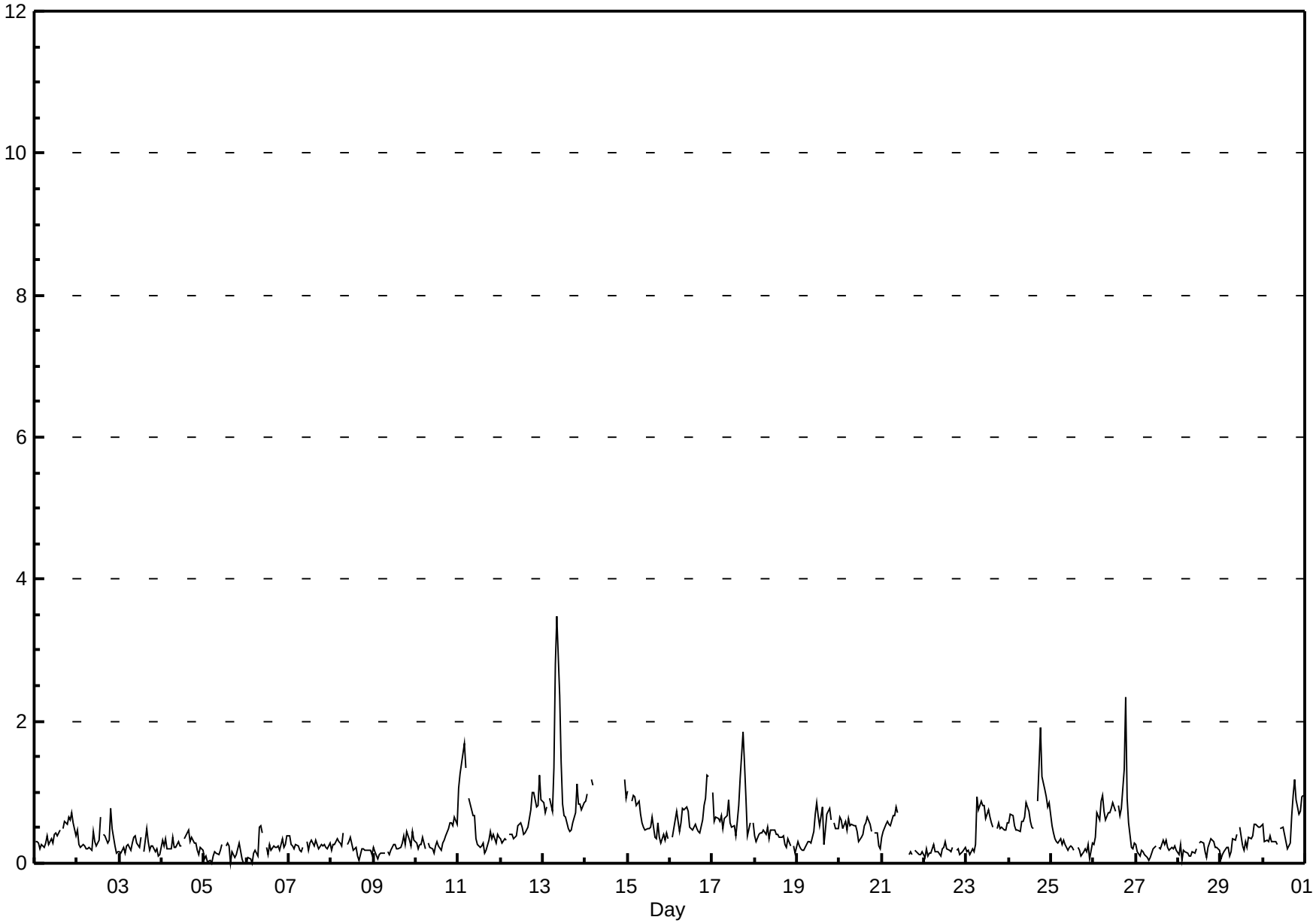
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - November 2014



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - November 2014

Maximum Value: 5.1 ppb on Nov 13 09:00

Maximum Daily Average: 2.0 ppb on Nov 13

Minimum Value: 0 ppb on Nov 6 04:00

Minimum Daily Average: 0.9 ppb on Nov 5

Maximum Diurnal Average: 1.5 ppb at hour 19

Minimum Diurnal Average: 1.1 ppb at hour 16

Monthly Average: 1.24 ppb

Percentiles: $P_1 = 0.6$ $P_{10} = 0.8$ $Q_1 = 1.0$ Median = 1.1 $Q_3 = 1.4$ $P_{90} = 1.7$ $P_{99} = 3.1$

Hours in Service:	720
Hours of Data:	667
Hours of Missing Data:	53
Hours of Calibration:	36
Percent Operational Time:	97.6

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-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.2	1.5
2-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	4	4	1	1	1	1.3	4.3
3-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.4
4-Nov	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1.1	1.6
5-Nov	2	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.7
6-Nov	1	1	1	0	1	1	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.8
7-Nov	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4
8-Nov	1	1	1	1	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.7
9-Nov	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
10-Nov	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	1.5
11-Nov	2	2	2	2	2	A	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	2.4
12-Nov	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	2	2	1.4	2.1
13-Nov	2	1	2	A	2	1	3	5	5	3	3	2	1	2	1	1	1	1	2	2	2	2	2	2	2.0	5.1
14-Nov	2	2	A	2	2	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	2	2	--	2.3
15-Nov	2	A	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	1	2	2	1	1	1	1.4	2.0
16-Nov	A	1	1	1	2	1	1	1	1	2	2	1	1	1	2	1	1	1	1	2	2	2	2	A	1.5	2.2
17-Nov	2	1	1	2	1	2	1	1	1	1	2	1	2	1	1	2	2	3	3	2	1	1	A	2	1.7	3.4
18-Nov	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.2	1.7
19-Nov	1	1	1	1	1	1	1	1	1	1	2	2	1	1	2	1	1	1	2	1	A	1	1	1	1.2	1.7
20-Nov	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.3	1.8
21-Nov	1	1	1	1	1	1	1	1	2	2	C	C	C	C	C	1	1	1	A	1	1	1	1	1	1.2	2.0
22-Nov	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1.0	1.7
23-Nov	1	1	1	1	1	1	2	2	2	2	2	2	1	2	1	2	A	1	1	1	1	1	1	1	1.3	1.6
24-Nov	1	1	2	1	1	1	1	1	1	1	1	2	1	1	1	A	3	2	3	3	2	1	2	2	1.7	3.0
25-Nov	2	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	1.5
26-Nov	1	1	2	1	2	2	2	2	2	2	1	2	2	A	2	1	2	3	4	2	1	1	1	1	1.7	4.3
27-Nov	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
28-Nov	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3
29-Nov	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	1	1	2	1	1.1	1.6
30-Nov	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	2	2	2	1	2	2	2	1.3	2.1
	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.1	1.2	1.4	1.5	1.4	1.4	1.2	1.2	1.2	Diurnal Average	
	2.4	2.3	2.3	2.3	2.1	1.9	2.8	4.6	5.1	3.1	2.6	1.6	1.7	1.6	1.8	1.6	3.0	3.4	4.3	3.8	4.3	2.2	2.3	2.0	Diurnal Maximum	

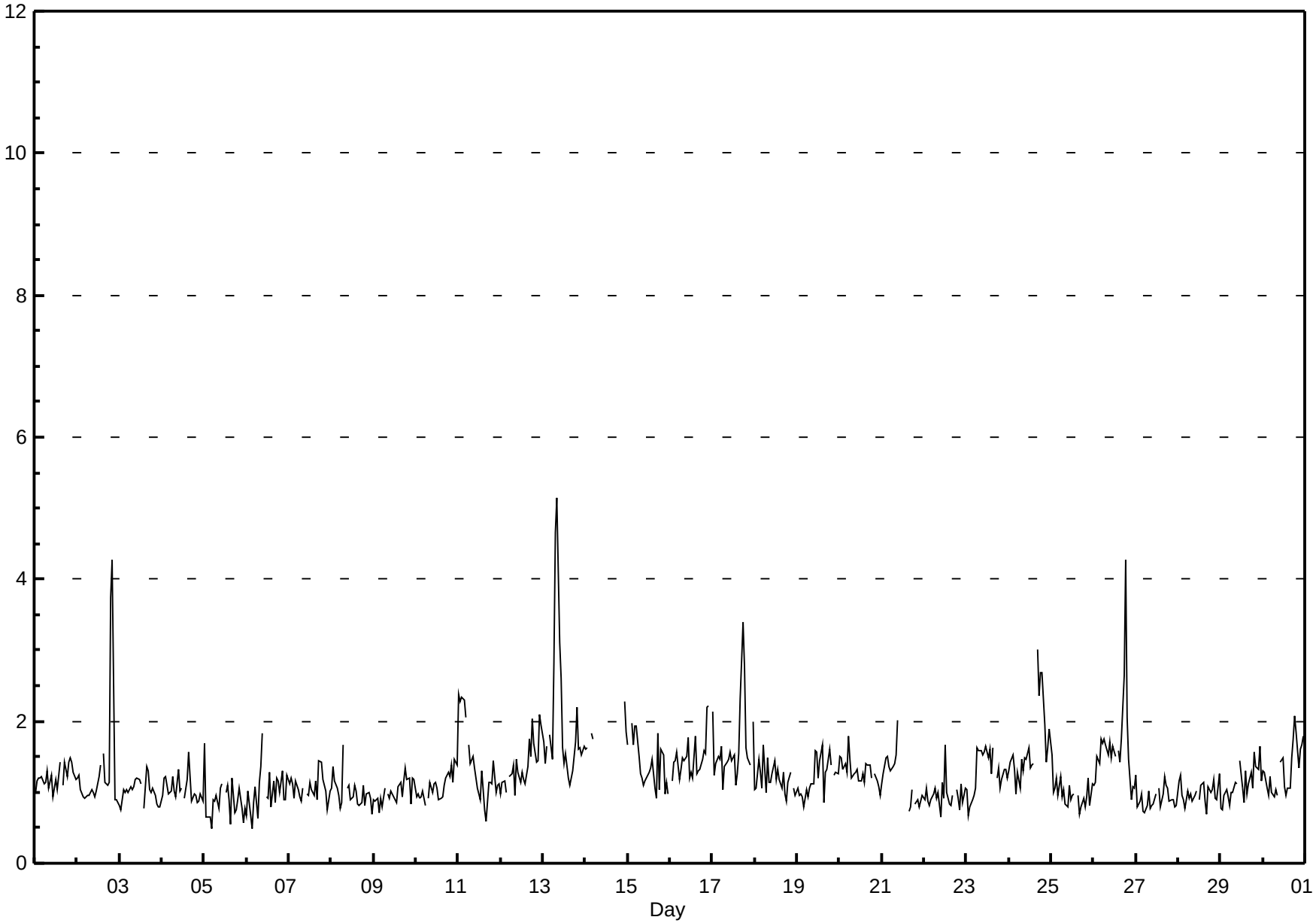
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

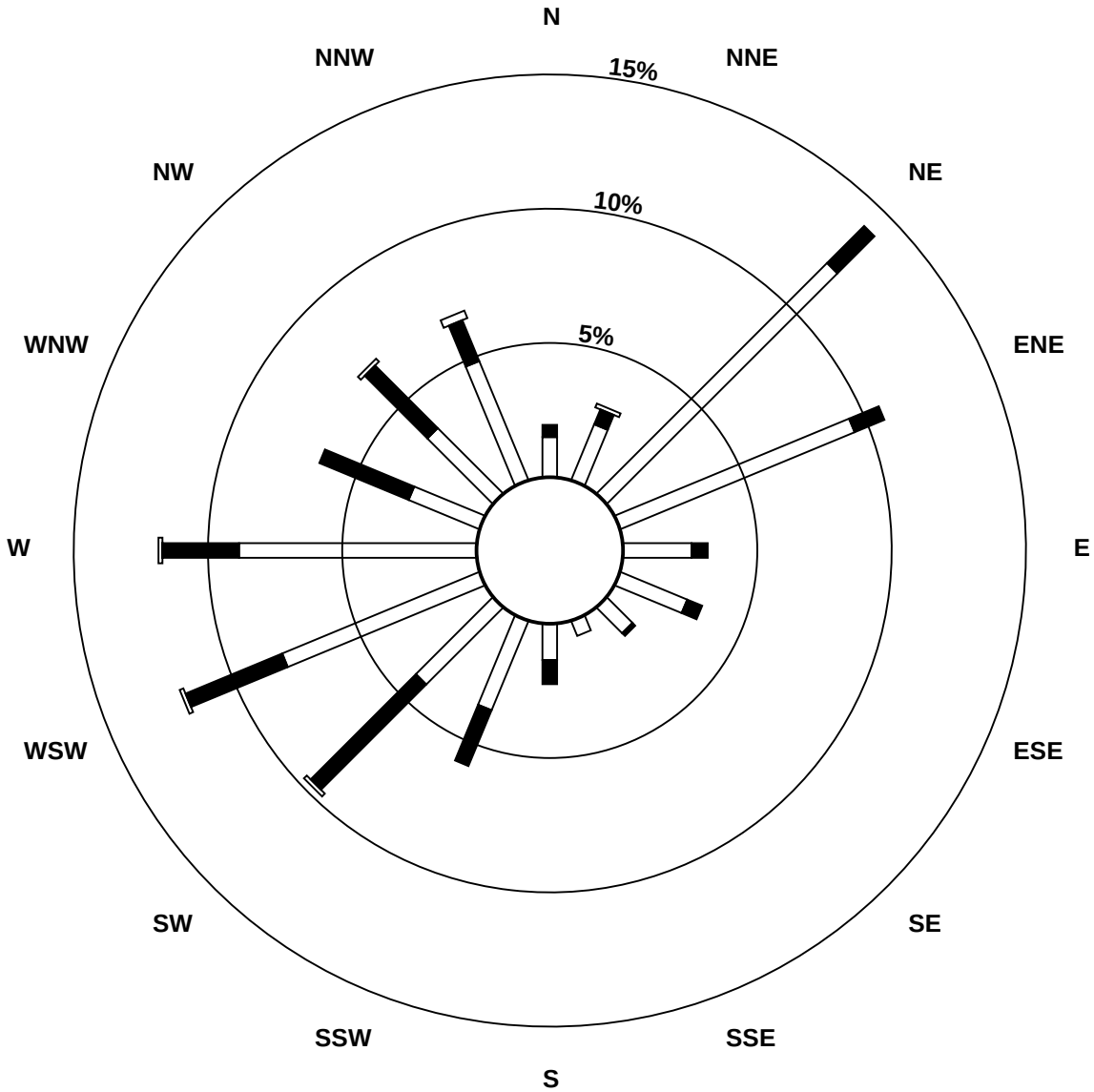
Evergreen Park - November 2014



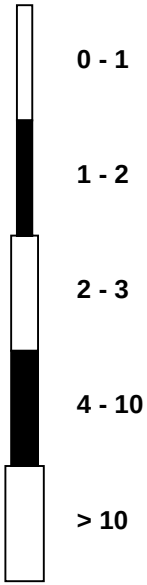
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - November 2014



Pollutant Classes (ppb)

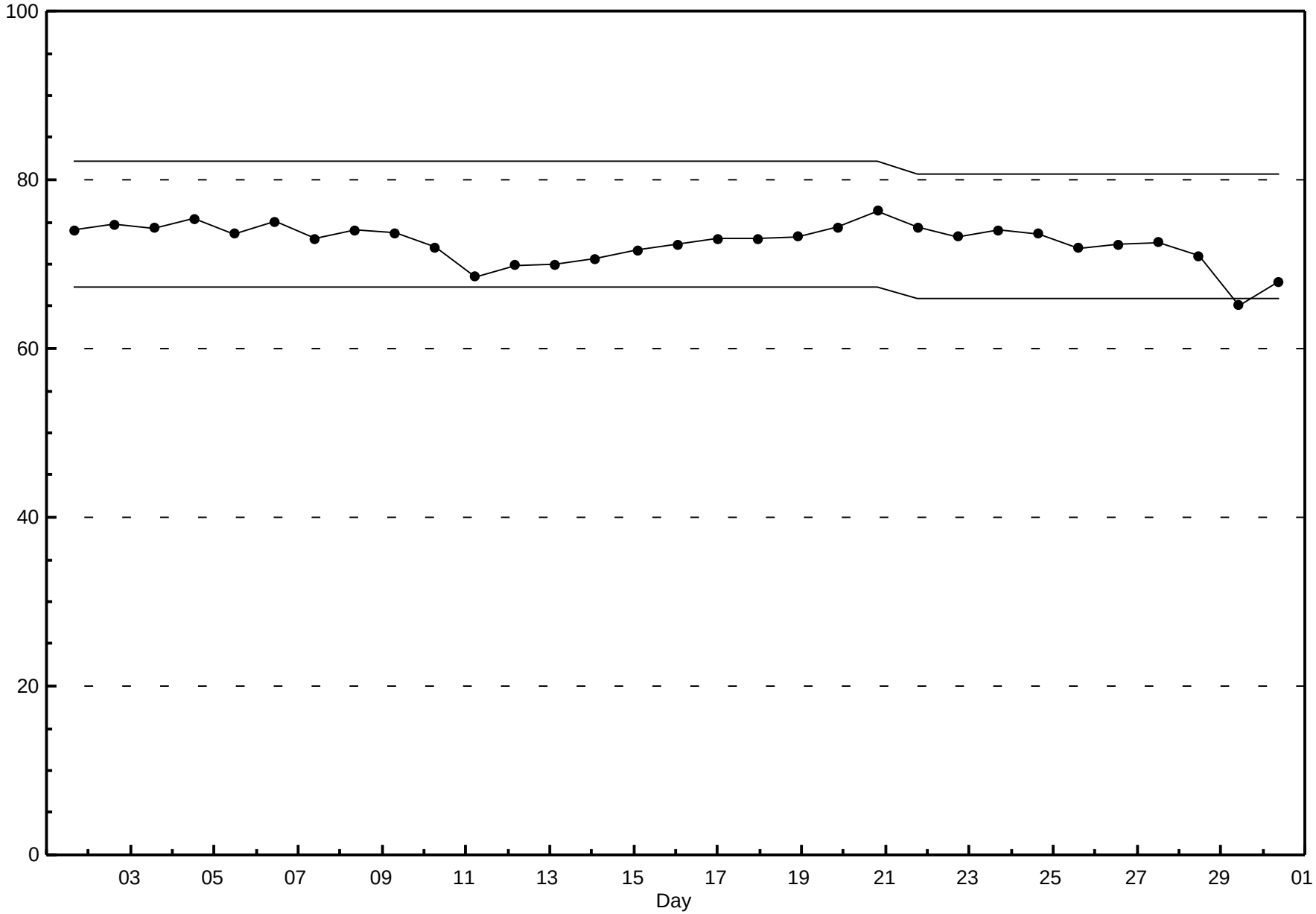


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Evergreen Park - November 2014



Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - November 2014

Number of Exceedences: 1-hr: 0 24-hr: 0

Maximum Value: 31.8 $\mu g/m^3$ on Nov 4 15:00

Maximum Daily Average: 15.8 $\mu g/m^3$ on Nov 20

Minimum Value: 0 $\mu g/m^3$ on Nov 1 02:00

Maximum Diurnal Average: 8.5 $\mu g/m^3$ at hour 11

Monthly Average: 5.86 $\mu g/m^3$

Minimum Daily Average: 1.5 $\mu g/m^3$ on Nov 27

Minimum Diurnal Average: 4.1 $\mu g/m^3$ at hour 5

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 1.9$ Median = 4.5 $Q_3 = 8.4$ $P_{90} = 14.0$ $P_{99} = 22.9$

Hours in Service:	720
Hours of Data:	702
Hours of Missing Data:	18
Hours of Calibration:	0
Percent Operational Time:	97.5

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-Nov	0	0	0	0	0	0	0	0	0	3	4	1	3	4	2	4	9	7	10	12	10	8	7	7	3.8	12.3
2-Nov	6	5	5	4	3	5	3	3	4	6	7	0	1	1	2	4	3	5	6	8	6	1	0	1	3.6	8.2
3-Nov	0	0	1	1	0	1	2	4	7	7	9	14	8	4	3	1	0	0	0	0	0	0	0	0	2.6	13.6
4-Nov	0	0	0	0	3	4	9	6	5	5	8	6	2	18	32	24	0	0	0	0	0	0	1	1	5.1	31.8
5-Nov	3	3	3	3	4	4	4	5	5	6	9	4	7	4	1	0	0	0	0	0	0	0	0	0	2.7	9.5
6-Nov	0	0	0	0	0	2	4	7	7	6	12	10	4	6	7	7	7	4	3	3	3	5	4	6	4.5	11.8
7-Nov	5	3	4	3	1	2	2	2	2	2	2	2	1	1	2	3	2	1	2	1	0	0	0	0	1.8	4.6
8-Nov	0	2	1	4	4	1	0	0	0	1	1	1	0	1	1	1	1	2	6	4	3	4	4	3	1.9	6.0
9-Nov	1	2	1	2	2	2	2	3	5	4	4	3	3	4	3	4	5	5	5	5	6	7	7	5	3.7	7.4
10-Nov	11	5	4	4	5	4	4	4	4	6	4	3	3	4	3	2	3	1	2	3	3	3	4	6	3.9	10.7
11-Nov	5	7	8	5	3	4	4	4	6	7	6	2	0	3	3	5	4	4	6	7	7	7	9	9	5.3	9.4
12-Nov	9	8	8	8	8	11	15	15	12	11	16	20	20	20	15	11	14	17	19	18	15	12	10	9	13.3	20.4
13-Nov	9	8	9	10	9	11	14	13	15	18	29	28	15	15	12	12	12	12	13	14	13	16	15	19	14.3	29.0
14-Nov	19	21	19	17	14	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	6	6	--	21.2
15-Nov	3	6	5	5	5	5	4	3	4	5	7	6	9	21	12	9	1	2	2	2	2	6	6	5	5.7	21.2
16-Nov	5	3	5	4	3	3	3	4	7	10	16	6	3	3	9	7	7	8	9	10	10	10	7	7	6.6	15.6
17-Nov	6	6	6	6	6	7	6	7	8	15	16	12	11	10	9	12	16	10	12	7	5	7	8	5	8.9	16.1
18-Nov	6	7	8	6	2	3	3	3	3	6	9	6	3	2	4	0	0	0	0	0	0	0	0	0	2.9	8.7
19-Nov	0	1	2	1	0	4	6	4	3	8	14	14	15	10	14	16	19	15	15	16	16	15	15	14	9.8	19.4
20-Nov	13	13	13	15	13	13	14	15	18	19	16	15	18	21	23	26	29	25	22	20	14	5	0	0	15.8	28.5
21-Nov	0	0	0	0	0	0	0	0	2	4	4	0	M	11	8	15	15	13	14	10	10	3	1	1	4.8	15.3
22-Nov	3	3	7	7	2	6	4	2	3	4	2	1	3	3	4	4	5	5	7	6	6	5	5	5	4.3	7.0
23-Nov	3	5	5	4	6	5	5	6	6	7	8	10	9	9	11	10	11	11	12	11	9	10	10	10	8.1	12.4
24-Nov	10	10	8	6	4	4	3	4	4	10	10	11	10	8	6	5	6	7	10	7	6	6	7	9	7.2	10.9
25-Nov	6	6	7	8	9	9	9	8	8	5	5	6	7	9	6	5	5	4	5	6	5	5	5	4	6.4	9.3
26-Nov	4	6	7	9	9	9	12	9	9	10	15	20	14	10	11	16	17	14	15	14	14	8	1	1	10.6	19.6
27-Nov	4	3	3	5	4	2	5	4	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1.5	5.3
28-Nov	0	0	0	0	1	2	2	2	2	4	2	3	4	5	3	2	5	2	2	2	3	2	3	2	2.3	4.8
29-Nov	0	1	0	2	1	0	1	3	4	5	9	5	2	1	2	1	2	6	4	5	4	4	5	5	3.0	8.6
30-Nov	5	3	3	1	0	0	0	0	0	0	2	3	1	0	0	0	3	11	9	8	7	6	6	6	3.1	10.8
	4.5	4.5	4.8	4.6	4.1	4.3	4.8	4.9	5.3	6.8	8.5	7.3	6.3	7.1	7.2	7.1	6.9	6.7	7.2	6.9	6.1	5.4	4.9	4.8	Diurnal Average	
	18.7	21.2	19.2	17.0	13.8	12.5	14.8	15.2	17.6	19.4	29.0	28.0	19.5	21.2	31.8	25.6	28.5	25.4	21.9	20.2	15.5	15.6	15.5	18.7	Diurnal Maximum	

P - Power Failure M - Maintenance

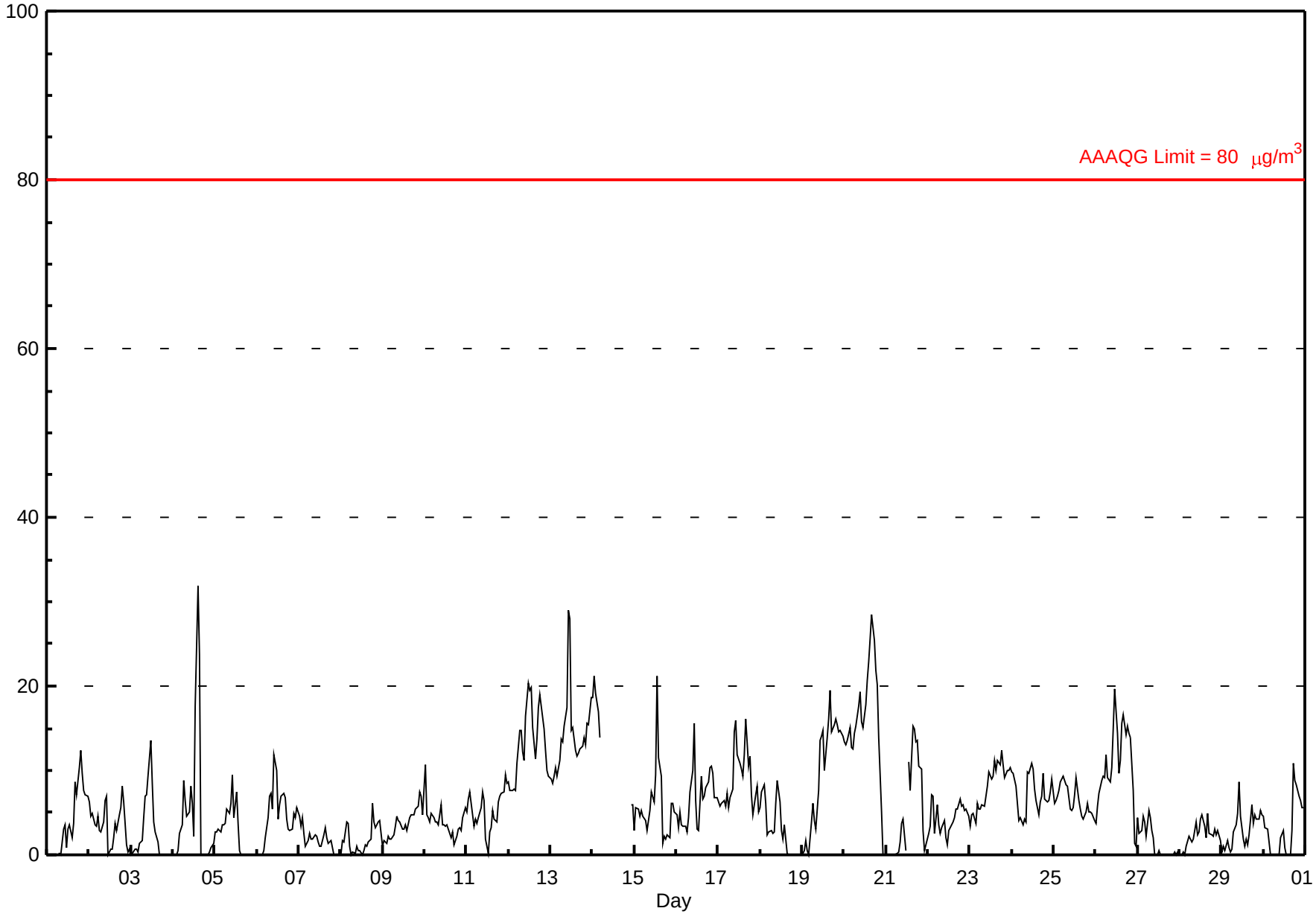
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - November 2014



Peace Airshed Zone Association

Hourly Maximums

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

Evergreen Park - November 2014

Maximum Value: 171.7 $\mu g/m^3$ on Nov 21 14:00

Maximum Daily Average: 20.0 $\mu g/m^3$ on Nov 21

Minimum Value: 0 $\mu g/m^3$ on Nov 4 01:00

Minimum Daily Average: 3.3 $\mu g/m^3$ on Nov 7

Maximum Diurnal Average: 17.9 $\mu g/m^3$ at hour 14

Minimum Diurnal Average: 6.5 $\mu g/m^3$ at hour 5

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

Percentiles: P_1 = 0.0 P_{10} = 2.1 Q_1 = 4.6 Median = 7.3 Q_3 = 12.5 P_{90} = 19.5 P_{99} = 38.2

Hours in Service:	720
Hours of Data:	702
Hours of Missing Data:	18
Hours of Calibration:	0
Percent Operational Time:	97.5

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-Nov	2	1	1	2	0	1	1	2	2	5	7	3	4	6	5	11	13	11	14	16	12	10	8	9	6.1	15.8
2-Nov	8	6	7	6	5	7	6	5	6	11	13	3	4	2	6	7	6	7	10	12	10	3	1	4	6.4	13.1
3-Nov	1	2	3	2	1	3	4	7	10	13	20	26	21	18	7	4	1	1	1	1	1	1	1	1	6.2	26.3
4-Nov	0	1	1	2	5	6	14	12	8	8	14	8	5	32	53	40	24	0	1	0	1	2	3	5	10.1	53.3
5-Nov	4	4	4	5	5	6	5	7	7	11	14	7	16	5	4	1	1	1	1	0	1	2	0	1	4.7	15.5
6-Nov	3	2	2	1	2	5	8	11	10	10	29	27	7	10	9	9	11	6	6	5	5	7	5	7	8.2	29.4
7-Nov	6	5	6	4	3	3	5	3	4	5	3	4	2	4	5	5	4	3	4	4	0	0	0	1	3.3	6.3
8-Nov	3	4	3	6	6	4	2	3	1	3	2	2	3	3	3	2	3	3	9	7	5	6	6	5	3.9	9.4
9-Nov	3	4	3	4	3	4	4	6	6	6	5	5	4	6	4	6	7	7	7	7	7	9	9	8	5.6	8.7
10-Nov	15	10	6	6	6	6	6	6	5	9	6	6	5	6	5	4	4	3	4	8	8	6	6	8	6.4	14.8
11-Nov	8	11	12	7	6	7	6	7	10	11	12	4	2	5	5	7	7	6	10	9	10	10	11	10	8.0	12.4
12-Nov	11	10	10	10	10	14	17	17	14	14	21	24	28	38	21	13	16	20	22	21	18	15	13	12	17.0	38.2
13-Nov	12	11	12	12	12	14	17	16	18	23	33	34	20	17	15	13	14	15	15	16	16	18	18	23	17.2	33.6
14-Nov	24	25	22	19	17	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	9	10	--	24.5
15-Nov	5	7	9	7	7	7	7	6	7	11	12	12	16	39	21	24	2	6	5	7	4	11	8	7	10.3	39.0
16-Nov	6	5	10	5	5	4	5	7	9	13	19	15	5	5	13	10	14	15	12	11	12	13	9	9	9.6	18.6
17-Nov	8	9	8	8	7	10	7	9	11	24	20	16	16	13	13	16	28	13	16	13	8	10	10	7	12.7	28.5
18-Nov	8	10	10	10	4	4	5	4	5	12	15	13	4	4	7	3	1	2	1	1	1	0	0	1	5.1	14.8
19-Nov	2	2	4	2	0	7	8	8	4	12	18	18	23	13	15	20	22	16	17	17	17	17	17	16	12.3	23.3
20-Nov	15	15	16	17	14	13	16	20	20	22	24	18	21	23	27	29	32	28	25	23	18	8	3	0	18.6	32.1
21-Nov	0	0	0	1	0	0	3	3	5	10	7	3	M	172	51	38	31	29	25	19	15	10	9	26	20.0	171.7
22-Nov	9	10	11	11	7	9	26	4	5	7	7	4	24	16	5	6	7	7	20	7	8	7	7	7	9.7	25.5
23-Nov	5	6	12	10	21	11	11	12	11	12	12	14	12	11	13	12	14	16	29	23	18	12	12	24	13.8	29.0
24-Nov	12	11	14	8	6	7	5	6	5	28	16	16	26	9	9	7	9	9	33	9	8	9	10	10	11.7	32.6
25-Nov	9	7	9	9	10	11	11	22	21	9	7	7	12	27	26	7	6	6	6	19	7	7	7	5	11.2	26.7
26-Nov	5	15	13	14	15	17	16	12	16	14	20	25	18	14	16	18	21	26	17	17	16	11	8	5	15.2	25.5
27-Nov	7	5	5	8	6	5	9	10	8	5	4	4	5	3	5	4	5	4	1	3	5	4	3	4	5.0	9.6
28-Nov	5	4	5	3	6	6	6	5	6	7	6	7	8	8	10	6	11	7	6	6	6	5	7	6	6.3	11.4
29-Nov	6	4	6	6	4	5	4	6	7	10	12	9	5	5	6	5	8	25	12	8	8	8	9	8	7.7	24.5
30-Nov	8	7	7	4	4	2	3	3	4	3	6	7	6	4	0	4	9	15	15	12	11	9	9	8	6.7	14.6
	6.9	7.1	7.7	7.0	6.5	6.8	8.1	8.1	8.5	11.3	13.3	11.8	11.5	17.9	13.1	11.4	11.4	10.5	11.8	10.3	8.9	7.9	7.3	8.1	Diurnal Average	
	23.8	24.5	21.6	19.4	20.9	16.7	25.5	21.9	21.4	27.8	32.6	33.6	27.5	171.7	53.3	40.1	32.1	28.7	32.6	23.1	18.5	18.0	18.2	25.5	Diurnal Maximum	

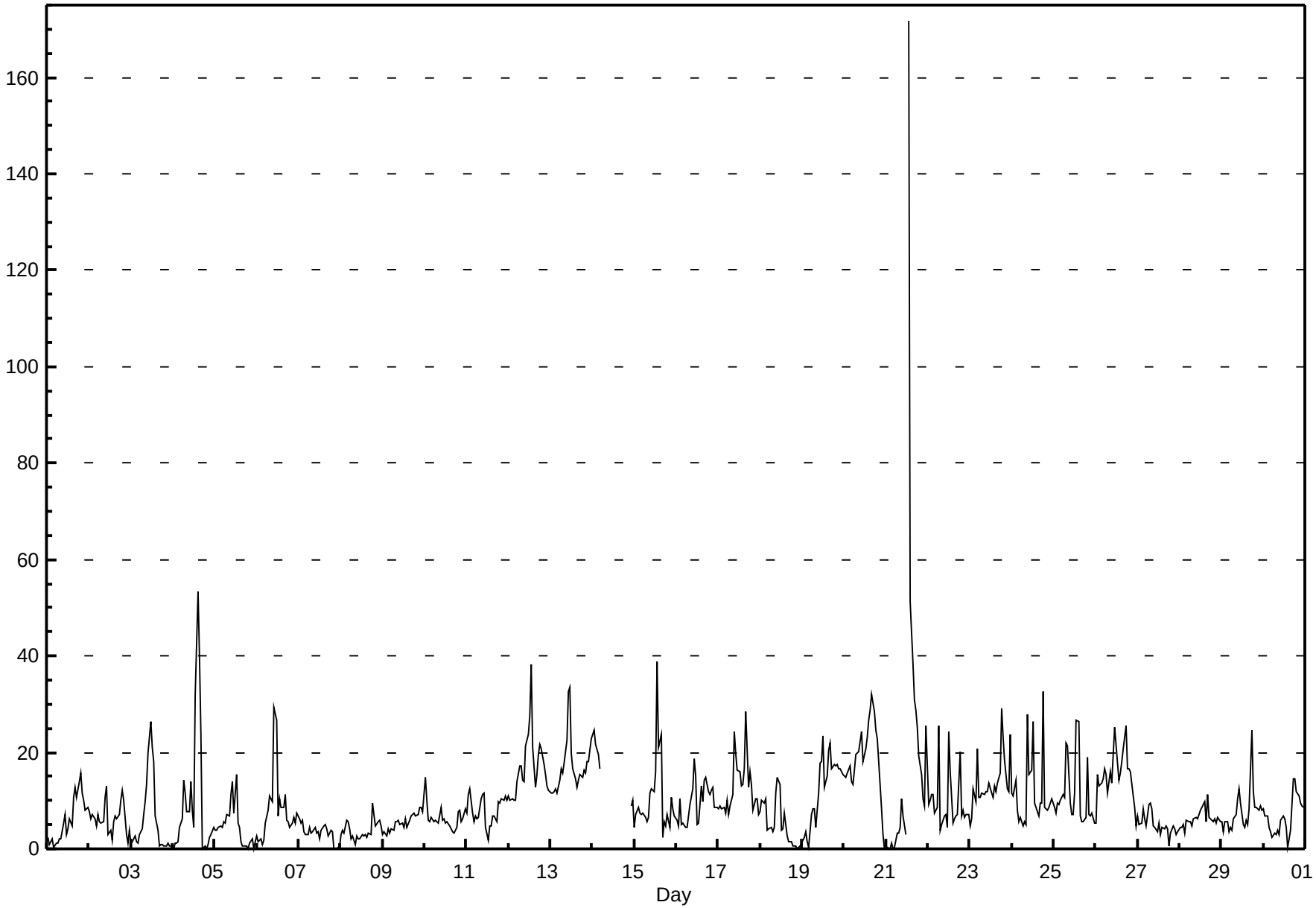
P - Power Failure M - Maintenance

Peace Airshed Zone Association

Hourly Maximums

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

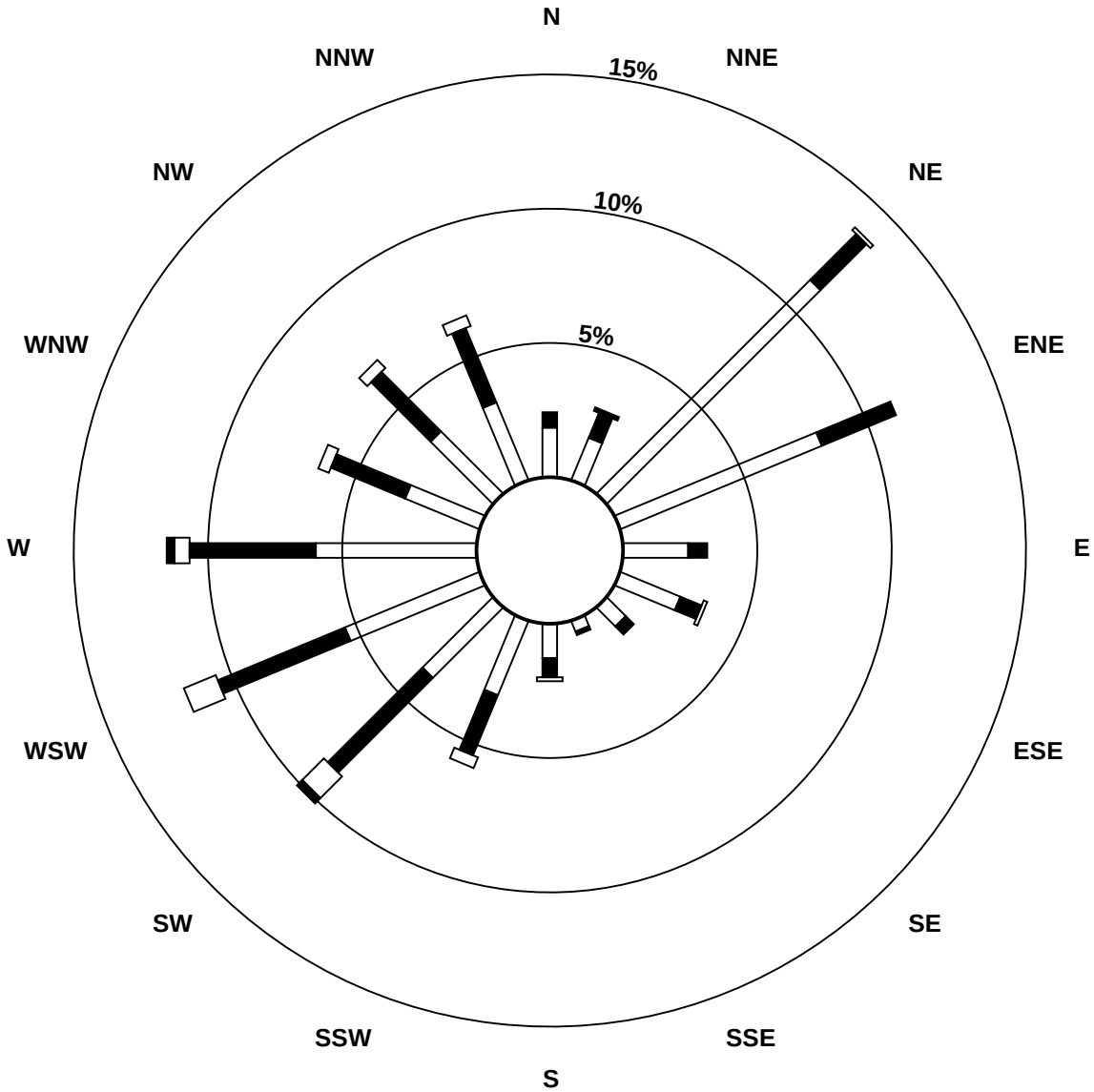
Evergreen Park - November 2014



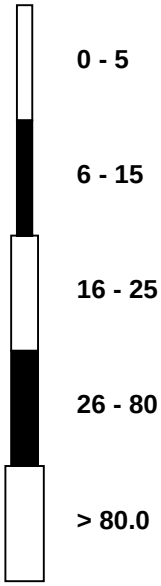
Pollutant Rose

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

Evergreen Park - November 2014



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



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - November 2014

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

Maximum Value: 10.5 ^{o}C on Nov 1 17:00

Maximum Daily Average: 4.5 ^{o}C on Nov 6

Minimum Value: -35 ^{o}C on Nov 29 09:00

Maximum Diurnal Average: -5.8 ^{o}C at hour 16

Monthly Average: -9.00 ^{o}C

Minimum Daily Average: -27.8 ^{o}C on Nov 29

Minimum Diurnal Average: -11.9 ^{o}C at hour 9

Percentiles: P_1 = -31.4 P_{10} = -24.0 Q_1 = -17.3 Median = -7.8 Q_3 = -0.5 P_{90} = 3.7 P_{99} = 8.6

Hours in Service:	720
Hours of Data:	703
Hours of Missing Data:	17
Hours of Calibration:	0
Percent Operational Time:	97.6

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-Nov	4	3	2	1	0	0	-1	-2	-2	0	3	4	6	8	9	10	10	6	2	1	0	-1	-1	-2	2.4	10.5
2-Nov	-2	-3	-3	-3	-4	-4	-3	-3	-3	0	1	4	6	8	9	7	7	6	4	4	5	5	4	3	1.8	8.7
3-Nov	4	3	3	2	2	1	1	0	0	1	3	4	5	6	6	5	5	4	3	3	3	3	3	3	3.0	5.8
4-Nov	3	3	2	1	0	0	0	1	1	1	2	3	6	9	9	9	8	7	6	5	5	4	4	3	3.9	9.4
5-Nov	3	2	2	2	2	2	2	1	0	1	3	4	5	6	6	6	6	5	5	5	5	5	5	5	3.7	6.4
6-Nov	5	5	5	5	6	7	6	3	2	3	4	5	4	5	5	4	5	5	5	5	5	4	3	2	4.5	7.0
7-Nov	0	0	0	-1	-2	-2	-2	-3	-3	-3	-3	-3	-3	-2	-2	-2	-2	-3	-3	-4	-4	-4	-4	-4	-2.5	0.3
8-Nov	-4	-4	-5	-5	-5	-6	-6	-6	-7	-7	-7	-7	-7	-7	-7	-7	-7	-8	-8	-8	-8	-9	-9	-9	-6.9	-4.3
9-Nov	-9	-9	-10	-9	-9	-10	-10	-10	-10	-9	-9	-8	-8	-7	-7	-7	-6	-6	-6	-7	-7	-7	-7	-8	-8.1	-6.2
10-Nov	-9	-10	-10	-11	-12	-12	-13	-14	-16	-15	-14	-13	-13	-13	-13	-12	-14	-16	-18	-20	-21	-23	-24	-24	-15.0	-8.8
11-Nov	-25	-26	-25	-25	-26	-26	-26	-26	-27	-25	-22	-19	-17	-15	-14	-14	-14	-16	-17	-18	-19	-20	-21	-22	-21.0	-13.9
12-Nov	-22	-23	-23	-23	-23	-24	-24	-23	-24	-23	-22	-21	-19	-16	-16	-17	-17	-19	-20	-21	-21	-22	-22	-24	-21.2	-15.8
13-Nov	-24	-25	-26	-26	-26	-26	-24	-25	-26	-25	-22	-20	-17	-17	-16	-15	-15	-18	-19	-21	-22	-23	-24	-25	-21.9	-14.6
14-Nov	-25	-25	-25	-26	-26	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-13	-13	--	-12.6
15-Nov	-15	-16	-17	-18	-19	-19	-19	-20	-20	-20	-18	-16	-14	-11	-9	-2	-1	-2	-3	-3	-3	-3	-4	-4	-11.4	-0.9
16-Nov	-5	-6	-8	-10	-10	-11	-12	-12	-13	-12	-9	-7	-5	-4	-4	-4	-5	-7	-9	-11	-12	-12	-13	-14	-8.8	-3.6
17-Nov	-14	-15	-16	-16	-17	-16	-17	-18	-18	-16	-12	-9	-6	-3	-2	-3	-3	-4	-3	-1	2	1	0	1	-8.7	1.6
18-Nov	1	0	-1	0	1	0	-1	-2	-2	-2	-1	0	0	0	0	-1	-2	-2	-3	-3	-3	-4	-5	-4	-1.4	0.9
19-Nov	-4	-4	-4	-5	-7	-9	-9	-8	-9	-8	-7	-6	-5	-4	-4	-3	-4	-5	-5	-7	-7	-8	-8	-7	-6.1	-3.1
20-Nov	-7	-7	-7	-6	-6	-6	-5	-4	-3	-2	-1	0	1	2	2	2	2	2	2	2	2	3	4	4	-1.1	4.4
21-Nov	4	4	4	3	2	2	1	2	3	2	2	3	2	1	0	0	-1	-1	-1	0	0	0	0	0	1.3	4.3
22-Nov	-1	-1	-1	-2	-3	-4	-5	-5	-6	-6	-7	-8	-8	-8	-8	-9	-9	-9	-9	-9	-9	-10	-11	-11	-6.7	-0.5
23-Nov	-13	-14	-14	-15	-15	-16	-16	-16	-16	-15	-14	-13	-11	-10	-9	-8	-8	-8	-8	-7	-7	-6	-5	-6	-11.3	-5.3
24-Nov	-6	-6	-7	-8	-10	-11	-13	-14	-14	-13	-12	-10	-8	-7	-6	-6	-5	-5	-5	-4	-4	-4	-4	-3	-7.8	-3.4
25-Nov	-5	-7	-8	-9	-9	-9	-9	-9	-10	-10	-10	-9	-9	-8	-8	-8	-8	-9	-10	-10	-10	-11	-13	-14	-9.2	-5.0
26-Nov	-15	-16	-17	-17	-18	-18	-18	-18	-19	-19	-18	-16	-14	-11	-12	-12	-13	-14	-14	-13	-12	-11	-12	-12	-14.9	-10.8
27-Nov	-13	-14	-14	-15	-15	-16	-17	-17	-17	-18	-18	-18	-18	-18	-18	-19	-19	-19	-19	-19	-19	-20	-20	-20	-17.4	-13.2
28-Nov	-20	-21	-21	-21	-21	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-23	-25	-26	-26	-27	-27	-27	-29	-23.1	-20.3
29-Nov	-29	-30	-31	-31	-32	-33	-34	-34	-35	-35	-32	-29	-26	-24	-22	-21	-21	-22	-22	-23	-25	-25	-25	-25	-27.8	-20.9
30-Nov	-25	-24	-24	-24	-24	-26	-28	-29	-31	-31	-28	-24	-24	-22	-21	-20	-22	-25	-26	-26	-25	-25	-25	-25	-25.2	-20.0
	-9.0	-9.6	-10.0	-10.4	-10.8	-10.7	-11.2	-11.6	-11.9	-11.3	-10.0	-8.7	-7.5	-6.4	-6.0	-5.8	-6.2	-7.2	-7.8	-8.2	-8.4	-8.7	-9.1	-9.4	Diurnal Average	
	5.2	4.8	5.2	5.3	5.6	7.0	5.7	3.0	2.5	3.5	4.2	4.5	6.2	8.9	9.4	9.9	10.5	7.1	6.0	5.1	5.2	5.1	5.3	5.5	Diurnal Maximum	

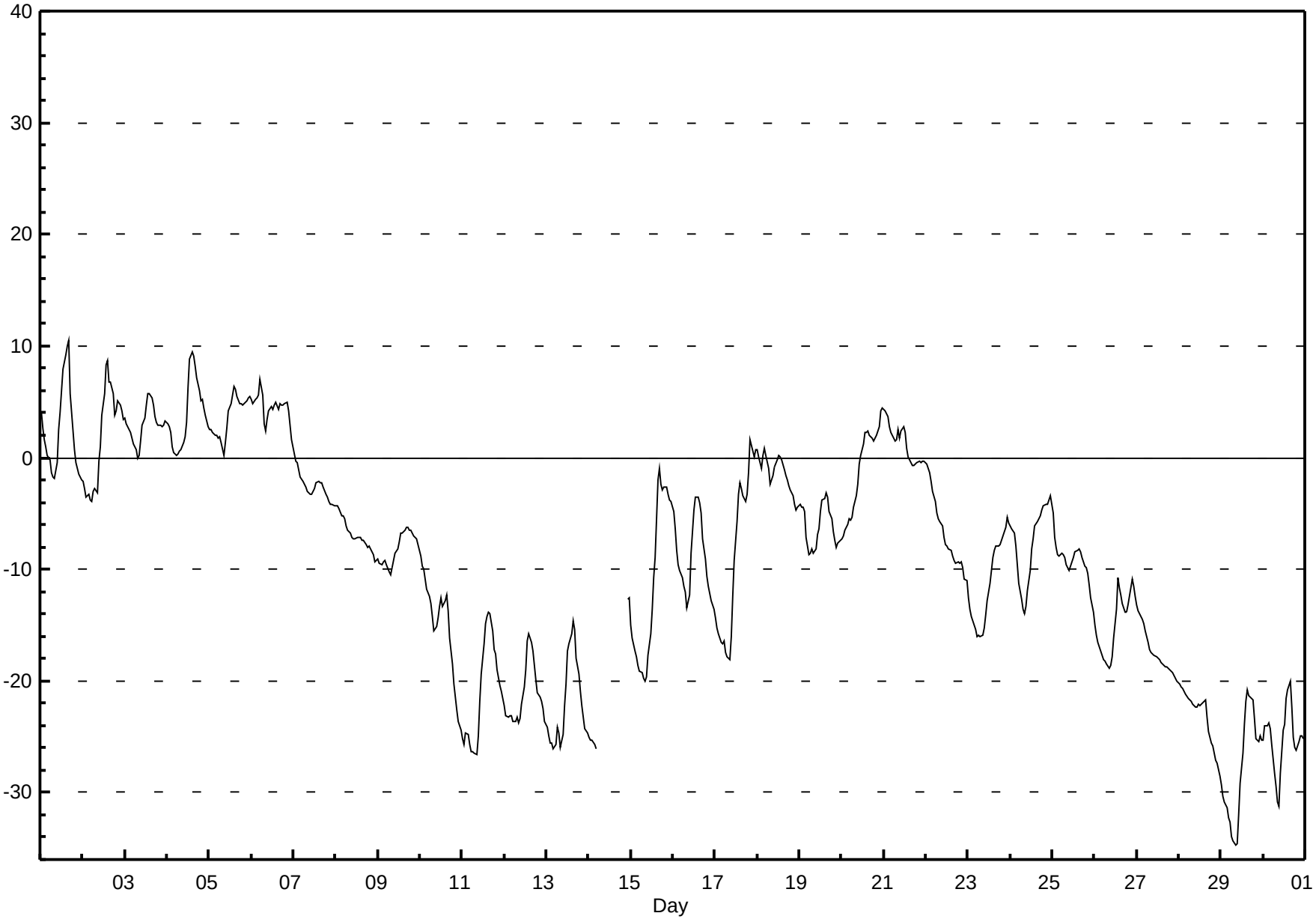
P - Power Failure

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - November 2014



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - November 2014

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

Maximum Value: 97.4 % on Nov 22 03:00 Maximum Daily Average: 92.4 % on Nov 21

Minimum Value: 43 % on Nov 5 16:00 Minimum Daily Average: 56.3 % on Nov 5

Maximum Diurnal Average: 81.5 % at hour 8 Minimum Diurnal Average: 70.2 % at hour 15

Monthly Average: 77.74 % Percentiles: P_1 = 46.5 P_{10} = 61.6 Q_1 = 72.7 Median = 78.8 Q_3 = 85.6 P_{90} = 90.5 P_{99} = 96.8

Hours in Service:	720
Hours of Data:	703
Hours of Missing Data:	17
Hours of Calibration:	0
Percent Operational Time:	97.6

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-Nov	83	88	90	91	92	93	93	94	94	93	87	73	64	56	50	48	50	71	85	88	90	91	92	92	81.2	93.9
2-Nov	93	93	93	92	92	92	91	91	91	87	79	68	60	51	51	64	64	70	79	74	69	74	76	78	77.9	92.7
3-Nov	74	74	74	73	74	74	75	79	75	70	64	61	56	51	52	52	55	59	61	62	61	62	60	58	64.8	78.7
4-Nov	58	59	63	72	76	78	82	82	84	84	83	80	66	51	44	43	46	51	56	58	56	61	65	69	65.3	84.2
5-Nov	70	68	66	66	65	65	64	64	70	66	61	55	54	49	45	43	46	47	46	47	47	48	48	50	56.3	69.7
6-Nov	53	57	59	60	60	57	63	75	78	74	73	71	71	70	71	82	83	84	81	79	74	75	77	80	71.1	83.7
7-Nov	79	79	79	78	77	76	77	77	77	78	76	74	73	73	76	79	78	79	87	91	92	92	92	92	80.4	92.2
8-Nov	92	92	92	91	91	91	91	90	90	90	89	88	87	85	84	84	84	85	86	86	87	88	88	88	88.3	92.1
9-Nov	89	89	89	90	90	89	89	89	89	89	87	85	83	82	80	81	83	86	87	85	84	86	86	86	86.3	90.2
10-Nov	84	83	83	80	81	80	80	80	81	80	78	74	68	71	68	65	70	78	80	79	78	77	77	76	77.2	84.4
11-Nov	76	76	76	76	76	75	76	75	75	75	76	74	72	70	69	69	71	76	79	80	80	79	79	78	75.3	80.2
12-Nov	78	77	77	77	77	78	77	77	77	77	77	78	79	81	80	79	79	79	78	78	78	78	77	76	77.9	81.0
13-Nov	76	75	75	75	74	75	76	76	75	75	74	75	75	75	73	70	72	77	78	78	77	77	76	75	75.2	78.1
14-Nov	76	75	75	75	74	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	86	86	--	86.1
15-Nov	84	83	81	81	80	79	79	79	78	78	79	77	72	69	69	57	55	60	59	57	57	63	65	66	71.1	84.0
16-Nov	68	74	81	85	86	86	86	86	85	85	80	72	61	56	59	62	66	77	82	85	86	87	86	85	77.6	86.6
17-Nov	85	84	83	82	82	82	81	80	80	81	80	70	61	58	55	59	63	63	64	65	58	59	59	58	70.5	84.6
18-Nov	55	58	64	66	66	67	70	76	74	73	71	68	67	67	71	75	78	80	82	83	84	86	87	88	73.1	87.6
19-Nov	87	87	88	89	91	90	90	90	90	90	90	90	88	77	74	71	74	79	82	85	87	88	89	88	85.6	90.5
20-Nov	88	88	87	86	86	85	85	83	82	82	80	81	83	84	86	86	88	89	90	91	92	93	85	82	86.0	93.0
21-Nov	83	82	84	88	90	91	92	92	91	91	92	92	91	94	95	95	96	96	96	97	97	97	97	97	92.4	97.1
22-Nov	97	97	97	97	96	95	94	93	92	91	89	84	81	81	78	73	79	81	76	75	76	77	82	84	86.2	97.4
23-Nov	86	85	85	84	84	83	83	83	82	82	82	82	84	82	81	80	80	83	83	82	80	80	81	85	82.5	85.6
24-Nov	86	87	87	88	88	88	87	86	85	84	84	85	86	85	84	85	86	89	90	90	91	92	92	92	87.4	92.0
25-Nov	92	90	89	87	87	87	87	87	87	87	86	85	85	83	83	84	85	87	87	86	86	87	86	86	86.6	91.7
26-Nov	85	84	83	83	82	81	81	81	81	81	81	82	84	86	85	85	84	84	84	84	85	87	86	85	83.5	87.3
27-Nov	84	84	82	82	81	81	80	80	79	79	78	77	78	77	76	76	77	77	78	78	78	78	77	77	79.0	84.3
28-Nov	76	76	75	74	72	72	73	73	72	73	71	69	70	69	68	66	69	71	72	74	75	75	76	75	72.4	76.2
29-Nov	74	74	73	73	72	72	71	71	70	70	71	72	71	65	61	61	64	67	68	72	75	76	76	76	70.6	75.9
30-Nov	76	75	75	75	75	76	75	74	73	72	71	70	70	66	66	65	70	74	75	75	75	74	75	74	72.9	76.1
	79.5	79.8	80.2	80.5	80.5	80.6	81.0	81.5	81.3	80.6	78.9	76.3	73.8	71.3	70.2	70.3	72.2	75.7	77.6	78.0	77.7	78.8	79.3	79.4	Diurnal Average	
	97.2	97.3	97.4	97.1	96.1	95.1	94.1	93.6	93.9	93.4	92.3	92.0	91.4	93.5	94.7	95.4	95.9	96.1	96.4	96.6	96.8	96.9	97.0	97.1	Diurnal Maximum	

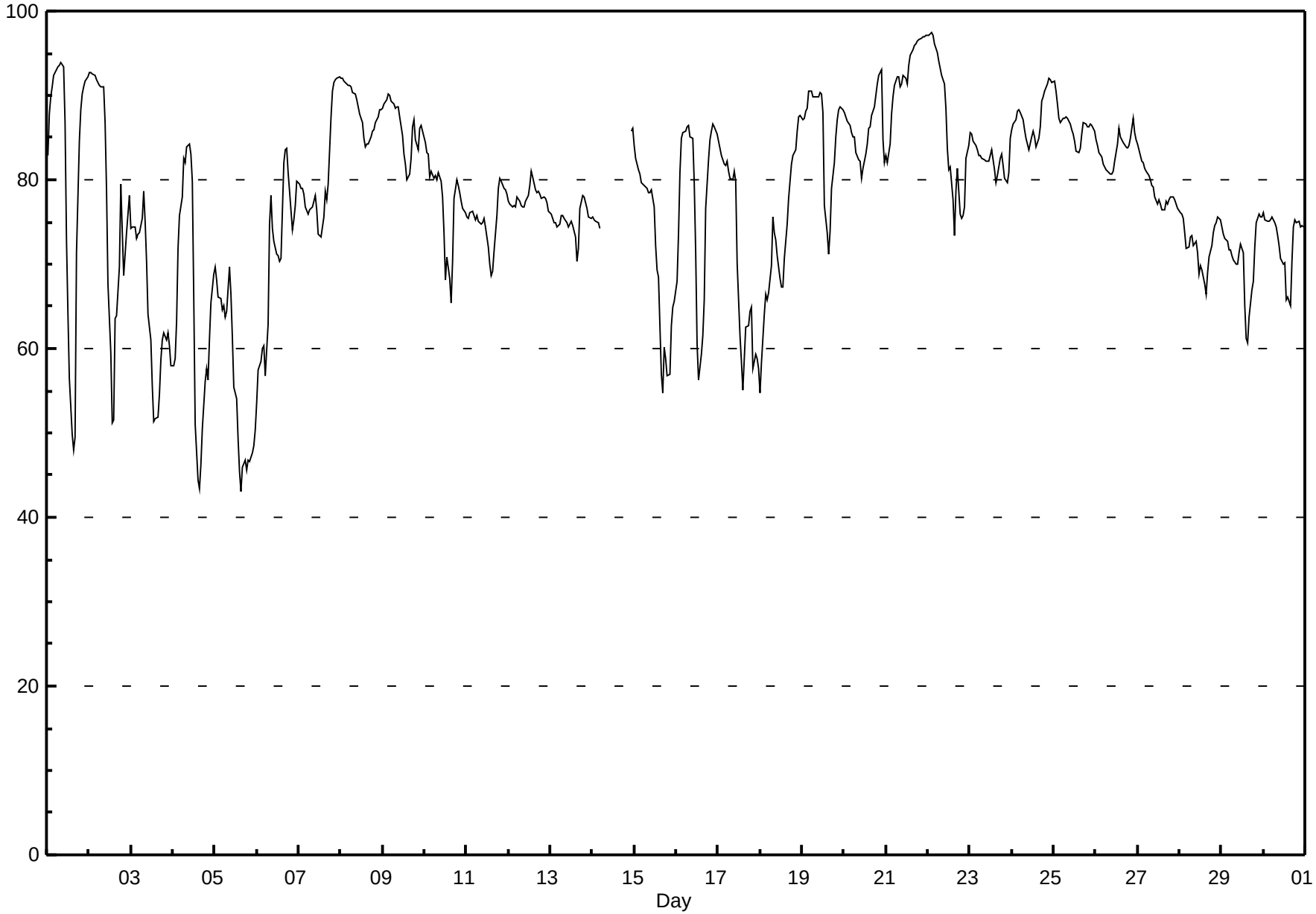
P - Power Failure

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - November 2014



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - November 2014

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	7	3	1	2	3	1	1	1	2	1	2	6	3	2	5	4	1	1	1	1	2	0	1	0	1.6	6.7
Dir	257	210	205	199	198	114	70	170	171	244	231	213	251	229	201	227	279	10	218	207	207	29	203	179	218.7	256.6
2 Spd	2	1	2	3	1	1	2	2	1	0	1	1	5	2	2	4	3	0	2	8	10	13	8	9	1.9	12.9
Dir	207	197	215	208	217	218	182	227	24	164	250	120	165	119	71	9	82	305	338	290	272	263	278	276	258.2	263.3
3 Spd	21	23	20	16	18	11	6	5	13	8	11	7	6	1	4	5	6	6	6	4	5	6	8	7	4.5	23.2
Dir	260	257	261	264	255	262	292	275	268	278	283	276	254	0	129	101	108	74	77	72	86	69	80	87	264.2	256.9
4 Spd	6	6	3	2	1	1	5	8	8	5	8	9	19	31	39	37	37	24	8	13	19	11	4	8	11.4	39.0
Dir	78	74	62	14	355	271	265	251	217	242	259	272	261	259	263	260	261	261	259	258	249	254	264	241	258.8	263.3
5 Spd	13	22	23	21	19	12	9	9	3	1	6	5	3	6	7	7	9	10	9	9	12	12	14	11	4.0	22.9
Dir	246	244	250	251	255	257	262	260	38	286	223	259	197	134	133	108	94	97	107	115	114	115	126	124	201.8	249.6
6 Spd	5	4	4	4	8	11	2	5	7	5	5	8	9	8	10	5	8	6	5	8	10	12	7	10	3.0	12.3
Dir	110	94	95	98	170	189	351	320	321	328	218	239	225	245	251	301	219	219	241	270	317	341	341	312	266.7	340.5
7 Spd	21	23	16	16	14	11	9	9	9	9	8	10	10	8	9	8	7	7	6	5	6	5	6	8	6.8	23.0
Dir	326	333	328	318	329	326	347	351	61	68	60	60	55	55	49	54	67	94	89	76	69	69	68	56	18.3	333.2
8 Spd	8	8	9	11	9	13	12	12	12	10	10	9	8	7	7	6	5	4	6	4	2	3	6	7	7.6	12.7
Dir	60	59	41	44	52	45	41	40	36	40	36	40	47	53	57	71	69	69	76	77	84	51	59	76	50.9	45.0
9 Spd	5	6	8	9	8	7	7	4	4	4	7	9	14	13	15	13	8	15	9	8	14	13	13	17	6.0	16.7
Dir	82	61	62	64	51	38	41	11	352	316	273	273	249	271	282	285	284	338	345	351	341	336	327	334	329.3	333.9
10 Spd	11	10	7	17	14	14	13	11	5	6	8	6	4	10	9	4	2	0	0	1	1	1	1	1	6.4	16.5
Dir	42	39	32	42	51	45	45	47	51	64	59	55	29	54	54	36	65	38	6	37	39	51	36	50	46.8	41.6
11 Spd	1	1	1	0	1	1	1	1	0	1	7	7	7	8	8	9	4	1	1	1	0	3	5	4	1.8	8.8
Dir	65	293	37	14	216	8	253	53	94	35	49	52	51	49	47	57	62	40	38	250	274	244	264	260	41.9	56.7
12 Spd	1	2	4	3	1	5	6	4	6	5	5	4	5	3	3	6	4	1	1	1	2	2	1	1	2.3	6.3
Dir	249	213	215	248	223	204	212	206	212	217	244	242	254	249	314	331	321	331	313	294	326	302	270	217	247.2	331.3
13 Spd	1	1	1	1	2	3	3	5	3	2	2	4	2	3	4	1	1	1	1	1	0	0	0	0	1.4	4.8
Dir	211	200	214	226	202	229	266	269	329	247	260	233	231	250	238	259	31	248	302	215	253	104	173	255	248.6	268.8
14 Spd	2	0	1	1	0	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	6	2	--	6.3
Dir	207	186	215	217	181	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	210	224	--	209.5
15 Spd	3	1	1	1	1	0	1	2	1	3	4	8	8	8	8	19	23	12	12	9	8	8	7	6	6.0	22.5
Dir	206	210	60	211	216	270	278	265	277	282	286	261	262	292	288	281	306	293	269	272	284	273	270	265	279.9	306.1
16 Spd	4	3	0	1	1	1	0	1	0	1	1	1	2	3	5	5	3	2	1	1	1	2	1	1	1.0	4.8
Dir	282	20	355	310	241	232	249	226	231	226	264	325	255	328	17	14	16	33	280	337	305	303	294	296	328.0	14.5
17 Spd	1	1	1	1	1	2	1	0	2	2	4	3	1	1	2	1	3	3	3	5	7	11	7	6	2.4	11.1
Dir	233	234	256	226	261	244	215	338	215	263	245	241	265	335	0	308	305	311	288	275	312	323	305	297	290.4	322.7
18 Spd	10	9	13	14	22	15	15	13	9	8	5	8	9	10	5	3	4	3	4	4	6	2	2	2	5.0	21.7
Dir	277	279	255	286	320	318	305	306	291	256	256	281	318	340	58	64	65	69	74	86	109	106	70	75	306.7	320.5
19 Spd	1	1	4	1	4	4	1	1	2	0	0	3	1	7	6	5	3	3	0	2	1	2	1	1	1.4	7.0
Dir	128	59	106	162	194	201	181	157	136	93	299	246	315	224	223	231	267	307	274	216	245	235	44	56	217.6	224.1
20 Spd	1	1	0	2	0	1	4	2	0	4	3	1	0	1	1	0	2	1	2	4	3	6	17	12	2.6	17.5
Dir	233	231	203	251	321	270	216	219	234	223	242	240	35	338	307	24	214	211	199	215	257	256	246	256	242.8	246.1
21 Spd	3	3	1	2	3	0	1	2	1	3	3	5	10	9	9	10	14	11	14	17	14	15	14	15	6.4	16.7
Dir	277	334	282	201	200	219	188	139	187	79	94	75	55	60	59	64	62	70	62	62	69	65	65	62	64.8	61.5
22 Spd	13	16	15	17	12	22	20	20	17	21	20	22	19	18	18	23	16	16	16	15	10	2	1	1	12.8	22.6
Dir	60	52	53	43	16	339	334	338	327	336	318	315	311	301	307	318	316	323	333	332	329	318	174	75	336.8	317.9

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - November 2014

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
23 Spd	1	1	2	1	1	1	1	1	0	1	4	3	3	4	3	4	2	4	6	7	7	6	1	2	1.9	7.4
Dir	51	51	42	359	233	333	269	252	252	241	234	294	283	314	227	244	252	223	231	252	242	270	55	74	257.3	241.8
24 Spd	3	2	2	2	1	0	1	1	0	1	2	3	2	4	2	3	1	1	1	0	4	7	7	4	0.7	7.3
Dir	93	100	115	122	75	226	42	37	196	198	47	49	40	38	46	63	83	74	223	223	237	291	298	15	27.1	298.0
25 Spd	7	7	7	7	2	2	2	4	5	6	2	4	4	5	5	4	2	4	5	2	1	0	0	0	3.1	7.2
Dir	66	55	46	65	58	64	105	114	108	118	112	126	124	126	118	123	91	62	61	71	25	203	217	45	88.2	46.4
26 Spd	0	0	1	2	1	1	1	2	3	3	2	3	1	1	2	1	2	2	1	1	5	13	19	20	2.3	20.3
Dir	282	243	341	329	309	321	301	343	311	342	324	236	246	358	1	335	285	305	332	71	68	69	59	53	36.9	52.7
27 Spd	24	20	18	18	21	18	21	20	18	15	19	22	17	19	21	20	18	17	15	17	17	18	21	17	18.8	24.0
Dir	55	51	53	47	49	40	39	40	40	44	52	51	45	48	45	44	40	43	43	44	47	43	46	44	45.8	55.1
28 Spd	17	17	16	14	11	11	9	9	12	15	17	17	19	17	12	10	9	7	6	5	8	6	6	8	7.9	19.1
Dir	41	46	39	35	30	28	23	14	352	340	345	348	341	343	321	284	287	297	275	268	247	239	254	257	348.5	340.7
29 Spd	7	6	6	3	2	4	4	3	0	2	3	8	11	17	12	7	7	5	3	3	2	4	5	4	4.9	16.5
Dir	242	220	238	233	197	206	218	228	222	226	239	257	270	269	274	287	249	269	282	233	226	255	302	278	255.4	269.2
30 Spd	7	12	7	11	7	1	0	2	2	0	1	2	3	2	3	1	2	3	2	3	2	0	1	2	2.7	11.6
Dir	253	265	267	256	245	274	206	184	206	198	260	275	269	251	229	296	291	322	319	327	301	263	250	178	262.6	264.8
Spd	1.4	1.8	1.5	2.0	1.8	2.2	2.5	2.5	2.0	1.9	2.1	2.4	2.7	2.9	2.5	2.8	2.2	2.0	1.4	1.4	1.5	1.9	1.5	1.7	Diurnal Average	
Dir	353.9	354.8	349.6	347.9	339.2	341.1	345.9	341.5	345.3	342.9	321.2	313.7	305.3	317.6	316.0	321.6	320.4	340.0	1.5	334.8	327.5	339.8	2.8	5.4		
Spd	24.0	23.2	22.9	20.7	21.7	21.9	20.9	20.1	18.1	20.7	20.4	21.8	19.4	30.9	39.0	36.6	37.3	24.1	16.4	16.9	18.6	18.2	21.4	20.3	Diurnal Maximum	
Dir	55.1	256.9	249.6	251.1	320.5	338.5	39.2	338.4	39.6	335.8	317.7	314.8	260.6	259.0	263.3	260.0	261.2	261.1	333.4	44.5	248.6	43.4	46.0	52.7		

Maximum Speed Value: 39 km/h on Nov 4 15:00
Maximum Daily Speed Average: 18.8 km/h on Nov 27
Maximum Diurnal Speed Average: 2.9 km/h at hour 14

Minimum Speed Value: 0 km/h on Nov 25 22:00
Minimum Daily Speed Average: 0.7 km/h on Nov 13
Minimum Diurnal Speed Average: 1.4 km/h at hour 20

Monthly Average Velocity: 1.93 km/h 335.56 deg

Speed Percentiles: $P_1 = 0.1$ $P_{10} = 0.7$ $Q_1 = 1.5$ Median = 4.4 $Q_3 = 8.9$ $P_{90} = 16.1$ $P_{99} = 22.7$

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

Hours in Service:	720
Hours of Data:	703
Hours of Missing Data:	17
Percent Operational Time:	97.6

P - Power Failure

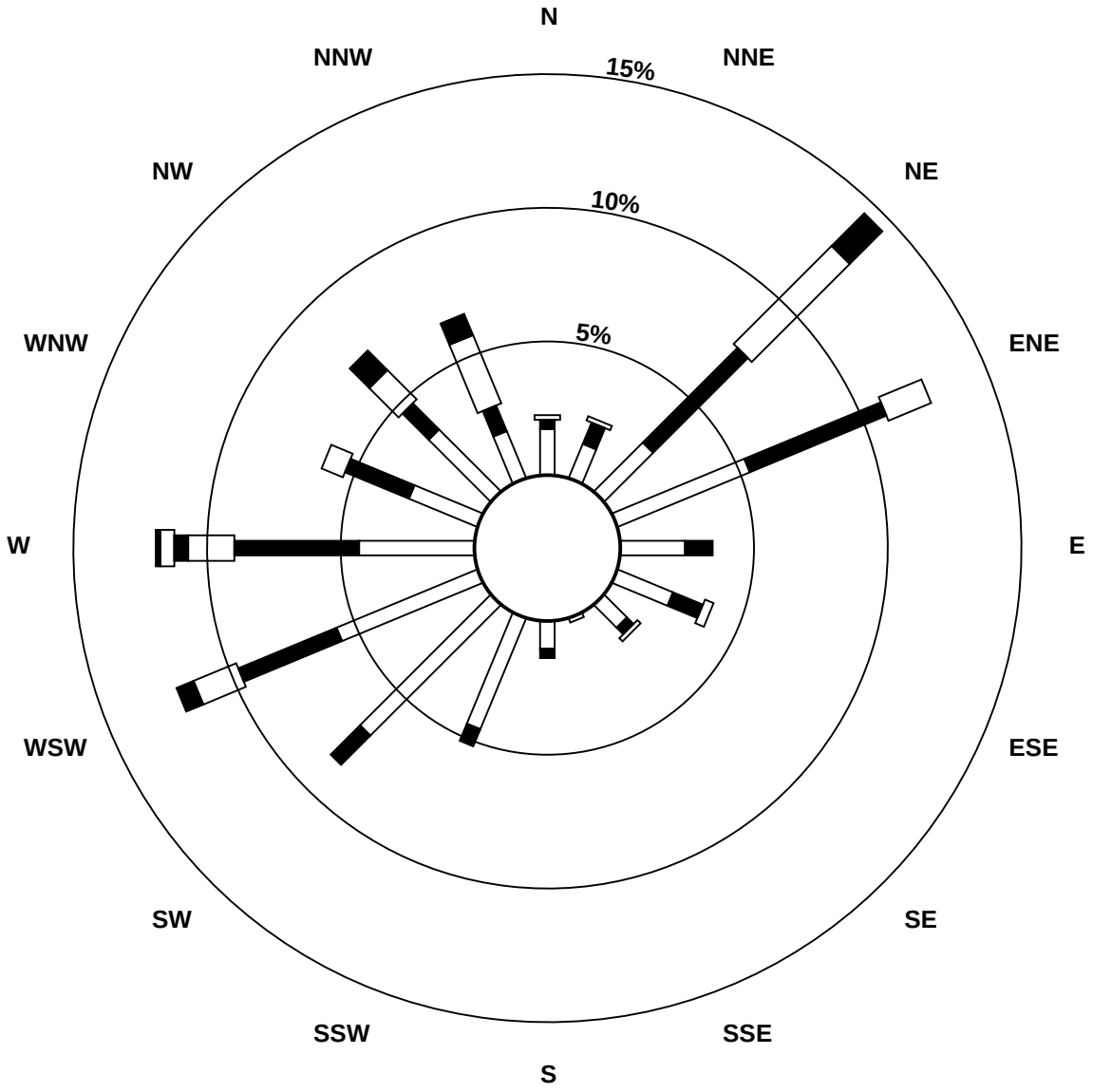
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	27	7	9	3	0	0	46
NorthEast	48	53	40	11	0	0	152
East	36	30	2	0	0	0	68
SouthEast	15	6	3	0	0	0	24
South	31	3	0	0	0	0	34
SouthWest	102	25	2	1	0	0	130
West	68	56	21	7	3	1	156
NorthWest	49	14	20	10	0	0	93
Total	376	194	97	32	3	1	703

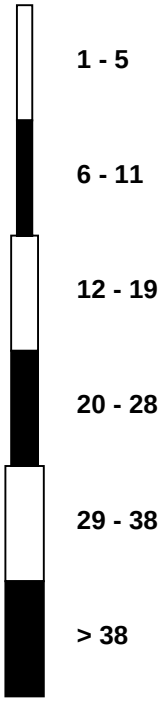
Wind Rose

Wind Speed (WS) (km/h)

Evergreen Park - November 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - November 2014

Maximum Speed: 39 km/h on Nov 4 15:00

Maximum Daily Speed Average: 19.2 km/h on Nov 27

Minimum Speed: 0 km/h on Nov 16 09:00

Minimum Daily Speed Average: 2.0 km/h on Nov 16

Maximum Diurnal Speed Average: 8.7 km/h at hour 15

Minimum Diurnal Speed Average: 5.5 km/h at hour 19

Monthly Average Speed: 6.83 km/h

Percentiles: $P_1 = 0.4$ $P_{10} = 1.1$ $Q_1 = 2.0$ Median = 4.9 $Q_3 = 9.4$ $P_{90} = 16.4$ $P_{99} = 22.9$

Hours in Service:	720
Hours of Data:	703
Hours of Missing Data:	17
Percent Operational Time:	97.6

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-Nov	7	3	2	2	3	4	2	1	2	2	2	6	4	3	6	4	1	1	1	1	2	0	1	1	2.6	7.0
2-Nov	3	1	3	3	1	1	3	3	3	1	2	3	6	3	3	5	3	2	2	9	10	14	8	10	4.3	13.8
3-Nov	21	23	20	17	18	11	7	5	14	8	11	8	7	3	5	5	6	6	7	5	5	6	8	7	9.7	23.3
4-Nov	6	7	4	2	2	2	6	9	9	7	9	9	20	31	39	37	38	24	8	13	19	11	4	9	13.5	39.3
5-Nov	14	22	23	21	19	12	10	10	5	3	7	5	4	7	8	8	9	11	9	10	13	13	14	11	11.0	23.0
6-Nov	6	4	4	4	11	13	4	5	8	6	5	8	9	8	10	5	9	6	5	8	10	13	8	11	7.6	12.6
7-Nov	22	23	16	16	14	12	9	11	9	9	9	11	11	9	9	8	8	8	7	6	7	6	6	8	10.6	23.4
8-Nov	8	8	9	11	9	13	13	13	12	11	11	9	9	8	8	7	5	4	6	4	3	3	6	8	8.2	13.1
9-Nov	6	6	8	9	8	7	7	5	4	5	7	10	15	14	16	14	9	15	9	8	14	13	13	18	10.1	17.7
10-Nov	11	10	8	17	15	14	14	11	6	6	8	7	6	10	9	5	2	1	1	1	1	1	1	1	6.9	16.8
11-Nov	2	1	1	1	2	1	2	1	1	3	7	7	7	8	9	9	5	2	1	2	1	4	5	4	3.6	9.2
12-Nov	2	2	4	3	2	5	6	4	6	5	5	4	5	3	4	6	4	1	1	1	2	2	1	1	3.4	6.4
13-Nov	2	1	1	2	2	3	4	6	3	2	3	5	2	3	4	2	1	2	1	1	1	0	0	1	2.1	5.8
14-Nov	2	1	1	1	0	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	6	2	--	6.4
15-Nov	3	1	2	1	1	2	2	2	2	4	6	8	8	10	10	20	23	14	13	10	8	8	7	6	7.1	23.1
16-Nov	5	3	1	1	1	1	0	1	0	1	1	1	3	4	5	5	3	2	1	1	2	2	1	1	2.0	5.2
17-Nov	1	1	1	1	2	3	1	1	2	2	4	3	2	1	2	2	3	3	4	7	8	11	7	7	3.4	11.3
18-Nov	10	10	13	15	22	15	16	13	9	9	5	8	9	11	6	3	4	3	4	5	6	2	2	2	8.5	22.2
19-Nov	2	1	4	2	4	5	1	1	2	2	1	3	3	8	6	5	3	3	1	2	2	4	1	1	2.7	7.6
20-Nov	2	1	1	2	1	2	4	2	1	4	3	2	1	2	2	2	2	2	3	4	4	6	18	13	3.4	17.6
21-Nov	4	3	1	2	3	1	3	5	2	4	3	6	10	9	10	11	14	11	14	17	15	15	15	16	8.2	17.0
22-Nov	13	16	15	17	13	22	21	20	17	21	21	23	20	19	19	23	17	16	17	16	10	3	1	1	16.0	23.3
23-Nov	1	1	2	1	1	2	1	2	1	1	4	5	8	5	5	5	3	4	7	7	8	6	2	2	3.6	7.6
24-Nov	3	2	2	3	1	1	1	1	1	1	2	3	3	5	2	5	2	1	1	2	5	8	8	4	2.8	7.9
25-Nov	7	7	8	7	2	2	2	4	5	6	3	5	5	5	5	5	3	4	6	2	1	0	0	0	3.9	7.6
26-Nov	1	1	1	2	2	1	2	2	4	3	2	3	2	2	2	3	2	2	2	1	5	14	20	21	4.1	20.8
27-Nov	24	21	19	18	21	19	21	20	18	16	19	22	18	19	22	20	18	17	16	17	18	19	22	17	19.2	24.3
28-Nov	17	17	16	14	12	12	9	9	12	16	18	17	20	18	13	11	9	7	6	5	8	6	6	9	12.0	19.6
29-Nov	7	6	6	3	2	4	4	3	1	2	4	9	11	17	12	7	7	6	4	3	2	4	6	4	5.7	16.7
30-Nov	7	12	7	11	7	2	0	2	3	1	1	3	4	2	3	1	3	3	3	3	3	1	1	2	3.5	11.7
	7.3	7.2	6.8	7.0	6.7	6.6	6.0	6.1	5.6	5.5	6.4	7.4	7.9	8.5	8.7	8.4	7.5	6.3	5.5	6.0	6.6	6.7	6.7	6.6	Diurnal Average	
	24.3	23.4	23.0	20.8	22.2	22.1	21.2	20.4	18.4	21.0	21.2	22.6	19.9	31.2	39.3	36.9	37.7	24.3	16.7	17.1	18.8	18.6	21.7	20.8	Diurnal Maximum	

P - Power Failure

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

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - November 2014

Maximum Value: 98.9 deg on Nov 16 09:00

Minimum Value: 4.3 deg on Nov 5 05:00

Percentiles: P_1 = 6.4 P_{10} = 11.4 Q_1 = 15.9 Median = 27.8 Q_3 = 53.0 P_{90} = 76.5 P_{99} = 91.7

Hours in Service:	720
Hours of Data:	703
Hours of Missing Data:	17
Hours of Calibration:	0
Percent Operational Time:	97.6

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-Nov	19	37	63	46	32	79	92	86	46	90	49	23	41	76	35	31	68	67	72	63	32	88	92	80	92.4
2-Nov	43	44	79	33	89	53	61	64	88	86	53	78	34	67	48	33	46	88	53	37	15	24	23	43	89.5
3-Nov	7	5	6	8	6	26	47	49	10	23	18	34	21	76	62	26	16	9	12	14	15	14	12	14	76.1
4-Nov	12	14	23	41	76	73	52	21	47	46	16	15	14	9	7	7	8	8	28	11	8	13	24	11	75.9
5-Nov	7	5	5	5	4	7	19	21	67	92	19	27	48	39	32	20	17	12	15	23	16	17	16	16	92.5
6-Nov	17	23	20	28	60	43	85	19	14	37	27	19	14	11	11	31	37	16	15	15	19	14	15	29	84.8
7-Nov	12	10	14	14	22	19	18	43	17	20	22	20	19	22	18	20	22	24	23	20	25	24	31	19	43.5
8-Nov	21	19	30	13	16	15	17	15	16	16	17	19	24	23	20	22	27	31	23	21	47	17	20	16	46.6
9-Nov	27	19	18	18	15	17	21	22	35	52	29	27	17	20	19	15	18	14	19	21	10	9	13	20	52.4
10-Nov	19	17	20	12	12	12	12	10	16	15	28	26	50	21	20	34	13	70	70	68	50	29	63	67	70.1
11-Nov	74	66	69	79	73	76	76	32	83	86	7	11	25	15	19	18	28	62	55	79	81	67	16	26	86.0
12-Nov	37	34	15	30	65	9	10	14	10	8	11	12	19	28	48	12	14	44	33	57	40	32	60	84	84.1
13-Nov	72	80	54	68	45	39	37	36	31	40	46	19	60	32	23	73	26	75	34	89	75	71	86	80	89.5
14-Nov	51	84	49	50	90	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	12	53	89.7
15-Nov	39	70	77	80	92	90	95	37	69	40	43	11	13	36	31	17	13	29	16	12	13	12	12	11	95.3
16-Nov	39	23	81	60	44	54	85	53	99	44	51	32	47	42	24	21	21	23	50	57	35	32	46	47	98.9
17-Nov	52	79	56	83	70	50	68	92	41	50	22	28	45	44	38	56	28	22	47	51	36	10	24	21	92.1
18-Nov	9	21	5	19	13	17	15	18	16	53	27	21	21	21	23	28	15	30	16	18	21	41	22	20	53.1
19-Nov	47	62	15	41	38	17	88	69	61	97	73	21	78	42	17	15	39	26	55	53	83	56	63	71	96.7
20-Nov	76	53	87	21	66	63	23	79	78	47	64	67	73	63	78	88	44	94	68	47	47	18	7	9	94.3
21-Nov	36	17	60	71	43	83	73	88	63	28	53	37	13	22	16	18	16	16	14	12	20	16	17	15	87.7
22-Nov	15	11	12	12	20	9	8	11	14	11	16	15	15	17	16	14	19	14	11	12	16	64	81	56	80.8
23-Nov	77	49	36	46	88	62	70	78	85	86	46	80	82	42	65	33	66	54	49	17	11	17	69	65	88.4
24-Nov	38	47	33	55	63	95	55	50	93	74	35	15	48	44	59	70	59	83	62	96	50	28	24	30	96.2
25-Nov	21	25	22	21	42	42	41	21	34	21	27	19	30	25	18	23	29	26	22	42	31	88	90	57	90.0
26-Nov	70	64	70	37	45	53	61	43	43	22	28	14	42	83	28	62	41	37	89	46	28	15	13	13	88.7
27-Nov	11	12	13	13	11	12	10	10	11	14	13	12	11	13	10	9	11	9	12	10	11	14	10	11	13.8
28-Nov	10	11	10	11	17	16	18	20	22	9	8	14	16	14	20	23	18	23	19	20	11	14	10	13	23.4
29-Nov	11	13	23	35	46	9	31	47	84	85	61	15	9	8	13	32	17	20	42	63	57	56	36	43	85.1
30-Nov	19	7	11	11	10	71	88	45	65	77	48	43	37	36	30	47	52	48	38	23	48	84	90	68	89.7
	76.8	84.1	87.1	83.0	91.7	94.8	95.3	92.1	98.9	96.7	73.4	80.1	82.1	82.7	78.0	88.0	68.4	94.3	88.7	96.2	83.2	88.5	92.4	84.1	

P - Power Failure

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.4 ppb on Nov 10 17:00 Maximum Daily Average: 2.0 ppb on Nov 13

Minimum Value: 0 ppb on Nov 21 21:00 Minimum Daily Average: 0.1 ppb on Nov 8
Maximum Diurnal Average: 1.0 ppb at hour 17 Minimum Diurnal Average: 0.4 ppb at hour 3
Monthly Average: 0.59 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.3 Q_3 = 0.7 P_{90} = 1.4 P_{99} = 4.1

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.6
2-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	1	0.2	1.4
3-Nov	2	0	1	1	1	2	2	1	1	1	2	1	1	A	0	0	0	0	0	0	0	0	0	0	0.9	2.2
4-Nov	0	0	0	0	0	0	0	0	0	0	0	1	A	2	1	1	0	0	1	2	1	1	2	1	0.6	2.1
5-Nov	1	1	1	1	1	1	0	0	0	1	1	A	2	1	1	0	0	0	0	0	0	0	0	0	0.6	1.6
6-Nov	0	0	0	0	0	0	0	0	1	2	A	0	1	1	0	0	0	0	0	0	0	0	1	0	0.4	2.5
7-Nov	0	0	0	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5
8-Nov	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
9-Nov	0	0	0	0	0	0	0	A	5	1	3	1	0	3	2	1	1	2	1	0	1	0	0	0	1.0	4.9
10-Nov	0	0	0	0	0	0	A	0	0	2	1	1	0	0	0	2	9	4	1	0	0	0	0	0	1.0	9.4
11-Nov	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
12-Nov	0	0	0	0	A	0	0	0	0	0	0	0	0	2	3	3	3	2	1	1	1	0	0	0	0.8	3.4
13-Nov	0	0	0	A	1	1	1	2	1	3	3	3	2	2	3	4	5	3	3	3	2	2	2	1	2.0	4.9
14-Nov	2	2	A	3	5	2	2	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0	1.6	4.5
15-Nov	1	A	1	1	0	0	0	0	0	1	2	2	1	1	1	1	1	1	0	1	1	1	1	1	0.9	2.0
16-Nov	A	5	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	A	0.6	4.6
17-Nov	1	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	0.9	2.0
18-Nov	0	0	0	0	0	0	0	0	0	1	1	1	0	1	4	4	1	0	0	0	0	A	0	0	0.7	4.1
19-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0.3	1.4
20-Nov	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	1	3	1	0.6	2.8
21-Nov	3	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	3.4
22-Nov	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0	A	0	0	0	0	0	0	0.3	1.2
23-Nov	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	A	0	0	0	0	1	1	1	0.4	0.7
24-Nov	1	1	1	1	0	1	1	1	1	1	0	C	C	C	0	A	0	0	0	0	0	0	1	2	0.6	1.9
25-Nov	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.8
26-Nov	0	0	0	0	0	0	0	1	1	1	0	0	0	A	0	1	0	0	1	1	0	0	0	0	0.4	1.1
27-Nov	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
28-Nov	0	0	0	0	0	0	0	0	0	1	2	A	0	0	0	0	0	0	0	0	0	1	1	1	0.3	1.6
29-Nov	1	1	1	1	0	0	0	0	0	1	A	0	1	3	2	1	1	1	1	0	1	0	1	1	0.9	2.8
30-Nov	1	0	0	0	1	1	1	0	0	A	0	1	1	1	0	0	1	1	1	1	1	2	2	0	0.7	1.7
	0.6	0.6	0.4	0.5	0.5	0.4	0.4	0.4	0.6	0.7	0.7	0.6	0.6	0.7	0.9	0.9	1.0	0.7	0.5	0.5	0.5	0.4	0.7	0.5	Diurnal Average	
	3.4	4.6	1.5	3.2	4.5	2.1	2.5	1.9	4.9	3.3	3.0	2.7	2.0	2.8	4.1	3.9	9.4	4.2	2.8	2.6	1.9	2.0	2.8	1.9	Diurnal Maximum	

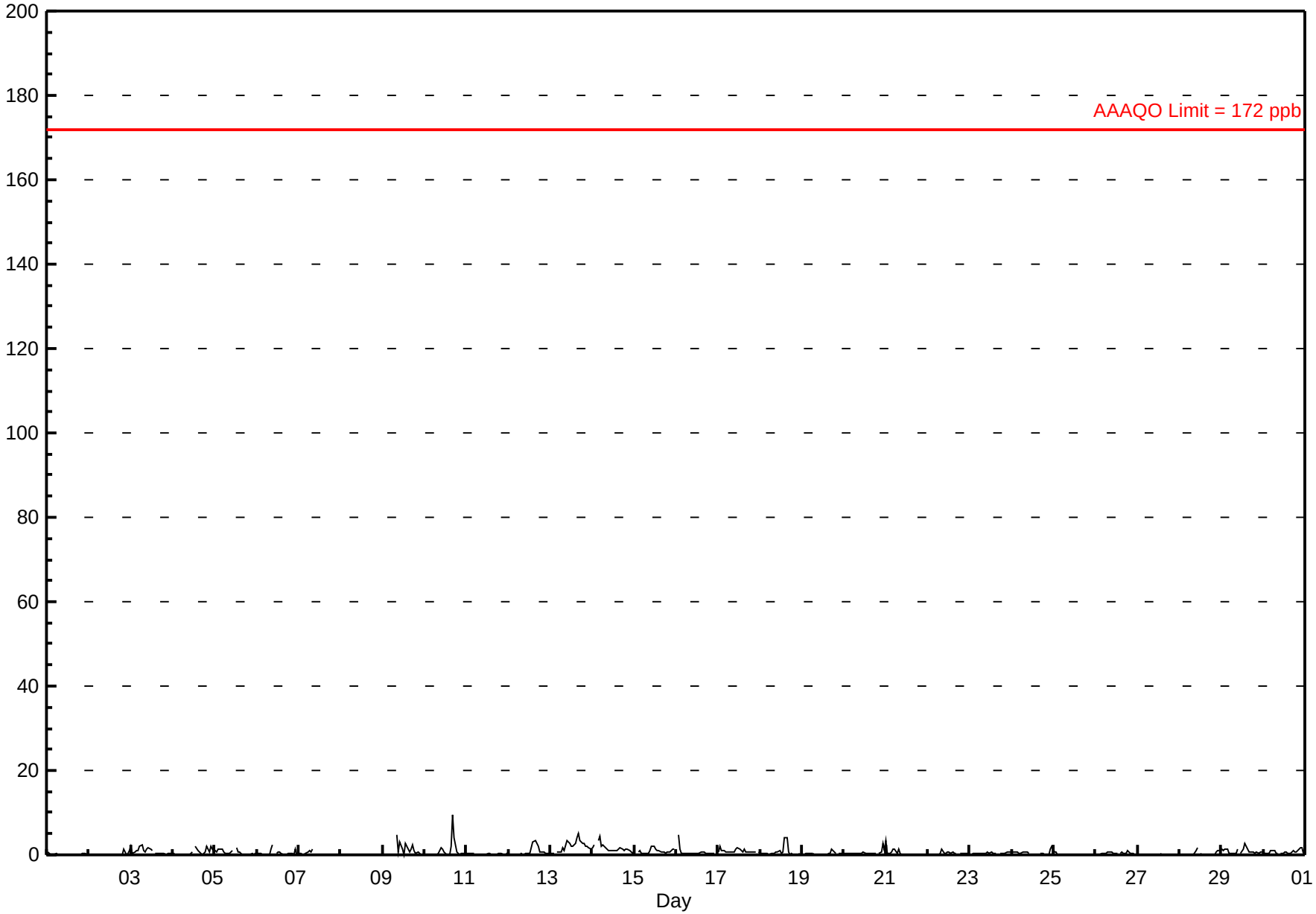
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - November 2014



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - November 2014

Maximum Value: 15.8 ppb on Nov 10 17:00

Maximum Daily Average: 3.2 ppb on Nov 13

Minimum Value: 0 ppb on Nov 21 23:00

Minimum Daily Average: 0.5 ppb on Nov 8

Maximum Diurnal Average: 1.9 ppb at hour 10

Minimum Diurnal Average: 0.9 ppb at hour 3

Monthly Average: 1.30 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.7 $Q_3 = 1.4$ $P_{90} = 2.9$ $P_{99} = 7.4$

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	2	1	1	1	0	1	0	1	0	0	0	0	1	0	0	A	0	0	1	1	1	1	1	0	0.6	1.9
2-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	1	5	1	1	2	0.7	4.6
3-Nov	5	1	2	1	2	3	3	2	1	2	2	3	1	A	1	1	1	1	1	1	1	1	1	1	1.5	5.1
4-Nov	1	0	1	0	0	0	0	1	0	1	1	1	A	4	2	3	1	1	2	7	5	2	6	4	1.8	6.7
5-Nov	5	2	3	3	2	1	1	1	1	1	3	A	3	1	1	1	1	1	0	0	0	1	1	1	1.5	5.0
6-Nov	1	1	1	1	0	1	1	1	2	6	A	1	1	1	1	1	1	0	1	1	1	1	4	1	1.1	6.4
7-Nov	1	1	0	0	1	2	3	3	3	A	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.8	3.1
8-Nov	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	1	1	0	1	0	0	0	0	0	0.5	0.9
9-Nov	1	0	0	0	0	0	0	A	8	2	5	4	0	10	9	2	3	3	2	1	4	3	0	0	2.6	10.4
10-Nov	0	0	0	0	0	0	A	0	1	3	3	2	1	1	1	8	16	12	2	1	1	1	1	1	2.4	15.8
11-Nov	1	1	1	1	1	A	1	0	0	0	0	1	1	0	1	1	0	0	1	1	1	1	0	1	0.6	1.0
12-Nov	1	0	1	1	A	1	1	1	1	0	0	1	1	3	4	4	4	4	1	1	1	1	1	1	1.4	3.9
13-Nov	1	1	1	A	1	1	2	2	1	15	6	3	3	2	4	5	7	4	3	3	2	2	2	2	3.2	14.8
14-Nov	2	3	A	5	6	3	3	3	2	2	1	1	1	1	1	2	2	2	2	2	2	1	1	1	2.2	5.7
15-Nov	2	A	1	1	1	1	1	1	1	2	3	2	2	2	1	1	1	1	1	1	1	2	2	3	1.4	2.9
16-Nov	A	6	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.1	6.3
17-Nov	2	3	2	2	1	1	1	1	1	1	2	2	2	1	1	2	1	1	1	1	1	1	A	1	1.4	3.1
18-Nov	1	1	1	1	1	1	1	1	1	2	1	2	1	2	6	7	2	1	1	0	0	A	1	1	1.4	6.8
19-Nov	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	4	4	1	A	1	1	1	0.9	3.9
20-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	4	7	4	1.4	6.6
21-Nov	7	1	1	2	4	3	2	12	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1.6	12.1
22-Nov	0	0	0	0	0	0	0	1	3	1	1	2	2	1	1	1	1	A	1	1	1	1	1	1	0.9	2.8
23-Nov	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
24-Nov	1	1	1	1	1	1	1	1	1	1	1	C	C	C	1	A	1	1	1	0	1	0	5	5	1.3	5.1
25-Nov	2	2	1	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0.6	2.4
26-Nov	0	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	0.8	1.8
27-Nov	0	1	1	1	0	0	1	0	0	0	0	0	A	1	1	0	0	1	0	0	0	1	0	1	0.5	0.6
28-Nov	0	0	0	1	0	1	0	0	0	4	3	A	1	0	1	1	0	1	0	1	1	1	2	2	0.9	4.4
29-Nov	2	2	2	2	1	1	1	1	1	2	A	1	5	4	3	2	1	1	1	1	1	1	2	2	1.6	4.9
30-Nov	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	4	3	1	1.3	4.2
	1.4	1.2	0.9	1.0	1.0	1.0	1.0	1.3	1.2	1.9	1.5	1.3	1.2	1.6	1.6	1.7	1.7	1.5	1.1	1.1	1.2	1.1	1.6	1.3	Diurnal Average	
	6.6	6.3	3.4	5.2	5.7	3.1	3.5	12.1	7.6	14.8	5.8	4.3	4.9	10.4	8.6	7.7	15.8	11.8	3.5	6.7	4.6	4.2	6.6	5.1	Diurnal Maximum	

C - Calibration

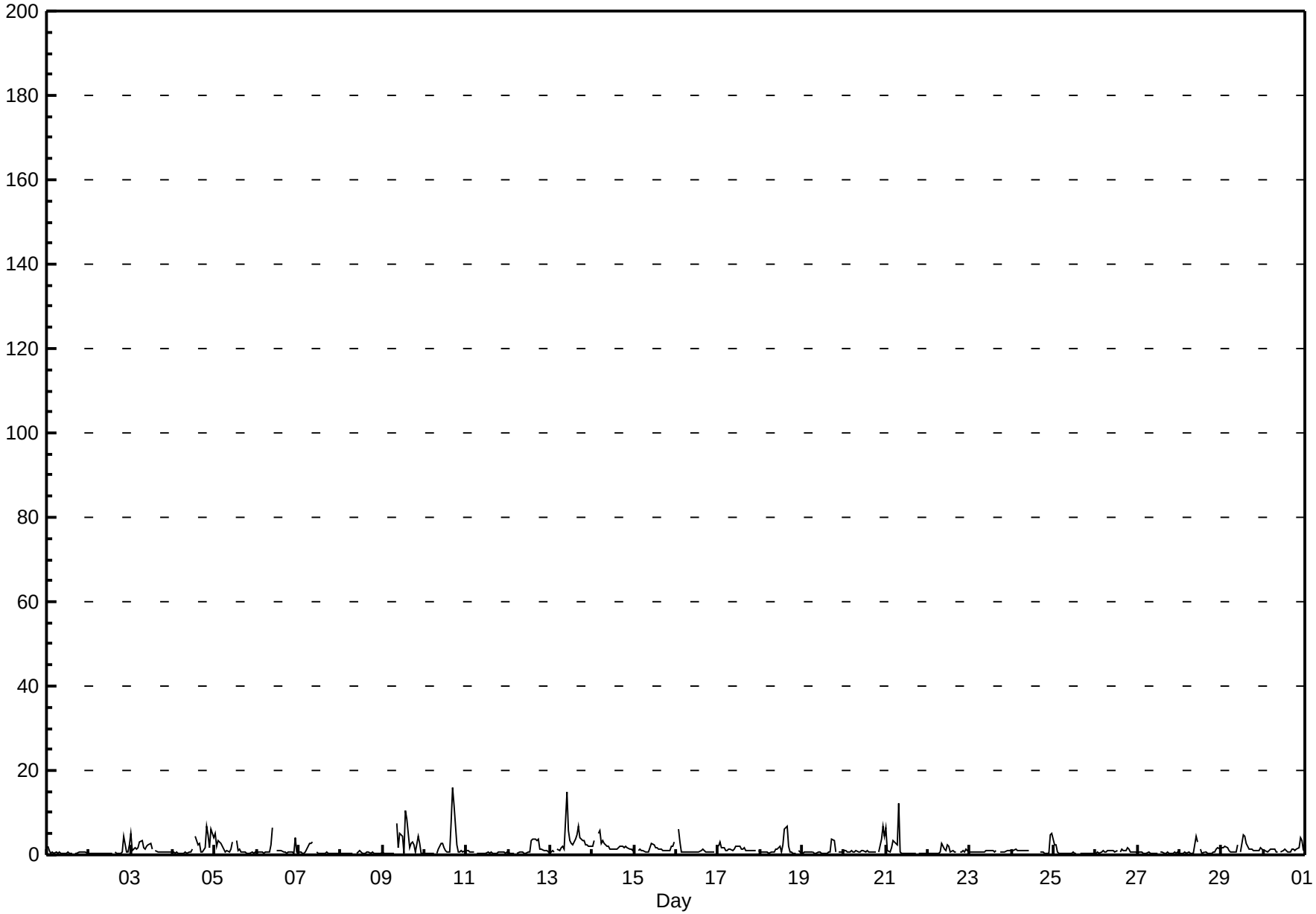
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

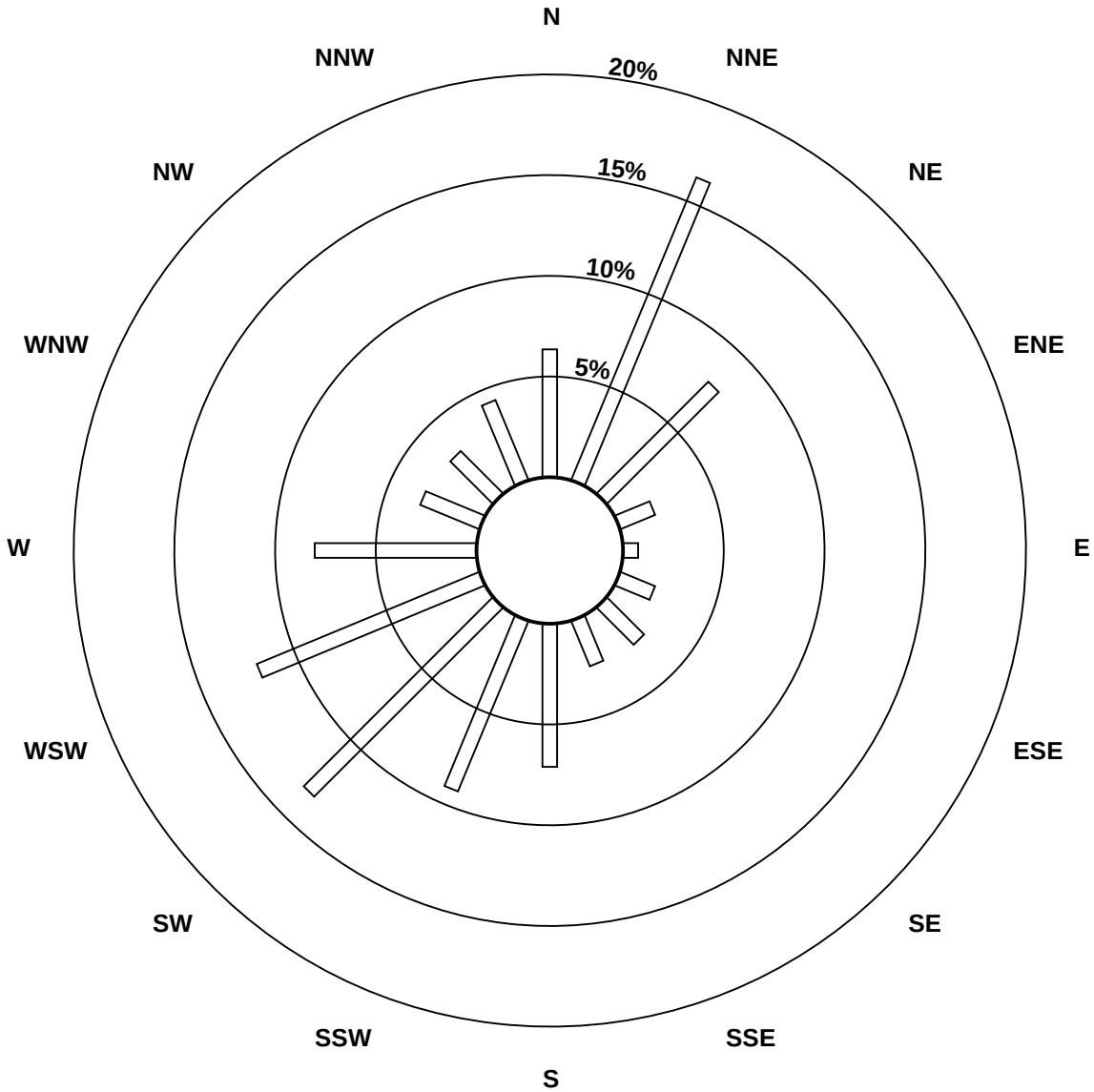
Smoky Heights - November 2014



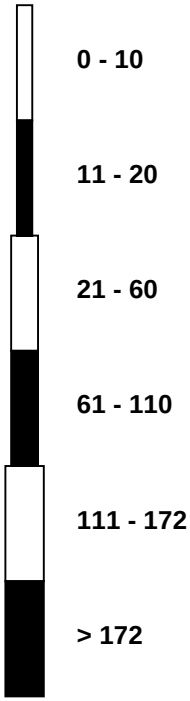
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - November 2014



Pollutant Classes (ppb)

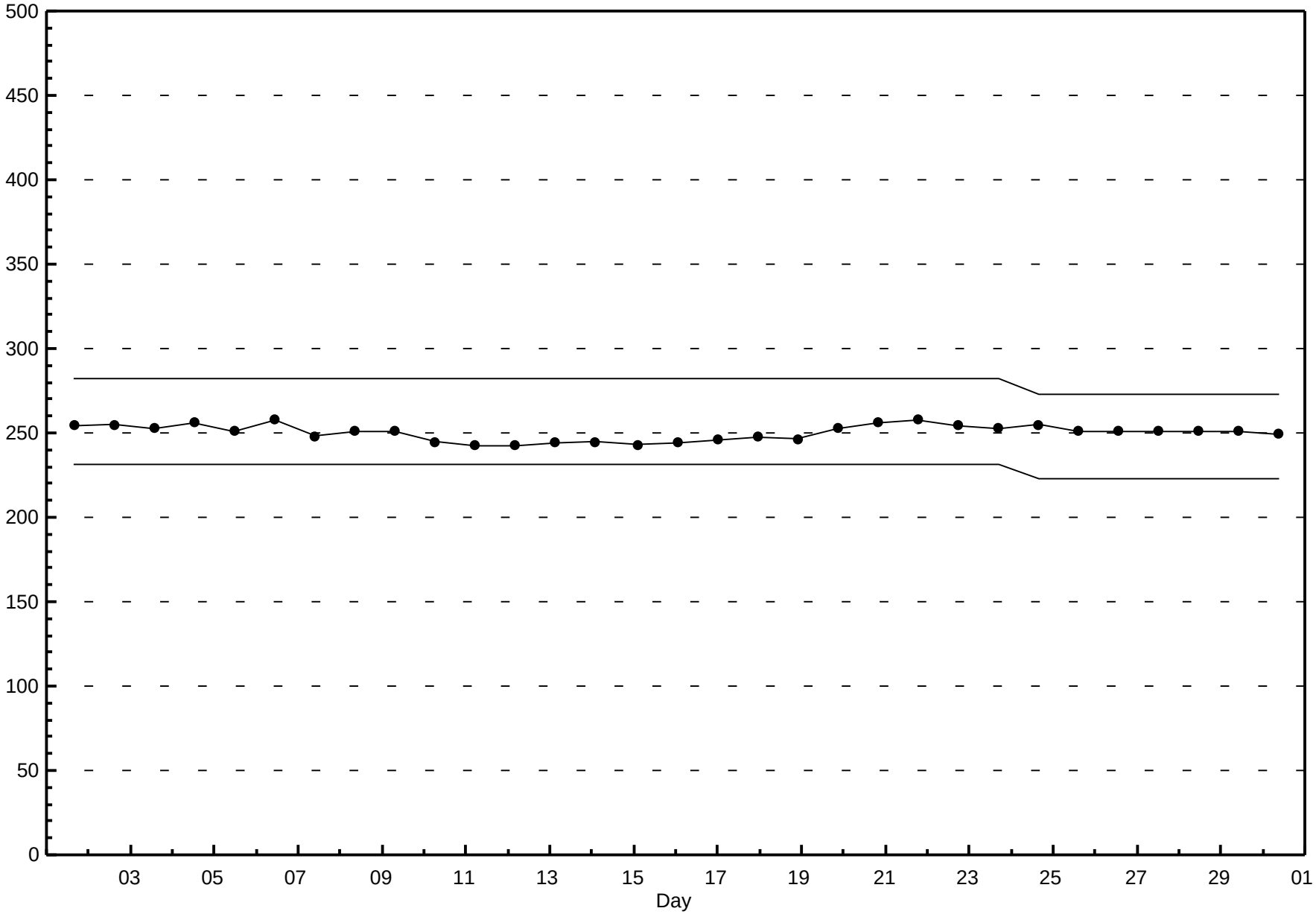


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Smoky Heights - November 2014



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - November 2014

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

Maximum Value: 1.3 ppb on Dec 1 00:00 Maximum Daily Average: 0.3 ppb on Nov 14

Minimum Value: 0 ppb on Nov 1 03:00 Minimum Daily Average: 0.0 ppb on Nov 21

Maximum Diurnal Average: 0.1 ppb at hour 11 Minimum Diurnal Average: 0.1 ppb at hour 2

Monthly Average: 0.10 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.1 $Q_3 = 0.1$ $P_{90} = 0.2$ $P_{99} = 0.5$

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
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-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
2-Nov	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
3-Nov	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
4-Nov	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
5-Nov	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
6-Nov	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
7-Nov	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	0.1
8-Nov	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
9-Nov	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
10-Nov	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
11-Nov	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
12-Nov	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
13-Nov	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
14-Nov	0	0	A	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0.3	0.5
15-Nov	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
16-Nov	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
17-Nov	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
18-Nov	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
19-Nov	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
20-Nov	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.6
21-Nov	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
22-Nov	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
23-Nov	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
24-Nov	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3
25-Nov	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
26-Nov	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
27-Nov	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
28-Nov	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
29-Nov	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
30-Nov	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	1.3
	0.1	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	Diurnal Average	
	0.2	0.2	0.3	0.2	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.3	1.3	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

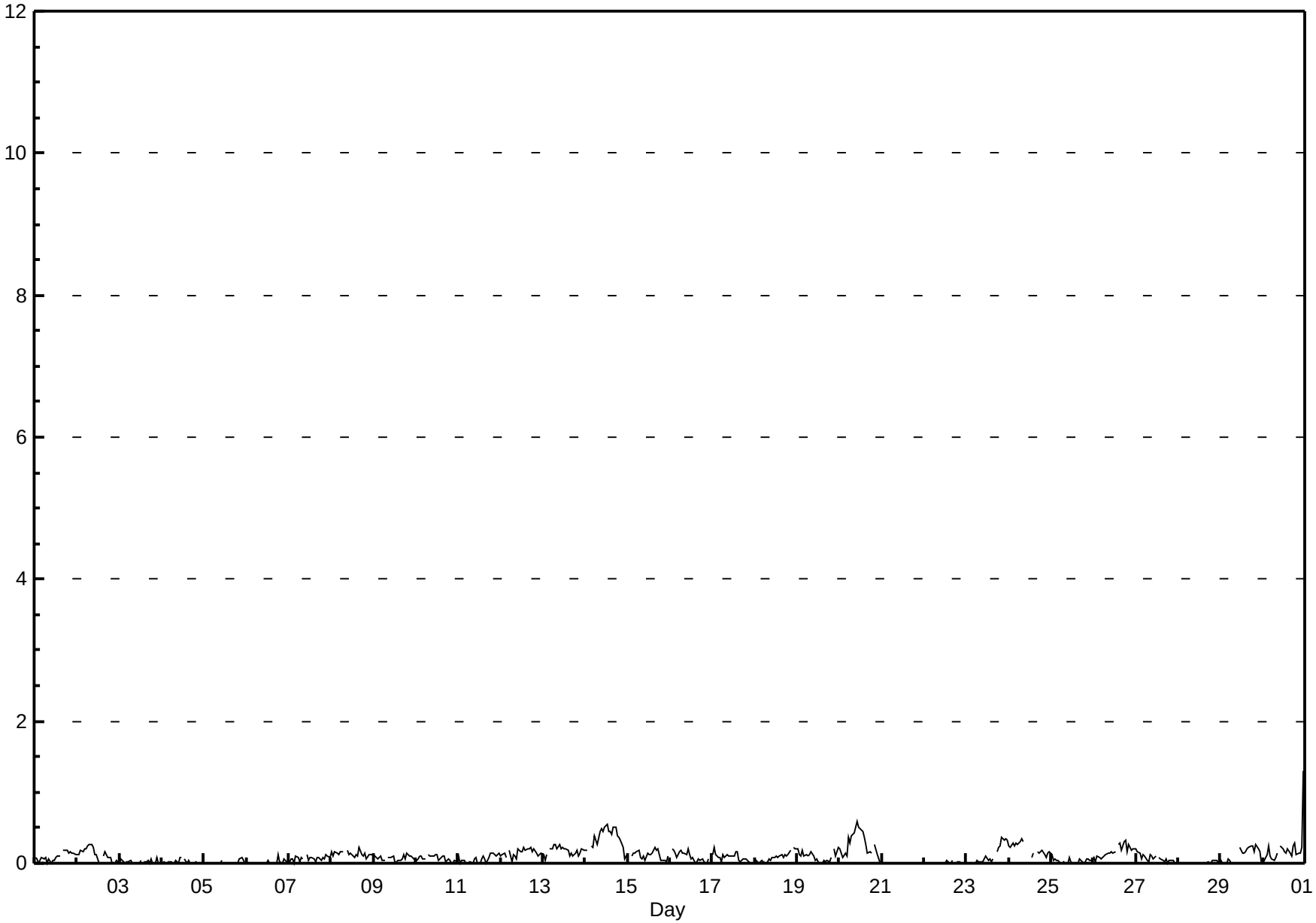
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - November 2014



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - November 2014

Maximum Value: 1.9 ppb on Dec 1 00:00

Maximum Daily Average: 0.8 ppb on Nov 14

Minimum Value: 0 ppb on Nov 21 23:00

Maximum Diurnal Average: 0.6 ppb at hour 22

Monthly Average: 0.51 ppb

Minimum Daily Average: 0.3 ppb on Nov 21

Minimum Diurnal Average: 0.5 ppb at hour 4

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.6$ $P_{90} = 0.7$ $P_{99} = 1.0$

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
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-Nov	0	1	0	0	0	0	0	1	0	0	0	1	1	1	1	A	1	0	1	1	1	1	1	1	0.5	0.8
2-Nov	1	1	1	0	1	1	1	1	1	1	0	1	1	1	A	1	1	1	0	0	0	0	0	0	0.5	0.7
3-Nov	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	2	0	0	0.5	1.9
4-Nov	0	0	0	0	1	1	0	0	0	0	0	0	A	0	1	1	0	0	1	0	0	0	0	0	0.4	0.6
5-Nov	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	1	0	0	0.4	0.6
6-Nov	0	0	1	0	1	0	0	0	0	0	A	0	0	1	0	0	1	0	1	0	0	1	0	0	0.5	0.7
7-Nov	0	1	0	0	1	0	0	0	0	A	1	0	1	1	1	0	1	1	1	0	0	0	1	1	0.5	0.6
8-Nov	1	1	1	1	1	1	0	1	A	1	1	1	0	1	1	0	1	1	1	0	1	1	0	1	0.6	0.9
9-Nov	1	1	0	0	1	0	0	A	0	1	0	1	0	0	1	0	0	1	1	1	0	1	1	1	0.5	0.8
10-Nov	0	1	0	1	0	1	A	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0.5	0.6
11-Nov	0	0	1	1	0	A	0	0	0	0	0	1	1	0	1	0	0	1	0	1	1	1	1	1	0.5	0.7
12-Nov	0	0	0	0	A	1	0	0	1	0	1	0	0	1	1	1	1	1	1	1	1	0	0	1	0.5	0.7
13-Nov	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0.6	0.8
14-Nov	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.8	1.1
15-Nov	0	A	1	0	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0.5	0.8
16-Nov	A	1	1	1	1	1	0	1	0	0	1	1	0	0	0	0	1	1	1	1	0	0	1	A	0.5	0.7
17-Nov	1	1	1	0	0	0	1	1	1	0	1	0	0	1	1	0	0	1	0	0	0	0	A	0	0.5	0.7
18-Nov	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	1	0	0	1	0	1	A	1	1	0.5	0.7
19-Nov	1	0	0	1	1	1	1	1	0	0	1	0	1	0	0	0	0	1	0	1	A	1	0	1	0.5	0.8
20-Nov	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	0.7	1.0
21-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.4
22-Nov	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.5
23-Nov	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	A	1	1	1	1	1	1	1	0.5	0.9
24-Nov	1	1	1	1	1	1	1	1	1	C	C	C	C	0	1	A	1	1	1	1	0	0	1	1	0.6	0.9
25-Nov	0	1	0	0	1	0	0	0	0	1	1	0	0	1	A	1	0	1	0	0	0	0	0	0	0.5	0.6
26-Nov	1	0	1	0	0	0	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.6	0.9
27-Nov	1	1	1	0	0	0	0	0	1	1	0	0	A	0	1	0	1	0	1	0	1	1	0	0	0.5	0.6
28-Nov	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
29-Nov	1	0	0	0	0	0	0	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0.5	0.7
30-Nov	0	0	0	1	1	0	1	0	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	2	0.6	1.9
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	Diurnal Average	
	0.9	0.7	0.9	0.7	0.8	0.8	0.8	0.9	0.9	1.0	1.0	0.9	1.0	1.1	0.9	0.8	1.1	0.9	0.8	0.9	0.8	1.9	0.9	1.9	Diurnal Maximum	

C - Calibration

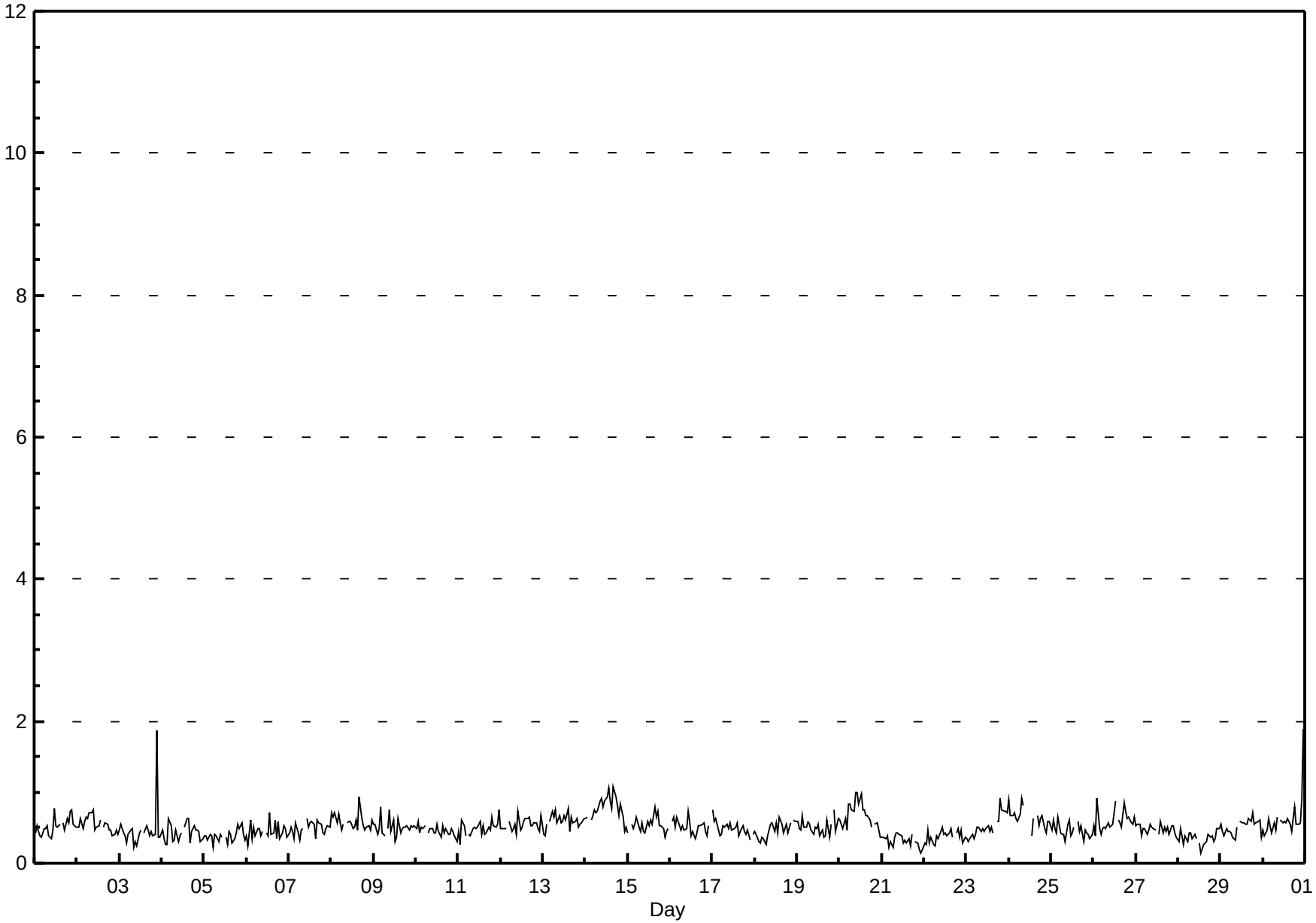
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

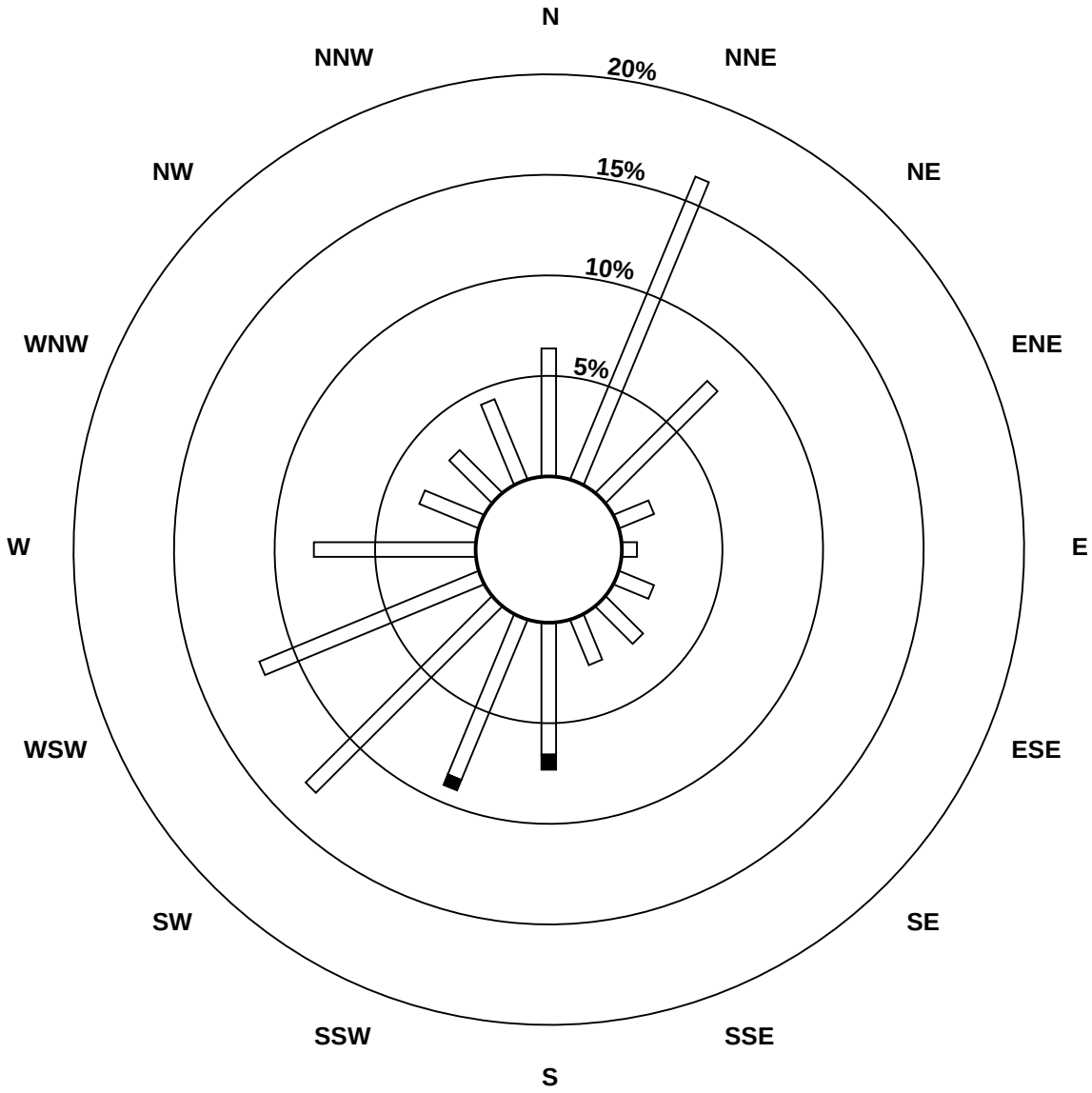
Smoky Heights - November 2014



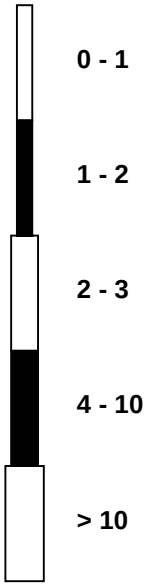
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - November 2014



Pollutant Classes (ppb)

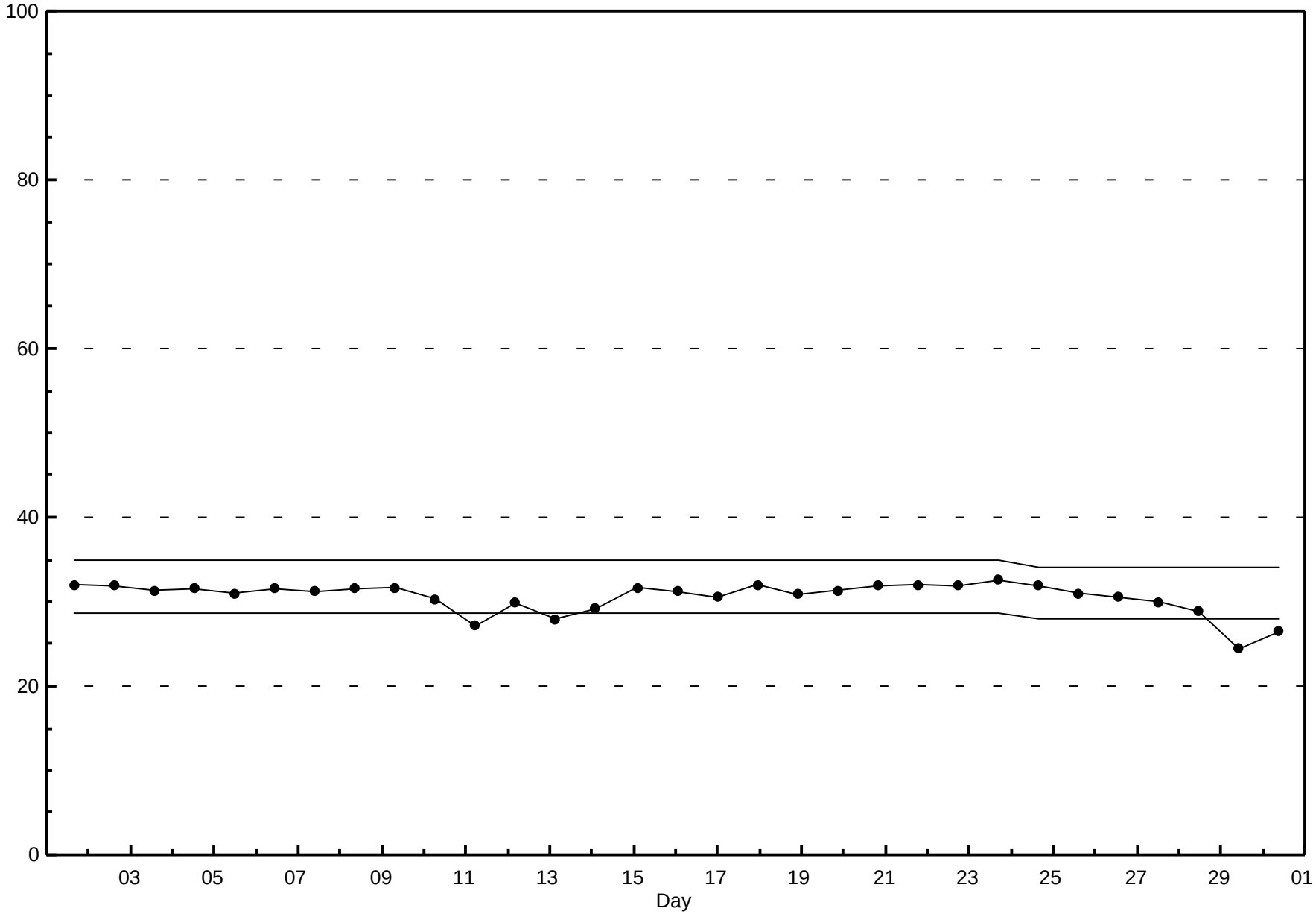


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Smoky Heights - November 2014



Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - November 2014

Number of Exceedences: 1-hr: 0 24-hr: 0

Maximum Value: 67.6 $\mu g/m^3$ on Nov 11 00:00

Maximum Daily Average: 24.2 $\mu g/m^3$ on Nov 13

Minimum Value: 0 $\mu g/m^3$ on Nov 1 03:00

Maximum Diurnal Average: 9.3 $\mu g/m^3$ at hour 24

Monthly Average: 7.01 $\mu g/m^3$

Minimum Daily Average: 2.0 $\mu g/m^3$ on Nov 3

Minimum Diurnal Average: 4.9 $\mu g/m^3$ at hour 6

Percentiles: $P_1 = 0.0$ $P_{10} = 0.5$ $Q_1 = 2.2$ Median = 4.4 $Q_3 = 8.8$ $P_{90} = 16.6$ $P_{99} = 35.2$

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST) 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-Nov	5	1	0	0	0	1	1	2	2	3	1	2	4	5	0	3	2	3	3	5	6	5	5	7	2.8	7.0
2-Nov	5	2	2	3	4	6	6	5	5	4	1	0	0	0	0	1	5	6	4	10	3	1	2	4	3.4	10.2
3-Nov	3	2	2	2	2	1	1	2	3	2	2	1	0	1	4	3	1	1	1	2	0	0	2	8	2.0	8.0
4-Nov	4	0	0	0	2	3	3	4	4	4	6	4	2	2	1	0	1	1	3	2	1	2	2	2	2.3	5.9
5-Nov	4	4	5	4	5	5	5	5	5	4	4	4	4	2	2	2	1	1	0	0	0	0	0	0	2.7	4.9
6-Nov	1	0	2	0	1	1	1	1	2	6	3	2	1	3	4	0	1	2	2	4	5	5	5	7	2.5	6.6
7-Nov	7	5	4	4	3	3	2	3	3	2	4	2	1	1	2	1	0	0	0	0	0	1	3	4	2.3	7.1
8-Nov	0	3	8	5	2	0	1	1	1	7	6	2	5	3	3	8	15	2	4	8	8	12	5	3	4.7	15.1
9-Nov	4	4	1	4	4	2	4	4	8	8	8	8	3	3	4	6	9	6	4	7	8	14	13	6	6.0	14.1
10-Nov	5	4	6	6	7	6	5	3	9	10	7	7	11	2	3	2	6	0	1	3	0	12	3	68	7.7	67.6
11-Nov	1	2	1	1	10	3	2	4	5	13	6	9	4	7	11	14	7	17	11	7	11	7	24	35	8.9	35.3
12-Nov	2	3	16	1	4	2	5	4	6	12	10	11	9	12	12	12	12	9	9	8	10	11	10	10	8.3	16.0
13-Nov	10	9	12	12	13	14	17	20	23	32	26	27	25	22	20	30	34	35	33	34	36	35	33	28	24.2	36.0
14-Nov	26	24	28	19	26	28	26	23	26	23	23	25	23	21	17	16	13	13	11	11	11	8	5	0	18.6	27.9
15-Nov	0	0	0	2	4	4	5	3	4	8	7	6	7	2	2	6	10	9	5	1	1	1	2	3	3.7	9.7
16-Nov	6	36	0	6	6	1	32	11	1	7	0	3	2	3	4	4	4	6	3	3	4	6	5	6	6.7	36.3
17-Nov	4	8	8	11	7	4	7	7	7	10	11	7	5	4	4	4	3	7	7	6	4	4	2	1	5.8	10.8
18-Nov	0	0	0	0	0	0	0	0	1	1	4	1	1	1	2	4	2	1	13	2	10	11	8	14	3.1	13.9
19-Nov	6	0	0	1	4	4	3	4	10	3	3	4	5	6	6	5	6	6	6	7	7	8	10	11	5.2	10.6
20-Nov	11	12	13	15	18	17	17	18	19	19	21	24	32	30	29	27	21	22	22	24	19	8	0	0	18.3	31.6
21-Nov	0	0	0	1	9	1	1	4	5	11	10	29	26	22	21	19	14	7	4	0	0	0	0	0	7.7	29.0
22-Nov	7	11	8	12	6	1	0	1	1	1	1	2	3	3	2	3	4	6	3	3	3	1	2	3	3.6	11.8
23-Nov	6	4	3	4	4	4	6	7	3	6	8	7	6	7	9	12	11	12	9	9	10	8	5	3	6.8	12.3
24-Nov	5	4	4	4	1	0	1	0	0	5	M	M	22	17	11	9	21	11	14	8	3	8	12	24	8.3	23.5
25-Nov	2	11	19	18	32	10	10	24	13	9	9	14	11	9	57	7	7	7	7	14	11	15	12	5	13.8	56.7
26-Nov	6	6	7	7	6	10	13	10	10	12	12	12	13	9	14	18	15	13	41	16	8	3	6	9	11.5	40.7
27-Nov	6	7	8	7	7	7	8	8	22	11	3	2	1	2	2	1	0	0	0	0	1	28	11	5	6.2	28.2
28-Nov	10	8	12	3	2	4	0	4	7	4	5	4	3	3	4	5	3	1	1	1	4	5	5	5	4.2	11.5
29-Nov	4	3	3	2	2	3	3	3	4	6	7	5	6	2	2	3	4	5	7	5	5	6	9	5	4.4	8.7
30-Nov	6	4	5	5	4	2	2	3	2	4	4	3	2	2	1	2	6	11	13	9	5	4	4	5	4.5	13.0
	5.2	6.0	5.9	5.4	6.6	4.9	6.3	6.2	7.0	8.2	7.3	7.9	7.9	6.9	8.4	7.6	7.9	7.3	8.0	6.9	6.4	7.6	6.8	9.3	Diurnal Average	
	26.0	36.3	27.9	19.0	32.0	27.8	32.5	24.5	25.7	31.7	25.8	29.0	31.6	30.0	56.7	30.1	33.6	35.3	40.7	33.5	36.0	34.8	33.0	67.6	Diurnal Maximum	

M - Maintenance

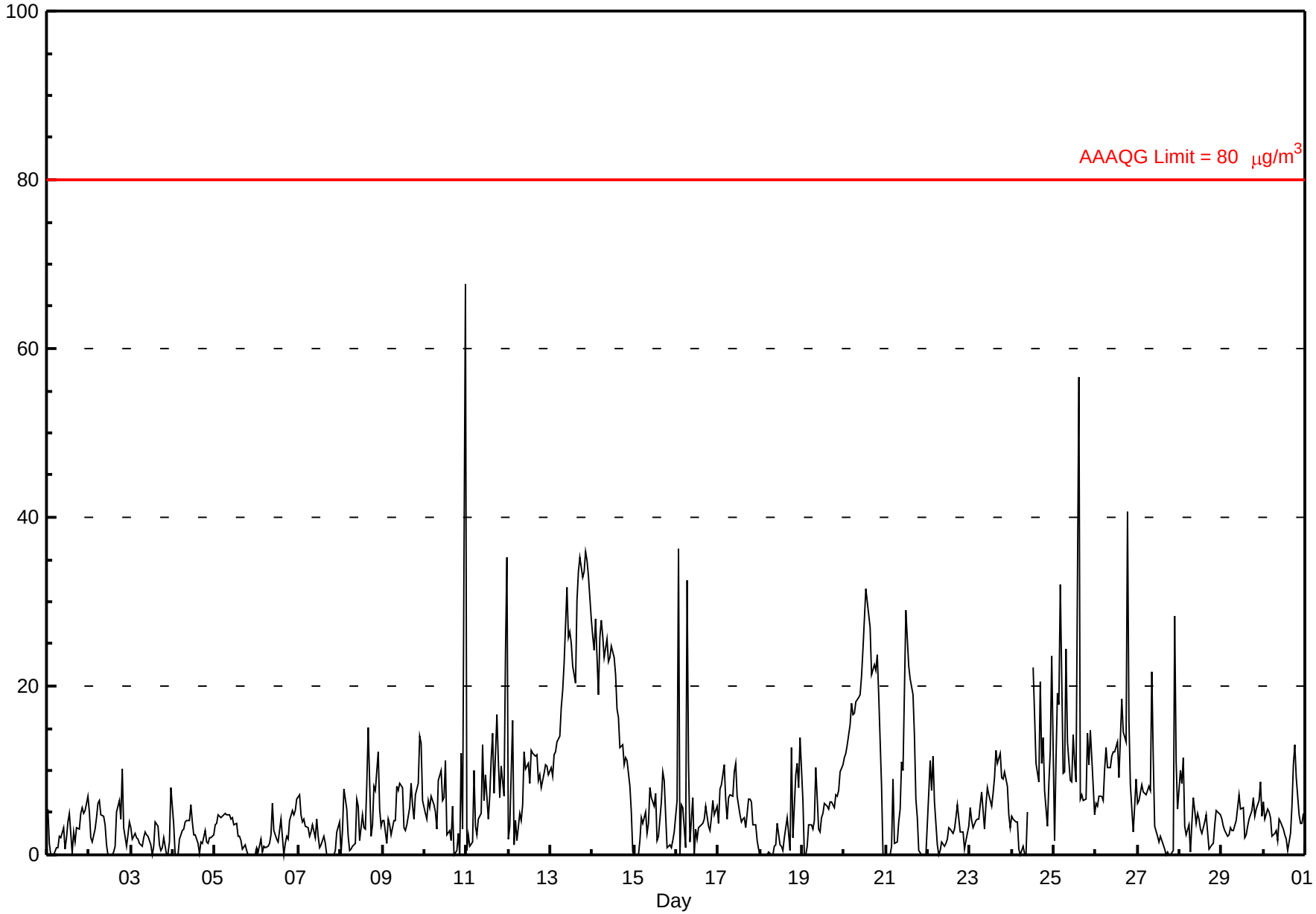
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - November 2014



Peace Airshed Zone Association

Hourly Maximums

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

Smoky Heights - November 2014

Maximum Value: 387.0 $\mu g/m^3$ on Nov 11 00:00

Maximum Daily Average: 38.4 $\mu g/m^3$ on Nov 25

Minimum Value: 0 $\mu g/m^3$ on Nov 5 23:00

Minimum Daily Average: 4.8 $\mu g/m^3$ on Nov 4

Maximum Diurnal Average: 27.9 $\mu g/m^3$ at hour 24

Minimum Diurnal Average: 10.0 $\mu g/m^3$ at hour 3

Monthly Average: 13.60 $\mu g/m^3$

Percentiles: P_1 = 0.2 P_{10} = 2.9 Q_1 = 5.4 Median = 8.6 Q_3 = 15.5 P_{90} = 27.1 P_{99} = 65.2

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Nov	8	3	2	3	1	3	3	4	6	8	3	5	6	9	2	7	4	11	7	8	8	7	7	9	5.7	11.1
2-Nov	8	5	4	7	8	10	9	7	7	7	4	1	2	2	2	5	8	29	8	20	6	3	4	6	7.1	28.7
3-Nov	6	4	5	3	4	3	3	4	5	5	5	3	2	3	13	10	4	2	4	5	2	3	16	17	5.4	16.7
4-Nov	11	4	2	2	4	5	5	7	7	8	9	7	5	4	3	2	3	3	5	4	4	4	4	4	4.8	11.3
5-Nov	5	6	7	6	7	7	7	7	7	6	8	6	5	6	6	4	3	5	3	2	3	2	0	3	5.0	7.6
6-Nov	4	3	4	2	3	2	3	5	6	22	7	6	4	7	7	3	3	5	7	6	7	8	7	9	5.9	22.0
7-Nov	9	7	6	7	5	6	6	5	8	4	8	5	3	3	6	4	2	2	2	2	0	3	5	8	4.9	9.3
8-Nov	3	9	12	13	4	2	2	3	3	11	12	5	9	6	6	28	49	4	13	15	14	30	16	9	11.6	48.9
9-Nov	7	8	6	7	5	5	6	7	11	9	11	10	5	6	7	10	16	13	7	11	12	21	20	12	9.7	21.0
10-Nov	8	7	8	9	9	9	7	7	24	24	15	13	27	6	9	4	11	5	9	13	10	55	14	387	28.7	387.0
11-Nov	13	13	7	6	18	13	8	11	8	32	23	25	12	18	21	23	11	25	31	16	20	14	47	91	21.0	90.7
12-Nov	12	9	31	7	9	4	7	10	14	23	18	20	13	22	19	23	14	13	15	13	15	16	13	15	14.8	30.5
13-Nov	15	16	19	18	17	18	20	23	28	35	29	30	32	29	27	33	37	40	37	37	41	38	39	36	28.8	41.1
14-Nov	29	30	35	30	31	31	30	25	28	25	26	27	27	26	20	20	18	15	14	14	14	11	8	2	22.4	35.4
15-Nov	1	1	2	4	8	7	8	6	10	14	14	16	10	7	10	11	12	12	11	4	6	3	4	6	7.8	16.1
16-Nov	24	169	9	20	21	4	82	61	8	16	11	5	4	6	5	7	7	12	8	12	7	14	13	13	22.4	169.1
17-Nov	10	17	13	16	12	8	11	12	10	17	22	15	10	7	9	10	10	15	13	14	9	8	6	3	11.4	21.5
18-Nov	1	1	1	2	1	2	1	3	6	9	9	3	4	2	7	10	7	6	36	5	14	18	19	59	9.5	59.4
19-Nov	51	1	1	3	6	6	7	7	14	6	5	7	8	8	7	7	10	11	11	10	10	10	13	14	9.7	50.8
20-Nov	14	14	15	17	20	18	19	20	21	21	24	32	34	32	32	29	24	25	24	27	24	19	0	0	21.1	34.4
21-Nov	0	0	2	11	26	15	14	14	13	14	25	33	30	25	23	22	17	11	7	4	0	0	0	6	13.0	32.7
22-Nov	14	17	11	27	21	5	2	2	4	3	3	4	6	6	5	5	10	9	8	5	9	5	4	8	8.2	27.4
23-Nov	10	15	7	8	9	9	9	12	7	11	13	10	8	11	14	15	14	16	13	12	13	11	9	6	10.9	16.4
24-Nov	7	6	6	24	21	6	8	7	1	12	M	M	54	37	27	21	44	57	27	41	11	13	19	43	22.3	56.8
25-Nov	25	17	30	72	58	72	27	46	30	21	20	21	17	13	299	10	10	10	9	21	29	21	40	7	38.4	298.9
26-Nov	8	9	9	10	9	14	17	17	14	16	21	17	22	24	30	24	22	21	59	27	11	7	12	11	17.9	59.2
27-Nov	8	10	11	11	12	10	11	11	30	22	8	4	4	5	4	3	1	2	2	3	7	113	33	22	14.4	113.3
28-Nov	22	25	20	13	5	6	5	5	13	5	8	6	5	4	6	7	5	5	4	3	6	7	8	7	8.4	25.2
29-Nov	6	7	6	6	6	6	6	7	7	13	16	8	9	4	6	6	8	11	11	10	10	11	20	16	9.0	19.8
30-Nov	11	9	10	10	11	7	6	5	5	12	7	6	6	6	2	6	8	15	16	13	7	7	9	8	8.4	15.5
	11.6	14.7	10.0	12.4	12.4	10.5	11.8	12.0	11.8	14.3	13.2	12.1	12.7	11.5	21.1	12.3	13.0	13.7	14.0	12.6	11.0	16.1	13.6	27.9	Diurnal Average	
	50.8	169.1	35.4	72.2	58.2	71.6	82.4	60.7	30.2	35.2	28.8	32.7	53.5	37.2	298.9	32.8	48.9	56.8	59.2	41.1	41.1	113.3	46.9	387.0	Diurnal Maximum	

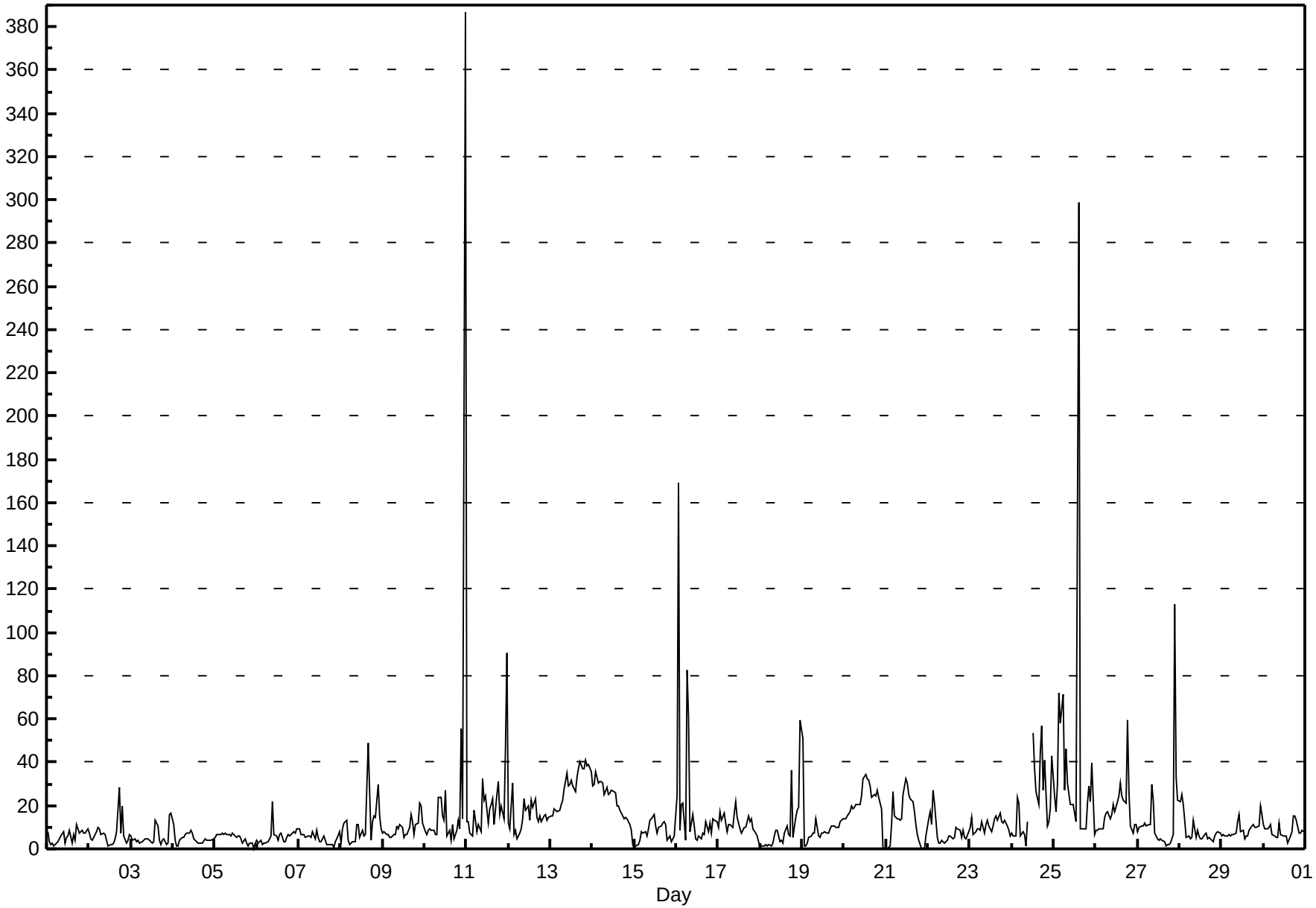
M - Maintenance

Peace Airshed Zone Association

Hourly Maximums

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

Smoky Heights - November 2014

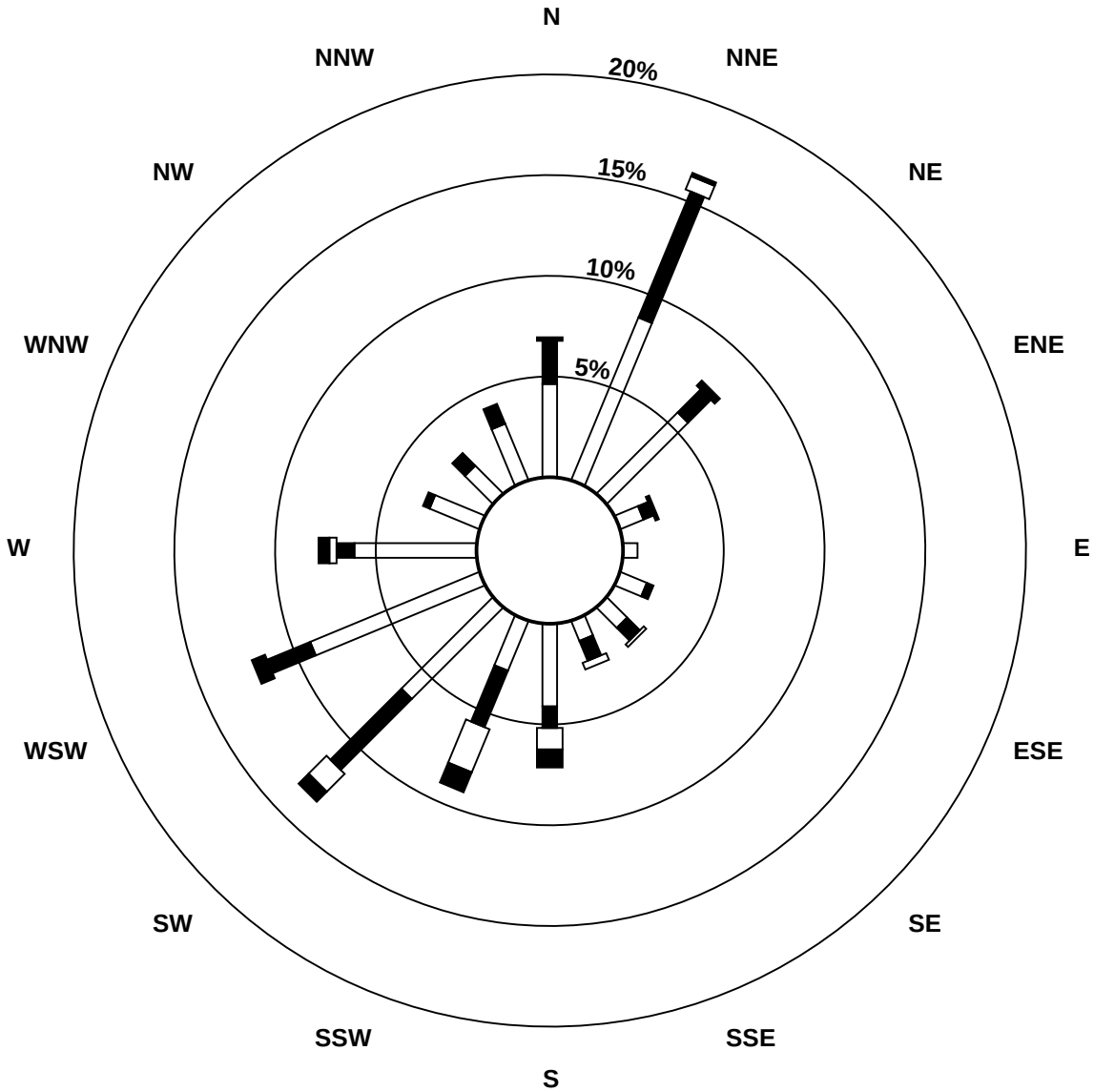


Peace Airshed Zone Association

Pollutant Rose

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

Smoky Heights - November 2014



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

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

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - November 2014

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

Maximum Value: 8.7 ^{o}C on Nov 4 16:00

Maximum Daily Average: 4.8 ^{o}C on Nov 6

Minimum Value: -34 ^{o}C on Nov 29 08:00

Maximum Diurnal Average: -7.1 ^{o}C at hour 15

Monthly Average: -9.97 ^{o}C

Minimum Daily Average: -30.5 ^{o}C on Nov 29

Minimum Diurnal Average: -12.5 ^{o}C at hour 9

Percentiles: P_1 = -32.9 P_{10} = -24.8 Q_1 = -17.2 Median = -8.8 Q_3 = -1.7 P_{90} = 2.9 P_{99} = 7.1

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

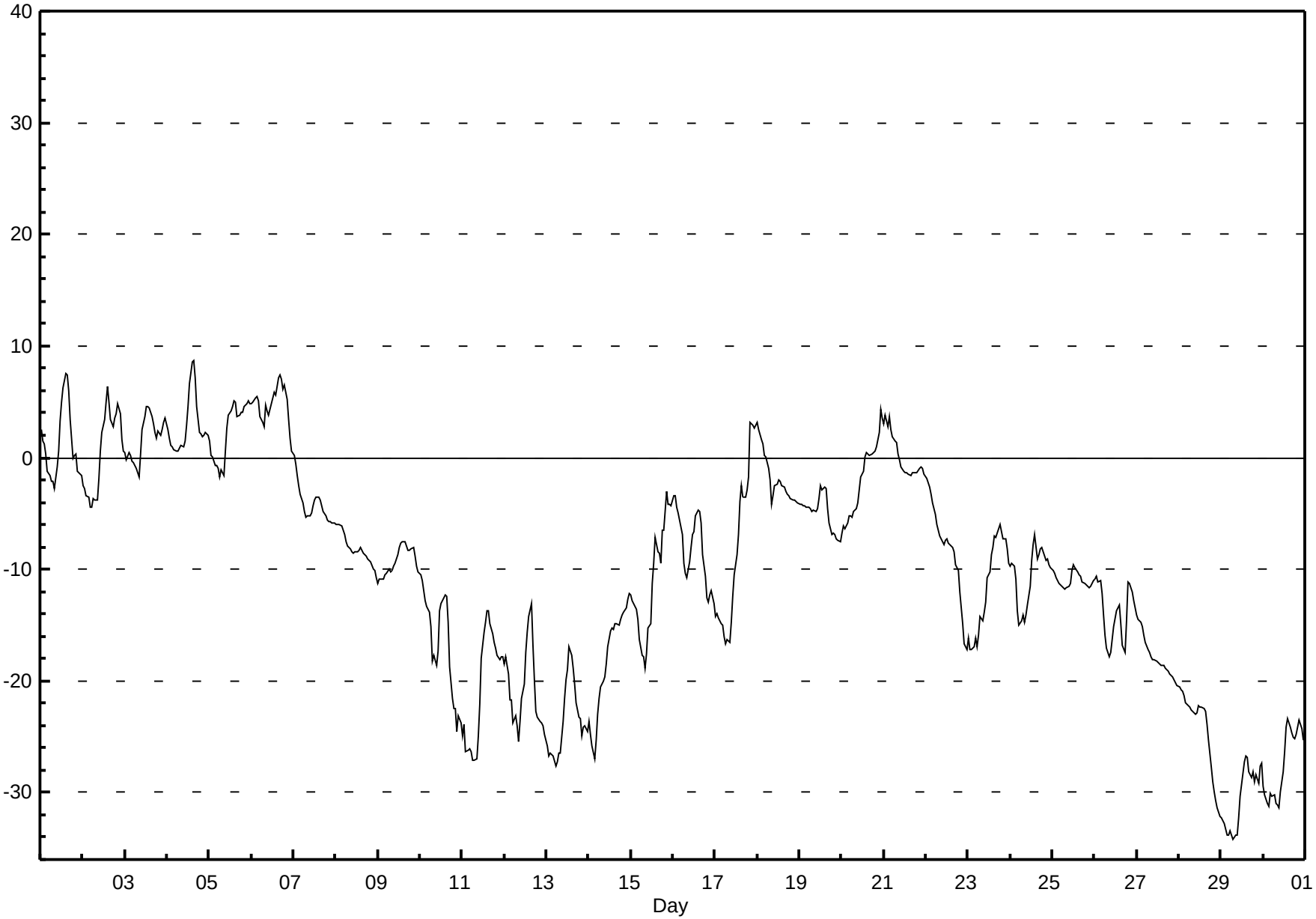
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Nov	3	1	1	0	-1	-2	-2	-2	-3	-1	1	3	5	6	8	7	6	3	0	0	0	-1	-1	-2	1.3	7.5
2-Nov	-3	-3	-3	-4	-4	-4	-4	-4	-4	-2	1	2	3	5	6	5	3	3	4	4	5	4	2	1	0.5	6.3
3-Nov	0	0	0	0	0	0	-1	-1	-2	0	2	4	5	5	4	4	3	2	2	2	2	3	3	4	1.7	4.6
4-Nov	3	2	1	1	1	1	1	1	1	1	1	3	5	7	9	9	7	5	2	2	2	2	2	2	2.8	8.7
5-Nov	1	0	0	-1	-1	-1	-2	-1	-2	1	3	4	4	5	5	5	4	4	4	4	5	5	5	5	2.3	5.1
6-Nov	5	5	5	5	5	4	3	3	5	4	4	5	5	6	6	7	7	7	6	6	5	3	2	1	4.8	7.5
7-Nov	0	-1	-2	-2	-3	-4	-5	-5	-5	-5	-5	-4	-4	-4	-4	-4	-4	-5	-5	-6	-6	-6	-6	-6	-4.1	0.2
8-Nov	-6	-6	-6	-6	-6	-7	-7	-8	-8	-8	-9	-8	-8	-8	-8	-8	-9	-9	-9	-9	-9	-10	-10	-11	-8.1	-5.9
9-Nov	-11	-11	-11	-11	-11	-10	-10	-10	-10	-10	-9	-9	-8	-8	-8	-8	-8	-8	-8	-8	-8	-9	-10	-10	-9.3	-7.5
10-Nov	-11	-11	-12	-13	-13	-14	-15	-18	-18	-19	-17	-14	-13	-13	-12	-12	-15	-19	-22	-22	-22	-25	-23	-24	-16.5	-10.5
11-Nov	-25	-24	-26	-26	-26	-26	-27	-27	-27	-25	-22	-18	-16	-15	-14	-14	-15	-16	-17	-17	-18	-18	-18	-18	-20.6	-13.7
12-Nov	-18	-18	-19	-22	-22	-24	-23	-24	-25	-24	-22	-20	-17	-16	-14	-13	-17	-20	-23	-23	-24	-24	-24	-25	-20.8	-13.0
13-Nov	-26	-27	-26	-27	-27	-28	-27	-26	-26	-24	-22	-20	-19	-17	-18	-19	-20	-22	-23	-23	-25	-24	-24	-24	-23.5	-17.0
14-Nov	-24	-25	-26	-27	-25	-23	-22	-20	-20	-20	-18	-17	-16	-15	-15	-15	-15	-15	-15	-14	-14	-13	-13	-12	-18.3	-12.2
15-Nov	-12	-13	-13	-14	-15	-16	-18	-18	-19	-18	-15	-15	-11	-9	-7	-8	-9	-9	-7	-7	-3	-4	-4	-4	-11.2	-3.0
16-Nov	-3	-3	-4	-5	-6	-7	-9	-10	-11	-9	-8	-7	-7	-5	-5	-5	-6	-9	-11	-13	-13	-12	-12	-13	-8.0	-3.4
17-Nov	-14	-14	-14	-15	-15	-16	-17	-16	-17	-15	-12	-10	-9	-7	-4	-2	-4	-4	-3	-2	3	3	3	3	-8.2	3.1
18-Nov	3	2	2	1	0	0	-1	-2	-4	-3	-3	-2	-2	-2	-3	-3	-3	-3	-3	-4	-4	-4	-4	-4	-1.9	3.2
19-Nov	-4	-4	-4	-4	-4	-4	-5	-5	-5	-5	-5	-4	-3	-3	-3	-3	-5	-6	-7	-7	-7	-7	-7	-8	-4.9	-2.6
20-Nov	-7	-6	-6	-6	-5	-5	-5	-5	-5	-4	-3	-2	-1	0	0	0	0	0	0	1	1	2	4	3	-1.9	4.3
21-Nov	3	4	3	4	3	2	1	1	0	0	-1	-1	-1	-1	-1	-2	-1	-1	-1	-1	-1	-1	-1	-1	0.1	3.8
22-Nov	-2	-2	-3	-3	-4	-5	-6	-7	-7	-8	-8	-7	-7	-8	-8	-8	-8	-10	-10	-12	-13	-15	-17	-17	-8.1	-1.9
23-Nov	-16	-17	-17	-17	-16	-17	-16	-14	-15	-14	-13	-11	-10	-9	-8	-7	-7	-6	-6	-7	-7	-7	-8	-9	-11.5	-6.0
24-Nov	-10	-9	-10	-11	-14	-15	-15	-14	-15	-14	-13	-11	-9	-8	-7	-9	-9	-8	-8	-8	-9	-9	-10	-10	-10.6	-6.9
25-Nov	-10	-10	-11	-11	-11	-12	-12	-12	-12	-12	-11	-10	-10	-10	-10	-10	-11	-11	-11	-11	-12	-12	-12	-11	-11.0	-9.6
26-Nov	-11	-11	-11	-11	-12	-14	-16	-17	-18	-17	-16	-15	-14	-13	-13	-15	-17	-17	-15	-11	-11	-12	-13	-13	-13.9	-10.7
27-Nov	-14	-14	-15	-15	-16	-17	-17	-17	-18	-18	-18	-18	-18	-18	-19	-19	-19	-19	-19	-19	-20	-20	-20	-20	-17.8	-14.0
28-Nov	-21	-21	-21	-21	-22	-22	-22	-23	-23	-23	-23	-22	-22	-22	-22	-23	-24	-25	-28	-29	-30	-31	-31	-32	-24.3	-20.6
29-Nov	-32	-33	-33	-34	-34	-33	-34	-34	-34	-34	-32	-30	-28	-27	-27	-27	-28	-29	-28	-29	-28	-29	-28	-27	-30.5	-26.8
30-Nov	-29	-30	-31	-31	-30	-30	-30	-31	-31	-31	-30	-28	-26	-24	-23	-24	-25	-25	-25	-25	-23	-24	-24	-25	-27.4	-23.4
	-9.7	-10.0	-10.4	-10.8	-11.2	-11.7	-12.1	-12.3	-12.5	-11.8	-10.8	-9.5	-8.4	-7.7	-7.1	-7.3	-8.2	-9.1	-9.5	-9.6	-9.5	-9.8	-10.0	-10.3	Diurnal Average	
	4.8	5.0	5.4	5.4	5.0	3.6	3.1	2.8	4.7	4.1	3.9	4.8	5.3	6.6	8.5	8.7	7.5	7.0	6.1	6.5	5.2	4.8	5.1	4.9	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - November 2014



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - November 2014

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 Spd	27	29	29	27	28	27	27	29	24	18	18	15	10	14	9	12	11	8	19	14	14	18	10	12	17.7	29.2
Dir	250	259	241	250	262	262	244	239	236	235	226	224	215	194	194	238	265	272	260	236	272	263	222	218	244.0	240.6
2 Spd	16	17	15	13	12	10	13	10	11	12	11	11	24	18	11	3	3	3	7	10	16	12	12	14	10.0	23.8
Dir	184	185	198	206	200	215	208	218	199	190	187	182	182	200	226	287	270	248	174	270	280	276	250	251	212.3	182.2
3 Spd	18	18	20	23	23	22	20	12	11	11	11	15	6	7	10	7	7	6	6	8	6	9	9	11	6.3	23.5
Dir	263	262	256	261	253	258	270	241	225	248	231	226	210	154	142	135	98	109	95	68	77	80	109	131	232.6	260.8
4 Spd	9	8	9	7	6	5	1	8	11	12	15	16	23	22	23	22	16	16	14	16	17	19	23	20	10.6	23.2
Dir	115	48	29	28	17	359	31	230	233	215	210	236	260	260	257	255	257	257	246	249	250	258	251	248	251.9	259.7
5 Spd	23	15	17	14	15	16	17	15	13	13	15	15	13	23	19	16	13	11	13	11	17	18	24	19	9.5	24.5
Dir	246	259	256	254	265	256	259	262	259	253	245	258	251	243	235	190	136	121	117	114	142	134	145	148	219.1	145.3
6 Spd	14	12	16	16	9	5	6	5	9	8	2	4	5	3	5	13	13	12	11	22	20	17	16	6	3.1	21.6
Dir	147	164	168	171	179	253	261	289	1	37	73	206	220	172	184	270	280	280	292	327	339	346	352	355	286.3	327.4
7 Spd	11	9	13	10	11	12	13	11	10	11	8	8	10	9	11	10	10	10	9	9	9	10	12	14	9.3	13.6
Dir	322	332	343	353	354	8	10	353	360	0	14	34	38	35	35	34	42	54	52	44	42	40	34	30	17.8	30.3
8 Spd	15	14	17	16	15	17	17	18	18	16	17	16	14	13	11	10	11	13	10	9	9	10	11	11	13.7	18.2
Dir	31	26	23	21	18	16	14	16	17	20	22	31	27	25	26	22	24	34	29	22	19	15	15	24	22.1	17.3
9 Spd	11	9	10	13	13	10	10	10	10	10	9	6	8	8	7	4	5	7	2	2	11	13	11	10	6.9	13.5
Dir	22	19	15	12	20	27	25	356	346	349	351	311	251	261	238	336	13	354	350	343	351	32	27	27	2.1	20.3
10 Spd	11	16	20	16	16	15	12	7	8	4	6	10	13	15	17	12	11	4	5	4	3	3	1	1	8.6	19.8
Dir	26	13	19	23	21	27	22	7	354	305	330	26	4	340	346	349	20	286	282	292	329	347	359	41	4.2	18.9
11 Spd	0	1	0	1	5	4	1	4	11	5	16	9	3	5	24	26	27	26	26	26	25	24	25	22	12.5	26.6
Dir	231	285	290	52	146	24	329	321	28	36	23	41	33	25	19	26	30	16	7	19	20	20	25	9	20.8	30.0
12 Spd	20	24	20	17	16	15	8	12	14	14	16	16	16	15	15	12	10	16	18	13	14	17	17	8	1.9	24.3
Dir	19	28	14	8	357	117	171	242	199	201	135	159	165	206	252	225	197	291	300	314	18	41	11	3	343.1	28.0
13 Spd	18	18	18	19	19	19	21	22	21	21	19	18	18	17	22	25	26	23	19	20	21	21	23	22	18.5	25.6
Dir	244	224	204	190	200	218	230	206	218	249	206	191	183	217	263	266	257	242	231	226	212	221	269	258	227.8	257.5
14 Spd	23	23	17	17	17	14	17	19	20	19	20	19	19	18	20	19	20	19	18	18	12	18	23	23	16.0	23.0
Dir	264	274	234	215	208	204	189	193	174	165	179	173	169	159	138	180	178	189	209	226	203	180	196	192	194.4	192.0
15 Spd	26	27	29	29	28	27	25	26	24	23	21	21	22	31	27	19	18	15	19	18	15	17	3	11	17.5	30.6
Dir	222	225	228	218	215	220	222	206	207	224	245	255	200	223	226	111	116	165	259	293	290	225	201	311	222.7	223.4
16 Spd	20	21	18	15	4	9	15	5	15	17	18	18	22	17	15	7	10	12	17	16	20	22	24	22	0.4	23.7
Dir	21	20	73	60	29	224	65	73	181	161	179	184	132	120	124	221	320	17	351	315	290	266	261	240	181.2	260.7
17 Spd	25	24	24	23	25	20	24	24	24	23	16	17	24	25	27	25	20	23	15	4	20	23	30	31	19.8	31.3
Dir	242	235	217	236	228	233	212	227	228	237	203	203	187	183	191	237	220	217	154	130	252	251	250	290	225.1	289.8
18 Spd	38	27	24	40	39	40	38	13	24	24	27	28	26	21	22	21	22	26	27	25	21	19	18	20	19.9	40.0
Dir	305	283	289	319	316	307	312	353	85	53	24	345	330	8	17	9	24	30	18	31	21	10	22	35	350.8	319.3
19 Spd	20	20	19	21	19	18	2	12	23	23	23	22	21	24	24	24	25	21	25	27	30	30	24	25	8.6	29.7
Dir	38	56	57	56	54	59	64	182	158	180	191	193	169	135	184	236	260	238	257	250	254	253	227	228	206.1	254.4
20 Spd	26	29	27	25	27	27	26	28	27	25	24	25	27	25	24	23	22	22	25	22	21	27	38	31	24.2	37.7
Dir	214	217	221	223	198	195	203	199	193	197	196	192	197	194	179	190	201	225	206	202	214	237	251	267	209.8	251.3
21 Spd	30	30	24	23	12	21	23	27	21	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	30.4
Dir	263	279	277	349	33	39	30	18	46	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	263.0
22 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	--	--

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - November 2014

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
23 Spd	8	5	1	10	11	15	10	9	10	8	5	1	1	2	2	3	2	6	10	8	11	13	12	11	2.8	14.5
Dir	306	189	237	241	267	262	263	234	231	234	220	229	232	214	235	207	205	209	231	179	61	53	30	39	246.8	262.0
24 Spd	9	9	11	9	9	12	11	11	11	6	1	3	7	6	4	4	3	3	N	N	N	N	N	N	2.2	11.7
Dir	34	36	37	36	251	263	265	252	241	220	253	261	230	176	344	37	23	28	N	N	N	N	N	N	289.0	263.0
25 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	--	--
26 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	--	--
27 Spd	N	N	N	N	N	N	N	N	N	N	N	N	0	0	0	0	0	1	0	0	0	5	2	1	--	4.9
Dir	N	N	N	N	N	N	N	N	N	N	N	N	32	32	33	37	39	37	37	38	37	34	35	31	--	34.4
28 Spd	1	1	0	0	2	6	10	15	16	11	4	13	14	12	9	16	12	2	2	1	N	N	N	N	6.8	16.0
Dir	29	30	24	20	5	3	7	8	3	349	342	349	341	340	328	325	313	300	230	226	N	N	N	N	345.3	325.2
29 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	--	--
30 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	--	--
Spd	7.0	6.4	5.2	4.9	5.5	5.6	5.7	6.0	5.1	6.2	5.4	5.7	6.4	6.1	4.4	4.3	2.4	3.1	4.5	4.4	5.4	4.6	5.1	5.3	Diurnal Average	
Dir	273.2	274.0	261.4	279.6	266.3	265.6	262.3	245.1	211.0	219.8	208.0	217.2	201.6	203.4	220.5	252.0	268.5	261.4	268.3	285.5	292.8	281.0	272.3	274.6		
Spd	37.6	29.8	29.2	40.0	38.8	39.7	37.8	28.8	26.6	25.4	26.9	28.3	26.7	30.6	26.6	26.1	26.6	26.5	27.3	27.0	29.7	29.5	37.7	31.3	Diurnal Maximum	
Dir	304.7	279.3	240.6	319.3	316.3	306.5	312.4	239.0	193.1	196.5	24.3	345.0	197.3	223.4	225.6	26.3	30.0	16.3	18.2	250.0	254.4	252.8	251.3	289.8		

Maximum Speed Value: 40 km/h on Nov 18 04:00
Maximum Daily Speed Average: 24.2 km/h on Nov 18
Maximum Diurnal Speed Average: 7.0 km/h at hour 1

Minimum Speed Value: 0 km/h on Nov 27 13:00
Minimum Daily Speed Average: 0.4 km/h on Nov 24
Minimum Diurnal Speed Average: 2.4 km/h at hour 17

Monthly Average Velocity: 4.57 km/h 251.71 deg

Speed Percentiles: $P_1 = 0.4$ $P_{10} = 3.9$ $Q_1 = 9.6$ Median = 15.2 $Q_3 = 21.4$ $P_{90} = 25.4$ $P_{99} = 37.6$

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

Hours in Service:	720
Hours of Data:	563
Hours of Missing Data:	157
Percent Operational Time:	78.2

N - Not Valid

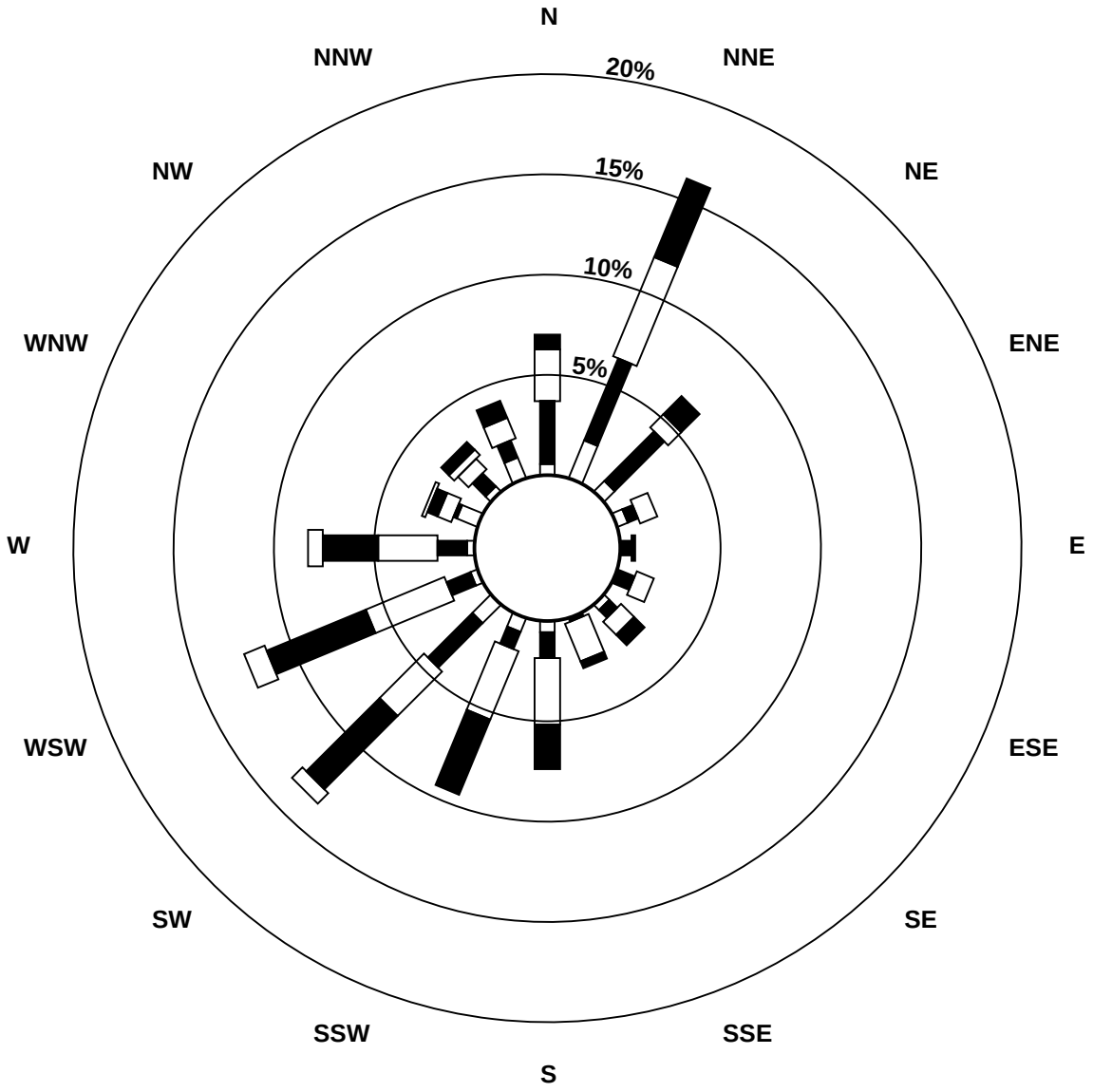
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	9	27	39	21	1	0	97
NorthEast	26	29	26	17	0	0	98
East	1	8	2	1	0	0	12
SouthEast	2	4	15	4	0	0	25
South	3	8	36	30	0	0	77
SouthWest	11	20	38	49	6	0	124
West	9	13	36	35	10	0	103
NorthWest	6	8	6	2	2	3	27
Total	67	117	198	159	19	3	563

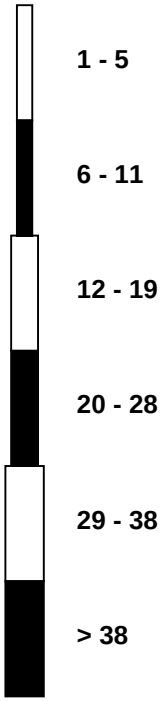
Wind Rose

Wind Speed (WS) (km/h)

Smoky Heights - November 2014



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - November 2014

Maximum Speed: 40 km/h on Nov 18 04:00

Maximum Daily Speed Average: 27.7 km/h on Nov 18

Minimum Speed: 0 km/h on Nov 27 13:00

Minimum Daily Speed Average: 7.4 km/h on Nov 28

Maximum Diurnal Speed Average: 18.0 km/h at hour 1

Minimum Diurnal Speed Average: 13.4 km/h at hour 18

Monthly Average Speed: 15.99 km/h

Percentiles: $P_1 = 0.4$ $P_{10} = 5.1$ $Q_1 = 10.3$ Median = 16.2 $Q_3 = 22.2$ $P_{90} = 26.1$ $P_{99} = 37.9$

Hours in Service:	720
Hours of Data:	563
Hours of Missing Data:	157
Percent Operational Time:	78.2

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-Nov	28	29	29	28	28	27	28	29	24	19	18	15	11	15	9	12	11	8	19	16	14	18	13	13	19.3	29.4
2-Nov	17	17	15	14	12	11	13	10	12	12	11	12	24	19	11	6	3	5	8	11	16	12	12	14	12.4	24.4
3-Nov	18	18	20	23	23	22	20	14	11	11	11	15	7	7	10	8	7	6	6	9	7	9	11	11	12.7	23.5
4-Nov	10	10	9	7	6	5	3	9	11	12	15	16	23	23	23	22	16	16	15	16	17	19	23	20	14.5	23.3
5-Nov	23	15	17	14	15	16	17	15	13	13	15	15	13	24	20	17	15	11	13	12	17	18	25	19	16.3	24.6
6-Nov	14	13	16	16	9	5	6	5	9	8	3	4	6	3	5	14	13	12	13	22	20	18	16	7	10.7	21.7
7-Nov	11	10	14	11	12	12	13	11	10	11	8	8	10	9	11	10	10	10	9	9	9	10	12	14	10.6	13.9
8-Nov	15	14	17	16	15	17	17	18	18	16	17	16	14	13	12	10	11	13	10	9	9	10	12	11	13.8	18.3
9-Nov	11	9	11	13	14	10	10	10	10	10	9	6	8	9	7	6	6	7	5	5	12	13	11	10	9.2	13.6
10-Nov	11	16	20	16	16	15	13	7	8	7	8	10	13	16	18	14	12	5	5	4	3	4	1	1	10.1	19.8
11-Nov	1	1	1	1	6	4	1	7	11	5	18	10	3	5	25	26	27	27	26	26	25	24	25	23	13.7	26.7
12-Nov	22	24	21	20	20	18	13	13	14	16	17	17	17	17	17	17	17	17	19	18	19	19	18	18	18.0	24.4
13-Nov	19	19	19	19	19	21	21	22	21	22	19	18	18	17	22	25	26	23	19	21	22	21	23	23	20.8	25.6
14-Nov	23	23	19	18	17	14	17	20	20	20	20	19	19	19	20	20	20	20	19	19	18	19	24	23	19.6	23.5
15-Nov	27	27	29	29	28	28	25	27	24	23	21	22	23	31	28	21	21	20	22	22	25	21	19	18	24.2	30.8
16-Nov	21	21	20	17	14	13	16	15	15	18	19	19	22	17	15	14	12	15	19	17	21	22	24	23	17.9	23.8
17-Nov	25	24	24	24	26	21	25	24	25	24	16	18	24	26	27	26	22	23	22	25	25	26	30	33	24.4	33.0
18-Nov	38	29	27	40	39	40	38	28	24	27	27	29	27	23	23	21	23	26	27	26	22	20	20	21	27.7	40.2
19-Nov	20	20	20	21	20	19	18	19	24	24	23	22	22	25	25	25	25	21	25	27	30	30	24	26	23.1	29.7
20-Nov	26	29	27	25	27	27	26	28	27	25	25	25	27	25	24	23	24	23	25	24	24	27	38	31	26.4	37.9
21-Nov	30	31	25	24	22	22	23	28	23	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	30.8
22-Nov	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
23-Nov	9	13	1	11	11	15	11	9	10	9	5	1	1	2	2	3	3	7	11	10	12	13	12	11	7.9	14.6
24-Nov	9	9	11	10	10	12	11	12	12	7	1	2	9	7	5	4	3	3	N	N	N	N	N	N	7.6	11.7
25-Nov	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
26-Nov	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
27-Nov	N	N	N	N	N	N	N	N	N	N	N	N	0	0	0	0	0	1	0	0	0	5	2	1	--	4.9
28-Nov	1	1	0	0	2	6	10	16	16	11	4	13	14	12	9	16	12	2	2	1	N	N	N	N	7.4	16.1
29-Nov	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
30-Nov	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
	18.0	17.6	17.1	17.3	17.2	16.7	16.5	16.4	16.4	15.2	14.5	14.5	14.8	15.2	15.3	15.0	14.1	13.4	14.8	15.1	16.7	17.2	18.0	16.8	Diurnal Average	
	37.9	30.8	29.4	40.2	39.0	40.0	38.0	29.0	26.8	27.2	27.1	29.1	26.9	30.8	27.8	26.1	26.7	26.6	27.4	27.2	29.7	29.7	37.9	33.0	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 - November 2014

Maximum Value: 90.3 deg on Nov 9 19:00

Minimum Value: 2.4 deg on Nov 3 04:00

Percentiles: P_1 = 3.3 P_{10} = 4.7 Q_1 = 6.2 Median = 9.9 Q_3 = 17.5 P_{90} = 33.9 P_{99} = 80.7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Nov	15	6	6	15	8	8	11	8	13	17	8	13	22	24	15	13	7	6	12	29	17	7	34	18	33.8
2-Nov	11	4	9	9	6	13	10	13	15	6	5	19	13	20	14	57	24	71	40	16	8	15	7	6	71.2
3-Nov	4	3	3	2	4	7	4	33	19	13	10	7	25	16	12	22	8	9	16	28	15	14	29	9	33.4
4-Nov	29	35	7	8	13	19	68	37	9	7	6	11	4	5	5	4	4	5	9	6	7	6	5	8	67.8
5-Nov	3	7	5	5	5	3	3	6	6	6	7	8	13	10	15	15	24	6	7	8	10	5	6	5	24.4
6-Nov	7	7	4	4	9	22	21	14	14	14	89	29	15	35	27	10	7	7	28	6	7	10	11	37	89.0
7-Nov	23	15	15	18	12	10	12	12	14	14	13	14	13	10	10	11	7	8	8	8	6	6	4	9	23.4
8-Nov	5	5	5	4	5	5	5	5	6	6	5	5	6	5	6	7	7	6	8	5	6	12	6	5	11.9
9-Nov	4	8	14	8	8	6	7	13	9	10	11	28	8	10	12	50	12	14	90	82	13	9	7	8	90.3
10-Nov	7	9	5	7	7	6	11	21	10	52	49	14	16	21	15	29	18	16	17	12	41	47	28	37	52.4
11-Nov	79	11	64	55	47	27	49	58	10	14	33	29	4	11	8	4	6	5	8	12	6	13	6	15	78.8
12-Nov	30	6	8	37	37	34	54	17	19	34	21	25	28	30	35	46	57	24	14	52	43	29	26	77	76.6
13-Nov	16	13	14	15	14	18	11	5	9	13	12	15	12	19	6	4	3	6	13	10	13	9	11	7	19.1
14-Nov	5	4	26	18	15	11	9	17	12	19	11	9	13	17	12	19	11	14	16	20	53	23	12	5	52.8
15-Nov	13	8	10	6	9	6	7	6	4	7	13	13	16	6	20	27	35	45	35	41	59	38	85	55	85.1
16-Nov	21	6	30	31	84	53	15	78	15	16	14	21	6	8	9	59	33	31	31	21	10	5	6	15	84.2
17-Nov	12	12	4	8	6	22	5	8	9	11	14	14	5	5	4	12	29	15	46	86	37	30	10	20	85.6
18-Nov	7	19	29	6	6	6	5	66	9	30	7	13	10	25	14	14	14	6	5	9	11	15	28	17	65.6
19-Nov	14	15	15	8	16	19	88	52	8	16	6	9	20	11	16	20	6	16	8	7	3	7	10	10	88.0
20-Nov	6	5	6	7	5	5	7	6	6	5	6	7	7	7	7	9	25	15	10	22	32	11	6	4	32.1
21-Nov	4	15	18	19	67	17	15	14	24	8	5	5	5	4	5	4	5	5	5	5	4	5	6	6	67.3
22-Nov	6	5	5	5	6	6	9	10	9	8	7	7	12	18	13	8	8	8	6	8	82	24	16	13	81.6
23-Nov	31	76	11	15	6	6	9	6	4	7	5	9	8	14	7	11	13	18	18	45	31	10	7	7	76.0
24-Nov	5	5	6	9	33	5	6	20	13	13	30	14	38	50	44	6	5	5	8	5	5	6	11	7	49.8
25-Nov	12	12	8	9	8	8	10	14	26	7	30	62	67	35	15	24	21	12	9	8	6	7	17	26	66.9
26-Nov	18	65	38	13	6	10	7	11	23	7	6	7	14	49	32	29	26	56	5	5	3	4	4	5	64.9
27-Nov	4	4	4	4	5	5	4	5	4	5	4	5	4	4	3	4	5	4	5	4	4	4	3	5	5.1
28-Nov	5	4	7	10	9	10	8	8	11	10	8	9	7	7	7	7	8	9	23	9	10	7	5	11	22.6
29-Nov	10	10	7	6	4	6	6	5	7	11	22	5	16	7	8	29	55	8	13	14	17	28	18	34	55.4
30-Nov	51	10	45	44	26	15	9	10	5	7	10	9	7	13	4	18	10	17	10	25	22	9	20	9	50.7
	78.8	76.0	64.3	55.4	84.2	53.4	88.0	77.7	26.3	52.4	89.0	62.3	66.9	49.8	44.3	59.0	56.6	71.2	90.3	85.6	81.6	46.8	85.1	76.6	

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.1 ppb on Nov 12 23:00 Maximum Daily Average: 1.9 ppb on Nov 20

Minimum Value: 0 ppb on Nov 4 16:00 Minimum Daily Average: 0.1 ppb on Nov 7
Maximum Diurnal Average: 0.8 ppb at hour 15 Minimum Diurnal Average: 0.5 ppb at hour 4
Monthly Average: 0.61 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.2 Median = 0.5 Q_3 = 0.7 P_{90} = 1.3 P_{99} = 3.0

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
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-Nov	0	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-Nov	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0.3	1.0
3-Nov	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
4-Nov	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
5-Nov	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	0.9
6-Nov	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
7-Nov	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
8-Nov	0	0	0	0	A	0	0	0	1	1	2	1	1	2	2	1	1	0	0	0	0	1	1	1	0.7	2.3
9-Nov	1	1	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.6	1.1
10-Nov	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
11-Nov	0	0	0	0	A	0	0	0	0	0	1	2	3	2	1	1	1	0	0	0	0	0	0	0	0.6	2.8
12-Nov	0	0	0	0	A	0	0	0	0	0	1	1	2	3	3	3	2	2	2	2	2	3	5	3	1.6	5.1
13-Nov	3	3	3	2	A	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.6	3.0
14-Nov	1	1	1	1	A	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.5	0.7
15-Nov	0	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.6	0.9
16-Nov	1	1	1	1	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0
17-Nov	1	2	2	2	A	2	2	1	1	1	1	1	1	0	C	C	C	0	0	0	0	0	0	0	0.9	2.2
18-Nov	0	1	1	1	A	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0.7	1.3
19-Nov	0	0	0	0	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0.9	2.4
20-Nov	2	2	2	2	A	2	2	1	1	1	1	1	2	1	3	4	4	3	2	2	2	1	1	1	1.9	4.2
21-Nov	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	1.2
22-Nov	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0.4	0.7
23-Nov	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1
24-Nov	1	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	1	1	1	1	0.5	0.7
25-Nov	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0	0.6	0.8
26-Nov	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	0	0	0	1	1	1	1	0	0	0.4	1.0
27-Nov	0	0	0	0	A	2	1	1	2	1	1	0	0	1	1	0	0	0	1	2	2	1	2	2	0.8	1.9
28-Nov	1	1	1	1	A	0	0	1	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0.6	1.1
29-Nov	0	0	0	0	A	0	1	0	0	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0.5	1.2
30-Nov	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0.5	0.8
	0.5	0.5	0.5	0.5	--	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.6	Diurnal Average	
	3.0	2.9	2.8	2.3	--	2.2	2.4	1.8	1.9	2.2	1.7	1.6	2.8	2.7	3.2	4.2	4.0	3.0	2.2	2.2	2.5	3.0	5.1	3.4	Diurnal Maximum	

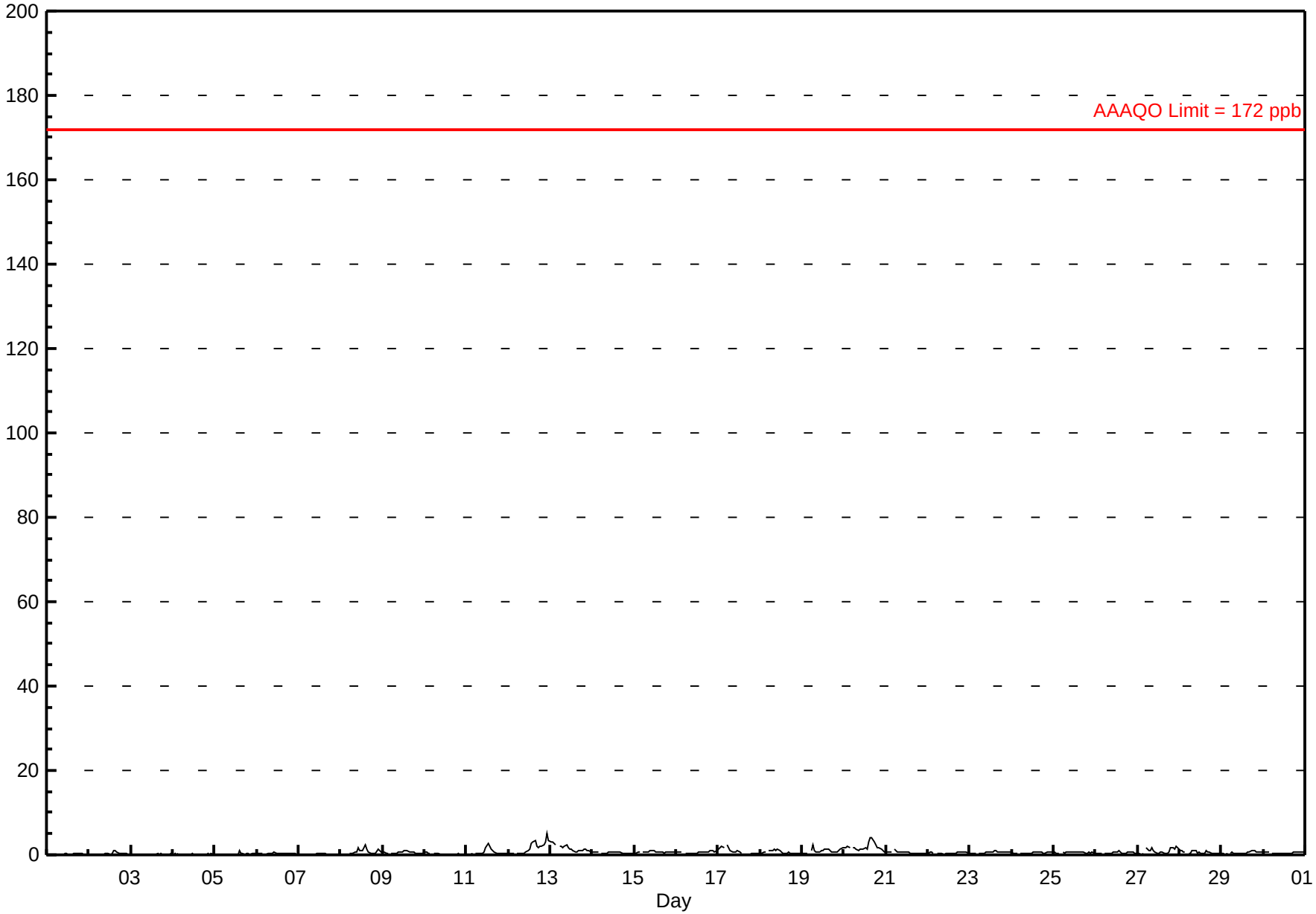
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - November 2014

Maximum Value: 6.4 ppb on Nov 12 23:00

Maximum Daily Average: 2.3 ppb on Nov 20

Minimum Value: 0 ppb on Nov 10 17:00

Minimum Daily Average: 0.2 ppb on Nov 7

Maximum Diurnal Average: 1.2 ppb at hour 15

Minimum Diurnal Average: 0.7 ppb at hour 3

Monthly Average: 0.85 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.3 Median = 0.6 Q_3 = 1.0 P_{90} = 1.9 P_{99} = 4.0

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
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-Nov	0	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
2-Nov	0	0	0	0	A	0	0	0	0	1	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0.4	1.4
3-Nov	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.3	0.8
4-Nov	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.3	0.7
5-Nov	0	0	0	0	A	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0.4	3.6
6-Nov	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	1.0
7-Nov	0	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
8-Nov	0	0	0	0	A	0	0	1	1	1	2	1	1	2	3	2	1	1	1	1	0	3	2	1	1.1	3.5
9-Nov	2	2	1	0	A	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	2.0
10-Nov	1	1	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
11-Nov	0	0	0	1	A	0	0	0	0	0	1	3	3	3	2	2	1	1	0	0	1	1	1	0	1.0	3.4
12-Nov	1	1	0	1	A	0	0	0	0	1	1	1	2	3	3	4	3	2	2	2	3	4	6	4	2.1	6.4
13-Nov	6	4	3	3	A	2	2	2	2	3	2	2	2	1	1	1	1	2	1	2	2	1	1	1	2.0	5.5
14-Nov	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.6	0.8
15-Nov	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
16-Nov	1	1	1	1	A	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	1	1	1	0.8	1.5
17-Nov	2	2	3	2	A	3	2	1	1	1	1	2	1	1	C	C	C	0	0	0	0	1	1	0	1.2	2.6
18-Nov	1	1	1	1	A	1	1	1	2	1	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0.8	1.8
19-Nov	0	0	0	0	A	2	3	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	2	2	1.3	3.2
20-Nov	2	2	2	3	A	2	2	2	1	2	2	2	2	2	4	5	5	4	3	2	2	2	1	1	2.3	5.3
21-Nov	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.7	2.2
22-Nov	1	1	1	1	A	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	0.5	0.8
23-Nov	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
24-Nov	1	1	0	0	A	0	3	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	3.1
25-Nov	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
26-Nov	0	0	0	0	A	0	0	0	0	1	1	1	1	2	1	1	1	0	1	1	1	1	1	0	0.6	1.8
27-Nov	0	0	0	1	A	3	2	3	3	2	1	1	1	1	1	0	0	1	1	2	2	2	2	2	1.4	3.2
28-Nov	2	2	1	1	A	1	1	1	4	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1.0	3.7
29-Nov	0	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0.8	1.9
30-Nov	1	1	1	1	A	1	1	0	0	0	0	2	0	0	0	0	1	1	1	1	1	1	1	1	0.7	1.6
	0.8	0.8	0.7	0.7	--	0.9	0.9	0.7	0.8	0.8	0.8	0.9	0.9	1.0	1.2	1.1	0.9	0.8	0.7	0.8	0.8	0.9	0.9	0.8	Diurnal Average	
	5.5	3.8	3.2	2.7	--	3.2	3.2	2.8	3.7	3.1	2.2	2.8	3.4	3.1	4.0	5.1	5.3	4.1	2.7	2.5	3.4	4.1	6.4	4.0	Diurnal Maximum	

C - Calibration

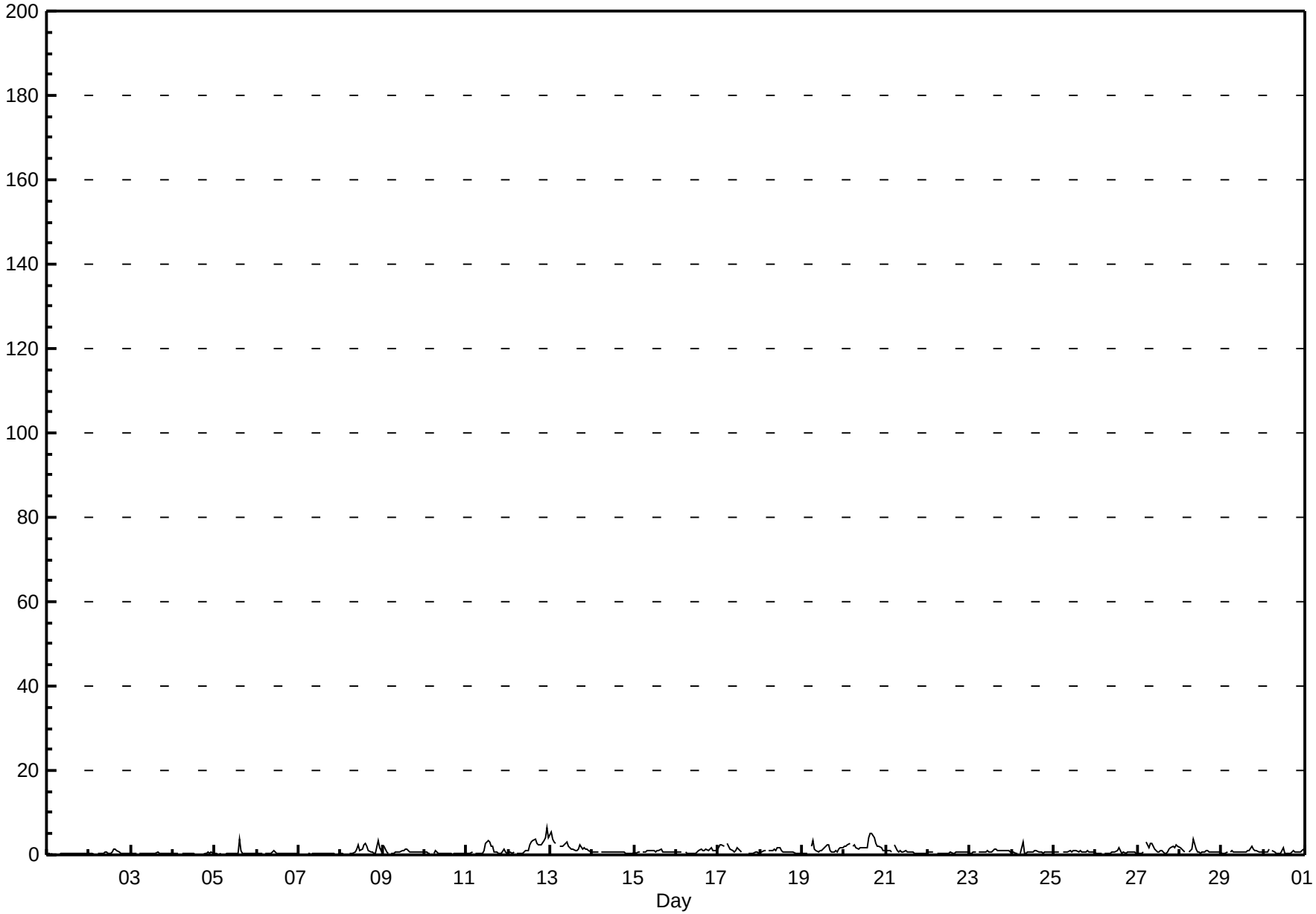
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

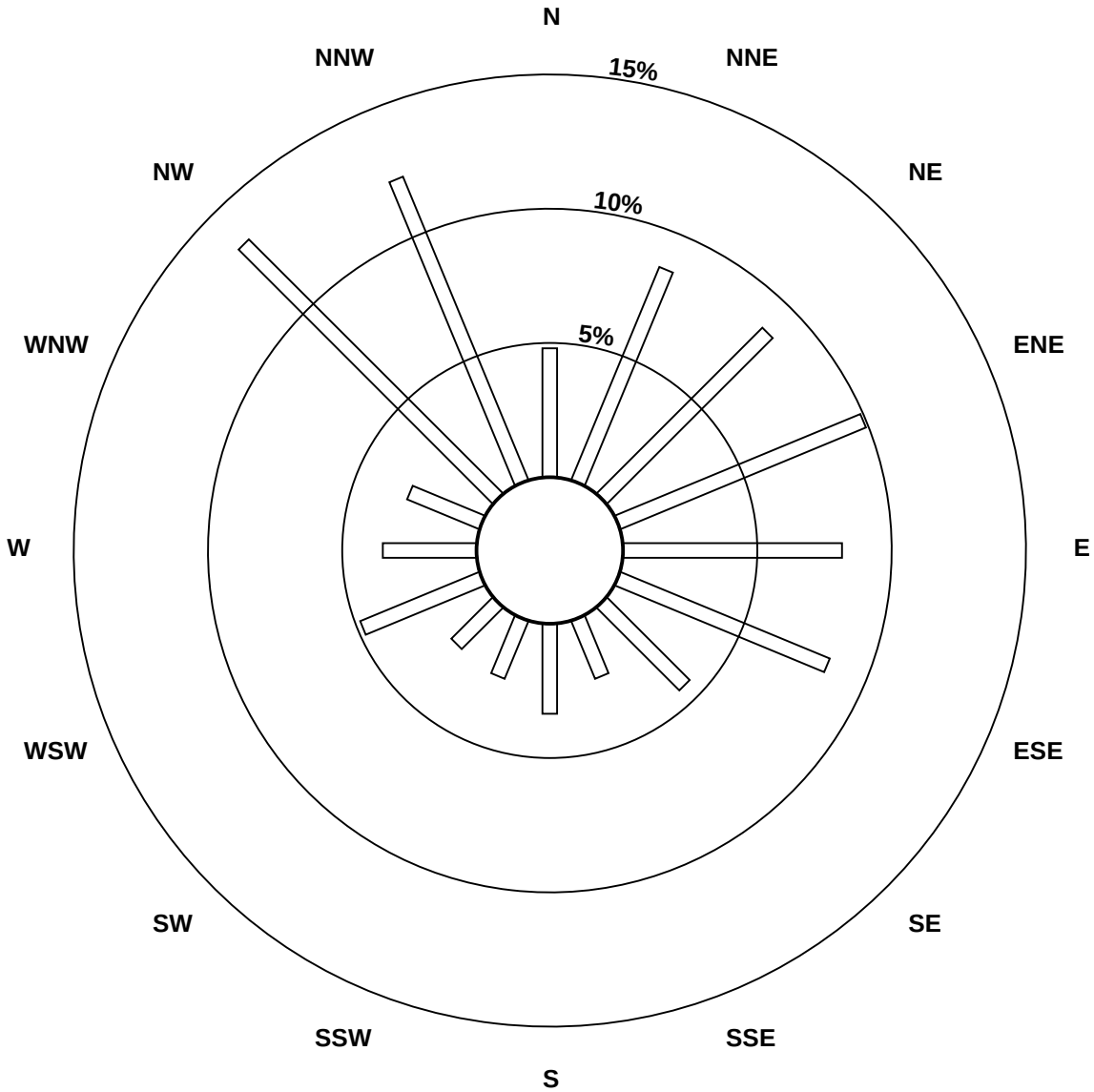
Beaverlodge - November 2014



Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - November 2014



Pollutant Classes (ppb)

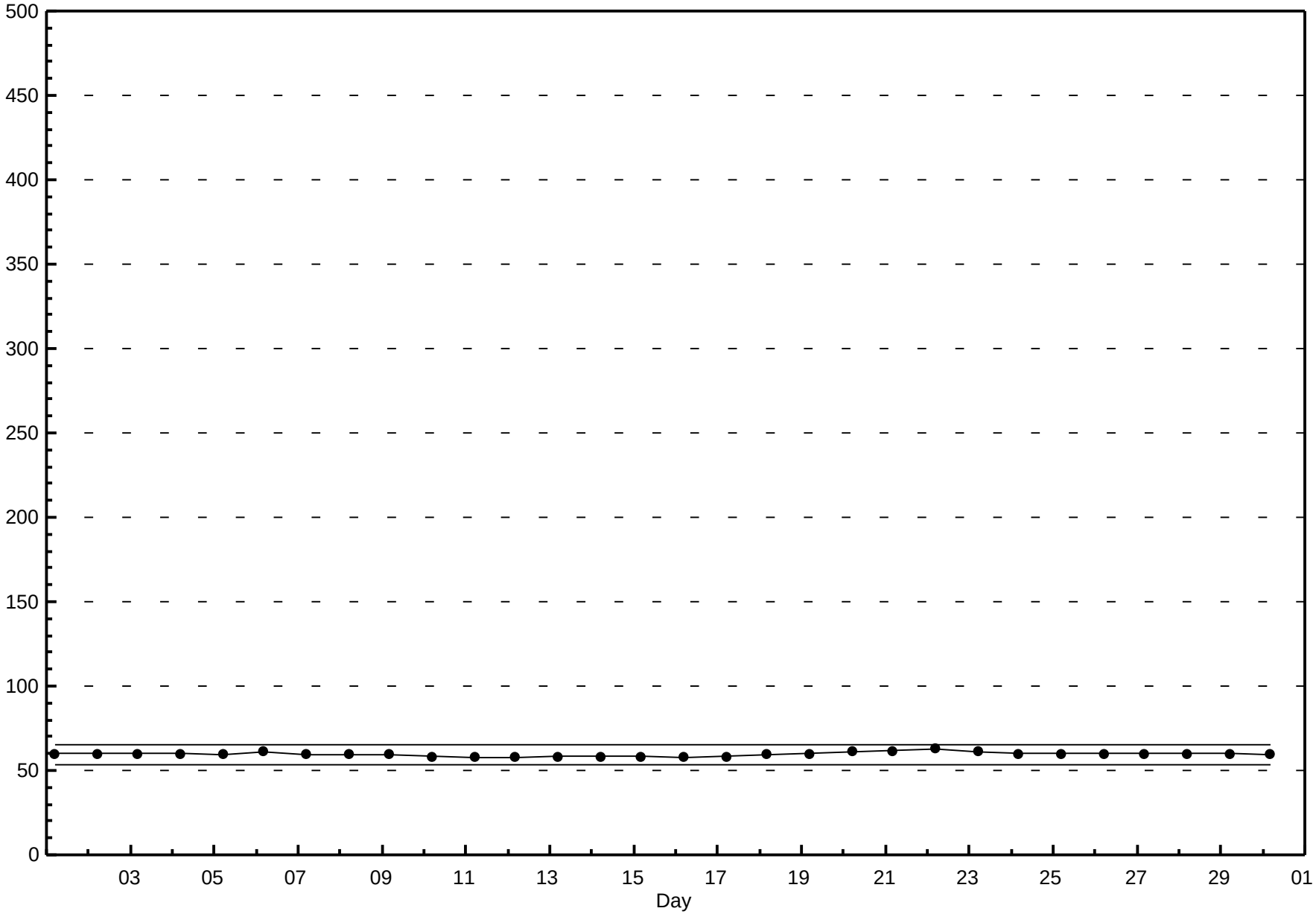
- 0 - 10
- 11 - 20
- 21 - 60
- 61 - 110
- 111 - 172
- > 172

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 28.9 ppb on Nov 13 00:00
Maximum Daily Average: 19.2 ppb on Nov 12

Minimum Value: 0 ppb on Nov 4 15:00
Maximum Diurnal Average: 9.5 ppb at hour 19
Monthly Average: 7.31 ppb

Minimum Daily Average: 0.9 ppb on Nov 27
Minimum Diurnal Average: 5.6 ppb at hour 3
Percentiles: P_1 = 0.7 P_{10} = 1.6 Q_1 = 3.0 Median = 5.0 Q_3 = 10.0 P_{90} = 16.6 P_{99} = 25.8

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	4	4	3	3	A	6	4	3	7	5	4	2	2	2	2	2	3	5	6	4	3	4	5	3	3.8	6.6
2-Nov	4	5	5	5	A	7	7	7	4	4	4	4	2	2	5	8	8	7	8	4	1	2	1	1	4.5	8.1
3-Nov	1	1	1	0	A	3	4	6	3	4	4	3	3	2	2	2	2	5	4	5	3	3	3	3	3.0	6.2
4-Nov	3	3	3	4	A	6	7	9	6	5	3	1	1	1	0	1	1	2	3	1	3	3	3	3	3.2	9.1
5-Nov	2	2	1	1	A	4	3	5	10	5	4	2	2	2	2	2	4	4	4	2	2	3	3	3	3.0	9.9
6-Nov	3	3	4	4	A	5	4	8	8	5	7	12	8	7	10	6	9	5	7	7	4	3	2	2	5.7	11.5
7-Nov	1	2	2	1	A	3	3	2	2	2	2	3	4	5	5	3	3	4	6	7	7	5	4	4	3.4	7.5
8-Nov	5	6	4	4	A	4	2	2	2	1	1	1	2	1	1	2	5	8	7	5	6	5	5	6	3.7	7.7
9-Nov	4	3	3	3	A	3	3	4	9	4	3	3	4	3	4	3	5	4	6	5	5	5	5	3	4.0	8.8
10-Nov	2	2	1	1	A	2	6	1	2	2	1	1	1	3	5	5	1	1	1	2	6	3	3	3	2.4	6.2
11-Nov	5	5	9	5	A	11	13	14	18	16	11	12	12	11	11	17	19	21	13	12	23	21	20	19	13.9	22.8
12-Nov	25	29	27	25	A	24	20	14	19	15	10	10	9	8	8	11	21	27	25	23	22	18	22	29	19.2	28.9
13-Nov	24	21	11	15	A	20	23	27	16	11	17	16	8	9	9	13	16	15	13	11	6	5	5	7	13.8	27.1
14-Nov	5	5	6	5	A	5	12	10	8	6	7	5	4	5	4	5	6	4	7	5	8	7	5	8	6.2	11.9
15-Nov	9	6	6	6	A	8	17	11	10	6	5	5	4	2	4	4	2	3	4	7	4	3	3	2	5.7	16.6
16-Nov	3	2	2	5	A	3	3	10	6	4	4	5	8	14	10	8	13	15	14	12	12	13	13	11	8.2	15.4
17-Nov	11	12	15	13	A	10	7	6	11	12	C	C	C	C	3	3	8	5	4	4	6	6	6	3	7.6	14.7
18-Nov	3	4	5	2	A	4	4	5	8	5	4	4	3	3	3	4	4	4	4	11	16	11	6	3	5.1	15.6
19-Nov	2	2	3	5	A	8	6	8	12	9	9	14	15	14	14	16	18	20	28	26	25	24	25	14	13.8	27.7
20-Nov	18	18	13	17	A	18	20	21	21	16	18	7	10	10	10	9	13	13	12	13	7	2	1	1	12.5	21.5
21-Nov	3	2	2	2	A	4	5	6	7	11	6	5	7	7	5	7	12	5	9	2	3	3	2	2	5.1	11.7
22-Nov	2	2	2	3	A	4	3	3	2	2	2	2	1	2	2	2	3	4	3	4	4	4	4	3	2.8	4.4
23-Nov	3	3	5	5	A	6	6	9	13	14	22	17	14	15	13	15	21	21	25	26	25	24	14	10	14.2	25.7
24-Nov	10	8	9	9	A	9	17	13	8	6	6	14	17	22	25	15	4	10	9	19	23	20	16	9	13.0	25.3
25-Nov	6	6	5	6	A	9	8	6	5	19	5	4	5	6	6	8	9	8	8	15	21	22	21	14	9.6	22.1
26-Nov	10	14	11	12	A	13	15	14	13	10	9	15	12	14	20	9	9	11	18	16	10	8	7	1	11.9	20.4
27-Nov	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6
28-Nov	1	1	1	1	A	3	2	7	5	3	3	4	2	3	4	5	10	7	25	12	15	11	20	11	6.8	24.9
29-Nov	6	5	7	12	A	9	10	11	7	5	3	2	8	8	14	11	17	5	4	7	6	4	5	6	7.4	17.2
30-Nov	4	4	4	3	A	3	4	5	7	6	4	3	4	3	4	8	7	9	8	6	5	3	4	2	4.8	8.8
	6.0	6.0	5.6	6.0	--	7.2	8.0	8.2	8.4	7.2	6.1	6.1	5.9	6.4	7.0	6.9	8.5	8.4	9.5	9.2	9.4	8.2	7.8	6.3	Diurnal Average	
	25.4	28.6	27.0	24.5	--	23.8	23.3	27.1	21.0	18.9	21.6	16.9	17.2	22.0	25.3	16.7	21.4	27.1	27.7	26.1	25.2	24.3	25.1	28.9	Diurnal Maximum	

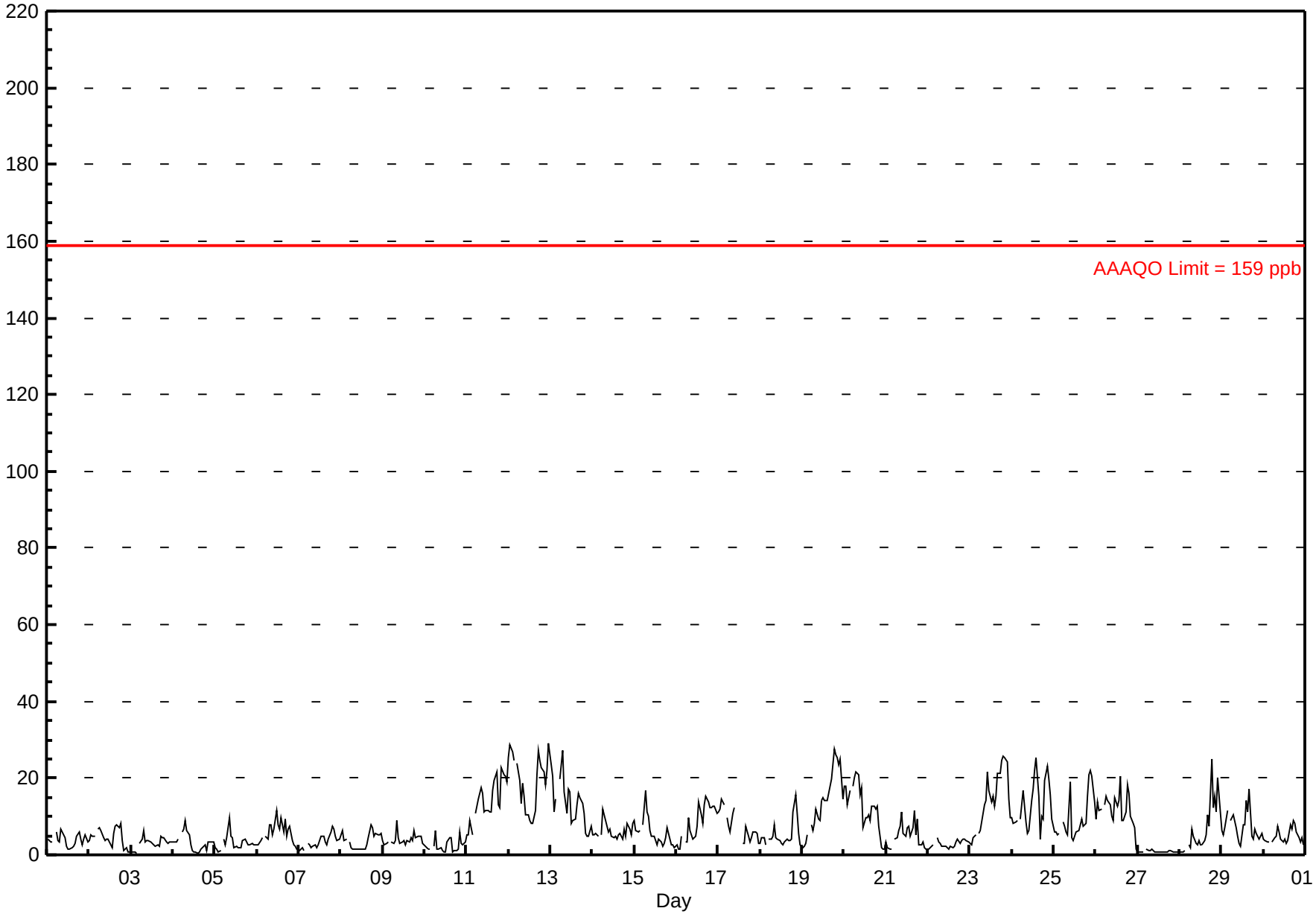
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - November 2014

Maximum Value: 331.5 ppb on Nov 10 07:00

Maximum Daily Average: 31.3 ppb on Nov 24

Minimum Value: 1 ppb on Nov 27 03:00

Minimum Daily Average: 1.5 ppb on Nov 27

Maximum Diurnal Average: 32.4 ppb at hour 7

Minimum Diurnal Average: 8.1 ppb at hour 3

Monthly Average: 12.60 ppb

Percentiles: P_1 = 1.1 P_{10} = 2.8 Q_1 = 4.6 Median = 7.8 Q_3 = 16.1 P_{90} = 25.7 P_{99} = 40.7

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	6	5	6	4	A	8	5	5	8	8	6	5	2	3	3	4	5	8	9	8	5	5	7	5	5.7	9.1
2-Nov	7	6	6	5	A	9	9	13	5	5	6	6	3	3	7	10	10	17	12	9	3	4	4	3	7.1	16.5
3-Nov	3	2	3	1	A	5	10	11	9	5	6	5	4	4	4	6	3	6	6	6	4	4	4	4	4.9	10.7
4-Nov	4	4	4	5	A	9	9	13	12	7	5	2	2	2	1	3	5	3	4	3	6	5	5	9	5.2	13.1
5-Nov	3	2	1	3	A	6	4	12	22	8	9	4	3	3	3	3	6	6	5	5	3	5	3	3	5.4	21.5
6-Nov	3	3	5	9	A	8	5	18	16	14	18	21	11	8	16	11	17	8	13	14	6	3	4	3	10.2	20.7
7-Nov	1	2	2	2	A	5	5	3	3	5	3	3	4	6	6	5	4	5	7	8	8	6	5	5	4.5	7.9
8-Nov	8	10	5	6	A	6	2	3	3	2	3	2	2	2	2	5	8	9	8	7	8	7	7	8	5.3	10.4
9-Nov	6	4	4	5	A	5	5	6	12	7	4	4	5	3	5	5	5	4	8	6	6	6	7	4	5.5	12.4
10-Nov	3	3	2	2	A	5	331	4	7	5	3	1	3	6	7	8	3	3	2	5	7	5	3	6	18.4	331.5
11-Nov	6	6	12	8	A	12	16	20	31	24	16	16	13	13	14	22	26	28	16	17	43	38	36	31	20.2	42.5
12-Nov	40	52	33	38	A	31	22	16	22	19	14	12	11	10	9	19	26	29	27	28	28	20	37	36	25.2	51.6
13-Nov	31	27	20	30	A	25	34	35	25	17	34	23	17	12	11	19	23	26	26	29	10	7	7	9	21.6	34.9
14-Nov	8	6	7	5	A	6	18	15	10	8	8	8	7	6	6	7	9	8	17	22	24	12	9	16	10.5	24.4
15-Nov	11	9	18	10	A	10	34	18	25	12	7	6	9	6	15	5	3	5	15	17	6	4	3	3	10.9	34.2
16-Nov	4	3	4	6	A	6	6	33	14	8	11	10	12	16	21	13	17	18	17	17	21	36	18	13	14.0	35.8
17-Nov	14	17	16	15	A	13	9	8	15	18	C	C	C	C	9	8	30	10	6	7	8	8	7	4	11.6	30.5
18-Nov	4	5	5	3	A	5	5	7	12	6	7	6	4	4	5	5	12	7	7	25	20	14	7	3	7.8	25.5
19-Nov	2	3	4	14	A	25	11	19	19	11	11	22	17	16	18	18	20	26	30	37	30	29	32	21	18.8	37.4
20-Nov	22	29	23	24	A	24	26	26	26	18	23	13	13	12	13	11	22	16	17	16	14	6	3	6	17.5	28.7
21-Nov	11	3	2	3	A	7	18	14	11	15	9	7	11	12	8	15	19	13	15	3	4	5	2	2	9.1	19.4
22-Nov	2	2	2	4	A	7	5	4	3	3	3	3	2	3	3	3	5	5	4	5	6	5	5	6	3.9	7.0
23-Nov	4	3	9	7	A	9	10	17	27	23	29	21	16	18	18	19	24	30	27	28	26	25	30	19	19.2	30.4
24-Nov	21	9	12	10	A	11	317	25	15	7	20	19	24	27	34	25	8	12	11	27	27	23	21	16	31.3	317.0
25-Nov	7	7	7	8	A	12	11	8	7	154	6	5	7	7	8	11	13	9	9	25	30	26	27	20	18.5	154.3
26-Nov	12	21	15	14	A	19	20	16	20	19	11	26	33	31	28	11	10	15	24	21	14	9	9	5	17.6	33.3
27-Nov	2	1	1	1	A	3	2	2	2	1	1	2	1	2	1	1	1	1	2	1	1	1	1	1	1.5	2.7
28-Nov	1	1	1	2	A	5	4	189	163	4	4	7	3	5	5	11	15	12	37	19	25	16	41	18	25.6	188.9
29-Nov	9	7	9	15	A	10	12	12	10	10	5	3	27	19	25	36	44	9	6	11	8	6	6	6	13.3	43.6
30-Nov	5	4	4	4	A	5	5	8	13	10	5	5	10	5	6	24	8	10	12	7	6	6	8	4	7.6	23.8
	8.7	8.6	8.1	8.8	--	10.3	32.4	19.3	18.9	15.1	9.9	9.1	9.6	9.1	10.4	11.4	13.4	12.0	13.3	14.5	13.6	11.5	12.0	9.6	Diurnal Average	
	40.2	51.6	33.3	37.6	--	31.0	331.5	188.9	163.4	154.3	34.1	26.3	33.3	31.5	33.6	35.5	43.6	30.1	37.2	37.4	42.5	38.0	41.1	35.9	Diurnal Maximum	

C - Calibration

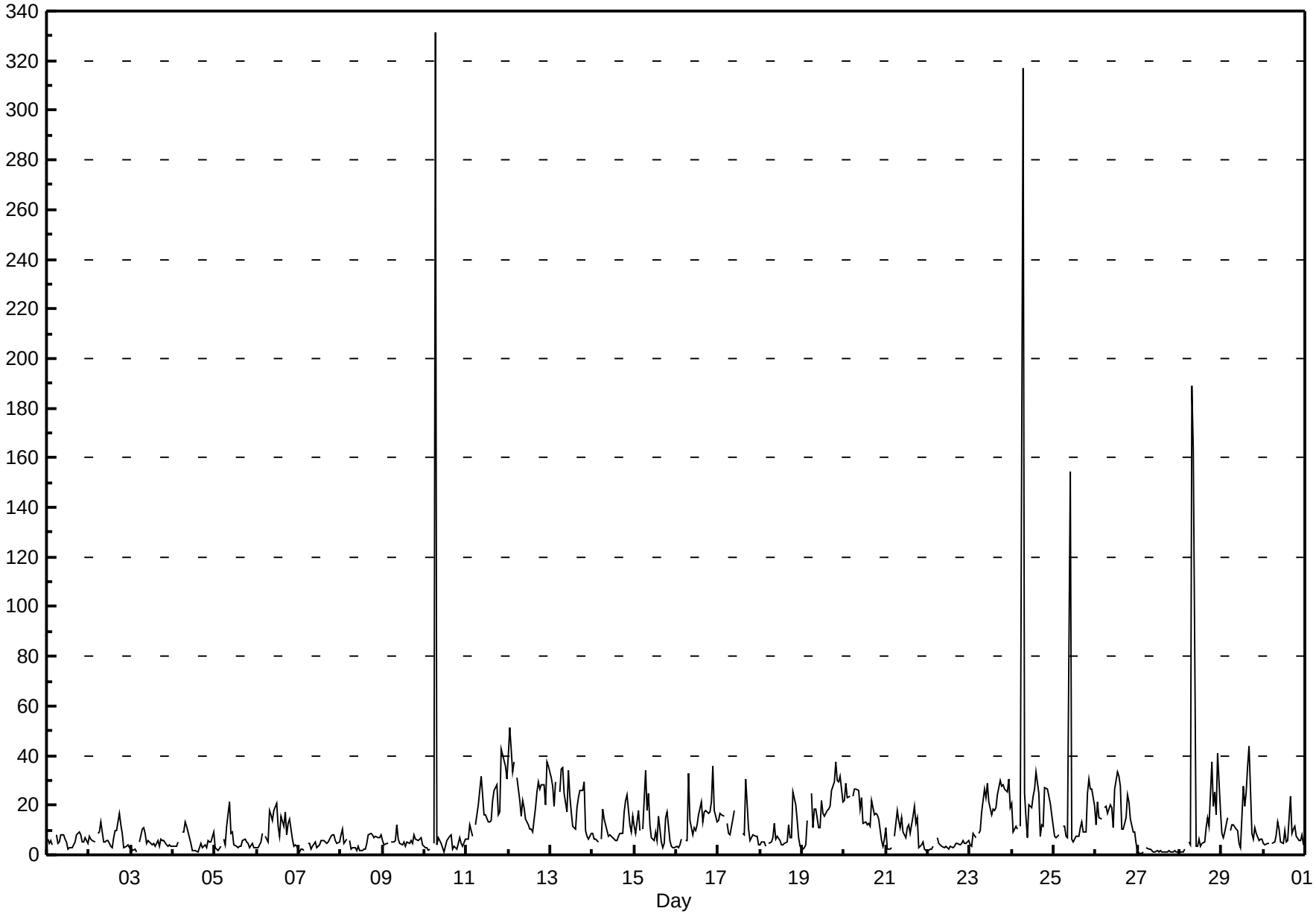
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

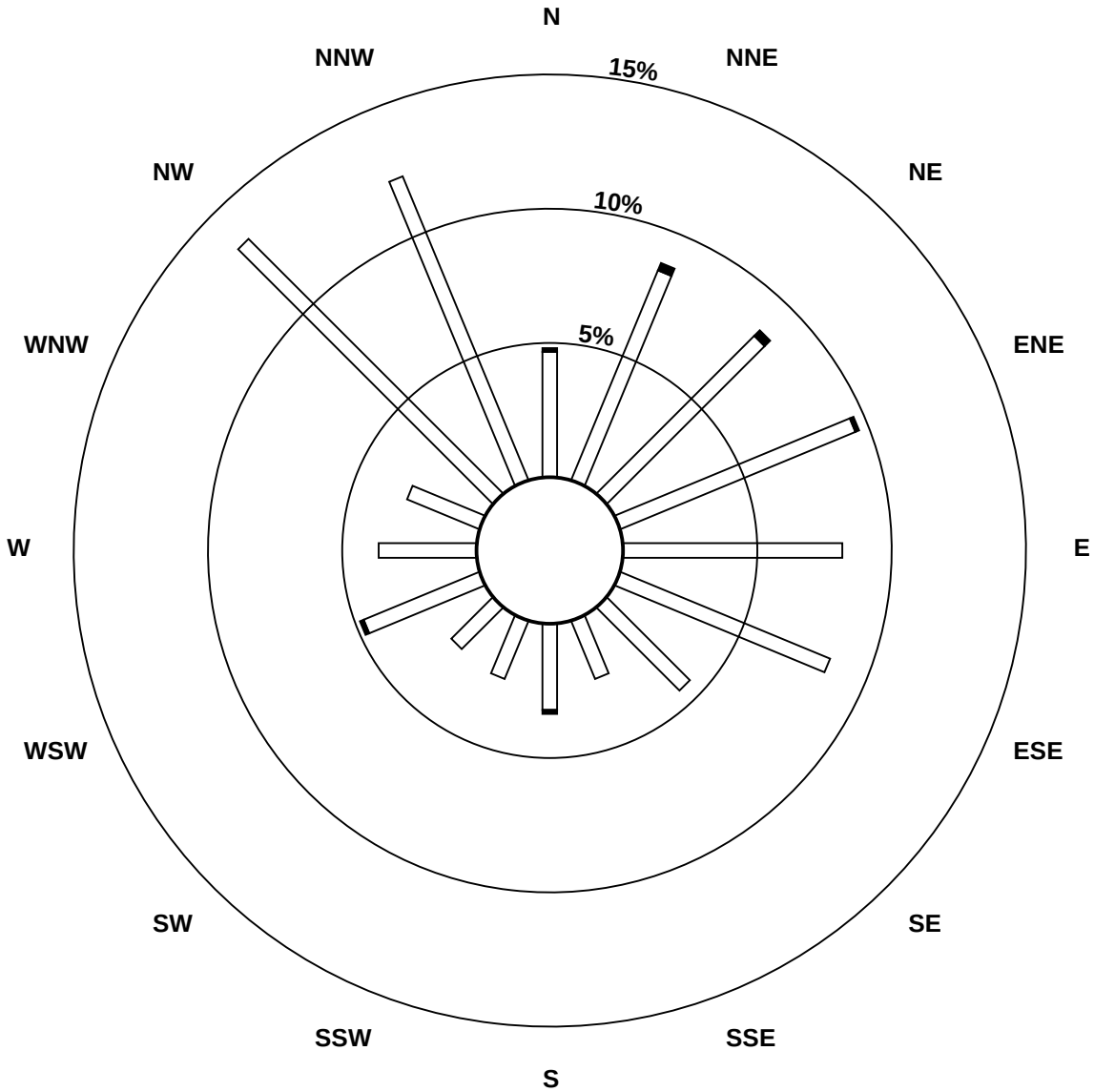
Beaverlodge - November 2014



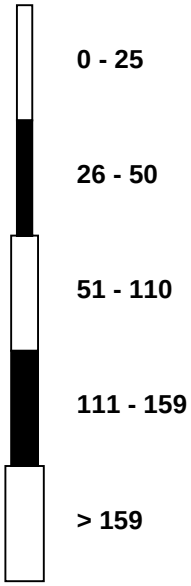
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - November 2014



Pollutant Classes (ppb)

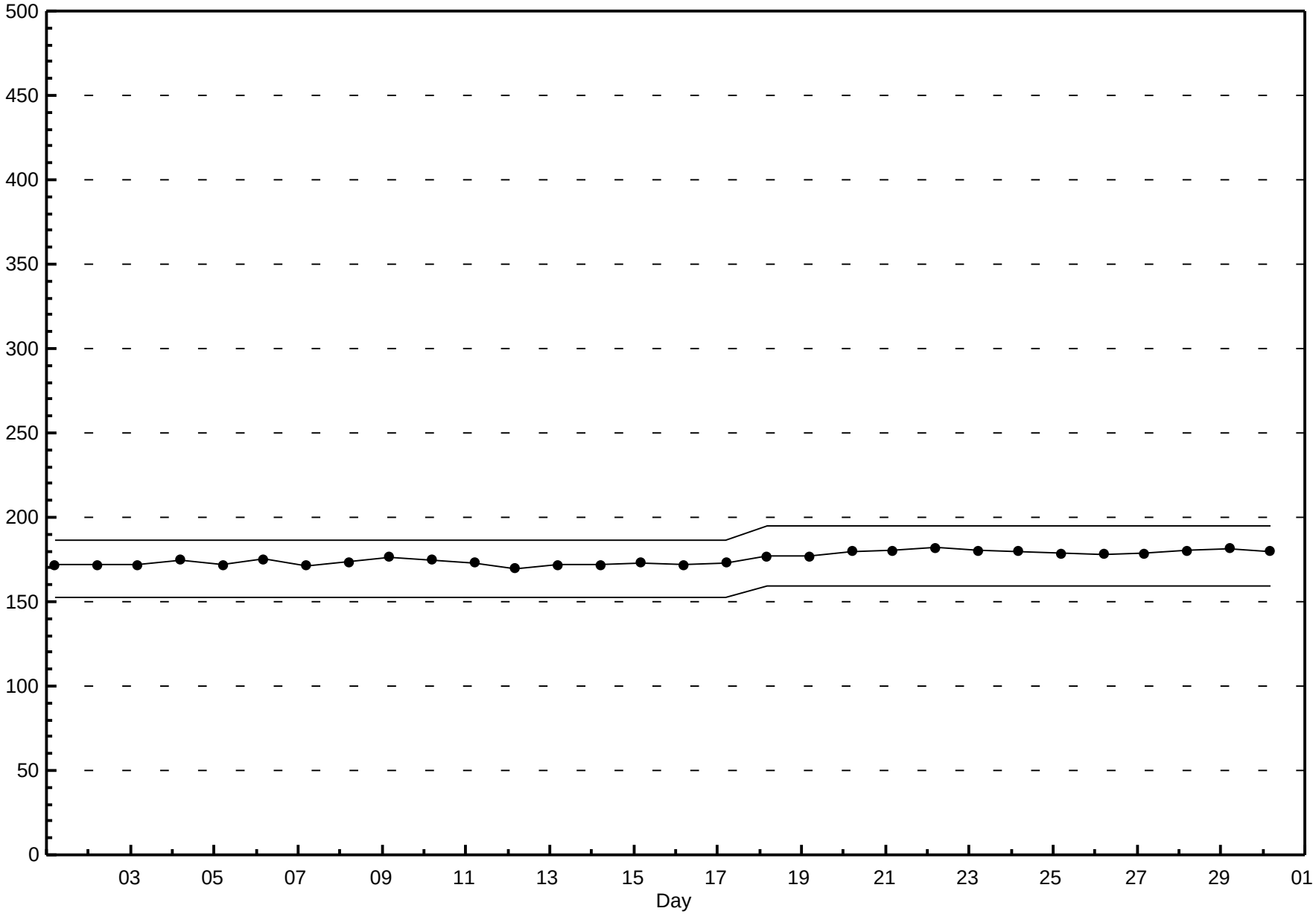


Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 42.7 ppb on Nov 13 12:00
Maximum Daily Average: 9.5 ppb on Nov 13

Minimum Value: 0 ppb on Nov 1 01:00
Maximum Diurnal Average: 6.3 ppb at hour 12
Monthly Average: 2.18 ppb

Minimum Daily Average: 0.1 ppb on Nov 27
Minimum Diurnal Average: 0.2 ppb at hour 3
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.2 $Q_3 = 1.5$ $P_{90} = 7.8$ $P_{99} = 28.8$

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	0	0	0	0	A	0	0	0	1	2	4	2	1	1	1	1	1	0	0	0	0	0	0	0	0.6	4.0
2-Nov	0	0	0	0	A	0	0	0	0	1	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0.5	2.1
3-Nov	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.4
4-Nov	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	0.9
5-Nov	0	0	0	0	A	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
6-Nov	0	0	0	0	A	0	0	1	1	0	1	3	2	1	1	0	0	0	0	0	0	0	0	0	0.4	2.8
7-Nov	0	0	0	0	A	0	0	0	0	1	1	1	2	2	1	1	0	0	0	0	0	0	0	0	0.4	2.3
8-Nov	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.3	0.9
9-Nov	0	0	0	0	A	0	0	0	1	1	1	2	3	2	2	1	1	0	0	0	0	0	0	0	0.6	2.6
10-Nov	0	0	0	0	A	0	7	0	0	0	1	0	0	3	3	2	0	0	0	0	0	0	0	0	0.8	7.4
11-Nov	0	0	0	0	A	0	0	0	1	9	11	16	16	14	11	13	6	1	0	0	2	1	1	0	4.5	15.7
12-Nov	5	7	3	5	A	2	1	0	3	10	9	14	13	12	9	9	13	8	1	3	3	0	13	25	7.3	24.8
13-Nov	10	3	0	1	A	1	11	24	3	8	41	43	16	17	15	15	10	2	0	0	0	0	0	0	9.5	42.7
14-Nov	0	0	0	0	A	0	0	0	0	1	3	3	3	3	2	1	1	0	0	0	0	0	0	0	0.7	2.8
15-Nov	0	0	0	0	A	0	3	0	0	1	2	2	2	1	2	1	0	0	0	0	0	0	0	0	0.6	2.6
16-Nov	0	0	0	0	A	0	0	0	0	1	2	3	6	13	8	3	2	0	0	0	0	0	0	0	1.7	12.9
17-Nov	0	0	0	0	A	0	0	0	1	3	C	C	C	C	1	1	1	0	0	0	0	0	0	0	0.4	2.5
18-Nov	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	0.9
19-Nov	0	0	0	0	A	0	0	0	0	2	4	14	14	13	11	8	4	1	1	8	1	0	2	0	3.6	14.4
20-Nov	1	4	2	2	A	4	13	18	14	3	12	3	5	4	5	2	3	0	0	0	0	0	0	0	4.1	17.7
21-Nov	0	0	0	0	A	0	0	0	0	2	1	2	4	5	2	2	3	0	1	0	0	0	0	0	1.0	4.8
22-Nov	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	0.9
23-Nov	0	0	0	0	A	0	0	0	4	8	34	16	10	11	9	9	11	9	14	14	10	11	8	0	7.8	34.3
24-Nov	0	0	0	0	A	0	18	3	0	1	4	14	22	27	35	6	0	0	0	1	1	0	0	0	5.7	35.3
25-Nov	0	0	0	0	A	0	0	1	0	5	2	2	4	6	5	4	2	0	0	2	13	12	10	1	3.0	12.5
26-Nov	0	1	0	0	A	0	2	1	2	3	7	31	27	29	30	2	1	0	1	0	0	0	0	0	6.0	31.0
27-Nov	0	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
28-Nov	0	0	0	0	A	0	0	4	13	0	1	2	2	2	2	2	1	0	2	0	0	0	1	0	1.5	12.5
29-Nov	0	0	0	0	A	0	0	0	0	1	1	2	9	8	12	5	7	0	0	0	0	0	0	0	1.9	12.5
30-Nov	0	0	0	0	A	0	0	0	0	1	1	2	3	2	2	2	0	0	0	0	0	0	0	0	0.6	2.6
	0.6	0.5	0.2	0.3	--	0.3	1.9	1.8	1.5	2.2	5.1	6.3	5.8	6.2	5.8	3.1	2.2	0.8	0.7	1.0	1.0	0.9	1.2	0.9	Diurnal Average	
	10.0	7.3	3.2	4.8	--	4.1	18.1	24.3	13.9	9.7	40.6	42.7	26.9	29.1	35.3	15.0	12.9	9.2	14.0	14.0	12.5	12.4	13.2	24.8	Diurnal Maximum	

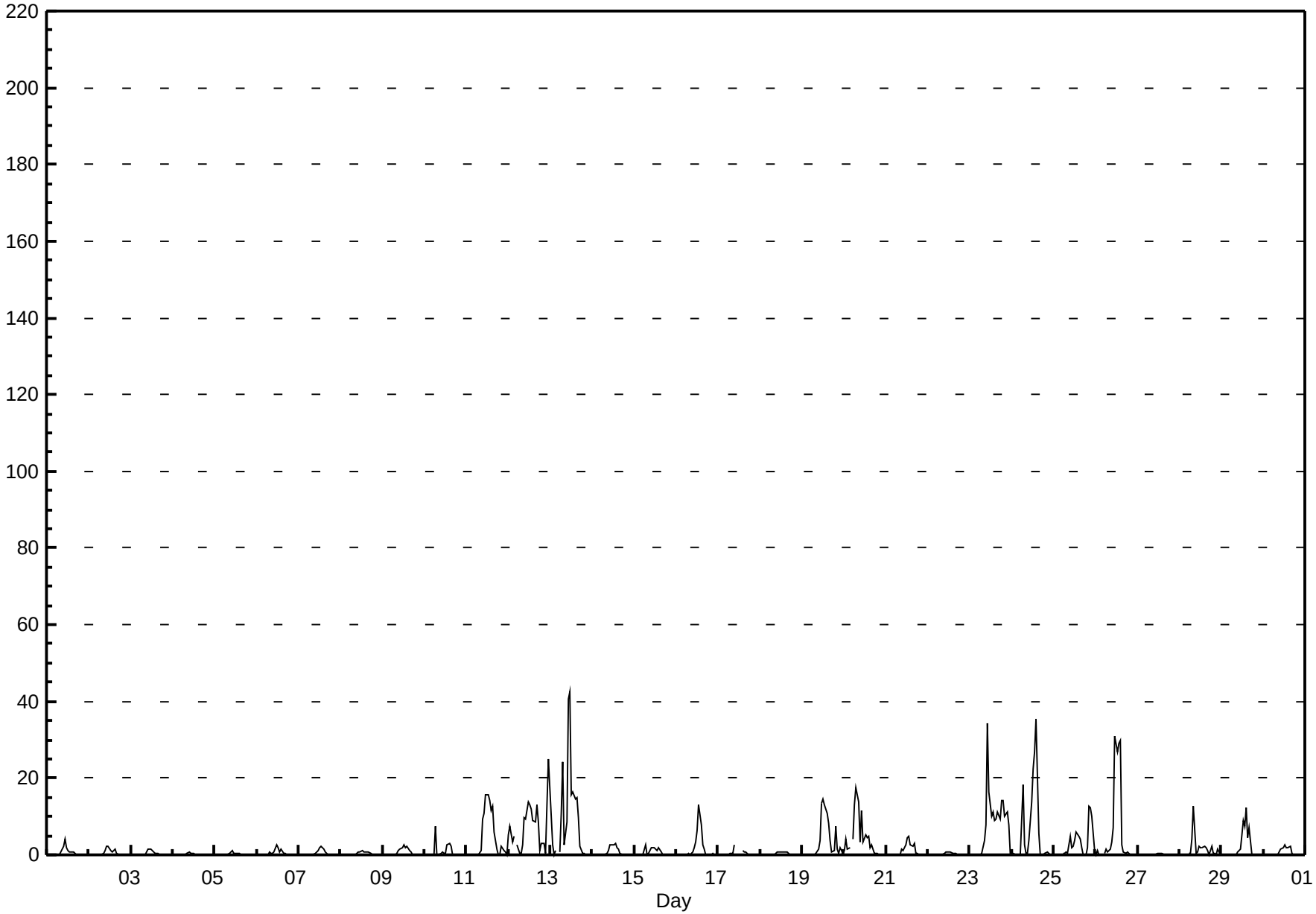
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - November 2014

Maximum Value: 431.4 ppb on Nov 24 07:00

Maximum Daily Average: 30.8 ppb on Nov 24

Minimum Value: 0 ppb on Nov 17 19:00

Minimum Daily Average: 0.4 ppb on Nov 27

Maximum Diurnal Average: 23.7 ppb at hour 7

Minimum Diurnal Average: 0.9 ppb at hour 3

Monthly Average: 7.05 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.7 $Q_3 = 3.9$ $P_{90} = 16.8$ $P_{99} = 95.6$

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	0	0	0	0	A	0	0	0	2	4	7	5	2	2	2	2	2	0	0	1	1	0	0	0	1.3	7.2
2-Nov	0	0	0	0	A	0	0	1	1	2	3	4	2	2	1	2	1	1	0	0	0	0	0	0	0.9	3.8
3-Nov	1	0	0	0	A	0	0	0	1	1	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0.6	2.3
4-Nov	0	0	0	0	A	0	0	1	1	2	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0.5	2.2
5-Nov	0	0	0	0	A	0	0	0	1	1	2	1	1	1	1	0	1	1	0	0	0	0	0	0	0.5	2.2
6-Nov	0	0	0	0	A	0	1	6	4	3	5	9	4	1	7	2	1	0	0	0	0	0	0	0	1.9	8.7
7-Nov	0	0	0	0	A	0	0	0	1	2	1	2	2	3	2	1	1	0	0	0	0	0	0	0	0.7	2.7
8-Nov	0	1	0	0	A	0	0	0	1	0	3	1	1	1	1	1	2	1	0	0	0	0	0	0	0.7	2.5
9-Nov	0	0	0	0	A	0	0	0	1	1	2	2	4	2	4	2	1	0	0	0	0	1	0	0	1.0	4.0
10-Nov	0	0	0	0	A	1	136	1	1	2	3	1	2	5	5	4	1	0	0	0	0	0	0	0	7.1	136.0
11-Nov	0	0	0	0	A	0	0	1	3	17	17	25	18	18	17	19	9	5	1	1	25	17	7	1	8.8	25.3
12-Nov	33	45	9	31	A	9	2	2	8	16	13	18	16	14	12	14	24	14	3	12	10	2	60	53	18.2	59.7
13-Nov	38	10	3	12	A	5	60	57	9	20	110	70	46	24	21	25	19	14	4	3	0	0	0	0	23.9	110.0
14-Nov	0	0	0	0	A	0	1	0	1	2	4	5	5	4	3	2	1	0	0	0	1	0	0	1	1.4	4.7
15-Nov	0	0	0	0	A	0	15	0	3	3	3	2	6	3	9	1	0	0	0	0	0	0	0	0	2.1	14.8
16-Nov	0	0	0	0	A	0	0	3	0	1	8	8	11	15	21	4	4	1	0	0	1	6	0	0	3.7	21.1
17-Nov	0	1	0	0	A	0	0	1	1	7	C	C	C	C	7	2	4	0	0	0	0	0	0	0	1.3	6.6
18-Nov	0	0	0	0	A	0	0	0	1	1	2	1	1	1	1	1	1	0	0	1	0	0	0	0	0.5	1.8
19-Nov	0	0	0	0	A	1	0	0	2	3	5	27	18	16	17	9	8	9	3	52	7	4	8	3	8.4	52.0
20-Nov	9	38	9	9	A	17	49	33	26	8	19	7	8	7	7	3	21	1	13	1	1	1	0	0	12.4	48.8
21-Nov	0	0	0	0	A	0	2	0	1	2	2	5	8	11	4	6	8	1	3	0	0	0	0	0	2.4	11.4
22-Nov	0	1	0	0	A	0	0	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	0.5	1.3
23-Nov	0	0	0	0	A	1	0	3	31	22	54	27	14	15	16	14	22	25	27	25	16	17	35	7	16.2	53.8
24-Nov	3	2	0	0	A	0	431	24	4	1	34	33	47	49	49	19	0	0	0	3	4	2	0	0	30.8	431.4
25-Nov	0	0	0	0	A	2	1	3	1	66	2	3	6	8	7	9	5	0	0	9	52	29	35	4	10.6	66.2
26-Nov	0	6	1	0	A	4	9	5	8	13	10	56	97	96	70	5	2	11	3	1	1	0	0	0	17.3	97.0
27-Nov	1	0	0	0	A	0	1	0	1	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	0.9
28-Nov	0	0	0	0	A	1	1	248	313	1	2	6	2	3	3	3	3	0	14	3	1	1	17	0	27.1	312.8
29-Nov	0	0	0	0	A	0	0	0	1	1	2	3	47	22	33	21	48	0	0	0	0	0	0	0	7.8	47.6
30-Nov	0	0	0	0	A	0	0	0	1	1	2	3	9	3	2	10	1	0	1	0	0	0	0	0	1.5	10.0
	2.9	3.5	0.9	1.9	--	1.5	23.7	13.1	14.2	6.8	11.1	11.3	13.2	11.5	10.8	6.2	6.3	2.8	2.5	3.8	4.1	2.7	5.6	2.4	Diurnal Average	
	37.7	44.5	9.4	31.0	--	16.6	431.4	248.5	312.8	66.2	110.0	70.0	97.0	96.0	70.1	24.6	47.6	25.3	27.0	52.0	51.7	28.9	59.7	52.7	Diurnal Maximum	

C - Calibration

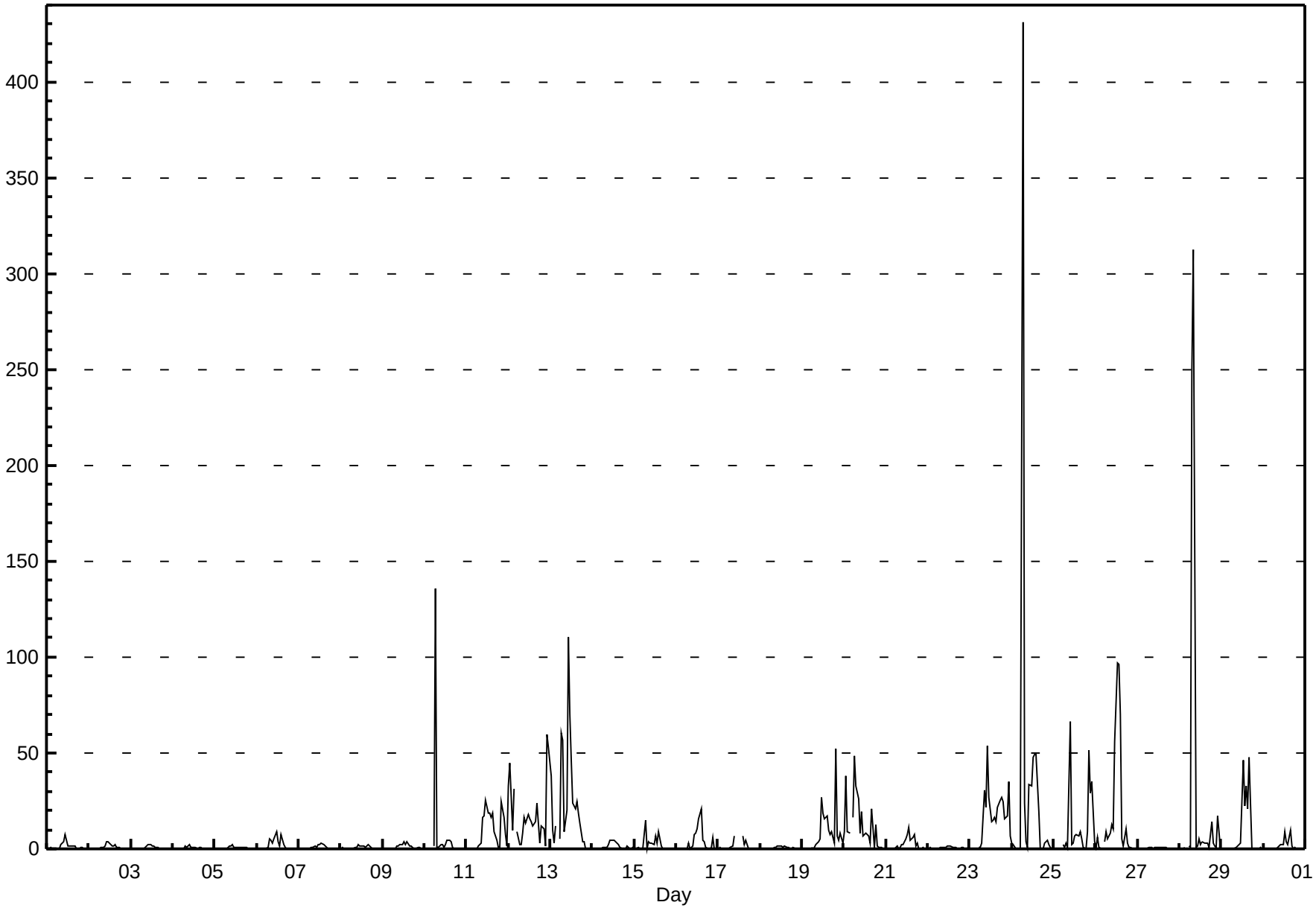
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 60.8 ppb on Nov 24 15:00
Maximum Daily Average: 26.6 ppb on Nov 12

Minimum Value: 0 ppb on Nov 4 15:00
Maximum Diurnal Average: 12.8 ppb at hour 15
Monthly Average: 9.49 ppb

Minimum Daily Average: 1.0 ppb on Nov 27
Minimum Diurnal Average: 5.8 ppb at hour 3
Percentiles: P_1 = 0.7 P_{10} = 1.7 Q_1 = 3.3 Median = 5.7 Q_3 = 11.7 P_{90} = 24.1 P_{99} = 50.1

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	4	4	3	3	A	6	4	3	8	8	9	4	3	3	3	3	4	5	6	4	3	4	5	3	4.4	8.5
2-Nov	4	5	5	5	A	7	7	7	5	5	6	6	4	3	7	9	8	7	8	4	1	2	1	1	5.0	9.1
3-Nov	1	1	1	1	A	3	4	6	3	5	5	5	4	3	3	3	2	5	4	5	3	3	3	3	3.3	6.2
4-Nov	3	3	3	4	A	6	7	9	7	6	3	1	1	1	0	1	1	2	3	1	3	3	3	3	3.3	9.2
5-Nov	2	2	1	1	A	4	3	5	10	6	5	2	3	2	2	2	4	4	4	3	3	3	3	3	3.3	10.4
6-Nov	3	3	4	4	A	5	4	9	8	6	7	14	10	8	11	6	10	5	7	7	4	3	2	2	6.1	14.4
7-Nov	1	2	2	1	A	3	3	2	3	3	3	4	5	7	7	4	3	4	6	8	7	5	4	4	3.9	7.5
8-Nov	5	7	4	4	A	4	2	2	2	2	2	2	3	2	2	3	5	8	7	5	6	5	5	6	4.1	7.9
9-Nov	4	3	3	3	A	3	3	4	9	6	4	5	6	5	6	5	5	4	6	5	5	5	5	3	4.7	9.3
10-Nov	2	2	2	2	A	2	12	2	2	2	2	1	1	6	8	7	1	1	1	2	6	3	3	3	3.1	11.5
11-Nov	5	5	9	5	A	11	13	15	19	26	22	27	27	25	23	30	25	23	13	12	25	22	21	19	18.4	29.6
12-Nov	31	36	30	29	A	26	20	14	21	25	20	24	22	20	17	20	34	36	26	26	25	19	35	54	26.6	53.8
13-Nov	34	23	11	16	A	21	34	51	19	19	58	59	24	25	24	28	26	17	14	11	6	5	5	7	23.4	59.2
14-Nov	5	5	6	5	A	5	12	10	8	7	9	8	7	8	6	7	6	4	7	5	8	7	5	8	6.9	12.1
15-Nov	9	6	6	6	A	8	19	11	11	8	7	7	6	4	6	4	3	3	4	7	4	3	3	2	6.3	19.2
16-Nov	3	2	2	5	A	3	3	10	6	5	6	8	14	27	18	11	15	16	14	12	13	13	13	11	10.0	26.7
17-Nov	11	12	15	13	A	10	8	6	11	15	C	C	C	C	4	4	8	5	3	4	6	6	5	3	7.9	14.8
18-Nov	3	4	4	3	A	4	4	5	8	5	5	5	4	4	4	5	4	4	4	11	16	11	6	3	5.4	15.7
19-Nov	2	2	3	5	A	8	6	8	13	11	13	28	29	27	25	24	22	20	29	34	27	24	27	15	17.5	33.7
20-Nov	19	22	15	19	A	22	33	39	35	19	29	11	15	14	15	11	15	13	12	13	8	2	1	2	16.7	39.3
21-Nov	3	2	2	2	A	4	5	6	7	13	7	7	12	12	7	9	15	5	10	3	3	3	2	2	6.1	14.6
22-Nov	2	2	2	3	A	5	3	3	2	2	3	3	2	3	2	3	3	4	3	4	4	4	4	3	3.0	4.5
23-Nov	3	3	5	5	A	6	6	9	17	22	56	33	24	26	22	24	33	30	39	40	35	36	22	10	22.0	56.0
24-Nov	10	8	9	9	A	9	24	16	9	6	10	28	40	49	61	21	4	10	9	20	24	20	16	9	18.4	60.8
25-Nov	6	6	5	6	A	9	8	7	5	24	6	6	9	12	11	12	11	8	8	18	34	35	31	15	12.6	34.6
26-Nov	10	15	12	12	A	14	17	15	15	14	16	46	40	44	50	11	10	12	19	16	10	8	7	1	18.0	50.5
27-Nov	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.7
28-Nov	1	1	1	1	A	3	2	10	15	3	4	6	4	5	6	7	12	8	27	13	16	11	22	11	8.1	27.0
29-Nov	6	5	7	12	A	9	10	11	7	6	4	4	17	15	27	16	24	5	4	7	6	4	5	6	9.4	26.6
30-Nov	4	4	4	3	A	3	4	5	8	7	6	5	7	5	6	10	7	9	8	6	5	3	4	2	5.4	10.1
	6.6	6.5	5.8	6.3	--	7.5	9.4	10.0	9.8	9.5	11.3	12.5	11.8	12.6	12.8	10.0	10.8	9.2	10.3	10.2	10.4	9.1	9.0	7.2	Diurnal Average	
	33.7	36.0	30.2	29.3	--	26.3	34.3	51.4	35.0	25.5	57.9	59.2	39.7	49.0	60.8	29.6	34.1	35.5	38.9	39.9	35.3	35.6	35.4	53.8	Diurnal Maximum	

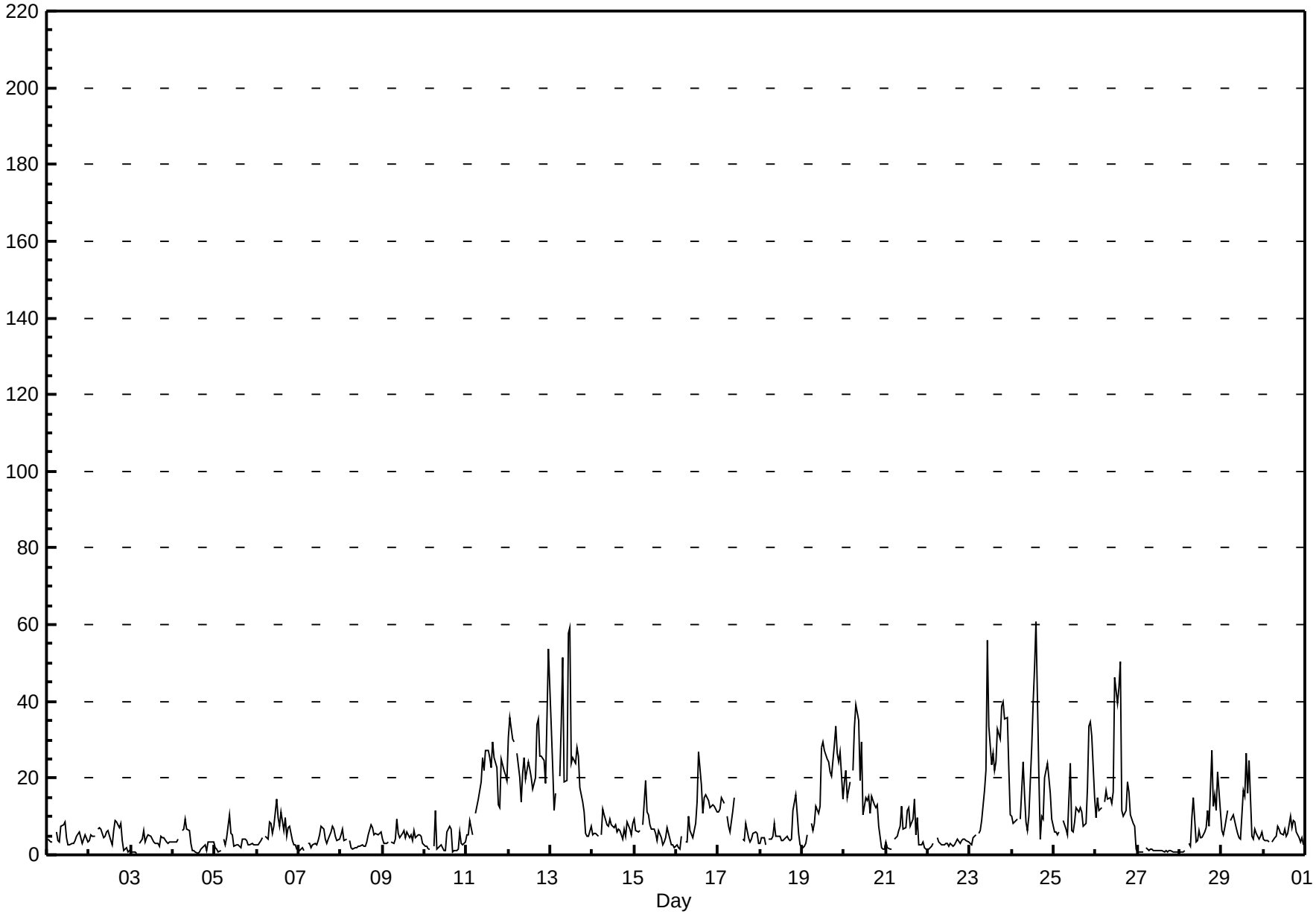
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - November 2014

Maximum Value: 468.0 ppb on Nov 28 09:00

Maximum Daily Average: 48.6 ppb on Nov 24

Minimum Value: 1 ppb on Nov 27 02:00

Minimum Daily Average: 1.7 ppb on Nov 27

Maximum Diurnal Average: 42.3 ppb at hour 7

Minimum Diurnal Average: 8.8 ppb at hour 3

Monthly Average: 18.32 ppb

Percentiles: P_1 = 1.3 P_{10} = 3.0 Q_1 = 5.0 Median = 8.8 Q_3 = 19.7 P_{90} = 40.7 P_{99} = 121.6

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	6	5	6	4	A	8	5	6	10	11	14	10	4	4	4	6	6	8	9	9	6	6	7	5	6.8	13.6
2-Nov	8	6	6	6	A	9	10	14	6	6	9	10	5	5	9	12	11	17	12	9	3	4	4	3	7.9	17.2
3-Nov	4	2	3	1	A	5	11	11	9	6	8	7	5	6	5	7	4	6	6	6	4	4	4	4	5.5	11.1
4-Nov	4	3	4	5	A	9	10	14	12	8	6	2	3	2	2	4	5	3	4	3	6	5	6	9	5.6	13.7
5-Nov	3	2	1	4	A	6	4	12	23	9	11	5	4	4	4	4	6	7	5	5	3	5	3	3	5.9	23.1
6-Nov	3	3	5	9	A	8	6	24	20	17	23	29	16	9	23	13	18	8	13	14	6	4	4	3	12.1	29.4
7-Nov	1	2	2	2	A	5	5	3	4	7	4	5	7	8	7	7	5	5	8	8	8	6	5	5	5.1	8.1
8-Nov	9	11	5	6	A	6	2	3	3	2	6	3	3	4	3	6	10	9	8	7	8	7	7	8	5.9	11.2
9-Nov	6	5	4	5	A	5	5	6	14	8	6	6	9	5	9	6	7	5	8	7	6	6	7	4	6.4	13.9
10-Nov	3	3	2	2	A	6	348	5	8	7	6	2	5	10	11	11	3	4	2	5	7	5	4	6	20.2	348.0
11-Nov	6	6	12	8	A	12	16	21	34	40	32	41	32	31	31	41	31	31	17	18	67	54	43	32	28.5	66.9
12-Nov	73	92	41	69	A	40	23	17	27	34	27	30	26	25	21	33	48	42	29	40	38	22	97	88	42.7	96.7
13-Nov	69	37	22	39	A	30	93	92	34	36	142	93	63	36	31	43	42	38	29	33	10	7	7	9	45.0	141.9
14-Nov	9	6	7	5	A	6	19	15	10	9	12	12	11	10	9	10	9	9	17	22	26	12	9	16	11.7	25.6
15-Nov	11	9	18	10	A	10	49	18	28	15	10	8	15	9	24	7	3	5	15	18	6	4	3	3	13.0	49.0
16-Nov	4	3	4	6	A	6	6	34	14	9	18	18	23	32	42	17	19	18	17	17	22	42	18	13	17.4	42.2
17-Nov	14	18	16	16	A	13	9	9	15	24	C	C	C	C	13	10	34	10	5	6	8	7	7	4	12.6	34.4
18-Nov	4	5	5	3	A	5	5	7	13	7	9	7	5	5	6	6	13	7	7	26	20	14	7	3	8.2	26.0
19-Nov	2	3	4	14	A	25	11	19	20	14	15	49	35	30	35	26	26	32	32	85	37	31	37	21	26.2	85.2
20-Nov	29	66	31	31	A	40	74	57	49	27	42	19	22	19	19	14	42	17	29	16	15	6	4	6	29.3	73.7
21-Nov	11	2	2	3	A	8	19	14	11	17	11	12	19	23	13	21	27	14	18	3	4	5	2	2	11.4	27.1
22-Nov	2	3	3	4	A	7	5	4	4	3	4	4	3	5	4	4	5	5	4	5	6	5	5	6	4.3	7.3
23-Nov	4	3	9	7	A	9	10	21	57	43	79	48	30	34	34	33	46	54	54	53	42	42	62	26	34.8	79.3
24-Nov	24	12	12	11	A	11	460	47	19	7	51	50	68	75	76	44	8	12	11	28	29	24	21	17	48.6	459.8
25-Nov	7	7	8	8	A	14	11	10	8	159	9	8	13	15	14	20	19	9	9	32	80	53	61	24	26.0	158.7
26-Nov	12	27	16	15	A	23	28	21	29	28	21	74	127	125	96	16	12	21	27	22	15	9	9	5	33.8	127.0
27-Nov	2	1	1	1	A	3	3	3	2	2	1	3	2	2	2	2	2	1	1	1	1	2	1	1	1.7	2.8
28-Nov	1	1	1	3	A	6	5	209	468	4	6	12	5	8	8	14	16	12	51	22	27	17	58	18	42.3	468.0
29-Nov	9	7	9	15	A	10	12	12	11	11	7	5	73	42	58	56	88	9	7	11	9	6	7	6	20.8	87.8
30-Nov	5	4	5	4	A	5	5	9	14	11	6	7	18	8	8	34	9	10	12	8	6	6	8	4	9.0	33.5
	11.5	11.9	8.8	10.5	--	11.7	42.3	24.5	32.6	19.3	20.5	20.0	22.5	20.4	20.7	17.5	19.1	14.3	15.5	17.9	17.4	13.9	17.2	11.8	Diurnal Average	
	73.1	92.0	41.3	68.6	--	39.9	459.8	208.9	468.0	158.7	141.9	93.0	127.0	124.9	96.5	55.6	87.8	54.0	53.5	85.2	79.7	53.8	96.7	88.4	Diurnal Maximum	

C - Calibration

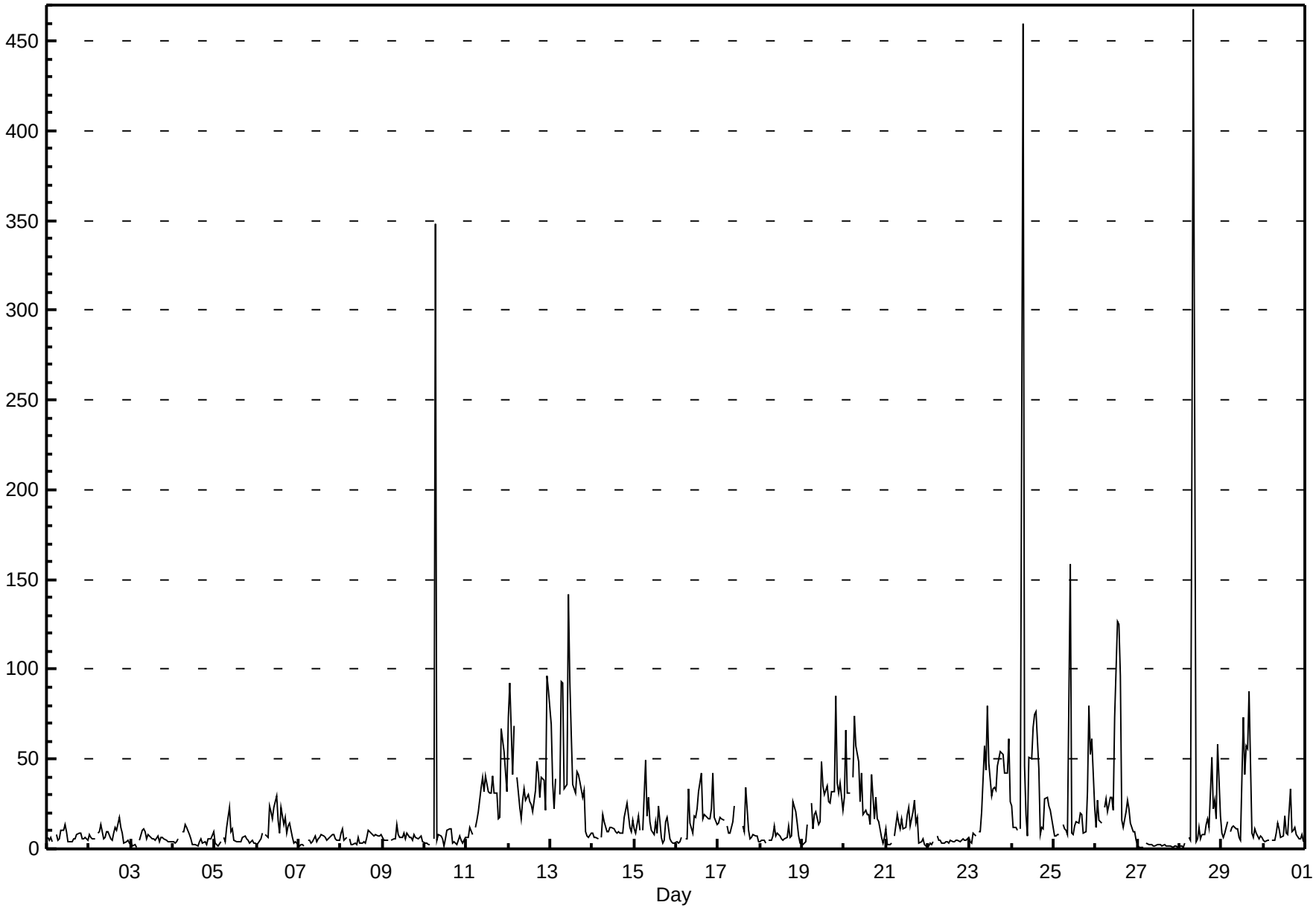
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - November 2014

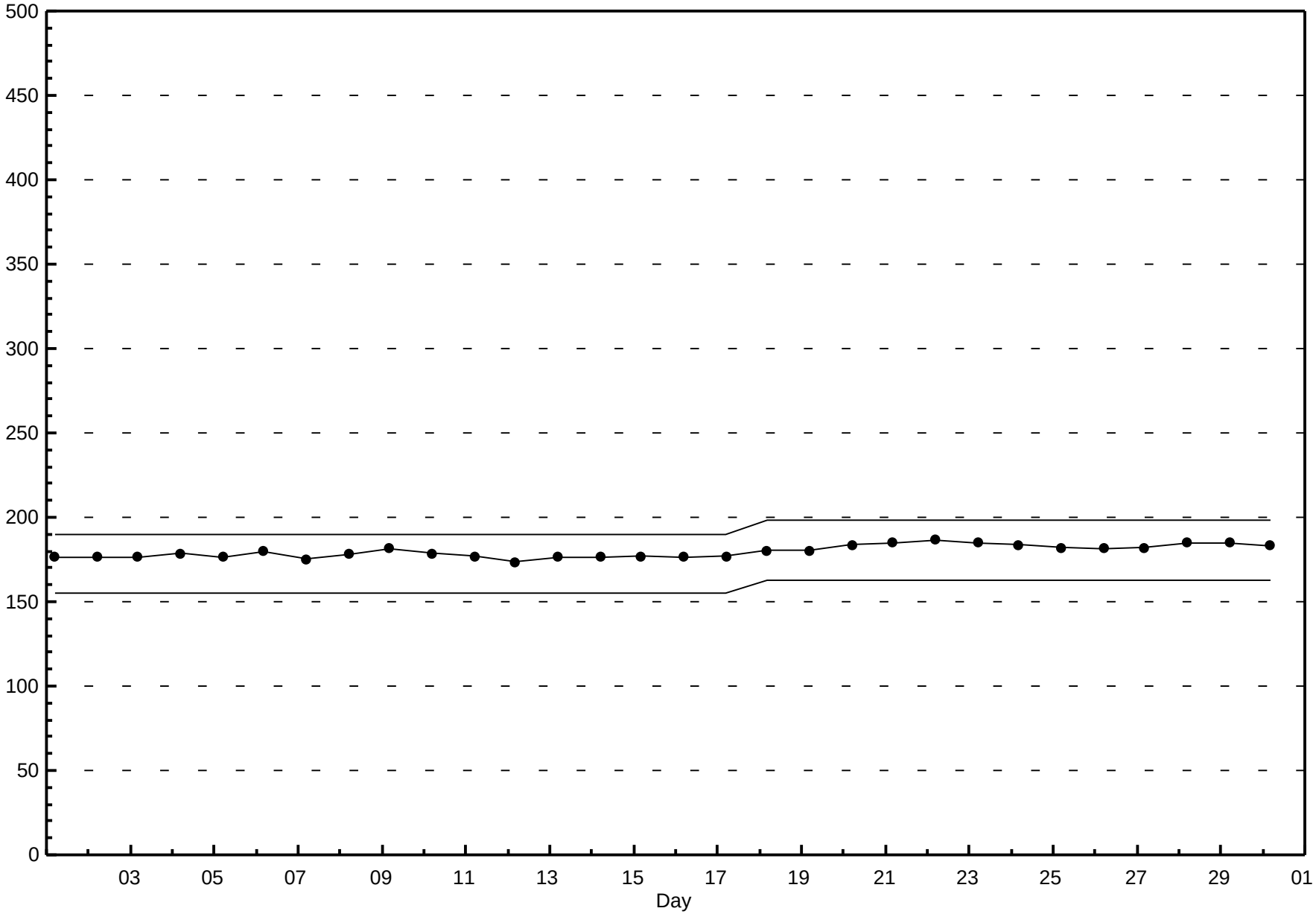


Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 42.2 ppb on Dec 1 00:00 Maximum Daily Average: 34.7 ppb on Nov 18

Minimum Value: 3 ppb on Nov 23 21:00 Minimum Daily Average: 10.9 ppb on Nov 12
Maximum Diurnal Average: 25.8 ppb at hour 16 Minimum Diurnal Average: 20.6 ppb at hour 9
Monthly Average: 23.61 ppb Percentiles: P_1 = 4.0 P_{10} = 11.4 Q_1 = 17.0 Median = 24.0 Q_3 = 30.5 P_{90} = 34.8 P_{99} = 40.2

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
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-Nov	17	17	16	16	A	15	19	19	16	15	16	20	22	25	27	25	23	24	23	25	27	23	21	25	20.7	27.2
2-Nov	23	21	20	21	A	18	16	16	20	23	23	29	29	29	26	23	21	23	22	33	36	32	30	28	24.4	36.0
3-Nov	29	29	30	31	A	30	28	26	27	25	25	27	29	29	30	29	30	28	28	27	29	30	29	28	28.5	31.2
4-Nov	28	28	27	26	A	22	19	13	13	19	30	33	33	40	40	40	38	36	34	35	35	32	35	34	30.0	40.4
5-Nov	31	32	32	32	A	29	31	29	23	28	30	32	30	35	36	32	30	30	30	32	31	31	30	30	30.7	35.6
6-Nov	29	29	26	25	A	20	24	19	21	25	22	13	16	16	19	28	29	34	32	31	31	29	27	24	24.7	33.8
7-Nov	23	22	21	21	A	21	20	20	19	19	20	19	17	16	16	17	18	17	15	12	12	14	14	14	17.8	23.2
8-Nov	13	12	15	14	A	18	20	22	21	22	22	23	23	24	24	23	22	21	21	23	23	24	23	22	20.8	24.1
9-Nov	25	25	24	26	A	28	27	25	21	23	23	22	22	23	22	22	20	19	18	20	19	16	15	18	21.7	28.2
10-Nov	23	23	23	23	A	34	32	31	31	31	33	36	37	35	35	35	39	38	38	38	33	35	35	34	32.7	38.6
11-Nov	32	31	28	31	A	25	22	21	17	19	22	22	24	24	24	21	18	15	23	22	14	14	14	15	21.6	32.0
12-Nov	10	8	7	8	A	7	9	14	10	12	17	18	19	20	20	17	9	5	5	7	8	10	9	4	10.9	20.0
13-Nov	6	8	16	13	A	8	5	3	9	12	11	12	19	16	15	13	11	12	17	21	27	28	28	24	14.6	28.2
14-Nov	27	27	27	28	A	28	20	21	23	25	25	27	27	28	28	28	28	33	32	33	29	30	30	25	27.3	33.1
15-Nov	24	25	28	24	A	21	15	23	28	31	35	40	40	38	35	40	41	41	40	36	39	40	39	38	33.0	41.3
16-Nov	36	37	36	32	A	34	33	27	30	31	31	31	29	24	28	29	24	23	23	24	23	23	22	23	28.4	36.8
17-Nov	22	20	17	18	A	24	27	30	27	27	36	40	C	C	C	42	36	37	37	36	33	33	34	38	30.6	41.5
18-Nov	37	35	35	37	A	35	34	33	31	35	36	37	38	39	38	37	38	38	37	29	23	27	31	35	34.7	38.7
19-Nov	37	36	35	31	A	27	27	24	20	22	21	18	18	19	19	17	14	11	5	7	7	8	6	9	19.0	36.7
20-Nov	6	5	9	7	A	9	7	5	4	13	11	19	20	21	19	20	15	11	11	11	22	32	33	34	14.9	33.5
21-Nov	31	31	32	32	A	29	24	21	20	17	24	24	23	20	22	20	12	16	13	20	20	19	23	23	22.4	32.3
22-Nov	22	21	19	18	A	19	21	22	23	23	23	24	25	25	26	26	26	25	26	26	25	25	25	24	23.4	26.2
23-Nov	25	25	22	22	A	21	20	17	12	11	8	11	14	14	15	14	7	8	4	3	3	3	14	16	13.4	25.0
24-Nov	15	17	15	15	A	15	16	14	19	24	24	15	12	9	7	18	34	27	28	16	9	12	16	20	17.2	33.7
25-Nov	21	17	17	16	A	12	12	13	14	11	15	16	17	17	17	15	13	14	14	9	5	3	4	8	13.1	20.8
26-Nov	11	8	10	9	A	9	6	6	8	13	15	12	16	16	13	24	23	20	11	11	16	17	15	25	13.7	25.2
27-Nov	26	28	28	28	A	29	30	30	29	30	30	30	30	30	30	30	30	31	31	31	31	31	31	31	29.7	31.4
28-Nov	32	32	32	31	A	31	31	31	30	29	29	29	30	31	31	30	25	27	13	23	21	24	16	23	27.3	31.7
29-Nov	26	26	23	20	A	23	23	23	26	28	31	32	30	31	26	30	22	35	36	34	35	35	34	32	28.7	36.1
30-Nov	33	34	34	33	A	33	31	31	29	30	32	33	34	35	34	31	31	29	29	32	36	40	40	42	33.2	42.2
	24.0	23.6	23.5	22.9	--	22.4	21.6	20.9	20.6	22.5	24.1	24.7	25.0	25.1	24.9	25.8	24.2	24.3	23.2	23.5	23.3	23.9	24.1	24.9	Diurnal Average	
	37.5	36.8	36.2	37.0	--	35.3	34.4	33.4	31.0	34.8	36.4	39.9	40.1	40.4	40.4	41.5	41.1	41.3	40.0	38.0	38.6	39.9	39.6	42.2	Diurnal Maximum	

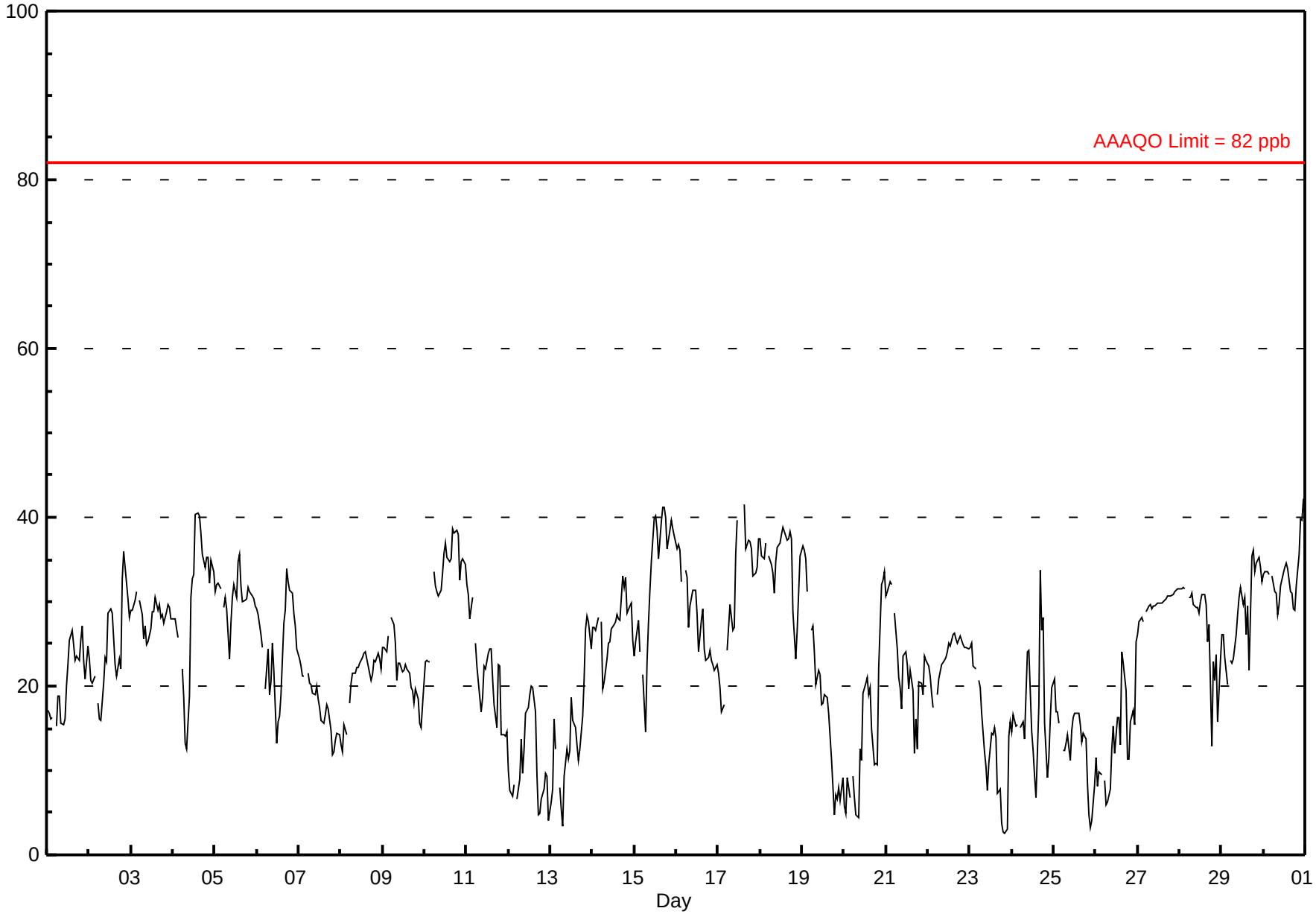
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Beaverlodge - November 2014

Maximum Value: 43.6 ppb on Dec 1 00:00

Maximum Daily Average: 36.6 ppb on Nov 18

Minimum Value: 3 ppb on Nov 23 21:00

Minimum Daily Average: 14.9 ppb on Nov 25

Maximum Diurnal Average: 28.8 ppb at hour 16

Minimum Diurnal Average: 23.7 ppb at hour 9

Monthly Average: 26.11 ppb

Percentiles: P_1 = 7.4 P_{10} = 15.3 Q_1 = 20.3 Median = 26.4 Q_3 = 31.8 P_{90} = 36.8 P_{99} = 42.0

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
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-Nov	26	18	18	18	A	17	20	21	19	17	20	22	25	27	28	26	27	26	26	27	28	28	24	26	23.2	28.1
2-Nov	26	22	21	22	A	20	18	20	22	26	27	31	31	30	29	26	26	27	28	40	39	35	32	30	27.2	40.0
3-Nov	30	30	32	32	A	31	31	29	30	28	27	29	30	31	33	32	31	29	30	29	30	31	31	29	30.2	32.5
4-Nov	29	29	28	27	A	25	22	20	15	26	34	34	38	41	41	42	40	38	36	37	39	35	38	36	32.5	41.5
5-Nov	33	33	34	33	A	31	32	30	28	31	33	35	33	36	37	34	31	31	32	33	33	31	31	30	32.4	36.8
6-Nov	30	29	29	27	A	23	30	30	31	29	26	18	18	22	31	37	36	36	36	35	34	30	28	27	29.2	36.6
7-Nov	24	23	22	22	A	23	22	21	20	20	21	19	18	17	16	17	19	19	16	13	13	14	15	15	18.6	23.6
8-Nov	14	16	16	16	A	19	21	22	22	23	23	23	24	24	25	24	23	22	22	25	24	25	24	24	21.9	25.3
9-Nov	25	26	25	27	A	29	29	26	23	24	24	22	23	23	23	22	21	20	19	20	20	17	17	21	23.0	29.4
10-Nov	24	24	23	23	A	34	33	32	32	33	35	36	38	36	36	38	39	39	39	39	34	35	36	36	33.7	39.3
11-Nov	33	32	30	32	A	27	24	23	24	25	24	25	24	26	27	24	21	22	24	26	21	17	19	20	24.8	33.2
12-Nov	17	18	13	19	A	10	13	17	12	15	20	21	20	21	20	20	13	7	7	9	16	12	16	9	15.0	21.2
13-Nov	17	18	19	16	A	12	12	8	12	15	15	16	22	17	16	15	18	18	22	25	29	29	29	26	18.6	29.4
14-Nov	28	28	28	29	A	29	27	23	24	26	27	29	29	29	29	29	31	37	37	37	36	33	33	27	29.8	37.1
15-Nov	27	29	30	28	A	22	23	29	31	33	37	43	42	42	38	42	41	42	41	39	40	40	40	38	35.6	42.8
16-Nov	38	37	37	34	A	35	34	34	33	33	33	33	34	27	34	33	29	25	26	26	26	26	24	24	31.2	37.6
17-Nov	24	21	18	20	A	26	29	32	32	29	39	40	C	C	C	43	40	40	40	39	34	35	37	38	32.9	43.1
18-Nov	38	37	37	37	A	37	35	35	33	37	38	38	38	40	39	38	39	39	39	39	29	30	35	36	36.6	39.7
19-Nov	37	37	36	34	A	31	29	28	25	23	24	21	19	20	20	19	15	14	6	13	10	10	10	11	21.4	37.0
20-Nov	8	10	16	15	A	19	20	19	11	14	15	21	21	27	26	24	22	16	13	14	32	33	34	34	20.3	34.4
21-Nov	34	32	33	33	A	30	28	26	22	20	26	26	24	22	23	23	18	19	20	24	23	23	24	24	25.0	33.9
22-Nov	23	22	20	19	A	21	22	22	24	24	24	25	26	25	27	27	27	26	27	27	26	25	25	25	24.2	26.8
23-Nov	25	25	25	23	A	22	21	20	19	16	19	14	20	17	17	17	13	22	8	3	3	8	23	18	17.3	25.5
24-Nov	18	18	17	17	A	17	17	20	22	26	28	24	26	12	12	33	35	30	29	26	15	15	19	23	21.8	35.0
25-Nov	24	17	18	17	A	15	14	15	15	15	16	17	18	18	18	17	16	15	15	13	8	4	6	12	14.9	23.6
26-Nov	12	12	11	11	A	10	9	9	11	14	17	16	22	27	26	27	24	23	15	15	18	18	20	26	17.1	27.2
27-Nov	27	29	29	28	A	29	30	30	30	30	30	30	30	30	30	30	31	31	31	31	31	32	32	32	30.1	31.7
28-Nov	32	32	32	32	A	32	31	32	31	30	30	30	31	31	31	31	28	29	26	26	25	26	23	28	29.5	32.3
29-Nov	27	27	25	24	A	24	24	25	28	30	32	33	33	36	33	35	31	37	37	35	36	37	36	33	31.2	37.4
30-Nov	34	34	34	34	A	34	33	32	31	31	34	35	36	36	35	36	32	32	31	35	38	42	42	44	34.9	43.6
	26.1	25.5	25.3	25.0	--	24.4	24.6	24.2	23.7	24.7	26.5	26.9	27.4	27.2	27.6	28.8	27.2	27.0	26.0	26.7	26.3	26.0	26.7	26.8	Diurnal Average	
	38.4	37.3	37.3	37.5	--	36.6	34.9	34.7	33.1	37.0	39.2	42.8	42.3	42.0	41.1	43.1	41.4	42.0	41.3	40.0	39.5	42.0	41.7	43.6	Diurnal Maximum	

C - Calibration

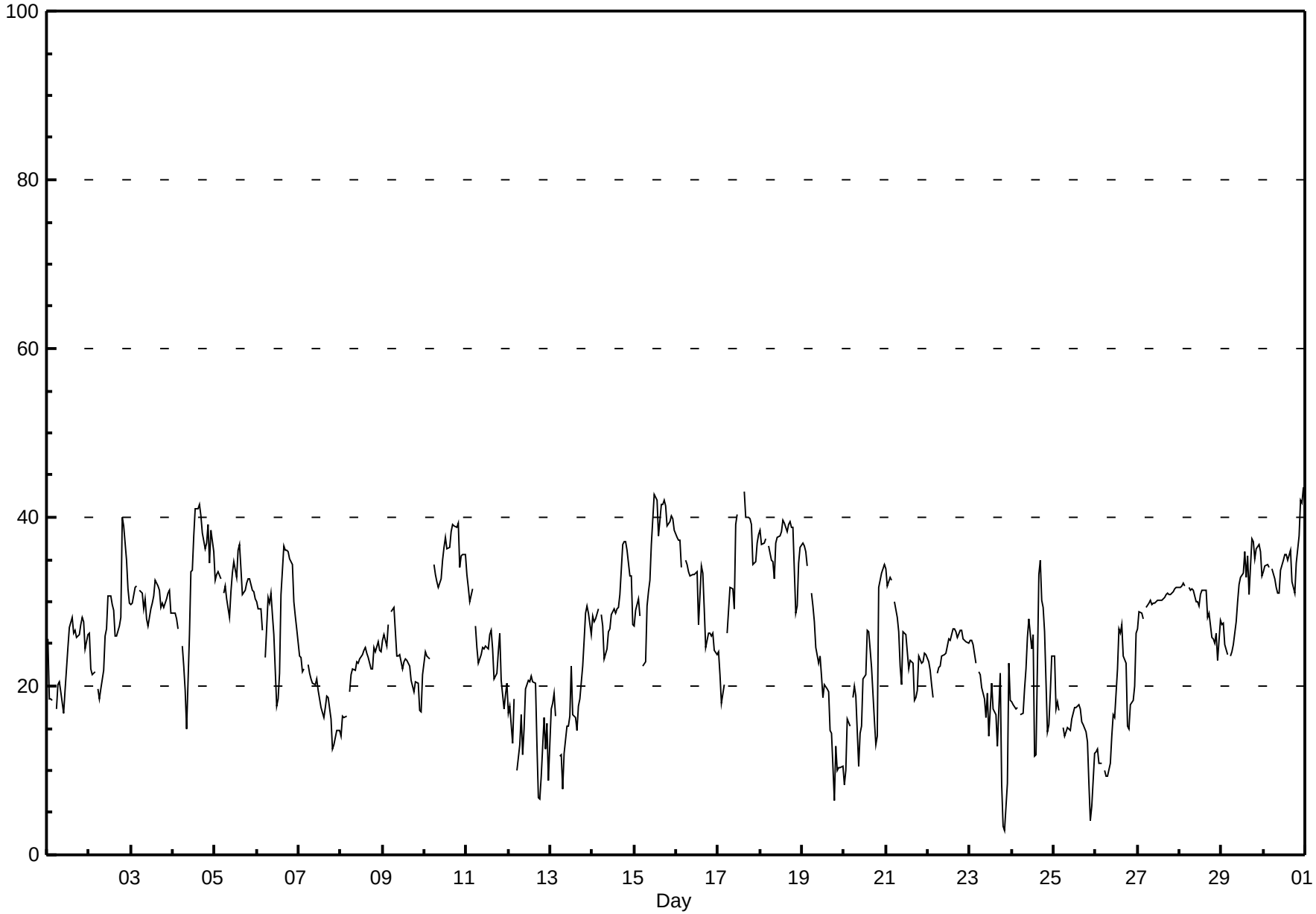
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

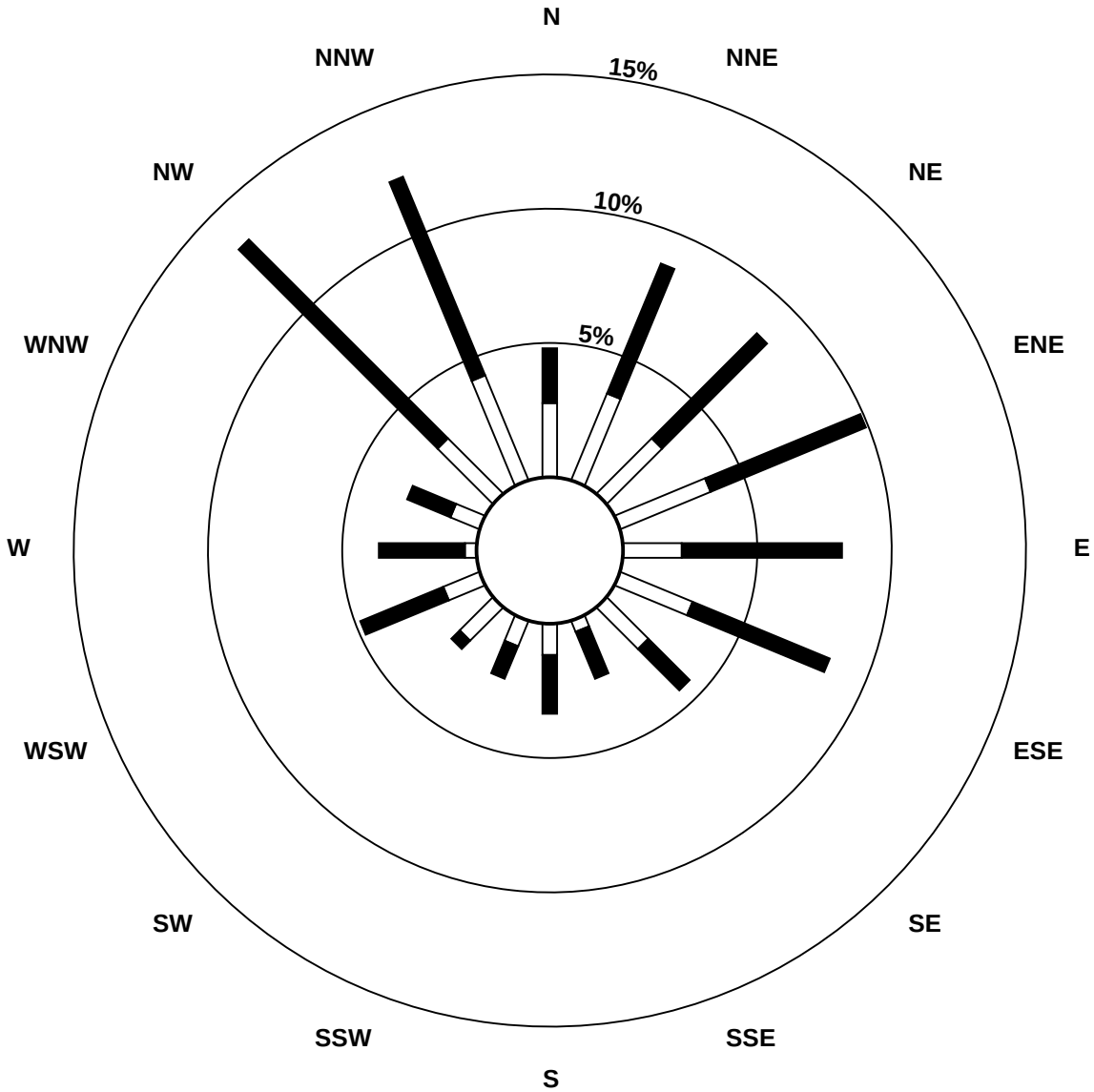
Beaverlodge - November 2014



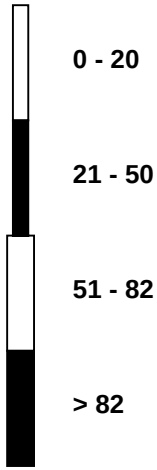
Pollutant Rose

Ozone (O_3) - ppb

Beaverlodge - November 2014



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Beaverlodge - November 2014

Maximum Value: 39.4 ppb on Nov 15 19:00

Minimum Value: 6.6 ppb on Nov 20 02:00

Percentiles: P_1 = 7.0 P_{10} = 12.3 Q_1 = 17.6 Median = 23.5 Q_3 = 29.8 P_{90} = 33.6 P_{99} = 38.8

Hours in Service:	720
Hours of Data:	714
Hours of Missing Data:	6
Hours of Calibration:	6
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Nov	16	15	14	15	16	16	16	17	17	17	17	17	18	19	20	21	22	23	24	24	25	25	24	24	24.9
2-Nov	24	24	23	23	22	21	21	19	19	19	20	21	22	23	24	25	25	25	25	26	26	27	28	28	28.2
3-Nov	29	30	31	31	30	30	29	29	29	28	28	27	27	27	27	28	28	28	29	29	29	29	29	29	30.9
4-Nov	28	28	28	28	28	27	25	23	21	20	20	21	23	25	28	31	34	36	37	37	37	36	36	35	37.4
5-Nov	34	34	33	33	33	32	31	31	30	29	29	29	29	30	30	31	32	32	32	32	32	31	31	30	34.0
6-Nov	30	30	30	29	28	27	26	24	23	23	22	21	20	20	19	20	21	22	23	26	28	29	30	30	30.4
7-Nov	29	28	26	25	24	23	22	21	21	20	20	20	20	19	18	18	18	17	17	16	15	15	15	15	29.0
8-Nov	14	13	13	14	14	14	15	16	18	19	20	21	21	22	23	23	23	23	23	23	23	23	23	22	23.0
9-Nov	23	23	24	24	24	25	25	26	25	25	25	24	24	23	22	22	22	21	21	21	20	19	18	18	25.7
10-Nov	18	19	19	20	20	23	25	27	28	29	31	33	33	33	34	34	35	36	37	37	36	36	36	36	36.9
11-Nov	35	34	33	32	32	31	29	27	25	23	22	21	21	21	22	22	22	21	21	21	20	19	18	17	35.4
12-Nov	16	15	13	11	11	10	9	9	9	10	11	12	13	15	16	17	17	16	14	13	11	10	9	7	16.5
13-Nov	7	7	8	9	9	9	9	9	9	10	9	9	10	11	12	14	14	14	14	15	16	18	20	21	21.0
14-Nov	23	25	26	27	27	27	26	25	25	24	24	24	24	24	26	26	27	28	29	30	30	30	30	30	30.2
15-Nov	29	28	28	27	26	25	23	23	23	24	25	27	29	31	34	36	38	39	39	39	39	39	39	39	39.4
16-Nov	39	38	38	37	37	36	35	34	33	32	31	31	31	29	29	29	29	27	26	26	25	25	24	23	38.6
17-Nov	23	22	22	21	20	21	21	22	23	24	27	30	30	31	N	N	N	N	N	N	37	36	36	36	36.9
18-Nov	36	36	35	35	36	36	36	35	35	34	35	35	35	35	36	36	37	38	38	37	35	33	33	32	37.8
19-Nov	32	32	32	32	33	33	33	31	29	27	25	23	22	21	20	19	18	17	15	14	12	11	9	8	33.2
20-Nov	7	7	7	7	7	7	7	7	7	8	8	10	11	13	14	16	17	17	17	16	16	18	19	21	20.9
21-Nov	23	25	28	31	32	32	30	29	27	25	24	23	23	22	21	21	20	20	19	18	18	18	18	18	32.1
22-Nov	20	20	21	21	21	21	20	20	20	21	21	22	22	23	24	24	25	25	25	26	26	26	25	25	25.6
23-Nov	25	25	24	24	24	23	23	22	20	18	16	14	14	13	13	12	12	11	11	10	8	7	7	7	24.9
24-Nov	8	9	11	12	14	15	15	15	16	17	18	18	17	17	16	16	18	18	19	19	18	19	20	20	20.1
25-Nov	18	17	16	16	17	17	16	15	14	14	13	13	14	14	15	15	15	16	15	14	13	11	10	9	18.5
26-Nov	9	8	7	7	8	9	9	9	8	9	9	10	11	12	12	15	17	17	17	17	17	17	17	17	17.4
27-Nov	18	19	21	23	24	26	28	28	29	29	29	29	29	30	30	30	30	30	30	30	30	31	31	31	30.9
28-Nov	31	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	29	29	27	26	25	24	22	21	31.5
29-Nov	22	21	23	22	23	23	24	24	24	24	25	27	27	28	28	29	29	29	30	30	31	32	33	33	32.9
30-Nov	34	34	34	34	34	33	33	33	32	31	31	31	32	32	32	32	32	32	32	32	32	33	33	35	34.8
Diurnal Maximums	38.6	38.0	37.5	37.1	36.9	36.0	36.0	35.4	34.5	34.4	34.6	34.6	35.0	35.4	35.9	36.4	37.5	38.8	39.4	39.0	38.8	39.0	39.4	39.2	

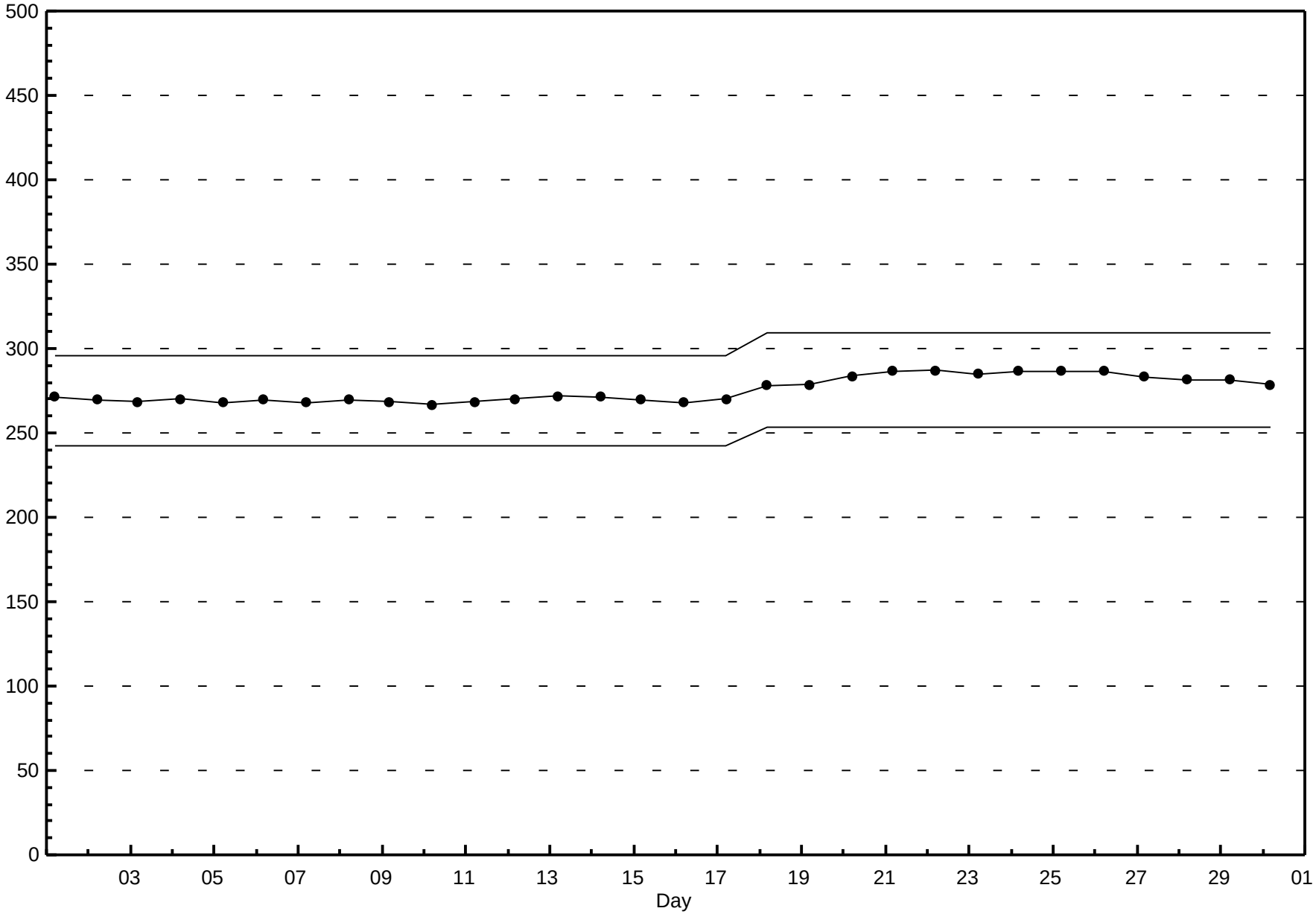
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - November 2014

Number of Exceedences: 1-hr: 0 24-hr: 0

Maximum Value: 25.9 $\mu g/m^3$ on Nov 21 19:00

Maximum Daily Average: 14.3 $\mu g/m^3$ on Nov 12

Minimum Value: 0 $\mu g/m^3$ on Nov 1 02:00

Maximum Diurnal Average: 7.8 $\mu g/m^3$ at hour 19

Monthly Average: 6.50 $\mu g/m^3$

Minimum Daily Average: 1.8 $\mu g/m^3$ on Nov 29

Minimum Diurnal Average: 5.3 $\mu g/m^3$ at hour 14

Percentiles: $P_1 = 0.0$ $P_{10} = 0.4$ $Q_1 = 2.4$ Median = 5.5 $Q_3 = 9.2$ $P_{90} = 14.3$ $P_{99} = 20.9$

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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-Nov	6	0	0	0	3	0	3	3	1	0	0	7	0	0	7	0	1	0	4	5	2	2	2	2	2.0	6.9
2-Nov	2	1	0	3	3	2	5	7	6	5	0	1	3	0	0	3	5	0	8	7	0	1	4	7	3.0	7.7
3-Nov	2	0	5	0	4	3	3	6	6	4	0	0	2	0	2	12	13	10	4	1	0	4	7	7	3.9	12.5
4-Nov	1	2	5	1	3	5	2	3	8	0	2	4	2	3	1	0	2	4	11	7	10	6	2	10	3.9	11.2
5-Nov	3	5	4	3	6	5	5	7	9	5	11	6	1	2	2	3	5	0	0	0	1	3	8	14	4.4	14.2
6-Nov	0	0	6	15	7	7	3	3	2	5	7	10	9	1	5	2	5	8	0	9	0	0	2	5	4.6	14.8
7-Nov	2	3	4	2	0	0	0	0	0	0	0	1	0	6	7	5	6	6	10	5	4	5	8	5	3.2	10.2
8-Nov	3	3	4	1	0	2	0	2	3	2	1	3	5	0	0	4	0	0	3	3	5	0	1	0	2.0	5.1
9-Nov	10	12	10	2	6	4	2	7	6	9	0	3	10	7	5	6	9	2	3	2	4	9	6	6	5.8	12.3
10-Nov	13	10	4	6	8	5	2	1	0	2	2	0	4	5	2	0	0	0	2	6	3	3	1	1	3.3	13.4
11-Nov	2	7	5	4	7	7	7	1	7	6	10	13	12	10	11	11	15	14	9	8	7	8	11	9	8.5	15.0
12-Nov	12	15	12	12	18	19	12	6	5	10	17	19	14	11	13	11	12	18	18	16	19	15	17	20	14.3	20.1
13-Nov	17	18	19	14	19	14	19	17	16	10	13	17	12	9	11	17	11	13	13	7	10	7	5	6	13.1	19.3
14-Nov	6	6	6	6	3	4	5	7	3	6	10	2	4	5	7	4	4	5	5	0	0	5	3	3	4.7	9.6
15-Nov	5	5	3	2	5	8	8	10	16	17	13	16	13	6	5	5	4	3	7	6	5	3	1	2	7.1	17.2
16-Nov	6	4	1	4	4	5	4	4	7	7	5	5	4	5	7	3	4	8	5	8	9	9	12	13	5.9	12.7
17-Nov	15	15	13	14	13	9	7	7	7	2	3	4	5	3	2	5	M	7	7	2	6	10	16	14	8.1	15.5
18-Nov	14	16	17	14	8	9	9	8	9	9	8	6	7	2	2	3	6	6	7	5	7	6	7	6	7.9	16.6
19-Nov	5	0	4	6	5	7	8	6	9	15	13	12	20	16	19	21	15	18	22	8	24	21	21	13	12.8	24.4
20-Nov	6	12	8	8	8	11	9	11	16	12	8	11	4	1	13	20	21	17	18	14	2	0	2	0	9.7	20.9
21-Nov	2	3	14	10	6	6	2	10	4	1	12	17	26	4	2	11	7	13	26	17	8	7	10	6	9.4	25.9
22-Nov	7	8	7	7	11	7	7	7	3	1	2	3	0	1	4	2	6	4	2	5	7	7	7	6	5.0	11.1
23-Nov	7	8	9	7	8	8	11	10	14	10	11	14	18	15	17	15	17	15	13	16	15	13	11	8	12.1	17.9
24-Nov	7	9	10	8	9	12	9	11	9	6	2	6	9	12	13	8	2	4	8	13	14	17	12	11	9.2	16.9
25-Nov	9	8	8	5	3	5	6	2	3	1	0	2	7	12	14	16	14	10	9	11	14	15	16	15	8.5	16.3
26-Nov	10	12	13	13	16	10	14	12	8	3	3	6	7	11	13	8	7	5	7	9	7	9	13	8	9.3	15.5
27-Nov	0	1	6	5	5	5	6	6	9	9	6	2	4	6	5	5	3	3	3	1	2	1	0	2	4.1	9.1
28-Nov	0	0	3	3	6	4	6	4	6	3	5	6	3	4	1	4	6	3	5	4	5	5	4	5	4.0	6.0
29-Nov	3	2	0	0	0	2	1	2	0	2	0	0	0	1	1	2	5	2	2	2	6	2	4	4	1.8	5.5
30-Nov	4	4	8	5	5	2	5	7	1	0	1	0	0	0	0	4	7	2	3	0	3	4	9	4	3.2	9.2
	5.9	6.2	6.9	6.1	6.6	6.3	6.0	6.2	6.4	5.4	5.6	6.6	6.7	5.3	6.3	7.1	7.2	6.7	7.8	6.6	6.7	6.7	7.4	7.1	Diurnal Average	
	17.0	17.8	18.7	14.8	18.5	18.8	19.3	17.2	16.3	17.2	17.1	19.3	25.6	15.6	19.0	20.6	20.9	18.4	25.9	16.8	24.4	21.0	21.4	20.1	Diurnal Maximum	

M - Maintenance

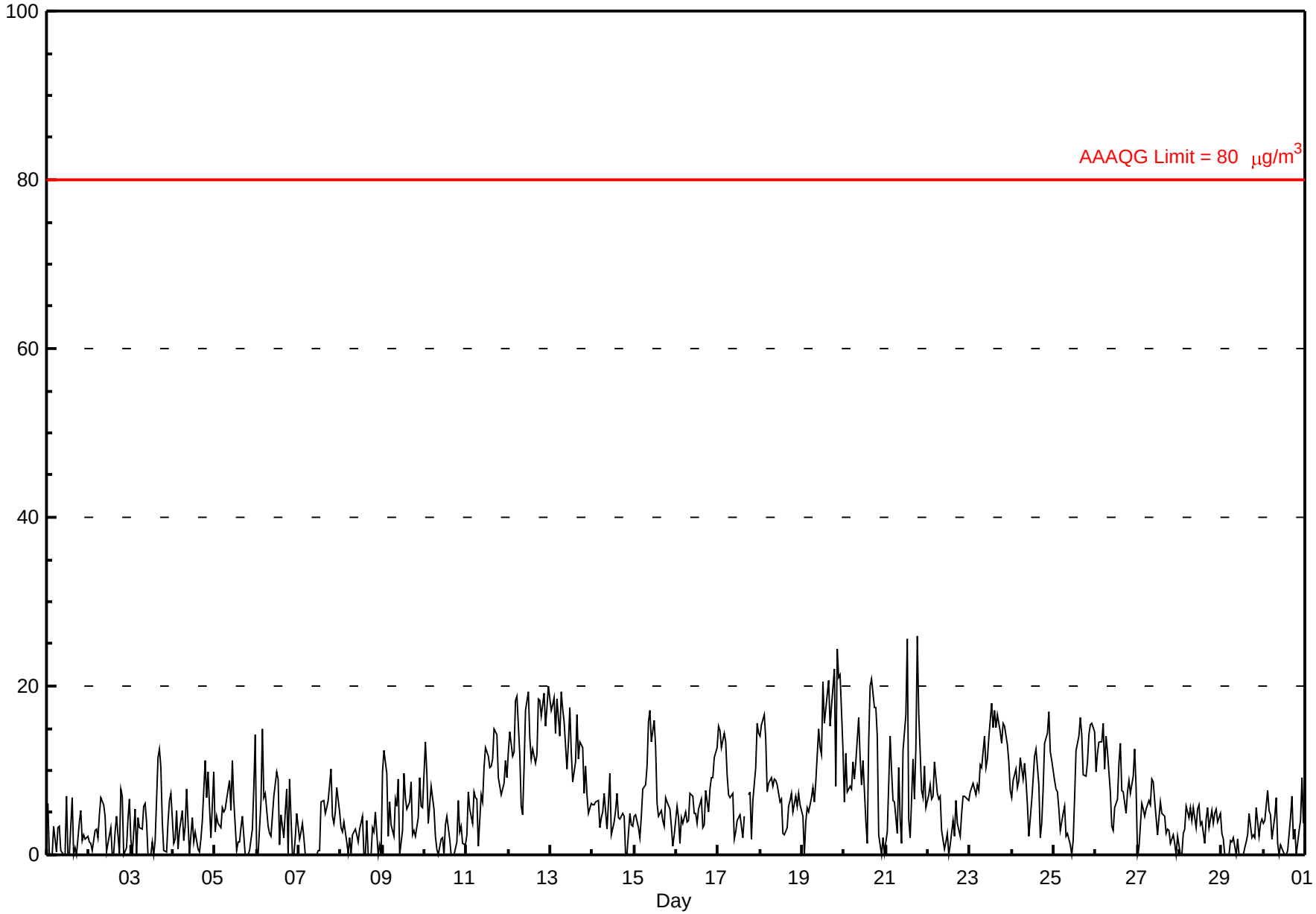
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - November 2014

Maximum Value: 30.3 $\mu g/m^3$ on Nov 21 19:00

Maximum Daily Average: 17.0 $\mu g/m^3$ on Nov 12

Minimum Value: 0 $\mu g/m^3$ on Nov 1 10:00

Minimum Daily Average: 3.7 $\mu g/m^3$ on Nov 29

Maximum Diurnal Average: 10.6 $\mu g/m^3$ at hour 19

Minimum Diurnal Average: 7.6 $\mu g/m^3$ at hour 10

Monthly Average: 8.91 $\mu g/m^3$

Percentiles: P_1 = 0.0 P_{10} = 2.9 Q_1 = 4.8 Median = 8.0 Q_3 = 12.0 P_{90} = 16.8 P_{99} = 25.4

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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-Nov	11	3	3	1	7	2	6	5	3	0	4	9	1	1	11	3	4	4	5	6	3	4	3	3	4.3	11.0
2-Nov	3	3	2	4	4	3	7	8	7	7	2	3	5	4	4	4	5	2	11	11	0	5	7	8	5.1	11.5
3-Nov	4	1	8	4	5	5	4	7	7	6	1	1	4	2	7	15	15	11	10	2	2	7	9	9	6.1	15.1
4-Nov	5	6	8	5	5	6	3	6	9	4	6	6	3	5	4	1	4	10	13	10	11	10	11	14	6.9	13.9
5-Nov	5	7	6	4	7	7	7	8	10	10	13	9	3	3	3	8	8	0	0	0	5	5	13	16	6.4	16.0
6-Nov	9	7	9	21	13	11	5	4	4	6	9	12	11	7	8	6	12	12	8	13	1	0	6	7	8.4	21.0
7-Nov	6	5	6	4	2	0	0	0	1	0	0	2	2	8	8	6	7	9	12	8	8	12	13	7	5.2	12.9
8-Nov	7	8	7	3	2	4	4	4	4	4	5	6	7	5	8	8	4	1	5	6	8	0	4	2	4.9	8.3
9-Nov	16	15	11	8	8	6	5	8	11	11	5	9	11	10	9	9	11	8	5	5	9	11	7	10	9.0	16.1
10-Nov	15	14	8	8	10	10	3	2	0	5	5	0	6	6	3	0	0	0	5	8	5	4	3	3	5.2	15.1
11-Nov	5	9	8	5	9	9	9	4	9	9	12	14	14	12	13	15	16	15	13	9	9	12	13	11	10.5	15.8
12-Nov	14	17	14	15	23	22	16	8	8	15	19	21	18	13	14	12	13	23	23	17	21	19	21	22	17.0	23.4
13-Nov	21	23	22	20	21	17	21	20	19	14	16	19	16	10	13	18	17	16	16	10	12	9	7	7	16.1	22.9
14-Nov	7	7	7	8	6	6	7	8	7	12	12	5	5	9	10	6	6	9	8	3	4	6	7	5	7.0	11.7
15-Nov	6	5	5	4	7	9	9	13	19	19	14	19	18	9	6	7	6	5	10	9	7	4	3	6	9.1	19.0
16-Nov	7	6	4	5	4	6	5	5	10	7	7	6	5	8	9	4	6	9	7	10	10	13	13	14	7.6	14.3
17-Nov	16	15	14	15	15	10	9	10	10	4	5	5	6	6	3	8	M	9	9	8	11	13	20	17	10.5	19.7
18-Nov	16	17	20	18	11	11	12	10	10	11	11	9	10	5	6	5	8	8	9	8	9	8	8	9	10.4	19.7
19-Nov	7	2	7	8	8	9	9	10	13	16	17	19	26	22	22	22	18	23	26	21	28	24	26	19	16.7	28.1
20-Nov	8	16	13	11	12	14	12	13	18	16	11	15	11	10	16	24	22	19	19	19	7	3	4	2	13.1	23.7
21-Nov	4	10	17	15	9	10	7	13	9	2	20	22	29	16	8	14	11	17	30	28	11	11	12	7	13.8	30.3
22-Nov	9	10	9	8	13	13	8	8	6	2	3	4	0	4	5	6	8	5	4	6	8	8	8	7	6.8	13.1
23-Nov	8	9	9	8	9	10	12	16	16	11	14	18	19	16	18	16	17	17	15	17	17	15	13	9	13.7	19.0
24-Nov	8	10	11	9	12	13	10	11	11	7	3	9	11	13	14	12	3	6	14	15	17	20	15	13	11.2	19.8
25-Nov	11	8	9	9	4	7	7	4	3	2	2	3	12	14	16	17	17	12	10	13	16	17	20	20	10.5	19.9
26-Nov	12	14	15	19	19	14	15	13	12	5	4	9	9	13	15	11	8	6	9	10	9	12	14	12	11.6	19.0
27-Nov	2	4	8	7	5	7	8	8	11	10	9	3	6	7	7	6	4	5	4	4	4	2	0	4	5.6	10.8
28-Nov	1	1	4	4	7	7	7	6	6	5	7	7	4	5	3	5	6	5	7	5	6	7	6	7	5.3	7.3
29-Nov	3	3	5	0	2	3	2	3	3	5	5	1	2	4	2	5	7	4	4	4	8	5	5	5	3.7	7.7
30-Nov	5	7	9	8	6	3	8	9	5	1	3	3	0	0	2	8	10	7	6	2	4	9	12	6	5.6	12.0
	8.4	8.7	9.2	8.7	8.9	8.5	8.0	8.1	8.7	7.6	8.2	8.9	9.1	8.2	8.9	9.4	9.4	9.2	10.6	9.6	9.0	9.1	10.1	9.4	Diurnal Average	
	20.6	22.9	22.3	21.0	22.8	22.2	20.7	19.7	19.4	19.0	20.3	22.3	28.5	21.5	22.3	23.7	22.4	23.3	30.3	28.3	28.1	24.3	25.6	21.7	Diurnal Maximum	

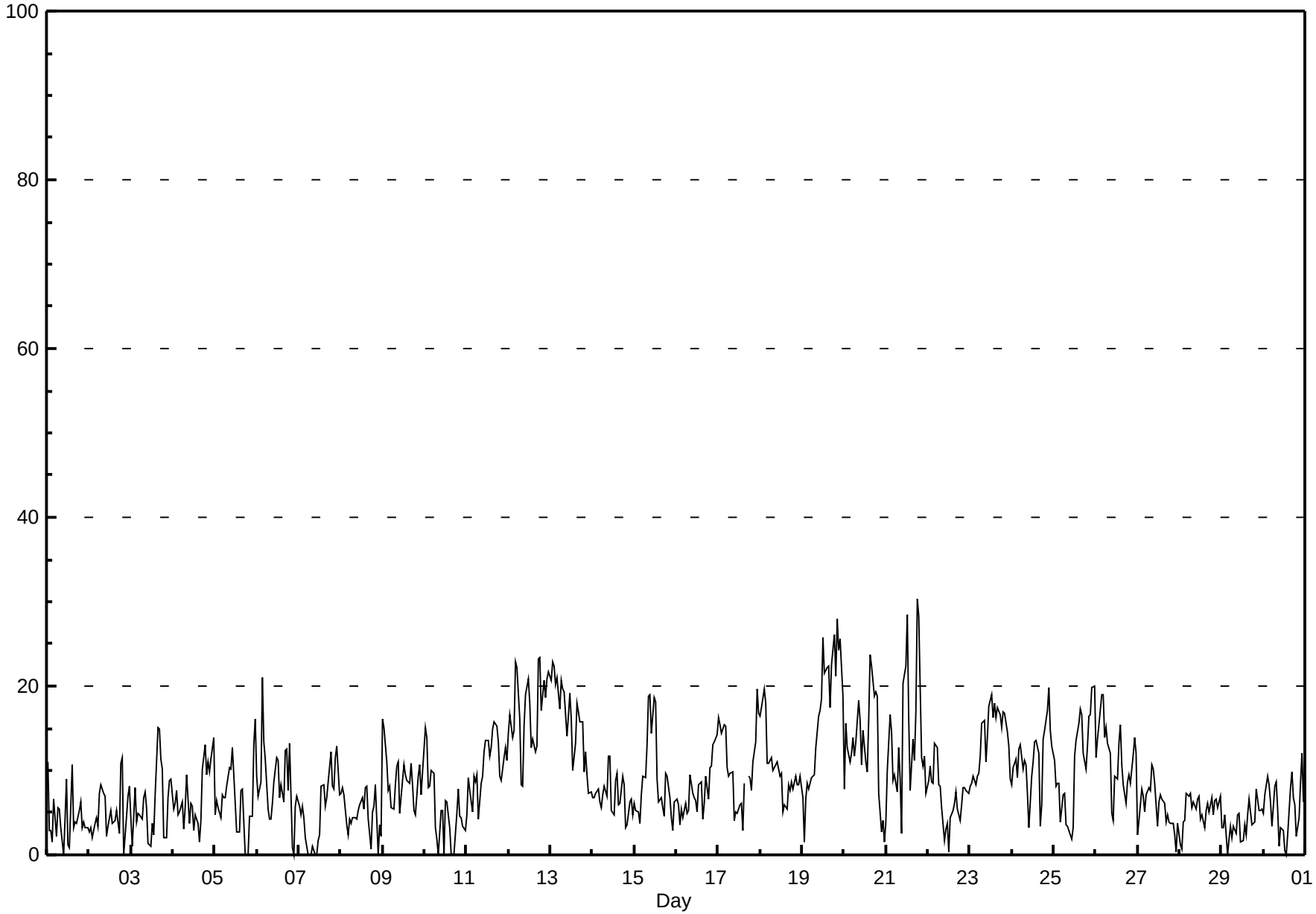
M - Maintenance

Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - November 2014

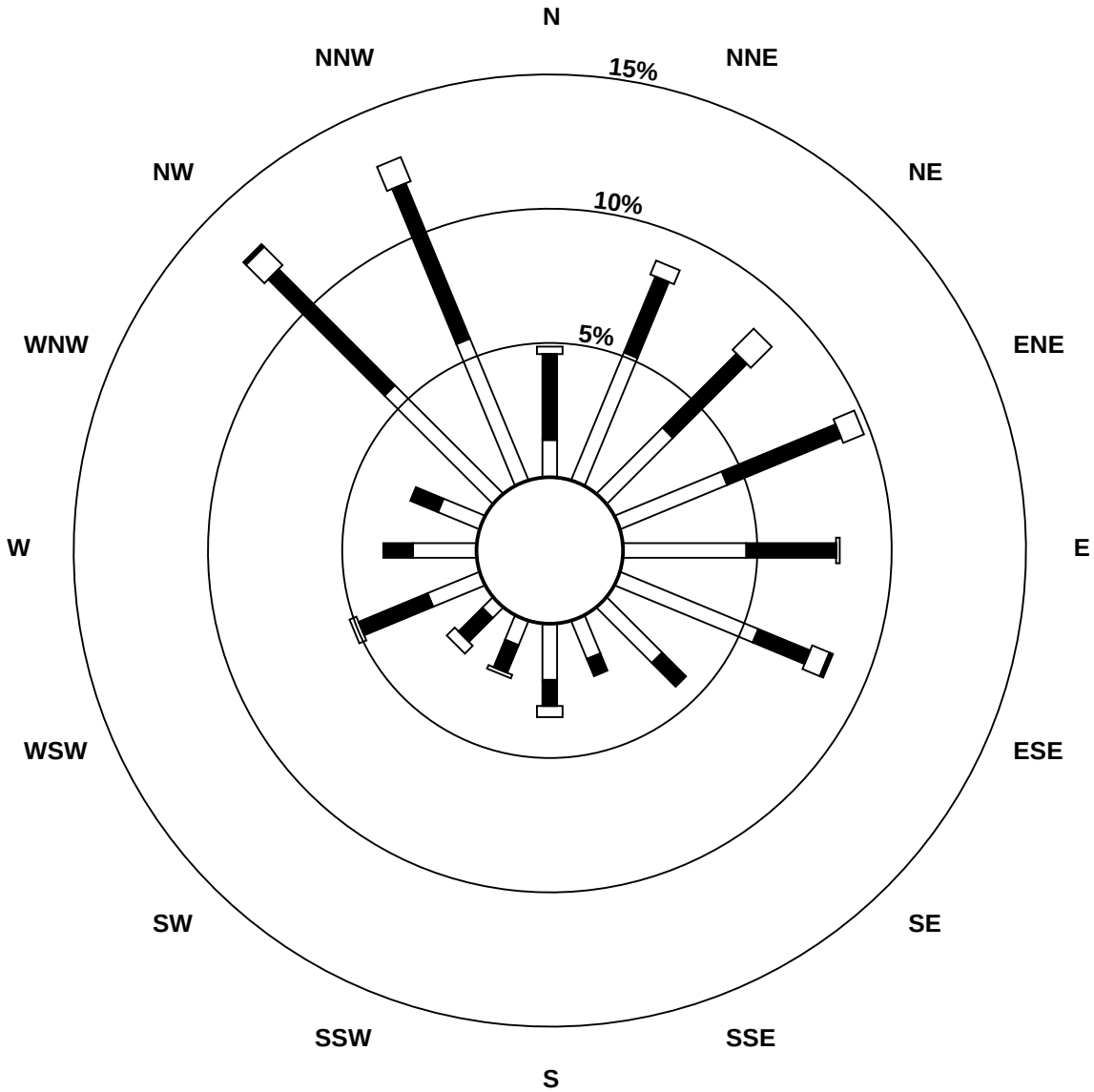


Peace Airshed Zone Association

Pollutant Rose

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

Beaverlodge - November 2014



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

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

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - November 2014

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

Maximum Value: 8.9 ^{o}C on Nov 4 14:00

Maximum Daily Average: 3.5 ^{o}C on Nov 6

Minimum Value: -29 ^{o}C on Nov 29 00:00

Maximum Diurnal Average: -5.5 ^{o}C at hour 16

Monthly Average: -7.89 ^{o}C

Minimum Daily Average: -23.9 ^{o}C on Nov 28

Minimum Diurnal Average: -10.0 ^{o}C at hour 9

Percentiles: P_1 = -26.2 P_{10} = -21.3 Q_1 = -14.8 Median = -7.3 Q_3 = -0.7 P_{90} = 3.4 P_{99} = 6.4

Hours in Service:	720
Hours of Data:	710
Hours of Missing Data:	10
Hours of Calibration:	0
Percent Operational Time:	98.6

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-Nov	2	1	0	-1	-1	-2	-1	-2	-2	-1	1	2	4	5	6	7	7	5	3	3	3	1	1	0	1.7	6.8
2-Nov	-1	-2	-2	-2	-2	-3	-3	-3	-2	1	3	4	5	6	6	6	5	5	5	5	4	3	3	2	1.8	5.8
3-Nov	2	2	2	1	0	0	0	0	-1	1	1	2	4	3	4	3	3	2	3	3	3	3	3	2	1.8	3.7
4-Nov	3	2	2	2	1	1	0	0	0	1	3	5	7	9	9	8	7	4	4	4	3	3	2	2	3.4	8.9
5-Nov	1	1	1	0	-1	-1	-1	0	-1	1	3	4	3	5	6	4	3	3	3	3	3	3	3	3	2.1	5.9
6-Nov	3	3	3	2	1	1	3	2	3	5	5	3	4	5	5	5	6	6	5	5	5	3	1	0	3.5	5.8
7-Nov	-1	-1	-2	-3	-4	-4	-4	-5	-5	-5	-3	-2	-2	-2	-2	-2	-3	-4	-4	-4	-4	-4	-3	-3	-3.1	-1.3
8-Nov	-3	-4	-4	-4	-4	-5	-6	-7	-7	-7	-7	-6	-6	-6	-5	-6	-7	-7	-8	-8	-8	-8	-9	-8	-6.3	-3.4
9-Nov	-9	-9	-9	-9	-9	-10	-10	-10	-10	-9	-9	-9	-8	-7	-5	-6	-6	-7	-7	-7	-8	-8	-9	-10	-8.3	-5.5
10-Nov	-10	-11	-11	-11	-11	-12	-13	-14	-15	-16	-14	-13	-10	-13	-13	-11	-13	-16	-17	-17	-18	-18	-18	-18	-13.9	-10.2
11-Nov	-19	-19	-19	-20	-20	-21	-21	-21	-24	-24	-23	-21	-21	-19	-18	-18	-18	-19	-20	-20	-19	-21	-21	-20	-20.4	-17.7
12-Nov	-21	-23	-23	-22	-21	-22	-22	-23	-23	-23	-21	-18	-18	-16	-11	-14	-17	-20	-20	-20	-20	-20	-22	-24	-20.3	-11.5
13-Nov	-24	-25	-24	-23	-25	-25	-25	-27	-25	-22	-21	-16	-16	-15	-15	-13	-15	-18	-17	-15	-15	-14	-15	-16	-19.4	-13.4
14-Nov	-16	-16	-16	-16	-16	-16	-16	-15	-15	-14	-14	-13	-11	-11	-11	-11	-11	-11	-11	-12	-12	-13	-14	-14	-13.5	-10.6
15-Nov	-15	-18	-18	-18	-18	-18	-18	-18	-16	-13	-11	-9	-7	-5	-4	-2	-1	-2	-2	-3	-2	-2	-3	-3	-9.3	-1.2
16-Nov	-4	-4	-5	-5	-6	-7	-8	-9	-10	-9	-7	-4	-3	-4	-2	-1	-4	-6	-7	-8	-8	-9	-10	-10	-6.3	-1.4
17-Nov	-10	-10	-11	-11	-9	-9	-7	-7	-7	-7	-4	-2	0	1	3	4	4	5	4	3	1	0	0	0	-2.8	4.8
18-Nov	-1	-1	-1	-1	-1	-1	-2	-3	-3	-2	-1	-1	-1	-1	-1	-1	-2	-2	-3	-5	-6	-6	-6	-7	-2.4	-0.6
19-Nov	-6	-7	-7	-9	-10	-10	-10	-9	-9	-9	-8	-8	-6	-5	-5	-4	-6	-7	-7	-7	-7	-7	-7	-5	-7.3	-4.4
20-Nov	-4	-5	-4	-4	-4	-2	-1	-1	-1	1	2	4	4	4	4	4	3	3	3	4	5	5	5	6	1.3	5.6
21-Nov	5	4	5	4	5	5	4	3	3	3	3	4	4	3	2	1	0	-1	-1	0	0	-1	0	-1	2.2	4.8
22-Nov	-2	-3	-3	-4	-5	-6	-6	-7	-8	-9	-9	-9	-9	-9	-10	-10	-10	-10	-10	-10	-10	-10	-11	-12	-8.0	-1.8
23-Nov	-12	-12	-12	-12	-13	-14	-13	-14	-14	-13	-13	-12	-10	-9	-8	-7	-7	-6	-6	-6	-6	-6	-3	-3	-9.7	-2.8
24-Nov	-4	-6	-8	-8	-8	-7	-7	-7	-6	-5	-4	-6	-5	-3	-4	-2	-1	-2	-2	-3	-4	-3	-3	-3	-4.7	-1.4
25-Nov	-5	-8	-8	-8	-8	-8	-9	-9	-9	-9	-9	-8	-8	-8	-8	-8	-9	-9	-10	-10	-11	-12	-11	-11	-8.9	-5.1
26-Nov	-12	-12	-13	-13	-15	-14	-17	-16	-16	-12	-9	-12	-9	-8	-9	-9	-9	-10	-9	-9	-9	-9	-10	-11	-11.4	-7.9
27-Nov	-13	-14	-14	-15	-16	-16	-17	-18	-18	-18	-18	-18	-19	-19	-19	-19	-20	-20	-20	-21	-21	-21	-21	-21	-18.2	-12.5
28-Nov	-22	-22	-22	-22	-22	-22	-22	-23	-23	-23	-23	-23	-23	-23	-23	-24	-24	-25	-26	-26	-26	-27	-28	-29	-23.9	-21.6
29-Nov	N	N	N	N	N	N	N	N	N	N	-27	-25	-22	-21	-23	-19	-22	-19	-19	-19	-20	-20	-21	-22	--	-18.8
30-Nov	-22	-23	-22	-23	-26	-26	-26	-26	-26	-26	-24	-22	-22	-21	-20	-19	-21	-19	-18	-16	-15	-13	-12	-11	-20.8	-11.1
	-7.6	-8.3	-8.6	-8.7	-9.2	-9.5	-9.6	-9.9	-10.0	-9.1	-8.6	-7.7	-6.7	-6.1	-5.8	-5.5	-6.3	-6.9	-7.1	-7.2	-7.5	-7.7	-8.0	-8.3	Diurnal Average	
	4.8	4.2	4.5	4.3	4.5	4.7	3.7	2.8	2.9	5.3	5.2	5.1	6.9	8.9	8.8	8.4	7.0	5.6	5.3	5.1	4.7	5.4	5.3	5.6	Diurnal Maximum	

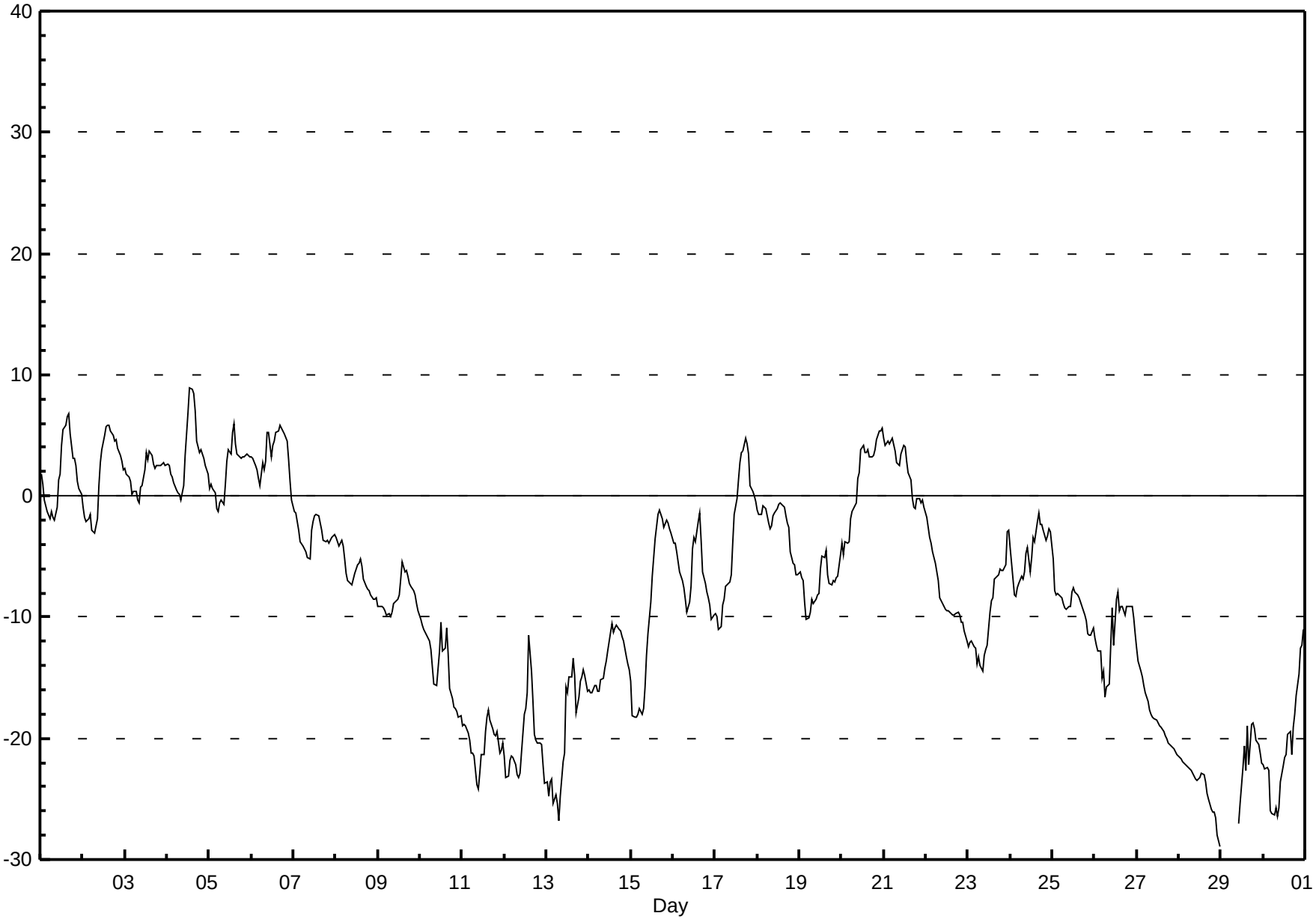
N - Not Valid

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - November 2014

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

Maximum Value: 100.0 % on Nov 7 19:00 Maximum Daily Average: 99.5 % on Nov 8

Minimum Value: 38 % on Nov 17 16:00 Minimum Daily Average: 63.9 % on Nov 17

Maximum Diurnal Average: 89.3 % at hour 6 Minimum Diurnal Average: 79.9 % at hour 15

Monthly Average: 85.52 % Percentiles: P_1 = 47.5 P_{10} = 68.6 Q_1 = 79.3 Median = 87.6 Q_3 = 95.6 P_{90} = 98.9 P_{99} = 100.0

Hours in Service:	720
Hours of Data:	710
Hours of Missing Data:	10
Hours of Calibration:	0
Percent Operational Time:	98.6

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-Nov	90	93	96	97	98	99	96	97	95	90	82	80	71	66	68	66	66	69	75	74	76	83	88	86	83.3	99.3
2-Nov	88	89	91	89	85	91	90	90	83	74	73	65	63	63	65	68	69	69	71	75	83	84	84	85	78.7	91.3
3-Nov	82	81	80	79	81	77	76	79	80	75	77	73	67	71	70	74	75	76	73	72	71	70	69	71	75.0	81.9
4-Nov	69	69	72	72	74	79	85	90	93	89	85	78	70	52	48	50	59	67	69	68	71	73	76	80	72.6	93.2
5-Nov	86	82	82	82	84	84	78	76	78	74	67	65	68	56	54	66	68	66	65	64	64	63	65	67	70.9	85.8
6-Nov	68	70	74	76	81	87	79	81	79	77	78	81	81	82	83	80	75	73	73	73	75	80	83	88	78.2	87.6
7-Nov	90	89	89	88	82	82	83	85	86	86	77	79	79	81	83	85	90	98	100	100	100	100	100	100	88.9	100.0
8-Nov	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	99	99	99	99	99	99	99	99.5	100.0
9-Nov	98	98	98	98	98	98	98	98	98	98	98	98	98	98	99	99	100	100	99	99	99	98	98	97	98.4	99.7
10-Nov	97	97	96	96	96	95	95	94	93	92	91	89	88	87	86	86	87	90	89	89	90	90	90	91	91.4	96.8
11-Nov	91	91	91	90	90	89	89	89	86	84	84	82	82	82	82	82	85	88	88	89	89	89	89	89	87.0	91.0
12-Nov	88	87	86	88	88	88	87	87	86	86	87	85	84	82	83	83	87	89	89	89	89	88	87	86	86.6	89.1
13-Nov	86	85	86	85	84	85	84	82	85	82	81	79	83	81	82	81	85	90	92	93	94	94	93	93	86.0	93.6
14-Nov	93	92	92	93	93	93	93	94	94	94	93	92	91	91	93	94	94	96	96	96	96	95	94	94	93.5	96.0
15-Nov	92	90	91	91	90	91	90	92	93	91	90	88	88	91	87	71	59	59	60	64	64	65	67	68	80.5	92.6
16-Nov	68	67	69	72	74	78	81	84	87	81	75	63	56	58	53	52	60	72	76	80	82	87	91	94	73.4	94.3
17-Nov	95	98	97	99	88	81	74	71	68	65	54	47	44	41	40	38	41	45	53	54	62	60	60	59	63.9	98.6
18-Nov	61	64	66	69	72	71	75	77	77	77	77	77	76	76	78	79	84	86	88	93	100	99	100	100	80.1	100.0
19-Nov	100	100	100	100	99	99	100	99	99	98	98	98	96	94	96	94	97	98	99	99	99	98	99	97	98.2	100.0
20-Nov	95	97	98	97	97	98	96	97	98	93	93	90	90	96	97	98	100	99	100	96	85	77	76	74	93.2	99.9
21-Nov	78	81	79	79	79	78	84	89	89	89	84	83	82	89	92	92	100	100	100	98	97	99	98	100	89.0	100.0
22-Nov	100	100	100	100	99	99	98	98	97	96	95	95	91	90	87	86	85	85	83	83	84	84	87	90	92.2	100.0
23-Nov	91	89	87	90	93	95	95	94	94	91	92	93	88	87	85	82	83	89	90	90	89	92	89	91	89.8	94.7
24-Nov	91	90	95	96	100	100	100	99	99	95	91	92	91	90	91	97	96	100	100	100	100	100	100	100	96.3	100.0
25-Nov	100	98	98	99	98	98	98	98	97	97	97	96	96	96	96	96	97	97	97	98	97	96	97	97	97.3	100.0
26-Nov	97	96	97	96	94	95	93	94	94	95	93	89	90	90	94	97	96	97	96	94	94	94	95	93	94.2	96.7
27-Nov	94	94	94	93	93	92	91	90	88	88	87	86	85	87	87	86	86	86	86	86	86	86	86	85	88.5	94.3
28-Nov	84	84	82	82	82	84	84	84	85	84	83	82	80	79	80	79	80	81	83	83	83	83	82	81	82.3	84.5
29-Nov	N	N	N	N	N	N	N	N	N	N	80	78	74	71	75	75	77	77	77	79	81	81	81	82	--	81.7
30-Nov	82	83	84	84	85	84	84	84	83	83	82	72	69	70	68	69	75	75	76	74	67	63	61	61	75.9	84.8
	88.1	88.1	88.7	89.0	88.9	89.3	88.8	89.3	89.1	87.0	84.7	82.4	80.8	80.0	79.9	80.2	81.8	83.8	84.8	85.1	85.5	85.7	86.1	86.6	Diurnal Average	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.7	99.5	99.5	99.5	99.6	99.7	99.7	99.2	99.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Diurnal Maximum	

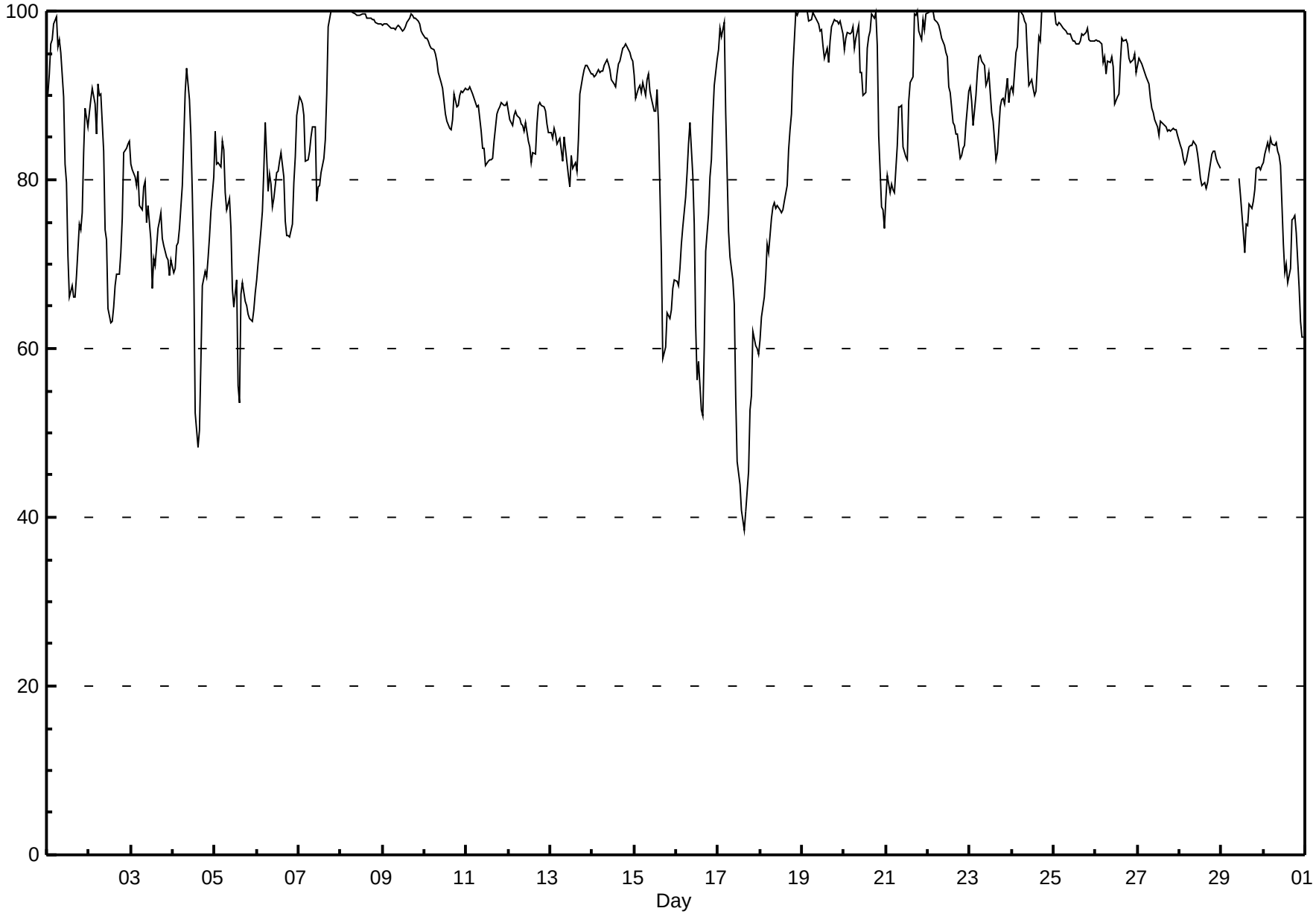
N - Not Valid

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - November 2014



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - November 2014

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	2	2	4	3	2	2	4	4	4	3	4	6	4	5	9	7	5	2	2	4	3	3	3	2	2.7	9.4
Dir	201	104	141	122	120	90	62	88	131	115	141	198	174	179	166	180	183	169	105	58	72	125	72	104	140	166
2 Spd	4	4	3	3	3	4	5	4	4	1	4	5	5	5	3	3	2	3	7	12	11	11	16	12	2.0	15.6
Dir	122	114	124	100	181	117	146	92	90	72	104	177	154	132	122	118	156	151	210	281	254	270	270	259	205	270
3 Spd	17	14	12	12	8	8	9	4	2	4	4	4	3	4	6	8	9	13	18	17	19	22	19	15	3.0	22.4
Dir	266	271	274	262	259	285	297	315	81	164	174	212	196	168	96	90	95	95	100	99	106	97	103	98	119	97
4 Spd	9	10	8	5	2	6	9	3	4	5	13	13	16	27	33	27	19	7	8	8	5	10	6	7	7.4	33.0
Dir	103	94	94	83	249	314	303	98	162	230	261	238	245	258	268	267	252	246	249	257	312	266	295	252	258	268
5 Spd	3	3	3	13	8	1	2	8	10	1	4	5	5	5	9	13	16	20	19	19	22	25	21	18	6.4	25.0
Dir	53	287	250	257	241	213	203	277	229	337	270	182	156	140	125	102	102	99	107	102	104	104	112	108	119	104
6 Spd	15	8	5	2	6	7	9	14	9	12	7	3	2	1	2	4	4	6	4	6	11	16	15	16	4.8	15.7
Dir	107	118	144	249	339	21	15	342	343	347	329	229	156	66	288	329	301	317	278	312	342	350	339	323	344	323
7 Spd	16	11	14	12	9	7	9	9	11	9	3	5	4	4	3	8	8	11	10	11	12	4	4	5	3.4	16.0
Dir	323	329	335	322	333	347	356	9	16	20	64	125	149	143	145	24	112	118	111	102	105	139	130	131	36	323
8 Spd	3	4	4	1	4	10	14	13	13	10	7	7	5	6	2	6	9	10	10	11	9	10	8	6	4.4	14.4
Dir	265	329	12	235	242	16	29	31	25	21	16	12	21	19	55	161	140	135	109	94	114	98	92	114	60	29
9 Spd	8	8	2	4	7	8	8	5	4	5	8	7	6	5	4	7	7	12	11	11	10	8	7	8	5.4	11.8
Dir	98	81	320	7	10	21	10	337	314	315	341	321	255	259	308	331	340	344	339	353	336	341	316	329	343	344
10 Spd	13	13	13	11	11	14	14	11	11	12	5	4	3	8	7	2	4	5	7	7	8	8	9	7	5.9	13.7
Dir	338	339	343	341	344	9	24	43	40	44	40	69	113	141	158	108	73	63	64	74	73	76	76	76	36	9
11 Spd	5	4	5	6	4	3	4	3	4	5	5	4	4	6	2	8	7	7	11	3	7	3	3	1	1.4	11.0
Dir	79	80	94	83	106	194	166	198	76	229	242	256	296	309	9	298	313	330	337	354	296	19	36	92	331	337
12 Spd	2	2	3	2	2	2	3	5	6	3	3	0	2	1	0	3	1	2	4	1	2	3	0	1	1.4	5.6
Dir	250	24	46	41	340	348	326	334	320	332	314	45	258	63	2	173	192	57	48	1	326	355	23	52	350	320
13 Spd	3	3	2	1	1	0	0	2	3	1	3	2	3	3	3	1	1	1	2	4	9	9	6	6	2.1	9.4
Dir	343	41	40	185	343	199	25	352	40	357	313	312	316	218	241	256	230	89	32	314	329	325	317	313	325	325
14 Spd	8	8	9	11	10	15	13	11	10	7	5	3	2	2	4	3	2	4	4	3	3	2	4	7	3.9	14.9
Dir	332	350	336	330	333	327	335	328	327	322	299	249	193	179	185	159	60	330	313	243	224	211	168	134	322	327
15 Spd	5	3	2	2	1	5	3	4	2	3	5	3	3	6	11	23	20	15	14	4	6	6	8	7	4.6	23.4
Dir	140	178	69	91	80	53	64	52	68	60	57	54	14	8	321	314	315	307	307	315	330	346	330	337	336	314
16 Spd	10	9	8	9	6	3	4	2	3	4	2	2	2	4	2	1	2	1	1	1	2	1	2	1	1.9	10.3
Dir	322	326	324	308	319	22	37	20	50	68	67	116	118	88	59	84	102	240	306	246	347	49	37	15	354	322
17 Spd	1	0	2	3	1	2	3	4	4	5	5	4	4	5	3	1	3	10	14	13	12	12	13	11	4.2	14.2
Dir	35	20	289	46	19	38	52	61	73	56	61	71	52	51	49	14	262	334	334	339	317	330	330	332	354	334
18 Spd	13	10	7	6	3	11	12	11	12	12	10	12	7	9	7	5	5	5	6	3	5	6	7	7	6.1	12.9
Dir	324	319	313	314	334	333	323	323	310	318	318	320	323	331	335	348	18	12	8	78	96	77	80	79	337	324
19 Spd	4	4	3	4	3	2	3	2	4	1	1	6	1	2	1	1	1	1	2	0	0	1	1	3	0.4	5.5
Dir	87	89	94	225	231	88	65	124	214	242	327	289	349	185	201	232	190	15	32	257	254	176	113	66	136	289
20 Spd	2	1	2	0	0	2	1	1	4	4	3	2	3	3	3	2	3	2	2	2	10	13	18	16	1.1	17.8
Dir	118	50	53	271	66	13	79	170	57	56	81	210	90	74	90	113	94	106	61	237	257	269	262	270	270	262
21 Spd	4	2	2	6	5	6	6	4	2	3	3	6	6	8	9	5	6	4	3	14	4	6	6	13	3.4	13.8
Dir	253	86	73	38	27	6	26	59	102	67	90	120	119	110	93	81	316	10	312	46	5	286	26	28	46	46
22 Spd	12	14	12	15	16	16	17	17	19	17	17	17	20	17	19	16	13	10	10	9	7	5	4	5	12.5	20.5
Dir	23	14	359	341	337	333	337	322	318	320	317	315	312	314	309	310	312	312	324	326	322	329	45	62	328	312

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - November 2014

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
23 Spd	5	6	4	2	3	2	1	2	2	2	1	5	1	1	3	1	4	3	3	1	3	3	7	7	1.2	7.2
Dir	74	96	142	180	243	46	319	20	62	347	353	298	321	306	233	357	334	344	43	186	61	17	306	350	359	350
24 Spd	6	5	3	2	2	4	2	2	2	2	3	2	0	2	4	8	14	12	10	4	5	3	3	13	2.2	14.1
Dir	346	348	55	74	108	73	89	59	69	73	43	113	69	60	68	68	98	109	112	221	232	324	315	335	65	98
25 Spd	15	19	14	11	8	6	6	7	5	4	5	2	6	7	7	7	6	6	5	2	2	0	2	1	2.8	18.7
Dir	331	315	334	345	342	338	342	12	15	308	25	56	127	132	123	122	106	107	91	277	258	200	218	139	1	315
26 Spd	1	1	1	0	1	2	1	3	2	2	0	2	1	3	6	12	12	10	10	11	12	11	12	13	4.0	12.8
Dir	76	248	2	74	74	48	13	46	53	33	257	2	354	335	317	329	332	347	6	6	21	67	77	64	16	64
27 Spd	14	19	17	13	14	16	19	21	16	18	17	15	13	12	12	15	18	18	19	18	17	19	18	19	16.3	21.3
Dir	45	44	45	42	27	31	33	34	37	37	39	47	40	31	33	44	46	38	32	28	24	28	24	18	35	34
28 Spd	21	18	17	13	15	12	10	11	9	9	10	10	12	14	15	13	11	9	6	6	6	5	1	4	8.9	20.5
Dir	30	21	18	15	11	5	4	2	345	337	336	324	320	317	307	310	306	325	283	295	296	293	182	59	345	30
29 Spd	3	2	3	3	3	4	4	3	2	1	4	3	0	0	5	7	4	8	7	6	7	9	13	12	3.1	13.0
Dir	78	88	84	127	85	70	66	51	41	357	307	36	119	177	45	327	279	333	342	319	315	326	325	330	349	325
30 Spd	17	7	9	8	4	2	4	3	5	5	3	3	4	4	5	3	2	2	4	4	1	6	5	6	0.5	17.0
Dir	321	320	315	326	176	102	76	115	140	174	179	131	129	105	103	110	168	99	66	58	86	265	276	282	342	321
Spd	3.7	3.8	3.6	3.2	3.0	4.5	4.7	4.5	3.2	3.3	2.6	1.3	0.6	0.7	1.1	2.2	1.5	2.8	3.0	2.8	2.4	2.7	2.5	3.1	Diurnal Average	
Dir	2	6	2	343	342	4	6	9	9	1	346	316	306	322	320	338	2	25	27	22	9	13	9	12		
Spd	20.5	19.0	17.2	14.6	16.1	16.3	19.0	21.3	19.4	17.5	17.0	17.4	20.5	27.1	33.0	27.4	20.0	20.1	19.1	19.1	22.2	25.0	21.0	19.3	Diurnal Maximum	
Dir	30	44	18	341	337	333	33	34	318	37	317	315	312	258	268	267	315	99	107	102	104	104	112	18		

Maximum Speed Value: 33 km/h on Nov 4 15:00
Maximum Daily Speed Average: 16.3 km/h on Nov 27
Maximum Diurnal Speed Average: 4.7 km/h at hour 7

Minimum Speed Value: 0 km/h on Nov 20 04:00
Minimum Daily Speed Average: 0.4 km/h on Nov 19
Minimum Diurnal Speed Average: 0.6 km/h at hour 13

Hours in Service: 720
Hours of Data: 720
Hours of Missing Data: 0

Monthly Average Velocity: 2.67 km/h 2.2 deg

Speed Percentiles: $P_1 = 0.4$ $P_{10} = 1.6$ $Q_1 = 2.7$ Median = 4.9 $Q_3 = 10.0$ $P_{90} = 14.3$ $P_{99} = 22.0$

Percent Operational Time: 100.0

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

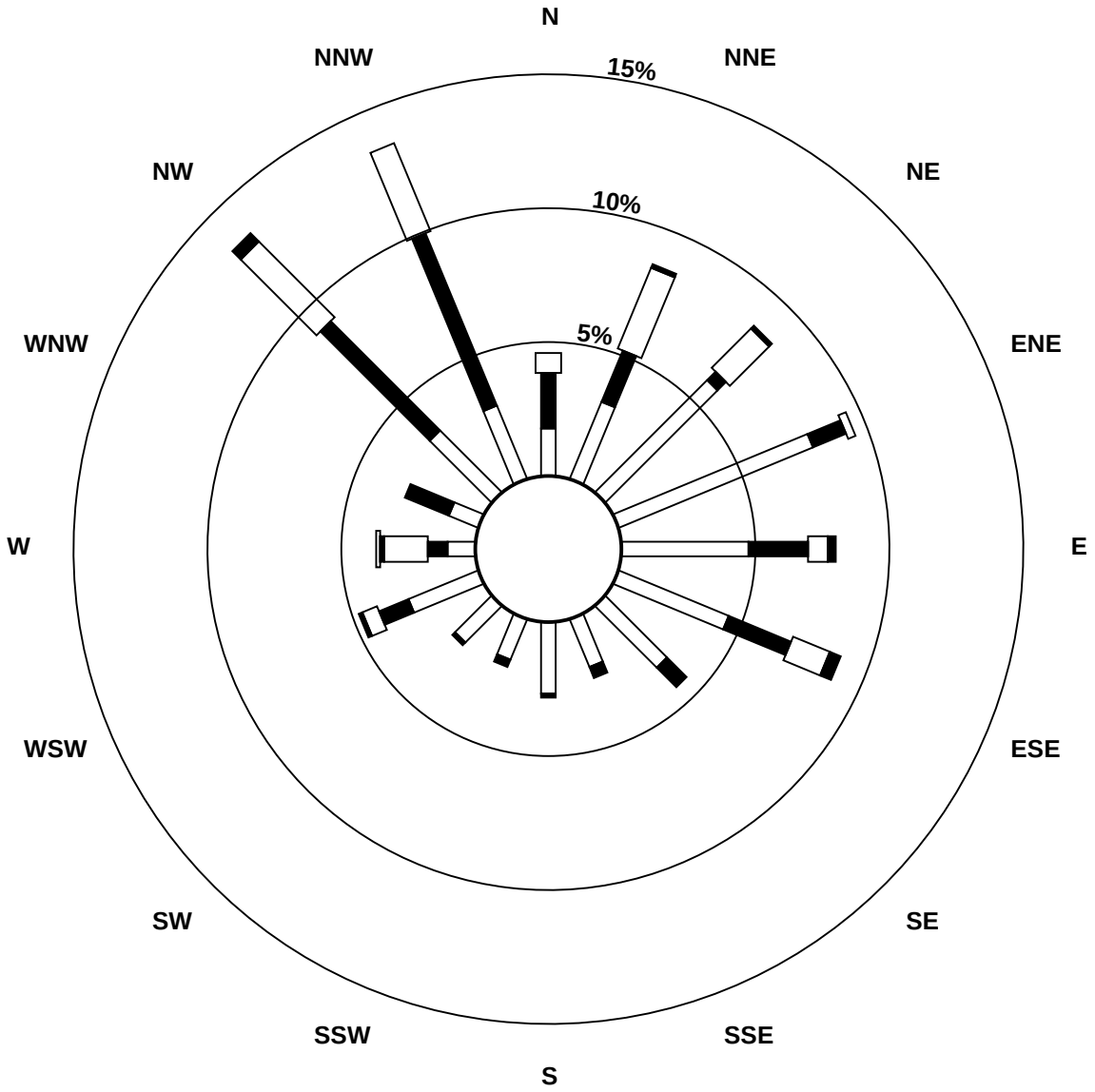
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	40	45	22	1	0	0	108
NorthEast	78	10	33	2	0	0	123
East	76	33	14	7	0	0	130
SouthEast	40	21	0	0	0	0	61
South	39	6	0	0	0	0	45
SouthWest	27	6	2	0	0	0	35
West	25	16	14	2	1	0	58
NorthWest	37	74	44	5	0	0	160
Total	362	211	129	17	1	0	720

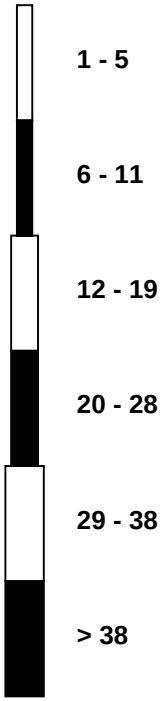
Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - November 2014



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - November 2014

Maximum Speed: 33 km/h on Nov 4 15:00

Maximum Daily Speed Average: 16.5 km/h on Nov 27

Minimum Speed: 1 km/h on Nov 16 16:00

Minimum Daily Speed Average: 2.7 km/h on Nov 19

Maximum Diurnal Speed Average: 8.7 km/h at hour 22

Minimum Diurnal Speed Average: 5.9 km/h at hour 13

Monthly Average Speed: 7.24 km/h

Percentiles: $P_1 = 1.2$ $P_{10} = 2.4$ $Q_1 = 3.4$ Median = 5.4 $Q_3 = 10.1$ $P_{90} = 14.7$ $P_{99} = 22.0$

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

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-Nov	3	3	5	3	3	3	4	4	5	4	5	6	5	5	10	7	5	2	3	4	4	3	3	3	4.2	9.5
2-Nov	4	4	4	4	3	4	6	5	4	2	4	5	6	5	3	4	3	4	7	13	12	11	16	12	5.9	15.7
3-Nov	17	14	12	12	8	8	9	4	3	4	4	4	4	5	7	8	9	13	18	17	19	23	19	15	10.7	22.5
4-Nov	9	10	8	5	3	7	9	4	4	6	13	13	17	27	33	28	19	8	9	9	7	11	6	7	11.4	33.1
5-Nov	4	5	6	13	9	2	2	8	10	5	5	5	7	6	9	13	16	20	19	19	22	25	21	18	11.2	25.1
6-Nov	15	8	6	8	8	7	9	15	12	12	8	4	3	2	4	5	4	6	4	6	11	16	15	16	8.6	15.8
7-Nov	16	11	14	12	9	7	9	9	11	9	5	5	5	5	4	8	9	11	10	11	12	11	11	5	9.2	16.1
8-Nov	5	5	5	2	4	11	14	13	13	10	7	7	5	6	4	6	9	10	10	11	9	10	9	6	7.9	14.4
9-Nov	9	9	2	5	7	8	9	5	4	5	9	7	7	5	5	7	7	12	11	11	10	8	7	8	7.3	11.8
10-Nov	13	13	13	11	11	14	14	11	11	12	5	5	4	9	7	4	5	6	7	7	8	8	9	7	8.8	13.7
11-Nov	5	4	5	6	4	4	4	4	5	6	5	5	5	7	5	8	8	8	12	4	7	4	4	2	5.5	12.3
12-Nov	3	5	3	3	3	3	3	5	6	4	3	1	3	3	1	3	3	2	4	3	3	3	2	3	3.1	5.7
13-Nov	3	3	3	2	3	1	1	4	3	3	5	3	4	3	3	2	2	1	2	4	9	9	6	6	3.7	9.5
14-Nov	8	8	9	11	10	15	13	11	10	7	5	4	2	2	4	3	2	5	4	3	3	2	4	7	6.4	14.9
15-Nov	5	3	3	2	2	5	3	5	2	4	5	3	4	6	11	24	20	15	15	5	6	6	8	7	7.0	23.6
16-Nov	10	9	8	9	7	4	5	3	3	4	3	2	3	4	2	1	3	2	2	2	5	3	4	1	4.1	10.4
17-Nov	2	2	3	3	2	3	3	4	4	5	5	4	4	5	3	2	4	10	14	13	12	12	13	11	6.0	14.3
18-Nov	13	10	7	6	4	11	12	11	12	12	11	12	7	9	7	5	5	5	6	5	5	6	7	7	8.2	12.9
19-Nov	4	4	3	4	3	2	4	3	4	2	2	6	2	2	2	1	1	2	3	1	1	2	2	4	2.7	5.8
20-Nov	3	3	2	2	2	3	2	3	4	4	3	3	3	3	3	2	3	4	2	4	11	13	18	16	4.8	17.9
21-Nov	6	2	2	6	5	6	7	5	2	3	3	6	6	8	9	10	7	6	5	14	8	10	8	13	6.5	14.4
22-Nov	13	14	12	15	16	16	17	18	20	17	17	17	21	17	20	16	13	10	10	9	7	5	4	5	13.7	20.6
23-Nov	5	6	4	3	3	3	3	3	2	3	5	7	3	4	4	3	5	4	3	3	3	4	7	7	4.0	7.3
24-Nov	7	6	4	4	2	4	2	3	3	2	4	3	4	3	5	9	14	12	10	8	7	3	4	13	5.7	14.2
25-Nov	15	19	14	11	8	6	6	7	6	4	5	3	6	7	7	8	6	6	5	3	2	2	2	1	6.7	18.7
26-Nov	1	2	1	1	2	3	4	3	3	3	2	4	2	5	6	12	12	10	10	11	12	12	12	13	6.1	13.1
27-Nov	14	19	17	14	14	16	19	21	16	18	17	15	13	12	12	15	18	18	19	18	17	19	18	19	16.5	21.4
28-Nov	21	18	17	13	15	12	10	11	9	9	10	10	12	14	15	13	11	9	6	6	6	5	3	4	10.9	20.6
29-Nov	3	2	4	3	3	4	4	4	2	3	4	3	3	2	5	8	5	9	8	6	7	10	13	12	5.2	13.1
30-Nov	17	8	9	8	4	4	4	3	5	5	3	4	4	4	5	4	3	3	4	5	2	6	7	7	5.3	17.1
	8.4	7.6	6.9	6.7	6.0	6.5	7.1	7.0	6.6	6.2	6.1	5.9	5.9	6.5	7.1	7.9	7.7	7.8	8.1	7.8	8.2	8.7	8.7	8.5	Diurnal Average	
	20.6	19.0	17.2	14.8	16.2	16.4	19.0	21.4	19.5	17.6	17.1	17.5	20.6	27.2	33.1	27.6	20.0	20.1	19.2	19.2	22.2	25.1	21.1	19.3	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

Beaverlodge - November 2014

Maximum Value: 96.3 deg on Nov 20 04:00

Minimum Value: 2.3 deg on Nov 5 18:00

Percentiles: P_1 = 3.3 P_{10} = 5.2 Q_1 = 7.8 Median = 21.4 Q_3 = 43.8 P_{90} = 71.2 P_{99} = 89.9

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Nov	79	50	34	29	36	33	9	28	29	45	37	24	44	17	7	8	9	15	51	7	27	33	33	33	78.6
2-Nov	22	23	38	22	36	21	22	36	19	60	33	26	28	29	14	35	54	48	22	22	18	8	7	15	60.1
3-Nov	5	7	5	18	43	17	5	21	66	27	13	14	34	41	14	6	8	3	3	7	4	6	5	5	65.8
4-Nov	22	8	5	17	59	65	21	38	44	51	5	10	12	4	4	5	8	58	57	23	35	17	11	27	64.8
5-Nov	75	69	80	5	15	83	44	36	11	71	39	44	37	29	10	7	5	2	6	7	4	5	5	8	83.0
6-Nov	8	15	33	77	37	29	25	26	47	8	39	40	46	82	89	37	38	8	14	17	7	6	7	6	89.1
7-Nov	7	11	7	10	14	19	12	12	6	5	59	35	29	33	42	14	28	6	6	5	7	67	68	17	67.9
8-Nov	52	29	21	84	22	30	4	6	6	6	7	5	7	7	57	15	12	13	6	7	12	5	9	7	83.8
9-Nov	6	35	31	22	9	4	17	18	22	16	26	16	37	19	37	12	10	7	7	7	9	7	13	11	37.0
10-Nov	9	8	5	6	8	6	10	5	5	4	9	16	27	8	6	56	18	7	5	6	4	5	5	9	56.4
11-Nov	28	25	7	10	45	37	32	46	43	40	22	21	37	44	57	23	50	46	33	57	24	43	38	60	59.7
12-Nov	77	62	44	47	67	59	58	40	9	39	42	80	43	63	75	24	63	43	13	72	40	22	84	89	88.5
13-Nov	27	22	67	81	64	84	93	76	66	75	66	73	52	20	42	80	70	69	39	19	4	4	7	12	92.7
14-Nov	8	11	7	4	5	3	5	5	5	10	11	28	45	20	14	18	52	17	29	42	27	19	19	9	51.9
15-Nov	16	20	61	55	75	10	34	39	59	51	10	29	48	18	15	7	3	7	24	53	16	9	6	10	74.5
16-Nov	7	4	5	5	36	31	12	72	59	25	75	32	38	26	34	80	55	75	79	70	66	86	76	85	86.5
17-Nov	70	85	61	44	58	33	37	9	23	11	13	19	25	10	24	50	22	11	6	8	8	14	5	6	85.5
18-Nov	3	4	5	12	74	7	8	6	7	7	8	6	10	9	15	12	15	5	4	60	20	5	3	4	74.1
19-Nov	23	33	12	42	52	57	74	45	28	83	71	33	92	25	67	60	59	66	40	93	87	66	40	24	93.1
20-Nov	22	85	23	96	92	40	90	78	27	28	35	38	46	26	24	30	29	61	47	76	14	10	4	12	96.3
21-Nov	53	43	28	22	10	10	58	41	27	15	26	14	8	14	9	64	33	40	63	20	71	55	77	12	76.9
22-Nov	12	7	9	8	7	7	5	9	6	5	5	4	5	5	5	5	6	9	8	9	7	10	16	12	16.3
23-Nov	14	6	13	38	34	80	91	56	87	70	78	61	74	78	47	72	44	56	37	94	24	38	23	19	94.4
24-Nov	52	23	62	88	43	11	37	88	69	57	56	68	87	87	59	29	6	4	8	56	30	37	28	12	88.1
25-Nov	8	5	7	7	9	11	13	6	23	21	26	35	20	9	10	9	13	8	9	79	40	88	41	64	88.5
26-Nov	70	79	78	83	72	65	80	39	73	56	88	54	78	69	52	5	3	5	8	12	7	17	7	12	87.8
27-Nov	7	5	6	11	6	5	4	4	6	4	6	7	9	7	7	7	5	5	3	4	4	4	4	4	11.2
28-Nov	4	5	4	12	6	7	5	6	6	7	5	8	5	7	6	4	4	7	11	8	9	9	63	14	62.9
29-Nov	41	31	40	27	16	14	9	18	50	66	27	19	80	90	18	33	44	11	14	26	27	24	6	9	89.9
30-Nov	4	44	8	23	28	63	32	21	12	19	48	35	19	27	19	42	42	32	27	17	71	25	59	16	71.2
	78.6	85.5	79.5	96.3	92.4	84.0	92.7	88.1	87.2	83.3	87.8	80.5	92.2	89.9	89.1	80.1	69.7	75.2	79.0	94.4	86.7	88.5	84.3	88.5	

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - November 2014

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

Maximum Value: 109.4 ppb on Nov 18 01:00

Maximum Daily Average: 6.2 ppb on Nov 18

Minimum Value: 0 ppb on Nov 1 01:00

Minimum Daily Average: 0.0 ppb on Nov 1

Maximum Diurnal Average: 4.3 ppb at hour 1

Minimum Diurnal Average: 0.1 ppb at hour 7

Monthly Average: 0.47 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} = 3.6

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	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
2-Nov	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
3-Nov	0	1	1	2	2	1	0	1	1	5	1	0	0	A	1	0	0	0	0	0	0	0	0	0	0.7	4.5
4-Nov	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	2	0	0	1	6	0	0	0	3	0.6	6.0
5-Nov	9	0	0	0	0	0	0	0	0	0	0	A	2	0	2	0	0	0	0	0	0	0	0	0	0.6	8.9
6-Nov	0	0	0	0	0	0	0	0	0	0	A	0	C	C	C	0	0	5	0	0	2	0	0	0	0.6	4.7
7-Nov	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
8-Nov	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
9-Nov	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.1	0.8
10-Nov	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
11-Nov	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.7
12-Nov	0	0	0	0	A	0	0	0	0	0	1	1	1	1	2	1	1	1	0	0	0	0	0	0	0.6	1.6
13-Nov	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0.5	1.4
14-Nov	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2	2	0.5	2.3
15-Nov	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0.3	1.5
16-Nov	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
17-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	1	0.2	1.1
18-Nov	109	25	4	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	6.2	109.4
19-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	A	1	0	0	0.3	0.7
20-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	4	0.4	3.8
21-Nov	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	1.2
22-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0.2	1.4
23-Nov	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
24-Nov	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
25-Nov	0	0	0	0	0	0	0	0	0	0	0	1	0	1	A	0	0	0	0	0	0	0	0	0	0.1	0.7
26-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3
27-Nov	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
28-Nov	0	0	0	0	1	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
29-Nov	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	0.5
30-Nov	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
	4.3	1.0	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.3	0.2	0.3	0.4	0.3	0.4	0.3	0.2	0.4	0.2	0.4	0.3	0.2	0.2	0.5	Diurnal Average	
	109.4	25.4	3.8	1.5	2.4	1.0	0.5	1.6	0.6	4.5	0.9	1.4	2.0	1.4	2.0	2.1	1.0	4.7	1.1	6.0	2.1	0.7	1.9	3.8	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

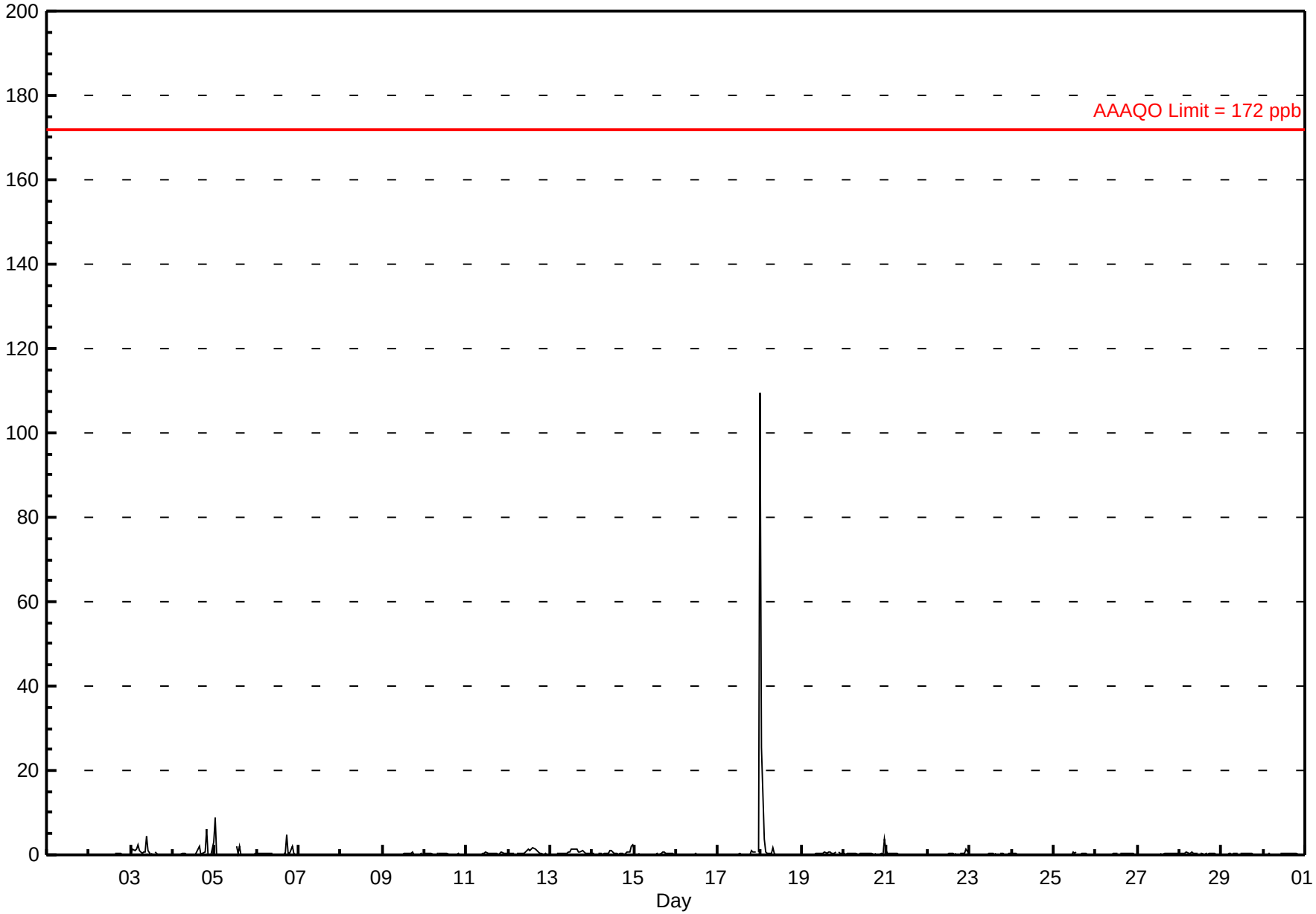
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - November 2014



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - November 2014

Maximum Value: 264.7 ppb on Nov 18 01:00

Maximum Daily Average: 21.2 ppb on Nov 18

Minimum Value: 0 ppb on Nov 3 23:00

Minimum Daily Average: 0.4 ppb on Nov 1

Maximum Diurnal Average: 10.7 ppb at hour 1

Minimum Diurnal Average: 0.6 ppb at hour 7

Monthly Average: 1.78 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.7 $Q_3 = 0.9$ $P_{90} = 1.4$ $P_{99} = 15.8$

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	0	0	1	0	0	0	0	1	0	0	1	1	1	0	0	A	0	0	0	0	0	0	1	1	0.4	0.8
2-Nov	0	0	0	0	0	1	0	0	1	0	0	1	0	0	A	1	1	1	1	1	1	1	1	1	0.6	0.8
3-Nov	1	7	3	3	9	2	1	1	11	11	4	1	7	A	3	0	1	0	1	0	0	1	0	1	2.9	11.0
4-Nov	1	0	1	1	1	1	1	1	1	1	0	0	A	0	10	11	1	1	4	16	0	1	1	13	2.8	15.8
5-Nov	22	1	0	1	0	1	1	0	1	1	0	A	16	3	8	1	1	0	1	1	1	0	1	1	2.6	21.7
6-Nov	1	1	1	1	1	1	1	1	1	1	A	1	C	C	C	1	1	32	1	3	10	1	1	0	3.0	31.9
7-Nov	0	0	0	1	1	0	0	0	0	A	0	0	0	0	0	1	1	0	1	1	0	0	0	1	0.5	0.8
8-Nov	1	1	0	0	0	1	0	0	A	0	0	1	1	1	1	0	1	1	0	1	1	1	1	1	0.5	0.9
9-Nov	1	0	1	0	1	0	0	A	0	1	0	1	1	1	1	1	1	1	0	0	1	1	1	0	0.7	1.4
10-Nov	1	0	0	1	1	0	A	11	1	1	2	1	1	1	0	1	1	1	1	1	1	1	1	1	1.1	10.6
11-Nov	0	1	0	1	0	A	0	1	1	1	2	2	1	1	1	1	1	1	0	1	1	1	1	1	0.9	2.3
12-Nov	1	1	1	1	A	1	1	1	1	1	2	3	2	3	2	2	2	1	1	1	1	1	1	1	1.2	2.8
13-Nov	1	1	1	A	1	1	1	1	1	1	1	1	5	4	2	3	1	2	2	1	1	1	1	1	1.4	4.7
14-Nov	1	1	A	1	1	1	0	1	1	1	3	4	1	1	1	0	1	2	1	1	1	2	3	4	1.3	3.7
15-Nov	3	A	1	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.6
16-Nov	A	0	0	1	1	1	0	1	0	1	0	1	1	1	0	1	0	1	1	1	1	1	1	A	0.6	0.8
17-Nov	1	1	1	0	0	0	1	1	0	0	0	1	1	0	0	1	1	1	1	22	3	1	A	1	1.7	21.6
18-Nov	265	196	13	1	1	1	1	4	1	1	1	1	0	0	0	0	0	0	0	0	1	A	1	0	21.2	264.7
19-Nov	0	0	1	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	3	A	2	1	1	0.9	3.0
20-Nov	1	0	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	9	1.1	8.8
21-Nov	7	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	7.0
22-Nov	1	1	1	1	1	0	0	0	1	0	1	1	1	1	1	1	1	A	1	1	1	1	3	1	0.8	3.1
23-Nov	0	0	1	1	0	0	1	0	1	0	0	1	1	1	1	1	A	0	1	0	0	1	1	1	0.6	1.0
24-Nov	1	1	1	1	1	1	1	0	0	1	0	0	0	1	0	A	0	1	0	0	1	0	1	1	0.6	0.9
25-Nov	0	0	1	0	0	0	0	1	0	0	0	3	2	2	A	1	1	1	1	1	0	1	0	0	0.8	3.3
26-Nov	0	0	0	0	1	0	0	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	0.7	0.9
27-Nov	1	1	1	0	1	1	0	0	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
28-Nov	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	0	0	0	0.8	1.1
29-Nov	0	0	1	0	0	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0.7	1.5
30-Nov	1	0	0	0	0	0	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.7	0.9
	10.7	7.5	1.1	0.7	0.9	0.6	0.6	1.1	1.0	1.0	1.0	1.0	1.8	1.0	1.5	1.2	0.8	1.9	0.8	2.1	1.1	0.7	0.8	1.5	Diurnal Average	
	264.7	195.5	13.0	3.1	8.8	2.4	1.2	10.6	11.0	10.7	3.5	3.6	15.8	3.8	9.9	10.6	1.8	31.9	3.6	21.6	10.5	1.6	3.2	12.9	Diurnal Maximum	

C - Calibration

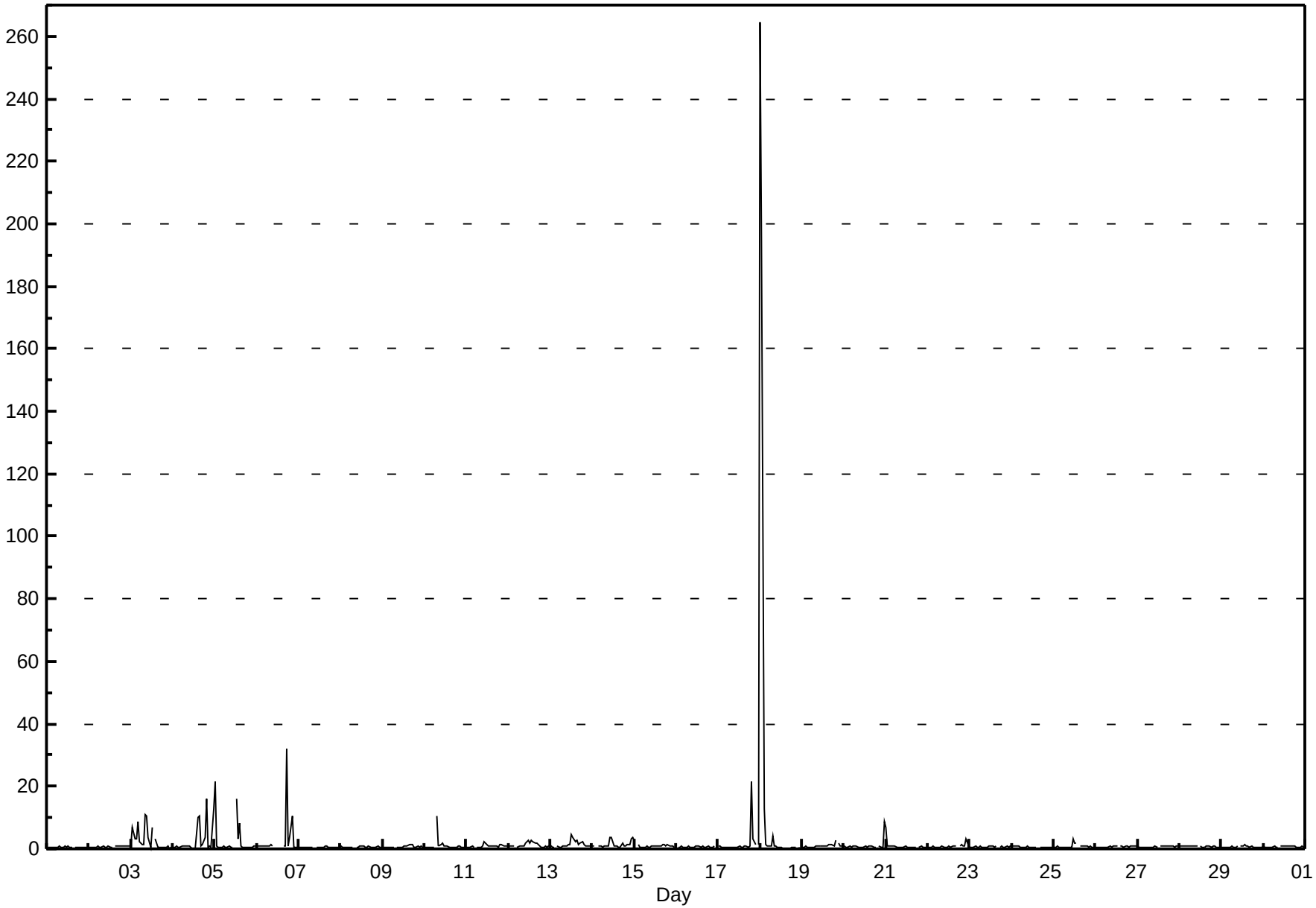
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

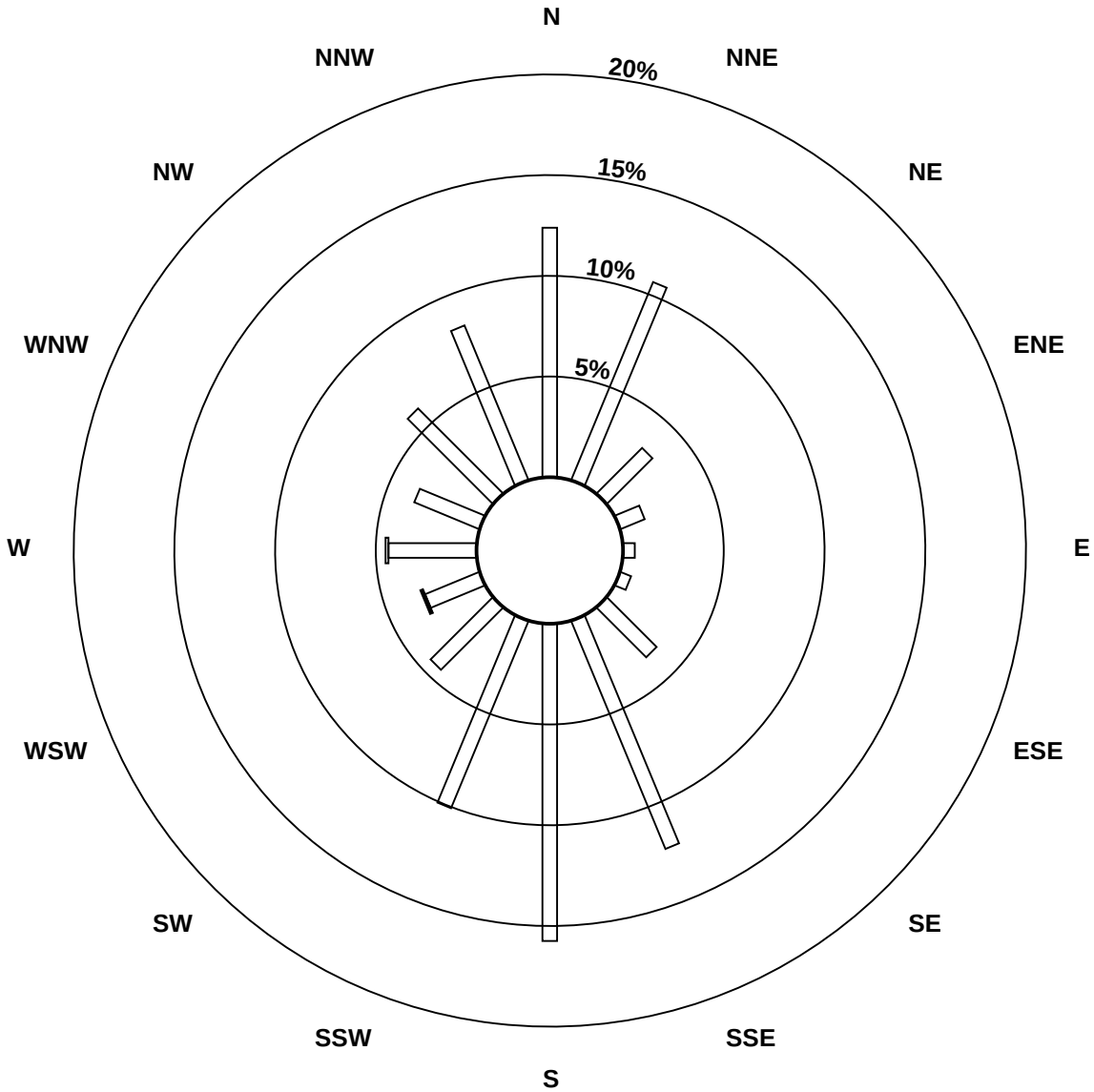
Valleyview - November 2014



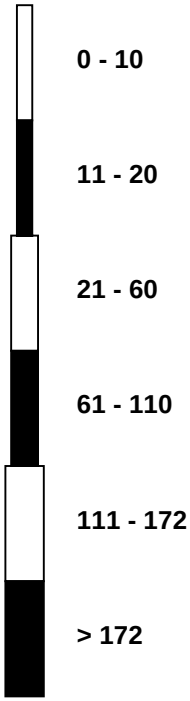
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Valleyview - November 2014



Pollutant Classes (ppb)

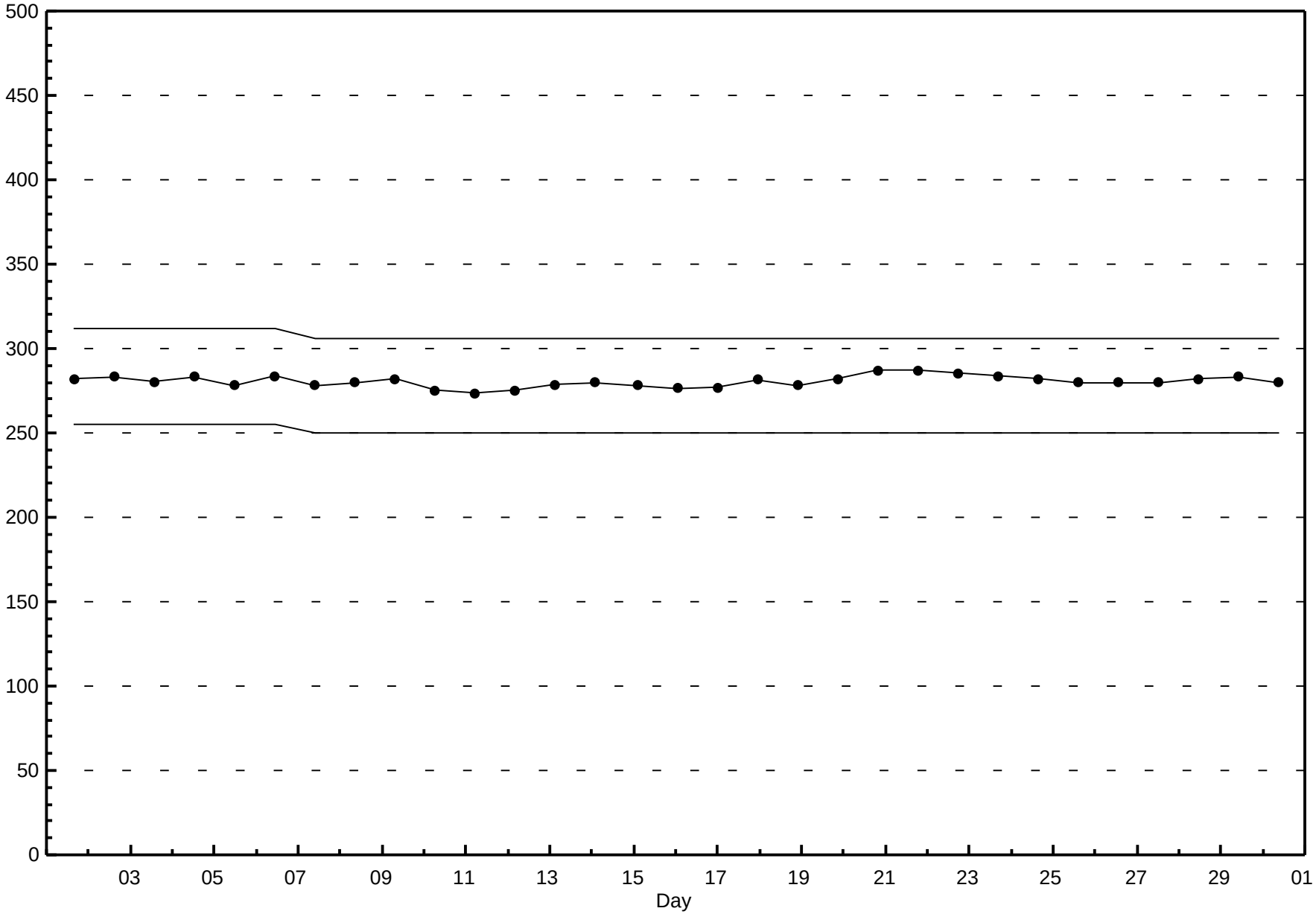


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Valleyview - November 2014



Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.6 ppb on Nov 12 09:00 Maximum Daily Average: 1.0 ppb on Nov 12

Minimum Value: 0 ppb on Nov 4 00:00 Minimum Daily Average: 0.1 ppb on Nov 28
Maximum Diurnal Average: 0.4 ppb at hour 19 Minimum Diurnal Average: 0.2 ppb at hour 14
Monthly Average: 0.26 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.6 P_{99} = 1.8

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.1
2-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
3-Nov	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.6
4-Nov	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0.1	0.7
5-Nov	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Nov	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	1	0	0	0	0	0	0	0	0	0.1	0.5
7-Nov	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
8-Nov	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.7
9-Nov	1	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	0.5
10-Nov	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	1	2	1	1	1	1	1	1	0.4	1.5
11-Nov	0	1	2	3	2	A	1	1	2	0	0	1	0	0	0	0	0	1	2	1	1	1	1	0	0.9	2.7
12-Nov	0	1	1	1	A	0	1	1	4	3	2	1	0	0	0	0	1	1	1	1	1	1	1	1	1.0	3.6
13-Nov	1	1	1	A	1	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	0	1	1	0.5	1.1
14-Nov	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
15-Nov	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	0.2
16-Nov	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	A	0.4	1.4
17-Nov	1	1	0	1	1	1	1	1	1	2	2	1	0	0	0	0	1	0	0	0	0	0	A	0	0.6	1.8
18-Nov	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.5
19-Nov	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
20-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3
21-Nov	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
22-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0.2	0.6
23-Nov	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
24-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0.3	0.6
25-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
26-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0.3	0.6
27-Nov	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
28-Nov	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
29-Nov	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	1	1	0	0	0	0	0.2	0.6
30-Nov	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
	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2	Diurnal Average	
	1.1	0.9	2.2	2.7	1.7	0.6	1.2	1.5	3.6	3.0	1.8	0.8	0.5	0.4	0.5	0.5	0.8	1.5	1.8	0.9	0.8	0.8	0.7	0.9	Diurnal Maximum	

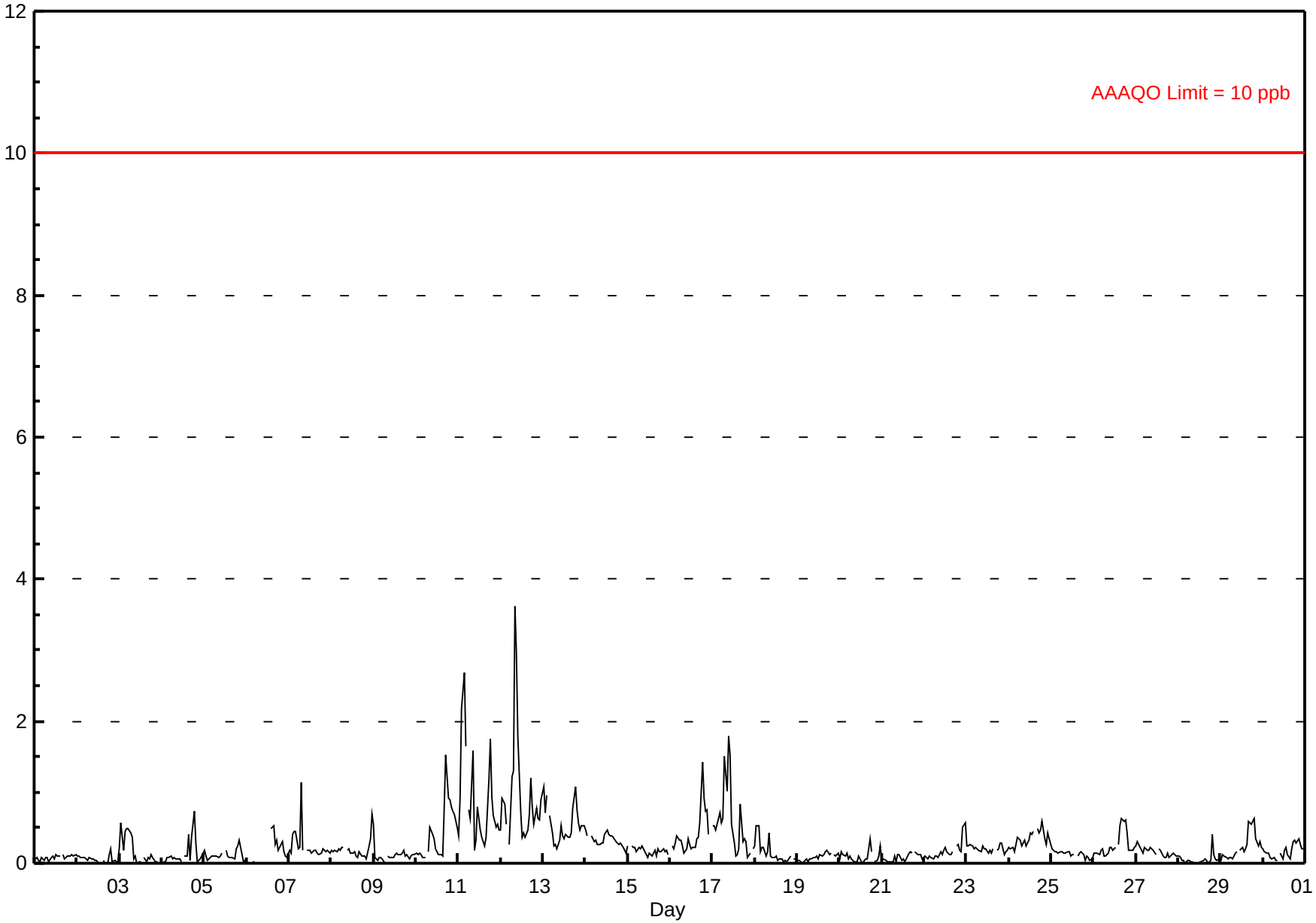
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - November 2014



Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - November 2014

Maximum Value: 20.4 ppb on Nov 10 18:00

Maximum Daily Average: 2.4 ppb on Nov 10

Minimum Value: 0 ppb on Nov 6 07:00

Minimum Daily Average: 0.4 ppb on Nov 2

Maximum Diurnal Average: 1.5 ppb at hour 18

Minimum Diurnal Average: 0.6 ppb at hour 6

Monthly Average: 0.76 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.7$ $P_{90} = 1.1$ $P_{99} = 4.1$

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 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-Nov	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0.4	0.5
2-Nov	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0.4	0.6
3-Nov	1	1	1	1	1	1	1	1	1	0	0	0	1	A	0	0	1	0	1	0	0	0	0	0	0.6	1.4
4-Nov	1	1	0	1	0	0	0	0	0	0	1	1	A	1	0	1	0	1	2	1	0	0	0	1	0.6	1.6
5-Nov	1	1	1	0	0	1	0	0	0	0	0	A	1	0	0	0	1	0	1	1	1	0	0	0	0.5	0.7
6-Nov	1	0	0	0	0	0	0	0	0	0	C	C	C	C	1	1	1	1	1	1	1	0	0	0	0.6	1.4
7-Nov	1	0	1	2	2	1	2	5	1	A	1	0	1	0	0	1	1	0	0	0	1	1	1	0	0.9	5.0
8-Nov	1	1	0	0	1	1	1	1	A	1	1	0	0	1	0	1	0	1	1	0	0	1	1	1	0.6	1.1
9-Nov	1	0	0	0	0	0	0	A	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0.5	1.4
10-Nov	1	0	0	1	0	1	A	2	1	1	1	1	0	0	0	0	18	20	2	1	1	1	1	1	2.4	20.4
11-Nov	1	2	4	5	3	A	2	3	4	1	1	1	1	1	1	1	1	2	3	2	1	1	1	1	1.7	4.9
12-Nov	1	2	2	1	A	1	3	3	5	4	3	1	1	1	1	1	1	2	1	1	1	1	1	2	1.8	5.3
13-Nov	2	2	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1.0	1.8
14-Nov	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
15-Nov	1	A	1	1	1	0	0	1	0	1	0	0	1	1	0	1	0	1	1	1	0	1	1	0	0.5	0.7
16-Nov	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	2	1	1	1	A	1.0	3.8
17-Nov	1	1	1	1	1	1	1	4	2	3	2	1	1	0	0	1	2	1	1	1	0	0	A	1	1.1	3.6
18-Nov	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0.6	1.3
19-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	A	0	1	0	0.4	0.5
20-Nov	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	1	0	1	0	A	0	0	0	1	0.5	1.1
21-Nov	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	A	1	0	0	0	0	0.5	0.7
22-Nov	0	1	0	0	0	0	0	0	1	0	1	1	1	1	0	0	0	A	1	1	1	1	1	1	0.6	1.2
23-Nov	1	1	1	1	1	1	0	0	1	1	0	1	1	1	1	1	A	0	1	1	1	0	1	1	0.6	0.8
24-Nov	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	1.0
25-Nov	1	1	0	0	1	1	1	1	1	0	0	0	0	0	A	0	0	1	0	0	1	1	0	0	0.5	0.7
26-Nov	1	1	0	1	1	1	0	0	1	1	1	1	1	A	1	1	1	1	1	1	0	1	0	1	0.7	1.3
27-Nov	1	1	1	1	1	1	0	0	1	1	1	0	A	1	1	1	1	0	1	0	0	0	1	1	0.5	0.8
28-Nov	1	1	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0	0	0	1	1	0	0	1	0.5	1.1
29-Nov	0	0	1	0	0	0	0	0	0	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.2
30-Nov	1	1	0	1	0	0	0	0	0	A	1	0	1	1	1	0	1	1	1	1	1	1	0	1	0.5	0.8
	0.7	0.7	0.7	0.7	0.7	0.6	0.7	1.0	0.9	0.7	0.7	0.6	0.6	0.6	0.6	0.6	1.3	1.5	0.9	0.8	0.6	0.6	0.6	0.7	Diurnal Average	
	1.8	2.2	3.6	4.9	2.6	0.9	3.4	5.0	5.3	4.2	3.1	1.5	0.9	0.9	1.4	1.1	17.9	20.4	3.8	2.1	1.3	1.3	1.1	2.0	Diurnal Maximum	

C - Calibration

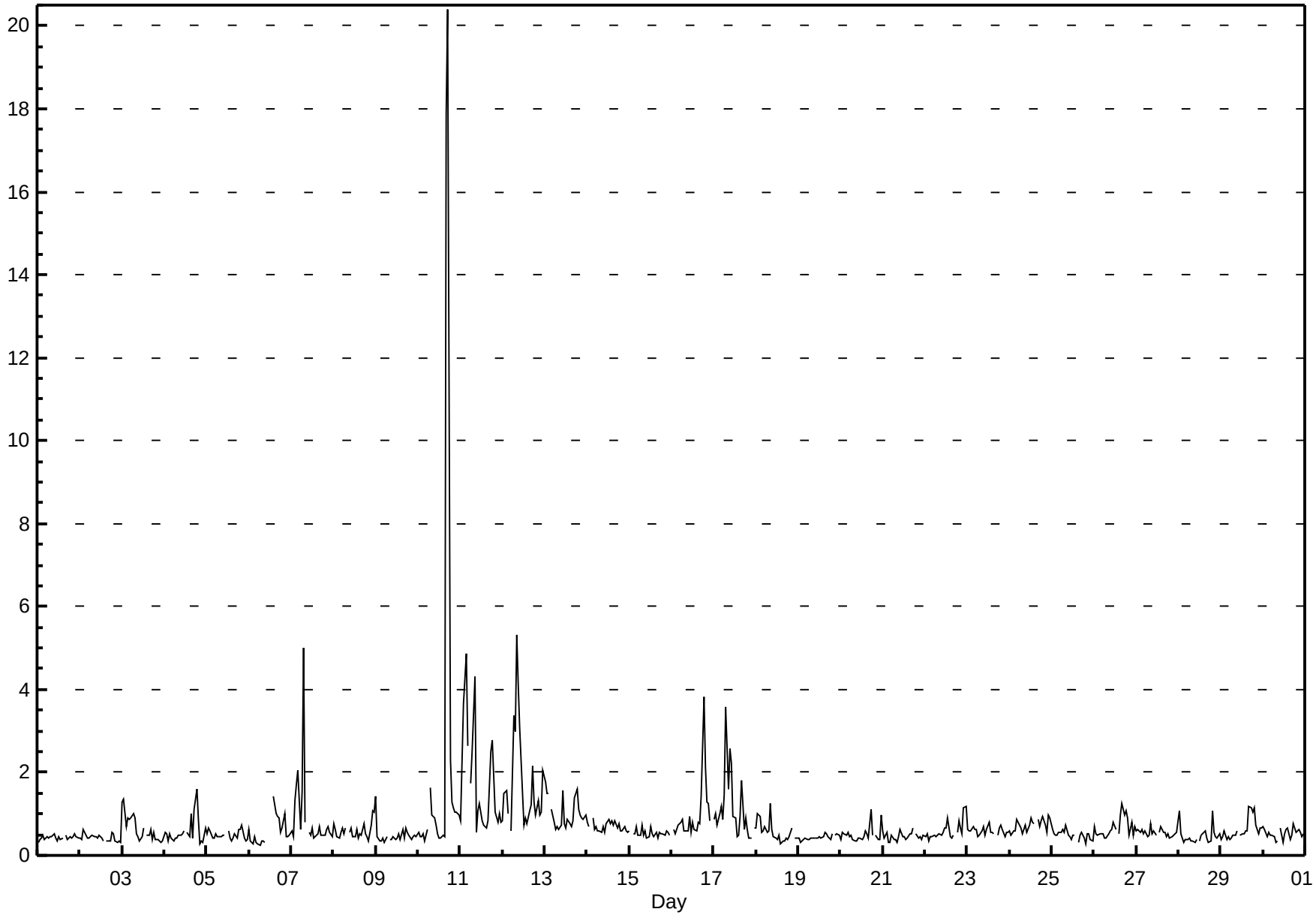
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

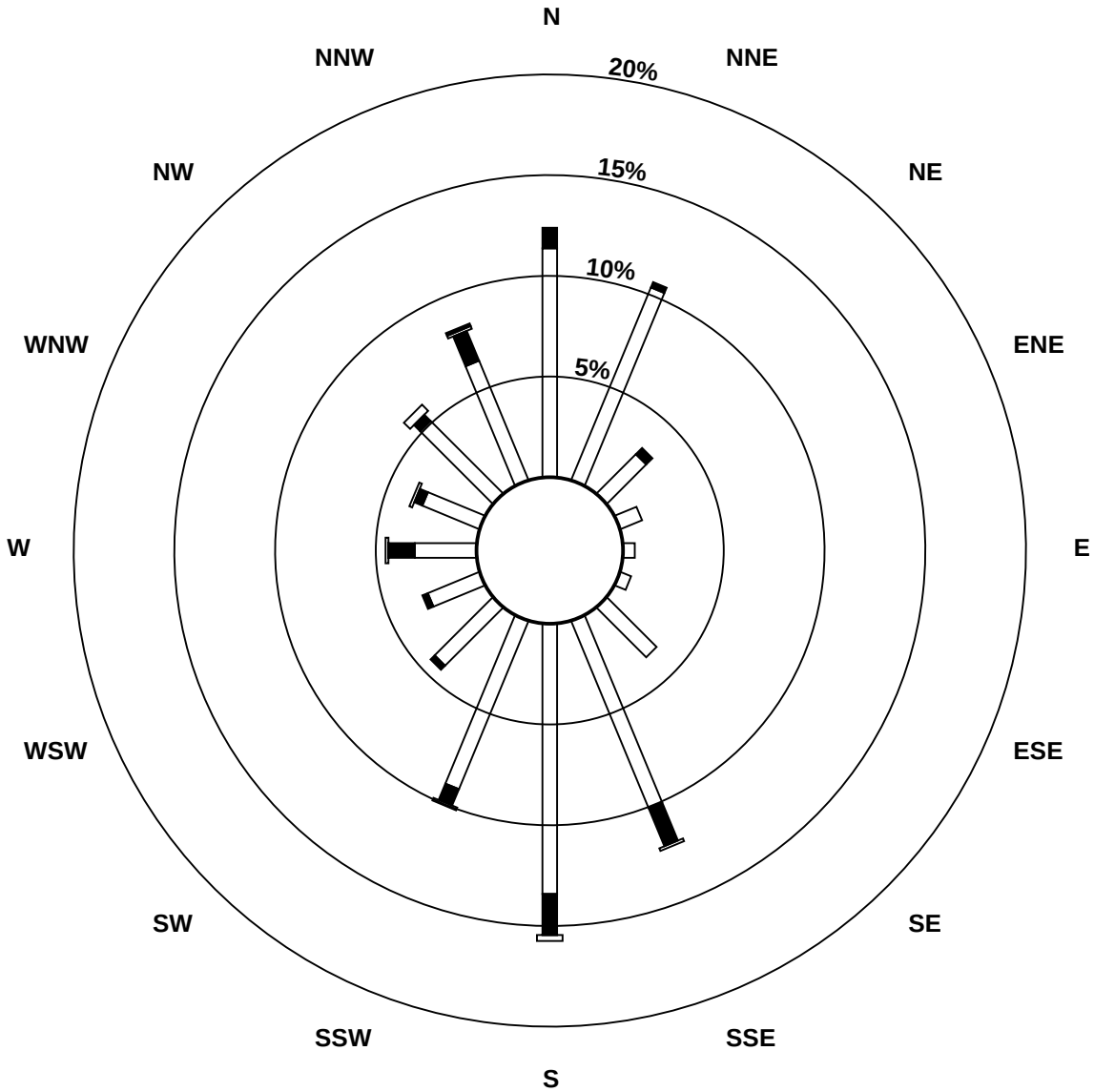
Valleyview - November 2014



Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Valleyview - November 2014



Pollutant Classes (ppb)

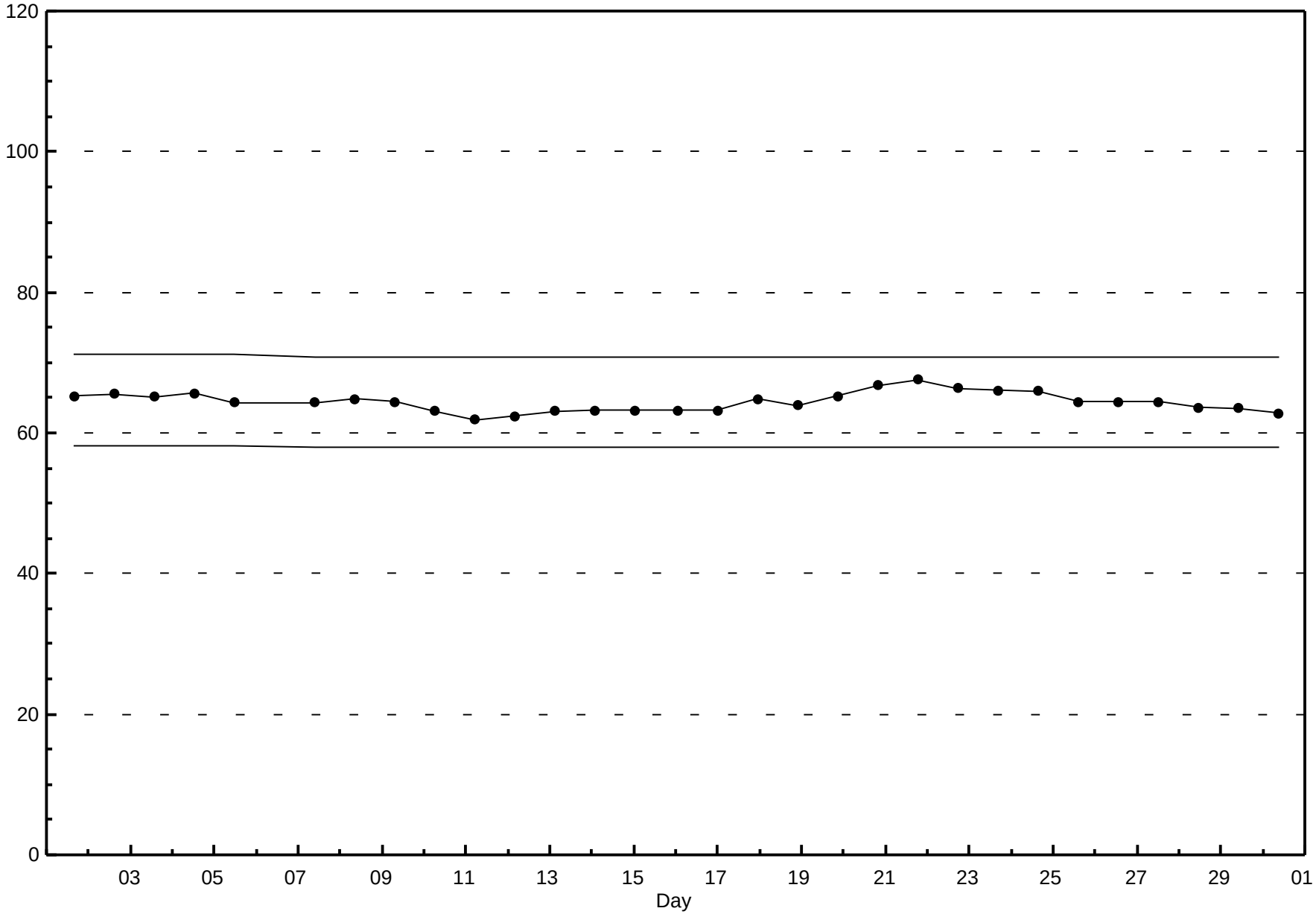
- 0 - 1
- 1 - 2
- 2 - 3
- 4 - 10
- > 10

Peace Airshed Zone Association

Span Responses

Hydrogen Sulphide (H_2S)

Valleyview - November 2014



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - November 2014

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

Maximum Value: 9.9 ^{o}C on Nov 1 16:00 Maximum Daily Average: 5.7 ^{o}C on Nov 6

Minimum Value: -35 ^{o}C on Nov 30 07:00 Minimum Daily Average: -29.1 ^{o}C on Nov 29

Maximum Diurnal Average: -4.8 ^{o}C at hour 16 Minimum Diurnal Average: -11.2 ^{o}C at hour 9

Monthly Average: -8.15 ^{o}C Percentiles: P_1 = -33.4 P_{10} = -23.2 Q_1 = -14.8 Median = -7.0 Q_3 = 0.6 P_{90} = 4.4 P_{99} = 8.6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

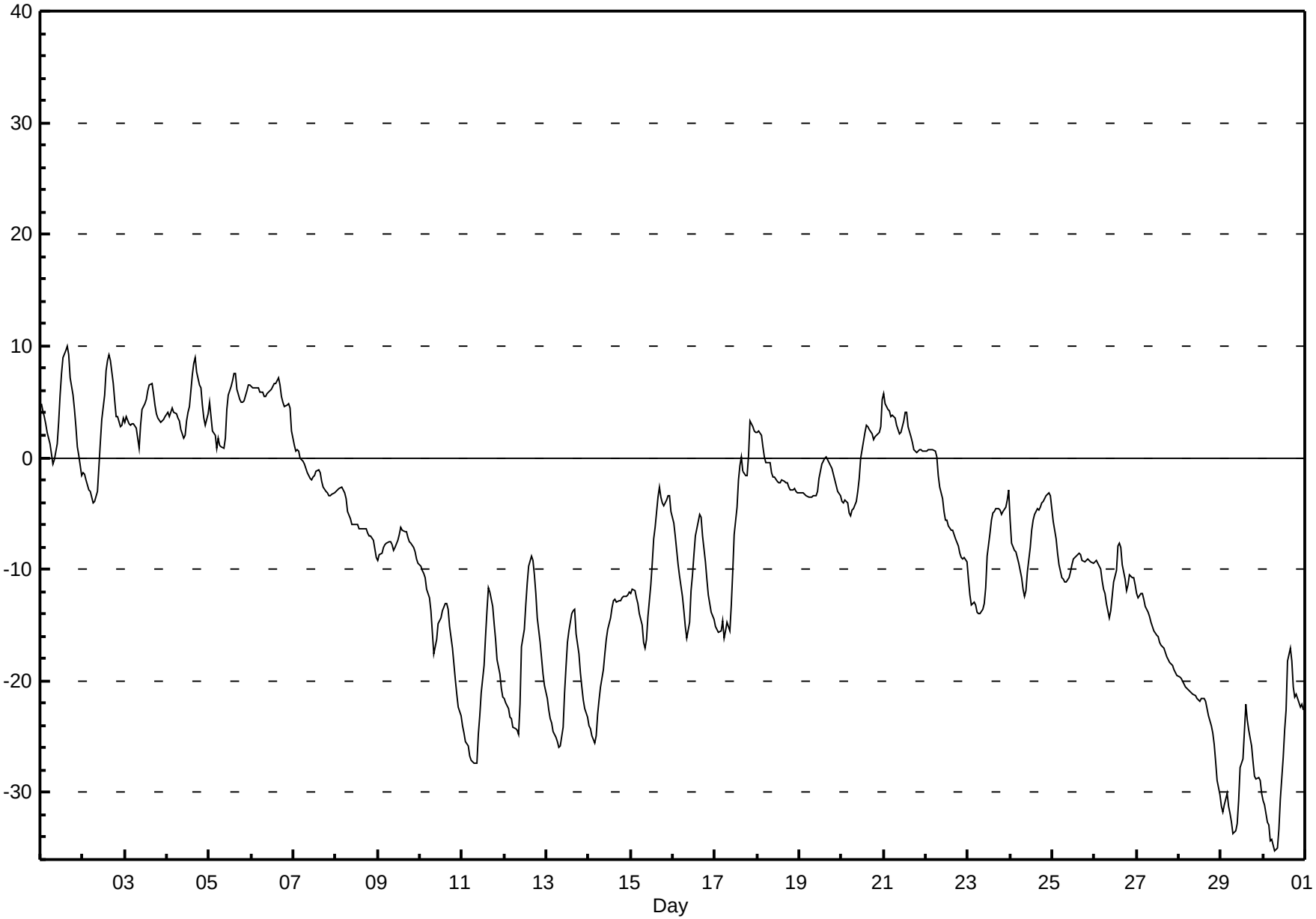
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Nov	5	4	4	3	2	1	0	-1	0	1	3	6	8	9	10	10	9	7	6	4	3	1	0	-2	3.9	9.9
2-Nov	-1	-1	-2	-3	-3	-4	-4	-4	-3	-1	1	3	6	8	9	9	9	7	5	4	4	3	3	4	2.0	9.2
3-Nov	3	4	3	3	3	3	3	2	1	3	4	5	5	6	7	7	6	5	4	4	3	3	3	4	3.8	6.6
4-Nov	4	4	4	4	4	4	3	3	3	2	2	3	4	5	7	8	9	8	7	6	5	4	3	4	4.6	8.9
5-Nov	5	4	2	2	1	2	1	1	1	2	4	6	6	7	8	8	6	5	5	5	5	6	7	7	4.3	7.6
6-Nov	6	6	6	6	6	6	6	5	5	6	6	6	6	7	7	7	7	5	5	5	5	5	4	2	5.7	7.1
7-Nov	1	1	1	1	0	0	-1	-1	-1	-2	-2	-2	-2	-1	-1	-1	-2	-3	-3	-3	-3	-3	-3	-3	-1.5	1.1
8-Nov	-3	-3	-3	-3	-3	-3	-4	-5	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-7	-7	-7	-7	-8	-9	-5.5	-2.7
9-Nov	-9	-9	-9	-8	-8	-8	-7	-8	-8	-8	-8	-7	-7	-6	-7	-7	-7	-7	-8	-8	-8	-8	-9	-10	-7.8	-6.2
10-Nov	-10	-10	-10	-11	-12	-13	-14	-16	-18	-16	-15	-15	-14	-14	-13	-13	-14	-15	-17	-18	-20	-21	-22	-23	-15.1	-9.8
11-Nov	-24	-25	-25	-26	-27	-27	-27	-27	-27	-25	-23	-21	-19	-16	-14	-12	-12	-13	-15	-16	-18	-19	-21	-21	-20.9	-11.6
12-Nov	-22	-22	-23	-23	-23	-24	-24	-24	-25	-22	-17	-15	-13	-11	-10	-9	-9	-10	-12	-14	-17	-18	-19	-20	-17.8	-8.8
13-Nov	-22	-23	-23	-24	-24	-25	-25	-26	-26	-24	-21	-19	-17	-15	-14	-14	-14	-16	-18	-19	-21	-22	-22	-23	-20.7	-13.6
14-Nov	-24	-24	-25	-26	-25	-23	-22	-20	-19	-18	-16	-15	-14	-13	-13	-13	-13	-13	-13	-13	-12	-12	-12	-12	-17.1	-12.1
15-Nov	-12	-12	-12	-13	-13	-14	-15	-17	-17	-16	-14	-11	-9	-7	-6	-4	-3	-4	-4	-4	-4	-3	-3	-5	-9.3	-2.7
16-Nov	-6	-7	-8	-10	-11	-12	-14	-15	-16	-15	-12	-10	-9	-7	-6	-5	-5	-7	-9	-11	-12	-13	-14	-14	-10.4	-5.1
17-Nov	-15	-15	-16	-15	-15	-16	-16	-15	-16	-13	-10	-7	-4	-2	-1	0	-1	-2	-2	0	3	3	2	2	-7.0	3.2
18-Nov	2	2	2	1	0	0	0	-1	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-3	-3	-3	-3	-3	-3	-1.3	2.3
19-Nov	-3	-3	-3	-3	-3	-4	-4	-4	-3	-3	-3	-2	-1	-1	0	0	0	0	-1	-1	-2	-2	-3	-3	-2.2	0.0
20-Nov	-4	-4	-4	-4	-5	-5	-5	-5	-4	-3	-2	0	1	2	3	3	3	2	2	2	2	2	3	5	-0.6	5.3
21-Nov	6	5	4	4	4	4	4	3	2	2	2	3	4	4	3	2	1	1	1	0	1	1	1	1	2.6	5.7
22-Nov	1	1	1	1	1	1	0	-2	-3	-4	-5	-6	-6	-6	-7	-6	-7	-7	-8	-9	-9	-9	-9	-9	-4.4	0.7
23-Nov	-11	-12	-13	-13	-13	-14	-14	-14	-14	-13	-12	-9	-7	-6	-5	-5	-5	-5	-5	-5	-5	-4	-4	-3	-8.7	-2.9
24-Nov	-6	-8	-8	-8	-9	-9	-11	-12	-12	-12	-10	-8	-7	-6	-5	-5	-5	-4	-4	-4	-3	-3	-3	-3	-6.9	-3.1
25-Nov	-6	-6	-7	-9	-10	-11	-11	-11	-11	-11	-10	-10	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9.2	-5.7
26-Nov	-9	-9	-9	-10	-11	-12	-12	-13	-14	-14	-12	-11	-10	-8	-8	-8	-10	-11	-12	-11	-10	-11	-11	-11	-10.8	-7.7
27-Nov	-12	-13	-12	-12	-13	-13	-14	-14	-15	-15	-16	-16	-16	-17	-17	-17	-18	-18	-18	-18	-19	-19	-19	-20	-15.8	-12.1
28-Nov	-20	-20	-20	-20	-21	-21	-21	-21	-21	-21	-22	-22	-22	-22	-22	-22	-23	-23	-24	-25	-26	-27	-29	-30	-22.6	-19.6
29-Nov	-31	-32	-31	-30	-31	-32	-33	-34	-33	-33	-31	-28	-27	-25	-22	-23	-24	-26	-27	-29	-29	-29	-29	-30	-29.1	-22.1
30-Nov	-31	-31	-33	-33	-34	-34	-35	-35	-35	-33	-31	-27	-24	-23	-18	-17	-18	-21	-21	-21	-22	-22	-22	-23	-26.8	-17.0
	-8.2	-8.6	-9.0	-9.3	-9.7	-10.1	-10.5	-10.9	-11.2	-10.5	-9.2	-7.9	-6.8	-5.8	-5.1	-4.8	-5.2	-6.1	-6.9	-7.3	-7.6	-8.0	-8.3	-8.7	Diurnal Average	
	6.3	6.3	6.3	6.3	6.2	5.9	5.8	5.4	5.5	5.7	5.9	6.2	7.6	9.0	9.6	9.9	9.2	7.7	6.6	6.2	5.1	6.0	6.5	6.5	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - November 2014



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Valleyview - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 100.0 % on Nov 21 18:00 Maximum Daily Average: 95.7 % on Nov 21

Minimum Value: 34 % on Nov 5 16:00 Minimum Daily Average: 50.3 % on Nov 5
Maximum Diurnal Average: 80.7 % at hour 9 Minimum Diurnal Average: 69.3 % at hour 16
Monthly Average: 77.22 % Percentiles: P_1 = 40.1 P_{10} = 57.9 Q_1 = 70.3 Median = 80.1 Q_3 = 86.6 P_{90} = 92.0 P_{99} = 100.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

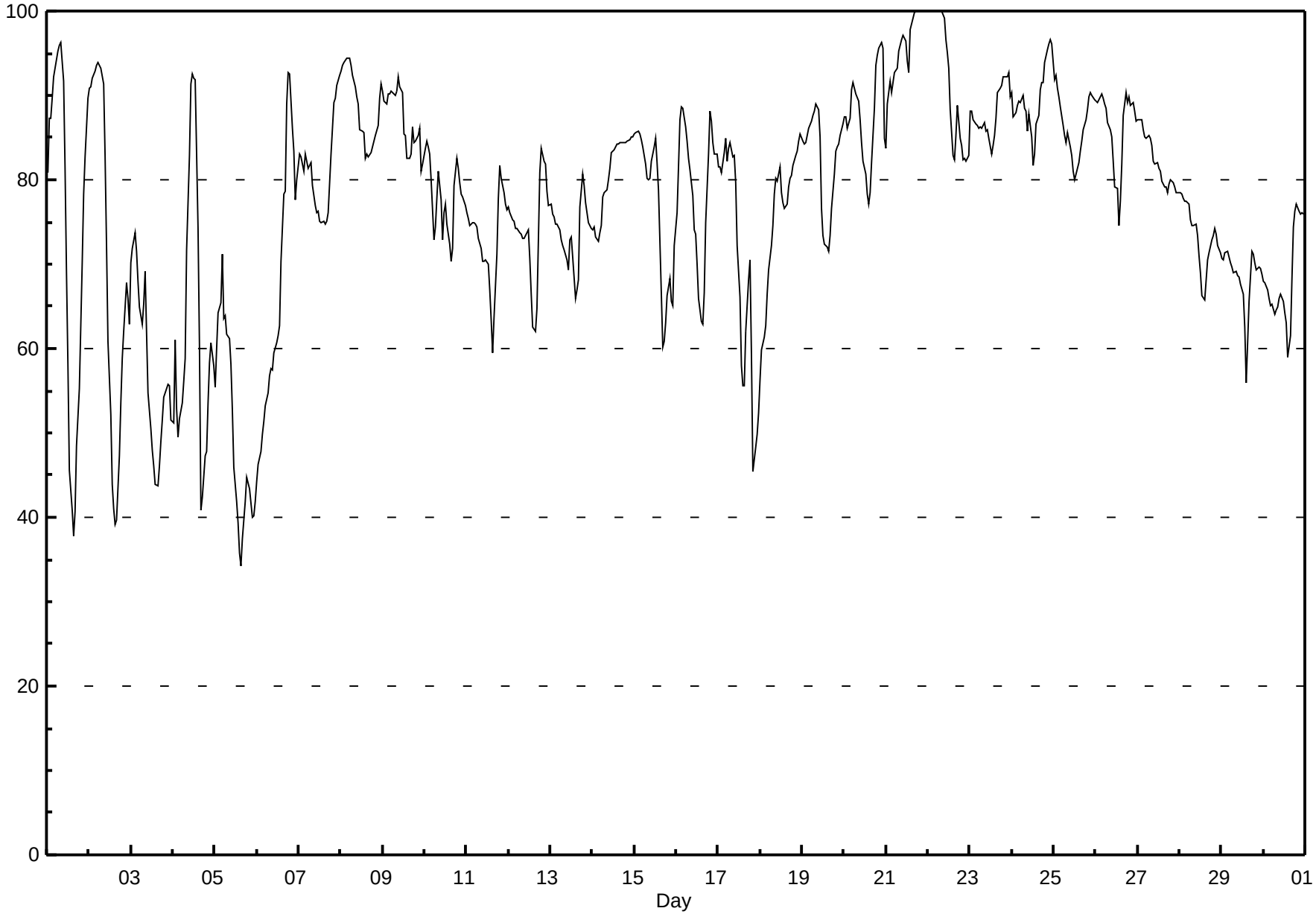
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Nov	81	87	87	90	92	94	95	96	96	92	81	69	58	46	41	38	41	48	55	63	70	78	83	90	73.8	96.3
2-Nov	91	91	92	93	94	94	94	93	91	83	72	61	52	44	41	39	40	47	54	59	62	68	66	63	70.1	93.9
3-Nov	70	72	74	72	68	65	63	65	69	62	55	50	48	46	44	44	46	49	52	54	55	56	56	52	57.7	73.7
4-Nov	51	61	53	50	52	54	56	59	72	83	91	93	92	92	74	60	41	42	47	48	54	58	61	58	62.5	92.5
5-Nov	56	60	64	65	71	64	64	62	61	58	53	46	42	39	36	34	37	42	45	44	43	40	40	42	50.3	71.1
6-Nov	44	46	48	50	51	53	55	57	58	58	59	61	62	63	70	78	79	89	93	92	86	83	78	80	66.4	92.8
7-Nov	83	83	82	81	83	81	82	82	79	77	76	76	75	75	75	75	75	76	83	86	89	90	91	92	81.2	92.3
8-Nov	93	94	94	94	94	94	94	92	91	90	89	86	86	86	83	83	83	83	84	85	85	86	90	91	88.7	94.5
9-Nov	90	89	89	90	90	91	90	90	91	92	91	90	85	85	83	82	83	86	84	85	85	86	81	82	87.2	92.1
10-Nov	84	85	84	83	80	73	74	78	81	78	73	76	77	75	72	70	72	79	83	81	80	78	78	77	77.9	84.5
11-Nov	76	75	75	75	75	75	74	73	72	70	70	71	70	67	63	59	64	71	78	82	80	79	77	76	72.8	81.8
12-Nov	77	76	75	75	74	74	74	74	73	73	73	74	71	66	62	62	65	73	81	84	82	82	79	77	74.0	83.8
13-Nov	77	76	76	75	75	74	73	72	72	70	69	73	73	71	66	67	68	77	81	79	77	76	75	74	73.6	80.6
14-Nov	74	74	73	73	74	75	78	79	79	80	81	83	84	84	84	84	84	84	84	84	85	85	85	85	80.7	85.1
15-Nov	85	86	86	85	85	84	82	80	80	80	82	84	85	82	79	66	60	61	63	66	68	66	65	72	76.4	85.7
16-Nov	76	82	87	89	88	86	85	83	81	78	74	74	70	66	63	63	67	75	83	88	87	84	83	83	78.9	88.6
17-Nov	82	82	81	83	85	82	84	84	83	83	80	72	66	58	56	56	62	68	71	59	45	48	50	52	69.6	84.9
18-Nov	56	60	61	63	66	69	72	75	78	80	80	82	79	77	77	77	79	80	81	82	83	83	85	85	75.4	85.5
19-Nov	85	84	84	85	86	87	88	88	89	88	85	77	73	72	72	72	73	77	81	83	84	84	85	87	82.1	88.9
20-Nov	87	87	86	87	91	92	91	90	89	87	84	82	81	78	77	78	82	88	94	95	96	96	96	85	87.5	96.2
21-Nov	84	89	92	90	92	93	93	95	96	97	97	96	94	93	98	99	100	100	100	100	100	100	100	100	95.7	100.0
22-Nov	100	100	100	100	100	100	100	100	100	99	97	95	93	88	83	82	85	89	85	84	82	83	82	83	92.1	100.0
23-Nov	88	88	87	87	87	86	86	86	87	86	86	85	83	84	85	87	90	91	91	92	92	92	93	90	87.9	92.7
24-Nov	90	88	88	89	89	89	90	88	88	86	88	85	82	83	87	88	91	92	91	94	95	96	97	96	89.6	96.6
25-Nov	92	92	91	90	89	87	85	84	86	84	83	81	80	81	82	83	85	86	87	88	90	90	90	89	86.5	92.4
26-Nov	89	89	90	90	90	89	88	87	86	85	82	79	79	75	78	82	88	90	89	90	89	89	88	87	86.1	90.3
27-Nov	87	87	87	86	85	85	85	85	84	82	82	82	81	81	80	79	79	78	80	80	80	79	79	78	82.2	87.2
28-Nov	78	78	78	77	77	77	75	75	75	75	73	71	69	66	66	68	70	71	73	73	74	74	72	71	73.3	78.4
29-Nov	71	70	71	72	71	70	70	69	69	69	68	68	66	62	56	61	66	71	71	70	69	70	69	69	68.3	71.6
30-Nov	68	68	67	66	65	65	64	65	65	66	66	66	64	63	59	61	68	74	76	77	76	76	76	76	68.3	77.2
	78.9	80.0	80.0	80.1	80.6	80.1	80.1	80.2	80.7	79.7	78.1	76.2	74.0	71.6	69.7	69.3	70.7	74.7	77.3	78.3	78.2	78.5	78.3	78.1	Diurnal Average	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.2	97.1	96.4	94.1	92.6	97.7	99.1	99.9	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) - %

Valleyview - November 2014



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - November 2014

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	2	3	1	1	1	1	1	2	3	4	3	3	3	4	4	3	2	3	2	1	1	1	1	2.2	4.3
Dir	233	176	178	235	175	167	211	187	184	167	173	170	156	170	172	166	157	159	165	170	180	168	189	178	176	172
2 Spd	1	1	1	0	1	1	1	0	2	4	5	5	5	5	5	4	2	1	1	2	3	2	1	2	2.2	5.5
Dir	201	204	214	196	213	221	202	210	170	170	164	166	169	172	167	169	169	156	164	181	181	210	209	226	177	167
3 Spd	3	6	5	5	7	8	6	8	6	1	1	6	7	4	1	2	2	1	1	2	1	3	4	6	2.4	8.4
Dir	251	269	252	271	268	274	275	257	240	246	244	304	306	318	262	132	143	132	120	156	140	145	137	135	257	274
4 Spd	3	2	6	6	7	8	5	4	1	2	4	2	3	2	4	7	12	7	8	9	6	3	4	7	3.2	12.3
Dir	154	170	166	168	167	170	172	174	231	172	165	167	167	156	271	279	288	278	273	263	243	227	215	254	222	288
5 Spd	8	5	2	2	1	2	1	1	1	2	2	4	4	3	0	2	3	5	5	6	8	10	12	15	3.2	14.6
Dir	262	234	196	184	164	214	206	203	214	197	146	240	257	243	260	149	133	129	138	140	142	152	161	165	175	165
6 Spd	12	12	10	10	10	9	6	7	5	5	2	1	1	0	1	1	6	3	2	2	6	8	11	12	2.2	12.0
Dir	166	167	169	166	168	170	171	171	171	170	316	57	326	246	296	276	318	264	204	218	280	313	358	1	188	166
7 Spd	7	5	5	6	6	6	5	4	5	6	5	4	3	2	4	7	8	6	3	2	3	2	2	2	4.1	8.0
Dir	12	25	336	342	325	319	321	339	12	19	29	31	24	31	13	12	14	26	16	28	20	33	25	23	6	14
8 Spd	3	3	5	7	7	8	10	10	11	10	10	11	10	11	10	9	6	4	6	4	2	2	2	2	6.7	11.1
Dir	15	11	359	357	1	359	6	2	1	358	357	360	1	354	359	357	7	18	24	31	19	341	336	335	2	354
9 Spd	4	4	2	2	2	4	3	3	7	7	5	6	6	6	6	5	4	8	6	4	5	8	10	11	5.0	11.5
Dir	350	17	23	357	351	13	17	1	8	359	357	354	336	305	291	292	318	341	357	358	354	7	12	4	352	4
10 Spd	8	11	11	10	12	12	10	6	5	1	2	7	7	5	4	4	3	2	2	0	0	0	0	0	4.9	12.2
Dir	352	357	1	7	11	16	20	8	324	293	347	3	359	0	15	18	7	325	316	196	165	188	162	209	3	16
11 Spd	0	0	0	0	0	1	1	1	0	0	2	3	4	3	3	2	2	1	0	0	0	0	0	0	0.7	3.5
Dir	199	43	261	187	293	260	164	296	154	244	342	337	329	306	340	320	315	356	316	274	189	168	196	154	319	329
12 Spd	1	0	0	0	0	0	0	0	2	1	0	3	3	3	4	4	3	3	1	0	0	0	0	0	1.1	3.7
Dir	277	255	164	171	190	148	269	357	340	332	311	347	340	337	333	327	337	353	337	338	150	340	0	346	336	333
13 Spd	0	0	0	0	1	0	0	0	1	1	0	1	2	2	1	1	0	0	0	0	0	1	0	0	0.1	1.8
Dir	150	147	163	305	172	183	178	215	184	175	27	29	359	351	23	29	273	220	165	174	178	172	176	179	126	359
14 Spd	0	1	0	0	1	2	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	0	1	0	0.3	1.8
Dir	187	182	198	165	166	171	171	158	164	159	120	33	37	32	47	66	103	305	34	151	152	222	221	229	164	171
15 Spd	1	1	2	2	2	2	0	0	0	1	2	1	1	1	3	2	5	7	5	2	5	5	3	1	0.9	6.9
Dir	207	168	169	168	172	176	189	193	194	203	170	182	201	214	176	255	314	321	307	301	307	329	358	81	283	321
16 Spd	1	1	0	0	0	0	0	0	0	0	0	1	2	4	4	4	3	0	0	0	0	0	0	1	0.7	4.5
Dir	52	340	20	125	198	169	164	184	169	213	305	332	345	343	334	324	333	274	42	305	153	179	169	177	334	334
17 Spd	0	1	0	1	1	1	2	1	1	1	2	3	3	2	2	2	1	2	1	1	5	6	9	9	1.2	9.2
Dir	166	149	164	195	184	173	204	205	189	193	183	171	180	166	182	196	234	204	161	302	319	306	305	298	254	298
18 Spd	6	4	2	6	8	6	3	1	4	8	8	6	6	4	2	2	2	1	2	3	1	0	1	1	2.5	8.4
Dir	256	272	278	309	314	310	308	274	303	318	331	22	8	19	32	28	62	76	67	59	57	357	359	39	333	314
19 Spd	1	1	1	1	1	2	2	2	2	3	3	5	6	5	5	3	4	2	3	5	5	4	3	2	2.8	6.1
Dir	101	127	118	135	128	144	146	138	152	160	157	166	163	166	165	168	165	172	177	174	173	171	173	184	163	163
20 Spd	2	2	3	0	0	0	1	2	2	1	2	1	1	1	1	1	1	0	1	1	2	1	2	7	1.2	6.7
Dir	179	181	183	204	224	203	219	197	198	200	186	164	181	175	220	209	196	339	211	190	182	204	193	261	204	261
21 Spd	6	2	1	0	1	0	0	1	0	1	1	0	2	5	5	5	3	5	3	5	5	5	7	4	2.1	7.0
Dir	290	173	140	161	206	209	179	226	175	357	153	165	347	343	347	355	7	7	12	17	15	4	15	28	359	15
22 Spd	4	3	3	2	3	4	8	9	12	16	13	11	8	9	11	9	10	8	7	7	7	6	3	1	6.1	15.9
Dir	30	28	36	46	43	26	3	358	332	340	348	347	306	299	303	311	321	293	293	286	293	300	285	269	328	340

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - November 2014

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
23 Spd	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	3	0	1	0	1	1	1	2	7	0.3	6.9
Dir	125	234	253	317	328	251	146	247	236	8	193	348	222	195	160	287	122	246	193	226	180	171	327	347	285	347
24 Spd	8	5	5	3	2	0	0	0	0	0	1	0	0	1	2	1	3	1	0	1	0	1	1	5	1.5	7.5
Dir	16	17	359	17	308	9	197	212	150	183	188	197	359	22	26	16	350	342	291	48	72	311	320	358	4	16
25 Spd	9	10	10	9	8	10	8	7	2	1	1	1	1	1	1	1	0	2	3	2	1	2	2	1	3.5	10.3
Dir	355	2	5	18	11	7	4	4	12	18	58	145	167	79	119	128	90	10	17	44	344	11	353	358	10	7
26 Spd	0	0	0	0	0	1	1	0	1	0	0	1	1	1	1	0	1	1	2	7	11	8	10	13	1.9	12.7
Dir	221	232	182	159	200	185	189	193	199	188	259	305	289	232	272	247	1	335	341	8	15	27	14	9	7	9
27 Spd	15	13	12	13	13	11	11	15	13	13	13	12	12	11	12	11	11	11	10	10	10	10	9	9	11.4	15.1
Dir	4	5	14	19	20	17	9	9	18	25	22	27	41	43	45	49	49	48	46	41	42	44	43	39	29	4
28 Spd	7	8	9	8	9	9	10	12	10	12	13	14	14	12	8	9	7	5	4	2	1	1	1	1	6.9	14.3
Dir	32	21	17	12	4	353	359	1	353	337	341	343	340	343	1	328	317	291	293	266	211	169	171	161	349	340
29 Spd	3	11	6	2	2	8	33	26	38	18	1	2	2	2	1	3	0	1	0	1	1	1	1	1	6.4	37.8
Dir	180	194	191	193	207	198	185	188	189	188	188	183	249	198	195	339	303	151	27	181	183	182	205	192	190	189
30 Spd	1	0	3	3	2	1	4	15	11	1	1	1	1	1	4	4	1	1	0	1	0	1	1	3	2.3	14.8
Dir	167	193	161	174	148	161	182	185	189	199	199	209	337	327	172	180	200	268	239	231	229	206	218	197	187	185
Spd	1.2	0.8	0.8	1.2	1.2	1.0	0.3	0.4	0.7	0.9	1.4	1.8	1.8	1.6	1.2	1.5	1.8	1.4	0.9	0.5	0.7	0.7	1.1	1.2	Diurnal Average	
Dir	342	354	7	6	354	346	321	289	255	335	358	356	342	339	343	338	339	340	345	356	344	352	4	349		
Spd	15.1	13.1	11.9	13.3	13.0	12.2	32.7	26.2	37.8	17.8	13.5	13.7	14.3	11.5	11.7	11.5	12.3	11.3	10.0	10.4	11.2	10.4	12.4	14.6	Diurnal Maximum	
Dir	4	5	14	19	20	16	185	188	189	188	341	343	340	343	45	49	288	48	46	41	15	44	161	165		

Maximum Speed Value: 38 km/h on Nov 29 09:00
Maximum Daily Speed Average: 11.4 km/h on Nov 27
Maximum Diurnal Speed Average: 1.8 km/h at hour 17

Minimum Speed Value: 0 km/h on Nov 16 22:00
Minimum Daily Speed Average: 0.1 km/h on Nov 14
Minimum Diurnal Speed Average: 0.3 km/h at hour 7

Monthly Average Velocity: 1.05 km/h 345.6 deg

Speed Percentiles: $P_1 = 0.1$ $P_{10} = 0.3$ $Q_1 = 0.8$ Median = 2.1 $Q_3 = 5.5$ $P_{90} = 9.7$ $P_{99} = 14.6$

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

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Percent Operational Time:	100.0

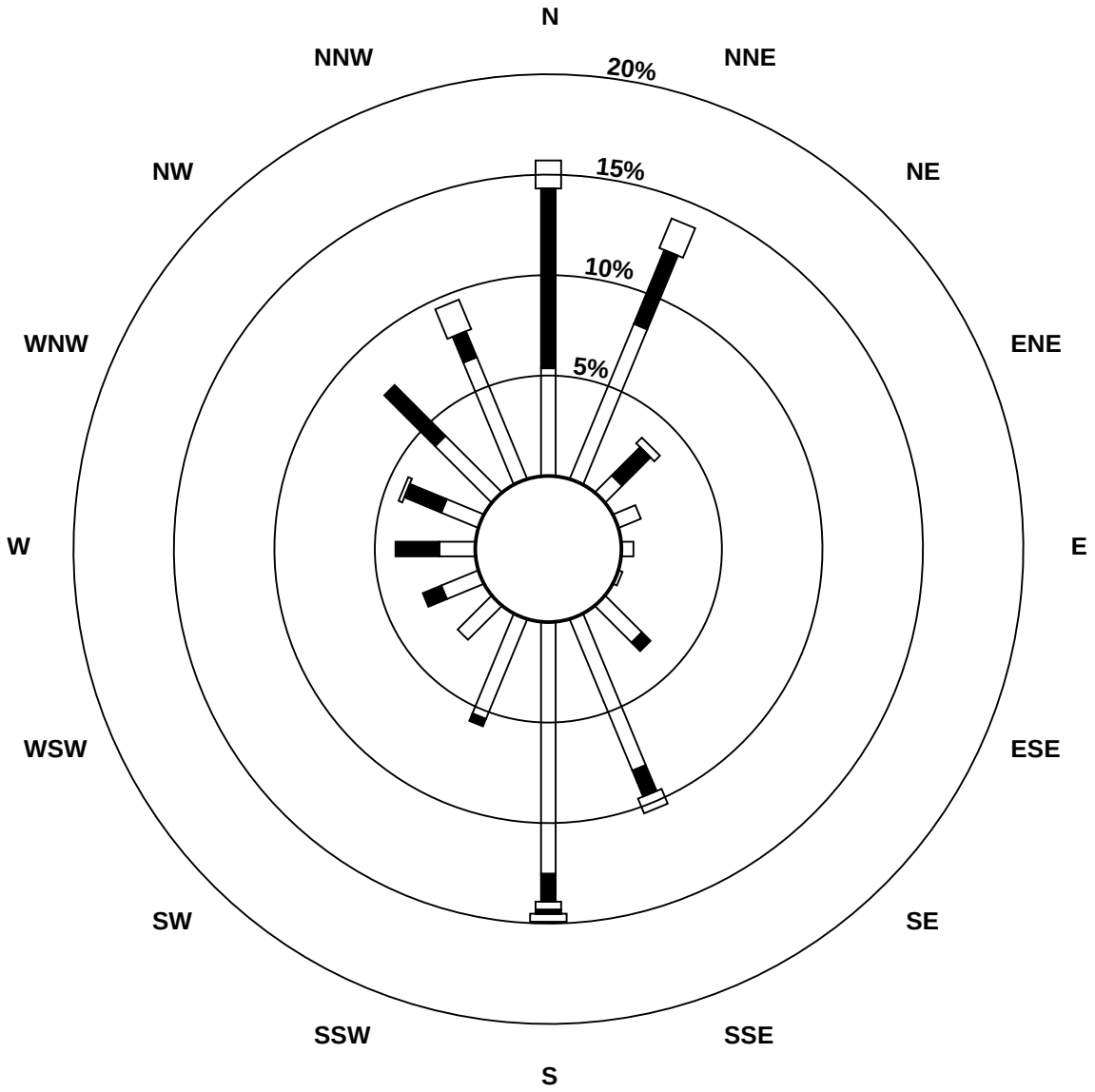
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	75	67	25	0	0	0	167
NorthEast	43	11	8	0	0	0	62
East	7	0	0	0	0	0	7
SouthEast	48	6	0	0	0	0	54
South	186	20	7	1	2	0	216
SouthWest	71	3	0	0	0	0	74
West	33	19	1	0	0	0	53
NorthWest	54	31	2	0	0	0	87
Total	517	157	43	1	2	0	720

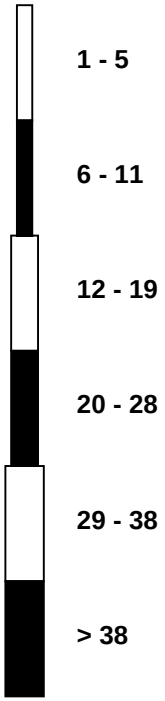
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - November 2014



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - November 2014

Maximum Speed: 38 km/h on Nov 29 09:00

Maximum Daily Speed Average: 11.9 km/h on Nov 27

Minimum Speed: 0 km/h on Nov 16 22:00

Minimum Daily Speed Average: 0.7 km/h on Nov 14

Maximum Diurnal Speed Average: 5.2 km/h at hour 9

Minimum Diurnal Speed Average: 2.9 km/h at hour 19

Monthly Average Speed: 3.89 km/h

Percentiles: $P_1 = 0.1$ $P_{10} = 0.4$ $Q_1 = 1.0$ Median = 2.4 $Q_3 = 5.7$ $P_{90} = 9.7$ $P_{99} = 15.0$

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

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-Nov	5	2	3	1	2	1	1	1	2	3	4	3	3	4	4	4	4	2	3	2	1	1	1	1	2.4	4.6
2-Nov	1	1	1	0	1	1	1	1	2	4	5	5	5	5	6	4	2	1	1	3	3	3	1	2	2.4	5.6
3-Nov	4	6	5	5	7	8	7	8	6	3	3	7	7	5	3	2	2	1	1	2	1	3	4	6	4.4	8.5
4-Nov	3	2	6	6	7	8	5	4	2	3	4	2	3	2	4	7	12	7	8	9	6	3	4	7	5.2	12.4
5-Nov	8	5	2	2	1	2	1	1	1	2	2	5	5	4	2	3	3	5	5	6	8	10	13	15	4.6	14.7
6-Nov	12	12	11	10	10	9	6	7	5	5	6	2	2	1	1	2	6	4	2	2	6	8	11	12	6.3	12.1
7-Nov	7	5	5	6	6	6	5	4	5	6	6	4	4	2	4	7	8	6	3	2	3	2	2	2	4.6	8.1
8-Nov	3	3	5	7	7	8	10	10	11	11	10	11	10	11	10	9	7	4	6	5	2	2	2	2	6.9	11.2
9-Nov	4	4	2	3	3	4	4	3	7	7	5	6	6	7	6	5	5	9	6	4	5	8	11	12	5.6	11.5
10-Nov	8	11	11	11	12	12	11	7	5	1	2	8	7	6	4	4	3	3	2	0	0	0	0	0	5.4	12.4
11-Nov	0	0	0	0	1	1	1	1	1	0	2	3	4	3	3	2	2	2	1	1	1	0	1	1	1.2	3.6
12-Nov	1	0	0	1	0	0	0	0	2	1	1	3	3	3	4	4	3	3	1	0	1	1	0	0	1.4	3.7
13-Nov	0	0	1	0	1	1	0	0	1	1	1	1	2	2	1	1	0	0	0	0	1	1	0	0	0.7	1.9
14-Nov	0	1	0	0	1	2	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	1	1	1	0.7	1.9
15-Nov	1	1	2	2	2	2	0	0	0	1	2	1	1	1	3	2	5	7	5	2	5	5	3	1	2.3	7.1
16-Nov	1	1	0	0	0	0	0	0	0	0	0	1	2	4	4	4	3	0	0	1	0	0	0	1	1.0	4.5
17-Nov	0	1	0	1	1	1	2	2	1	1	2	3	3	2	2	2	1	2	2	4	5	6	9	9	2.6	9.3
18-Nov	6	5	3	6	8	6	3	1	4	8	8	6	6	4	3	2	2	1	2	3	2	1	1	1	3.8	8.4
19-Nov	1	1	1	1	1	2	2	2	2	4	3	5	6	5	5	4	4	2	3	5	5	4	3	2	3.0	6.2
20-Nov	2	2	3	0	0	0	1	2	2	1	2	1	1	2	1	1	2	2	1	2	2	1	2	7	1.6	7.0
21-Nov	7	2	1	1	1	0	1	2	0	1	1	0	3	5	5	5	3	5	4	5	5	5	7	4	3.1	7.1
22-Nov	4	3	3	2	3	4	8	9	12	16	13	11	9	9	11	9	10	8	7	7	7	6	3	1	7.4	16.0
23-Nov	0	0	0	0	0	0	0	0	0	1	0	1	1	2	2	3	1	2	1	1	2	1	3	7	1.3	7.2
24-Nov	8	6	5	3	2	0	1	0	1	0	1	0	0	1	2	1	4	2	0	2	0	2	1	5	2.0	7.7
25-Nov	9	10	10	9	8	10	8	7	2	1	1	1	1	2	1	2	1	3	3	2	1	2	2	1	4.1	10.4
26-Nov	0	0	0	0	0	1	1	0	1	0	1	1	1	1	1	0	1	1	2	7	11	8	10	13	2.7	12.9
27-Nov	15	13	12	13	13	12	12	15	13	13	13	12	12	11	12	12	11	11	10	11	10	11	9	9	11.9	15.2
28-Nov	7	8	9	9	9	10	10	12	10	12	14	14	14	12	8	9	7	5	4	3	1	1	1	2	7.9	14.4
29-Nov	4	11	6	2	2	8	33	27	38	18	1	2	2	2	1	3	1	1	1	1	1	2	1	1	7.1	38.4
30-Nov	1	2	4	3	2	1	4	15	17	2	1	1	1	2	4	4	2	1	0	1	0	1	1	3	3.1	17.4
	4.1	3.9	3.7	3.5	3.8	4.1	4.6	4.7	5.2	4.3	3.7	4.0	4.1	4.0	4.0	3.9	3.8	3.3	2.9	3.0	3.2	3.3	3.6	4.2	Diurnal Average	
	15.2	13.2	12.0	13.4	13.1	12.4	32.9	26.6	38.4	18.0	13.6	13.8	14.4	11.7	11.9	11.6	12.4	11.4	10.1	10.5	11.3	10.5	12.5	14.7	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

Valleyview - November 2014

Maximum Value: 96.4 deg on Nov 16 03:00

Minimum Value: 4.9 deg on Nov 16 14:00

Percentiles: P_1 = 5.9 P_{10} = 8.3 Q_1 = 11.0 Median = 18.2 Q_3 = 42.3 P_{90} = 67.0 P_{99} = 90.7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Nov	27	7	42	47	12	18	29	33	6	11	11	18	27	19	17	14	11	10	10	6	9	11	31	25	46.8
2-Nov	13	13	30	28	16	33	27	37	11	10	10	11	13	11	11	11	22	52	41	40	11	32	19	15	52.2
3-Nov	28	13	16	12	11	10	11	16	14	91	75	24	17	23	73	16	12	16	18	28	21	14	10	9	90.8
4-Nov	17	15	10	8	7	6	8	8	51	36	20	15	12	11	45	10	9	11	8	8	9	10	7	18	50.6
5-Nov	12	12	11	24	23	21	16	11	31	18	24	39	33	38	94	37	12	7	12	10	10	12	9	7	94.4
6-Nov	8	7	8	8	7	7	9	10	12	7	86	50	52	68	59	49	9	24	16	56	17	16	15	9	86.3
7-Nov	12	11	15	11	10	11	17	12	18	13	15	23	22	29	23	14	11	11	16	18	16	14	15	12	29.5
8-Nov	13	11	10	6	6	8	11	6	7	8	9	8	10	8	9	9	12	18	14	16	36	30	17	22	36.4
9-Nov	16	14	17	61	45	12	12	14	10	11	18	10	11	19	12	16	14	21	10	10	13	9	8	7	60.6
10-Nov	9	8	7	19	9	12	14	31	24	71	34	13	15	20	19	16	15	43	25	59	57	19	32	93	92.6
11-Nov	58	82	73	69	70	61	34	54	62	58	42	7	14	7	26	15	18	37	94	65	53	62	52	44	93.8
12-Nov	54	86	47	32	38	83	93	82	34	52	64	9	8	6	6	7	13	15	25	89	72	81	87	88	92.8
13-Nov	63	57	94	70	72	64	49	26	23	18	74	25	30	19	42	24	56	37	37	18	13	10	36	36	93.6
14-Nov	33	30	45	76	42	11	17	17	22	51	86	18	24	27	42	47	44	61	26	64	40	46	41	64	85.9
15-Nov	42	29	6	7	7	5	50	55	46	36	7	21	36	55	16	49	24	12	16	21	11	9	35	34	55.5
16-Nov	47	87	96	71	56	24	36	18	38	51	80	18	14	5	6	9	21	49	60	64	26	74	69	26	96.4
17-Nov	29	23	28	19	23	36	19	19	23	18	13	12	10	18	11	18	37	9	40	79	18	23	11	8	79.3
18-Nov	11	29	37	9	5	8	39	91	13	11	16	15	13	15	13	17	31	33	25	19	79	88	42	31	91.0
19-Nov	24	52	38	23	18	19	15	11	14	12	13	10	12	11	11	10	8	14	9	7	8	7	9	10	52.5
20-Nov	11	14	7	48	48	17	30	10	11	8	14	32	20	41	48	53	57	92	72	33	18	38	20	15	91.5
21-Nov	23	36	52	77	42	54	49	52	59	83	65	88	70	28	14	11	16	10	51	16	29	17	10	13	88.2
22-Nov	18	15	19	11	11	9	10	7	15	8	11	8	17	12	10	10	8	12	10	11	11	17	18	35	34.6
23-Nov	61	73	84	84	68	60	57	41	26	81	71	76	46	22	46	57	71	68	85	56	19	17	73	18	84.8
24-Nov	14	17	12	48	30	73	41	78	67	52	17	60	69	45	21	41	70	84	77	51	64	65	48	36	84.2
25-Nov	10	12	10	12	12	10	8	11	38	42	38	68	39	47	42	48	45	24	23	56	48	20	28	61	68.3
26-Nov	70	67	54	66	72	14	7	14	42	36	60	63	50	43	33	57	62	29	58	6	9	12	13	8	71.6
27-Nov	6	7	9	8	8	10	8	8	8	8	9	9	10	11	10	8	9	8	9	8	8	9	9	10	11.3
28-Nov	10	11	11	12	11	7	8	7	9	5	8	7	5	10	9	11	11	9	9	16	30	19	10	44	44.5
29-Nov	38	15	17	9	34	26	10	27	16	31	49	12	36	35	70	20	84	22	85	19	32	17	34	22	85.2
30-Nov	55	75	51	34	40	44	17	21	35	26	17	32	84	71	20	8	27	56	67	22	25	14	21	12	84.2
	70.0	87.3	96.4	83.6	72.0	83.4	92.8	91.0	66.7	90.8	86.3	88.2	84.2	71.3	94.4	57.3	84.4	91.5	93.8	89.3	79.0	88.3	87.3	92.6	

PAZA
Falher Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Falher - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.3 ppb on Nov 17 10:00 Maximum Daily Average: 0.9 ppb on Nov 17

Minimum Value: 0 ppb on Nov 18 18:00 Minimum Daily Average: 0.0 ppb on Nov 19
Maximum Diurnal Average: 0.3 ppb at hour 12 Minimum Diurnal Average: 0.1 ppb at hour 23
Monthly Average: 0.20 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} = 1.6

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	34
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-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
2-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
3-Nov	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
4-Nov	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
5-Nov	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	0.2
6-Nov	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	0.5
7-Nov	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
8-Nov	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
9-Nov	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
10-Nov	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
11-Nov	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
12-Nov	0	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
13-Nov	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.4	1.2
14-Nov	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
15-Nov	0	A	2	2	2	1	1	0	0	P	P	P	R	1	1	1	1	0	0	0	0	0	0	0	0.7	2.2
16-Nov	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.3
17-Nov	0	0	0	0	0	1	1	1	2	2	2	2	2	1	1	1	1	1	1	1	0	0	A	0	0.9	2.3
18-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4
19-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0.0	0.5
20-Nov	1	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	0.9
21-Nov	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
22-Nov	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	0.6
23-Nov	1	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	0.6
24-Nov	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
25-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
26-Nov	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
27-Nov	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
28-Nov	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
29-Nov	0	0	1	0	0	0	0	0	0	0	A	0	0	0	C	C	0	0	0	0	0	0	0	0	0.3	0.6
30-Nov	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0.4	0.7
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	Diurnal Average	
	0.9	0.5	1.6	2.2	1.6	1.2	1.0	0.8	1.9	2.3	2.3	2.0	1.5	0.9	0.9	0.7	0.7	0.8	0.8	0.5	0.5	0.4	0.4	0.6	Diurnal Maximum	

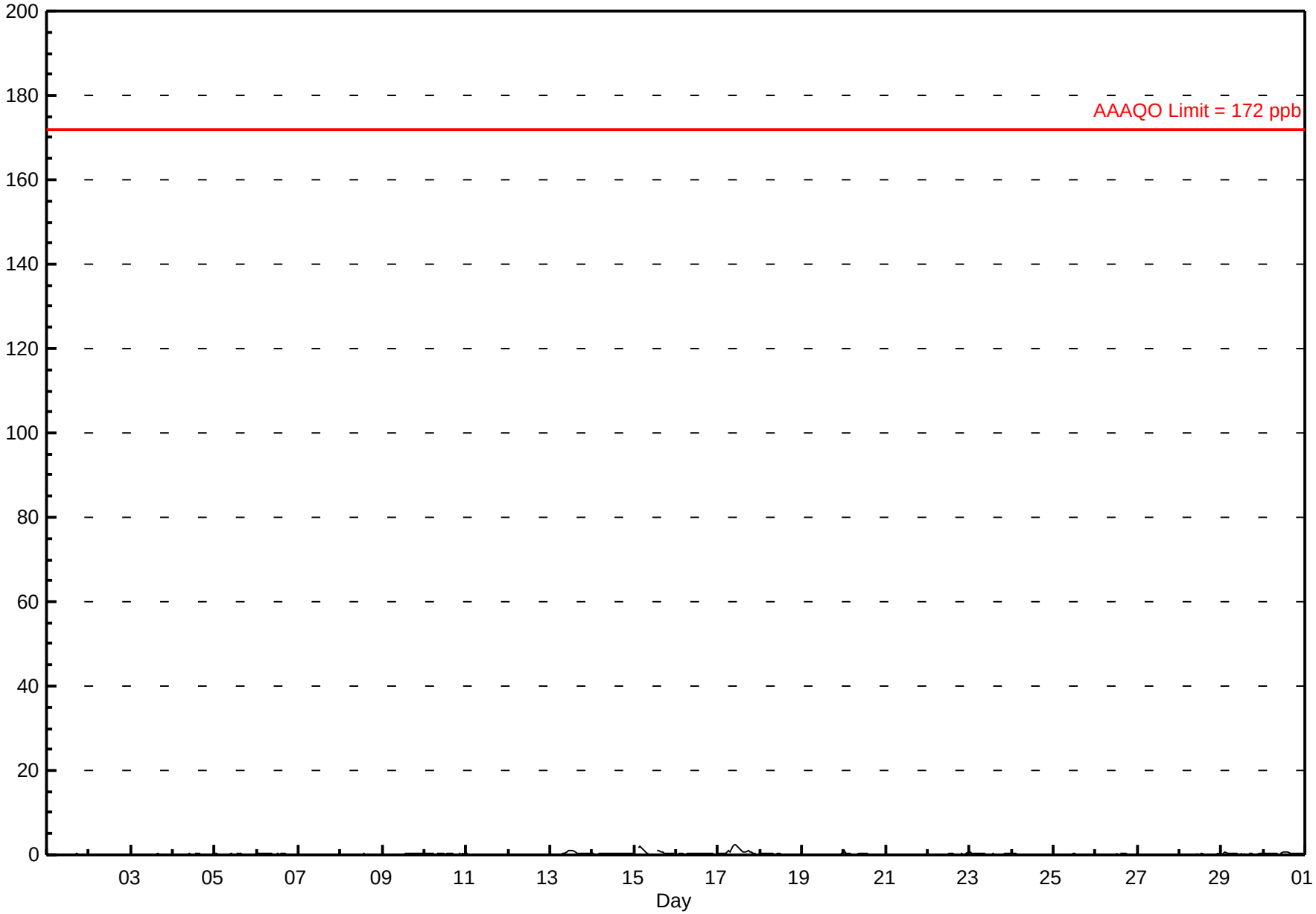
C - Calibration R - Recovery P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Falher - November 2014



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Falher - November 2014

Maximum Value: 14.0 ppb on Nov 25 10:00

Maximum Daily Average: 1.5 ppb on Nov 17

Minimum Value: 0 ppb on Nov 19 12:00

Minimum Daily Average: 0.4 ppb on Nov 21

Maximum Diurnal Average: 1.2 ppb at hour 10

Minimum Diurnal Average: 0.5 ppb at hour 20

Monthly Average: 0.64 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.7$ $P_{90} = 0.9$ $P_{99} = 2.6$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	34
Percent Operational Time:	99.6

Hourly Period Ending At (MST)

Day	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-Nov	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	A	0	2	0	0	0	0	0	0	0.5	2.0
2-Nov	1	0	0	0	0	1	0	0	0	1	1	0	1	0	A	0	1	0	1	1	1	0	0	0	0.5	0.7
3-Nov	0	1	0	1	1	1	0	1	0	0	0	1	1	A	1	1	1	0	0	1	0	0	0	0	0.5	0.7
4-Nov	0	1	0	0	0	1	1	1	1	1	0	1	A	1	1	0	0	1	0	0	0	0	0	1	0.5	0.8
5-Nov	1	0	1	0	0	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0.6	0.7
6-Nov	0	1	1	1	1	1	0	1	1	1	A	1	0	0	0	0	0	1	0	0	0	0	0	1	0.5	1.0
7-Nov	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0.4	0.6
8-Nov	0	0	0	0	0	0	0	0	A	1	0	0	1	0	0	0	0	1	1	0	1	0	0	1	0.5	0.6
9-Nov	0	0	1	0	0	1	0	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
10-Nov	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	0	0	1	0	1	1	0.6	0.9
11-Nov	1	1	1	1	0	A	1	0	0	0	1	0	0	1	1	0	0	0	0	1	0	1	0	0	0.5	0.6
12-Nov	0	0	0	1	A	0	0	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0	1	0	0.5	0.7
13-Nov	1	1	1	A	1	0	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	0.9	1.7
14-Nov	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	1.2
15-Nov	1	A	2	3	2	2	1	1	1	P	P	P	R	1	2	1	1	1	1	1	1	1	1	1	1.3	2.6
16-Nov	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.6	0.7
17-Nov	1	1	1	1	1	2	2	2	3	3	3	3	2	2	1	1	2	1	1	1	1	1	A	1	1.5	3.4
18-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	A	0	0	0.6	1.0
19-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	1	1	1	0.4	1.2
20-Nov	2	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0	1	A	0	0	0	0	0.6	1.5
21-Nov	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.7
22-Nov	0	0	1	0	0	0	1	1	0	1	0	0	1	1	1	1	1	A	0	1	1	1	1	1	0.6	1.2
23-Nov	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	A	0	1	1	1	1	1	1	0.7	1.1
24-Nov	1	1	1	0	0	0	0	1	1	0	0	1	0	1	0	A	1	0	0	0	1	0	1	0	0.5	1.0
25-Nov	0	0	0	1	1	0	0	1	1	14	0	1	1	0	A	1	1	1	0	1	1	0	1	0	1.1	14.0
26-Nov	0	1	1	0	1	0	1	0	0	0	1	1	1	A	1	1	1	1	1	0	0	0	1	0	0.5	1.0
27-Nov	0	0	1	0	0	0	0	0	0	1	1	1	A	1	0	0	1	1	0	1	1	1	1	1	0.5	0.8
28-Nov	1	0	0	1	1	1	1	1	0	0	1	A	1	1	0	1	0	1	1	0	1	1	1	1	0.5	0.8
29-Nov	0	1	1	1	1	1	1	1	1	1	A	1	1	6	C	C	1	1	1	0	0	1	1	1	1.1	6.2
30-Nov	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.2	0.7	0.7	0.7	0.9	0.7	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.6	0.6	Diurnal Average	
	1.5	1.3	2.2	2.6	2.1	2.0	1.8	1.7	2.8	14.0	3.2	2.7	2.3	6.2	1.7	1.2	1.5	2.0	1.2	1.0	1.0	1.2	1.1	1.2	Diurnal Maximum	

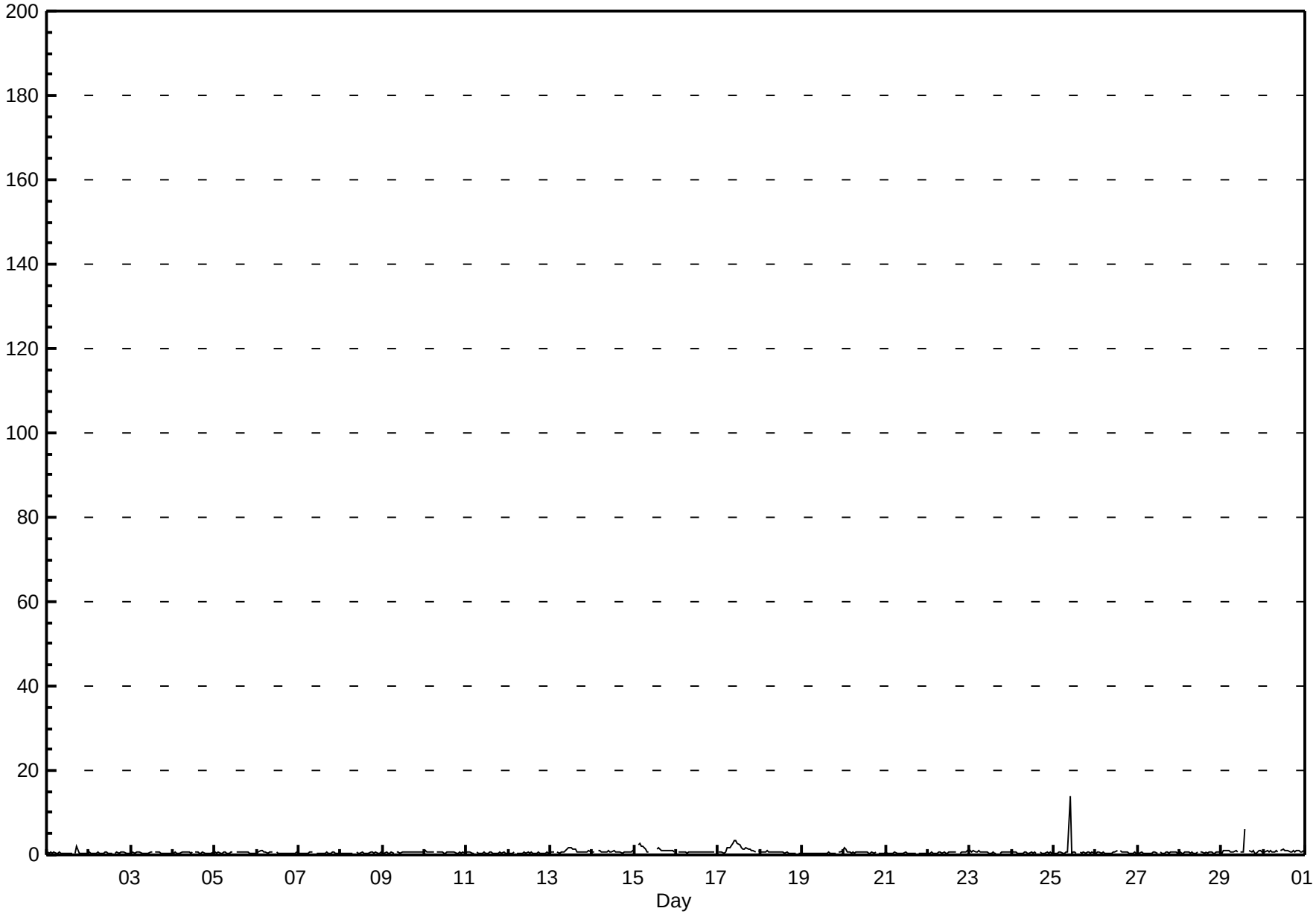
C - Calibration R - Recovery P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

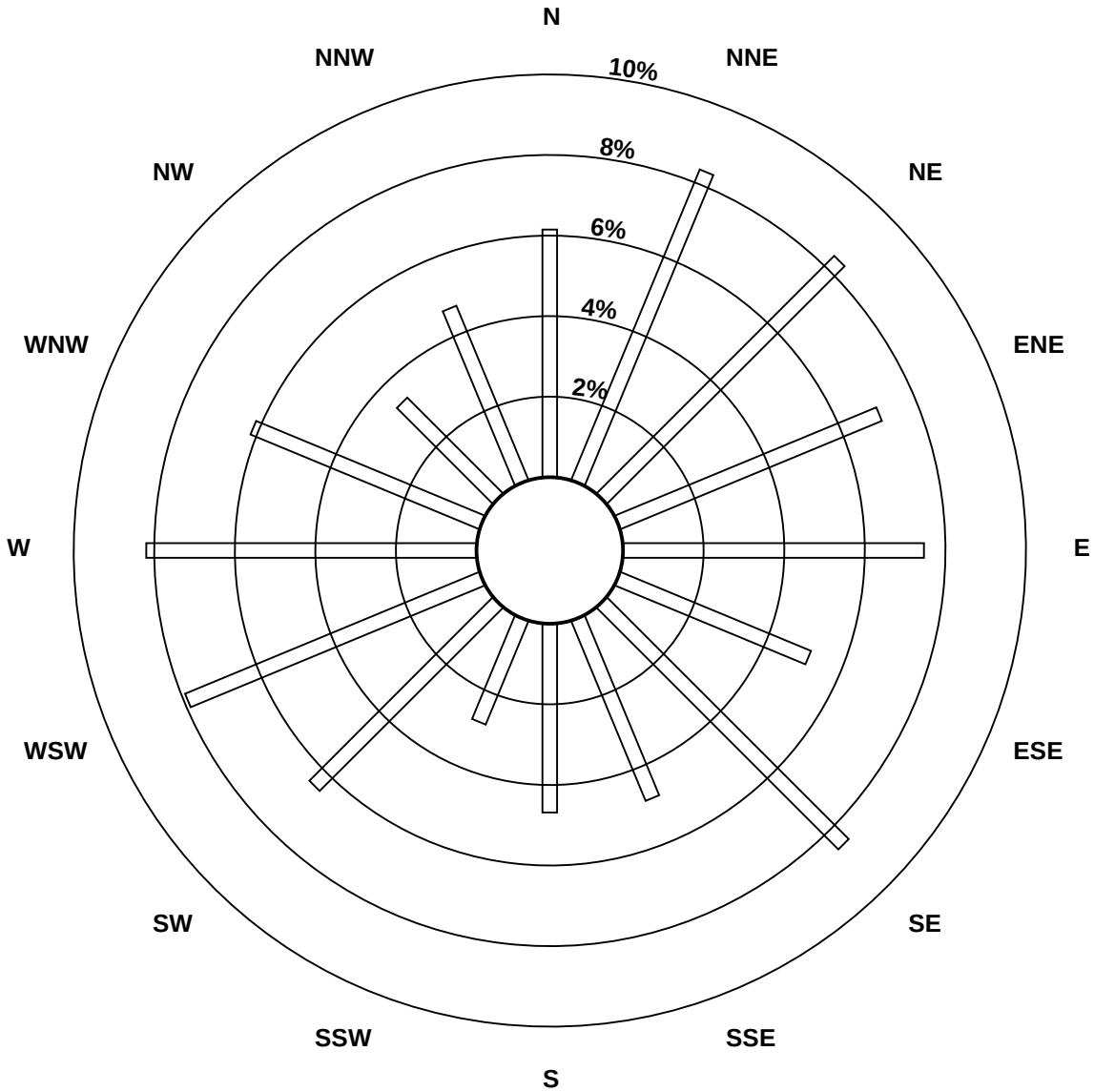
Falher - November 2014



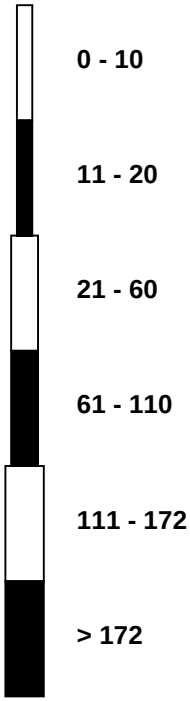
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Falher - November 2014



Pollutant Classes (ppb)

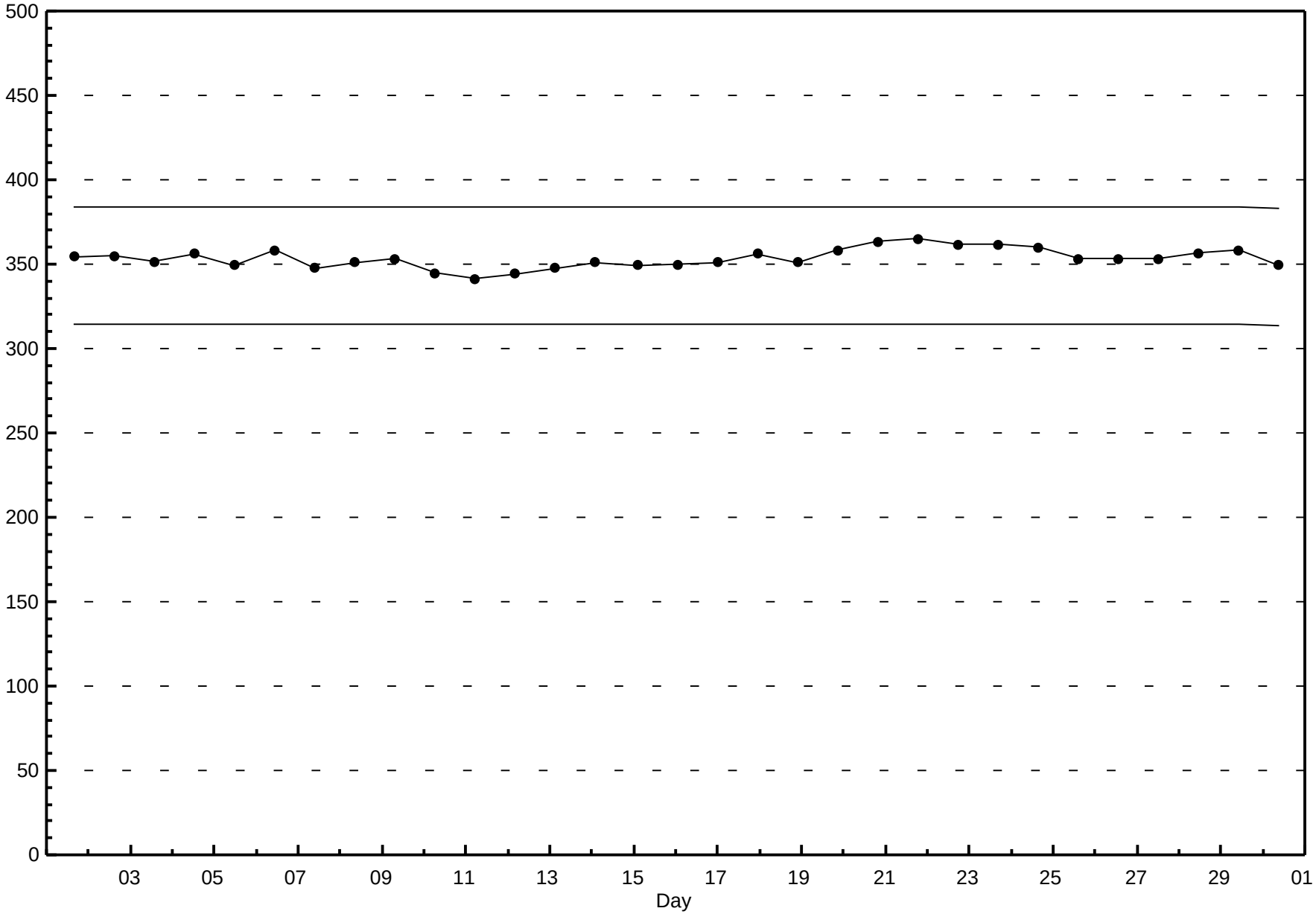


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Falher - November 2014



Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Falher - November 2014

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

Maximum Value: 1.2 ppb on Nov 1 20:00 Maximum Daily Average: 0.4 ppb on Nov 6

Minimum Value: 0 ppb on Nov 1 03:00 Minimum Daily Average: 0.0 ppb on Nov 27

Maximum Diurnal Average: 0.2 ppb at hour 10 Minimum Diurnal Average: 0.1 ppb at hour 3

Monthly Average: 0.12 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 0.6

Hours in Service:	720
Hours of Data:	680
Hours of Missing Data:	40
Hours of Calibration:	37
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-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	0	0	0	0.2	1.2
2-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.5
3-Nov	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	0.5
4-Nov	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
5-Nov	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0.2	0.6
6-Nov	0	1	0	1	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
7-Nov	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	0.2
8-Nov	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
9-Nov	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
10-Nov	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
11-Nov	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
12-Nov	0	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
13-Nov	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
14-Nov	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
15-Nov	0	A	0	0	0	0	0	0	0	P	P	P	R	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
16-Nov	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
17-Nov	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
18-Nov	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
19-Nov	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
20-Nov	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
21-Nov	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
22-Nov	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
23-Nov	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
24-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2
25-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2
26-Nov	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
27-Nov	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
28-Nov	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
29-Nov	0	0	0	0	0	0	0	0	0	0	A	C	C	C	C	C	0	0	0	0	0	0	0	0	0.1	0.2
30-Nov	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	0.2
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	Diurnal Average	
	0.5	0.7	0.5	0.7	0.3	0.3	0.6	0.7	0.4	0.6	0.3	0.4	0.4	0.3	0.2	0.3	0.5	0.4	0.7	1.2	0.5	0.4	0.5	0.4	Diurnal Maximum	

C - Calibration R - Recovery P - Power Failure A - Automated Daily Zero Span

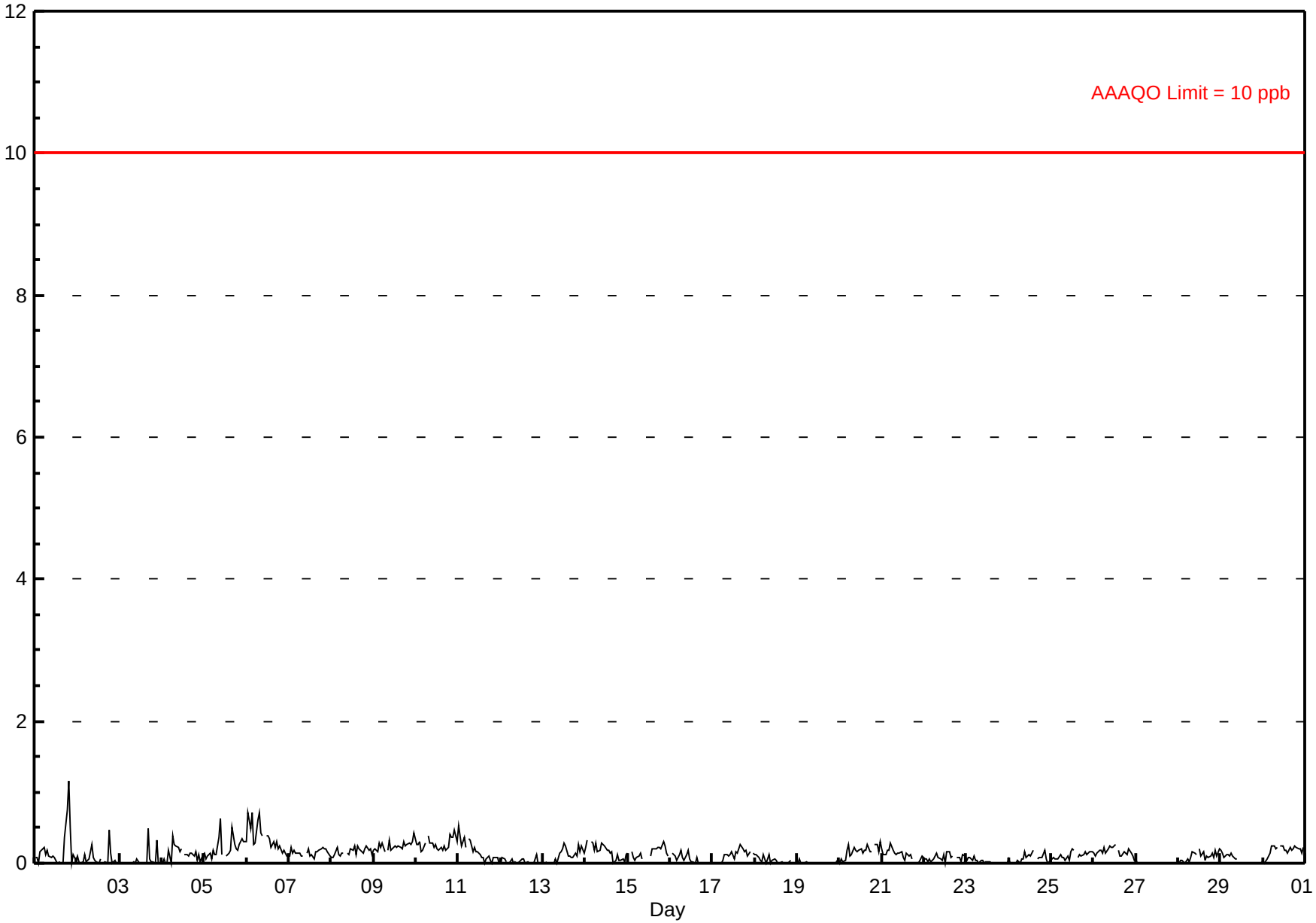
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Falher - November 2014



Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Falher - November 2014

Maximum Value: 3.6 ppb on Nov 3 17:00

Maximum Daily Average: 1.1 ppb on Nov 6

Minimum Value: 0 ppb on Nov 27 14:00

Minimum Daily Average: 0.5 ppb on Nov 27

Maximum Diurnal Average: 0.8 ppb at hour 10

Minimum Diurnal Average: 0.6 ppb at hour 23

Monthly Average: 0.72 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 0.8$ $P_{90} = 0.9$ $P_{99} = 2.4$

Hours in Service:	720
Hours of Data:	680
Hours of Missing Data:	40
Hours of Calibration:	37
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-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	3	3	2	2	0	1	1	1.0	2.7
2-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	1	1	1	1	0	0.7	2.0
3-Nov	0	1	1	1	0	0	0	1	1	1	1	1	0	A	1	0	4	1	0	1	1	2	0	1	0.7	3.6
4-Nov	0	1	0	1	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.6
5-Nov	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	3	1	1	1	1	1	1	1	0.9	2.7
6-Nov	1	1	2	2	1	1	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.4
7-Nov	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
8-Nov	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
9-Nov	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	1.2
10-Nov	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	1.3
11-Nov	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.7	1.1
12-Nov	1	1	1	1	A	0	1	1	0	1	1	1	1	1	1	1	1	0	0	1	1	1	0	1	0.6	0.8
13-Nov	1	0	1	A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
14-Nov	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.8	1.0
15-Nov	1	A	1	1	1	1	1	1	1	P	P	P	R	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
16-Nov	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	0	1	1	0	A	0.7	1.4
17-Nov	0	0	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	0.7	0.9
18-Nov	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0	1	1	0	1	A	1	1	0.6	0.8
19-Nov	0	1	1	1	1	1	1	0	0	1	0	1	0	1	0	0	0	0	1	1	A	1	0	1	0.5	0.7
20-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.0
21-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	0	1	1	0.7	1.1
22-Nov	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	A	1	1	1	1	1	1	0.7	0.9
23-Nov	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.6	0.9
24-Nov	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0	1	0.6	0.9
25-Nov	1	1	1	1	1	1	1	1	1	3	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	2.7
26-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	0.7	1.0
27-Nov	1	1	0	1	1	0	1	0	0	1	0	1	A	0	0	0	1	1	0	0	1	0	0	0	0.5	0.8
28-Nov	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	1	0	1	1	1	0.7	1.1
29-Nov	1	1	1	1	1	1	1	1	1	1	A	C	C	C	C	C	0	0	0	0	0	0	0	1	0.5	0.8
30-Nov	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
	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.7	0.8	0.7	0.6	0.7	Diurnal Average	
	1.5	1.4	2.0	2.4	1.0	1.4	1.6	2.2	1.4	2.7	1.0	1.0	1.2	0.9	0.9	1.0	3.6	2.6	2.7	2.4	2.3	1.6	1.1	1.2	Diurnal Maximum	

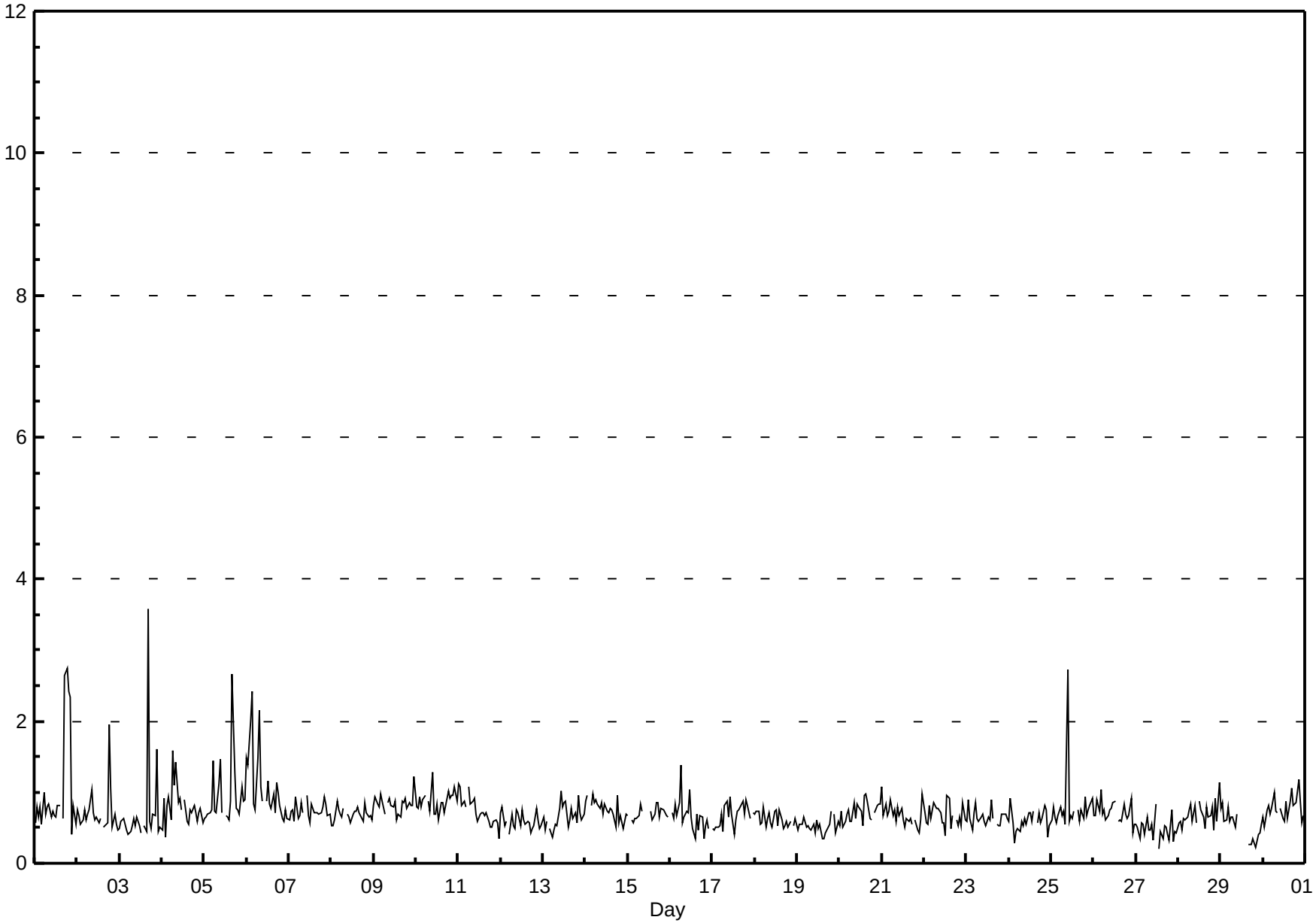
C - Calibration R - Recovery P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

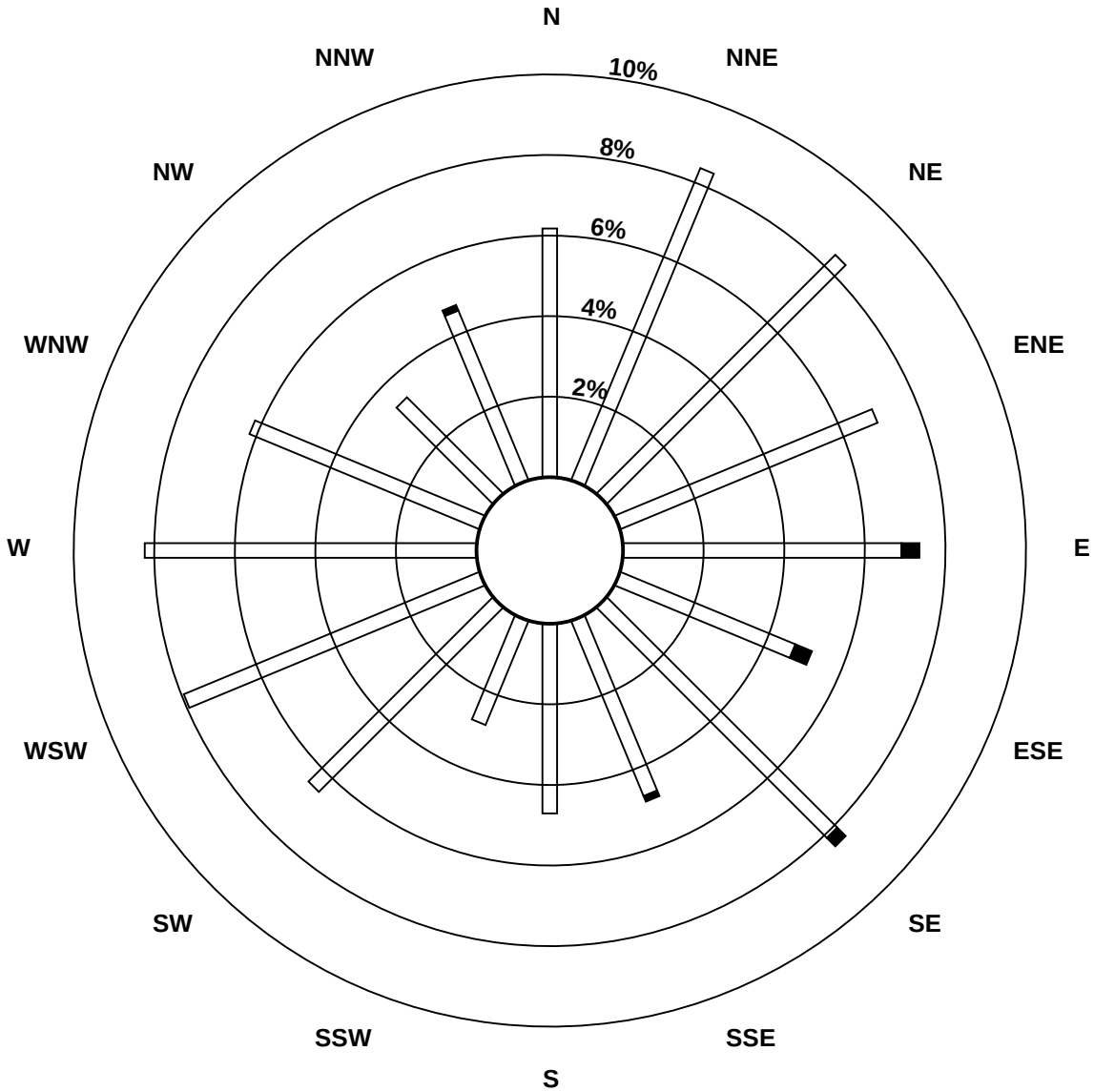
Falher - November 2014



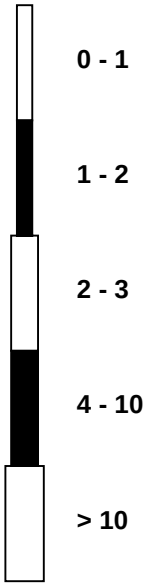
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Falher - November 2014



Pollutant Classes (ppb)

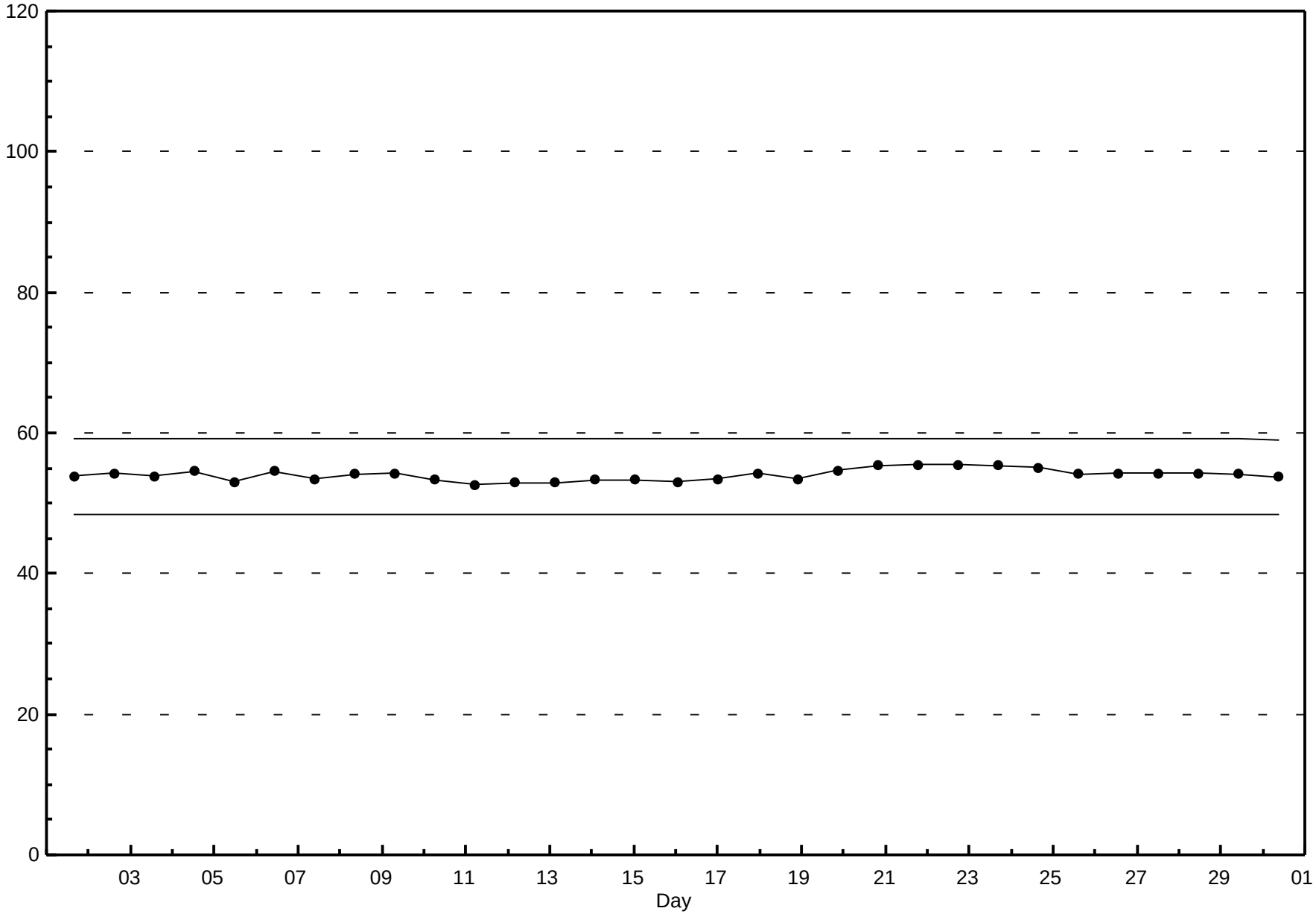


Peace Airshed Zone Association

Span Responses

Hydrogen Sulphide (H_2S)

Falher - November 2014



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Falher - November 2014

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

Maximum Value: 8.8 ^{o}C on Nov 1 16:00 Maximum Daily Average: 4.1 ^{o}C on Nov 6

Minimum Value: -33 ^{o}C on Nov 30 09:00 Minimum Daily Average: -29.4 ^{o}C on Nov 29

Maximum Diurnal Average: -7.3 ^{o}C at hour 15 Minimum Diurnal Average: -12.2 ^{o}C at hour 9

Monthly Average: -9.88 ^{o}C Percentiles: P_1 = -32.1 P_{10} = -22.8 Q_1 = -16.3 Median = -9.4 Q_3 = -2.2 P_{90} = 1.8 P_{99} = 7.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

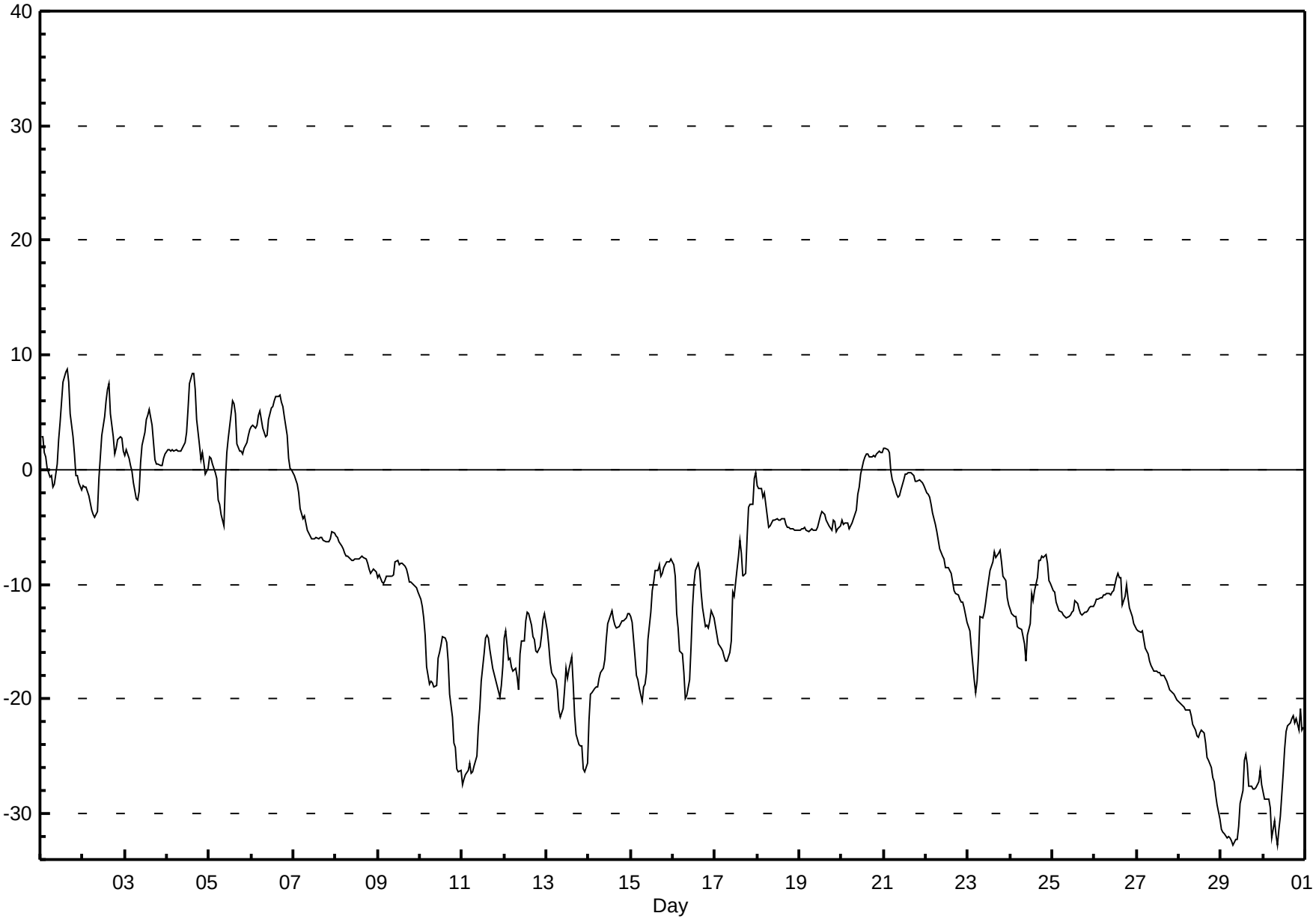
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Nov	3	3	2	1	0	-1	-1	-2	-1	0	3	4	6	8	8	9	8	5	3	1	0	-1	-1	-2	2.3	8.8
2-Nov	-1	-2	-2	-2	-3	-4	-4	-4	-4	-1	1	3	5	6	7	8	5	3	1	2	3	3	3	2	1.0	7.5
3-Nov	1	2	1	0	0	-1	-2	-3	-2	1	2	3	4	5	5	4	2	1	0	1	0	0	1	1	1.1	5.3
4-Nov	2	2	2	2	2	2	2	2	2	2	2	3	5	7	8	8	7	4	2	1	1	1	0	0	2.9	8.4
5-Nov	1	1	0	0	-1	-3	-3	-4	-5	-1	2	3	5	6	6	5	2	2	2	1	2	2	3	3	1.2	6.0
6-Nov	4	4	4	4	5	5	4	3	3	3	4	5	6	6	6	6	6	6	5	5	3	1	0	0	4.1	6.5
7-Nov	-1	-1	-1	-2	-3	-4	-4	-5	-5	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-6	-5	-6	-4.8	-0.6
8-Nov	-6	-6	-6	-7	-7	-7	-7	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-9	-9	-9	-9	-9	-7.6	-5.7
9-Nov	-9	-9	-10	-10	-10	-9	-9	-9	-9	-9	-8	-8	-8	-8	-8	-8	-9	-9	-10	-10	-10	-10	-10	-11	-9.2	-8.0
10-Nov	-11	-12	-13	-14	-17	-19	-18	-19	-19	-19	-16	-16	-15	-15	-15	-15	-17	-20	-22	-24	-24	-26	-26	-26	-18.2	-11.4
11-Nov	-28	-27	-27	-26	-26	-26	-26	-26	-25	-23	-21	-18	-16	-15	-14	-15	-16	-17	-18	-18	-19	-20	-19	-17	-20.9	-14.5
12-Nov	-15	-14	-17	-16	-17	-18	-17	-18	-19	-16	-15	-15	-13	-12	-13	-14	-15	-15	-16	-16	-15	-14	-13	-13	-15.2	-12.4
13-Nov	-14	-15	-17	-18	-18	-18	-19	-21	-22	-21	-19	-17	-18	-17	-16	-19	-21	-23	-24	-24	-24	-26	-26	-26	-20.2	-14.1
14-Nov	-22	-20	-19	-19	-19	-19	-18	-18	-17	-17	-15	-13	-13	-12	-13	-14	-14	-14	-13	-13	-13	-13	-13	-12	-15.5	-12.3
15-Nov	-13	-13	-16	-18	-18	-19	-20	-19	-19	-18	-15	-12	-11	-10	-9	-9	-8	-9	-9	-9	-8	-8	-8	-8	-12.7	-7.8
16-Nov	-8	-9	-13	-14	-16	-16	-18	-20	-20	-18	-15	-12	-10	-9	-8	-9	-11	-12	-14	-14	-14	-13	-12	-13	-13.2	-8.1
17-Nov	-14	-14	-15	-16	-16	-16	-17	-17	-16	-15	-11	-11	-9	-8	-6	-7	-9	-9	-6	-3	-3	-3	-1	0	-10.0	-0.3
18-Nov	-1	-2	-2	-2	-2	-3	-5	-5	-5	-4	-4	-4	-4	-4	-4	-4	-5	-5	-5	-5	-5	-5	-5	-5	-4.1	-1.3
19-Nov	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-4	-4	-4	-4	-5	-5	-5	-4	-5	-5	-5	-5	-4.9	-3.6
20-Nov	-4	-5	-5	-5	-5	-5	-5	-4	-4	-2	-1	0	1	1	1	1	1	1	1	1	1	2	1	2	-1.3	1.6
21-Nov	2	2	2	2	0	-1	-2	-2	-2	-2	-2	-1	0	0	0	0	0	-1	-1	-1	-1	-1	-1	-1	-0.6	1.9
22-Nov	-2	-2	-2	-3	-4	-5	-5	-6	-7	-8	-8	-9	-9	-9	-9	-10	-11	-11	-11	-11	-11	-12	-12	-13	-7.8	-2.0
23-Nov	-14	-14	-16	-18	-19	-18	-16	-13	-13	-12	-11	-11	-9	-8	-8	-7	-8	-7	-7	-8	-9	-10	-11	-12	-11.7	-7.1
24-Nov	-12	-13	-13	-13	-14	-14	-14	-15	-15	-17	-14	-13	-11	-11	-11	-9	-8	-8	-8	-8	-7	-8	-10	-10	-11.4	-7.4
25-Nov	-11	-11	-12	-12	-12	-12	-13	-13	-13	-13	-13	-12	-12	-11	-12	-12	-12	-13	-12	-12	-12	-12	-12	-12	-12.2	-10.6
26-Nov	-12	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-9	-9	-9	-9	-12	-11	-10	-11	-12	-13	-13	-14	-11.1	-9.1
27-Nov	-14	-14	-14	-14	-15	-16	-16	-17	-17	-17	-18	-18	-18	-18	-18	-18	-18	-18	-19	-19	-19	-20	-20	-20	-17.3	-13.9
28-Nov	-20	-20	-21	-21	-21	-21	-21	-21	-22	-23	-23	-23	-23	-23	-23	-24	-25	-25	-26	-27	-27	-28	-29	-30	-23.7	-20.3
29-Nov	-31	-32	-32	-32	-32	-32	-32	-33	-32	-32	-31	-29	-28	-25	-25	-26	-28	-28	-28	-28	-28	-27	-26	-28	-29.4	-24.8
30-Nov	-28	-29	-29	-29	-30	-32	-31	-32	-33	-31	-30	-26	-24	-23	-22	-22	-22	-21	-22	-22	-23	-21	-23	-22	-26.1	-20.9
	-9.5	-9.6	-10.2	-10.6	-11.1	-11.6	-11.8	-12.1	-12.2	-11.4	-10.2	-9.3	-8.2	-7.5	-7.3	-7.6	-8.5	-9.1	-9.5	-9.7	-9.9	-10.1	-10.1	-10.2	Diurnal Average	
	3.8	3.9	3.6	3.9	4.8	5.1	3.7	3.3	2.9	3.0	4.4	5.3	5.9	7.7	8.5	8.8	7.7	5.9	5.5	4.6	3.0	2.9	3.0	3.5	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Falher - November 2014



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Falher - November 2014

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	10	11	13	12	8	10	11	14	10	10	14	14	12	10	9	9	4	9	9	13	12	12	11	9.4	14.2
Dir	193	200	202	185	186	179	163	151	167	165	161	178	176	187	182	195	235	174	127	123	125	125	128	121	167	176
2 Spd	14	16	16	12	11	11	8	11	10	9	15	18	19	18	17	14	11	14	12	6	2	4	4	10	10.3	19.3
Dir	136	133	132	121	125	117	113	112	106	129	129	140	141	140	157	150	135	134	115	54	15	273	239	217	134	141
3 Spd	12	13	14	14	11	5	6	10	4	8	13	16	10	8	4	2	7	11	13	15	17	18	22	25	2.8	25.3
Dir	214	218	231	222	244	253	228	222	259	236	243	246	261	243	245	77	80	83	80	79	79	93	86	82	170	82
4 Spd	23	21	25	24	24	24	18	15	9	6	8	11	13	16	18	19	15	14	11	13	15	12	11	13	5.2	24.6
Dir	85	88	80	82	90	94	98	102	102	164	151	177	216	239	256	260	253	258	224	213	216	221	221	227	155	80
5 Spd	14	13	14	11	8	2	8	7	3	5	7	9	11	10	6	6	12	15	16	15	22	24	27	28	6.3	28.2
Dir	216	218	215	226	229	134	175	181	96	148	185	184	222	252	200	120	89	87	92	85	90	91	86	93	132	93
6 Spd	26	26	22	19	18	19	16	13	5	7	7	8	7	9	10	7	10	13	16	15	20	21	18	10	2.7	26.1
Dir	101	101	105	107	110	113	103	97	26	75	112	177	196	177	199	227	245	252	274	290	322	313	291	281	126	101
7 Spd	17	20	18	17	12	9	10	13	15	15	14	12	8	11	11	10	9	10	9	7	8	8	11	13	10.4	20.4
Dir	290	305	295	291	268	277	310	326	330	316	330	333	325	319	328	328	321	328	346	345	345	359	40	29	321	305
8 Spd	15	17	20	17	18	19	19	15	15	14	15	12	11	9	8	7	6	9	9	9	11	12	11	10	12.2	19.8
Dir	12	13	11	7	360	357	354	338	338	345	345	356	350	354	346	5	341	17	25	51	43	25	17	13	3	11
9 Spd	9	13	12	10	11	10	9	9	7	6	2	7	13	14	13	11	9	9	11	13	12	12	14	17	7.6	16.9
Dir	38	29	25	345	357	347	352	336	324	310	301	244	252	251	261	273	284	287	284	287	277	275	291	281	302	281
10 Spd	15	15	18	16	14	11	9	9	8	10	10	10	9	7	5	1	1	2	1	5	4	4	3	1	6.0	17.6
Dir	291	280	266	260	251	234	224	201	213	230	265	262	262	250	287	82	11	117	0	5	8	360	349	15	261	266
11 Spd	1	1	2	1	1	0	1	1	1	2	3	6	10	14	13	15	14	13	12	8	11	13	15	11	6.8	15.3
Dir	342	333	330	326	10	199	347	326	317	343	11	33	33	36	39	30	19	13	5	4	6	10	359	6	15	359
12 Spd	6	3	3	2	1	0	0	0	0	0	0	0	0	0	4	4	5	1	1	0	4	2	4	2	0.4	6.4
Dir	8	46	32	12	18	208	220	216	240	208	119	121	153	182	220	231	237	257	271	34	258	294	67	95	324	8
13 Spd	4	2	2	2	3	3	1	1	0	3	2	2	4	4	3	6	5	4	1	1	2	4	5	4	2.6	5.5
Dir	146	125	112	99	118	120	150	138	161	165	145	145	127	128	117	98	69	74	97	90	87	71	81	96	109	98
14 Spd	2	6	8	5	3	1	2	1	2	5	5	4	4	4	4	5	4	4	3	4	7	7	8	13	4.3	12.8
Dir	128	173	185	178	195	223	201	177	156	161	175	169	172	173	154	160	136	148	148	130	121	128	143	143	156	143
15 Spd	12	11	10	11	8	8	8	7	6	6	8	10	15	11	18	16	16	12	9	12	10	8	8	9	4.6	17.5
Dir	143	129	86	84	92	77	74	97	102	100	127	152	170	184	215	216	222	217	243	239	260	283	281	266	180	215
16 Spd	9	5	2	5	7	4	2	2	1	1	2	8	8	9	10	12	13	13	14	16	14	15	19	17	7.0	19.0
Dir	265	278	349	126	119	64	18	11	356	7	31	38	47	59	59	60	57	45	31	26	24	26	33	30	38	33
17 Spd	15	11	9	7	8	6	8	5	5	6	4	11	8	7	3	4	8	10	13	15	14	16	22	24	2.3	23.7
Dir	29	31	26	21	45	85	67	63	92	96	131	136	135	151	165	209	184	196	215	241	239	240	241	250	200	250
18 Spd	20	21	16	13	13	16	17	10	7	7	11	12	15	11	5	4	7	7	6	5	1	3	4	5	6.5	20.8
Dir	256	253	256	251	251	242	249	295	299	307	325	324	332	341	341	326	359	21	28	9	25	23	27	62	293	253
19 Spd	7	8	10	12	15	15	14	16	18	19	20	19	20	18	18	21	19	18	15	16	12	11	13	13	14.9	20.7
Dir	63	67	56	68	77	76	78	83	76	75	74	76	85	85	75	73	71	74	77	79	77	94	120	118	79	73
20 Spd	13	9	6	5	4	7	6	7	11	11	10	10	7	7	7	7	7	9	10	10	13	10	8	6	7.7	12.9
Dir	134	133	129	169	152	164	150	139	142	146	146	149	147	142	144	137	116	143	133	141	145	182	196	240	148	134
21 Spd	8	9	8	9	12	13	13	14	12	12	10	10	14	14	15	17	20	21	23	20	21	24	27	32	10.6	31.6
Dir	238	242	236	248	323	325	323	322	331	339	350	15	44	57	54	55	59	55	53	51	47	40	46	51	28	51
22 Spd	34	24	17	21	21	20	17	16	18	18	16	19	17	15	17	16	14	14	14	10	7	2	10	10	6.7	34.4
Dir	44	48	32	18	12	359	349	332	304	309	297	284	281	269	250	243	231	234	234	223	237	179	186	158	314	44

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Falher - November 2014

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
23 Spd	7	6	10	10	10	11	12	13	16	16	15	10	3	5	10	4	2	3	6	12	16	16	20	14	3.0	19.5
Dir	153	74	61	51	20	358	11	30	31	40	51	70	61	159	122	171	311	353	277	243	259	271	269	260	4	269
24 Spd	13	10	6	4	4	7	7	8	9	6	9	10	5	7	4	6	10	15	9	11	9	17	22	18	5.8	22.4
Dir	263	268	262	257	356	341	24	0	12	358	34	35	23	13	12	10	45	63	61	31	6	303	291	296	347	291
25 Spd	19	18	21	21	22	19	15	14	10	8	8	7	4	2	1	2	1	3	3	3	8	9	8	8	6.8	21.9
Dir	273	263	262	255	257	264	261	271	269	251	243	263	303	320	82	313	346	23	41	7	14	33	41	49	275	257
26 Spd	10	14	15	14	13	11	4	2	1	5	10	8	7	6	4	3	5	8	21	25	25	23	25	25	4.4	25.0
Dir	28	38	46	53	54	63	80	69	31	131	175	186	218	211	206	219	227	268	291	283	282	276	274	280	291	283
27 Spd	23	22	21	25	29	28	27	26	25	23	19	17	19	20	21	22	25	24	24	24	23	21	20	21	22.9	29.1
Dir	283	281	285	293	285	290	284	281	282	283	282	286	284	280	276	279	284	286	287	279	279	282	280	273	283	285
28 Spd	22	22	19	15	16	16	17	19	22	22	19	15	15	15	15	13	11	11	5	5	7	9	8	8	10.3	22.1
Dir	269	272	276	262	261	254	255	241	236	226	225	220	216	216	206	194	175	174	168	136	110	113	102	84	230	226
29 Spd	9	15	16	13	14	14	9	11	10	8	10	9	7	4	7	9	8	8	11	10	8	9	12	7	7.7	15.6
Dir	75	60	56	49	47	47	44	48	43	56	77	75	86	126	146	131	136	111	117	129	142	139	156	145	86	56
30 Spd	11	11	10	8	3	2	11	10	9	9	11	14	19	21	13	16	17	16	13	8	1	10	9	7	9.0	21.2
Dir	149	137	131	140	98	75	56	41	24	27	20	31	43	49	51	56	47	52	52	60	90	73	53	47	58	49
Spd	0.4	0.5	1.0	0.8	1.6	1.9	1.7	1.8	2.2	1.0	0.2	0.8	1.0	1.2	1.8	0.6	0.6	1.6	1.6	1.4	1.7	2.1	1.6	1.1	Diurnal Average	
Dir	297	351	1	342	351	358	355	349	339	321	338	188	217	213	208	180	56	60	30	357	353	354	355	13		
Spd	34.4	25.7	24.6	24.6	29.1	28.3	27.4	26.0	25.1	22.8	20.3	19.1	19.5	21.2	21.2	21.7	24.9	24.2	24.3	25.0	24.7	24.3	27.5	31.6	Diurnal Maximum	
Dir	44	101	80	293	285	290	284	281	282	283	74	76	85	49	276	279	284	286	287	283	282	40	86	51		

Maximum Speed Value: 34 km/h on Nov 22 01:00
Maximum Daily Speed Average: 22.9 km/h on Nov 27
Maximum Diurnal Speed Average: 2.2 km/h at hour 9

Minimum Speed Value: 0 km/h on Nov 12 11:00
Minimum Daily Speed Average: 0.4 km/h on Nov 12
Minimum Diurnal Speed Average: 0.2 km/h at hour 11

Hours in Service: 720
Hours of Data: 720
Hours of Missing Data: 0

Monthly Average Velocity: 0.75 km/h 350.6 deg

Speed Percentiles: $P_1 = 0.1$ $P_{10} = 2.8$ $Q_1 = 6.6$ Median = 10.2 $Q_3 = 15.1$ $P_{90} = 19.8$ $P_{99} = 27.3$

Percent Operational Time: 100.0

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

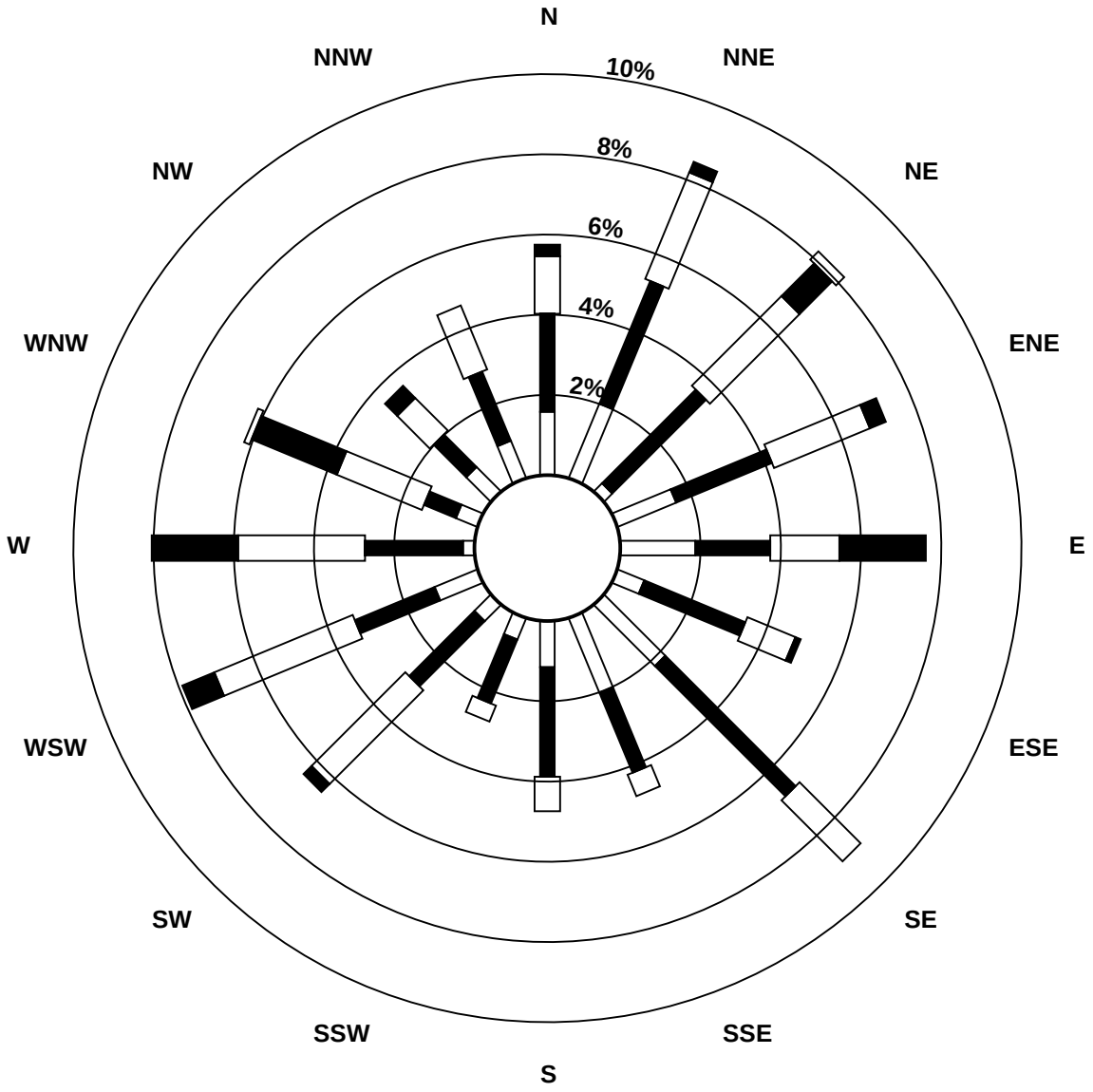
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	25	35	22	5	0	0	87
NorthEast	14	45	44	10	2	0	115
East	19	30	29	19	1	0	98
SouthEast	28	47	29	1	0	0	105
South	17	37	10	0	0	0	64
SouthWest	14	27	38	4	0	0	83
West	8	26	46	37	2	0	119
NorthWest	12	12	21	4	0	0	49
Total	137	259	239	80	5	0	720

Wind Rose

Wind Speed (WS) (km/h)

Falher - November 2014



Wind Speed Classes (km/h)

Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Falher - November 2014

Maximum Speed: 35 km/h on Nov 22 01:00

Maximum Daily Speed Average: 23.0 km/h on Nov 27

Minimum Speed: 0 km/h on Nov 11 06:00

Minimum Daily Speed Average: 1.9 km/h on Nov 12

Maximum Diurnal Speed Average: 13.5 km/h at hour 23

Minimum Diurnal Speed Average: 9.3 km/h at hour 9

Monthly Average Speed: 11.13 km/h

Percentiles: P_1 = 0.0 P_{10} = 3.3 Q_1 = 6.8 Median = 10.4 Q_3 = 15.2 P_{90} = 19.8 P_{99} = 27.4

Hours in Service:	720
Hours of Data:	720
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-Nov	10	10	11	13	12	8	10	11	14	10	10	14	14	12	10	9	9	5	9	9	13	12	12	11	10.8	14.3
2-Nov	14	16	16	12	11	11	8	11	10	9	15	18	19	18	17	14	12	14	13	9	7	7	5	10	12.3	19.3
3-Nov	12	13	14	14	11	5	6	10	6	8	13	16	10	8	4	3	7	11	13	15	17	18	22	25	11.7	25.3
4-Nov	23	21	25	24	24	24	18	16	9	6	8	11	13	16	18	19	15	15	11	13	15	12	11	13	15.8	24.6
5-Nov	14	13	14	11	8	4	8	7	3	6	7	9	11	10	7	7	12	15	16	15	22	24	28	28	12.4	28.3
6-Nov	26	26	22	19	18	19	16	13	6	7	7	8	7	9	10	7	10	13	16	16	20	21	18	10	14.3	26.4
7-Nov	17	20	18	17	12	10	10	13	15	16	14	12	9	11	11	10	9	10	9	7	8	8	11	13	12.2	20.5
8-Nov	15	17	20	17	18	19	19	15	15	14	15	12	11	9	8	7	7	9	9	9	11	12	11	10	12.9	19.8
9-Nov	9	13	12	10	11	11	10	10	7	6	3	7	13	14	13	11	9	9	11	13	12	12	14	17	10.7	16.9
10-Nov	16	15	18	16	14	11	9	9	8	10	10	10	9	8	5	2	2	2	1	5	4	4	3	1	8.0	17.6
11-Nov	1	1	2	1	1	0	1	1	1	2	3	6	11	14	13	15	14	13	12	8	11	13	15	11	7.1	15.4
12-Nov	6	4	3	2	1	0	0	0	0	0	0	0	0	0	4	4	5	1	1	0	4	2	5	2	1.9	6.4
13-Nov	4	2	2	2	3	3	1	1	0	4	2	2	4	4	4	6	5	4	1	1	2	4	5	4	3.0	5.6
14-Nov	2	6	8	5	4	1	2	1	2	5	5	4	4	4	4	5	4	4	3	4	7	8	9	13	4.7	12.8
15-Nov	12	12	10	11	8	8	8	7	6	6	8	10	15	11	18	16	16	12	9	12	10	8	9	9	10.5	17.6
16-Nov	9	5	3	5	7	4	2	2	1	1	2	8	8	9	10	12	13	13	14	16	14	15	19	17	8.7	19.0
17-Nov	15	11	9	7	9	7	8	5	5	6	4	11	8	8	3	4	8	11	13	15	14	16	22	24	10.1	23.8
18-Nov	20	21	16	13	13	16	17	10	7	7	11	12	15	12	6	4	7	7	7	5	1	3	4	5	10.0	20.8
19-Nov	7	8	10	12	15	15	14	16	18	19	20	19	20	18	19	21	19	18	15	16	12	12	13	13	15.4	20.7
20-Nov	13	9	7	5	4	7	6	7	11	11	10	10	7	7	7	7	7	9	10	10	13	10	8	7	8.4	13.0
21-Nov	8	9	8	9	13	13	13	14	12	12	10	11	14	15	15	17	20	21	23	20	21	24	27	32	15.9	31.6
22-Nov	35	24	17	21	21	20	17	17	18	19	16	19	17	15	18	16	14	14	14	10	7	4	10	10	16.4	34.5
23-Nov	7	7	10	10	11	11	12	13	16	16	15	10	3	5	10	6	5	3	7	12	16	16	20	14	10.7	19.7
24-Nov	13	10	6	4	5	7	7	8	9	6	9	10	5	7	4	6	10	15	9	11	10	17	22	19	9.6	22.4
25-Nov	19	18	21	21	22	19	15	14	10	8	8	7	5	3	2	3	2	3	3	3	8	9	8	8	10.0	21.9
26-Nov	10	14	15	14	13	11	4	2	3	6	10	8	7	6	5	3	5	8	21	25	25	23	25	25	12.0	25.1
27-Nov	23	22	21	25	29	28	27	26	25	23	19	17	19	20	21	22	25	24	24	24	23	21	20	21	23.0	29.2
28-Nov	22	22	19	15	16	16	17	20	22	22	19	15	15	15	15	13	11	11	5	5	7	9	8	8	14.5	22.2
29-Nov	9	15	16	14	14	14	9	11	10	8	10	9	7	5	7	9	8	8	11	10	8	9	12	7	10.0	15.7
30-Nov	11	11	10	8	5	2	11	10	9	9	11	14	19	21	13	17	17	16	13	9	3	10	9	7	11.1	21.2
	13.4	13.2	12.8	11.8	11.7	10.8	10.3	10.0	9.3	9.3	9.8	10.7	10.7	10.4	10.0	9.8	10.2	10.7	10.8	10.9	11.5	12.1	13.5	13.2	Diurnal Average	
	34.5	25.7	24.6	24.7	29.2	28.3	27.5	26.1	25.2	22.8	20.3	19.2	19.6	21.2	21.2	21.8	25.0	24.3	24.3	25.1	24.8	24.4	27.5	31.6	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 - November 2014

Maximum Value: 99.4 deg on Nov 25 17:00

Minimum Value: 1.7 deg on Nov 1 05:00

Percentiles: P_1 = 1.9 P_{10} = 3.1 Q_1 = 4.4 Median = 7.0 Q_3 = 11.6 P_{90} = 21.1 P_{99} = 72.7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Nov	5	4	4	3	2	11	5	7	4	5	12	7	7	15	14	20	6	32	17	8	6	3	4	3	32.5
2-Nov	3	3	3	2	5	11	4	6	9	7	4	6	4	5	6	5	12	2	9	53	74	64	60	8	74.2
3-Nov	5	6	2	7	5	11	44	8	48	11	5	6	13	17	29	58	5	3	4	2	2	5	5	2	57.6
4-Nov	2	6	2	4	4	3	7	6	16	23	14	10	14	6	8	3	7	14	10	3	5	3	3	6	22.9
5-Nov	3	6	2	7	8	86	8	10	38	15	7	6	16	13	25	24	6	4	2	4	4	3	2	4	86.3
6-Nov	8	3	2	4	3	3	4	11	41	15	15	20	7	8	8	13	6	8	6	12	5	5	4	11	40.7
7-Nov	5	6	9	5	18	27	7	10	7	8	12	9	17	7	8	11	11	7	8	6	7	13	5	11	26.6
8-Nov	3	3	4	4	6	5	5	6	6	6	6	13	8	11	5	12	14	11	7	9	9	12	10	14	13.9
9-Nov	10	5	13	8	8	18	17	9	9	6	56	16	7	4	5	5	6	5	4	7	8	4	6	3	55.8
10-Nov	13	12	4	6	4	8	11	9	9	9	7	6	8	19	13	56	49	9	50	12	17	5	6	28	56.4
11-Nov	6	9	8	23	27	55	9	20	6	18	9	10	11	5	3	3	5	4	4	9	3	8	6	9	55.0
12-Nov	3	15	8	4	6	5	28	29	31	10	22	10	15	34	12	9	11	33	31	93	33	40	28	52	92.6
13-Nov	23	27	11	15	13	13	11	4	9	14	7	10	8	9	17	9	5	9	4	5	7	7	3	13	26.9
14-Nov	12	16	7	14	21	27	17	15	7	7	6	8	8	8	9	12	12	21	15	8	5	8	6	6	27.3
15-Nov	7	9	17	6	5	11	6	6	6	5	9	4	4	10	5	4	3	2	17	6	13	11	10	7	17.5
16-Nov	7	12	55	8	7	21	8	7	6	19	8	6	4	4	3	3	8	6	4	2	4	3	2	2	54.6
17-Nov	2	4	4	6	22	17	16	6	9	9	14	5	17	16	12	17	8	14	10	6	2	3	3	5	22.3
18-Nov	3	3	4	5	3	4	2	20	14	13	6	5	5	9	24	22	7	11	8	11	11	10	24	15	24.4
19-Nov	8	13	8	5	3	2	4	4	3	3	5	4	6	4	6	3	3	3	2	6	6	15	6	4	15.0
20-Nov	7	6	12	11	4	11	9	8	4	5	4	3	8	8	10	11	7	9	18	17	6	13	7	21	20.8
21-Nov	6	6	6	16	29	5	8	4	9	6	4	24	4	8	6	5	3	4	3	3	3	4	4	3	29.0
22-Nov	5	7	9	3	8	6	11	11	11	14	7	3	5	6	8	3	4	4	3	5	15	52	11	13	51.8
23-Nov	12	29	9	12	12	3	7	10	7	4	8	6	12	20	13	47	55	24	19	7	9	7	6	6	54.6
24-Nov	5	8	27	27	17	7	24	11	9	9	3	7	13	4	11	24	8	7	10	6	26	6	2	5	26.8
25-Nov	7	4	4	4	4	3	5	4	8	8	7	17	20	48	59	76	99	34	25	22	20	5	7	8	99.4
26-Nov	5	6	4	5	4	13	9	47	85	28	7	17	7	10	14	13	14	7	5	3	3	6	3	2	84.8
27-Nov	3	3	3	6	3	4	4	4	3	3	4	4	4	4	4	3	3	4	4	5	3	3	3	3	5.9
28-Nov	3	4	4	8	4	5	4	5	3	4	3	7	4	4	7	6	13	6	14	11	5	5	11	6	13.8
29-Nov	3	3	5	4	4	3	7	4	4	12	3	8	7	22	11	15	10	8	3	8	8	7	6	9	22.1
30-Nov	4	11	9	8	49	12	9	6	3	4	6	5	4	3	8	7	5	2	7	24	93	19	15	17	92.7
	22.7	28.6	54.6	26.7	49.2	86.3	43.8	47.2	84.8	28.1	55.8	23.7	19.6	48.1	58.8	76.3	99.4	34.5	49.7	92.6	92.7	64.0	60.3	51.8	

PAZA
Portable – Clairmont Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable Clairmont - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.4 ppb on Nov 13 11:00 Maximum Daily Average: 2.4 ppb on Nov 13

Minimum Value: 0 ppb on Nov 19 09:00 Minimum Daily Average: 0.1 ppb on Nov 27
Maximum Diurnal Average: 0.9 ppb at hour 15 Minimum Diurnal Average: 0.4 ppb at hour 3
Monthly Average: 0.64 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.4 Q_3 = 0.9 P_{90} = 1.4 P_{99} = 3.3

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

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-Nov	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0.3	0.6
2-Nov	0	0	0	0	0	0	0	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0.5	1.3
3-Nov	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.5
4-Nov	0	0	0	0	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
5-Nov	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
6-Nov	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	1	0	0	0	0.3	0.6
7-Nov	0	0	0	1	0	0	0	0	0	A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5
8-Nov	1	3	0	0	0	0	0	0	A	0	0	0	1	1	1	2	1	1	1	0	0	0	1	0	0.5	2.5
9-Nov	0	0	1	1	1	1	0	A	0	0	1	2	2	3	2	1	1	2	1	1	2	1	1	1	1.2	3.4
10-Nov	0	0	0	0	0	0	A	0	0	0	0	0	0	2	3	2	2	1	1	0	0	0	0	0	0.6	2.9
11-Nov	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.3	0.9
12-Nov	0	0	0	0	A	0	0	0	0	0	0	1	1	2	2	2	2	2	2	2	1	1	2	2	1.0	2.2
13-Nov	2	1	1	A	1	2	3	3	3	4	4	4	3	3	3	3	2	2	2	2	2	1	1	1	2.4	4.4
14-Nov	1	1	A	1	1	1	1	1	1	1	2	1	2	2	2	1	2	1	2	2	1	1	0	0	1.2	2.1
15-Nov	0	A	1	1	1	0	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1.0	2.3
16-Nov	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	2	3	2	1	A	0.9	2.7
17-Nov	0	0	0	0	0	0	0	1	0	1	1	1	1	2	1	1	1	1	1	1	1	0	A	1	0.7	1.5
18-Nov	1	1	1	1	1	1	1	1	1	P	C	C	C	1	0	0	0	1	1	0	0	A	0	0	0.6	0.9
19-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3	4	3	A	1	0	0	0.7	3.9
20-Nov	0	0	0	0	0	0	0	1	1	1	1	2	2	2	2	1	1	1	1	A	1	1	0	0	0.8	1.9
21-Nov	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0.3	0.7
22-Nov	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	1	1	1	1	1	0.4	1.0
23-Nov	0	0	1	1	1	1	1	1	0	0	0	0	1	0	1	1	A	1	1	1	1	1	1	1	0.7	1.4
24-Nov	1	0	1	0	0	0	0	0	0	1	0	0	0	1	1	A	2	2	1	1	1	1	1	1	0.7	1.8
25-Nov	0	0	0	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	1.1
26-Nov	0	2	1	1	1	0	0	0	0	1	1	1	1	A	1	1	1	1	1	2	1	0	0	0	0.8	2.0
27-Nov	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
28-Nov	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	0	0	0	1	1	0	0	0.3	0.9
29-Nov	1	0	0	0	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
30-Nov	1	1	1	1	2	1	1	0	0	A	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0.7	1.5
	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.7	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	Diurnal Average	
	1.5	2.5	1.1	1.3	1.5	2.4	2.6	3.3	3.3	3.8	4.4	4.3	3.5	3.4	3.1	2.7	2.3	2.8	3.9	2.9	2.7	2.2	2.1	1.8	Diurnal Maximum	

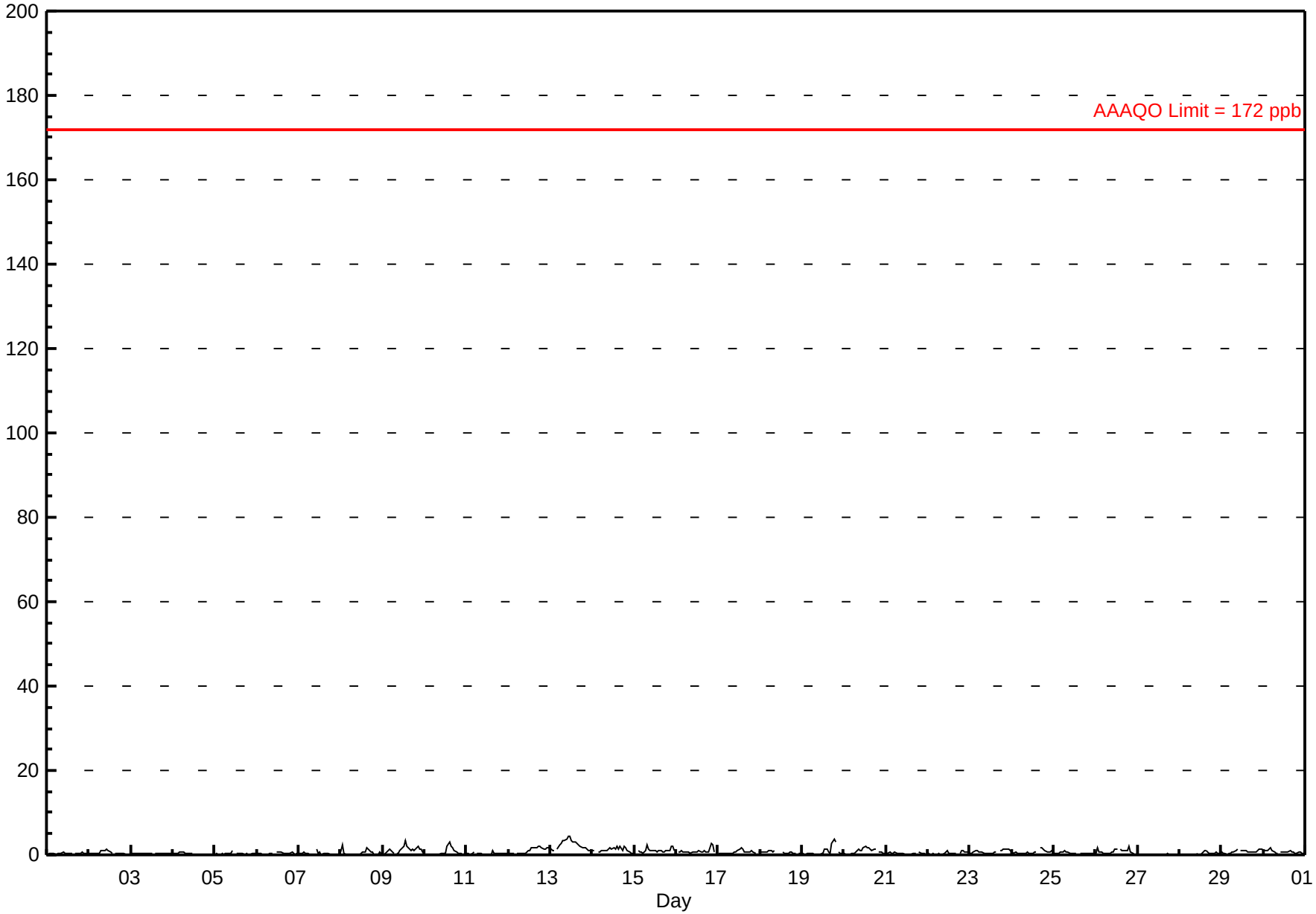
C - Calibration P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Portable Clairmont - November 2014

Maximum Value: 28.1 ppb on Nov 19 19:00

Maximum Daily Average: 3.8 ppb on Nov 19

Minimum Value: 0 ppb on Nov 19 09:00

Minimum Daily Average: 0.6 ppb on Nov 27

Maximum Diurnal Average: 2.5 ppb at hour 18

Minimum Diurnal Average: 1.0 ppb at hour 4

Monthly Average: 1.45 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.7$ $Q_1 = 0.8$ Median = 1.0 $Q_3 = 1.6$ $P_{90} = 2.4$ $P_{99} = 4.9$

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

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-Nov	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	1.3
2-Nov	1	1	1	1	1	1	1	2	2	2	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1.1	2.3
3-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	1.4
4-Nov	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	1	1	0	1	0.9	1.3
5-Nov	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4
6-Nov	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	1.5
7-Nov	1	1	1	1	1	1	1	1	1	A	3	1	2	1	1	1	1	1	1	1	1	1	1	1	0.9	2.8
8-Nov	2	5	1	1	1	1	0	0	A	1	1	1	3	2	2	2	2	1	1	1	1	1	1	1	1.4	5.2
9-Nov	0	1	1	2	3	2	1	A	1	1	3	3	3	5	4	2	2	2	2	3	3	3	2	1	2.2	4.8
10-Nov	1	1	1	1	1	1	A	10	1	1	1	1	1	4	4	3	3	2	1	1	1	1	1	1	1.8	10.5
11-Nov	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1.0	1.9
12-Nov	1	1	1	1	A	1	1	1	1	1	1	2	2	2	2	2	2	19	3	2	2	2	2	3	2.4	19.1
13-Nov	2	2	2	A	2	3	3	4	4	5	6	5	4	4	4	3	3	3	2	2	3	2	2	2	3.2	6.3
14-Nov	2	1	A	2	2	1	2	2	1	2	2	2	3	3	4	3	5	2	3	3	2	1	1	1	2.1	4.5
15-Nov	1	A	2	1	1	1	2	4	2	2	2	2	2	1	2	1	1	1	2	2	2	3	3	2	1.7	3.6
16-Nov	A	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	4	1	A	1.6	3.5
17-Nov	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	2	2	1	1	A	1	1.3	2.3
18-Nov	1	1	1	1	1	1	2	1	2	P	C	C	C	1	1	1	1	2	1	1	1	A	1	1	1.3	2.4
19-Nov	1	1	1	1	1	1	1	1	0	0	1	1	1	3	2	1	1	20	28	17	A	3	2	1	3.8	28.1
20-Nov	1	1	1	1	1	1	1	1	2	2	2	2	3	2	2	2	2	2	2	A	1	1	1	1	1.5	2.7
21-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	2	1	1	1	1	1.1	2.1
22-Nov	1	1	1	1	1	1	1	1	0	1	1	2	1	1	1	1	1	A	1	2	2	1	1	1	1.1	2.4
23-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	2	2	2	2	2	1.4	2.5
24-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	2	2	2	1	1	1	2	1.3	2.7
25-Nov	1	1	1	1	1	2	2	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.1	2.0
26-Nov	2	2	2	1	1	1	1	1	1	1	1	2	2	A	2	2	1	1	2	3	2	1	1	0	1.5	3.4
27-Nov	1	1	1	1	0	1	0	0	0	0	0	1	A	0	0	0	1	1	0	1	1	1	0	1	0.6	0.9
28-Nov	1	1	0	1	0	1	0	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	0.9	1.7
29-Nov	1	1	1	1	1	1	1	1	2	3	A	2	2	2	2	1	1	1	1	1	2	2	2	2	1.4	2.8
30-Nov	2	2	2	2	2	2	2	1	1	A	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1.4	2.2
	1.1	1.2	1.0	1.0	1.1	1.1	1.1	1.6	1.3	1.3	1.5	1.5	1.6	1.7	1.7	1.5	1.5	2.5	2.3	2.0	1.4	1.4	1.2	1.1	Diurnal Average	
	2.4	5.2	2.0	2.0	2.8	3.3	3.5	10.5	4.4	4.5	6.3	5.3	4.1	4.8	4.3	3.3	4.5	20.0	28.1	17.3	3.4	3.5	2.9	2.6	Diurnal Maximum	

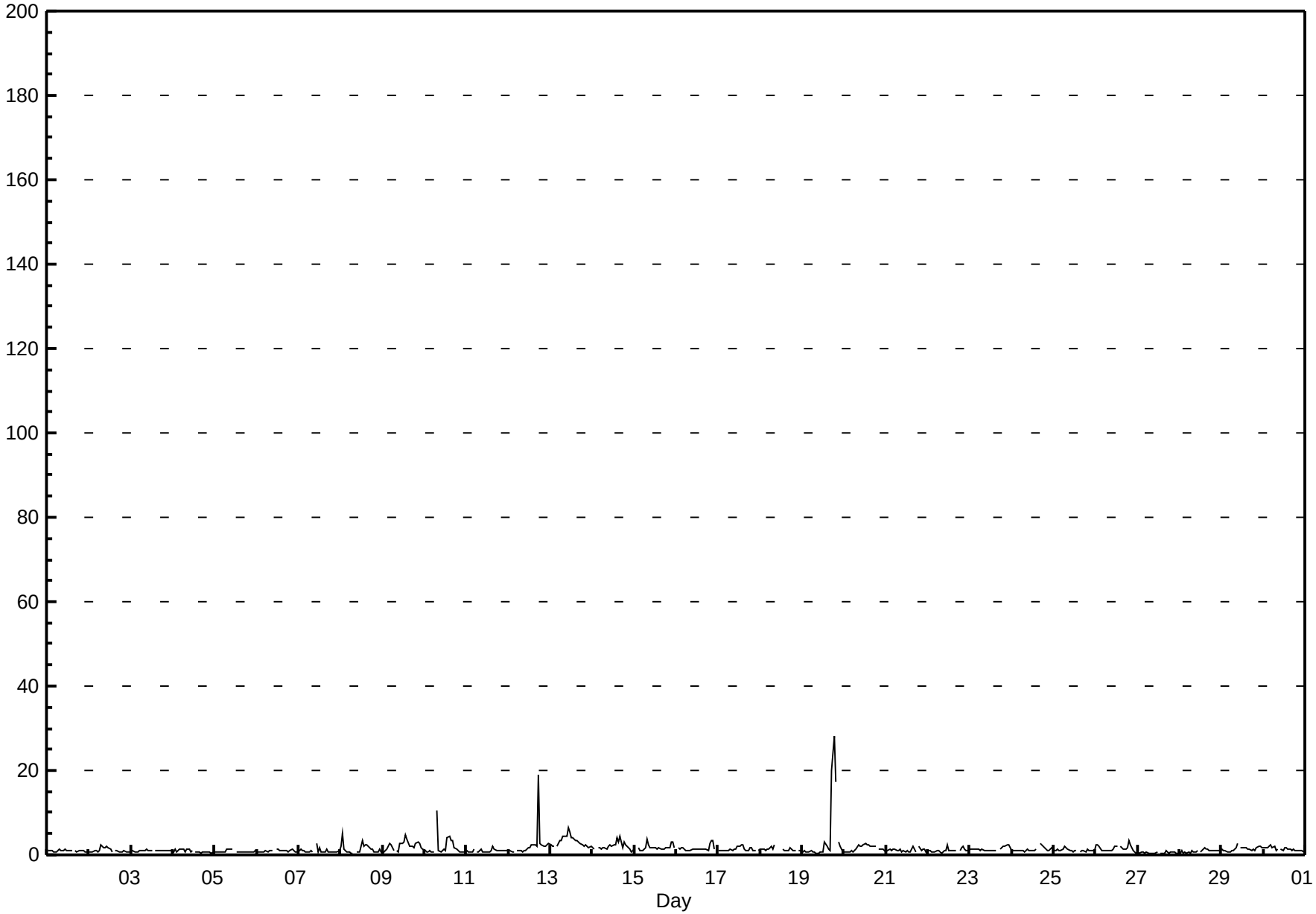
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

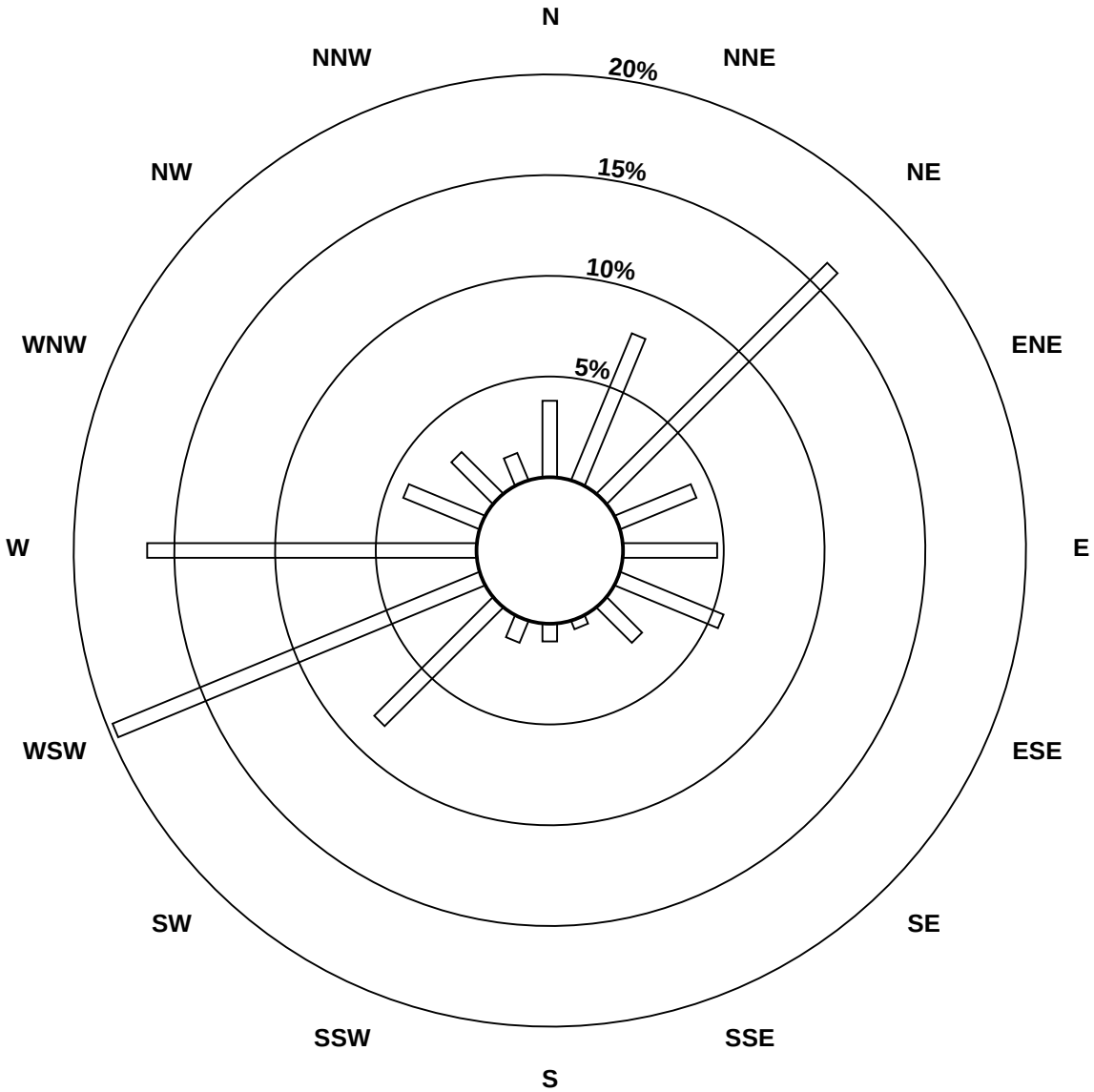
Portable Clairmont - November 2014



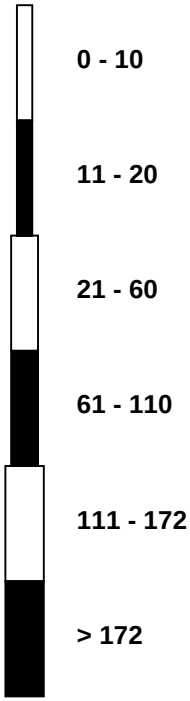
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Portable Clairmont - November 2014



Pollutant Classes (ppb)

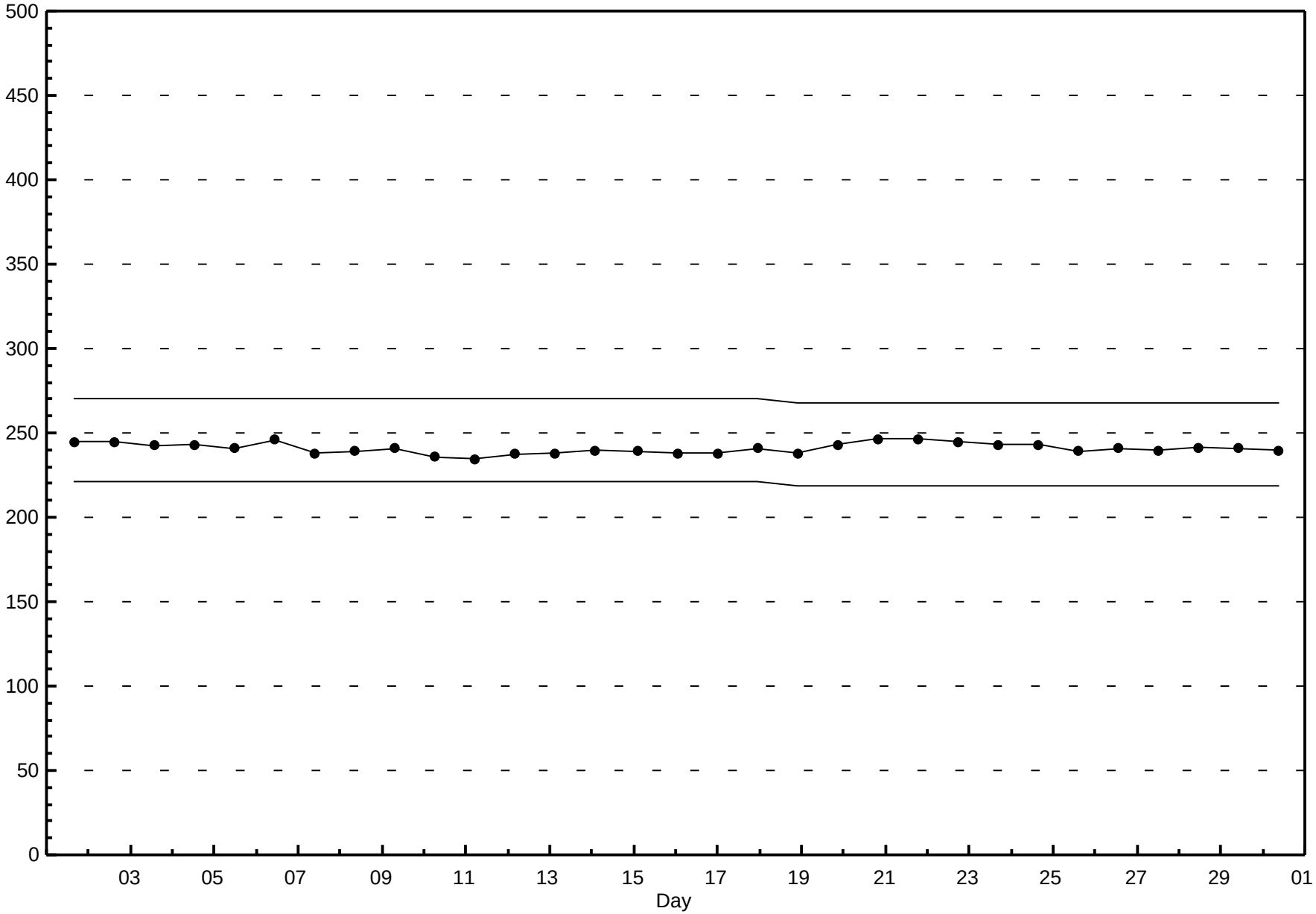


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable Clairmont - November 2014

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

Maximum Value: 1.5 ppb on Nov 2 01:00

Maximum Daily Average: 0.7 ppb on Nov 20

Minimum Value: 0 ppb on Nov 12 00:00

Minimum Daily Average: 0.2 ppb on Nov 25

Maximum Diurnal Average: 0.4 ppb at hour 18

Minimum Diurnal Average: 0.3 ppb at hour 4

Monthly Average: 0.37 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.5$ $P_{90} = 0.6$ $P_{99} = 1.0$

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

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-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	0	0	0	0.3	0.7
2-Nov	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0.5	1.5
3-Nov	1	1	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.9
4-Nov	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
5-Nov	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
6-Nov	0	0	0	0	0	0	0	1	0	0	A	0	1	0	0	0	0	1	0	1	0	0	0	0	0.4	0.6
7-Nov	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
8-Nov	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
9-Nov	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
10-Nov	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	0.4	0.8
11-Nov	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
12-Nov	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.3	0.5
13-Nov	0	0	0	A	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0.5	0.7
14-Nov	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0.8
15-Nov	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.7
16-Nov	A	1	1	1	0	0	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	0	1	A	0.5	0.7
17-Nov	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	A	0	0.6	1.2
18-Nov	1	0	0	0	0	0	0	0	0	P	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0.4	0.6
19-Nov	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	1	1	1	1	A	1	1	0	0.4	0.8
20-Nov	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	0.7	1.1
21-Nov	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.5
22-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.4
23-Nov	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	1	A	1	1	1	0	0	0	0	0.4	0.6
24-Nov	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.6
25-Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.3
26-Nov	0	0	0	0	0	1	0	0	1	1	0	0	1	A	1	1	1	1	1	1	0	0	0	0	0.5	0.8
27-Nov	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
28-Nov	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
29-Nov	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
30-Nov	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	0	1	0	1	1	1	0.5	0.8
	0.4	0.4	0.3	0.3	0.3	0.3	0.3	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	0.3	Diurnal Average	
	1.5	1.2	0.8	0.7	0.7	0.6	0.7	0.8	1.2	0.9	0.7	0.7	0.9	1.1	1.0	0.9	0.9	1.1	1.1	0.8	0.7	0.8	0.7	0.7	Diurnal Maximum	

C - Calibration P - Power Failure A - Automated Daily Zero Span

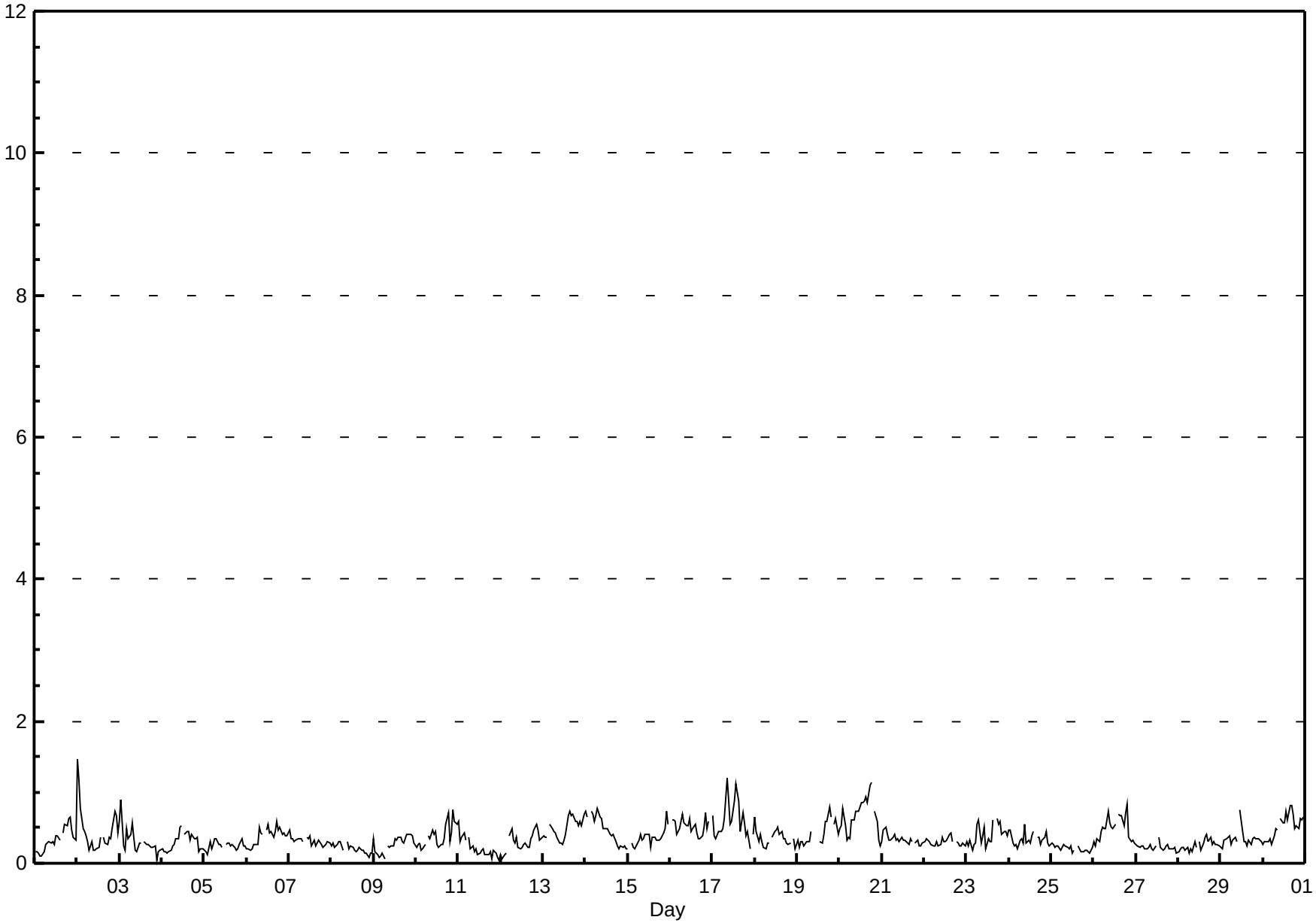
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Portable Clairmont - November 2014

Maximum Value: 3.2 ppb on Nov 2 01:00

Maximum Daily Average: 1.3 ppb on Nov 20

Minimum Value: 0 ppb on Nov 9 07:00

Maximum Diurnal Average: 1.0 ppb at hour 1

Monthly Average: 0.90 ppb

Minimum Daily Average: 0.7 ppb on Nov 8

Minimum Diurnal Average: 0.8 ppb at hour 5

Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.8 $Q_3 = 1.0$ $P_{90} = 1.2$ $P_{99} = 1.7$

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

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-Nov	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
2-Nov	3	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1.1	3.2
3-Nov	2	2	1	1	1	1	2	2	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.9
4-Nov	1	1	1	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5
5-Nov	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
6-Nov	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	1.5
7-Nov	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	1.1
8-Nov	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
9-Nov	1	1	1	1	0	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
10-Nov	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	1.5
11-Nov	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.7	1.3
12-Nov	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
13-Nov	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1.0	1.6
14-Nov	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
15-Nov	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
16-Nov	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.1	1.4
17-Nov	1	1	1	1	1	1	1	1	2	2	1	1	1	2	2	2	1	2	1	1	1	1	A	1	1.2	1.9
18-Nov	1	1	1	1	1	1	1	1	1	P	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.3
19-Nov	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	2	A	1	1	1	1.0	1.6
20-Nov	1	1	2	1	1	1	1	1	1	2	1	1	1	1	1	1	2	2	2	A	1	1	1	1	1.3	2.2
21-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.9	1.2
22-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.2
23-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	1.4
24-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.9	1.2
25-Nov	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.9
26-Nov	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	1.6
27-Nov	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
28-Nov	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
29-Nov	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.7
30-Nov	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
	1.0	0.9	0.9	0.8	0.8	0.8	0.9	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	Diurnal Average	
	3.2	1.9	1.5	1.3	1.4	1.6	1.8	1.9	1.7	1.7	1.4	1.7	1.4	1.6	1.6	1.9	1.6	1.6	2.2	1.6	1.4	1.6	1.5	1.2	Diurnal Maximum	

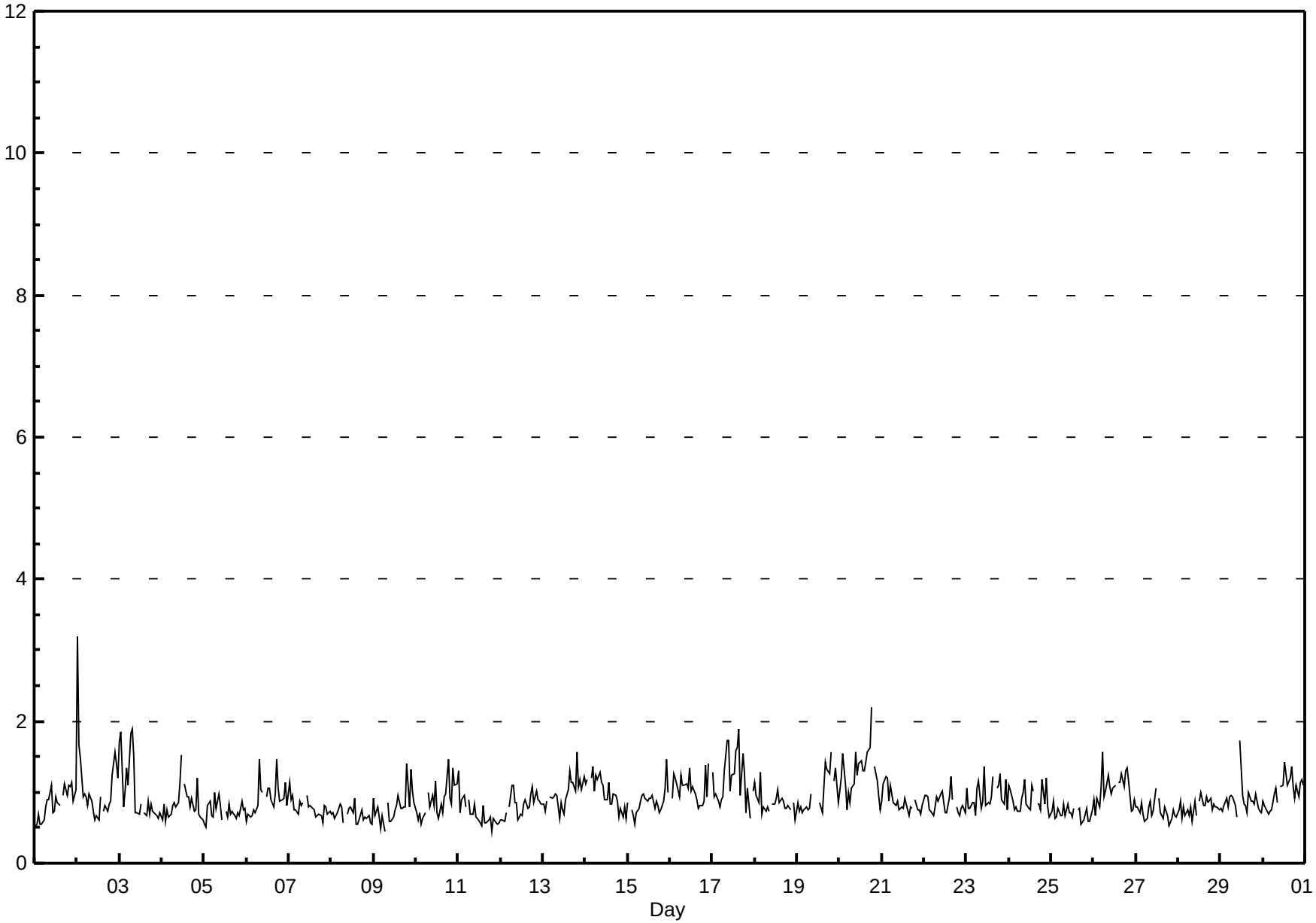
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

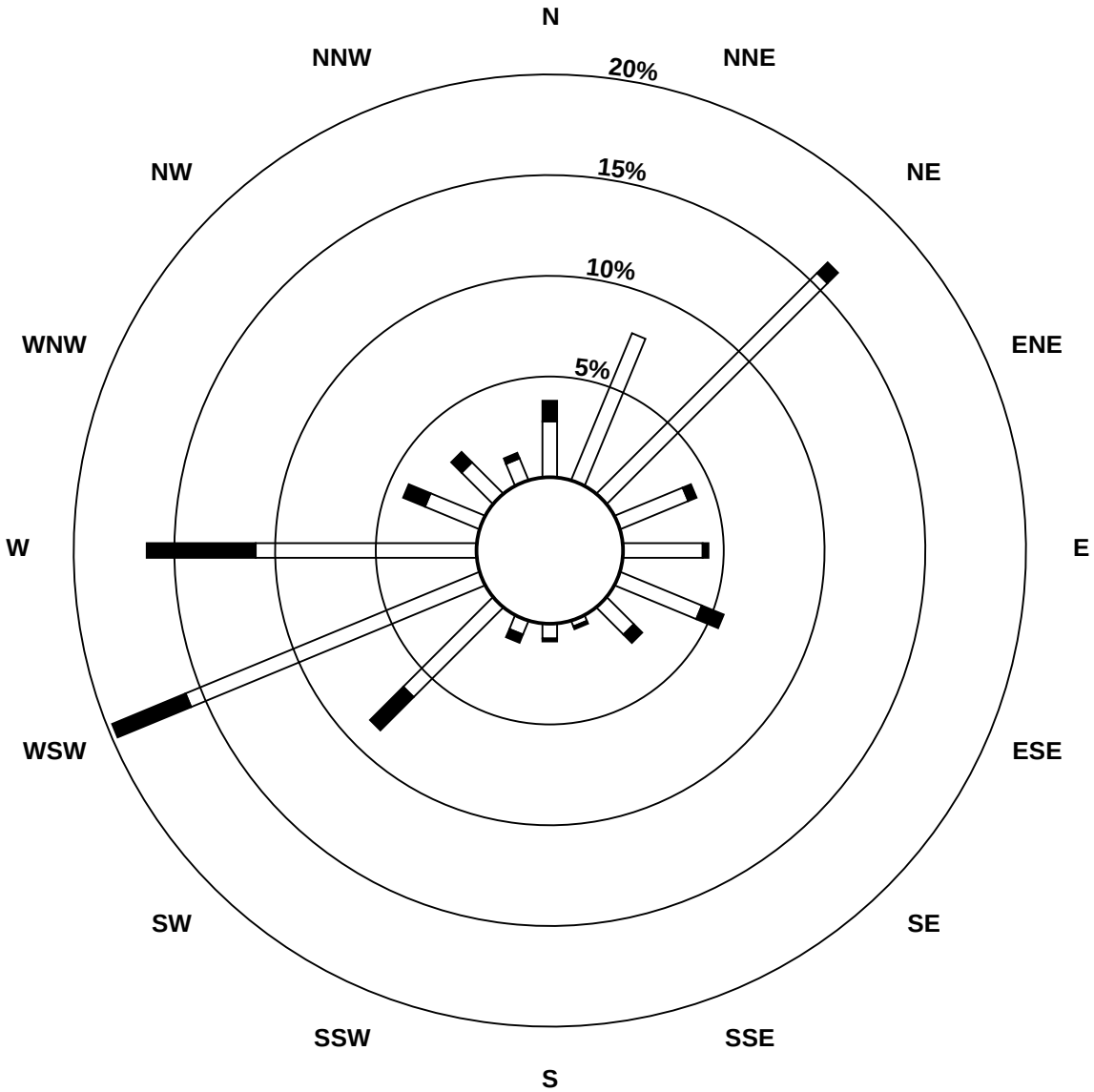
Portable Clairmont - November 2014



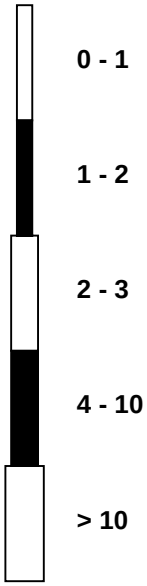
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Portable Clairmont - November 2014



Pollutant Classes (ppb)

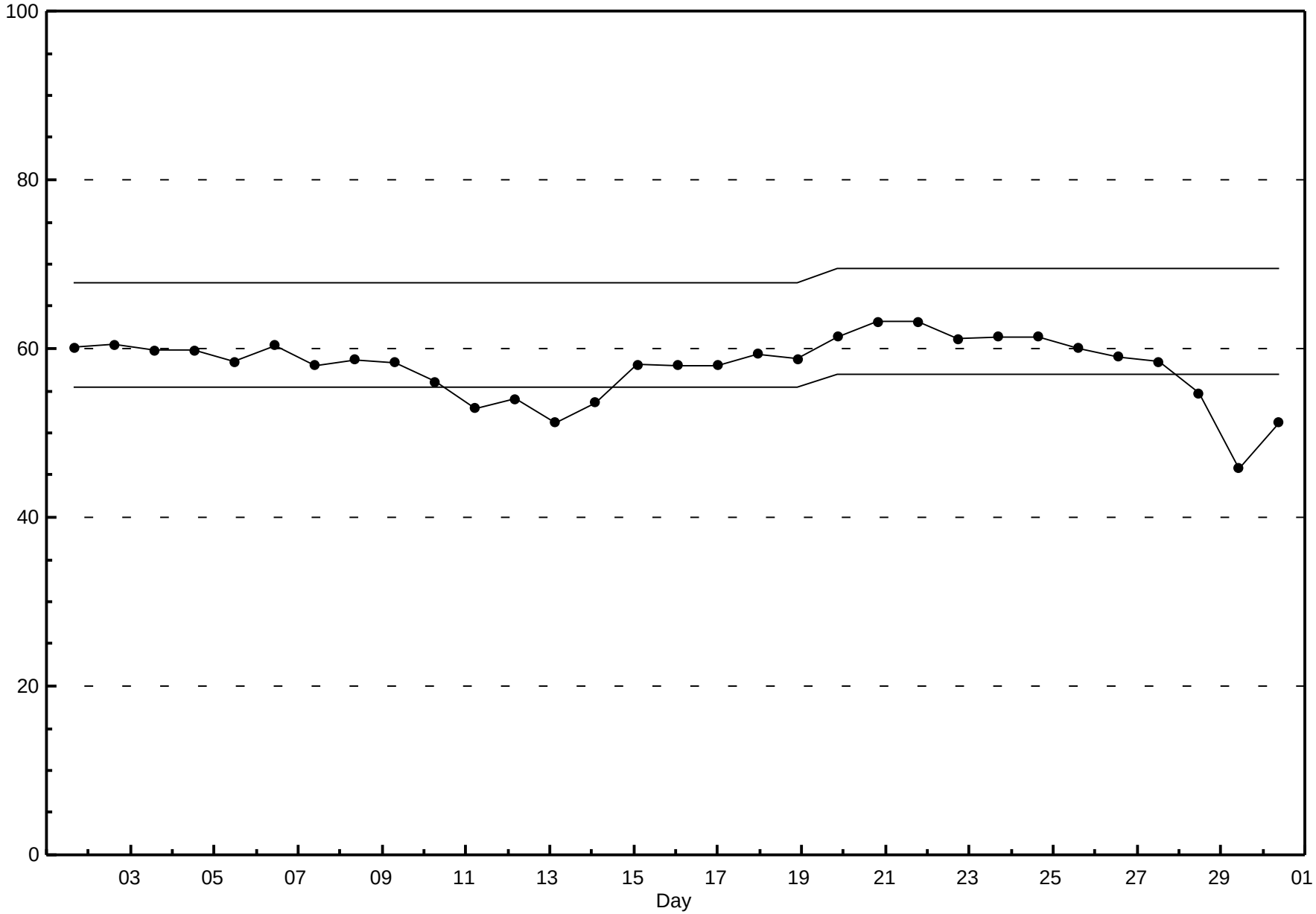


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable Clairmont - November 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 50.6 ppb on Nov 17 14:00
Maximum Daily Average: 31.6 ppb on Nov 30

Minimum Value: 0 ppb on Nov 13 19:00
Maximum Diurnal Average: 15.2 ppb at hour 8
Monthly Average: 10.61 ppb

Minimum Daily Average: 0.7 ppb on Nov 27
Minimum Diurnal Average: 6.9 ppb at hour 5
Percentiles: P_1 = 0.0 P_{10} = 0.9 Q_1 = 2.4 Median = 7.5 Q_3 = 17.0 P_{90} = 24.1 P_{99} = 41.9

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

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-Nov	4	6	8	7	9	8	17	18	17	20	14	13	13	14	11	A	9	13	15	19	18	13	12	12	12.6	20.2
2-Nov	14	13	13	17	15	15	17	15	18	12	11	11	7	6	A	6	7	15	18	13	7	9	15	13	12.4	18.4
3-Nov	5	6	6	5	10	7	12	11	12	7	5	6	5	A	11	8	6	5	4	4	3	3	2	3	6.4	12.3
4-Nov	3	3	2	2	2	2	9	15	21	19	15	17	A	3	3	3	11	15	7	6	4	5	2	2	7.4	21.3
5-Nov	3	3	4	5	8	16	19	30	22	18	10	A	16	10	5	4	3	2	2	2	2	2	3	3	8.4	30.2
6-Nov	2	2	2	3	4	6	15	22	12	18	A	18	10	10	10	6	10	18	10	8	5	4	5	4	8.8	21.7
7-Nov	3	3	2	2	3	5	2	1	1	A	2	0	1	1	1	1	2	2	1	1	1	1	1	2	1.8	5.3
8-Nov	1	2	2	2	1	1	1	1	A	2	1	1	1	1	1	1	2	2	2	1	1	3	2	2	1.4	2.6
9-Nov	1	1	1	1	1	1	2	A	6	8	6	4	4	6	6	7	6	7	10	16	10	10	6	2	5.3	15.8
10-Nov	1	1	1	1	1	1	A	4	2	14	18	6	1	1	1	5	20	33	36	13	18	33	31	33	11.9	35.8
11-Nov	24	9	22	23	6	A	5	4	4	4	3	2	3	3	3	2	2	2	2	2	3	3	3	3	6.0	24.4
12-Nov	16	8	5	22	A	29	35	24	22	28	12	10	7	9	10	14	17	23	26	27	28	24	25	24	19.4	34.7
13-Nov	22	21	23	A	18	17	19	19	17	13	11	10	11	15	5	7	10	21	0	0	0	0	0	13	11.8	23.0
14-Nov	0	0	A	0	0	0	17	36	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.5	36.0
15-Nov	0	A	0	0	0	0	0	0	0	0	0	0	0	8	9	10	5	7	6	8	7	10	9	10	3.8	10.0
16-Nov	A	18	20	18	11	20	19	18	23	18	16	12	9	21	10	8	10	12	13	23	27	23	24	A	17.1	27.3
17-Nov	19	17	13	13	14	16	21	24	26	23	17	24	37	51	45	28	24	28	23	15	10	8	A	5	21.7	50.6
18-Nov	5	4	4	4	4	7	7	7	9	P	C	C	C	C	C	6	4	2	3	3	3	A	8	4	--	8.7
19-Nov	2	1	1	2	2	2	6	14	12	8	7	5	5	8	14	18	27	30	30	29	A	26	24	25	13.0	29.9
20-Nov	24	20	19	18	19	21	22	21	25	25	22	29	35	32	35	34	35	37	29	A	25	19	4	4	24.1	36.6
21-Nov	5	7	9	7	5	9	11	23	14	4	3	2	2	2	2	2	2	2	A	2	2	1	1	1	5.2	23.2
22-Nov	2	2	2	2	2	3	3	4	5	4	4	3	3	2	3	3	4	A	3	4	4	6	9	8	3.7	8.8
23-Nov	12	5	4	3	5	10	25	23	15	13	12	8	7	7	9	11	A	20	26	22	24	18	19	18	13.8	25.7
24-Nov	20	17	7	9	6	11	18	16	18	22	15	12	10	16	14	A	10	10	9	7	11	15	14	7	12.8	22.0
25-Nov	5	4	4	4	4	4	5	7	7	7	3	5	5	6	A	8	7	6	5	3	2	3	3	4	4.8	8.0
26-Nov	12	13	14	14	13	13	17	16	16	14	11	9	10	A	19	20	21	22	23	23	8	4	1	1	13.7	23.1
27-Nov	1	1	1	1	1	1	1	1	1	0	0	1	A	1	0	2	1	1	1	1	1	1	1	0	0.7	1.7
28-Nov	0	1	1	1	1	1	3	5	9	7	8	A	7	8	11	19	25	15	18	14	17	19	18	18	9.8	25.1
29-Nov	20	23	26	20	26	24	22	28	23	20	A	12	12	12	14	16	20	25	25	28	21	17	14	11	20.0	28.5
30-Nov	11	12	12	10	11	22	29	34	38	A	29	27	34	42	35	49	46	46	40	41	42	39	41	40	31.6	48.7
	8.2	7.7	7.9	7.4	6.9	9.4	13.1	15.2	13.8	12.2	9.4	9.2	9.3	10.8	10.6	10.7	11.9	14.5	13.3	11.6	10.5	11.0	10.3	9.3	Diurnal Average	
	24.4	23.4	25.6	22.8	25.7	28.7	34.7	36.0	37.6	27.8	29.0	29.5	36.5	50.6	44.8	48.7	45.8	45.6	39.8	41.5	41.9	39.1	40.5	39.5	Diurnal Maximum	

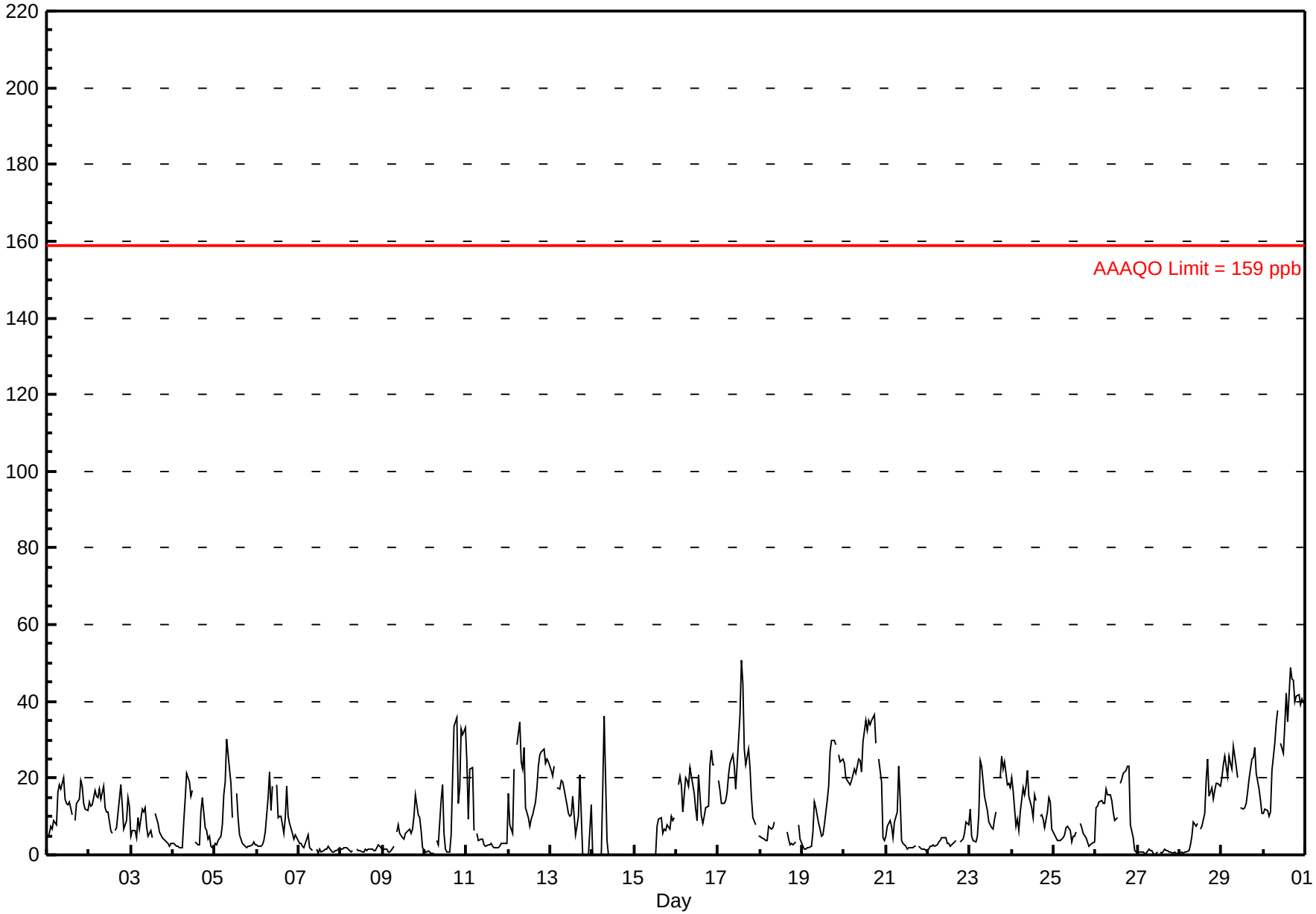
C - Calibration P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Portable Clairmont - November 2014

Maximum Value: 107.7 ppb on Nov 5 08:00

Maximum Daily Average: 40.2 ppb on Nov 30

Minimum Value: 0 ppb on Nov 13 20:00

Minimum Daily Average: 6.4 ppb on Nov 27

Maximum Diurnal Average: 29.0 ppb at hour 8

Minimum Diurnal Average: 10.7 ppb at hour 5

Monthly Average: 17.80 ppb

Percentiles: P_1 = 0.0 P_{10} = 2.2 Q_1 = 6.0 Median = 15.7 Q_3 = 24.9 P_{90} = 34.7 P_{99} = 75.9

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

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-Nov	8	9	13	9	12	16	22	26	25	26	21	39	64	21	28	A	18	19	25	24	24	33	16	14	22.3	64.4
2-Nov	16	14	16	19	17	17	19	17	24	20	20	20	9	13	A	10	14	25	26	20	21	13	24	23	18.1	25.7
3-Nov	9	8	14	10	17	10	21	18	24	11	10	11	10	A	16	30	14	6	26	12	8	12	3	3	13.2	29.7
4-Nov	3	3	3	3	2	2	23	29	25	23	20	25	A	5	5	5	24	25	12	15	9	9	4	3	12.1	28.7
5-Nov	6	4	11	10	22	22	38	108	38	29	18	A	24	15	9	30	12	6	7	7	3	3	32	3	20.1	107.7
6-Nov	11	8	3	8	7	12	25	32	27	23	A	24	20	16	13	10	14	26	15	11	11	8	8	8	14.8	32.0
7-Nov	5	8	4	3	6	8	5	4	4	A	9	2	20	1	7	22	9	24	3	5	16	2	2	3	7.6	24.3
8-Nov	3	6	3	2	2	1	3	3	A	12	2	7	4	9	34	17	6	2	6	2	2	16	11	3	6.8	33.5
9-Nov	1	2	2	1	1	2	7	A	12	20	9	6	7	9	10	9	11	10	21	85	29	86	8	5	15.4	85.5
10-Nov	18	4	2	2	2	2	A	27	18	35	33	16	8	12	2	17	34	40	48	25	26	38	37	37	21.1	48.2
11-Nov	43	25	31	35	20	A	14	5	6	5	4	4	10	4	4	7	3	9	12	3	6	4	4	4	11.3	43.1
12-Nov	28	21	13	36	A	45	40	37	38	31	21	16	12	13	14	18	21	29	30	32	33	27	29	28	26.6	44.7
13-Nov	30	25	29	A	22	21	26	22	22	16	14	12	12	26	18	23	23	57	31	0	0	9	0	36	20.6	56.6
14-Nov	1	0	A	0	0	4	95	81	72	7	9	0	0	0	0	0	0	0	0	0	0	0	0	0	11.7	94.9
15-Nov	0	A	0	0	0	0	0	0	0	0	0	0	12	9	12	13	25	11	12	14	11	20	14	14	7.3	24.8
16-Nov	A	25	29	34	18	33	28	22	28	29	24	16	18	34	13	16	17	16	30	35	35	27	31	A	25.3	35.2
17-Nov	24	22	16	17	20	21	28	78	41	33	23	54	42	76	61	34	26	32	29	23	13	18	A	6	32.1	77.6
18-Nov	6	6	6	7	6	28	13	13	18	P	C	C	C	C	C	21	17	6	13	19	34	A	9	8	--	33.6
19-Nov	3	3	2	3	3	3	23	27	24	19	12	10	14	24	21	31	33	37	34	33	A	31	26	27	19.2	36.7
20-Nov	26	23	21	21	22	24	25	24	31	30	34	42	44	56	41	40	42	42	39	A	27	24	7	5	30.0	55.6
21-Nov	11	17	15	12	8	14	23	33	46	6	14	3	5	12	3	7	18	6	A	4	4	2	3	1	11.6	45.6
22-Nov	2	2	3	4	4	4	8	20	11	7	7	9	5	4	5	5	6	A	5	6	7	10	14	12	6.9	19.6
23-Nov	14	11	5	4	6	25	31	30	18	19	21	12	13	12	19	20	A	30	31	26	28	21	22	22	19.1	31.3
24-Nov	37	19	12	21	17	22	42	43	24	31	23	19	16	24	28	A	16	22	15	18	26	19	16	14	22.8	43.2
25-Nov	7	5	4	4	5	6	23	16	18	17	13	17	13	50	A	19	26	15	22	28	4	7	9	11	14.7	50.1
26-Nov	20	16	17	17	17	17	27	19	20	24	15	13	13	A	32	25	24	25	30	40	24	5	2	5	19.4	39.6
27-Nov	1	2	1	3	1	1	13	4	8	2	1	35	A	2	10	29	8	12	5	2	3	1	1	3	6.4	34.6
28-Nov	1	17	1	1	1	4	9	27	16	11	13	A	12	19	16	25	36	21	23	26	21	23	22	22	15.8	35.9
29-Nov	25	33	39	26	36	29	31	36	30	27	A	15	17	16	17	27	24	33	39	41	31	21	18	13	27.1	41.4
30-Nov	13	16	14	15	16	32	38	43	66	A	35	43	61	54	45	57	54	54	43	44	47	44	49	43	40.2	65.5
	12.9	12.2	11.3	11.3	10.7	14.7	24.2	29.0	25.2	18.9	15.7	17.4	18.0	19.8	17.8	20.3	19.9	22.1	21.8	20.7	17.4	18.4	14.6	13.1	Diurnal Average	
	43.1	32.7	39.3	36.3	35.9	44.7	94.9	107.7	71.7	34.7	34.9	53.7	64.4	76.3	61.3	56.7	53.6	56.6	48.2	84.9	47.1	85.5	48.9	43.1	Diurnal Maximum	

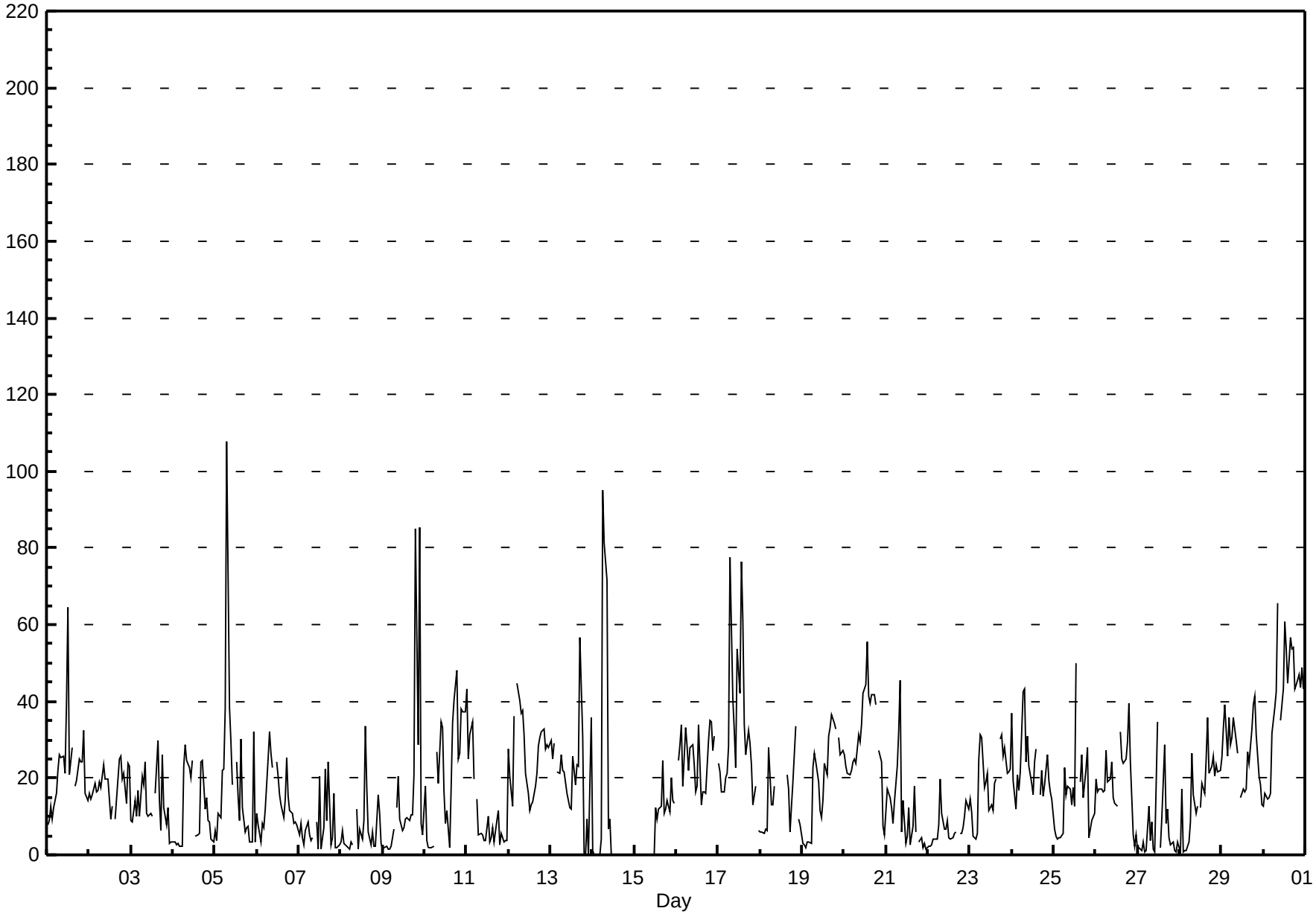
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Portable Clairmont - November 2014

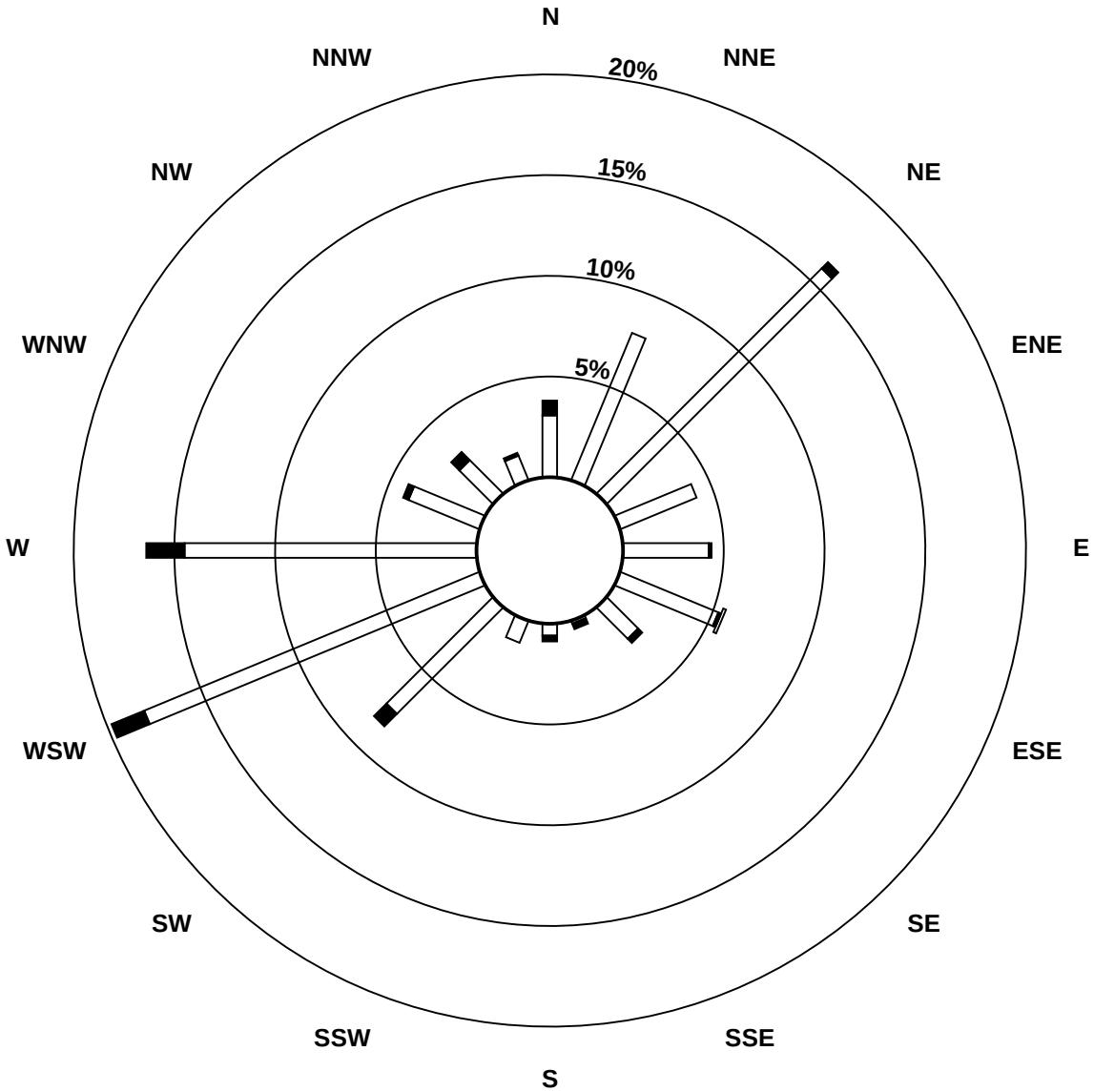


Peace Airshed Zone Association

Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Portable Clairmont - November 2014



Pollutant Classes (ppb)

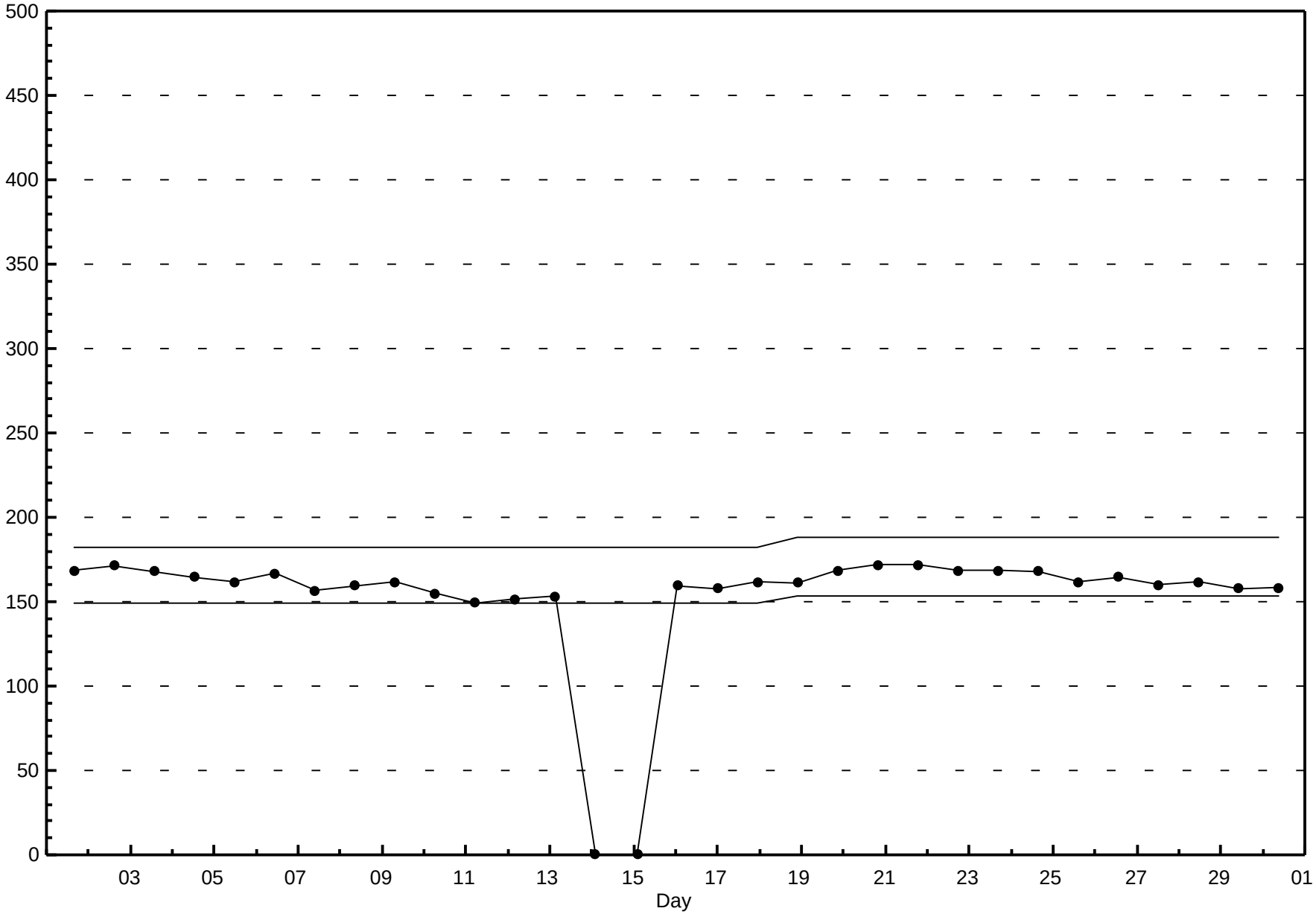
- 0 - 25
- 26 - 50
- 51 - 110
- 111 - 159
- > 159

Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable Clairmont - November 2014

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

Maximum Value: 133.5 ppb on Nov 17 14:00

Maximum Daily Average: 36.7 ppb on Nov 20

Minimum Value: 0 ppb on Nov 3 23:00

Minimum Daily Average: 0.4 ppb on Nov 8

Maximum Diurnal Average: 16.6 ppb at hour 14

Minimum Diurnal Average: 2.6 ppb at hour 2

Monthly Average: 8.31 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.7$ Median = 2.5 $Q_3 = 9.9$ $P_{90} = 21.4$ $P_{99} = 73.9$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

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-Nov	0	0	1	1	0	1	28	34	31	35	19	16	13	14	9	A	2	1	7	21	32	14	6	9	12.9	35.1
2-Nov	21	19	26	36	32	28	11	8	21	16	14	14	6	4	A	1	2	4	8	3	2	1	3	4	12.3	36.1
3-Nov	1	1	2	1	3	2	4	5	6	3	3	3	3	A	3	2	1	0	1	1	0	0	0	0	2.0	6.2
4-Nov	0	0	0	0	0	0	2	7	13	17	13	20	A	1	1	1	3	2	1	1	1	0	0	0	3.5	19.5
5-Nov	0	0	1	0	1	3	10	24	25	15	4	A	9	5	1	1	1	0	0	0	0	0	0	0	4.5	24.9
6-Nov	0	0	0	0	0	1	2	14	6	13	A	15	3	2	1	1	1	2	1	1	1	0	1	1	2.9	14.6
7-Nov	1	1	1	1	2	3	1	1	1	A	1	1	0	0	0	1	0	0	0	2	1	0	0	0	0.8	2.8
8-Nov	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.4
9-Nov	0	0	0	0	0	0	0	A	1	3	2	3	3	5	4	4	2	2	2	12	6	9	2	0	2.6	11.8
10-Nov	1	0	0	0	0	0	A	1	3	12	19	5	1	1	0	2	6	10	34	0	4	20	16	25	7.1	34.5
11-Nov	16	2	8	9	0	A	0	0	1	1	2	2	2	2	2	2	0	0	0	0	0	0	0	0	2.2	16.3
12-Nov	3	0	0	7	A	13	32	14	10	42	10	9	7	10	11	11	8	13	19	20	28	14	14	13	13.5	42.5
13-Nov	9	6	15	A	5	6	6	6	6	5	7	8	11	29	32	35	36	49	18	12	12	18	15	41	16.8	49.1
14-Nov	17	17	A	14	12	21	45	65	28	20	16	8	8	8	8	14	5	1	1	1	1	1	1	1	13.6	65.3
15-Nov	1	A	1	1	1	1	2	3	4	5	7	9	8	5	6	4	2	1	1	1	2	3	2	3	3.1	8.7
16-Nov	A	1	2	6	2	7	5	3	6	12	15	10	10	21	6	3	2	1	1	6	7	5	7	A	6.3	21.0
17-Nov	3	3	2	3	3	5	8	15	37	34	23	49	99	134	107	35	8	9	5	2	2	2	A	1	25.5	133.5
18-Nov	1	1	1	1	0	2	1	1	2	P	C	C	C	C	C	4	2	1	1	0	0	A	1	0	--	4.3
19-Nov	0	0	0	0	0	0	1	3	4	3	3	4	4	6	10	13	16	22	29	18	A	18	8	15	7.8	29.5
20-Nov	16	6	4	4	3	7	13	10	28	34	22	64	97	74	75	72	79	114	61	A	42	18	1	1	36.7	113.7
21-Nov	1	1	1	1	1	2	1	8	7	1	1	1	1	1	1	2	1	0	A	0	0	0	0	0	1.4	8.2
22-Nov	0	0	0	0	0	0	1	2	1	1	2	3	3	2	2	2	2	A	1	1	2	2	2	1	1.3	2.7
23-Nov	1	0	0	0	0	2	15	23	7	10	10	6	5	4	5	6	A	7	11	7	14	4	2	2	6.1	23.4
24-Nov	2	1	0	1	0	3	13	13	10	50	20	13	8	16	13	A	1	1	0	1	4	2	1	0	7.6	49.7
25-Nov	0	0	0	0	0	0	1	1	2	2	1	4	5	9	A	5	3	2	2	2	0	1	0	0	1.7	8.9
26-Nov	4	5	6	5	4	6	11	12	12	20	21	18	22	A	40	33	30	20	21	12	0	0	0	0	13.2	40.5
27-Nov	0	0	0	0	0	0	1	1	1	0	1	1	A	0	2	2	1	1	0	1	0	0	0	0	0.5	2.0
28-Nov	0	0	0	0	0	0	1	2	2	3	4	A	5	7	8	13	12	6	6	6	7	7	5	5	4.3	12.5
29-Nov	5	4	7	2	12	5	8	19	12	16	A	15	15	13	12	9	7	5	8	10	7	5	4	3	9.0	19.4
30-Nov	3	4	4	3	3	5	6	11	17	A	31	34	55	73	48	73	54	45	19	21	22	21	26	28	26.4	72.7
	3.7	2.6	2.9	3.3	2.9	4.3	7.9	10.5	10.5	13.8	10.1	12.4	15.0	16.6	15.2	12.6	9.9	11.1	9.0	5.6	6.8	5.7	4.0	5.3	Diurnal Average	
	20.8	19.3	25.5	36.1	32.3	28.0	45.2	65.3	37.2	49.7	31.4	63.7	98.7	133.5	106.8	72.7	79.1	113.7	61.0	21.5	42.5	21.4	26.5	40.7	Diurnal Maximum	

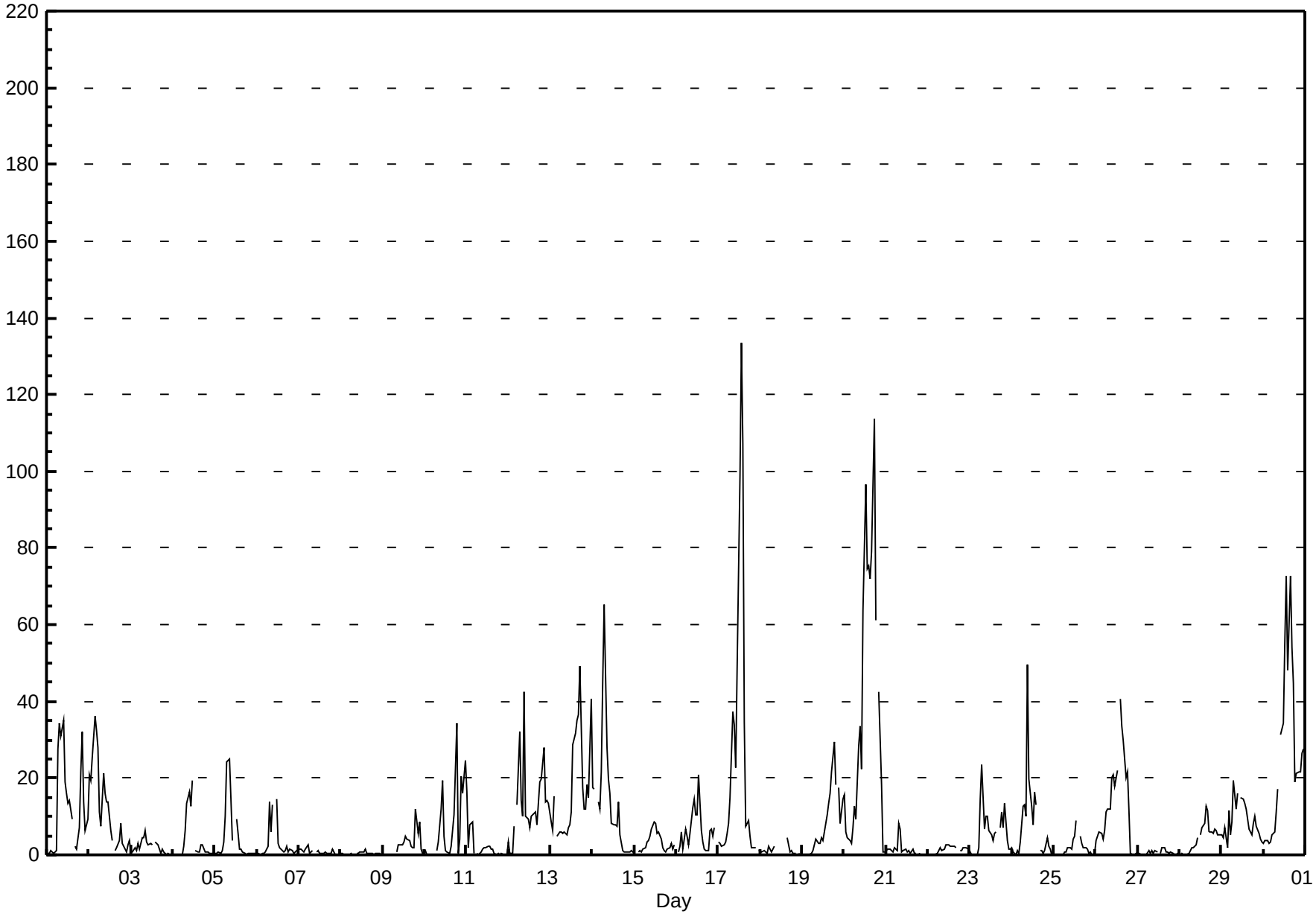
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable Clairmont - November 2014

Maximum Value: 232.3 ppb on Nov 9 20:00

Maximum Daily Average: 61.1 ppb on Nov 20

Minimum Value: 0 ppb on Nov 4 00:00

Minimum Daily Average: 5.4 ppb on Nov 22

Maximum Diurnal Average: 45.6 ppb at hour 8

Minimum Diurnal Average: 7.3 ppb at hour 5

Monthly Average: 22.87 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 1.5$ $Q_1 = 4.6$ Median = 12.4 $Q_3 = 28.3$ $P_{90} = 54.7$ $P_{99} = 143.4$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

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-Nov	1	3	9	3	1	6	55	71	50	60	33	43	33	30	59	A	17	10	70	42	47	79	20	33	33.6	79.2
2-Nov	36	24	37	45	46	38	21	210	40	42	24	22	33	12	A	8	28	28	27	7	28	3	18	17	34.6	210.5
3-Nov	5	5	10	9	9	17	13	12	33	8	7	7	20	A	10	13	22	13	57	26	6	12	1	0	13.7	57.1
4-Nov	0	0	0	0	0	0	23	23	30	38	23	70	A	2	2	2	8	5	4	1	13	1	1	1	10.7	69.8
5-Nov	3	1	4	3	11	14	56	196	77	48	11	A	18	25	5	8	4	10	1	19	3	4	6	5	23.1	195.5
6-Nov	1	8	0	6	1	21	11	41	45	27	A	30	11	5	2	2	4	6	2	5	8	3	9	3	10.9	45.1
7-Nov	3	10	2	2	4	6	18	12	13	A	14	40	4	8	8	19	3	10	4	69	13	1	1	5	11.7	69.1
8-Nov	15	9	0	0	0	1	14	3	A	6	1	16	10	16	28	6	9	15	3	4	6	9	20	1	8.4	28.5
9-Nov	4	0	5	0	0	0	1	A	4	19	4	5	12	17	9	9	8	7	18	232	72	213	3	7	28.3	232.3
10-Nov	34	4	0	1	1	3	A	26	56	37	43	17	7	6	1	11	14	28	96	2	80	38	36	44	25.5	96.4
11-Nov	37	9	20	73	1	A	14	2	19	3	15	13	9	5	3	20	6	4	13	4	20	0	1	1	12.8	73.1
12-Nov	10	2	2	28	A	30	61	80	46	56	39	18	12	15	16	17	13	30	27	46	44	24	29	30	29.4	79.8
13-Nov	33	13	35	A	12	12	11	10	26	8	11	13	14	49	48	53	54	112	45	20	22	43	34	66	32.2	111.8
14-Nov	27	31	A	22	26	32	145	133	133	36	38	17	14	17	18	26	15	5	4	2	4	4	3	5	32.9	145.0
15-Nov	3	A	4	11	3	5	7	7	9	12	12	14	34	7	8	7	53	2	4	7	4	7	5	8	10.2	53.2
16-Nov	A	5	12	43	8	21	10	10	19	38	24	16	97	34	42	18	17	25	22	35	18	8	24	A	24.9	97.2
17-Nov	14	8	7	8	13	21	16	103	138	53	32	148	117	179	173	60	11	24	21	9	4	11	A	2	51.0	179.3
18-Nov	2	2	2	2	2	18	4	10	14	P	C	C	C	C	C	63	30	10	24	8	6	A	16	0	--	62.7
19-Nov	0	4	4	0	0	18	16	14	24	50	14	34	12	14	28	27	27	40	48	27	A	29	14	34	20.7	49.6
20-Nov	33	18	9	12	9	14	22	17	73	65	48	106	139	130	91	146	96	151	130	A	55	37	3	3	61.1	150.9
21-Nov	3	8	8	5	3	7	11	21	55	5	10	11	1	6	1	28	5	4	A	5	2	5	3	1	8.9	54.5
22-Nov	0	0	2	0	2	1	5	34	5	3	5	11	5	4	5	4	4	A	2	3	4	6	9	8	5.4	34.0
23-Nov	5	3	2	0	1	13	29	54	14	21	19	10	12	7	27	32	A	22	28	12	29	6	9	12	15.9	53.7
24-Nov	9	10	0	9	5	17	59	72	37	109	59	27	22	47	43	A	10	8	4	35	84	5	4	1	29.4	108.7
25-Nov	0	0	0	0	0	1	21	10	19	19	6	37	29	88	A	16	17	16	25	28	2	10	3	8	15.5	87.6
26-Nov	14	13	28	10	10	14	18	24	21	72	34	26	59	A	64	58	41	32	36	54	3	3	1	20	28.4	71.7
27-Nov	2	12	0	3	0	3	12	6	8	12	60	24	A	6	29	16	16	12	7	26	17	1	1	9	12.2	59.8
28-Nov	0	18	1	1	1	3	6	20	7	5	8	A	15	29	14	22	28	11	13	32	11	11	13	12	12.3	32.4
29-Nov	13	12	27	11	37	14	18	42	27	29	A	20	21	20	18	14	12	13	24	25	13	9	7	6	18.8	41.9
30-Nov	5	9	8	7	7	12	17	60	47	A	70	76	139	105	83	82	95	62	37	28	32	45	45	41	48.3	139.2
	10.7	8.3	8.2	10.8	7.3	12.5	24.6	45.6	37.5	32.6	24.6	32.2	33.4	32.7	31.0	28.2	23.0	24.7	27.6	28.1	22.4	21.7	11.6	13.2	Diurnal Average	
	37.1	31.3	36.7	73.1	46.0	38.3	145.0	210.5	138.2	108.7	70.0	148.3	139.2	179.3	173.4	146.3	96.0	150.9	130.4	232.3	84.1	213.3	44.5	65.6	Diurnal Maximum	

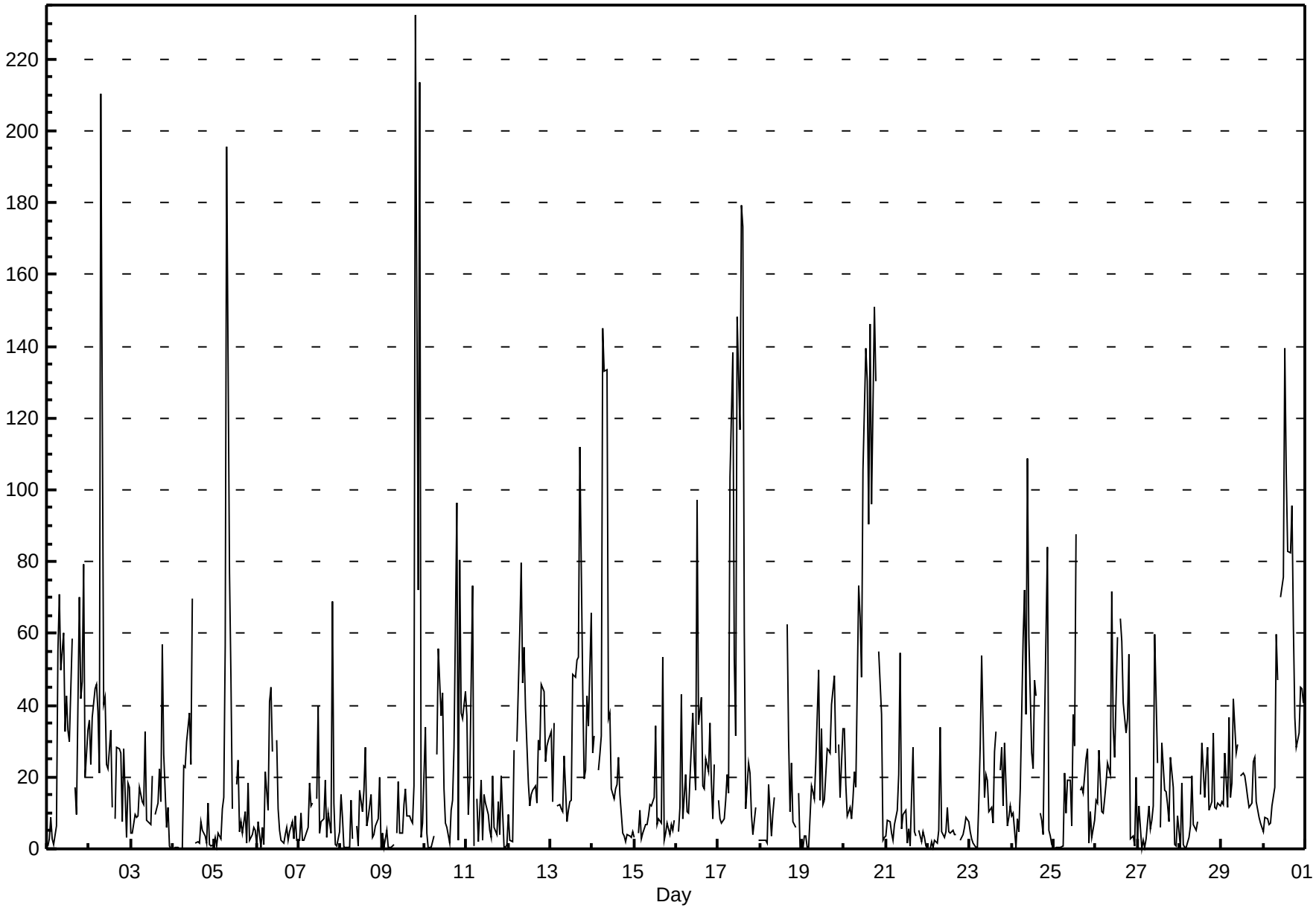
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable Clairmont - November 2014

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

Maximum Value: 184.8 ppb on Nov 17 14:00

Maximum Daily Average: 61.3 ppb on Nov 20

Minimum Value: 0 ppb on Nov 27 05:00

Minimum Daily Average: 1.2 ppb on Nov 27

Maximum Diurnal Average: 28.1 ppb at hour 14

Minimum Diurnal Average: 10.9 ppb at hour 5

Monthly Average: 20.05 ppb

Percentiles: $P_1 = 0.6$ $P_{10} = 1.9$ $Q_1 = 4.0$ Median = 12.0 $Q_3 = 28.2$ $P_{90} = 46.8$ $P_{99} = 113.0$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

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-Nov	5	6	9	7	9	9	44	53	48	55	34	30	27	28	20	A	11	15	22	41	50	28	18	21	25.6	55.4
2-Nov	35	32	38	53	48	43	29	22	39	28	25	25	13	10	A	8	9	18	27	16	9	10	18	16	24.9	52.9
3-Nov	6	7	8	6	13	8	17	16	19	11	8	9	7	A	14	11	8	6	6	5	4	3	2	3	8.4	18.6
4-Nov	3	3	2	2	2	2	11	21	35	36	28	37	A	5	4	3	14	18	8	7	5	5	2	2	11.0	36.5
5-Nov	3	3	4	5	9	19	29	55	47	33	14	A	26	15	7	5	4	3	2	3	3	3	4	3	13.0	55.0
6-Nov	3	3	2	3	4	7	17	36	18	31	A	33	13	12	11	6	11	20	11	10	7	4	6	6	11.9	35.9
7-Nov	5	5	3	2	5	8	2	2	2	A	2	2	2	1	1	2	2	3	1	2	2	1	1	2	2.6	8.1
8-Nov	2	2	2	2	1	1	1	1	A	2	1	2	1	2	3	2	2	2	2	1	2	3	3	2	1.8	3.0
9-Nov	1	2	2	1	1	1	3	A	7	11	8	7	8	11	10	11	8	9	12	28	16	19	8	2	8.0	27.9
10-Nov	2	1	1	1	1	1	A	4	6	26	38	11	2	1	1	8	27	44	71	14	22	54	48	58	19.2	70.7
11-Nov	41	11	30	32	7	A	6	4	5	5	5	4	5	5	4	4	2	2	2	2	3	3	3	3	8.2	40.9
12-Nov	20	8	6	30	A	42	67	39	33	70	22	19	15	20	21	25	26	37	46	47	56	38	39	38	33.1	70.4
13-Nov	31	27	39	A	23	23	25	25	23	19	18	18	22	48	55	63	66	81	47	40	41	47	43	71	38.9	81.5
14-Nov	45	45	A	40	37	49	75	99	54	42	34	20	18	19	21	38	25	13	9	7	6	5	6	5	31.0	99.1
15-Nov	5	A	5	6	5	8	13	16	16	15	15	18	17	13	16	14	7	8	7	9	9	13	11	12	11.3	18.4
16-Nov	A	20	23	25	13	27	24	21	29	31	31	22	19	42	16	12	12	14	14	30	34	29	31	A	23.6	41.9
17-Nov	23	20	16	16	18	22	29	39	64	57	40	73	136	185	152	62	32	37	28	17	12	10	A	6	47.5	184.8
18-Nov	6	5	5	4	3	9	7	8	10	P	C	C	C	C	C	11	7	4	4	3	4	A	8	4	--	10.8
19-Nov	2	1	2	2	2	3	7	17	17	11	10	9	9	14	25	32	44	52	60	48	A	44	33	40	21.0	59.9
20-Nov	40	26	24	23	23	28	35	31	54	59	44	94	132	107	111	107	115	151	90	A	68	38	5	5	61.3	151.4
21-Nov	6	9	10	9	5	11	13	32	22	4	4	4	2	3	2	3	3	3	A	2	2	2	2	1	6.6	31.9
22-Nov	2	2	2	2	2	3	4	5	6	6	7	6	6	4	5	6	6	A	4	5	6	8	11	9	5.1	10.6
23-Nov	13	5	4	3	5	12	40	47	22	23	22	15	12	11	15	17	A	28	38	30	38	22	21	20	20.1	46.9
24-Nov	22	18	8	10	7	15	31	29	28	72	35	25	18	32	27	A	12	12	10	9	16	18	15	7	20.6	72.1
25-Nov	5	4	4	4	4	5	6	8	10	8	5	9	10	15	A	13	10	8	6	5	2	3	3	4	6.6	14.6
26-Nov	17	18	20	20	18	20	29	28	28	35	32	27	32	A	60	53	51	42	45	35	9	5	1	1	27.2	59.6
27-Nov	1	1	1	1	0	1	2	1	2	1	1	1	A	1	2	4	2	2	1	1	1	1	1	1	1.2	3.7
28-Nov	0	1	1	1	1	1	4	7	11	10	13	A	12	15	19	32	37	22	24	20	24	26	24	24	14.3	37.4
29-Nov	26	28	33	23	38	30	31	48	36	36	A	28	27	26	26	26	27	31	34	39	29	23	19	14	29.4	48.4
30-Nov	14	16	16	13	15	28	36	46	55	A	61	61	90	115	83	122	101	91	60	64	64	61	68	68	58.5	122.3
	13.2	11.4	11.0	11.9	10.9	15.0	22.0	26.3	25.7	27.4	20.6	22.5	25.2	28.1	27.1	25.0	23.4	26.7	23.8	18.6	18.6	18.1	15.6	15.4	Diurnal Average	
	44.7	45.0	38.5	52.9	47.5	49.0	75.4	99.1	63.5	72.1	60.8	93.8	135.8	184.8	152.2	122.3	114.9	151.4	90.4	63.5	67.8	61.2	67.6	71.4	Diurnal Maximum	

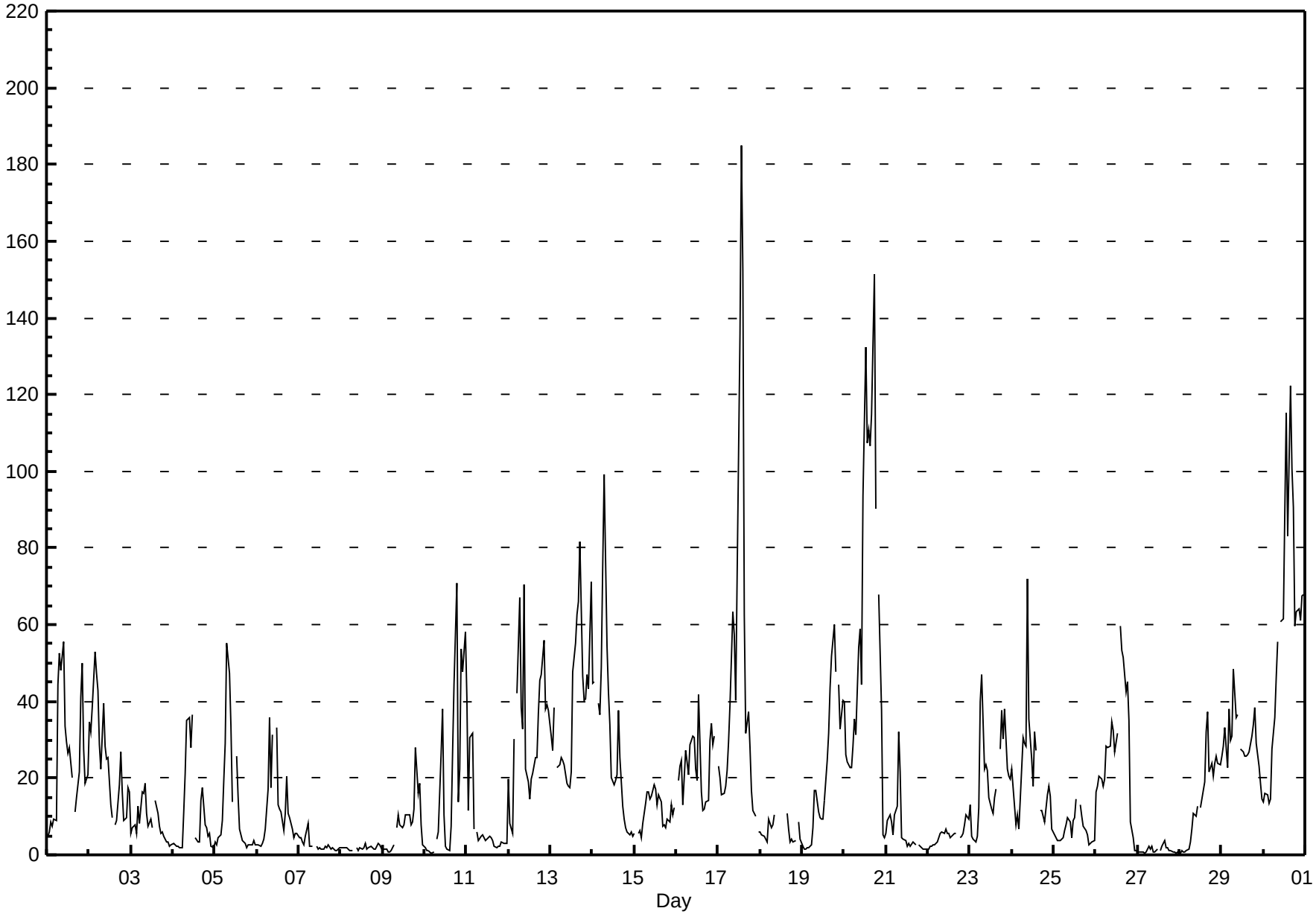
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable Clairmont - November 2014

Maximum Value: 304.8 ppb on Nov 5 08:00

Maximum Daily Average: 89.3 ppb on Nov 20

Minimum Value: 1 ppb on Nov 27 05:00

Minimum Daily Average: 11.3 ppb on Nov 8

Maximum Diurnal Average: 70.7 ppb at hour 8

Minimum Diurnal Average: 18.8 ppb at hour 5

Monthly Average: 38.91 ppb

Percentiles: P_1 = 1.7 P_{10} = 4.8 Q_1 = 11.7 Median = 27.7 Q_3 = 51.7 P_{90} = 78.4 P_{99} = 190.0

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

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-Nov	8	12	18	11	13	21	73	88	75	84	54	82	98	43	69	A	35	27	92	62	66	112	30	44	53.0	112.3
2-Nov	51	37	52	63	62	54	39	216	60	61	39	39	30	21	A	16	37	41	49	26	49	16	42	41	49.6	215.6
3-Nov	11	13	24	18	24	16	34	29	57	18	18	18	25	A	22	37	18	15	35	34	13	20	3	3	22.0	57.1
4-Nov	3	4	3	3	2	2	38	48	50	61	40	84	A	6	7	7	32	30	16	16	14	10	4	4	21.1	83.8
5-Nov	9	5	15	10	33	37	95	305	111	76	30	A	43	38	14	35	16	11	9	8	4	5	39	4	41.4	304.8
6-Nov	12	10	4	9	9	32	35	73	71	49	A	55	32	21	16	11	18	32	17	15	12	10	15	10	24.6	73.2
7-Nov	8	18	6	5	10	13	10	7	17	A	10	22	24	3	8	41	10	35	4	22	24	3	2	3	13.3	41.3
8-Nov	8	8	3	2	2	2	7	5	A	18	2	23	10	12	62	20	10	6	8	4	6	25	13	3	11.3	62.3
9-Nov	3	2	4	2	1	2	7	A	14	39	14	10	16	22	19	18	18	18	38	295	91	300	11	7	41.4	300.4
10-Nov	45	6	2	2	3	5	A	29	47	71	75	33	13	15	2	29	47	65	143	27	104	75	73	77	43.0	143.2
11-Nov	77	34	51	104	21	A	29	7	15	8	9	12	18	9	7	11	6	11	13	4	8	4	4	4	20.1	103.7
12-Nov	38	23	15	63	A	74	98	95	76	87	61	34	22	28	30	32	33	59	56	78	77	52	57	58	54.1	97.9
13-Nov	63	37	65	A	31	31	36	32	44	23	24	25	25	74	79	90	83	167	80	49	52	74	64	100	58.7	166.7
14-Nov	58	61	A	53	57	64	191	187	172	67	64	35	29	34	41	57	43	28	22	12	11	10	9	9	57.1	191.3
15-Nov	10	A	11	26	7	13	23	23	25	26	23	25	40	15	19	20	78	13	16	21	15	27	18	21	22.4	78.0
16-Nov	A	26	36	76	26	52	39	32	45	65	44	32	114	68	49	29	30	40	52	70	50	36	55	A	48.4	113.9
17-Nov	36	29	22	24	31	39	39	182	180	80	53	196	158	257	226	93	37	57	40	29	15	29	A	8	80.9	256.6
18-Nov	8	8	7	8	7	46	16	23	32	P	C	C	C	C	C	54	36	12	17	27	40	A	16	8	--	54.2
19-Nov	3	6	4	4	3	16	39	39	49	48	25	27	27	34	47	55	60	71	77	59	A	57	41	62	37.0	77.0
20-Nov	60	40	30	33	31	37	47	41	105	94	75	149	185	171	133	169	135	192	170	A	80	62	8	8	89.3	192.1
21-Nov	14	25	19	16	11	19	34	54	101	12	24	5	6	18	3	16	22	7	A	6	6	3	3	2	18.5	100.8
22-Nov	2	2	4	4	7	5	13	51	13	9	10	20	9	8	10	9	9	A	7	9	11	14	22	19	11.6	50.9
23-Nov	18	12	6	5	6	38	60	84	31	39	38	21	25	18	44	36	A	53	59	36	58	28	31	35	33.9	83.6
24-Nov	44	26	12	30	22	38	97	114	60	132	68	45	36	72	68	A	23	28	18	38	75	24	20	16	48.0	131.6
25-Nov	7	5	4	5	5	6	40	20	27	21	19	27	29	113	A	34	35	25	47	55	5	17	13	19	25.1	113.4
26-Nov	34	29	44	27	27	31	45	42	40	96	49	38	70	A	89	83	63	56	66	68	27	6	2	21	45.7	95.7
27-Nov	3	14	1	5	1	2	24	7	13	6	16	40	A	4	19	45	21	22	10	18	8	2	1	11	12.7	45.5
28-Nov	1	36	2	1	2	6	15	47	21	16	20	A	28	47	30	47	64	32	31	56	32	34	34	33	27.7	64.3
29-Nov	38	45	66	34	70	39	46	78	57	55	A	34	38	36	34	42	34	43	58	67	40	29	25	19	44.7	77.5
30-Nov	17	24	23	19	23	40	54	97	88	A	85	120	190	157	128	136	148	116	79	72	79	88	90	84	85.2	190.3
	23.7	20.5	19.0	22.8	18.8	26.9	45.7	70.7	58.4	50.3	36.6	46.4	49.6	49.9	47.4	45.3	41.5	45.1	45.8	44.3	37.1	40.4	25.8	25.3	Diurnal Average	
	77.5	61.2	65.7	103.7	70.5	74.3	191.3	304.8	179.7	131.6	85.5	196.4	190.3	256.6	226.5	168.5	147.8	192.1	170.2	295.4	104.2	300.4	90.0	100.4	Diurnal Maximum	

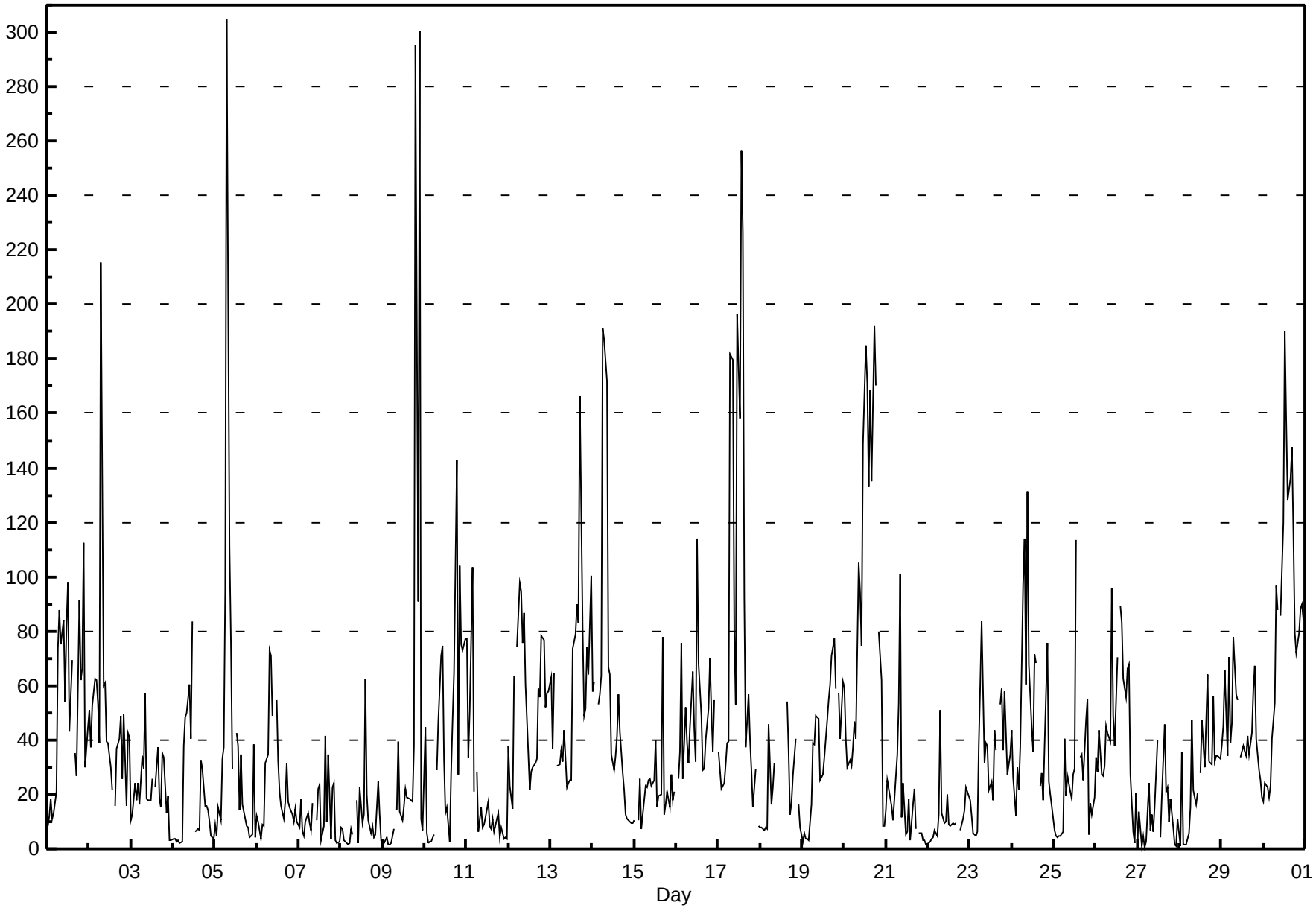
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable Clairmont - November 2014

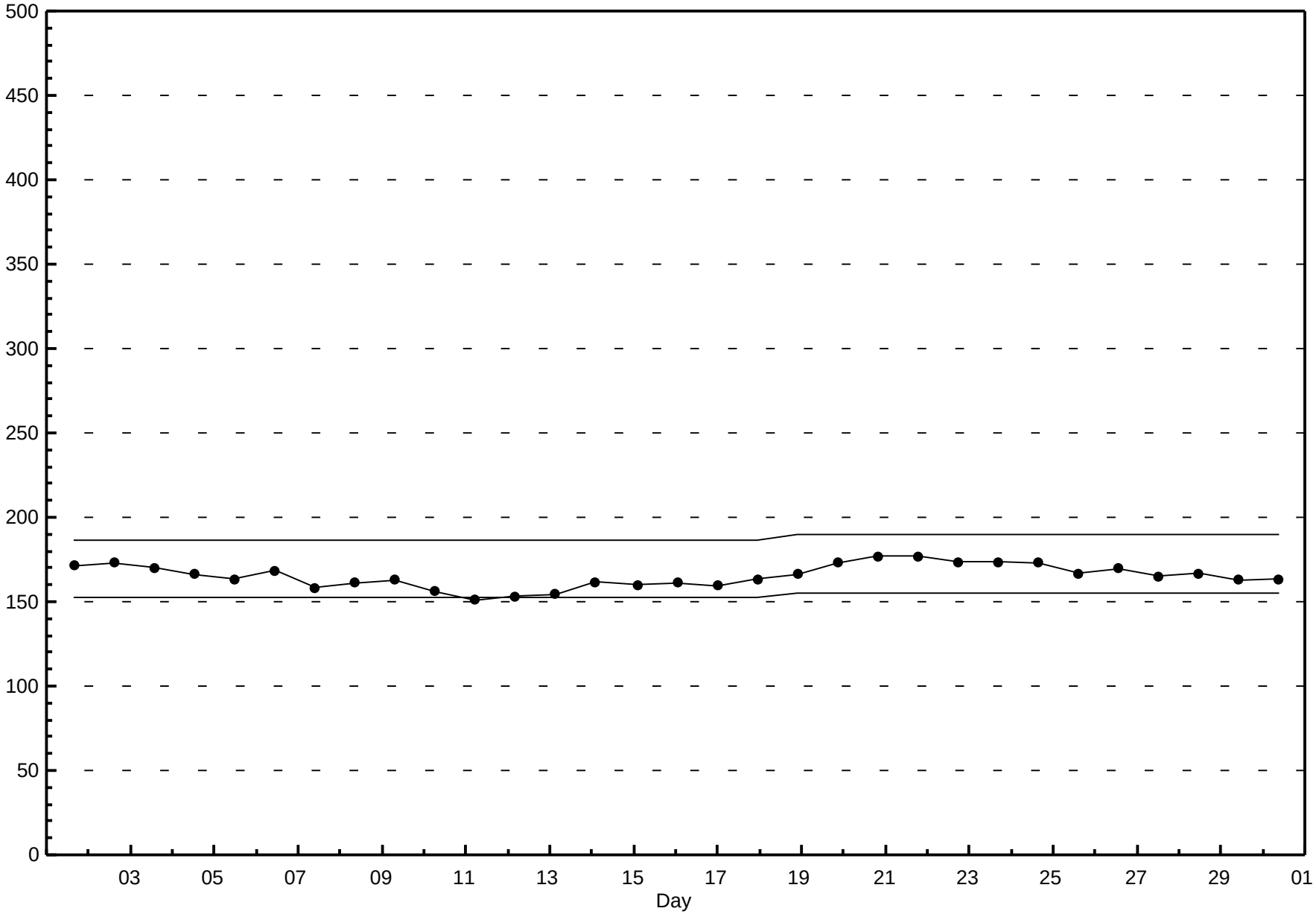


Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Portable Clairmont - November 2014

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

Maximum Value: 39.1 ppb on Nov 15 17:00

Maximum Daily Average: 33.3 ppb on Nov 18

Minimum Value: 1 ppb on Nov 1 07:00

Minimum Daily Average: 5.5 ppb on Nov 20

Maximum Diurnal Average: 20.7 ppb at hour 14

Minimum Diurnal Average: 12.2 ppb at hour 8

Monthly Average: 17.60 ppb

Percentiles: P_1 = 0.9 P_{10} = 3.3 Q_1 = 8.8 Median = 18.5 Q_3 = 26.0 P_{90} = 30.9 P_{99} = 36.2

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

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-Nov	22	20	14	14	9	6	1	1	1	5	9	12	14	14	16	A	19	13	6	2	1	1	2	1	8.9	21.6
2-Nov	1	1	1	1	1	1	1	2	2	6	9	12	17	20	A	21	18	9	4	11	26	18	11	12	8.8	25.9
3-Nov	20	16	17	19	13	16	12	14	12	17	23	23	27	A	23	24	22	20	20	20	22	24	28	24	19.8	27.9
4-Nov	23	23	22	23	23	23	15	7	2	4	8	10	A	31	35	35	27	22	28	27	29	26	31	32	22.0	35.5
5-Nov	28	28	26	24	21	11	10	4	5	12	22	A	16	22	28	31	29	28	33	31	30	30	29	28	23.0	33.3
6-Nov	28	26	27	27	26	23	13	6	8	4	A	8	18	20	19	33	24	14	21	20	24	25	22	20	19.9	33.3
7-Nov	19	18	19	18	17	14	17	19	19	A	19	20	22	22	21	20	20	18	18	18	19	19	19	19	18.8	21.7
8-Nov	19	19	18	19	20	21	21	22	A	23	24	25	26	27	27	27	27	27	28	29	29	27	27	28	24.4	28.8
9-Nov	29	28	28	30	30	29	29	A	25	23	25	25	25	22	21	19	18	17	15	11	14	15	14	22	22.5	30.3
10-Nov	32	31	31	31	30	30	A	28	29	21	18	29	34	36	36	32	18	5	4	19	13	3	3	2	22.5	36.3
11-Nov	9	23	10	9	27	A	27	28	28	27	29	30	30	31	33	34	35	32	29	27	27	27	27	27	26.4	34.8
12-Nov	13	21	23	6	A	3	2	7	8	6	16	18	20	19	18	15	11	5	3	3	3	3	3	3	9.9	23.1
13-Nov	4	5	3	A	7	9	7	9	10	17	20	21	20	16	13	10	5	3	4	4	5	4	4	5	8.9	20.8
14-Nov	4	4	A	4	3	3	3	4	5	8	13	19	20	21	21	13	17	26	29	31	32	34	33	33	16.5	33.6
15-Nov	32	A	31	30	30	26	21	20	20	22	22	21	24	29	27	31	39	37	37	35	36	33	31	31	29.0	39.1
16-Nov	A	19	15	17	18	8	12	13	7	12	16	21	26	20	26	26	24	22	20	10	6	10	7	A	16.1	26.4
17-Nov	10	11	14	13	12	11	6	3	2	6	11	11	7	7	6	7	8	5	12	22	28	30	A	34	12.0	33.7
18-Nov	33	34	35	36	37	34	33	34	31	P	27	29	30	C	C	C	35	35	35	35	35	A	29	34	33.3	37.4
19-Nov	35	36	35	34	33	31	26	18	17	18	20	21	21	19	15	11	5	3	2	2	A	2	2	3	17.7	36.2
20-Nov	2	4	4	4	4	3	2	2	1	3	6	4	4	4	4	3	2	2	1	A	1	7	28	30	5.5	29.5
21-Nov	28	24	21	22	24	19	14	3	12	19	20	15	17	16	16	17	17	16	A	18	22	22	20	19	18.4	27.8
22-Nov	17	16	16	17	19	20	21	22	21	22	22	22	22	24	24	24	25	A	25	25	24	22	19	19	21.1	25.1
23-Nov	14	19	20	22	20	14	2	3	7	8	11	14	17	18	16	15	A	7	2	4	2	6	5	5	10.9	21.5
24-Nov	3	5	14	14	15	8	4	6	4	4	7	12	15	11	11	A	16	15	14	17	15	10	13	14	10.7	16.6
25-Nov	15	16	17	16	16	15	14	13	14	16	19	19	19	18	A	16	16	18	18	19	19	19	18	18	16.9	19.3
26-Nov	9	8	5	6	5	5	3	2	2	4	6	9	9	A	6	4	2	2	1	1	13	16	24	24	7.4	24.4
27-Nov	26	26	26	26	27	28	28	28	29	29	29	29	A	29	29	30	31	31	32	32	32	33	33	33	29.4	32.8
28-Nov	32	31	31	31	30	30	29	28	23	25	25	A	26	26	23	16	11	19	16	20	18	16	16	17	23.4	32.4
29-Nov	14	9	6	7	4	5	9	4	8	10	A	19	21	22	23	22	19	14	15	14	20	22	25	28	14.8	28.3
30-Nov	28	26	27	28	26	17	9	4	4	A	13	17	15	12	11	7	4	3	3	2	3	3	3	2	11.6	27.8
	18.9	18.9	19.2	18.9	19.0	16.0	13.5	12.2	12.4	13.7	17.5	18.4	20.2	20.7	20.3	20.1	18.7	16.2	16.4	17.6	18.9	17.5	18.2	19.6	Diurnal Average	
	35.3	36.2	35.1	36.1	37.4	34.3	33.3	34.1	31.4	28.8	29.2	30.4	34.2	35.9	36.3	35.5	39.1	37.4	37.0	35.5	36.5	33.6	33.5	34.2	Diurnal Maximum	

C - Calibration P - Power Failure A - Automated Daily Zero Span

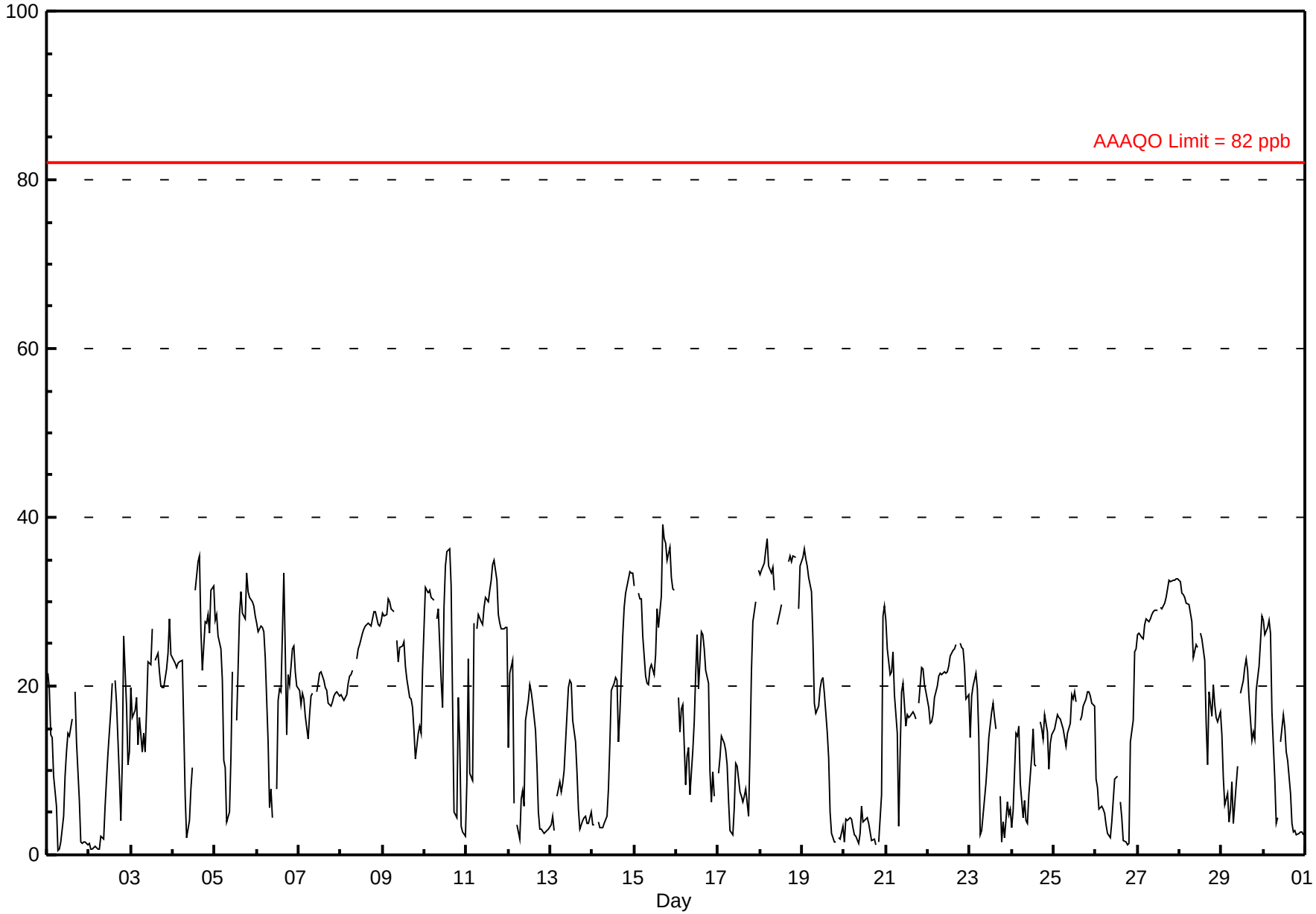
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Portable Clairmont - November 2014

Maximum Value: 42.3 ppb on Nov 6 16:00

Maximum Daily Average: 35.6 ppb on Nov 18

Minimum Value: 1 ppb on Nov 1 07:00

Minimum Daily Average: 8.1 ppb on Nov 20

Maximum Diurnal Average: 23.2 ppb at hour 16

Minimum Diurnal Average: 15.8 ppb at hour 8

Monthly Average: 20.53 ppb

Percentiles: P_1 = 2.3 P_{10} = 5.8 Q_1 = 13.6 Median = 21.1 Q_3 = 28.4 P_{90} = 32.8 P_{99} = 38.5

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

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-Nov	25	25	18	16	13	9	1	2	3	9	11	14	16	16	18	A	23	19	16	5	3	5	5	5	12.1	25.2
2-Nov	5	2	2	3	2	2	2	3	3	10	11	17	19	22	A	22	20	17	9	20	31	23	16	25	12.4	30.7
3-Nov	25	19	20	22	19	20	17	18	16	22	25	25	30	A	26	26	25	21	21	21	24	26	30	29	22.9	29.9
4-Nov	25	24	24	24	24	24	23	13	5	8	13	24	A	33	37	38	36	31	32	33	31	33	33	34	26.1	37.6
5-Nov	30	30	29	29	28	18	20	9	12	23	25	A	21	25	32	33	31	31	34	33	32	31	30	29	26.7	34.2
6-Nov	28	27	29	29	28	28	23	16	11	8	A	19	22	23	30	42	33	19	26	25	28	27	24	24	24.8	42.3
7-Nov	21	20	20	20	18	16	19	20	20	A	20	21	22	22	22	21	20	19	19	19	19	20	20	20	19.9	22.3
8-Nov	19	19	19	20	21	22	22	23	A	24	25	26	27	27	28	28	28	28	29	29	30	29	28	29	25.2	29.5
9-Nov	29	29	30	31	31	30	31	A	30	26	27	27	27	25	23	20	20	20	18	15	18	18	16	30	24.7	31.1
10-Nov	33	33	33	33	31	31	A	31	32	32	26	35	36	37	37	37	32	12	17	25	18	9	5	4	26.9	36.8
11-Nov	27	30	16	24	32	A	29	29	28	28	30	31	31	33	33	36	35	35	30	28	27	27	27	27	29.3	35.9
12-Nov	27	26	26	16	A	6	6	16	15	10	19	20	21	21	20	18	14	8	5	6	3	4	4	4	13.8	27.4
13-Nov	4	6	4	A	8	11	9	11	14	20	24	22	22	22	16	13	9	4	6	6	6	5	5	14	11.4	24.0
14-Nov	4	4	A	5	4	6	4	5	7	10	18	22	24	24	25	18	24	33	34	34	34	35	35	35	19.4	35.5
15-Nov	33	A	33	33	32	29	25	24	22	25	25	23	30	31	29	39	41	41	39	38	39	38	34	34	32.0	41.0
16-Nov	A	31	26	28	27	19	18	15	14	18	22	26	30	24	28	27	26	25	22	21	8	13	12	A	21.8	31.2
17-Nov	13	13	16	16	16	16	10	6	4	8	12	13	8	8	8	11	11	7	27	25	32	32	A	35	15.1	34.7
18-Nov	34	35	36	37	39	38	36	36	36	P	32	33	34	C	C	C	37	37	37	36	37	A	30	37	35.6	38.5
19-Nov	37	37	36	35	35	33	29	22	21	19	22	22	22	22	17	17	7	15	3	5	A	9	3	8	20.7	36.8
20-Nov	3	6	7	6	13	5	5	4	3	3	9	6	6	6	5	3	2	2	2	A	4	25	30	31	8.1	30.8
21-Nov	31	29	25	25	27	23	19	10	20	20	22	21	18	17	17	18	17	17	A	20	24	24	21	20	21.0	30.7
22-Nov	19	16	16	18	20	22	23	23	24	23	23	23	23	24	25	26	26	A	26	25	26	25	22	22	22.6	26.0
23-Nov	17	21	21	22	21	21	7	8	9	10	13	16	20	20	19	19	A	14	3	7	5	9	10	10	13.9	22.1
24-Nov	5	9	17	16	17	15	13	15	10	9	9	19	20	15	13	A	17	16	15	20	20	13	15	16	14.4	20.1
25-Nov	16	17	17	17	17	16	15	15	18	18	20	20	21	20	A	20	19	19	20	22	20	20	19	20	18.3	22.1
26-Nov	18	10	7	8	6	7	4	3	3	6	9	10	10	A	8	7	3	8	3	3	16	21	25	25	9.7	25.4
27-Nov	27	27	26	27	28	28	28	29	29	29	29	29	A	29	30	31	31	32	33	33	33	33	33	33	29.9	32.8
28-Nov	33	32	31	31	31	30	30	29	27	27	28	A	29	29	27	22	18	22	21	23	20	19	19	19	26.0	32.8
29-Nov	19	15	10	10	9	9	13	9	14	14	A	21	23	24	26	26	24	17	25	24	26	26	28	30	19.1	29.7
30-Nov	29	28	29	29	29	25	15	11	8	A	18	19	19	17	14	10	6	6	5	5	5	6	5	3	14.9	29.4
	21.9	21.4	21.4	21.6	21.6	19.3	17.1	15.8	15.8	17.1	20.2	21.5	22.5	22.8	22.8	23.2	21.9	19.8	19.9	20.9	21.2	20.8	20.2	22.5	Diurnal Average	
	36.7	36.8	36.2	37.5	38.5	37.6	35.6	36.5	35.6	32.0	31.9	34.7	35.7	36.8	37.4	42.3	41.0	41.0	39.1	38.1	38.6	37.5	35.0	36.8	Diurnal Maximum	

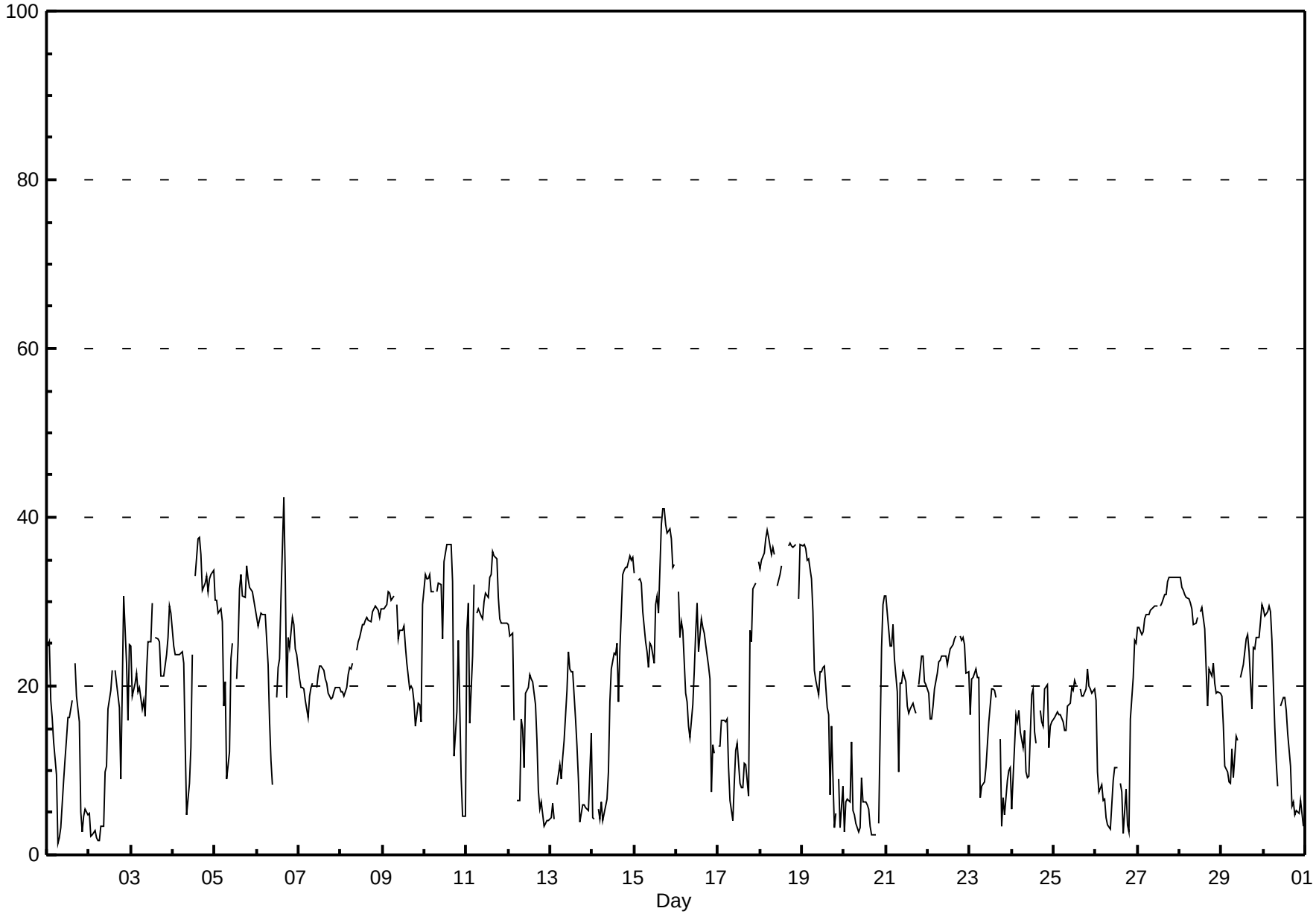
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

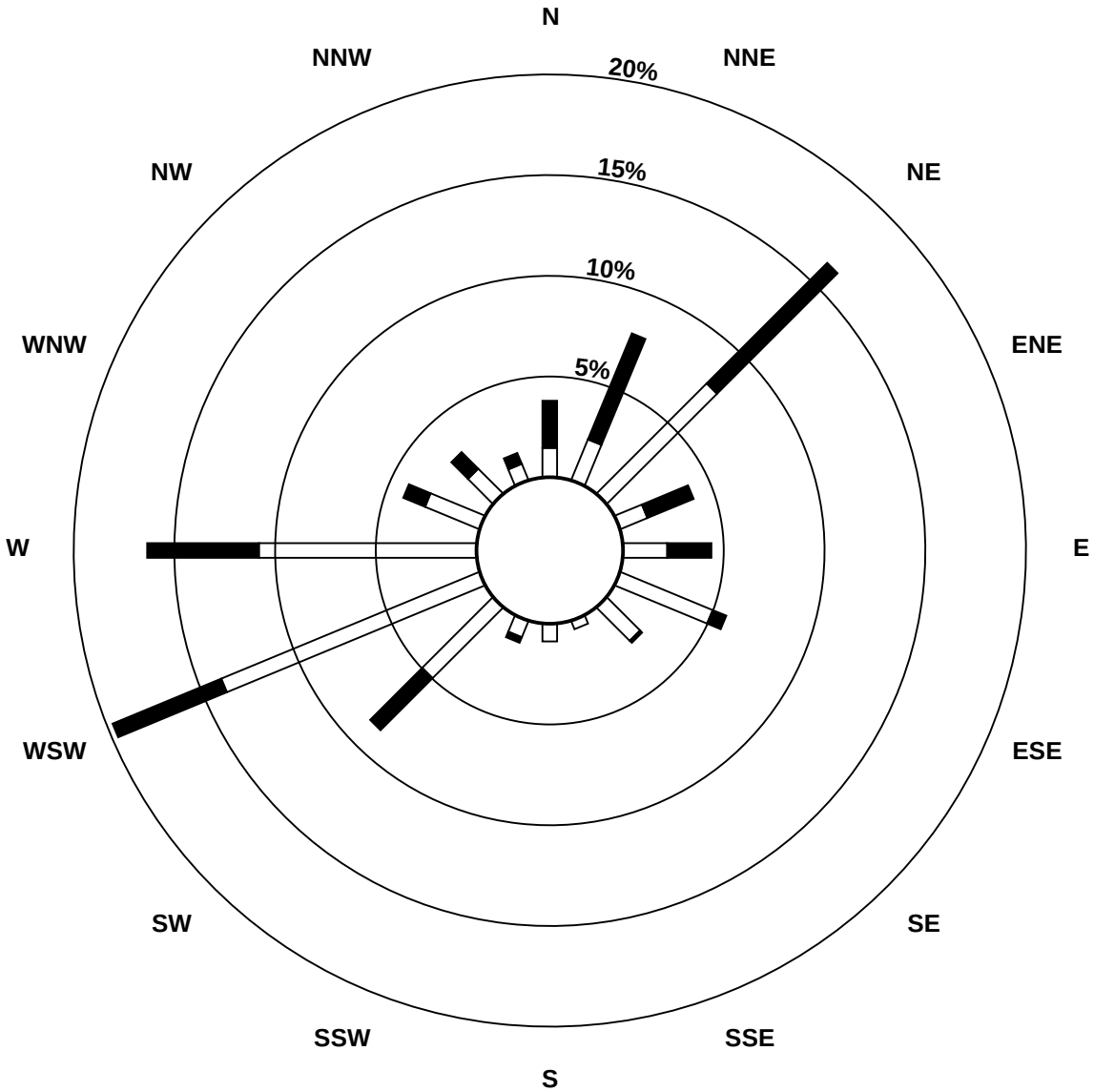
Portable Clairmont - November 2014



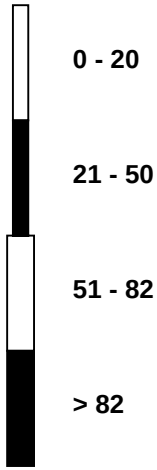
Pollutant Rose

Ozone (O_3) - ppb

Portable Clairmont - November 2014



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Portable Clairmont - November 2014

Maximum Value: 35.1 ppb on Nov 16 00:00

Minimum Value: 0.9 ppb on Nov 2 07:00

Percentiles: P_1 = 1.6 P_{10} = 5.3 Q_1 = 10.8 Median = 17.5 Q_3 = 24.0 P_{90} = 29.4 P_{99} = 34.4

Hours in Service:	720
Hours of Data:	712
Hours of Missing Data:	8
Hours of Calibration:	5
Percent Operational Time:	99.6

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-Nov	10	11	12	13	14	15	14	11	8	6	6	6	6	7	9	10	13	14	14	12	10	9	6	6	14.7
2-Nov	4	2	1	1	1	1	1	1	1	2	3	4	6	9	10	12	15	15	14	14	16	15	15	14	15.6
3-Nov	14	15	16	17	16	16	16	16	15	15	16	16	18	18	20	21	23	23	23	22	21	22	22	22	23.0
4-Nov	23	23	23	24	24	24	22	20	17	15	13	12	10	11	14	18	21	24	27	29	29	29	28	28	29.3
5-Nov	28	29	28	28	27	25	23	19	16	14	14	12	11	13	16	19	23	25	27	27	29	30	30	30	30.3
6-Nov	30	30	29	28	28	27	25	22	20	17	15	13	12	11	12	16	18	20	20	21	22	23	23	21	29.8
7-Nov	21	21	21	21	20	18	18	18	18	17	18	18	18	20	20	20	20	20	20	20	19	19	19	19	21.2
8-Nov	19	19	19	19	19	19	20	20	20	21	22	22	23	24	25	26	26	26	27	27	28	28	28	28	27.8
9-Nov	28	28	28	28	28	29	29	29	29	28	27	27	26	25	24	23	22	22	20	19	17	16	16	16	29.1
10-Nov	18	19	21	24	26	28	30	31	30	29	27	26	27	28	29	29	28	26	24	23	20	16	12	8	30.6
11-Nov	7	10	10	9	11	12	15	19	22	22	25	28	29	29	30	30	31	32	32	31	31	30	30	29	31.9
12-Nov	26	25	24	21	21	17	14	11	10	8	7	9	10	12	14	15	15	15	14	12	10	7	6	4	26.1
13-Nov	3	3	3	3	4	5	5	6	7	9	11	12	14	15	16	16	15	14	12	10	8	6	5	4	15.9
14-Nov	4	4	4	4	4	4	4	4	4	4	5	7	9	12	14	15	17	19	21	22	24	25	27	29	29.4
15-Nov	31	32	32	32	32	31	29	27	26	25	24	23	22	23	23	25	27	29	31	32	34	34	35	35	35.1
16-Nov	34	32	29	26	23	20	17	14	13	13	13	13	14	16	18	19	22	23	23	22	19	18	16	14	34.5
17-Nov	12	11	10	10	11	11	11	10	9	8	8	8	7	7	7	7	8	8	8	9	12	15	16	20	19.7
18-Nov	23	27	31	33	34	35	35	35	34	34	33	32	31	31	N	N	N	N	N	N	N	N	34	34	34.7
19-Nov	34	34	34	34	34	34	33	31	29	26	24	23	21	20	18	18	16	14	12	10	8	6	4	3	34.4
20-Nov	2	2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	3	3	2	3	6	10	10.2
21-Nov	14	17	20	20	23	25	23	20	18	17	17	16	15	15	15	17	17	17	16	17	17	18	19	19	24.5
22-Nov	19	19	19	19	18	18	18	18	19	20	20	21	21	22	22	23	23	23	24	24	24	24	23	23	24.5
23-Nov	21	21	20	20	19	18	16	14	13	12	11	10	10	10	12	13	14	14	13	11	9	7	6	4	21.1
24-Nov	4	4	6	7	9	9	9	9	9	9	8	8	8	8	9	9	11	12	13	14	14	14	14	14	14.1
25-Nov	14	14	14	14	15	15	15	15	15	15	15	16	16	16	17	17	18	18	18	18	18	18	18	18	18.2
26-Nov	17	16	14	13	11	9	7	6	5	4	4	5	5	5	6	6	6	6	5	4	4	6	8	10	17.3
27-Nov	14	17	20	23	24	26	26	27	27	27	28	28	28	29	29	29	29	30	30	31	31	31	32	32	32.2
28-Nov	32	32	32	32	32	31	31	30	29	28	27	27	26	26	25	23	22	21	20	20	19	17	16	17	32.4
29-Nov	17	16	15	13	11	10	9	7	7	7	7	8	11	13	15	18	19	20	19	19	18	18	19	19	19.9
30-Nov	21	22	24	26	26	26	24	21	18	16	14	13	11	11	11	11	11	10	9	7	6	4	3	3	26.3
Diurnal Maximums	34.5	34.4	34.4	34.2	34.1	34.7	34.5	34.6	34.4	34.5	33.4	32.4	31.3	30.8	29.6	30.4	31.3	31.9	31.8	32.4	33.9	34.4	35.0	35.1	

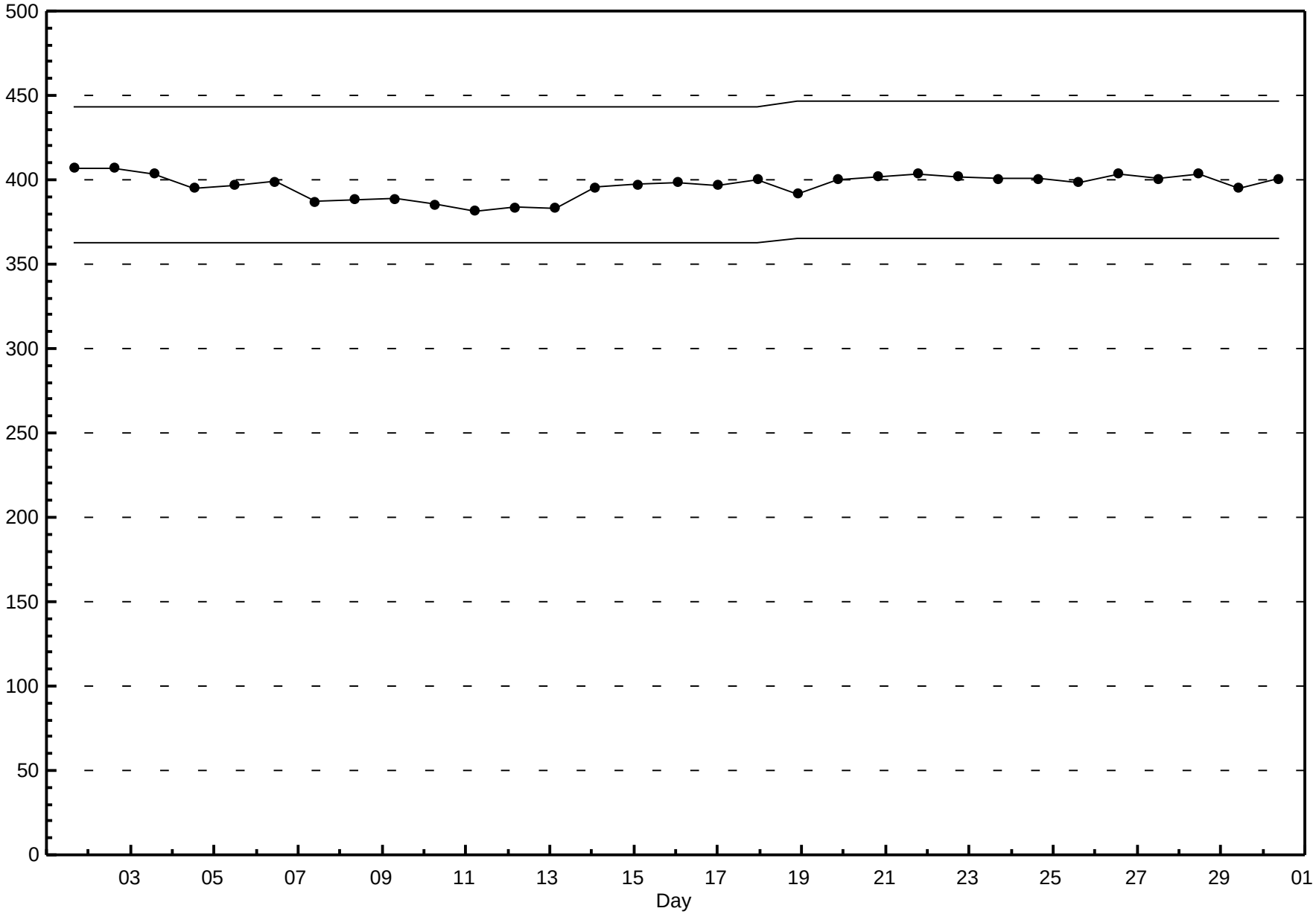
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Portable Clairmont - November 2014

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

Maximum Value: 4.00 ppm on Nov 14 01:00

Maximum Daily Average: 3.10 ppm on Nov 13

Minimum Value: 1.9 ppm on Nov 10 08:00

Minimum Daily Average: 2.09 ppm on Nov 22

Maximum Diurnal Average: 2.52 ppm at hour 8

Minimum Diurnal Average: 2.34 ppm at hour 24

Monthly Average: 2.416 ppm

Percentiles: P_1 = 2.02 P_{10} = 2.08 Q_1 = 2.12 Median = 2.25 Q_3 = 2.61 P_{90} = 3.04 P_{99} = 3.61

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

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-Nov	2.1	2.1	2.1	2.1	2.2	2.3	2.5	2.6	2.5	2.3	2.2	2.3	2.3	2.3	2.3	A	2.2	2.3	2.5	2.5	2.6	2.5	2.5	2.7	2.36	2.68
2-Nov	3.2	3.7	3.4	3.2	3.3	3.2	2.8	2.5	2.7	2.6	2.4	2.4	2.3	2.3	A	2.2	2.2	2.3	2.4	2.3	2.1	2.3	2.4	2.3	2.62	3.68
3-Nov	2.4	2.3	2.2	2.2	2.4	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.14	2.37
4-Nov	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.3	2.3	A	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.10	2.30
5-Nov	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.3	2.2	2.2	A	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.14	2.38
6-Nov	2.1	2.1	2.0	2.0	2.0	2.1	2.2	2.4	2.3	2.3	A	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.1	2.0	2.1	2.1	2.15	2.45
7-Nov	2.1	2.1	2.2	2.1	2.1	2.2	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.11	2.18
8-Nov	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.11	2.18
9-Nov	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.19	2.27
10-Nov	2.1	2.1	2.1	2.1	2.1	2.1	A	1.9	2.2	2.2	2.3	2.2	2.1	2.1	2.1	2.2	2.3	2.6	2.4	2.4	2.5	2.7	2.9	2.9	2.28	2.89
11-Nov	2.6	2.4	2.7	2.7	2.3	A	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.30	2.72
12-Nov	2.4	2.3	2.3	2.6	A	2.9	2.7	2.6	2.5	2.7	2.4	2.4	2.4	2.5	2.6	2.6	2.6	2.6	2.8	2.9	3.3	3.0	2.7	2.9	2.64	3.27
13-Nov	3.0	3.2	3.5	A	3.3	3.3	3.2	3.1	3.0	3.0	3.0	2.9	2.9	2.9	3.0	2.9	3.1	3.3	3.0	3.0	3.0	3.1	3.1	3.4	3.10	3.51
14-Nov	4.0	3.5	A	3.5	3.3	3.4	3.4	3.6	3.5	3.1	2.6	2.5	2.7	2.5	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.75	4.00
15-Nov	2.1	A	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.8	2.9	2.7	2.5	2.6	2.4	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.32	2.88
16-Nov	A	2.4	2.6	2.6	2.5	2.6	2.9	2.8	2.9	2.7	3.1	2.8	2.5	2.5	2.4	2.3	2.4	2.4	2.4	2.6	2.9	2.7	2.9	A	2.63	3.09
17-Nov	2.7	2.8	2.8	3.2	3.2	3.2	3.1	3.4	3.7	3.5	3.4	3.4	3.4	3.4	3.5	3.3	3.6	3.3	2.9	2.6	2.4	2.3	A	2.2	3.10	3.66
18-Nov	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	P	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.2	2.1	2.13	2.24
19-Nov	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	C	C	C	2.3	2.3	2.7	3.1	3.0	2.6	A	2.6	2.6	2.6	2.38	3.11
20-Nov	3.1	2.8	3.0	3.2	2.8	2.8	2.9	3.1	3.0	3.0	3.5	3.0	3.1	3.0	3.0	3.1	3.2	3.6	4.0	A	3.2	3.0	2.1	2.0	3.02	3.96
21-Nov	2.0	2.2	2.1	2.3	2.1	2.2	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.0	2.0	2.0	2.0	2.10	2.30
22-Nov	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.2	2.3	2.2	2.09	2.26
23-Nov	2.3	2.3	2.2	2.3	2.2	2.3	2.7	2.8	2.6	2.6	2.5	2.6	2.4	2.4	2.4	2.5	A	2.6	2.6	2.6	2.6	2.6	2.7	2.6	2.50	2.83
24-Nov	2.5	2.4	2.3	2.3	2.3	2.4	2.5	2.5	2.5	2.7	2.4	2.4	2.3	2.4	2.4	A	2.3	2.3	2.3	2.3	2.2	2.4	2.3	2.2	2.37	2.74
25-Nov	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	A	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.18	2.24
26-Nov	2.4	2.4	2.5	2.5	2.6	2.9	2.8	3.0	3.0	3.0	2.9	3.0	3.2	A	3.0	3.0	3.3	3.1	3.1	2.8	2.3	2.2	2.1	2.1	2.75	3.32
27-Nov	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.10	2.12
28-Nov	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.2	2.3	2.3	2.4	2.4	2.3	2.3	2.5	2.6	2.6	2.7	2.26	2.74
29-Nov	2.4	2.7	3.1	3.0	3.1	3.7	3.0	2.9	2.9	3.3	A	3.2	2.9	2.8	2.7	2.6	2.6	2.7	2.7	2.5	2.4	2.5	2.5	2.4	2.81	3.72
30-Nov	2.4	2.5	2.4	2.4	2.4	2.4	2.6	3.0	2.9	A	2.6	2.5	2.6	2.8	2.8	2.8	3.5	3.2	2.7	2.6	2.6	2.8	3.0	3.0	2.71	3.51
	2.37	2.39	2.37	2.40	2.40	2.47	2.48	2.52	2.51	2.50	2.44	2.46	2.43	2.38	2.40	2.37	2.42	2.46	2.44	2.34	2.36	2.38	2.36	2.34	Diurnal Average	
	4.00	3.68	3.51	3.49	3.30	3.72	3.38	3.61	3.66	3.53	3.48	3.42	3.35	3.41	3.46	3.33	3.61	3.59	3.96	3.00	3.27	3.14	3.12	3.39	Diurnal Maximum	

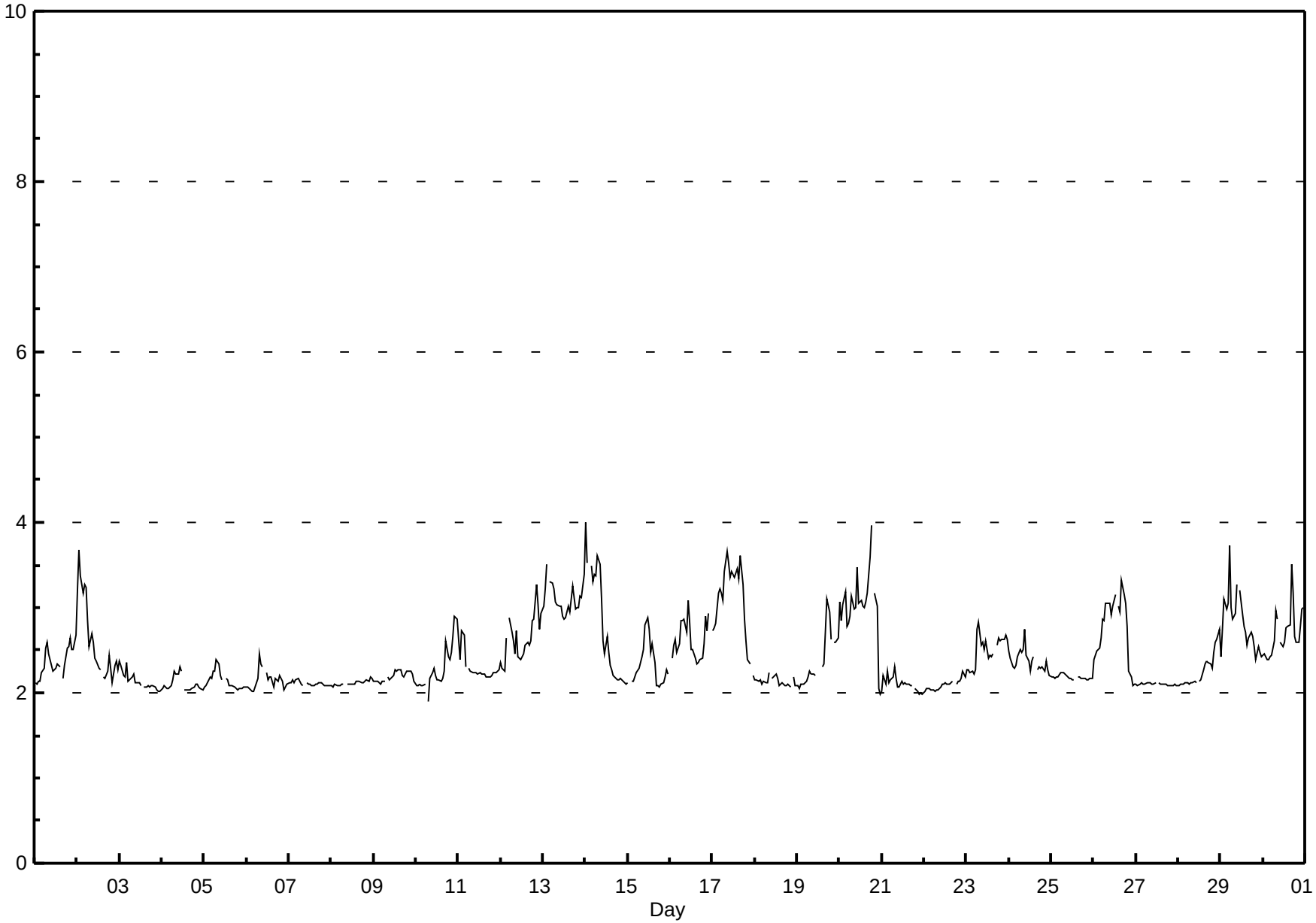
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

Portable Clairmont - November 2014

Maximum Value: 6.12 ppm on Nov 10 18:00

Maximum Daily Average: 3.40 ppm on Nov 20

Minimum Value: 2.0 ppm on Nov 21 22:00

Minimum Daily Average: 2.12 ppm on Nov 27

Maximum Diurnal Average: 2.82 ppm at hour 8

Minimum Diurnal Average: 2.46 ppm at hour 14

Monthly Average: 2.593 ppm

Percentiles: P_1 = 2.05 P_{10} = 2.12 Q_1 = 2.18 Median = 2.36 Q_3 = 2.92 P_{90} = 3.35 P_{99} = 4.75

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

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-Nov	2.2	2.2	2.2	2.2	2.4	2.4	3.5	3.2	2.6	2.5	2.3	2.3	2.7	2.4	2.5	A	2.4	2.9	3.3	3.1	3.0	2.8	2.8	3.1	2.66	3.55
2-Nov	3.6	4.5	4.7	3.5	3.8	3.7	3.0	3.0	3.2	3.1	2.5	2.5	2.3	2.3	A	2.2	2.3	2.4	2.8	2.5	2.2	2.6	3.3	2.4	2.97	4.66
3-Nov	2.9	2.5	2.4	2.3	2.6	2.4	2.3	2.3	2.5	2.2	2.2	2.2	2.2	A	2.1	2.4	2.2	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.28	2.86
4-Nov	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2.3	2.3	2.4	2.5	A	2.1	2.1	2.1	2.1	2.1	2.4	2.4	2.2	2.1	2.1	2.0	2.20	2.50
5-Nov	2.1	2.1	2.2	2.5	2.2	2.4	2.5	2.8	2.7	2.3	2.3	A	2.5	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.26	2.81
6-Nov	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.9	2.6	2.4	A	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.4	2.1	2.1	2.1	2.26	2.87
7-Nov	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	A	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.16	2.30
8-Nov	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.16	2.30
9-Nov	2.2	2.2	2.2	2.2	2.1	2.2	2.2	A	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.5	2.3	2.2	2.4	2.4	2.5	2.3	2.3	2.2	2.28	2.46
10-Nov	2.1	2.1	2.2	2.1	2.1	2.1	A	2.3	2.3	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.4	6.1	2.6	2.8	2.8	2.8	3.0	3.1	2.56	6.12
11-Nov	3.0	2.7	2.9	2.9	2.6	A	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.5	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.42	2.95
12-Nov	2.5	2.4	2.7	3.1	A	3.4	2.8	3.5	2.7	2.9	2.5	2.4	2.5	2.5	2.6	2.7	2.6	2.7	3.0	3.1	3.7	3.3	3.0	3.1	2.86	3.75
13-Nov	3.1	3.3	4.0	A	3.4	3.7	3.3	3.3	3.1	3.1	3.2	3.0	2.9	3.0	3.1	3.0	3.4	3.9	3.4	3.5	3.1	3.3	3.3	4.0	3.32	4.05
14-Nov	4.8	3.8	A	3.6	3.5	5.1	3.8	3.9	3.7	3.5	3.0	2.6	2.7	2.6	2.4	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.1	3.00	5.11
15-Nov	2.2	A	2.2	2.2	2.3	2.3	2.4	2.8	2.8	2.7	2.9	3.0	3.1	2.5	3.2	2.7	2.4	2.2	2.1	2.1	2.2	2.2	2.4	2.3	2.48	3.16
16-Nov	A	2.8	3.0	2.8	2.7	2.9	4.2	2.9	3.0	2.8	3.3	3.3	3.3	2.6	2.5	2.4	2.4	2.4	2.6	3.0	3.4	3.3	3.3	A	2.95	4.22
17-Nov	2.9	2.8	3.0	3.3	3.3	3.4	3.4	3.7	3.8	3.8	3.5	3.7	3.5	3.6	3.7	3.7	4.0	3.5	3.3	2.9	2.8	2.5	A	2.4	3.32	3.99
18-Nov	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4	P	2.3	2.3	2.3	2.2	2.2	2.2	2.4	2.2	2.1	2.1	2.1	A	2.2	2.1	2.22	2.37
19-Nov	2.1	2.1	2.2	2.1	2.1	2.2	2.4	2.4	2.3	2.3	2.2	C	C	C	2.3	2.4	3.5	4.0	3.1	2.9	A	2.7	2.7	2.9	2.55	4.02
20-Nov	3.5	3.4	4.0	4.3	2.9	3.0	3.1	3.3	3.2	3.1	5.1	3.1	3.2	3.1	3.0	3.2	3.3	4.2	4.9	A	3.5	3.5	2.2	2.0	3.40	5.06
21-Nov	2.1	2.6	2.5	2.5	2.3	2.3	2.3	2.6	2.3	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.1	A	2.1	2.0	2.0	2.0	2.0	2.21	2.60
22-Nov	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.2	2.2	A	2.1	2.2	2.2	2.3	2.4	2.3	2.14	2.38
23-Nov	2.4	2.4	2.3	2.4	2.3	2.4	3.0	3.0	2.7	3.0	2.9	2.7	2.6	2.5	2.5	2.6	A	2.7	2.7	2.7	2.7	2.8	2.8	2.9	2.65	3.04
24-Nov	2.7	2.4	2.3	2.4	2.4	2.9	2.9	3.0	2.7	3.1	2.6	2.5	2.3	2.5	2.6	A	2.4	2.4	2.3	2.4	2.4	2.6	2.3	2.3	2.55	3.13
25-Nov	2.2	2.2	2.2	2.2	2.2	2.4	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.2	A	2.3	2.3	2.2	2.3	2.8	2.2	2.3	2.2	2.2	2.27	2.78
26-Nov	2.6	2.5	2.6	2.7	2.7	3.0	3.0	3.2	3.2	3.2	3.0	3.3	3.3	A	3.1	3.1	3.9	3.4	3.2	3.2	2.6	2.2	2.1	2.2	2.93	3.94
27-Nov	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.12	2.13
28-Nov	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	A	2.2	2.3	2.4	2.4	2.5	2.5	2.5	2.4	2.9	3.1	3.2	3.6	2.42	3.64
29-Nov	2.6	3.0	3.4	3.2	3.3	5.4	3.7	3.2	3.5	3.7	A	3.4	3.1	2.9	2.9	2.7	2.7	2.9	3.0	2.9	2.5	2.7	2.7	2.5	3.11	5.40
30-Nov	2.6	2.6	2.5	2.4	2.5	2.6	3.1	4.4	3.2	A	2.7	2.7	2.8	3.0	3.0	2.9	5.0	3.4	3.1	3.3	2.7	3.0	3.3	3.2	3.05	5.00
	2.53	2.54	2.57	2.55	2.51	2.74	2.72	2.82	2.70	2.67	2.62	2.58	2.57	2.46	2.52	2.48	2.63	2.75	2.64	2.56	2.53	2.53	2.52	2.49	Diurnal Average	
	4.78	4.45	4.66	4.27	3.76	5.40	4.22	4.37	3.77	3.82	5.06	3.70	3.46	3.55	3.69	3.71	5.00	6.12	4.88	3.47	3.75	3.50	3.35	4.05	Diurnal Maximum	

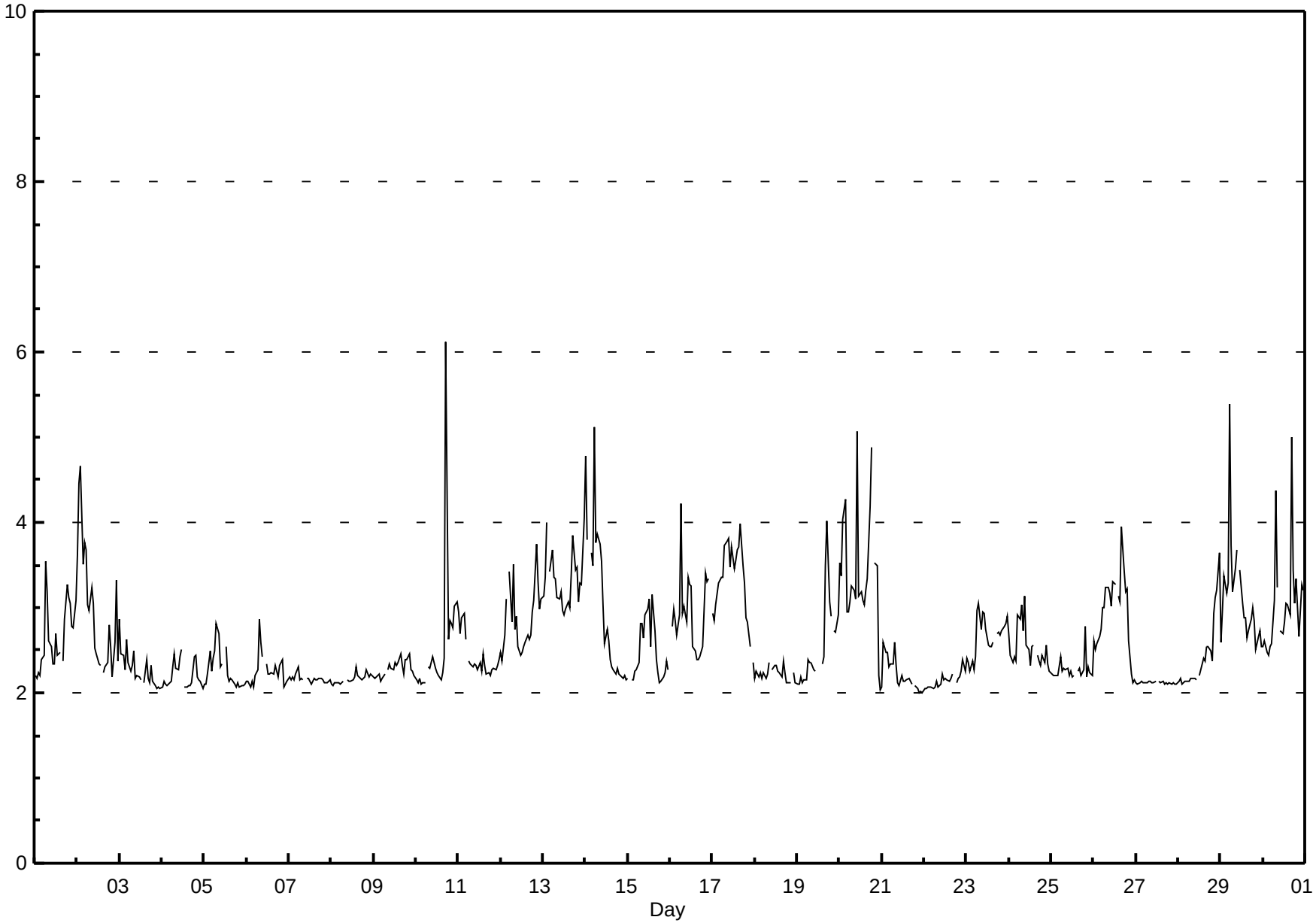
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

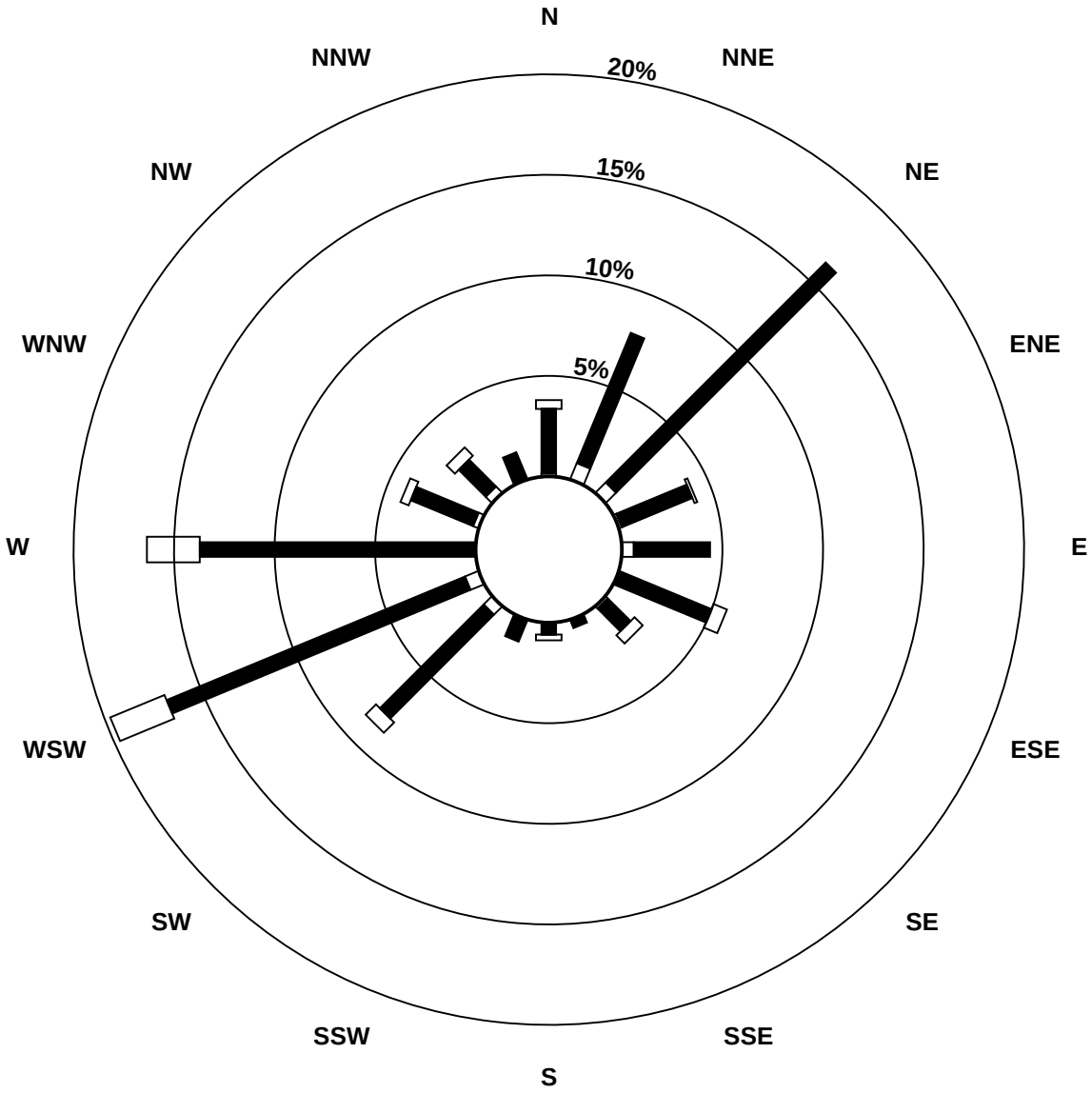
Portable Clairmont - November 2014



Pollutant Rose

Total Hydrocarbons (THC) - ppm

Portable Clairmont - November 2014



Pollutant Classes (ppm)

- 1.5 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

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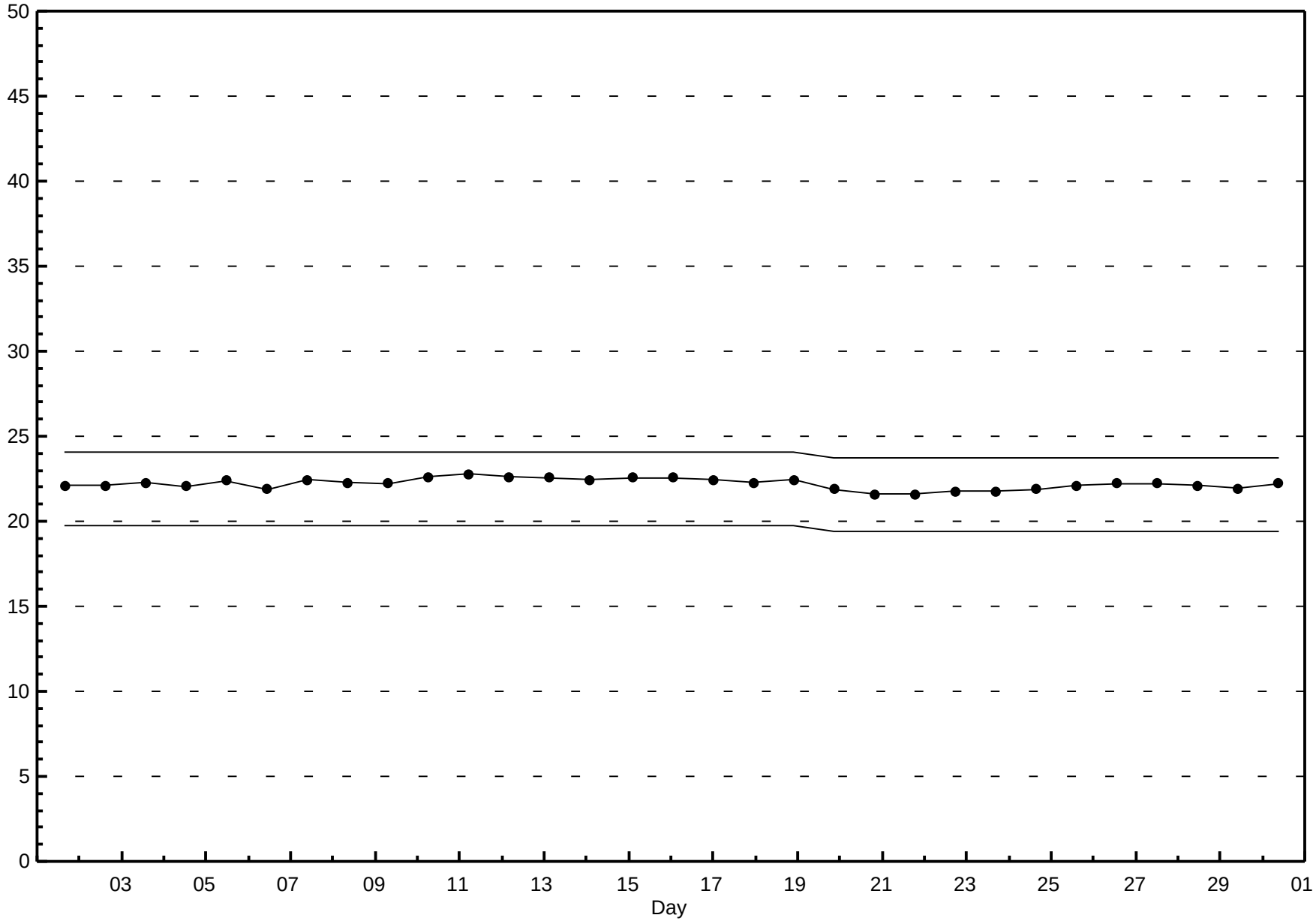
Span Responses

Total Hydrocarbons (THC)

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Averages

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

Portable Clairmont - November 2014

Number of Exceedences: 1-hr: 0 24-hr: 0

Maximum Value: 47.8 $\mu g/m^3$ on Nov 13 15:00

Maximum Daily Average: 13.7 $\mu g/m^3$ on Nov 20

Minimum Value: 0 $\mu g/m^3$ on Nov 1 01:00

Maximum Diurnal Average: 8.8 $\mu g/m^3$ at hour 15

Monthly Average: 6.37 $\mu g/m^3$

Minimum Daily Average: 1.1 $\mu g/m^3$ on Nov 27

Minimum Diurnal Average: 4.4 $\mu g/m^3$ at hour 5

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 2.0$ Median = 4.8 $Q_3 = 8.2$ $P_{90} = 13.6$ $P_{99} = 35.9$

Hours in Service:	720
Hours of Data:	637
Hours of Missing Data:	83
Hours of Calibration:	3
Percent Operational Time:	88.9

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-Nov	0	3	6	3	1	0	1	3	6	9	0	0	0	2	2	2	6	11	13	20	21	9	6	5	5.4	20.8
2-Nov	11	6	7	12	10	10	4	1	7	6	3	0	0	0	0	4	1	6	12	14	7	7	13	8	6.2	14.2
3-Nov	3	1	2	0	3	1	0	2	4	4	1	0	0	0	0	0	1	6	8	7	6	6	1	3	2.5	7.5
4-Nov	7	10	4	2	2	3	6	6	7	7	4	5	0	0	0	0	1	2	5	7	8	8	4	5	4.3	10.5
5-Nov	7	5	4	3	4	4	5	7	9	10	3	0	0	0	0	1	0	4	5	2	1	0	0	0	3.1	10.1
6-Nov	0	1	3	0	0	0	2	5	5	6	4	0	0	0	2	0	1	3	2	5	6	7	10	14	3.2	13.8
7-Nov	10	6	5	3	2	2	1	1	1	2	2	1	2	2	1	2	1	2	0	0	0	0	0	1	2.0	10.1
8-Nov	2	0	8	3	1	0	0	1	0	1	1	1	1	2	1	1	1	2	2	2	2	2	7	2	1.8	7.6
9-Nov	1	2	2	3	1	2	2	4	4	5	5	2	4	6	6	7	3	4	4	6	6	8	7	7	4.2	8.1
10-Nov	6	5	4	4	4	4	2	1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	6.2
11-Nov	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
12-Nov	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-Nov	N	N	N	N	N	N	N	N	N	N	N	N	N	N	48	40	29	26	31	36	37	36	34	40	--	47.8
14-Nov	31	30	27	21	21	22	21	24	19	17	13	12	9	6	5	7	4	2	1	1	0	2	4	2	12.5	30.7
15-Nov	1	2	2	1	1	1	2	3	6	6	5	7	9	8	5	7	3	2	3	3	5	5	3	6	4.0	8.7
16-Nov	8	8	9	4	0	3	2	2	6	8	5	4	2	7	3	2	10	10	13	14	16	12	10	7	6.8	15.6
17-Nov	6	6	4	4	4	6	6	5	9	13	11	11	16	26	24	6	7	12	9	4	3	5	7	7	8.9	26.1
18-Nov	6	7	7	6	2	1	2	1	33	P	C	C	C	11	6	6	4	4	3	2	2	3	3	3	5.6	32.6
19-Nov	2	2	5	5	4	4	6	7	8	8	6	6	6	M	34	23	23	27	21	20	15	15	14	20	12.2	33.9
20-Nov	13	12	14	12	13	13	14	11	14	15	13	16	21	21	20	19	19	22	13	14	13	8	0	0	13.7	21.5
21-Nov	0	0	0	0	0	0	1	1	2	3	2	6	9	26	21	15	14	14	10	5	1	1	0	0	5.4	25.7
22-Nov	3	4	4	3	3	1	2	3	3	3	2	2	2	3	5	7	7	4	5	5	5	6	6	6	4.0	7.4
23-Nov	7	5	4	4	5	7	6	6	4	7	8	6	7	7	8	9	8	9	11	12	11	9	9	9	7.4	11.7
24-Nov	9	8	5	3	3	3	4	4	5	10	7	9	7	9	7	5	4	4	4	0	11	5	6	3	5.7	11.5
25-Nov	6	8	9	11	11	9	7	9	8	7	7	7	6	6	6	7	7	8	7	6	6	5	6	6	7.3	11.3
26-Nov	10	9	8	13	12	14	12	12	13	15	16	13	13	13	14	10	9	15	16	11	9	7	0	0	11.0	15.8
27-Nov	2	1	1	2	2	3	6	3	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.1	6.0
28-Nov	0	0	0	0	1	2	1	2	2	3	2	5	3	5	6	3	3	6	6	4	2	6	5	10	3.2	9.6
29-Nov	3	1	4	2	6	3	3	5	2	6	9	4	4	4	7	3	1	4	5	8	4	7	13	5	4.7	12.7
30-Nov	6	4	6	2	1	3	3	2	9	13	7	7	8	14	6	19	13	14	7	10	10	9	11	9	8.0	18.6
	5.9	5.5	5.7	4.7	4.4	4.5	4.5	4.9	7.3	7.5	5.5	4.9	5.2	7.1	8.8	7.6	6.8	8.2	8.0	8.1	7.7	6.9	6.6	6.6	Diurnal Average	
	30.7	30.4	26.9	20.6	20.7	21.5	21.2	24.3	32.6	16.9	15.6	16.3	20.9	26.1	47.8	40.1	29.3	26.6	30.7	36.4	37.1	36.1	33.7	39.9	Diurnal Maximum	

C - Calibration P - Power Failure M - Maintenance N - Not Valid

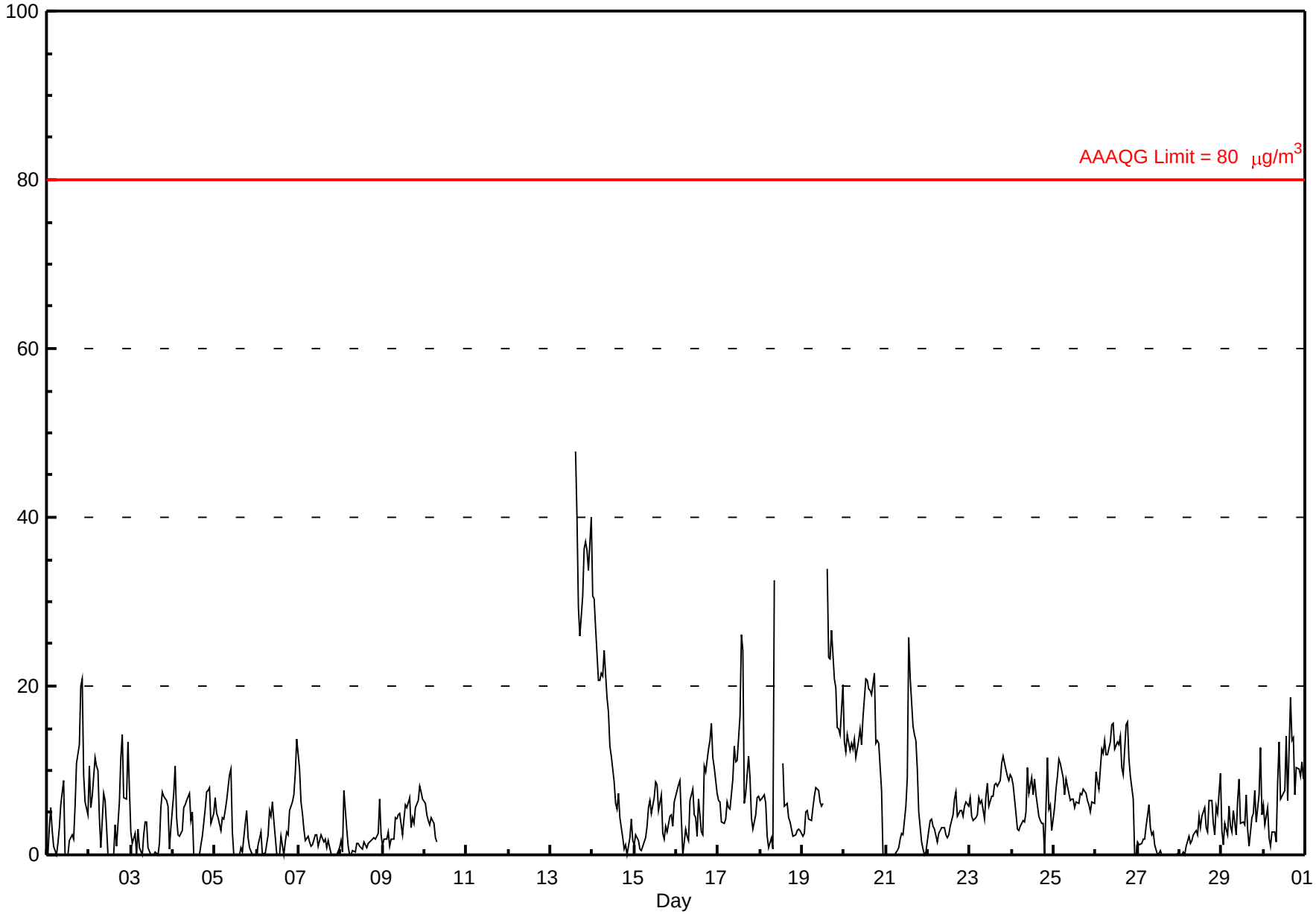
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Maximums

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

Portable Clairmont - November 2014

Maximum Value: 108.0 $\mu g/m^3$ on Nov 18 09:00

Maximum Daily Average: 17.8 $\mu g/m^3$ on Nov 20

Minimum Value: 0 $\mu g/m^3$ on Nov 1 13:00

Minimum Daily Average: 3.7 $\mu g/m^3$ on Nov 27

Maximum Diurnal Average: 14.0 $\mu g/m^3$ at hour 9

Minimum Diurnal Average: 7.6 $\mu g/m^3$ at hour 6

Monthly Average: 10.26 $\mu g/m^3$

Percentiles: P_1 = 0.0 P_{10} = 3.1 Q_1 = 4.9 Median = 8.2 Q_3 = 12.7 P_{90} = 20.1 P_{99} = 44.2

Hours in Service:	720
Hours of Data:	637
Hours of Missing Data:	83
Hours of Calibration:	3
Percent Operational Time:	88.9

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-Nov	2	6	9	8	5	3	4	6	12	13	8	3	0	4	6	5	9	15	17	26	26	16	10	9	9.3	26.1
2-Nov	25	10	10	14	14	14	8	4	13	13	8	3	0	0	0	9	4	11	15	21	11	12	21	11	10.4	25.1
3-Nov	11	5	7	4	10	4	3	6	9	9	4	3	0	0	4	1	4	8	9	9	8	9	6	5	5.7	10.6
4-Nov	9	14	8	6	5	6	8	9	10	11	13	9	4	0	0	0	4	4	8	9	10	11	9	8	7.3	14.0
5-Nov	10	9	8	5	9	8	8	11	14	16	8	3	2	2	3	5	5	7	9	6	4	2	1	1	6.5	15.6
6-Nov	2	4	5	3	2	2	5	10	10	9	8	4	0	2	4	4	3	5	4	9	8	9	13	16	5.9	15.8
7-Nov	16	9	8	6	6	4	5	5	6	6	6	3	5	5	6	6	4	4	3	1	0	1	0	5	5.0	16.4
8-Nov	4	3	12	7	4	3	1	3	3	5	4	3	3	5	4	3	4	4	5	5	4	6	11	7	4.8	11.7
9-Nov	4	5	5	7	4	4	5	7	6	8	8	5	8	9	9	10	8	7	8	8	9	10	10	10	7.3	10.2
10-Nov	9	7	7	6	8	6	5	7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	8.8
11-Nov	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--
12-Nov	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-Nov	N	N	N	N	N	N	N	N	N	N	N	N	N	N	54	44	35	29	36	39	41	40	37	46	--	53.9
14-Nov	34	35	34	24	23	25	28	29	27	20	18	14	12	11	9	12	10	3	2	5	3	5	7	7	16.6	35.2
15-Nov	4	6	5	4	5	6	5	6	9	12	13	14	14	13	9	10	5	6	9	6	9	9	8	13	8.3	14.0
16-Nov	23	15	14	11	4	5	8	7	10	13	10	8	4	10	6	6	21	12	15	18	20	16	16	11	11.7	22.7
17-Nov	10	17	7	6	7	12	9	9	13	18	14	23	23	37	36	9	11	16	16	7	5	8	11	11	14.0	37.0
18-Nov	8	10	10	9	5	4	5	3	108	P	C	C	C	14	8	8	7	6	4	4	5	4	4	5	11.7	108.0
19-Nov	4	4	7	7	6	6	7	9	11	11	9	9	9	M	44	26	33	39	36	26	21	22	18	34	17.3	44.3
20-Nov	21	14	21	20	19	14	16	13	16	19	18	20	25	27	21	22	21	26	24	18	18	12	0	0	17.8	27.3
21-Nov	0	4	1	0	1	1	2	3	4	4	3	9	18	29	25	18	17	15	14	10	4	3	4	3	8.0	28.6
22-Nov	5	6	6	6	5	3	4	6	6	6	5	4	3	5	7	8	10	8	7	7	7	8	10	9	6.3	10.0
23-Nov	9	7	6	7	6	13	10	10	7	9	11	9	10	11	12	11	12	13	13	14	12	11	10	11	10.2	14.2
24-Nov	13	11	9	5	6	7	7	7	8	16	11	16	13	12	14	7	7	6	5	6	49	7	8	7	10.7	48.7
25-Nov	8	10	12	14	14	11	9	12	11	8	8	8	7	8	8	10	11	10	9	8	8	7	8	8	9.5	14.3
26-Nov	15	12	12	16	16	21	15	15	16	17	20	17	21	19	19	13	12	28	25	19	14	9	1	2	15.6	28.2
27-Nov	4	3	4	5	3	6	10	5	6	5	4	2	3	3	3	2	1	10	0	2	2	2	2	2	3.7	10.2
28-Nov	3	3	4	3	3	4	4	4	4	5	4	7	6	8	10	9	5	14	15	7	7	8	15	18	7.1	17.9
29-Nov	8	5	8	5	10	6	7	8	5	12	16	7	10	9	14	13	6	9	11	12	8	15	20	7	9.7	20.3
30-Nov	8	7	8	8	4	6	8	5	20	36	14	16	19	23	15	32	26	20	14	16	18	22	22	12	15.7	35.6
	10.0	8.8	9.2	7.9	7.6	7.6	7.7	8.1	14.0	12.0	9.9	8.8	8.8	10.7	13.1	11.3	10.9	12.3	12.3	11.9	12.3	10.5	10.4	10.2	Diurnal Average	
	33.6	35.2	34.1	23.6	22.8	24.8	27.9	29.3	108.0	35.6	20.1	22.5	25.2	37.0	53.9	44.2	35.4	39.4	36.1	39.3	48.7	39.8	37.3	45.8	Diurnal Maximum	

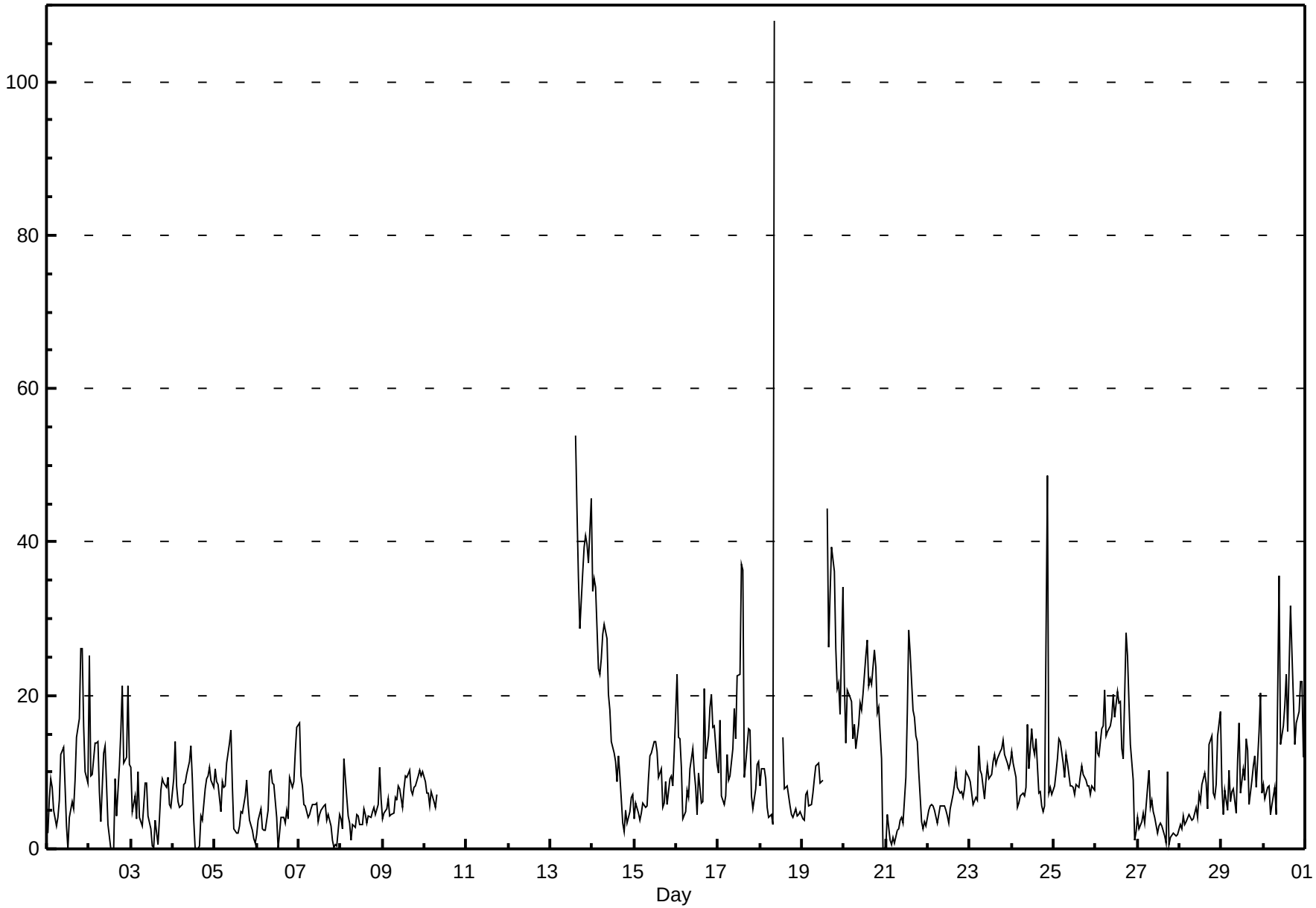
C - Calibration P - Power Failure M - Maintenance N - Not Valid

Peace Airshed Zone Association

Hourly Maximums

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

Portable Clairmont - November 2014

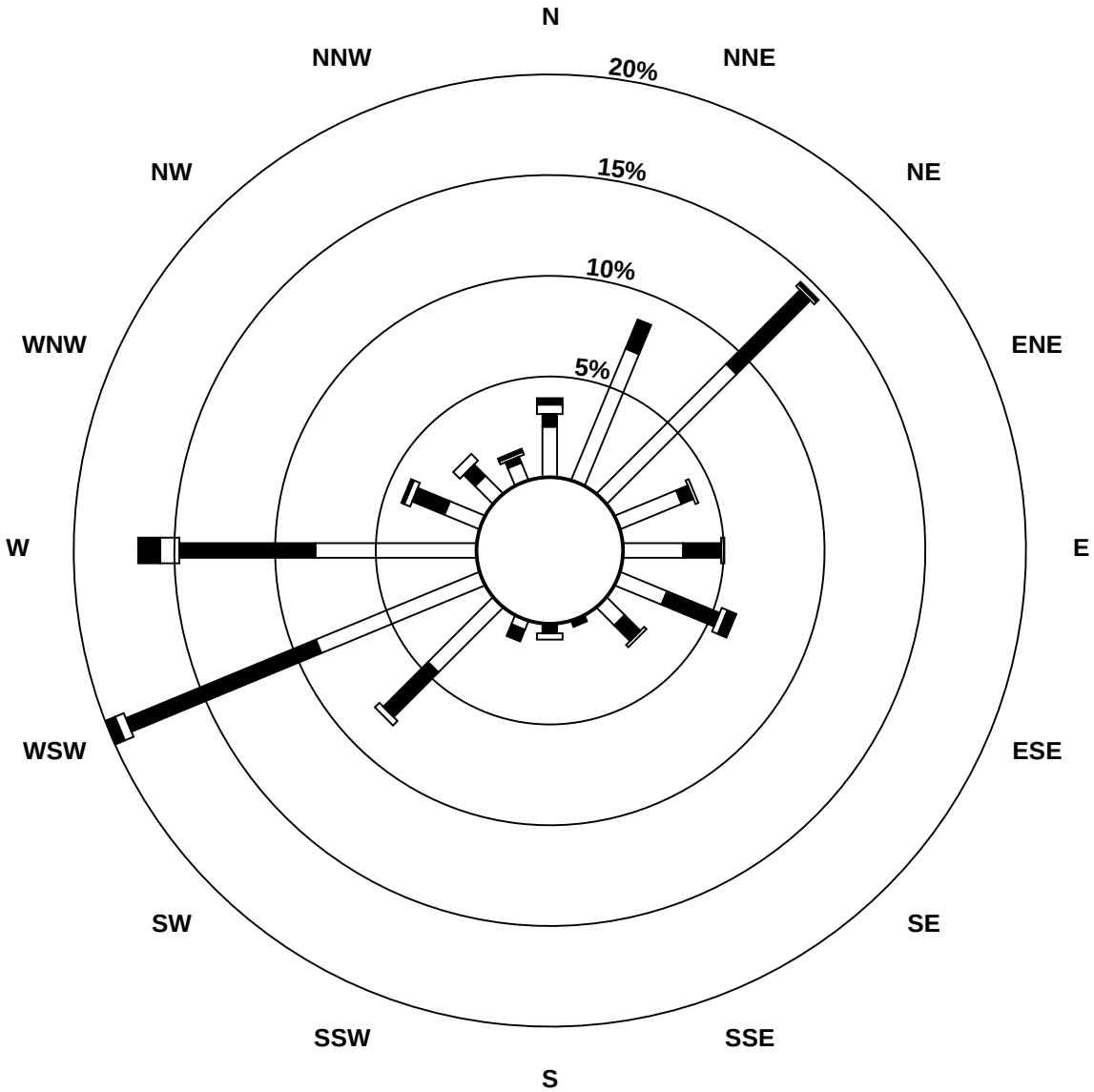


Peace Airshed Zone Association

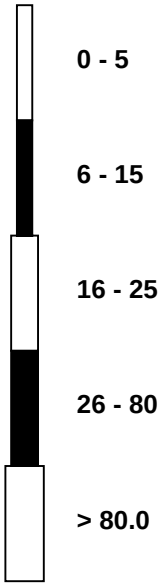
Pollutant Rose

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

Portable Clairmont - November 2014



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



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Portable Clairmont - November 2014

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

Maximum Value: 8.4 ^{o}C on Nov 4 15:00 Maximum Daily Average: 3.8 ^{o}C on Nov 6

Minimum Value: -36 ^{o}C on Nov 29 10:00 Minimum Daily Average: -29.6 ^{o}C on Nov 29

Maximum Diurnal Average: -7.3 ^{o}C at hour 16 Minimum Diurnal Average: -12.3 ^{o}C at hour 9

Monthly Average: -9.79 ^{o}C Percentiles: P_1 = -33.6 P_{10} = -23.6 Q_1 = -17.3 Median = -8.4 Q_3 = -2.0 P_{90} = 2.4 P_{99} = 6.3

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Nov	2	1	0	0	-1	-2	-3	-3	-2	2	3	3	4	6	7	7	6	3	1	-1	-1	-2	-2	-3	1.0	6.7
2-Nov	-3	-4	-4	-4	-4	-4	-3	-3	-2	1	1	2	3	4	4	4	3	3	2	3	4	2	0	0	0.2	4.3
3-Nov	0	-1	-1	-1	-2	-2	-3	-3	-2	-1	1	2	4	5	4	4	2	2	1	1	1	2	3	2	0.8	4.9
4-Nov	1	1	1	1	1	1	1	1	1	1	2	3	5	8	8	8	7	5	3	3	2	2	3	2	3.0	8.4
5-Nov	1	1	0	0	-1	-2	-2	-2	-2	1	3	3	3	4	5	4	3	2	4	4	4	4	4	4	1.9	4.9
6-Nov	4	3	4	4	4	3	3	2	2	3	4	5	6	6	5	6	5	5	4	4	4	3	1	1	3.8	6.1
7-Nov	-1	-1	-1	-2	-2	-3	-3	-4	-4	-4	-4	-4	-3	-3	-3	-3	-3	-4	-4	-5	-5	-5	-5	-5	-3.5	-0.6
8-Nov	-5	-5	-5	-5	-6	-6	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-8	-8	-8	-9	-9	-10	-10	-10	-7.3	-5.2
9-Nov	-10	-10	-10	-10	-10	-10	-11	-11	-10	-10	-9	-8	-8	-7	-7	-6	-6	-7	-7	-7	-8	-8	-8	-9	-8.6	-6.3
10-Nov	-10	-10	-10	-11	-12	-13	-14	-17	-17	-16	-15	-13	-12	-13	-13	-11	-15	-18	-20	-20	-21	-22	-23	-23	-15.3	-9.7
11-Nov	-22	-21	-24	-24	-22	-22	-23	-22	-21	-21	-20	-19	-18	-16	-16	-15	-15	-16	-16	-17	-17	-17	-17	-17	-19.0	-14.7
12-Nov	-19	-18	-18	-21	-23	-23	-22	-21	-20	-19	-19	-17	-18	-16	-17	-17	-19	-20	-21	-22	-22	-24	-24	-25	-20.2	-16.1
13-Nov	-25	-25	-25	-25	-26	-26	-25	-24	-24	-23	-22	-21	-18	-17	-18	-17	-19	-20	-21	-22	-22	-23	-23	-23	-22.3	-17.2
14-Nov	-23	-24	-24	-24	-23	-22	-22	-21	-19	-17	-15	-13	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-12	-12	-15.9	-10.8
15-Nov	-12	-13	-13	-14	-15	-17	-18	-19	-20	-18	-18	-17	-14	-11	-11	-6	-3	-4	-5	-5	-4	-6	-6	-6	-11.4	-3.1
16-Nov	-7	-9	-11	-11	-12	-13	-13	-14	-15	-12	-9	-8	-8	-5	-6	-6	-8	-10	-10	-12	-13	-14	-15	-16	-10.6	-5.0
17-Nov	-16	-16	-17	-17	-17	-18	-18	-18	-18	-15	-12	-10	-9	-6	-6	-7	-7	-6	-3	-1	-1	-2	-2	-1	-10.2	-0.6
18-Nov	-2	-2	-1	-1	-1	-3	-3	-4	-5	P	-2	-1	0	-1	-2	-2	-3	-3	-3	-4	-4	-4	-4	-4	-2.6	-0.3
19-Nov	-4	-4	-4	-4	-5	-5	-6	-6	-7	-7	-6	-4	-4	-2	-2	-4	-6	-7	-7	-7	-7	-8	-8	-7	-5.5	-1.6
20-Nov	-7	-7	-7	-6	-5	-5	-5	-4	-3	-2	-1	1	2	2	2	1	1	1	1	1	1	2	4	3	-1.2	3.8
21-Nov	3	3	2	2	3	2	2	1	1	1	1	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0.4	2.8
22-Nov	-2	-2	-2	-3	-4	-5	-6	-6	-6	-7	-7	-8	-8	-8	-9	-10	-10	-10	-11	-11	-11	-11	-12	-12	-7.5	-1.5
23-Nov	-13	-14	-14	-14	-15	-15	-16	-16	-16	-15	-14	-13	-10	-9	-8	-8	-7	-7	-7	-6	-6	-5	-5	-5	-10.8	-5.2
24-Nov	-6	-7	-8	-10	-11	-13	-14	-14	-14	-12	-10	-9	-7	-5	-6	-6	-6	-5	-5	-5	-4	-4	-3	-6	-7.9	-3.4
25-Nov	-8	-9	-9	-10	-9	-9	-10	-10	-11	-11	-10	-10	-10	-9	-9	-10	-10	-10	-10	-11	-11	-12	-13	-14	-10.2	-8.0
26-Nov	-14	-16	-18	-19	-20	-20	-20	-20	-21	-20	-19	-17	-15	-15	-14	-16	-17	-15	-14	-12	-10	-11	-12	-13	-16.1	-10.4
27-Nov	-14	-14	-15	-15	-16	-16	-17	-17	-18	-18	-18	-18	-18	-19	-19	-19	-19	-19	-19	-19	-20	-20	-20	-20	-17.8	-13.6
28-Nov	-21	-21	-21	-21	-22	-22	-22	-22	-23	-23	-23	-23	-22	-22	-22	-23	-24	-26	-28	-28	-29	-30	-30	-31	-24.2	-20.6
29-Nov	-31	-32	-33	-34	-34	-35	-35	-35	-35	-36	-33	-32	-30	-28	-25	-24	-24	-25	-24	-24	-24	-26	-25	-26	-29.6	-23.8
30-Nov	-26	-27	-26	-26	-27	-28	-29	-30	-31	-30	-26	-26	-25	-24	-26	-25	-26	-26	-27	-26	-25	-25	-25	-25	-26.5	-23.7
	-9.7	-10.1	-10.5	-10.9	-11.2	-11.7	-12.0	-12.3	-12.3	-11.6	-10.1	-9.4	-8.3	-7.3	-7.4	-7.3	-8.0	-8.6	-8.9	-9.0	-9.1	-9.5	-9.7	-10.0	Diurnal Average	
	3.5	3.2	3.5	3.7	3.8	3.4	2.8	2.5	1.8	2.9	4.3	5.1	6.1	7.9	8.4	7.9	6.7	4.5	4.4	3.7	4.0	3.7	4.1	4.0	Diurnal Maximum	

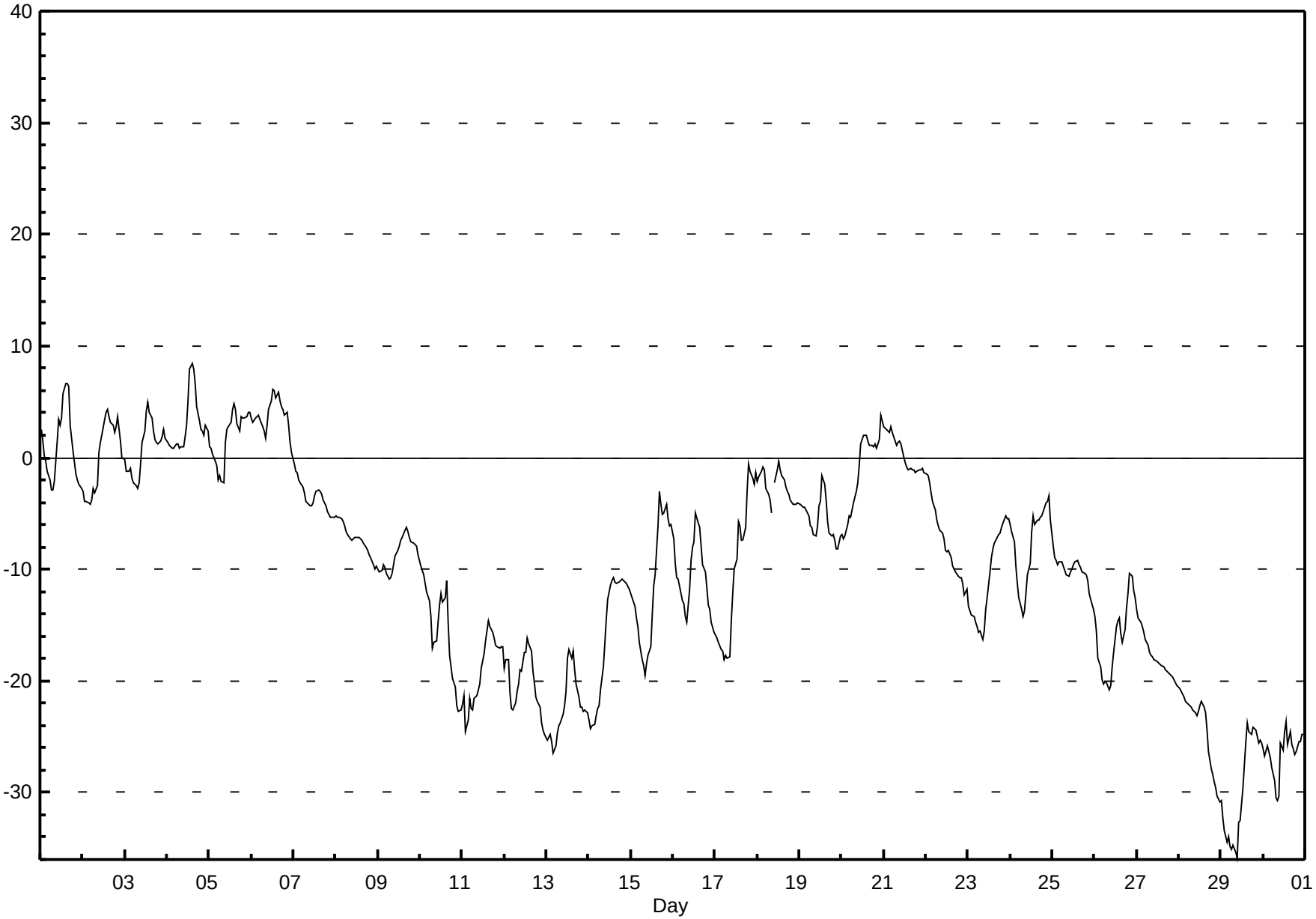
P - Power Failure

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Portable Clairmont - November 2014



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Clairmont - November 2014

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	7	4	3	4	2	1	1	3	2	4	4	3	4	5	5	4	3	3	2	1	1	2	2	1	1.6	7.4
Dir	224	229	267	241	120	69	214	145	111	172	131	96	79	115	102	84	96	108	113	285	106	95	69	133	133.4	223.9
2 Spd	3	1	4	4	3	3	5	2	1	2	4	6	8	5	7	8	6	2	4	5	8	4	4	6	1.1	8.5
Dir	257	129	126	116	133	133	125	112	291	128	120	114	107	59	33	46	67	297	274	252	251	248	205	262	122.2	46.4
3 Spd	5	5	6	7	6	6	7	8	7	8	8	5	3	6	5	5	7	10	11	13	14	11	13	11	1.9	13.7
Dir	254	271	258	268	263	249	256	263	272	274	265	226	211	125	102	59	45	44	42	43	46	35	63	38	359.4	45.5
4 Spd	12	14	13	12	11	8	2	4	4	4	3	6	12	13	14	16	14	8	7	8	8	6	10	13	3.2	16.2
Dir	42	41	41	37	34	39	250	213	171	218	260	197	220	238	240	239	222	230	245	236	247	249	225	223	239.9	239.0
5 Spd	7	9	7	5	4	5	5	4	3	4	3	3	4	6	8	9	9	9	15	14	15	15	15	12	3.4	15.4
Dir	231	225	239	250	262	251	251	272	331	264	235	83	85	65	102	88	52	42	85	90	87	85	91	78	89.8	85.2
6 Spd	10	10	9	9	8	1	4	4	7	5	5	6	6	7	5	9	6	6	7	7	10	10	9	8	2.5	10.5
Dir	67	65	90	99	128	39	337	293	265	253	242	227	248	232	255	272	252	223	238	282	293	311	329	275	273.5	67.3
7 Spd	10	10	11	13	8	6	6	8	9	11	12	12	11	11	11	9	9	10	10	11	13	15	15	18	6.7	17.9
Dir	254	242	273	279	269	265	43	44	40	49	48	40	42	39	32	35	55	58	53	50	50	46	46	40	31.9	40.3
8 Spd	19	19	18	17	17	15	14	13	11	9	8	7	10	9	8	9	8	8	11	13	10	11	13	14	11.5	19.0
Dir	41	31	25	25	22	15	8	5	7	19	9	22	32	34	38	48	62	80	58	46	51	33	32	46	31.3	31.0
9 Spd	15	16	13	13	13	11	7	8	5	3	4	3	8	9	8	8	11	9	5	5	6	8	9	9	4.3	16.1
Dir	40	41	41	44	40	40	8	349	329	243	242	252	249	287	263	256	284	290	311	315	286	279	280	16	339.2	41.0
10 Spd	11	8	10	14	10	16	11	6	6	3	3	3	3	6	4	0	3	2	1	3	2	3	1	1	4.5	15.6
Dir	23	7	354	4	12	5	15	28	46	319	279	360	12	47	24	322	308	319	358	89	101	262	225	137	9.5	4.5
11 Spd	3	2	2	2	6	7	5	5	6	5	6	7	7	10	12	12	11	10	14	11	9	9	8	6	7.1	14.2
Dir	53	26	264	82	64	55	47	50	59	55	52	54	47	43	50	49	45	51	44	43	48	45	56	54	49.3	44.0
12 Spd	2	5	5	1	3	2	1	2	1	2	3	2	3	1	2	3	2	3	3	2	3	3	3	1	1.4	4.8
Dir	283	58	84	210	262	239	169	278	345	159	229	218	223	280	252	266	286	264	265	258	263	251	252	232	250.7	57.7
13 Spd	2	2	2	2	3	4	3	3	3	2	3	2	1	1	3	2	2	5	5	5	2	1	1	2	2.1	5.0
Dir	242	245	257	246	245	256	243	242	234	236	238	226	219	307	355	339	299	267	261	253	244	359	112	274	257.6	252.6
14 Spd	4	2	2	1	1	1	1	1	2	3	3	3	3	3	4	4	3	4	3	4	6	5	5	6	2.8	6.0
Dir	264	245	262	181	275	115	277	318	246	262	253	247	236	224	214	216	228	247	264	226	239	221	225	229	237.7	228.9
15 Spd	6	6	4	4	3	2	2	3	3	3	3	3	6	12	15	18	21	15	11	10	12	10	6	8	7.5	20.6
Dir	229	227	206	243	230	241	244	250	250	249	251	241	252	253	249	257	276	255	231	221	256	263	256	263	250.3	276.1
16 Spd	5	2	3	5	2	2	4	2	1	1	2	2	2	3	4	6	7	6	4	3	5	5	4	4	1.1	7.0
Dir	256	273	249	270	284	271	269	264	280	281	270	74	37	101	64	40	41	36	49	260	249	252	263	256	302.1	40.8
17 Spd	3	2	3	4	4	5	3	1	1	1	2	2	2	4	3	5	4	4	10	13	13	12	13	15	4.8	15.2
Dir	258	259	239	260	249	250	255	285	289	222	235	119	8	118	272	252	247	272	251	267	264	264	264	262	258.8	262.3
18 Spd	14	13	15	16	16	13	15	14	13	P	1	4	2	6	6	4	5	4	6	6	7	7	6	4	3.2	16.4
Dir	264	264	261	269	279	273	281	275	265	P	229	236	101	92	84	78	76	59	92	91	108	109	109	58	267.8	268.6
19 Spd	5	6	7	4	3	5	5	6	6	4	3	3	4	5	4	1	5	5	2	2	3	3	2	1	1.5	6.5
Dir	36	31	37	54	52	58	80	114	113	101	83	86	99	128	114	290	260	265	268	231	264	249	246	179	79.5	36.5
20 Spd	1	6	4	5	2	3	3	4	3	2	1	2	1	2	1	1	1	1	2	4	2	6	10	9	2.5	9.8
Dir	316	261	255	247	245	244	209	242	235	284	231	128	318	1	86	6	316	233	277	224	266	230	232	247	244.9	232.2
21 Spd	6	5	5	5	6	7	1	4	6	6	10	13	17	17	15	18	22	24	25	26	31	25	29	27	11.6	30.6
Dir	245	263	234	255	285	247	234	120	89	81	56	52	45	45	48	41	35	34	32	31	29	36	31	28	34.6	29.3
22 Spd	27	23	21	19	12	12	12	10	10	9	12	17	14	17	16	16	15	16	16	13	11	9	4	3	9.3	26.7
Dir	36	25	23	18	353	312	303	299	305	298	279	276	269	270	268	265	269	275	282	278	271	268	282	277	305.3	36.0

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Clairmont - November 2014

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
23 Spd	1	4	4	6	4	1	1	4	4	4	4	2	2	4	3	4	5	3	4	4	5	5	2	5	1.3	5.6
Dir	235	53	49	46	61	132	216	251	255	258	245	286	252	240	246	226	257	212	229	223	225	247	359	44	250.8	45.9
24 Spd	6	7	7	6	4	1	1	1	0	2	2	3	1	1	6	8	11	8	8	6	1	7	6	9	2.7	10.6
Dir	118	130	123	119	71	84	137	105	336	168	113	357	52	322	56	35	45	54	45	59	25	265	291	35	63.0	45.4
25 Spd	8	13	13	11	8	6	6	7	7	8	7	7	7	7	6	6	7	9	11	10	6	6	6	3	6.4	13.5
Dir	45	23	24	34	19	39	47	105	113	110	111	106	99	107	107	80	45	39	39	37	63	49	35	29	57.9	22.6
26 Spd	3	5	4	4	4	4	3	4	4	4	3	3	1	1	1	3	4	2	2	6	14	17	18	16	2.0	18.2
Dir	258	254	260	263	251	259	249	259	258	261	255	243	228	79	316	246	267	269	58	38	42	37	36	26	347.2	35.7
27 Spd	19	18	19	17	23	22	28	26	28	27	23	23	22	20	20	18	20	21	20	21	22	22	22	21	21.6	27.7
Dir	18	22	17	16	13	14	10	7	14	19	23	21	18	14	17	21	23	23	23	22	23	23	24	17	18.1	13.5
28 Spd	18	18	19	19	19	20	17	16	13	13	12	12	13	9	6	5	6	9	8	9	8	7	5	6	8.8	20.4
Dir	12	11	6	355	350	352	345	338	324	318	320	308	314	302	245	243	237	256	248	251	265	257	261	256	324.3	352.3
29 Spd	4	3	1	1	1	2	4	2	4	4	4	5	4	5	6	7	7	4	6	7	8	10	11	12	5.0	12.5
Dir	249	237	240	128	185	243	258	245	257	249	247	260	241	256	254	260	260	253	268	266	260	266	266	257	256.7	257.0
30 Spd	13	9	10	9	7	5	2	1	3	2	3	2	2	1	4	3	5	6	5	4	3	2	1	2	3.1	12.9
Dir	255	266	256	260	262	243	257	217	147	61	118	354	35	257	292	346	255	260	254	243	265	233	43	49	260.2	254.9
Spd	2.8	3.3	3.2	3.3	3.4	3.1	3.0	2.4	2.0	1.4	1.2	1.2	1.4	1.4	1.4	1.8	2.4	2.3	2.4	2.1	2.4	2.6	2.8	3.2	Diurnal Average	
Dir	359.2	3.8	358.1	352.2	352.0	340.2	337.0	328.2	334.2	336.3	330.0	1.4	8.5	12.6	6.9	345.2	344.4	348.6	6.3	357.7	352.1	348.2	7.4	2.4		
Spd	26.7	22.9	20.8	19.1	23.4	22.1	27.6	26.0	27.7	26.9	23.5	22.8	21.8	20.0	20.4	18.4	21.6	23.9	24.7	26.2	30.6	25.4	28.6	27.5	Diurnal Maximum	
Dir	36.0	25.2	22.6	18.2	13.1	14.2	10.4	6.9	13.5	19.4	23.3	20.5	17.8	13.9	17.1	257.1	35.1	34.2	32.5	31.4	29.3	35.8	31.0	27.9		

Maximum Speed Value: 31 km/h on Nov 21 21:00
Maximum Daily Speed Average: 21.6 km/h on Nov 27
Maximum Diurnal Speed Average: 3.4 km/h at hour 5

Minimum Speed Value: 0 km/h on Nov 10 16:00
Minimum Daily Speed Average: 1.1 km/h on Nov 12
Minimum Diurnal Speed Average: 1.2 km/h at hour 11

Monthly Average Velocity: 2.30 km/h 352.29 deg

Speed Percentiles: $P_1 = 0.6$ $P_{10} = 1.6$ $Q_1 = 3.0$ Median = 5.5 $Q_3 = 10.0$ $P_{90} = 15.3$ $P_{99} = 26.6$

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

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Percent Operational Time:	99.9

P - Power Failure

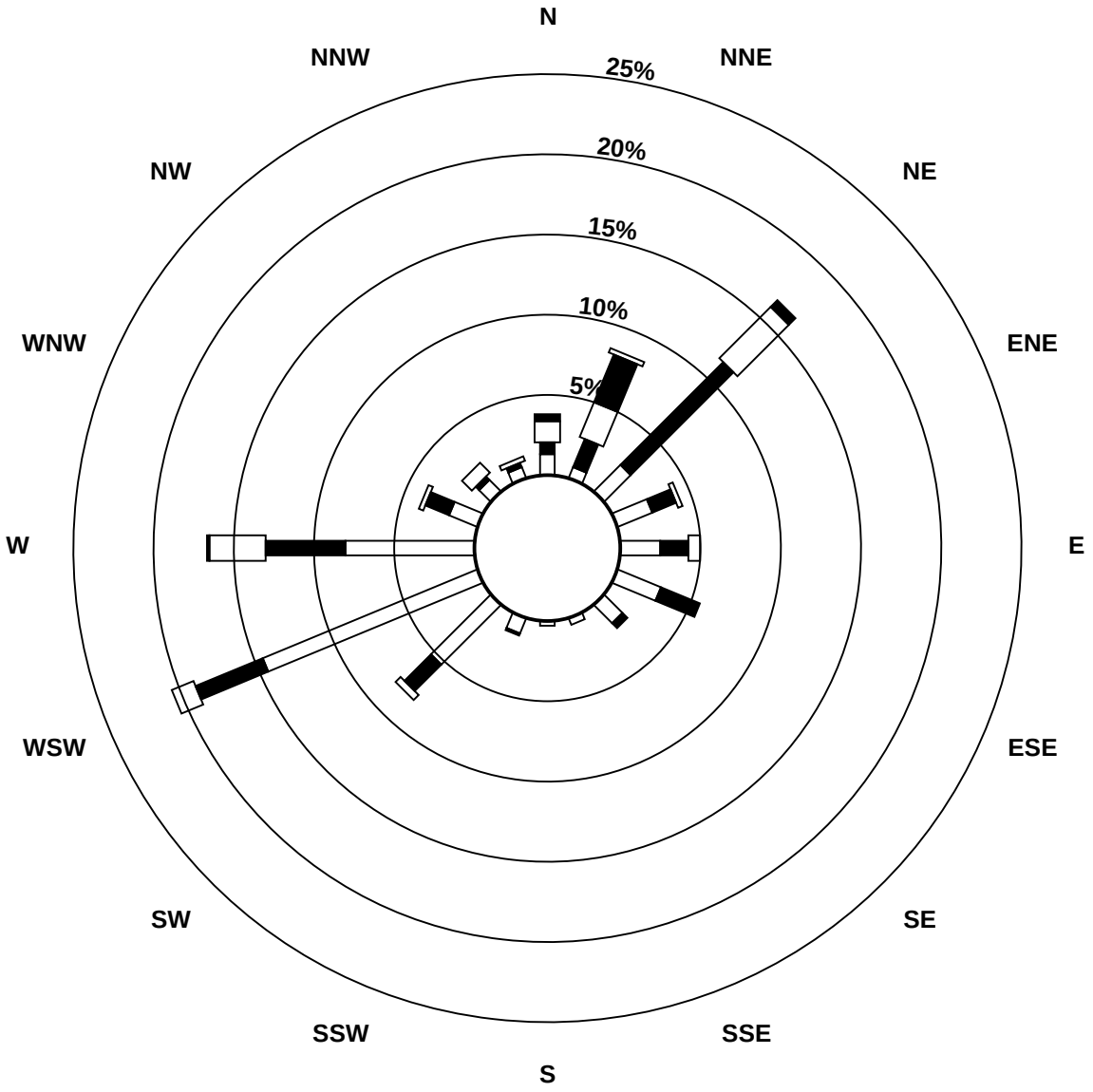
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	14	10	19	16	0	0	59
NorthEast	25	73	52	16	2	0	168
East	33	25	6	0	0	0	64
SouthEast	25	13	0	0	0	0	38
South	8	1	0	0	0	0	9
SouthWest	90	29	7	0	0	0	126
West	116	70	34	1	0	0	221
NorthWest	20	7	7	0	0	0	34
Total	331	228	125	33	2	0	719

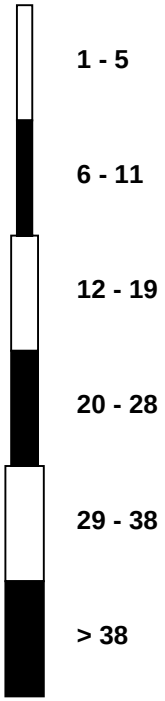
Wind Rose

Wind Speed (WS) (km/h)

Portable Clairmont - November 2014



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Clairmont - November 2014

Maximum Speed: 31 km/h on Nov 21 21:00

Maximum Daily Speed Average: 21.8 km/h on Nov 27

Minimum Speed: 1 km/h on Nov 20 00:00

Minimum Daily Speed Average: 2.8 km/h on Nov 13

Maximum Diurnal Speed Average: 8.8 km/h at hour 21

Minimum Diurnal Speed Average: 5.8 km/h at hour 10

Monthly Average Speed: 7.58 km/h

Percentiles: $P_1 = 1.4$ $P_{10} = 2.4$ $Q_1 = 3.6$ Median = 5.8 $Q_3 = 10.1$ $P_{90} = 15.3$ $P_{99} = 26.7$

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Percent Operational Time:	99.9

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-Nov	8	5	4	5	3	2	2	3	3	4	4	4	5	5	5	4	3	3	3	1	1	2	2	2	3.6	7.7
2-Nov	4	2	4	4	3	3	6	4	3	3	4	7	8	6	7	9	6	4	5	6	8	5	4	6	4.9	8.6
3-Nov	5	5	6	7	6	6	7	8	8	8	9	5	4	6	5	6	7	10	11	13	14	11	13	11	7.9	13.7
4-Nov	12	14	13	12	12	8	5	6	5	5	4	6	13	13	14	16	14	9	7	9	8	7	10	13	9.8	16.3
5-Nov	8	9	7	5	5	5	5	5	4	5	4	5	5	6	8	9	9	10	15	14	15	16	15	13	8.4	15.6
6-Nov	11	10	9	9	8	4	5	4	8	5	5	6	6	7	6	9	7	6	7	8	10	10	10	9	7.4	10.7
7-Nov	10	10	12	13	9	6	7	8	9	11	12	12	12	11	11	9	9	10	10	12	13	15	16	18	11.1	17.9
8-Nov	19	19	18	17	17	15	14	13	11	9	8	7	10	9	8	9	8	8	11	13	10	11	13	14	12.1	19.0
9-Nov	15	16	13	13	13	11	7	8	5	4	4	6	8	9	8	8	11	9	5	5	6	8	9	11	8.8	16.1
10-Nov	12	8	10	14	11	16	12	7	8	4	3	3	4	6	4	2	3	2	2	3	2	3	2	1	5.9	15.7
11-Nov	4	5	3	3	7	7	5	5	6	5	6	7	7	10	12	12	11	10	14	11	9	9	8	6	7.6	14.2
12-Nov	3	5	5	2	3	2	1	3	2	3	3	3	3	2	3	3	3	3	3	2	3	3	3	2	2.8	5.3
13-Nov	2	2	2	2	3	4	3	3	3	3	3	2	2	2	3	3	3	5	5	5	2	2	2	2	2.8	5.1
14-Nov	4	2	2	2	2	1	2	2	2	3	4	3	3	4	4	4	4	4	4	5	6	6	5	6	3.5	6.3
15-Nov	6	7	5	4	3	2	2	3	3	3	3	3	6	13	15	19	21	15	12	10	12	10	7	8	8.0	20.7
16-Nov	5	3	4	5	3	3	4	3	2	2	2	2	3	3	4	6	7	6	4	3	5	5	4	4	3.9	7.0
17-Nov	3	3	4	4	4	5	3	2	1	2	3	2	2	4	3	5	4	5	10	14	13	12	13	15	5.7	15.3
18-Nov	14	13	15	16	16	13	15	15	13	P	4	5	3	7	6	4	5	5	6	6	7	7	6	4	9.0	16.5
19-Nov	5	6	7	4	3	5	5	6	6	5	4	4	4	6	4	4	5	5	2	2	3	4	2	1	4.2	6.6
20-Nov	2	6	4	5	2	3	4	4	3	2	3	2	2	3	2	3	3	2	4	5	3	6	10	9	3.8	10.0
21-Nov	6	5	6	5	7	7	3	4	6	6	10	14	17	17	15	18	22	24	25	26	31	25	29	28	14.8	30.6
22-Nov	27	23	21	19	14	12	12	10	10	9	12	17	14	17	16	16	15	16	16	13	12	9	4	3	14.0	26.8
23-Nov	2	4	5	6	4	2	2	4	4	4	4	5	6	5	6	6	6	4	4	4	5	5	4	6	4.5	6.2
24-Nov	7	7	7	6	4	2	2	2	2	3	2	3	3	3	7	9	11	9	8	6	4	8	6	10	5.4	10.7
25-Nov	8	14	13	11	8	6	6	7	8	8	7	7	7	8	6	6	7	9	11	10	6	6	6	3	7.8	13.6
26-Nov	3	5	4	4	4	4	3	5	4	4	3	3	2	2	3	3	4	3	2	6	14	17	18	16	5.7	18.3
27-Nov	19	18	19	17	23	22	28	26	28	27	24	23	22	20	20	18	20	21	20	21	22	22	22	21	21.8	27.8
28-Nov	18	18	19	19	19	20	17	16	13	13	12	12	13	9	6	5	6	9	8	9	8	7	5	6	12.0	20.5
29-Nov	4	3	2	1	1	3	4	2	4	4	4	5	4	5	7	7	7	4	6	7	9	10	11	13	5.4	12.5
30-Nov	13	9	10	10	7	6	3	1	3	3	3	2	2	3	4	3	5	6	5	4	4	3	2	3	4.8	12.9
	8.7	8.6	8.4	8.2	7.5	6.9	6.5	6.2	6.3	5.8	5.8	6.2	6.6	7.3	7.5	7.8	8.2	7.8	8.3	8.4	8.8	8.7	8.7	8.8	Diurnal Average	
	26.8	23.0	20.9	19.2	23.5	22.2	27.8	26.1	27.8	26.9	23.5	22.8	21.9	20.1	20.5	18.6	21.7	24.0	24.8	26.3	30.6	25.5	28.7	27.6	Diurnal Maximum	

P - Power Failure

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

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Portable Clairmont - November 2014

Maximum Value: 94.9 deg on Nov 10 19:00

Minimum Value: 3.1 deg on Nov 3 18:00

Percentiles: P_1 = 3.8 P_{10} = 5.5 Q_1 = 8.1 Median = 14.0 Q_3 = 28.8 P_{90} = 59.8 P_{99} = 89.9

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

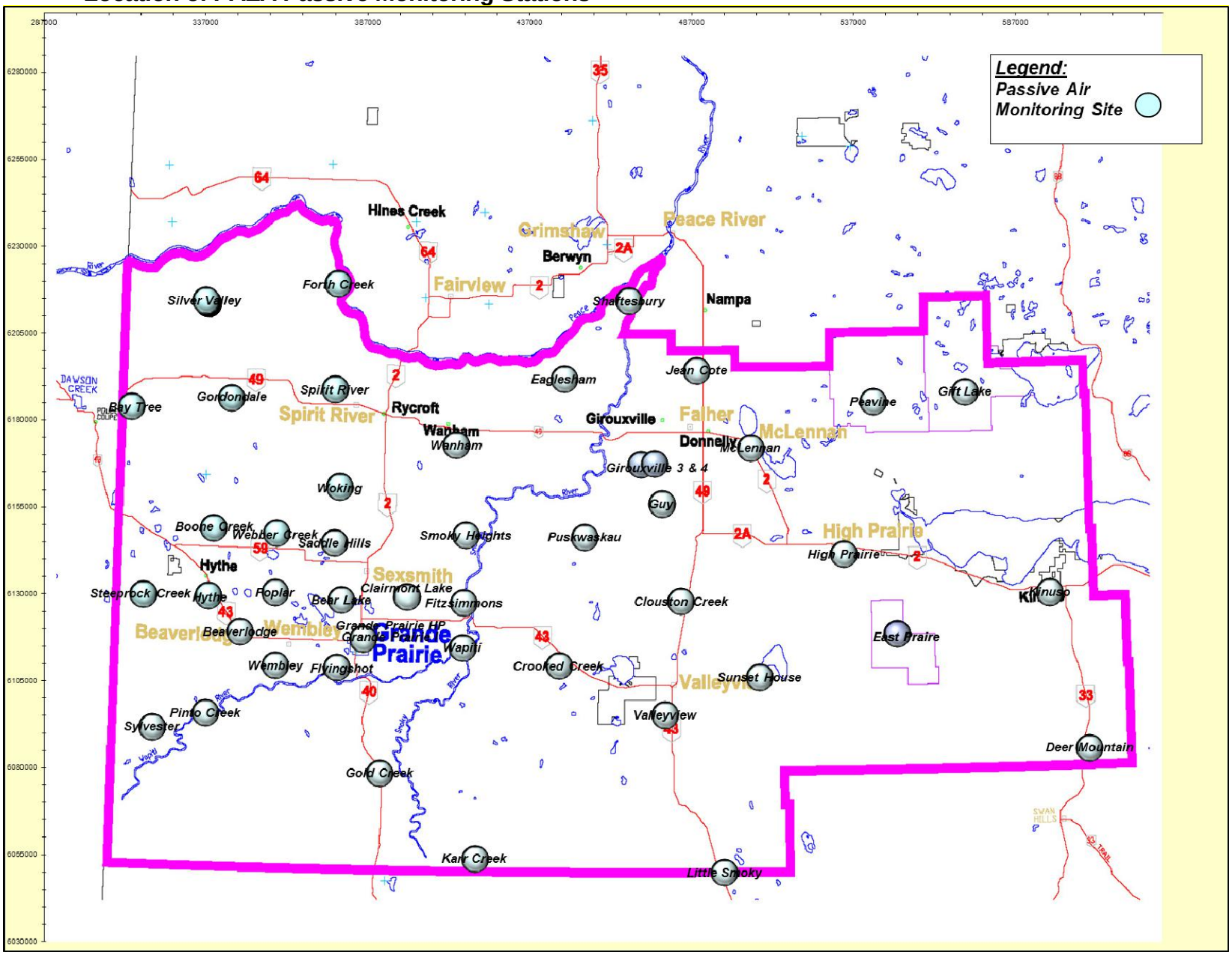
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Nov	15	43	62	40	51	67	74	52	67	20	15	34	41	13	16	10	20	27	66	74	60	39	50	81	81.4
2-Nov	36	54	15	17	24	50	10	75	80	28	12	14	15	24	10	10	33	81	50	16	9	19	19	25	81.4
3-Nov	19	14	13	8	7	7	4	9	15	8	11	22	47	13	12	12	11	3	5	4	5	7	12	7	46.9
4-Nov	7	5	6	7	6	12	74	49	46	34	47	21	13	7	8	7	9	33	35	26	18	27	8	8	74.0
5-Nov	17	10	15	31	46	20	17	23	63	25	45	72	32	11	12	13	13	7	8	11	8	9	5	9	72.5
6-Nov	11	11	17	13	15	88	35	42	32	39	15	19	17	11	22	19	27	14	8	17	9	8	7	28	88.2
7-Nov	8	12	8	6	10	16	46	12	10	10	9	9	8	9	8	11	10	9	9	8	5	5	5	4	45.5
8-Nov	5	5	6	5	6	6	8	7	7	11	7	10	10	9	12	11	15	10	15	7	10	6	5	6	15.3
9-Nov	4	5	6	7	6	9	14	7	25	67	33	53	17	11	13	10	13	7	26	10	15	7	5	42	67.2
10-Nov	10	12	8	8	10	5	8	27	47	63	46	16	49	22	16	95	30	38	95	27	47	15	29	71	94.9
11-Nov	26	74	23	60	12	7	7	7	9	14	8	7	7	6	5	5	5	7	5	6	6	6	6	12	74.5
12-Nov	56	27	28	57	13	32	56	29	88	34	13	31	21	60	21	27	18	8	9	36	15	12	10	42	88.1
13-Nov	24	21	24	21	9	12	11	15	17	17	14	18	40	59	16	41	39	12	13	11	24	71	61	49	71.5
14-Nov	11	23	35	68	91	52	58	74	43	19	14	13	19	20	21	19	22	26	59	27	21	22	21	17	90.5
15-Nov	17	19	21	20	19	14	13	12	15	13	12	11	10	6	6	8	5	14	9	12	9	5	16	7	20.6
16-Nov	51	68	65	9	69	70	14	50	82	86	43	56	33	29	16	5	3	9	30	54	12	12	10	17	85.6
17-Nov	26	25	23	14	16	13	32	63	70	60	30	62	38	19	67	13	12	22	13	12	9	9	12	6	70.1
18-Nov	7	7	5	7	6	9	8	13	9	P	80	24	82	8	8	20	14	27	13	10	8	9	13	17	82.5
19-Nov	9	12	7	32	18	16	15	10	10	30	30	39	23	19	32	84	15	10	24	41	29	31	29	37	83.7
20-Nov	64	11	14	10	29	33	21	22	22	57	63	13	92	61	52	76	77	76	55	35	64	24	10	9	92.3
21-Nov	23	17	17	21	26	9	94	17	15	14	12	8	6	5	6	5	5	5	4	4	4	5	5	4	93.5
22-Nov	4	4	4	4	37	9	7	9	7	9	11	6	7	7	8	7	7	8	7	7	9	9	26	26	36.7
23-Nov	76	18	16	10	13	71	74	12	20	25	17	77	89	53	70	45	46	47	25	19	18	10	62	29	89.5
24-Nov	18	12	11	11	19	77	45	38	87	61	46	37	84	95	45	32	6	8	5	19	91	18	15	30	94.5
25-Nov	8	8	11	8	17	10	12	18	11	9	9	11	15	12	21	13	17	7	4	6	13	11	6	27	27.4
26-Nov	20	14	18	11	16	15	16	14	13	18	20	17	85	49	80	17	13	42	54	8	6	5	6	9	85.3
27-Nov	5	5	5	6	4	4	6	4	4	4	4	4	6	6	5	6	5	4	5	4	4	4	5	6	6.0
28-Nov	6	6	6	6	6	5	5	5	8	6	5	5	7	18	9	11	11	7	7	6	7	11	15	10	17.9
29-Nov	18	41	79	26	35	38	19	32	12	12	21	14	15	28	9	7	11	22	16	14	9	7	8	5	79.4
30-Nov	5	7	6	9	13	37	61	62	10	46	19	45	56	80	24	27	19	10	14	21	31	41	78	44	80.2
	76.2	74.5	79.4	68.2	90.5	88.2	93.5	74.7	88.1	85.6	80.5	77.4	92.3	94.5	80.4	94.7	77.4	81.4	94.9	74.3	91.4	71.5	78.3	81.4	

P - Power Failure

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for November 2014

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
5a	Boone Creek	**0.6**	**19.5**	**1.4**		
5b	Boone Creek	**0.2**	**26.6**	**2.7**		
10a	Woking	**0.2**	**38.2**	**6.0**		
10b	Woking	**0.4**	**27.4**	**1.5**		
28a	Clairmont Lake	**0.2**	**35.5**	**1.2**		
28b	Clairmont Lake	**0.2**	**30.6**	**2.0**		
48a	Deer Mountain	**0.3**	**33.3**	**4.5**		
48b	Deer Mountain	**0.5**	**28.5**	**1.9**		
63a	Girouxville 3				**0.3**	
63b	Girouxville 3				**0.3**	
1	Silver Valley	**0.7**	**33.0**	**1.3**		08-27-081-11 W6M
2	Bay Tree	**0.1**	**34.0**	**2.5**		13-16-078-13 W6M
3	Fourth Creek	**0.4**	**36.0**	**2.5**		04-13-082-07 W6M
4	Gordondale	**0.1**	**37.9**	**1.8**		04-34-078-10 W6M
5	Boone Creek	**0.4**	**23.0**	**2.0**		16-36-074-11 W6M
7	Steeprock Creek	**0.2**	**29.0**	**2.0**		09-35-072-13 W6M
9	Spirit River	**0.3**	**28.7**	**2.1**		08-12-079-07 W6M
10	Woking	**0.3**	**32.8**	**3.7**		01-13-076-07 W6M
11	Webber Creek	**0.1**	**25.7**	**0.6**		09-36-074-09 W6M
12	Hythe	**0.6**	**31.6**	**1.1**		14-36-072-11 W6M
14	Sylvester	**0.2**	**30.5**	**0.7**		08-06-069-12 W6M
16	Beaverlodge	**0.7**	**29.1**	**2.6**		15-36-071-10 W6M
17	Poplar	**0.2**	**26.3**	**1.2**		13-06-073-08 W6M
18	Saddle Hills	**0.6**	**33.5**	**0.9**		04-25-074-07 W6M
19	Wanham	**0.1**	**24.2**	**1.6**		16-22-077-03 W6M
20	Shaftesbury	**0.4**	**35.5**	**2.9**		04-03-082-23 W5M
21	Eaglesham	**0.5**	**32.5**	**0.7**		16-21-079-25 W5M
23	Bear Lake	**0.6**	**28.3**	**1.2**		15-31-072-06 W6M
24	Wembley	**0.1**	**32.4**	**2.0**		12-31-070-08 W6M
25	Pinto Creek	**0.6**	**29.9**	**4.3**		04-24-069-11 W6M
26	Flyingshot	**0.4**	**35.7**	**0.9**		15-36-070-07 W6M
27	Grande Prairie I	**0.4**	**25.9**	**3.1**		08-15-071-06 W6M

PAZA Passive Results for November 2014 (Continued)

28	Clairmont Lake	**0.2**	**33.1**	**1.6**		09-06-073-04 W6M
29	Smoky Heights	**0.2**	**33.2**	**1.5**		04-06-075-02 W6M
30	Fitzsimmons	**0.2**	**31.5**	**0.9**		15-36-072-03 W6M
32	Gold Creek	**0.3**	**18.4**	**1.2**		06-33-067-05 W6M
33	Wapiti	**0.3**	**34.2**	**1.6**		02-25-071-03 W6M
34	Puskwaskau	**0.2**	**38.4**	**0.9**		15-35-074-25 W5M
35	Jean Cote	**0.2**	**20.9**	**3.2**		12-35-079-21 W5M
36	Guy	**0.2**	**28.5**	**3.4**		03-04-076-22 W5M
37	Crooked Creek	**0.3**	**31.6**	**5.2**		16-01-071-26 W5M
38	Karr Creek	**0.4**	**23.3**	**1.9**		10-16-065-02 W6M
39	Clouston Creek	**0.3**	**41.8**	**3.3**		12-01-073-22 W5M
40	McLennan	**0.2**	**31.4**	**2.5**		03-29-077-19 W5M
41	Valleyview	**0.8**	**32.5**	**14.4**		09-30-069-22 W5M
42	Sunset House	**0.4**	**18.1**	**1.4**		05-32-070-19 W5M
43	High Prairie	**0.5**	**28.7**	**0.7**		16-13-074-17 W5M
44	Peavine	**0.3**	**29.3**	**5.3**		03-05-079-15 W5M
45	Gift Lake	**0.1**	**15.5**	**0.3**	**0.1**	10-07-079-12 W5M
46	Little Smoky	**0.2**	**31.8**	**2.9**		12-01-065-21 W5M
47	Kinuso	**0.8**	**33.2**	**1.2**		12-10-073-10 W5M
48	Deer Mountain	**0.4**	**30.9**	**3.2**		15-22-068-09 W5M
49	Grande Prairie HP	**0.5**	**33.7**	**2.9**		17-26-071-06 W6M
50	East Prairie	**0.6**	**26.6**	**12.4**		13-02-072-15 W5M
63	Girouxville 3				**0.3**	14-02-077-23 W5M
64	Girouxville 4				**0.2**	4-08-077-22 W5M

*BDL = Below Detection Level

*N/S - No sample

Passive Summary for November 2014

Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2	Hydrogen Sulphide H_2S
	ppb	ppb	ppb	ppb
	Passive Summary for November 2014 (PAZA Zone)			
Mean	**0.4**	**30.0**	**2.6**	**0.2**
Standard Deviation	**0.2**	**5.4**	**2.7**	**0.1**
Minimum	**0.1**	**15.5**	**0.3**	**0.1**
Minimum At	**Gift Lake (#45)**	**Gift Lake (#45)**	**Gift Lake (#45)**	**Gift Lake (#45)**
Maximum	**0.8**	**41.8**	**14.4**	**0.3**
Maximum At	**Kinuso (#47)**	**Clouston Creek (#39)**	**Valleyview (#41)**	**Girouxville 3 (#63)**

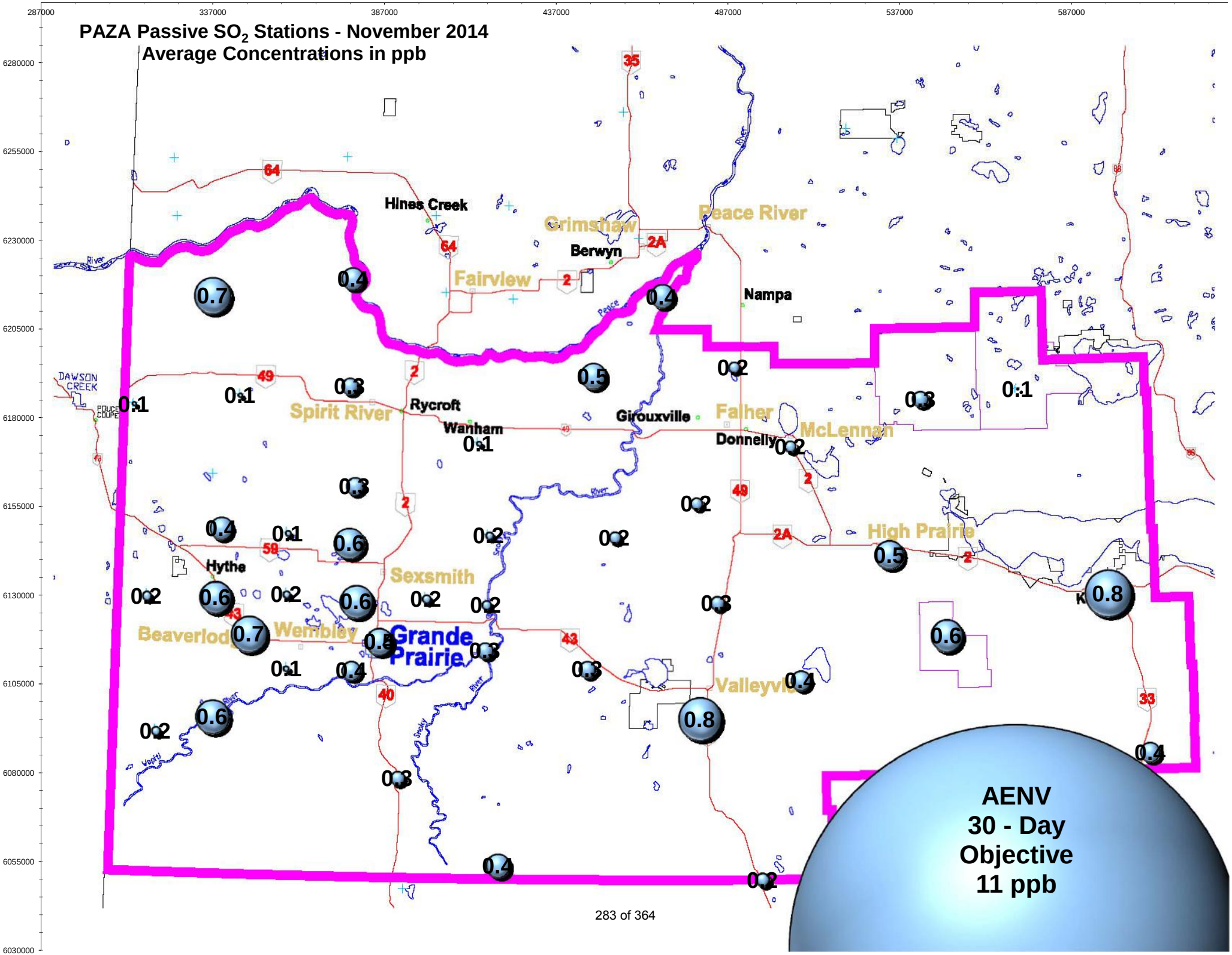
Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

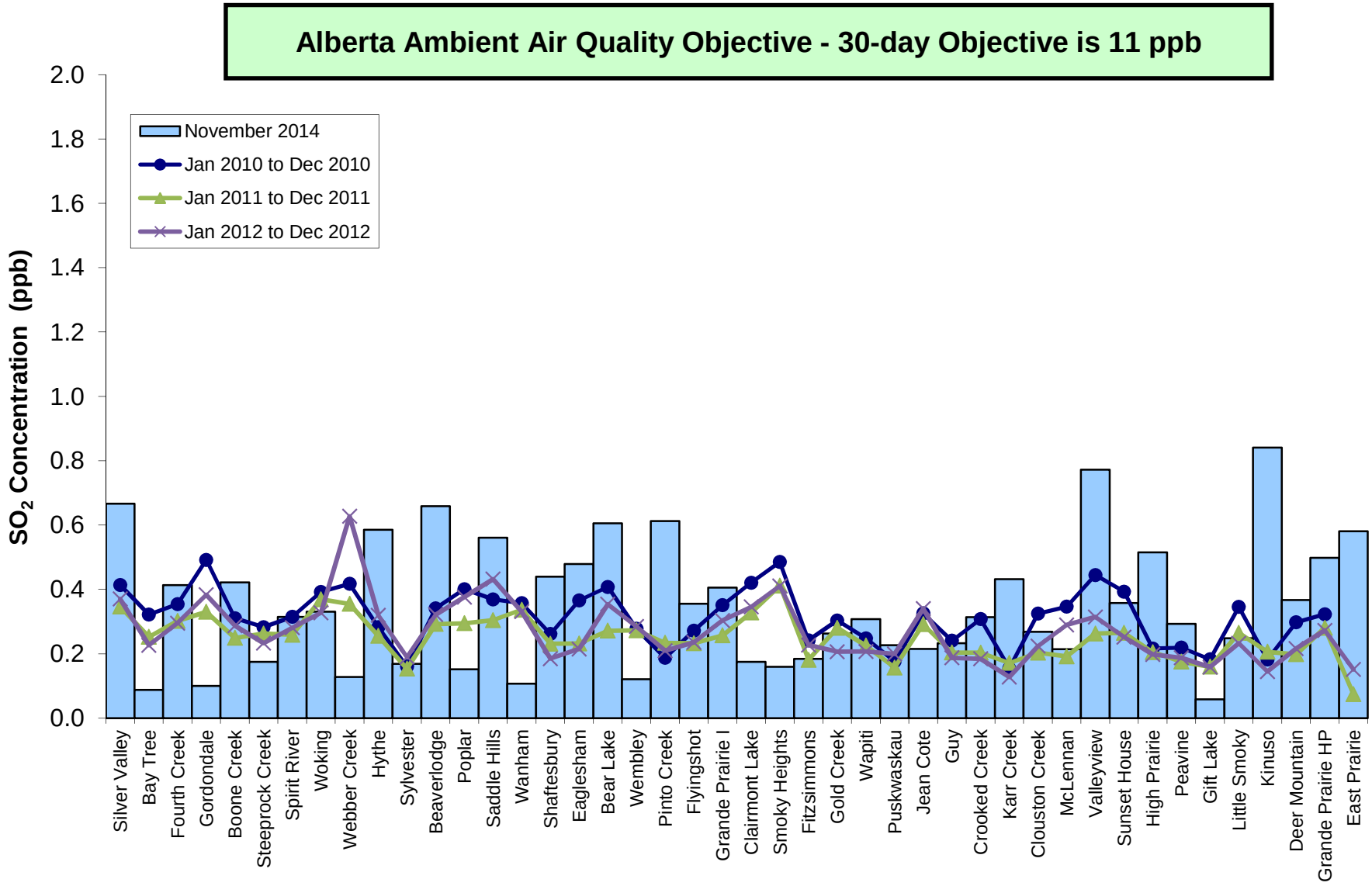
	SO_2	O_3	NO_2
PAZA Beaverlodge station	**0.6**	**23.6**	**7.3**
PAZA Beaverlodge passive	**0.7**	**29.1**	**2.6**

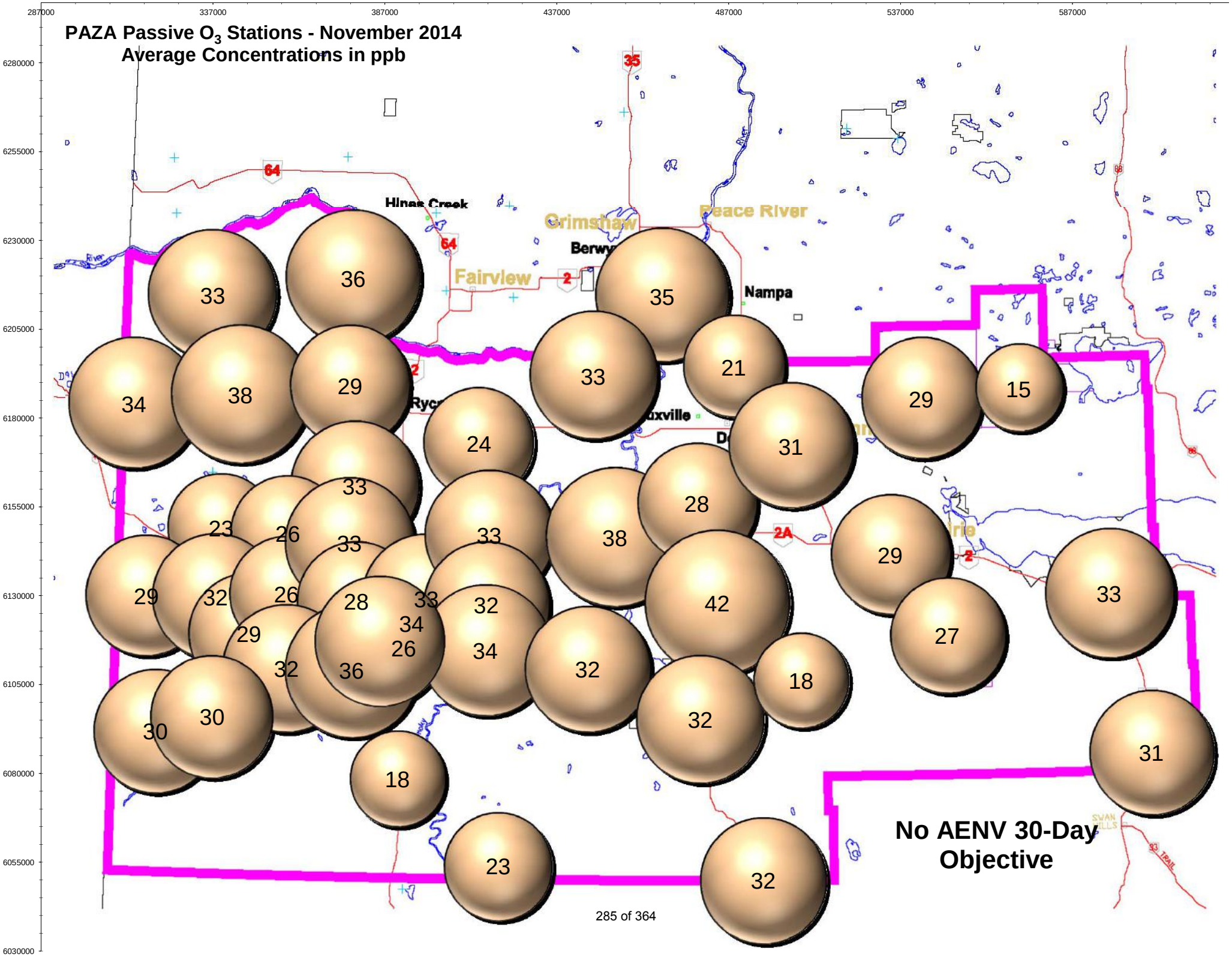
Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

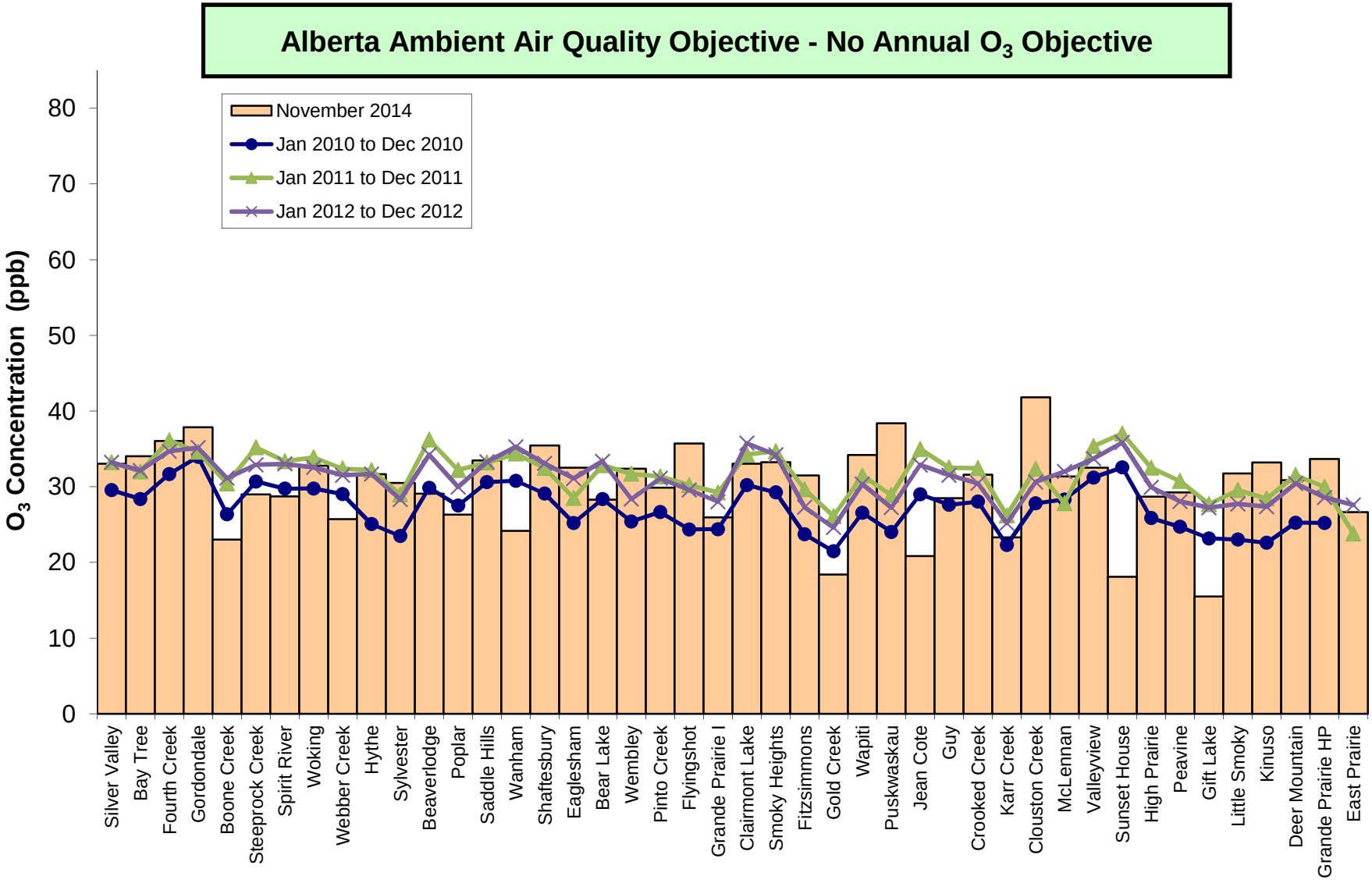
	SO_2	O_3	NO_2
PAZA Henry Pirker station	**0.6**	**13.7**	**18.5**
PAZA Grande Prairie passive	**0.5**	**33.7**	**2.9**

PAZA Passive SO_2 Stations - November 2014
Average Concentrations in ppb

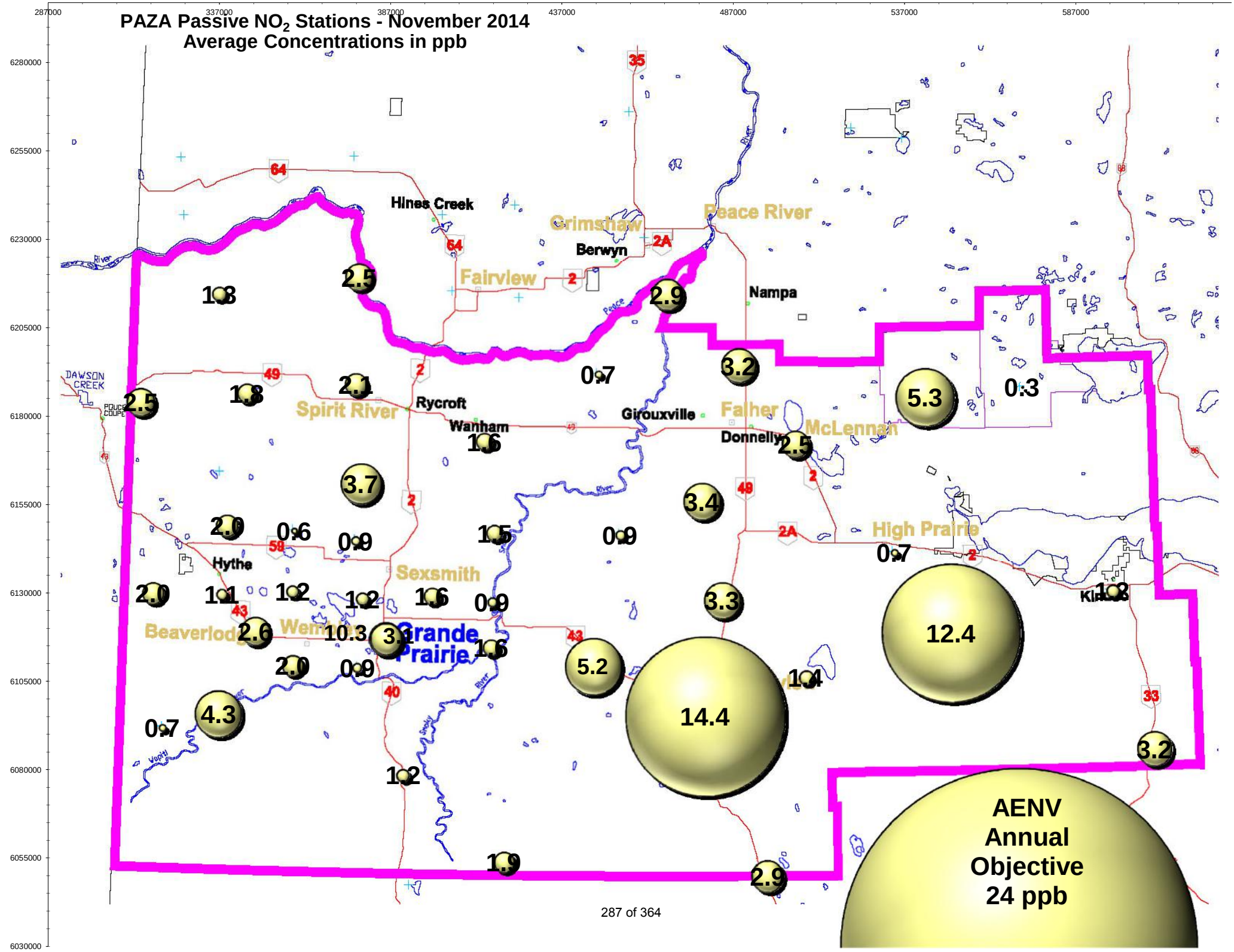


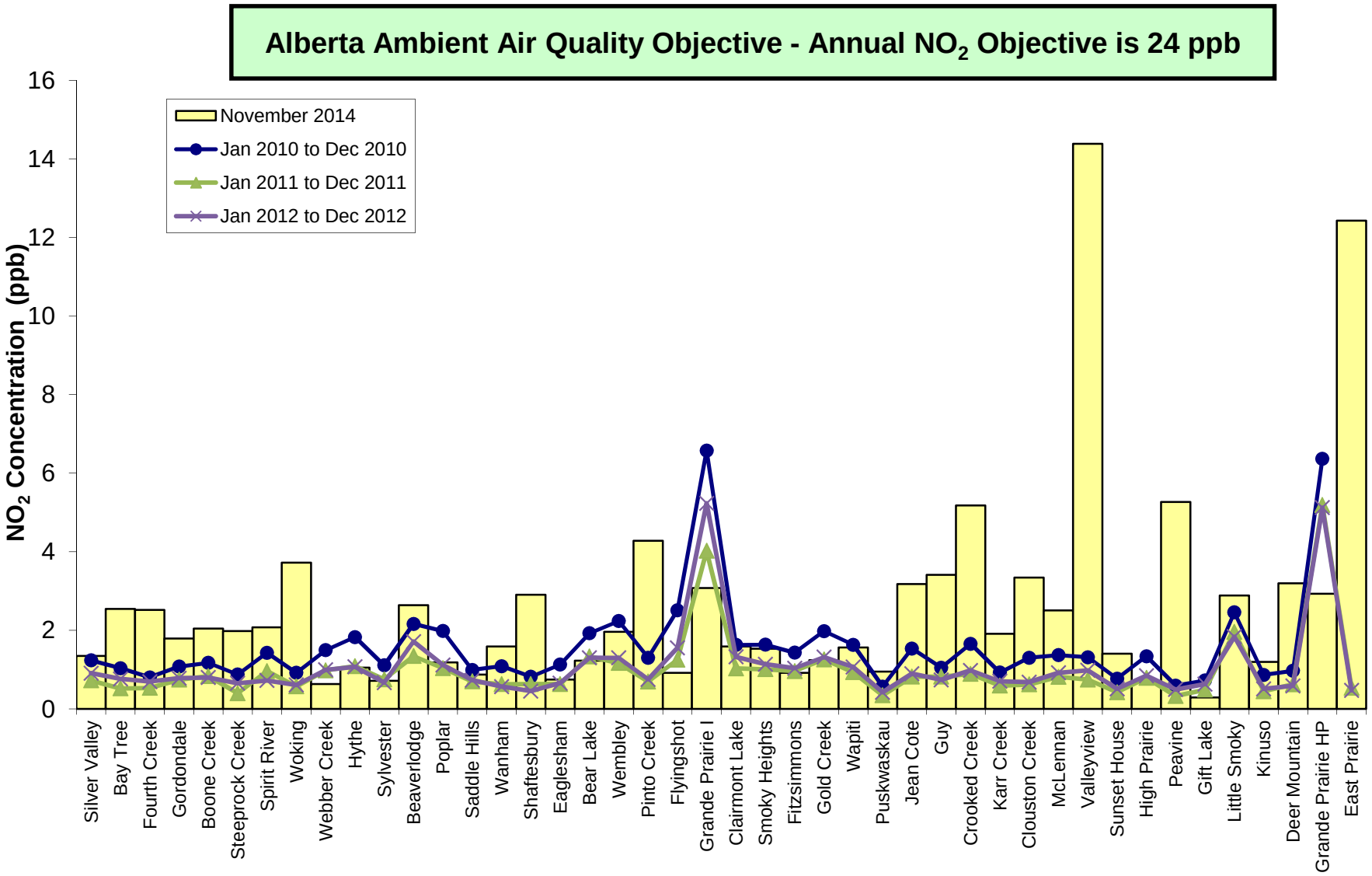

Alberta Ambient Air Quality Objective - 30-day Objective is 11 ppb
November 2014
Jan 2010 to Dec 2010
Jan 2011 to Dec 2011
Jan 2012 to Dec 2012
SO2 Concentration (ppb)
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Silver Valley
Bay Tree
Fourth Creek
Gordondale
Boone Creek
Steeprock Creek
Spirit River
Woking
Webber Creek
Hythe
Sylvester
Beaverlodge
Poplar
Saddle Hills
Wanham
Shaftesbury
Eaglesham
Bear Lake
Wembley
Pinto Creek
Flyingshot
Grande Prairie I
Clairmont Lake
Smoky Heights
Fitzsimmons
Gold Creek
Wapiti
Puskwaskau
Jean Cote
Guy
Crooked Creek
Karr Creek
Clouston Creek
McLennan
Valleyview
Sunset House
High Prairie
Peavine
Gift Lake
Little Smoky
Kinuso
Deer Mountain
Grande Prairie HP
East Prairie


PAZA Passive O_3 Stations - November 2014
Average Concentrations in ppb
287000
337000
387000
437000
487000
537000
587000
6280000
6255000
6230000
6205000
6180000
6155000
6130000
6105000
6080000
6055000
6030000
Hines Creek
Grimshaw
Peace River
Berwyn
Fairview
Nampa
Rycroft
Doxville
Trie
33
36
35
34
38
29
33
21
29
15
24
31
33
23
26
33
33
38
28
29
29
32
26
28
33
32
42
33
29
34
26
34
27
32
36
32
18
30
30
32
18
31
23
32
No AENV 30-Day Objective

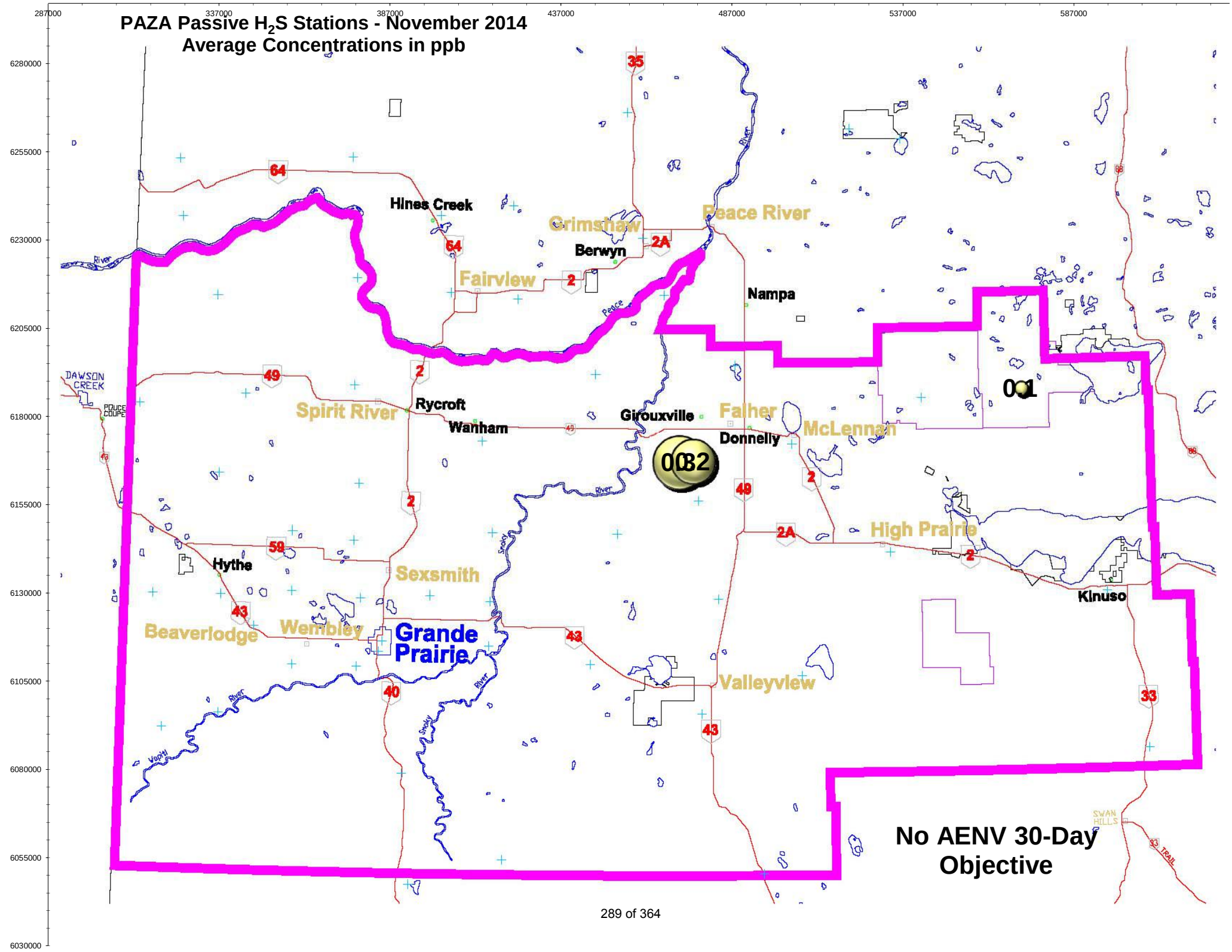

Alberta Ambient Air Quality Objective - No Annual O_3 Objective
November 2014
Jan 2010 to Dec 2010
Jan 2011 to Dec 2011
Jan 2012 to Dec 2012
O_3 Concentration (ppb)
0
10
20
30
40
50
60
70
80
Silver Valley
Bay Tree
Fourth Creek
Gordondale
Boone Creek
Steeprock Creek
Spirit River
Woking
Webber Creek
Hythe
Sylvester
Beaverlodge
Poplar
Saddle Hills
Wanham
Shaftesbury
Eaglesham
Bear Lake
Wembley
Pinto Creek
Flyingshot
Grande Prairie I
Clairmont Lake
Smoky Heights
Fitzsimmons
Gold Creek
Wapiti
Puskwaskau
Jean Cote
Guy
Crooked Creek
Karr Creek
Clouston Creek
McLennan
Valleyview
Sunset House
High Prairie
Peavine
Gift Lake
Little Smoky
Kinuso
Deer Mountain
Grande Prairie HP
East Prairie

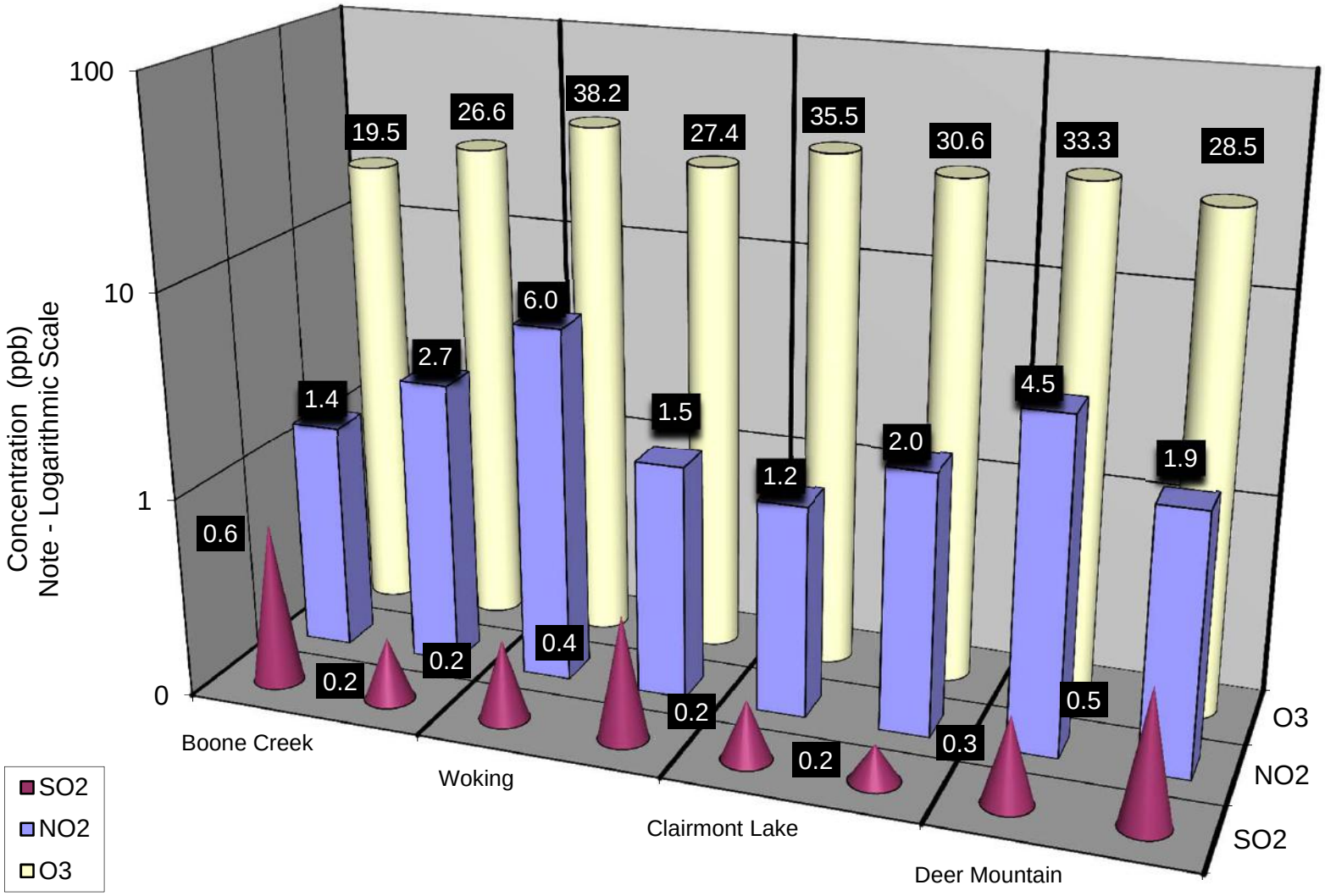
PAZA Passive NO_2 Stations - November 2014
Average Concentrations in ppb




Alberta Ambient Air Quality Objective - Annual NO_2 Objective is 24 ppb
November 2014
Jan 2010 to Dec 2010
Jan 2011 to Dec 2011
Jan 2012 to Dec 2012
NO_2 Concentration (ppb)
0
2
4
6
8
10
12
14
16
Silver Valley
Bay Tree
Fourth Creek
Gordondale
Boone Creek
Steeprock Creek
Spirit River
Woking
Webber Creek
Hythe
Sylvester
Beaverlodge
Poplar
Saddle Hills
Wanham
Shaftesbury
Eaglesham
Bear Lake
Wembley
Pinto Creek
Flyingshot
Grande Prairie I
Clairmont Lake
Smoky Heights
Fitzsimmons
Gold Creek
Wapiti
Puskwaskau
Jean Cote
Guy
Crooked Creek
Karr Creek
Clouston Creek
McLennan
Valleyview
Sunset House
High Prairie
Peavine
Gift Lake
Little Smoky
Kinuso
Deer Mountain
Grande Prairie HP
East Prairie

PAZA Passive H_2S Stations - November 2014
Average Concentrations in ppb





Duplicate Summary Chart

November 2014 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 – Falher Station with the following calibrations:
SO_2 & H_2S

PAZA – Clairmont Station with the following calibrations:
SO_2, NO, NO_2, NO_x, O_3, THC, TRS

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 10, 2014	Previous Calibration	October 2, 2014
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	9:00	End Time (MST)	12:44
Barometric Pressure	705.000 mm	Station Temperature	20.5 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Conc	50.2 ppm	Cal Gas Cert Date	March 10, 2017
		Cal Gas Cylinder #	LL119493
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	1.000185	Calculated slope	1.001396
Calculated intercept	2.006672	Calculated intercept	1.736594
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	9.2		9.6	
Coefficient	0.762		0.754	
Pressure	656.2	mm Hg	656.9	mm Hg
Flow	0.480	lpm	0.481	lpm
Lamp intensity	44138	Hz	43987	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	0.5	N/A
4995	39.93	398.1	397.2	1.0022
4995	19.97	199.9	195.8	1.0207
4995	9.97	100.0	96.5	1.0361
4995	0.00	0.0	0.5	As Found Zero
4995	39.93	398.1	401.3	As Found Span
			Average Correction Factor	1.0197

Calculated value of As Found Response: 402.9 ppb Percent Change of As Found: -1.2%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	259.4	ppb	161.3	ppb

Notes: Span adjustment made, run adjustment point.

Calibration Performed By: Grover Chrisitiansen

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

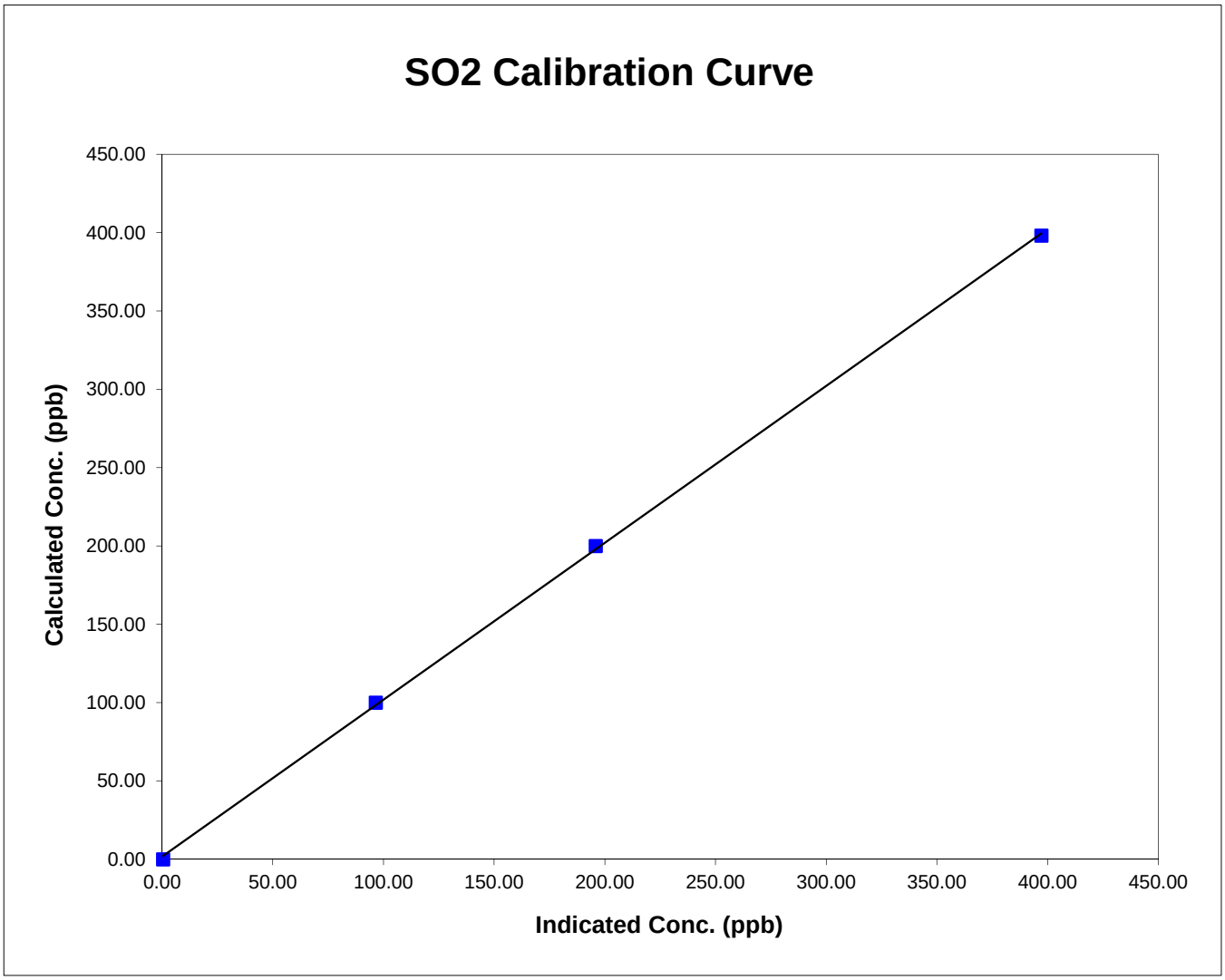
FOCUS AIR QUALITY MONITORING

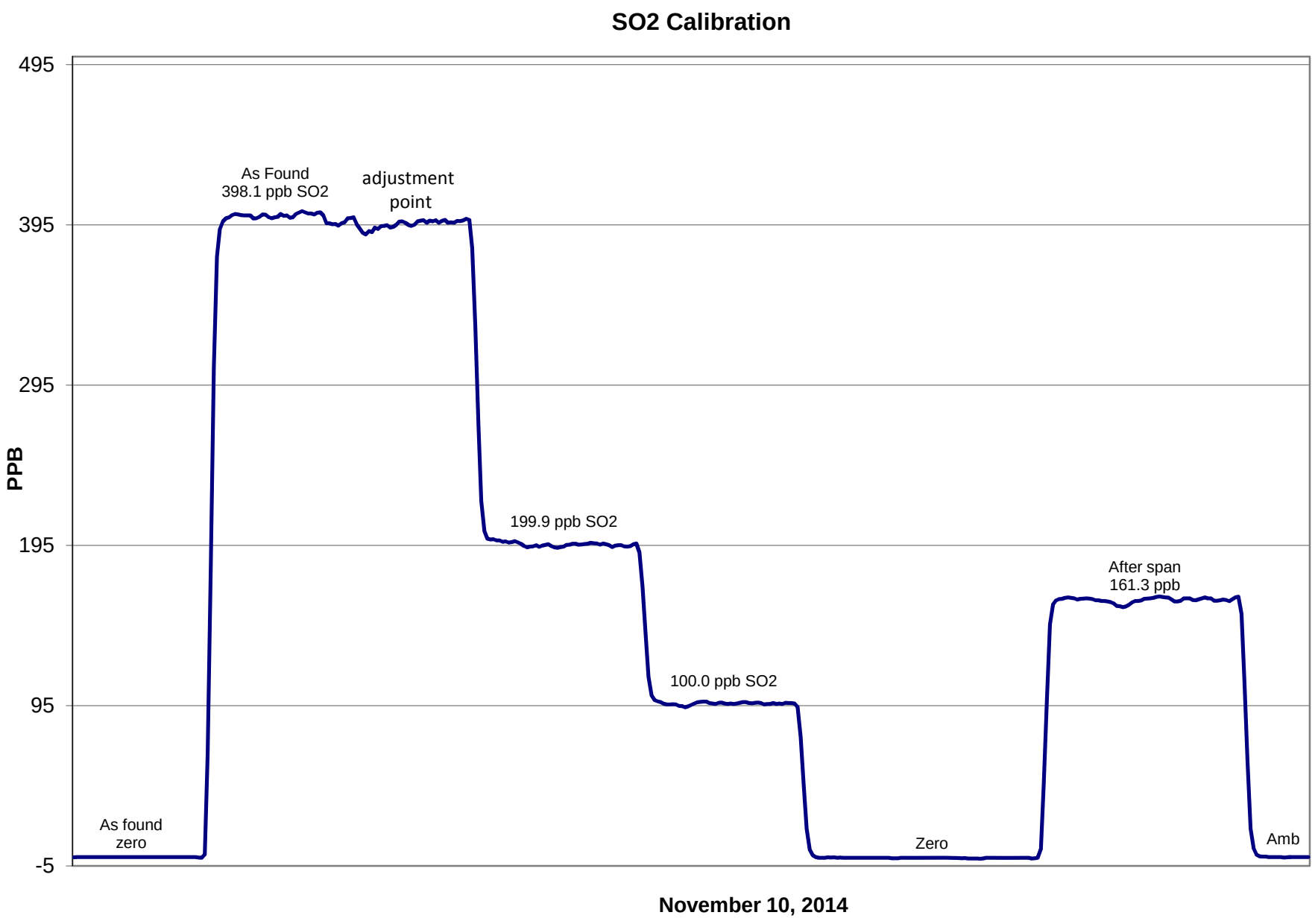
Station Information

Calibration Date	November 10, 2014	Previous Calibration	October 2, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	12:44
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
398.1	397.2	1.0022	Correlation Coefficient	0.999840
199.9	195.8	1.0207		
100.0	96.5	1.0361	Slope	1.001396
			Intercept	1.736594




SO2 Calibration
495
395
295
195
95
-5
PPB
As Found
398.1 ppb SO2
adjustment
point
199.9 ppb SO2
100.0 ppb SO2
Zero
After span
161.3 ppb
Amb
As found
zero
November 10, 2014

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 10, 2014	Previous Calibration	October 2, 2014
Station Number	1	Station Location	Henry Pirker

Reason: Routine Installation Removal Other: Maintanance

Start Time (MST)	9:00		End Time (MST)	14:15	
Barometric Pressure	705.000	mm	Station Temperature	20.5	Deg C
Calibrator	Environics		Serial Number	3016	
NO Cal Gas Conc	50.9	ppm	Cal Gas Expiry Date	March 10, 2017	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL119493	

DACS Information

DACS make: CR3000 DACS serial No.: 5237

Parameter		NO2	NOx	NO
Before	Data Slope	0.996572	0.999825	0.997753
	Data Offset	-1.031683	1.604645	1.847336
After	Data Slope	1.000884	1.004294	0.994019
	Data Offset	1.295775	2.081881	2.313075
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model: CR3000 Analyzer serial #: 5408

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	15.3	mV	15.5	mV
NOx bkgnd	16.0	mV	16.2	mV
NO coefficient	1.056		1.092	
NOx coefficient	1.003		0.995	
NO2 conv temp	318.0	Deg C	318.0	Deg C
Cooler Temp	-2.5	Deg C	-2.5	Deg C
PMT Volt	-788.0	mV	-788.0	mV
R Cell Press	237.8	in Hg	241.9	in Hg
Sample Flow	0.659	LPM	0.655	LPM

Notes: Span adjustment made, run adjustment point.

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **0**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: November 10, 2014 Station Location: Henry Pirker

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.0	-0.3	0.2	N/A	N/A
1	4995	39.92	405.9	403.6	2.4	403.3	404.8	-1.6	1.0066	0.9971
2	4995	19.96	203.8	202.6	1.2	199.4	200.1	-0.9	1.0220	1.0122
3	4995	9.93	101.6	101.0	0.6	97.3	97.5	-0.4	1.0445	1.0355
AFZ	4995	0.00	0.0	0.0	0.0	0.0	-0.3	0.2	0.0000	0.0000
AFS	4995	39.92	405.9	403.6	0.8	393.5	391.5	1.9	1.0316	1.0309
							Average Correction Factor		1.0243	1.0149

As Found Concentrations: NO_X= 395.0 NO= 392.8 As Found Percent Change NO_X= -2.7% NO= -2.7%

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	-0.3	-0.3	0.0	0.0	-0.3	0.2	N/A	N/A	N/A	N/A
NO point	401.6	401.6	0.0	399.8	401.6	-1.9	1.0045	1.0000	N/A	N/A
300	401.6	90.4	311.2	400.7	90.4	310.6	1.0024	1.0000	1.0021	99.8%
200	401.6	191.6	210.0	399.9	191.6	208.3	1.0044	1.0000	1.0081	99.2%
100	401.6	290.3	111.4	398.1	290.3	107.8	1.0090	1.0000	1.0335	96.8%
					Average Correction Factor		1.0053	1.0000	1.0146	98.6%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.2	0.0	-0.1	ppb	-0.4	-0.5	-0.1	ppb
Auto span	300.9	298.9	2.2	ppb	287.4	285.7	1.9	ppb

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **NO_2**

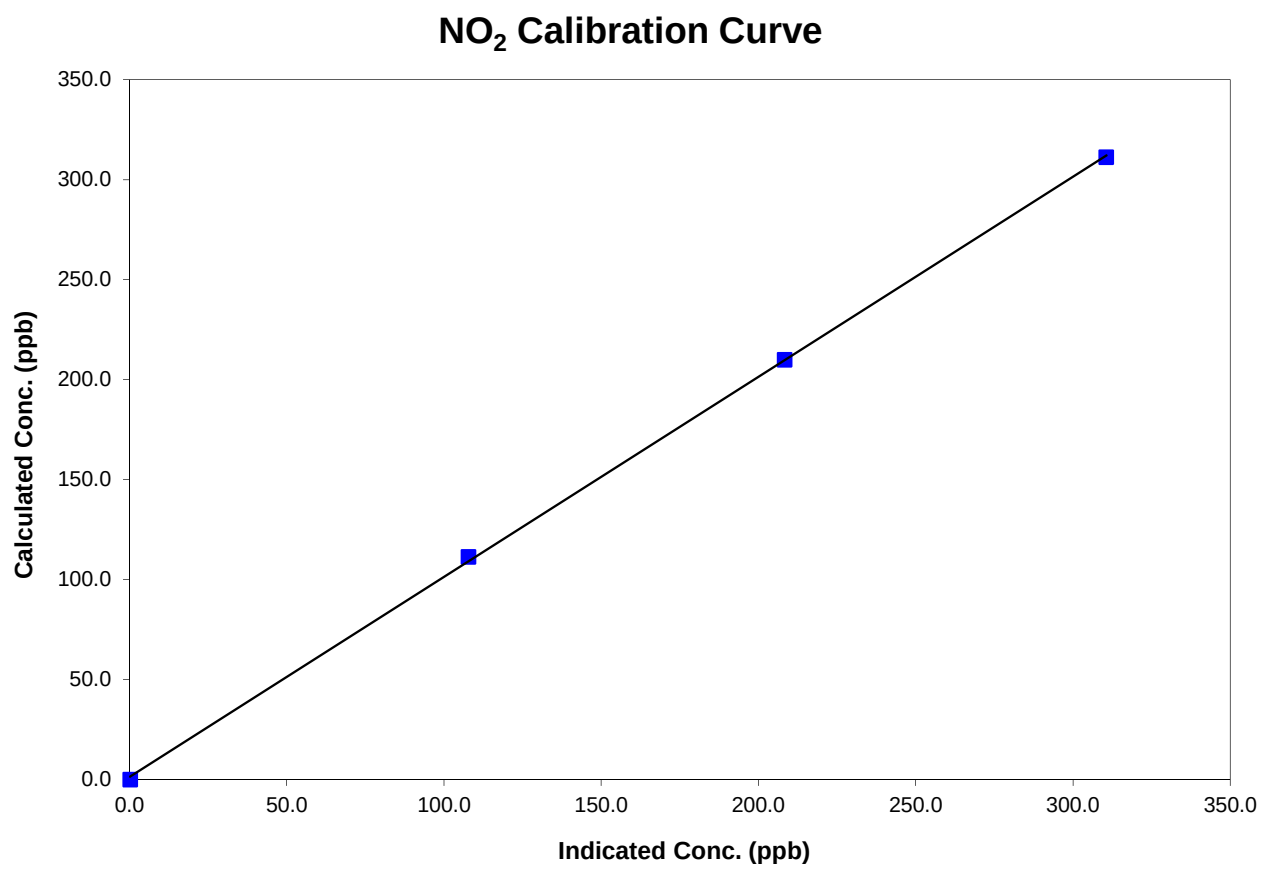
Air Monitoring Network **0**

Station Information

Calibration Date	November 10, 2014	Previous Calibration	October 2, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	14:15
Analyzer make	CR3000	Analyzer serial #	5408

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
311.2	310.6	1.0021	Correlation Coefficient	0.999849
210.0	208.3	1.0081		
111.4	107.8	1.0335	Slope	1.000884
			Intercept	1.295775



Calibration Summary

Parameter **NO_x**

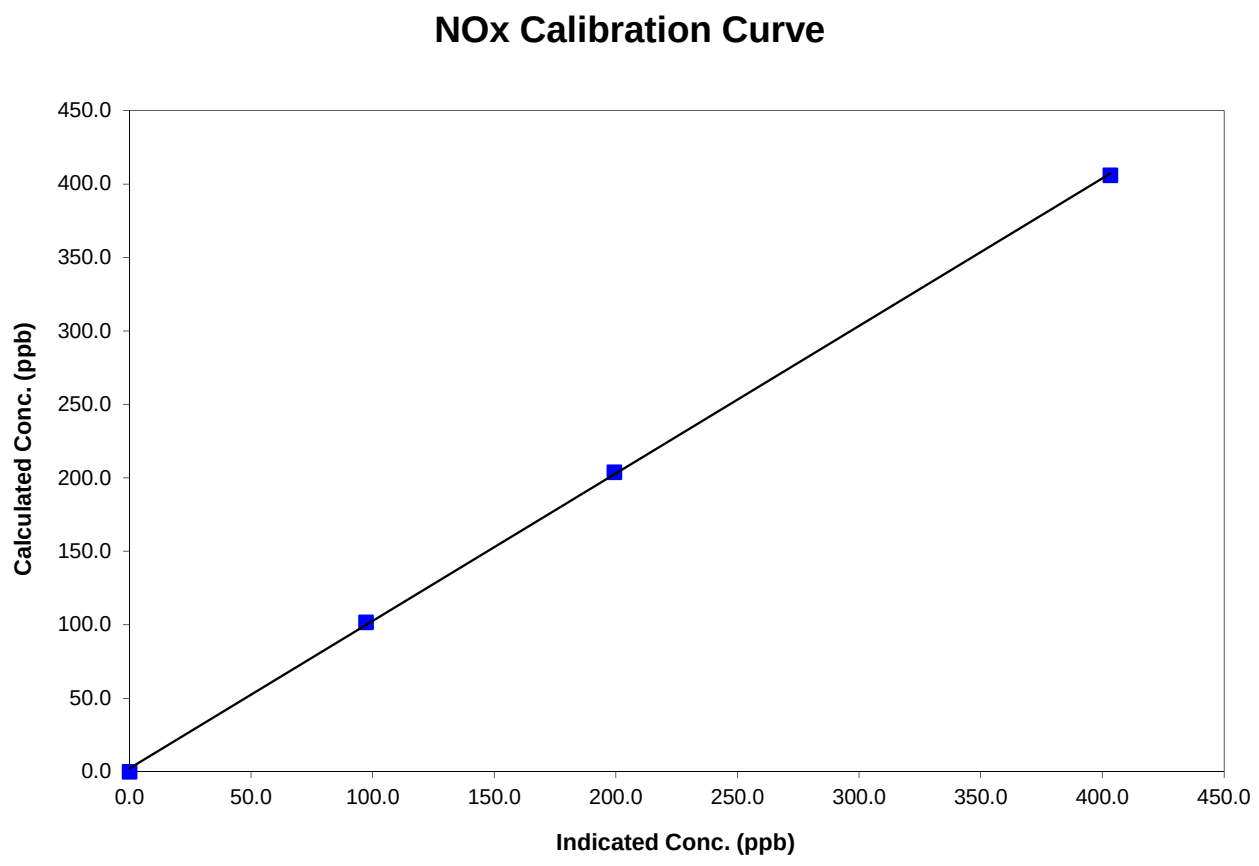
Air Monitoring Network **0**

Station Information

Calibration Date	November 10, 2014	Previous Calibration	October 2, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	14:15
Analyzer make	CR3000	Analyzer serial #	5408

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
405.9	403.3	1.0066	Correlation Coefficient	0.999876
203.8	199.4	1.0220		
101.6	97.3	1.0445	Slope	1.004294
			Intercept	2.081881



Calibration Summary

Parameter **NO**

Air Monitoring Network **0**

FOCUS AIR QUALITY MONITORING

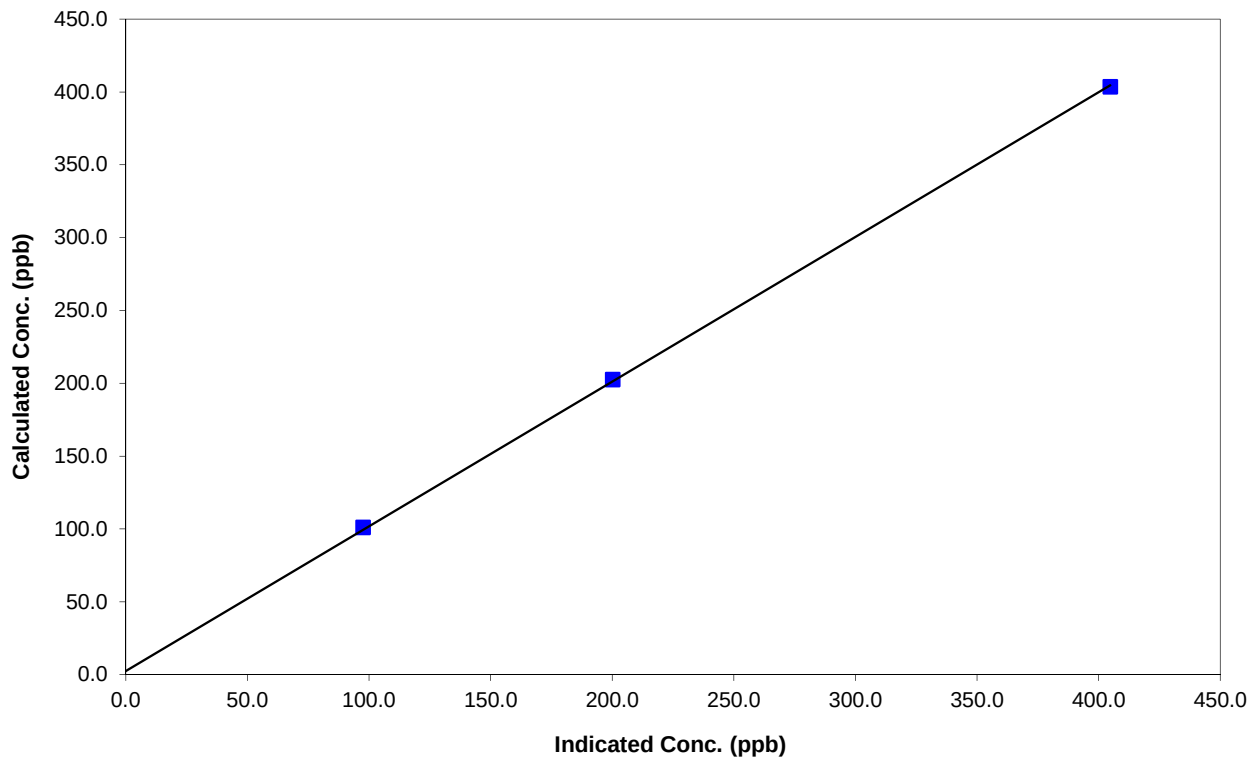
Station Information

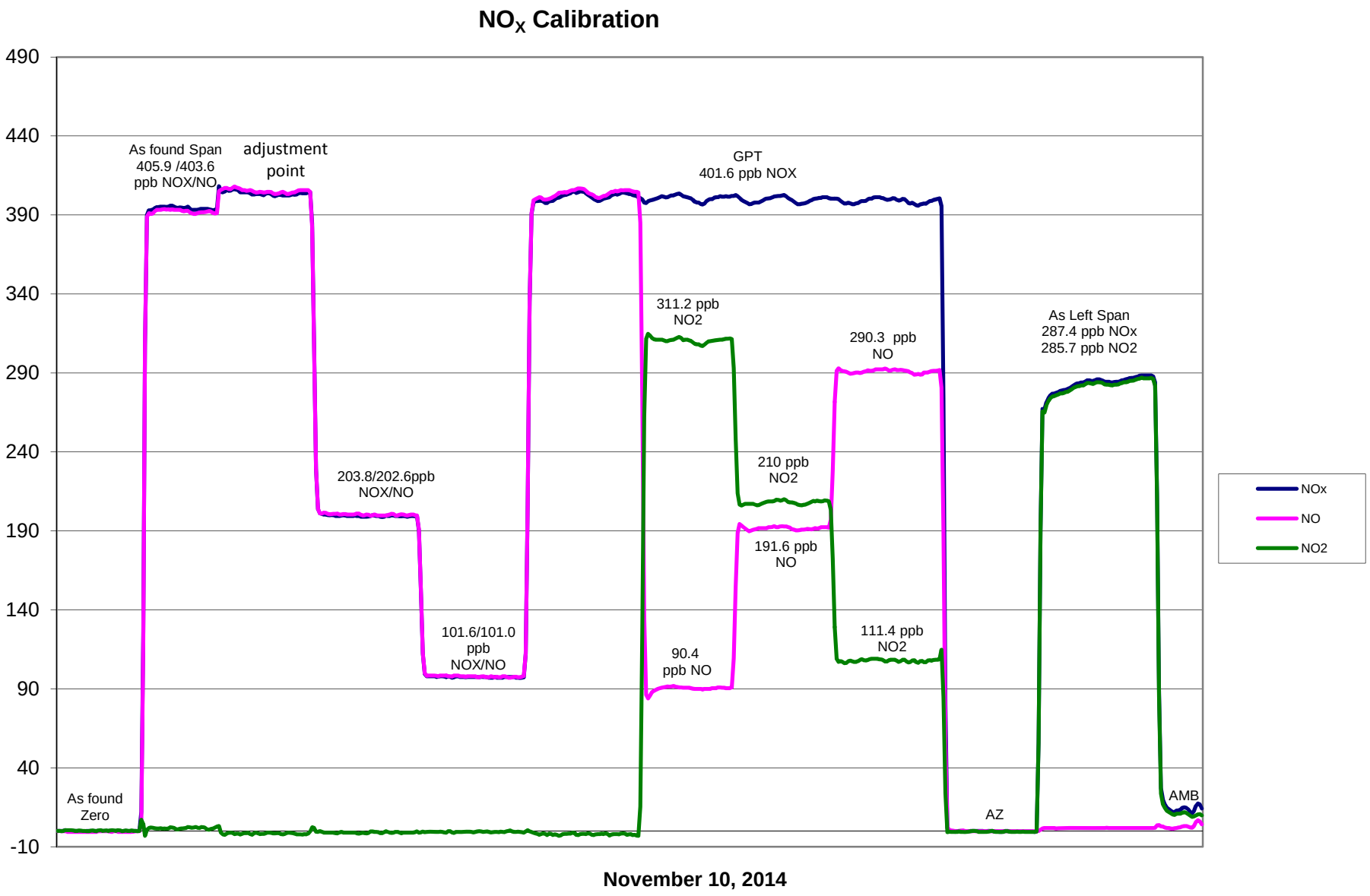
Calibration Date	November 10, 2014	Previous Calibration	October 2, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	14:15
Analyzer make	CR3000	Analyzer serial #	5408

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A		
403.6	404.8	0.9971	Correlation Coefficient	0.999890
202.6	200.1	1.0122		
101.0	97.5	1.0355	Slope	0.994019
			Intercept	2.313075

NO Calibration Curve




NOx Calibration
490
440
390
340
290
240
190
140
90
40
-10
As found Span
405.9 /403.6
ppb NOX/NO
adjustment
point
GPT
401.6 ppb NOX
311.2 ppb
NO2
290.3 ppb
NO
As Left Span
287.4 ppb NOx
285.7 ppb NO2
203.8/202.6ppb
NOX/NO
210 ppb
NO2
191.6 ppb
NO
101.6/101.0
ppb
NOX/NO
90.4
ppb NO
111.4 ppb
NO2
As found
Zero
AZ
AMB
NOx
NO
NO2
November 10, 2014

Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 10, 2014	Previous Calibration	October 2, 2014
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	13:05:00 PM	End Time (MST)	16:00
Barometric Pressure	705.000 mm	Station Temperature	20.5 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	0.992295	Calculated slope	0.997786
Calculated intercept	-0.269272	Calculated intercept	0.473004
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	1.015		0.991	
Lamp temp	57	mV	57	mV
Lamp Intensity A/B	100311/94069	mV	103085/96670	mV
Pressure	690.2	mm Hg	692.6	mm Hg
Flow A	0.735	ccm	0.734	ccm
Flow B	0.733	ccm	0.733	ccm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5035	0.0	0.0	0.1	N/A
5035	0.3	311.2	312.0	0.9976
5035	0.2	210.0	209.5	1.0023
5035	0.1	111.4	110.5	1.0077
5035	0.0	0.0	0.1	As found zero
5035	0.3	311.2	318.8	As found span
			Average Correction Factor	1.0025

Calculated value of As Found Response: 315.9 ppm Percent Change of As Found: 1.5%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.5	ppb
Auto span	419.1	ppb	432.3	ppb

Notes: Span adjustment made, run adjustment point.

Calibration Performed By: Grover Chrisitiansen

Calibration Summary

Parameter **O3**

Air Monitoring Network **PAZA**

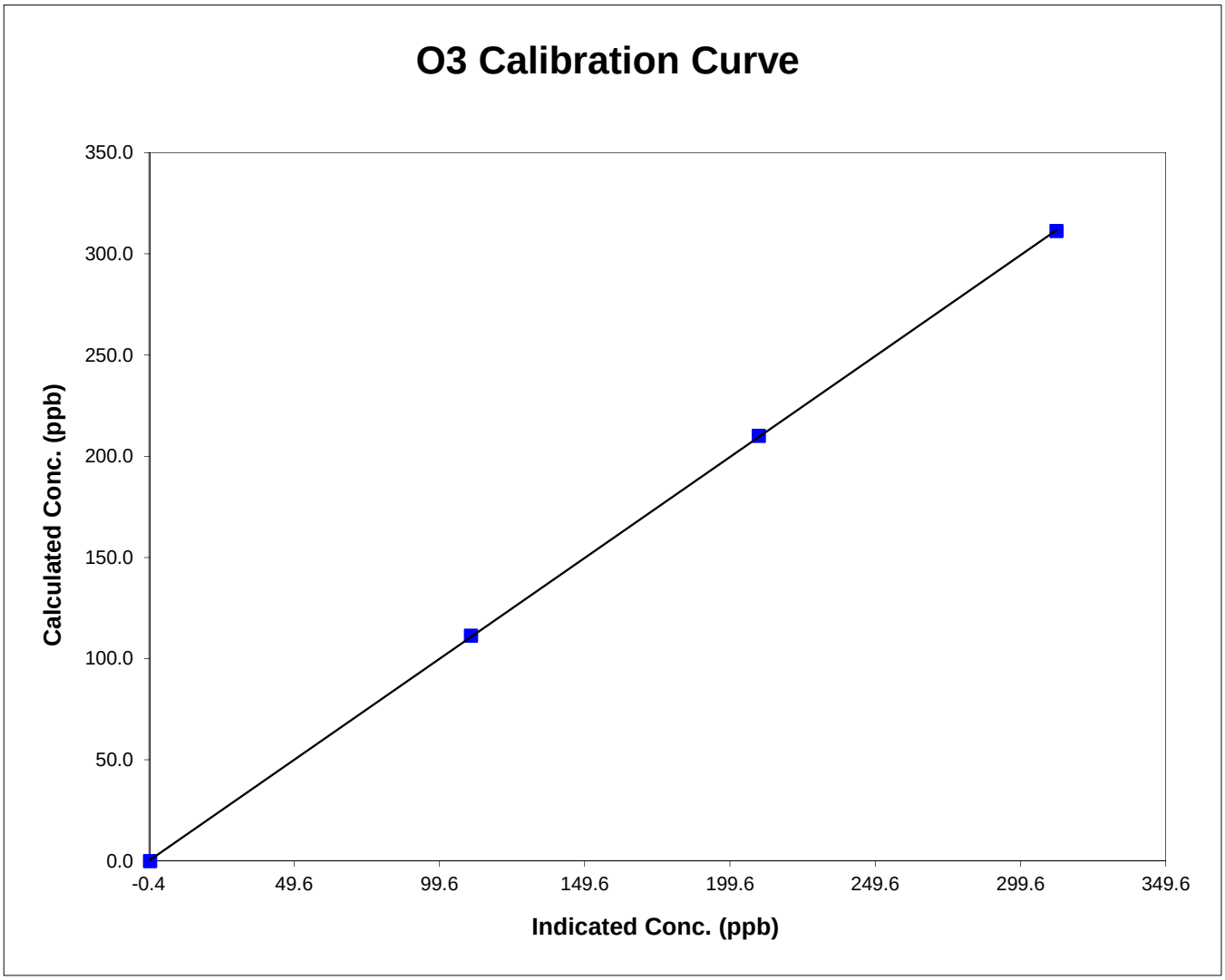
FOCUS AIR QUALITY MONITORING

Station Information

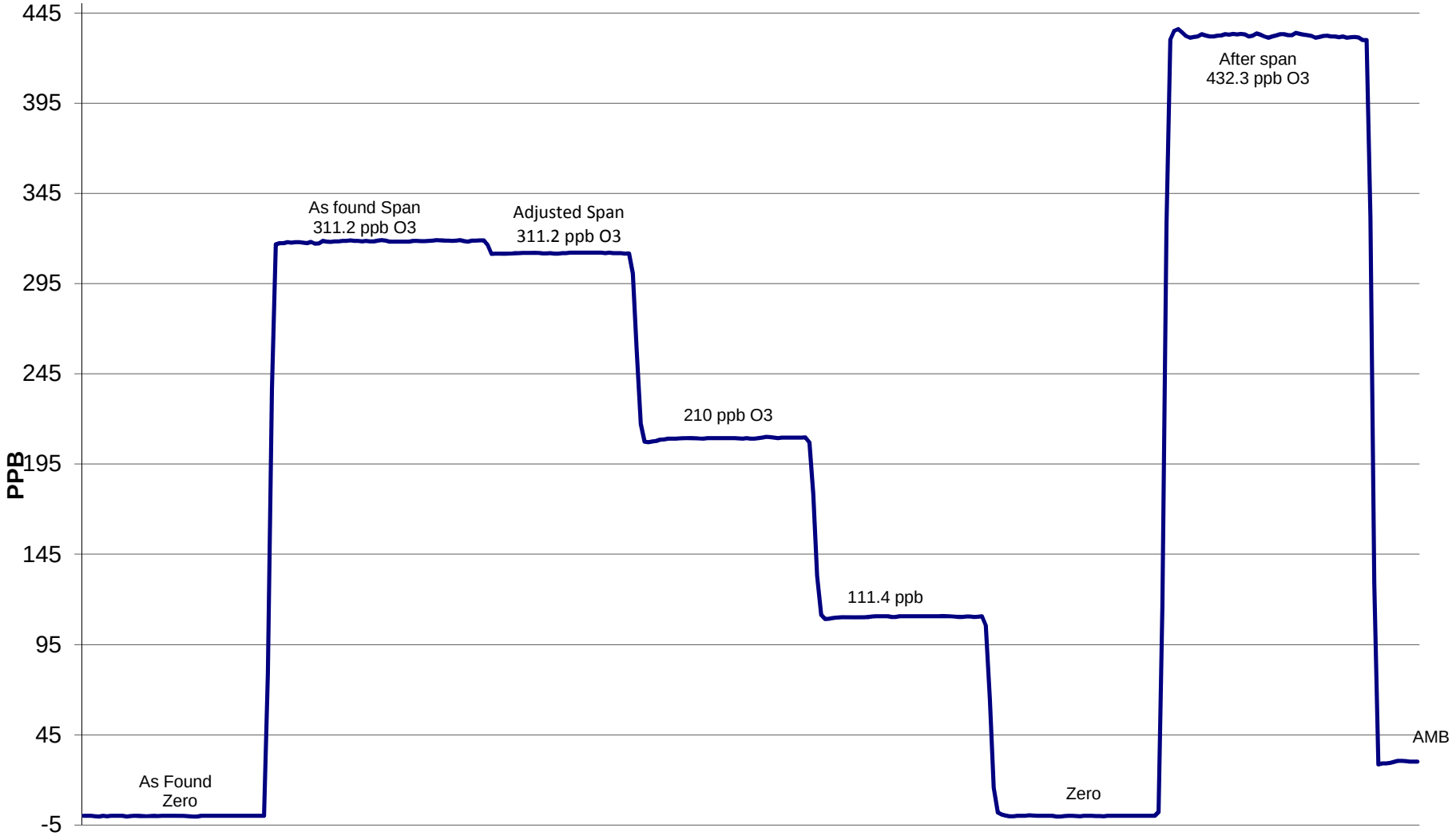
Calibration Date	November 10, 2014	Previous Calibration	October 2, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:05:00 PM	End Time (MST)	16:00
Analyzer make/model	Teco 49C	Analyzer serial #	607415761

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA		
311.2	312.0	0.9976	Correlation Coefficient	0.999978
210.0	209.5	1.0023		
111.4	110.5	1.0077	Slope	0.997786
			Intercept	0.473004



O3 Calibration



November 10, 2014

Calibration Report

Parameter **CO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 12, 2014	Previous Calibration	October 3, 2014
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:00	End Time (MST)	14:06
Barometric Pressure	708.0 mm/hg	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Conc	2898 ppm	Cal Gas Expiry Date	04/02/2013
		Cal Gas Cylinder #	LL83909
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.998700	Calculated slope	1.004732
Calculated intercept	0.131103	Calculated intercept	0.127025
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	1.463		1.559	
CO span setting	1.016		1.016	
Sample pressure	693.1	mm Hg	693.9	mm Hg
Sample Flow	1.123	LPM	1.133	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	39.77	1.0062
4995	34.96	20.14	19.85	1.0146
4995	17.96	10.38	10.07	1.0313
4995	0.00	0.00	0.01	As Found Zero
4995	69.94	40.02	39.77	As Found Span
			Average Correction Factor	1.0173

Calculated value of As Found Response: 39.839 ppm Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	20.04	ppm	18.66	ppm

Notes: No adjustment made

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **CO**

Air Monitoring Network **PAZA**

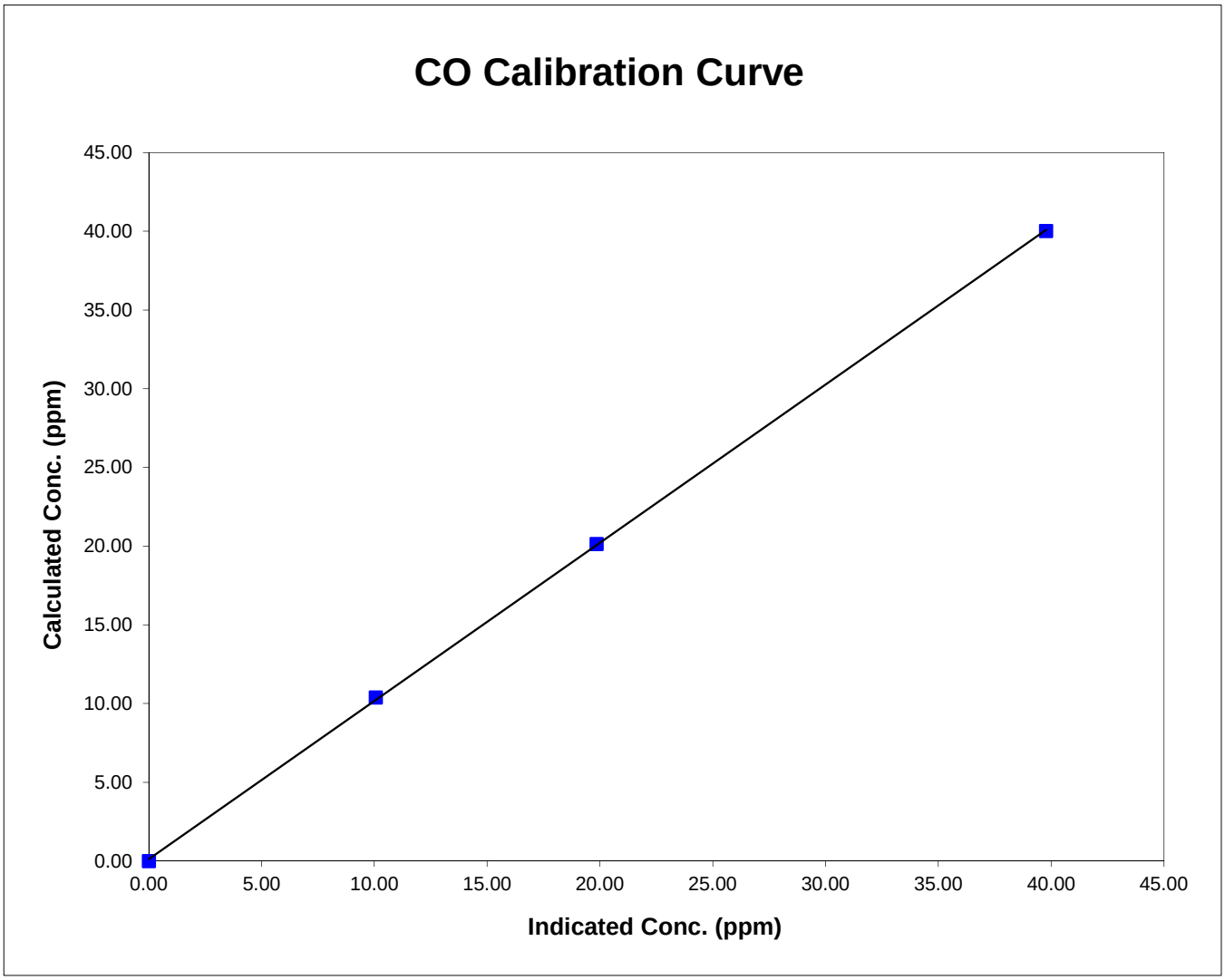
FOCUS AIR QUALITY MONITORING

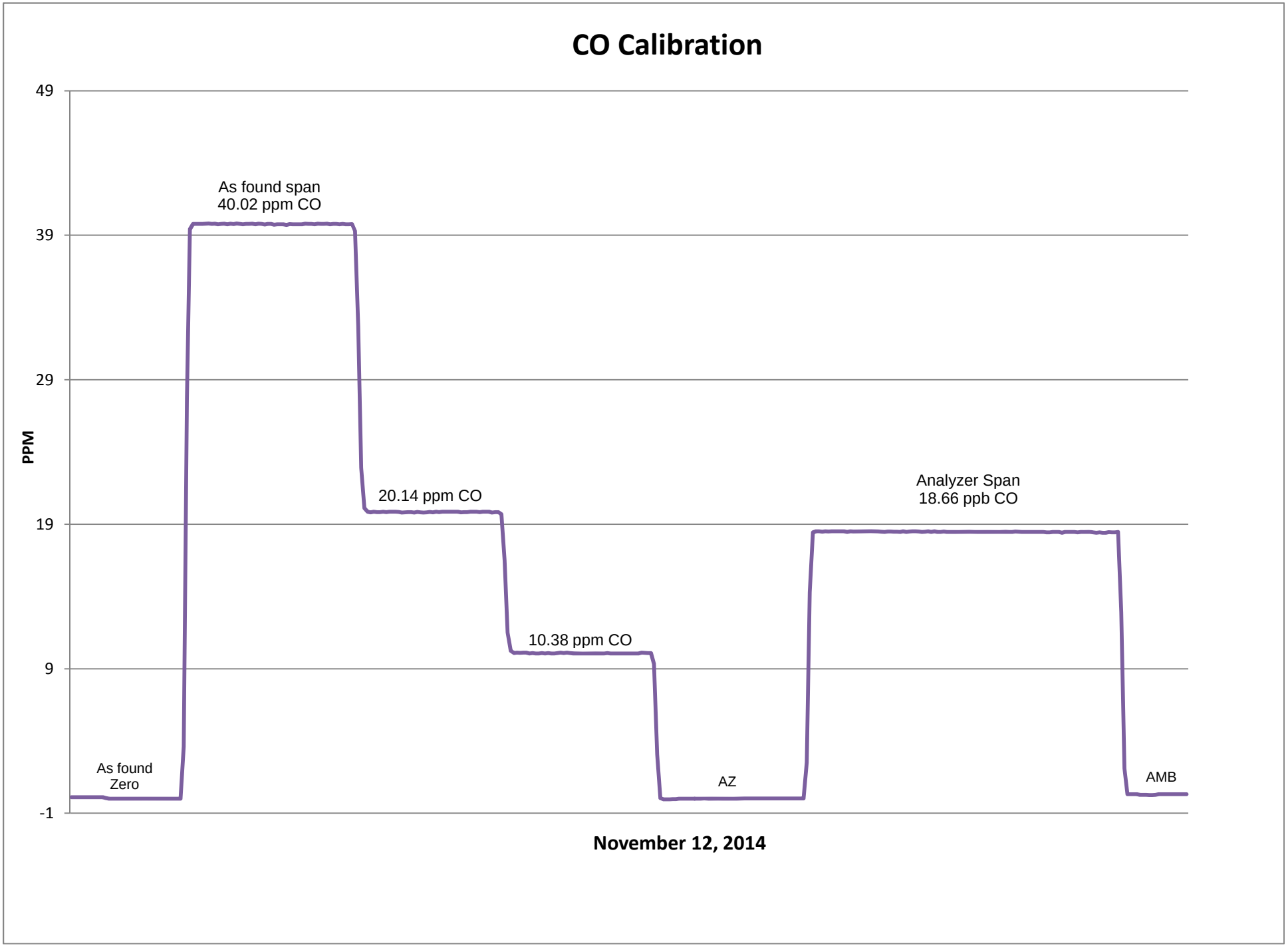
Station Information

Calibration Date	November 12, 2014	Previous Calibration	October 3, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:00	End Time (MST)	14:06
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	39.772	1.0062	Correlation Coefficient	0.999944
20.142	19.852	1.0146		
10.383	10.068	1.0313	Slope	1.004732
			Intercept	0.127025




CO Calibration
49
39
29
19
9
-1
PPM
As found span
40.02 ppm CO
20.14 ppm CO
10.38 ppm CO
Analyzer Span
18.66 ppb CO
As found
Zero
AZ
AMB
November 12, 2014

Calibration Report

Parameter **CH4 / NMHC / THC**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 12, 2014	Previous Calibration	October 3, 2014
Station Number	1	Station Location	Henry Pirker

Reason: Routine | Install | Removal | Other:

Start Time (MST)	8:40	End Time (MST)	11:59
Barometric Pressure	705.00 mm/hg	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas CH4 Conc	386 ppm CH4	Cal Gas Expiry Date	28/03/2014
Cal Gas C3H8 Conc	207 569.25 ppm CH4	Cal Gas Cylinder #	LL34318
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	27.9	PSI	27.9	PSI
Fuel pressure	42.1	PSI	42.1	PSI
Carrier pressure	30.3	PSI	30.3	PSI
CH4 cal factor	5.82		5.82	E^{-4}
NMHC cal factor	1.91		1.91	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	68.96	12.89	13.04	0.9889
1996	40.96	7.76	7.80	0.9946
1996	15.99	3.07	3.09	0.9936
1996	0.00	0.00	0.02	As Found Zero
1996	68.93	12.89	13.33	As Found Span
			Average Correction Factor	0.9924

Calculated value of As Found Response: 13.269 ppm Percent Change of As Found: -3.0%

	Before		After
Calculated slope	0.994933	Calculated slope	0.990466
Calculated intercept	0.025788	Calculated intercept	0.000712

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	8.36	ppm	9.14	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	68.96	19.01	19.18	0.9910
1996	40.96	11.45	11.62	0.9848
1996	15.99	4.52	4.63	0.9781
1996	0.00	0.00	0.02	As Found Zero
1996	68.93	19.00	19.30	As Found Span
			Average Correction Factor	0.9846

Calculated value of As Found Response: 19.234 ppm Percent Change of As Found: -1.2%

	Before		After
Calculated slope	0.998917	Calculated slope	0.992026
Calculated intercept	-0.028456	Calculated intercept	-0.047019

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	11.57	ppm	12.63	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	68.96	31.90	32.20	0.9906
1996	40.96	19.21	19.41	0.9895
1996	15.99	7.59	7.70	0.9858
1996	0.00	0.00	0.03	As Found Zero
1996	68.93	31.89	32.66	As Found Span
			Average Correction Factor	0.9886

Calculated value of As Found Response: 32.567 ppm Percent Change of As Found: -2.1%

	Before		After
Calculated slope	0.997940	Calculated slope	0.991698
Calculated intercept	0.002233	Calculated intercept	-0.038478

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	19.91	ppm	21.76	ppm

Notes: Span adjustments made

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **CH4**

Air Monitoring Network **PAZA**

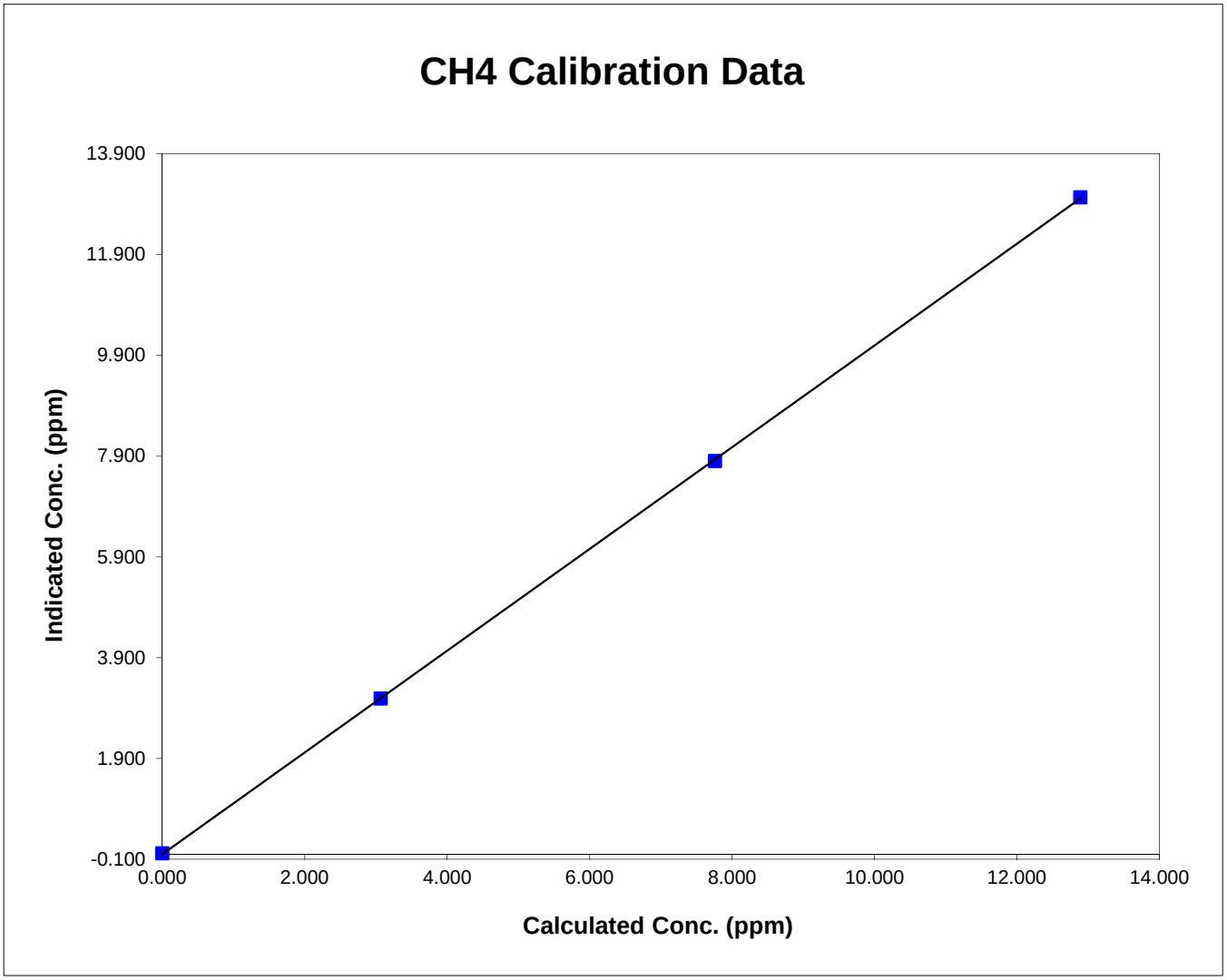
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 12, 2014	Previous Calibration	October 3, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:40	End Time (MST)	11:59
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.019	N/A		
12.891	13.035	0.9889	Correlation Coefficient	0.999980
7.762	7.804	0.9946		
3.068	3.088	0.9936	Slope	0.990466
			Intercept	0.000712



Calibration Summary

Parameter **NMHC**

Air Monitoring Network **PAZA**

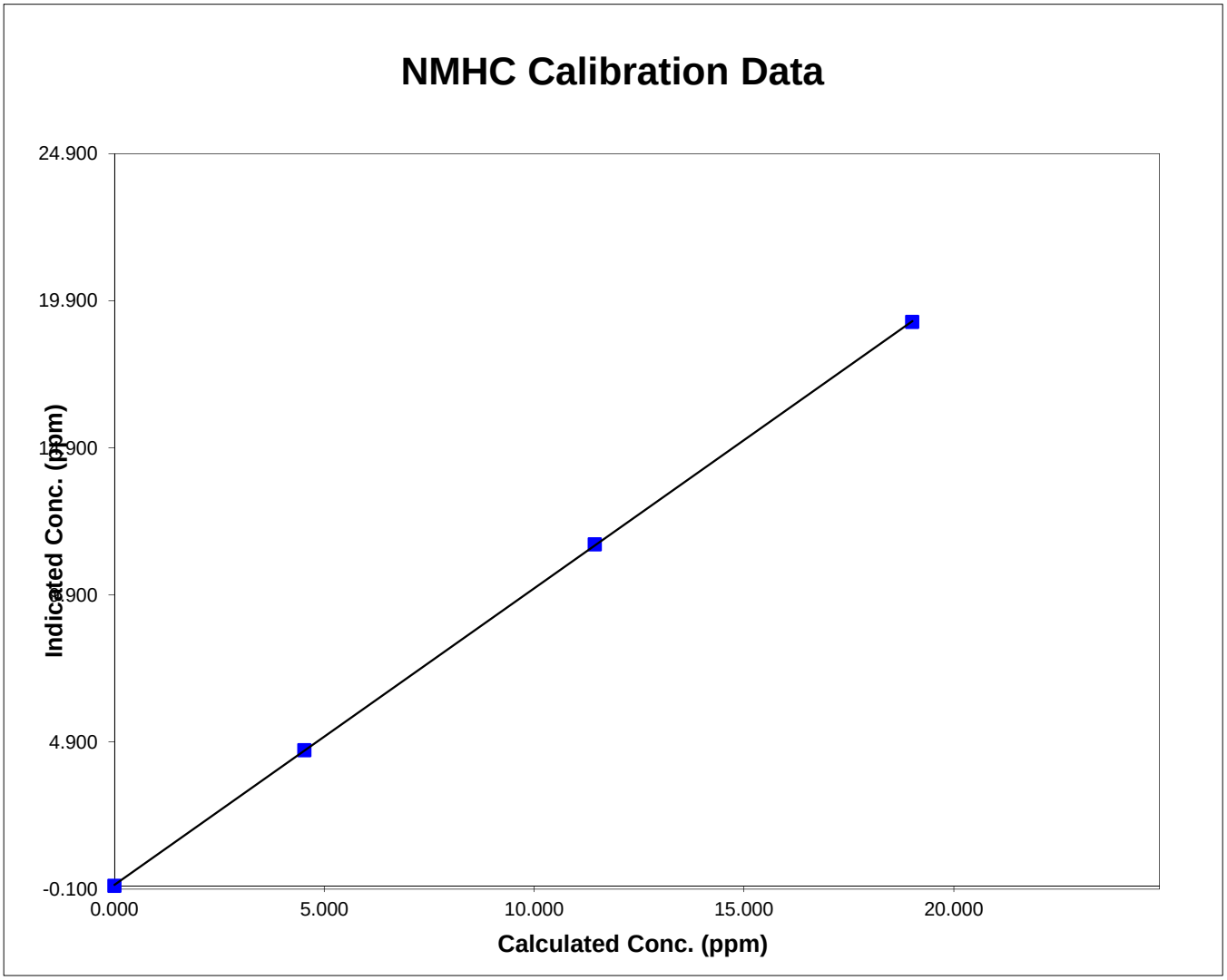
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 12, 2014	Previous Calibration	October 3, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:40	End Time (MST)	11:59
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.019	N/A		
19.010	19.183	0.9910	Correlation Coefficient	0.999984
11.447	11.624	0.9848		
4.524	4.626	0.9781	Slope	0.992026
			Intercept	-0.047019



Calibration Summary

Parameter **THC**

Air Monitoring Network **PAZA**

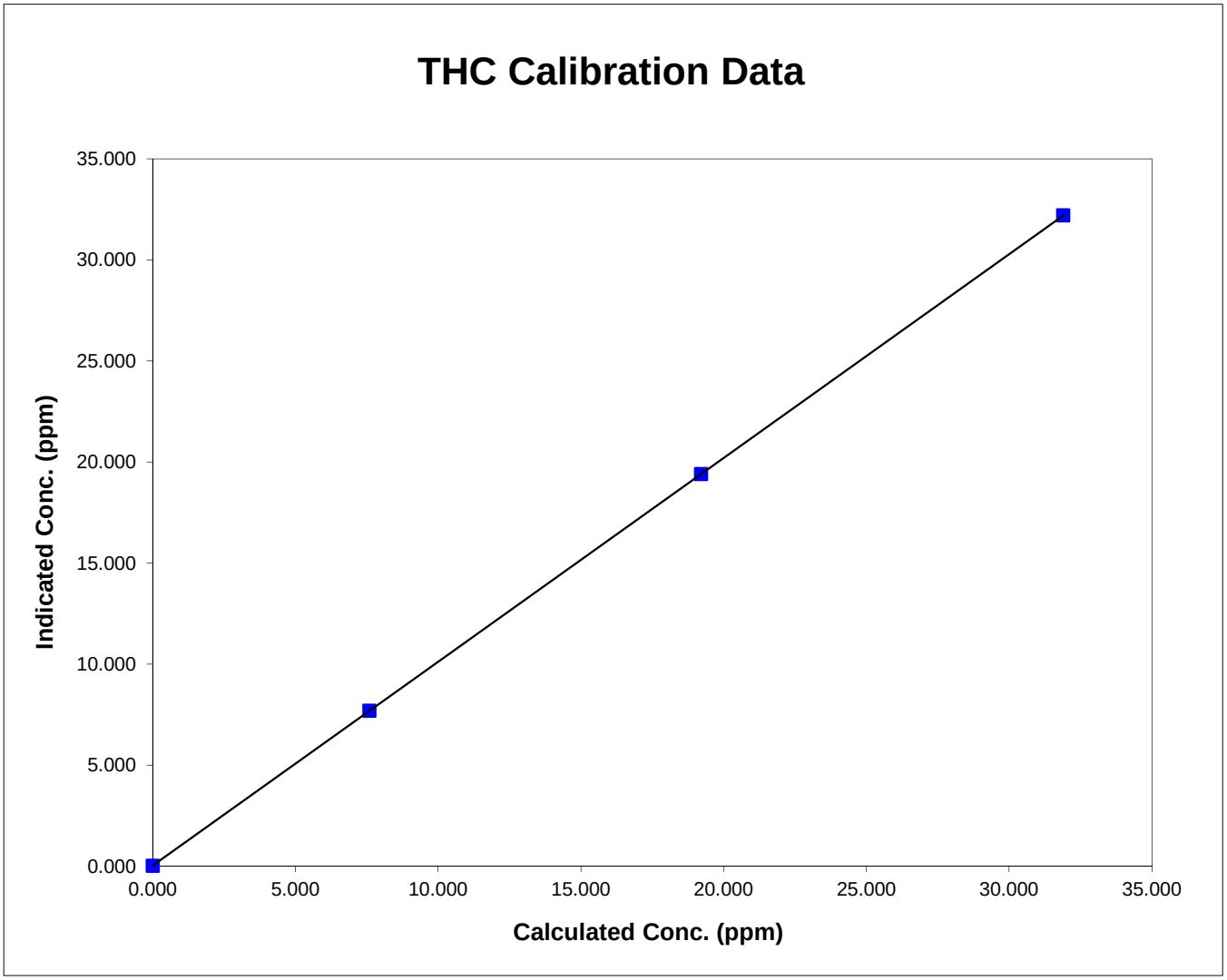
FOCUS AIR QUALITY MONITORING

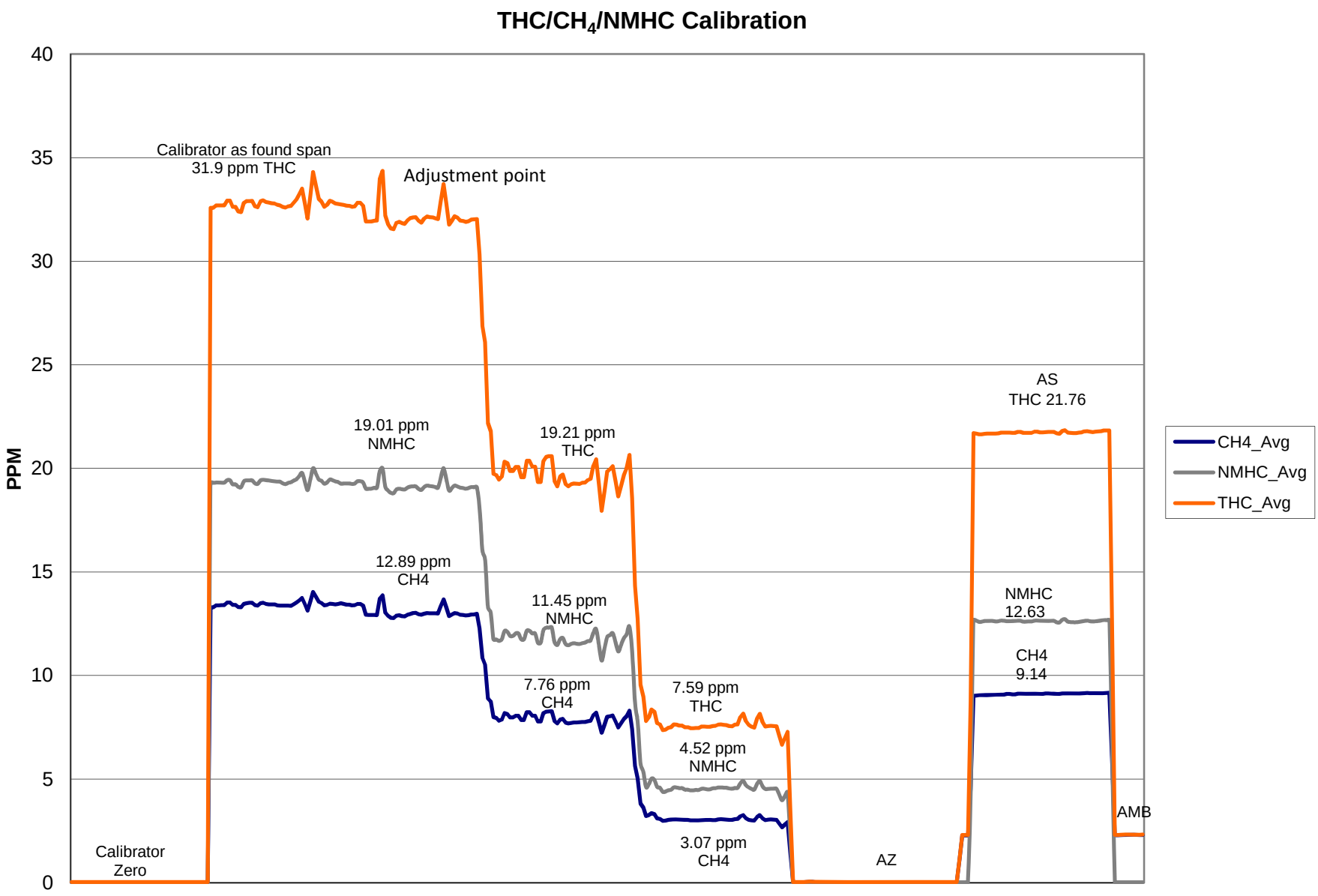
Station Information

Calibration Date	November 12, 2014	Previous Calibration	October 3, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:40	End Time (MST)	11:59
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		
31.901	32.202	0.9906	Correlation Coefficient	1.000000
19.209	19.413	0.9895		
7.592	7.701	0.9858	Slope	0.991698
			Intercept	-0.038478




THC/CH4/NMHC Calibration
PPM
40
35
30
25
20
15
10
5
0
Calibrator as found span
31.9 ppm THC
Adjustment point
19.01 ppm
NMHC
19.21 ppm
THC
12.89 ppm
CH4
11.45 ppm
NMHC
7.76 ppm
CH4
7.59 ppm
THC
4.52 ppm
NMHC
3.07 ppm
CH4
Calibrator
Zero
AZ
AS
THC 21.76
NMHC
12.63
CH4
9.14
AMB
CH4_Avg
NMHC_Avg
THC_Avg

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 12, 2014	Previous Calibration	October 3, 2014
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	14:00	End Time (MST)	18:10
Barometric Pressure	705.00 mm/Hg	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Conc	10.32 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	0.992340	Calculated slope	1.003120
Calculated intercept	0.592659	Calculated intercept	-0.158107
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.939		0.946	
Background	16.8		16.7	
Pressure	668.5	mm Hg	669.5	mm Hg
Flow	0.452	ccm	0.455	ccm
Lamp Voltage	881	V	885	V

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	0.00	0.66	N/A
4995	39.93	81.84	81.94	0.9988
4995	19.95	41.05	40.85	1.0049
6995	9.95	14.66	14.31	1.0244
4995	0.00	0.00	0.66	As Found Zero
4995	39.93	81.84	79.83	As Found Span
			Average Correction Factor	1.0094

Calculated value of As Found Response: 79.2 ppb Percent Change of As Found: 3.3%

	before calibration		after calibration	
Auto zero	0.50	ppb	0.16	ppb
Auto span	35.65	ppb	33.79	ppb

Notes: Span adjustment made.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

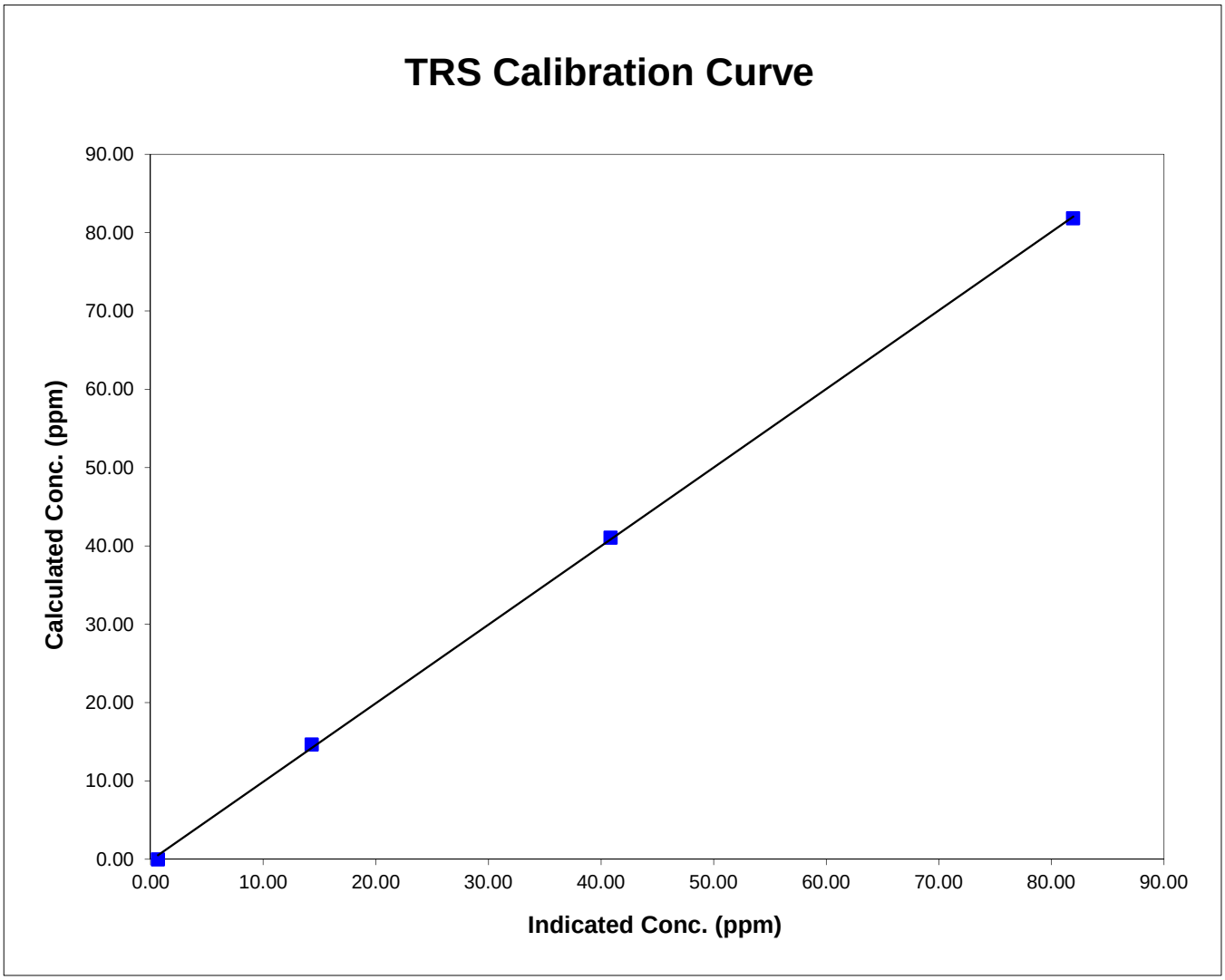
FOCUS AIR QUALITY MONITORING

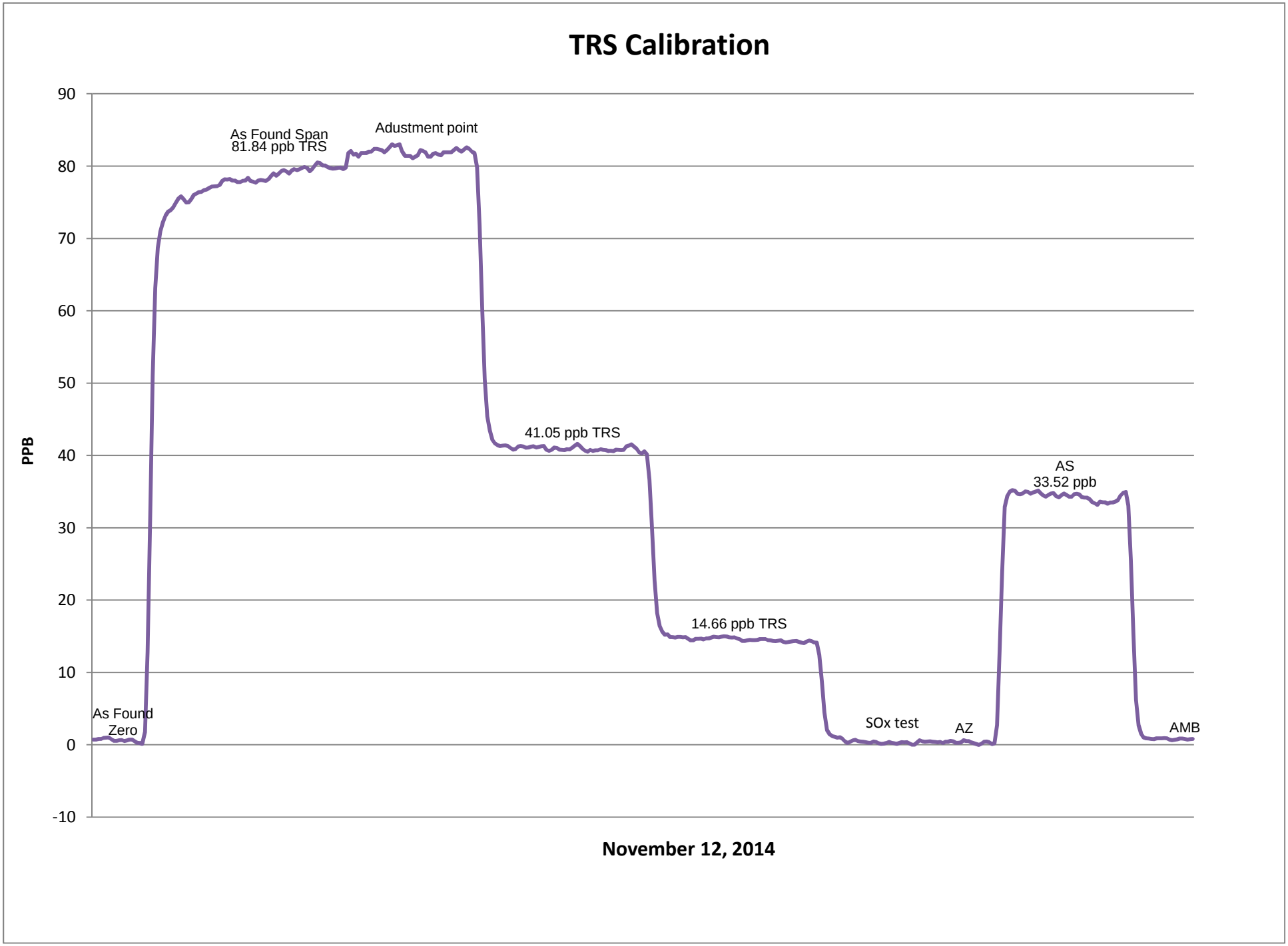
Station Information

Calibration Date	November 12, 2014	Previous Calibration	October 3, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	14:00	End Time (MST)	18:10
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	0.659	N/A		
81.844	81.939	0.9988	Correlation Coefficient	0.999856
41.054	40.852	1.0049		
14.659	14.309	1.0244	Slope	1.003120
			Intercept	-0.158107




TRS Calibration
PPB
90
80
70
60
50
40
30
20
10
0
-10
As Found Span
81.84 ppb TRS
Adustment point
41.05 ppb TRS
14.66 ppb TRS
AS
33.52 ppb
As Found
Zero
SOx test
AZ
AMB
November 12, 2014

Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 21 2014	Previous Calibration	October 23 2014
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:15	End Time (MST)	14:40:00 PM
Barometric Pressure	0.906 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentration	49.8 ppm	Cal Gas Expiry Date	25/02/2025
Correction factor	0.030797	Cal Gas Cylinder #	LL105159
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.989773	Calculated slope	1.002310
Calculated intercept	2.428104	Calculated intercept	1.253844
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.5		11.5	
coefficient	1.219		1.219	
Lamp Voltage	831	volts	831	volts
Chamber Temp	45.1	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	657.7	mm Hg	657.7	mm Hg
Sample Flow	0.446	ccm	0.446	ccm
Lamp Intensity	89	%	88	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.2	N/A
4995	39.93	394.9	393.5	1.0036
4995	19.97	198.3	195.7	1.0133
4995	9.97	99.2	96.4	1.0289
4995	0.0	0.0	0.2	As Found Zero
4995	39.93	394.9	393.5	As Found Span
			Average Correction Factor	1.0153

Calculated value of As Found Response: 391.764 ppm Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.3	ppm
Auto span	281.3	ppm	202.2	ppm

Notes: No adjustments made.
Perm tube was replaced,expecting it to stabilize, which will bring the daily span up.

Calibration Performed By: Dmytro Dolotii, Grover Christiansen

Calibration Summary

Parameter **SO2**

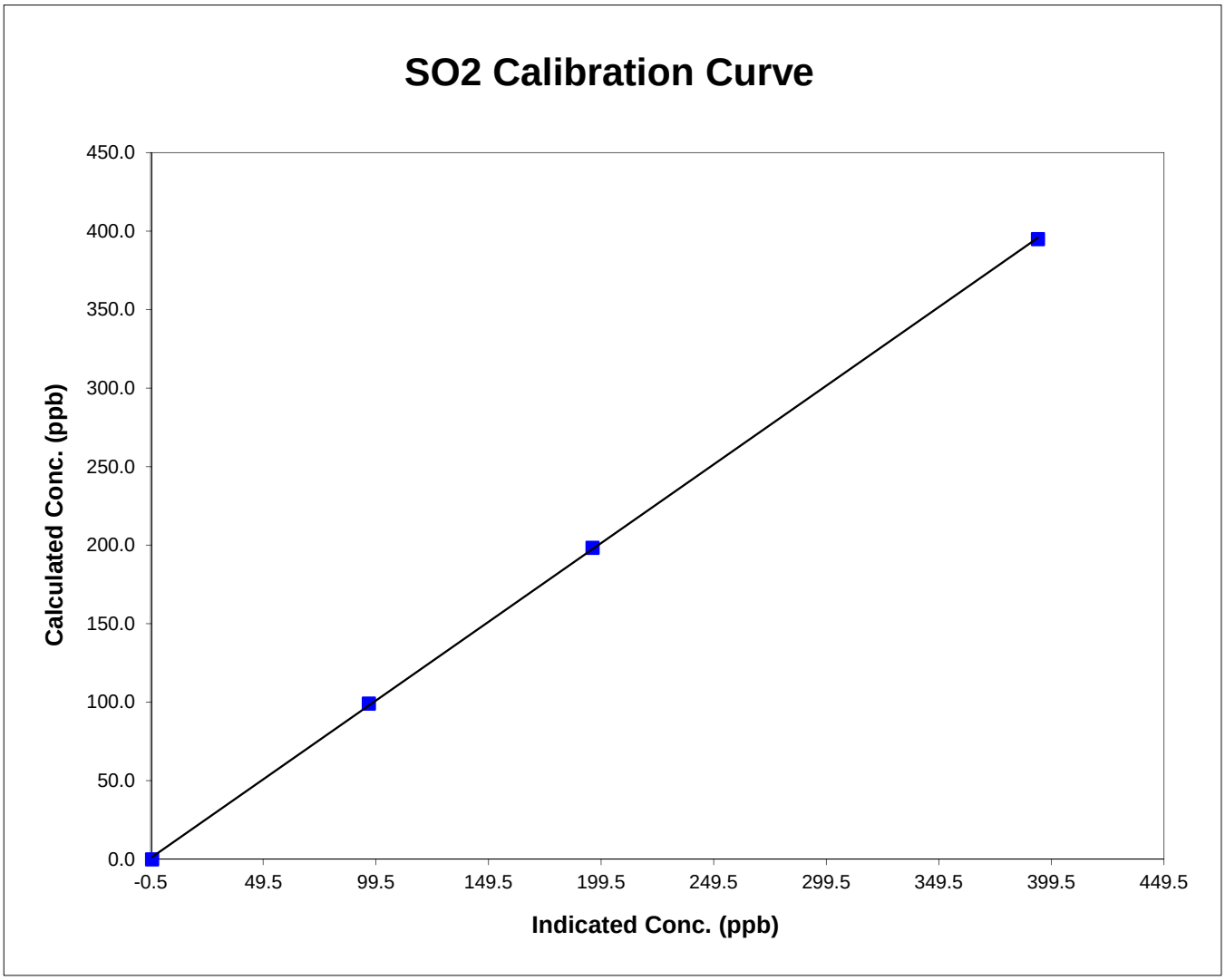
Air Monitoring Network **PAZA**

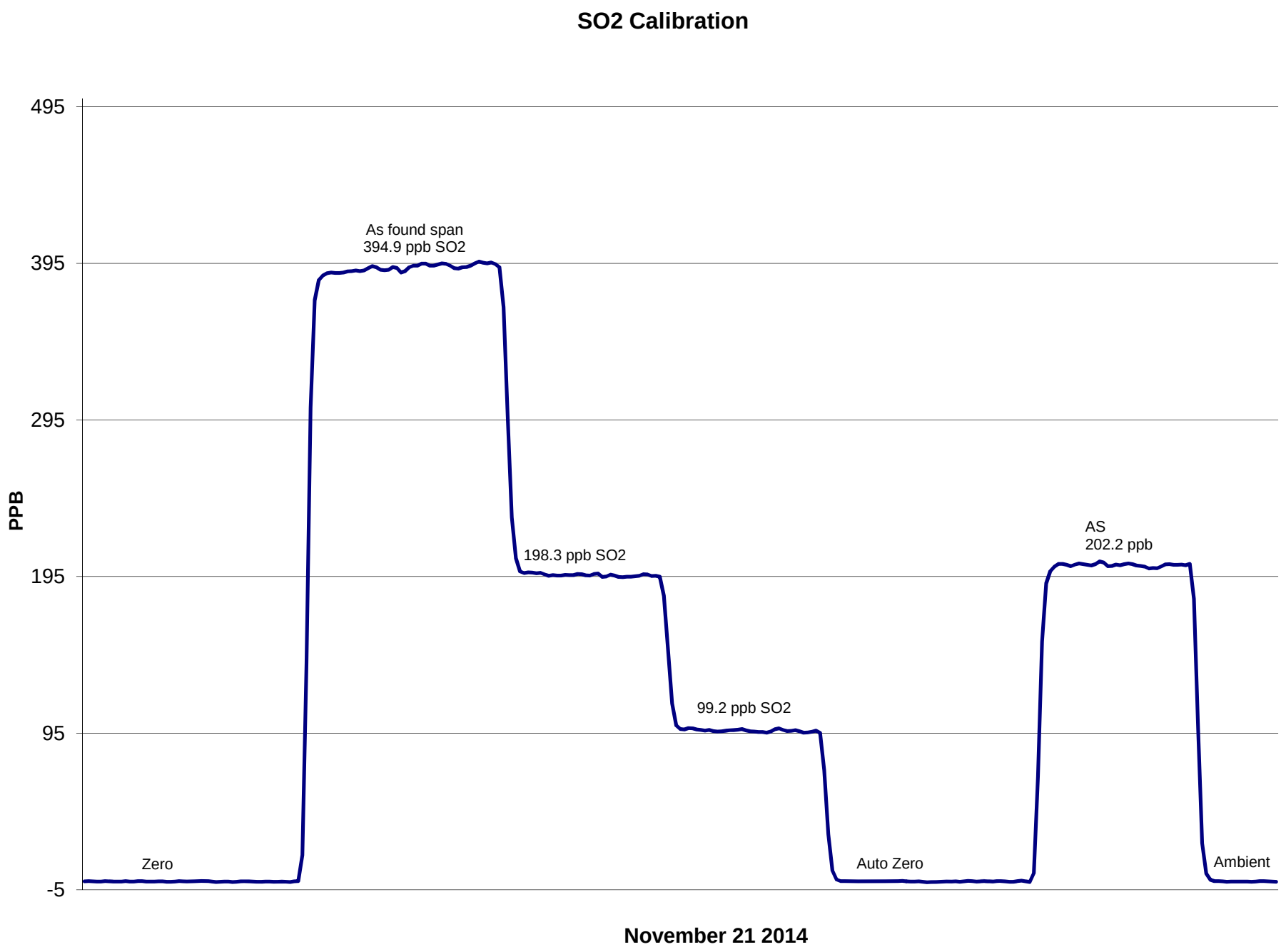
Station Information

Calibration Date	November 21 2014	Previous Calibration	October 23 2014
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	12:15	End Time (MST)	14:40:00 PM
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	0.2	N/A		
394.9	393.5	1.0036	Correlation Coefficient	0.999939
198.3	195.7	1.0133		
99.2	96.4	1.0289	Slope	1.002310
			Intercept	1.253844




SO2 Calibration
495
395
295
195
95
-5
PPB
As found span
394.9 ppb SO2
198.3 ppb SO2
99.2 ppb SO2
AS
202.2 ppb
Zero
Auto Zero
Ambient
November 21 2014

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 21 2014	Previous Calibration	October 23 2014
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:

Start Time (MST)	9:50	End Time (MST)	13:17:00 PM
Barometric Pressure	0.906 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	0.030589	Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	1.000473	Calculated slope	0.980955
Calculated intercept	0.296830	Calculated intercept	0.137579

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	40.5	ppb	41.4	ppb
coefficient	1.010		1.010	
Lamp Voltage	1052	volts	1051	volts
Chamber Temp	44.5	Deg C	44.5	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	628.9	mm Hg	624.5	mm Hg
Sample Flow	0.619	ccm	0.616	ccm
Lamp Intensity	31,048	mv	3,152	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.2	N/A
4995	39.93	82.48	84.1	0.9807
4995	19.97	41.41	41.9	0.9892
6995	9.97	14.80	14.6	1.0120
4995	9.97		1.1	Sox Test
4995	0.00	0.00	0.8	As Found Zero
4995	39.93	82.48	84.1	As Found Span
			Average Correction Factor	0.9940

Calculated value of As Found Response: 83.64 ppm Percent Change of As Found: -1.4%

	before calibration		after calibration	
Auto zero	0.8	ppm	0.4	ppm
Auto span	75.8	ppm	75.9	ppm

Notes: Zero adjustment made.

Calibration Performed By: Dmyrtro Dolotii,Grover Christiansen

Calibration Summary

Parameter **TRS**

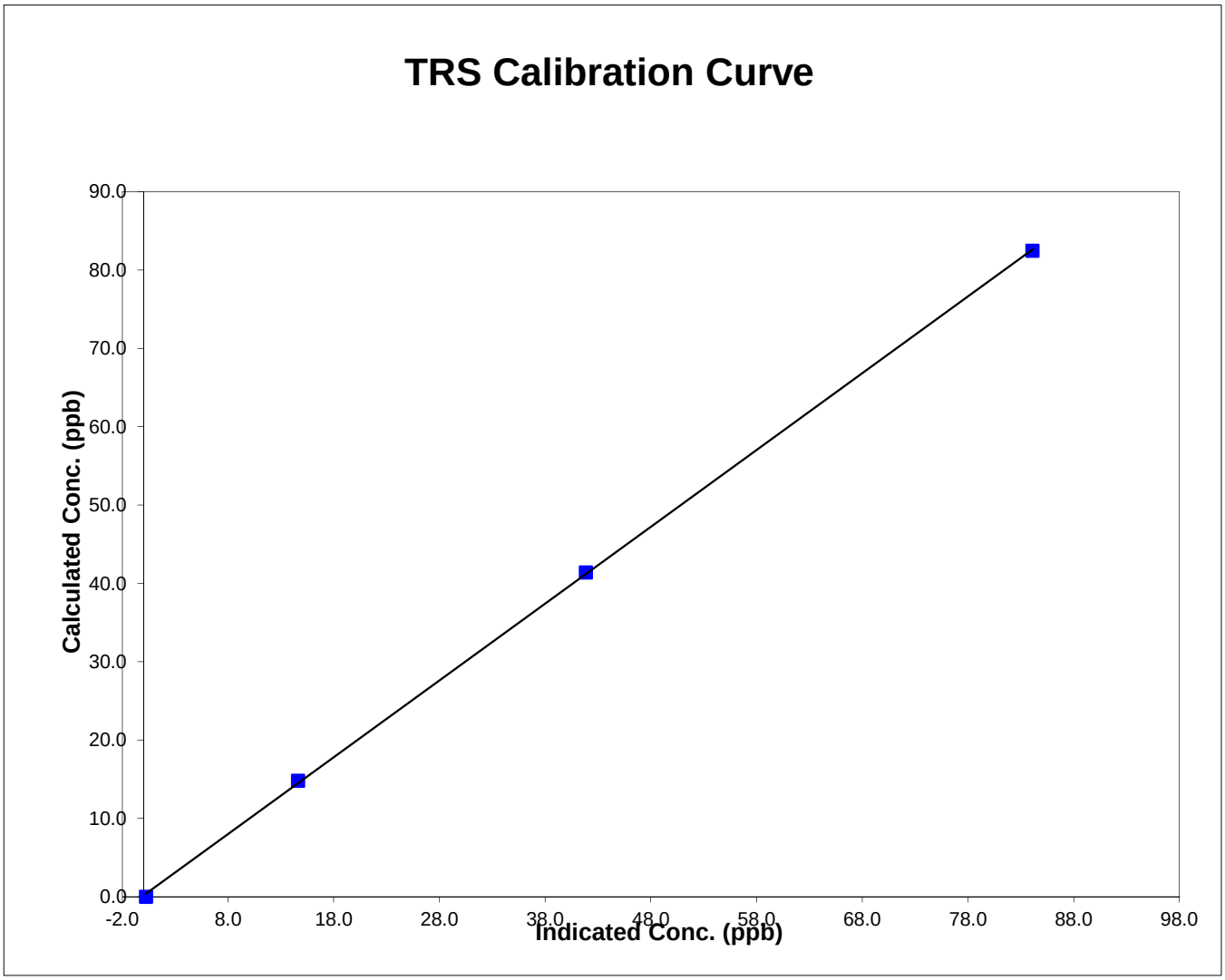
Air Monitoring Network **PAZA**

Station Information

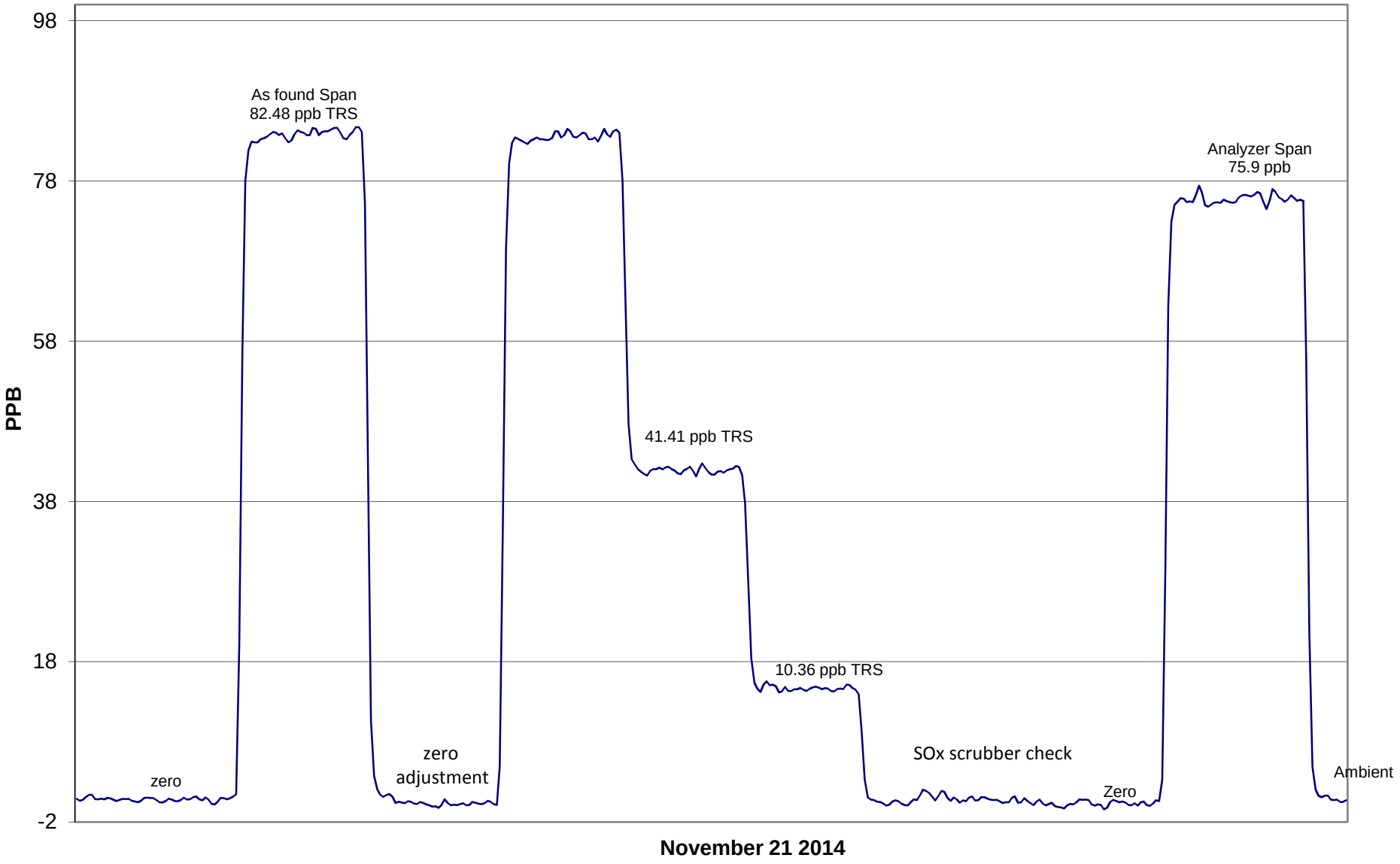
Calibration Date	November 21 2014	Previous Calibration	October 23 2014
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:50	End Time (MST)	13:17:00 PM
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
82.5	84.1	0.9807	Correlation Coefficient	0.999923
41.4	41.9	0.9892		
14.8	14.6	1.0120	Slope	0.980955
			Intercept	0.137579



TRS Calibration



Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 24, 2014	Previous Calibration	October 27, 2014
Station Number	3	Station Location	Smokey Heights
Reason: Routine	Install	Removal	Other:

Start Time (MST)	11:30	End Time (MST)	13:50:00 AM
Barometric Pressure	0.929 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentration	49.8 ppm	Cal Gas Cert Date	20/01/2016
Correction factor	0.031579	Cal Gas Cylinder #	LL1105159
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.982623	Calculated slope	0.997187
Calculated intercept	1.479453	Calculated intercept	1.073633

Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	12.1		12.2	
coefficient	0.952		0.952	
Lamp Voltage	935	volts	933	volts
Chamber Temp	45	Deg C	44.8	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	666.6	mm Hg	666.6	mm Hg
Sample Flow	0.446	lpm	0.446	lpm
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	0.4	N/A
4995	39.93	394.94	395.7	0.9980
4995	19.97	198.31	197.0	1.0065
4995	9.97	99.20	96.9	1.0233
4995	0.0	0.00	0.4	As Found Zero
4995	39.93	394.94	395.7	As Found Span
			Average Correction Factor	1.0093

Calculated value of As Found Response: 389.918 ppm Percent Change of As Found: 1.3%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.3	ppb
Auto span	254.7	ppb	253.8	ppb

Notes: No adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **SO2**

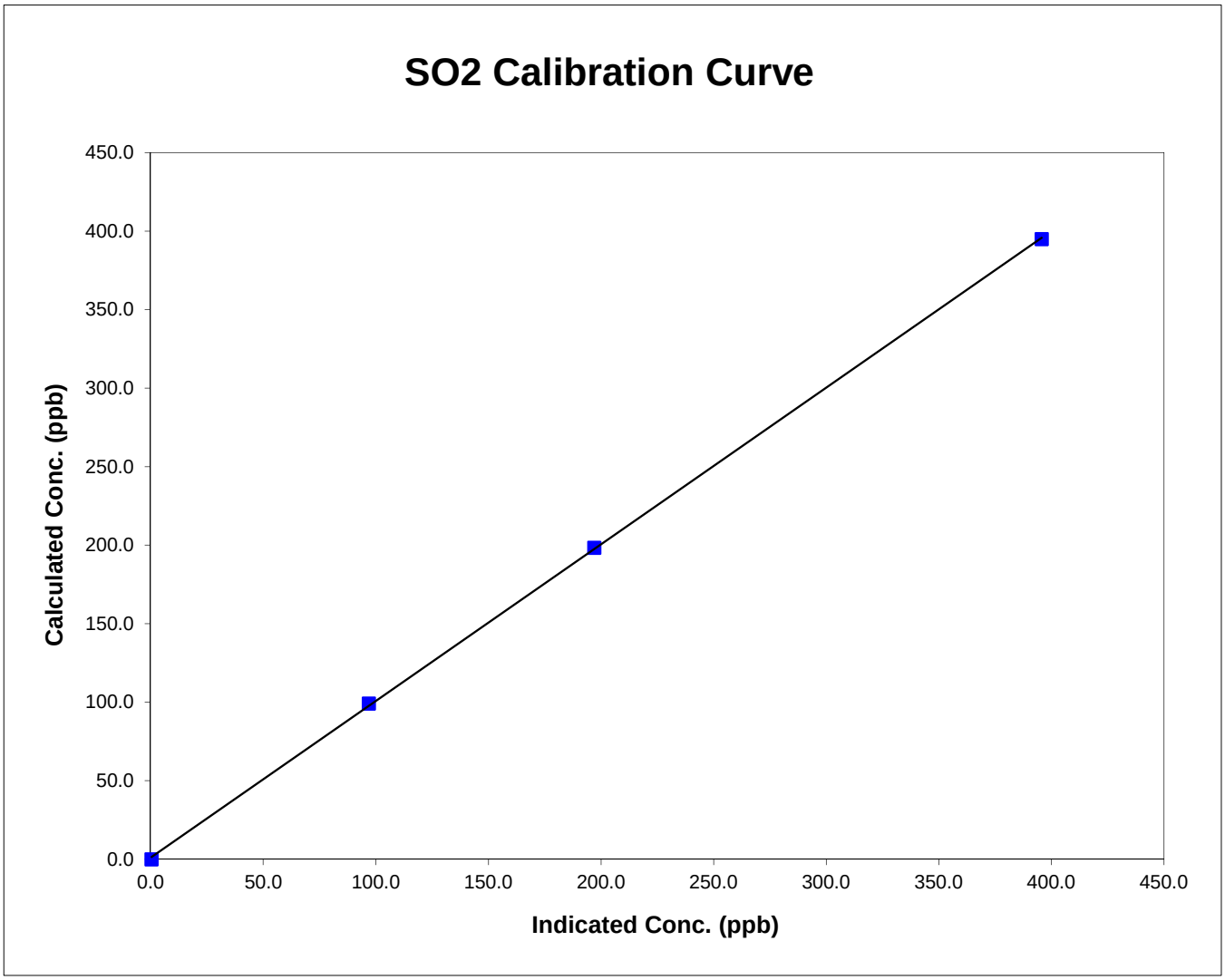
Air Monitoring Network **PAZA**

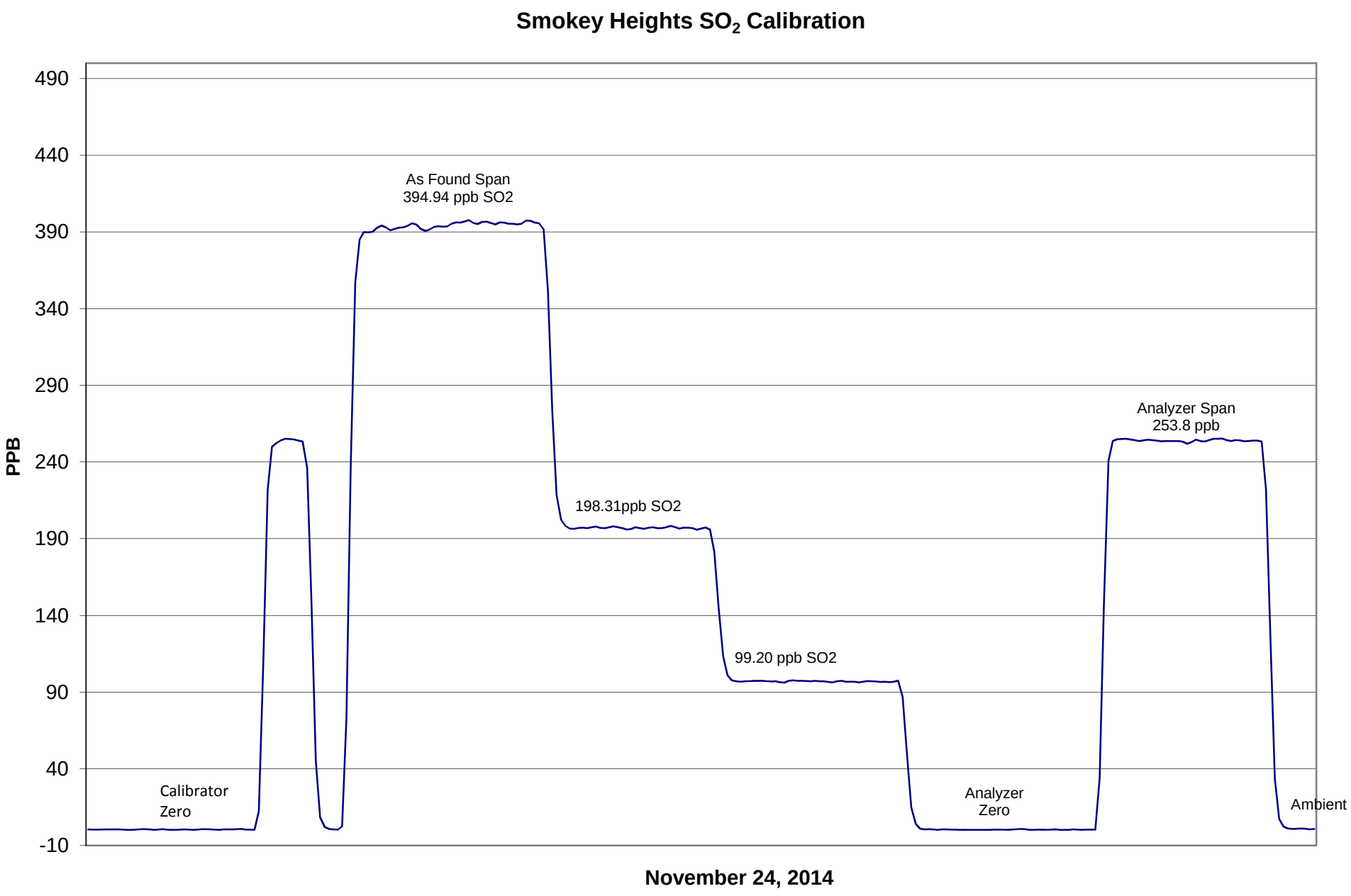
Station Information

Calibration Date	November 24, 2014	Previous Calibration	October 27, 2014
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	11:30	End Time (MST)	13:50:00 AM
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	0.4	N/A		
394.9	395.7	0.9980	Correlation Coefficient	0.999936
198.3	197.0	1.0065		
99.2	96.9	1.0233	Slope	0.997187
			Intercept	1.073633




Smokey Heights SO_2 Calibration
490
440
390
340
290
240
190
140
90
40
-10
PPB
As Found Span
394.94 ppb SO2
198.31ppb SO2
99.20 ppb SO2
Analyzer Span
253.8 ppb
Calibrator
Zero
Analyzer
Zero
Ambient
November 24, 2014

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 24, 2014	Previous Calibration	October 27, 2014
Station Number	3	Station Location	Smokey Heights
Reason: Routine	Install	Removal	Other:

Start Time (MST)	9:00	End Time (MST)	12:00
Barometric Pressure	0.929 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	2844
Cal Gas Conc	10.32 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.031579	Cal Gas Cylinder #	BLM00586
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.995876	Calculated slope	0.990937
Calculated intercept	0.606317	Calculated intercept	0.299738

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	19	ppb	19.5	ppb
coefficient	0.983		0.983	
Lamp Voltage	840	volts	841	volts
Chamber Temp	43.9	Deg C	43.8	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	606	mm Hg	583.9	mm Hg
Sample Flow	0.630	lpm	0.630	lpm
Lamp Intensity	34,950	mv	34,638	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.3	N/A
4995	39.93	81.84	82.6	0.9907
4995	19.97	41.10	40.7	1.0104
6995	9.97	14.69	14.0	1.0459
4995	9.97		0.6	Sox test
4995	0.0	0.00	0.3	As Found Zero
4995	39.93	81.84	82.6	As Found Span
			Average Correction Factor	1.0157

Calculated value of As Found Response: 82.53 ppm Percent Change of As Found: -0.8%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.8	ppm
Auto span	32.4	ppm	32.5	ppm

Notes: No adjustments made, scrubber check performed.

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **TRS**

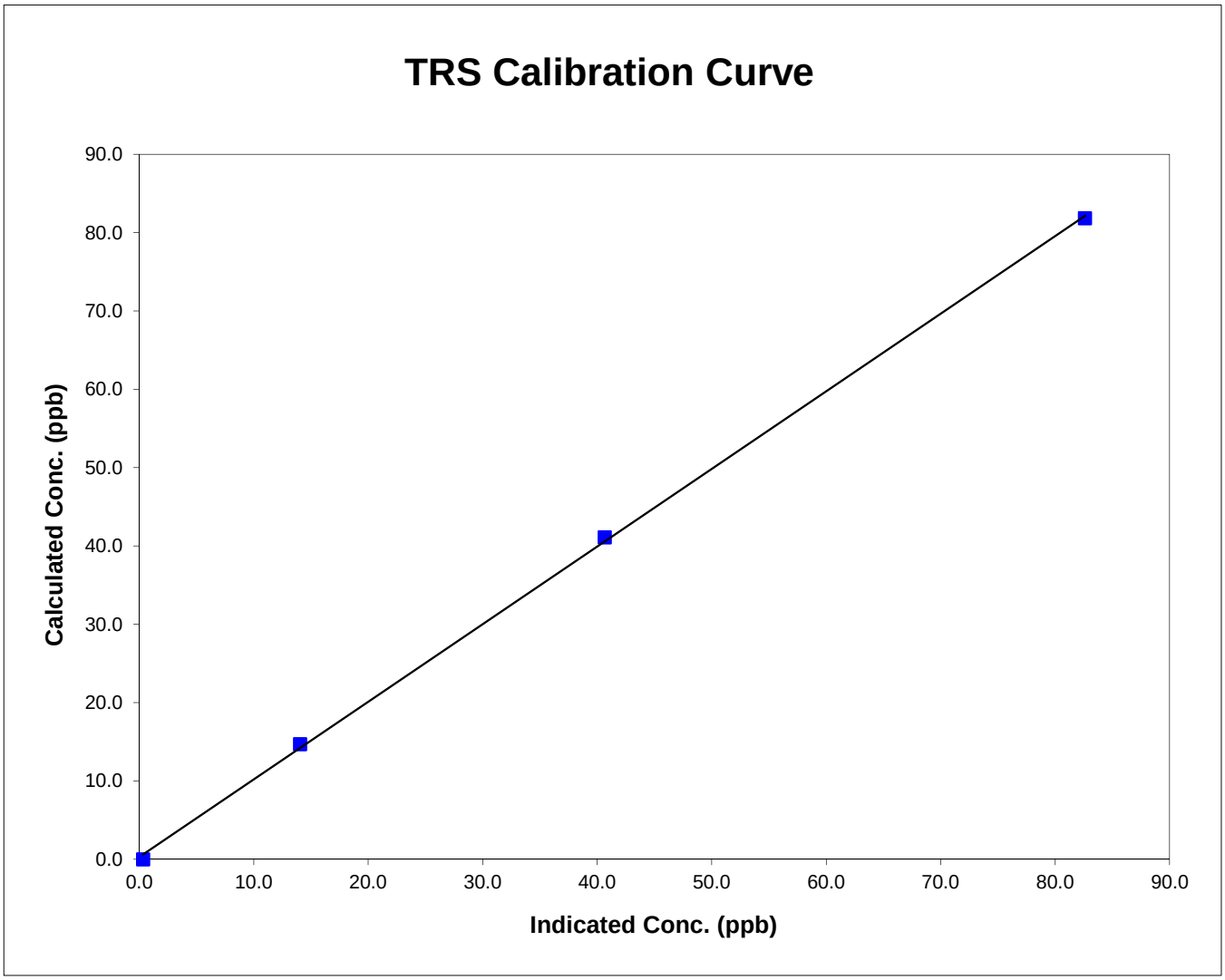
Air Monitoring Network **PAZA**

Station Information

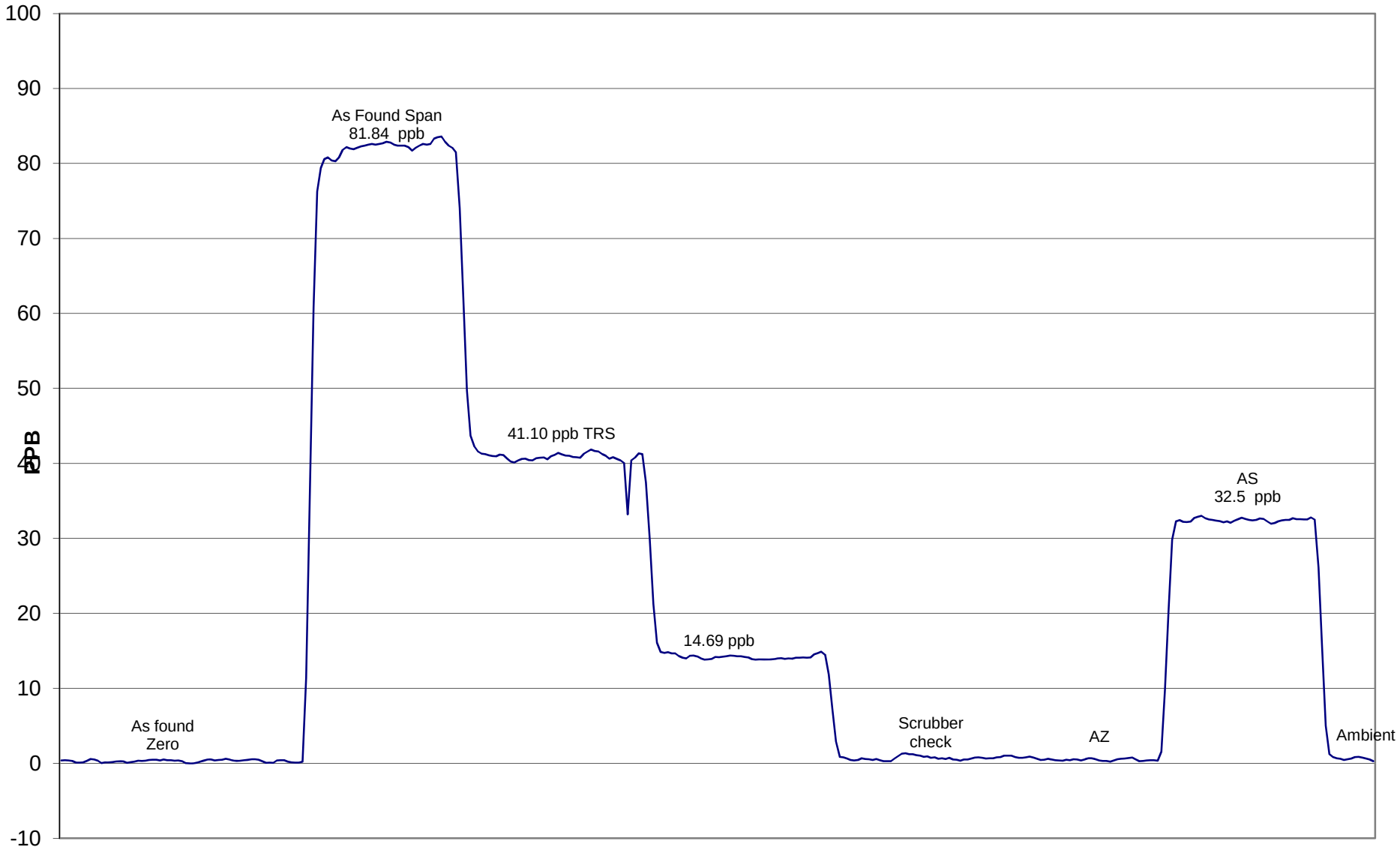
Calibration Date	November 24, 2014	Previous Calibration	October 27, 2014
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	9:00	End Time (MST)	12:00
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
81.8	82.6	0.9907	Correlation Coefficient	0.999745
41.1	40.7	1.0104		
14.7	14.0	1.0459	Slope	0.990937
			Intercept	0.299738



Smokey Heights TRS Calibration



November 24, 2014

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 17, 2014	Previous Calibration	October 6, 2014
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	14:10:00 PM	End Time (MST)	16:40:00 PM
Barometric Pressure	0.908 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	1.002565	Calculated slope	1.003175
Calculated intercept	0.252803	Calculated intercept	-0.079573
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.7		2.74	
Coefficient	1.035		1.035	
PMT	-767.4	V	-767.5	V
UV Lamp Voltage	1082	V	1082	V
Chamber Temp	45.1	Deg C	45	Deg C
Pressure	662.2	mm Hg	661.1	mm Hg
Sample Flow	0.524	LPM	0.524	LPM
Lamp Intensity	95	%	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)
4994	0.00	0.0	0.1	N/A
4994	39.92	85.6	85.4	1.0024
4994	19.96	43.0	43.0	0.9996
4994	9.96	21.5	21.4	1.0032
4994	0.00	0.0	0.1	As found zero
4994	39.92	85.6	84.1	As found span
			Average Correction Factor	1.0017

Calculated value of As Found Response: 84.459 ppm Percent Change of As Found: 1.4%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.0	ppb
Auto span	59.7	ppb	59.8	ppb

Notes: Span adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

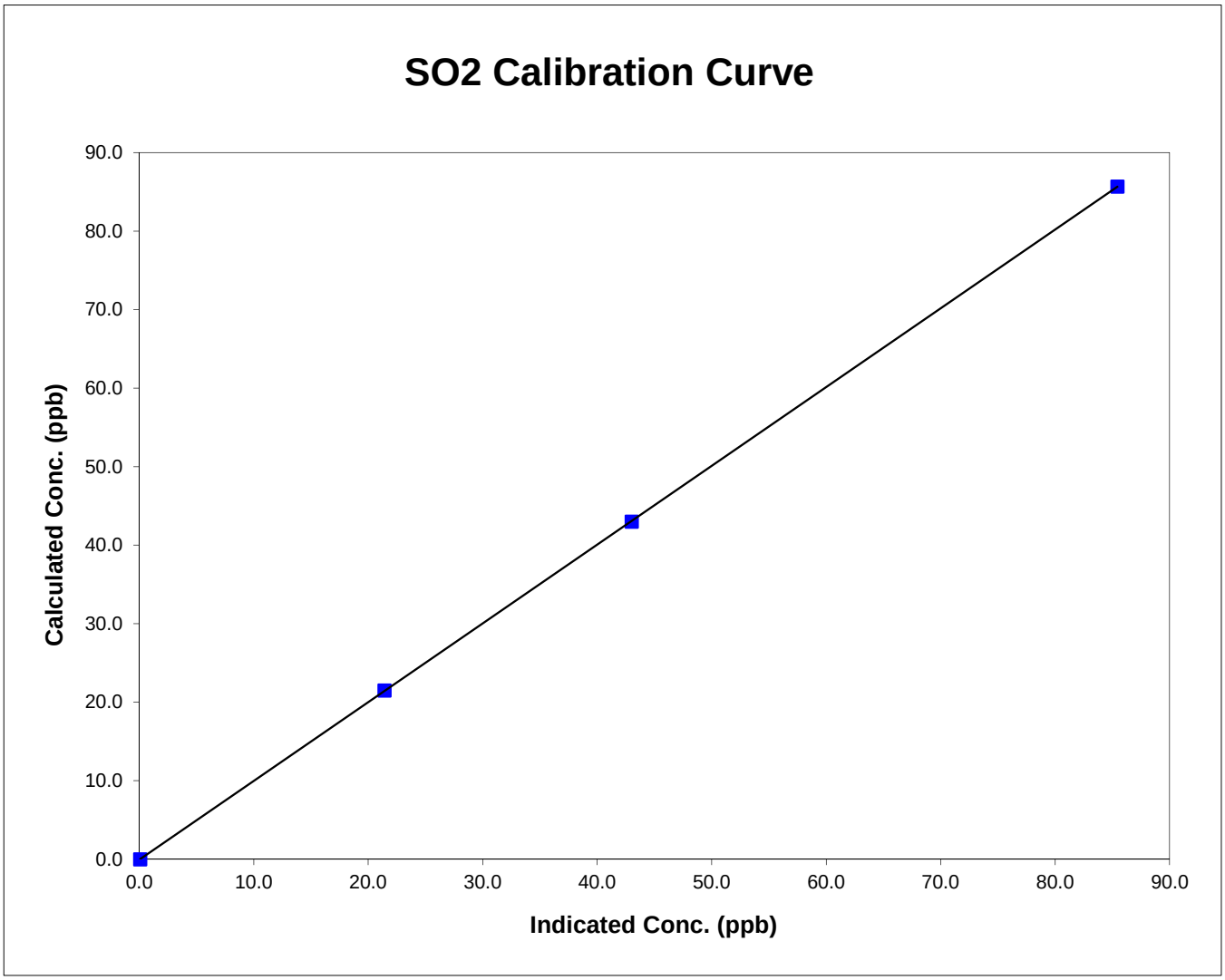
FOCUS AIR QUALITY MONITORING

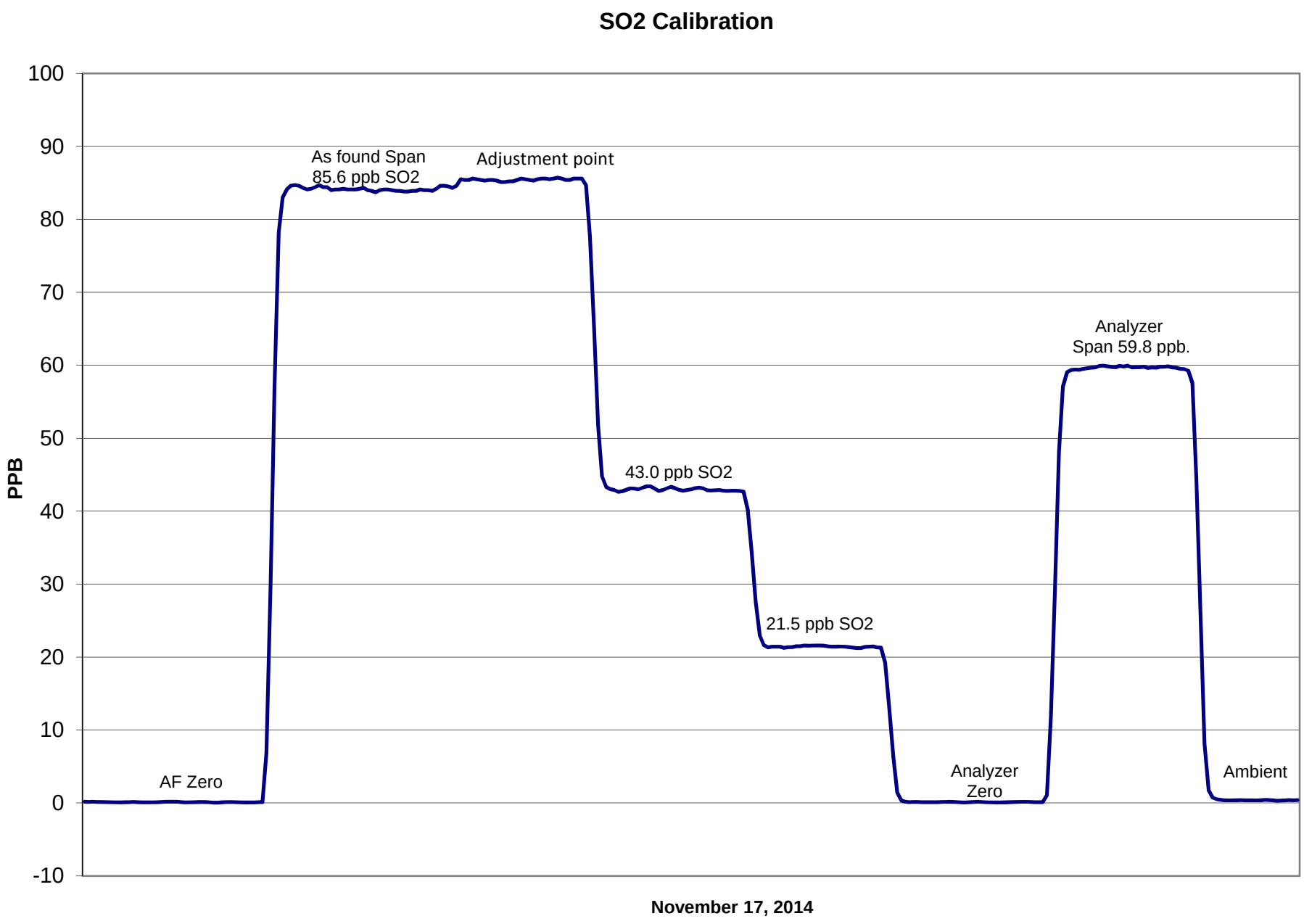
Station Information

Calibration Date	November 17, 2014	Previous Calibration	October 6, 2014
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	14:10:00 PM	End Time (MST)	16:40:00 PM
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	0.1	N/A		
85.6	85.4	1.0024	Correlation Coefficient	0.999997
43.0	43.0	0.9996		
21.5	21.4	1.0032	Slope	1.003175
			Intercept	-0.079573




SO2 Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As found Span
85.6 ppb SO2
Adjustment point
43.0 ppb SO2
21.5 ppb SO2
Analyzer
Span 59.8 ppb.
AF Zero
Analyzer
Zero
Ambient
November 17, 2014

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 17, 2014	Previous Calibration	October 6, 2014
Station Number	4	Station Location	Beaverlodge

Reason: Routine Installation Removal Other:

Start Time (MST)	9:55		End Time (MST)	13:30:00 PM	
Barometric Pressure	0.907	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3016	
NO Cal Gas Conc	50.9	ppm	Cal Gas Expiry Date	March 10, 2017	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL119493	

DACS Information

DACS make: CR3000 DACS serial No.: 5237

Parameter		NO2	NOx	NO
Before	Data Slope	0.996108	0.999206	0.996046
	Data Offset	-0.726819	1.803197	1.921956
After	Data Slope	0.991881	0.997077	0.995209
	Data Offset	-0.944431	0.562457	0.743745
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	3.1	mV	3.1	mV
NOx bkgnd	3.4	mV	3.4	mV
NO coefficient	1.036		1.058	
NOx coefficient	1.002		1.004	
NO2 conv temp	321.6	Deg C	323.7	Deg C
PMT Temp	-2.9	Deg C	-2.9	Deg C
PMT Volt	-747.8	mV	-747.7	mV
R Cell Press	235.5	in Hg	235.2	in Hg
Sample Flow	0.597	LPM	0.592	LPM

Notes: Span adjustments made.

Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 17, 2014	Previous Calibration	October 6, 2014
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:35	End Time (MST)	15:07:00 PM
Barometric Pressure	0.907 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	1.001884	Calculated slope	0.990637
Calculated intercept	-0.407944	Calculated intercept	-0.599568
Analyzer make	Teco 49i	Analyzer serial #	1136451236,AMU 1879

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.60	ppb	-0.60	ppb
slope	1.002		1.042	
Lamp temp	53.9	mV	53.9	mV
Lamp Intensity A/B	71640/74490	mV	71622/74457	mV
Pressure	687.5	mm Hg	686.9	mm Hg
Flow A	0.759	LPM	0.754	LPM
Flow B	0.737	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	0.2	N/A
5035	0.30	304.5	308.0	0.9887
5035	0.20	204.8	206.9	0.9897
5035	0.10	107.0	109.4	0.9780
5035	0.00	0.0	0.2	As found zero
5035	0.30	304.5	296.2	As found span
			Average Correction Factor	0.9855

Calculated value of As Found Response: 296.1 ppm Percent Change of As Found: -2.7%

	before calibration		after calibration	
Auto zero	-0.2	ppb	-0.1	ppb
Auto span	268.6	ppb	280.5	ppb

Notes: Span adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **O3**

Air Monitoring Network **PAZA**

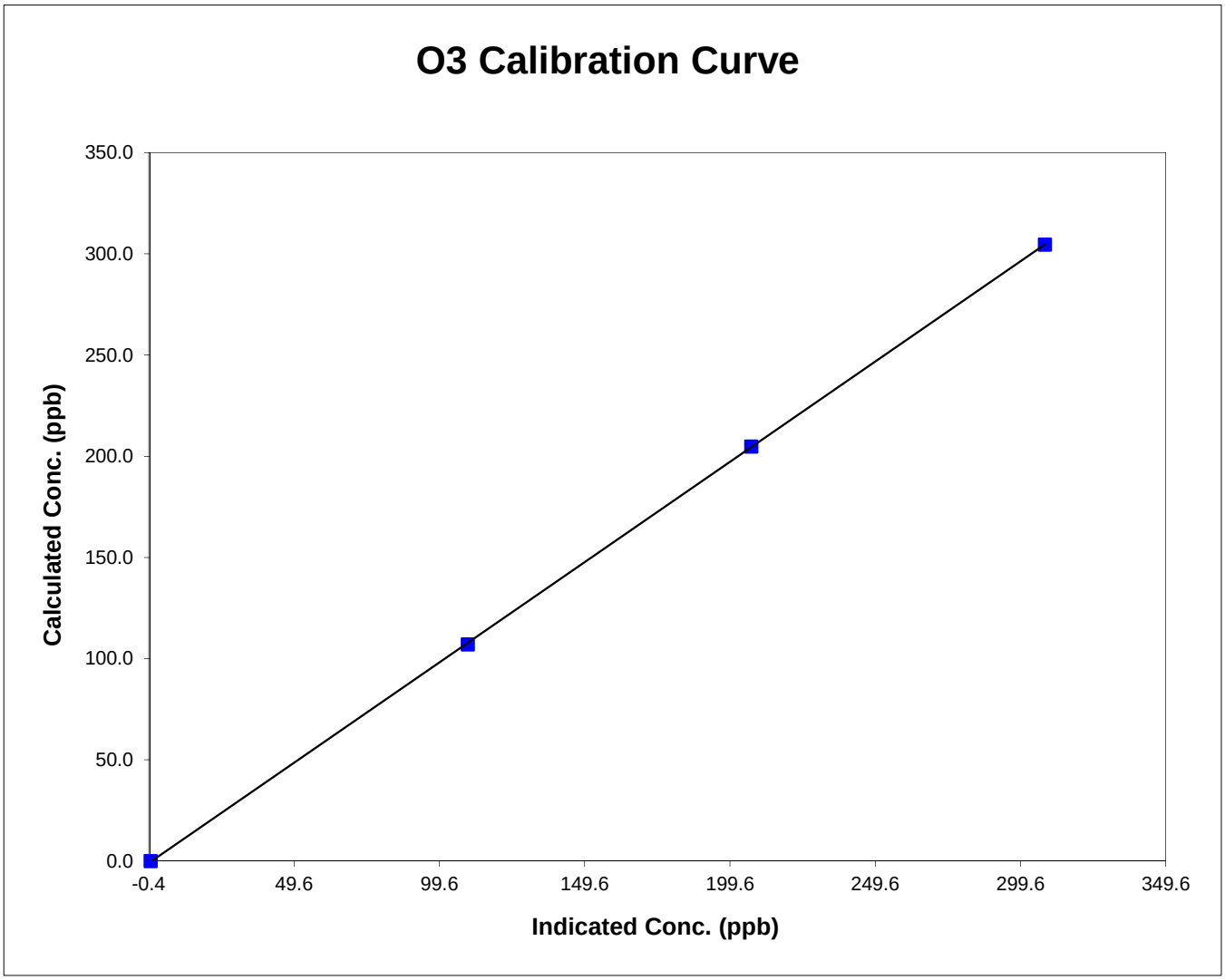
FOCUS AIR QUALITY MONITORING

Station Information

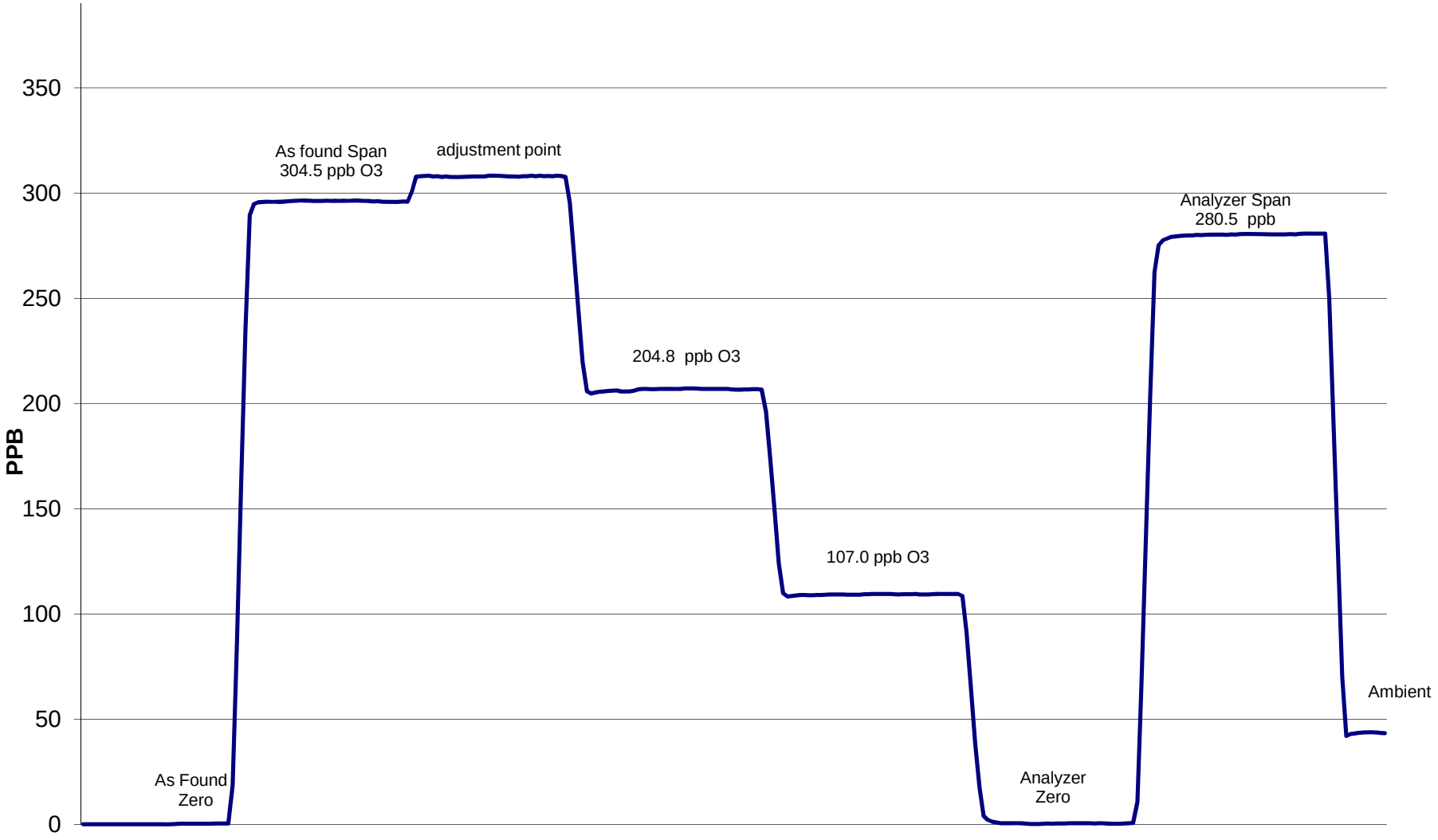
Calibration Date	November 17, 2014	Previous Calibration	October 6, 2014
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	12:35	End Time (MST)	15:07:00 PM
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236,AMU 1879

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	NA		
304.5	308.0	0.9887	Correlation Coefficient	0.999982
204.8	206.9	0.9897		
107.0	109.4	0.9780	Slope	0.990637
			Intercept	-0.599568



O3 Calibration



November 17, 2014

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 6 2014	Previous Calibration	October 8 2014
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:10	End Time (MST)	14:40
Barometric Pressure	706.00 mmHg	Station Temperature	23.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentration	50.2 ppm	Cal Gas Exp Date	March 10, 2017
Gas Cylinder Num.	LL119493		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.000353	Calculated slope	0.998366
Calculated intercept	1.822880	Calculated intercept	2.064764
Analyzer make	TEI 43C	Analyzer serial #	609716239

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	15.3		15.1	
Coefficient	0.989		0.989	
UV Lamp Voltage	739	LPM	739	LPM
Chamber Temp	43.2	V	43.2	V
Perm Gas Temp	45	C	45	C
Pressure	664.2	in Hg	664.6	in Hg
Sample Flow	0.482	LPM	0.484	LPM
Lamp Intensity	47581	Hz	47644	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.0	N/A
4995	39.93	398.1	398.0	1.0004
4995	19.97	199.9	196.4	1.0180
4995	9.95	99.8	96.4	1.0358
4995	0.00	0.0	0.0	As found zero
4995	39.91	397.9	389.3	As found span
			Average Correction Factor	1.0181

Calculated value of As Found Response: 391.3 ppm Percent Change of As Found: 1.7%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	278.6	ppm	285.5	ppm

Notes: Span adjustment made, run adj point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

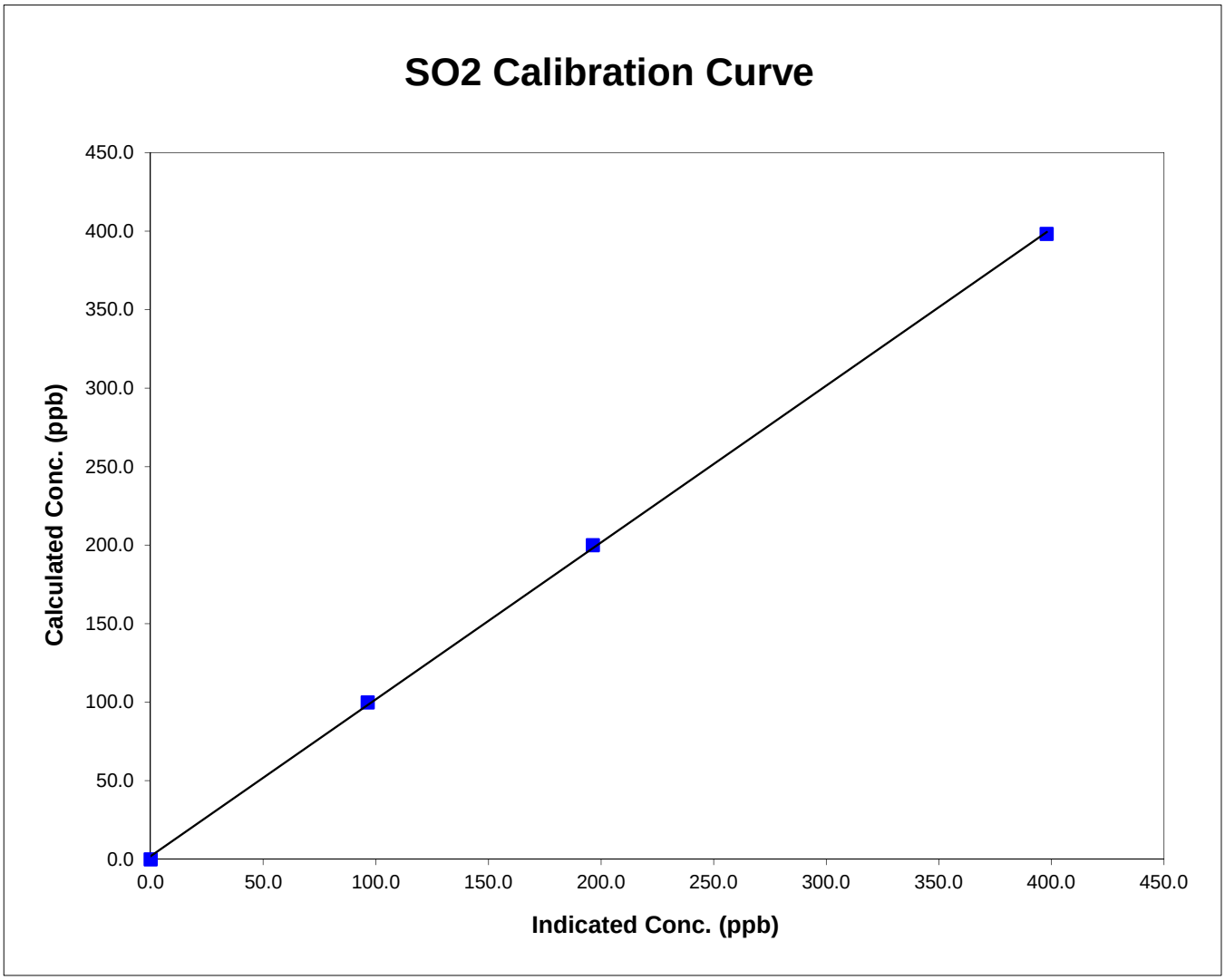
Air Monitoring Network **PAZA**

Station Information

Calibration Date	November 6 2014	Previous Calibration	October 8 2014
Station Number	6	Station Location	Valleyview
Start Time (MST)	12:10	End Time (MST)	14:40
Analyzer make/model	TEI 43C	Analyzer serial #	609716239

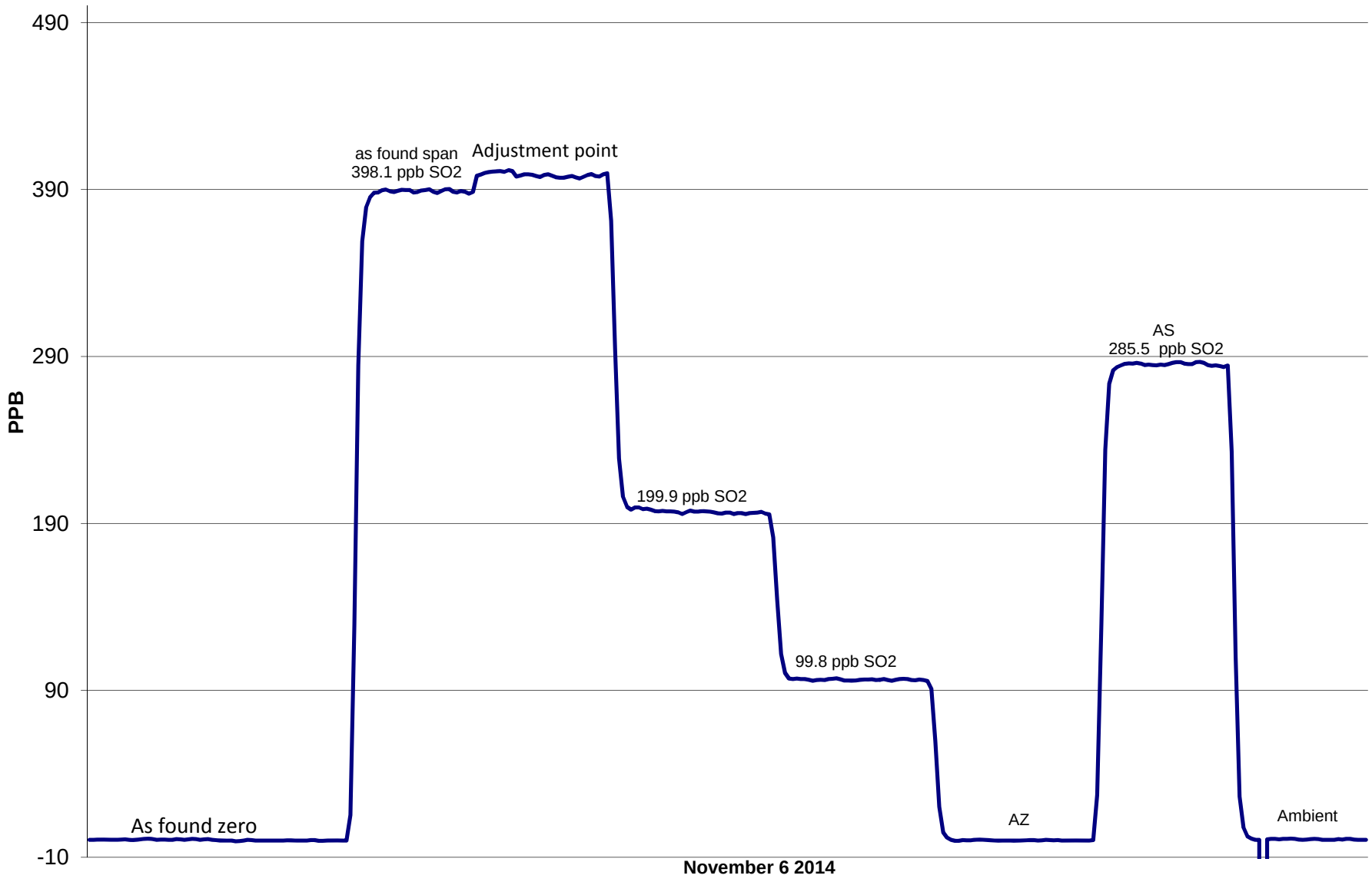
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
398.1	398.0	1.0004	Correlation Coefficient	0.999867
199.9	196.4	1.0180		
99.8	96.4	1.0358	Slope	0.998366
			Intercept	2.064764



AZ

SO2 Calibration



Calibration Report

Parameter **H2S**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 6 2014	Previous Calibration	Ocotber 8 2014
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	10:30	End Time (MST)	13:33
Barometric Pressure	706.00 mm	Station Temperature	23.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentratior	10.32 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	0.999601	Calculated slope	0.995202
Calculated intercept	0.276812	Calculated intercept	0.288509
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	7.5	ppb	7.5	ppb
Coefficient	0.888		0.888	
Lamp Voltage	790	V	790	V
Chamber Temp	45	c	45	c
Perm Oven Temp	45	c	45	c
Pressure	562.50	mm Hg	564.70	mm Hg
Sample Flow	0.385	ccm	0.387	lpm
Lamp Intensity	91	%	91	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.2	N/A
4997	39.91	81.8	82.1	0.9962
4997	19.94	41.0	40.6	1.0092
6995	9.97	14.7	14.1	1.0453
4997	9.97		2.8	Sox Test
4997	0.00	0.0	0.2	As found zero
4997	39.93	81.8	82.1	As found span
			Average Correction Factor	1.0169

Calculated value of As Found Response: 82.13 ppm Percent Change of As Found: -0.4%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.4	ppm
Auto span	64.8	ppm	67.3	ppm

Notes: NO adjustments made

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PAZA**

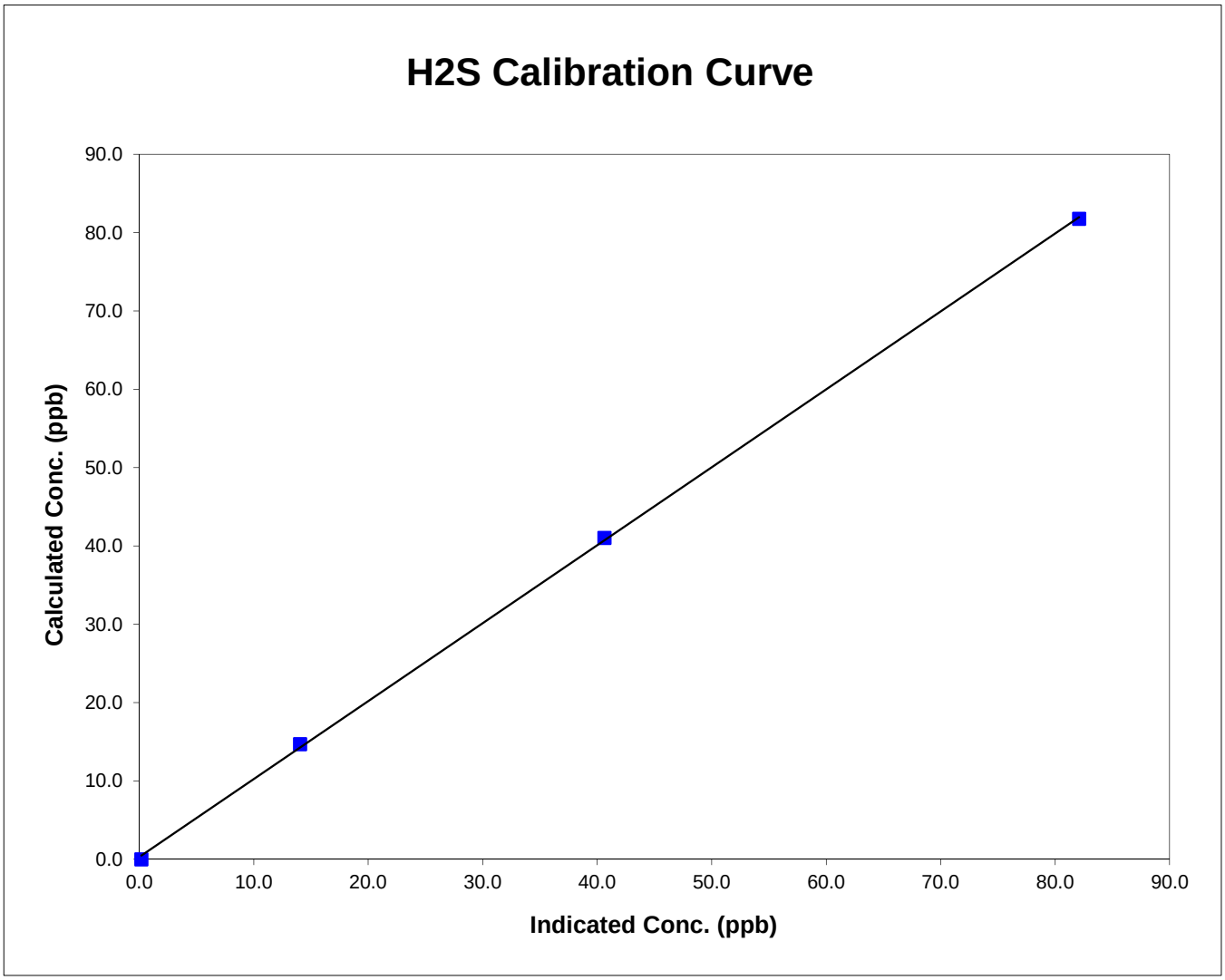
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 6 2014	Previous Calibration	Ocotber 8 2014
Station Number	6	Station Location	Valleyview
Start Time (MST)	10:30	End Time (MST)	13:33
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

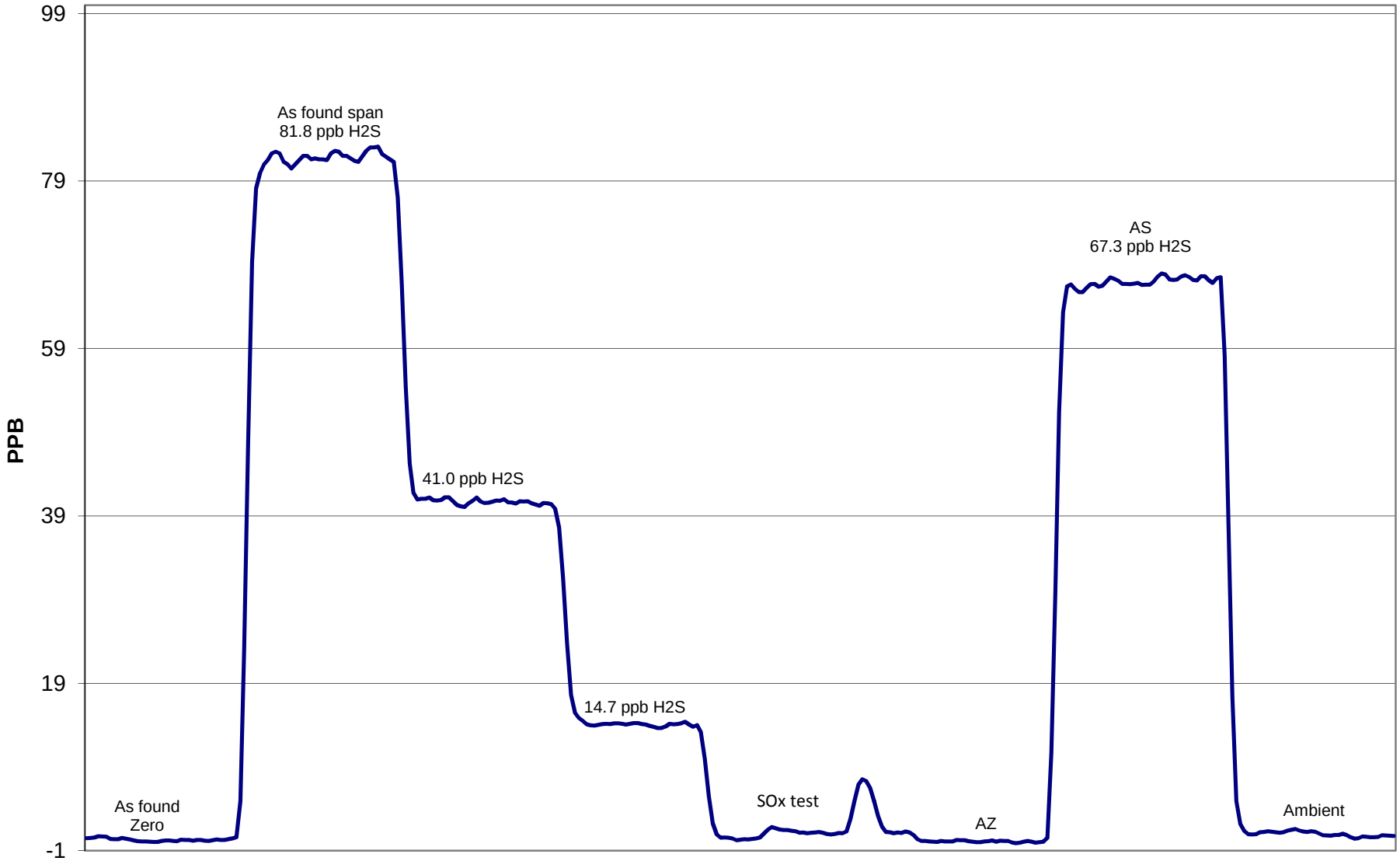
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
81.8	82.1	0.9962	Correlation Coefficient	0.999863
41.0	40.6	1.0092		
14.7	14.1	1.0453	Slope	0.995202
			Intercept	0.288509



10.4 ppb H2S

H2S Calibration



November 6 2014

Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 29, 2014	Previous Calibration	October 7, 2014
Station Number	1	Station Location	Falher
Reason: Routine	Install	Removal	Other:

Start Time (MST)	13:56:00 PM	End Time (MST)	16:15:00 PM
Barometric Pressure	0.908 mm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Concentration	50.2 ppm	Cal Gas Expiry Date	10/03/2017
Correction factor	0.030865	Cal Gas Cylinder #	LL119493
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.990712	Calculated slope	0.994296
Calculated intercept	0.596053	Calculated intercept	0.176680

Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	6.7		6.5	
coefficient	0.922		0.902	
Lamp Voltage	860	volts	859	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	678.5	mm Hg	684.1	mm Hg
Sample Flow	0.413	ccm	0.417	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	0.8	N/A
4995	39.93	398.1	400.7	0.9935
4995	19.96	199.8	200.2	0.9982
4995	9.97	100.0	99.6	1.0044
4995	0.0	0.0	0.8	As Found Zero
4995	39.93	398.1	406.2	As Found Span
			Average Correction Factor	0.9987

Calculated value of As Found Response: 402.276 ppm Percent Change of As Found: -1.0%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.7	ppm
Auto span	351.3	ppm	353.8	ppm

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **SO2**

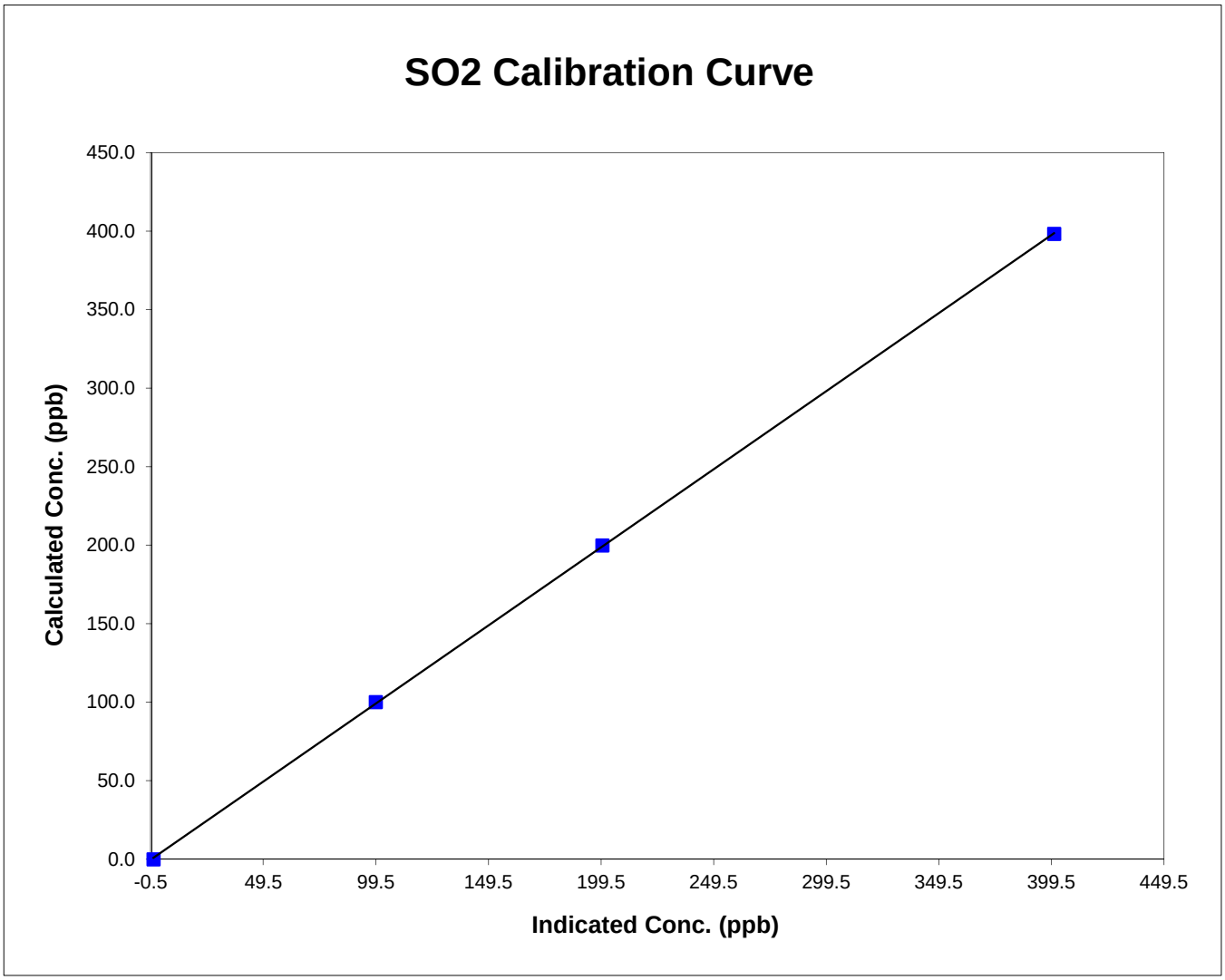
Air Monitoring Network **PAZA**

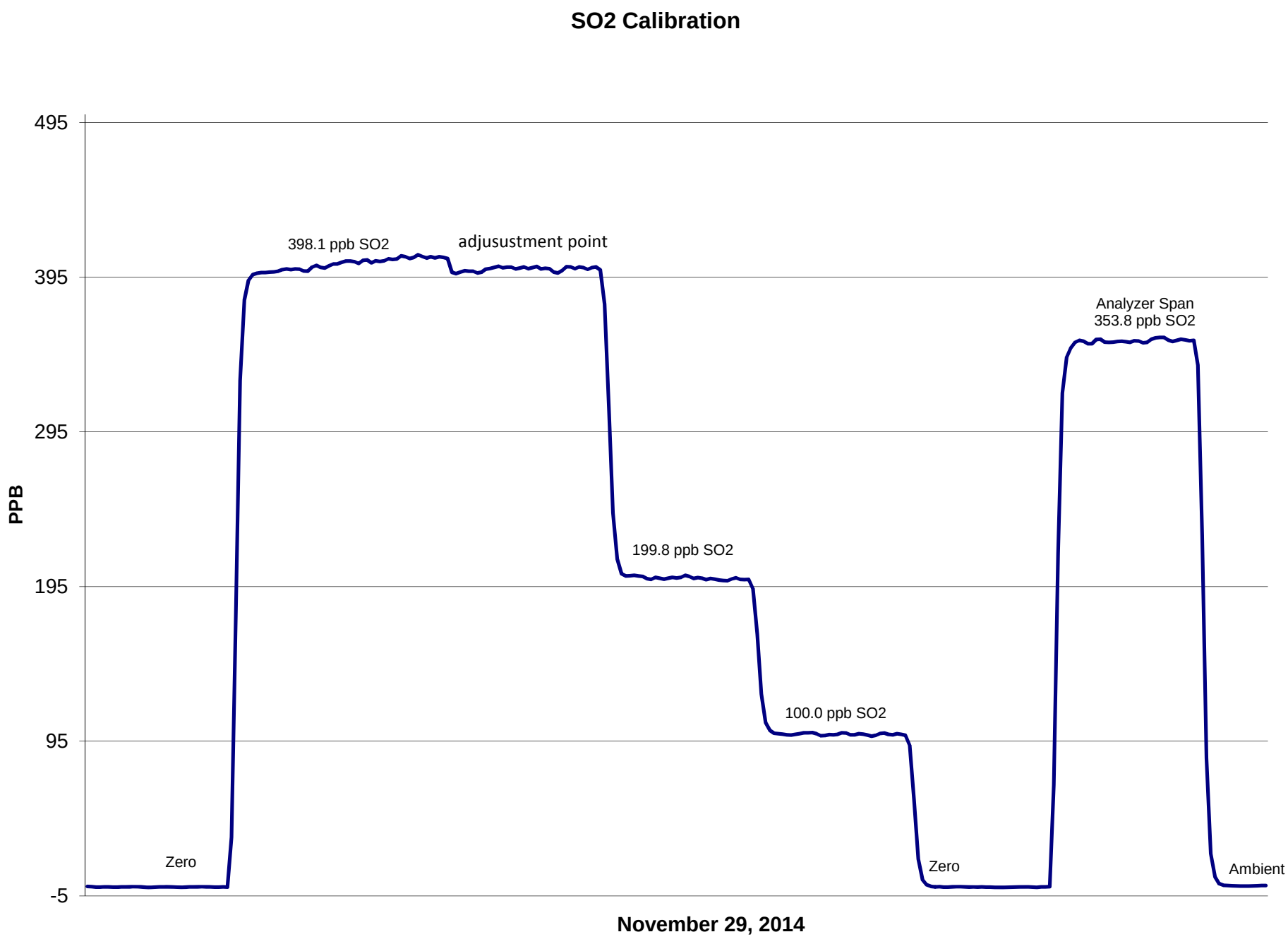
Station Information

Calibration Date	November 29, 2014	Previous Calibration	October 7, 2014
Station Number	1	Station Location	Falher
Start Time (MST)	13:56:00 PM	End Time (MST)	16:15:00 PM
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	0.8	N/A		
398.1	400.7	0.9935	Correlation Coefficient	0.999975
199.8	200.2	0.9982		
100.0	99.6	1.0044	Slope	0.994296
			Intercept	0.176680




SO2 Calibration
495
395
295
195
95
-5
PPB
398.1 ppb SO2
adjusustment point
199.8 ppb SO2
100.0 ppb SO2
Analyzer Span
353.8 ppb SO2
Zero
Zero
Ambient
November 29, 2014

Calibration Report

Parameter **H2S**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 29, 2014	Previous Calibration	October 7, 2014
Station Number	1	Station Location	Falher
Reason: Routine	Install	Removal	Other:

Start Time (MST)	11:30	End Time (MST)	14:50:00 PM
Barometric Pressure	0.908 mm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Conc	10.32 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.030865	Cal Gas Cylinder #	LL110781
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.983630	Calculated slope	0.988472
Calculated intercept	-0.176060	Calculated intercept	-0.048331

Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	13.6	ppb	14.1	ppb
coefficient	1.117		1.117	
Lamp Voltage	804	volts	805	volts
Chamber Temp	45.2	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	555.5	mm Hg	557	mm Hg
Sample Flow	0.871	lpm	0.87	lpm
Lamp Intensity	90	mv	90	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.2	N/A
4995	39.93	81.84	82.8	0.9881
4995	19.96	41.07	41.7	0.9839
6994	9.97	14.69	14.6	1.0050
4995	0.00	0.00	0.8	As Found Zero
4995	39.93	81.84	82.8	As Found Span
			Average Correction Factor	0.9923

Calculated value of As Found Response: 80.53 ppm Percent Change of As Found: 1.6%

	before calibration		after calibration	
Auto zero	0.2	ppm	0.3	ppm
Auto span	54.2	ppm	55.4	ppm

Notes: Zero adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **H2S**

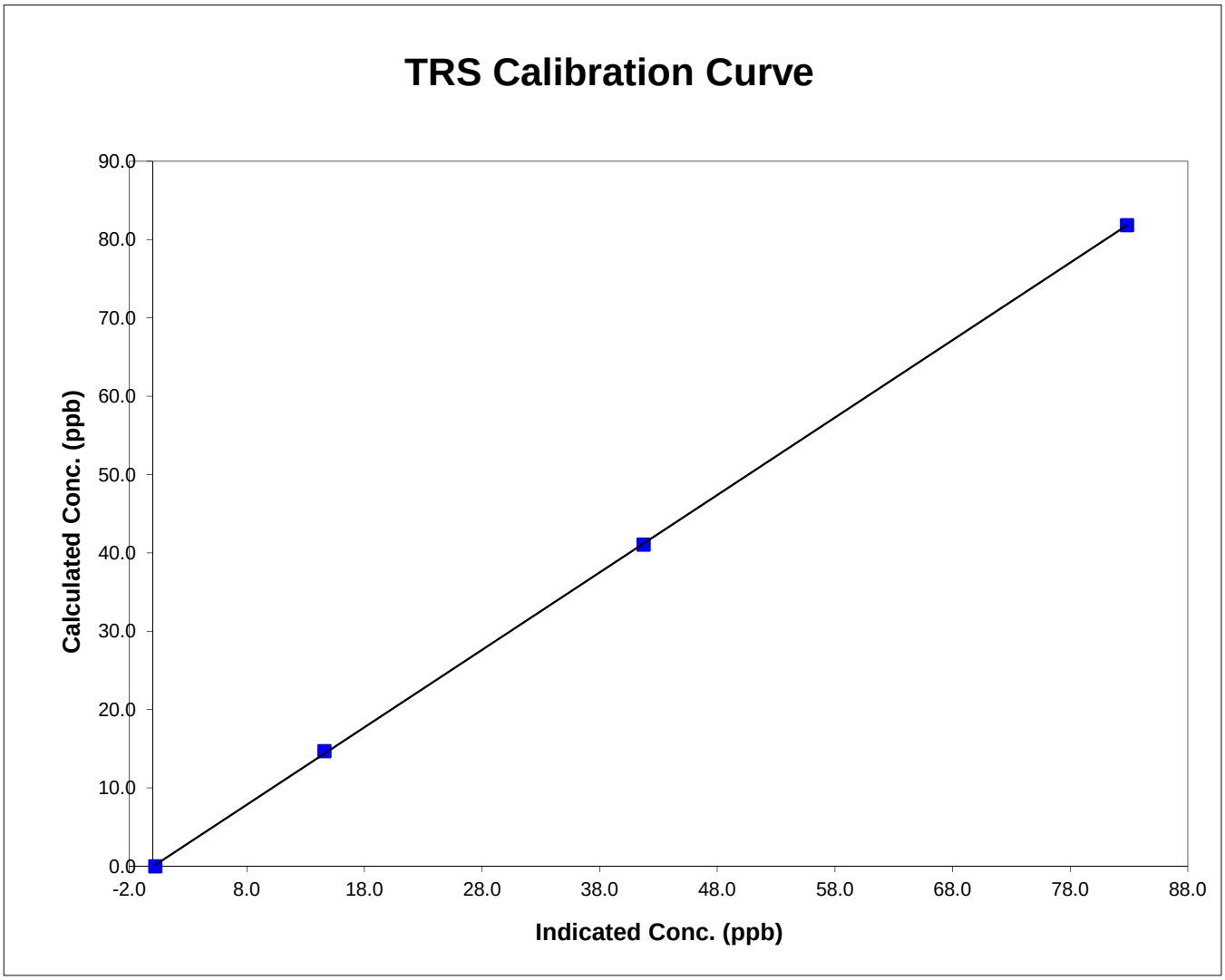
Air Monitoring Network **PAZA**

Station Information

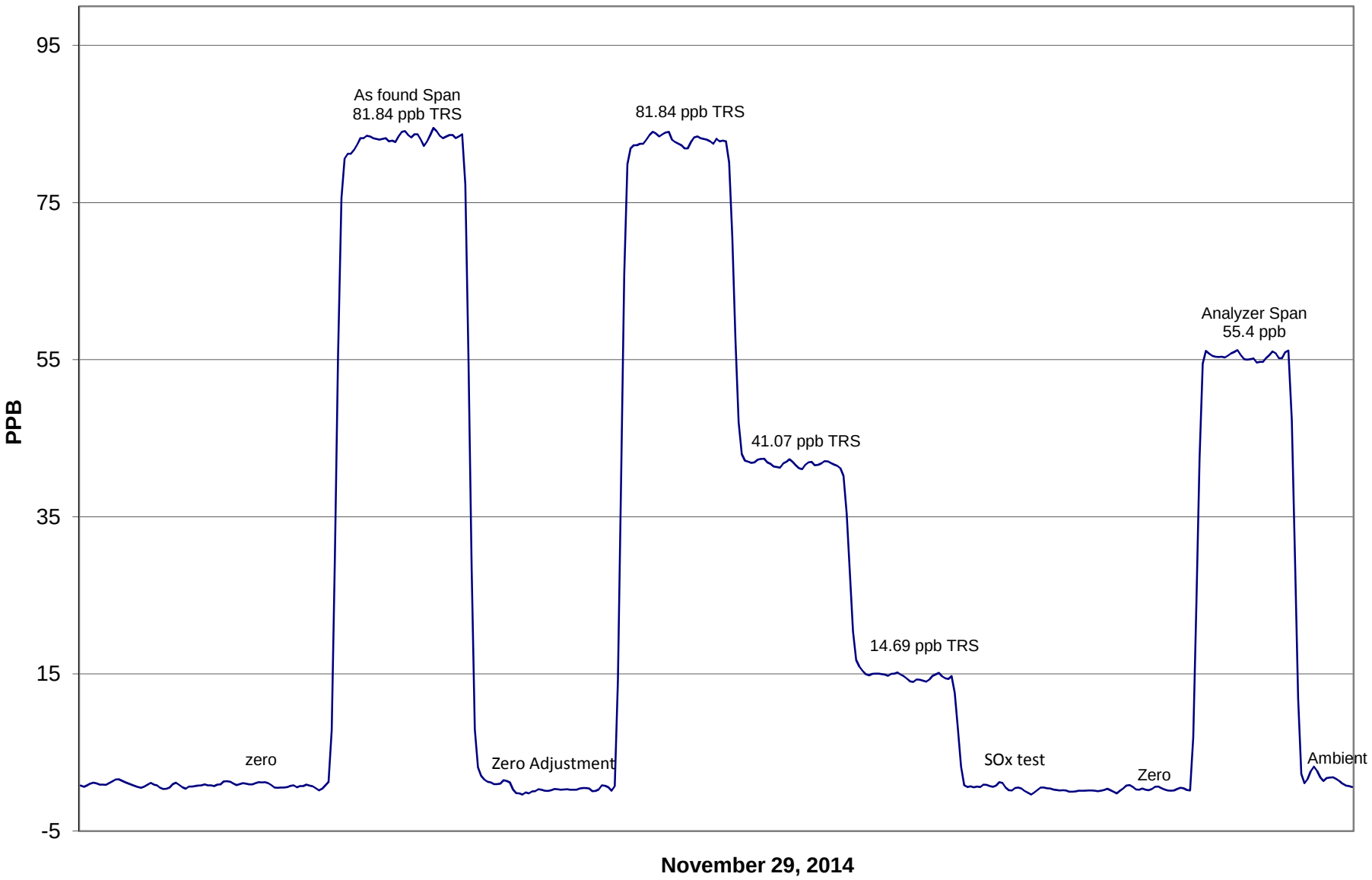
Calibration Date	November 29, 2014	Previous Calibration	October 7, 2014
Station Number	1	Station Location	Falher
Start Time (MST)	11:30	End Time (MST)	14:50:00 PM
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
81.8	82.8	0.9881	Correlation Coefficient	0.999966
41.1	41.7	0.9839		
14.7	14.6	1.0050	Slope	0.988472
			Intercept	-0.048331



H2S Calibration



Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 18, 2014	Previous Calibration	October 10, 2014
Station Number	10	Station Location	Clairmont
Reason: Routine	Install	Removal	Other:
Start Time (MST)	10:10	End Time (MST)	12:55
Barometric Pressure	0.926 Atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Concentration	50.2 ppm	Cal Gas Expiry Date	10/03/2017
Gas Cert Reference	LL119493		
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	1.001042	Calculated slope	0.998790
Calculated intercept	1.819016	Calculated intercept	1.778045
Analyzer make	TEI 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	21.1		21.4	
Coefficient	1.042		1.042	
UV Lamp Voltage	880	V	881	V
Chamber Temp	44.5	C	44.5	C
Perm Gas Temp	45	C	45	C
Pressure	677.5	mm Hg	677.3	mm Hg
Sample Flow	0.467	LPM	0.463	LPM
Lamp Intesity	30555	Hz	30573	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.0	N/A
4995	39.93	398.1	397.8	1.0008
4995	19.97	199.9	197.2	1.0139
4995	9.97	100.0	96.8	1.0334
4995	0.00	0.0	0.0	As found zero
4995	39.93	398.1	397.8	As found span
			Average Correction Factor	1.0160

Calculated value of As Found Response: 400.012 ppm Percent Change of As Found: -0.5%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	243.2	ppm	239.0	ppm

Notes: NO adjustments made

Calibration Performed By: Dmytro Dolotii.

Calibration Summary

Parameter **SO2**

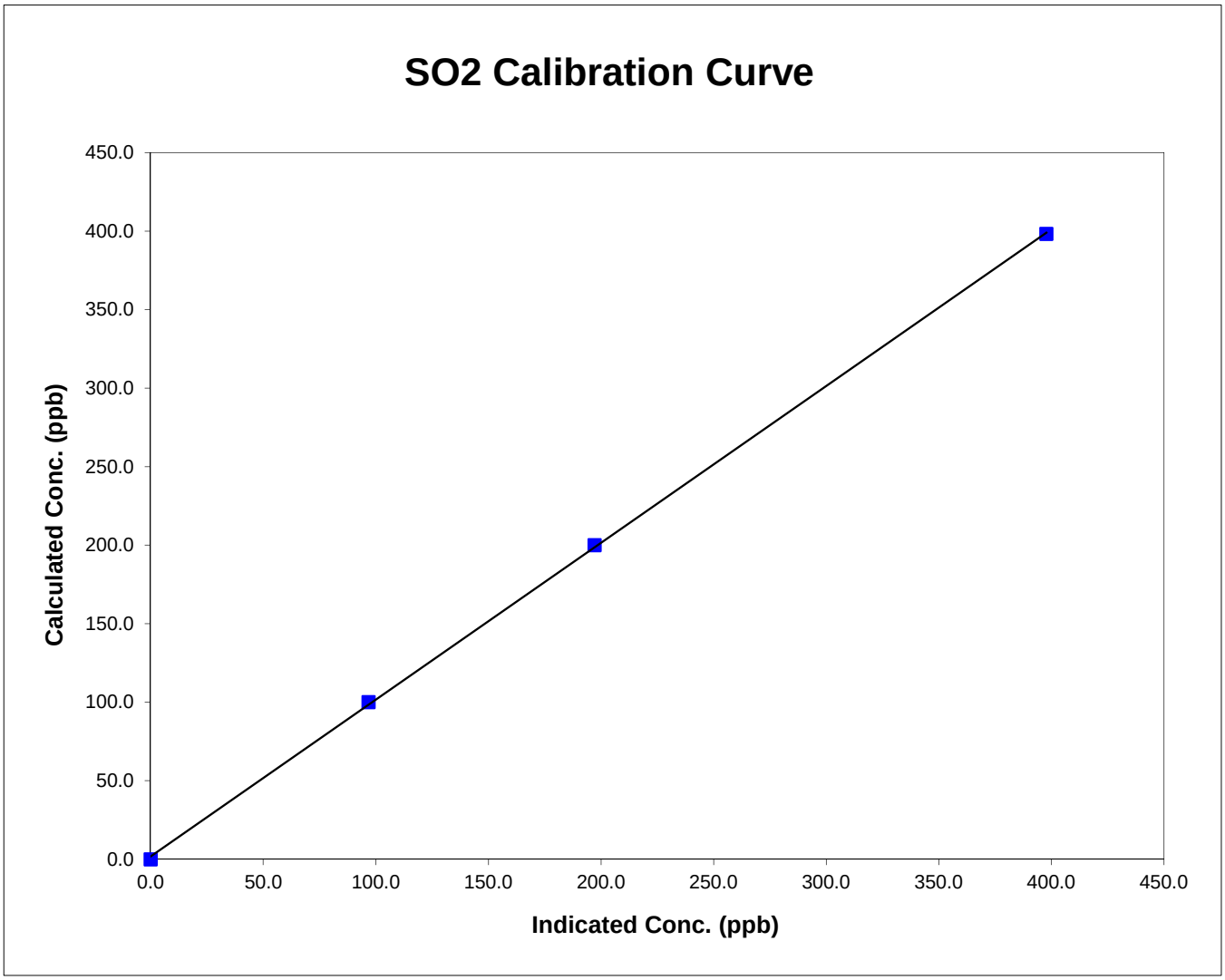
Air Monitoring Network **PAZA**

Station Information

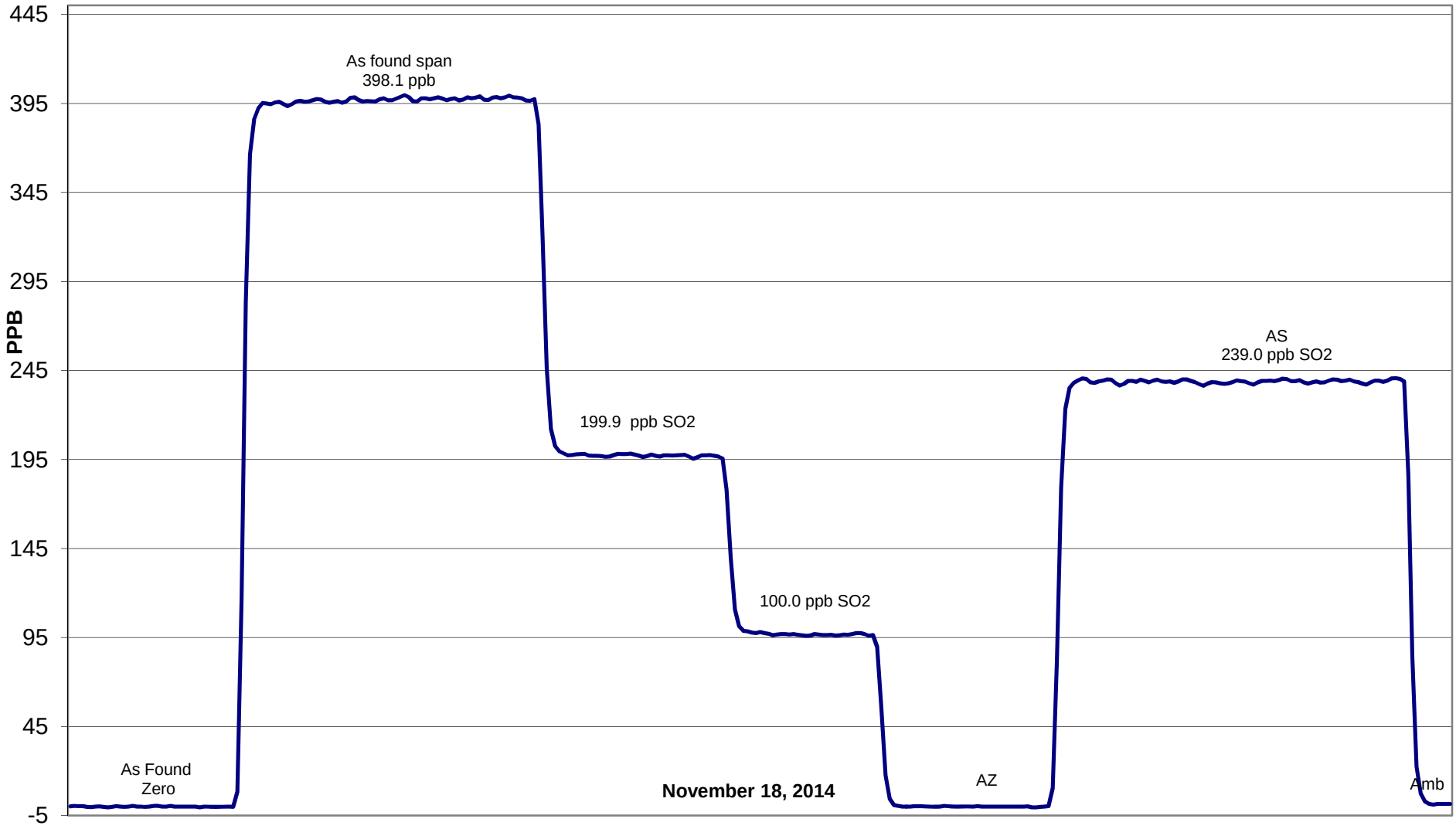
Calibration Date	November 18, 2014	Previous Calibration	October 10, 2014
Station Number	10	Station Location	Clairmont
Start Time (MST)	10:10	End Time (MST)	12:55
Analyzer make/model	TEI 43C	Analyzer serial #	436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
398.1	397.8	1.0008	Correlation Coefficient	0.999906
199.9	197.2	1.0139		
100.0	96.8	1.0334	Slope	0.998790
			Intercept	1.778045



SO2 Calibration



Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 18, 2014	Previous Calibration	October 10, 2014
Station Number	10	Station Location	Clairmont

Reason: Routine Installation Removal Other:

Start Time (MST)	10:05		End Time (MST)	14:15:00 PM	
Barometric Pressure	0.925	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3016	
NO Cal Gas Conc	50.9	ppm	Cal Gas Expiry Date	March 10, 2017	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL119493	

DACS Information

DACS make	CR3000	DACS serial No.	5407

Parameter		NO2	NOx	NO
Before	Data Slope	1.000114	0.999605	0.998446
	Data Offset	0.340855	1.150230	0.994233
After	Data Slope	0.992648	0.998659	0.997183
	Data Offset	-1.257008	0.883600	0.607306
Channel #		8	6	7
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	6.7	mV	7.0	mV
NOx bkgnd	6.9	mV	7.1	mV
NO coefficient	1.190		1.228	
NOx coefficient	0.999		0.999	
NO2 conv temp	326.4	Deg C	326.6	Deg C
PMT Temp	-2.7	Deg C	-2.8	Deg C
PMT Volt	-845.8	mV	-845.5	mV
R Cell Press	218.6	in Hg	217.1	in Hg
Sample Flow	0.669	LPM	0.682	LPM

Notes: Span adjustments made

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **0**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: November 18, 2014 Station Location: Clairmont

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.3	0.1	0.2	N/A	N/A
1	4995	39.92	405.9	403.6	2.4	406.1	404.5	0.0	0.9996	0.9978
2	4995	19.96	203.8	202.6	1.2	202.8	202.2	-0.1	1.0047	1.0018
3	4995	9.93	101.6	101.0	0.6	99.6	99.9	-0.1	1.0204	1.0111
AFZ	4995	0.00	0.0	0.0	0.0	0.3	0.1	0.2	0.0000	0.0000
AFS	4995	39.92	405.9	403.6	0.8	393.6	391.8	0.2	1.0314	1.0300
							Average Correction Factor		1.0083	1.0036

As Found Concentrations: NO_X= 394.3 NO= 392.1 As Found Percent Change NO_X= -2.9% NO= -2.9%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NOX 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	0.3	0.1	0.2	N/A	N/A	N/A	N/A
NO point	403.0	403.0	0.0	404.4	403.0	-0.5	0.9965	1.0000	N/A	N/A
300	403.0	99.5	303.5	407.4	99.5	306.5	0.9891	1.0000	0.9903	101.0%
200	403.0	200.0	203.0	407.5	200.0	205.7	0.9890	1.0000	0.9868	101.3%
100	403.0	298.7	104.3	408.7	298.7	108.0	0.9861	1.0000	0.9662	103.5%
					Average Correction Factor		0.9881	1.0000	0.9811	101.9%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.1	0.1	0.1	ppb	0.4	0.2	0.4	ppb
Auto span	165.6	163.6	1.3	ppb	172.8	170.7	1.4	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **0**

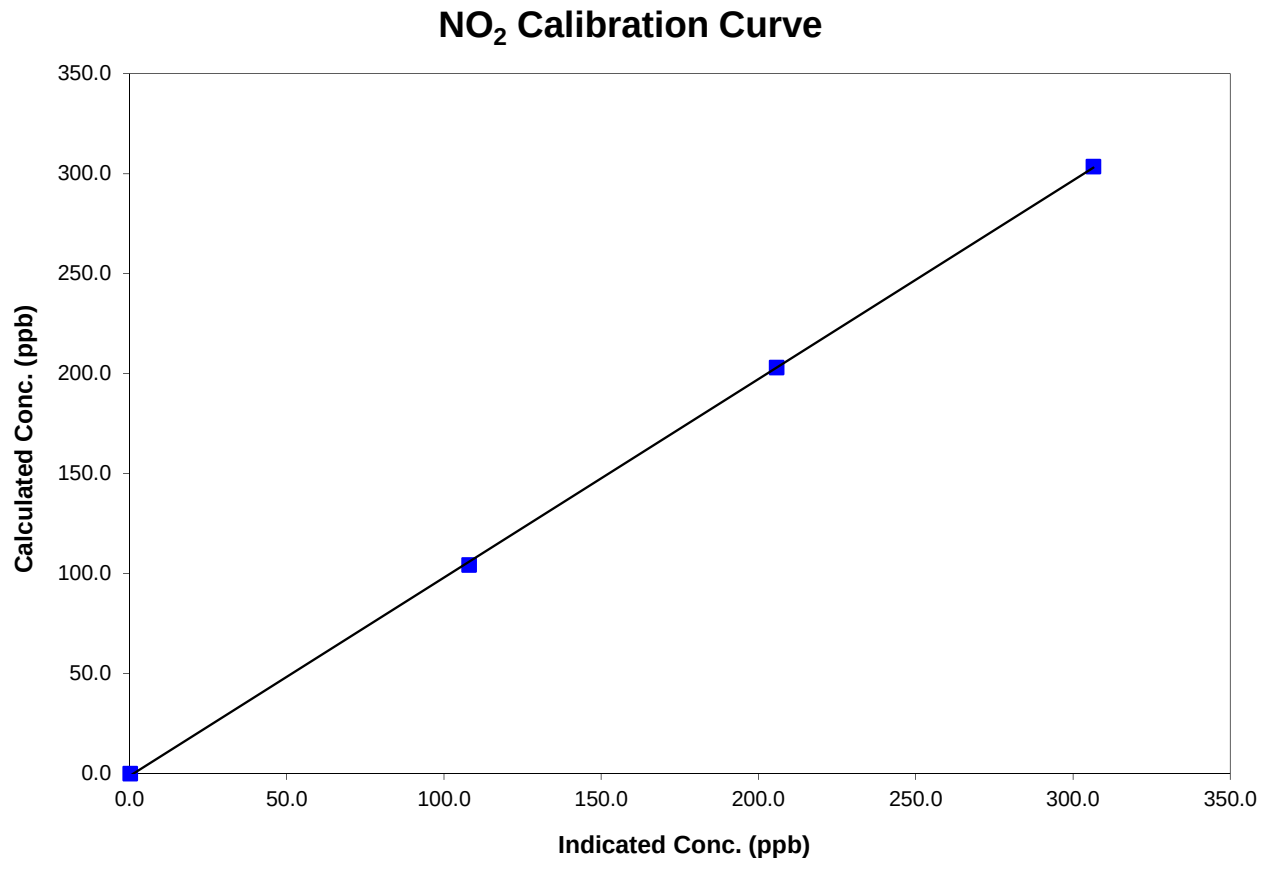
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 18, 2014	Previous Calibration	October 10, 2014
Station Number	10	Station Location	Clairmont
Start Time (MST)	10:05	End Time (MST)	14:15:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
303.5	306.5	0.9903	Correlation Coefficient	0.999923
203.0	205.7	0.9868		
104.3	108.0	0.9662	Slope	0.992648
			Intercept	-1.257008



Calibration Summary

Parameter **NO_x**

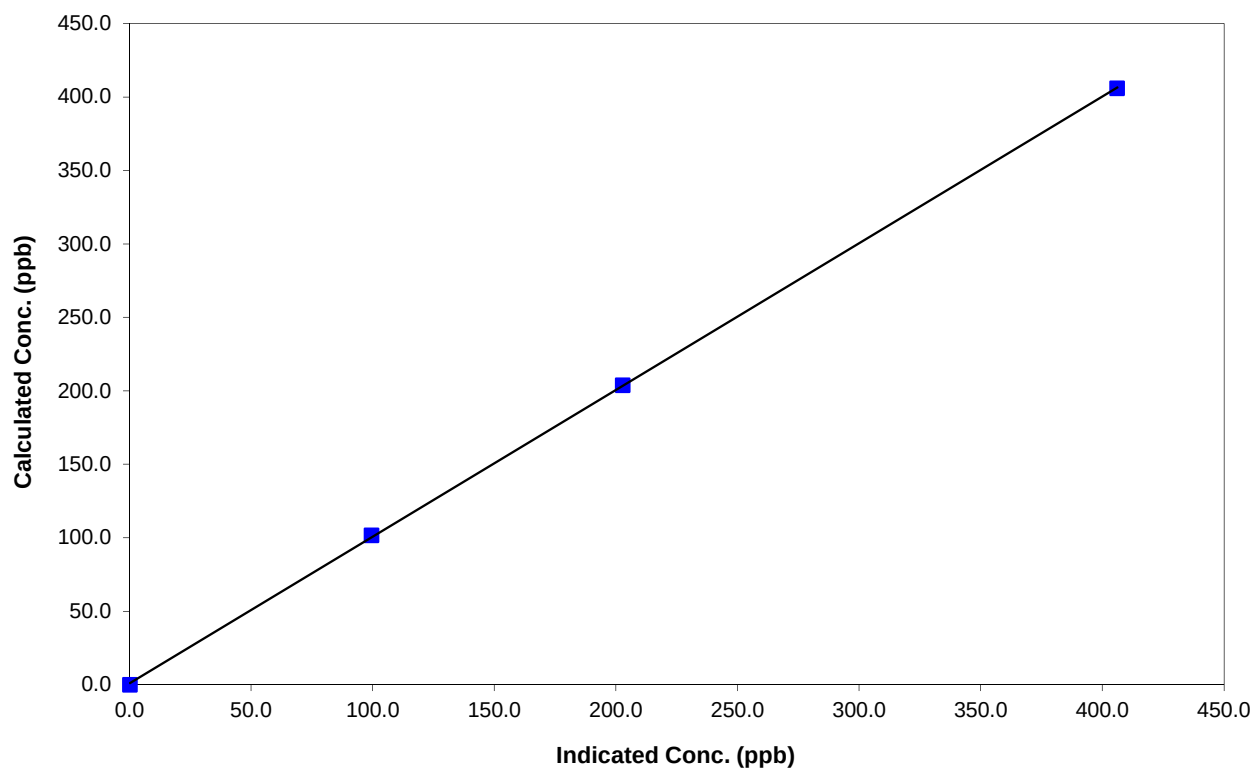
Air Monitoring Network **0**

Station Information

Calibration Date	November 18, 2014	Previous Calibration	October 10, 2014
Station Number	10	Station Location	Clairmont
Start Time (MST)	10:05	End Time (MST)	14:15:00 PM
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	0.3	N/A		
405.9	406.1	0.9996	Correlation Coefficient	0.999963
203.8	202.8	1.0047		
101.6	99.6	1.0204	Slope	0.998659
			Intercept	0.883600



Calibration Summary

Parameter **NO**

Air Monitoring Network **0**

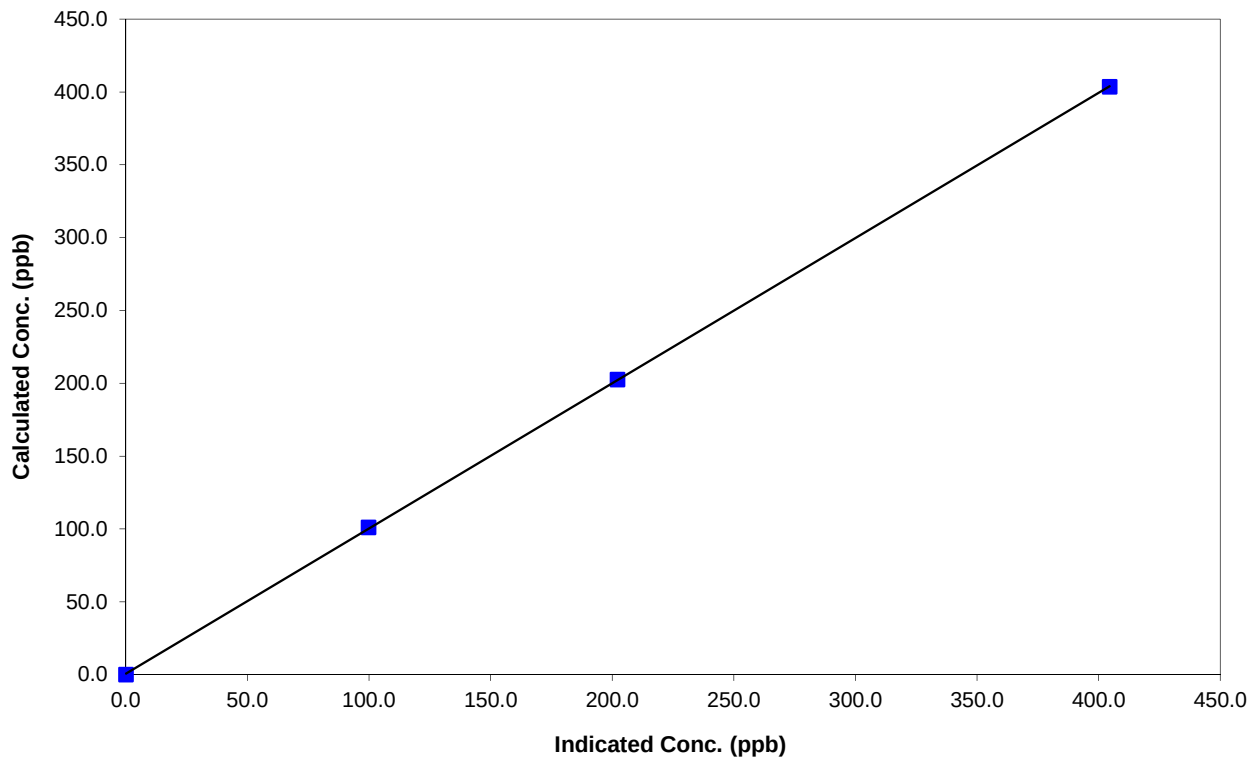
Station Information

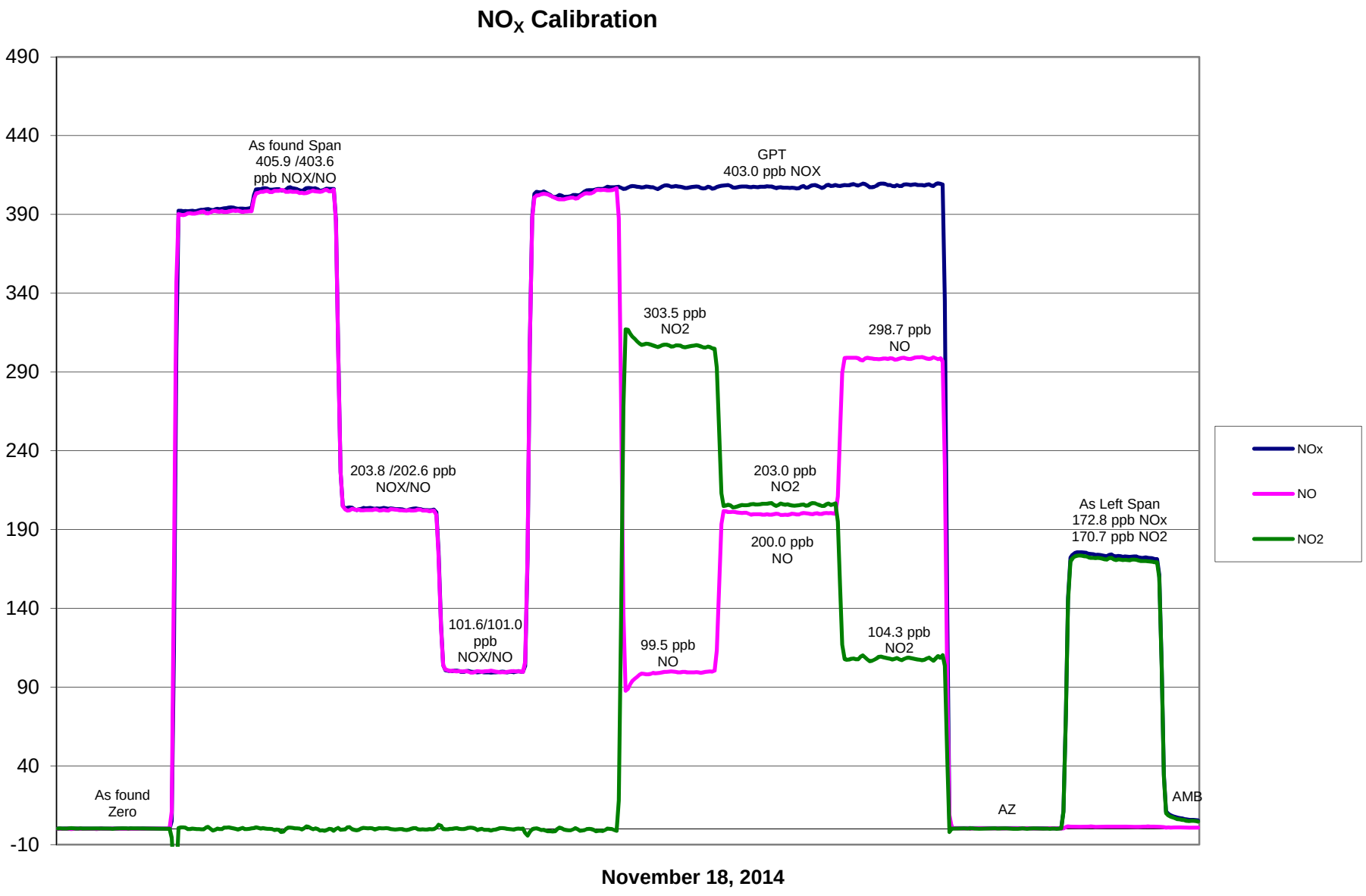
Calibration Date	November 18, 2014	Previous Calibration	October 10, 2014
Station Number	10	Station Location	Clairmont
Start Time (MST)	10:05	End Time (MST)	14:15:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
403.6	404.5	0.9978	Correlation Coefficient	0.999984
202.6	202.2	1.0018		
101.0	99.9	1.0111	Slope	0.997183
			Intercept	0.607306

NO Calibration Curve




NOx Calibration
490
440
390
340
290
240
190
140
90
40
-10
As found Span
405.9 /403.6
ppb NOX/NO
GPT
403.0 ppb NOX
303.5 ppb
NO2
298.7 ppb
NO
203.8 /202.6 ppb
NOX/NO
203.0 ppb
NO2
As Left Span
172.8 ppb NOx
170.7 ppb NO2
200.0 ppb
NO
101.6/101.0
ppb
NOX/NO
99.5 ppb
NO
104.3 ppb
NO2
As found
Zero
AZ
AMB
NOx
NO
NO2
November 18, 2014

Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 18 2014	Previous Calibration	October 10 2014
Station Number	10	Station Location	Clairmont
Reason: Routine	Install	Removal remove	Other:
Start Time (MST)	13:10:00 PM	End Time (MST)	15:20:00 PM
Barometric Pressure	0.925 atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	0.993991	Calculated slope	0.983114
Calculated intercept	0.661519	Calculated intercept	-1.032281
Analyzer make	TEI Model 49C	Analyzer serial #	49C-0609716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0	ppb	0	ppb
Span	0.992		1.007	
Cell A intensity	88628	Hz	88230	Hz
Cell B intensity	85034	Hz	85125	Hz
Pressure	668.40	in Hg	673.80	in Hg
CellA Flow	0.705	ccm	0.705	ccm
Cell B Flow	0.695	cmm	0.698	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	-0.1	N/A
5035	0.30	303.5	309.2	0.9817
5035	0.20	203.0	207.5	0.9783
5035	0.10	104.3	108.9	0.9574
5035	0.00	0.0	-0.1	As found zero
5035	0.30	303.5	304.0	As found span
			Average Correction Factor	0.9725

Calculated value of As Found Response: 302.9 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	0.7	ppb	-1.1	ppb
Auto span	403.9	ppb	417.3	ppb

Notes: Span adjustment was made to the wrong calculated values from NO2.Because of that decided to use calculated NO2 values from the previoust calibration as a reference

Calibration Performed By: Dmytro Dolotii.

Calibration Summary

Parameter **O3**

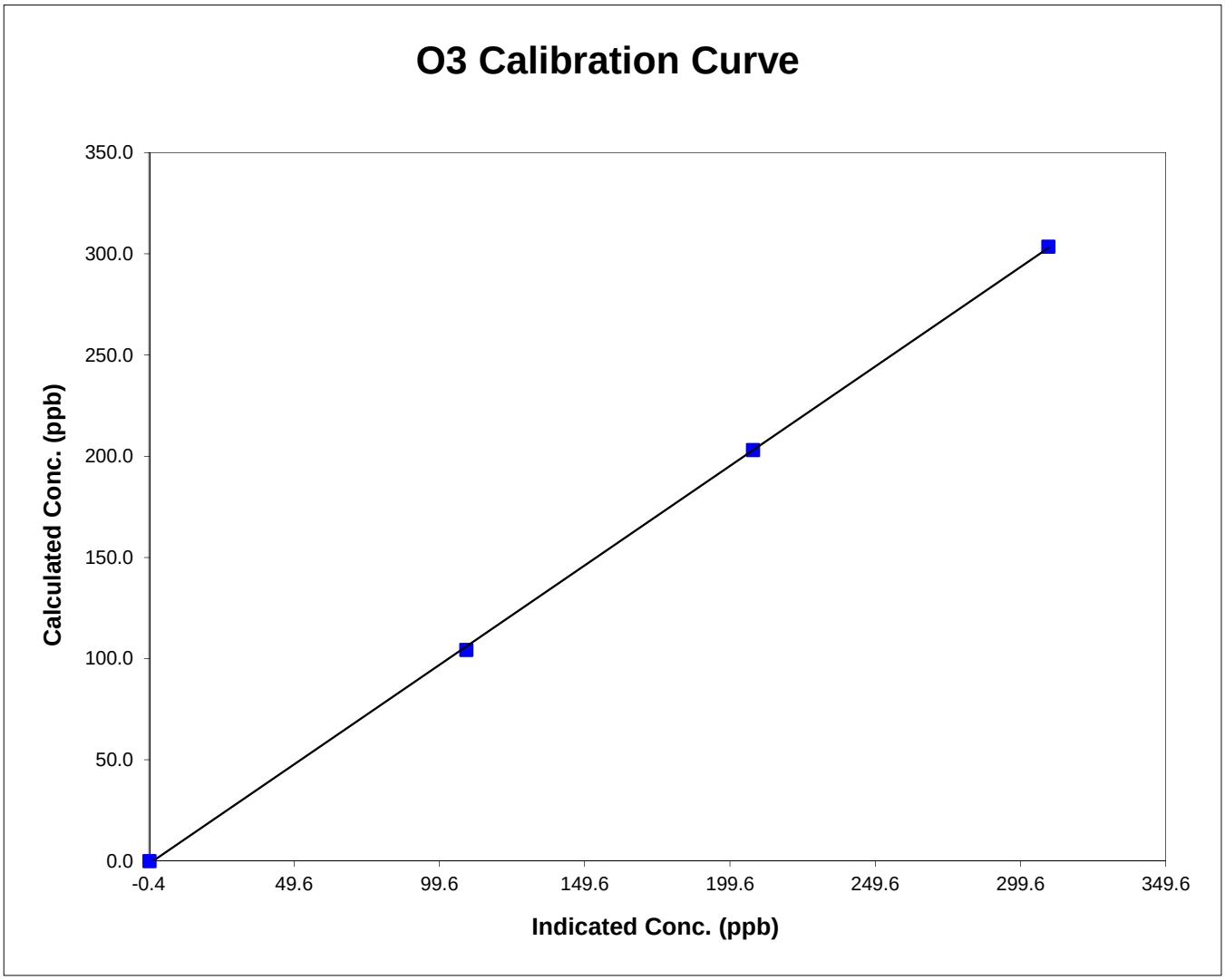
Air Monitoring Network **PAZA**

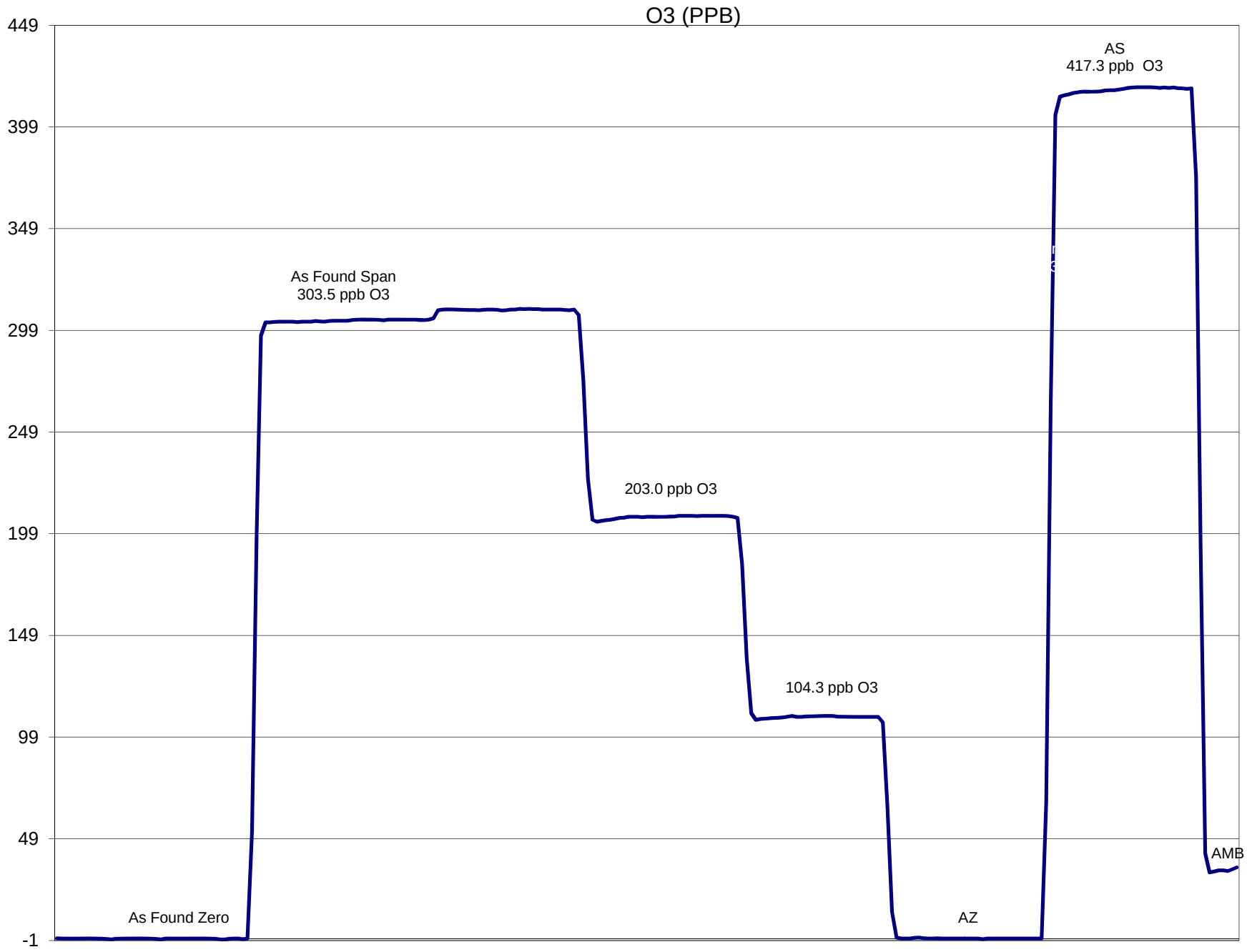
Station Information

Calibration Date	November 18 2014	Previous Calibration	October 10 2014
Station Number	10	Station Location	Clairmont
Start Time (MST)	13:10:00 PM	End Time (MST)	15:20:00 PM
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-0609716240

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	NA		
303.5	309.2	0.9817	Correlation Coefficient	0.999906
203.0	207.5	0.9783		
104.3	108.9	0.9574	Slope	0.983114
			Intercept	-1.032281





November 18 2014

Calibration Report

Parameter **THC**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 19, 2014	Previous Calibration	October 10, 2014
Station Number	10	Station Location	Clairmont
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	11:35	End Time (MST)	13:45:00 PM
Barometric Pressure	0.926 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Concentration	404 ppm CH4/ 201 ppm C3H8	Cal Gas Expiry Date	28/03/2014
Cal Gas CH4 equiv	956.75 ppm	Cal Gas Cylinder #	LL34989
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 1 volt	DACS channel #	12
	Before		After
Calculated slope	0.996918	Calculated slope	0.989054
Calculated intercept	0.126058	Calculated intercept	0.089933
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.50	psi	6.50	psi
THC zero counts	1510	capture	1510	capture
THC span counts	11040	capture	11040	capture
THC zero offset	2320	capture	2320	capture
THC span offset	2328	capture	2328	capture

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2996	0.00	0.00	-0.02	N/A
2996	69.89	21.81	21.99	0.9916
2996	29.96	9.47	9.42	1.0056
2996	9.97	3.17	3.08	1.0303
2996	0.00	0.00	-0.02	As Found Zero
2996	69.93	21.82	21.99	As Found Span
			Average Correction Factor	1.0092

Calculated value of As Found Response: 22.073 ppm Percent Change of As Found: -1.1%

	before calibration		after calibration	
Auto zero	0.12	ppm	0.10	ppm
Auto span	21.91	ppm	22.18	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **THC**

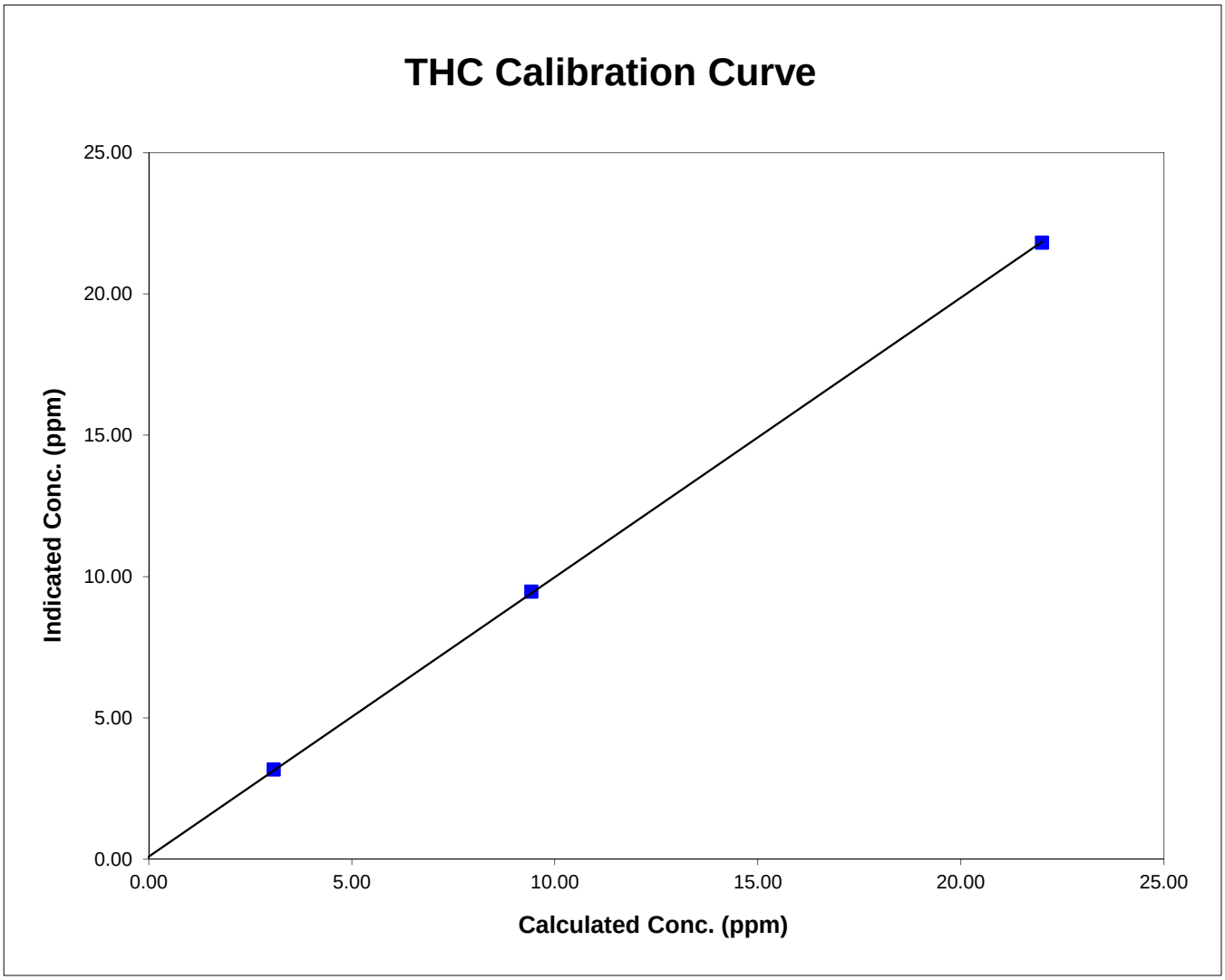
Air Monitoring Network **PASZA**

Station Information

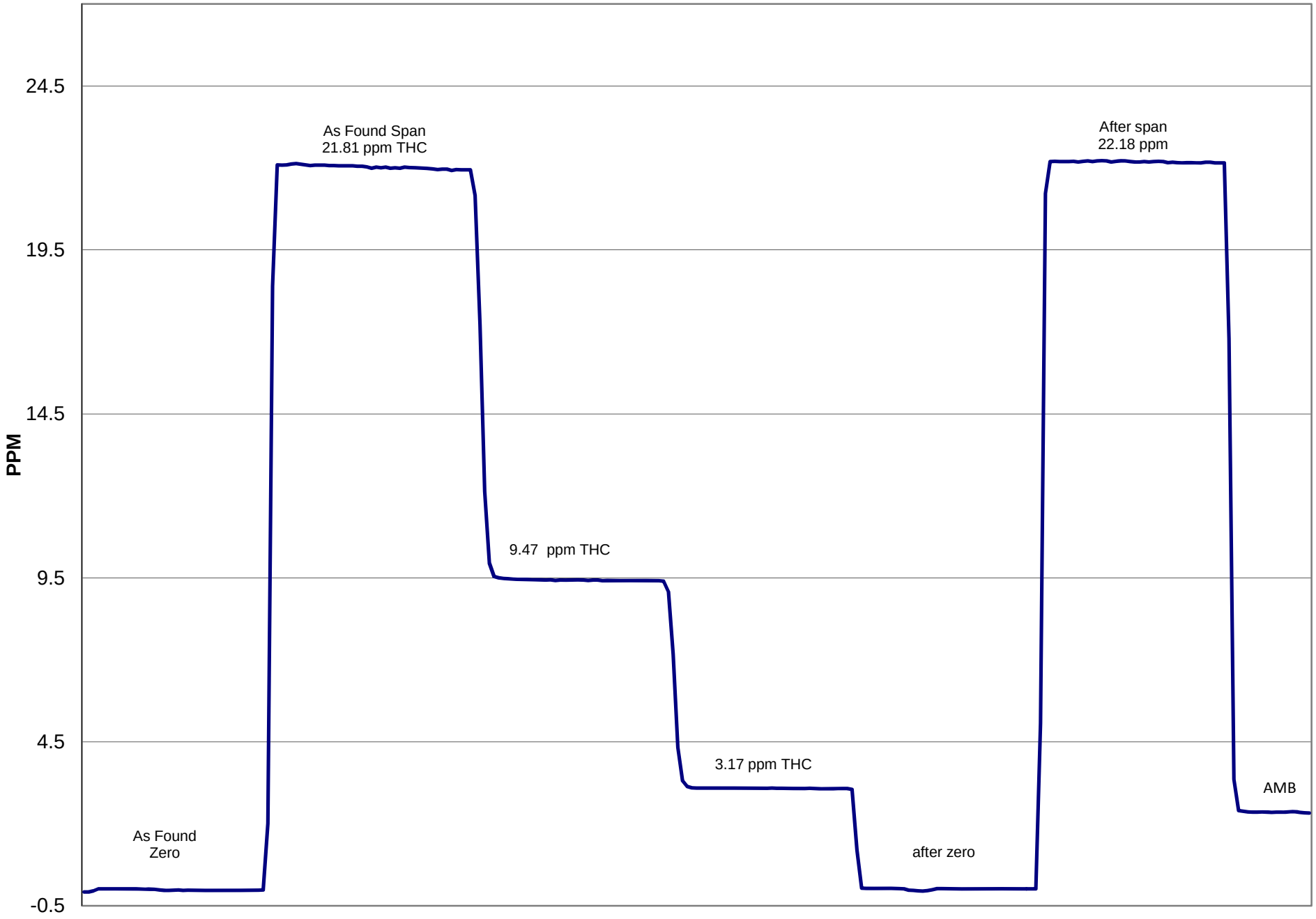
Calibration Date	November 19, 2014	Previous Calibration	October 10, 2014
Station Number	10	Station Location	Clairmont
Start Time (MST)	11:35	End Time (MST)	13:45:00 PM
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.021	N/A		
21.81	21.99	0.9916	Correlation Coefficient	0.999958
9.47	9.42	1.0056		
3.17	3.08	1.0303	Slope	0.989054
			Intercept	0.089933



THC Calibration



Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	November 19, 2014	Previous Calibration	October 13, 2014
Station Name	PAZA Rover	Station Location	Clairmont
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:35 PM	End Time (MST)	12:20
Barometric Pressure	0.917 Atm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentration	10.32 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	0.970837	Calculated slope	0.992070
Calculated intercept	0.102171	Calculated intercept	-0.188539
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	26.0	ppb	26.1	ppb
Coefficient	0.992		0.992	
Lamp Voltage	794	V	794	V
Chamber Temp	43.7	C	44	C
Perm gas Temp	44.99	C	45	C
Pressure	663.5	mmHg	663.1	mmHg
Sample Flow	0.434	lpm	0.434	lpm
Lamp Intensity	43888	Hz	44030	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	0.3	N/A
4995	39.93	81.8	82.8	0.9890
4995	19.97	41.1	41.5	0.9898
6995	9.97	14.7	14.9	0.9846
4995	9.97		1.0	Sox Test
4995	0.00	0.0	0.3	As found zero
4995	39.93	81.8	82.8	As found span
			Average Correction Factor	0.9878

Calculated value of As Found Response: 80.15 ppm Percent Change of As Found: 2.1%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.2	ppm
Auto span	65.1	ppm	62.7	ppm

Notes: No adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

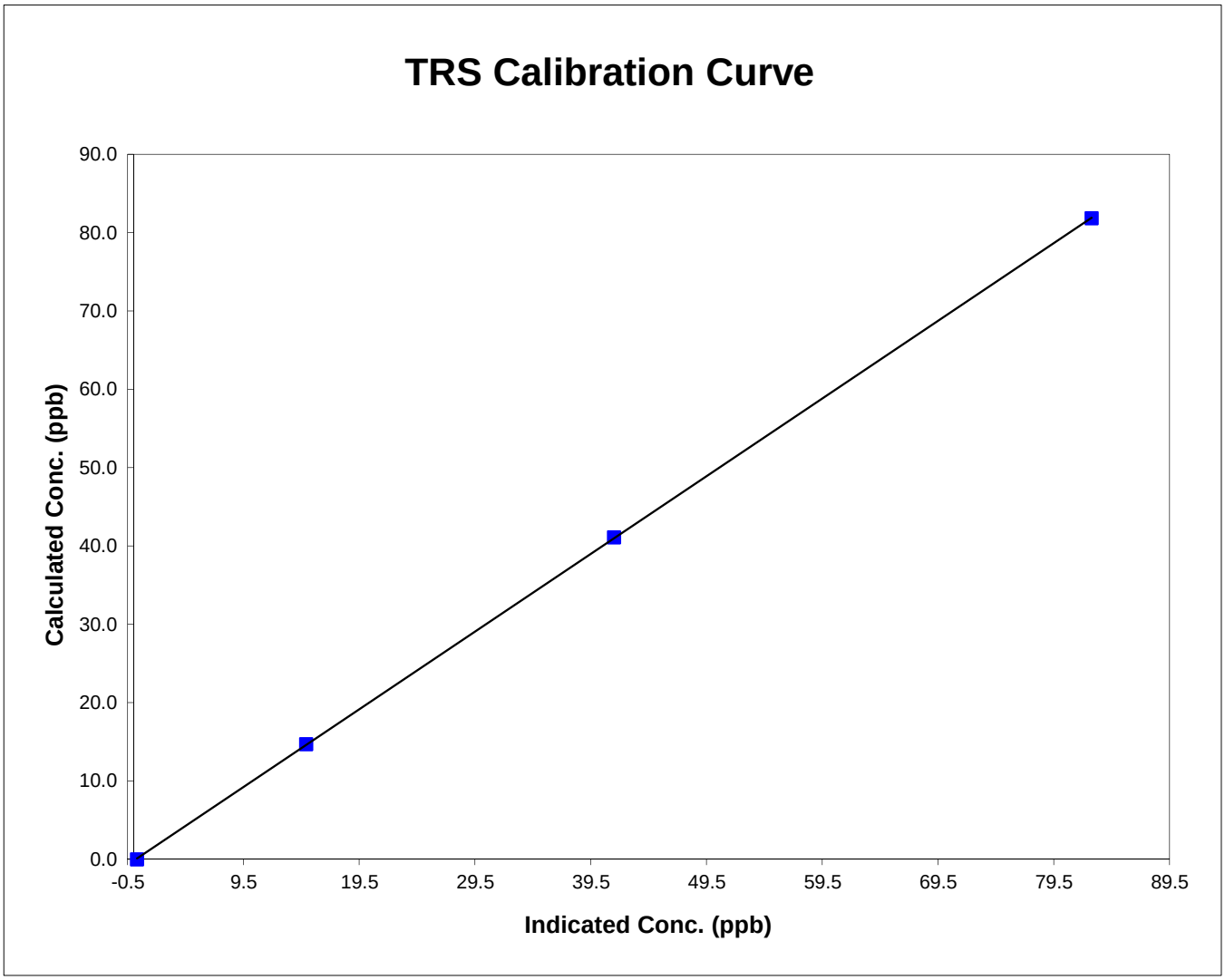
FOCUS AIR QUALITY MONITORING

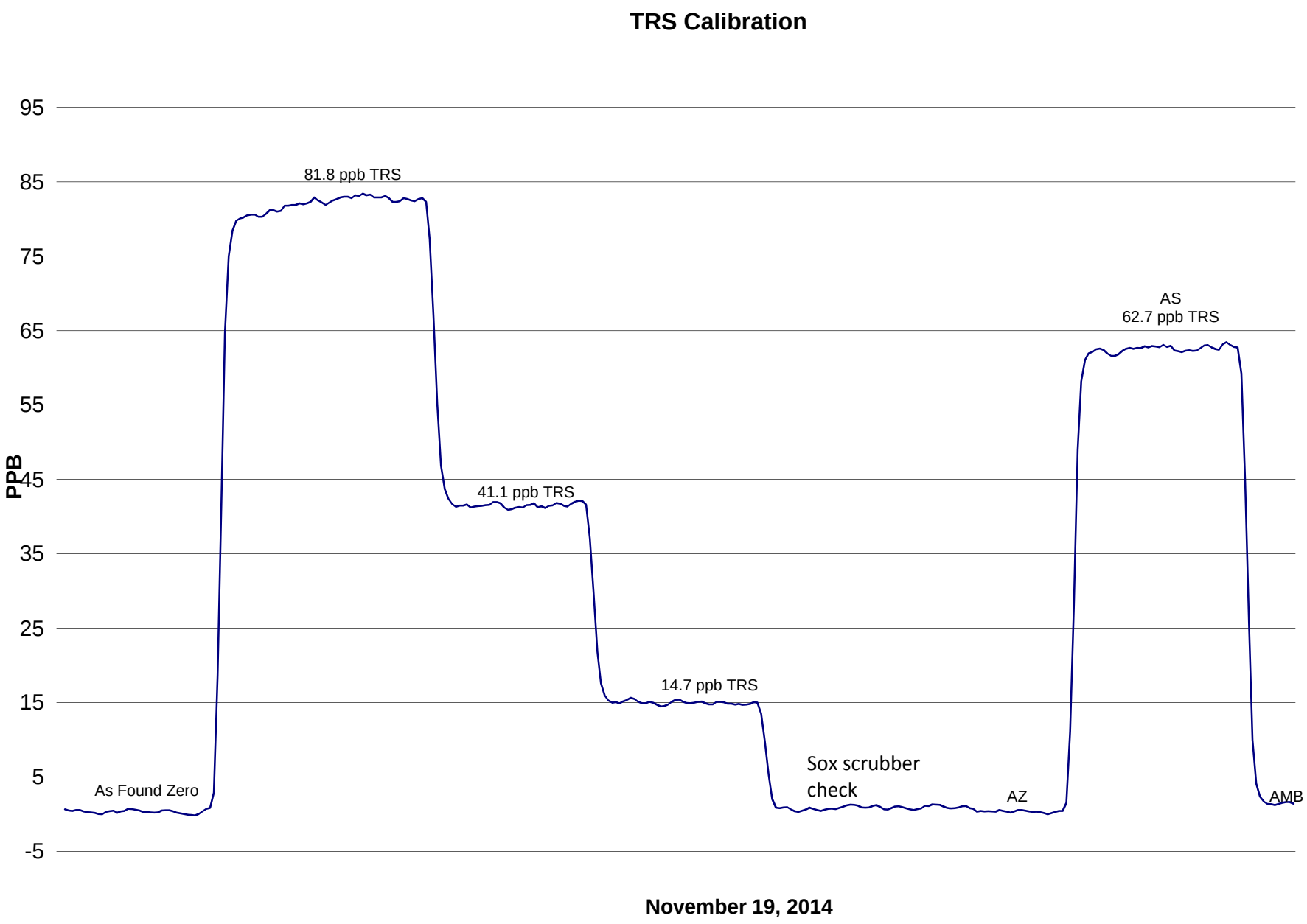
Station Information

Calibration Date	November 19, 2014	Previous Calibration	October 13, 2014
Station Number	PAZA Rover	Station Location	Clairmont
Start Time (MST)	21:35	End Time (MST)	12:20
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
81.8	82.8	0.9890	Correlation Coefficient	0.999992
41.1	41.5	0.9898		
14.7	14.9	0.9846	Slope	0.992070
			Intercept	-0.188539




TRS Calibration
PPB
95
85
75
65
55
45
35
25
15
5
-5
81.8 ppb TRS
41.1 ppb TRS
14.7 ppb TRS
AS
62.7 ppb TRS
As Found Zero
Sox scrubber
check
AZ
AMB
November 19, 2014