Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program
Monthly Report
September 2016

Peace Airshed Zone Association
Box 21135 Grande Prairie, AB, T8V 6W7
P: 780-833-4343
www.paza.ca

October 31, 2016

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

RE: Peace Airshed Zone Association (PAZA) – September 2016 Ambient Air Report

Enclosed is the PAZA Ambient Monitoring Network Report for the month of September 2016.

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
Exshaw Oil Corporation	Spirit River	03-10-077-07-W6	344521-00-00
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

Company	Facility	LSD	EPEA Approval Number
	Pouce Coupe	16-07-078-11-W6	00000614-01-00
Petrus Resources	Rycroft	08-25-077-06-W6	11351-02-00
	Spirit River	08-34-077-06-W6	11096-02-00
Spectra Energy Midstream Corporation	Fourth Creek	16-11-082-09-W6	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: **Six (6) Stations including Henry Pirker (Grande Prairie), Evergreen Park, Smoky Heights, Beaverlodge, Valleyview, and Rycroft-Portable.**

During the month of September, 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 September.

Evergreen Park Station:

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

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 September.

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 September.

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 September.

Donnelly Station:

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

Rycroft-Portable Station:

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

Passive Monitoring - 46 Stations throughout the PAZA zone:

There were five duplicate sites sampled in the month of September: Bay Tree, Steeprock Creek, Clairmont Lake, Kinuso, and Girouxville 4 (H_2S). The Fourth Creek passive sample was for the dates August 1 to October 1, due to road construction restricting access to the site in September. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

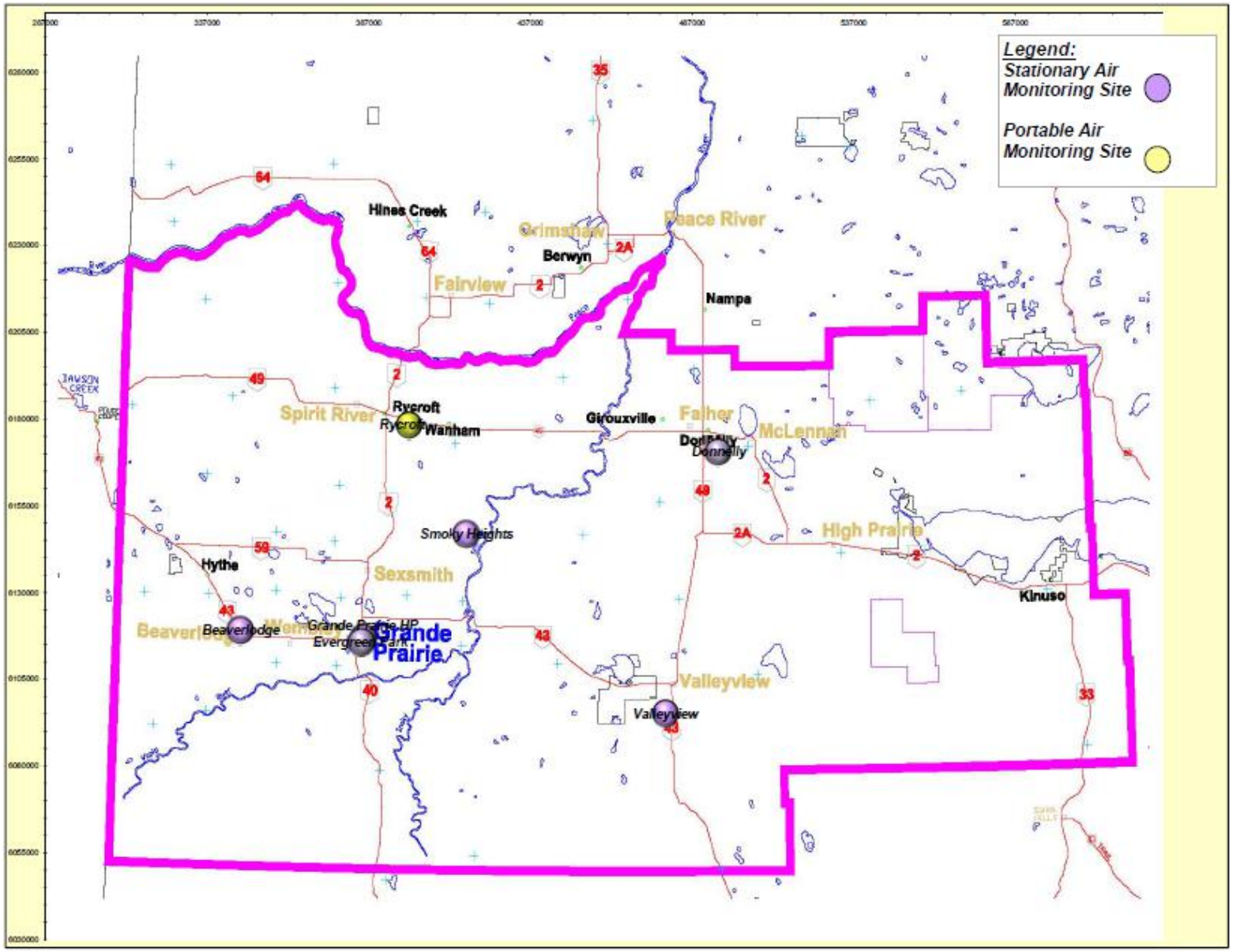
- Monthly average concentrations for SO_2 passives ranged from 0.0 ppb to 0.3 ppb, with a mean of 0.1 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.2 ppb to 4.2 ppb, with a mean of 0.8 ppb.
- Monthly average concentrations for O_3 passives ranged from 14.3 ppb to 29.8 ppb, with a mean of 21.0 ppb.
- Monthly average concentrations for H_2S passives ranged from 0.1 ppb to 0.4 ppb, with a mean of 0.2 ppb.

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

On Behalf of the
Peace Airshed Zone Association

Patrick Andersen, B.Sc.
Program Manager

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Sep-2016	Peace Airshed Zone Assocation						Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
Pollutant (units)	Objectives 1-hr	Objectives 24-hr	Station	Monthly Average	Exceedence 1-hr	Exceedence 24-hr	Conc	Day	Conc	Day	Operational Time (%)	Calibration Date
SO_2 (ppb)	172	48	Henry Pirker	0.0	0	0	1.3	Sep-20 10:00	0.2	Sep-30	100.0%	Sep-01
SO_2 (ppb)	172	48	Evergreen Park	0.1	0	0	2.1	Sep-27 09:00	0.2	Sep-27	99.7%	Sep-06
SO_2 (ppb)	172	48	Smoky Heights	0.3	0	0	4.7	Sep-17 23:00	0.6	Sep-18	99.0%	Sep-09
SO_2 (ppb)	172	48	Beaverlodge	0.1	0	0	15.6	Sep-30 02:00	1.7	Sep-30	100.0%	Sep-13
SO_2 (ppb)	172	48	Valleyview	0.9	0	0	84.6	Sep-01 12:00	5.2	Sep-01	99.3%	Sep-12
SO_2 (ppb)	172	48	Donnelly	0.1	0	0	1.3	Sep-04 09:00	0.3	Sep-22	100.0%	Sep-08
SO_2 (ppb)	172	48	Rycroft-Portable	0.2	0	0	3.4	Sep-13 17:00	0.5	Sep-13	100.0%	Sep-14
NO (ppb)			Henry Pirker	2.1	-	-	54.9	Sep-22 08:00	9.5	Sep-23	100.0%	Sep-01
NO_2 (ppb)	159	106	Henry Pirker	4.5	0	0	24.4	Sep-23 11:00	9.0	Sep-26	100.0%	Sep-01
NO_X (ppb)			Henry Pirker	7.0	-	-	72.3	Sep-22 08:00	18.4	Sep-23	100.0%	Sep-01
NO (ppb)			Beaverlodge	0.4	-	-	20.3	Sep-29 09:00	3.1	Sep-29	100.0%	Sep-13
NO_2 (ppb)	159	106	Beaverlodge	2.2	0	0	15.9	Sep-29 07:00	5.7	Sep-29	100.0%	Sep-13
NO_X (ppb)			Beaverlodge	2.6	-	-	31.8	Sep-29 09:00	8.8	Sep-29	100.0%	Sep-13
NO (ppb)			Rycroft-Portable	0.2	-	-	3.5	Sep-29 10:00	0.5	Sep-01	100.0%	Sep-14
NO_2 (ppb)	159	106	Rycroft-Portable	1.2	0	0	10.6	Sep-28 22:00	2.5	Sep-29	100.0%	Sep-14
NO_X (ppb)			Rycroft-Portable	1.4	-	-	11.8	Sep-28 22:00	2.9	Sep-29	100.0%	Sep-14
O_3 (ppb)	82		Henry Pirker	18.6	0	-	37.4	Sep-27 03:00	31.3	Sep-24	100.0%	Sep-01
O_3 (ppb) - 8-hr			Henry Pirker		0				34.1	Sep-24		-
O_3 (ppb)	82		Beaverlodge	19.6	0	-	37.3	Sep-29 16:00	30.2	Sep-24	100.0%	Sep-13
O_3 (ppb) - 8-hr			Beaverlodge		0				34.7	Sep-29		-
O_3 (ppb)	82		Rycroft-Portable	20.0	0	-	38.7	Sep-28 17:00	29.9	Sep-27	100.0%	Sep-14
O_3 (ppb) - 8-hr			Rycroft-Portable		0				36.2	Sep-17		-
CO (ppm)	13		Henry Pirker	0.14	0	-	0.5	Sep-22 08:00	0.2	Sep-23	100.0%	Sep-02
CO (ppm) - 8-hr	5		Henry Pirker		0				0.4	Sep-23		-

PAZA Monthly Continuous Data Summary – continued

Sep-2016			Peace Airshed Zone Assocation				Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
THC (ppm)			Henry Pirker	2.0	-	-	3.2	Sep-17 04:00	2.3	Sep-22	100.0%	Sep-02
CH_4 (ppm)			Henry Pirker	2.0	-	-	3.2	Sep-17 04:00	2.3	Sep-22	100.0%	Sep-02
NMHC (ppm)			Henry Pirker	0.0	-	-	0.0	Sep-09 02:00	0.0	Sep-18	100.0%	Sep-02
THC (ppm)			Rycroft-Portable	1.8	-	-	2.0	Sep-29 10:00	1.9	Sep-29	100.0%	Sep-15
TRS (ppb)			Henry Pirker	0.3	-	-	3.3	Sep-22 10:00	0.7	Sep-22	100.0%	Sep-02
TRS (ppb)			Evergreen Park	0.3	-	-	11.2	Sep-22 13:00	1.5	Sep-22	99.7%	Sep-06
TRS (ppb)			Smoky Heights	0.1	-	-	0.6	Sep-01 23:00	0.2	Sep-15	100.0%	Sep-09
TRS (ppb)			Rycroft-Portable	0.3	-	-	1.1	Sep-26 19:00	0.4	Sep-26	100.0%	Sep-15
H_2S (ppb)	10	3	Valleyview	0.2	0	0	1.3	Sep-13 16:00	1.4	Sep-13	99.3%	Sep-12
H_2S (ppb)	10	3	Donnelly	0.2	0	0	3.1	Sep-28 22:00	0.6	Sep-01	100.0%	Sep-08
$PM_{2.5}$ (µg/m3)	80	30	Henry Pirker	3.7	0	0	39.7	Sep-22 09:00	9.9	Sep-28	99.7%	Sep-07
$PM_{2.5}$ (µg/m3)	80	30	Evergreen Park	3.4	0	0	40.2	Sep-24 11:00	9.9	Sep-24	99.4%	Sep-06
$PM_{2.5}$ (µg/m3)	80	30	Smoky Heights	3.8	0	0	51.0	Sep-30 12:00	7.8	Sep-29	100.0%	Sep-09
$PM_{2.5}$ (µg/m3)	80	30	Beaverlodge	3.0	0	0	10.9	Sep-21 22:00	7.6	Sep-28	99.9%	Sep-13
$PM_{2.5}$ (µg/m3)	80	30	Rycroft-Portable	1.6	0	0	21.3	Sep-29 23:00	7.6	Sep-29	99.7%	Mar-03
RH (%)			Henry Pirker	54.2	-	-	89.8	Sep-02 08:00	82.1	Sep-01	100.0%	-
RH (%)			Evergreen Park	70.2	-	-	99.9	Sep-02 08:00	90.4	Sep-01	99.7%	-
RH (%)			Beaverlodge	69.3	-	-	100.0	Sep-01 01:00	91.8	Sep-01	100.0%	-
RH (%)			Valleyview	62.3	-	-	98.2	Sep-17 05:00	89.7	Sep-02	99.3%	-
SR (W/m^2)			Henry Pirker	126.6	-	-	609.3	Sep-05 13:00	181.0	Sep-07	100.0%	-
Temp (°C)			Henry Pirker	10.9	-	-	25.2	Sep-13 16:00	16.9	Sep-14	100.0%	-
Temp (°C)			Evergreen Park	10.2	-	-	25.3	Sep-13 15:00	16.8	Sep-14	99.7%	-
Temp (°C)			Smoky Heights	9.8	-	-	24.6	Sep-13 16:00	15.1	Sep-14	100.0%	-
Temp (°C)			Beaverlodge	10.1	-	-	23.6	Sep-13 15:00	16.1	Sep-14	100.0%	-
Temp (°C)			Valleyview	11.0	-	-	25.5	Sep-13 17:00	16.4	Sep-14	99.3%	-
Temp (°C)			Donnelly	10.8	-	-	25.0	Sep-13 17:00	16.5	Sep-14	100.0%	-
Temp (°C)			Rycroft-Portable	10.6	-	-	25.9	Sep-13 16:00	16.6	Sep-13	100.0%	-

PAZA Monthly Continuous Data Summary – continued

Sep-2016	Peace Airshed Zone Assocation						Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
WSPD s (km/hr)			Henry Pirker	8.4	-	-	30.0	Sep-24 11:00	18.5	Sep-24	100.0%	-
WSPD s (km/hr)			Evergreen Park	11.7	-	-	47.0	Sep-27 15:00	30.9	Sep-27	99.7%	-
WSPD s (km/hr)			Smoky Heights	12.7	-	-	39.0	Sep-27 13:00	24.4	Sep-27	100.0%	-
WSPD s (km/hr)			Beaverlodge	11.6	-	-	44.0	Sep-27 14:00	26.3	Sep-27	100.0%	-
WSPD s (km/hr)			Valleyview	4.3	-	-	20.0	Sep-27 13:00	11.8	Sep-27	99.3%	-
WSPD s (km/hr)			Donnelly	12.4	-	-	36.0	Sep-10 12:00	23.2	Sep-27	100.0%	-
WSPD s (km/hr)			Rycroft-Portable	10.5	-	-	36.0	Sep-24 17:00	21.2	Sep-03	100.0%	-
WSPD v (km/hr)			Henry Pirker	5.2	-	-	29.0	Sep-24 11:00	18.0	Sep-24	100.0%	-
WSPD v (km/hr)			Evergreen Park	8.1	-	-	46.0	Sep-24 11:00	30.3	Sep-27	99.7%	-
WSPD v (km/hr)			Smoky Heights	8.6	-	-	39.0	Sep-27 13:00	24.1	Sep-27	100.0%	-
WSPD v (km/hr)			Beaverlodge	6.6	-	-	44.0	Sep-27 14:00	25.8	Sep-27	100.0%	-
WSPD v (km/hr)			Valleyview	2.2	-	-	19.0	Sep-27 11:00	11.2	Sep-27	99.3%	-
WSPD v (km/hr)			Donnelly	7.6	-	-	36.0	Sep-10 12:00	21.6	Sep-27	100.0%	-
WSPD v (km/hr)			Rycroft-Portable	6.6	-	-	36.0	Sep-24 17:00	20.7	Sep-03	100.0%	-
WDIR			Henry Pirker	SW	-	-	-	-	-	-	100.0%	-
WDIR			Evergreen Park	WSW	-	-	-	-	-	-	99.7%	-
WDIR			Smoky Heights	SW	-	-	-	-	-	-	100.0%	-
WDIR			Beaverlodge	W	-	-	-	-	-	-	100.0%	-
WDIR			Valleyview	W	-	-	-	-	-	-	99.3%	-
WDIR			Donnelly	SSW	-	-	-	-	-	-	100.0%	-
WDIR			Rycroft-Portable	SW	-	-	-	-	-	-	100.0%	-

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues:

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
NOx/NO/NO_2	TEI	42i	No operational issues observed.
O_3	TEI	49i	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC/CH_4/NMHC	TEI	55I	No operational issues observed.
TRS	TEI	45C/43C	No operational issues observed.
$PM_{2.5}$	Sharp	5030	2 hours of routine maintenance resulted in an uptime of 99.7%.
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

Power disruption on September 6.

Parameter	Make	Model	Notes
SO_2	TEI	43i	Power disruption at the station, resulting in an uptime of 99.7%.
TRS	TEI	43C	Power disruption at the station, resulting in an uptime of 99.7%.
$PM_{2.5}$	Sharp	5030	Power disruption at the station and intermittent instrument malfunctioning, resulting in an uptime of 99.4%.
ET	Met One/Gill	083D	Power disruption at the station, resulting in an uptime of 99.7%.
RH	Met One/Gill		Power disruption at the station, resulting in an uptime of 99.7%.
WS / WD	Met One/ Gill		Power disruption at the station, resulting in an uptime of 99.7%.

PAZA – Smoky Heights Station

General Station Issues

Parameter	Make	Model	Notes
SO_2	TEI	43C	Instrument malfunctioning resulted in an uptime of 99.0%
TRS	TEI	43C	No operational issues observed.
$PM_{2.5}$	Sharp	5030	No operational issues observed.
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Beaverlodge Station

General Station Issues

Data logger issues.

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.
$PM_{2.5}$	Sharp	5030	Instrument malfunctioning resulted in an uptime of 99.9%
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

Power disruption on September 16.

Parameter	Make	Model	Notes
SO_2	TEI	43i	Power disruption at the station, resulting in an uptime of 99.3%.
H_2S	TEI	43A	Power disruption at the station, resulting in an uptime of 99.3%.
ET	Gill	Met Pak 3	Power disruption at the station, resulting in an uptime of 99.3%.
RH	Gill	Met Pak 3	Power disruption at the station, resulting in an uptime of 99.3%.
WS / WD	Gill	Met Pak 3	Power disruption at the station, resulting in an uptime of 99.3%.

PAZA – Donnelly Station

General Station Issues

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-Rycroft

General Station Issues

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
NO_x	TEI	42i	No operational issues observed.
O_3	TEI	49i	No operational issues observed.
TRS	TEI	39C	No operational issues observed.
THC	TEI	51C	No operational issues observed.
$PM_{2.5}$	Sharp	5030	One hour of data flagged as routine maintenance, and one of hour instrument malfunctioning, resulting in an uptime of 99.7%.
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 - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.3 ppb on Sep 20 10:00 Maximum Daily Average: 0.2 ppb on Sep 30

Minimum Value: 0 ppb on Sep 1 03:00 Minimum Daily Average: 0.0 ppb on Sep 24
Maximum Diurnal Average: 0.1 ppb at hour 10 Minimum Diurnal Average: 0.0 ppb at hour 23
Monthly Average: 0.04 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.0 P_{90} = 0.1 P_{99} = 0.7

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-Sep	0	0	0	0	0	0	0	0	C	C	C	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
2-Sep	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
3-Sep	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
4-Sep	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
5-Sep	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
6-Sep	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
7-Sep	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
8-Sep	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0.1	0.7
9-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
10-Sep	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
11-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
12-Sep	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
13-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.4
14-Sep	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
15-Sep	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
16-Sep	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
17-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.3
18-Sep	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
19-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.1
20-Sep	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	1.3
21-Sep	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
22-Sep	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
23-Sep	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
24-Sep	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
25-Sep	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
26-Sep	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
27-Sep	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
28-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
29-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.2	0.9
30-Sep	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.5	0.6	1.2	0.5	1.0	0.9	0.1	0.3	0.4	1.3	0.7	0.3	0.6	0.3	0.4	0.3	0.7	0.3	0.2	0.4	0.7	0.4	0.2	0.9	Diurnal Maximum	

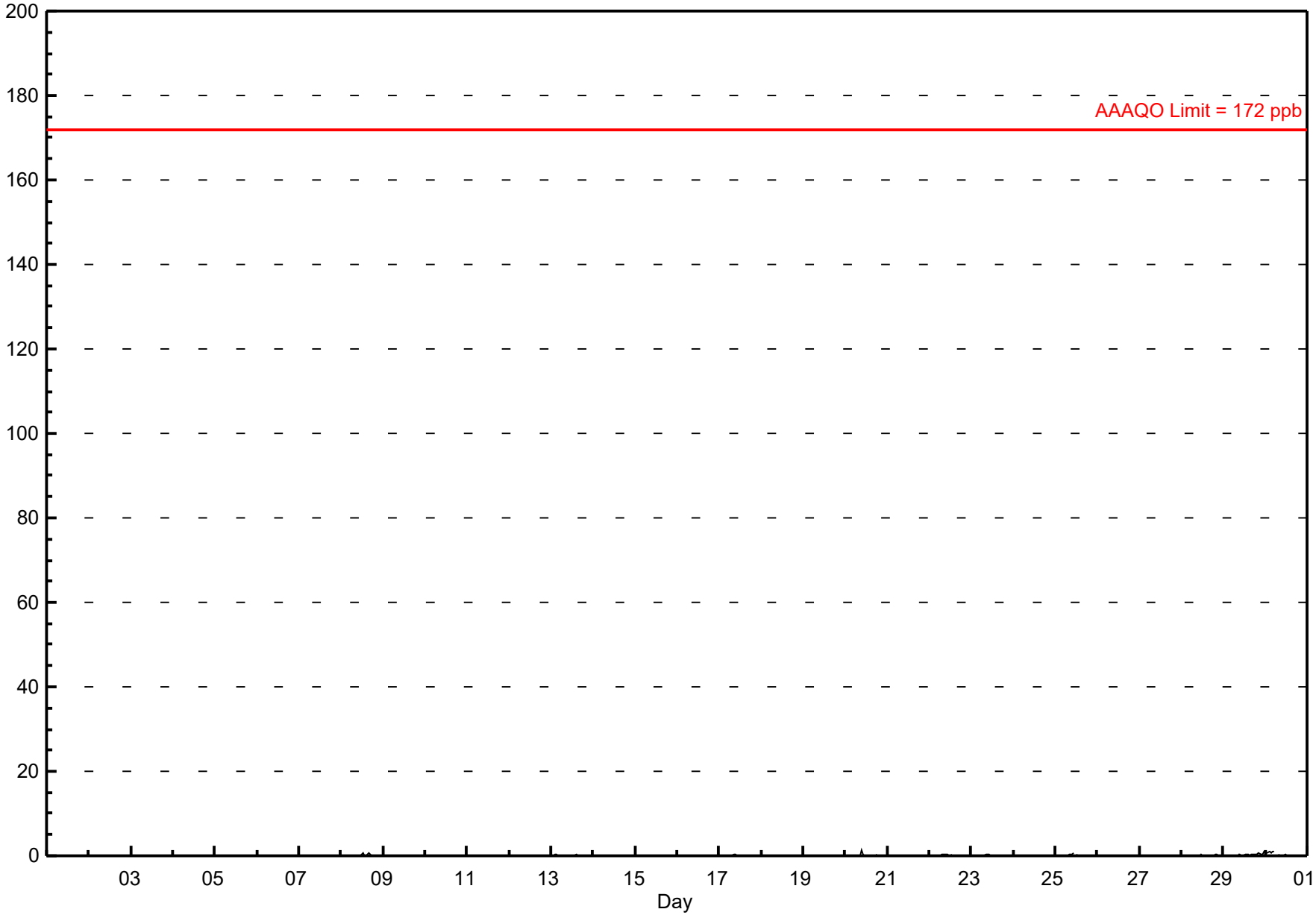
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - September 2016

Maximum Value: 2.8 ppb on Sep 20 10:00

Maximum Daily Average: 0.5 ppb on Sep 29

Minimum Value: 0 ppb on Sep 28 03:00

Minimum Daily Average: 0.0 ppb on Sep 24

Maximum Diurnal Average: 0.3 ppb at hour 10

Minimum Diurnal Average: 0.0 ppb at hour 23

Monthly Average: 0.11 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.1 P_{90} = 0.3 P_{99} = 1.4

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-Sep	0	0	0	0	0	0	0	0	C	C	C	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
2-Sep	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
3-Sep	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
4-Sep	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	0.3
5-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
7-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
8-Sep	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	2	1	0	0	0	0	0	0	0	0.2	1.7
9-Sep	0	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
10-Sep	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
11-Sep	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
12-Sep	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
13-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0.2	1.3
14-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.1
15-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
16-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.2
17-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.4
18-Sep	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
19-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3
20-Sep	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	2.8
21-Sep	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
22-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0.2	0.9
23-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.5
24-Sep	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
25-Sep	0	0	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0
26-Sep	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
27-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4
28-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	0.6
29-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0	2	0.5	2.2
30-Sep	1	1	1	1	1	1	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.4
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	Diurnal Average	
	1.0	1.0	1.4	0.9	1.2	1.4	0.3	0.4	0.6	2.8	1.0	0.7	1.3	0.9	1.3	1.7	1.1	0.4	0.3	2.2	1.9	0.9	0.4	1.6	Diurnal Maximum	

C - Calibration

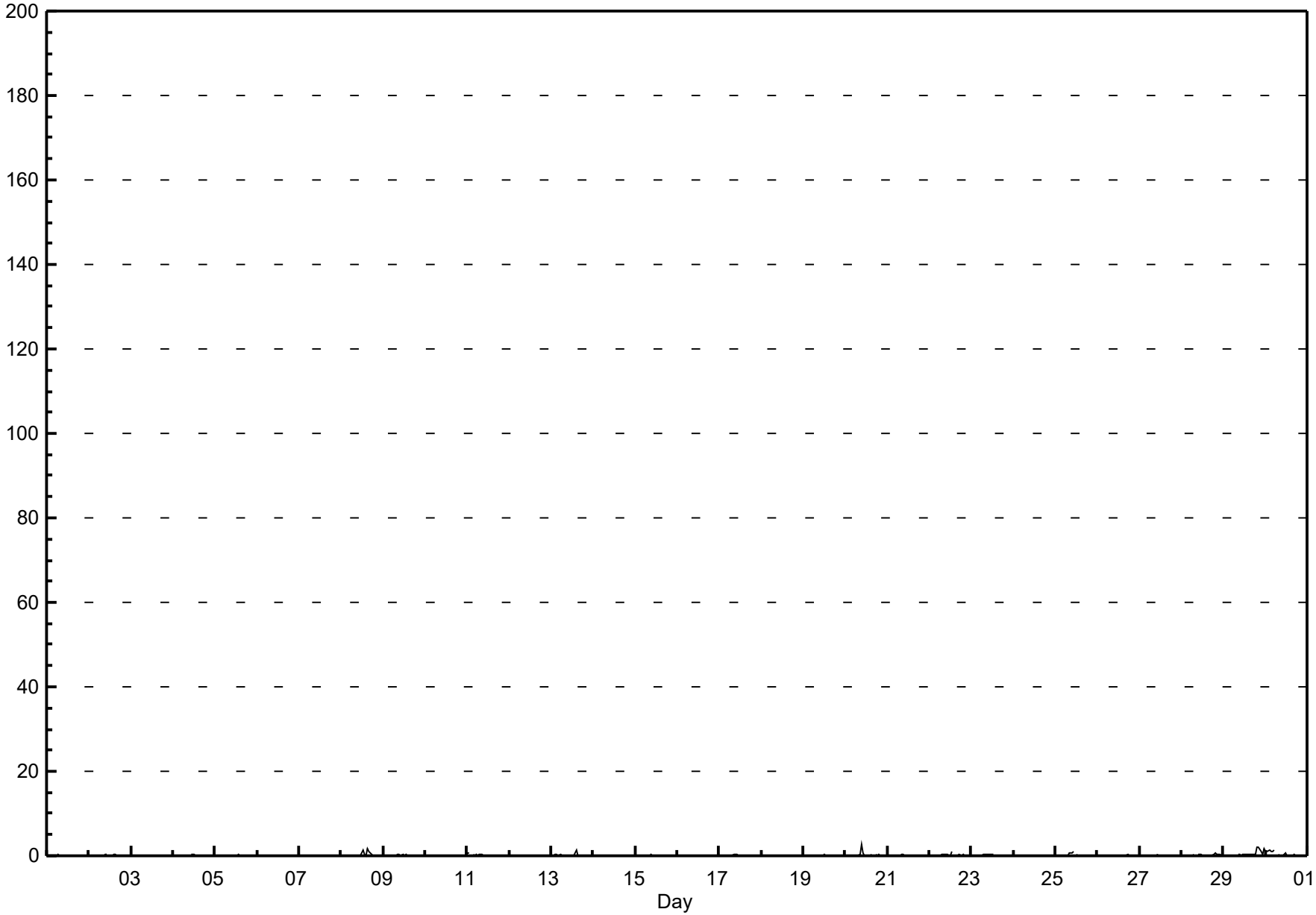
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

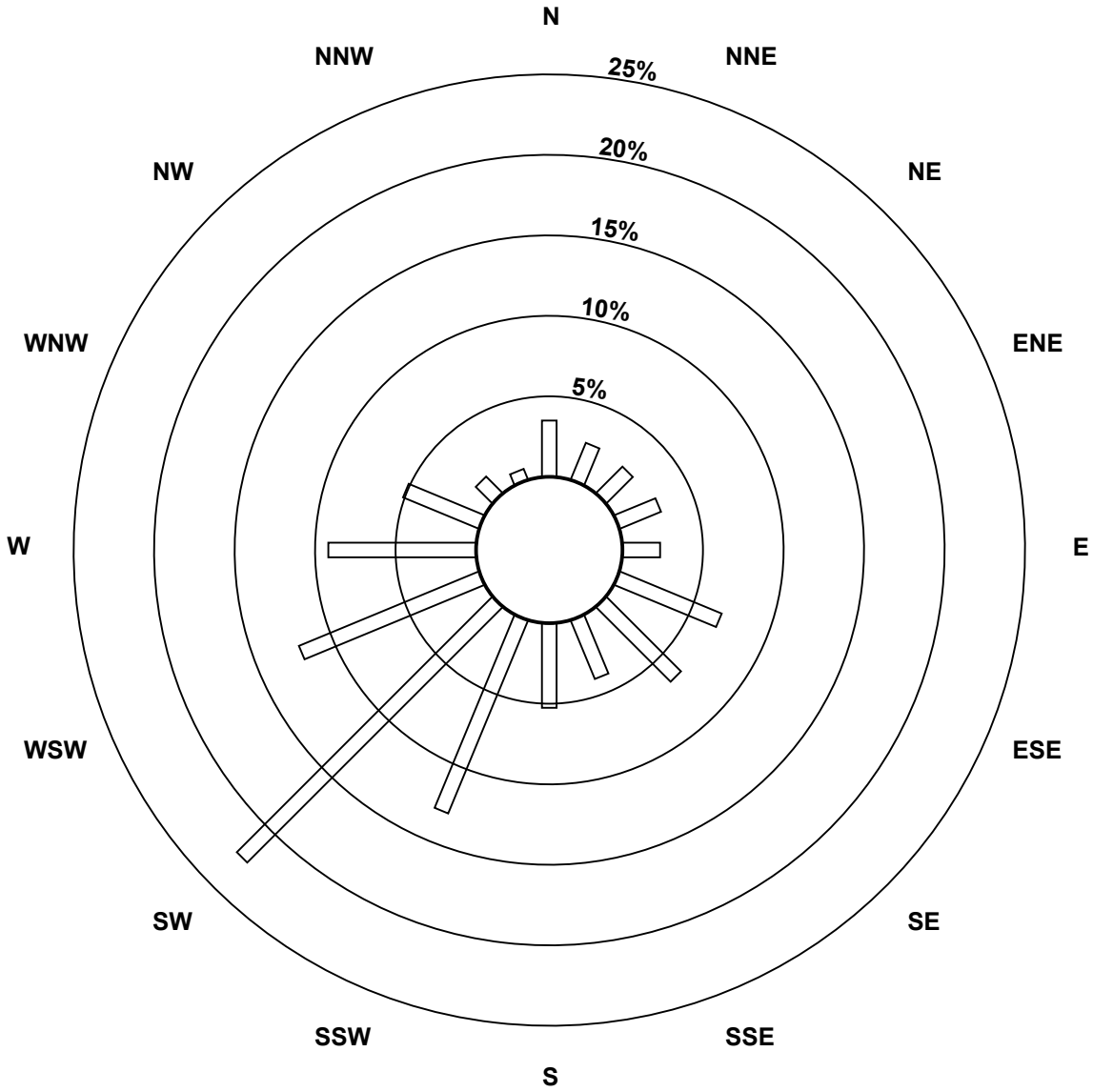
Henry Pirker - September 2016



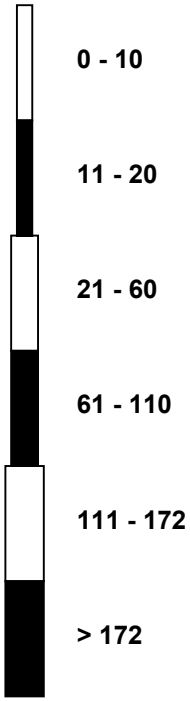
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - September 2016



Pollutant Classes (ppb)

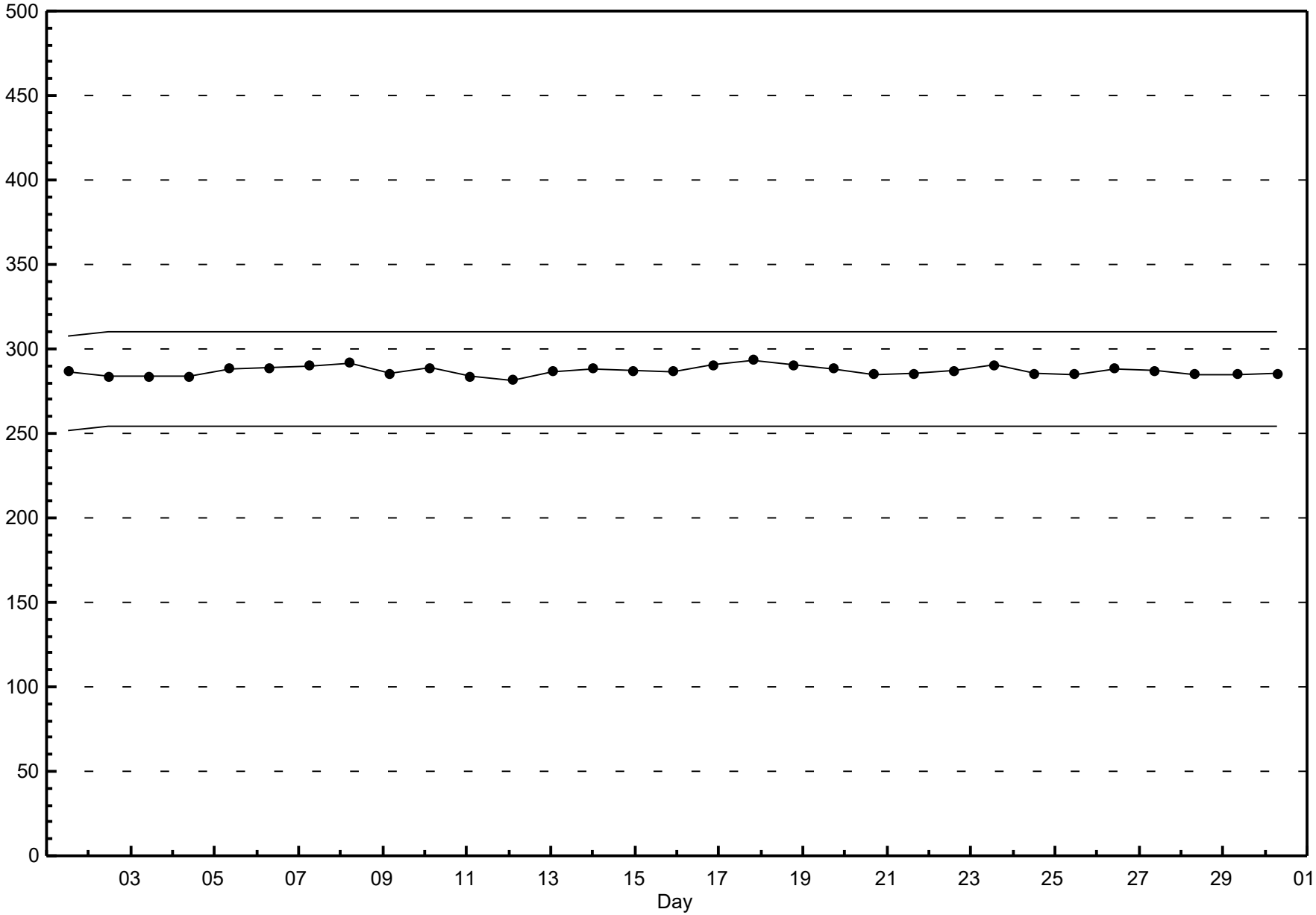


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - September 2016

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

Maximum Value: 3.3 ppb on Sep 22 10:00

Maximum Daily Average: 0.7 ppb on Sep 22

Minimum Value: 0 ppb on Sep 30 20:00

Minimum Daily Average: 0.1 ppb on Sep 27

Maximum Diurnal Average: 0.4 ppb at hour 10

Minimum Diurnal Average: 0.2 ppb at hour 16

Monthly Average: 0.30 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.3$ $P_{90} = 0.4$ $P_{99} = 0.9$

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-Sep	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0.3	0.5
2-Sep	1	1	1	0	1	1	1	1	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
3-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
4-Sep	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
5-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
6-Sep	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	0.5
7-Sep	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
8-Sep	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
9-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
10-Sep	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
11-Sep	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
12-Sep	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
13-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.3
14-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.4
15-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.5
16-Sep	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.5
17-Sep	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	1.2
18-Sep	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
19-Sep	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
20-Sep	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0.4	0.6
21-Sep	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	0.4	1.0
22-Sep	1	1	1	1	0	1	0	1	1	3	2	0	0	2	A	0	0	0	0	0	0	0	0	0	0.7	3.3
23-Sep	0	0	0	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0.4	1.1
24-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
25-Sep	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
26-Sep	1	0	0	0	0	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9
27-Sep	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
28-Sep	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
29-Sep	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
30-Sep	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
	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	Diurnal Average	
	0.8	0.7	0.6	1.2	0.6	0.7	0.8	0.9	0.9	3.3	2.4	0.7	0.4	2.1	0.3	0.4	0.3	0.4	0.4	0.5	0.5	0.5	0.7	1.0	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

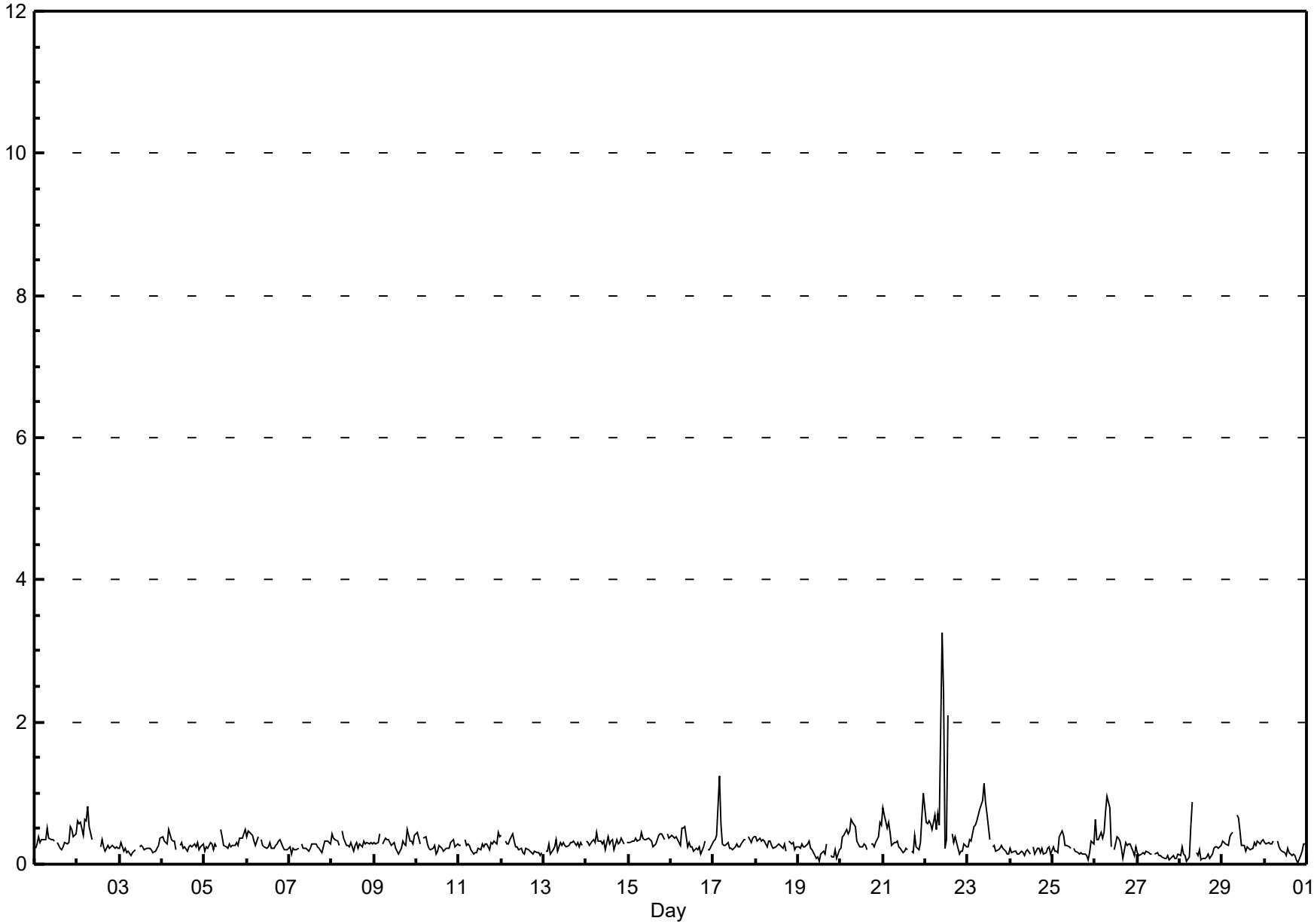
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - September 2016

Maximum Value: 7.2 ppb on Sep 22 10:00

Maximum Daily Average: 1.5 ppb on Sep 22

Minimum Value: 0 ppb on Sep 28 05:00

Minimum Daily Average: 0.6 ppb on Sep 27

Maximum Diurnal Average: 1.0 ppb at hour 10

Minimum Diurnal Average: 0.7 ppb at hour 18

Monthly Average: 0.80 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.7 $Q_3 = 0.9$ $P_{90} = 1.0$ $P_{99} = 1.6$

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-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
2-Sep	1	1	1	1	2	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6
3-Sep	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
4-Sep	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	1.1
5-Sep	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
6-Sep	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
7-Sep	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
8-Sep	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
9-Sep	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
10-Sep	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
11-Sep	1	1	A	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
12-Sep	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	0.7	0.9
13-Sep	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	0.9
14-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.1
15-Sep	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
16-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.0
17-Sep	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.9	1.8
18-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	0.9
19-Sep	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	A	1	0	0	1	1	1	0.6	0.9
20-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.3
21-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	2	0.8	1.5
22-Sep	1	1	1	1	1	1	1	1	1	7	4	1	1	5	A	1	1	1	1	1	1	1	1	1	1.5	7.2
23-Sep	1	1	1	1	1	1	1	2	2	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1.0	2.0
24-Sep	1	1	1	1	1	0	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9
25-Sep	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	0	0	1	1	1	1	1	0.7	0.9
26-Sep	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	0.9	1.5
27-Sep	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	0	0	1	1	1	1	1	0.6	0.7
28-Sep	1	1	1	1	0	1	1	1	A	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0.7	1.4
29-Sep	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	1.3
30-Sep	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.8	1.0	0.9	0.7	0.7	0.9	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.8	0.9	Diurnal Average	
	1.4	1.1	1.2	1.8	1.6	1.4	1.5	1.5	1.5	7.2	4.3	1.4	1.1	5.4	1.0	1.0	1.0	0.9	0.9	1.0	1.3	1.0	1.4	1.5	Diurnal Maximum	

C - Calibration

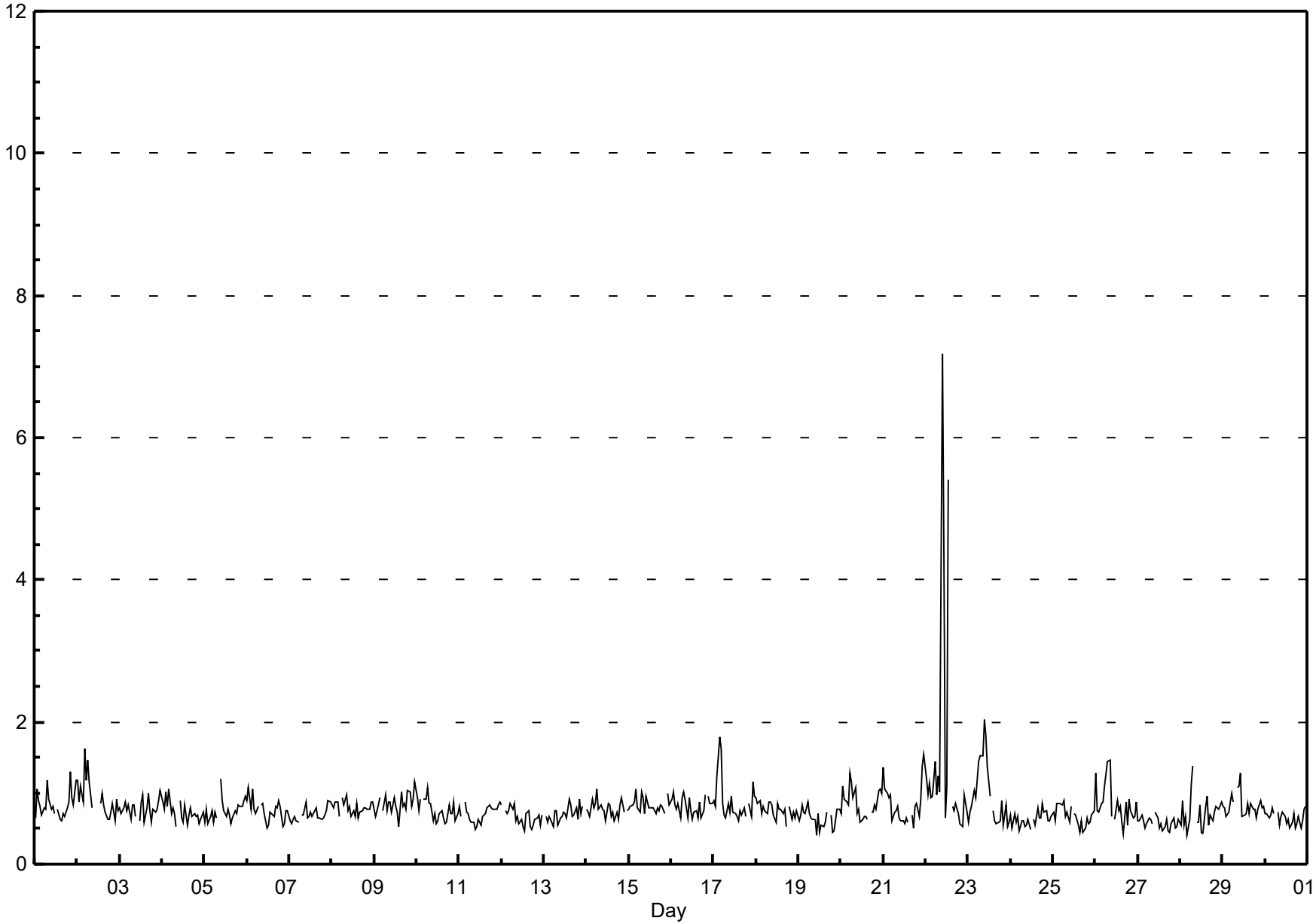
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

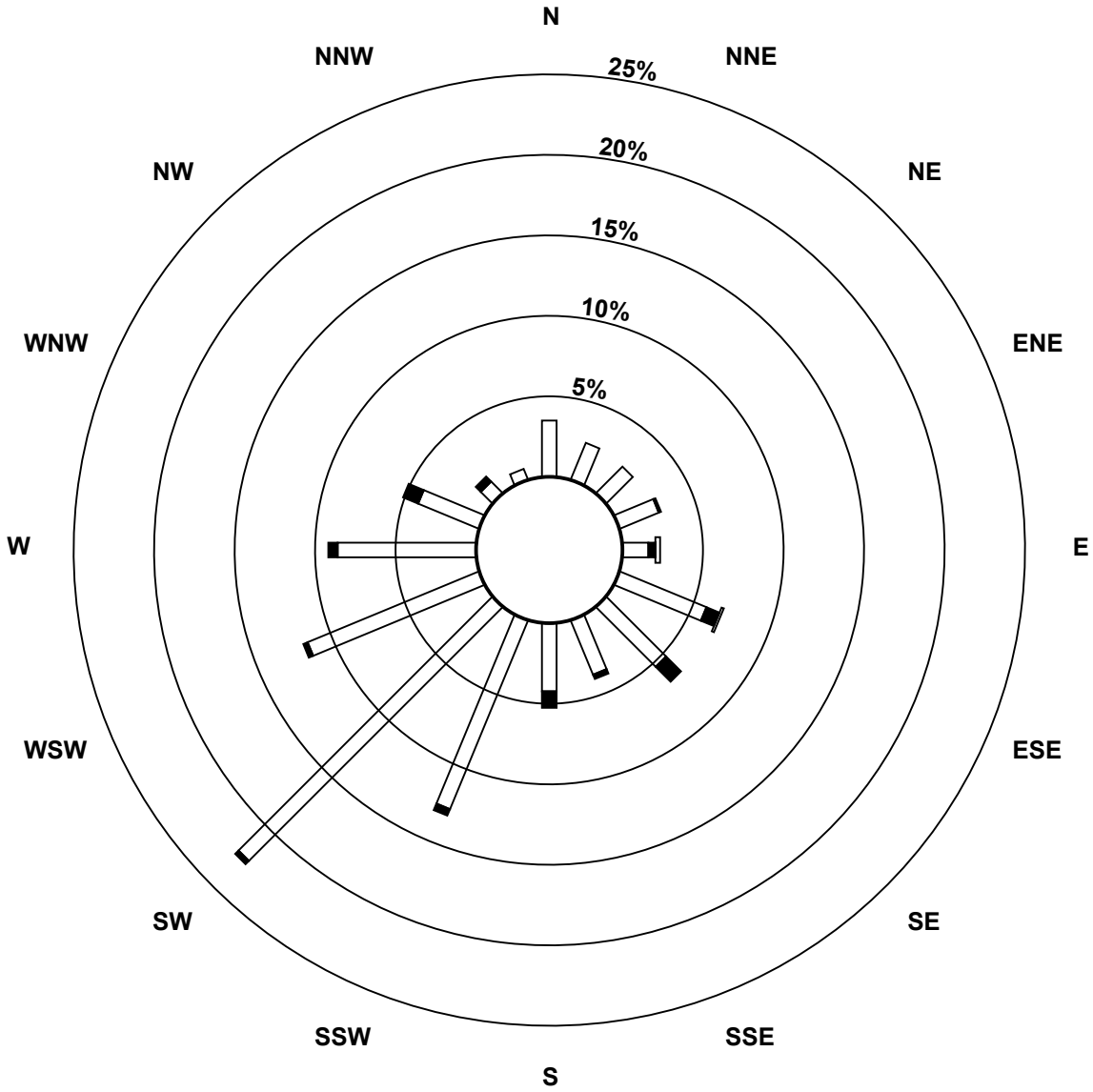
Henry Pirker - September 2016



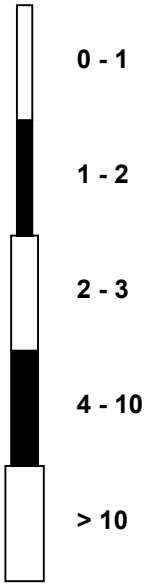
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - September 2016



Pollutant Classes (ppb)

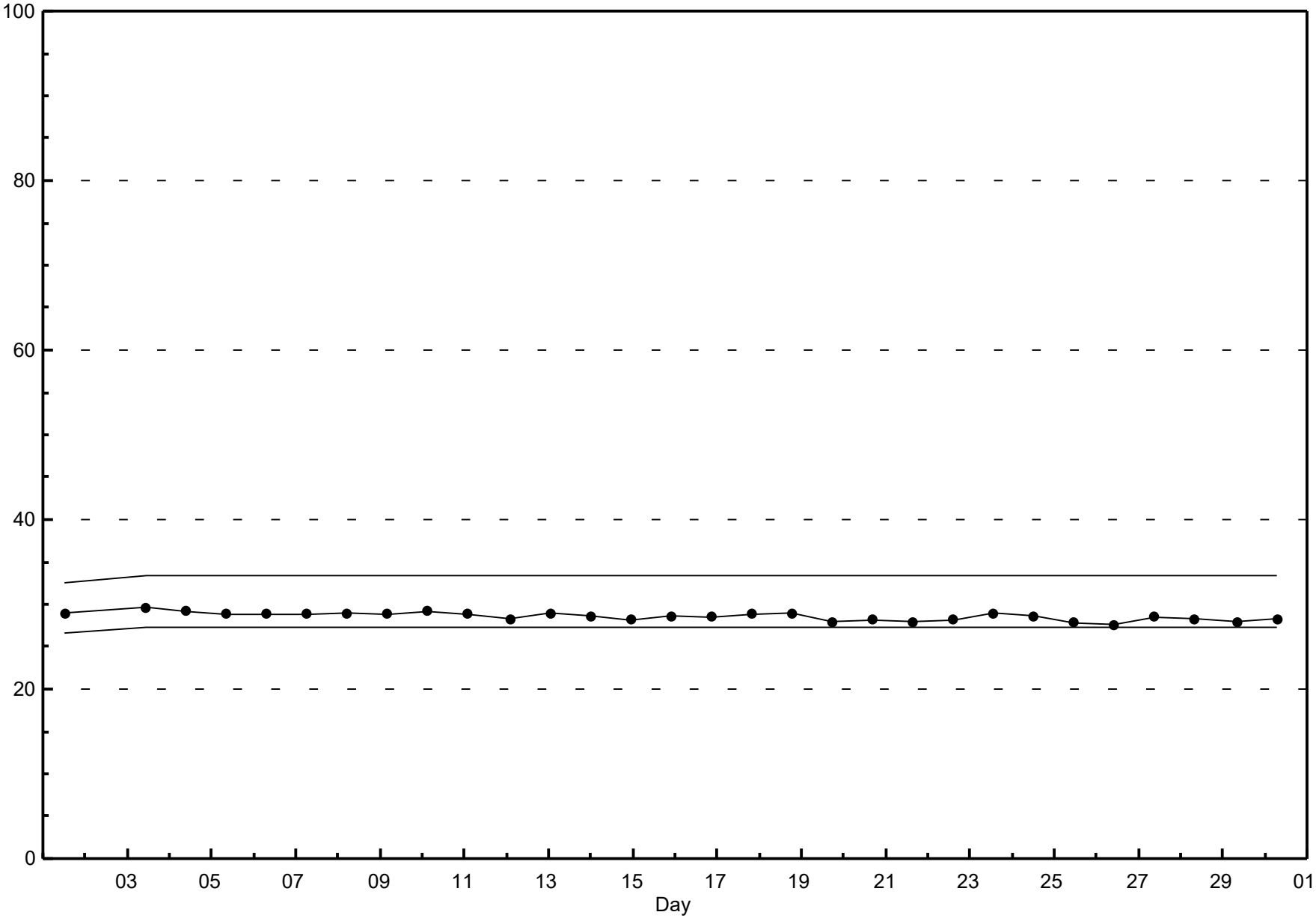


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 24.4 ppb on Sep 23 11:00
Maximum Daily Average: 9.0 ppb on Sep 26

Minimum Value: 0 ppb on Sep 11 02:00
Maximum Diurnal Average: 9.0 ppb at hour 7
Monthly Average: 4.51 ppb

Minimum Daily Average: 1.1 ppb on Sep 3
Minimum Diurnal Average: 1.5 ppb at hour 15
Percentiles: $P_1 = 0.4$ $P_{10} = 0.9$ $Q_1 = 1.5$ Median = 3.1 $Q_3 = 6.1$ $P_{90} = 10.4$ $P_{99} = 18.0$

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-Sep	2	2	2	2	2	2	3	4	C	C	C	C	C	2	1	1	1	1	1	2	6	10	9	6	3.2	10.4
2-Sep	4	4	3	2	3	4	4	4	3	2	1	A	3	2	2	1	1	1	1	1	2	1	1	0	2.1	4.3
3-Sep	1	0	0	0	0	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	3	4	1.1	3.9
4-Sep	3	3	4	7	6	7	6	4	3	A	3	1	1	1	1	1	1	1	2	6	6	6	4	5	3.6	6.9
5-Sep	4	4	4	3	5	8	7	6	A	8	5	4	4	2	1	1	1	1	2	2	6	7	12	12	4.7	12.0
6-Sep	7	5	5	3	3	4	7	A	5	3	2	1	1	1	1	4	2	2	4	8	7	4	2	2	3.7	8.5
7-Sep	2	1	1	2	3	5	A	12	5	2	1	1	1	1	1	1	1	2	3	4	8	9	10	8	3.7	11.8
8-Sep	6	3	2	2	3	A	15	9	5	4	2	1	1	1	1	1	1	1	1	4	3	3	3	2	3.3	15.3
9-Sep	2	2	3	4	A	7	9	8	8	5	3	2	2	3	2	2	2	4	7	7	5	4	5	4	4.3	8.6
10-Sep	6	5	3	A	3	2	2	2	1	1	1	1	1	0	1	1	1	1	1	1	2	2	1	1	1.6	6.0
11-Sep	0	0	A	2	1	1	1	1	1	2	1	1	0	1	1	1	1	1	2	3	4	3	6	7	1.7	7.2
12-Sep	6	A	5	6	5	7	9	7	5	5	4	3	2	1	1	1	1	3	3	3	3	2	1	1	3.7	9.0
13-Sep	A	2	2	1	2	3	5	9	5	2	2	2	1	1	1	1	2	2	2	3	3	1	2	A	2.5	8.6
14-Sep	4	2	3	4	6	10	12	9	6	2	1	1	1	1	1	1	1	1	3	4	5	3	A	3	3.7	11.9
15-Sep	2	2	4	4	5	8	8	8	5	3	2	2	1	1	1	2	2	3	3	6	4	A	7	5	3.8	8.1
16-Sep	4	4	3	4	4	9	14	16	14	6	3	2	1	1	2	3	3	2	3	4	A	6	10	8	5.4	15.9
17-Sep	9	9	6	4	5	3	3	5	4	3	2	2	1	1	1	1	2	3	2	A	4	3	2	2	3.4	9.2
18-Sep	1	1	2	2	1	2	2	2	2	1	2	2	1	1	1	1	1	1	A	5	3	4	2	2	1.7	5.0
19-Sep	3	3	5	4	5	10	15	15	9	4	2	0	1	1	1	5	8	A	7	7	12	11	3	5	5.8	14.8
20-Sep	5	3	3	5	8	10	8	9	7	2	2	2	1	1	1	1	A	2	2	8	17	15	16	18	6.4	18.4
21-Sep	11	9	9	8	8	9	10	10	9	6	3	1	1	1	1	A	2	2	8	10	8	7	14	15	7.0	15.3
22-Sep	10	11	10	10	8	10	18	17	13	10	7	4	4	5	A	3	2	4	8	10	7	5	3	4	8.0	17.7
23-Sep	4	7	8	11	10	12	15	15	18	21	24	16	7	A	4	3	3	4	4	4	3	2	2	1	8.5	24.4
24-Sep	1	1	1	1	2	3	2	3	2	1	1	1	A	2	1	1	1	2	2	3	3	5	3	3	2.0	5.2
25-Sep	3	4	7	9	10	12	14	12	12	12	14	A	8	3	2	1	2	2	5	5	7	11	18	11	8.0	17.8
26-Sep	11	8	8	11	14	17	17	20	16	11	A	4	6	6	2	1	3	15	17	11	5	2	1	1	9.0	19.5
27-Sep	1	1	1	1	2	5	6	5	3	A	2	2	1	1	1	2	2	3	3	4	5	4	4	4	2.7	5.6
28-Sep	4	6	8	10	12	16	19	21	A	11	9	10	3	1	2	1	2	3	12	16	14	7	9	7	8.9	21.0
29-Sep	8	5	7	6	7	11	18	A	20	16	7	5	3	2	2	2	3	4	6	8	6	5	3	4	7.0	19.6
30-Sep	3	3	4	5	5	7	A	16	11	6	5	4	5	5	5	4	4	4	2	2	2	1	1	1	4.5	16.2
	4.3	3.8	4.1	4.6	5.1	7.0	9.0	8.8	7.1	5.6	4.1	2.8	2.3	1.8	1.5	1.8	1.9	2.5	4.1	5.3	5.6	5.0	5.4	5.1	Diurnal Average	
	11.3	10.5	9.8	11.3	14.0	16.6	19.4	21.0	19.6	20.7	24.4	15.6	7.6	6.4	4.7	4.6	7.7	14.8	16.7	16.3	16.7	14.6	17.8	18.4	Diurnal Maximum	

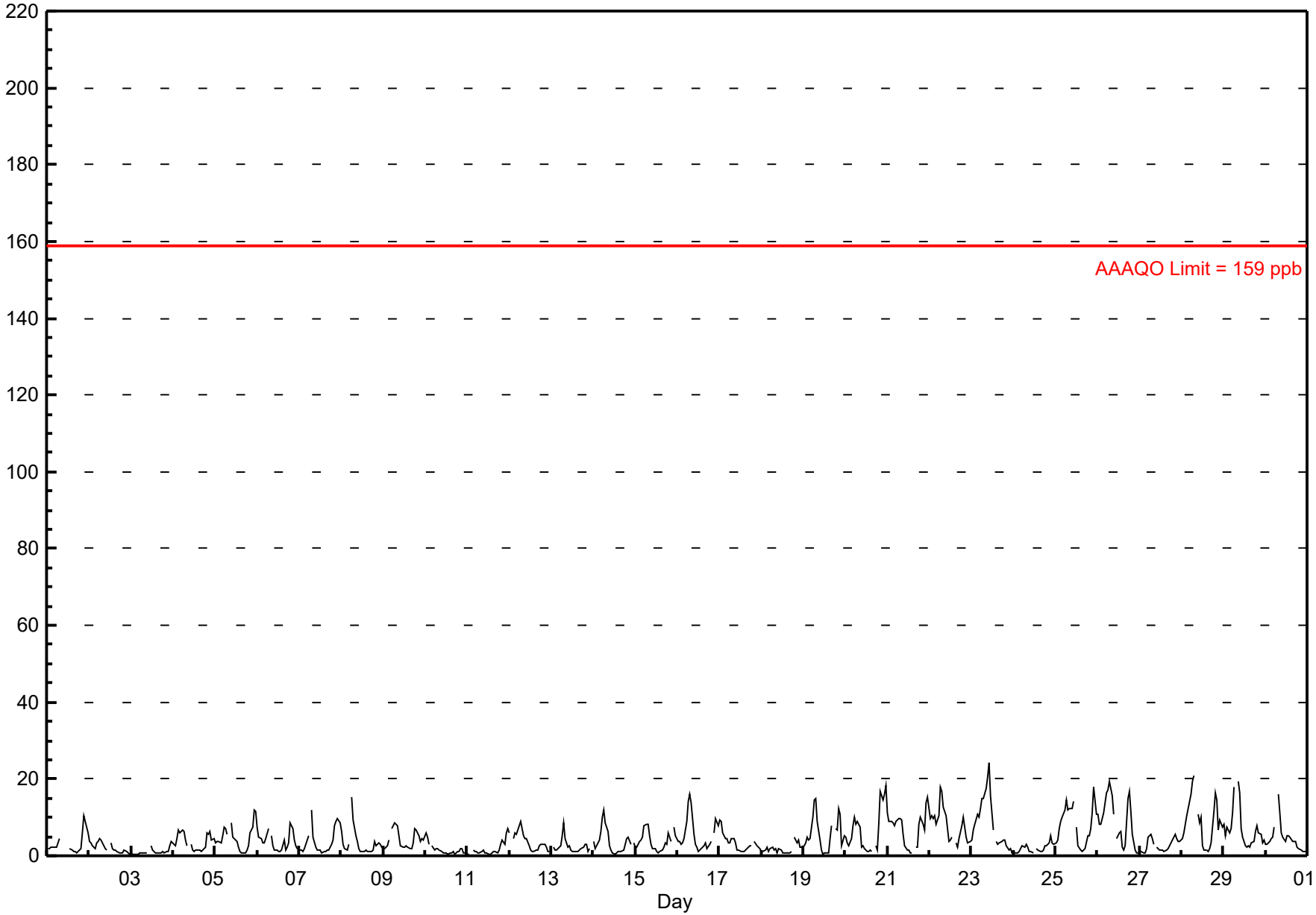
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - September 2016

Maximum Value: 51.3 ppb on Sep 9 13:00

Maximum Daily Average: 14.2 ppb on Sep 26

Minimum Value: 1 ppb on Sep 3 03:00

Minimum Daily Average: 2.1 ppb on Sep 3

Maximum Diurnal Average: 12.3 ppb at hour 8

Minimum Diurnal Average: 2.9 ppb at hour 15

Monthly Average: 6.83 ppb

Percentiles: $P_1 = 0.8$ $P_{10} = 1.8$ $Q_1 = 2.6$ Median = 4.9 $Q_3 = 9.2$ $P_{90} = 14.7$ $P_{99} = 26.3$

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-Sep	2	3	3	3	3	3	6	14	C	C	C	C	C	2	2	2	2	1	3	4	9	13	11	8	5.0	14.2
2-Sep	6	4	4	2	4	5	5	11	5	3	3	A	6	3	3	16	2	2	1	1	3	3	1	1	4.1	16.1
3-Sep	1	1	1	1	1	1	1	8	1	2	A	4	2	2	2	2	1	2	2	1	2	2	5	6	2.1	8.4
4-Sep	5	3	5	9	6	8	7	5	3	A	5	2	2	2	2	2	2	2	4	10	9	8	6	6	5.0	9.6
5-Sep	5	6	5	4	8	9	9	7	A	12	7	6	5	4	2	2	1	1	4	4	9	11	14	14	6.5	14.1
6-Sep	11	6	6	4	4	5	8	A	22	5	2	2	2	3	3	7	4	4	6	15	11	7	5	4	6.3	22.1
7-Sep	2	2	2	3	4	8	A	15	9	4	2	2	3	2	3	2	3	3	5	6	11	18	12	11	5.7	17.8
8-Sep	9	4	3	3	4	A	18	13	8	10	3	2	3	2	3	2	3	2	4	7	5	5	5	3	5.3	17.8
9-Sep	2	3	4	5	A	8	11	9	9	8	5	4	51	28	4	3	3	6	9	8	7	5	6	5	8.9	51.3
10-Sep	8	7	5	A	5	2	3	2	2	2	1	2	2	2	2	2	3	1	2	2	4	4	1	1	2.8	7.6
11-Sep	1	1	A	3	2	2	1	1	13	11	3	1	1	1	2	2	2	1	2	5	6	6	8	9	3.6	13.0
12-Sep	7	A	7	6	6	7	16	27	7	6	6	4	3	2	2	3	3	5	4	4	5	4	2	3	6.0	27.5
13-Sep	A	4	3	2	3	6	9	12	6	3	9	3	3	2	2	2	3	3	3	4	4	2	11	A	4.5	11.6
14-Sep	6	3	3	5	8	12	15	12	9	5	3	1	2	2	2	2	2	3	5	6	6	4	A	6	5.4	15.0
15-Sep	3	3	5	5	7	11	10	9	9	5	3	3	2	2	2	3	5	6	6	10	8	A	9	7	5.6	11.3
16-Sep	5	5	5	4	8	13	18	18	16	10	5	4	3	3	4	4	5	3	6	6	A	8	13	11	7.7	18.1
17-Sep	11	10	9	5	7	4	5	7	6	5	3	5	2	2	2	3	3	4	4	A	5	3	3	3	4.7	10.6
18-Sep	2	2	3	3	2	3	4	2	3	2	3	4	1	1	2	2	2	2	A	9	5	6	4	4	3.1	9.3
19-Sep	5	5	5	8	7	17	20	17	14	6	4	1	1	2	2	9	12	A	13	10	19	21	10	8	9.4	21.0
20-Sep	6	5	4	6	10	11	10	11	11	3	4	4	12	2	3	2	A	4	4	11	24	17	20	21	8.9	24.1
21-Sep	17	10	10	9	11	11	11	11	11	24	5	3	2	2	2	A	4	4	15	14	10	14	17	24	10.6	24.2
22-Sep	14	13	13	12	10	18	24	21	17	13	10	5	5	7	A	5	3	7	13	14	10	7	5	5	11.0	24.0
23-Sep	7	11	13	12	12	14	17	17	20	24	29	22	12	A	6	4	4	6	6	6	4	4	4	1	11.2	28.6
24-Sep	1	2	2	2	3	4	4	4	3	2	2	1	A	3	2	2	2	3	4	4	5	8	5	4	3.0	7.6
25-Sep	6	8	9	12	11	16	19	14	15	14	16	A	12	4	3	2	2	3	8	9	10	19	20	13	10.6	20.4
26-Sep	12	10	12	15	19	18	22	24	19	14	A	7	27	16	6	5	6	28	27	18	16	4	1	1	14.2	27.6
27-Sep	2	2	1	1	4	8	7	6	5	A	4	2	2	2	2	2	3	4	5	6	8	5	6	5	4.2	8.4
28-Sep	8	8	12	13	16	19	22	24	A	15	11	15	5	4	4	2	4	6	22	21	19	12	13	9	12.5	23.9
29-Sep	10	8	13	8	10	19	21	A	22	19	13	7	4	3	4	4	5	7	14	11	7	17	4	6	10.2	21.5
30-Sep	4	3	6	8	6	9	A	20	16	9	7	6	7	8	7	5	5	6	3	3	3	2	2	2	6.4	20.0
	6.1	5.3	5.9	6.0	7.0	9.4	11.6	12.3	10.5	8.7	6.2	4.6	6.5	4.1	2.9	3.5	3.4	4.5	7.0	7.8	8.5	8.2	7.7	6.8	Diurnal Average	
	16.9	12.7	12.9	14.5	18.7	19.2	24.0	27.5	22.1	24.4	28.6	22.0	51.3	28.3	7.5	16.1	12.4	27.6	27.2	20.6	24.1	21.0	20.4	24.0	Diurnal Maximum	

C - Calibration

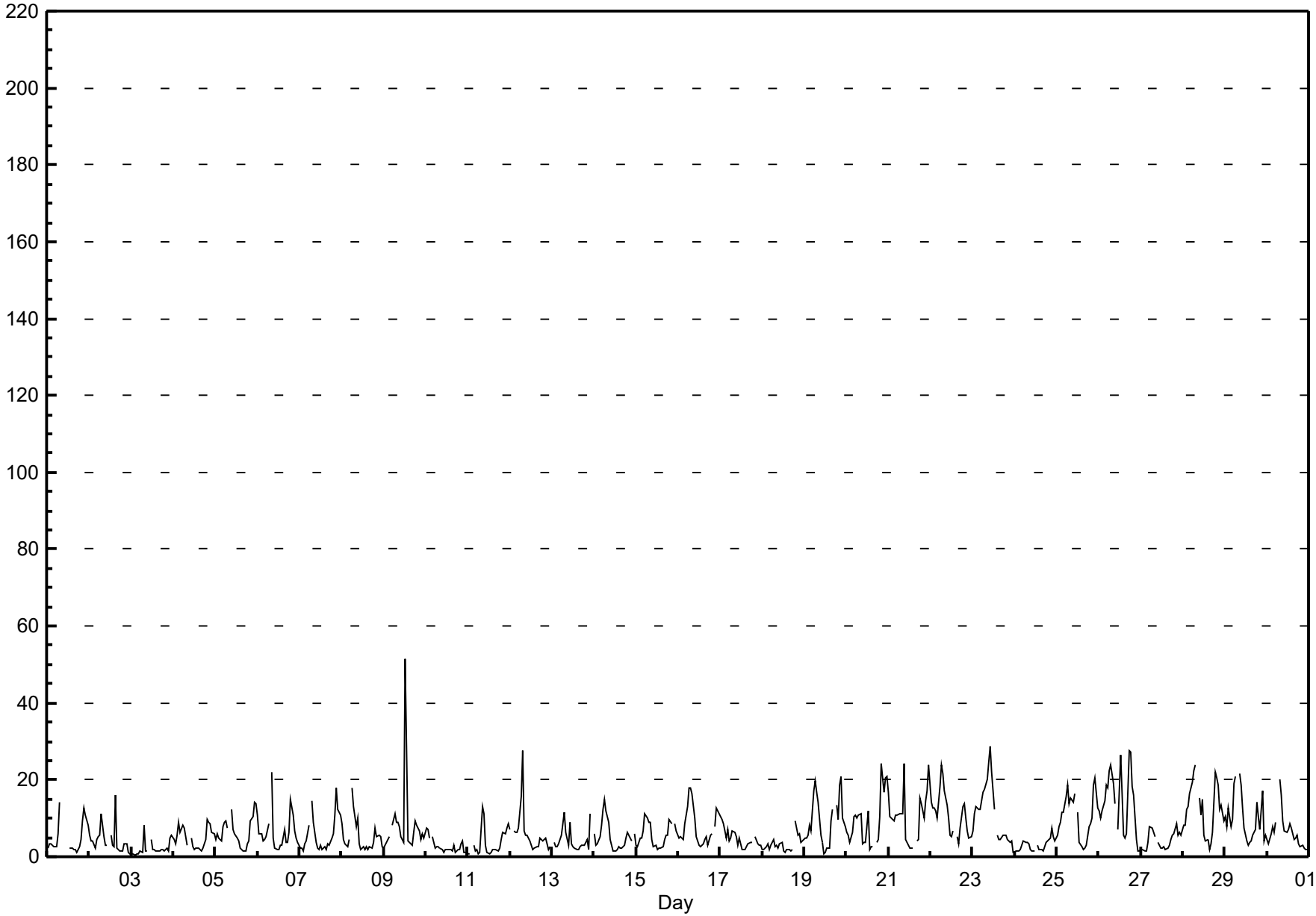
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

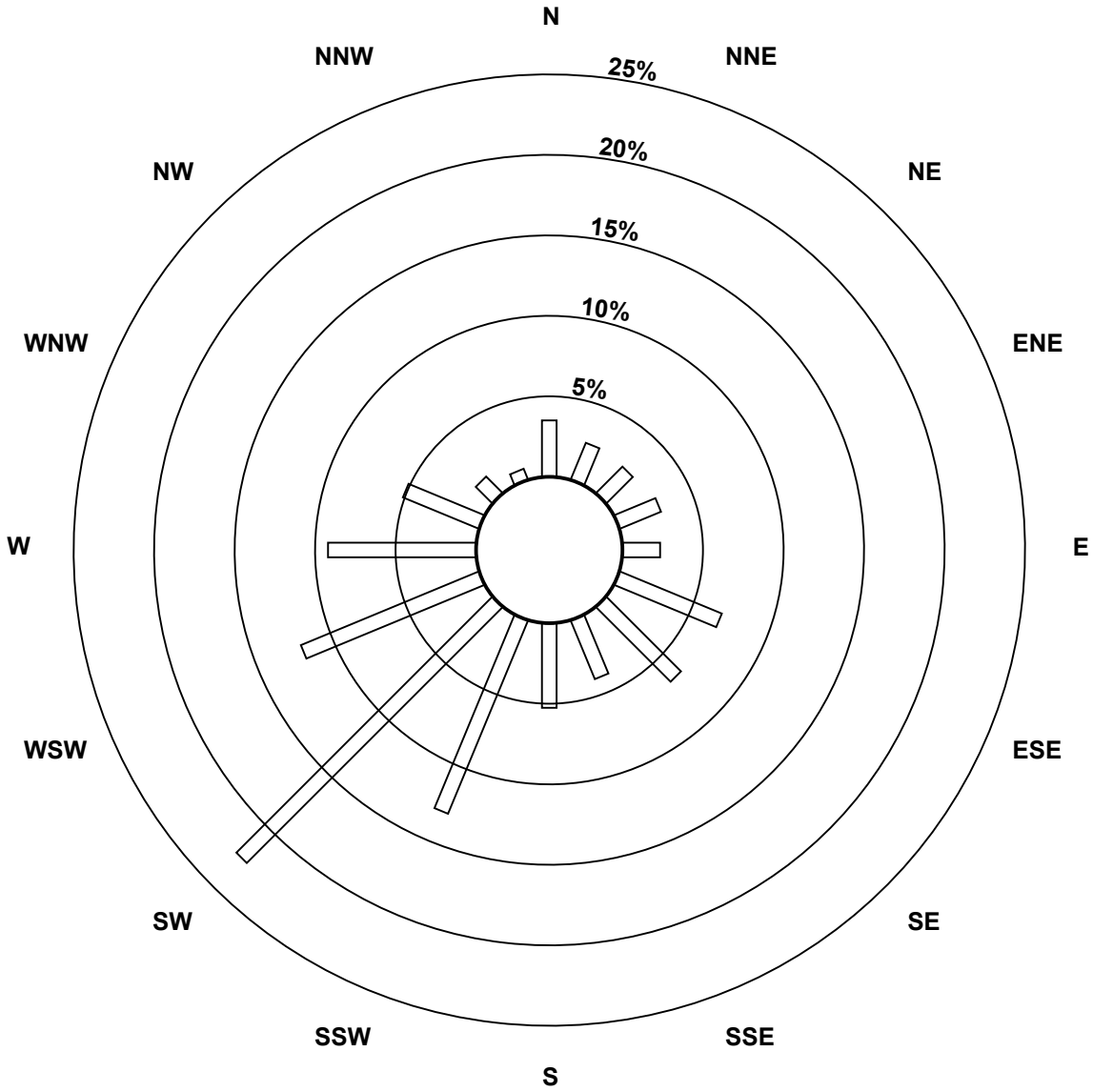
Henry Pirker - September 2016



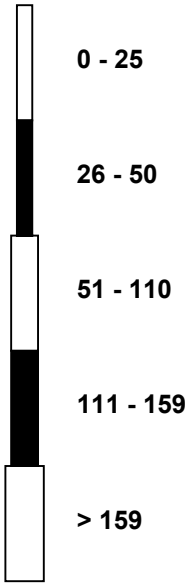
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - September 2016



Pollutant Classes (ppb)

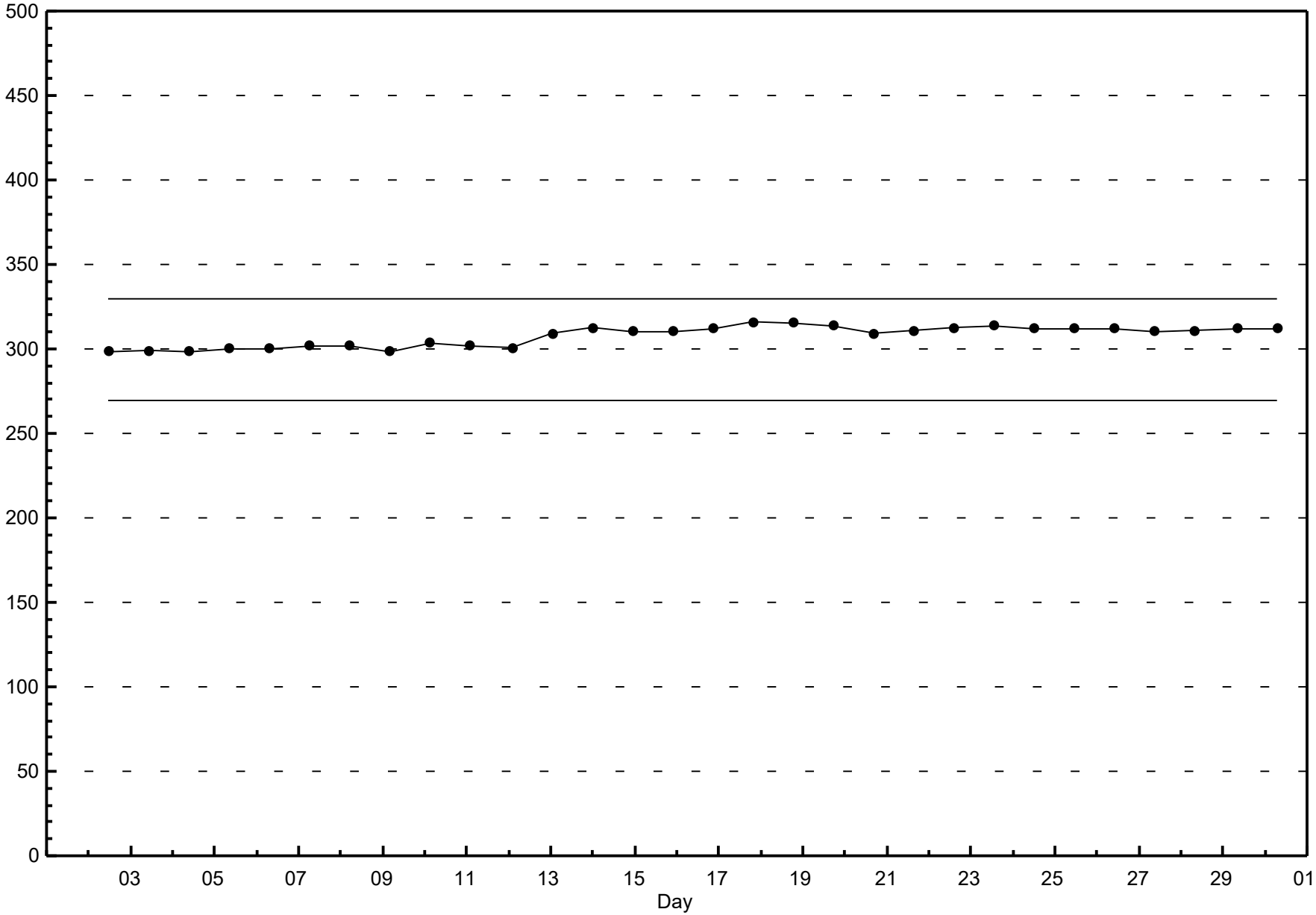


Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 54.9 ppb on Sep 22 08:00
Maximum Daily Average: 9.5 ppb on Sep 23

Minimum Value: 0 ppb on Sep 18 01:00
Maximum Diurnal Average: 11.6 ppb at hour 8
Monthly Average: 2.13 ppb

Minimum Daily Average: 0.2 ppb on Sep 18
Minimum Diurnal Average: 0.3 ppb at hour 20
Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.5 $Q_3 = 1.1$ $P_{90} = 4.5$ $P_{99} = 34.1$

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-Sep	0	0	0	0	0	1	4	6	C	C	C	C	C	1	1	1	1	0	0	0	1	5	5	2	1.5	5.6
2-Sep	1	1	1	0	1	3	4	12	6	2	2	A	1	1	1	1	1	0	0	0	0	0	0	0	1.7	12.1
3-Sep	0	0	0	0	0	0	0	0	0	1	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	0.8
4-Sep	0	0	0	2	2	7	7	4	2	A	1	0	0	1	1	1	0	0	0	0	0	0	0	0	1.3	6.5
5-Sep	0	0	0	0	0	1	2	4	A	10	7	7	4	1	0	0	0	0	0	0	0	0	2	9	2.2	9.9
6-Sep	2	1	0	0	1	2	9	A	7	3	1	1	1	1	1	2	1	1	0	1	0	0	0	0	1.5	8.6
7-Sep	0	0	0	0	0	1	A	9	3	1	1	1	1	0	1	1	1	1	0	0	0	0	1	0	1.0	8.9
8-Sep	0	0	0	0	0	A	6	4	3	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1.1	6.4
9-Sep	0	0	0	0	A	1	5	10	14	9	1	1	3	4	1	1	0	0	0	0	0	0	0	0	2.3	13.6
10-Sep	0	0	0	A	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
11-Sep	0	0	A	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	2.0
12-Sep	0	A	0	1	2	6	21	23	12	8	6	2	1	1	1	1	1	1	0	0	0	0	0	0	3.8	23.4
13-Sep	A	0	0	0	0	0	0	2	2	2	4	1	1	1	1	1	1	1	0	0	0	0	0	A	0.8	3.5
14-Sep	0	0	0	0	0	1	5	4	4	2	1	0	0	0	1	1	1	1	1	0	0	0	A	0	1.0	4.7
15-Sep	0	0	0	0	0	1	2	6	4	2	1	1	1	1	1	1	1	1	1	0	0	A	0	0	1.0	5.6
16-Sep	0	0	0	0	0	2	16	25	19	3	1	1	1	1	1	1	1	0	0	0	A	0	2	1	3.2	24.5
17-Sep	2	2	1	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0.5	1.9
18-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0.2	0.5
19-Sep	0	0	0	0	0	2	5	7	4	2	1	0	0	0	0	1	2	A	1	0	0	2	0	0	1.3	7.3
20-Sep	0	0	0	0	2	8	5	10	9	1	2	1	1	0	0	0	A	0	0	0	2	0	3	11	2.5	11.0
21-Sep	11	2	2	2	4	4	13	25	20	8	3	1	1	1	0	A	0	0	1	0	0	0	1	1	4.4	25.3
22-Sep	0	1	4	3	1	5	15	55	25	18	9	4	3	3	A	1	0	1	1	1	0	0	0	0	6.5	54.9
23-Sep	0	0	1	1	1	3	21	43	51	42	35	15	3	A	1	1	0	0	0	0	0	0	0	0	9.5	50.9
24-Sep	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
25-Sep	0	0	0	0	0	0	1	1	4	7	12	A	3	1	0	0	0	0	0	0	0	0	1	0	1.3	11.8
26-Sep	0	0	0	0	2	3	16	32	26	6	A	1	2	2	1	0	0	2	2	1	0	0	0	0	4.3	31.7
27-Sep	0	0	0	0	0	0	0	1	1	A	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.0
28-Sep	0	0	0	0	0	2	14	38	A	8	6	7	1	0	1	0	0	0	1	1	0	0	0	0	3.5	38.1
29-Sep	0	0	0	0	1	4	23	A	44	25	4	3	1	1	1	1	0	0	1	0	0	0	0	0	4.8	43.5
30-Sep	0	0	0	0	0	0	A	3	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0.7	2.5
	0.7	0.3	0.4	0.5	0.7	2.0	6.9	11.6	9.9	6.2	3.8	2.0	1.2	0.9	0.6	0.6	0.5	0.5	0.4	0.3	0.3	0.4	0.6	0.9	Diurnal Average	
	10.9	2.2	4.3	3.0	3.5	8.1	23.0	54.9	50.9	41.8	35.1	15.2	3.9	4.4	1.3	1.9	1.9	1.8	1.7	0.8	2.3	5.5	4.9	11.0	Diurnal Maximum	

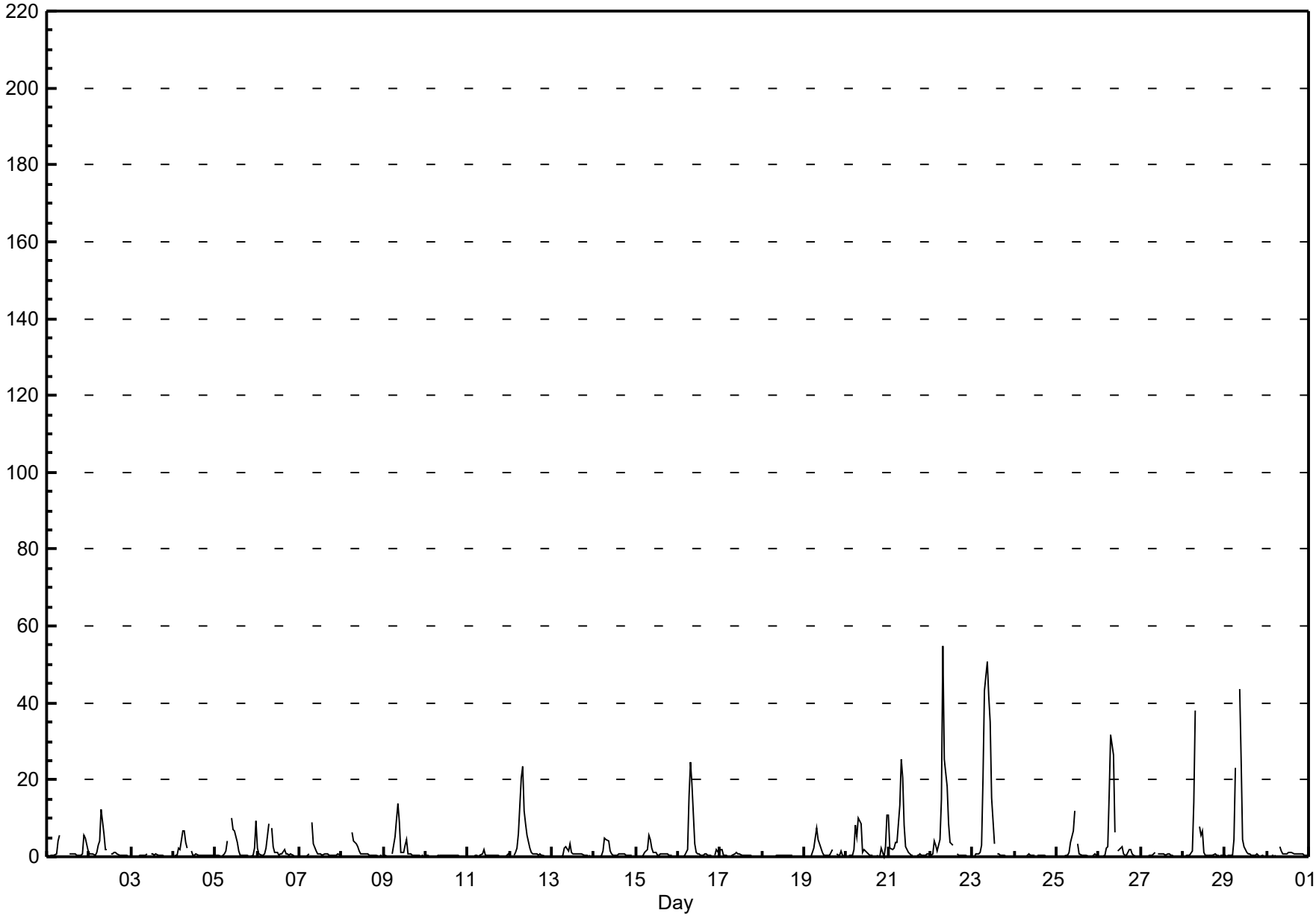
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - September 2016

Maximum Value: 81.3 ppb on Sep 22 08:00

Maximum Daily Average: 13.9 ppb on Sep 22

Minimum Value: 0 ppb on Sep 25 21:00

Minimum Daily Average: 0.5 ppb on Sep 24

Maximum Diurnal Average: 19.5 ppb at hour 8

Minimum Diurnal Average: 1.1 ppb at hour 18

Monthly Average: 4.98 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.3$ $Q_1 = 0.6$ Median = 1.2 $Q_3 = 3.6$ $P_{90} = 12.1$ $P_{99} = 55.4$

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-Sep	3	1	1	0	1	1	14	14	C	C	C	C	C	2	2	1	1	1	1	0	4	11	10	4	3.8	13.8
2-Sep	2	2	1	1	3	5	5	45	17	2	8	A	1	4	3	8	1	1	1	1	1	1	0	0	5.0	45.5
3-Sep	0	0	0	0	0	1	1	8	4	1	A	2	1	1	1	1	1	1	0	0	0	0	0	0	1.1	8.1
4-Sep	0	0	1	12	4	9	9	6	4	A	3	1	1	1	1	1	1	1	1	2	1	2	1	1	2.7	11.5
5-Sep	1	1	1	0	2	2	4	12	A	13	14	12	6	3	1	1	1	1	1	0	1	3	8	33	5.2	32.8
6-Sep	11	4	2	1	2	3	14	A	38	7	2	2	1	3	1	5	2	1	1	5	0	0	0	0	4.6	38.0
7-Sep	0	0	0	0	0	3	A	13	6	3	2	1	2	1	3	1	2	1	1	0	0	11	11	1	2.8	13.0
8-Sep	0	0	0	0	0	A	17	8	8	6	2	2	2	1	2	1	2	1	1	2	5	0	1	0	2.8	17.2
9-Sep	0	0	0	0	A	1	11	13	21	19	3	2	67	81	1	1	1	1	1	1	0	0	1	0	9.9	81.0
10-Sep	1	3	1	A	1	0	0	1	1	1	3	1	1	1	1	1	1	1	1	1	1	0	0	0	0.9	2.6
11-Sep	1	0	A	0	1	1	0	1	5	26	2	1	1	1	1	2	1	1	0	0	1	0	2	2	2.1	26.5
12-Sep	2	A	1	2	5	9	54	56	19	13	9	5	5	1	1	6	1	1	1	0	1	0	0	0	8.3	55.6
13-Sep	A	0	0	0	0	0	1	4	4	4	30	5	4	2	1	1	3	1	1	1	1	0	3	A	3.1	29.8
14-Sep	0	0	0	1	1	3	11	7	7	3	2	1	1	1	1	2	1	1	1	1	1	0	A	1	2.0	11.2
15-Sep	0	0	1	0	1	3	6	11	11	4	2	2	1	1	1	1	1	2	1	1	1	A	0	0	2.2	11.0
16-Sep	0	0	0	0	1	5	42	43	29	8	2	1	2	1	1	1	1	1	1	0	A	0	6	2	6.4	43.0
17-Sep	10	4	1	0	0	0	0	0	2	2	1	3	1	1	1	1	2	1	0	A	0	0	0	0	1.4	9.6
18-Sep	0	0	0	0	0	0	1	0	1	1	1	1	1	1	11	1	1	1	A	0	0	0	0	0	1.0	10.7
19-Sep	0	0	0	0	0	9	12	11	47	4	5	1	1	1	1	4	5	A	2	1	1	11	1	0	5.2	46.9
20-Sep	0	1	0	1	4	18	16	14	18	5	5	7	14	1	1	1	A	1	0	0	25	1	10	29	7.5	29.0
21-Sep	23	19	4	5	10	22	19	33	29	46	6	2	2	1	1	A	1	1	1	1	0	4	5	8	10.6	46.2
22-Sep	2	2	43	5	3	7	46	81	51	34	14	7	4	4	A	1	1	1	3	3	2	1	0	1	13.9	81.3
23-Sep	1	0	3	2	4	7	33	56	63	58	47	28	8	A	2	1	1	1	0	0	0	0	0	0	13.8	63.0
24-Sep	0	0	0	0	0	0	1	1	1	1	1	1	A	1	1	1	1	1	0	0	0	0	0	0	0.5	0.9
25-Sep	0	1	0	0	0	1	2	2	6	9	17	A	8	1	0	1	1	0	0	0	0	2	2	0	2.4	16.5
26-Sep	0	0	2	1	10	4	52	49	40	10	A	2	16	38	3	2	1	6	6	7	1	0	0	0	10.9	52.4
27-Sep	0	0	0	0	0	1	1	1	2	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.7	1.6
28-Sep	1	0	1	3	4	7	32	49	A	12	12	13	3	3	2	1	3	1	11	5	3	1	4	1	7.5	49.4
29-Sep	1	1	3	1	2	26	40	A	50	35	9	5	2	1	2	1	2	1	3	3	1	3	1	0	8.3	49.5
30-Sep	1	1	1	3	1	1	A	7	4	2	5	2	2	3	6	2	2	2	2	2	2	1	2	1	2.4	6.5
	2.1	1.5	2.4	1.4	2.1	5.2	15.9	19.5	18.0	12.2	7.7	4.1	5.7	5.7	1.9	1.7	1.4	1.1	1.5	1.4	1.9	1.9	2.4	3.0	Diurnal Average	
	22.6	19.4	42.9	11.5	10.0	25.7	54.3	81.3	63.0	58.5	47.2	28.3	67.3	81.0	10.7	7.6	5.0	5.7	11.4	6.8	25.1	11.3	10.9	32.8	Diurnal Maximum	

C - Calibration

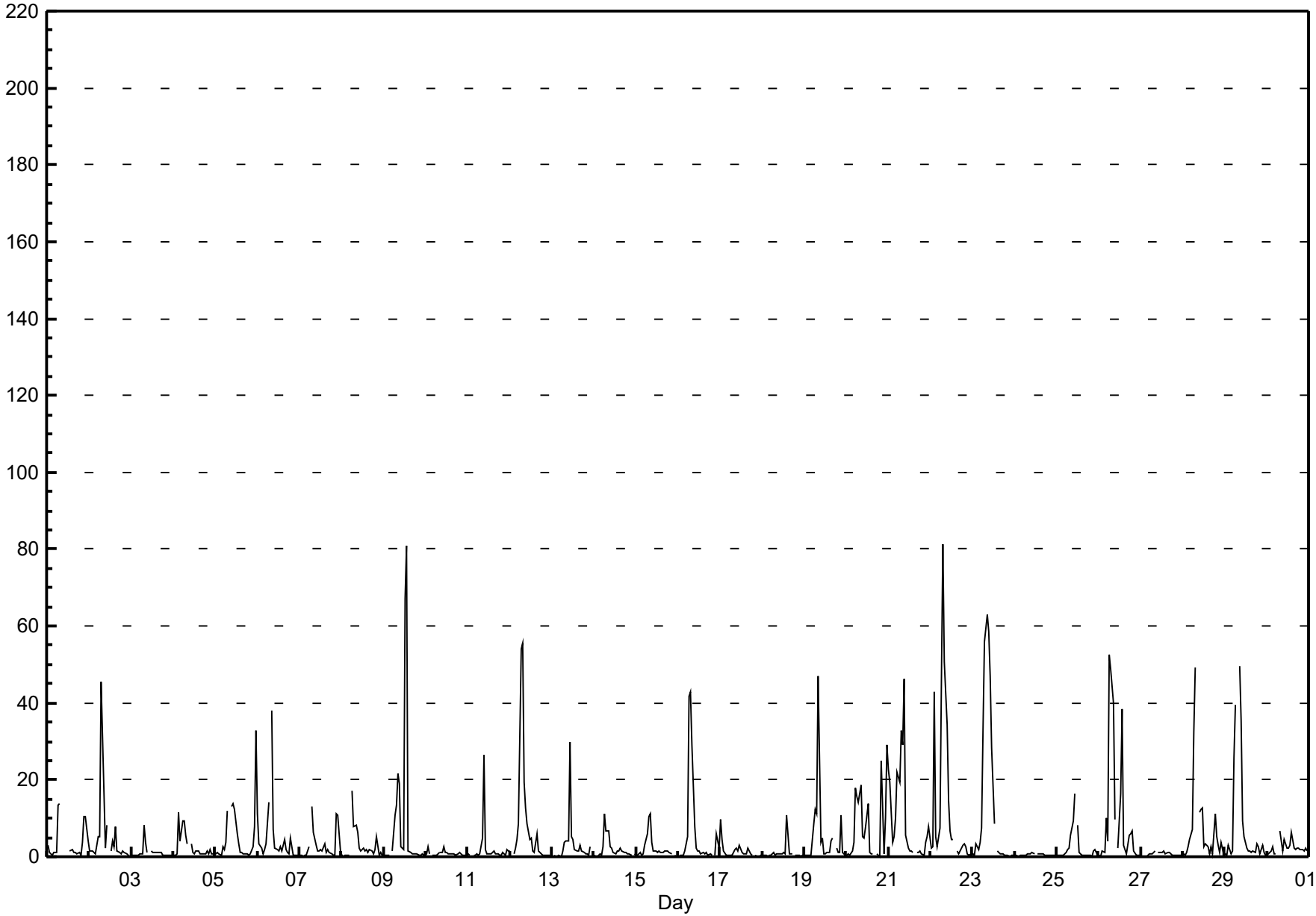
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 72.3 ppb on Sep 22 08:00
Maximum Daily Average: 18.4 ppb on Sep 23

Minimum Value: 1 ppb on Sep 3 03:00
Maximum Diurnal Average: 20.9 ppb at hour 8
Monthly Average: 7.02 ppb

Minimum Daily Average: 1.7 ppb on Sep 3
Minimum Diurnal Average: 2.5 ppb at hour 15
Percentiles: P_1 = 1.0 P_{10} = 1.6 Q_1 = 2.3 Median = 4.0 Q_3 = 8.2 P_{90} = 14.8 P_{99} = 58.3

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-Sep	3	2	3	3	3	3	8	10	C	C	C	C	C	3	3	2	2	1	2	3	7	16	14	8	5.1	16.3
2-Sep	5	5	4	3	5	7	9	17	9	4	3	A	4	3	3	3	2	2	1	1	2	2	1	1	4.1	16.8
3-Sep	1	1	1	1	1	1	1	2	1	2	A	4	2	2	2	2	1	2	2	1	2	2	3	4	1.7	4.4
4-Sep	4	3	5	9	8	14	13	8	5	A	5	2	2	2	2	2	2	2	3	7	6	7	5	5	5.3	13.8
5-Sep	4	4	4	4	6	9	9	10	A	19	13	12	8	4	2	1	1	1	2	3	6	8	15	21	7.3	21.5
6-Sep	10	6	5	4	4	7	16	A	13	6	3	3	2	2	3	6	3	3	4	10	8	5	3	2	5.6	15.9
7-Sep	2	2	2	2	3	6	A	21	9	4	3	2	3	2	2	2	2	2	4	5	9	10	11	9	5.1	21.1
8-Sep	7	3	2	2	3	A	22	14	9	7	4	2	2	2	2	2	2	2	2	4	3	4	4	3	4.6	22.1
9-Sep	2	2	3	5	A	8	14	18	22	15	4	4	6	7	3	3	3	4	8	7	6	4	5	4	6.9	21.7
10-Sep	7	5	4	A	3	2	2	3	2	2	2	2	2	1	1	1	2	1	1	2	2	2	1	1	2.3	6.7
11-Sep	1	1	A	2	2	2	1	1	2	4	2	1	1	1	1	2	2	1	2	3	5	4	7	8	2.4	8.2
12-Sep	7	A	5	8	8	13	30	31	17	14	10	5	3	2	2	3	2	4	4	4	3	3	2	2	7.9	30.9
13-Sep	A	3	2	2	2	3	6	11	7	4	6	3	2	2	2	2	3	3	3	4	4	2	3	A	3.6	11.3
14-Sep	4	2	3	4	7	12	17	14	11	4	3	1	1	1	2	2	2	2	4	5	6	3	A	4	5.0	17.0
15-Sep	3	3	4	5	6	9	10	14	10	6	4	3	2	2	2	3	3	4	4	7	4	A	8	5	5.2	14.0
16-Sep	4	4	3	4	5	11	30	41	34	9	4	4	2	2	3	3	4	3	4	4	A	6	12	9	9.0	40.9
17-Sep	12	11	7	5	5	4	4	5	5	5	3	3	2	2	2	2	3	3	3	A	4	3	3	2	4.2	11.5
18-Sep	1	1	2	3	2	2	3	2	3	1	3	3	1	2	2	2	2	2	A	6	4	5	3	3	2.4	5.6
19-Sep	3	4	5	5	5	13	20	23	14	7	3	1	1	2	1	6	10	A	8	7	13	13	3	6	7.5	22.6
20-Sep	5	4	3	5	10	19	14	20	17	4	5	4	2	2	2	2	A	3	2	9	20	15	19	30	9.3	29.9
21-Sep	23	11	11	11	12	13	23	36	30	14	6	3	3	2	2	A	3	3	9	11	9	7	15	17	11.8	35.5
22-Sep	10	12	15	14	10	15	33	72	39	29	16	8	8	8	A	4	3	5	9	11	8	5	4	4	14.9	72.3
23-Sep	5	7	9	12	12	16	36	59	69	63	60	31	10	A	5	4	4	5	5	5	3	2	2	1	18.4	69.0
24-Sep	1	1	1	2	2	3	3	4	3	2	2	2	A	3	2	2	2	2	3	3	4	6	4	4	2.6	5.7
25-Sep	4	5	7	10	11	13	15	14	16	20	27	A	11	4	2	2	2	2	6	6	8	12	19	11	9.8	26.6
26-Sep	11	9	9	12	17	20	34	52	43	18	A	6	8	9	4	2	3	17	19	13	6	2	1	1	13.8	51.8
27-Sep	1	2	1	1	2	6	6	5	4	A	3	3	3	3	2	3	3	3	4	5	6	5	4	4	3.4	6.3
28-Sep	5	6	9	11	13	18	34	60	A	19	15	17	4	2	3	2	3	4	13	17	15	7	10	8	12.9	59.8
29-Sep	9	6	8	7	8	16	41	A	64	42	12	8	4	4	4	3	4	4	8	8	7	6	4	5	12.3	63.7
30-Sep	3	3	4	5	6	8	A	19	13	7	6	5	7	7	6	5	5	5	3	3	2	2	2	2	5.6	19.2
	5.4	4.4	4.9	5.5	6.3	9.4	16.3	20.9	17.4	12.2	8.3	5.2	3.8	3.0	2.5	2.7	2.8	3.4	4.9	5.9	6.3	5.8	6.4	6.4	Diurnal Average	
	22.7	11.6	14.6	13.9	16.7	19.8	41.5	72.3	69.0	63.0	60.1	31.3	11.3	9.3	6.4	6.5	10.0	17.1	19.0	17.4	19.6	16.3	19.5	29.9	Diurnal Maximum	

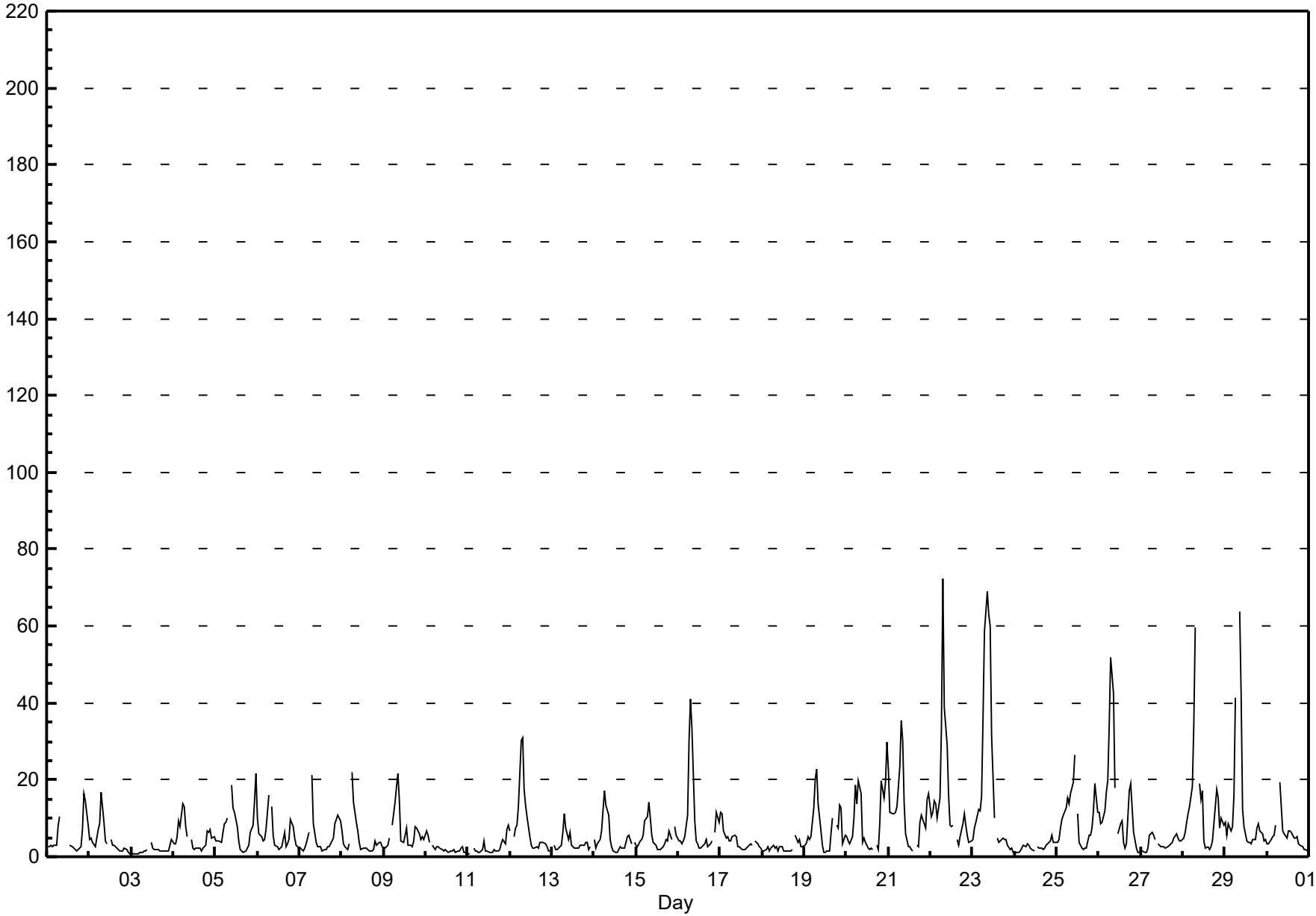
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - September 2016

Maximum Value: 119.4 ppb on Sep 9 13:00

Maximum Daily Average: 24.9 ppb on Sep 26

Minimum Value: 1 ppb on Sep 3 03:00

Minimum Daily Average: 3.4 ppb on Sep 3

Maximum Diurnal Average: 30.9 ppb at hour 8

Minimum Diurnal Average: 4.9 ppb at hour 15

Monthly Average: 11.74 ppb

Percentiles: P_1 = 1.5 P_{10} = 2.8 Q_1 = 3.9 Median = 6.2 Q_3 = 13.2 P_{90} = 25.7 P_{99} = 72.4

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-Sep	5	4	4	4	4	4	20	26	C	C	C	C	C	4	4	3	3	2	4	5	13	23	21	13	8.7	25.7
2-Sep	8	6	6	3	8	10	10	57	22	5	11	A	7	6	5	21	4	3	2	3	4	5	2	1	9.1	57.0
3-Sep	1	1	1	1	2	2	2	17	3	3	A	5	3	3	3	3	2	3	3	2	3	2	5	6	3.4	16.9
4-Sep	5	4	7	20	10	17	17	11	7	A	9	4	3	3	4	3	3	3	5	12	10	10	7	7	7.8	19.8
5-Sep	6	7	5	5	10	10	13	20	A	25	21	18	11	8	3	4	3	2	4	5	10	13	22	43	11.7	43.5
6-Sep	22	10	9	5	6	9	22	A	57	12	5	4	3	6	5	12	6	5	7	18	11	7	5	4	10.9	57.2
7-Sep	3	3	2	4	5	11	A	26	15	7	4	4	5	4	5	3	5	4	6	7	11	30	23	12	8.6	29.6
8-Sep	9	5	4	3	5	A	35	21	15	15	6	4	5	3	5	3	5	4	5	9	7	6	6	3	8.0	35.0
9-Sep	3	4	5	6	A	10	22	22	31	27	8	6	119	65	6	5	4	8	10	9	8	5	7	5	17.1	119.4
10-Sep	8	10	6	A	6	3	3	3	4	3	3	3	3	3	3	3	4	2	2	3	4	5	2	2	3.8	10.2
11-Sep	2	1	A	3	2	3	2	2	18	33	5	2	2	2	3	4	3	3	3	5	8	7	10	11	5.8	33.1
12-Sep	9	A	8	9	11	16	70	71	26	19	15	9	8	3	4	5	4	6	6	5	6	4	2	3	13.9	70.5
13-Sep	A	4	3	3	4	6	10	16	10	6	37	6	7	4	4	4	6	5	4	4	5	3	14	A	7.5	37.2
14-Sep	7	4	4	6	9	16	26	19	16	7	6	3	3	4	4	5	4	5	6	7	7	5	A	7	7.7	25.7
15-Sep	3	3	5	5	7	15	15	20	21	9	5	5	3	4	4	4	6	8	7	11	10	A	9	7	8.1	20.5
16-Sep	5	5	5	5	10	19	60	61	45	18	8	6	5	4	4	6	7	4	7	6	A	8	19	14	14.4	61.4
17-Sep	20	15	10	5	8	5	5	7	8	7	5	8	3	3	3	4	5	5	4	A	6	4	3	4	6.3	19.7
18-Sep	3	3	3	4	2	4	5	3	4	3	4	5	3	2	11	3	3	3	A	10	6	7	4	5	4.3	10.6
19-Sep	5	5	6	9	7	25	33	28	53	9	9	2	2	4	4	14	17	A	16	11	20	32	11	8	14.3	53.5
20-Sep	7	6	4	8	14	28	26	25	30	8	9	11	26	3	4	4	A	5	5	11	49	17	31	50	16.5	50.3
21-Sep	35	29	14	14	21	33	30	44	39	51	11	6	4	4	4	A	6	6	17	15	11	17	21	32	20.2	50.6
22-Sep	17	16	53	17	12	26	63	97	66	48	25	13	10	11	A	7	4	9	14	17	13	8	5	6	24.2	97.1
23-Sep	8	12	17	14	16	22	50	71	84	82	73	51	21	A	7	6	5	7	6	6	5	4	5	2	24.9	83.6
24-Sep	2	2	2	3	3	5	4	4	4	3	3	3	A	4	3	3	3	3	4	5	6	8	6	4	3.8	8.1
25-Sep	6	9	10	12	12	17	21	16	21	24	33	A	20	5	3	3	3	3	9	9	11	21	23	13	13.3	33.1
26-Sep	13	11	14	15	28	23	74	72	58	24	A	9	44	48	9	7	7	33	33	25	18	5	2	2	24.9	73.8
27-Sep	2	2	2	2	4	9	8	8	7	A	5	4	4	4	3	4	4	6	6	6	9	6	7	6	5.1	9.2
28-Sep	9	9	14	16	18	25	54	74	A	27	23	28	8	7	7	3	6	7	33	26	22	13	15	10	19.8	73.6
29-Sep	12	8	16	8	12	46	61	A	71	54	22	13	7	5	6	5	7	8	18	13	8	21	5	6	18.7	70.7
30-Sep	5	4	7	11	7	10	A	25	21	10	12	8	9	11	14	7	6	8	6	5	4	4	3	3	8.7	24.6
	8.3	7.0	8.4	7.5	9.1	14.7	27.2	30.9	28.1	20.0	13.8	8.8	12.5	8.2	4.9	5.4	5.0	5.8	8.7	9.3	10.5	10.3	10.2	10.0	Diurnal Average	
	35.2	29.0	53.0	19.8	28.0	45.6	73.8	97.1	83.6	81.6	72.7	50.6	119.4	64.9	14.0	21.4	17.2	33.5	33.4	26.0	49.3	32.0	30.9	50.3	Diurnal Maximum	

C - Calibration

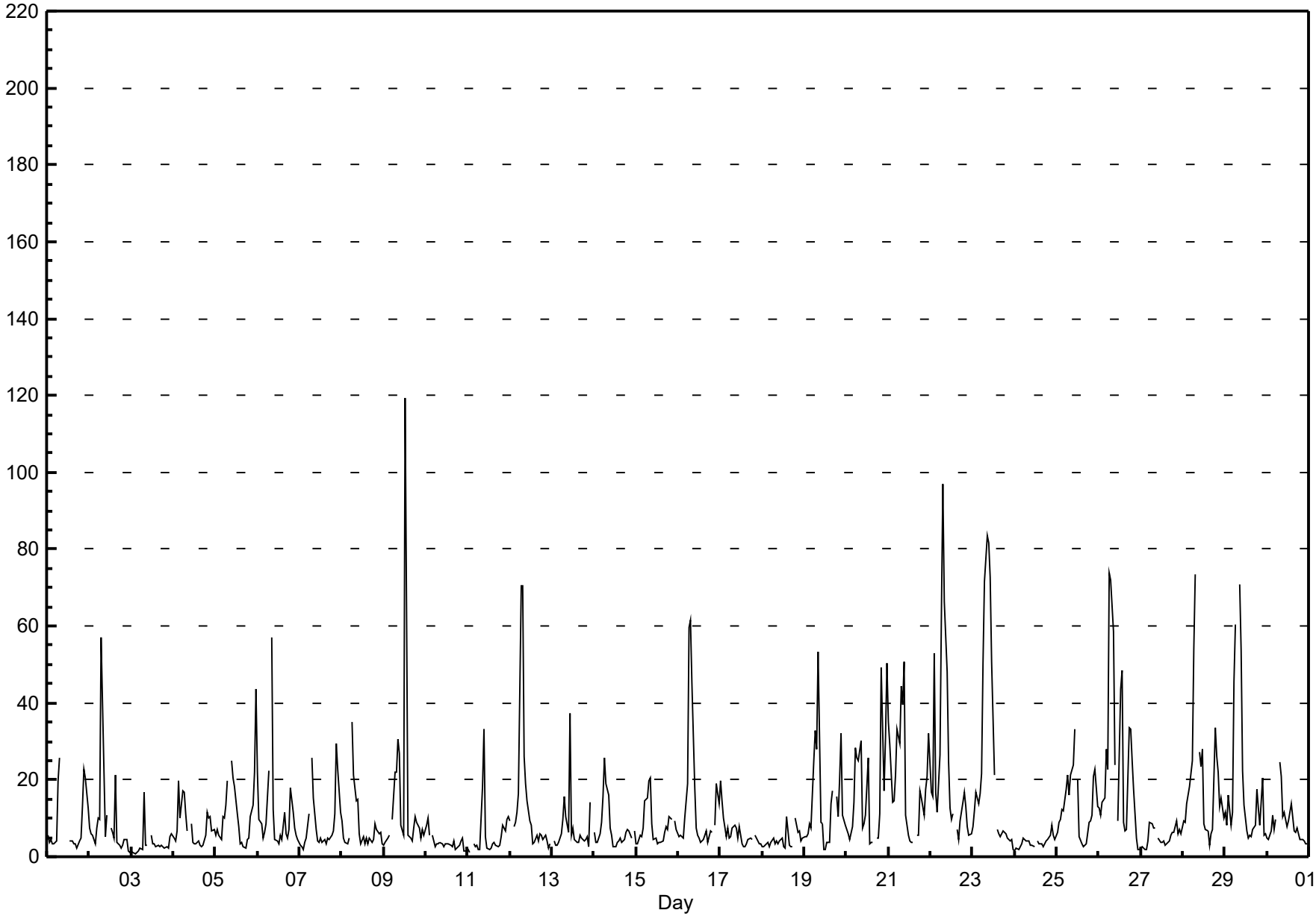
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - September 2016

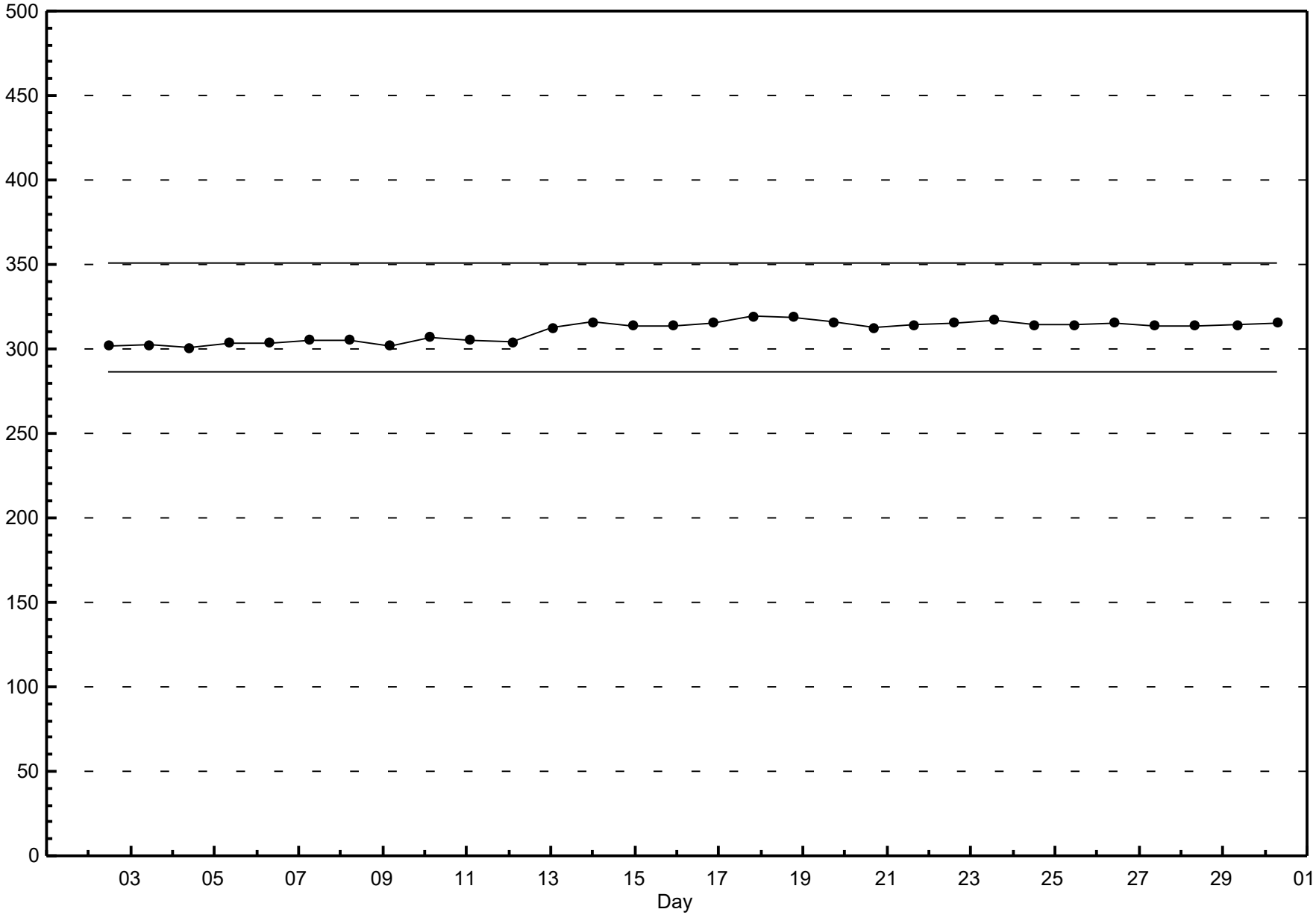


Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - September 2016

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

Maximum Value: 37.4 ppb on Sep 27 03:00

Maximum Daily Average: 31.3 ppb on Sep 24

Minimum Value: 2 ppb on Sep 21 07:00

Minimum Daily Average: 8.8 ppb on Sep 1

Maximum Diurnal Average: 27.7 ppb at hour 16

Minimum Diurnal Average: 8.6 ppb at hour 7

Monthly Average: 18.61 ppb

Percentiles: P_1 = 1.8 P_{10} = 4.7 Q_1 = 11.3 Median = 19.5 Q_3 = 26.0 P_{90} = 31.1 P_{99} = 36.2

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-Sep	7	11	6	4	3	3	3	5	7	6	6	C	C	C	16	18	18	19	17	15	9	4	3	5	8.8	18.9
2-Sep	6	5	5	5	4	3	3	4	5	8	11	A	16	14	14	17	18	16	14	13	12	11	12	13	9.8	17.7
3-Sep	13	14	14	14	15	15	14	14	14	13	A	13	14	16	17	17	18	20	22	23	22	22	19	17	16.5	23.3
4-Sep	14	10	7	3	2	2	2	4	6	A	19	24	26	27	28	30	31	30	30	25	21	19	20	18	17.3	30.8
5-Sep	17	15	14	11	9	6	6	6	A	10	10	11	15	21	24	22	21	21	20	18	14	10	3	2	13.4	23.9
6-Sep	5	6	6	6	6	4	3	A	7	12	16	18	21	21	22	23	26	24	21	14	16	18	18	15	14.3	26.5
7-Sep	15	14	15	14	10	11	A	7	15	19	23	25	27	27	28	28	26	26	25	21	15	14	10	9	18.4	27.6
8-Sep	9	14	16	16	14	A	4	8	10	13	17	20	20	20	23	25	26	26	26	23	28	22	14	13	17.8	28.4
9-Sep	12	12	11	7	A	4	3	4	6	11	20	20	23	23	24	25	24	21	16	14	12	11	10	10	14.1	25.2
10-Sep	8	10	14	A	27	29	32	29	28	29	30	31	32	32	32	31	30	30	30	30	26	24	21	18	26.2	32.1
11-Sep	16	14	A	13	13	13	13	16	21	23	25	24	25	23	21	21	21	20	19	17	15	14	8	7	17.4	24.6
12-Sep	6	A	6	3	3	2	2	3	6	9	14	17	21	25	26	28	27	24	23	23	21	20	21	21	15.3	27.6
13-Sep	A	18	19	19	19	18	14	12	18	20	20	21	23	24	24	26	25	23	22	20	18	19	18	A	20.0	25.8
14-Sep	16	16	15	12	9	7	4	10	14	20	23	25	26	25	23	24	26	25	21	18	16	17	A	16	17.7	25.8
15-Sep	16	15	13	11	11	8	6	6	12	18	24	27	29	27	27	27	26	22	20	16	17	A	13	13	17.6	28.7
16-Sep	14	13	14	13	11	6	2	3	6	20	27	30	31	31	29	24	20	20	18	14	A	11	6	6	16.1	31.2
17-Sep	4	3	6	7	12	23	25	24	22	24	28	32	34	34	35	34	34	31	30	A	30	30	29	27	24.2	35.2
18-Sep	29	28	27	27	27	25	24	25	25	27	27	28	31	31	32	31	31	30	A	24	26	23	23	21	27.0	31.5
19-Sep	21	20	16	16	15	8	6	6	12	18	23	28	29	30	32	27	21	A	25	26	14	15	30	22	19.9	32.3
20-Sep	15	13	11	7	4	2	3	4	8	20	21	24	30	29	29	31	A	31	31	22	11	13	6	2	15.9	31.2
21-Sep	2	3	3	2	2	2	2	2	5	10	15	19	22	26	29	A	30	31	26	23	24	25	13	9	14.1	30.5
22-Sep	9	5	2	2	3	2	2	2	5	8	12	16	18	23	A	33	36	35	29	24	28	29	29	27	16.5	36.4
23-Sep	23	12	11	6	3	2	2	2	4	6	9	16	27	A	35	36	32	31	31	29	32	37	34	36	19.8	37.0
24-Sep	36	35	33	31	30	28	28	28	29	32	33	34	A	35	35	35	34	33	32	31	29	25	27	26	31.3	36.1
25-Sep	25	23	19	15	12	9	7	9	9	9	8	A	21	30	33	32	32	31	26	23	20	15	7	15	18.8	32.6
26-Sep	14	15	16	9	5	3	2	3	4	10	A	25	25	25	30	33	33	19	11	11	16	20	20	21	16.1	32.6
27-Sep	32	37	37	35	30	26	24	25	26	A	32	32	33	33	34	33	32	31	30	28	25	24	23	23	29.8	37.4
28-Sep	22	18	13	11	9	5	3	3	A	14	19	22	32	35	36	37	36	35	26	20	20	25	17	12	20.4	36.8
29-Sep	11	14	12	13	10	4	2	A	4	9	22	23	29	33	34	37	37	35	31	28	28	28	30	28	21.7	36.8
30-Sep	29	28	26	24	22	20	A	12	16	22	23	23	20	19	20	21	20	19	21	20	19	19	20	21	21.1	29.0
	15.4	15.2	14.1	12.4	11.7	10.0	8.6	9.8	12.3	15.7	19.9	23.3	24.9	26.4	27.3	27.7	27.3	26.2	23.9	21.1	20.1	19.5	17.4	16.3	Diurnal Average	
	36.1	37.2	37.4	35.1	29.9	29.5	31.9	29.1	29.4	31.7	32.9	33.7	33.5	34.8	35.7	36.8	36.8	35.3	32.1	31.2	32.0	37.0	33.7	35.7	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

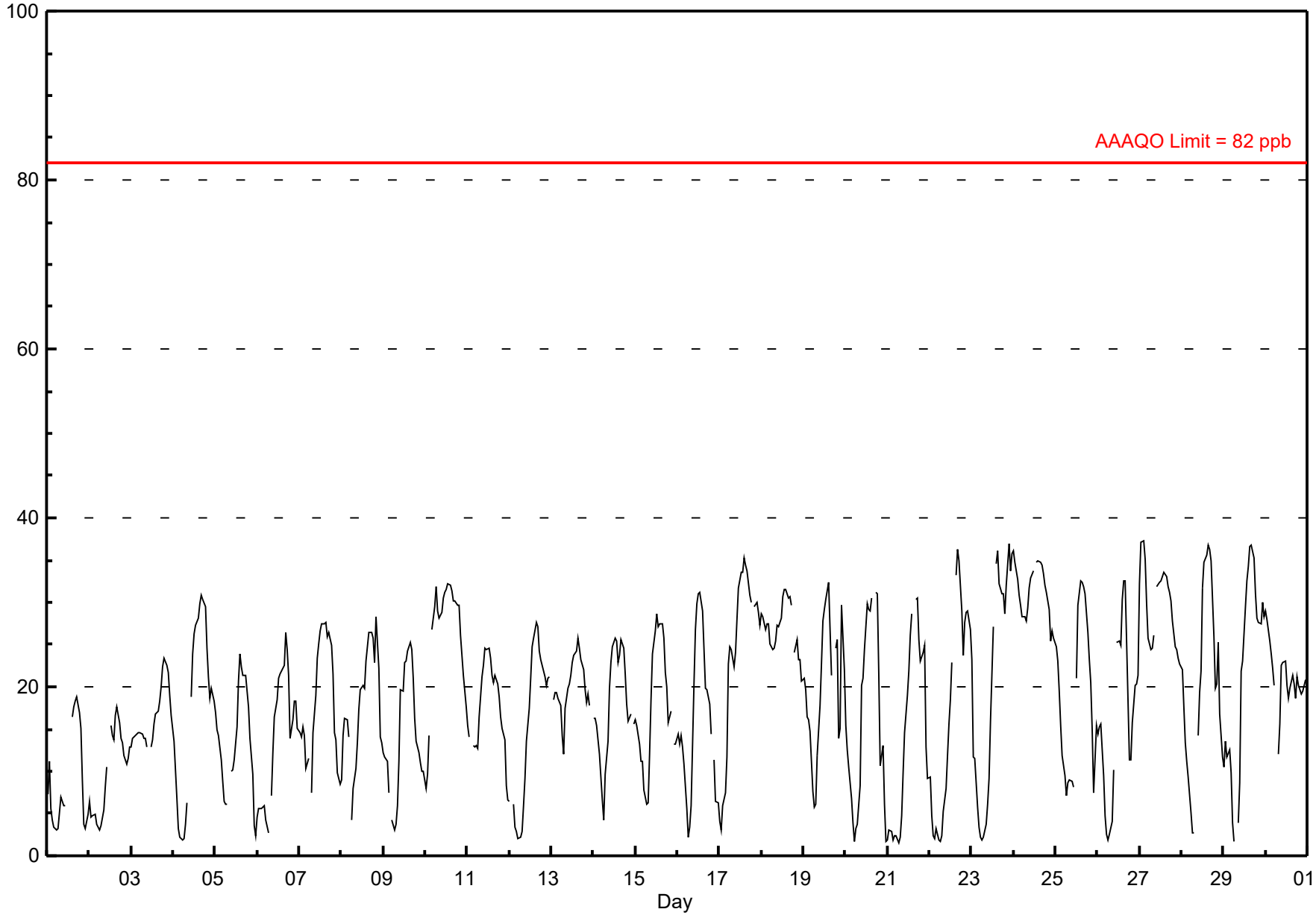
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Henry Pirker - September 2016

Maximum Value: 38.8 ppb on Sep 23 16:00

Maximum Daily Average: 32.5 ppb on Sep 24

Minimum Value: 2 ppb on Sep 21 00:00

Maximum Diurnal Average: 29.6 ppb at hour 16

Monthly Average: 20.77 ppb

Minimum Daily Average: 10.9 ppb on Sep 1

Minimum Diurnal Average: 10.1 ppb at hour 7

Percentiles: P_1 = 2.4 P_{10} = 6.8 Q_1 = 13.9 Median = 21.2 Q_3 = 28.5 P_{90} = 33.0 P_{99} = 37.9

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-Sep	10	14	7	5	4	3	4	8	8	8	8	C	C	C	19	21	21	21	19	17	13	7	6	7	10.9	20.8
2-Sep	8	7	5	6	5	4	3	5	7	9	14	A	17	16	16	18	19	18	15	14	14	12	12	14	11.3	19.1
3-Sep	14	15	15	15	15	15	16	14	14	14	A	14	15	16	18	18	20	22	24	25	24	24	21	19	17.7	25.0
4-Sep	16	12	9	5	3	2	3	5	7	A	23	26	28	28	29	31	32	32	32	29	23	21	21	19	19.0	32.1
5-Sep	19	16	16	14	10	8	8	7	A	13	13	14	17	24	25	24	22	22	21	20	16	14	4	3	15.2	25.2
6-Sep	8	8	7	7	7	5	4	A	9	15	18	20	22	23	24	25	29	27	25	21	20	20	21	16	16.5	28.6
7-Sep	15	15	16	16	14	17	A	12	17	21	25	27	28	28	29	29	28	28	28	23	20	17	14	10	20.8	29.2
8-Sep	14	17	18	17	16	A	7	10	12	16	19	21	21	23	25	27	28	28	29	29	32	25	17	14	20.2	32.3
9-Sep	13	13	13	9	A	7	4	4	8	20	22	21	25	26	26	27	26	24	19	15	14	12	11	11	16.1	27.0
10-Sep	11	13	18	A	36	35	33	31	29	30	31	32	33	33	33	33	32	32	31	30	29	26	24	19	28.4	36.3
11-Sep	16	15	A	14	14	14	13	18	23	25	26	26	25	26	23	22	23	21	21	18	17	16	10	8	18.9	25.8
12-Sep	9	A	7	4	4	3	3	4	9	11	17	20	24	26	27	30	30	26	24	24	23	21	22	22	17.0	29.6
13-Sep	A	20	20	20	20	20	17	16	21	21	22	23	24	24	26	27	26	25	23	21	19	20	20	A	21.6	27.0
14-Sep	18	17	17	15	10	8	7	14	16	23	24	26	27	26	25	26	27	26	25	20	18	18	A	16	19.6	26.5
15-Sep	17	17	15	13	13	12	7	9	16	23	25	29	30	28	29	29	28	24	22	19	20	A	16	14	19.8	30.0
16-Sep	16	15	15	14	13	8	3	5	14	25	30	31	32	33	31	27	23	21	21	16	A	13	10	8	18.5	32.5
17-Sep	6	6	10	9	20	25	27	28	24	26	31	34	35	35	36	36	35	34	33	A	31	31	30	28	26.5	36.4
18-Sep	30	29	28	28	29	26	26	26	27	29	29	32	32	33	33	32	31	31	A	27	27	25	25	24	28.6	32.7
19-Sep	22	21	18	18	17	15	9	9	16	20	27	29	30	32	35	33	25	A	30	29	21	29	32	25	23.6	34.8
20-Sep	20	14	12	10	6	2	5	5	14	23	26	30	31	31	31	32	A	33	32	27	18	16	14	2	18.8	33.0
21-Sep	4	4	4	2	4	4	2	3	7	11	17	21	24	28	30	A	32	32	31	25	26	27	18	13	16.1	32.0
22-Sep	13	7	3	4	5	3	2	3	8	10	14	17	20	26	A	36	38	38	35	27	31	31	30	28	18.7	37.7
23-Sep	25	23	18	10	6	3	2	3	6	8	13	22	32	A	39	39	34	34	34	30	36	38	35	37	22.8	38.8
24-Sep	37	36	34	31	31	29	29	29	31	32	34	35	A	36	36	36	35	34	34	33	32	28	29	27	32.5	37.2
25-Sep	27	26	24	21	14	13	9	10	10	10	12	A	28	33	34	34	33	33	31	27	24	20	16	19	22.0	33.7
26-Sep	16	18	18	13	8	4	2	3	7	12	A	28	29	29	33	35	34	32	17	16	20	24	21	27	19.4	34.8
27-Sep	37	38	39	37	32	28	26	26	29	A	33	33	33	34	35	34	33	32	32	31	27	26	26	25	31.6	38.6
28-Sep	24	21	16	14	12	8	8	4	A	17	21	28	35	36	37	38	38	37	32	22	23	26	25	13	23.2	37.7
29-Sep	12	15	13	14	14	7	2	A	5	20	27	26	33	35	36	38	38	37	35	30	30	30	31	30	24.2	38.1
30-Sep	30	29	27	25	23	22	A	19	21	24	24	25	23	21	22	23	21	21	22	21	20	20	21	22	22.8	29.9
	17.4	17.2	15.9	14.2	14.1	12.1	10.1	11.8	15.0	18.5	22.4	25.5	26.9	28.2	29.0	29.6	29.0	28.5	26.7	23.7	22.9	21.9	20.1	18.0	Diurnal Average	
	37.2	38.2	38.6	36.9	36.3	35.1	33.5	30.7	31.4	32.5	33.8	34.7	34.8	36.4	38.7	38.8	38.1	37.7	35.2	32.6	36.3	38.1	35.1	36.8	Diurnal Maximum	

C - Calibration

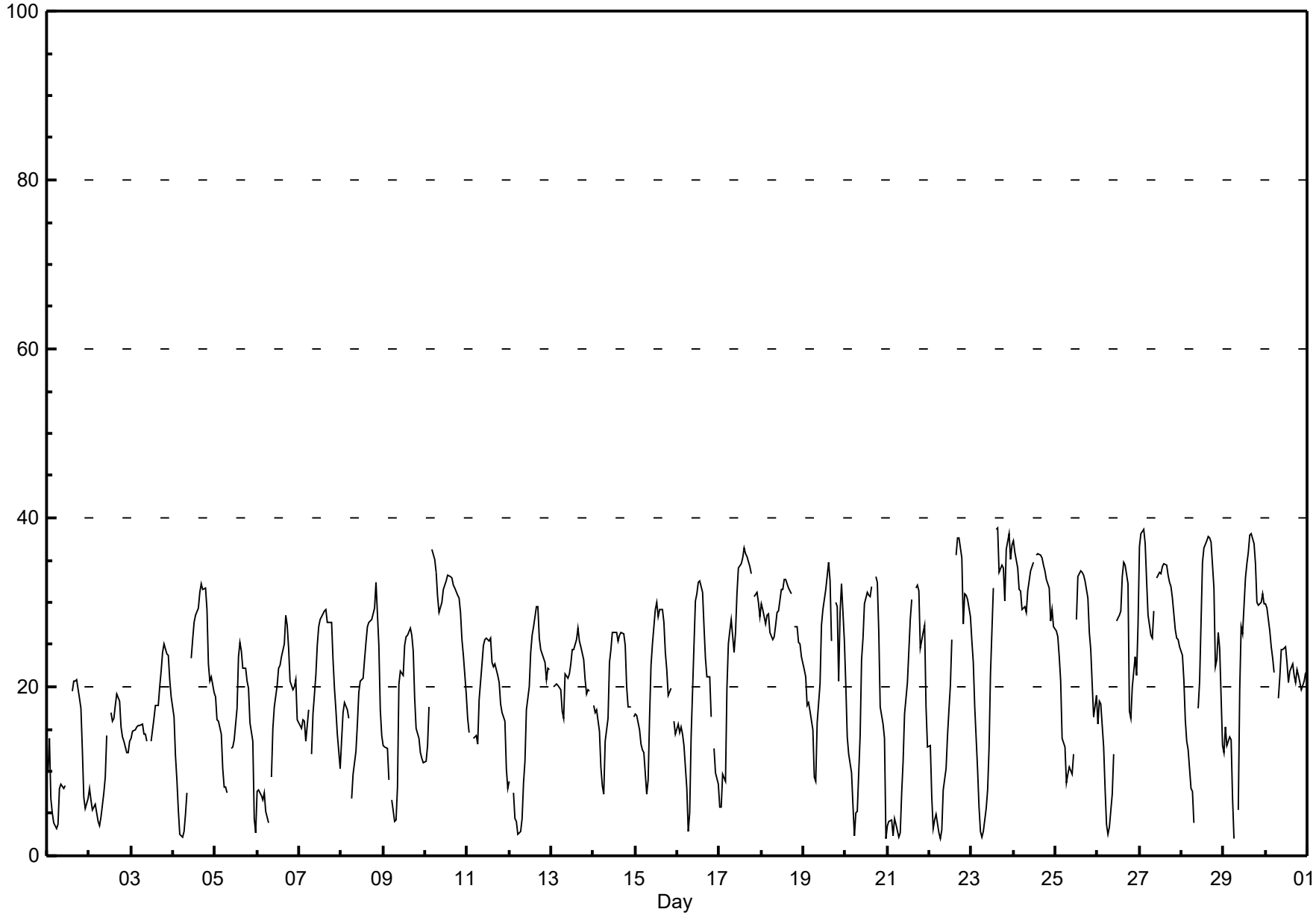
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

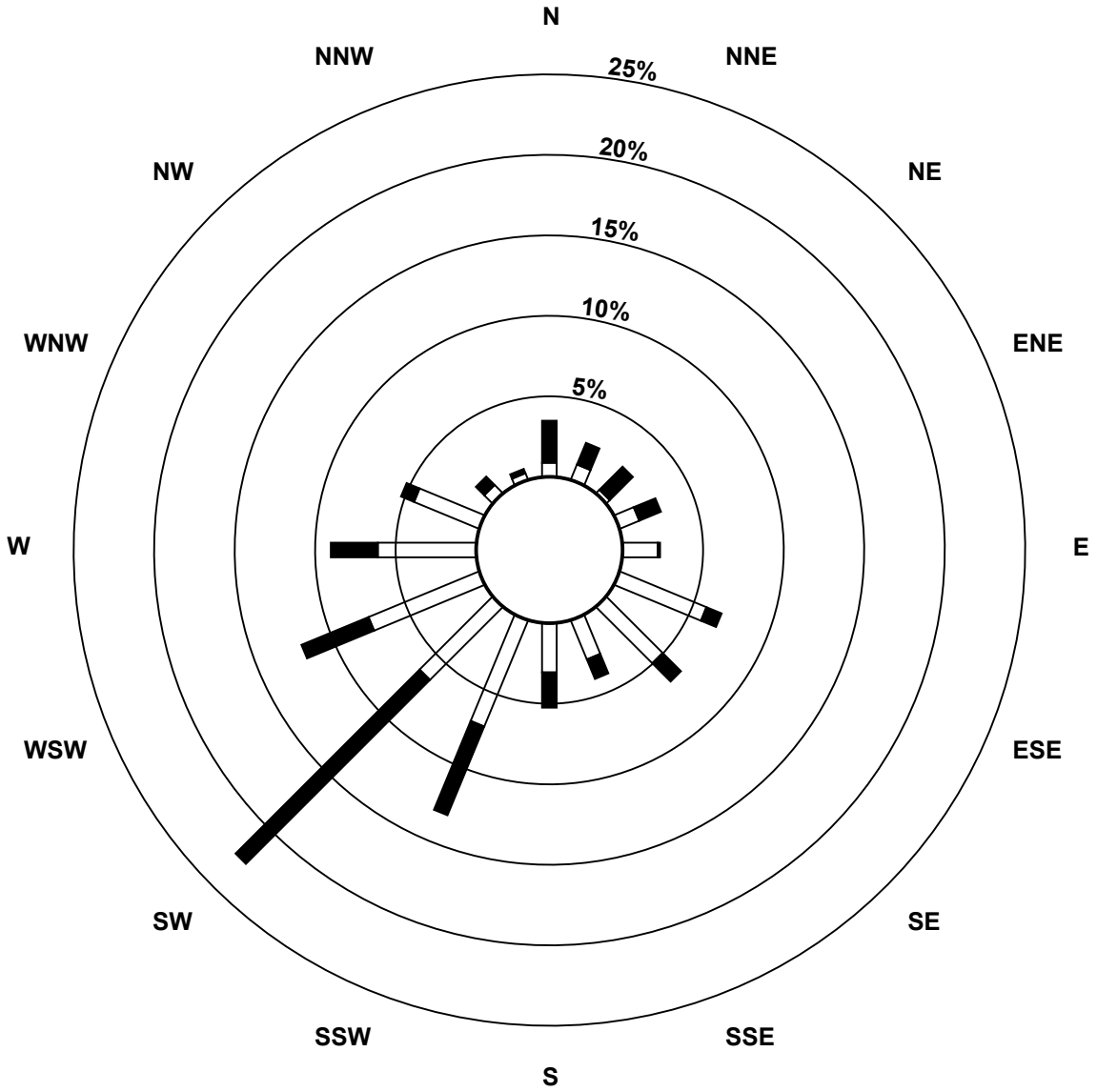
Henry Pirker - September 2016



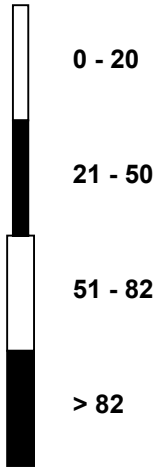
Pollutant Rose

Ozone (O_3) - ppb

Henry Pirker - September 2016



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Henry Pirker - September 2016

Maximum Value: 34.1 ppb on Sep 24 18:00

Minimum Value: 2.2 ppb on Sep 21 07:00

Percentiles: P_1 = 3.4 P_{10} = 7.1 Q_1 = 12.5 Median = 18.6 Q_3 = 24.8 P_{90} = 29.9 P_{99} = 33.5

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-Sep	5	5	6	5	6	5	5	5	5	5	5	5	5	N	N	N	N	N	N	17	16	14	13	11	17.2
2-Sep	10	8	6	5	5	4	4	4	4	5	5	5	7	9	10	12	14	15	15	15	15	14	14	13	15.3
3-Sep	13	13	13	13	13	14	14	14	14	14	14	14	14	14	14	15	15	16	17	18	20	20	21	20	20.5
4-Sep	20	19	17	14	12	9	7	5	5	4	5	8	12	15	19	23	26	27	28	28	28	27	26	24	28.4
5-Sep	22	21	19	17	15	14	12	11	10	9	8	8	9	11	14	16	17	18	19	20	20	19	16	14	22.4
6-Sep	12	10	8	6	5	5	5	5	5	6	8	10	12	14	17	18	20	22	22	22	21	21	20	19	22.2
7-Sep	18	16	16	16	15	14	14	12	12	13	14	16	18	20	21	24	25	26	26	26	24	23	21	18	26.4
8-Sep	16	15	13	13	13	13	12	12	12	12	12	12	13	14	16	19	21	22	23	24	25	25	24	22	25.0
9-Sep	21	19	17	15	13	11	9	8	7	7	8	10	11	14	16	19	21	23	22	21	20	18	17	15	22.5
10-Sep	13	11	11	11	13	15	19	21	24	27	29	29	30	30	30	31	31	31	31	31	30	29	28	26	31.2
11-Sep	24	22	21	19	17	15	14	14	15	16	17	18	20	21	22	23	23	23	22	21	20	18	17	15	24.2
12-Sep	13	12	10	9	7	5	4	4	4	4	5	7	9	12	15	18	21	23	24	25	25	24	23	23	24.5
13-Sep	22	21	21	20	20	19	18	17	17	17	17	18	18	19	20	22	23	23	23	23	23	22	21	21	23.5
14-Sep	19	19	18	16	15	13	11	11	11	11	12	14	16	18	21	22	24	24	24	23	22	21	21	20	24.5
15-Sep	18	17	16	15	14	13	12	11	10	11	12	14	16	19	21	24	26	26	26	24	23	22	20	18	26.1
16-Sep	16	15	14	14	13	12	11	10	9	9	11	13	16	19	22	25	27	26	25	23	22	20	16	14	26.5
17-Sep	11	9	7	6	7	8	11	13	15	18	21	24	26	28	29	30	32	33	33	33	32	32	31	30	33.0
18-Sep	29	29	28	28	28	27	27	27	26	26	26	26	27	27	28	29	30	30	30	30	29	28	27	25	30.4
19-Sep	24	22	22	21	19	17	15	13	12	12	13	14	16	19	22	25	26	27	27	27	25	23	22	22	27.5
20-Sep	21	20	18	16	15	13	10	7	6	7	9	11	14	17	21	24	26	28	29	29	26	24	21	16	29.3
21-Sep	15	11	8	5	4	3	2	2	3	3	5	7	10	12	16	18	21	24	26	27	27	27	24	23	26.9
22-Sep	20	17	14	11	9	6	4	3	3	3	5	6	8	11	12	16	21	25	27	28	30	31	30	30	30.5
23-Sep	28	25	23	21	17	14	11	8	5	5	4	6	9	9	14	19	23	27	30	32	32	33	33	33	32.8
24-Sep	33	34	34	34	34	33	32	31	30	30	30	30	30	31	32	33	34	34	34	34	33	32	31	30	34.1
25-Sep	29	27	26	24	22	20	17	15	13	11	10	9	10	13	17	20	24	27	29	29	28	27	23	21	29.3
26-Sep	19	17	16	14	12	11	10	8	7	6	5	7	10	13	18	22	26	27	25	23	22	22	20	19	27.1
27-Sep	19	21	24	27	29	30	30	31	30	29	28	28	28	29	31	32	33	32	32	32	31	30	28	27	32.6
28-Sep	26	24	22	20	18	16	13	10	9	8	9	11	14	18	23	28	29	31	32	32	31	29	27	24	32.2
29-Sep	21	18	16	15	14	11	9	9	8	7	9	10	13	17	22	24	28	31	32	33	33	32	32	31	33.0
30-Sep	30	29	28	27	27	26	25	23	21	20	20	20	19	19	19	20	21	21	20	20	20	20	20	20	29.6
Diurnal Maximums	33.1	33.6	33.8	34.1	33.8	32.7	32.0	31.1	30.2	29.9	29.9	30.2	30.3	31.2	32.2	33.2	33.9	34.1	34.0	33.6	33.1	32.8	32.7	32.7	

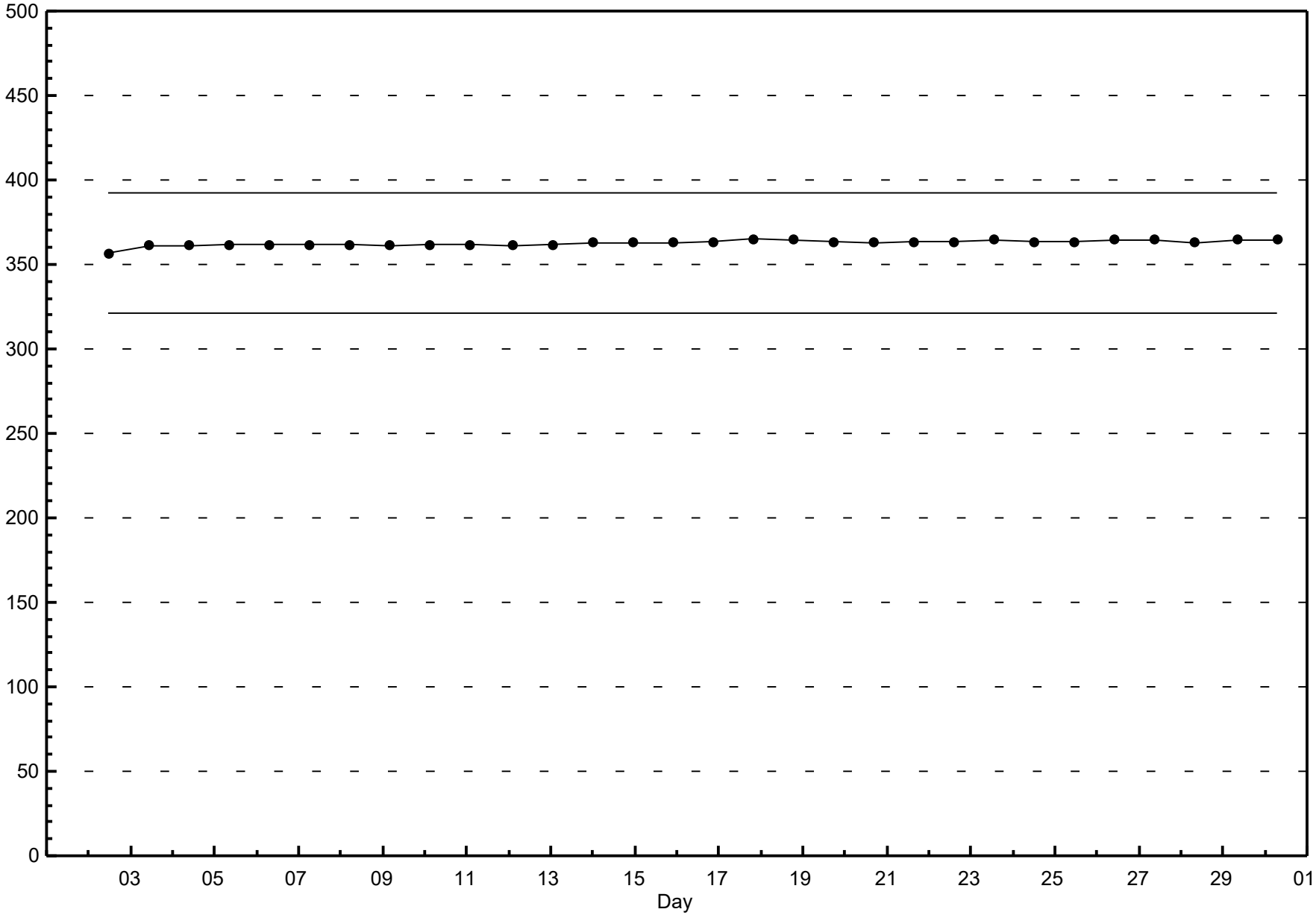
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.51 ppm on Sep 22 08:00 Maximum Daily Average: 0.22 ppm on Sep 23

Minimum Value: 0.1 ppm on Sep 14 01:00 Minimum Daily Average: 0.10 ppm on Sep 3
Maximum Diurnal Average: 0.21 ppm at hour 8 Minimum Diurnal Average: 0.11 ppm at hour 15
Monthly Average: 0.142 ppm Percentiles: P_1 = 0.09 P_{10} = 0.10 Q_1 = 0.11 Median = 0.12 Q_3 = 0.15 P_{90} = 0.20 P_{99} = 0.43

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-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.16	0.30
2-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.21
3-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.13
4-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.14	0.25
5-Sep	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	A	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.17	0.33
6-Sep	0.2	0.2	0.1	0.1	0.1	0.1	0.2	A	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	0.1	0.1	0.13	0.19
7-Sep	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	0.1	0.1	0.2	0.2	0.2	0.2	0.12	0.19
8-Sep	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.16
9-Sep	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.14	0.23
10-Sep	0.2	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.15
11-Sep	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.11	0.20
12-Sep	0.2	A	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.27
13-Sep	A	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.11	0.15
14-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.11	0.20
15-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.12	0.17
16-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.13	0.27
17-Sep	0.2	0.2	0.2	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	A	0.1	0.1	0.1	0.1	0.14	0.22
18-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.11	0.12
19-Sep	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.1	0.2	0.2	0.2	0.1	0.1	0.14	0.21
20-Sep	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.16	0.32
21-Sep	0.2	0.1	0.1	0.1	0.2	0.1	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.17	0.29
22-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.2	0.2	0.2	0.1	0.1	A	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.19	0.51
23-Sep	0.1	0.1	0.2	0.2	0.2	0.2	0.5	0.4	0.5	0.5	0.4	0.3	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.22	0.50
24-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.12
25-Sep	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.2	0.17	0.41
26-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.4	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.19	0.47
27-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.13	0.17
28-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	A	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.20	0.48
29-Sep	0.2	0.1	0.1	0.1	0.1	0.2	0.2	A	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.17	0.34
30-Sep	0.1	0.1	0.1	0.1	0.1	0.2	A	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.15	0.21
	0.13	0.13	0.13	0.13	0.13	0.14	0.19	0.21	0.18	0.16	0.14	0.13	0.12	0.11	0.11	0.11	0.12	0.13	0.14	0.15	0.16	0.15	0.15	0.14	Diurnal Average	
	0.21	0.22	0.19	0.25	0.20	0.21	0.45	0.51	0.50	0.50	0.40	0.26	0.16	0.16	0.16	0.15	0.21	0.28	0.29	0.28	0.32	0.30	0.41	0.33	Diurnal Maximum	

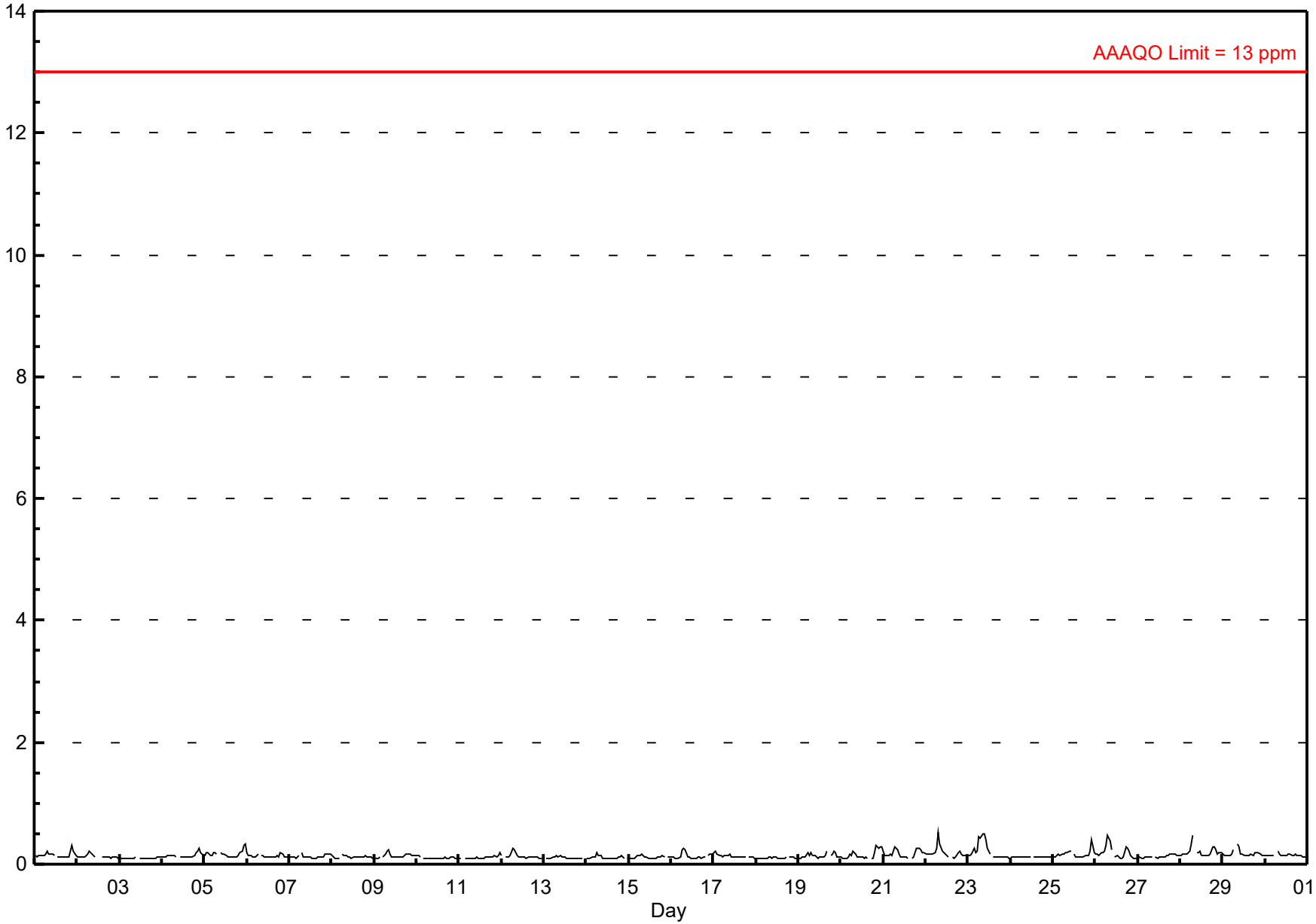
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na

Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - September 2016

Maximum Value: 0.89 ppm on Sep 21 07:00

Maximum Daily Average: 0.28 ppm on Sep 23

Minimum Value: 0.1 ppm on Sep 14 13:00

Minimum Daily Average: 0.12 ppm on Sep 18

Maximum Diurnal Average: 0.28 ppm at hour 8

Minimum Diurnal Average: 0.13 ppm at hour 14

Monthly Average: 0.179 ppm

Percentiles: $P_1 = 0.10$ $P_{10} = 0.12$ $Q_1 = 0.13$ Median = 0.15 $Q_3 = 0.19$ $P_{90} = 0.27$ $P_{99} = 0.62$

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-Sep	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.7	0.2	0.3	0.2	0.3	A	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.4	0.4	0.3	0.2	0.22	0.70
2-Sep	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.15	0.30
3-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.12	0.16
4-Sep	0.1	0.1	0.1	0.2	0.2	0.2	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	0.2	0.3	0.3	0.2	0.2	0.16	0.33
5-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	A	0.2	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	0.5	0.22	0.51
6-Sep	0.3	0.2	0.2	0.1	0.2	0.1	0.2	A	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.16	0.31
7-Sep	0.1	0.1	0.2	0.1	0.1	0.2	A	0.3	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	0.15	0.25
8-Sep	0.2	0.1	0.1	0.1	0.1	A	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.14	0.21
9-Sep	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.17	0.29
10-Sep	0.2	0.2	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.19
11-Sep	0.1	0.1	A	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	0.2	0.2	0.14	0.25
12-Sep	0.2	A	0.1	0.1	0.1	0.2	0.5	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.17	0.49
13-Sep	A	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.14	0.28
14-Sep	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.2	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	A	0.1	0.16	0.60
15-Sep	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.1	0.1	0.15	0.25
16-Sep	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	A	0.2	0.2	0.2	0.17	0.36
17-Sep	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.16	0.25
18-Sep	0.1	0.1	0.1	0.1	0.1	0.1	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	0.12	0.16
19-Sep	0.1	0.1	0.1	0.1	0.2	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	A	0.2	0.2	0.3	0.4	0.1	0.1	0.19	0.39
20-Sep	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.2	0.5	0.3	0.3	0.4	0.19	0.49
21-Sep	0.3	0.2	0.2	0.2	0.3	0.3	0.9	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	A	0.1	0.1	0.3	0.4	0.3	0.3	0.2	0.2	0.25	0.89
22-Sep	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.6	0.5	0.3	0.2	0.2	0.2	0.1	A	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.24	0.62
23-Sep	0.2	0.2	0.2	0.4	0.3	0.3	0.8	0.6	0.6	0.6	0.5	0.3	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.28	0.75
24-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.14
25-Sep	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.5	0.2	0.20	0.53
26-Sep	0.2	0.2	0.2	0.2	0.4	0.2	0.7	0.6	0.4	0.3	A	0.1	0.2	0.2	0.1	0.1	0.2	0.5	0.5	0.4	0.3	0.1	0.1	0.1	0.27	0.71
27-Sep	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.15	0.18
28-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.6	A	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.4	0.3	0.2	0.2	0.2	0.27	0.71
29-Sep	0.2	0.1	0.1	0.2	0.2	0.3	0.3	A	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.21	0.43
30-Sep	0.2	0.1	0.1	0.1	0.2	0.2	A	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.18	0.33
	0.16	0.15	0.15	0.16	0.16	0.19	0.28	0.28	0.24	0.20	0.17	0.16	0.15	0.13	0.14	0.13	0.14	0.15	0.19	0.20	0.21	0.19	0.19	0.17	Diurnal Average	
	0.32	0.25	0.29	0.44	0.35	0.39	0.89	0.70	0.60	0.60	0.51	0.34	0.28	0.18	0.21	0.20	0.27	0.48	0.71	0.38	0.49	0.43	0.53	0.51	Diurnal Maximum	

C - Calibration

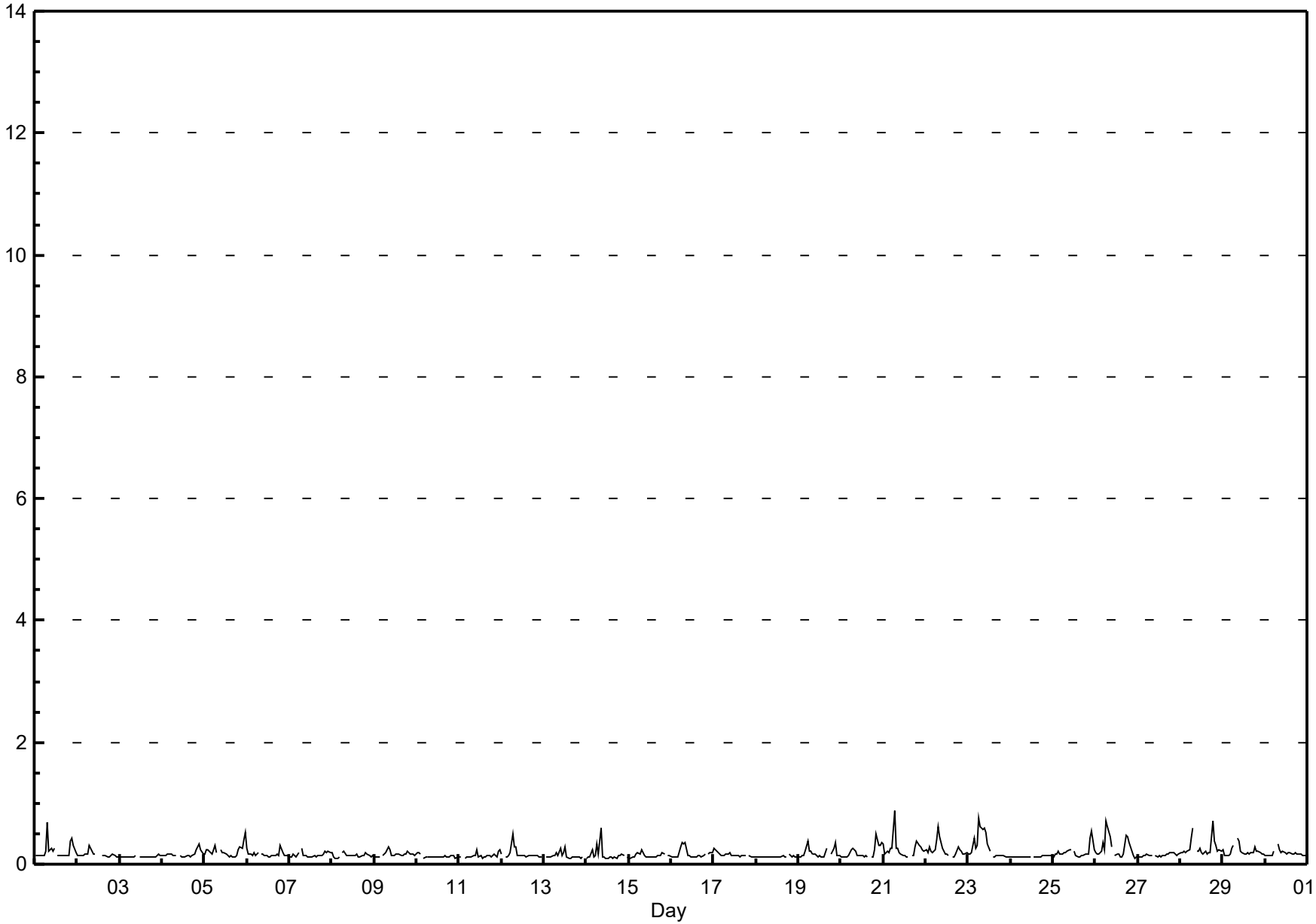
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

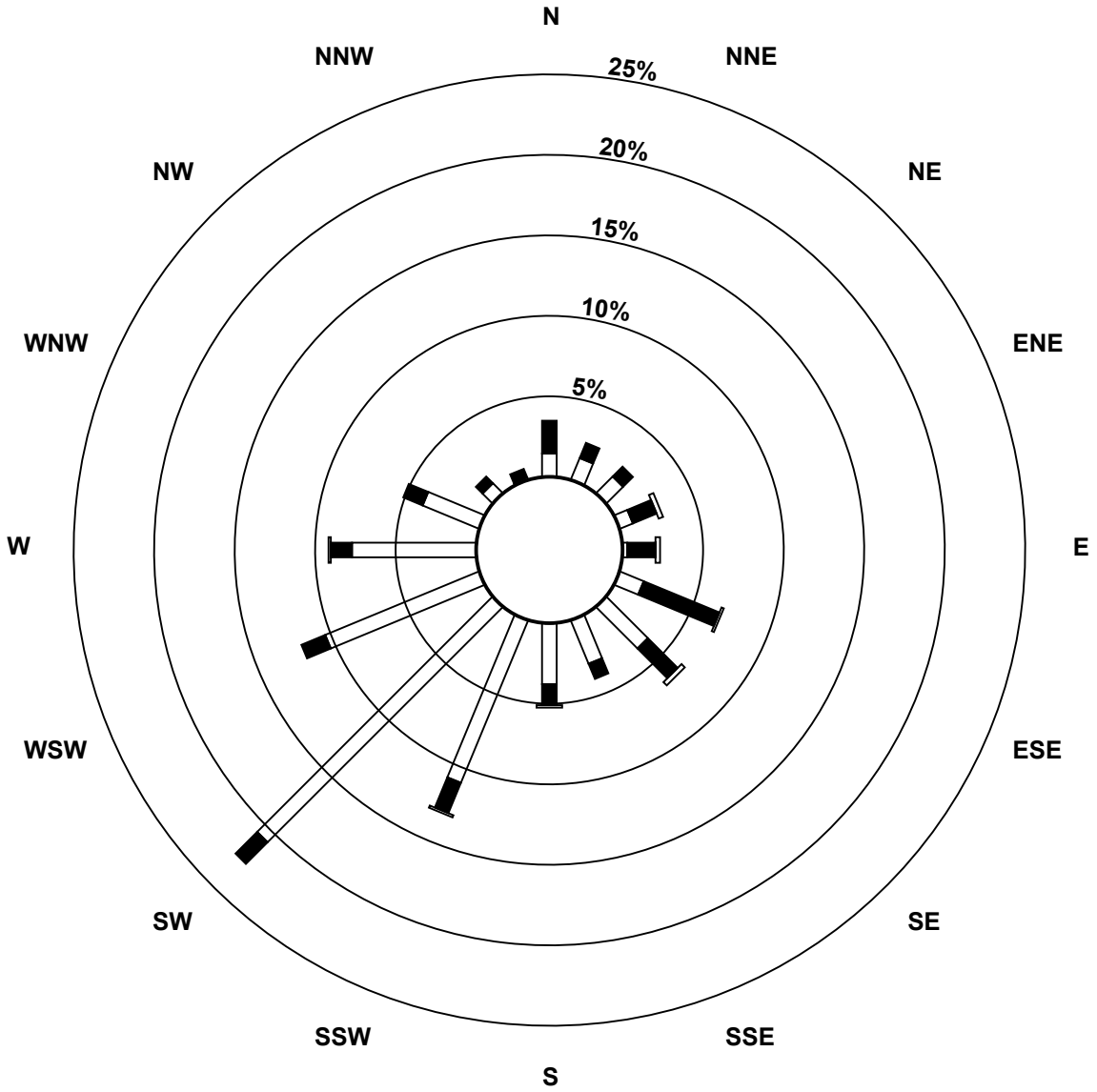
Henry Pirker - September 2016



Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - September 2016



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 - September 2016

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 0.39 ppm on Sep 23 14:00

Minimum Value: 0.09 ppm on Sep 14 18:00

Percentiles: P_1 = 0.10 P_{10} = 0.10 Q_1 = 0.11 Median = 0.13 Q_3 = 0.16 P_{90} = 0.19 P_{99} = 0.27

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-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.17
2-Sep	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	N	N	N	N	N	N	0.1	0.1	0.1	0.1	0.1	0.17
3-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11
4-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.17
5-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.19
6-Sep	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	0.1	0.1	0.21
7-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
8-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
9-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
10-Sep	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
11-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13
12-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.17
13-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12
14-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13
15-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13
16-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
17-Sep	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.17
18-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12
19-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.17
20-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.22
21-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.23
22-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.25
23-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.39
24-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12
25-Sep	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	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.19
26-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.28
27-Sep	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	0.2	0.2	0.16
28-Sep	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	0.2	0.2	0.2	0.2	0.2	0.26
29-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
30-Sep	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	0.1	0.1	0.1	0.1	0.16
Diurnal Maximums	0.22	0.22	0.23	0.22	0.21	0.21	0.21	0.25	0.29	0.34	0.37	0.37	0.37	0.39	0.34	0.29	0.24	0.18	0.18	0.18	0.20	0.20	0.20	0.22	

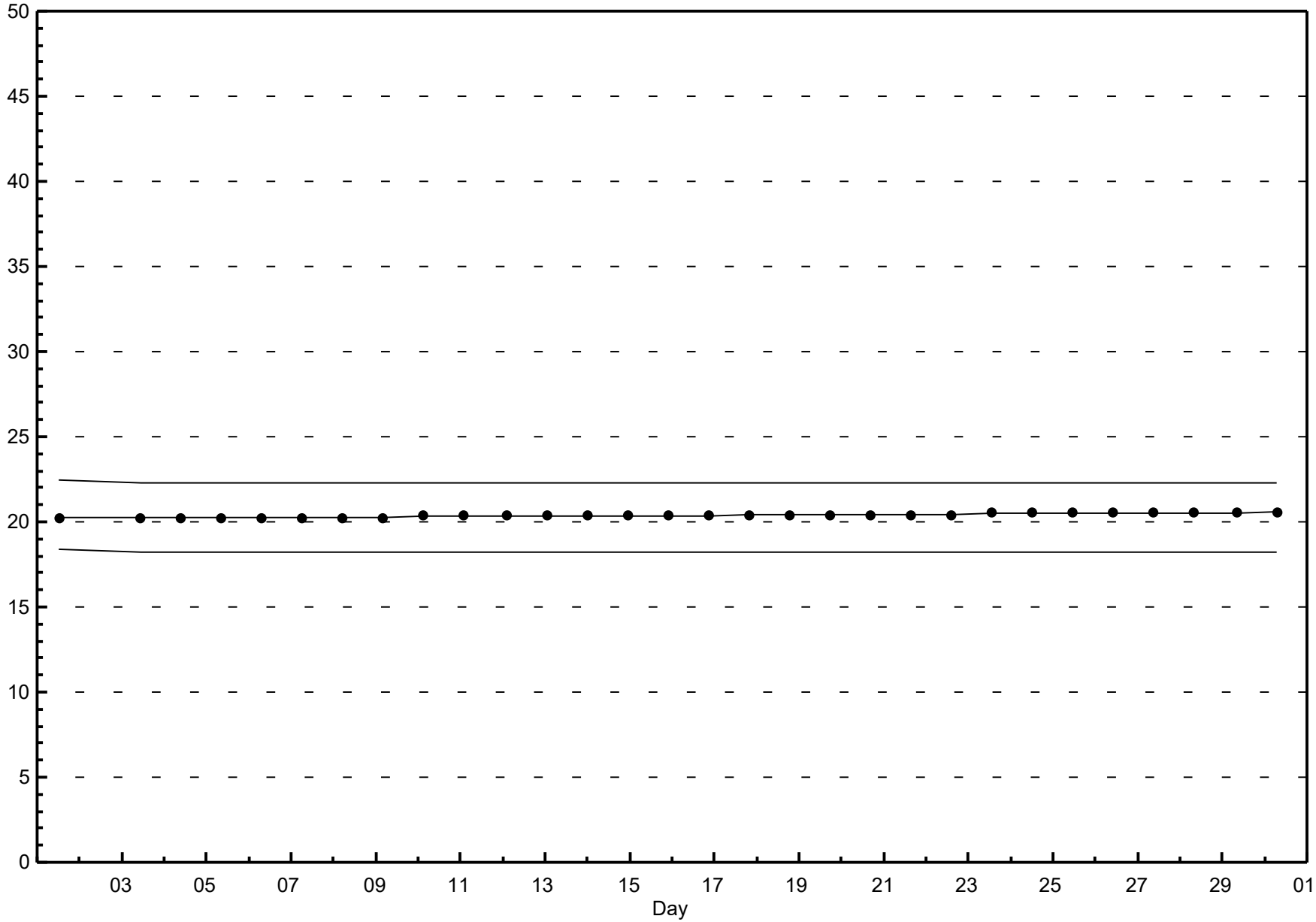
N - Not Valid
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm

Peace Airshed Zone Association

Span Responses

Carbon Monoxide (CO)

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - September 2016

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

Maximum Value: 3.23 ppm on Sep 17 04:00

Maximum Daily Average: 2.27 ppm on Sep 22

Minimum Value: 1.9 ppm on Sep 14 14:00

Minimum Daily Average: 1.92 ppm on Sep 18

Maximum Diurnal Average: 2.19 ppm at hour 5

Minimum Diurnal Average: 1.92 ppm at hour 16

Monthly Average: 2.030 ppm

Percentiles: P_1 = 1.87 P_{10} = 1.90 Q_1 = 1.93 Median = 1.97 Q_3 = 2.06 P_{90} = 2.23 P_{99} = 2.79

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-Sep	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	A	2.0	2.0	2.0	2.0	1.9	2.0	2.1	2.4	2.2	2.2	2.1	2.07	2.45
2-Sep	2.1	2.1	2.2	2.1	2.4	2.3	2.7	2.3	2.1	2.1	2.0	A	C	C	C	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.09	2.67
3-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	1.95	2.06
4-Sep	2.0	2.1	2.2	2.3	2.9	2.4	2.3	2.2	2.1	A	2.1	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.09	2.91
5-Sep	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	A	2.5	2.3	2.2	2.1	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.2	2.1	2.4	2.09	2.48
6-Sep	2.3	2.4	2.4	2.5	2.1	2.1	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	2.1	2.0	2.0	2.0	2.0	2.06	2.52
7-Sep	2.0	2.0	2.0	2.0	2.2	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.2	1.98	2.24
8-Sep	2.5	2.2	2.0	2.1	2.0	A	2.2	2.0	2.2	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	2.00	2.53
9-Sep	1.9	1.9	2.1	2.4	A	2.1	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.1	2.5	2.2	2.06	2.46
10-Sep	2.3	2.2	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.30
11-Sep	1.9	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.97	2.06
12-Sep	2.2	A	2.2	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.04	2.23
13-Sep	A	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.95	2.22
14-Sep	2.0	2.0	2.0	2.1	2.2	2.0	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.95	2.18
15-Sep	1.9	1.9	2.0	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	A	2.2	2.0	1.96	2.17
16-Sep	2.1	2.2	2.0	2.1	2.1	2.1	2.4	2.2	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	A	2.0	2.0	2.0	2.02	2.35
17-Sep	2.1	2.5	2.4	3.2	2.8	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.08	3.23
18-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.9	2.0	1.92	1.97
19-Sep	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	A	2.0	1.9	2.0	2.0	1.9	2.0	1.99	2.12
20-Sep	2.0	2.0	2.0	2.1	2.3	2.3	2.2	2.2	2.1	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	2.2	2.2	2.04	2.29
21-Sep	2.3	2.3	2.3	2.5	2.4	2.3	2.4	2.3	2.2	2.0	2.0	2.0	2.0	2.0	1.9	A	2.0	2.0	1.9	2.0	2.0	2.0	2.2	2.3	2.14	2.52
22-Sep	2.4	2.7	2.9	2.8	2.9	3.2	2.7	2.4	2.2	2.1	2.1	2.0	2.0	2.0	A	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.27	3.21
23-Sep	2.1	2.5	2.4	2.4	2.7	2.6	2.7	2.7	2.6	2.4	2.3	2.2	2.1	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.22	2.71
24-Sep	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	2.0	2.0	2.0	1.94	1.98
25-Sep	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.03	2.15
26-Sep	2.0	2.1	2.0	2.1	2.3	2.2	2.2	2.2	2.3	2.1	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.0	2.0	1.9	1.9	1.9	2.04	2.34
27-Sep	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	2.0	2.0	2.0	2.0	2.0	1.93	2.00
28-Sep	2.0	2.1	2.1	2.2	2.2	2.2	2.4	2.7	A	2.3	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.07	2.71
29-Sep	2.0	2.0	2.0	2.0	2.1	2.3	2.4	A	2.3	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.04	2.35
30-Sep	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.96	1.99
	2.07	2.10	2.11	2.18	2.19	2.15	2.19	2.13	2.08	2.04	1.99	1.96	1.95	1.93	1.92	1.92	1.93	1.93	1.95	1.96	1.98	1.99	2.03	2.03	Diurnal Average	
	2.53	2.68	2.91	3.23	2.92	3.21	2.75	2.71	2.63	2.48	2.31	2.19	2.11	2.04	1.98	1.96	2.10	2.00	2.21	2.13	2.45	2.24	2.46	2.38	Diurnal Maximum	

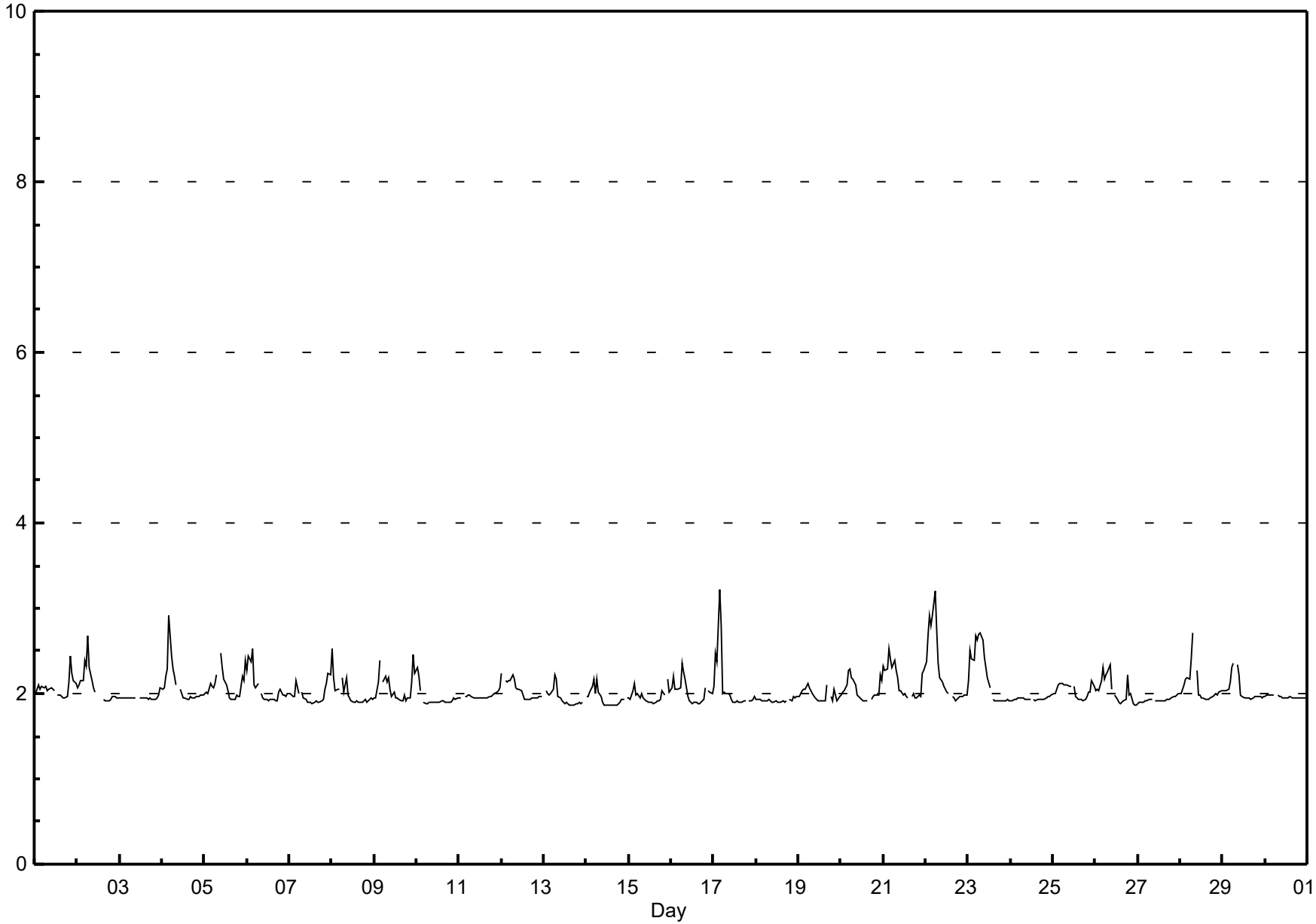
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - September 2016

Maximum Value: 6.30 ppm on Sep 26 19:00

Maximum Daily Average: 2.47 ppm on Sep 23

Minimum Value: 1.9 ppm on Sep 26 23:00

Minimum Daily Average: 1.96 ppm on Sep 27

Maximum Diurnal Average: 2.54 ppm at hour 4

Minimum Diurnal Average: 1.97 ppm at hour 16

Monthly Average: 2.210 ppm

Percentiles: P_1 = 1.89 P_{10} = 1.93 Q_1 = 1.97 Median = 2.03 Q_3 = 2.23 P_{90} = 2.79 P_{99} = 3.89

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-Sep	2.0	2.7	2.5	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	3.7	3.7	2.8	2.4	2.2	2.31	3.75
2-Sep	2.1	2.2	2.2	2.2	3.5	2.5	3.3	2.6	2.2	2.1	2.0	A	C	C	C	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.23	3.46
3-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.98	2.15
4-Sep	2.1	2.2	2.6	2.9	3.2	3.0	2.8	2.3	2.2	A	2.1	2.2	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.25	3.24
5-Sep	2.0	2.2	2.1	2.4	2.1	2.2	2.3	2.5	A	2.9	3.1	2.3	2.2	2.3	2.0	2.0	2.1	2.0	2.3	2.2	2.1	3.0	2.9	2.8	2.36	3.10
6-Sep	2.4	4.4	3.9	3.9	2.8	2.1	2.5	A	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.0	2.8	2.2	2.1	2.2	2.0	2.0	2.41	4.40
7-Sep	2.0	2.1	2.0	2.0	3.4	2.1	A	2.2	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.1	1.9	1.9	2.0	2.0	2.4	2.7	4.7	3.1	2.27	4.68
8-Sep	3.9	2.6	2.1	2.1	2.1	A	2.6	2.1	3.6	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.20	3.88
9-Sep	2.0	2.0	3.3	3.3	A	2.6	2.7	2.7	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.2	2.3	2.0	2.0	2.2	2.5	3.0	3.4	2.40	3.42
10-Sep	3.4	2.9	2.4	A	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.07	3.41
11-Sep	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	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.00	2.09
12-Sep	3.0	A	2.4	2.2	2.2	2.2	2.7	2.3	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.16	2.96
13-Sep	A	2.2	2.1	2.0	2.3	2.6	3.0	2.7	2.0	2.0	2.0	1.9	1.9	2.3	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.10	2.97
14-Sep	2.3	2.1	2.2	2.8	2.6	2.2	3.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	2.0	2.10	3.06
15-Sep	2.0	2.1	2.3	3.6	2.1	2.1	2.0	2.4	2.0	2.0	1.9	2.0	1.9	2.0	2.0	1.9	2.4	2.0	2.0	2.2	2.4	A	2.6	2.4	2.19	3.64
16-Sep	2.3	3.1	2.3	2.2	2.6	2.4	3.8	3.4	2.9	2.1	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.2	2.4	A	2.3	2.1	2.2	2.34	3.78
17-Sep	3.4	3.3	3.1	4.0	4.2	2.1	2.1	2.1	2.2	2.1	2.0	2.0	1.9	2.0	1.9	2.0	1.9	2.0	1.9	A	2.0	2.0	2.0	2.0	2.35	4.23
18-Sep	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	A	2.0	1.9	2.0	2.0	2.1	1.96	2.08
19-Sep	2.0	2.0	2.1	2.2	2.3	2.2	2.2	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	3.3	A	2.1	2.0	2.4	2.4	2.1	2.1	2.14	3.27
20-Sep	2.0	2.4	2.2	2.2	2.5	2.7	2.3	2.2	2.2	2.0	2.0	2.1	1.9	1.9	1.9	2.0	A	2.1	2.1	2.2	2.1	2.2	2.9	2.2	2.19	2.85
21-Sep	2.6	2.5	2.4	3.3	2.6	2.4	3.1	2.5	2.6	2.1	2.1	2.0	2.1	2.1	2.0	A	2.1	2.4	2.0	2.0	2.0	2.0	3.4	2.8	2.40	3.42
22-Sep	3.1	3.0	3.2	3.5	3.4	3.8	2.9	2.6	2.4	2.2	2.1	2.1	2.1	2.1	A	2.1	2.1	1.9	2.1	2.1	2.0	2.0	2.0	2.0	2.47	3.80
23-Sep	2.8	3.4	3.5	3.1	3.1	2.8	2.9	3.1	2.8	2.6	2.5	2.2	2.4	A	2.1	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.47	3.46
24-Sep	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	A	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.97	2.10
25-Sep	2.3	2.0	2.2	2.4	2.5	2.5	2.2	2.2	2.2	2.1	2.1	A	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.1	2.7	2.5	2.20	2.69
26-Sep	2.2	2.4	2.2	2.5	2.7	2.4	2.8	2.6	3.4	2.1	A	2.1	2.1	2.0	1.9	2.0	2.0	2.1	6.3	2.5	2.4	1.9	1.9	1.9	2.45	6.30
27-Sep	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1	1.96	2.05
28-Sep	2.0	2.3	2.5	2.7	2.7	2.5	2.7	3.1	A	2.6	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.24	3.09
29-Sep	2.1	2.1	2.1	2.1	2.2	2.7	2.7	A	2.5	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.1	2.0	2.0	2.0	2.13	2.69
30-Sep	2.0	2.2	2.0	2.1	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	2.1	2.0	2.1	2.0	2.0	2.0	2.03	2.16
	2.34	2.42	2.40	2.54	2.52	2.34	2.52	2.34	2.27	2.13	2.07	2.02	2.01	2.00	1.97	1.97	2.05	2.01	2.18	2.12	2.13	2.13	2.30	2.21	Diurnal Average	
	3.88	4.40	3.94	4.01	4.23	3.80	3.78	3.41	3.64	2.89	3.10	2.30	2.39	2.35	2.06	2.09	3.27	2.36	6.30	3.75	3.72	3.02	4.68	3.42	Diurnal Maximum	

C - Calibration

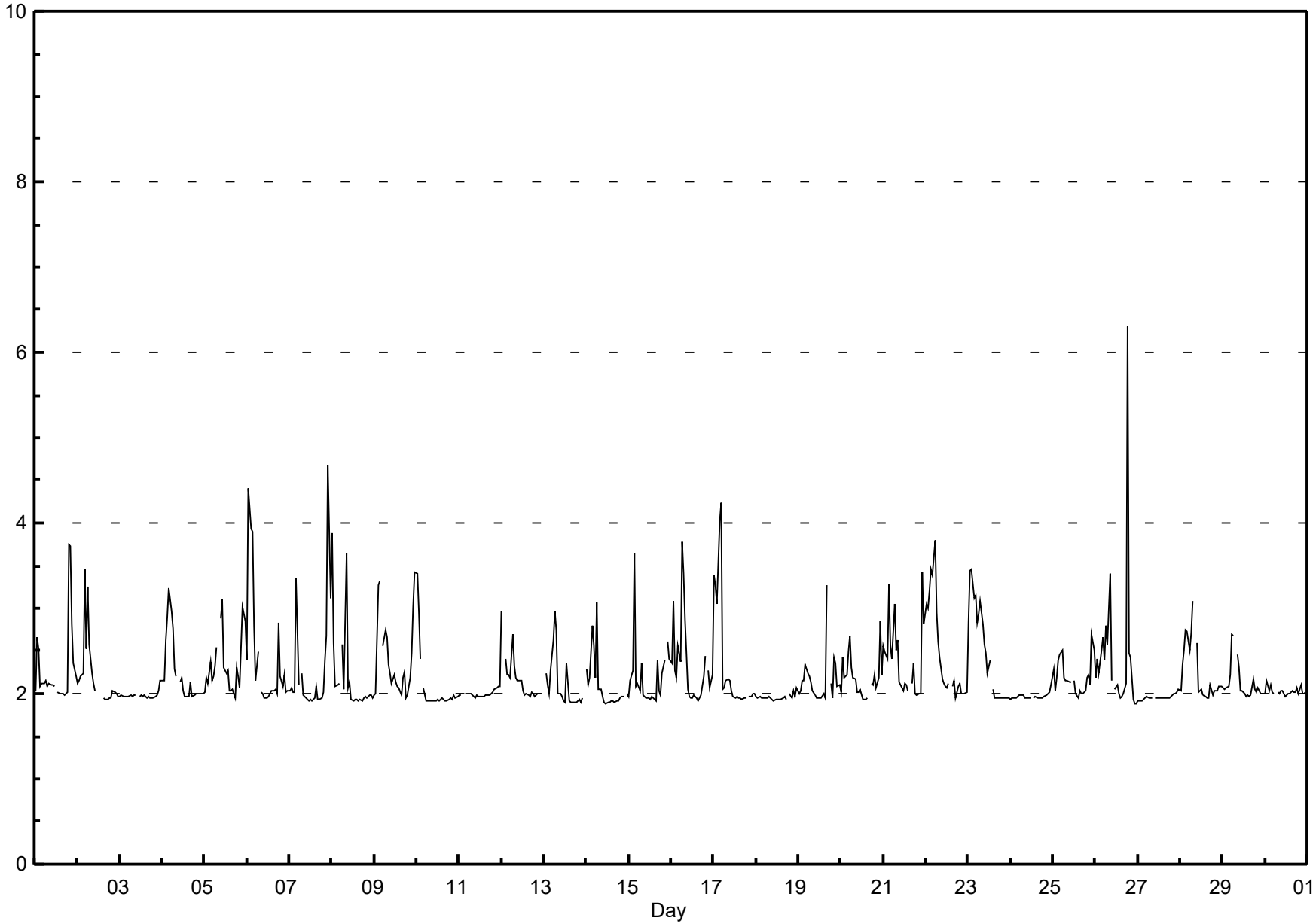
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

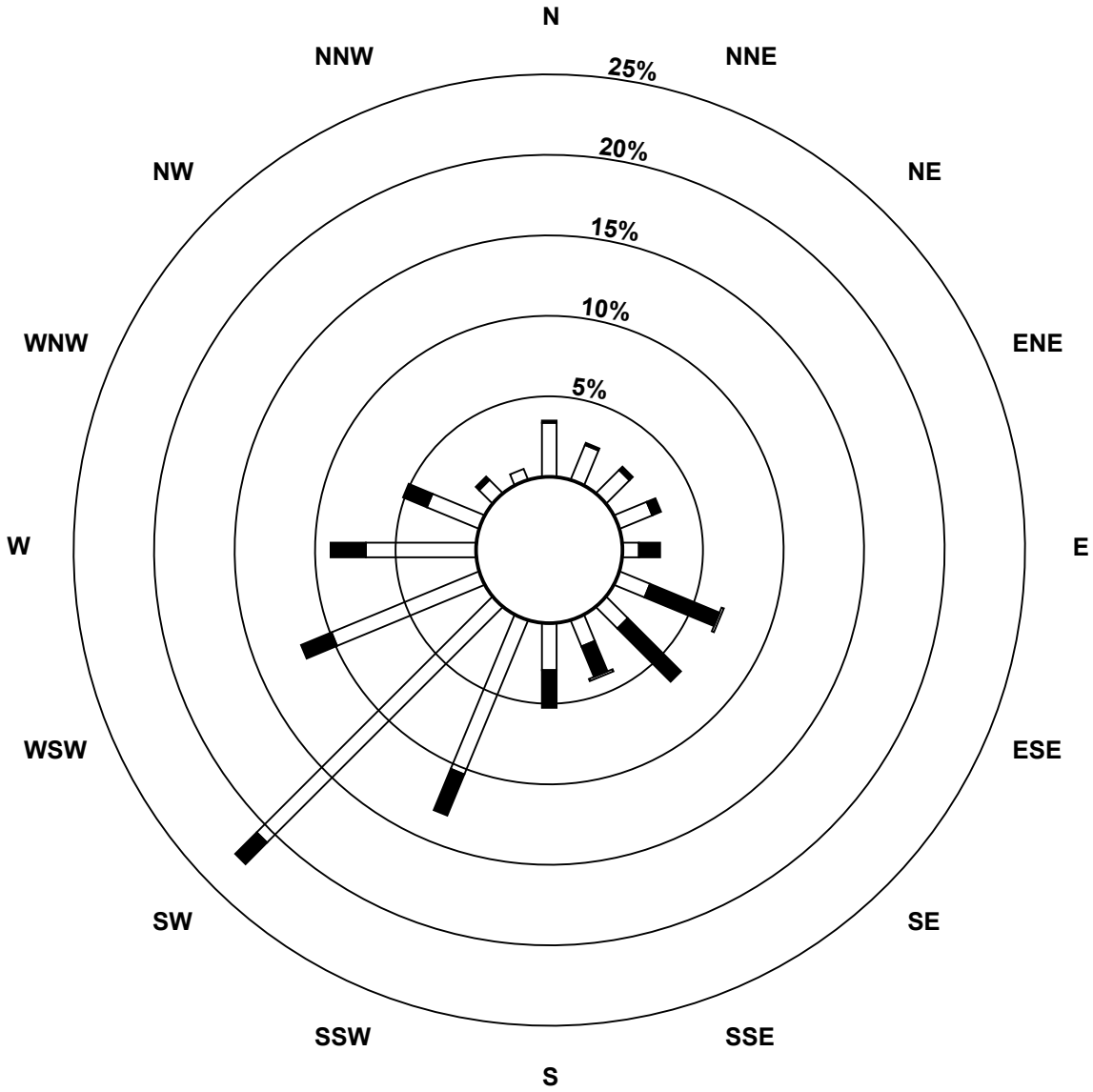
Henry Pirker - September 2016



Pollutant Rose

Total Hydrocarbons (THC) - ppm

Henry Pirker - September 2016



Pollutant Classes (ppm)

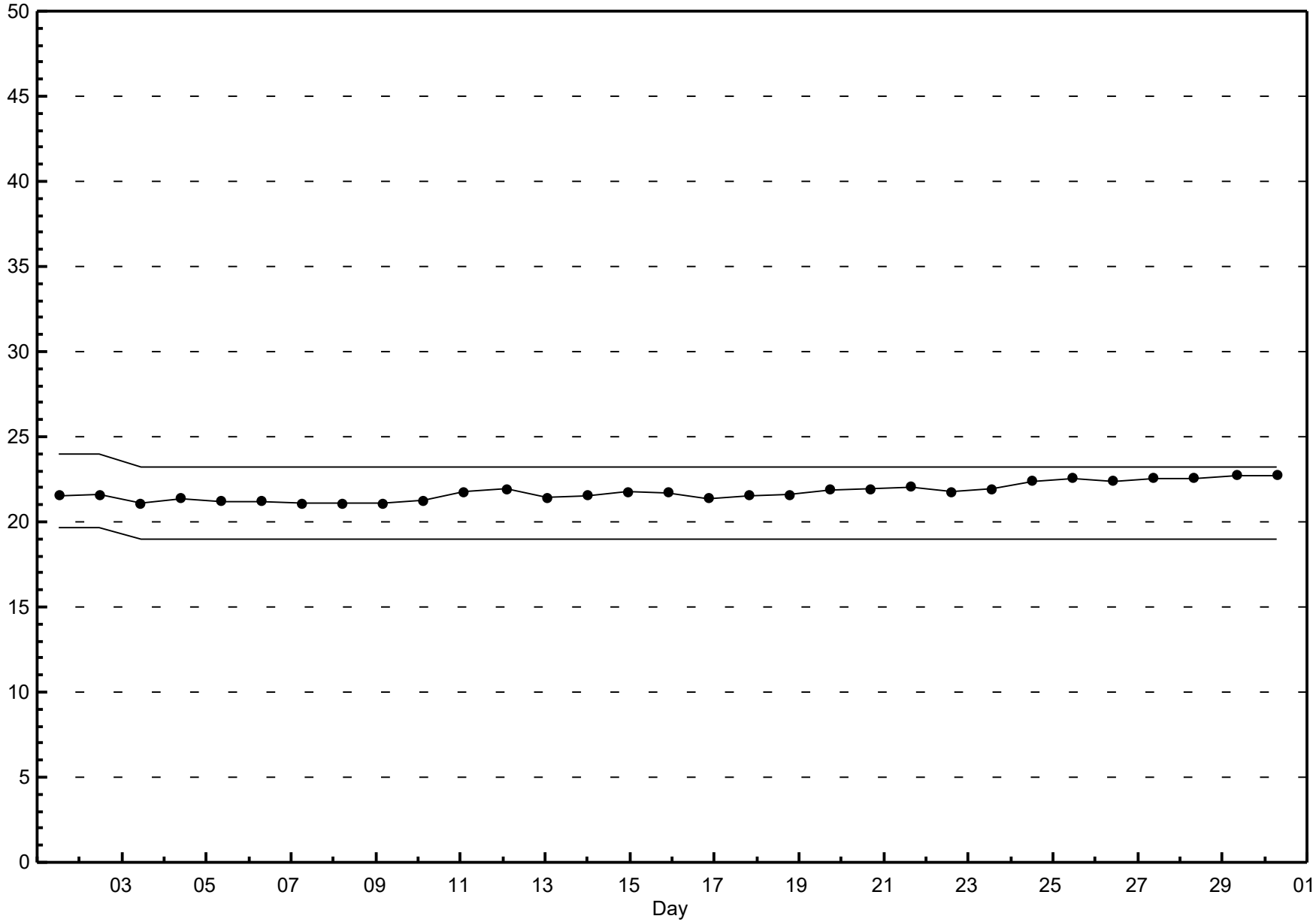
- 1.5 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

Peace Airshed Zone Association

Span Responses

Total Hydrocarbons (THC)

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

Methane (CH_4) - ppm

Henry Pirker - September 2016

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

Maximum Value: 3.23 ppm on Sep 17 04:00

Maximum Daily Average: 2.27 ppm on Sep 22

Minimum Value: 1.9 ppm on Sep 14 14:00

Minimum Daily Average: 1.92 ppm on Sep 18

Maximum Diurnal Average: 2.19 ppm at hour 5

Minimum Diurnal Average: 1.92 ppm at hour 16

Monthly Average: 2.030 ppm

Percentiles: P_1 = 1.87 P_{10} = 1.91 Q_1 = 1.93 Median = 1.97 Q_3 = 2.06 P_{90} = 2.23 P_{99} = 2.79

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-Sep	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.2	2.2	2.1	2.07	2.45
2-Sep	2.1	2.1	2.2	2.1	2.4	2.3	2.7	2.3	2.1	2.1	2.0	A	C	C	C	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.09	2.67
3-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	1.95	2.06
4-Sep	2.0	2.1	2.2	2.3	2.9	2.4	2.3	2.2	2.1	A	2.1	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.09	2.91
5-Sep	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	A	2.5	2.3	2.2	2.1	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.2	2.1	2.4	2.09	2.48
6-Sep	2.3	2.4	2.4	2.5	2.1	2.1	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	2.1	2.0	2.0	2.0	2.0	2.06	2.52
7-Sep	2.0	2.0	2.0	2.0	2.2	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.2	1.98	2.24
8-Sep	2.5	2.2	2.0	2.1	2.0	A	2.2	2.0	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.00	2.53
9-Sep	1.9	1.9	2.1	2.4	A	2.1	2.2	2.1	2.2	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.1	2.5	2.2	2.06	2.46
10-Sep	2.3	2.2	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.30
11-Sep	1.9	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.97	2.06
12-Sep	2.2	A	2.2	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.04	2.23
13-Sep	A	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.95	2.22
14-Sep	2.0	2.0	2.0	2.1	2.2	2.0	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.95	2.18
15-Sep	1.9	1.9	2.0	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	A	2.2	2.0	1.96	2.16
16-Sep	2.1	2.2	2.0	2.1	2.1	2.1	2.4	2.2	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	A	2.0	2.0	2.0	2.02	2.35
17-Sep	2.1	2.5	2.4	3.2	2.8	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.08	3.23
18-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.9	2.0	1.92	1.97
19-Sep	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.1	A	2.0	1.9	2.0	2.0	1.9	2.0	1.99	2.12
20-Sep	2.0	2.0	2.0	2.1	2.3	2.3	2.2	2.2	2.1	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	2.2	2.2	2.04	2.29
21-Sep	2.3	2.3	2.3	2.5	2.4	2.3	2.4	2.3	2.2	2.0	2.0	2.0	2.0	2.0	1.9	A	2.0	2.0	1.9	2.0	2.0	2.0	2.2	2.3	2.14	2.52
22-Sep	2.4	2.7	2.9	2.8	2.9	3.2	2.7	2.4	2.2	2.1	2.1	2.0	2.0	2.0	A	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.27	3.21
23-Sep	2.1	2.5	2.4	2.4	2.7	2.6	2.7	2.7	2.6	2.4	2.3	2.2	2.1	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.22	2.71
24-Sep	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	2.0	2.0	2.0	1.94	1.98
25-Sep	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.03	2.15
26-Sep	2.0	2.1	2.0	2.1	2.3	2.2	2.2	2.2	2.3	2.1	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.0	2.0	1.9	1.9	1.9	2.04	2.34
27-Sep	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	2.0	2.0	2.0	2.0	2.0	1.93	2.00
28-Sep	2.0	2.1	2.1	2.2	2.2	2.2	2.4	2.7	A	2.3	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.07	2.71
29-Sep	2.0	2.0	2.0	2.0	2.1	2.3	2.4	A	2.3	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.04	2.35
30-Sep	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.96	1.99
	2.07	2.10	2.11	2.18	2.19	2.15	2.19	2.13	2.08	2.04	1.99	1.97	1.95	1.93	1.92	1.92	1.93	1.93	1.95	1.96	1.98	1.99	2.03	2.03	Diurnal Average	
	2.53	2.68	2.91	3.23	2.92	3.21	2.75	2.71	2.63	2.48	2.31	2.19	2.11	2.03	1.98	1.97	2.10	2.00	2.21	2.13	2.45	2.24	2.46	2.38	Diurnal Maximum	

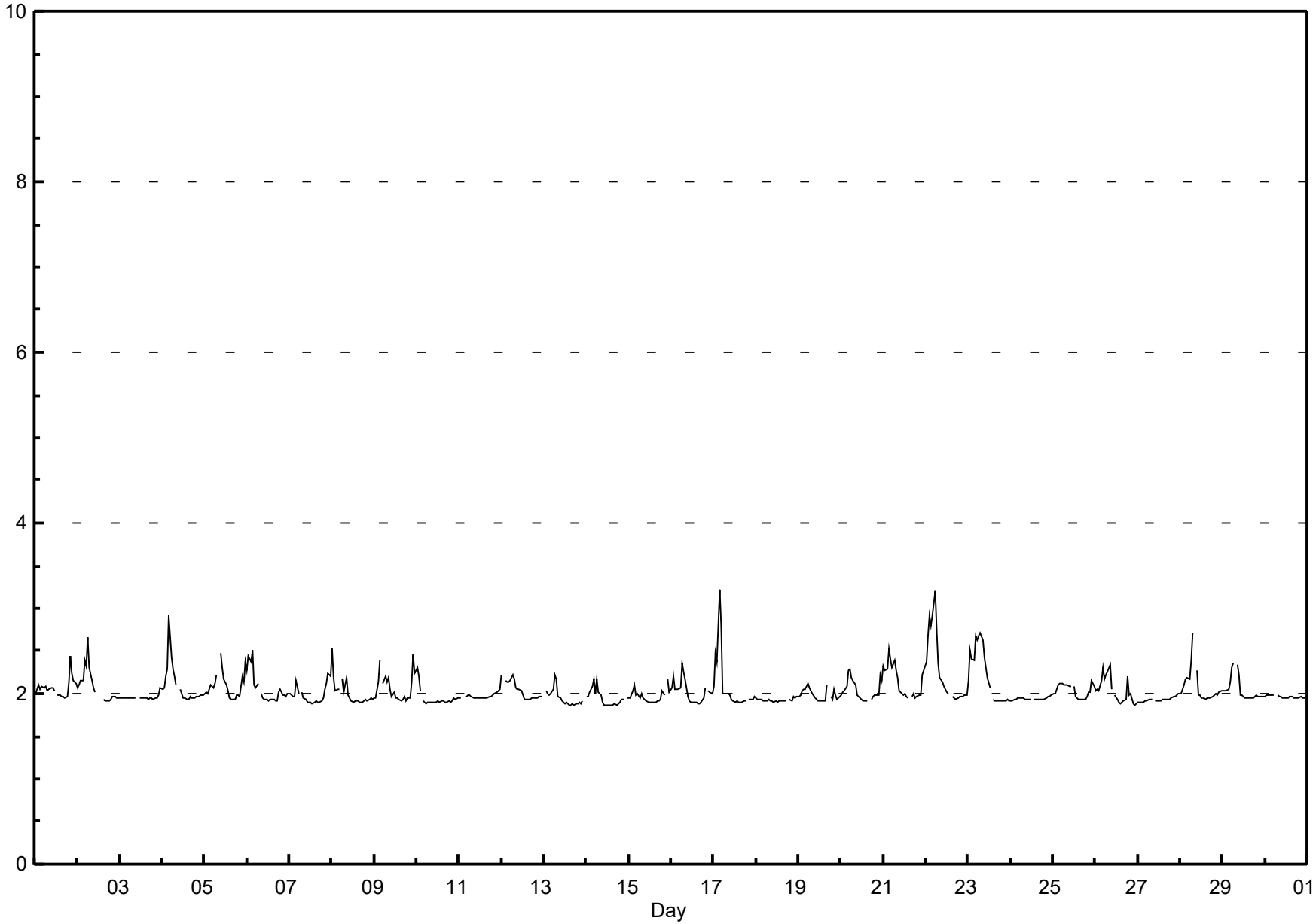
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Methane (CH_4) - ppm

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Maximums

Methane (CH_4) - ppm

Henry Pirker - September 2016

Maximum Value: 6.30 ppm on Sep 26 19:00

Maximum Daily Average: 2.48 ppm on Sep 23

Minimum Value: 1.9 ppm on Sep 14 12:00

Minimum Daily Average: 1.96 ppm on Sep 27

Maximum Diurnal Average: 2.54 ppm at hour 4

Minimum Diurnal Average: 1.97 ppm at hour 16

Monthly Average: 2.209 ppm

Percentiles: P_1 = 1.90 P_{10} = 1.94 Q_1 = 1.96 Median = 2.02 Q_3 = 2.22 P_{90} = 2.79 P_{99} = 3.90

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-Sep	2.0	2.7	2.5	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	3.7	3.7	2.8	2.4	2.2	2.30	3.75
2-Sep	2.1	2.2	2.2	2.2	3.4	2.5	3.3	2.6	2.2	2.1	2.0	A	C	C	C	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.23	3.45
3-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.98	2.15
4-Sep	2.2	2.2	2.6	2.9	3.2	3.0	2.8	2.3	2.2	A	2.1	2.2	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.24	3.24
5-Sep	2.0	2.2	2.1	2.4	2.1	2.2	2.3	2.5	A	2.9	3.1	2.3	2.2	2.3	2.0	2.0	2.0	2.0	2.3	2.2	2.1	3.0	2.9	2.8	2.35	3.09
6-Sep	2.4	4.4	3.9	3.9	2.8	2.1	2.5	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.8	2.2	2.1	2.2	2.0	2.0	2.41	4.40
7-Sep	2.0	2.1	2.0	2.0	3.4	2.1	A	2.2	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.1	1.9	1.9	2.0	2.0	2.4	2.7	4.7	3.1	2.27	4.69
8-Sep	3.9	2.6	2.1	2.1	2.1	A	2.6	2.1	3.6	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.20	3.88
9-Sep	2.0	2.0	3.3	3.3	A	2.5	2.7	2.7	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.2	2.2	2.0	2.0	2.2	2.5	3.0	3.4	2.40	3.42
10-Sep	3.4	2.9	2.4	A	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.07	3.41
11-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.00	2.09
12-Sep	3.0	A	2.4	2.2	2.2	2.2	2.7	2.3	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.15	2.96
13-Sep	A	2.2	2.1	2.0	2.3	2.6	3.0	2.7	2.0	2.0	2.0	1.9	1.9	2.3	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.11	2.97
14-Sep	2.3	2.1	2.2	2.8	2.6	2.2	3.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	2.0	2.10	3.07
15-Sep	2.0	2.1	2.3	3.6	2.1	2.1	2.0	2.4	2.0	2.0	1.9	2.0	1.9	2.0	2.0	1.9	2.4	2.0	2.0	2.2	2.4	A	2.6	2.4	2.19	3.64
16-Sep	2.4	3.1	2.3	2.2	2.6	2.4	3.8	3.4	2.9	2.1	2.0	2.0	1.9	2.0	2.0	1.9	2.0	2.0	2.2	2.4	A	2.3	2.1	2.2	2.34	3.78
17-Sep	3.4	3.3	3.1	4.0	4.2	2.1	2.1	2.1	2.2	2.1	2.0	2.0	1.9	2.0	1.9	2.0	1.9	2.0	1.9	A	2.0	2.0	2.0	2.0	2.35	4.23
18-Sep	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	A	2.0	1.9	2.0	2.0	2.1	1.96	2.07
19-Sep	2.0	2.0	2.1	2.2	2.3	2.2	2.2	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	3.3	A	2.1	2.0	2.4	2.4	2.1	2.1	2.14	3.26
20-Sep	2.0	2.4	2.2	2.2	2.5	2.7	2.3	2.2	2.2	2.0	2.0	2.0	1.9	1.9	1.9	2.0	A	2.1	2.1	2.2	2.1	2.2	2.9	2.2	2.19	2.85
21-Sep	2.6	2.5	2.4	3.3	2.6	2.4	3.0	2.5	2.6	2.1	2.1	2.0	2.1	2.1	2.0	A	2.1	2.4	2.0	2.0	2.0	2.0	3.4	2.8	2.39	3.42
22-Sep	3.0	3.0	3.2	3.5	3.4	3.8	3.0	2.6	2.4	2.2	2.1	2.1	2.1	2.1	A	2.1	2.1	1.9	2.1	2.1	2.0	2.0	2.0	2.0	2.47	3.80
23-Sep	2.8	3.4	3.5	3.1	3.2	2.8	2.9	3.1	2.8	2.6	2.5	2.2	2.4	A	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.48	3.47
24-Sep	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	A	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.97	2.10
25-Sep	2.3	2.0	2.2	2.4	2.4	2.5	2.2	2.2	2.2	2.1	2.1	A	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.1	2.7	2.5	2.19	2.69
26-Sep	2.2	2.4	2.2	2.5	2.7	2.4	2.8	2.6	3.4	2.1	A	2.1	2.1	2.0	1.9	2.0	2.0	2.1	6.3	2.5	2.4	1.9	1.9	1.9	2.45	6.30
27-Sep	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1	1.96	2.05
28-Sep	2.0	2.4	2.5	2.7	2.7	2.5	2.7	3.1	A	2.6	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.24	3.09
29-Sep	2.1	2.1	2.1	2.1	2.2	2.7	2.7	A	2.5	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.1	2.0	2.0	2.0	2.12	2.69
30-Sep	2.0	2.2	2.0	2.1	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	2.1	2.0	2.1	2.0	2.0	2.0	2.02	2.17
	2.34	2.42	2.41	2.54	2.52	2.34	2.52	2.34	2.27	2.12	2.07	2.02	2.01	2.00	1.97	1.97	2.05	2.01	2.18	2.12	2.13	2.13	2.30	2.21	Diurnal Average	
	3.88	4.40	3.94	4.02	4.23	3.80	3.78	3.40	3.64	2.89	3.09	2.29	2.40	2.35	2.06	2.09	3.26	2.35	6.30	3.75	3.73	3.01	4.69	3.42	Diurnal Maximum	

C - Calibration

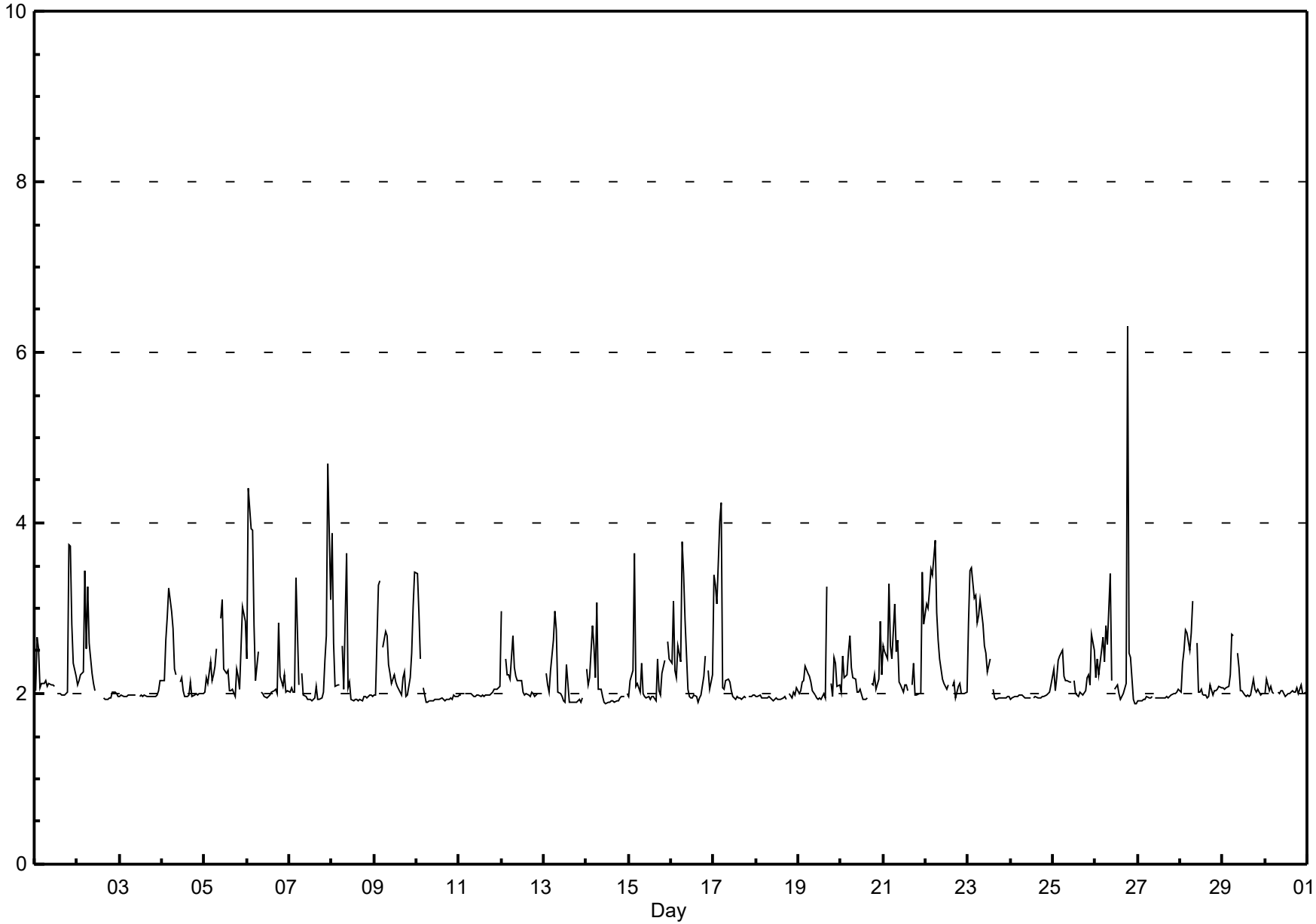
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Methane (CH_4) - ppm

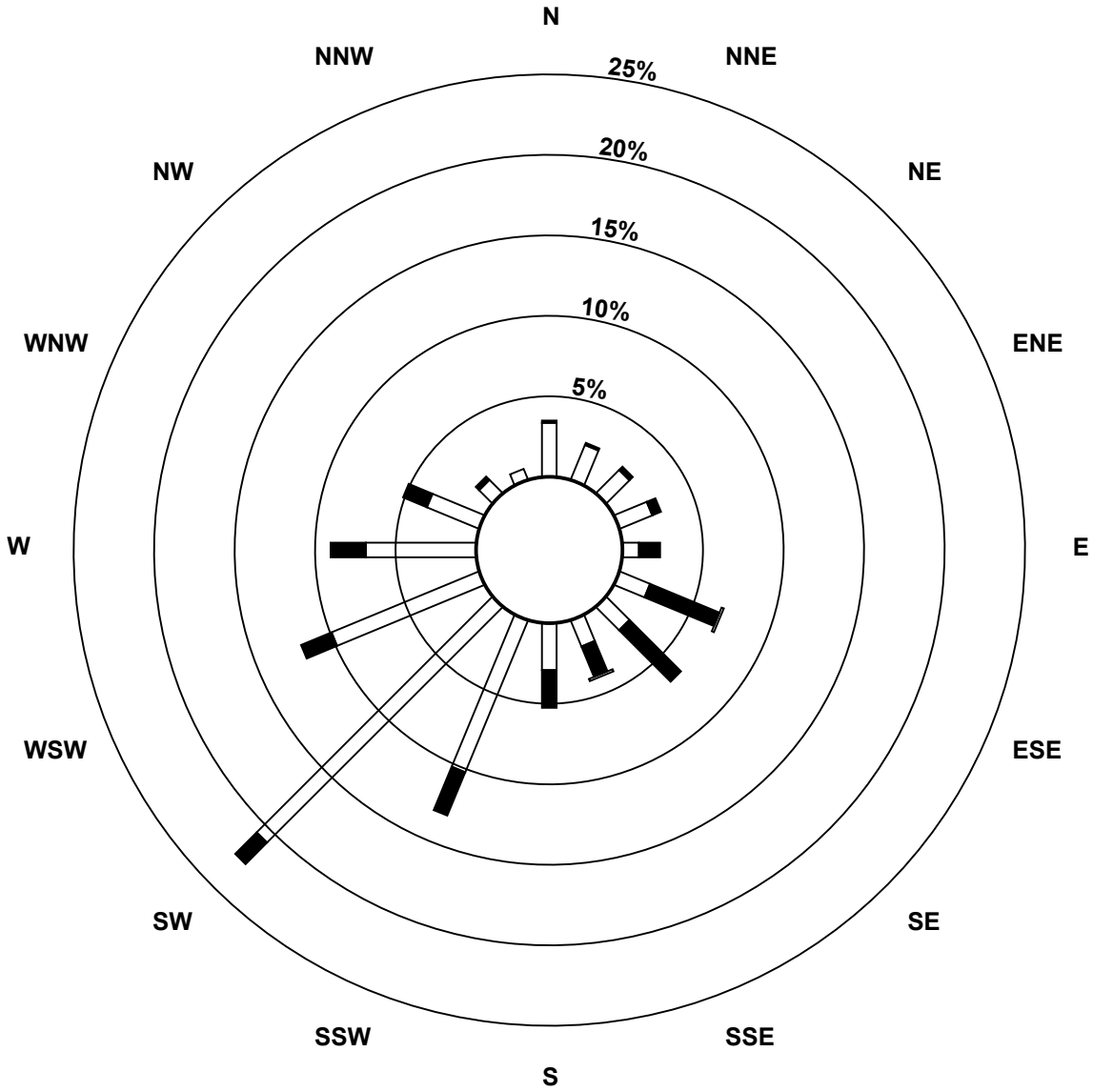
Henry Pirker - September 2016



Pollutant Rose

Methane (CH_4) - ppm

Henry Pirker - September 2016



Pollutant Classes (ppm)

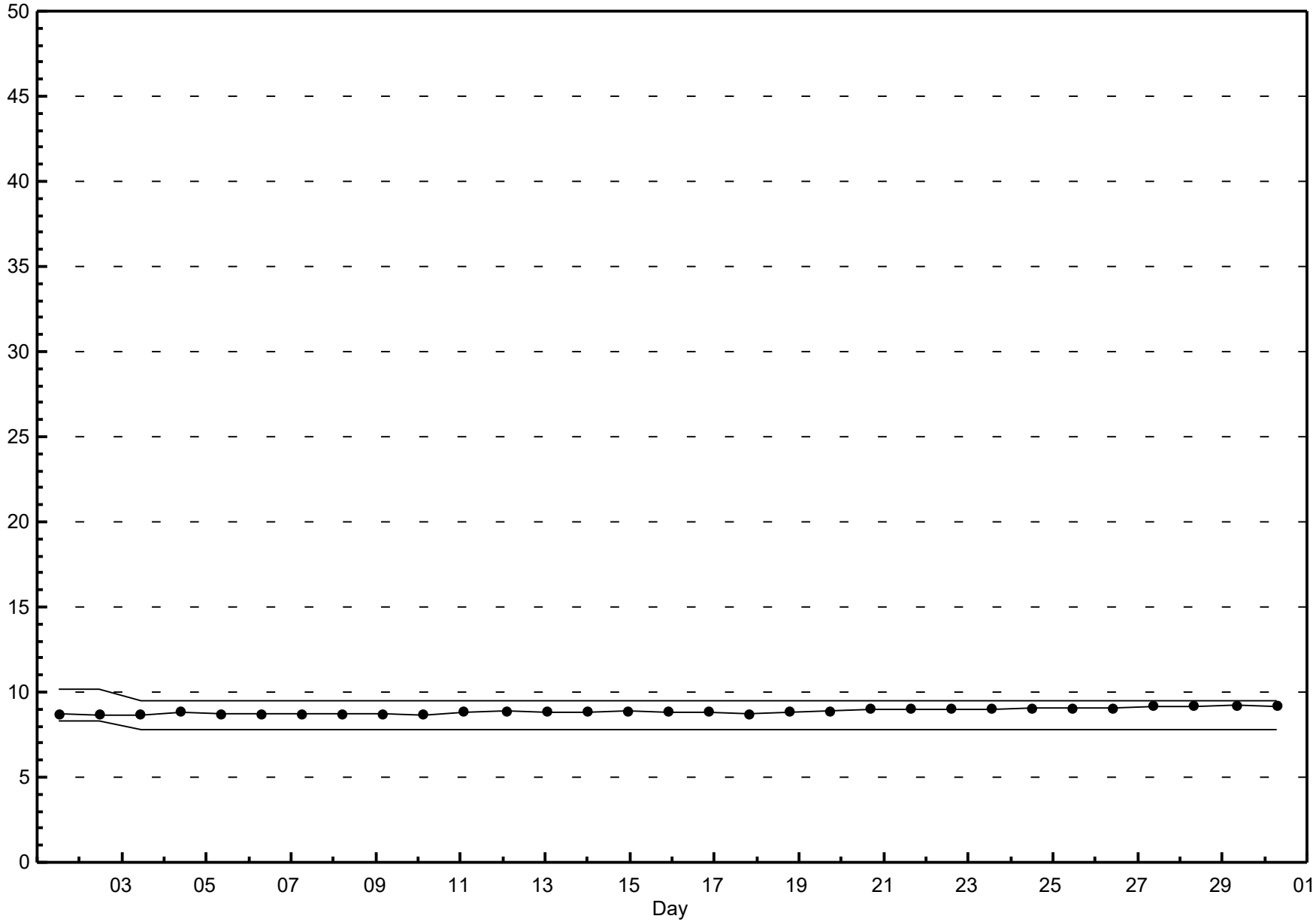
- 1.5 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

Peace Airshed Zone Association

Span Responses

Methane (CH_4)

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - September 2016

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

Maximum Value: 0.00 ppm on Sep 9 02:00

Maximum Daily Average: 0.00 ppm on Sep 18

Minimum Value: 0.0 ppm on Sep 1 01:00

Minimum Daily Average: 0.00 ppm on Sep 2

Maximum Diurnal Average: 0.00 ppm at hour 8

Minimum Diurnal Average: 0.00 ppm at hour 19

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

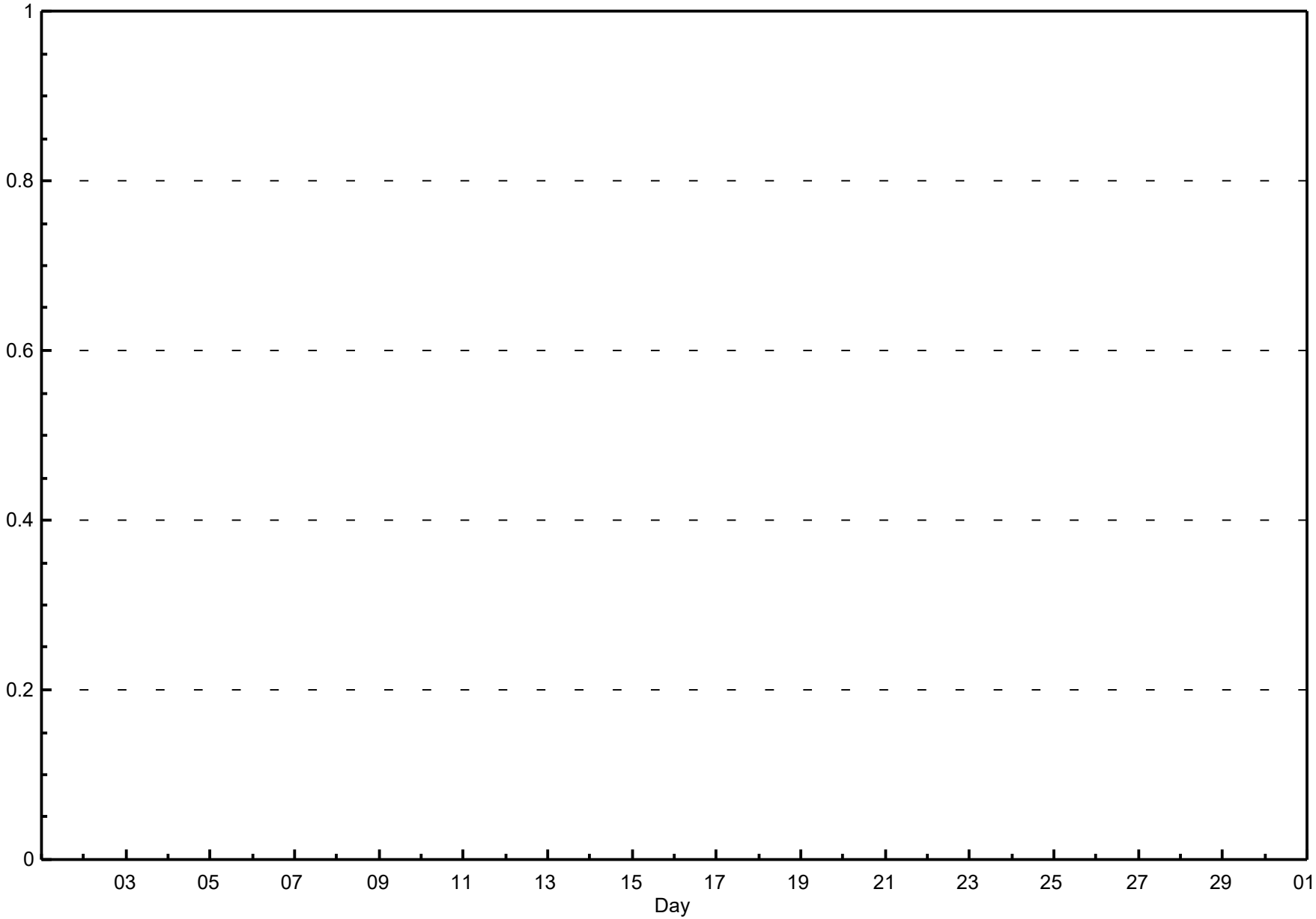
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - September 2016

Maximum Value: 0.00 ppm on Sep 3 18:00

Maximum Daily Average: 0.00 ppm on Sep 18

Minimum Value: 0.0 ppm on Sep 8 14:00

Minimum Daily Average: 0.00 ppm on Sep 2

Maximum Diurnal Average: 0.00 ppm at hour 12

Minimum Diurnal Average: 0.00 ppm at hour 11

Monthly Average: 0.001 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:	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-Sep	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
2-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
3-Sep	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
4-Sep	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
5-Sep	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
6-Sep	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
7-Sep	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
8-Sep	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
9-Sep	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Sep	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
11-Sep	0.0	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
12-Sep	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
13-Sep	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
14-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
15-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
16-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
17-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
18-Sep	0.0	0.0	0.0	0.0	0.0	0.0	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
19-Sep	0.0	0.0	0.0	0.0	0.0	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
20-Sep	0.0	0.0	0.0	0.0	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
21-Sep	0.0	0.0	0.0	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
22-Sep	0.0	0.0	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
23-Sep	0.0	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
24-Sep	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
25-Sep	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
26-Sep	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
27-Sep	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
28-Sep	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
29-Sep	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
30-Sep	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
	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

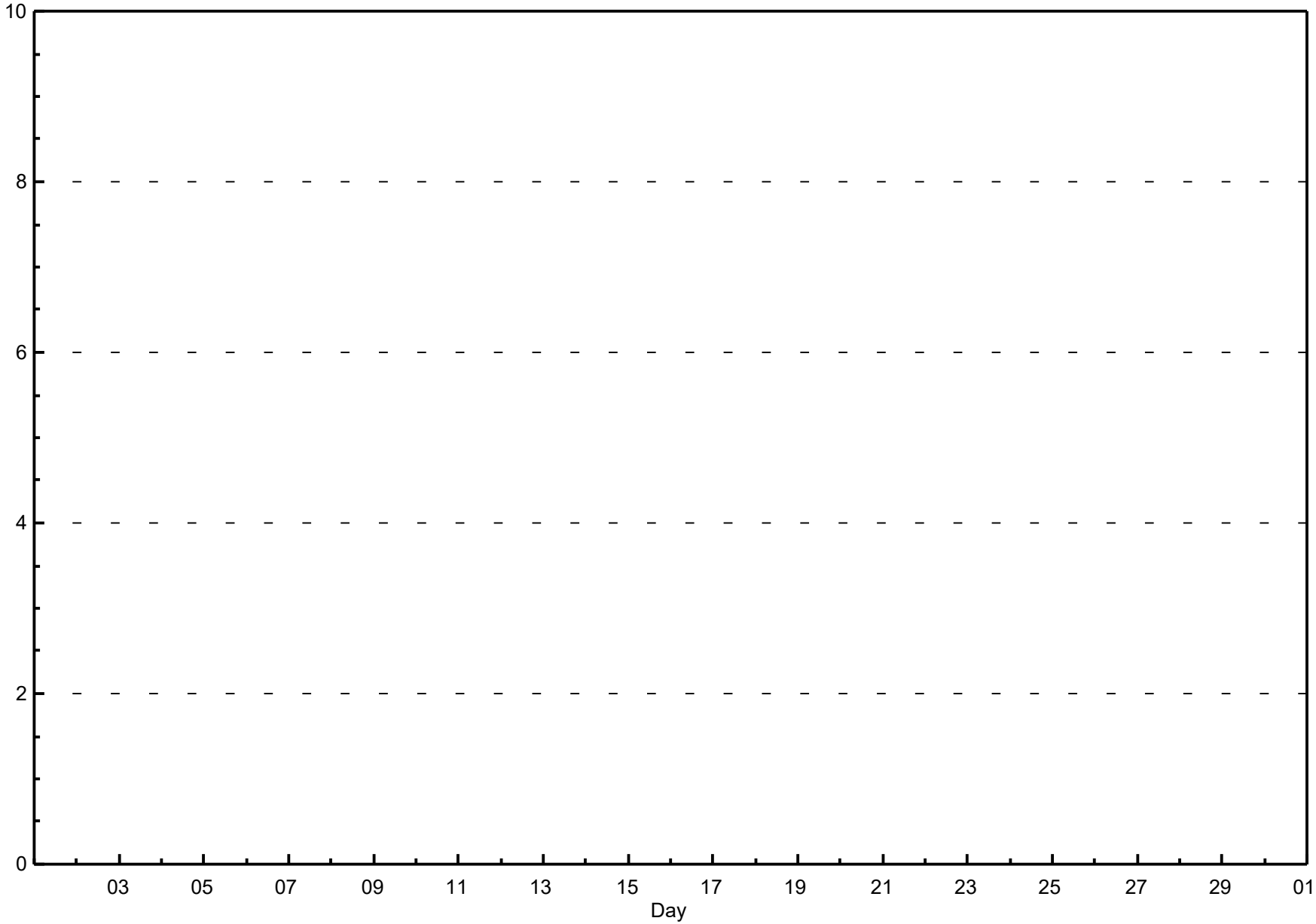
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

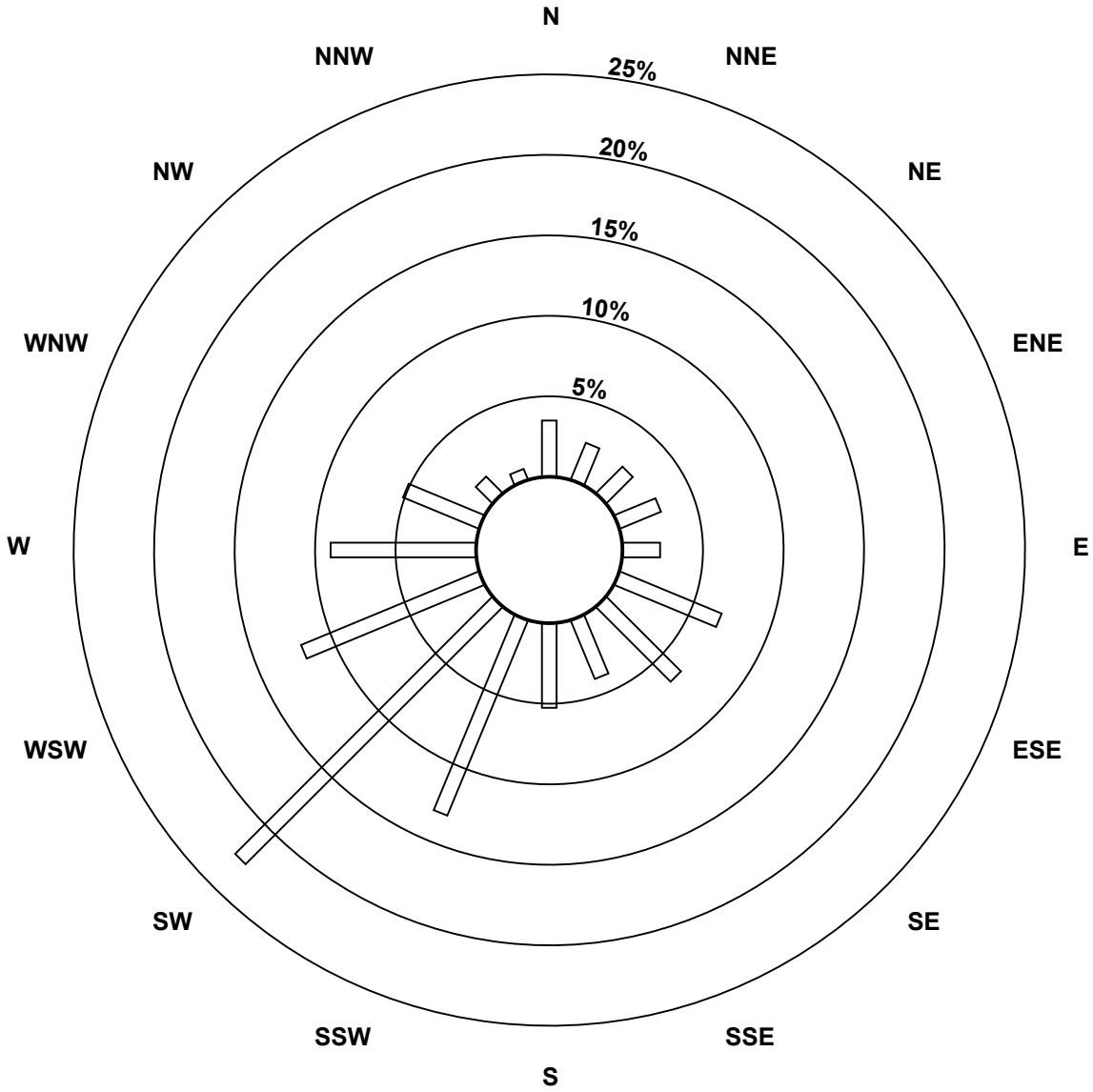
Henry Pirker - September 2016



Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - September 2016



Pollutant Classes (ppm)

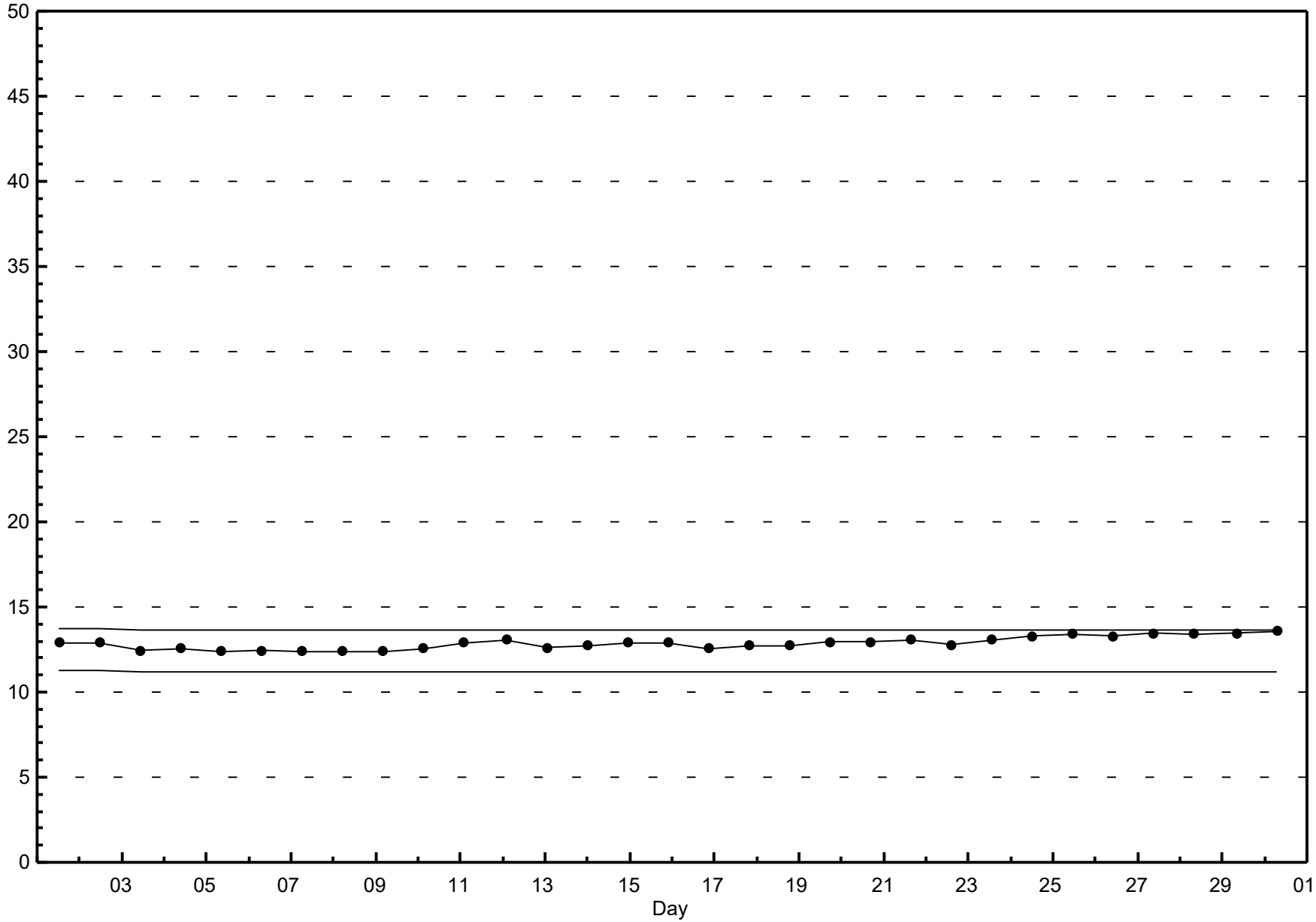
- 0 - 0.05
- 0.06 - 0.1
- 0.11 - 0.30
- > 0.30

Peace Airshed Zone Association

Span Responses

Non Methane Hydrocarbon (NMHC)

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - September 2016

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

Maximum Value: 39.7 $\mu g/m^3$ on Sep 22 09:00

Maximum Daily Average: 9.9 $\mu g/m^3$ on Sep 28

Minimum Value: 0 $\mu g/m^3$ on Sep 17 15:00

Maximum Diurnal Average: 6.7 $\mu g/m^3$ at hour 9

Monthly Average: 3.73 $\mu g/m^3$

Minimum Daily Average: 0.8 $\mu g/m^3$ on Sep 18

Minimum Diurnal Average: 1.6 $\mu g/m^3$ at hour 16

Percentiles: $P_1 = 0.3$ $P_{10} = 0.7$ $Q_1 = 1.2$ Median = 2.5 $Q_3 = 4.9$ $P_{90} = 8.6$ $P_{99} = 17.6$

Hours in Service:	720
Hours of Data:	716
Hours of Missing Data:	4
Hours of Calibration:	2
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-Sep	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	3	2	1.4	4.6
2-Sep	3	3	4	4	4	4	4	5	4	4	3	2	M	M	3	1	1	1	1	1	1	1	1	1	2.5	4.6
3-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.5
4-Sep	2	1	2	2	3	3	3	3	3	3	2	1	1	1	1	2	1	2	2	3	3	5	4	3	2.2	4.6
5-Sep	3	3	4	4	4	4	4	5	6	7	4	4	3	2	2	1	1	1	2	4	4	5	7	7	3.7	7.1
6-Sep	4	4	4	4	4	4	4	4	3	2	1	1	1	1	1	2	1	1	2	2	3	2	2	2	2.6	4.4
7-Sep	2	3	3	2	3	3	3	3	2	1	1	1	1	1	C	C	2	2	3	5	8	8	8	7	3.3	8.1
8-Sep	8	5	4	4	4	5	6	6	4	3	2	2	2	3	3	3	2	2	1	3	2	3	2	1	3.3	8.2
9-Sep	2	2	3	4	3	3	4	7	8	4	1	2	2	3	1	1	1	2	3	4	5	3	2	1	3.1	8.3
10-Sep	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	11	1	1	1	1	1	1	1	1.5	10.7
11-Sep	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	2	2	1	1	5	2	2	3	1.1	4.9
12-Sep	3	3	3	2	2	2	3	6	4	4	2	1	1	1	0	0	0	1	1	2	1	2	1	1	1.9	5.6
13-Sep	2	3	3	3	3	3	4	6	3	2	2	1	1	1	1	1	1	1	2	2	2	2	2	2	2.3	6.1
14-Sep	2	2	2	2	3	4	5	4	3	2	1	0	0	0	1	1	1	1	1	3	6	4	3	3	2.2	5.8
15-Sep	4	4	5	6	5	6	6	8	6	4	3	3	1	1	1	1	2	3	3	6	6	5	5	5	4.1	7.6
16-Sep	4	4	4	4	4	5	8	8	6	2	2	2	1	1	1	1	2	2	3	3	3	4	8	6	3.7	8.2
17-Sep	9	11	7	5	5	2	3	5	3	2	1	0	0	0	0	0	0	1	1	1	0	1	0	0	2.5	11.3
18-Sep	1	0	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	0.8	1.4
19-Sep	2	1	1	1	1	2	3	4	3	2	1	1	1	1	1	3	5	3	3	4	7	5	1	2	2.4	6.6
20-Sep	2	2	3	4	4	5	5	6	5	2	2	1	1	1	1	2	1	1	1	3	7	6	13	9	3.6	13.1
21-Sep	9	6	6	6	7	6	6	7	9	5	4	3	3	1	0	1	0	1	2	5	6	6	10	13	5.0	12.6
22-Sep	10	10	12	12	13	9	8	24	40	14	6	4	3	3	2	2	1	1	2	5	4	5	5	6	8.3	39.7
23-Sep	6	12	9	21	12	11	12	14	18	20	22	11	7	3	2	1	2	2	2	2	3	4	3	2	8.3	21.7
24-Sep	3	3	2	2	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	2	3	7	3	3	2.0	6.7
25-Sep	3	3	3	5	8	9	9	8	9	14	9	8	4	2	1	1	1	1	2	3	5	8	13	5	5.6	14.1
26-Sep	6	8	8	5	5	5	7	18	15	5	4	3	3	1	1	1	1	6	6	5	4	2	1	1	5.0	17.6
27-Sep	1	1	1	1	1	1	3	3	1	2	1	1	1	2	4	5	4	6	8	10	11	11	10	9	4.1	10.7
28-Sep	9	11	11	11	11	11	11	13	15	15	9	9	6	5	5	5	5	5	8	12	16	8	13	14	9.9	16.3
29-Sep	12	11	11	11	11	11	13	15	18	13	8	7	5	5	4	4	5	5	7	9	10	9	7	8	9.1	17.7
30-Sep	8	9	9	8	8	7	7	8	8	6	5	4	4	4	5	4	2	2	2	2	2	2	2	2	5.0	8.8
	4.2	4.4	4.2	4.6	4.5	4.4	5.0	6.4	6.7	4.8	3.4	2.7	2.0	1.6	1.6	1.6	2.0	2.0	2.5	3.5	4.3	4.2	4.5	4.1	Diurnal Average	
	11.8	11.7	11.5	20.7	12.6	11.3	13.4	23.7	39.7	19.5	21.7	10.7	6.7	4.8	5.1	5.0	10.7	6.1	8.5	12.2	16.3	10.6	13.1	14.2	Diurnal Maximum	

C - Calibration M - Maintenance

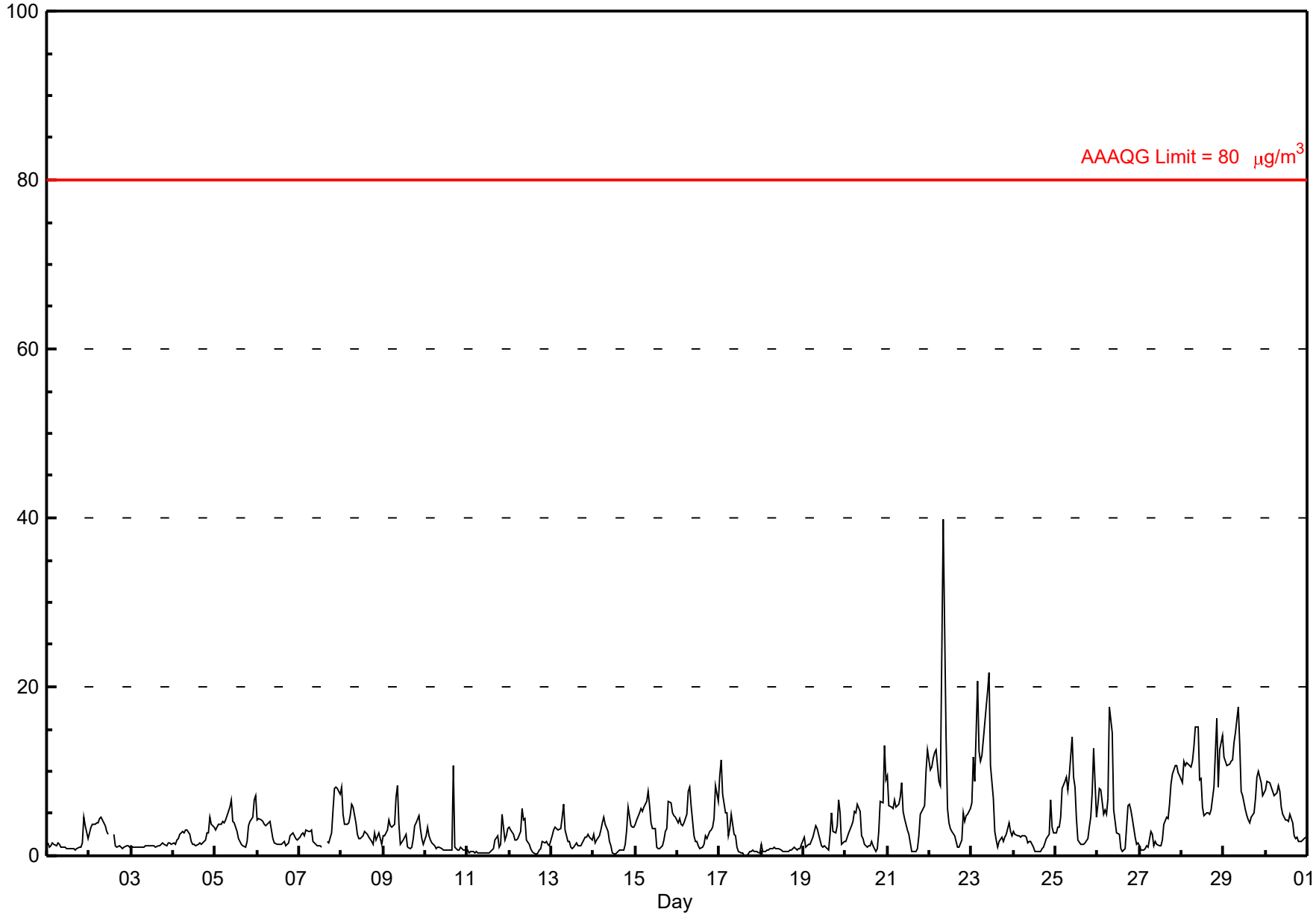
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Maximums

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

Henry Pirker - September 2016

Maximum Value: 90.5 $\mu g/m^3$ on Sep 22 09:00

Maximum Daily Average: 14.1 $\mu g/m^3$ on Sep 22

Minimum Value: 0 $\mu g/m^3$ on Sep 17 16:00

Maximum Diurnal Average: 18.2 $\mu g/m^3$ at hour 1

Monthly Average: 5.94 $\mu g/m^3$

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

Minimum Diurnal Average: 2.2 $\mu g/m^3$ at hour 15

Percentiles: $P_1 = 0.6$ $P_{10} = 1.1$ $Q_1 = 1.6$ Median = 3.6 $Q_3 = 7.1$ $P_{90} = 12.2$ $P_{99} = 43.3$

Hours in Service:	720
Hours of Data:	716
Hours of Missing Data:	4
Hours of Calibration:	2
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-Sep	5	1	1	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	16	8	2	2.4	16.0
2-Sep	6	4	4	4	4	6	6	6	6	4	3	3	M	M	3	2	1	2	1	1	1	2	1	1	3.3	6.4
3-Sep	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1.5	3.1
4-Sep	3	2	2	2	3	3	3	3	4	3	2	2	2	2	2	2	2	2	3	4	4	5	5	4	2.8	5.3
5-Sep	8	4	4	4	5	4	5	6	7	11	5	5	3	3	2	2	1	1	3	9	7	7	8	8	5.1	10.8
6-Sep	8	5	6	5	4	4	4	5	4	3	2	2	2	2	2	2	2	2	2	3	3	3	2	2	3.2	8.1
7-Sep	5	3	3	3	4	3	4	4	2	2	1	1	2	1	C	C	6	3	5	8	9	11	12	9	4.6	12.5
8-Sep	15	7	4	6	4	6	7	7	6	3	3	2	3	4	3	6	3	4	2	4	3	3	3	2	4.6	14.9
9-Sep	26	3	5	6	4	4	5	12	10	5	2	2	11	13	1	2	2	5	5	4	6	4	3	2	6.0	25.9
10-Sep	8	5	3	2	2	2	1	1	1	1	1	1	1	1	1	1	79	3	1	1	2	1	1	2	5.1	78.7
11-Sep	11	1	1	1	1	1	1	1	1	2	0	1	1	1	1	2	7	8	1	2	14	2	4	5	2.8	14.2
12-Sep	30	4	4	3	2	2	4	8	7	7	3	3	2	1	1	0	1	2	2	3	2	2	2	2	4.0	30.2
13-Sep	27	4	4	4	4	5	6	9	4	2	3	2	3	2	3	2	2	2	3	3	3	3	3	2	4.3	26.7
14-Sep	36	2	2	3	3	5	6	6	4	4	3	2	0	1	1	1	1	1	2	7	7	4	4	7	4.6	36.1
15-Sep	15	5	6	9	6	6	7	9	8	5	4	4	3	2	1	2	3	4	5	12	11	7	6	5	6.0	15.2
16-Sep	7	6	5	4	5	6	16	12	8	4	2	2	2	1	1	2	4	3	4	4	4	6	12	7	5.2	15.8
17-Sep	16	13	9	6	10	4	5	9	3	4	2	1	1	1	0	0	1	1	1	1	1	1	1	0	3.7	16.4
18-Sep	49	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3.1	49.1
19-Sep	41	1	1	2	2	3	4	4	5	2	2	1	2	1	1	5	7	6	4	8	11	21	2	2	5.8	41.5
20-Sep	7	3	3	4	5	7	7	8	8	3	2	2	1	2	1	4	2	1	1	7	9	8	61	10	6.9	61.0
21-Sep	30	8	6	6	7	6	7	8	12	7	5	4	3	2	1	1	1	1	4	7	7	8	17	18	7.4	30.0
22-Sep	22	11	13	14	16	10	12	47	91	41	8	4	4	3	3	3	2	1	3	8	5	6	6	6	14.1	90.5
23-Sep	10	30	13	51	25	14	13	15	24	23	29	16	11	4	3	2	2	4	2	3	4	5	4	3	12.8	50.6
24-Sep	45	3	3	3	3	3	3	3	2	2	3	2	1	1	1	1	1	2	2	3	4	11	5	4	4.5	44.6
25-Sep	34	5	4	6	10	10	12	9	14	20	11	11	9	3	2	2	2	3	4	5	5	15	16	7	9.1	34.3
26-Sep	12	16	16	7	7	6	9	31	17	10	7	4	5	3	3	2	1	16	17	7	7	4	2	2	8.7	31.4
27-Sep	13	1	1	1	1	1	24	7	2	2	2	2	2	3	4	5	6	7	10	10	12	12	11	11	6.2	23.5
28-Sep	14	14	12	12	12	11	13	17	22	22	14	11	7	5	6	5	5	7	12	17	25	11	20	19	13.1	25.4
29-Sep	20	12	12	12	12	13	15	16	22	16	10	8	7	5	5	5	6	6	8	10	11	10	8	8	10.6	22.2
30-Sep	18	10	10	10	8	8	9	11	9	8	6	5	5	5	7	6	3	3	3	2	2	2	2	3	6.4	18.1
	18.2	6.2	5.3	6.4	5.8	5.2	6.9	9.2	10.2	7.3	4.7	3.5	3.2	2.5	2.2	2.3	5.1	3.4	3.8	5.3	6.1	6.4	7.7	5.2	Diurnal Average	
	49.1	29.9	15.5	50.6	24.5	13.9	23.5	46.6	90.5	41.0	29.1	15.9	11.1	12.6	7.5	5.8	78.7	16.4	16.9	17.5	25.4	21.5	61.0	19.1	Diurnal Maximum	

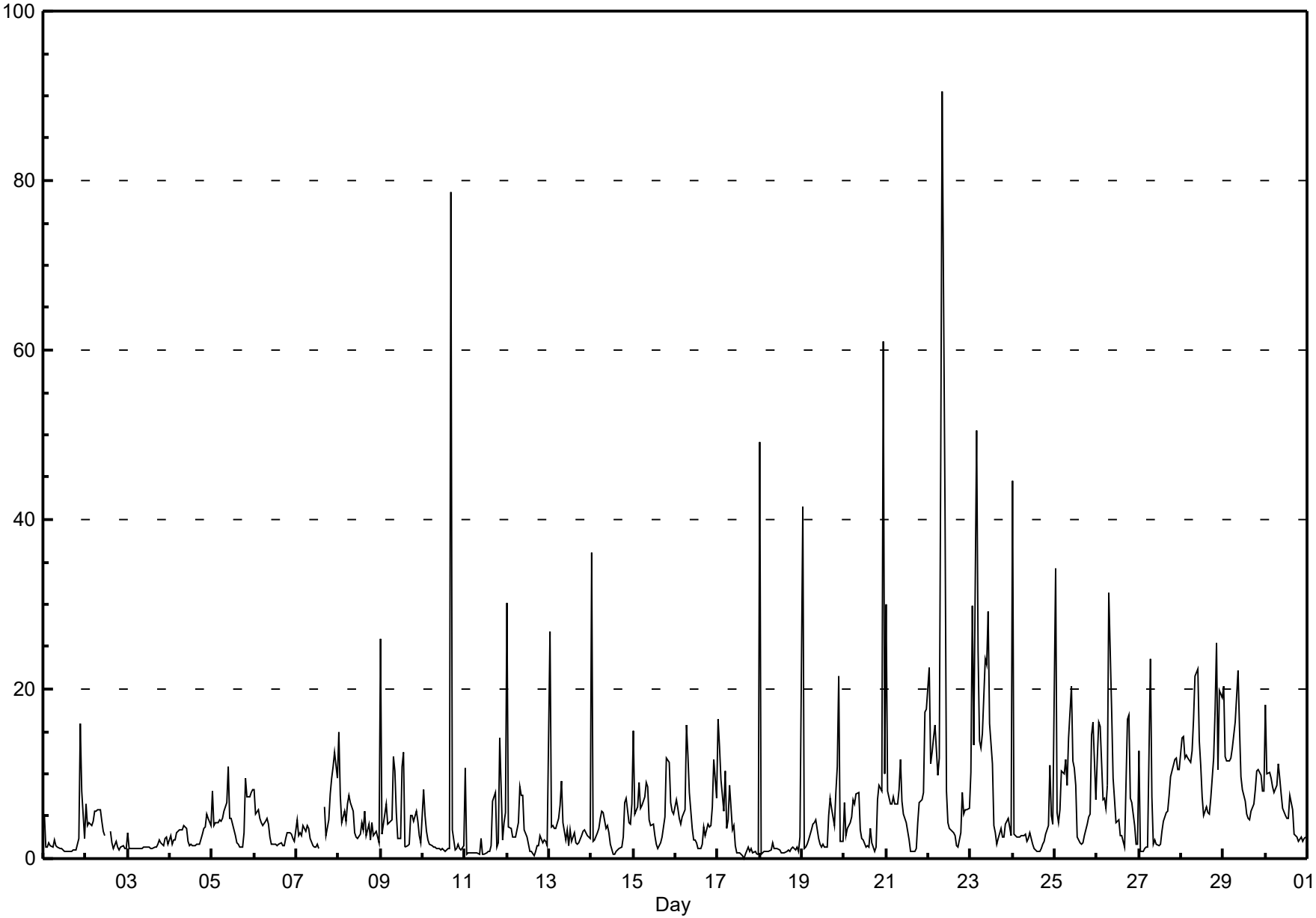
C - Calibration M - Maintenance

Peace Airshed Zone Association

Hourly Maximums

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

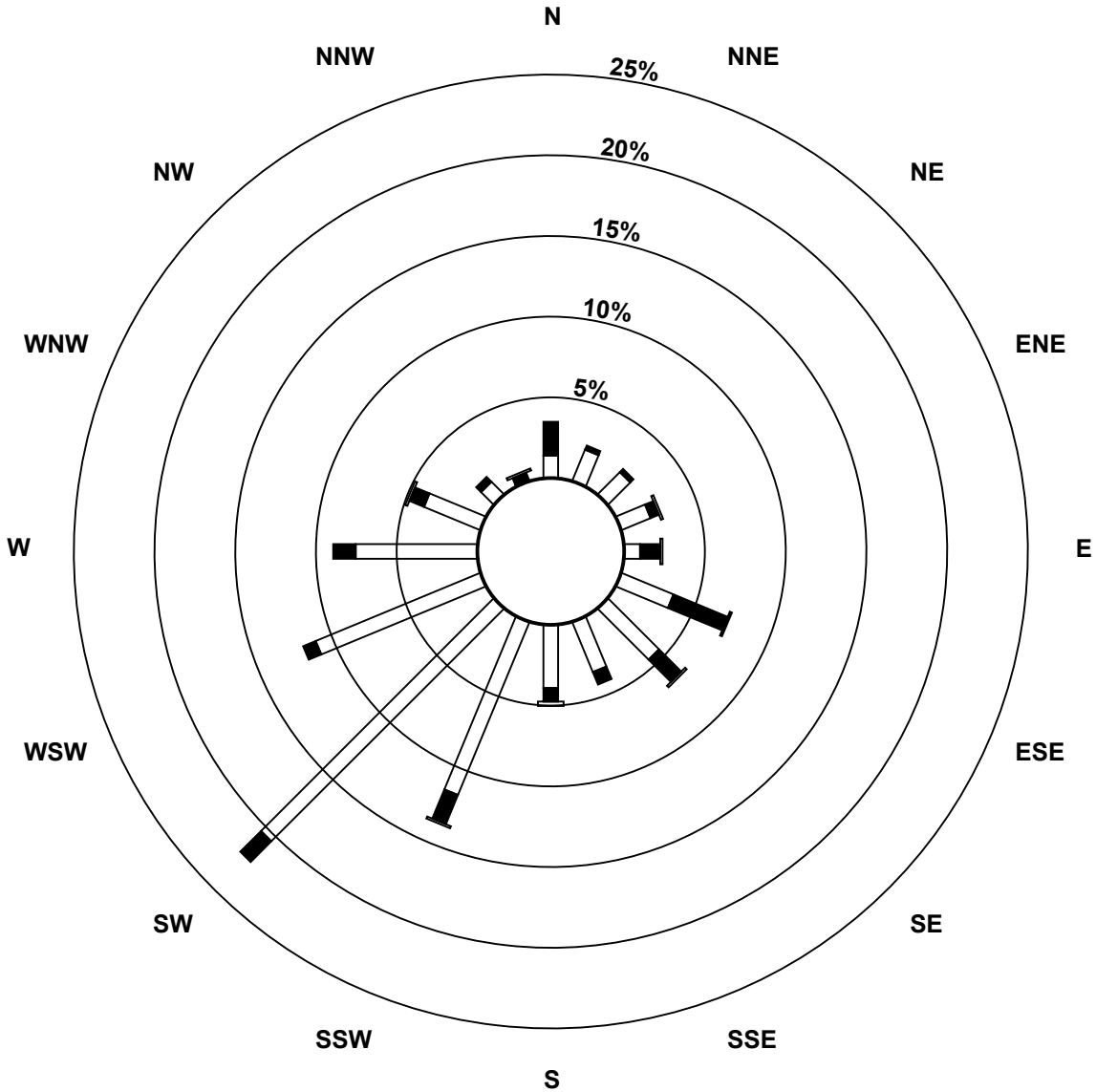
Henry Pirker - September 2016



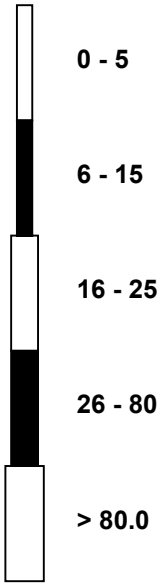
Pollutant Rose

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

Henry Pirker - September 2016



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



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - September 2016

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

Maximum Value: 25.2 °C on Sep 13 16:00

Maximum Daily Average: 16.9 °C on Sep 14

Minimum Value: -2 °C on Sep 29 07:00

Minimum Daily Average: 6.0 °C on Sep 3

Maximum Diurnal Average: 16.5 °C at hour 15

Minimum Diurnal Average: 5.7 °C at hour 7

Monthly Average: 10.85 °C

Percentiles: P_1 = 0.0 P_{10} = 4.1 Q_1 = 7.2 Median = 10.6 Q_3 = 14.5 P_{90} = 17.6 P_{99} = 23.7

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

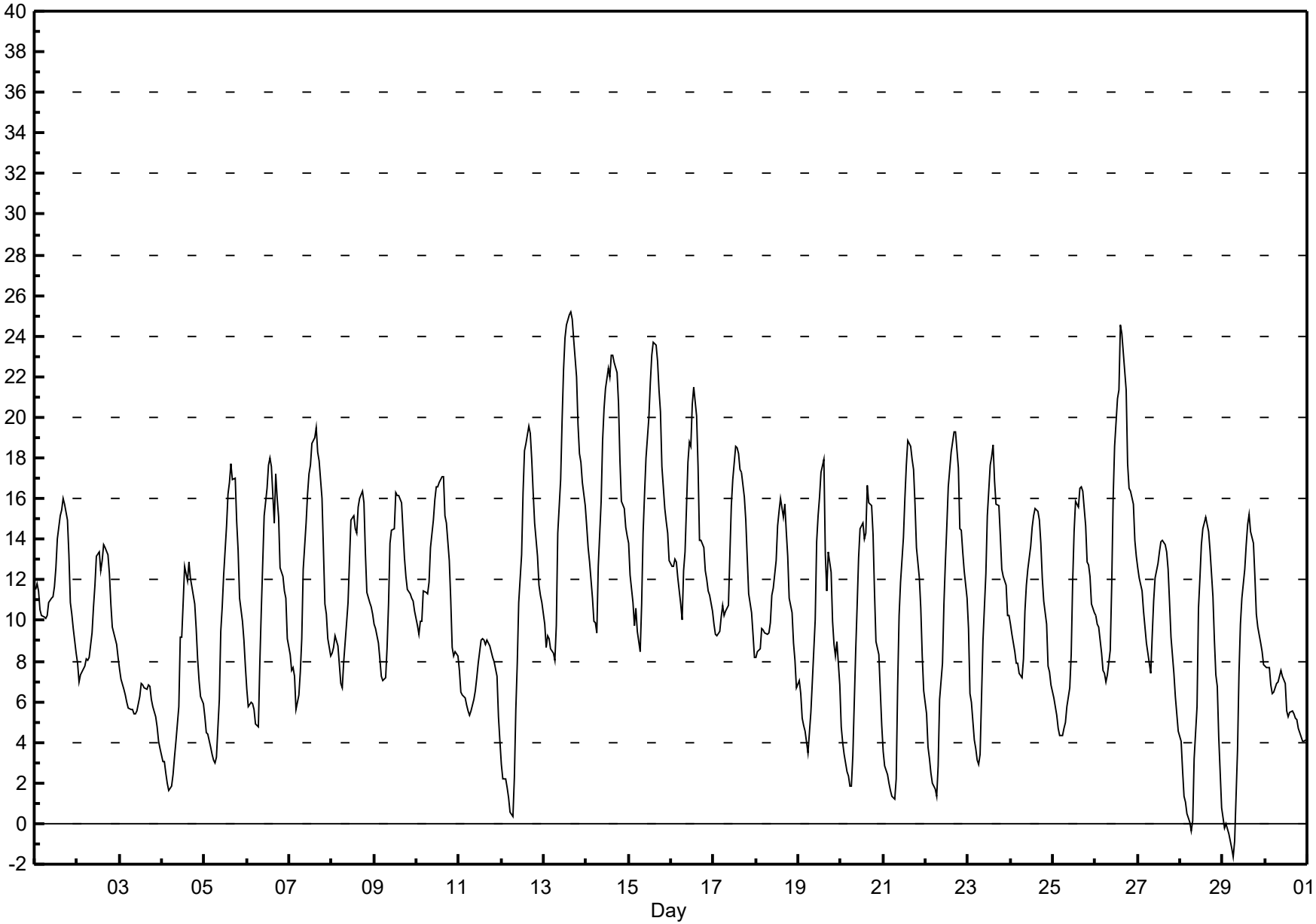
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	12	12	11	11	10	10	10	10	11	11	11	12	13	14	15	15	16	16	15	13	11	10	10	8	12.0	16.0
2-Sep	8	7	7	8	8	8	8	8	9	11	12	13	13	12	13	14	14	13	12	11	10	9	9	8	10.2	13.7
3-Sep	8	7	7	6	6	6	6	6	5	5	6	6	7	7	7	7	7	7	6	6	5	5	4	4	6.0	7.6
4-Sep	3	3	2	2	2	2	2	3	4	6	9	9	11	13	12	13	12	12	11	10	8	7	6	6	7.0	12.9
5-Sep	5	4	4	4	3	3	3	3	6	9	11	12	15	16	17	18	17	17	15	13	11	10	9	8	9.8	17.8
6-Sep	7	6	6	6	6	5	5	8	10	13	15	17	18	18	18	15	17	16	15	13	12	11	11	9	11.5	18.0
7-Sep	8	8	8	7	6	6	7	9	13	15	16	17	18	19	19	20	18	18	16	13	11	10	9	8	12.5	19.5
8-Sep	8	9	9	9	8	7	7	8	10	11	13	15	15	15	14	16	16	16	16	13	11	11	11	10	11.6	16.4
9-Sep	10	10	9	8	7	7	7	9	11	14	14	15	16	16	16	16	14	13	12	12	11	11	11	10	11.6	16.3
10-Sep	10	9	10	10	11	11	11	12	14	15	16	17	17	17	17	17	15	15	13	11	9	8	8	8	12.6	17.1
11-Sep	8	6	6	6	6	6	5	6	6	7	7	8	9	9	9	9	9	9	8	8	8	7	5	4	7.1	9.1
12-Sep	3	2	2	2	1	1	0	2	6	8	11	13	16	18	19	20	19	18	16	15	13	12	11	11	10.0	19.6
13-Sep	10	9	9	9	9	8	8	10	14	17	20	22	24	25	25	25	25	24	22	20	18	18	17	16	16.8	25.2
14-Sep	15	14	13	11	10	10	9	13	16	19	20	21	22	22	23	23	23	22	21	18	16	16	15	14	16.9	23.1
15-Sep	14	12	11	10	11	9	8	11	14	16	18	20	22	23	24	24	23	21	20	18	16	15	14	13	16.1	23.7
16-Sep	13	13	13	13	12	11	10	12	13	18	19	19	21	21	20	18	14	14	14	12	12	11	11	10	14.3	21.5
17-Sep	10	9	9	9	10	11	10	10	11	13	16	17	19	18	18	17	17	16	15	13	11	10	9	8	12.9	18.6
18-Sep	8	8	9	10	10	9	9	9	10	11	12	13	15	15	16	15	16	14	13	11	10	9	8	7	11.1	16.0
19-Sep	7	6	5	5	5	3	4	5	7	10	14	15	16	17	18	13	11	13	12	10	9	8	9	7	9.7	18.0
20-Sep	5	4	3	3	2	2	2	3	9	11	13	14	15	14	14	17	16	16	14	11	9	8	7	5	9.0	16.7
21-Sep	4	3	2	2	2	1	1	2	7	10	12	14	16	18	19	19	18	17	16	14	12	11	8	7	9.7	18.9
22-Sep	5	4	3	2	2	2	1	3	6	8	11	13	15	17	18	19	19	19	17	15	14	13	12	11	10.4	19.3
23-Sep	10	6	6	4	4	3	3	3	9	11	12	15	18	18	19	17	16	16	14	12	12	12	10	10	10.8	18.7
24-Sep	10	9	8	8	8	7	7	8	10	12	13	14	15	15	16	15	15	14	12	11	10	8	7	7	10.8	15.5
25-Sep	6	6	5	5	4	4	5	5	6	7	8	12	14	16	16	17	17	16	15	13	13	12	11	10	10.1	16.6
26-Sep	10	10	10	8	8	7	7	7	9	12	16	19	21	21	25	24	23	21	18	16	16	16	14	13	14.6	24.6
27-Sep	13	12	11	10	10	9	8	7	9	11	12	13	13	14	14	14	13	12	11	9	7	6	5	5	10.4	13.9
28-Sep	4	3	1	1	1	0	0	0	3	6	11	12	14	14	15	15	14	13	11	9	7	7	4	1	6.9	15.1
29-Sep	0	0	0	-1	-1	-1	-2	-1	4	7	10	11	13	14	15	15	14	14	12	10	10	9	8	8	7.0	15.2
30-Sep	8	8	8	7	6	6	7	7	7	8	7	7	6	5	5	6	5	5	5	5	4	4	4	4	6.0	7.7
	8.0	7.3	7.0	6.5	6.2	5.8	5.7	6.7	9.0	11.0	12.8	14.1	15.4	16.1	16.5	16.3	15.8	15.3	13.9	12.2	10.9	10.2	9.3	8.4	Diurnal Average	
	14.7	13.6	13.0	12.9	12.1	11.4	11.3	12.7	15.9	18.9	20.4	22.3	23.9	24.6	25.0	25.2	24.8	23.9	22.0	19.6	18.2	17.8	16.8	15.7	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - September 2016

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

Maximum Value: 89.8 % on Sep 2 08:00 Maximum Daily Average: 82.1 % on Sep 1

Minimum Value: 25 % on Sep 13 16:00 Minimum Daily Average: 46.1 % on Sep 13

Maximum Diurnal Average: 79.9 % at hour 7 Minimum Diurnal Average: 45.8 % at hour 15

Monthly Average: 64.22 % Percentiles: P_1 = 27.7 P_{10} = 39.9 Q_1 = 50.5 Median = 65.2 Q_3 = 78.9 P_{90} = 86.9 P_{99} = 89.1

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

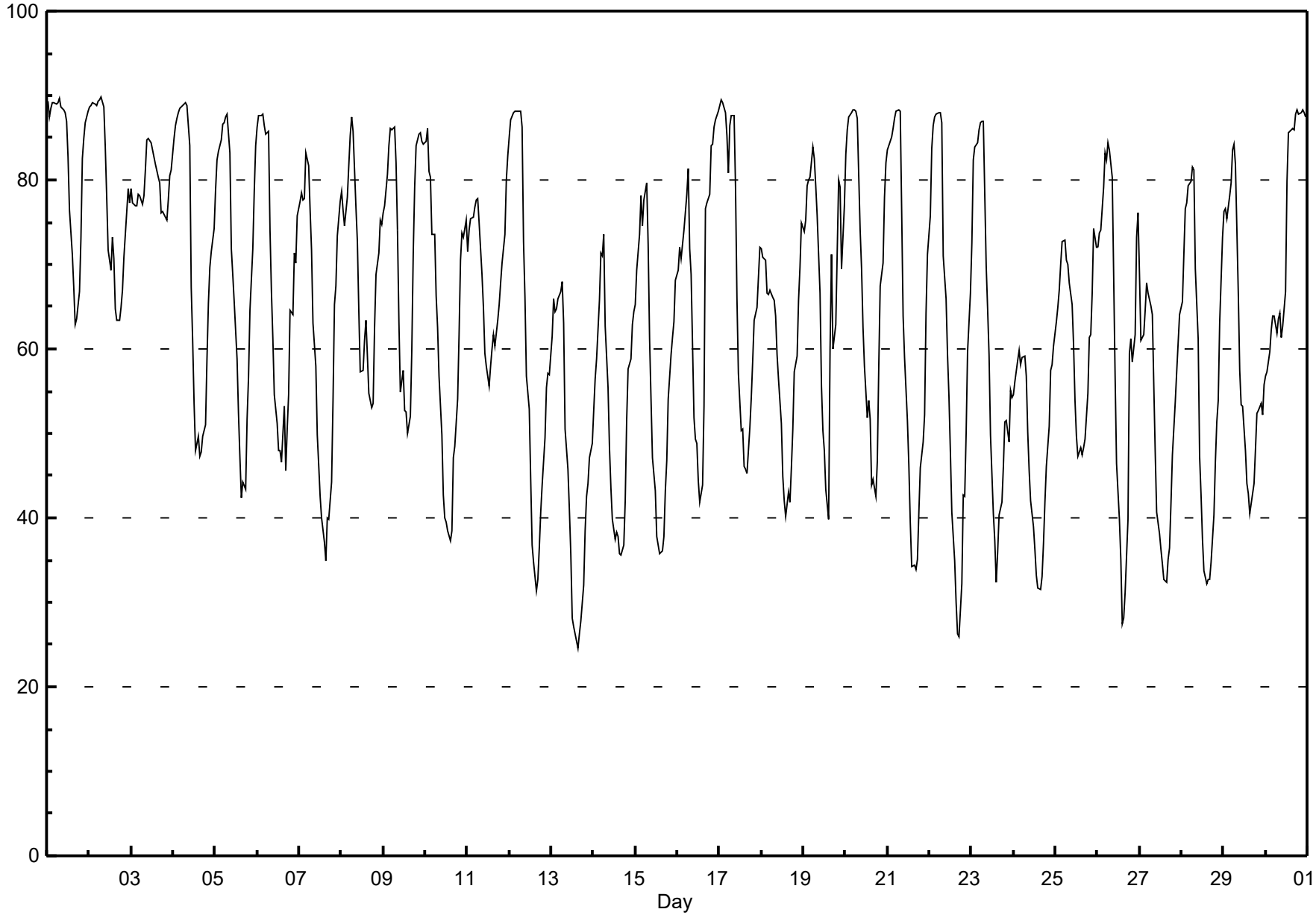
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	89	87	88	89	89	89	89	90	89	88	88	87	83	77	71	67	63	64	67	73	82	85	87	88	82.1	89.7
2-Sep	89	89	89	89	89	89	90	90	89	84	78	72	69	73	71	65	63	63	65	67	71	76	79	77	78.1	89.8
3-Sep	79	77	77	77	78	78	77	78	81	85	85	84	84	83	82	80	80	76	76	76	75	78	81	81	79.5	84.9
4-Sep	85	86	87	88	89	89	89	89	89	84	67	61	54	48	50	47	48	50	51	59	65	70	72	74	70.4	89.2
5-Sep	79	82	83	85	87	87	88	88	83	72	69	66	59	52	47	42	44	43	52	57	65	72	79	84	69.3	87.7
6-Sep	86	88	88	88	87	85	86	74	67	61	55	51	48	48	47	53	46	51	55	65	64	71	70	76	67.0	87.8
7-Sep	77	79	78	78	83	82	77	72	63	58	50	46	43	40	37	35	40	40	44	54	65	67	73	77	60.7	83.2
8-Sep	79	76	75	78	82	85	87	86	77	73	65	57	58	61	63	59	55	53	53	63	69	71	75	75	69.8	87.4
9-Sep	76	77	81	84	86	86	86	82	74	63	55	57	53	53	50	52	60	71	79	84	85	86	85	84	72.9	86.2
10-Sep	85	86	81	80	74	74	66	63	57	50	43	40	39	38	37	38	47	48	54	62	71	74	73	75	60.6	86.1
11-Sep	72	74	75	76	77	78	78	75	69	65	60	58	56	58	60	62	60	63	65	68	70	74	80	83	68.9	82.9
12-Sep	85	87	88	88	88	88	88	86	73	66	57	53	45	37	35	31	33	37	41	44	49	55	57	57	61.2	88.2
13-Sep	62	66	64	65	66	67	68	63	51	46	41	36	28	27	25	25	26	28	32	38	42	44	47	49	46.1	68.0
14-Sep	53	56	59	66	71	71	74	63	55	48	44	40	37	38	38	36	36	37	42	51	58	59	63	64	52.4	73.6
15-Sep	65	69	74	78	75	78	80	72	61	54	47	43	38	37	36	36	38	43	47	54	59	61	63	68	57.3	79.7
16-Sep	69	72	71	72	74	78	81	72	69	52	49	49	44	42	44	53	77	77	78	84	84	86	87	88	68.9	88.2
17-Sep	89	89	89	88	85	81	86	88	88	79	66	57	50	51	46	46	45	51	54	59	63	65	68	72	69.0	89.5
18-Sep	72	71	71	67	67	67	66	66	64	59	56	51	45	42	40	43	42	46	51	57	59	66	70	75	58.8	74.9
19-Sep	74	75	79	80	80	84	83	79	76	67	56	50	48	43	40	60	71	60	63	71	80	79	70	77	68.6	83.9
20-Sep	83	86	87	88	88	88	88	87	74	69	62	58	52	54	52	44	45	43	47	58	68	70	78	82	68.8	88.3
21-Sep	84	84	85	86	87	88	88	88	76	64	59	51	46	40	34	34	34	35	41	46	49	52	64	71	62.0	88.3
22-Sep	76	84	86	88	88	88	88	87	71	66	59	54	48	41	35	30	26	26	32	43	43	50	60	67	59.7	87.9
23-Sep	73	82	84	84	86	87	87	87	70	65	59	50	41	37	32	36	40	42	46	51	51	49	55	54	60.4	87.0
24-Sep	55	56	59	60	58	59	59	57	50	46	42	39	36	33	32	32	33	37	42	46	51	57	58	60	48.2	60.4
25-Sep	63	65	67	70	73	73	71	70	68	65	60	54	50	47	48	47	48	49	55	61	62	67	74	72	61.6	74.2
26-Sep	72	74	74	79	83	82	84	84	80	69	57	46	40	35	28	28	31	40	59	61	58	62	73	76	61.5	84.5
27-Sep	69	61	62	65	68	67	65	64	56	48	41	38	36	35	33	32	35	36	42	48	54	57	61	64	51.4	69.0
28-Sep	66	71	77	77	79	80	82	81	69	61	47	43	38	34	32	33	33	35	40	47	51	54	63	73	56.9	81.5
29-Sep	76	77	75	78	80	84	84	82	67	57	53	53	48	44	43	41	42	44	48	52	53	54	52	56	60.1	84.3
30-Sep	57	57	60	62	64	64	62	64	64	61	63	67	80	86	86	86	86	88	88	88	88	88	88	88	74.3	88.4
	74.5	76.2	77.1	78.4	79.3	79.8	79.9	77.5	70.6	64.2	57.7	53.8	49.8	47.8	45.8	45.8	47.5	49.2	53.6	59.5	63.5	66.6	70.2	73.0	Diurnal Average	
	89.3	89.5	89.2	89.1	89.1	89.3	89.5	89.8	88.9	88.3	88.0	86.9	83.5	85.6	85.7	86.1	85.9	87.8	88.3	87.8	88.0	88.4	88.0	88.2	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - September 2016

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

Maximum Value: 609.3 W/m^2 on Sep 5 13:00

Maximum Daily Average: 181.0 W/m^2 on Sep 7

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

Minimum Daily Average: 12.2 W/m^2 on Sep 30

Maximum Diurnal Average: 417.4 W/m^2 at hour 13

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

Monthly Average: 126.55 W/m^2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 11.1 Q_3 = 244.4 P_{90} = 432.9 P_{99} = 568.2

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

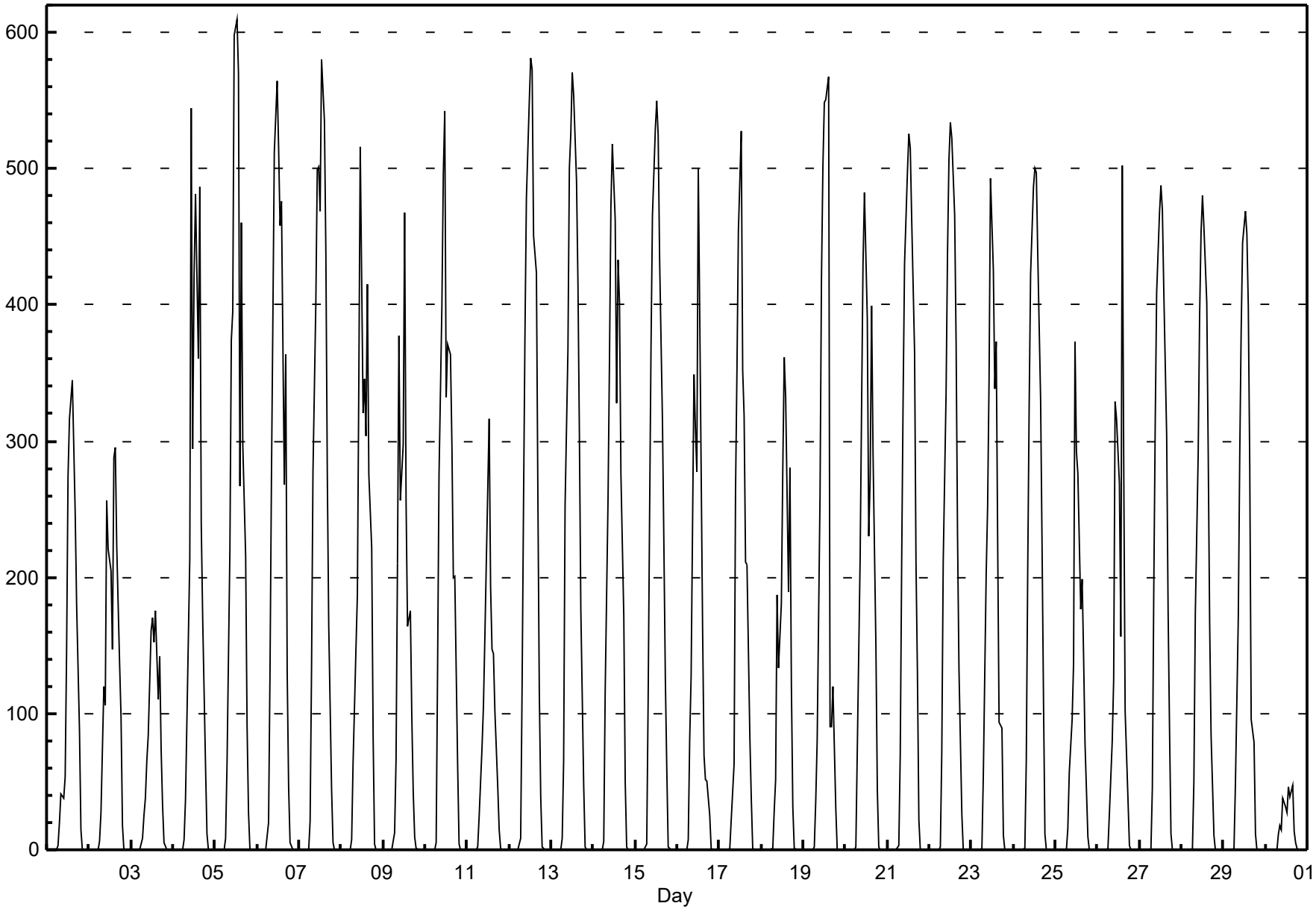
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	0	0	0	0	0	0	3	20	41	37	54	146	274	316	345	297	247	180	88	15	0	0	0	0	85.9	345.0
2-Sep	0	0	0	0	0	0	6	27	119	106	256	221	205	147	288	296	223	136	98	18	0	0	0	0	89.5	295.5
3-Sep	0	0	0	0	0	0	8	25	38	65	84	161	171	152	175	110	142	73	32	5	0	0	0	0	51.7	175.1
4-Sep	0	0	0	0	0	0	7	37	96	214	544	295	422	481	360	486	240	170	61	12	0	0	0	0	142.7	543.9
5-Sep	0	0	0	0	0	0	8	63	220	374	395	598	609	569	267	460	297	215	90	27	0	0	0	0	174.7	609.3
6-Sep	0	0	0	0	0	0	20	130	271	389	512	564	516	458	476	268	363	130	46	6	0	0	0	0	172.9	564.2
7-Sep	0	0	0	0	0	0	21	132	278	401	500	501	469	580	535	438	276	165	45	5	0	0	0	0	181.0	580.1
8-Sep	0	0	0	0	0	0	7	64	147	187	342	516	320	346	304	416	276	222	83	4	0	0	0	0	134.7	515.9
9-Sep	0	0	0	0	0	0	13	66	210	377	257	298	467	255	163	176	98	42	9	1	0	0	0	0	101.3	467.3
10-Sep	0	0	0	0	0	0	5	134	276	398	496	542	332	371	364	297	199	201	62	4	0	0	0	0	153.3	542.0
11-Sep	0	0	0	0	0	0	2	25	75	105	156	211	316	193	147	144	102	46	15	1	0	0	0	0	64.0	316.3
12-Sep	0	0	0	0	0	0	8	120	255	378	478	548	581	573	451	423	263	116	39	3	0	0	0	0	176.5	581.5
13-Sep	0	0	0	0	0	0	9	65	252	366	500	526	571	554	490	415	305	176	48	2	0	0	0	0	178.3	571.1
14-Sep	0	0	0	0	0	0	6	116	257	359	472	518	462	328	433	401	275	171	50	2	0	0	0	0	160.4	518.3
15-Sep	0	0	0	0	0	0	5	111	245	369	466	528	549	524	434	314	222	126	60	2	0	0	0	0	164.8	549.3
16-Sep	0	0	0	0	0	0	7	81	127	349	309	278	500	394	164	70	51	51	25	1	0	0	0	0	100.3	500.0
17-Sep	0	0	0	0	0	0	1	22	63	262	352	454	528	353	319	211	209	83	38	1	0	0	0	0	120.6	528.0
18-Sep	0	0	0	0	0	0	1	29	51	187	133	181	280	362	333	189	280	121	32	1	0	0	0	0	90.8	361.7
19-Sep	0	0	0	0	0	0	2	36	80	260	420	501	549	551	568	90	91	120	31	0	0	0	0	0	137.5	567.6
20-Sep	0	0	0	0	0	0	2	73	214	324	430	482	390	231	273	399	291	150	45	2	0	0	0	0	137.8	481.8
21-Sep	0	0	0	0	0	0	3	70	211	331	430	497	525	515	462	366	211	130	22	0	0	0	0	0	157.2	525.3
22-Sep	0	0	0	0	0	0	2	71	211	335	438	507	534	522	466	372	231	132	26	0	0	0	0	0	160.3	534.3
23-Sep	0	0	0	0	0	0	1	55	203	252	344	493	425	338	373	228	94	90	10	0	0	0	0	0	121.1	492.6
24-Sep	0	0	0	0	0	0	1	66	205	325	423	486	500	497	437	330	224	112	11	0	0	0	0	0	150.8	499.9
25-Sep	0	0	0	0	0	0	0	15	57	96	137	373	292	276	176	199	142	78	10	0	0	0	0	0	77.1	373.0
26-Sep	0	0	0	0	0	0	1	27	80	125	329	316	269	157	502	286	102	37	3	0	0	0	0	0	93.0	502.0
27-Sep	0	0	0	0	0	0	0	45	191	312	409	468	488	469	409	303	175	89	12	0	0	0	0	0	140.4	487.7
28-Sep	0	0	0	0	0	0	1	51	174	290	392	453	480	457	402	292	167	84	10	0	0	0	0	0	135.6	480.0
29-Sep	0	0	0	0	0	0	1	48	170	288	381	446	469	452	398	281	95	79	12	0	0	0	0	0	130.0	468.6
30-Sep	0	0	0	0	0	0	0	12	18	15	38	31	27	46	39	47	13	5	1	0	0	0	0	0	12.2	46.9
	0.0	0.0	0.0	0.0	0.0	0.0	5.0	61.2	161.2	262.6	349.1	404.6	417.4	382.3	351.8	286.8	196.8	117.7	37.0	3.7	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	0.1	20.9	133.7	277.5	401.0	543.9	598.1	609.3	580.1	567.6	486.3	363.4	222.2	97.6	26.9	0.0	0.0	0.0	0.0	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - September 2016



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - September 2016

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	6	2	5	9	7	7	6	9	4	7	8	9	12	12	10	11	10	8	7	2	2	2	1	4	5.6	11.8
Dir	17	192	222	283	254	260	241	309	284	204	232	246	257	269	268	258	244	259	245	261	138	302	280	289	259.2	269.0
2 Spd	5	3	4	2	1	2	2	3	5	3	2	3	4	7	10	9	11	12	12	9	6	8	10	12	5.4	12.2
Dir	298	282	279	262	139	176	132	212	255	250	302	211	244	284	279	284	281	278	277	272	259	255	254	258	266.9	257.9
3 Spd	13	14	13	13	16	16	17	15	15	13	15	16	15	15	16	17	17	15	12	11	10	5	5	5	13.0	17.0
Dir	270	259	258	256	253	251	253	252	252	253	256	256	261	270	278	277	279	282	280	278	278	272	242	233	263.3	279.4
4 Spd	3	3	1	0	1	1	2	2	4	5	5	4	2	2	3	1	3	4	4	6	5	6	5	5	2.0	5.8
Dir	194	177	163	38	138	300	116	111	124	139	152	128	174	245	345	68	117	74	53	55	70	71	64	56	97.3	55.4
5 Spd	4	2	3	2	2	1	3	2	2	3	3	5	4	5	3	5	7	7	6	1	1	2	1	0	1.8	7.0
Dir	57	66	75	129	31	62	110	126	121	146	115	128	115	139	215	211	193	215	172	243	295	102	117	199	146.1	214.6
6 Spd	2	1	2	2	4	4	3	5	6	8	9	9	8	6	12	11	9	8	3	2	5	4	8	7	5.4	12.3
Dir	267	208	244	206	202	191	190	201	203	215	209	216	221	210	172	171	174	184	221	216	224	198	210	196	199.6	172.4
7 Spd	6	5	7	4	2	4	4	5	9	10	17	17	17	18	17	16	14	14	11	7	4	2	1	1	8.6	17.8
Dir	203	254	228	245	136	232	201	188	213	218	232	217	229	246	240	235	244	232	222	223	221	219	241	256	228.7	246.0
8 Spd	3	4	6	4	2	1	3	7	9	11	14	14	14	17	16	18	14	11	10	9	4	7	8	8	7.8	17.8
Dir	151	189	200	196	266	227	202	217	216	215	238	253	265	273	270	273	270	266	250	272	269	208	219	218	246.6	273.3
9 Spd	5	7	1	3	4	4	4	3	3	4	6	7	8	9	8	12	8	5	7	7	7	6	6	6	4.5	12.0
Dir	253	274	227	158	149	133	116	119	109	124	161	130	122	137	184	180	165	117	99	100	113	129	143	126	142.5	180.2
10 Spd	3	3	3	6	18	16	19	20	25	26	28	25	21	18	16	16	15	19	15	13	7	9	13	13	12.8	27.7
Dir	109	136	123	200	217	211	219	214	218	227	233	233	244	255	246	257	281	290	296	311	287	246	271	284	243.6	232.6
11 Spd	11	10	11	11	9	9	9	9	12	11	8	11	8	8	9	10	9	7	4	4	3	5	2	2	7.5	11.5
Dir	302	287	280	279	287	285	278	281	304	312	320	301	292	272	264	279	275	261	251	249	213	221	258	270	283.0	304.3
12 Spd	1	1	3	3	3	2	0	3	4	4	5	7	8	10	11	11	14	11	11	12	10	8	7	7	6.1	14.1
Dir	250	167	201	186	218	255	2	126	168	152	166	165	185	210	203	217	228	213	208	215	209	203	204	210	203.2	228.1
13 Spd	8	5	8	8	3	4	6	4	8	10	11	15	23	24	27	26	24	24	22	16	17	15	9	8	13.2	27.1
Dir	226	224	209	217	217	205	154	176	219	221	227	236	236	234	229	227	223	224	221	218	217	218	208	198	222.2	229.3
14 Spd	6	4	3	2	2	2	2	6	2	15	21	20	18	16	16	21	21	22	14	9	8	8	6	7	10.0	21.6
Dir	202	202	218	261	213	203	226	211	204	231	236	253	254	257	239	232	238	234	226	210	207	205	194	194	231.2	233.7
15 Spd	8	4	4	4	7	4	4	3	7	11	13	13	14	13	15	16	17	12	9	6	5	7	3	5	8.0	17.3
Dir	200	262	242	209	222	235	262	210	211	201	218	221	235	236	238	236	229	236	245	233	251	240	191	126	227.8	229.4
16 Spd	5	5	6	5	5	2	3	3	4	6	10	12	11	11	13	20	7	2	4	5	6	6	5	5	4.7	19.6
Dir	127	135	207	198	191	178	189	194	230	221	228	235	234	226	219	235	254	258	159	124	122	121	95	113	205.1	234.7
17 Spd	2	1	4	4	6	10	7	6	5	7	11	12	14	11	16	18	16	12	15	13	12	13	11	9	8.8	17.9
Dir	107	161	131	149	155	181	183	155	139	165	193	201	224	226	224	227	220	221	221	210	211	216	207	196	204.4	227.3
18 Spd	10	10	12	14	14	13	13	12	14	18	17	15	17	20	21	19	23	17	12	10	11	8	7	5	13.6	22.8
Dir	209	210	209	218	222	221	221	232	234	240	230	235	245	237	237	238	222	238	242	221	225	227	243	259	229.9	222.2
19 Spd	8	6	4	4	3	2	5	4	6	7	7	6	6	8	2	5	2	3	3	3	1	8	6	2	2.7	8.4
Dir	212	222	222	243	276	249	210	208	211	223	252	254	257	217	224	16	121	148	323	40	238	313	33	262	240.9	216.5
20 Spd	4	3	3	2	3	2	4	3	3	7	6	5	8	8	7	8	6	1	1	4	3	3	1	1	2.9	8.2
Dir	290	295	292	249	212	274	283	271	271	254	231	235	260	281	269	250	316	252	156	116	122	117	284	322	262.4	250.3
21 Spd	2	3	1	1	3	1	1	3	3	4	6	7	5	6	5	4	5	6	6	6	6	5	1	2	2.5	6.6
Dir	251	291	320	169	124	161	109	131	164	183	171	172	160	166	180	125	141	124	66	67	69	74	134	139	137.0	171.8
22 Spd	1	1	0	1	4	5	4	1	3	4	4	4	5	6	6	7	5	1	4	5	8	8	7	5	3.5	8.3
Dir	169	185	254	140	127	119	110	76	110	100	91	81	95	118	114	124	142	19	37	31	46	62	67	65	90.4	62.5

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - September 2016

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	3	0	1	1	0	2	1	1	1	1	2	4	4	2	13	21	17	12	14	14	17	18	11	17	6.6	20.7
Dir	52	224	91	284	228	117	80	261	212	178	130	127	188	221	221	230	223	210	225	224	231	223	211	218	218.2	229.6
24 Spd	18	18	14	13	15	15	16	15	18	24	29	27	23	26	25	26	27	22	18	17	11	6	8	7	18.0	29.3
Dir	211	215	213	210	210	214	216	218	224	227	222	223	229	228	229	228	225	223	217	216	210	199	195	195	219.8	222.3
25 Spd	6	2	3	2	3	3	2	2	3	3	2	2	3	5	8	6	7	8	3	3	3	3	3	5	2.5	7.7
Dir	200	139	84	75	122	120	110	127	120	87	104	117	166	217	223	194	208	171	187	220	181	105	74	111	162.3	170.9
26 Spd	5	6	4	2	3	3	3	3	6	5	5	8	5	4	13	10	4	1	3	3	7	14	20	18	3.4	19.8
Dir	114	110	99	84	108	121	101	84	125	109	87	137	148	178	163	144	120	25	272	242	263	244	232	224	172.3	231.9
27 Spd	16	18	21	15	13	12	14	17	18	22	25	26	26	25	27	25	23	20	16	12	8	8	7	5	17.3	26.9
Dir	211	224	218	215	224	219	213	216	215	217	225	228	218	223	221	219	217	224	217	215	199	204	194	210	218.3	221.1
28 Spd	2	3	2	2	2	2	3	4	4	5	2	3	4	5	4	4	4	5	5	4	3	4	3	3	1.4	5.1
Dir	216	135	112	129	161	104	113	113	124	134	273	5	41	50	34	36	26	2	344	335	336	354	297	276	39.7	344.1
29 Spd	3	3	4	3	3	1	2	1	1	2	3	5	9	10	10	9	7	7	5	4	6	6	6	7	3.1	10.4
Dir	283	272	298	270	279	227	195	199	171	282	357	94	55	55	54	52	23	12	23	11	5	6	2	356	18.7	55.3
30 Spd	7	6	6	6	5	4	3	5	4	6	8	8	9	8	9	10	11	10	11	11	11	10	11	10	7.6	11.4
Dir	359	4	5	1	357	348	353	301	316	359	360	10	360	0	4	5	3	360	13	18	24	27	30	34	6.8	3.4
Spd	3.0	3.2	3.4	3.5	3.7	3.6	3.6	3.9	4.9	6.5	7.6	7.5	7.7	8.2	9.1	9.3	8.5	7.0	5.3	3.7	3.2	3.3	3.0	3.0	Diurnal Average	
Dir	224.8	228.3	224.3	225.9	218.4	217.2	212.6	216.0	216.3	219.1	225.7	225.9	234.4	238.4	232.8	234.0	234.7	237.9	237.8	235.0	224.1	220.2	219.0	218.9		
Spd	17.6	18.0	21.0	14.8	17.8	16.4	19.0	20.3	25.0	25.5	29.3	26.6	26.3	25.9	27.1	26.3	27.2	24.4	22.0	16.9	17.2	18.1	19.8	18.0	Diurnal Maximum	
Dir	211.0	224.2	217.9	215.3	216.8	251.4	218.9	213.8	217.8	226.7	222.3	223.0	217.6	228.5	229.3	228.1	225.0	223.6	221.0	216.0	217.1	223.2	231.9	224.2		

Maximum Speed Value: 29 km/h on Sep 24 11:00
Maximum Daily Speed Average: 18.0 km/h on Sep 24
Maximum Diurnal Speed Average: 9.3 km/h at hour 16

Minimum Speed Value: 0 km/h on Sep 4 04:00
Minimum Daily Speed Average: 1.4 km/h on Sep 5
Minimum Diurnal Speed Average: 3.0 km/h at hour 1

Monthly Average Velocity: 5.20 km/h 227.91 deg

Speed Percentiles: $P_1 = 0.5$ $P_{10} = 2.0$ $Q_1 = 3.3$ Median = 6.1 $Q_3 = 11.4$ $P_{90} = 16.8$ $P_{99} = 26.2$

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

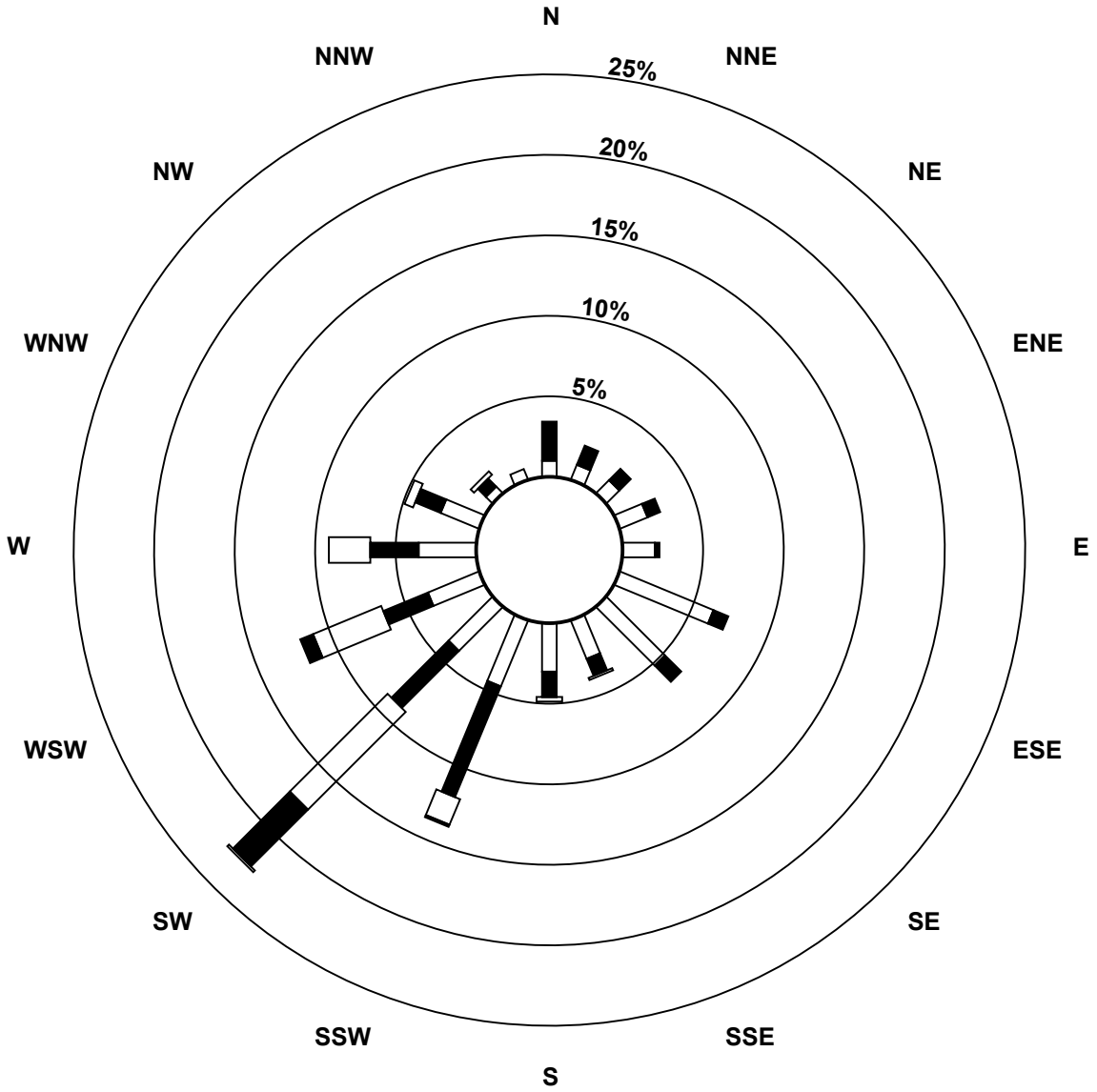
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	11	21	2	0	0	0	34
NorthEast	18	18	0	0	0	0	36
East	35	10	0	0	0	0	45
SouthEast	69	24	0	0	0	0	93
South	48	35	7	0	0	0	90
SouthWest	51	71	97	41	1	0	261
West	49	45	41	1	0	0	136
NorthWest	14	7	4	0	0	0	25
Total	295	231	151	42	1	0	720

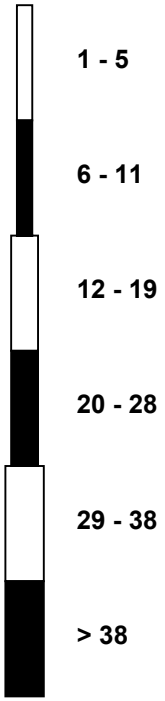
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - September 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - September 2016

Maximum Speed: 30 km/h on Sep 24 11:00

Maximum Daily Speed Average: 18.5 km/h on Sep 24

Minimum Speed: 1 km/h on Sep 4 04:00

Minimum Daily Speed Average: 3.6 km/h on Sep 5

Maximum Diurnal Speed Average: 13.6 km/h at hour 16

Minimum Diurnal Speed Average: 5.3 km/h at hour 4

Monthly Average Speed: 8.41 km/h

Percentiles: P_1 = 1.3 P_{10} = 2.5 Q_1 = 3.8 Median = 6.5 Q_3 = 11.6 P_{90} = 17.0 P_{99} = 26.7

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-Sep	7	5	7	9	7	8	8	9	5	7	8	9	12	12	11	11	10	8	7	3	2	2	2	4	7.1	12.1
2-Sep	5	3	4	3	2	3	3	3	5	4	3	3	5	7	10	9	11	12	12	9	6	8	10	12	6.4	12.3
3-Sep	13	14	13	14	16	17	17	15	15	13	15	16	15	16	16	17	17	15	12	12	10	5	6	5	13.4	17.1
4-Sep	3	3	2	1	1	1	2	3	4	5	6	5	3	4	4	3	4	5	4	6	5	6	5	5	3.7	5.9
5-Sep	4	3	3	2	2	1	3	2	3	3	4	6	5	5	4	6	8	7	6	2	1	2	1	2	3.6	8.4
6-Sep	2	1	2	2	4	4	3	5	6	8	9	10	9	7	13	12	10	8	3	3	6	5	8	7	6.0	13.0
7-Sep	6	5	7	5	3	5	6	5	9	10	18	18	18	18	17	17	15	15	11	8	4	3	2	2	9.4	18.2
8-Sep	4	4	6	4	3	2	3	7	9	11	14	14	14	17	16	18	15	12	10	10	7	7	8	8	9.3	18.0
9-Sep	5	7	2	3	4	4	4	3	3	5	7	7	8	9	9	12	9	5	7	7	8	6	6	6	6.2	12.4
10-Sep	3	4	4	6	18	16	19	20	25	26	28	26	21	18	16	17	15	19	15	14	7	9	13	13	15.6	28.0
11-Sep	12	10	11	11	9	10	9	9	12	11	8	11	8	9	9	10	9	7	5	4	3	5	2	2	8.2	11.9
12-Sep	1	2	3	3	3	2	2	3	4	4	6	8	9	11	12	12	14	11	11	12	10	8	7	7	7.0	14.4
13-Sep	8	6	9	8	5	5	6	5	8	10	12	16	23	25	27	26	24	25	22	16	17	15	9	8	14.0	27.4
14-Sep	6	5	3	3	2	3	4	6	4	15	21	21	19	16	17	21	21	22	15	9	8	8	6	7	10.9	21.8
15-Sep	8	5	4	5	7	4	4	3	7	12	14	13	14	14	16	16	18	12	9	6	5	7	4	5	8.9	17.6
16-Sep	5	5	6	5	5	3	4	3	4	7	10	12	12	11	13	20	7	2	4	6	6	6	5	5	6.9	19.7
17-Sep	2	1	4	4	7	10	7	6	6	8	11	12	14	12	17	18	16	13	15	13	12	14	11	9	10.1	18.1
18-Sep	10	10	12	14	14	14	13	13	14	18	17	15	17	20	22	19	23	17	12	10	11	8	8	6	14.1	23.0
19-Sep	8	6	5	4	3	2	5	4	6	7	7	7	8	9	7	7	3	3	5	4	2	8	7	3	5.4	8.8
20-Sep	4	3	3	2	3	2	4	3	3	7	6	6	9	8	7	8	7	2	1	4	3	3	2	1	4.4	8.6
21-Sep	3	3	2	1	3	2	2	3	3	4	7	7	5	6	6	5	6	6	6	6	6	5	3	3	4.3	7.0
22-Sep	2	1	1	2	4	5	4	2	4	4	4	5	6	7	7	7	5	3	4	5	8	8	7	6	4.6	8.4
23-Sep	4	2	4	2	3	3	2	2	2	2	3	4	6	4	15	21	17	12	15	14	17	18	11	17	8.2	21.0
24-Sep	18	18	14	14	15	15	16	15	18	24	30	27	23	26	26	27	28	22	18	17	12	7	9	7	18.5	29.6
25-Sep	6	5	3	2	3	3	2	3	3	3	2	3	4	6	8	6	8	8	5	4	4	3	3	5	4.2	7.9
26-Sep	5	6	4	2	3	3	4	3	6	5	6	9	6	5	14	10	5	1	4	3	7	15	20	18	6.8	20.0
27-Sep	16	18	21	15	14	12	14	17	18	22	26	26	27	26	27	26	23	20	16	12	8	8	7	6	17.7	27.3
28-Sep	4	4	3	3	2	3	3	4	5	5	2	4	5	6	5	5	5	5	5	4	3	4	3	4	4.0	5.5
29-Sep	3	3	4	3	3	2	2	2	2	3	4	6	9	11	11	10	7	7	5	4	6	6	6	7	5.4	10.7
30-Sep	7	6	6	6	5	4	4	5	4	6	8	9	9	9	10	11	12	11	11	11	11	11	11	10	8.2	11.6
	6.1	5.6	5.7	5.3	5.8	5.6	5.9	6.2	7.3	9.1	10.6	11.1	11.4	11.8	13.0	13.6	12.4	10.5	9.1	7.9	7.2	7.4	6.8	6.6	Diurnal Average	
	17.8	18.1	21.1	15.0	18.2	16.6	19.1	20.5	25.1	25.9	29.6	26.9	26.8	26.3	27.4	26.8	27.6	24.7	22.1	17.0	17.3	18.4	20.0	18.2	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 - September 2016

Maximum Value: 92.0 deg on Sep 12 02:00

Minimum Value: 4.6 deg on Sep 21 20:00

Percentiles: P_1 = 6.2 P_{10} = 8.2 Q_1 = 10.3 Median = 14.6 Q_3 = 29.4 P_{90} = 49.5 P_{99} = 82.3

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-Sep	19	75	60	14	11	12	40	14	22	14	19	13	10	13	14	14	14	12	12	32	37	58	62	17	75.0
2-Sep	14	21	12	54	53	44	14	52	16	38	71	46	33	15	10	16	12	10	9	8	12	11	8	8	71.0
3-Sep	8	9	9	9	8	8	8	8	8	9	8	8	9	9	7	8	8	10	9	7	7	13	16	16	16.0
4-Sep	27	13	44	65	39	47	37	17	16	21	36	43	69	60	63	83	60	26	17	9	9	8	10	8	83.0
5-Sep	12	36	18	33	51	42	30	21	37	34	43	36	41	34	48	47	37	18	25	75	58	27	76	86	85.6
6-Sep	26	63	43	27	21	10	14	12	14	16	18	19	21	28	21	18	16	15	46	33	26	31	10	9	62.7
7-Sep	21	14	15	27	36	77	40	15	12	13	11	13	14	13	13	14	10	9	9	23	24	29	61	66	77.0
8-Sep	26	12	12	15	48	54	15	13	11	10	16	10	18	9	8	8	11	13	8	25	52	13	10	15	54.3
9-Sep	18	19	57	16	13	9	11	14	18	40	25	20	18	19	27	15	24	20	10	12	15	11	10	15	57.4
10-Sep	16	33	41	15	13	12	8	8	6	9	8	11	12	9	13	20	8	11	9	9	15	13	9	8	40.7
11-Sep	9	8	8	7	9	9	7	10	15	14	15	13	16	19	14	11	11	12	14	11	39	17	18	27	38.7
12-Sep	45	92	13	14	32	20	80	16	16	27	21	21	20	19	21	20	13	14	10	8	9	9	11	13	92.0
13-Sep	13	36	12	13	63	31	23	46	24	15	14	12	10	10	9	9	10	8	5	6	6	6	12	9	63.1
14-Sep	11	19	14	40	35	44	60	19	75	12	10	10	10	11	17	11	10	7	9	9	10	10	9	9	75.2
15-Sep	10	29	28	42	18	15	16	36	15	12	9	14	12	15	13	13	10	10	8	14	9	10	42	11	42.1
16-Sep	14	18	18	14	18	66	68	32	29	17	13	11	14	17	15	8	14	23	47	10	11	16	9	8	68.0
17-Sep	31	64	12	16	14	10	10	19	19	16	14	15	13	19	13	10	10	13	8	10	9	8	11	10	63.8
18-Sep	10	9	8	5	6	7	7	6	7	11	7	12	10	12	10	9	9	8	8	14	8	15	31	24	31.1
19-Sep	11	15	22	15	38	35	15	20	13	13	20	24	33	19	88	37	41	26	85	33	79	25	40	50	87.7
20-Sep	11	34	14	56	23	64	18	17	20	13	24	36	19	18	16	12	33	77	61	13	12	13	74	41	77.2
21-Sep	30	22	56	70	17	42	64	11	16	16	19	19	43	24	30	60	22	20	8	5	5	8	68	46	69.6
22-Sep	54	48	67	34	6	6	13	39	21	26	28	34	33	36	31	33	23	72	13	8	10	11	8	11	71.7
23-Sep	59	74	84	69	82	49	70	70	60	66	52	40	40	60	50	9	11	12	7	8	8	11	11	7	83.9
24-Sep	8	7	9	10	7	7	7	7	8	8	9	9	11	11	10	10	9	9	6	7	12	10	13	14	13.6
25-Sep	16	60	39	39	19	10	25	22	18	33	49	75	43	24	13	27	27	14	45	35	24	32	12	17	74.8
26-Sep	11	12	27	37	35	18	73	41	6	27	27	15	41	32	19	13	18	68	48	42	15	22	7	8	73.3
27-Sep	9	7	6	10	15	14	7	6	9	9	11	11	10	11	9	10	10	9	7	7	8	7	10	42	41.8
28-Sep	88	41	30	50	49	49	27	12	14	26	53	47	39	44	45	41	33	26	12	8	11	19	27	12	88.1
29-Sep	10	13	10	14	9	46	21	63	52	47	41	34	17	14	18	18	21	15	12	13	13	16	14	12	62.7
30-Sep	14	12	14	13	15	19	22	18	26	24	15	20	14	16	13	15	12	13	14	12	11	13	12	11	25.7
	88.1	92.0	83.9	69.6	81.9	77.0	79.8	69.9	75.2	66.4	71.0	74.8	68.9	60.3	87.7	83.0	60.2	77.2	84.8	75.2	79.4	58.5	76.4	85.6	

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.1 ppb on Sep 27 09:00 Maximum Daily Average: 0.2 ppb on Sep 27

Minimum Value: 0 ppb on Sep 3 06:00 Minimum Daily Average: 0.0 ppb on Sep 18
Maximum Diurnal Average: 0.2 ppb at hour 9 Minimum Diurnal Average: 0.0 ppb at hour 3
Monthly Average: 0.09 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.1 P_{90} = 0.2 P_{99} = 0.7

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
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-Sep	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
2-Sep	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
3-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
4-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
5-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
6-Sep	0	0	0	0	0	0	0	A	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
7-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
8-Sep	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	P	P	0	0	0.1	0.7
9-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
10-Sep	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
11-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
12-Sep	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
13-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0.1	0.5
14-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.2
15-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.4
16-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.3
17-Sep	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	0.5
18-Sep	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
19-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.2
20-Sep	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
21-Sep	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
22-Sep	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0.1	0.9
23-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0.1	0.6
24-Sep	0	0	0	0	0	0	0	1	1	0	0	1	A	0	0	1	0	0	0	0	0	0	0	0	0.2	0.7
25-Sep	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
26-Sep	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
27-Sep	0	0	0	0	0	0	0	1	2	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2.1
28-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
29-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
30-Sep	0	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.2	0.3	0.2	0.2	0.2	0.2	0.2	1.3	2.1	0.7	0.9	0.6	0.9	0.4	0.5	0.7	0.3	0.4	0.2	0.1	0.2	0.2	0.2	0.2	Diurnal Maximum	

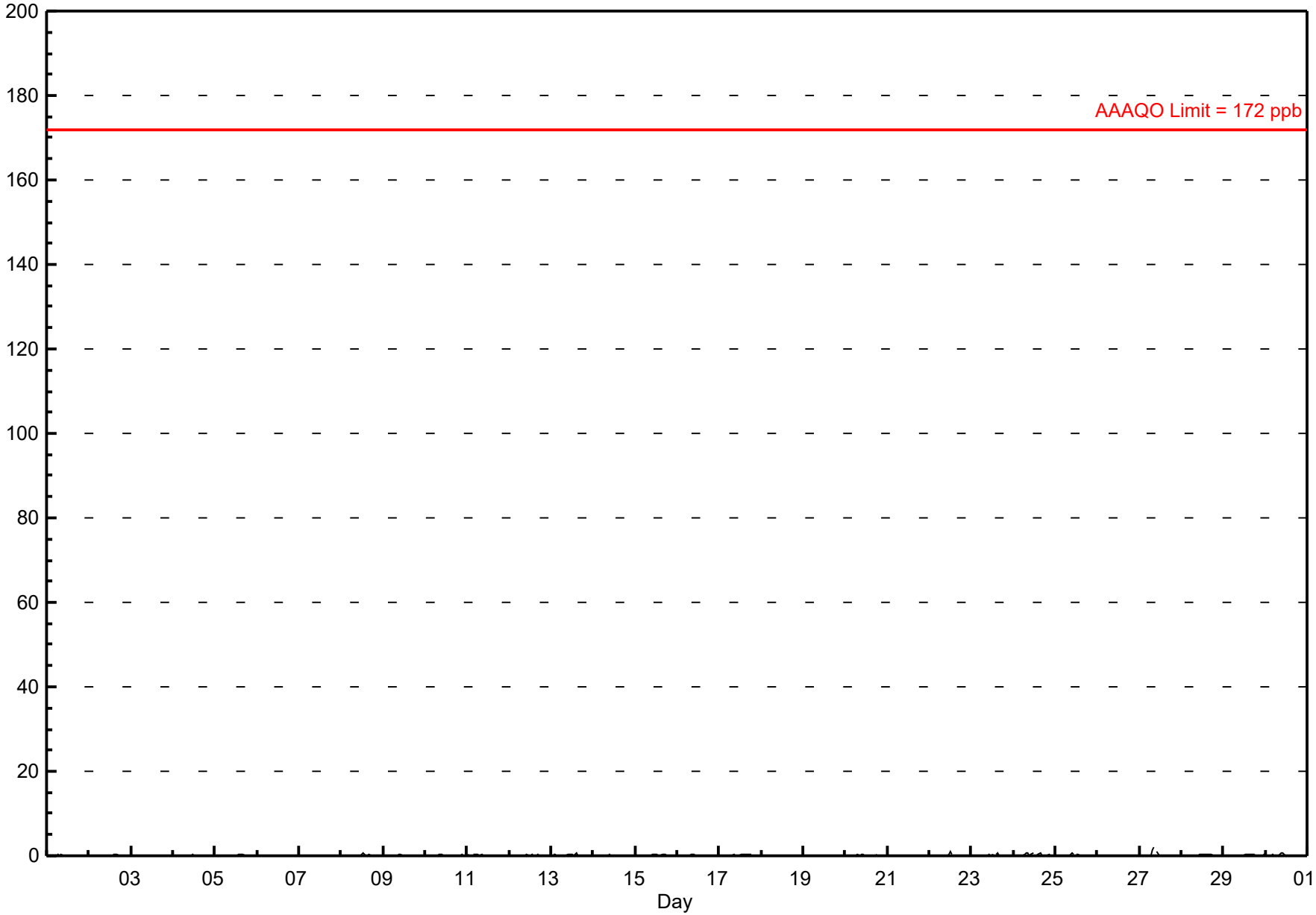
C - Calibration P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - September 2016



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - September 2016

Maximum Value: 14.7 ppb on Sep 24 21:00

Maximum Daily Average: 1.6 ppb on Sep 24

Minimum Value: 0 ppb on Sep 27 01:00

Minimum Daily Average: 0.5 ppb on Sep 18

Maximum Diurnal Average: 1.1 ppb at hour 21

Minimum Diurnal Average: 0.5 ppb at hour 4

Monthly Average: 0.68 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.6 $Q_3 = 0.7$ $P_{90} = 0.9$ $P_{99} = 2.2$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
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-Sep	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
2-Sep	1	0	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
3-Sep	1	1	0	1	1	1	1	1	1	1	A	1	0	1	0	1	1	1	1	1	1	1	0	1	0.6	1.3
4-Sep	1	1	0	1	0	0	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	0	1	0.6	0.8
5-Sep	0	1	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.6	0.9
6-Sep	1	1	1	1	1	1	1	A	1	C	C	C	C	1	1	0	0	0	1	1	0	1	0	0	0.6	0.8
7-Sep	0	0	0	0	0	0	A	0	1	1	1	1	1	1	0	1	0	0	1	1	1	0	0	0	0.5	0.8
8-Sep	1	0	1	0	1	A	0	1	1	1	1	0	2	1	1	1	1	1	1	0	P	P	0	0	0.6	1.8
9-Sep	1	1	1	0	A	0	0	0	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	0	0.6	1.1
10-Sep	1	0	0	A	1	0	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
11-Sep	1	1	A	1	1	1	1	1	1	0	1	1	1	0	1	0	1	1	0	0	0	0	0	0	0.6	1.1
12-Sep	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
13-Sep	A	1	1	1	1	1	0	0	1	1	1	1	1	1	2	1	1	1	0	1	1	1	0	A	0.8	1.5
14-Sep	0	1	1	0	1	0	1	1	1	1	1	0	1	0	1	0	1	0	0	1	1	1	A	1	0.6	1.1
15-Sep	1	0	1	0	1	0	1	0	1	1	1	1	1	1	1	1	1	2	1	0	1	A	0	1	0.8	1.6
16-Sep	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	A	1	0	1	0.6	0.9
17-Sep	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.5
18-Sep	1	1	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	A	0	0	0	0	0	0.5	0.7
19-Sep	0	0	1	0	0	0	1	1	1	1	1	1	1	1	0	1	0	A	1	0	0	0	0	0	0.5	1.0
20-Sep	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0	0.6	1.0
21-Sep	0	1	0	1	0	1	1	0	1	0	1	1	1	0	1	A	0	1	1	0	1	1	1	0	0.6	0.9
22-Sep	0	1	0	1	1	1	1	1	1	1	1	1	2	1	A	1	1	1	1	0	1	1	1	1	0.7	2.0
23-Sep	0	0	0	0	0	1	1	0	0	1	1	1	1	A	2	2	1	1	1	1	0	1	0	0	0.7	2.3
24-Sep	0	0	1	1	0	0	1	3	2	0	2	2	A	0	1	2	1	1	0	0	15	0	2	0	1.6	14.7
25-Sep	1	1	0	1	0	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.3
26-Sep	0	1	1	0	0	1	1	0	1	1	A	1	1	0	0	1	1	1	0	0	0	0	0	0	0.5	0.7
27-Sep	0	0	0	0	0	0	1	4	9	A	2	0	2	0	0	0	0	1	0	0	1	1	1	0	1.1	8.8
28-Sep	1	0	1	0	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0.6	1.0
29-Sep	0	0	1	0	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
30-Sep	1	1	1	1	1	0	A	1	2	1	1	1	0	1	0	1	1	1	0	0	0	0	0	1	0.6	1.7
	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.8	1.1	0.8	0.9	0.7	0.9	0.7	0.7	0.7	0.7	0.7	0.6	0.6	1.1	0.6	0.5	0.5	Diurnal Average	
	0.8	1.1	0.8	0.8	1.2	0.8	1.5	4.1	8.8	1.4	2.5	2.2	2.0	1.3	2.3	2.0	1.3	1.6	1.0	1.3	14.7	0.8	1.6	0.9	Diurnal Maximum	

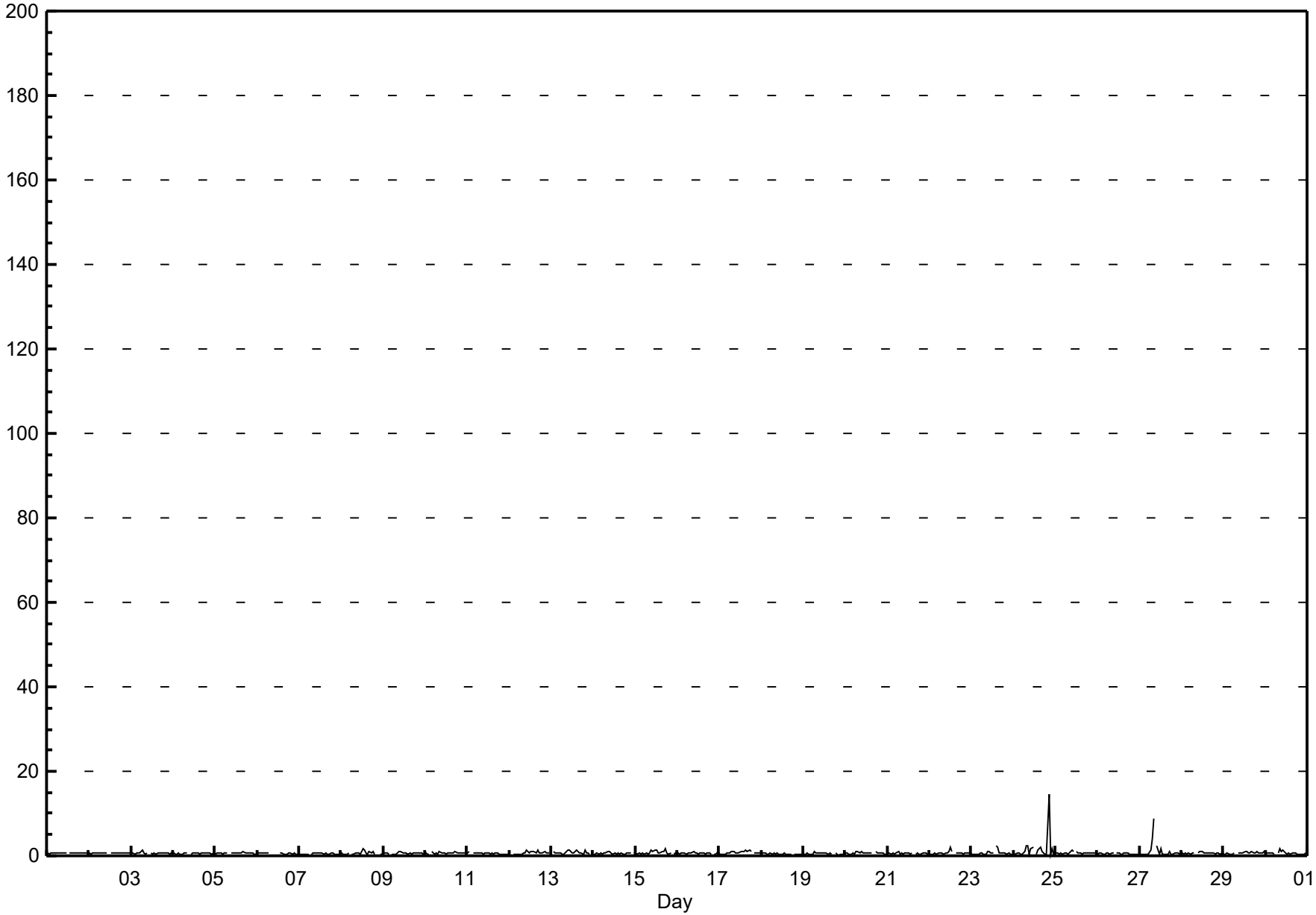
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

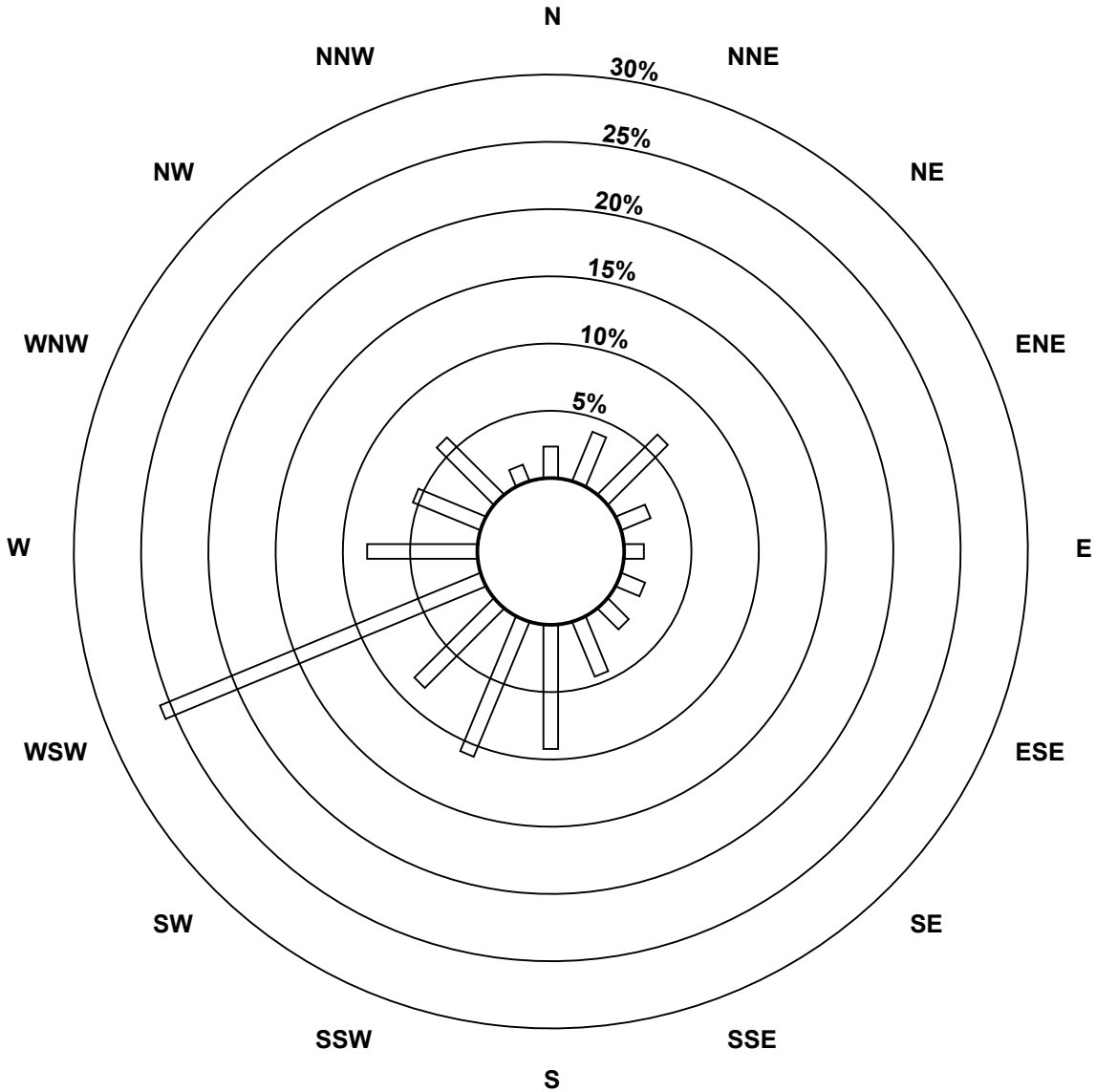
Evergreen Park - September 2016



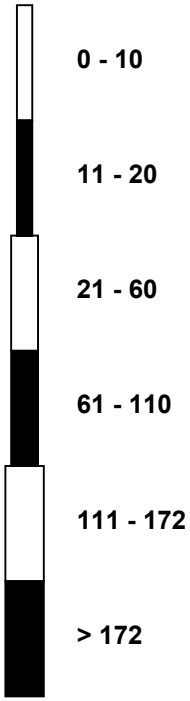
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - September 2016



Pollutant Classes (ppb)

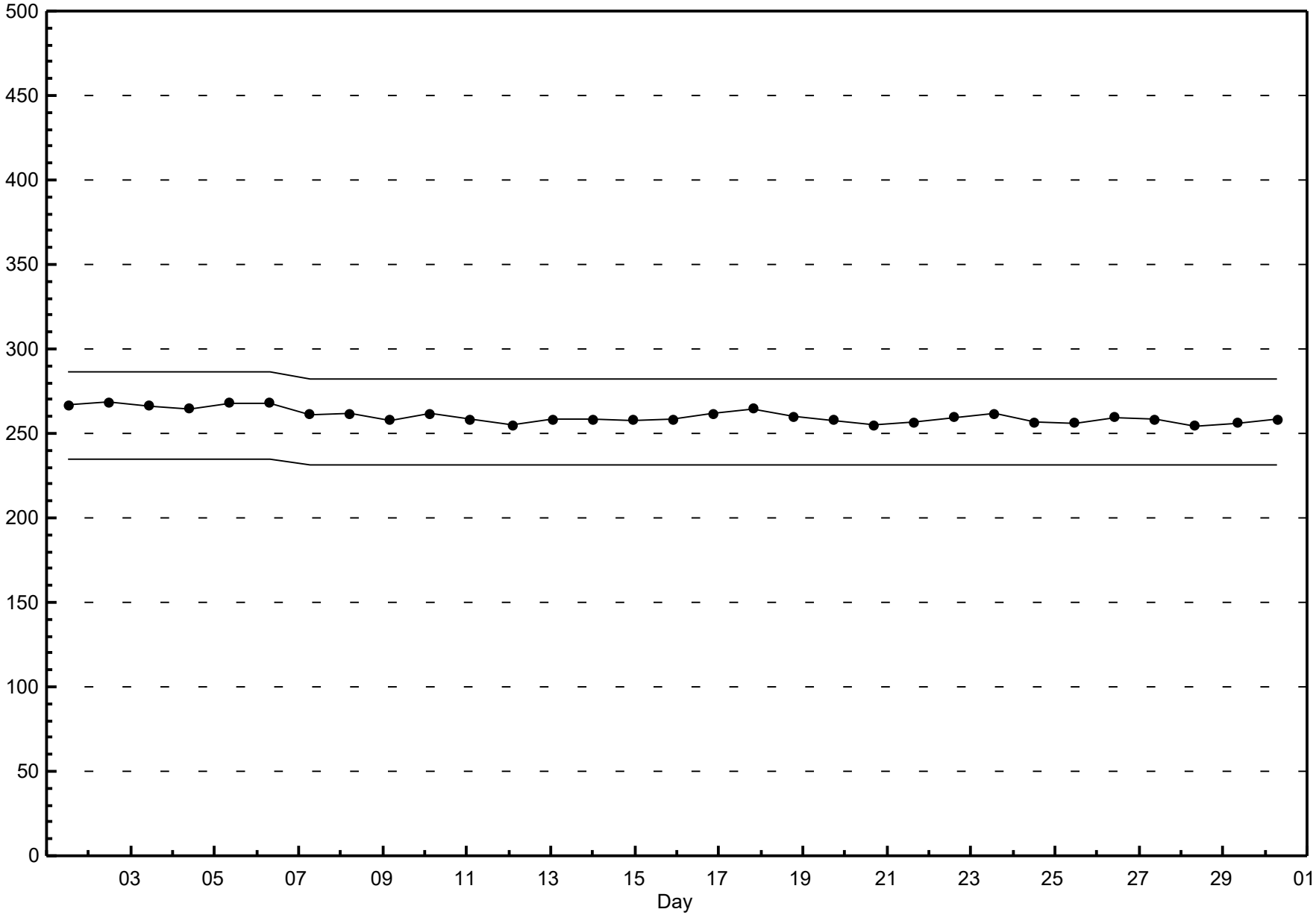


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Evergreen Park - September 2016



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - September 2016

Maximum Value: 11.2 ppb on Sep 22 13:00

Maximum Daily Average: 1.5 ppb on Sep 22

Minimum Value: 0 ppb on Sep 1 22:00

Minimum Daily Average: 0.1 ppb on Sep 4

Maximum Diurnal Average: 0.7 ppb at hour 13

Minimum Diurnal Average: 0.3 ppb at hour 4

Monthly Average: 0.33 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.3$ $P_{90} = 0.5$ $P_{99} = 1.7$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
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-Sep	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
2-Sep	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
3-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
4-Sep	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
5-Sep	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
6-Sep	0	0	0	0	0	0	0	A	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
7-Sep	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
8-Sep	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	P	0	0	0.2	0.4
9-Sep	0	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
10-Sep	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	0.5
11-Sep	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
12-Sep	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
13-Sep	A	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0.5	1.9
14-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.4
15-Sep	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
16-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.4
17-Sep	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
18-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4
19-Sep	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.5
20-Sep	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	1.8
21-Sep	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	2	0.3	1.8
22-Sep	1	1	1	1	1	1	1	1	1	6	2	4	11	1	A	0	0	0	0	0	0	0	0	0	1.5	11.2
23-Sep	0	0	0	1	0	0	0	0	1	2	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0.4	1.5
24-Sep	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
25-Sep	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
26-Sep	1	1	0	0	0	1	1	1	1	0	A	0	0	0	0	0	0	0	2	1	1	1	0	0	0.6	1.5
27-Sep	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
28-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0.3	0.7
29-Sep	1	1	1	1	0	1	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.5
30-Sep	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.4	0.4	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	1.5	1.8	1.1	1.2	1.0	0.9	1.2	1.2	1.9	6.0	2.0	3.9	11.2	1.0	0.4	0.4	0.6	0.5	1.5	0.8	0.7	0.7	0.6	1.8	Diurnal Maximum	

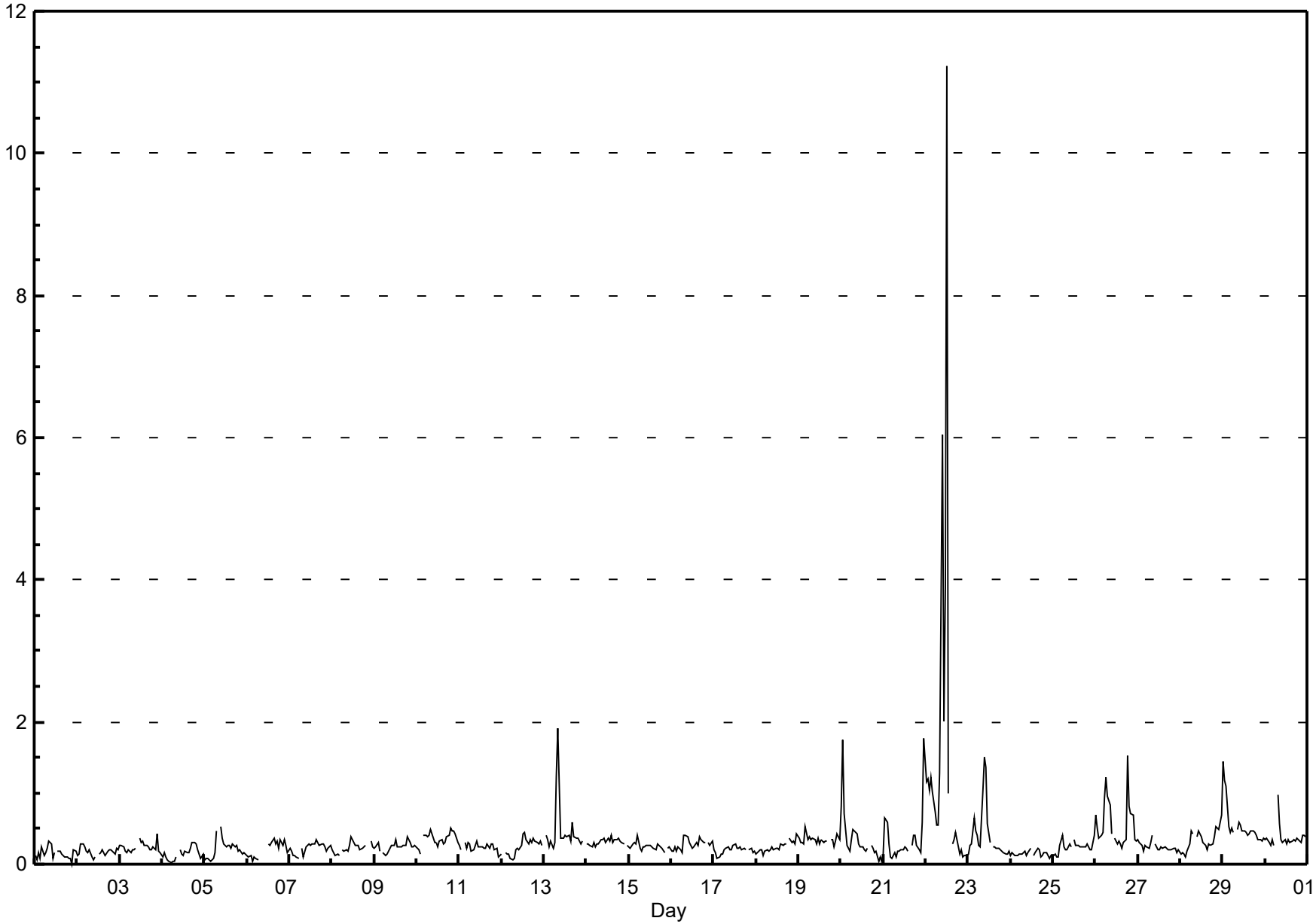
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - September 2016



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - September 2016

Maximum Value: 25.3 ppb on Sep 22 13:00

Maximum Daily Average: 3.2 ppb on Sep 22

Minimum Value: 0 ppb on Sep 1 22:00

Minimum Daily Average: 0.5 ppb on Sep 4

Maximum Diurnal Average: 1.6 ppb at hour 13

Minimum Diurnal Average: 0.7 ppb at hour 15

Monthly Average: 0.79 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 0.8$ $P_{90} = 0.9$ $P_{99} = 3.3$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
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-Sep	1	0	1	0	1	1	0	1	1	1	0	0	A	1	1	1	1	1	0	1	0	0	2	1	0.6	1.6
2-Sep	0	1	1	1	1	1	1	1	0	0	0	A	0	1	1	0	0	1	1	1	1	0	1	1	0.6	1.1
3-Sep	1	1	1	0	0	1	1	0	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	0.6	0.9
4-Sep	1	0	0	0	0	0	0	0	1	A	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0.5	0.7
5-Sep	0	0	0	0	0	0	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0.6	1.0
6-Sep	1	1	1	0	0	0	0	A	C	C	C	C	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
7-Sep	1	1	0	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
8-Sep	1	1	0	1	0	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	P	P	1	1	0.6	0.9
9-Sep	1	1	1	1	A	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
10-Sep	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
11-Sep	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.8
12-Sep	0	A	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
13-Sep	A	1	1	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.0	3.0
14-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.7	0.9
15-Sep	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	0.7	0.9
16-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	0.9
17-Sep	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	0.9
18-Sep	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	0.9
19-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.0
20-Sep	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	0.9	3.4
21-Sep	0	1	1	1	0	0	0	0	1	1	0	1	1	1	0	A	1	1	1	1	1	1	2	3	0.8	2.6
22-Sep	2	2	1	2	2	1	1	1	3	9	6	10	25	3	A	1	1	1	1	0	1	0	1	0	3.2	25.3
23-Sep	1	1	1	1	1	1	1	1	3	2	2	1	1	A	1	1	1	1	1	0	0	1	1	1	0.9	3.4
24-Sep	0	1	1	0	0	1	1	1	1	0	1	1	A	1	1	1	0	1	1	0	1	1	1	0	0.6	0.7
25-Sep	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.1
26-Sep	1	1	1	1	1	2	2	2	1	1	A	1	1	1	1	1	1	1	4	1	1	2	1	1	1.2	4.4
27-Sep	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.6	1.0
28-Sep	0	1	0	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	0.7	1.6
29-Sep	2	2	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.5
30-Sep	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.5
	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.8	1.0	1.1	0.9	1.0	1.6	0.8	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	Diurnal Average	
	3.4	3.3	1.8	1.7	1.8	2.2	2.1	2.8	3.4	8.6	5.5	10.2	25.3	3.0	0.9	1.0	1.3	1.1	4.4	1.4	1.5	1.6	1.9	2.6	Diurnal Maximum	

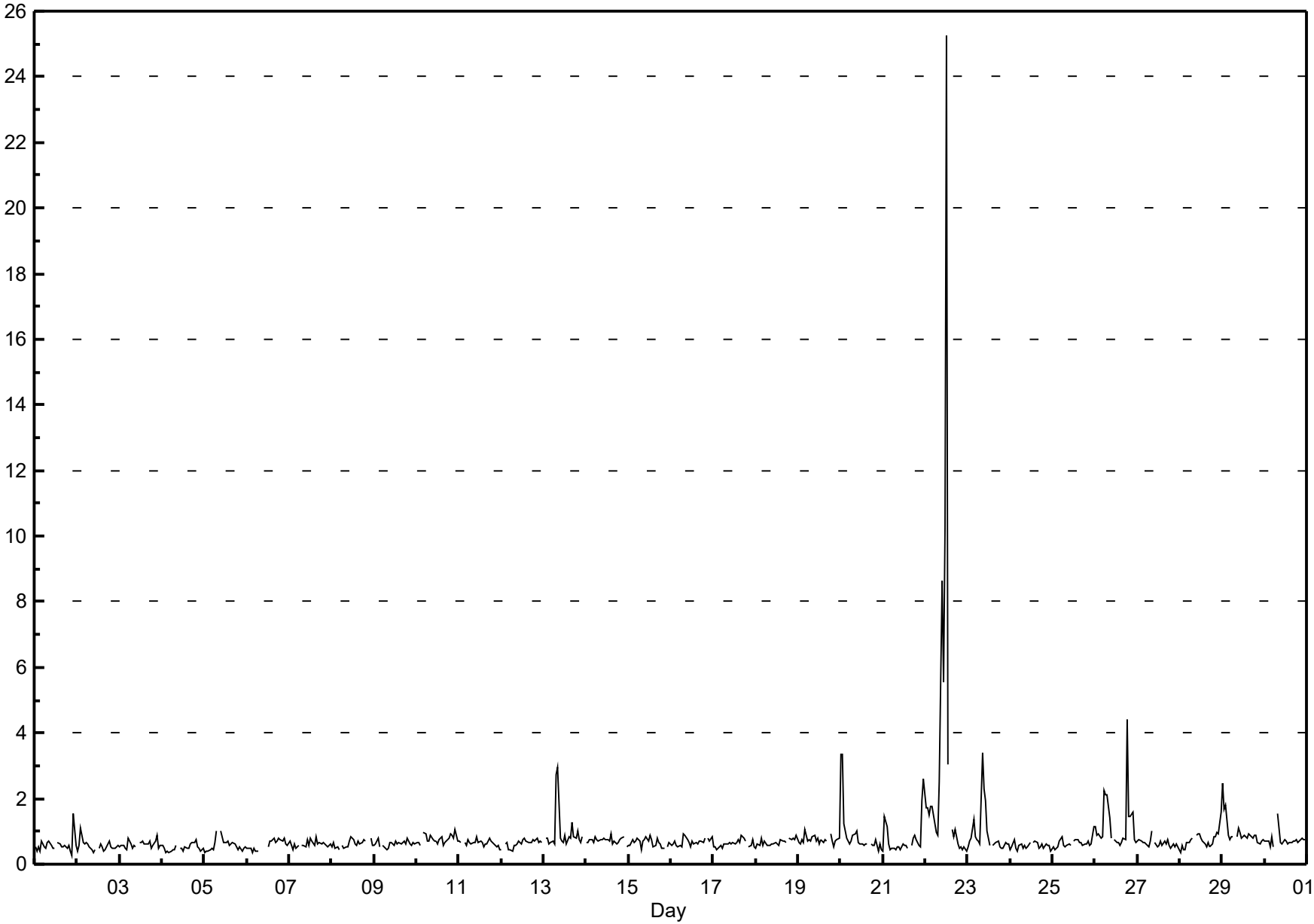
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

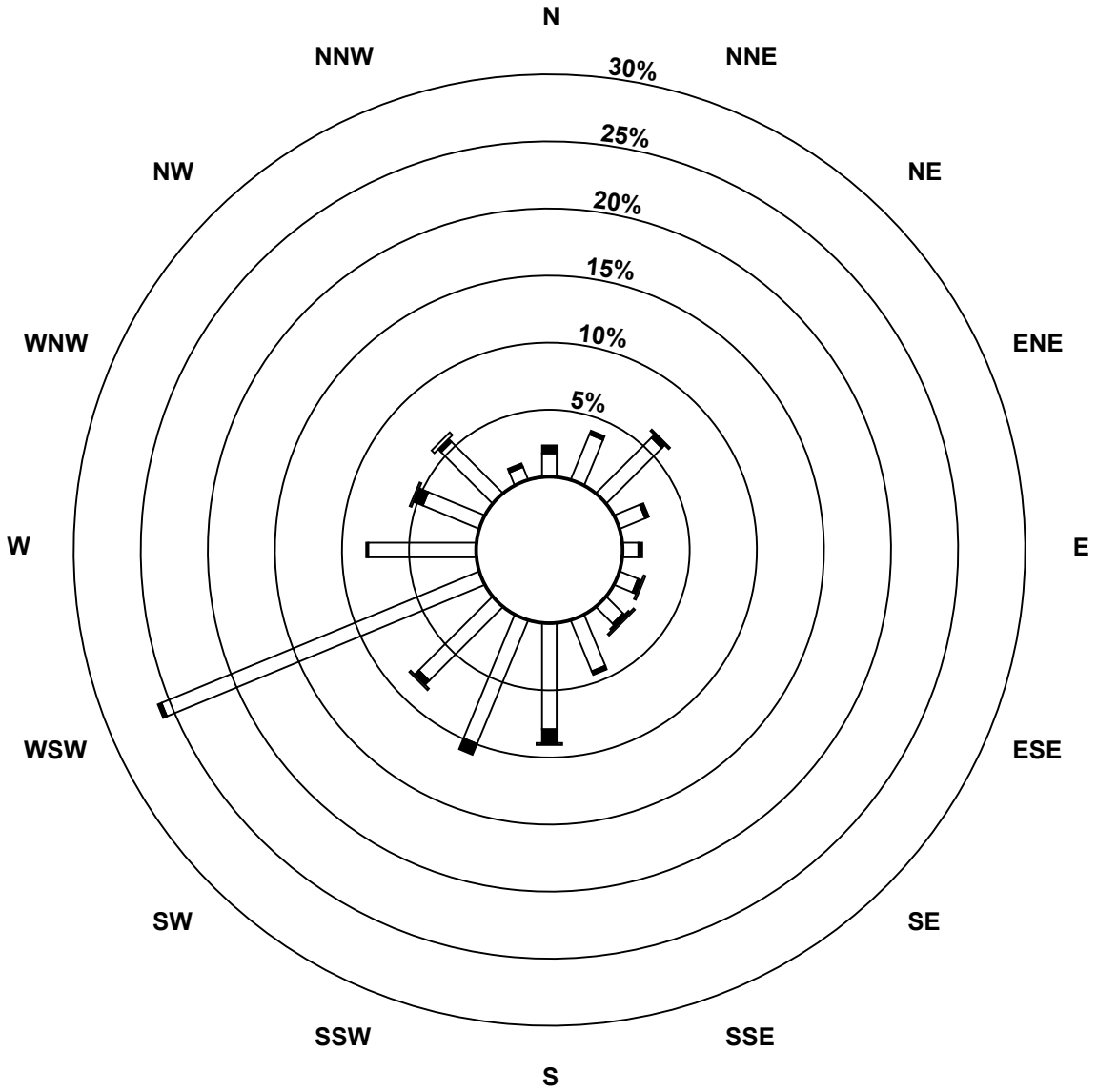
Evergreen Park - September 2016



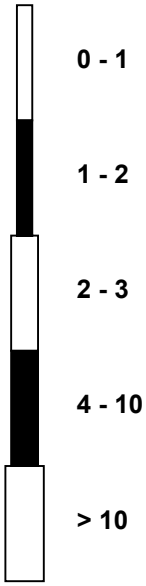
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - September 2016



Pollutant Classes (ppb)

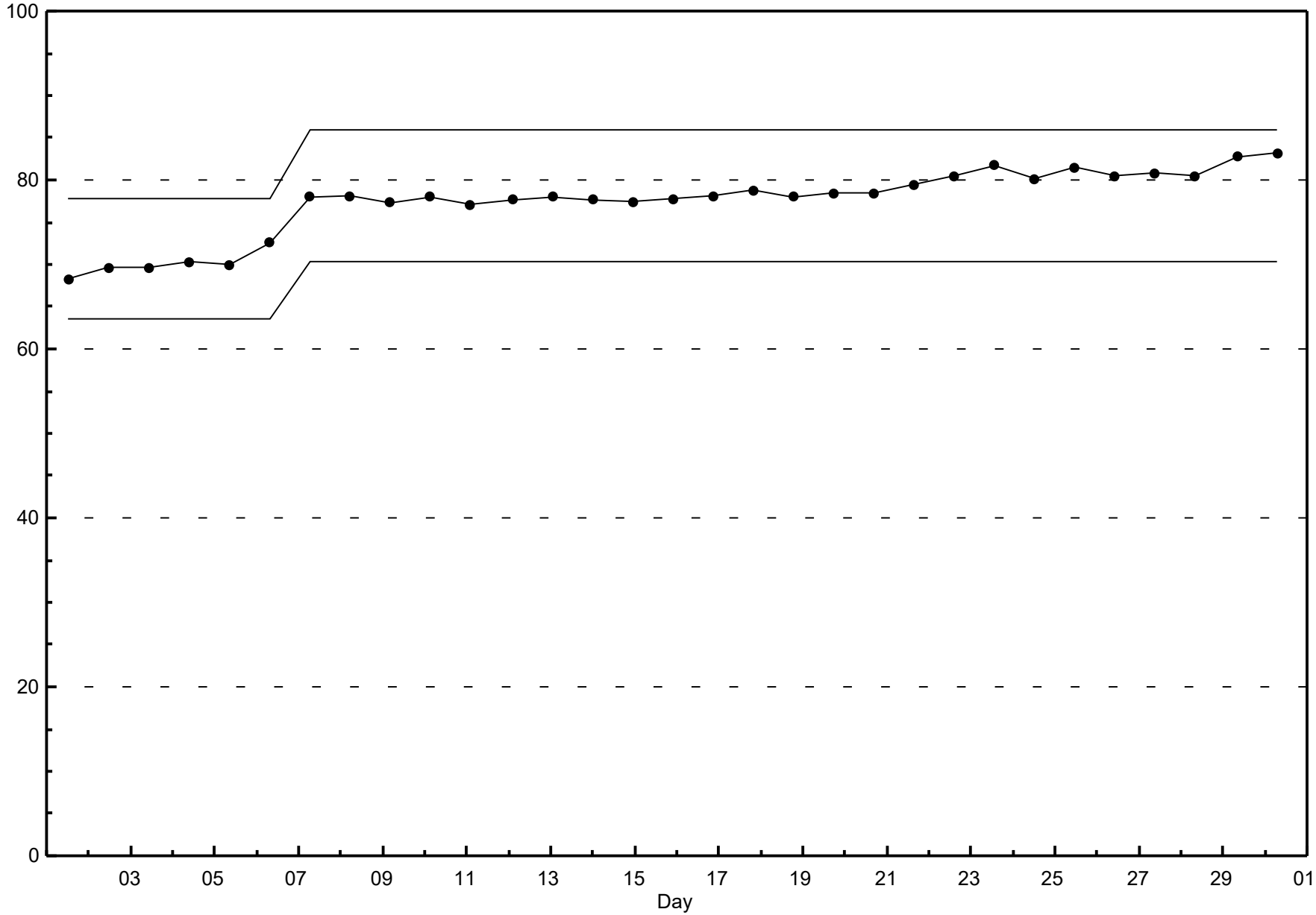


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Evergreen Park - September 2016



Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - September 2016

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

Maximum Value: 40.2 $\mu g/m^3$ on Sep 24 11:00

Maximum Daily Average: 9.9 $\mu g/m^3$ on Sep 24

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

Maximum Diurnal Average: 6.9 $\mu g/m^3$ at hour 11

Monthly Average: 3.36 $\mu g/m^3$

Minimum Daily Average: 0.2 $\mu g/m^3$ on Sep 3

Minimum Diurnal Average: 1.5 $\mu g/m^3$ at hour 3

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.6$ Median = 1.7 $Q_3 = 4.0$ $P_{90} = 7.6$ $P_{99} = 30.0$

Hours in Service:	720
Hours of Data:	711
Hours of Missing Data:	9
Hours of Calibration:	5
Percent Operational Time:	99.4

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-Sep	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	2	0.3	1.8
2-Sep	0	0	2	1	0	2	0	1	5	0	1	1	2	2	3	0	0	0	0	0	0	0	0	0	0.8	5.3
3-Sep	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0.2	1.1
4-Sep	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	1	3	2	2	0	0	2	0.6	3.1
5-Sep	1	1	2	0	0	0	2	3	3	4	2	1	3	1	1	1	3	1	4	3	0	0	0	0	1.6	4.2
6-Sep	0	0	2	2	1	0	1	3	7	5	3	C	C	C	C	C	13	8	6	5	5	4	2	2	3.6	13.5
7-Sep	2	2	1	1	1	1	2	3	4	5	0	1	3	8	0	2	3	2	3	4	7	8	6	5	3.1	8.5
8-Sep	3	1	1	1	1	1	4	6	4	2	3	2	3	4	2	2	2	2	1	4	P	P	N	1	2.3	6.1
9-Sep	1	1	0	0	0	0	0	1	1	2	3	1	1	0	0	1	0	0	0	0	0	0	0	0	0.5	2.8
10-Sep	0	0	0	0	2	1	0	2	12	16	2	1	1	1	0	0	2	2	2	3	3	1	1	1	2.2	15.6
11-Sep	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0	2	2	2	2	2	1.1	2.1
12-Sep	0	0	0	0	0	0	0	1	2	0	2	3	5	8	6	1	8	5	6	3	2	1	0	0	2.3	8.4
13-Sep	0	1	1	1	1	1	0	2	5	13	17	12	11	8	30	10	8	6	5	3	1	1	1	1	5.8	29.7
14-Sep	1	1	2	2	1	1	1	2	11	13	6	8	8	5	5	8	8	5	6	6	4	2	2	2	4.6	13.5
15-Sep	1	2	1	1	1	0	1	3	11	10	13	18	20	16	13	15	22	20	0	1	0	0	0	0	7.0	21.8
16-Sep	0	1	1	0	1	0	0	6	7	5	2	3	0	1	4	8	4	3	0	0	3	3	2	4	2.4	7.9
17-Sep	2	3	3	2	3	1	0	0	1	1	4	6	15	5	10	16	3	6	3	0	0	0	0	0	3.5	15.9
18-Sep	0	0	0	0	1	1	2	1	1	2	2	0	1	2	2	4	5	3	3	3	2	1	1	1	1.6	4.9
19-Sep	1	1	1	0	1	1	9	5	7	7	4	3	2	0	0	1	2	5	6	2	1	3	1	1	2.6	9.3
20-Sep	1	1	1	1	1	3	6	26	7	2	3	3	1	2	2	2	2	1	2	2	2	2	1	1	3.0	26.2
21-Sep	1	2	2	2	1	2	4	5	7	3	2	2	2	1	1	1	0	2	2	2	2	4	5	4	2.4	6.8
22-Sep	3	3	3	5	5	4	3	4	6	5	5	6	5	2	0	1	0	2	3	1	3	3	6	5	3.5	5.9
23-Sep	5	6	4	5	4	4	3	7	10	17	39	12	3	4	20	32	4	0	3	3	2	1	1	2	7.9	39.2
24-Sep	4	5	2	3	3	4	15	22	19	14	40	30	12	1	16	31	9	3	3	2	0	0	0	1	9.9	40.2
25-Sep	0	0	0	0	2	3	3	3	3	3	8	5	7	2	1	1	1	0	1	2	2	1	0	1	2.1	8.1
26-Sep	1	1	1	0	1	3	2	1	3	2	2	1	0	0	0	0	1	4	12	7	0	3	2	0	1.9	11.5
27-Sep	0	0	0	0	1	2	12	36	34	27	26	N	6	0	3	4	6	8	5	5	5	4	4	4	8.3	36.1
28-Sep	4	3	3	3	3	3	6	6	9	8	5	3	2	2	2	2	4	4	6	7	7	7	8	6	4.7	8.8
29-Sep	9	9	8	7	6	8	16	19	12	11	8	5	4	4	4	3	4	5	5	6	7	6	6	6	7.5	19.2
30-Sep	7	6	6	6	7	7	8	8	7	3	3	4	4	2	2	2	1	1	1	1	0	0	0	0	3.6	8.2
	1.7	1.7	1.5	1.5	1.6	1.9	3.5	5.9	6.8	6.0	6.9	4.7	4.2	2.8	4.4	5.1	3.8	3.3	3.1	2.6	2.1	1.9	1.8	1.7	Diurnal Average	
	9.1	8.6	7.6	7.3	7.4	8.1	16.3	36.1	34.2	27.3	40.2	30.3	19.6	15.8	29.7	32.0	21.8	19.6	11.5	7.1	6.9	8.4	7.5	6.4	Diurnal Maximum	

C - Calibration P - Power Failure N - Not Valid

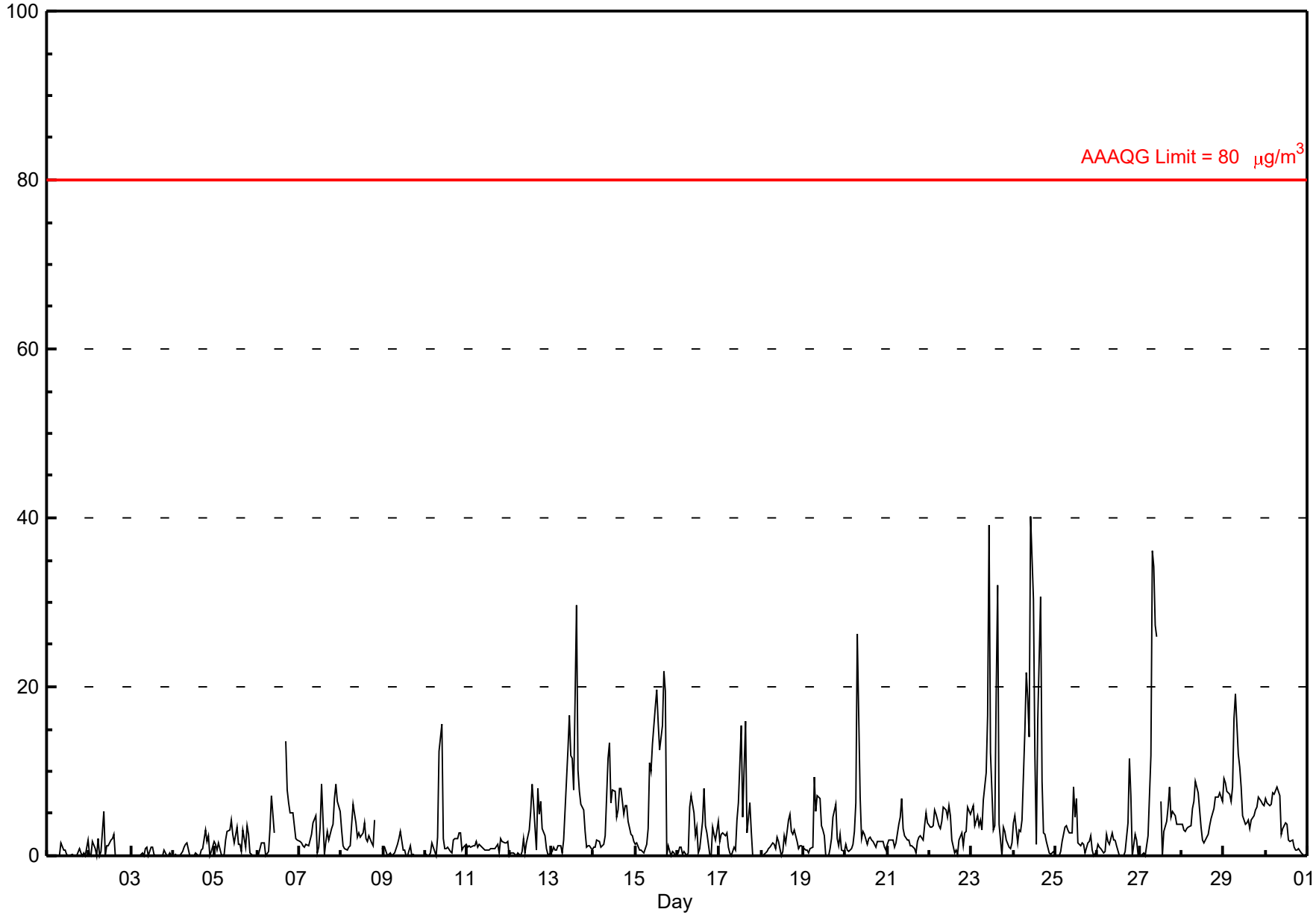
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - September 2016



Peace Airshed Zone Association

Hourly Maximums

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

Evergreen Park - September 2016

Maximum Value: 70.4 $\mu g/m^3$ on Sep 27 08:00

Maximum Daily Average: 21.1 $\mu g/m^3$ on Sep 24

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

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

Maximum Diurnal Average: 14.2 $\mu g/m^3$ at hour 9

Minimum Diurnal Average: 3.2 $\mu g/m^3$ at hour 4

Monthly Average: 7.35 $\mu g/m^3$

Percentiles: $P_1 = 0.1$ $P_{10} = 1.6$ $Q_1 = 2.4$ Median = 3.9 $Q_3 = 7.4$ $P_{90} = 15.6$ $P_{99} = 54.9$

Hours in Service:	720
Hours of Data:	711
Hours of Missing Data:	9
Hours of Calibration:	5
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	0	3	3	2	2	2	2	1	4	3	2	3	2	3	6	1	2	2	4	6	1	2	1	4	2.5	6.3
2-Sep	3	2	7	4	2	6	1	5	8	4	5	4	6	5	4	3	3	2	1	2	1	1	0	0	3.2	8.5
3-Sep	2	2	1	1	1	1	3	2	3	3	1	3	3	2	2	2	2	1	3	3	2	1	2	2	2.0	3.1
4-Sep	2	2	0	1	2	2	3	3	4	2	3	3	3	3	1	4	4	5	7	4	4	3	2	5	2.9	6.5
5-Sep	3	3	4	2	3	2	4	5	5	7	5	7	6	6	5	9	8	7	12	9	2	0	0	1	4.9	12.1
6-Sep	3	3	4	4	4	2	3	7	17	10	6	C	C	C	C	C	22	9	8	6	6	8	4	3	6.8	22.1
7-Sep	3	3	3	2	3	3	3	5	6	11	1	4	18	22	2	5	4	4	7	7	9	10	9	9	6.3	21.6
8-Sep	8	4	3	2	3	3	6	12	10	4	4	4	4	6	4	3	4	3	5	7	P	P	N	2	4.7	11.8
9-Sep	3	2	1	1	2	1	2	3	3	7	6	3	2	1	1	3	1	2	0	3	3	1	1	1	2.2	6.6
10-Sep	2	1	1	1	7	3	1	6	32	46	4	2	3	3	2	2	3	4	4	5	5	3	2	3	6.1	45.7
11-Sep	3	3	3	3	3	4	2	3	2	3	2	2	2	3	3	2	4	4	2	3	3	3	3	5	2.9	4.9
12-Sep	1	2	2	2	1	3	2	2	8	2	4	9	24	20	20	5	25	10	12	5	7	4	2	1	7.3	25.3
13-Sep	2	2	2	2	2	3	2	4	14	23	26	33	24	22	52	48	10	11	9	6	4	2	3	3	13.0	52.2
14-Sep	2	2	3	3	2	3	4	4	33	30	31	35	16	6	8	11	11	8	8	8	7	4	5	3	10.3	34.7
15-Sep	3	3	2	2	2	2	3	6	23	14	28	40	37	40	23	41	45	49	0	3	2	2	1	1	15.5	49.4
16-Sep	2	2	4	2	3	2	5	9	11	12	5	5	2	3	9	17	7	7	2	0	6	5	3	8	5.4	16.6
17-Sep	3	4	5	4	4	3	1	1	3	3	17	16	29	20	21	38	11	16	14	0	0	1	0	1	8.9	38.4
18-Sep	1	2	1	1	2	2	2	3	2	4	3	1	2	5	4	7	8	5	6	4	3	2	2	2	3.1	7.7
19-Sep	2	2	2	2	2	3	27	23	11	15	11	14	9	2	1	3	4	8	10	5	3	5	5	2	7.3	27.1
20-Sep	3	2	2	3	3	4	32	36	29	4	4	5	4	5	5	4	4	2	3	3	3	3	3	2	7.1	36.4
21-Sep	3	4	4	4	3	3	6	9	10	6	4	3	3	3	2	3	3	5	4	3	3	5	10	6	4.4	9.9
22-Sep	5	5	7	7	8	6	6	11	12	8	7	9	8	4	2	2	2	5	6	2	5	5	10	10	6.3	11.6
23-Sep	8	9	5	7	6	6	5	10	12	30	67	22	10	8	66	53	22	2	7	6	4	3	2	4	15.7	66.6
24-Sep	7	10	4	5	4	8	29	43	42	38	63	55	32	8	45	55	28	9	5	4	3	1	5	2	21.1	63.0
25-Sep	1	1	3	2	5	5	5	5	5	6	11	8	11	4	3	3	3	2	3	3	5	3	1	2	4.2	11.3
26-Sep	5	3	2	1	2	6	5	4	5	6	5	3	3	2	0	1	5	7	23	9	8	5	4	2	4.8	23.5
27-Sep	0	2	2	2	3	4	36	70	70	55	45	N	36	5	8	7	11	25	7	7	6	5	6	5	18.2	70.4
28-Sep	6	5	5	5	6	5	9	9	15	10	7	6	4	4	5	4	6	6	7	8	8	9	10	9	6.9	14.5
29-Sep	12	12	9	9	8	10	32	29	16	13	11	6	6	5	6	5	7	8	7	7	9	8	7	7	10.5	31.7
30-Sep	10	9	8	8	12	10	11	11	11	4	6	6	7	4	4	4	3	2	2	3	3	2	1	3	6.0	11.5
	3.6	3.5	3.4	3.2	3.6	3.9	8.4	11.4	14.2	12.7	13.2	11.1	10.9	7.6	10.9	12.0	9.1	7.7	6.2	4.8	4.3	3.7	3.7	3.6	Diurnal Average	
	12.3	11.9	9.4	8.8	11.5	10.4	35.7	70.4	70.4	55.0	66.6	55.1	37.3	39.6	66.5	55.3	45.4	49.4	23.5	9.4	8.9	9.8	10.3	9.6	Diurnal Maximum	

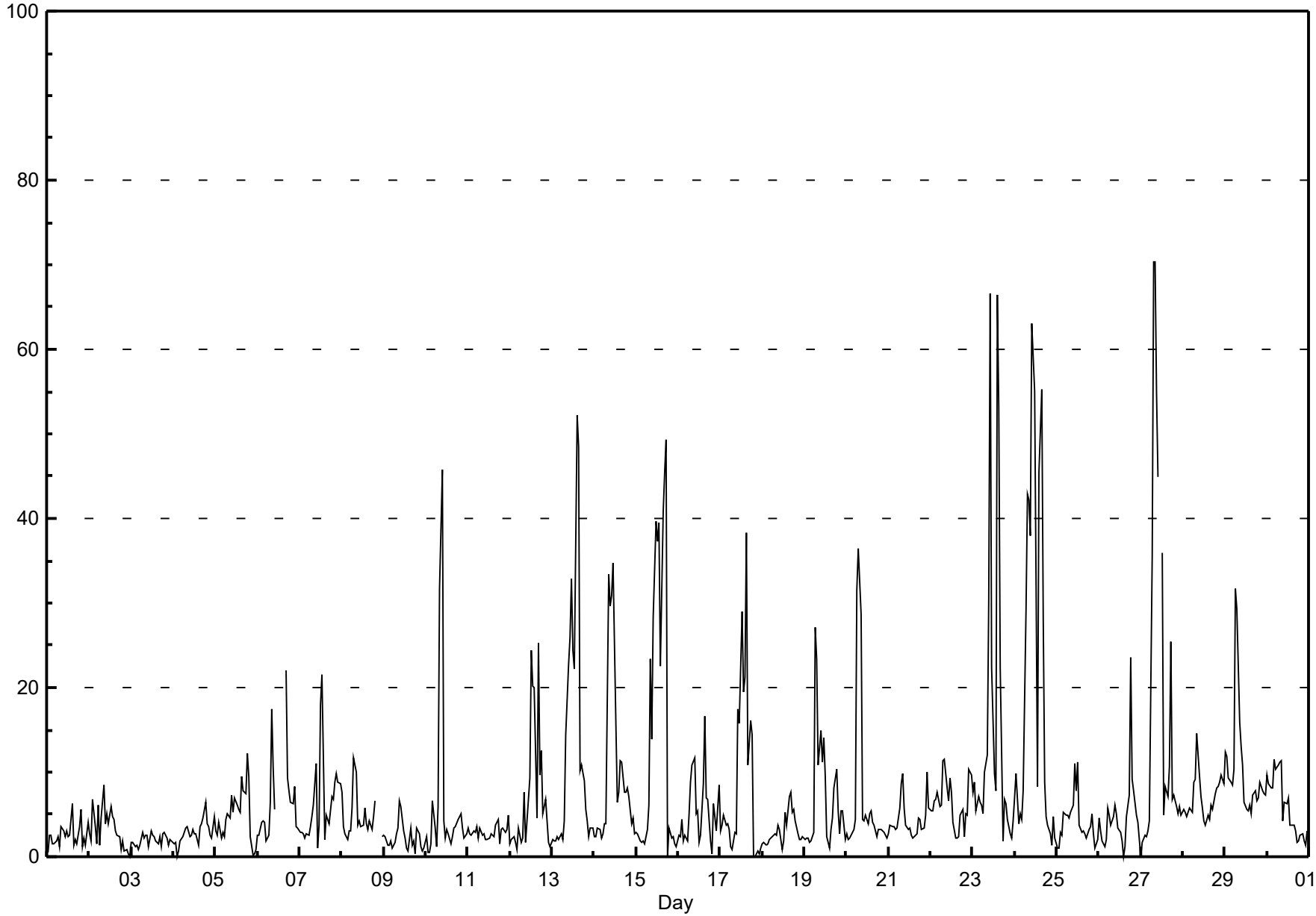
C - Calibration P - Power Failure N - Not Valid

Peace Airshed Zone Association

Hourly Maximums

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

Evergreen Park - September 2016

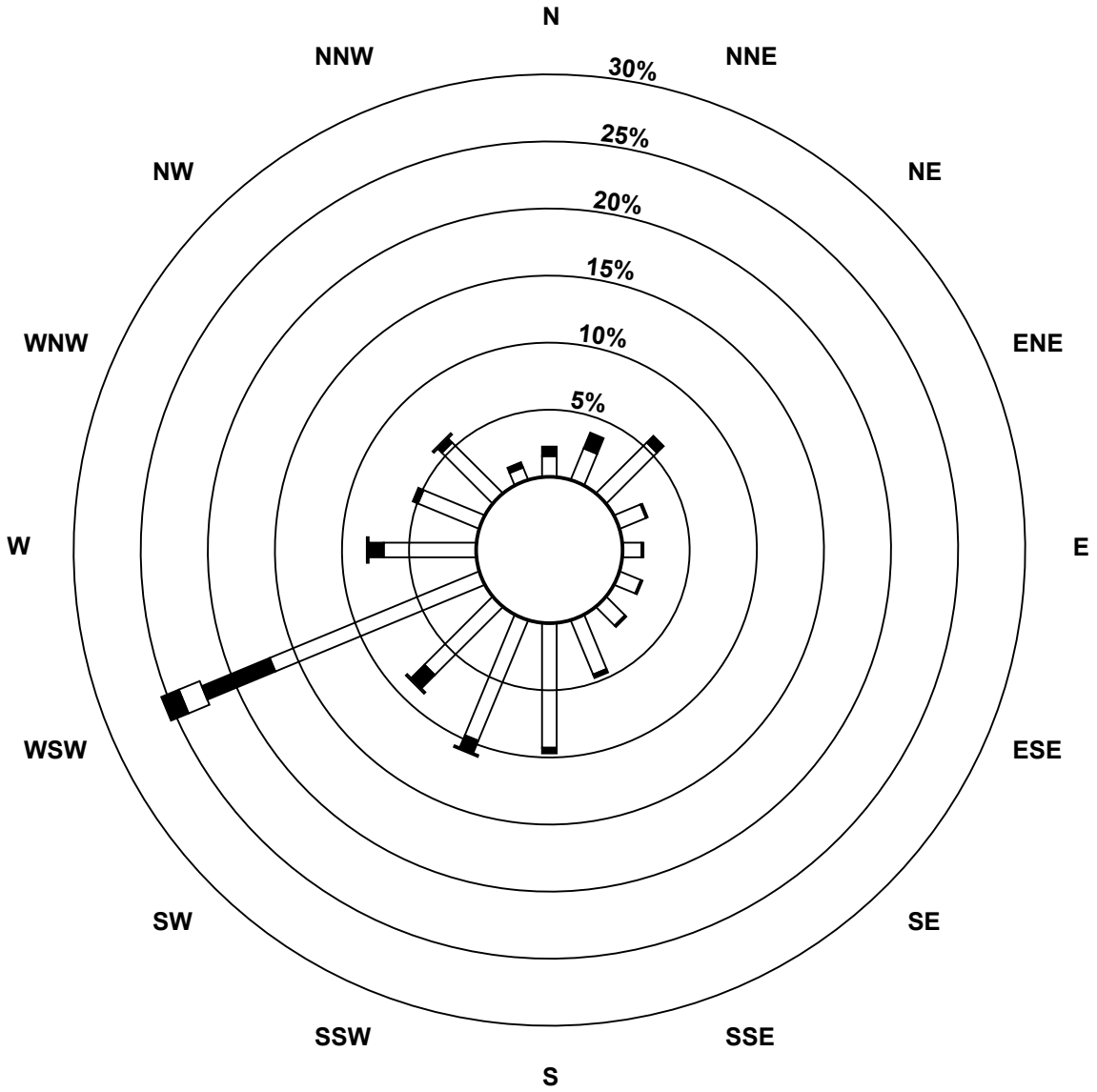


Peace Airshed Zone Association

Pollutant Rose

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

Evergreen Park - September 2016



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) - °C

Evergreen Park - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 25.3 °C on Sep 13 15:00 Maximum Daily Average: 16.8 °C on Sep 14

Minimum Value: -2 °C on Sep 28 06:00 Minimum Daily Average: 5.2 °C on Sep 28
Maximum Diurnal Average: 16.2 °C at hour 15 Minimum Diurnal Average: 4.5 °C at hour 7
Monthly Average: 10.15 °C Percentiles: P_1 = -1.8 P_{10} = 2.6 Q_1 = 6.0 Median = 9.9 Q_3 = 14.3 P_{90} = 17.3 P_{99} = 23.8

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

Day	Hourly Period Ending At (MST) 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-Sep	12	12	11	11	11	10	10	10	11	11	11	11	12	14	15	16	16	15	16	14	10	9	9	8	11.8	15.9
2-Sep	8	7	7	8	8	8	8	8	9	10	11	12	13	13	13	13	14	13	13	11	10	10	9	8	10.2	14.2
3-Sep	8	7	7	6	6	6	5	6	5	5	5	6	7	6	6	7	6	7	6	6	6	5	5	4	6.0	7.9
4-Sep	4	4	3	2	1	1	2	3	4	5	7	9	10	10	12	12	12	12	11	7	5	4	3	3	6.1	12.3
5-Sep	2	2	2	1	1	1	1	2	3	5	7	10	13	15	16	16	15	16	13	11	10	8	7	6	7.6	15.8
6-Sep	5	4	3	3	2	2	1	3	6	10	13	15	16	16	16	14	17	16	15	13	10	11	11	10	9.6	16.8
7-Sep	9	8	6	4	3	3	2	4	9	13	15	16	17	18	18	18	19	18	16	14	11	9	7	7	11.0	18.7
8-Sep	7	8	8	8	7	6	5	7	10	11	12	14	15	15	15	16	16	16	16	14	P	P	11	11	11.2	16.4
9-Sep	11	10	10	9	8	7	6	7	10	13	14	15	16	17	16	16	15	13	12	11	11	11	10	10	11.5	16.6
10-Sep	9	8	7	6	10	12	12	12	13	15	16	17	17	18	17	17	16	15	14	12	10	9	9	9	12.4	17.5
11-Sep	8	7	7	7	6	5	5	6	6	6	7	8	8	8	9	9	9	9	9	8	8	7	6	4	7.1	8.9
12-Sep	2	1	1	2	0	-1	-1	0	3	6	9	13	16	17	18	19	19	18	17	15	14	13	11	11	9.3	19.4
13-Sep	11	11	11	11	10	7	4	5	9	16	19	22	24	25	25	25	25	24	22	21	20	19	18	17	16.7	25.3
14-Sep	17	15	12	10	9	8	7	12	15	18	20	21	22	22	23	23	23	22	21	19	18	17	16	15	16.8	23.1
15-Sep	14	12	9	7	6	6	5	6	11	15	17	19	21	22	24	24	23	22	21	19	17	16	14	11	15.0	23.8
16-Sep	11	12	13	13	12	9	8	9	12	16	17	18	19	20	20	18	14	14	14	13	12	11	10	9	13.5	20.4
17-Sep	8	8	8	9	9	10	10	10	11	12	15	16	17	18	18	18	17	16	15	14	12	11	11	10	12.6	18.0
18-Sep	10	10	10	10	10	10	10	10	10	11	12	13	15	15	16	16	15	14	13	12	11	10	9	8	11.7	16.4
19-Sep	7	6	6	5	5	5	5	5	6	9	11	13	14	15	15	14	13	14	13	9	8	7	8	6	9.2	15.3
20-Sep	4	3	2	1	2	2	3	3	6	8	10	12	13	15	14	14	15	15	14	9	7	5	4	3	7.8	15.1
21-Sep	2	2	1	0	0	-1	-1	0	3	7	10	13	15	17	18	19	19	18	14	10	7	5	5	3	7.8	18.8
22-Sep	2	1	1	0	-1	-1	-1	-1	2	6	9	12	15	17	19	20	20	20	16	11	10	9	9	7	8.4	20.5
23-Sep	5	4	3	3	2	1	0	0	4	8	11	15	17	17	18	17	16	16	15	13	12	12	11	11	9.6	18.4
24-Sep	11	10	10	9	9	9	8	8	10	11	12	13	14	15	16	15	15	14	13	12	11	9	8	6	11.2	15.5
25-Sep	6	4	3	3	3	3	3	4	5	6	8	12	14	15	16	17	17	17	14	13	12	11	9	8	9.3	17.4
26-Sep	8	8	7	6	5	6	5	5	6	10	16	19	22	22	25	25	24	21	16	14	16	17	14	13	13.7	24.9
27-Sep	13	13	12	11	11	10	9	8	9	11	12	12	13	13	14	14	13	13	11	10	8	8	7	6	10.9	13.8
28-Sep	3	0	-1	-2	-2	-2	-2	-2	0	5	8	11	13	14	15	14	14	13	10	7	5	3	2	1	5.2	14.6
29-Sep	0	-1	-1	-2	-2	-2	-2	-2	0	4	7	10	12	14	14	15	15	14	12	8	7	7	6	6	5.8	15.1
30-Sep	5	6	6	6	5	5	5	6	6	7	7	7	6	5	5	5	5	5	5	5	5	4	4	4	5.4	7.2
	7.3	6.7	6.1	5.6	5.2	4.8	4.5	5.1	7.1	9.7	11.6	13.4	14.9	15.7	16.2	16.1	16.0	15.4	13.8	11.8	10.4	9.6	8.7	7.8	Diurnal Average	
	16.7	15.3	13.0	13.2	11.6	11.6	12.1	12.2	15.0	18.1	19.6	21.6	24.0	24.8	25.3	25.3	24.8	24.2	22.4	20.6	19.5	19.0	18.2	17.4	Diurnal Maximum	

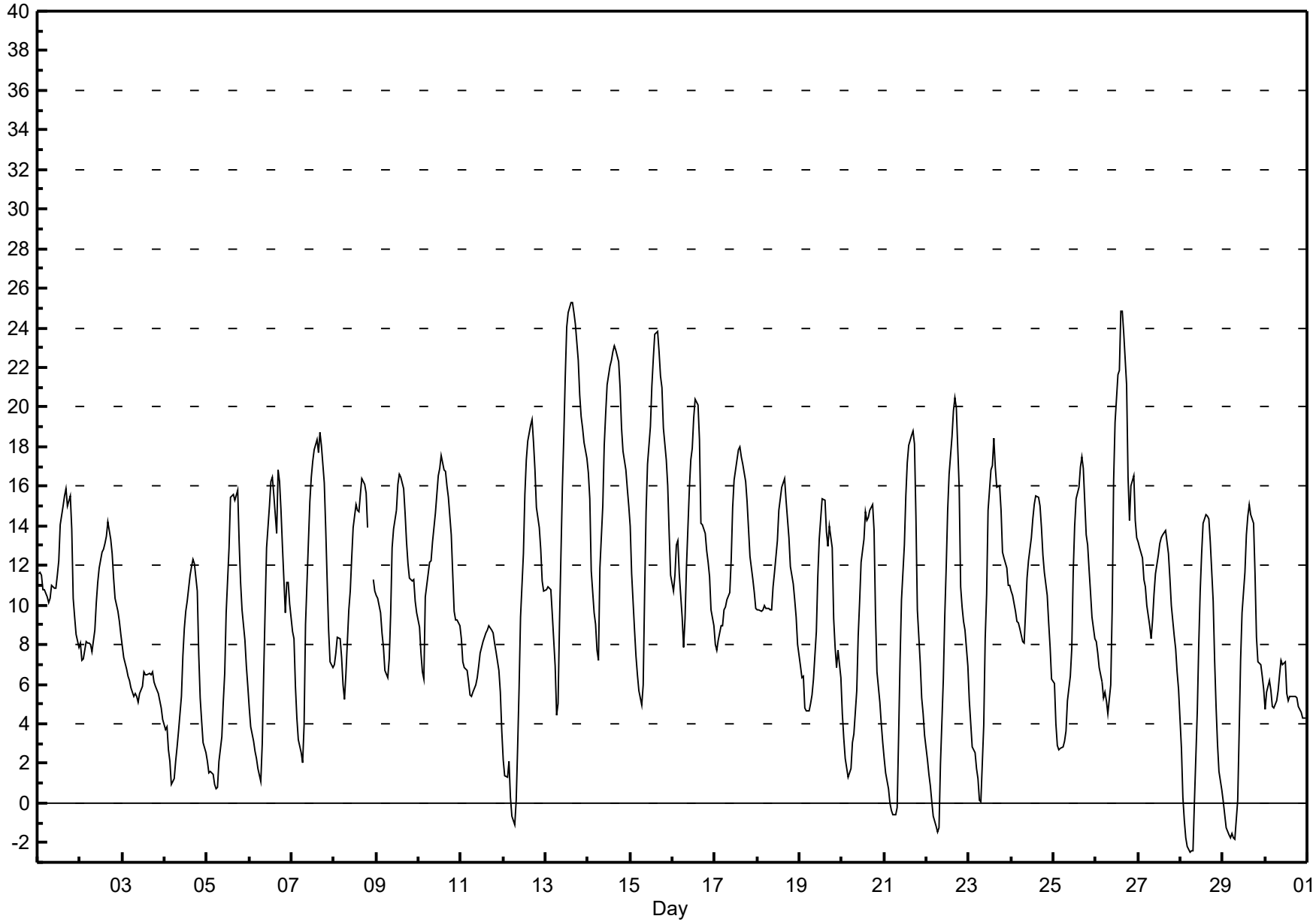
P - Power Failure

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - September 2016



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - September 2016

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

Maximum Value: 99.9 % on Sep 2 08:00 Maximum Daily Average: 90.4 % on Sep 1

Minimum Value: 22 % on Sep 22 17:00 Minimum Daily Average: 45.4 % on Sep 24

Maximum Diurnal Average: 90.1 % at hour 7 Minimum Diurnal Average: 46.1 % at hour 16

Monthly Average: 70.20 % Percentiles: P_1 = 25.6 P_{10} = 37.8 Q_1 = 50.8 Median = 72.6 Q_3 = 92.5 P_{90} = 97.7 P_{99} = 99.6

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-Sep	99	99	99	99	97	97	99	99	99	98	97	96	91	79	74	70	65	69	70	81	96	98	98	99	90.4	99.4
2-Sep	99	99	100	100	99	99	99	100	98	87	83	80	73	73	74	68	63	64	65	68	71	78	82	82	83.5	99.9
3-Sep	80	81	82	81	82	83	89	86	88	96	95	94	93	92	92	90	91	85	85	83	81	83	88	92	87.2	96.5
4-Sep	95	96	96	97	97	99	100	100	98	88	73	58	55	54	49	47	47	50	63	84	93	94	96	97	80.2	99.9
5-Sep	97	97	98	98	98	98	99	100	99	96	90	76	62	51	51	51	54	54	69	93	97	98	98	99	84.2	99.6
6-Sep	99	99	99	98	99	99	99	99	91	77	62	54	49	53	57	64	47	48	68	71	88	76	73	77	76.9	99.2
7-Sep	83	82	93	96	97	98	98	96	80	62	53	48	41	39	38	39	35	37	44	54	69	83	90	93	68.7	98.1
8-Sep	93	92	86	87	92	96	98	98	83	78	69	63	57	60	60	59	52	51	53	63	P	P	77	78	74.7	98.0
9-Sep	78	78	81	88	92	95	97	95	85	65	62	58	54	50	49	52	63	79	89	95	96	93	97	98	78.7	98.0
10-Sep	97	99	99	99	85	77	63	60	58	50	43	37	36	35	37	35	42	45	52	62	71	73	72	76	62.6	99.4
11-Sep	74	75	77	78	82	89	86	82	76	72	66	61	58	58	60	63	61	65	68	77	81	86	92	95	74.2	95.0
12-Sep	97	97	98	98	96	97	97	97	92	76	61	53	44	35	33	31	30	33	37	43	46	51	56	59	64.9	98.3
13-Sep	59	59	59	58	64	78	90	88	74	46	41	36	27	26	23	25	25	26	29	34	37	39	40	42	46.9	90.3
14-Sep	45	51	67	78	82	87	89	68	57	49	44	39	36	36	35	35	35	36	40	46	50	54	58	61	53.3	89.0
15-Sep	66	77	89	94	96	97	98	98	79	59	47	42	38	35	34	33	36	41	42	47	53	58	68	78	62.7	98.0
16-Sep	82	81	74	75	84	92	96	92	81	58	51	50	46	42	43	47	81	84	87	89	92	95	97	99	75.8	98.6
17-Sep	99	99	100	99	99	96	98	99	98	91	73	60	52	50	48	47	46	50	54	56	58	62	64	67	73.4	99.6
18-Sep	67	67	68	67	67	67	66	65	64	58	57	49	41	38	38	37	40	44	49	54	57	62	67	73	56.8	73.0
19-Sep	78	79	79	87	87	87	85	84	81	73	62	55	51	46	44	51	57	51	63	82	90	94	87	90	72.6	94.4
20-Sep	95	97	97	97	98	98	96	94	87	78	72	64	56	47	51	48	47	46	55	77	89	92	95	96	78.0	98.2
21-Sep	97	97	97	97	97	98	97	98	93	76	63	53	44	38	34	32	30	33	51	70	80	87	89	92	72.7	97.6
22-Sep	94	96	96	96	97	97	97	97	92	73	62	54	44	37	30	25	22	27	46	61	64	70	72	84	68.1	97.4
23-Sep	91	94	96	96	97	97	97	98	91	75	66	49	38	35	32	34	37	39	43	51	52	50	53	50	65.0	97.9
24-Sep	50	50	52	54	53	53	56	57	50	43	41	38	34	31	30	30	33	35	38	41	47	52	58	65	45.4	64.8
25-Sep	67	77	83	84	86	87	86	86	76	68	64	54	49	47	46	44	45	48	65	64	73	82	86	89	69.0	89.4
26-Sep	89	91	93	94	96	96	96	97	96	84	53	43	35	33	25	26	30	43	79	94	70	60	75	79	69.9	97.2
27-Sep	66	59	58	62	60	62	62	59	53	45	39	37	34	32	31	30	31	33	37	42	48	52	57	61	47.9	66.5
28-Sep	76	87	90	93	94	95	95	94	87	64	53	46	38	31	31	31	33	36	48	58	67	76	83	87	66.2	94.8
29-Sep	89	90	93	94	94	93	92	93	86	72	60	53	47	43	42	41	42	44	55	66	68	65	65	68	69.0	93.6
30-Sep	74	74	73	78	83	85	85	80	77	69	69	71	90	97	97	98	98	99	100	100	100	100	100	100	87.4	99.9
	82.4	84.0	85.8	87.4	88.3	89.7	90.1	88.6	82.3	70.9	62.4	55.7	50.5	47.4	46.3	46.1	47.3	49.8	58.1	66.8	71.7	74.6	77.9	80.8	Diurnal Average	
	99.3	99.4	99.6	99.7	99.0	99.4	99.6	99.9	99.2	98.5	97.5	96.3	92.8	96.7	97.1	98.3	98.2	99.2	99.5	99.5	99.5	99.7	99.8	99.9	Diurnal Maximum	

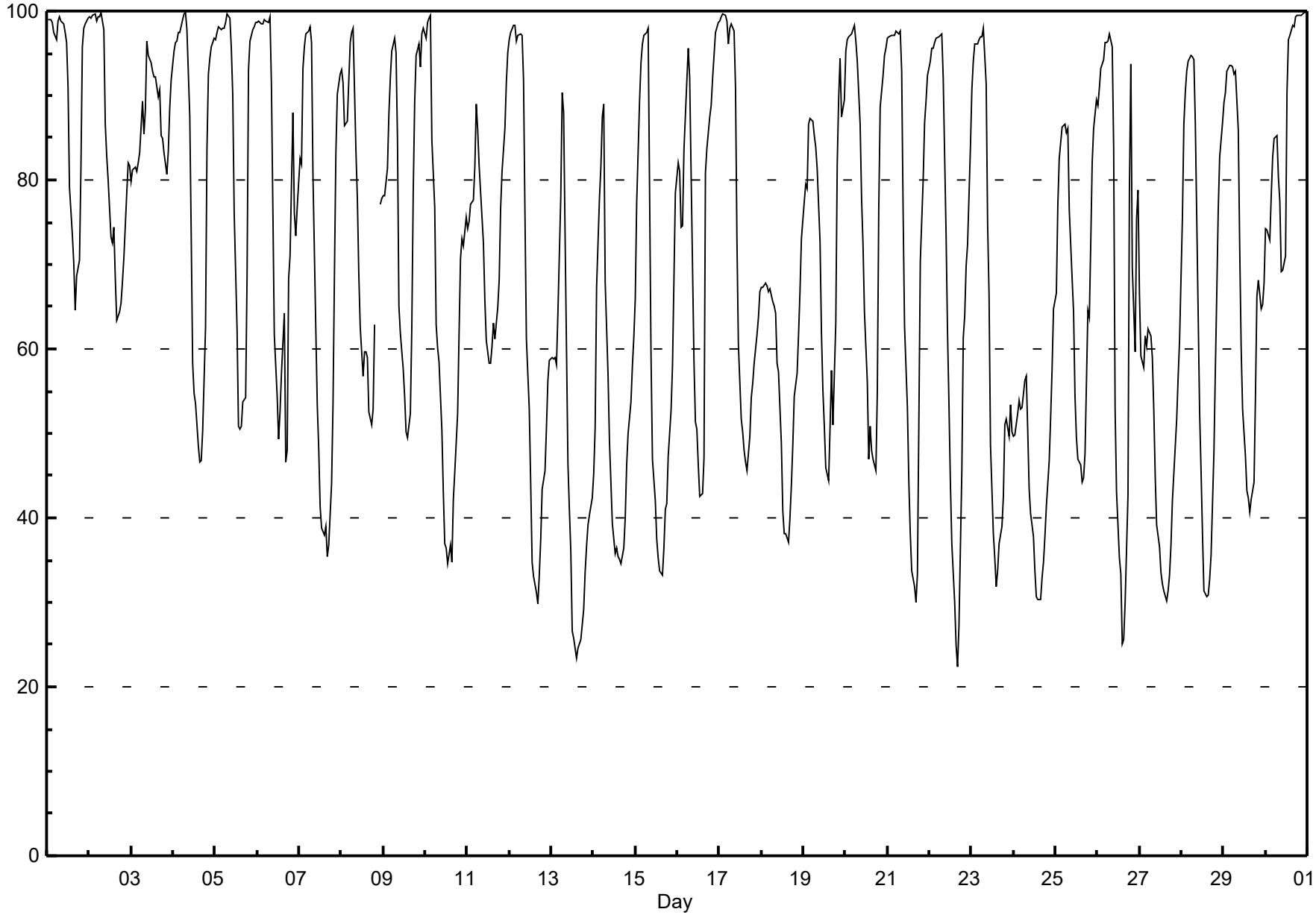
P - Power Failure

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - September 2016



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - September 2016

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	4	8	11	10	10	10	8	3	14	13	14	15	19	13	15	17	10	7	1	0	1	1	1	7.5	19.3
Dir	41	206	259	312	287	270	271	353	261	238	251	252	277	273	292	286	258	273	250	252	235	194	331	304	272.3	273.0
2 Spd	1	1	4	4	1	2	3	4	7	4	5	6	8	5	13	14	16	16	18	15	10	9	14	21	6.8	21.1
Dir	309	226	268	272	156	208	170	240	249	220	194	193	257	279	316	321	316	312	313	306	285	269	280	304	290.0	304.0
3 Spd	21	19	18	21	20	21	23	21	23	20	19	19	20	21	22	22	20	19	18	15	14	8	7	7	17.3	22.9
Dir	298	298	292	288	273	271	262	263	265	262	272	272	274	290	307	309	306	310	310	302	305	292	261	259	285.6	264.7
4 Spd	5	5	0	0	3	3	2	4	5	5	6	6	5	7	2	5	2	5	3	3	1	1	1	1	1.1	7.5
Dir	250	237	172	179	189	171	152	165	176	195	175	161	201	311	225	329	17	39	40	66	110	88	21	41	195.0	311.0
5 Spd	0	1	0	0	1	0	2	1	3	1	4	4	7	8	3	3	3	5	3	1	1	0	1	2	1.3	7.5
Dir	5	37	196	2	73	187	187	192	204	178	186	191	202	202	260	12	305	152	286	102	0	159	137	207	203.7	202.4
6 Spd	0	1	0	1	6	1	1	2	4	8	14	15	14	9	17	18	15	11	2	6	1	11	11	10	6.8	18.1
Dir	141	192	190	197	187	192	173	188	175	235	244	243	255	261	212	231	218	232	207	212	194	284	231	219	231.1	231.5
7 Spd	7	7	3	1	0	0	0	1	3	16	24	27	28	28	21	16	23	21	15	10	4	2	1	1	10.1	27.7
Dir	232	239	259	107	172	130	100	62	231	237	242	241	255	251	280	279	249	240	242	224	241	189	37	155	248.1	254.9
8 Spd	1	4	6	6	1	1	3	3	16	19	20	22	21	26	23	18	20	19	12	8	P	P	12	13	10.8	26.0
Dir	194	200	203	203	171	190	187	224	241	244	260	268	283	308	303	295	289	289	281	261	P	P	245	238	270.1	307.9
9 Spd	10	8	5	5	2	1	0	1	3	8	8	7	10	10	16	21	13	5	5	7	8	7	2	6	5.7	21.0
Dir	241	299	248	183	179	76	115	163	150	193	185	158	140	181	205	220	201	157	148	153	159	178	156	188	191.1	219.9
10 Spd	3	3	2	3	22	24	32	33	38	40	41	35	28	29	21	22	26	26	23	16	7	11	19	20	17.8	41.1
Dir	174	181	139	228	239	237	238	237	241	248	250	261	261	267	299	284	321	326	327	355	304	268	299	317	268.9	250.2
11 Spd	18	19	21	22	21	15	15	15	17	11	9	12	17	12	14	13	12	8	5	6	5	3	0	2	10.9	21.7
Dir	331	324	317	320	323	317	314	321	322	344	357	332	320	308	312	289	291	275	292	205	202	203	214	192	314.8	320.3
12 Spd	3	1	3	5	2	2	1	3	5	5	5	10	14	17	19	20	18	20	16	14	14	13	13	18	9.6	20.3
Dir	189	191	244	248	193	192	185	189	195	189	176	206	232	238	236	223	242	244	233	236	233	220	210	208	225.2	222.7
13 Spd	17	16	14	13	7	2	1	0	3	14	25	21	30	34	38	39	39	37	32	28	27	25	18	14	20.4	39.2
Dir	222	230	231	233	238	234	89	87	230	244	242	248	254	250	251	242	244	248	243	242	237	242	239	235	242.4	241.8
14 Spd	12	9	0	2	2	1	3	14	12	22	27	25	30	25	28	32	28	28	24	17	15	10	10	9	15.3	31.6
Dir	226	214	209	16	209	101	220	212	243	247	246	265	260	265	257	248	256	255	244	238	235	227	214	222	246.5	248.3
15 Spd	6	2	2	1	0	0	1	3	8	17	22	22	21	21	20	24	23	16	13	13	9	7	5	3	10.3	24.5
Dir	230	269	35	34	134	50	179	202	237	237	242	244	248	249	253	247	252	257	266	248	242	236	181	183	245.5	247.0
16 Spd	3	5	9	5	2	1	2	4	3	7	13	10	11	15	19	34	10	3	5	5	5	4	2	3	6.3	34.4
Dir	193	178	236	211	208	103	156	210	277	252	243	244	244	261	251	242	260	208	184	159	165	147	112	178	232.6	242.4
17 Spd	1	0	2	1	0	10	9	5	9	10	17	19	25	18	26	22	21	19	18	22	22	21	21	20	13.4	26.0
Dir	144	157	176	187	57	202	199	189	186	197	228	237	243	249	242	249	257	253	243	237	239	244	238	235	236.3	241.6
18 Spd	21	20	21	18	23	22	23	21	19	26	24	22	27	32	31	37	39	24	12	15	15	14	11	9	21.7	38.6
Dir	238	240	238	239	240	243	244	243	249	255	243	252	263	258	258	248	250	254	255	239	243	249	245	268	248.4	249.5
19 Spd	8	8	9	4	6	7	7	8	8	10	11	8	10	8	5	13	0	7	3	9	1	4	8	4	4.0	12.7
Dir	246	239	245	275	294	254	249	259	236	250	271	292	255	285	294	25	25	240	21	71	356	353	51	190	271.5	24.6
20 Spd	3	0	0	4	4	4	7	5	5	10	12	11	11	13	11	10	9	4	1	0	1	1	0	1	3.9	12.8
Dir	312	309	218	208	225	270	261	250	271	267	241	243	285	275	321	317	343	33	136	172	196	188	359	26	277.6	274.5
21 Spd	3	1	1	1	1	2	2	3	5	4	5	9	7	9	7	8	6	4	3	1	0	0	2	0	3.0	9.1
Dir	192	192	165	193	188	196	201	200	203	178	176	195	188	211	216	195	178	115	73	55	196	358	232	171	190.2	194.7
22 Spd	0	2	1	1	2	0	0	1	3	3	5	6	2	6	6	6	2	3	4	5	4	5	4	1	1.6	6.2
Dir	206	190	190	186	198	80	175	19	45	37	124	146	146	177	155	204	103	54	43	48	49	79	55	101	110.9	145.7

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Evergreen Park - September 2016

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	2	1	1	1	1	1	1	2	2	2	8	5	14	27	25	16	17	16	19	22	20	33	9.2	32.9
Dir	323	154	213	242	110	197	27	12	12	314	203	119	246	290	244	253	236	234	248	252	250	244	226	237	242.6	237.4
24 Spd	36	36	31	29	29	25	23	21	30	40	46	39	39	39	39	38	42	39	29	29	17	14	10	8	29.9	45.9
Dir	238	240	237	234	241	243	241	240	246	250	246	251	251	251	249	250	245	243	242	244	232	215	215	212	243.2	246.5
25 Spd	6	2	1	0	1	1	1	1	1	3	1	2	5	9	9	5	6	8	3	6	2	1	1	1	2.2	9.1
Dir	196	143	51	90	191	47	45	20	126	155	84	176	236	260	243	270	240	214	168	242	183	55	163	160	221.5	243.2
26 Spd	2	1	1	0	2	3	1	3	1	3	10	6	14	9	21	12	3	2	3	1	9	15	24	26	4.7	25.9
Dir	148	130	82	88	188	177	103	38	62	140	163	156	208	190	195	176	147	303	295	289	292	284	250	250	220.0	250.3
27 Spd	27	26	35	27	27	24	23	30	36	43	42	41	41	46	46	40	44	38	29	19	15	15	12	8	30.3	45.9
Dir	240	243	236	235	246	244	237	241	242	246	248	252	264	245	243	248	244	244	242	237	228	230	220	240	243.5	242.6
28 Spd	1	0	1	1	1	1	2	1	6	3	3	5	5	4	6	8	9	11	8	4	2	1	1	1	2.0	10.9
Dir	205	47	103	184	146	138	204	166	188	200	352	60	49	77	61	51	33	25	19	4	5	335	312	322	43.9	24.9
29 Spd	0	0	1	2	2	3	2	1	5	4	3	4	9	11	11	11	11	11	6	6	7	6	6	4	3.7	11.4
Dir	277	356	197	194	215	218	268	214	225	334	73	63	71	52	56	72	42	38	40	39	35	30	30	359	46.5	38.3
30 Spd	4	2	3	1	1	1	1	2	3	9	11	12	10	8	7	14	16	16	18	18	17	16	13	11	8.5	17.9
Dir	16	18	22	325	335	254	270	299	354	27	33	40	28	22	20	39	37	37	46	47	48	46	48	43	36.4	46.2
Spd	5.5	5.2	5.3	4.7	5.3	5.3	5.6	5.7	7.8	10.6	12.2	11.3	13.2	13.6	13.4	13.8	12.7	10.0	7.4	5.8	5.5	5.5	5.3	6.0	Diurnal Average	
Dir	245.9	247.7	248.8	252.2	249.4	245.8	243.5	243.0	242.7	245.2	243.2	248.1	256.3	259.6	258.9	258.1	260.3	263.1	264.5	252.1	245.8	246.5	242.5	245.1		
Spd	35.8	36.4	34.9	28.8	29.3	25.3	32.3	33.0	38.5	42.9	45.9	40.9	41.0	45.5	45.9	39.8	43.5	38.5	32.0	28.8	26.6	24.6	24.3	32.9	Diurnal Maximum	
Dir	237.9	240.4	236.4	234.2	241.3	243.0	238.4	236.7	241.2	245.9	246.5	251.9	263.9	244.9	242.6	248.0	243.8	243.4	243.4	244.1	237.3	242.2	249.8	237.4		

Maximum Speed Value: 46 km/h on Sep 24 11:00
Maximum Daily Speed Average: 30.3 km/h on Sep 27
Maximum Diurnal Speed Average: 13.8 km/h at hour 16

Minimum Speed Value: 0 km/h on Sep 5 04:00
Minimum Daily Speed Average: 1.1 km/h on Sep 5
Minimum Diurnal Speed Average: 4.7 km/h at hour 4

Monthly Average Velocity: 8.14 km/h 251.90 deg

Speed Percentiles: $P_1 = 0.2$ $P_{10} = 0.7$ $Q_1 = 2.5$ Median = 7.7 $Q_3 = 17.7$ $P_{90} = 26.0$ $P_{99} = 41.9$

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

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

P - Power Failure

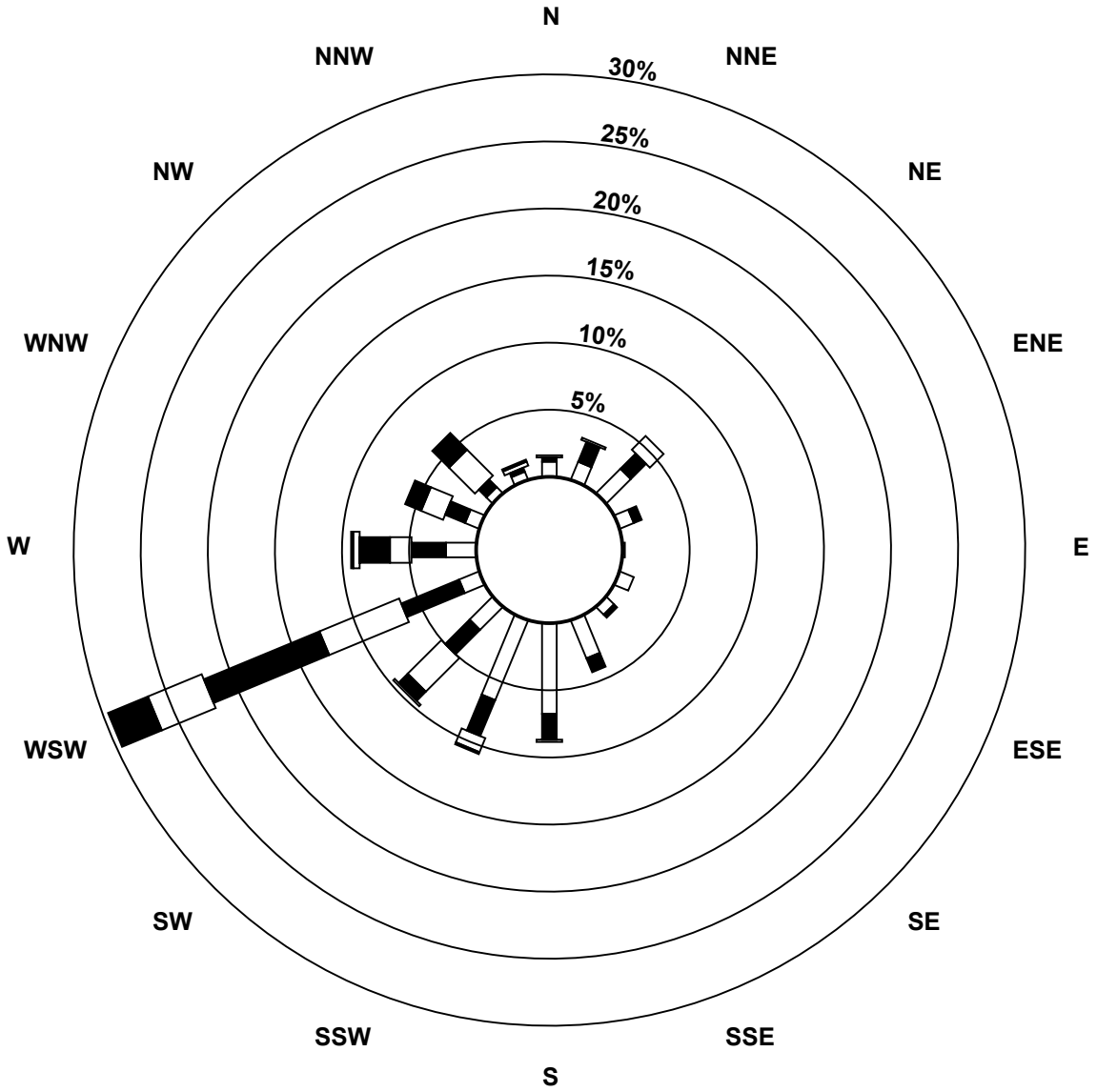
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	25	6	2	0	0	0	33
NorthEast	32	16	14	0	0	0	62
East	25	4	0	0	0	0	29
SouthEast	32	6	0	0	0	0	38
South	87	37	2	1	0	0	127
SouthWest	41	41	56	45	18	11	212
West	22	34	30	40	14	13	153
NorthWest	17	9	22	16	0	0	64
Total	281	153	126	102	32	24	718

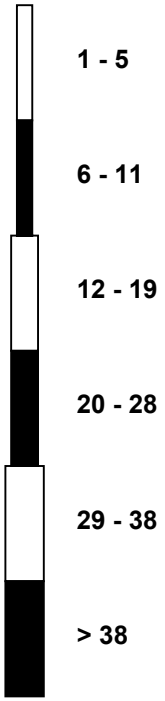
Wind Rose

Wind Speed (WS) (km/h)

Evergreen Park - September 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - September 2016

Peace Airshed Zone Association

Maximum Speed: 47 km/h on Sep 27 15:00

Maximum Daily Speed Average: 30.9 km/h on Sep 27

Minimum Speed: 0 km/h on Sep 5 04:00

Minimum Daily Speed Average: 3.2 km/h on Sep 5

Maximum Diurnal Speed Average: 20.0 km/h at hour 16

Minimum Diurnal Speed Average: 6.7 km/h at hour 4

Monthly Average Speed: 11.74 km/h

Percentiles: $P_1 = 0.4$ $P_{10} = 1.4$ $Q_1 = 3.1$ Median = 8.7 $Q_3 = 18.1$ $P_{90} = 26.7$ $P_{99} = 42.5$

Hours in Service: 720

Hours of Data: 718

Hours of Missing Data: 2

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-Sep	6	6	10	11	10	11	14	9	5	15	13	15	16	20	14	17	17	11	7	2	1	1	2	2	9.8	20.3
2-Sep	2	1	4	5	1	2	3	4	8	5	6	6	9	6	13	15	17	17	18	16	10	9	15	22	9.0	21.7
3-Sep	22	20	18	22	21	22	23	22	23	21	20	20	20	21	23	23	20	19	18	16	14	8	7	7	18.7	23.4
4-Sep	5	5	1	0	3	3	2	4	5	6	8	8	8	9	4	7	5	5	3	3	2	1	1	1	4.1	9.0
5-Sep	1	1	1	0	1	0	3	1	3	2	4	5	8	10	7	5	5	6	8	1	2	0	1	2	3.2	9.9
6-Sep	1	2	0	1	6	1	1	2	4	9	15	16	15	12	17	21	16	11	2	6	2	13	11	10	8.1	20.6
7-Sep	7	7	3	1	1	1	0	1	4	17	25	28	29	29	23	17	25	21	15	10	5	2	2	2	11.5	29.0
8-Sep	1	4	6	6	2	2	3	4	16	19	21	23	23	28	25	20	22	19	12	9	P	P	12	13	13.2	27.7
9-Sep	10	9	7	5	3	1	1	1	4	9	9	8	12	11	17	21	13	5	5	8	8	8	4	6	7.7	21.4
10-Sep	5	4	3	3	23	25	32	33	39	41	42	36	29	31	22	23	27	27	23	17	11	12	19	20	22.9	41.7
11-Sep	18	20	21	22	22	16	16	16	18	13	11	13	18	13	15	14	13	9	5	6	6	3	1	2	12.8	21.9
12-Sep	3	1	3	5	2	2	1	3	5	6	6	11	16	18	20	21	19	21	16	14	14	14	14	18	10.6	21.0
13-Sep	17	16	14	14	7	4	1	2	5	15	26	22	31	35	39	40	39	37	32	28	27	25	18	14	21.2	39.6
14-Sep	12	9	2	2	2	2	4	14	13	23	28	27	31	26	29	32	29	29	24	17	15	10	10	9	16.7	32.4
15-Sep	6	4	3	1	1	1	2	3	9	18	23	23	21	22	21	25	23	16	14	13	9	7	5	3	11.4	25.2
16-Sep	3	5	10	5	3	3	3	4	3	7	13	11	12	16	19	35	11	4	5	5	6	4	2	3	8.1	34.7
17-Sep	3	2	3	1	1	11	9	5	9	11	18	20	25	20	27	23	22	20	18	22	22	21	21	20	14.7	26.7
18-Sep	21	20	21	18	23	22	23	21	19	27	24	24	28	33	32	38	39	24	13	15	15	14	12	10	22.4	39.2
19-Sep	9	8	9	4	6	8	7	8	9	10	13	10	12	11	7	13	3	7	4	10	2	4	9	5	7.9	13.4
20-Sep	3	1	1	4	4	5	7	5	5	12	13	12	14	15	12	11	12	5	1	1	1	1	0	1	6.1	15.3
21-Sep	3	1	1	1	1	3	2	3	5	5	6	10	8	11	10	9	7	5	3	1	0	0	3	0	4.1	10.9
22-Sep	1	2	1	1	2	0	1	1	3	4	6	7	6	9	8	8	4	4	4	5	4	5	4	2	3.8	8.9
23-Sep	1	1	2	2	3	2	2	1	2	3	3	4	9	6	18	27	25	16	18	16	20	23	20	33	10.7	33.1
24-Sep	36	37	31	29	29	25	23	21	30	40	46	40	40	40	40	38	43	39	29	29	18	14	10	8	30.7	46.4
25-Sep	7	3	2	2	1	1	1	1	2	3	2	3	6	10	10	7	9	8	4	7	3	1	2	3	4.0	9.8
26-Sep	2	2	2	1	2	5	2	3	2	5	11	7	15	10	22	13	4	4	4	1	10	17	25	26	8.1	26.2
27-Sep	27	26	35	28	28	25	23	30	36	43	43	42	42	46	47	41	44	39	29	19	15	16	12	8	30.9	46.5
28-Sep	3	3	2	2	3	2	3	2	6	4	5	6	8	7	9	10	10	11	8	4	2	1	1	1	4.6	11.2
29-Sep	1	0	1	2	2	4	3	2	6	5	5	6	11	12	13	12	11	12	6	6	7	6	6	4	5.8	12.7
30-Sep	4	2	3	2	1	1	2	2	4	10	11	13	10	9	8	14	17	16	18	18	18	16	13	12	9.4	18.3
	8.0	7.5	7.4	6.7	7.1	6.9	7.2	7.7	10.0	13.5	15.8	15.8	17.8	18.2	19.0	20.0	18.3	15.6	12.3	10.9	9.3	8.8	8.8	8.9	Diurnal Average	
	36.1	36.6	35.1	29.0	29.4	25.5	32.5	33.3	38.8	43.4	46.4	41.6	42.0	46.4	46.5	40.6	44.0	39.0	32.2	28.9	26.7	24.8	24.6	33.1	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 - September 2016

Maximum Value: 101.3 deg on Sep 4 03:00

Minimum Value: 3.9 deg on Sep 29 20:00

Percentiles: P_1 = 5.7 P_{10} = 8.5 Q_1 = 13.3 Median = 21.9 Q_3 = 52.9 P_{90} = 75.8 P_{99} = 92.2

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 Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Sep	37	81	66	17	27	28	46	31	62	13	19	14	20	19	27	28	18	22	27	64	88	35	69	68	88.3
2-Sep	60	87	22	29	71	56	25	28	23	40	35	39	31	49	20	23	17	20	18	16	23	17	18	13	86.5
3-Sep	17	18	17	18	14	15	13	12	13	13	16	16	16	15	16	13	14	16	12	13	14	13	15	13	18.5
4-Sep	15	18	101	87	9	28	34	22	24	30	36	47	61	44	87	49	83	31	29	13	43	64	61	45	101.3
5-Sep	54	89	81	87	63	78	61	87	36	71	33	49	34	56	75	54	85	54	90	75	76	87	67	64	90.0
6-Sep	88	65	65	76	9	37	78	27	25	19	16	19	24	41	17	42	14	16	80	14	53	40	9	6	87.6
7-Sep	13	31	34	67	92	69	60	92	84	14	12	12	17	16	22	20	20	12	9	15	59	39	64	91	92.4
8-Sep	79	14	22	11	78	86	51	31	12	10	19	20	26	22	21	24	21	15	16	26	P	P	10	8	86.3
9-Sep	13	26	37	13	56	54	78	30	33	21	21	33	31	27	19	11	22	15	28	17	19	16	59	16	78.2
10-Sep	69	64	53	67	15	10	7	7	7	10	10	17	15	22	18	17	11	13	15	20	51	18	15	12	68.8
11-Sep	14	11	9	8	10	11	10	11	22	28	28	25	18	23	21	22	21	21	46	21	20	44	68	32	67.5
12-Sep	16	61	15	13	13	10	27	14	20	39	35	25	26	25	23	15	24	11	8	6	7	14	8	5	61.5
13-Sep	8	7	9	12	15	94	60	88	86	16	9	18	14	12	8	8	7	9	7	6	6	7	7	6	93.6
14-Sep	9	19	88	64	67	85	51	9	33	15	11	22	15	19	15	13	13	13	8	5	6	8	10	9	87.8
15-Sep	12	55	33	67	94	89	57	53	17	9	13	13	14	19	20	14	10	13	17	13	13	20	9	20	94.5
16-Sep	42	51	30	33	76	72	73	24	37	22	15	22	24	25	17	8	28	38	24	15	20	40	49	56	75.8
17-Sep	90	86	65	54	81	13	8	19	18	19	18	14	12	27	13	12	12	14	9	7	10	8	7	7	90.1
18-Sep	7	7	6	5	6	6	6	7	11	14	10	19	16	15	17	13	10	11	14	6	8	11	13	32	32.2
19-Sep	15	12	13	25	20	20	14	15	20	18	27	43	43	45	50	23	91	21	80	39	66	62	28	54	91.2
20-Sep	31	79	85	19	16	24	22	19	30	33	16	28	36	42	42	17	45	46	64	75	46	80	47	65	84.6
21-Sep	28	88	68	75	42	52	15	9	24	26	38	27	47	44	57	40	49	48	18	52	68	89	82	80	89.0
22-Sep	94	21	50	52	20	68	83	77	51	37	55	33	83	61	60	56	74	40	11	8	26	16	12	80	93.8
23-Sep	76	68	64	92	83	58	77	70	58	69	71	77	37	55	55	9	11	10	13	9	9	11	7	7	92.3
24-Sep	8	7	7	7	5	6	6	7	9	10	9	11	15	13	14	9	11	9	7	6	14	6	9	37	37.2
25-Sep	52	54	76	83	66	66	31	85	69	34	80	63	46	32	21	46	54	16	58	36	59	61	68	77	84.8
26-Sep	48	44	72	88	57	62	75	44	76	54	18	44	18	23	20	25	82	76	54	93	24	20	8	9	92.6
27-Sep	7	9	7	8	12	10	7	7	7	9	10	11	13	11	10	11	8	7	7	8	6	8	7	10	12.6
28-Sep	75	79	83	83	72	76	59	66	15	77	63	45	63	60	65	36	19	12	9	11	17	62	55	67	83.2
29-Sep	65	43	49	28	43	26	37	60	28	53	50	53	27	30	27	27	20	15	9	4	8	14	13	17	65.3
30-Sep	23	24	19	61	19	69	42	41	40	17	18	18	19	23	36	14	18	13	14	16	15	17	15	20	69.2
	93.8	89.3	101.3	92.3	94.5	93.6	82.6	91.8	85.9	77.5	80.0	76.7	82.7	60.6	87.0	56.1	91.2	76.3	90.0	92.6	88.3	89.0	82.4	90.5	

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 - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.7 ppb on Sep 17 23:00 Maximum Daily Average: 0.6 ppb on Sep 18

Minimum Value: 0 ppb on Sep 5 04:00 Minimum Daily Average: 0.0 ppb on Sep 5
Maximum Diurnal Average: 0.4 ppb at hour 1 Minimum Diurnal Average: 0.2 ppb at hour 4
Monthly Average: 0.25 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.2 P_{90} = 0.5 P_{99} = 2.4

Hours in Service:	720
Hours of Data:	679
Hours of Missing Data:	41
Hours of Calibration:	34
Percent Operational Time:	99.0

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-Sep	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	0.5
2-Sep	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	0.7
3-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
4-Sep	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
5-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
6-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
7-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	1.3
8-Sep	0	0	0	1	0	A	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
9-Sep	0	0	0	0	A	0	0	0	1	0	0	0	1	0	0	C	C	C	0	0	0	0	0	0	0.2	0.8
10-Sep	0	0	0	A	0	1	0	0	0	1	0	0	0	0	N	N	N	N	N	N	0	0	0	0	--	1.2
11-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
12-Sep	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
13-Sep	A	0	0	0	0	0	0	0	0	0	0	1	N	0	0	0	0	0	1	0	3	0	0	A	0.4	2.7
14-Sep	1	0	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	2	A	2	0.4	2.4
15-Sep	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	2	0	0.4	3.4
16-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0.2	0.7
17-Sep	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	0	1	5	1	0.4	4.7
18-Sep	4	1	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	A	0	0	1	1	1	0.6	4.0
19-Sep	1	0	0	0	0	1	0	0	1	1	1	1	1	0	0	0	1	A	0	0	0	0	0	0	0.5	1.2
20-Sep	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	1.3
21-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3
22-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.4
23-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	1	0	1	0	0	0.3	1.1
24-Sep	0	0	0	0	1	2	1	0	1	1	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0.4	2.4
25-Sep	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
26-Sep	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
27-Sep	0	0	1	1	0	0	0	3	1	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.4	3.0
28-Sep	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
29-Sep	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
30-Sep	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
	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	Diurnal Average	
	4.0	1.3	1.2	0.6	1.1	2.4	1.3	3.0	1.3	1.2	1.1	0.8	1.0	0.5	0.7	0.5	1.2	1.0	1.1	1.3	2.7	1.6	4.7	2.4	Diurnal Maximum	

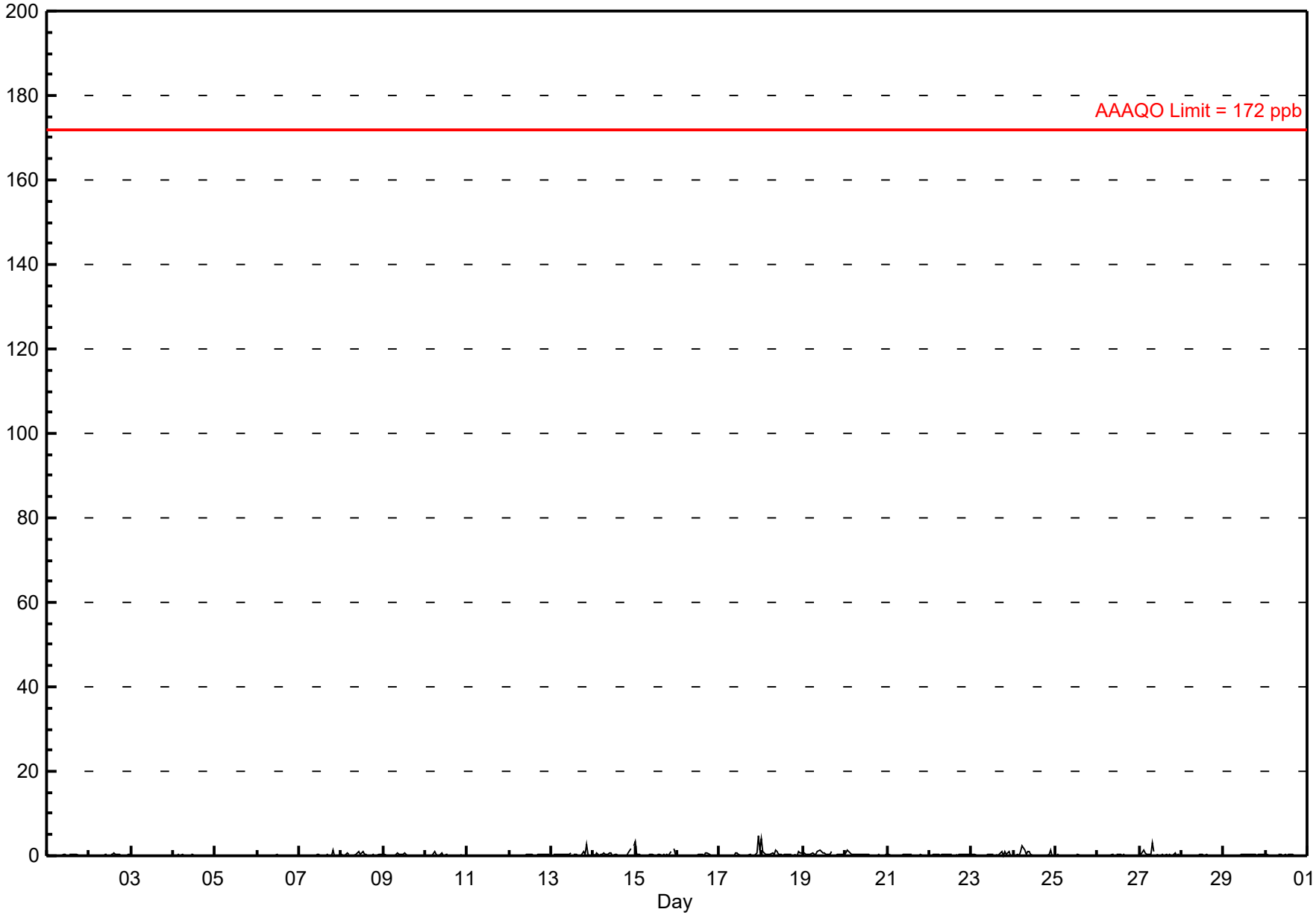
C - Calibration N - Not Valid A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - September 2016



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - September 2016

Maximum Value: 28.5 ppb on Sep 17 23:00

Maximum Daily Average: 2.3 ppb on Sep 17

Minimum Value: 0 ppb on Sep 5 05:00

Minimum Daily Average: 0.5 ppb on Sep 5

Maximum Diurnal Average: 1.7 ppb at hour 23

Minimum Diurnal Average: 0.6 ppb at hour 15

Monthly Average: 0.88 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.6 $Q_3 = 0.7$ $P_{90} = 1.4$ $P_{99} = 5.8$

Hours in Service:	720
Hours of Data:	679
Hours of Missing Data:	41
Hours of Calibration:	34
Percent Operational Time:	99.0

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-Sep	1	0	0	0	0	1	1	1	0	1	1	1	A	2	1	1	1	1	1	0	1	1	0	0	0.6	1.9
2-Sep	0	0	0	0	0	1	1	0	1	1	1	A	1	1	1	1	1	1	1	0	0	0	1	1	0.7	1.4
3-Sep	1	0	0	1	0	1	0	0	0	0	A	0	1	0	0	0	0	0	1	1	0	1	0	0	0.5	0.7
4-Sep	0	0	1	1	1	1	1	1	0	A	1	1	1	0	0	1	0	1	1	0	0	1	1	0	0.5	0.7
5-Sep	0	0	0	0	0	1	1	0	A	0	0	1	1	0	1	1	0	1	1	0	0	0	0	0	0.5	0.7
6-Sep	0	0	0	0	0	0	0	A	1	0	0	1	1	1	0	0	0	1	0	0	0	0	1	0	0.5	0.8
7-Sep	1	0	0	0	0	0	A	0	0	0	1	1	0	1	1	0	1	0	1	4	1	0	0	1	0.7	3.7
8-Sep	1	0	1	3	1	A	1	0	1	1	2	1	2	1	1	0	1	1	1	0	1	1	1	1	0.9	2.5
9-Sep	1	1	1	0	A	1	0	1	1	1	1	1	1	1	1	C	C	C	1	0	0	1	1	0	0.7	1.4
10-Sep	0	1	0	A	1	5	1	1	0	1	1	1	1	1	N	N	N	N	N	N	1	1	0	0	--	5.0
11-Sep	1	0	A	0	0	0	0	1	1	1	0	0	1	1	0	1	1	0	0	0	0	0	0	1	0.5	0.7
12-Sep	0	A	0	0	0	0	0	1	0	1	1	1	1	1	0	0	1	1	1	0	0	1	1	1	0.6	1.4
13-Sep	A	1	1	1	1	1	1	1	1	1	2	1	N	1	1	0	1	1	3	2	5	1	1	A	1.1	4.8
14-Sep	2	1	2	1	1	1	1	1	1	2	2	1	1	1	1	1	0	0	0	0	3	4	A	4	1.2	4.2
15-Sep	10	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	A	4	1	1.5	10.1
16-Sep	1	1	1	0	1	1	0	1	1	0	1	1	1	1	1	1	2	3	1	0	A	1	0	0	0.8	2.5
17-Sep	1	0	0	0	1	0	0	1	0	1	1	1	0	1	0	1	0	1	1	A	0	3	29	8	2.3	28.5
18-Sep	17	3	1	1	1	1	2	2	3	3	1	1	1	1	1	1	1	1	A	1	1	2	1	2	1.9	17.1
19-Sep	2	1	1	1	1	2	1	1	2	2	2	1	1	1	1	2	3	A	1	1	0	0	1	1	1.2	3.0
20-Sep	2	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0	1	0.9	3.1
21-Sep	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	0	0	0	0.6	0.8
22-Sep	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.6	0.9
23-Sep	1	1	1	0	1	1	0	0	1	1	1	1	1	A	1	0	1	2	1	3	2	4	0	1	1.0	3.8
24-Sep	0	0	1	1	6	4	3	1	2	2	1	0	A	1	0	1	0	1	1	1	2	5	1	0	1.5	6.0
25-Sep	1	1	0	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	1	0.5	0.8
26-Sep	1	0	1	0	1	0	1	1	0	1	A	1	1	1	1	1	1	0	0	1	0	0	0	1	0.5	0.7
27-Sep	1	1	3	3	2	1	1	9	3	A	1	1	0	1	1	1	1	2	0	1	3	1	1	1	1.7	9.4
28-Sep	1	1	0	0	0	0	0	0	A	0	1	1	0	1	0	1	1	0	1	0	1	1	1	1	0.5	0.7
29-Sep	1	0	0	1	1	0	0	A	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.6	1.4
30-Sep	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0	0	0.6	0.7
	1.6	0.8	0.8	0.7	0.8	0.9	0.7	0.9	0.9	0.9	0.8	0.7	0.7	0.7	0.6	0.7	0.7	0.8	0.7	0.8	1.2	1.1	1.7	1.0	Diurnal Average	
	17.1	3.1	3.3	2.6	6.0	5.0	2.9	9.4	3.4	2.6	1.9	1.4	1.7	1.9	1.3	1.6	3.0	2.5	3.2	3.7	6.7	4.6	28.5	8.0	Diurnal Maximum	

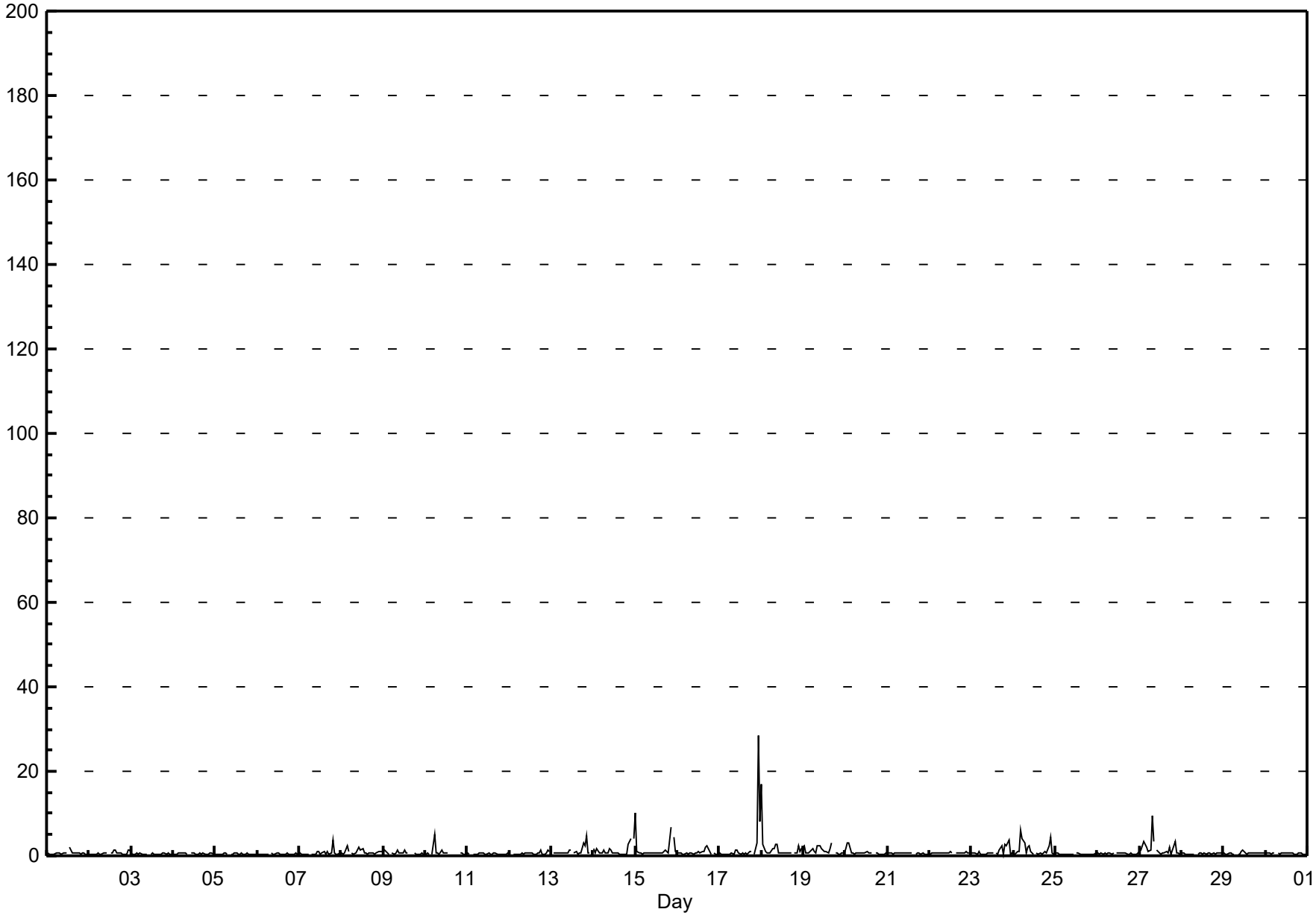
C - Calibration N - Not Valid A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

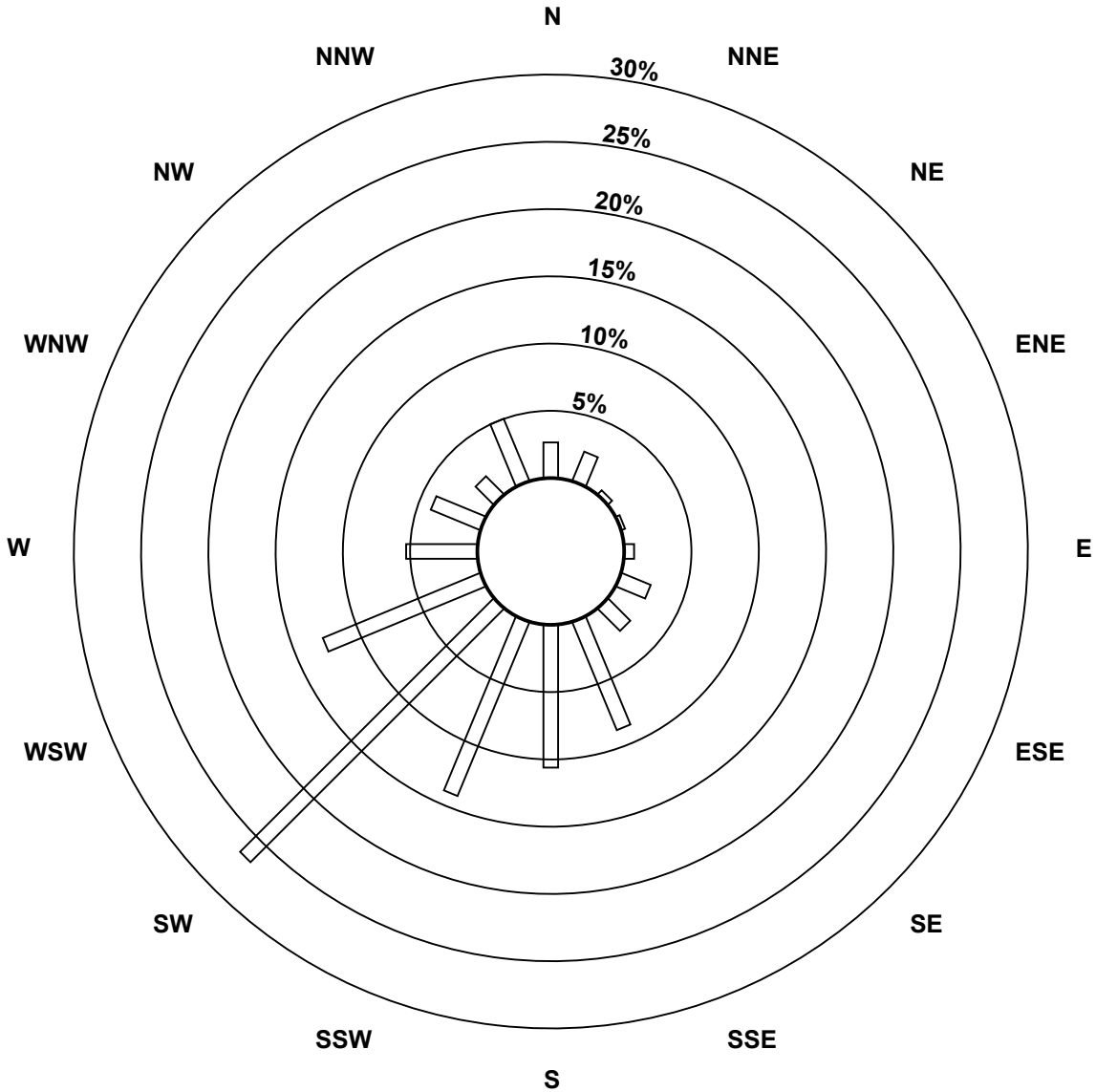
Smoky Heights - September 2016



Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - September 2016



Pollutant Classes (ppb)

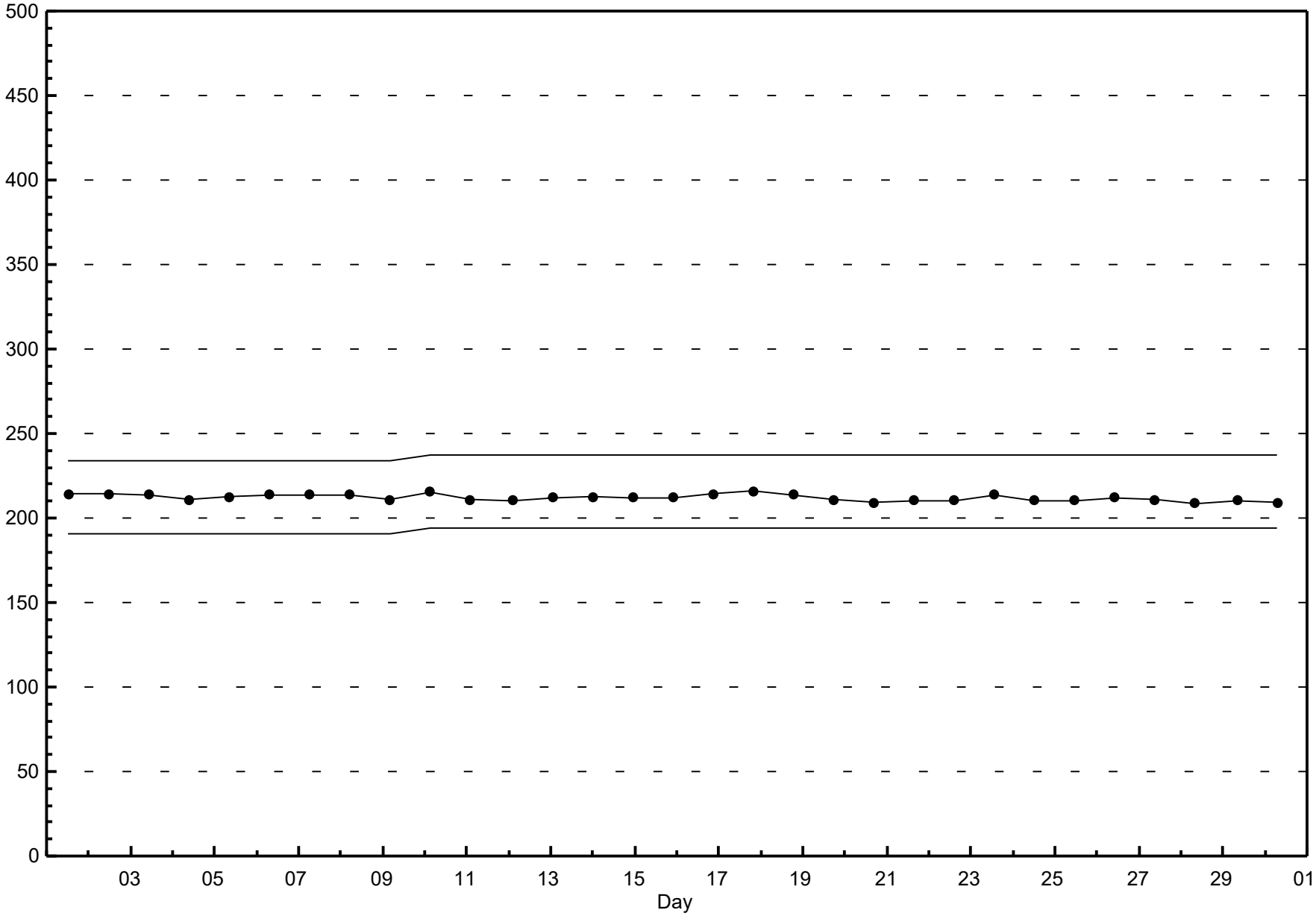
- 0 - 10
- 11 - 20
- 21 - 60
- 61 - 110
- 111 - 172
- > 172

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Smoky Heights - September 2016



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - September 2016

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

Maximum Value: 0.6 ppb on Sep 1 23:00 Maximum Daily Average: 0.2 ppb on Sep 15

Minimum Value: 0 ppb on Sep 3 02:00 Minimum Daily Average: 0.0 ppb on Sep 3

Maximum Diurnal Average: 0.1 ppb at hour 3 Minimum Diurnal Average: 0.1 ppb at hour 17

Monthly Average: 0.12 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.1 $Q_3 = 0.2$ $P_{90} = 0.2$ $P_{99} = 0.4$

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	38
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-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0.2	0.6
2-Sep	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
3-Sep	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
4-Sep	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
5-Sep	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
6-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
7-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
8-Sep	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	0.2
9-Sep	0	0	0	0	A	0	0	0	0	0	C	C	C	C	C	C	C	0	0	0	0	0	0	0	--	0.3
10-Sep	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
12-Sep	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
13-Sep	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
14-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3
15-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3
16-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3
17-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.4
18-Sep	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
19-Sep	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	0.2
20-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2
21-Sep	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
22-Sep	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
23-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.2
24-Sep	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
25-Sep	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
26-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
27-Sep	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
28-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2
29-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
30-Sep	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
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	
	0.5	0.3	0.5	0.3	0.3	0.3	0.4	0.3	0.5	0.3	0.3	0.3	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.6	0.3	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

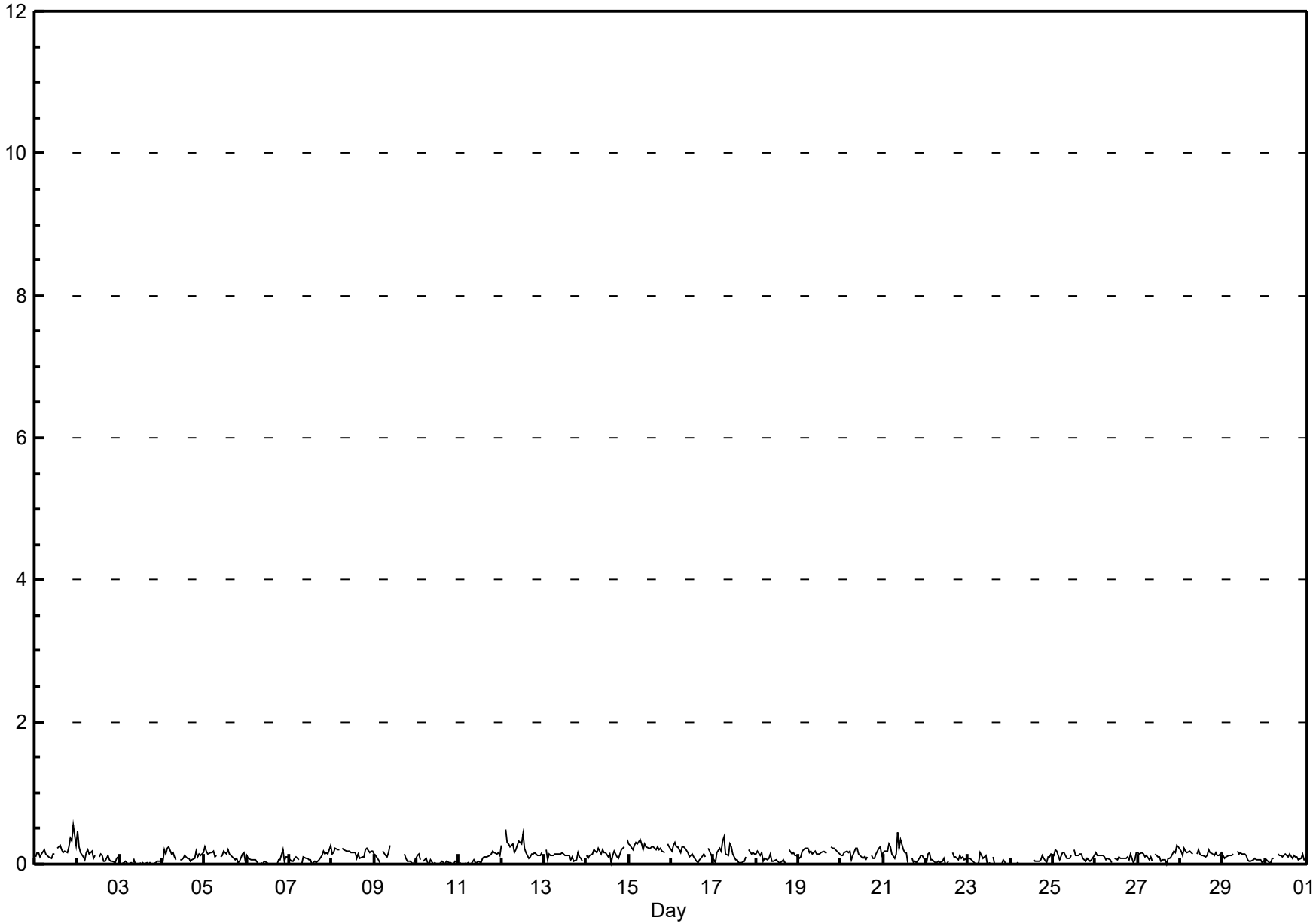
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - September 2016



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - September 2016

Maximum Value: 3.9 ppb on Sep 1 23:00

Maximum Daily Average: 0.8 ppb on Sep 1

Minimum Value: 0 ppb on Sep 6 15:00

Maximum Diurnal Average: 0.7 ppb at hour 23

Monthly Average: 0.56 ppb

Minimum Daily Average: 0.4 ppb on Sep 24

Minimum Diurnal Average: 0.5 ppb at hour 17

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

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	38
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-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	4	1	0.8	3.9
2-Sep	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	0	0	1	1	1	0	1	1	1	0.6	1.2
3-Sep	0	0	0	1	0	0	0	0	1	1	A	0	0	0	0	1	0	1	0	0	1	0	0	0	0.5	0.6
4-Sep	0	1	0	1	1	1	1	1	1	A	0	1	1	1	1	1	1	0	1	1	1	1	1	1	0.6	0.9
5-Sep	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	0	1	1	1	0	1	1	1	0	0.6	0.9
6-Sep	1	1	1	1	1	1	0	A	1	0	0	0	1	0	0	0	0	0	1	0	1	1	1	1	0.5	1.1
7-Sep	1	0	0	1	1	1	A	0	1	0	0	1	1	1	0	0	0	1	1	1	1	1	1	1	0.5	0.7
8-Sep	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
9-Sep	1	1	1	1	A	1	1	0	1	1	C	C	C	C	C	C	C	1	0	0	0	0	0	0	--	0.9
10-Sep	1	1	1	A	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
11-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	1	1	0.5	0.7
12-Sep	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0.7	0.8
13-Sep	A	1	0	1	0	0	1	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0	A	0.5	0.8
14-Sep	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0	1	1	A	1	0.6	0.8
15-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.7	0.9
16-Sep	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	0	0	1	1	0	A	1	1	0	0.6	0.8
17-Sep	0	0	0	1	1	1	1	1	0	1	1	1	0	1	0	0	0	0	1	A	1	1	1	1	0.6	1.1
18-Sep	1	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	1	1	0	1	0	0.5	0.8
19-Sep	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	0.8
20-Sep	1	1	1	1	1	1	0	1	1	1	0	1	1	0	0	1	A	1	0	1	1	1	1	1	0.6	1.0
21-Sep	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	0	1	0	0	1	1	1	1	0.6	1.2
22-Sep	0	1	1	0	0	0	1	0	0	0	1	0	0	0	A	1	1	1	1	1	0	1	1	0	0.5	0.6
23-Sep	0	1	1	0	0	0	0	1	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0.4	0.7
24-Sep	0	0	0	0	0	1	0	1	0	1	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0.4	0.6
25-Sep	1	1	1	0	0	1	1	1	1	0	1	A	0	1	0	1	0	1	0	0	1	0	0	1	0.5	0.6
26-Sep	1	0	1	1	1	1	0	1	1	0	A	1	1	1	1	0	1	1	1	1	1	0	0	1	0.5	0.7
27-Sep	1	1	1	1	1	1	1	0	0	A	1	1	1	0	0	1	0	0	0	0	1	1	1	1	0.5	0.8
28-Sep	1	0	1	1	0	1	1	0	A	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	0.6	0.7
29-Sep	0	1	1	0	1	1	1	A	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0.5	0.8
30-Sep	1	1	1	0	1	1	A	1	1	1	0	1	1	0	1	0	1	1	1	0	1	1	0	1	0.5	0.7
	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.5	0.7	0.6	Diurnal Average	
	1.2	0.9	0.8	1.0	0.8	0.8	1.1	0.8	1.2	0.8	0.9	0.8	0.7	0.8	0.7	0.7	0.7	0.8	0.7	1.1	1.1	0.8	3.9	0.9	Diurnal Maximum	

C - Calibration

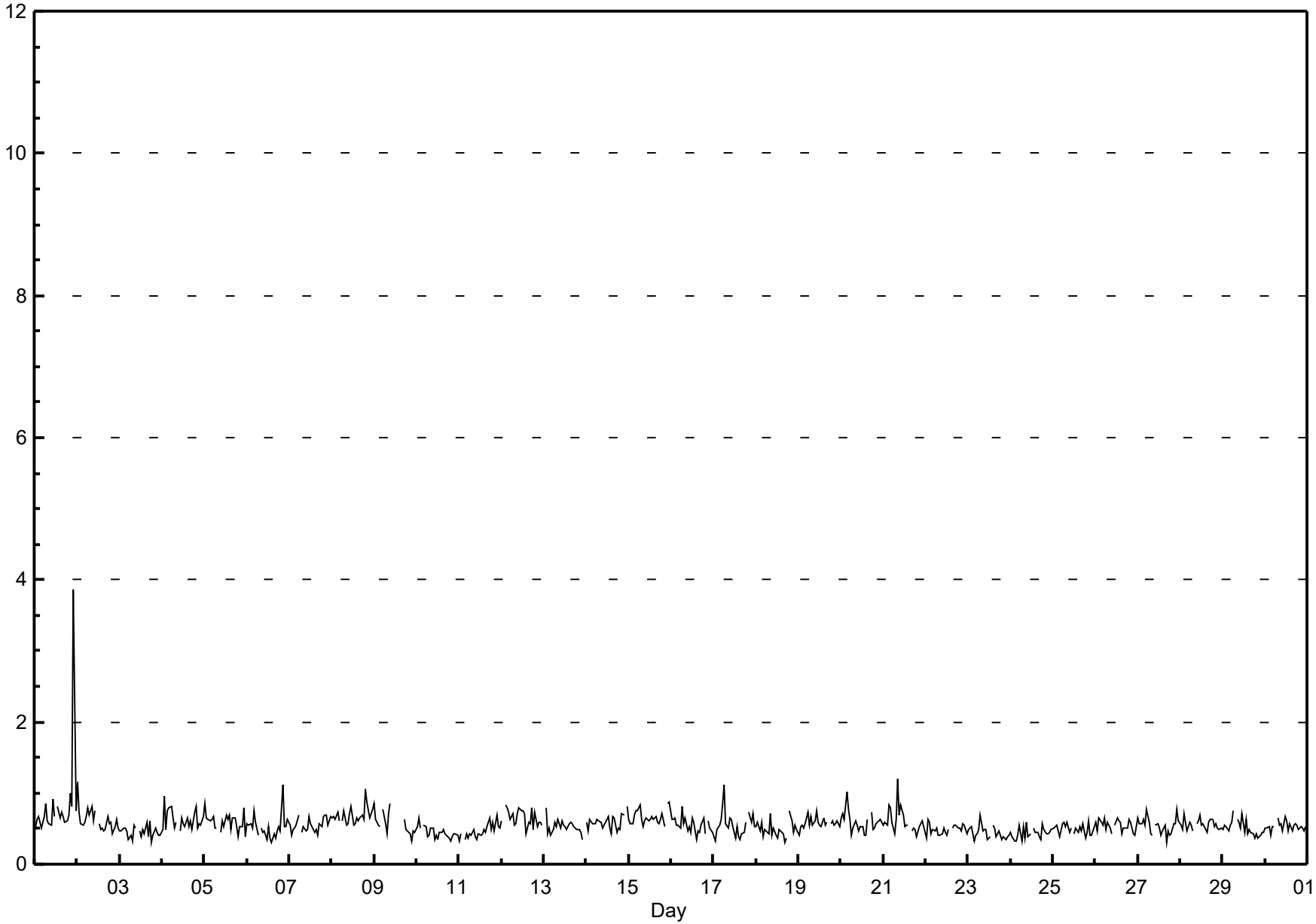
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

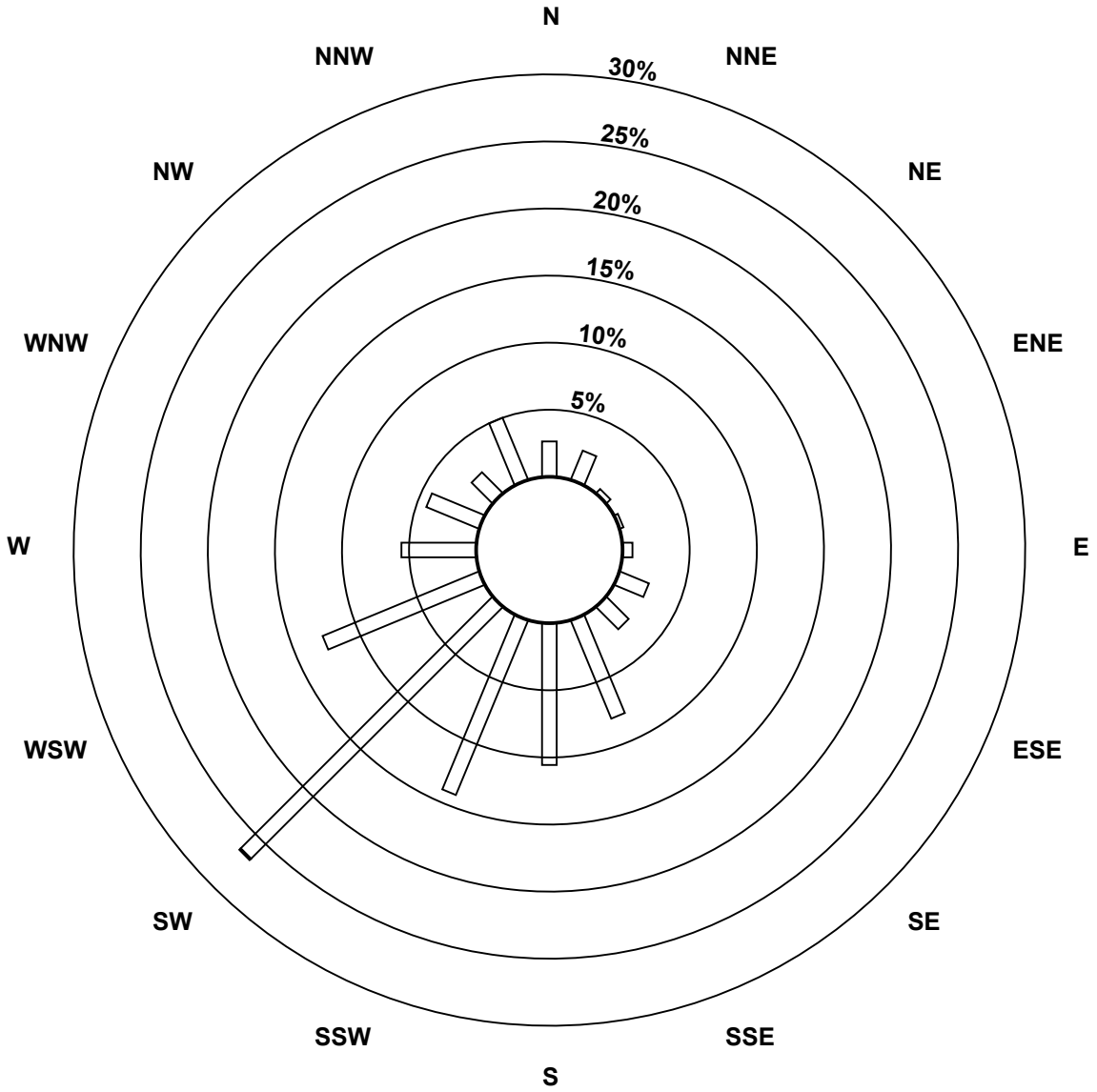
Smoky Heights - September 2016



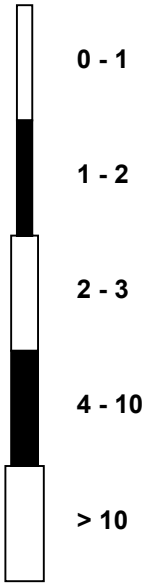
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - September 2016



Pollutant Classes (ppb)

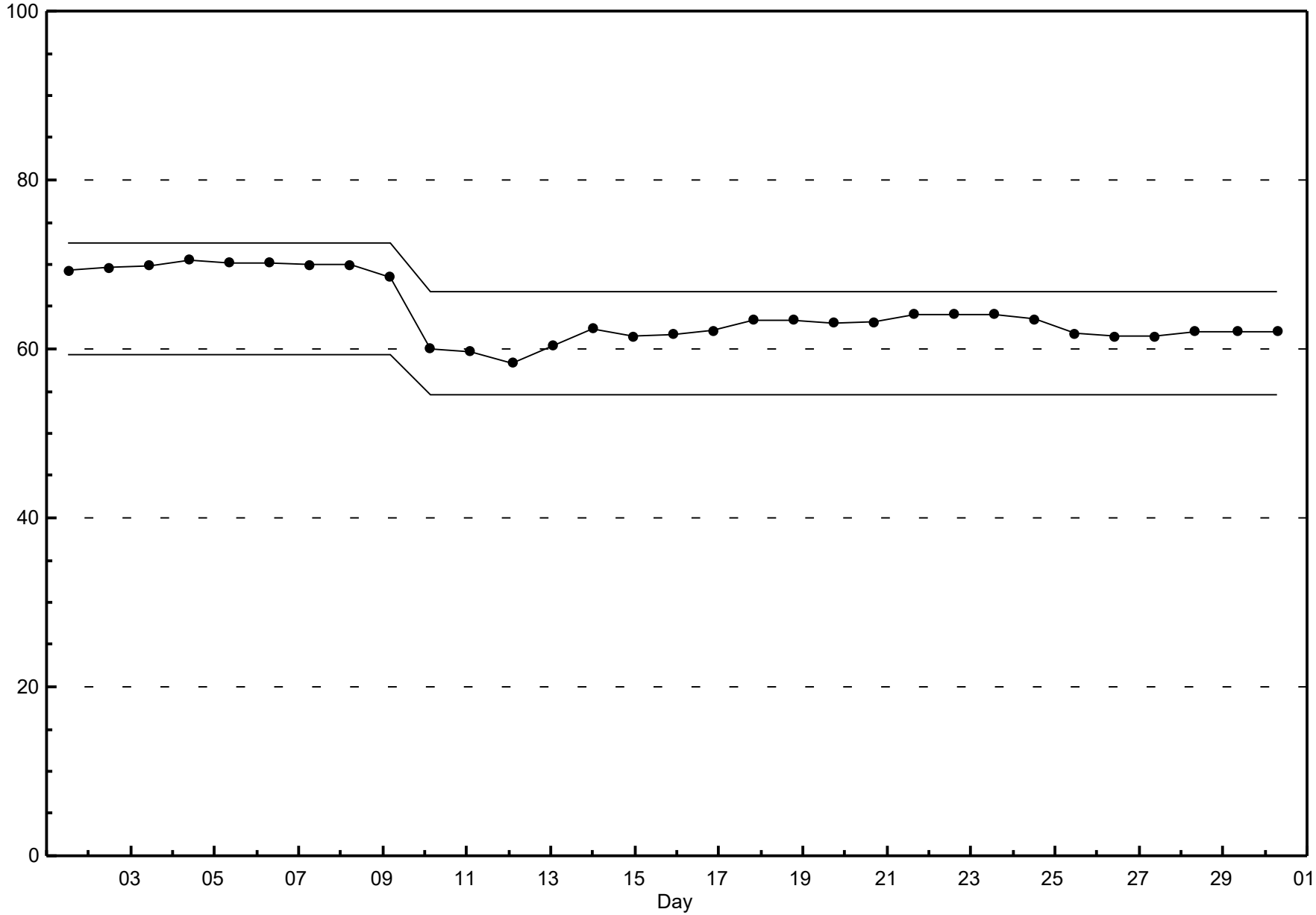


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Smoky Heights - September 2016



Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - September 2016

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

Maximum Value: 51.0 $\mu g/m^3$ on Sep 30 12:00

Maximum Daily Average: 7.8 $\mu g/m^3$ on Sep 29

Minimum Value: 0 $\mu g/m^3$ on Sep 9 21:00

Maximum Diurnal Average: 7.3 $\mu g/m^3$ at hour 21

Monthly Average: 3.75 $\mu g/m^3$

Minimum Daily Average: 0.0 $\mu g/m^3$ on Sep 11

Minimum Diurnal Average: 2.5 $\mu g/m^3$ at hour 7

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 1.0$ Median = 2.6 $Q_3 = 4.6$ $P_{90} = 8.3$ $P_{99} = 26.9$

Hours in Service:	720
Hours of Data:	715
Hours of Missing Data:	5
Hours of Calibration:	5
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-Sep	1	1	1	1	2	2	2	1	1	1	0	0	0	1	1	1	1	1	1	2	2	2	2	3	1.3	2.5
2-Sep	3	3	3	2	2	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	1	1	1	1	2.1	3.5
3-Sep	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
4-Sep	1	1	1	1	1	1	1	1	3	5	3	2	2	2	2	2	2	2	2	3	4	4	3	3	2.3	5.5
5-Sep	3	3	3	3	3	3	3	3	3	2	3	2	2	2	2	2	3	4	4	4	5	5	5	4	3.1	4.7
6-Sep	4	4	3	4	3	3	2	3	2	2	2	2	2	2	2	2	2	3	3	3	4	4	4	4	3.0	4.5
7-Sep	4	4	4	4	4	4	4	4	4	3	2	2	2	2	2	4	2	3	4	4	13	7	5	5	3.9	13.2
8-Sep	4	3	3	3	3	2	2	2	3	3	2	2	2	2	2	2	3	7	3	4	5	5	4	4	3.1	6.6
9-Sep	4	5	4	4	4	3	3	3	5	6	6	C	C	C	C	C	1	0	0	0	0	0	0	0	2.5	6.1
10-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
11-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
12-Sep	0	0	0	0	0	0	0	0	0	1	1	1	1	2	2	1	1	4	2	20	4	4	2	2	2.0	19.8
13-Sep	1	1	1	1	1	1	1	1	1	1	2	2	3	6	7	16	15	6	10	17	16	5	7	4	5.3	17.2
14-Sep	3	6	3	2	3	1	2	1	1	4	3	5	1	7	6	12	9	13	12	28	9	4	4	4	6.1	28.1
15-Sep	4	5	4	3	2	3	3	4	6	5	5	6	4	2	8	4	9	13	4	30	7	5	7	4	6.1	29.9
16-Sep	4	4	4	4	3	3	2	2	3	2	2	4	3	11	11	9	4	0	1	1	1	2	1	1	3.5	11.3
17-Sep	1	1	1	1	2	3	2	0	0	2	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0.6	2.6
18-Sep	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	5	3	5	3	3	3	4	2	1	1.3	4.8
19-Sep	0	0	0	0	0	0	0	0	0	0	0	1	3	3	2	8	5	7	11	9	13	5	3	2	3.0	13.5
20-Sep	2	1	1	1	1	1	1	2	1	2	3	2	3	3	3	5	6	10	8	14	8	5	14	4	4.2	14.3
21-Sep	1	1	1	3	3	3	2	3	6	8	10	9	6	4	4	5	5	3	4	5	18	7	4	6	5.0	18.4
22-Sep	4	5	4	3	3	4	4	4	4	4	4	3	2	1	1	1	1	2	3	6	7	9	8	7	4.0	9.2
23-Sep	6	5	5	5	5	5	7	13	5	5	6	4	3	2	5	10	4	2	4	5	5	6	9	6	5.5	12.7
24-Sep	5	3	3	4	4	4	3	2	2	3	2	6	7	4	5	5	5	5	4	6	6	33	50	4	7.3	49.6
25-Sep	5	3	3	3	3	2	2	1	1	1	1	2	6	2	2	4	4	6	3	2	5	3	3	3	2.9	6.2
26-Sep	2	1	1	0	0	1	0	3	1	0	2	2	1	2	3	3	14	34	18	4	15	7	1	1	4.9	34.0
27-Sep	1	0	0	0	0	0	0	0	0	0	0	2	1	2	3	5	8	12	11	11	39	12	17	16	5.8	39.4
28-Sep	18	9	9	9	9	9	8	10	7	7	6	5	4	3	4	3	4	5	8	8	8	8	11	9	7.6	17.8
29-Sep	8	8	7	7	7	7	9	10	10	9	7	6	5	5	4	4	4	5	7	14	16	11	9	9	7.8	15.6
30-Sep	9	9	9	8	7	7	7	5	4	4	7	51	17	7	6	5	2	2	1	1	1	1	1	2	7.2	51.0
	3.3	3.0	2.7	2.6	2.5	2.5	2.5	2.7	2.6	2.8	2.8	4.3	2.9	2.9	3.1	4.1	4.0	5.2	4.4	6.9	7.3	5.3	6.0	3.6	Diurnal Average	
	17.8	9.2	8.9	8.6	8.9	9.0	9.3	12.7	9.8	9.2	9.5	51.0	16.8	11.3	10.7	16.4	15.3	34.0	18.2	29.9	39.4	33.0	49.6	16.5	Diurnal Maximum	

C - Calibration

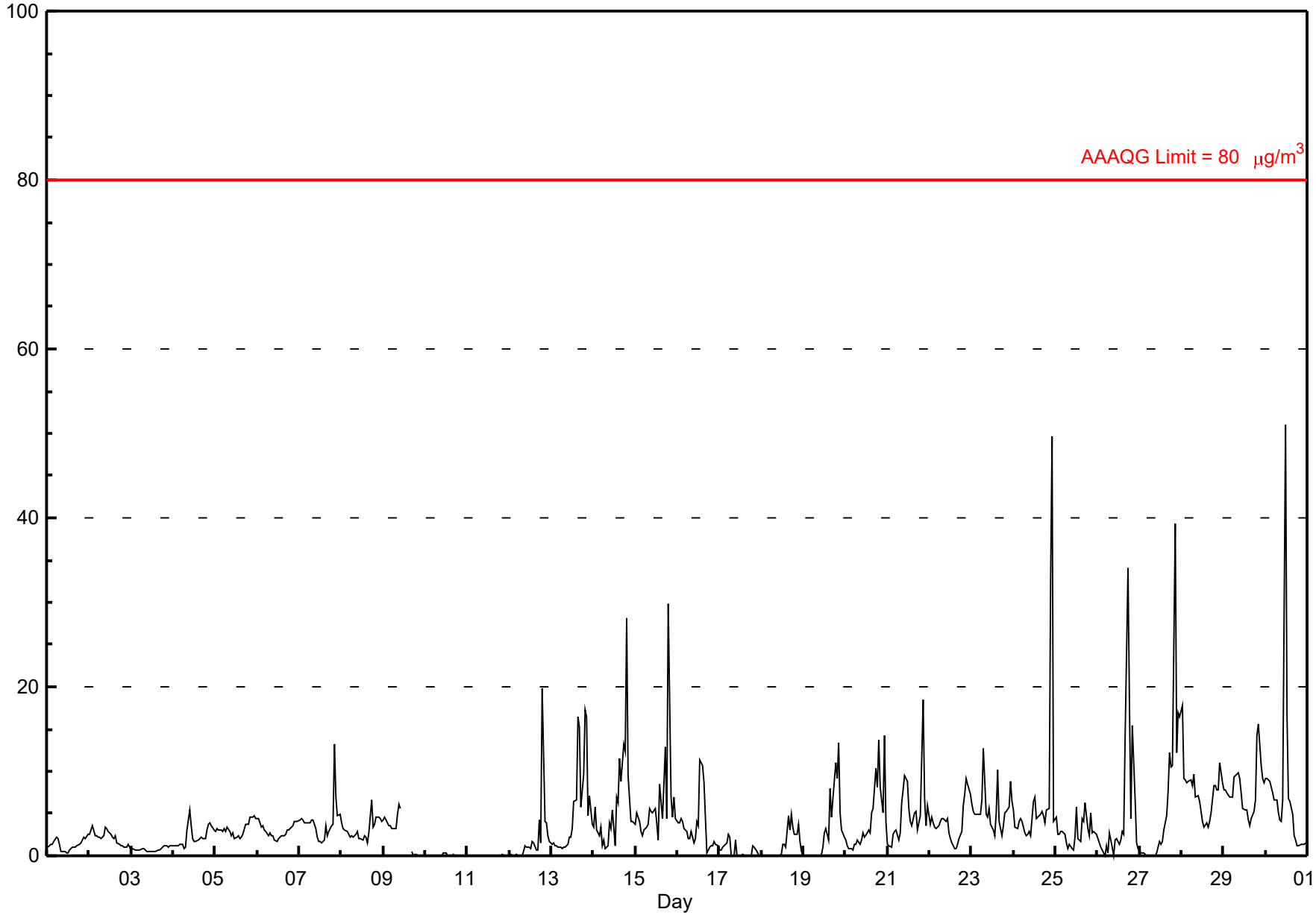
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - September 2016



Peace Airshed Zone Association

Hourly Maximums

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

Smoky Heights - September 2016

Maximum Value: 423.6 $\mu g/m^3$ on Sep 24 23:00

Maximum Daily Average: 51.1 $\mu g/m^3$ on Sep 24

Minimum Value: 0 $\mu g/m^3$ on Sep 9 21:00

Minimum Daily Average: 0.4 $\mu g/m^3$ on Sep 10

Maximum Diurnal Average: 43.2 $\mu g/m^3$ at hour 21

Minimum Diurnal Average: 3.1 $\mu g/m^3$ at hour 4

Monthly Average: 16.35 $\mu g/m^3$

Percentiles: P_1 = 0.0 P_{10} = 0.5 Q_1 = 1.5 Median = 4.4 Q_3 = 12.7 P_{90} = 41.0 P_{99} = 225.7

Hours in Service:	720
Hours of Data:	715
Hours of Missing Data:	5
Hours of Calibration:	5
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	1	1	2	2	2	2	2	2	1	1	1	0	0	1	2	1	1	1	2	2	2	2	2	3	1.6	2.9
2-Sep	3	4	4	3	3	2	3	2	3	4	4	3	3	3	2	3	2	1	1	1	1	1	1	1	2.5	4.2
3-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4
4-Sep	1	1	1	1	1	2	1	1	6	7	4	3	2	2	2	2	7	2	2	5	4	4	4	3	2.9	7.0
5-Sep	3	4	4	3	3	3	3	4	4	2	3	2	3	3	2	3	4	6	8	4	5	5	5	5	3.8	7.5
6-Sep	5	5	5	6	4	4	3	3	3	3	2	3	7	5	4	5	4	3	3	4	4	6	4	5	4.2	7.0
7-Sep	5	5	5	4	4	4	4	5	5	4	3	7	6	5	7	17	11	11	15	5	53	18	6	5	8.9	53.2
8-Sep	4	4	3	3	3	3	3	3	3	9	3	6	4	16	8	2	13	84	9	4	5	5	5	4	8.6	83.8
9-Sep	5	5	4	4	4	4	4	4	7	7	8	C	C	C	C	C	1	0	0	1	0	0	0	0	3.1	7.5
10-Sep	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	4	1	0	0	0	0	0	0	0.4	4.4
11-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	2	4	0	0	0	0.8	4.1
12-Sep	0	0	0	0	1	0	0	0	2	2	2	2	2	9	8	7	6	37	4	96	9	10	3	3	8.6	96.0
13-Sep	2	2	1	1	2	2	1	4	5	8	15	10	59	61	84	106	105	42	89	106	89	8	24	5	34.7	105.5
14-Sep	4	23	4	3	20	7	15	5	19	33	55	51	35	51	99	115	65	129	88	152	90	37	17	5	46.6	151.7
15-Sep	5	6	5	4	3	23	13	14	20	29	60	44	44	38	128	39	82	96	53	279	77	7	132	5	50.2	278.5
16-Sep	4	4	11	5	4	15	5	10	5	10	25	39	53	168	120	66	70	2	4	6	5	3	2	2	26.6	168.3
17-Sep	1	1	1	2	3	4	4	0	0	4	1	1	1	1	1	11	2	4	2	3	3	1	1	0	2.2	11.2
18-Sep	0	0	0	0	0	0	0	0	0	0	4	4	23	10	4	38	15	32	28	10	21	7	3	1	8.4	38.1
19-Sep	0	0	0	0	0	0	0	4	2	5	3	7	24	19	18	83	70	81	46	49	122	13	5	12	23.5	122.1
20-Sep	5	2	2	4	1	10	8	4	3	6	25	20	5	8	10	16	69	140	36	23	20	18	120	8	23.4	139.7
21-Sep	2	2	2	4	4	16	2	9	11	9	10	13	8	7	19	65	31	15	20	26	258	30	7	21	24.6	257.5
22-Sep	5	5	5	4	4	9	18	18	21	11	19	3	2	2	1	1	2	3	4	17	9	10	9	8	7.9	21.5
23-Sep	7	6	5	5	6	6	26	38	13	17	21	9	5	14	30	87	31	13	16	29	32	9	21	18	19.4	86.9
24-Sep	6	5	4	5	5	23	5	16	14	16	15	83	148	50	25	44	22	21	9	17	17	244	424	7	51.1	423.6
25-Sep	6	3	3	4	4	3	2	1	5	3	3	16	46	3	2	59	32	72	16	3	20	4	4	3	13.2	72.0
26-Sep	2	2	2	1	0	27	12	24	8	0	5	5	3	11	37	14	273	233	47	22	83	83	7	1	37.6	273.1
27-Sep	1	1	0	0	0	0	0	0	0	0	2	11	3	7	17	6	23	33	41	12	321	19	82	47	26.1	320.5
28-Sep	55	10	9	9	12	13	11	21	8	13	15	7	5	4	13	4	8	20	31	10	8	8	32	13	14.2	54.7
29-Sep	8	8	8	7	7	7	44	18	12	10	11	9	9	25	7	4	8	6	8	31	31	14	17	9	13.3	44.4
30-Sep	10	11	9	9	8	7	13	8	5	6	61	214	41	13	11	7	4	2	1	1	2	1	1	2	18.6	214.0
	5.1	4.0	3.3	3.1	3.6	6.7	6.8	7.3	6.1	7.3	12.7	19.8	18.7	18.5	22.8	27.9	32.4	36.6	19.6	30.7	43.2	18.9	31.3	6.7	Diurnal Average	
	54.7	22.9	11.0	9.3	19.5	26.8	44.4	38.3	21.5	32.7	60.6	214.0	147.8	168.3	127.7	115.0	273.1	232.8	89.4	278.5	320.5	243.8	423.6	47.1	Diurnal Maximum	

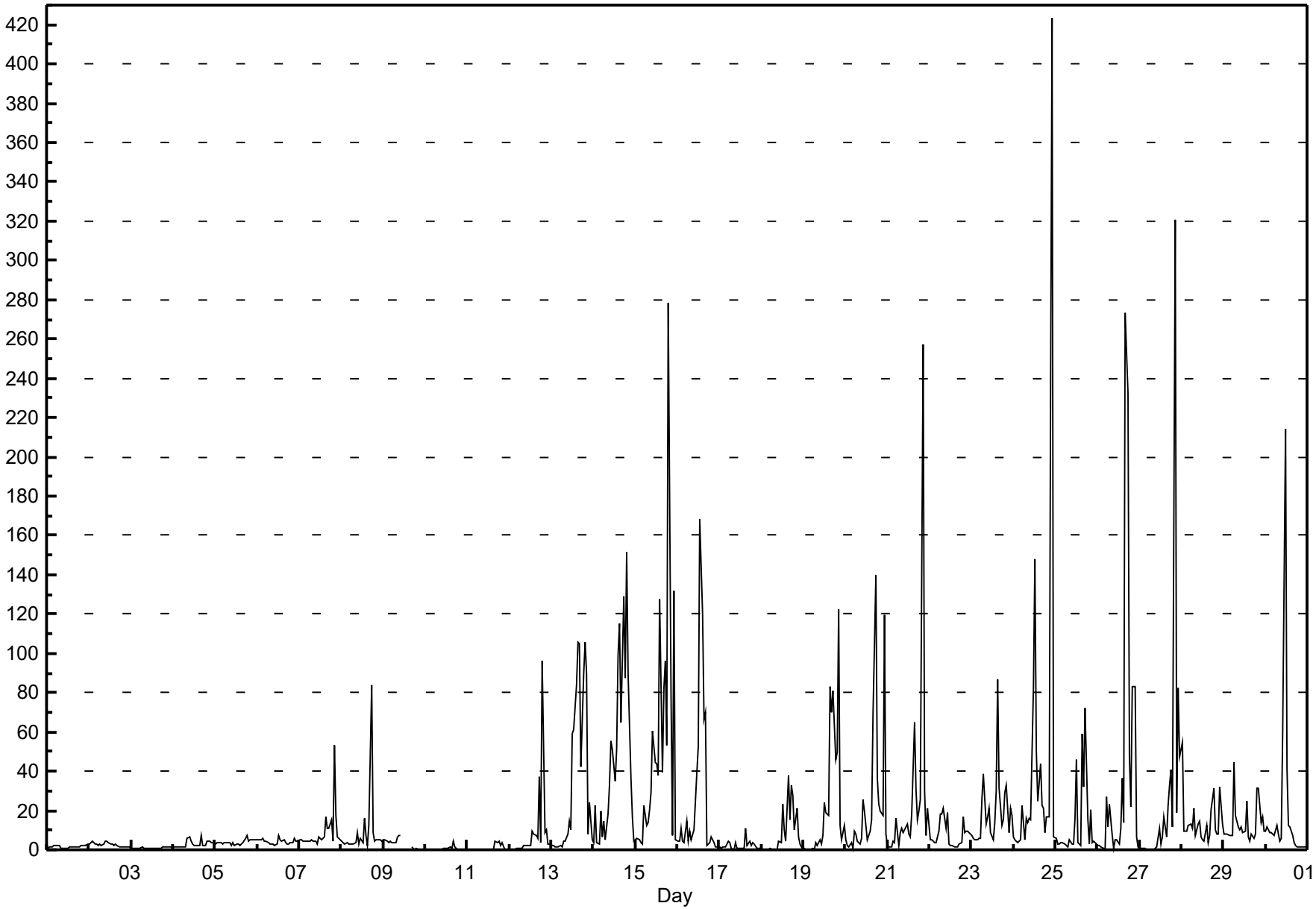
C - Calibration

Peace Airshed Zone Association

Hourly Maximums

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

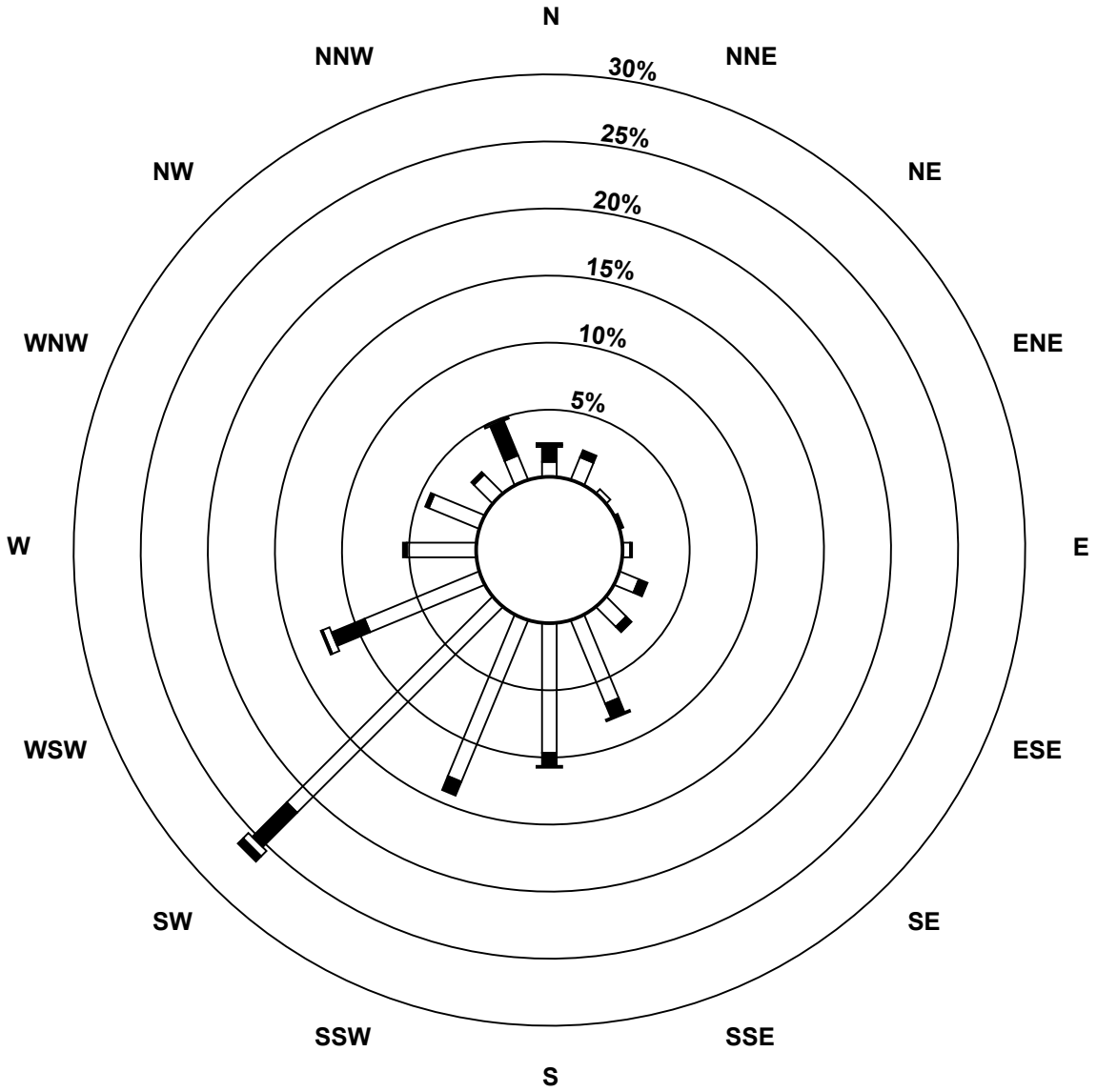
Smoky Heights - September 2016



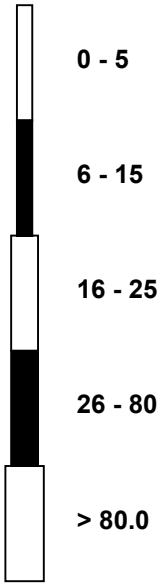
Pollutant Rose

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

Smoky Heights - September 2016



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



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - °C

Smoky Heights - September 2016

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

Maximum Value: 24.6 °C on Sep 13 16:00

Maximum Daily Average: 15.1 °C on Sep 14

Minimum Value: -2 °C on Sep 28 07:00

Minimum Daily Average: 5.5 °C on Sep 4

Maximum Diurnal Average: 15.7 °C at hour 16

Minimum Diurnal Average: 4.7 °C at hour 7

Monthly Average: 9.81 °C

Percentiles: P_1 = -0.8 P_{10} = 3.1 Q_1 = 6.2 Median = 9.4 Q_3 = 13.5 P_{90} = 16.5 P_{99} = 22.4

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

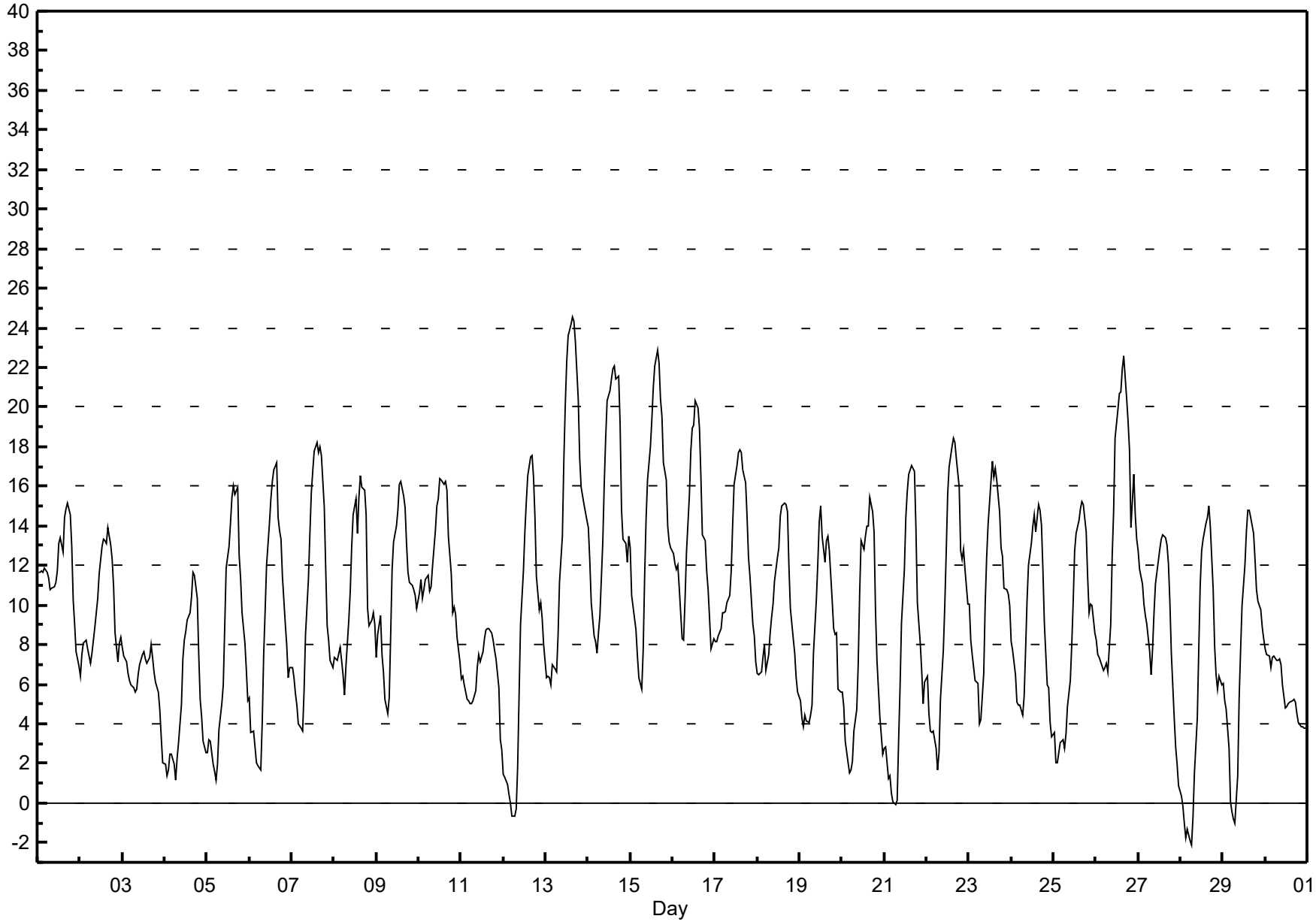
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	12	12	12	12	12	12	11	11	11	11	11	12	13	13	13	14	15	15	15	13	10	9	8	7	11.8	15.1
2-Sep	6	8	8	8	8	7	7	8	9	10	10	12	13	13	13	13	14	13	12	11	9	7	8	8	9.8	13.9
3-Sep	8	7	7	7	6	6	6	6	6	6	7	7	8	7	7	7	8	7	7	6	6	5	3	2	6.3	8.0
4-Sep	2	1	2	2	3	2	1	2	3	5	7	8	9	9	10	10	12	12	10	8	5	4	3	3	5.5	11.7
5-Sep	3	3	3	2	2	1	2	4	5	6	9	12	13	14	15	16	16	16	13	11	10	8	7	5	8.1	16.0
6-Sep	5	4	4	3	2	2	2	4	7	10	12	14	15	16	17	17	14	14	13	11	9	8	6	7	9.0	17.2
7-Sep	7	6	6	5	4	4	4	6	9	11	14	16	17	18	18	18	18	18	15	12	9	8	7	7	10.6	18.2
8-Sep	7	7	7	8	7	6	5	7	9	11	13	15	15	14	15	17	16	16	15	10	9	9	10	9	10.7	16.5
9-Sep	7	9	9	8	7	5	4	5	8	12	13	14	15	16	16	16	15	13	12	11	11	11	10	10	10.7	16.3
10-Sep	11	11	10	11	11	12	11	11	12	14	15	15	16	16	16	16	16	13	12	10	10	10	8	7	12.2	16.4
11-Sep	6	6	6	5	5	5	5	5	6	7	7	7	8	8	9	9	9	9	8	8	7	6	3	3	6.5	8.8
12-Sep	1	1	1	0	0	-1	-1	0	2	5	9	12	14	15	17	18	18	16	14	11	10	10	9	8	7.9	17.6
13-Sep	6	6	6	6	7	7	7	8	11	14	17	20	22	24	24	25	24	23	20	17	16	16	15	14	14.9	24.6
14-Sep	14	12	10	8	8	8	9	9	13	16	18	20	21	21	22	22	21	22	19	15	13	13	12	13	15.1	22.1
15-Sep	13	10	9	9	7	6	6	8	11	14	16	18	19	21	22	23	22	20	19	17	16	14	13	13	14.6	22.9
16-Sep	13	12	12	12	11	8	8	10	13	16	18	19	19	20	20	19	16	14	13	12	11	9	8	8	13.4	20.3
17-Sep	8	8	8	9	10	10	10	10	10	12	14	16	17	18	18	18	17	16	14	12	11	9	8	7	12.1	17.9
18-Sep	7	6	7	7	8	7	7	9	9	10	11	12	13	14	15	15	15	15	12	10	8	8	6	6	9.9	15.2
19-Sep	5	4	4	4	4	4	4	5	8	10	12	14	15	13	12	13	13	13	10	9	8	9	6	6	8.6	15.0
20-Sep	6	5	3	2	2	2	2	4	5	7	11	13	13	13	14	14	15	15	14	10	7	4	3	3	7.7	15.4
21-Sep	3	3	1	1	1	0	0	0	3	6	9	12	14	16	17	17	17	17	14	10	8	7	5	6	7.7	17.0
22-Sep	6	5	4	4	4	3	2	3	5	8	10	13	16	17	18	18	18	17	16	13	12	13	12	10	10.2	18.5
23-Sep	10	8	8	6	6	6	4	4	7	10	12	14	16	17	16	17	16	15	13	12	11	11	11	10	10.9	17.3
24-Sep	8	8	7	5	5	5	4	5	8	10	12	13	14	15	14	15	15	14	12	9	6	6	4	3	9.0	15.1
25-Sep	4	2	2	3	3	3	3	3	5	6	8	10	13	14	14	15	15	15	14	11	10	10	10	9	8.4	15.2
26-Sep	8	7	7	7	7	7	7	7	9	12	15	18	20	21	21	22	23	20	19	18	14	17	15	13	13.9	22.6
27-Sep	13	12	11	10	9	9	8	6	8	10	11	12	13	13	14	13	13	12	10	8	4	3	2	1	9.4	13.6
28-Sep	0	0	-1	-2	-1	-2	-2	-1	2	4	8	11	13	13	14	14	15	14	11	8	6	6	6	6	5.9	15.0
29-Sep	6	5	5	3	0	0	-1	-1	1	5	8	10	12	14	15	15	14	14	12	11	10	10	9	8	7.7	14.8
30-Sep	8	7	7	7	7	7	7	7	7	7	6	5	5	5	5	5	5	5	5	4	4	4	4	4	5.8	7.8
	7.1	6.6	6.2	5.7	5.4	5.0	4.7	5.5	7.4	9.5	11.5	13.2	14.3	15.0	15.4	15.7	15.5	14.7	13.1	10.9	9.4	8.7	7.8	7.2	Diurnal Average	
	13.9	12.2	11.8	12.0	11.9	11.6	11.3	10.9	13.1	16.1	18.4	20.3	22.3	23.6	24.2	24.6	24.3	23.3	20.4	17.9	16.3	16.6	15.1	14.3	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - September 2016



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - September 2016

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	12	7	2	9	7	9	4	10	7	6	5	12	11	10	12	16	16	16	9	6	3	3	3	4	6.2	16.2
Dir	328	5	54	350	334	320	296	317	292	339	260	238	228	251	254	243	244	245	271	282	307	265	230	274	277.0	243.7
2 Spd	3	3	1	3	2	2	5	6	6	4	4	8	8	13	12	4	7	10	10	12	8	10	9	14	4.6	14.0
Dir	295	305	146	185	220	211	231	243	260	208	211	140	150	216	222	333	329	316	299	288	255	231	239	255	247.6	255.1
3 Spd	19	15	17	15	18	16	17	18	18	16	19	20	23	21	19	16	18	22	19	17	12	11	11	10	16.5	23.1
Dir	260	260	257	247	240	245	246	244	242	261	274	281	282	283	279	270	279	279	277	268	265	255	248	237	263.4	281.8
4 Spd	8	3	4	5	4	4	3	5	6	6	7	6	6	6	3	2	3	4	5	1	4	3	4	2	2.2	7.6
Dir	228	213	170	193	174	170	164	152	158	144	151	146	150	193	163	346	324	50	109	68	35	13	332	301	162.4	227.8
5 Spd	5	5	3	2	1	4	3	3	6	6	7	12	10	10	8	9	9	10	12	11	3	5	6	6	4.8	11.6
Dir	254	245	260	274	353	245	223	153	150	139	146	139	131	125	159	169	151	147	202	147	170	221	222	190	169.1	201.9
6 Spd	4	7	5	5	6	6	8	8	10	13	13	13	14	13	11	12	14	7	3	4	4	9	12	14	8.3	14.4
Dir	211	170	180	200	170	176	174	182	193	204	202	201	205	208	225	194	187	288	165	210	222	238	230	232	204.4	231.5
7 Spd	16	16	11	10	10	9	7	7	8	14	18	20	26	25	24	20	17	15	11	11	10	10	12	12	13.3	25.8
Dir	236	231	213	183	197	190	173	183	175	199	213	225	236	232	238	249	235	227	225	233	228	241	234	244	224.1	235.9
8 Spd	7	8	10	8	8	6	9	8	14	15	11	11	13	14	17	20	20	17	14	7	10	11	13	12	10.3	19.7
Dir	204	212	209	201	219	199	193	208	219	226	228	223	265	273	269	284	272	267	281	280	242	240	236	237	243.6	284.3
9 Spd	8	10	5	6	7	5	6	5	7	9	11	12	14	14	16	18	18	15	12	14	15	15	12	11	9.2	17.6
Dir	234	262	303	213	238	169	179	197	194	159	150	148	149	157	162	185	203	194	172	157	140	149	167	175	176.1	203.5
10 Spd	16	20	14	19	19	25	25	25	27	33	36	30	27	26	17	12	20	26	17	19	22	22	18	17	18.0	36.5
Dir	186	199	218	212	214	221	216	215	223	229	237	238	248	265	280	301	263	293	308	307	291	292	298	300	249.0	236.7
11 Spd	17	18	17	18	18	16	14	13	16	11	14	14	9	9	13	12	11	9	4	2	2	6	9	9	10.8	17.9
Dir	299	297	297	300	297	296	301	299	296	340	317	321	309	296	281	281	276	267	275	246	239	224	232	250	292.8	296.8
12 Spd	11	11	13	11	6	6	7	9	12	11	11	13	15	15	16	18	18	12	7	10	13	16	16	17	10.9	18.4
Dir	240	240	236	230	187	176	181	165	158	151	147	154	181	198	209	204	217	209	206	218	221	217	221	221	202.5	203.7
13 Spd	11	13	12	12	16	18	16	15	18	20	22	25	26	29	33	35	32	28	15	13	15	15	19	18	19.3	35.2
Dir	208	202	207	215	223	219	213	202	215	210	215	225	219	238	238	240	241	236	243	238	232	231	236	236	226.9	240.1
14 Spd	12	9	14	12	14	13	13	10	13	19	27	28	27	25	24	22	21	21	13	8	11	12	14	14	16.3	27.5
Dir	241	240	233	237	240	229	229	224	209	227	231	242	238	246	250	251	251	247	249	236	224	229	234	234	238.0	241.7
15 Spd	14	15	15	15	10	6	8	7	8	17	21	19	19	21	22	21	22	16	15	15	17	15	13	12	14.6	21.9
Dir	226	234	235	234	227	207	228	190	174	197	217	210	207	220	228	230	233	225	230	246	233	237	215	200	222.4	227.8
16 Spd	10	9	8	8	5	11	7	7	7	12	24	26	28	27	23	26	32	14	11	10	9	9	10	9	13.4	32.2
Dir	193	194	195	200	188	193	226	176	121	182	213	218	221	220	218	231	227	223	202	183	181	206	194	183	209.0	227.4
17 Spd	7	10	9	7	11	11	13	12	7	14	17	22	26	26	25	23	22	20	17	13	17	15	19	18	15.2	26.3
Dir	189	189	196	199	172	184	183	191	173	184	190	205	215	219	212	227	216	222	227	225	223	232	231	234	210.5	215.3
18 Spd	20	20	21	21	17	11	12	16	16	24	25	29	26	22	28	25	22	21	7	6	8	13	15	14	18.1	29.0
Dir	231	236	233	232	233	220	224	225	222	230	232	233	242	241	241	246	248	243	301	234	219	234	233	242	235.9	233.1
19 Spd	16	15	15	11	13	9	5	5	6	8	7	5	5	8	13	11	9	7	1	3	5	7	8	9	6.8	16.0
Dir	241	240	240	231	241	233	185	198	182	191	187	159	202	251	222	233	232	324	243	299	314	327	210	258	233.1	241.1
20 Spd	6	6	4	4	5	6	4	3	6	7	7	8	4	4	6	6	5	8	1	1	3	3	5	3	2.4	7.9
Dir	325	328	167	231	249	244	208	174	159	180	188	197	15	349	323	314	237	267	23	131	237	247	250	204	242.7	266.7
21 Spd	3	4	7	6	8	7	6	6	7	8	10	11	11	12	12	12	11	6	4	2	1	1	3	4	6.0	12.4
Dir	171	199	213	205	174	173	181	181	169	143	147	143	162	178	185	197	157	148	117	87	149	287	269	180	171.0	185.0
22 Spd	4	4	7	7	8	7	6	7	9	9	8	8	7	12	12	10	14	11	7	7	8	15	15	5	7.2	15.1
Dir	182	203	196	197	185	189	194	193	159	158	144	133	119	109	128	123	115	115	89	95	111	121	123	116	138.1	121.4

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Smoky Heights - September 2016

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	10	8	9	7	7	6	7	4	8	10	6	8	9	18	14	11	27	20	12	20	16	18	21	24	10.7	27.5
Dir	126	146	128	152	140	147	195	225	194	164	167	142	192	220	213	201	222	225	207	223	227	223	215	217	201.3	221.5
24 Spd	20	19	19	17	19	18	17	15	17	26	30	36	33	31	26	32	31	30	24	15	12	11	11	15	21.6	35.8
Dir	209	207	214	218	224	227	232	223	216	227	234	236	229	236	237	232	235	223	222	220	213	230	227	235	226.7	236.2
25 Spd	15	11	8	11	10	9	6	5	5	5	7	5	4	6	8	14	14	10	11	10	9	7	4	5	7.2	14.7
Dir	233	234	224	224	195	187	169	161	159	142	151	169	165	121	155	211	210	169	165	185	210	191	191	187	190.7	233.4
26 Spd	4	1	4	5	6	7	7	6	7	5	9	16	18	15	13	12	8	3	9	10	9	24	30	26	8.1	30.4
Dir	204	274	244	216	218	214	204	221	175	187	147	152	172	167	157	149	149	176	245	273	235	247	240	235	205.9	240.0
27 Spd	18	21	19	23	17	18	19	20	24	26	36	38	39	37	37	38	36	31	24	15	12	12	11	11	24.1	38.8
Dir	218	222	215	227	213	232	225	225	227	222	231	234	231	225	221	225	234	238	233	231	227	230	223	236	227.4	231.0
28 Spd	12	10	10	9	8	9	9	4	6	7	5	2	4	2	3	4	2	3	6	7	6	6	8	8	2.4	11.9
Dir	239	228	225	199	202	197	189	193	173	156	180	162	118	100	98	110	165	329	332	340	341	336	328	332	220.5	239.2
29 Spd	9	7	6	4	4	5	4	3	1	2	4	8	10	12	13	14	10	8	7	7	8	11	8	10	6.8	13.9
Dir	333	332	336	355	354	359	12	31	119	65	9	4	12	357	9	24	21	18	16	333	326	332	340	337	357.5	24.3
30 Spd	10	9	9	9	10	8	9	11	13	15	16	16	19	18	19	17	18	18	18	20	22	22	21	21	14.7	22.2
Dir	330	332	337	337	338	337	330	340	349	346	350	350	357	360	360	358	4	13	15	13	17	15	19	21	359.4	15.4
Spd	8.0	7.9	7.6	7.8	7.4	7.3	7.3	6.8	7.6	9.0	10.6	11.0	11.2	11.8	11.8	11.7	12.5	9.8	6.3	5.6	5.9	7.1	8.4	8.5	Diurnal Average	
Dir	234.5	233.1	227.8	226.1	222.9	219.0	216.2	214.8	207.4	207.9	216.3	217.4	222.0	230.2	231.1	234.9	234.0	242.1	242.0	242.6	237.1	239.7	234.0	237.6		
Spd	20.4	20.9	21.1	22.9	19.2	24.8	24.9	25.3	26.8	32.9	36.5	37.9	38.8	37.4	37.0	37.7	35.9	30.5	23.7	19.7	22.2	23.6	30.4	26.5	Diurnal Maximum	
Dir	231.0	222.4	233.0	226.6	214.4	220.7	216.0	214.9	222.7	228.6	236.7	234.4	231.0	225.3	221.2	225.0	233.7	237.9	221.6	13.1	290.9	246.8	240.0	235.3		

Maximum Speed Value: 39 km/h on Sep 27 13:00
Maximum Daily Speed Average: 24.1 km/h on Sep 27
Maximum Diurnal Speed Average: 12.5 km/h at hour 17

Minimum Speed Value: 1 km/h on Sep 2 03:00
Minimum Daily Speed Average: 2.2 km/h on Sep 4
Minimum Diurnal Speed Average: 5.6 km/h at hour 20

Monthly Average Velocity: 8.57 km/h 227.75 deg

Speed Percentiles: $P_1 = 1.3$ $P_{10} = 4.1$ $Q_1 = 6.7$ Median = 10.7 $Q_3 = 16.5$ $P_{90} = 22.4$ $P_{99} = 35.5$

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

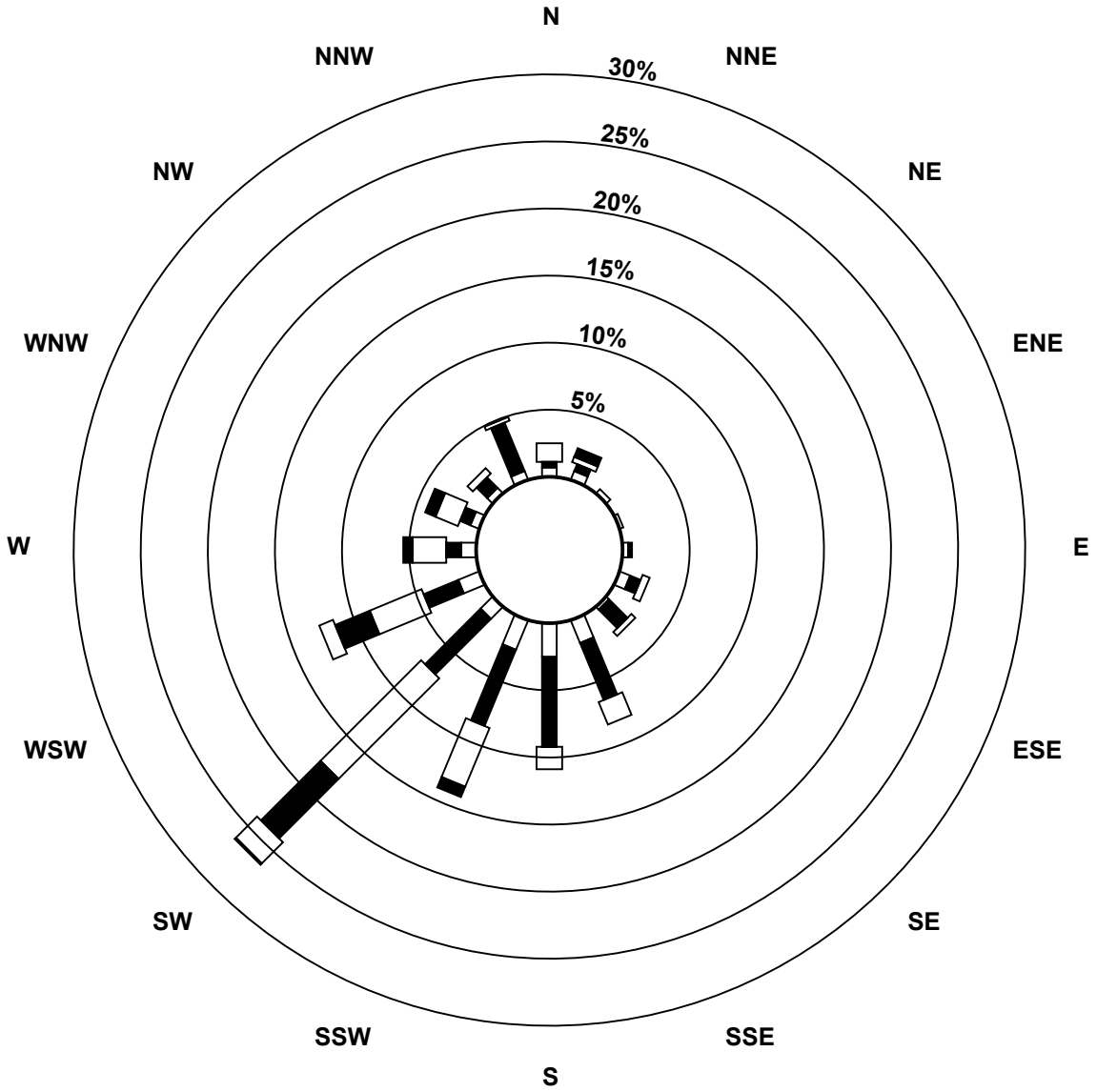
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	9	15	11	7	0	0	42
NorthEast	6	0	1	0	0	0	7
East	6	3	1	0	0	0	10
SouthEast	9	39	18	0	0	0	66
South	26	95	32	1	0	0	154
SouthWest	25	60	132	68	24	1	310
West	9	20	23	17	0	0	69
NorthWest	12	32	17	1	0	0	62
Total	102	264	235	94	24	1	720

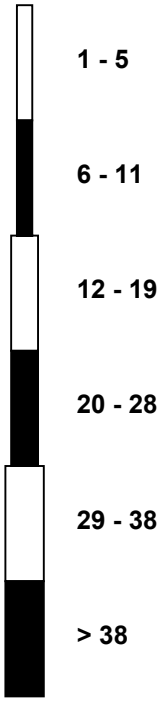
Wind Rose

Wind Speed (WS) (km/h)

Smoky Heights - September 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - September 2016

Peace Airshed Zone Association

Maximum Speed: 39 km/h on Sep 27 13:00

Maximum Daily Speed Average: 24.4 km/h on Sep 27

Minimum Speed: 1 km/h on Sep 21 22:00

Minimum Daily Speed Average: 4.9 km/h on Sep 4

Maximum Diurnal Speed Average: 17.5 km/h at hour 17

Minimum Diurnal Speed Average: 9.3 km/h at hour 8

Monthly Average Speed: 12.68 km/h

Percentiles: P_1 = 2.2 P_{10} = 4.7 Q_1 = 7.1 Median = 11.1 Q_3 = 16.7 P_{90} = 23.0 P_{99} = 35.7

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-Sep	13	7	7	11	8	9	5	10	8	6	6	12	11	11	13	16	17	16	9	6	4	3	3	4	8.9	16.6
2-Sep	4	3	2	3	3	2	5	6	6	5	5	8	9	14	12	7	7	10	10	12	8	10	9	14	7.4	14.5
3-Sep	19	15	17	15	18	16	18	18	19	17	19	20	23	21	19	17	19	22	20	17	13	11	11	10	17.2	23.3
4-Sep	8	4	4	5	4	4	3	5	6	6	7	6	7	7	5	5	5	5	5	2	4	3	4	3	4.9	7.7
5-Sep	5	5	3	2	2	4	3	3	6	6	7	12	10	10	10	11	10	10	13	12	4	5	6	6	6.9	13.0
6-Sep	5	7	5	6	6	6	8	8	11	13	13	13	14	13	12	12	16	8	5	5	4	9	12	14	9.6	16.4
7-Sep	16	16	12	10	10	9	7	8	8	14	18	21	26	26	25	20	17	16	12	11	10	11	12	12	14.4	26.1
8-Sep	9	9	10	8	8	7	9	8	14	15	11	12	14	14	18	20	20	17	16	7	10	11	13	12	12.3	20.2
9-Sep	9	12	10	6	8	6	6	5	7	10	11	12	14	15	16	18	18	15	12	14	15	15	12	11	11.4	18.0
10-Sep	17	20	14	19	19	25	25	25	27	33	37	31	27	27	18	13	21	26	17	19	22	22	18	17	22.5	36.7
11-Sep	17	18	17	18	18	16	14	13	16	17	14	14	10	10	13	13	11	9	4	3	2	7	9	9	12.2	18.1
12-Sep	11	11	13	11	7	6	7	9	12	11	11	13	16	16	16	20	19	12	7	10	13	16	16	17	12.5	19.7
13-Sep	11	13	12	12	16	18	16	15	18	20	22	25	27	29	33	35	32	28	16	13	15	15	19	18	20.0	35.3
14-Sep	12	9	14	12	14	13	14	10	13	19	27	28	27	26	25	23	21	22	13	9	12	12	14	14	16.7	27.9
15-Sep	14	15	15	15	10	7	8	7	8	17	21	19	19	22	22	21	22	16	15	15	17	15	13	12	15.3	22.4
16-Sep	10	10	8	8	6	11	8	7	7	12	24	27	28	28	23	26	32	14	11	11	9	9	10	9	14.6	32.3
17-Sep	7	10	10	7	12	12	13	12	7	14	17	23	27	26	25	23	23	20	18	14	18	15	19	18	16.2	26.6
18-Sep	20	21	21	21	17	11	12	16	16	25	25	29	26	23	28	25	23	23	7	6	8	13	15	15	18.6	29.1
19-Sep	16	15	15	11	13	9	6	5	6	9	7	7	7	9	13	11	9	12	3	4	5	8	8	9	9.1	16.0
20-Sep	7	6	5	4	5	6	4	4	6	7	8	9	6	5	7	6	7	8	3	2	3	3	5	3	5.5	8.6
21-Sep	3	4	7	7	8	7	6	6	8	8	10	11	11	13	13	13	12	6	4	2	1	1	3	4	7.0	13.2
22-Sep	4	4	7	8	8	7	6	7	9	10	9	9	8	12	12	11	14	11	7	7	8	15	15	6	8.9	15.1
23-Sep	11	8	10	7	7	7	7	4	8	11	7	9	12	18	15	11	28	20	12	20	16	18	22	24	12.9	27.7
24-Sep	20	19	19	17	19	18	17	16	17	27	30	36	34	32	26	33	31	30	24	15	12	11	11	15	22.0	36.0
25-Sep	15	11	9	11	10	9	6	6	5	5	7	5	5	6	9	15	14	10	11	10	9	8	4	6	8.6	14.8
26-Sep	4	3	4	5	7	7	7	7	7	5	9	16	18	15	13	12	9	4	10	11	9	24	30	27	11.0	30.5
27-Sep	18	21	19	23	17	18	19	20	24	26	36	38	39	38	37	38	36	31	24	15	12	12	12	11	24.4	39.1
28-Sep	12	10	10	9	8	9	9	5	7	7	6	4	5	5	5	5	3	4	6	7	6	6	8	8	6.8	11.9
29-Sep	9	7	6	5	4	5	5	3	1	3	5	8	10	12	14	14	11	8	7	7	8	11	8	10	7.6	14.1
30-Sep	10	9	9	9	10	8	9	11	13	15	16	16	20	18	20	17	18	18	18	20	22	22	21	21	15.4	22.3
	11.1	10.7	10.4	10.2	10.0	9.8	9.4	9.3	10.7	13.0	14.9	16.4	17.0	17.4	17.3	17.0	17.5	15.1	11.3	10.2	10.1	11.4	12.1	12.0	Diurnal Average	
	20.4	21.1	21.2	23.3	19.4	24.8	25.0	25.4	26.9	33.1	36.7	38.2	39.1	37.6	37.5	38.0	36.1	30.8	23.7	19.8	22.3	23.6	30.5	26.6	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

Smoky Heights - September 2016

Maximum Value: 92.0 deg on Sep 28 14:00

Minimum Value: 2.3 deg on Sep 24 07:00

Percentiles: P_1 = 2.9 P_{10} = 4.9 Q_1 = 6.9 Median = 10.4 Q_3 = 17.5 P_{90} = 30.8 P_{99} = 69.7

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-Sep	22	19	75	28	16	17	29	14	43	27	29	6	15	24	11	11	12	9	7	15	24	29	46	23	74.9
2-Sep	37	15	89	29	40	62	10	17	16	30	50	21	22	20	13	47	22	11	12	8	16	8	8	16	89.3
3-Sep	10	7	8	8	6	6	6	5	6	9	6	6	7	7	9	8	11	7	6	9	6	6	3	6	11.0
4-Sep	6	40	11	9	16	19	22	12	14	19	18	26	38	31	64	85	68	53	24	73	12	25	18	27	85.4
5-Sep	11	5	44	25	46	11	19	20	13	14	19	16	17	15	37	32	24	9	31	25	35	13	16	15	45.5
6-Sep	20	12	18	27	13	15	9	9	12	9	13	14	17	20	24	15	37	46	55	39	42	8	5	3	54.6
7-Sep	7	3	16	8	5	6	9	10	18	9	10	13	7	13	17	7	11	13	12	10	16	13	12	7	18.0
8-Sep	38	27	10	16	8	25	8	11	6	7	15	17	31	11	18	11	15	9	29	18	9	4	4	4	37.9
9-Sep	31	28	74	16	20	35	20	9	11	10	10	11	10	14	8	11	12	10	7	9	5	8	16	6	73.5
10-Sep	10	10	6	5	9	5	4	4	5	6	6	5	13	15	22	18	18	11	9	9	6	8	8	7	21.9
11-Sep	6	6	7	7	7	7	7	7	7	45	12	17	16	18	17	22	14	10	12	28	24	33	8	4	44.6
12-Sep	6	7	3	7	12	17	7	6	7	8	10	15	15	15	17	21	11	6	9	6	5	4	4	3	20.9
13-Sep	5	4	7	6	3	2	6	6	5	6	12	10	17	7	7	5	7	6	19	12	7	4	3	3	19.1
14-Sep	9	15	5	5	7	8	12	9	8	7	6	9	8	10	12	11	7	8	6	13	7	8	8	4	14.5
15-Sep	11	4	3	3	8	24	12	11	14	9	8	10	12	14	12	11	8	10	7	9	9	7	6	8	24.0
16-Sep	9	19	13	11	17	10	29	24	14	23	10	9	9	12	9	9	6	13	8	9	8	22	10	17	28.9
17-Sep	11	6	11	16	10	4	7	8	13	7	10	11	9	8	8	13	7	8	6	8	7	4	3	5	16.1
18-Sep	3	7	5	3	4	11	7	4	8	5	6	5	9	14	7	8	9	35	25	12	17	8	3	5	34.6
19-Sep	3	5	5	7	6	7	28	10	21	16	18	44	61	36	9	14	13	58	64	45	27	27	40	23	63.6
20-Sep	21	17	59	34	7	22	12	45	11	10	18	32	63	44	44	25	53	21	68	58	49	28	10	31	67.8
21-Sep	20	14	11	10	13	12	7	8	8	8	10	12	16	20	16	22	19	10	14	9	59	63	22	14	63.2
22-Sep	18	20	12	8	7	7	7	5	7	12	24	21	21	13	15	23	10	6	8	5	18	5	5	71	71.0
23-Sep	10	8	29	14	17	17	8	20	18	12	26	11	39	9	12	15	7	8	5	7	7	8	5	4	38.6
24-Sep	3	4	3	4	6	4	2	9	6	5	7	7	8	12	7	8	8	8	4	11	16	10	9	5	16.2
25-Sep	3	6	30	4	11	12	32	10	15	10	10	19	30	21	28	10	8	14	11	7	12	13	13	20	31.8
26-Sep	28	69	21	28	18	21	13	28	19	30	12	9	7	7	9	6	13	48	30	11	16	4	4	6	69.2
27-Sep	12	8	8	10	6	7	3	4	5	5	7	7	7	7	9	7	6	7	3	7	14	4	17	5	17.5
28-Sep	6	12	5	23	11	11	6	15	15	11	21	58	52	92	71	33	67	20	5	8	6	7	5	5	92.0
29-Sep	5	5	6	42	12	11	33	29	57	50	30	15	11	14	14	11	14	10	12	8	7	6	10	6	57.1
30-Sep	9	5	7	6	7	8	8	8	7	10	6	5	6	5	6	6	7	12	8	7	6	6	5	6	12.3
	37.9	69.2	89.3	41.8	45.5	62.1	32.8	45.3	57.1	50.4	50.3	58.2	63.3	92.0	71.2	85.4	67.6	58.2	67.8	73.5	58.8	63.2	45.6	71.0	

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 15.6 ppb on Sep 30 02:00
Maximum Daily Average: 1.7 ppb on Sep 30

Minimum Value: 0 ppb on Sep 12 00:00
Maximum Diurnal Average: 0.6 ppb at hour 2
Monthly Average: 0.12 ppb

Minimum Daily Average: 0.0 ppb on Sep 18
Minimum Diurnal Average: 0.1 ppb at hour 20
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.1 P_{90} = 0.2 P_{99} = 0.6

Hours in Service:	720
Hours of Data:	688
Hours of Missing Data:	32
Hours of Calibration:	32
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-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
2-Sep	0	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
3-Sep	0	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
4-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
5-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
6-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
7-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
8-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
9-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
10-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Sep	0	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
12-Sep	0	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-Sep	0	0	0	0	A	0	0	0	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0	0.0	0.1
14-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
15-Sep	0	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
16-Sep	0	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
17-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
18-Sep	0	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
19-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
20-Sep	0	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
21-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
22-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
23-Sep	0	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
24-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
25-Sep	0	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
26-Sep	0	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
27-Sep	0	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
28-Sep	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
29-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.3	0.5
30-Sep	4	16	9	4	A	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7	15.6
	0.2	0.6	0.3	0.2	--	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	4.4	15.6	8.8	3.5	--	1.6	0.9	0.7	0.6	0.6	0.6	0.4	0.4	0.4	0.5	0.4	0.3	0.4	0.4	0.3	0.3	0.5	0.5	0.5	Diurnal Maximum	

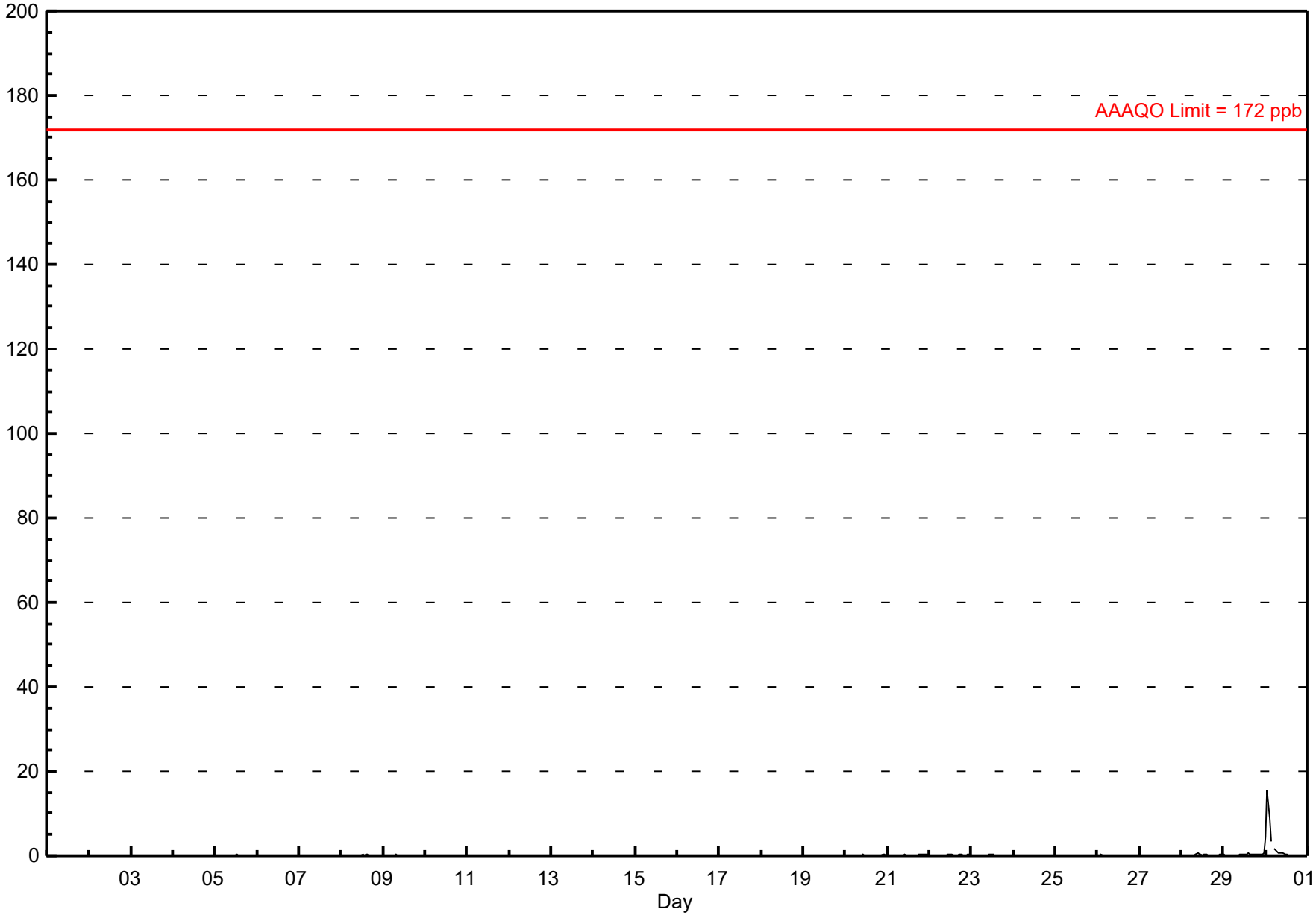
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - September 2016

Maximum Value: 18.3 ppb on Sep 30 02:00

Maximum Daily Average: 2.7 ppb on Sep 30

Minimum Value: 0 ppb on Sep 19 04:00

Minimum Daily Average: 0.1 ppb on Sep 3

Maximum Diurnal Average: 0.8 ppb at hour 2

Minimum Diurnal Average: 0.2 ppb at hour 21

Monthly Average: 0.26 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.1 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 0.9

Hours in Service:	720
Hours of Data:	688
Hours of Missing Data:	32
Hours of Calibration:	32
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-Sep	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
2-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
3-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
4-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
5-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
6-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
7-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
8-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.2	0.6
9-Sep	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
10-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
11-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
12-Sep	0	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-Sep	0	0	0	0	A	0	0	0	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.2
14-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
15-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
16-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
17-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
18-Sep	0	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
19-Sep	0	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
20-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
21-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0.3	0.7
22-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.5
23-Sep	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
24-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
25-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
26-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
27-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
28-Sep	0	0	0	0	A	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8
29-Sep	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	0	1	1	0	0	0	0	1	0.4	0.8
30-Sep	16	18	14	5	A	3	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2.7	18.3
	0.7	0.8	0.6	0.3	--	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	15.8	18.3	13.5	5.2	--	2.5	1.2	0.8	0.7	1.8	0.7	0.6	0.6	0.5	0.8	0.6	0.4	0.7	0.6	0.5	0.4	0.7	0.7	0.8	Diurnal Maximum	

C - Calibration

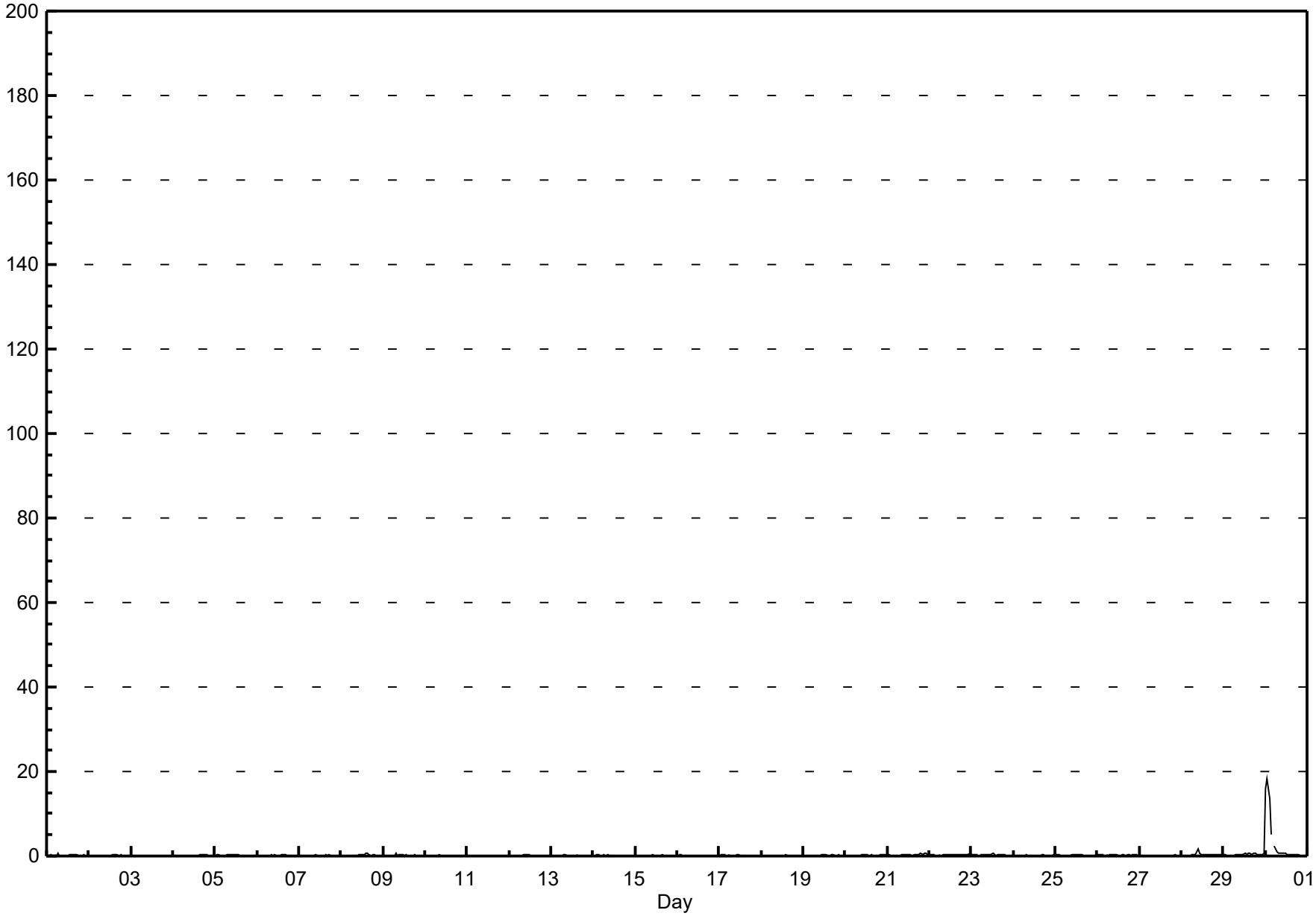
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - September 2016

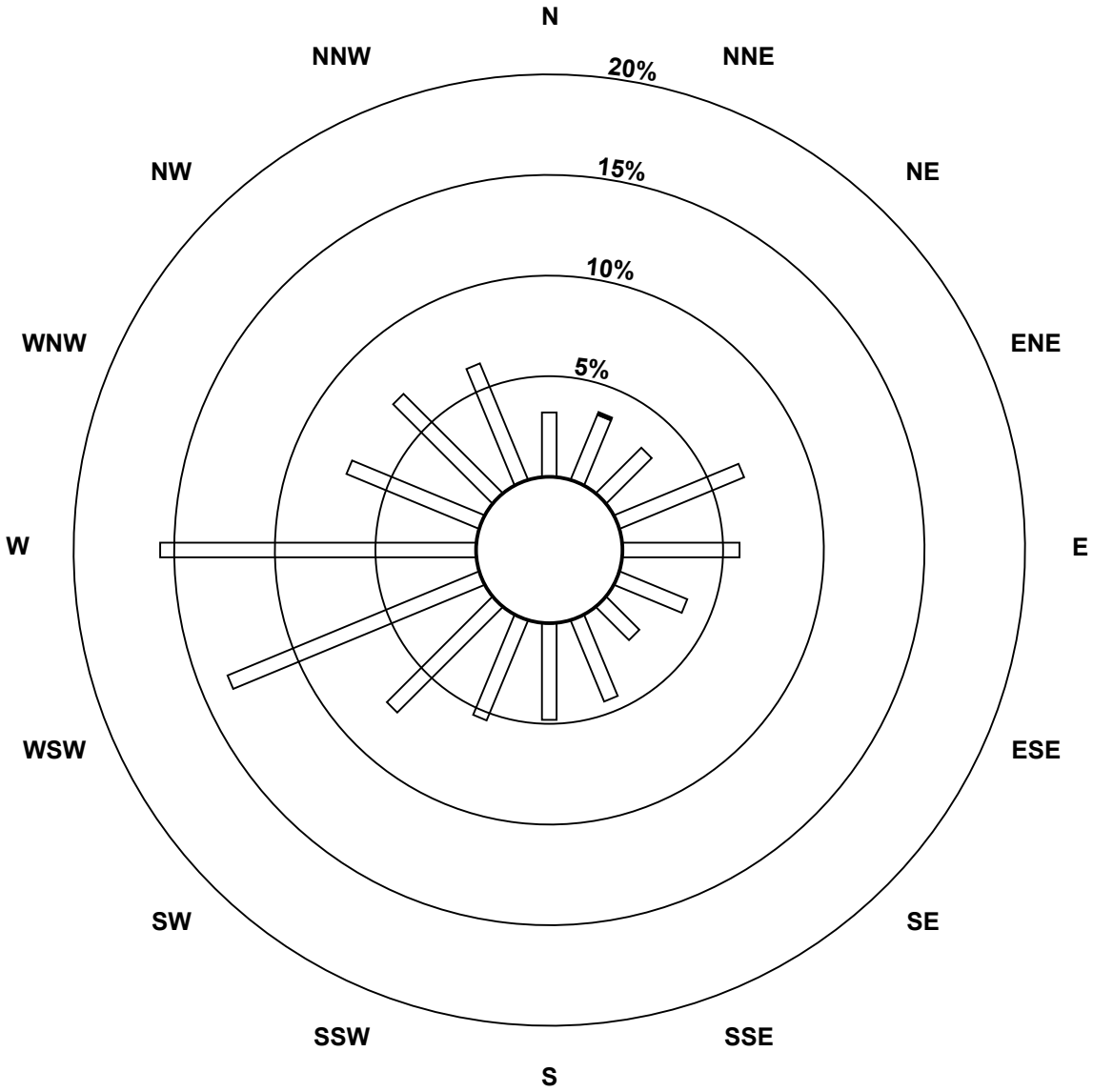


Peace Airshed Zone Association

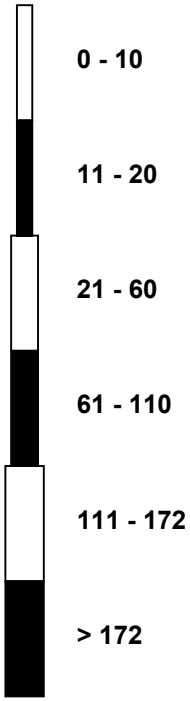
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - September 2016



Pollutant Classes (ppb)

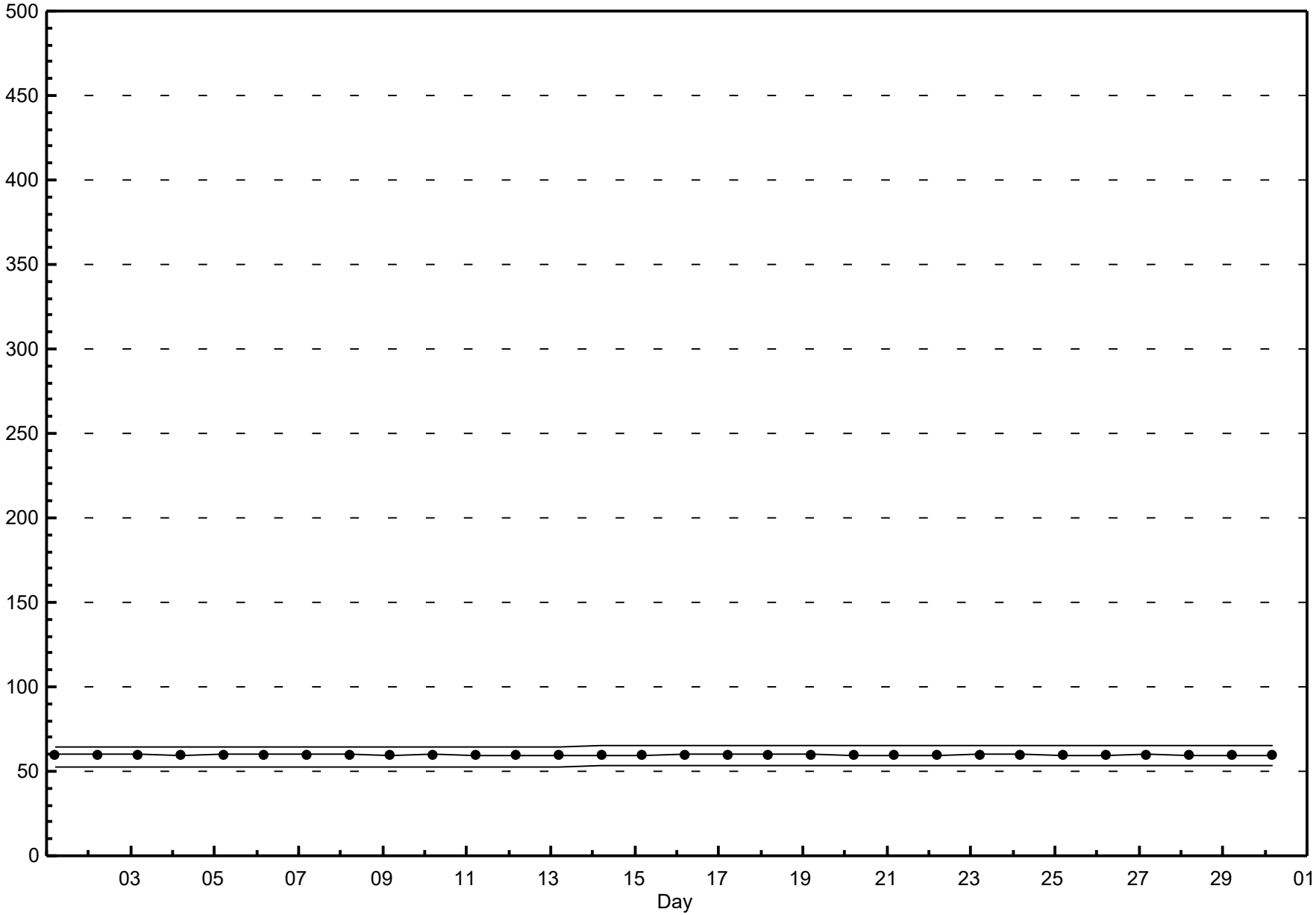


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - September 2016

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

Maximum Value: 15.9 ppb on Sep 29 07:00

Maximum Daily Average: 5.7 ppb on Sep 29

Minimum Value: 0 ppb on Sep 10 02:00

Minimum Daily Average: 0.7 ppb on Sep 10

Maximum Diurnal Average: 6.5 ppb at hour 6

Minimum Diurnal Average: 0.9 ppb at hour 17

Monthly Average: 2.18 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.5$ $Q_1 = 0.8$ Median = 1.5 $Q_3 = 2.8$ $P_{90} = 4.9$ $P_{99} = 9.8$

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-Sep	2	2	2	2	A	7	5	4	3	2	2	1	1	1	1	1	1	1	1	1	3	2	1	1	2.0	6.7
2-Sep	1	2	3	4	A	6	5	3	2	2	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1.7	6.2
3-Sep	1	0	1	1	A	5	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	4.8
4-Sep	1	1	1	1	A	5	3	2	2	2	1	1	0	0	0	0	0	0	1	1	1	1	2	2	1.3	4.5
5-Sep	3	4	4	4	A	8	5	6	4	3	2	1	1	1	1	0	0	1	1	2	2	2	3	2	2.6	7.9
6-Sep	2	2	2	3	A	7	7	4	2	1	2	1	1	1	1	2	1	1	1	2	2	1	1	1	2.0	7.4
7-Sep	1	1	2	2	A	7	6	4	3	2	1	1	1	1	1	1	1	1	2	2	2	2	1	1	2.0	6.8
8-Sep	2	3	3	2	A	6	4	4	4	2	1	1	1	1	1	1	1	1	1	1	2	1	2	2	2.0	5.8
9-Sep	2	2	3	3	A	7	6	6	2	1	1	1	1	1	1	1	1	2	3	3	2	2	2	1	2.3	6.8
10-Sep	0	0	0	0	A	4	2	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	0.7	3.9
11-Sep	1	0	1	1	A	5	3	3	3	1	1	1	1	1	0	1	1	1	1	2	3	2	2	2	1.6	4.5
12-Sep	2	2	1	1	A	6	5	4	3	1	1	1	1	1	1	1	0	1	1	1	1	2	2	1	1.7	5.8
13-Sep	1	0	0	0	A	5	6	7	C	C	C	C	C	C	2	2	1	1	1	2	2	2	1	2	--	6.7
14-Sep	2	2	1	2	A	9	5	4	2	1	1	1	1	1	1	1	0	0	1	4	3	3	3	2	2.1	8.5
15-Sep	1	2	2	2	A	8	8	6	4	2	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2.2	8.1
16-Sep	1	2	2	2	A	6	6	3	3	1	2	1	1	1	2	1	1	2	2	2	3	2	3	2	2.2	6.2
17-Sep	1	1	1	2	A	6	4	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	6.0
18-Sep	1	0	0	0	A	4	2	1	1	1	1	0	1	1	1	0	0	0	1	1	1	2	1	1	0.9	3.9
19-Sep	2	1	1	1	A	6	4	5	5	2	2	1	1	1	1	2	2	1	2	2	1	2	4	2	2.2	6.1
20-Sep	2	5	3	2	A	6	4	4	3	3	2	1	3	1	0	1	1	1	1	4	2	2	2	2	2.3	6.3
21-Sep	4	5	4	5	A	9	6	4	6	3	2	1	1	1	1	1	1	1	2	2	3	4	4	4	3.0	8.7
22-Sep	3	3	2	1	A	10	8	5	3	3	2	1	2	1	1	1	1	3	3	3	2	6	4	3	3.1	9.9
23-Sep	5	8	7	6	A	9	9	7	6	6	4	3	4	1	1	1	1	1	1	1	1	1	1	0	3.6	9.5
24-Sep	0	0	1	0	A	3	2	1	1	1	1	0	0	1	0	0	0	1	1	1	2	3	5	3	1.2	4.9
25-Sep	2	4	4	4	A	7	5	4	4	3	3	2	2	1	1	1	1	0	1	1	2	1	3	3	2.5	6.6
26-Sep	3	3	3	3	A	7	6	9	5	3	1	1	1	0	0	1	1	2	3	1	1	0	0	0	2.4	8.7
27-Sep	0	0	0	0	A	4	2	2	1	1	1	1	1	0	0	0	0	0	1	1	1	2	1	1	1.0	3.7
28-Sep	2	2	2	2	A	7	6	6	5	5	4	1	1	2	1	1	2	4	9	3	3	5	5	1	3.6	8.7
29-Sep	1	2	6	13	A	12	16	13	12	10	8	5	2	2	2	1	2	1	2	3	5	4	6	4	5.7	15.9
30-Sep	3	2	3	5	A	7	5	7	6	4	2	2	2	3	2	3	2	2	2	1	1	1	1	1	2.9	7.3
	1.7	2.1	2.2	2.5	--	6.5	5.3	4.5	3.4	2.4	1.7	1.2	1.1	0.9	0.9	0.9	0.9	1.1	1.6	1.7	1.9	2.0	2.2	1.7	Diurnal Average	
	5.4	8.4	6.8	13.4	--	12.2	15.9	13.2	11.5	10.2	7.8	4.6	4.0	2.6	2.4	2.5	2.3	4.3	8.7	3.8	5.5	5.6	6.1	4.5	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

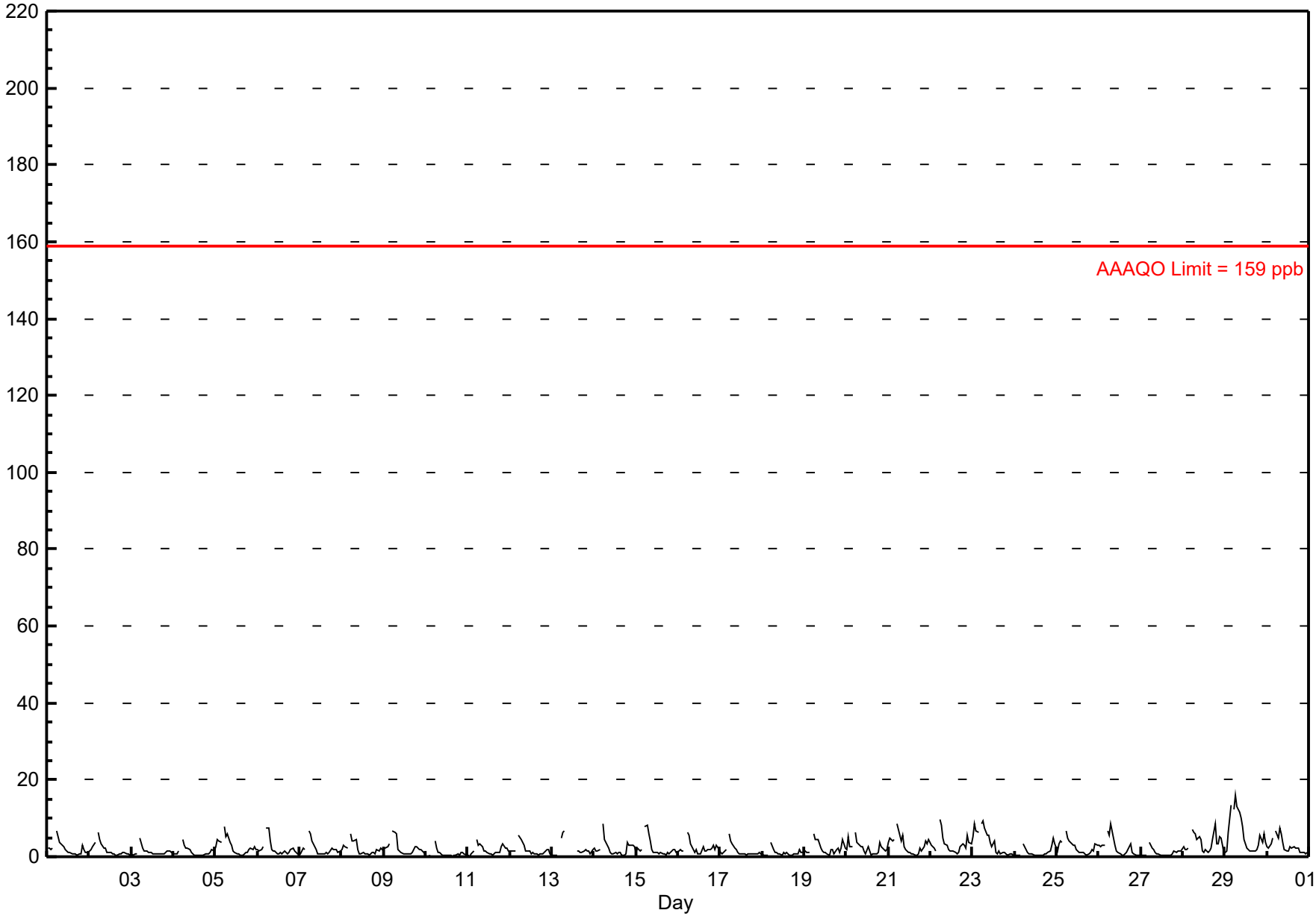
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - September 2016

Maximum Value: 41.9 ppb on Sep 16 15:00

Maximum Daily Average: 8.7 ppb on Sep 28

Minimum Value: 0 ppb on Sep 11 02:00

Minimum Daily Average: 1.5 ppb on Sep 10

Maximum Diurnal Average: 8.9 ppb at hour 6

Minimum Diurnal Average: 2.1 ppb at hour 17

Monthly Average: 4.02 ppb

Percentiles: P_1 = 0.6 P_{10} = 1.0 Q_1 = 1.5 Median = 2.7 Q_3 = 4.8 P_{90} = 8.3 P_{99} = 21.2

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-Sep	3	2	5	3	A	9	6	5	4	3	3	2	1	1	1	1	1	1	1	2	6	3	2	2	3.0	9.3
2-Sep	2	3	4	5	A	8	6	5	3	3	2	1	1	1	1	1	1	1	1	2	2	1	1	1	2.4	8.5
3-Sep	1	1	1	1	A	8	3	2	2	2	2	1	1	1	1	1	1	1	1	1	2	2	3	2	1.8	7.6
4-Sep	1	1	1	2	A	7	4	3	3	3	2	1	1	1	1	1	1	1	1	2	1	2	4	3	2.0	6.8
5-Sep	4	6	5	4	A	12	6	8	5	4	2	2	1	2	1	1	1	3	2	3	4	3	4	3	3.8	11.9
6-Sep	3	2	2	3	A	9	8	6	4	2	2	1	1	9	2	3	4	1	4	4	3	2	2	1	3.5	9.2
7-Sep	1	2	3	3	A	8	8	5	14	3	1	1	1	1	1	3	3	2	8	5	3	3	2	2	3.8	14.3
8-Sep	3	4	4	3	A	8	5	6	17	7	1	1	1	1	1	1	1	3	3	2	6	3	3	3	3.8	17.3
9-Sep	3	4	6	4	A	8	8	10	4	2	8	1	1	3	2	2	3	3	4	4	2	3	2	2	3.7	10.2
10-Sep	1	0	1	1	A	6	3	1	3	1	1	1	1	1	1	1	1	0	2	1	2	2	1	1	1.5	6.1
11-Sep	2	0	2	2	A	6	4	4	4	2	2	2	2	1	1	1	1	1	2	4	7	3	3	2	2.5	6.6
12-Sep	2	2	2	2	A	7	6	5	4	2	2	2	1	14	1	4	1	1	2	2	3	4	3	1	3.1	14.0
13-Sep	1	1	1	1	A	6	11	9	C	C	C	C	C	C	2	14	2	4	2	5	3	4	1	3	--	14.5
14-Sep	3	2	5	4	A	12	9	8	7	2	1	1	1	2	3	3	1	1	3	7	5	6	5	4	4.2	12.5
15-Sep	2	3	2	3	A	9	10	7	6	3	3	4	4	3	3	5	1	1	2	2	3	6	4	2	3.9	9.7
16-Sep	2	2	3	2	A	8	8	20	5	3	6	2	1	1	42	7	2	3	4	3	4	3	4	3	6.0	41.9
17-Sep	2	1	2	3	A	8	6	8	3	3	2	1	2	2	3	1	2	2	1	2	2	2	3	1	2.6	8.1
18-Sep	2	1	1	1	A	7	3	2	2	2	2	1	4	3	5	1	1	1	2	2	2	3	3	1	2.2	6.5
19-Sep	3	1	1	1	A	8	5	7	7	5	3	8	5	1	1	4	4	1	4	4	2	4	12	6	4.3	12.0
20-Sep	2	11	4	3	A	8	4	4	4	4	4	2	37	11	1	4	6	1	2	6	5	2	2	5	5.8	37.3
21-Sep	7	9	5	7	A	11	7	5	11	4	2	2	1	1	1	1	1	2	4	2	6	4	4	11	4.7	11.5
22-Sep	7	4	3	2	A	12	11	10	5	4	3	2	2	2	1	1	2	4	5	5	4	8	5	5	4.6	11.6
23-Sep	10	18	8	8	A	13	16	10	9	9	4	4	40	17	2	3	2	2	3	2	1	2	2	1	8.1	40.5
24-Sep	1	1	1	1	A	6	2	2	2	1	1	1	1	5	1	1	2	2	3	2	4	6	8	4	2.5	7.6
25-Sep	3	5	6	7	A	9	5	5	6	4	4	2	8	1	2	1	1	1	2	2	3	2	7	4	4.0	9.0
26-Sep	4	3	4	3	A	7	8	11	9	7	3	3	2	1	1	1	3	8	5	3	1	1	1	1	3.9	11.2
27-Sep	1	2	1	1	A	6	4	2	2	1	2	1	1	2	1	1	1	1	3	3	3	2	3	2	2.0	5.6
28-Sep	4	2	2	3	A	9	12	12	6	9	10	4	6	23	4	10	9	13	33	6	5	7	8	2	8.7	33.1
29-Sep	1	6	11	19	A	18	22	18	17	12	10	6	4	5	4	2	2	3	6	5	8	5	9	7	8.7	21.7
30-Sep	3	3	4	11	A	12	6	14	7	5	3	2	2	4	3	3	3	2	4	2	2	25	1	1	5.4	24.7
	2.7	3.5	3.3	3.8	--	8.9	7.2	7.2	6.1	3.9	3.1	2.2	4.7	4.2	3.2	2.7	2.1	2.4	4.0	3.2	3.5	4.1	3.7	2.9	Diurnal Average	
	10.4	17.8	10.7	18.8	--	18.2	21.7	19.6	17.3	12.4	10.2	8.1	40.5	23.4	41.9	14.5	9.0	13.4	33.1	6.6	7.6	24.7	12.0	10.8	Diurnal Maximum	

C - Calibration

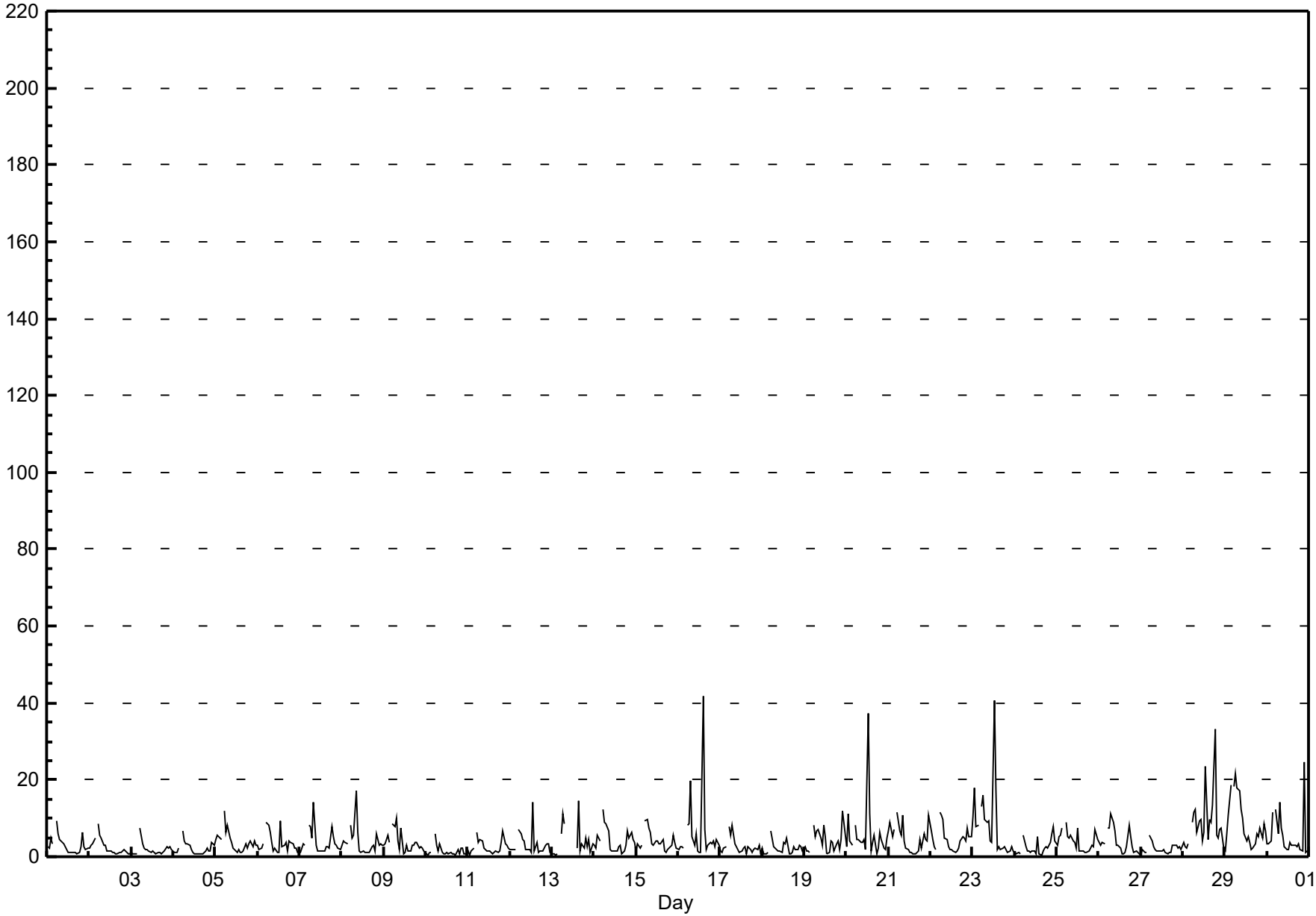
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - September 2016

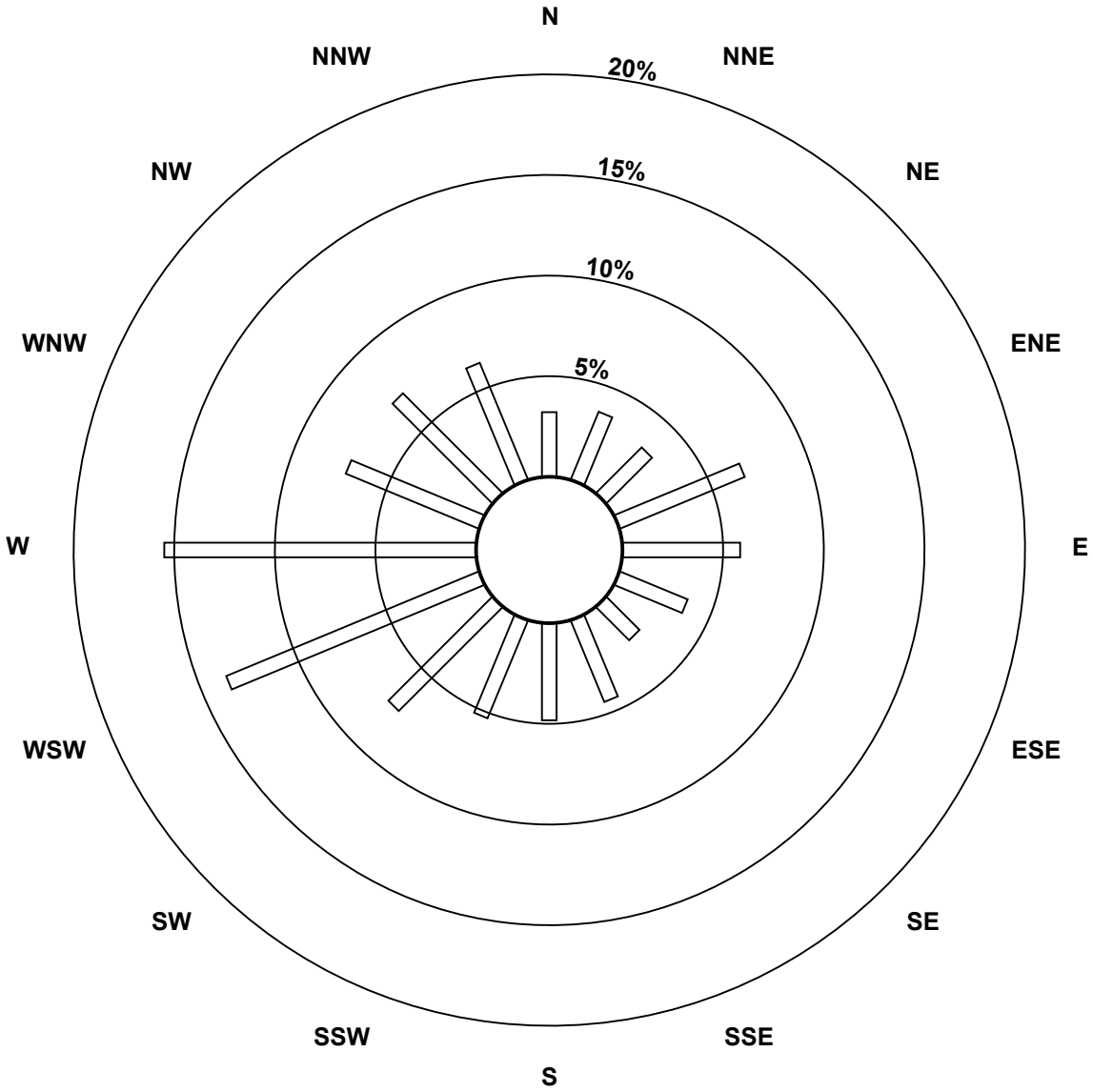


Peace Airshed Zone Association

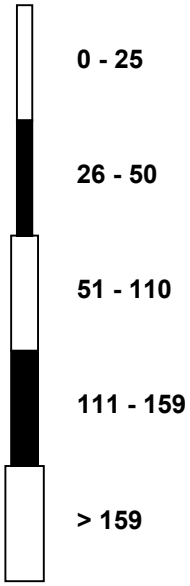
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - September 2016



Pollutant Classes (ppb)

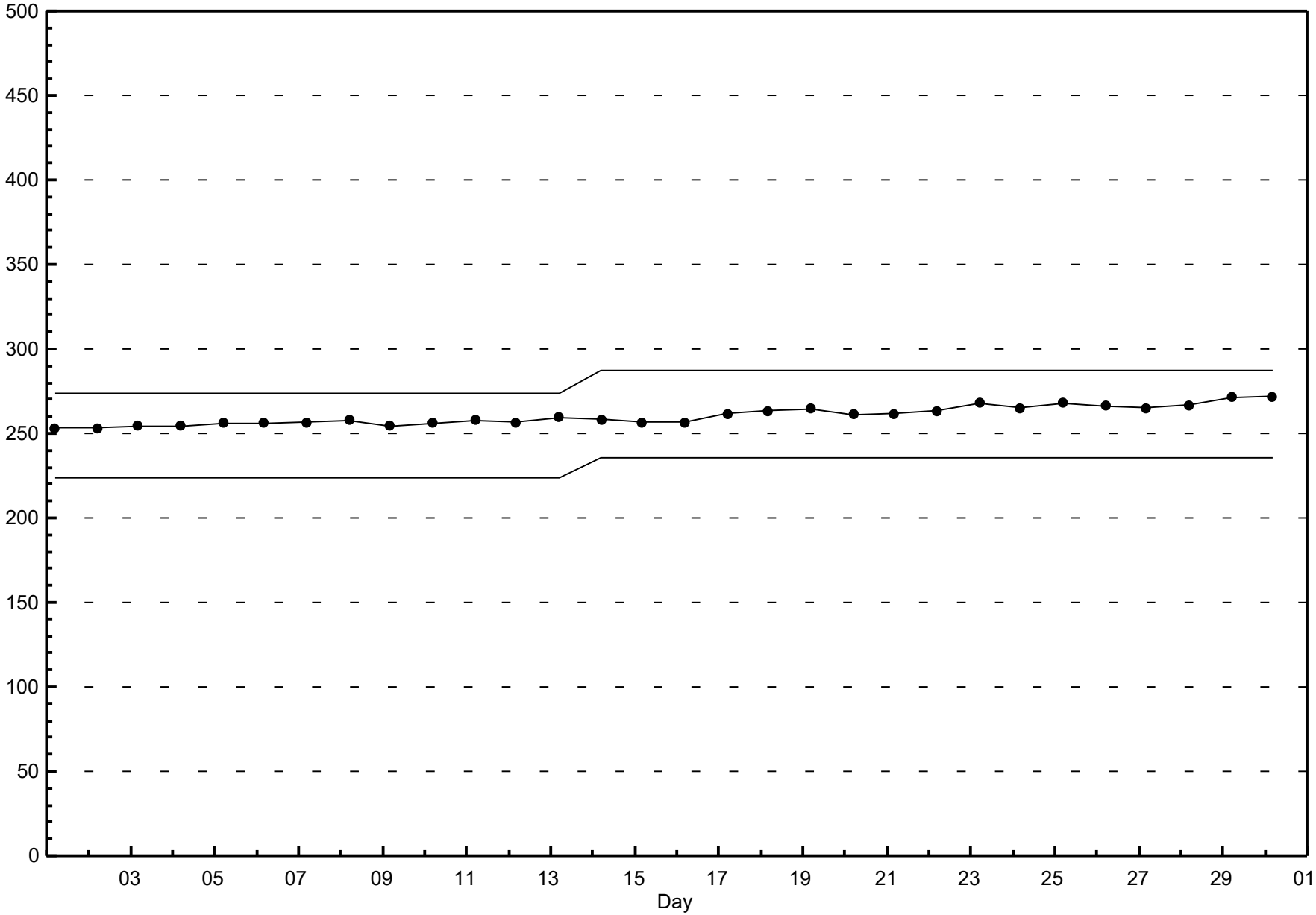


Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 20.3 ppb on Sep 29 09:00
Maximum Daily Average: 3.1 ppb on Sep 29

Minimum Value: 0 ppb on Sep 1 22:00
Maximum Diurnal Average: 2.2 ppb at hour 9
Monthly Average: 0.42 ppb

Minimum Daily Average: 0.0 ppb on Sep 10
Minimum Diurnal Average: 0.0 ppb at hour 24
Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.1 $Q_3 = 0.3$ $P_{90} = 0.9$ $P_{99} = 4.7$

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-Sep	0	0	0	0	A	0	1	1	2	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0.5	1.7
2-Sep	0	0	0	2	A	1	3	2	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	2.7
3-Sep	0	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
4-Sep	0	0	0	0	A	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.1
5-Sep	0	0	0	0	A	0	0	6	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.7	6.3
6-Sep	0	0	0	0	A	0	4	5	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.6	4.5
7-Sep	0	0	0	0	A	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8
8-Sep	0	0	0	0	A	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.9
9-Sep	0	0	0	0	A	0	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	3.0
10-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
12-Sep	0	0	0	0	A	0	1	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.2
13-Sep	0	0	0	0	A	0	0	2	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	--	1.7
14-Sep	0	0	0	0	A	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.3	1.0
15-Sep	0	0	0	0	A	0	1	3	3	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0.5	3.1
16-Sep	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
17-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
18-Sep	0	0	0	0	A	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0.1	1.0
19-Sep	0	0	0	0	A	0	0	1	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.3	2.2
20-Sep	0	0	0	0	A	0	0	0	2	2	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.6
21-Sep	0	0	0	0	A	0	0	1	7	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	6.7
22-Sep	0	0	0	0	A	0	1	1	2	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.7
23-Sep	0	0	0	0	A	0	1	2	3	5	3	1	3	1	0	0	0	0	0	0	0	0	0	0	0.9	5.1
24-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
25-Sep	0	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
26-Sep	0	0	0	0	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
27-Sep	0	0	0	0	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
28-Sep	0	0	0	0	A	0	0	1	2	5	4	1	1	1	0	0	1	0	2	0	0	0	0	0	0.8	4.8
29-Sep	0	0	0	2	A	0	5	12	20	20	7	3	1	1	0	0	0	0	0	0	0	0	0	0	3.1	20.3
30-Sep	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
	0.0	0.0	0.0	0.1	--	0.1	0.6	1.6	2.2	1.9	1.0	0.5	0.5	0.3	0.3	0.2	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.1	0.1	0.3	2.3	--	0.5	4.9	11.7	20.3	19.6	7.1	2.8	3.1	1.2	1.0	1.0	0.6	0.5	2.2	0.2	0.1	0.3	0.1	0.1	Diurnal Maximum	

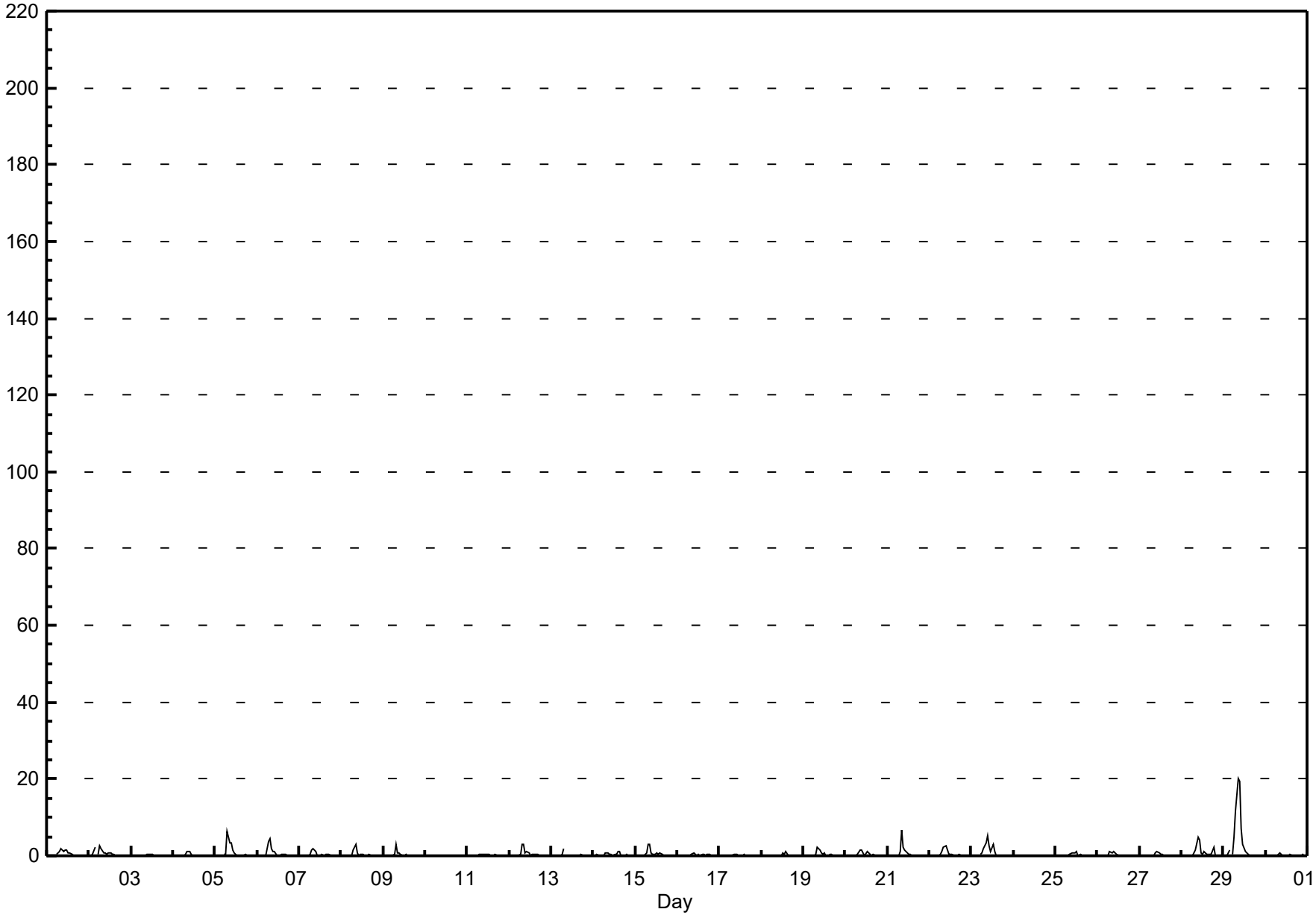
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - September 2016

Maximum Value: 50.2 ppb on Sep 29 10:00

Maximum Daily Average: 7.5 ppb on Sep 29

Minimum Value: 0 ppb on Sep 10 00:00

Minimum Daily Average: 0.2 ppb on Sep 10

Maximum Diurnal Average: 5.0 ppb at hour 9

Minimum Diurnal Average: 0.2 ppb at hour 24

Monthly Average: 1.54 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.4 $Q_3 = 1.0$ $P_{90} = 3.7$ $P_{99} = 20.2$

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-Sep	0	0	5	0	A	1	2	2	3	2	3	2	1	1	1	1	0	0	0	0	0	0	0	0	1.2	5.0
2-Sep	1	0	1	5	A	1	7	4	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1.2	7.0
3-Sep	0	0	0	0	A	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0.3	0.7
4-Sep	0	0	0	0	A	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.2
5-Sep	0	0	0	0	A	4	1	13	4	4	2	1	1	1	0	0	1	1	1	0	0	0	0	0	1.5	12.6
6-Sep	0	0	0	0	A	0	7	6	6	1	2	0	0	1	1	2	11	0	1	0	0	0	0	0	1.8	11.0
7-Sep	0	0	0	0	A	0	1	3	3	3	1	1	1	1	1	3	1	1	1	1	0	0	0	0	0.9	3.3
8-Sep	0	0	0	0	A	0	1	3	12	2	1	1	1	0	0	0	9	1	0	0	0	0	0	0	1.4	11.8
9-Sep	0	0	1	0	A	1	2	7	3	1	3	0	0	2	1	0	1	0	0	0	0	1	0	0	1.0	6.7
10-Sep	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
11-Sep	0	0	0	0	A	0	0	1	1	1	1	1	1	0	3	0	0	0	0	0	0	1	0	0	0.5	3.4
12-Sep	0	0	1	0	A	0	1	5	5	1	1	1	1	4	5	5	4	0	0	0	0	0	0	0	1.6	5.3
13-Sep	0	0	0	0	A	0	1	5	C	C	C	C	C	C	3	2	0	2	0	1	0	0	0	0	--	5.1
14-Sep	0	0	6	1	A	0	1	4	3	4	4	1	1	1	2	7	1	0	0	1	0	1	0	0	1.7	6.6
15-Sep	0	0	0	0	A	0	2	5	6	2	3	2	3	3	3	5	1	0	0	0	0	0	0	0	1.6	6.3
16-Sep	0	0	0	0	A	1	1	0	1	14	3	1	3	0	3	2	0	1	1	0	0	0	0	0	1.4	14.4
17-Sep	0	0	0	0	A	0	0	1	1	1	1	0	1	2	2	0	0	0	0	0	0	0	0	0	0.5	2.4
18-Sep	0	0	0	0	A	0	0	0	0	0	0	0	4	3	3	0	0	0	0	0	0	0	0	0	0.6	3.7
19-Sep	0	0	0	0	A	0	1	1	4	3	1	3	3	0	3	2	1	0	0	0	0	0	0	0	1.1	4.4
20-Sep	0	0	0	0	A	0	0	1	18	3	8	1	8	7	9	1	4	0	0	0	0	0	0	0	2.7	17.9
21-Sep	0	0	0	1	A	0	0	2	22	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1.6	21.5
22-Sep	0	0	0	0	A	1	2	3	5	4	2	1	1	1	0	0	1	1	0	0	0	0	0	0	1.0	4.7
23-Sep	0	0	0	1	A	2	7	5	9	11	3	2	40	19	0	1	0	1	0	0	0	0	0	0	4.5	40.5
24-Sep	0	0	0	0	A	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0.3	1.7
25-Sep	0	0	0	0	A	0	0	0	1	1	1	1	15	0	0	0	0	0	0	0	0	0	0	0	1.1	14.7
26-Sep	0	0	0	0	A	0	0	2	2	2	4	2	1	2	0	0	1	0	0	0	0	1	0	0	0.8	3.7
27-Sep	0	0	0	0	A	0	1	0	1	2	2	2	1	2	1	0	0	1	1	0	0	0	0	0	0.7	2.4
28-Sep	0	0	0	0	A	0	2	6	4	12	11	3	7	8	8	10	3	2	20	1	0	1	0	0	4.3	19.8
29-Sep	0	0	0	8	A	1	21	33	26	50	11	5	6	6	2	0	0	0	0	1	0	0	0	0	7.5	50.2
30-Sep	0	0	0	0	A	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	25	0	0	1.5	25.3
	0.2	0.2	0.6	0.7	--	0.6	2.1	3.8	5.0	4.6	2.5	1.2	3.5	2.4	1.8	1.5	1.5	0.5	1.0	0.3	0.2	1.1	0.2	0.2	Diurnal Average	
	0.5	0.4	6.2	7.8	--	4.1	20.6	32.7	25.6	50.2	11.5	4.7	40.5	19.2	8.8	9.8	11.0	1.7	19.8	0.9	0.4	25.3	0.3	0.3	Diurnal Maximum	

C - Calibration

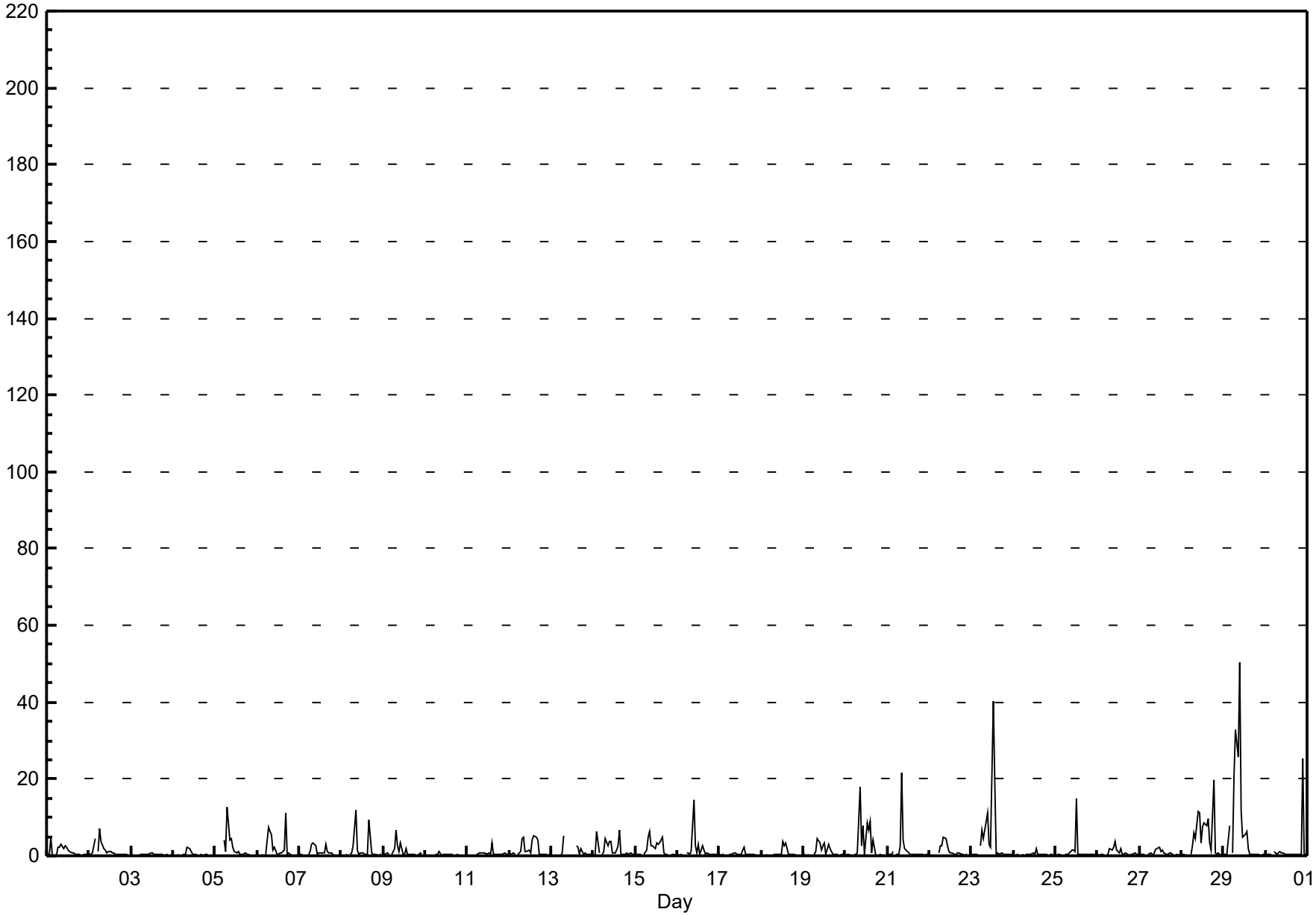
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - September 2016

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

Maximum Value: 31.8 ppb on Sep 29 09:00

Maximum Daily Average: 8.8 ppb on Sep 29

Minimum Value: 0 ppb on Sep 27 04:00

Minimum Daily Average: 1.0 ppb on Sep 18

Maximum Diurnal Average: 6.6 ppb at hour 6

Minimum Diurnal Average: 1.1 ppb at hour 17

Monthly Average: 2.64 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.6$ $Q_1 = 1.0$ Median = 1.8 $Q_3 = 3.2$ $P_{90} = 6.0$ $P_{99} = 11.5$

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-Sep	3	2	2	2	A	7	6	5	5	4	4	3	2	2	1	1	1	1	1	1	3	2	1	1	2.5	6.8
2-Sep	2	2	3	6	A	7	7	5	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2.3	7.3
3-Sep	1	0	1	1	A	5	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	4.8
4-Sep	1	1	1	1	A	5	3	3	4	3	2	1	1	0	0	0	0	0	1	1	1	1	2	2	1.4	4.5
5-Sep	3	4	4	4	A	8	5	12	7	6	3	2	1	1	1	0	1	1	1	2	2	2	3	2	3.3	12.3
6-Sep	2	2	2	3	A	8	11	9	4	2	3	1	1	1	1	2	1	1	1	2	2	1	1	1	2.7	10.9
7-Sep	1	1	2	2	A	7	6	5	5	3	1	1	1	1	1	1	1	2	2	2	2	2	1	1	2.3	6.8
8-Sep	2	3	3	2	A	6	4	5	7	3	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2.3	7.2
9-Sep	2	2	3	3	A	7	7	9	3	2	2	1	1	2	1	1	2	2	3	3	2	2	2	1	2.8	8.9
10-Sep	0	0	1	1	A	4	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	4.4
11-Sep	1	0	1	1	A	5	3	4	3	2	2	1	1	1	1	1	1	1	1	3	3	2	2	2	1.9	4.7
12-Sep	2	2	2	1	A	6	5	7	6	2	3	2	1	1	1	1	1	1	1	1	1	2	2	1	2.2	7.0
13-Sep	1	0	0	0	A	5	7	9	C	C	C	C	C	C	2	2	1	1	1	2	2	2	1	2	--	8.5
14-Sep	2	2	2	2	A	9	5	5	3	1	1	1	1	1	2	2	1	0	1	4	3	3	3	3	2.5	8.7
15-Sep	1	2	2	2	A	8	9	9	7	3	2	1	2	1	2	2	1	1	1	1	1	2	2	1	2.7	9.0
16-Sep	1	2	2	2	A	6	6	3	3	2	2	1	1	1	3	2	2	2	2	2	3	2	3	2	2.4	6.4
17-Sep	1	1	1	2	A	6	4	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	6.0
18-Sep	1	0	0	0	A	4	2	1	1	1	1	0	2	1	2	0	0	1	1	1	1	2	1	1	1.0	3.8
19-Sep	2	1	1	1	A	6	4	5	7	4	2	1	2	1	1	2	2	1	2	2	1	2	4	2	2.5	6.8
20-Sep	2	5	3	2	A	6	4	4	4	4	3	1	3	2	1	1	1	1	1	4	2	2	2	2	2.6	6.3
21-Sep	4	5	4	5	A	9	6	5	12	5	3	2	1	1	1	1	1	1	2	2	3	4	3	4	3.6	12.4
22-Sep	3	3	2	1	A	10	9	6	6	6	4	2	2	2	1	1	1	3	3	3	2	6	4	3	3.6	9.9
23-Sep	5	8	7	6	A	9	10	9	9	11	6	4	7	2	1	2	1	1	1	1	0	1	1	0	4.5	10.7
24-Sep	0	0	0	0	A	3	2	1	1	1	1	1	0	1	0	0	1	1	1	1	2	3	5	3	1.2	4.9
25-Sep	2	4	4	4	A	7	5	4	4	4	4	3	3	1	1	1	1	1	1	1	2	1	4	3	2.7	6.6
26-Sep	3	3	3	3	A	7	6	10	6	4	2	2	1	1	0	1	1	3	3	1	1	1	1	0	2.6	9.7
27-Sep	0	0	0	0	A	4	2	2	1	1	2	1	1	1	0	0	0	1	1	2	1	2	1	1	1.2	3.7
28-Sep	3	2	2	2	A	7	7	7	6	10	9	2	1	3	1	2	3	5	11	4	3	5	5	1	4.4	10.8
29-Sep	1	2	6	15	A	12	21	25	32	30	15	7	3	2	2	2	2	2	2	3	5	4	6	4	8.8	31.8
30-Sep	3	2	3	5	A	7	5	8	7	4	2	2	2	3	3	3	2	2	2	1	1	1	1	1	3.0	7.6
	1.7	2.1	2.2	2.7	--	6.6	5.9	6.1	5.6	4.3	2.8	1.7	1.6	1.3	1.2	1.1	1.1	1.3	1.8	1.7	1.9	2.1	2.2	1.7	Diurnal Average	
	5.3	8.4	6.8	14.9	--	12.4	20.8	24.9	31.8	29.7	14.9	7.4	7.1	3.1	2.9	2.8	2.8	4.8	10.8	4.0	5.5	5.5	6.2	4.4	Diurnal Maximum	

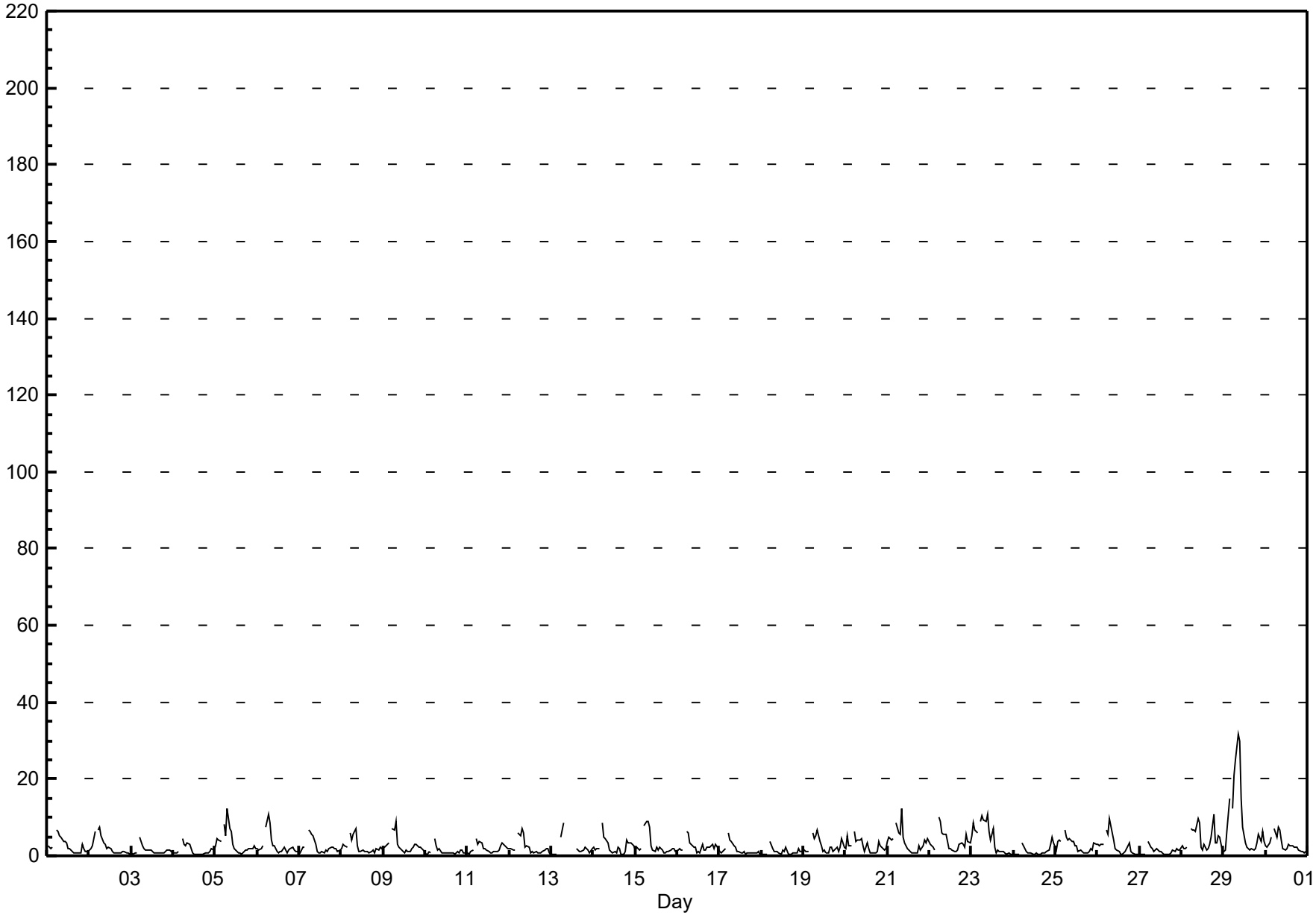
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - September 2016

Maximum Value: 57.2 ppb on Sep 29 10:00

Maximum Daily Average: 15.4 ppb on Sep 29

Minimum Value: 1 ppb on Sep 11 02:00

Minimum Daily Average: 2.0 ppb on Sep 3

Maximum Diurnal Average: 10.7 ppb at hour 8

Minimum Diurnal Average: 2.9 ppb at hour 1

Monthly Average: 5.17 ppb

Percentiles: $P_1 = 0.8$ $P_{10} = 1.3$ $Q_1 = 1.9$ Median = 3.2 $Q_3 = 6.0$ $P_{90} = 10.4$ $P_{99} = 37.8$

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-Sep	3	3	5	4	A	10	8	6	7	5	6	4	3	2	2	2	2	1	1	2	7	3	2	2	3.9	9.8
2-Sep	3	3	4	9	A	9	12	8	5	4	2	3	2	2	2	1	1	1	1	2	2	1	1	1	3.6	12.3
3-Sep	1	1	1	1	A	8	4	2	2	2	2	2	2	1	1	1	1	1	1	2	2	2	3	2	2.0	7.9
4-Sep	1	1	1	2	A	7	4	4	5	5	3	1	1	1	1	1	1	1	2	2	1	2	4	3	2.3	6.6
5-Sep	4	5	5	4	A	16	6	21	9	8	5	3	2	3	1	1	2	4	3	4	4	3	4	3	5.2	20.8
6-Sep	3	2	2	3	A	9	15	12	10	3	4	2	1	10	3	5	11	2	5	4	3	3	2	1	5.1	15.2
7-Sep	1	2	3	3	A	8	9	8	17	6	2	2	2	2	2	6	4	3	9	5	3	3	2	2	4.6	16.7
8-Sep	3	4	4	3	A	8	5	8	28	8	2	2	2	2	2	1	6	4	3	2	6	3	3	3	4.9	28.4
9-Sep	3	4	6	4	A	9	10	16	7	3	11	1	2	4	2	2	4	4	4	4	3	4	3	2	4.8	16.0
10-Sep	1	1	2	1	A	7	4	2	5	1	2	1	2	1	2	1	1	1	3	1	3	3	1	1	2.0	6.6
11-Sep	2	1	2	2	A	6	4	5	5	3	3	2	2	2	1	2	2	2	2	4	7	4	3	3	3.0	6.8
12-Sep	2	2	2	2	A	7	6	9	9	3	3	3	2	18	2	4	2	2	2	2	3	4	3	1	4.1	18.1
13-Sep	1	1	1	1	A	6	12	14	C	C	C	C	C	C	3	15	2	5	2	5	3	5	1	3	--	14.5
14-Sep	3	2	12	5	A	13	10	13	9	3	2	3	2	3	5	7	1	2	3	7	5	6	5	4	5.4	12.9
15-Sep	2	3	2	3	A	9	11	12	13	6	5	6	6	6	6	10	2	2	3	2	3	6	4	2	5.4	12.7
16-Sep	2	3	3	3	A	9	9	20	6	6	9	2	4	2	42	8	2	4	4	3	4	3	4	3	6.7	41.9
17-Sep	2	1	2	3	A	8	6	9	4	3	2	1	2	3	5	1	3	2	1	2	2	2	3	1	3.0	8.6
18-Sep	2	1	1	1	A	7	3	3	2	2	2	1	6	5	8	1	1	1	3	2	2	3	3	2	2.6	8.1
19-Sep	3	2	1	1	A	8	5	7	11	8	4	11	9	1	2	6	5	2	4	4	2	4	12	6	5.1	12.1
20-Sep	3	11	4	3	A	8	5	5	5	6	7	2	38	14	2	4	8	1	3	6	5	2	2	5	6.5	38.0
21-Sep	7	9	5	8	A	12	7	7	33	8	4	3	2	1	1	1	1	2	5	2	6	4	4	11	6.2	32.6
22-Sep	7	4	3	2	A	12	12	12	10	9	5	3	3	2	2	1	3	4	6	5	4	8	6	5	5.5	12.3
23-Sep	10	18	8	8	A	15	18	12	18	20	7	6	46	27	2	3	2	3	3	2	1	2	2	1	10.3	46.0
24-Sep	1	1	1	1	A	6	3	2	2	2	2	2	1	7	1	1	2	3	3	3	4	6	8	4	2.8	7.8
25-Sep	3	5	6	7	A	9	5	5	6	5	5	3	15	2	2	2	1	1	2	2	3	3	7	4	4.6	14.6
26-Sep	4	3	4	3	A	8	8	12	11	8	6	5	3	1	1	2	3	8	5	3	1	2	1	1	4.5	12.4
27-Sep	1	2	1	1	A	6	5	3	2	2	3	3	2	3	2	1	1	2	4	3	3	2	3	2	2.5	5.6
28-Sep	4	3	3	4	A	9	14	18	11	18	20	7	13	32	10	20	11	15	51	6	5	7	8	2	12.6	51.4
29-Sep	1	6	11	26	A	19	42	50	39	57	21	10	9	9	6	2	2	4	6	5	8	5	9	7	15.4	57.2
30-Sep	3	3	4	12	A	13	6	15	8	6	3	2	2	4	4	4	3	3	4	2	2	25	1	1	5.7	25.1
	2.9	3.6	3.6	4.4	--	9.4	9.0	10.7	10.3	7.6	5.2	3.4	6.4	5.9	4.1	3.8	3.0	2.9	4.9	3.3	3.6	4.3	3.8	3.0	Diurnal Average	
	10.2	18.1	11.8	26.2	--	19.1	42.1	50.3	38.9	57.2	21.4	10.6	46.0	32.0	41.9	19.6	11.4	15.2	51.4	7.1	7.8	25.1	12.1	10.9	Diurnal Maximum	

C - Calibration

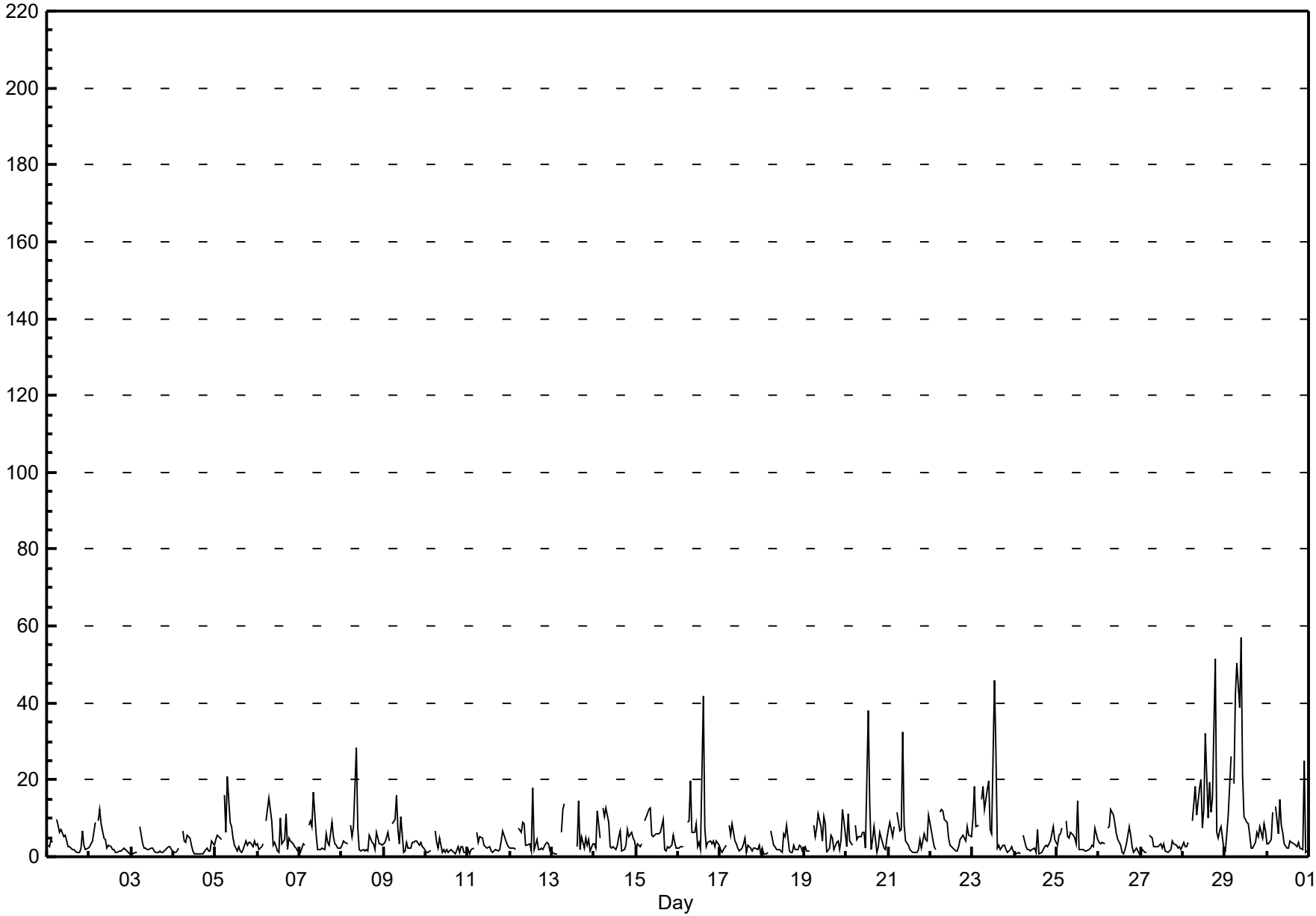
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - September 2016

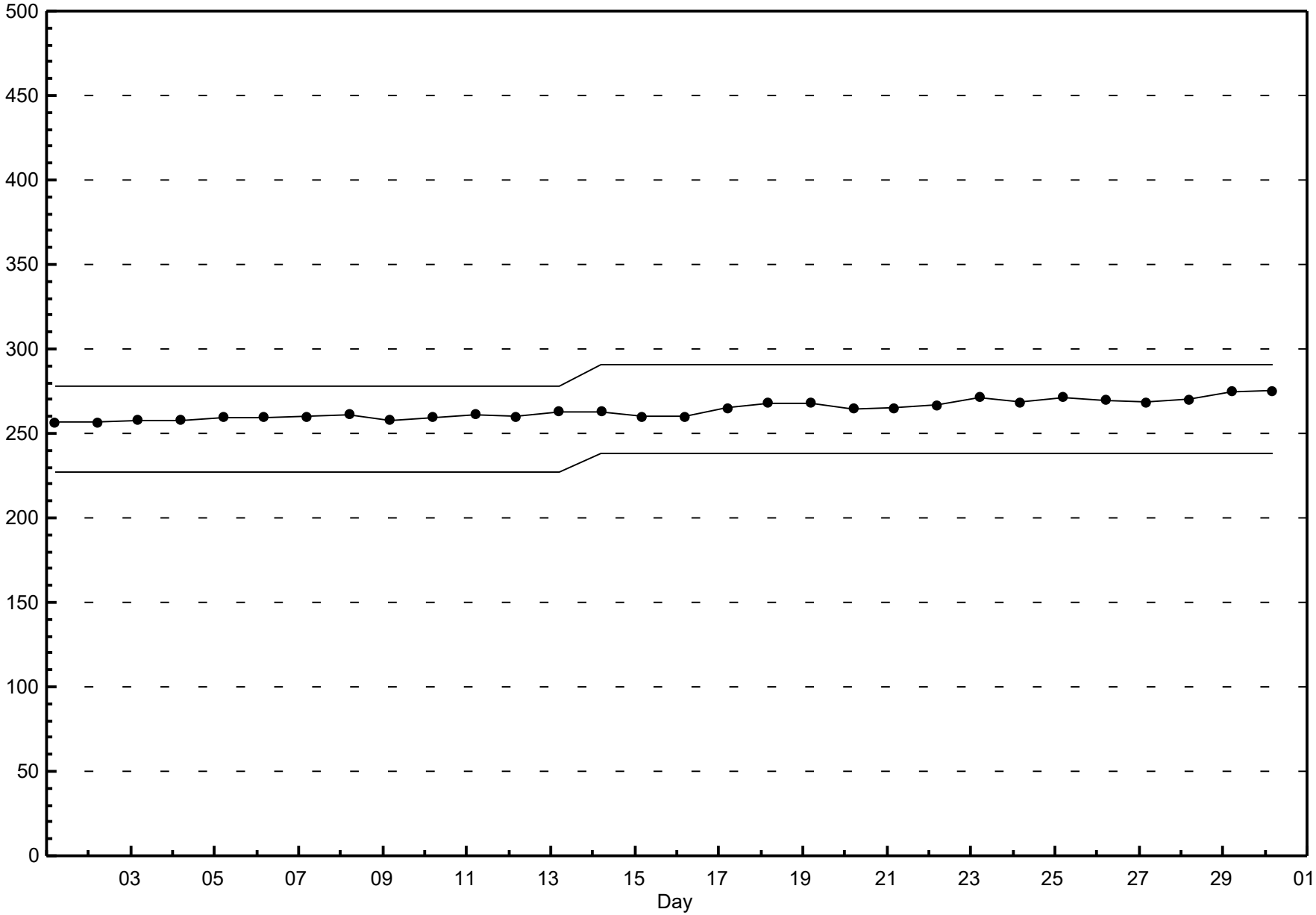


Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 37.3 ppb on Sep 29 16:00 Maximum Daily Average: 30.2 ppb on Sep 24

Minimum Value: 1 ppb on Sep 2 04:00 Minimum Daily Average: 6.2 ppb on Sep 1
Maximum Diurnal Average: 26.0 ppb at hour 15 Minimum Diurnal Average: 12.1 ppb at hour 8
Monthly Average: 19.55 ppb Percentiles: P_1 = 1.6 P_{10} = 8.3 Q_1 = 12.8 Median = 19.5 Q_3 = 25.9 P_{90} = 30.9 P_{99} = 35.9

Hours in Service:	720
Hours of Data:	688
Hours of Missing Data:	32
Hours of Calibration:	32
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-Sep	1	2	2	2	A	2	1	2	2	2	2	3	5	7	8	11	12	14	14	14	11	10	8	7	6.2	14.4
2-Sep	5	5	4	1	A	1	1	2	6	9	10	8	8	9	13	14	13	12	12	11	10	10	11	12	8.1	13.6
3-Sep	12	13	12	12	A	11	12	12	12	12	13	13	14	16	17	17	19	22	22	24	20	19	17	9	15.2	23.8
4-Sep	8	8	9	9	A	7	7	7	8	13	19	23	23	25	27	28	29	29	26	21	19	20	20	21	17.7	29.2
5-Sep	21	18	15	13	A	10	10	4	9	8	11	15	18	19	19	21	20	20	19	16	15	12	11	11	14.6	21.0
6-Sep	7	6	5	4	A	3	2	3	6	9	12	17	20	21	26	25	24	25	22	17	17	18	15	13	13.8	25.7
7-Sep	12	11	9	9	A	9	9	9	12	16	21	26	26	26	26	25	26	25	22	22	20	20	19	16	18.1	26.2
8-Sep	15	12	10	8	A	8	7	5	8	11	17	18	19	22	23	25	26	25	23	22	20	17	13	10	15.9	26.1
9-Sep	9	8	8	5	A	6	5	5	11	14	19	21	23	25	24	22	19	17	13	11	10	8	8	13	13.3	24.9
10-Sep	17	18	18	22	A	29	28	26	25	27	29	30	31	31	30	30	29	28	28	26	23	20	18	17	25.3	31.0
11-Sep	15	15	13	12	A	11	10	9	11	14	14	16	18	19	20	20	19	19	18	16	12	11	12	13	14.7	19.8
12-Sep	10	5	4	3	A	3	3	4	8	12	14	17	21	22	24	23	25	25	22	21	19	17	16	19	14.6	25.3
13-Sep	20	20	20	20	A	19	14	12	15	17	19	C	C	21	23	24	22	21	19	17	16	15	16	13	18.2	23.5
14-Sep	14	15	14	14	A	12	16	15	18	20	21	23	23	20	21	23	23	23	20	14	14	13	13	13	17.5	23.2
15-Sep	12	10	11	10	A	7	4	6	10	16	23	26	25	26	25	24	22	21	20	20	19	18	18	17	17.0	25.7
16-Sep	15	14	16	14	A	11	11	20	22	24	26	28	27	26	24	18	19	16	12	11	11	15	16	18	18.0	27.9
17-Sep	21	27	25	23	A	17	19	18	19	22	28	30	33	35	33	33	31	31	31	29	26	27	25	25	26.4	34.6
18-Sep	25	25	24	25	A	25	24	25	26	26	28	30	28	28	28	30	30	30	28	26	25	22	21	22	26.1	30.5
19-Sep	18	17	16	16	A	14	12	11	11	16	19	24	28	28	30	26	25	27	26	23	27	24	19	17	20.6	29.8
20-Sep	16	15	18	17	A	14	16	15	17	18	23	28	28	29	31	32	32	32	29	25	25	27	27	25	23.5	31.9
21-Sep	19	12	12	11	A	7	8	8	7	12	14	18	23	27	28	29	30	30	27	24	24	24	25	21	19.1	30.3
22-Sep	19	18	17	16	A	9	6	7	10	12	16	22	25	29	33	35	36	32	28	32	33	26	28	26	22.5	35.6
23-Sep	19	15	13	17	A	13	10	9	11	12	17	21	27	32	35	31	32	31	31	33	37	34	33	34	23.8	36.8
24-Sep	34	30	28	29	A	30	30	30	30	31	32	33	33	34	34	33	33	33	31	29	27	25	22	24	30.2	34.1
25-Sep	25	25	22	20	A	17	19	19	16	16	19	21	25	29	29	28	30	31	29	27	25	25	21	21	23.5	31.1
26-Sep	23	23	22	21	A	16	15	12	15	18	22	26	26	28	28	26	24	23	22	23	21	19	18	25	21.6	28.0
27-Sep	35	36	34	32	A	30	28	27	29	30	31	32	32	33	32	33	32	32	30	27	26	24	25	24	30.0	35.7
28-Sep	20	21	21	21	A	19	17	16	16	16	19	25	33	35	35	36	36	34	29	34	33	32	31	32	26.7	36.5
29-Sep	32	26	16	7	A	10	3	3	4	7	15	22	32	35	36	37	37	36	34	32	28	29	27	29	23.2	37.3
30-Sep	29	29	26	23	A	22	22	19	18	21	25	23	21	19	18	18	20	18	18	18	18	19	19	18	20.9	29.3
	17.7	16.6	15.4	14.6	--	13.1	12.4	12.1	13.8	16.0	19.2	22.0	24.0	25.2	26.0	26.0	25.9	25.3	23.4	22.2	21.2	20.0	19.1	18.8	Diurnal Average	
	34.8	35.7	33.7	32.5	--	29.6	30.0	29.9	30.3	30.6	31.8	32.7	33.2	34.7	35.9	37.3	36.8	36.0	34.0	33.8	36.8	34.1	33.2	33.7	Diurnal Maximum	

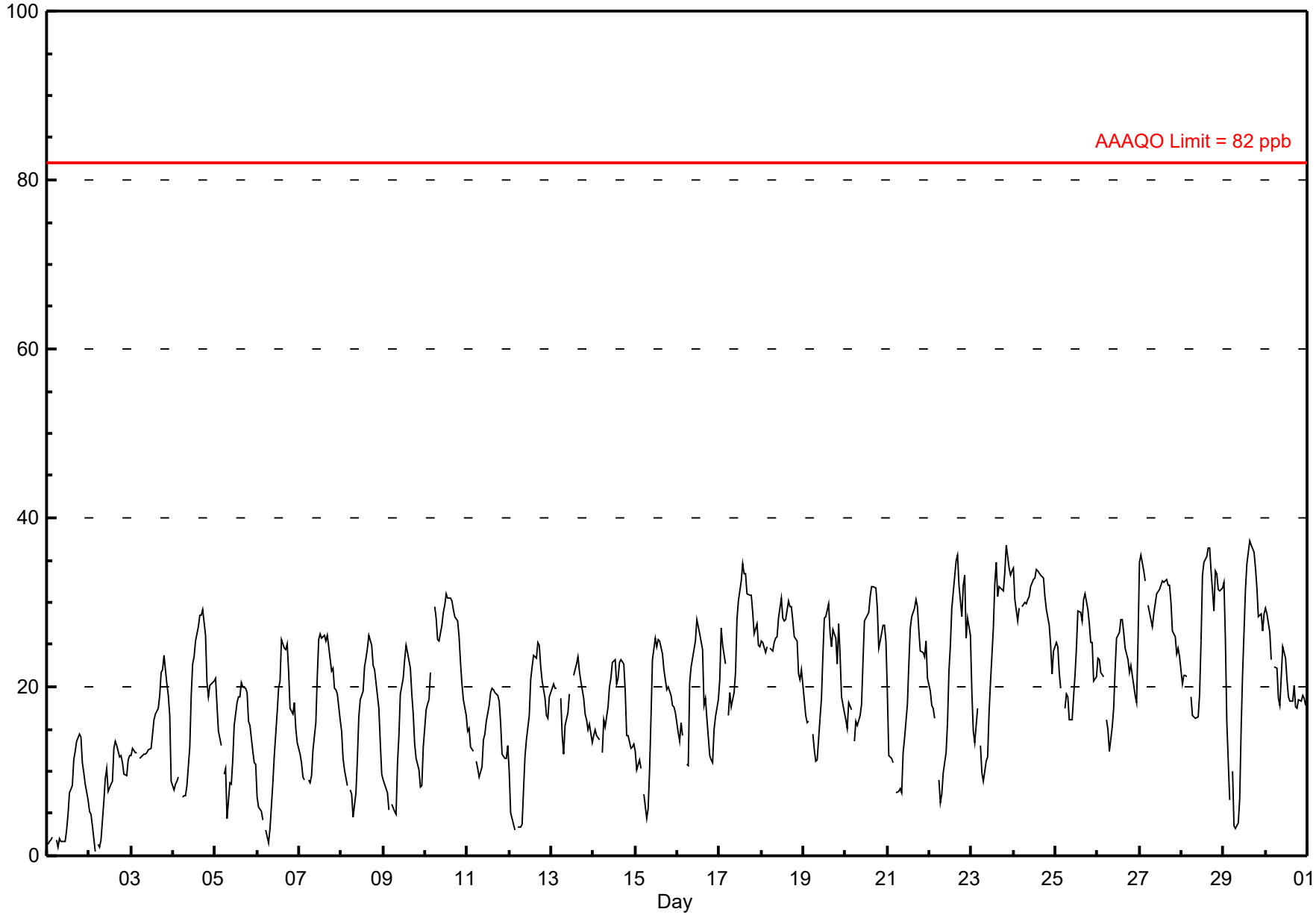
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Beaverlodge - September 2016

Maximum Value: 38.6 ppb on Sep 29 16:00

Maximum Daily Average: 31.7 ppb on Sep 24

Minimum Value: 2 ppb on Sep 1 01:00

Minimum Daily Average: 7.7 ppb on Sep 1

Maximum Diurnal Average: 27.8 ppb at hour 15

Minimum Diurnal Average: 14.7 ppb at hour 8

Monthly Average: 21.86 ppb

Percentiles: P_1 = 2.5 P_{10} = 10.0 Q_1 = 15.7 Median = 22.0 Q_3 = 28.7 P_{90} = 32.9 P_{99} = 37.8

Hours in Service:	720
Hours of Data:	688
Hours of Missing Data:	32
Hours of Calibration:	32
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-Sep	2	2	5	3	A	3	2	3	2	2	2	5	7	9	10	14	14	15	16	16	15	12	10	9	7.7	16.2
2-Sep	6	6	6	2	A	4	3	6	9	11	13	9	10	11	14	15	14	13	13	12	11	11	12	13	9.5	14.5
3-Sep	13	14	13	14	A	12	13	13	13	13	13	14	17	17	18	19	21	23	25	26	24	21	19	15	16.9	25.9
4-Sep	9	9	10	11	A	10	10	8	12	15	24	24	25	27	29	30	30	31	30	24	22	22	22	22	19.8	30.6
5-Sep	23	20	18	14	A	12	14	9	10	10	14	17	21	21	20	22	23	23	21	19	17	15	14	13	16.9	23.5
6-Sep	8	7	6	5	A	4	3	5	8	10	15	20	21	22	29	26	27	26	26	21	24	21	18	15	16.0	29.5
7-Sep	13	12	10	10	A	10	10	13	14	19	26	27	27	27	27	27	27	26	25	24	22	22	23	21	20.1	27.3
8-Sep	16	14	14	10	A	9	9	7	11	16	18	20	21	26	26	27	27	27	24	25	25	19	19	11	18.3	27.5
9-Sep	10	11	11	7	A	7	7	7	13	19	21	22	25	26	25	24	22	19	17	13	12	9	11	16	15.3	26.0
10-Sep	19	19	20	30	A	34	33	28	27	28	30	31	32	32	32	31	31	30	34	28	26	21	20	19	27.6	34.4
11-Sep	16	16	15	14	A	12	11	11	12	16	16	17	19	21	21	21	21	20	20	17	15	14	14	14	16.3	21.3
12-Sep	12	10	5	4	A	4	4	6	10	14	16	22	22	24	26	26	28	26	25	22	20	18	19	21	16.6	27.5
13-Sep	21	21	21	21	A	20	17	13	17	18	21	C	C	22	24	25	23	22	20	19	17	17	17	15	19.6	24.7
14-Sep	16	16	17	18	A	16	20	18	20	21	22	25	25	22	23	24	24	24	22	16	16	16	15	16	19.6	24.9
15-Sep	13	13	13	13	A	9	7	8	13	20	25	27	26	27	27	25	24	22	21	21	21	19	20	20	18.9	27.1
16-Sep	17	15	19	19	A	14	18	26	26	27	30	31	30	30	27	22	21	19	15	13	16	18	19	21	21.4	31.1
17-Sep	28	31	30	26	A	22	23	22	22	28	31	33	36	37	36	36	33	34	32	33	30	30	28	29	29.9	36.9
18-Sep	29	29	27	28	A	28	27	28	28	29	30	35	31	32	31	32	31	31	30	30	28	26	26	27	29.3	35.0
19-Sep	26	22	20	19	A	18	16	14	16	21	22	28	30	30	33	32	28	29	29	26	29	29	23	22	24.4	32.7
20-Sep	20	18	20	18	A	16	17	17	18	23	27	30	30	31	32	33	33	33	32	30	27	28	28	28	25.6	33.1
21-Sep	27	18	13	12	A	8	8	9	10	15	16	21	26	28	29	31	32	32	30	25	26	25	26	26	21.5	31.6
22-Sep	22	20	21	17	A	12	8	10	12	14	21	23	28	32	35	38	39	35	31	34	34	32	32	30	25.2	38.6
23-Sep	25	19	18	23	A	19	18	12	15	15	19	24	34	34	37	33	33	33	33	37	38	36	34	35	27.1	38.5
24-Sep	36	33	29	31	A	31	31	31	31	31	33	33	34	35	35	34	34	34	33	30	30	29	25	26	31.7	35.9
25-Sep	28	27	24	21	A	20	20	22	20	19	21	23	28	30	30	29	33	33	31	29	28	30	24	24	25.8	32.7
26-Sep	24	25	22	22	A	19	18	18	17	22	24	28	28	29	30	28	26	26	23	25	23	21	22	31	24.0	30.7
27-Sep	37	37	35	34	A	30	30	28	30	31	32	32	33	33	33	33	33	33	33	28	28	26	26	26	31.4	37.2
28-Sep	24	24	23	23	A	20	21	19	19	21	24	31	35	37	37	38	38	38	35	35	35	34	34	33	29.4	38.5
29-Sep	33	32	18	17	A	18	10	9	5	17	18	25	36	36	38	39	38	38	36	33	30	31	29	30	26.7	38.6
30-Sep	30	30	28	27	A	26	24	24	21	26	26	25	22	21	20	19	22	20	19	19	19	20	20	19	22.8	30.2
	20.1	19.0	17.7	17.0	--	15.6	15.0	14.7	16.0	19.1	21.6	24.3	26.1	26.8	27.8	27.7	27.7	27.2	26.0	24.3	23.6	22.4	21.6	21.5	Diurnal Average	
	36.8	37.2	34.9	34.2	--	34.3	32.5	30.7	31.2	31.3	33.2	35.0	35.6	36.9	38.0	38.6	38.6	38.5	35.8	37.2	38.5	36.0	34.5	35.3	Diurnal Maximum	

C - Calibration

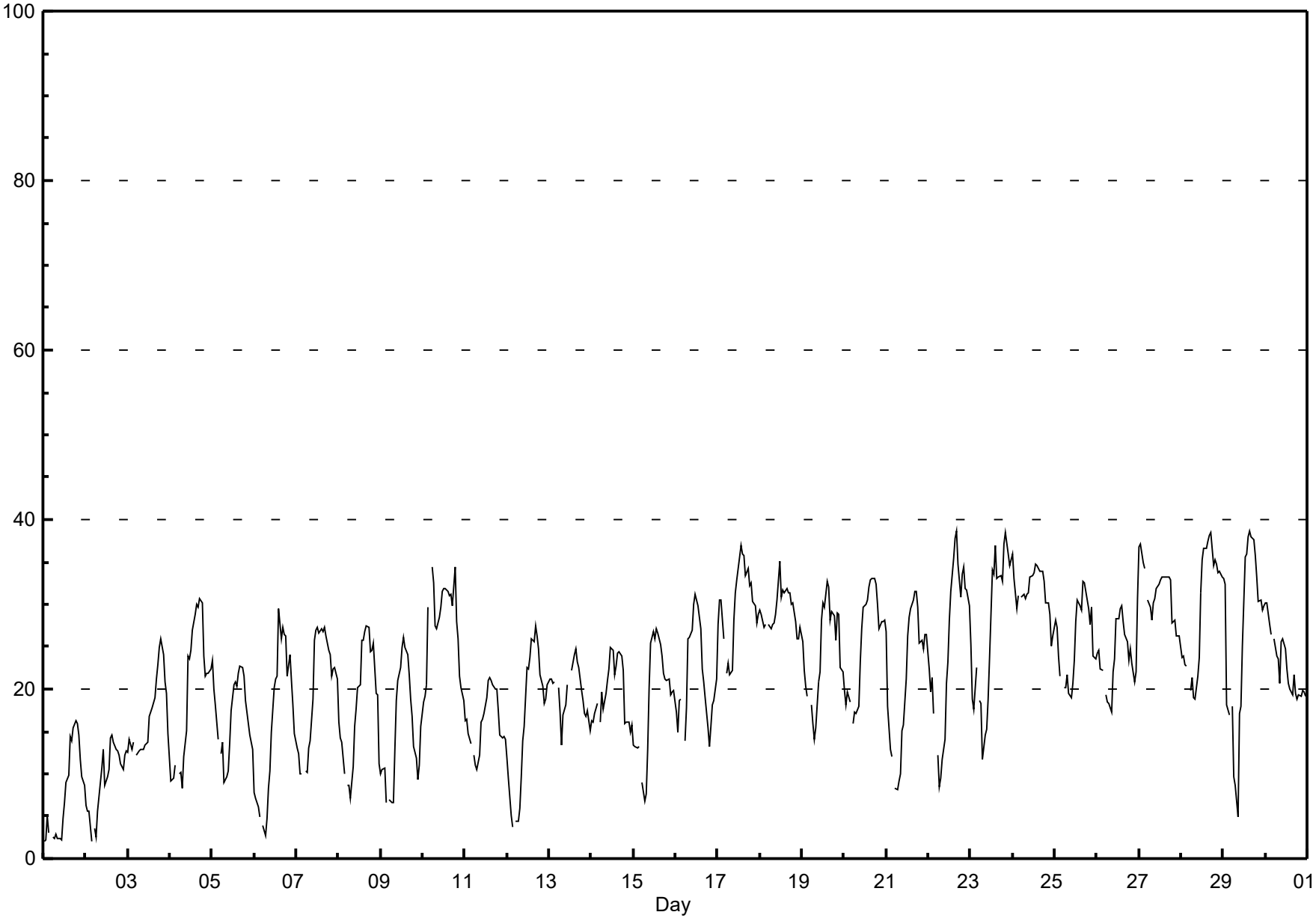
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

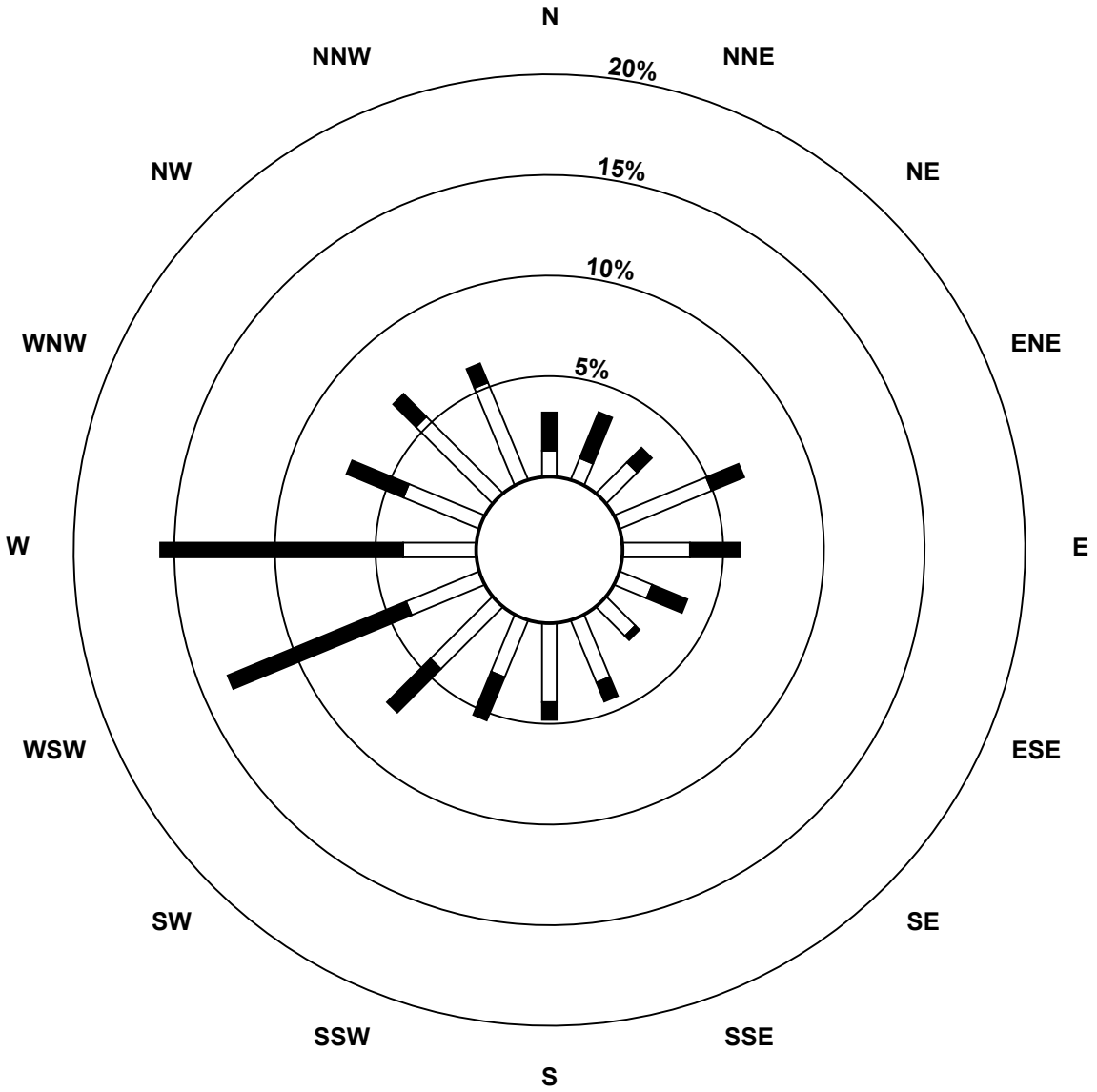
Beaverlodge - September 2016



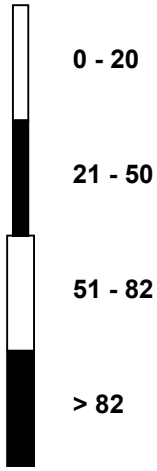
Pollutant Rose

Ozone (O_3) - ppb

Beaverlodge - September 2016



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Beaverlodge - September 2016

Maximum Value: 34.7 ppb on Sep 29 20:00

Minimum Value: 1.7 ppb on Sep 1 08:00

Percentiles: P_1 = 2.0 P_{10} = 9.4 Q_1 = 13.8 Median = 19.4 Q_3 = 24.9 P_{90} = 29.6 P_{99} = 33.5

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

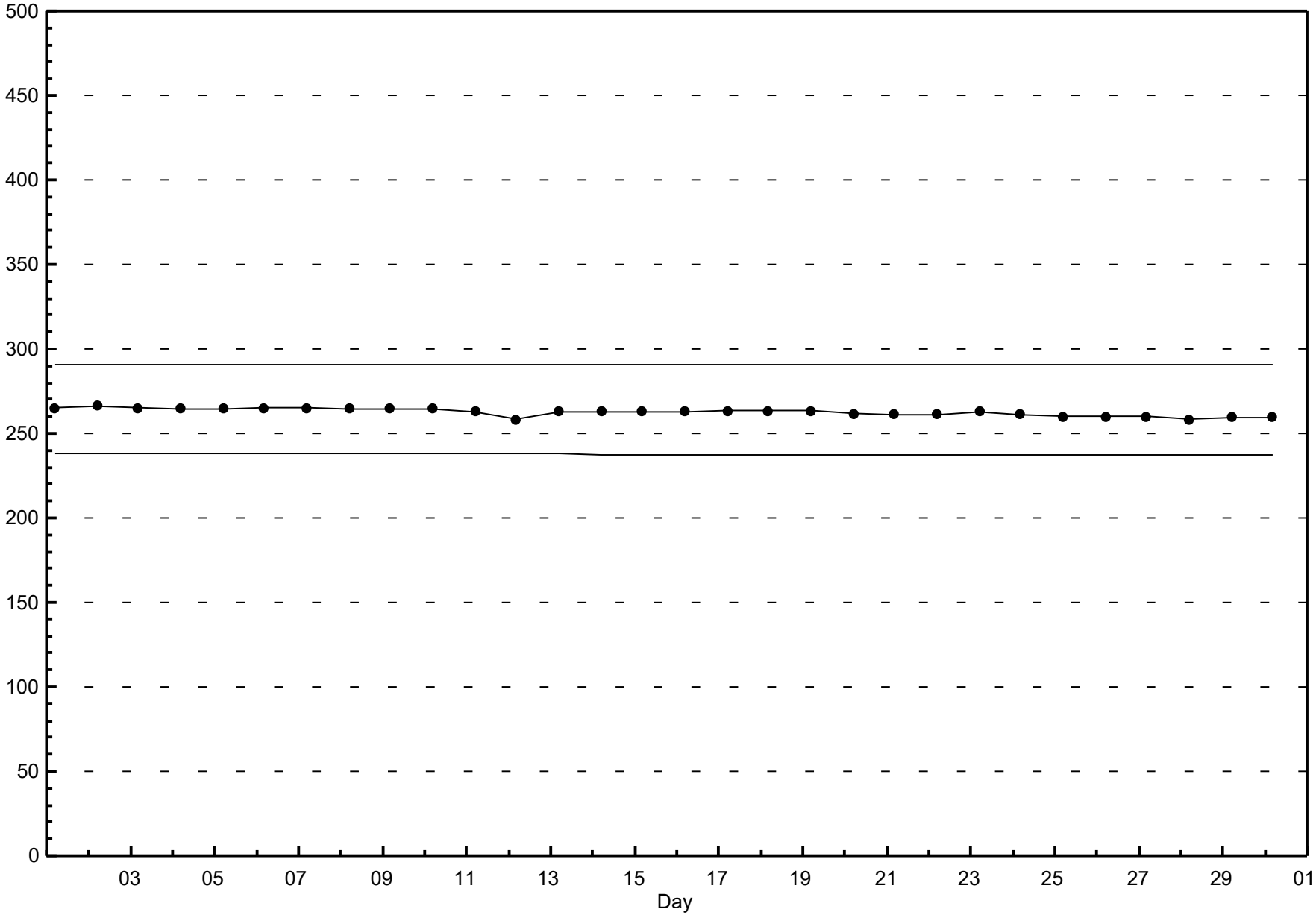
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Sep	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	5	6	8	9	11	12	12	12	11	11.9
2-Sep	10	9	8	6	6	4	3	3	3	3	4	5	6	7	8	10	10	11	11	11	12	12	11	11	11.6
3-Sep	11	11	11	11	12	12	12	12	12	12	12	12	12	13	14	14	15	16	18	19	20	20	20	19	20.0
4-Sep	18	16	14	12	11	10	8	8	8	9	10	12	13	16	18	21	23	25	26	26	26	25	24	23	26.4
5-Sep	22	21	19	18	18	17	15	13	11	10	9	10	11	12	13	15	16	18	19	19	19	18	17	16	22.1
6-Sep	14	12	10	9	8	7	5	4	4	5	6	7	9	11	14	17	19	21	22	22	22	22	20	19	22.4
7-Sep	17	16	14	13	13	11	10	10	10	11	12	15	16	18	20	22	24	25	25	25	24	23	22	21	25.2
8-Sep	20	18	17	15	14	13	11	9	8	8	9	11	12	13	15	18	20	22	23	23	23	23	21	20	23.3
9-Sep	17	15	13	11	10	8	7	7	7	8	9	12	13	15	18	20	21	21	21	19	18	16	14	13	21.3
10-Sep	12	12	13	14	15	18	21	23	24	25	27	28	28	28	29	29	30	30	30	29	28	27	25	24	29.8
11-Sep	22	20	18	17	16	14	13	12	12	11	12	12	13	14	15	16	18	18	19	19	18	17	16	15	21.9
12-Sep	14	12	10	9	8	7	6	5	4	5	7	9	10	12	15	17	20	21	22	23	23	22	21	20	22.9
13-Sep	20	19	19	19	19	19	19	18	17	17	17	16	16	17	18	20	21	22	21	21	20	19	19	17	21.5
14-Sep	16	16	15	15	14	14	14	14	15	16	17	18	19	20	20	21	22	22	22	21	20	19	18	17	22.1
15-Sep	15	14	13	12	12	11	10	9	8	9	11	13	15	17	20	22	23	24	24	23	22	21	20	19	24.0
16-Sep	18	17	17	16	16	15	14	14	15	17	18	20	21	23	25	24	24	23	21	19	17	16	15	15	24.8
17-Sep	15	17	18	20	21	21	21	21	21	20	21	22	23	25	27	29	31	32	32	32	31	30	29	28	32.1
18-Sep	27	27	26	25	25	25	25	25	25	25	26	26	27	27	27	28	29	29	29	28	28	27	26	25	29.0
19-Sep	24	22	21	20	19	18	17	15	14	14	14	15	17	19	21	23	25	26	27	27	27	26	25	23	26.7
20-Sep	22	21	20	19	18	17	16	16	16	16	17	19	20	22	24	26	28	29	30	30	29	29	29	28	30.1
21-Sep	26	24	22	20	19	16	13	11	9	9	10	11	12	15	17	20	23	25	26	27	27	27	27	26	27.4
22-Sep	24	23	22	21	20	18	15	13	12	11	11	12	13	16	19	23	26	28	30	31	32	32	31	30	32.3
23-Sep	28	26	24	22	21	19	16	14	13	12	13	13	15	17	20	23	26	28	30	32	33	33	33	33	33.2
24-Sep	34	33	33	32	32	31	31	30	30	30	30	31	31	31	32	32	33	33	33	32	32	31	29	28	33.5
25-Sep	27	26	25	24	23	22	22	21	20	18	18	18	19	20	22	23	25	26	28	29	29	28	27	26	28.6
26-Sep	25	24	23	23	22	21	20	19	18	17	17	18	19	20	22	24	25	26	26	25	24	23	22	22	25.5
27-Sep	23	25	26	28	28	30	31	32	31	30	30	29	30	30	31	31	32	32	32	31	31	29	28	27	32.1
28-Sep	26	25	23	23	22	22	20	19	19	18	18	18	20	22	25	27	30	32	33	34	34	34	33	33	34.1
29-Sep	32	31	29	26	25	22	18	14	10	7	7	9	12	15	19	23	27	31	33	35	34	34	32	31	34.7
30-Sep	30	30	29	27	27	26	26	24	23	22	21	21	21	21	20	20	21	20	19	19	18	18	18	18	30.4
Diurnal Maximums	33.5	33.4	32.9	32.4	31.8	31.1	31.4	31.6	30.7	29.9	30.2	30.7	31.0	31.5	32.0	32.4	32.7	33.0	33.5	34.7	34.3	33.7	33.2	33.2	

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - September 2016

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

Maximum Value: 10.9 $\mu g/m^3$ on Sep 21 22:00

Maximum Daily Average: 7.6 $\mu g/m^3$ on Sep 28

Minimum Value: 0 $\mu g/m^3$ on Sep 1 12:00

Maximum Diurnal Average: 3.9 $\mu g/m^3$ at hour 22

Monthly Average: 3.02 $\mu g/m^3$

Minimum Daily Average: 0.9 $\mu g/m^3$ on Sep 1

Minimum Diurnal Average: 2.2 $\mu g/m^3$ at hour 15

Percentiles: $P_1 = 0.6$ $P_{10} = 1.0$ $Q_1 = 1.4$ Median = 2.0 $Q_3 = 3.9$ $P_{90} = 7.0$ $P_{99} = 9.7$

Hours in Service:	720
Hours of Data:	713
Hours of Missing Data:	7
Hours of Calibration:	6
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-Sep	1	1	N	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5
2-Sep	1	1	1	1	2	1	2	2	2	3	6	8	6	3	2	2	2	2	2	2	2	1	2	2	2.4	8.4
3-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	2	1.5	2.7
4-Sep	2	2	3	3	3	2	3	3	3	2	2	2	2	2	2	2	2	2	2	3	3	4	5	5	2.7	4.6
5-Sep	3	5	6	6	6	6	5	5	4	4	2	2	2	2	1	1	1	1	1	1	1	2	2	2	3.0	6.4
6-Sep	2	2	2	2	1	1	3	2	2	1	1	1	2	2	1	2	2	2	2	2	2	2	1	1	1.6	2.5
7-Sep	1	2	2	2	2	3	3	2	1	1	1	1	1	1	1	1	1	2	2	2	1	2	1	1	1.6	2.8
8-Sep	2	2	2	1	1	1	1	2	2	1	1	2	2	2	2	2	1	2	2	2	2	2	2	2	1.7	2.3
9-Sep	2	2	2	2	2	2	2	5	2	2	2	2	2	1	1	1	1	1	2	2	1	1	1	1	1.6	4.8
10-Sep	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	1	1	2	1	1	1.4	2.0
11-Sep	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	2	1	1	2	2	2	3	2	1.3	2.5
12-Sep	2	1	1	1	1	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	2	3	1.5	2.9
13-Sep	3	3	2	2	2	2	3	3	C	C	C	C	C	C	2	2	2	2	3	4	5	4	3	4	2.9	5.1
14-Sep	3	3	3	3	3	4	3	3	2	2	2	2	2	2	2	2	4	1	2	7	7	5	4	4	3.1	7.4
15-Sep	2	3	3	3	2	2	3	4	4	4	3	2	2	2	3	4	5	5	5	9	5	5	6	5	3.8	9.5
16-Sep	5	4	3	3	4	3	3	2	2	2	3	2	2	1	2	1	1	1	1	1	1	2	2	2	2.4	5.2
17-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5
18-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.2	2.4
19-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	4	3	3	4	3	1.7	4.1
20-Sep	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	3	5	6	4	3	3	2.9	6.4
21-Sep	6	8	7	6	5	5	4	5	6	6	5	4	3	3	3	3	3	3	4	7	7	11	6	6	5.2	10.9
22-Sep	5	9	9	10	10	10	9	7	7	7	7	8	8	7	5	4	4	5	7	6	5	10	7	6	7.1	10.4
23-Sep	8	11	10	9	8	8	8	7	8	8	6	5	4	2	2	2	2	5	5	5	7	6	4	3	5.9	10.7
24-Sep	2	2	2	2	2	2	2	1	2	3	2	2	2	2	2	2	3	5	3	3	4	6	6	4	2.7	6.0
25-Sep	3	3	3	3	3	3	3	2	3	3	3	3	3	2	1	1	2	1	1	2	2	3	2	2	2.4	3.4
26-Sep	1	1	1	1	1	1	1	1	1	2	2	2	2	1	2	2	3	7	9	4	6	4	4	1	2.5	9.4
27-Sep	2	2	2	2	2	2	2	2	2	2	2	2	2	4	6	7	6	7	8	9	9	10	10	10	4.6	10.2
28-Sep	9	8	9	9	9	8	8	8	7	6	6	5	5	5	5	6	8	8	10	9	9	8	7	7	7.6	9.5
29-Sep	6	6	9	10	9	9	8	8	9	9	8	7	6	6	5	5	5	6	7	8	9	9	8	8	7.5	10.4
30-Sep	9	9	9	8	7	7	6	6	8	7	5	5	4	4	4	3	2	1	1	1	1	2	2	2	4.7	9.1
	3.0	3.3	3.5	3.3	3.2	3.1	3.1	3.0	3.0	3.0	2.8	2.7	2.5	2.2	2.2	2.3	2.5	2.8	3.2	3.6	3.6	3.9	3.4	3.1	Diurnal Average	
	9.2	10.7	9.7	10.4	10.4	9.8	8.5	7.9	9.1	9.1	8.3	8.4	8.0	7.4	5.8	6.6	8.5	8.4	9.5	9.5	8.8	10.9	9.6	9.6	Diurnal Maximum	

C - Calibration N - Not Valid

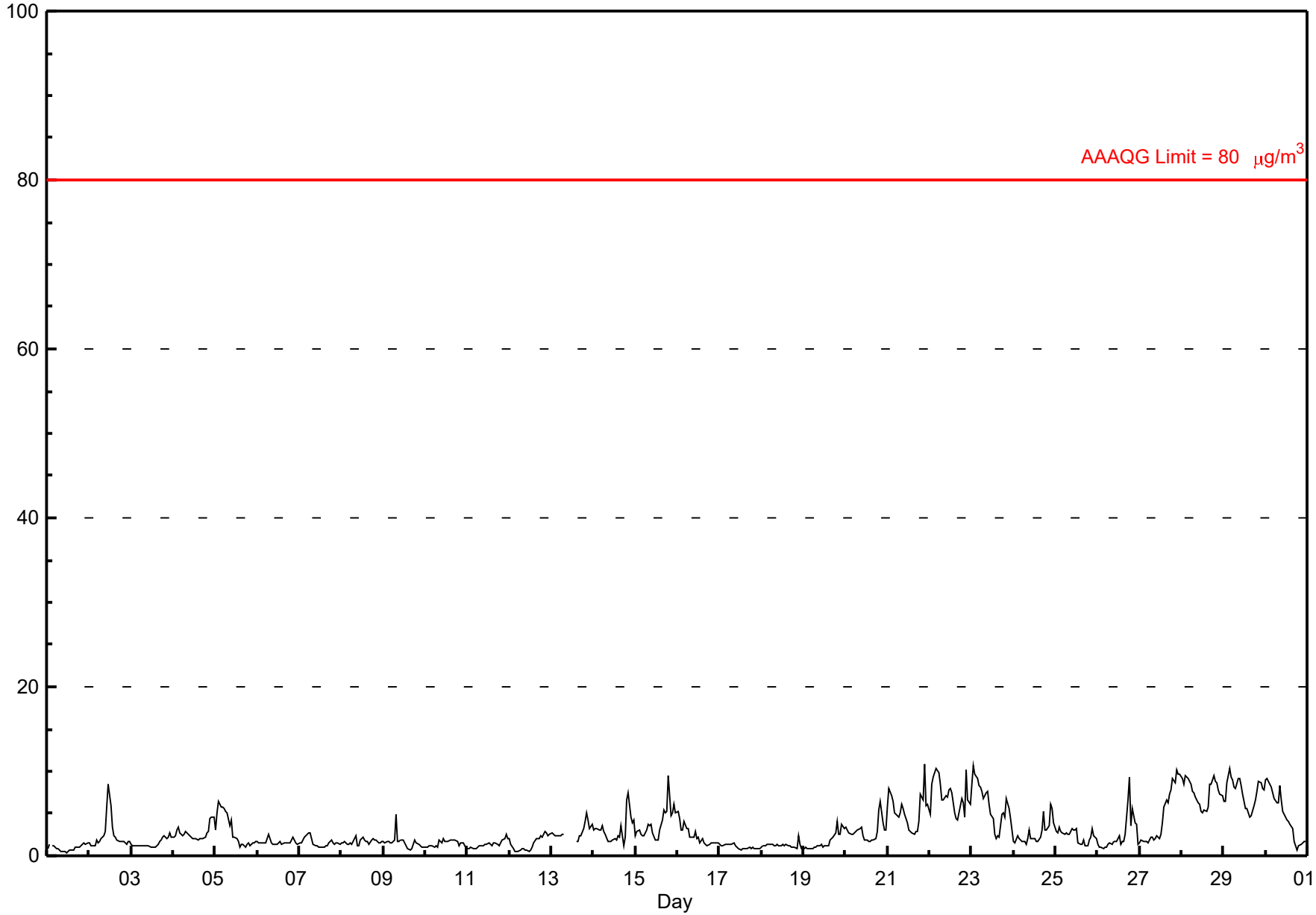
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - September 2016

Maximum Value: 22.8 $\mu g/m^3$ on Sep 26 21:00

Maximum Daily Average: 9.4 $\mu g/m^3$ on Sep 28

Minimum Value: 1 $\mu g/m^3$ on Sep 1 12:00

Minimum Daily Average: 1.5 $\mu g/m^3$ on Sep 1

Maximum Diurnal Average: 5.9 $\mu g/m^3$ at hour 21

Minimum Diurnal Average: 3.4 $\mu g/m^3$ at hour 15

Monthly Average: 4.42 $\mu g/m^3$

Percentiles: P_1 = 1.0 P_{10} = 1.5 Q_1 = 2.0 Median = 3.0 Q_3 = 6.1 P_{90} = 9.8 P_{99} = 14.8

Hours in Service:	720
Hours of Data:	713
Hours of Missing Data:	7
Hours of Calibration:	6
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-Sep	2	2	N	2	2	2	1	2	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	1.5	2.2
2-Sep	2	2	2	2	3	2	2	3	3	4	11	11	10	5	3	3	2	2	2	3	2	2	3	2	3.6	10.9
3-Sep	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	3	3	3	3	3	3	2.2	3.4
4-Sep	3	3	5	4	3	3	3	3	3	3	3	3	3	2	2	3	3	3	3	3	4	6	6	7	3.5	6.6
5-Sep	4	8	8	7	7	7	6	6	5	5	3	3	3	3	2	2	2	2	2	2	2	3	2	2	4.0	8.1
6-Sep	2	2	2	2	2	2	5	3	2	2	2	2	2	2	2	2	3	2	2	2	3	2	2	2	2.3	5.3
7-Sep	2	2	2	3	3	4	4	3	2	2	1	2	1	2	2	2	2	3	5	3	2	2	2	2	2.3	4.9
8-Sep	2	2	3	2	2	2	2	3	9	2	3	3	3	3	3	4	2	4	4	3	3	2	2	2	2.9	9.3
9-Sep	2	2	2	2	2	2	2	11	2	2	3	2	2	2	1	1	1	2	3	2	2	2	2	1	2.4	11.4
10-Sep	1	1	2	2	2	2	2	2	4	2	3	2	2	3	2	2	3	2	2	2	2	3	3	1	2.2	4.3
11-Sep	1	1	2	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2.1	3.5
12-Sep	2	2	2	1	1	1	1	1	1	1	1	1	1	4	2	5	3	3	4	3	4	4	3	3	2.3	5.1
13-Sep	3	3	3	3	3	3	3	3	C	C	C	C	C	C	3	3	6	7	6	8	14	8	4	4	4.9	14.3
14-Sep	4	4	4	4	4	6	5	5	2	3	2	3	8	3	4	5	13	2	7	10	12	9	5	7	5.5	12.5
15-Sep	3	3	4	3	3	3	4	4	4	7	4	4	3	3	6	7	18	11	10	20	7	6	8	6	6.3	19.7
16-Sep	6	6	5	8	5	4	5	4	3	4	5	8	7	4	5	3	2	2	2	2	2	2	2	2	4.0	8.4
17-Sep	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1.5	2.0
18-Sep	2	2	2	2	2	2	2	2	2	2	2	2	8	2	2	2	2	2	2	1	1	7	3	1	2.3	8.0
19-Sep	1	1	1	1	1	1	1	1	2	2	2	2	3	2	2	3	3	3	4	5	4	3	7	4	2.6	7.3
20-Sep	4	4	3	3	3	3	3	4	4	5	5	3	3	3	3	2	2	3	6	11	11	5	4	4	4.2	11.1
21-Sep	11	14	8	8	6	6	5	6	7	7	6	7	5	4	4	3	4	6	7	12	11	12	8	8	7.2	14.5
22-Sep	8	10	10	11	11	11	9	8	8	8	8	9	9	9	6	5	10	7	8	8	7	14	8	7	8.7	14.0
23-Sep	12	15	11	11	10	9	11	8	9	10	7	6	10	6	3	5	6	16	12	12	13	7	6	4	9.0	15.8
24-Sep	3	2	3	3	6	2	2	2	4	6	4	4	4	3	5	5	9	11	5	4	5	8	8	5	4.6	11.3
25-Sep	5	3	4	3	3	3	3	3	3	4	4	4	12	2	2	3	4	3	5	4	3	10	3	3	4.0	12.4
26-Sep	3	1	2	1	1	2	2	2	3	2	2	7	12	2	4	5	8	16	15	12	23	15	12	2	6.4	22.8
27-Sep	2	2	2	2	3	2	4	4	3	3	3	3	4	6	7	8	9	8	9	11	10	11	10	10	5.7	11.0
28-Sep	11	9	10	10	10	10	8	8	8	7	7	6	6	12	8	10	17	12	13	10	10	9	8	8	9.4	16.9
29-Sep	7	8	10	12	12	10	10	10	10	10	11	11	7	7	6	5	6	13	7	9	10	9	9	8	9.1	12.9
30-Sep	10	10	9	10	9	8	7	7	11	8	6	5	5	5	4	4	2	2	1	2	2	2	2	2	5.6	11.4
	4.1	4.3	4.2	4.2	4.1	3.9	4.0	4.1	4.2	4.1	3.9	4.0	4.8	3.6	3.4	3.7	4.9	5.2	5.1	5.7	5.9	5.7	4.7	4.0	Diurnal Average	
	12.0	14.8	11.0	11.7	11.5	10.8	10.8	11.4	11.4	10.2	10.8	11.4	12.4	12.4	7.8	10.0	18.1	16.1	15.2	19.7	22.8	14.8	11.8	10.5	Diurnal Maximum	

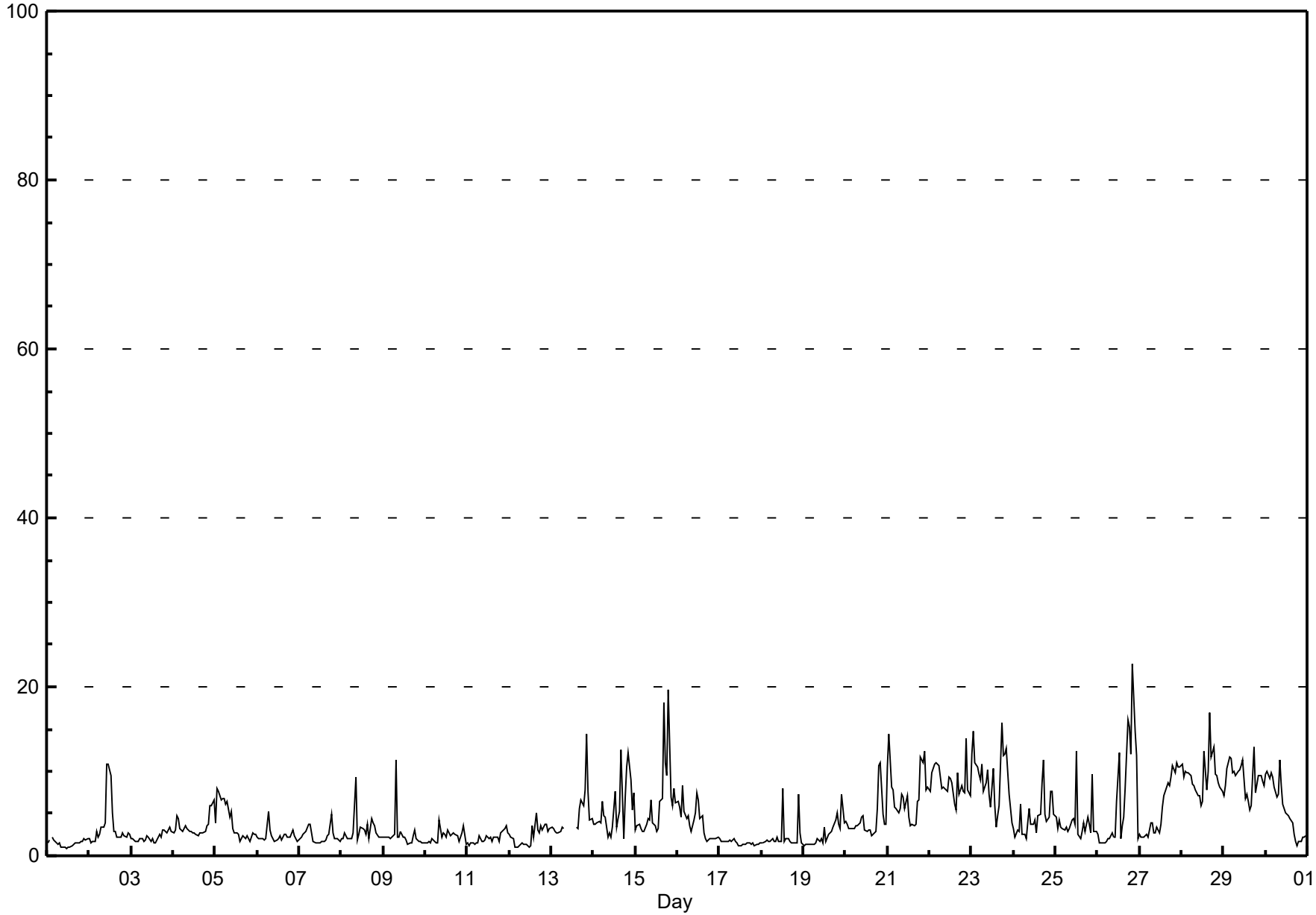
C - Calibration N - Not Valid

Peace Airshed Zone Association

Hourly Maximums

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

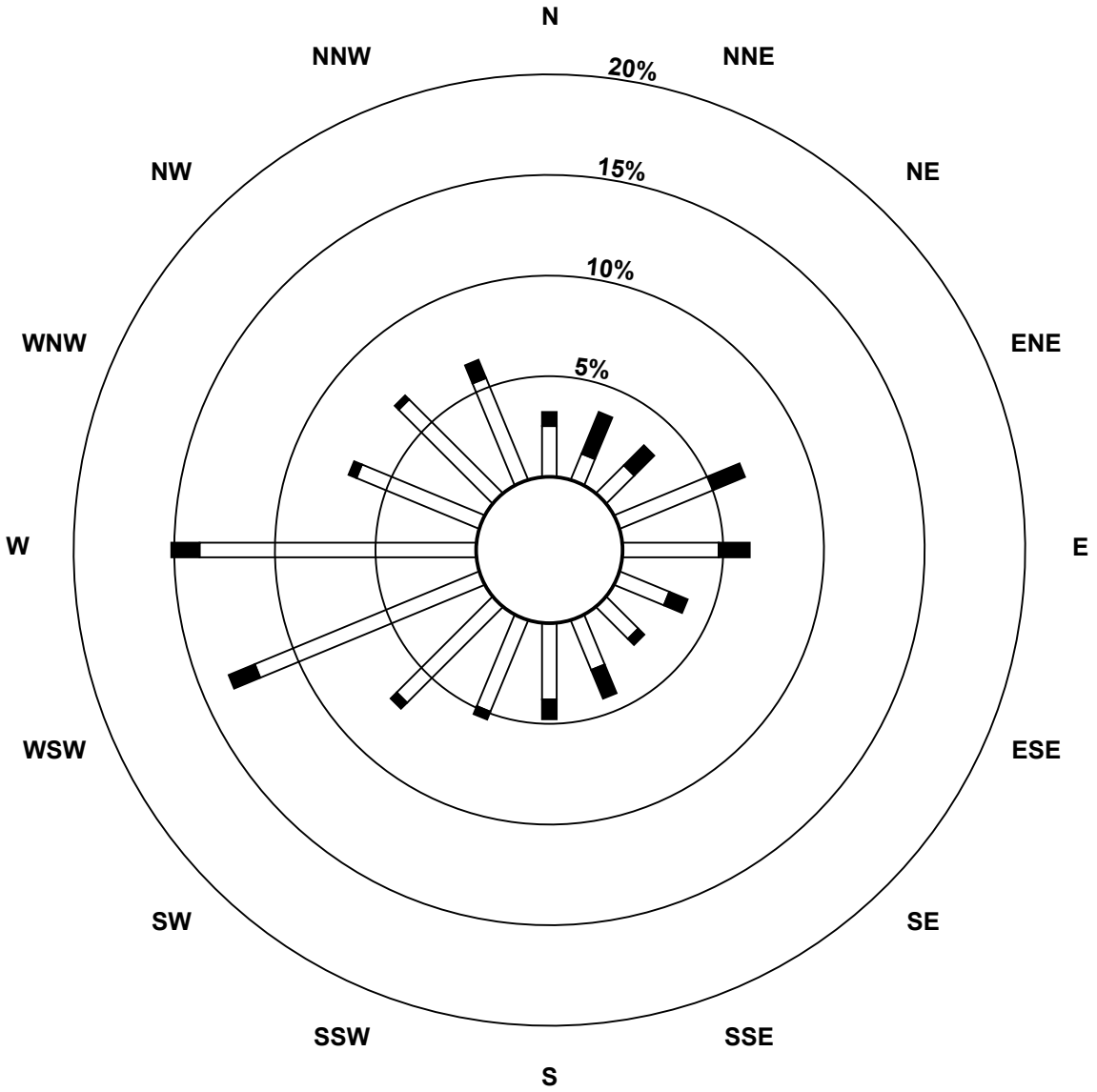
Beaverlodge - September 2016



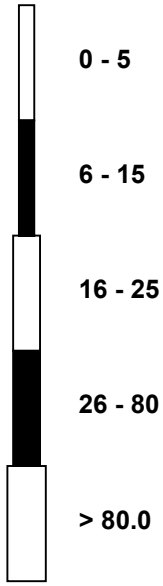
Pollutant Rose

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

Beaverlodge - September 2016



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



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - °C

Beaverlodge - September 2016

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

Maximum Value: 23.6 °C on Sep 13 15:00

Maximum Daily Average: 16.1 °C on Sep 14

Minimum Value: -2 °C on Sep 29 08:00

Minimum Daily Average: 4.9 °C on Sep 3

Maximum Diurnal Average: 14.8 °C at hour 15

Minimum Diurnal Average: 5.6 °C at hour 7

Monthly Average: 10.05 °C

Percentiles: P_1 = 0.1 P_{10} = 4.2 Q_1 = 6.3 Median = 9.9 Q_3 = 13.2 P_{90} = 15.9 P_{99} = 22.4

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

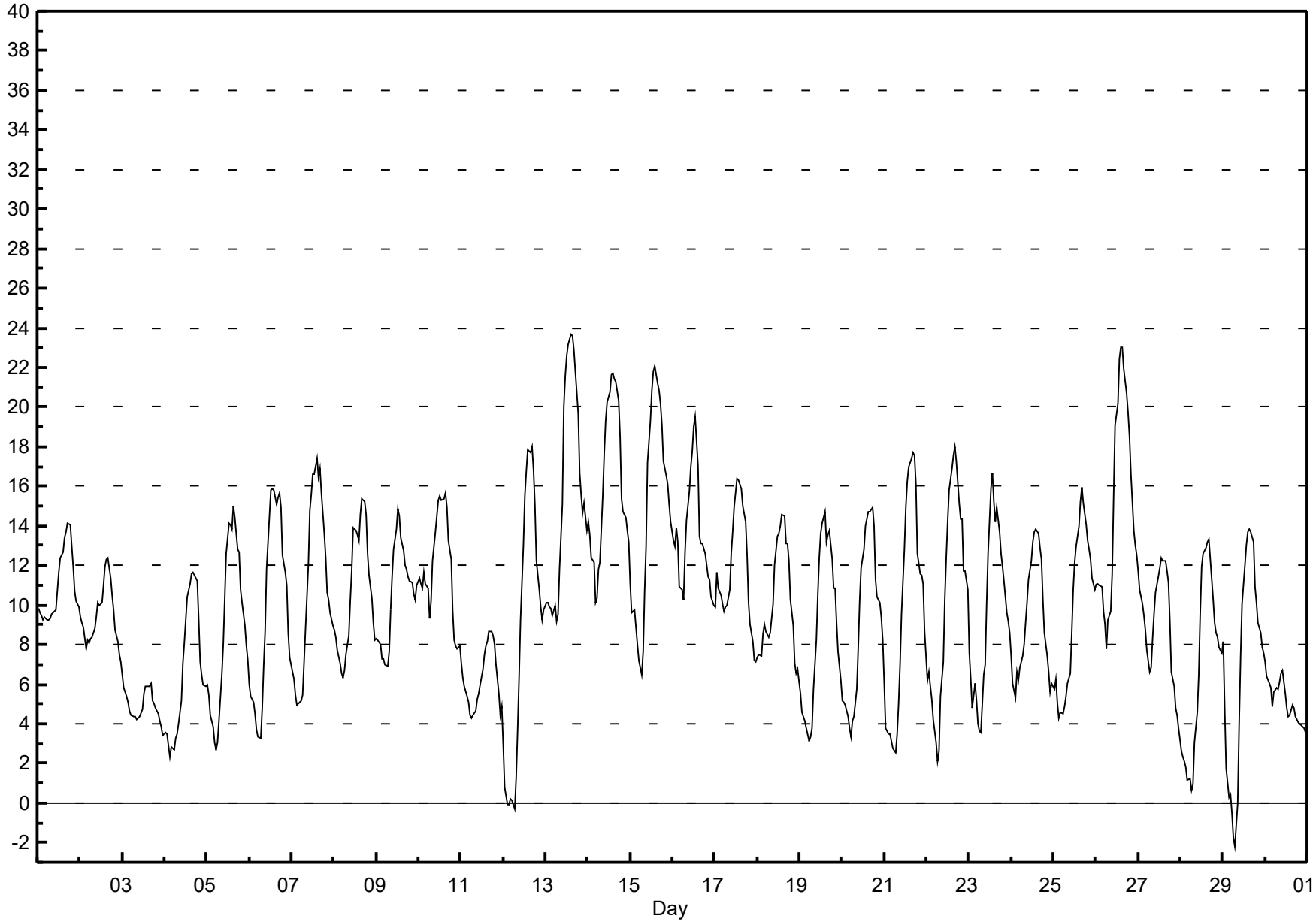
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	10	10	9	9	9	9	9	9	10	10	10	11	12	12	13	13	14	14	14	13	12	11	10	10	10.9	14.2
2-Sep	9	9	9	8	8	8	8	8	9	9	10	10	10	11	12	12	12	11	11	10	9	8	7	7	9.5	12.4
3-Sep	6	6	5	5	5	4	4	4	4	4	4	5	6	6	6	6	6	5	5	5	4	4	4	3	4.9	6.5
4-Sep	4	3	3	2	3	3	3	3	4	5	7	8	9	10	11	12	12	12	11	9	7	6	6	6	6.7	11.7
5-Sep	6	5	4	4	3	3	3	4	6	8	10	13	14	14	14	15	14	13	13	11	10	9	8	7	8.8	15.0
6-Sep	6	5	5	5	4	3	3	5	7	9	12	14	16	16	16	15	15	16	15	13	12	11	9	7	9.9	15.9
7-Sep	7	6	5	5	5	5	5	7	9	12	15	16	17	17	17	16	17	16	14	12	11	10	10	9	10.9	17.4
8-Sep	9	8	8	7	7	6	7	8	8	10	12	14	14	14	13	15	15	15	15	13	11	10	9	8	10.6	15.4
9-Sep	8	8	8	7	7	7	7	8	10	11	13	14	15	14	13	13	12	12	11	11	11	11	10	11	10.6	14.8
10-Sep	11	11	11	12	11	11	9	10	12	14	14	15	16	15	15	16	15	13	12	10	8	8	8	8	11.9	15.7
11-Sep	7	6	6	5	5	4	4	4	5	5	6	6	7	7	8	8	9	9	8	8	7	6	4	5	6.2	8.6
12-Sep	3	1	0	0	0	0	0	1	4	6	9	13	15	17	18	18	18	17	15	12	11	10	9	10	8.6	18.0
13-Sep	10	10	10	10	9	10	9	10	12	15	20	22	23	23	24	24	23	22	20	17	16	15	15	14	15.8	23.6
14-Sep	14	14	12	12	10	10	12	12	16	18	19	20	21	22	22	21	21	20	18	15	15	14	14	13	16.1	21.7
15-Sep	11	10	10	9	8	7	6	8	11	13	17	19	21	22	22	21	21	20	19	17	17	16	15	14	14.7	22.1
16-Sep	13	13	14	13	11	11	10	13	14	16	17	18	19	20	17	13	13	13	13	12	11	11	10	10	13.6	19.6
17-Sep	10	12	11	10	10	10	10	10	11	13	14	15	16	16	16	16	15	14	13	10	9	8	7	7	11.8	16.4
18-Sep	7	8	7	9	9	9	8	9	9	10	12	13	14	14	15	15	13	13	12	10	9	7	7	7	10.2	14.5
19-Sep	6	5	4	4	4	3	3	4	6	8	11	12	14	14	15	13	14	14	12	11	11	9	8	6	8.7	14.7
20-Sep	5	5	5	4	4	3	4	4	6	8	10	12	13	14	14	15	15	15	14	11	10	10	9	8	9.1	14.9
21-Sep	6	4	3	3	3	3	3	4	5	7	10	13	15	16	17	17	18	18	16	13	12	12	11	9	9.8	17.7
22-Sep	6	7	6	5	4	3	2	3	5	7	10	12	14	16	17	18	18	17	15	14	14	12	12	11	10.4	18.0
23-Sep	8	6	5	6	5	4	4	4	6	7	10	13	16	17	15	14	15	14	13	12	11	10	9	9	9.6	16.7
24-Sep	7	6	5	7	6	7	7	8	9	10	11	12	13	14	14	14	13	12	10	9	7	7	6	6	9.2	13.9
25-Sep	6	6	5	4	5	5	5	5	6	7	9	11	12	13	14	15	16	15	14	13	13	12	11	11	9.7	16.0
26-Sep	11	11	11	11	10	9	8	9	10	12	15	19	20	22	23	23	22	21	20	19	17	14	13	13	15.0	23.0
27-Sep	12	11	10	9	9	8	7	7	8	10	11	11	12	12	12	12	12	11	9	7	6	5	4	4	9.1	12.3
28-Sep	3	2	2	2	1	1	1	1	3	5	6	10	12	13	13	13	13	12	10	9	9	8	8	8	6.8	13.3
29-Sep	8	5	2	0	0	-1	-2	-2	0	4	7	10	12	13	14	14	14	13	11	10	9	9	8	8	6.9	13.8
30-Sep	7	6	6	6	5	6	6	6	6	7	7	6	5	4	4	5	5	4	4	4	4	4	4	4	5.1	7.1
	7.9	7.3	6.8	6.5	6.0	5.7	5.6	6.2	7.7	9.3	11.3	12.9	14.0	14.6	14.8	14.7	14.6	14.0	12.9	11.3	10.4	9.5	8.8	8.4	Diurnal Average	
	14.2	13.6	13.9	13.1	11.1	10.9	11.8	12.6	15.5	17.7	20.0	21.6	22.6	23.2	23.6	23.6	22.9	21.8	19.8	18.5	16.6	16.1	15.1	14.2	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - September 2016

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

Maximum Value: 100.0 % on Sep 1 01:00 Maximum Daily Average: 91.8 % on Sep 1

Minimum Value: 29 % on Sep 13 16:00 Minimum Daily Average: 50.9 % on Sep 13

Maximum Diurnal Average: 86.5 % at hour 7 Minimum Diurnal Average: 50.2 % at hour 15

Monthly Average: 69.34 % Percentiles: P_1 = 31.9 P_{10} = 41.8 Q_1 = 54.5 Median = 69.9 Q_3 = 86.3 P_{90} = 95.8 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

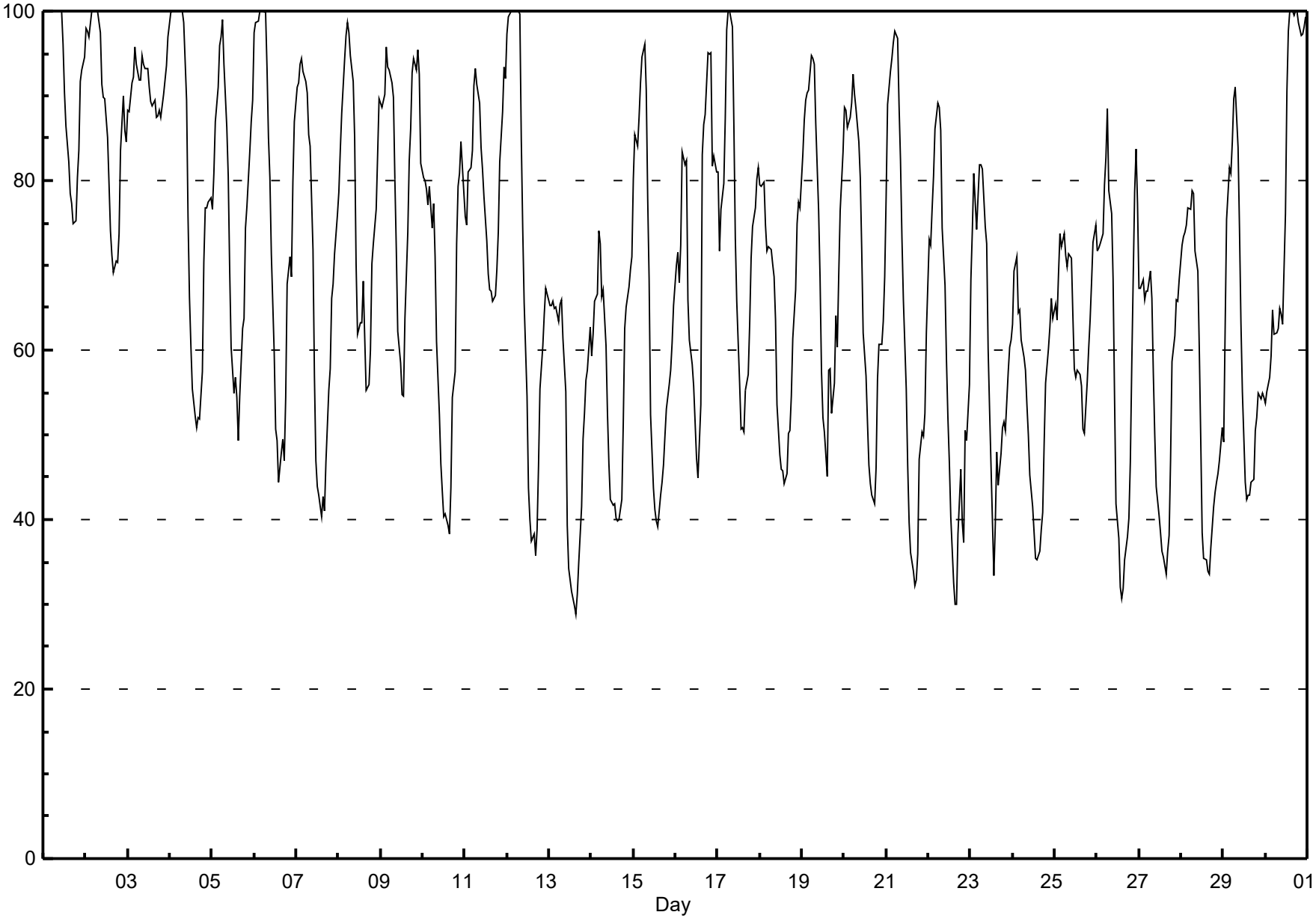
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	100	100	100	100	100	100	100	100	100	100	100	96	90	87	82	78	77	75	75	80	84	92	93	95	91.8	100.0
2-Sep	98	98	97	100	100	100	100	100	98	91	90	90	85	80	74	71	69	71	70	74	84	90	86	85	87.4	100.0
3-Sep	88	88	91	92	96	94	92	92	95	94	93	93	91	89	89	89	87	88	88	87	90	92	94	97	91.3	97.0
4-Sep	100	100	100	100	100	100	100	100	99	90	76	66	60	56	52	51	52	52	57	70	77	77	78	78	78.7	100.0
5-Sep	77	81	87	91	96	97	99	94	86	81	69	60	55	57	54	49	55	62	64	74	77	83	87	89	76.0	98.9
6-Sep	97	99	99	100	100	100	100	93	85	80	71	60	51	49	44	48	50	47	54	68	71	69	80	87	75.1	100.0
7-Sep	91	92	94	94	93	92	90	85	84	72	57	47	44	43	40	43	41	47	55	58	66	68	71	76	68.4	94.4
8-Sep	79	84	88	94	97	99	98	95	92	85	70	62	63	63	68	62	55	56	60	70	73	77	83	90	77.5	98.6
9-Sep	89	89	90	96	93	93	92	90	80	72	62	58	55	55	64	74	82	86	93	94	93	95	93	82	82.1	95.7
10-Sep	80	80	79	77	79	74	77	71	61	52	47	43	40	41	39	38	44	54	57	72	79	81	85	79	63.8	84.6
11-Sep	76	75	81	82	83	91	93	91	89	84	81	78	73	69	67	67	66	66	70	74	82	88	93	92	79.7	93.3
12-Sep	97	99	100	100	100	100	100	100	85	74	66	55	44	40	37	38	36	39	46	55	61	64	67	67	69.6	100.0
13-Sep	65	65	66	65	65	63	65	66	61	55	39	34	33	31	30	29	31	35	42	50	53	56	58	63	50.9	66.0
14-Sep	59	62	66	67	74	73	66	67	61	52	47	42	42	42	40	40	40	42	51	63	65	67	69	71	57.0	74.1
15-Sep	80	85	84	87	92	95	96	91	78	68	52	44	41	40	39	43	44	46	50	53	56	58	61	65	64.5	96.1
16-Sep	70	71	68	72	83	82	82	66	61	58	56	52	47	45	54	83	87	88	95	95	95	82	83	81	73.2	95.1
17-Sep	81	72	77	80	87	98	100	100	98	87	73	66	56	51	51	50	55	57	63	71	75	77	80	82	74.4	100.0
18-Sep	80	79	80	75	72	72	72	70	69	64	54	48	46	46	44	45	50	51	54	61	67	75	78	77	63.6	79.8
19-Sep	83	87	90	90	91	95	94	94	87	76	68	57	52	50	45	58	58	53	56	64	60	69	76	83	72.4	94.7
20-Sep	89	88	86	87	89	93	90	88	85	80	72	62	57	51	47	44	43	42	46	57	61	61	63	69	68.7	92.5
21-Sep	78	89	93	94	96	98	97	89	82	73	66	55	47	40	36	34	32	33	36	47	50	50	52	62	63.8	97.6
22-Sep	73	72	77	81	86	89	89	86	74	68	59	52	47	40	33	30	30	38	46	40	37	50	49	56	58.4	89.2
23-Sep	68	74	81	74	78	82	82	81	75	72	60	53	40	33	40	48	44	48	51	51	50	57	60	61	61.1	81.9
24-Sep	63	69	71	64	65	61	59	58	54	50	45	41	38	35	35	36	39	41	49	56	60	63	66	64	53.5	71.0
25-Sep	65	63	69	74	72	74	71	70	71	71	64	58	57	58	57	56	51	50	56	60	64	68	73	75	64.4	74.7
26-Sep	72	72	73	74	80	83	89	79	76	68	55	42	38	32	31	32	35	38	40	47	58	79	84	77	60.5	88.5
27-Sep	67	67	68	66	67	67	69	66	57	50	44	41	39	36	36	34	36	38	47	59	62	66	66	68	54.8	69.3
28-Sep	72	73	74	75	77	77	79	78	72	69	60	50	39	35	35	34	34	37	42	43	44	45	47	51	55.9	78.9
29-Sep	49	63	75	81	81	85	90	91	84	74	63	55	44	42	43	43	44	45	50	52	55	54	55	54	61.4	90.9
30-Sep	54	55	57	59	65	62	62	63	65	64	63	76	91	98	100	100	100	100	100	99	97	97	98	99	80.1	100.0
	78.1	79.7	82.0	83.1	85.2	86.2	86.5	83.8	78.8	72.6	64.1	57.9	53.4	51.1	50.2	51.6	52.2	54.1	58.8	64.8	68.2	71.7	74.3	75.8	Diurnal Average	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.2	91.1	97.6	100.0	100.0	99.5	100.0	100.0	98.6	97.1	97.4	98.2	99.3	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - September 2016



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - September 2016

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	7	10	14	7	8	5	13	11	12	9	13	15	13	14	12	9	7	6	4	5	5	8	7	8.3	15.0
Dir	269	273	311	338	310	342	321	337	299	305	290	300	295	301	296	294	316	305	329	354	1	27	17	352	313	295
2 Spd	9	8	5	4	2	1	1	1	4	4	8	12	10	10	10	12	15	15	12	11	12	13	15	15	8.2	15.2
Dir	343	356	342	259	338	16	229	252	319	288	289	326	324	332	339	323	341	334	327	322	310	304	325	324	324	334
3 Spd	16	17	16	16	15	18	18	19	19	20	22	22	20	19	18	19	17	18	13	8	6	5	5	2	14.9	21.7
Dir	318	309	305	301	298	289	293	296	300	306	307	310	316	323	325	329	331	322	326	321	292	278	279	51	310	310
4 Spd	2	4	4	4	2	2	1	3	6	6	6	6	3	4	1	1	7	6	7	6	7	7	9	9	3.1	9.4
Dir	70	62	56	41	33	55	148	179	173	175	189	192	173	190	153	113	99	73	104	96	82	81	79	79	107	79
5 Spd	7	3	4	1	1	1	2	1	3	5	7	5	8	14	9	13	19	6	10	2	5	2	2	2	2.6	18.6
Dir	88	142	243	319	78	48	38	151	205	217	218	238	176	231	229	224	276	274	316	25	57	104	91	95	235	276
6 Spd	2	1	2	2	3	3	3	3	4	6	10	12	15	13	15	12	9	5	7	7	4	8	6	3	4.1	15.2
Dir	121	109	99	139	133	93	108	107	156	213	223	259	282	287	257	265	296	249	205	231	34	255	232	201	248	282
7 Spd	2	2	2	3	3	3	4	1	11	11	21	29	28	27	24	26	26	19	15	14	1	0	2	3	9.5	28.9
Dir	101	154	111	77	85	90	65	140	208	226	253	265	264	267	275	260	260	254	260	274	178	83	11	236	258	265
8 Spd	4	4	2	2	2	2	0	2	5	7	14	19	21	18	19	17	17	13	12	10	5	4	2	2	6.9	20.9
Dir	218	240	190	112	169	84	51	207	237	255	291	301	314	328	316	307	298	291	282	284	287	277	167	127	295	314
9 Spd	1	1	3	2	3	3	3	4	5	5	6	7	12	29	21	13	10	8	7	6	7	7	2	6	5.5	29.5
Dir	119	17	203	156	99	71	86	92	166	176	177	185	217	224	233	195	159	151	132	148	174	208	177	205	190	224
10 Spd	9	14	5	23	31	29	18	20	28	37	41	35	29	24	24	23	18	17	15	17	8	10	12	16	17.5	41.3
Dir	237	227	229	261	255	250	251	245	259	270	267	272	279	283	290	286	323	351	356	9	313	312	305	332	278	267
11 Spd	16	14	11	13	12	11	10	8	9	10	11	11	10	11	11	10	9	6	6	3	4	1	3	1	8.4	16.4
Dir	348	350	330	336	330	323	321	327	334	328	320	312	312	320	326	318	332	329	330	331	259	346	43	287	328	348
12 Spd	3	2	6	3	3	4	5	4	5	8	12	14	19	15	18	21	22	21	19	14	8	7	5	8	7.7	22.2
Dir	75	83	54	76	102	96	124	137	174	200	215	223	255	253	244	242	257	259	246	249	249	221	227	244	238	257
13 Spd	9	13	13	11	5	6	6	3	8	8	24	30	32	39	39	35	34	27	14	17	12	5	8	2	15.9	39.4
Dir	252	254	250	242	228	239	208	177	213	215	272	273	273	269	261	262	257	252	254	258	248	213	234	181	256	261
14 Spd	3	3	1	6	4	3	7	8	15	27	30	29	23	33	33	35	36	32	16	13	11	4	2	4	15.0	35.6
Dir	67	63	262	285	251	261	264	261	266	270	276	282	293	264	262	268	265	265	256	253	255	228	205	224	267	265
15 Spd	2	3	4	3	2	3	3	4	5	10	17	19	22	24	26	25	24	21	16	14	9	4	3	1	8.7	25.6
Dir	193	61	48	83	99	68	92	61	188	222	251	263	274	266	273	258	258	267	283	276	285	244	227	1	264	273
16 Spd	3	2	7	7	5	6	3	6	4	9	15	21	27	29	29	10	8	3	7	4	4	3	2	4	7.8	29.4
Dir	155	77	273	256	200	217	222	255	254	239	256	256	259	263	266	265	302	218	176	166	174	198	153	239	251	266
17 Spd	2	3	1	3	6	8	5	6	7	11	12	13	23	28	27	26	20	19	18	16	14	10	8	7	11.3	28.0
Dir	19	255	174	70	200	227	203	179	210	243	243	240	237	256	258	264	268	258	242	246	249	248	233	224	246	256
18 Spd	9	11	9	15	14	11	14	18	23	16	24	29	27	27	29	34	25	20	16	19	15	1	2	3	16.9	34.1
Dir	246	258	247	264	274	270	266	268	274	278	274	270	272	276	282	268	268	275	267	263	262	204	262	309	270	268
19 Spd	4	3	1	1	5	3	2	1	2	4	7	8	8	8	8	6	8	10	9	4	9	6	5	3	3.6	10.0
Dir	245	76	132	61	47	78	77	130	170	269	297	304	289	352	301	302	290	302	303	358	332	354	322	343	318	302
20 Spd	5	11	9	9	7	7	12	9	8	9	8	11	10	8	9	8	6	5	2	2	5	5	5	3	5.8	11.7
Dir	28	325	327	329	326	332	326	329	317	298	301	315	299	308	335	334	9	357	2	102	62	66	68	65	333	326
21 Spd	1	2	2	2	4	4	3	3	4	5	6	7	7	11	8	8	7	6	8	7	3	2	3	1	2.6	10.6
Dir	174	120	80	73	67	64	83	96	165	195	197	202	215	212	215	210	202	167	137	82	85	65	46	62	168	212
22 Spd	3	2	3	4	3	3	5	4	3	4	4	5	6	8	8	9	9	10	9	8	5	10	5	5	3.8	10.1
Dir	66	41	56	60	98	117	120	76	124	152	149	164	150	164	159	161	123	104	99	90	49	339	44	59	109	104

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - September 2016

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	3	7	3	5	2	6	1	2	2	3	3	8	14	27	26	16	20	23	26	26	32	21	17	21	11.0	32.2
Dir	155	240	10	18	7	58	174	98	178	181	185	205	236	229	237	222	251	261	265	263	262	247	249	243	246	262
24 Spd	17	13	4	19	16	18	25	24	34	39	38	41	41	38	40	43	37	31	19	12	7	6	2	4	23.2	43.1
Dir	247	240	228	251	258	267	268	264	258	262	270	266	262	265	267	261	256	263	252	250	244	221	186	213	260	261
25 Spd	3	3	4	4	5	3	3	2	3	2	1	4	6	8	16	14	23	27	15	5	3	2	5	5	4.6	27.5
Dir	273	206	247	64	141	77	81	124	172	225	220	191	230	218	226	233	258	259	264	233	205	118	132	118	232	259
26 Spd	6	5	4	2	2	4	5	7	6	6	3	17	24	30	21	19	15	14	8	17	28	33	17	20	9.1	33.0
Dir	87	94	91	103	136	152	183	134	110	163	175	217	222	212	198	203	229	276	292	274	270	261	264	249	230	261
27 Spd	30	26	20	20	18	23	21	19	32	34	41	42	42	44	41	39	36	32	22	16	12	4	5	3	25.8	44.1
Dir	251	256	251	263	276	271	267	257	255	254	260	266	257	269	268	267	265	263	253	252	247	238	247	264	261	269
28 Spd	3	1	4	3	4	4	3	2	1	4	4	4	5	6	7	4	4	6	9	10	10	11	12	8	4.0	11.8
Dir	125	104	66	104	97	72	153	80	151	143	155	73	85	96	118	111	56	17	22	31	28	29	32	38	62	32
29 Spd	6	1	2	1	1	1	2	1	1	1	3	2	13	15	17	16	15	14	11	13	15	16	16	17	6.4	17.2
Dir	35	29	217	168	51	55	277	350	187	195	296	194	104	88	87	84	84	83	54	31	32	29	24	26	59	87
30 Spd	17	13	13	10	11	8	8	13	11	13	13	9	11	8	10	10	15	13	18	28	28	28	23	25	12.5	28.0
Dir	29	21	16	6	331	338	328	336	339	352	10	15	3	326	338	1	46	46	47	58	59	65	61	59	28	59
Spd	2.0	2.7	2.4	3.5	3.0	3.0	3.2	3.3	6.2	8.5	11.4	13.2	13.8	15.0	14.7	13.6	11.8	10.1	6.5	4.8	4.0	2.5	1.6	1.4	Diurnal Average	
Dir	290	285	295	292	279	282	271	272	255	259	266	269	268	265	267	264	273	275	278	285	287	289	326	316		
Spd	29.7	26.2	20.2	23.1	30.6	28.7	24.7	23.5	33.9	39.2	41.3	42.4	41.9	44.1	40.9	43.1	36.7	32.3	26.0	27.7	32.2	33.0	23.2	25.3	Diurnal Maximum	
Dir	251	256	251	261	255	250	268	264	258	262	267	266	257	269	268	261	256	265	265	58	262	261	61	59		

Maximum Speed Value: 44 km/h on Sep 27 14:00
Maximum Daily Speed Average: 25.8 km/h on Sep 27
Maximum Diurnal Speed Average: 15.0 km/h at hour 14

Minimum Speed Value: 0 km/h on Sep 8 07:00
Minimum Daily Speed Average: 2.6 km/h on Sep 21
Minimum Diurnal Speed Average: 1.4 km/h at hour 24

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

Monthly Average Velocity: 6.63 km/h 271.6 deg

Speed Percentiles: $P_1 = 0.8$ $P_{10} = 2.0$ $Q_1 = 3.9$ Median = 8.0 $Q_3 = 15.6$ $P_{90} = 25.9$ $P_{99} = 41.0$

Percent Operational Time: 100.0

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

Frequency Distribution

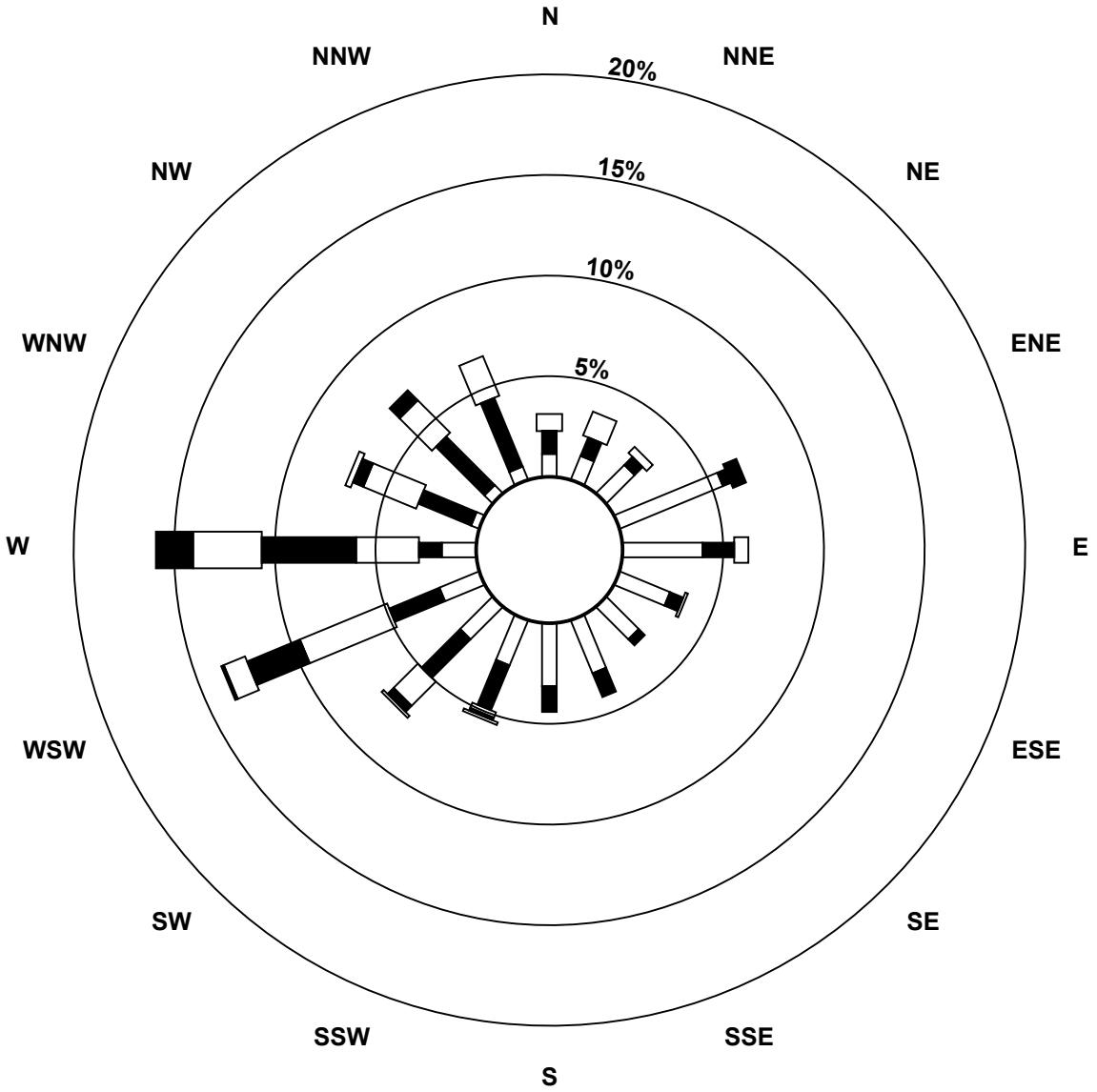
Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	18	18	12	0	0	0	48
NorthEast	41	11	10	5	0	0	67
East	58	17	6	0	0	0	81
SouthEast	36	11	0	0	0	0	47
South	33	27	1	1	0	0	62
SouthWest	32	43	23	10	2	0	110
West	16	28	49	55	35	14	197
NorthWest	7	50	44	7	0	0	108
Total	241	205	145	78	37	14	720

Peace Airshed Zone Association

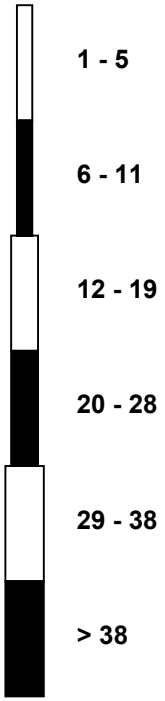
Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - September 2016



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - September 2016

Maximum Speed: 44 km/h on Sep 27 14:00

Maximum Daily Speed Average: 26.3 km/h on Sep 27

Minimum Speed: 2 km/h on Sep 21 01:00

Minimum Daily Speed Average: 5.4 km/h on Sep 4

Maximum Diurnal Speed Average: 20.2 km/h at hour 14

Minimum Diurnal Speed Average: 6.4 km/h at hour 3

Monthly Average Speed: 11.61 km/h

Percentiles: P_1 = 1.8 P_{10} = 2.9 Q_1 = 4.5 Median = 8.5 Q_3 = 15.9 P_{90} = 26.1 P_{99} = 41.3

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

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	10	7	11	15	9	10	7	13	12	12	10	13	15	14	14	12	9	8	6	4	5	5	9	8	9.9	15.3
2-Sep	9	8	6	5	3	3	2	3	4	4	8	12	10	11	11	13	16	16	12	11	12	13	15	15	9.2	15.7
3-Sep	16	18	16	16	15	18	18	19	19	21	22	22	21	19	18	19	18	18	14	9	6	5	5	3	15.5	21.8
4-Sep	3	4	4	4	2	2	2	3	6	6	7	7	5	6	5	6	7	6	7	6	7	7	9	9	5.4	9.4
5-Sep	7	4	5	3	2	2	3	2	4	6	7	5	8	15	10	13	20	7	10	4	5	3	4	4	6.3	19.7
6-Sep	3	2	2	2	3	3	4	3	4	7	10	13	16	14	15	12	10	6	7	7	5	8	6	3	7.0	16.2
7-Sep	2	2	3	3	3	3	4	4	11	12	21	29	29	27	25	26	27	19	15	15	4	2	4	4	12.3	29.3
8-Sep	4	4	3	2	3	2	2	2	5	8	14	19	21	19	19	17	17	13	12	11	6	5	3	2	9.0	21.4
9-Sep	3	3	3	3	3	3	3	4	5	6	7	7	13	30	21	14	10	8	7	6	7	7	3	6	7.6	29.6
10-Sep	10	14	6	24	31	29	18	20	28	37	42	36	29	24	24	23	19	17	15	17	9	10	12	16	21.3	41.5
11-Sep	17	14	11	13	12	11	10	8	9	11	11	11	10	11	11	10	9	6	6	3	4	3	3	3	9.1	16.5
12-Sep	3	3	6	3	3	4	5	4	6	9	12	15	20	16	19	22	23	21	19	14	8	7	5	8	10.6	22.6
13-Sep	10	13	13	11	5	7	6	3	8	8	24	30	32	39	40	36	34	27	14	17	12	7	8	4	17.1	39.6
14-Sep	3	3	3	7	5	5	8	8	15	28	30	30	23	33	34	35	36	32	17	13	11	5	3	5	16.4	35.9
15-Sep	2	4	5	3	3	4	3	5	5	10	17	20	22	24	26	26	24	22	16	14	9	5	4	2	11.4	26.0
16-Sep	4	2	8	8	6	7	5	6	4	10	15	21	28	29	30	11	8	5	7	5	5	6	3	4	9.8	29.8
17-Sep	3	3	2	3	6	8	5	6	8	11	12	14	24	28	27	27	20	20	18	16	14	10	8	8	12.5	28.3
18-Sep	9	11	9	15	14	11	14	18	24	16	24	30	28	27	29	35	25	20	16	19	15	5	4	4	17.6	34.5
19-Sep	4	4	2	2	5	3	2	2	2	5	7	9	9	9	9	8	8	10	9	6	9	7	5	4	5.9	10.2
20-Sep	6	11	9	9	8	8	12	9	8	9	8	12	10	9	9	9	7	5	2	3	5	5	5	3	7.6	11.8
21-Sep	2	3	3	3	4	4	3	3	5	6	6	7	8	11	9	9	8	6	8	8	7	3	3	2	5.4	11.2
22-Sep	3	3	3	4	3	4	6	4	3	4	5	6	7	8	9	9	10	10	10	8	6	11	5	5	6.1	11.1
23-Sep	4	7	4	5	3	6	2	2	2	3	4	8	15	27	26	16	21	23	26	26	32	21	17	21	13.5	32.3
24-Sep	17	13	5	19	16	18	25	24	34	39	38	41	41	38	41	43	37	31	19	12	8	6	5	6	24.1	43.5
25-Sep	4	3	5	5	5	3	4	3	3	3	3	4	6	9	16	14	23	28	15	5	3	3	5	5	7.4	27.6
26-Sep	6	5	4	4	3	5	6	8	7	7	5	19	24	31	22	20	16	14	8	17	28	33	17	20	13.7	33.1
27-Sep	30	26	20	20	18	23	21	20	32	34	41	43	42	44	41	40	36	32	22	16	12	6	6	5	26.3	44.3
28-Sep	3	4	5	4	4	4	4	2	2	4	5	4	6	8	8	6	4	6	9	10	10	11	12	8	6.0	11.9
29-Sep	6	2	3	2	3	3	5	4	2	2	5	4	13	15	18	16	15	14	11	13	15	16	16	17	9.1	17.6
30-Sep	17	13	13	10	11	9	8	13	11	14	13	10	11	8	11	11	15	13	18	28	28	28	23	25	15.1	28.1
	7.3	7.2	6.4	7.6	7.0	7.3	7.2	7.5	9.6	11.6	14.5	16.7	18.2	20.2	19.9	18.6	17.7	15.5	12.5	11.5	10.2	8.8	7.7	7.7	Diurnal Average	
	29.9	26.3	20.3	23.9	31.0	29.3	24.7	23.7	34.2	39.3	41.5	42.7	42.1	44.3	41.2	43.5	36.9	32.5	26.1	27.8	32.3	33.1	23.4	25.4	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 - September 2016

Maximum Value: 98.3 deg on Sep 14 03:00

Minimum Value: 2.4 deg on Sep 12 20:00

Percentiles: P_1 = 3.6 P_{10} = 6.0 Q_1 = 8.6 Median = 14.9 Q_3 = 32.7 P_{90} = 59.0 P_{99} = 86.0

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 Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Sep	13	16	26	21	41	47	48	8	22	13	25	12	12	11	11	13	13	15	17	14	31	13	11	21	47.7
2-Sep	9	6	43	35	51	76	68	65	21	19	21	12	13	20	24	16	14	11	10	9	11	7	11	10	76.1
3-Sep	8	8	7	7	7	5	7	6	6	6	6	5	9	8	9	8	9	9	10	17	11	9	7	58	57.6
4-Sep	12	13	9	13	41	47	30	13	13	18	26	26	65	59	87	94	25	20	4	6	8	7	4	5	93.8
5-Sep	8	34	25	87	79	92	72	34	37	18	15	44	29	26	16	15	22	33	7	63	16	46	61	50	92.5
6-Sep	30	62	41	30	21	16	28	16	20	18	14	20	20	14	13	16	19	29	11	13	53	21	13	38	61.9
7-Sep	39	34	37	18	18	14	11	60	8	17	9	9	11	10	13	7	7	9	6	12	77	88	71	55	88.2
8-Sep	18	21	57	51	29	22	91	63	7	23	8	14	13	13	11	13	11	11	5	22	34	22	44	25	90.7
9-Sep	79	69	14	28	25	12	12	24	16	15	19	20	16	5	7	15	9	10	13	18	20	12	73	14	78.8
10-Sep	23	7	43	16	9	11	8	4	8	5	6	9	8	8	9	8	21	9	11	12	24	7	8	9	43.1
11-Sep	8	8	9	8	8	8	9	11	12	13	10	11	14	13	15	11	22	18	17	37	19	61	37	71	70.8
12-Sep	41	50	13	24	15	20	15	26	18	21	9	15	12	18	14	10	11	7	5	2	7	12	50	11	50.3
13-Sep	12	4	6	5	30	35	23	24	14	20	12	6	8	8	5	7	7	7	9	5	23	59	20	63	63.1
14-Sep	47	31	98	43	53	73	31	22	6	7	7	9	6	9	8	7	7	5	10	4	3	43	55	41	98.3
15-Sep	46	48	15	40	35	49	29	23	16	16	6	11	11	10	10	11	10	13	12	7	13	29	20	66	66.5
16-Sep	28	46	70	58	48	50	79	14	20	17	13	8	9	12	9	29	16	46	12	37	39	66	62	40	79.2
17-Sep	64	46	69	27	33	6	16	16	13	12	11	20	13	8	9	8	5	7	7	5	5	9	22	18	69.3
18-Sep	20	6	7	5	6	6	7	4	7	7	6	9	10	7	9	9	9	9	13	4	10	87	77	53	86.6
19-Sep	69	62	59	66	16	35	42	60	52	50	21	28	27	24	32	38	12	11	4	42	8	61	47	52	69.1
20-Sep	40	9	18	18	18	34	6	7	9	13	24	15	21	41	26	22	33	32	62	46	8	10	4	35	61.8
21-Sep	53	43	44	51	14	7	15	17	29	17	23	19	25	21	51	41	30	19	19	12	81	72	13	69	81.3
22-Sep	18	53	20	13	24	19	15	19	30	21	26	43	29	26	26	23	21	10	7	6	44	33	14	34	52.8
23-Sep	42	17	55	36	64	13	83	63	55	36	55	18	17	9	7	14	14	9	5	6	5	6	5	5	83.3
24-Sep	7	6	55	13	7	5	4	6	7	6	7	8	8	10	7	7	7	7	9	9	47	56	78	50	78.0
25-Sep	68	23	63	47	24	16	24	33	31	66	74	26	22	19	12	15	7	5	5	28	35	68	23	21	74.5
26-Sep	14	22	12	59	36	38	22	27	28	41	66	39	6	15	17	12	17	12	16	15	12	4	8	7	65.7
27-Sep	6	6	6	7	9	6	5	6	4	5	5	7	6	5	7	8	6	6	5	5	8	72	67	76	75.8
28-Sep	43	76	27	38	30	13	31	42	63	28	34	32	45	49	38	59	40	13	3	4	4	3	8	9	76.0
29-Sep	9	85	32	76	85	95	64	76	58	82	80	77	24	14	13	13	11	9	11	4	5	5	3	3	94.9
30-Sep	5	9	6	18	7	13	12	4	9	15	9	16	10	9	10	11	13	9	9	4	5	4	7	5	18.4
	78.8	84.9	98.3	86.9	84.7	94.9	90.7	75.5	63.2	81.7	80.5	76.9	65.3	59.0	86.7	93.8	40.1	45.7	61.8	62.8	81.3	88.2	78.0	75.8	

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 84.6 ppb on Sep 1 12:00 Maximum Daily Average: 5.2 ppb on Sep 1

Minimum Value: 0 ppb on Sep 1 01:00 Minimum Daily Average: 0.0 ppb on Sep 26
Maximum Diurnal Average: 3.9 ppb at hour 12 Minimum Diurnal Average: 0.2 ppb at hour 4
Monthly Average: 0.85 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.4 P_{90} = 2.6 P_{99} = 7.8

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	32
Percent Operational Time:	99.3

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-Sep	0	0	0	0	0	0	3	0	1	0	4	85	A	2	6	13	2	2	0	0	0	0	0	0	5.2	84.6
2-Sep	0	0	0	0	0	0	0	0	0	0	0	A	1	0	1	2	2	2	0	0	0	0	0	1	0.4	2.2
3-Sep	1	1	0	1	0	2	2	4	7	6	A	2	2	1	0	0	0	0	0	0	0	0	0	0	1.3	6.7
4-Sep	3	4	2	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	4.1
5-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.1	0.6
6-Sep	0	0	0	0	0	0	0	A	0	0	0	1	2	1	0	1	0	2	0	0	0	0	0	0	0.3	1.7
7-Sep	0	0	0	0	0	0	A	0	0	0	4	3	6	1	1	0	0	0	0	0	0	0	0	0	0.7	5.6
8-Sep	0	0	0	0	0	A	0	0	0	0	6	1	1	4	5	4	7	9	2	2	0	2	2	1	2.0	8.6
9-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
10-Sep	0	0	0	A	0	0	0	5	7	6	2	1	1	0	1	0	0	0	0	0	0	1	0	0	1.1	6.6
11-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.1	1.3
12-Sep	0	A	0	0	0	0	0	0	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.3
13-Sep	A	0	0	0	0	0	0	0	0	0	1	5	2	4	4	3	2	1	0	1	1	1	3	A	1.2	5.2
14-Sep	0	0	0	0	0	0	0	0	0	3	3	1	0	0	0	0	0	0	0	0	0	0	A	0	0.3	2.9
15-Sep	0	0	0	0	0	0	0	0	0	0	1	0	2	1	4	4	2	3	0	0	0	A	0	0	0.7	3.8
16-Sep	0	0	0	0	0	0	0	0	0	0	2	2	4	3	3	0	0	1	0	P	P	P	P	P	0.9	4.2
17-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	A	0	0	0	0	0.1	1.1
18-Sep	0	3	0	2	8	3	8	7	4	2	5	1	4	2	0	0	1	1	A	3	1	0	1	2	2.6	8.2
19-Sep	0	0	0	0	0	0	0	0	3	4	5	1	1	0	1	0	0	A	0	0	0	0	0	0	0.8	5.0
20-Sep	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0.1	1.1
21-Sep	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
22-Sep	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	1	1	1	0	0	0	0	0	0	0.3	0.6
23-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.3
24-Sep	7	13	8	0	0	3	6	7	7	3	3	2	A	3	2	2	2	0	0	5	3	0	0	0	3.3	13.0
25-Sep	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
26-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
27-Sep	0	8	4	0	3	7	3	4	3	A	3	1	0	3	2	3	3	5	5	1	0	0	0	0	2.5	7.9
28-Sep	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
29-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.5
30-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
	0.5	1.1	0.5	0.2	0.5	0.6	0.8	1.0	1.2	1.0	1.4	3.9	1.0	1.0	1.0	1.2	0.8	0.9	0.4	0.6	0.3	0.2	0.3	0.2	Diurnal Average	
	7.0	13.0	8.0	2.1	8.2	7.1	7.7	7.0	7.2	6.0	5.6	84.6	5.6	3.7	5.7	12.5	6.6	8.6	4.6	4.5	3.0	2.1	3.1	2.0	Diurnal Maximum	

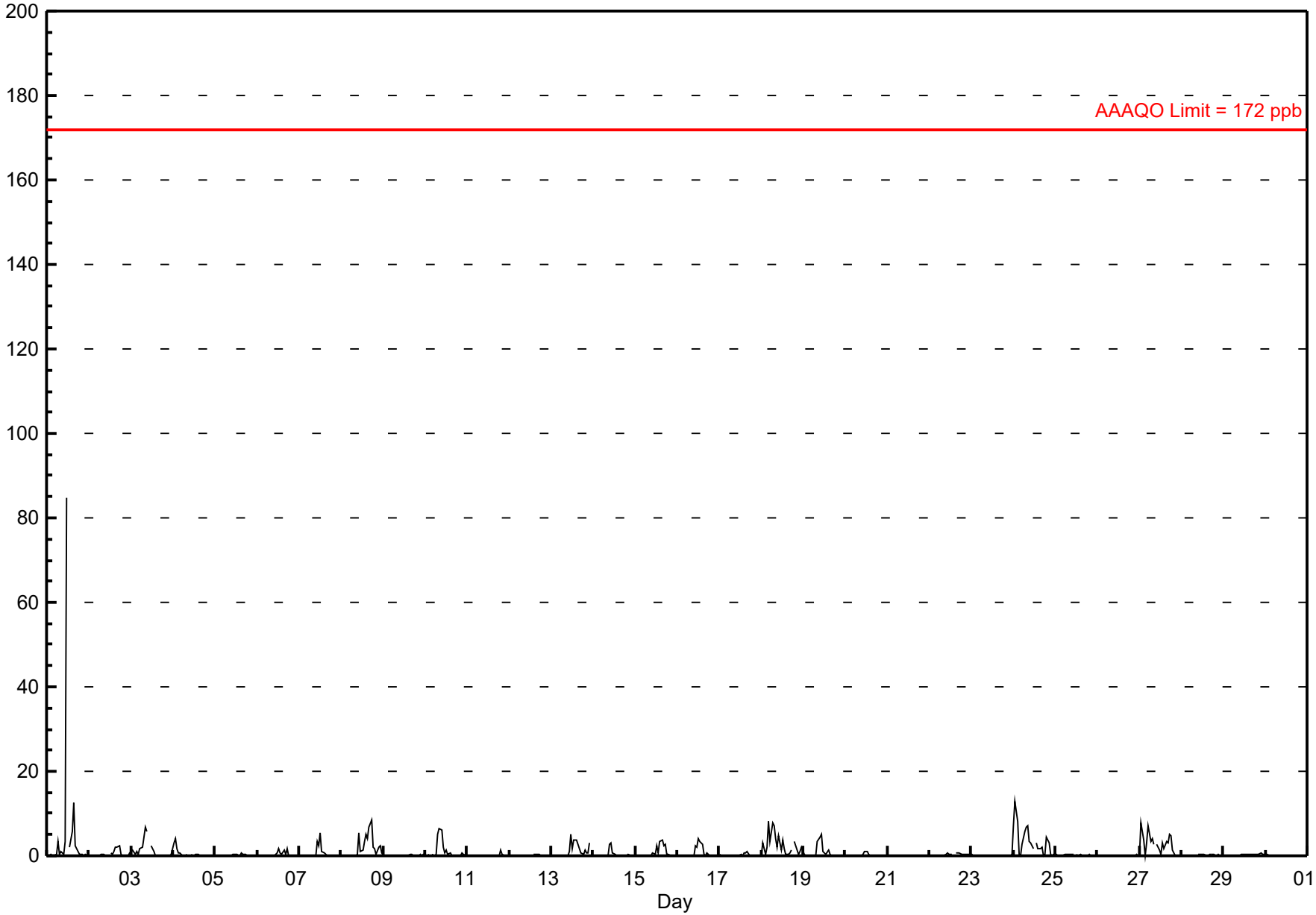
C - Calibration P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - September 2016



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - September 2016

Maximum Value: 390.8 ppb on Sep 1 12:00

Maximum Daily Average: 27.0 ppb on Sep 1

Minimum Value: 0 ppb on Sep 23 11:00

Minimum Daily Average: 0.5 ppb on Sep 21

Maximum Diurnal Average: 17.9 ppb at hour 12

Minimum Diurnal Average: 1.1 ppb at hour 4

Monthly Average: 3.71 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.6 $Q_3 = 2.5$ $P_{90} = 11.4$ $P_{99} = 27.2$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	32
Percent Operational Time:	99.3

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-Sep	1	0	5	1	1	3	6	1	6	4	12	391	A	10	27	106	36	9	1	1	1	1	1	1	27.0	390.8
2-Sep	1	1	1	1	1	1	1	1	1	1	1	A	4	1	3	3	3	3	2	0	1	0	1	3	1.4	4.3
3-Sep	3	4	1	2	2	12	3	18	12	11	A	4	4	3	1	0	0	1	1	0	1	0	0	2	3.8	17.8
4-Sep	6	7	5	3	4	1	1	1	1	A	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1.6	6.5
5-Sep	1	1	1	1	1	1	0	0	A	1	1	1	1	0	1	3	2	7	1	0	0	0	0	1	1.1	6.8
6-Sep	0	0	0	0	0	1	0	A	0	0	0	2	9	3	1	5	1	12	1	1	1	1	1	1	1.9	12.2
7-Sep	1	1	1	1	1	1	A	1	1	1	13	17	27	4	8	4	1	1	1	1	1	1	1	1	3.6	27.3
8-Sep	1	1	1	1	1	A	1	1	1	12	30	7	8	18	15	27	17	18	7	4	2	14	13	5	8.7	30.0
9-Sep	3	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	2.9
10-Sep	1	1	1	A	1	1	1	13	12	12	8	4	14	6	3	1	1	1	1	1	0	4	2	0	3.7	14.1
11-Sep	0	1	A	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	4	2	0	0	0	0.7	4.5
12-Sep	1	A	0	1	1	1	1	1	1	1	1	1	C	C	12	1	1	1	1	1	1	1	1	1	1.2	12.1
13-Sep	A	1	1	1	1	1	1	1	1	1	6	15	9	16	12	12	13	4	2	2	1	3	12	A	5.1	15.5
14-Sep	0	1	0	0	1	0	0	0	1	11	14	7	6	1	0	0	0	0	1	2	1	1	A	0	2.2	13.5
15-Sep	0	0	0	0	0	1	0	1	1	1	4	4	17	6	14	27	13	8	1	1	1	A	1	1	4.4	26.7
16-Sep	1	1	1	1	1	1	1	1	1	1	15	12	16	12	9	2	1	4	0	P	P	P	P	P	4.1	15.8
17-Sep	1	1	1	1	0	1	1	1	1	1	0	1	4	1	8	3	7	1	1	A	1	1	0	1	1.4	8.0
18-Sep	0	10	1	10	17	14	14	11	8	11	11	4	9	12	3	4	4	6	A	11	9	1	5	6	8.0	17.0
19-Sep	1	1	1	1	1	1	0	2	8	10	26	2	3	4	7	1	1	A	0	1	0	0	0	0	3.1	26.1
20-Sep	0	0	0	0	0	0	0	0	0	0	4	3	6	2	1	2	A	0	0	1	0	1	1	1	1.1	5.6
21-Sep	0	0	0	0	0	0	1	0	0	0	0	1	0	1	1	A	0	1	0	1	1	1	1	1	0.5	0.8
22-Sep	1	1	1	1	0	1	0	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.1
23-Sep	1	1	1	1	0	0	0	0	0	0	0	1	1	A	1	1	0	1	3	1	0	1	0	3	0.8	2.9
24-Sep	17	21	18	2	1	10	11	18	16	13	13	11	A	11	12	13	16	1	3	8	9	1	1	1	9.7	20.7
25-Sep	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	1.1
26-Sep	1	1	1	1	1	0	0	0	1	0	A	1	0	0	0	0	0	1	0	0	0	0	3	1	0.6	3.2
27-Sep	2	22	9	2	13	20	7	16	24	A	11	10	5	12	14	16	17	19	27	10	1	1	1	1	11.3	27.2
28-Sep	1	1	0	0	0	1	0	1	A	1	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0.7	1.0
29-Sep	0	0	0	0	0	1	1	A	0	0	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0.7	1.1
30-Sep	1	1	0	1	1	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	0.5	0.8
	1.5	2.7	1.8	1.1	1.8	2.5	1.9	3.2	3.5	3.4	6.3	17.9	5.5	4.7	5.4	8.2	4.9	3.6	2.0	1.9	1.3	1.3	1.7	1.2	Diurnal Average	
	16.6	22.3	18.2	10.3	17.0	20.1	13.7	17.8	24.1	13.4	30.0	390.8	27.3	17.8	26.5	106.5	35.5	19.0	27.2	11.3	9.0	13.8	13.0	6.5	Diurnal Maximum	

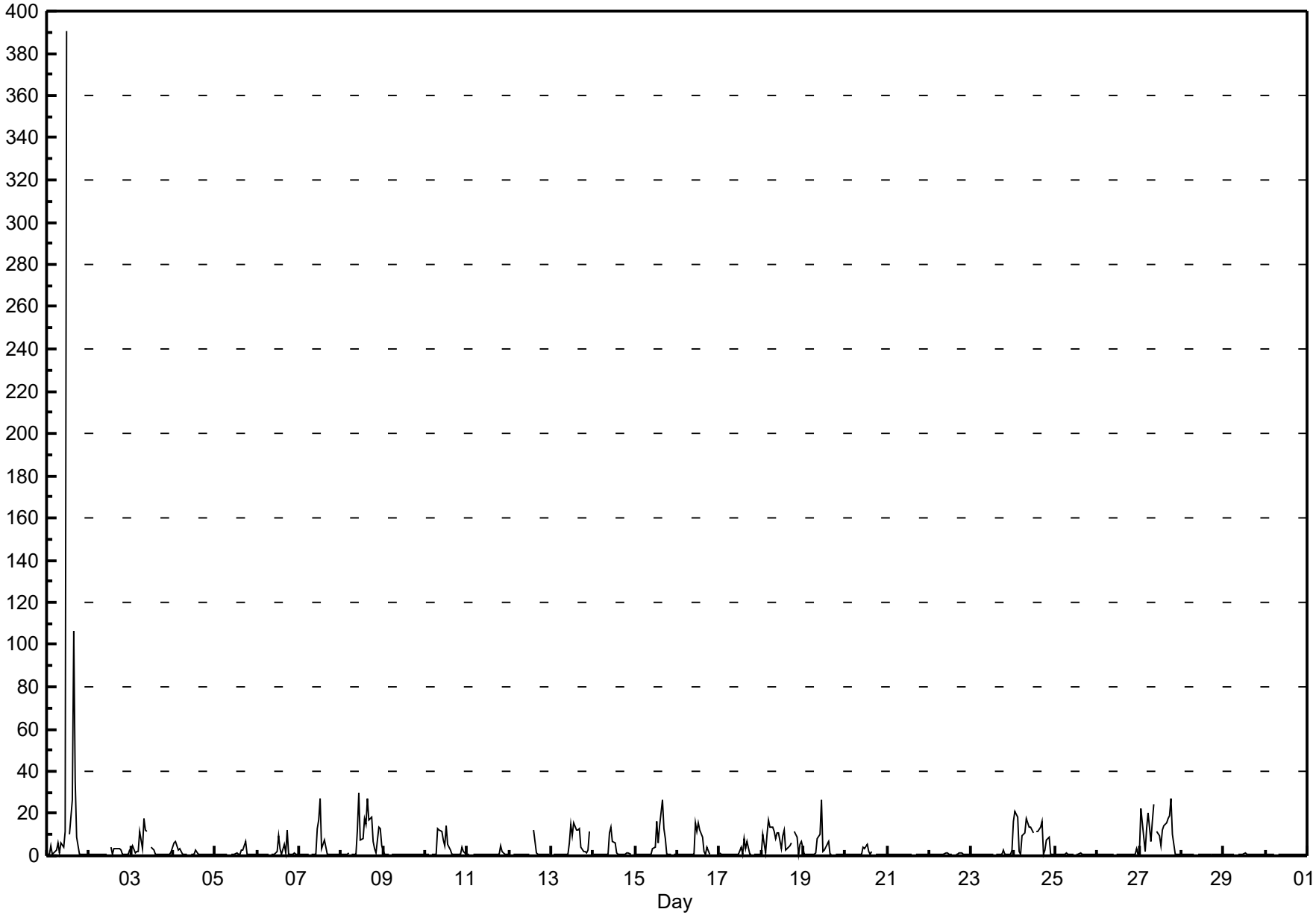
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

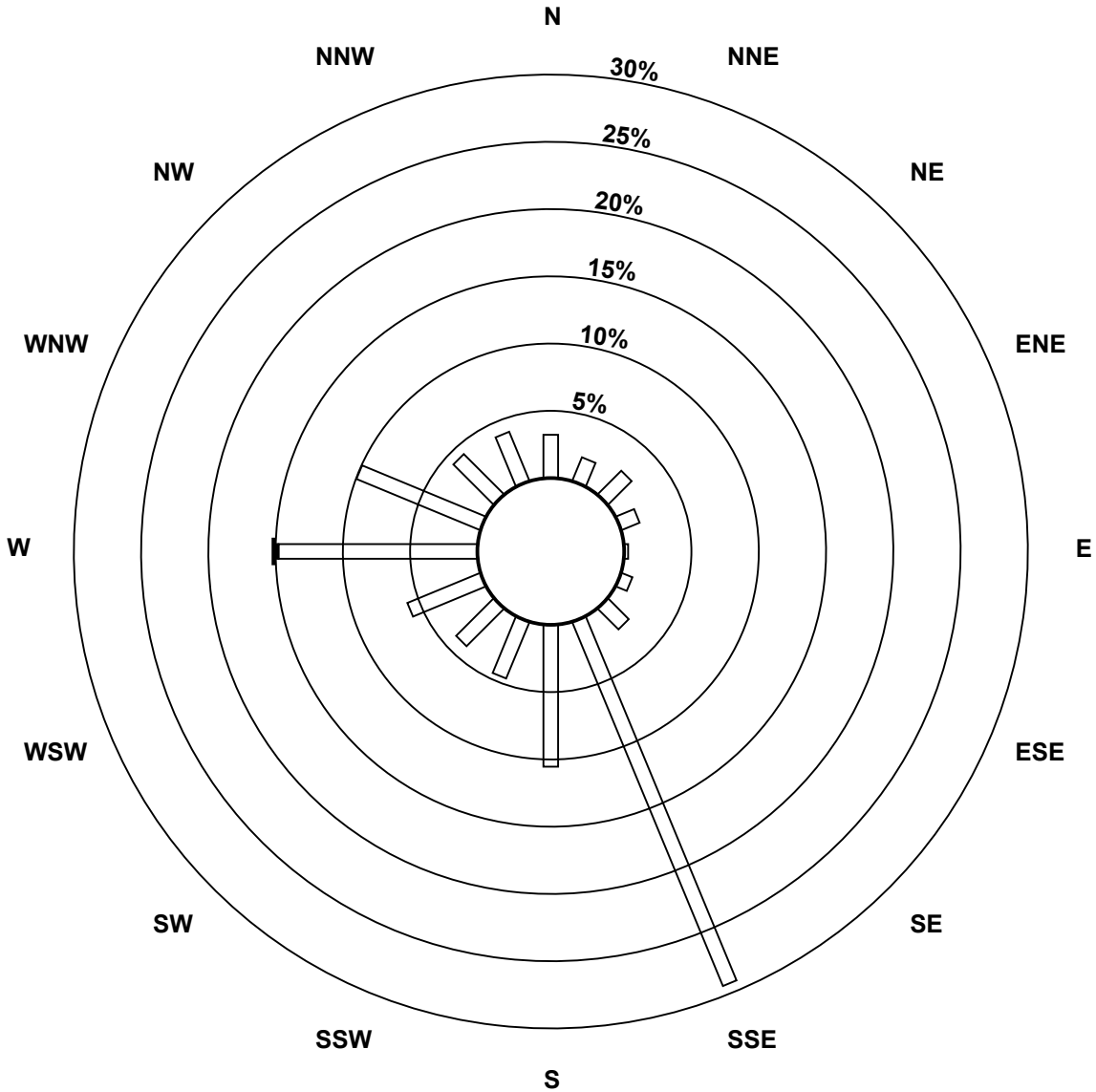
Valleyview - September 2016



Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Valleyview - September 2016



Pollutant Classes (ppb)

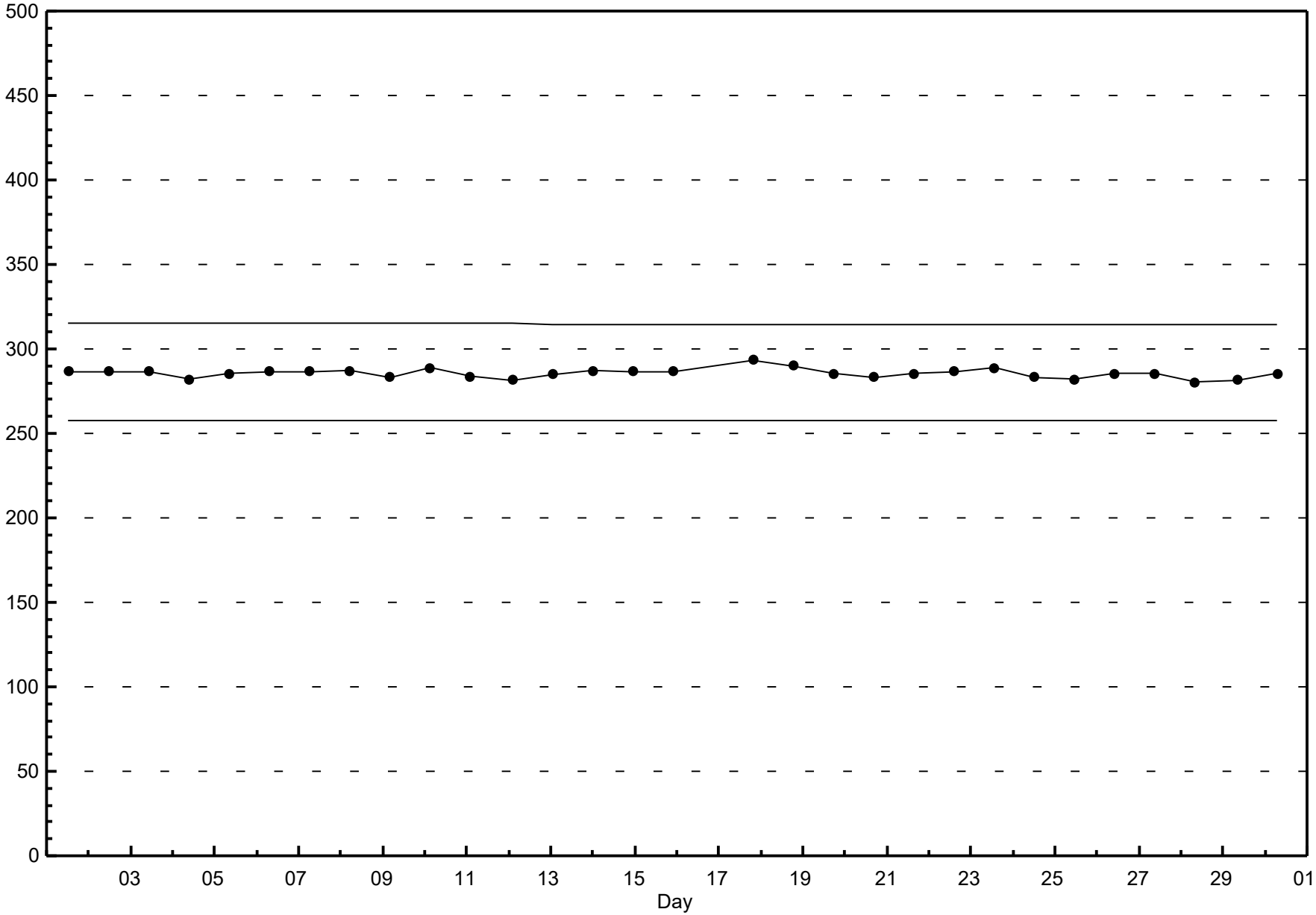
- 0 - 10
- 11 - 20
- 21 - 60
- 61 - 110
- 111 - 172
- > 172

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Valleyview - September 2016



Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - September 2016

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

Maximum Value: 1.3 ppb on Sep 13 16:00

Maximum Daily Average: 0.4 ppb on Sep 13

Minimum Value: 0 ppb on Sep 4 19:00

Minimum Daily Average: 0.0 ppb on Sep 26

Maximum Diurnal Average: 0.2 ppb at hour 20

Minimum Diurnal Average: 0.1 ppb at hour 14

Monthly Average: 0.16 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 0.7

Hours in Service:	720
Hours of Data:	681
Hours of Missing Data:	39
Hours of Calibration:	34
Percent Operational Time:	99.3

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

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

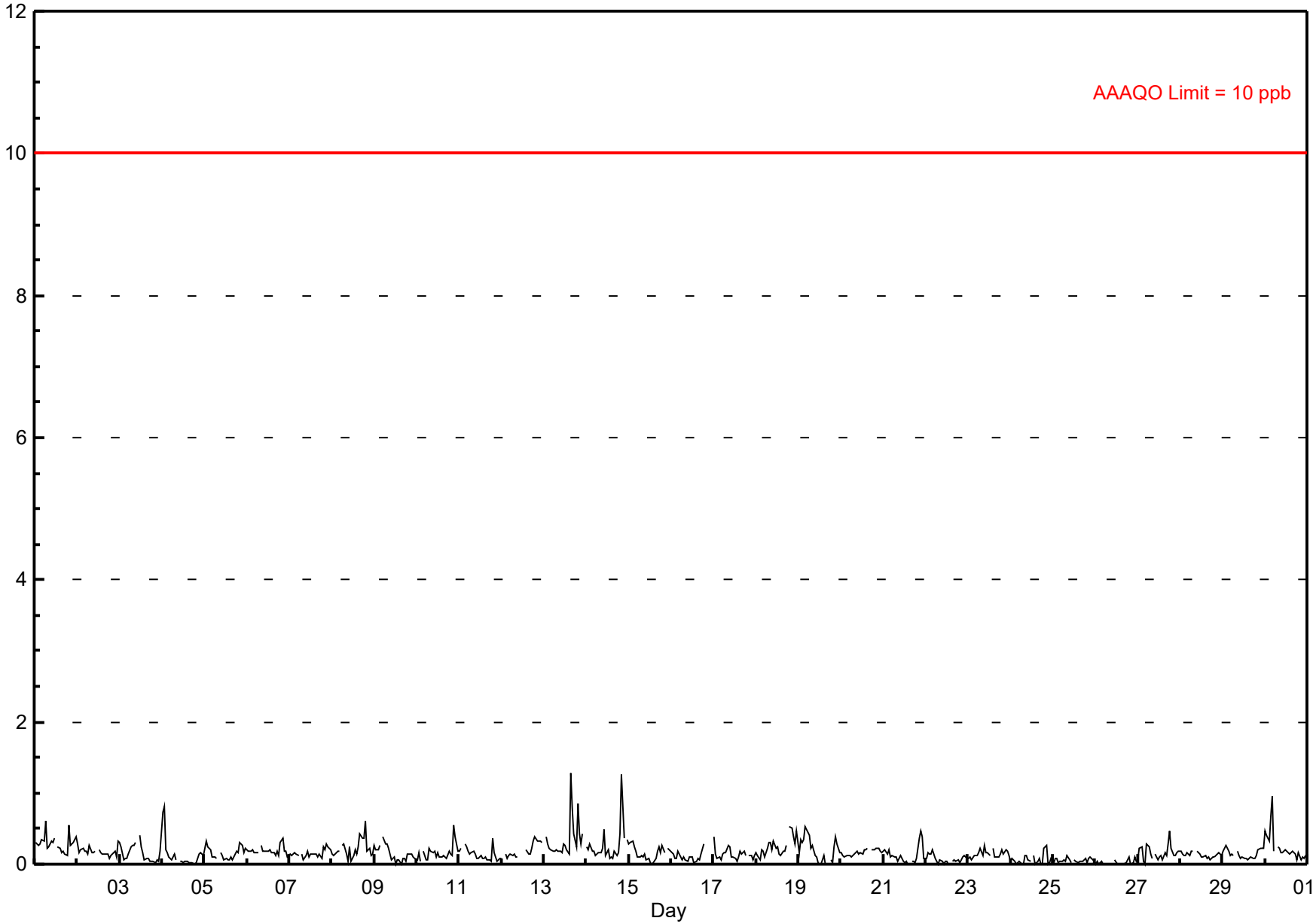
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - September 2016



Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - September 2016

Maximum Value: 6.8 ppb on Sep 13 16:00

Maximum Daily Average: 1.2 ppb on Sep 13

Minimum Value: 0 ppb on Sep 19 16:00

Minimum Daily Average: 0.4 ppb on Sep 26

Maximum Diurnal Average: 0.8 ppb at hour 20

Minimum Diurnal Average: 0.5 ppb at hour 14

Monthly Average: 0.60 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.5 $Q_3 = 0.6$ $P_{90} = 0.8$ $P_{99} = 2.1$

Hours in Service:	720
Hours of Data:	681
Hours of Missing Data:	39
Hours of Calibration:	34
Percent Operational Time:	99.3

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-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	0.8	2.0
2-Sep	1	1	1	1	1	1	0	1	1	1	0	A	1	0	0	0	1	1	1	1	1	1	0	1	0.6	1.5
3-Sep	1	1	0	0	1	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	1	0.6	0.9
4-Sep	1	1	1	1	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.5	1.3
5-Sep	1	1	1	1	0	0	0	0	A	1	1	0	0	1	0	1	1	0	1	1	1	1	1	1	0.6	0.8
6-Sep	1	0	1	1	1	0	1	A	1	1	1	1	1	1	1	0	1	1	0	1	1	1	0	0	0.6	0.9
7-Sep	1	1	1	0	0	0	A	0	1	0	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0.6	1.1
8-Sep	1	1	1	0	1	A	2	1	1	0	1	0	1	1	1	1	1	1	1	2	1	1	1	0	0.8	2.1
9-Sep	1	1	1	1	A	1	1	1	1	0	1	1	0	0	1	0	0	1	0	1	1	1	0	0	0.6	1.1
10-Sep	1	1	0	A	1	0	1	1	0	1	1	0	1	1	1	0	0	0	1	1	0	2	1	1	0.6	1.6
11-Sep	1	1	A	1	1	1	1	1	0	0	0	1	0	0	0	0	1	0	0	1	1	0	0	0	0.6	1.4
12-Sep	0	A	0	0	1	1	0	1	1	0	C	C	C	C	1	0	0	1	1	1	1	1	1	1	0.5	0.8
13-Sep	A	1	1	0	1	1	1	1	1	1	0	1	1	1	1	7	3	1	1	1	1	1	2	A	1.2	6.8
14-Sep	1	1	1	1	1	0	1	1	0	1	2	1	1	0	0	0	1	1	1	2	2	2	A	1	0.8	2.1
15-Sep	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	0	A	1	1	0.6	1.0
16-Sep	1	1	0	0	1	1	0	1	0	0	0	1	1	1	1	1	0	1	1	P	P	P	P	P	0.5	0.8
17-Sep	1	0	0	1	0	0	1	0	1	1	0	0	1	0	0	1	1	1	0	A	1	1	0	1	0.5	0.9
18-Sep	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.4
19-Sep	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	A	0	0	1	1	1	1	0.6	1.1
20-Sep	1	0	0	0	0	1	1	1	1	0	1	1	0	1	0	1	A	0	1	1	1	1	1	1	0.5	0.7
21-Sep	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	0	0.5	1.2
22-Sep	0	1	0	0	1	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.6
23-Sep	0	0	0	0	0	0	1	1	1	1	1	0	1	A	1	1	0	0	1	1	1	1	1	0	0.5	0.8
24-Sep	1	0	0	0	0	1	0	0	1	0	0	1	A	1	0	1	1	0	0	1	1	0	0	1	0.5	1.2
25-Sep	0	1	0	1	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
26-Sep	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	1	0	0	1	1	0.4	0.7
27-Sep	1	1	1	0	0	1	1	1	0	A	1	1	0	1	0	1	0	1	1	1	1	1	0	1	0.6	1.3
28-Sep	1	0	0	0	1	0	1	1	A	1	1	1	0	1	1	0	0	0	1	0	0	1	1	0	0.5	0.7
29-Sep	1	1	1	1	0	0	0	A	1	1	1	1	0	1	0	0	0	1	1	0	0	1	1	1	0.5	0.7
30-Sep	1	1	1	2	2	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0.8	2.5
	0.6	0.6	0.5	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.7	0.6	0.6	0.6	0.8	0.7	0.7	0.6	0.6	Diurnal Average	
	1.4	1.2	0.9	2.4	2.5	1.2	2.1	1.2	0.8	0.8	2.1	0.9	0.7	0.7	1.1	6.8	3.4	1.0	1.1	2.1	1.8	1.6	1.6	1.5	Diurnal Maximum	

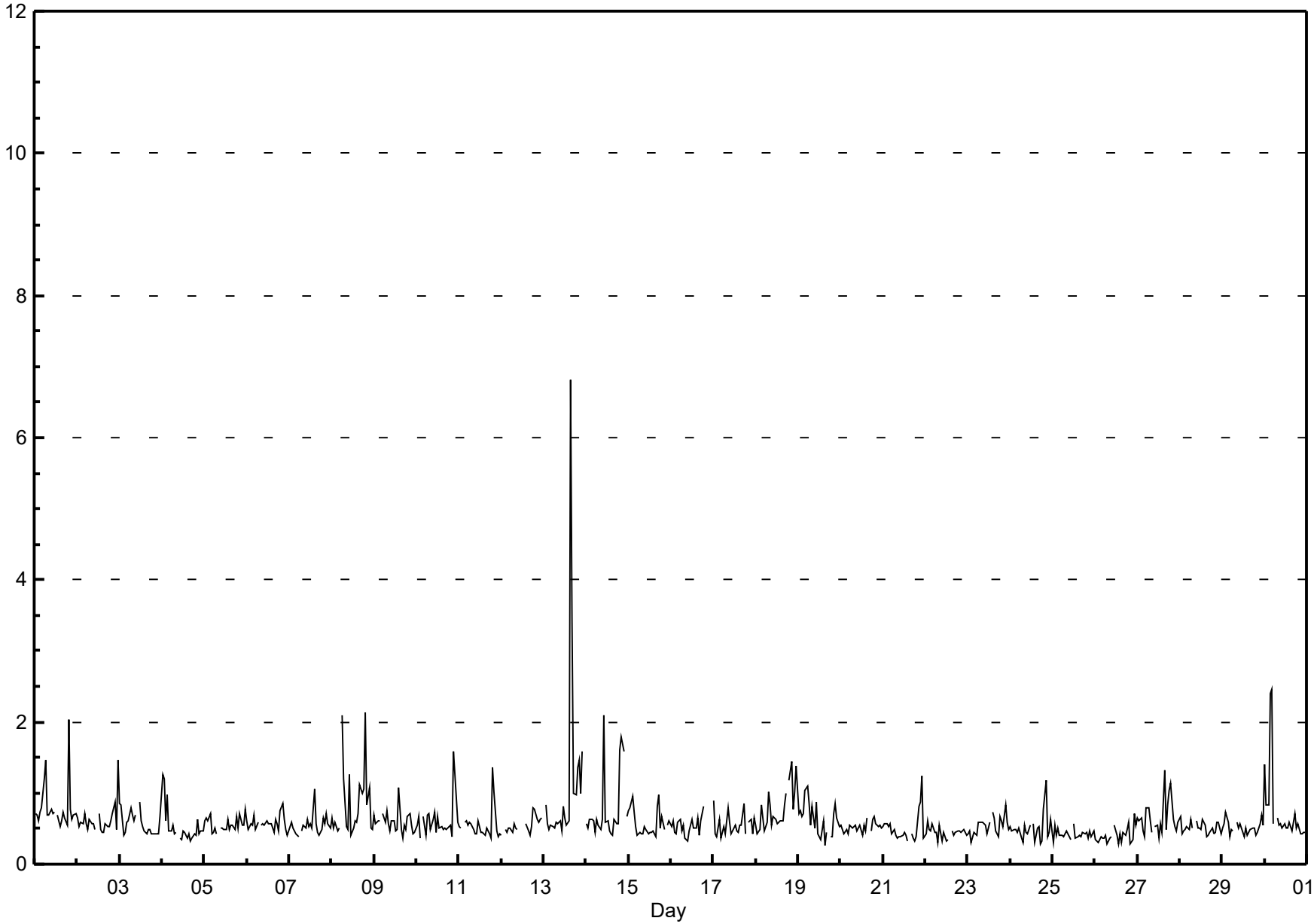
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

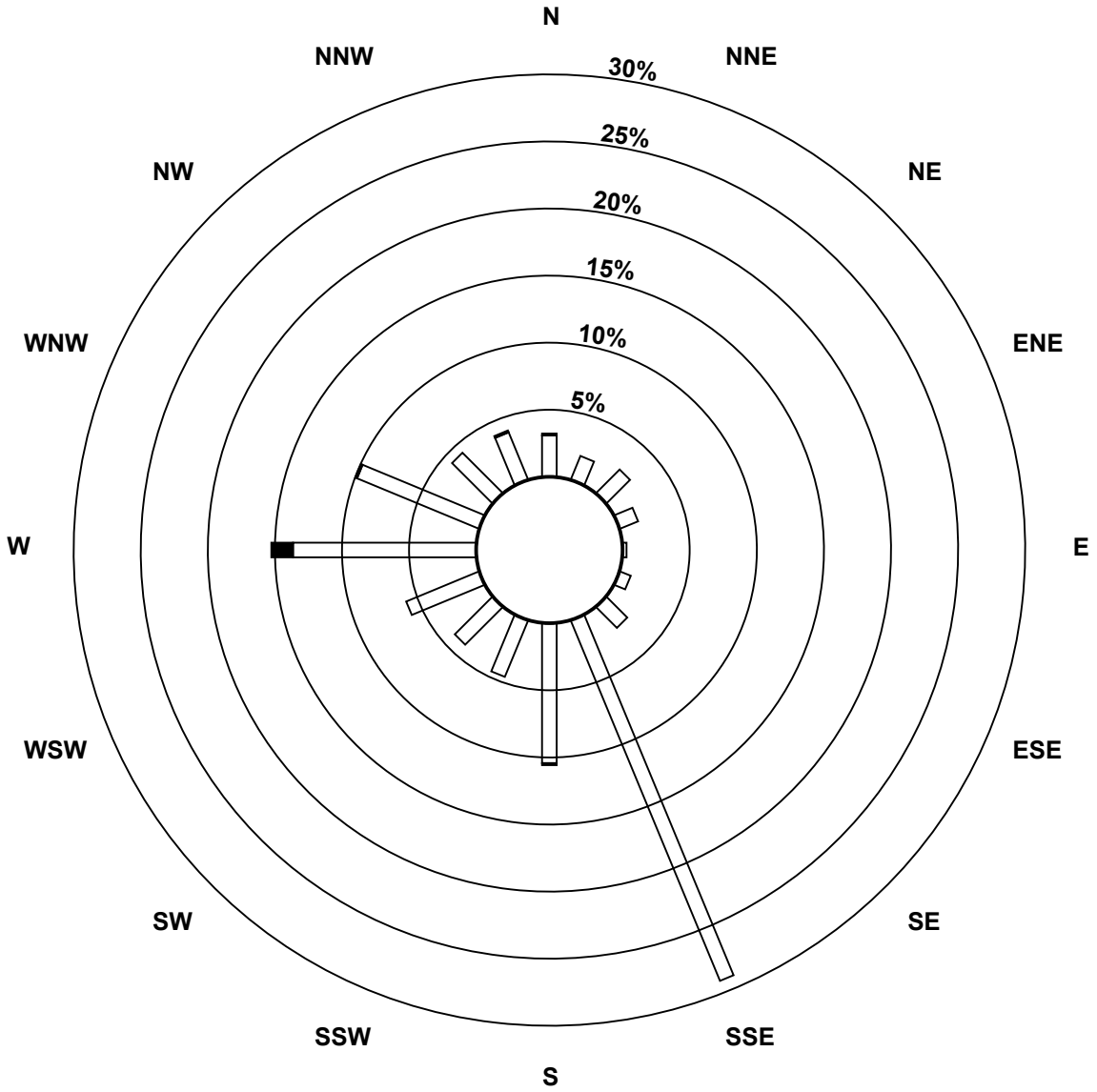
Valleyview - September 2016



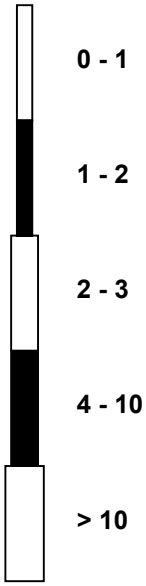
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Valleyview - September 2016



Pollutant Classes (ppb)

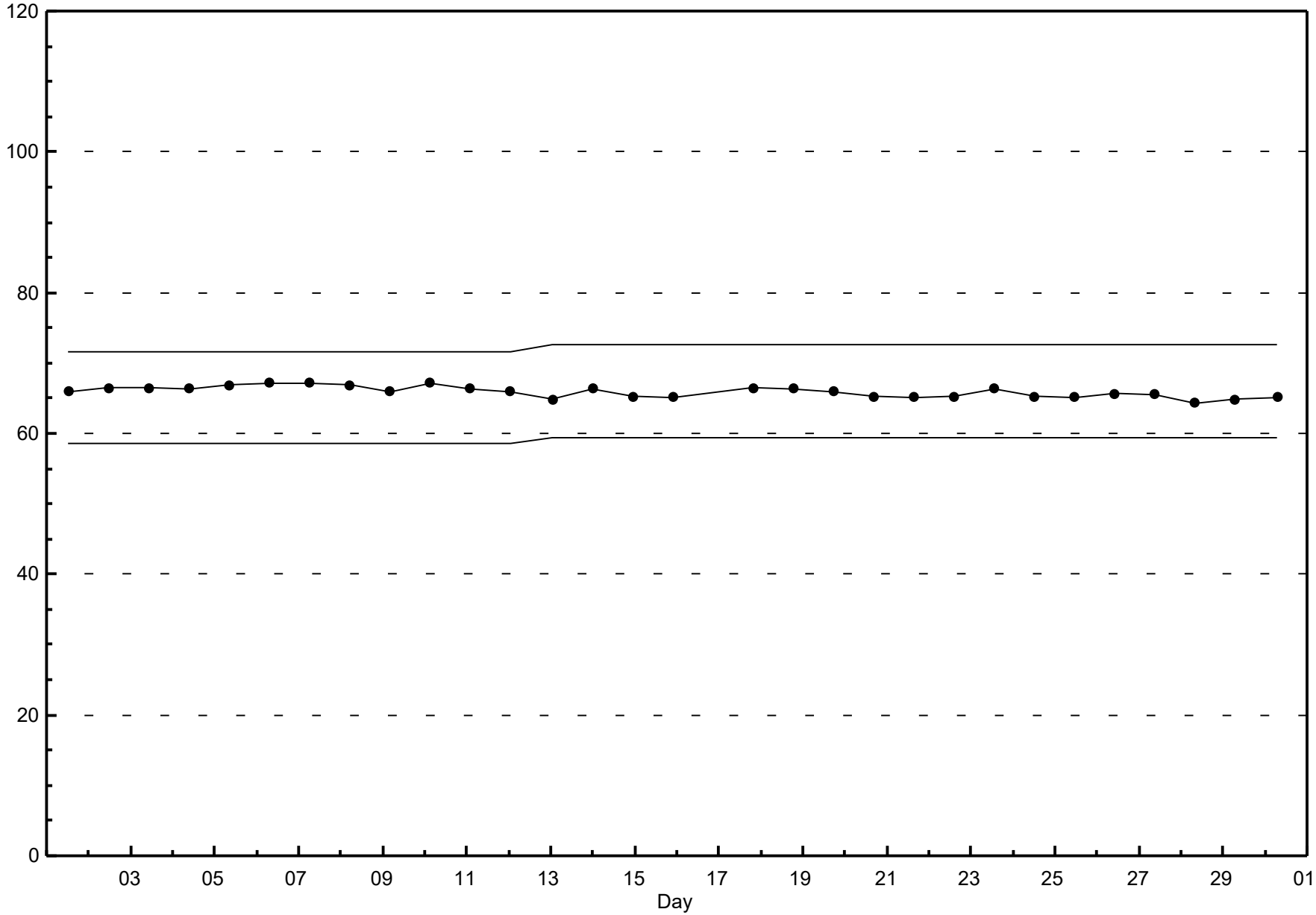


Peace Airshed Zone Association

Span Responses

Hydrogen Sulphide (H_2S)

Valleyview - September 2016



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - °C

Valleyview - September 2016

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

Maximum Value: 25.5 °C on Sep 13 17:00

Maximum Daily Average: 16.4 °C on Sep 14

Minimum Value: -2 °C on Sep 29 07:00

Minimum Daily Average: 7.2 °C on Sep 11

Maximum Diurnal Average: 16.5 °C at hour 17

Minimum Diurnal Average: 6.2 °C at hour 7

Monthly Average: 11.04 °C

Percentiles: P_1 = -0.1 P_{10} = 4.3 Q_1 = 7.5 Median = 10.8 Q_3 = 14.4 P_{90} = 17.7 P_{99} = 23.9

Hours in Service:	720
Hours of Data:	715
Hours of Missing Data:	5
Hours of Calibration:	0
Percent Operational Time:	99.3

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-Sep	15	14	14	13	13	13	13	13	13	13	13	13	14	14	15	16	16	16	16	15	12	11	10	9	13.5	16.2
2-Sep	9	8	7	8	8	8	8	9	10	10	10	11	12	13	13	14	14	14	12	12	11	11	10	10	10.4	14.2
3-Sep	9	9	9	8	7	7	6	6	6	6	6	7	8	9	9	8	8	7	7	7	7	6	6	6	7.3	9.2
4-Sep	6	5	5	5	5	4	4	4	6	8	8	8	9	10	10	10	11	12	12	10	8	6	5	4	7.3	12.1
5-Sep	4	3	2	2	1	1	1	1	4	7	10	12	14	16	16	17	17	15	14	12	10	9	8	7	8.5	16.9
6-Sep	6	5	4	3	3	3	4	5	6	10	13	15	15	16	16	18	18	17	17	14	11	12	11	11	10.6	17.7
7-Sep	10	9	7	7	6	6	6	8	10	13	15	16	17	17	18	16	17	18	17	14	11	9	8	8	11.8	18.3
8-Sep	7	8	9	9	9	9	9	10	11	12	13	14	15	15	16	13	13	14	14	13	12	12	10	10	11.6	15.6
9-Sep	9	8	8	8	7	7	7	8	9	12	15	16	17	18	18	18	17	17	15	13	12	12	12	12	12.3	18.3
10-Sep	11	11	10	9	9	9	11	13	14	15	16	16	17	17	17	17	17	16	15	12	10	9	8	8	12.8	17.0
11-Sep	9	8	7	7	6	6	6	5	6	6	6	7	7	7	8	8	9	9	8	8	7	7	7	7	7.2	8.8
12-Sep	7	7	5	4	3	2	2	4	6	9	11	14	15	16	17	18	18	17	15	13	10	9	8	8	9.9	17.7
13-Sep	7	7	6	6	6	5	5	6	11	14	17	20	21	23	24	25	26	25	24	22	21	19	18	15	15.5	25.5
14-Sep	13	12	11	11	10	10	9	11	14	18	19	20	21	22	22	23	23	23	22	20	18	17	14	12	16.4	22.9
15-Sep	12	12	11	10	10	8	9	10	13	16	19	20	21	21	22	23	23	23	21	18	15	14	12	12	15.7	23.5
16-Sep	12	11	10	10	10	11	11	11	14	18	19	20	21	21	22	21	20	16	14	P	P	P	P	P	15.4	21.6
17-Sep	11	11	11	11	11	11	11	12	12	12	14	16	17	18	18	17	18	16	14	13	12	11	10	10	13.2	18.5
18-Sep	8	9	9	9	10	10	10	11	10	10	11	11	13	14	14	15	16	14	14	13	12	10	9	9	11.4	15.7
19-Sep	8	6	6	5	5	5	5	7	9	11	11	13	14	14	14	14	14	14	12	10	8	8	6	5	9.4	14.5
20-Sep	4	4	3	3	2	1	1	2	5	9	11	12	13	13	14	14	14	14	14	11	9	7	5	4	7.9	14.4
21-Sep	3	2	2	1	1	1	0	1	4	7	11	14	16	17	18	19	19	18	17	13	10	8	6	5	8.9	19.0
22-Sep	4	4	3	2	1	1	1	1	6	10	12	14	16	18	19	19	20	20	18	15	14	13	13	12	10.6	19.7
23-Sep	11	11	11	10	10	10	9	9	10	11	12	13	15	17	18	18	18	17	16	15	12	12	11	11	12.8	17.7
24-Sep	12	11	11	9	8	8	8	8	10	11	12	13	14	15	15	16	16	15	14	12	11	10	8	6	11.4	15.8
25-Sep	6	5	4	3	3	4	3	4	4	6	9	13	15	16	17	17	17	17	16	13	11	10	8	9	9.6	17.2
26-Sep	10	10	8	7	7	6	7	8	11	14	16	19	23	24	24	25	24	23	22	21	20	19	18	17	16.0	24.8
27-Sep	16	14	13	13	13	12	12	11	10	11	12	13	13	14	15	15	14	13	12	10	9	7	5	4	11.8	15.9
28-Sep	2	2	1	1	1	0	-1	0	2	6	9	12	13	15	15	15	16	16	14	11	9	7	6	4	7.3	16.1
29-Sep	2	1	0	-1	-1	-1	-2	-1	1	3	7	10	12	14	15	16	16	15	14	14	13	12	12	12	7.6	15.8
30-Sep	11	10	10	10	9	9	9	8	9	8	8	8	8	9	9	9	9	8	8	7	7	6	6	6	8.4	10.7
	8.5	7.9	7.3	6.8	6.5	6.2	6.2	6.8	8.5	10.5	12.3	13.7	14.8	15.7	16.3	16.4	16.5	16.0	15.0	13.1	11.4	10.4	9.5	8.8	Diurnal Average	
	15.9	14.3	13.7	13.3	13.2	13.1	13.1	12.9	14.3	17.9	19.4	20.4	22.7	23.8	24.4	25.2	25.5	24.9	23.7	21.7	20.8	19.3	18.2	17.4	Diurnal Maximum	

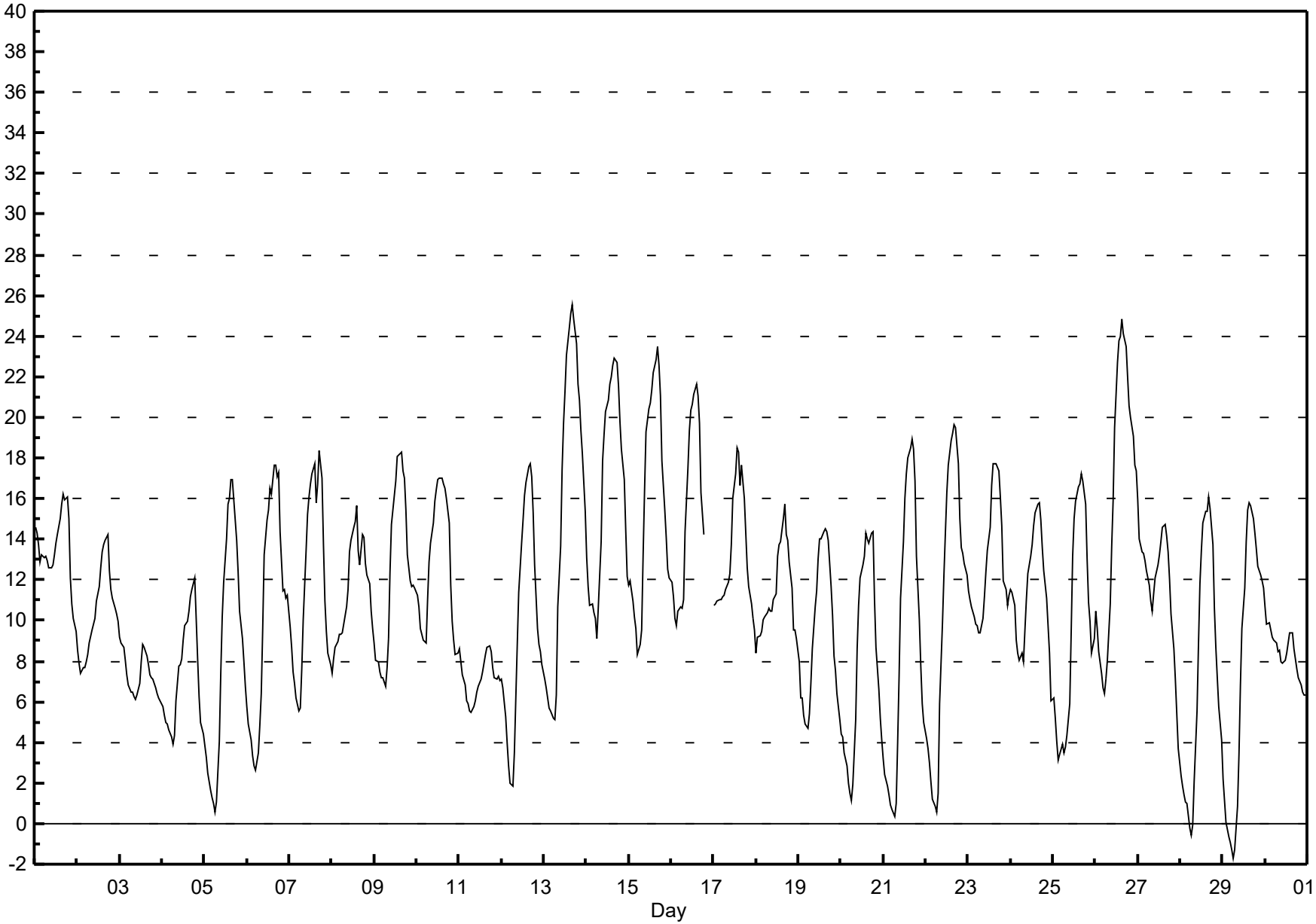
P - Power Failure

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - September 2016



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Valleyview - September 2016

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

Maximum Value: 98.2 % on Sep 17 05:00 Maximum Daily Average: 89.7 % on Sep 2

Minimum Value: 13 % on Sep 13 17:00 Minimum Daily Average: 30.7 % on Sep 27

Maximum Diurnal Average: 82.9 % at hour 6 Minimum Diurnal Average: 35.8 % at hour 16

Monthly Average: 62.28 % Percentiles: P_1 = 14.8 P_{10} = 24.7 Q_1 = 37.9 Median = 66.7 Q_3 = 87.0 P_{90} = 93.2 P_{99} = 97.6

Hours in Service:	720
Hours of Data:	715
Hours of Missing Data:	5
Hours of Calibration:	0
Percent Operational Time:	99.3

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-Sep	92	92	94	96	95	95	94	91	93	92	92	89	84	80	74	68	63	60	61	66	87	93	95	96	85.0	95.7
2-Sep	96	96	96	97	97	97	97	97	98	98	98	94	87	80	74	72	72	71	82	91	94	96	88	85	89.7	97.7
3-Sep	84	86	83	82	82	82	81	81	82	87	89	88	86	84	85	86	88	90	92	91	88	87	87	87	85.8	91.6
4-Sep	87	88	88	90	92	94	94	94	87	72	62	60	55	47	47	47	45	44	44	61	78	88	92	93	72.9	94.3
5-Sep	93	94	93	94	94	95	95	95	92	84	72	66	56	37	36	32	31	48	59	67	78	85	88	91	74.0	95.2
6-Sep	93	93	94	94	95	95	96	96	93	80	61	45	39	33	36	27	28	34	38	61	80	73	80	71	68.2	95.8
7-Sep	79	85	90	90	91	93	93	85	76	65	43	36	33	30	29	44	37	32	40	63	79	89	92	92	66.0	93.2
8-Sep	92	91	89	91	90	92	92	91	90	83	67	60	51	49	47	65	73	70	67	71	68	65	74	80	75.4	92.4
9-Sep	84	90	90	92	93	93	94	94	88	73	62	45	32	27	27	28	33	38	49	71	86	90	89	88	69.0	94.0
10-Sep	88	90	91	90	90	90	77	57	52	44	32	27	25	25	24	28	31	33	39	56	65	70	74	75	57.2	91.2
11-Sep	73	70	69	75	84	84	86	87	83	78	73	65	62	59	54	46	45	47	54	65	73	79	80	82	69.6	87.1
12-Sep	82	85	89	91	93	94	94	93	80	69	48	31	24	21	21	21	23	31	46	61	81	81	80	80	63.3	94.1
13-Sep	83	82	82	82	82	83	83	77	59	47	35	26	23	19	15	14	13	13	13	17	19	23	26	38	43.9	83.4
14-Sep	51	60	65	64	65	64	71	65	54	36	31	27	23	23	25	23	23	24	26	30	33	37	52	71	43.6	71.5
15-Sep	76	76	81	83	84	87	83	82	67	51	39	29	20	19	18	18	20	24	32	49	61	70	80	78	55.2	87.1
16-Sep	78	81	86	85	83	84	82	77	63	51	38	29	28	27	26	29	35	57	83	P	P	P	P	P	59.0	85.5
17-Sep	98	98	98	98	98	98	96	96	96	96	88	72	53	36	34	43	41	58	61	72	81	88	91	91	78.4	98.2
18-Sep	90	79	75	72	65	62	60	57	60	66	52	55	41	39	42	34	28	34	34	35	46	62	54	56	54.0	90.2
19-Sep	65	80	77	83	84	87	85	79	68	62	59	49	42	40	40	39	39	40	59	71	81	83	88	90	66.3	90.0
20-Sep	93	95	94	95	95	95	95	95	89	78	71	56	47	48	36	37	37	34	36	63	77	88	91	92	72.4	95.2
21-Sep	92	93	94	94	94	94	94	94	87	76	54	40	32	25	22	19	17	18	23	38	53	70	80	80	61.8	94.4
22-Sep	85	88	87	88	90	91	92	91	77	58	40	33	26	20	18	19	21	25	31	39	45	46	48	52	54.6	92.0
23-Sep	57	58	61	66	71	73	76	77	74	69	62	54	47	37	33	32	31	31	34	29	42	42	52	44	52.2	76.8
24-Sep	38	34	35	41	45	45	43	46	40	34	29	25	22	19	17	16	15	17	21	23	27	31	38	57	31.5	56.8
25-Sep	50	61	73	73	73	69	72	72	69	63	44	30	30	30	29	28	28	31	38	50	65	68	77	75	54.1	76.9
26-Sep	68	73	78	84	85	86	82	78	67	55	42	31	21	15	15	13	14	17	21	24	26	29	33	39	45.7	86.2
27-Sep	46	55	44	41	41	36	35	35	34	29	23	20	18	17	16	15	15	16	19	24	28	36	42	50	30.7	55.2
28-Sep	66	75	75	75	72	79	82	81	71	53	37	28	22	17	15	16	15	18	22	31	40	47	53	64	48.1	81.8
29-Sep	85	88	89	89	89	89	89	87	81	71	59	45	38	31	27	24	25	27	30	35	42	47	49	52	57.8	89.1
30-Sep	58	65	64	65	64	61	66	72	79	91	93	93	94	94	93	91	92	91	91	91	93	93	93	92	82.4	94.0
	77.4	80.0	80.8	82.0	82.5	82.9	82.6	80.7	75.0	67.0	56.4	48.3	42.0	37.7	35.9	35.8	35.9	39.0	44.9	53.2	62.7	67.4	71.2	73.9	Diurnal Average	
	97.9	97.9	98.1	98.1	98.2	97.6	96.9	97.1	97.5	97.7	97.6	93.5	93.8	94.0	93.2	91.1	91.6	90.6	91.6	91.4	94.5	96.3	94.5	95.5	Diurnal Maximum	

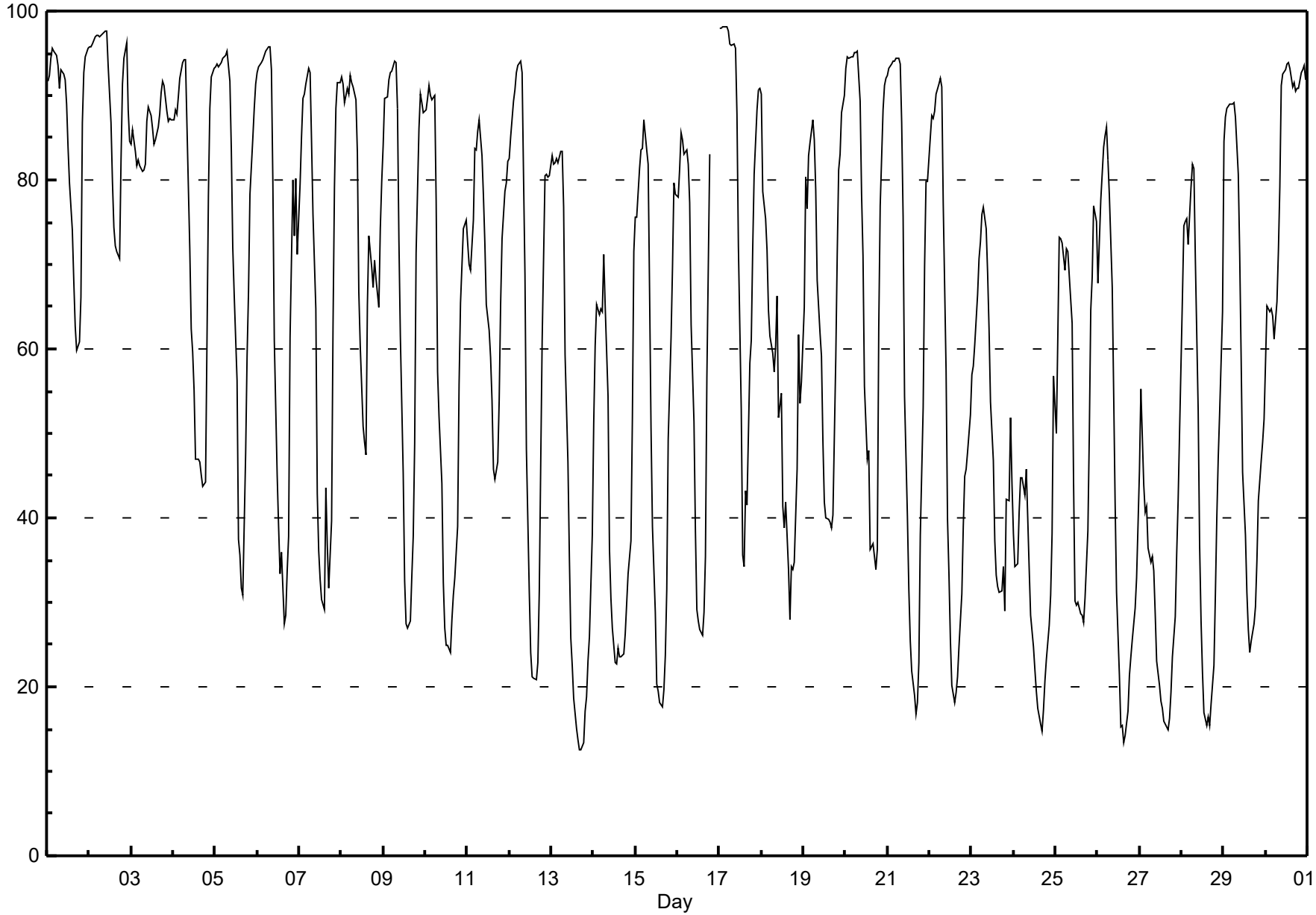
P - Power Failure

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Valleyview - September 2016



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - September 2016

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	7	6	13	1	4	6	4	4	2	5	7	7	7	8	8	10	7	4	1	0	0	0	0	4.0	13.1
Dir	360	354	5	10	308	284	277	306	285	292	264	272	279	286	269	270	291	296	310	274	192	326	120	221	303	10
2 Spd	0	0	0	0	0	0	0	1	1	1	1	1	2	1	1	1	1	0	4	0	0	1	4	4	0.2	3.9
Dir	165	175	321	176	306	229	200	152	147	160	163	202	321	131	147	123	126	359	29	313	231	272	317	271	284	317
3 Spd	6	6	10	11	12	13	15	10	12	10	11	14	13	12	12	12	10	10	7	7	9	5	5	4	9.7	15.4
Dir	279	282	287	283	287	281	274	272	265	271	279	277	283	284	303	318	303	301	298	308	300	302	302	287	287	274
4 Spd	4	5	3	1	0	0	0	0	2	1	1	1	1	0	1	2	2	2	1	1	1	1	1	0	0.4	4.5
Dir	280	276	276	228	180	152	162	150	158	156	188	297	254	184	56	32	51	44	113	74	70	335	325	308	300	276
5 Spd	0	0	0	0	0	0	0	1	1	2	4	1	1	1	1	1	1	2	2	2	2	1	0	0	0.5	3.7
Dir	306	176	203	1	240	239	312	249	179	156	159	216	242	35	14	35	243	253	152	156	153	150	57	260	177	159
6 Spd	0	0	0	0	0	0	1	1	2	2	2	2	6	6	4	4	4	3	1	0	0	1	2	1	1.1	6.0
Dir	300	185	185	196	183	178	171	158	159	159	157	263	277	276	312	264	315	252	192	174	165	207	164	218	251	276
7 Spd	1	1	2	2	1	1	1	2	2	2	8	10	11	8	8	3	4	2	1	0	0	0	0	0	2.0	11.2
Dir	175	164	162	160	165	166	167	163	158	166	274	280	273	282	298	172	245	224	217	184	199	163	175	181	254	273
8 Spd	0	0	0	0	1	1	1	0	1	2	7	7	10	11	10	10	6	5	5	5	6	5	3	1	3.8	10.8
Dir	188	185	146	32	218	181	238	200	219	234	263	290	284	279	271	284	267	263	261	263	284	274	243	196	270	279
9 Spd	1	1	1	1	1	1	1	1	2	2	3	3	2	1	4	4	4	4	4	2	3	4	4	4	2.1	4.2
Dir	177	155	161	156	151	154	158	152	154	154	153	173	215	179	158	162	159	228	231	158	159	154	158	158	169	158
10 Spd	3	1	2	1	0	1	7	15	12	13	16	17	16	16	13	13	12	9	10	12	7	4	4	8	7.3	17.2
Dir	157	163	161	163	175	168	243	264	265	268	286	286	282	297	284	324	344	331	337	335	329	287	285	318	294	286
11 Spd	12	11	11	11	9	8	7	9	10	12	11	12	11	10	10	9	8	6	7	4	3	1	0	1	7.6	12.1
Dir	337	347	339	333	331	325	332	327	331	327	339	348	341	338	331	323	316	306	316	283	252	207	157	160	330	348
12 Spd	0	0	0	0	0	1	1	2	2	2	3	4	4	3	4	4	3	0	1	0	0	2	2	2	1.5	4.3
Dir	187	155	183	171	162	158	163	153	162	155	156	163	160	171	216	228	235	220	147	206	176	161	161	164	177	160
13 Spd	2	2	1	2	1	1	1	2	3	2	3	10	12	11	13	13	15	14	12	10	10	5	6	2	5.3	14.9
Dir	158	160	168	161	164	164	170	158	155	160	233	273	275	261	267	268	280	281	283	277	284	281	262	186	266	280
14 Spd	1	1	1	1	1	1	1	2	2	8	13	14	17	15	9	9	8	8	7	3	5	3	1	1	4.6	16.6
Dir	161	156	153	162	164	172	162	164	159	269	276	285	281	290	308	300	301	297	295	285	275	254	205	142	282	281
15 Spd	1	1	1	1	1	1	1	0	2	2	1	5	9	10	9	8	5	3	0	0	1	0	1	1	2.0	9.7
Dir	153	154	151	154	170	160	166	186	152	155	174	243	256	254	270	277	279	271	240	128	169	173	153	152	245	254
16 Spd	1	1	0	1	2	2	1	1	2	1	4	8	9	6	6	6	5	8	1	P	P	P	P	P	2.5	9.0
Dir	164	172	179	224	156	165	167	175	163	163	264	274	273	271	266	301	295	299	154	P	P	P	P	P	267	273
17 Spd	0	1	1	1	2	1	1	1	1	2	2	2	4	7	6	4	1	1	2	4	3	2	2	1	1.5	7.1
Dir	171	172	161	159	159	161	170	195	154	156	162	194	248	244	272	280	263	195	189	165	166	167	174	166	208	244
18 Spd	1	6	4	7	8	6	5	7	9	4	14	15	16	11	8	10	10	9	9	7	1	0	6	5	7.2	16.0
Dir	167	254	244	263	262	255	260	270	278	263	275	283	280	290	306	289	292	289	277	277	278	196	259	262	276	280
19 Spd	3	1	1	1	1	1	1	0	4	2	3	1	3	5	1	2	4	6	3	1	0	1	0	1	0.6	5.8
Dir	241	188	219	184	170	146	155	242	272	271	242	122	298	307	64	53	26	21	18	315	226	3	185	161	305	21
20 Spd	1	0	0	0	0	1	0	1	2	2	3	3	2	1	6	8	8	3	0	0	0	0	0	0	1.1	8.2
Dir	154	163	236	98	170	157	174	161	152	158	254	272	294	13	300	302	323	327	121	184	146	150	195	224	293	302
21 Spd	0	0	0	0	0	0	0	0	2	2	2	3	4	4	3	2	1	2	1	0	0	0	0	0	1.1	4.0
Dir	194	204	178	164	157	278	203	247	166	153	157	156	162	164	171	178	180	151	140	4	338	198	193	202	164	164
22 Spd	0	1	0	0	0	0	0	0	1	6	7	8	8	9	8	8	8	7	7	7	6	6	6	5	4.4	8.7
Dir	160	341	281	333	164	217	216	183	163	160	160	159	160	161	157	154	159	159	158	151	152	158	161	163	158	161

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Valleyview - September 2016

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	8	9	7	6	5	5	5	6	4	3	3	3	1	1	2	1	3	1	0	1	1	3	3.3	8.7
Dir	157	159	161	160	161	161	159	159	159	159	161	165	162	162	161	164	159	179	285	274	210	266	173	250	166	160
24 Spd	6	10	7	4	4	4	7	5	7	12	14	16	15	17	17	15	14	11	11	10	4	3	0	1	8.7	17.1
Dir	261	264	261	247	240	252	254	252	273	276	279	283	283	279	286	287	284	294	286	276	265	247	207	166	276	279
25 Spd	1	1	1	1	2	2	1	1	2	3	3	3	3	2	0	1	1	1	0	0	0	0	0	1	1.2	3.2
Dir	171	153	156	179	164	164	176	154	154	156	155	155	165	166	178	130	144	146	163	75	157	255	194	177	160	155
26 Spd	2	1	0	0	0	0	2	3	4	4	4	3	3	4	2	3	5	4	3	3	3	3	3	10	2.0	10.5
Dir	168	171	169	168	182	226	176	162	158	158	157	159	177	208	177	166	153	155	156	167	165	166	259	308	177	308
27 Spd	16	12	12	9	10	9	13	15	13	15	19	18	19	17	16	17	18	13	9	4	2	1	0	0	11.2	19.1
Dir	288	270	272	248	259	269	280	277	285	285	278	283	290	274	276	266	273	276	280	250	245	201	186	171	275	278
28 Spd	1	1	1	1	1	0	0	0	0	1	2	1	1	2	3	3	1	1	2	4	2	4	2	0	0.3	3.9
Dir	162	161	165	167	174	173	113	209	297	152	164	152	134	131	150	140	135	54	340	11	354	349	349	3	92	349
29 Spd	0	0	0	0	0	0	0	0	1	2	1	1	3	3	3	7	6	5	4	2	2	3	1	0	1.1	6.6
Dir	171	353	192	171	172	196	194	190	169	150	150	62	4	4	360	20	37	47	59	100	144	148	150	351	52	20
30 Spd	1	2	0	1	3	5	4	5	3	4	4	3	4	4	4	4	4	5	6	7	8	6	6	6	3.8	7.7
Dir	349	335	340	335	353	1	10	2	31	32	43	41	32	39	51	76	69	64	50	41	43	39	28	33	34	43
Spd	1.1	1.2	1.1	1.0	1.2	1.2	1.7	1.9	1.8	2.0	3.6	4.5	5.4	4.9	4.4	4.0	3.6	3.1	2.2	1.5	1.0	0.7	0.8	0.8	Diurnal Average	
Dir	272	271	268	270	253	256	258	262	250	246	262	273	276	276	282	286	291	291	292	286	270	243	249	258		
Spd	15.8	11.8	11.9	13.1	12.3	12.9	15.4	15.3	13.4	14.6	19.1	17.5	19.0	17.1	16.7	16.5	17.9	14.0	12.3	11.9	10.3	6.0	6.4	10.5	Diurnal Maximum	
Dir	288	270	272	10	287	281	274	264	285	285	278	283	290	279	286	266	273	281	283	335	284	158	259	308		

Maximum Speed Value: 19 km/h on Sep 27 11:00
Maximum Daily Speed Average: 11.2 km/h on Sep 27
Maximum Diurnal Speed Average: 5.4 km/h at hour 13

Minimum Speed Value: 0 km/h on Sep 25 20:00
Minimum Daily Speed Average: 0.2 km/h on Sep 5
Minimum Diurnal Speed Average: 0.7 km/h at hour 22

Monthly Average Velocity: 2.21 km/h 273.4 deg

Speed Percentiles: $P_1 = 0.1$ $P_{10} = 0.3$ $Q_1 = 0.8$ Median = 2.3 $Q_3 = 6.2$ $P_{90} = 10.7$ $P_{99} = 16.4$

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

Hours in Service:	720
Hours of Data:	715
Hours of Missing Data:	5
Percent Operational Time:	99.3

P - Power Failure

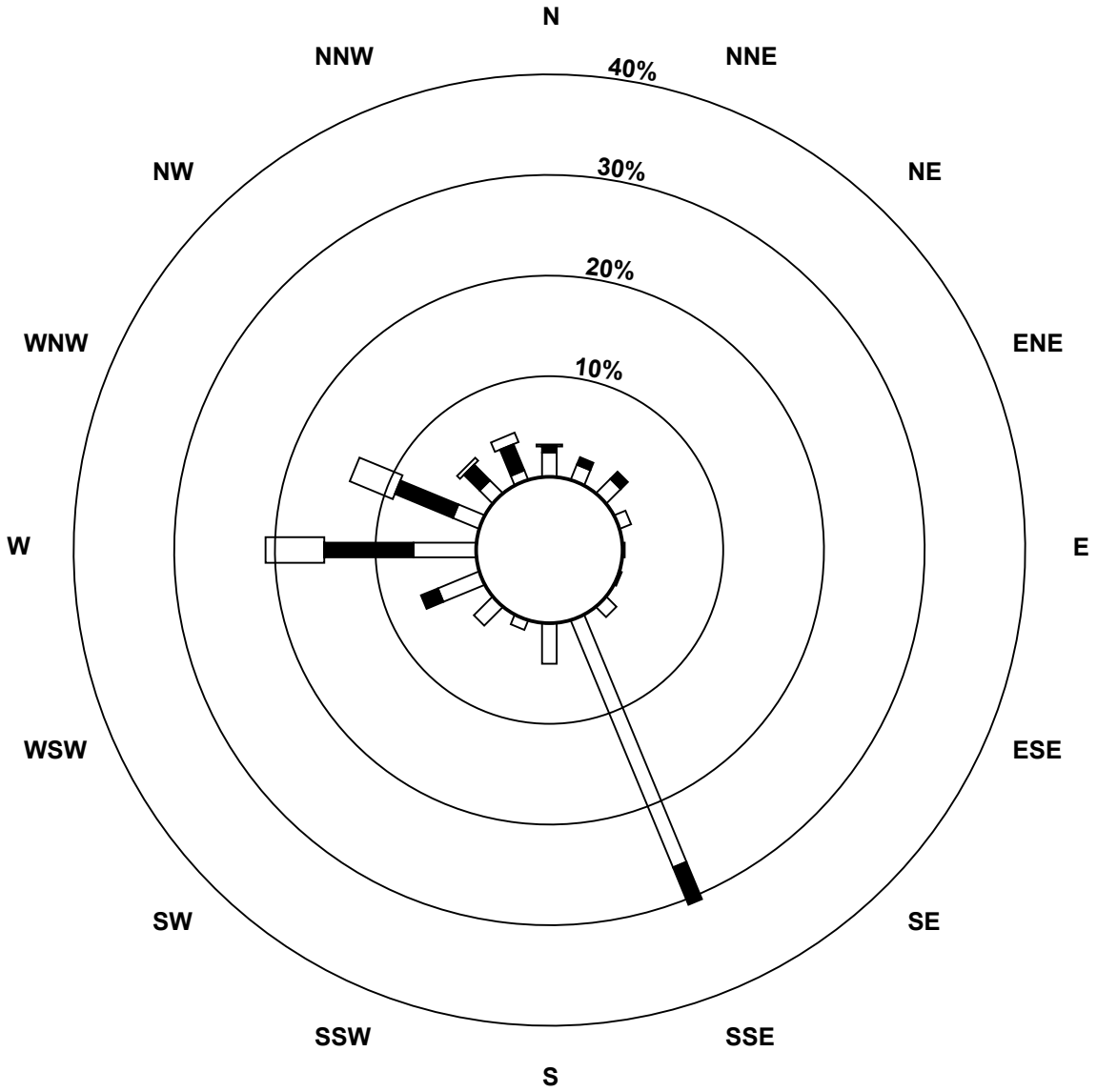
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	25	8	6	0	0	0	39
NorthEast	23	8	0	0	0	0	31
East	7	0	0	0	0	0	7
SouthEast	94	5	0	0	0	0	99
South	218	18	0	0	0	0	236
SouthWest	55	3	0	0	0	0	58
West	49	69	53	2	0	0	173
NorthWest	28	36	8	0	0	0	72
Total	499	147	67	2	0	0	715

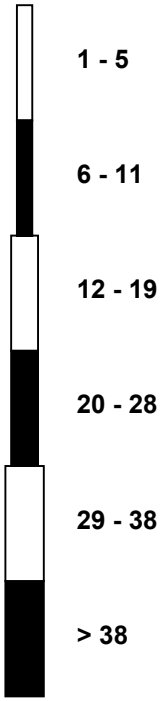
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - September 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - September 2016

Peace Airshed Zone Association

Maximum Speed: 20 km/h on Sep 27 13:00

Maximum Daily Speed Average: 11.8 km/h on Sep 27

Minimum Speed: 0 km/h on Sep 4 07:00

Minimum Daily Speed Average: 1.3 km/h on Sep 21

Maximum Diurnal Speed Average: 7.8 km/h at hour 13

Minimum Diurnal Speed Average: 2.3 km/h at hour 23

Monthly Average Speed: 4.28 km/h

Percentiles: $P_1 = 0.1$ $P_{10} = 0.3$ $Q_1 = 1.0$ Median = 2.6 $Q_3 = 6.4$ $P_{90} = 11.0$ $P_{99} = 17.3$

Hours in Service: 720

Hours of Data: 715

Hours of Missing Data: 5

Percent Operational Time: 99.3

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-Sep	7	7	8	13	3	5	6	6	5	3	5	7	7	8	9	9	10	8	4	2	0	0	0	1	5.5	13.4
2-Sep	0	0	1	1	1	1	0	1	1	1	1	2	3	1	1	1	1	1	4	1	0	1	4	4	1.3	4.0
3-Sep	6	7	10	11	13	13	16	11	12	10	11	14	13	13	13	12	11	10	7	8	9	6	5	4	10.2	15.7
4-Sep	4	5	3	1	0	0	0	0	2	1	2	2	2	2	2	3	3	2	1	1	1	1	1	0	1.7	4.6
5-Sep	0	0	0	0	0	0	1	1	1	2	4	1	2	2	2	3	1	2	2	2	2	1	1	0	1.3	3.8
6-Sep	0	0	0	0	0	0	1	1	2	2	2	4	6	7	4	5	4	4	1	0	0	2	2	2	2.1	7.3
7-Sep	2	1	2	2	1	1	1	2	2	2	9	11	12	8	8	3	5	3	1	0	1	0	0	0	3.1	11.6
8-Sep	0	0	0	1	1	1	2	0	1	2	8	8	10	11	10	11	7	5	5	5	6	6	3	2	4.5	11.3
9-Sep	1	1	1	1	1	1	1	1	2	2	3	4	3	2	4	4	4	5	4	2	3	4	4	4	2.6	4.7
10-Sep	3	2	2	1	0	1	7	16	12	13	17	18	17	17	14	14	12	9	10	12	8	4	4	8	9.2	17.6
11-Sep	12	11	11	11	9	9	7	9	11	12	12	12	11	10	10	10	8	6	7	5	3	1	0	1	8.2	12.3
12-Sep	0	0	0	0	0	1	1	2	2	3	3	4	4	4	5	5	3	1	1	0	0	2	2	2	1.9	5.1
13-Sep	2	2	1	2	1	1	1	2	3	2	5	10	12	11	13	13	15	14	13	10	10	6	6	2	6.6	15.2
14-Sep	1	1	1	1	1	1	1	2	2	9	13	14	17	15	9	10	8	8	7	3	5	3	1	1	5.6	17.0
15-Sep	1	1	1	1	1	1	1	1	2	3	1	6	10	10	10	9	6	4	1	1	1	0	1	1	3.0	10.2
16-Sep	1	1	0	2	2	2	1	1	2	1	5	8	10	6	6	7	5	8	1	P	P	P	P	P		
	0	1	1	1	2	1	1	1	1	2	3	3	5	8	7	5	2	1	2	4	3	2	2	2	2.4	7.8
18-Sep	1	6	5	7	8	6	5	8	9	5	14	15	16	12	8	10	11	9	9	7	2	1	7	5	7.8	16.3
19-Sep	4	1	1	1	1	1	1	1	5	3	3	2	4	6	4	2	4	6	3	1	1	1	0	1	2.4	6.2
20-Sep	1	0	0	0	0	1	0	1	2	2	3	4	3	1	7	8	8	3	0	0	0	0	0	0	1.9	8.4
21-Sep	0	0	0	0	0	0	0	0	2	2	2	3	4	4	4	3	1	2	1	0	0	0	0	0	1.3	4.4
22-Sep	0	1	0	0	0	0	0	0	1	6	7	8	8	9	8	8	8	7	7	7	6	6	6	5	4.6	8.8
23-Sep	6	6	8	9	7	6	5	5	5	6	4	3	3	3	2	1	2	1	3	2	0	1	1	3	3.8	8.8
24-Sep	6	10	7	4	4	4	7	5	8	12	14	16	16	17	17	16	15	11	11	10	4	3	1	1	9.2	17.4
25-Sep	1	1	1	1	2	2	1	1	2	3	3	3	3	2	1	2	1	1	0	0	0	0	0	1	1.4	3.3
26-Sep	2	1	0	0	0	1	2	3	4	4	4	3	4	5	3	3	5	4	3	3	3	3	5	11	3.1	10.6
27-Sep	16	12	12	9	10	9	13	15	14	15	19	18	20	17	17	17	18	14	9	4	3	1	0	0	11.8	19.5
28-Sep	1	1	1	1	1	0	0	0	0	2	2	2	3	3	4	3	1	1	2	4	2	4	2	0	1.7	3.9
29-Sep	0	0	0	0	0	0	0	0	1	2	2	2	3	4	4	7	6	6	4	2	3	3	1	0	2.1	6.8
30-Sep	1	2	0	1	3	5	4	5	4	4	4	3	4	4	4	4	4	5	6	7	8	6	6	6	4.2	7.8
	2.7	2.7	2.7	2.8	2.5	2.5	2.9	3.4	3.9	4.6	6.2	7.1	7.8	7.4	6.9	6.9	6.3	5.4	4.4	3.5	3.0	2.4	2.3	2.3	Diurnal Average	
	16.2	12.0	12.3	13.4	12.5	13.2	15.7	15.7	13.6	14.9	19.5	17.9	19.5	17.4	17.4	16.9	18.4	14.2	12.6	12.1	10.5	6.0	6.6	10.6	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

Valleyview - September 2016

Maximum Value: 96.6 deg on Sep 28 13:00

Minimum Value: 5.9 deg on Sep 13 01:00

Percentiles: P_1 = 6.5 P_{10} = 10.0 Q_1 = 12.8 Median = 21.9 Q_3 = 43.0 P_{90} = 63.8 P_{99} = 88.4

Hours in Service:	720
Hours of Data:	715
Hours of Missing Data:	5
Hours of Calibration:	0
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Sep	9	13	48	12	69	26	18	57	62	75	19	16	17	24	22	23	19	20	24	35	17	78	82	71	81.9
2-Sep	39	36	87	86	64	51	48	16	25	24	33	51	80	53	35	45	37	81	26	85	68	48	15	22	86.6
3-Sep	12	14	13	11	11	13	11	15	13	15	12	11	11	12	15	11	10	12	17	15	11	13	12	16	17.2
4-Sep	12	13	24	56	49	59	96	79	26	59	57	78	79	87	63	64	55	46	45	19	24	11	15	64	96.2
5-Sep	70	74	63	58	28	65	44	37	60	26	15	65	87	85	79	86	58	48	54	10	11	13	89	64	89.4
6-Sep	81	44	43	26	19	14	13	15	11	27	33	65	29	37	27	46	28	43	35	45	8	32	15	76	80.8
7-Sep	26	13	8	7	8	8	13	9	11	44	22	20	16	17	19	27	38	37	35	64	61	74	49	53	74.0
8-Sep	44	61	62	83	49	18	31	54	48	49	24	25	21	16	19	20	14	14	21	11	22	31	30	45	83.2
9-Sep	39	17	19	31	27	26	20	8	9	14	18	38	48	60	23	20	9	40	37	6	7	9	8	6	59.6
10-Sep	8	22	10	11	36	37	33	13	13	16	16	13	14	14	11	19	18	13	18	11	13	23	16	13	37.3
11-Sep	11	12	12	10	14	7	20	10	9	10	11	11	11	13	17	17	14	13	13	22	19	39	55	16	55.0
12-Sep	42	59	26	23	36	17	17	10	16	20	25	22	15	31	42	42	50	49	14	73	57	22	9	7	72.7
13-Sep	6	6	8	16	23	27	43	26	9	18	53	16	16	17	15	17	13	10	12	8	11	18	12	36	53.2
14-Sep	23	31	11	19	17	20	10	8	16	49	13	15	12	13	14	15	17	13	13	24	10	11	32	44	49.5
15-Sep	9	13	11	13	28	32	18	37	13	16	88	45	32	22	17	20	26	22	68	66	21	34	29	24	88.1
16-Sep	12	12	42	56	33	28	10	30	28	59	45	24	19	29	29	20	12	22	47	P	P	P	P	P	58.5
17-Sep	62	17	10	8	8	13	17	39	20	15	19	42	41	33	37	35	38	30	25	13	11	21	28	14	62.2
18-Sep	23	22	20	14	8	10	13	13	11	39	11	10	11	16	19	14	15	16	13	11	56	54	13	16	56.5
19-Sep	39	35	27	37	61	24	13	83	25	71	36	57	50	35	74	46	27	25	38	54	69	90	60	55	90.4
20-Sep	44	61	72	85	63	14	30	25	25	39	43	48	72	75	29	13	14	26	60	45	83	55	72	70	84.7
21-Sep	41	46	31	46	40	48	48	42	15	34	52	23	18	27	40	39	61	22	15	70	70	61	57	52	70.3
22-Sep	79	35	65	71	62	41	63	39	58	10	9	9	10	9	12	11	11	10	8	8	9	6	9	14	78.9
23-Sep	9	10	8	7	7	8	9	7	11	8	15	12	12	18	47	19	16	35	43	55	29	39	53	17	55.2
24-Sep	13	9	14	23	38	29	9	16	14	12	15	16	15	12	16	16	14	11	10	9	23	19	39	29	38.7
25-Sep	17	17	13	31	6	9	13	60	11	10	23	18	23	24	75	51	36	27	36	96	43	72	51	11	96.4
26-Sep	10	32	64	66	57	88	9	8	6	8	10	15	29	30	22	16	10	8	16	10	8	7	55	10	88.3
27-Sep	13	11	17	14	12	13	11	11	10	12	12	11	13	15	19	13	14	11	11	34	37	45	19	31	44.7
28-Sep	14	30	12	17	44	55	62	89	42	67	38	64	97	70	50	58	80	62	28	11	16	10	24	78	96.6
29-Sep	66	79	25	67	28	50	37	39	37	23	60	89	41	31	40	18	15	12	27	24	33	11	35	87	88.5
30-Sep	14	22	37	16	14	10	17	12	24	14	11	13	12	14	18	25	23	21	15	9	10	12	10	12	37.4
	80.8	79.1	86.6	85.7	69.2	88.3	96.2	88.7	62.2	75.5	88.1	88.5	96.6	87.4	78.5	85.5	79.9	81.0	67.8	96.4	83.1	90.4	89.4	87.3	

P - Power Failure

PAZA
Donnelly Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Donnelly - September 2016

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

Maximum Value: 1.3 ppb on Sep 4 09:00 Maximum Daily Average: 0.3 ppb on Sep 22

Minimum Value: 0 ppb on Sep 1 01:00 Minimum Daily Average: 0.0 ppb on Sep 1

Maximum Diurnal Average: 0.1 ppb at hour 9 Minimum Diurnal Average: 0.1 ppb at hour 20

Monthly Average: 0.09 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.1 P_{90} = 0.2 P_{99} = 0.5

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-Sep	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
2-Sep	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
3-Sep	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
4-Sep	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	1.3
5-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
6-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
7-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
8-Sep	0	0	0	0	0	A	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.1	0.2
9-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.1	0.6
10-Sep	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
11-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
12-Sep	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
13-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
14-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.1
15-Sep	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
16-Sep	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
17-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
18-Sep	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
19-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3
20-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3
21-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0.2	0.5
22-Sep	0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.9
23-Sep	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
24-Sep	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
25-Sep	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.8
26-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
27-Sep	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
28-Sep	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
29-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.7
30-Sep	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
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	
	0.3	0.2	0.2	0.3	0.4	0.8	0.3	0.3	1.3	0.5	0.9	0.5	0.3	0.4	0.7	0.4	0.4	0.8	0.3	0.3	0.3	0.3	0.3	0.2	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

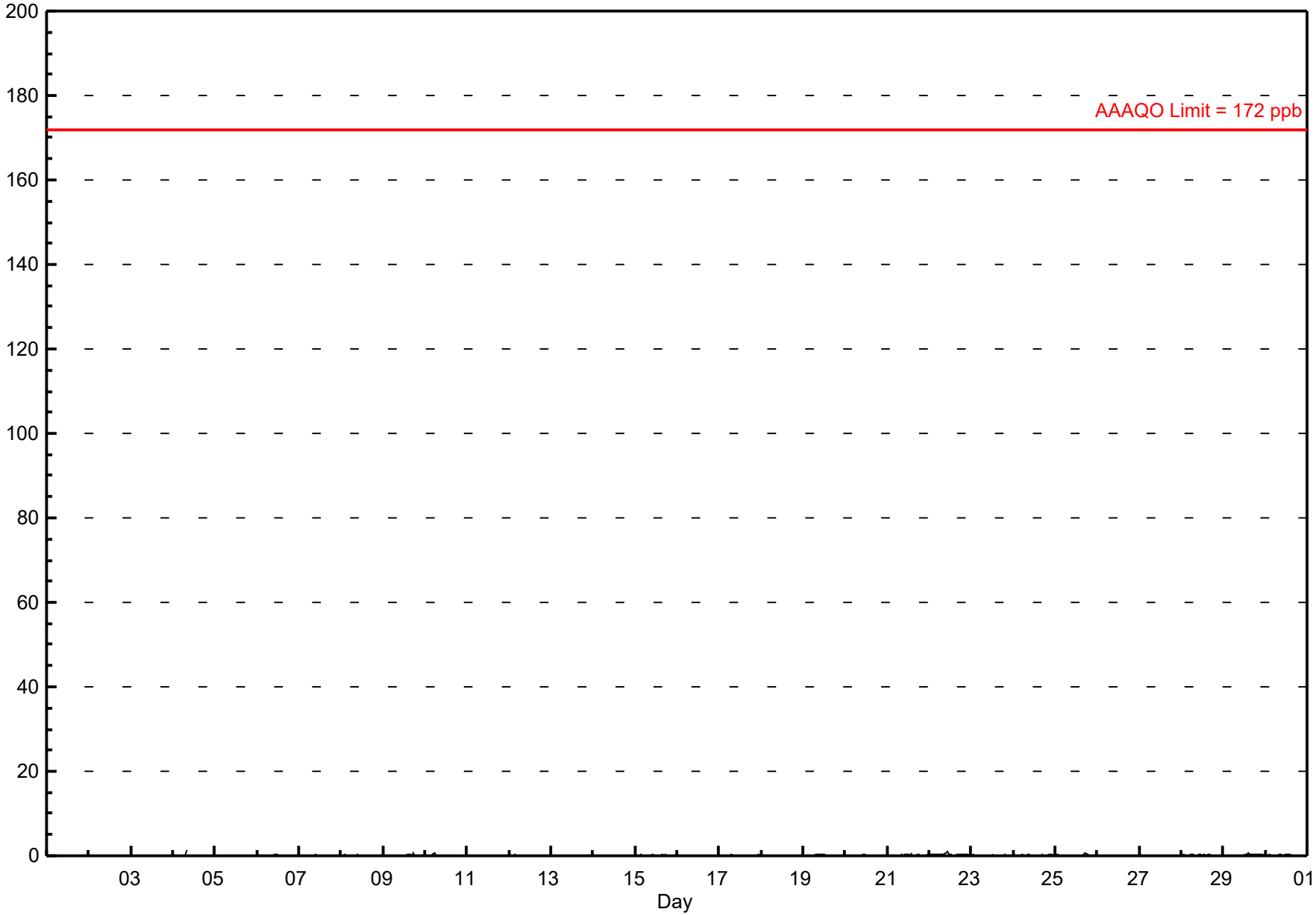
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Donnelly - September 2016



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Donnelly - September 2016

Maximum Value: 19.7 ppb on Sep 22 11:00

Maximum Daily Average: 1.6 ppb on Sep 22

Minimum Value: 0 ppb on Sep 1 17:00

Minimum Daily Average: 0.3 ppb on Sep 1

Maximum Diurnal Average: 1.2 ppb at hour 11

Minimum Diurnal Average: 0.4 ppb at hour 24

Monthly Average: 0.54 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.6$ $P_{90} = 0.7$ $P_{99} = 1.6$

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-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
2-Sep	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
3-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
4-Sep	0	0	0	0	0	0	0	2	4	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.6	3.5
5-Sep	0	0	1	1	1	0	0	0	A	1	1	1	1	0	0	1	0	0	0	0	0	0	0	1	0.5	0.6
6-Sep	1	1	1	0	0	0	1	A	0	1	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0.5	0.9
7-Sep	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	1.3
8-Sep	0	1	1	1	1	A	0	1	1	1	1	1	C	C	C	0	0	0	0	0	0	0	0	0	0.5	0.8
9-Sep	0	1	0	0	A	1	1	1	1	0	0	1	0	0	1	1	1	3	0	0	1	0	0	0	0.6	2.8
10-Sep	0	0	0	A	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.0
11-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0.4	1.3
12-Sep	1	A	1	1	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0.5	0.7
13-Sep	A	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	A	0.4	0.6
14-Sep	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	A	1	0.4	0.7
15-Sep	0	0	0	1	1	1	0	0	0	1	1	1	0	0	0	1	1	1	1	0	0	A	1	0	0.5	0.6
16-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	1	0	0.4	0.7
17-Sep	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	A	1	0	1	0	0.5	0.7
18-Sep	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.6
19-Sep	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	0	0	A	1	0	0	1	0	0	0.5	1.0
20-Sep	0	0	0	0	0	1	0	0	1	0	1	1	1	0	0	0	A	0	0	0	1	0	0	1	0.5	1.4
21-Sep	1	0	0	1	1	0	0	1	1	0	1	1	1	1	5	A	1	1	1	1	0	1	1	1	0.8	5.4
22-Sep	1	1	1	1	1	1	1	1	1	1	20	1	1	1	A	1	1	1	1	1	1	1	1	1	1.6	19.7
23-Sep	1	1	0	0	1	0	0	0	1	0	0	1	0	A	1	1	1	1	0	1	1	0	0	0	0.6	1.5
24-Sep	1	0	1	0	0	1	0	1	0	1	1	0	A	1	1	0	1	1	1	1	2	1	1	0	0.6	1.7
25-Sep	1	1	0	1	0	1	1	0	1	0	1	A	0	1	1	1	1	3	2	1	0	0	0	0	0.7	2.7
26-Sep	0	1	0	0	0	0	1	1	0	0	A	1	1	1	0	1	0	0	0	0	0	0	0	0	0.4	0.7
27-Sep	0	0	1	1	0	0	0	0	1	A	1	0	0	1	1	1	1	1	0	0	1	1	1	1	0.5	1.0
28-Sep	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.6	0.9
29-Sep	0	0	0	1	1	0	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
30-Sep	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0	0	0.6	1.0
	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	1.2	0.5	0.5	0.5	0.7	0.5	0.5	0.7	0.5	0.5	0.5	0.4	0.5	0.4	Diurnal Average	
	1.1	0.7	1.0	0.8	1.7	2.0	0.9	1.5	3.5	1.3	19.7	1.0	0.9	1.0	5.4	1.3	0.9	2.8	1.6	1.3	1.7	0.9	1.1	0.8	Diurnal Maximum	

C - Calibration

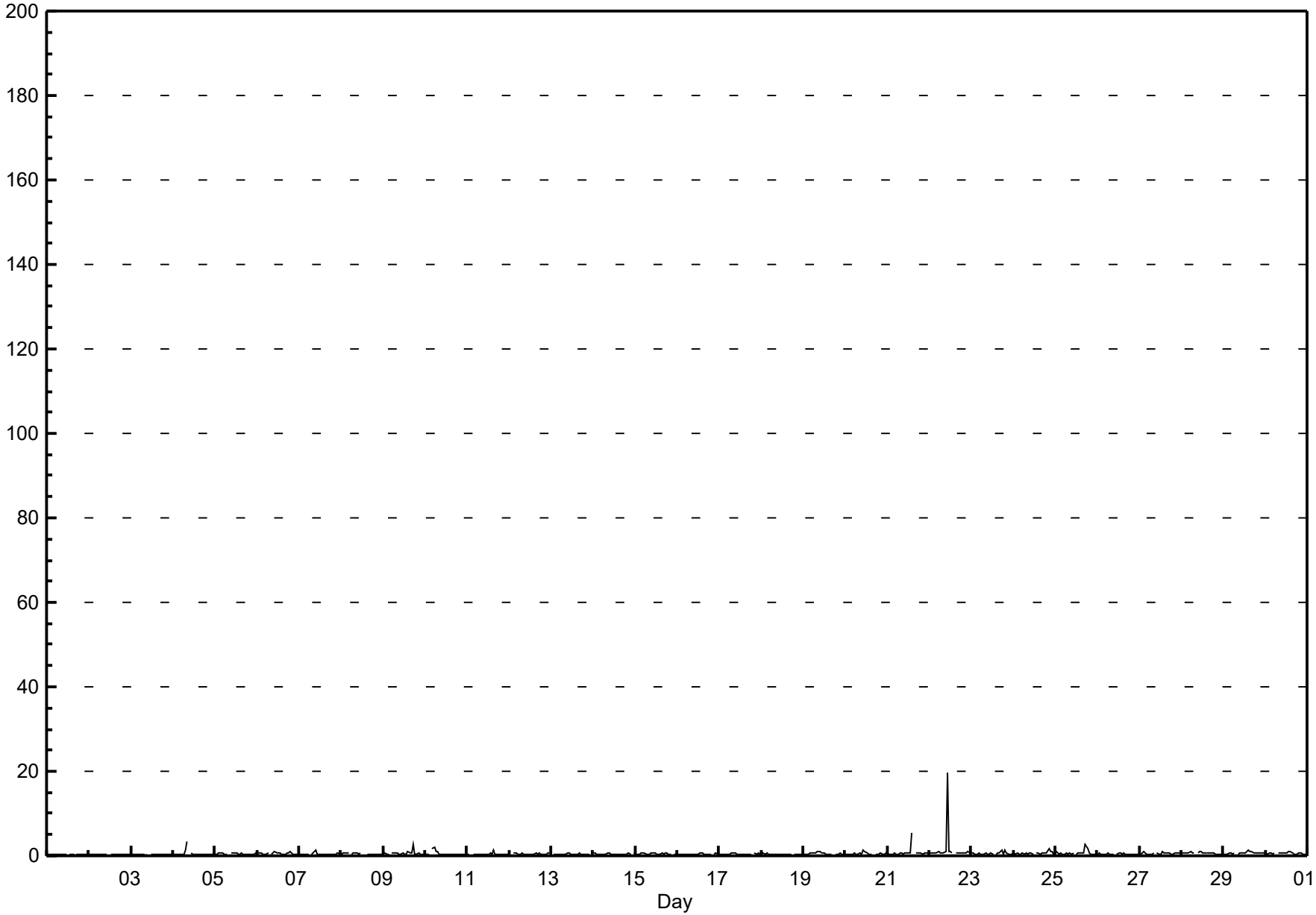
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

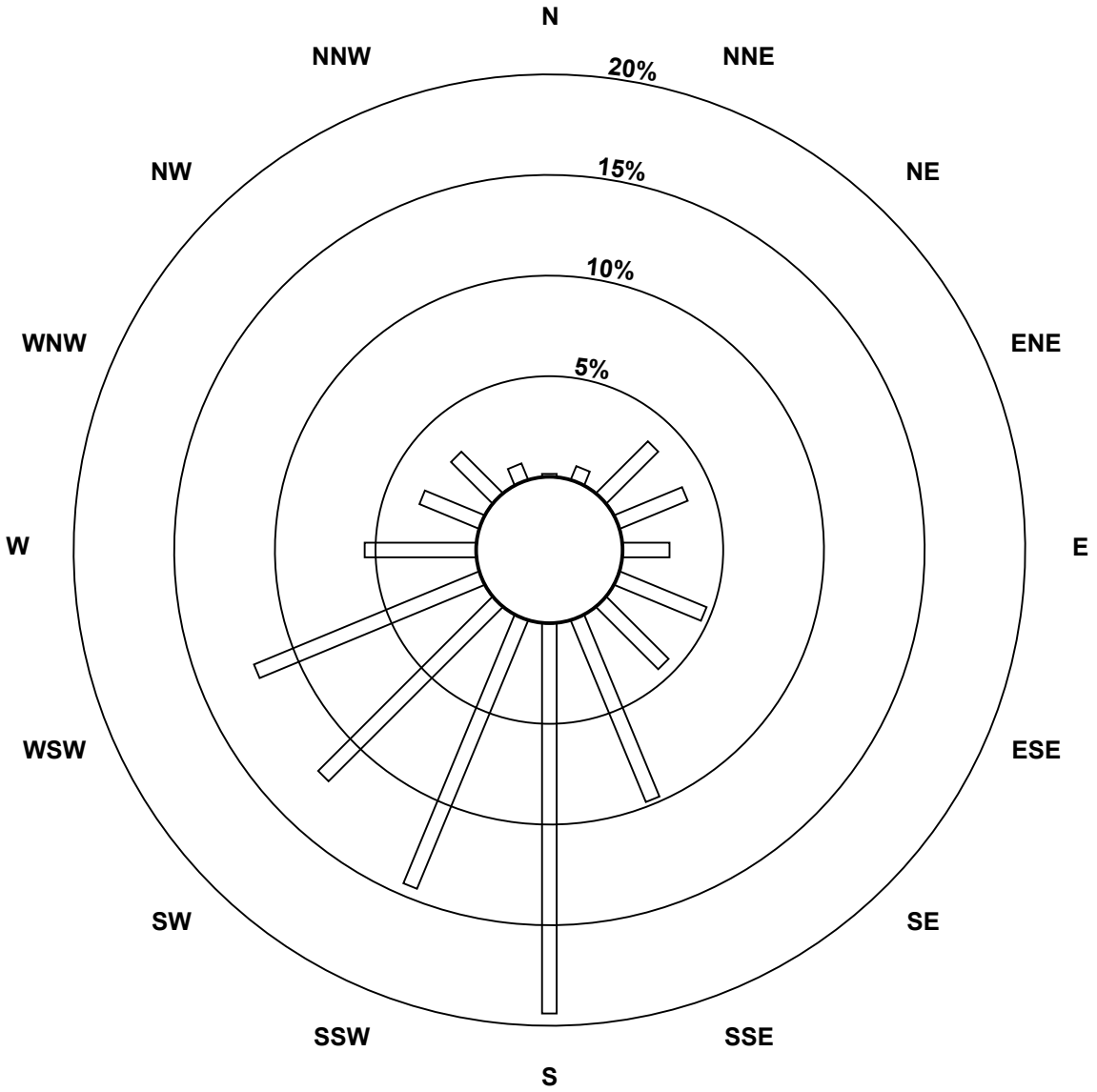
Donnelly - September 2016



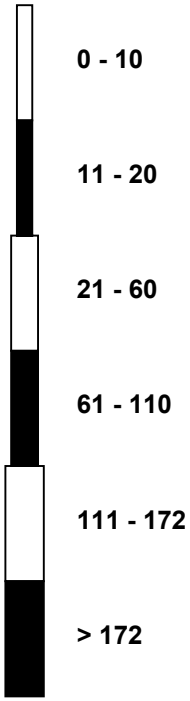
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Donnelly - September 2016



Pollutant Classes (ppb)

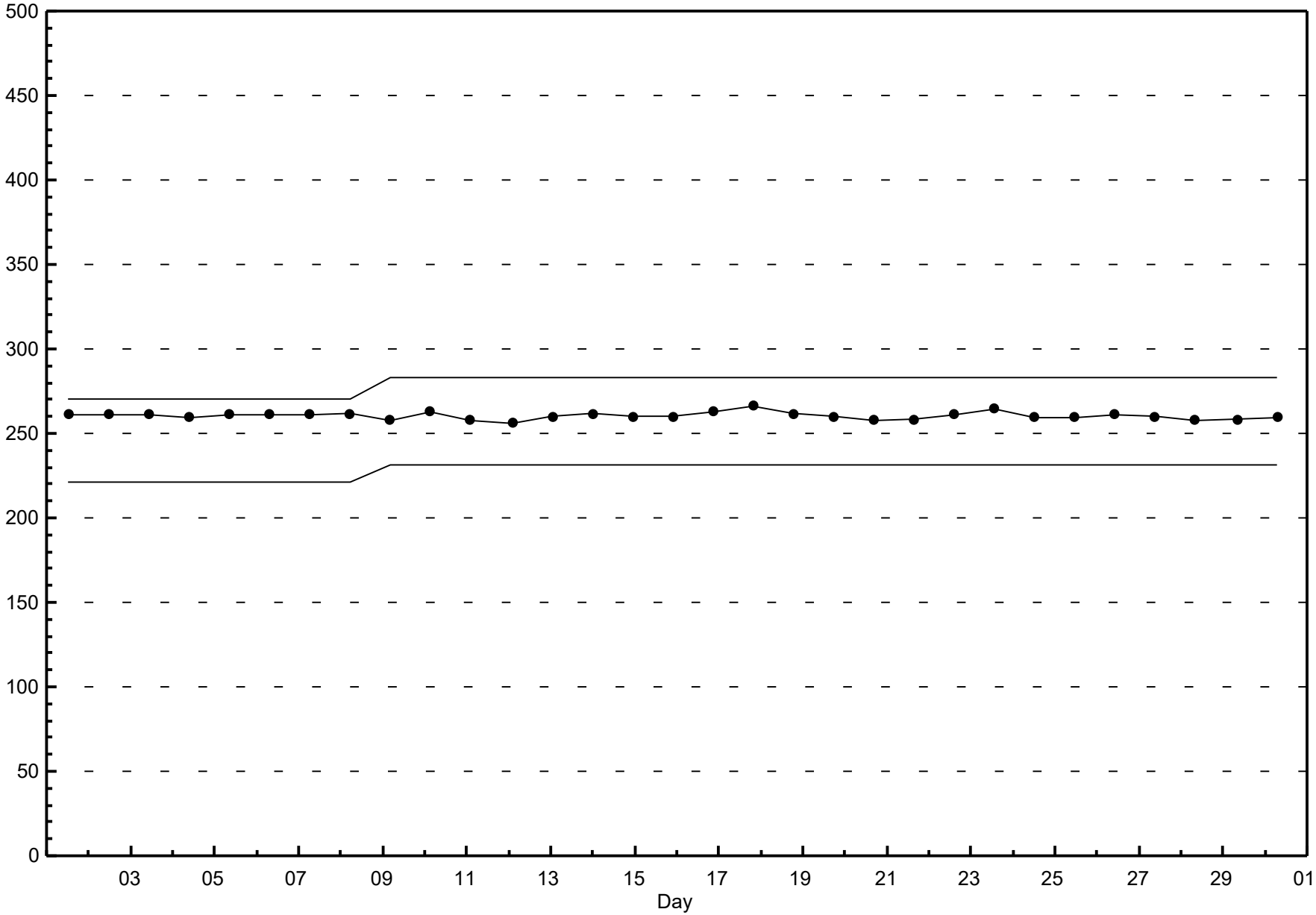


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Donnelly - September 2016



Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Donnelly - September 2016

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

Maximum Value: 3.1 ppb on Sep 28 22:00

Maximum Daily Average: 0.6 ppb on Sep 1

Minimum Value: 0 ppb on Sep 3 17:00

Minimum Daily Average: 0.0 ppb on Sep 27

Maximum Diurnal Average: 0.3 ppb at hour 22

Minimum Diurnal Average: 0.1 ppb at hour 13

Monthly Average: 0.17 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} = 0.8

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-Sep	1	1	1	0	1	0	2	1	0	0	1	1	A	1	0	0	0	0	0	0	1	1	1	1	0.6	1.9
2-Sep	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0.3	0.6
3-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
4-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
5-Sep	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
6-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
7-Sep	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
8-Sep	0	0	0	0	0	A	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.2	0.4
9-Sep	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
10-Sep	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
11-Sep	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
12-Sep	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
13-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.4
14-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0.2	0.8
15-Sep	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
16-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.3
17-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
18-Sep	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
19-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	1	1	0.2	1.2
20-Sep	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
21-Sep	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
22-Sep	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
23-Sep	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
24-Sep	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
25-Sep	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
26-Sep	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
27-Sep	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
28-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0.2	3.1
29-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
30-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	Diurnal Average	
	1.2	0.6	0.5	0.4	0.7	0.7	1.9	0.6	0.4	0.4	0.6	0.6	0.3	0.8	0.4	0.3	0.3	0.3	0.3	0.4	0.8	3.1	0.7	0.8	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

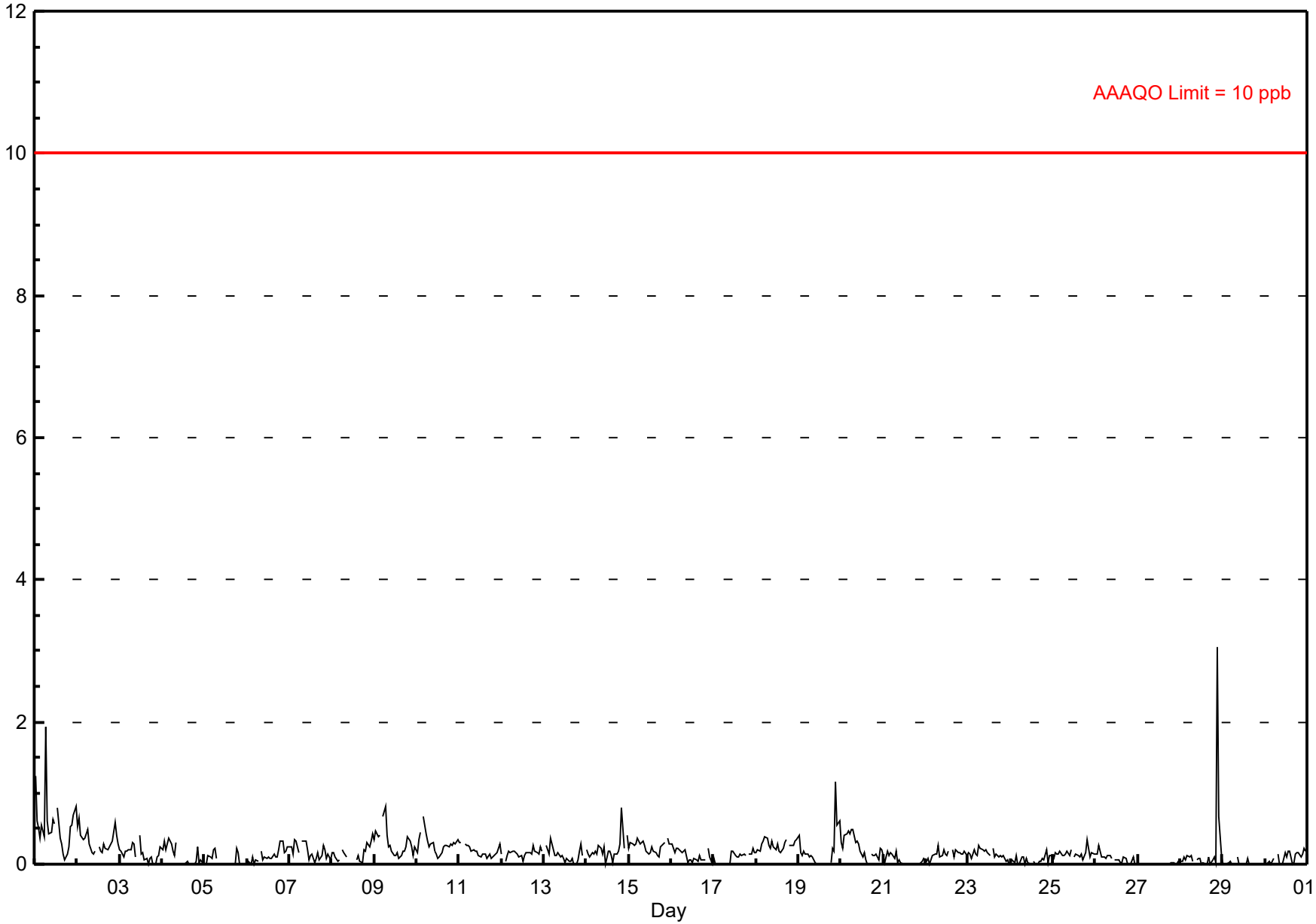
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Donnelly - September 2016



Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Donnelly - September 2016

Maximum Value: 23.0 ppb on Sep 28 22:00

Maximum Daily Average: 1.7 ppb on Sep 28

Minimum Value: 0 ppb on Sep 27 14:00

Minimum Daily Average: 0.5 ppb on Sep 27

Maximum Diurnal Average: 1.9 ppb at hour 22

Minimum Diurnal Average: 0.6 ppb at hour 16

Monthly Average: 0.80 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 0.8$ $P_{90} = 1.0$ $P_{99} = 1.8$

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-Sep	2	1	1	1	1	1	4	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1.3	3.7
2-Sep	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
3-Sep	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	0.7	1.0
4-Sep	1	1	1	1	1	1	1	1	1	A	1	1	0	0	1	1	1	1	0	1	1	1	1	1	0.7	1.1
5-Sep	1	1	1	1	1	1	1	1	A	1	1	0	1	1	1	0	0	0	1	1	0	0	0	1	0.6	0.9
6-Sep	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.7	1.4
7-Sep	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.6
8-Sep	1	1	1	1	1	A	1	1	1	C	C	C	C	C	1	1	0	1	1	1	1	1	1	1	0.8	1.0
9-Sep	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	1.4
10-Sep	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
11-Sep	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
12-Sep	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
13-Sep	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	0.8	1.0
14-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	2	A	1	1.1	6.9
15-Sep	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
16-Sep	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0	1	1	A	1	1	0	0.7	1.1
17-Sep	1	1	0	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	0.9
18-Sep	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
19-Sep	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	A	1	1	1	12	1	1	1.2	12.0
20-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	0.9	1.2
21-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	0	0	1	0	1	0	1	1	0.6	0.8
22-Sep	1	1	1	1	1	1	1	1	1	1	4	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	3.8
23-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	0.7	1.0
24-Sep	1	1	0	1	0	1	1	1	1	0	0	1	A	1	1	0	1	1	1	1	1	0	1	1	0.6	1.1
25-Sep	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
26-Sep	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	0	0.6	1.0
27-Sep	1	1	1	0	0	1	0	0	0	A	1	0	0	0	0	0	0	1	0	1	1	0	1	1	0.5	0.8
28-Sep	1	0	1	1	1	1	1	1	A	1	1	1	0	1	1	1	1	1	1	1	0	23	3	1	1.7	23.0
29-Sep	0	0	0	1	0	0	1	A	1	1	0	0	0	1	1	1	0	1	1	0	1	1	1	1	0.5	1.0
30-Sep	0	0	0	0	1	1	A	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.6	0.9
	0.8	0.8	0.7	0.8	0.8	0.8	0.9	0.8	0.7	0.8	0.8	0.7	0.6	0.7	0.7	0.6	0.7	0.7	0.7	0.7	1.0	1.9	0.9	0.7	Diurnal Average	
	1.9	1.3	1.2	1.2	1.3	1.3	3.7	1.2	1.3	1.2	3.8	1.4	0.9	2.1	1.1	0.9	1.1	0.9	1.0	1.1	6.9	23.0	3.1	1.5	Diurnal Maximum	

C - Calibration

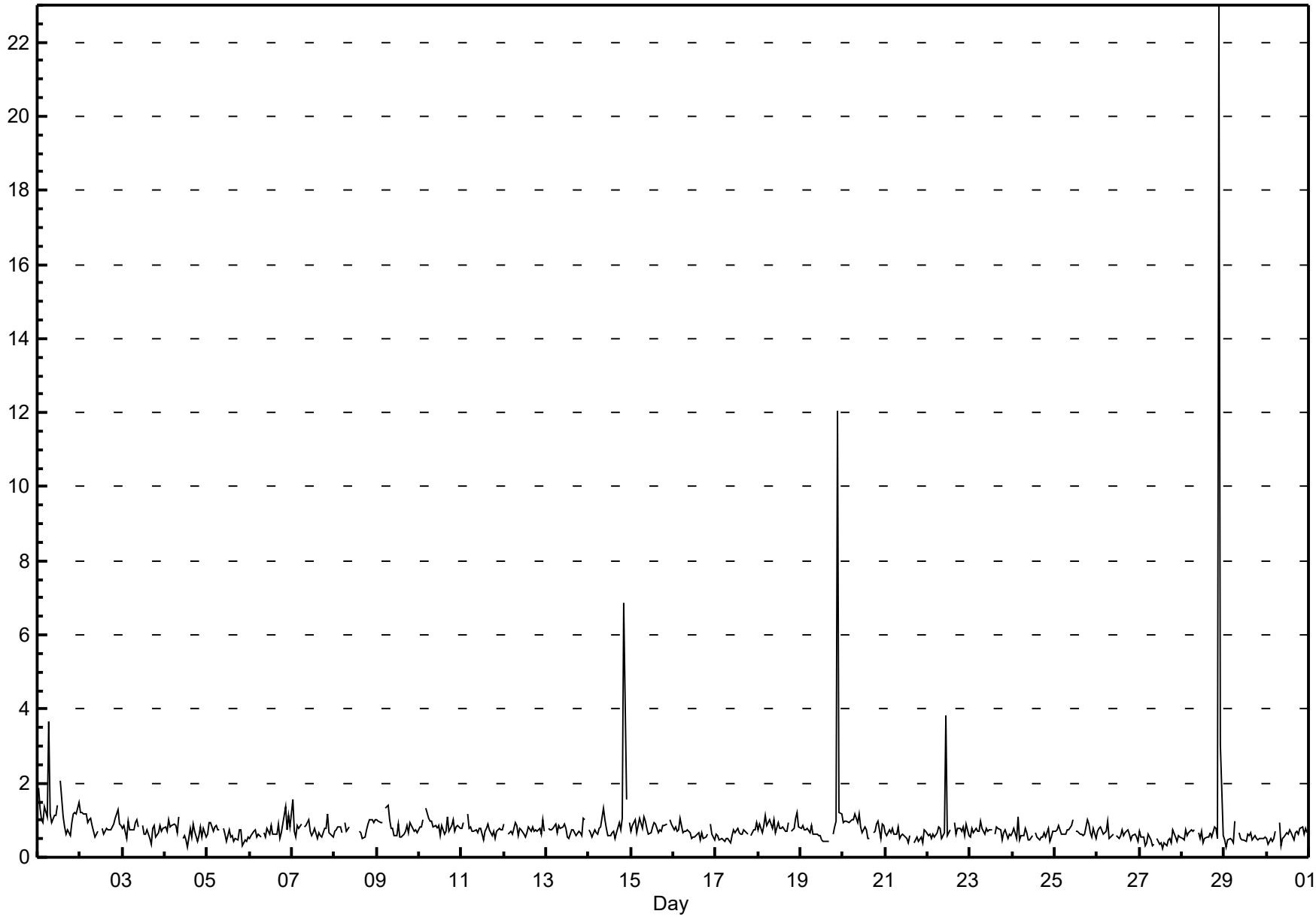
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

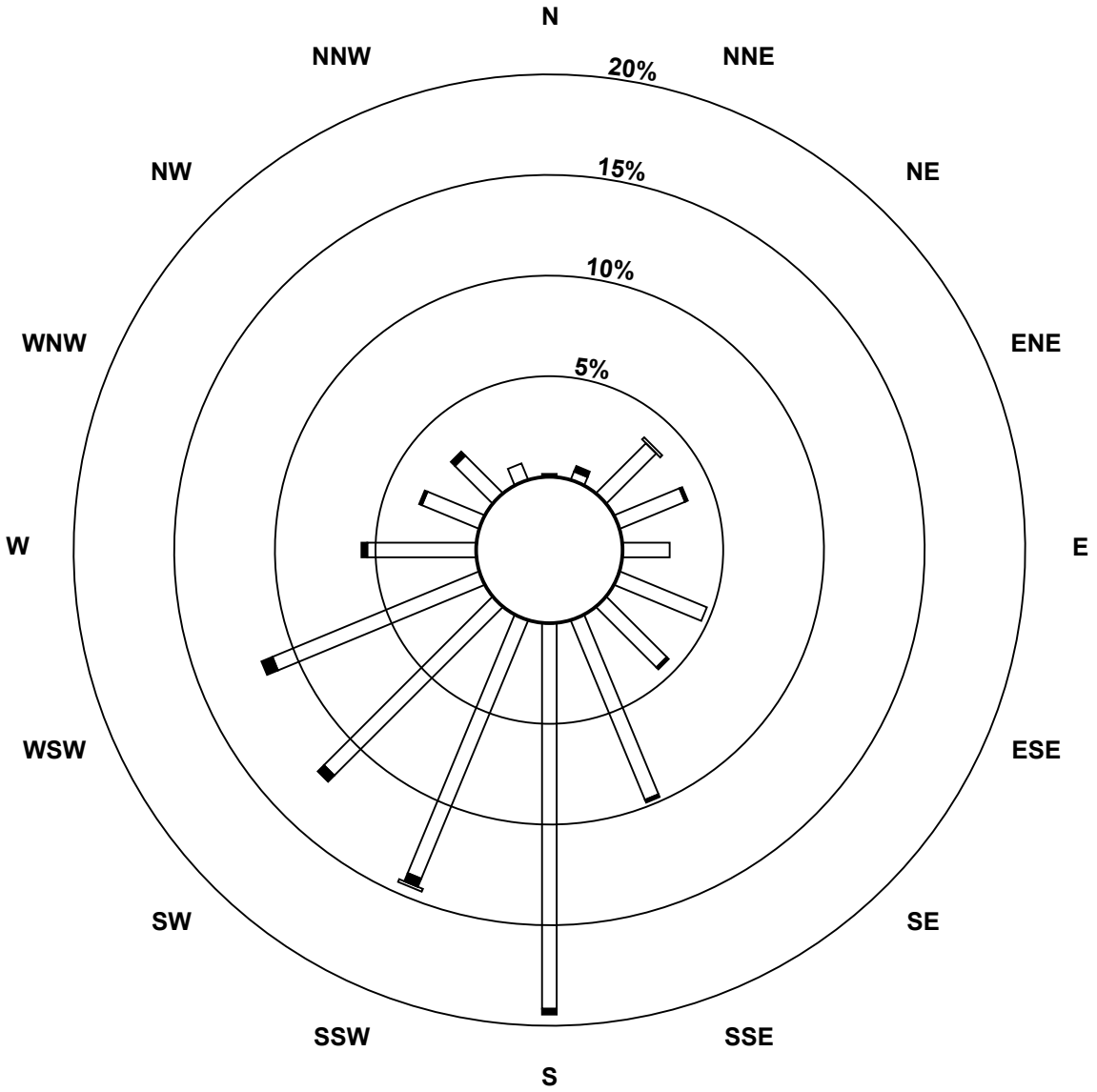
Donnelly - September 2016



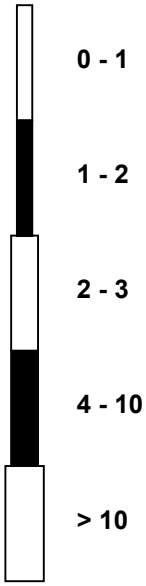
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Donnelly - September 2016



Pollutant Classes (ppb)

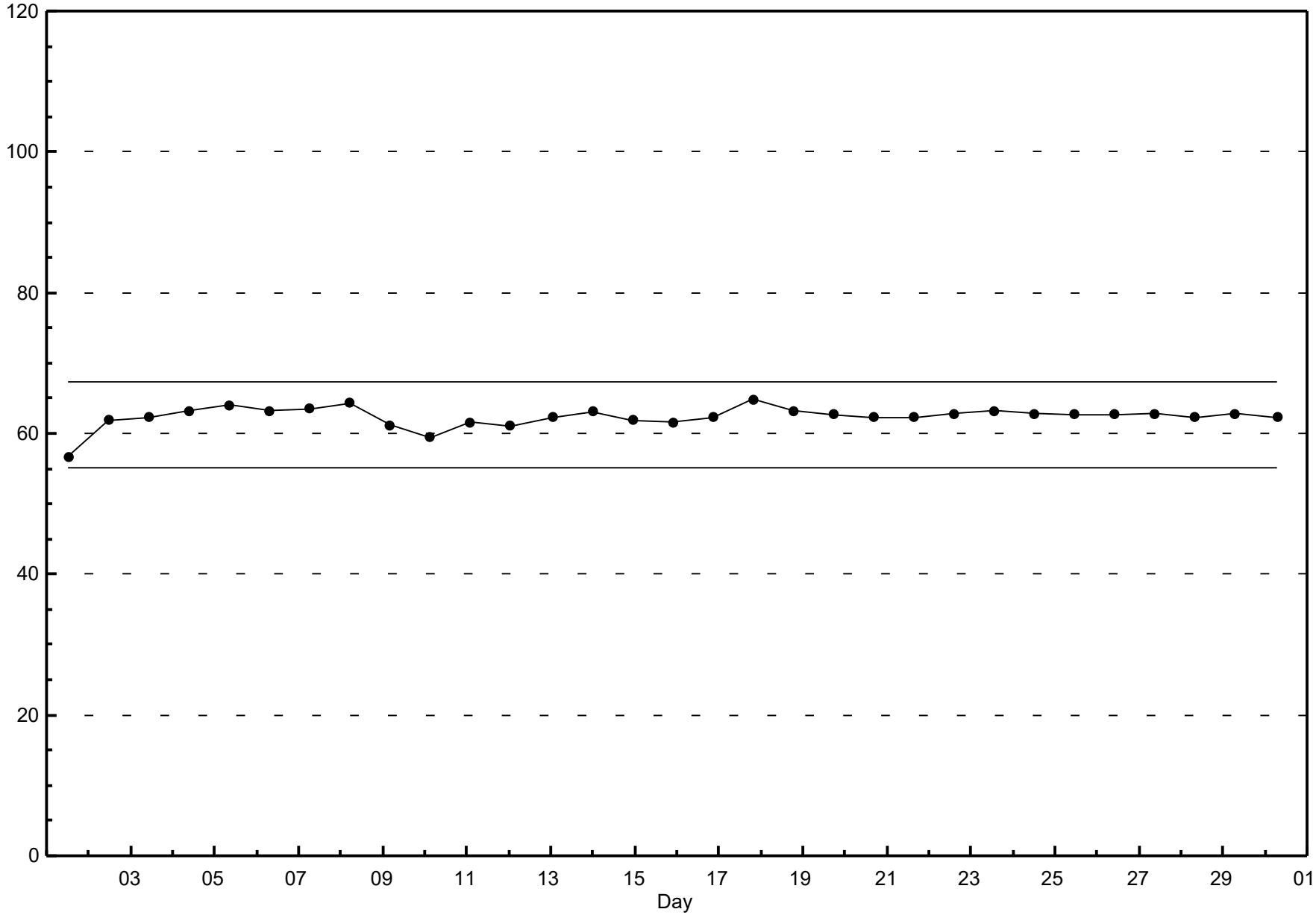


Peace Airshed Zone Association

Span Responses

Hydrogen Sulphide (H_2S)

Donnelly - September 2016



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - °C

Donnelly - September 2016

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

Maximum Value: 25.0 °C on Sep 13 17:00

Maximum Daily Average: 16.5 °C on Sep 14

Minimum Value: -2 °C on Sep 29 07:00

Minimum Daily Average: 5.9 °C on Sep 4

Maximum Diurnal Average: 15.8 °C at hour 16

Minimum Diurnal Average: 6.6 °C at hour 7

Monthly Average: 10.80 °C

Percentiles: P_1 = 1.0 P_{10} = 4.6 Q_1 = 7.2 Median = 10.7 Q_3 = 13.9 P_{90} = 17.1 P_{99} = 21.8

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

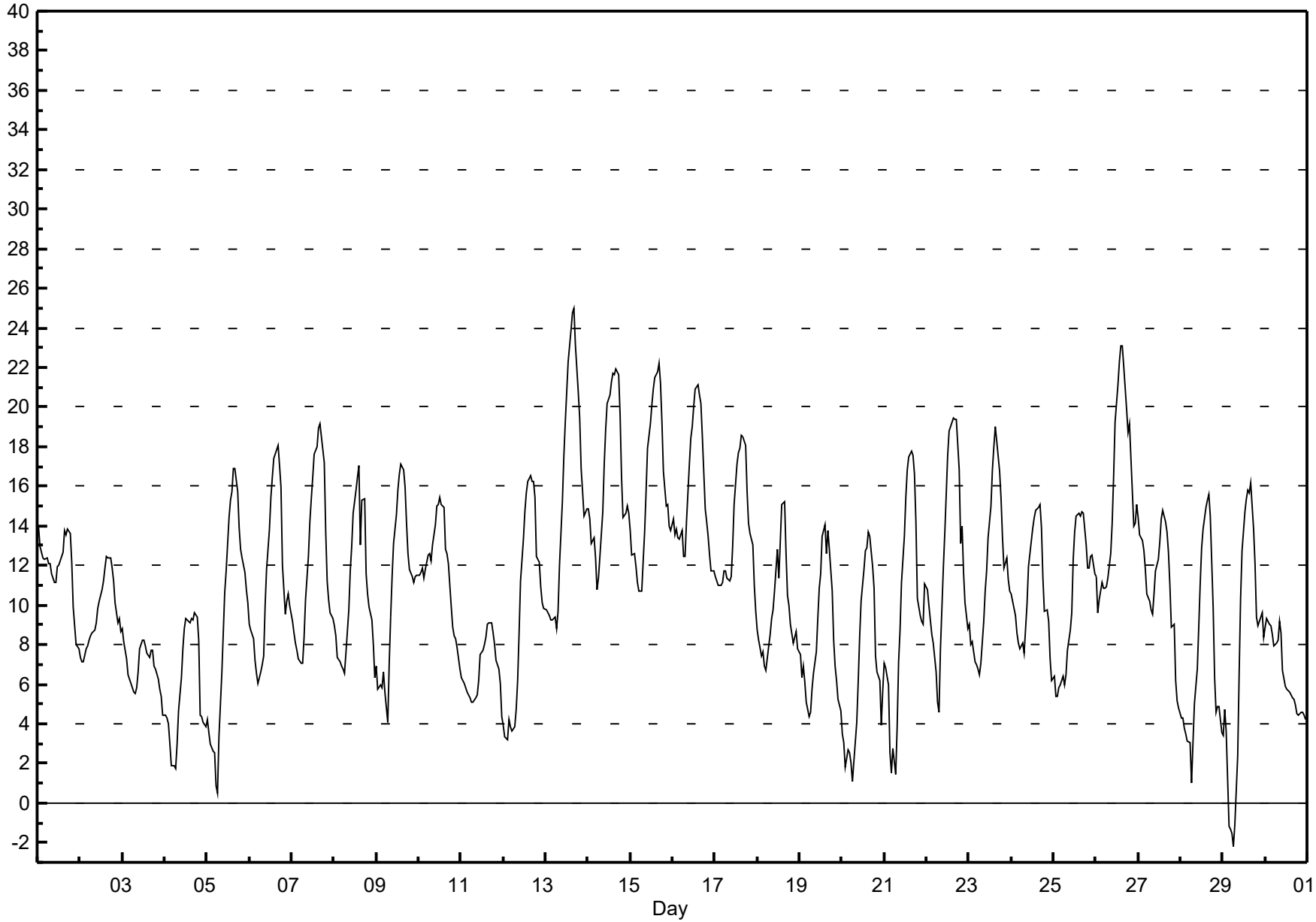
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	14	13	13	12	12	12	12	12	12	11	11	12	12	12	13	14	14	14	14	12	10	9	8	8	11.9	13.9
2-Sep	7	7	7	8	8	8	8	9	9	9	10	10	11	11	12	12	12	12	12	11	10	9	9	9	9.7	12.5
3-Sep	9	8	7	6	6	6	6	6	6	7	8	8	8	8	8	7	8	8	7	7	6	6	5	4	6.9	8.8
4-Sep	4	4	4	3	2	2	2	3	5	6	8	9	9	9	9	9	9	10	9	8	4	4	4	4	5.9	9.6
5-Sep	4	4	3	3	3	1	1	3	7	9	11	12	14	15	16	17	17	16	14	13	12	12	11	10	9.4	16.9
6-Sep	9	9	8	7	7	6	7	7	7	10	12	14	15	16	17	18	18	17	16	12	10	10	11	10	11.4	18.1
7-Sep	9	9	8	8	7	7	7	8	10	12	14	15	16	18	18	19	19	18	17	14	11	10	10	9	12.3	19.1
8-Sep	9	8	7	7	7	7	7	8	10	12	13	15	16	16	17	13	15	15	12	11	10	9	8	6	10.7	17.0
9-Sep	7	6	6	6	7	6	4	7	9	11	13	15	16	17	17	17	16	14	13	12	11	11	11	12	10.9	17.1
10-Sep	12	12	12	11	12	12	13	12	13	14	15	15	15	15	15	13	13	12	10	9	8	8	8	7	11.9	15.4
11-Sep	6	6	6	6	5	5	5	5	5	5	6	7	8	8	8	9	9	9	9	8	7	7	6	4	6.7	9.1
12-Sep	4	3	3	4	4	4	4	5	6	9	11	13	15	16	16	17	16	16	15	12	12	11	10	10	9.9	16.5
13-Sep	10	10	9	9	9	9	9	10	12	15	17	19	21	22	24	25	25	23	21	19	17	16	15	15	15.9	25.0
14-Sep	15	14	13	13	12	11	11	12	15	17	19	20	21	21	22	22	22	22	20	16	14	15	15	15	16.5	21.9
15-Sep	14	13	13	12	11	11	11	12	14	16	18	19	20	21	21	22	22	21	19	17	15	15	14	14	16.0	22.2
16-Sep	14	14	14	13	13	14	12	12	14	17	18	19	20	21	21	21	20	18	15	14	13	13	12	12	15.7	21.1
17-Sep	11	11	11	11	11	12	12	11	11	11	13	15	17	18	18	19	18	18	16	14	14	13	11	10	13.6	18.6
18-Sep	9	8	7	8	7	7	8	8	9	10	11	13	11	13	15	15	13	11	10	9	8	8	9	8	9.8	15.2
19-Sep	7	6	7	6	5	4	5	6	7	8	9	11	12	13	14	13	14	13	11	8	7	6	5	5	8.4	14.1
20-Sep	4	3	2	3	3	2	1	2	4	6	8	10	12	13	13	14	13	12	11	7	7	6	4	6	6.9	13.7
21-Sep	7	7	6	3	2	3	1	4	7	9	11	13	15	17	17	18	18	17	14	10	9	9	9	11	9.9	17.8
22-Sep	11	10	9	9	8	7	5	5	8	12	14	16	18	19	19	19	19	19	17	13	14	12	10	9	12.5	19.5
23-Sep	9	8	8	7	7	7	6	7	9	11	12	13	15	17	18	19	18	17	15	13	12	12	11	11	11.8	19.0
24-Sep	11	10	9	9	8	8	8	8	9	10	12	13	14	14	15	15	15	14	11	10	10	9	7	6	10.6	15.1
25-Sep	6	5	5	6	6	6	6	6	8	9	10	12	14	15	15	14	15	15	13	12	12	12	13	12	10.2	14.7
26-Sep	11	10	10	11	11	11	11	11	13	14	16	19	21	22	23	23	22	20	19	19	17	14	14	15	15.8	23.1
27-Sep	14	14	13	13	12	11	10	10	10	11	12	12	13	14	15	14	14	13	11	9	9	6	5	5	11.2	14.8
28-Sep	4	4	4	3	3	3	1	3	5	7	9	11	13	14	15	15	16	14	10	6	5	5	5	4	7.5	15.6
29-Sep	3	5	4	-1	-1	-2	-2	-1	2	7	10	13	15	15	16	16	16	14	12	9	9	9	10	8	7.7	16.1
30-Sep	9	9	9	9	9	8	8	8	9	9	7	6	6	6	6	5	5	5	5	4	5	5	4	4	6.6	9.3
	8.8	8.3	8.0	7.5	7.2	6.9	6.6	7.3	8.8	10.4	11.9	13.4	14.4	15.2	15.7	15.8	15.7	14.9	13.2	11.4	10.3	9.7	9.1	8.7	Diurnal Average	
	14.9	14.4	13.8	13.4	13.3	13.8	12.6	12.5	14.7	17.2	18.9	20.2	21.1	22.3	23.9	24.7	25.0	23.2	20.8	19.4	17.4	15.7	15.0	15.1	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Donnelly - September 2016



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Donnelly - September 2016

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	10	9	7	13	10	6	12	9	7	6	10	12	17	18	17	17	16	13	8	6	5	5	6	7.1	17.9
Dir	290	305	1	13	18	18	202	254	271	294	326	278	241	241	251	243	260	256	266	263	246	223	220	202	268	251
2 Spd	6	5	3	5	5	5	4	7	10	8	8	10	9	7	2	1	1	2	3	5	5	6	11	14	5.0	14.1
Dir	202	186	214	263	213	196	219	286	280	266	254	256	257	233	238	107	118	118	205	284	273	221	233	243	243	243
3 Spd	20	22	23	21	21	20	21	24	22	22	20	17	18	18	18	18	15	15	11	8	9	6	9	5	15.1	23.6
Dir	250	249	248	248	246	246	245	243	247	252	269	291	289	295	307	304	296	299	333	308	312	298	275	246	269	243
4 Spd	4	7	6	7	7	7	5	7	7	6	6	6	8	7	8	5	7	4	3	2	2	4	4	4	4.5	8.2
Dir	215	211	201	195	195	189	187	194	203	198	200	170	147	140	172	154	130	114	70	90	109	107	104	107	170	147
5 Spd	4	2	2	2	3	2	6	3	3	9	7	7	5	10	10	3	5	7	4	6	11	12	13	13	5.3	13.3
Dir	108	106	99	91	91	84	63	85	164	164	166	164	165	186	178	186	151	178	127	124	150	164	158	164	153	158
6 Spd	13	14	12	6	6	6	7	10	9	9	9	9	10	8	9	11	10	10	11	6	4	10	12	13	8.5	13.6
Dir	170	166	162	145	143	145	167	177	175	182	184	199	225	221	206	208	217	223	213	197	160	166	164	167	184	166
7 Spd	12	11	11	12	13	12	11	12	15	15	14	14	18	18	19	21	17	13	8	4	10	7	8	9	11.3	20.8
Dir	173	173	179	177	176	180	180	184	200	214	230	217	222	228	234	234	254	248	234	174	179	177	181	174	206	234
8 Spd	8	8	9	8	7	9	10	9	13	18	16	14	19	22	21	13	8	10	2	8	3	5	5	9	8.0	21.9
Dir	184	191	186	187	185	185	195	205	231	254	241	257	259	256	262	333	320	304	272	258	217	215	197	191	239	256
9 Spd	6	6	6	6	3	3	1	6	7	10	11	13	12	15	14	18	11	11	7	9	14	18	20	21	9.9	20.6
Dir	192	184	198	189	176	130	158	156	167	161	168	192	207	210	192	186	184	208	194	184	176	170	167	173	182	173
10 Spd	19	18	18	17	20	23	23	26	29	29	32	36	31	25	29	22	15	20	20	16	15	14	12	11	18.1	36.0
Dir	180	192	196	195	203	211	219	218	226	238	251	258	264	276	262	269	264	286	266	264	265	286	325	311	245	258
11 Spd	14	15	14	13	12	13	12	13	12	15	15	16	15	14	14	13	13	16	15	15	10	8	6	6	10.9	16.1
Dir	291	291	294	300	305	303	306	311	315	318	322	332	322	310	298	285	259	251	247	252	245	232	222	187	290	251
12 Spd	7	10	8	10	12	12	13	10	12	15	17	17	15	17	17	19	16	9	5	7	12	15	15	16	12.2	18.8
Dir	172	171	178	184	176	171	177	184	194	192	198	189	184	195	200	210	233	203	154	144	163	171	183	184	187	210
13 Spd	16	16	15	14	16	16	17	17	19	19	20	21	23	21	21	22	23	21	16	19	12	10	13	16	14.8	23.3
Dir	184	184	186	184	183	181	177	178	186	201	217	228	233	232	243	267	265	273	267	258	238	215	189	205	218	265
14 Spd	17	15	12	16	13	10	12	13	14	20	23	25	24	27	25	22	19	17	9	5	7	12	13	11	13.1	26.8
Dir	210	210	203	205	198	181	183	187	203	233	247	255	264	258	259	264	271	269	260	203	173	170	173	181	229	258
15 Spd	10	10	10	12	9	11	12	12	14	16	16	16	19	21	20	19	14	10	8	9	9	11	9	11	12.1	20.6
Dir	178	174	171	175	175	178	174	174	180	192	216	210	208	214	223	222	217	231	189	182	192	206	186	186	197	214
16 Spd	12	14	14	12	15	15	17	14	12	20	27	23	22	22	21	17	16	29	17	12	12	12	13	15	15.1	28.9
Dir	188	177	172	178	171	173	174	179	194	228	228	238	234	230	230	232	221	223	224	202	179	175	168	167	205	223
17 Spd	16	15	13	12	11	13	15	17	17	17	16	20	21	20	24	21	16	15	13	13	15	16	14	13	14.9	23.7
Dir	172	177	179	180	175	174	180	195	202	189	194	210	220	224	225	236	247	237	223	203	209	220	207	207	206	225
18 Spd	14	13	12	10	10	9	12	13	12	17	17	26	19	24	27	23	16	13	15	9	8	6	5	6	13.2	26.8
Dir	205	207	194	213	214	228	248	243	239	243	230	256	238	234	244	250	271	253	268	255	224	240	216	187	238	244
19 Spd	5	8	8	5	6	6	7	6	8	8	8	9	10	11	13	20	14	6	6	1	2	1	3	1	4.4	19.5
Dir	216	200	211	208	195	191	192	205	207	235	242	242	246	251	287	343	311	299	346	20	135	248	260	20	251	343
20 Spd	1	1	5	5	3	1	2	2	4	7	7	11	12	9	8	6	7	9	1	5	5	4	0	6	2.2	11.7
Dir	74	142	187	177	174	136	260	224	222	240	214	237	251	294	323	311	316	330	77	109	123	149	290	162	240	251
21 Spd	5	9	5	1	4	4	1	6	11	11	10	15	14	12	13	12	11	8	5	7	10	8	7	10	7.5	15.1
Dir	172	164	161	158	152	151	106	156	168	177	164	177	183	193	201	198	190	196	134	122	118	112	112	148	167	177
22 Spd	17	17	17	14	12	8	5	3	3	11	15	15	16	18	17	18	18	12	5	9	17	9	6	5	11.4	18.4
Dir	157	157	160	158	151	129	110	89	102	137	136	130	142	141	151	158	141	136	118	119	128	111	102	90	140	141

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Donnelly - September 2016

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	5	6	4	5	4	4	3	5	9	12	10	9	9	6	9	15	11	14	13	13	13	16	20	6.7	20.3
Dir	103	103	111	95	106	102	98	91	104	140	171	153	154	171	172	201	230	210	206	208	205	209	217	221	183	221
24 Spd	22	23	24	23	23	23	21	18	17	18	26	26	23	27	27	28	28	18	12	14	17	16	13	13	19.6	28.0
Dir	222	223	220	221	218	230	241	232	225	235	245	248	248	248	247	260	265	264	258	239	214	208	192	186	235	265
25 Spd	14	12	12	11	8	10	9	10	7	13	16	13	14	14	16	10	11	11	6	6	9	10	14	12	10.2	16.1
Dir	204	190	181	182	185	176	168	161	159	169	172	166	182	209	233	218	207	207	157	125	129	146	169	163	181	172
26 Spd	11	4	11	20	20	20	20	18	17	18	17	22	20	20	21	15	5	3	8	10	1	2	8	16	11.8	22.3
Dir	158	125	154	165	166	164	163	158	159	162	163	173	179	193	201	189	149	105	114	123	226	131	258	258	171	173
27 Spd	22	21	21	22	22	22	26	30	29	26	27	28	30	30	33	31	25	19	15	14	17	15	14	12	21.6	32.8
Dir	238	225	206	212	226	235	244	251	248	244	245	260	249	253	251	250	255	257	249	219	220	188	188	181	238	251
28 Spd	11	13	14	13	12	11	3	9	11	12	9	8	8	7	4	6	4	4	2	2	5	5	7	5	6.2	13.8
Dir	177	172	175	173	168	165	171	163	167	171	164	175	182	191	192	166	142	88	91	84	46	55	61	58	161	175
29 Spd	4	4	2	2	3	2	2	2	3	3	2	7	7	7	9	10	7	6	4	5	6	7	5	5	4.5	10.3
Dir	63	73	82	261	50	78	135	98	35	51	77	67	90	69	49	40	65	55	72	65	67	60	66	56	63	40
30 Spd	5	5	6	6	5	9	11	11	12	9	10	18	15	19	19	21	19	22	22	16	17	14	16	17	13.4	22.5
Dir	64	67	62	64	54	44	37	48	50	60	41	36	47	40	48	46	46	43	42	51	49	54	54	57	48	42
Spd	8.3	8.3	8.3	8.0	7.5	7.2	7.2	7.9	8.6	10.1	10.5	10.5	11.2	11.8	12.0	9.8	8.4	7.5	4.5	4.2	5.2	5.8	6.2	7.1	Diurnal Average	
Dir	195	194	191	194	190	191	199	204	209	215	220	229	229	232	238	244	246	248	239	211	189	184	184	186		
Spd	21.9	23.1	23.7	23.4	22.5	23.5	26.1	29.8	29.4	29.0	31.6	36.0	30.8	30.5	32.8	31.4	28.0	28.9	22.5	18.6	17.3	17.5	20.5	20.6	Diurnal Maximum	
Dir	238	223	220	221	218	211	244	251	248	238	251	258	264	253	251	250	265	223	42	258	214	170	167	173		

Maximum Speed Value: 36 km/h on Sep 10 12:00
Maximum Daily Speed Average: 21.6 km/h on Sep 27
Maximum Diurnal Speed Average: 12.0 km/h at hour 15

Minimum Speed Value: 0 km/h on Sep 20 23:00
Minimum Daily Speed Average: 2.2 km/h on Sep 29
Minimum Diurnal Speed Average: 4.2 km/h at hour 20

Monthly Average Velocity: 7.61 km/h 213.3 deg

Speed Percentiles: $P_1 = 1.2$ $P_{10} = 4.2$ $Q_1 = 6.9$ Median = 11.6 $Q_3 = 16.3$ $P_{90} = 21.1$ $P_{99} = 29.6$

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

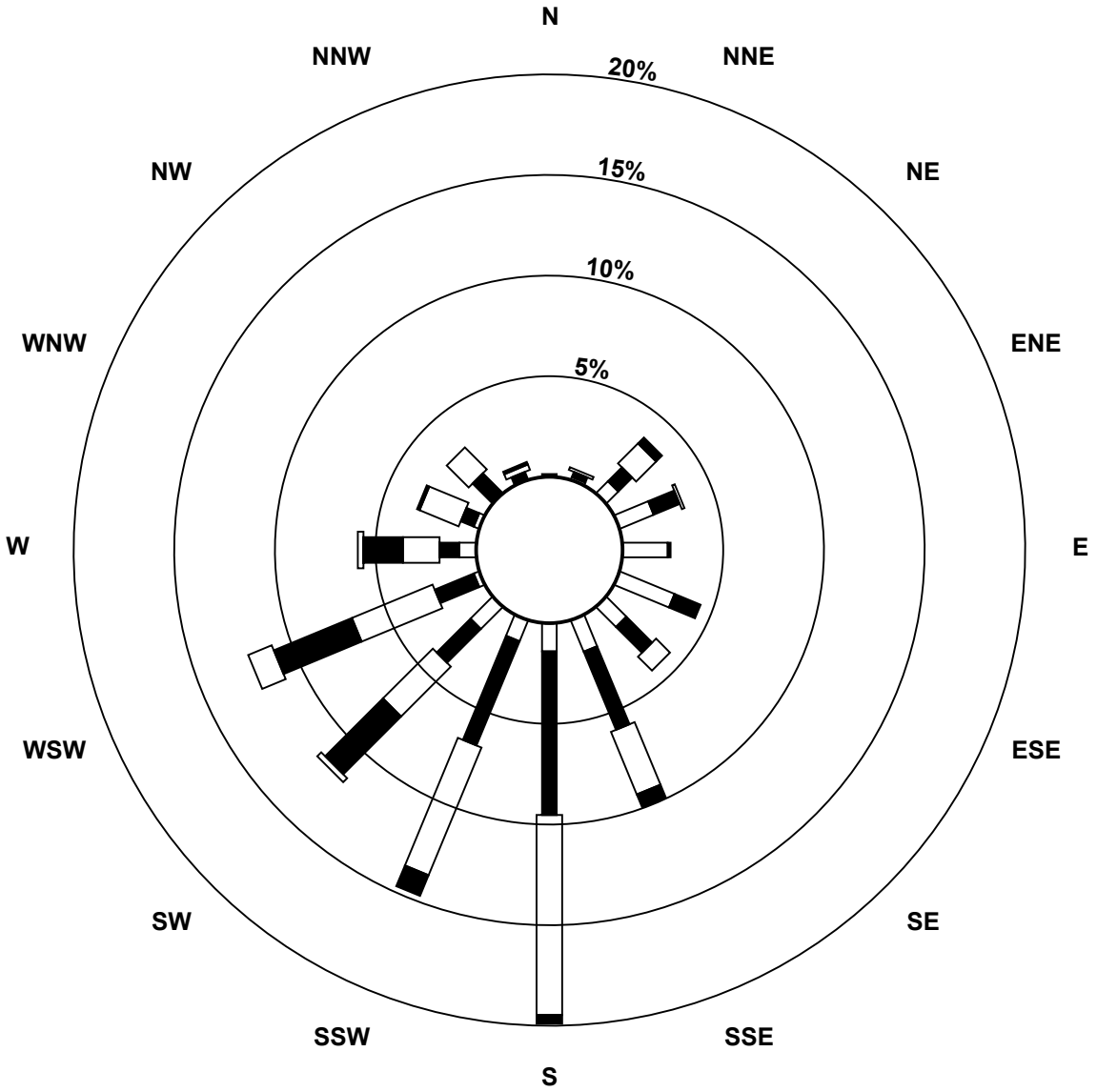
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	2	4	1	1	0	0	8
NorthEast	9	20	9	5	0	0	43
East	36	11	0	0	0	0	47
SouthEast	17	30	13	0	0	0	60
South	13	97	124	13	0	0	247
SouthWest	16	39	64	55	3	0	177
West	9	16	37	28	11	0	101
NorthWest	0	14	23	0	0	0	37
Total	102	231	271	102	14	0	720

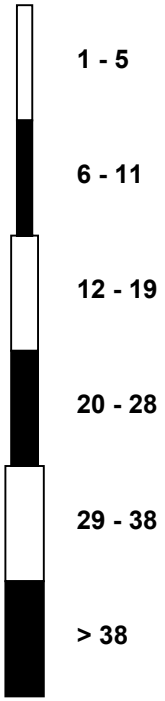
Wind Rose

Wind Speed (WS) (km/h)

Donnelly - September 2016



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Donnelly - September 2016

Maximum Speed: 36 km/h on Sep 10 12:00

Maximum Daily Speed Average: 23.2 km/h on Sep 27

Minimum Speed: 1 km/h on Sep 20 01:00

Minimum Daily Speed Average: 5.1 km/h on Sep 29

Maximum Diurnal Speed Average: 17.4 km/h at hour 15

Minimum Diurnal Speed Average: 9.0 km/h at hour 20

Monthly Average Speed: 12.40 km/h

Percentiles: P_1 = 1.4 P_{10} = 4.6 Q_1 = 7.1 Median = 11.8 Q_3 = 16.5 P_{90} = 21.4 P_{99} = 30.5

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-Sep	4	10	9	8	16	12	8	12	10	8	7	10	12	18	18	18	17	16	13	8	6	5	5	6	10.7	18.0
2-Sep	6	5	4	5	5	5	4	7	10	9	8	10	10	7	3	2	2	2	4	5	5	6	11	14	6.2	14.1
3-Sep	20	22	23	21	21	20	22	24	22	22	20	17	19	18	18	18	15	15	11	8	9	7	9	5	16.9	23.6
4-Sep	5	7	6	7	7	7	5	7	7	7	6	7	9	8	9	6	8	4	3	2	2	4	4	4	5.8	8.9
5-Sep	4	2	2	2	3	2	6	3	4	9	7	8	6	11	10	5	6	8	4	6	11	12	13	13	6.5	13.3
6-Sep	13	14	12	6	6	6	7	11	9	9	10	10	11	9	10	11	11	10	11	7	4	10	12	13	9.7	13.6
7-Sep	12	11	11	12	13	12	11	12	15	15	14	15	18	19	20	21	18	14	8	5	10	7	8	9	13.0	21.3
8-Sep	9	8	9	8	7	9	10	9	13	18	16	15	19	22	22	14	9	11	6	9	4	5	5	9	11.0	22.4
9-Sep	6	6	6	6	4	3	3	6	7	10	12	13	13	16	14	18	12	12	7	9	14	18	21	21	10.5	20.7
10-Sep	19	18	18	17	20	24	23	26	29	29	32	36	31	26	29	23	15	20	20	16	15	15	12	12	21.8	36.2
11-Sep	14	15	14	13	12	13	12	13	12	16	15	16	15	14	15	13	14	16	15	15	10	8	7	6	13.1	16.4
12-Sep	7	10	8	10	12	12	13	10	12	15	17	17	16	18	18	19	17	9	6	7	12	15	15	16	12.9	19.1
13-Sep	16	16	15	14	16	16	17	17	19	19	20	21	23	21	22	22	24	21	16	19	12	11	13	16	17.8	23.6
14-Sep	17	15	12	16	14	10	12	13	14	20	24	25	24	27	25	22	19	17	9	5	7	12	13	11	16.1	27.1
15-Sep	10	10	10	12	9	11	12	12	14	16	16	17	19	21	21	20	14	10	9	9	9	11	9	11	13.0	21.4
16-Sep	12	14	14	12	15	16	17	14	12	21	27	24	23	23	21	17	16	29	17	13	12	12	13	15	17.1	29.1
17-Sep	16	15	13	12	11	13	15	17	17	17	16	20	21	20	24	22	16	16	13	13	15	16	14	13	16.2	24.0
18-Sep	14	13	12	10	10	10	12	13	12	17	17	27	20	24	27	24	18	13	15	10	8	7	6	6	14.3	27.3
19-Sep	5	8	8	5	6	6	7	6	9	8	8	9	10	11	15	20	15	6	6	1	2	1	3	2	7.4	19.8
20-Sep	1	1	6	5	3	1	3	4	5	7	8	11	12	10	8	6	8	9	2	5	6	4	1	6	5.5	12.4
21-Sep	6	9	5	1	4	4	1	6	11	12	11	15	15	13	14	12	12	8	5	7	10	8	7	10	8.6	15.3
22-Sep	17	17	17	14	12	8	5	3	4	11	15	15	16	19	18	19	19	12	5	9	17	9	6	5	12.1	18.9
23-Sep	5	6	7	4	6	4	4	3	5	9	12	10	9	10	7	10	16	11	14	13	13	13	16	20	9.4	20.3
24-Sep	22	23	24	23	23	23	21	18	17	18	27	27	24	27	27	28	28	18	12	14	17	16	13	13	21.0	28.2
25-Sep	14	12	12	11	8	10	9	10	7	13	16	13	15	15	16	11	11	11	6	6	9	11	14	12	11.3	16.1
26-Sep	11	5	11	20	20	20	20	18	17	18	17	22	21	21	21	15	6	3	8	13	6	3	8	16	14.1	22.5
27-Sep	22	21	21	22	22	22	26	30	29	27	27	28	31	31	33	32	26	19	15	14	17	15	14	12	23.2	33.3
28-Sep	11	13	14	13	12	11	3	9	11	12	9	9	8	8	6	7	5	4	2	2	5	5	7	5	8.0	13.8
29-Sep	5	4	3	2	3	3	2	2	4	3	3	7	8	8	10	10	7	6	5	5	7	7	5	5	5.1	10.5
30-Sep	5	5	6	6	5	9	11	11	12	9	11	18	15	19	19	21	19	22	23	16	17	14	16	17	13.6	22.5
	11.0	11.1	11.0	10.6	10.8	10.8	10.7	11.5	12.3	14.1	14.9	16.5	16.5	17.1	17.4	16.1	14.0	12.4	9.7	9.0	9.7	9.6	10.0	10.7	Diurnal Average	
	22.2	23.1	23.7	23.5	22.6	23.5	26.3	29.9	29.5	29.3	31.8	36.2	31.1	30.9	33.3	31.5	28.2	29.1	22.5	18.6	17.4	17.6	20.5	20.7	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

Donnelly - September 2016

Maximum Value: 86.0 deg on Sep 29 06:00

Minimum Value: 1.7 deg on Sep 13 05:00

Percentiles: P_1 = 2.1 P_{10} = 3.6 Q_1 = 5.3 Median = 9.3 Q_3 = 14.5 P_{90} = 25.4 P_{99} = 70.4

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 Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Sep	44	25	12	58	60	38	56	12	20	29	28	14	10	7	8	9	8	7	9	10	12	18	9	18	60.1
2-Sep	14	14	26	25	22	13	27	14	9	14	13	13	16	17	61	37	34	20	48	9	16	8	6	4	61.0
3-Sep	4	4	4	3	4	3	4	3	4	6	10	8	7	8	7	8	7	7	10	10	11	11	8	8	10.9
4-Sep	19	6	8	4	5	4	3	7	9	21	25	31	29	18	20	34	12	20	17	16	6	4	4	10	33.7
5-Sep	6	13	16	12	12	32	8	15	50	13	19	20	38	27	20	67	44	13	14	10	6	6	6	6	67.1
6-Sep	4	5	5	32	15	17	11	5	5	12	17	26	25	26	32	20	24	18	8	31	19	4	5	3	32.3
7-Sep	4	4	3	5	2	3	4	5	10	10	13	14	13	17	13	13	16	20	5	19	6	5	4	4	19.8
8-Sep	9	5	7	11	11	6	4	10	6	11	13	16	10	10	18	17	24	22	85	22	10	11	25	4	84.7
9-Sep	10	10	12	9	39	24	69	9	9	10	13	19	21	15	14	7	12	14	7	8	7	4	3	3	68.6
10-Sep	4	5	3	5	4	4	4	5	5	9	6	6	8	7	6	10	8	11	10	5	5	15	10	13	14.6
11-Sep	5	5	6	8	9	7	6	6	9	14	10	15	17	18	15	15	13	10	5	4	10	3	12	9	17.9
12-Sep	8	3	8	4	5	3	4	6	7	7	9	9	12	16	13	10	10	12	23	9	4	5	2	2	22.8
13-Sep	2	2	2	4	2	3	3	4	3	9	8	10	8	13	14	10	8	6	7	3	13	23	8	5	22.5
14-Sep	3	4	4	4	10	2	3	4	15	9	9	10	9	8	14	8	11	9	12	22	5	4	4	4	22.5
15-Sep	4	4	6	4	5	3	3	8	4	10	12	14	11	15	15	13	13	6	14	14	13	19	7	8	19.3
16-Sep	10	2	5	10	4	5	2	3	11	9	8	12	12	13	13	9	9	7	10	18	3	8	3	3	18.2
17-Sep	3	3	5	2	3	3	4	4	5	5	8	11	13	13	8	14	13	7	12	4	5	9	4	9	13.7
18-Sep	3	9	5	8	10	10	4	4	7	7	9	18	16	8	11	9	30	18	6	11	9	11	26	14	30.0
19-Sep	25	11	9	12	8	11	6	11	9	15	11	15	22	20	28	10	13	22	18	33	14	72	32	57	72.0
20-Sep	32	22	17	7	11	16	75	59	27	16	19	14	20	28	16	24	25	26	55	7	12	5	85	53	84.9
21-Sep	8	4	6	14	9	6	48	22	10	8	12	10	13	22	18	19	19	17	13	4	3	6	9	9	48.1
22-Sep	4	3	3	7	6	18	14	19	27	9	8	7	12	12	15	12	13	5	11	7	3	13	10	13	27.3
23-Sep	17	11	15	14	10	11	16	23	20	13	12	14	14	19	40	30	8	11	14	5	7	5	5	3	39.9
24-Sep	4	3	4	3	4	5	4	4	7	10	10	10	13	10	8	7	7	6	5	11	8	9	8	4	12.5
25-Sep	6	6	7	4	8	4	6	5	12	5	4	9	13	15	8	12	9	9	27	7	7	11	4	6	26.6
26-Sep	6	40	34	2	2	3	5	4	5	5	7	6	11	11	9	8	24	7	5	60	78	41	23	6	78.3
27-Sep	10	6	5	6	9	5	8	4	3	6	9	7	12	9	10	6	8	6	8	8	5	5	7	5	12.0
28-Sep	4	5	4	5	2	3	40	4	5	5	11	14	27	37	67	38	46	15	13	16	16	7	4	8	67.0
29-Sep	7	15	72	83	42	86	33	27	17	34	40	16	23	20	22	11	16	10	15	10	6	5	6	6	86.0
30-Sep	6	7	7	7	7	5	4	7	7	10	11	3	4	4	4	3	3	3	4	5	4	5	4	5	11.3
	44.3	40.3	72.3	82.8	60.1	86.0	75.1	58.6	49.9	34.3	40.1	30.9	38.0	37.0	67.0	67.1	46.2	26.2	84.7	59.7	78.3	72.0	84.9	57.4	

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

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable Rycroft - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.4 ppb on Sep 13 17:00 Maximum Daily Average: 0.5 ppb on Sep 13

Minimum Value: 0 ppb on Sep 1 01:00 Minimum Daily Average: 0.0 ppb on Sep 27
Maximum Diurnal Average: 0.3 ppb at hour 17 Minimum Diurnal Average: 0.1 ppb at hour 22
Monthly Average: 0.18 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.2 P_{90} = 0.4 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-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0.2	1.1
2-Sep	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0.2	0.8
3-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.7
4-Sep	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
5-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0.2	0.5
6-Sep	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.5
7-Sep	0	1	0	1	1	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
8-Sep	0	0	0	0	0	A	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0.4	1.3
9-Sep	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	0.8
10-Sep	0	0	0	A	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0.2	2.3
11-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.4
12-Sep	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
13-Sep	A	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	A	0.5	3.4
14-Sep	0	0	0	0	0	0	1	0	0	C	C	C	C	0	0	1	2	0	0	0	0	0	A	0	0.4	2.0
15-Sep	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	1.0
16-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.2
17-Sep	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
18-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.4
19-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3
20-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3
21-Sep	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	A	0	0	0	0	0	0	0	0	0.2	1.0
22-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.4
23-Sep	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	0.9
24-Sep	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
25-Sep	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	1	0	0	1	0	0	0	0	0	0.2	0.8
26-Sep	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
27-Sep	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
28-Sep	0	0	0	1	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3
29-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
30-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.4	0.5	0.7	0.8	1.7	1.0	0.9	0.9	0.9	1.4	1.4	0.9	2.3	1.1	0.8	0.9	3.4	0.7	0.6	0.5	0.4	0.4	0.5	0.4	Diurnal Maximum	

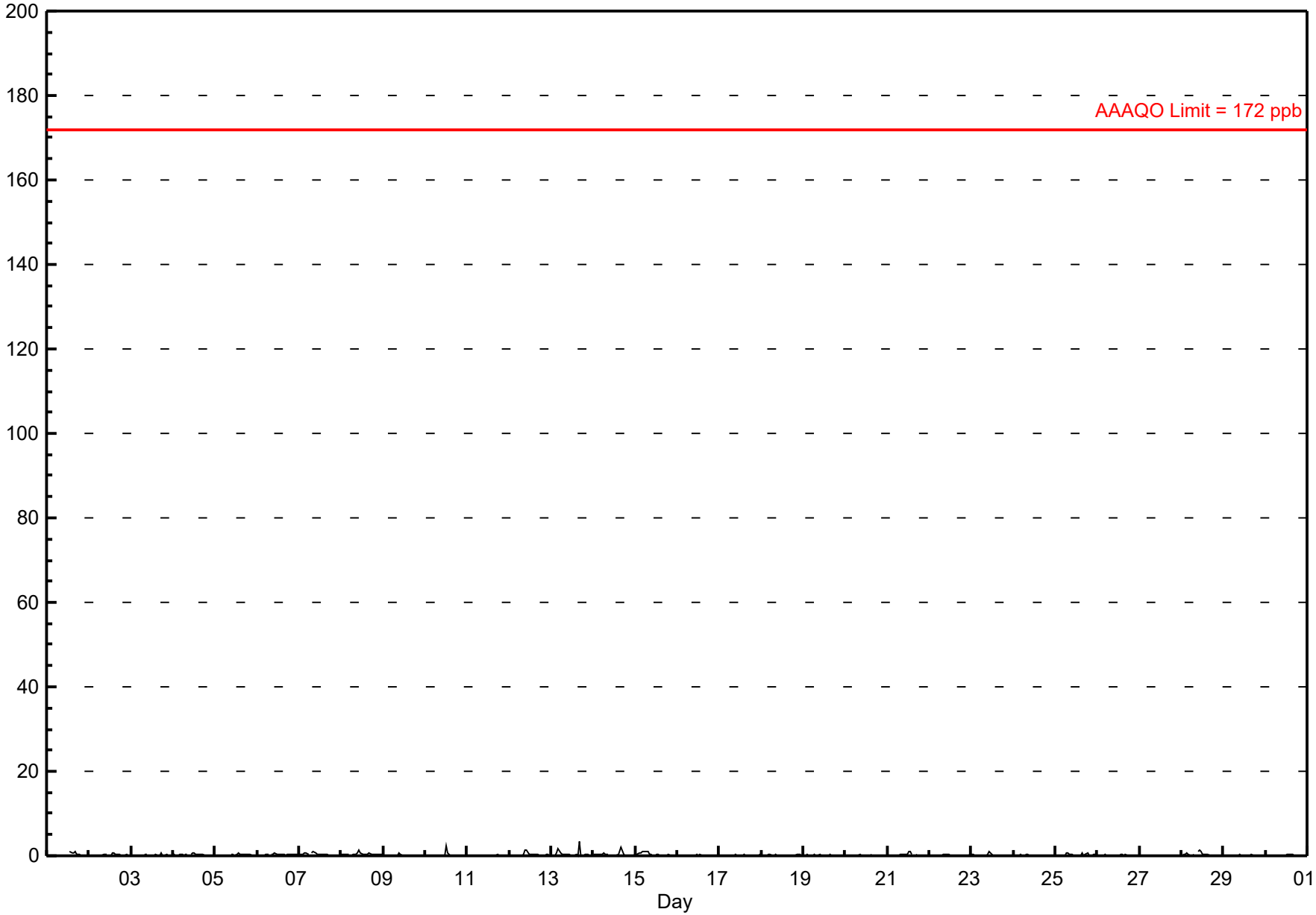
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Portable Rycroft - September 2016

Maximum Value: 38.9 ppb on Sep 13 17:00

Maximum Daily Average: 2.9 ppb on Sep 13

Minimum Value: 0 ppb on Sep 29 06:00

Minimum Daily Average: 0.6 ppb on Sep 27

Maximum Diurnal Average: 3.1 ppb at hour 17

Minimum Diurnal Average: 0.7 ppb at hour 2

Monthly Average: 1.13 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.6$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 1.0$ $P_{90} = 1.6$ $P_{99} = 6.2$

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-Sep	1	1	1	1	0	0	1	1	1	0	0	1	A	5	7	5	5	3	3	1	1	0	1	1	1.6	7.2
2-Sep	1	1	1	1	1	1	1	1	1	1	1	A	1	4	7	5	3	3	1	1	1	3	1	1	1.7	6.7
3-Sep	1	1	1	1	1	1	1	1	2	1	A	1	1	2	2	1	2	11	1	1	2	1	1	1	1.5	11.2
4-Sep	1	1	1	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6
5-Sep	1	1	1	1	0	1	1	1	A	1	1	1	1	2	2	4	1	1	1	4	1	1	1	1	1.1	4.2
6-Sep	1	1	1	1	1	1	1	A	1	1	3	1	1	2	1	1	1	1	1	1	1	1	1	1	1.0	2.7
7-Sep	1	1	1	1	1	1	A	1	2	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1.1	2.5
8-Sep	1	1	1	1	1	A	1	1	1	2	3	1	1	5	4	4	6	2	1	1	1	1	1	1	1.8	5.9
9-Sep	1	1	1	1	A	1	1	1	1	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.7	1.7
10-Sep	1	1	1	A	1	1	0	1	1	1	1	1	24	16	1	2	1	1	1	1	2	1	1	1	2.4	24.0
11-Sep	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	4	7	0	1	1	1	1	1	1.0	7.1
12-Sep	1	A	1	1	1	1	1	1	2	2	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1.0	2.2
13-Sep	A	1	1	2	3	1	1	1	1	1	1	1	1	1	3	1	39	2	1	1	1	1	1	A	2.9	38.9
14-Sep	1	1	1	1	1	1	1	1	1	C	C	C	C	7	1	11	13	4	1	1	1	1	A	1	2.5	13.1
15-Sep	1	1	1	2	2	2	2	2	1	1	1	1	1	3	1	1	1	1	1	1	1	A	1	1	1.1	3.2
16-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	0.6	0.9
17-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	A	1	1	1	1	0.8	3.4
18-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	A	1	1	1	1	1	0.8	2.7
19-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	A	1	1	1	1	1	1	0.8	3.5
20-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	A	1	1	1	1	1	1	1	0.9	5.3
21-Sep	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	A	1	1	1	1	1	1	1	1	0.8	1.6
22-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.1
23-Sep	1	1	1	1	1	1	1	0	1	1	2	2	1	A	1	1	1	1	1	0	1	1	0	1	0.8	2.0
24-Sep	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	1.2
25-Sep	1	1	1	1	1	1	2	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.8
26-Sep	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
27-Sep	1	0	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	0	1	0.6	0.8
28-Sep	1	1	1	1	1	1	1	1	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.2
29-Sep	1	1	1	1	1	0	1	A	1	3	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0.8	3.1
30-Sep	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	1.0	1.2	1.1	0.9	1.7	2.3	1.5	1.9	3.1	1.6	0.8	0.8	0.8	0.7	0.7	0.7	Diurnal Average	
	1.1	1.1	1.3	1.6	2.7	1.8	1.6	1.8	2.1	3.1	2.9	1.7	24.0	16.5	7.2	10.7	38.9	11.2	2.7	3.7	2.1	2.7	1.2	1.3	Diurnal Maximum	

C - Calibration

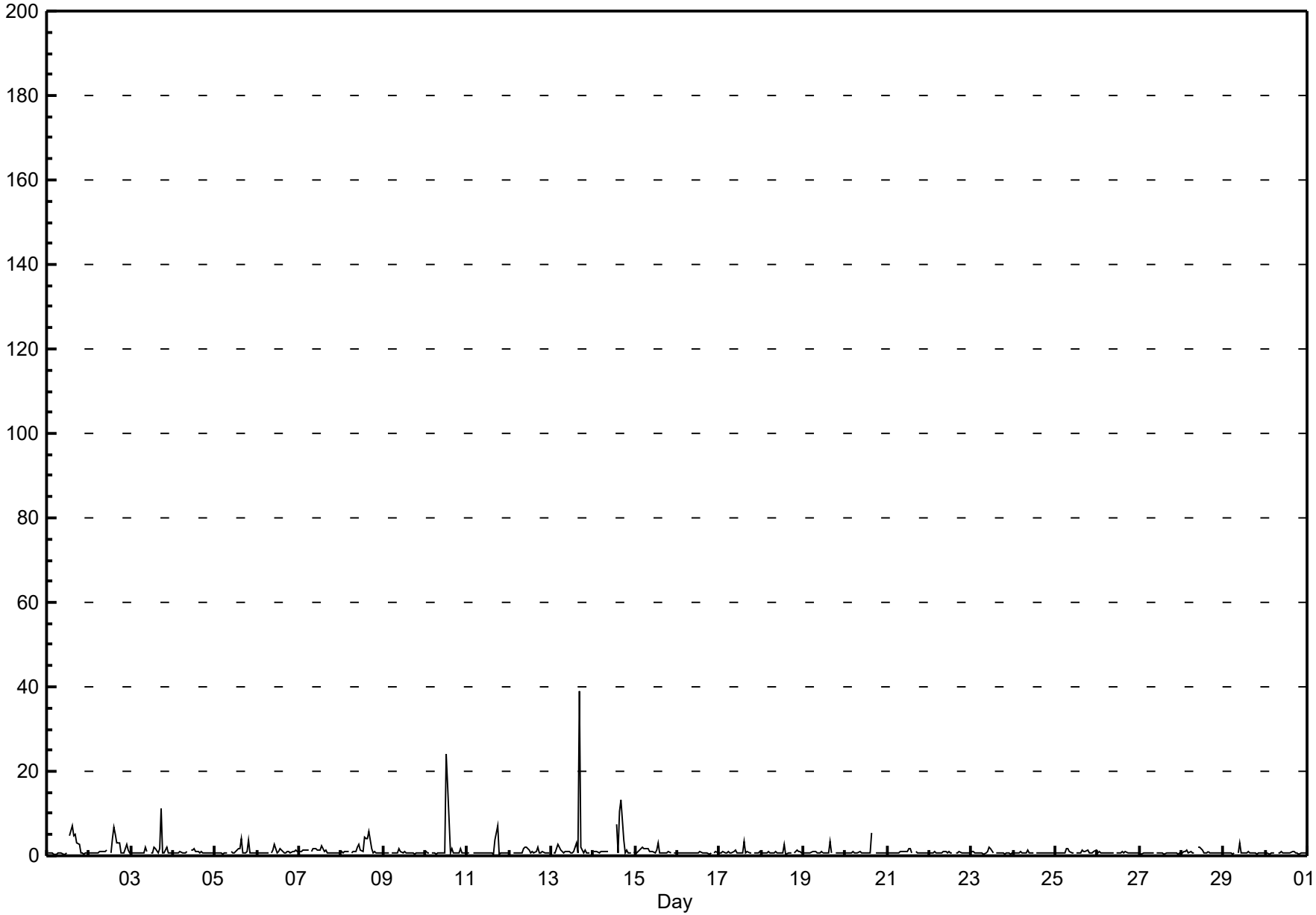
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

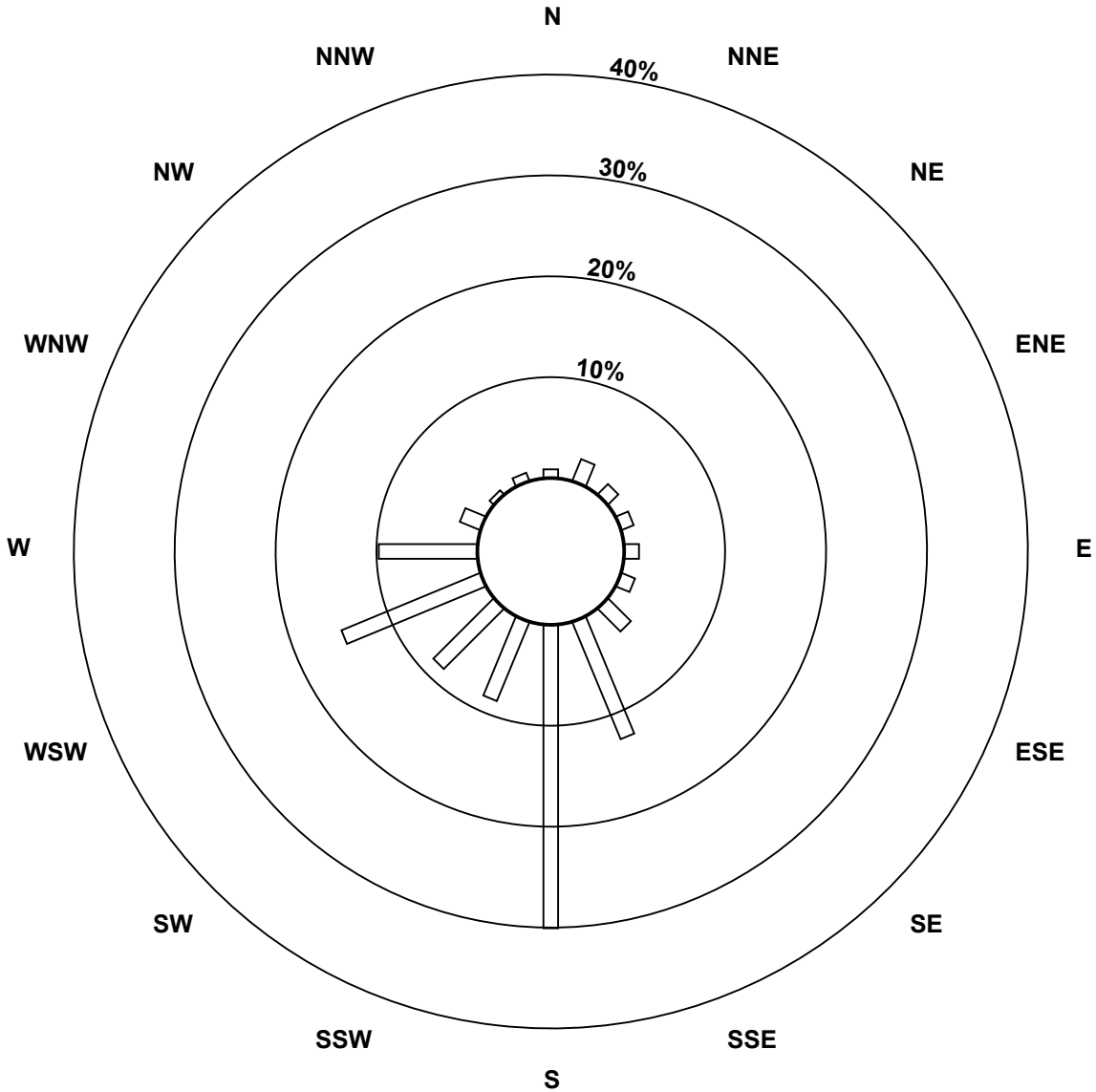
Portable Rycroft - September 2016



Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Portable Rycroft - September 2016



Pollutant Classes (ppb)

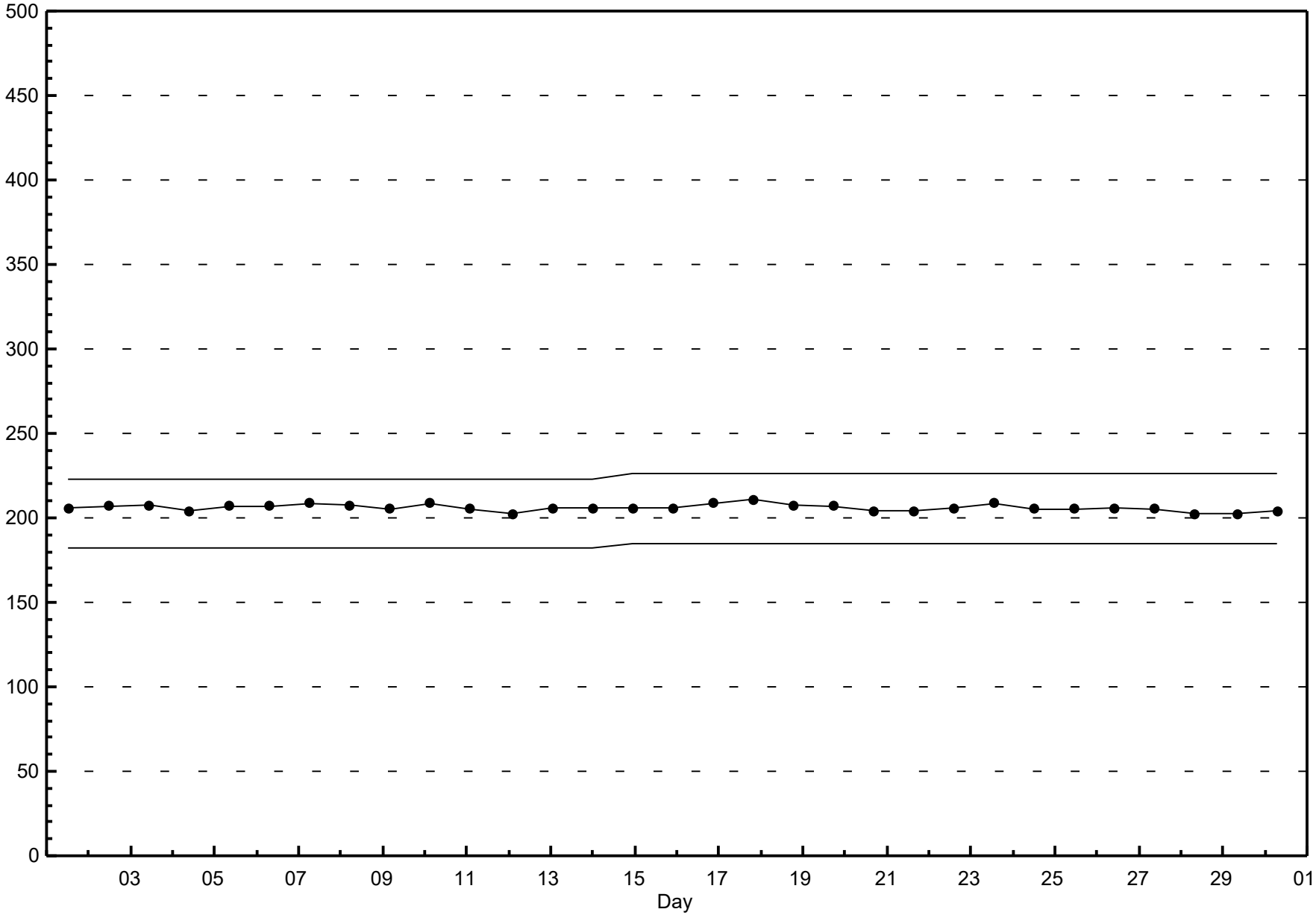
- 0 - 10
- 11 - 20
- 21 - 60
- 61 - 110
- 111 - 172
- > 172

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - September 2016

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

Maximum Value: 1.1 ppb on Sep 26 19:00

Maximum Daily Average: 0.4 ppb on Sep 26

Minimum Value: 0 ppb on Sep 2 18:00

Minimum Daily Average: 0.1 ppb on Sep 4

Maximum Diurnal Average: 0.3 ppb at hour 23

Minimum Diurnal Average: 0.2 ppb at hour 16

Monthly Average: 0.28 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.3$ $P_{90} = 0.4$ $P_{99} = 0.6$

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

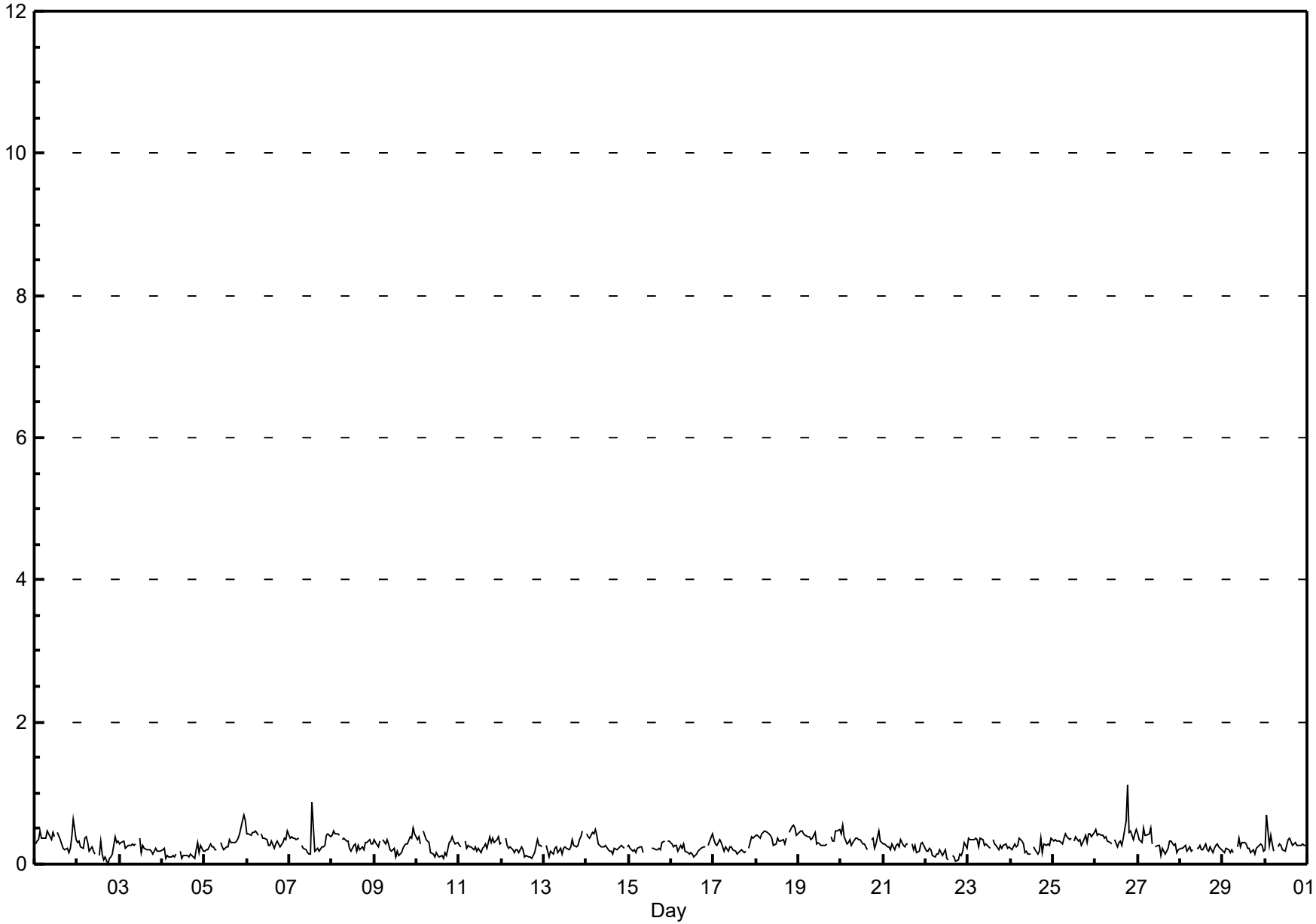
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - September 2016

Maximum Value: 18.6 ppb on Sep 7 14:00

Maximum Daily Average: 1.6 ppb on Sep 7

Minimum Value: 0 ppb on Sep 4 12:00

Minimum Daily Average: 0.6 ppb on Sep 22

Maximum Diurnal Average: 1.6 ppb at hour 14

Minimum Diurnal Average: 0.7 ppb at hour 16

Monthly Average: 0.83 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.6$ $Q_1 = 0.7$ Median = 0.8 $Q_3 = 0.9$ $P_{90} = 1.0$ $P_{99} = 1.6$

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-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
2-Sep	1	1	1	1	1	1	1	1	1	1	1	A	1	8	1	0	1	1	1	1	1	1	1	1	1.0	8.3
3-Sep	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
4-Sep	1	1	1	1	0	1	1	0	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
5-Sep	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4
6-Sep	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	0.9	2.5
7-Sep	1	1	1	1	1	1	A	1	1	1	1	1	1	19	1	1	1	1	1	1	1	1	1	1	1.6	18.6
8-Sep	1	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0.8	1.7
9-Sep	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	1.0
10-Sep	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
11-Sep	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
12-Sep	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
13-Sep	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.1
14-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	A	1	0.8	1.5
15-Sep	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	A	1	1	0.7	0.8
16-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	0.9
17-Sep	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	0.9
18-Sep	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	1.1
19-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.1
20-Sep	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
21-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	0.9
22-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	0	1	1	1	1	1	1	0.6	0.9
23-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.1
24-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
25-Sep	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.0
26-Sep	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	3	6	1	1	1	1	1	1.2	6.1
27-Sep	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
28-Sep	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
29-Sep	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
30-Sep	1	2	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.9
	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	1.6	0.8	0.7	0.7	0.8	0.9	0.8	0.8	0.8	0.9	0.8	Diurnal Average	
	1.1	1.9	1.2	1.6	1.1	1.2	1.1	1.3	1.0	1.0	1.1	0.9	1.7	18.6	2.5	1.1	1.1	3.4	6.1	1.2	1.4	1.1	1.3	1.1	Diurnal Maximum	

C - Calibration

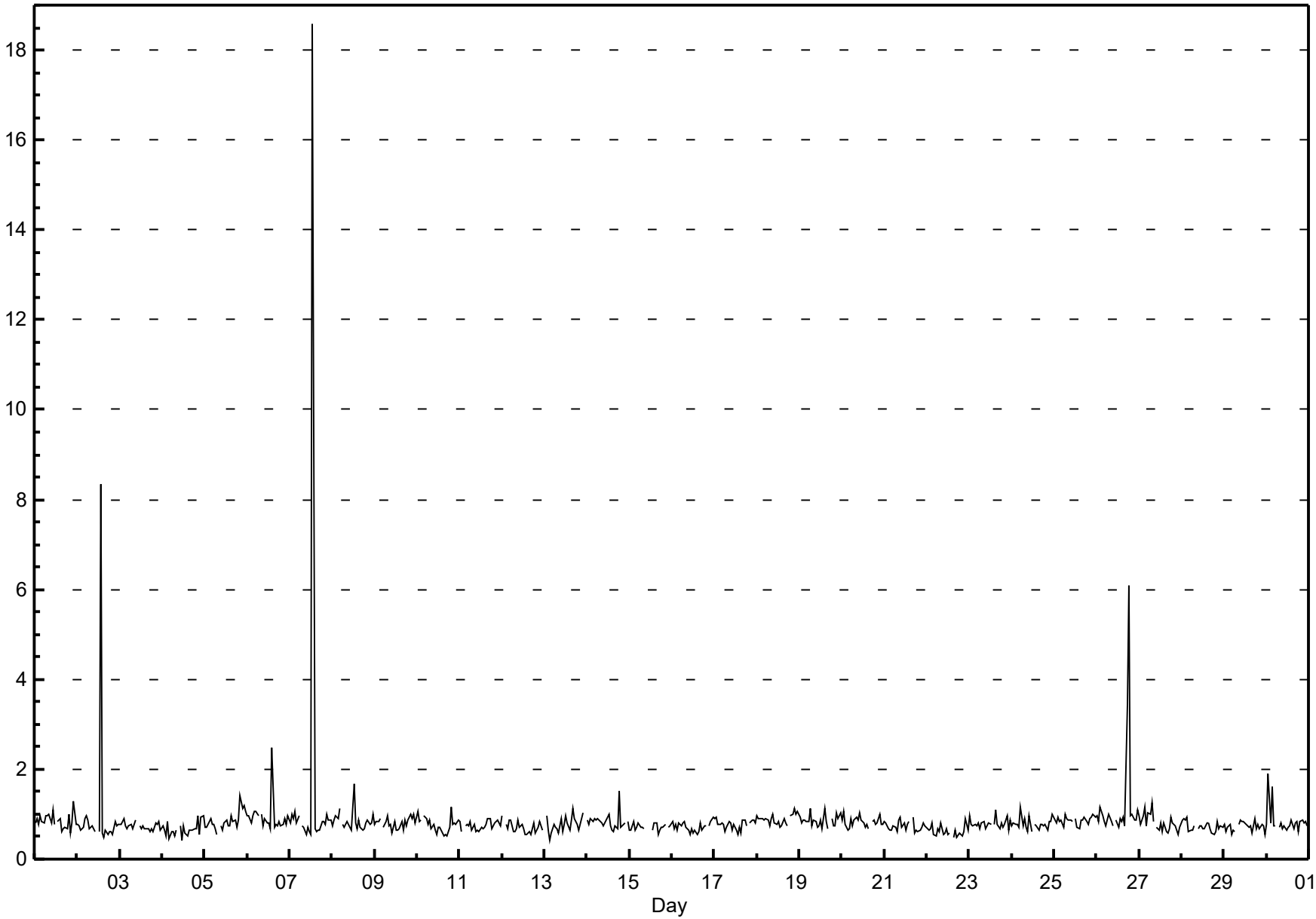
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - September 2016

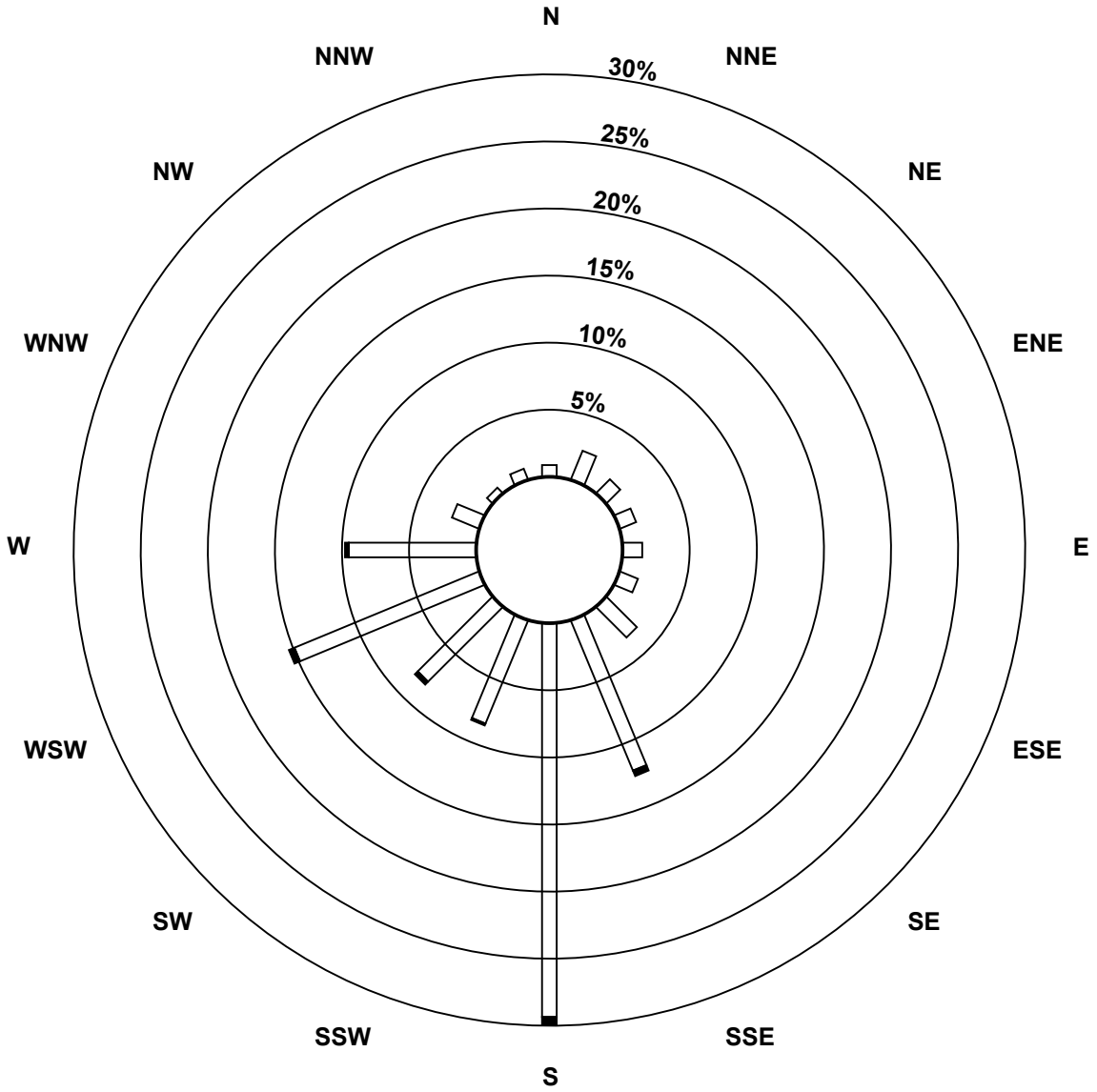


Peace Airshed Zone Association

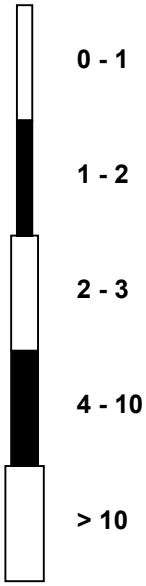
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - September 2016



Pollutant Classes (ppb)

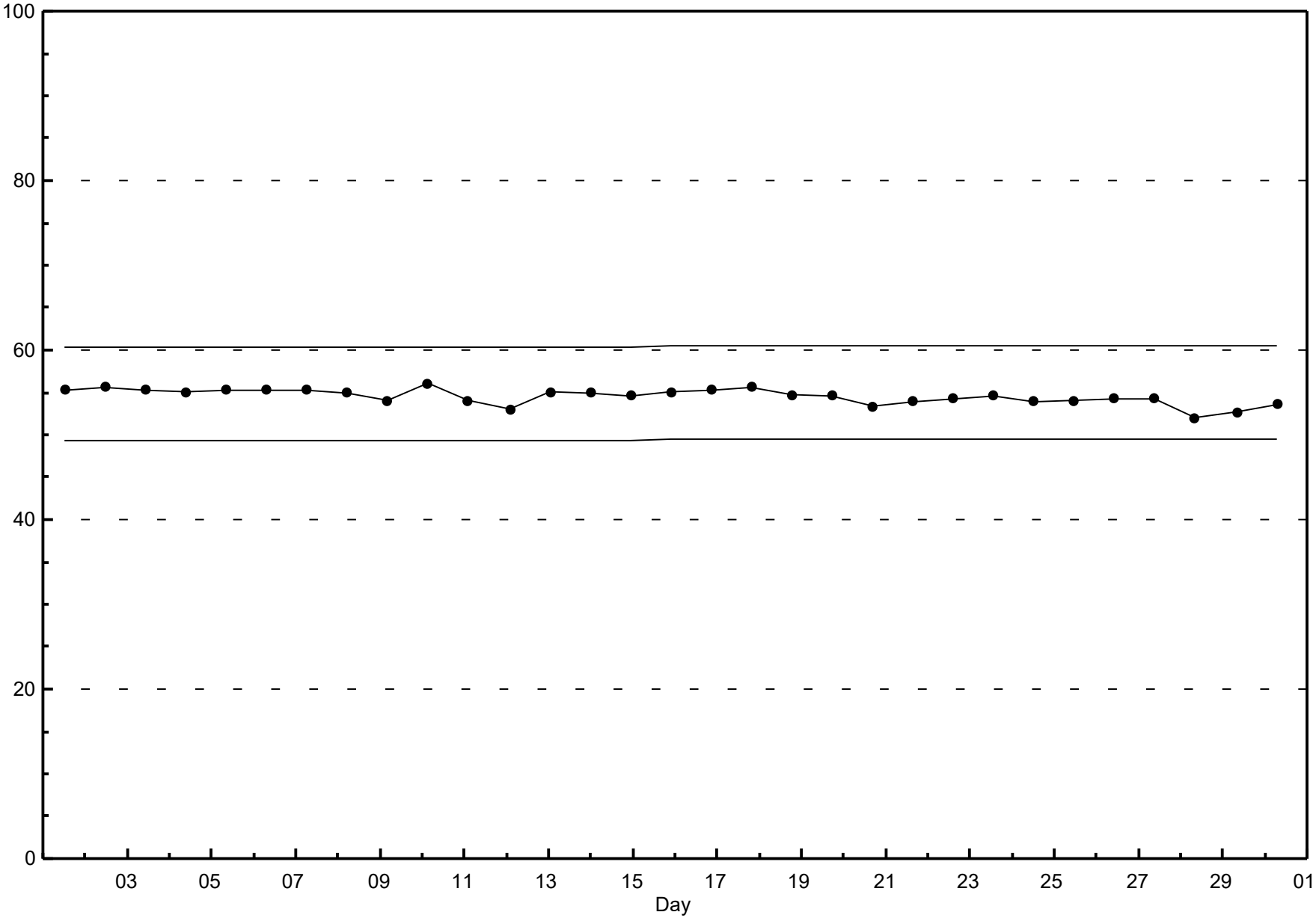


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable Rycroft - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 10.6 ppb on Sep 28 22:00
Maximum Daily Average: 2.5 ppb on Sep 29

Minimum Value: 0 ppb on Sep 5 05:00
Maximum Diurnal Average: 1.9 ppb at hour 22
Monthly Average: 1.15 ppb

Minimum Daily Average: 0.6 ppb on Sep 11
Minimum Diurnal Average: 0.6 ppb at hour 15
Percentiles: $P_1 = 0.2$ $P_{10} = 0.4$ $Q_1 = 0.6$ Median = 1.0 $Q_3 = 1.5$ $P_{90} = 2.0$ $P_{99} = 4.6$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	1	1	1	1	1	2	2	2	2	1	2	1	A	3	2	2	2	1	1	1	2	1	2	3	1.5	2.7
2-Sep	2	1	1	1	1	1	2	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	0	0	1.0	2.3
3-Sep	0	0	0	0	0	0	1	1	0	0	A	2	1	1	0	0	0	0	0	0	2	3	4	1	0.9	3.7
4-Sep	2	1	1	1	1	1	1	0	1	A	1	1	0	0	0	0	0	0	0	1	0	1	1	0	0.6	2.0
5-Sep	0	0	0	0	0	1	0	0	A	2	1	1	1	1	0	0	0	0	1	2	1	1	1	1	0.6	2.1
6-Sep	1	1	1	1	1	1	1	A	2	2	1	1	1	1	0	1	0	0	0	1	1	1	1	1	0.9	2.3
7-Sep	1	1	1	1	1	1	A	2	2	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	0.9	2.4
8-Sep	1	1	1	1	1	A	2	2	2	2	1	1	1	1	1	1	1	1	1	2	3	2	1	2	1.4	2.5
9-Sep	2	1	0	0	A	2	1	2	2	1	1	1	0	1	1	1	0	0	0	1	1	1	1	1	0.8	1.9
10-Sep	0	1	1	A	2	1	1	1	0	1	0	1	1	0	0	0	0	0	0	1	1	0	1	1	0.7	2.2
11-Sep	0	0	A	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.6	1.5
12-Sep	1	A	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	2	2	1	1	1	1	1.0	2.1
13-Sep	A	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	2	1	1	1	2	A	1.0	2.2
14-Sep	3	2	1	1	1	1	1	1	1	C	C	C	C	C	C	1	2	2	2	2	2	2	A	2	--	2.5
15-Sep	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	2	1	A	2	1	1.1	1.9
16-Sep	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	A	2	2	1	0.8	2.2
17-Sep	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	2	1	1	1	0.8	2.1
18-Sep	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	0	A	2	3	6	2	1	1.3	6.1
19-Sep	1	2	2	2	2	2	2	2	2	2	1	1	1	0	1	1	1	A	2	2	1	1	1	2	1.4	2.5
20-Sep	2	2	2	1	1	1	1	2	2	2	1	1	0	0	0	0	A	1	1	2	1	2	3	2	1.4	3.0
21-Sep	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	1	1	1	3	2	1	2	2	1.2	3.3
22-Sep	1	1	1	2	1	1	1	2	2	2	1	2	2	1	A	2	1	1	2	2	2	3	2	2	1.6	2.7
23-Sep	2	2	2	2	2	2	2	2	2	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1.3	2.0
24-Sep	1	1	0	0	1	1	1	1	1	0	0	0	A	1	1	1	0	1	1	2	2	2	1	1	0.9	2.1
25-Sep	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	2	1	1	2	1	1.2	1.7
26-Sep	1	1	2	2	2	2	2	2	1	1	A	1	1	1	1	1	1	2	4	3	2	1	1	1	1.4	3.7
27-Sep	1	1	1	1	1	1	1	3	1	A	1	1	1	0	0	1	0	1	1	1	1	2	1	1	0.9	3.0
28-Sep	1	2	1	1	1	1	1	2	A	2	1	1	1	1	1	1	1	1	1	4	4	11	7	4	2.2	10.6
29-Sep	3	2	3	2	2	2	3	A	3	5	2	2	1	1	1	1	1	1	3	3	5	5	3	3	2.5	4.7
30-Sep	5	5	6	4	2	2	A	2	2	1	1	1	2	2	1	1	0	1	0	0	0	0	0	0	1.6	5.7
	1.4	1.2	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.0	0.8	0.8	0.7	0.6	0.6	0.7	0.8	1.1	1.6	1.7	1.9	1.6	1.3	Diurnal Average	
	4.7	4.6	5.7	3.7	2.3	2.5	2.8	3.0	3.4	4.5	2.2	1.9	2.3	2.5	1.8	1.7	2.0	2.0	3.7	4.0	4.7	10.6	6.6	3.7	Diurnal Maximum	

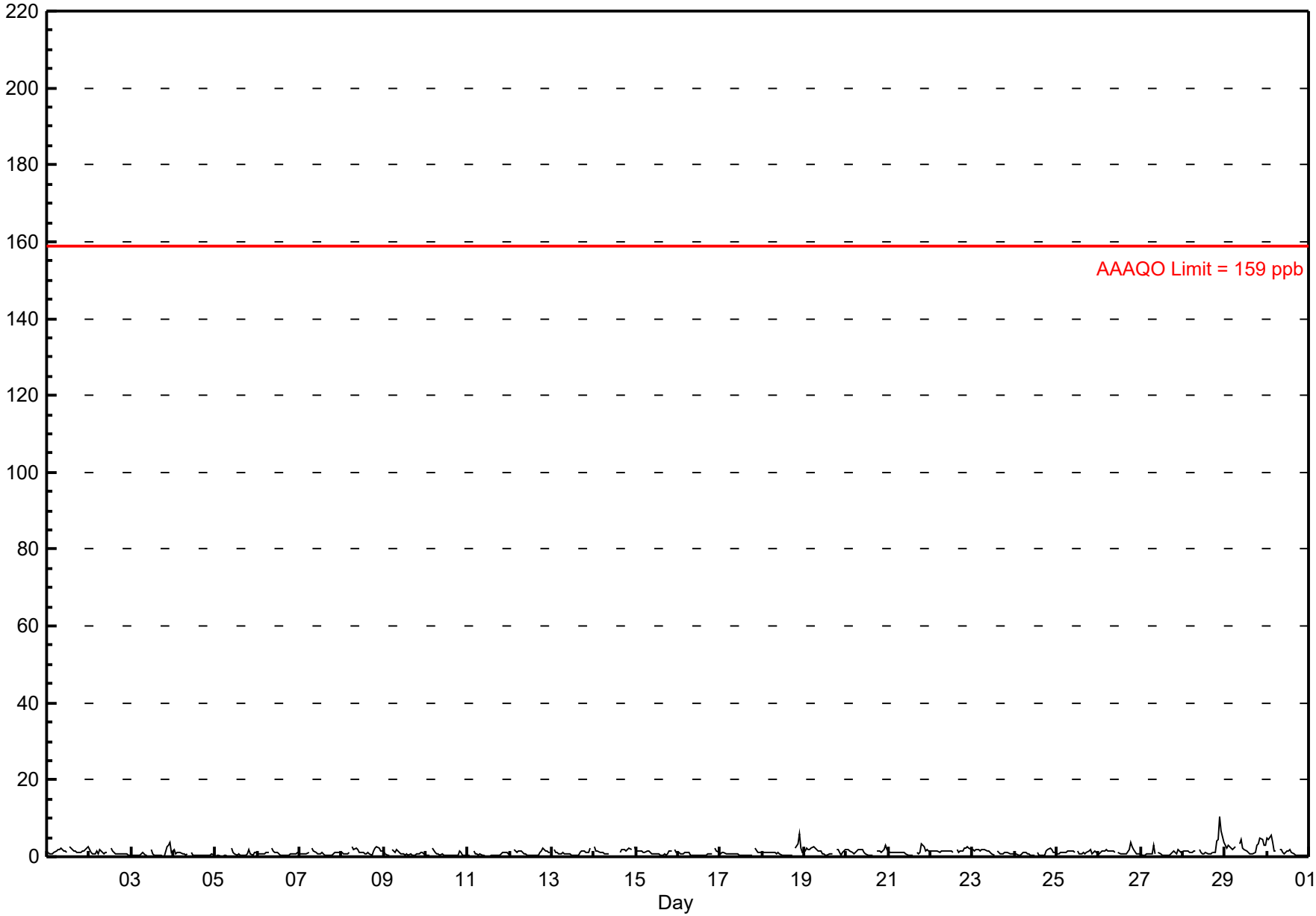
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Portable Rycroft - September 2016

Maximum Value: 21.0 ppb on Sep 28 22:00

Maximum Daily Average: 4.0 ppb on Sep 28

Minimum Value: 0 ppb on Sep 11 13:00

Minimum Daily Average: 1.1 ppb on Sep 11

Maximum Diurnal Average: 4.0 ppb at hour 21

Minimum Diurnal Average: 1.3 ppb at hour 15

Monthly Average: 2.08 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.7$ $Q_1 = 1.1$ Median = 1.5 $Q_3 = 2.3$ $P_{90} = 3.6$ $P_{99} = 11.4$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	2	1	1	1	1	2	2	3	3	2	3	2	A	3	3	3	3	2	2	2	3	4	3	3	2.3	4.5
2-Sep	4	2	2	1	2	2	4	3	1	2	2	A	4	2	2	1	1	1	2	2	3	2	2	1	2.0	3.7
3-Sep	1	1	1	1	2	1	2	1	1	1	A	3	1	1	1	1	1	1	0	1	7	16	13	2	2.5	15.8
4-Sep	3	1	1	1	1	1	1	1	1	A	3	1	1	1	0	1	1	1	1	2	1	1	2	1	1.1	3.2
5-Sep	0	0	0	1	0	1	1	0	A	4	1	1	1	2	1	1	1	1	2	9	2	2	1	1	1.5	8.7
6-Sep	1	1	1	1	1	1	1	A	3	2	2	1	1	1	1	1	1	1	1	3	1	1	1	2	1.4	3.3
7-Sep	2	1	1	1	1	1	A	4	2	2	1	1	4	5	2	1	1	0	1	1	1	1	3	1	1.6	5.1
8-Sep	1	1	1	1	1	A	4	2	3	2	2	1	2	1	2	2	3	1	5	6	4	6	2	2	2.5	6.3
9-Sep	3	2	1	1	A	4	2	3	3	1	1	1	2	1	1	1	3	1	1	1	1	1	1	1	1.6	3.8
10-Sep	1	1	1	A	4	2	1	1	1	1	1	1	2	1	1	1	1	1	1	5	5	1	1	1	1.5	5.2
11-Sep	1	1	A	3	1	1	1	1	1	0	0	0	0	1	3	1	1	1	1	1	2	1	1	1	1.1	3.2
12-Sep	1	A	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	6	6	5	2	2	2	1	1.9	6.2
13-Sep	A	4	1	1	1	1	1	1	1	1	1	2	1	1	1	1	3	2	3	3	5	2	8	A	2.1	8.4
14-Sep	9	2	2	1	1	1	1	1	1	C	C	C	C	C	C	2	4	5	5	3	16	2	A	4	--	16.5
15-Sep	2	2	2	2	2	2	2	2	1	1	1	1	1	2	1	1	1	1	1	2	2	A	3	2	1.6	3.0
16-Sep	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	3	2	2	1.1	3.2
17-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	3	2	1	1	1.2	3.1
18-Sep	1	1	1	1	1	1	2	1	2	2	2	1	1	2	1	2	1	1	A	4	12	13	3	2	2.6	13.1
19-Sep	3	3	2	2	3	3	3	2	2	2	1	1	1	1	1	1	2	A	3	3	2	1	4	4	2.3	4.5
20-Sep	3	3	2	1	1	2	2	3	2	3	1	1	1	1	1	1	A	2	3	3	2	2	4	3	2.1	3.7
21-Sep	2	1	1	1	1	2	1	1	2	2	1	1	1	0	1	A	2	1	3	4	4	2	2	2	1.7	3.9
22-Sep	2	2	2	2	2	1	2	2	2	2	2	2	2	8	A	3	2	3	2	6	4	3	2	2	2.6	8.2
23-Sep	2	2	3	2	2	2	2	3	3	2	2	1	1	A	2	2	1	2	2	2	1	1	1	1	1.9	3.4
24-Sep	1	1	1	1	6	7	2	1	1	1	1	1	A	2	1	1	1	2	6	3	5	5	2	2	2.3	6.7
25-Sep	1	1	1	1	1	1	2	2	2	3	2	A	3	1	1	1	1	2	2	6	1	2	3	1	1.8	6.3
26-Sep	1	1	2	2	2	2	2	2	2	2	A	2	1	1	1	4	2	3	8	7	4	1	1	1	2.4	7.7
27-Sep	1	1	1	2	2	1	1	7	2	A	2	1	1	1	1	1	1	1	2	2	1	3	2	2	1.7	6.8
28-Sep	2	2	2	2	1	1	2	2	A	3	2	1	1	1	2	1	1	8	3	8	13	21	8	5	4.0	21.0
29-Sep	4	3	3	3	2	3	3	A	4	8	3	2	2	1	1	1	1	2	5	5	10	12	5	5	3.9	11.5
30-Sep	10	7	8	7	2	2	A	3	7	2	2	2	3	3	2	1	1	1	1	1	1	1	1	1	3.0	9.6
	2.3	1.7	1.7	1.6	1.8	1.9	1.8	2.0	2.0	1.9	1.5	1.3	1.5	1.7	1.3	1.3	1.4	1.9	2.6	3.5	4.0	4.0	2.9	2.0	Diurnal Average	
	9.6	7.3	8.0	7.1	6.0	6.7	3.8	6.8	7.3	7.8	3.0	3.5	4.0	8.2	3.2	3.6	3.8	8.0	7.7	8.7	16.5	21.0	13.1	4.9	Diurnal Maximum	

C - Calibration

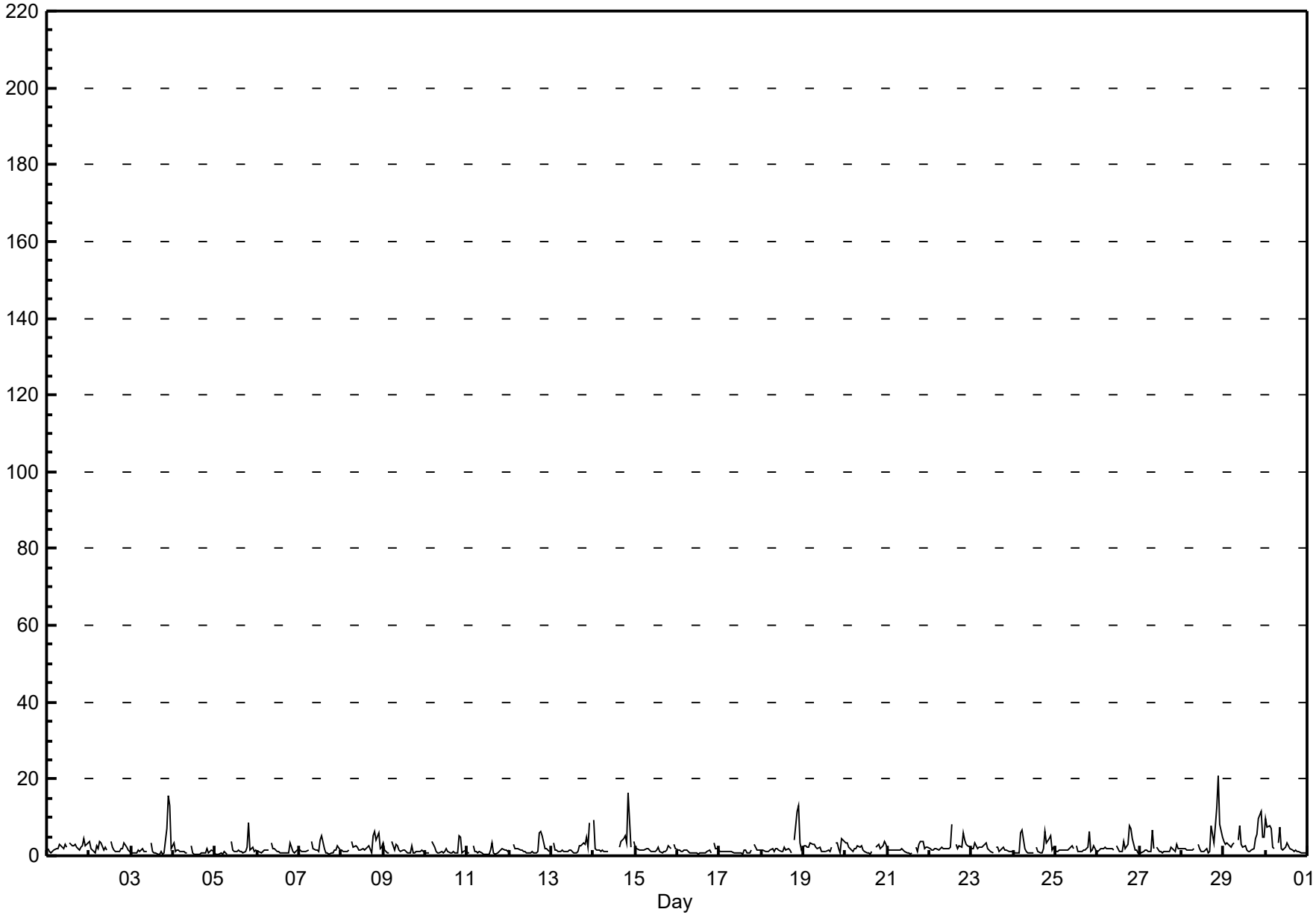
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

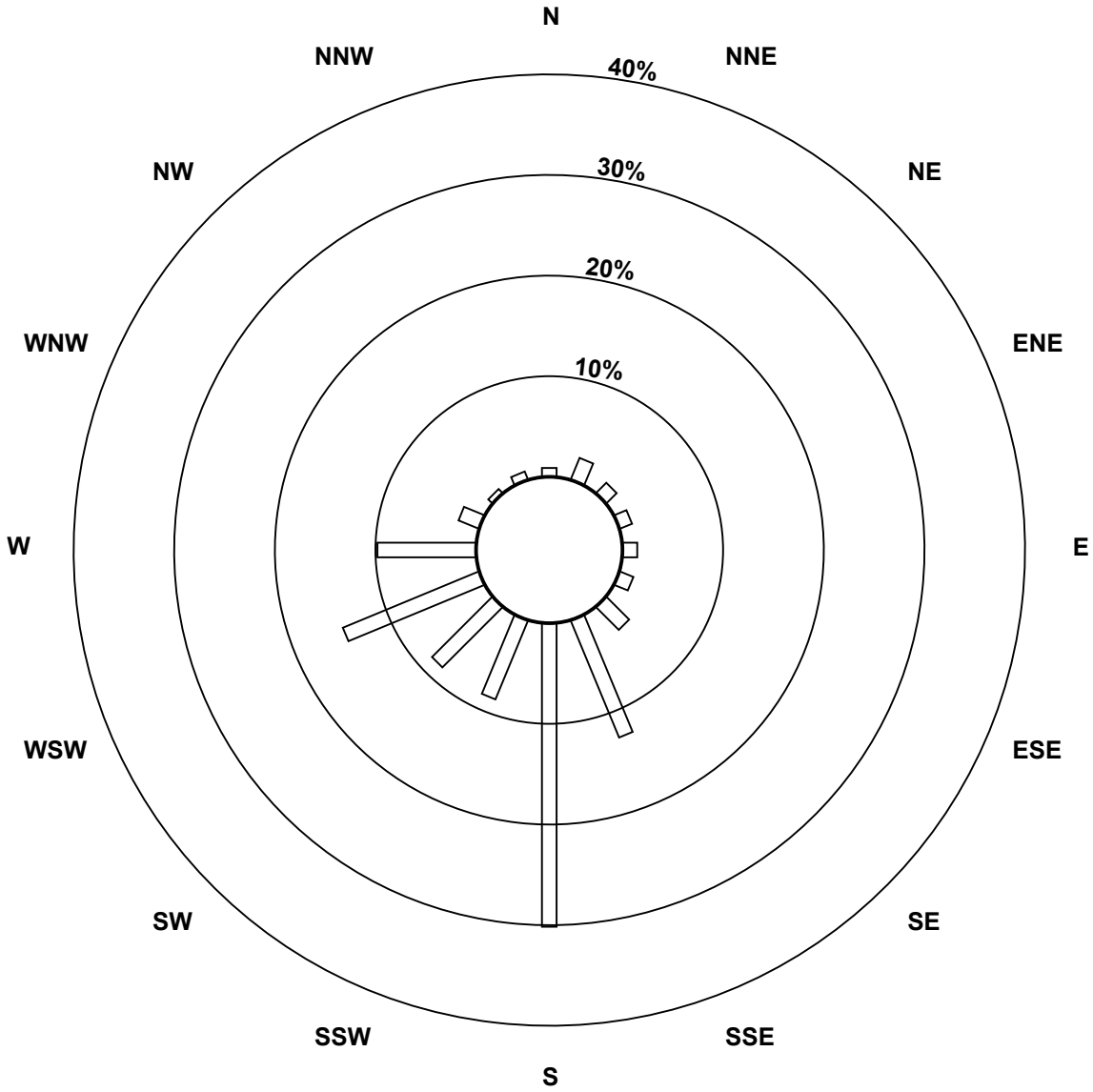
Portable Rycroft - September 2016



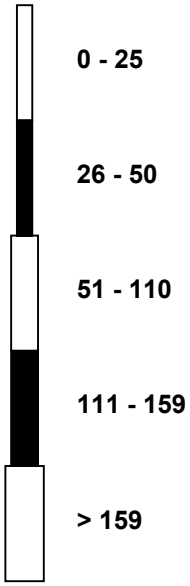
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Portable Rycroft - September 2016



Pollutant Classes (ppb)

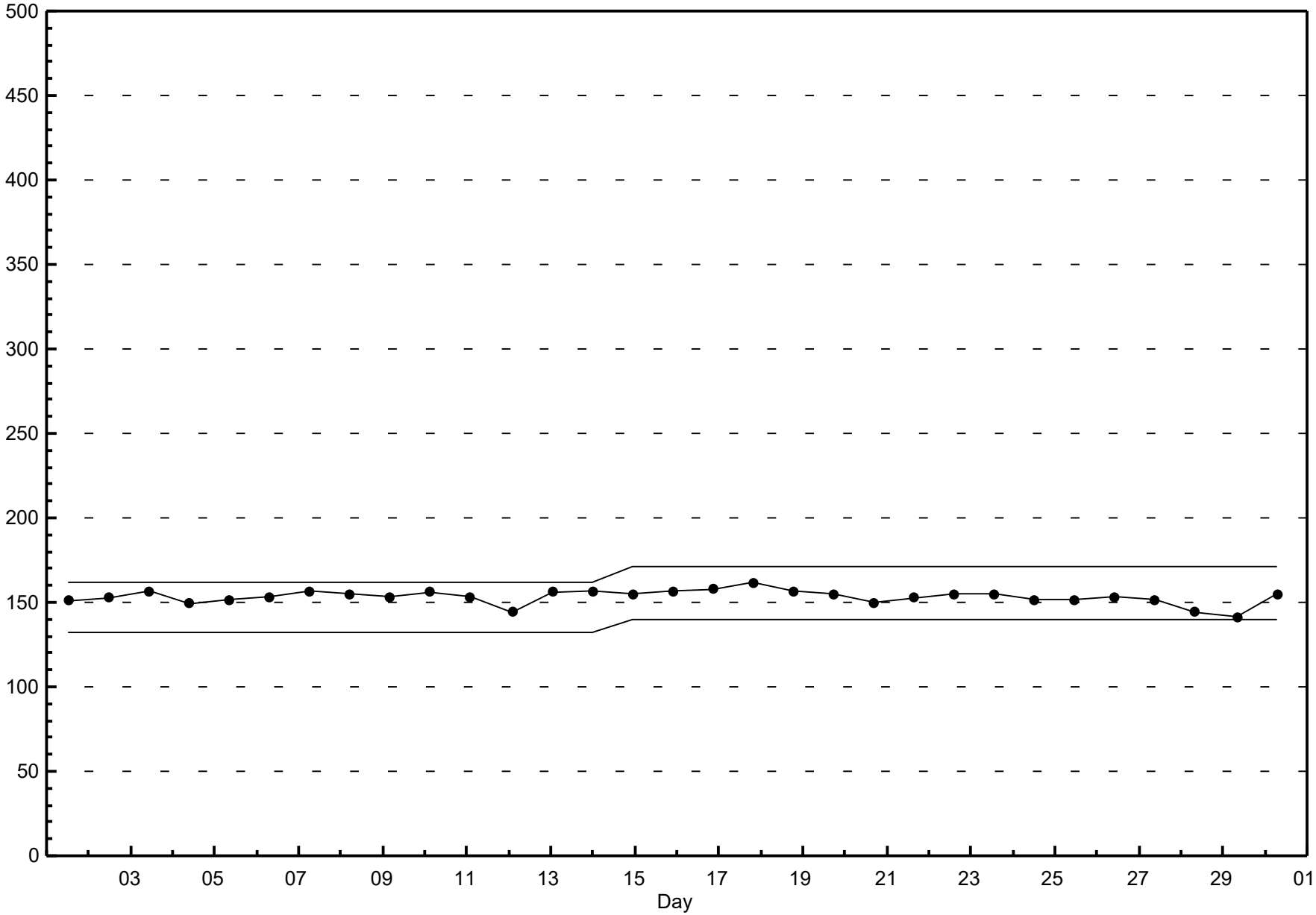


Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable Rycroft - September 2016

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

Maximum Value: 3.5 ppb on Sep 29 10:00

Maximum Daily Average: 0.5 ppb on Sep 1

Minimum Value: 0 ppb on Sep 4 04:00

Minimum Daily Average: 0.1 ppb on Sep 10

Maximum Diurnal Average: 0.6 ppb at hour 10

Minimum Diurnal Average: 0.1 ppb at hour 20

Monthly Average: 0.19 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.1 $Q_3 = 0.2$ $P_{90} = 0.4$ $P_{99} = 1.4$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	0	0	0	0	0	0	0	1	1	0	1	1	A	1	2	1	1	1	0	0	0	0	0	0	0.5	1.7
2-Sep	1	0	0	0	1	0	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0.5	1.3
3-Sep	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	2	0	0.3	2.1
4-Sep	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	0.6
5-Sep	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
6-Sep	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
7-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.6
8-Sep	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
9-Sep	0	0	0	0	A	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
10-Sep	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
11-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
12-Sep	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
13-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0.2	0.6
14-Sep	1	0	0	0	0	0	0	0	0	C	C	C	C	C	C	0	1	1	0	0	2	0	A	0	--	1.5
15-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.4
16-Sep	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
17-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.1
18-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4
19-Sep	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	1.0
20-Sep	0	0	0	0	0	0	0	1	1	2	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	1.8
21-Sep	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	1.0
22-Sep	0	0	0	0	0	0	0	0	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0.3	1.1
23-Sep	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	1.3
24-Sep	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
25-Sep	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
26-Sep	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	0.4
27-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
28-Sep	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	1.1
29-Sep	0	0	0	0	0	0	0	A	2	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.5
30-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.6	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	Diurnal Average	
	0.8	0.3	0.4	0.2	0.9	0.3	0.9	0.8	1.6	3.5	1.1	0.8	0.7	1.4	1.7	1.3	1.4	0.7	0.4	0.3	1.5	1.4	2.1	0.2	Diurnal Maximum	

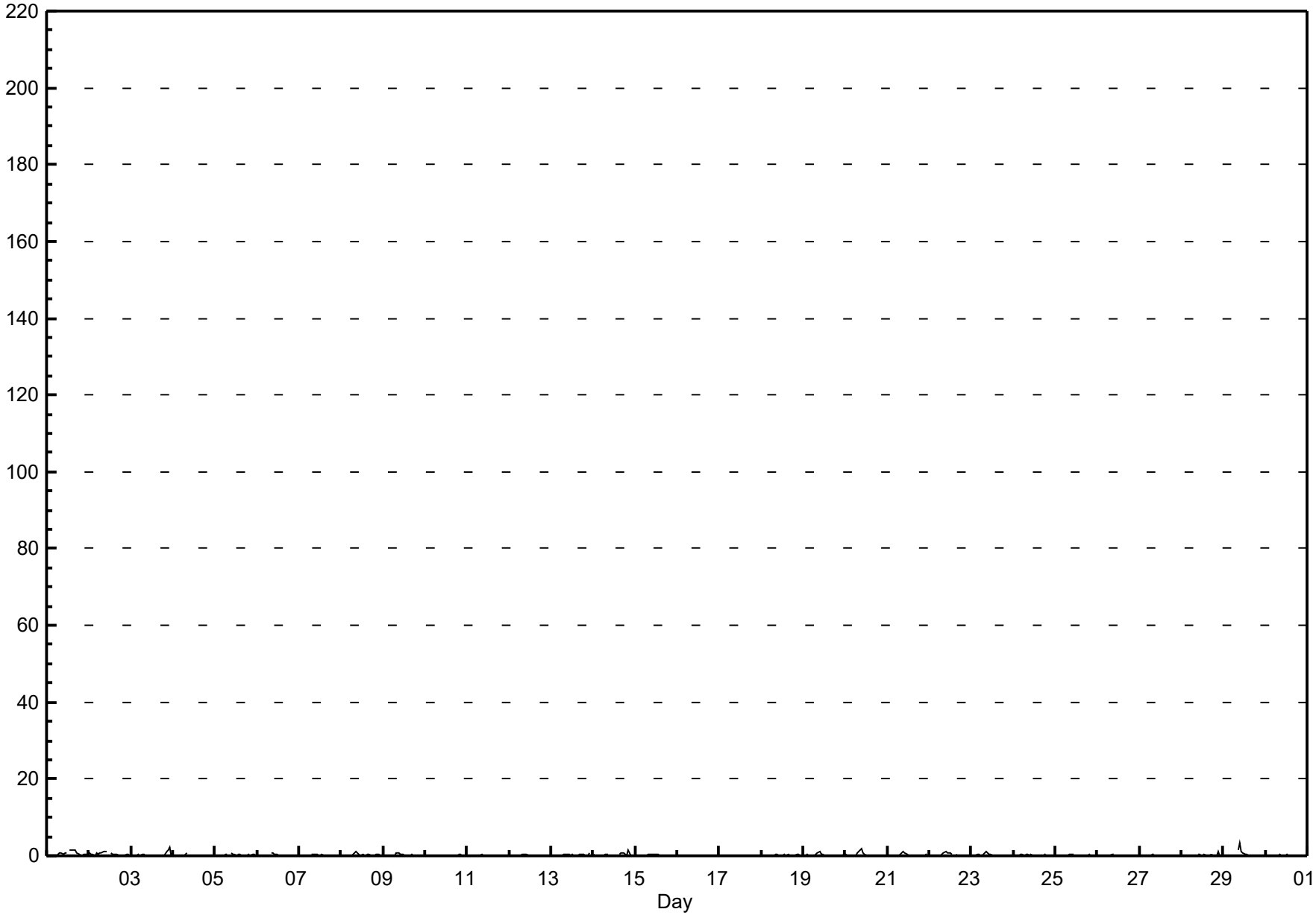
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable Rycroft - September 2016

Maximum Value: 56.4 ppb on Sep 14 21:00

Maximum Daily Average: 2.1 ppb on Sep 3

Minimum Value: 0 ppb on Sep 10 18:00

Minimum Daily Average: 0.3 ppb on Sep 17

Maximum Diurnal Average: 2.8 ppb at hour 21

Minimum Diurnal Average: 0.3 ppb at hour 4

Monthly Average: 0.84 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 0.3 $Q_3 = 0.6$ $P_{90} = 1.5$ $P_{99} = 9.3$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	0	0	0	0	0	1	1	2	2	1	4	1	A	3	4	3	3	3	1	0	0	4	0	1	1.6	4.5
2-Sep	5	2	2	0	3	1	3	3	2	3	2	A	1	1	1	1	1	1	1	1	3	1	2	0	1.7	5.3
3-Sep	0	0	0	0	1	0	2	0	1	1	A	0	0	0	1	0	0	1	0	0	5	16	17	0	2.1	17.3
4-Sep	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
5-Sep	0	0	0	1	0	0	1	1	A	2	0	0	0	1	1	0	0	1	1	2	0	2	0	0	0.7	2.1
6-Sep	0	0	0	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0.5	2.5
7-Sep	0	0	0	0	0	0	A	1	1	1	1	1	2	4	1	0	0	0	0	0	0	0	1	0	0.6	3.8
8-Sep	0	0	0	0	0	A	0	1	2	1	1	0	1	1	1	2	1	0	0	0	6	1	0	0	0.9	6.4
9-Sep	1	0	0	0	A	0	0	1	1	1	1	12	1	0	0	0	11	0	0	0	0	0	0	0	1.4	11.9
10-Sep	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	2	0	0	0	0.4	2.2
11-Sep	0	0	A	0	0	0	0	0	1	0	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0.5	4.6
12-Sep	0	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0.4	1.2
13-Sep	A	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	1	0	0	0	4	A	0.7	4.4
14-Sep	18	0	0	0	0	0	0	0	1	C	C	C	C	C	C	1	2	2	1	0	56	0	A	0	--	56.4
15-Sep	0	0	0	0	0	0	0	1	1	0	1	1	1	2	0	0	0	0	0	0	0	A	0	0	0.4	1.5
16-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0.3	1.0
17-Sep	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.5
18-Sep	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	0	0	A	0	2	4	0	0	0.8	4.4
19-Sep	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	1	A	0	0	0	0	0	0	0.5	1.5
20-Sep	1	0	0	0	0	0	0	2	2	3	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0.7	2.9
21-Sep	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	1.5
22-Sep	0	0	0	0	0	0	0	6	1	2	1	1	1	7	A	0	0	0	0	1	0	0	0	0	1.1	7.3
23-Sep	0	0	0	0	0	0	0	1	3	10	1	0	0	A	0	1	0	0	0	0	0	0	0	0	1.0	9.8
24-Sep	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	1	2	0	0	0	1	0	0.5	1.9
25-Sep	0	0	0	0	0	0	0	0	0	2	1	A	0	0	0	0	0	0	0	3	0	0	0	0	0.5	3.2
26-Sep	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	3	0	0	1	0	0	0	0	0	0.5	3.1
27-Sep	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.9
28-Sep	0	0	0	0	0	0	0	0	A	1	1	0	0	0	1	0	0	7	0	0	2	6	0	0	1.0	7.0
29-Sep	0	0	0	0	0	0	0	A	2	8	2	1	1	0	0	0	0	1	0	0	0	0	0	0	0.8	7.7
30-Sep	0	0	0	0	0	0	A	0	2	0	0	0	7	1	1	0	0	0	0	0	0	0	0	0	0.7	6.6
	1.1	0.3	0.3	0.3	0.4	0.3	0.5	1.0	1.0	1.5	0.8	1.0	0.8	1.0	0.7	0.6	0.9	0.7	0.5	0.6	2.8	1.4	1.1	0.3	Diurnal Average	
	17.8	1.7	2.2	1.0	3.1	1.1	2.8	6.4	3.5	9.8	3.8	11.9	6.6	7.3	4.6	3.1	11.3	7.0	1.9	3.2	56.4	15.6	17.3	0.5	Diurnal Maximum	

C - Calibration

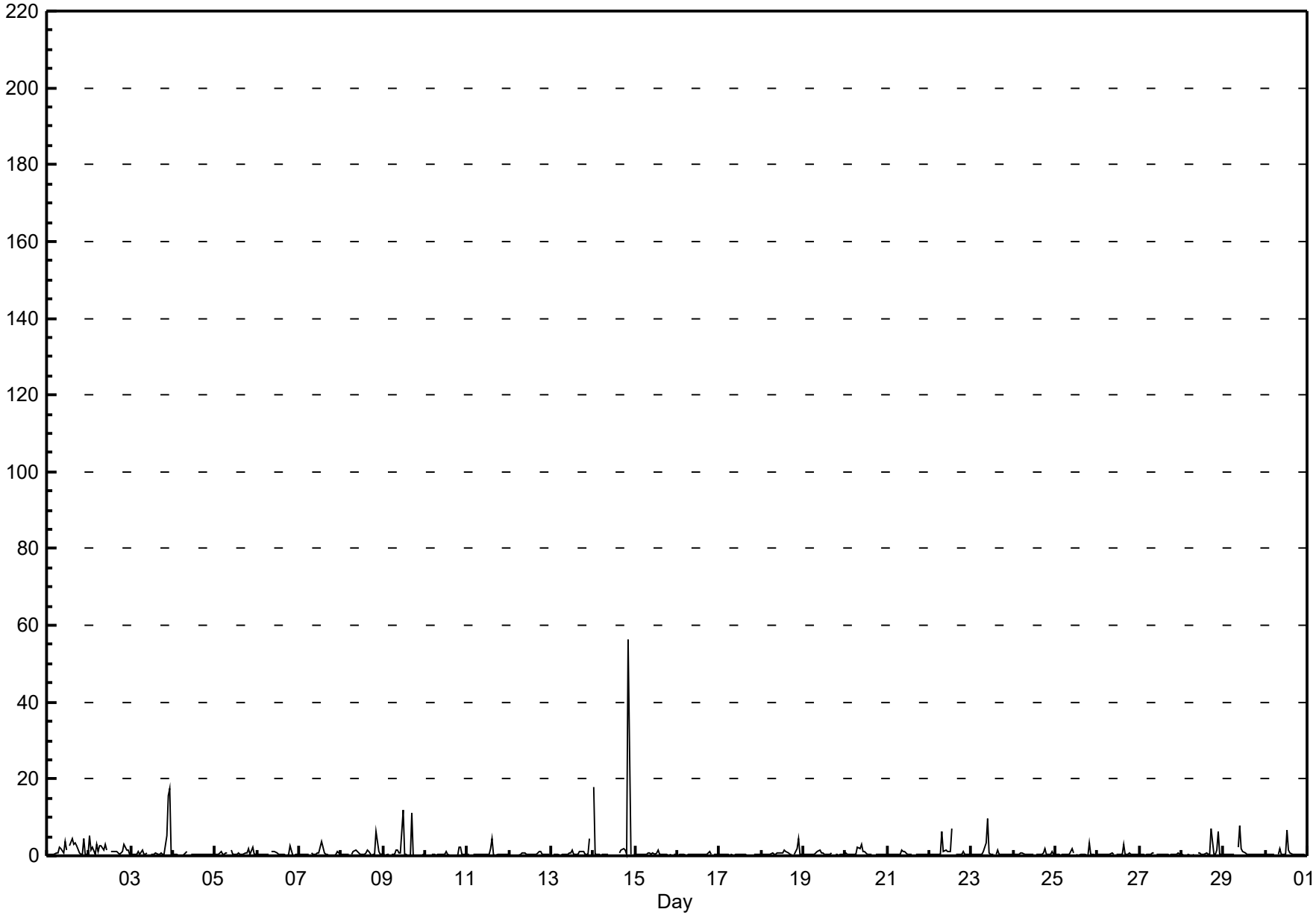
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable Rycroft - September 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 11.8 ppb on Sep 28 22:00
Maximum Daily Average: 2.9 ppb on Sep 29

Minimum Value: 0 ppb on Sep 11 13:00
Maximum Diurnal Average: 2.1 ppb at hour 22
Monthly Average: 1.35 ppb

Minimum Daily Average: 0.6 ppb on Sep 11
Minimum Diurnal Average: 0.8 ppb at hour 15
Percentiles: $P_1 = 0.2$ $P_{10} = 0.5$ $Q_1 = 0.7$ Median = 1.1 $Q_3 = 1.7$ $P_{90} = 2.4$ $P_{99} = 4.7$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	1	1	1	1	1	2	2	3	3	2	2	2	A	4	3	3	3	2	1	1	2	2	2	3	2.0	3.9
2-Sep	3	1	1	1	2	1	3	2	2	3	2	A	3	2	2	1	1	1	1	1	1	1	1	1	1.5	2.9
3-Sep	1	1	0	0	1	1	2	1	1	1	A	2	1	1	1	0	0	0	0	0	4	4	6	1	1.2	5.8
4-Sep	2	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	0	0	1	1	1	1	0	0.7	2.1
5-Sep	0	0	0	0	0	1	1	1	A	3	1	1	1	1	1	1	0	1	1	2	1	1	1	1	0.8	2.7
6-Sep	1	1	1	1	1	1	1	A	3	2	2	1	1	1	1	1	0	0	0	1	1	1	1	1	1.0	3.2
7-Sep	1	1	1	1	1	1	A	3	2	1	1	1	1	2	0	0	0	0	0	0	1	1	1	1	1.0	2.7
8-Sep	1	1	1	1	1	A	3	2	3	2	2	1	1	1	1	2	1	1	2	2	3	3	1	2	1.6	3.0
9-Sep	2	1	0	0	A	2	1	2	2	2	1	1	0	1	1	1	1	0	0	1	1	1	1	1	1.0	2.4
10-Sep	0	1	1	A	2	1	1	1	1	1	0	1	1	0	0	0	0	0	0	2	1	0	1	1	0.7	2.2
11-Sep	1	0	A	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.6	1.6
12-Sep	1	A	2	1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	2	2	1	1	1	1	1.1	2.1
13-Sep	A	2	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	2	2	1	1	1	3	A	1.1	2.8
14-Sep	3	2	1	1	1	1	1	1	1	C	C	C	C	C	C	1	3	3	2	2	4	2	A	2	--	3.9
15-Sep	2	2	1	1	1	1	2	2	1	1	1	1	1	1	0	0	1	0	1	2	1	A	2	1	1.2	2.0
16-Sep	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	A	2	2	1	0.8	2.3
17-Sep	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	A	2	1	1	1	0.8	2.2
18-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	2	4	6	3	1	1.4	6.5
19-Sep	2	2	2	2	2	3	2	2	2	3	1	1	1	1	1	1	1	A	2	2	1	1	1	2	1.6	2.7
20-Sep	2	2	2	1	1	1	1	3	3	4	2	1	1	0	0	0	A	2	2	2	1	2	3	2	1.7	3.6
21-Sep	2	1	1	1	1	1	1	1	2	2	2	1	1	0	0	A	1	1	1	3	3	2	2	2	1.5	3.4
22-Sep	2	2	1	2	2	1	1	2	2	3	2	2	2	1	A	2	1	1	2	2	2	3	2	2	1.9	2.9
23-Sep	2	2	2	2	2	2	2	2	3	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1.5	2.9
24-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	2	2	2	2	1	1	1.0	2.2
25-Sep	1	1	1	1	1	1	1	2	2	2	2	A	2	1	1	1	1	1	1	2	1	1	2	1	1.3	1.9
26-Sep	1	1	2	2	2	2	2	2	2	1	A	1	1	1	1	1	1	2	4	3	2	1	1	1	1.5	3.8
27-Sep	1	1	1	1	1	1	1	3	1	A	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.1	3.4
28-Sep	2	2	1	1	1	1	1	2	A	3	1	1	1	1	1	1	1	1	1	4	5	12	7	4	2.4	11.8
29-Sep	3	2	3	2	2	2	3	A	5	8	3	3	2	1	1	1	1	1	3	3	5	5	3	3	2.9	8.1
30-Sep	5	5	6	4	2	2	A	2	2	1	1	1	2	2	1	1	1	1	0	0	0	0	0	0	1.7	5.9
	1.5	1.3	1.4	1.3	1.3	1.3	1.4	1.6	1.8	1.9	1.3	1.0	0.9	0.9	0.8	0.8	0.8	0.9	1.2	1.7	1.9	2.1	1.8	1.4	Diurnal Average	
	4.8	4.7	5.9	3.8	2.5	2.6	2.8	3.4	4.9	8.1	3.1	2.7	2.9	3.9	3.5	2.9	3.0	2.7	3.8	4.2	4.7	11.8	6.8	3.8	Diurnal Maximum	

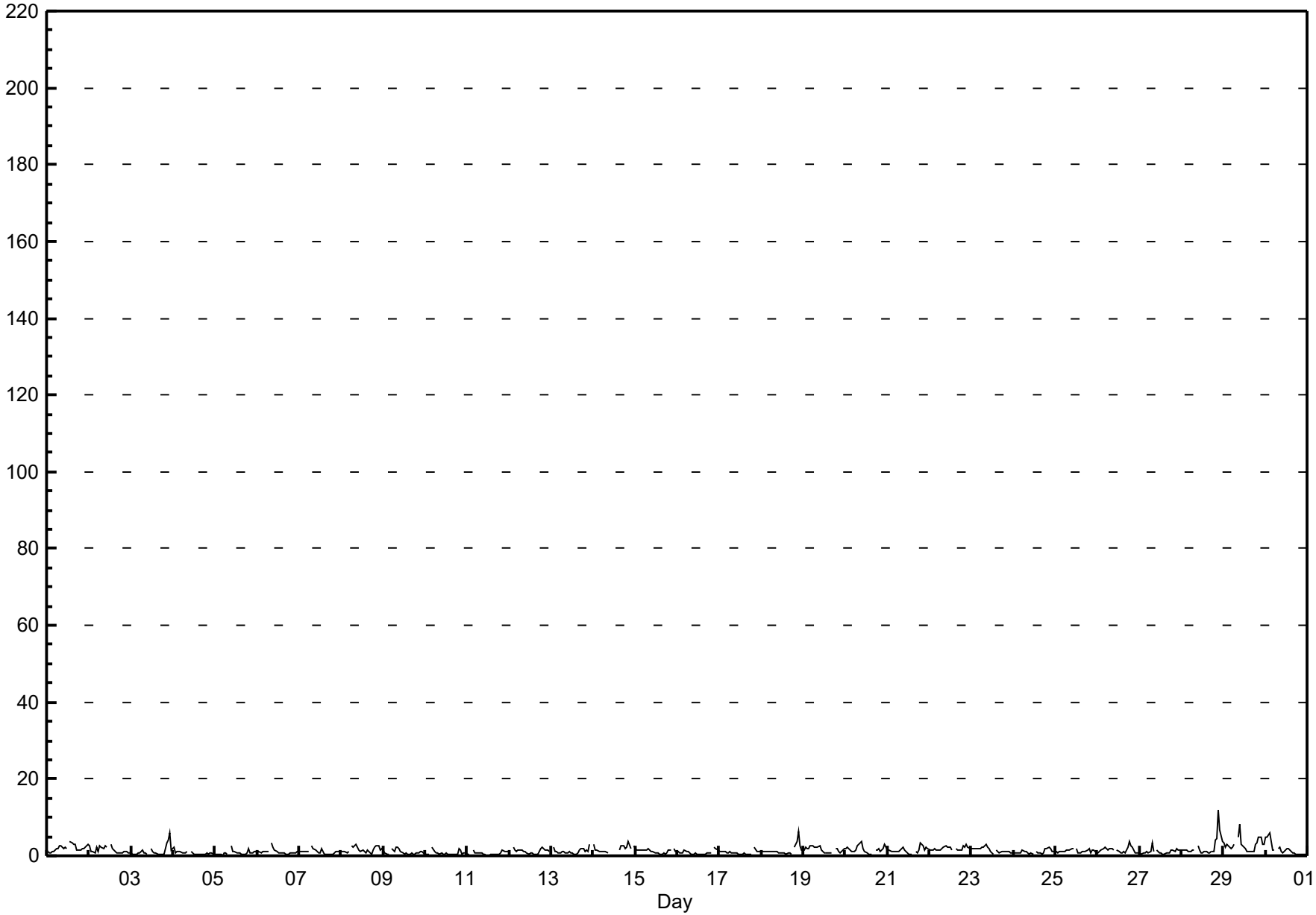
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable Rycroft - September 2016

Maximum Value: 72.8 ppb on Sep 14 21:00

Maximum Daily Average: 4.7 ppb on Sep 28

Minimum Value: 0 ppb on Sep 11 13:00

Minimum Daily Average: 1.2 ppb on Sep 16

Maximum Diurnal Average: 6.7 ppb at hour 21

Minimum Diurnal Average: 1.7 ppb at hour 4

Monthly Average: 2.72 ppb

Percentiles: $P_1 = 0.5$ $P_{10} = 0.8$ $Q_1 = 1.2$ Median = 1.7 $Q_3 = 2.9$ $P_{90} = 5.2$ $P_{99} = 15.0$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	2	1	1	1	1	2	3	5	4	2	6	3	A	6	7	6	6	5	2	3	3	9	3	4	3.7	8.9
2-Sep	9	3	4	1	5	3	6	6	3	5	3	A	4	4	3	2	2	2	2	3	6	4	3	1	3.6	9.0
3-Sep	1	1	1	1	3	1	3	2	2	2	A	4	1	1	1	1	1	1	1	1	12	32	29	2	4.5	31.5
4-Sep	3	1	1	1	1	1	1	1	2	A	3	1	1	0	0	1	1	1	1	2	1	1	2	1	1.2	3.2
5-Sep	1	1	1	2	0	1	1	1	A	5	2	1	1	2	2	1	1	2	3	11	2	4	2	1	2.0	10.5
6-Sep	1	1	1	1	1	1	1	A	4	3	3	2	1	1	1	1	1	1	1	5	1	1	1	2	1.6	5.2
7-Sep	2	1	1	1	1	1	A	4	2	2	2	1	6	9	3	1	1	0	1	1	1	1	4	1	2.0	8.9
8-Sep	1	1	1	1	1	A	4	3	4	3	2	2	2	2	3	4	4	1	5	7	9	7	2	2	3.1	9.0
9-Sep	4	2	1	1	A	4	2	4	3	2	1	12	2	1	1	1	8	1	1	1	1	1	1	1	2.4	11.9
10-Sep	1	1	1	A	4	2	1	1	1	1	1	2	3	1	1	1	1	1	1	7	7	1	1	1	1.7	7.2
11-Sep	1	1	A	3	1	1	1	1	1	1	0	0	0	3	8	1	1	1	1	2	2	2	1	1	1.5	7.9
12-Sep	1	A	3	2	1	2	2	2	2	2	1	1	1	1	1	1	2	7	8	6	2	2	2	1	2.2	7.5
13-Sep	A	4	1	1	1	1	1	1	1	1	2	2	2	1	1	1	3	4	4	3	5	2	13	A	2.7	12.9
14-Sep	27	2	2	1	1	1	1	1	1	C	C	C	C	C	C	3	5	6	7	3	73	2	A	4	--	72.8
15-Sep	2	2	2	2	2	2	2	2	2	1	2	2	2	4	1	1	1	1	2	2	2	A	3	2	1.8	3.7
16-Sep	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	3	1	A	3	2	2	1.2	3.2
17-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	A	3	2	1	2	1.3	3.1
18-Sep	2	1	1	1	1	1	2	1	2	3	2	1	2	4	2	3	2	1	A	4	13	18	3	2	3.3	17.8
19-Sep	3	3	2	2	3	3	3	3	3	3	2	2	1	1	2	2	3	A	4	4	2	1	5	4	2.6	4.7
20-Sep	4	3	2	2	1	2	2	5	4	6	3	2	1	1	1	2	A	3	3	3	2	3	4	3	2.5	5.7
21-Sep	2	2	2	1	1	2	1	2	3	3	2	1	1	1	1	A	2	1	3	4	4	2	3	2	2.0	3.9
22-Sep	2	2	2	2	2	2	2	7	3	3	3	3	3	15	A	3	2	3	2	7	4	3	3	2	3.4	15.2
23-Sep	2	2	3	2	3	3	3	4	7	9	2	1	1	A	2	4	1	2	2	2	1	1	1	1	2.6	9.1
24-Sep	1	1	1	1	7	7	2	1	1	1	1	1	A	2	1	1	1	3	8	3	5	5	3	2	2.6	8.3
25-Sep	1	1	1	1	1	1	2	2	2	4	2	A	3	1	1	1	1	2	2	8	1	2	3	1	2.1	8.5
26-Sep	1	2	2	2	2	2	2	2	2	2	A	3	1	1	1	6	2	3	9	7	4	1	1	1	2.6	8.6
27-Sep	1	1	1	2	2	1	1	8	2	A	2	1	1	1	1	1	1	1	2	2	1	3	2	2	1.9	7.8
28-Sep	2	2	2	2	1	1	2	2	A	3	3	1	1	1	2	1	1	15	4	8	14	25	9	5	4.7	24.5
29-Sep	4	3	4	3	2	3	3	A	7	16	5	3	3	2	1	1	2	2	4	5	10	12	5	5	4.6	15.7
30-Sep	10	8	8	7	2	2	A	3	9	3	2	3	8	4	2	2	1	2	1	1	1	1	1	1	3.5	9.9
	3.2	1.9	1.9	1.7	2.0	2.0	2.0	2.7	2.8	3.2	2.2	2.1	2.0	2.6	1.9	1.8	2.0	2.5	3.0	4.0	6.7	5.2	3.8	2.1	Diurnal Average	
	27.1	7.5	8.2	7.2	6.7	7.4	5.9	7.8	9.3	15.7	6.1	11.9	8.1	15.2	7.9	6.2	8.5	15.2	8.6	10.5	72.8	31.5	28.7	5.1	Diurnal Maximum	

C - Calibration

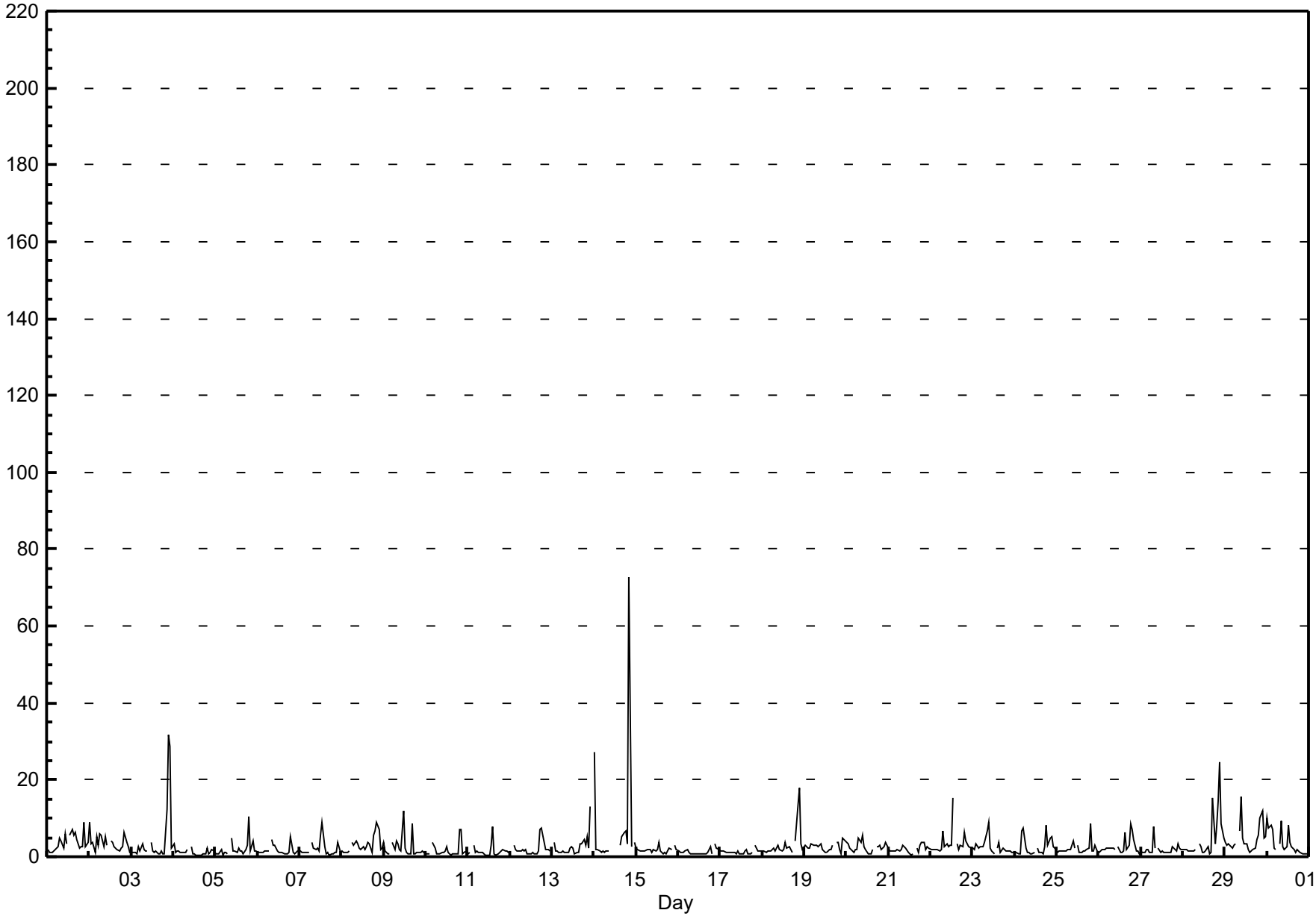
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Portable Rycroft - September 2016

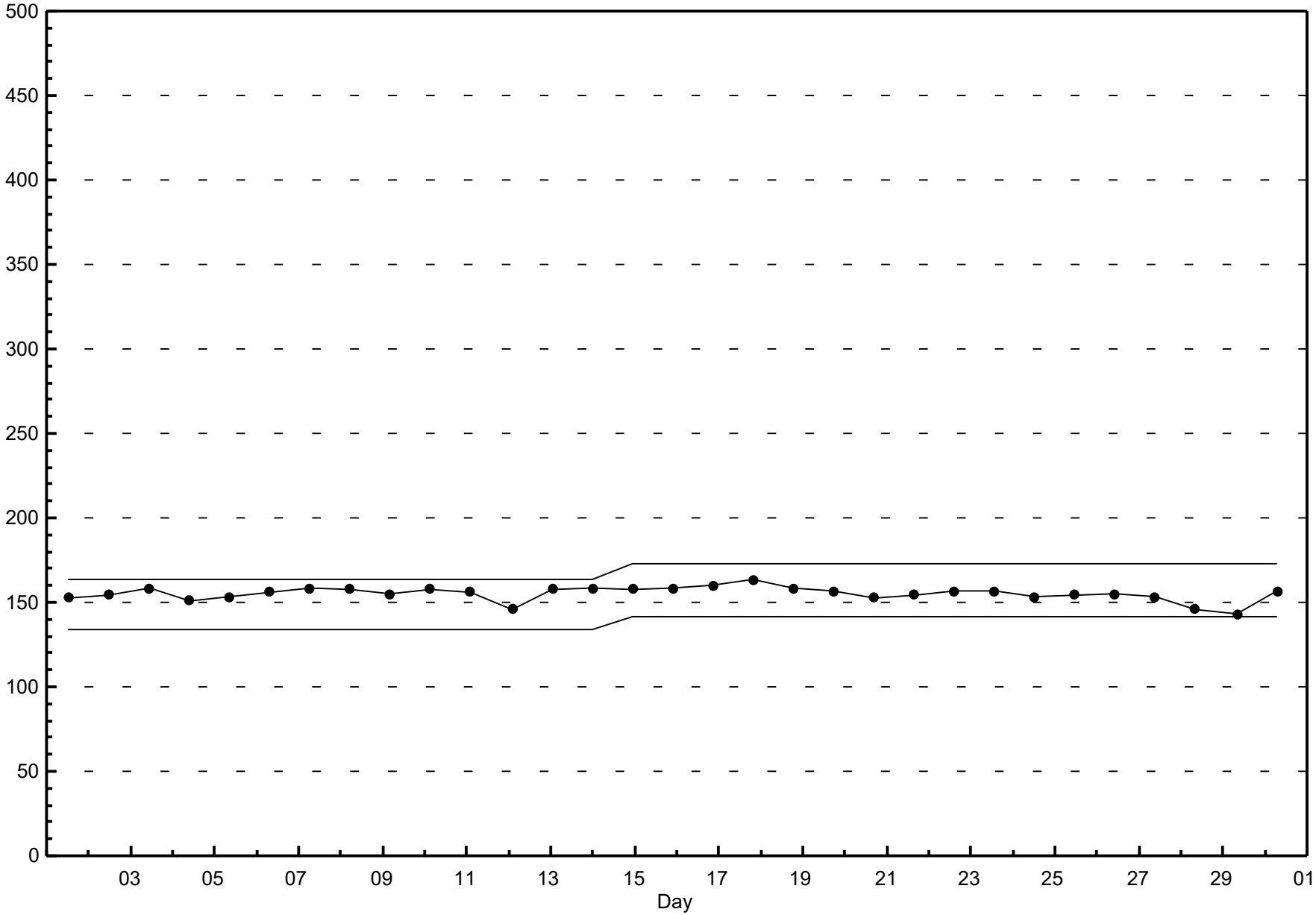


Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Portable Rycroft - September 2016

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

Maximum Value: 38.7 ppb on Sep 28 17:00

Maximum Daily Average: 29.9 ppb on Sep 27

Minimum Value: 2 ppb on Sep 1 08:00

Minimum Daily Average: 5.3 ppb on Sep 1

Maximum Diurnal Average: 27.7 ppb at hour 17

Minimum Diurnal Average: 14.0 ppb at hour 7

Monthly Average: 19.97 ppb

Percentiles: P_1 = 2.9 P_{10} = 8.5 Q_1 = 13.4 Median = 20.5 Q_3 = 26.3 P_{90} = 31.5 P_{99} = 37.7

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-Sep	3	5	5	3	4	3	2	2	3	8	5	5	A	6	6	7	12	10	11	7	5	4	2	3	5.3	11.9
2-Sep	4	5	5	3	2	4	3	5	6	6	8	A	12	13	15	14	13	13	13	11	10	9	10	11	8.5	15.2
3-Sep	11	12	13	13	13	12	11	10	10	10	A	12	14	15	15	16	18	20	21	22	15	13	10	10	13.7	21.5
4-Sep	7	6	6	6	5	5	5	6	9	A	26	27	27	28	28	29	29	29	28	23	23	23	18	14	17.7	29.4
5-Sep	12	11	9	6	6	6	4	6	A	16	24	25	22	19	19	20	20	18	19	17	15	11	7	6	13.8	25.0
6-Sep	6	6	7	8	6	5	6	A	9	13	18	20	21	23	25	24	28	24	21	20	20	18	15	15	15.5	27.6
7-Sep	13	12	11	11	11	11	A	12	15	17	21	22	23	24	26	27	27	27	24	22	18	17	15	14	18.2	27.1
8-Sep	14	13	12	12	11	A	10	11	13	18	18	18	19	24	24	24	26	29	29	23	15	15	14	14	17.6	29.3
9-Sep	16	20	16	13	A	11	10	9	8	11	18	22	24	25	25	25	23	19	18	18	17	15	13	13	17.0	25.5
10-Sep	15	14	14	A	17	21	23	22	24	28	30	31	30	30	30	31	28	26	24	23	16	13	9	9	21.9	30.8
11-Sep	9	9	A	9	9	9	9	9	13	19	21	22	23	22	19	19	19	18	17	14	10	9	8	8	14.1	23.3
12-Sep	7	A	8	8	8	8	8	13	16	18	18	19	21	23	25	27	27	26	22	18	14	15	15	15	16.6	26.7
13-Sep	A	15	16	17	18	17	16	18	18	18	18	21	22	23	25	25	23	20	19	18	15	15	14	A	18.8	25.1
14-Sep	13	13	13	14	14	13	14	14	19	21	22	24	25	C	C	C	27	25	23	19	17	17	A	16	18.2	26.5
15-Sep	14	14	14	14	14	15	15	17	20	23	27	29	30	28	27	27	25	23	22	18	14	A	17	16	20.0	29.6
16-Sep	16	17	17	17	15	17	19	22	24	25	28	30	30	31	32	27	24	24	22	21	A	17	16	16	22.0	32.1
17-Sep	17	17	18	18	20	23	26	27	26	29	32	35	38	38	37	36	36	36	33	A	26	24	23	24	27.8	38.0
18-Sep	24	22	24	22	26	24	23	22	27	30	27	27	29	30	31	30	31	29	A	21	16	12	14	16	24.3	30.6
19-Sep	16	13	13	13	13	12	11	10	13	20	29	30	32	31	31	32	33	A	27	23	21	23	16	14	20.7	33.0
20-Sep	12	10	10	7	7	6	6	7	12	15	20	24	28	31	32	33	A	32	28	28	24	17	11	12	17.9	32.7
21-Sep	12	15	13	12	14	13	15	13	14	15	18	24	27	28	31	A	32	30	27	25	27	23	21	23	20.5	31.7
22-Sep	22	19	17	16	17	14	12	13	14	15	19	23	27	33	A	37	38	37	35	34	31	25	29	27	24.1	38.0
23-Sep	26	26	23	22	18	17	18	14	11	20	25	33	36	A	35	35	38	33	30	29	30	33	35	33	27.0	37.8
24-Sep	31	31	30	29	29	28	23	24	27	32	33	34	A	34	34	34	34	33	30	26	25	25	26	25	29.4	34.3
25-Sep	24	23	23	22	22	21	21	21	21	21	22	A	32	35	33	32	32	29	28	24	26	23	23	24	25.3	34.8
26-Sep	23	24	23	22	21	21	21	22	23	26	A	32	31	30	30	28	29	27	20	19	20	19	17	15	23.6	31.7
27-Sep	26	29	30	32	34	32	30	24	28	A	33	34	34	34	33	34	33	33	31	25	26	23	24	24	29.9	34.2
28-Sep	23	22	23	22	22	22	20	19	A	20	26	31	32	34	36	38	39	37	35	29	22	10	11	13	25.5	38.7
29-Sep	14	11	10	11	10	9	9	A	11	14	23	27	30	34	37	37	39	37	31	30	29	27	27	24	23.1	38.6
30-Sep	19	13	13	13	16	17	A	23	23	24	26	24	22	22	20	22	23	24	23	23	22	21	21	21	20.6	25.6
	15.5	15.5	15.0	14.2	14.6	14.4	14.0	14.9	16.3	19.0	22.7	25.1	26.5	26.7	27.2	27.5	27.7	26.5	24.5	21.7	19.6	17.8	16.6	16.4	Diurnal Average	
	31.4	30.9	30.3	31.8	33.5	32.3	30.5	26.7	28.1	31.5	32.9	35.5	38.0	37.9	36.9	37.9	38.7	37.3	34.9	34.2	30.6	32.9	34.7	33.1	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

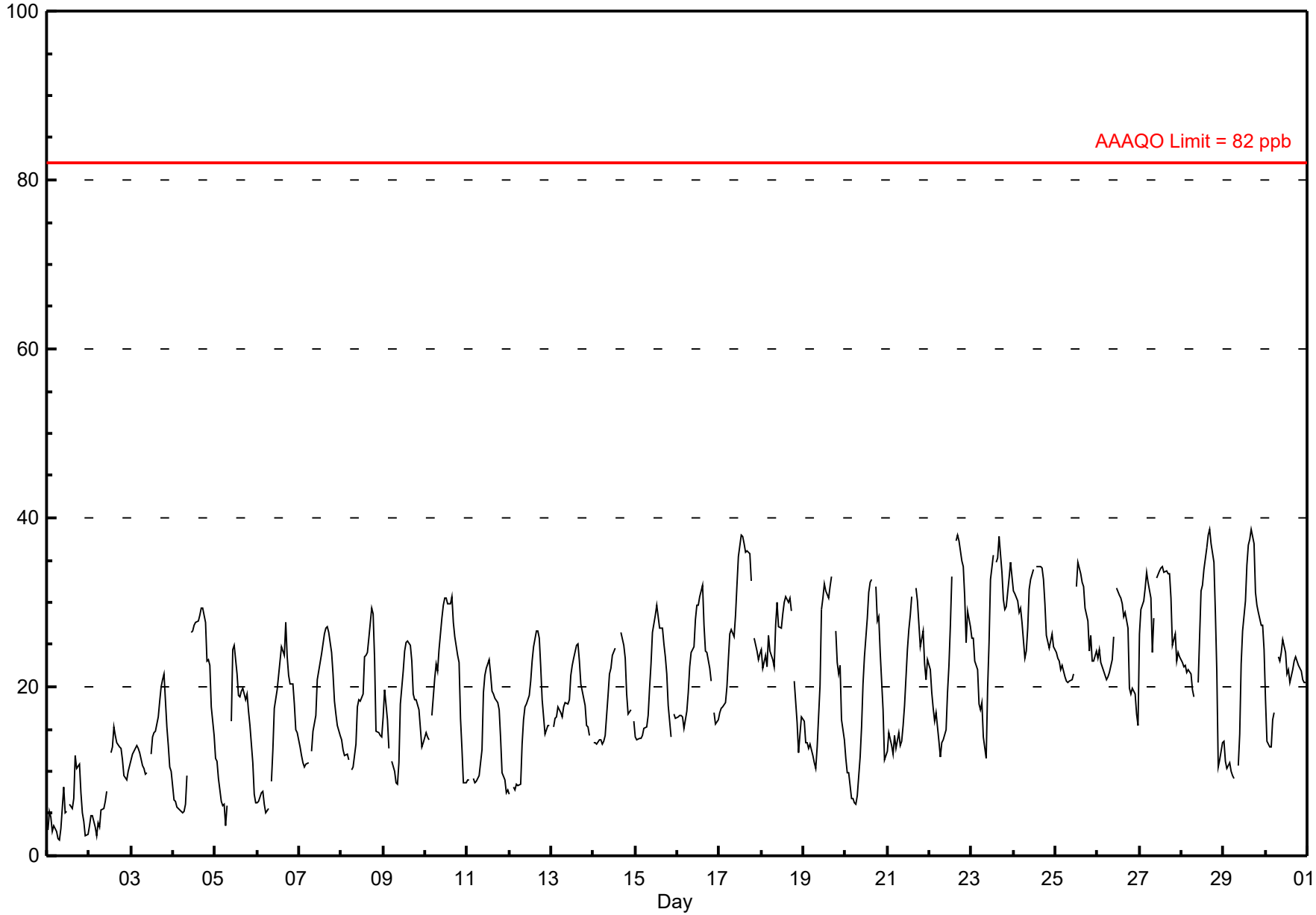
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Portable Rycroft - September 2016

Maximum Value: 42.1 ppb on Sep 23 17:00

Maximum Daily Average: 31.9 ppb on Sep 27

Minimum Value: 2 ppb on Sep 1 07:00

Minimum Daily Average: 6.8 ppb on Sep 1

Maximum Diurnal Average: 29.3 ppb at hour 17

Minimum Diurnal Average: 15.3 ppb at hour 7

Monthly Average: 21.79 ppb

Percentiles: P_1 = 3.7 P_{10} = 9.8 Q_1 = 15.2 Median = 22.4 Q_3 = 28.0 P_{90} = 33.3 P_{99} = 39.2

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-Sep	5	7	7	4	4	4	2	2	5	10	8	6	A	8	7	10	13	13	13	10	6	6	3	4	6.8	13.2
2-Sep	5	7	5	5	3	6	5	7	6	8	9	A	13	14	17	15	14	13	13	13	11	10	11	12	9.6	17.1
3-Sep	12	13	13	14	13	13	12	11	10	10	A	13	15	16	16	18	19	21	22	23	20	16	14	14	15.1	22.7
4-Sep	8	7	7	6	6	6	6	8	12	A	27	28	28	28	29	30	30	30	31	26	25	25	22	19	19.2	30.8
5-Sep	14	13	12	10	10	9	6	11	A	26	26	27	25	21	21	21	21	20	20	20	18	13	9	7	16.5	26.5
6-Sep	7	8	8	9	7	5	6	A	10	15	19	21	23	25	26	26	31	27	22	22	22	20	16	15	17.0	30.9
7-Sep	13	13	12	11	12	12	A	14	16	21	22	23	24	26	28	28	28	28	26	22	20	19	17	15	19.4	27.8
8-Sep	15	15	13	13	12	A	11	11	16	19	20	20	23	25	26	25	28	35	33	26	18	16	16	16	19.7	34.8
9-Sep	18	23	21	19	A	12	11	10	10	15	22	24	26	27	26	26	24	21	19	19	18	16	14	14	19.1	26.7
10-Sep	16	15	15	A	18	23	24	24	27	29	31	31	31	30	31	32	30	28	27	27	19	14	11	10	23.6	32.0
11-Sep	9	10	A	10	9	10	10	10	18	22	23	24	25	24	20	20	20	20	19	16	11	10	8	8	15.4	24.8
12-Sep	8	A	9	8	9	9	11	16	18	18	19	20	22	25	26	28	28	28	24	22	17	16	16	16	18.0	28.3
13-Sep	A	16	17	17	18	18	17	18	19	19	20	23	23	25	26	26	25	22	20	19	17	16	16	A	19.9	25.9
14-Sep	14	15	14	14	14	14	14	16	22	22	23	25	26	C	C	C	28	26	25	24	18	18	A	17	19.5	28.1
15-Sep	15	14	14	14	15	16	16	18	22	24	28	30	31	31	28	28	27	25	23	21	15	A	18	17	21.3	31.4
16-Sep	17	18	18	17	16	19	21	24	25	26	29	31	30	32	33	33	26	27	24	21	A	18	18	19	23.5	33.0
17-Sep	19	19	19	19	23	25	29	28	28	33	34	38	39	39	39	37	38	38	34	A	28	26	24	25	29.6	39.2
18-Sep	25	24	26	27	27	25	24	25	29	32	30	28	30	31	31	31	34	31	A	25	21	17	16	18	26.4	34.0
19-Sep	18	15	15	15	17	15	13	12	14	28	31	33	33	33	33	33	35	A	29	26	25	29	19	17	23.4	35.1
20-Sep	16	12	14	9	8	7	7	9	14	22	22	27	30	32	33	34	A	33	31	30	27	24	14	12	20.3	33.7
21-Sep	14	16	15	14	15	15	16	14	14	18	22	26	28	30	32	A	33	31	30	26	27	26	24	25	22.2	32.6
22-Sep	25	24	22	18	18	15	14	14	15	18	21	26	32	34	A	39	39	39	36	36	35	30	30	28	26.5	39.3
23-Sep	28	27	27	24	22	21	20	18	15	24	29	35	37	A	37	40	42	36	34	31	30	36	36	34	29.8	42.1
24-Sep	32	32	31	30	32	30	26	27	31	33	34	35	A	35	35	35	35	34	31	30	28	27	27	26	31.1	35.2
25-Sep	25	25	24	23	23	23	22	22	22	22	25	A	34	36	35	33	33	32	29	28	27	27	26	26	27.1	36.4
26-Sep	25	26	23	22	22	22	22	24	25	29	A	32	32	31	31	30	30	31	29	23	23	23	19	19	25.8	32.4
27-Sep	31	33	32	36	36	34	32	29	31	A	34	34	35	35	35	35	34	34	34	27	28	25	26	25	31.9	36.2
28-Sep	24	24	24	23	23	22	21	20	A	22	31	33	33	36	38	39	39	39	37	33	28	17	16	15	27.6	39.4
29-Sep	15	13	11	12	11	10	10	A	15	18	25	28	33	36	39	39	40	39	34	32	32	31	29	28	25.3	39.5
30-Sep	26	18	15	16	21	21	A	27	24	25	27	26	23	24	22	23	24	25	24	24	23	22	21	21	22.7	27.1
	17.2	17.2	16.7	15.9	16.0	16.0	15.3	16.7	18.4	21.7	24.7	26.7	28.0	28.2	28.6	29.1	29.3	28.5	26.6	24.2	22.0	20.4	18.4	18.0	Diurnal Average	
	32.1	33.4	32.4	36.2	35.5	33.7	31.6	29.3	30.9	32.7	34.2	37.9	39.2	38.9	38.7	40.5	42.1	39.4	36.6	36.3	35.3	36.4	36.0	34.1	Diurnal Maximum	

C - Calibration

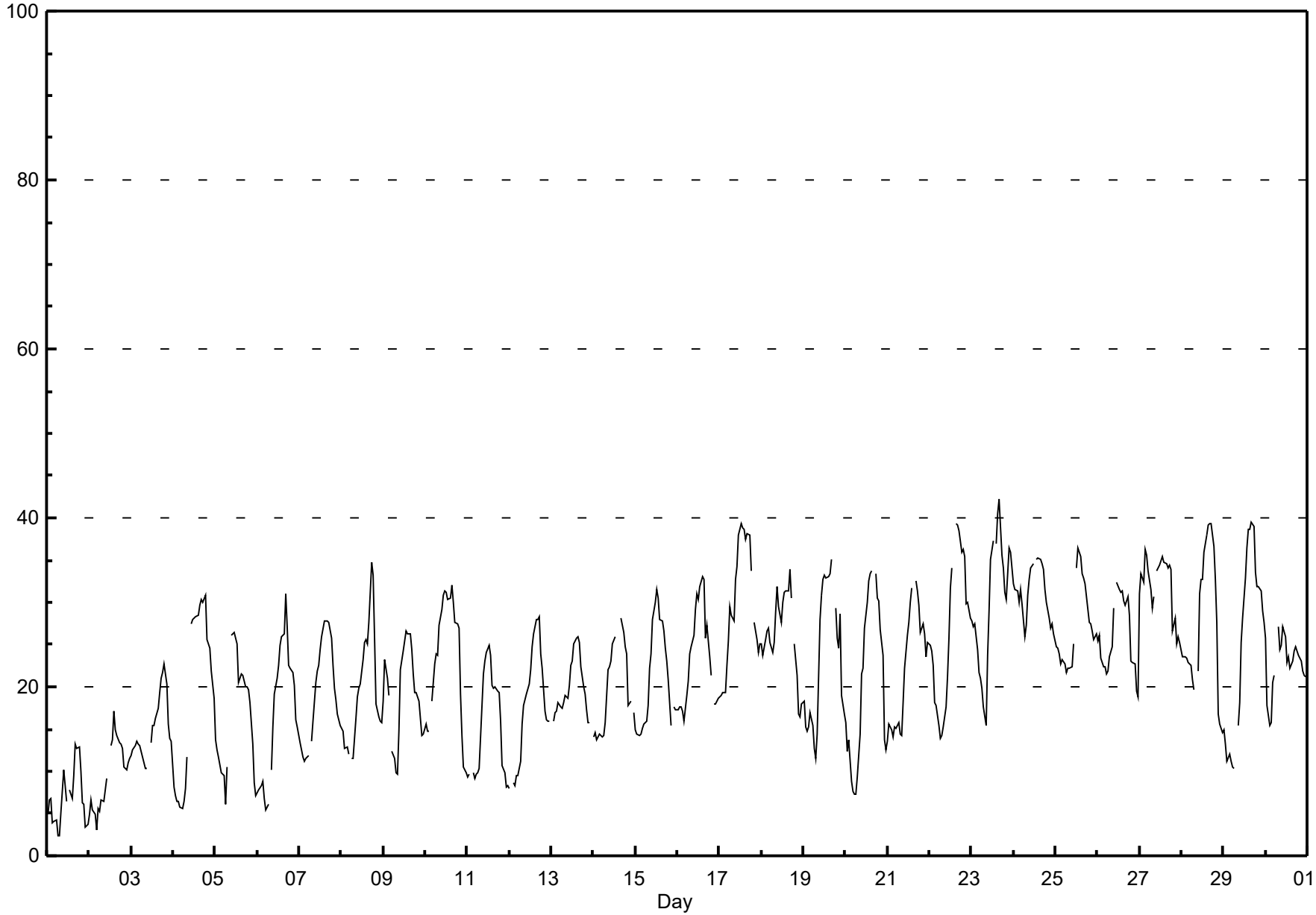
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

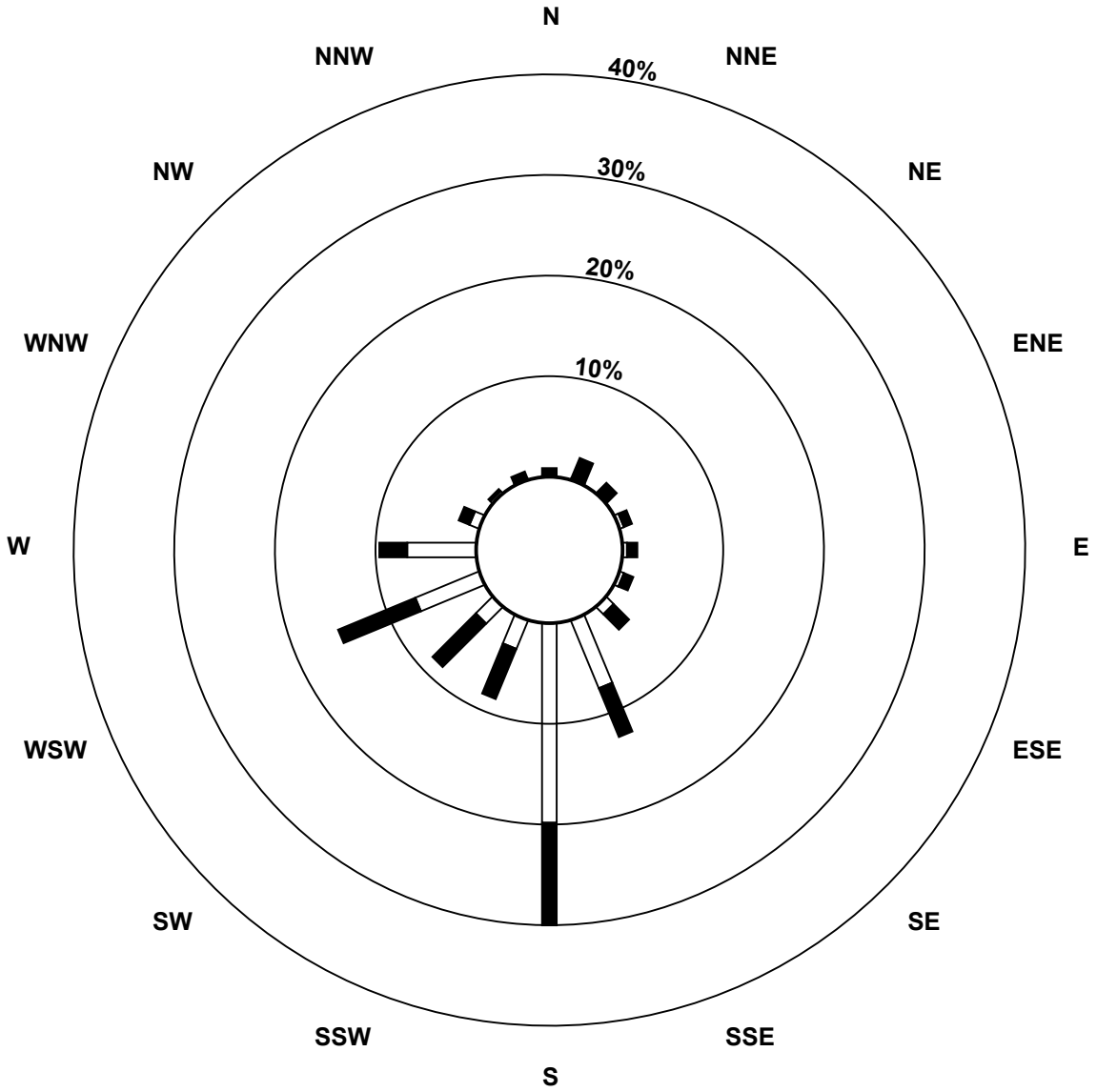
Portable Rycroft - September 2016



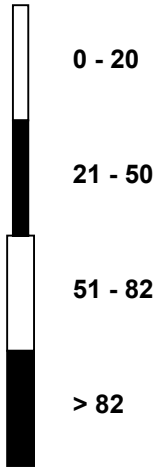
Pollutant Rose

Ozone (O_3) - ppb

Portable Rycroft - September 2016



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Portable Rycroft - September 2016

Maximum Value: 36.2 ppb on Sep 17 20:00

Minimum Value: 3.3 ppb on Sep 1 08:00

Percentiles: P_1 = 3.7 P_{10} = 9.4 Q_1 = 14.3 Median = 20.5 Q_3 = 25.2 P_{90} = 30.0 P_{99} = 34.9

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-Sep	6	5	5	4	4	4	3	3	3	4	4	4	4	5	5	6	7	7	8	8	8	8	7	7	8.5
2-Sep	6	5	4	4	3	3	4	4	4	4	5	5	6	8	9	11	12	13	13	13	13	12	12	11	13.4
3-Sep	11	11	11	11	11	12	12	12	12	11	11	11	11	12	12	13	14	16	16	18	18	18	17	16	17.7
4-Sep	15	13	11	9	8	7	6	6	6	6	9	12	15	18	22	25	28	28	28	28	27	26	25	23	28.0
5-Sep	21	19	17	14	12	10	8	7	7	8	10	12	15	16	19	21	20	21	20	19	18	17	16	14	21.1
6-Sep	13	11	10	8	7	7	6	6	7	8	9	11	13	16	18	19	21	23	23	23	23	22	21	20	23.2
7-Sep	18	17	15	14	13	12	12	12	12	12	14	15	17	19	20	22	23	25	25	25	24	23	22	21	25.0
8-Sep	19	17	16	14	14	13	12	12	12	12	13	14	15	16	18	20	21	23	24	25	24	23	22	21	24.7
9-Sep	19	18	17	15	15	15	14	14	12	11	11	13	14	16	18	20	22	23	23	22	21	20	19	17	22.8
10-Sep	16	16	15	14	14	15	17	18	19	21	23	24	26	27	28	29	30	29	29	28	26	24	21	18	29.6
11-Sep	16	14	12	10	9	9	9	9	10	11	12	14	16	17	19	20	21	20	20	19	17	16	14	13	20.6
12-Sep	11	10	9	8	8	8	8	9	10	11	12	14	15	17	19	21	22	23	24	24	23	22	21	19	23.6
13-Sep	18	17	16	15	16	16	16	17	17	17	17	18	19	19	21	21	22	22	22	22	21	20	19	18	22.4
14-Sep	16	15	15	14	14	14	13	14	14	15	16	18	19	20	21	N	N	N	N	N	N	21	21	21	21.3
15-Sep	19	17	16	15	15	14	14	15	15	16	18	20	22	23	25	26	27	27	26	25	23	22	21	19	26.9
16-Sep	18	17	16	16	16	16	17	17	18	19	21	23	24	26	28	28	28	28	27	26	26	24	22	20	28.3
17-Sep	19	18	17	17	17	18	19	21	22	23	25	27	30	31	33	34	35	36	36	36	34	32	31	29	36.2
18-Sep	27	25	24	24	24	24	24	24	24	25	25	26	26	27	28	29	29	29	29	29	27	24	22	20	29.4
19-Sep	18	16	15	14	14	14	13	13	12	13	15	17	20	22	25	27	30	31	31	30	28	27	25	22	31.2
20-Sep	19	18	16	14	12	10	9	8	8	9	10	12	15	18	21	24	26	29	30	30	30	28	25	22	30.3
21-Sep	21	18	17	15	13	13	13	13	13	14	14	16	17	19	21	22	25	27	29	29	29	28	26	26	28.5
22-Sep	25	23	22	21	20	19	18	16	15	15	15	16	17	19	21	24	27	31	33	35	35	34	33	32	35.0
23-Sep	31	29	28	26	25	24	22	21	19	18	18	20	22	22	25	28	32	34	34	34	33	33	33	33	34.3
24-Sep	32	32	31	31	31	31	29	28	28	28	28	29	29	30	31	33	34	34	33	32	31	30	29	28	33.7
25-Sep	27	26	25	24	24	23	23	22	22	21	21	21	22	24	26	28	30	31	32	31	30	29	27	26	31.6
26-Sep	25	25	24	24	23	23	23	22	22	22	22	24	25	26	28	29	29	30	28	27	25	24	22	21	29.5
27-Sep	20	21	22	24	25	27	29	30	30	30	30	31	31	31	32	33	34	34	33	32	31	30	29	27	33.6
28-Sep	26	25	24	23	23	23	22	21	21	21	21	23	24	26	28	31	32	34	35	35	34	31	28	25	35.3
29-Sep	21	18	15	13	11	11	11	11	10	11	12	15	18	21	25	27	30	33	34	34	34	33	32	31	34.4
30-Sep	28	25	23	21	19	18	16	16	17	18	20	22	23	23	23	23	23	23	22	22	22	22	22	22	28.0
Diurnal Maximums	31.8	31.5	31.5	31.5	31.4	30.8	29.4	29.7	30.0	30.1	30.5	30.7	30.8	31.4	32.7	33.8	35.1	36.0	36.1	36.2	35.0	33.9	33.3	32.6	

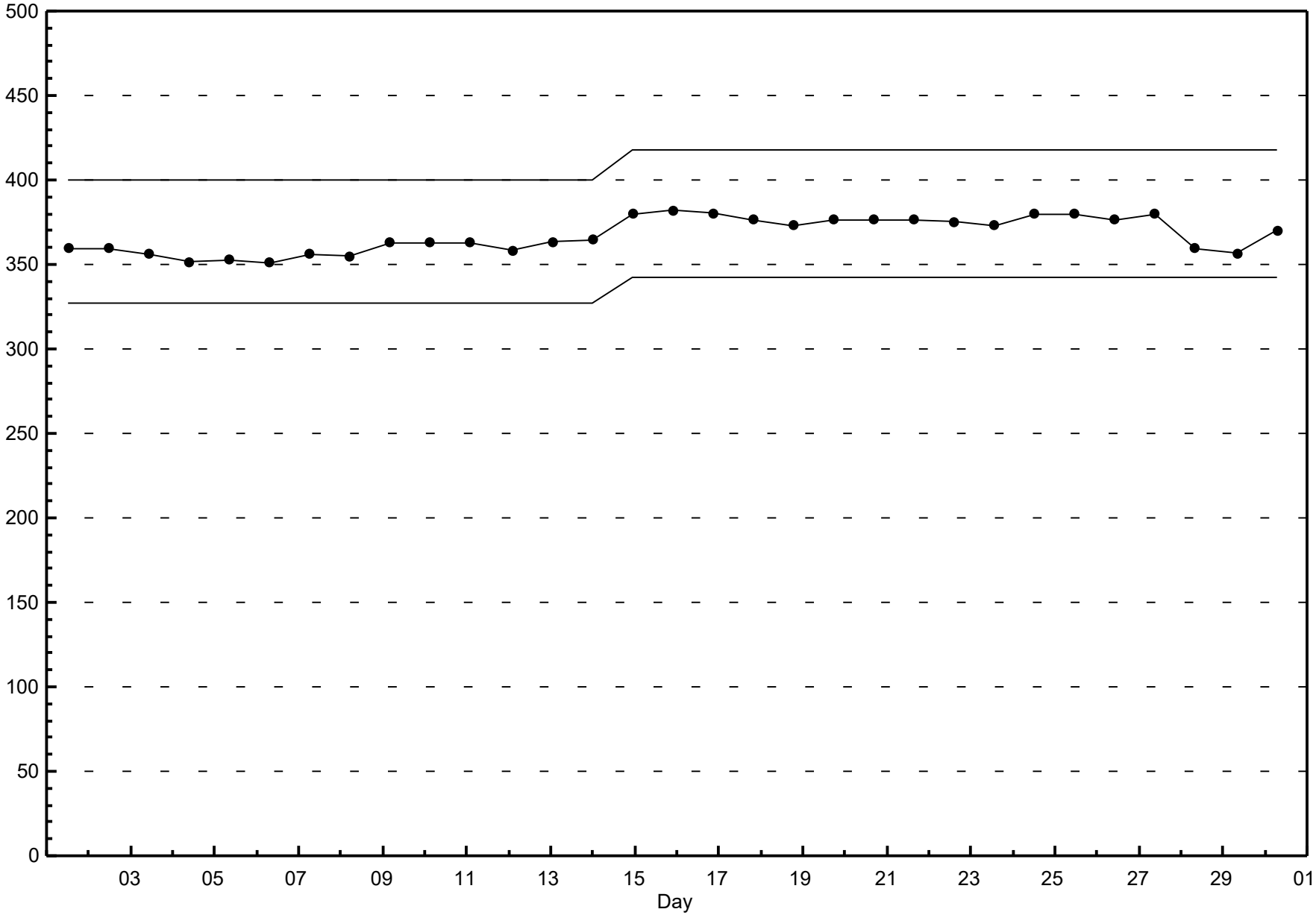
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Portable Rycroft - September 2016

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

Maximum Value: 2.03 ppm on Sep 29 10:00

Maximum Daily Average: 1.90 ppm on Sep 29

Minimum Value: 1.7 ppm on Sep 26 23:00

Minimum Daily Average: 1.75 ppm on Sep 16

Maximum Diurnal Average: 1.85 ppm at hour 7

Minimum Diurnal Average: 1.79 ppm at hour 17

Monthly Average: 1.822 ppm

Percentiles: P_1 = 1.72 P_{10} = 1.75 Q_1 = 1.79 Median = 1.82 Q_3 = 1.86 P_{90} = 1.89 P_{99} = 1.96

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-Sep	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	A	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.86	1.92
2-Sep	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.90
3-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.81	1.87
4-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.86	1.93
5-Sep	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.83	1.88
6-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.91
7-Sep	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.78	1.84
8-Sep	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.80	1.85
9-Sep	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.77	1.83
10-Sep	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.75	1.80
11-Sep	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.84	1.90
12-Sep	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.86	1.91
13-Sep	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	A	1.78	1.85
14-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.77	1.80
15-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	C	C	C	1.8	1.7	1.7	1.7	1.7	1.7	1.8	A	1.7	1.8	1.77	1.82
16-Sep	1.8	1.8	1.8	1.7	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.8	1.8	1.75	1.79
17-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.78	1.82
18-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.9	1.81	1.86
19-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.91
20-Sep	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.86	1.95
21-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.86	1.93
22-Sep	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	1.8	A	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.87	1.91
23-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.85	1.92
24-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.84	1.88
25-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.92
26-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.9	1.8	1.7	1.7	1.7	1.7	1.78	1.88
27-Sep	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.82	1.88
28-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.87	1.94
29-Sep	1.9	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.90	2.03
30-Sep	1.8	1.9	1.8	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.93
	1.84	1.84	1.84	1.85	1.85	1.85	1.85	1.85	1.84	1.83	1.81	1.80	1.80	1.80	1.80	1.79	1.79	1.79	1.79	1.80	1.81	1.82	1.83	1.83	Diurnal Average	
	1.94	1.96	1.98	1.99	2.00	1.96	1.97	1.94	1.99	2.03	1.92	1.90	1.88	1.86	1.86	1.85	1.84	1.88	1.88	1.87	1.88	1.91	1.94	1.93	Diurnal Maximum	

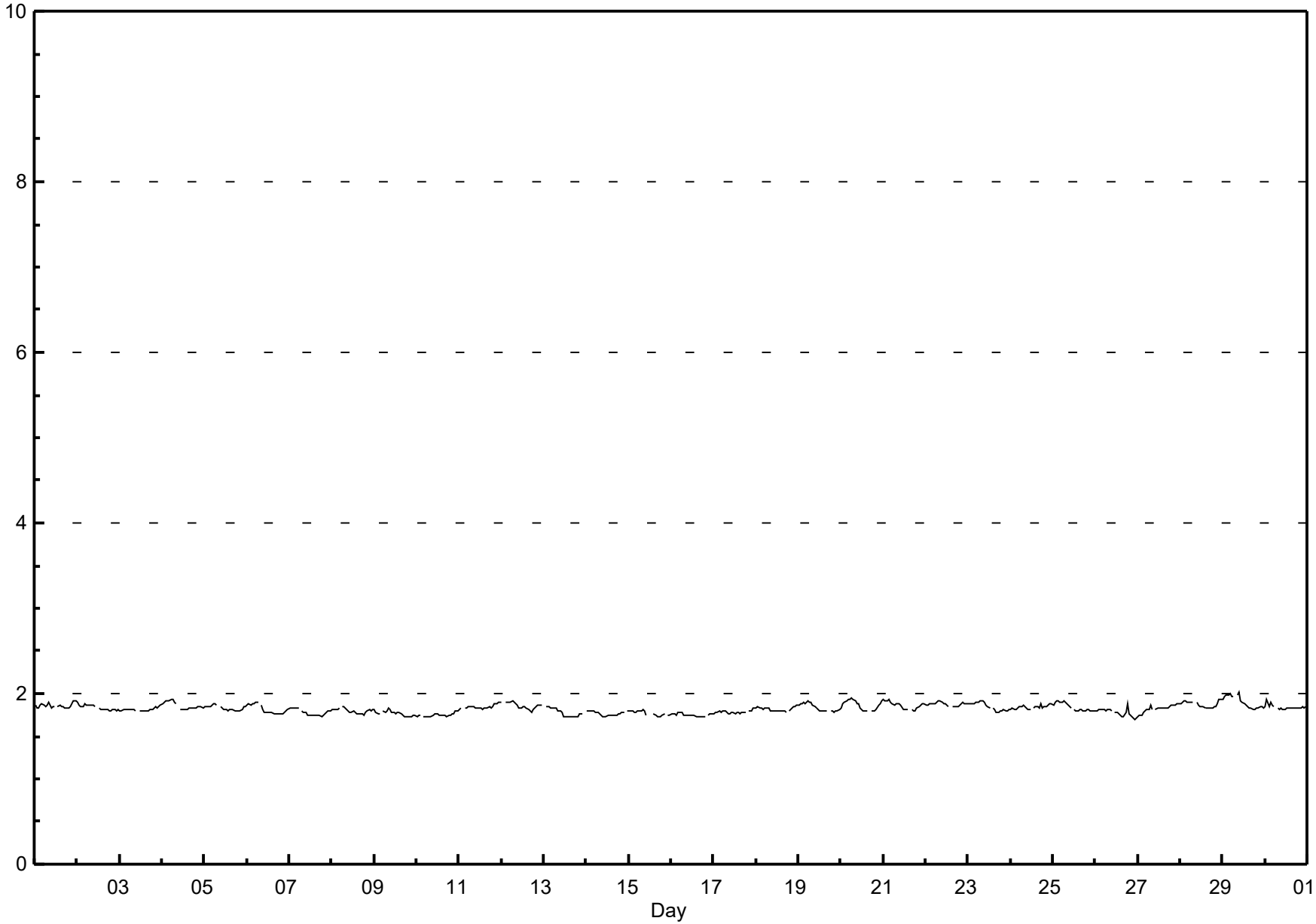
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

Portable Rycroft - September 2016

Maximum Value: 2.72 ppm on Sep 26 19:00

Maximum Daily Average: 1.92 ppm on Sep 29

Minimum Value: 1.7 ppm on Sep 26 22:00

Minimum Daily Average: 1.76 ppm on Sep 16

Maximum Diurnal Average: 1.88 ppm at hour 6

Minimum Diurnal Average: 1.81 ppm at hour 17

Monthly Average: 1.843 ppm

Percentiles: P_1 = 1.73 P_{10} = 1.76 Q_1 = 1.80 Median = 1.84 Q_3 = 1.88 P_{90} = 1.92 P_{99} = 2.04

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-Sep	1.9	1.8	1.8	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	1.88	1.94
2-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.8	1.87	1.93
3-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.83	1.94
4-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.87	1.94
5-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.85	1.91
6-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.91
7-Sep	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.79	1.85
8-Sep	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.82	1.86
9-Sep	1.9	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.79	1.85
10-Sep	1.7	1.7	1.8	A	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.76	1.81
11-Sep	1.8	1.8	A	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.86	1.92
12-Sep	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.87	1.92
13-Sep	A	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.7	1.8	1.8	1.8	1.8	A	1.79	1.86
14-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.78	1.83
15-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	C	C	C	1.8	1.8	1.7	1.7	1.7	1.8	1.8	A	1.8	1.8	1.79	1.84
16-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.8	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.8	A	1.8	1.8	1.8	1.76	1.80
17-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.80	1.85
18-Sep	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.9	1.9	1.9	1.9	1.83	1.88
19-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.85	1.93
20-Sep	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.88	1.96
21-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.88	1.95
22-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.93
23-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.87	1.95
24-Sep	1.8	1.8	1.8	1.8	1.9	2.0	1.9	1.9	1.9	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.88	2.05
25-Sep	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.87	2.02
26-Sep	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.7	1.7	2.2	2.7	1.8	1.8	1.7	1.7	1.7	1.85	2.72
27-Sep	1.8	1.8	1.8	1.9	1.8	1.8	1.8	2.1	1.9	A	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.86	2.05
28-Sep	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0	1.89	1.99
29-Sep	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.92	2.12
30-Sep	1.9	2.1	1.9	2.1	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.87	2.09
	1.85	1.86	1.86	1.87	1.87	1.88	1.87	1.87	1.86	1.85	1.83	1.82	1.82	1.82	1.82	1.82	1.81	1.82	1.84	1.82	1.84	1.84	1.85	1.85	Diurnal Average	
	1.96	2.09	2.00	2.06	2.02	2.05	2.02	2.05	2.00	2.12	1.95	1.91	1.90	1.90	1.92	1.94	1.90	2.24	2.72	1.89	1.94	1.94	1.99	1.96	Diurnal Maximum	

C - Calibration

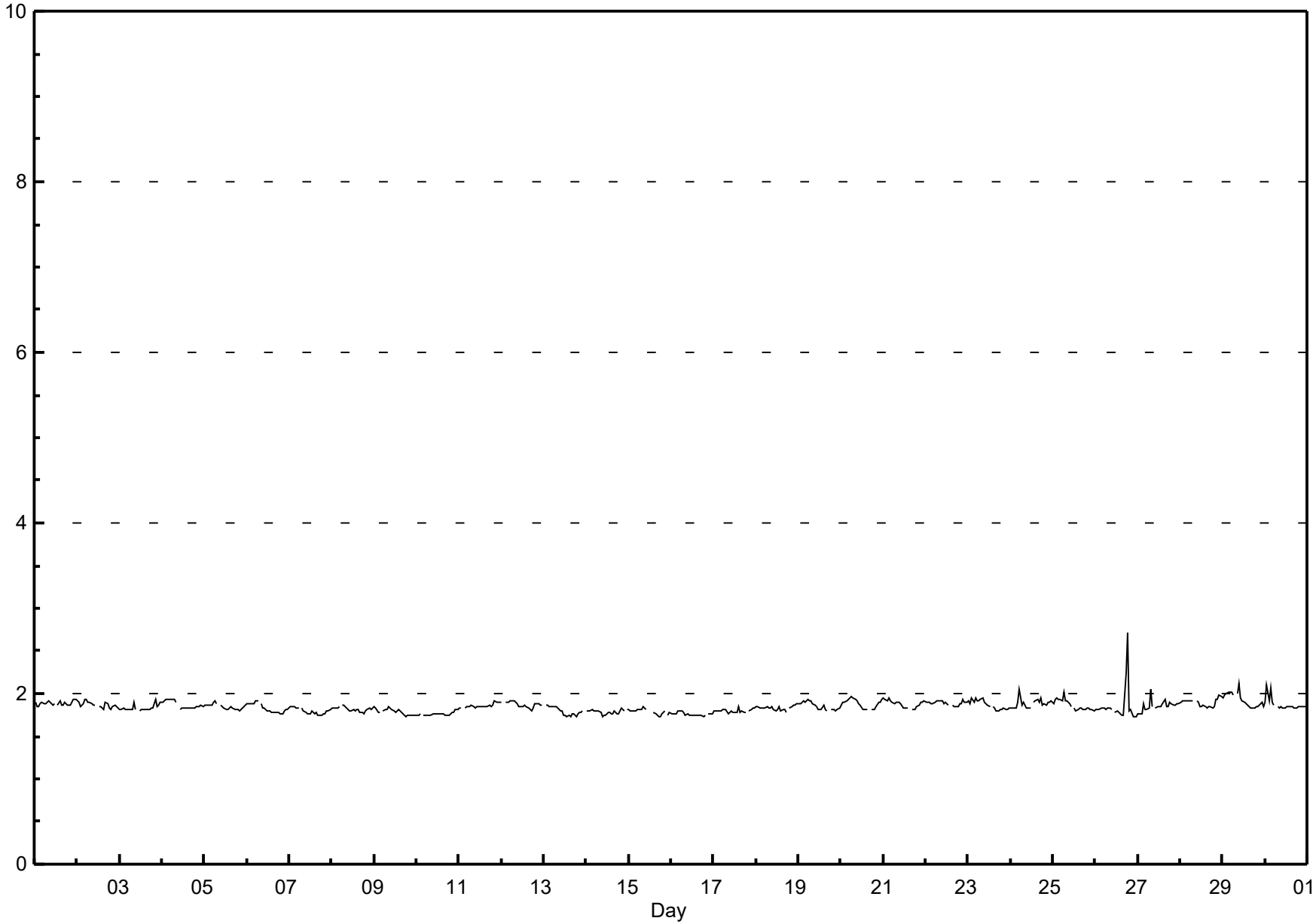
A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

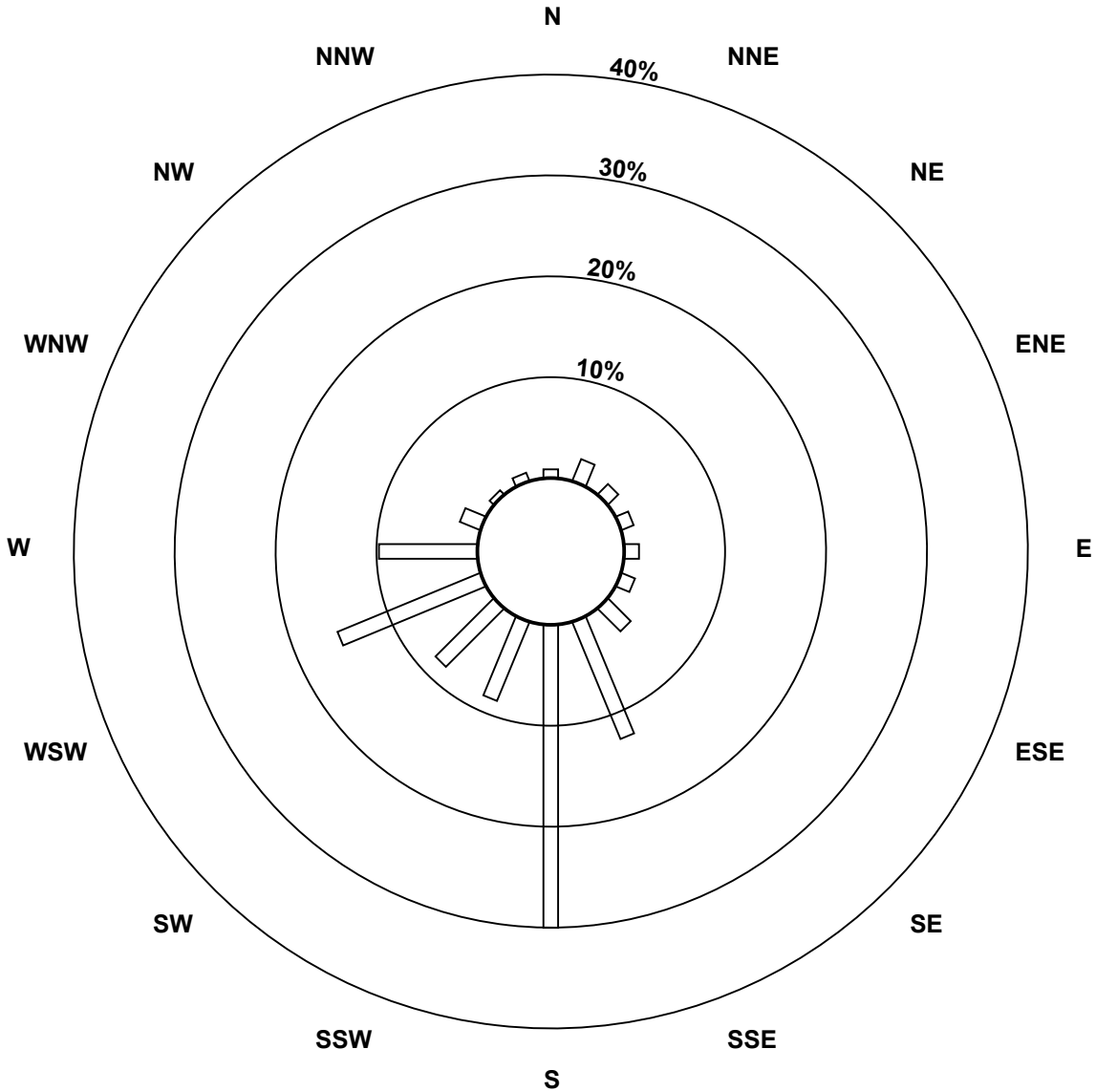
Portable Rycroft - September 2016



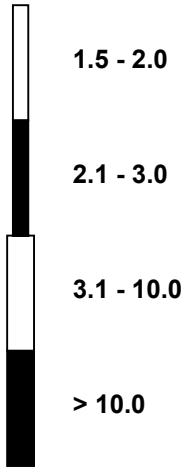
Pollutant Rose

Total Hydrocarbons (THC) - ppm

Portable Rycroft - September 2016



Pollutant Classes (ppm)

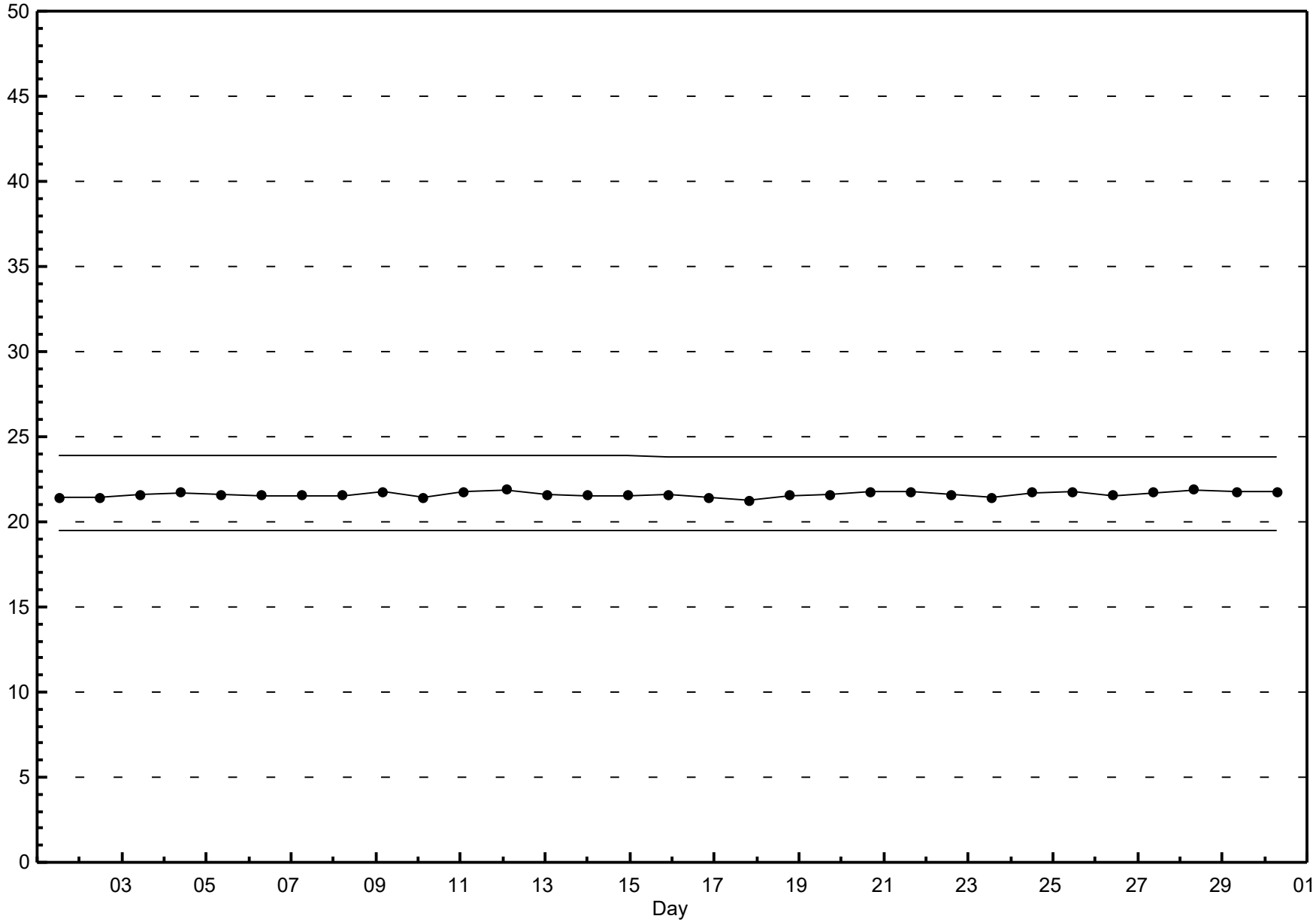


Peace Airshed Zone Association

Span Responses

Total Hydrocarbons (THC)

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Averages

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

Portable Rycroft - September 2016

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

Maximum Value: 21.3 $\mu g/m^3$ on Sep 29 23:00

Maximum Daily Average: 7.6 $\mu g/m^3$ on Sep 29

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

Maximum Diurnal Average: 2.8 $\mu g/m^3$ at hour 22

Monthly Average: 1.55 $\mu g/m^3$

Minimum Daily Average: 0.1 $\mu g/m^3$ on Sep 1

Minimum Diurnal Average: 0.9 $\mu g/m^3$ at hour 6

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.7 $Q_3 = 2.0$ $P_{90} = 4.2$ $P_{99} = 12.3$

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-Sep	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
2-Sep	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	4	2	0	1	0	0	0.5	3.5
3-Sep	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	1	0	2	0	0	0	0.3	1.6
4-Sep	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1	0	0.4	1.4
5-Sep	0	0	0	0	0	0	1	3	1	1	1	1	0	1	0	0	1	1	1	0	0	0	0	0	0.6	3.2
6-Sep	0	0	0	0	0	0	1	2	2	2	0	2	1	0	0	1	0	2	1	1	0	1	0	1	0.7	2.3
7-Sep	0	0	0	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0.4	1.5
8-Sep	0	1	0	1	1	1	1	3	4	2	3	2	3	2	2	3	2	2	1	2	2	2	2	1	1.7	3.9
9-Sep	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4
10-Sep	0	0	0	0	1	0	0	1	0	2	1	2	1	2	0	0	5	1	0	0	0	1	0	1	0.7	4.5
11-Sep	0	0	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.3	0.8
12-Sep	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	2	0	0	1	0.3	2.2
13-Sep	0	0	1	1	0	0	1	1	1	1	0	0	4	0	2	3	4	5	2	2	2	3	8	5	1.9	8.1
14-Sep	4	1	1	1	0	0	1	1	1	1	1	1	1	0	3	3	4	4	6	5	7	3	3	3	2.3	6.7
15-Sep	2	2	1	1	2	1	2	2	2	6	1	2	M	10	4	3	2	2	1	2	4	1	1	1	2.3	10.2
16-Sep	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0.2	1.1
17-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.1	1.0
18-Sep	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	2	1	1	1	3	3	2	0	1.1	3.1
19-Sep	1	1	0	0	1	0	0	1	2	2	1	1	0	0	1	1	1	1	3	4	1	1	1	1	1.1	4.0
20-Sep	1	0	0	1	1	1	1	2	2	2	1	1	0	0	0	0	0	1	0	1	N	3	2	1	0.9	2.9
21-Sep	1	1	0	1	1	1	1	2	2	2	1	1	1	0	0	1	1	2	2	4	4	4	5	4	1.8	5.2
22-Sep	3	3	3	2	2	2	3	3	4	5	5	4	3	0	1	0	1	2	2	3	4	9	6	4	3.1	9.1
23-Sep	4	4	3	3	2	2	2	3	5	5	3	1	0	0	1	1	1	1	1	3	3	2	4	4	2.5	4.7
24-Sep	5	2	1	2	3	2	2	2	2	1	1	1	0	1	3	3	2	3	2	3	6	3	1	2	2.1	5.9
25-Sep	1	0	0	1	1	1	1	1	1	2	3	0	2	0	1	0	1	2	3	2	0	0	0	0	0.9	2.8
26-Sep	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5	6	4	3	0	1	1	0.8	5.9
27-Sep	0	0	1	1	2	1	1	2	0	0	1	0	0	1	1	1	2	2	4	4	3	3	3	3	1.5	4.5
28-Sep	4	5	6	6	6	5	4	5	5	5	4	2	3	5	5	4	5	7	5	7	10	21	12	7	6.2	21.3
29-Sep	5	5	5	4	4	5	4	5	7	8	6	5	4	3	4	5	5	5	10	12	17	21	21	12	7.6	21.3
30-Sep	13	19	8	7	5	4	3	2	3	2	2	3	4	3	2	1	1	2	1	1	0	0	0	0	3.7	19.4
	1.6	1.6	1.2	1.1	1.1	0.9	1.1	1.5	1.7	1.8	1.3	0.9	1.0	1.1	1.0	1.1	1.3	1.7	1.9	2.2	2.6	2.8	2.5	1.8	Diurnal Average	
	12.7	19.4	8.2	6.8	5.6	5.0	4.4	4.8	7.0	7.7	6.5	5.4	4.3	10.2	5.5	4.6	4.8	7.3	9.7	12.4	17.5	21.3	21.3	11.9	Diurnal Maximum	

M - Maintenance N - Not Valid

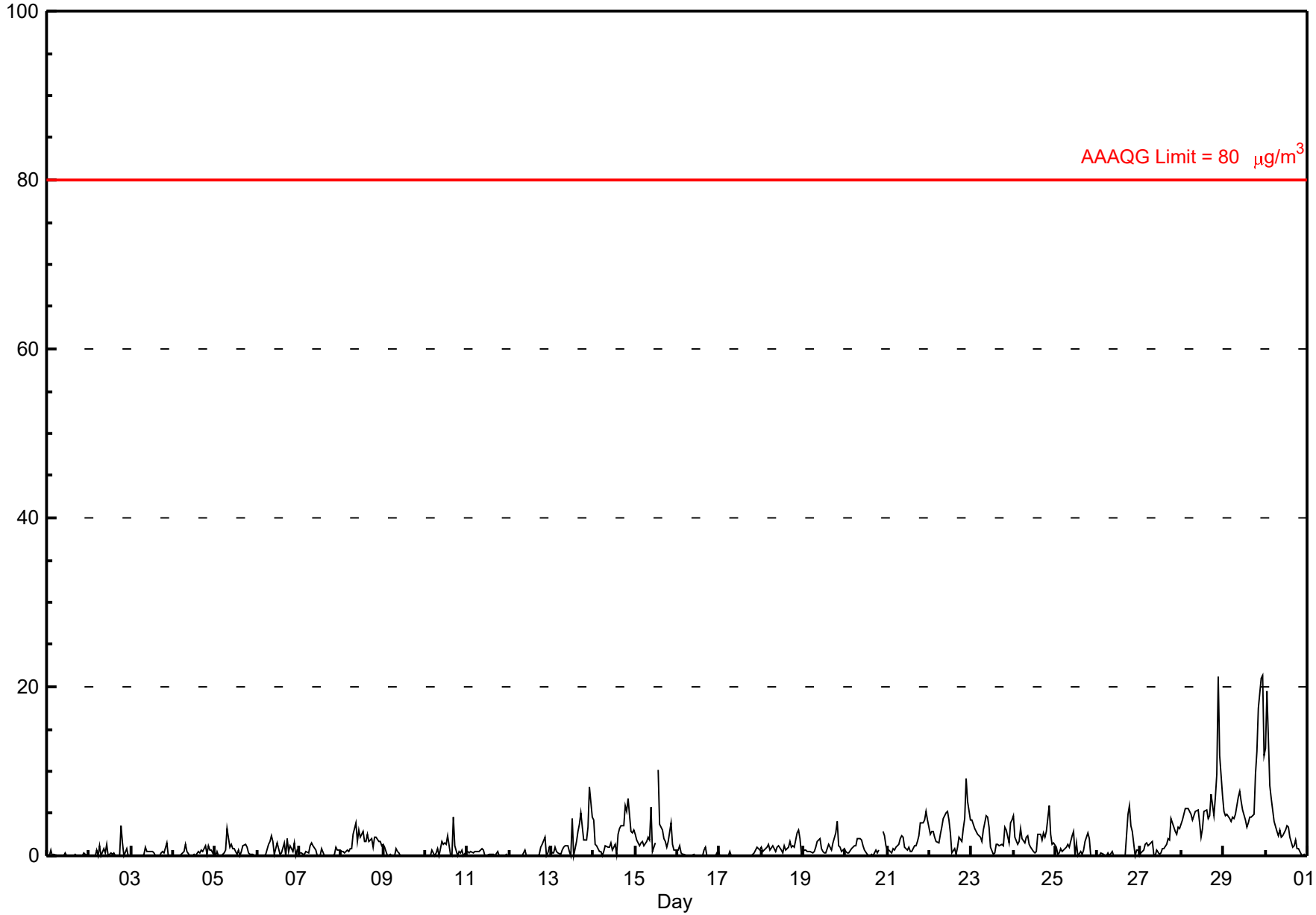
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Maximums

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

Portable Rycroft - September 2016

Maximum Value: 41.3 $\mu g/m^3$ on Sep 29 23:00

Maximum Daily Average: 10.6 $\mu g/m^3$ on Sep 29

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

Minimum Daily Average: 1.0 $\mu g/m^3$ on Sep 17

Maximum Diurnal Average: 5.5 $\mu g/m^3$ at hour 21

Minimum Diurnal Average: 2.2 $\mu g/m^3$ at hour 6

Monthly Average: 3.49 $\mu g/m^3$

Percentiles: $P_1 = 0.1$ $P_{10} = 0.9$ $Q_1 = 1.6$ Median = 2.5 $Q_3 = 4.3$ $P_{90} = 6.3$ $P_{99} = 17.2$

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-Sep	2	2	2	3	3	1	2	1	2	3	3	3	4	1	2	2	3	2	1	1	3	2	1	3	2.2	3.5
2-Sep	3	1	1	1	3	2	4	2	3	2	5	2	2	2	5	1	1	2	7	6	3	3	1	1	2.5	7.2
3-Sep	0	1	0	0	1	1	1	1	2	2	2	2	2	2	1	1	2	2	2	2	3	1	1	1	1.4	3.2
4-Sep	0	1	1	1	1	2	2	3	1	3	2	2	3	2	4	2	3	2	4	3	2	2	2	1	2.1	4.2
5-Sep	0	1	1	0	3	3	4	6	5	4	2	3	3	4	2	3	4	5	4	1	2	2	1	1	2.7	6.0
6-Sep	1	1	1	1	1	1	3	4	4	4	3	4	4	2	4	5	4	6	2	4	2	3	1	2	2.7	5.6
7-Sep	1	1	1	1	1	1	2	3	3	3	2	1	2	4	3	1	1	2	2	1	1	2	2	2	1.9	4.1
8-Sep	2	1	2	2	1	2	2	4	6	5	6	4	5	4	5	4	3	5	4	4	4	5	3	3	3.6	6.3
9-Sep	3	3	1	0	2	0	1	2	3	3	2	2	2	2	1	2	1	1	0	0	0	0	0	1	1.4	3.4
10-Sep	1	2	1	2	3	1	2	2	2	5	3	4	3	5	3	2	9	3	3	3	2	2	1	2	2.7	8.7
11-Sep	2	2	2	1	2	2	2	2	2	3	2	2	2	2	2	2	1	3	1	2	1	1	1	1	1.6	2.7
12-Sep	1	0	1	1	1	1	0	1	2	3	0	2	3	3	2	2	1	3	3	3	5	2	2	3	1.9	4.8
13-Sep	3	2	3	3	2	1	2	2	2	4	3	1	11	5	7	9	7	8	3	4	3	9	19	12	5.2	18.7
14-Sep	9	3	3	3	2	2	2	2	6	3	4	5	4	3	8	8	6	8	11	11	14	5	4	5	5.4	13.9
15-Sep	4	3	2	3	3	2	4	4	4	16	4	4	M	14	6	4	3	3	2	4	5	3	1	2	4.3	15.6
16-Sep	1	2	2	1	1	0	2	3	1	1	2	0	1	0	1	2	2	1	0	1	0	1	1	2	1.3	2.7
17-Sep	1	1	1	1	1	1	1	1	0	1	0	0	1	0	1	0	1	1	1	1	1	2	2	2	1.0	2.4
18-Sep	2	2	2	3	3	3	2	2	1	3	2	2	2	5	2	3	6	4	3	3	4	7	3	1	3.0	7.2
19-Sep	2	2	1	2	2	1	2	2	3	4	2	2	2	2	4	3	3	6	7	7	7	3	2	2	3.0	7.5
20-Sep	2	1	1	2	3	3	2	3	3	3	3	1	2	2	1	2	1	3	2	1	N	4	5	2	2.3	4.8
21-Sep	2	2	1	2	2	2	3	4	4	4	3	2	2	2	2	2	2	4	4	5	5	6	10	6	3.3	9.5
22-Sep	4	5	5	3	3	3	4	5	5	6	7	6	5	1	3	2	2	3	4	5	7	12	11	6	4.9	11.9
23-Sep	6	5	5	4	4	4	3	7	9	6	5	3	2	2	2	3	4	3	2	5	7	3	5	5	4.4	9.0
24-Sep	6	4	3	4	6	4	2	4	4	2	2	3	2	2	6	5	4	5	4	7	14	4	3	3	4.4	14.4
25-Sep	2	2	2	2	2	2	3	2	3	4	6	2	4	1	2	3	3	5	6	6	2	2	1	0	2.8	6.1
26-Sep	1	1	2	2	2	1	1	1	3	1	2	1	1	2	2	1	2	15	9	10	5	3	4	3	3.2	15.4
27-Sep	3	3	3	4	5	3	3	3	1	1	3	1	3	3	3	4	5	3	6	6	4	4	4	5	3.5	6.4
28-Sep	5	6	7	7	7	6	5	6	6	7	6	4	5	7	8	6	6	12	9	11	32	35	15	9	9.5	35.1
29-Sep	7	6	6	6	6	6	6	6	10	10	8	7	6	5	5	6	6	7	14	17	21	26	41	18	10.6	41.3
30-Sep	17	33	14	8	7	6	5	5	5	3	5	5	5	5	5	3	2	3	3	2	1	1	2	1	6.0	33.4
	3.1	3.3	2.5	2.5	2.7	2.2	2.6	3.1	3.5	4.0	3.3	2.7	3.1	3.1	3.4	3.1	3.3	4.4	4.1	4.5	5.5	5.2	5.0	3.5	Diurnal Average	
	17.1	33.4	14.1	8.3	7.3	6.2	5.7	6.8	9.5	15.6	8.3	6.9	10.6	13.6	7.9	8.6	8.7	15.4	13.6	16.9	32.2	35.1	41.3	17.5	Diurnal Maximum	

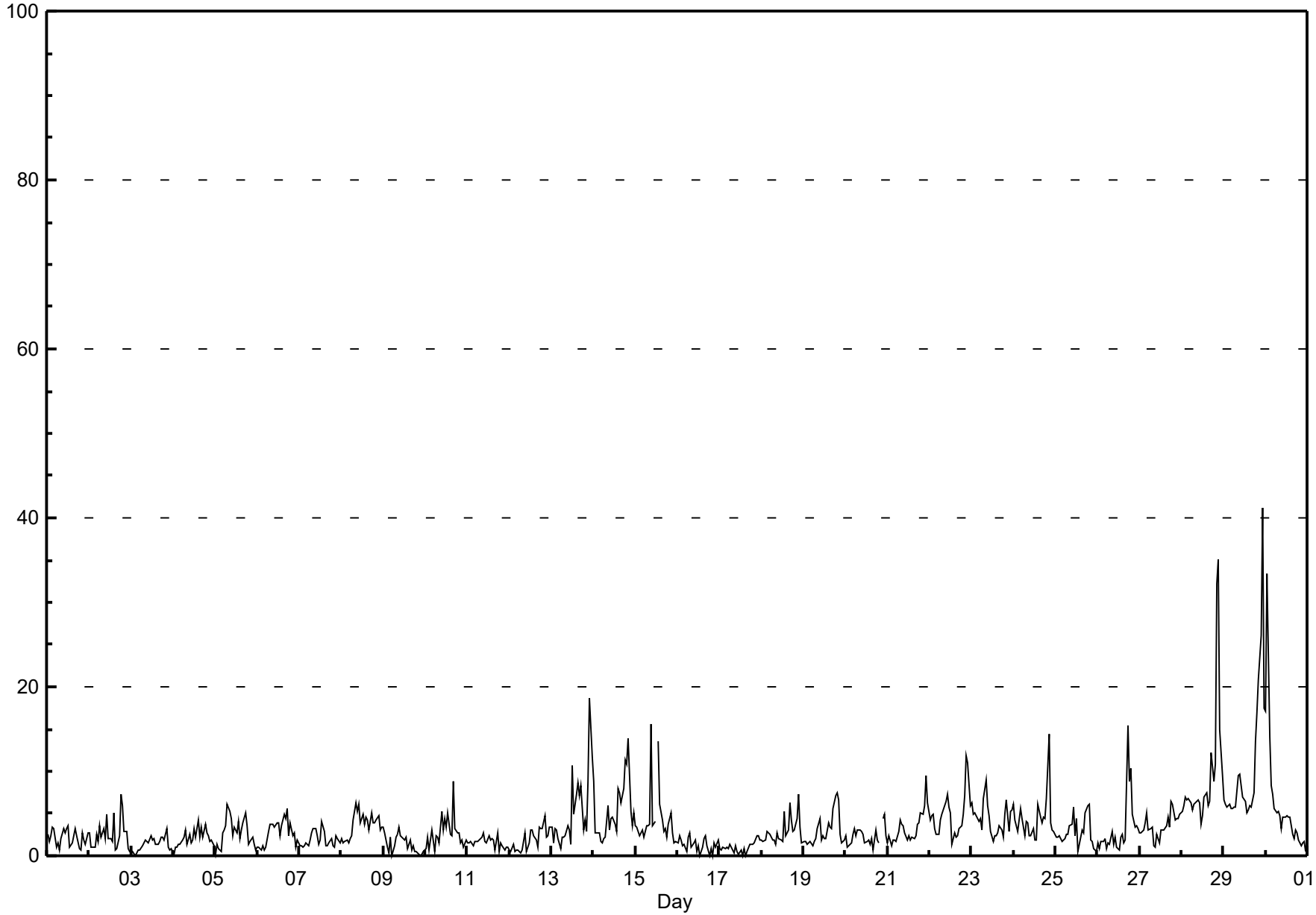
M - Maintenance N - Not Valid

Peace Airshed Zone Association

Hourly Maximums

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

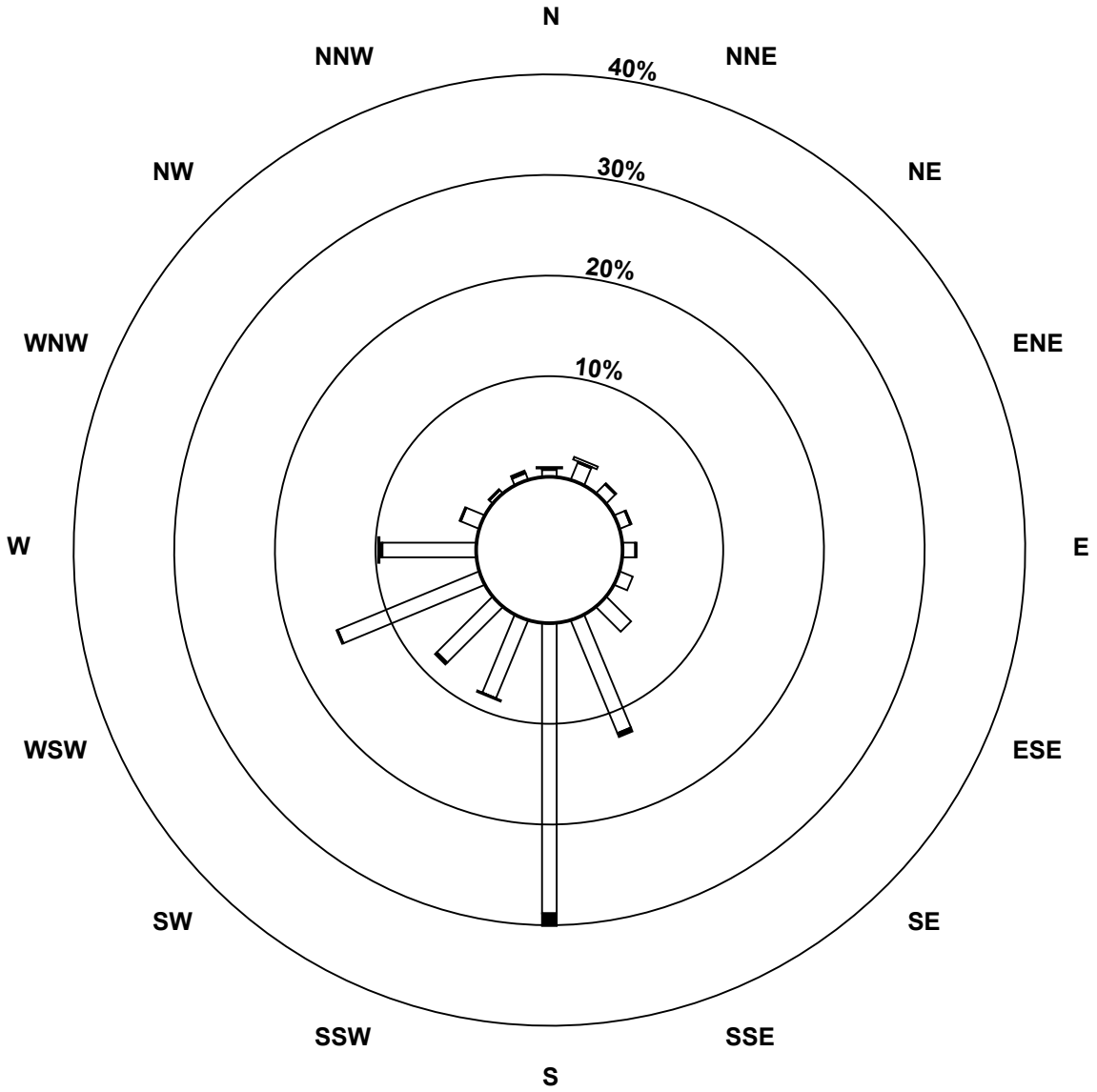
Portable Rycroft - September 2016



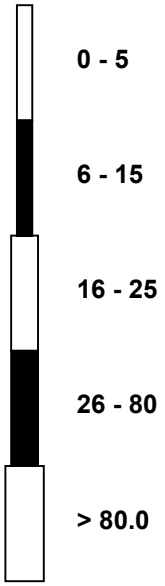
Pollutant Rose

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

Portable Rycroft - September 2016



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



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - °C

Portable Rycroft - September 2016

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

Maximum Value: 25.9 °C on Sep 13 16:00

Maximum Daily Average: 16.6 °C on Sep 13

Minimum Value: -3 °C on Sep 29 07:00

Minimum Daily Average: 4.8 °C on Sep 30

Maximum Diurnal Average: 16.7 °C at hour 15

Minimum Diurnal Average: 5.7 °C at hour 7

Monthly Average: 10.60 °C

Percentiles: P_1 = -0.6 P_{10} = 3.4 Q_1 = 6.5 Median = 10.5 Q_3 = 14.6 P_{90} = 18.2 P_{99} = 23.2

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

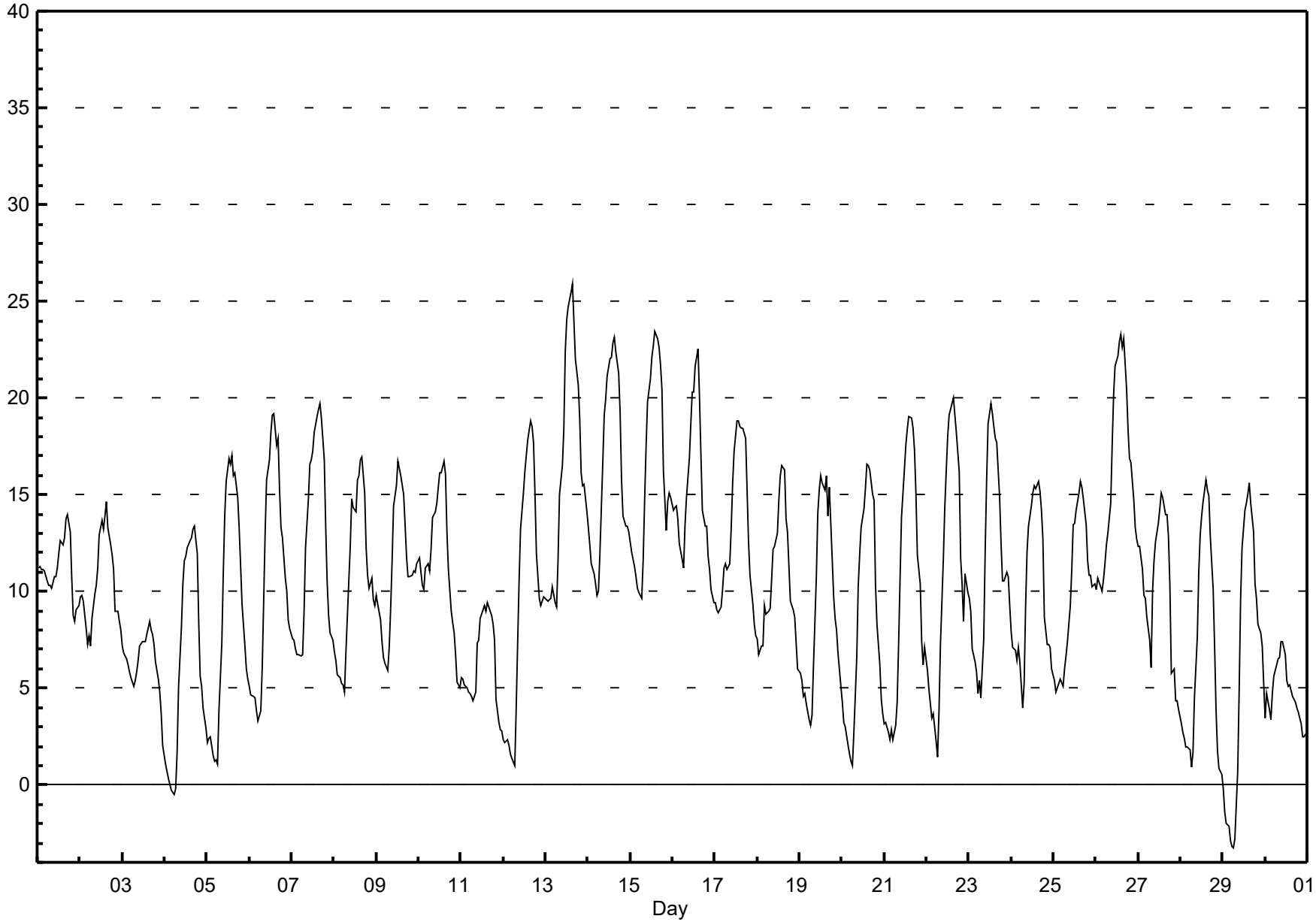
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	11	11	11	11	11	11	10	10	10	11	11	11	12	13	12	13	14	14	13	11	9	8	9	9	11.1	13.9
2-Sep	10	10	10	8	7	8	7	9	10	10	11	13	14	13	14	15	13	12	12	11	9	9	8	8	10.5	14.6
3-Sep	7	7	6	6	6	6	5	5	6	6	7	7	7	7	8	8	8	8	7	6	5	5	4	2	6.3	8.4
4-Sep	1	1	0	0	0	0	0	2	5	8	10	12	12	12	13	13	13	13	12	8	6	5	4	3	6.3	13.4
5-Sep	2	2	2	2	1	1	1	4	7	11	14	16	17	17	17	16	16	15	13	11	9	7	6	5	8.9	17.0
6-Sep	5	5	5	5	4	3	4	6	9	13	16	17	18	19	19	18	18	15	13	13	11	10	9	8	10.9	19.2
7-Sep	8	7	7	7	7	7	7	9	12	15	17	17	17	18	19	19	20	19	17	13	10	9	8	7	12.3	19.7
8-Sep	7	6	6	6	5	5	5	7	11	12	15	14	14	16	16	17	17	15	12	11	10	11	10	9	10.7	17.0
9-Sep	10	9	9	7	7	6	6	7	9	12	14	15	17	16	16	15	13	12	11	11	11	11	11	11	11.1	16.7
10-Sep	12	11	10	10	11	11	11	12	14	14	15	15	16	16	17	16	13	11	9	8	8	7	5	5	11.6	16.7
11-Sep	6	5	5	5	5	5	5	4	5	7	7	9	9	9	9	9	9	9	8	8	4	3	3	3	6.3	9.4
12-Sep	2	2	2	2	2	1	1	4	7	11	13	15	16	17	18	19	19	18	15	12	10	9	10	10	9.8	18.9
13-Sep	10	9	10	10	10	9	9	12	15	17	18	22	24	25	25	26	24	22	21	19	16	15	16	14	16.6	25.9
14-Sep	13	12	11	11	10	10	10	12	17	19	20	21	22	22	23	23	22	21	19	16	14	13	13	13	16.2	23.2
15-Sep	13	12	11	11	10	10	10	12	15	17	20	21	22	23	23	23	23	22	20	16	13	15	15	15	16.3	23.4
16-Sep	14	14	14	14	12	12	11	13	15	17	19	20	20	22	23	20	17	14	13	13	12	11	10	9	15.1	22.5
17-Sep	9	9	9	9	10	11	11	11	11	13	16	17	19	19	19	18	18	18	15	13	11	9	8	8	13.0	18.8
18-Sep	8	7	7	7	9	9	9	9	11	12	12	13	15	16	16	16	14	13	11	9	9	9	7	6	10.6	16.5
19-Sep	6	5	5	5	4	3	3	4	6	11	14	15	16	16	15	16	14	15	12	10	9	8	7	5	9.3	16.0
20-Sep	4	3	3	2	2	1	1	3	7	10	12	13	14	15	17	16	16	15	15	10	8	6	4	4	8.5	16.6
21-Sep	3	3	3	2	3	2	3	4	7	11	14	16	18	18	19	19	18	17	15	12	10	7	6	7	10.0	19.0
22-Sep	6	5	4	3	4	2	1	4	7	12	14	16	18	19	20	20	19	18	16	12	10	8	11	10	10.9	20.0
23-Sep	10	9	7	6	6	5	5	5	8	12	16	19	20	19	19	18	18	15	12	11	11	11	11	9	11.6	19.8
24-Sep	8	7	7	6	7	6	4	5	9	12	13	14	15	15	15	16	15	14	13	9	7	7	7	6	10.0	15.7
25-Sep	5	5	5	5	5	5	6	7	7	9	11	13	14	14	15	16	15	15	13	12	11	11	10	10	10.0	15.7
26-Sep	10	11	10	10	11	11	12	13	15	18	20	22	22	23	23	23	23	20	18	17	17	15	13	13	16.2	23.3
27-Sep	12	12	11	10	10	9	8	6	10	12	13	14	14	15	15	14	14	13	10	6	6	4	4	4	10.2	15.1
28-Sep	3	3	2	2	2	2	1	2	4	8	11	13	14	15	16	15	15	13	10	7	4	2	1	1	6.8	15.8
29-Sep	0	-1	-2	-2	-3	-3	-3	-3	1	5	10	12	14	15	15	16	15	13	10	10	8	8	7	5	6.1	15.6
30-Sep	3	5	4	3	5	6	6	7	7	7	7	7	5	5	5	5	4	4	4	4	3	2	2	3	4.8	7.4
	7.3	6.9	6.5	6.1	6.1	5.8	5.7	6.8	9.2	11.7	13.7	15.0	15.9	16.3	16.7	16.6	15.9	14.8	13.1	10.9	9.4	8.6	8.0	7.4	Diurnal Average	
	14.2	14.3	14.4	13.8	12.5	11.6	12.4	13.5	16.7	19.1	20.1	22.4	24.0	24.7	25.5	25.9	23.9	22.0	20.7	19.0	16.7	15.5	15.6	14.8	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Portable Rycroft - September 2016



Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Rycroft - September 2016

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	6	4	2	6	15	12	9	13	12	8	9	8	15	20	18	18	22	20	15	9	4	5	4	6	9.7	21.5
Dir	7	67	194	295	273	289	274	256	280	282	240	239	254	257	252	250	252	259	259	264	243	218	190	232	259.5	251.7
2 Spd	10	11	7	6	7	6	5	7	7	8	6	8	13	15	15	21	19	18	13	12	11	16	21	19	11.6	20.8
Dir	245	249	237	251	248	270	250	237	240	264	255	238	266	263	257	264	262	257	245	238	237	253	256	256	253.4	256.1
3 Spd	19	19	22	21	22	22	22	25	24	23	24	27	27	28	26	28	28	27	23	16	10	7	10	6	20.7	28.4
Dir	249	250	249	244	245	247	247	253	257	260	269	273	271	266	263	264	263	263	266	274	252	241	238	205	257.8	263.1
4 Spd	7	7	6	6	6	6	6	5	4	4	5	4	4	6	4	5	2	3	1	2	1	4	0	2	3.5	7.3
Dir	183	171	170	172	172	170	170	174	162	144	169	107	133	164	123	172	94	50	147	68	101	69	173	171	155.1	170.7
5 Spd	3	4	2	1	2	1	1	1	2	4	7	6	7	9	10	9	2	5	4	4	4	5	5	7	2.8	9.6
Dir	196	187	180	103	200	180	89	65	131	115	143	145	151	242	269	263	231	150	234	256	160	169	181	158	188.7	269.3
6 Spd	5	6	7	6	7	6	6	7	8	6	7	5	4	6	7	6	6	12	10	4	6	9	10	11	6.0	11.7
Dir	160	159	154	168	173	167	164	171	175	183	254	227	216	238	235	211	157	177	172	101	143	159	170	170	177.6	177.0
7 Spd	9	8	8	8	9	9	10	9	9	9	19	17	16	18	19	17	12	9	6	8	7	6	6	7	9.0	19.3
Dir	172	173	173	172	172	175	170	180	184	195	247	245	243	244	240	248	244	229	193	181	182	178	172	175	210.5	247.4
8 Spd	7	7	5	6	7	6	6	6	6	12	14	20	18	20	22	24	24	18	2	6	5	9	5	3	8.6	23.9
Dir	169	176	178	172	172	169	185	178	249	251	270	266	265	273	254	249	252	287	218	189	199	242	216	190	242.2	249.1
9 Spd	9	8	3	2	5	6	6	6	7	6	6	7	12	13	14	13	10	7	9	10	11	10	13	13	7.9	14.4
Dir	240	225	119	206	165	150	153	146	163	164	186	197	175	169	176	176	185	159	148	145	144	152	165	166	169.2	175.5
10 Spd	9	9	8	7	8	10	10	8	18	31	30	33	33	24	14	24	25	18	19	16	15	14	11	14	14.9	32.8
Dir	186	193	190	194	190	193	197	204	227	237	241	246	255	285	261	251	277	282	284	249	260	273	264	268	247.9	245.6
11 Spd	15	17	18	17	18	16	17	15	13	12	12	10	10	14	15	13	14	16	10	3	2	5	7	7	11.1	18.2
Dir	269	273	273	268	267	269	270	262	278	298	305	292	292	280	268	271	268	262	269	227	206	183	173	173	269.2	266.7
12 Spd	7	8	10	8	7	6	5	9	11	11	12	11	11	9	7	10	10	7	2	4	8	11	12	12	8.0	12.5
Dir	169	167	167	160	153	168	176	162	166	175	171	183	189	208	202	236	236	238	198	174	171	169	174	179	181.7	171.2
13 Spd	11	12	11	11	12	12	10	11	10	9	8	24	31	30	30	32	30	29	22	10	6	9	8	7	14.0	32.0
Dir	176	179	181	185	185	184	182	187	190	195	215	241	241	244	242	245	253	247	236	225	181	174	183	177	221.6	245.4
14 Spd	7	8	8	8	9	7	8	8	11	27	30	29	27	26	24	24	21	18	8	5	7	9	8	10	12.6	30.1
Dir	179	172	181	180	184	183	179	181	220	239	241	244	248	243	247	263	251	253	234	208	178	173	180	183	227.8	240.9
15 Spd	8	8	7	8	7	8	8	8	10	8	8	13	12	13	14	20	16	17	11	4	5	8	8	8	8.8	19.9
Dir	177	179	175	175	175	170	172	180	183	188	235	244	235	235	234	238	235	233	228	212	191	186	184	186	209.7	238.1
16 Spd	9	9	8	10	9	9	10	11	11	9	17	17	12	13	13	14	13	7	8	8	8	9	8	7	9.6	17.0
Dir	182	189	185	182	183	184	178	185	186	195	232	233	225	228	226	203	197	193	176	177	172	161	174	166	196.5	233.3
17 Spd	8	6	8	4	10	10	14	13	11	11	10	11	13	20	16	9	12	11	7	8	8	8	7	8	9.2	19.7
Dir	156	164	167	185	171	178	184	181	166	176	194	195	225	233	239	232	232	224	199	190	189	189	187	189	197.4	232.8
18 Spd	8	8	6	9	19	12	14	9	16	22	22	23	23	23	26	27	17	11	9	4	4	4	5	6	12.6	26.7
Dir	188	175	189	219	239	233	240	231	237	242	241	239	240	241	242	249	275	295	251	220	213	230	184	180	238.0	248.7
19 Spd	5	6	6	4	4	5	7	6	5	7	10	10	9	10	8	7	15	6	3	5	4	5	2	1	3.1	14.8
Dir	182	187	186	213	205	192	180	184	184	245	266	261	261	271	239	261	334	5	114	36	60	165	286	304	238.9	334.2
20 Spd	3	5	7	7	8	6	7	6	4	7	13	14	12	12	14	12	11	10	3	1	5	6	7	6	5.3	14.0
Dir	224	179	173	176	186	179	175	182	190	263	276	277	284	278	262	254	264	259	306	128	164	179	171	168	233.4	261.6
21 Spd	7	7	7	7	8	8	9	8	5	4	5	5	9	9	9	8	10	8	7	7	7	5	6	8	6.9	9.7
Dir	165	161	152	163	169	158	155	157	176	163	141	152	178	185	190	195	179	157	144	153	160	181	180	178	167.3	179.3
22 Spd	7	5	6	7	8	7	6	6	4	3	4	7	7	8	8	9	11	7	1	1	2	5	9	8	5.4	11.0
Dir	170	176	172	161	147	170	184	181	180	62	92	116	100	123	131	140	150	142	103	74	149	172	157	155	148.7	149.6

Peace Airshed Zone Association

Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Portable Rycroft - September 2016

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	4	2	5	5	4	8	3	3	5	6	6	10	10	8	7	10	6	4	6	7	9	10	7	5.6	10.3
Dir	157	138	159	146	148	134	145	174	130	148	152	193	186	205	200	204	213	206	208	194	192	190	191	197	182.4	191.2
24 Spd	11	9	8	7	9	14	4	5	7	18	24	23	23	28	28	29	36	25	15	5	9	10	10	10	13.8	36.0
Dir	187	193	193	194	234	259	199	169	205	229	236	234	238	248	252	254	260	255	237	215	188	187	185	187	232.7	260.4
25 Spd	10	8	9	9	8	8	8	7	6	6	4	6	6	8	8	5	6	5	3	3	7	6	3	5	6.2	10.3
Dir	184	181	172	173	175	173	163	169	164	168	171	177	182	174	194	201	185	154	142	184	177	167	135	132	173.0	184.2
26 Spd	9	8	10	9	11	14	12	12	9	8	12	13	12	11	10	8	4	2	7	3	7	6	8	6	7.8	13.8
Dir	141	146	152	150	144	151	163	159	147	154	160	178	176	183	175	187	163	219	254	199	234	214	211	205	171.1	150.6
27 Spd	6	8	7	13	20	17	13	5	5	15	23	28	27	22	20	24	28	21	11	6	8	7	9	8	14.0	27.9
Dir	211	208	219	239	237	235	233	263	205	227	234	238	237	233	235	238	240	233	228	196	185	192	178	186	229.1	240.1
28 Spd	8	8	7	8	8	8	7	7	7	5	4	5	4	5	4	6	2	2	2	4	0	3	7	7	4.4	8.4
Dir	177	171	162	171	164	162	149	159	158	163	132	72	96	94	110	170	99	65	53	39	83	199	177	171	151.6	163.8
29 Spd	6	6	6	6	6	7	7	7	4	4	2	6	8	12	13	14	12	11	8	6	6	7	8	6	2.6	13.9
Dir	188	193	182	174	180	183	184	182	185	261	330	3	20	45	41	25	35	28	8	16	22	15	3	341	35.2	25.2
30 Spd	5	4	4	5	3	3	7	9	10	11	16	14	16	14	15	21	26	22	22	24	22	22	21	23	12.6	25.7
Dir	322	263	291	261	295	336	347	338	343	359	22	24	32	34	16	7	13	24	35	32	33	28	36	40	18.6	13.1
Spd	6.1	6.2	6.0	6.0	7.0	6.5	6.4	6.2	6.1	7.4	8.8	10.0	10.3	11.0	11.1	11.9	10.5	8.0	5.0	2.7	3.7	4.7	5.3	5.2	Diurnal Average	
Dir	193.7	192.9	190.4	197.1	202.6	201.5	196.0	198.0	207.8	225.2	236.4	238.8	239.6	243.5	241.1	245.2	251.6	250.2	238.4	211.2	187.5	190.8	188.8	185.7		
Spd	19.2	19.4	21.7	21.2	22.1	22.1	22.4	24.8	23.7	31.1	30.3	32.8	32.6	29.7	29.7	32.0	36.0	28.6	23.5	24.1	22.0	21.9	20.8	23.4	Diurnal Maximum	
Dir	248.7	249.6	249.3	244.0	244.7	247.0	247.5	253.4	257.1	236.6	240.8	245.6	254.6	244.3	241.9	245.4	260.4	246.6	265.6	32.2	33.4	27.7	256.1	39.6		

Maximum Speed Value: 36 km/h on Sep 24 17:00
Maximum Daily Speed Average: 20.7 km/h on Sep 3
Maximum Diurnal Speed Average: 11.9 km/h at hour 16

Minimum Speed Value: 0 km/h on Sep 4 23:00
Minimum Daily Speed Average: 2.6 km/h on Sep 4
Minimum Diurnal Speed Average: 2.7 km/h at hour 20

Monthly Average Velocity: 6.57 km/h 221.02 deg

Speed Percentiles: $P_1 = 1.2$ $P_{10} = 3.8$ $Q_1 = 6.1$ Median = 8.2 $Q_3 = 12.4$ $P_{90} = 21.3$ $P_{99} = 30.1$

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

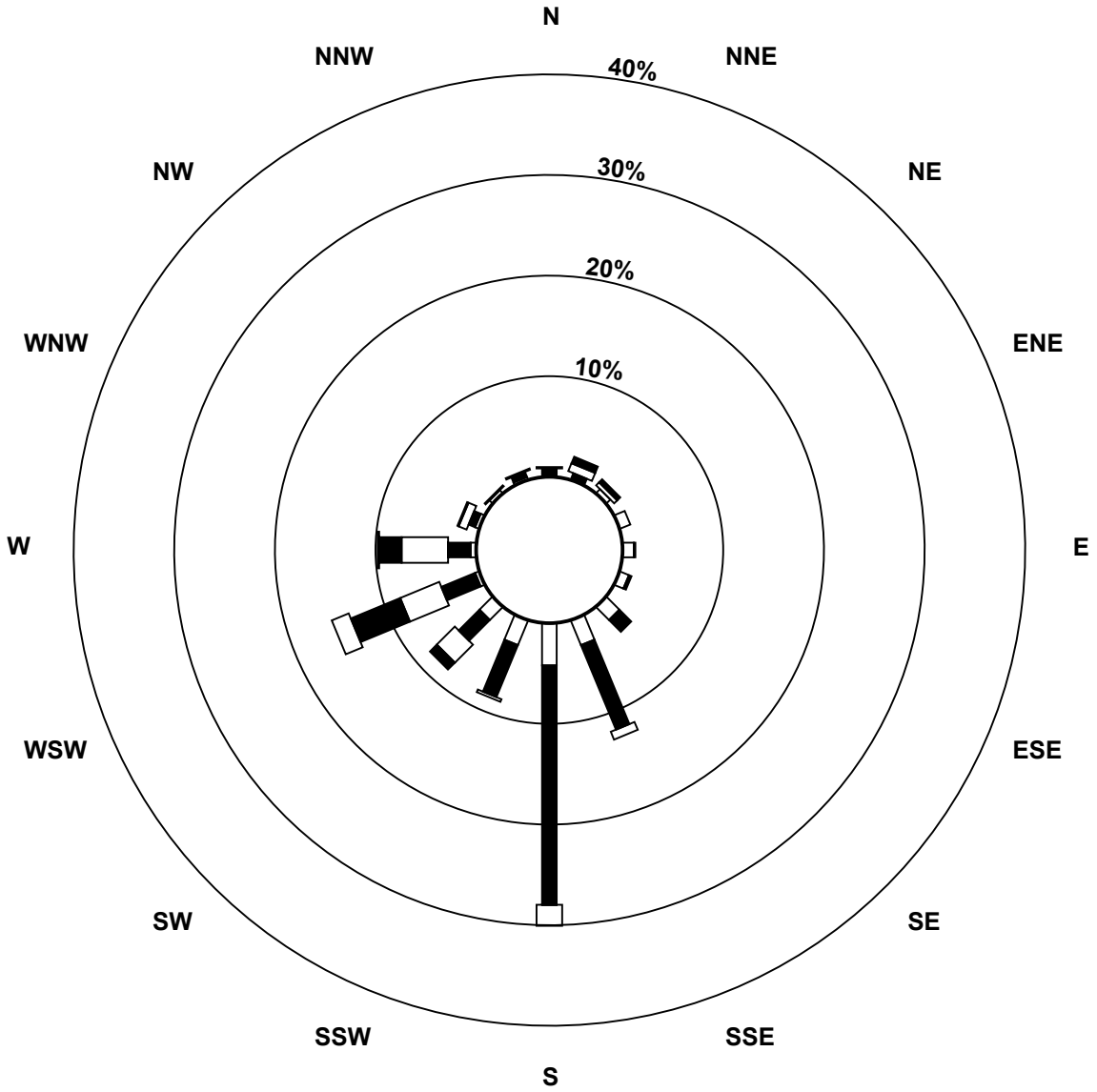
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	0	13	3	2	0	0	18
NorthEast	8	2	7	7	0	0	24
East	15	3	0	0	0	0	18
SouthEast	22	42	2	0	0	0	66
South	39	242	29	0	0	0	310
SouthWest	21	50	35	31	10	0	147
West	8	27	50	35	6	0	126
NorthWest	6	1	4	0	0	0	11
Total	119	380	130	75	16	0	720

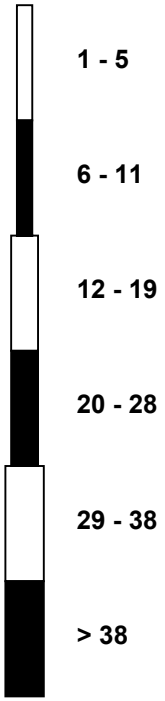
Wind Rose

Wind Speed (WS) (km/h)

Portable Rycroft - September 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Rycroft - September 2016

Maximum Speed: 36 km/h on Sep 24 17:00

Maximum Daily Speed Average: 21.2 km/h on Sep 3

Minimum Speed: 1 km/h on Sep 22 19:00

Minimum Daily Speed Average: 4.9 km/h on Sep 4

Maximum Diurnal Speed Average: 15.9 km/h at hour 16

Minimum Diurnal Speed Average: 7.2 km/h at hour 20

Monthly Average Speed: 10.53 km/h

Percentiles: $P_1 = 2.0$ $P_{10} = 4.5$ $Q_1 = 6.3$ Median = 8.4 $Q_3 = 12.7$ $P_{90} = 21.4$ $P_{99} = 30.1$

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-Sep	7	4	3	6	16	12	10	14	13	9	9	8	16	20	18	18	22	20	15	9	4	6	5	6	11.1	21.6
2-Sep	11	11	7	6	7	7	5	7	7	8	6	9	14	16	16	21	19	18	14	12	12	16	21	19	12.0	21.0
3-Sep	19	19	22	21	22	22	22	25	24	23	25	27	28	28	26	28	29	27	24	16	10	7	10	6	21.2	28.5
4-Sep	7	7	6	6	6	6	6	5	4	4	6	5	6	7	6	6	5	5	1	2	2	4	2	2	4.9	7.3
5-Sep	3	4	3	2	2	3	2	2	3	5	7	7	8	11	10	9	6	5	8	6	4	5	5	7	5.3	11.0
6-Sep	5	6	7	6	7	6	6	7	8	6	7	6	6	7	7	7	7	12	10	5	6	9	11	11	7.4	11.8
7-Sep	9	8	8	8	9	9	10	9	9	10	19	18	16	18	19	18	13	9	6	8	7	7	6	7	10.9	19.4
8-Sep	7	7	5	6	7	6	6	6	8	12	14	20	19	20	22	24	24	21	3	6	5	9	5	3	11.0	24.1
9-Sep	9	8	5	3	5	6	6	6	7	6	7	8	12	13	15	13	11	8	9	10	11	10	13	13	8.9	14.6
10-Sep	9	9	8	7	8	10	10	8	19	31	30	33	33	25	17	25	25	19	19	17	15	14	11	14	17.3	32.9
11-Sep	15	17	18	17	18	16	17	15	13	13	12	11	11	15	15	13	14	16	11	4	2	5	7	7	12.5	18.2
12-Sep	7	8	10	8	7	6	5	9	11	11	13	11	11	10	8	10	10	7	2	4	8	11	12	12	8.9	12.7
13-Sep	11	12	11	11	12	12	10	11	10	9	9	24	31	30	30	32	31	29	23	10	6	9	8	8	16.2	32.1
14-Sep	7	8	8	8	9	7	8	8	12	28	30	29	28	26	25	25	21	18	8	5	7	9	8	10	14.7	30.2
15-Sep	8	8	8	8	7	8	8	8	10	9	9	14	13	13	14	20	16	17	11	5	5	8	8	8	10.1	20.0
16-Sep	9	9	8	10	10	9	10	11	11	9	17	17	12	13	13	14	13	8	8	8	8	9	8	7	10.5	17.3
17-Sep	8	6	8	4	10	10	14	13	11	12	10	11	13	20	16	9	12	11	7	8	8	8	7	8	10.3	19.8
18-Sep	8	8	6	10	19	12	14	9	16	23	22	23	23	23	26	27	20	11	9	4	4	5	5	6	13.9	26.8
19-Sep	6	6	6	4	4	5	7	6	5	8	11	10	10	11	8	9	15	7	4	7	7	6	4	3	7.0	15.0
20-Sep	3	5	7	7	8	6	7	6	4	7	13	14	12	12	14	13	12	10	4	2	5	6	7	7	8.0	14.4
21-Sep	7	7	7	7	8	8	9	8	5	5	5	5	9	9	9	8	10	8	7	7	7	5	6	8	7.3	9.9
22-Sep	8	5	6	7	8	7	6	6	4	4	4	8	8	8	9	9	11	7	1	2	3	6	9	8	6.5	11.2
23-Sep	5	4	2	5	6	4	8	4	4	6	7	6	11	10	8	8	10	6	4	6	7	9	10	7	6.6	10.6
24-Sep	11	9	8	7	10	14	5	5	8	18	24	23	23	28	28	29	36	25	15	5	9	10	10	10	15.5	36.1
25-Sep	10	8	9	9	9	8	8	7	6	6	4	6	6	9	8	6	6	5	3	4	7	6	3	5	6.6	10.3
26-Sep	9	9	10	9	11	14	12	12	9	8	12	13	13	12	11	8	4	3	7	4	7	7	8	6	9.1	13.8
27-Sep	6	8	7	13	20	17	13	5	5	15	23	28	28	23	21	24	28	21	11	6	8	7	9	8	14.8	28.0
28-Sep	8	8	8	8	8	8	7	7	7	5	5	6	6	8	5	7	4	3	2	4	2	4	7	7	6.0	8.5
29-Sep	7	6	6	6	6	7	7	7	4	4	3	6	9	12	14	14	13	11	8	6	6	7	8	7	7.6	14.1
30-Sep	5	4	4	5	3	3	7	10	10	11	16	14	16	14	15	21	26	22	22	24	22	22	21	23	14.2	25.7
	8.2	7.9	7.6	7.9	9.4	9.1	8.8	8.6	8.9	10.8	12.7	14.0	15.0	15.7	15.1	15.9	15.7	12.9	9.2	7.2	7.2	8.1	8.5	8.4	Diurnal Average	
	19.3	19.5	21.8	21.2	22.2	22.1	22.4	24.8	23.7	31.2	30.3	32.9	32.8	29.9	29.9	32.1	36.1	28.7	23.6	24.2	22.1	22.0	20.9	23.4	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

Portable Rycroft - September 2016

Maximum Value: 89.3 deg on Sep 20 00:00

Minimum Value: 2.4 deg on Sep 20 23:00

Percentiles: P_1 = 3.1 P_{10} = 4.4 Q_1 = 5.7 Median = 9.1 Q_3 = 17.9 P_{90} = 29.9 P_{99} = 80.5

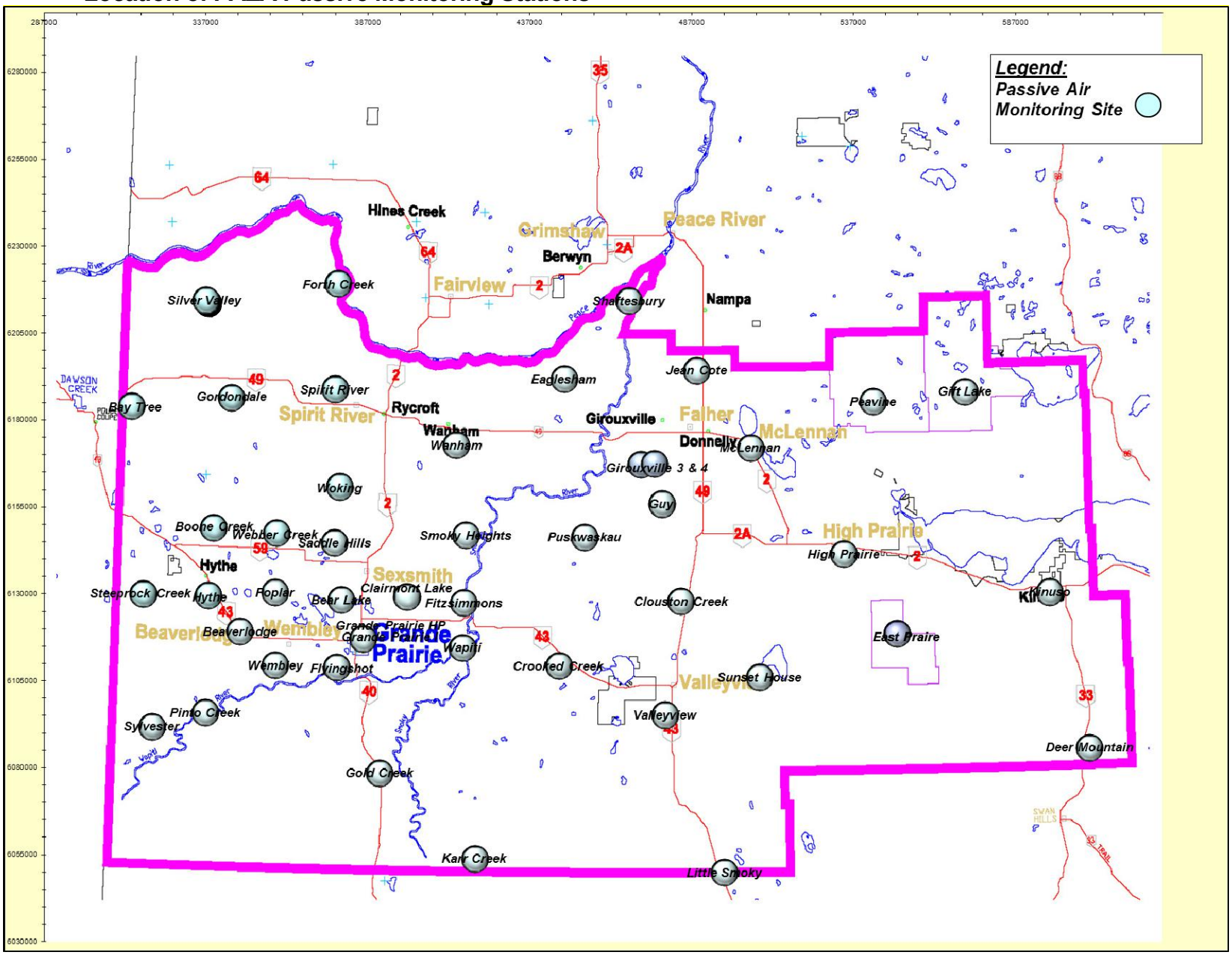
Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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-Sep	23	42	43	32	5	12	19	12	17	20	9	10	11	7	6	6	6	7	4	7	29	28	22	14	43.5
2-Sep	6	11	9	15	9	13	33	10	17	19	21	21	13	14	13	10	10	7	6	6	9	4	6	5	33.2
3-Sep	5	4	5	4	5	4	3	3	3	3	5	5	5	5	5	5	6	7	5	6	4	10	3	20	19.9
4-Sep	5	3	7	3	3	4	5	9	20	29	39	55	50	36	61	43	69	69	81	25	55	9	82	40	82.5
5-Sep	16	7	19	60	29	79	54	89	27	34	24	30	37	44	26	10	83	19	81	78	27	16	11	10	89.2
6-Sep	11	6	6	11	4	4	5	5	7	20	32	45	58	37	29	28	14	7	21	46	7	6	4	3	57.9
7-Sep	4	4	4	4	5	4	3	5	9	26	8	11	8	8	10	14	18	17	12	4	6	9	9	6	26.0
8-Sep	5	6	18	4	4	9	6	7	34	10	14	9	12	12	7	6	7	28	48	5	15	5	21	28	48.1
9-Sep	8	28	51	30	26	8	8	7	7	13	23	24	16	12	8	7	26	13	8	9	6	9	4	5	51.4
10-Sep	9	8	6	7	10	7	6	8	11	5	4	4	6	17	34	9	7	8	7	13	9	4	5	4	34.3
11-Sep	5	4	3	5	3	6	7	12	9	11	10	17	24	11	11	12	9	9	8	27	10	18	5	5	27.5
12-Sep	6	4	4	8	6	16	27	6	8	8	11	13	14	25	23	21	15	9	17	14	4	3	3	4	27.2
13-Sep	4	4	5	4	5	4	7	7	7	9	21	8	7	6	7	6	5	4	5	8	18	6	7	5	21.2
14-Sep	5	7	5	4	5	6	7	5	27	6	6	7	9	8	11	11	6	5	9	17	6	5	5	4	26.5
15-Sep	6	5	4	4	5	7	11	4	7	10	20	12	20	15	11	9	6	6	6	19	9	5	5	5	20.0
16-Sep	5	5	9	6	5	4	5	4	5	12	10	12	12	15	15	11	6	24	6	5	6	7	7	17	23.9
17-Sep	8	9	8	7	6	4	4	7	5	11	11	8	14	8	11	16	11	13	9	5	4	4	5	4	16.3
18-Sep	5	7	10	23	6	6	5	6	5	6	5	5	8	10	7	5	30	8	24	19	27	39	17	18	38.9
19-Sep	5	6	8	17	22	19	7	6	9	36	16	19	28	24	14	31	8	44	47	40	58	30	68	89	89.3
20-Sep	22	9	8	5	5	10	5	10	23	16	8	13	14	18	14	22	24	8	45	45	13	5	2	9	45.5
21-Sep	4	9	7	12	6	16	4	6	11	34	28	31	22	19	22	18	13	13	5	6	6	8	6	7	33.6
22-Sep	13	9	16	8	6	5	7	6	18	40	28	29	27	25	28	25	10	15	44	55	44	17	10	11	55.0
23-Sep	45	29	43	18	61	30	9	77	63	19	22	28	16	15	10	18	12	12	17	6	7	5	6	7	76.8
24-Sep	4	5	6	6	26	14	13	16	21	7	8	7	9	8	7	9	5	5	8	14	6	6	7	5	25.7
25-Sep	4	5	5	4	4	5	9	6	8	8	30	15	11	13	14	18	14	16	28	26	9	16	18	12	29.6
26-Sep	6	25	8	5	5	5	6	5	10	18	14	11	17	15	29	15	28	33	18	29	11	16	19	17	32.7
27-Sep	13	13	12	20	3	4	5	37	18	9	9	8	7	8	13	8	7	5	12	12	4	5	9	4	37.0
28-Sep	6	8	11	4	4	7	6	9	13	23	45	41	51	55	59	27	72	65	59	24	88	25	14	9	87.6
29-Sep	22	14	5	3	3	4	3	3	18	24	64	25	23	19	13	11	10	11	5	4	3	12	12	10	63.8
30-Sep	20	16	10	21	43	55	11	21	5	10	6	4	4	7	6	5	4	7	4	5	5	4	5	5	55.0
	44.8	41.9	51.4	59.7	60.9	79.3	53.7	89.2	63.2	40.4	63.8	54.6	57.9	55.5	61.5	42.5	82.7	68.6	80.7	78.4	87.6	38.9	82.5	89.3	

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for September 2016

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
2a	Bay Tree	**0.1**	**20.9**	**0.4**		
2b	Bay Tree	**0.1**	**22.1**	**0.4**		
7a	Steeprock Creek	**0.1**	**22.0**	**0.4**		
7b	Steeprock Creek	**0.1**	**24.3**	**0.3**		
28a	Clairmont Lake	**0.2**	**22.0**	**1.3**		
28b	Clairmont Lake	**0.1**	**21.2**	**1.7**		
47a	Kinuso	**0.1**	**20.7**	**0.5**		
47b	Kinuso	**0.1**	**21.8**	**0.3**		
64a	Girouxville 4				**0.4**	
64b	Girouxville 4				**0.4**	
1	Silver Valley	**0.1**	**23.4**	**0.7**		08-27-081-11 W6M
2	Bay Tree	**0.1**	**21.5**	**0.4**		13-16-078-13 W6M
3	Fourth Creek	**0.2**	**26.5**	**0.6**		04-13-082-07 W6M
4	Gordondale	**0.2**	**25.9**	**1.0**		04-34-078-10 W6M
5	Boone Creek	**0.1**	**21.5**	**0.6**		16-36-074-11 W6M
7	Steeprock Creek	**0.1**	**23.2**	**0.4**		09-35-072-13 W6M
9	Spirit River	**0.1**	**26.3**	**1.0**		08-12-079-07 W6M
10	Woking	**0.3**	**23.2**	**0.5**		01-13-076-07 W6M
11	Webber Creek	**0.1**	**18.1**	**1.1**		09-36-074-09 W6M
12	Hythe	**0.2**	**22.3**	**0.6**		14-36-072-11 W6M
14	Sylvester	**0.0**	**16.0**	**0.3**		08-06-069-12 W6M
16	Beaverlodge	**0.1**	**27.4**	**1.0**		15-36-071-10 W6M
17	Poplar	**0.1**	**20.3**	**1.0**		13-06-073-08 W6M
18	Saddle Hills	**0.1**	**20.0**	**0.7**		04-25-074-07 W6M
19	Wanham	**0.2**	**25.0**	**0.7**		16-22-077-03 W6M
20	Shaftesbury	**0.2**	**22.2**	**0.5**		04-03-082-23 W5M
21	Eaglesham	**0.1**	**19.4**	**0.4**		16-21-079-25 W5M
23	Bear Lake	**0.1**	**20.3**	**1.1**		15-31-072-06 W6M
24	Wembley	**0.1**	**16.3**	**1.1**		12-31-070-08 W6M
25	Pinto Creek	**0.0**	**18.7**	**0.7**		04-24-069-11 W6M
26	Flyingshot	**0.1**	**17.4**	**0.9**		15-36-070-07 W6M
27	Grande Prairie I	**0.2**	**19.5**	**3.0**		08-15-071-06 W6M

*Fourth Creek (Site 3) passive sample collected data from August 1 to October 1, due to road construction restricting site access during September.

PAZA Passive Results for September 2016 (Continued)

28	Clairmont Lake	**0.1**	**21.6**	**1.5**		09-06-073-04 W6M
29	Smoky Heights	**0.2**	**29.8**	**0.7**		04-06-075-02 W6M
30	Fitzsimmons	**0.0**	**20.7**	**1.0**		15-36-072-03 W6M
32	Gold Creek	**0.2**	**14.8**	**1.2**		06-33-067-05 W6M
33	Wapiti	**0.1**	**22.6**	**1.1**		02-25-071-03 W6M
34	Puskwaskau	**0.1**	**17.7**	**0.2**		15-35-074-25 W5M
35	Jean Cote	**0.1**	**19.9**	**0.5**		12-35-079-21 W5M
36	Guy	**0.1**	**21.2**	**0.5**		03-04-076-22 W5M
37	Crooked Creek	**0.1**	**19.5**	**0.7**		16-01-071-26 W5M
38	Karr Creek	**0.0**	**15.8**	**0.6**		10-16-065-02 W6M
39	Clouston Creek	**0.1**	**21.7**	**0.6**		12-01-073-22 W5M
40	McLennan	**0.1**	**26.1**	**0.5**		03-29-077-19 W5M
41	Valleyview	**0.1**	**21.3**	**0.6**		09-30-069-22 W5M
42	Sunset House	**0.1**	**23.3**	**0.5**		05-32-070-19 W5M
43	High Prairie	**0.1**	**25.5**	**BDL**		16-13-074-17 W5M
44	Peavine	**0.1**	**17.9**	**0.2**		03-05-079-15 W5M
45	Gift Lake	**0.1**	**14.3**	**0.3**	**0.1**	10-07-079-12 W5M
46	Little Smoky	**0.1**	**15.2**	**1.7**		12-01-065-21 W5M
47	Kinuso	**0.1**	**21.3**	**0.4**		12-10-073-10 W5M
65	Deer Mountain 2	**0.1**	**19.1**	**0.5**		15-22-068-09 W5M
49	Grande Prairie HP	**0.2**	**20.4**	**4.2**		17-26-071-06 W6M
50	East Prairie	**0.0**	**19.7**	**0.3**		13-02-072-15 W5M
63	Girouxville 3				**0.3**	14-02-077-23 W5M
64	Girouxville 4				**0.4**	4-08-077-22 W5M

*BDL = Below Detection Level

*N/S - No sample

Passive Summary for September 2016

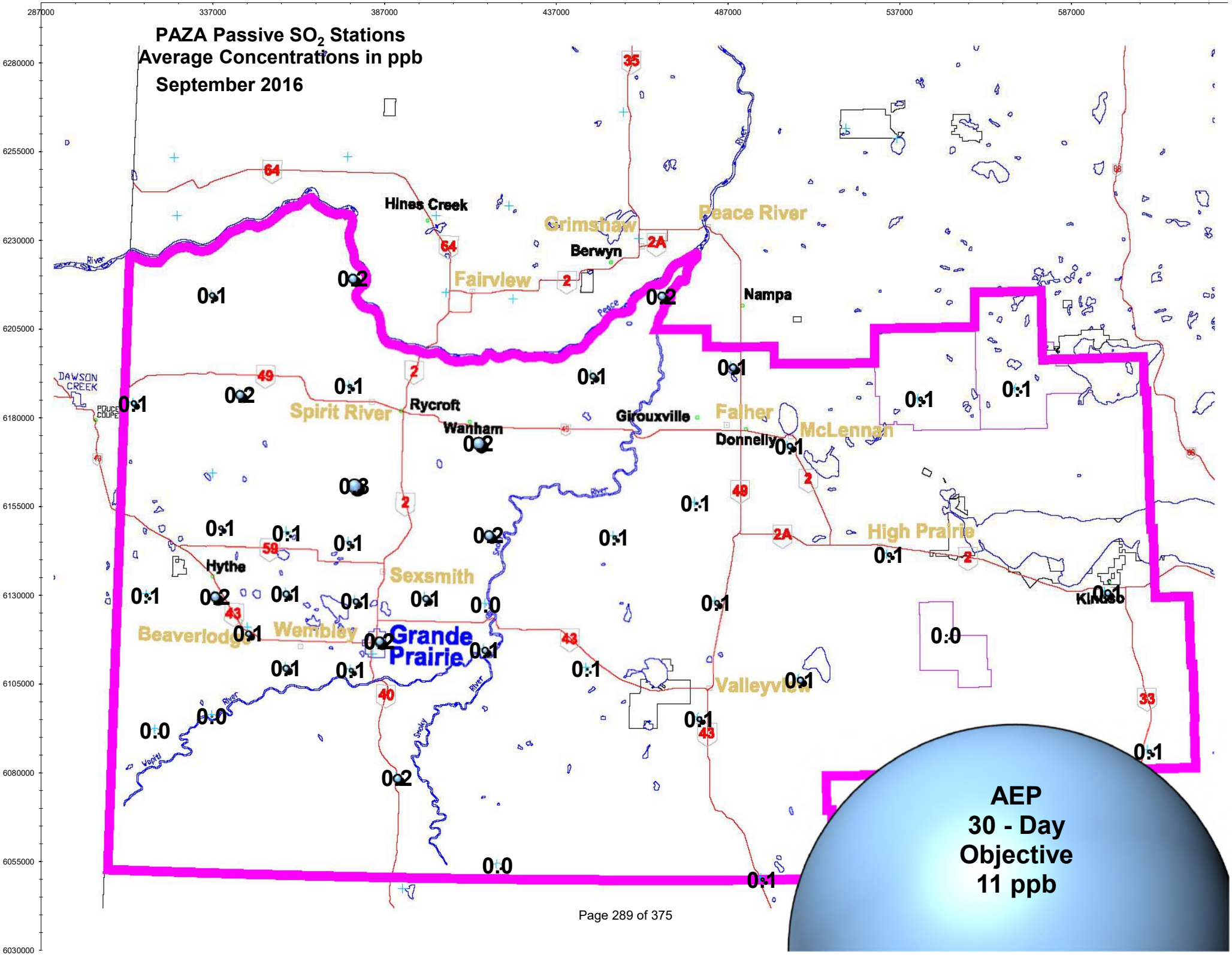
Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2	Hydrogen Sulphide H_2S
	ppb	ppb	ppb	ppb
	Passive Summary for September 2016 (PAZA Zone)			
Mean	**0.1**	**21.0**	**0.8**	**0.2**
Standard Deviation	**0.1**	**3.6**	**0.7**	**0.2**
Minimum	**0.0**	**14.3**	**0.2**	**0.1**
Minimum At	**Karr Creek (#38)**	**Gift Lake (#45)**	**Peavine (#44)**	**Gift Lake (#45)**
Maximum	**0.3**	**29.8**	**4.2**	**0.4**
Maximum At	**Woking (#10)**	**Smoky Heights (#29)**	**Grande Prairie HP**	**Girouxville 4 (#64a)**

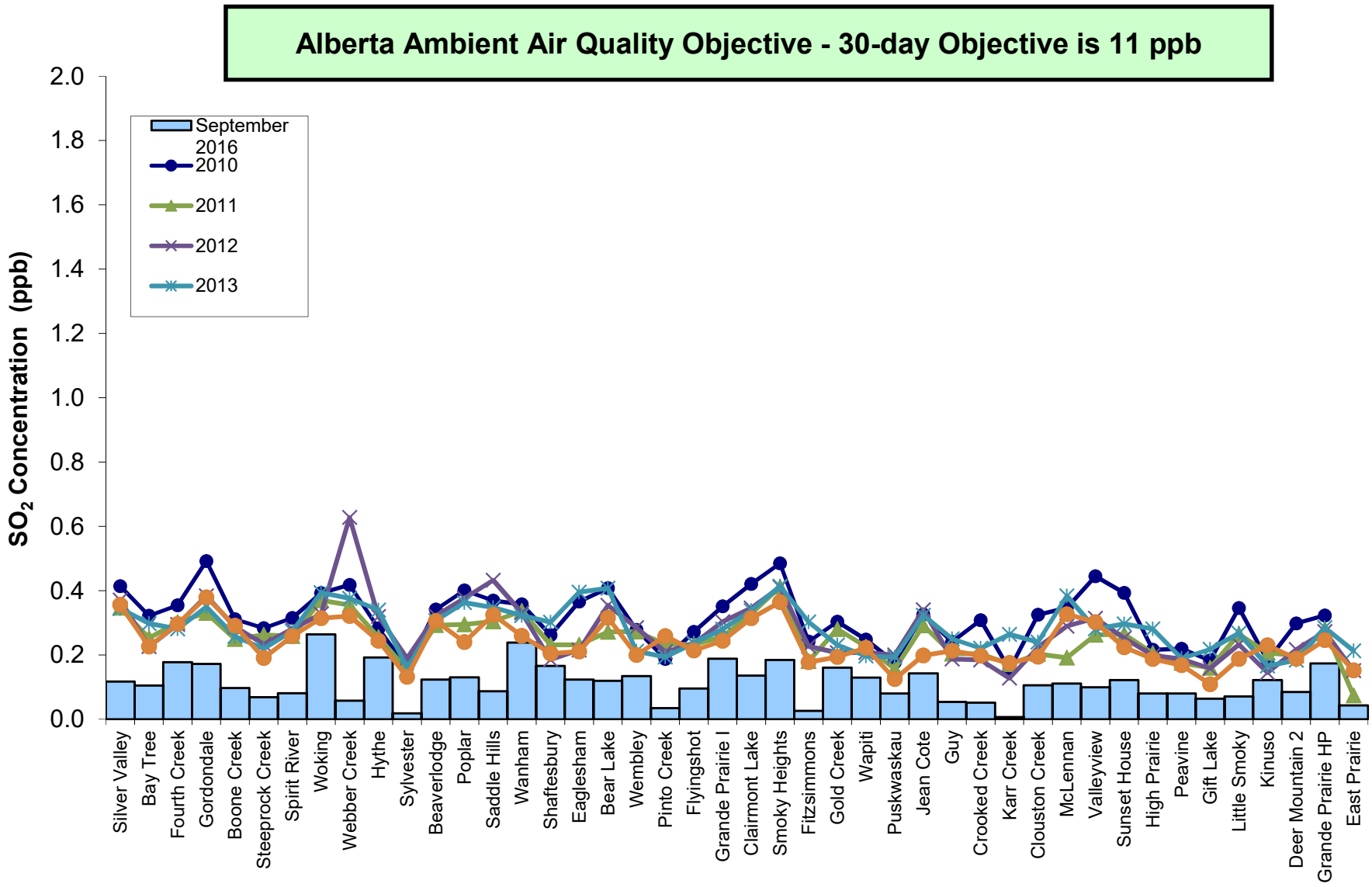
Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

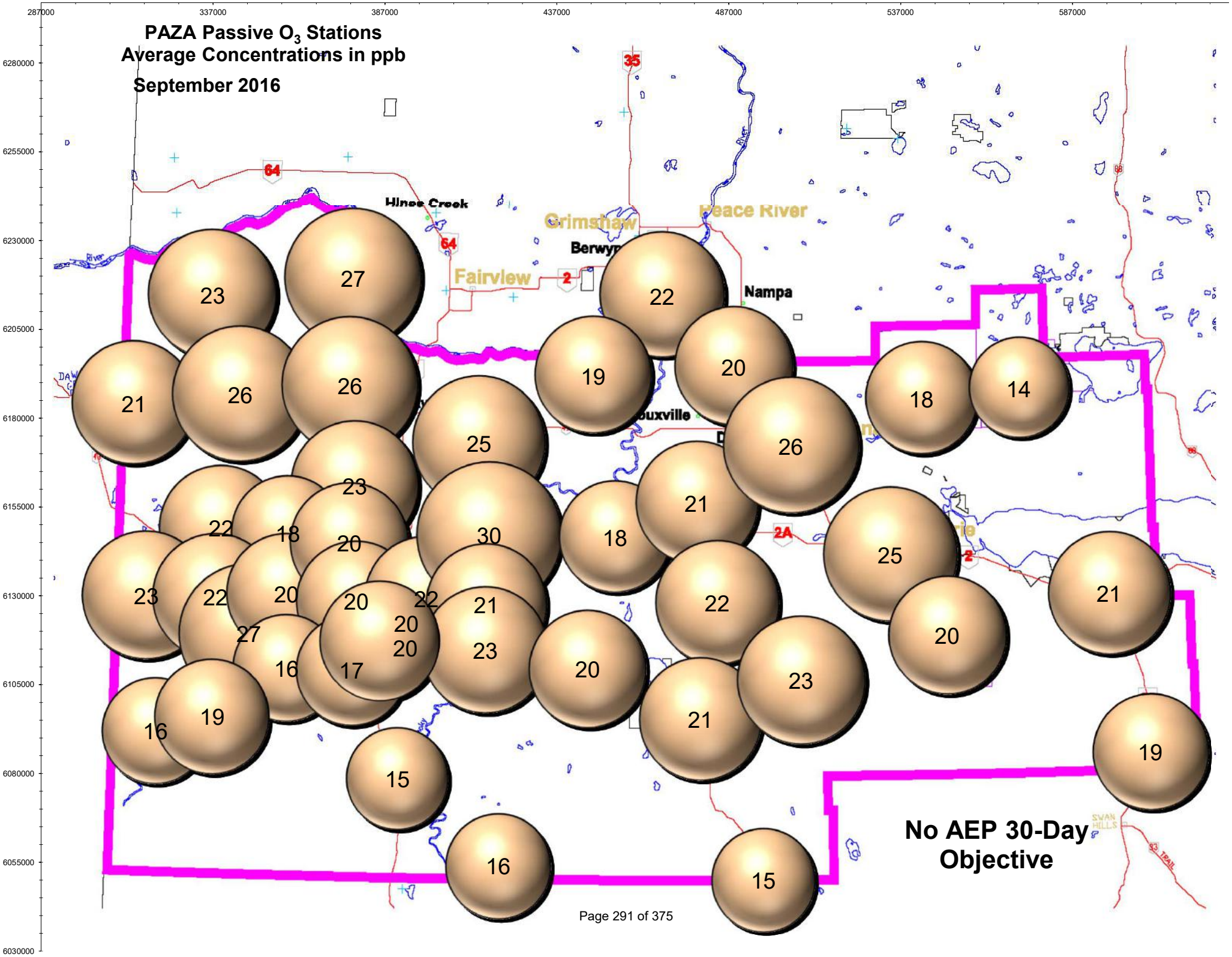
	SO_2	O_3	NO_2
PAZA Beaverlodge station	**0.1**	**19.6**	**2.2**
PAZA Beaverlodge passive	**0.1**	**27.4**	**1.0**

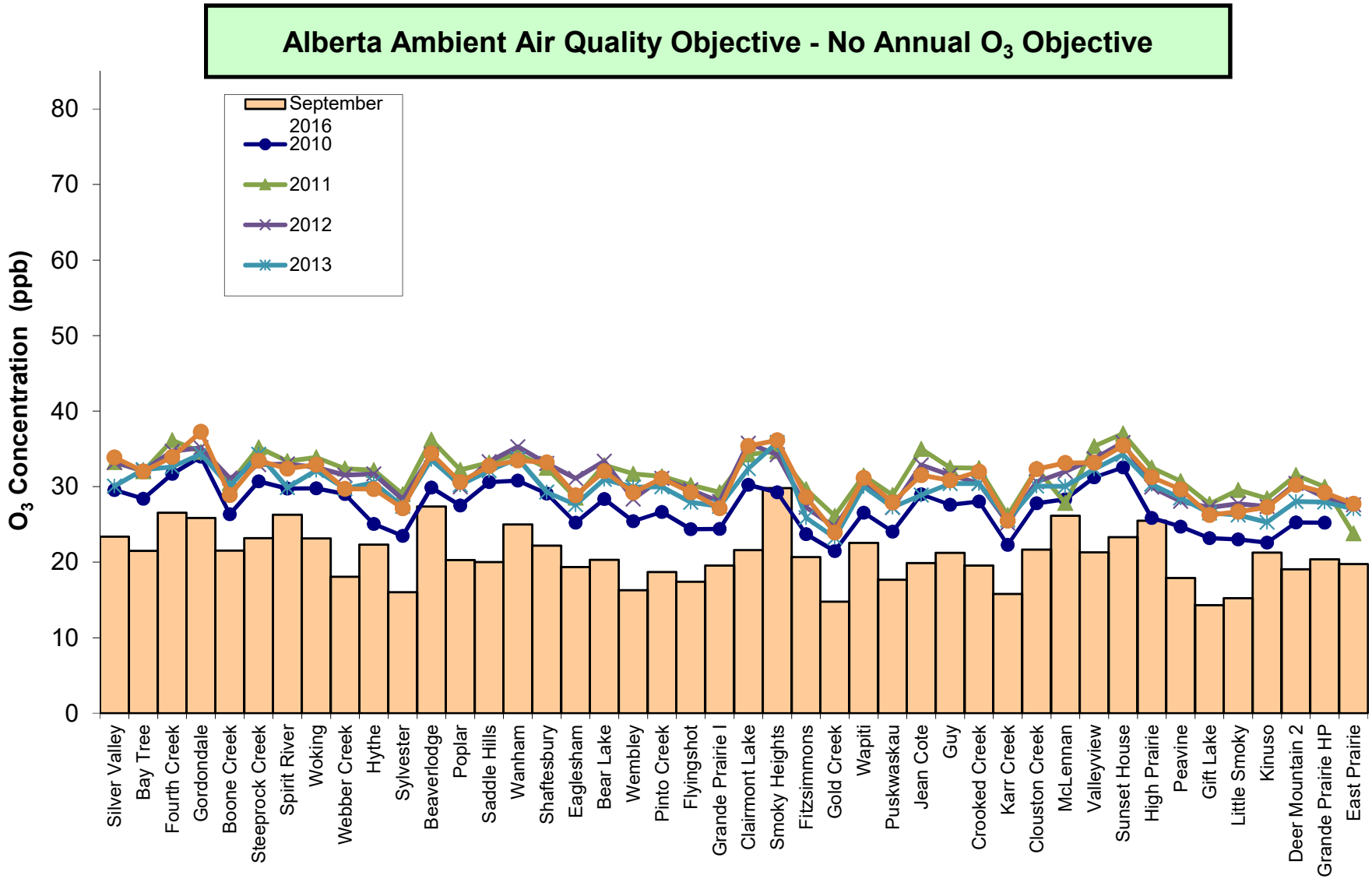
Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

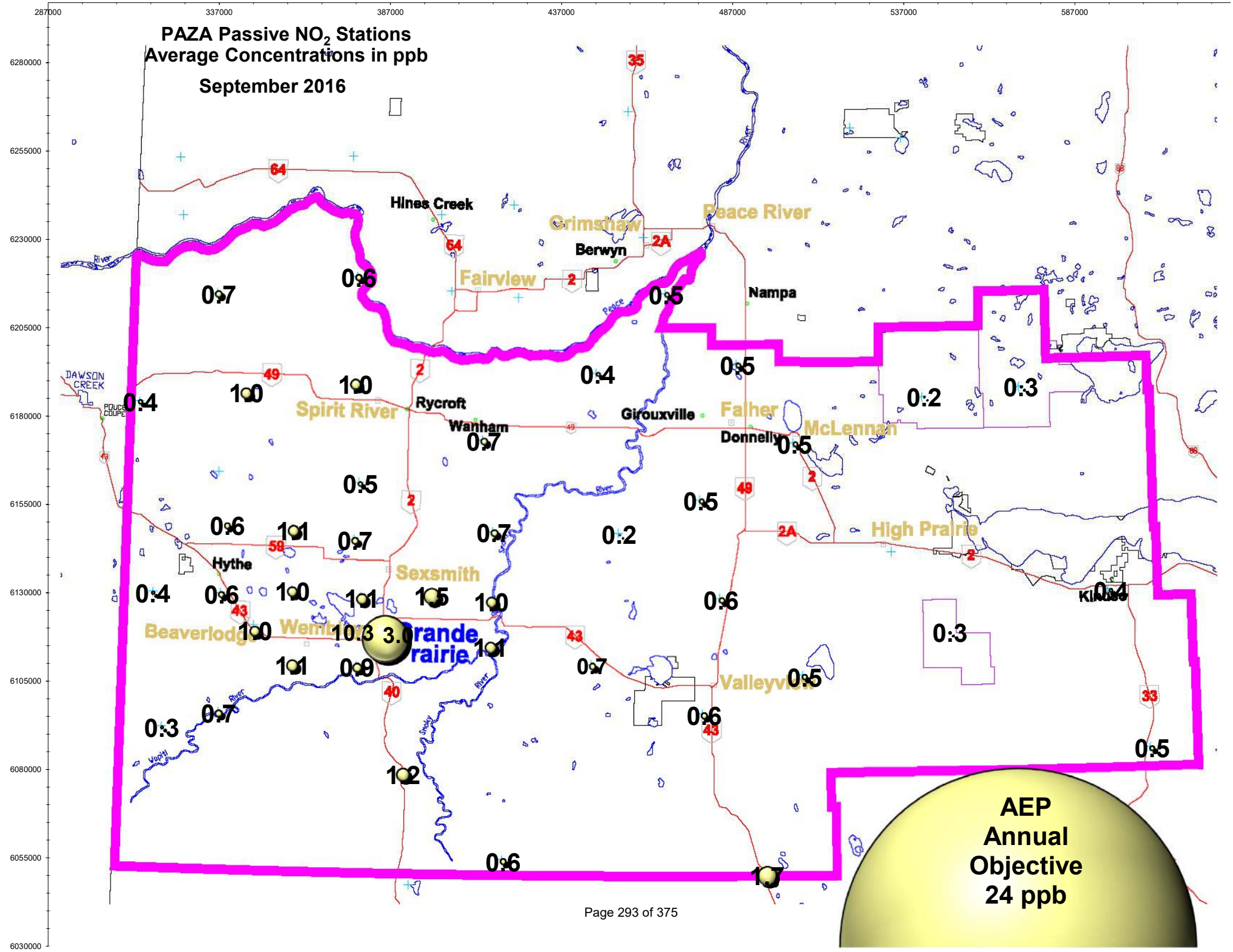
	SO_2	O_3	NO_2
PAZA Henry Pirker station	**0.0**	**18.6**	**4.5**
PAZA Grande Prairie passive	**0.2**	**20.4**	**4.2**

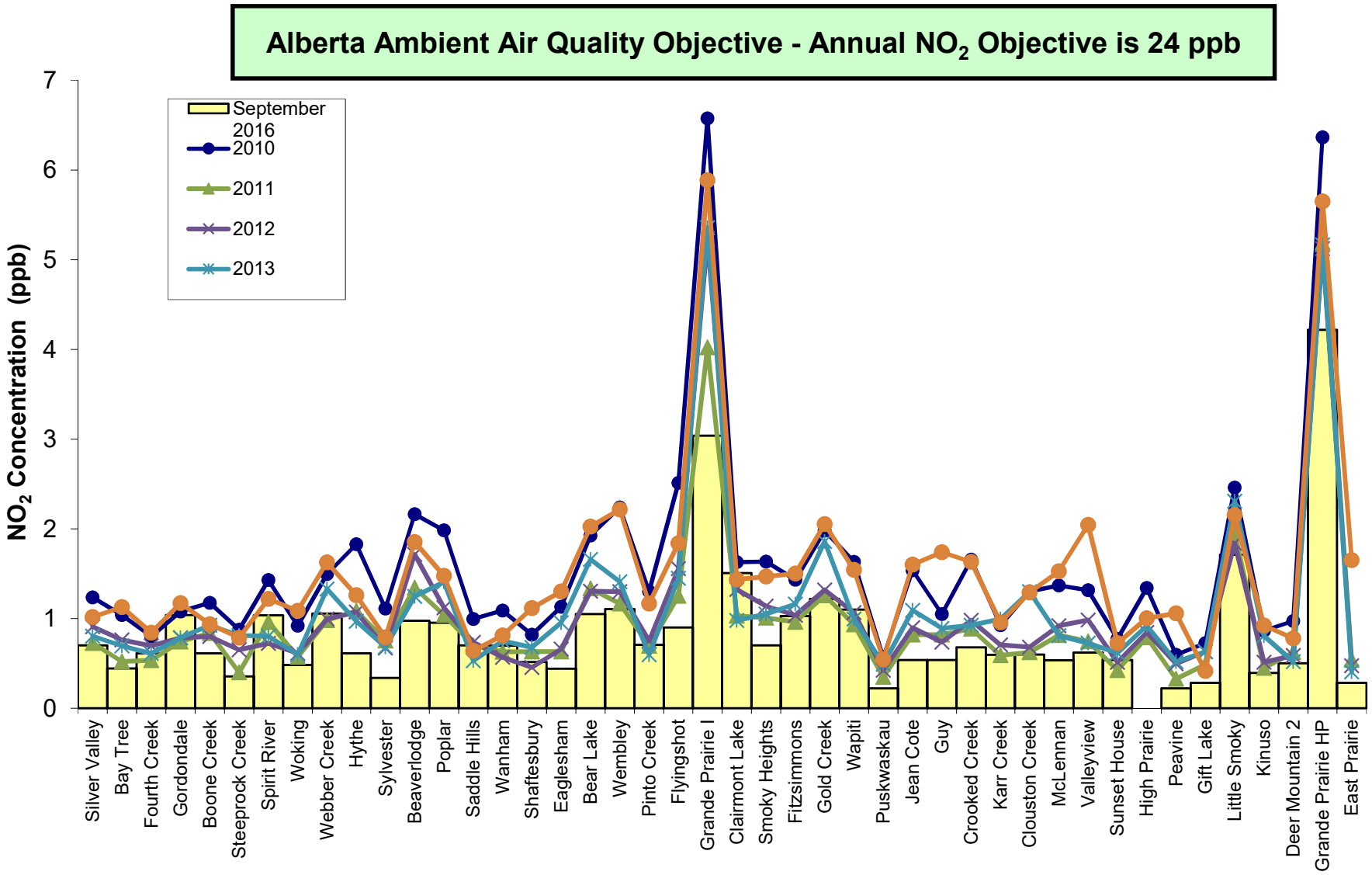

PAZA Passive SO_2 Stations
Average Concentrations in ppb
September 2016
287000
337000
387000
437000
487000
537000
587000
6280000
6255000
6230000
6205000
6180000
6155000
6130000
6105000
6080000
6055000
6030000
Hines Creek
Grimshaw
Peace River
Berwyn
Fairview
Nampa
DAWSON CREEK
POUCE COUPE
Spirit River
Rycroft
Wanham
Girouxville
Falher
Donnelly
McLennan
High Prairie
Hythe
Sexsmith
Beaverlodge
Wembley
Grande Prairie
Valleyview
Kinuso
0.1
0.2
0.3
0.0
AEP
30 - Day
Objective
11 ppb

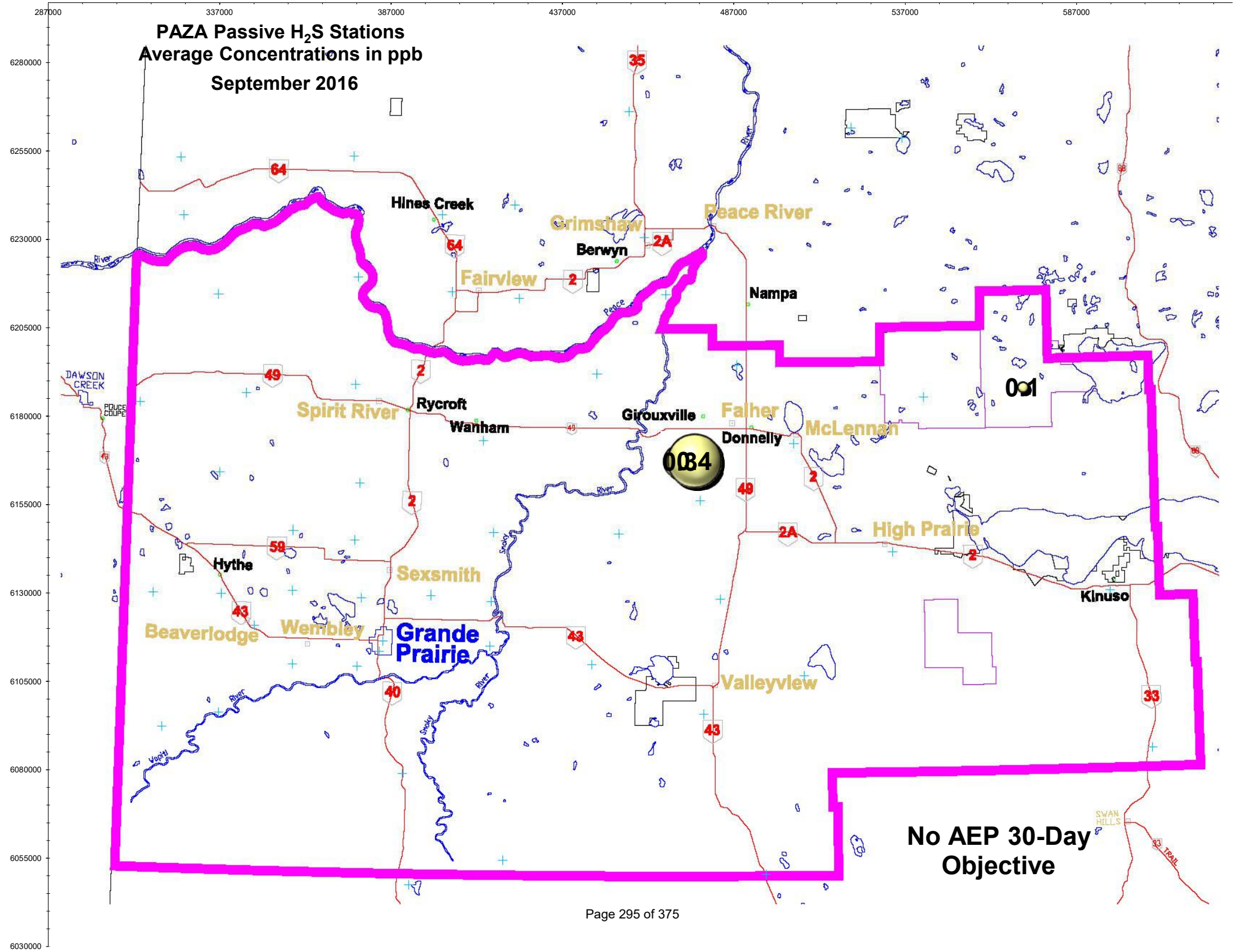

Alberta Ambient Air Quality Objective - 30-day Objective is 11 ppb
SO_2 Concentration (ppb)
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
September 2016
2010
2011
2012
2013
Silver Valley
Bay Tree
Fourth Creek
Gordondale
Boone Creek
Steeprock Creek
Spirit River
Woking
Webber Creek
Hythe
Sylvester
Beaverlodge
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 2
Grande Prairie HP
East Prairie

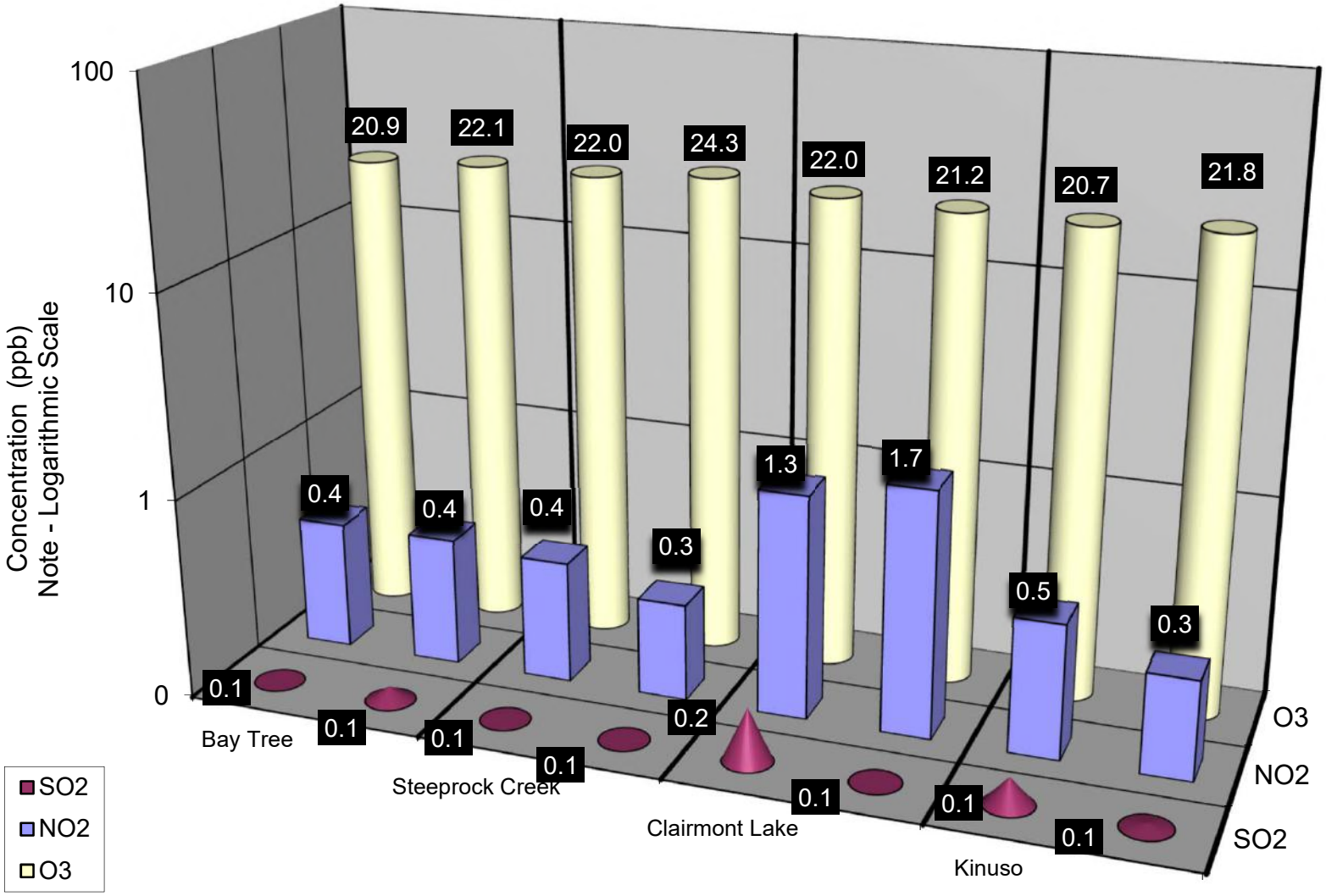

PAZA Passive O_3 Stations
Average Concentrations in ppb
September 2016
287000
337000
387000
437000
487000
537000
587000
6280000
6255000
6230000
6205000
6180000
6155000
6130000
6105000
6080000
6055000
6030000
Hines Creek
Grimshaw
Peace River
Berwyn
Fairview
Nampa
No AEP 30-Day Objective


Alberta Ambient Air Quality Objective - No Annual O_3 Objective
O_3 Concentration (ppb)
0
10
20
30
40
50
60
70
80
September 2016
2010
2011
2012
2013
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 2
Grande Prairie HP
East Prairie


PAZA Passive NO_2 Stations
Average Concentrations in ppb
September 2016
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
DAWSON CREEK
Spirit River
Rycroft
Wanham
Girouxville
Falher
Donnelly
McLennan
High Prairie
Hythe
Sexsmith
Beaverlodge
Grande Prairie
Valleyview
Kinuso
0.7
0.6
0.5
0.4
1.0
1.0
0.4
0.5
0.2
0.3
0.7
0.5
0.5
0.5
0.6
1.1
0.7
0.7
0.2
0.4
0.6
1.0
1.1
1.5
1.0
0.6
0.4
1.0
10.3
3.0
1.1
0.3
1.1
0.9
0.7
0.5
0.3
0.7
0.6
0.5
1.2
0.6
1.7
AEP
Annual
Objective
24 ppb


Alberta Ambient Air Quality Objective - Annual NO2 Objective is 24 ppb
NO2 Concentration (ppb)
0
1
2
3
4
5
6
7
September 2016
2010
2011
2012
2013
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 2
Grande Prairie HP
East Prairie


PAZA Passive H_2S Stations
Average Concentrations in ppb
September 2016
287000
337000
387000
437000
487000
537000
587000
6280000
6255000
6230000
6205000
6180000
6155000
6130000
6105000
6080000
6055000
6030000
Hines Creek
Grimshaw
Berwyn
Peace River
Fairview
Nampa
DAWSON CREEK
POUCE COUPE
Spirit River
Rycroft
Wanham
Girouxville
Falher
Donnelly
McLennan
High Prairie
Hythe
Sexsmith
Beaverlodge
Wembley
Grande Prairie
Valleyview
Kinuso
SWAN HILLS
001
004
No AEP 30-Day Objective



Duplicate Summary Chart

September 2016 Calibration Reports

PAZA - Henry Pirker Station with the following calibrations:
SO_2, NO, NO_2, NO_x, O_3, CO, THC, TRS & $PM_{2.5}$

PAZA – Evergreen Park Station with the following calibrations:
SO_2, TRS & $PM_{2.5}$

PAZA – Smoky Heights Station with the following calibrations:
SO_2, TRS & $PM_{2.5}$

PAZA – Beaverlodge Station with the following calibrations:
SO_2, NO, NO_2, NO_x, O_3 & $PM_{2.5}$

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

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

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

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 3, 2016	Previous Calibration	July 7, 2016
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	9:00	End Time (MST)	11:25
Barometric Pressure	726.000 mm	Station Temperature	21.0 Deg C
Calibrator	Environics	Serial Number	6586
Cal Gas Conc	49.7 ppm	Cal Gas Cert Date	October 5, 2018
		Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.989153	Calculated slope	0.994119
Calculated intercept	0.884810	Calculated intercept	1.189632
Analyzer make	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	1.52		1.47	
Coefficient	0.977		0.948	
Pressure	672.5	mm Hg	671.6	mm Hg
Flow	0.443	lpm	0.442	lpm
Lamp intensity	83	Hz	82	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)
4996	0.00	0.0	0.1	N/A
4998	39.94	394.0	396.0	0.9949
4997	19.99	198.0	196.6	1.0071
4999	9.89	98.1	96.7	1.0152
4996	0.00	0.0	0.1	As Found Zero
4996	39.93	394.1	407.2	As Found Span
			Average Correction Factor	1.0057

Calculated value of As Found Response: 403.5 ppb Percent Change of As Found: -2.4%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	287.8	ppb	282.3	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

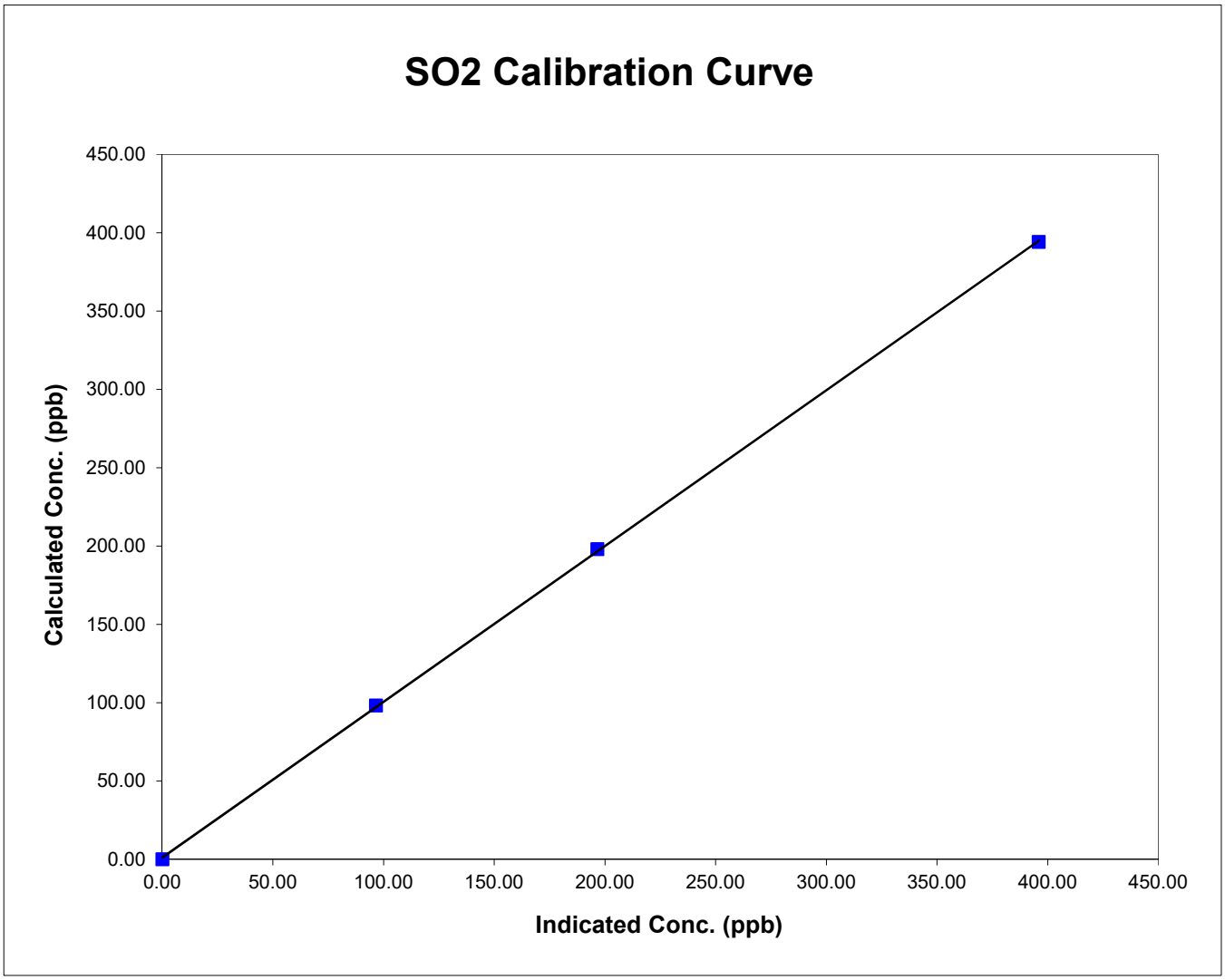
WSP AIR QUALITY MONITORING

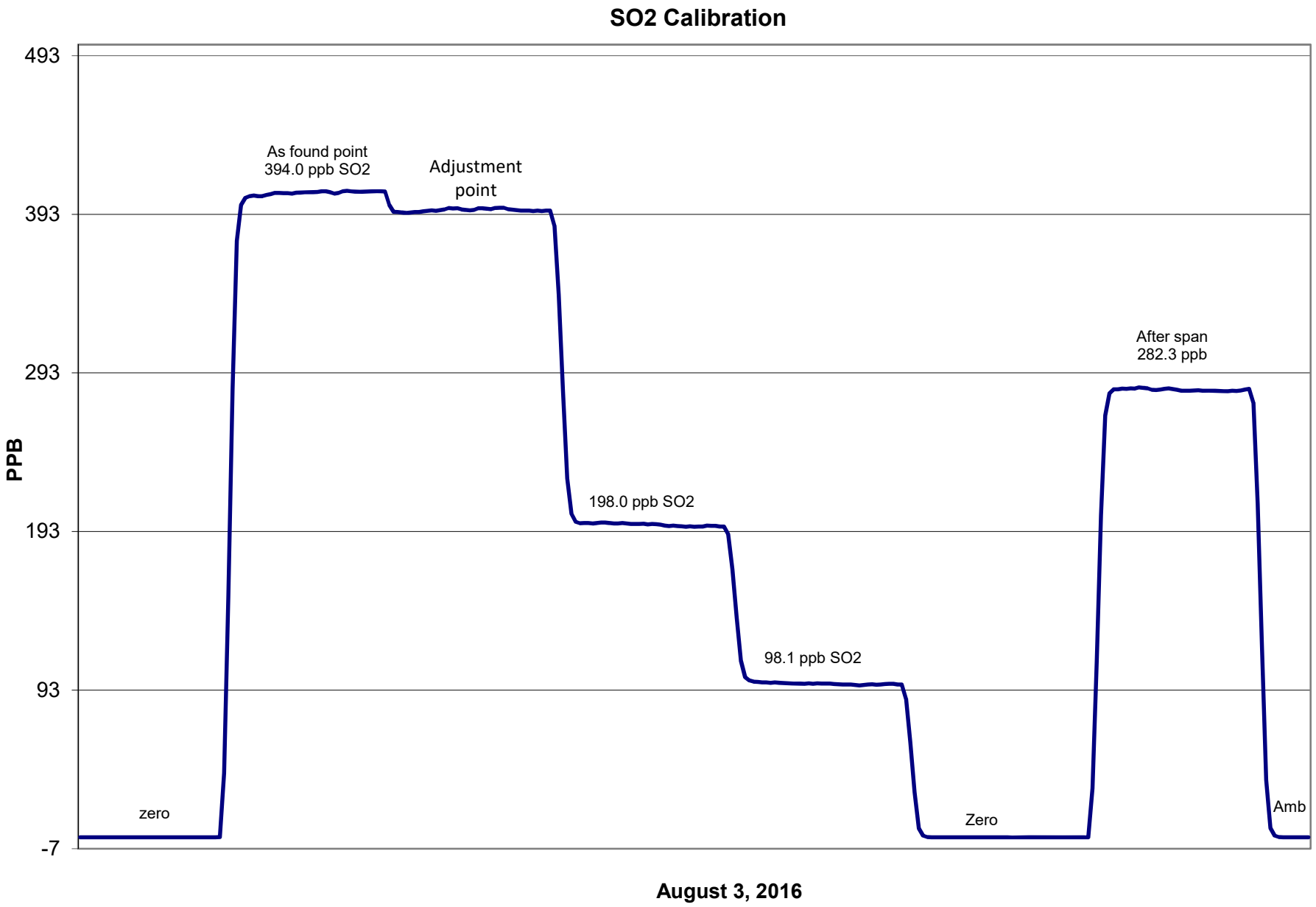
Station Information

Calibration Date	August 3, 2016	Previous Calibration	July 7, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:00	End Time (MST)	11:25
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
394.0	396.0	0.9949	Correlation Coefficient	0.999939
198.0	196.6	1.0071		
98.1	96.7	1.0152	Slope	0.994119
			Intercept	1.189632




SO2 Calibration
493
393
293
193
93
-7
PPB
As found point
394.0 ppb SO2
Adjustment
point
198.0 ppb SO2
98.1 ppb SO2
After span
282.3 ppb
zero
Zero
Amb
August 3, 2016

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 3, 2016	Previous Calibration	July 6, 2016
Station Number	1	Station Location	Henry Pirker

Reason: Routine Installation Removal Other:

Start Time (MST)	8:00		End Time (MST)	13:15:00 PM	
Barometric Pressure	726.000	mm	Station Temperature	21.0	Deg C
Calibrator	Environics		Serial Number	906535067(AMU 197	
NO Cal Gas Conc	50.9	ppm	Cal Gas Expiry Date	October 5, 2018	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL103793	

DACS Information

DACS make	CR3000	DACS serial No.	5408

Parameter		NO2	NOx	NO
Before	Data Slope	1.002705	1.004354	0.997813
	Data Offset	0.314781	0.239074	-0.000959
After	Data Slope	1.001513	0.997733	0.991500
	Data Offset	-0.071796	0.403248	0.381798
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	42i	Analyzer serial #	906535087

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	6.1	mV	6.1	mV
NOx bkgnd	6.6	mV	6.6	mV
NO coefficient	0.960		0.960	
NOx coefficient	1.000		1.000	
NO2 conv temp	327.6	Deg C	323.7	Deg C
Cooler Temp	-2.9	Deg C	-2.9	Deg C
PMT Volt	-844.3	mV	-844.0	mV
R Cell Press	169.2	in Hg	166.7	in Hg
Sample Flow	0.620	LPM	0.620	LPM

Notes: No adjustment made

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date: August 3, 2016 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	4996	0.00	0.0	0.0	0.0	0.4	0.7	0.0	N/A	N/A
1	4997	39.96	406.2	403.8	2.4	407.0	407.4	0.0	0.9980	0.9912
2	4998	19.95	203.6	202.4	1.2	203.6	203.3	0.1	1.0000	0.9956
3	4997	9.94	101.6	101.0	0.6	100.5	100.4	0.1	1.0118	1.0063
AFZ	4996	0.00	0.0	0.0	0.0	0.4	0.7	0.0	0.0000	0.0000
AFS	4996	39.92	405.9	403.5	0.8	407.0	407.4	0.0	0.9972	0.9904
							Average Correction Factor		1.0033	0.9977

As Found Concentrations: NO_X= 408.6 NO= 405.8 As Found Percent Change NO_X= 0.7% NO= 0.6%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.7	0.7	0.0	0.4	0.7	0.0	N/A	N/A	N/A	N/A
NO point	407.0	407.0	0.0	406.5	407.0	-0.2	1.0012	1.0000	N/A	N/A
300	407.0	74.9	332.1	406.6	74.9	331.5	1.0009	1.0000	1.0016	99.8%
200	407.0	183.1	223.9	407.7	183.1	223.8	0.9982	1.0000	1.0004	100.0%
100	407.0	298.5	108.5	407.8	298.5	108.4	0.9979	1.0000	1.0008	99.9%
					Average Correction Factor		0.9990	1.0000	1.0010	99.9%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.1	0.0	0.5	ppb	0.3	0.0	0.7	ppb
Auto span	318.8	315.3	3.3	ppb	321.8	318.0	3.7	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

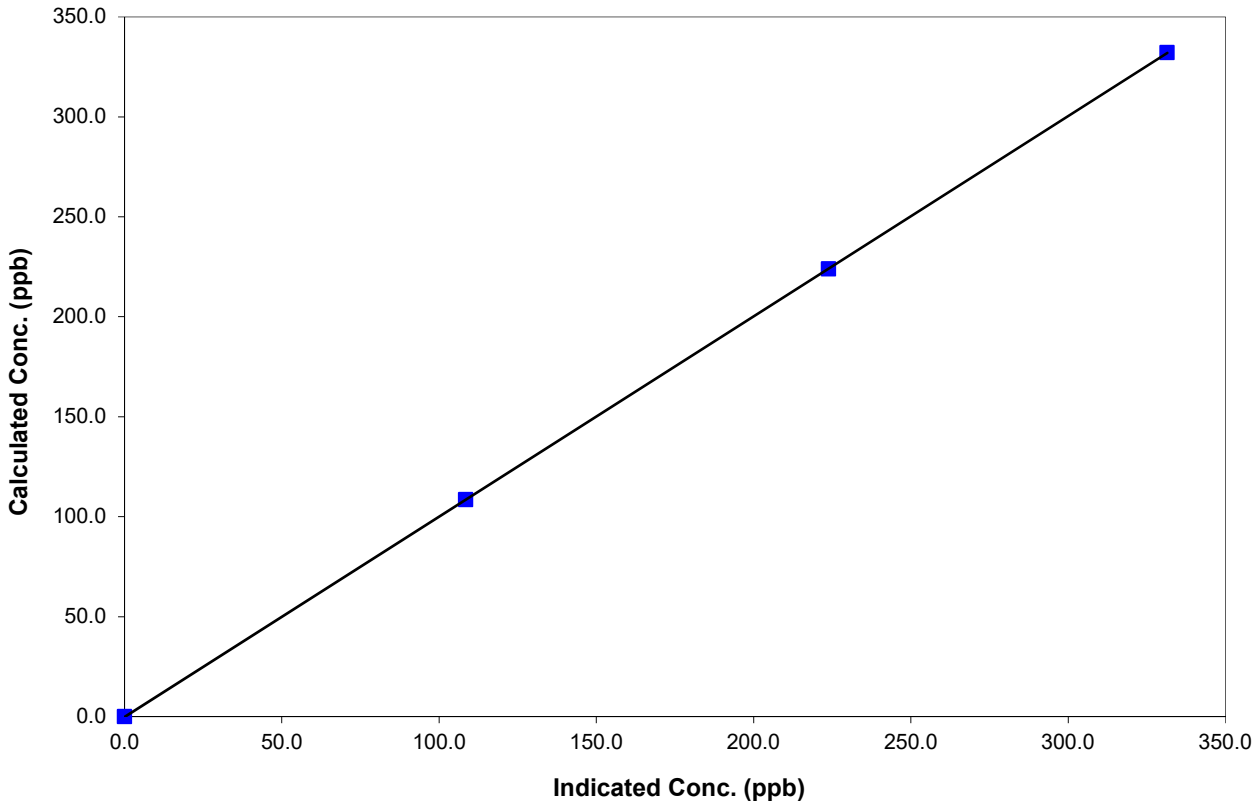
Station Information

Calibration Date	August 3, 2016	Previous Calibration	July 6, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	13:15:00 PM
Analyzer make	42i	Analyzer serial #	906535087

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
332.1	331.5	1.0016	Correlation Coefficient	0.999999
223.9	223.8	1.0004		
108.5	108.4	1.0008	Slope	1.001513
			Intercept	-0.071796

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

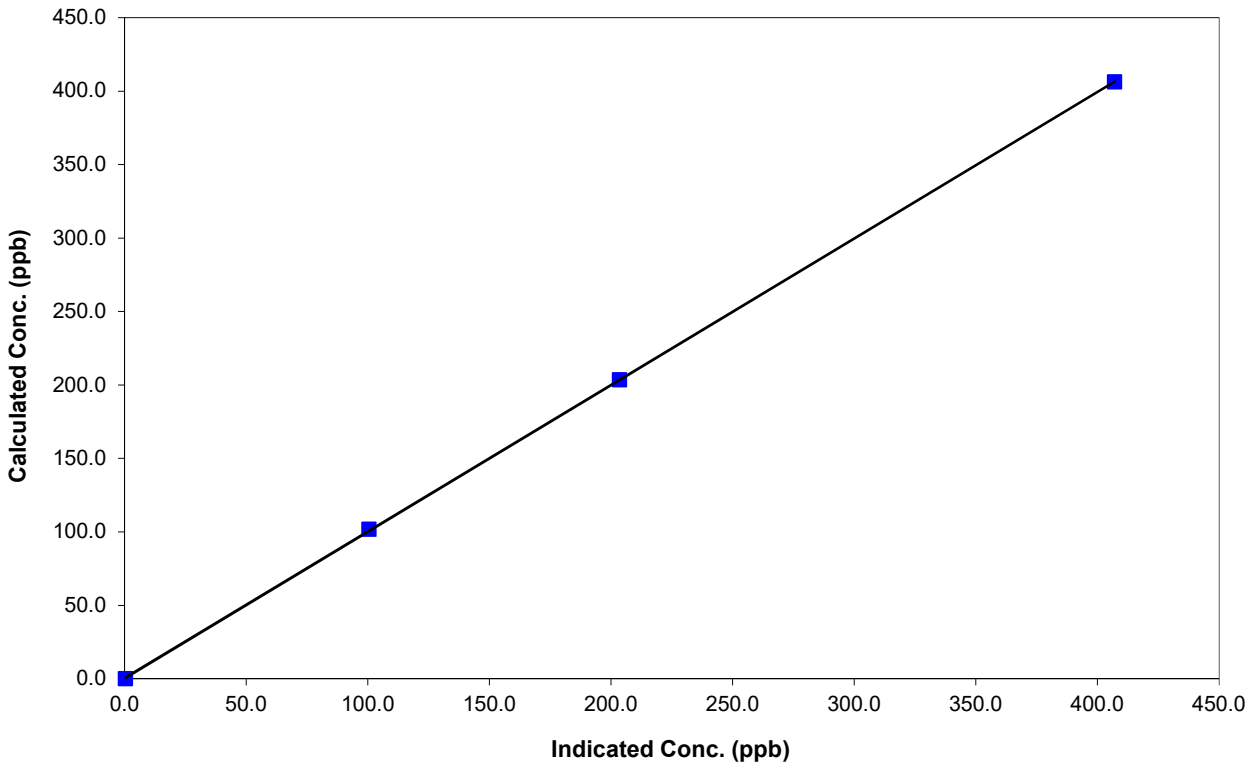
Station Information

Calibration Date	August 3, 2016	Previous Calibration	July 6, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	13:15:00 PM
Analyzer make	42i	Analyzer serial #	906535087

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
406.2	407.0	0.9980	Correlation Coefficient	0.999981
203.6	203.6	1.0000		
101.6	100.5	1.0118	Slope	0.997733
			Intercept	0.403248

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

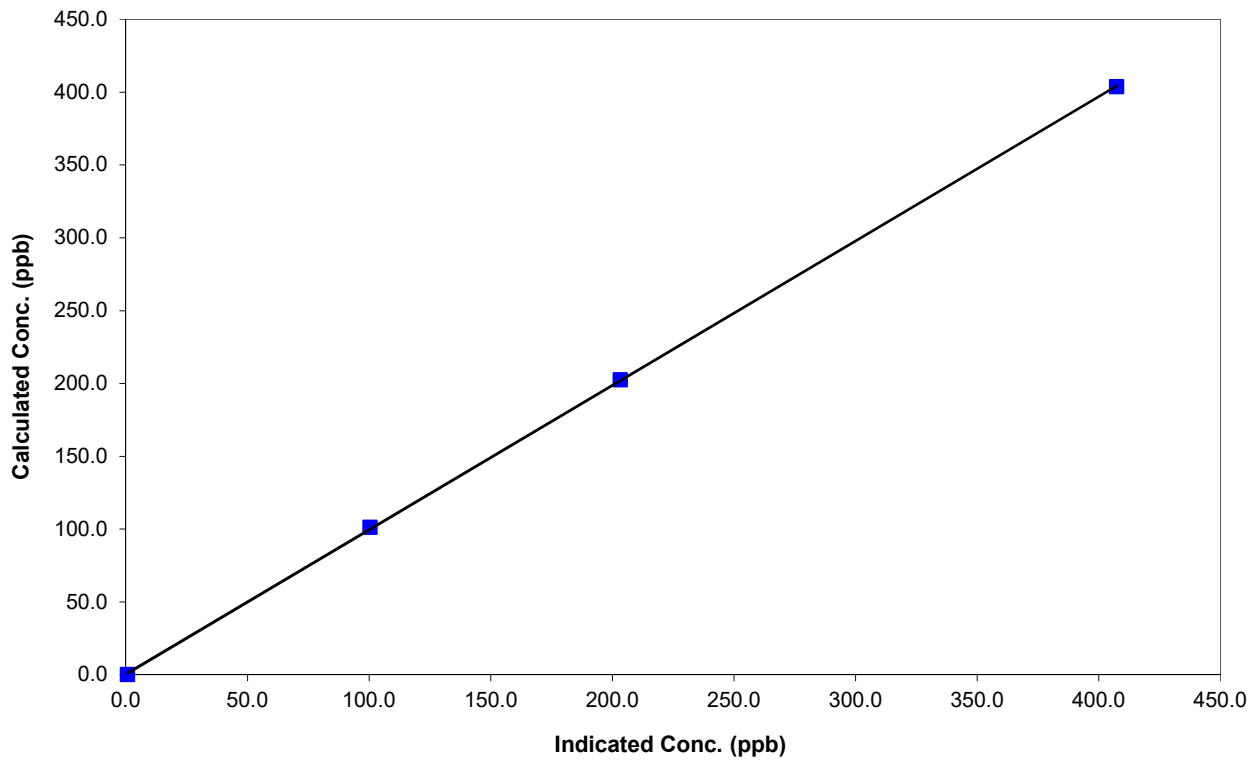
Station Information

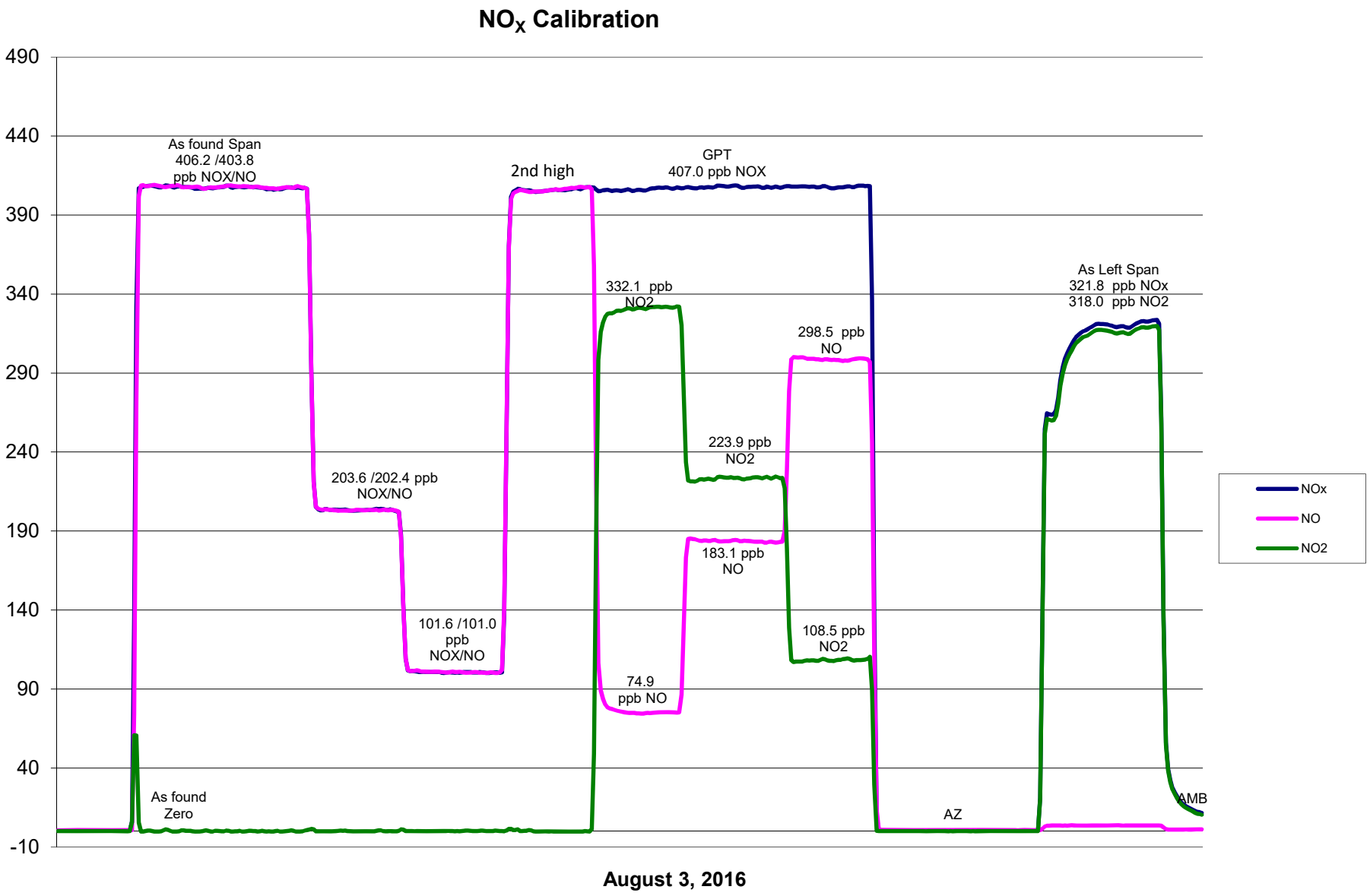
Calibration Date	August 3, 2016	Previous Calibration	July 6, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:00	End Time (MST)	13:15:00 PM
Analyzer make	42i	Analyzer serial #	906535087

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	N/A		
403.8	407.4	0.9912	Correlation Coefficient	0.999969
202.4	203.3	0.9956		
101.0	100.4	1.0063	Slope	0.991500
			Intercept	0.381798

NO Calibration Curve




NOx Calibration
490
440
390
340
290
240
190
140
90
40
-10
As found Span
406.2 /403.8
ppb NOX/NO
2nd high
GPT
407.0 ppb NOX
332.1 ppb
NO2
298.5 ppb
NO
As Left Span
321.8 ppb NOx
318.0 ppb NO2
223.9 ppb
NO2
203.6 /202.4 ppb
NOX/NO
183.1 ppb
NO
101.6 /101.0
ppb
NOX/NO
108.5 ppb
NO2
74.9
ppb NO
As found
Zero
AZ
AMB
NOx
NO
NO2
August 3, 2016

Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 3, 2016	Previous Calibration	July 6, 2016
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:00	End Time (MST)	14:15:00 PM
Barometric Pressure	726.000 mm	Station Temperature	21.0 Deg C
Calibrator	Environics	Serial Number	6586
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	1.001973	Calculated slope	0.997505
Calculated intercept	0.458167	Calculated intercept	0.355979
Analyzer make	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.10	ppb	-1.20	ppb
slope	1.017		1.017	
Lamp temp	53.6	mV	53.5	mV
Lamp Intensity A/B	75531/82524	mV	75123/82658	mV
Pressure	694.3	mm Hg	695.1	mm Hg
Flow A	0.733	ccm	0.734	ccm
Flow B	0.734	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)
4997	0.0	0.0	-0.6	N/A
4999	0.3	332.1	333.0	0.9972
4999	0.2	223.9	222.9	1.0044
4998	0.1	108.5	109.4	0.9918
4997	0.0	0.0	-0.6	As found zero
4997	0.3	332.1	333.0	As found span
			Average Correction Factor	0.9978

Calculated value of As Found Response: 334.8 ppm Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	1.0	ppb	-0.2	ppb
Auto span	367.1	ppb	362.5	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **O3**

Air Monitoring Network **PAZA**

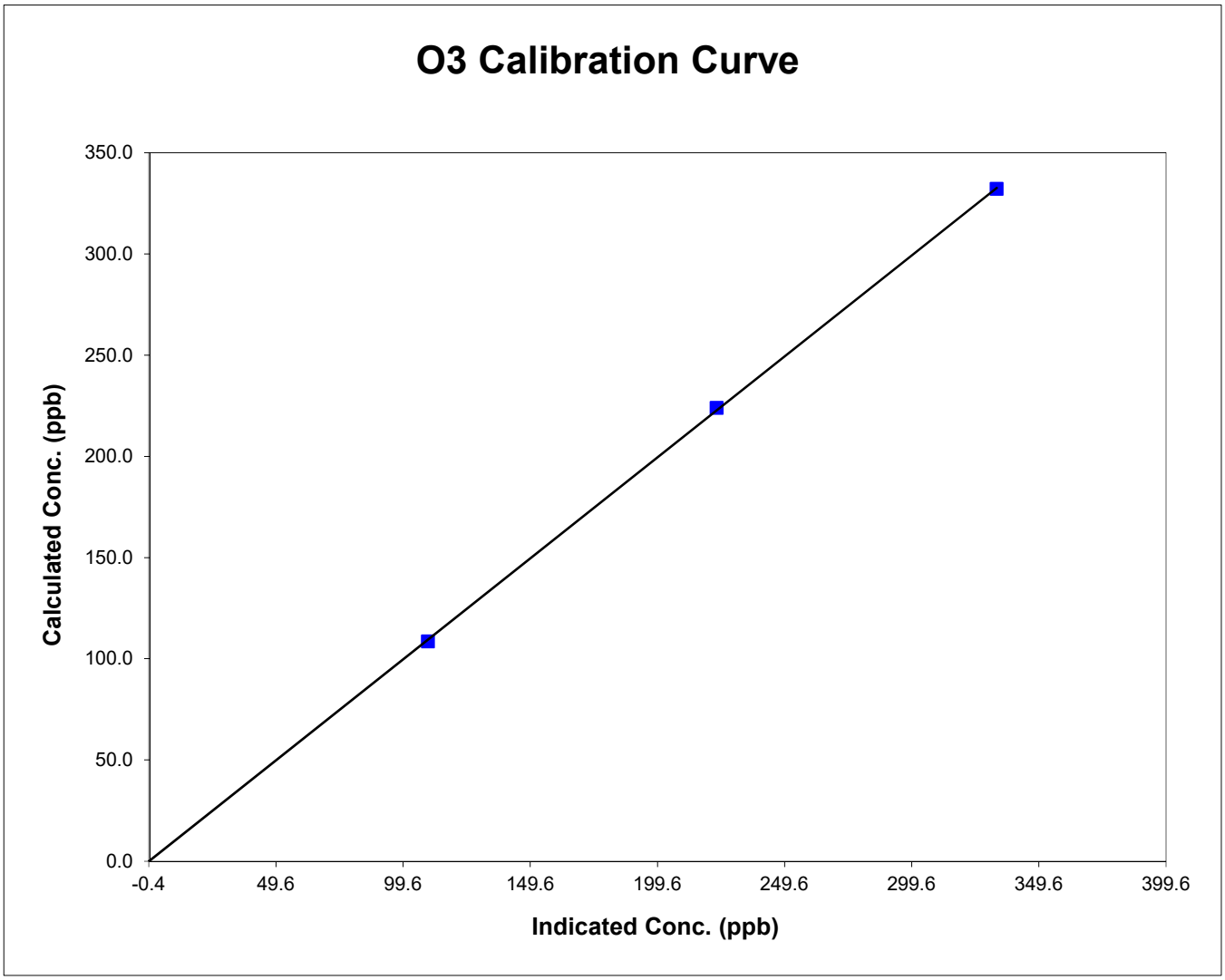
WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 3, 2016	Previous Calibration	July 6, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:00	End Time (MST)	14:15:00 PM
Analyzer make/model	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.6	NA		
332.1	333.0	0.9972	Correlation Coefficient	0.999957
223.9	222.9	1.0044		
108.5	109.4	0.9918	Slope	0.997505
			Intercept	0.355979



O3 Calibration

August 3, 2016

Calibration Report

Parameter **CO**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 4, 2016	Previous Calibration	July 7, 2016
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:10	End Time (MST)	15:20:00 PM
Barometric Pressure	726.0 mm/hg	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	6586
Cal Gas Conc	2906 ppm	Cal Gas Expiry Date	7/7/2023
		Cal Gas Cylinder #	LL109096
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	1.008010	Calculated slope	0.991683
Calculated intercept	-0.178105	Calculated intercept	-0.187154
Analyzer make	Model 48I-TLE	Analyzer serial #	1408761378

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	5.705		5.856	
CO span setting	1.047		1.047	
Sample pressure	700.1	mm Hg	698.9	mm Hg
Sample Flow	0.451	LPM	0.451	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
4999	69.80	40.02	40.45	0.9894
4998	34.97	20.19	20.64	0.9781
4995	17.96	10.41	10.87	0.9579
4995	0.00	0.00	0.14	As Found Zero
4995	69.80	40.05	40.73	As Found Span
			Average Correction Factor	0.9752

Calculated value of As Found Response: 40.734 ppm Percent Change of As Found: -1.7%

	before calibration		after calibration	
Auto zero	0.01	ppm	0.01	ppm
Auto span	20.27	ppm	20.32	ppm

Notes: Zero adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **CO**

Air Monitoring Network **PAZA**

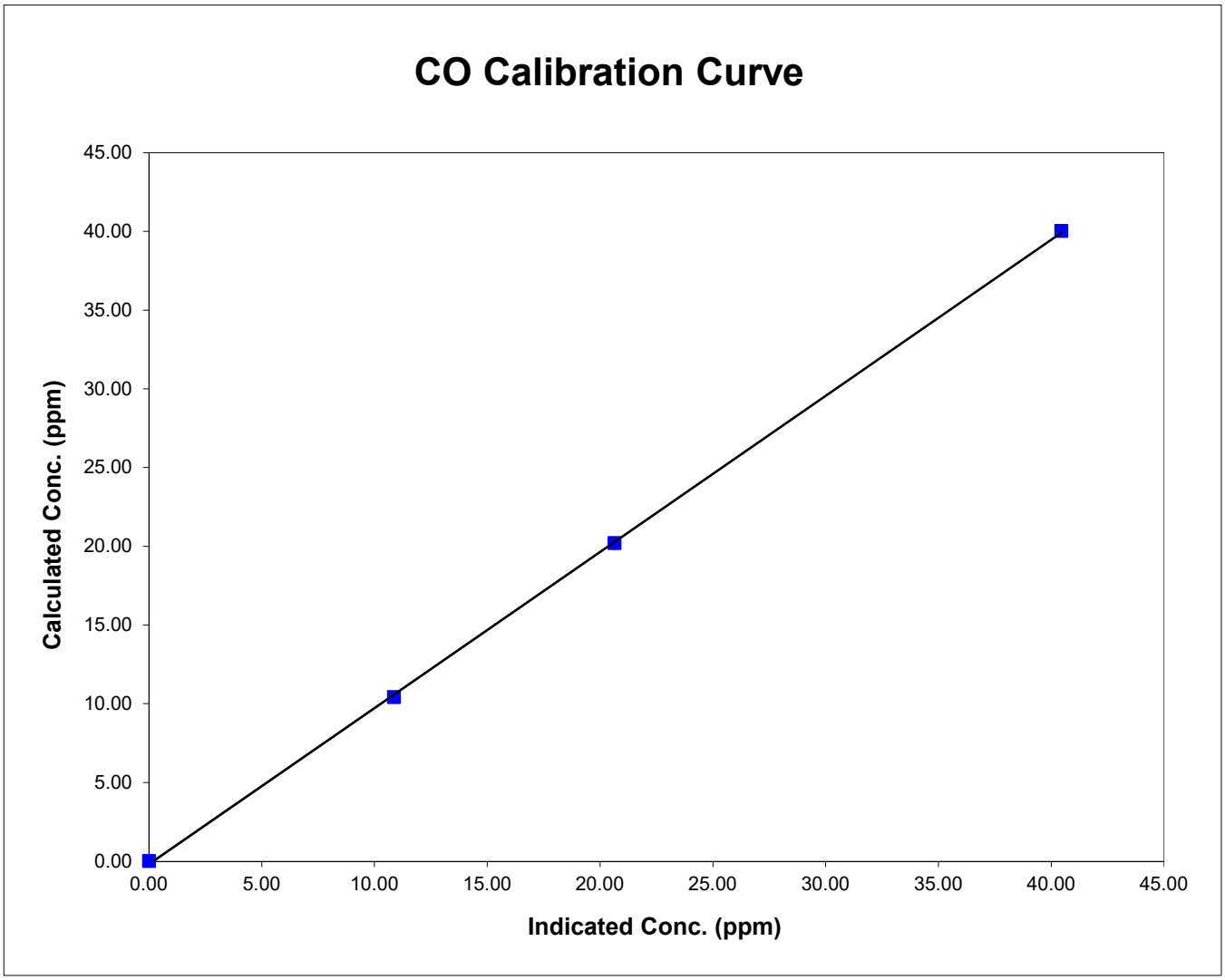
WSP AIR QUALITY MONITORING

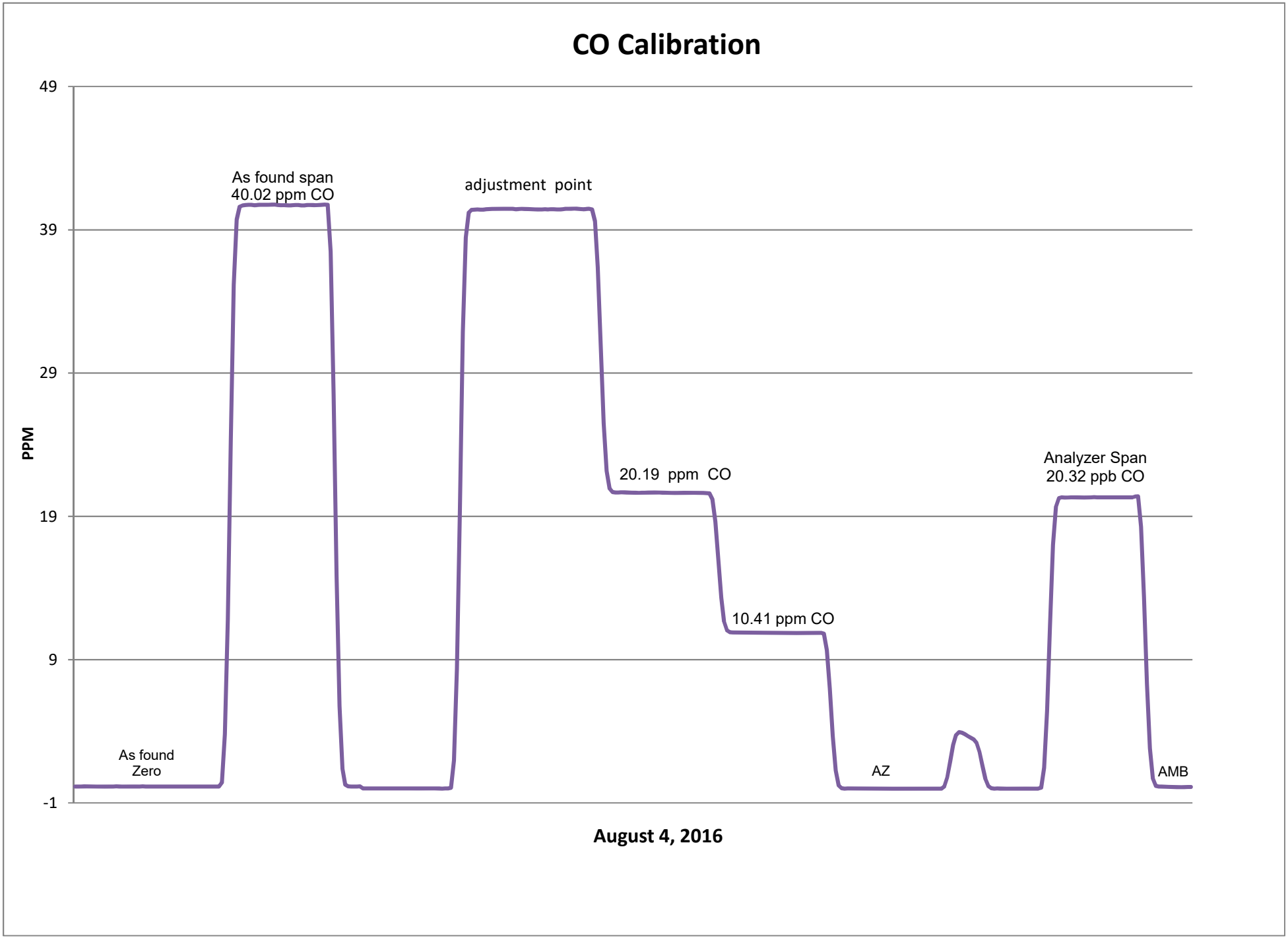
Station Information

Calibration Date	August 4, 2016	Previous Calibration	July 7, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:10	End Time (MST)	15:20:00 PM
Analyzer make/model	Model 48I-TLE	Analyzer serial #	1408761378

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.011	N/A		
40.017	40.445	0.9894	Correlation Coefficient	0.999907
20.191	20.643	0.9781		
10.411	10.868	0.9579	Slope	0.991683
			Intercept	-0.187154




CO Calibration
49
39
29
19
9
-1
PPM
As found span
40.02 ppm CO
adjustment point
20.19 ppm CO
10.41 ppm CO
Analyzer Span
20.32 ppb CO
As found
Zero
AZ
AMB
August 4, 2016

Calibration Report

Parameter **CH4 / NMHC / THC**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 4, 2016	Previous Calibration	July 27, 2016
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:

Start Time (MST)	10:10	End Time (MST)	13:05:00 PM
Barometric Pressure	726.00 mm/hg	Station Temperature	21.0 Deg C
Calibrator	Environics 6103	Serial Number	6586
Cal Gas CH4 Conc	386 ppm CH4	Cal Gas Expiry Date	3/28/2014
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	27.8	PSI	27.8	PSI
Fuel pressure	42.1	PSI	42.1	PSI
Carrier pressure	30.3	PSI	30.3	PSI
CH4 cal factor	6.26		6.41	E^{-4}
NMHC cal factor	2.84		2.92	E^{-4}
Rt	12.74	Sec	12.31	Sec
Pk Index	23.22		23.43	

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)
1995	0.00	0.00	0.02	N/A
1997	68.96	12.88	12.91	0.9979
1998	40.99	7.76	7.72	1.0046
1999	15.97	3.06	3.39	0.9029
1995	0.00	0.00	0.02	As Found Zero
1995	68.93	12.89	14.97	As Found Span
			Average Correction Factor	0.9685

Calculated value of As Found Response: 14.747 ppm Percent Change of As Found: -14.4%

	Before		After
Calculated slope	0.986053	Calculated slope	1.009169
Calculated intercept	0.004700	Calculated intercept	-0.140055

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	9.25	ppm	9.01	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)
1995	0.00	0.00	0.02	N/A
1997	68.96	19.00	19.04	0.9979
1998	40.99	11.44	11.88	0.9635
1999	15.97	4.51	5.52	0.8175
1995	0.00	0.00	0.02	As Found Zero
1995	68.93	19.01	20.02	As Found Span
			Average Correction Factor	0.9263

Calculated value of As Found Response: 19.458 ppm Percent Change of As Found: -2.4%

	Before		After
Calculated slope	0.984732	Calculated slope	1.010911
Calculated intercept	-0.237184	Calculated intercept	-0.474327

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	13.06	ppm	12.90	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)
1995	0.00	0.00	0.03	N/A
1997	68.96	31.89	31.92	0.9988
1998	40.99	19.20	19.58	0.9807
1999	15.97	7.57	8.89	0.8518
1995	0.00	0.00	0.03	As Found Zero
1995	68.93	31.90	35.36	As Found Span
			Average Correction Factor	0.9438

Calculated value of As Found Response: 34.604 ppm Percent Change of As Found: -8.5%

	Before		After
Calculated slope	0.986026	Calculated slope	1.011181
Calculated intercept	-0.225809	Calculated intercept	-0.610220

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	22.30	ppm	21.90	ppm

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **CH4**

Air Monitoring Network **PAZA**

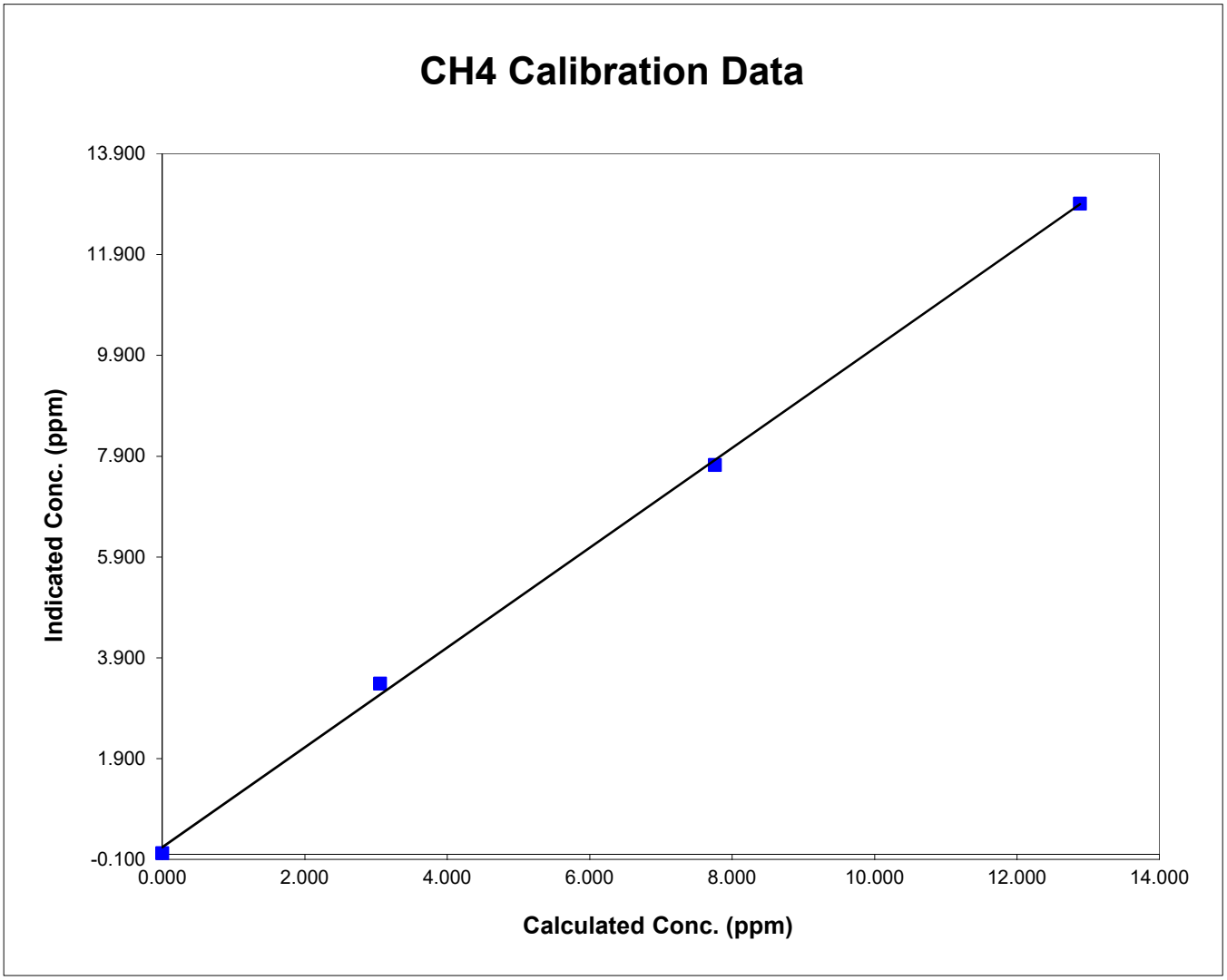
WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 4, 2016	Previous Calibration	July 27, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:10	End Time (MST)	13:05:00 PM
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		
12.884	12.911	0.9979	Correlation Coefficient	0.999223
7.760	7.724	1.0046		
3.059	3.388	0.9029	Slope	1.009169
			Intercept	-0.140055



Calibration Summary

Parameter **NMHC**

Air Monitoring Network **PAZA**

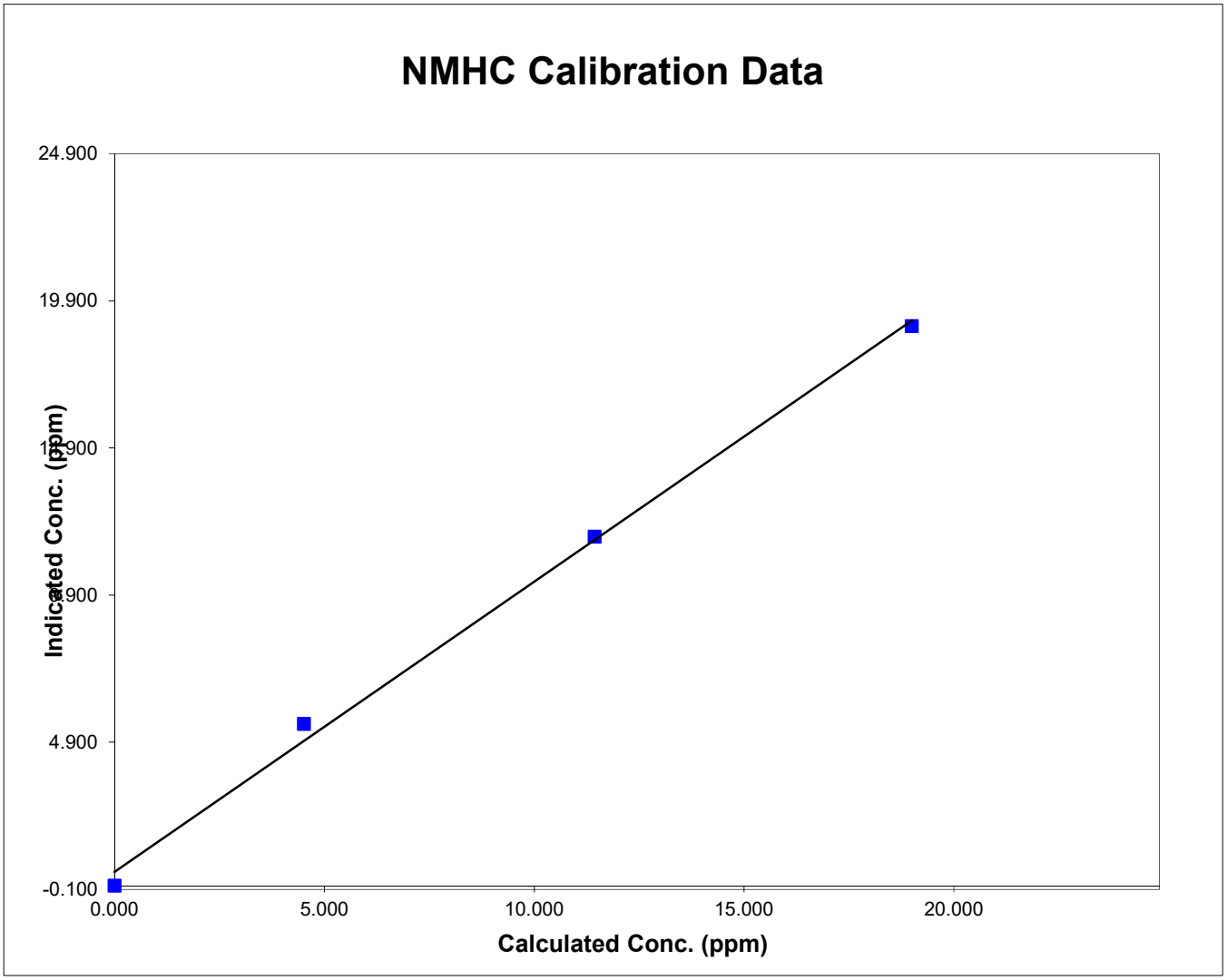
WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 4, 2016	Previous Calibration	July 27, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:10	End Time (MST)	13:05:00 PM
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		
19.001	19.041	0.9979	Correlation Coefficient	0.997012
11.444	11.878	0.9635		
4.512	5.519	0.8175	Slope	1.010911
			Intercept	-0.474327



Calibration Summary

Parameter **THC**

Air Monitoring Network **PAZA**

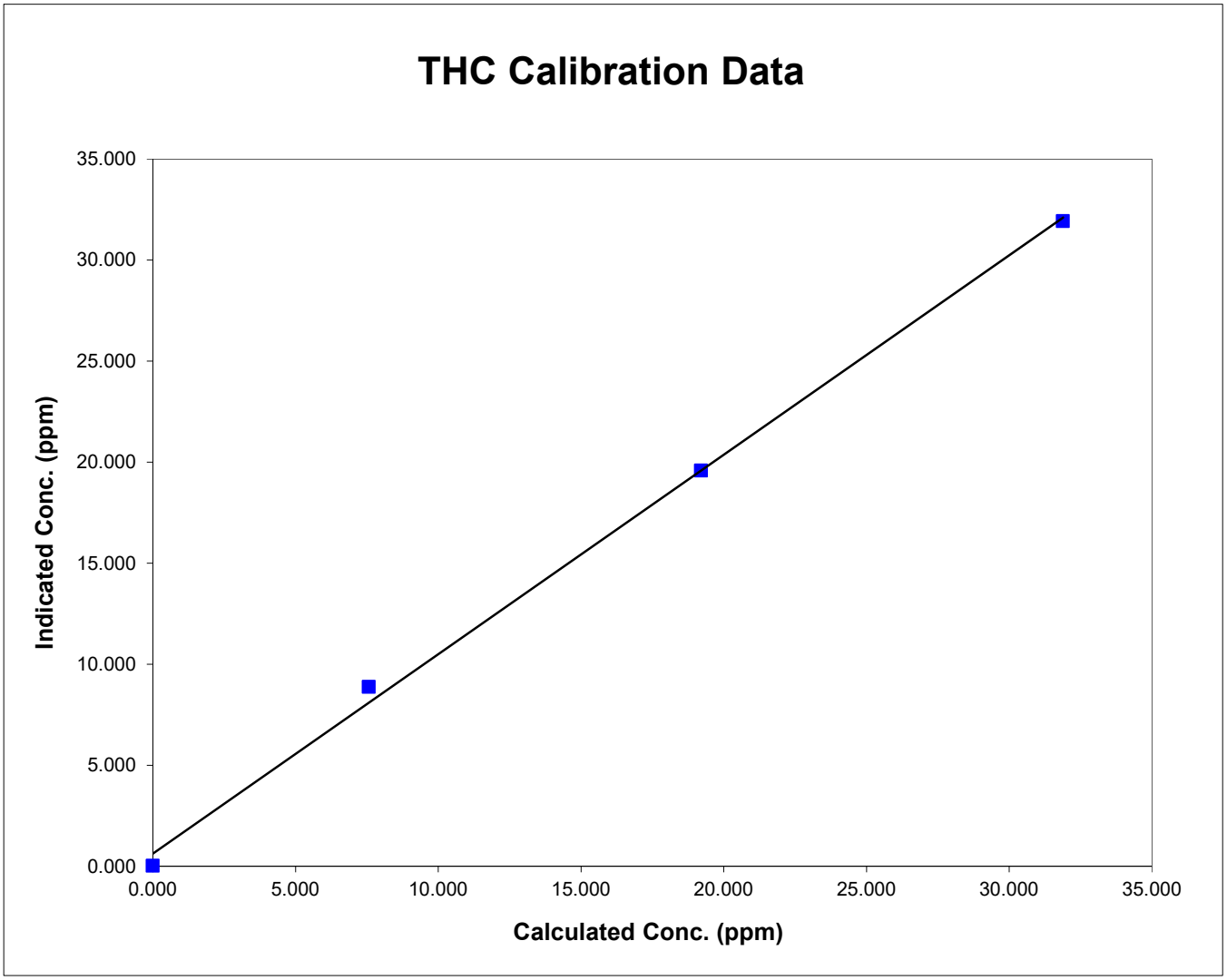
WSP AIR QUALITY MONITORING

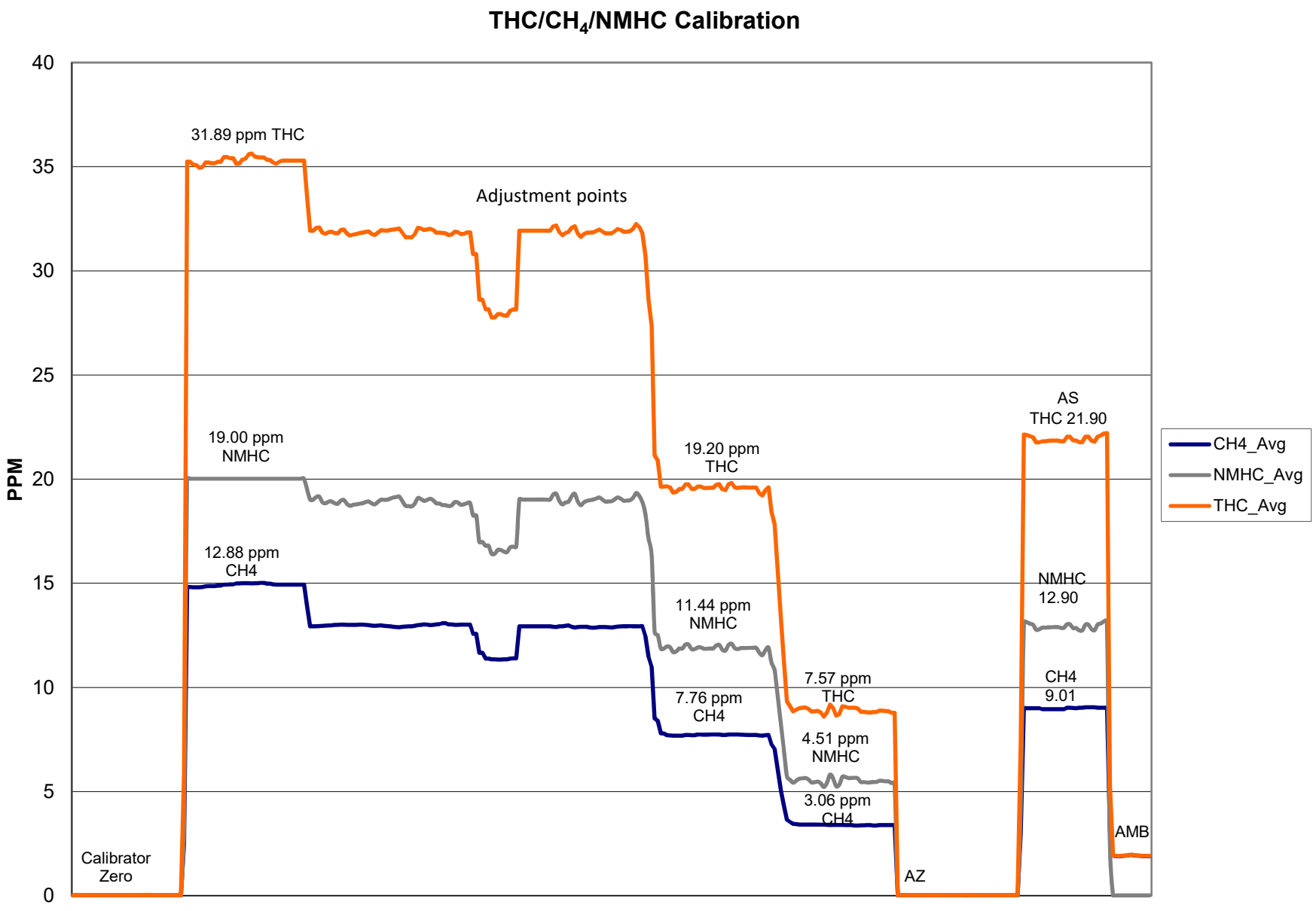
Station Information

Calibration Date	August 4, 2016	Previous Calibration	July 27, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:10	End Time (MST)	13:05:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.032	N/A		
31.885	31.923	0.9988	Correlation Coefficient	0.998231
19.203	19.582	0.9807		
7.571	8.888	0.8518	Slope	1.011181
			Intercept	-0.610220




THC/CH4/NMHC Calibration
PPM
40
35
30
25
20
15
10
5
0
31.89 ppm THC
Adjustment points
19.00 ppm
NMHC
12.88 ppm
CH4
19.20 ppm
THC
11.44 ppm
NMHC
7.76 ppm
CH4
7.57 ppm
THC
4.51 ppm
NMHC
3.06 ppm
CH4
AS
THC 21.90
NMHC
12.90
CH4
9.01
Calibrator
Zero
AZ
AMB
CH4_Avg
NMHC_Avg
THC_Avg

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 4, 2016	Previous Calibration	July 7, 2016
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	8:10	End Time (MST)	10:56
Barometric Pressure	726.00 mm/Hg	Station Temperature	21.0 Deg C
Calibrator	Environics 6103	Serial Number	6586
Cal Gas Conc	10.2 ppb	Cal Gas Expiry Date	02/23/2019
		Cal Gas Cylinder #	EY0000380
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.996739	Calculated slope	0.990099
Calculated intercept	-0.396263	Calculated intercept	0.297220
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.997		0.918	
Background	20.4		18.8	
Pressure	665.8	mm Hg	664.8	mm Hg
Flow	0.447	ccm	0.447	ccm
Lamp Voltage	903	V	903	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)
4997	0.00	0.00	0.30	N/A
4999	39.97	80.91	81.65	0.9909
4999	19.98	40.61	40.42	1.0045
6998	10.01	14.56	13.86	1.0504
4997	0.00	0.00	0.30	As Found Zero
4997	39.93	80.86	86.93	As Found Span
			Average Correction Factor	1.0153

Calculated value of As Found Response: 86.0 ppb Percent Change of As Found: -6.3%

	before calibration		after calibration	
Auto zero	0.27	ppb	0.30	ppb
Auto span	32.48	ppb	29.55	ppb

Notes: Span adjustment made
Sox scrubber check performed

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

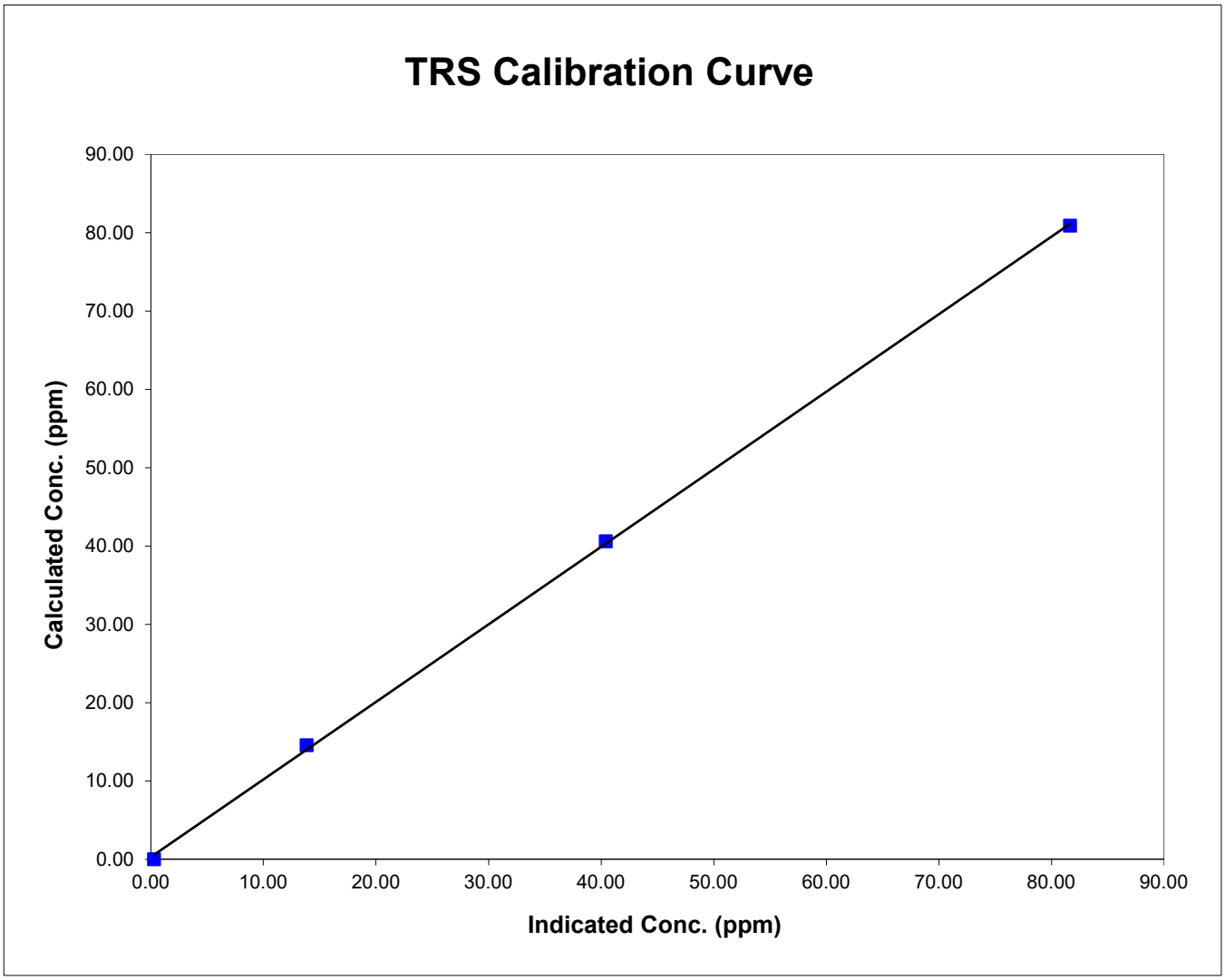
WSP AIR QUALITY MONITORING

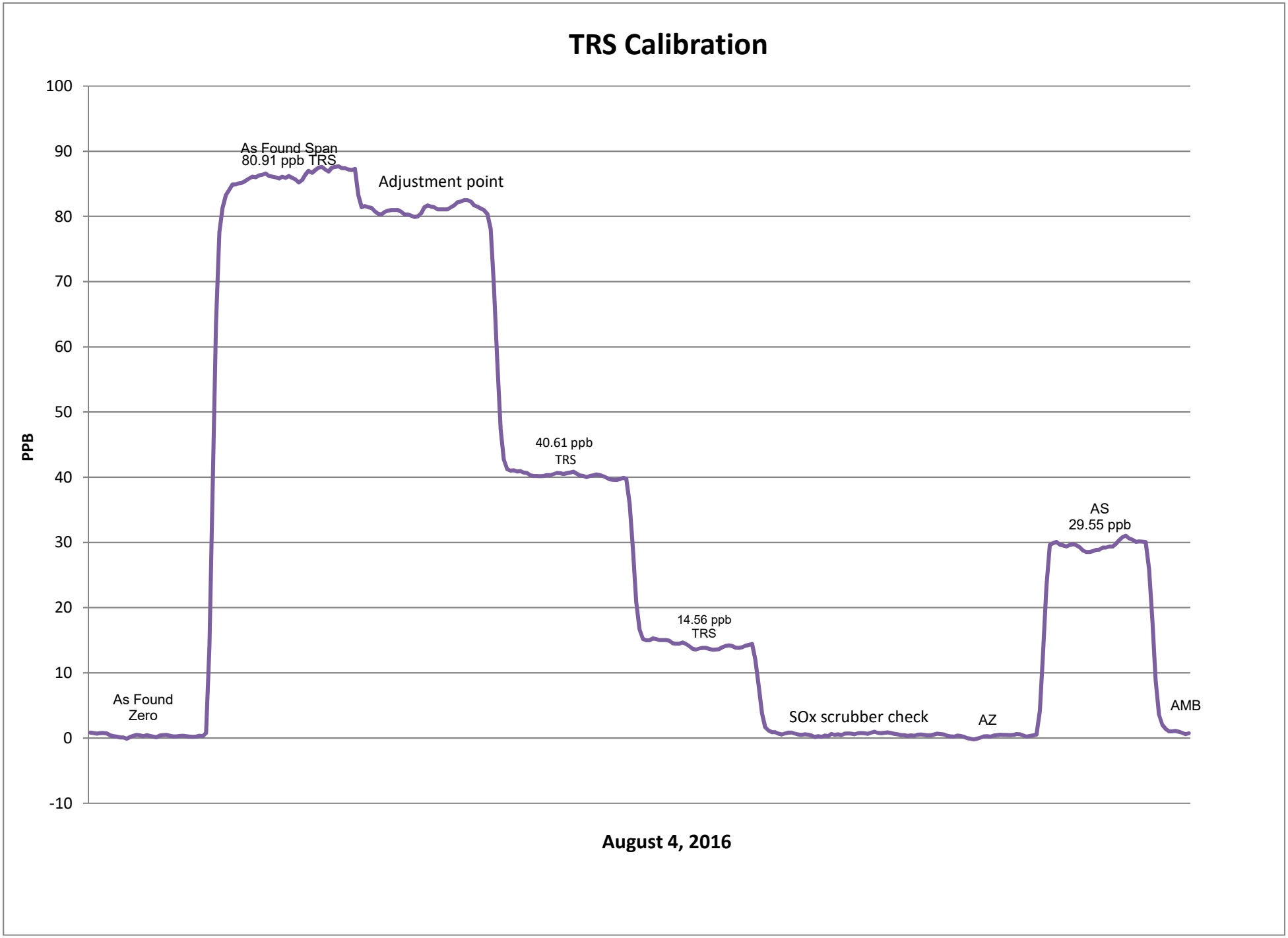
Station Information

Calibration Date	August 4, 2016	Previous Calibration	July 7, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:10	End Time (MST)	10:56
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	0.300	N/A		
80.908	81.650	0.9909	Correlation Coefficient	0.999794
40.605	40.423	1.0045		
14.562	13.863	1.0504	Slope	0.990099
			Intercept	0.297220




TRS Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As Found Span
80.91 ppb TRS
Adjustment point
40.61 ppb
TRS
14.56 ppb
TRS
AS
29.55 ppb
As Found
Zero
SOx scrubber check
AZ
AMB
August 4, 2016

Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 5 2016	Previous Calibration	July 19 2016
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:00	End Time (MST)	14:07:00 PM
Barometric Pressure	0.920 ATM	Station Temperature	21.0 Deg C
Calibrator	Environics	Serial Number	6586
Cal Gas Concentration	49.7 ppm	Cal Gas Expiry Date	10/5/2018
Correction factor	0.031167	Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.980172	Calculated slope	0.974226
Calculated intercept	0.910564	Calculated intercept	1.206196
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.8		11.8	
coefficient	1.257		1.257	
Lamp Voltage	826	volts	827	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	672.2	mm Hg	671.6	mm Hg
Sample Flow	0.45	ccm	0.451	ccm
Lamp Intensity	89	%	89	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4996	0.0	0.00	0.6	N/A
4998	39.95	394.1	404.2	0.9749
4998	19.96	197.7	200.7	0.9853
4997	9.99	99.2	98.8	1.0039
4996	0.0	0.0	0.6	As Found Zero
4996	39.93	394.1	404.2	As Found Span
			Average Correction Factor	0.9880

Calculated value of As Found Response: 396.526 ppm Percent Change of As Found: -0.6%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.4	ppm
Auto span	266.3	ppm	264.6	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

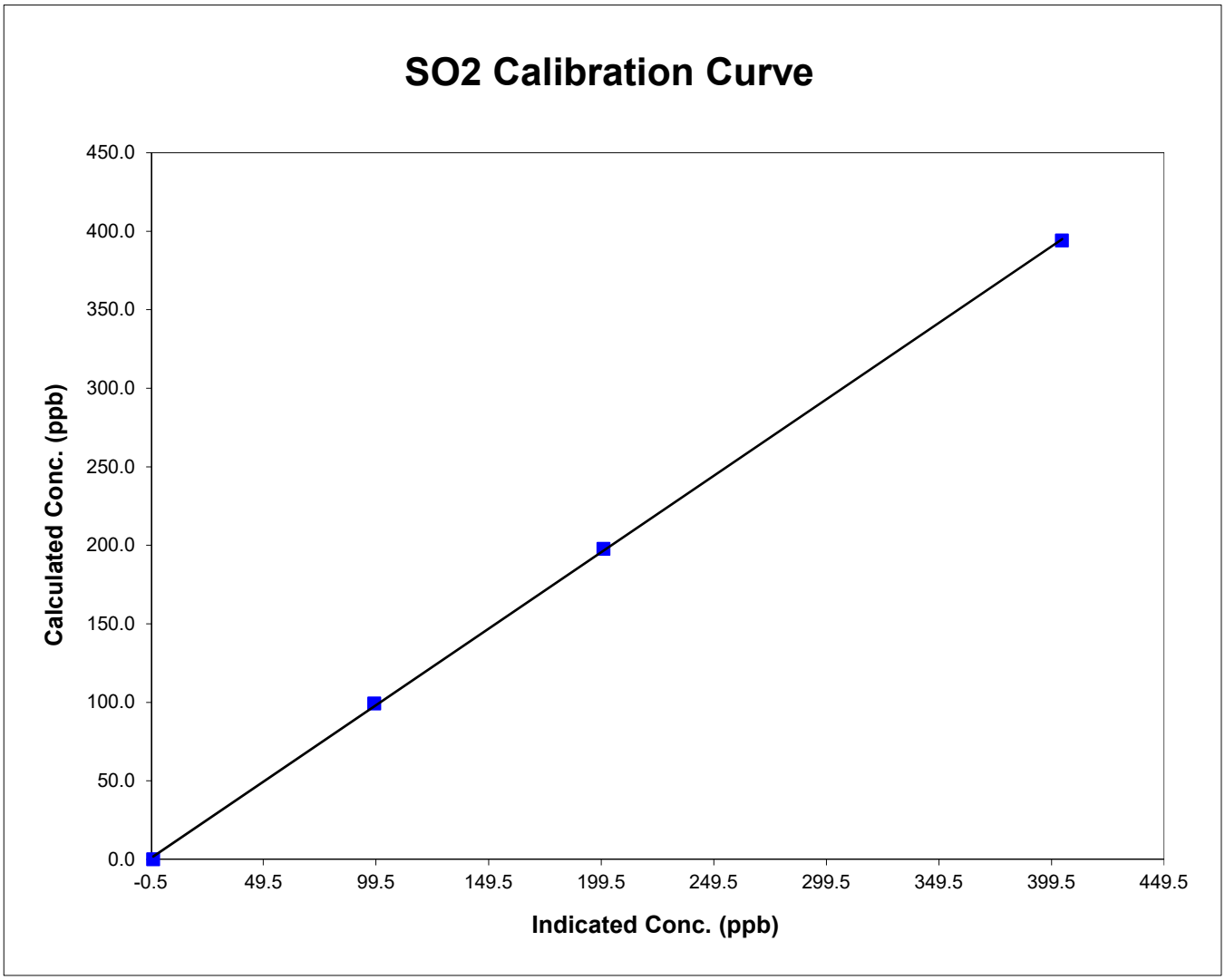
WSP AIR QUALITY MONITORING

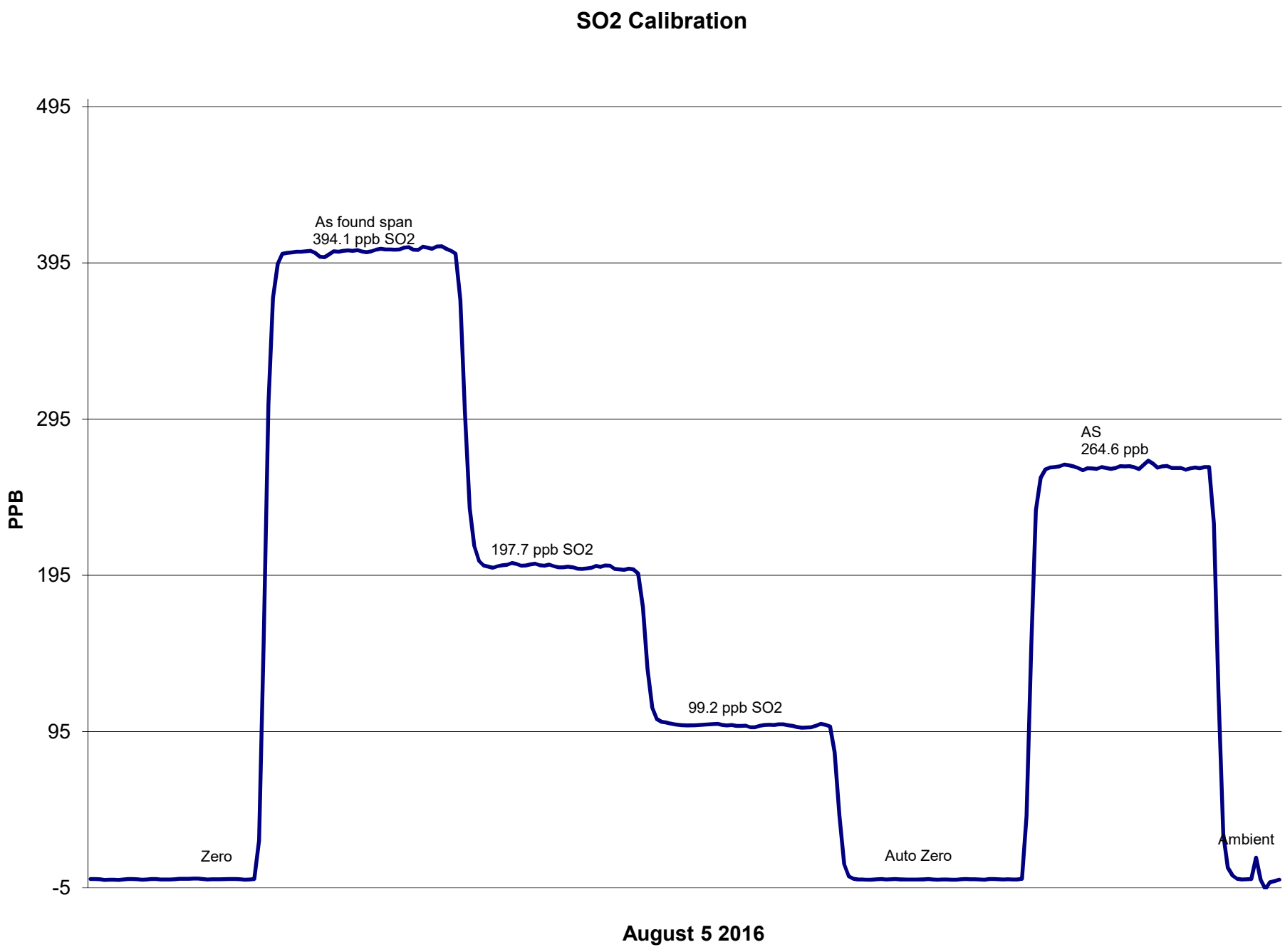
Station Information

Calibration Date	August 5 2016	Previous Calibration	July 19 2016
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	12:00	End Time (MST)	14:07:00 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	0.6	N/A		
394.1	404.2	0.9749	Correlation Coefficient	0.999904
197.7	200.7	0.9853		
99.2	98.8	1.0039	Slope	0.974226
			Intercept	1.206196




SO2 Calibration
495
395
295
195
95
-5
PPB
As found span
394.1 ppb SO2
197.7 ppb SO2
99.2 ppb SO2
AS
264.6 ppb
Zero
Auto Zero
Ambient
August 5 2016

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 5 2016	Previous Calibration	July 19 2016
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:

Start Time (MST)	9:25	End Time (MST)	12:40
Barometric Pressure	0.920 ATM	Station Temperature	21.0 Deg C
Calibrator	Environics	Serial Number	6586
Cal Gas Conc	10.2 ppm	Cal Gas Expiry Date	7/8/2016
Correction factor	0.031167	Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	1.000180	Calculated slope	1.000362
Calculated intercept	-0.625493	Calculated intercept	-0.578443

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.6	ppb	15	ppb
coefficient	1.032		0.990	
Lamp Voltage	976	volts	975	volts
Chamber Temp	44	Deg C	44	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	652.1	mm Hg	651.5	mm Hg
Sample Flow	0.543	ccm	0.538	ccm
Lamp Intensity	37,240	mv	37,245	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)
4996	0.00	0.00	0.7	N/A
4995	39.95	80.93	81.6	0.9924
4998	19.96	40.57	41.0	0.9891
6997	9.89	14.40	14.9	0.9665
4999	9.98		#DIV/0!	Sox Test
4996	0.00	0.00	0.7	As Found Zero
4996	39.93	80.88	83.3	As Found Span
			Average Correction Factor	0.9827

Calculated value of As Found Response: 82.01 ppm Percent Change of As Found: -1.4%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.7	ppm
Auto span	78.5	ppm	77.1	ppm

Notes: Span adjustment made
Sox scrubber material replaced

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **TRS**

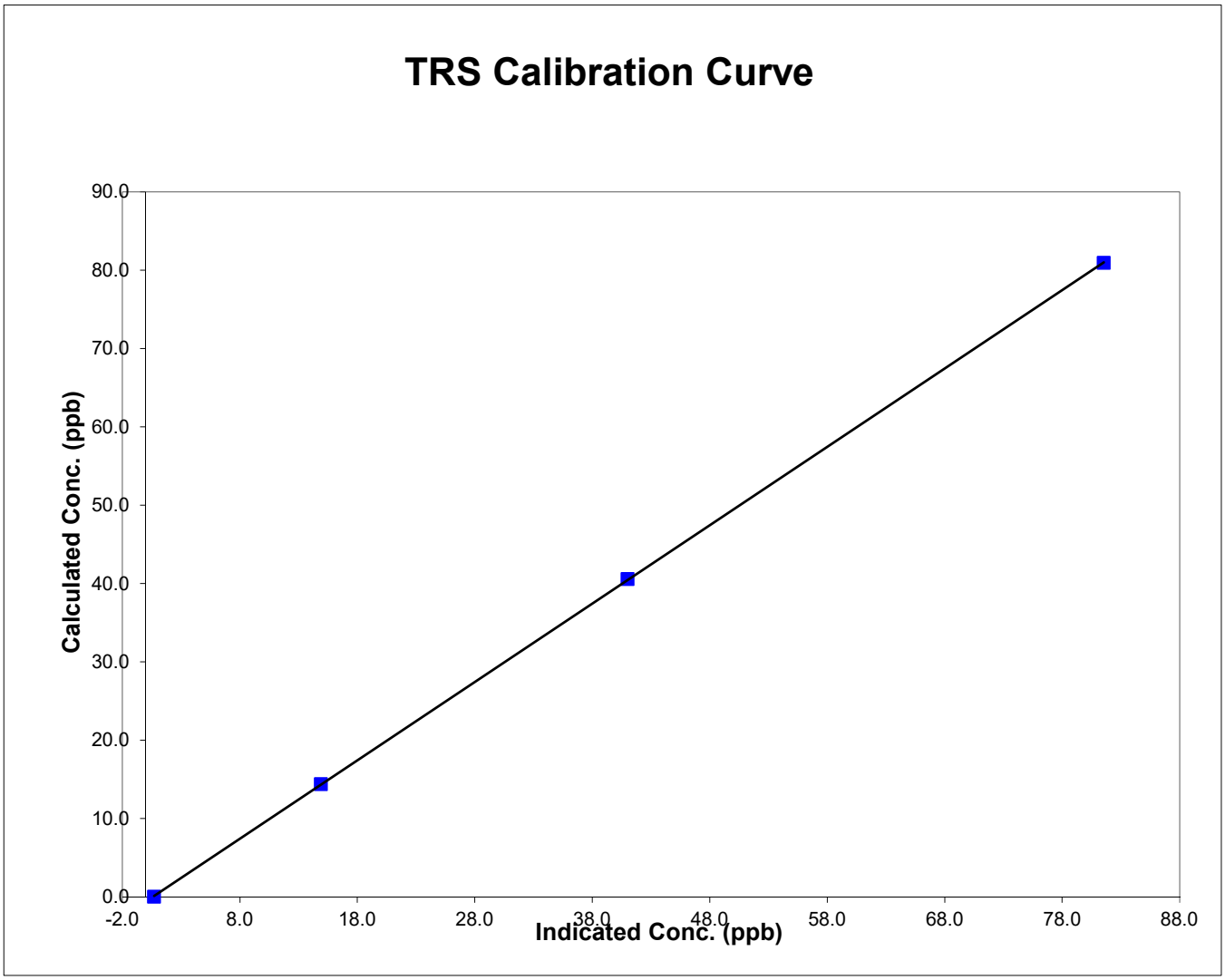
Air Monitoring Network **PAZA**

Station Information

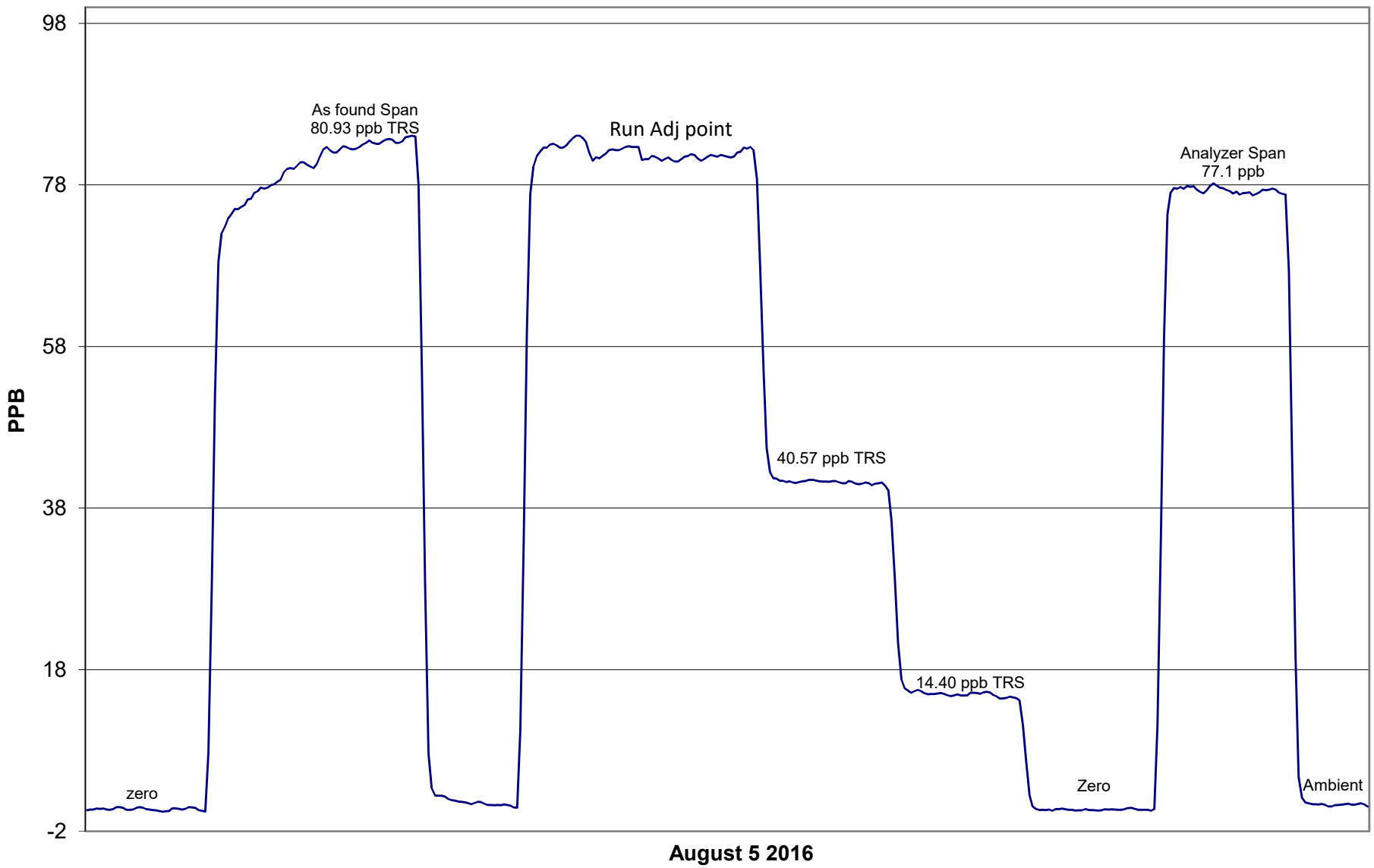
Calibration Date	August 5 2016	Previous Calibration	July 19 2016
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:25	End Time (MST)	12:40
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.7	N/A		
80.9	81.6	0.9924	Correlation Coefficient	0.999990
40.6	41.0	0.9891		
14.4	14.9	0.9665	Slope	1.000362
			Intercept	-0.578443



TRS Calibration



Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 9, 2016	Previous Calibration	July 28, 2016
Station Number	3	Station Location	Smokey Heights
Reason: Routine	Install	Removal	Other:

Start Time (MST)	13:03:00 PM	End Time (MST)	15:05:00 PM
Barometric Pressure	0.930 ATM	Station Temperature	22.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Concentration	49.7 ppm	Cal Gas Cert Date	11/5/2018
Correction factor	0.031399	Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.994379	Calculated slope	0.980821
Calculated intercept	0.740955	Calculated intercept	0.719550

Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	12.8		12.7	
coefficient	0.939		0.939	
Lamp Voltage	935	volts	936	volts
Chamber Temp	45	Deg C	45.3	Deg C
Perm Gas Temp	45	Deg C	45.01	Deg C
Pressure	663.3	mm Hg	666	mm Hg
Sample Flow	0.445	lpm	0.446	lpm
Lamp Intensity	88	%	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)
4996	0.0	0.00	0.6	N/A
4998	39.92	393.82	401.4	0.9812
4996	19.95	197.67	200.4	0.9865
4991	9.98	99.18	98.9	1.0026
4996	0.0	0.00	0.6	As Found Zero
4998	39.92	393.82	401.4	As Found Span
			Average Correction Factor	0.9901

Calculated value of As Found Response: 399.259 ppm Percent Change of As Found: -1.4%

	before calibration		after calibration	
Auto zero	0.5	ppb	0.6	ppb
Auto span	210.6	ppb	213.6	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **SO2**

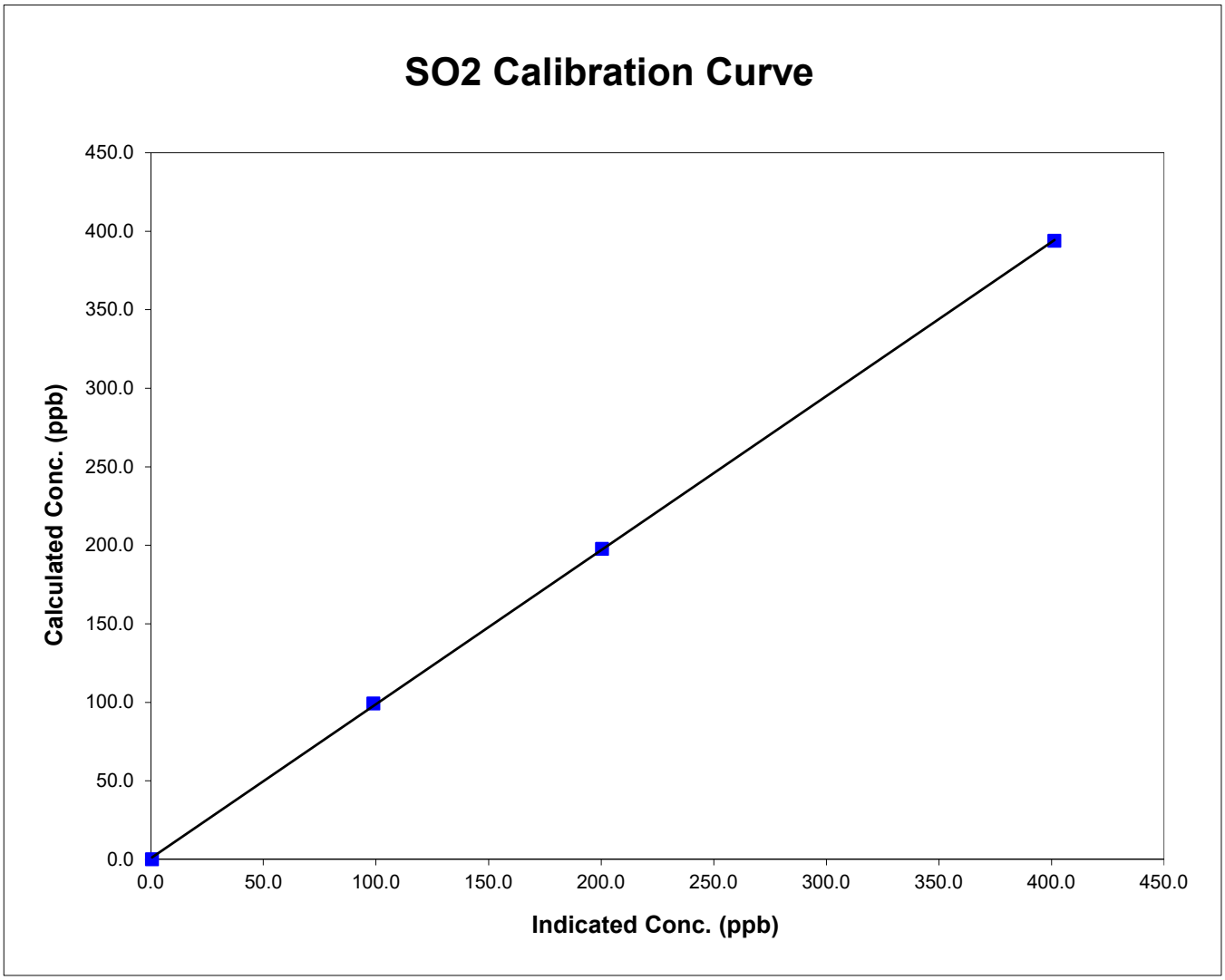
Air Monitoring Network **PAZA**

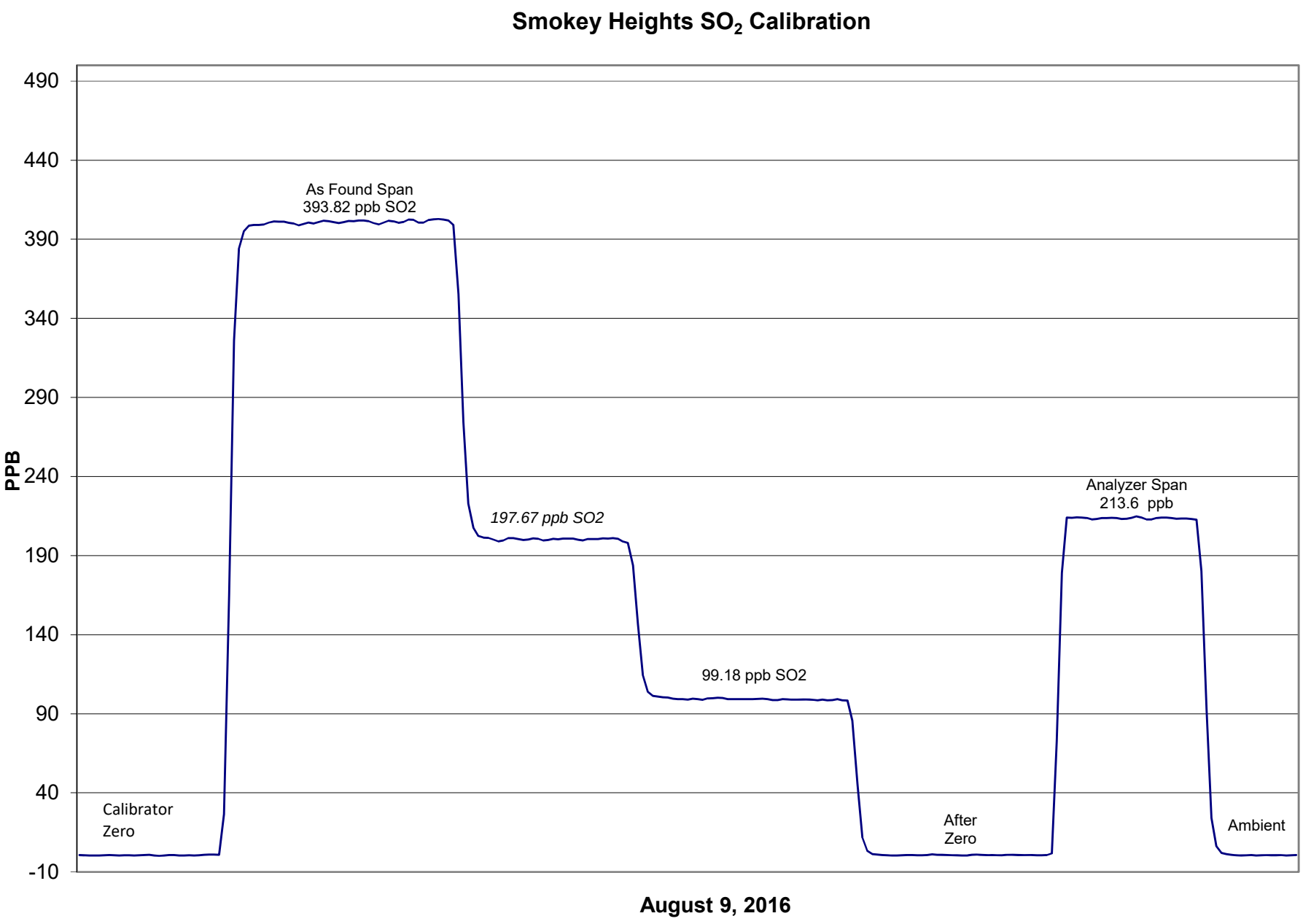
Station Information

Calibration Date	August 9, 2016	Previous Calibration	July 28, 2016
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	13:03:00 PM	End Time (MST)	15:05:00 PM
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	0.6	N/A		
393.8	401.4	0.9812	Correlation Coefficient	0.999950
197.7	200.4	0.9865		
99.2	98.9	1.0026	Slope	0.980821
			Intercept	0.719550




Smokey Heights SO_2 Calibration
490
440
390
340
290
240
190
140
90
40
-10
PPB
As Found Span
393.82 ppb SO2
197.67 ppb SO2
99.18 ppb SO2
Analyzer Span
213.6 ppb
Calibrator
Zero
After
Zero
Ambient
August 9, 2016

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 9, 2016	Previous Calibration	July 28, 2016
Station Number	3	Station Location	Smokey Heights
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:15	End Time (MST)	13:45:00 PM
Barometric Pressure	0.930 ATM	Station Temperature	22.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Conc	10.2 ppm	Cal Gas Expiry Date	7/8/2016
Correction factor	0.031399	Cal Gas Cylinder #	BLM00586
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.984570	Calculated slope	0.988924
Calculated intercept	0.805372	Calculated intercept	0.855478
Analyzer make	TEI Model 43I APSAA	Analyzer serial #	1153630151

	before		after	
Concentration range	100	ppb	100	ppb
Background	14.1	ppb	15.1	ppb
coefficient	1.021		1.009	
Lamp Voltage	796	volts	797	volts
Chamber Temp	44.9	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	672.2	mm Hg	671.9	mm Hg
Sample Flow	0.421	lpm	0.420	lpm
Lamp Intensity	90	mv	90	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)
4990	0.0	0.00	-0.2	N/A
4987	39.85	80.86	81.3	0.9947
4988	19.91	40.55	39.5	1.0269
6991	9.92	14.45	13.3	1.0840
4990	9.92		74.7	Sox test
4990	0.0	0.00	-0.2	As Found Zero
4987	39.85	80.86	75.5	As Found Span
			Average Correction Factor	1.0352

Calculated value of As Found Response: 75.33 ppm Percent Change of As Found: 6.8%

	before calibration		after calibration	
Auto zero	-0.3	ppm	-0.1	ppm
Auto span	66.9	ppm	65.2	ppm

Notes: Span adjutment made
Sox scrubber material replaced
Last dilution point got interrupted by daily zero/span check

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

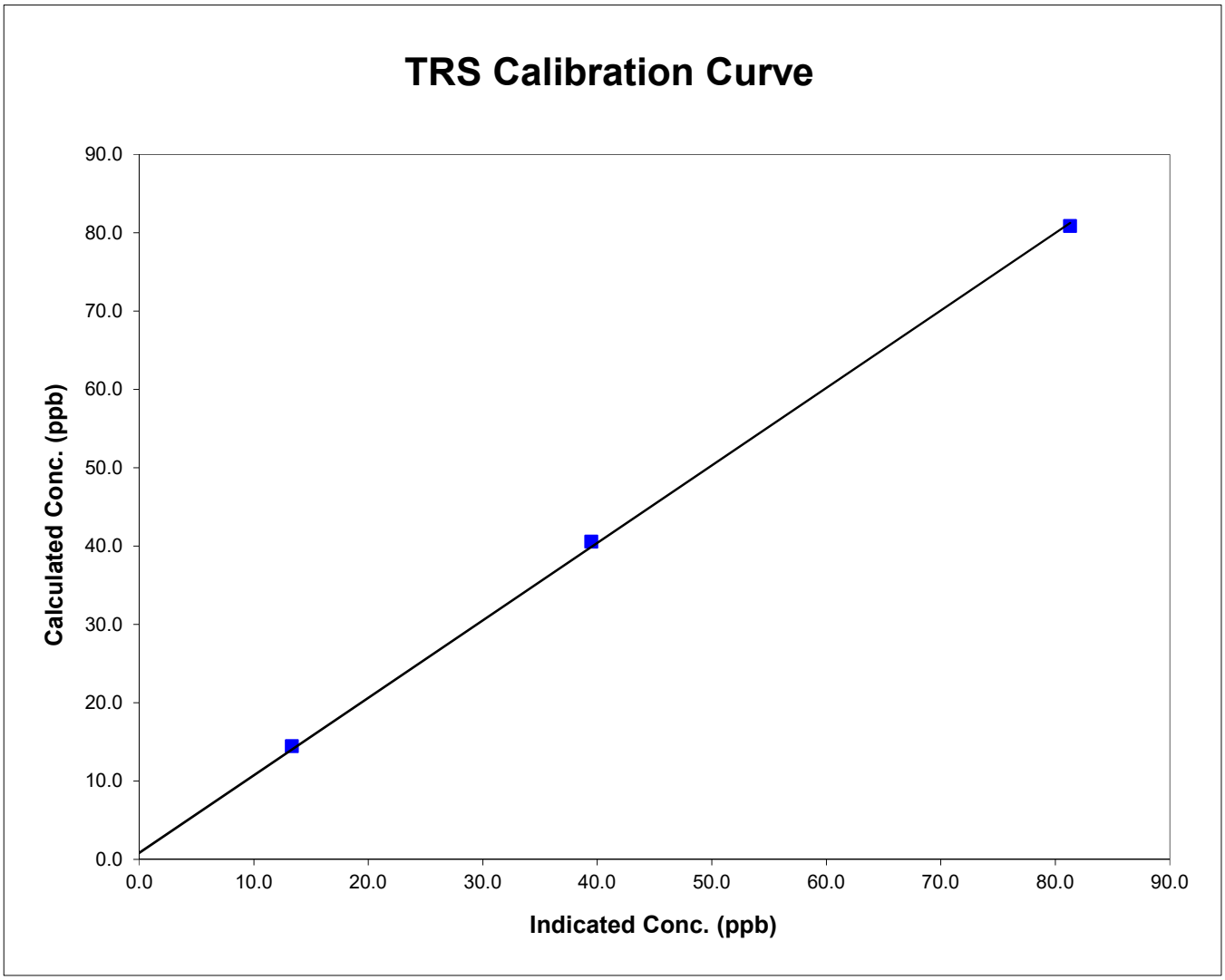
WSP AIR QUALITY MONITORING

Station Information

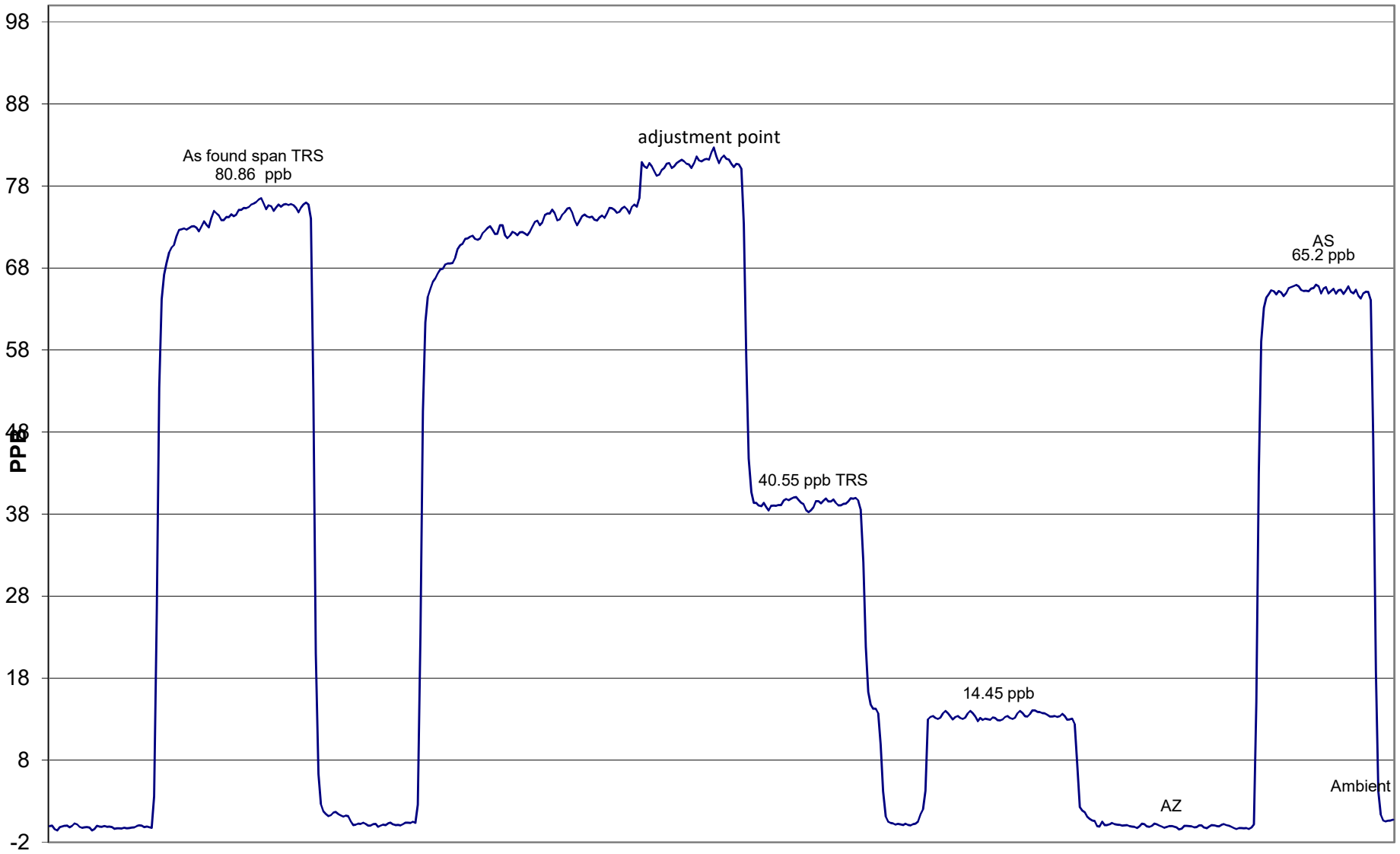
Calibration Date	August 9, 2016	Previous Calibration	July 28, 2016
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	9:15	End Time (MST)	13:45:00 PM
Analyzer make/model	TEI Model 43I APSAA	Analyzer serial #	1153630151

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A		
80.9	81.3	0.9947	Correlation Coefficient	0.999686
40.6	39.5	1.0269		
14.5	13.3	1.0840	Slope	0.988924
			Intercept	0.855478



Smokey Heights TRS Calibration



August 9, 2016

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 11, 2016	Previous Calibration	July 13, 2016
Station Number	4	Station Location	Beaverlodge
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	13:35	End Time (MST)	15:40:00 PM
Barometric Pressure	0.928 atm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Concentration	10.5 ppm	Cal Gas Expiry Date	1/12/2019
Gas Cert Reference	FF16108		
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.980646	Calculated slope	0.988354
Calculated intercept	-0.204710	Calculated intercept	-0.293957
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.52		2.52	
Coefficient	0.969		0.969	
PMT	-768.9	V	-768.1	V
UV Lamp Voltage	1098	V	1109	V
Chamber Temp	45	Deg C	45	Deg C
Pressure	666.5	mm Hg	666.1	mm Hg
Sample Flow	0.462	LPM	0.463	LPM
Lamp Intensity	96	%	96	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4989	0.00	0.0	0.2	N/A
4989	39.84	83.2	84.4	0.9859
4989	19.92	41.8	42.7	0.9788
4989	9.91	20.8	21.5	0.9691
4989	0.00	0.0	0.2	As found zero
4989	39.84	83.2	84.4	As found span
			Average Correction Factor	0.9779

Calculated value of As Found Response: 82.389 ppm Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	0.0	ppb	-0.1	ppb
Auto span	57.4	ppb	57.7	ppb

Notes: No adjustment made

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

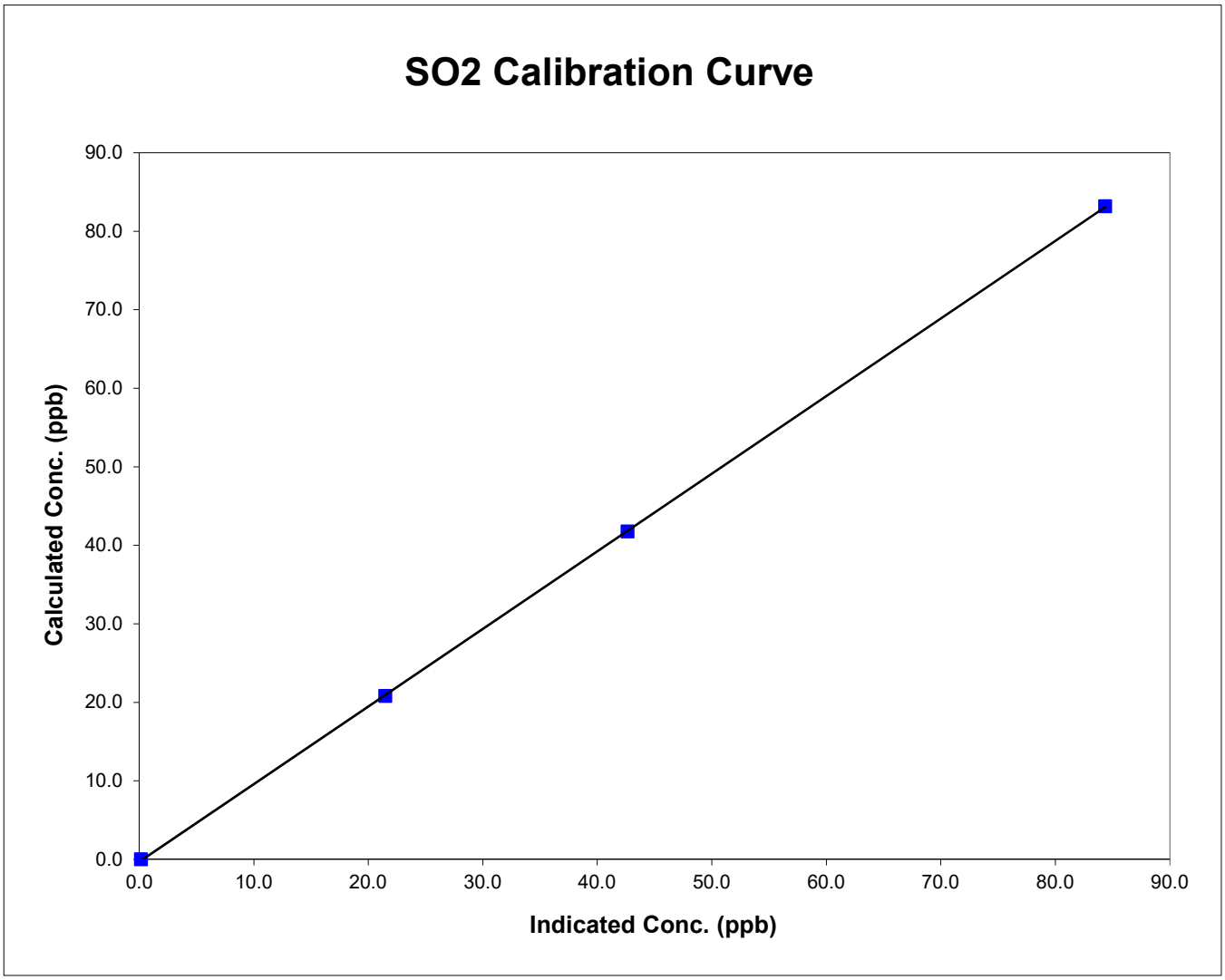
WSP AIR QUALITY MONITORING

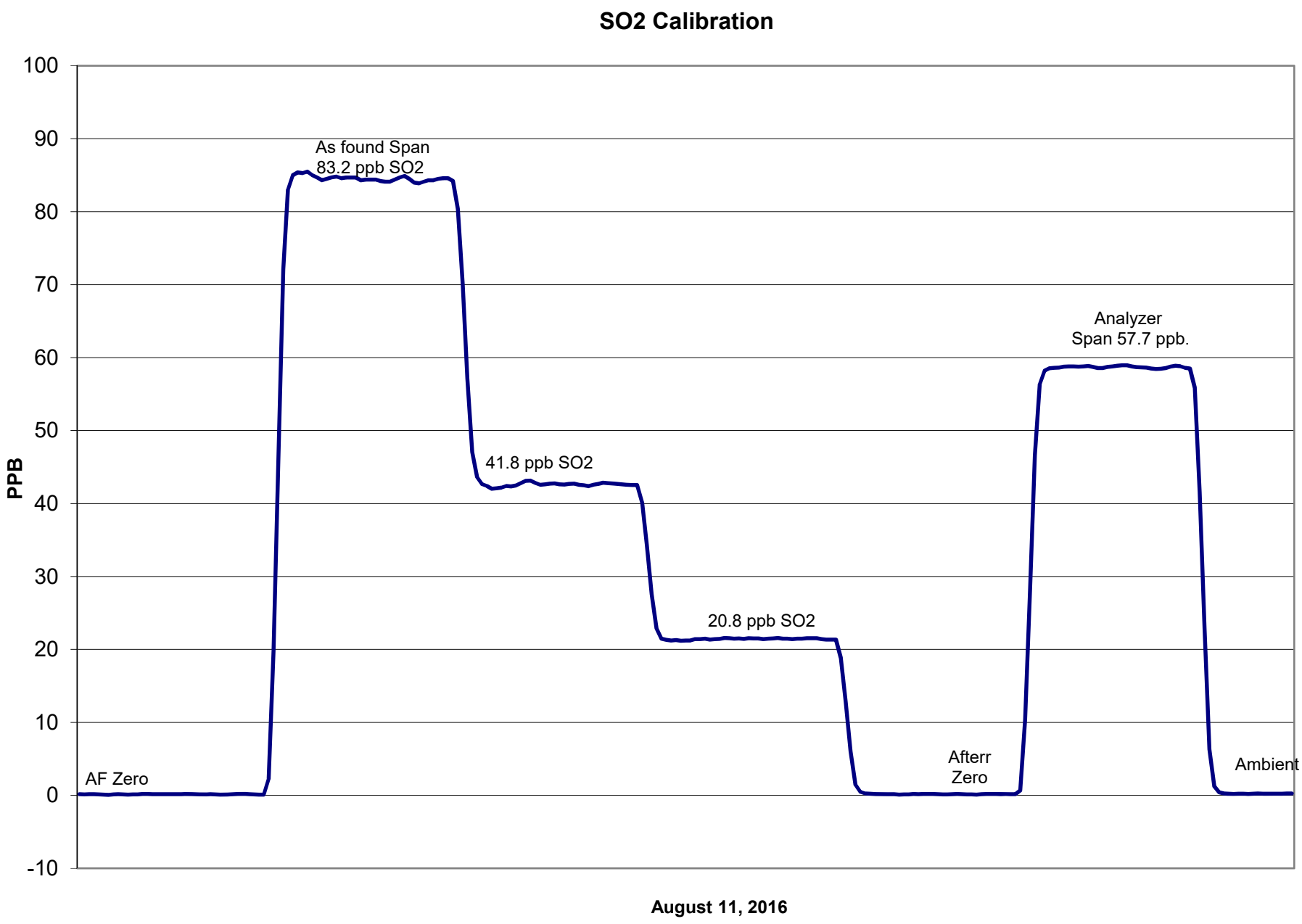
Station Information

Calibration Date	August 11, 2016	Previous Calibration	July 13, 2016
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:35	End Time (MST)	15:40:00 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	0.2	N/A		
83.2	84.4	0.9859	Correlation Coefficient	0.999985
41.8	42.7	0.9788		
20.8	21.5	0.9691	Slope	0.988354
			Intercept	-0.293957




SO2 Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As found Span
83.2 ppb SO2
41.8 ppb SO2
20.8 ppb SO2
Analyzer
Span 57.7 ppb.
AF Zero
Afterr
Zero
Ambient
August 11, 2016

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 11, 2016	Previous Calibration	July 13, 2016
Station Number	4	Station Location	Beaverlodge

Reason: Routine Installation Removal Other:

Start Time (MST)	9:05		End Time (MST)	13:15:00 PM	
Barometric Pressure	0.928	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3474	
NO Cal Gas Conc	50.9	ppm	Cal Gas Expiry Date	November 5, 2018	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL103793	

DACS Information

DACS make	CR3000	DACS serial No.	5237

Parameter		NO2	NOx	NO
Before	Data Slope	1.005357	0.998152	0.997723
	Data Offset	0.316070	-0.184583	0.323781
After	Data Slope	1.000537	1.002965	0.998942
	Data Offset	-0.660950	0.347586	0.855990
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	906535068

Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	2.8	mV	2.8	mV
NOx bkgnd	3.3	mV	3.3	mV
NO coefficient	1.190		1.190	
NOx coefficient	0.999		0.999	
NO2 conv temp	322.4	Deg C	322.6	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-729.0	mV	-730.0	mV
R Cell Press	191.5	in Hg	192.7	in Hg
Sample Flow	0.689	LPM	0.691	LPM

Notes: No adjustment made

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date: August 11, 2016 Station Location: Beaverlodge

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4990	0.00	0.0	0.0	0.0	0.5	-0.1	0.5	N/A	N/A
1	4990	39.87	405.8	403.5	2.4	404.7	403.5	0.4	1.0028	1.0000
2	4990	19.92	203.6	202.4	1.2	202.3	201.1	0.2	1.0066	1.0063
3	4990	9.92	101.6	101.0	0.6	100.1	99.7	0.2	1.0148	1.0131
AFZ	4990	0.00	0.0	0.0	0.0	0.5	-0.1	0.5	0.0000	0.0000
AFS	4990	39.92	406.3	404.0	0.8	404.7	403.5	0.4	1.0041	1.0012
							Average Correction Factor		1.0081	1.0064

As Found Concentrations: NO_X= 403.3 NO= 403.0 As Found Percent Change NO_X= -0.8% NO= -0.2%

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	0.5	-0.1	0.5	N/A	N/A	N/A	N/A
NO point	403.8	403.8	0.0	404.3	403.8	-0.5	0.9990	1.0000	N/A	N/A
300	403.8	71.0	332.8	405.4	71.0	333.4	0.9962	1.0000	0.9983	100.2%
200	403.8	179.7	224.1	405.0	179.7	224.4	0.9972	1.0000	0.9989	100.1%
100	403.8	295.0	108.8	405.4	295.0	109.8	0.9961	1.0000	0.9908	100.9%
					Average Correction Factor		0.9965	1.0000	0.9960	100.4%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.2	0.1	-0.1	ppb	0.4	0.4	-0.1	ppb
Auto span	269.8	266.5	2.4	ppb	282.5	279.0	2.6	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

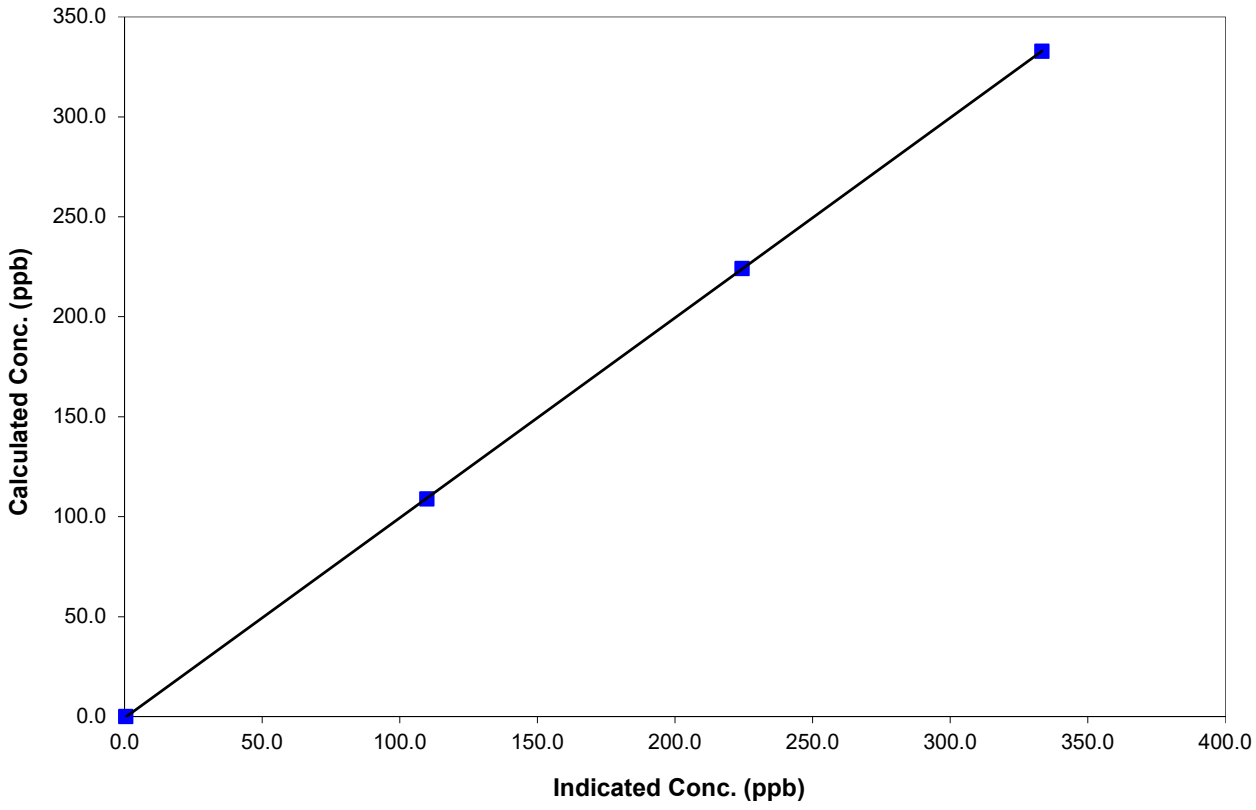
Station Information

Calibration Date	August 11, 2016	Previous Calibration	July 13, 2016
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:05	End Time (MST)	13:15:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
332.8	333.4	0.9983	Correlation Coefficient	0.999995
224.1	224.4	0.9989		
108.8	109.8	0.9908	Slope	1.000537
			Intercept	-0.660950

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

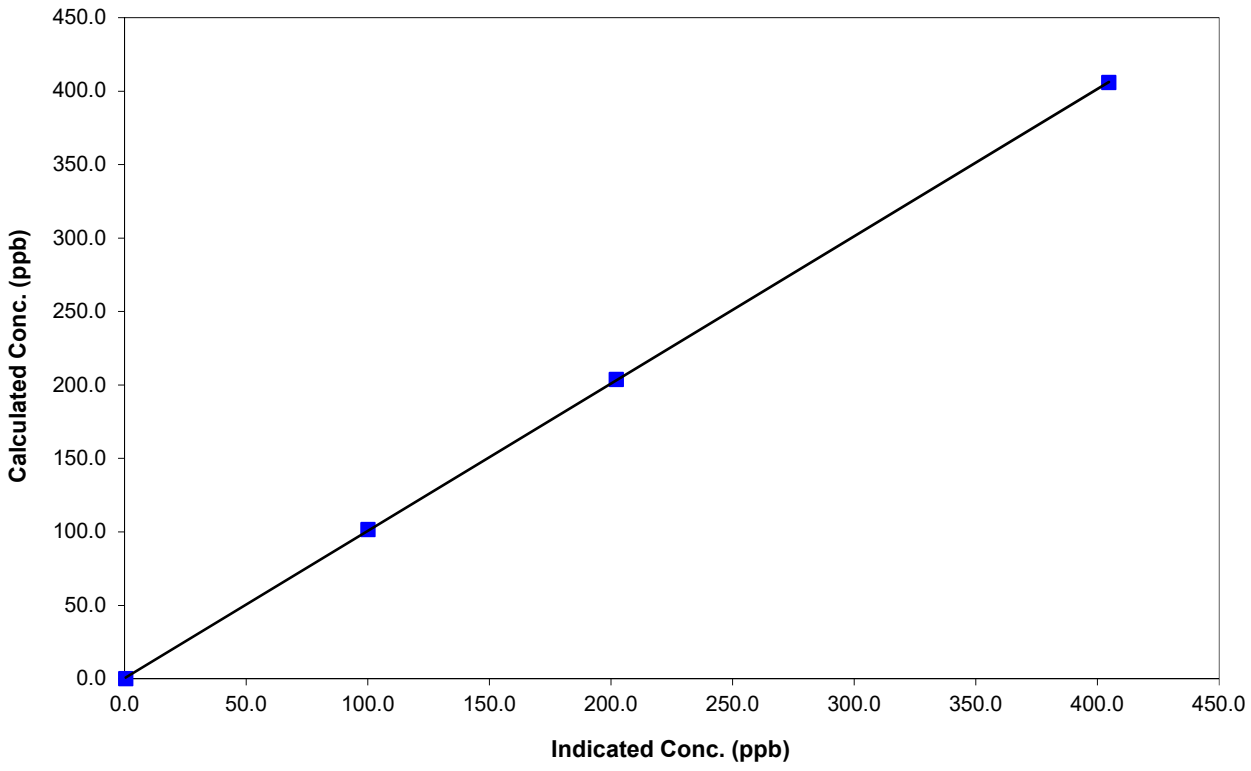
Station Information

Calibration Date	August 11, 2016	Previous Calibration	July 13, 2016
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:05	End Time (MST)	13:15:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A		
405.8	404.7	1.0028	Correlation Coefficient	0.999981
203.6	202.3	1.0066		
101.6	100.1	1.0148	Slope	1.002965
			Intercept	0.347586

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

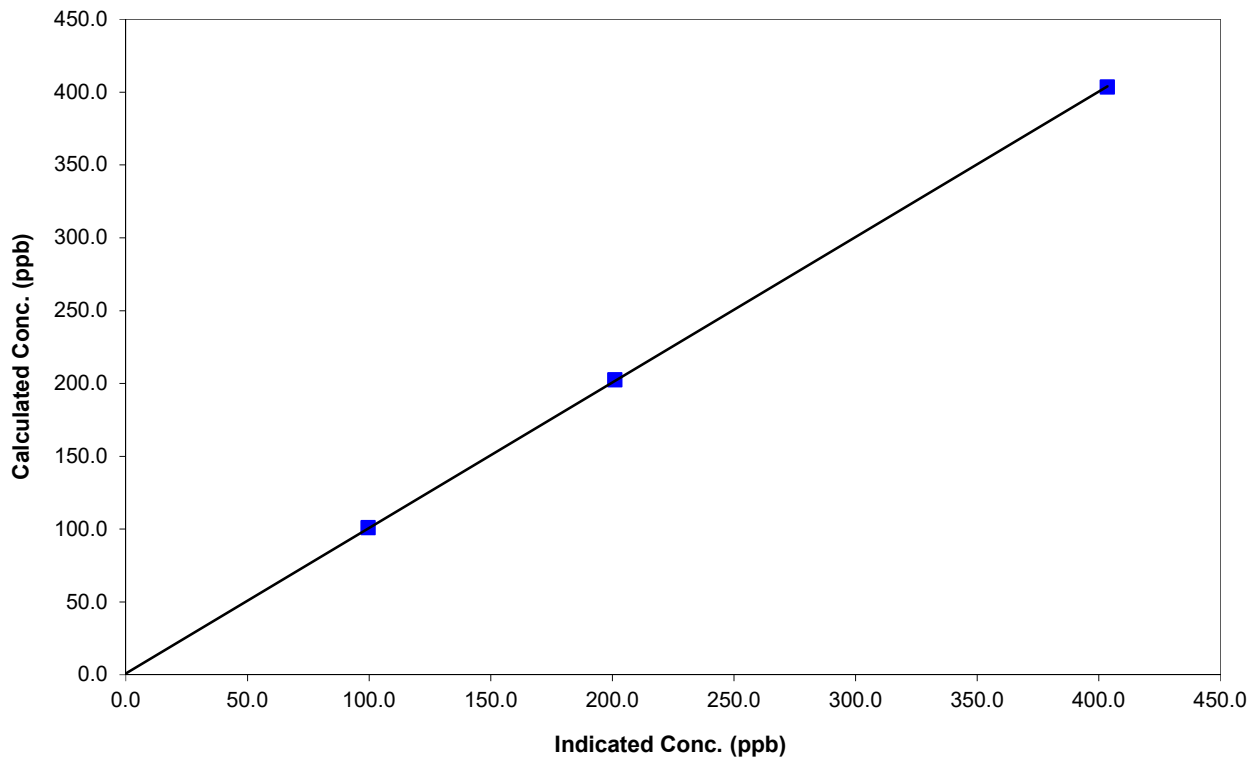
Station Information

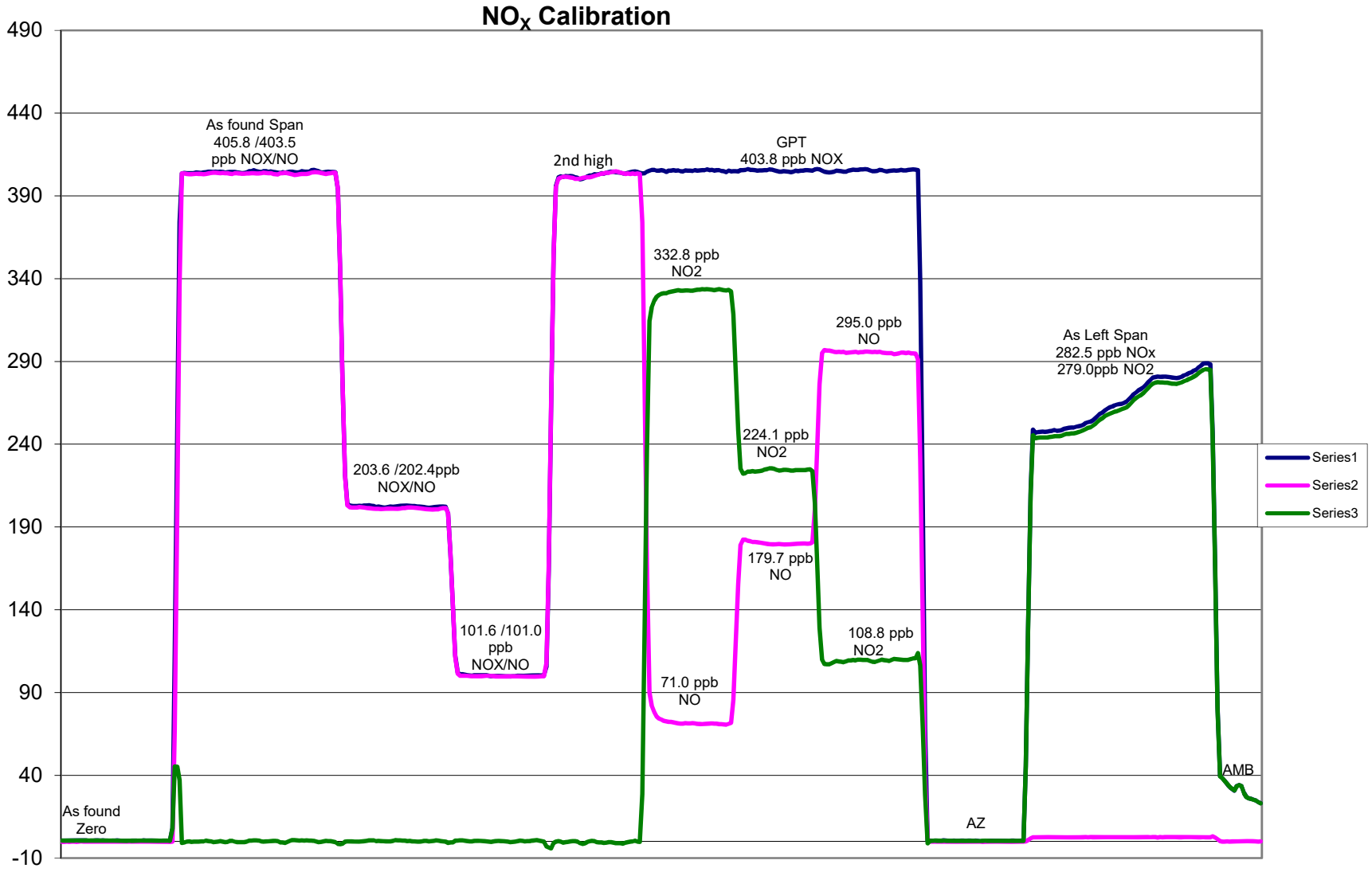
Calibration Date	August 11, 2016	Previous Calibration	July 13, 2016
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	9:05	End Time (MST)	13:15:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
403.5	403.5	1.0000	Correlation Coefficient	0.999984
202.4	201.1	1.0063		
101.0	99.7	1.0131	Slope	0.998942
			Intercept	0.855990

NO Calibration Curve





August 11, 2016

Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 11, 2016	Previous Calibration	July 13, 2016
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:55	End Time (MST)	14:30:00 PM
Barometric Pressure	0.928 atm	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3474
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	0.998519	Calculated slope	0.996038
Calculated intercept	0.369326	Calculated intercept	0.308780
Analyzer make	Teco 49i	Analyzer serial #	1136451236,AMU 1879

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.30	ppb	-0.30	ppb
slope	1.061		1.061	
Lamp temp	53.8	mV	53.8	mV
Lamp Intensity A/B	46871/52426	mV	46721/52916	mV
Pressure	681.7	mm Hg	689.2	mm Hg
Flow A	0.787	LPM	0.787	LPM
Flow B	0.743	LPM	0.742	LPM

Calibration Data

Dilution air flow rate (cc/min)	Calibrator Setting	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5028	0.00	0.0	0.2	N/A
5028	0.30	332.8	334.6	0.9945
5028	0.20	224.1	223.6	1.0023
5028	0.10	108.8	108.7	1.0012
5028	0.00	0.0	0.2	As found zero
5028	0.30	332.8	347.2	As found span
			Average Correction Factor	0.9994

Calculated value of As Found Response: 346.9 ppm Percent Change of As Found: 4.2%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.2	ppb
Auto span	280.1	ppb	262.5	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **O3**

Air Monitoring Network **PAZA**

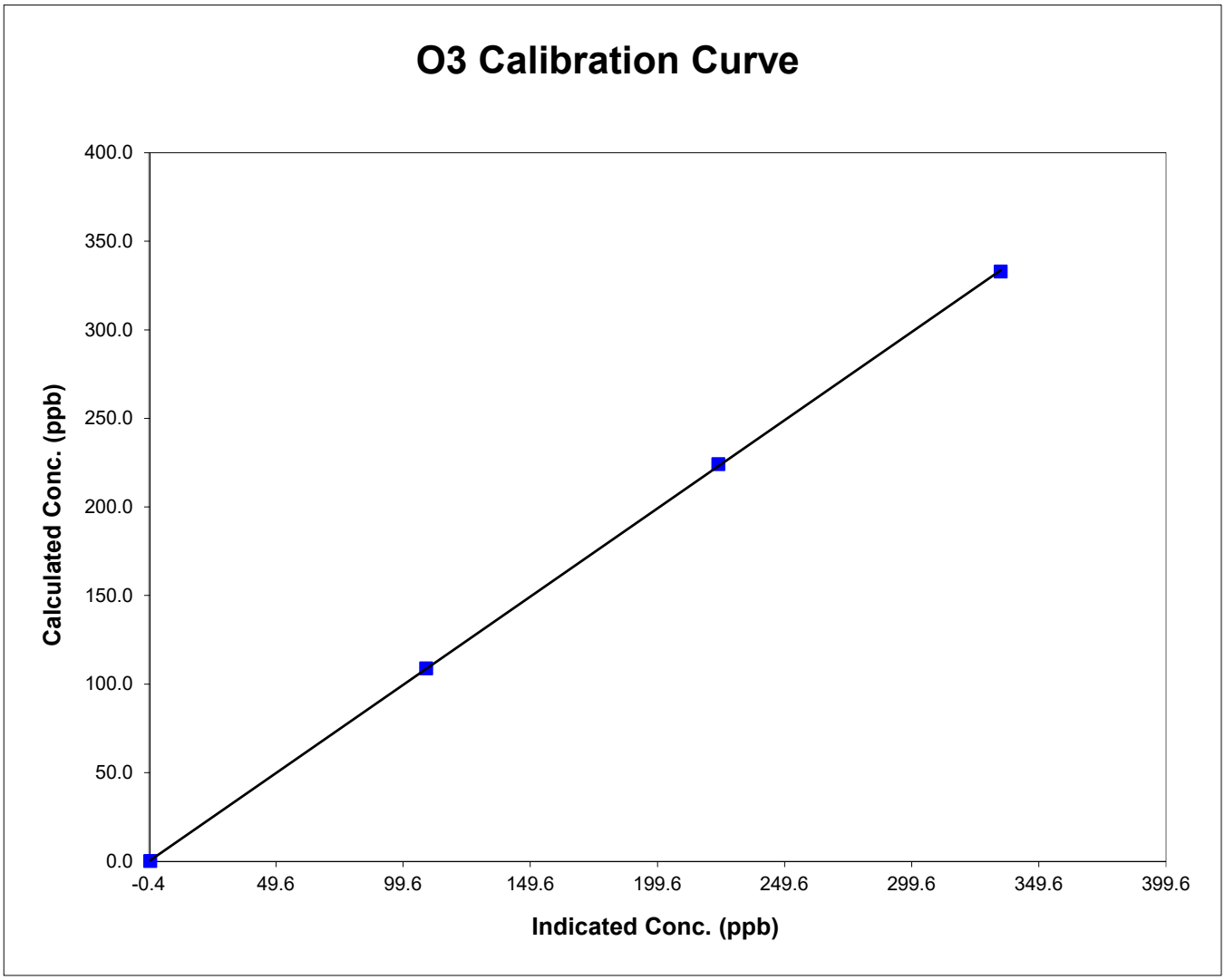
WSP AIR QUALITY MONITORING

Station Information

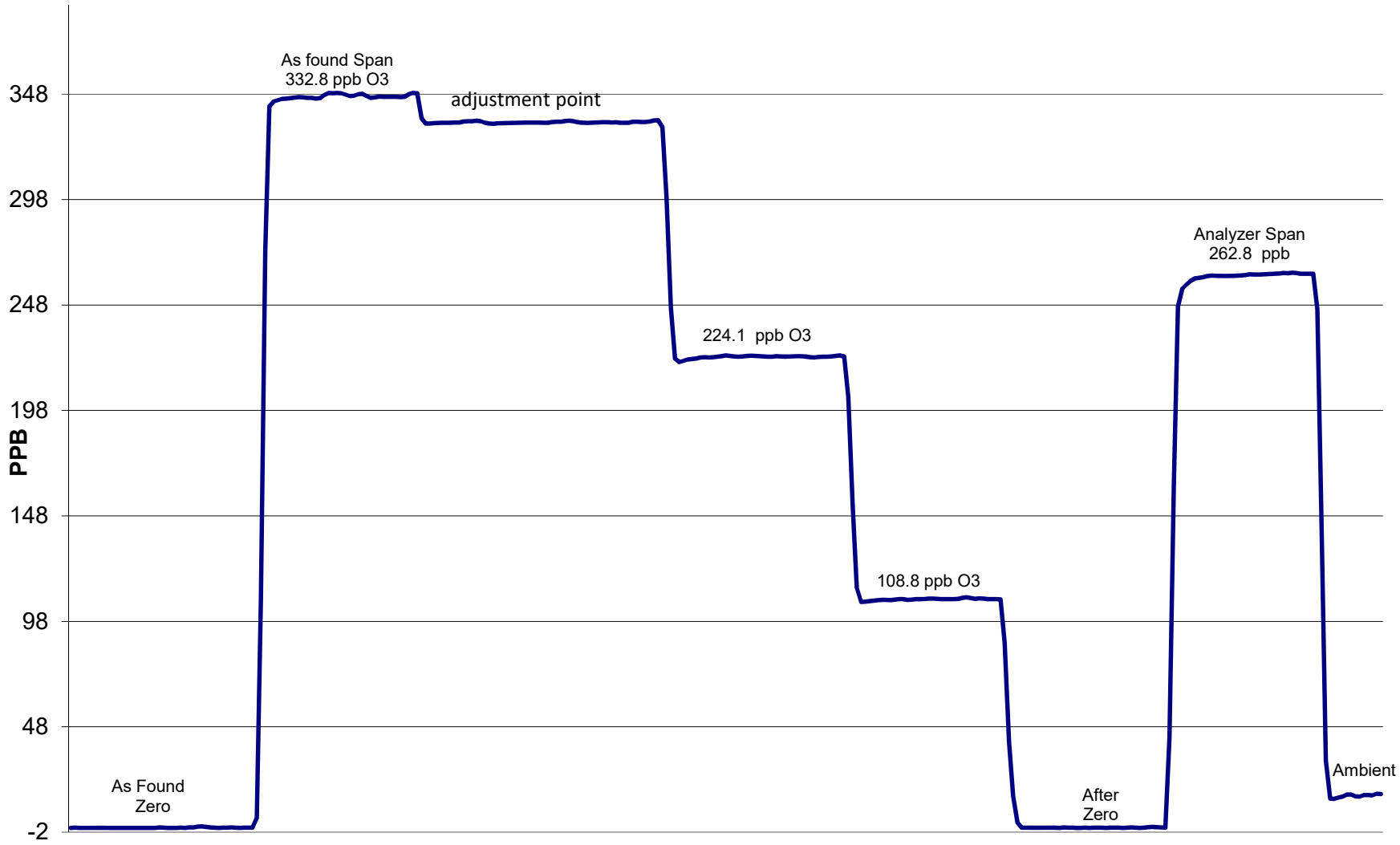
Calibration Date	August 11, 2016	Previous Calibration	July 13, 2016
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	11:55	End Time (MST)	14:30:00 PM
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236,AMU 1879

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	NA		
332.8	334.6	0.9945	Correlation Coefficient	0.999964
224.1	223.6	1.0023		
108.8	108.7	1.0012	Slope	0.996038
			Intercept	0.308780



O3 Calibration



August 11, 2016

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 10 2016	Previous Calibration	July 20 2016
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:15	End Time (MST)	14:30:00 PM
Barometric Pressure	0.927 atm	Station Temperature	22.0 Deg C
Calibrator	Environics	Serial Number	3016
Cal Gas Concentration	49.7 ppm	Cal Gas Exp Date	November 5, 2018
Gas Cylinder Num.	LL103793		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.989764	Calculated slope	0.990489
Calculated intercept	0.668312	Calculated intercept	0.053535
Analyzer make	TEI 43C	Analyzer serial #	609716239

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	15.8		15.8	
Coefficient	1.031		1.031	
UV Lamp Voltage	730	LPM	730	LPM
Chamber Temp	42.8	V	43	V
Perm Gas Temp	45	C	45	C
Pressure	670.1	in Hg	670	in Hg
Sample Flow	0.485	LPM	0.485	LPM
Lamp Intensity	47629	Hz	47736	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	0.9	N/A
4997	39.93	394.0	398.3	0.9892
4999	19.99	197.9	198.9	0.9951
4995	9.95	98.8	99.1	0.9973
4995	0.00	0.0	0.9	As found zero
4995	39.93	394.2	398.3	As found span
			Average Correction Factor	0.9938

Calculated value of As Found Response: 394.1 ppm Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.9	ppm	1.1	ppm
Auto span	288.0	ppm	286.1	ppm

Notes: No span adjustments

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

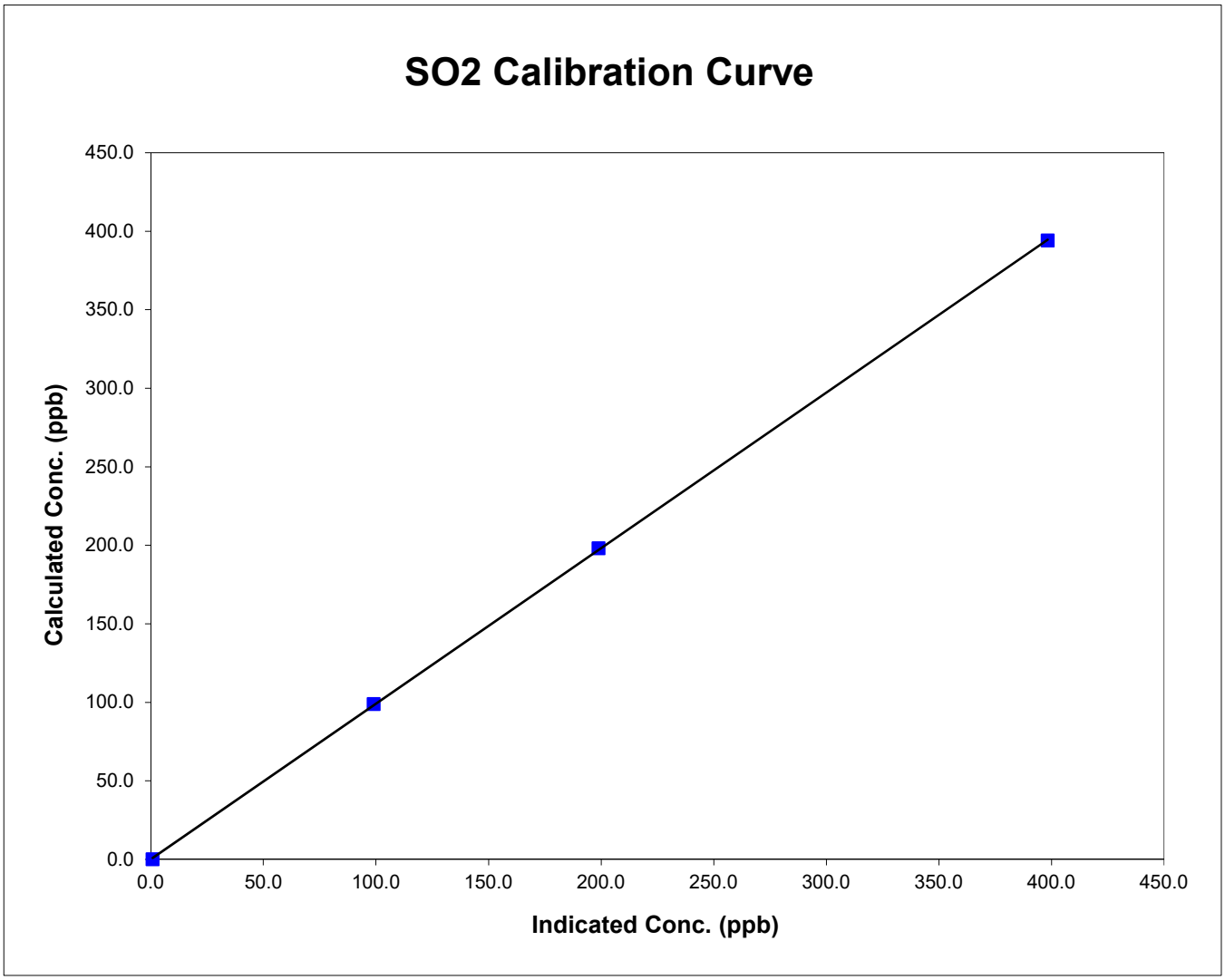
WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 10 2016	Previous Calibration	July 20 2016
Station Number	6	Station Location	Valleyview
Start Time (MST)	12:15	End Time (MST)	14:30:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	609716239

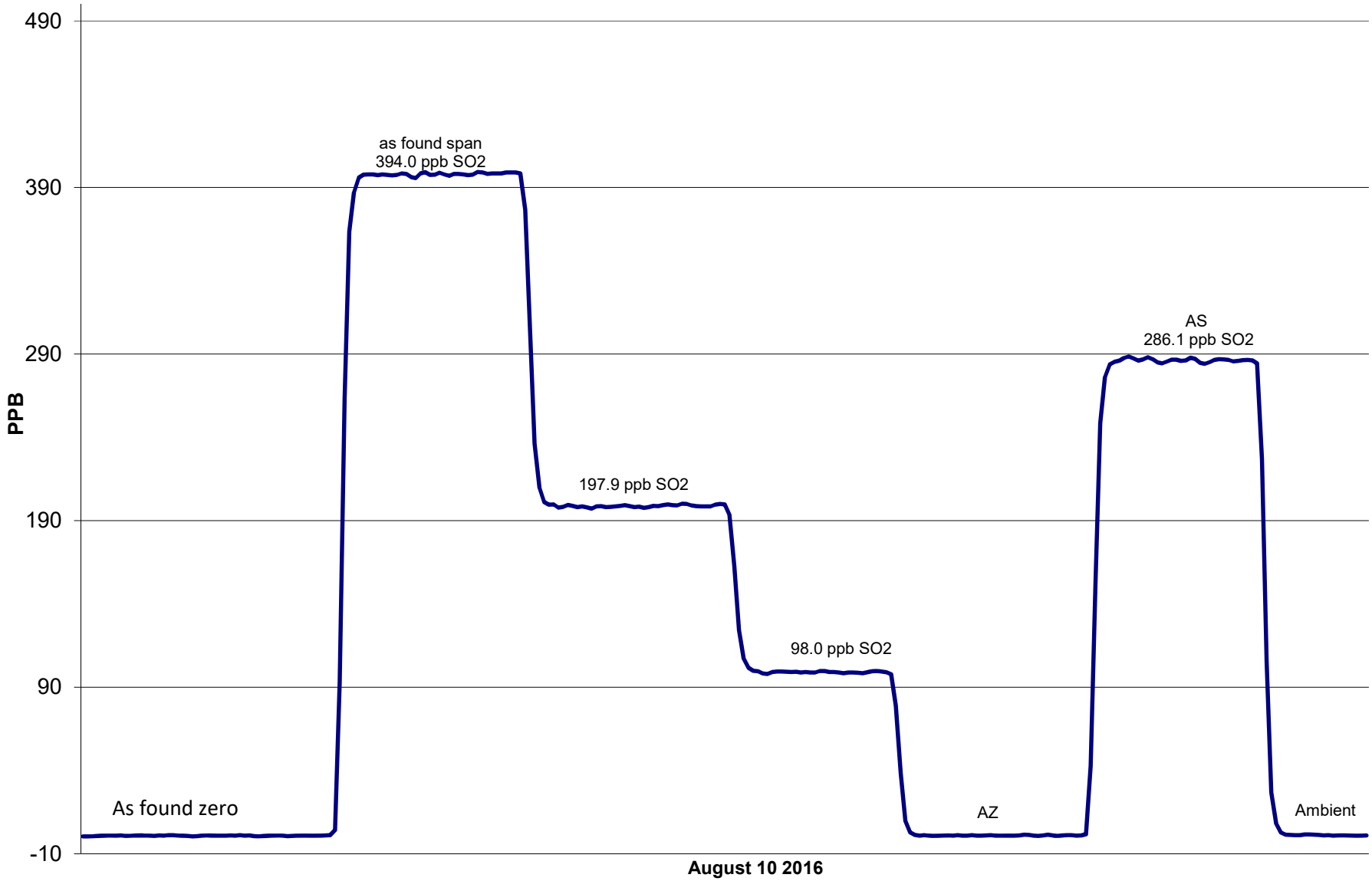
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.9	N/A		
394.0	398.3	0.9892	Correlation Coefficient	0.999973
197.9	198.9	0.9951		
98.8	99.1	0.9973	Slope	0.990489
			Intercept	0.053535



AZ

SO2 Calibration



Calibration Report

Parameter **H2S**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 10 2016	Previous Calibration	July 21 2016
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:55	End Time (MST)	13:10:00 PM
Barometric Pressure	0.927 atm	Station Temperature	22.0 Deg C
Calibrator	Environics	Serial Number	6586
Cal Gas Concentration	10.2 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	0.994840	Calculated slope	1.001844
Calculated intercept	-0.094533	Calculated intercept	-0.031764
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	8.0	ppb	8.0	ppb
Coefficient	0.859		0.859	
Lamp Voltage	788	V	792	V
Chamber Temp	45.2	c	45	c
Perm Oven Temp	45	c	45	c
Pressure	536.30	mm Hg	537.60	mm Hg
Sample Flow	0.368	ccm	0.369	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)
4996	0.00	0.0	0.2	N/A
4998	39.98	80.9	81.0	0.9998
4998	19.96	40.6	40.3	1.0078
6999	10.09	14.7	14.7	1.0002
4997	9.97		2.8	Sox Test
4997	0.00	0.0	0.2	As found zero
4997	39.93	80.9	81.0	As found span
			Average Correction Factor	1.0026

Calculated value of As Found Response: 80.28 ppm Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	0.4	ppm	0.5	ppm
Auto span	67.0	ppm	66.7	ppm

Notes: No adjustments made
Sox scrubber check is done

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PAZA**

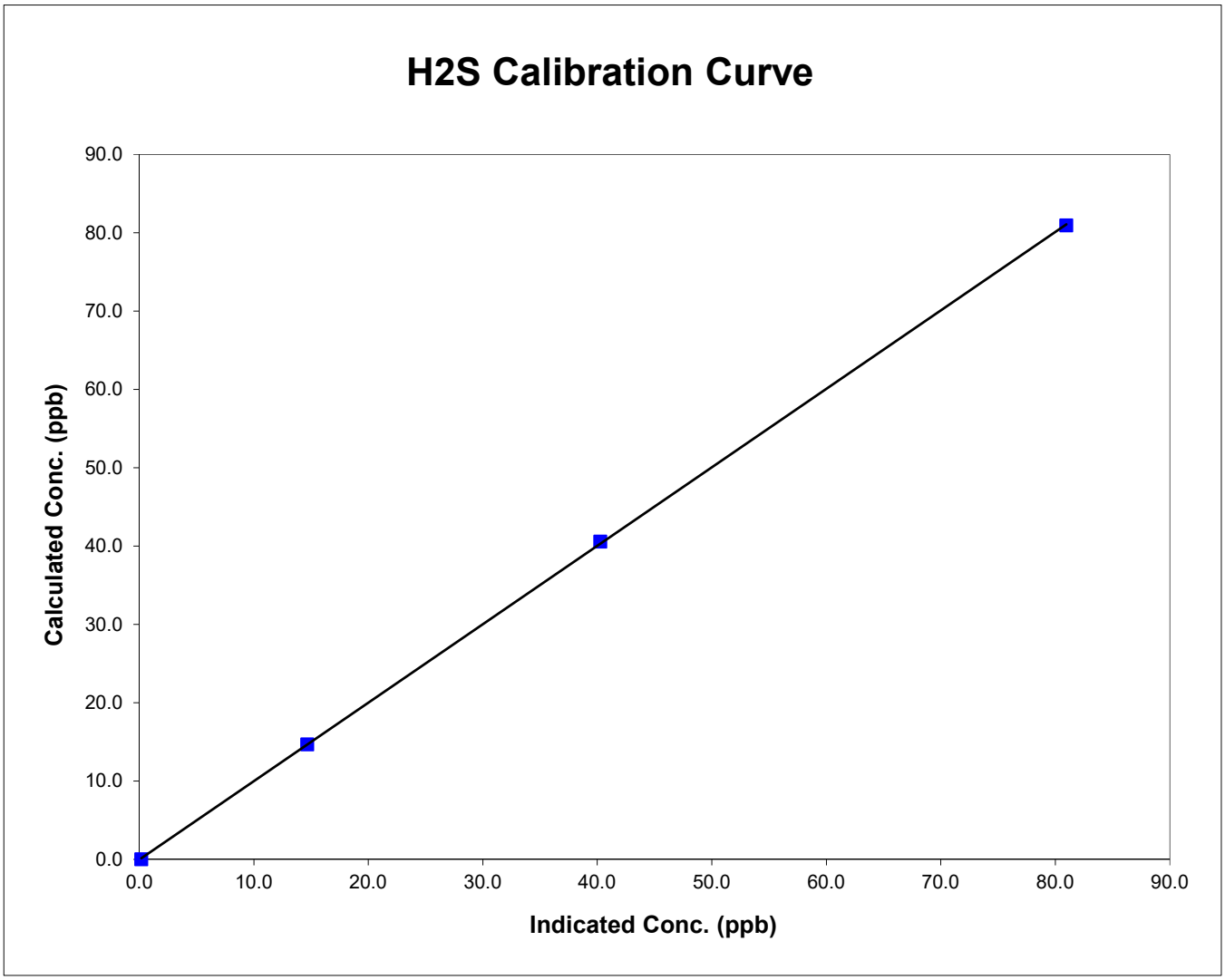
WSP AIR QUALITY MONITORING

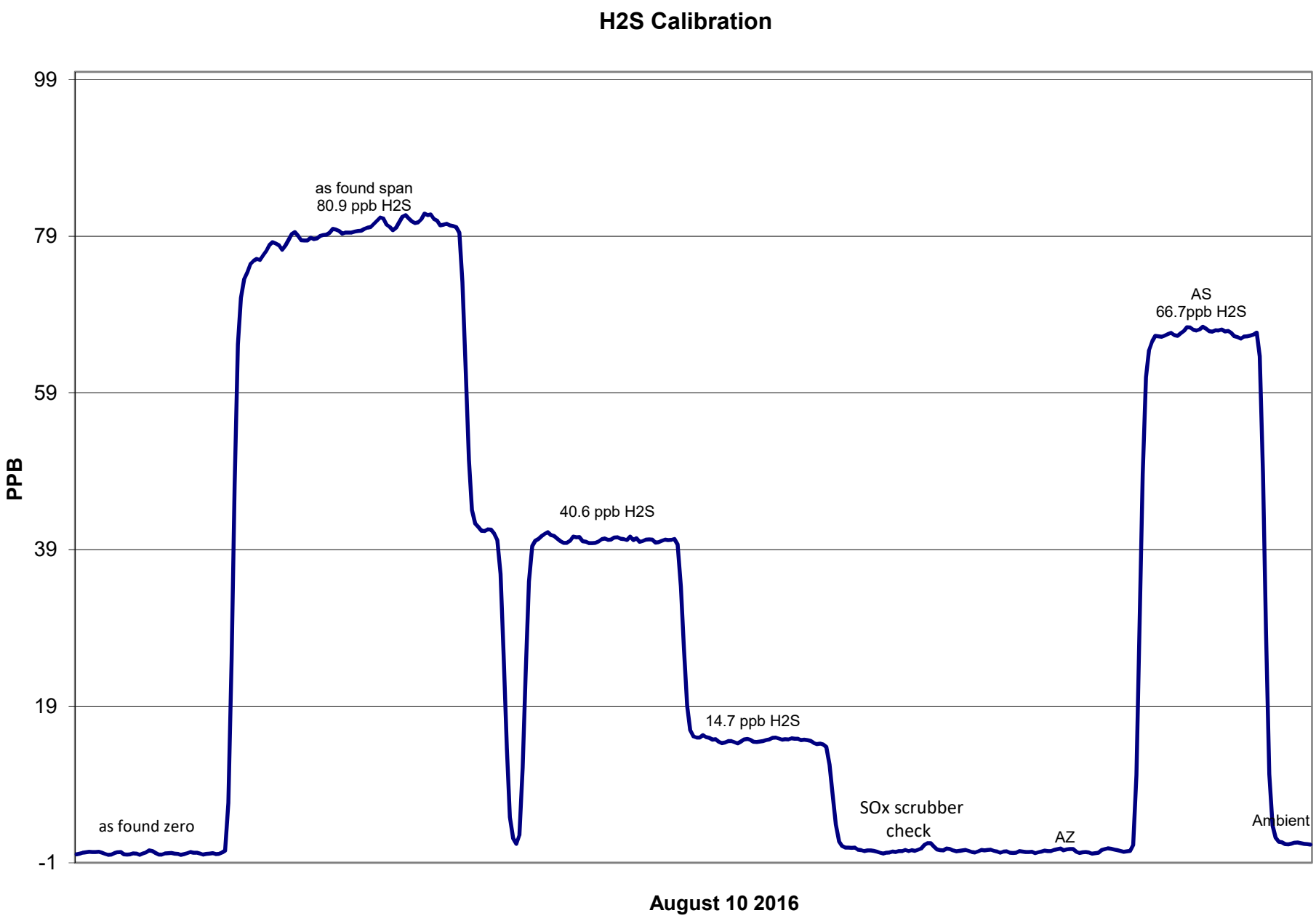
Station Information

Calibration Date	August 10 2016	Previous Calibration	July 21 2016
Station Number	6	Station Location	Valleyview
Start Time (MST)	9:55	End Time (MST)	13:10:00 PM
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		
80.9	81.0	0.9998	Correlation Coefficient	0.999970
40.6	40.3	1.0078		
14.7	14.7	1.0002	Slope	1.001844
			Intercept	-0.031764




H2S Calibration
99
79
59
39
19
-1
PPB
as found span
80.9 ppb H2S
40.6 ppb H2S
14.7 ppb H2S
SOx scrubber
check
AZ
AS
66.7ppb H2S
Ambient
as found zero
August 10 2016

Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 16, 2016	Previous Calibration	February 24, 2016
Station Number	1	Station Location	Donnelly
Reason: Routine	Install	Removal	Other:
Start Time (MST)	12:30	End Time (MST)	14:50:00 PM
Barometric Pressure	0.921 mm	Station Temperature	22.0 Deg C
Calibrator	Environics	Serial Number	6586
Cal Gas Concentration	49.7 ppm	Cal Gas Expiry Date	11/5/2018
Correction factor	0.031095	Cal Gas Cylinder #	LL103793
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.985045	Calculated slope	0.999584
Calculated intercept	0.479657	Calculated intercept	0.763148
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	5.5		6.5	
coefficient	0.905		0.929	
Lamp Voltage	816	volts	821	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	679.1	mm Hg	680.6	mm Hg
Sample Flow	0.399	ccm	0.399	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	0.4	N/A
4995	39.93	394.2	394.3	0.9996
4995	19.96	197.8	196.0	1.0093
4995	9.97	99.0	97.6	1.0148
4995	0.0	0.0	0.4	As Found Zero
4995	39.93	394.2	382.3	As Found Span
			Average Correction Factor	1.0079

Calculated value of As Found Response: 376.676 ppm Percent Change of As Found: 4.4%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.4	ppm
Auto span	265.4	ppm	242.0	ppm

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii,Grover Christiansen

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

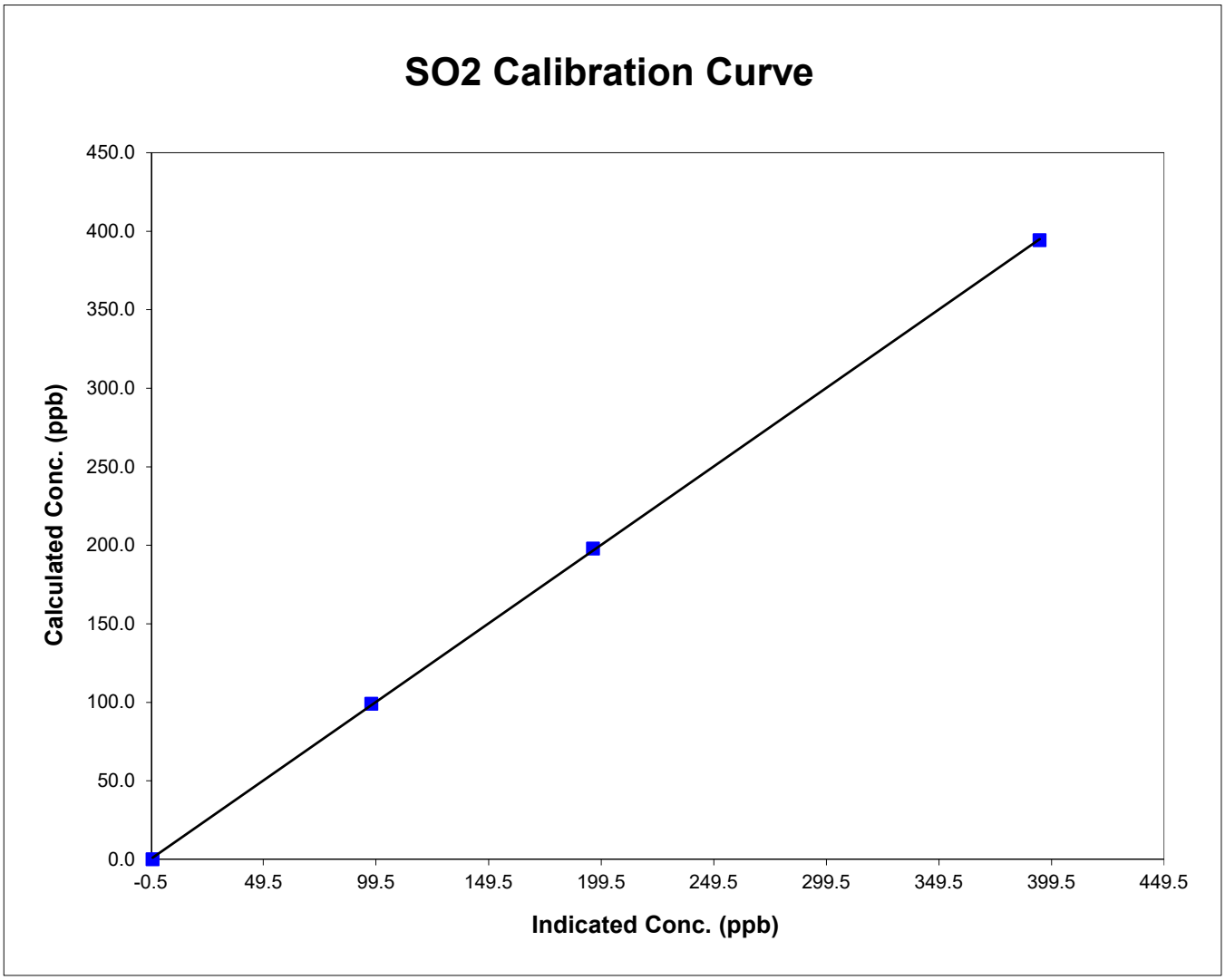
WSP AIR QUALITY MONITORING

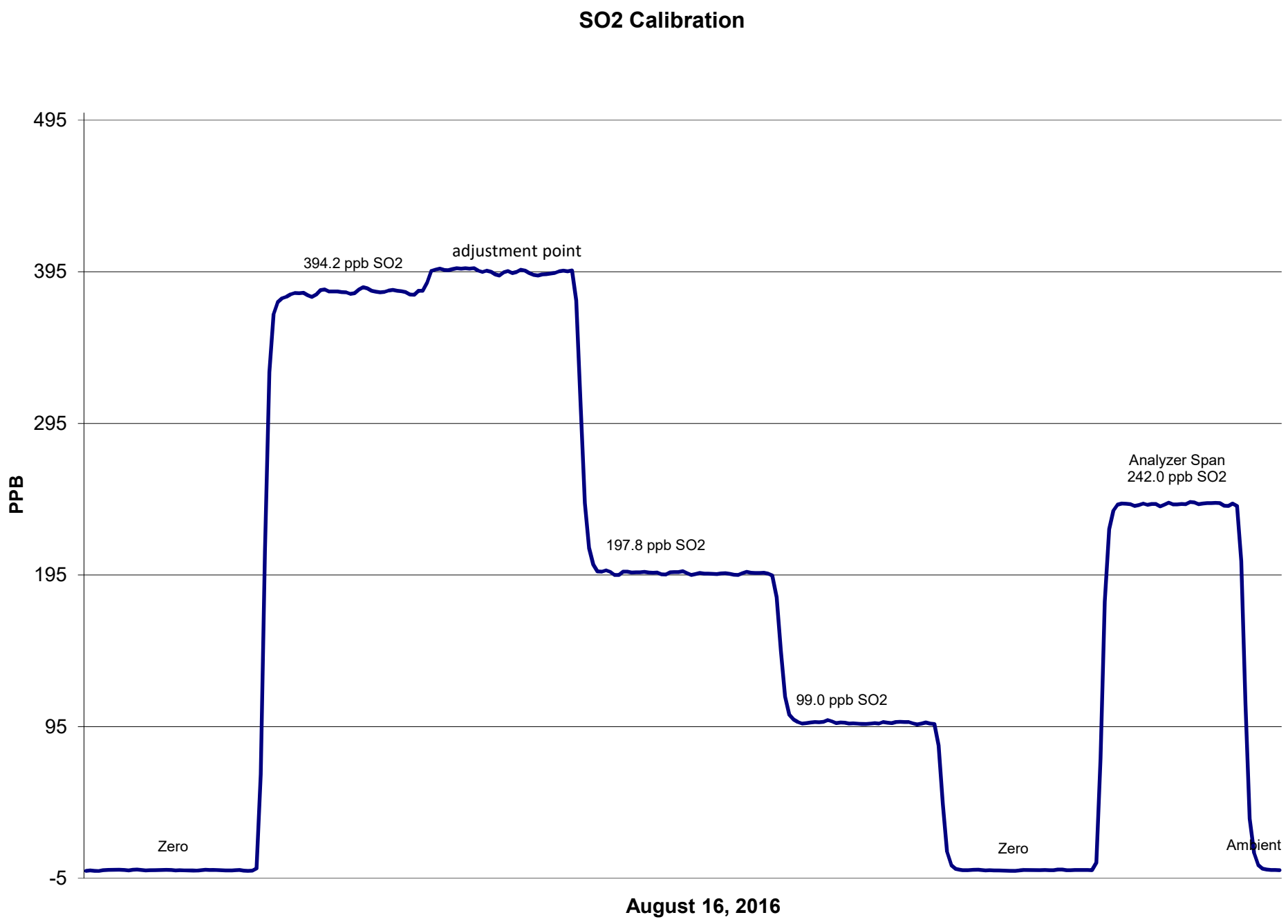
Station Information

Calibration Date	August 16, 2016	Previous Calibration	February 24, 2016
Station Number	1	Station Location	Donnelly
Start Time (MST)	12:30	End Time (MST)	14:50:00 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	0.4	N/A		
394.2	394.3	0.9996	Correlation Coefficient	0.999957
197.8	196.0	1.0093		
99.0	97.6	1.0148	Slope	0.999584
			Intercept	0.763148




SO2 Calibration
495
395
295
195
95
-5
PPB
394.2 ppb SO2
adjustment point
197.8 ppb SO2
99.0 ppb SO2
Analyzer Span
242.0 ppb SO2
Zero
Zero
Ambient
August 16, 2016

Calibration Report

Parameter **H2S**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 16, 2016	Previous Calibration	Febuary 24, 2016
Station Number	1	Station Location	Donnelly
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:50	End Time (MST)	13:30:00 PM
Barometric Pressure	0.926 mm	Station Temperature	22.0 Deg C
Calibrator	Environics	Serial Number	6586
Cal Gas Conc	10.2 ppm	Cal Gas Expiry Date	7/8/2016
Correction factor	0.031264	Cal Gas Cylinder #	LL103793
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.990164	Calculated slope	0.990748
Calculated intercept	-0.219665	Calculated intercept	-0.430598
Analyzer make	Thermo 450i	Analyzer serial #	1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.7	ppb	15.5	ppb
coefficient	1.109		1.09	
Lamp Voltage	796	volts	798	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	499	mm Hg	498.5	mm Hg
Sample Flow	0.781	lpm	0.778	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	0.3	N/A
4995	39.93	80.89	82.1	0.9856
4995	19.96	40.60	41.4	0.9813
6994	9.97	14.52	15.2	0.9522
4995	0.00	0.00	0.3	As Found Zero
4995	39.93	80.89	80.2	As Found Span
			Average Correction Factor	0.9730

Calculated value of As Found Response: 78.84 ppm Percent Change of As Found: 2.5%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.6	ppm
Auto span	57.3	ppm	63.2	ppm

Notes: Span adjustment done

Calibration Performed By: Dmytro Dolotii, Grover Christiansen

Calibration Summary

Parameter **H2S**

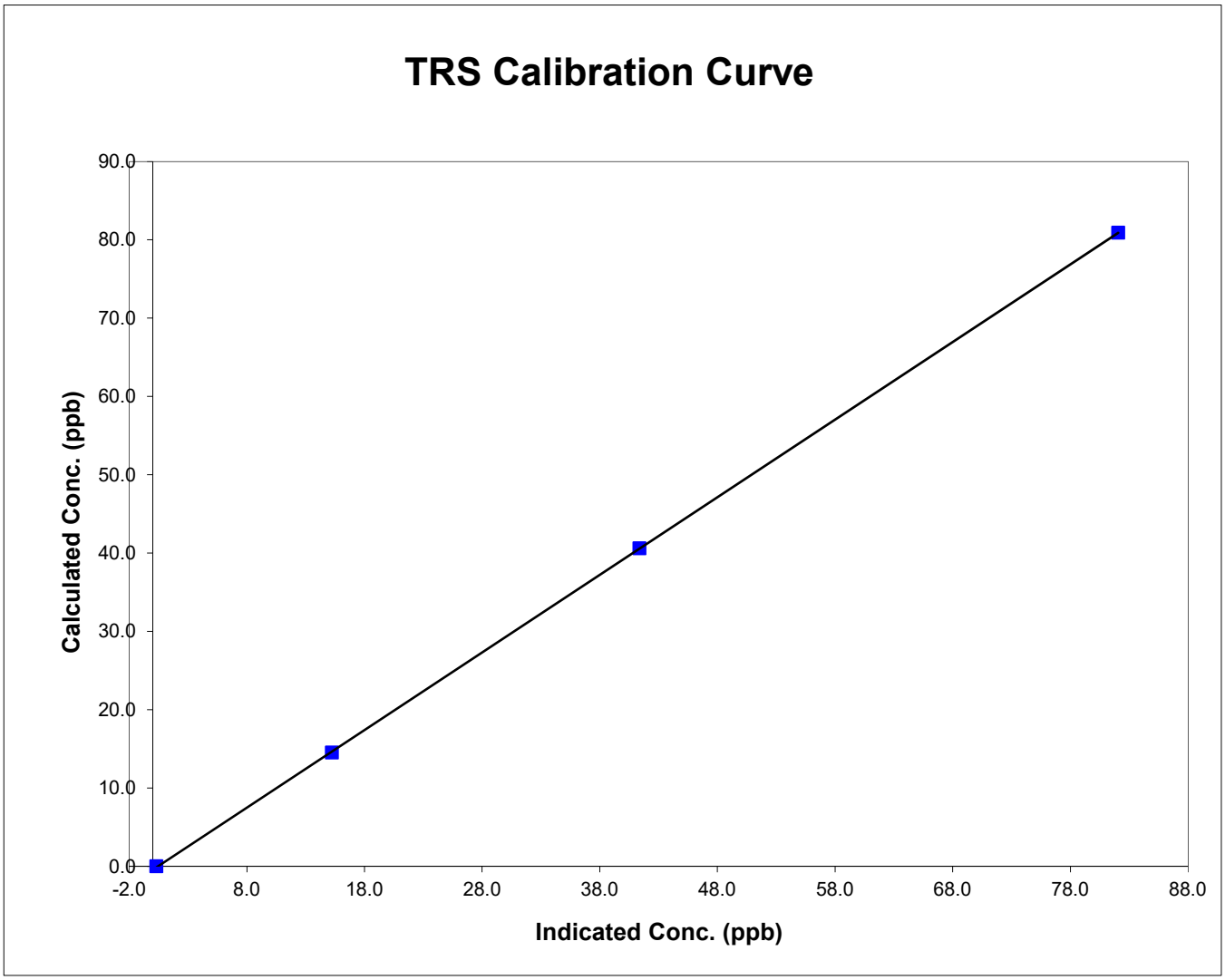
Air Monitoring Network **PAZA**

Station Information

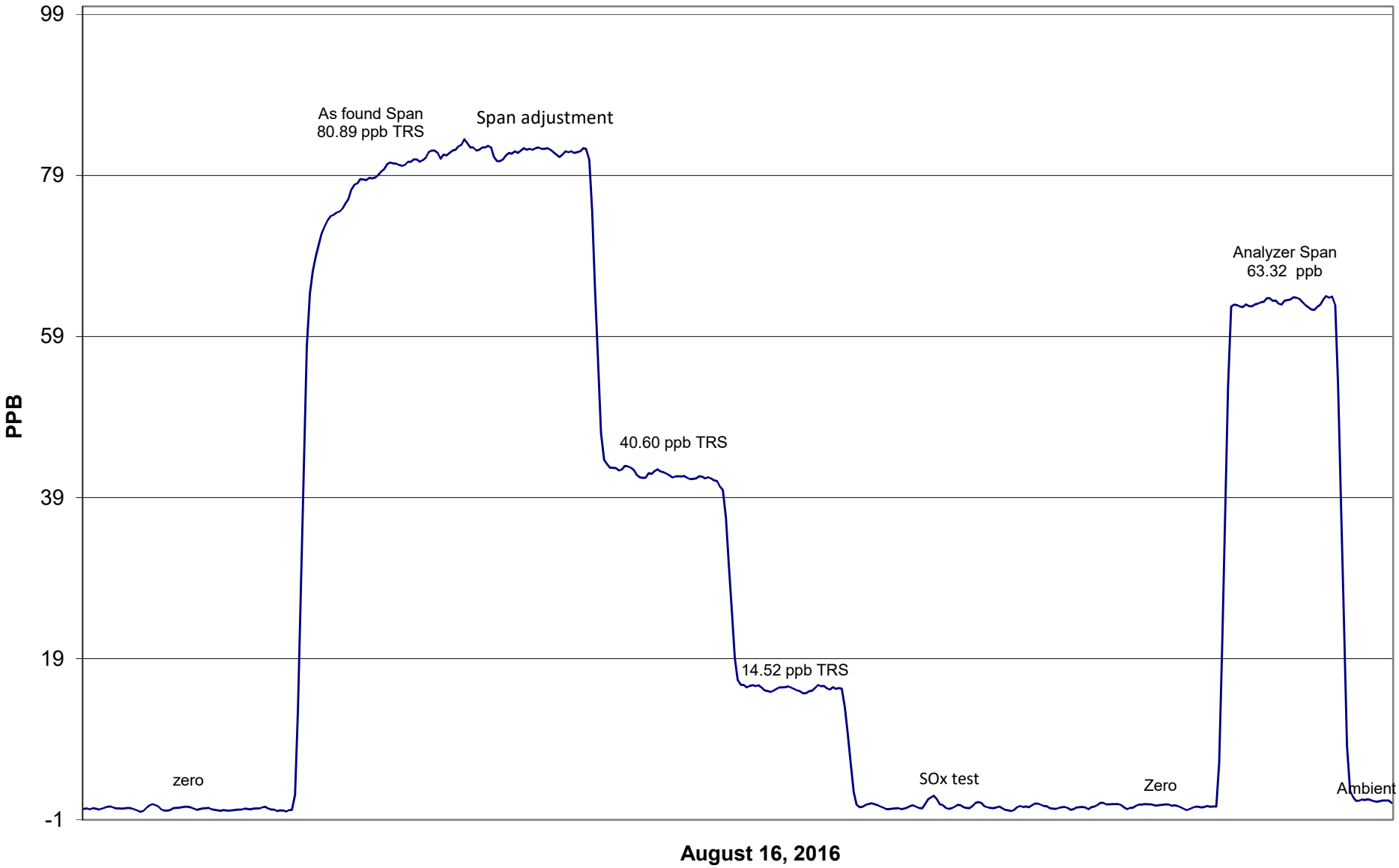
Calibration Date	August 16, 2016	Previous Calibration	Febuary 24, 2016
Station Number	1	Station Location	Donnelly
Start Time (MST)	9:50	End Time (MST)	13:30:00 PM
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
80.9	82.1	0.9856	Correlation Coefficient	0.999990
40.6	41.4	0.9813		
14.5	15.2	0.9522	Slope	0.990748
			Intercept	-0.430598



H2S Calibration



Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 17, 2016	Previous Calibration	July 8, 2016
Station Number	10	Station Location	Clairmont
Reason: Routine	Install	Removal	Other:
Start Time (MST)	8:10	End Time (MST)	10:45
Barometric Pressure	0.929 Atm	Station Temperature	21.0 Deg C
Calibrator	Environics 6103	Serial Number	6586
Cal Gas Concentratior	49.8 ppm	Cal Gas Expiry Date	3/10/2017
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	0.982176	Calculated slope	0.985671
Calculated intercept	0.595659	Calculated intercept	0.810058
Analyzer make	TEI 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	23.3		23.3	
Coefficient	1.058		1.058	
UV Lamp Voltage	887	V	887	V
Chamber Temp	44.1	C	44.3	C
Perm Gas Temp	45	C	45	C
Pressure	680.9	mm Hg	681.1	mm Hg
Sample Flow	0.47	LPM	0.47	LPM
Lamp Intesity	30472	Hz	30362	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)
4998	0.00	0.0	0.3	N/A
4996	39.95	395.1	400.7	0.9859
4997	19.98	198.3	199.2	0.9956
4999	9.94	98.8	98.8	1.0001
4998	0.00	0.0	0.3	As found zero
4999	39.93	394.6	400.7	As found span
			Average Correction Factor	0.9939

Calculated value of As Found Response: 393.935 ppm Percent Change of As Found: 0.2%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	209.8	ppm	202.4	ppm

Notes: No adjustment made

Calibration Summary

Parameter **SO2**

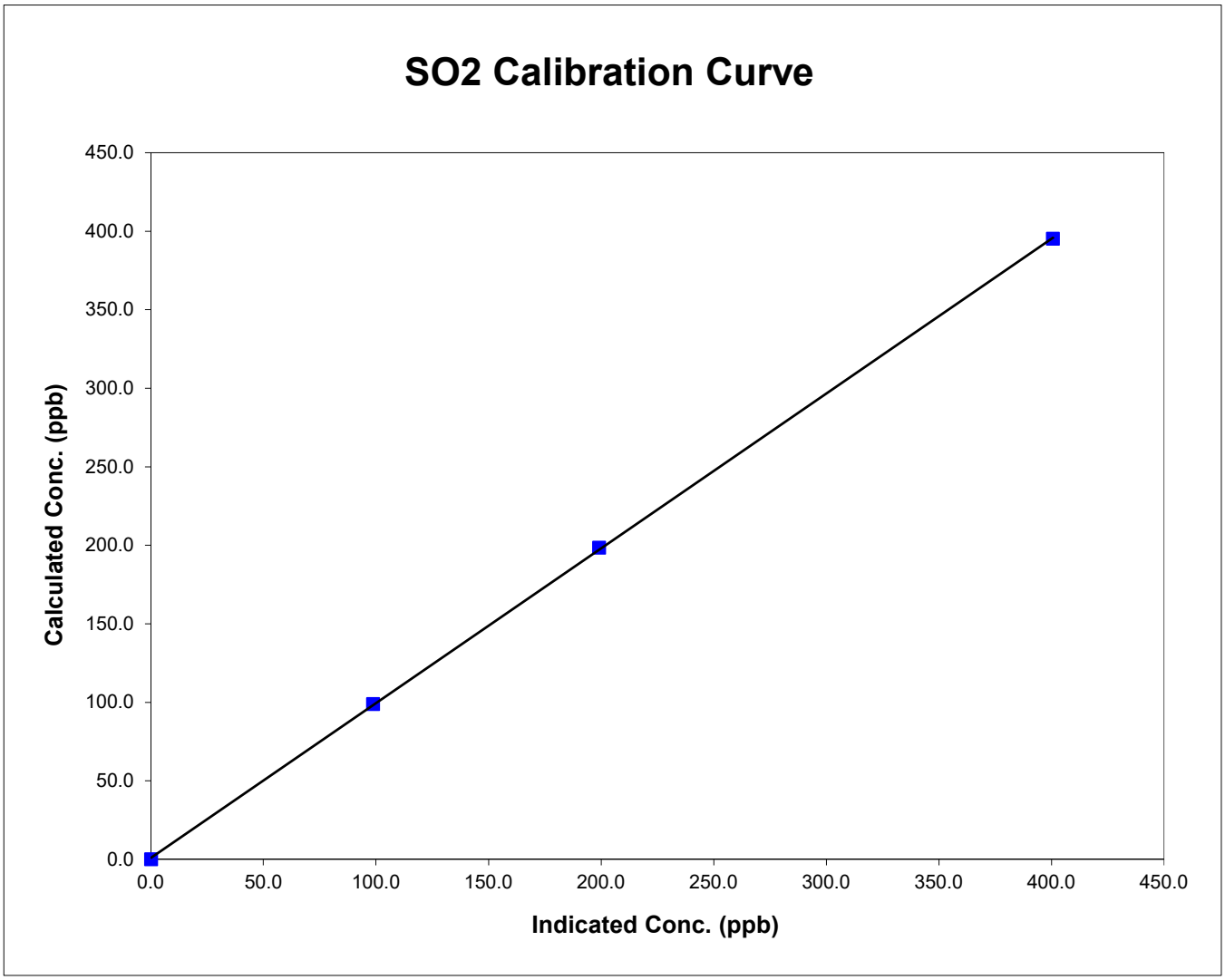
Air Monitoring Network **PAZA**

Station Information

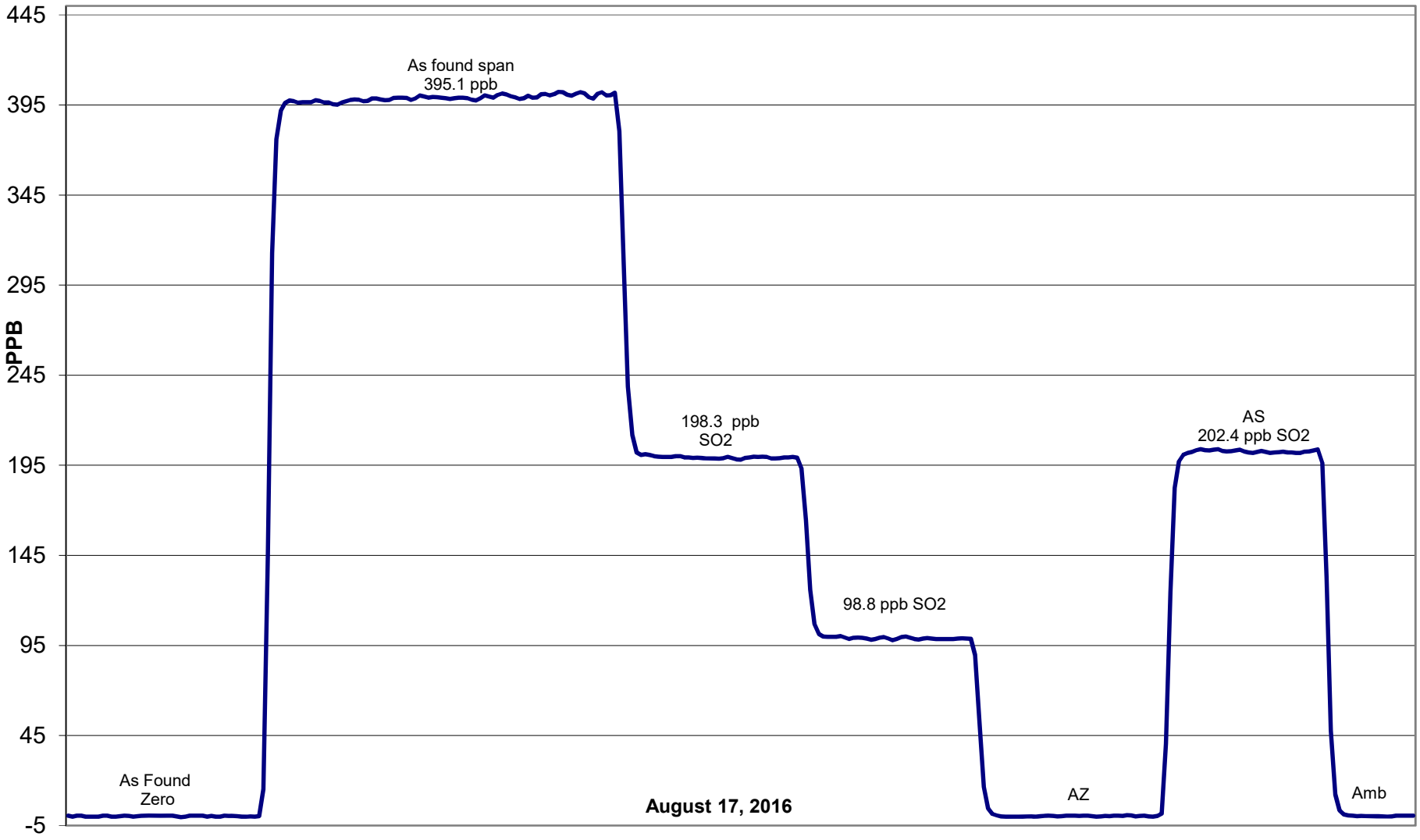
Calibration Date	August 17, 2016	Previous Calibration	July 8, 2016
Station Number	10	Station Location	Clairmont
Start Time (MST)	8:10	End Time (MST)	10:45
Analyzer make/model	TEI 43C	Analyzer serial #	436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
395.1	400.7	0.9859	Correlation Coefficient	0.999960
198.3	199.2	0.9956		
98.8	98.8	1.0001	Slope	0.985671
			Intercept	0.810058



SO2 Calibration



Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 17, 2016	Previous Calibration	July 8, 2016
Station Number	10	Station Location	Rycroft

Reason: Routine Installation Removal Other:

Start Time (MST)	8:15		End Time (MST)	11:55	
Barometric Pressure	0.929	Atm	Station Temperature	21.0	Deg C
Calibrator	Environics		Serial Number	6586	
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	1.002181	1.003981	1.001286
	Data Offset	-0.369639	0.607442	0.245639
After	Data Slope	1.002549	0.999333	0.994649
	Data Offset	-1.518571	0.768206	0.717907
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	7.6	mV	7.8	mV
NOx bkgnd	8.0	mV	8.2	mV
NO coefficient	1.335		1.374	
NOx coefficient	0.999		0.999	
NO2 conv temp	326.0	Deg C	326.4	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-835.5	mV	-834.5	mV
R Cell Press	220.7	in Hg	219.3	in Hg
Sample Flow	0.674	LPM	0.678	LPM

Notes: Span adjustment done

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date: August 17, 2016 Station Location: Rycroft

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	4994	0.00	0.0	0.0	0.0	0.0	-0.3	0.3	N/A	N/A
1	4995	39.92	405.9	403.6	2.4	405.8	405.3	-1.3	1.0004	0.9958
2	4994	19.96	203.8	202.6	1.2	202.9	202.6	-0.6	1.0044	1.0001
3	4998	9.98	102.0	101.4	0.6	100.5	101.0	-0.5	1.0158	1.0043
AFZ	4994	0.00	0.0	0.0	0.0	0.0	-0.3	0.3	0.0000	0.0000
AFS	4999	39.92	405.6	403.2	0.8	393.5	392.3	-0.5	1.0308	1.0280
							Average Correction Factor		1.0068	1.0001

As Found Concentrations: NO_X= 395.7 NO= 393.4 As Found Percent Change NO_X= -2.5% NO= -2.5%

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	-0.3	-0.3	0.0	0.0	-0.3	0.3	N/A	N/A	N/A	N/A
NO point	404.1	404.1	0.0	405.1	404.1	-1.1	0.9973	1.0000	N/A	N/A
300	404.1	66.8	337.3	404.8	66.8	336.5	0.9981	1.0000	1.0024	99.8%
200	404.1	178.5	225.6	408.8	178.5	228.2	0.9885	1.0000	0.9887	101.1%
100	404.1	295.9	108.2	408.5	295.9	110.4	0.9891	1.0000	0.9794	102.1%
					Average Correction Factor		0.9919	1.0000	0.9901	101.0%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.6	-0.3	-0.4	ppb	-0.2	0.1	-0.4	ppb
Auto span	155.7	153.9	1.0	ppb	153.7	151.8	1.0	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

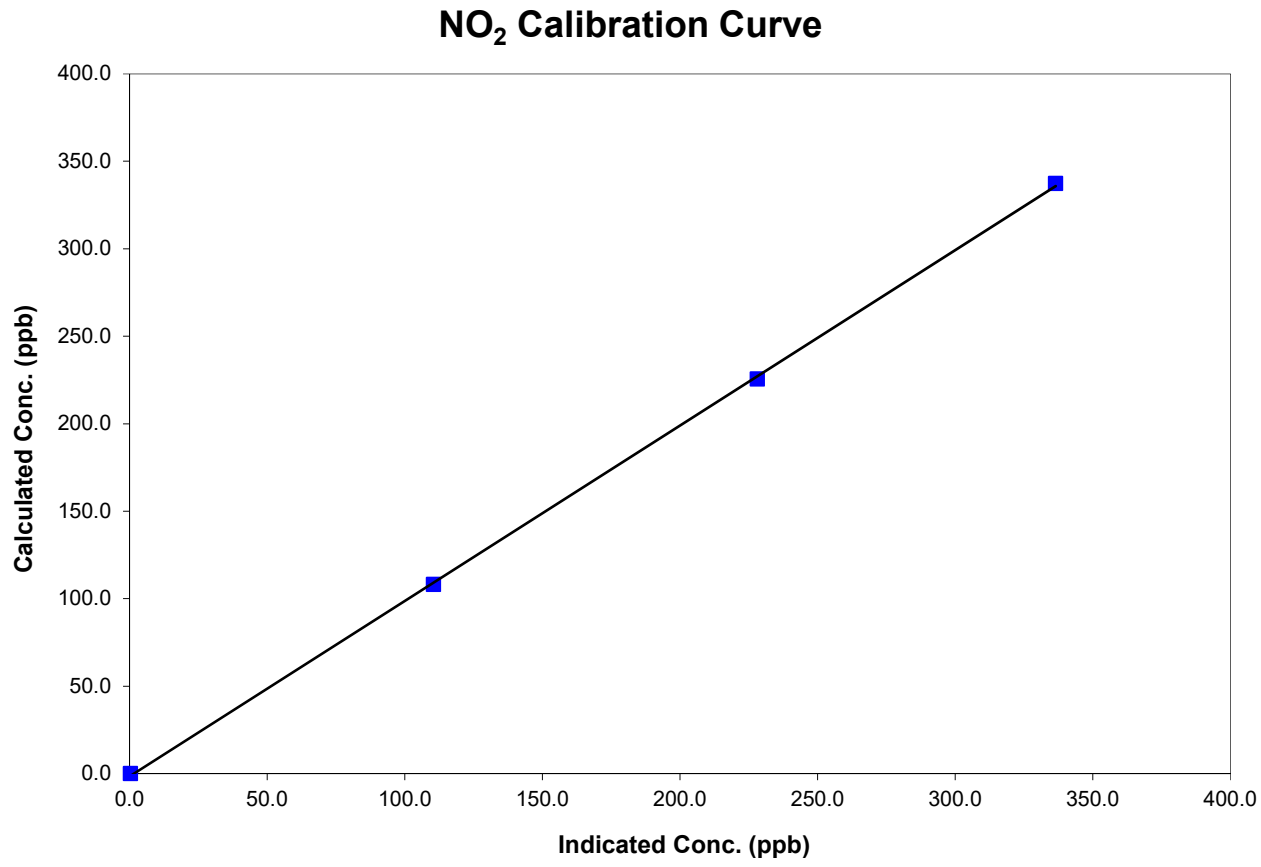
WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 17, 2016	Previous Calibration	July 8, 2016
Station Number	10	Station Location	Rycroft
Start Time (MST)	8:15	End Time (MST)	11:55
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		
337.3	336.5	1.0024	Correlation Coefficient	0.999884
225.6	228.2	0.9887		
108.2	110.4	0.9794	Slope	1.002549
			Intercept	-1.518571



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

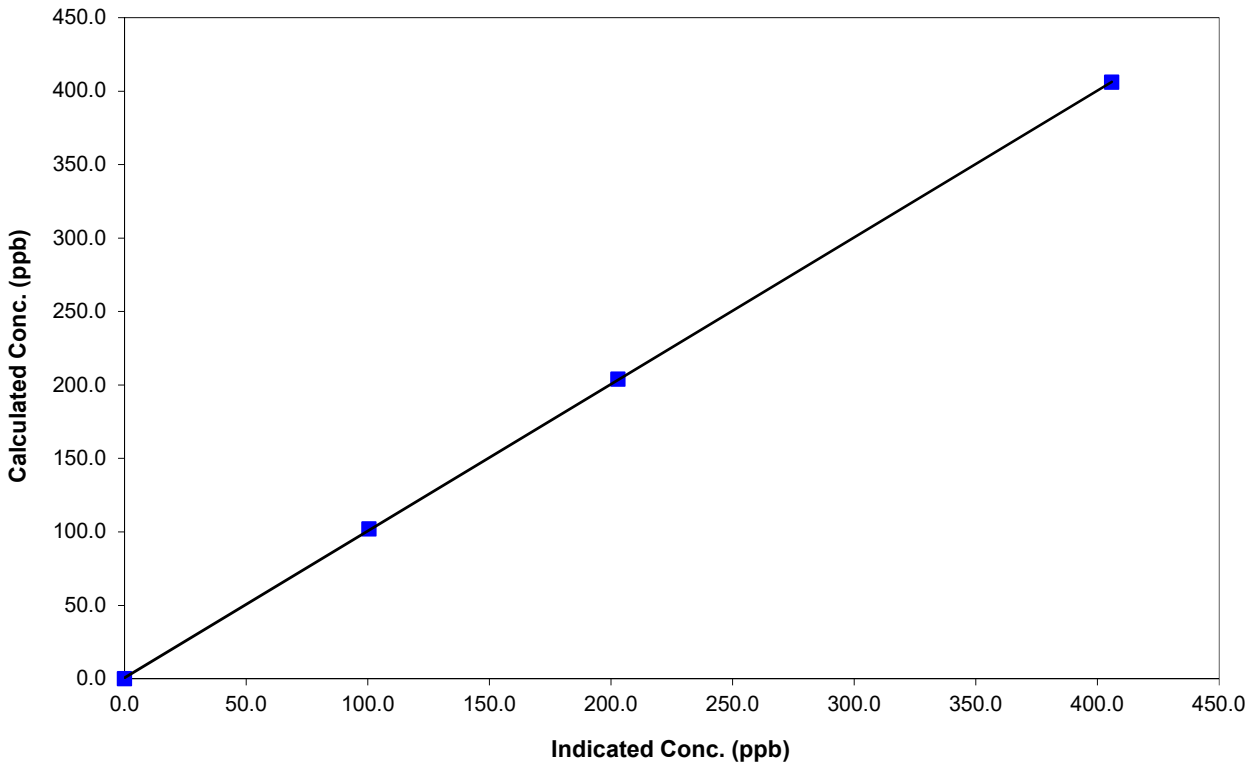
Station Information

Calibration Date	August 17, 2016	Previous Calibration	July 8, 2016
Station Number	10	Station Location	Rycroft
Start Time (MST)	8:15	End Time (MST)	11:55
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
405.9	405.8	1.0004	Correlation Coefficient	0.999982
203.8	202.9	1.0044		
102.0	100.5	1.0158	Slope	0.999333
			Intercept	0.768206

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

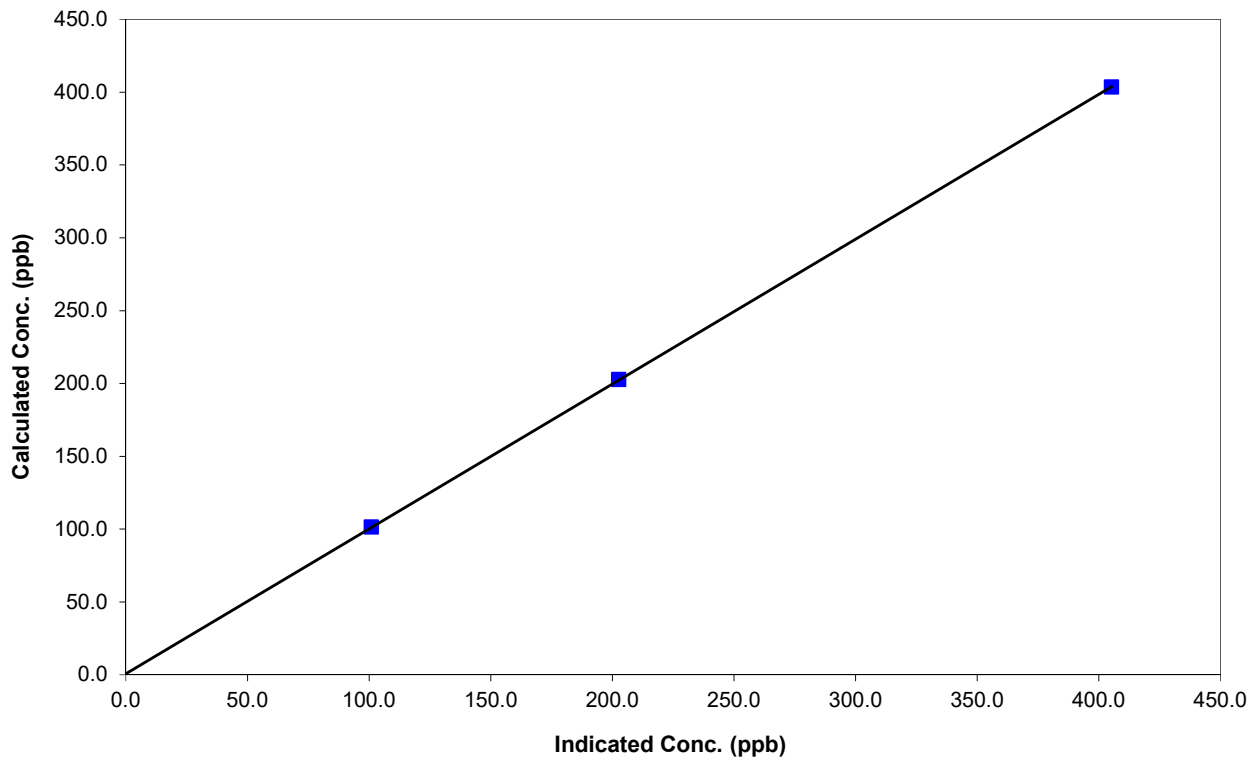
Station Information

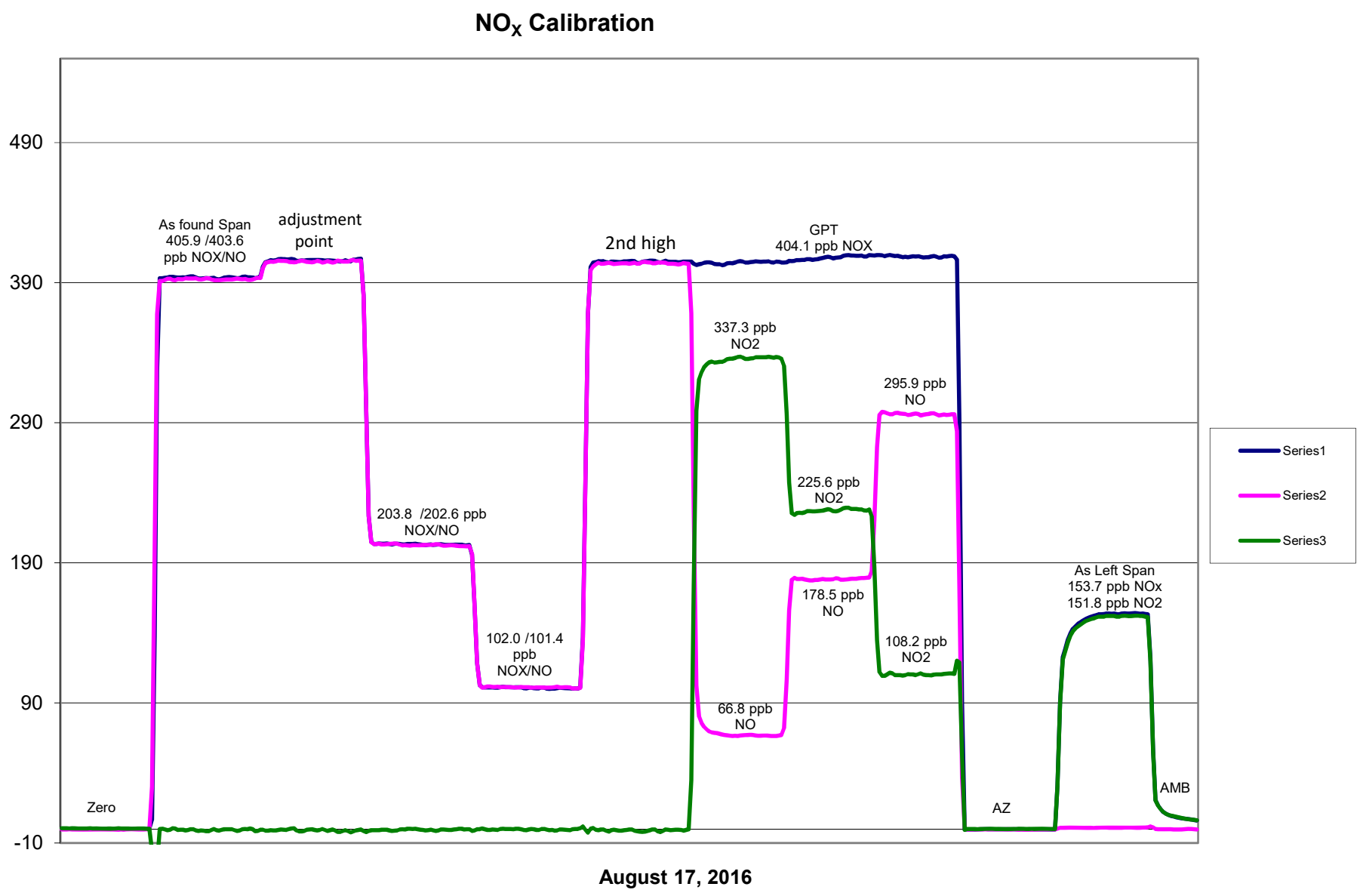
Calibration Date	August 17, 2016	Previous Calibration	July 8, 2016
Station Number	10	Station Location	Rycroft
Start Time (MST)	8:15	End Time (MST)	11:55
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A		
403.6	405.3	0.9958	Correlation Coefficient	0.999995
202.6	202.6	1.0001		
101.4	101.0	1.0043	Slope	0.994649
			Intercept	0.717907

NO Calibration Curve




NOx Calibration
490
390
290
190
90
-10
As found Span
405.9 /403.6
ppb NOX/NO
adjustment
point
2nd high
GPT
404.1 ppb NOX
337.3 ppb
NO2
295.9 ppb
NO
225.6 ppb
NO2
203.8 /202.6 ppb
NOX/NO
178.5 ppb
NO
As Left Span
153.7 ppb NOx
151.8 ppb NO2
102.0 /101.4
ppb
NOX/NO
108.2 ppb
NO2
66.8 ppb
NO
Zero
AZ
AMB
Series1
Series2
Series3
August 17, 2016

Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 17 2016	Previous Calibration	July 8 2016
Station Number	10	Station Location	Rycroft
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	11:00	End Time (MST)	13:00:00 PM
Barometric Pressure	0.929 atm	Station Temperature	21.0 Deg C
Calibrator	Environics 6103	Serial Number	6586
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.019185	Calculated slope	1.020464
Calculated intercept	-0.759433	Calculated intercept	-1.620406
Analyzer make	Model 49-I	Analyzer serial #	1153630156

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-0.5	ppb	-0.5	ppb
Span	0.994		0.994	
Cell A intensity	92997	Hz	95889	Hz
Cell B intensity	121143	Hz	121436	Hz
Pressure	701.10	in Hg	701.70	in Hg
CellA Flow	0.696	ccm	0.696	ccm
Cell B Flow	0.695	cmm	0.691	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)
5015	0.00	0.0	0.6	N/A
5020	0.30	337.3	331.6	1.0171
5025	0.20	225.6	222.7	1.0129
5020	0.10	108.2	109.0	0.9924
5015	0.00	0.0	0.6	As found zero
5020	0.30	337.3	331.6	As found span
			Average Correction Factor	1.0075

Calculated value of As Found Response: 336.6 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	-0.2	ppb	0.4	ppb
Auto span	397.6	ppb	364.6	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter **O3**

Air Monitoring Network **PAZA**

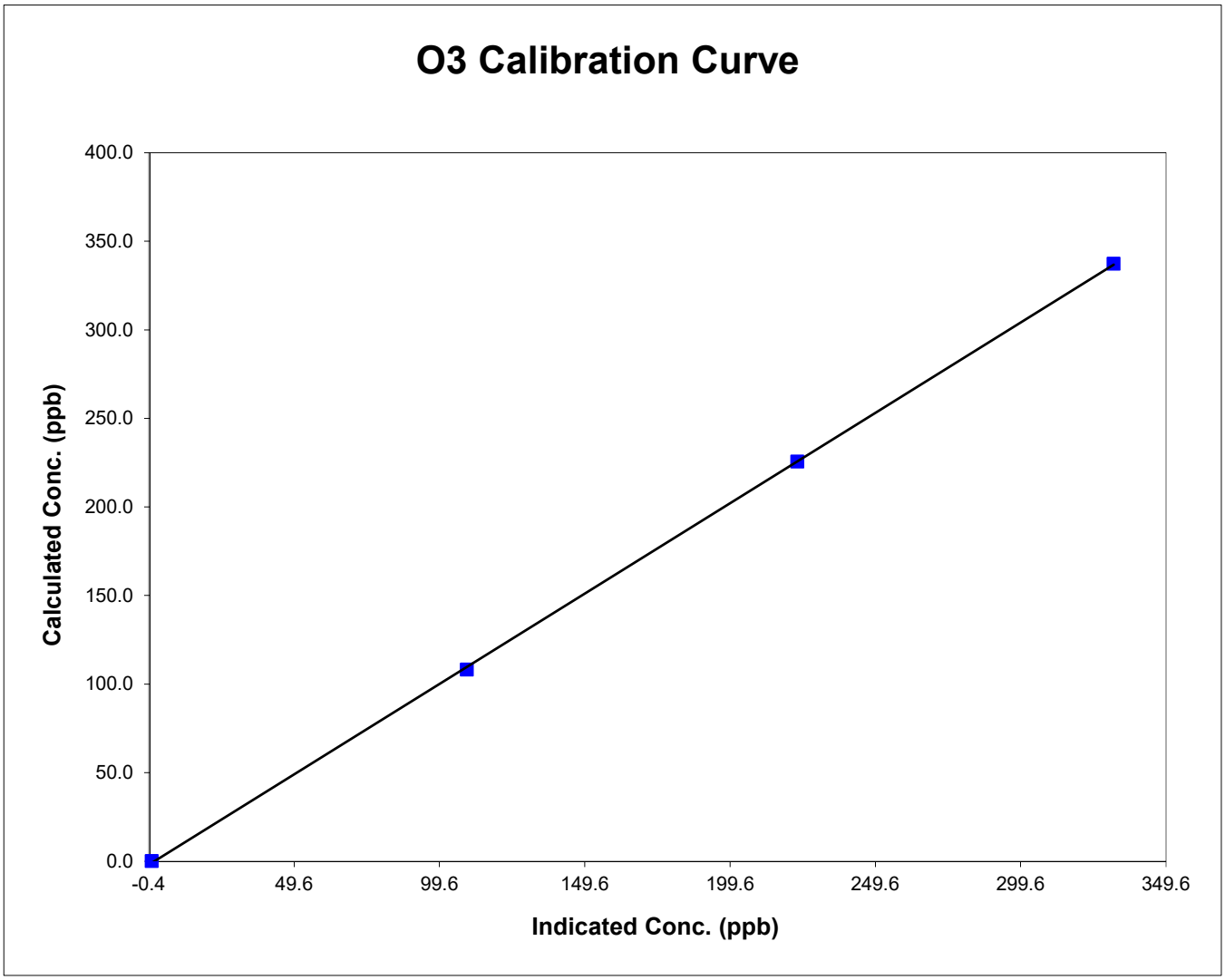
WSP AIR QUALITY MONITORING

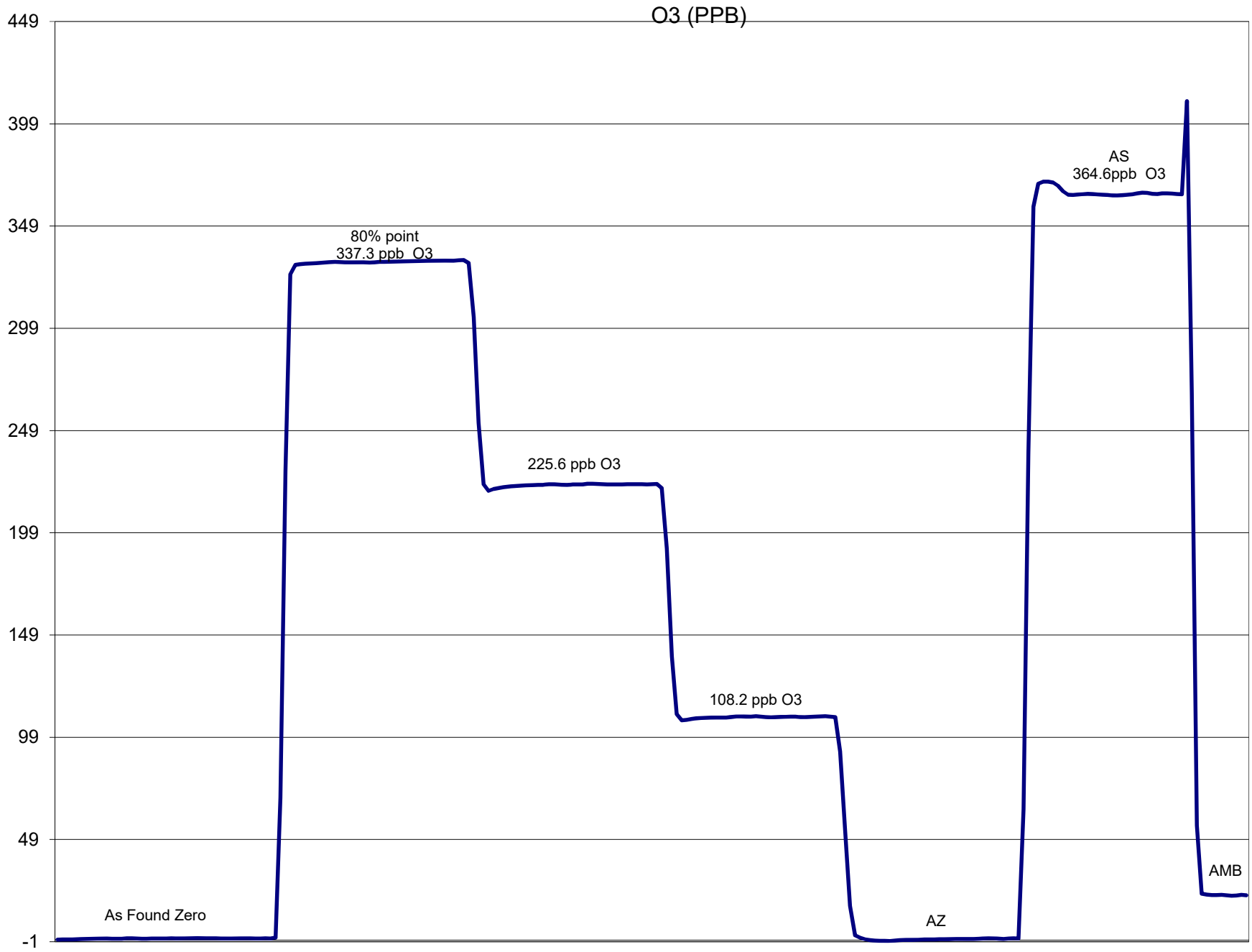
Station Information

Calibration Date	August 17 2016	Previous Calibration	July 8 2016
Station Number	10	Station Location	Rycroft
Start Time (MST)	11:00	End Time (MST)	13:00:00 PM
Analyzer make/model	Model 49-I	Analyzer serial #	1153630156

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	NA		
337.3	331.6	1.0171	Correlation Coefficient	0.999948
225.6	222.7	1.0129		
108.2	109.0	0.9924	Slope	1.020464
			Intercept	-1.620406





August 17 2016

Calibration Report

Parameter **THC**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	July 29, 2016	Previous Calibration	July 9, 2016
Station Number	10	Station Location	Rycroft Rover
Reason: Routine	Install	Removal	Other:
Start Time (MST)	9:40	End Time (MST)	12:30
Barometric Pressure	0.925 ATM	Station Temperature	21.0 Deg C
Calibrator	Environics 6103	Serial Number	6586
Cal Gas Concentration	404 ppm CH4/ 201 ppm C3H8	Cal Gas Expiry Date	3/28/2014
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	0.994643	Calculated slope	0.989191
Calculated intercept	0.159637	Calculated intercept	0.085558
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	2273	capture	2256	capture
THC span offset	2267	capture	2267	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	0.01	N/A
2998	69.96	21.82	22.02	0.9910
2997	29.98	9.48	9.40	1.0078
2998	9.99	3.18	3.07	1.0337
2996	0.00	0.00	-0.05	As Found Zero
2996	69.93	21.82	22.06	As Found Span
			Average Correction Factor	1.0108

Calculated value of As Found Response: 22.157 ppm Percent Change of As Found: -1.5%

	before calibration		after calibration	
Auto zero	-0.07	ppm	0.00	ppm
Auto span	22.46	ppm	21.71	ppm

Notes: Zero adjustment made.

Calibration Summary

Parameter **THC**

Air Monitoring Network **PAZA**

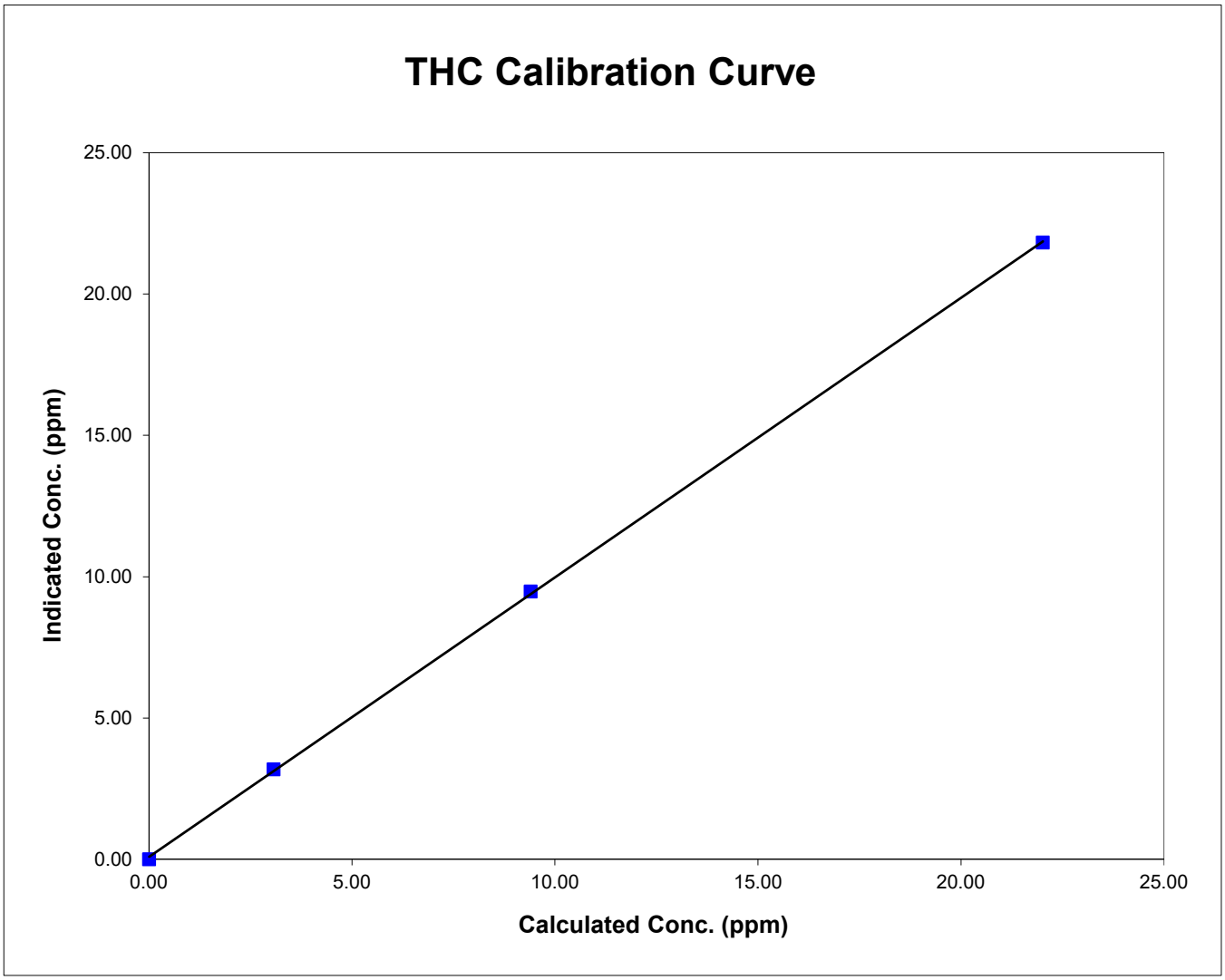
WSP AIR QUALITY MONITORING

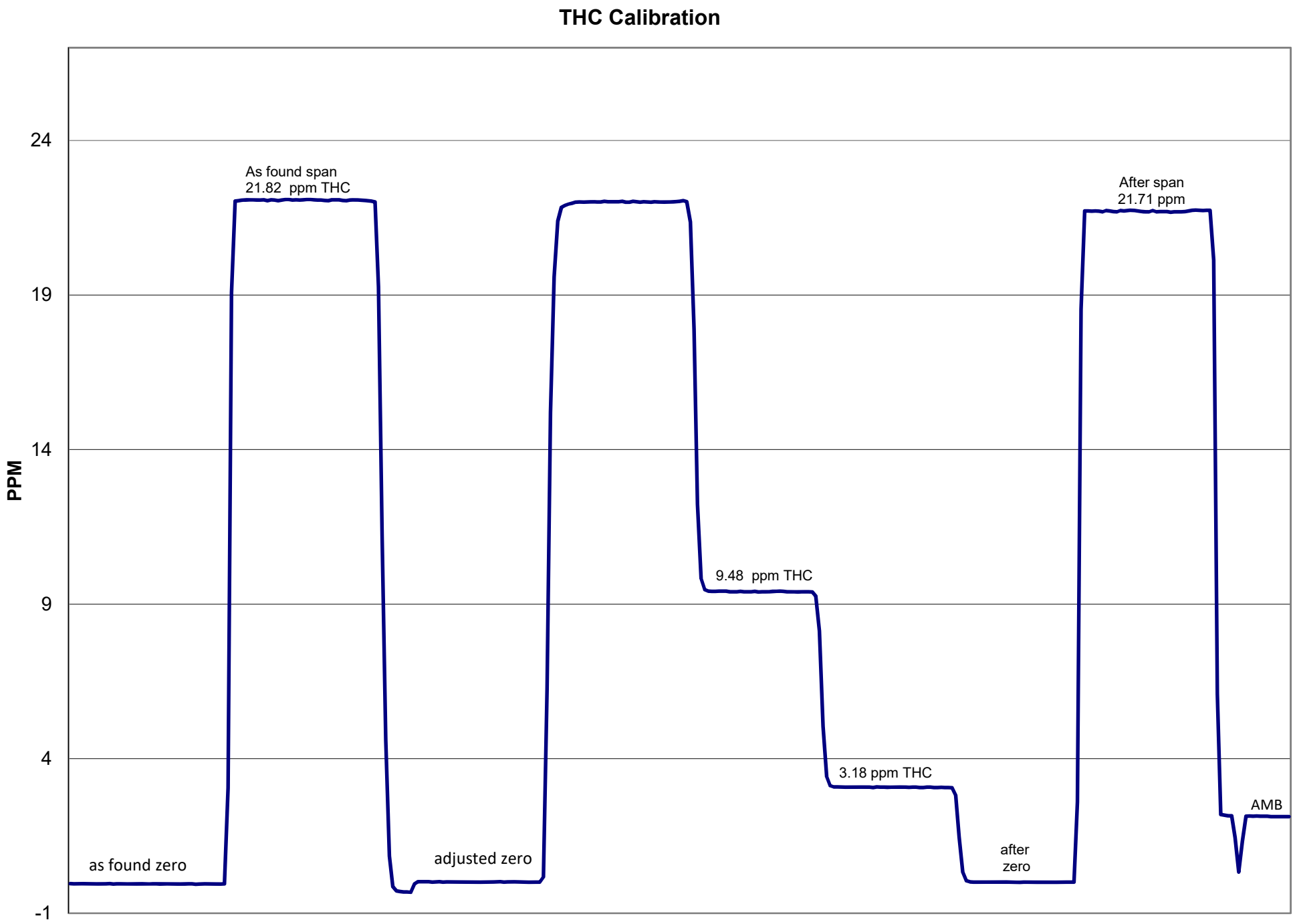
Station Information

Calibration Date	July 29, 2016	Previous Calibration	July 9, 2016
Station Number	10	Station Location	Rycroft Rover
Start Time (MST)	9:40	End Time (MST)	12:30
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	0.010	N/A		
21.82	22.02	0.9910	Correlation Coefficient	0.999922
9.48	9.40	1.0078		
3.18	3.07	1.0337	Slope	0.989191
			Intercept	0.085558




THC Calibration
PPM
24
19
14
9
4
-1
As found span
21.82 ppm THC
After span
21.71 ppm
9.48 ppm THC
3.18 ppm THC
AMB
as found zero
adjusted zero
after
zero

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

WSP AIR QUALITY MONITORING

Station Information

Calibration Date	August 17, 2016	Previous Calibration	July 9, 2016
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	12:05 PM	End Time (MST)	15:05:00 PM
Barometric Pressure	0.925 Atm	Station Temperature	21.0 Deg C
Calibrator	Environics	Serial Number	6586
Cal Gas Concentratior	10.2 ppm	Cal Gas Expiry Date	02/23/2019
Gas Cert Reference	EY0000380		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.006843	Calculated slope	0.992001
Calculated intercept	-0.129934	Calculated intercept	-0.132212
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	26.1	ppb	25.4	ppb
Coefficient	0.956		0.934	
Lamp Voltage	794	V	793	V
Chamber Temp	43,7	C	43.8	C
Perm gas Temp	45	C	45	C
Pressure	668.0	mmHg	669.2	mmHg
Sample Flow	0.451	lpm	0.452	lpm
Lamp Intensity	43704	Hz	43245	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)
4996	0.0	0.0	0.2	N/A
4997	39.94	80.9	81.6	0.9909
4997	19.91	40.5	41.1	0.9851
6998	9.97	14.5	14.6	0.9958
4996	9.97		0.5	Sox Test
4995	0.00	0.0	0.2	As found zero
4995	39.93	80.9	82.0	As found span
			Average Correction Factor	0.9906

Calculated value of As Found Response: 82.20 ppm Percent Change of As Found: -1.6%

	before calibration		after calibration	
Auto zero	0.1	ppm	0.4	ppm
Auto span	57.4	ppm	55.8	ppm

Notes: Span adjustment made
Sox scrubber check performed

Calibration Summary

Parameter **TRS**

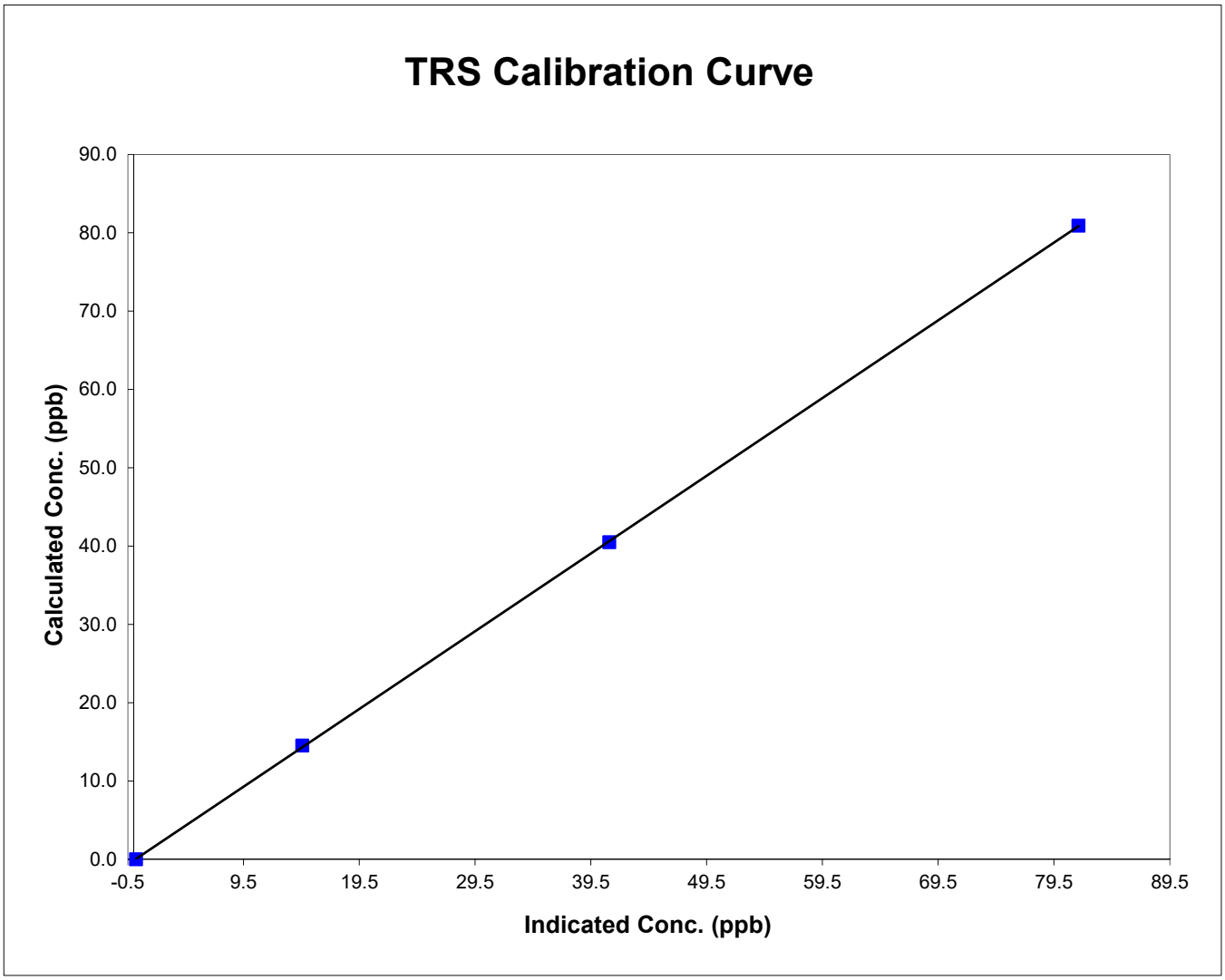
Air Monitoring Network **PAZA**

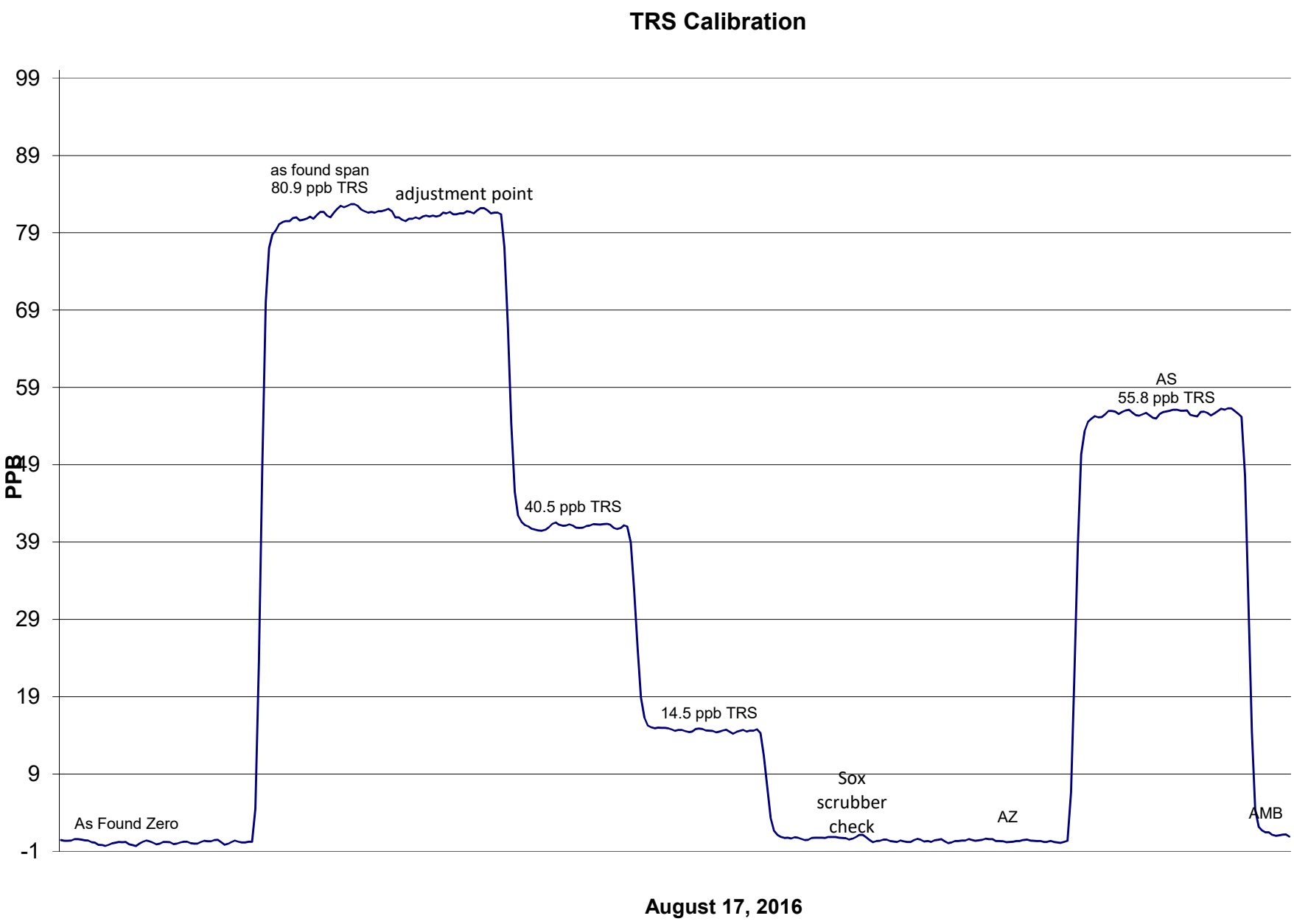
Station Information

Calibration Date	August 17, 2016	Previous Calibration	July 9, 2016
Station Number	PAZA Rover	Station Location	Rycroft
Start Time (MST)	12:05	End Time (MST)	15:05:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
80.9	81.6	0.9909	Correlation Coefficient	0.999983
40.5	41.1	0.9851		
14.5	14.6	0.9958	Slope	0.992001
			Intercept	-0.132212




TRS Calibration
99
89
79
69
59
49
39
29
19
9
-1
PPB
as found span
80.9 ppb TRS
adjustment point
40.5 ppb TRS
14.5 ppb TRS
Sox
scrubber
check
AZ
AS
55.8 ppb TRS
AMB
As Found Zero
August 17, 2016