Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

Continuous Ambient Air Quality Monitoring Program
Monthly Report
September 2012

Operations and Reporting

Peace Airshed Zone Association
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October 23rd, 2012

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

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

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

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

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

	NW Belloy (Dunvegan)	16-36-079-03-W6	9810-02-00
	Eaglesham (South)	02-14-077-25-W5	47669-01-00
	Puskwaskau	03-26-074-01-W6	17524-01-00
	North Normanville	03-36-079-23-W5	47455-01-00
	West Culp	05-34-078-25-W6	136284-00-00
	Cecil	08-15-084-08-W6	10032-02-00
EnCana Corporation	Sexsmith	04-08-075-07-W6	10002-01-00
Galleon Energy Inc.	Eaglesham	01-25-076-01-W6	241532-00-00
	Kakut	14-12-075-03-W6	248469-00-01
	Donnelly	06-01-077-21-W5	87-02-00
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	238762-00-02
Longview Oil Corp.	Sunset House	06-22-70-20-W5	138884-01-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	1746-02-01
	Pouce Coupe	16-07-078-11-W6	614-01-00
Petrus Resources	Rycroft	08-25-077-06-W6	11351-02-00
	Spirit River	08-34-077-06-W6	11096-02-00
Spectra Energy Midstream Corporation	Fourth Creek	16-11-082-09-W6	263-01-00
Suncor Energy Inc.	Progress	07-22-078-09-W6	11428-02-00
Taqa North Ltd.	Valhalla	13-21-076-09-W6	17620-01-01
Veresen Energy Infrastructure Inc.	Hythe Brainard	11-18-074-12-W6	10910-02-02
Weyerhaeuser Canada	Grande Prairie Pulp and Wood Plant	01-14-070-05-W6	113-02-00

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

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

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

Henry Pirker Station:

- The measured ambient air quality was within the Alberta Ambient Air Quality Objectives (AAAQO) for the Henry Pirker station.
- All analyzers and sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of 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 except for $PM_{2.5}$, which had three (3) 1-hour exceedence of the AAAQO guideline:
  - September 16 20:00 114.2 $\mu g/m^3$ Alberta Environment Reference # 263203
  - September 20 19:00 88.8 $\mu g/m^3$ Alberta Environment Reference # 263368
  - September 21 19:00 123.5 $\mu g/m^3$ Alberta Environment Reference # 263412
- The station was shut down on September 25th for trailer shelter replacement.
- 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.

Sunset House Station:

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

Wildfires burning in northwestern Alberta may have influenced $PM_{2.5}$ concentrations from the 20th through the 25th. Alberta Health Services issued a smoke advisory for the northern region on Sept 24.

Passive Monitoring - 46 Stations throughout the PAZA zone:

There were five duplicate sites sampled in the month of September: Woking, Webber Creek, Valleyview, Sunset House, and Girouxville 3. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO_2 passives ranged from 0.1 ppb to 0.6 ppb, with a mean of 0.3 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.1 ppb to 3.1 ppb, with a mean of 0.7 ppb.
- Monthly average concentrations for O_3 passives ranged from 14.6 ppb to 31.7 ppb, with a mean of 22.8 ppb.
- Monthly average concentrations for H_2S passives ranged from 0.1 ppb to 0.2 ppb, with a mean of 0.2 ppb.

If you have any questions or concerns, please contact Shelly Pruden, PAZA Program Manager at 780.833.4343 or 780.882.4071.

On Behalf of the
Peace Airshed Zone Association

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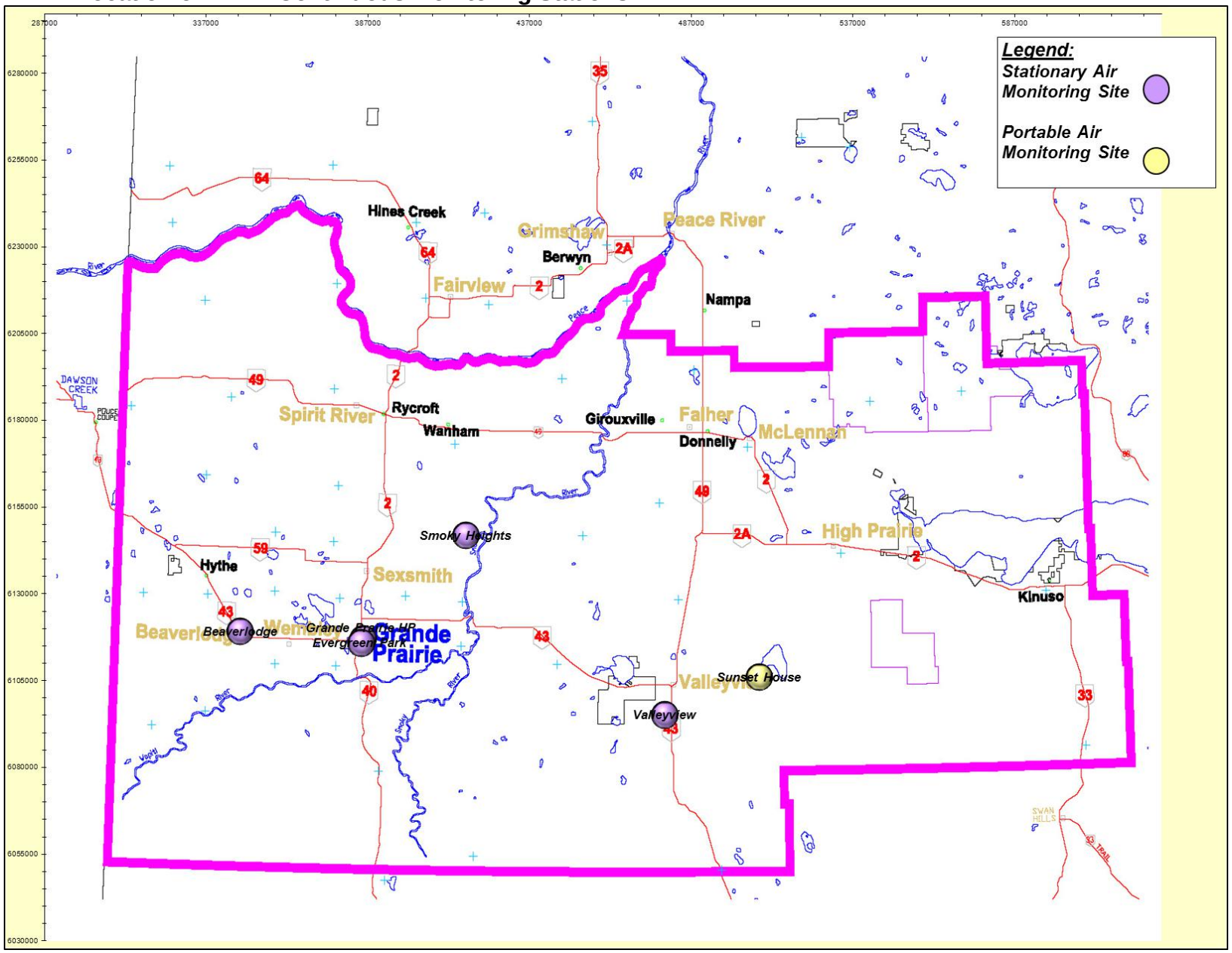
Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Sep-2012	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
Pollutant (units)	Objectives 1-hr	Objectives 24-hr	Station	Monthly Average	Exceedence 1-hr	Exceedence 24-hr	Conc	Day	Conc	Day	Operational Time (%)
SO_2 (ppb)	172	48	Henry Pirker	0.2	0	0	16.3	Sep-24 10:00	0.9	Sep-24	100%
SO_2 (ppb)	172	48	Evergreen Park	0.3	0	0	9.1	Sep-11 06:00	1.4	Sep-11	100%
SO_2 (ppb)	172	48	Smoky Heights	0.3	0	0	3.6	Sep-17 07:00	0.7	Sep-17	100%
SO_2 (ppb)	172	48	Beaverlodge	0.2	0	0	2.5	Sep-23 22:00	0.8	Sep-23	100%
SO_2 (ppb)	172	48	Valleyview	1.1	0	0	92.7	Sep-29 17:00	11.8	Sep-29	100%
SO_2 (ppb)	172	48	Sunset House	0.1	0	0	1.5	Sep-28 03:00	0.5	Sep-28	100%
NO (ppb)			Henry Pirker	3.5	0	0	93.6	Sep-20 08:00	14.7	Sep-27	100%
NO_2 (ppb)	159	106	Henry Pirker	7.8	0	0	37.3	Sep-21 21:00	16.1	Sep-27	100%
NO_X (ppb)			Henry Pirker	11.4	0	0	121.3	Sep-20 08:00	30.8	Sep-27	100%
NO (ppb)			Beaverlodge	0.3	0	0	8.8	Sep-28 09:00	0.8	Sep-28	100%
NO_2 (ppb)	159	106	Beaverlodge	2.3	0	0	17.5	Sep-24 11:00	4.6	Sep-23	100%
NO_X (ppb)			Beaverlodge	2.5	0	0	21.2	Sep-24 11:00	5.0	Sep-23	100%
NO (ppb)			Sunset House	0.1	0	0	1.6	Sep-07 13:00	0.2	Sep-08	100%
NO_2 (ppb)	159	106	Sunset House	1.1	0	0	4.0	Sep-24 03:00	2.4	Sep-24	100%
NO_X (ppb)			Sunset House	1.1	0	0	4.7	Sep-07 13:00	2.4	Sep-24	100%
O_3 (ppb)	82		Henry Pirker	22.3	0	-	52.0	Sep-17 16:00	35.6	Sep-17	100%
O_3 (ppb) - 8-hr			Henry Pirker		0				47.0	Sep-17	
O_3 (ppb)	82		Beaverlodge	29.5	0	-	52.9	Sep-17 15:00	41.5	Sep-17	100%
O_3 (ppb) - 8-hr			Beaverlodge		0				50.3	Sep-17	
O_3 (ppb)	82		Sunset House	29.4	0	-	48.4	Sep-21 17:00	39.6	Sep-28	100%
O_3 (ppb) - 8-hr			Sunset House		0				45.3	Sep-28	
CO (ppm)	13		Henry Pirker	0.19	0	-	0.9	Sep-21 22:00	0.3	Sep-21	100%
CO (ppm) - 8-hr	5		Henry Pirker		0				0.5	Sep-22	
THC (ppm)			Henry Pirker	2.34	-	-	8.2	Sep-05 22:00	2.6	Sep-19	96%
TRS (ppb)			Henry Pirker	0.4	-	-	3.9	Sep-26 01:00	1.0	Sep-28	100%
TRS (ppb)			Evergreen Park	0.3	-	-	2.2	Sep-27 23:00	0.6	Sep-28	100%
TRS (ppb)			Smoky Heights	0.3	-	-	1.0	Sep-21 08:00	0.4	Sep-09	100%
TRS (ppb)			Sunset House	0.3	-	-	0.8	Sep-25 12:00	0.4	Sep-25	100%
H_2S (ppb)	10	3	Valleyview	0.0	0	0	2.8	Sep-29 17:00	0.1	Sep-29	100%
PM2.5 (µg/m3)	80	30	Henry Pirker	7.7	0	0	39.7	Sep-22 00:00	21.8	Sep-22	100%
PM2.5 (µg/m3)	80	30	Evergreen Park	7.4	0	0	71.1	Sep-14 16:00	19.4	Sep-14	99%
PM2.5 (µg/m3)	80	30	Smoky Heights	7.7	3	0	123.5	Sep-21 20:00	20.6	Sep-21	100%
PM2.5 (µg/m3)	80	30	Beaverlodge	10.2	0	0	40.1	Sep-19 11:00	20.8	Sep-23	99%
PM2.5 (µg/m3)	80	30	Sunset House	3.8	0	0	36.0	Sep-25 09:00	12.3	Sep-25	98%

PAZA Monthly Continuous Data Summary – continued

Sep-2012	Peace Airshed Zone Assocation						Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
RH (%)			Henry Pirker	54.2	-	-	90.9	Sep-26 08:00	83.1	Sep-25	100%
RH (%)			Evergreen Park	55.5	-	-	98.2	Sep-26 10:00	88.3	Sep-25	100%
RH (%)			Beaverlodge	54.3	-	-	100.0	Sep-25 06:00	8.9	Sep-25	100%
RH (%)			Valleyview	62.4	-	-	99.8	Sep-26 10:00	86.7	Sep-25	100%
SR (W/m^2)			Henry Pirker	150.2	-	-	663.1	Sep-03 13:00	198.7	Sep-06	100%
Temp (°C)			Henry Pirker	13.5	-	-	28.9	Sep-21 16:00	17.6	Sep-08	100%
Temp (°C)			Evergreen Park	13.2	-	-	28.1	Sep-21 17:00	16.7	Sep-17	100%
Temp (°C)			Smoky Heights	13.1	-	-	28.1	Sep-08 17:00	17.3	Sep-09	100%
Temp (°C)			Beaverlodge	13.9	-	-	29.4	Sep-21 17:00	18.4	Sep-21	100%
Temp (°C)			Valleyview	13.2	-	-	27.9	Sep-21 17:00	17.3	Sep-09	100%
Temp (°C)			Sunset House	12.9	-	-	27.2	Sep-23 16:00	18.2	Sep-28	100%
WSPD s (km/hr)			Henry Pirker	10.4	-	-	42.0	Sep-14 12:00	22.8	Sep-10	100%
WSPD s (km/hr)			Evergreen Park	14.6	-	-	56.0	Sep-10 18:00	36.3	Sep-10	100%
WSPD s (km/hr)			Smoky Heights	14.7	-	-	51.0	Sep-14 13:00	29.4	Sep-10	100%
WSPD s (km/hr)			Beaverlodge	12.7	-	-	50.0	Sep-14 13:00	25.9	Sep-11	100%
WSPD s (km/hr)			Valleyview	5.4	-	-	26.0	Sep-14 14:00	14.6	Sep-11	100%
WSPD s (km/hr)			Sunset House	10.6	-	-	25.0	Sep-30 12:00	17.6	Sep-27	100%
WSPD v (km/hr)			Henry Pirker	7.3	-	-	42.0	Sep-14 12:00	22.4	Sep-10	100%
WSPD v (km/hr)			Evergreen Park	11.0	-	-	56.0	Sep-10 18:00	35.5	Sep-10	100%
WSPD v (km/hr)			Smoky Heights	11.5	-	-	50.0	Sep-14 13:00	29.1	Sep-10	100%
WSPD v (km/hr)			Beaverlodge	8.3	-	-	49.0	Sep-14 13:00	25.5	Sep-11	100%
WSPD v (km/hr)			Valleyview	3.5	-	-	25.0	Sep-14 14:00	14.1	Sep-11	100%
WSPD v (km/hr)			Sunset House	5.4	-	-	25.0	Sep-30 12:00	17.1	Sep-27	100%
WDIR			Henry Pirker	W	-	-	-	-	-	-	100%
WDIR			Evergreen Park	W	-	-	-	-	-	-	100%
WDIR			Smoky Heights	WSW	-	-	-	-	-	-	100%
WDIR			Beaverlodge	W	-	-	-	-	-	-	100%
WDIR			Valleyview	W	-	-	-	-	-	-	100%
WDIR			Sunset House	SW	-	-	-	-	-	-	100%

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on September 4th (CO, THC) and September 5th (SO_2, NO_X , O_3, TRS). Power outage on September 14th caused loss of 2 hours of data.

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed.
NOx/NO/NO_2	TEI	42C	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC	TEI	51-CLT	Analyzer instability through the month prompted trouble calls on September 1st and manual Zero/Span triggers on 5th, 17th, 21st, 26th, 27th and 28th. Equipment rebuild and recalibration on September 24th. Spans affected throughout the month.
TRS	TEI	45C/43C	No operational issues observed.
$PM_{2.5}$	Sharp	5030	No operational issues observed.
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Evergreen Park Station

General Station Issues

Routine monthly calibration performed on September 14th (SO_2 and TRS)

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	No operational issues observed.
ET	Met One/Gill	083D	No operational issues observed.
RH	Met One/Gill		No operational issues observed.
WS / WD	Met One/ Gill		No operational issues observed.

PAZA – Smoky Heights Station

General Station Issues

Routine monthly calibrations were performed on September 25th (SO_2, TRS, $PM_{2.5}$) prior to station shutdown for trailer replacement.

Parameter	Make	Model	Notes
SO_2	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Three (3) 1-hour exceedences were recorded. **AE Reference #263203, 263368,263412**
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations performed on September 6th (SO_2, NO_X, O_3). Datalogger failure caused loss of two hours of data on September 14th.

Parameter	Make	Model	Notes
SO_2	TEI	43CTL	No operational issues observed.
NOx/NO/NO_2	TEI	42C	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	4 hours of data lost due to datalogger and analyzer failure.
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS / WD	Blue Sky	857	No operational issues observed.

PAZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed on September 19th (SO_2 & H_2S).

Parameter	Make	Model	Notes
SO_2	TEI	43i	No operational issues observed.
H_2S	TEI	43A	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA – Portable-Sunset House Station			
General Station Issues			
Routine monthly calibrations were performed on September 20th (SO_2, O_3, NO_x,TRS).			
Parameter	**Make**	**Model**	**Notes**
SO_2	TEI	43i	No operational issues observed.
O_3	TEI	49C	No operational issues observed.
TRS	TEI	39C	No operational issues observed.
$PM_{2.5}$	R&P	1400AB	Nine (9) hours flagged invalid due to negative readings.
ET	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA
Henry Pirker Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 16.3 ppb on Sep 24 10:00
Maximum Daily Average: 0.9 ppb on Sep 24

Minimum Value: 0 ppb on Sep 1 05:00
Maximum Diurnal Average: 1.0 ppb at hour 10
Monthly Average: 0.20 ppb

Minimum Daily Average: 0.0 ppb on Sep 30
Minimum Diurnal Average: 0.0 ppb at hour 4
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.2 P_{90} = 0.4 P_{99} = 2.0

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	36
Percent Operational Time:	99.7

Hourly Period Ending At (MST)

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-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
2-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	0.3
3-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
4-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
5-Sep	0	0	0	0	0	0	0	C	C	C	C	0	1	1	0	0	0	0	0	0	A	0	0	0	0.2	0.7
6-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
7-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	0.5
8-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0.1	0.8
9-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
10-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	0.4
11-Sep	0	6	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0.4	6.1
12-Sep	0	0	0	0	0	0	0	0	0	1	2	2	1	A	0	0	0	0	0	0	0	2	0	0	0.5	2.2
13-Sep	0	0	0	0	0	0	1	0	2	1	3	2	A	1	1	1	1	0	0	0	0	0	0	0	0.6	2.9
14-Sep	0	0	0	0	0	0	0	0	0	P	P	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
15-Sep	0	0	0	0	0	0	0	0	0	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
16-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	0.5
17-Sep	1	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.9
18-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
19-Sep	0	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0.2	0.9
20-Sep	0	0	0	0	0	A	0	1	1	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0.3	1.0
21-Sep	0	0	0	0	A	0	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.0
22-Sep	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.1
23-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0.3	0.7
24-Sep	0	A	0	0	0	0	0	0	0	16	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.9	16.3
25-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
26-Sep	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.8
27-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
28-Sep	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1	1	2	0	0	0	A	0	0	0	0.4	2.1
29-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	0.2
30-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
	0.1	0.3	0.1	0.0	0.1	0.1	0.1	0.1	0.3	1.0	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	Diurnal Average	
	0.6	6.1	1.0	0.2	0.8	0.5	0.7	0.7	1.6	16.3	2.9	1.8	1.1	1.4	1.2	1.2	2.1	0.9	0.7	0.5	0.5	2.2	0.8	0.3	Diurnal Maximum	

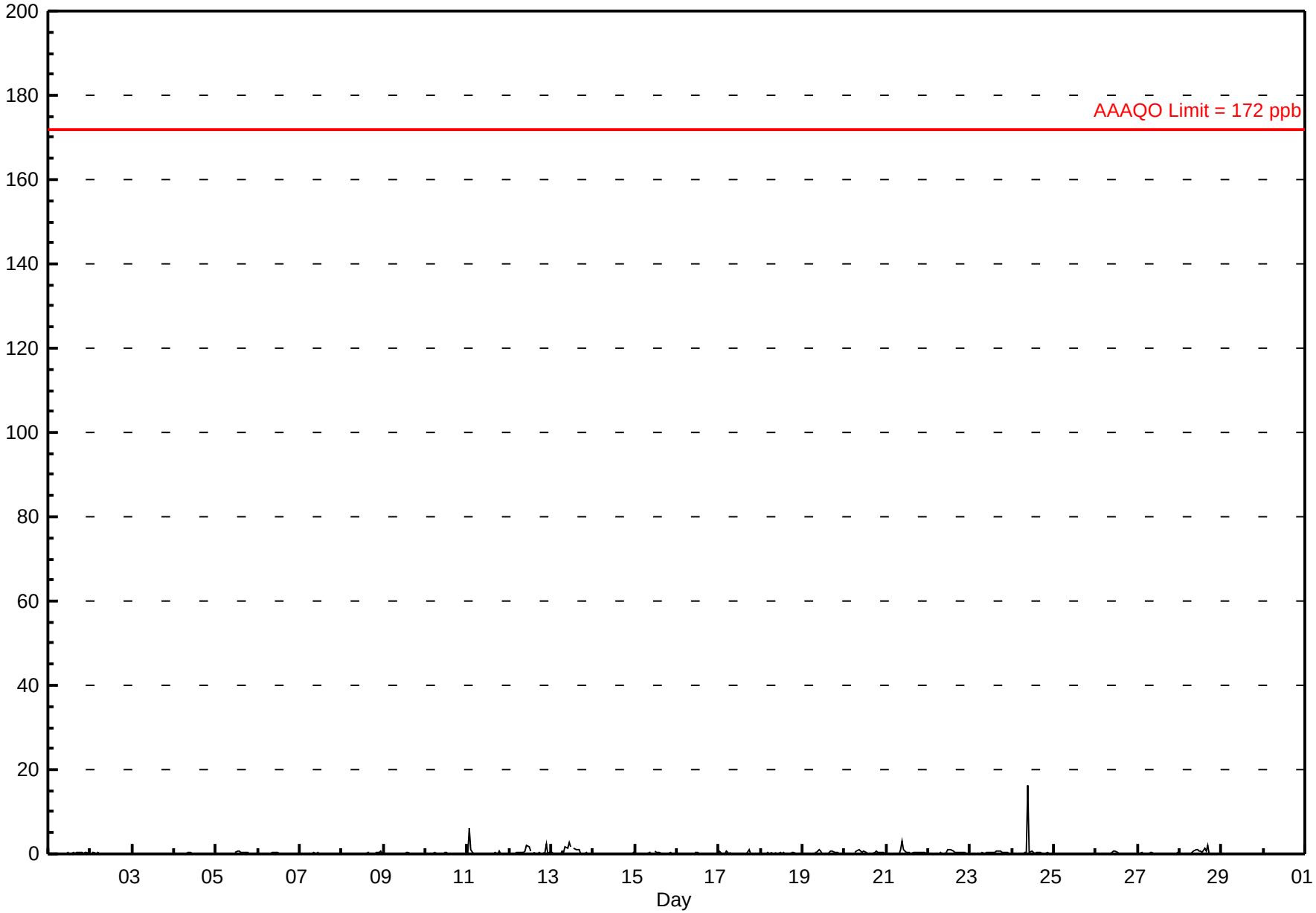
C - Calibration P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - September 2012

Maximum Value: 240.1 ppb on Sep 24 10:00

Maximum Daily Average: 11.0 ppb on Sep 24

Minimum Value: 0 ppb on Sep 3 20:00

Minimum Daily Average: 0.3 ppb on Sep 25

Maximum Diurnal Average: 9.9 ppb at hour 10

Minimum Diurnal Average: 0.3 ppb at hour 4

Monthly Average: 0.95 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.3 Median = 0.5 Q_3 = 0.5 P_{90} = 1.0 P_{99} = 4.0

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	36
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	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0.5	1.0
2-Sep	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0.5	0.6
3-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	0.4	0.5
4-Sep	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0	1	1	0	0	A	0	0	0.4	0.5
5-Sep	0	0	0	0	0	0	0	C	C	C	C	1	1	1	1	1	1	1	1	1	A	1	1	0	0.5	1.3
6-Sep	1	1	1	0	0	0	1	1	1	1	1	1	1	0	1	1	0	0	0	A	0	0	0	1	0.4	0.9
7-Sep	0	1	1	0	1	1	0	1	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0.5	1.0
8-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	1	1	4	0	0.6	4.5
9-Sep	0	1	1	1	0	0	0	0	1	1	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0.3	0.5
10-Sep	0	0	0	0	1	1	1	0	1	1	1	1	1	1	0	A	0	1	1	0	0	0	0	0	0.4	1.0
11-Sep	2	9	4	1	1	0	1	1	0	0	0	1	0	1	A	0	1	0	2	1	0	0	0	0	1.0	8.9
12-Sep	1	0	1	0	1	1	1	1	1	4	4	3	3	A	1	0	1	2	0	0	2	4	0	1	1.3	4.1
13-Sep	1	1	0	0	0	1	3	1	3	3	4	3	A	2	2	2	2	0	0	0	0	1	0	0	1.4	4.5
14-Sep	0	1	1	1	1	0	0	0	1	P	P	A	0	0	0	0	0	0	0	0	1	0	1	1	0.3	0.5
15-Sep	1	0	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	0	0.5	1.2
16-Sep	0	0	0	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
17-Sep	1	1	0	0	2	2	0	0	A	0	0	0	0	0	0	0	0	3	0	0	1	0	1	0	0.6	2.6
18-Sep	0	0	0	0	1	0	1	A	1	1	1	1	1	2	1	0	1	1	1	1	1	1	1	0	0.6	2.0
19-Sep	1	0	1	0	0	0	A	0	0	2	2	0	1	1	1	1	1	2	1	1	1	1	1	1	0.7	2.5
20-Sep	1	0	1	0	0	A	1	1	2	1	1	1	1	1	1	1	1	2	1	0	1	0	0	0	0.7	1.8
21-Sep	0	0	0	0	A	0	0	0	3	4	3	1	0	0	0	0	0	0	0	0	1	1	0	0	0.9	3.9
22-Sep	0	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0.7	1.5
23-Sep	0	0	A	0	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	0	1	0	0	0.6	1.0
24-Sep	0	A	0	0	0	0	0	0	1	240	0	2	1	0	1	0	0	0	0	0	1	0	0	0	11.0	240.1
25-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	0.5
26-Sep	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0.4	1.4
27-Sep	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.5	1.0
28-Sep	0	0	0	1	0	0	0	1	1	1	1	1	1	2	2	1	4	1	1	1	A	0	0	0	0.9	3.6
29-Sep	6	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.6	6.2
30-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	0.5
	0.7	0.7	0.5	0.3	0.4	0.4	0.5	0.5	0.8	9.9	1.0	0.9	0.7	0.6	0.6	0.6	0.7	0.6	0.5	0.4	0.5	0.6	0.5	0.4	Diurnal Average	
	6.2	8.9	4.5	1.0	1.9	1.6	3.0	1.0	3.4	240.1	4.5	3.0	2.8	2.1	2.5	2.0	3.6	2.6	2.0	1.0	2.3	3.7	4.5	1.5	Diurnal Maximum	

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

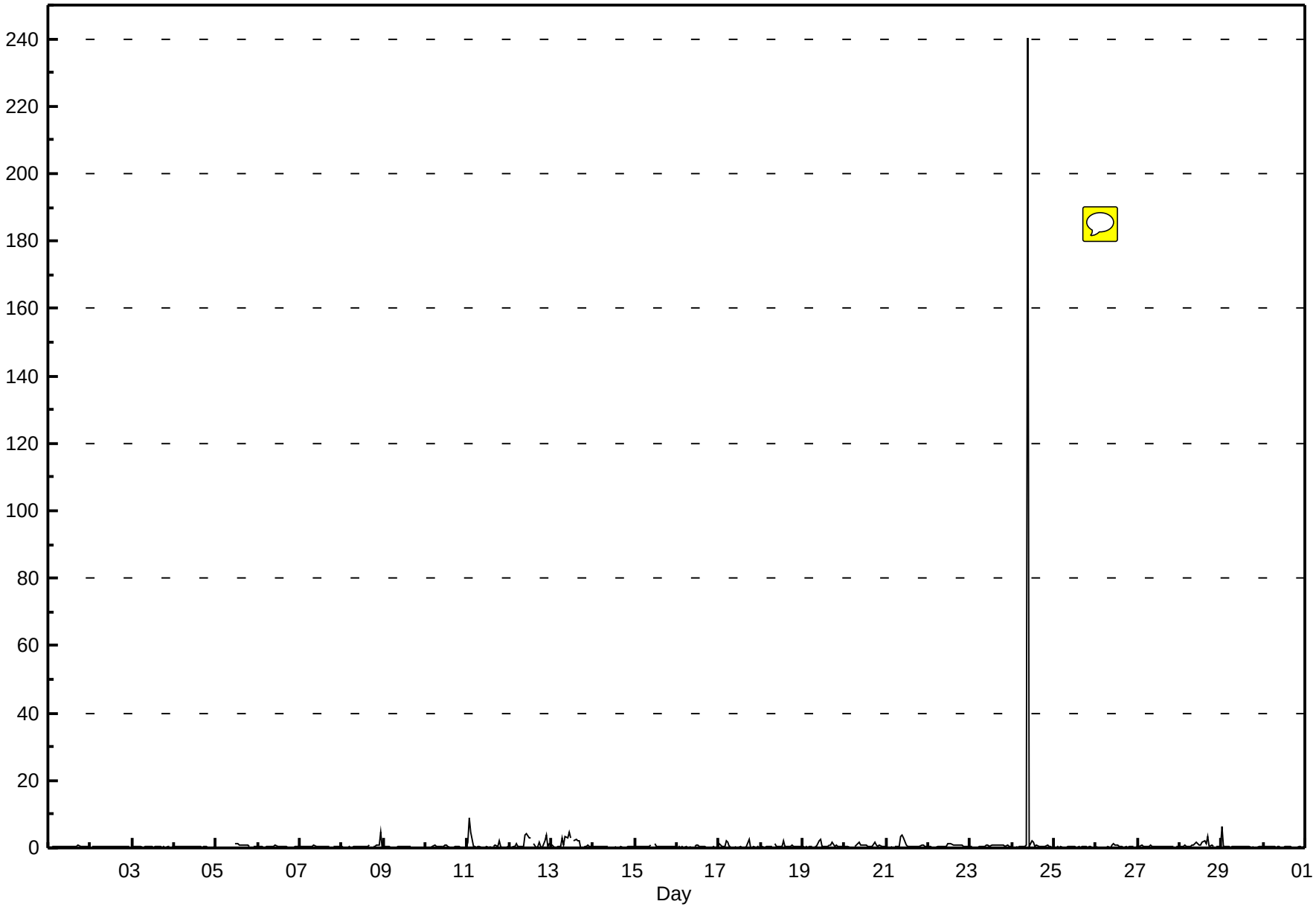
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

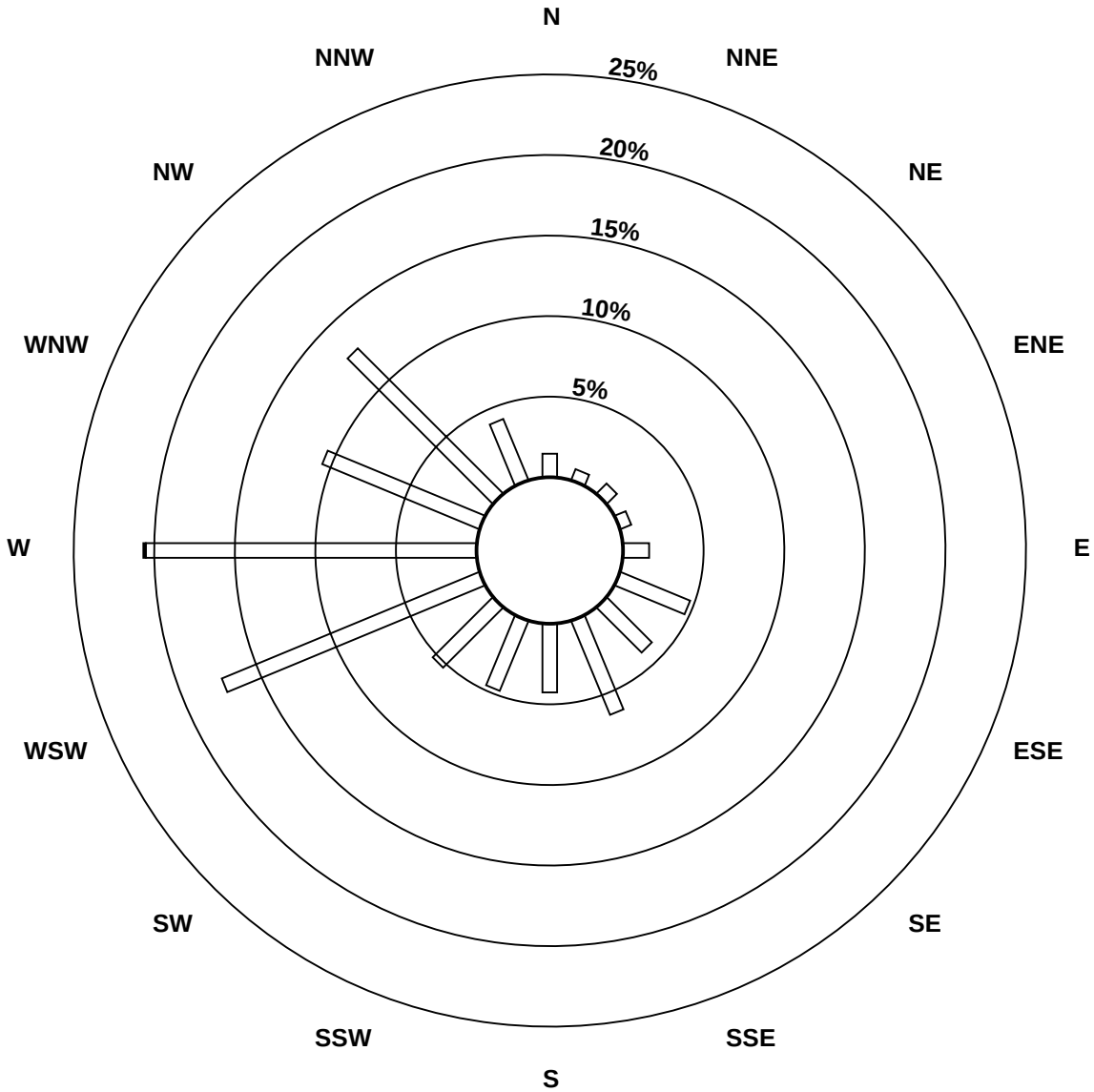
Henry Pirker - September 2012



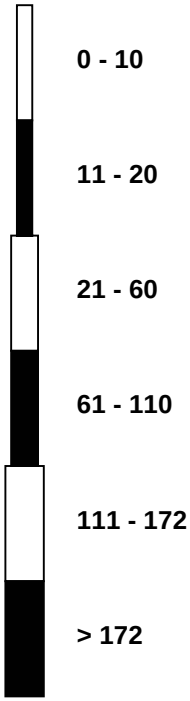
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Henry Pirker - September 2012



Pollutant Classes (ppb)

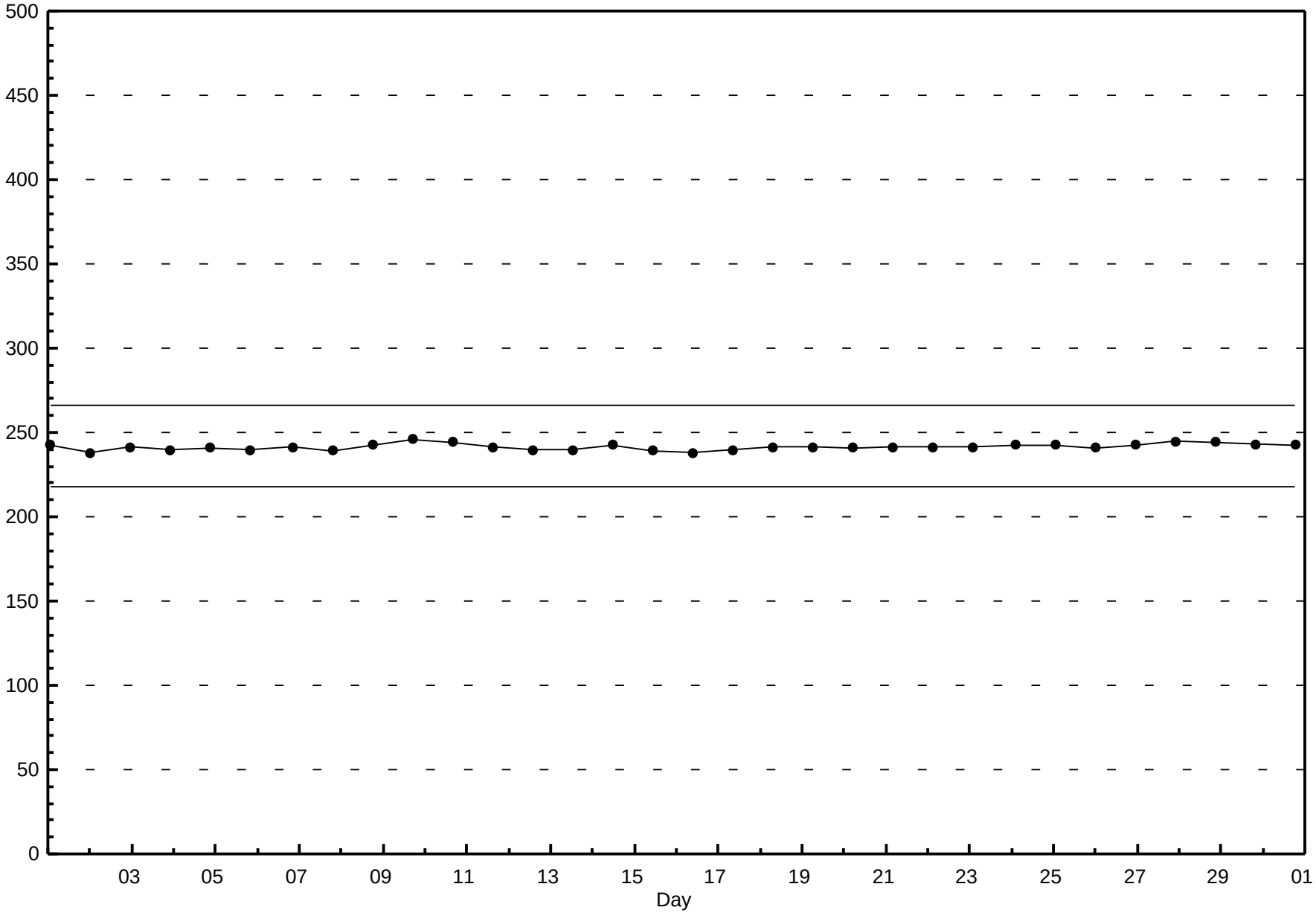


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Henry Pirker - September 2012



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.9 ppb on Sep 26 01:00 Maximum Daily Average: 1.0 ppb on Sep 28

Minimum Value: 0 ppb on Sep 22 18:00 Minimum Daily Average: 0.2 ppb on Sep 2
Maximum Diurnal Average: 0.6 ppb at hour 8 Minimum Diurnal Average: 0.2 ppb at hour 15
Monthly Average: 0.39 ppb Percentiles: $P_1 = 0.1$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.4$ $P_{90} = 0.7$ $P_{99} = 1.9$

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	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
2-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	0.2
3-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	0.4
4-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	0.3	0.4
5-Sep	0	0	0	0	0	0	0	0	1	0	0	0	0	C	C	C	0	0	0	0	A	1	1	0	0.3	0.7
6-Sep	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.6
7-Sep	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.6
8-Sep	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	0	0.4	0.6
9-Sep	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.8
10-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	0.4
11-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	0.3	0.4
12-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	0.5
13-Sep	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	0.4	1.1
14-Sep	1	0	0	0	0	0	0	0	0	P	P	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
15-Sep	0	0	0	0	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.7
16-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.6
17-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	0.3	0.6
18-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.3	0.6
19-Sep	1	1	1	2	1	1	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.6	1.6
20-Sep	1	1	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	1.4
21-Sep	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	0.8
22-Sep	1	1	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.4	0.8
23-Sep	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	0.8
24-Sep	0	A	0	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
25-Sep	A	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	A	0.6	1.1
26-Sep	4	2	2	1	1	2	2	1	1	0	0	1	1	0	0	0	0	0	0	0	1	0	A	1	0.9	3.9
27-Sep	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	A	1	1	0.6	1.1
28-Sep	1	1	1	2	2	2	3	4	3	1	1	0	0	0	1	0	0	0	0	0	A	0	0	0	1.0	3.6
29-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
30-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	0.3
	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	Diurnal Average	
	3.9	1.9	1.9	1.6	1.6	2.1	2.9	3.6	2.6	1.2	0.6	0.8	0.7	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.8	1.1	1.1	0.9	Diurnal Maximum	

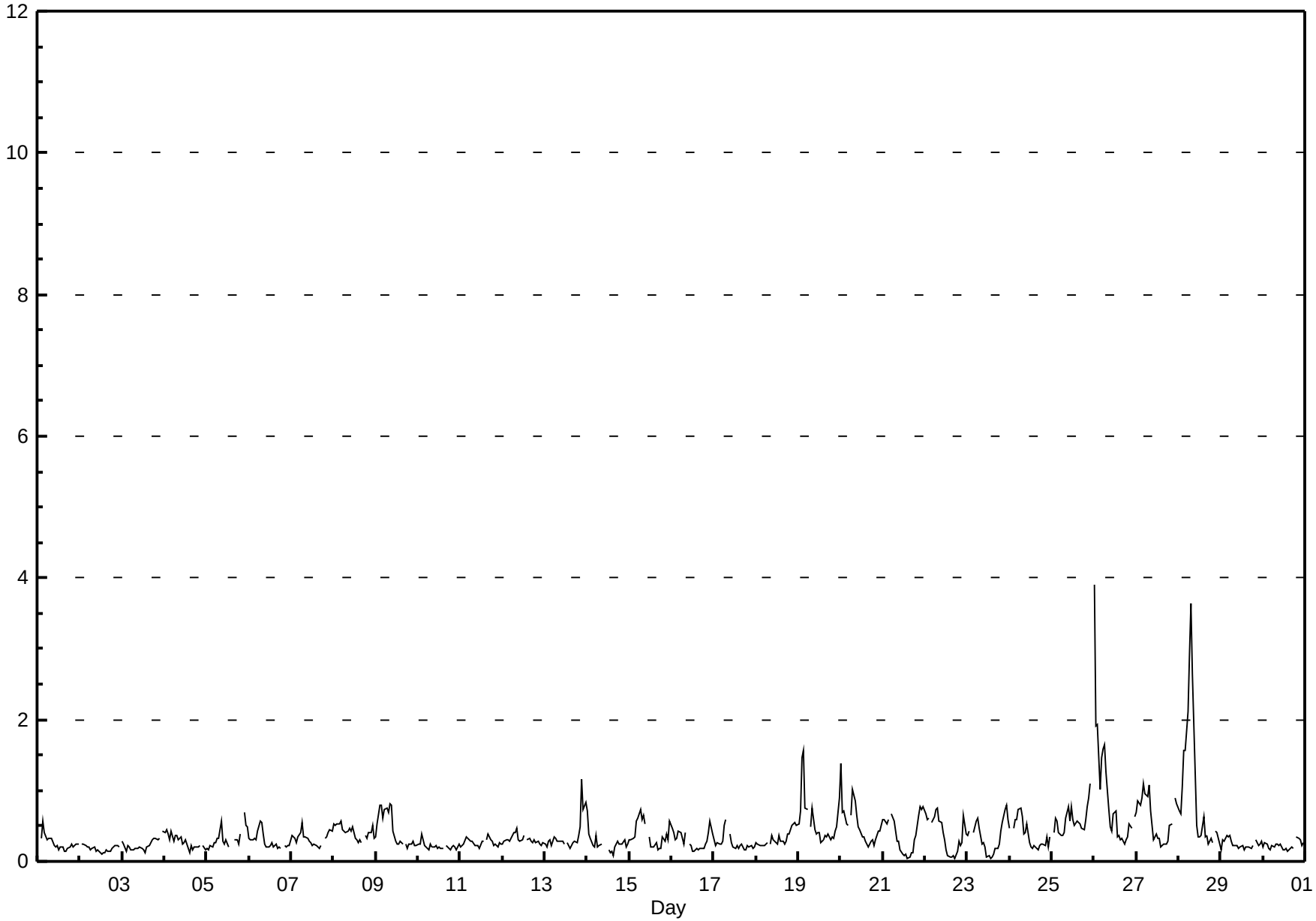
C - Calibration P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - September 2012

Maximum Value: 4.7 ppb on Sep 26 01:00

Maximum Daily Average: 1.6 ppb on Sep 26

Minimum Value: 0 ppb on Sep 23 14:00

Minimum Daily Average: 0.6 ppb on Sep 2

Maximum Diurnal Average: 1.1 ppb at hour 8

Minimum Diurnal Average: 0.7 ppb at hour 16

Monthly Average: 0.84 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 0.9$ $P_{90} = 1.2$ $P_{99} = 3.3$

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	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.6	1.2
2-Sep	A	1	1	1	1	1	1	1	1	0	1	1	0	0	0	1	1	1	1	1	1	1	1	A	0.6	0.8
3-Sep	1	1	0	1	0	1	0	1	1	1	1	0	0	1	1	0	1	1	1	1	1	1	A	1	0.6	1.0
4-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	1.0
5-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	C	C	C	1	1	1	1	A	1	1	1	0.7	1.3
6-Sep	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.0
7-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	0.7	1.1
8-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	0.8	1.1
9-Sep	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.5
10-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	0.6	0.8
11-Sep	1	1	1	1	1	1	1	1	1	0	0	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.8
12-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
13-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	2	1	0.9	2.1
14-Sep	1	1	1	1	1	1	1	1	1	P	P	A	1	1	0	0	1	1	1	1	1	1	1	1	0.8	1.3
15-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	0.8	1.4
16-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	1.2
17-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	1.0
18-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	1.2
19-Sep	1	1	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.1	2.5
20-Sep	2	1	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.0
21-Sep	1	1	1	1	A	1	1	1	1	1	1	0	1	0	0	0	1	0	1	1	1	1	1	1	0.9	1.4
22-Sep	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	0.8	1.3
23-Sep	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	2	1	0.8	1.5
24-Sep	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	0.8	1.4
25-Sep	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1.1	1.6
26-Sep	5	3	3	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.6	4.7
27-Sep	1	1	1	2	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.1	1.8
28-Sep	1	1	2	2	2	3	3	4	3	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.5	4.1
29-Sep	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.6
30-Sep	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	0.6	0.8
	1.0	0.9	1.0	1.0	0.9	1.0	1.0	1.1	1.0	0.9	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.9	0.9	0.9	Diurnal Average	
	4.7	3.3	3.4	2.5	2.4	3.3	3.5	4.1	3.4	2.3	1.1	1.4	1.4	1.1	1.2	1.1	1.0	1.1	0.9	1.0	1.4	2.1	1.6	1.6	Diurnal Maximum	

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

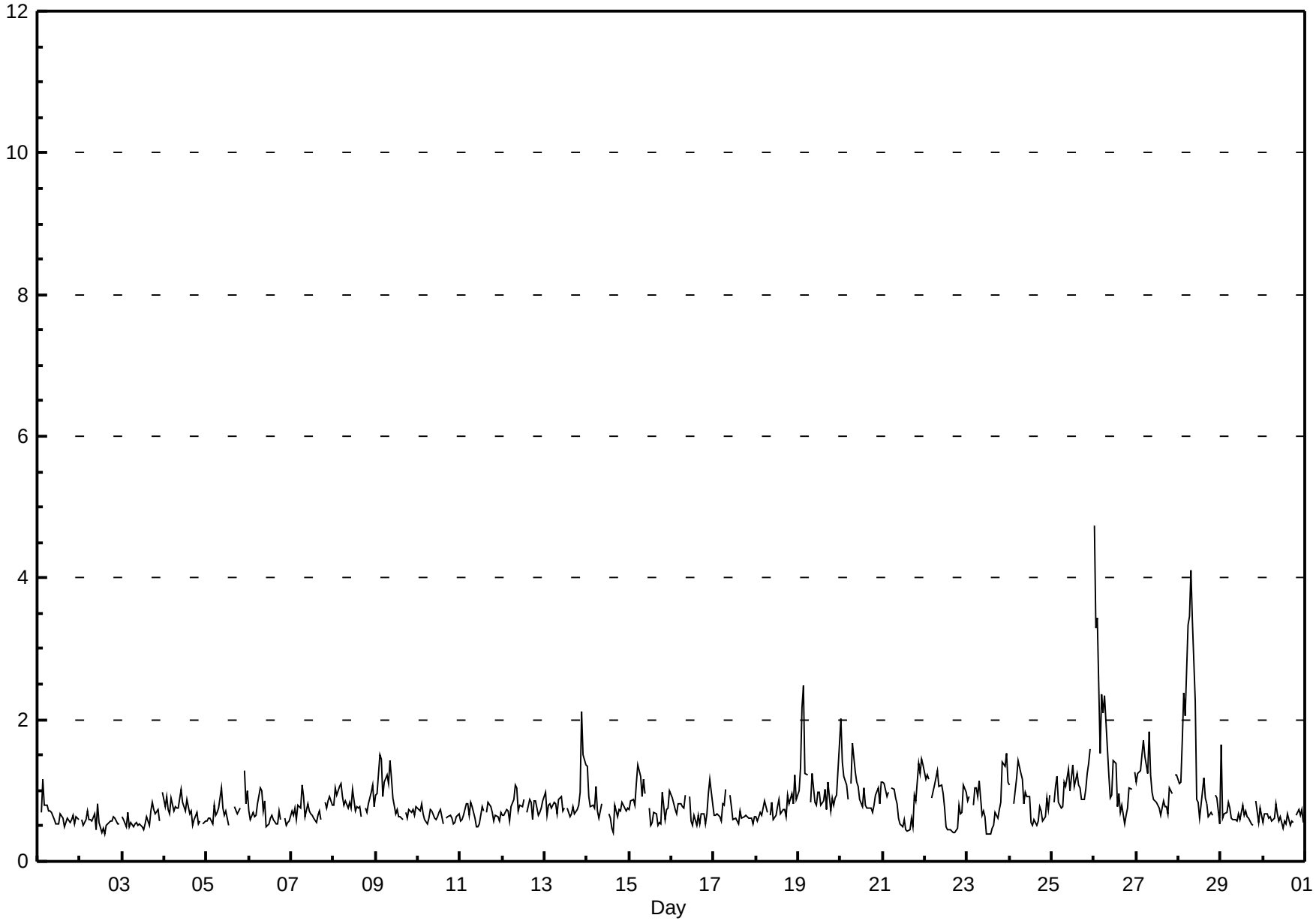
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

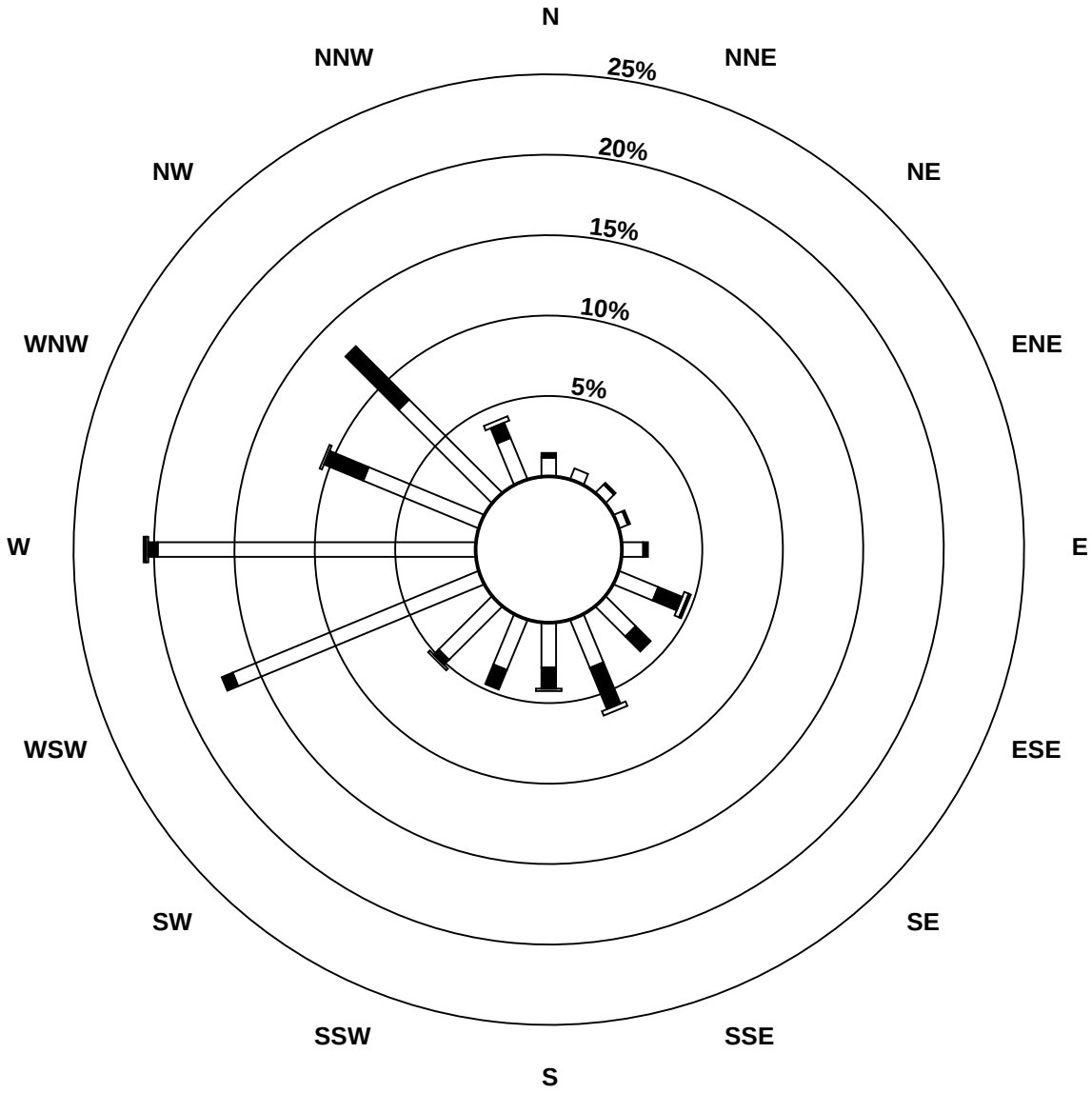
Henry Pirker - September 2012



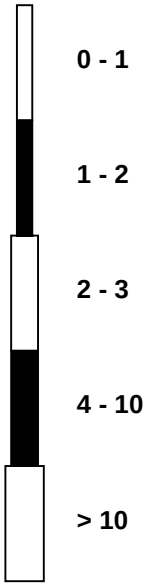
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - September 2012



Pollutant Classes (ppb)

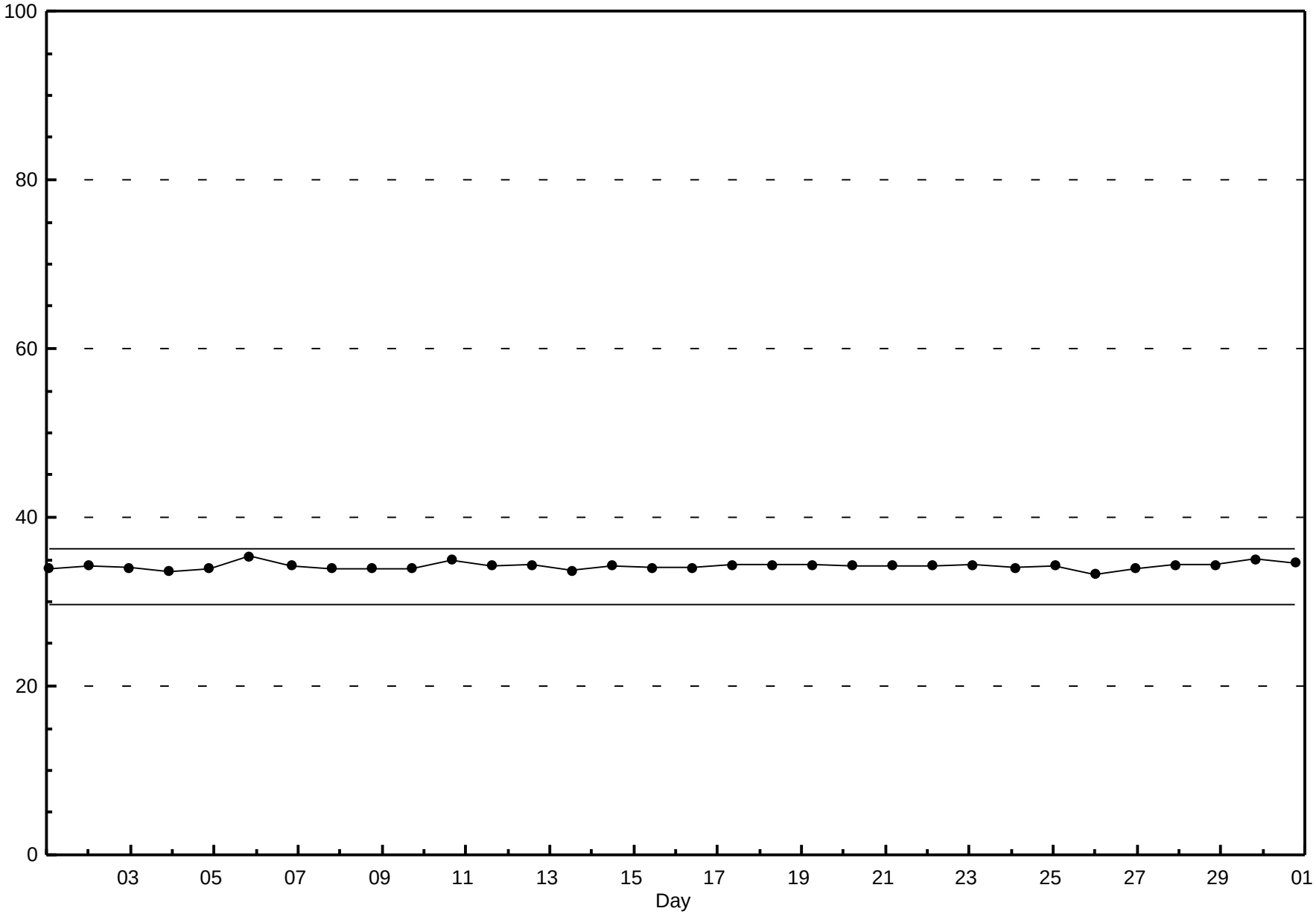


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Henry Pirker - September 2012



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - September 2012

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

Maximum Value: 37.3 ppb on Sep 21 21:00

Maximum Daily Average: 16.1 ppb on Sep 27

Minimum Value: 1 ppb on Sep 3 12:00

Minimum Daily Average: 1.5 ppb on Sep 2

Maximum Diurnal Average: 12.9 ppb at hour 7

Minimum Diurnal Average: 2.7 ppb at hour 16

Monthly Average: 7.76 ppb

Percentiles: P_1 = 0.9 P_{10} = 1.6 Q_1 = 2.4 Median = 4.9 Q_3 = 10.6 P_{90} = 18.8 P_{99} = 30.7

Hours in Service:	720
Hours of Data:	680
Hours of Missing Data:	40
Hours of Calibration:	38
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	4	A	9	9	8	6	7	9	9	5	3	2	2	2	1	1	2	2	3	5	4	5	4	3	4.5	9.3
2-Sep	A	4	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	A	1.5	4.5
3-Sep	3	2	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	3	2	A	4	1.6	3.8
4-Sep	4	3	2	3	5	8	13	9	4	3	2	2	2	2	1	2	2	3	2	2	2	A	5	3	3.7	12.8
5-Sep	2	1	1	2	2	4	5	C	C	C	C	C	C	3	2	2	2	2	3	10	A	23	23	14	--	23.4
6-Sep	5	4	4	4	8	15	17	12	9	8	3	3	2	2	2	2	2	3	3	A	6	5	2	3	5.4	17.0
7-Sep	2	2	3	5	7	9	12	7	5	2	2	1	1	2	2	2	2	4	A	9	11	8	6	4	4.8	12.1
8-Sep	6	8	10	9	11	10	14	13	12	6	7	8	9	7	4	3	2	A	7	13	9	7	6	3	8.0	14.0
9-Sep	5	6	9	9	8	9	9	10	8	8	5	5	4	3	4	4	A	4	4	7	2	2	2	2	5.6	9.5
10-Sep	2	1	1	1	2	4	6	5	3	3	3	3	2	2	2	A	4	3	3	3	3	2	1	1	2.5	5.6
11-Sep	2	2	1	1	2	7	9	7	3	2	2	1	2	2	A	4	3	2	3	3	3	2	2	2	2.9	9.2
12-Sep	2	2	3	3	3	7	22	21	15	3	3	3	3	A	4	3	3	2	2	3	7	8	1	2	5.4	21.6
13-Sep	1	1	2	2	5	10	18	12	9	4	2	3	A	4	3	2	3	3	6	20	24	20	19	19	8.4	23.6
14-Sep	14	7	6	6	8	16	17	14	10	P	P	A	4	3	2	2	2	2	2	2	3	4	3	3	6.2	17.3
15-Sep	6	10	12	10	10	17	19	17	13	7	A	9	3	2	1	1	1	1	3	6	13	24	11	12	9.1	23.6
16-Sep	11	10	7	6	9	11	11	9	7	A	5	6	3	2	1	1	2	3	8	12	14	4	4	4	6.5	14.2
17-Sep	4	4	6	4	4	10	20	19	A	12	5	3	3	3	4	4	4	5	6	6	4	4	2	2	6.0	19.7
18-Sep	2	2	2	3	4	4	7	A	4	3	2	2	2	2	2	1	2	2	6	20	30	31	27	24	8.0	30.6
19-Sep	23	19	15	10	9	14	A	22	24	19	11	4	2	2	2	2	2	4	8	12	16	23	21	17	12.2	23.5
20-Sep	15	9	9	10	11	A	20	27	26	23	16	11	5	3	2	1	2	6	10	12	18	29	31	27	14.1	31.3
21-Sep	18	11	11	12	A	19	21	20	17	14	9	7	4	4	3	4	4	12	26	31	37	35	26	18	15.6	37.3
22-Sep	13	15	14	A	14	15	16	19	13	10	13	7	5	5	5	5	3	4	21	35	21	24	15	10	13.2	35.4
23-Sep	12	10	A	11	9	11	15	11	9	9	8	10	9	5	4	3	5	3	15	35	37	31	21	13	12.8	36.7
24-Sep	7	A	10	11	10	14	19	22	15	14	15	6	5	5	3	3	3	3	5	9	3	3	1	1	8.3	21.5
25-Sep	A	4	3	3	4	4	7	11	11	8	4	4	7	4	6	4	8	7	6	13	18	19	14	A	7.7	18.7
26-Sep	12	13	14	12	10	12	11	10	7	5	8	9	8	6	3	3	4	4	9	16	21	19	A	28	10.5	27.8
27-Sep	24	22	19	18	16	16	16	18	16	13	10	7	4	4	4	4	9	8	23	33	30	A	29	28	16.1	33.5
28-Sep	26	22	19	20	21	17	15	16	25	25	13	10	18	11	7	6	6	5	9	9	A	7	5	3	13.7	25.7
29-Sep	4	4	8	9	13	12	19	14	12	9	8	6	3	2	2	2	2	2	3	A	5	4	5	6	6.7	19.1
30-Sep	8	11	9	4	6	9	7	3	2	2	2	2	2	2	1	2	2	3	A	6	8	11	7	4	4.9	11.3
	8.4	7.5	7.4	6.9	7.6	10.0	12.9	12.8	10.4	8.1	6.0	4.8	4.1	3.2	2.8	2.7	3.1	3.6	7.2	12.0	12.7	12.8	10.5	9.2	Diurnal Average	
	25.7	22.3	19.4	20.0	21.1	19.0	21.6	27.5	26.4	24.6	16.2	11.2	18.4	10.6	6.8	6.5	9.2	12.1	25.6	35.4	37.3	34.6	31.3	28.2	Diurnal Maximum	

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

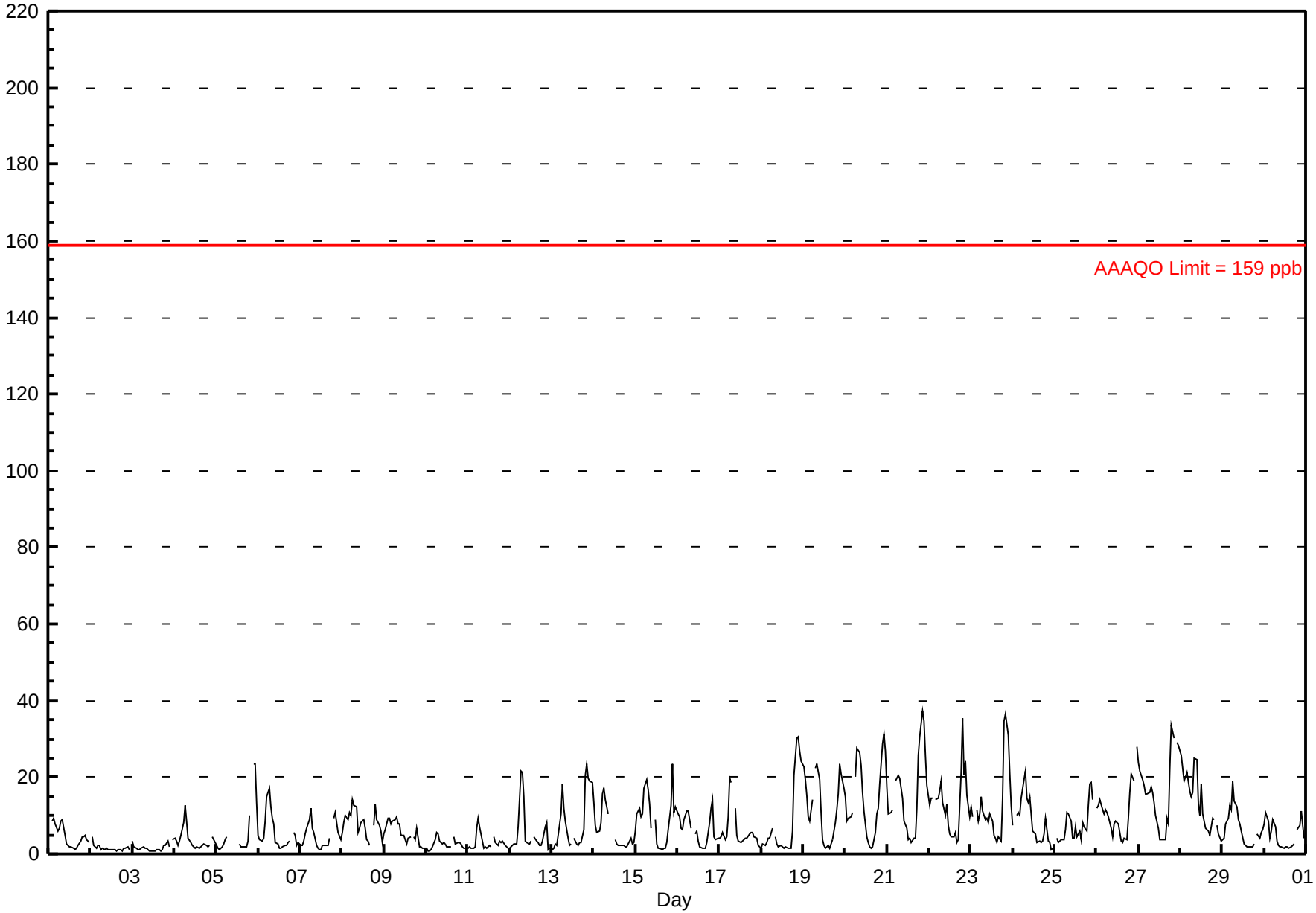
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - September 2012



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - September 2012

Maximum Value: 64.8 ppb on Sep 23 20:00

Maximum Daily Average: 20.7 ppb on Sep 21

Minimum Value: 2 ppb on Sep 10 03:00

Minimum Daily Average: 2.5 ppb on Sep 2

Maximum Diurnal Average: 18.1 ppb at hour 20

Minimum Diurnal Average: 5.3 ppb at hour 16

Monthly Average: 11.18 ppb

Percentiles: P_1 = 1.6 P_{10} = 2.9 Q_1 = 4.3 Median = 8.6 Q_3 = 15.4 P_{90} = 23.4 P_{99} = 39.0

Hours in Service:	720
Hours of Data:	680
Hours of Missing Data:	40
Hours of Calibration:	38
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	A	14	11	11	11	9	11	13	6	4	4	3	4	3	3	6	5	5	9	7	9	6	5	7.1	13.6
2-Sep	A	7	3	2	3	3	3	4	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	A	2.5	7.0
3-Sep	7	2	2	2	2	2	3	2	2	2	2	2	2	2	3	2	2	2	3	4	5	3	A	7	2.7	7.1
4-Sep	5	5	3	5	8	13	17	11	7	4	4	4	3	4	3	5	5	5	4	3	4	A	7	4	5.7	17.1
5-Sep	3	2	2	3	3	6	7	C	C	C	C	C	C	5	4	5	3	3	7	20	A	26	25	23	--	26.1
6-Sep	7	5	5	7	10	20	20	16	15	11	6	5	4	3	3	4	4	6	5	A	8	7	3	4	7.9	20.4
7-Sep	4	3	5	6	9	15	16	13	10	4	4	4	7	9	12	3	4	21	A	12	14	12	9	5	8.8	21.0
8-Sep	19	10	12	10	13	13	17	14	14	8	9	10	16	13	11	8	10	A	11	21	24	12	17	6	12.9	23.7
9-Sep	14	16	12	11	10	10	10	12	11	11	7	9	5	5	5	7	A	7	7	14	2	4	2	2	8.6	16.4
10-Sep	2	2	2	2	3	6	9	9	5	4	5	4	4	3	4	A	7	5	4	4	4	3	2	3	4.0	9.0
11-Sep	2	3	2	2	3	9	12	11	5	3	3	2	4	4	A	8	4	3	4	4	5	4	3	3	4.6	12.5
12-Sep	2	2	5	5	5	13	24	25	19	9	4	5	6	A	7	5	5	4	4	6	11	13	2	3	8.0	24.9
13-Sep	2	2	4	3	8	15	26	19	12	10	4	4	A	6	4	4	5	5	9	26	25	37	24	21	12.1	37.4
14-Sep	19	10	9	8	11	19	21	18	17	P	P	A	6	5	4	4	4	3	3	4	6	9	4	4	9.1	20.9
15-Sep	12	14	15	12	14	21	22	22	19	9	A	15	4	4	3	3	5	4	5	13	17	29	23	16	13.2	29.3
16-Sep	14	11	9	8	12	14	13	11	9	A	7	11	7	3	2	3	4	16	15	20	20	13	5	5	10.1	19.9
17-Sep	9	5	9	7	9	18	21	23	A	24	7	5	4	6	6	8	6	7	8	8	9	6	3	3	9.3	23.9
18-Sep	2	4	3	6	9	8	23	A	8	5	6	4	14	3	4	3	4	3	12	33	33	32	30	29	12.2	33.3
19-Sep	25	22	19	12	14	18	A	31	26	28	17	6	4	5	6	2	5	8	13	19	24	29	27	20	16.6	31.3
20-Sep	18	12	11	12	14	A	24	32	29	27	18	14	9	6	6	3	6	11	15	15	26	33	34	31	17.8	34.3
21-Sep	23	14	14	14	A	23	22	21	22	18	13	9	6	8	4	19	10	26	32	40	43	40	34	21	20.7	43.2
22-Sep	17	17	17	A	16	16	21	23	24	12	16	14	8	8	6	8	4	8	59	41	33	31	22	12	18.9	58.5
23-Sep	14	17	A	14	12	14	17	14	10	11	10	16	11	6	5	4	8	6	34	65	39	36	27	15	17.7	64.8
24-Sep	12	A	13	14	14	19	21	25	21	17	17	15	8	8	5	7	5	7	11	21	6	5	2	3	12.1	25.4
25-Sep	A	6	4	4	6	5	11	14	13	13	6	11	15	9	10	6	11	11	8	18	23	23	18	A	11.3	23.4
26-Sep	17	17	17	14	13	14	13	11	9	6	10	10	10	9	17	5	7	8	16	19	27	29	A	33	14.5	32.8
27-Sep	26	23	27	21	18	21	20	23	19	20	13	10	7	8	6	6	15	14	35	38	37	A	33	33	20.6	38.3
28-Sep	29	25	21	23	24	23	17	22	30	32	16	13	27	23	11	9	9	9	15	17	A	11	13	7	18.5	31.7
29-Sep	7	9	14	15	17	20	25	17	19	19	10	8	4	4	3	3	3	3	4	A	7	7	8	9	10.3	25.4
30-Sep	14	13	13	6	7	13	12	9	3	3	4	3	4	4	3	4	4	4	A	9	10	16	13	5	7.8	15.6
	11.8	10.0	9.9	9.0	10.3	13.9	16.5	16.6	14.2	11.8	8.4	7.8	7.3	6.1	5.7	5.3	5.8	7.5	12.5	18.1	16.9	17.2	14.3	11.9	Diurnal Average	
	28.8	24.7	26.8	22.8	23.9	23.0	26.4	31.9	30.5	31.7	18.4	15.9	26.8	23.4	17.0	18.9	14.7	25.7	58.5	64.8	43.2	39.9	34.3	33.0	Diurnal Maximum	

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

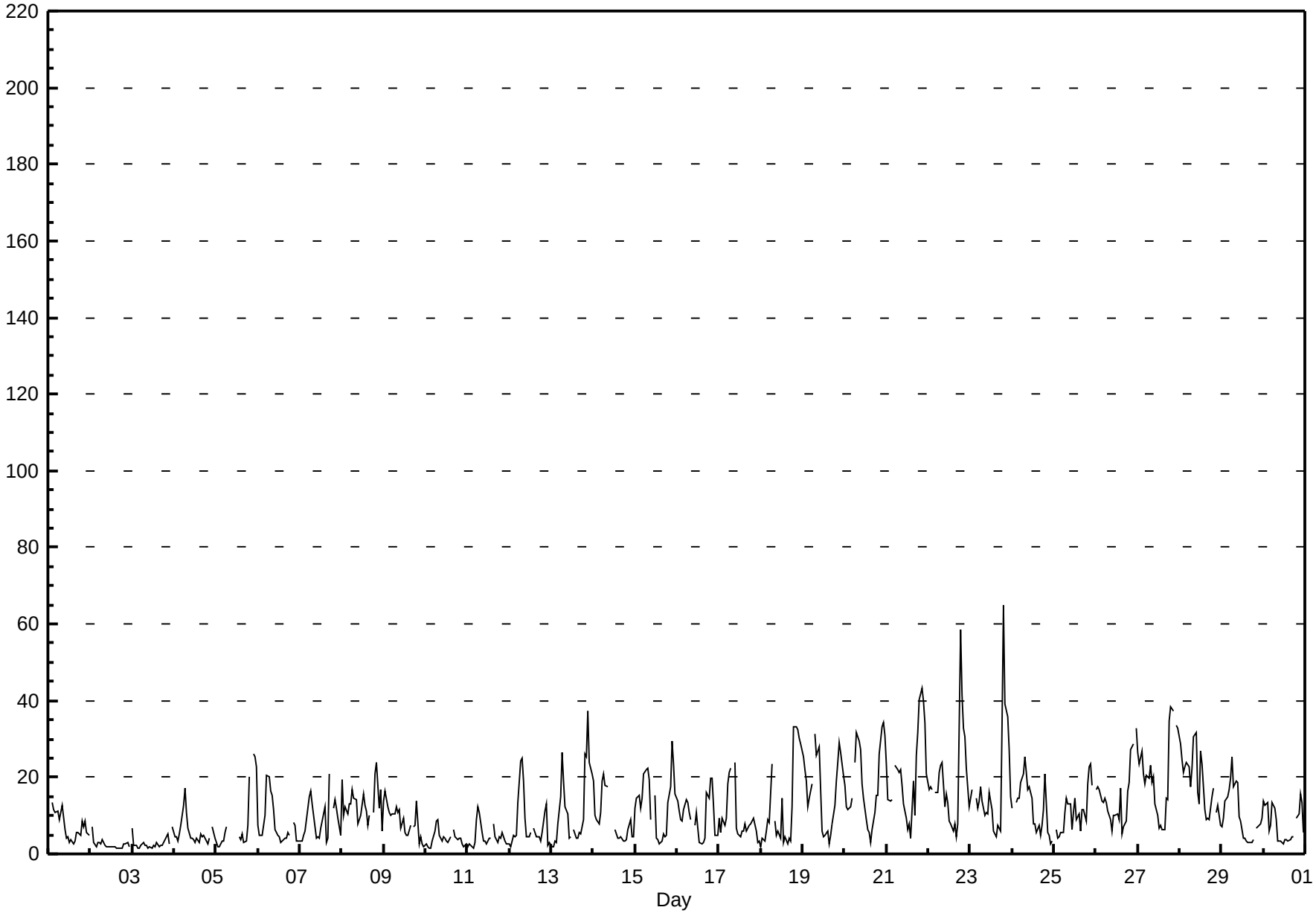
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

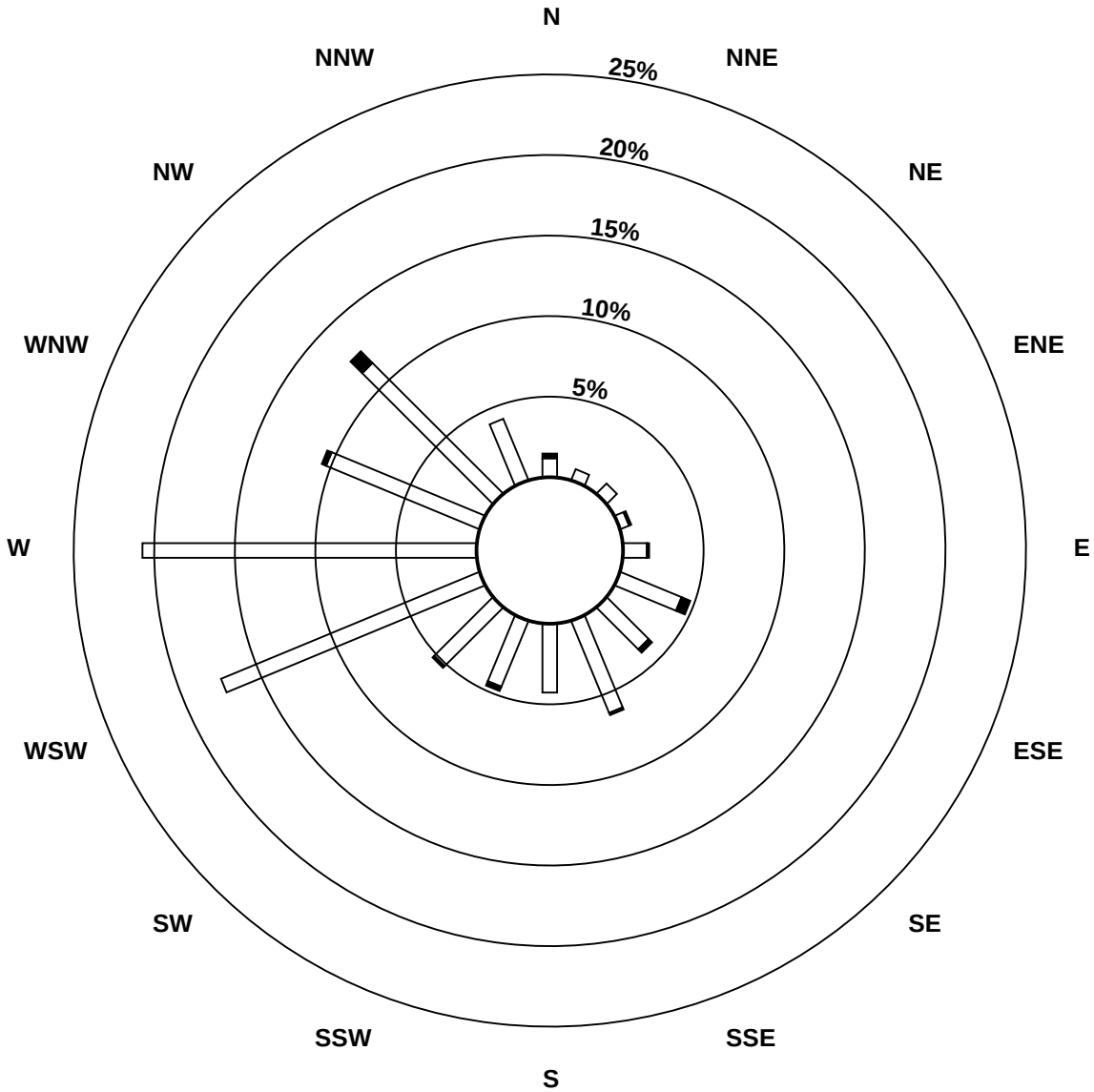
Henry Pirker - September 2012



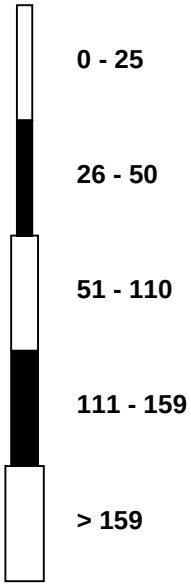
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Henry Pirker - September 2012



Pollutant Classes (ppb)

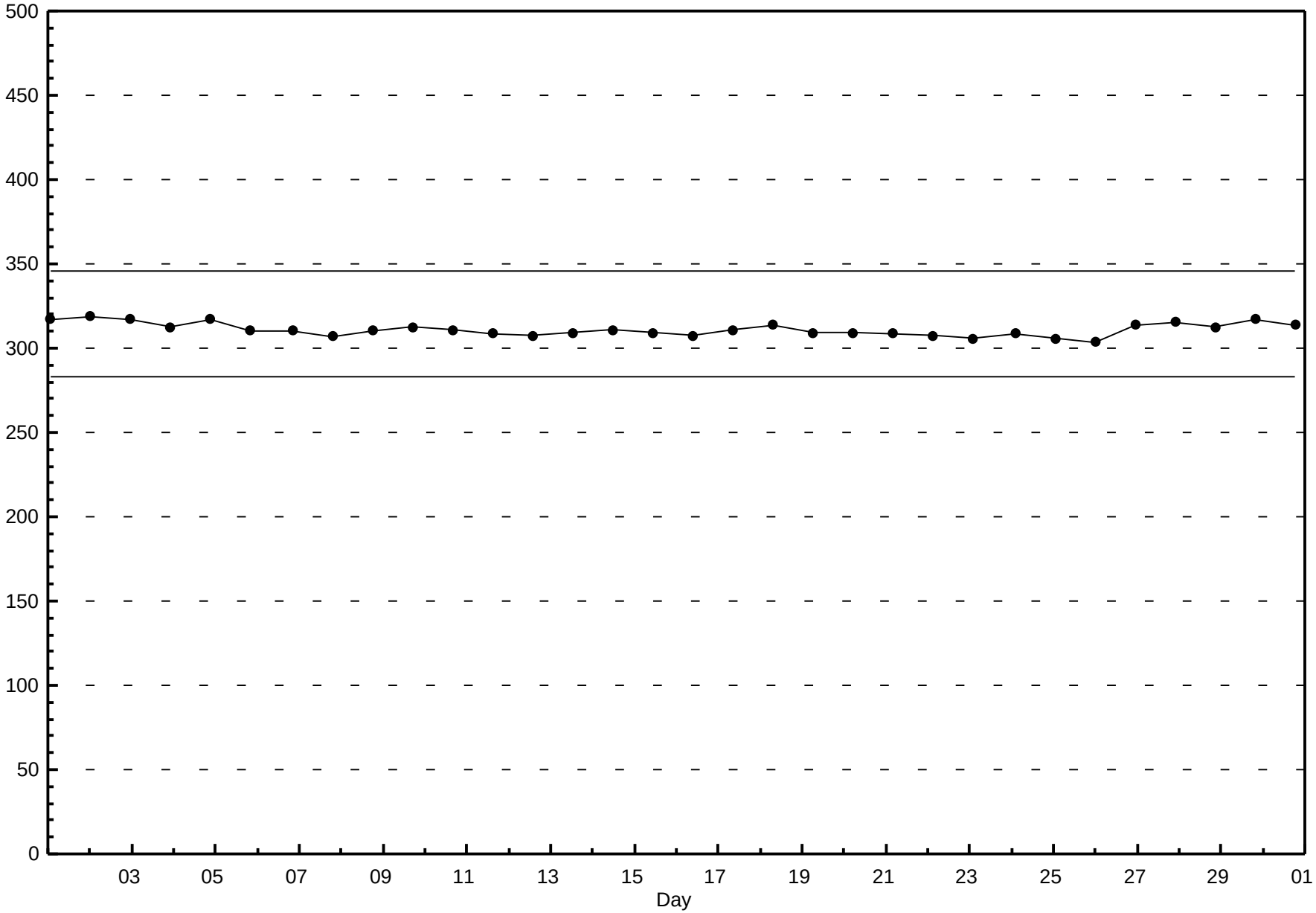


Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Henry Pirker - September 2012



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - September 2012

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

Maximum Value: 93.6 ppb on Sep 20 08:00

Maximum Daily Average: 14.7 ppb on Sep 27

Minimum Value: 0 ppb on Sep 1 01:00

Maximum Diurnal Average: 16.2 ppb at hour 8

Monthly Average: 3.46 ppb

Minimum Daily Average: 0.1 ppb on Sep 3

Minimum Diurnal Average: 0.4 ppb at hour 18

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.5 $Q_3 = 2.2$ $P_{90} = 10.9$ $P_{99} = 44.4$

Hours in Service:	720
Hours of Data:	680
Hours of Missing Data:	40
Hours of Calibration:	38
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	A	0	0	0	0	0	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.3
2-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
3-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	0.1	0.4
4-Sep	0	0	0	0	0	0	4	4	2	2	1	1	1	1	1	1	1	1	0	0	0	A	0	0	0.8	3.9
5-Sep	0	0	0	0	0	0	0	C	C	C	C	C	C	1	1	0	0	0	0	0	A	3	6	2	--	5.9
6-Sep	0	0	0	0	0	5	21	18	11	7	2	1	1	0	1	1	1	1	0	A	0	0	0	0	3.0	20.9
7-Sep	0	0	0	0	0	1	4	3	2	0	0	0	0	0	1	0	0	1	A	0	0	0	0	0	0.6	3.7
8-Sep	0	0	1	0	0	1	2	8	11	4	4	3	3	1	1	0	0	A	0	0	0	0	0	0	1.8	11.3
9-Sep	0	1	1	0	0	2	4	6	6	9	2	2	1	0	0	0	A	0	0	0	0	0	0	0	1.5	9.3
10-Sep	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0.3	0.8
11-Sep	0	0	0	0	0	0	1	2	1	1	1	1	1	1	A	1	1	1	1	0	0	0	0	0	0.6	1.9
12-Sep	0	0	0	0	0	1	10	17	11	2	1	1	1	A	1	1	1	0	0	0	0	0	0	0	2.0	16.5
13-Sep	0	0	0	0	0	0	5	4	3	1	1	1	A	1	1	1	1	1	1	10	28	13	8	4	3.6	27.6
14-Sep	0	0	0	0	0	1	3	4	4	P	P	A	1	1	1	0	1	0	0	0	0	0	0	0	0.7	3.7
15-Sep	0	0	0	0	1	6	11	9	11	5	A	3	0	0	0	0	0	0	0	0	0	6	1	2	2.5	11.4
16-Sep	1	2	1	1	1	2	1	4	4	A	2	3	1	0	0	0	0	0	0	0	1	0	0	0	1.0	4.1
17-Sep	0	0	0	0	0	0	12	30	A	5	1	1	1	1	1	1	0	0	0	0	0	0	0	0	2.3	30.0
18-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	2	9	16	16	11	2.4	16.1
19-Sep	11	11	3	0	2	2	A	12	34	13	6	1	0	0	0	0	0	0	1	0	0	5	7	3	4.9	33.7
20-Sep	5	1	3	3	1	A	35	94	67	32	11	5	1	0	0	0	0	0	0	0	0	6	22	13	13.1	93.6
21-Sep	9	1	3	2	A	11	13	18	13	8	3	2	1	1	0	1	0	1	1	4	29	45	29	5	8.7	44.8
22-Sep	2	3	4	A	5	5	25	40	16	6	8	2	1	1	1	0	0	0	2	5	0	7	3	0	6.0	39.6
23-Sep	1	1	A	1	1	6	6	4	4	5	3	3	2	1	0	0	0	0	0	13	14	27	10	2	4.5	27.0
24-Sep	1	A	0	2	2	6	18	42	15	9	9	2	1	1	0	0	0	0	0	0	0	0	0	0	4.7	41.5
25-Sep	A	0	0	0	0	0	0	1	4	4	1	1	5	1	1	1	2	1	0	0	2	4	9	A	1.7	8.7
26-Sep	21	6	7	1	1	2	6	15	14	9	13	14	7	3	1	1	1	0	0	0	0	2	A	16	6.0	21.3
27-Sep	18	13	9	14	10	16	27	60	42	17	7	3	1	1	1	1	2	1	3	18	16	A	25	33	14.7	60.3
28-Sep	23	11	16	4	6	14	19	58	80	45	7	5	7	2	1	1	0	0	1	0	A	0	0	0	13.1	80.1
29-Sep	0	0	0	0	1	1	1	1	2	2	2	2	1	1	1	1	1	0	0	A	0	0	0	0	0.7	2.2
30-Sep	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1	1	0	A	0	0	0	0	0	0.3	0.6
	3.4	1.8	1.6	1.0	1.1	2.8	7.9	16.2	12.9	7.0	3.3	2.1	1.4	0.7	0.5	0.4	0.5	0.4	0.5	1.9	3.6	4.8	4.9	3.2	Diurnal Average	
	23.4	12.8	16.2	14.0	10.4	15.6	34.6	93.6	80.1	44.5	12.9	14.0	6.9	2.7	1.4	1.1	2.2	1.0	2.8	17.7	29.2	44.8	29.2	32.8	Diurnal Maximum	

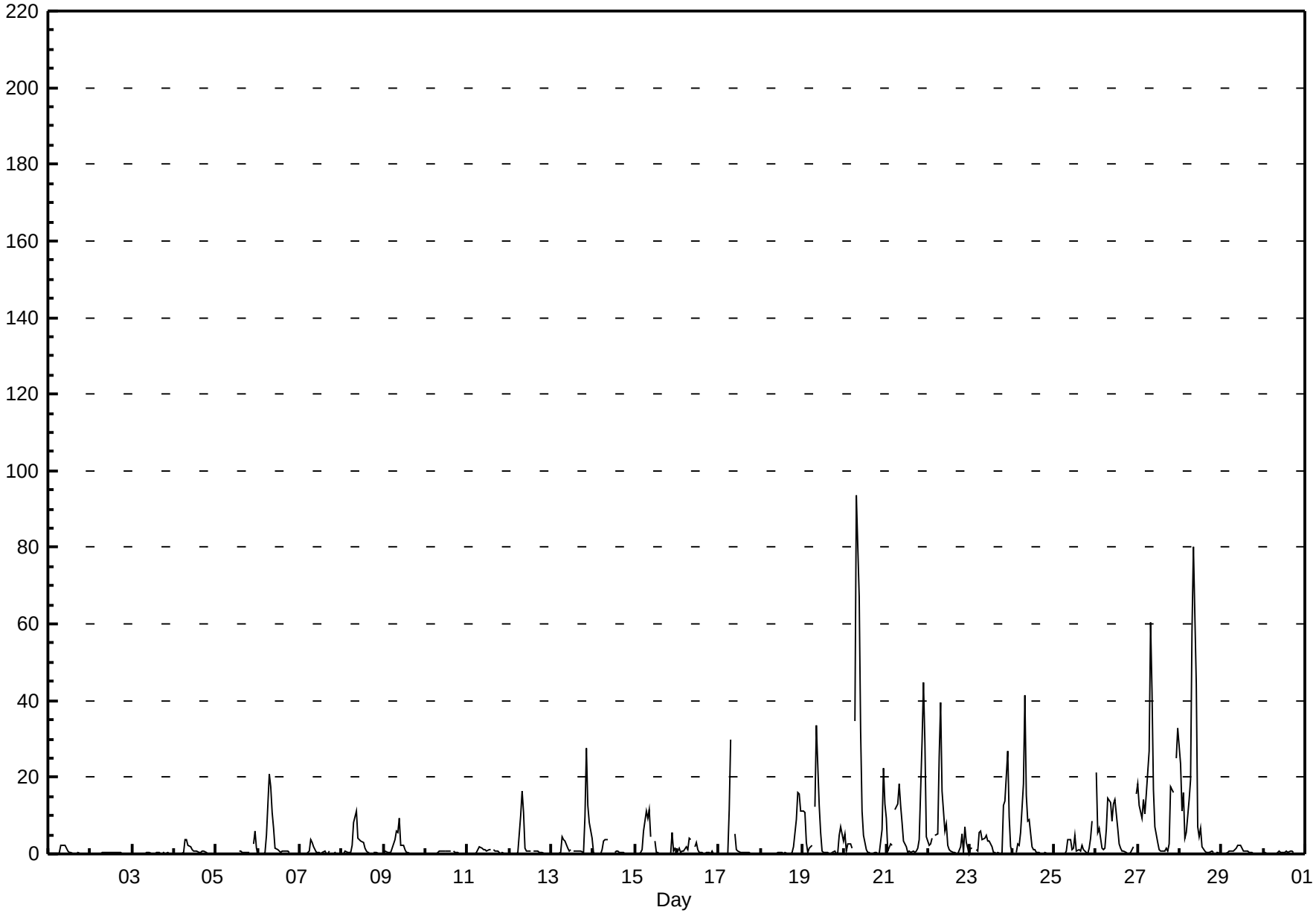
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - September 2012

Maximum Value: 213.9 ppb on Sep 13 22:00

Maximum Daily Average: 31.5 ppb on Sep 27

Minimum Value: 0 ppb on Sep 4 23:00

Minimum Daily Average: 0.4 ppb on Sep 3

Maximum Diurnal Average: 27.1 ppb at hour 8

Minimum Diurnal Average: 1.5 ppb at hour 16

Monthly Average: 8.28 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.5$ Median = 1.5 $Q_3 = 6.8$ $P_{90} = 23.3$ $P_{99} = 99.0$

Hours in Service:	720
Hours of Data:	680
Hours of Missing Data:	40
Hours of Calibration:	38
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	A	0	0	3	0	1	5	4	3	2	1	1	1	1	2	3	3	0	0	0	0	0	1	1.6	5.5
2-Sep	A	0	0	0	0	0	1	1	1	0	1	1	1	1	1	0	0	1	0	0	0	0	0	A	0.5	1.5
3-Sep	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0	A	0	0.4	1.5
4-Sep	0	0	0	0	1	2	8	5	5	3	2	2	1	2	1	2	1	1	1	0	0	A	0	0	1.7	8.2
5-Sep	0	0	0	0	0	0	1	C	C	C	C	C	C	2	1	2	1	1	1	2	A	9	10	10	--	10.0
6-Sep	0	0	0	0	1	14	45	32	27	16	4	4	3	1	1	2	2	2	1	A	0	1	0	0	6.8	45.2
7-Sep	0	0	0	0	1	4	11	11	6	3	4	2	4	4	20	0	1	13	A	1	1	1	1	0	3.8	20.0
8-Sep	3	1	3	2	2	4	6	12	16	6	5	5	7	4	3	2	4	A	1	4	3	1	2	0	4.0	15.6
9-Sep	0	11	2	2	2	4	8	12	12	19	4	7	2	1	1	0	A	0	0	0	0	1	0	0	3.8	18.5
10-Sep	0	0	0	0	0	0	1	1	2	2	1	1	1	2	2	A	1	1	1	1	1	0	0	0	0.7	2.0
11-Sep	0	0	0	0	0	1	3	3	2	3	2	2	3	3	A	2	2	2	1	1	1	0	0	0	1.2	2.9
12-Sep	0	0	1	0	1	2	24	22	16	5	2	1	2	A	2	1	1	1	1	1	0	1	0	1	3.5	23.6
13-Sep	0	0	0	0	0	1	12	8	7	4	1	2	A	1	1	2	2	1	1	34	55	214	23	8	16.4	213.9
14-Sep	1	0	3	1	1	3	6	6	8	P	P	A	1	2	1	1	1	1	0	0	0	0	0	0	1.7	7.5
15-Sep	0	1	0	3	4	20	20	19	19	7	A	7	1	2	0	2	3	1	1	1	1	18	3	9	6.3	20.2
16-Sep	7	4	2	2	4	8	3	5	5	A	3	8	4	1	1	1	1	5	3	1	6	1	0	0	3.1	8.4
17-Sep	1	0	0	0	6	1	22	48	A	18	2	1	1	1	1	1	1	1	0	0	0	0	0	0	4.6	47.6
18-Sep	0	0	0	0	0	0	2	A	0	0	3	1	1	1	1	1	2	1	4	21	28	23	26	21	6.0	28.2
19-Sep	17	18	10	2	20	7	A	29	43	26	12	2	1	2	3	1	1	3	3	1	8	22	20	14	11.5	43.1
20-Sep	16	11	11	11	8	A	57	124	94	54	16	8	3	1	2	0	2	2	3	1	1	31	29	34	22.6	124.0
21-Sep	34	4	23	12	A	28	24	29	27	14	7	3	1	2	1	11	1	2	5	16	90	65	64	13	20.7	90.5
22-Sep	12	13	13	A	14	13	68	83	68	8	10	7	3	2	1	1	1	2	23	24	3	31	12	2	17.9	83.1
23-Sep	5	10	A	6	3	23	24	8	5	7	5	7	3	1	1	1	1	1	3	105	48	50	30	9	15.4	105.3
24-Sep	5	A	5	10	14	29	34	57	46	13	13	7	3	3	1	1	1	1	0	5	0	0	0	0	10.6	56.7
25-Sep	A	1	0	0	0	0	0	3	8	10	3	14	20	5	4	1	4	3	1	1	7	10	21	A	5.3	20.9
26-Sep	24	17	10	3	3	5	10	20	17	23	20	19	12	6	26	2	2	1	0	0	4	24	A	25	11.9	26.1
27-Sep	28	28	37	23	15	36	52	109	67	38	10	7	2	2	2	1	3	1	21	49	97	A	51	45	31.5	109.3
28-Sep	39	26	42	13	29	48	56	100	102	99	12	6	10	6	2	1	1	1	1	1	A	1	1	0	26.0	102.1
29-Sep	4	3	2	3	6	13	3	2	6	5	3	4	1	1	1	1	1	1	1	A	0	0	0	0	2.7	12.7
30-Sep	0	3	1	0	0	0	0	1	1	1	1	1	2	2	1	1	1	1	A	1	1	1	0	0	1.0	3.0
	7.0	5.3	5.7	3.2	4.8	9.1	17.3	27.1	21.9	14.3	5.4	4.6	3.3	2.2	3.0	1.5	1.5	1.8	2.8	9.7	12.7	18.1	10.6	6.8	Diurnal Average	
	38.9	27.6	42.1	22.8	29.4	48.4	68.4	124.0	102.1	99.2	19.5	19.0	19.9	6.3	26.1	11.4	3.7	13.5	23.3	105.3	96.9	213.9	64.3	44.6	Diurnal Maximum	

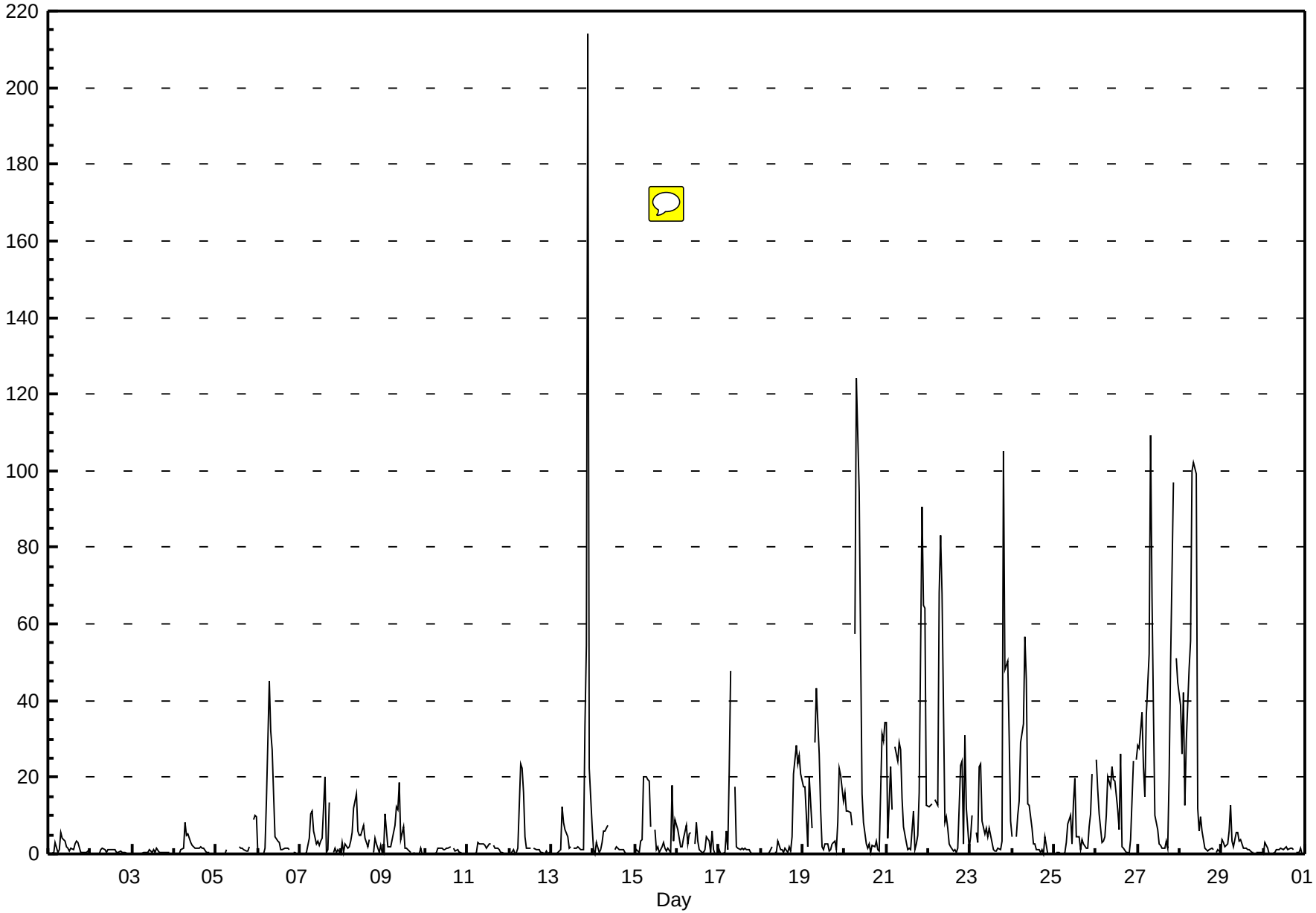
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - September 2012

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

Maximum Value: 121.3 ppb on Sep 20 08:00

Maximum Daily Average: 30.8 ppb on Sep 27

Minimum Value: 1 ppb on Sep 5 03:00

Minimum Daily Average: 1.8 ppb on Sep 2

Maximum Diurnal Average: 29.2 ppb at hour 8

Minimum Diurnal Average: 3.2 ppb at hour 16

Monthly Average: 11.38 ppb

Percentiles: P_1 = 1.2 P_{10} = 1.9 Q_1 = 3.0 Median = 5.6 Q_3 = 13.3 P_{90} = 29.6 P_{99} = 67.7

Hours in Service:	720
Hours of Data:	680
Hours of Missing Data:	40
Hours of Calibration:	38
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	4	A	9	9	8	6	7	11	11	7	4	3	2	3	2	1	2	3	4	5	5	5	4	3	5.1	11.3
2-Sep	A	5	2	2	2	2	1	2	1	2	2	2	2	2	2	1	1	1	1	2	2	2	1	A	1.8	4.6
3-Sep	4	2	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	3	2	4	2	A	4	1.9	3.9
4-Sep	4	3	2	3	5	9	17	13	6	5	4	3	2	3	2	3	3	3	3	2	3	A	5	3	4.6	16.6
5-Sep	2	1	1	2	2	4	5	C	C	C	C	C	C	3	3	2	2	2	4	10	A	26	29	15	--	29.5
6-Sep	5	4	4	4	9	20	38	30	20	14	5	4	2	2	3	3	3	4	4	A	6	5	2	3	8.4	38.0
7-Sep	2	2	4	5	7	10	16	10	8	3	2	2	2	3	3	2	3	5	A	10	11	9	6	4	5.6	16.0
8-Sep	6	9	11	10	11	11	17	21	24	10	11	12	12	8	5	4	3	A	8	14	9	7	6	3	10.0	23.7
9-Sep	5	7	10	10	8	10	13	16	14	17	7	7	5	3	5	5	A	5	4	7	2	2	2	2	7.2	17.3
10-Sep	2	1	1	1	2	4	6	6	4	4	4	4	3	3	3	A	5	3	3	3	3	2	2	2	3.1	6.1
11-Sep	2	2	2	2	2	7	11	9	5	3	3	3	4	3	A	6	4	3	4	3	4	3	2	2	3.8	10.5
12-Sep	2	2	3	3	3	8	32	38	26	5	4	4	5	A	5	4	4	3	3	4	7	8	1	2	7.7	38.1
13-Sep	1	2	3	2	5	11	23	16	12	6	3	4	A	5	4	3	4	4	7	30	52	33	28	23	12.2	51.5
14-Sep	14	8	6	6	8	17	21	18	14	P	P	A	5	4	3	3	3	3	2	2	3	4	3	3	7.2	21.1
15-Sep	6	11	12	10	12	23	31	26	25	11	A	12	3	2	2	2	2	2	3	7	13	30	12	14	11.8	31.1
16-Sep	12	12	7	7	10	13	12	13	11	A	7	9	5	2	2	2	2	3	9	12	15	5	4	4	7.8	15.1
17-Sep	4	5	6	4	4	10	32	49	A	17	6	4	4	4	4	5	5	6	6	6	4	4	2	2	8.3	48.8
18-Sep	2	3	2	3	4	4	7	A	5	3	2	3	2	2	2	2	2	2	7	22	40	47	43	36	10.7	47.1
19-Sep	34	31	18	10	11	17	A	35	58	32	17	5	3	2	3	2	3	4	9	12	16	28	28	21	17.4	57.6
20-Sep	21	10	12	12	12	A	55	121	94	55	28	16	6	3	2	2	2	6	11	12	19	35	54	40	27.3	121.3
21-Sep	27	11	13	14	A	31	34	38	30	23	12	9	4	5	3	5	4	13	27	35	67	80	55	23	24.5	79.7
22-Sep	15	18	19	A	19	20	42	59	30	16	21	10	6	5	5	6	3	4	23	41	21	32	18	10	19.3	58.6
23-Sep	14	11	A	13	10	16	21	15	13	14	12	14	11	6	5	3	5	4	15	47	51	58	31	15	17.5	58.1
24-Sep	8	A	10	13	13	20	38	63	30	22	24	8	7	7	3	4	3	3	5	10	3	3	1	2	13.1	63.2
25-Sep	A	4	3	4	4	4	7	12	15	12	5	6	12	5	7	4	10	8	6	13	20	23	23	A	9.5	23.1
26-Sep	33	19	21	13	12	13	17	24	20	13	21	23	15	8	5	4	5	4	10	16	21	21	A	44	16.6	43.8
27-Sep	42	34	29	32	26	32	43	78	58	30	17	10	5	4	4	4	11	9	25	51	47	A	54	61	30.8	78.0
28-Sep	49	34	35	24	27	31	34	74	105	69	20	15	25	13	8	7	6	5	10	9	A	8	6	3	26.9	105.2
29-Sep	4	4	8	10	13	13	20	15	14	11	10	8	3	3	3	3	3	2	3	A	5	4	6	7	7.5	20.1
30-Sep	8	11	9	4	6	9	7	4	3	3	2	2	2	2	2	3	3	3	A	7	8	12	7	4	5.3	11.6
	11.9	9.4	9.1	8.1	8.9	13.0	21.0	29.2	23.5	15.2	9.4	7.1	5.6	4.0	3.5	3.2	3.7	4.1	7.8	14.1	16.5	17.8	15.6	12.6	Diurnal Average	
	49.2	34.5	35.2	32.2	26.9	31.5	55.0	121.3	105.2	69.2	27.6	22.6	25.2	12.6	7.6	7.0	10.9	13.0	27.1	51.4	66.7	79.7	55.3	61.1	Diurnal Maximum	

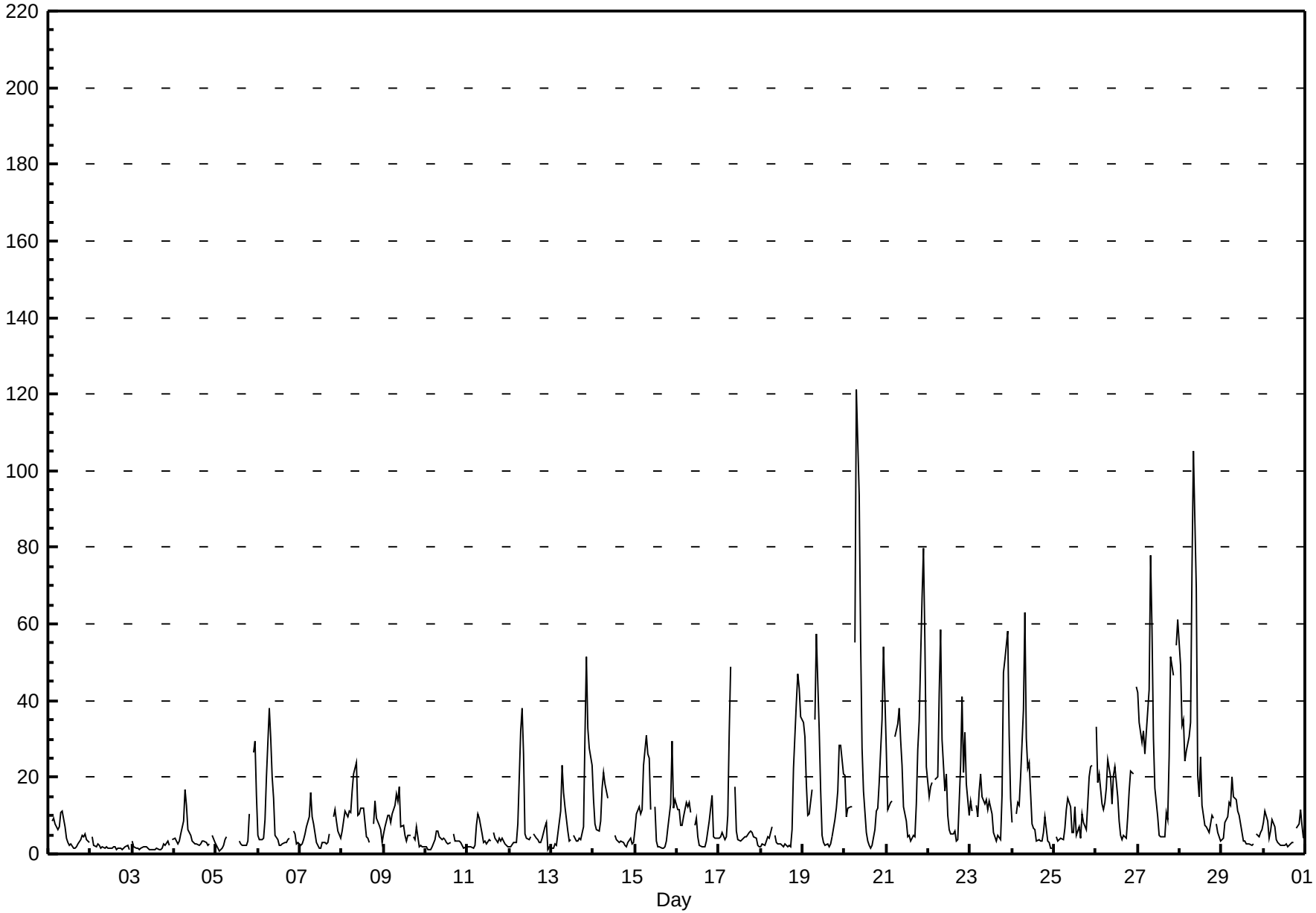
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - September 2012



Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - September 2012

Maximum Value: 231.6 ppb on Sep 13 22:00

Maximum Daily Average: 50.3 ppb on Sep 27

Minimum Value: 1 ppb on Sep 5 03:00

Minimum Daily Average: 3.1 ppb on Sep 2

Maximum Diurnal Average: 43.1 ppb at hour 8

Minimum Diurnal Average: 7.0 ppb at hour 16

Monthly Average: 18.89 ppb

Percentiles: P_1 = 2.0 P_{10} = 3.3 Q_1 = 5.5 Median = 10.1 Q_3 = 23.1 P_{90} = 45.4 P_{99} = 126.8

Hours in Service:	720
Hours of Data:	680
Hours of Missing Data:	40
Hours of Calibration:	38
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	A	14	11	12	11	10	16	16	9	6	6	3	5	4	6	9	9	5	9	8	9	6	6	8.5	16.3
2-Sep	A	7	3	2	3	3	4	5	3	3	3	3	3	3	3	2	2	2	2	3	3	3	2	A	3.1	7.1
3-Sep	7	2	2	2	2	2	3	3	3	3	3	3	3	2	5	3	3	3	4	4	6	3	A	7	3.2	6.9
4-Sep	5	5	3	5	9	14	25	16	11	7	7	5	4	6	4	7	6	6	4	3	5	A	7	4	7.3	25.4
5-Sep	3	2	1	3	3	5	8	C	C	C	C	C	C	7	5	7	4	4	8	22	A	32	34	30	--	33.5
6-Sep	8	5	5	8	10	35	63	48	43	27	11	8	8	4	5	6	6	7	6	A	9	8	3	4	14.5	63.5
7-Sep	4	3	5	6	9	17	26	24	15	6	8	7	10	13	32	4	5	35	A	13	15	12	11	5	12.5	34.8
8-Sep	23	11	14	12	13	14	22	26	30	14	14	15	24	17	14	10	14	A	12	25	26	12	19	6	16.8	29.9
9-Sep	14	27	15	13	12	13	18	25	22	30	11	16	7	6	6	8	A	7	8	14	3	6	2	2	12.3	29.7
10-Sep	3	2	2	2	3	6	9	10	6	5	6	5	5	4	7	A	8	5	5	5	4	3	2	3	4.8	10.2
11-Sep	2	3	3	2	3	9	16	13	8	6	6	4	7	7	A	10	6	5	5	5	6	4	3	3	6.0	15.7
12-Sep	2	2	6	5	5	15	48	47	35	14	6	6	7	A	8	6	6	6	4	6	11	14	3	3	11.6	47.9
13-Sep	2	2	4	3	8	16	39	28	19	15	6	7	A	8	6	6	7	6	10	57	79	232	44	29	27.5	231.6
14-Sep	20	11	12	9	12	22	27	24	24	P	P	A	8	7	6	6	6	4	4	4	7	9	5	4	11.0	26.8
15-Sep	12	16	16	15	16	39	42	42	37	17	A	22	5	6	3	6	8	6	6	14	18	45	27	22	19.1	45.4
16-Sep	20	15	11	11	15	18	15	15	14	A	10	20	11	4	3	4	5	20	18	21	26	14	5	5	12.9	26.0
17-Sep	10	6	10	8	15	20	42	70	A	42	9	7	5	7	7	10	7	8	8	9	9	6	3	3	13.8	69.9
18-Sep	2	4	4	6	9	9	26	A	9	6	10	5	15	4	6	3	6	4	13	55	59	56	54	45	17.8	59.0
19-Sep	38	35	26	13	34	24	A	60	68	51	29	8	5	8	9	3	6	11	16	20	32	46	40	30	26.6	68.3
20-Sep	29	23	22	21	20	A	74	155	119	80	34	23	11	8	8	4	9	12	17	16	27	61	63	58	38.9	154.6
21-Sep	58	18	36	24	A	51	45	50	49	32	20	13	8	10	5	30	11	28	37	56	134	104	88	33	40.8	133.6
22-Sep	29	27	27	A	29	26	86	101	91	20	25	20	11	10	7	9	5	9	82	63	36	54	33	14	35.4	101.4
23-Sep	19	25	A	20	14	32	35	20	15	18	15	23	15	7	6	5	9	7	37	152	78	79	54	23	30.7	152.5
24-Sep	15	A	18	23	26	39	54	79	67	30	30	21	10	11	7	9	5	8	12	26	6	5	3	4	22.0	79.3
25-Sep	A	7	4	5	6	6	11	17	21	23	9	23	34	13	15	7	14	14	9	19	30	31	32	A	15.9	34.3
26-Sep	37	32	27	17	16	18	23	31	25	21	29	29	20	16	40	7	8	9	17	19	30	53	A	52	25.1	52.7
27-Sep	50	49	64	44	32	46	69	133	85	56	22	16	9	10	8	8	18	15	53	88	129	A	80	74	50.3	132.5
28-Sep	63	47	58	33	53	61	72	121	126	127	28	19	36	30	13	10	10	10	16	18	A	11	14	8	42.7	127.4
29-Sep	7	12	16	16	22	32	29	19	25	25	13	12	6	5	4	4	4	4	4	A	7	8	8	10	12.7	32.4
30-Sep	14	15	14	6	8	14	13	10	4	5	5	4	6	6	5	5	6	5	A	10	11	17	14	6	8.7	17.3
	17.9	14.7	15.3	11.8	14.4	21.3	32.9	43.1	35.4	25.6	13.8	12.5	10.5	8.4	8.6	7.0	7.4	9.3	15.0	26.9	29.1	33.4	23.5	17.6	Diurnal Average	
	63.0	49.0	64.1	43.6	52.7	60.9	85.9	154.6	125.9	127.4	34.2	28.9	36.0	29.5	40.2	30.4	17.8	34.8	82.2	152.5	133.6	231.6	88.0	73.5	Diurnal Maximum	

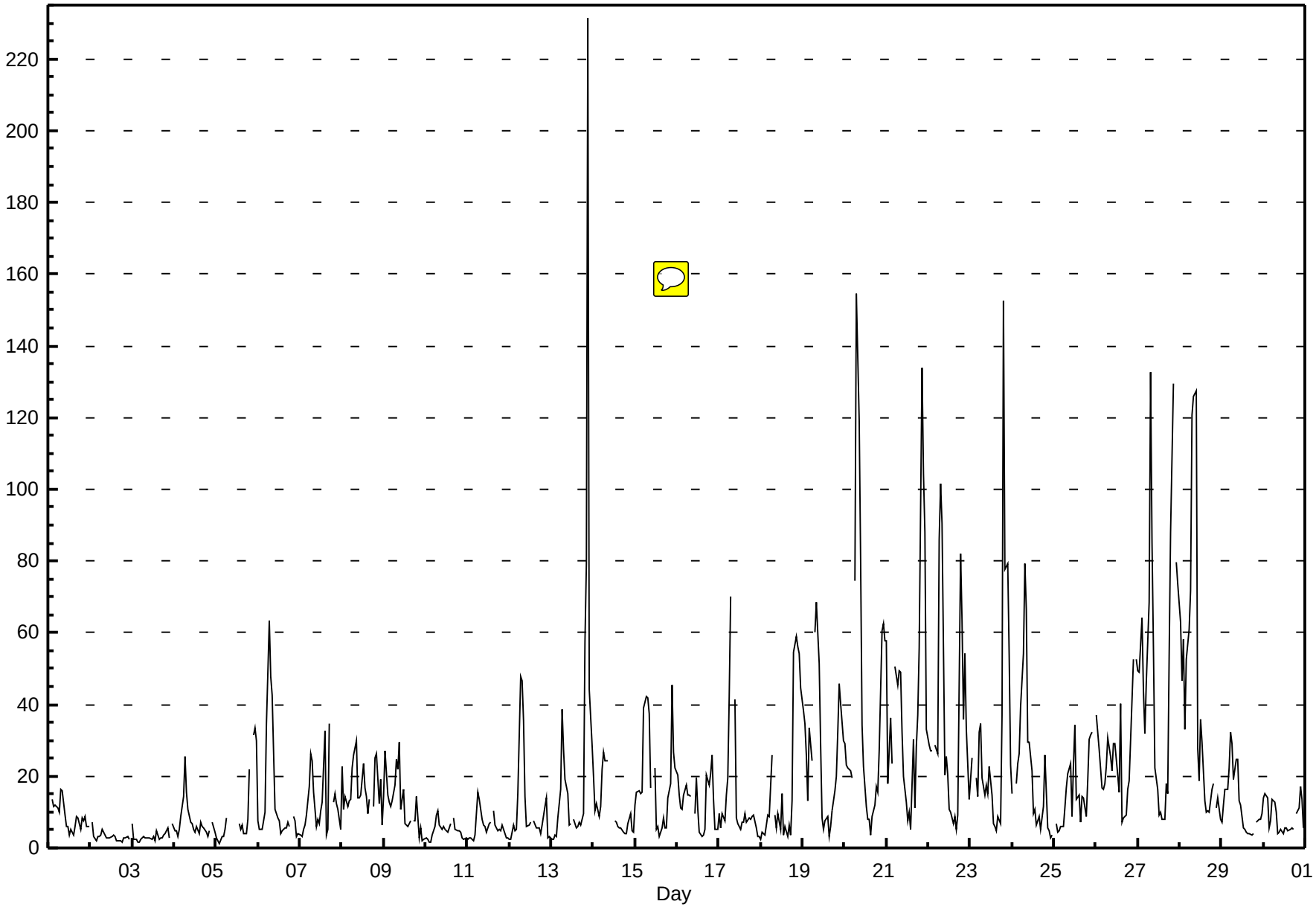
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Henry Pirker - September 2012



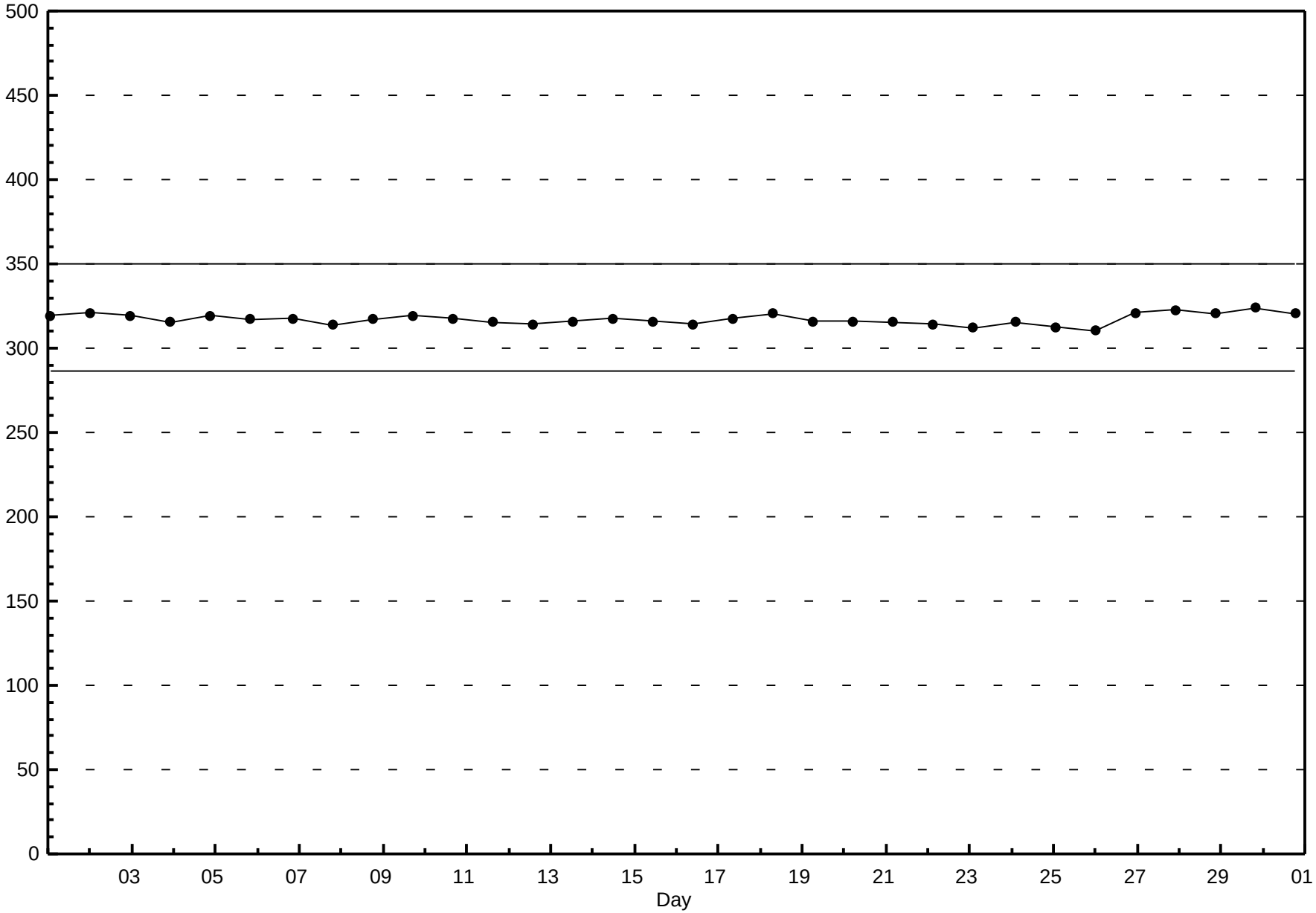
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Henry Pirker - September 2012



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 52.0 ppb on Sep 17 16:00 Maximum Daily Average: 35.6 ppb on Sep 17

Minimum Value: 1 ppb on Sep 26 01:00 Minimum Daily Average: 12.7 ppb on Sep 26
Maximum Diurnal Average: 37.4 ppb at hour 16 Minimum Diurnal Average: 8.7 ppb at hour 7
Monthly Average: 22.29 ppb Percentiles: P_1 = 0.8 P_{10} = 3.1 Q_1 = 11.4 Median = 24.2 Q_3 = 30.9 P_{90} = 39.8 P_{99} = 47.1

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	36
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	25	A	24	18	16	15	12	11	11	13	19	25	28	29	40	44	40	36	30	27	27	24	14	14	23.6	43.7
2-Sep	A	13	14	13	12	13	17	16	17	19	21	23	26	27	29	30	27	27	27	26	25	24	25	A	21.4	30.2
3-Sep	25	26	26	28	29	28	27	27	29	30	32	34	34	34	34	33	32	29	24	23	20	21	A	19	28.0	34.3
4-Sep	16	16	16	16	14	11	7	11	17	19	24	26	29	30	30	30	30	28	25	26	25	A	23	23	21.4	30.5
5-Sep	23	23	22	22	19	20	18	15	19	27	33	C	C	C	C	33	34	34	32	22	A	3	2	9	21.6	34.1
6-Sep	17	17	15	13	8	2	1	4	9	15	23	27	30	31	31	30	31	31	29	A	26	23	24	23	20.1	30.9
7-Sep	24	24	22	17	15	13	5	14	22	34	36	38	39	40	41	44	44	41	A	30	26	27	27	28	28.2	43.8
8-Sep	24	11	5	6	4	7	5	6	10	15	21	28	35	43	46	43	40	A	26	18	23	25	27	30	21.7	45.8
9-Sep	25	16	10	6	7	3	3	5	8	10	17	25	34	40	47	44	A	47	47	38	41	40	39	36	25.6	47.3
10-Sep	30	32	36	35	36	32	27	25	26	27	26	27	29	31	31	A	30	31	31	30	29	28	27	26	29.6	35.9
11-Sep	25	25	24	25	23	18	15	17	22	24	26	27	26	29	A	29	27	27	24	25	24	25	25	23	24.2	29.2
12-Sep	23	21	19	19	21	17	3	5	12	25	27	28	27	A	30	29	28	28	28	27	22	19	26	25	22.2	30.2
13-Sep	25	25	23	23	20	15	8	14	18	24	26	27	A	29	29	27	24	23	20	5	1	4	3	3	18.0	29.3
14-Sep	7	13	15	16	14	7	7	11	21	P	P	A	42	41	40	40	39	39	38	36	32	29	30	27	25.9	41.9
15-Sep	23	16	11	11	8	2	1	6	9	17	A	28	34	36	38	39	38	38	34	27	22	5	16	7	20.3	38.6
16-Sep	9	7	9	8	6	3	4	7	14	A	22	24	30	33	33	34	35	33	26	20	16	25	25	26	19.5	34.7
17-Sep	25	26	25	28	28	20	2	2	A	26	38	42	44	46	51	52	51	46	44	42	45	46	46	45	35.6	52.0
18-Sep	44	42	40	37	34	36	33	A	39	38	39	40	41	41	41	42	43	42	36	17	4	2	1	1	31.9	44.4
19-Sep	1	1	5	11	13	5	A	5	5	14	23	35	40	39	38	38	40	37	30	26	20	9	3	3	19.2	40.0
20-Sep	3	7	5	6	6	A	1	2	4	8	17	27	37	40	42	44	43	40	33	30	21	6	1	1	18.4	43.7
21-Sep	4	9	7	6	A	1	1	3	11	18	27	34	41	43	44	43	43	34	17	10	3	2	2	4	17.7	43.8
22-Sep	9	5	3	A	3	2	1	2	7	14	17	29	36	39	42	44	45	43	24	8	19	6	7	13	18.1	44.9
23-Sep	9	13	A	8	7	3	1	7	12	16	22	30	37	42	43	46	50	49	30	8	2	1	3	8	19.3	49.5
24-Sep	12	A	12	7	7	3	1	1	9	13	16	27	29	30	42	45	45	44	38	30	35	36	42	39	24.4	45.2
25-Sep	A	30	27	25	23	20	18	12	10	14	23	20	25	26	23	26	23	25	23	11	6	3	1	A	18.9	30.3
26-Sep	1	3	1	2	3	2	1	1	3	6	8	9	17	26	33	35	33	33	27	20	15	13	A	2	12.7	35.2
27-Sep	1	1	1	1	1	1	1	1	4	9	17	26	35	40	39	38	33	32	15	3	4	A	2	2	13.4	39.8
28-Sep	1	2	2	3	2	1	1	1	2	9	19	26	29	33	30	32	29	31	24	23	A	27	24	30	16.6	32.7
29-Sep	29	27	21	15	12	15	9	13	15	18	19	23	32	37	37	35	34	33	31	A	28	27	24	22	24.2	36.9
30-Sep	21	16	19	26	21	16	22	29	29	32	35	38	39	40	39	36	33	30	A	26	22	18	21	23	27.4	39.6
	17.2	16.6	15.8	15.6	14.2	11.5	8.7	9.4	14.1	19.2	24.1	28.3	33.0	35.5	37.2	37.4	36.0	34.8	29.0	22.6	20.8	18.4	18.2	18.3	Diurnal Average	
	44.4	41.7	40.0	37.3	35.8	35.7	33.1	28.6	38.7	38.0	39.4	41.7	43.9	45.9	50.7	52.0	50.7	48.6	46.6	42.1	45.1	45.7	46.3	44.7	Diurnal Maximum	

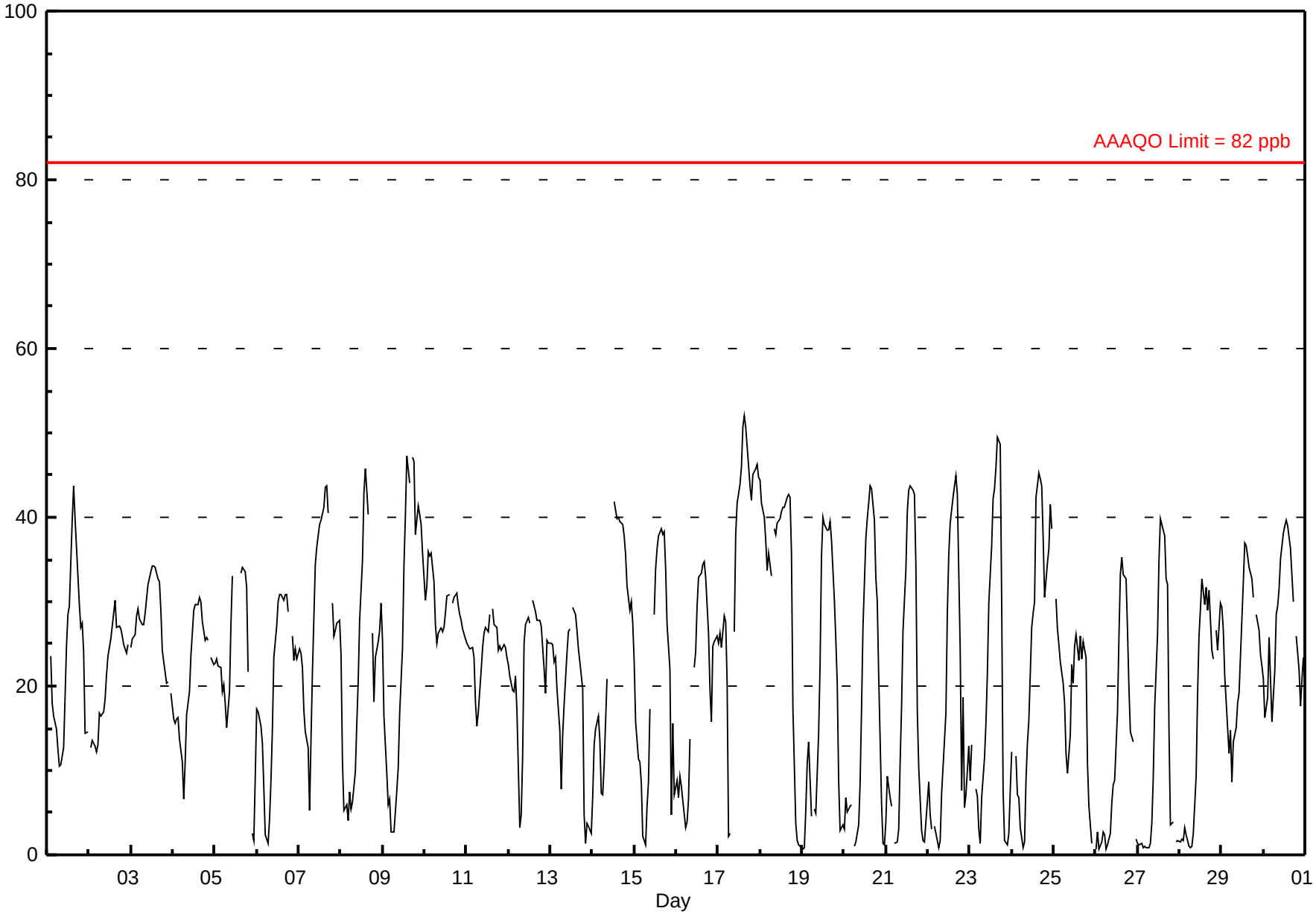
C - Calibration P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Henry Pirker - September 2012



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Henry Pirker - September 2012

Maximum Value: 55.1 ppb on Sep 17 15:00

Maximum Daily Average: 39.1 ppb on Sep 17

Minimum Value: 1 ppb on Sep 26 01:00

Minimum Daily Average: 16.0 ppb on Sep 26

Maximum Diurnal Average: 39.5 ppb at hour 15

Minimum Diurnal Average: 11.5 ppb at hour 7

Monthly Average: 25.51 ppb

Percentiles: P_1 = 1.5 P_{10} = 6.7 Q_1 = 16.2 Median = 26.7 Q_3 = 34.3 P_{90} = 42.7 P_{99} = 52.1

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	36
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	29	A	27	20	20	17	14	14	16	15	23	28	31	38	44	45	43	41	33	30	30	30	19	16	27.0	45.4
2-Sep	A	13	15	14	13	15	17	18	18	20	23	25	27	28	31	32	29	28	27	27	26	25	26	A	22.7	32.1
3-Sep	26	26	27	29	30	29	28	28	30	32	33	35	36	36	35	34	34	33	26	24	22	21	A	21	29.4	36.1
4-Sep	18	19	17	17	16	14	11	14	18	23	26	29	30	31	31	32	32	31	27	27	27	A	25	23	23.3	31.8
5-Sep	23	24	24	24	20	22	21	17	26	29	35	C	C	C	C	35	36	35	34	28	A	6	4	15	24.1	35.7
6-Sep	20	18	16	16	9	7	2	7	11	21	26	30	32	32	32	31	33	33	31	A	27	25	25	24	22.2	33.3
7-Sep	26	26	25	19	20	19	8	18	30	37	38	39	40	42	43	46	45	45	A	36	28	28	29	29	31.0	45.5
8-Sep	27	20	9	9	7	12	9	9	15	18	23	33	41	47	48	47	45	A	31	22	29	33	33	38	26.2	47.6
9-Sep	33	23	16	9	9	6	6	7	12	16	20	31	39	44	51	49	A	52	53	44	43	44	41	39	29.9	52.5
10-Sep	32	34	37	37	37	35	31	28	28	28	28	28	31	32	32	A	31	32	32	31	30	29	28	26	31.3	37.5
11-Sep	26	25	25	25	25	21	19	21	24	26	28	28	28	30	A	31	30	28	26	26	26	26	25	24	25.9	30.8
12-Sep	24	22	22	21	23	21	11	8	20	28	29	29	30	A	32	31	29	29	29	29	27	26	26	27	24.9	31.8
13-Sep	26	26	24	25	24	18	15	20	22	26	28	28	A	31	30	28	27	25	22	18	2	8	7	5	21.1	30.8
14-Sep	9	16	19	18	16	12	10	17	30	P	P	A	43	43	42	41	42	41	40	37	35	32	31	29	28.8	43.3
15-Sep	28	20	15	16	17	7	2	10	15	21	A	34	36	38	40	40	39	40	38	31	26	20	22	13	24.6	39.8
16-Sep	14	11	13	12	9	6	6	11	18	A	24	29	32	34	35	36	36	36	32	29	21	27	27	28	22.8	36.2
17-Sep	28	28	28	31	32	27	9	4	A	38	41	44	46	48	55	55	54	50	47	45	48	48	48	46	39.1	55.1
18-Sep	45	45	42	39	38	38	37	A	40	39	41	42	42	43	43	43	44	44	42	30	13	4	2	2	34.7	45.4
19-Sep	2	3	10	17	19	12	A	9	9	19	32	40	42	41	41	40	43	42	33	31	26	21	6	6	23.5	42.8
20-Sep	6	10	9	10	10	A	2	2	6	14	22	34	40	43	44	46	45	43	38	33	29	16	3	2	22.0	45.5
21-Sep	11	14	12	12	A	4	3	4	17	23	31	37	43	46	45	45	44	41	27	20	5	5	5	9	21.9	46.2
22-Sep	14	10	7	A	6	4	1	3	13	16	19	33	40	41	44	46	46	45	42	17	25	19	13	18	22.7	46.3
23-Sep	11	19	A	11	10	7	3	9	13	19	24	35	41	44	45	48	53	54	43	18	4	2	8	12	23.2	53.9
24-Sep	16	A	14	13	12	6	1	2	14	18	18	31	33	39	47	47	47	46	43	38	37	43	44	41	28.3	47.4
25-Sep	A	32	30	27	25	23	21	14	13	23	26	23	30	28	26	28	25	29	27	18	7	9	9	A	22.5	31.8
26-Sep	1	6	1	2	6	6	1	2	4	8	10	11	22	31	36	37	37	35	32	25	30	21	A	4	16.0	37.0
27-Sep	2	4	18	1	1	1	1	2	7	14	21	32	37	43	43	40	39	40	25	12	13	A	3	3	17.5	42.6
28-Sep	2	4	3	6	5	2	1	2	4	17	23	29	32	39	33	33	32	35	30	27	A	29	30	33	19.7	39.0
29-Sep	43	30	27	21	22	21	14	19	18	22	23	27	36	39	38	37	36	34	33	A	30	28	26	27	28.4	42.9
30-Sep	26	21	27	28	24	22	27	30	31	35	37	40	41	41	40	38	36	32	A	28	24	20	24	25	30.3	40.9
	20.2	19.6	19.3	18.3	17.4	15.0	11.5	12.1	17.9	23.0	26.9	31.5	35.8	38.3	39.5	39.4	38.3	37.9	33.7	27.9	24.6	23.2	21.0	20.9	Diurnal Average	
	45.4	44.9	41.9	39.4	37.5	37.9	37.4	30.3	40.4	39.4	40.9	44.3	46.3	48.3	55.1	54.9	53.5	53.9	52.5	44.9	47.6	47.9	47.9	46.4	Diurnal Maximum	

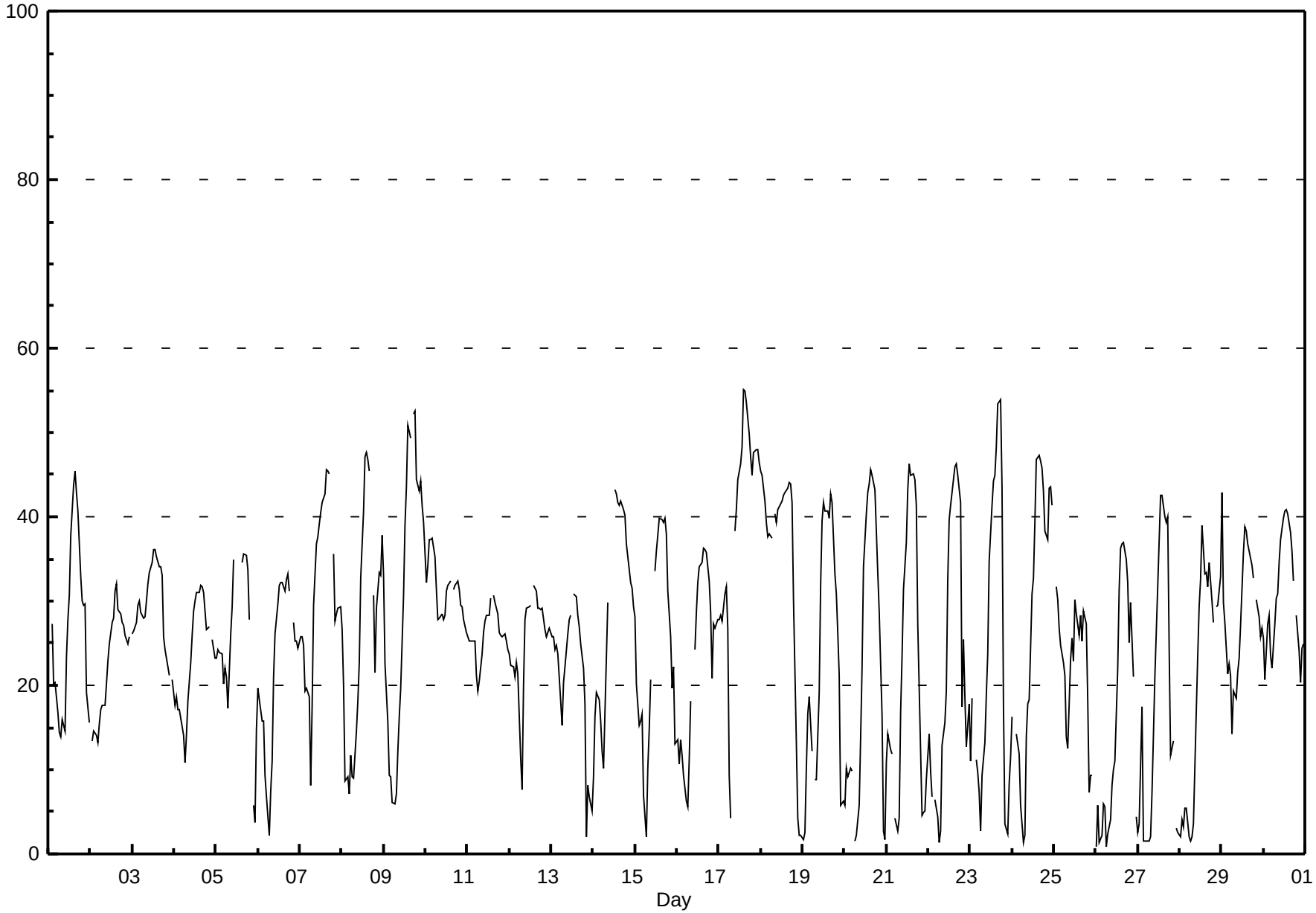
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

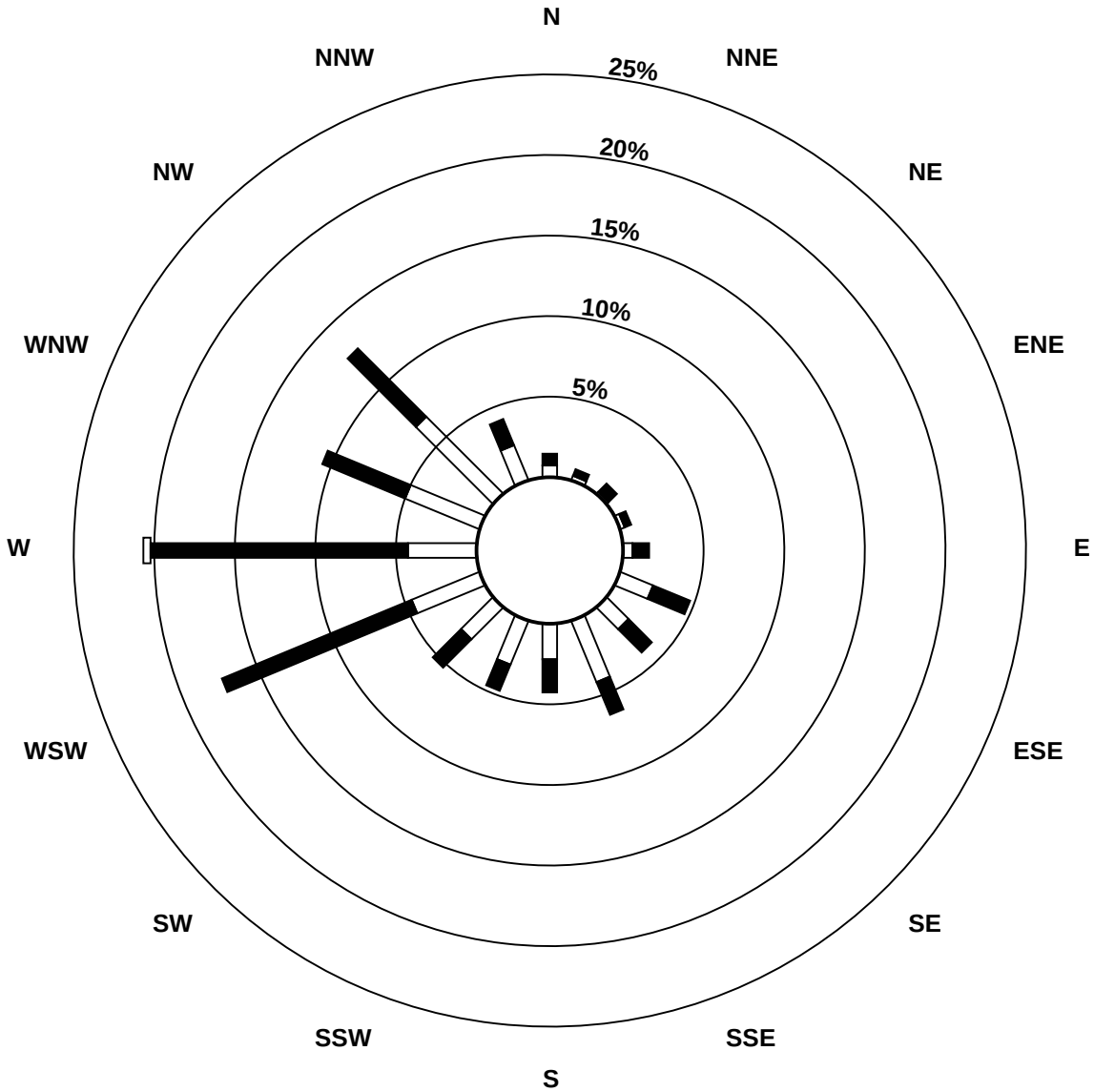
Henry Pirker - September 2012



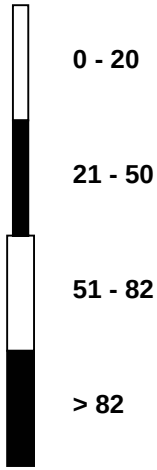
Pollutant Rose

Ozone (O_3) - ppb

Henry Pirker - September 2012



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Henry Pirker - September 2012

Maximum Value: 47.0 ppb on Sep 17 21:00

Minimum Value: 1.1 ppb on Sep 27 08:00

Percentiles: P_1 = 1.7 P_{10} = 6.9 Q_1 = 14.3 Median = 23.1 Q_3 = 29.1 P_{90} = 36.4 P_{99} = 45.2

Hours in Service:	720
Hours of Data:	706
Hours of Missing Data:	14
Hours of Calibration:	8
Percent Operational Time:	99.2

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	21	20	19	19	19	19	17	15	15	14	15	17	18	22	26	30	33	34	34	34	33	30	27	34.3
2-Sep	25	21	19	17	15	13	14	14	14	15	16	17	19	21	22	24	25	26	27	27	27	27	26	26	27.3
3-Sep	25	25	25	25	26	27	27	27	28	28	29	30	30	31	32	32	33	33	32	30	29	27	26	24	32.9
4-Sep	22	20	19	18	17	15	14	13	13	14	15	16	18	20	23	26	27	28	29	28	28	28	27	26	28.5
5-Sep	25	24	24	23	22	22	21	20	20	20	22	22	22	N	N	N	N	N	N	N	N	26	23	19	26.2
6-Sep	17	14	12	11	11	10	10	10	9	8	10	11	14	18	21	25	27	29	30	30	30	29	28	27	30.4
7-Sep	26	25	24	23	22	20	18	17	16	18	19	22	25	28	33	37	39	40	41	40	38	36	34	32	40.8
8-Sep	29	25	22	19	16	14	11	9	7	7	9	12	16	20	25	30	34	36	37	36	34	32	29	27	37.3
9-Sep	25	24	22	20	18	15	12	9	7	6	7	10	13	18	23	28	31	36	41	42	44	44	42	41	43.5
10-Sep	40	38	37	36	36	35	33	32	31	31	29	28	28	27	28	28	29	29	30	30	30	30	29	29	39.8
11-Sep	28	27	27	26	25	24	23	22	21	21	21	22	22	23	24	26	27	27	27	27	26	26	26	25	28.1
12-Sep	24	24	23	22	22	21	18	16	15	15	16	17	18	18	22	26	28	28	28	28	27	26	26	25	28.3
13-Sep	25	25	24	23	23	23	20	19	18	18	18	19	19	21	24	26	27	26	25	22	20	16	13	10	26.6
14-Sep	8	7	6	8	9	10	10	11	13	13	13	N	N	N	N	N	N	40	40	39	38	37	35	34	40.2
15-Sep	32	29	25	22	19	16	13	10	8	8	8	10	14	19	24	29	33	36	36	35	34	30	27	23	35.9
16-Sep	20	16	13	10	8	8	7	7	7	7	9	11	15	19	23	27	30	30	31	30	29	28	27	26	31.0
17-Sep	24	24	23	24	26	25	23	20	19	19	21	23	25	29	36	43	44	46	47	47	47	47	46	46	47.0
18-Sep	45	44	44	43	42	40	39	38	37	37	37	37	38	39	40	40	41	41	41	38	33	28	23	18	44.8
19-Sep	13	8	4	3	4	5	5	6	6	8	11	14	18	23	25	29	34	36	37	36	34	30	25	21	37.3
20-Sep	16	13	10	7	5	5	4	4	4	4	6	9	14	17	22	27	32	36	38	39	37	32	27	22	38.6
21-Sep	17	13	10	7	5	4	4	5	6	7	10	14	17	22	27	32	36	39	37	34	30	25	19	14	38.5
22-Sep	10	6	5	4	4	4	4	3	3	4	6	9	13	18	23	28	33	37	38	35	33	29	24	20	37.7
23-Sep	16	12	11	11	9	9	8	7	7	8	9	12	16	21	26	31	36	40	41	38	34	29	23	19	40.8
24-Sep	14	9	6	6	7	7	7	6	6	7	7	10	12	16	21	26	31	35	37	38	39	39	39	38	39.4
25-Sep	38	36	34	33	32	29	26	22	21	19	18	17	18	18	19	21	23	24	24	23	20	18	15	13	37.6
26-Sep	10	7	4	2	2	2	2	2	2	2	3	4	6	9	13	17	21	24	27	28	28	26	25	20	27.9
27-Sep	16	11	8	5	3	1	1	1	1	2	4	8	12	17	21	26	30	32	32	29	25	23	18	13	32.5
28-Sep	8	4	2	2	2	2	2	2	2	3	5	8	11	15	19	22	26	29	29	29	29	28	27	27	29.2
29-Sep	27	26	26	25	23	22	20	18	16	15	15	16	18	21	24	27	30	31	33	34	34	32	30	28	34.1
30-Sep	26	24	22	23	22	21	20	21	22	24	26	28	30	33	35	36	36	36	36	35	32	29	27	25	36.5
	44.8	44.2	43.7	43.2	41.7	40.5	38.8	38.0	37.2	36.6	36.6	36.9	37.9	38.7	39.9	42.7	43.7	46.1	46.8	46.9	47.0	47.0	46.4	45.5	
	Diurnal Maximums																								

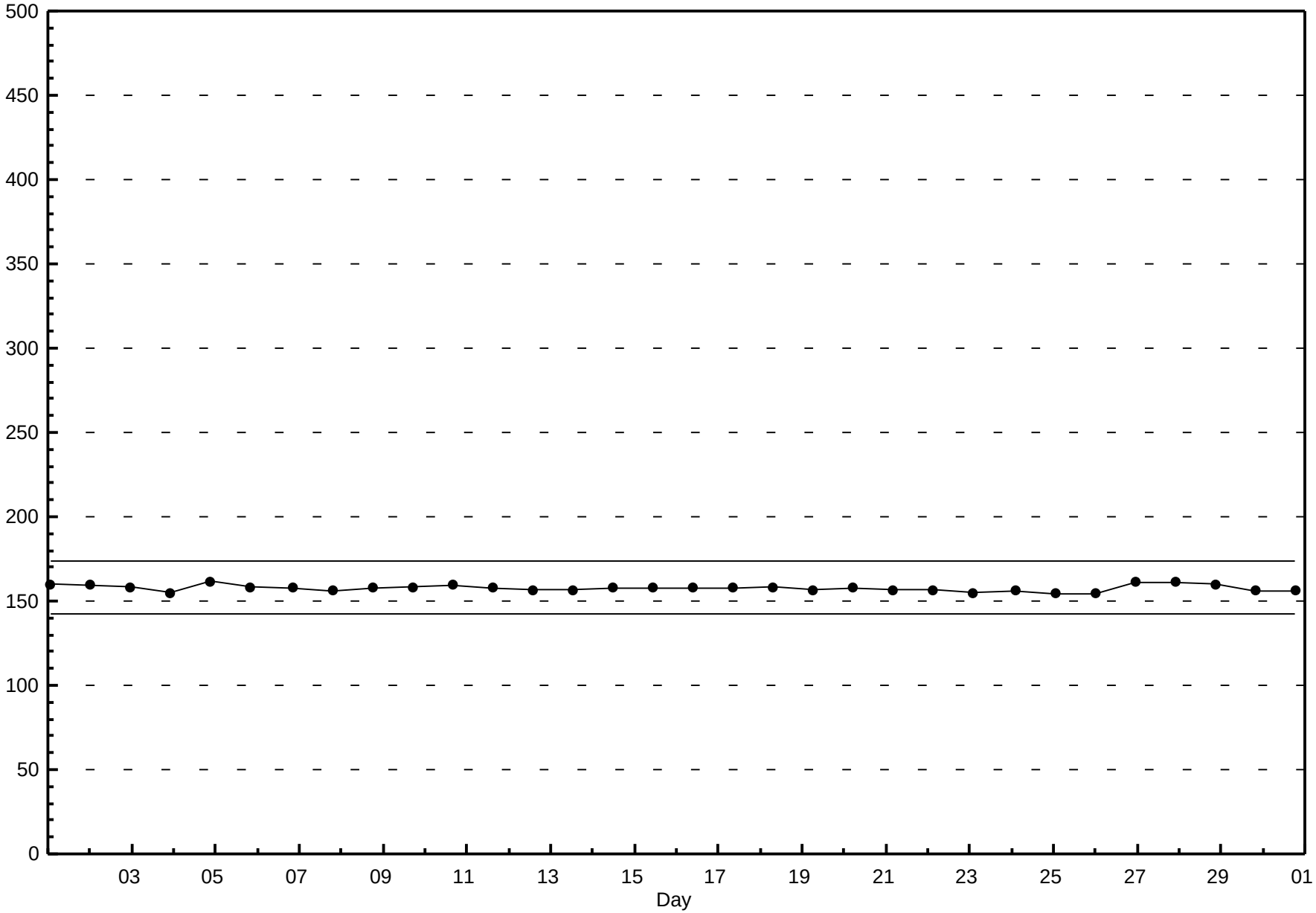
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Henry Pirker - September 2012



Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.89 ppm on Sep 21 22:00 Maximum Daily Average: 0.33 ppm on Sep 21

Minimum Value: 0.1 ppm on Sep 13 04:00 Minimum Daily Average: 0.11 ppm on Sep 11
Maximum Diurnal Average: 0.28 ppm at hour 21 Minimum Diurnal Average: 0.15 ppm at hour 16
Monthly Average: 0.190 ppm Percentiles: P_1 = 0.08 P_{10} = 0.10 Q_1 = 0.12 Median = 0.15 Q_3 = 0.22 P_{90} = 0.32 P_{99} = 0.60

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	0.2	A	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.21
2-Sep	A	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	A	0.15	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	0.2	0.2	0.2	0.2	A	0.1	0.13	0.16
4-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	C	C	C	0.2	0.2	0.2	0.2	A	0.2	0.2	0.13	0.17
5-Sep	0.2	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	A	0.3	0.4	0.2	0.18	0.35
6-Sep	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.1	0.1	0.1	0.1	0.17	0.32
7-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	0.2	0.1	0.1	0.1	0.1	0.2	A	0.2	0.3	0.3	0.2	0.2	0.17	0.26
8-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	A	0.2	0.3	0.2	0.2	0.2	0.2	0.21	0.26
9-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	A	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.19	0.26
10-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	A	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	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	0.11	0.13
12-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.24
13-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.6	0.3	0.3	0.2	0.16	0.61
14-Sep	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	P	P	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	0.11	0.23
15-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.14	0.31
16-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	A	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
17-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	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	0.1	0.1	0.13	0.26
18-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.4	0.3	0.21	0.49
19-Sep	0.3	0.3	0.2	0.2	0.2	0.2	A	0.4	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.22	0.47
20-Sep	0.2	0.1	0.1	0.1	0.1	A	0.3	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.5	0.4	0.25	0.56
21-Sep	0.3	0.2	0.2	0.2	A	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.9	0.9	0.5	0.3	0.33	0.89
22-Sep	0.3	0.3	0.3	A	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.7	0.6	0.4	0.3	0.3	0.29	0.67
23-Sep	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.7	0.7	0.6	0.3	0.2	0.29	0.69
24-Sep	0.2	A	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.18	0.45
25-Sep	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	A	0.28	0.41
26-Sep	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.3	A	0.5	0.29	0.50
27-Sep	0.5	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.6	0.5	A	0.5	0.6	0.31	0.64
28-Sep	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.3	0.5	0.5	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.1	0.1	0.26	0.52
29-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	A	0.1	0.1	0.1	0.1	0.12	0.14
30-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	A	0.1	0.2	0.2	0.2	0.1	0.13	0.20
	0.19	0.18	0.17	0.15	0.16	0.17	0.20	0.24	0.23	0.20	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.19	0.25	0.28	0.26	0.22	0.20	Diurnal Average	
	0.52	0.46	0.41	0.31	0.30	0.32	0.35	0.56	0.48	0.45	0.37	0.40	0.31	0.30	0.34	0.33	0.35	0.32	0.43	0.67	0.87	0.89	0.51	0.57	Diurnal Maximum	

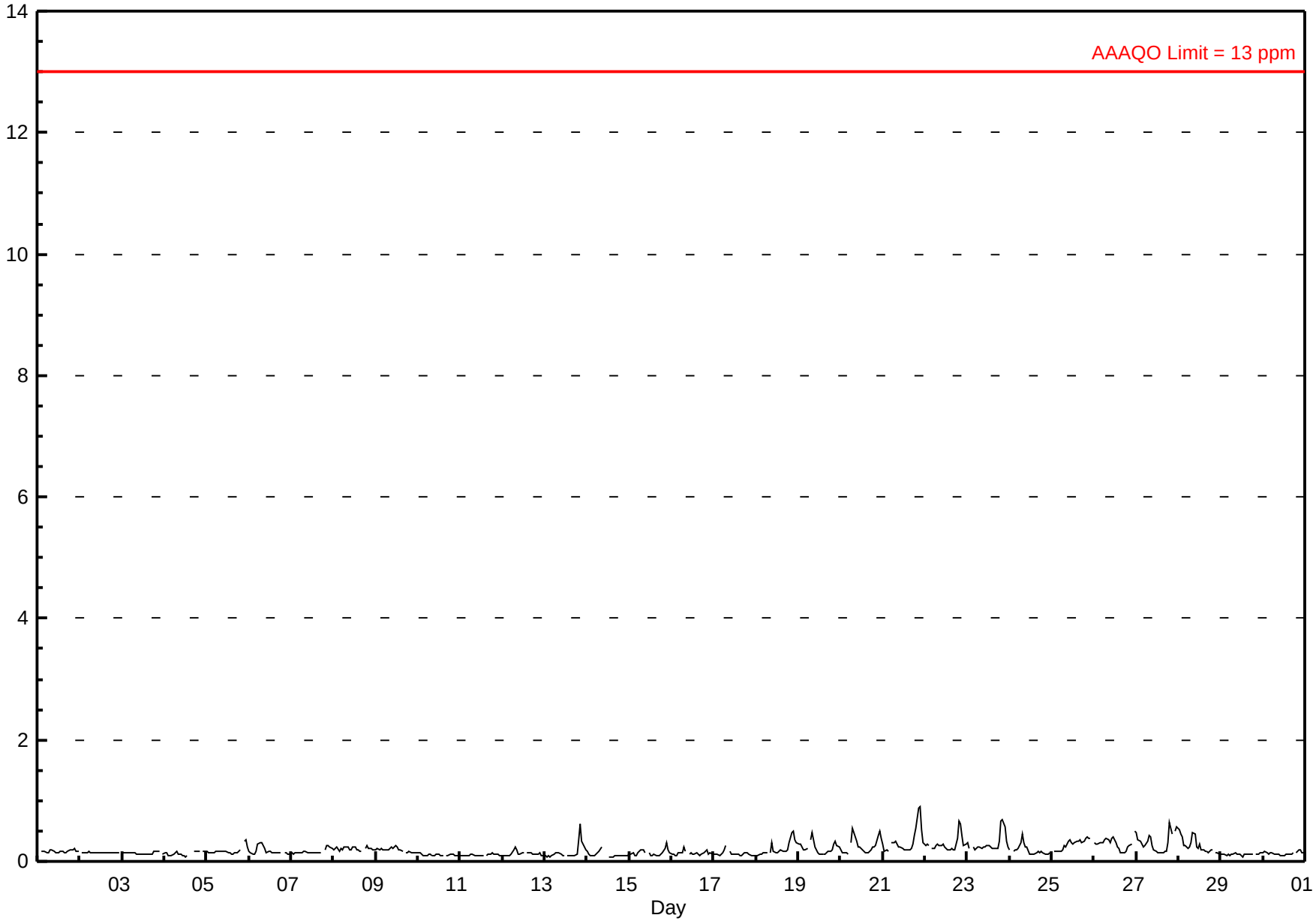
C - Calibration P - Power Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na

Peace Airshed Zone Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Henry Pirker - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - September 2012

Maximum Value: 2.90 ppm on Sep 28 10:00

Maximum Daily Average: 0.58 ppm on Sep 21

Minimum Value: 0.1 ppm on Sep 12 04:00

Minimum Daily Average: 0.14 ppm on Sep 14

Maximum Diurnal Average: 0.42 ppm at hour 21

Minimum Diurnal Average: 0.19 ppm at hour 14

Monthly Average: 0.271 ppm

Percentiles: $P_1 = 0.10$ $P_{10} = 0.14$ $Q_1 = 0.15$ Median = 0.20 $Q_3 = 0.29$ $P_{90} = 0.50$ $P_{99} = 1.35$

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	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.24
2-Sep	A	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	A	0.16	0.20
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	0.2	0.2	0.2	0.2	0.2	A	0.2	0.14	0.21
4-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	C	C	C	0.2	0.2	0.2	0.2	A	0.2	0.2	0.15	0.20
5-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.6	0.4	0.4	0.23	0.61
6-Sep	0.2	0.2	0.1	0.2	0.2	0.5	0.4	0.5	0.4	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.1	0.1	0.1	0.1	0.22	0.46
7-Sep	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.3	0.6	0.2	0.2	0.22	0.56
8-Sep	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	A	0.3	0.3	0.3	0.3	0.2	0.2	0.26	0.35
9-Sep	0.2	0.3	0.2	0.4	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.6	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.25	0.56
10-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	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14	0.15
11-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.14	0.29
12-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	A	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.15	0.30
13-Sep	0.1	0.1	0.1	0.1	0.1	0.8	0.2	0.2	0.2	0.2	0.1	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.7	0.9	0.5	0.5	0.2	0.26	0.88
14-Sep	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.3	P	P	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	0.14	0.30
15-Sep	0.2	0.2	0.2	0.2	0.1	0.6	0.2	0.2	0.3	0.2	A	0.2	0.1	0.2	0.1	0.3	0.2	0.2	0.3	0.2	0.9	0.5	0.3	0.2	0.26	0.86
16-Sep	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.17	0.30
17-Sep	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.4	A	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.18	0.40
18-Sep	0.1	0.1	0.1	0.2	0.1	0.2	0.2	A	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.7	0.6	0.7	0.5	0.4	0.29	0.74
19-Sep	0.3	0.4	0.3	0.2	0.2	0.3	A	0.7	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.7	0.5	0.5	0.8	0.34	0.82
20-Sep	0.2	0.2	0.2	0.2	0.2	A	0.4	1.0	0.6	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.34	1.00
21-Sep	0.5	0.2	0.3	0.2	A	0.7	0.5	0.4	0.4	0.3	2.0	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.8	1.2	2.1	0.8	0.3	0.58	2.14
22-Sep	0.4	0.3	0.3	A	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.8	1.0	1.0	0.7	0.3	0.5	0.39	0.96
23-Sep	0.4	0.3	A	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.6	1.2	0.9	0.7	0.4	0.3	0.38	1.20
24-Sep	0.2	A	0.2	0.3	0.3	0.3	0.5	0.5	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26	0.55
25-Sep	A	0.2	0.2	0.2	0.2	0.2	0.3	0.9	0.3	0.4	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.3	0.7	0.5	0.4	0.4	0.4	A	0.38	0.86
26-Sep	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.3	1.5	0.2	0.2	0.2	0.2	0.2	0.4	0.5	A	0.6	0.41	1.46
27-Sep	0.6	0.5	0.6	0.4	0.3	0.5	0.5	0.6	0.6	1.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.8	1.4	1.0	A	0.7	0.6	0.53	1.77
28-Sep	0.8	1.7	0.6	0.4	0.5	0.3	0.7	0.5	0.6	2.9	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.53	2.90
29-Sep	0.3	0.2	0.2	0.1	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	A	0.2	0.2	0.2	0.2	0.17	0.29
30-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	A	0.2	0.3	0.3	0.3	0.2	0.18	0.35
	0.25	0.26	0.21	0.20	0.20	0.28	0.28	0.35	0.31	0.40	0.29	0.21	0.21	0.19	0.24	0.19	0.19	0.20	0.29	0.38	0.42	0.41	0.30	0.27	Diurnal Average	
	0.76	1.74	0.62	0.45	0.50	0.81	0.70	1.00	0.65	2.90	1.98	0.47	0.56	0.35	1.46	0.37	0.37	0.54	0.79	1.38	1.17	2.14	0.84	0.82	Diurnal Maximum	

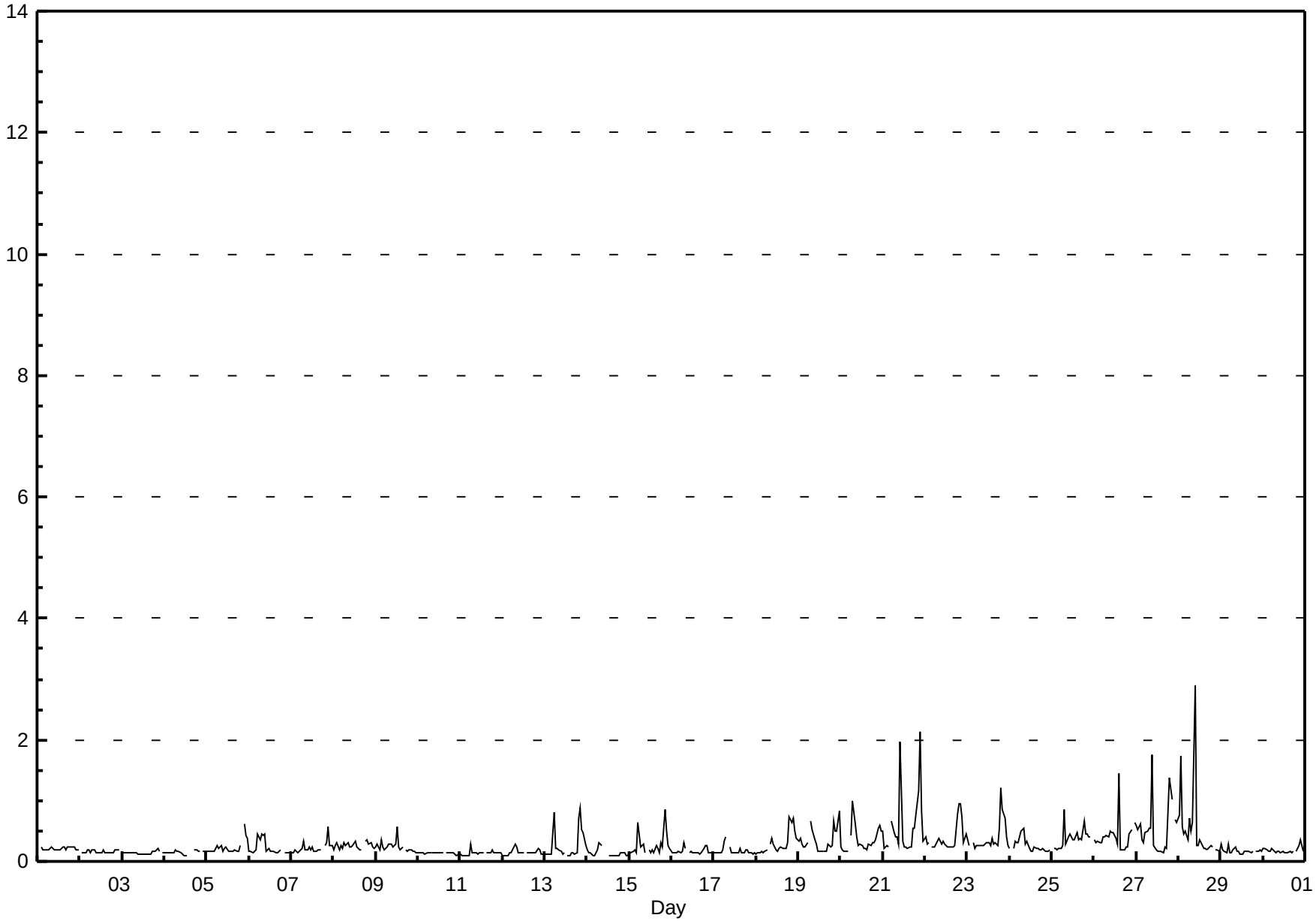
C - Calibration P - Power Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Carbon Monoxide (CO) - ppm

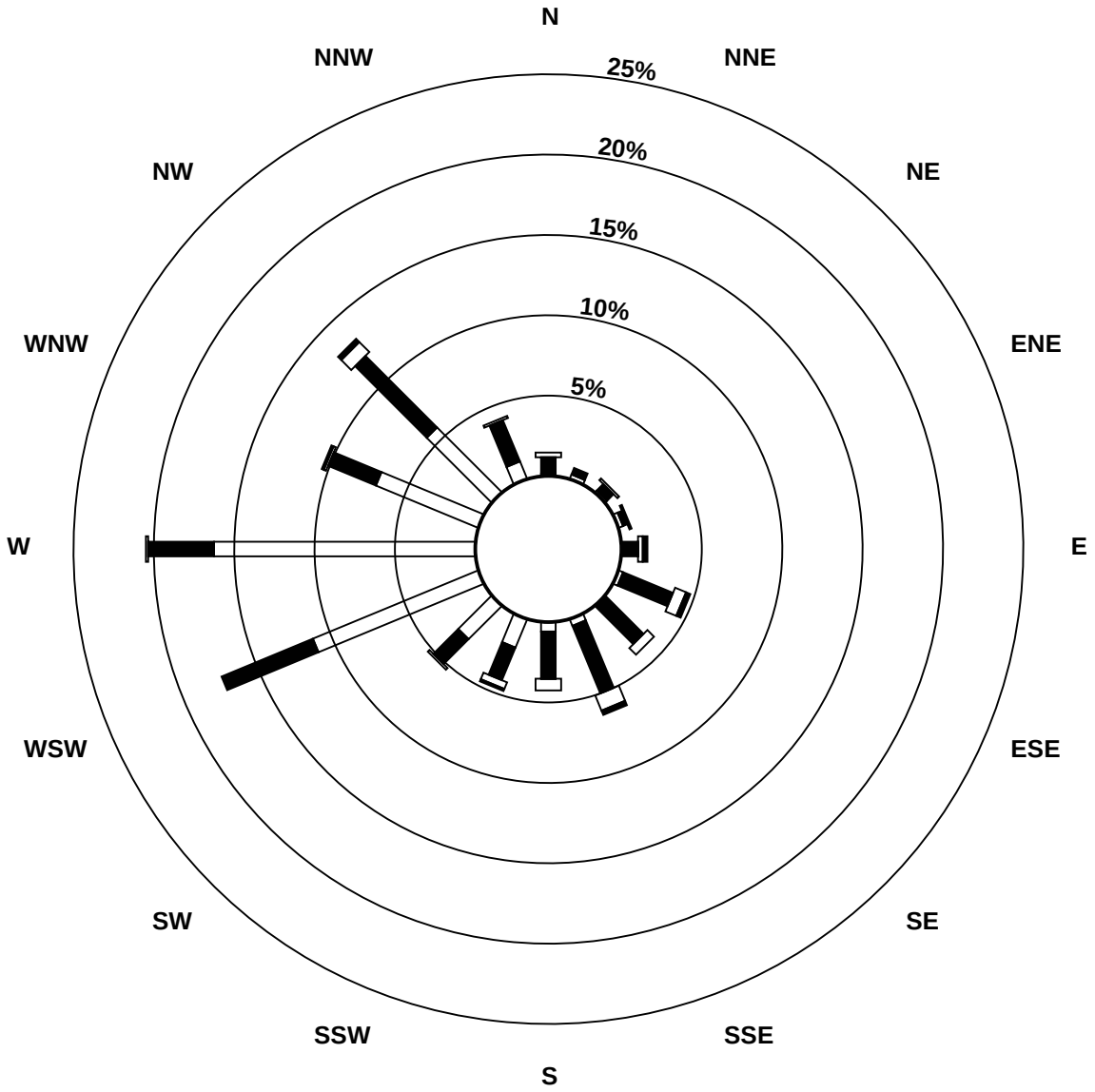
Henry Pirker - September 2012



Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - September 2012



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 2012

Number of Exceedences (AAAQO): 8-hr: 0
Maximum Value: 0.51 ppm on Sep 22 01:00

Minimum Value: 0.08 ppm on Sep 14 18:00

Percentiles: P_1 = 0.09 P_{10} = 0.11 Q_1 = 0.13 Median = 0.16 Q_3 = 0.23 P_{90} = 0.32 P_{99} = 0.49

Hours in Service:	720
Hours of Data:	707
Hours of Missing Data:	13
Hours of Calibration:	7
Percent Operational Time:	99.2

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	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
2-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.19
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	0.15
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	N	N	N	N	N	N	N	0.2	0.16
5-Sep	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.23
6-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	0.1	0.1	0.1	0.1	0.23
7-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.21
8-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	0.23
9-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	0.1	0.1	0.22
10-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	0.15
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	0.11
12-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
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	0.2	0.2	0.3	0.3	0.26
14-Sep	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	N	N	N	N	N	N	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.27
15-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.17
16-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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.17
17-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
18-Sep	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.31
19-Sep	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.35
20-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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.32
21-Sep	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.5	0.51
22-Sep	0.5	0.5	0.5	0.5	0.4	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	0.2	0.3	0.3	0.4	0.4	0.4	0.51
23-Sep	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.41
24-Sep	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.43
25-Sep	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.36
26-Sep	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.35
27-Sep	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.40
28-Sep	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.51
29-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	0.1	0.1	0.15
30-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	0.2	0.2	0.15
Diurnal Maximums	0.51	0.51	0.51	0.48	0.43	0.40	0.37	0.34	0.33	0.33	0.34	0.35	0.35	0.34	0.32	0.31	0.33	0.32	0.32	0.33	0.37	0.45	0.49	0.51	

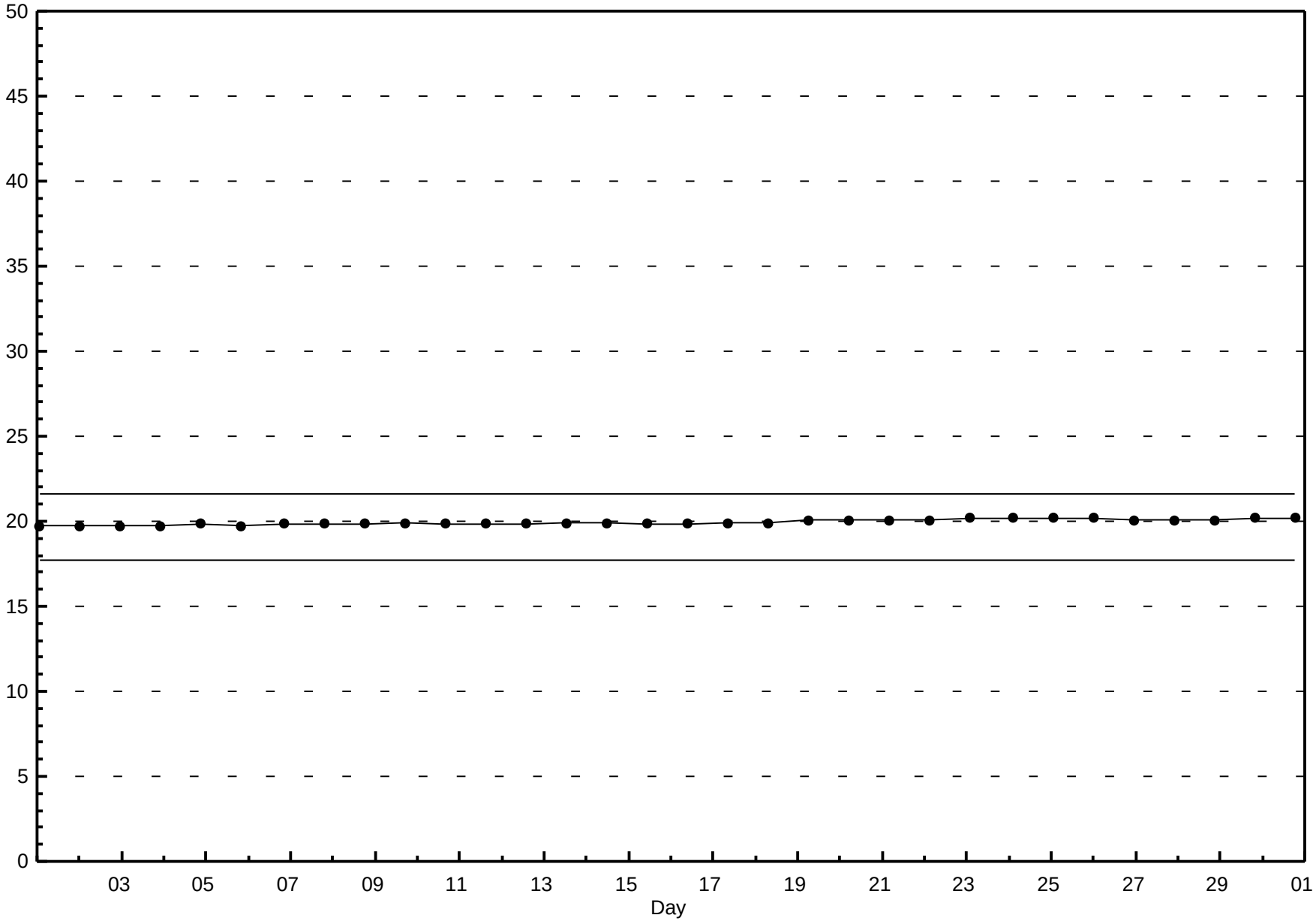
N - Not Valid
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm

Peace Airshed Zone Association

Span Responses

Carbon Monoxide (CO)

Henry Pirker - September 2012



Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.15 ppm on Sep 5 22:00
Maximum Daily Average: 2.64 ppm on Sep 19

Minimum Value: 2.0 ppm on Sep 9 23:00
Maximum Diurnal Average: 2.52 ppm at hour 6
Monthly Average: 2.319 ppm
Minimum Daily Average: 2.10 ppm on Sep 10
Minimum Diurnal Average: 2.13 ppm at hour 17
Percentiles: P_1 = 2.04 P_{10} = 2.10 Q_1 = 2.13 Median = 2.19 Q_3 = 2.39 P_{90} = 2.69 P_{99} = 3.20

Hours in Service:	720
Hours of Data:	640
Hours of Missing Data:	80
Hours of Calibration:	54
Percent Operational Time:	96.4

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	2.2	A	2.2	2.4	2.4	2.3	2.2	2.3	2.4	2.2	2.1	2.1	M	M	M	M	M	M	M	2.2	2.2	2.2	2.2	2.2	--	2.41
2-Sep	A	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.13	2.22
3-Sep	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	N	N	N	N	N	N	N	N	--	2.18
4-Sep	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	2.2	2.2	2.2	2.1	2.1	2.2	A	2.2	2.2	--	2.25
5-Sep	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	A	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	A	8.2	4.4	4.1	2.63	8.15
6-Sep	2.5	2.5	2.6	2.7	2.4	2.4	2.4	2.3	2.4	2.4	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	A	2.1	2.2	2.1	2.1	2.29	2.75
7-Sep	2.1	2.3	2.3	2.2	2.7	2.4	2.5	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	A	2.1	2.2	2.2	2.2	2.2	2.23	2.70
8-Sep	2.3	3.2	3.1	3.2	3.0	3.5	2.8	2.8	2.6	2.6	2.5	2.4	2.3	2.2	2.1	2.1	2.1	A	2.1	2.1	2.1	2.3	2.1	2.1	2.50	3.45
9-Sep	2.0	2.2	2.1	2.3	2.3	2.3	2.4	2.5	2.3	2.4	2.2	2.2	2.1	2.0	2.0	2.1	A	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.17	2.46
10-Sep	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.10	2.14
11-Sep	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.2	2.1	A	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.16	2.19
12-Sep	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.2	2.2	2.2	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.18	2.39
13-Sep	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.0	2.0	2.1	2.2	2.2	2.4	3.0	2.4	2.4	2.20	2.99
14-Sep	3.0	2.5	2.4	2.3	2.3	2.3	2.2	2.2	2.2	P	P	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.24	2.98
15-Sep	2.3	2.4	2.4	2.5	2.7	2.8	2.7	2.7	2.7	2.6	A	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.4	2.3	2.5	2.38	2.83
16-Sep	2.6	3.0	2.7	2.7	2.7	2.8	2.5	2.5	2.4	A	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.4	2.2	2.2	2.2	2.38	2.97
17-Sep	2.2	2.2	2.3	2.2	2.2	2.2	2.4	2.8	A	2.2	2.1	2.1	2.1	2.1	2.1	A	A	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.21	2.75
18-Sep	2.1	2.1	2.1	2.2	2.2	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.6	2.5	2.5	2.6	2.21	2.60
19-Sep	2.6	2.9	4.7	4.8	3.5	3.6	A	2.4	2.7	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.4	2.5	2.4	2.64	4.78
20-Sep	2.5	2.5	2.6	2.8	2.9	A	2.9	2.9	2.7	2.5	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.4	2.5	2.6	2.43	2.92
21-Sep	2.6	2.6	2.7	2.8	A	2.9	2.7	2.7	2.5	2.6	2.4	A	2.2	2.2	2.1	2.1	2.1	2.1	2.3	2.3	2.6	2.6	2.6	2.5	2.46	2.95
22-Sep	2.6	2.7	2.7	A	2.8	2.9	2.8	2.8	2.7	2.5	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.4	2.4	2.5	2.5	2.7	2.47	2.85
23-Sep	2.7	2.7	A	2.8	2.8	3.0	2.9	2.7	2.5	2.5	2.4	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.5	2.6	2.6	2.6	2.5	2.49	2.96
24-Sep	2.8	A	2.8	2.8	2.9	3.0	3.0	3.0	2.6	2.2	C	C	C	C	C	C	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	--	3.05
25-Sep	A	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	A	2.19	2.35
26-Sep	2.4	2.3	2.3	2.4	2.4	2.4	2.5	A	A	2.3	2.5	2.4	2.4	A	2.4	2.3	2.3	2.3	2.3	2.3	2.6	2.6	A	2.8	2.40	2.78
27-Sep	2.8	2.9	3.4	3.4	3.3	3.0	2.9	A	A	3.0	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.4	A	2.5	2.7	2.61	3.39
28-Sep	2.7	2.7	2.7	2.5	2.5	2.7	2.7	2.8	A	2.6	2.3	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.36	2.79
29-Sep	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.2	2.2	2.19	2.32
30-Sep	2.2	2.3	2.3	2.2	2.4	2.5	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.2	2.2	2.2	2.3	2.20	2.45
	2.38	2.42	2.49	2.52	2.50	2.52	2.46	2.45	2.36	2.34	2.24	2.21	2.17	2.14	2.14	2.13	2.13	2.13	2.15	2.21	2.26	2.52	2.34	2.39	Diurnal Average	
	2.98	3.22	4.66	4.78	3.51	3.64	3.05	3.03	2.71	3.04	2.49	2.40	2.35	2.23	2.36	2.29	2.26	2.25	2.31	2.48	2.60	8.15	4.40	4.12	Diurnal Maximum	

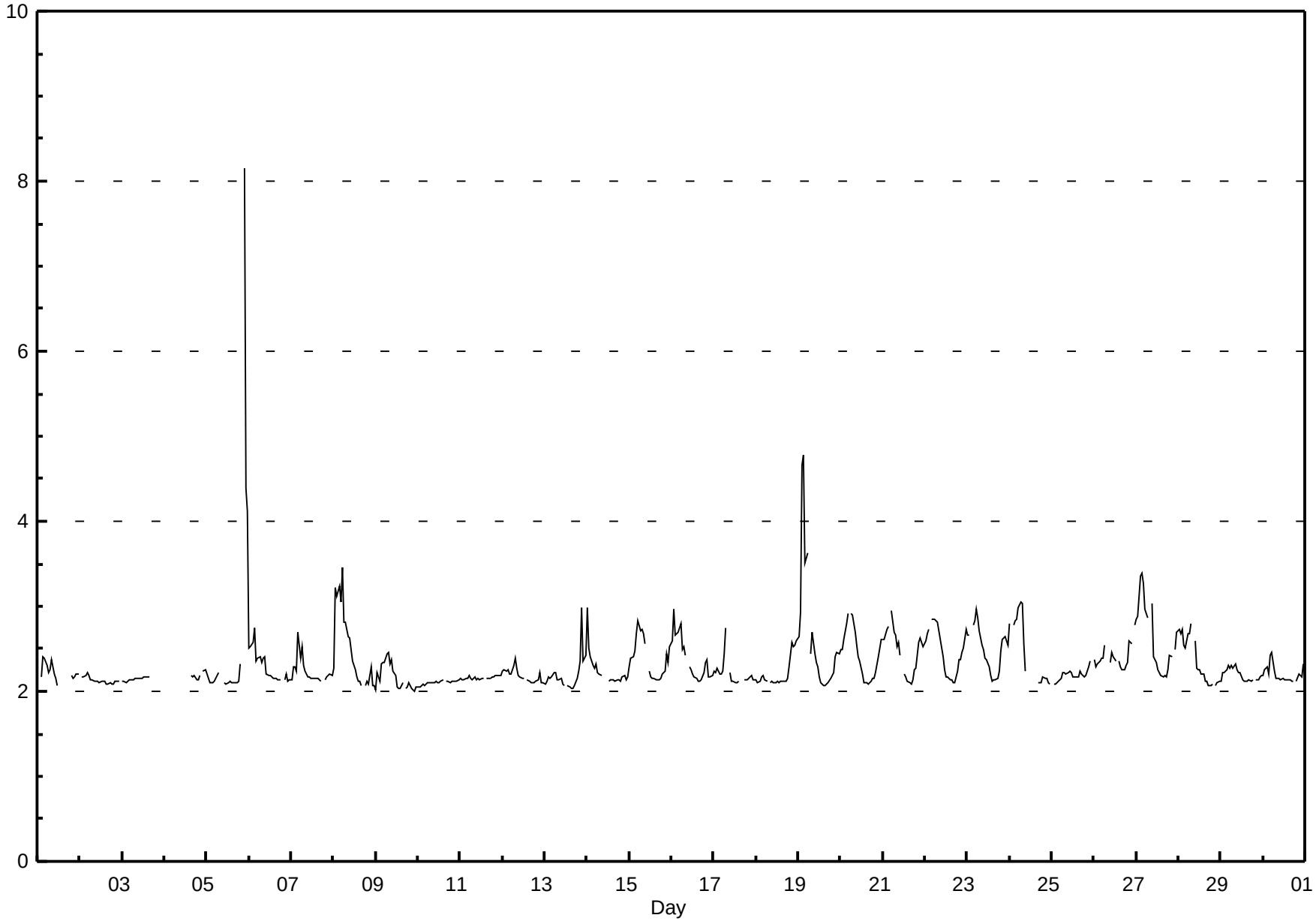
C - Calibration P - Power Failure M - Maintenance N - Not Valid A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

Henry Pirker - September 2012

Maximum Value: 19.92 ppm on Sep 5 22:00

Maximum Daily Average: 3.85 ppm on Sep 5

Minimum Value: 2.0 ppm on Sep 9 23:00

Minimum Daily Average: 2.14 ppm on Sep 10

Maximum Diurnal Average: 3.39 ppm at hour 22

Minimum Diurnal Average: 2.18 ppm at hour 17

Monthly Average: 2.562 ppm

Percentiles: P_1 = 2.10 P_{10} = 2.14 Q_1 = 2.18 Median = 2.29 Q_3 = 2.65 P_{90} = 3.06 P_{99} = 4.75

Hours in Service:	720
Hours of Data:	640
Hours of Missing Data:	80
Hours of Calibration:	54
Percent Operational Time:	96.4

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	2.4	A	2.4	2.6	2.7	2.7	2.3	2.3	2.9	2.3	2.3	2.1	M	M	M	M	M	M	M	2.2	2.2	2.2	2.3	2.3	--	2.91
2-Sep	A	2.2	2.2	2.2	2.3	2.5	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	A	2.18	2.46
3-Sep	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	N	N	N	N	N	N	N	N	--	2.24
4-Sep	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	2.3	2.3	2.3	2.2	2.2	2.3	A	2.4	2.3	--	2.43
5-Sep	2.3	2.3	2.2	2.1	2.1	2.2	2.3	2.3	A	A	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	3.5	A	19.9	8.9	10.5	3.85	19.92
6-Sep	3.2	3.1	4.1	5.4	2.4	2.5	2.5	2.4	2.6	2.8	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.2	2.2	A	2.2	2.3	2.2	2.3	2.64	5.42
7-Sep	2.3	3.0	2.7	2.9	3.9	3.4	3.1	2.4	2.4	2.4	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.1	A	2.3	2.2	2.2	2.2	2.2	2.50	3.91
8-Sep	3.1	6.1	5.2	5.3	5.4	6.1	2.9	3.2	2.8	2.7	2.6	2.5	2.3	2.2	2.2	2.1	2.1	A	2.1	2.6	2.5	9.0	2.3	2.3	3.46	8.99
9-Sep	2.1	3.6	3.0	3.2	2.7	2.6	3.0	3.4	2.4	2.5	2.3	2.4	2.1	2.1	2.4	2.6	A	2.1	2.2	2.3	2.1	2.1	2.0	2.4	2.51	3.64
10-Sep	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	A	2.2	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.14	2.21
11-Sep	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.20	2.23
12-Sep	2.3	2.3	2.5	2.6	2.2	2.3	2.5	2.7	2.3	2.3	2.2	2.2	2.2	A	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.7	2.2	2.1	2.29	2.72
13-Sep	2.1	2.2	2.3	2.3	2.3	2.5	2.5	2.2	2.2	2.4	2.1	2.1	A	2.1	2.1	2.1	2.1	2.2	2.3	2.7	2.7	3.7	2.6	3.8	2.41	3.82
14-Sep	4.3	2.7	3.4	2.5	2.5	2.6	2.3	2.3	2.3	P	P	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.44	4.32
15-Sep	3.0	2.9	2.6	2.8	3.1	3.4	3.1	3.1	2.8	2.6	A	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.7	2.5	3.1	2.61	3.37
16-Sep	2.8	3.2	2.9	2.8	3.1	3.3	2.7	2.6	2.5	A	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.6	2.4	3.7	3.0	2.4	2.2	2.2	2.62	3.68
17-Sep	2.5	2.3	2.3	2.5	2.5	2.4	2.6	3.0	A	2.5	2.2	2.2	2.1	2.1	2.2	A	A	2.2	2.2	2.3	2.2	2.4	2.2	2.2	2.33	2.97
18-Sep	2.2	2.1	2.3	2.4	2.3	2.2	2.2	A	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.5	3.5	2.8	2.8	2.9	2.34	3.52
19-Sep	2.8	3.5	5.8	5.9	4.6	4.5	A	2.6	2.8	2.9	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.4	2.9	2.7	2.6	2.96	5.94
20-Sep	2.7	2.8	2.8	3.0	3.1	A	3.2	3.3	2.9	2.7	2.5	2.4	2.3	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.4	2.7	2.6	2.8	2.57	3.27
21-Sep	2.8	2.7	3.1	2.9	A	3.1	2.9	2.9	3.0	3.1	12.0	A	2.3	2.2	2.2	2.1	2.1	2.2	2.4	2.4	3.2	3.0	3.1	2.7	3.11	11.99
22-Sep	2.7	2.8	2.9	A	3.0	3.0	3.0	2.9	3.0	2.6	2.4	2.3	2.2	2.2	2.2	2.2	2.1	2.1	3.1	2.5	2.6	2.7	2.6	2.8	2.61	3.13
23-Sep	2.8	2.9	A	2.9	2.9	3.1	3.1	2.8	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.4	2.9	2.9	2.9	2.7	2.7	2.62	3.13
24-Sep	3.0	A	3.0	3.2	3.0	3.2	3.2	3.2	2.9	2.6	C	C	C	C	C	C	2.1	2.1	2.1	2.3	2.2	2.2	2.1	2.1	--	3.23
25-Sep	A	2.1	2.1	2.2	2.2	2.2	2.4	2.4	2.2	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.3	2.3	2.2	2.2	2.3	2.4	2.4	A	2.27	2.44
26-Sep	2.4	2.4	2.4	2.4	2.5	2.5	2.8	A	A	2.7	2.7	2.4	2.4	A	2.6	2.3	2.3	2.3	2.4	2.5	2.9	2.8	A	2.9	2.53	2.89
27-Sep	3.0	3.1	6.7	3.5	3.6	3.5	3.1	A	A	3.7	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.4	2.6	2.6	A	2.6	2.8	2.93	6.71
28-Sep	2.9	3.0	3.0	2.7	2.6	3.3	2.8	3.0	A	3.5	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.51	3.47
29-Sep	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.4	2.4	2.3	2.4	2.2	2.1	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.26	2.45
30-Sep	2.2	2.4	2.4	2.3	2.5	2.6	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.3	2.2	2.2	3.0	2.28	3.01
	2.61	2.75	2.98	2.92	2.79	2.87	2.64	2.62	2.51	2.55	2.68	2.27	2.24	2.19	2.21	2.20	2.18	2.19	2.26	2.42	2.46	3.39	2.61	2.82	Diurnal Average	
	4.32	6.06	6.71	5.94	5.37	6.06	3.22	3.39	3.05	3.70	11.99	2.45	2.41	2.33	2.59	2.63	2.30	2.55	3.13	3.68	3.52	19.92	8.89	10.55	Diurnal Maximum	

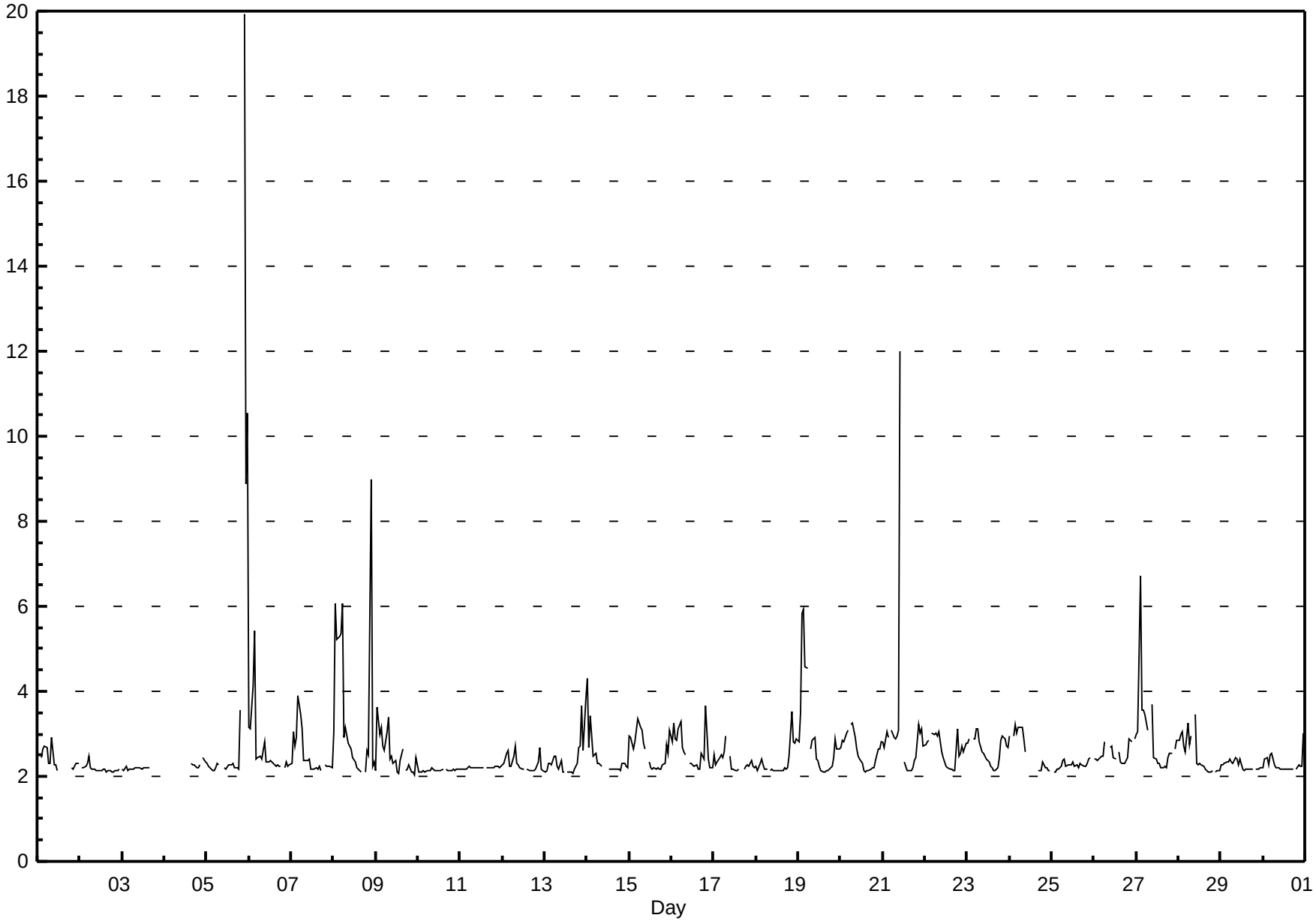
C - Calibration P - Power Failure M - Maintenance N - Not Valid A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Total Hydrocarbons (THC) - ppm

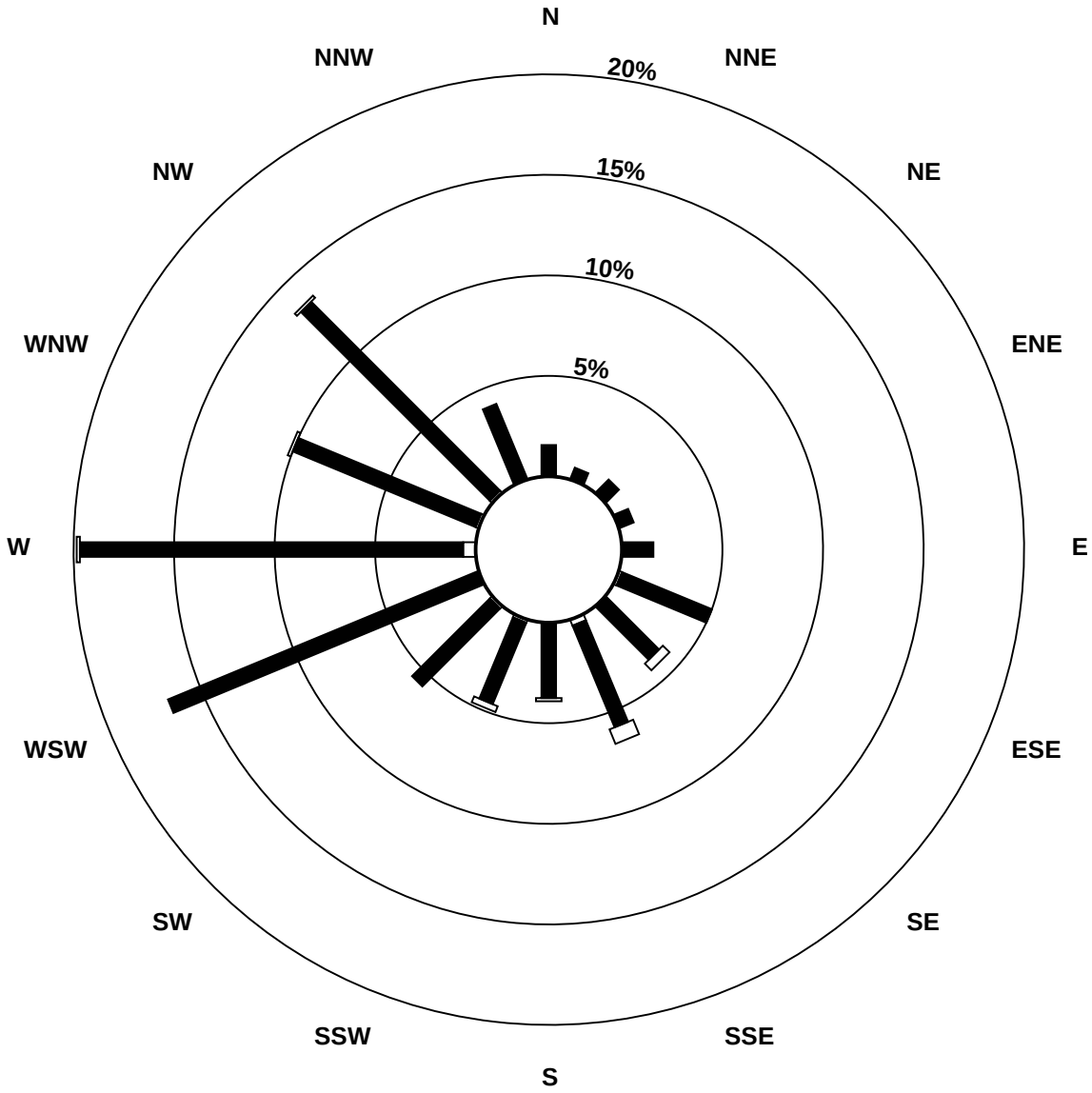
Henry Pirker - September 2012



Pollutant Rose

Total Hydrocarbons (THC) - ppm

Henry Pirker - September 2012



Pollutant Classes (ppm)

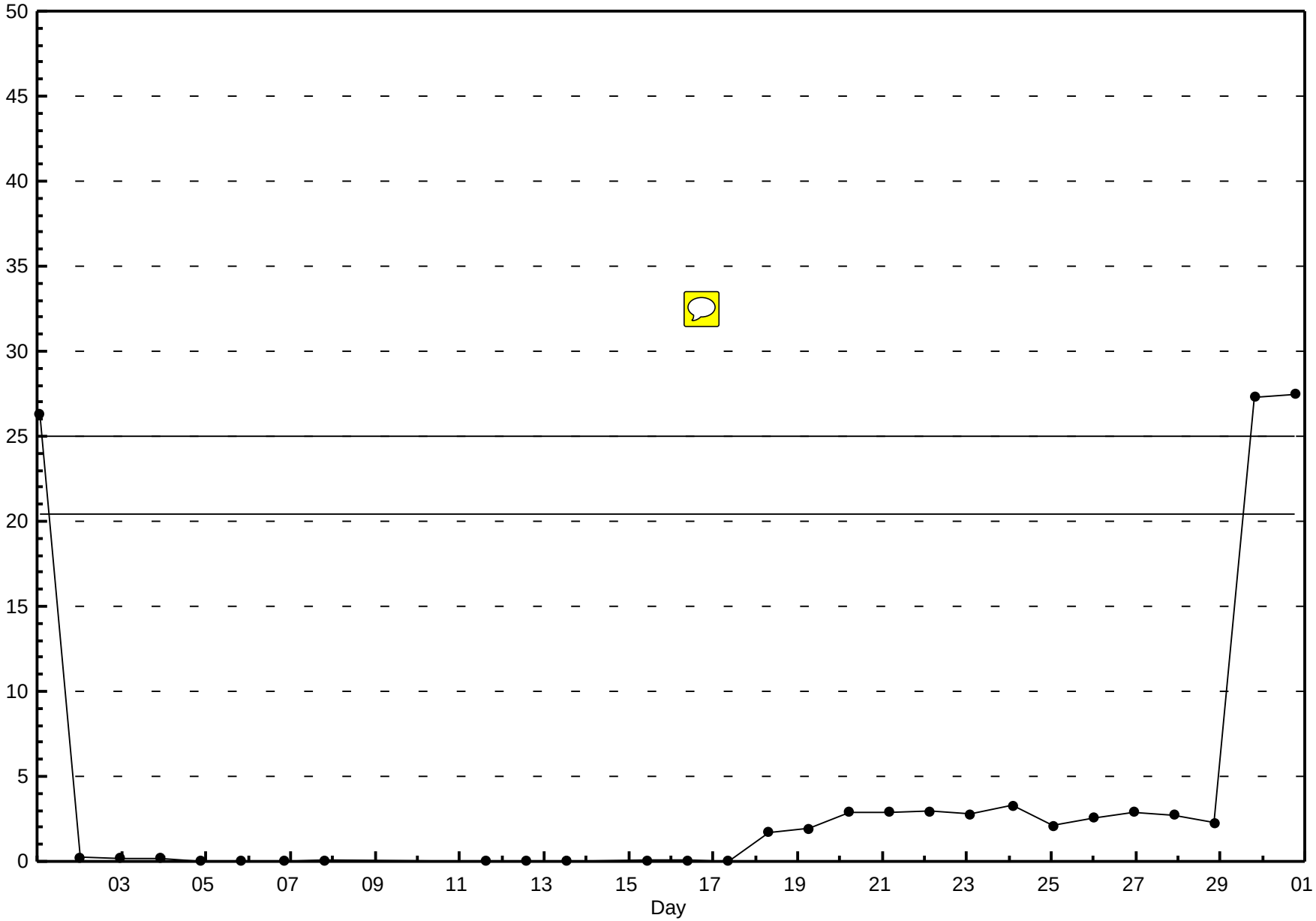
- 1.5 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

Peace Airshed Zone Association

Span Responses

Total Hydrocarbons (THC)

Henry Pirker - September 2012



Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - September 2012

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

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

Maximum Daily Average: 21.8 $\mu g/m^3$ on Sep 22

Minimum Value: 0 $\mu g/m^3$ on Sep 25 02:00

Maximum Diurnal Average: 10.4 $\mu g/m^3$ at hour 24

Monthly Average: 7.70 $\mu g/m^3$

Minimum Daily Average: 1.2 $\mu g/m^3$ on Sep 29

Minimum Diurnal Average: 4.9 $\mu g/m^3$ at hour 18

Percentiles: $P_1 = 0.0$ $P_{10} = 2.0$ $Q_1 = 2.3$ Median = 4.9 $Q_3 = 11.1$ $P_{90} = 18.9$ $P_{99} = 31.7$

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	4	5	6	6	5	5	6	6	5	5	4	4	4	3	2	2	2	2	2	2	2	2	3	4	3.8	6.4
2-Sep	4	4	3	2	3	4	4	3	3	3	3	3	2	2	2	2	2	2	2	3	3	2	2	2	2.7	4.1
3-Sep	2	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.3	3.0
4-Sep	2	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.3	3.1
5-Sep	2	2	2	3	3	2	4	3	2	3	4	4	4	4	4	4	4	3	4	5	7	5	4	6	3.7	7.5
6-Sep	8	8	8	8	7	7	8	6	5	6	5	4	3	3	2	2	2	2	3	3	4	5	3	3	4.8	8.1
7-Sep	5	6	7	5	5	7	8	8	7	8	9	9	9	9	9	9	8	8	9	10	11	13	14	13	8.4	13.5
8-Sep	12	15	19	21	22	19	14	13	13	12	10	11	10	9	8	8	7	5	5	4	4	5	3	2	10.4	21.6
9-Sep	2	2	2	5	6	5	7	8	6	4	5	8	8	8	9	10	9	8	8	7	4	2	3	4	5.9	9.5
10-Sep	3	2	3	4	4	5	5	5	4	4	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2.9	4.7
11-Sep	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.3	2.9
12-Sep	3	4	4	4	4	3	3	4	3	3	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2.8	4.2
13-Sep	3	4	4	4	4	4	4	4	3	2	2	2	2	2	2	2	2	2	2	2	3	3	6	7	3.2	6.6
14-Sep	6	7	8	8	8	8	8	10	16	P	P	8	6	5	4	3	3	3	3	3	4	4	4	4	6.2	15.8
15-Sep	5	7	8	9	9	10	10	9	9	8	6	5	4	3	3	2	2	2	3	3	5	8	9	15	6.4	14.8
16-Sep	15	13	14	14	12	11	11	10	8	6	5	4	4	3	2	2	2	2	3	4	6	6	6	6	7.1	14.9
17-Sep	6	6	6	6	5	5	9	11	11	9	7	5	4	3	3	3	3	3	3	4	4	4	4	4	5.3	11.2
18-Sep	5	5	5	6	6	7	7	7	6	11	8	6	6	6	5	5	5	6	5	7	8	12	17	24	7.7	23.6
19-Sep	27	25	20	18	16	15	14	14	15	13	12	10	8	7	6	5	5	5	7	7	8	9	21	27	13.1	27.1
20-Sep	25	26	25	22	19	18	18	20	21	18	17	16	12	10	8	7	7	8	9	9	11	12	12	18	15.4	26.0
21-Sep	23	24	25	22	21	20	19	19	18	18	17	16	14	12	11	11	12	13	14	13	23	22	29	40	18.9	39.7
22-Sep	36	29	27	29	28	27	27	28	22	18	19	17	16	14	13	13	12	12	13	13	15	25	35	37	21.8	37.4
23-Sep	32	23	23	24	24	25	24	23	18	17	17	17	14	11	11	12	13	13	12	11	14	22	33	34	19.4	33.9
24-Sep	30	29	27	25	23	22	22	24	18	17	18	15	13	13	11	C	C	3	2	2	1	1	0	0	14.4	29.7
25-Sep	1	0	0	0	0	0	0	0	1	12	21	14	13	16	20	21	22	21	21	19	20	21	22	22	12.0	22.4
26-Sep	19	15	14	14	14	16	16	19	14	11	11	17	12	6	3	2	2	2	3	4	16	7	10	14	10.9	19.2
27-Sep	12	10	10	10	8	8	9	10	9	11	9	5	3	2	1	1	1	1	3	10	5	7	8	12	6.8	12.4
28-Sep	10	10	11	12	11	10	12	15	22	14	7	6	7	5	5	5	6	5	2	0	0	0	0	0	7.3	21.7
29-Sep	0	0	1	1	1	1	1	1	1	3	2	1	1	1	2	1	1	1	1	1	1	1	2	2	1.2	2.7
30-Sep	2	2	3	2	4	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	2	3	2	2	1.8	3.6
	10.2	9.7	9.9	9.7	9.3	9.2	9.4	9.6	8.9	8.4	7.9	7.3	6.4	5.6	5.3	5.0	5.0	4.9	5.0	5.3	6.5	7.0	8.6	10.4	Diurnal Average	
	35.7	29.2	27.5	28.5	28.0	26.5	27.3	27.5	21.7	18.3	20.5	17.3	15.5	15.7	20.3	21.2	22.3	21.1	21.1	19.4	23.1	24.5	34.7	39.7	Diurnal Maximum	

C - Calibration P - Power Failure

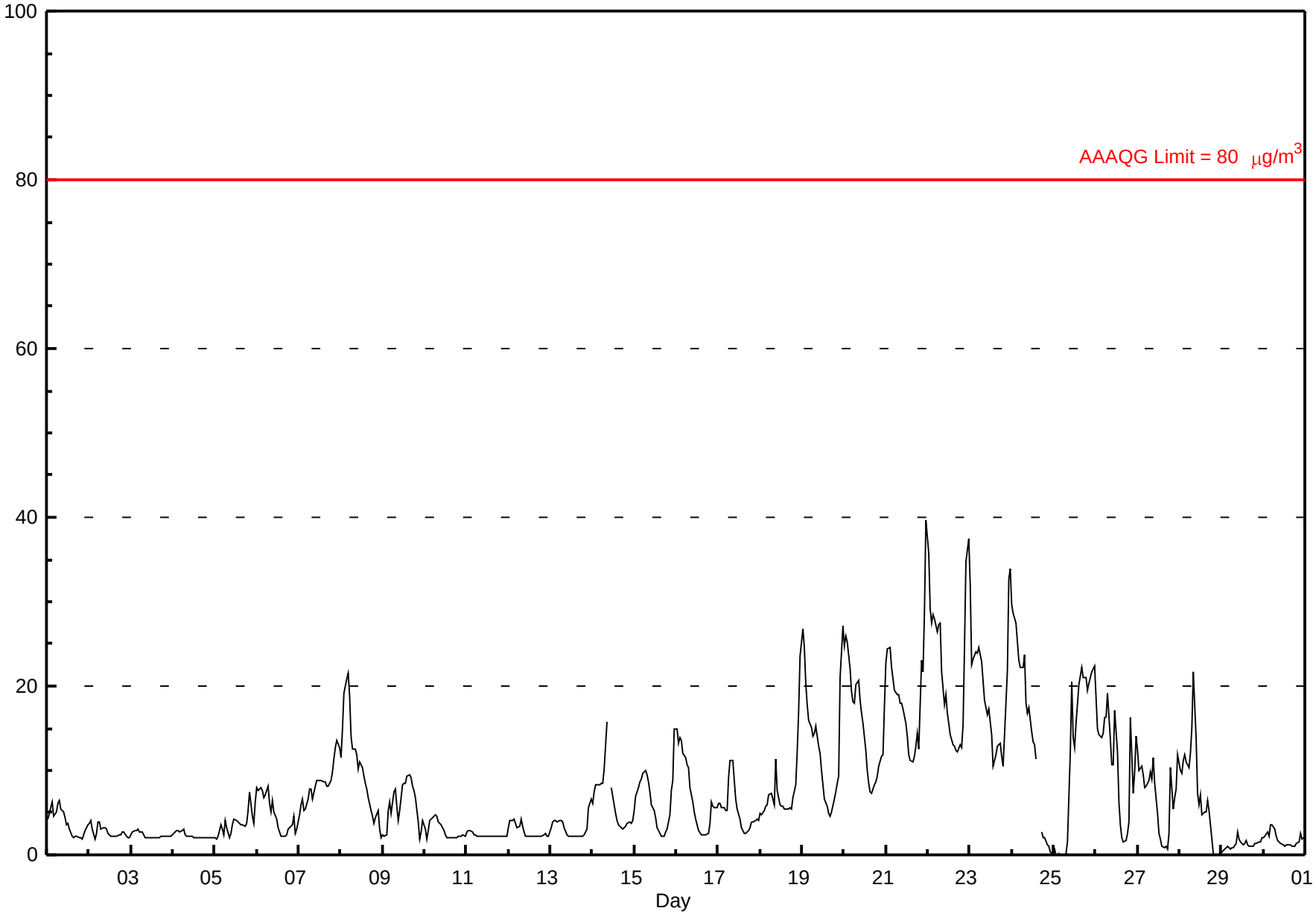
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Henry Pirker - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

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

Henry Pirker - September 2012

Maximum Value: 127.4 $\mu g/m^3$ on Sep 26 21:00

Maximum Daily Average: 24.2 $\mu g/m^3$ on Sep 21

Minimum Value: 0 $\mu g/m^3$ on Sep 25 06:00

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

Maximum Diurnal Average: 15.4 $\mu g/m^3$ at hour 1

Minimum Diurnal Average: 5.4 $\mu g/m^3$ at hour 16

Monthly Average: 9.22 $\mu g/m^3$

Percentiles: P_1 = 0.1 P_{10} = 2.1 Q_1 = 2.7 Median = 5.8 Q_3 = 12.9 P_{90} = 21.8 P_{99} = 41.2

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)																								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	9	5	6	7	5	5	7	7	6	6	5	4	4	4	2	2	2	2	2	2	2	3	3	4	4.4	9.0
2-Sep	9	4	4	2	3	5	5	3	3	3	3	3	2	2	2	2	3	3	3	3	3	3	2	2	3.2	8.9
3-Sep	4	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2.5	3.6
4-Sep	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.4	3.2
5-Sep	9	2	3	4	4	3	5	4	2	3	4	13	5	5	4	4	4	4	5	7	8	7	6	7	5.1	13.0
6-Sep	8	8	8	8	7	7	9	8	6	8	6	5	4	3	2	2	2	4	4	4	4	5	4	4	5.5	9.0
7-Sep	5	6	7	6	6	7	10	10	7	9	9	9	9	9	9	9	8	9	9	11	12	14	14	13	9.1	14.1
8-Sep	12	17	21	23	22	21	16	13	13	13	11	12	11	10	9	8	8	5	5	5	5	6	4	2	11.4	22.5
9-Sep	19	2	4	7	7	6	8	8	7	4	7	9	9	9	10	10	10	9	8	8	6	2	3	4	7.4	19.1
10-Sep	21	2	4	4	4	5	5	5	4	4	3	3	3	2	2	2	2	2	2	2	2	2	2	2	3.8	21.3
11-Sep	9	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.7	9.1
12-Sep	4	4	4	4	4	4	4	5	4	3	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3.0	4.6
13-Sep	4	4	4	4	4	4	4	4	4	3	2	2	2	2	2	2	2	2	2	3	3	4	7	7	3.5	7.4
14-Sep	7	8	9	9	8	9	9	13	17	P	P	13	7	6	5	4	4	3	3	4	4	4	4	4	6.9	17.2
15-Sep	6	8	8	9	9	10	11	10	9	8	7	6	5	4	3	2	2	2	3	4	5	10	13	17	7.2	17.4
16-Sep	34	14	14	15	13	12	11	11	9	6	6	5	4	3	3	3	2	2	3	6	8	6	6	6	8.4	34.0
17-Sep	15	6	6	6	5	6	13	12	13	11	7	6	5	4	3	3	3	3	3	4	4	4	4	4	6.3	15.3
18-Sep	18	5	6	6	7	8	8	8	9	13	10	7	6	6	6	6	6	6	6	8	9	18	22	28	9.6	28.4
19-Sep	29	28	25	19	17	15	15	16	17	15	13	11	9	7	6	5	5	6	8	8	9	12	27	29	14.7	28.8
20-Sep	29	27	27	24	20	19	19	22	23	19	17	16	15	11	9	8	8	15	10	10	11	14	15	22	17.1	28.8
21-Sep	24	41	49	23	22	20	20	22	20	20	38	16	16	13	11	12	13	16	16	14	50	26	38	43	24.2	49.9
22-Sep	43	33	29	30	29	27	28	29	26	19	19	19	17	15	14	13	13	13	14	14	19	31	39	42	23.9	42.9
23-Sep	40	26	24	25	25	25	24	24	21	18	18	19	18	11	11	12	14	14	13	11	17	31	36	35	21.3	39.5
24-Sep	35	31	31	27	24	23	23	25	22	19	18	17	14	14	12	C	C	3	2	3	2	2	1	0	15.8	35.4
25-Sep	13	0	0	0	0	0	0	1	4	21	25	16	16	18	22	23	24	22	23	22	21	22	24	25	14.3	25.1
26-Sep	22	17	15	15	16	17	18	26	15	13	13	20	19	9	5	3	2	2	3	4	127	12	15	20	17.9	127.4
27-Sep	15	13	11	11	9	15	21	12	11	20	16	6	4	2	2	1	1	1	10	54	10	10	14	17	11.9	53.7
28-Sep	12	11	12	13	12	12	14	19	25	21	8	7	8	7	6	7	9	7	4	0	0	0	0	0	9.0	25.4
29-Sep	1	1	1	1	1	1	1	1	4	4	3	2	2	3	3	2	1	1	1	2	2	2	2	2	1.8	4.2
30-Sep	3	4	4	4	5	4	3	3	2	2	2	1	1	2	1	2	1	1	2	2	2	7	2	2	2.6	6.8
	15.4	11.2	11.6	10.5	10.0	10.0	10.7	10.9	10.4	10.0	9.6	8.5	7.5	6.3	5.8	5.4	5.4	5.6	5.8	7.4	11.9	9.0	10.5	11.8	Diurnal Average	
	42.9	41.3	48.9	29.6	29.3	27.0	28.2	28.7	26.4	20.8	37.8	19.6	18.5	18.3	22.1	22.6	23.5	22.3	22.8	53.7	127.4	31.5	38.8	42.6	Diurnal Maximum	

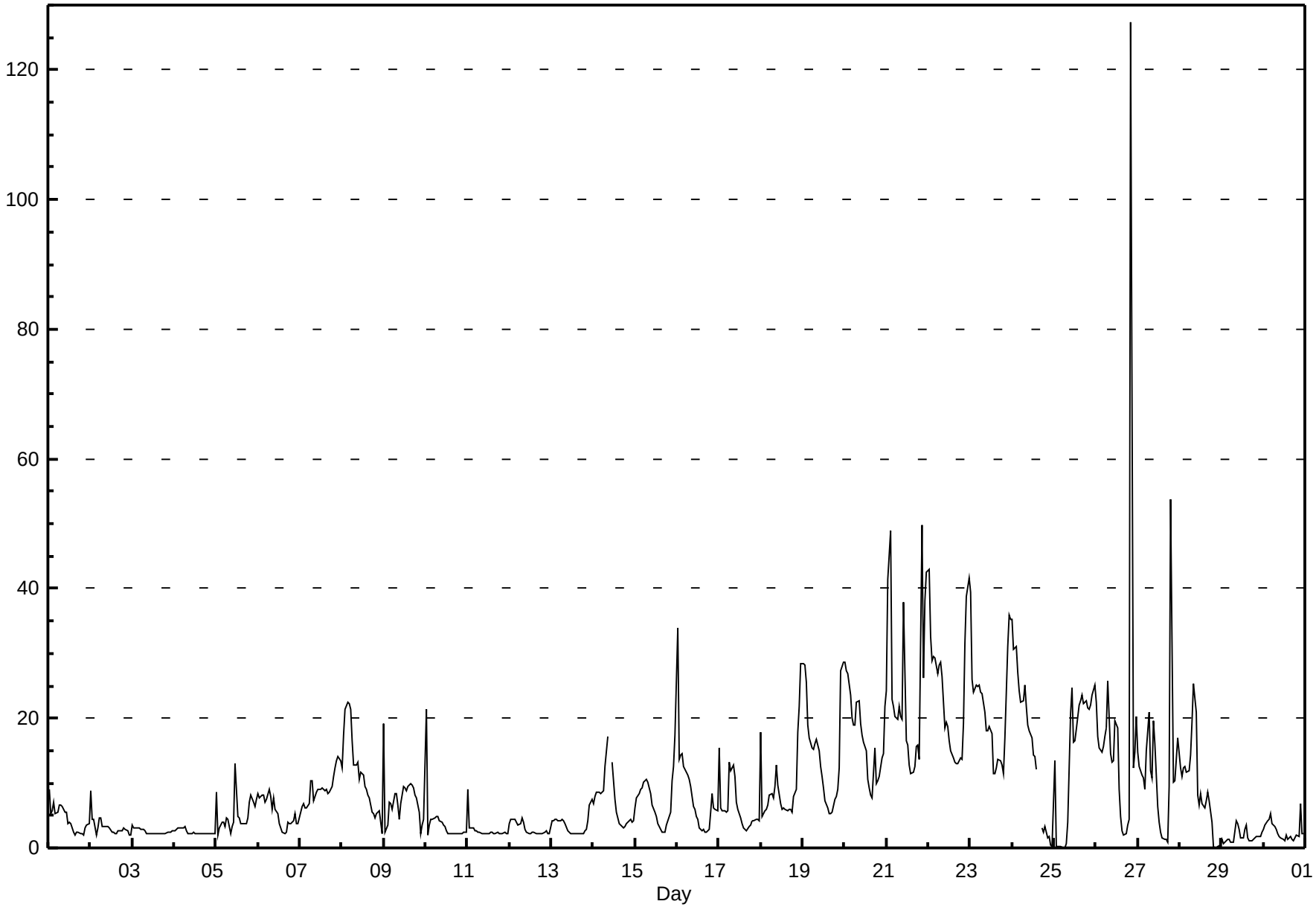
C - Calibration P - Power Failure

Peace Airshed Zone Association

Hourly Maximums

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

Henry Pirker - September 2012

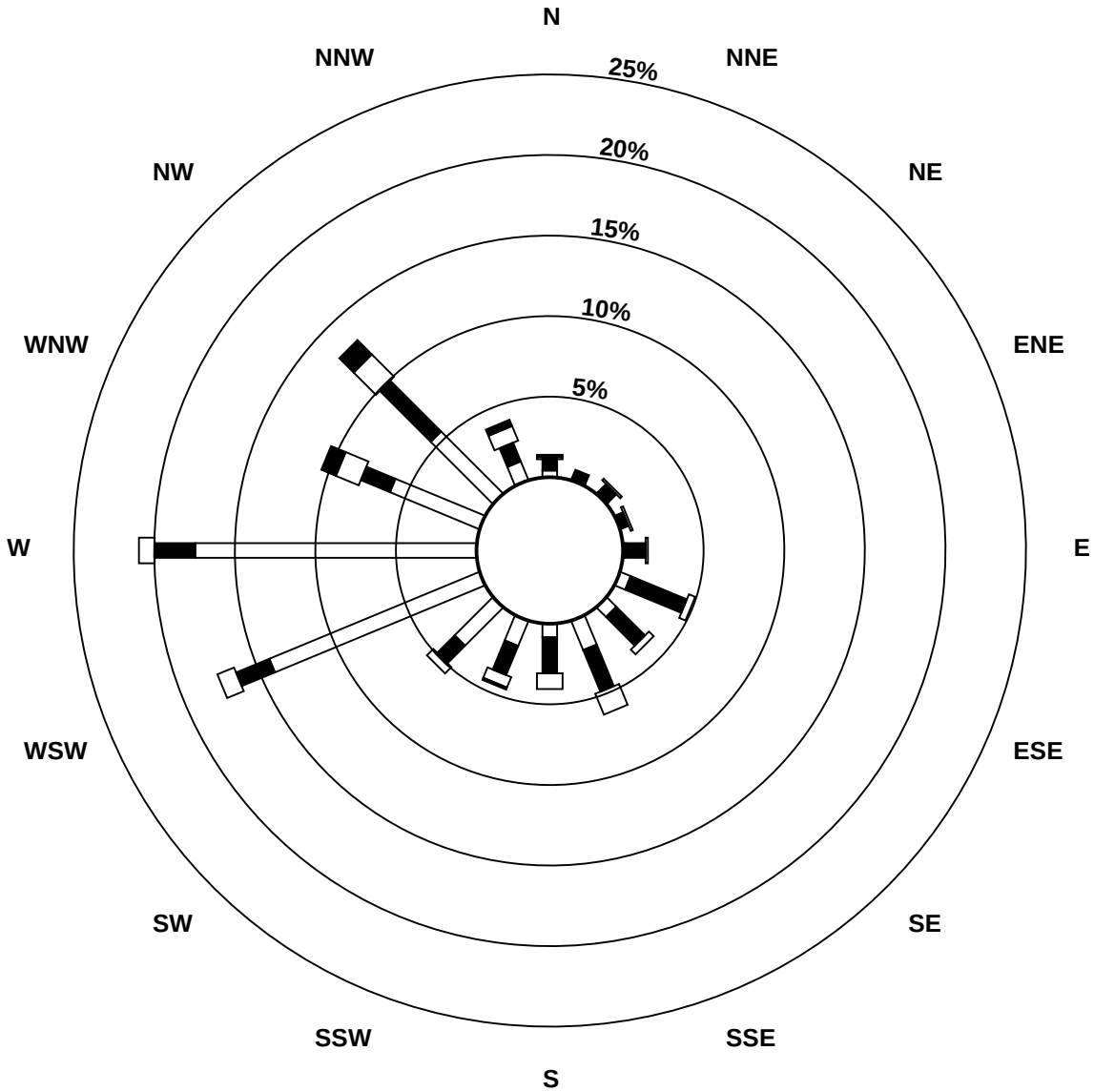


Peace Airshed Zone Association

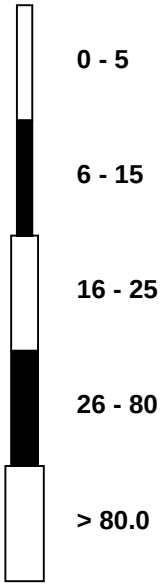
Pollutant Rose

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

Henry Pirker - September 2012



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



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - September 2012

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

Maximum Value: 28.9 ^{o}C on Sep 21 16:00

Maximum Daily Average: 17.6 ^{o}C on Sep 8

Minimum Value: -1 ^{o}C on Sep 16 07:00

Minimum Daily Average: 9.0 ^{o}C on Sep 29

Maximum Diurnal Average: 21.1 ^{o}C at hour 15

Minimum Diurnal Average: 6.3 ^{o}C at hour 7

Monthly Average: 13.47 ^{o}C

Percentiles: P_1 = 1.4 P_{10} = 5.1 Q_1 = 8.6 Median = 12.9 Q_3 = 17.9 P_{90} = 22.6 P_{99} = 27.4

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	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	9	8	7	7	6	7	8	9	10	13	15	17	18	18	18	18	17	14	13	12	12	12	12	12.1	18.4
2-Sep	11	11	12	11	11	10	12	13	13	14	16	19	19	19	20	20	18	18	16	15	14	13	13	12	14.6	20.2
3-Sep	12	11	11	11	11	10	9	10	12	13	15	16	17	17	18	17	17	17	16	15	13	12	11	9	13.3	17.6
4-Sep	7	7	6	7	6	6	7	9	11	14	16	18	18	20	21	20	20	20	17	16	16	15	14	13	13.5	20.5
5-Sep	14	14	13	13	11	12	11	11	13	16	18	18	19	20	20	21	20	20	19	16	12	10	10	9	15.0	20.9
6-Sep	10	10	8	8	7	6	6	9	11	15	18	21	23	25	26	27	26	26	24	21	20	17	17	16	16.6	26.6
7-Sep	14	13	12	11	10	10	8	12	16	18	19	20	21	22	22	23	22	21	20	18	16	14	13	12	16.1	22.6
8-Sep	11	7	6	5	5	5	6	9	14	16	20	24	26	27	29	29	28	28	25	23	22	20	19	17	17.6	28.8
9-Sep	16	15	14	12	12	11	10	12	14	17	18	20	24	25	26	22	22	21	20	18	16	14	14	13	16.9	26.4
10-Sep	13	12	10	10	10	10	9	9	10	11	10	10	12	14	14	14	14	13	11	9	8	8	7	6	10.6	14.0
11-Sep	6	6	6	6	6	5	5	6	9	11	12	13	13	15	15	15	14	12	11	10	9	9	7	6	9.4	14.8
12-Sep	5	4	3	3	5	5	4	6	10	12	13	13	14	16	14	13	14	14	14	12	10	10	13	13	10.0	15.8
13-Sep	13	13	12	12	11	10	10	13	15	17	19	21	22	23	23	24	23	22	22	17	14	13	12	11	16.4	23.6
14-Sep	11	12	12	12	11	11	11	11	14	P	P	20	20	20	20	20	20	19	17	14	12	11	11	10	14.4	20.2
15-Sep	8	6	5	3	2	1	1	4	6	10	14	16	17	17	18	18	17	17	16	12	10	8	7	4	9.9	18.1
16-Sep	3	1	0	0	0	0	-1	2	6	9	12	15	17	19	20	20	20	19	16	15	13	12	11	11	10.0	19.8
17-Sep	10	10	9	9	8	7	4	7	12	17	20	23	25	26	27	28	27	26	24	21	20	18	17	16	17.1	27.7
18-Sep	17	17	16	16	15	15	14	14	16	17	18	19	19	19	20	20	19	19	17	13	11	9	7	6	15.5	19.6
19-Sep	5	4	4	4	4	3	5	7	9	13	16	20	23	24	25	25	25	23	21	17	15	12	9	8	13.4	25.2
20-Sep	7	5	5	5	4	4	4	7	12	16	19	23	26	27	28	28	27	27	24	20	17	14	12	10	15.4	27.6
21-Sep	9	7	7	6	5	5	5	7	13	16	19	22	24	27	28	29	29	27	24	20	17	15	12	10	15.9	28.9
22-Sep	10	9	7	7	6	6	5	6	11	15	19	23	24	25	27	26	27	26	22	18	16	13	10	9	15.1	26.6
23-Sep	9	8	7	6	5	4	4	6	11	14	18	20	22	24	26	26	26	25	22	17	14	12	9	8	14.4	26.1
24-Sep	7	7	6	5	5	5	5	6	9	15	19	21	21	21	23	23	22	22	20	17	16	15	16	14	14.2	22.9
25-Sep	13	12	11	11	10	10	10	10	10	11	12	12	10	9	10	10	12	12	10	8	7	7	5	4	9.9	12.5
26-Sep	4	5	5	4	4	3	3	3	4	8	11	13	16	18	20	20	20	19	18	14	13	11	9	7	10.5	20.3
27-Sep	6	6	5	4	4	3	2	3	7	10	14	18	22	24	25	25	25	25	21	18	16	13	12	11	13.3	25.2
28-Sep	10	9	8	8	8	6	5	6	12	16	18	21	24	23	21	20	19	17	15	15	14	13	10	9	13.6	24.3
29-Sep	7	5	4	3	3	3	3	5	6	7	9	12	15	16	16	15	15	14	12	11	10	9	8	8	9.0	15.8
30-Sep	6	6	6	7	5	4	5	8	9	12	13	14	14	15	15	16	15	13	13	11	11	10	10	10	10.3	15.5
	9.4	8.6	7.9	7.5	7.0	6.5	6.3	7.9	10.9	13.4	15.9	18.0	19.5	20.5	21.1	21.0	20.7	20.0	18.0	15.6	13.8	12.3	11.2	10.2	Diurnal Average	
	16.5	16.5	16.0	15.8	15.0	15.1	13.6	14.1	16.4	17.6	20.3	23.7	25.7	27.3	28.8	28.9	28.6	27.6	25.0	23.1	21.9	20.0	18.8	17.3	Diurnal Maximum	

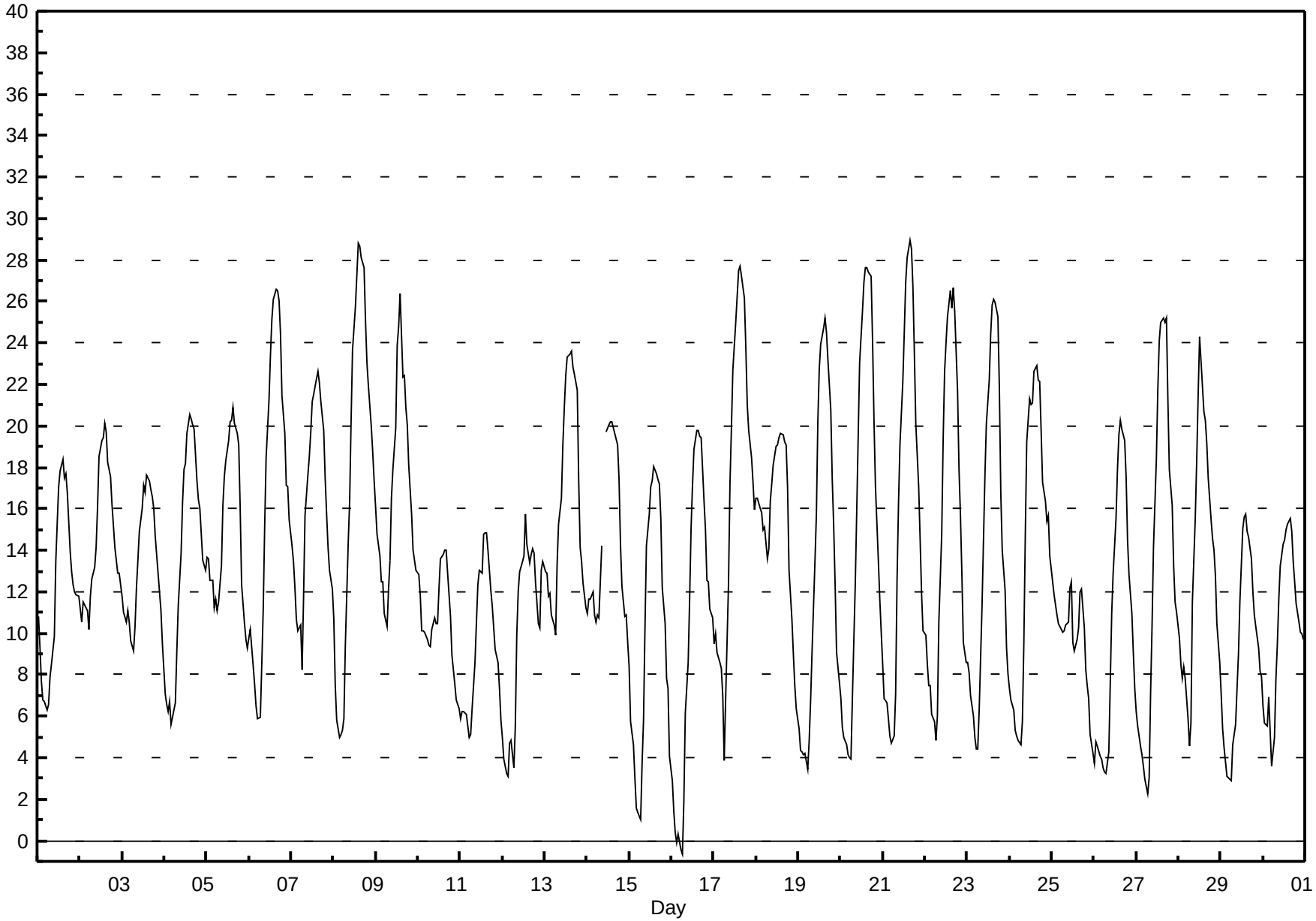
P - Power Failure

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Henry Pirker - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - September 2012

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

Maximum Value: 90.9 % on Sep 26 08:00 Maximum Daily Average: 83.1 % on Sep 25

Minimum Value: 9 % on Sep 17 17:00 Minimum Daily Average: 34.8 % on Sep 17

Maximum Diurnal Average: 75.7 % at hour 7 Minimum Diurnal Average: 31.6 % at hour 15

Monthly Average: 54.23 % Percentiles: P_1 = 17.9 P_{10} = 29.0 Q_1 = 37.2 Median = 54.9 Q_3 = 70.0 P_{90} = 81.9 P_{99} = 90.6

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	73	76	82	86	86	84	84	80	77	72	60	53	48	47	45	45	47	54	71	75	77	78	73	71	68.5	86.5
2-Sep	70	72	69	71	72	73	67	63	60	54	46	38	35	34	33	36	40	42	45	49	53	58	58	61	54.1	73.4
3-Sep	62	63	63	58	56	59	59	55	48	43	38	34	30	30	29	31	32	37	44	49	56	59	62	66	48.6	66.4
4-Sep	75	76	77	75	78	78	78	69	61	55	48	43	42	38	37	38	39	41	49	52	53	58	62	65	57.7	78.0
5-Sep	66	67	69	66	72	70	72	73	67	58	51	43	40	37	34	33	35	36	38	48	62	74	73	75	56.6	74.8
6-Sep	73	70	76	79	83	85	85	76	66	55	45	38	34	31	29	29	28	29	32	38	42	50	51	55	53.4	85.3
7-Sep	57	59	63	69	72	72	79	69	54	37	34	32	29	29	27	26	27	29	34	40	45	51	55	60	47.9	79.2
8-Sep	66	77	81	83	85	86	85	74	58	54	45	37	32	30	26	27	28	30	36	42	45	51	62	69	54.6	86.0
9-Sep	76	84	85	89	88	90	91	85	82	73	65	59	43	39	31	37	34	36	40	47	61	66	68	70	64.1	90.7
10-Sep	73	70	67	63	59	58	59	58	53	50	50	50	44	38	37	35	36	42	48	53	55	58	60	61	53.2	72.8
11-Sep	64	64	62	60	62	64	64	60	53	47	39	37	37	31	32	30	34	42	44	46	47	50	53	58	49.2	64.0
12-Sep	61	64	67	68	63	63	68	62	50	45	43	42	42	38	43	47	46	46	49	51	57	59	53	52	53.3	68.4
13-Sep	53	53	57	57	60	62	64	55	50	47	41	37	32	30	29	31	33	34	37	49	61	63	65	70	48.8	70.0
14-Sep	69	62	61	58	61	62	60	60	50	P	P	18	18	17	18	18	19	20	24	30	37	41	40	44	40.4	69.0
15-Sep	50	59	61	66	72	74	77	68	66	53	40	33	30	27	26	24	23	24	26	33	41	52	59	66	48.0	76.8
16-Sep	71	78	79	84	83	86	85	76	60	53	45	38	34	29	27	28	28	30	38	42	49	49	53	54	54.1	86.0
17-Sep	56	54	56	56	57	62	73	68	55	37	28	23	19	16	12	11	9	11	15	20	21	23	24	27	34.8	73.1
18-Sep	28	30	33	35	38	38	42	45	42	44	37	34	33	32	31	30	29	29	33	44	55	60	65	69	40.0	68.6
19-Sep	73	77	81	82	81	83	73	68	64	49	42	30	24	23	23	23	24	27	30	35	39	49	59	64	51.0	83.0
20-Sep	67	66	69	71	73	74	76	67	53	46	39	32	26	23	19	18	18	19	28	36	45	57	62	67	48.0	75.7
21-Sep	69	74	78	80	82	85	83	75	55	46	39	33	27	24	21	20	21	26	34	43	53	60	65	67	52.5	84.5
22-Sep	72	79	84	82	85	87	88	86	71	57	45	36	32	29	26	28	27	29	39	49	56	65	73	74	58.3	87.9
23-Sep	79	79	81	86	87	87	88	83	65	58	49	43	41	36	32	30	31	33	41	57	67	72	75	74	61.5	87.6
24-Sep	77	81	81	84	85	87	88	86	68	52	42	37	37	37	34	33	34	35	42	49	52	55	55	68	58.3	87.9
25-Sep	78	82	85	87	89	90	90	90	87	80	73	76	80	82	82	79	74	71	78	87	89	89	90	90	83.1	90.0
26-Sep	90	91	91	91	91	91	91	91	91	83	71	68	55	45	38	34	34	36	41	49	53	58	66	74	67.5	90.9
27-Sep	78	80	83	85	85	86	88	86	74	64	51	39	32	26	23	24	25	26	35	45	48	58	63	65	56.9	87.5
28-Sep	68	73	76	72	72	77	81	77	61	49	42	35	28	31	38	36	40	47	58	59	59	63	65	58	56.8	81.2
29-Sep	58	63	66	73	74	71	72	68	68	63	58	50	39	32	29	32	33	35	41	46	49	53	57	58	53.6	74.0
30-Sep	62	65	63	57	63	71	64	59	54	47	39	34	33	33	35	36	39	44	48	52	55	57	59	62	51.3	70.5
	67.1	69.6	71.6	72.4	73.9	75.2	75.7	71.1	62.1	54.2	46.3	40.1	35.9	33.1	31.6	31.6	32.3	34.7	40.6	47.1	52.8	57.9	60.9	63.8	Diurnal Average	
	90.2	90.6	90.6	90.7	90.7	90.8	90.8	90.9	90.7	82.8	72.7	75.5	79.7	81.9	81.9	79.4	73.5	71.0	78.3	86.5	88.7	89.3	89.6	90.0	Diurnal Maximum	

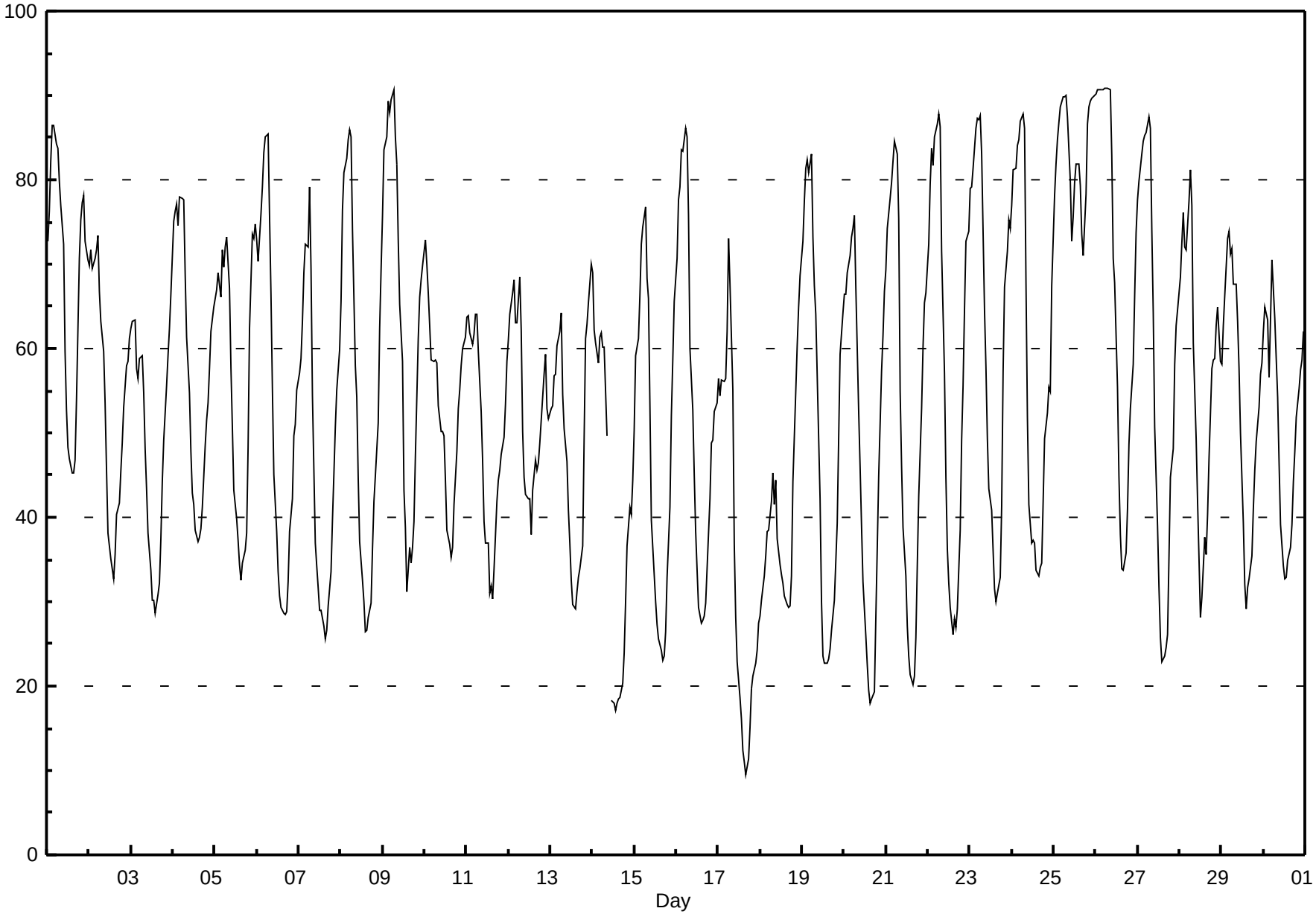
P - Power Failure

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - September 2012



Peace Airshed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - September 2012

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

Maximum Value: 663.1 W/m^2 on Sep 3 13:00

Maximum Daily Average: 198.7 W/m^2 on Sep 6

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

Minimum Daily Average: 55.0 W/m^2 on Sep 25

Maximum Diurnal Average: 486.4 W/m^2 at hour 14

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

Monthly Average: 150.24 W/m^2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 14.7 Q_3 = 294.5 P_{90} = 486.4 P_{99} = 606.9

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	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	17	65	70	159	388	295	286	398	333	238	164	100	24	11	0	0	0	0	106.2	397.7
2-Sep	0	0	0	0	0	0	8	36	60	107	331	565	593	619	571	430	293	235	119	12	0	0	0	0	165.8	618.8
3-Sep	0	0	0	0	0	0	29	142	293	419	526	583	663	441	514	367	246	147	108	14	0	0	0	0	187.2	663.1
4-Sep	0	0	0	0	0	0	27	133	274	412	509	540	443	475	504	278	269	160	26	7	0	0	0	0	169.0	539.8
5-Sep	0	0	0	0	0	0	6	45	185	402	462	479	629	607	479	430	272	160	103	9	0	0	0	0	177.9	629.2
6-Sep	0	0	0	0	0	0	20	131	264	394	500	572	607	600	550	464	349	221	91	7	0	0	0	0	198.7	607.0
7-Sep	0	0	0	0	0	0	15	124	256	381	491	565	610	603	554	455	341	208	84	9	0	0	0	0	195.6	609.6
8-Sep	0	0	0	0	0	0	9	130	263	389	487	552	594	584	539	444	346	206	33	6	0	0	0	0	190.9	593.6
9-Sep	0	0	0	0	0	0	15	105	152	331	273	524	597	458	442	118	183	91	28	3	0	0	0	0	138.4	596.9
10-Sep	0	0	0	0	0	0	4	35	149	238	157	186	449	542	448	419	272	225	101	9	0	0	0	0	134.8	541.5
11-Sep	0	0	0	0	0	0	7	116	262	391	496	466	305	610	492	453	306	152	56	4	0	0	0	0	171.5	609.6
12-Sep	0	0	0	0	0	0	7	94	231	366	258	241	235	385	242	194	222	133	60	3	0	0	0	0	111.3	385.0
13-Sep	0	0	0	0	0	0	7	114	176	272	443	512	567	575	489	375	235	135	59	3	0	0	0	0	165.1	574.5
14-Sep	0	0	0	0	0	0	3	15	213	P	P	560	596	586	535	445	317	187	58	2	0	0	0	0	159.8	595.9
15-Sep	0	0	0	0	0	0	9	91	166	368	472	545	580	571	518	434	316	184	54	2	0	0	0	0	179.6	580.4
16-Sep	0	0	0	0	0	0	4	87	215	355	449	525	563	558	495	323	225	121	19	1	0	0	0	0	164.2	563.0
17-Sep	0	0	0	0	0	0	5	98	226	356	463	536	570	561	507	417	299	168	38	1	0	0	0	0	176.9	569.9
18-Sep	0	0	0	0	0	0	4	94	220	335	450	529	513	541	484	404	286	161	31	0	0	0	0	0	168.9	541.5
19-Sep	0	0	0	0	0	0	4	70	164	263	379	492	503	517	460	402	218	107	30	1	0	0	0	0	150.3	517.4
20-Sep	0	0	0	0	0	0	3	79	207	330	434	508	544	536	486	397	281	153	34	1	0	0	0	0	166.4	543.8
21-Sep	0	0	0	0	0	0	3	76	206	328	432	505	541	526	468	370	244	97	23	0	0	0	0	0	159.1	540.6
22-Sep	0	0	0	0	0	0	2	43	161	282	394	469	507	512	408	297	312	119	18	0	0	0	0	0	146.8	511.7
23-Sep	0	0	0	0	0	0	2	57	178	296	395	470	507	500	445	348	244	125	21	0	0	0	0	0	149.5	506.5
24-Sep	0	0	0	0	0	0	2	52	164	309	364	300	217	286	293	193	137	130	32	0	0	0	0	0	103.2	363.7
25-Sep	0	0	0	0	0	0	0	14	54	135	259	158	40	53	75	169	232	113	17	0	0	0	0	0	55.0	258.7
26-Sep	0	0	0	0	0	0	1	17	121	306	410	482	508	466	465	350	176	115	15	0	0	0	0	0	143.1	508.3
27-Sep	0	0	0	0	0	0	1	58	189	302	412	459	439	441	347	267	195	120	10	0	0	0	0	0	135.0	458.7
28-Sep	0	0	0	0	0	0	1	54	181	304	352	491	465	173	122	87	40	20	6	0	0	0	0	0	95.7	491.4
29-Sep	0	0	0	0	0	0	1	19	43	109	147	268	471	419	432	339	226	87	13	0	0	0	0	0	107.3	471.5
30-Sep	0	0	0	0	0	0	1	49	177	297	398	479	411	450	426	337	170	43	4	0	0	0	0	0	135.0	478.7
	0.0	0.0	0.0	0.0	0.0	0.0	7.2	74.7	184.0	308.1	397.7	461.8	485.1	486.4	437.4	341.5	247.3	140.8	43.9	3.4	0.0	0.0	0.0	0.0	Diurnal Average	
	0.1	0.0	0.0	0.0	0.0	0.1	28.7	142.2	292.8	419.0	526.0	582.7	663.1	618.8	571.0	464.2	349.0	234.6	119.4	13.7	0.0	0.0	0.0	0.0	Diurnal Maximum	

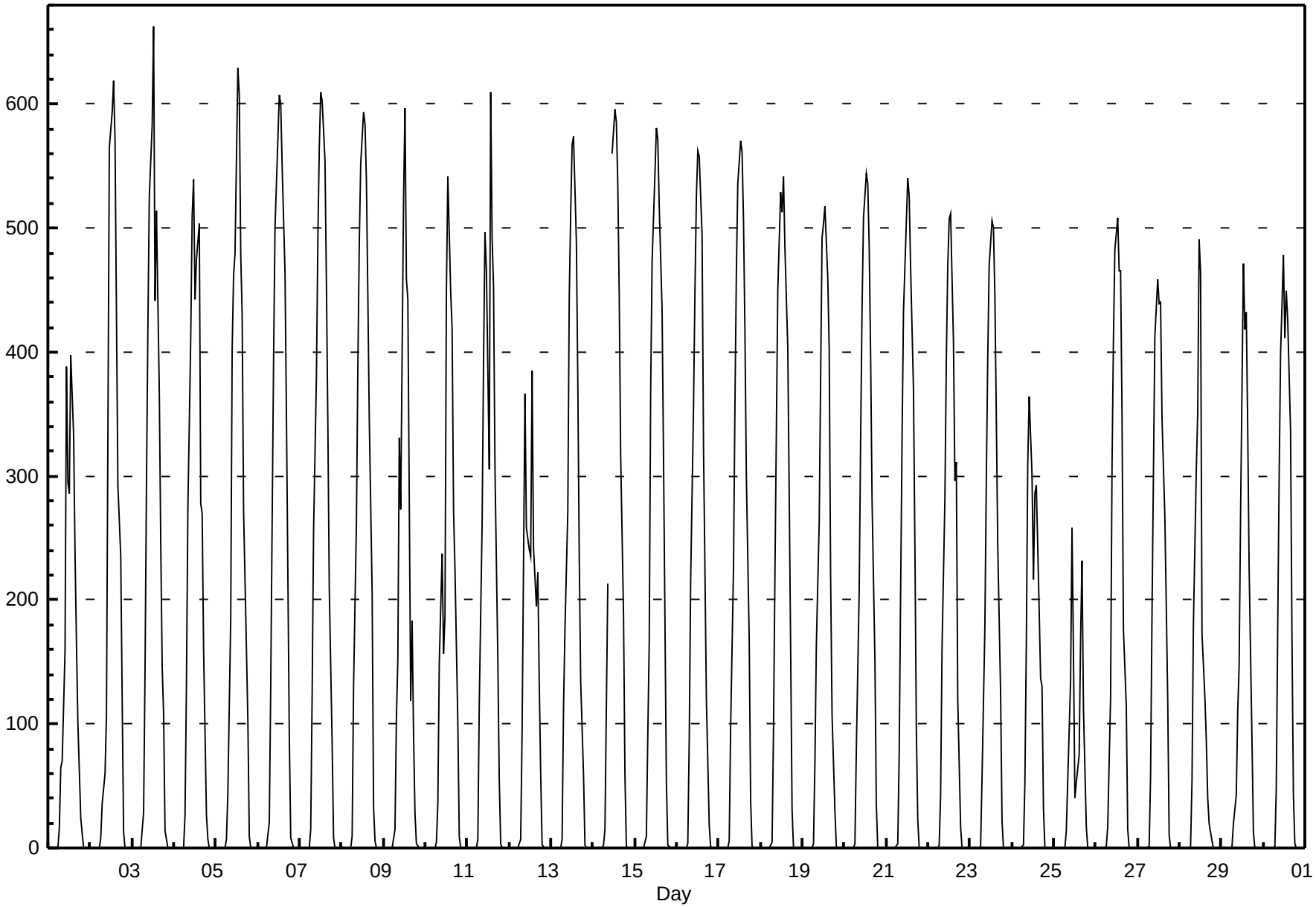
P - Power Failure

Peace Airshed Zone Association

Hourly Averages

Solar Radiation (SR) - W/m^2

Henry Pirker - September 2012



Peace Airshed Zone Association

Hourly Averages

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

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	6	3	3	4	4	1	4	4	7	8	6	5	10	11	10	10	7	8	6	6	5	9	11	2.8	11.2
Dir	247	117	157	234	269	302	217	256	229	242	264	286	260	254	319	338	338	18	96	153	123	171	273	251	268.2	319.2
2 Spd	12	12	11	11	8	7	13	16	17	22	26	26	29	30	29	33	36	34	32	27	21	16	17	17	20.6	35.8
Dir	254	262	263	262	272	302	286	282	284	277	268	263	258	257	262	270	267	262	258	256	253	250	255	253	264.0	267.1
3 Spd	17	16	16	19	19	16	18	20	23	26	26	24	23	24	26	24	23	23	18	17	15	17	16	8	19.3	26.5
Dir	256	262	261	262	261	254	255	255	259	268	285	290	279	281	279	276	284	268	249	257	249	254	259	314	267.7	267.7
4 Spd	4	4	6	8	5	8	8	7	12	14	16	15	19	18	19	20	21	19	25	23	16	12	12	12	13.1	24.9
Dir	249	274	257	260	284	266	271	284	262	258	252	251	271	265	284	285	279	261	253	258	266	241	244	243	263.3	252.6
5 Spd	13	13	10	10	9	12	9	9	10	13	16	15	19	19	16	16	14	12	8	4	1	3	1	5	9.6	18.7
Dir	251	271	305	304	313	328	314	304	301	311	307	315	307	299	309	310	310	309	312	304	263	167	130	170	302.7	299.5
6 Spd	6	7	3	2	5	4	5	5	5	6	10	11	12	12	12	16	17	19	18	15	18	11	13	5	8.1	19.1
Dir	218	250	278	191	130	110	116	152	167	187	219	212	239	236	240	247	247	252	253	249	257	247	257	302	238.4	252.4
7 Spd	2	5	4	3	5	6	6	11	6	10	8	6	3	5	4	4	3	7	9	8	8	8	8	8	2.3	10.7
Dir	285	310	247	221	243	321	308	335	11	46	69	71	41	108	111	28	178	132	120	117	111	110	114	115	81.8	335.4
8 Spd	4	2	3	2	4	4	4	3	4	4	2	3	4	5	3	7	10	10	9	7	6	7	8	10	3.6	10.4
Dir	121	319	296	266	163	198	168	210	252	332	215	187	133	128	85	140	131	118	122	137	135	155	167	185	150.9	117.7
9 Spd	6	3	3	3	4	2	3	3	1	6	2	7	3	5	2	11	3	14	13	13	24	8	11	8	3.2	24.0
Dir	154	124	130	112	179	339	199	307	313	233	238	154	146	110	202	273	227	150	223	266	279	300	309	291	241.9	279.1
10 Spd	14	18	18	16	17	15	13	16	22	26	25	26	28	31	30	31	28	34	25	23	22	22	22	20	22.4	34.1
Dir	275	272	269	274	268	262	251	264	263	258	257	259	265	265	275	272	266	261	253	250	252	253	256	257	262.3	261.1
11 Spd	18	19	18	18	16	11	9	11	22	26	26	25	24	24	26	30	32	32	21	23	17	17	13	13	19.8	32.1
Dir	254	256	259	262	253	263	282	287	268	275	287	289	287	283	274	278	263	277	260	257	251	247	240	240	268.1	276.8
12 Spd	12	10	4	7	12	11	5	2	3	18	20	20	17	20	33	30	27	26	23	16	4	3	15	14	14.2	33.1
Dir	243	241	306	235	240	240	251	244	292	260	263	267	248	256	269	265	268	266	274	279	247	254	290	266	262.8	268.8
13 Spd	14	11	7	10	8	8	7	9	9	12	17	16	19	24	26	19	13	6	3	3	3	5	5	5	9.3	26.2
Dir	258	255	250	255	275	278	267	256	240	252	268	245	257	273	275	274	264	237	220	152	152	156	116	138	257.4	274.8
14 Spd	5	4	6	5	5	5	8	7	11	P	P	42	38	39	37	34	31	30	20	14	10	9	9	8	15.8	41.8
Dir	158	198	199	213	261	240	246	255	247	P	P	262	269	277	282	281	281	276	290	300	295	308	314	297	273.8	261.7
15 Spd	3	3	3	3	4	3	4	3	4	5	3	3	4	6	9	10	13	11	10	5	5	2	4	4	4.2	12.6
Dir	292	241	308	307	296	305	306	320	307	281	246	236	228	318	297	322	321	331	342	360	38	358	24	301	315.0	321.3
16 Spd	4	4	4	5	1	2	5	3	6	9	7	5	7	9	10	5	4	1	6	6	5	10	7	7	4.5	10.3
Dir	320	304	302	294	14	203	158	186	235	227	218	211	213	243	252	249	197	183	280	254	255	254	255	270	246.0	251.9
17 Spd	5	8	7	7	6	6	4	3	3	9	16	17	16	18	18	21	24	20	18	15	13	12	13	10	11.6	23.6
Dir	289	270	271	285	294	296	319	321	300	264	267	281	271	265	265	268	267	253	254	253	252	246	250	229	265.2	267.3
18 Spd	13	13	12	10	8	11	11	14	14	13	14	16	17	17	17	14	13	11	7	2	1	1	1	2	8.8	16.9
Dir	247	261	266	250	248	301	302	314	323	334	330	304	308	311	313	323	342	337	357	95	128	218	214	6	306.0	307.5
19 Spd	0	3	4	5	2	5	3	0	3	2	5	5	11	16	14	15	14	12	6	5	4	1	3	3	3.0	15.6
Dir	200	169	164	158	166	196	214	48	170	265	359	321	321	326	320	320	328	353	55	110	76	263	314	324	326.4	325.7
20 Spd	3	3	3	3	1	3	3	3	2	3	3	4	7	9	10	11	9	7	7	6	3	1	3	0	2.9	10.8
Dir	307	312	298	316	335	304	344	304	310	282	275	256	291	283	324	336	338	22	79	97	136	307	3	315	324.1	335.9
21 Spd	4	2	2	3	3	1	5	5	5	5	6	5	8	6	5	1	3	4	4	4	1	2	4	4	1.8	7.9
Dir	307	298	315	346	325	238	154	178	233	248	216	191	199	203	180	109	147	123	119	146	122	315	293	319	206.7	199.4
22 Spd	4	2	3	4	4	4	3	4	3	3	3	3	4	3	4	1	2	3	4	4	3	3	5	4	1.4	5.0
Dir	318	337	309	305	303	311	304	292	331	302	260	268	182	188	240	169	140	111	96	97	82	328	293	335	299.0	292.5

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

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

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	4	3	4	3	3	1	2	3	3	3	3	2	4	3	3	2	4	4	3	3	1	3	4	4	0.5	4.4
Dir	1	304	313	334	298	249	198	220	243	248	261	162	146	139	175	139	94	117	112	73	148	315	301	317	255.4	117.0
24 Spd	4	4	3	3	2	4	1	3	6	4	3	9	11	7	10	10	12	13	7	8	9	10	13	15	6.5	15.1
Dir	343	300	319	294	330	307	289	197	225	273	252	297	262	266	303	301	321	322	317	311	311	307	300	285	297.5	285.3
25 Spd	15	14	12	9	4	7	5	6	8	9	10	8	11	5	4	5	5	4	7	6	5	4	1	1	2.2	15.1
Dir	274	270	276	262	202	173	162	192	259	280	306	324	52	66	82	163	181	144	126	165	143	146	148	38	237.4	274.4
26 Spd	1	1	2	3	3	1	5	4	4	5	5	7	6	7	8	8	8	7	6	6	5	3	2	0	3.8	8.1
Dir	117	221	161	169	309	288	171	186	170	164	161	123	169	210	214	207	210	178	167	168	197	173	161	356	182.7	213.9
27 Spd	2	1	3	3	5	2	1	4	4	5	7	7	8	11	13	13	8	9	3	3	2	2	1	2	3.6	13.3
Dir	114	196	141	131	147	128	191	175	163	163	136	141	162	198	224	222	233	242	210	201	325	307	323	105	188.4	222.0
28 Spd	3	2	3	5	3	2	1	1	2	3	2	3	3	8	11	9	14	18	11	7	9	13	12	8	4.2	18.3
Dir	105	110	96	105	111	330	330	267	272	166	115	130	257	310	318	321	309	285	275	272	267	271	287	281	288.6	284.8
29 Spd	5	2	2	1	1	3	4	3	4	8	6	7	15	28	35	34	31	30	23	20	17	12	8	8	12.1	34.5
Dir	302	316	329	319	325	267	232	221	209	204	223	220	225	264	269	262	258	262	265	263	263	262	256	257	258.1	269.4
30 Spd	6	6	7	8	4	5	8	16	20	24	29	29	28	33	34	28	26	20	16	10	6	3	5	4	14.8	34.0
Dir	232	244	221	230	184	231	258	261	258	260	270	267	266	273	269	276	275	277	276	275	277	285	219	160	264.4	269.4
Spd	5.2	5.5	4.7	4.6	4.2	4.1	3.8	4.9	6.4	8.1	8.8	9.4	10.3	12.1	13.7	13.2	12.0	10.1	7.6	6.6	5.7	5.4	5.9	5.0	Diurnal Average	
Dir	259.1	263.0	265.8	260.6	260.1	271.2	259.9	266.8	262.6	264.5	268.5	266.0	264.1	269.6	276.4	277.9	275.9	269.7	259.9	253.9	255.9	253.6	265.2	260.9		
Spd	17.7	19.3	18.5	18.6	19.0	16.2	18.2	20.0	23.2	26.5	28.6	41.8	38.3	39.0	36.8	33.9	35.8	34.1	32.2	26.5	24.0	21.7	21.7	20.3	Diurnal Maximum	
Dir	254.4	256.4	269.0	262.1	261.1	254.3	255.0	255.0	259.1	267.7	269.7	261.7	269.1	277.2	281.7	281.1	267.1	261.1	258.3	256.1	279.1	253.5	255.6	256.8		

Maximum Speed Value: 42 km/h on Sep 14 12:00
Maximum Daily Speed Average: 22.4 km/h on Sep 10
Maximum Diurnal Speed Average: 13.7 km/h at hour 15

Minimum Speed Value: 0 km/h on Sep 27 00:00
Minimum Daily Speed Average: 0.5 km/h on Sep 23
Minimum Diurnal Speed Average: 3.8 km/h at hour 7

Monthly Average Velocity: 7.34 km/h 266.49 deg

Speed Percentiles: $P_1 = 0.7$ $P_{10} = 2.5$ $Q_1 = 3.6$ Median = 7.0 $Q_3 = 14.0$ $P_{90} = 22.7$ $P_{99} = 33.8$

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

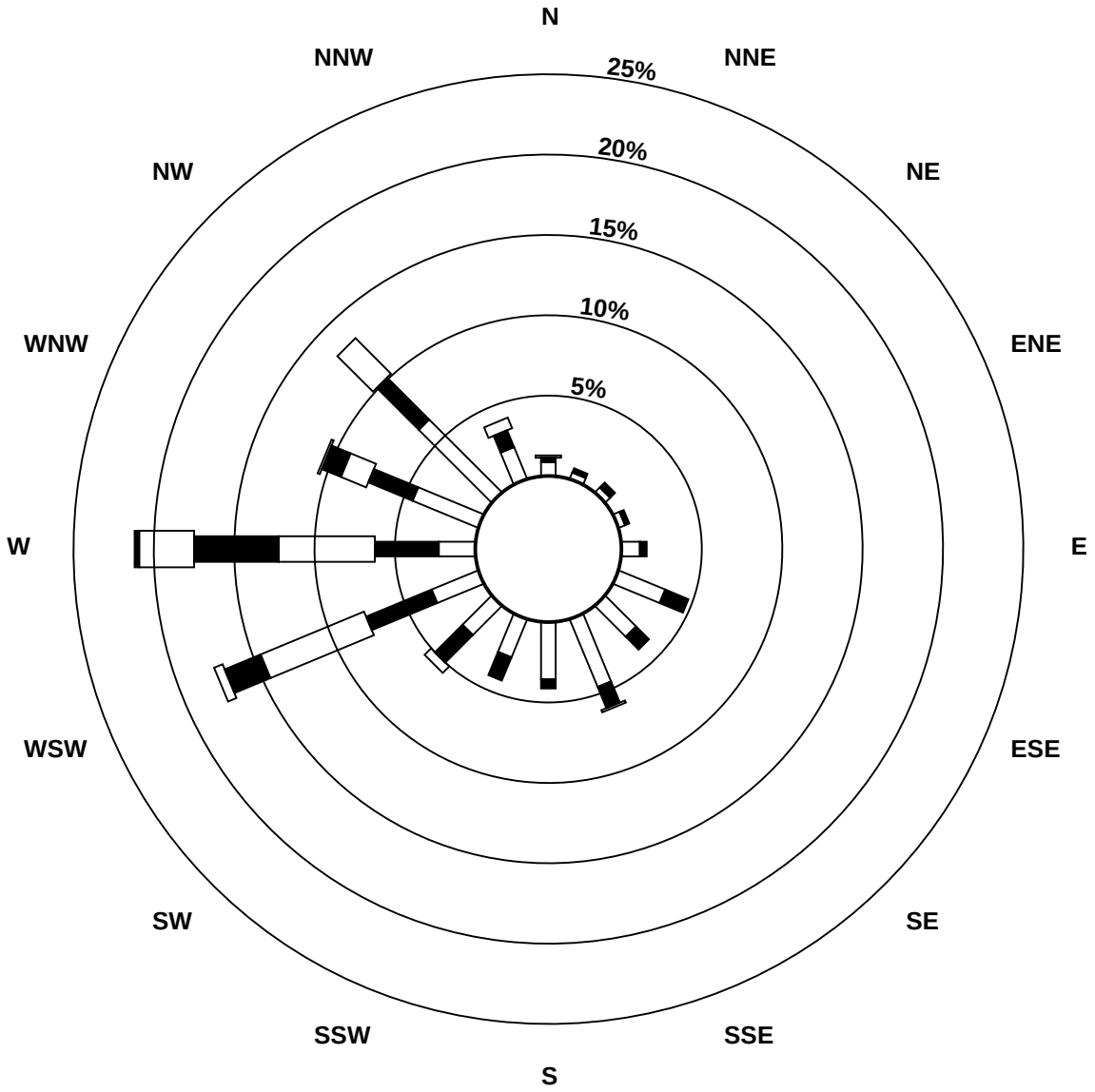
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	11	9	2	0	0	0	22
NorthEast	6	3	1	0	0	0	10
East	21	10	0	0	0	0	31
SouthEast	39	24	1	0	0	0	64
South	49	23	1	0	0	0	73
SouthWest	32	38	22	0	0	0	92
West	37	56	81	66	31	3	274
NorthWest	76	44	32	0	0	0	152
Total	271	207	140	66	31	3	718

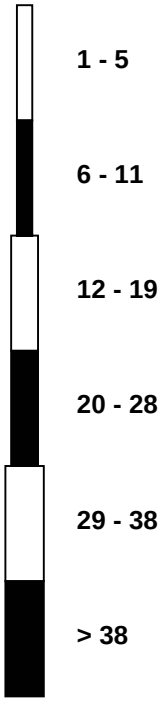
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - September 2012



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - September 2012

Maximum Speed: 42 km/h on Sep 14 12:00

Maximum Daily Speed Average: 22.8 km/h on Sep 10

Minimum Speed: 2 km/h on Sep 18 21:00

Minimum Daily Speed Average: 3.7 km/h on Sep 23

Maximum Diurnal Speed Average: 16.8 km/h at hour 15

Minimum Diurnal Speed Average: 6.3 km/h at hour 6

Monthly Average Speed: 10.44 km/h

Percentiles: $P_1 = 2.1$ $P_{10} = 3.3$ $Q_1 = 4.3$ Median = 7.6 $Q_3 = 14.3$ $P_{90} = 23.1$ $P_{99} = 34.1$

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	9	6	3	3	5	5	3	4	5	7	9	6	6	11	12	11	11	10	9	7	6	6	9	11	7.2	12.1
2-Sep	12	12	11	11	8	8	13	17	17	22	26	26	29	30	29	33	36	34	33	27	21	17	17	17	21.2	36.4
3-Sep	18	17	16	19	19	16	18	20	23	27	26	25	24	25	26	25	23	24	19	17	15	17	17	9	20.2	26.8
4-Sep	4	5	6	8	5	8	9	7	12	14	17	16	20	18	20	20	21	20	25	23	16	12	12	12	13.8	25.2
5-Sep	13	14	11	10	9	12	9	9	10	14	17	16	19	19	17	16	14	12	8	4	2	3	2	5	11.0	19.3
6-Sep	6	7	4	4	5	4	5	5	5	6	10	12	13	12	14	16	18	19	19	15	19	11	14	7	10.3	19.4
7-Sep	4	6	4	4	6	6	6	11	7	10	8	7	5	7	5	5	4	7	10	8	8	8	8	8	6.8	10.8
8-Sep	4	3	3	2	4	5	4	4	4	4	3	4	5	6	5	8	10	11	9	7	7	8	10	13	6.0	12.9
9-Sep	6	4	6	4	5	4	4	4	4	6	3	7	5	6	4	12	13	16	15	13	25	9	11	9	8.2	24.8
10-Sep	14	18	19	16	17	15	14	16	22	26	25	26	28	32	30	31	28	35	25	23	23	22	22	21	22.8	34.5
11-Sep	18	19	18	18	16	11	9	11	22	26	27	25	24	25	26	30	33	32	22	23	17	18	14	13	20.7	32.5
12-Sep	12	10	6	7	13	11	5	3	4	18	21	21	18	21	33	30	27	26	23	17	6	5	15	14	15.2	33.4
13-Sep	14	11	8	10	8	9	7	10	9	12	17	16	20	25	27	19	14	6	4	3	3	6	5	5	11.2	26.6
14-Sep	5	4	6	6	6	6	8	8	12	P	P	42	39	39	37	34	31	30	20	14	10	9	9	8	17.5	42.2
15-Sep	4	4	4	3	4	4	5	3	4	5	4	5	6	10	11	11	13	11	10	6	5	4	4	4	5.9	13.1
16-Sep	4	4	5	5	3	2	5	4	6	9	8	6	8	11	11	6	5	3	7	6	6	10	8	8	6.2	11.2
17-Sep	5	8	7	7	6	6	4	3	3	10	16	17	16	18	19	22	24	20	19	15	13	12	13	11	12.3	23.8
18-Sep	13	13	13	10	9	11	11	14	14	14	15	17	17	17	17	15	14	11	7	3	2	2	2	2	10.9	17.4
19-Sep	2	4	4	5	3	5	5	4	3	3	5	6	11	16	15	16	14	12	6	6	4	3	3	4	6.7	16.0
20-Sep	3	4	4	3	2	3	3	3	2	4	4	4	8	10	11	11	10	7	7	6	3	3	4	3	5.1	11.2
21-Sep	4	3	3	3	3	2	5	5	5	5	6	6	8	7	5	4	3	5	5	4	2	3	4	4	4.4	8.5
22-Sep	5	3	3	4	4	4	3	4	4	3	3	4	5	4	4	4	4	4	4	4	3	4	5	4	3.9	5.4
23-Sep	4	4	4	3	4	2	3	3	3	4	3	4	5	4	5	4	4	5	3	3	2	3	4	5	3.7	5.0
24-Sep	5	5	4	4	2	4	2	3	7	5	4	10	11	7	11	10	12	13	7	8	9	10	14	16	7.7	15.8
25-Sep	15	14	12	9	5	7	5	7	9	9	10	9	12	7	5	6	5	5	7	6	5	4	2	3	7.4	15.3
26-Sep	2	3	3	3	4	2	5	4	5	6	6	7	7	8	9	9	9	7	6	6	5	4	2	3	5.2	9.1
27-Sep	3	3	3	4	5	3	3	5	4	6	8	8	9	12	13	14	8	9	4	4	5	3	4	3	5.9	13.6
28-Sep	3	2	3	5	3	4	3	4	3	4	3	4	4	8	11	9	14	19	12	7	9	13	12	9	7.1	18.6
29-Sep	6	4	4	4	3	4	4	4	5	8	7	8	16	29	35	34	31	30	23	21	17	12	8	8	13.6	35.1
30-Sep	6	7	7	8	5	5	8	16	20	24	29	29	29	33	34	29	26	20	16	10	6	3	5	4	15.8	34.5
	7.5	7.4	6.7	6.7	6.4	6.3	6.4	7.2	8.5	10.7	11.8	13.1	14.3	15.9	16.8	16.5	16.0	15.6	12.8	10.6	9.2	8.1	8.6	8.0	Diurnal Average	
	17.8	19.5	18.6	18.7	19.2	16.4	18.4	20.2	23.5	26.8	28.9	42.2	38.7	39.4	37.2	34.3	36.4	34.5	32.5	26.7	24.8	21.9	21.9	20.5	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

Henry Pirker - September 2012

Maximum Value: 95.3 deg on Sep 27 00:00

Minimum Value: 4.8 deg on Sep 22 19:00

Percentiles: P_1 = 6.2 P_{10} = 8.1 Q_1 = 10.2 Median = 16.8 Q_3 = 31.7 P_{90} = 58.1 P_{99} = 83.1

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
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	46	31	38	25	27	34	78	17	21	21	17	20	38	24	22	17	17	51	15	30	17	32	16	11	77.8
2-Sep	9	8	12	7	11	16	10	7	8	8	8	10	9	12	11	9	10	11	8	7	9	9	7	8	15.6
3-Sep	6	7	8	7	7	8	8	7	9	10	11	14	14	13	10	13	11	17	10	7	8	9	8	29	28.9
4-Sep	32	21	13	9	28	9	9	16	14	12	14	22	13	15	15	13	13	18	9	8	12	9	9	12	31.7
5-Sep	9	26	12	11	7	11	10	6	8	12	13	14	14	14	13	14	10	9	8	11	55	15	52	12	55.3
6-Sep	23	19	30	57	8	7	9	20	20	33	27	26	20	22	28	20	18	11	9	9	6	11	8	38	57.4
7-Sep	83	32	33	68	36	17	18	9	32	23	22	35	72	43	59	43	64	25	11	7	6	6	6	6	83.3
8-Sep	27	20	13	59	11	29	22	38	28	31	67	58	63	34	64	25	18	14	11	21	28	25	36	39	67.1
9-Sep	29	61	77	64	39	78	60	40	79	22	63	25	54	31	70	41	75	30	37	17	14	61	12	27	78.9
10-Sep	11	8	8	8	8	9	13	12	9	9	9	10	9	10	11	11	9	9	8	8	8	8	8	8	13.2
11-Sep	7	7	7	6	9	10	22	9	8	11	10	11	8	14	12	10	10	8	10	6	8	8	9	9	21.7
12-Sep	8	10	50	16	9	9	18	66	59	12	12	14	12	15	8	9	10	9	8	8	46	66	9	15	66.5
13-Sep	9	12	15	7	9	20	26	19	11	13	12	14	18	11	10	13	20	20	47	16	29	31	12	14	47.5
14-Sep	11	16	20	21	24	20	15	32	13	P	P	9	9	8	9	9	11	9	10	6	11	9	8	7	32.1
15-Sep	54	27	42	74	29	41	18	33	20	24	39	68	56	57	42	26	17	15	10	13	10	71	30	18	73.6
16-Sep	21	28	20	16	86	47	8	33	13	20	22	38	25	36	24	57	60	76	43	20	26	12	12	17	86.2
17-Sep	28	9	7	8	14	7	16	23	34	19	9	11	14	13	19	9	8	11	9	10	10	9	11	14	33.6
18-Sep	9	9	28	10	21	14	8	7	14	13	14	16	14	12	13	17	15	13	19	53	42	52	65	46	64.9
19-Sep	84	28	12	11	60	26	67	91	48	49	20	38	13	13	14	13	15	11	19	17	14	78	16	34	90.8
20-Sep	19	38	37	32	74	42	32	18	37	28	34	34	30	28	24	15	16	19	20	9	42	65	30	94	94.1
21-Sep	15	57	52	22	18	72	8	21	15	16	17	22	22	33	32	79	56	17	22	19	56	33	29	34	78.6
22-Sep	13	31	30	19	12	11	16	26	22	31	31	41	47	64	29	84	61	40	5	10	7	32	10	15	83.8
23-Sep	11	40	9	28	24	73	35	31	28	23	43	69	39	61	65	83	44	23	26	12	75	14	23	25	83.2
24-Sep	30	38	25	26	34	18	75	12	30	32	40	40	14	18	15	13	9	9	7	12	7	6	14	17	74.7
25-Sep	8	10	12	18	36	12	10	24	14	9	14	29	16	36	31	22	24	37	15	7	17	33	81	69	80.6
26-Sep	91	65	60	24	64	62	17	19	20	30	35	19	24	27	25	29	20	10	11	18	31	35	47	95	95.3
27-Sep	60	78	13	12	9	44	80	40	18	20	17	18	20	21	14	12	13	11	38	48	72	64	83	29	83.0
28-Sep	35	49	35	10	17	77	78	88	76	55	55	56	49	20	8	7	7	9	9	14	7	9	13	17	87.7
29-Sep	32	83	56	82	83	39	28	50	33	14	21	22	23	10	10	9	8	8	7	8	10	9	12	12	83.4
30-Sep	11	20	14	13	36	19	14	11	8	8	9	9	11	10	10	8	8	7	8	9	11	32	8	18	36.4
	90.6	83.4	76.8	81.5	86.2	78.3	80.4	90.8	78.9	55.1	67.1	69.2	72.4	64.2	70.4	83.8	74.7	75.6	47.5	53.1	75.3	78.2	83.0	95.3	

P - Power Failure

FOCUS AIR QUALITY MONITORING

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.1 ppb on Sep 11 06:00 Maximum Daily Average: 1.4 ppb on Sep 11

Minimum Value: 0 ppb on Sep 1 16:00 Minimum Daily Average: 0.0 ppb on Sep 30
Maximum Diurnal Average: 0.4 ppb at hour 13 Minimum Diurnal Average: 0.1 ppb at hour 22
Monthly Average: 0.26 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} = 3.8

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-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
2-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
3-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	0.1	0.2
4-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
5-Sep	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.5
6-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
7-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
8-Sep	0	0	0	0	0	0	0	0	1	1	0	0	2	2	2	2	1	A	0	0	1	0	1	0	0.6	1.9
9-Sep	0	0	0	0	0	0	0	0	0	0	0	1	3	1	1	0	A	0	0	0	0	0	0	0	0.4	3.0
10-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	0.1
11-Sep	0	0	0	3	4	9	8	1	1	2	0	0	0	0	A	0	0	1	0	0	0	0	0	0	1.4	9.1
12-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	1	1	0	0	1	0	0	0	0	0.3	1.1
13-Sep	3	6	6	4	1	0	1	2	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1.1	5.8
14-Sep	0	0	0	0	0	0	0	0	0	C	C	C	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.6
15-Sep	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
16-Sep	0	0	0	0	0	0	0	0	0	A	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0.3	4.0
17-Sep	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	0.8
18-Sep	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.3	1.1
19-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0.2	0.6
20-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	0.1	0.3
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	0.3
22-Sep	0	0	0	A	0	0	0	0	0	0	0	1	1	3	1	1	1	1	0	0	0	0	0	0	0.4	2.6
23-Sep	0	0	A	0	0	0	0	0	0	0	0	0	0	1	2	2	3	3	0	0	0	0	0	0	0.5	2.8
24-Sep	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
25-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
26-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	0.1	0.4
27-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
28-Sep	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	A	0	0	0	0.2	0.8
29-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
30-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
	0.2	0.3	0.3	0.3	0.2	0.4	0.4	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	3.4	5.6	5.8	3.8	3.9	9.1	8.4	2.3	1.3	2.0	4.0	2.5	3.0	2.6	1.7	1.9	2.8	2.6	0.5	1.1	0.9	0.3	1.2	0.3	Diurnal Maximum	

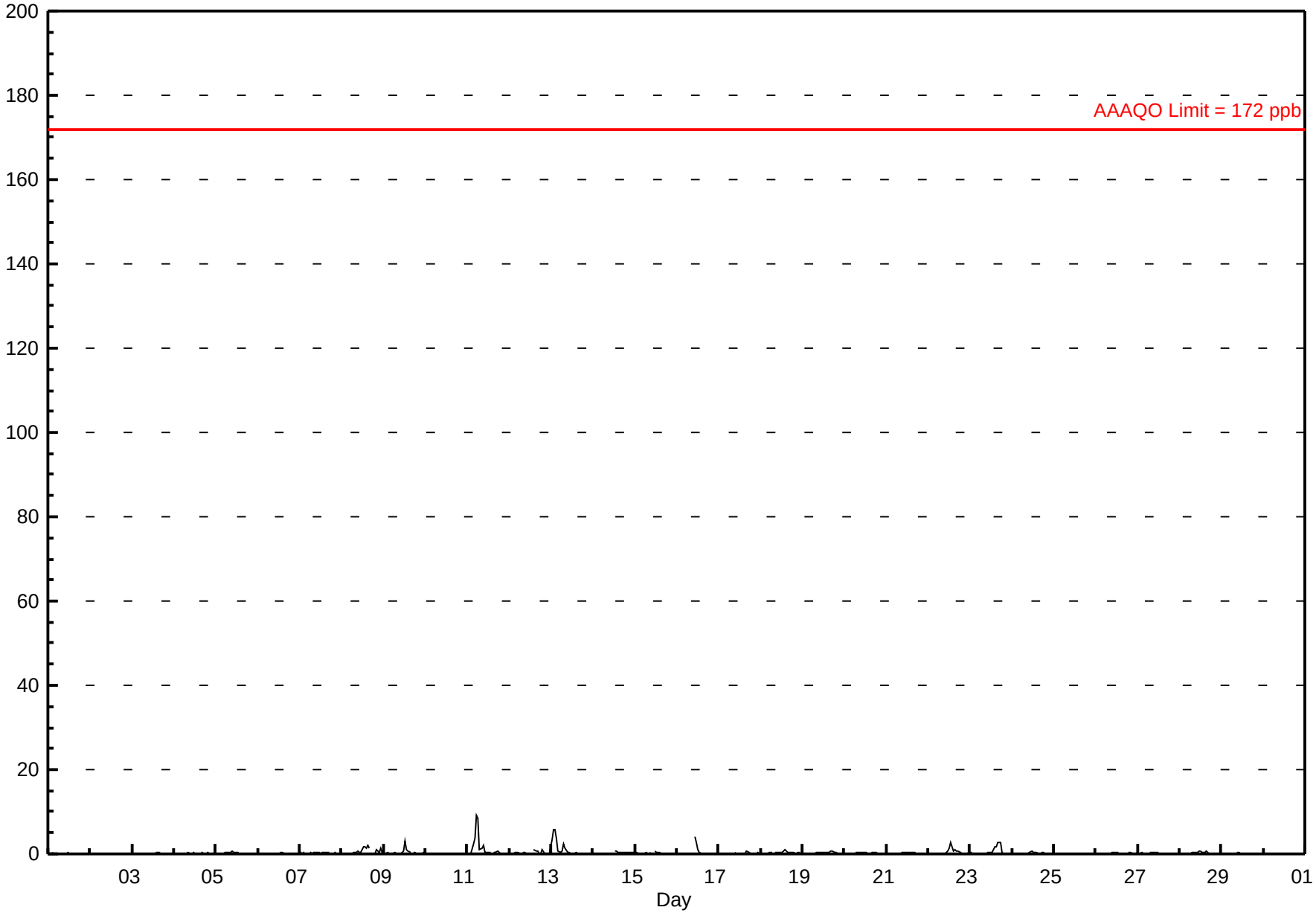
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - September 2012

Maximum Value: 15.0 ppb on Sep 11 07:00

Maximum Daily Average: 2.8 ppb on Sep 11

Minimum Value: 0 ppb on Sep 14 09:00

Minimum Daily Average: 0.4 ppb on Sep 2

Maximum Diurnal Average: 1.2 ppb at hour 13

Minimum Diurnal Average: 0.5 ppb at hour 24

Monthly Average: 0.87 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.6 $Q_3 = 0.7$ $P_{90} = 1.2$ $P_{99} = 7.9$

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	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0.5	0.8
2-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	1	A	0.4	1.0
3-Sep	1	0	1	0	1	1	0	1	1	1	0	0	1	0	1	1	1	1	0	1	0	0	A	0	0.5	0.8
4-Sep	0	0	0	0	1	0	0	0	1	1	1	1	1	0	1	1	1	1	0	1	1	A	1	0	0.6	1.2
5-Sep	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	A	0	0	0	0.7	1.2
6-Sep	1	0	1	0	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	A	0	1	1	1	0.6	1.1
7-Sep	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	2	A	1	1	1	0	1	0.7	1.6
8-Sep	1	0	1	1	0	1	1	1	1	1	1	1	4	3	3	4	3	A	1	1	2	1	5	1	1.6	5.0
9-Sep	1	1	1	1	1	0	1	1	1	1	1	3	6	2	1	1	A	1	1	1	1	1	1	1	1.1	6.3
10-Sep	1	1	1	0	0	1	1	1	0	1	1	1	0	0	0	A	1	0	1	0	0	1	1	0	0.5	0.7
11-Sep	1	0	1	4	5	14	15	3	3	3	1	1	1	1	A	1	1	2	1	0	0	2	1	0	2.8	15.0
12-Sep	1	1	1	1	1	1	0	1	1	1	1	1	1	A	3	2	3	1	1	2	1	1	0	1	0.9	2.7
13-Sep	8	8	8	8	1	1	2	3	4	1	1	1	A	1	1	1	0	0	0	0	1	0	0	0	2.3	8.4
14-Sep	0	0	0	0	0	0	0	0	0	C	C	C	1	1	1	1	1	2	1	2	1	1	1	1	0.7	2.0
15-Sep	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	1	1	0.7	1.3
16-Sep	0	0	0	0	1	0	0	0	0	A	9	4	2	1	1	0	0	0	0	0	1	0	0	0	1.0	8.9
17-Sep	0	0	0	0	0	0	0	1	A	1	1	1	1	0	1	1	2	1	0	2	1	1	1	1	0.7	2.2
18-Sep	1	1	0	1	1	1	1	A	1	1	1	1	1	3	4	1	1	1	1	1	1	1	1	1	0.9	4.0
19-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	1.2
20-Sep	1	1	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.6	0.9
21-Sep	0	0	0	0	A	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0.6	1.0
22-Sep	1	1	1	A	0	0	0	1	1	1	1	1	4	5	1	2	1	1	1	1	1	0	1	1	1.1	5.0
23-Sep	1	1	A	1	1	1	1	1	0	1	1	1	1	2	3	3	4	6	1	1	1	0	0	1	1.3	6.1
24-Sep	0	A	0	1	0	1	1	1	0	1	1	2	1	1	1	1	1	1	1	1	0	1	1	0	0.7	1.7
25-Sep	A	0	1	1	0	1	0	0	0	1	1	1	1	0	0	0	0	1	1	1	0	1	0	A	0.5	0.8
26-Sep	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	1	1	3	1	1	A	1	0.7	3.0
27-Sep	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	0	1	0	A	1	0	0.6	0.8
28-Sep	0	0	1	1	0	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1	1	0.8	1.7
29-Sep	1	1	1	0	0	1	1	1	0	1	1	1	1	1	1	1	0	0	0	A	1	1	1	1	0.6	0.8
30-Sep	1	1	0	1	0	0	0	0	0	1	1	1	0	0	0	2	0	0	A	1	0	0	1	1	0.5	1.6
	0.9	0.8	0.8	0.9	0.7	1.0	1.1	0.8	0.8	0.8	1.1	1.0	1.2	1.1	1.0	1.0	1.0	0.9	0.6	0.9	0.6	0.7	0.7	0.5	Diurnal Average	
	8.1	8.4	8.1	7.9	5.5	14.3	15.0	3.4	3.8	3.5	8.9	3.7	6.3	5.0	4.0	3.6	3.9	6.1	1.0	3.0	2.4	2.4	5.0	0.8	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

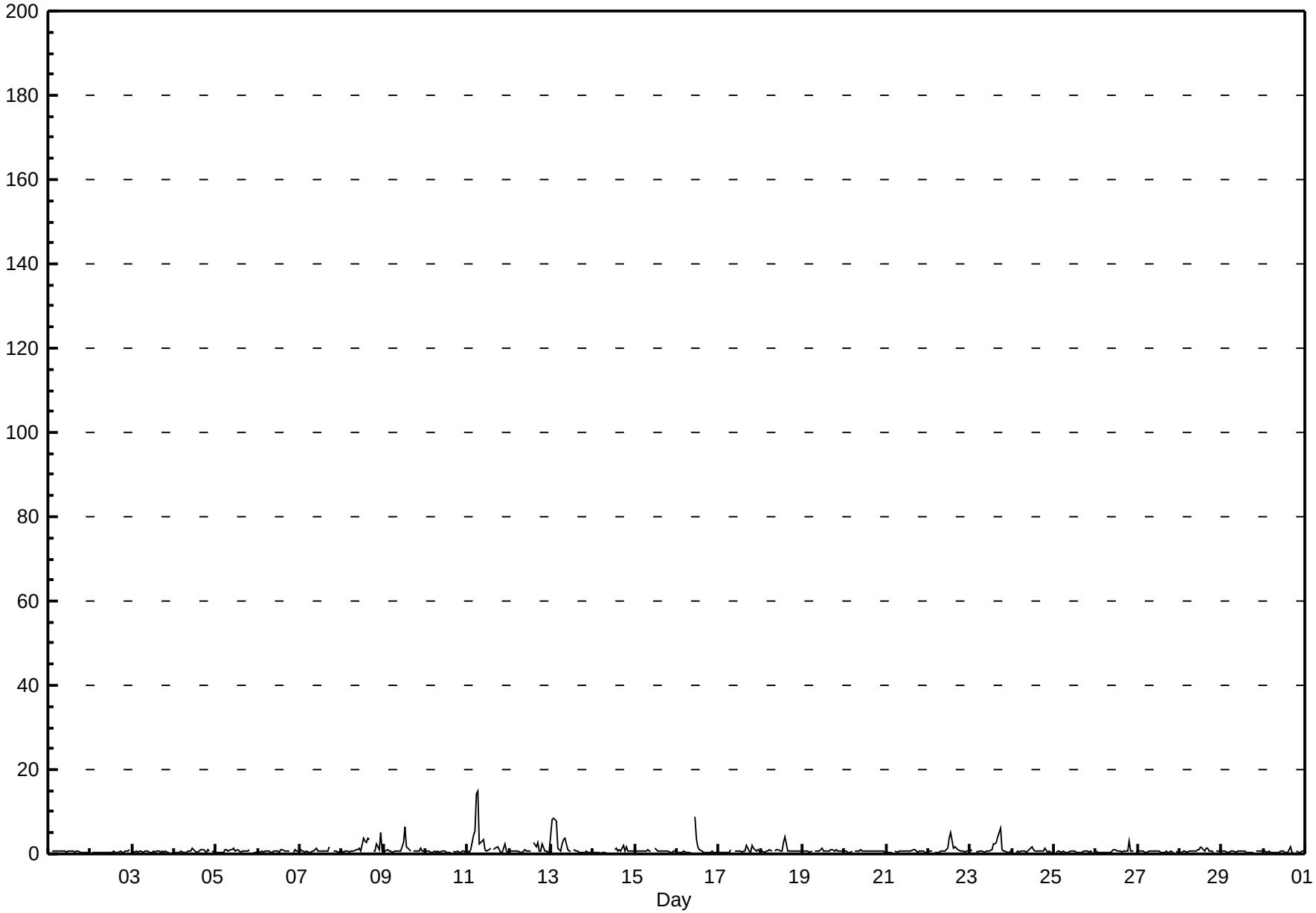
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - September 2012

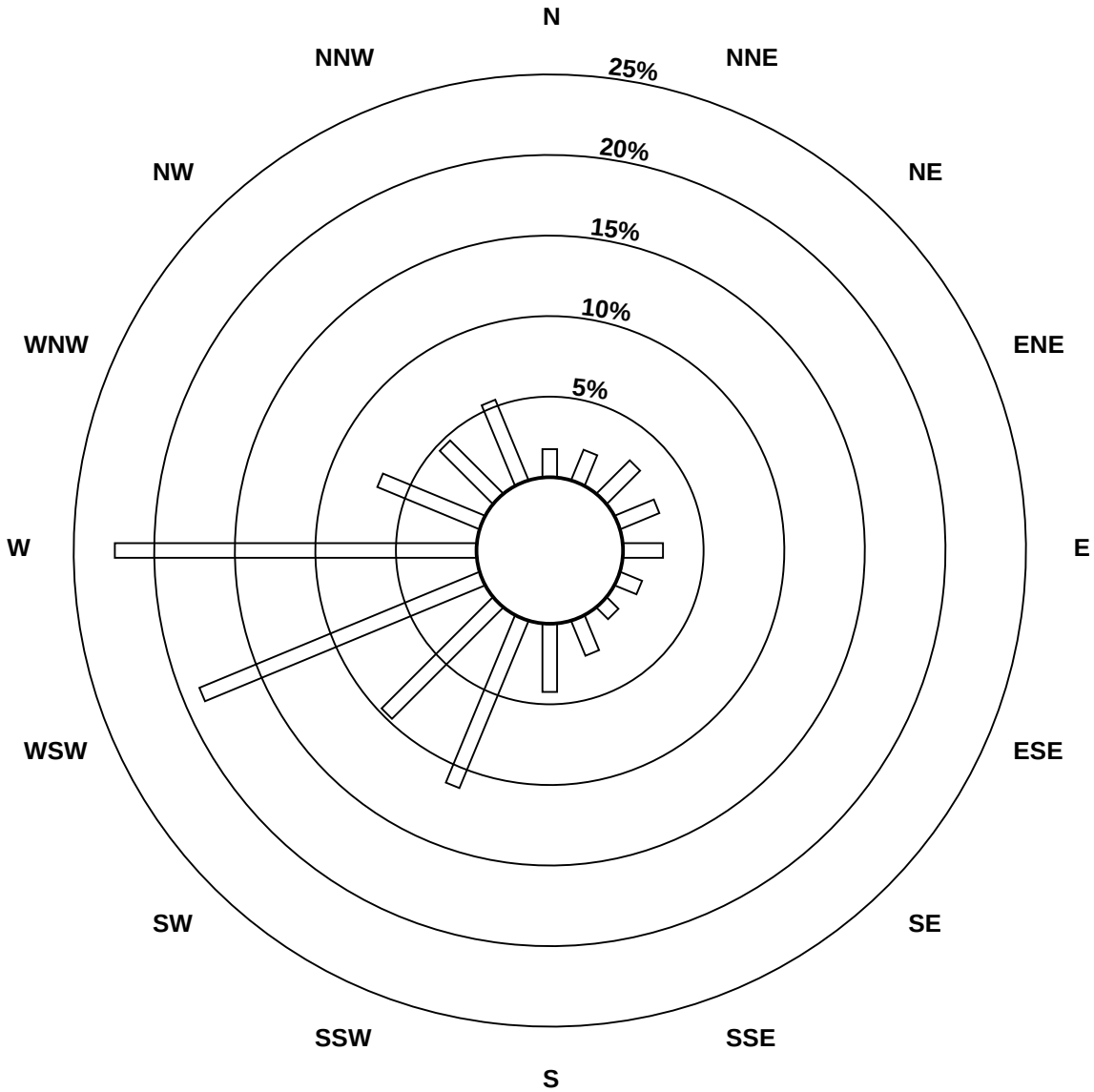


Peace Airshed Zone Association

Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Evergreen Park - September 2012



Pollutant Classes (ppb)

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

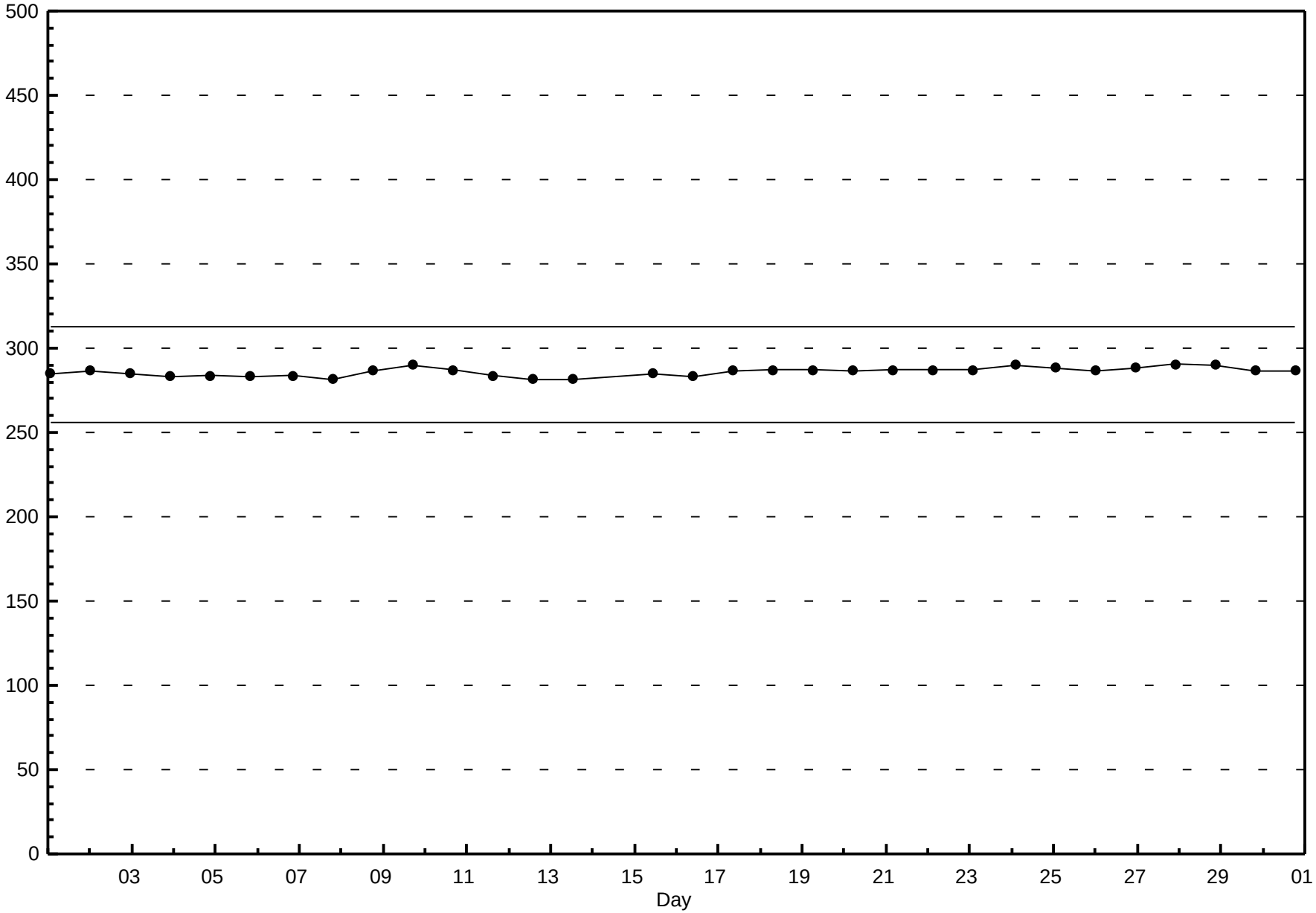
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Evergreen Park - September 2012



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.2 ppb on Sep 27 23:00 Maximum Daily Average: 0.6 ppb on Sep 28

Minimum Value: 0 ppb on Sep 14 17:00 Minimum Daily Average: 0.1 ppb on Sep 15
Maximum Diurnal Average: 0.4 ppb at hour 24 Minimum Diurnal Average: 0.3 ppb at hour 19
Monthly Average: 0.33 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.4$ $P_{90} = 0.5$ $P_{99} = 1.2$

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	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
2-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	0.5
3-Sep	1	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
4-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0.3	0.5
5-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
6-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
7-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
8-Sep	0	0	0	1	1	1	0	1	0	1	0	0	1	1	0	0	0	A	0	0	0	0	1	0	0.5	0.7
9-Sep	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0.3	0.8
10-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
11-Sep	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0.3	0.6
12-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	0.5
13-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
14-Sep	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.2	0.4
15-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
16-Sep	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
17-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	0.5
18-Sep	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
19-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	0.3	0.4
20-Sep	1	2	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.9
21-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	0.8
22-Sep	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	0.9
23-Sep	2	1	A	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	0.5	2.1
24-Sep	1	A	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
25-Sep	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	A	0.4	0.7
26-Sep	0	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0.5	1.2
27-Sep	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2	2	0.5	2.2
28-Sep	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0.6	1.5
29-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	0.3	0.5
30-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
	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	Diurnal Average	
	2.1	1.9	1.1	1.1	0.7	1.2	1.2	1.4	1.5	0.9	0.6	0.7	0.8	0.6	0.5	0.6	0.7	0.7	0.5	0.5	0.8	0.6	2.2	1.8	Diurnal Maximum	

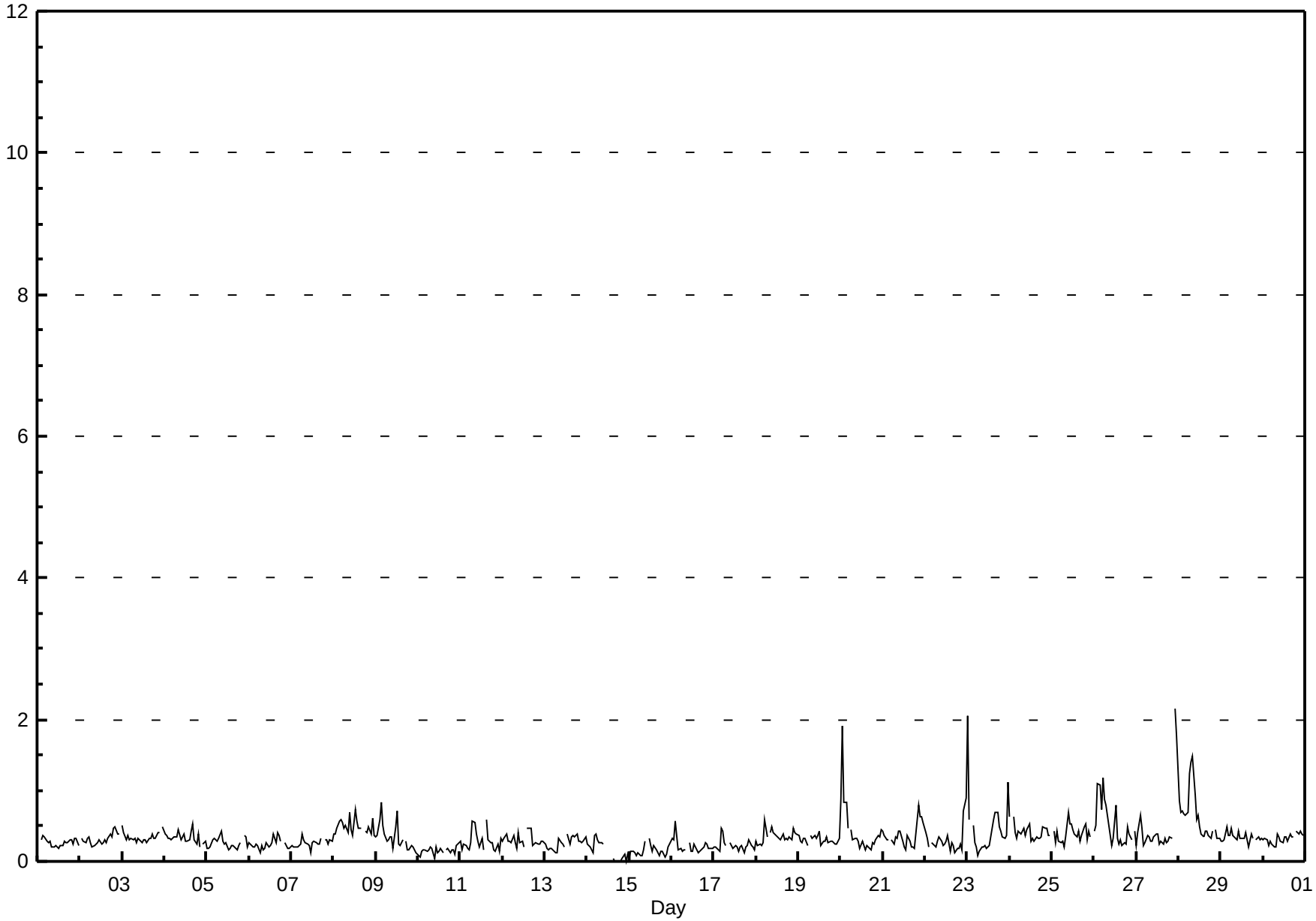
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - September 2012



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - September 2012

Maximum Value: 4.0 ppb on Sep 23 01:00

Maximum Daily Average: 1.4 ppb on Sep 28

Minimum Value: 1 ppb on Sep 14 23:00

Minimum Daily Average: 0.8 ppb on Sep 15

Maximum Diurnal Average: 1.2 ppb at hour 24

Minimum Diurnal Average: 1.0 ppb at hour 21

Monthly Average: 1.06 ppb

Percentiles: $P_1 = 0.6$ $P_{10} = 0.8$ $Q_1 = 0.9$ Median = 1.0 $Q_3 = 1.2$ $P_{90} = 1.3$ $P_{99} = 2.4$

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-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	0.9	1.1
2-Sep	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1.0	1.6
3-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.1	1.3
4-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	1	1	1.1	1.5
5-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	1.0	1.2
6-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	1	1	1	1	1.0	1.6
7-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
8-Sep	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	2	1	1.2	1.9
9-Sep	1	1	1	2	1	1	1	1	1	1	1	1	2	1	1	1	A	1	1	1	1	1	1	1	1.1	1.6
10-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	0.8	1.1
11-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1	1	1.0	1.6
12-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	1.0	1.4
13-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	1.0	1.4
14-Sep	1	1	1	1	1	1	1	1	1	1	C	C	C	C	C	1	1	1	1	1	1	1	1	1	0.9	1.3
15-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	1.1
16-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	0.9	1.4
17-Sep	1	1	1	1	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.0
18-Sep	1	1	1	1	1	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.6
19-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	1.0	1.2
20-Sep	2	3	1	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	3.1
21-Sep	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.1	1.7
22-Sep	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1.1	2.2
23-Sep	4	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	3	1.3	4.0
24-Sep	1	A	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.6
25-Sep	A	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	2	1	1	1	A	1.1	1.5
26-Sep	1	2	2	2	2	2	1	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1.3	2.0
27-Sep	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	4	3	1.3	3.7
28-Sep	2	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.4	2.5
29-Sep	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	1	1	1.1	1.8
30-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	1.0	1.3
	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.1	1.1	1.2	Diurnal Average	
	4.0	3.1	1.8	2.1	2.0	2.0	2.4	2.4	2.5	1.5	1.5	1.6	1.9	1.2	1.5	1.5	1.4	1.8	1.4	1.5	1.7	1.6	3.7	3.3	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

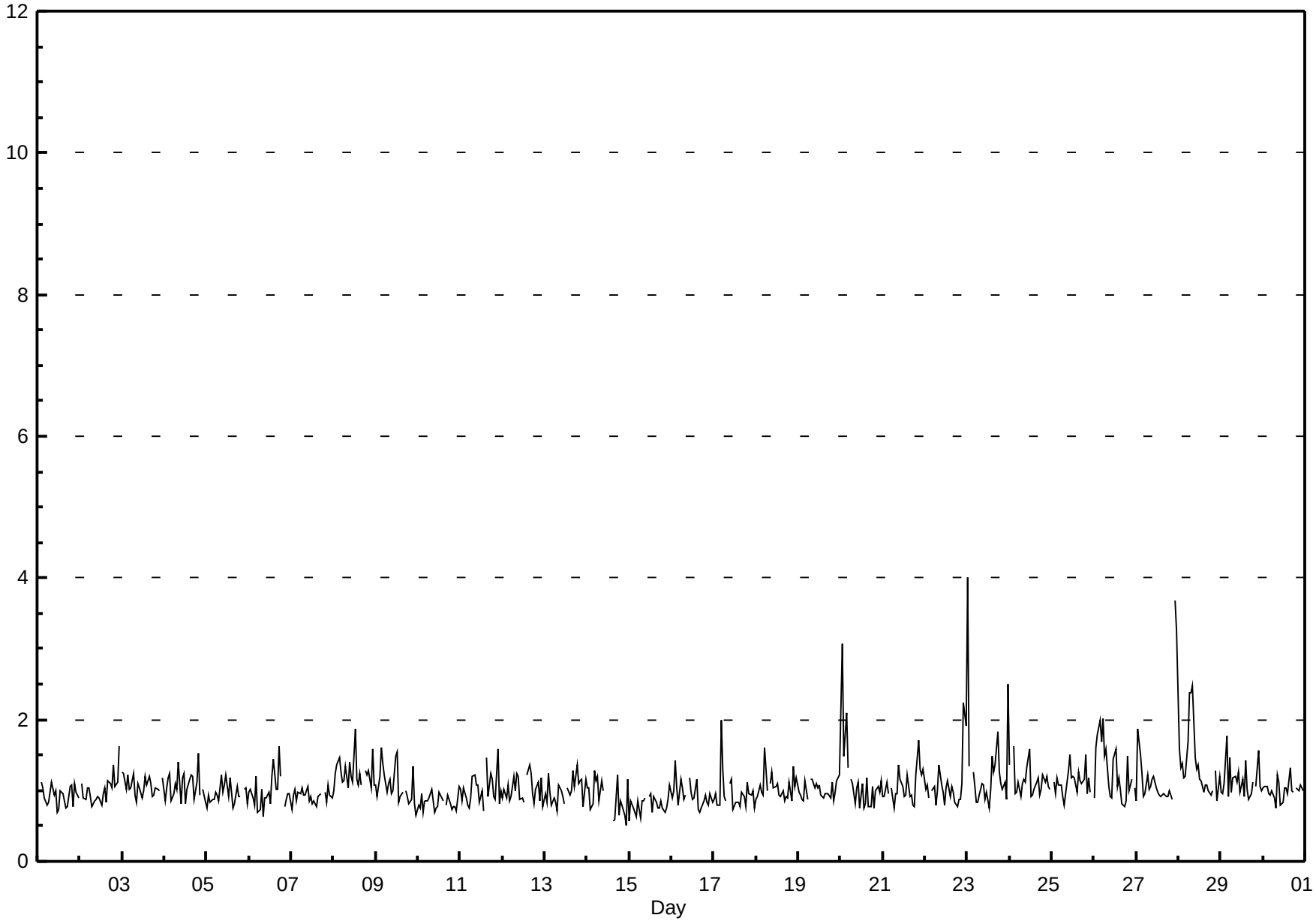
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

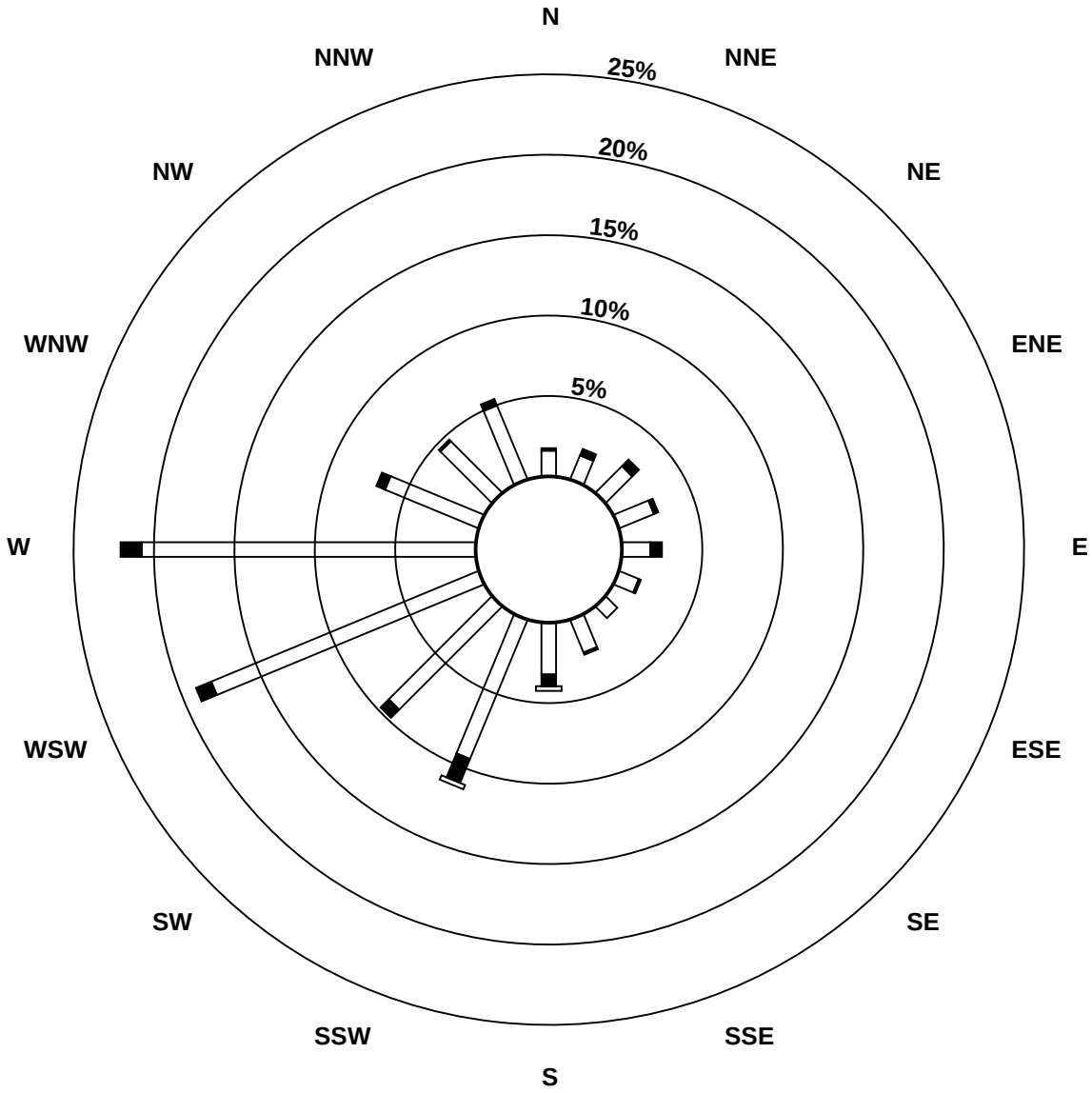
Evergreen Park - September 2012



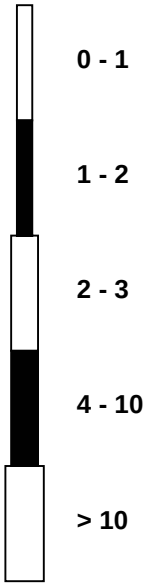
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Evergreen Park - September 2012



Pollutant Classes (ppb)

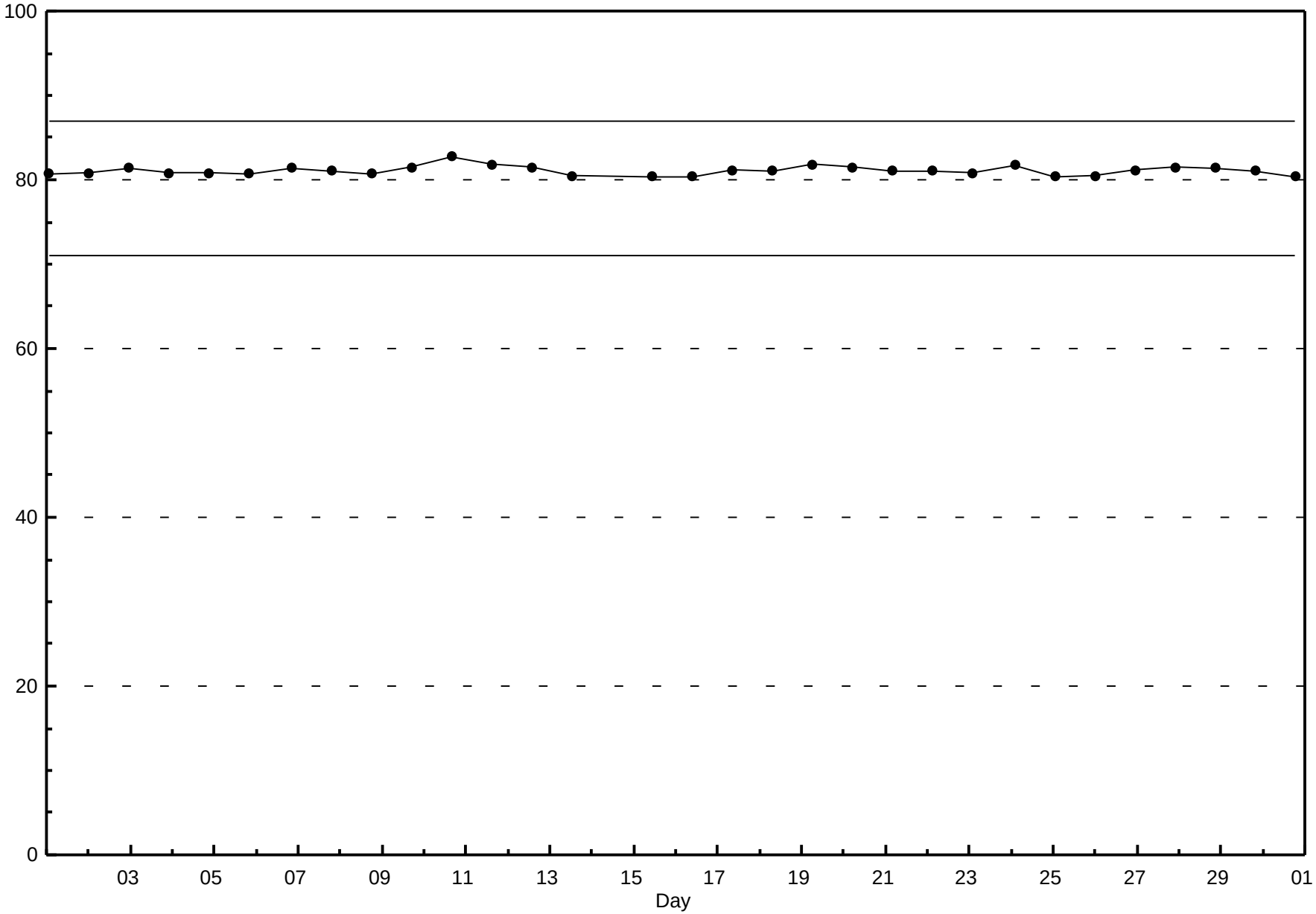


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Evergreen Park - September 2012



Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - September 2012

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

Maximum Value: 71.1 $\mu g/m^3$ on Sep 14 16:00

Maximum Daily Average: 19.4 $\mu g/m^3$ on Sep 14

Minimum Value: 0 $\mu g/m^3$ on Sep 2 00:00

Maximum Diurnal Average: 11.2 $\mu g/m^3$ at hour 17

Monthly Average: 7.40 $\mu g/m^3$

Minimum Daily Average: 1.0 $\mu g/m^3$ on Sep 30

Minimum Diurnal Average: 3.8 $\mu g/m^3$ at hour 5

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 1.3$ Median = 4.7 $Q_3 = 11.3$ $P_{90} = 17.8$ $P_{99} = 33.8$

Hours in Service:	720
Hours of Data:	716
Hours of Missing Data:	4
Hours of Calibration:	0
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	3	1	0	1	3	4	3	4	2	3	3	2	2	2	2	1	2	4	5	3	3	4	0	0	2.3	4.7
2-Sep	0	0	1	1	1	1	1	1	1	3	11	14	15	24	17	25	27	21	14	5	1	1	2	0	7.8	27.0
3-Sep	0	0	1	0	0	0	0	1	2	3	3	0	1	2	2	2	2	3	2	4	2	1	2	3	1.5	3.8
4-Sep	0	0	0	1	1	1	1	7	11	7	11	12	3	9	13	19	32	19	8	21	0	0	0	0	7.3	31.7
5-Sep	1	1	1	1	1	3	3	3	3	1	1	0	0	0	0	0	1	2	4	5	17	11	7	11	3.2	17.1
6-Sep	5	2	1	0	0	1	1	4	4	3	4	3	7	10	17	13	15	13	11	5	4	4	2	1	5.3	16.6
7-Sep	1	4	2	2	3	5	17	11	8	5	5	6	6	5	5	9	6	5	6	9	12	12	7	5	6.5	16.6
8-Sep	6	6	6	8	8	9	12	25	37	51	28	11	12	6	4	5	3	3	5	8	3	4	9	3	11.2	50.6
9-Sep	2	1	0	0	0	0	1	3	10	1	3	4	6	2	7	1	5	N	0	4	6	2	1	1	2.7	10.1
10-Sep	1	0	0	0	0	0	0	1	2	3	4	2	3	5	8	4	4	16	3	2	0	0	0	0	2.4	15.7
11-Sep	2	1	1	1	1	3	7	15	8	5	2	5	13	4	12	26	24	22	6	0	0	0	0	0	6.5	25.8
12-Sep	0	0	0	0	0	1	3	1	0	19	1	2	2	6	34	21	20	0	0	0	2	0	1	1	4.7	33.9
13-Sep	1	1	1	1	1	2	2	6	20	9	5	6	5	11	32	22	5	5	1	1	8	4	2	2	6.4	31.7
14-Sep	0	0	0	0	2	4	5	14	21	10	16	70	67	M	M	71	42	28	13	15	14	12	12	10	19.4	71.1
15-Sep	11	11	7	8	6	5	10	9	9	6	13	13	7	0	3	1	1	1	0	6	5	9	9	12	6.7	12.8
16-Sep	9	6	7	6	5	4	4	3	5	4	6	4	3	3	2	0	0	0	3	3	6	2	0	0	3.5	8.9
17-Sep	0	1	0	0	2	2	9	18	23	11	13	13	14	19	17	16	28	15	6	7	5	2	0	0	9.2	27.6
18-Sep	1	2	3	5	6	19	8	4	5	20	16	4	2	4	5	3	3	4	3	8	8	19	18	13	7.6	20.1
19-Sep	10	8	6	5	4	5	4	8	11	11	27	20	16	9	8	7	7	7	6	5	8	9	7	7	9.0	27.1
20-Sep	8	11	13	13	13	12	11	16	35	26	18	13	15	8	4	2	2	2	3	5	10	19	33	21	13.0	35.1
21-Sep	20	17	16	11	7	6	5	9	19	28	24	12	9	7	14	13	16	10	14	27	26	25	24	27	16.1	27.6
22-Sep	21	17	13	11	11	12	13	20	20	13	15	16	12	9	7	7	7	22	10	11	8	14	18	18	13.6	22.1
23-Sep	21	23	17	15	14	13	10	11	14	11	12	12	10	10	10	13	12	8	6	7	9	13	14	16	12.6	23.0
24-Sep	18	17	15	13	13	13	13	19	17	19	29	27	9	11	11	6	18	4	1	4	2	0	0	1	11.6	29.3
25-Sep	0	1	1	1	0	1	0	1	3	17	22	21	17	18	20	18	18	17	16	18	14	15	14	15	11.2	22.5
26-Sep	13	10	9	10	9	9	8	10	12	14	20	12	10	6	7	0	0	0	0	5	9	1	0	3	7.3	20.4
27-Sep	2	2	5	1	0	0	2	4	11	7	7	4	1	0	0	0	16	6	0	4	10	8	8	8	4.4	16.4
28-Sep	6	4	4	3	2	3	4	8	14	9	6	6	5	2	2	4	6	4	0	2	1	0	0	0	4.0	14.3
29-Sep	N	0	0	0	0	0	1	2	3	2	3	4	7	10	27	19	14	5	3	3	1	1	0	0	4.6	27.0
30-Sep	1	0	1	0	1	1	1	3	4	1	2	3	0	1	3	0	0	0	0	0	0	0	0	3	1.0	4.1
	5.5	4.9	4.3	3.9	3.8	4.6	5.3	8.1	11.1	10.7	11.0	10.7	9.3	7.0	10.0	10.9	11.2	8.5	4.9	6.6	6.5	6.4	6.3	6.1	Diurnal Average	
	21.0	23.0	17.1	15.2	13.9	19.1	16.6	25.0	37.2	50.6	29.3	70.1	66.7	24.4	33.9	71.1	42.5	27.8	16.2	27.4	26.4	25.0	32.5	27.0	Diurnal Maximum	

M - Maintenance N - Not Valid

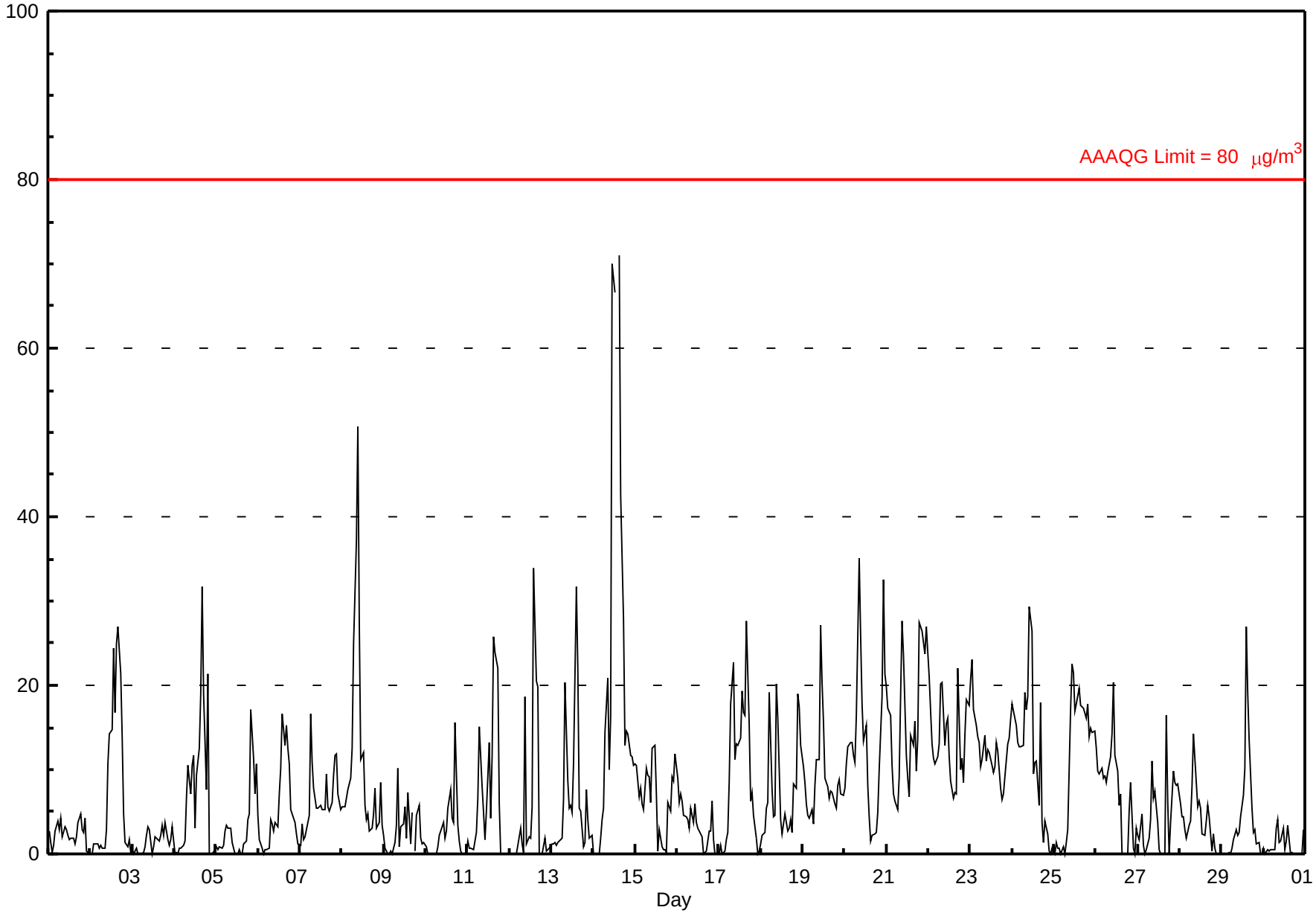
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Evergreen Park - September 2012



Peace Airshed Zone Association

Hourly Maximums

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

Evergreen Park - September 2012

Maximum Value: 123.9 $\mu g/m^3$ on Sep 14 12:00

Maximum Daily Average: 31.3 $\mu g/m^3$ on Sep 14

Minimum Value: 0 $\mu g/m^3$ on Sep 10 03:00

Minimum Daily Average: 4.1 $\mu g/m^3$ on Sep 3

Maximum Diurnal Average: 20.4 $\mu g/m^3$ at hour 17

Minimum Diurnal Average: 6.9 $\mu g/m^3$ at hour 4

Monthly Average: 13.32 $\mu g/m^3$

Percentiles: $P_1 = 0.0$ $P_{10} = 2.2$ $Q_1 = 4.6$ Median = 9.4 $Q_3 = 17.5$ $P_{90} = 29.1$ $P_{99} = 59.0$

Hours in Service:	720
Hours of Data:	717
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	5	4	3	3	4	6	5	7	5	7	6	6	4	7	4	4	6	6	7	5	4	9	3	1	4.9	8.7
2-Sep	2	2	2	3	2	2	2	2	2	5	17	20	26	38	28	47	41	41	43	9	3	3	6	3	14.6	47.5
3-Sep	3	1	3	1	0	1	2	2	5	5	5	1	5	4	4	4	4	6	6	9	6	3	5	13	4.1	13.1
4-Sep	2	1	1	2	2	4	4	10	29	15	28	28	11	13	23	39	54	33	29	54	2	2	1	2	16.2	54.3
5-Sep	2	2	3	2	2	7	7	5	5	3	3	0	2	3	3	2	4	4	10	17	23	17	9	15	6.1	22.6
6-Sep	7	4	2	1	2	3	2	8	10	4	6	9	18	36	44	26	36	24	27	9	8	9	5	2	12.5	43.6
7-Sep	3	9	3	5	5	6	36	19	12	8	8	9	9	8	8	20	8	7	8	15	19	14	11	7	10.8	35.8
8-Sep	7	7	8	9	10	12	18	34	59	76	47	17	16	9	7	7	5	5	9	13	6	7	15	14	17.4	76.1
9-Sep	5	3	2	3	3	3	6	9	30	11	10	11	12	7	24	10	19	N	11	15	15	7	5	4	9.7	29.7
10-Sep	3	0	0	0	0	0	2	3	9	6	7	4	7	10	13	8	7	27	13	4	2	2	2	1	5.4	27.0
11-Sep	7	2	2	2	3	4	20	20	12	9	7	17	25	17	35	45	39	37	25	0	0	4	0	0	13.9	45.3
12-Sep	1	1	0	1	1	3	6	3	5	35	8	6	6	30	60	27	33	2	0	3	6	3	3	2	10.2	60.2
13-Sep	3	3	3	2	3	4	5	9	35	19	9	10	10	33	57	41	16	21	6	7	11	7	3	5	13.3	57.0
14-Sep	0	1	2	3	5	9	13	17	26	16	25	124	95	M	M	113	64	50	22	23	19	16	23	22	31.3	123.9
15-Sep	13	18	15	11	10	9	17	13	14	11	29	29	13	7	8	7	5	4	5	10	9	19	12	16	12.6	28.6
16-Sep	13	10	12	10	7	10	8	6	9	8	14	9	7	10	8	3	4	6	6	6	14	5	4	5	8.1	14.3
17-Sep	3	3	3	5	8	7	16	30	35	16	24	19	21	44	40	33	44	24	10	16	13	7	5	5	17.9	44.0
18-Sep	8	7	6	10	10	40	13	9	9	35	31	10	8	6	10	6	8	8	15	13	13	29	23	18	14.4	40.4
19-Sep	15	12	11	7	8	8	6	10	15	14	37	37	20	12	11	12	11	10	10	11	14	12	10	9	13.5	37.2
20-Sep	14	14	16	23	22	14	13	27	46	37	38	22	32	13	10	4	5	7	7	13	14	35	38	29	20.5	45.8
21-Sep	24	22	21	15	11	9	9	14	27	40	37	15	13	10	35	25	26	14	26	39	37	32	31	31	23.5	40.2
22-Sep	25	23	16	14	14	14	20	28	26	17	23	21	17	13	10	12	11	54	17	18	16	16	23	21	19.5	54.1
23-Sep	27	26	20	19	17	17	14	16	19	14	16	16	15	14	15	18	16	13	12	13	16	18	20	21	17.3	27.5
24-Sep	23	21	21	17	15	16	18	25	23	22	42	49	19	17	18	12	26	13	6	13	8	5	2	6	18.2	48.6
25-Sep	4	6	5	4	1	3	4	4	5	33	33	26	21	21	22	21	21	21	22	22	17	20	21	18	15.6	33.1
26-Sep	15	12	12	15	12	11	11	15	17	19	30	17	16	18	31	4	2	2	5	26	27	6	2	9	13.9	31.2
27-Sep	6	5	18	5	3	3	5	13	18	18	19	9	3	2	1	4	47	12	7	15	15	12	10	11	10.8	47.2
28-Sep	9	9	8	5	5	7	9	15	25	15	9	11	8	9	7	7	10	8	4	7	6	6	0	1	8.4	25.3
29-Sep	0	2	2	3	22	5	5	4	10	5	5	7	10	19	41	33	35	9	8	5	4	5	4	7	10.3	40.8
30-Sep	7	6	6	6	4	4	3	14	14	4	5	7	6	6	12	5	5	4	1	2	0	1	1	18	5.9	18.0
	8.5	7.8	7.5	6.9	7.2	8.1	9.9	13.0	18.6	17.5	19.2	18.9	15.8	15.0	20.4	20.0	20.4	16.3	12.4	13.7	11.5	10.9	9.9	10.6	Diurnal Average	
	27.5	26.5	21.4	22.8	22.1	40.4	35.8	34.1	59.5	76.1	47.0	123.9	94.6	43.8	60.2	112.6	64.3	54.1	43.1	54.3	36.7	34.8	38.5	31.4	Diurnal Maximum	

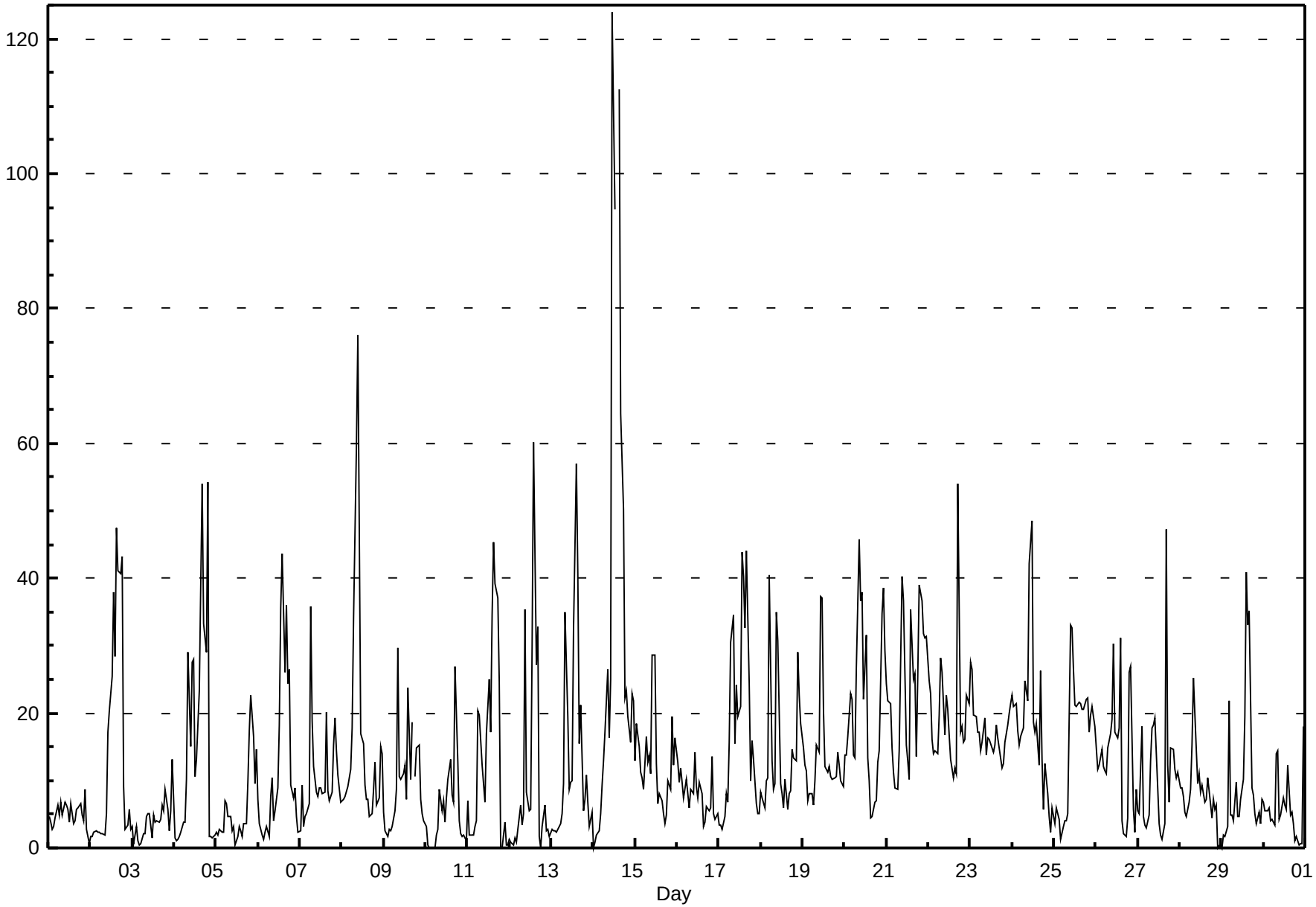
M - Maintenance N - Not Valid

Peace Airshed Zone Association

Hourly Maximums

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

Evergreen Park - September 2012

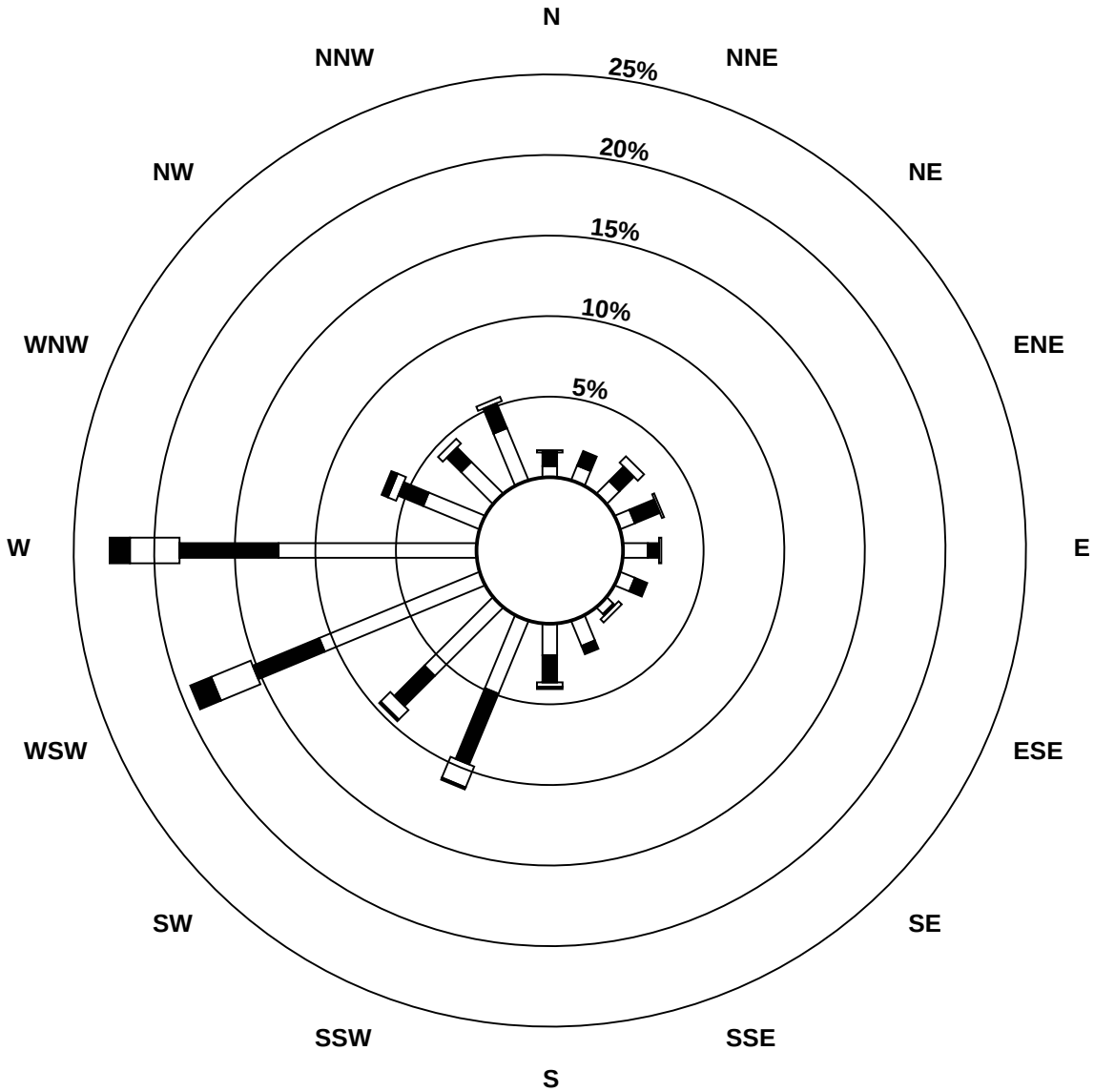


Peace Airshed Zone Association

Pollutant Rose

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

Evergreen Park - September 2012



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

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

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - September 2012

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

Maximum Value: 28.1 ^{o}C on Sep 21 17:00

Maximum Daily Average: 16.7 ^{o}C on Sep 17

Minimum Value: -1 ^{o}C on Sep 16 07:00

Maximum Diurnal Average: 20.2 ^{o}C at hour 16

Monthly Average: 13.18 ^{o}C

Minimum Daily Average: 9.2 ^{o}C on Sep 15

Minimum Diurnal Average: 6.5 ^{o}C at hour 7

Percentiles: $P_1 = 0.7$ $P_{10} = 5.1$ $Q_1 = 8.8$ Median = 12.9 $Q_3 = 17.4$ $P_{90} = 21.8$ $P_{99} = 27.2$

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

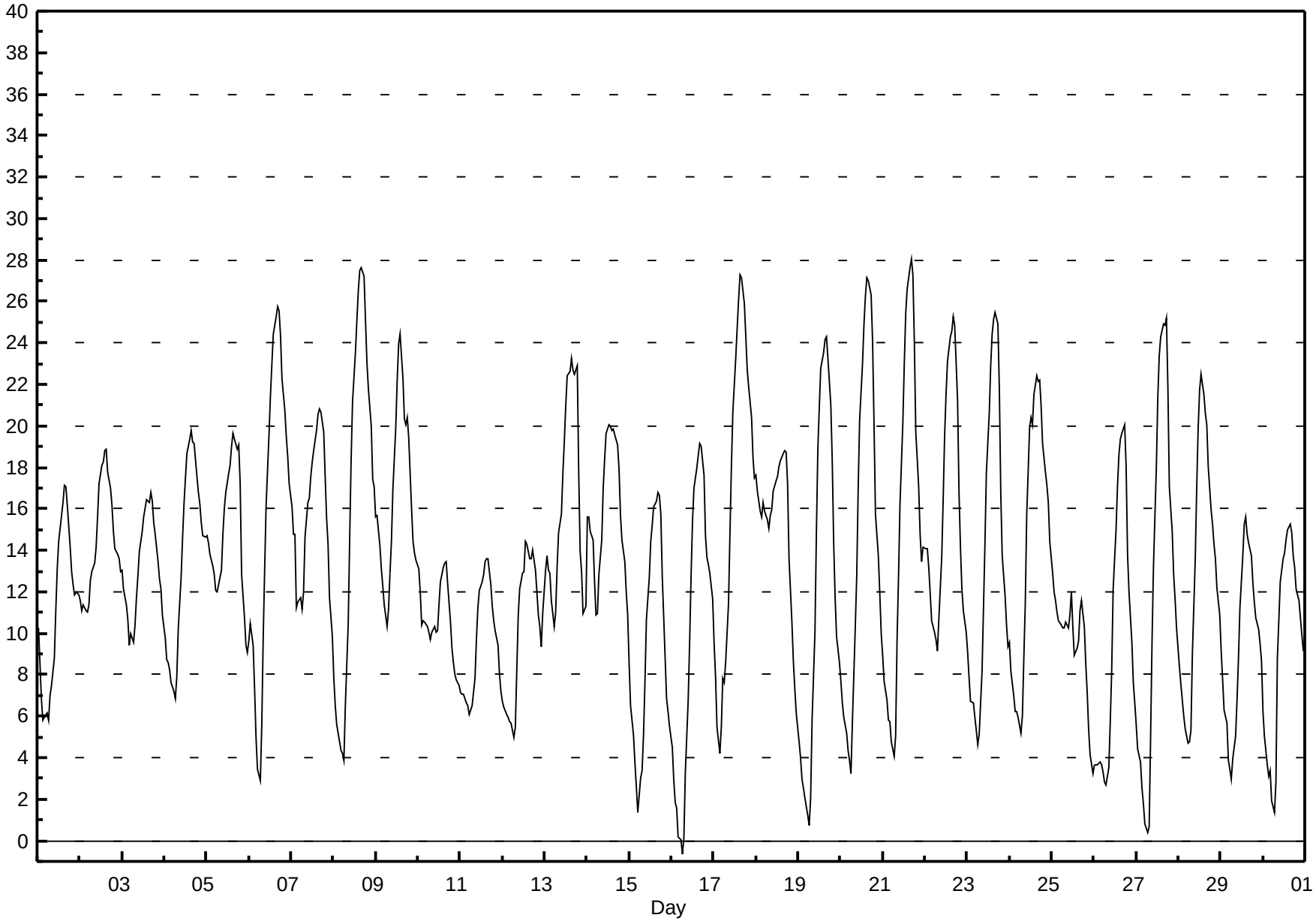
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	10	9	7	6	6	6	6	7	7	9	11	13	14	15	16	17	17	16	14	13	12	12	12	12	11.2	17.1
2-Sep	12	11	11	11	11	11	13	13	13	14	16	17	18	18	19	19	18	17	16	15	14	14	14	13	14.5	18.9
3-Sep	13	12	11	11	9	10	10	10	12	13	14	15	16	16	16	16	17	16	15	15	13	13	12	11	13.2	16.8
4-Sep	10	9	9	8	8	7	7	8	10	13	15	16	17	19	19	20	19	19	18	17	16	15	15	15	13.7	19.8
5-Sep	15	14	14	13	13	12	12	12	13	15	16	17	18	18	19	20	19	19	19	17	13	11	9	9	14.9	19.6
6-Sep	10	10	9	7	5	3	3	6	10	13	16	20	21	23	24	25	26	26	24	22	21	20	19	17	15.9	25.8
7-Sep	16	15	15	11	12	12	11	12	15	16	17	18	18	19	20	21	21	21	20	18	16	14	12	10	15.7	20.8
8-Sep	8	7	6	5	4	4	4	7	10	15	18	21	24	25	27	27	28	27	25	23	22	20	17	17	16.2	27.6
9-Sep	16	16	14	13	12	11	10	11	13	14	17	20	22	24	24	22	20	20	20	19	16	14	14	14	16.6	24.4
10-Sep	13	12	10	11	11	10	10	10	10	10	10	10	11	13	13	13	13	12	11	9	9	8	8	7	10.6	13.4
11-Sep	7	7	7	7	6	6	6	6	8	10	11	12	12	13	13	14	14	12	11	11	10	9	8	7	9.5	13.6
12-Sep	7	6	6	6	6	6	5	5	8	11	12	13	13	14	14	14	14	14	14	13	11	10	9	11	10.1	14.4
13-Sep	13	14	13	13	12	10	11	13	15	16	18	19	21	22	23	23	23	22	23	18	14	13	11	11	16.3	23.2
14-Sep	16	16	15	14	12	11	11	13	14	17	18	20	20	20	20	20	20	19	18	16	14	13	12	11	15.8	20.1
15-Sep	9	7	5	4	3	1	3	3	5	8	11	13	14	15	16	16	17	17	16	13	9	7	6	6	9.2	16.8
16-Sep	5	3	2	2	0	0	-1	0	3	7	10	13	15	17	18	19	19	19	18	15	14	13	13	12	9.7	19.2
17-Sep	9	8	5	4	5	8	8	9	11	15	18	21	23	25	26	27	27	26	24	23	22	20	18	17	16.7	27.3
18-Sep	18	17	16	16	16	16	15	15	16	16	17	17	18	18	18	19	19	19	17	14	11	9	7	6	15.3	18.8
19-Sep	5	4	3	3	2	1	1	2	6	10	15	19	21	23	24	24	24	23	21	18	14	12	10	9	12.2	24.3
20-Sep	8	7	6	5	4	4	3	6	10	13	17	20	23	25	26	27	27	26	24	20	16	14	12	10	14.7	27.1
21-Sep	9	8	7	6	6	5	4	5	10	13	16	20	23	25	27	28	28	27	24	20	17	15	13	14	15.4	28.1
22-Sep	14	14	13	12	11	10	10	9	11	14	16	19	22	23	24	25	25	25	21	17	14	12	11	10	15.9	25.3
23-Sep	9	8	7	7	6	5	5	5	8	11	14	18	21	23	24	25	25	25	22	17	14	12	10	9	13.8	25.5
24-Sep	10	8	7	6	6	6	5	6	9	11	16	20	20	20	21	22	22	22	21	19	18	17	16	14	14.4	22.4
25-Sep	13	12	12	11	11	10	10	10	11	10	11	12	10	9	9	10	11	12	10	9	7	5	4	3	9.7	12.9
26-Sep	4	4	4	4	4	3	3	3	4	6	8	12	15	17	19	19	20	20	18	14	12	10	8	7	9.8	20.1
27-Sep	6	4	4	3	2	1	0	1	5	10	13	18	21	23	24	25	25	25	22	17	15	13	12	10	12.4	25.2
28-Sep	8	8	7	6	5	5	5	5	9	14	17	20	22	22	22	21	20	18	16	15	14	14	12	11	13.1	22.5
29-Sep	9	8	6	6	4	3	3	4	5	7	9	11	14	15	16	15	14	14	12	12	11	10	9	9	9.4	15.6
30-Sep	6	5	4	3	3	2	1	3	9	11	13	14	14	15	15	15	15	14	13	12	12	11	10	9	9.5	15.3
	10.1	9.3	8.5	7.7	7.2	6.7	6.5	7.3	9.7	12.0	14.3	16.6	18.1	19.2	19.9	20.2	20.2	19.8	18.3	15.9	14.0	12.7	11.5	10.7	Diurnal Average	
	17.6	16.9	15.9	15.6	16.3	15.9	15.5	15.1	15.7	17.0	18.4	21.2	23.5	25.4	26.6	27.6	28.1	27.3	25.0	23.0	21.8	20.4	18.6	17.5	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Evergreen Park - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - September 2012

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

Maximum Value: 98.2 % on Sep 26 10:00 Maximum Daily Average: 88.3 % on Sep 25

Minimum Value: 10 % on Sep 17 17:00 Minimum Daily Average: 35.7 % on Sep 14

Maximum Diurnal Average: 77.2 % at hour 7 Minimum Diurnal Average: 31.6 % at hour 16

Monthly Average: 55.48 % Percentiles: P_1 = 16.7 P_{10} = 29.0 Q_1 = 36.6 Median = 54.9 Q_3 = 72.1 P_{90} = 87.6 P_{99} = 97.0

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

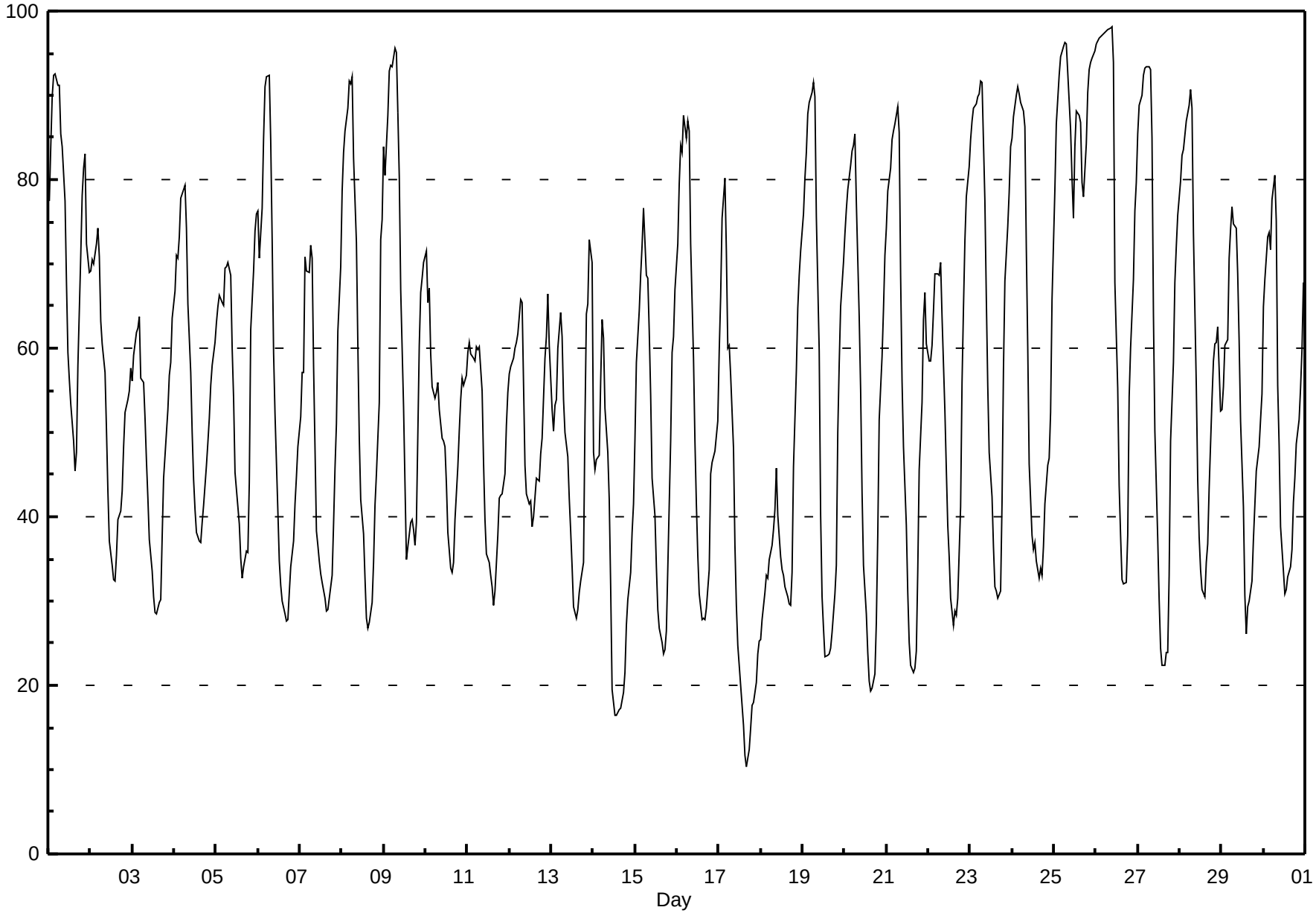
Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	77	84	90	92	92	91	91	85	84	77	68	60	56	53	49	45	48	58	71	78	81	83	72	69	73.2	92.5
2-Sep	69	70	70	72	74	71	63	60	57	50	43	37	34	32	32	35	40	41	43	48	52	54	55	58	52.6	74.2
3-Sep	56	59	62	62	64	56	56	52	47	42	37	34	31	29	28	30	30	38	45	47	53	57	58	64	47.3	63.7
4-Sep	67	71	71	73	78	79	79	74	65	57	50	44	41	38	37	37	39	41	46	49	52	56	58	61	56.8	79.2
5-Sep	63	65	66	65	65	69	70	70	69	60	54	45	41	39	35	33	34	36	36	44	62	69	74	76	55.9	76.0
6-Sep	76	71	77	85	91	92	92	85	73	60	52	41	35	32	30	29	28	28	31	34	37	42	45	48	54.6	92.3
7-Sep	52	57	57	71	69	69	72	71	58	38	37	35	33	32	30	29	29	30	33	39	46	51	62	70	48.8	72.1
8-Sep	79	83	86	89	92	91	92	83	73	60	49	42	38	33	28	27	27	30	35	41	45	54	73	75	59.3	92.2
9-Sep	84	80	88	93	94	93	96	95	88	80	67	53	44	35	37	39	40	38	37	39	60	67	68	70	66.0	95.5
10-Sep	72	65	67	59	55	54	55	56	53	49	49	48	44	38	34	33	35	40	46	50	54	56	56	57	51.1	71.6
11-Sep	60	61	59	59	58	60	60	60	55	47	40	36	35	33	32	29	31	38	42	43	43	45	51	55	47.1	60.7
12-Sep	57	58	59	60	61	62	66	65	56	46	43	41	42	39	40	45	44	44	47	49	59	61	67	60	53.0	66.5
13-Sep	53	50	53	54	60	64	61	54	50	47	42	38	34	29	28	29	31	32	35	51	64	65	73	70	48.7	72.9
14-Sep	48	46	47	47	56	63	61	53	48	42	32	20	16	17	17	17	17	19	22	27	30	33	38	42	35.7	63.3
15-Sep	49	58	64	69	72	77	69	68	62	54	45	40	34	29	27	25	24	24	26	34	49	60	61	67	49.5	76.5
16-Sep	72	80	84	83	88	85	87	86	72	59	49	41	35	31	28	28	28	29	34	45	46	47	48	51	55.7	87.6
17-Sep	60	66	75	80	72	60	60	57	48	37	29	25	20	18	15	12	10	12	15	18	18	20	24	25	36.5	80.2
18-Sep	25	28	31	33	33	35	37	39	41	46	40	35	34	33	32	30	30	30	33	46	57	65	69	71	39.7	71.5
19-Sep	76	80	83	88	89	90	92	90	76	60	40	30	27	23	24	24	24	26	31	34	50	58	65	70	56.3	91.6
20-Sep	73	76	79	82	83	84	85	77	64	55	43	34	29	24	20	19	20	21	27	38	52	59	65	71	53.4	85.4
21-Sep	74	79	81	85	86	87	89	86	69	56	48	39	31	25	22	22	22	24	33	46	54	63	67	61	56.1	88.6
22-Sep	59	58	60	64	69	69	69	70	64	53	46	39	35	30	27	29	28	30	41	56	65	73	78	81	53.9	81.4
23-Sep	85	87	89	89	90	90	92	92	77	66	56	48	42	36	32	31	30	31	42	58	68	74	78	84	65.3	91.8
24-Sep	85	87	90	91	90	89	88	86	72	60	46	38	36	37	35	33	34	33	36	42	46	47	52	66	59.2	91.1
25-Sep	79	87	90	92	94	96	96	96	93	86	80	75	84	88	88	87	80	78	84	90	93	94	94	95	88.3	96.2
26-Sep	96	96	97	97	97	97	98	98	98	98	94	68	55	44	38	33	32	32	38	54	60	68	76	80	72.7	98.2
27-Sep	85	89	90	92	93	93	93	93	85	64	50	38	30	24	22	22	24	24	33	49	58	68	72	76	61.2	93.4
28-Sep	80	83	84	85	87	89	91	88	74	56	44	38	34	31	31	35	37	43	54	58	61	61	62	53	60.7	90.7
29-Sep	53	55	60	61	71	74	77	75	74	69	61	51	41	31	26	29	30	32	37	41	45	48	52	55	52.0	76.8
30-Sep	65	68	73	74	72	78	80	75	56	49	39	34	31	31	33	34	36	42	45	49	51	55	60	68	54.0	80.5
	67.6	70.0	72.7	74.9	76.5	77.0	77.2	74.6	66.6	57.4	49.1	41.6	37.4	33.9	31.9	31.6	32.0	34.2	39.2	46.6	53.7	58.4	62.4	64.9	Diurnal Average	
	96.1	96.5	96.8	97.1	97.3	97.5	97.6	97.7	97.9	98.2	93.9	75.4	83.9	88.2	87.6	86.8	79.6	78.0	84.3	90.4	93.1	93.8	94.4	95.3	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Evergreen Park - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1 Spd	4	4	1	4	5	2	7	9	9	11	15	12	13	18	18	13	6	10	7	6	3	6	12	18	5.5	18.3
Dir	221	109	228	217	215	227	209	255	222	254	264	255	240	247	248	343	25	99	86	153	148	216	269	260	245.2	247.8
2 Spd	17	17	15	10	9	12	20	21	23	34	37	44	45	48	50	52	50	50	43	32	28	29	26	25	29.9	51.6
Dir	264	265	269	276	308	293	286	302	296	283	273	265	261	260	259	259	264	263	262	249	253	250	252	256	265.5	259.0
3 Spd	27	24	25	23	20	24	25	30	39	39	32	29	28	31	30	30	31	33	26	25	22	25	26	16	26.4	39.2
Dir	258	264	258	262	260	263	258	261	263	267	280	290	286	282	300	305	290	270	254	256	251	255	262	292	270.8	267.5
4 Spd	14	12	11	15	10	9	8	12	21	21	28	28	27	27	28	26	35	29	39	39	22	18	21	21	21.6	39.5
Dir	274	265	266	271	277	278	295	268	267	265	256	256	263	269	260	270	259	253	256	263	257	246	250	252	261.6	256.2
5 Spd	20	19	15	12	12	10	13	7	9	18	23	26	29	24	22	25	22	14	12	1	2	2	2	4	12.4	28.8
Dir	254	265	282	305	317	297	334	303	313	332	333	331	336	325	323	335	338	325	333	303	207	207	214	205	316.5	336.5
6 Spd	6	8	7	2	1	2	1	0	8	10	10	16	19	23	20	27	26	27	26	29	25	27	24	18	14.0	28.6
Dir	212	217	201	170	174	49	43	114	200	203	201	231	257	261	250	248	259	255	252	257	259	263	256	245	247.8	257.1
7 Spd	12	4	7	4	7	6	7	12	9	12	11	6	6	7	5	4	5	9	9	7	4	5	3	3	2.0	12.1
Dir	236	304	261	218	235	316	290	350	27	53	58	79	39	38	19	325	75	129	118	107	118	111	79	65	45.0	236.0
8 Spd	2	1	1	2	2	2	2	2	9	5	3	1	8	8	2	7	8	9	8	8	5	14	9	9	3.7	14.4
Dir	48	337	208	203	214	195	206	206	244	242	236	56	166	183	235	164	140	110	110	174	163	179	174	250	180.1	179.1
9 Spd	8	6	2	1	3	1	5	2	1	11	3	6	1	3	4	13	18	8	32	15	35	18	8	9	6.4	34.6
Dir	176	160	96	214	228	205	205	228	188	218	212	160	84	99	76	315	247	296	266	270	280	280	273	270	259.7	280.4
10 Spd	24	29	21	19	22	26	23	24	32	46	44	43	46	46	47	43	43	56	43	44	32	36	36	32	35.5	55.8
Dir	277	280	276	275	268	264	259	255	262	260	261	261	264	266	268	273	268	262	261	257	254	257	259	258	263.8	262.4
11 Spd	33	35	35	30	33	29	28	27	34	39	36	34	37	31	36	42	45	39	39	34	34	31	25	24	33.2	45.2
Dir	259	258	262	263	263	265	264	262	268	272	284	283	274	284	277	267	268	272	258	257	254	252	245	244	265.4	268.2
12 Spd	23	22	19	16	18	12	5	2	10	36	32	33	28	29	42	41	34	26	17	13	1	2	3	6	18.6	41.6
Dir	246	248	241	248	235	227	228	124	212	257	259	255	256	262	268	262	261	259	249	252	172	84	99	245	253.2	268.3
13 Spd	19	19	15	12	2	5	12	17	18	17	18	28	21	29	34	26	24	9	1	1	1	3	2	7	13.6	33.5
Dir	261	259	252	262	301	227	256	251	258	254	251	249	239	251	258	257	251	285	347	181	193	197	60	214	253.1	257.7
14 Spd	18	16	11	8	3	4	9	17	27	32	40	50	49	51	47	38	37	36	24	18	14	9	6	4	21.7	51.0
Dir	215	221	218	215	314	224	228	262	261	252	254	257	276	271	280	282	289	279	286	325	301	300	292	242	268.4	270.6
15 Spd	3	3	2	2	1	1	6	3	10	8	5	6	10	10	10	16	17	15	10	3	1	1	2	2	4.3	17.1
Dir	214	250	228	235	228	226	245	263	271	264	254	290	271	280	287	329	339	351	3	38	219	52	24	213	299.4	338.8
16 Spd	1	2	1	4	2	7	5	8	10	8	8	7	11	16	14	8	5	6	5	3	8	11	8	7	6.0	16.2
Dir	267	227	285	231	189	211	200	202	207	202	199	209	218	269	267	253	237	175	275	222	245	255	242	217	231.3	269.3
17 Spd	3	1	1	1	6	7	5	6	10	19	20	23	24	27	24	30	32	33	33	29	31	26	17	15	16.9	33.3
Dir	54	29	231	200	313	305	287	293	265	264	262	265	266	256	253	266	266	263	260	258	257	251	228	237	260.8	263.3
18 Spd	20	21	18	19	19	12	14	24	24	21	21	24	26	27	25	21	17	11	6	1	1	2	3	0	11.8	26.5
Dir	239	252	254	256	252	277	308	333	332	338	332	326	344	341	345	348	345	350	28	203	322	209	205	71	315.2	341.1
19 Spd	1	1	2	2	1	0	3	2	7	5	11	6	11	21	23	21	19	10	6	4	1	1	1	0	3.8	22.6
Dir	39	183	218	205	120	100	78	88	192	201	252	319	359	334	343	343	347	25	62	94	360	203	9	323	343.2	342.9
20 Spd	1	1	0	2	1	4	2	2	2	9	11	14	11	16	15	9	11	10	6	3	0	3	1	0	2.6	16.0
Dir	58	200	192	209	196	220	222	213	273	254	258	252	260	278	308	354	27	54	69	84	290	208	174	38	283.2	278.3
21 Spd	1	1	2	2	5	2	2	3	5	8	5	7	8	7	12	9	5	5	2	4	0	1	0	6	3.2	11.9
Dir	223	96	206	213	205	213	212	218	236	251	246	201	211	218	257	270	311	81	159	203	293	253	288	254	233.5	256.7
22 Spd	5	4	6	5	4	5	5	4	6	13	9	6	6	3	5	5	6	4	0	1	1	1	2	0	3.0	12.6
Dir	249	255	272	274	293	282	277	267	269	278	280	257	221	277	307	336	67	54	102	41	357	5	195	301	279.6	278.2

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	1	2	1	2	2	3	3	4	10	9	7	2	4	3	1	2	4	5	1	0	0	1	0	2	2.0	10.4
Dir	189	225	239	217	199	205	199	209	244	257	262	259	339	186	178	212	185	112	72	22	308	29	282	232	228.2	243.7
24 Spd	1	3	1	5	6	4	2	4	11	13	9	7	17	7	5	13	8	15	9	7	13	17	19	19	7.2	18.6
Dir	250	220	213	203	214	217	221	213	244	253	248	278	271	275	328	305	280	332	342	322	320	315	298	272	283.8	297.9
25 Spd	21	18	19	10	4	6	4	7	14	16	14	11	14	13	6	1	4	4	4	2	2	0	1	4	3.9	21.3
Dir	274	270	277	264	191	194	160	207	264	274	272	277	48	62	48	322	226	136	132	184	128	284	67	53	267.2	273.8
26 Spd	2	2	3	1	4	4	6	6	6	6	5	5	6	7	10	13	11	7	5	2	2	2	1	2	3.6	12.9
Dir	65	100	72	21	325	242	197	203	201	171	194	157	174	241	238	244	209	198	170	210	234	203	60	214	207.9	243.8
27 Spd	1	1	0	1	1	2	1	2	3	5	9	9	10	20	20	17	7	8	1	1	1	1	1	2	4.0	20.0
Dir	217	255	277	160	163	24	211	216	208	179	161	163	173	220	211	236	249	249	103	11	258	340	213	171	209.7	211.4
28 Spd	3	2	1	2	2	1	0	1	2	1	2	2	7	6	10	11	12	26	18	7	10	19	18	15	6.2	26.0
Dir	39	29	83	49	35	335	98	3	340	51	26	346	331	324	300	330	326	293	276	257	268	270	283	275	295.9	292.8
29 Spd	12	8	4	5	4	2	0	2	4	7	10	13	23	39	47	50	50	39	26	27	21	18	11	12	17.4	50.0
Dir	248	245	328	264	218	254	169	186	211	209	219	237	256	256	267	271	266	270	272	263	255	256	244	226	258.9	271.3
30 Spd	1	3	7	1	2	1	2	9	39	40	46	43	44	44	46	40	31	19	16	9	7	1	3	3	17.9	46.4
Dir	146	203	216	186	157	107	187	212	253	258	265	267	273	278	271	276	280	281	271	286	253	61	193	195	265.9	271.2
Spd	8.6	8.3	7.5	6.6	5.7	5.7	5.8	6.8	11.4	14.4	14.6	15.1	15.1	17.6	18.6	18.3	16.2	13.4	11.6	10.1	9.5	9.3	8.0	8.6	Diurnal Average	
Dir	252.4	255.3	257.5	256.9	259.2	260.7	260.5	263.9	261.1	262.9	265.2	265.4	271.2	272.0	275.2	280.7	277.0	274.0	266.0	258.5	259.7	255.8	255.2	251.7		
Spd	33.3	34.6	34.7	30.3	33.4	29.3	27.9	29.8	39.3	46.4	46.1	50.5	49.1	51.0	49.7	51.6	49.6	55.8	43.3	44.1	34.6	36.1	35.6	32.4	Diurnal Maximum	
Dir	258.5	257.9	261.7	263.1	263.1	265.2	263.8	261.5	252.8	260.3	265.2	257.4	276.2	270.6	258.9	259.0	264.5	262.4	261.3	256.5	280.4	257.3	258.8	257.7		

Maximum Speed Value: 56 km/h on Sep 10 18:00
Maximum Daily Speed Average: 35.5 km/h on Sep 10
Maximum Diurnal Speed Average: 18.6 km/h at hour 15

Minimum Speed Value: 0 km/h on Sep 6 08:00
Minimum Daily Speed Average: 2.0 km/h on Sep 23
Minimum Diurnal Speed Average: 5.7 km/h at hour 6

Monthly Average Velocity: 11.00 km/h 265.63 deg

Speed Percentiles: $P_1 = 0.3$ $P_{10} = 1.2$ $Q_1 = 3.2$ Median = 9.0 $Q_3 = 21.2$ $P_{90} = 33.3$ $P_{99} = 49.6$

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

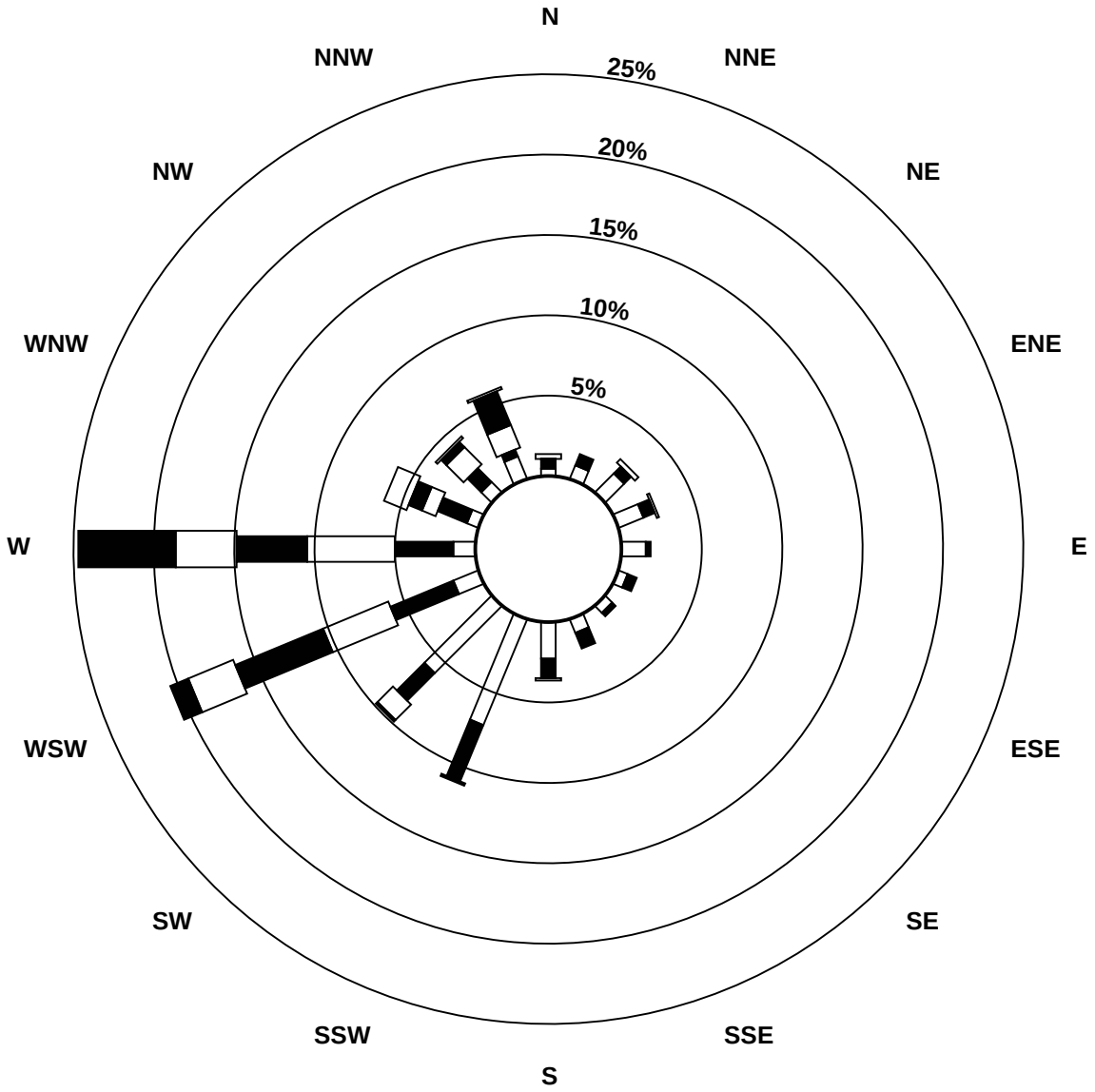
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	13	5	7	8	0	0	33
NorthEast	29	12	3	0	0	0	44
East	27	7	0	0	0	0	34
SouthEast	10	5	0	0	0	0	15
South	39	28	1	0	0	0	68
SouthWest	85	41	20	7	0	0	153
West	22	48	56	68	58	49	301
NorthWest	20	17	19	13	3	0	72
Total	245	163	106	96	61	49	720

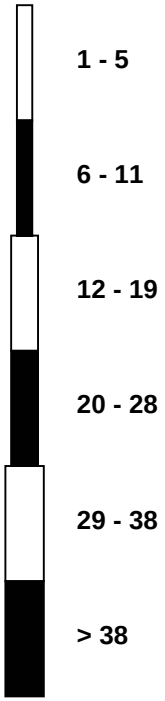
Wind Rose

Wind Speed (WS) (km/h)

Evergreen Park - September 2012



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - September 2012

Maximum Speed: 56 km/h on Sep 10 18:00

Maximum Daily Speed Average: 36.3 km/h on Sep 10

Minimum Speed: 1 km/h on Sep 6 05:00

Minimum Daily Speed Average: 4.4 km/h on Sep 23

Maximum Diurnal Speed Average: 23.7 km/h at hour 15

Minimum Diurnal Speed Average: 7.8 km/h at hour 6

Monthly Average Speed: 14.64 km/h

Percentiles: P_1 = 1.6 P_{10} = 2.5 Q_1 = 4.4 Median = 10.1 Q_3 = 21.9 P_{90} = 33.6 P_{99} = 50.3

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	8	4	2	5	5	3	8	10	9	11	16	13	14	18	19	16	8	11	8	8	5	7	13	18	9.9	19.0
2-Sep	17	18	16	11	10	12	22	22	24	34	38	45	46	49	50	52	51	50	44	33	28	29	26	25	31.3	52.0
3-Sep	27	24	25	23	20	25	25	30	39	40	34	32	30	32	32	31	32	34	26	25	22	25	26	18	28.2	39.9
4-Sep	14	12	12	16	11	10	8	13	22	21	29	29	29	29	29	27	35	30	40	39	22	18	21	21	22.3	39.9
5-Sep	20	20	15	12	13	10	13	7	9	19	24	27	30	25	23	26	23	15	12	2	3	2	2	5	14.9	29.7
6-Sep	6	8	7	2	1	2	2	3	8	10	11	18	20	24	21	28	27	28	26	29	25	27	24	19	15.6	28.8
7-Sep	12	9	9	4	7	8	8	13	10	13	13	10	11	12	10	8	7	10	9	7	5	5	4	3	8.5	12.9
8-Sep	2	2	2	3	3	3	3	3	9	6	6	5	10	10	9	8	11	10	8	9	8	17	12	16	7.3	17.4
9-Sep	9	8	5	6	5	4	5	4	4	11	6	7	7	7	7	16	24	19	33	16	36	20	15	10	11.9	35.7
10-Sep	25	29	22	20	22	27	23	25	32	47	45	43	46	47	48	44	44	56	44	44	32	36	36	33	36.3	56.1
11-Sep	34	35	35	31	34	30	28	27	34	40	37	36	38	33	37	43	46	40	39	35	34	31	25	25	34.3	46.5
12-Sep	23	22	19	16	18	12	6	3	12	36	33	34	28	30	42	42	34	26	17	14	3	3	6	8	20.3	42.5
13-Sep	19	19	15	12	4	5	13	17	18	18	19	29	22	30	34	27	25	10	2	3	3	4	3	8	15.0	34.3
14-Sep	18	16	11	9	4	4	9	18	27	32	41	51	50	52	49	39	39	37	25	18	14	9	6	5	24.4	52.3
15-Sep	4	4	3	3	3	4	6	5	10	9	7	9	12	14	13	18	18	16	10	4	2	3	2	2	7.5	18.3
16-Sep	2	2	2	4	3	7	5	8	10	8	9	8	12	19	17	12	8	7	6	3	8	11	9	7	7.9	18.7
17-Sep	4	2	2	2	6	7	5	7	10	20	21	24	25	28	25	31	33	34	33	29	32	26	17	16	18.2	33.6
18-Sep	20	21	18	19	19	14	15	25	24	21	22	25	27	28	26	22	18	13	6	2	2	2	3	2	16.5	28.0
19-Sep	2	2	3	3	3	2	4	5	7	6	12	11	13	22	23	22	20	11	6	5	2	2	2	2	7.9	23.4
20-Sep	2	3	3	3	3	4	3	3	3	9	12	15	13	18	17	12	12	10	6	4	3	3	3	2	6.9	17.8
21-Sep	2	2	3	3	5	3	2	3	5	9	6	7	9	10	14	11	7	5	3	4	2	2	4	6	5.3	13.9
22-Sep	5	5	6	5	4	6	5	5	7	13	10	7	8	6	7	6	8	4	2	2	2	2	4	2	5.5	13.1
23-Sep	2	3	2	3	3	3	3	4	11	10	7	5	6	7	6	7	7	6	2	1	2	1	3	3	4.4	10.6
24-Sep	4	4	2	5	6	5	2	4	12	14	9	9	18	9	7	14	9	16	9	7	14	17	19	19	9.8	19.5
25-Sep	22	19	20	11	5	6	4	7	14	16	15	12	17	13	6	5	5	5	5	3	2	2	2	4	9.2	21.7
26-Sep	2	2	3	3	5	5	6	6	6	7	6	7	8	9	11	14	12	8	5	3	3	2	2	4	5.9	14.3
27-Sep	2	4	2	2	2	2	3	3	3	6	10	10	12	21	20	18	8	8	2	3	3	3	2	3	6.3	20.6
28-Sep	3	2	4	3	2	3	3	4	4	3	4	5	8	7	11	11	13	27	19	7	11	19	19	16	8.6	27.2
29-Sep	13	10	6	8	6	4	3	4	4	7	10	14	23	41	48	51	50	40	27	28	21	19	11	12	19.2	51.0
30-Sep	3	4	7	3	3	3	4	11	39	40	47	44	45	45	47	41	32	20	17	9	7	3	4	4	20.0	47.4
	10.9	10.5	9.3	8.3	7.9	7.8	8.3	9.9	14.2	17.9	18.5	19.7	21.3	23.2	23.7	23.4	22.1	20.1	16.3	13.2	11.8	11.8	10.9	10.5	Diurnal Average	
	33.5	34.7	34.9	30.5	33.6	29.5	28.1	30.1	39.5	46.8	46.8	51.0	50.2	52.3	50.2	52.0	50.5	56.1	43.8	44.5	35.7	36.4	35.8	32.6	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

Evergreen Park - September 2012

Maximum Value: 99.5 deg on Sep 9 13:00

Minimum Value: 5.0 deg on Sep 17 19:00

Percentiles: P_1 = 5.7 P_{10} = 8.1 Q_1 = 13.0 Median = 22.7 Q_3 = 55.3 P_{90} = 78.6 P_{99} = 96.1

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
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	63	56	64	41	32	73	29	15	17	17	17	23	23	13	17	41	44	26	33	43	55	32	13	8	72.7
2-Sep	10	12	14	17	15	18	19	17	17	13	11	9	12	9	8	8	11	8	9	12	9	7	7	6	18.8
3-Sep	7	8	6	6	7	8	6	8	9	12	19	22	21	15	20	19	17	17	7	6	6	7	8	36	35.5
4-Sep	16	11	12	10	16	16	16	15	9	11	12	14	18	20	14	20	9	10	8	8	11	9	7	8	19.7
5-Sep	8	12	15	18	19	20	15	19	21	21	17	19	15	19	19	18	16	15	13	81	42	63	24	25	80.8
6-Sep	11	9	5	46	68	51	81	90	14	14	22	25	19	19	20	18	15	9	9	6	6	6	7	7	90.1
7-Sep	14	63	36	24	31	43	29	32	31	22	40	74	60	64	70	67	63	31	17	8	18	14	17	29	74.5
8-Sep	50	59	79	73	62	74	69	52	16	46	69	91	52	54	87	52	43	27	15	38	75	54	51	78	91.5
9-Sep	31	48	78	91	63	95	64	68	89	25	80	55	100	63	65	33	43	86	18	21	15	29	59	29	99.5
10-Sep	13	11	12	15	13	10	12	13	10	7	8	7	9	11	13	15	10	6	8	7	6	6	6	6	15.2
11-Sep	6	5	6	7	6	7	7	7	10	11	17	19	13	20	15	11	14	11	7	6	7	8	7	7	19.5
12-Sep	8	7	8	10	6	8	21	54	30	10	9	9	9	14	12	10	10	12	14	39	83	64	56	57	83.0
13-Sep	15	8	6	11	80	29	57	5	9	13	16	14	19	19	12	15	12	23	67	92	85	47	65	41	91.6
14-Sep	9	11	12	46	65	42	31	21	7	9	11	8	12	13	17	14	17	13	13	13	16	17	18	57	64.5
15-Sep	71	57	57	73	90	89	25	72	26	37	56	63	46	51	45	30	25	21	21	50	79	88	65	64	90.1
16-Sep	75	63	75	29	56	19	17	8	10	25	26	51	37	40	34	53	64	33	35	76	29	7	23	17	75.8
17-Sep	49	88	78	80	42	24	21	22	17	12	14	12	17	12	15	15	10	8	5	6	5	7	19	25	87.7
18-Sep	9	7	6	6	8	26	18	13	15	14	20	18	19	21	16	25	23	29	21	76	73	42	25	88	88.1
19-Sep	69	84	41	75	75	91	68	70	13	22	19	59	35	21	16	18	19	20	16	28	74	89	67	83	91.0
20-Sep	88	77	97	67	84	46	88	56	64	21	21	18	43	27	30	48	29	15	14	65	85	23	75	99	99.1
21-Sep	97	72	79	71	11	65	49	40	48	24	46	31	37	46	34	35	62	19	73	16	86	88	88	32	96.6
22-Sep	21	52	20	34	32	30	18	44	26	17	30	49	56	77	59	52	44	24	84	77	32	56	74	87	87.0
23-Sep	85	52	55	43	72	29	47	12	11	16	27	77	64	91	97	87	57	37	79	96	95	60	79	77	97.3
24-Sep	76	80	78	10	16	41	48	37	16	14	43	59	20	35	55	29	34	14	15	28	13	14	17	13	80.3
25-Sep	11	17	15	27	44	20	45	23	14	11	16	25	41	21	28	91	52	41	28	58	57	86	68	44	90.8
26-Sep	33	39	43	82	26	54	18	19	20	33	42	55	52	43	39	26	20	23	20	50	76	55	93	70	92.7
27-Sep	73	95	92	69	74	73	90	74	51	38	24	31	37	18	11	17	26	20	76	60	85	77	89	78	95.2
28-Sep	45	52	87	52	42	83	81	98	83	82	80	83	34	45	19	16	21	18	16	15	22	13	13	17	98.1
29-Sep	21	53	47	54	48	76	85	85	50	18	11	17	16	15	9	12	8	10	11	7	9	8	18	11	84.8
30-Sep	81	50	18	82	74	83	71	50	6	8	10	11	12	12	12	13	11	14	17	18	20	89	52	69	88.7
	96.6	95.2	96.7	90.5	90.1	94.7	89.9	98.1	89.0	81.8	80.3	91.5	99.5	91.0	97.3	90.8	63.6	85.8	84.1	96.3	94.7	88.7	92.7	99.1	

FOCUS AIR QUALITY MONITORING

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.6 ppb on Sep 17 07:00 Maximum Daily Average: 0.7 ppb on Sep 17

Minimum Value: 0 ppb on Sep 9 18:00 Minimum Daily Average: 0.1 ppb on Sep 14
Maximum Diurnal Average: 0.5 ppb at hour 1 Minimum Diurnal Average: 0.1 ppb at hour 20
Monthly Average: 0.31 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.4 P_{90} = 0.8 P_{99} = 2.6

Hours in Service:	590
Hours of Data:	560
Hours of Missing Data:	30
Hours of Calibration:	30
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	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.6
2-Sep	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0.3	1.0
3-Sep	2	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.4	2.4
4-Sep	0	0	0	1	1	1	0	3	2	1	1	0	0	0	0	0	0	0	0	0	1	A	0	0	0.5	2.6
5-Sep	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.9
6-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	3	0	0	0	0.2	2.5
7-Sep	0	1	1	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	2.7
8-Sep	0	0	0	0	0	0	0	0	2	2	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0.3	2.2
9-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0.1	1.0
10-Sep	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	2	0.4	1.7
11-Sep	1	1	1	2	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	1	0	3	0	0.6	2.6
12-Sep	2	1	0	0	1	1	0	0	1	1	1	0	0	A	0	0	0	0	1	0	0	1	0	0	0.5	1.7
13-Sep	0	0	0	0	0	0	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
14-Sep	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
15-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
16-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.9
17-Sep	0	0	0	0	0	3	4	2	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.7	3.6
18-Sep	0	2	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.9
19-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0.3	3.3
20-Sep	0	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	1	0.4	1.5
21-Sep	1	1	0	0	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0.3	1.3
22-Sep	0	1	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.1
23-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	0.4
24-Sep	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0.2	0.7
25-Sep	A	0	0	0	1	0	1	0	0	1	C	C	C	C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	0.8
26-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
27-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
28-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
29-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
30-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	0.5	0.4	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.3	0.4	0.4	0.3	Diurnal Average	
	2.4	1.9	1.1	2.7	1.7	3.1	3.6	2.6	2.2	1.8	1.0	1.2	1.5	1.4	0.9	1.1	0.9	0.5	0.7	0.4	2.5	3.3	2.6	1.7	Diurnal Maximum	

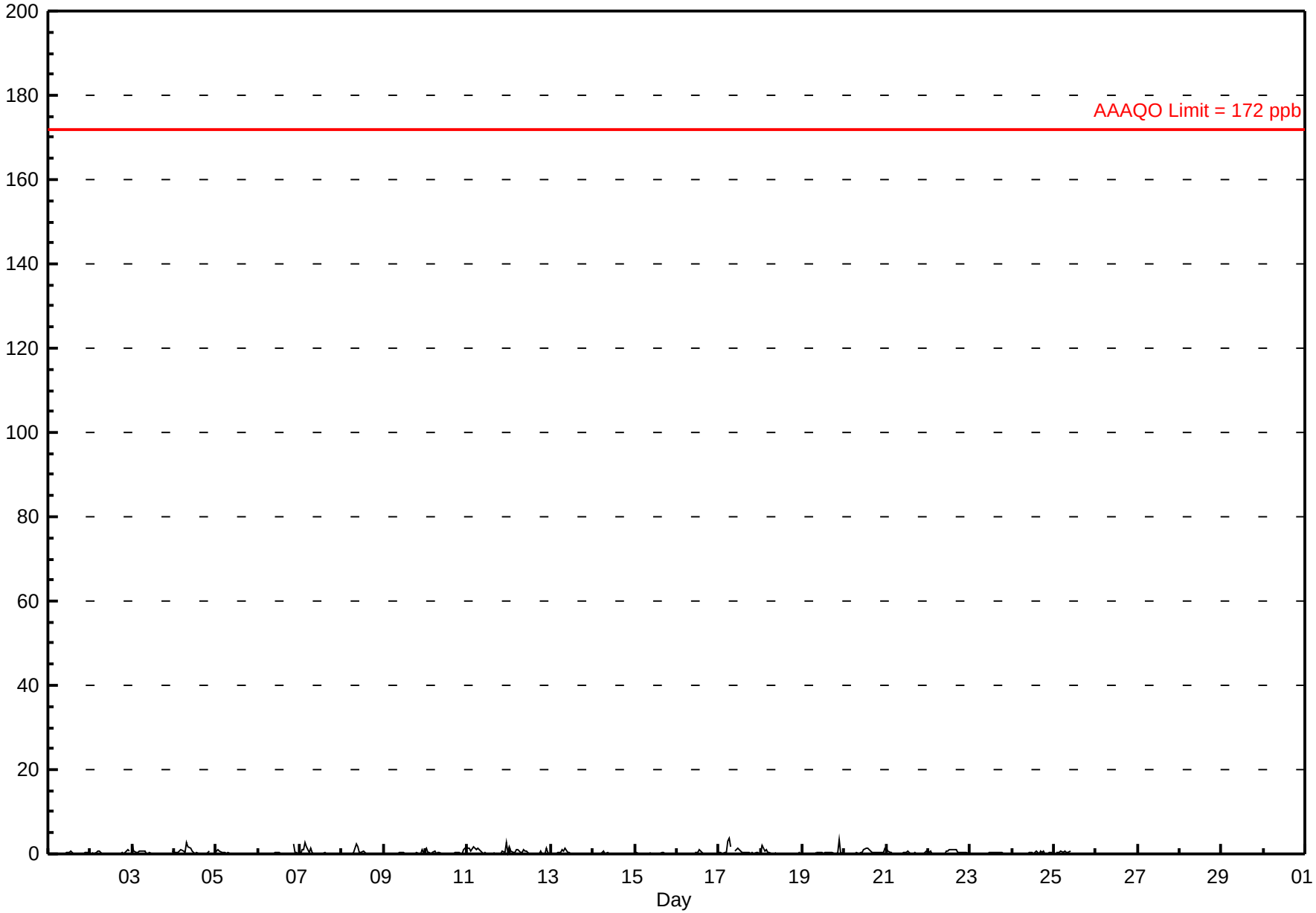
C - Calibration NS - Not in service A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - September 2012

Maximum Value: 19.5 ppb on Sep 25 10:00

Maximum Daily Average: 1.7 ppb on Sep 17

Minimum Value: 0 ppb on Sep 9 18:00

Minimum Daily Average: 0.5 ppb on Sep 15

Maximum Diurnal Average: 1.6 ppb at hour 10

Minimum Diurnal Average: 0.5 ppb at hour 18

Monthly Average: 0.94 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 1.0$ $P_{90} = 1.9$ $P_{99} = 7.5$

Hours in Service:	590
Hours of Data:	560
Hours of Missing Data:	30
Hours of Calibration:	30
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	A	0	0	0	1	0	0	0	0	1	1	1	2	0	0	0	0	0	1	0	2	2	1	0.6	2.0
2-Sep	A	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	2	1	1	3	5	A	1.0	5.2
3-Sep	5	2	1	1	1	1	1	2	0	0	1	1	0	0	0	0	0	0	0	1	0	1	A	1	0.9	5.0
4-Sep	1	1	1	1	2	2	0	10	10	2	2	1	0	1	1	0	0	1	0	1	2	A	0	1	1.7	10.1
5-Sep	1	2	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.6	2.2
6-Sep	1	0	0	1	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	A	9	1	1	0	0.9	9.2
7-Sep	1	2	4	8	5	1	4	1	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	1.4	7.8
8-Sep	0	0	0	0	0	0	0	3	4	4	1	1	1	1	0	0	0	A	0	0	0	0	0	1	0.9	4.1
9-Sep	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	A	0	0	1	1	0	2	1	0.5	2.4
10-Sep	2	2	1	1	2	1	1	2	2	0	0	1	1	0	0	A	0	1	1	1	0	0	2	3	1.1	2.5
11-Sep	2	2	1	2	2	1	2	2	1	1	0	0	0	0	A	1	0	1	1	1	4	3	7	1	1.5	6.6
12-Sep	3	2	1	1	4	2	1	1	2	1	1	1	0	A	1	1	1	0	2	0	0	4	2	0	1.4	4.0
13-Sep	0	0	0	0	1	1	2	1	4	1	1	0	A	0	0	0	0	0	0	0	1	0	0	0	0.7	3.7
14-Sep	0	0	0	0	0	1	1	0	1	0	0	A	0	0	0	0	0	0	0	0	1	0	1	0	0.5	1.2
15-Sep	0	1	0	0	1	0	0	0	0	1	A	0	0	0	1	1	1	1	1	0	0	1	0	0	0.5	0.7
16-Sep	0	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	0	0	0	0	0	0	1	0	0.5	1.3
17-Sep	1	2	1	2	1	8	5	4	A	1	2	2	1	1	1	1	1	1	0	1	1	1	2	0	1.7	7.5
18-Sep	2	5	2	2	1	1	0	A	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0.9	5.2
19-Sep	0	0	0	0	0	0	A	1	1	1	1	1	1	1	0	1	1	1	0	0	2	6	1	0	0.9	5.9
20-Sep	0	0	0	0	1	A	0	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	2	0.9	2.2
21-Sep	2	1	1	1	A	0	0	0	0	1	0	1	1	1	0	1	1	0	0	0	0	0	1	1	0.6	1.9
22-Sep	1	1	1	A	1	0	0	0	0	0	1	1	2	2	1	2	1	1	1	1	1	1	1	0	0.8	1.6
23-Sep	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	1	0	0	0	0	0.5	0.8
24-Sep	0	A	0	0	0	0	0	0	0	0	1	0	1	2	4	1	2	1	2	1	1	1	1	1	0.8	3.7
25-Sep	A	1	1	1	1	0	1	1	1	20	C	C	C	C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	19.5
26-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
27-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
28-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
29-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
30-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	1.1	1.2	0.8	1.0	1.1	1.1	1.0	1.3	1.2	1.6	0.7	0.7	0.7	0.8	0.7	0.6	0.6	0.5	0.7	0.6	1.1	1.2	1.4	0.7	Diurnal Average	
	5.0	5.2	3.8	7.8	5.3	7.5	4.9	10.1	9.7	19.5	2.0	1.9	2.0	2.3	3.7	1.6	1.5	1.0	2.2	1.4	9.2	5.9	6.6	2.5	Diurnal Maximum	

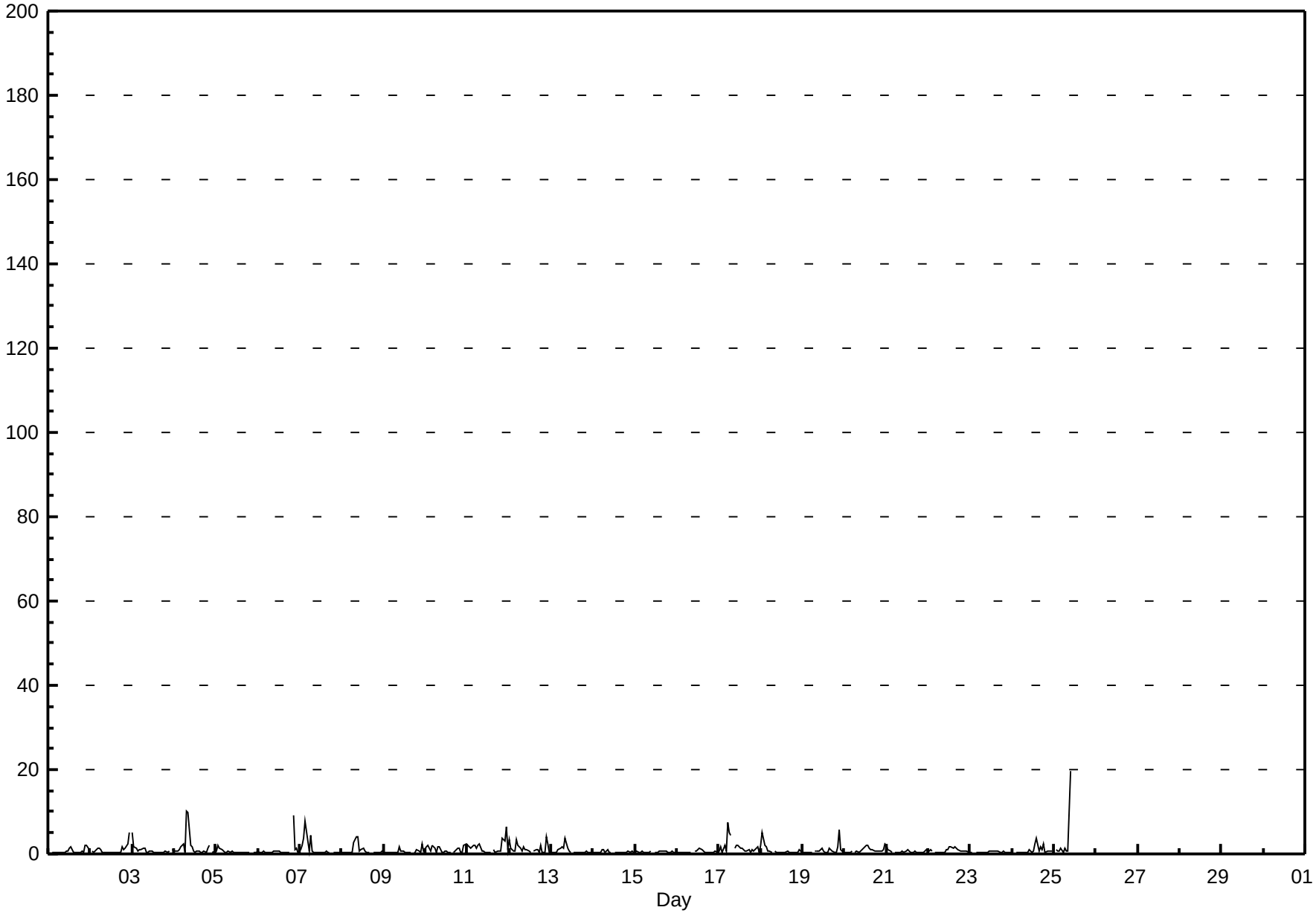
C - Calibration NS - Not in service A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

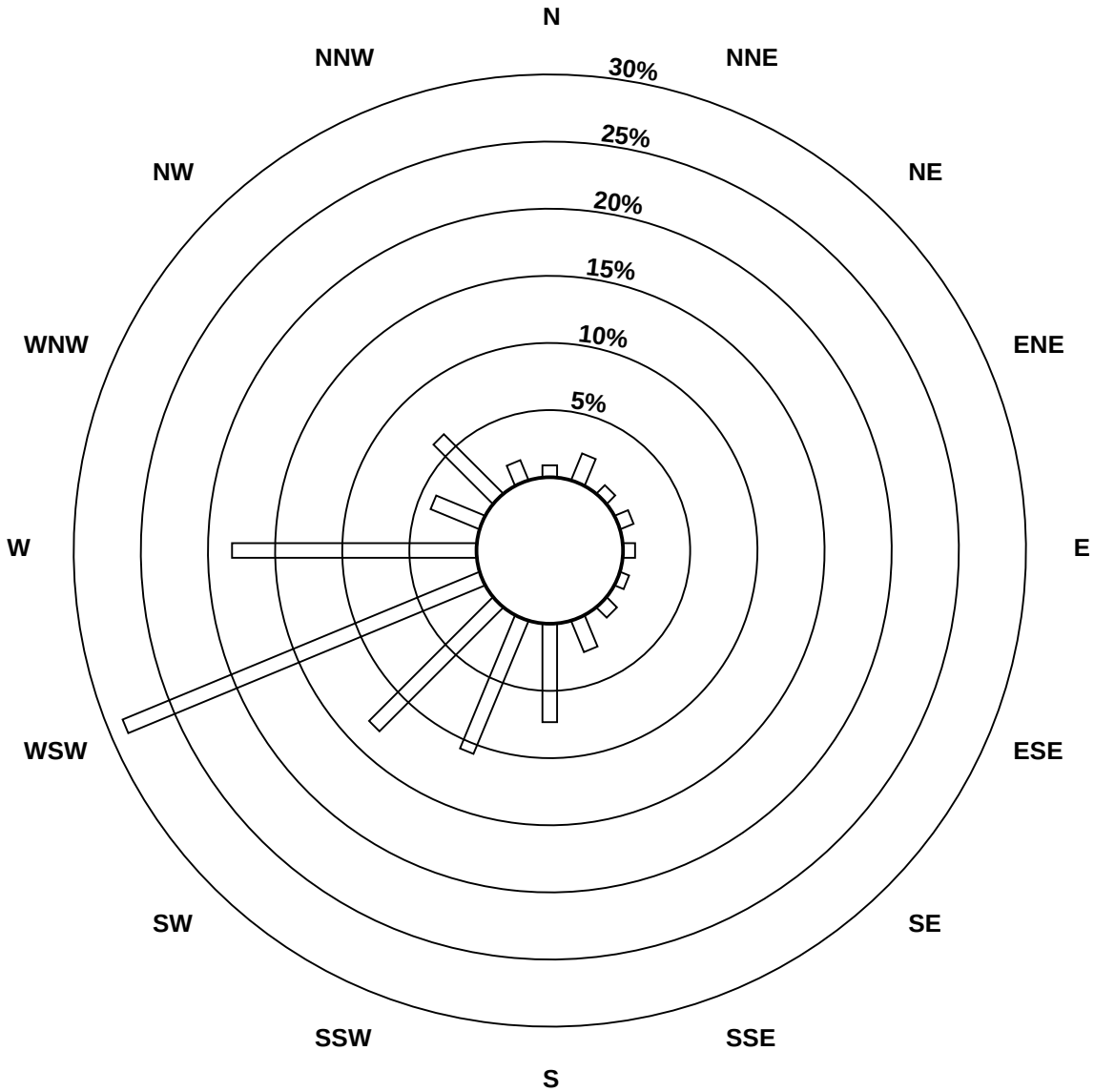
Smoky Heights - September 2012



Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Smoky Heights - September 2012



Pollutant Classes (ppb)

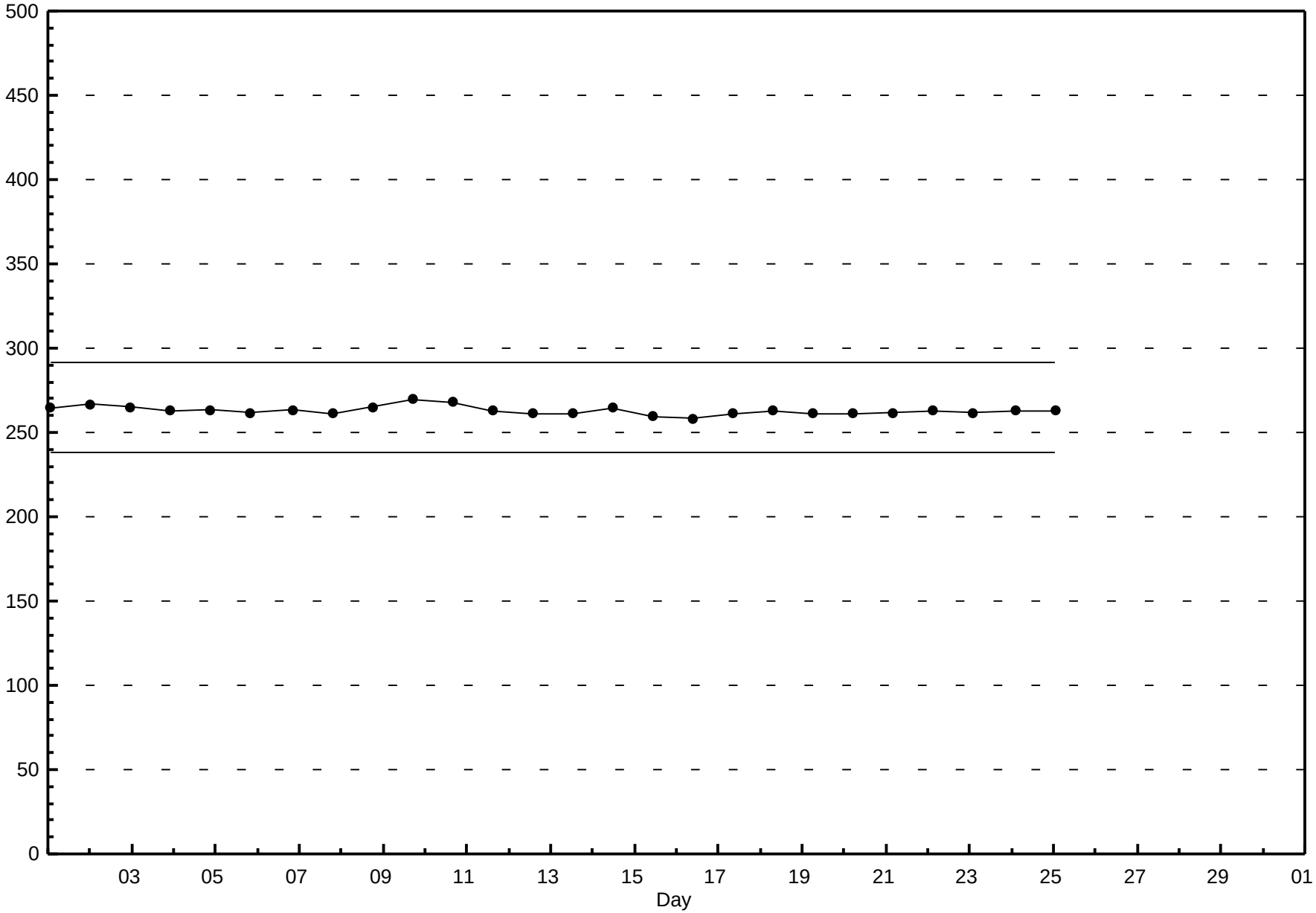
- 0 - 10
- 11 - 20
- 21 - 60
- 61 - 110
- 111 - 172
- > 172

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Smoky Heights - September 2012



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.0 ppb on Sep 21 08:00 Maximum Daily Average: 0.4 ppb on Sep 9

Minimum Value: 0 ppb on Sep 14 19:00 Minimum Daily Average: 0.1 ppb on Sep 11
Maximum Diurnal Average: 0.4 ppb at hour 6 Minimum Diurnal Average: 0.2 ppb at hour 17
Monthly Average: 0.28 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.4$ $P_{90} = 0.5$ $P_{99} = 0.7$

Hours in Service:	588
Hours of Data:	558
Hours of Missing Data:	30
Hours of Calibration:	30
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	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
2-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
3-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	0.2	0.5
4-Sep	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0.3	0.7
5-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	0.5
6-Sep	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.7
7-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	0.5
8-Sep	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.7
9-Sep	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.8
10-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
11-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
12-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	0.2	0.3
13-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
14-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
15-Sep	0	0	1	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
16-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
17-Sep	0	0	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
18-Sep	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	0.7
19-Sep	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
20-Sep	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7
21-Sep	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
22-Sep	0	0	1	A	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
23-Sep	0	0	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
24-Sep	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
25-Sep	A	0	0	0	0	1	1	1	C	C	C	C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	0.7
26-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
27-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
28-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
29-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
30-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	Diurnal Average	
	0.7	0.7	0.9	0.8	0.7	0.8	0.8	1.0	0.6	0.6	0.5	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.7	Diurnal Maximum	

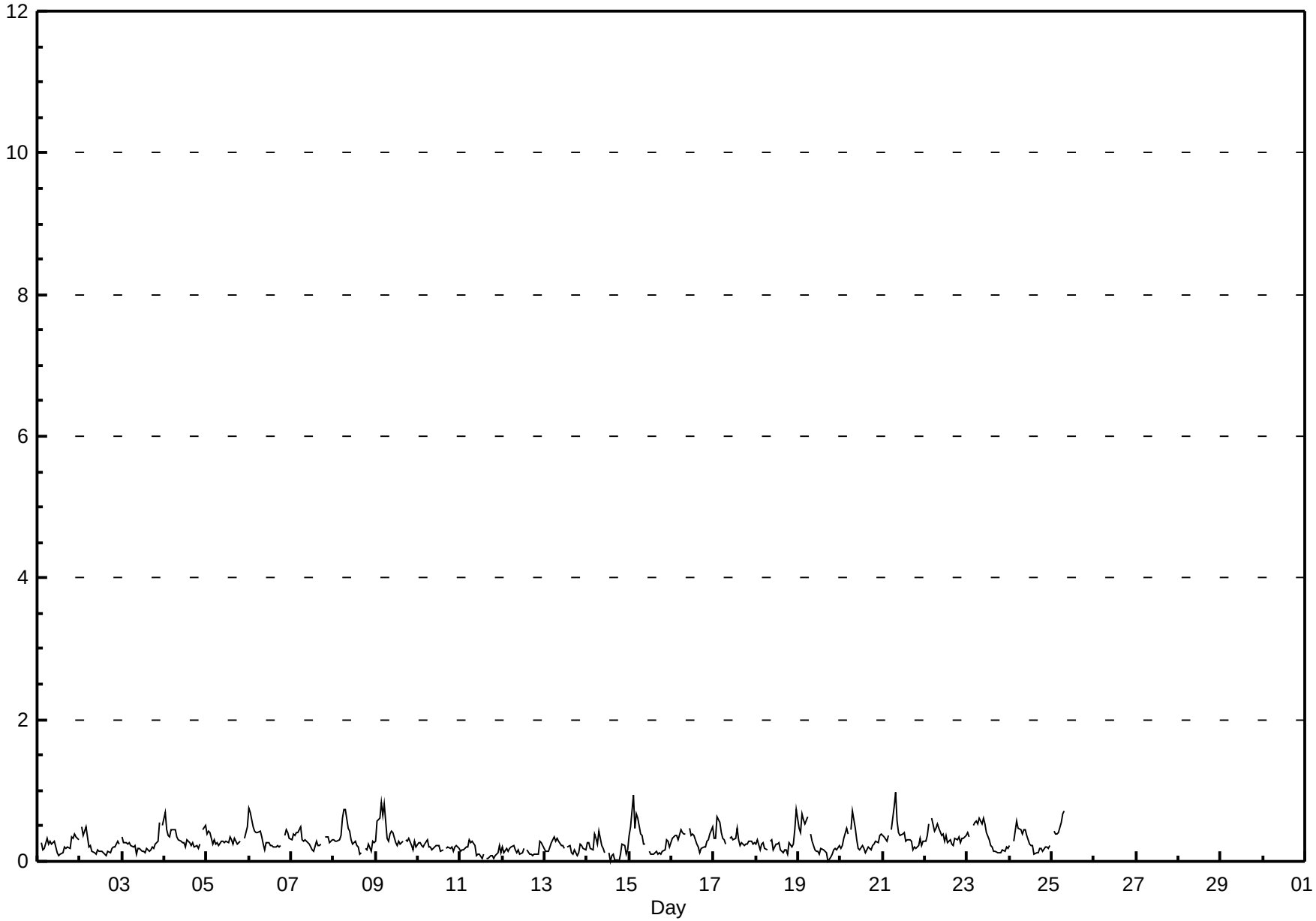
C - Calibration NS - Not in service A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - September 2012



Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - September 2012

Maximum Value: 1.7 ppb on Sep 19 00:00

Maximum Daily Average: 0.9 ppb on Sep 9

Minimum Value: 0 ppb on Sep 11 13:00

Minimum Daily Average: 0.5 ppb on Sep 11

Maximum Diurnal Average: 0.9 ppb at hour 5

Minimum Diurnal Average: 0.6 ppb at hour 16

Monthly Average: 0.70 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.7 $Q_3 = 0.8$ $P_{90} = 0.9$ $P_{99} = 1.4$

Hours in Service:	588
Hours of Data:	558
Hours of Missing Data:	30
Hours of Calibration:	30
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	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	0.7	1.0
2-Sep	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	A	0.6	0.9
3-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	A	1	0.7	1.1
4-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	1.2
5-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	1.1
6-Sep	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.2
7-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	0.7	0.8
8-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	0	1	1	1	1	0.8	1.4
9-Sep	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.5
10-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	0.6	0.8
11-Sep	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	1	1	0	0.5	0.7
12-Sep	1	0	1	1	1	1	1	1	1	1	0	0	1	A	1	0	1	0	0	0	1	1	1	1	0.5	0.7
13-Sep	1	0	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	0.6	0.9
14-Sep	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	0	0	0	0	1	1	1	1	0.6	1.0
15-Sep	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	1	1	0.7	1.4
16-Sep	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.7	1.1
17-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	1.3
18-Sep	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	2	0.7	1.7
19-Sep	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	0	0	0	1	1	1	1	0.7	1.2
20-Sep	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0.7	1.2
21-Sep	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5
22-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	1.3
23-Sep	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	0.8	1.2
24-Sep	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	1	1	1	1	0.7	1.0
25-Sep	A	1	1	1	1	1	1	1	C	C	C	C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	1.4
26-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
27-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
28-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
29-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
30-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	Diurnal Average	
	1.2	1.4	1.4	1.5	1.4	1.4	1.4	1.5	1.1	1.0	0.9	1.1	0.9	0.9	0.8	0.7	0.9	0.8	0.7	0.9	1.0	1.0	1.1	1.7	Diurnal Maximum	

C - Calibration NS - Not in service A - Automated Daily Zero Span

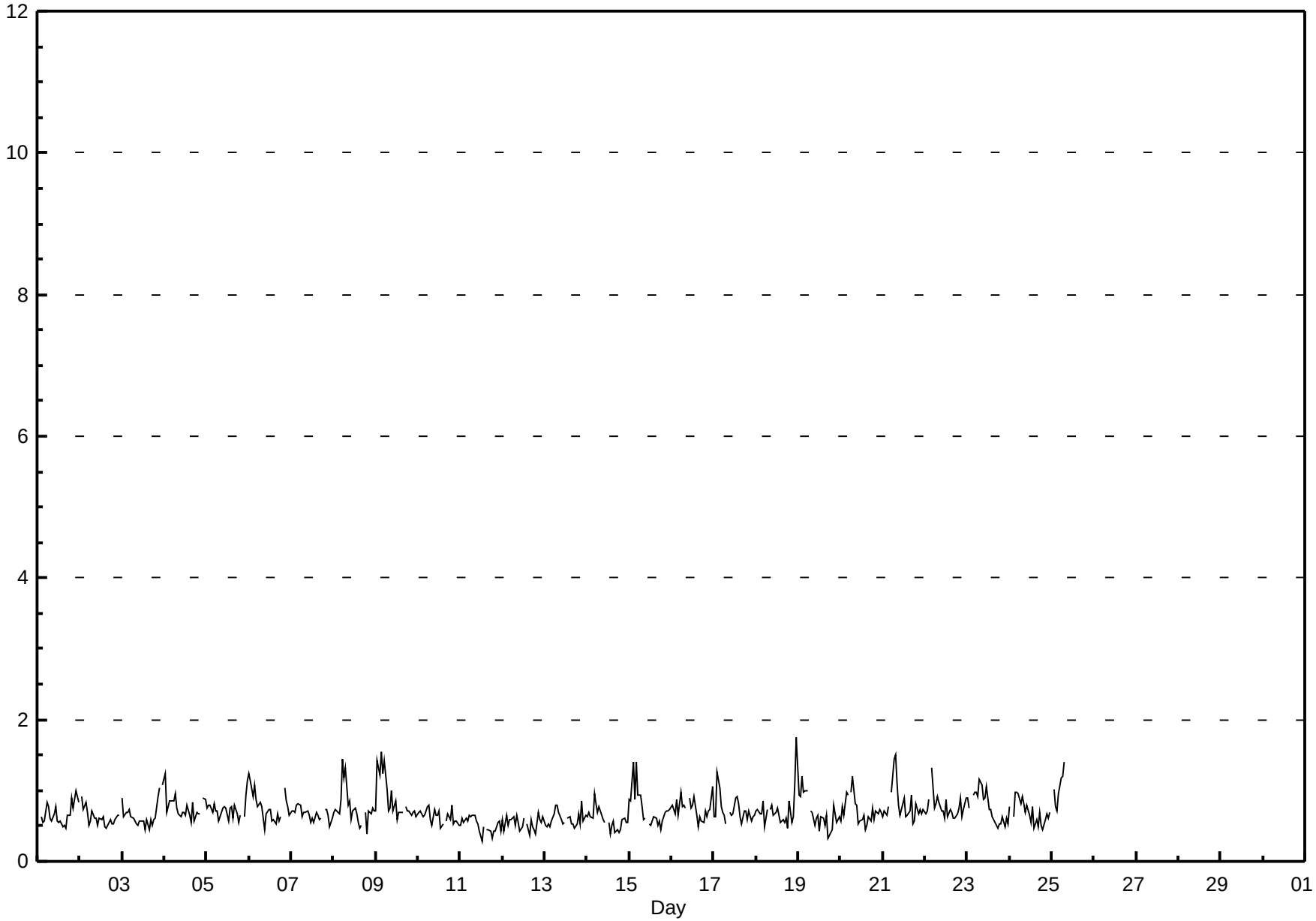
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

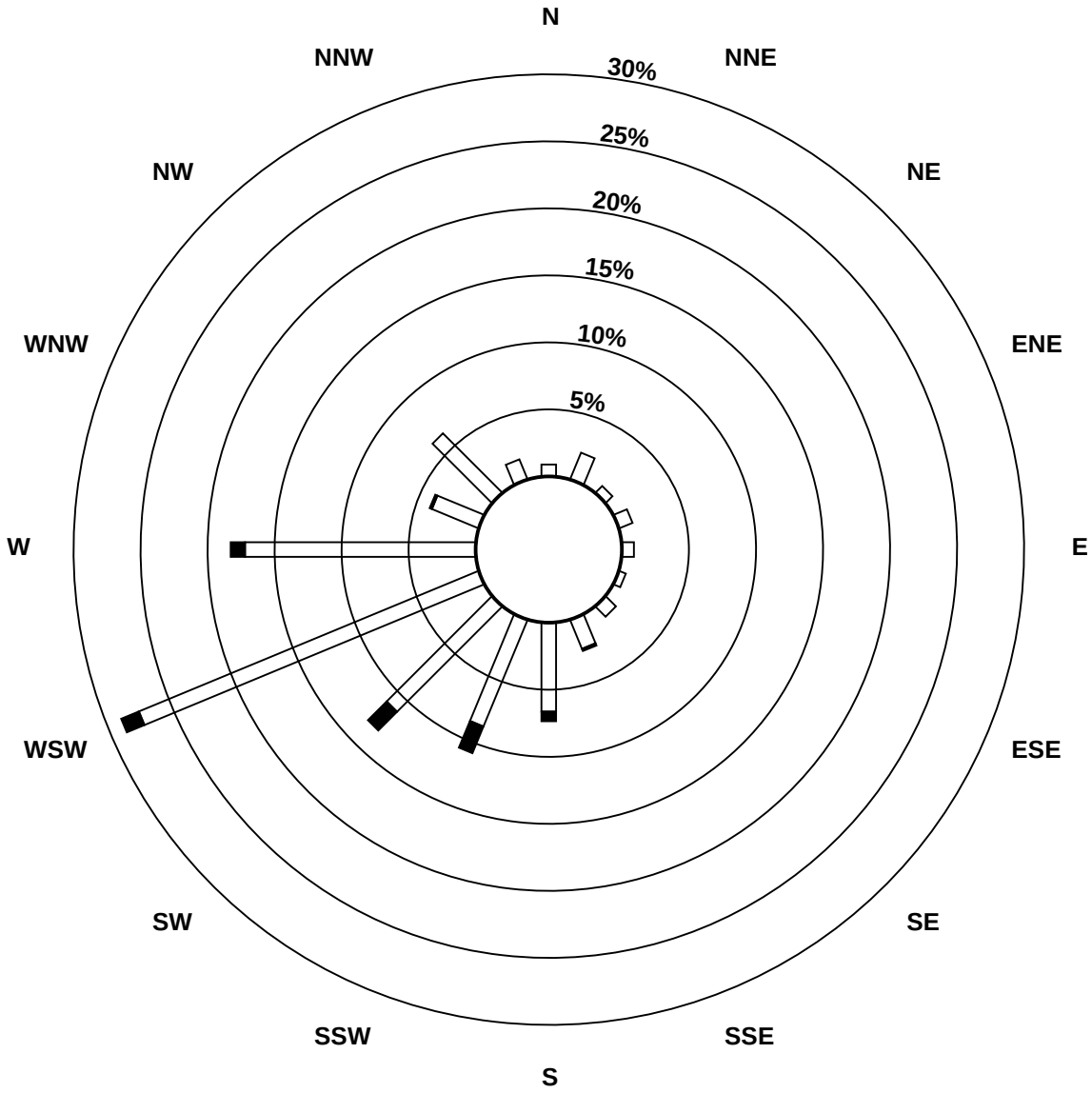
Smoky Heights - September 2012



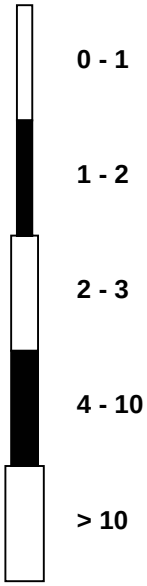
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Smoky Heights - September 2012



Pollutant Classes (ppb)

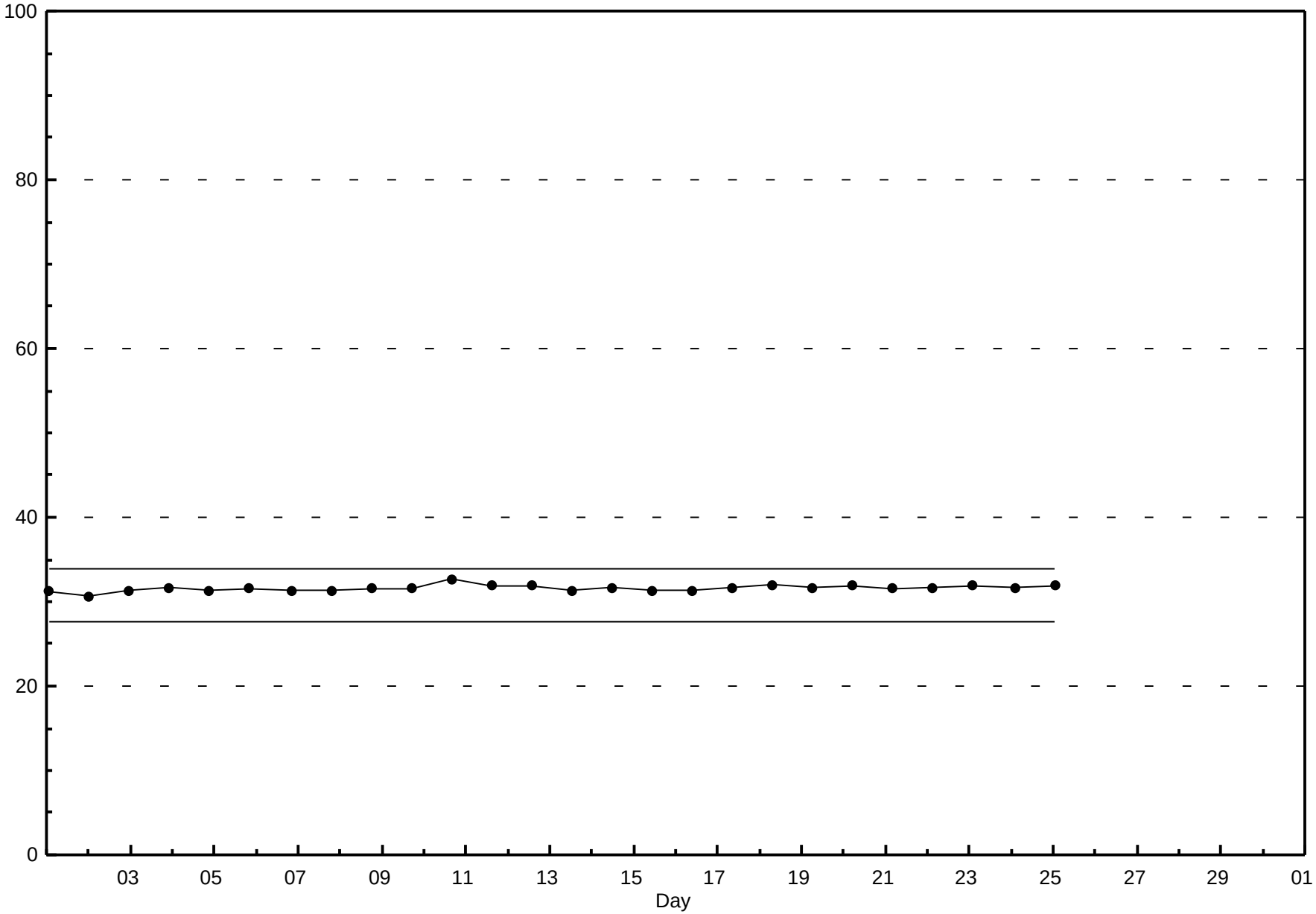


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Smoky Heights - September 2012



Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - September 2012

Number of Exceedences: 1-hr: 3 24-hr: 0

Maximum Value: 123.5 $\mu g/m^3$ on Sep 21 20:00

Maximum Daily Average: 20.6 $\mu g/m^3$ on Sep 21

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

Maximum Diurnal Average: 20.2 $\mu g/m^3$ at hour 20

Monthly Average: 7.69 $\mu g/m^3$

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

Minimum Diurnal Average: 4.3 $\mu g/m^3$ at hour 2

Percentiles: $P_1 = 0.0$ $P_{10} = 1.0$ $Q_1 = 2.0$ Median = 4.5 $Q_3 = 10.2$ $P_{90} = 16.1$ $P_{99} = 58.7$

Hours in Service:	591
Hours of Data:	588
Hours of Missing Data:	3
Hours of Calibration:	3
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	1	1	5	4	4	4	4	4	3	3	2	4	5	5	4	4	2	1	1	2	2	1	2.9	5.0
2-Sep	3	2	3	2	2	2	2	2	1	1	1	1	0	1	2	1	4	6	2	2	2	2	2	1	1.9	5.9
3-Sep	1	0	1	1	0	1	1	1	1	0	0	0	0	2	5	2	2	1	1	2	3	3	3	2	1.5	5.4
4-Sep	2	2	2	2	2	1	1	2	2	1	1	1	0	0	2	4	10	10	11	3	2	3	3	3	2.9	10.5
5-Sep	3	3	3	3	2	2	2	2	1	2	2	2	2	16	5	8	8	6	12	10	18	7	10	6	5.7	17.8
6-Sep	6	4	4	5	4	4	8	5	3	4	2	3	3	2	4	10	4	3	3	6	6	6	6	5	4.6	10.4
7-Sep	3	3	3	4	7	8	13	8	10	9	6	7	6	6	6	5	5	5	6	24	17	41	12	14	9.5	40.6
8-Sep	17	8	8	9	9	8	8	11	13	10	10	6	8	4	4	6	4	5	5	17	23	2	9	6	8.8	22.9
9-Sep	0	3	3	1	1	0	2	3	3	5	4	3	2	0	1	5	3	5	1	4	5	4	3	3	2.6	5.2
10-Sep	4	0	0	0	0	0	0	0	0	0	0	1	2	3	1	4	11	7	2	2	2	1	1	1	1.8	10.9
11-Sep	1	2	1	1	2	2	2	1	0	2	2	0	5	2	5	6	5	8	2	2	3	2	2	2	2.5	8.2
12-Sep	2	1	3	1	0	1	1	1	3	3	1	2	1	0	1	3	2	0	1	2	2	7	4	3	1.9	7.1
13-Sep	2	2	2	3	1	2	1	4	2	1	2	1	7	1	0	2	1	2	2	15	12	13	4	1	3.5	15.1
14-Sep	2	1	3	2	1	2	4	28	11	10	4	1	4	4	9	12	12	18	16	21	34	21	12	11	10.1	34.1
15-Sep	11	7	17	7	10	4	5	10	9	7	4	2	5	4	6	6	5	4	5	10	8	6	15	5	7.2	17.0
16-Sep	2	2	1	1	1	1	4	3	5	5	5	5	3	2	2	1	4	9	19	25	114	16	28	9	11.1	114.2
17-Sep	7	3	3	2	2	2	40	11	7	10	4	2	4	1	4	3	5	7	7	6	6	6	4	3	6.2	40.5
18-Sep	4	6	11	12	19	8	16	9	20	23	10	5	6	10	9	9	7	2	3	10	22	8	10	5	10.2	22.9
19-Sep	3	2	4	9	8	10	14	11	8	6	6	9	4	3	5	4	6	8	5	63	21	21	7	4	9.9	62.8
20-Sep	6	7	7	14	15	10	10	12	13	12	10	11	6	6	5	6	4	5	20	89	75	14	14	7	15.8	88.8
21-Sep	11	8	11	10	8	10	25	24	14	13	12	18	19	10	14	10	14	9	73	123	19	13	15	11	20.6	123.5
22-Sep	15	15	17	19	15	15	14	16	17	16	16	14	12	13	12	12	20	9	10	20	28	61	19	33	18.3	60.6
23-Sep	10	10	9	20	12	8	9	11	19	11	19	20	17	14	11	11	9	9	38	19	16	11	15	10	14.1	38.4
24-Sep	12	11	9	18	12	10	8	25	17	17	19	14	13	13	16	11	8	15	6	9	7	8	3	1	11.8	25.1
25-Sep	5	3	4	3	1	1	2	2	8	3	18	26	C	C	C	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	26.2
26-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
27-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
28-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
29-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
30-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	5.4	4.3	5.1	6.1	5.5	4.6	7.8	8.3	7.6	7.0	6.4	6.3	5.5	5.0	5.6	6.1	6.7	6.6	10.5	20.2	18.6	11.6	8.4	6.2	Diurnal Average	
	16.8	15.3	17.0	20.3	18.7	15.1	40.5	27.9	20.0	22.9	18.6	26.2	18.8	15.6	15.7	11.8	20.3	17.5	73.4	123.5	114.2	60.6	27.8	33.2	Diurnal Maximum	

C - Calibration NS - Not in service

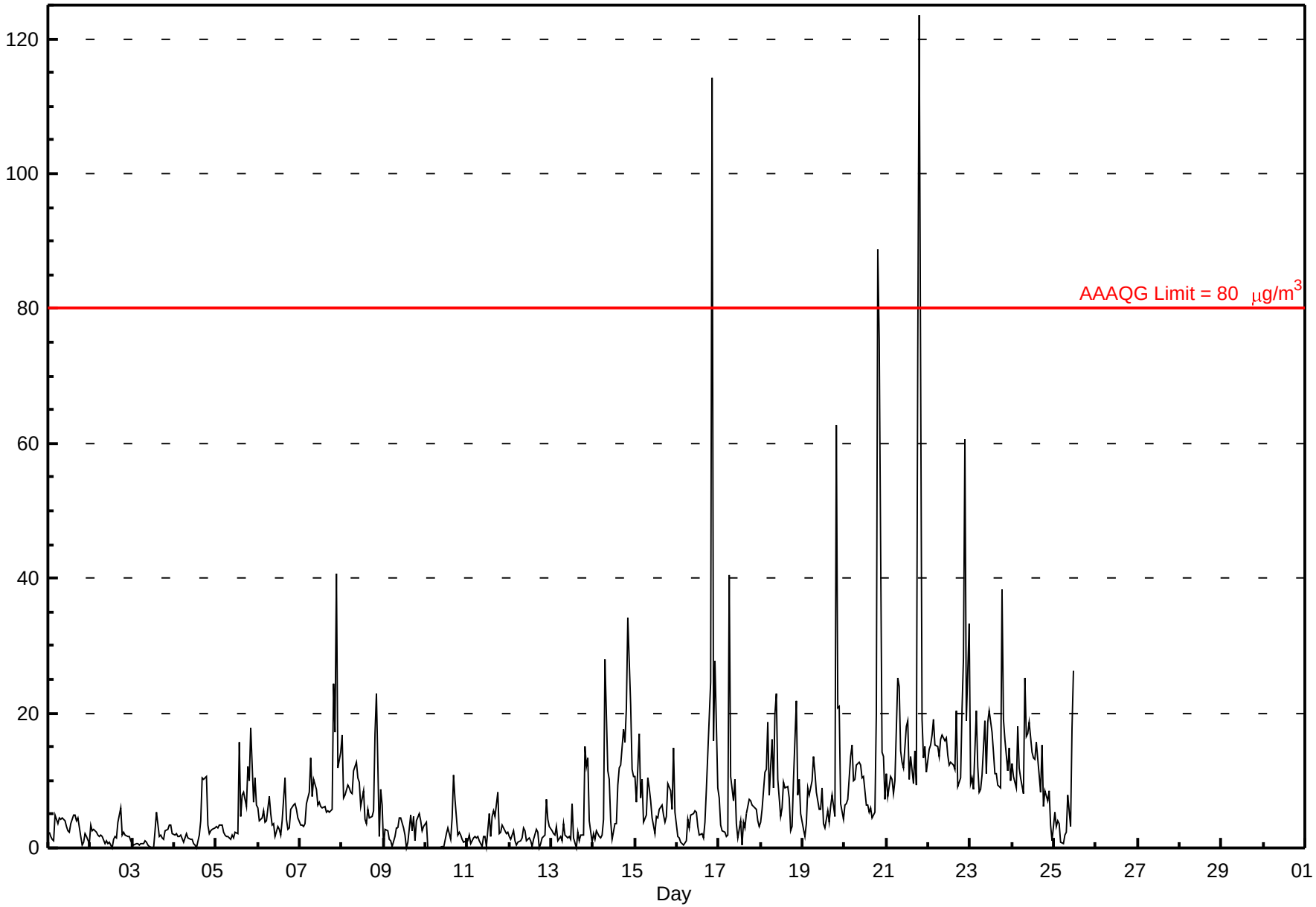
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Smoky Heights - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

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

Smoky Heights - September 2012

Maximum Value: 382.1 $\mu g/m^3$ on Sep 21 20:00

Maximum Daily Average: 45.2 $\mu g/m^3$ on Sep 21

Minimum Value: 0 $\mu g/m^3$ on Sep 10 07:00

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

Maximum Diurnal Average: 53.0 $\mu g/m^3$ at hour 21

Minimum Diurnal Average: 7.7 $\mu g/m^3$ at hour 2

Monthly Average: 16.97 $\mu g/m^3$

Percentiles: P_1 = 1.4 P_{10} = 2.9 Q_1 = 4.4 Median = 8.8 Q_3 = 18.3 P_{90} = 34.0 P_{99} = 143.4

Hours in Service:	591
Hours of Data:	588
Hours of Missing Data:	3
Hours of Calibration:	3
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	4	3	3	4	7	5	6	6	6	6	5	4	6	6	9	6	6	6	5	3	3	3	3	3	5.1	8.9
2-Sep	6	6	5	5	3	3	3	4	2	3	2	3	1	4	3	2	11	15	4	4	3	4	3	3	4.2	14.9
3-Sep	3	2	2	2	2	2	3	2	3	1	2	2	0	9	9	5	3	3	3	4	4	6	5	3	3.3	8.7
4-Sep	3	4	3	3	3	2	3	3	3	3	3	2	2	1	7	10	21	35	16	7	4	4	4	4	6.2	35.2
5-Sep	4	5	5	7	3	3	4	3	3	3	5	12	17	37	7	37	38	18	38	27	28	18	25	8	14.9	38.4
6-Sep	8	6	7	11	12	11	16	11	6	9	3	6	4	3	12	34	12	8	6	13	10	9	8	7	9.6	34.2
7-Sep	5	5	4	5	31	30	22	10	13	11	8	8	9	8	9	7	7	7	9	87	28	83	21	32	19.1	86.7
8-Sep	49	9	10	12	11	14	10	14	16	13	15	11	14	8	7	16	9	6	8	31	72	40	45	26	19.3	71.9
9-Sep	27	12	4	3	4	2	5	5	4	7	9	7	5	3	3	11	8	11	11	10	11	7	6	9	7.7	26.7
10-Sep	6	4	2	1	2	0	0	3	2	3	2	4	11	16	5	10	27	14	5	4	3	3	2	3	5.6	27.4
11-Sep	3	4	2	3	3	3	3	3	1	5	6	4	13	8	12	11	10	17	6	4	5	4	3	6	5.8	17.3
12-Sep	3	2	7	2	2	2	3	5	5	5	4	3	4	2	7	9	6	2	3	4	4	32	10	10	5.7	32.0
13-Sep	4	4	3	6	3	3	3	9	3	3	5	4	20	6	5	7	8	5	6	46	35	28	14	2	9.7	46.2
14-Sep	4	4	5	8	4	3	10	83	15	13	12	5	8	7	29	41	28	37	78	78	142	77	36	21	31.2	142.3
15-Sep	21	9	60	23	34	6	14	19	20	12	6	4	16	7	15	14	7	5	6	17	12	8	46	32	17.1	59.6
16-Sep	4	5	2	3	2	2	12	8	8	7	7	12	4	4	8	5	9	30	73	59	300	51	44	13	28.1	300.3
17-Sep	11	6	4	6	3	6	96	25	12	26	9	3	11	2	14	10	18	14	15	10	10	9	6	4	13.7	95.8
18-Sep	6	7	35	24	55	13	38	21	33	30	20	7	10	22	25	25	15	7	8	32	52	17	16	9	21.9	55.0
19-Sep	5	3	6	15	11	14	21	18	16	8	15	19	8	8	12	11	14	17	7	118	30	76	9	6	19.4	117.9
20-Sep	10	9	10	36	27	12	16	18	23	14	14	23	14	10	7	11	7	9	33	182	285	34	25	11	35.0	285.1
21-Sep	17	11	13	13	12	13	57	42	26	25	15	29	23	14	27	26	26	19	179	382	58	16	26	14	45.2	382.1
22-Sep	37	28	32	31	19	18	17	22	21	19	20	19	14	15	13	13	63	13	15	41	126	153	39	87	36.4	153.2
23-Sep	16	17	13	62	15	12	12	23	23	17	25	24	21	18	14	13	11	11	111	33	22	21	25	15	23.9	110.5
24-Sep	24	24	14	32	17	16	17	41	26	19	21	17	18	17	37	20	11	26	17	22	24	35	5	4	21.0	41.1
25-Sep	12	7	8	6	4	5	5	4	36	15	22	39	C	C	C	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	38.6
26-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
27-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
28-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
29-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
30-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	11.6	7.7	10.5	13.0	11.6	7.9	15.8	16.0	13.1	11.1	10.2	10.9	10.7	9.8	12.3	14.8	15.7	14.1	27.5	50.7	53.0	30.8	17.8	13.8	Diurnal Average	
	48.6	27.9	59.6	61.8	55.0	29.5	95.8	83.2	36.2	30.0	24.7	38.6	23.5	37.2	37.1	41.2	62.8	37.5	179.1	382.1	300.3	153.2	45.7	86.7	Diurnal Maximum	

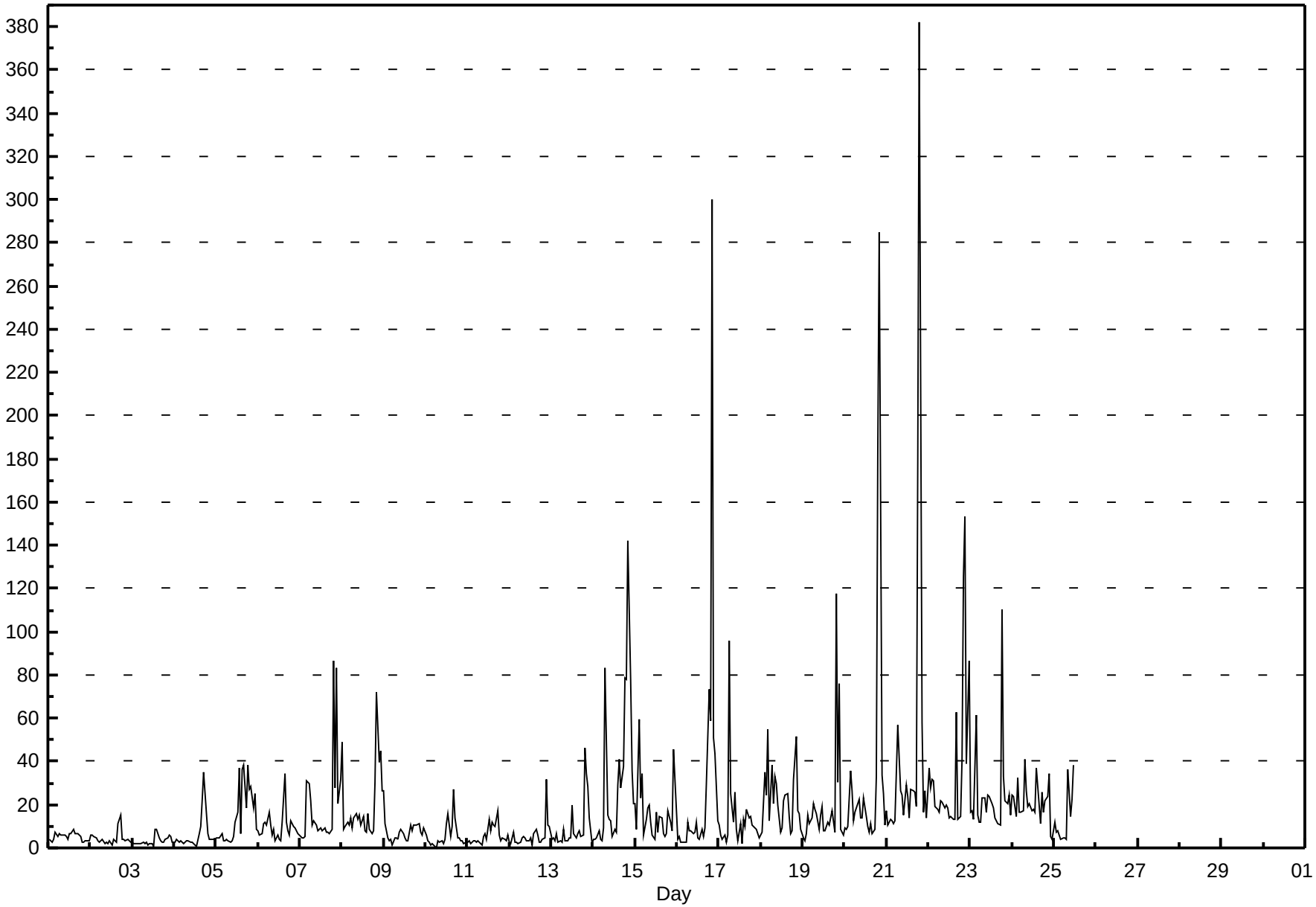
C - Calibration NS - Not in service

Peace Airshed Zone Association

Hourly Maximums

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

Smoky Heights - September 2012

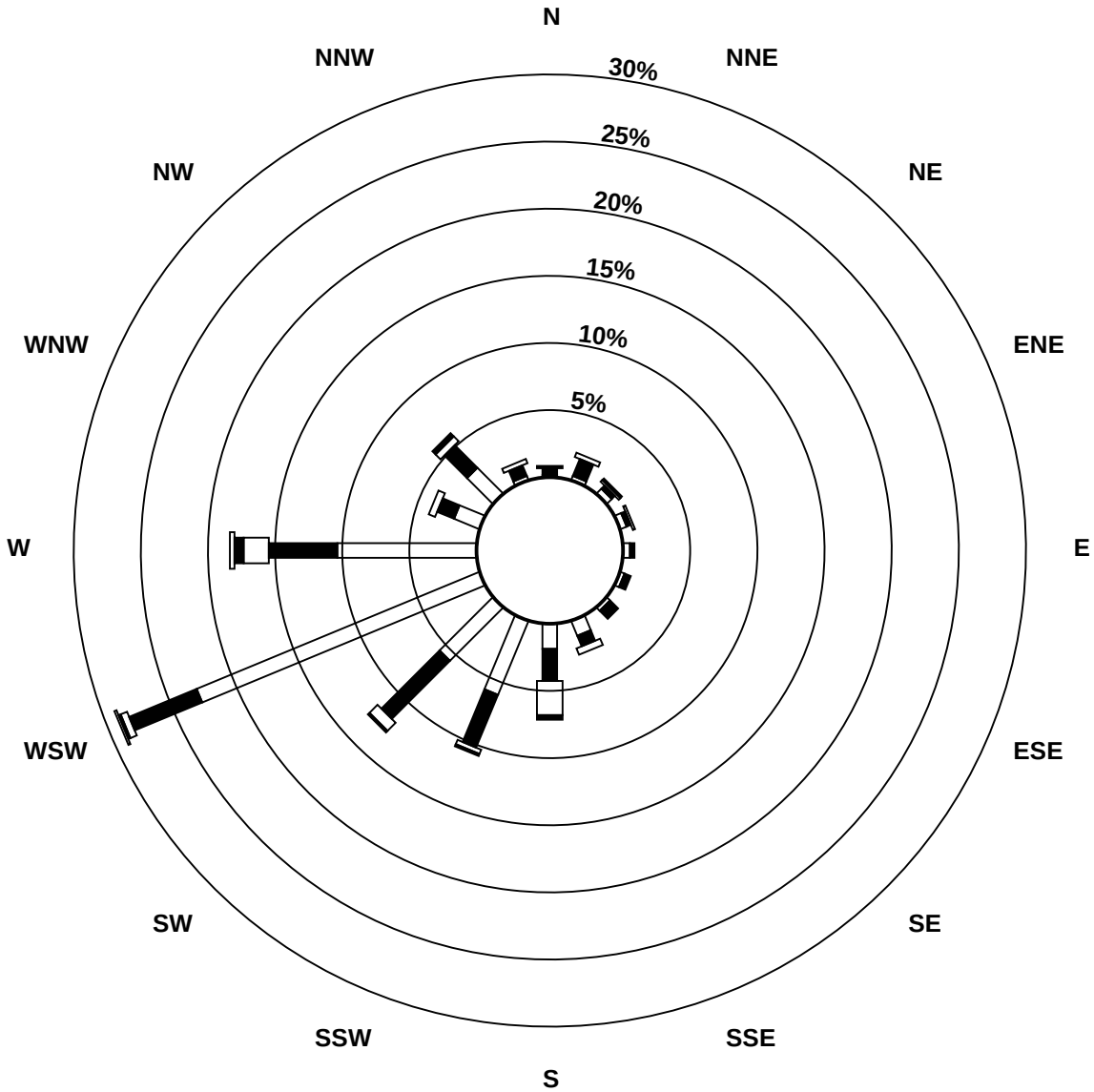


Peace Airshed Zone Association

Pollutant Rose

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

Smoky Heights - September 2012



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

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

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - September 2012

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

Maximum Value: 28.1 ^{o}C on Sep 8 17:00

Maximum Daily Average: 17.3 ^{o}C on Sep 9

Minimum Value: 0 ^{o}C on Sep 15 07:00

Minimum Daily Average: 8.4 ^{o}C on Sep 16

Maximum Diurnal Average: 21.0 ^{o}C at hour 16

Minimum Diurnal Average: 6.3 ^{o}C at hour 7

Monthly Average: 13.14 ^{o}C

Percentiles: $P_1 = 0.3$ $P_{10} = 5.0$ $Q_1 = 8.0$ Median = 12.4 $Q_3 = 17.8$ $P_{90} = 22.2$ $P_{99} = 27.3$

Hours in Service:	592
Hours of Data:	592
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	8	7	7	6	7	6	6	8	8	11	14	16	18	17	15	14	13	13	12	11	11	11	11	11	10.9	17.6
2-Sep	11	11	10	10	10	11	11	11	12	13	14	16	19	20	19	21	19	18	17	15	14	13	11	10	14.0	20.9
3-Sep	9	10	9	7	8	7	7	9	11	13	15	16	17	17	17	18	18	18	17	14	11	11	9	8	12.2	17.8
4-Sep	7	6	5	5	6	5	4	6	10	13	15	17	18	19	19	20	20	20	19	18	16	14	12	11	12.7	20.2
5-Sep	12	11	11	12	12	12	12	13	15	16	17	18	19	20	20	20	20	20	19	15	12	9	8	8	14.7	20.4
6-Sep	6	5	5	5	4	4	4	6	9	13	17	19	21	23	24	25	26	26	25	21	18	14	13	15	14.5	26.1
7-Sep	13	12	12	11	10	10	13	14	15	17	18	19	20	21	20	21	21	21	19	15	12	11	12	11	15.3	21.1
8-Sep	9	8	7	8	7	5	4	7	12	16	19	22	24	26	28	28	28	28	26	21	20	20	20	20	17.2	28.1
9-Sep	18	17	14	12	12	11	11	12	13	15	17	20	23	25	26	26	22	20	20	19	18	16	15	14	17.3	25.9
10-Sep	13	13	12	11	10	10	10	10	10	11	12	12	13	13	14	14	14	14	13	11	9	8	7	7	11.2	14.2
11-Sep	6	6	6	5	4	4	5	6	8	9	12	13	13	14	15	15	14	13	11	10	8	7	6	5	8.9	14.9
12-Sep	4	3	3	3	2	2	3	5	7	9	12	13	14	14	15	14	13	13	13	12	11	9	8	7	8.8	15.3
13-Sep	7	9	8	7	6	6	5	7	13	16	18	20	21	22	23	24	23	22	20	16	13	12	13	11	14.2	23.6
14-Sep	9	8	9	8	8	9	8	8	12	18	19	20	20	20	20	20	20	18	17	15	12	11	10	9	13.7	20.5
15-Sep	6	5	2	2	1	0	0	2	5	9	13	15	16	16	17	16	17	17	15	11	8	7	6	6	8.9	17.1
16-Sep	5	4	2	1	0	0	0	0	2	6	10	13	15	17	18	18	18	18	16	12	9	7	7	7	8.4	18.3
17-Sep	7	8	8	8	9	8	8	9	13	16	19	22	23	25	26	27	28	27	24	21	19	17	15	15	16.7	27.7
18-Sep	16	18	19	17	16	17	16	16	16	16	17	18	18	19	19	19	19	19	16	10	9	8	5	5	15.4	19.3
19-Sep	3	2	2	3	2	2	2	5	9	13	16	21	22	23	23	23	23	21	18	14	11	11	9	8	11.9	23.4
20-Sep	7	5	5	4	5	3	3	5	8	13	18	22	24	25	26	27	26	26	23	15	13	11	10	9	13.9	26.6
21-Sep	10	9	9	8	6	5	5	5	9	14	17	21	23	25	26	27	27	25	21	18	15	12	11	11	14.9	27.3
22-Sep	9	8	7	7	7	6	5	6	9	12	15	19	21	23	25	25	25	25	22	17	13	11	11	9	14.0	25.5
23-Sep	7	8	6	5	6	4	5	5	8	10	12	17	20	23	25	26	26	25	21	16	12	11	10	9	13.2	25.7
24-Sep	8	6	5	6	5	5	4	4	7	11	15	17	19	20	22	23	23	22	20	18	18	18	17	16	13.7	23.4
25-Sep	15	13	12	11	11	11	11	11	11	11	10	10	10	10	11	15	NS	NS	NS	NS	NS	NS	NS	NS	--	14.7
26-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
27-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
28-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
29-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
30-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	9.0	8.4	7.7	7.3	6.9	6.5	6.3	7.6	10.2	12.9	15.2	17.3	18.8	19.9	20.6	21.0	21.0	20.4	18.5	15.1	13.0	11.6	10.7	10.0	Diurnal Average	
	18.1	17.7	18.6	17.3	16.1	17.2	15.8	16.0	16.1	18.4	19.2	22.0	23.9	26.3	27.8	28.0	28.1	27.7	25.8	21.0	19.8	20.4	19.9	19.7	Diurnal Maximum	

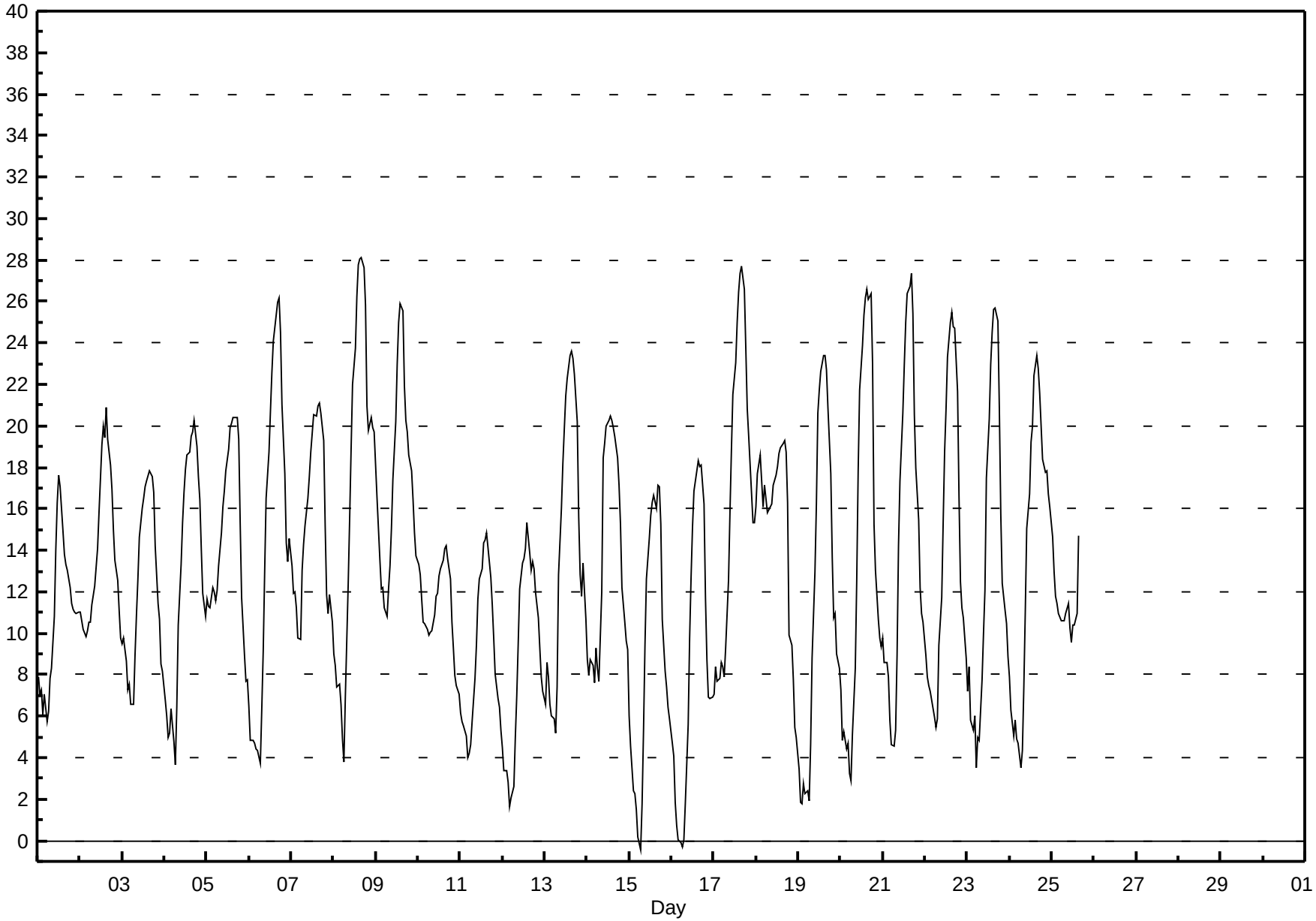
NS - Not in service

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Smoky Heights - September 2012



Peace Airshed Zone Association

Hourly Averages

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

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	3	5	9	8	8	7	6	3	7	8	7	8	4	5	8	5	4	5	6	6	9	13	16	17	3.9	17.1
Dir	311	257	292	257	225	201	169	270	194	210	206	234	271	79	95	59	112	75	360	284	288	263	266	244	246.3	244.3
2 Spd	16	15	2	7	14	17	17	18	26	27	26	20	29	31	36	33	39	40	41	29	26	24	19	14	23.3	40.8
Dir	257	255	208	250	249	253	254	262	258	264	261	260	270	261	244	258	243	249	251	244	247	251	246	246	253.2	251.1
3 Spd	16	18	17	18	19	16	17	23	31	33	29	25	27	26	26	27	30	31	24	17	15	14	11	15	21.3	32.5
Dir	255	245	244	231	244	242	240	244	249	261	264	277	274	271	278	277	265	262	263	256	256	252	256	259	258.8	260.6
4 Spd	14	15	15	14	13	16	16	15	18	22	25	24	22	24	25	22	21	20	17	25	22	17	16	15	18.5	25.4
Dir	263	260	262	265	259	265	260	258	246	247	248	248	243	245	263	274	269	279	260	244	244	236	254	249	255.3	244.0
5 Spd	17	15	13	11	8	11	12	16	15	18	23	24	22	19	18	18	18	15	14	10	11	10	10	7	13.4	23.6
Dir	242	247	248	313	312	292	310	311	321	320	314	309	303	312	305	306	294	299	279	278	274	277	260	230	294.2	309.4
6 Spd	8	8	9	9	9	9	7	8	12	13	17	20	17	20	19	18	20	20	17	16	15	12	16	22	13.6	21.6
Dir	201	198	200	194	201	207	221	207	186	196	206	221	209	215	212	210	227	230	229	237	245	245	247	240	218.8	240.0
7 Spd	20	19	19	13	13	7	9	10	13	13	12	6	4	2	6	4	6	7	6	2	2	4	10	6	2.9	20.0
Dir	257	260	256	250	258	317	348	356	7	24	41	13	11	345	259	179	154	177	135	148	225	171	172	185	273.4	257.0
8 Spd	6	8	10	12	11	10	8	9	14	14	12	12	13	10	10	10	8	10	6	2	11	8	11	18	9.0	18.4
Dir	240	249	237	223	209	230	212	225	233	219	209	201	178	192	219	217	179	160	147	179	178	176	196	257	210.3	256.7
9 Spd	12	2	11	10	7	7	9	9	9	9	14	11	9	7	7	8	25	26	13	19	30	23	15	9	9.7	30.5
Dir	304	287	258	247	228	241	203	209	205	141	162	153	167	200	212	272	275	259	255	269	265	267	248	221	243.2	265.3
10 Spd	20	27	32	26	20	20	21	18	23	28	34	41	40	35	34	32	27	27	37	32	32	31	32	34	29.1	41.1
Dir	246	253	256	258	257	250	253	248	246	255	254	249	259	259	265	265	273	260	251	250	246	250	255	255	255.0	249.4
11 Spd	33	29	23	21	18	20	19	20	28	32	28	26	26	35	35	37	33	24	37	25	19	19	20	21	25.7	37.4
Dir	257	256	249	257	255	260	261	259	260	259	272	280	288	257	266	255	269	272	257	256	245	244	245	239	259.8	257.2
12 Spd	18	15	18	17	14	14	13	14	15	19	27	35	32	31	37	38	31	31	26	26	15	5	9	5	20.9	38.1
Dir	248	247	243	243	243	254	240	238	236	240	246	255	257	253	250	253	260	258	255	259	257	247	222	230	250.2	253.4
13 Spd	10	12	10	6	7	9	6	8	15	23	30	31	27	23	29	28	29	24	12	7	8	7	14	9	15.2	30.6
Dir	235	233	242	231	199	247	197	176	234	242	257	255	247	243	229	235	242	237	246	234	205	199	195	257	236.6	254.7
14 Spd	8	6	13	10	9	10	6	8	16	33	40	47	50	44	44	43	42	37	30	20	11	10	11	11	22.0	50.2
Dir	215	225	194	215	229	243	202	219	235	231	237	243	256	257	259	262	262	272	275	270	265	265	285	280	252.1	256.4
15 Spd	11	14	15	12	7	4	2	3	2	5	5	6	4	6	6	4	4	6	6	4	8	4	2	1	2.7	14.6
Dir	254	266	260	269	262	242	261	217	178	157	117	138	170	271	257	291	287	49	16	347	19	21	24	340	271.1	260.1
16 Spd	3	4	4	3	4	5	11	11	14	17	10	11	10	10	16	16	12	9	5	5	8	9	9	10	7.5	16.5
Dir	317	286	262	288	217	201	181	183	180	196	197	201	181	198	233	233	228	210	185	260	273	264	250	253	217.5	196.3
17 Spd	11	16	16	16	22	20	17	10	15	17	18	18	23	25	27	26	32	31	29	28	28	22	19	15	20.6	32.1
Dir	238	258	248	242	258	262	267	233	235	231	224	236	244	248	245	245	251	252	240	249	246	240	249	233	245.7	251.1
18 Spd	18	22	25	17	10	22	21	24	18	22	21	24	20	20	21	17	16	15	8	5	8	9	7	5	14.2	24.6
Dir	238	252	245	252	257	293	285	300	327	326	322	319	318	317	306	315	311	307	334	260	273	276	265	216	293.6	245.3
19 Spd	6	6	8	8	9	10	9	10	13	19	16	17	15	14	13	15	13	10	6	3	2	10	8	7	6.8	19.4
Dir	230	196	210	193	231	204	237	225	226	241	236	295	311	298	314	320	343	14	28	324	242	283	268	281	269.2	241.4
20 Spd	4	5	3	5	6	8	11	10	10	10	8	10	11	6	9	3	8	5	3	4	8	8	6	6	3.9	11.4
Dir	221	218	259	232	241	212	203	204	201	178	187	189	232	268	69	36	81	40	15	278	276	274	250	245	219.0	231.6
21 Spd	5	7	8	9	8	8	8	8	10	14	12	11	11	11	15	16	12	9	6	7	8	7	7	1	8.0	16.1
Dir	201	216	228	221	209	217	229	235	220	215	183	189	164	176	232	220	217	192	203	254	274	267	264	60	215.6	219.6
22 Spd	4	6	7	9	6	7	6	7	8	8	7	6	7	4	3	3	4	4	4	4	4	6	3	1	2.9	8.5
Dir	249	213	197	191	195	186	191	185	184	172	181	147	147	167	125	87	59	86	61	27	2	306	327	278	175.0	190.8

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

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

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	4	6	1	1	2	2	4	6	7	9	6	6	8	7	6	5	6	6	2	5	2	3	5	3	2.7	8.7
Dir	221	264	270	148	267	216	210	218	184	172	172	174	174	172	159	144	125	116	189	293	322	319	320	294	191.6	171.9
24 Spd	2	2	4	5	5	6	7	9	9	10	7	10	7	6	14	7	5	4	7	6	10	12	11	14	3.4	14.1
Dir	274	256	208	226	233	192	193	199	188	217	177	139	116	182	273	314	5	30	346	324	318	306	278	269	249.6	268.9
25 Spd	16	16	13	16	12	2	8	2	2	5	11	12	9	6	2	2	NS	NS	NS	NS	NS	NS	NS	NS	--	16.2
Dir	264	267	248	256	255	200	266	196	122	48	37	39	39	12	211	221	NS	NS	NS	NS	NS	NS	NS	NS	--	256.2
26 Spd	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Dir	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
27 Spd	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Dir	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
28 Spd	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Dir	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
29 Spd	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Dir	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
30 Spd	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Dir	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Spd	10.7	11.3	11.5	10.2	9.6	9.3	8.7	8.6	10.4	12.3	12.3	12.8	12.7	13.6	15.2	14.4	14.5	12.7	11.6	11.6	11.1	10.5	10.6	10.5	Diurnal Average	
Dir	250.2	249.7	244.7	244.5	243.1	246.8	243.6	242.9	239.2	241.3	244.3	250.7	254.7	253.2	255.1	259.3	259.6	258.2	257.5	257.7	256.5	256.1	249.6	248.6		
Spd	33.0	28.8	31.8	26.3	21.5	22.2	21.3	23.9	31.1	32.9	40.0	47.0	50.2	43.8	44.1	43.4	42.4	39.7	40.8	32.2	31.7	30.6	31.9	34.0	Diurnal Maximum	
Dir	256.9	256.2	256.3	258.2	257.9	292.7	253.5	300.0	249.2	230.9	236.8	242.8	256.4	257.0	258.6	261.8	261.8	248.9	251.1	250.3	246.2	250.3	254.6	255.0		

Maximum Speed Value: 50 km/h on Sep 14 13:00
Maximum Daily Speed Average: 29.1 km/h on Sep 10
Maximum Diurnal Speed Average: 15.2 km/h at hour 15

Minimum Speed Value: 1 km/h on Sep 16 00:00
Minimum Daily Speed Average: 2.7 km/h on Sep 23
Minimum Diurnal Speed Average: 8.6 km/h at hour 8

Monthly Average Velocity: 11.46 km/h 250.80 deg

Speed Percentiles: $P_1 = 1.6$ $P_{10} = 4.2$ $Q_1 = 6.8$ Median = 11.3 $Q_3 = 19.2$ $P_{90} = 28.5$ $P_{99} = 42.0$

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

Hours in Service:	592
Hours of Data:	592
Hours of Missing Data:	0
Percent Operational Time:	100.0

NS - Not in service

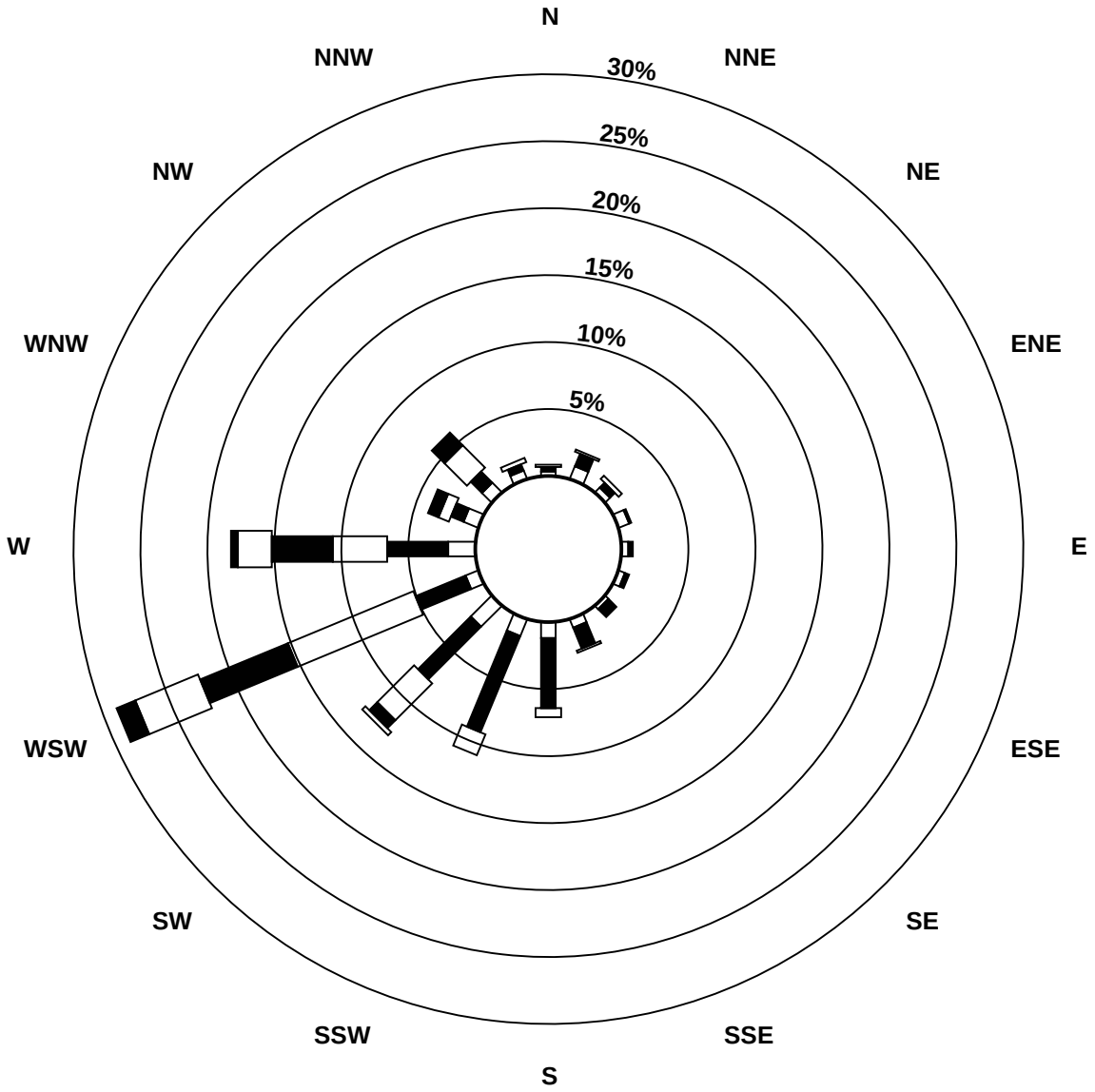
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	7	10	2	0	0	0	19
NorthEast	7	7	3	0	0	0	17
East	4	4	0	0	0	0	8
SouthEast	7	12	0	0	0	0	19
South	10	60	14	0	0	0	84
SouthWest	16	67	54	31	8	3	179
West	20	44	54	49	41	10	218
NorthWest	8	9	19	12	0	0	48
Total	79	213	146	92	49	13	592

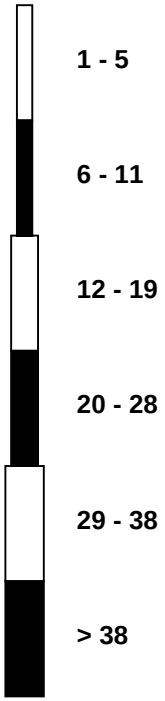
Wind Rose

Wind Speed (WS) (km/h)

Smoky Heights - September 2012



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - September 2012

Maximum Speed: 51 km/h on Sep 14 13:00

Maximum Daily Speed Average: 29.4 km/h on Sep 10

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

Minimum Daily Speed Average: 5.2 km/h on Sep 23

Maximum Diurnal Speed Average: 19.6 km/h at hour 15

Minimum Diurnal Speed Average: 10.7 km/h at hour 5

Monthly Average Speed: 14.66 km/h

Percentiles: P_1 = 2.1 P_{10} = 5.2 Q_1 = 7.5 Median = 11.9 Q_3 = 19.6 P_{90} = 28.5 P_{99} = 42.4

Hours in Service:	592
Hours of Data:	592
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	4	7	10	9	10	8	7	5	8	8	9	9	8	7	9	6	6	6	7	7	10	13	16	17	8.5	17.4
2-Sep	16	15	6	7	14	17	17	18	26	27	26	20	29	32	36	34	39	40	41	29	26	24	19	15	23.9	40.9
3-Sep	16	18	17	18	19	16	17	23	31	33	29	26	28	27	26	28	31	32	24	17	15	15	11	15	22.1	32.9
4-Sep	14	15	15	14	13	16	16	15	18	22	25	25	23	25	25	23	21	20	18	26	22	17	17	15	19.1	25.5
5-Sep	17	16	13	12	8	11	12	16	16	19	24	24	23	20	20	18	18	16	14	10	11	10	10	8	15.2	24.2
6-Sep	8	8	9	9	9	9	8	8	12	14	17	20	18	20	20	19	20	20	17	16	15	13	16	22	14.4	21.6
7-Sep	20	19	19	13	13	10	9	11	14	13	12	8	6	5	8	6	7	7	6	2	2	4	10	6	9.7	20.1
8-Sep	6	8	10	12	11	10	8	9	14	14	12	12	13	13	11	10	9	10	6	3	12	13	12	20	10.8	19.6
9-Sep	19	7	11	10	8	7	9	10	9	10	14	11	10	9	10	9	26	27	14	20	31	23	15	12	13.8	31.0
10-Sep	20	27	32	26	20	20	21	18	23	28	35	41	41	35	34	32	27	27	37	32	32	31	32	34	29.4	41.3
11-Sep	33	29	23	21	18	20	19	20	28	32	28	27	26	36	36	37	34	25	38	25	19	19	20	21	26.4	37.6
12-Sep	18	15	18	17	14	14	13	14	15	19	28	35	32	31	38	38	32	31	26	26	15	6	9	6	21.2	38.4
13-Sep	10	12	11	7	8	9	6	9	15	24	30	31	27	23	29	29	30	24	12	7	9	7	14	9	16.4	31.1
14-Sep	8	7	13	10	9	10	7	8	16	33	40	47	51	44	44	44	43	38	30	20	11	10	11	11	23.6	50.8
15-Sep	12	14	15	12	7	5	3	3	2	5	5	6	7	8	8	6	8	7	6	4	8	5	3	1	6.7	14.7
16-Sep	3	4	4	4	4	5	11	11	15	17	10	12	11	12	17	16	13	9	6	5	8	9	9	10	9.3	17.0
17-Sep	11	16	16	16	22	20	17	10	15	18	19	18	24	26	28	27	32	32	29	29	28	22	20	15	21.1	32.3
18-Sep	18	23	25	17	10	23	21	24	18	22	22	24	21	21	22	18	17	16	8	6	8	9	7	6	16.9	24.6
19-Sep	6	7	9	8	9	11	9	10	13	20	17	18	16	15	14	16	13	10	7	5	6	10	9	7	11.0	19.5
20-Sep	5	5	4	5	7	8	11	10	10	10	9	10	12	11	10	7	8	6	4	5	8	8	6	7	7.8	12.4
21-Sep	5	7	8	9	8	8	9	8	10	14	12	11	12	13	16	16	12	9	6	7	8	7	7	2	9.4	16.4
22-Sep	4	6	8	9	6	7	6	7	8	8	7	6	7	6	5	4	4	4	5	4	4	6	4	3	5.7	8.6
23-Sep	4	6	3	2	2	3	4	6	7	9	6	7	8	7	7	6	6	6	3	5	2	4	5	4	5.2	8.7
24-Sep	3	3	5	6	5	6	7	9	9	10	8	10	7	9	14	9	6	5	7	6	10	12	11	14	8.0	14.4
25-Sep	16	16	14	16	12	7	8	3	3	5	11	12	9	7	3	2	NS	NS	NS	NS	NS	NS	NS	NS	--	16.3
26-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
27-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
28-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
29-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
30-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
	12.0	12.3	12.6	11.6	10.7	11.3	11.0	11.4	14.2	17.3	18.2	18.9	18.8	18.5	19.6	18.4	19.2	17.8	15.4	13.2	13.3	12.3	12.3	11.6	Diurnal Average	
	33.1	28.9	31.9	26.4	21.6	22.6	21.4	24.3	31.3	33.2	40.4	47.5	50.8	44.5	44.5	43.7	42.8	39.9	40.9	32.3	31.8	30.7	31.9	34.1	Diurnal Maximum	

NS - Not in service

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

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - September 2012

Maximum Value: 94.5 deg on Sep 19 21:00

Minimum Value: 2.3 deg on Sep 4 02:00

Percentiles: P_1 = 2.8 P_{10} = 4.4 Q_1 = 6.9 Median = 11.7 Q_3 = 19.8 P_{90} = 40.6 P_{99} = 78.4

Hours in Service:	592
Hours of Data:	592
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	57	48	9	21	36	31	44	72	23	19	32	28	81	46	21	35	44	38	28	22	26	10	9	11	80.6
2-Sep	8	7	75	20	4	4	3	10	4	4	4	8	9	16	6	10	5	6	4	4	5	5	5	6	74.9
3-Sep	5	5	7	5	6	4	6	4	5	9	8	11	11	13	14	11	9	7	5	3	3	15	28	4	27.8
4-Sep	3	2	4	4	3	4	4	5	5	7	7	14	14	15	12	10	7	8	18	5	6	5	5	5	17.8
5-Sep	2	4	4	20	17	21	9	7	12	15	14	13	18	18	21	15	13	18	5	8	8	5	11	27	26.9
6-Sep	11	7	5	9	4	11	13	17	7	13	14	11	16	15	14	18	11	7	6	7	10	14	7	3	17.8
7-Sep	5	3	4	10	7	49	12	13	14	18	18	52	66	88	59	58	47	22	9	56	21	15	4	18	88.4
8-Sep	14	11	10	6	7	13	10	9	14	9	13	15	14	35	24	25	32	12	11	43	29	59	27	22	59.2
9-Sep	70	84	13	15	26	29	16	15	22	48	11	20	31	48	58	35	18	15	29	14	12	7	11	38	83.9
10-Sep	6	7	4	5	5	7	6	9	9	6	7	6	8	10	7	9	8	9	5	5	4	4	3	3	9.7
11-Sep	3	5	3	5	3	3	4	4	5	7	13	9	7	10	11	10	14	19	6	4	5	3	4	5	18.8
12-Sep	4	7	3	3	6	5	7	5	6	6	9	8	7	8	8	7	6	5	5	4	4	13	13	47	47.0
13-Sep	11	4	17	29	27	14	30	19	6	7	6	10	13	13	12	11	9	6	12	28	30	17	8	10	30.3
14-Sep	20	27	8	14	5	7	15	11	10	8	8	8	8	10	8	7	8	8	7	6	9	6	10	4	26.6
15-Sep	16	5	4	9	17	40	49	28	58	24	29	29	67	50	52	68	68	34	10	20	16	24	43	30	68.3
16-Sep	25	20	21	22	16	10	5	11	9	13	17	19	26	29	18	19	15	12	12	16	5	11	17	18	29.3
17-Sep	15	6	6	9	5	4	5	11	8	7	10	12	11	10	10	11	6	8	4	6	4	4	15	5	15.4
18-Sep	9	4	3	5	4	12	4	11	10	9	12	12	19	18	14	16	13	12	8	41	17	13	20	24	40.9
19-Sep	14	10	13	18	11	14	14	10	14	7	18	18	16	26	19	18	15	16	11	55	95	10	14	9	94.5
20-Sep	47	23	27	14	15	10	7	9	7	9	20	19	25	68	30	70	19	19	14	45	12	4	19	38	70.5
21-Sep	19	9	6	10	7	7	8	10	4	7	14	19	13	25	14	13	16	15	19	13	4	13	17	69	69.1
22-Sep	48	14	13	7	10	7	9	9	6	10	14	24	21	44	59	52	17	16	23	21	28	9	43	65	64.5
23-Sep	58	7	93	69	25	45	20	18	7	8	17	18	21	25	30	33	19	12	55	10	41	23	10	35	93.4
24-Sep	72	67	62	29	9	20	9	6	10	22	29	12	23	41	16	35	14	35	12	6	9	4	17	12	71.6
25-Sep	9	8	20	8	15	79	14	71	45	26	8	12	15	42	74	38	NS	NS	NS	NS	NS	NS	NS	NS	79.0
26-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
27-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
28-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
29-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
30-Sep	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
	71.6	83.9	93.4	68.8	36.0	79.0	48.6	72.3	57.8	48.4	31.6	52.3	80.6	88.4	74.1	70.5	68.3	37.7	54.7	56.3	94.5	59.2	43.5	69.1	

NS - Not in service

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.5 ppb on Sep 23 22:00 Maximum Daily Average: 0.8 ppb on Sep 23

Minimum Value: 0 ppb on Sep 6 18:00 Minimum Daily Average: 0.0 ppb on Sep 12
Maximum Diurnal Average: 0.3 ppb at hour 1 Minimum Diurnal Average: 0.1 ppb at hour 7
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} = 0.4 P_{99} = 1.4

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	33
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	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	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	0.0	0.2
3-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.5
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	0.1
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	C	C	C	0	0	0	0	0	0	0	0.1	0.3
7-Sep	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
8-Sep	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
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	0.3
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	0.0
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	0.2
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	0.0	0.1
13-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.2	1.4
14-Sep	2	1	0	0	A	0	0	0	0	0	D	D	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.2
15-Sep	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
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	0.3
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	0.1
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	0.2	0.5
19-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	0	0	0.4	1.2
20-Sep	1	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.4	1.5
21-Sep	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
22-Sep	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	0	1	1	0	0	1	1	1	1	0.4	0.8
23-Sep	1	0	0	0	A	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	2	3	2	1	0.8	2.5
24-Sep	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
25-Sep	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0.2	1.0
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	0.0	0.1
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	0.3
28-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
29-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
30-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
	0.3	0.2	0.2	0.1	--	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.2	Diurnal Average	
	2.2	0.8	0.7	0.6	--	0.7	0.6	0.5	0.4	0.6	0.9	0.8	0.7	0.6	1.0	1.1	1.4	0.8	0.5	1.5	1.7	2.5	1.8	1.4	Diurnal Maximum	

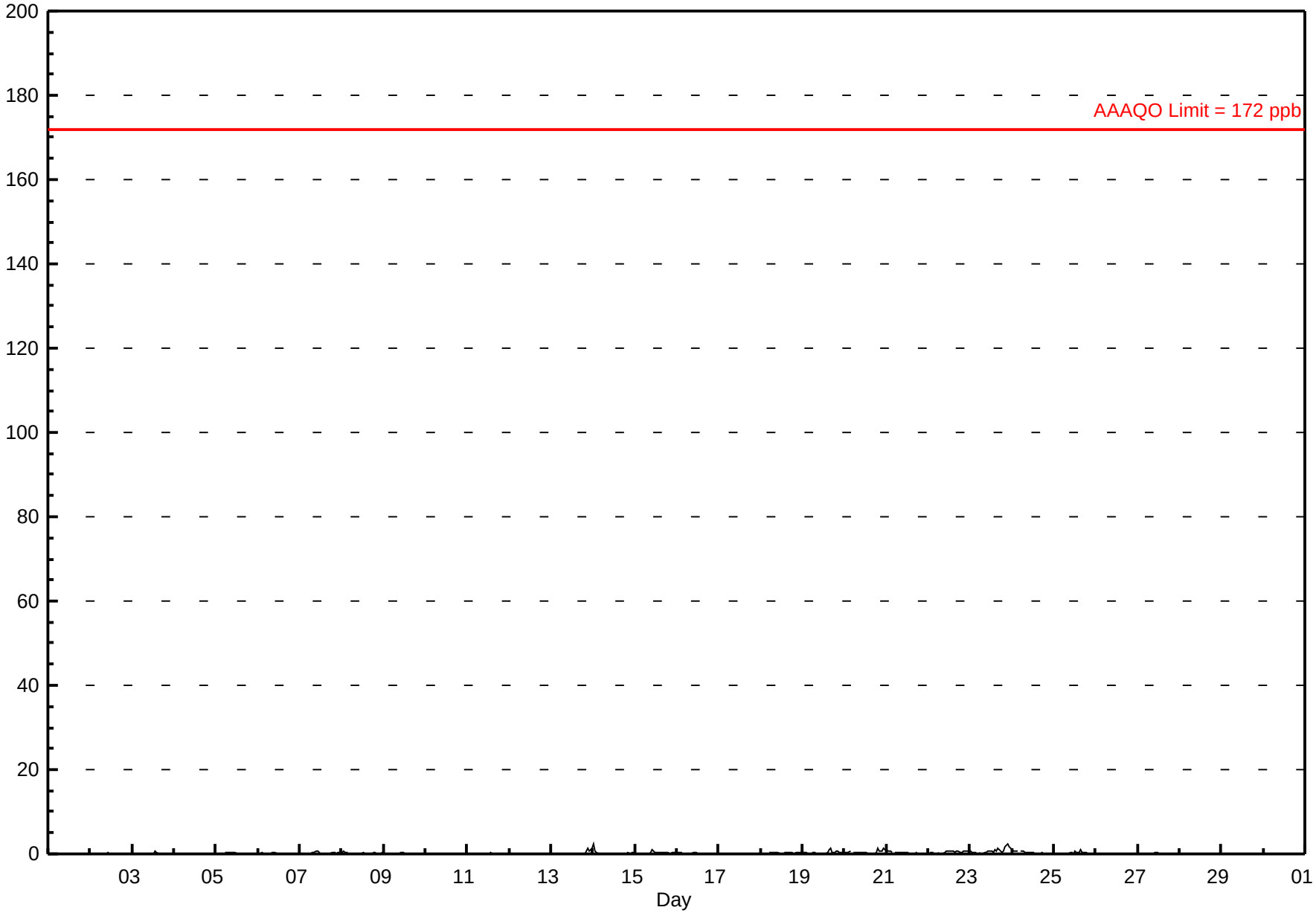
C - Calibration D - DAS Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - September 2012

Maximum Value: 3.7 ppb on Sep 14 01:00

Maximum Daily Average: 1.1 ppb on Sep 23

Minimum Value: 0 ppb on Sep 26 04:00

Minimum Daily Average: 0.1 ppb on Sep 12

Maximum Diurnal Average: 0.4 ppb at hour 1

Minimum Diurnal Average: 0.2 ppb at hour 6

Monthly Average: 0.32 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.7 P_{99} = 2.2

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	33
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	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
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	0.5
3-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.7
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	0.1	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	0.3	0.5
6-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0.2	0.5
7-Sep	0	0	0	0	A	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0.4	0.9
8-Sep	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
9-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0.3	1.0
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	0.1	0.2
11-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.6
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	0	0	0	0	0	0	0	0	2	3	2	3	0.5	2.6
14-Sep	4	1	1	0	A	0	0	0	0	0	D	D	0	0	0	0	0	0	0	0	0	0	1	0	0.5	3.7
15-Sep	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.4	1.5
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	0.2	0.4
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	0.2	0.3
18-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.4	0.8
19-Sep	1	0	0	0	A	0	0	0	0	0	0	0	0	0	1	2	2	1	0	1	1	1	1	0	0.5	1.7
20-Sep	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	1	2	1	0.7	3.1
21-Sep	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.1
22-Sep	0	1	0	0	A	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.4
23-Sep	1	1	0	1	A	0	0	0	0	0	1	1	1	1	2	1	2	1	1	1	2	3	2	2	1.1	2.8
24-Sep	1	1	1	1	A	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.5
25-Sep	0	0	0	0	A	0	0	0	0	0	1	0	1	1	0	3	1	0	0	0	0	0	0	0	0.5	3.2
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	1	0	0	0	0	0	0	0	0.2	0.6
28-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
29-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	0.2
30-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
	0.4	0.3	0.3	0.3	--	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
	3.7	1.2	0.8	0.9	--	0.9	0.7	0.7	0.5	0.8	1.5	1.0	1.3	0.8	2.2	3.2	2.2	1.4	1.0	3.1	2.1	2.8	2.3	2.5	Diurnal Maximum	

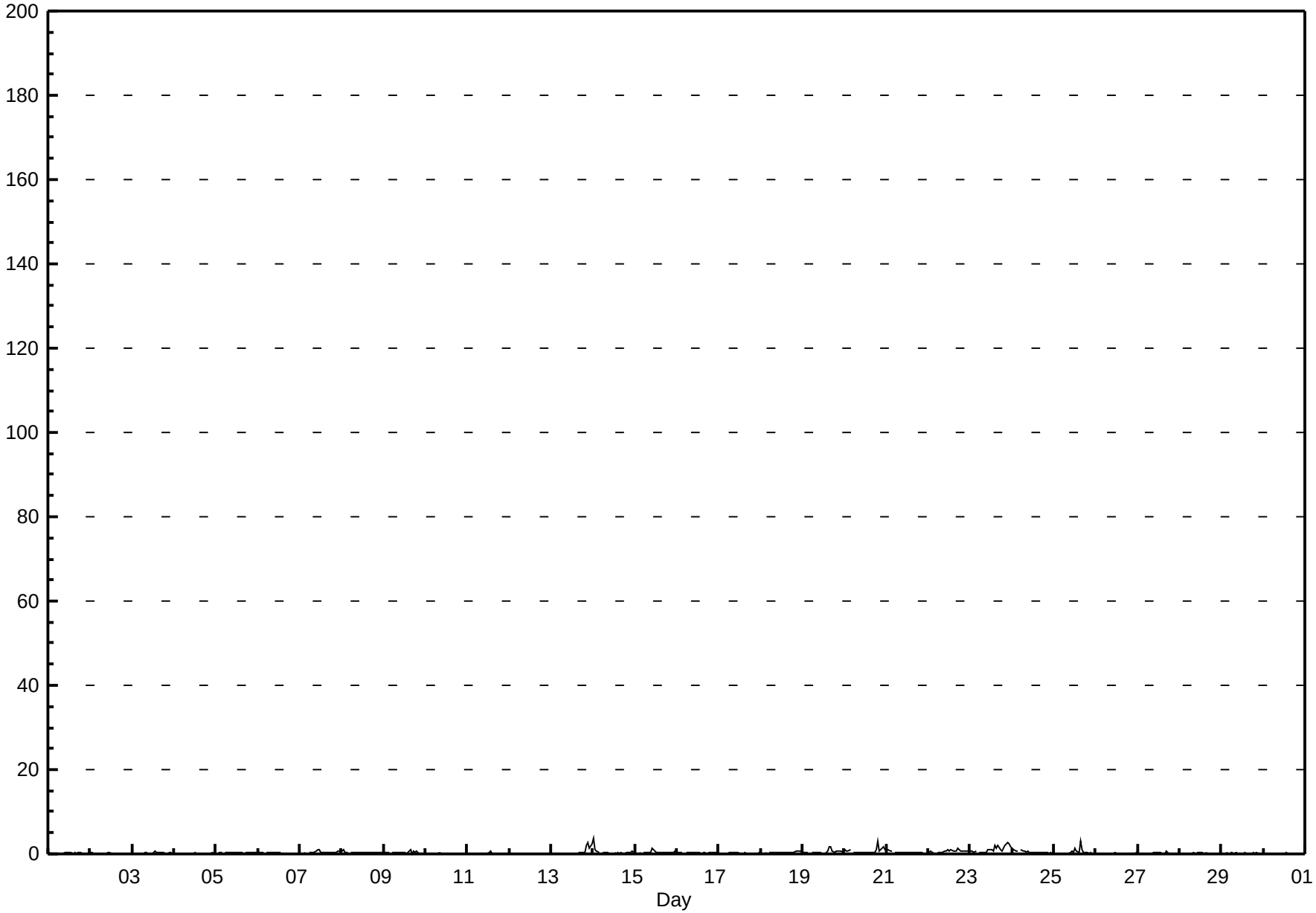
C - Calibration D - DAS Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

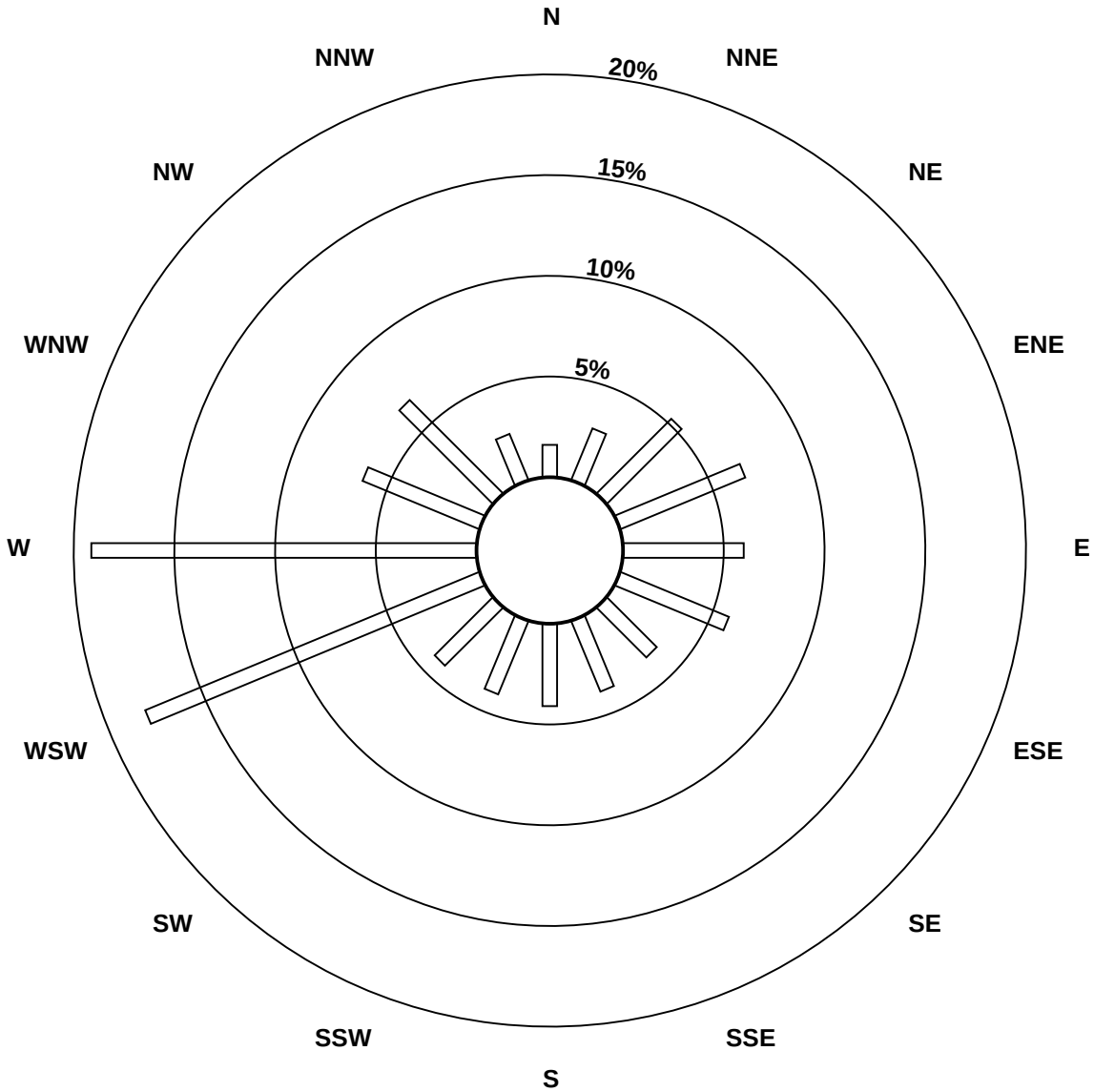
Beaverlodge - September 2012



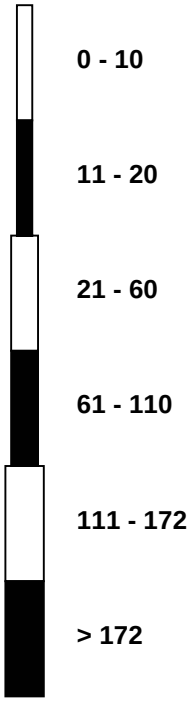
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Beaverlodge - September 2012



Pollutant Classes (ppb)

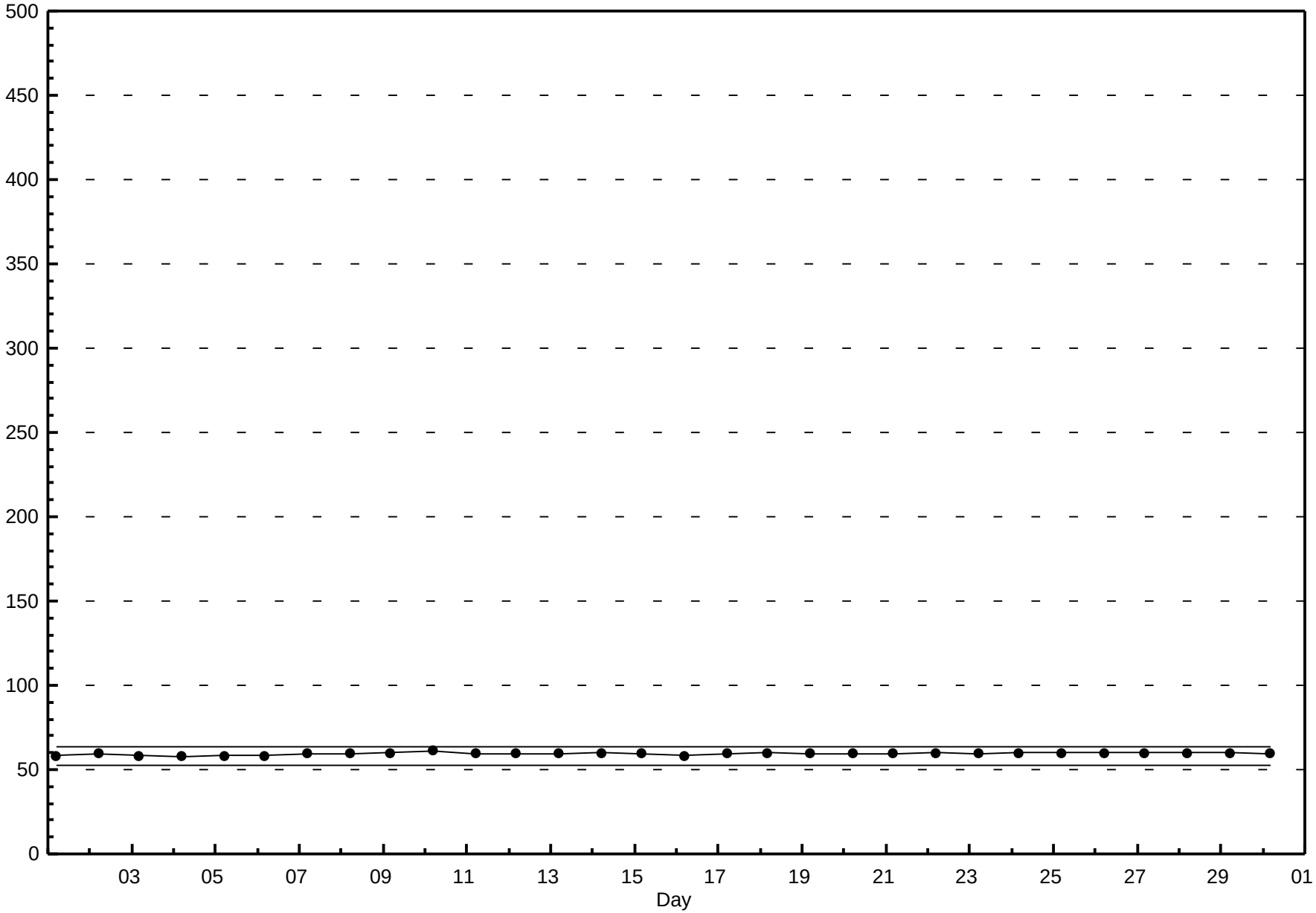


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Beaverlodge - September 2012



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 17.5 ppb on Sep 24 11:00
Maximum Daily Average: 4.6 ppb on Sep 23

Minimum Value: 0 ppb on Sep 11 02:00
Maximum Diurnal Average: 5.2 ppb at hour 6
Monthly Average: 2.25 ppb

Minimum Daily Average: 0.9 ppb on Sep 3
Minimum Diurnal Average: 0.9 ppb at hour 17
Percentiles: P_1 = 0.3 P_{10} = 0.5 Q_1 = 0.8 Median = 1.6 Q_3 = 3.1 P_{90} = 4.8 P_{99} = 9.2

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	3	2	2	2	A	7	6	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.9	7.3
2-Sep	1	1	1	1	A	4	2	1	1	1	0	0	1	1	2	2	4	4	1	1	1	1	1	1	1.4	3.9
3-Sep	1	0	1	0	A	3	2	1	1	1	0	0	0	0	0	0	0	0	0	2	3	2	1	1	0.9	2.8
4-Sep	1	1	1	2	A	5	3	4	3	1	1	0	0	0	0	1	1	1	1	1	1	1	1	4	1.4	4.6
5-Sep	2	0	1	1	A	4	5	3	3	2	1	1	1	1	1	1	1	0	1	3	2	3	2	4	1.8	5.4
6-Sep	3	2	2	2	A	5	5	5	2	C	C	C	C	C	2	2	1	1	1	1	3	1	1	1	2.2	5.4
7-Sep	1	1	1	1	A	5	3	3	3	2	1	1	1	1	1	1	1	1	3	5	5	4	2	3	2.0	5.0
8-Sep	3	4	4	5	A	7	6	5	4	3	4	1	2	1	0	0	1	1	3	3	3	5	3	3	3.1	6.8
9-Sep	2	2	2	2	A	7	8	4	4	4	2	2	1	1	1	1	1	2	1	2	1	1	2	1	2.2	7.7
10-Sep	1	1	1	1	A	4	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1.0	3.9
11-Sep	2	0	0	0	A	2	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	4	3	1	1.0	3.7
12-Sep	2	1	0	0	A	5	4	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	6.3
13-Sep	1	4	3	4	A	3	4	3	2	1	0	1	0	1	0	1	0	1	3	8	3	3	4	4	2.3	7.7
14-Sep	3	3	3	3	A	7	3	1	1	1	D	D	2	2	1	1	1	1	1	2	3	2	2	2	2.2	7.0
15-Sep	1	1	1	2	A	5	5	7	11	7	3	1	1	0	0	0	0	0	0	1	2	7	4	4	2.8	10.9
16-Sep	4	3	3	3	A	6	5	4	3	3	3	2	1	1	0	0	0	1	2	2	2	2	1	1	2.2	6.0
17-Sep	1	1	1	1	A	3	3	2	3	2	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1.1	3.1
18-Sep	1	1	1	1	A	3	3	4	2	1	1	1	1	1	1	1	0	2	1	2	2	2	2	2	1.3	3.5
19-Sep	2	3	3	4	A	7	6	5	4	3	2	1	0	1	1	1	1	1	1	2	3	2	2	3	2.5	7.1
20-Sep	3	2	2	2	A	4	4	4	7	5	3	1	1	0	0	0	1	1	1	2	2	3	5	5	2.5	7.2
21-Sep	4	4	3	2	A	5	4	6	5	4	4	3	2	1	1	1	1	2	8	4	3	4	2	2	3.3	7.6
22-Sep	2	2	2	2	A	4	2	2	3	3	4	3	2	1	1	1	1	1	1	2	3	3	3	3	2.3	4.2
23-Sep	3	5	5	9	A	9	11	9	10	6	4	3	2	2	1	1	1	2	5	3	4	4	3	3	4.6	11.2
24-Sep	4	5	5	4	A	6	3	9	6	8	17	5	4	4	1	1	1	2	2	2	1	1	1	2	4.1	17.5
25-Sep	2	2	2	5	A	9	8	9	4	2	3	2	1	1	1	2	2	3	5	5	3	3	3	3	3.5	9.2
26-Sep	4	5	5	5	A	8	6	6	4	2	2	2	1	1	1	1	1	1	3	3	4	3	2	3	3.2	8.0
27-Sep	2	3	3	3	A	5	4	7	5	3	4	4	2	1	1	1	1	2	3	2	1	2	2	2	2.7	6.8
28-Sep	2	2	3	3	A	6	4	5	11	5	9	5	4	7	6	7	2	1	1	1	1	1	1	1	3.8	11.0
29-Sep	1	1	1	1	A	3	4	4	4	4	2	1	0	1	1	1	1	1	1	1	1	1	2	2	1.6	3.9
30-Sep	2	2	1	1	A	4	2	1	1	0	0	1	0	1	1	0	0	0	1	1	1	2	3	3	1.2	3.7
	2.1	2.0	2.0	2.4	--	5.2	4.3	4.3	3.8	2.7	2.7	1.5	1.2	1.1	0.9	1.0	0.9	1.2	1.8	2.1	2.1	2.3	2.0	2.2	Diurnal Average	
	4.3	5.2	5.3	9.4	--	9.2	11.2	9.2	11.0	8.3	17.5	5.3	4.5	7.1	5.8	7.2	3.8	3.5	7.6	7.7	4.7	6.8	4.7	4.8	Diurnal Maximum	

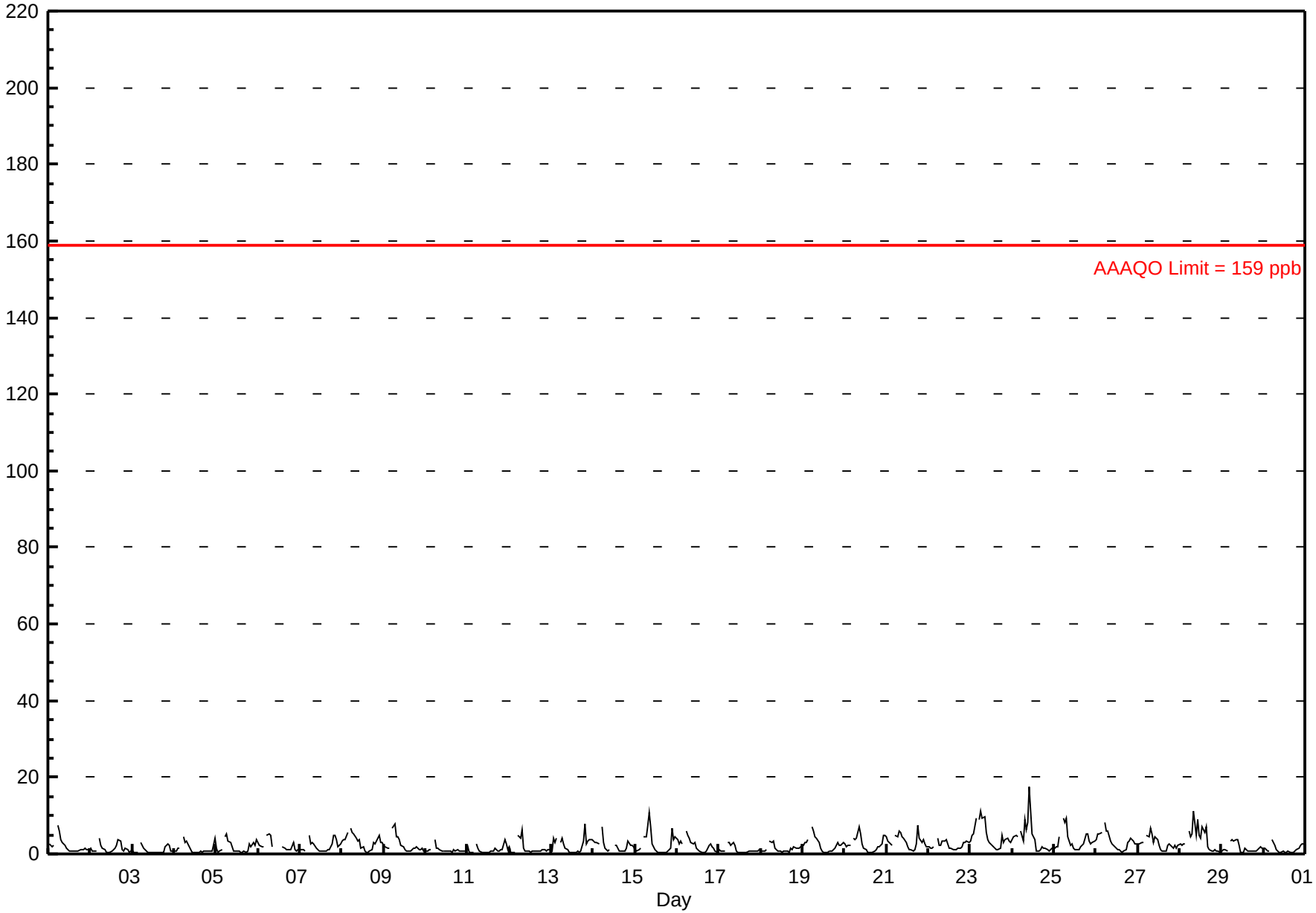
C - Calibration D - DAS Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - September 2012

Maximum Value: 83.0 ppb on Sep 24 11:00

Maximum Daily Average: 10.3 ppb on Sep 24

Minimum Value: 1 ppb on Sep 11 03:00

Minimum Daily Average: 2.0 ppb on Sep 3

Maximum Diurnal Average: 8.7 ppb at hour 6

Minimum Diurnal Average: 2.3 ppb at hour 15

Monthly Average: 4.49 ppb

Percentiles: P_1 = 0.6 P_{10} = 1.1 Q_1 = 1.6 Median = 3.0 Q_3 = 5.8 P_{90} = 9.0 P_{99} = 22.7

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	3	3	3	4	A	13	11	6	4	3	2	2	1	1	1	1	1	1	2	4	2	3	2	3	3.3	12.9
2-Sep	3	1	1	1	A	9	4	3	2	1	1	1	1	1	4	7	17	15	2	2	4	3	1	4	3.7	17.0
3-Sep	3	1	2	1	A	7	2	2	1	1	1	1	1	1	1	1	1	1	1	4	5	8	1	1	2.0	8.4
4-Sep	1	1	2	2	A	7	6	6	4	2	2	1	1	1	1	1	1	2	3	2	2	2	3	7	2.5	7.0
5-Sep	6	1	2	2	A	7	9	6	4	3	2	1	1	1	1	1	1	1	1	8	3	8	4	5	3.4	8.7
6-Sep	4	3	2	3	A	8	7	6	2	C	C	C	C	C	3	3	2	2	2	3	7	3	2	2	3.5	7.5
7-Sep	2	1	1	1	A	9	3	5	3	2	2	1	1	1	1	1	1	2	5	10	9	6	2	3	3.2	9.9
8-Sep	5	6	5	8	A	10	6	6	5	4	5	2	3	1	1	1	1	2	4	6	6	11	6	5	4.7	10.6
9-Sep	5	4	4	4	A	10	10	6	8	6	2	2	2	1	2	4	2	3	3	3	2	2	6	1	4.1	10.5
10-Sep	2	2	3	2	A	7	3	3	4	2	3	2	1	1	1	1	8	5	2	2	2	2	3	1	2.8	8.1
11-Sep	4	1	1	1	A	5	3	2	2	1	1	1	1	1	2	5	8	2	2	4	4	6	6	2	2.8	8.5
12-Sep	4	3	2	1	A	8	7	9	6	1	2	2	1	5	2	2	1	2	3	4	3	2	2	2	3.2	8.8
13-Sep	2	7	7	8	A	7	10	6	4	2	1	2	2	1	3	2	1	2	7	14	4	8	4	4	4.7	14.1
14-Sep	4	4	3	3	A	12	6	2	1	6	D	D	13	15	14	9	1	2	3	5	7	8	7	3	6.1	14.9
15-Sep	1	1	2	2	A	7	6	16	16	11	4	2	1	1	1	1	1	1	1	3	4	17	6	9	4.8	16.6
16-Sep	6	3	5	7	A	10	6	5	4	4	4	3	1	1	1	1	1	4	6	6	3	3	1	1	3.6	9.6
17-Sep	2	1	1	1	A	5	8	4	6	5	2	1	1	1	2	1	1	2	1	2	2	2	2	2	2.4	7.9
18-Sep	1	1	1	3	A	5	6	7	2	1	1	1	1	1	1	1	10	32	3	7	5	3	2	3	4.3	31.9
19-Sep	3	3	3	5	A	9	14	8	10	5	3	2	1	1	1	1	4	2	2	7	6	3	2	4	4.4	13.6
20-Sep	4	2	4	3	A	7	9	8	22	12	4	20	49	1	1	1	1	2	2	4	2	4	12	6	7.8	49.0
21-Sep	7	4	3	3	A	7	8	10	10	5	6	4	4	2	1	1	2	7	15	11	13	7	4	3	6.0	15.0
22-Sep	4	2	6	4	A	7	4	5	5	6	8	4	3	2	1	1	2	2	2	3	4	4	5	3	3.8	7.5
23-Sep	4	9	9	16	A	13	15	11	12	8	5	4	3	2	2	1	2	3	10	4	5	5	4	3	6.5	16.1
24-Sep	7	6	6	5	A	14	6	25	11	18	83	8	10	14	2	1	2	3	3	3	2	2	2	3	10.3	83.0
25-Sep	2	2	3	8	A	13	13	14	9	4	3	3	2	1	2	2	3	5	9	10	5	3	4	5	5.4	14.0
26-Sep	6	9	9	7	A	12	8	9	6	3	3	2	2	5	1	1	2	3	6	6	5	5	5	3	5.1	12.1
27-Sep	4	3	3	4	A	9	7	9	7	4	6	5	3	2	2	2	2	7	10	4	3	6	3	3	4.6	9.6
28-Sep	3	3	4	3	A	9	6	11	23	8	15	9	40	38	9	11	8	4	2	1	2	2	1	2	9.4	40.5
29-Sep	1	3	3	1	A	7	7	5	6	5	5	1	2	11	6	6	1	1	2	3	2	4	3	3	3.8	11.1
30-Sep	2	2	2	3	A	7	5	3	1	1	1	1	2	1	2	1	1	1	2	2	3	4	6	4	2.5	6.9
	3.5	3.0	3.4	3.9	--	8.7	7.2	7.2	6.6	4.7	6.2	3.1	5.3	4.0	2.3	2.5	3.0	4.0	3.9	4.9	4.1	4.8	3.8	3.3	Diurnal Average	
	6.7	8.9	8.8	16.1	--	14.5	15.3	25.5	23.4	18.3	83.0	20.0	49.0	37.7	13.6	11.0	17.0	31.9	15.0	14.1	12.9	16.6	12.0	8.6	Diurnal Maximum	

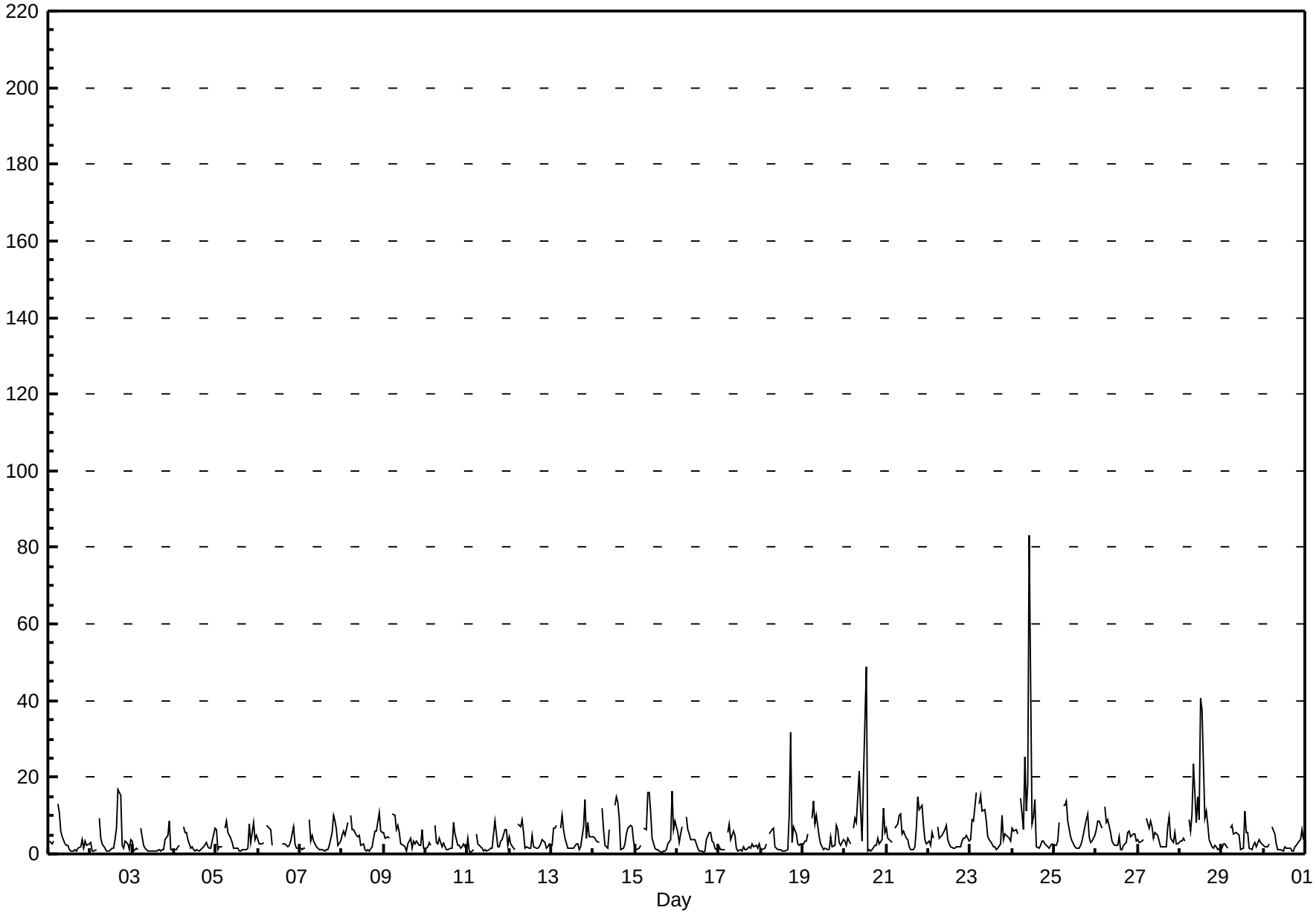
C - Calibration D - DAS Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - September 2012

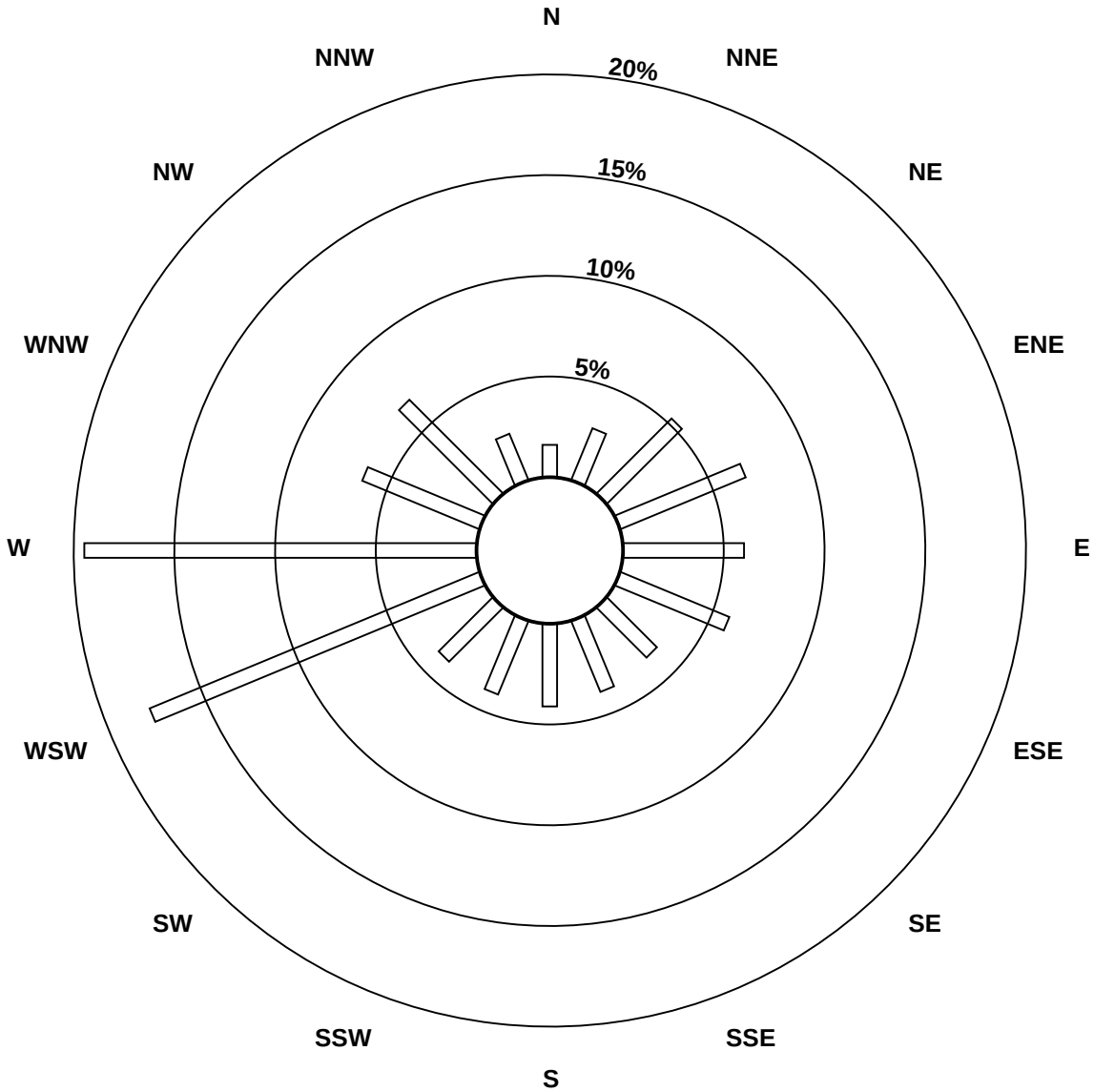


FOCUS AIR QUALITY MONITORING

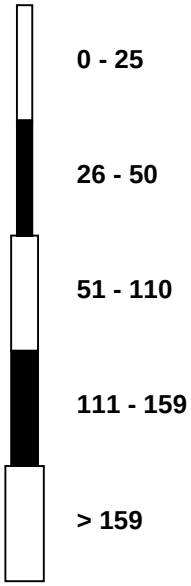
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Beaverlodge - September 2012



Pollutant Classes (ppb)

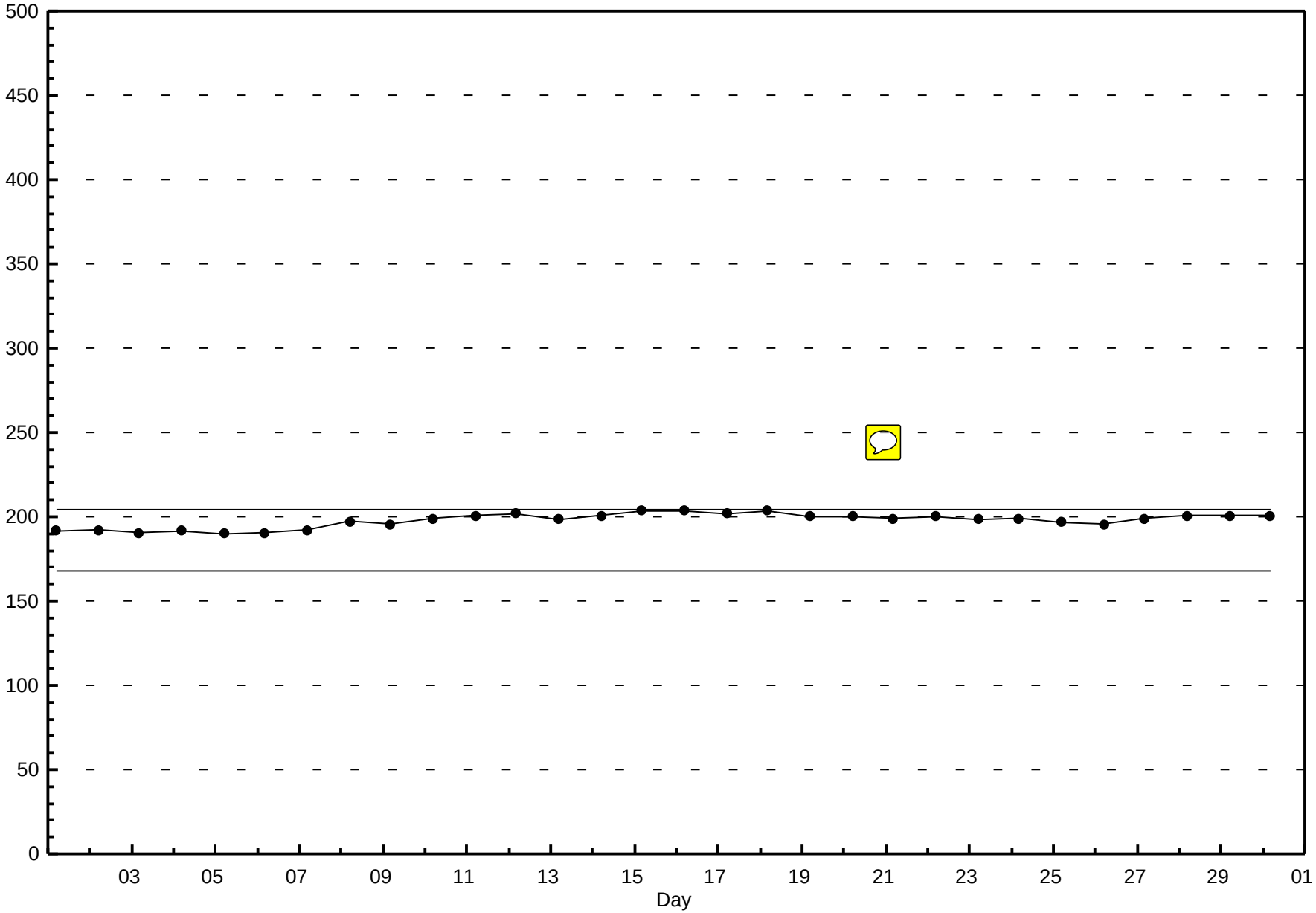


Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Beaverlodge - September 2012



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - September 2012

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

Maximum Value: 8.8 ppb on Sep 28 09:00

Maximum Daily Average: 0.8 ppb on Sep 28

Minimum Value: 0 ppb on Sep 1 01:00

Minimum Daily Average: 0.0 ppb on Sep 3

Maximum Diurnal Average: 1.6 ppb at hour 9

Minimum Diurnal Average: 0.0 ppb at hour 1

Monthly Average: 0.25 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.1 P_{90} = 0.7 P_{99} = 3.1

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	A	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
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	0.0	0.1
4-Sep	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.4
5-Sep	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
6-Sep	0	0	0	0	A	0	0	2	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.2	1.7
7-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
8-Sep	0	0	0	0	A	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.9
9-Sep	0	0	0	0	A	0	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0
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	0.1	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	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.7
13-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
14-Sep	0	0	0	0	A	0	0	0	0	0	D	D	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	1	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	6.5
16-Sep	0	0	0	0	A	0	0	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.8
17-Sep	0	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
18-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0.1	1.8
19-Sep	0	0	0	0	A	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.6
20-Sep	0	0	0	0	A	0	0	0	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	3.5
21-Sep	0	0	0	0	A	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.1
22-Sep	0	0	0	0	A	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
23-Sep	0	0	0	0	A	0	1	1	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	4.6
24-Sep	0	0	0	0	A	0	0	3	2	2	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0.6	3.8
25-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	0.3	0.9
26-Sep	0	0	1	1	A	1	1	2	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.7	3.2
27-Sep	0	0	0	0	A	0	0	1	3	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0.5	2.6
28-Sep	0	0	0	0	A	0	0	0	9	1	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0.8	8.8
29-Sep	0	0	0	0	A	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
30-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
	0.0	0.0	0.0	0.0	--	0.1	0.1	0.7	1.6	1.0	0.8	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.1	0.3	0.8	0.9	--	0.9	0.7	3.0	8.8	4.4	3.8	1.5	1.4	1.7	0.7	0.9	1.8	0.8	0.3	0.2	0.1	0.1	0.1	0.1	Diurnal Maximum	

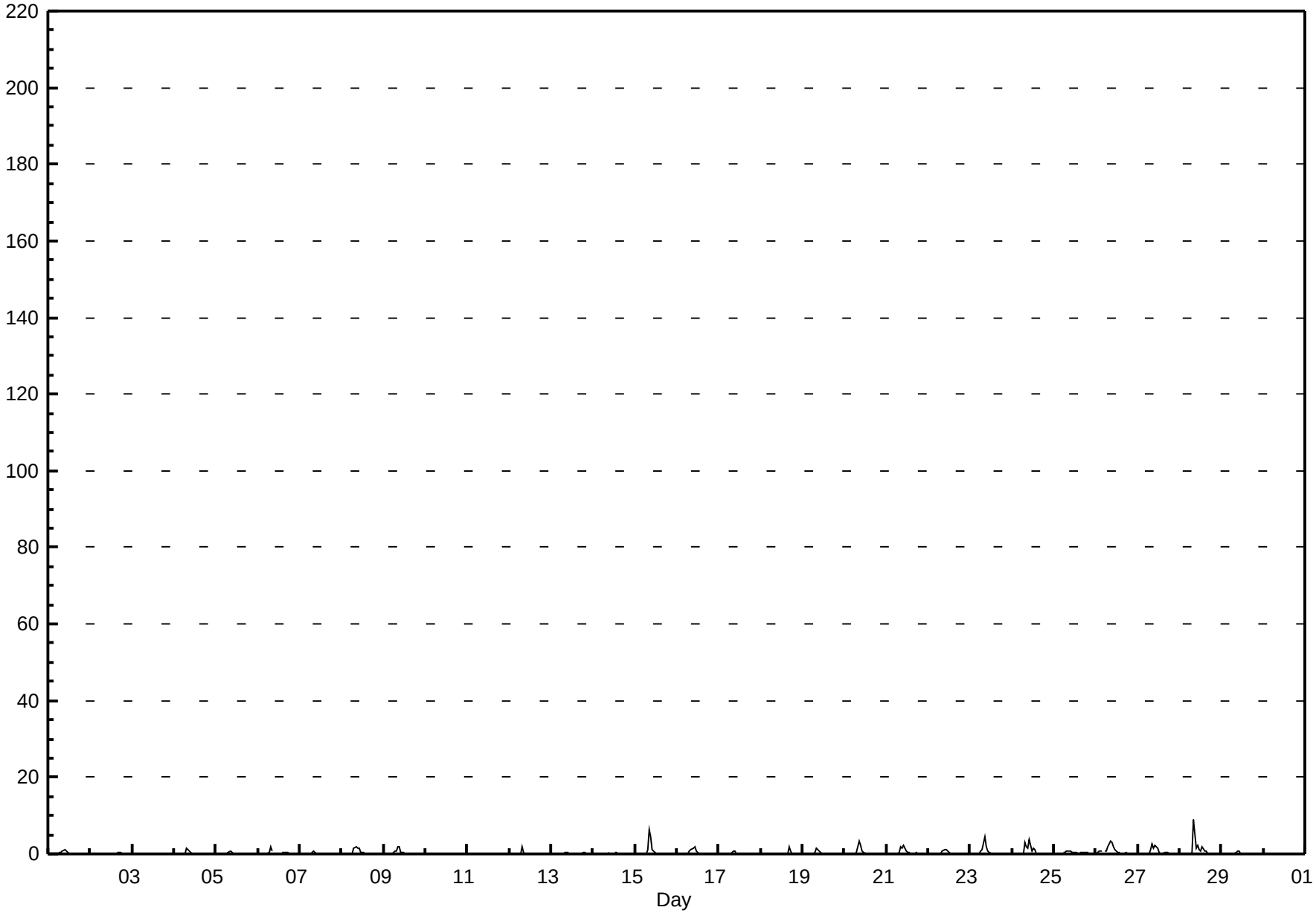
C - Calibration D - DAS Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Beaverlodge - September 2012



Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - September 2012

Maximum Value: 99.6 ppb on Sep 18 17:00

Maximum Daily Average: 6.4 ppb on Sep 18

Minimum Value: 0 ppb on Sep 2 00:00

Minimum Daily Average: 0.2 ppb on Sep 3

Maximum Diurnal Average: 4.6 ppb at hour 9

Minimum Diurnal Average: 0.1 ppb at hour 1

Monthly Average: 1.19 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.1$ Median = 0.2 $Q_3 = 0.6$ $P_{90} = 2.0$ $P_{99} = 17.9$

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	A	0	3	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.0
2-Sep	0	0	0	0	A	0	0	0	0	0	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0.4	1.1
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	0.2	0.4
4-Sep	0	0	0	0	A	0	1	3	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.5	3.1
5-Sep	0	0	0	0	A	0	0	1	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0.3	1.1
6-Sep	0	0	0	0	A	0	1	3	1	C	C	C	C	C	0	1	1	1	0	1	0	0	0	0	0.5	2.9
7-Sep	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
8-Sep	0	0	0	0	A	0	1	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0.6	2.3
9-Sep	0	0	0	0	A	1	2	3	6	4	1	1	0	0	2	3	0	0	0	0	0	0	0	0	1.1	6.5
10-Sep	0	0	0	0	A	0	0	1	1	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0.4	1.1
11-Sep	0	0	0	0	A	0	0	1	1	0	1	0	1	0	0	1	1	1	0	0	0	0	0	0	0.4	1.3
12-Sep	0	0	0	0	A	0	1	4	2	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0.6	4.1
13-Sep	0	0	0	0	A	1	1	0	1	1	2	1	1	2	0	1	0	1	1	1	1	0	0	0	0.6	1.8
14-Sep	0	0	0	0	A	0	0	1	0	6	D	D	1	3	0	0	0	0	0	0	0	0	0	0	0.7	5.9
15-Sep	0	0	0	0	A	0	0	5	17	7	2	0	0	0	0	0	0	0	0	1	0	0	0	0	1.6	17.1
16-Sep	0	0	0	0	A	0	0	1	2	3	3	1	1	0	0	0	0	1	0	0	0	0	0	0	0.6	2.6
17-Sep	0	0	0	0	A	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.1
18-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	100	44	0	0	0	0	0	0	6.4	99.6
19-Sep	0	0	0	0	A	0	3	1	10	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.9	9.6
20-Sep	0	0	0	0	A	0	1	1	17	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	17.2
21-Sep	0	0	0	0	A	0	0	1	5	2	26	1	1	13	0	0	0	4	1	0	0	0	0	0	2.4	26.0
22-Sep	0	0	1	0	A	0	0	1	1	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.3
23-Sep	0	0	0	0	A	0	5	4	6	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1.0	5.8
24-Sep	0	0	0	0	A	0	0	19	5	4	11	1	18	15	0	0	0	0	0	0	0	0	0	0	3.4	19.1
25-Sep	0	0	0	1	A	1	1	2	2	3	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0.8	2.6
26-Sep	0	7	6	3	A	4	3	4	6	4	3	1	1	1	0	0	1	0	0	0	0	0	1	0	2.0	6.6
27-Sep	0	0	0	0	A	0	0	2	5	2	3	2	1	0	1	0	1	1	0	0	0	1	0	0	1.0	5.0
28-Sep	0	0	0	0	A	0	0	2	37	2	7	2	1	68	2	2	1	0	0	0	0	0	0	0	5.5	67.8
29-Sep	0	0	0	0	A	0	0	0	1	1	2	0	1	1	1	1	0	0	0	0	0	0	0	0	0.4	1.6
30-Sep	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.5
	0.1	0.3	0.3	0.2	--	0.3	0.9	2.2	4.6	2.3	2.7	0.7	1.2	3.8	0.4	0.5	3.7	2.0	0.3	0.3	0.2	0.2	0.2	0.1	Diurnal Average	
	0.3	6.6	5.7	2.9	--	3.9	4.6	19.1	36.9	8.1	26.0	2.5	18.2	67.8	2.1	2.7	99.6	44.4	0.7	1.2	0.8	0.7	0.6	0.4	Diurnal Maximum	

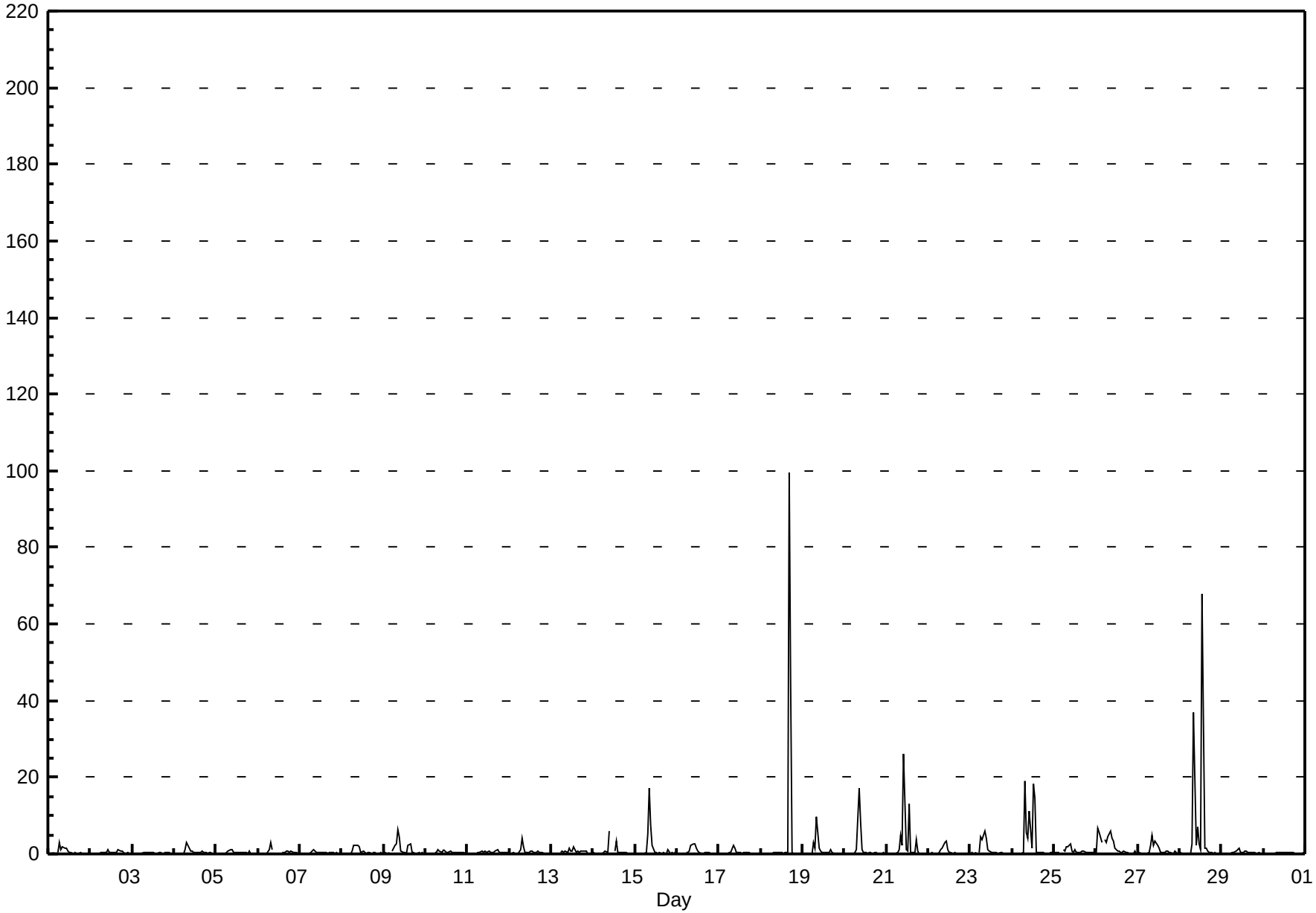
C - Calibration D - DAS Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Beaverlodge - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 21.2 ppb on Sep 24 11:00
Maximum Daily Average: 5.0 ppb on Sep 23

Minimum Value: 0 ppb on Sep 11 02:00
Maximum Diurnal Average: 5.4 ppb at hour 9
Monthly Average: 2.51 ppb

Minimum Daily Average: 0.9 ppb on Sep 3
Minimum Diurnal Average: 1.0 ppb at hour 15
Percentiles: P_1 = 0.4 P_{10} = 0.6 Q_1 = 0.9 Median = 1.6 Q_3 = 3.4 P_{90} = 5.4 P_{99} = 11.6

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	3	2	2	2	A	7	6	4	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2.1	7.4
2-Sep	1	1	1	1	A	4	2	2	1	1	1	1	1	1	2	2	4	4	1	1	1	1	1	1	1.5	4.1
3-Sep	1	0	1	0	A	3	2	1	1	1	1	0	0	0	0	0	1	0	0	2	3	2	1	1	0.9	2.8
4-Sep	1	1	1	2	A	5	3	5	4	1	1	1	0	1	1	1	1	1	1	1	1	1	1	4	1.6	4.9
5-Sep	2	1	1	1	A	4	6	4	4	2	1	1	1	1	1	1	1	1	1	3	2	3	2	4	1.9	5.5
6-Sep	3	2	2	2	A	5	6	7	3	C	C	C	C	C	2	1	1	1	1	1	3	1	1	1	2.3	6.8
7-Sep	1	1	1	1	A	5	3	4	3	2	1	1	1	1	1	1	1	1	3	5	5	4	2	3	2.1	5.0
8-Sep	3	4	4	5	A	7	6	7	6	5	5	2	2	1	0	1	1	1	3	3	3	5	3	3	3.4	6.7
9-Sep	2	2	2	2	A	7	8	5	6	5	3	2	1	1	1	1	1	2	1	2	1	1	2	1	2.5	8.3
10-Sep	1	1	1	1	A	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	4.0
11-Sep	2	0	0	0	A	2	1	1	1	0	0	1	1	1	1	1	2	1	1	1	1	4	3	1	1.1	3.6
12-Sep	2	0	0	0	A	5	4	8	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	8.0
13-Sep	1	4	3	4	A	3	4	3	2	1	1	1	1	1	0	1	0	1	4	8	3	3	4	4	2.4	7.9
14-Sep	3	3	3	3	A	7	3	1	1	1	D	D	3	3	2	1	1	1	1	2	3	2	2	2	2.3	7.0
15-Sep	1	1	1	2	A	5	5	9	17	12	4	2	1	0	0	0	0	0	1	1	2	7	4	4	3.3	17.3
16-Sep	4	3	3	3	A	6	5	5	4	4	5	2	1	1	0	0	0	1	2	3	2	2	1	0	2.5	5.9
17-Sep	1	1	1	1	A	3	3	3	4	3	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1.2	4.0
18-Sep	1	1	1	1	A	3	3	4	2	1	1	1	1	1	1	1	2	2	1	2	2	2	2	2	1.5	3.7
19-Sep	2	3	3	4	A	7	6	5	6	4	2	1	1	1	1	1	1	1	1	2	3	2	2	3	2.7	7.1
20-Sep	3	2	2	2	A	4	4	5	11	8	3	2	1	1	0	1	1	1	1	2	2	3	5	5	2.9	10.8
21-Sep	4	4	3	2	A	5	4	6	7	6	6	4	2	1	1	1	1	3	8	4	3	4	2	2	3.6	7.7
22-Sep	2	2	2	2	A	4	2	2	4	4	5	3	2	2	1	1	1	2	1	2	3	3	3	3	2.5	5.1
23-Sep	3	5	5	9	A	9	12	10	14	7	5	3	2	2	2	1	1	2	5	3	4	4	3	3	5.0	14.3
24-Sep	4	5	5	4	A	6	3	12	8	10	21	6	6	5	1	1	1	2	2	2	1	1	1	2	4.7	21.2
25-Sep	2	2	2	5	A	9	8	10	5	3	3	2	1	1	1	2	2	3	5	5	3	3	3	3	3.7	10.0
26-Sep	4	5	6	6	A	9	7	8	7	5	4	3	1	1	1	1	1	1	3	3	4	3	2	3	3.9	8.9
27-Sep	3	3	3	3	A	5	5	8	8	5	7	5	3	1	1	1	1	3	3	2	1	2	2	2	3.2	7.9
28-Sep	3	2	3	3	A	6	4	6	20	6	11	6	5	9	7	8	2	1	1	1	1	1	1	1	4.6	19.8
29-Sep	1	1	1	1	A	3	4	4	4	4	3	1	1	2	1	1	1	1	1	1	1	1	2	2	1.8	4.4
30-Sep	2	2	1	1	A	4	2	1	1	1	1	1	1	1	1	1	1	0	1	1	2	2	3	3	1.3	3.7
	2.1	2.0	2.1	2.4	--	5.2	4.4	5.0	5.4	3.7	3.5	1.9	1.4	1.3	1.0	1.1	1.1	1.3	1.9	2.2	2.1	2.3	2.0	2.2	Diurnal Average	
	4.3	5.5	5.9	9.3	--	9.5	11.7	11.9	19.8	11.6	21.2	6.3	5.9	8.9	6.5	8.1	4.1	3.7	7.7	7.9	4.7	6.7	4.8	4.8	Diurnal Maximum	

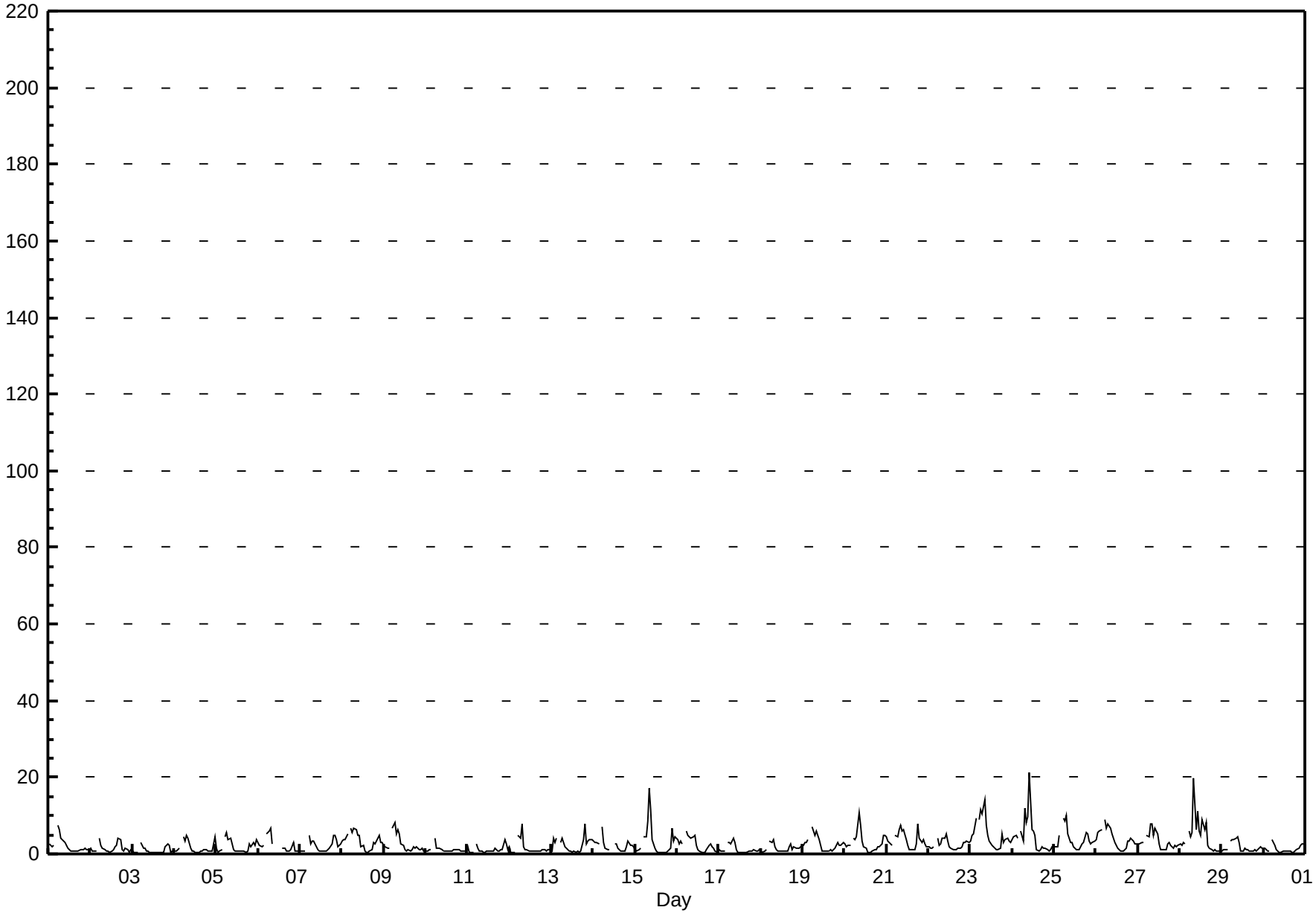
C - Calibration D - DAS Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - September 2012

Maximum Value: 86.8 ppb on Sep 24 11:00

Maximum Daily Average: 13.6 ppb on Sep 28

Minimum Value: 0 ppb on Sep 11 03:00

Minimum Daily Average: 2.1 ppb on Sep 3

Maximum Diurnal Average: 11.0 ppb at hour 9

Minimum Diurnal Average: 2.6 ppb at hour 15

Monthly Average: 5.27 ppb

Percentiles: P_1 = 0.7 P_{10} = 1.2 Q_1 = 1.9 Median = 3.3 Q_3 = 6.3 P_{90} = 10.3 P_{99} = 40.8

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	3	3	3	4	A	13	14	7	6	4	3	3	2	1	1	2	1	2	2	4	2	3	2	3	3.8	13.9
2-Sep	3	1	1	1	A	10	4	3	2	1	2	1	2	2	4	7	18	15	3	2	4	3	1	4	4.0	18.0
3-Sep	3	1	1	1	A	7	3	2	1	1	1	1	1	1	1	1	1	1	1	4	5	9	1	1	2.1	8.6
4-Sep	1	1	2	2	A	7	7	8	6	2	3	2	1	2	1	1	2	2	3	2	2	2	3	7	3.0	8.3
5-Sep	6	1	2	2	A	7	9	6	5	4	2	2	2	1	1	1	2	1	1	9	3	8	4	5	3.6	9.1
6-Sep	4	3	2	3	A	8	7	9	3	C	C	C	C	C	2	3	2	2	2	4	7	3	2	1	3.7	8.6
7-Sep	2	1	1	2	A	9	3	5	4	2	2	1	1	1	1	1	1	2	6	10	9	7	2	3	3.4	10.0
8-Sep	5	6	5	8	A	10	6	8	7	6	7	3	3	1	1	1	1	2	4	6	6	11	6	5	5.1	10.7
9-Sep	5	4	4	4	A	11	11	9	14	10	3	3	2	1	4	1	2	3	3	3	3	2	6	1	4.8	14.0
10-Sep	2	2	3	2	A	8	3	3	5	2	4	3	2	2	2	2	8	6	3	3	2	2	3	1	3.1	8.3
11-Sep	4	1	0	1	A	5	3	3	2	1	2	1	2	2	2	5	9	3	2	4	4	7	6	3	3.1	9.1
12-Sep	4	3	2	1	A	8	7	12	7	2	2	2	2	5	2	2	2	2	3	4	3	2	2	2	3.6	11.9
13-Sep	2	7	7	7	A	7	11	7	5	2	2	2	2	2	3	3	1	2	7	14	5	8	4	4	5.0	14.4
14-Sep	4	4	3	3	A	12	6	3	2	7	D	D	13	18	14	9	1	2	3	5	7	8	7	3	6.4	18.2
15-Sep	1	1	2	2	A	7	6	21	32	18	7	2	1	1	1	1	1	1	1	3	4	16	6	9	6.3	32.4
16-Sep	6	3	5	7	A	10	6	5	6	6	6	4	2	1	1	1	1	4	6	6	3	3	1	1	4.1	9.8
17-Sep	2	1	1	1	A	5	8	4	8	7	2	1	1	1	2	1	1	2	1	3	2	2	2	2	2.7	8.1
18-Sep	1	1	2	2	A	5	6	7	2	2	1	1	1	1	1	1	22	76	3	7	5	3	2	3	6.8	75.8
19-Sep	3	3	3	5	A	9	16	9	20	6	4	2	1	2	1	1	6	2	2	7	6	3	3	4	5.2	19.6
20-Sep	4	2	4	3	A	7	10	9	39	20	5	20	49	1	1	1	1	2	2	4	3	4	12	6	9.0	48.9
21-Sep	7	4	3	3	A	7	8	11	15	8	8	5	5	2	1	1	2	7	15	11	13	7	4	3	6.6	15.3
22-Sep	3	2	6	4	A	7	4	5	6	9	11	5	3	2	1	2	2	2	2	3	4	4	5	3	4.2	10.8
23-Sep	4	9	9	16	A	13	19	13	17	12	6	4	3	2	2	1	2	3	10	4	5	5	4	3	7.2	18.8
24-Sep	7	6	7	5	A	15	6	42	16	22	87	9	26	20	2	2	3	3	3	3	2	2	2	3	12.7	86.8
25-Sep	2	2	4	9	A	14	14	15	10	6	4	3	2	2	2	3	4	5	9	11	5	3	3	5	6.0	15.5
26-Sep	6	13	12	9	A	15	11	13	12	7	6	3	3	5	1	1	3	3	6	6	5	5	5	3	6.7	15.0
27-Sep	4	3	3	4	A	9	7	10	12	6	8	7	5	2	2	2	3	8	10	4	3	7	3	3	5.4	12.0
28-Sep	3	3	4	4	A	9	6	11	59	10	22	11	41	82	11	13	9	4	2	2	3	2	1	2	13.6	82.2
29-Sep	1	3	3	2	A	7	8	6	6	7	7	2	2	12	6	6	2	1	2	3	2	4	3	3	4.1	11.7
30-Sep	2	2	2	3	A	7	5	3	1	2	1	1	2	2	2	2	1	1	2	2	3	4	6	4	2.6	6.8
	3.5	3.2	3.5	4.0	--	8.8	7.8	8.9	11.0	6.6	7.7	3.7	6.3	6.1	2.6	2.7	3.8	5.8	4.1	5.1	4.2	4.9	3.8	3.4	Diurnal Average	
	6.7	13.0	11.7	15.9	--	15.0	18.8	42.1	59.0	21.7	86.8	20.0	48.9	82.2	13.9	12.6	22.4	75.8	15.3	14.4	12.9	16.5	12.2	8.6	Diurnal Maximum	

C - Calibration D - DAS Failure A - Automated Daily Zero Span

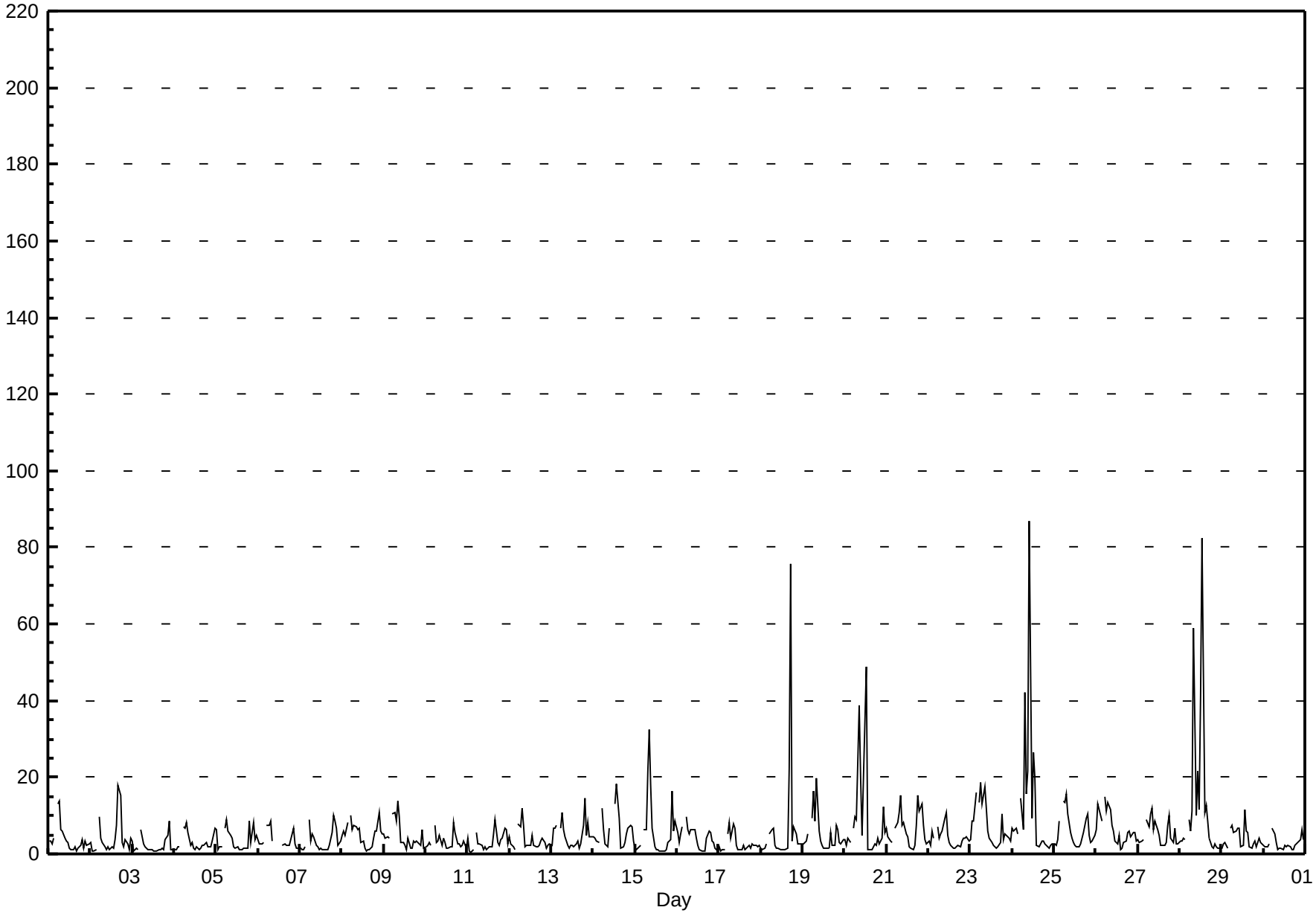
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Beaverlodge - September 2012



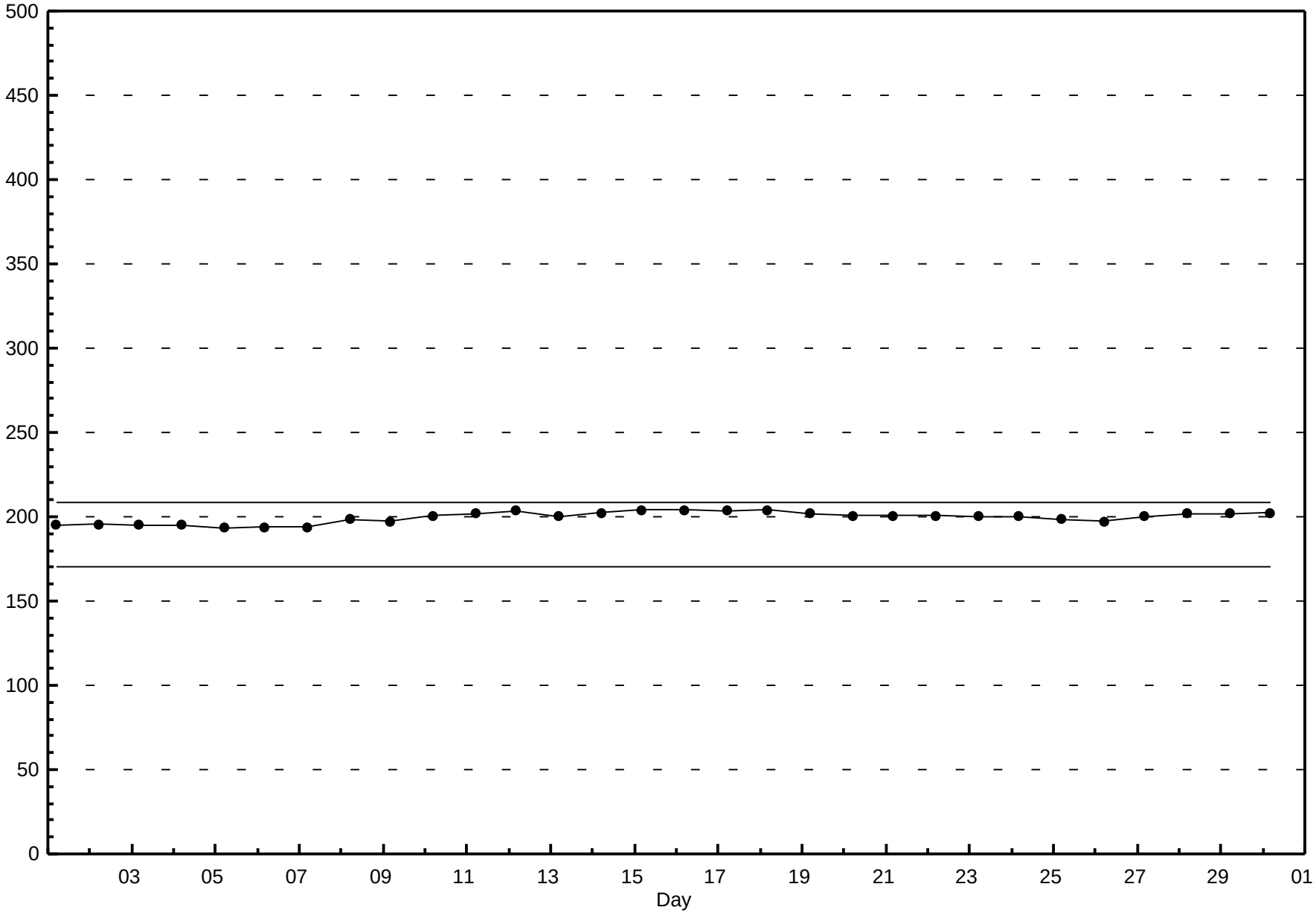
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Beaverlodge - September 2012



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 52.9 ppb on Sep 17 15:00
Maximum Daily Average: 41.5 ppb on Sep 17

Minimum Value: 5 ppb on Sep 26 08:00
Maximum Diurnal Average: 37.1 ppb at hour 15
Monthly Average: 29.53 ppb

Minimum Daily Average: 20.9 ppb on Sep 6
Minimum Diurnal Average: 20.2 ppb at hour 8
Percentiles: P_1 = 7.9 P_{10} = 18.6 Q_1 = 24.1 Median = 29.1 Q_3 = 35.7 P_{90} = 41.6 P_{99} = 49.7

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	33
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	26	26	27	19	A	12	12	11	13	16	21	24	25	29	39	43	44	38	29	21	20	18	18	16	23.8	43.6
2-Sep	14	14	13	16	A	17	17	16	18	21	23	25	27	28	29	27	26	26	25	24	24	27	25	26	22.2	29.1
3-Sep	27	29	28	29	A	30	29	28	29	30	32	33	33	32	33	31	31	31	29	26	22	21	23	23	28.6	33.0
4-Sep	22	21	20	19	A	15	14	12	15	21	26	28	29	29	31	30	29	27	26	26	25	25	24	22	23.2	30.6
5-Sep	24	25	23	22	A	21	17	21	22	29	33	32	33	34	34	33	33	33	33	30	28	25	25	20	27.4	34.2
6-Sep	18	17	15	14	A	13	11	11	18	22	26	28	C	C	C	28	25	26	26	25	23	25	24	24	20.9	28.1
7-Sep	23	24	24	25	A	23	25	23	26	33	37	39	40	41	42	43	44	45	42	35	33	30	31	29	32.8	45.2
8-Sep	28	26	24	19	A	19	14	12	18	22	26	34	36	36	33	33	35	37	35	31	31	25	23	25	27.1	37.4
9-Sep	28	29	28	28	A	17	7	15	15	19	28	34	42	47	44	45	49	43	42	40	43	39	36	33	32.6	48.5
10-Sep	31	37	37	36	A	31	30	26	28	29	29	29	30	31	32	31	31	32	32	30	28	26	25	26	30.4	37.1
11-Sep	27	27	27	26	A	25	24	25	25	26	27	27	29	30	30	30	27	27	26	24	24	24	24	25	26.3	30.0
12-Sep	25	26	26	26	A	20	20	15	26	30	30	30	30	31	30	29	29	29	30	29	28	27	27	27	27.0	30.9
13-Sep	26	23	23	22	A	26	23	24	25	26	27	28	30	30	28	27	26	26	23	18	22	21	21	21	24.6	29.9
14-Sep	20	19	19	19	A	20	33	36	35	38	D	D	41	40	40	40	40	40	39	36	33	33	32	31	32.5	40.7
15-Sep	32	32	31	29	A	22	22	18	15	21	29	33	35	36	36	37	37	37	35	34	33	25	27	26	29.7	36.8
16-Sep	26	25	22	23	A	17	18	17	17	18	22	27	30	33	34	36	36	33	31	30	30	30	32	33	26.9	35.7
17-Sep	29	30	30	30	A	32	30	29	28	34	43	47	49	52	53	53	52	50	47	46	47	50	48	46	41.5	52.9
18-Sep	45	43	42	39	A	40	38	38	43	42	43	44	44	44	44	45	45	43	40	38	38	38	36	35	41.0	45.0
19-Sep	34	32	28	24	A	22	21	23	25	32	37	39	38	38	37	38	39	38	36	35	33	33	35	33	32.6	39.2
20-Sep	33	34	30	32	A	29	26	23	20	25	32	38	40	42	42	44	44	42	40	40	40	38	37	33	34.9	44.1
21-Sep	33	33	33	32	A	28	25	22	21	26	29	37	41	41	41	42	40	37	31	34	31	28	28	28	32.2	41.5
22-Sep	26	24	25	24	A	23	24	23	20	28	30	35	38	42	43	42	45	42	39	42	42	42	40	40	33.9	45.2
23-Sep	38	27	21	18	A	17	7	11	12	22	31	38	41	44	45	46	47	45	38	44	52	49	47	45	34.1	51.5
24-Sep	40	31	33	33	A	28	27	19	20	26	14	22	24	34	45	46	44	44	41	41	45	43	38	33	33.5	45.7
25-Sep	31	29	25	20	A	14	13	13	20	25	24	25	31	31	32	32	31	29	25	21	21	22	21	21	24.1	31.7
26-Sep	20	12	10	5	A	6	8	5	7	9	13	19	28	33	36	37	37	37	32	32	28	28	28	28	21.7	37.4
27-Sep	29	26	22	19	A	19	16	13	14	21	23	25	32	38	38	38	37	35	34	36	37	35	34	32	28.5	38.5
28-Sep	31	31	28	29	A	28	29	28	13	22	22	27	30	27	29	22	35	35	37	37	33	35	37	37	29.7	37.3
29-Sep	36	35	34	33	A	29	23	20	21	20	27	34	36	36	36	36	35	33	32	30	29	28	27	26	30.3	36.4
30-Sep	26	27	29	31	A	28	27	29	30	34	37	39	40	40	38	36	33	32	31	30	28	27	25	21	31.3	39.7
	28.3	27.1	26.0	24.6	--	22.4	21.0	20.2	21.3	25.6	28.3	31.7	34.5	36.1	37.1	36.6	36.9	35.8	33.6	32.0	31.7	30.5	29.9	28.8	Diurnal Average	
	45.0	42.7	41.9	39.2	--	40.3	37.7	37.9	42.8	41.6	42.8	46.9	48.9	52.4	52.9	52.7	52.2	49.8	46.7	45.8	51.5	49.8	48.3	46.1	Diurnal Maximum	

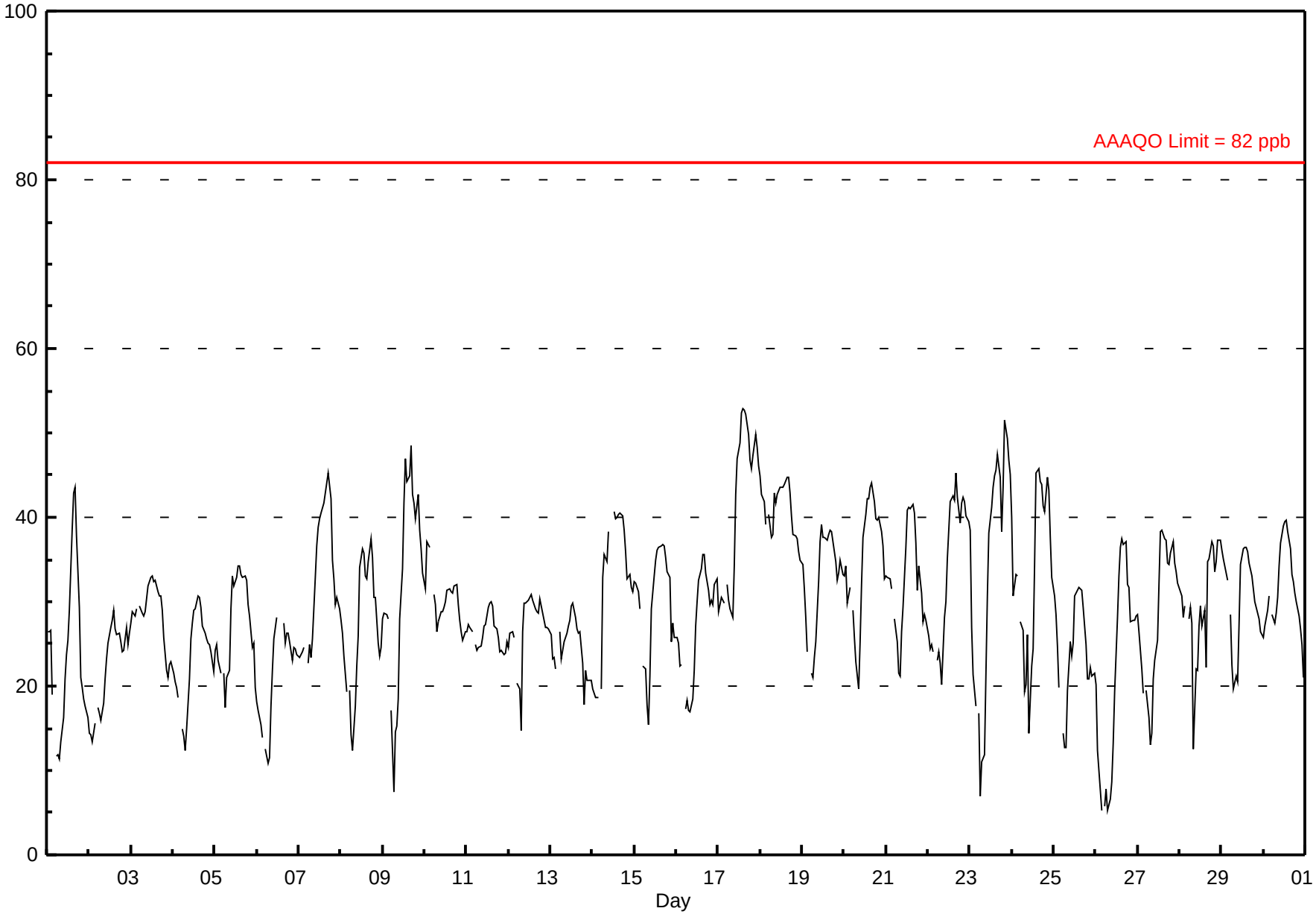
C - Calibration D - DAS Failure A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Beaverlodge - September 2012



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Beaverlodge - September 2012

Maximum Value: 55.4 ppb on Sep 17 14:00

Maximum Daily Average: 43.7 ppb on Sep 17

Minimum Value: 7 ppb on Sep 26 08:00

Minimum Daily Average: 23.0 ppb on Sep 6

Maximum Diurnal Average: 38.7 ppb at hour 15

Minimum Diurnal Average: 23.4 ppb at hour 8

Monthly Average: 31.91 ppb

Percentiles: P_1 = 13.8 P_{10} = 21.0 Q_1 = 26.0 Median = 31.5 Q_3 = 37.5 P_{90} = 43.4 P_{99} = 52.2

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	33
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	28	28	28	21	A	15	15	16	15	20	24	25	29	33	42	46	46	43	39	23	21	20	19	18	26.7	46.0
2-Sep	16	16	14	18	A	19	18	17	21	22	25	26	28	29	31	29	28	27	26	25	26	29	26	29	23.7	30.6
3-Sep	29	30	30	30	A	30	30	29	30	32	33	34	35	34	34	33	32	33	30	29	24	23	23	24	30.0	35.1
4-Sep	23	21	21	20	A	16	15	14	18	26	27	29	30	30	32	31	31	28	28	27	26	26	25	25	24.8	32.4
5-Sep	26	26	25	22	A	23	22	22	25	34	35	33	34	35	35	35	34	34	34	32	30	29	26	24	29.4	35.3
6-Sep	20	18	17	15	A	14	12	18	21	24	28	29	C	C	C	34	28	27	27	27	25	25	25	25	23.0	34.4
7-Sep	25	25	26	27	A	25	27	26	31	34	38	40	41	41	43	44	46	46	46	39	36	31	31	31	34.8	46.5
8-Sep	29	29	26	24	A	21	17	16	22	25	31	37	38	38	35	35	37	40	39	34	34	29	27	27	30.1	40.4
9-Sep	30	33	32	32	A	23	23	19	19	25	32	39	45	50	48	52	50	49	47	43	45	42	39	37	37.2	52.2
10-Sep	35	39	39	38	A	34	32	29	30	30	30	31	31	32	32	33	32	33	33	33	29	28	26	28	32.0	39.3
11-Sep	28	28	27	27	A	26	25	25	25	27	28	28	31	31	31	31	29	28	27	26	26	27	26	26	27.5	31.3
12-Sep	26	27	27	27	A	23	21	21	30	31	31	31	32	32	32	30	29	30	31	31	30	28	28	28	28.4	31.8
13-Sep	28	25	27	25	A	27	27	26	27	27	28	30	31	32	29	28	27	28	26	23	24	23	21	21	26.5	31.6
14-Sep	21	21	20	20	A	22	37	37	37	43	D	D	43	41	41	41	42	41	40	38	35	35	33	33	34.4	43.3
15-Sep	33	33	33	31	A	25	24	24	23	25	35	35	36	37	37	38	38	38	37	35	34	34	32	32	32.5	37.8
16-Sep	28	26	25	24	A	19	19	19	18	20	24	29	32	34	35	37	37	36	34	32	31	31	33	33	28.6	36.9
17-Sep	33	31	31	31	A	33	32	30	30	39	46	49	51	55	54	55	54	53	49	47	50	51	50	47	43.7	55.4
18-Sep	46	44	43	43	A	43	40	43	44	42	44	44	44	44	45	46	46	46	42	42	41	40	37	36	42.9	46.5
19-Sep	36	33	31	26	A	22	23	27	30	36	40	41	39	39	38	39	39	40	38	37	37	35	36	34	34.7	40.7
20-Sep	35	35	34	33	A	31	27	26	24	30	36	40	42	43	43	45	45	44	42	43	41	39	40	36	37.3	45.4
21-Sep	35	34	34	34	A	31	27	24	25	28	34	39	42	42	42	42	42	41	37	37	36	30	31	31	34.8	42.4
22-Sep	28	26	26	25	A	25	26	25	25	32	33	38	41	44	43	43	48	48	41	43	44	43	43	42	36.1	48.3
23-Sep	40	38	30	23	A	20	18	14	17	26	36	40	43	45	46	47	49	50	43	49	53	52	48	46	38.0	52.9
24-Sep	44	38	36	35	A	30	29	29	31	34	19	24	28	48	48	47	46	46	44	44	46	45	42	35	37.8	47.8
25-Sep	34	32	27	23	A	19	17	17	23	27	27	30	32	32	33	33	34	31	28	26	23	23	22	24	26.8	33.7
26-Sep	22	19	17	14	A	11	11	7	8	10	17	23	32	37	38	39	38	39	36	34	32	33	33	30	25.3	39.3
27-Sep	29	28	25	20	A	20	20	15	20	25	25	29	37	40	40	39	40	37	37	37	38	37	35	34	30.9	39.8
28-Sep	32	33	30	31	A	30	30	32	20	27	25	32	32	30	34	27	39	38	38	38	35	37	39	38	32.5	38.9
29-Sep	37	36	36	35	A	32	27	25	24	24	32	36	38	38	38	37	36	34	32	32	30	29	29	28	32.5	38.4
30-Sep	27	29	32	32	A	31	31	30	32	36	39	40	41	41	40	37	35	33	32	32	30	29	29	25	33.3	41.0
	30.1	29.5	28.3	26.9	--	24.6	24.1	23.4	24.9	28.7	31.1	33.9	36.5	38.3	38.7	38.4	38.6	38.1	36.2	34.7	33.7	32.9	32.0	30.9	Diurnal Average	
	46.5	44.3	43.0	42.6	--	43.0	39.6	42.7	44.0	43.0	46.4	48.6	50.8	55.4	54.4	54.8	53.9	53.0	48.5	48.9	52.9	52.4	50.0	47.5	Diurnal Maximum	

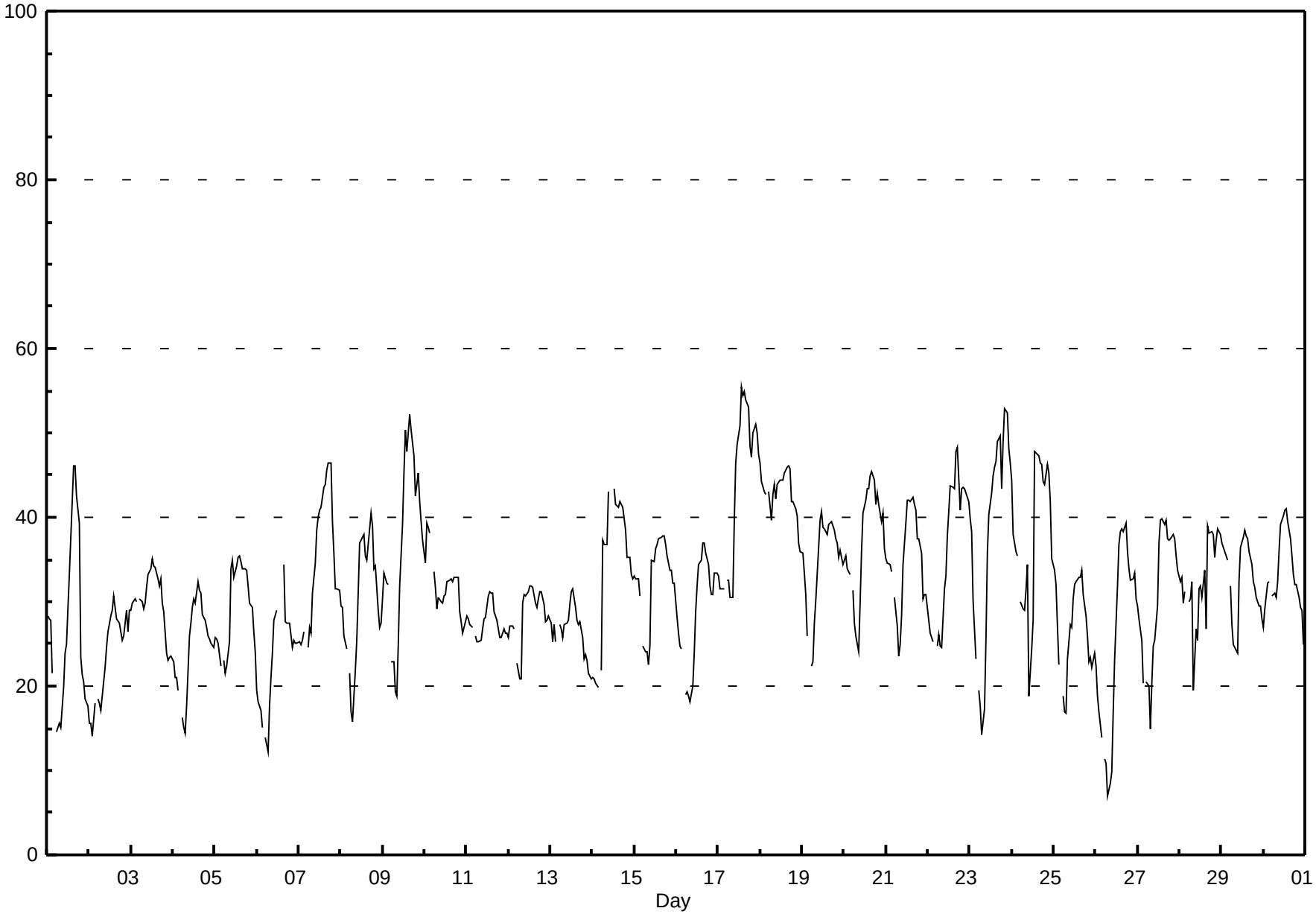
C - Calibration D - DAS Failure A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

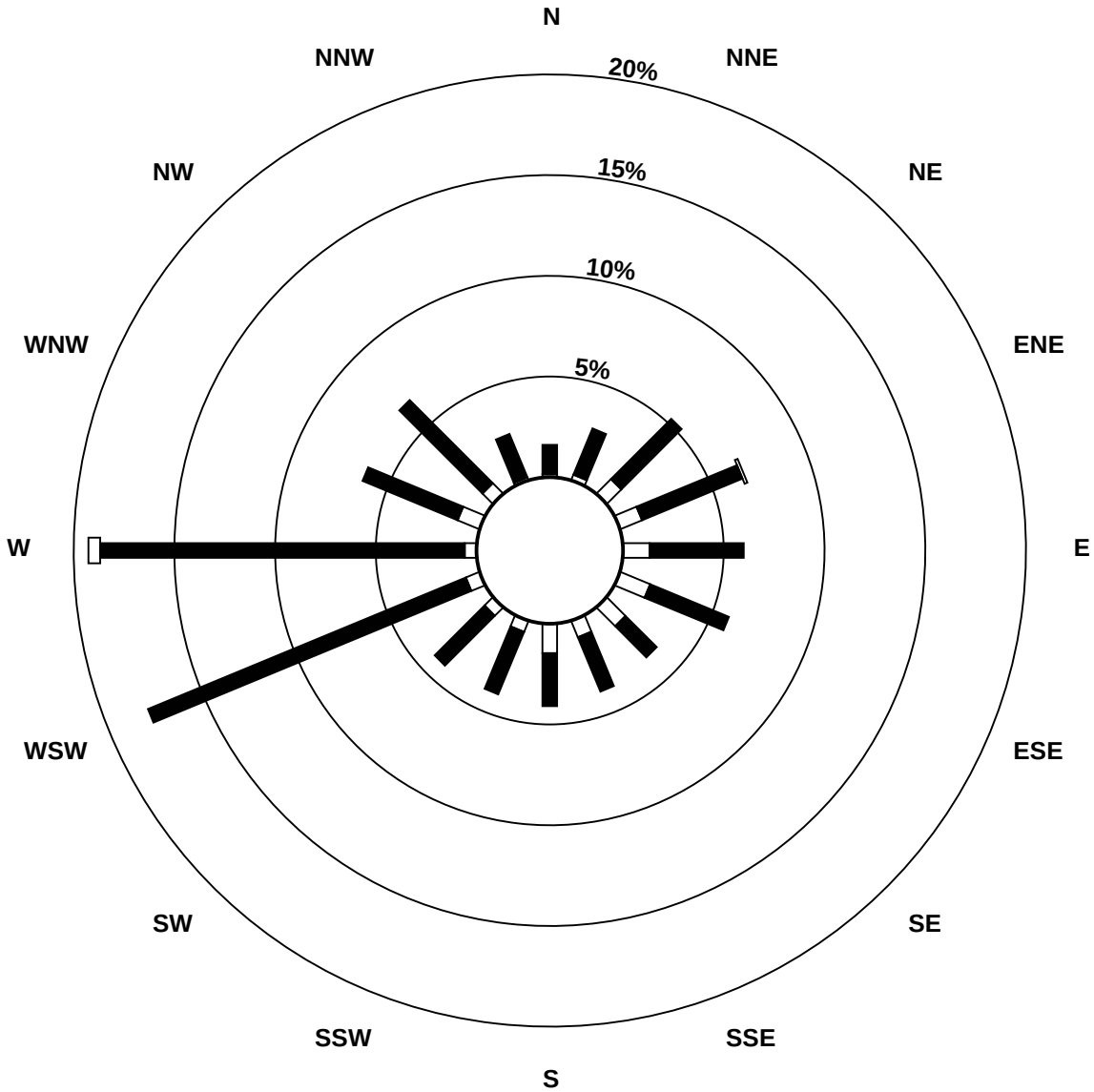
Beaverlodge - September 2012



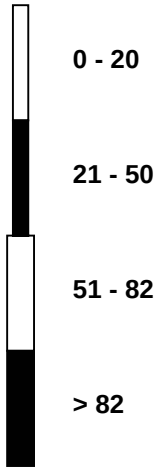
Pollutant Rose

Ozone (O_3) - ppb

Beaverlodge - September 2012



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Beaverlodge - September 2012

Maximum Value: 50.3 ppb on Sep 17 19:00

Minimum Value: 7.0 ppb on Sep 26 10:00

Percentiles: P_1 = 13.6 P_{10} = 19.9 Q_1 = 24.7 Median = 28.8 Q_3 = 34.0 P_{90} = 40.2 P_{99} = 47.7

Hours in Service:	720
Hours of Data:	713
Hours of Missing Data:	7
Hours of Calibration:	7
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Sep	28	27	26	25	25	23	21	19	17	16	15	16	17	19	22	26	30	33	34	33	33	31	29	25	33.8
2-Sep	22	19	17	16	16	16	15	15	16	17	18	20	21	22	23	25	26	26	27	27	26	26	26	26	26.7
3-Sep	26	26	26	27	27	28	28	29	29	29	30	30	30	31	31	32	32	32	32	31	29	28	27	26	31.9
4-Sep	24	23	22	21	21	20	19	17	16	17	17	19	20	22	24	26	28	29	29	28	28	27	27	26	28.7
5-Sep	25	25	24	24	23	23	22	22	22	22	24	25	26	28	30	31	33	33	33	33	32	31	30	28	33.2
6-Sep	26	24	22	20	19	17	15	14	14	15	16	18	18	19	N	N	N	N	N	N	26	25	25	25	26.4
7-Sep	25	24	24	24	24	24	24	24	24	25	27	29	31	33	35	37	40	41	42	41	41	39	38	36	41.9
8-Sep	34	32	29	27	27	25	23	20	19	18	19	21	23	25	27	30	32	34	35	34	34	32	31	30	34.9
9-Sep	29	28	27	27	27	25	23	22	20	18	18	19	22	26	30	34	38	41	43	44	44	43	42	40	43.9
10-Sep	38	38	37	37	36	35	34	33	32	31	30	29	29	29	29	30	30	31	31	31	31	30	29	29	38.3
11-Sep	28	28	27	27	26	26	26	26	26	25	25	25	26	27	27	28	28	28	28	28	27	26	26	25	28.4
12-Sep	25	25	25	25	25	25	24	23	23	23	24	24	25	27	28	30	30	30	30	30	29	29	29	28	29.9
13-Sep	28	27	26	25	25	25	24	24	24	24	25	26	26	27	27	28	28	28	27	26	25	24	23	22	27.9
14-Sep	21	20	20	20	20	20	21	23	26	28	30	N	34	37	38	39	40	40	40	40	39	38	37	36	40.3
15-Sep	34	33	33	32	32	30	29	27	24	23	22	23	24	26	28	30	33	35	36	36	36	34	33	32	35.8
16-Sep	30	29	27	26	25	24	22	21	20	19	19	20	21	23	25	27	29	31	32	33	33	32	32	32	32.8
17-Sep	31	30	30	30	30	31	31	30	30	31	32	35	37	39	42	45	48	50	50	50	50	50	49	48	50.3
18-Sep	47	46	46	45	45	43	42	41	40	40	40	41	41	42	42	43	44	44	43	43	42	41	40	39	47.3
19-Sep	38	36	35	33	32	30	28	26	25	25	26	29	30	32	34	36	37	38	38	37	37	36	36	35	37.9
20-Sep	35	34	33	33	33	32	31	29	28	26	27	27	29	31	33	35	38	41	41	42	42	41	41	39	41.7
21-Sep	38	37	36	35	34	32	31	29	28	27	26	27	29	30	32	35	37	38	39	38	37	36	34	32	38.7
22-Sep	30	29	28	27	26	26	25	24	23	24	25	26	28	30	32	35	38	40	41	42	42	42	42	42	42.1
23-Sep	41	39	37	34	32	29	24	20	16	15	17	20	22	26	30	35	39	42	43	44	45	46	46	46	45.9
24-Sep	45	43	43	41	40	37	34	30	27	27	24	22	23	23	26	29	32	34	38	40	42	44	43	41	44.9
25-Sep	39	37	35	33	31	27	23	21	19	18	18	19	21	23	25	27	29	29	29	29	28	27	25	24	39.4
26-Sep	23	20	19	17	16	14	12	10	8	7	8	10	12	15	19	23	27	30	33	34	34	33	32	31	34.1
27-Sep	30	29	28	26	26	25	23	21	19	18	18	19	21	23	26	29	32	33	35	36	37	36	36	35	36.7
28-Sep	34	34	33	32	31	30	30	29	27	25	24	24	25	25	25	24	27	28	30	31	32	33	34	36	35.8
29-Sep	36	36	36	35	35	34	32	30	28	26	25	25	26	27	29	31	33	34	35	34	33	32	31	30	36.0
30-Sep	29	28	28	28	28	28	28	28	29	30	31	32	33	34	36	37	37	37	36	35	34	32	30	28	37.2
	47.3	46.4	45.8	45.0	44.7	43.4	41.8	40.7	40.4	40.2	40.3	40.9	41.3	41.7	42.5	44.8	47.8	49.8	50.3	50.2	50.0	49.6	49.1	48.2	
	Diurnal Maximums																								

N - Not Valid

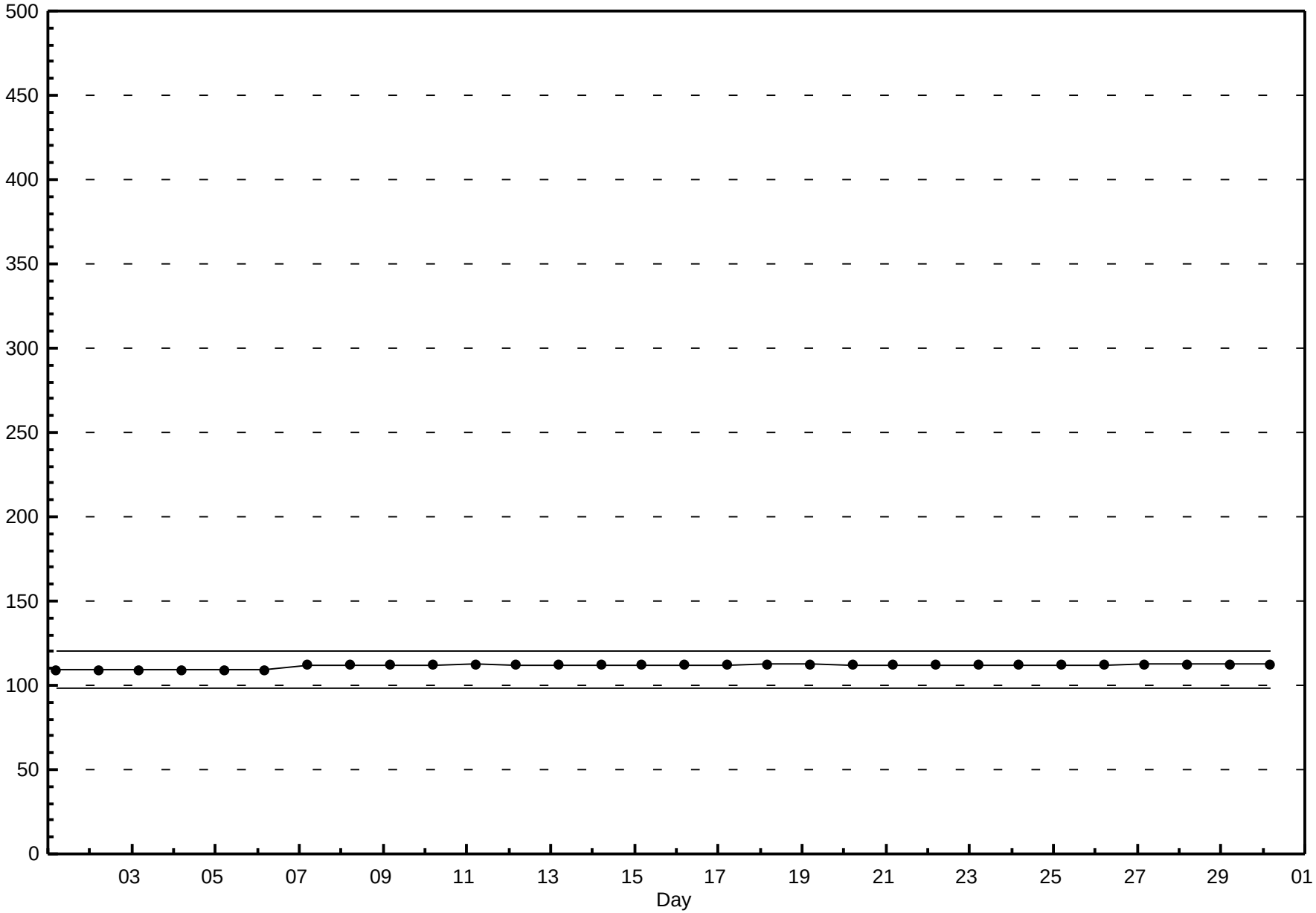
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Beaverlodge - September 2012



Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - September 2012

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

Maximum Value: 40.1 $\mu g/m^3$ on Sep 19 11:00

Maximum Daily Average: 20.8 $\mu g/m^3$ on Sep 23

Minimum Value: 0 $\mu g/m^3$ on Sep 9 18:00

Maximum Diurnal Average: 12.2 $\mu g/m^3$ at hour 11

Monthly Average: 10.23 $\mu g/m^3$

Minimum Daily Average: 4.6 $\mu g/m^3$ on Sep 3

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

Percentiles: $P_1 = 0.7$ $P_{10} = 4.4$ $Q_1 = 5.7$ Median = 7.7 $Q_3 = 13.4$ $P_{90} = 20.3$ $P_{99} = 28.6$

Hours in Service:	720
Hours of Data:	713
Hours of Missing Data:	7
Hours of Calibration:	0
Percent Operational Time:	99.0

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	8	6	7	5	5	7	7	8	6	8	7	7	8	7	8	8	5	6	8	7	6	5	5	6	6.6	8.4
2-Sep	6	6	5	5	4	4	5	5	5	6	6	5	3	7	6	6	8	8	7	7	5	5	4	5	5.5	8.4
3-Sep	4	4	4	4	3	3	4	5	5	4	5	5	5	5	6	6	4	5	5	5	6	7	3	4	4.6	6.6
4-Sep	3	3	4	5	5	5	5	6	8	7	6	6	7	5	4	4	5	6	7	7	8	7	7	7	5.7	8.4
5-Sep	6	6	6	5	5	6	7	7	7	7	6	4	4	6	8	12	8	7	10	7	8	7	8	9	7.0	12.2
6-Sep	9	10	7	6	6	6	8	8	7	7	8	8	6	4	5	M	M	M	6	6	6	6	9	6	6.9	9.9
7-Sep	7	6	6	8	8	23	10	12	12	12	13	13	13	15	14	12	13	13	15	17	27	21	16	13	13.3	27.0
8-Sep	13	13	17	18	20	15	14	13	13	12	12	14	10	9	7	7	7	8	12	7	13	27	29	20	13.9	28.8
9-Sep	12	10	8	8	8	12	12	14	12	12	12	10	11	9	8	15	9	0	6	8	9	8	4	7	9.3	14.8
10-Sep	6	6	4	3	8	4	6	4	4	10	20	3	5	10	6	3	4	4	4	4	5	6	5	4	5.8	19.9
11-Sep	5	4	4	3	4	3	3	2	5	6	5	4	3	2	9	11	8	10	6	8	6	5	6	8	5.3	10.7
12-Sep	20	0	0	1	5	3	3	6	11	5	5	4	6	5	3	5	8	5	3	4	6	5	6	6	5.3	20.2
13-Sep	5	6	6	6	5	6	6	7	7	7	8	8	7	18	14	14	6	6	5	7	14	14	10	7	8.3	18.0
14-Sep	8	7	5	6	5	7	15	27	18	N	N	D	N	8	5	0	3	4	5	7	7	7	8	6	7.9	27.4
15-Sep	6	5	6	5	6	11	16	9	8	14	13	10	7	7	6	5	12	8	6	7	10	11	13	13	9.0	15.8
16-Sep	27	19	18	16	16	11	13	17	15	18	11	9	7	8	7	27	9	6	8	7	12	10	12	8	13.0	27.3
17-Sep	7	7	5	5	6	7	6	7	13	15	11	6	7	7	6	6	7	6	8	10	10	9	9	11	7.9	14.7
18-Sep	10	10	10	13	8	10	10	9	14	7	7	6	6	9	10	11	11	13	11	11	14	17	15	13	10.6	16.7
19-Sep	11	14	14	11	12	9	12	13	13	23	40	9	14	14	8	6	10	17	10	13	17	20	21	14	14.4	40.1
20-Sep	15	13	9	10	12	11	11	10	14	19	14	12	10	10	10	9	8	8	11	15	21	24	17	19	13.1	24.5
21-Sep	21	17	18	14	13	15	17	17	20	21	17	15	16	17	17	20	19	21	24	28	27	29	34	28	20.1	34.1
22-Sep	26	24	22	20	21	23	30	26	22	19	18	18	15	14	14	12	12	15	30	27	20	20	20	20	20.4	30.1
23-Sep	20	17	23	25	24	21	20	18	19	20	21	21	20	19	18	15	16	18	19	24	30	26	23	23	20.8	30.3
24-Sep	22	21	23	24	20	18	17	17	21	23	27	28	20	23	16	11	12	12	11	10	8	8	7	7	17.0	28.0
25-Sep	7	8	8	9	7	8	7	11	20	24	27	28	22	16	19	23	25	26	27	26	26	27	28	27	19.0	27.9
26-Sep	27	24	18	20	19	18	17	18	15	12	12	9	8	6	5	7	6	5	6	8	6	7	7	7	12.0	26.8
27-Sep	8	8	7	7	7	9	8	6	6	6	6	5	5	8	5	5	4	6	10	6	6	8	7	7	6.7	10.2
28-Sep	7	7	7	6	8	9	7	6	8	10	8	10	8	9	9	10	10	9	2	3	6	0	5	3	7.0	10.2
29-Sep	0	1	4	4	5	5	5	5	5	4	7	7	4	2	8	9	5	5	7	5	4	6	6	7	5.0	8.8
30-Sep	7	6	6	4	4	4	4	6	6	5	5	3	5	4	3	5	6	6	6	5	4	5	5	5	5.0	7.5
	11.1	9.7	9.4	9.2	9.3	9.8	10.2	10.6	11.3	11.8	12.2	9.9	8.9	9.5	8.8	9.8	9.0	9.0	9.8	10.3	11.7	11.9	11.6	10.7	Diurnal Average	
	27.3	23.9	23.1	25.2	23.7	23.3	30.1	27.4	21.6	23.9	40.1	28.0	21.9	22.6	19.1	27.1	25.2	26.0	29.9	27.9	30.3	28.7	34.1	27.9	Diurnal Maximum	

D - DAS Failure M - Maintenance N - Not Valid

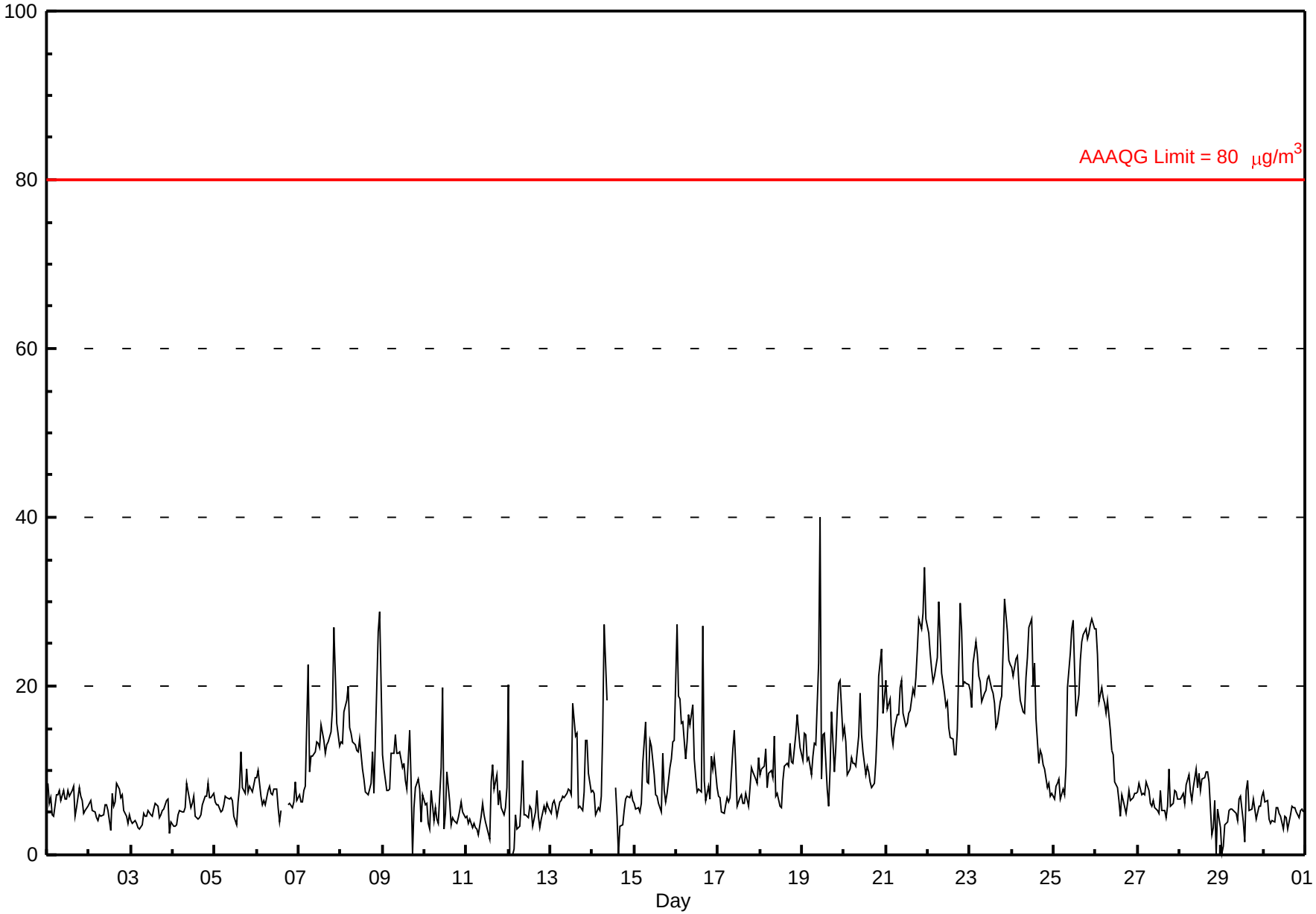
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Beaverlodge - September 2012



Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - September 2012

Maximum Value: 48.7 $\mu g/m^3$ on Sep 19 10:00

Maximum Daily Average: 22.3 $\mu g/m^3$ on Sep 22

Minimum Value: 0 $\mu g/m^3$ on Sep 12 03:00

Minimum Daily Average: 5.5 $\mu g/m^3$ on Sep 3

Maximum Diurnal Average: 14.5 $\mu g/m^3$ at hour 10

Minimum Diurnal Average: 10.4 $\mu g/m^3$ at hour 4

Monthly Average: 11.88 $\mu g/m^3$

Percentiles: P_1 = 3.7 P_{10} = 5.4 Q_1 = 6.7 Median = 8.9 Q_3 = 15.5 P_{90} = 22.4 P_{99} = 29.1

Hours in Service:	720
Hours of Data:	713
Hours of Missing Data:	7
Hours of Calibration:	0
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	11	7	8	6	6	8	8	8	8	8	7	8	8	8	9	9	7	8	9	8	8	6	6	6	7.5	10.7
2-Sep	7	7	6	6	5	5	5	5	6	7	7	6	4	8	8	8	10	9	7	8	7	5	5	5	6.4	9.5
3-Sep	5	4	4	4	4	3	5	5	5	5	6	5	5	6	8	8	5	5	6	7	8	8	4	5	5.5	8.3
4-Sep	4	4	4	5	6	5	5	7	9	8	6	7	9	6	5	5	5	7	8	9	9	7	8	8	6.5	9.5
5-Sep	8	7	6	6	6	7	8	8	7	8	7	6	5	8	13	14	9	10	12	8	9	8	9	10	8.3	14.0
6-Sep	10	11	8	7	7	7	8	9	8	8	9	9	7	5	6	M	M	M	7	8	8	7	10	8	7.8	10.7
7-Sep	8	7	8	9	16	28	14	14	14	13	15	14	14	18	17	14	14	14	16	22	30	25	18	13	15.5	29.5
8-Sep	14	15	18	21	22	16	15	14	14	13	14	15	12	10	8	8	8	11	22	15	16	31	30	28	16.2	30.9
9-Sep	13	11	9	8	10	13	13	16	13	13	13	11	11	10	8	16	12	7	10	10	13	12	6	8	11.1	15.9
10-Sep	7	7	5	6	9	5	6	5	5	28	28	5	6	13	12	5	7	7	5	5	7	7	5	5	8.3	28.3
11-Sep	5	5	5	4	5	5	4	5	5	7	7	6	6	5	15	14	10	11	9	8	6	6	6	14	7.1	15.3
12-Sep	26	17	0	5	6	4	5	10	13	7	6	6	7	7	5	7	9	7	4	6	6	6	7	6	7.4	25.6
13-Sep	6	6	7	6	6	7	8	8	8	8	9	9	9	21	20	21	7	6	6	10	15	15	12	8	9.9	20.8
14-Sep	9	9	5	6	6	8	24	30	23	N	N	D	N	10	6	4	5	4	6	8	8	8	8	8	9.7	30.2
15-Sep	7	6	6	6	7	19	21	9	10	16	16	11	8	8	7	8	18	13	7	10	11	14	14	25	11.6	25.1
16-Sep	32	22	21	16	17	12	15	18	17	20	16	10	9	9	11	30	14	8	9	11	12	13	13	9	15.2	32.0
17-Sep	8	8	6	6	7	8	7	8	17	17	12	8	8	9	7	7	8	7	10	11	12	11	10	12	9.3	16.8
18-Sep	10	11	12	14	9	11	12	12	16	11	8	7	7	11	11	12	12	15	15	12	17	18	15	14	12.1	18.0
19-Sep	12	16	16	12	12	11	14	14	15	49	49	12	18	19	11	8	15	20	12	13	21	21	22	16	17.8	48.7
20-Sep	16	15	11	11	12	11	11	12	17	20	17	13	11	12	13	10	9	9	13	18	24	26	21	21	14.8	26.2
21-Sep	22	20	20	18	13	16	17	17	22	23	17	17	17	18	18	20	20	23	26	32	32	37	37	31	22.3	37.0
22-Sep	28	26	23	22	22	27	32	27	23	20	18	19	16	15	14	14	13	16	38	39	21	21	21	21	22.3	38.5
23-Sep	20	19	24	27	27	22	21	20	21	20	21	22	21	20	20	16	17	19	20	30	32	29	23	23	22.3	31.9
24-Sep	23	22	24	24	22	19	19	18	24	26	31	31	24	24	22	12	13	13	11	11	9	9	9	9	18.7	31.0
25-Sep	8	9	9	10	7	8	8	14	24	24	30	30	24	19	22	25	26	27	28	27	27	28	29	28	20.5	30.2
26-Sep	28	27	19	21	19	19	17	19	18	13	13	9	9	8	6	8	7	6	8	8	7	8	8	8	13.0	27.5
27-Sep	8	10	8	8	9	10	8	8	7	7	6	7	8	9	6	6	6	7	11	7	7	9	8	8	7.8	11.0
28-Sep	8	8	8	7	9	10	9	7	11	11	9	10	8	10	10	11	11	10	5	6	8	3	8	4	8.4	11.5
29-Sep	3	2	4	4	7	6	7	6	6	5	7	8	6	4	10	10	7	7	7	6	5	7	7	8	6.3	10.5
30-Sep	9	7	7	5	4	5	5	6	7	5	6	5	6	5	5	7	7	6	6	6	5	6	7	6	5.9	8.6
	12.3	11.4	10.4	10.4	10.6	11.1	11.7	12.0	13.1	14.5	14.1	11.2	10.4	11.1	11.1	11.6	10.6	10.8	11.7	12.6	13.4	13.7	12.9	12.5	Diurnal Average	
	32.0	26.7	24.4	27.3	26.8	27.6	31.8	30.2	23.9	48.7	48.7	30.7	23.9	24.3	22.4	29.7	25.9	27.3	38.0	38.5	32.0	36.6	37.0	31.2	Diurnal Maximum	

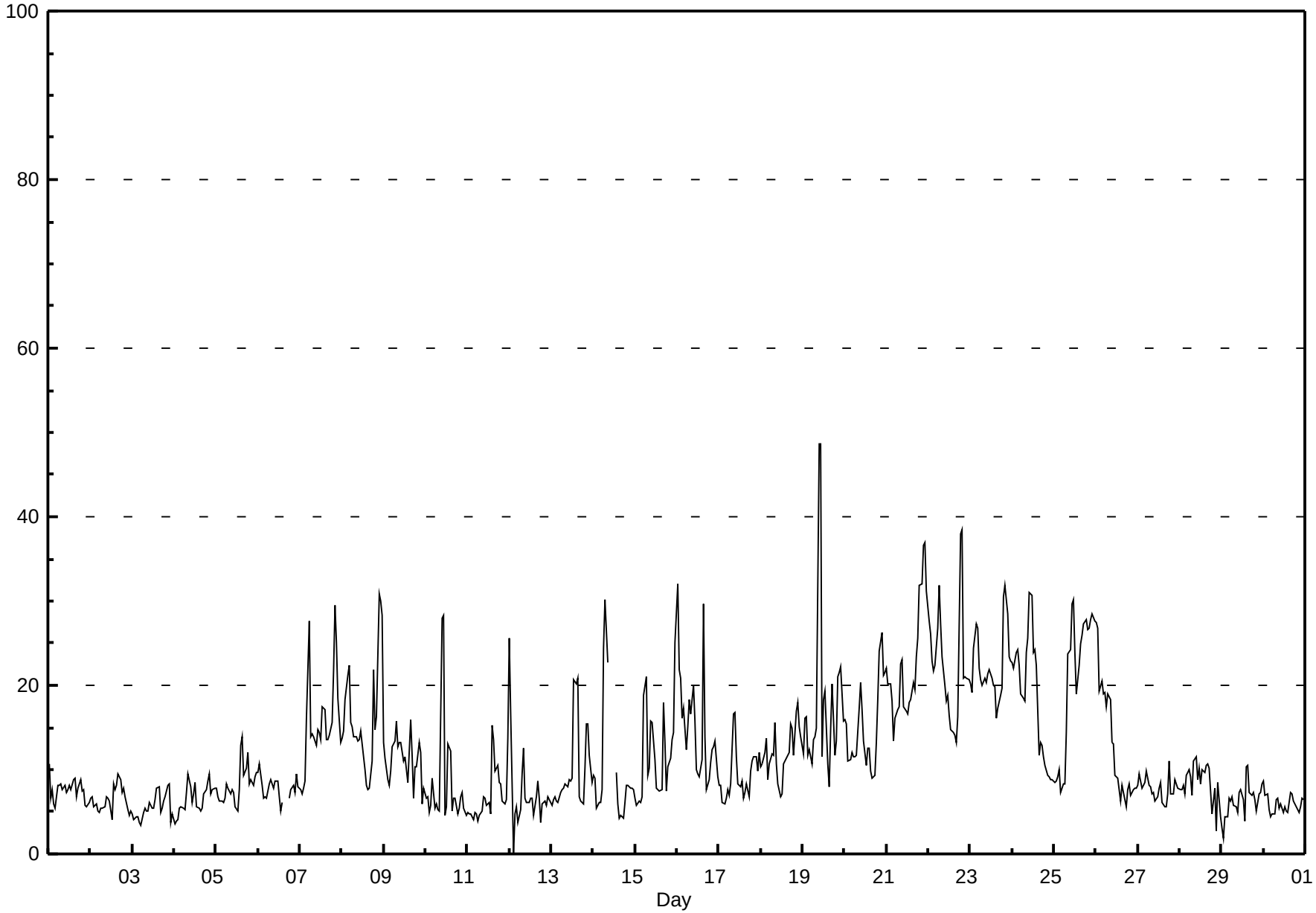
D - DAS Failure M - Maintenance N - Not Valid

Peace Airshed Zone Association

Hourly Maximums

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

Beaverlodge - September 2012

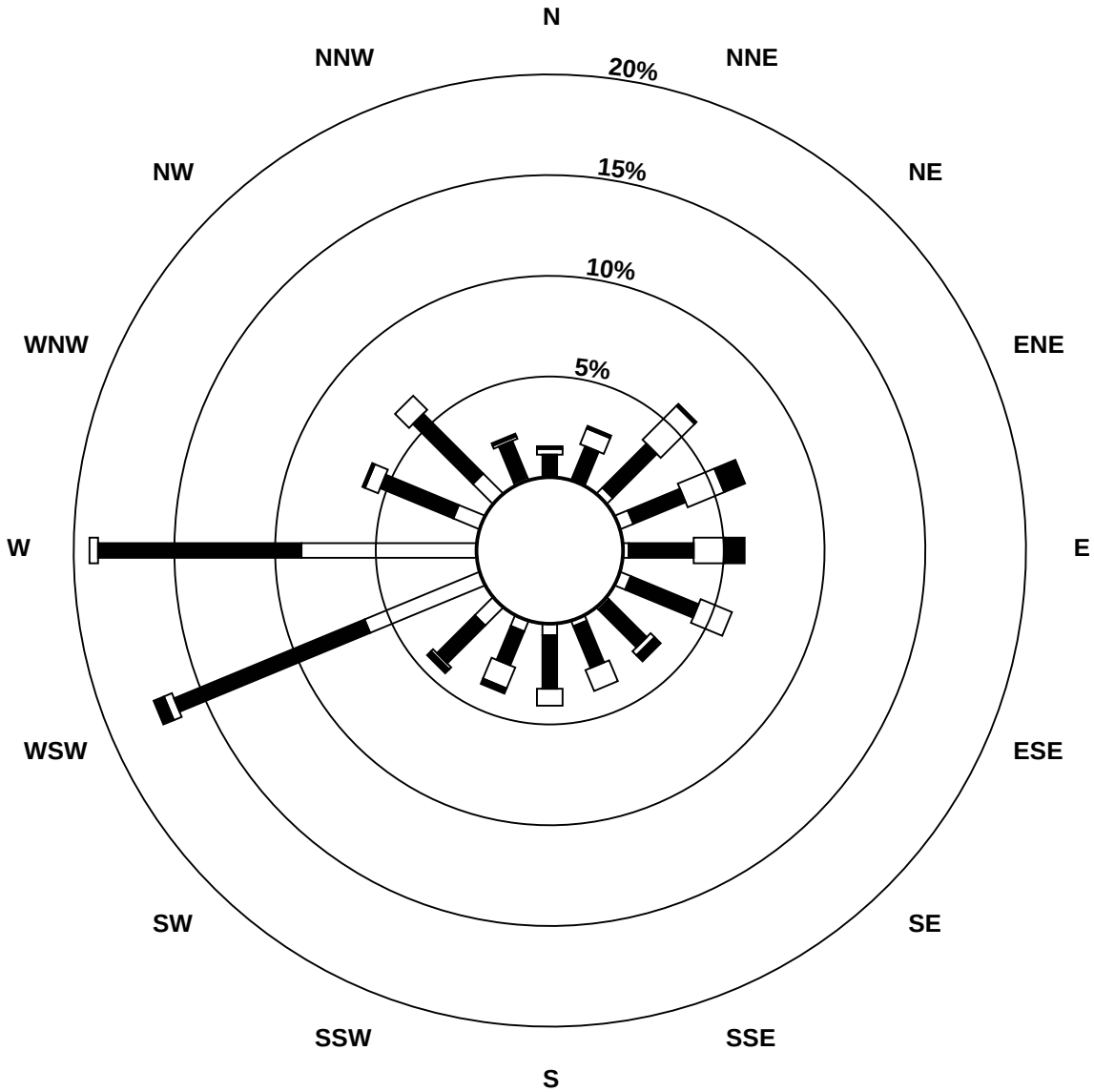


Peace Airshed Zone Association

Pollutant Rose

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

Beaverlodge - September 2012



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

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

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - September 2012

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

Maximum Value: 29.4 ^{o}C on Sep 21 17:00

Maximum Daily Average: 18.4 ^{o}C on Sep 21

Minimum Value: 0 ^{o}C on Sep 16 05:00

Minimum Daily Average: 8.9 ^{o}C on Sep 11

Maximum Diurnal Average: 20.5 ^{o}C at hour 16

Minimum Diurnal Average: 7.8 ^{o}C at hour 7

Monthly Average: 13.94 ^{o}C

Percentiles: P_1 = 2.7 P_{10} = 6.6 Q_1 = 9.7 Median = 13.3 Q_3 = 17.8 P_{90} = 22.1 P_{99} = 27.9

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	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	9	8	8	5	6	5	5	6	8	10	12	15	16	17	18	18	18	18	16	15	14	13	12	11	11.7	18.2
2-Sep	11	11	11	11	11	12	11	11	13	15	17	18	18	19	19	18	17	16	15	14	13	13	11	12	14.1	18.9
3-Sep	12	11	10	10	10	9	9	10	11	13	14	15	16	16	16	16	16	17	16	14	11	11	11	10	12.6	16.5
4-Sep	9	8	7	6	5	4	4	6	9	13	16	17	17	19	20	19	20	18	17	16	14	14	14	14	12.9	19.8
5-Sep	14	14	13	12	12	11	11	11	12	15	16	17	17	18	19	19	19	20	19	18	15	12	12	10	14.9	19.7
6-Sep	9	8	8	7	7	7	7	9	11	14	18	21	23	24	25	26	26	25	23	20	18	18	17	15	16.0	25.8
7-Sep	14	13	12	12	12	12	14	13	13	15	17	18	19	20	21	22	22	21	20	17	14	14	14	13	15.9	21.6
8-Sep	12	11	9	8	7	7	7	9	12	16	21	24	26	27	28	28	28	28	25	24	22	20	19	18	18.3	28.5
9-Sep	17	17	16	15	10	11	9	12	15	17	21	22	24	25	24	23	24	21	19	17	13	12	13	13	17.1	24.8
10-Sep	12	11	10	10	9	9	9	9	9	10	10	10	12	12	13	13	13	11	10	8	6	6	5	6	9.7	13.3
11-Sep	7	7	7	6	6	5	5	6	8	10	11	12	13	13	13	14	12	11	11	9	7	8	7	7	8.9	13.6
12-Sep	7	7	7	6	5	3	3	4	9	12	12	13	14	13	13	12	13	14	13	12	13	13	14	14	10.3	14.3
13-Sep	13	13	13	13	14	14	13	14	15	17	19	20	22	22	22	22	22	22	22	19	16	15	14	13	17.0	22.2
14-Sep	12	12	11	11	12	11	15	16	16	17	D	D	19	19	19	19	19	18	17	14	13	12	11	11	14.8	19.2
15-Sep	10	10	9	8	5	3	3	3	6	8	12	14	15	16	16	17	17	17	15	13	11	9	8	7	10.4	17.0
16-Sep	6	4	3	2	0	1	1	3	5	7	11	14	16	18	19	20	20	19	18	15	13	12	12	12	10.6	20.3
17-Sep	10	10	9	9	9	9	8	8	12	16	20	23	24	26	27	27	26	25	23	20	19	19	18	17	17.3	27.0
18-Sep	18	16	16	16	18	16	14	14	15	16	17	18	18	18	19	19	19	19	16	14	13	12	11	10	15.9	19.2
19-Sep	9	8	7	6	6	6	5	7	11	14	19	22	23	24	25	25	25	24	22	19	17	16	15	14	15.3	25.1
20-Sep	14	13	11	11	11	10	9	9	12	16	19	23	25	26	27	28	28	27	24	21	20	18	17	15	18.1	27.9
21-Sep	14	12	12	11	11	10	9	9	11	14	18	21	24	27	28	29	29	28	26	24	22	18	17	16	18.4	29.4
22-Sep	14	13	12	11	10	10	10	10	12	15	18	21	24	25	26	27	27	26	22	21	20	19	17	16	17.8	27.3
23-Sep	15	11	9	9	8	7	5	6	10	13	17	20	23	25	26	26	26	25	22	20	19	19	17	16	16.4	26.1
24-Sep	13	10	10	10	10	10	9	8	11	17	16	16	18	21	22	23	22	21	19	18	17	15	13	12	15.1	22.6
25-Sep	11	11	11	10	10	10	10	9	9	10	11	11	11	13	14	13	13	12	11	9	8	7	7	7	10.3	14.1
26-Sep	7	4	3	3	3	3	3	4	6	8	10	13	16	18	20	20	20	20	17	15	13	12	11	10	10.7	20.3
27-Sep	10	8	7	7	6	7	6	6	8	10	13	16	20	22	23	24	25	23	21	20	19	17	15	15	14.5	24.8
28-Sep	15	14	13	13	13	12	12	13	12	14	17	17	18	19	20	18	18	16	16	15	14	12	11	9	14.6	19.5
29-Sep	8	7	7	6	5	4	4	4	6	8	11	13	14	15	15	14	14	12	11	9	8	7	8	7	9.0	14.6
30-Sep	6	6	6	7	6	6	5	6	9	11	12	13	14	14	14	14	14	13	12	11	10	10	10	9	9.9	14.3
	11.2	10.3	9.6	9.1	8.5	8.1	7.8	8.5	10.6	13.1	15.3	17.2	18.7	19.7	20.4	20.5	20.4	19.6	17.9	15.9	14.5	13.5	12.7	11.9	Diurnal Average	
	18.3	16.8	16.2	15.8	17.6	16.2	14.8	16.2	16.5	17.4	21.4	24.4	26.0	27.1	28.0	29.2	29.4	28.1	25.9	23.7	22.5	20.3	18.9	17.9	Diurnal Maximum	

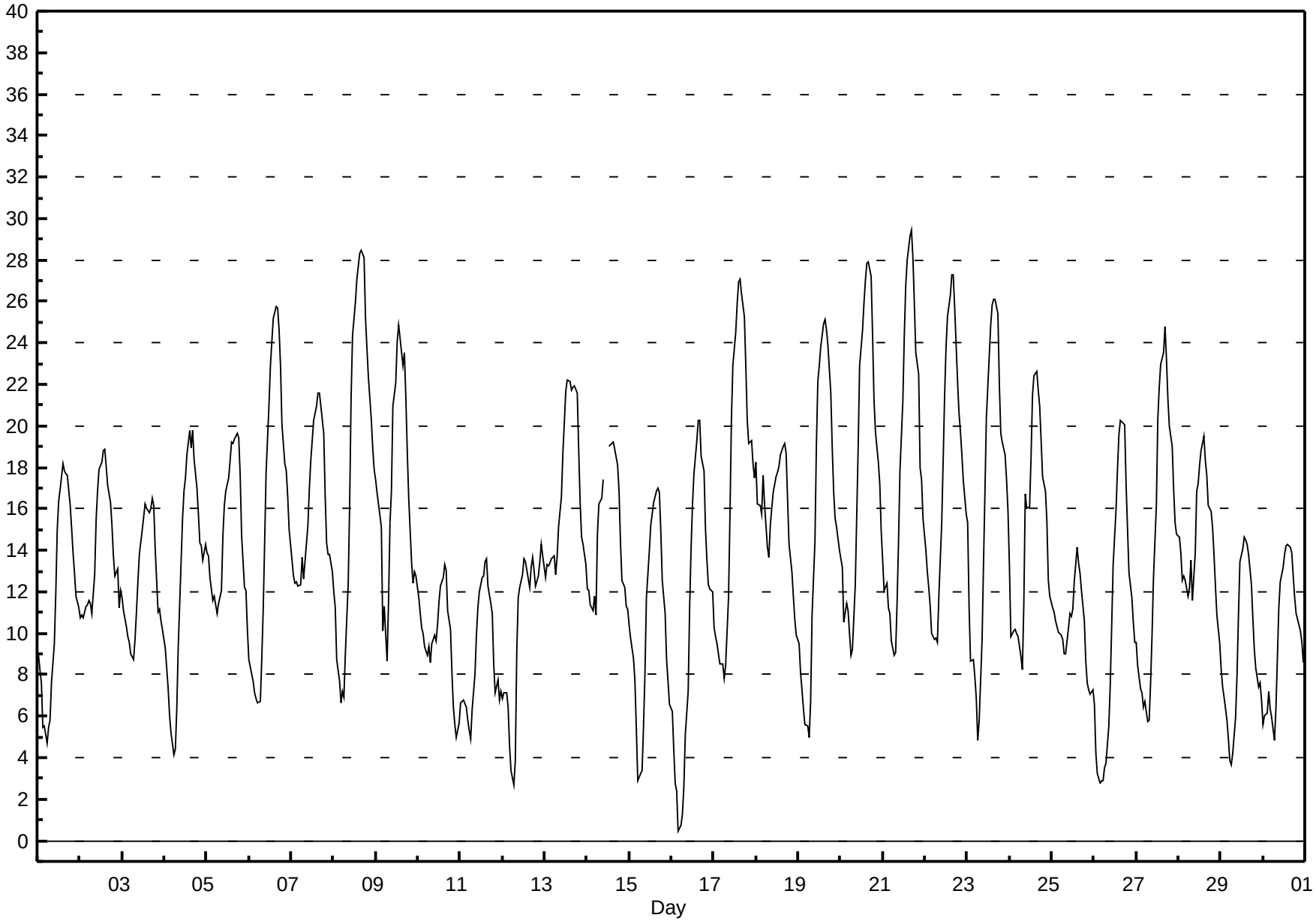
D - DAS Failure

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Beaverlodge - September 2012



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 100.0 % on Sep 25 06:00 Maximum Daily Average: 88.8 % on Sep 25

Minimum Value: 12 % on Sep 17 17:00 Minimum Daily Average: 35.7 % on Sep 17
Maximum Diurnal Average: 74.9 % at hour 7 Minimum Diurnal Average: 32.6 % at hour 15
Monthly Average: 54.32 % Percentiles: P_1 = 19.3 P_{10} = 29.1 Q_1 = 37.7 Median = 53.8 Q_3 = 68.0 P_{90} = 79.7 P_{99} = 100.0

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	78	82	85	93	93	96	95	92	86	77	66	56	52	47	41	45	42	47	58	64	66	67	71	73	69.8	96.1
2-Sep	75	76	78	76	74	72	71	73	63	49	42	37	35	34	37	42	44	47	53	59	62	60	69	65	58.0	78.4
3-Sep	63	63	66	64	62	64	64	60	54	46	40	35	33	32	32	35	36	36	39	47	61	64	67	68	51.3	68.0
4-Sep	72	76	79	85	88	93	94	86	76	61	52	47	44	42	39	42	42	47	53	58	64	66	70	70	64.4	93.7
5-Sep	71	70	73	77	74	75	78	77	74	64	55	48	47	44	37	37	37	35	36	42	54	62	63	71	58.3	77.8
6-Sep	79	82	85	88	88	88	87	79	70	58	48	38	34	32	30	28	29	32	36	44	51	53	57	62	57.5	88.2
7-Sep	66	69	71	71	72	73	66	69	64	49	41	34	32	31	29	28	28	29	34	43	51	54	56	60	50.8	72.6
8-Sep	64	67	76	81	86	86	89	80	65	53	41	32	29	27	27	27	27	29	36	40	40	49	57	61	52.9	89.4
9-Sep	67	68	70	71	91	88	95	87	73	66	50	44	32	25	27	31	30	42	52	61	79	82	78	80	62.0	94.9
10-Sep	78	65	64	63	65	64	56	64	57	54	54	50	45	40	38	36	39	49	49	59	68	72	74	70	57.3	78.0
11-Sep	66	65	63	63	66	68	70	65	58	49	43	41	35	35	33	32	40	44	48	56	59	55	59	58	52.9	69.7
12-Sep	58	57	58	60	67	73	76	73	56	47	47	46	43	45	51	53	51	51	53	55	55	55	52	54	55.7	76.2
13-Sep	58	57	58	58	58	57	60	58	53	48	42	37	33	32	32	34	34	35	36	44	51	57	58	62	47.9	62.5
14-Sep	66	64	67	67	62	64	47	44	45	31	D	D	21	21	21	21	21	23	26	31	36	38	41	42	40.9	67.2
15-Sep	44	46	49	53	62	71	71	71	66	57	44	36	32	30	27	25	26	26	29	34	39	46	50	55	45.3	71.4
16-Sep	56	64	71	76	82	84	82	77	68	61	49	41	36	32	29	27	28	32	35	43	49	53	52	51	53.3	83.9
17-Sep	57	58	60	63	63	62	64	62	52	39	26	20	18	15	14	13	12	14	19	23	24	23	25	28	35.7	64.2
18-Sep	29	33	34	37	32	35	44	45	43	45	41	37	35	35	34	34	33	34	39	45	49	52	54	58	39.8	57.8
19-Sep	63	71	75	78	80	78	79	72	57	42	30	25	25	25	25	25	26	27	31	37	42	41	37	41	47.3	79.6
20-Sep	44	45	55	54	58	64	70	70	59	49	40	30	24	22	21	20	20	21	26	31	37	41	45	52	41.5	70.0
21-Sep	57	62	60	64	65	69	70	68	61	50	41	32	28	25	24	23	22	25	28	32	34	46	47	54	45.4	70.2
22-Sep	60	63	67	70	75	76	73	73	67	53	45	36	30	28	26	25	25	28	36	39	41	45	50	55	49.5	75.6
23-Sep	57	71	80	83	85	90	93	93	78	66	54	44	36	32	29	28	29	31	38	46	46	48	53	58	57.0	92.8
24-Sep	68	79	80	79	74	72	73	78	68	47	53	49	45	38	34	34	36	39	45	51	52	63	86	92	59.7	92.1
25-Sep	96	96	98	99	100	100	100	94	89	83	84	88	77	71	66	73	75	79	83	90	95	97	99	98	88.8	100.0
26-Sep	99	99	100	100	100	100	100	100	97	86	75	64	49	41	34	32	32	32	41	46	54	57	60	63	69.2	100.0
27-Sep	63	68	74	77	80	78	81	79	74	62	53	45	35	30	29	29	28	30	32	33	34	40	45	47	51.9	81.0
28-Sep	48	50	54	53	52	55	52	49	64	54	46	44	42	41	39	48	48	56	55	58	62	59	55	54	51.6	64.0
29-Sep	55	56	58	63	69	73	76	78	72	67	53	41	38	33	32	33	36	42	50	56	61	65	65	68	55.8	77.6
30-Sep	72	69	65	61	65	67	73	73	63	49	41	36	35	37	39	42	45	50	55	59	62	64	71	81	57.2	81.2
	64.3	66.3	69.2	71.0	72.9	74.5	74.9	73.0	65.8	55.4	48.1	41.8	36.6	34.1	32.6	33.4	34.0	37.1	41.7	47.6	52.7	55.8	58.8	61.7	Diurnal Average	
	99.0	99.2	100.0	100.0	100.0	100.0	100.0	100.0	97.5	86.0	84.3	87.6	77.0	71.3	65.7	72.6	75.4	78.7	83.3	89.6	95.2	96.6	98.7	98.2	Diurnal Maximum	

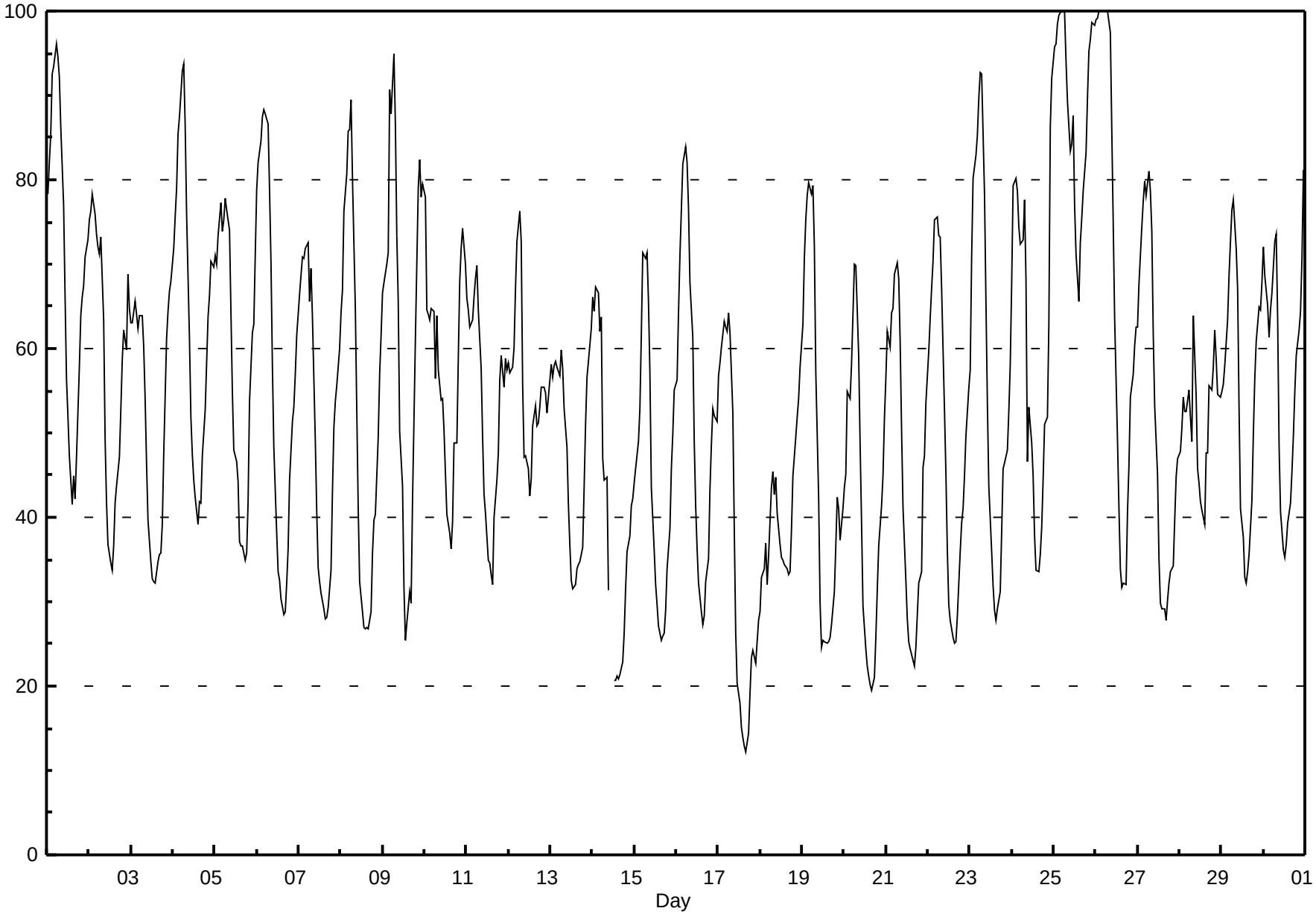
D - DAS Failure

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

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

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	2	3	4	3	4	2	1	2	5	7	6	8	9	7	10	9	1	6	12	11	7	5	5	2.7	11.6
Dir	159	163	54	120	225	17	61	276	185	204	246	316	312	317	318	335	34	91	219	259	272	282	302	284	289	259
2 Spd	7	9	10	8	8	7	7	8	12	25	32	33	36	36	40	41	40	39	29	19	19	26	18	23	21.8	41.2
Dir	272	295	296	272	261	253	238	232	255	258	257	253	251	264	266	264	260	252	245	244	254	256	247	257	257	264
3 Spd	23	23	23	23	22	22	20	27	31	33	31	28	30	31	32	31	25	24	26	16	10	12	8	7	23.0	33.1
Dir	260	268	265	264	266	264	261	259	261	271	279	286	278	280	278	273	279	281	269	260	244	262	269	301	271	271
4 Spd	8	9	3	3	4	4	6	3	3	12	27	25	23	26	27	29	31	35	31	23	19	20	15	16	14.5	34.8
Dir	323	309	304	71	64	54	47	62	157	253	251	266	273	262	275	265	260	259	262	250	246	246	251	256	263	259
5 Spd	16	15	10	10	10	11	5	8	6	13	12	14	17	17	16	13	11	11	7	5	6	4	4	4	8.7	17.4
Dir	261	279	318	313	321	314	312	317	309	308	335	323	314	301	308	307	320	324	322	8	43	57	82	170	313	314
6 Spd	3	4	4	3	3	4	3	3	8	13	13	19	22	18	24	27	30	29	24	18	15	22	13	4	11.4	29.8
Dir	124	134	135	101	108	138	129	123	182	219	222	243	257	250	260	263	257	237	240	247	255	257	262	237	243	257
7 Spd	7	2	1	1	5	8	14	14	14	9	6	5	5	4	2	1	8	12	14	10	10	10	9	7	2.4	13.7
Dir	216	172	75	15	251	310	319	326	329	12	62	130	60	91	309	150	118	117	121	109	92	94	99	107	72	319
8 Spd	5	2	1	2	3	4	4	2	1	0	1	6	5	9	15	16	15	13	11	3	4	4	7	7	2.9	16.0
Dir	105	193	112	123	79	102	99	112	187	340	62	309	285	204	238	214	211	154	145	116	134	99	72	107	169	214
9 Spd	5	4	5	2	3	7	1	4	2	4	5	6	9	10	20	7	9	18	17	23	18	11	19	21	4.7	22.7
Dir	100	30	36	47	315	31	305	50	46	181	165	184	170	196	232	122	147	162	190	241	275	250	268	268	221	241
10 Spd	17	15	12	14	14	13	17	14	19	28	32	31	35	37	37	34	39	37	30	20	20	16	15	15	23.2	38.8
Dir	271	267	256	252	247	254	255	229	261	259	260	257	255	260	265	269	259	251	256	244	244	249	248	250	256	259
11 Spd	22	23	28	25	21	16	15	22	29	34	33	33	30	32	41	39	40	36	25	17	14	15	12	16	25.5	41.1
Dir	263	266	270	270	265	265	268	265	262	269	271	264	280	267	262	262	259	264	250	243	246	258	256	262	264	262
12 Spd	12	20	21	14	4	2	2	1	23	35	35	37	38	38	37	36	31	28	34	21	20	22	30	16	22.8	38.1
Dir	264	266	264	268	225	204	65	109	248	259	265	266	269	251	256	257	256	258	264	257	259	252	260	259	259	251
13 Spd	16	21	20	19	18	23	11	9	11	17	27	32	26	34	32	31	21	15	5	3	5	6	4	3	14.9	33.6
Dir	249	259	260	259	263	259	266	286	244	264	249	247	252	243	240	247	234	214	189	93	73	98	110	128	248	243
14 Spd	2	4	3	3	3	4	27	35	30	43	D	D	49	49	44	40	38	36	22	12	10	8	4	9	20.1	49.5
Dir	135	186	87	131	244	216	260	255	237	245	D	D	257	259	260	262	266	270	286	300	288	313	314	293	261	257
15 Spd	6	7	5	6	2	0	1	2	2	6	4	4	8	11	13	12	11	11	12	8	8	3	4	1	4.8	12.9
Dir	296	306	341	337	233	109	12	216	252	285	290	301	284	325	301	300	337	355	7	22	28	284	25	149	325	301
16 Spd	3	2	1	4	1	3	2	3	2	5	6	8	8	10	4	9	20	14	9	9	7	10	12	9	4.8	19.7
Dir	216	85	170	43	297	52	59	62	160	192	171	206	225	232	264	256	269	250	270	270	261	249	256	254	247	269
17 Spd	1	2	4	4	4	4	3	5	2	5	20	21	23	28	29	32	32	28	24	19	21	25	22	13	13.1	32.1
Dir	215	83	62	57	53	62	73	60	102	238	259	271	268	263	266	265	267	249	249	245	262	263	255	266	262	267
18 Spd	24	16	12	11	23	12	10	8	15	15	17	16	17	16	13	12	11	10	8	5	5	4	4	4	8.3	23.6
Dir	258	263	270	252	266	278	314	336	333	330	323	328	327	329	342	350	349	17	30	46	57	151	97	73	315	258
19 Spd	4	3	3	4	3	2	5	4	2	4	6	19	22	17	14	14	14	14	11	5	6	8	8	5	3.7	21.6
Dir	98	108	129	135	97	92	51	39	101	207	255	296	303	298	318	324	339	28	32	40	67	75	78	104	351	303
20 Spd	4	2	2	2	3	2	3	4	3	3	4	11	19	16	14	11	10	9	10	8	8	8	3	1	1.8	18.7
Dir	100	131	39	34	53	94	64	70	105	134	202	271	280	278	265	292	352	23	33	64	81	83	97	7	340	280
21 Spd	2	5	1	3	4	3	4	3	4	4	5	7	7	5	3	4	4	6	3	3	6	1	1	3	1.5	7.1
Dir	41	51	322	54	53	52	63	67	78	178	177	191	209	206	194	162	148	123	116	51	302	97	72	68	121	191
22 Spd	0	3	3	4	4	4	1	1	2	4	7	7	6	3	2	3	4	6	6	6	6	8	2	1	2.2	7.6
Dir	200	261	53	54	50	40	19	136	62	302	312	305	293	353	58	4	99	87	70	58	60	53	53	45	30	53

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	1	1	0	4	2	2	2	2	2	2	3	3	2	3	4	6	6	7	8	7	7	5	3	2	2.2	8.2
Dir	33	214	203	324	18	0	86	49	83	149	205	174	160	114	164	156	156	112	114	72	63	74	94	111	109	114
24 Spd	2	2	5	4	4	1	0	2	2	4	3	7	3	1	13	12	13	10	14	13	16	20	10	9	5.1	19.8
Dir	110	71	58	46	53	33	49	207	336	288	226	206	184	257	291	299	291	315	306	301	296	280	292	256	292	280
25 Spd	9	9	8	5	4	3	3	7	9	13	13	12	13	9	4	11	12	10	8	7	7	6	6	4	0.9	13.2
Dir	255	267	239	179	134	176	297	290	292	309	333	359	29	43	67	157	136	132	138	94	78	86	87	81	56	29
26 Spd	1	1	1	2	2	3	1	3	4	5	5	7	12	12	12	12	13	14	10	3	3	2	3	3	3.4	13.8
Dir	241	98	186	325	45	44	115	57	164	152	166	187	209	231	242	258	238	239	243	257	72	116	91	90	220	239
27 Spd	2	3	4	2	4	3	4	5	5	7	8	8	13	19	14	16	19	19	7	9	8	4	4	4	5.7	19.4
Dir	124	112	107	144	108	105	94	118	137	158	169	174	189	209	209	229	226	237	212	230	246	240	87	127	198	226
28 Spd	5	5	7	3	1	3	6	3	4	4	1	4	4	2	1	5	26	18	21	25	19	21	21	18	6.3	25.7
Dir	155	99	119	127	40	51	42	52	159	169	216	222	215	63	252	268	274	268	266	263	264	272	287	280	266	274
29 Spd	13	9	6	3	5	1	2	1	2	2	7	29	33	43	41	39	37	30	19	17	15	11	6	6	14.6	43.3
Dir	292	303	314	320	240	106	159	114	136	96	219	244	253	248	249	255	250	246	244	243	243	246	224	211	250	248
30 Spd	3	2	7	7	4	6	6	14	19	33	39	38	37	38	40	34	31	26	13	12	5	4	1	2	16.5	40.0
Dir	174	185	253	226	180	200	227	237	244	257	260	262	263	258	260	266	263	266	288	277	247	221	206	108	257	260
Spd	4.8	4.8	3.9	3.2	3.2	2.4	2.7	3.6	5.9	10.2	11.2	13.4	15.4	16.4	17.6	16.6	15.5	12.2	9.4	7.2	5.9	6.3	4.8	4.7	Diurnal Average	
Dir	256	269	274	270	266	277	281	270	254	259	261	263	266	261	263	264	262	254	256	258	264	258	262	257		
Spd	23.6	22.8	28.4	24.7	22.7	23.4	27.3	35.4	30.9	42.9	38.5	38.2	49.5	48.8	43.6	41.2	40.1	39.5	33.8	24.6	21.1	25.7	30.1	22.6	Diurnal Maximum	
Dir	258	266	270	270	266	259	260	255	261	245	260	262	257	259	260	264	260	252	264	263	262	256	260	257		

Maximum Speed Value: 49 km/h on Sep 14 13:00
Maximum Daily Speed Average: 25.5 km/h on Sep 11
Maximum Diurnal Speed Average: 17.6 km/h at hour 15

Minimum Speed Value: 0 km/h on Sep 22 01:00
Minimum Daily Speed Average: 0.9 km/h on Sep 23
Minimum Diurnal Speed Average: 2.4 km/h at hour 6

Monthly Average Velocity: 8.34 km/h 262.0 deg

Speed Percentiles: $P_1 = 0.6$ $P_{10} = 2.0$ $Q_1 = 3.8$ Median = 8.1 $Q_3 = 17.7$ $P_{90} = 30.0$ $P_{99} = 41.0$

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

D - DAS Failure

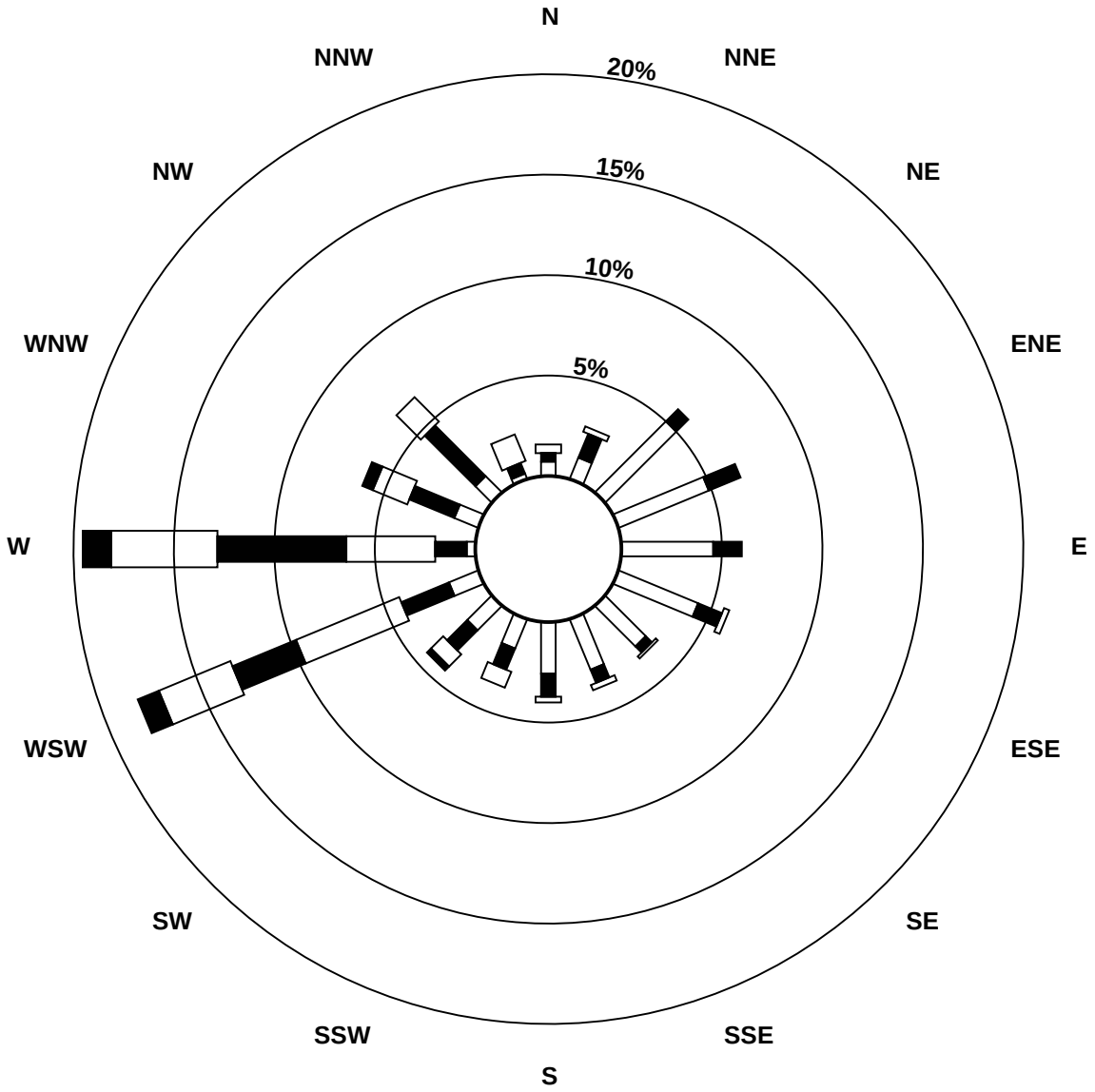
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	11	6	6	0	0	0	23
NorthEast	63	18	3	0	0	0	84
East	62	23	0	0	0	0	85
SouthEast	39	12	5	0	0	0	56
South	32	15	3	0	0	0	50
SouthWest	25	26	22	16	9	1	99
West	12	30	56	66	55	20	239
NorthWest	16	33	32	1	0	0	82
Total	260	163	127	83	64	21	718

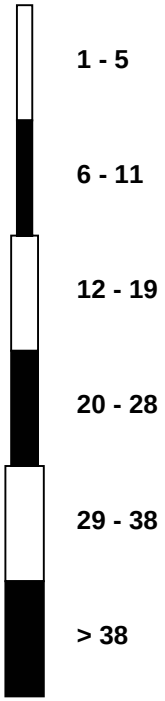
Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - September 2012



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - September 2012

Maximum Speed: 50 km/h on Sep 14 13:00

Maximum Daily Speed Average: 25.9 km/h on Sep 11

Minimum Speed: 1 km/h on Sep 24 07:00

Minimum Daily Speed Average: 4.4 km/h on Sep 23

Maximum Diurnal Speed Average: 20.9 km/h at hour 15

Minimum Diurnal Speed Average: 6.5 km/h at hour 6

Monthly Average Speed: 12.68 km/h

Percentiles: P_1 = 1.7 P_{10} = 3.1 Q_1 = 4.6 Median = 8.5 Q_3 = 18.1 P_{90} = 30.1 P_{99} = 41.4

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	4	3	5	4	5	3	4	4	6	9	7	9	9	8	11	10	8	11	12	11	7	5	5	6.9	12.0
2-Sep	7	9	10	9	8	8	7	8	12	26	32	34	36	37	40	42	40	40	30	19	19	26	18	23	22.4	41.8
3-Sep	24	23	23	23	22	22	20	27	31	33	31	28	30	32	32	32	25	25	26	17	10	12	8	7	23.5	33.4
4-Sep	9	9	4	3	4	5	6	3	4	13	27	25	24	27	28	29	31	35	31	23	19	20	15	16	17.0	34.9
5-Sep	16	15	10	10	10	11	5	8	6	13	13	15	18	17	17	14	12	12	7	5	7	4	4	4	10.5	18.0
6-Sep	4	5	5	4	3	4	4	3	8	13	14	20	22	19	25	27	30	29	24	18	15	22	13	5	14.0	30.0
7-Sep	7	4	3	2	5	9	14	14	14	10	8	7	7	6	5	7	10	13	14	10	10	10	9	7	8.5	13.9
8-Sep	5	3	2	3	3	4	4	3	3	4	3	6	7	10	16	17	15	14	11	7	5	6	8	8	7.0	17.3
9-Sep	5	8	5	5	8	8	8	5	6	5	5	7	10	11	22	8	10	18	17	24	19	11	19	21	11.0	23.9
10-Sep	17	16	13	15	14	13	17	15	19	28	32	31	35	38	37	34	39	37	30	21	20	16	15	15	23.7	39.1
11-Sep	22	23	28	25	21	16	15	22	29	34	33	33	30	32	42	40	40	36	25	17	14	15	12	16	25.9	41.6
12-Sep	12	20	21	14	5	3	2	2	23	35	35	37	38	38	37	36	32	28	34	21	21	22	30	16	23.5	38.4
13-Sep	16	21	20	20	18	24	11	10	12	17	28	32	26	35	32	31	22	15	5	3	5	6	4	3	17.3	34.5
14-Sep	3	5	3	4	5	5	27	36	31	43	D	D	50	49	44	40	39	37	22	12	11	8	5	9	22.2	49.9
15-Sep	6	7	6	7	4	1	2	2	3	6	5	6	9	12	14	14	11	11	12	9	8	5	5	5	7.1	14.0
16-Sep	3	3	2	4	1	3	3	3	3	6	6	9	9	12	7	11	20	14	9	9	7	10	12	9	7.3	20.2
17-Sep	2	2	4	4	4	4	3	5	4	7	20	22	23	28	29	32	32	28	24	19	21	26	22	13	15.8	32.3
18-Sep	24	16	12	12	23	13	10	8	15	16	18	17	19	17	14	13	12	10	8	5	5	4	4	5	12.4	23.7
19-Sep	4	4	3	4	4	2	5	5	2	5	7	19	22	18	15	16	14	15	11	7	6	8	8	5	8.8	22.0
20-Sep	5	3	4	3	3	2	3	4	3	4	6	12	19	17	15	13	11	10	10	8	8	8	6	4	7.4	19.4
21-Sep	3	5	3	4	4	3	4	4	4	5	6	7	7	6	5	5	5	6	3	4	6	3	3	4	4.6	7.5
22-Sep	2	4	3	4	5	4	2	1	3	5	8	7	7	6	5	5	6	7	6	6	6	8	3	2	4.8	7.7
23-Sep	2	4	5	5	3	3	2	2	2	2	3	4	3	4	6	6	7	7	8	7	7	6	3	2	4.4	8.3
24-Sep	4	3	5	4	4	2	1	2	4	5	4	7	4	5	13	12	14	10	14	13	16	20	11	11	7.8	20.0
25-Sep	9	9	8	5	5	3	3	7	9	13	14	13	14	10	5	11	12	11	8	7	7	6	6	5	8.3	13.5
26-Sep	1	2	3	3	2	3	2	4	5	6	6	7	13	13	14	13	14	14	10	4	4	3	4	3	6.3	14.0
27-Sep	2	4	4	3	4	4	4	5	5	7	8	8	13	20	15	16	21	19	8	9	8	4	4	4	8.3	20.8
28-Sep	5	5	7	4	3	4	6	3	6	4	2	4	4	3	2	6	26	18	22	25	20	22	21	18	10.1	26.1
29-Sep	13	9	7	5	7	2	3	2	2	3	8	30	34	43	41	39	37	30	19	17	15	11	8	6	16.4	43.5
30-Sep	4	5	7	8	5	6	7	14	19	33	39	39	37	38	41	34	31	26	13	12	5	4	2	2	18.0	40.5
	8.1	8.3	7.8	7.3	7.1	6.5	6.8	7.7	9.7	13.5	14.7	17.0	19.4	20.4	20.9	20.6	20.9	19.4	15.8	12.4	11.2	11.1	9.6	8.4	Diurnal Average	
	23.7	22.8	28.4	24.7	22.8	23.5	27.4	35.6	31.0	43.2	38.8	38.6	49.9	49.2	43.9	41.8	40.5	39.7	33.9	24.7	21.4	25.9	30.1	22.8	Diurnal Maximum	

D - DAS Failure

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

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - September 2012

Maximum Value: 93.8 deg on Sep 24 07:00

Minimum Value: 2.3 deg on Sep 11 20:00

Percentiles: P_1 = 2.7 P_{10} = 5.6 Q_1 = 8.2 Median = 15.8 Q_3 = 33.8 P_{90} = 62.5 P_{99} = 89.6

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)																								Daily Maximum
	1	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	30	63	25	44	42	43	60	91	81	25	49	42	27	31	46	28	18	89	83	16	13	11	24	40	90.6
2-Sep	38	7	7	19	13	20	20	8	18	9	8	9	9	11	9	10	7	6	6	8	7	8	8	7	38.4
3-Sep	4	6	2	2	3	3	3	3	5	8	8	8	10	11	9	9	10	16	5	6	10	3	12	15	15.9
4-Sep	7	7	73	28	13	10	6	27	38	34	9	11	11	13	12	11	7	5	7	7	4	3	4	4	73.1
5-Sep	4	11	15	7	8	6	30	12	43	10	19	18	16	14	17	14	15	12	17	22	7	37	29	16	43.0
6-Sep	28	22	18	22	25	12	20	22	15	13	14	14	14	16	16	11	8	6	5	8	6	3	6	25	27.8
7-Sep	40	71	90	68	23	21	8	10	12	24	59	60	50	63	83	84	34	13	6	6	5	4	7	10	90.2
8-Sep	8	54	49	51	27	25	31	46	61	88	84	29	68	46	22	22	14	16	5	84	43	40	44	25	87.9
9-Sep	8	50	32	77	69	22	87	40	78	32	29	29	25	20	29	34	14	16	13	21	18	13	8	5	87.3
10-Sep	9	10	11	9	11	12	14	16	10	6	7	6	7	9	8	10	8	6	5	6	2	2	4	4	15.5
11-Sep	4	4	3	3	3	3	4	3	5	6	9	11	9	12	9	11	12	7	6	2	7	3	7	3	12.3
12-Sep	4	3	4	4	29	77	42	41	11	6	5	6	8	7	9	6	9	7	5	8	11	9	4	7	76.7
13-Sep	7	5	4	4	6	6	10	20	21	12	16	8	12	13	9	7	12	10	14	19	14	10	13	21	21.3
14-Sep	44	36	31	34	76	21	11	6	7	7	D	D	8	7	7	10	9	8	5	8	24	18	34	6	76.3
15-Sep	14	9	25	12	66	83	79	50	39	15	43	50	38	24	20	40	21	20	6	14	4	51	45	76	83.2
16-Sep	21	50	56	36	93	15	32	21	44	24	22	25	35	37	67	44	14	10	12	7	15	13	3	6	92.8
17-Sep	90	43	12	11	10	17	17	12	50	53	8	12	12	11	11	7	7	7	4	5	9	13	3	7	90.3
18-Sep	3	6	9	15	4	16	11	20	7	12	14	17	21	17	22	23	19	20	4	28	22	33	20	19	32.7
19-Sep	24	42	31	21	29	24	24	54	53	21	36	11	11	21	21	24	12	14	6	63	33	5	18	16	62.6
20-Sep	25	52	85	71	32	23	17	13	22	38	38	20	17	18	27	25	21	15	4	22	8	7	70	81	85.0
21-Sep	77	11	88	26	15	46	9	33	23	32	23	20	28	50	76	46	44	19	27	51	37	69	73	69	87.8
22-Sep	92	66	44	15	18	28	79	69	75	31	12	27	39	72	87	67	67	18	14	11	10	9	90	81	92.4
23-Sep	74	86	90	56	77	61	60	41	42	37	30	39	59	57	48	34	29	32	11	9	6	10	14	60	89.8
24-Sep	56	54	13	15	9	74	94	52	71	37	35	9	65	78	10	20	24	9	6	7	5	8	12	30	93.8
25-Sep	8	9	14	20	28	33	66	5	4	8	17	13	14	22	47	14	15	8	7	10	7	8	8	29	66.2
26-Sep	78	49	71	63	48	26	59	51	32	19	18	23	17	18	27	22	12	9	6	41	24	49	51	47	77.6
27-Sep	30	21	27	34	23	27	24	12	19	18	10	16	10	9	15	10	22	8	30	12	6	82	23	26	81.8
28-Sep	21	27	21	33	74	42	29	28	55	27	86	29	29	61	72	31	12	8	10	4	9	8	7	5	85.7
29-Sep	7	8	32	84	64	51	53	59	53	47	58	17	8	5	7	8	9	4	4	5	5	8	31	12	84.0
30-Sep	44	70	21	24	52	27	64	6	7	8	7	8	9	7	9	7	7	10	6	6	31	19	59	41	69.6
	92.4	86.5	90.2	84.0	92.8	83.2	93.8	90.6	80.7	87.9	85.7	59.5	68.1	78.4	87.5	84.2	66.5	89.0	83.0	84.2	42.9	81.8	89.7	81.5	

D - DAS Failure

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and Roses

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 92.7 ppb on Sep 29 17:00 Maximum Daily Average: 11.8 ppb on Sep 29

Minimum Value: 0 ppb on Sep 1 01:00 Minimum Daily Average: 0.0 ppb on Sep 9
Maximum Diurnal Average: 3.7 ppb at hour 17 Minimum Diurnal Average: 0.3 ppb at hour 5
Monthly Average: 1.08 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.5 P_{90} = 2.6 P_{99} = 10.1

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	0	A	0	0	0	0	0	0	1	3	4	2	3	0	0	0	0	0	0	0	0	1	3	3	1.0	4.3
2-Sep	A	1	3	2	1	0	0	1	2	4	2	1	0	1	0	0	1	1	1	4	4	0	0	A	1.3	4.3
3-Sep	6	8	5	3	2	6	4	11	5	1	1	1	1	2	1	2	1	0	1	4	1	6	A	1	3.2	10.9
4-Sep	1	1	1	3	1	1	1	5	2	2	2	4	3	2	2	4	3	6	4	1	8	A	0	0	2.5	8.1
5-Sep	0	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.5	5.5
6-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	0.1
7-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	0.3
8-Sep	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6
9-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
10-Sep	0	0	0	1	2	1	0	2	2	0	2	1	1	0	0	A	0	2	4	3	4	8	9	7	2.1	9.4
11-Sep	8	5	1	1	1	0	0	1	0	0	0	0	0	0	A	0	1	0	1	1	3	2	0	1	1.2	7.6
12-Sep	0	0	0	0	0	0	0	0	0	3	2	3	1	A	2	1	2	0	0	0	0	0	0	0	0.8	3.3
13-Sep	0	0	0	0	0	0	0	0	0	0	3	4	A	1	3	1	1	0	0	1	0	0	0	0	0.7	4.3
14-Sep	0	0	0	0	0	0	0	0	0	0	3	A	4	12	22	1	1	0	0	0	0	0	0	0	2.0	22.3
15-Sep	0	0	0	0	0	0	0	0	0	0	A	1	3	2	0	0	0	0	0	0	0	0	0	0	0.4	2.6
16-Sep	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	2	0	0	0	0	0	0	0.3	1.6
17-Sep	0	0	0	0	0	0	0	0	A	1	2	1	3	8	3	4	0	0	0	2	0	9	3	0	1.6	8.9
18-Sep	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
19-Sep	0	0	0	0	0	0	A	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0.1	0.4
20-Sep	0	0	0	0	0	A	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0.2	2.1
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	0.4
22-Sep	0	0	0	A	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0.2	1.3
23-Sep	0	0	A	0	0	0	0	0	0	0	4	1	1	1	0	1	1	0	1	0	0	0	0	0	0.5	3.7
24-Sep	0	A	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0.3	1.6
25-Sep	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0.1	1.0
26-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
27-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0.1	0.6
28-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	A	0	0	0	0.2	1.5
29-Sep	0	0	0	0	0	0	0	0	0	0	22	6	6	17	42	58	93	3	7	A	8	5	2	3	11.8	92.7
30-Sep	0	0	0	0	0	0	0	0	0	3	4	2	1	1	0	0	1	1	A	1	0	0	0	0	0.7	3.8
	0.6	0.7	0.6	0.4	0.3	0.4	0.3	0.7	0.5	0.7	1.9	1.2	1.1	1.8	2.8	2.7	3.7	0.7	0.8	0.7	1.1	1.2	0.7	0.5	Diurnal Average	
	7.6	7.7	5.5	2.9	1.6	6.5	4.2	10.9	5.0	4.3	22.2	6.2	5.8	17.0	41.9	57.6	92.7	5.9	7.0	4.4	8.5	8.9	9.4	6.7	Diurnal Maximum	

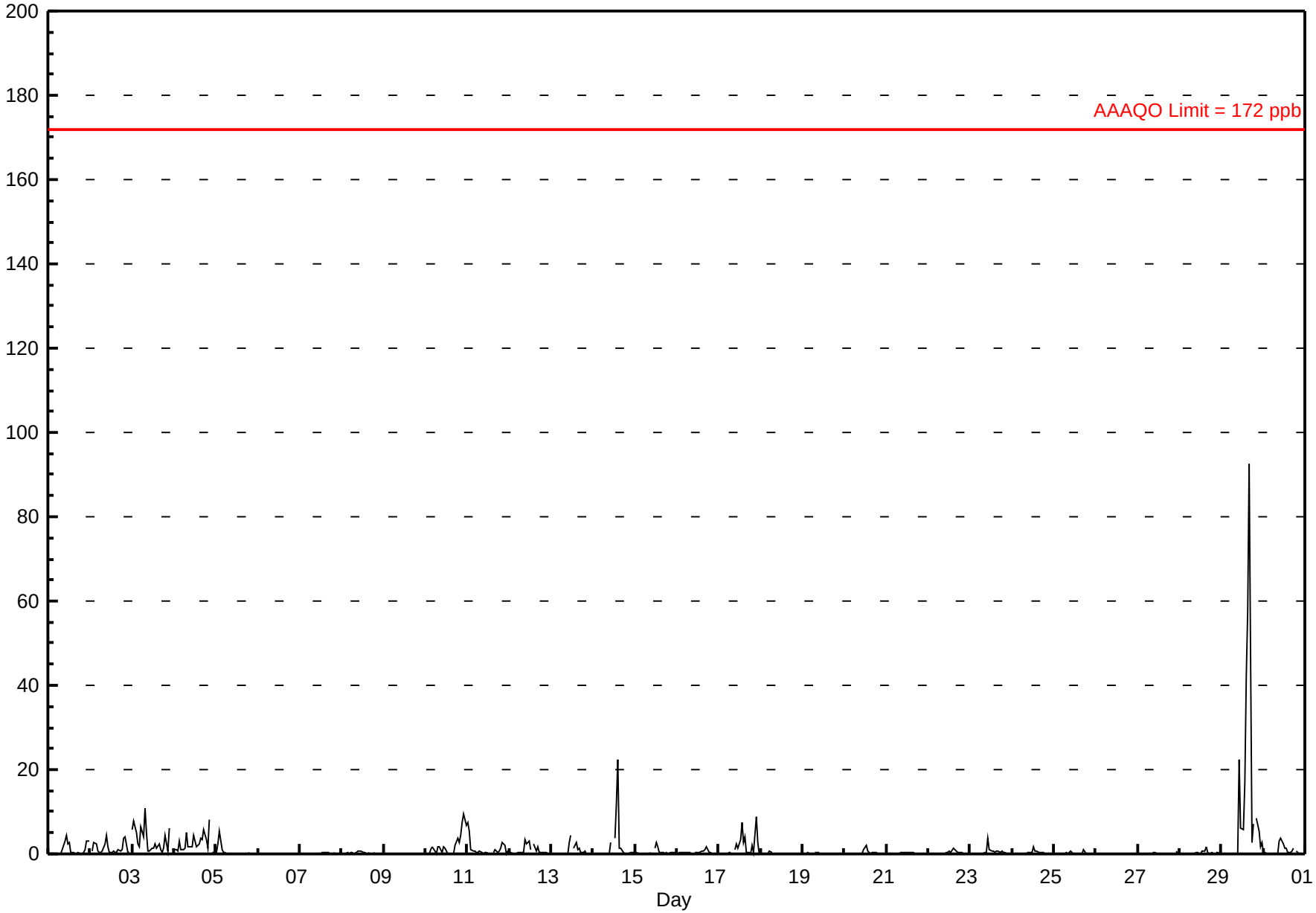
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Valleyview - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - September 2012

Maximum Value: 396.4 ppb on Sep 29 17:00

Maximum Daily Average: 61.8 ppb on Sep 29

Minimum Value: 0 ppb on Sep 6 22:00

Minimum Daily Average: 0.6 ppb on Sep 26

Maximum Diurnal Average: 16.7 ppb at hour 17

Minimum Diurnal Average: 1.3 ppb at hour 5

Monthly Average: 5.17 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.6 Q_1 = 0.7 Median = 0.9 Q_3 = 1.9 P_{90} = 11.0 P_{99} = 86.4

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	1	A	1	1	1	1	1	1	7	15	13	12	13	3	1	1	1	2	1	1	2	5	5	7	4.0	14.9
2-Sep	A	2	9	9	1	1	1	2	6	11	5	1	1	6	2	3	6	2	6	12	12	1	1	A	4.6	12.3
3-Sep	15	13	10	10	8	12	14	16	15	2	10	7	9	12	5	14	6	1	7	18	3	12	A	2	9.5	18.0
4-Sep	2	2	2	7	4	6	4	12	6	11	6	30	16	8	13	18	15	17	16	13	21	A	1	1	10.1	30.4
5-Sep	3	14	13	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2.0	13.7
6-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	1	0.7	1.1
7-Sep	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.8	1.2
8-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	0.9	1.4
9-Sep	1	1	0	1	1	1	1	1	1	0	0	1	1	1	1	1	A	0	3	0	1	1	1	0	0.7	2.7
10-Sep	1	1	0	7	5	4	1	8	4	3	8	7	4	1	1	A	1	9	12	12	10	11	14	14	6.0	14.0
11-Sep	14	16	2	1	1	1	1	1	1	1	1	7	1	1	A	6	5	2	6	5	9	9	1	4	4.3	16.0
12-Sep	2	2	1	1	1	1	1	1	1	19	8	10	6	A	14	5	8	1	1	1	1	1	1	1	3.8	18.8
13-Sep	1	1	1	1	1	1	1	1	1	1	14	13	A	8	16	15	9	2	1	2	1	1	1	1	3.9	16.0
14-Sep	1	1	1	1	1	1	1	1	1	1	11	A	10	162	124	7	6	1	1	1	1	1	1	1	14.5	162.4
15-Sep	1	1	1	1	1	1	1	0	1	4	A	3	7	5	1	1	1	1	1	1	1	1	1	1	1.5	7.0
16-Sep	1	1	1	1	1	1	1	1	1	A	1	1	1	1	4	3	7	12	1	1	1	1	1	1	1.9	11.8
17-Sep	1	1	1	1	1	1	1	1	A	8	11	11	15	25	10	20	3	8	1	10	1	36	25	1	8.4	35.7
18-Sep	1	1	1	0	1	6	2	A	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1.0	5.9
19-Sep	1	1	1	1	1	1	A	1	1	1	C	C	C	C	0	1	1	1	1	1	1	1	0	0	0.7	1.1
20-Sep	0	1	1	1	0	A	0	1	1	1	1	4	10	11	1	1	1	1	1	1	1	1	1	1	1.7	10.9
21-Sep	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.8	1.3
22-Sep	1	1	0	A	0	0	1	1	1	1	1	1	3	1	2	2	1	1	1	1	1	1	1	1	1.0	2.7
23-Sep	1	1	A	1	1	1	1	1	1	1	6	2	1	1	1	1	1	1	2	1	1	1	1	1	1.3	6.4
24-Sep	1	A	1	1	1	1	1	1	1	1	1	1	10	2	1	1	1	1	1	1	1	1	1	1	1.3	9.9
25-Sep	A	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	3	1	1	1	1	1	A	0.9	3.4
26-Sep	1	1	0	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	1	1	A	1	0.6	0.9
27-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	A	2	1	0.8	1.6
28-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	3	1	1	1	1	A	2	1	1	1.2	4.3
29-Sep	0	1	1	1	1	1	0	1	1	1	122	33	84	95	259	319	396	14	23	A	26	18	15	8	61.8	396.4
30-Sep	1	1	1	1	1	1	1	1	1	11	12	15	5	5	3	4	4	4	A	3	1	1	1	1	3.4	15.3
	1.8	2.3	1.8	1.9	1.3	1.6	1.4	2.0	2.0	3.5	8.6	6.0	7.4	12.7	16.3	14.9	16.7	3.1	3.3	3.3	3.6	3.9	2.7	1.8	Diurnal Average	
	14.7	16.0	12.5	9.8	7.6	11.7	14.2	15.6	15.0	18.8	121.8	33.0	84.1	162.4	259.5	319.4	396.4	16.7	23.4	18.0	25.6	35.7	24.9	14.0	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

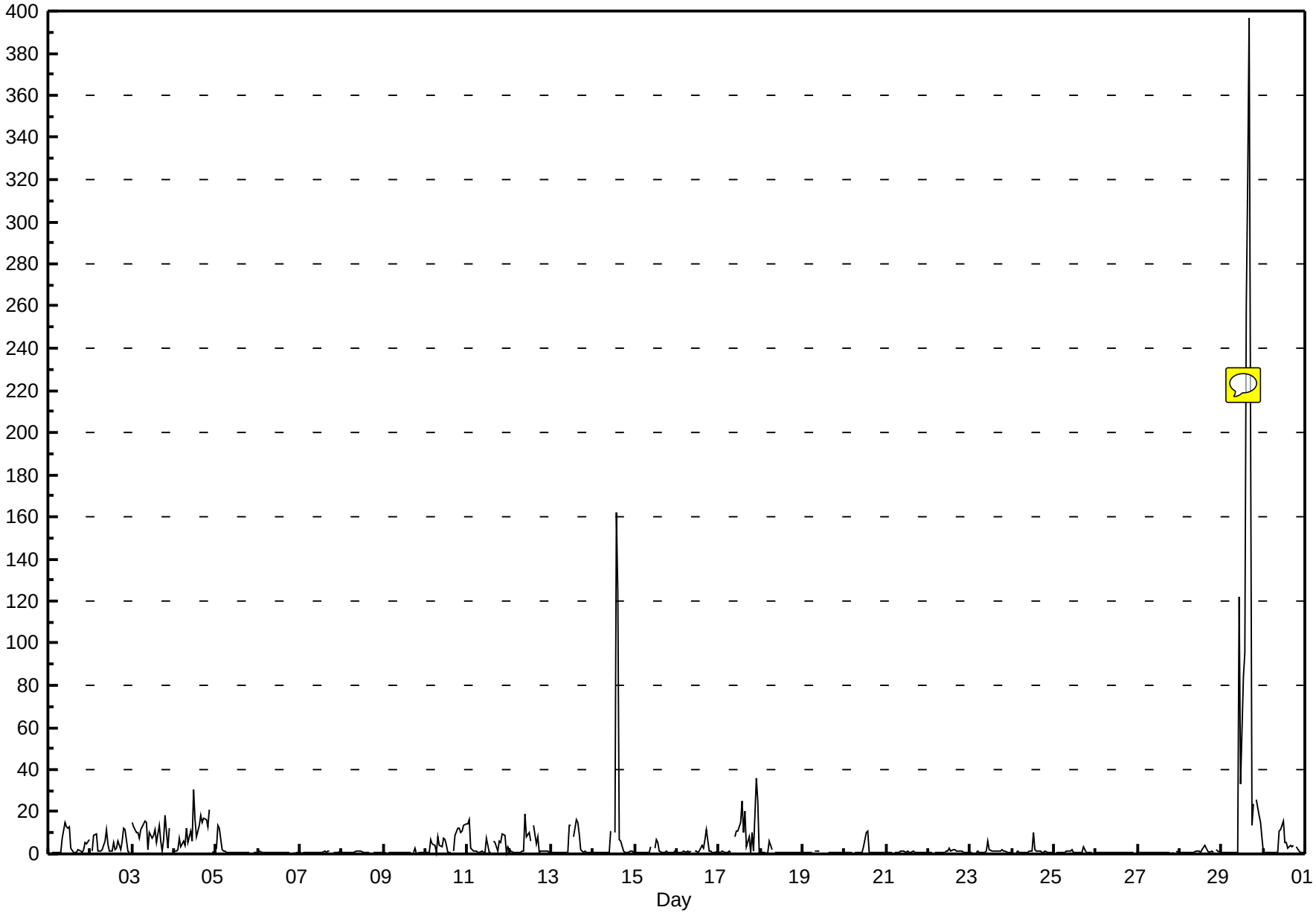
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Valleyview - September 2012



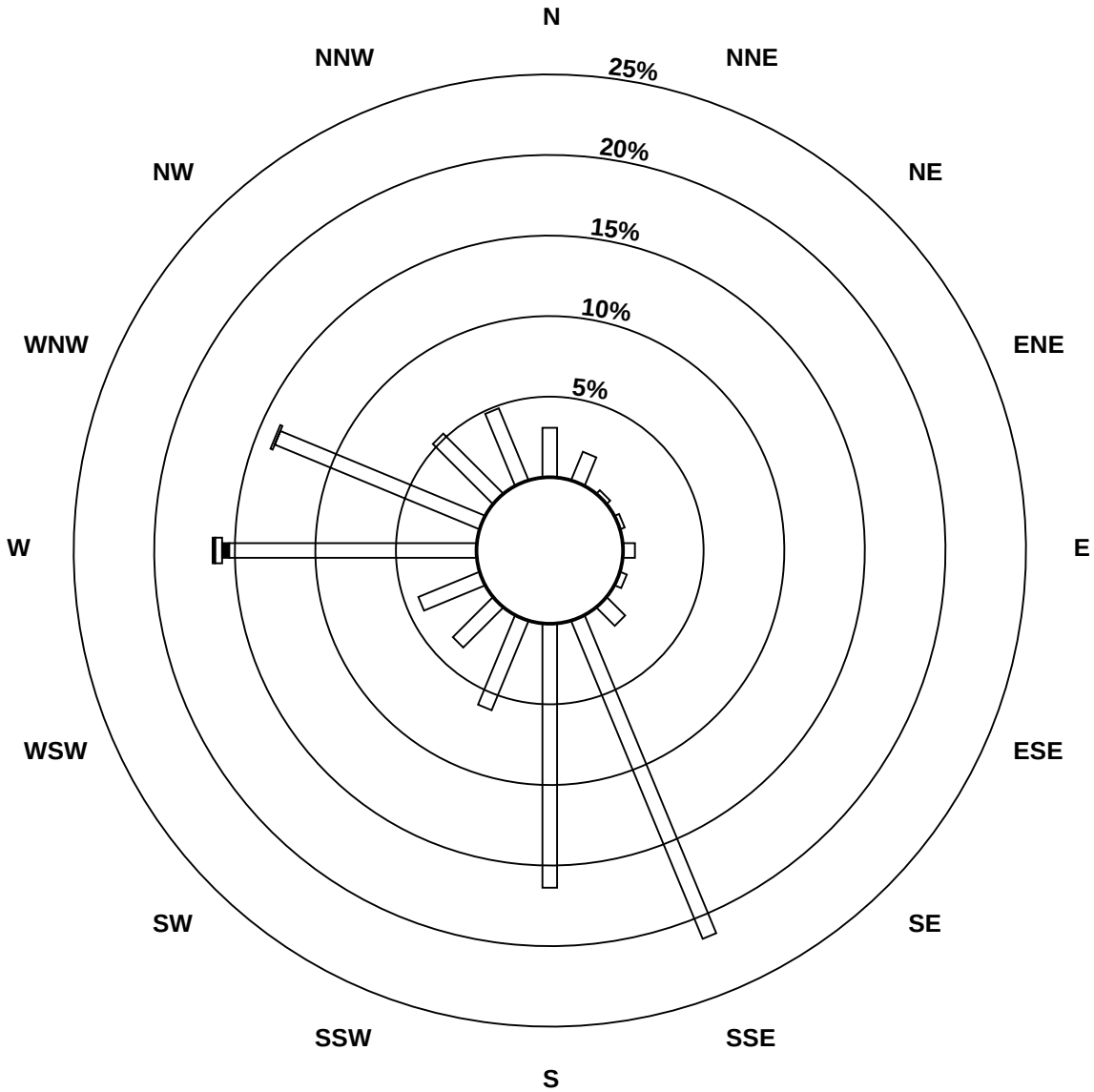
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Valleyview - September 2012



Pollutant Classes (ppb)

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

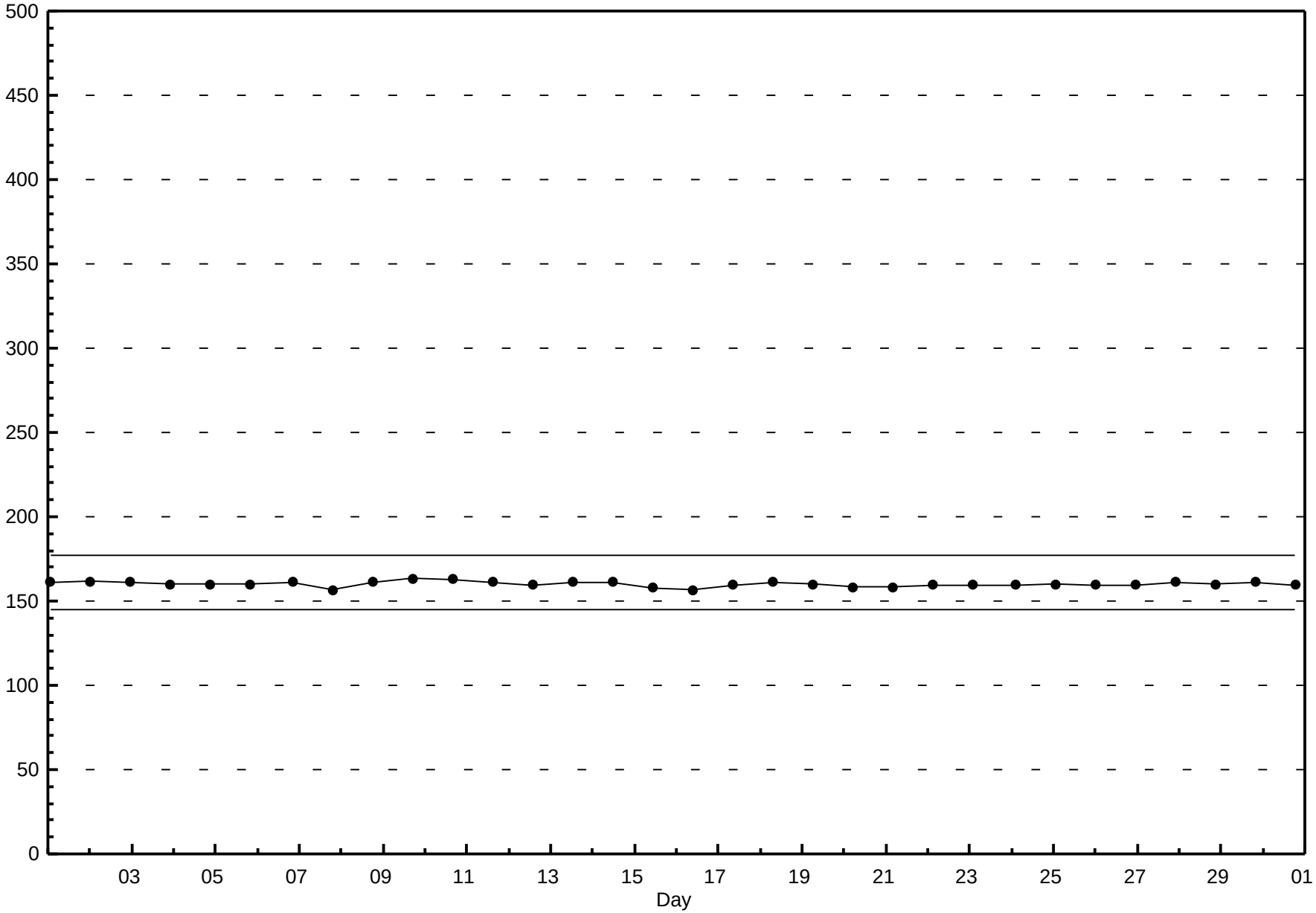
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Valleyview - September 2012



Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.8 ppb on Sep 29 17:00 Maximum Daily Average: 0.1 ppb on Sep 29

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 17 Minimum Diurnal Average: 0.0 ppb at hour 1
Monthly Average: 0.01 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.0 P_{90} = 0.0 P_{99} = 0.0

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	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
2-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	0.0
3-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
4-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
5-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
6-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	0.0
7-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
8-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	0.0
9-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
10-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	0.0
11-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
12-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	0.0
13-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
14-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	0.0	0.7
15-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	0.5
16-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
17-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
18-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
19-Sep	0	0	0	0	0	0	A	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
20-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	0.0	0.0
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	0.0	0.0
22-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
23-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
24-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
25-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	0.0
26-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
27-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	0.0
28-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
29-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	A	0	0	0	0	0.1	2.8
30-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	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.5	Diurnal Maximum	

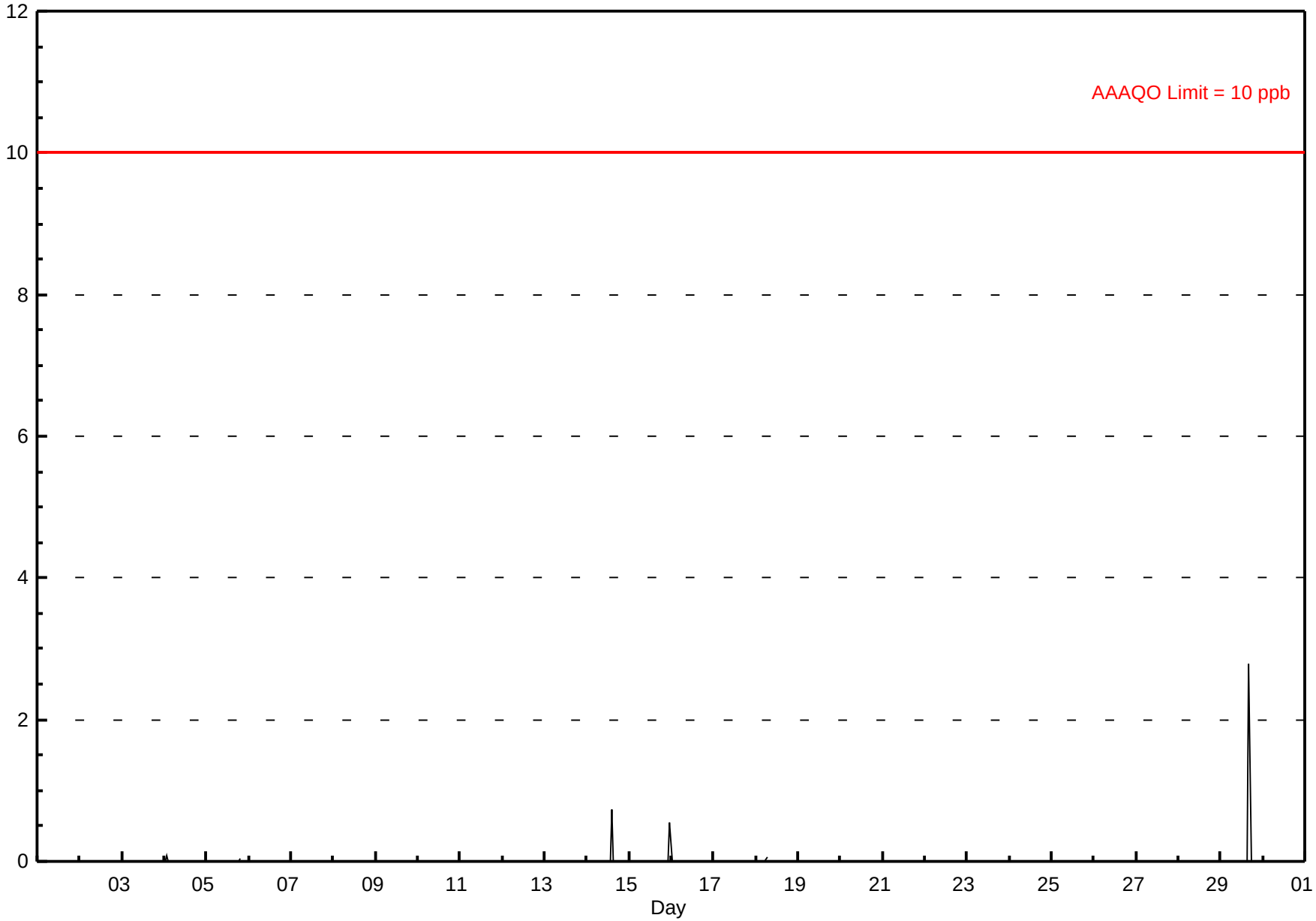
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Valleyview - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

Valleyview - September 2012

Maximum Value: 10.3 ppb on Sep 14 15:00

Maximum Daily Average: 0.5 ppb on Sep 14

Minimum Value: 0 ppb on Sep 1 01:00

Minimum Daily Average: 0.0 ppb on Sep 6

Maximum Diurnal Average: 0.4 ppb at hour 15

Minimum Diurnal Average: 0.0 ppb at hour 9

Monthly Average: 0.07 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.0 P_{90} = 0.0 P_{99} = 1.1

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

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0.1	1.2
2-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
3-Sep	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.1	1.2
4-Sep	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.8
5-Sep	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0.1	1.0
6-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	0.0
7-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
8-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0	0	0.1	1.0
9-Sep	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0	0.1	1.7
10-Sep	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.9
11-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	0.3
12-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
13-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	0.4
14-Sep	0	0	0	0	0	0	0	1	0	0	0	A	0	0	10	0	0	0	0	0	0	1	0	0	0.5	10.3
15-Sep	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	2	0.2	2.4
16-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
17-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
18-Sep	0	0	0	0	0	0	2	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.7
19-Sep	0	0	0	0	0	0	A	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
20-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	0.0	0.5
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	0.0	0.0
22-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
23-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
24-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
25-Sep	A	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.9
26-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
27-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	0.0
28-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
29-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6	1	0	A	0	0	0	0	0.4	6.5
30-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	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.1	Diurnal Average	
	0.4	1.7	0.8	1.1	1.2	0.1	1.7	1.2	0.0	0.9	0.8	0.0	0.1	0.0	10.3	2.6	6.5	0.7	0.2	0.8	1.1	1.2	0.7	2.4	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

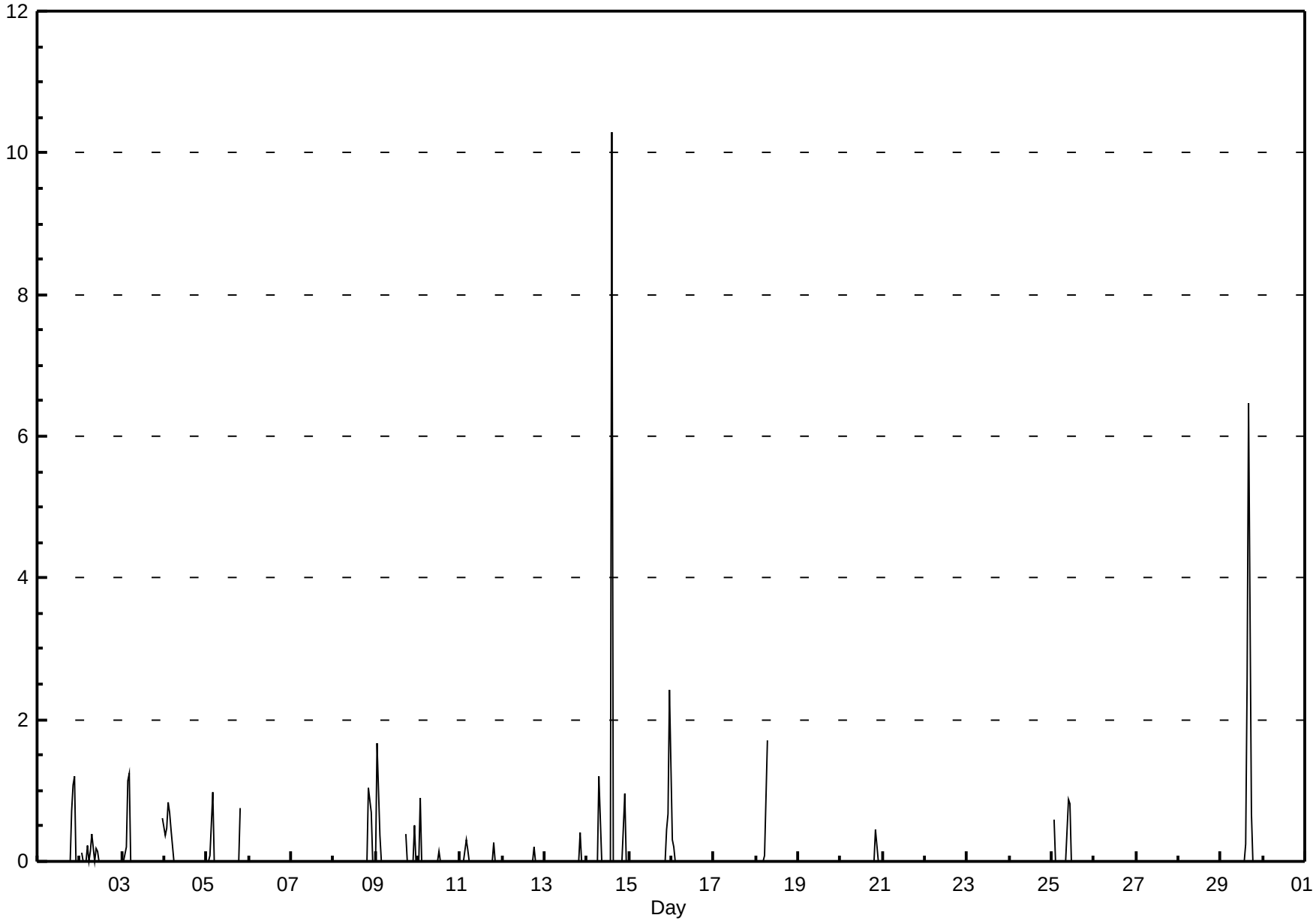
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Hydrogen Sulphide (H_2S) - ppb

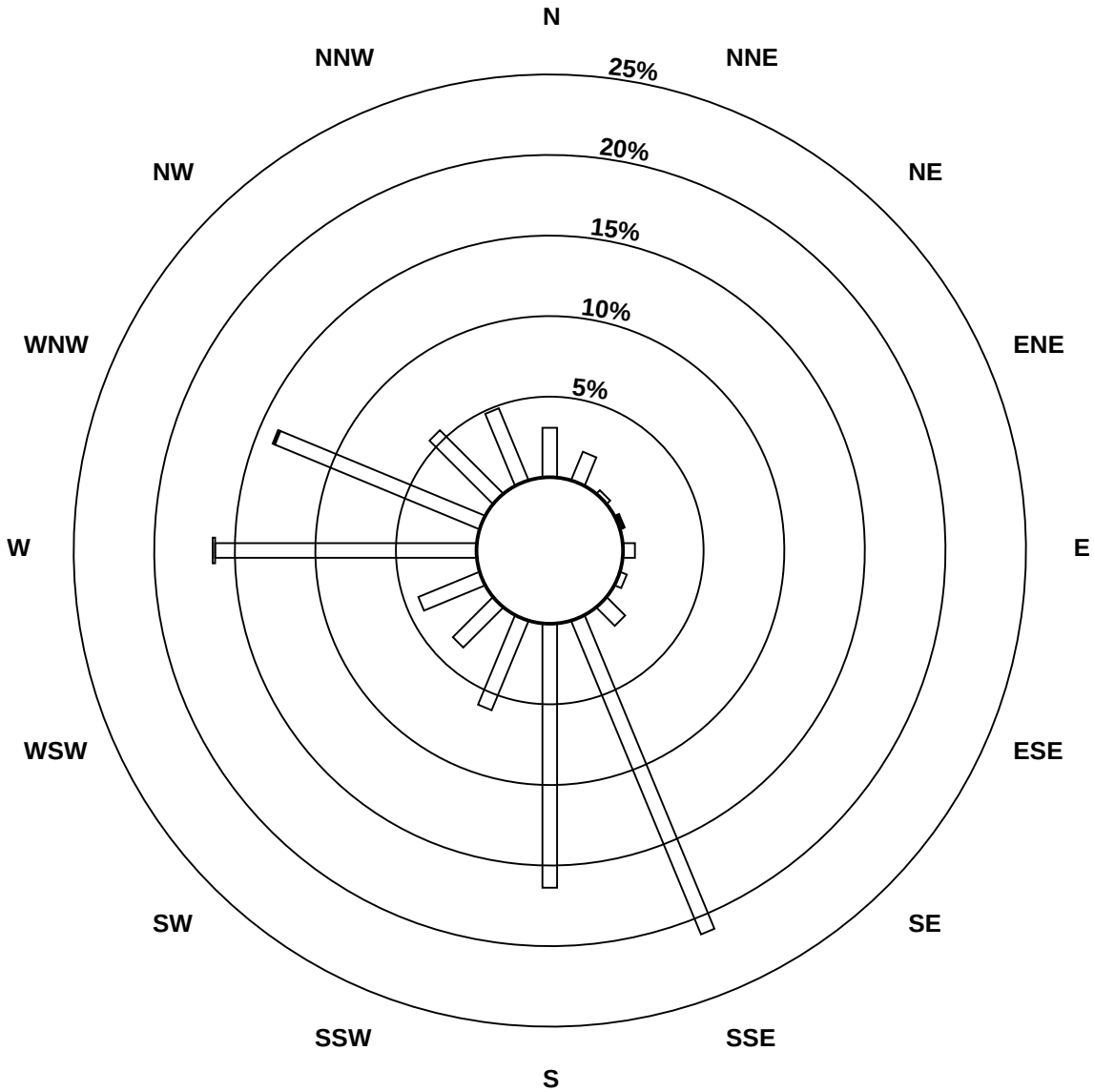
Valleyview - September 2012



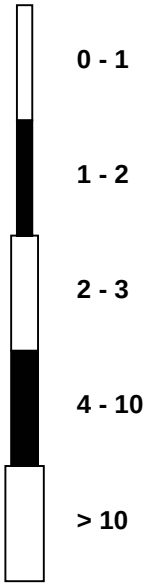
Pollutant Rose

Hydrogen Sulphide (H_2S) - ppb

Valleyview - September 2012



Pollutant Classes (ppb)

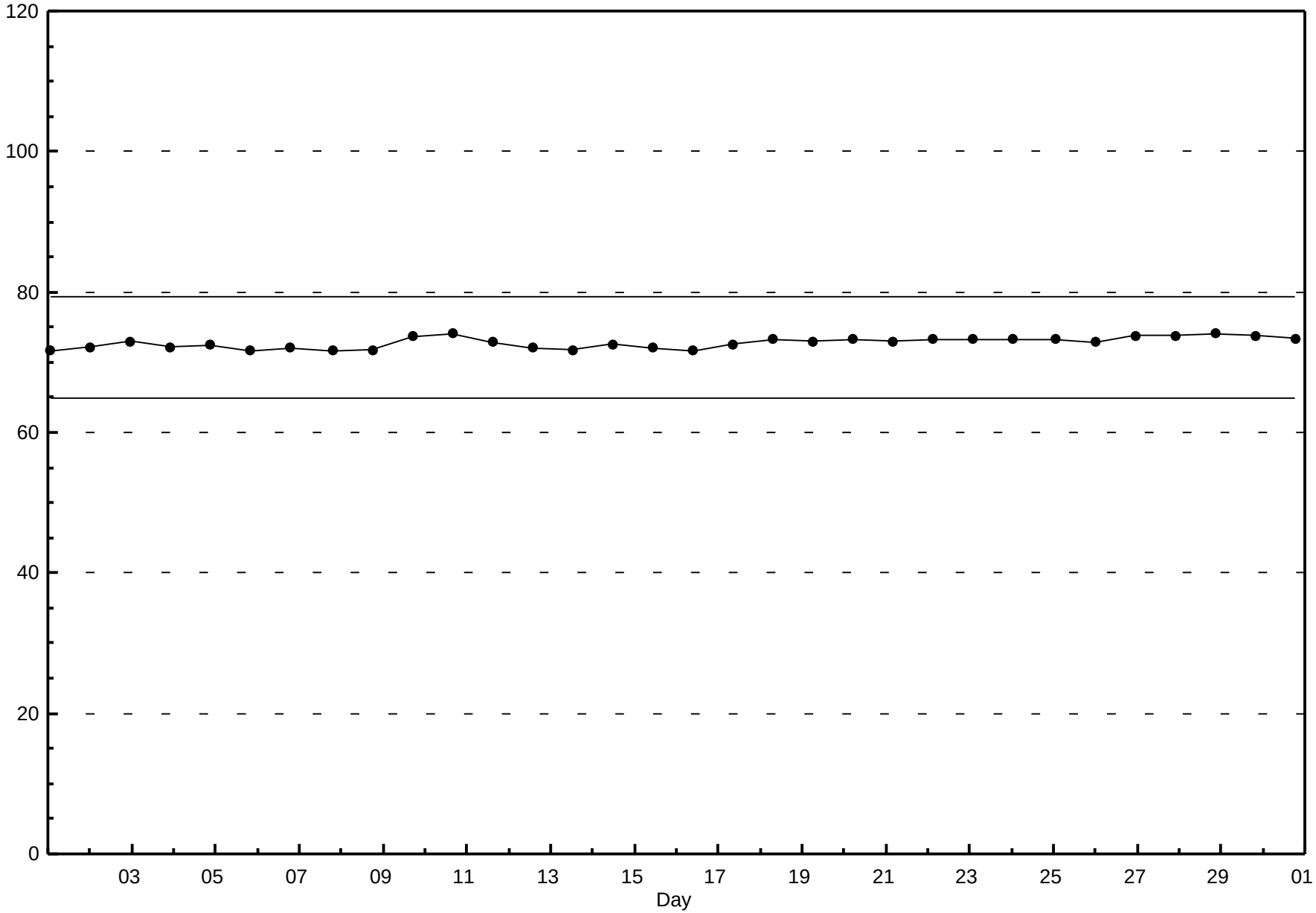


Peace Airshed Zone Association

Span Responses

Hydrogen Sulphide (H_2S)

Valleyview - September 2012



Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - September 2012

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

Maximum Value: 27.9 ^{o}C on Sep 21 17:00

Maximum Daily Average: 17.3 ^{o}C on Sep 9

Minimum Value: 1 ^{o}C on Sep 16 07:00

Minimum Daily Average: 8.8 ^{o}C on Sep 15

Maximum Diurnal Average: 20.4 ^{o}C at hour 16

Minimum Diurnal Average: 6.4 ^{o}C at hour 7

Monthly Average: 13.16 ^{o}C

Percentiles: P_1 = 2.2 P_{10} = 5.3 Q_1 = 8.5 Median = 12.6 Q_3 = 17.3 P_{90} = 22.3 P_{99} = 26.5

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

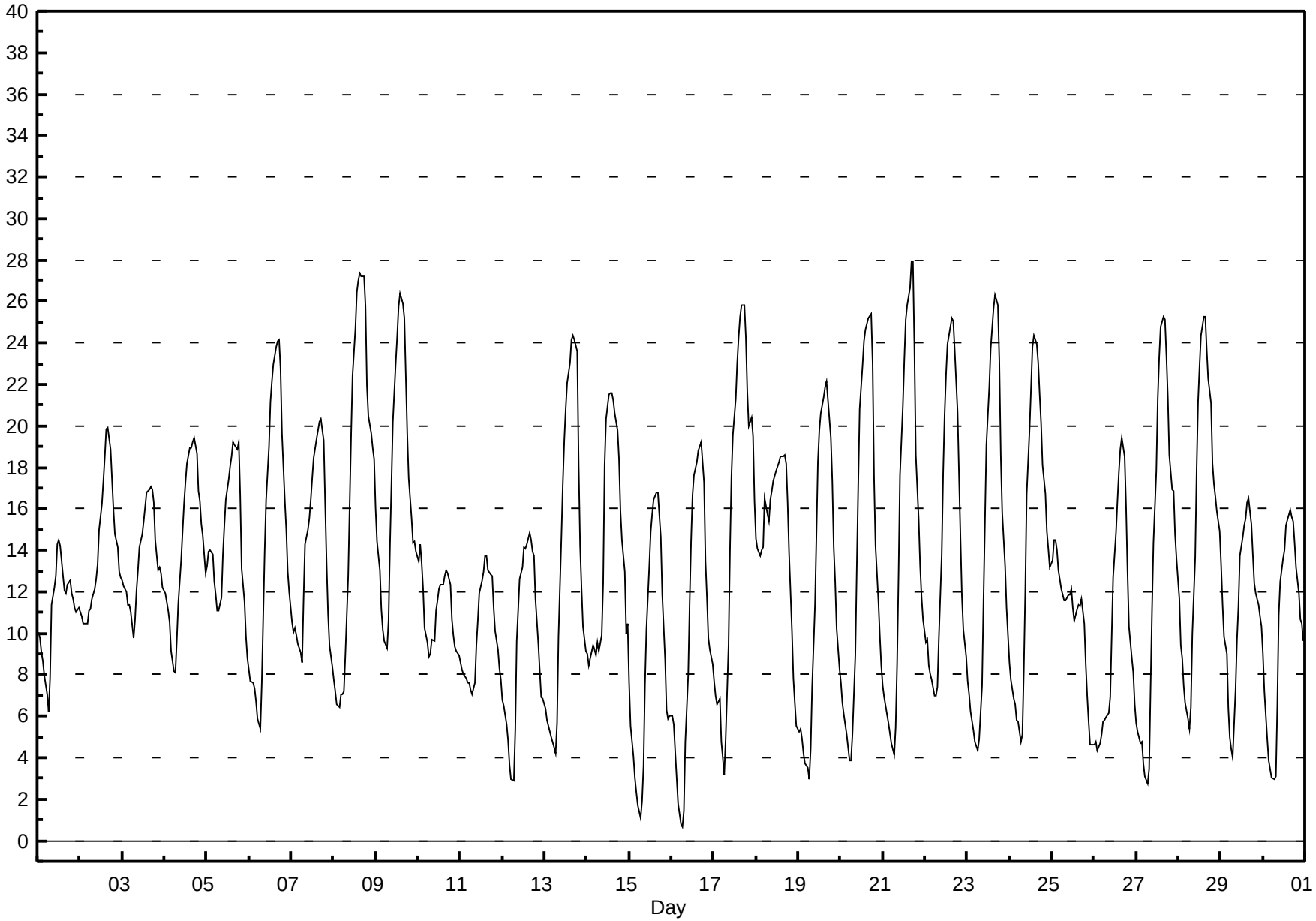
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	10	10	9	9	8	7	6	8	11	12	13	14	15	14	13	12	12	12	13	12	12	11	11	11	11.0	14.5
2-Sep	11	11	10	10	10	11	11	12	12	13	13	15	16	17	19	20	20	19	17	16	15	14	13	13	14.1	19.9
3-Sep	13	12	12	11	11	11	10	11	12	13	14	15	15	16	17	17	17	17	16	14	13	13	13	12	13.6	17.1
4-Sep	12	11	11	11	9	8	8	10	11	13	15	16	17	18	19	19	19	19	19	17	16	15	15	13	14.3	19.4
5-Sep	13	14	14	14	12	12	11	11	12	14	15	16	17	18	19	19	19	19	19	17	13	12	10	9	14.5	19.2
6-Sep	8	8	8	7	7	6	5	8	11	14	16	19	21	22	23	24	24	24	23	20	16	15	13	12	14.7	24.1
7-Sep	11	10	10	10	10	9	9	12	14	15	16	16	17	18	19	20	20	20	19	16	13	11	9	8	13.9	20.3
8-Sep	8	7	7	6	7	7	7	9	13	16	19	22	25	26	27	27	27	27	26	22	20	20	19	18	17.3	27.3
9-Sep	16	14	13	11	10	10	9	11	14	17	20	23	24	26	26	26	25	22	20	17	16	14	14	14	17.3	26.4
10-Sep	13	14	13	12	10	10	9	9	10	10	11	12	12	12	12	13	13	13	12	11	10	9	9	9	11.2	14.3
11-Sep	9	8	8	8	8	8	7	7	8	9	11	12	13	13	14	14	13	13	13	11	10	9	8	8	10.0	13.7
12-Sep	7	7	6	5	4	3	3	5	10	11	13	13	14	14	14	15	14	14	14	12	9	8	7	7	9.5	14.9
13-Sep	6	6	6	5	5	5	4	6	10	15	17	19	21	22	23	24	24	24	24	18	14	12	10	9	13.7	24.4
14-Sep	9	8	9	9	9	9	10	9	10	12	18	20	21	22	22	21	21	20	18	16	14	13	10	10	14.2	21.6
15-Sep	8	5	4	3	2	2	1	2	4	8	10	13	15	16	16	17	17	16	15	12	9	6	6	6	8.8	16.8
16-Sep	6	6	4	3	2	1	1	1	5	8	11	14	17	18	18	19	19	19	17	13	12	10	9	9	10.1	19.2
17-Sep	8	7	7	7	5	4	3	5	9	14	18	20	21	23	24	25	26	26	24	22	20	20	19	16	15.6	25.9
18-Sep	15	14	14	14	14	17	16	15	16	17	17	18	18	18	19	19	19	18	16	14	10	8	7	6	14.9	18.6
19-Sep	5	5	5	4	4	3	3	4	7	11	15	18	20	21	21	22	22	21	19	17	14	13	10	8	12.3	22.1
20-Sep	8	7	6	5	5	4	4	5	9	13	17	21	23	24	25	25	25	25	23	17	14	12	10	8	13.9	25.4
21-Sep	7	7	6	6	5	5	4	5	8	13	18	21	23	25	26	27	28	28	24	19	15	13	12	11	14.8	27.9
22-Sep	10	10	8	8	8	7	7	7	10	14	18	21	23	24	25	25	25	24	21	18	15	12	10	9	14.8	25.2
23-Sep	8	7	6	5	5	5	4	5	7	12	15	19	22	24	25	26	26	26	23	19	16	13	11	10	14.1	26.3
24-Sep	9	8	7	7	6	6	5	5	8	12	17	20	22	24	24	24	23	21	20	18	17	15	14	13	14.3	24.3
25-Sep	14	15	14	14	13	12	12	12	12	12	12	12	11	11	11	11	11	12	10	9	7	6	5	5	10.9	14.5
26-Sep	5	5	4	5	5	6	6	6	6	7	10	13	15	16	18	19	19	19	16	13	10	9	8	7	10.2	19.4
27-Sep	6	5	5	5	4	3	3	3	7	11	14	18	21	23	25	25	25	23	21	19	17	17	15	14	13.7	25.3
28-Sep	12	9	9	7	7	6	5	6	10	14	18	21	23	24	25	25	24	22	21	18	17	17	16	15	15.5	25.3
29-Sep	13	11	10	9	6	5	4	4	7	10	11	14	15	15	16	16	17	15	14	12	12	11	11	10	11.2	16.5
30-Sep	9	7	5	4	3	3	3	3	6	11	12	14	14	15	15	16	16	15	14	13	12	11	10	10	10.1	15.9
	9.5	9.0	8.3	7.8	7.1	6.7	6.4	7.2	9.7	12.3	14.8	17.0	18.4	19.4	20.0	20.4	20.4	19.8	18.4	15.7	13.7	12.3	11.2	10.3	Diurnal Average	
	16.1	14.5	14.5	14.0	14.2	16.5	15.7	15.4	16.5	17.1	20.2	23.0	24.7	26.5	27.0	27.3	27.9	27.9	25.7	21.9	20.5	20.4	19.5	18.4	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Valleyview - September 2012



Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Valleyview - September 2012

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

Maximum Value: 99.8 % on Sep 26 10:00 Maximum Daily Average: 86.7 % on Sep 25

Minimum Value: 14 % on Sep 14 14:00 Minimum Daily Average: 44.9 % on Sep 18

Maximum Diurnal Average: 88.0 % at hour 7 Minimum Diurnal Average: 34.7 % at hour 16

Monthly Average: 62.44 % Percentiles: P_1 = 21.3 P_{10} = 30.4 Q_1 = 40.1 Median = 61.6 Q_3 = 87.2 P_{90} = 94.6 P_{99} = 98.5

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

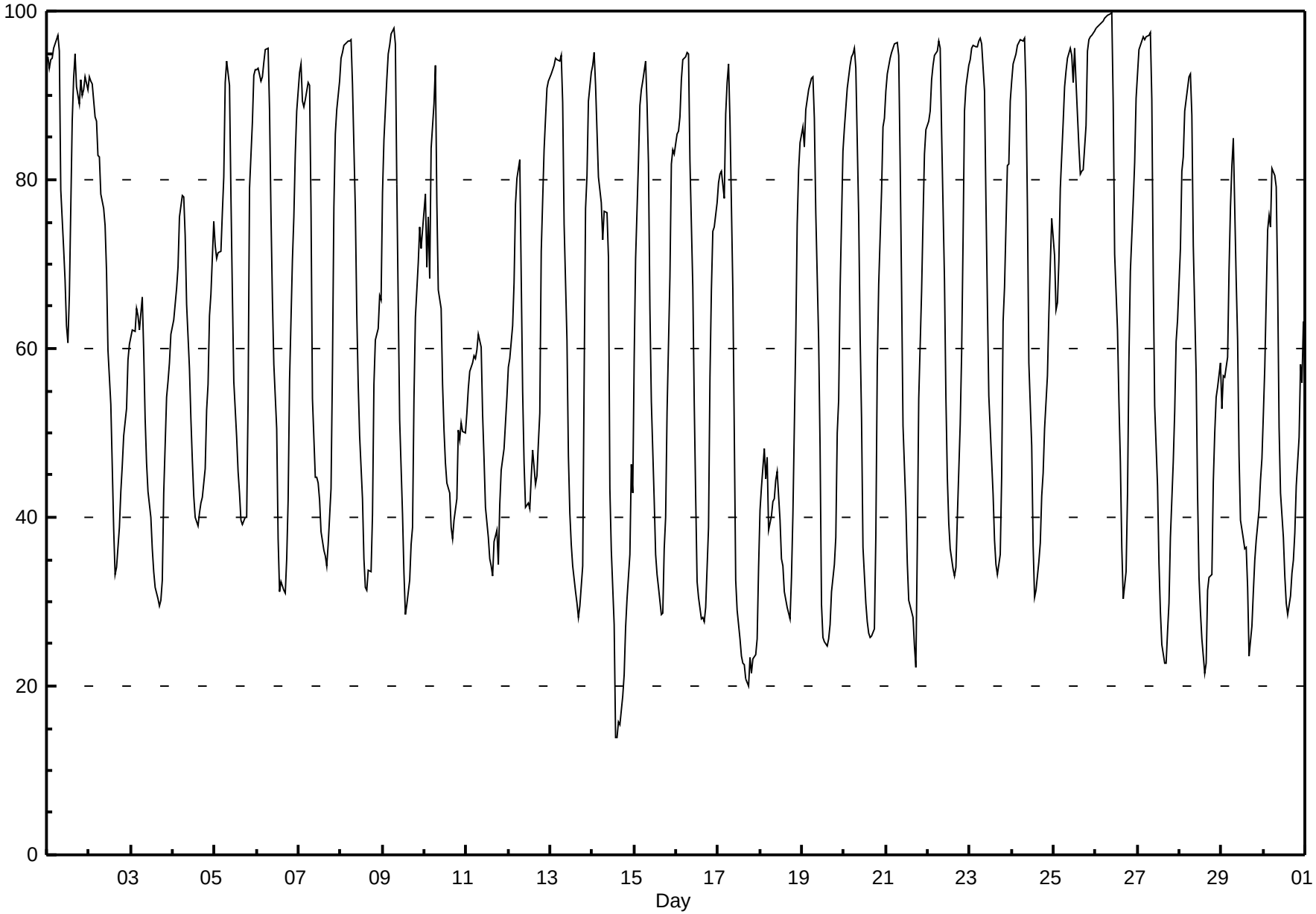
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	95	93	94	94	96	97	97	95	79	72	68	63	61	66	87	92	95	91	89	92	90	91	92	91	86.6	97.1
2-Sep	92	92	91	87	87	83	83	78	77	75	69	60	53	46	39	33	34	39	43	46	50	53	59	61	63.7	92.2
3-Sep	61	62	62	65	64	62	66	60	52	46	43	40	36	34	32	30	30	30	33	43	54	56	58	62	49.2	66.1
4-Sep	63	65	67	70	76	78	78	73	65	58	52	47	43	40	39	40	42	42	46	53	56	64	66	75	58.2	78.1
5-Sep	72	71	71	72	76	80	92	94	91	78	67	56	49	46	43	40	39	40	40	54	79	87	92	93	67.6	94.0
6-Sep	93	93	92	92	94	95	96	88	76	66	58	51	37	31	32	31	31	35	42	56	70	76	83	88	67.0	95.6
7-Sep	93	94	89	89	89	91	91	77	54	45	45	44	42	38	36	35	34	37	43	58	77	85	88	92	65.3	93.8
8-Sep	94	95	96	96	96	97	97	91	77	64	56	50	42	35	32	31	34	34	40	56	61	62	66	66	65.3	96.5
9-Sep	79	85	92	95	96	97	98	96	79	65	51	40	33	29	30	33	37	39	54	64	70	74	72	74	65.9	97.9
10-Sep	78	70	76	68	84	89	94	77	67	65	56	50	47	44	43	39	37	40	42	50	49	51	50	50	59.0	93.6
11-Sep	52	55	57	58	59	59	60	62	60	52	47	41	38	35	34	33	37	38	34	42	46	48	51	54	48.1	61.7
12-Sep	58	59	63	68	77	80	82	68	55	46	41	42	41	45	48	44	45	49	52	72	84	87	91	92	62.0	91.6
13-Sep	93	93	94	94	94	94	95	89	75	61	47	41	37	34	31	30	28	29	34	56	77	81	89	93	66.2	94.7
14-Sep	94	95	91	80	79	77	73	76	76	71	43	36	27	14	14	16	15	19	21	27	30	36	46	43	50.0	95.1
15-Sep	59	71	82	89	91	92	94	89	82	65	54	42	36	33	32	28	29	36	40	53	68	82	83	83	63.0	94.1
16-Sep	85	86	87	92	94	95	95	95	82	67	54	43	32	30	28	28	28	29	39	57	67	74	74	77	64.1	95.0
17-Sep	80	81	81	78	88	92	94	87	67	50	33	29	26	24	23	22	21	20	23	22	23	24	26	34	47.7	93.8
18-Sep	41	44	48	45	47	39	40	42	42	44	45	40	35	34	31	29	29	28	33	40	61	75	81	84	44.9	84.4
19-Sep	86	84	88	89	91	92	92	87	76	61	48	30	26	25	25	26	27	31	34	38	50	54	67	83	58.8	92.2
20-Sep	86	88	91	94	95	95	96	93	76	62	52	36	30	28	26	26	26	27	38	58	68	79	86	87	64.2	95.7
21-Sep	91	93	94	95	96	96	96	95	82	67	51	41	34	30	30	28	25	22	37	54	67	75	83	86	65.3	96.3
22-Sep	87	88	92	94	95	95	96	96	86	68	54	45	39	36	34	33	34	40	51	60	73	88	91	94	69.5	96.4
23-Sep	94	96	96	96	96	97	97	96	91	77	66	54	47	43	37	34	33	36	45	63	67	82	82	89	71.4	96.7
24-Sep	92	94	95	96	96	97	97	97	91	77	58	48	37	30	31	35	37	43	45	51	57	64	70	75	67.1	96.8
25-Sep	71	65	65	70	79	87	91	93	94	96	95	91	96	91	84	81	81	81	86	95	97	97	97	98	86.7	97.7
26-Sep	98	98	98	99	99	99	99	99	100	100	89	71	62	54	47	36	30	34	43	59	69	78	82	90	76.3	99.8
27-Sep	93	95	96	97	97	97	97	97	89	69	53	44	35	29	25	23	23	26	30	38	47	53	61	63	61.5	97.4
28-Sep	72	81	83	88	89	92	93	88	72	57	43	33	29	26	22	23	31	33	33	44	50	54	55	58	56.2	92.6
29-Sep	53	57	57	59	69	77	82	85	68	61	47	40	37	36	36	32	24	27	31	35	37	41	44	47	49.3	84.9
30-Sep	52	58	74	76	74	81	81	79	68	51	43	38	33	30	29	31	33	35	38	44	49	58	56	63	53.0	81.4
	78.6	80.0	82.1	82.8	85.4	86.7	88.0	84.8	74.9	64.5	54.2	46.2	40.6	37.2	35.9	34.7	35.0	37.0	42.1	52.5	61.4	67.6	71.5	74.8	Diurnal Average	
	98.0	98.1	98.4	98.6	98.9	99.1	99.3	99.4	99.6	99.8	94.7	91.5	95.6	91.4	86.9	92.1	95.0	91.0	88.9	95.3	96.6	97.0	97.2	97.7	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

Relative Humidity (RH) - %

Valleyview - September 2012



Peace Airshed Zone Association

Hourly Averages

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

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	1	1	1	1	1	1	0	1	2	8	7	7	8	7	8	6	5	3	2	4	5	5	7	6	3.0	7.8
Dir	235	318	289	186	207	161	277	101	225	266	272	285	283	318	0	9	0	315	291	289	284	272	264	270	293	266
2 Spd	7	5	5	6	8	9	8	8	7	6	10	11	12	14	16	18	17	21	20	18	19	17	12	9	11.6	21.0
Dir	262	281	251	282	283	294	284	284	277	276	278	287	293	287	288	292	283	279	279	275	263	258	256	264	278	279
3 Spd	11	10	10	8	8	8	8	11	14	18	17	17	18	17	16	16	17	16	14	9	10	14	13	10	12.8	18.1
Dir	263	264	271	276	272	264	260	268	274	281	287	283	283	279	283	280	284	292	282	261	257	267	282	279	277	281
4 Spd	11	8	4	4	2	4	4	5	11	9	11	12	11	10	10	10	8	9	10	6	10	7	3	3	7.4	12.2
Dir	281	281	286	274	235	245	255	264	278	283	279	275	267	278	260	264	274	263	261	254	266	253	231	229	269	275
5 Spd	6	7	7	9	7	7	5	4	6	8	11	12	12	12	11	13	12	8	4	1	1	1	1	1	6.1	12.6
Dir	249	260	270	281	294	310	305	299	285	318	338	332	323	322	318	319	325	325	312	237	152	171	174	168	308	319
6 Spd	1	1	2	2	2	1	1	2	3	4	3	4	5	5	4	3	3	2	2	2	1	1	1	1	2.3	4.8
Dir	167	161	170	171	166	170	173	168	159	159	162	160	166	171	178	216	189	164	159	163	203	191	187	180	171	171
7 Spd	2	2	2	2	2	1	1	2	10	12	13	7	4	3	3	3	3	2	2	1	1	1	1	0	2.0	12.7
Dir	158	158	159	160	157	141	5	359	10	3	2	10	19	9	346	23	349	107	141	156	156	198	194	167	15	2
8 Spd	0	0	1	1	1	2	1	2	3	3	3	3	3	2	3	3	2	2	2	1	1	1	1	1	1.3	3.1
Dir	164	173	298	176	182	167	170	164	160	164	165	162	168	187	151	146	139	118	97	69	286	36	110	230	157	164
9 Spd	1	1	0	1	1	1	1	0	3	3	2	3	3	5	5	3	2	6	6	1	4	5	6	2	0.4	6.1
Dir	164	303	190	240	182	216	193	202	160	163	165	160	127	135	151	152	113	335	340	80	345	304	292	283	195	335
10 Spd	2	6	9	9	2	1	1	7	5	7	14	17	20	17	15	18	18	15	18	16	18	18	17	17	11.6	19.5
Dir	236	297	301	277	262	190	158	271	278	295	276	279	280	288	290	290	286	275	276	278	274	270	267	273	279	280
11 Spd	15	15	15	15	13	14	13	9	11	15	17	18	18	19	20	18	19	13	17	13	10	10	8	10	14.1	20.1
Dir	271	274	277	279	281	287	291	286	283	291	293	299	289	288	288	296	283	300	282	279	265	259	255	259	283	288
12 Spd	9	8	6	3	2	1	1	3	2	9	14	14	12	12	7	8	13	6	2	1	1	1	1	1	5.1	14.0
Dir	260	261	248	233	190	175	186	215	192	259	274	278	286	268	286	287	276	291	274	154	173	186	178	174	266	274
13 Spd	2	2	3	3	3	2	2	3	3	3	7	8	9	11	11	8	9	5	1	1	0	0	1	1	3.1	11.2
Dir	175	176	191	168	165	172	177	165	160	173	256	267	258	259	257	253	270	289	248	160	266	191	169	186	240	259
14 Spd	1	1	1	1	2	2	1	2	2	1	13	18	19	25	24	19	23	16	12	9	2	1	2	4	7.4	25.4
Dir	207	220	171	198	164	159	188	284	164	162	272	269	272	278	283	290	286	297	308	333	333	263	209	255	282	278
15 Spd	1	2	2	1	1	0	1	1	2	2	0	2	2	3	4	6	8	7	3	0	0	1	1	0	0.8	8.4
Dir	185	162	162	154	156	139	176	169	153	148	87	176	5	9	20	336	344	30	27	315	204	9	331	57	21	344
16 Spd	0	1	0	0	1	1	1	1	2	3	3	4	5	5	6	4	5	3	0	1	1	1	2	2	1.5	5.7
Dir	299	183	156	184	177	198	185	167	164	158	156	166	165	155	247	258	270	281	99	181	179	174	169	163	193	247
17 Spd	2	1	3	2	0	1	1	2	3	2	9	10	11	11	12	9	10	7	3	7	8	12	8	2	4.7	12.5
Dir	157	174	165	166	192	198	187	161	157	167	277	285	273	262	269	262	253	250	231	254	253	264	257	168	254	264
18 Spd	3	2	1	1	1	6	6	7	12	13	13	17	18	19	17	16	13	11	6	0	1	1	1	1	6.5	18.8
Dir	154	150	169	177	322	269	287	289	305	331	339	327	331	331	331	322	319	324	335	287	174	171	163	178	321	331
19 Spd	1	2	1	1	1	1	1	0	3	2	1	8	10	11	9	7	5	4	3	3	0	1	1	1	1.9	11.2
Dir	162	174	178	186	185	207	200	31	166	148	133	305	324	318	309	321	342	356	357	329	191	207	176	154	314	318
20 Spd	1	1	0	0	1	1	1	1	3	3	2	4	7	7	8	11	5	2	0	0	0	1	0	1	1.2	10.6
Dir	182	182	211	150	187	181	177	160	157	161	146	287	282	305	319	345	334	310	108	233	93	136	198	220	302	345
21 Spd	0	0	0	0	1	1	1	1	2	3	3	3	3	3	4	3	1	1	1	1	0	0	1	0	1.3	3.8
Dir	226	202	161	222	217	195	177	161	199	156	163	164	165	160	148	146	168	235	163	179	202	201	160	296	169	148
22 Spd	1	1	1	1	1	1	1	1	2	2	2	2	2	1	2	3	2	1	2	1	0	0	0	0	0.4	2.9
Dir	193	208	176	192	171	183	180	172	155	165	160	153	129	138	34	33	36	16	348	342	186	167	172	219	124	33

FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

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

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	1	1	0	1	0	0	2	2	2	1	1	1	2	2	2	2	1	1	1	1	0	1	0.2	2.4
Dir	168	245	178	203	179	179	185	194	154	145	161	161	186	289	328	334	325	330	359	354	294	172	265	174	251	328
24 Spd	0	0	1	0	1	0	0	1	2	3	2	2	5	3	7	4	7	3	3	4	2	1	0	1	0.9	7.0
Dir	190	222	168	181	186	185	178	168	161	157	169	178	286	320	1	343	315	335	313	14	341	198	289	175	318	1
25 Spd	1	2	6	11	13	10	4	4	3	1	4	4	9	8	6	5	3	1	0	0	1	1	1	2	3.1	12.8
Dir	187	271	303	291	289	312	313	286	295	276	286	338	10	11	25	353	299	290	212	262	170	201	184	163	315	289
26 Spd	1	1	3	2	2	1	2	2	3	4	5	3	3	4	2	1	2	1	1	1	0	0	0	0	1.8	4.7
Dir	165	162	162	162	159	168	164	169	166	163	162	165	164	156	162	180	208	172	153	206	222	218	203	136	166	162
27 Spd	0	1	1	1	1	0	1	1	2	5	4	4	4	6	4	5	4	4	4	2	3	4	1	3	2.7	5.8
Dir	174	203	176	210	177	188	200	185	176	163	164	158	166	165	167	166	163	157	162	166	166	169	171	168	167	165
28 Spd	1	1	1	0	0	0	0	1	1	2	2	3	3	1	2	1	2	5	12	13	5	1	3	7	1.8	13.1
Dir	200	199	193	173	226	273	177	191	176	181	182	176	165	276	13	29	344	325	299	311	306	259	295	315	296	311
29 Spd	9	5	5	2	2	2	1	1	3	2	5	4	7	7	10	17	19	17	13	10	10	8	6	7	6.4	18.9
Dir	312	309	294	264	231	169	164	153	161	166	262	259	283	278	273	270	276	279	273	256	263	264	255	261	270	276
30 Spd	2	1	1	2	2	1	2	2	2	4	16	18	18	17	19	17	13	9	8	1	1	1	1	0	5.7	19.4
Dir	229	207	163	179	175	164	163	174	159	256	274	283	283	286	289	295	290	284	276	191	164	191	239	174	277	289
Spd	2.3	2.1	2.1	2.2	1.8	1.7	1.4	1.8	1.9	2.4	4.7	5.6	6.2	6.3	6.4	6.5	6.9	5.3	4.5	3.2	3.2	3.3	2.8	2.4	Diurnal Average	
Dir	253	258	260	259	256	264	259	257	248	267	279	283	286	287	293	295	291	294	287	280	265	257	256	256		
Spd	15.0	14.9	14.6	15.5	13.2	14.4	12.6	11.0	14.5	18.1	17.2	17.8	19.5	25.4	24.1	19.3	22.6	21.0	20.0	18.2	18.6	18.1	17.0	17.0	Diurnal Maximum	
Dir	271	274	277	279	281	287	291	268	274	281	293	283	280	278	283	290	286	279	279	275	263	270	267	273		

Maximum Speed Value: 25 km/h on Sep 14 14:00
Maximum Daily Speed Average: 14.1 km/h on Sep 11
Maximum Diurnal Speed Average: 6.9 km/h at hour 17

Minimum Speed Value: 0 km/h on Sep 28 07:00
Minimum Daily Speed Average: 0.2 km/h on Sep 23
Minimum Diurnal Speed Average: 1.4 km/h at hour 7

Monthly Average Velocity: 3.50 km/h 277.6 deg

Speed Percentiles: $P_1 = 0.2$ $P_{10} = 0.5$ $Q_1 = 1.1$ Median = 2.7 $Q_3 = 7.8$ $P_{90} = 13.5$ $P_{99} = 19.2$

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

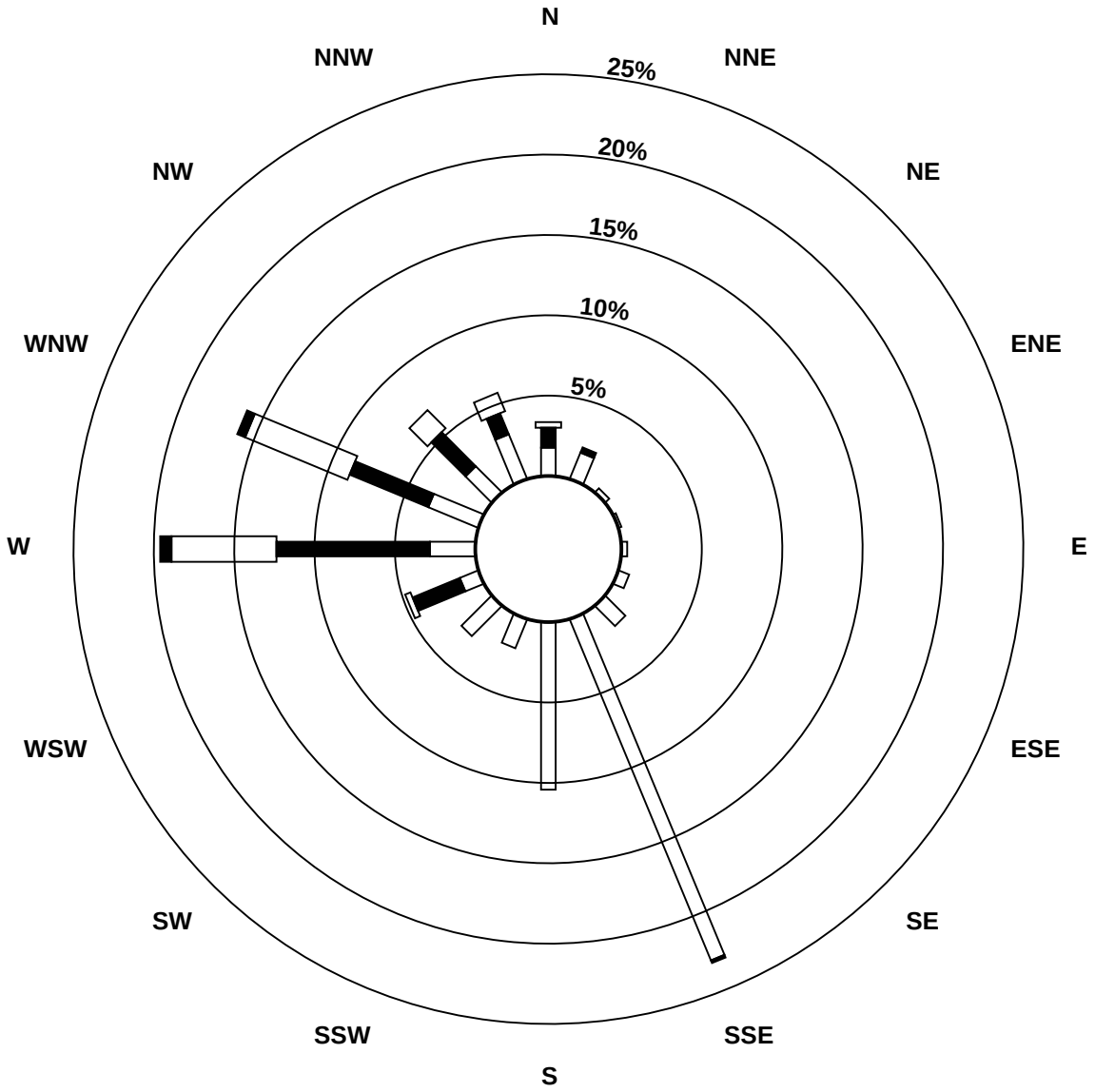
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	25	12	4	0	0	0	41
NorthEast	9	2	0	0	0	0	11
East	10	0	0	0	0	0	10
SouthEast	49	1	0	0	0	0	50
South	257	2	0	0	0	0	259
SouthWest	48	1	0	0	0	0	49
West	43	89	75	10	0	0	217
NorthWest	30	27	26	0	0	0	83
Total	471	134	105	10	0	0	720

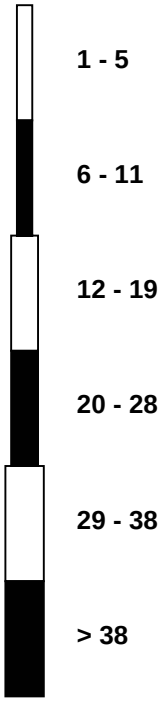
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - September 2012



Wind Speed Classes (km/h)



Peace Airshed Zone Association

Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - September 2012

Maximum Speed: 26 km/h on Sep 14 14:00

Maximum Daily Speed Average: 14.6 km/h on Sep 11

Minimum Speed: 1 km/h on Sep 24 04:00

Minimum Daily Speed Average: 1.4 km/h on Sep 23

Maximum Diurnal Speed Average: 9.6 km/h at hour 14

Minimum Diurnal Speed Average: 2.6 km/h at hour 7

Monthly Average Speed: 5.44 km/h

Percentiles: $P_1 = 0.6$ $P_{10} = 0.9$ $Q_1 = 1.5$ Median = 3.1 $Q_3 = 8.2$ $P_{90} = 13.8$ $P_{99} = 19.8$

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	2	2	2	2	1	1	1	2	3	8	7	7	8	8	8	6	6	4	2	5	5	6	7	6	4.5	8.3
2-Sep	7	5	5	6	8	9	8	9	7	6	10	12	13	14	16	19	18	21	20	19	19	17	12	9	12.1	21.3
3-Sep	11	10	10	8	8	8	8	11	15	18	17	17	18	18	17	17	18	16	14	10	10	14	13	10	13.2	18.5
4-Sep	11	8	4	4	2	4	4	5	12	10	12	13	12	11	11	10	9	9	10	6	10	7	3	3	7.9	12.7
5-Sep	6	7	7	9	7	8	5	5	6	9	12	12	12	12	12	13	13	8	4	1	1	1	1	1	7.2	13.2
6-Sep	1	1	2	2	2	1	1	2	4	4	4	4	5	5	5	4	3	2	2	2	2	1	1	1	2.6	5.3
7-Sep	2	2	2	2	2	1	3	3	10	12	13	8	5	4	4	4	4	2	2	1	1	1	1	1	3.7	13.0
8-Sep	1	1	1	1	2	2	1	2	3	3	3	3	3	2	3	3	2	2	2	2	2	3	2	3	2.1	3.3
9-Sep	2	2	1	2	1	2	2	1	3	3	2	4	3	5	5	3	2	9	8	2	4	5	6	2	3.3	8.8
10-Sep	2	6	9	10	3	2	1	8	5	8	14	17	20	18	15	18	18	15	18	16	18	18	17	17	12.3	19.9
11-Sep	15	15	15	16	13	15	13	9	11	16	18	18	19	19	21	18	19	13	18	13	10	10	8	10	14.6	20.5
12-Sep	9	8	6	4	2	2	2	4	3	9	14	14	13	13	8	8	13	6	2	1	1	1	1	2	6.1	14.4
13-Sep	2	2	3	3	3	2	2	3	3	3	7	9	10	12	12	9	9	6	1	1	1	1	1	1	4.4	12.0
14-Sep	1	1	1	2	2	2	1	3	2	1	13	18	20	26	25	20	23	16	12	10	3	2	2	4	8.7	26.0
15-Sep	2	2	2	1	1	1	1	1	2	2	1	2	3	4	5	7	9	7	3	1	1	2	1	1	2.6	9.2
16-Sep	1	1	1	1	1	1	1	1	3	3	3	4	5	6	7	5	5	3	1	1	1	1	3	2	2.5	6.6
17-Sep	2	2	3	2	1	1	1	2	3	3	9	10	11	12	12	9	10	7	3	7	9	13	8	2	5.9	12.6
18-Sep	3	2	2	2	4	6	6	7	12	13	14	17	19	19	17	16	13	11	6	1	1	1	1	1	8.2	19.2
19-Sep	1	2	1	1	1	1	1	1	3	2	2	9	11	12	10	8	6	4	3	3	2	1	1	1	3.7	11.8
20-Sep	1	1	1	1	1	1	1	1	3	3	3	6	7	8	9	11	5	2	1	1	1	1	1	1	2.9	10.8
21-Sep	1	1	1	1	1	1	1	1	3	3	3	3	4	3	4	3	2	2	1	1	1	1	1	1	1.7	4.1
22-Sep	2	1	1	1	1	1	1	1	2	2	2	2	3	2	3	3	2	2	2	1	1	1	1	1	1.6	3.5
23-Sep	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3	2	2	1	1	1	1	1	1	1.4	3.1
24-Sep	1	1	1	1	1	1	1	1	2	3	2	2	6	4	7	5	7	3	3	4	2	1	1	1	2.6	7.4
25-Sep	1	2	7	12	13	11	4	5	3	1	4	6	9	8	6	5	3	1	1	1	1	1	1	2	4.6	13.1
26-Sep	1	1	3	2	2	1	2	2	3	4	5	3	3	4	3	3	2	1	1	1	1	1	1	1	2.1	4.8
27-Sep	1	1	1	1	1	1	1	1	2	5	4	5	4	6	5	6	4	4	4	2	3	4	1	3	2.9	6.0
28-Sep	1	1	1	1	1	1	1	1	1	3	3	4	3	3	3	1	3	6	13	13	5	2	3	7	3.4	13.2
29-Sep	9	5	5	2	3	2	2	2	3	2	5	6	8	8	11	17	19	17	13	10	10	8	6	7	7.5	19.3
30-Sep	2	1	1	2	2	1	2	2	2	6	17	18	18	17	20	17	14	10	8	2	1	1	1	1	7.0	19.8
	3.4	3.1	3.3	3.3	3.0	2.9	2.6	3.2	4.5	5.7	7.6	8.5	9.3	9.6	9.5	9.1	8.8	7.1	6.0	4.6	4.3	4.2	3.6	3.4	Diurnal Average	
	15.1	15.1	14.9	15.7	13.4	14.5	12.8	11.1	14.8	18.5	17.8	18.4	20.0	26.0	24.5	19.7	22.9	21.3	20.3	18.6	18.7	18.3	17.2	17.2	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

Valleyview - September 2012

Maximum Value: 97.4 deg on Sep 24 23:00

Minimum Value: 5.6 deg on Sep 27 19:00

Percentiles: P_1 = 6.8 P_{10} = 9.7 Q_1 = 13.1 Median = 21.3 Q_3 = 43.7 P_{90} = 64.8 P_{99} = 91.1

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
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	69	91	77	63	63	37	97	68	61	29	19	25	16	28	12	12	15	36	24	14	21	18	9	14	96.8
2-Sep	16	21	19	23	14	11	10	14	13	15	10	13	13	12	12	12	11	9	10	11	7	7	6	7	23.4
3-Sep	7	8	8	11	9	8	7	9	12	12	14	12	14	12	17	18	14	12	10	10	7	10	11	8	18.0
4-Sep	10	10	19	26	27	17	17	28	11	16	17	17	18	27	24	22	21	12	11	15	17	9	25	21	27.8
5-Sep	21	19	11	10	10	14	11	14	12	20	18	17	18	18	13	17	12	9	10	39	29	20	14	25	39.0
6-Sep	10	13	11	13	10	14	26	30	11	16	22	20	21	25	32	43	33	19	8	33	46	21	19	16	45.9
7-Sep	9	11	15	7	7	30	97	65	11	12	12	27	52	53	52	57	44	44	13	11	36	45	59	65	96.6
8-Sep	76	60	78	38	15	7	13	10	12	17	20	25	28	49	29	28	25	23	35	34	91	78	64	69	91.2
9-Sep	64	89	91	67	33	51	43	78	12	15	34	27	23	18	21	29	28	62	51	62	36	20	16	57	91.4
10-Sep	42	14	14	16	54	55	19	46	35	29	12	10	12	12	13	10	12	11	9	12	9	8	8	9	54.8
11-Sep	8	10	10	8	10	9	9	10	12	13	15	17	12	12	12	16	11	18	13	10	9	7	9	7	18.3
12-Sep	7	8	11	24	17	18	21	23	36	36	13	13	13	21	26	22	18	13	38	59	36	45	47	19	59.4
13-Sep	20	22	29	13	9	15	8	9	9	30	29	18	25	20	30	35	19	14	63	51	72	73	37	32	72.7
14-Sep	31	54	64	65	25	32	41	60	36	59	17	12	13	12	11	12	10	12	10	10	75	43	26	13	75.1
15-Sep	51	21	24	17	24	60	29	17	15	31	91	58	57	66	59	50	27	30	19	73	62	93	70	85	93.0
16-Sep	93	33	82	82	64	34	56	30	13	17	28	19	18	17	39	48	39	37	71	37	34	16	16	9	92.8
17-Sep	14	22	7	63	76	38	23	17	9	47	16	20	20	16	16	23	12	14	26	9	7	8	21	18	76.2
18-Sep	7	13	29	60	84	19	11	10	14	16	25	15	17	12	13	16	13	12	8	82	17	28	7	30	83.6
19-Sep	8	6	12	12	20	50	63	84	14	28	70	20	20	18	21	21	15	16	21	24	85	22	56	45	84.9
20-Sep	36	24	76	77	24	31	25	69	13	15	39	67	27	24	21	12	26	38	85	89	84	66	69	59	89.4
21-Sep	71	54	78	78	47	40	29	15	33	20	21	21	16	20	23	20	52	34	45	41	50	57	25	79	79.0
22-Sep	85	49	41	40	40	25	12	33	12	13	44	56	52	68	56	35	19	51	33	18	79	75	89	51	89.4
23-Sep	77	56	57	54	62	20	60	78	37	39	45	50	57	82	54	47	24	25	43	43	78	35	84	44	84.1
24-Sep	55	66	32	52	40	59	73	31	19	13	37	45	49	41	18	15	13	28	11	24	52	50	97	49	97.4
25-Sep	36	50	37	10	13	14	33	30	22	56	15	42	15	13	15	17	37	27	90	89	66	30	36	13	90.0
26-Sep	32	44	9	12	11	33	18	15	13	11	12	32	43	33	58	71	48	27	12	23	62	49	60	84	84.0
27-Sep	63	45	16	40	49	59	53	37	33	11	17	13	14	13	17	15	15	8	6	15	10	7	22	20	63.0
28-Sep	36	44	43	78	85	87	86	29	37	48	45	34	40	78	64	43	40	15	16	8	27	41	28	12	86.6
29-Sep	10	14	14	21	43	15	61	29	16	21	42	48	29	40	21	16	13	10	9	8	8	8	9	12	61.4
30-Sep	17	22	16	16	7	29	20	12	15	57	13	16	13	16	12	14	11	12	12	48	63	26	63	62	62.9
	92.8	91.1	91.4	82.4	85.0	86.6	96.8	83.8	61.1	59.3	91.1	66.5	57.5	82.4	64.1	71.4	52.4	61.7	90.0	89.4	91.2	93.0	97.4	85.5	

FOCUS AIR QUALITY MONITORING

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

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Sunset House - September 2012

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

Maximum Value: 1.5 ppb on Sep 28 03:00

Maximum Daily Average: 0.5 ppb on Sep 28

Minimum Value: 0 ppb on Sep 1 04:00

Minimum Daily Average: 0.0 ppb on Sep 5

Maximum Diurnal Average: 0.2 ppb at hour 7

Minimum Diurnal Average: 0.1 ppb at hour 17

Monthly Average: 0.14 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} = 1.0

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	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	0.1
2-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	0.0
3-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
4-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
5-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
6-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	0.1
7-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	0.2
8-Sep	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6
9-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
10-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	0.4
11-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	0.2
12-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
13-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
14-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
15-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
16-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
17-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
18-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
19-Sep	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.3	0.9
20-Sep	1	1	1	1	1	A	1	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
21-Sep	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
22-Sep	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
23-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
24-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
25-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	0.3
26-Sep	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.5
27-Sep	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	1	1	0.4	0.8
28-Sep	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.5	1.5
29-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
30-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	0.2
	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	0.1	0.1	0.1	0.1	0.2	Diurnal Average	
	0.9	1.2	1.5	1.2	1.0	0.6	1.2	1.2	0.7	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.5	0.5	0.7	0.6	0.8	0.9	Diurnal Maximum	

C - Calibration A - Automated Daily Zero Span

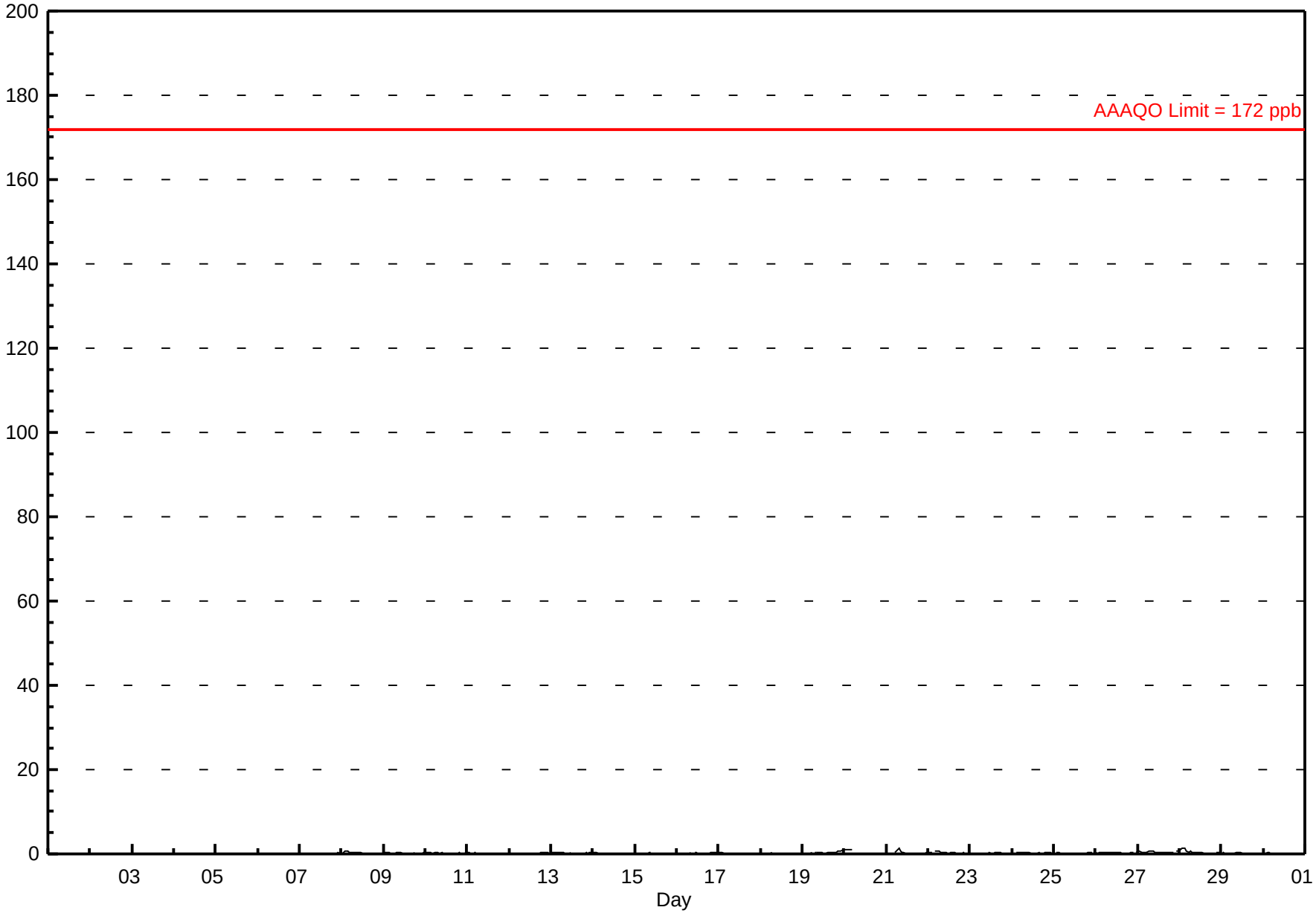
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb

Peace Airshed Zone Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Sunset House - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Sunset House - September 2012

Maximum Value: 4.4 ppb on Sep 19 15:00

Maximum Daily Average: 0.9 ppb on Sep 19

Minimum Value: 0 ppb on Sep 3 11:00

Minimum Daily Average: 0.2 ppb on Sep 5

Maximum Diurnal Average: 0.7 ppb at hour 8

Minimum Diurnal Average: 0.4 ppb at hour 17

Monthly Average: 0.54 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.3$ $Q_1 = 0.3$ Median = 0.5 $Q_3 = 0.7$ $P_{90} = 0.9$ $P_{99} = 1.5$

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-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
2-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	0.4
3-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
4-Sep	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.8
5-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
6-Sep	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.6
7-Sep	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.7
8-Sep	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.7	1.4
9-Sep	0	0	0	1	0	0	0	1	1	1	1	0	1	0	0	0	A	1	1	1	1	1	1	1	0.6	1.0
10-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	0.6	0.9
11-Sep	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0.4	0.9
12-Sep	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	1	1	1	1	1	1	0.5	0.9
13-Sep	0	1	1	1	1	1	1	1	1	0	1	1	A	0	0	0	0	0	0	0	1	1	0	1	0.6	0.9
14-Sep	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0.5	0.9
15-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	0.4	0.5
16-Sep	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0.5	0.8
17-Sep	0	1	1	1	1	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.9
18-Sep	1	1	0	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.5	0.9
19-Sep	0	0	0	0	0	1	A	1	1	0	0	0	1	1	4	1	1	1	1	1	1	1	1	1	0.9	4.4
20-Sep	1	1	1	1	1	A	2	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.6
21-Sep	0	0	0	1	A	1	2	2	1	1	1	1	1	1	1	1	0	1	0	1	1	0	1	1	0.7	2.1
22-Sep	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0.7	1.2
23-Sep	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	1	0.6	0.9
24-Sep	1	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
25-Sep	A	1	1	1	1	1	0	1	0	1	1	1	1	0	0	0	0	0	0	1	0	1	1	A	0.6	0.8
26-Sep	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	A	1	0.7	1.3
27-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	A	1	1	0.9	1.4
28-Sep	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	A	1	1	1	0.9	1.9
29-Sep	1	0	1	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	1	1	0	1	0.5	0.7
30-Sep	1	1	1	1	1	1	0	0	0	1	0	0	0	1	0	0	0	0	A	1	1	0	0	0	0.5	0.7
	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	Diurnal Average	
	1.5	1.8	1.9	1.7	1.5	1.2	2.1	2.1	1.4	1.0	0.9	0.9	0.9	0.8	4.4	0.9	0.9	1.0	1.0	1.0	1.4	1.0	1.5	1.5	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

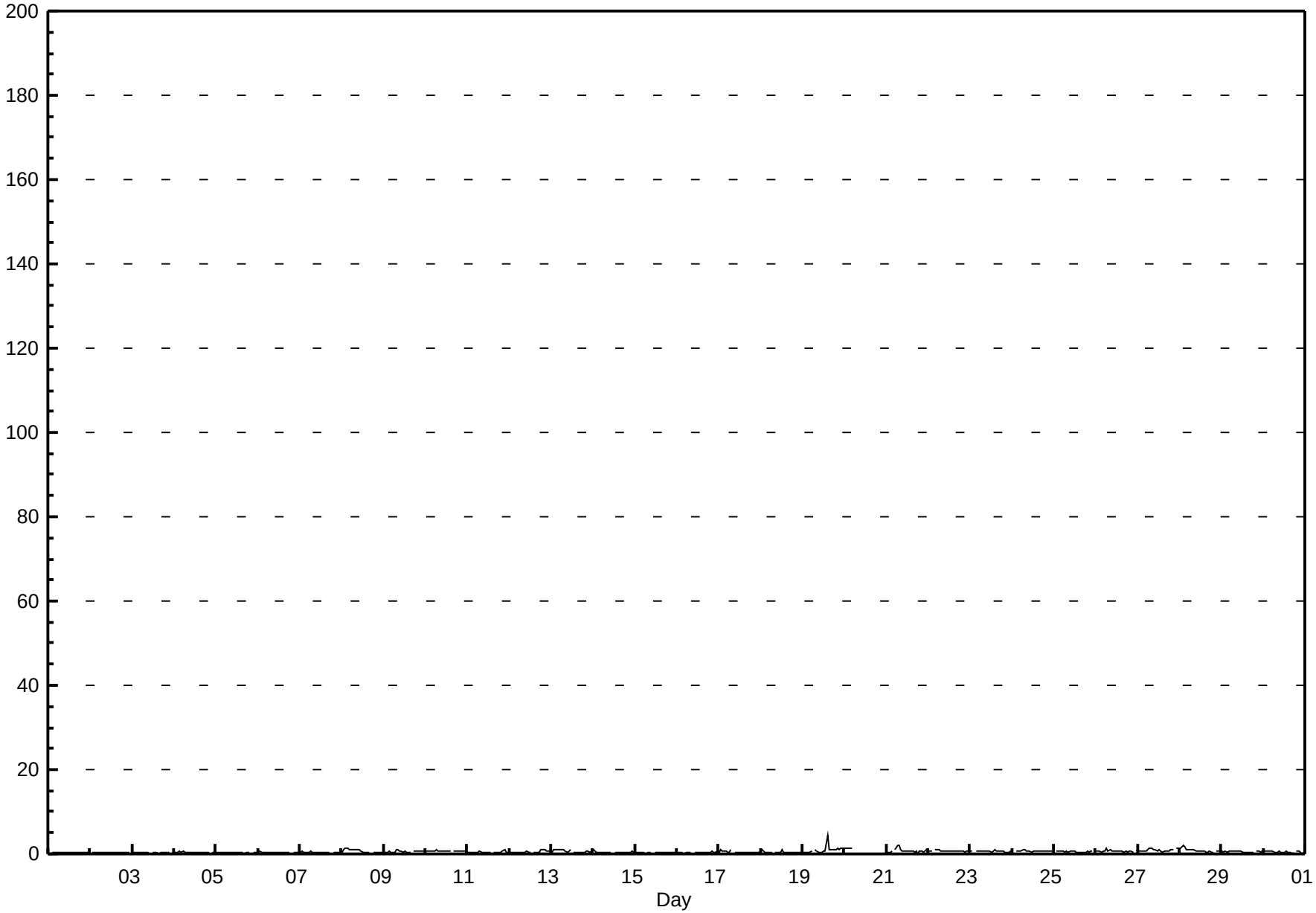
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Sulphur Dioxide (SO_2) - ppb

Sunset House - September 2012

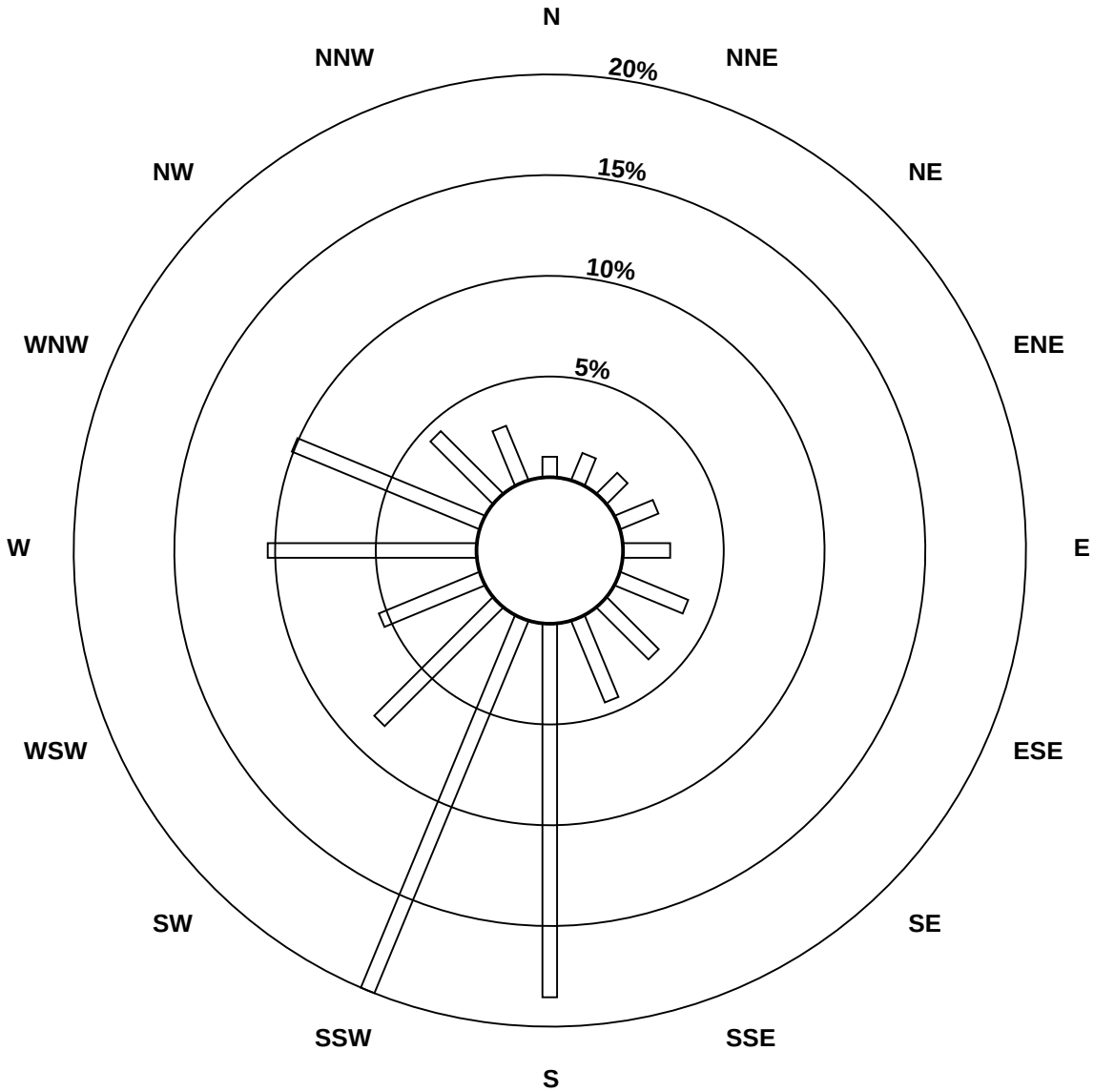


FOCUS AIR QUALITY MONITORING

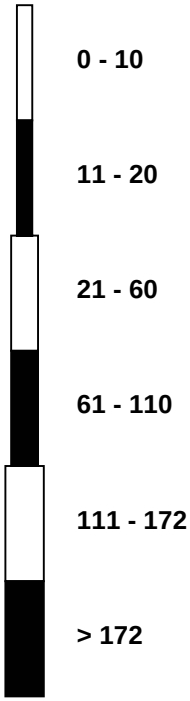
Pollutant Rose

Sulphur Dioxide (SO_2) - ppb

Sunset House - September 2012



Pollutant Classes (ppb)

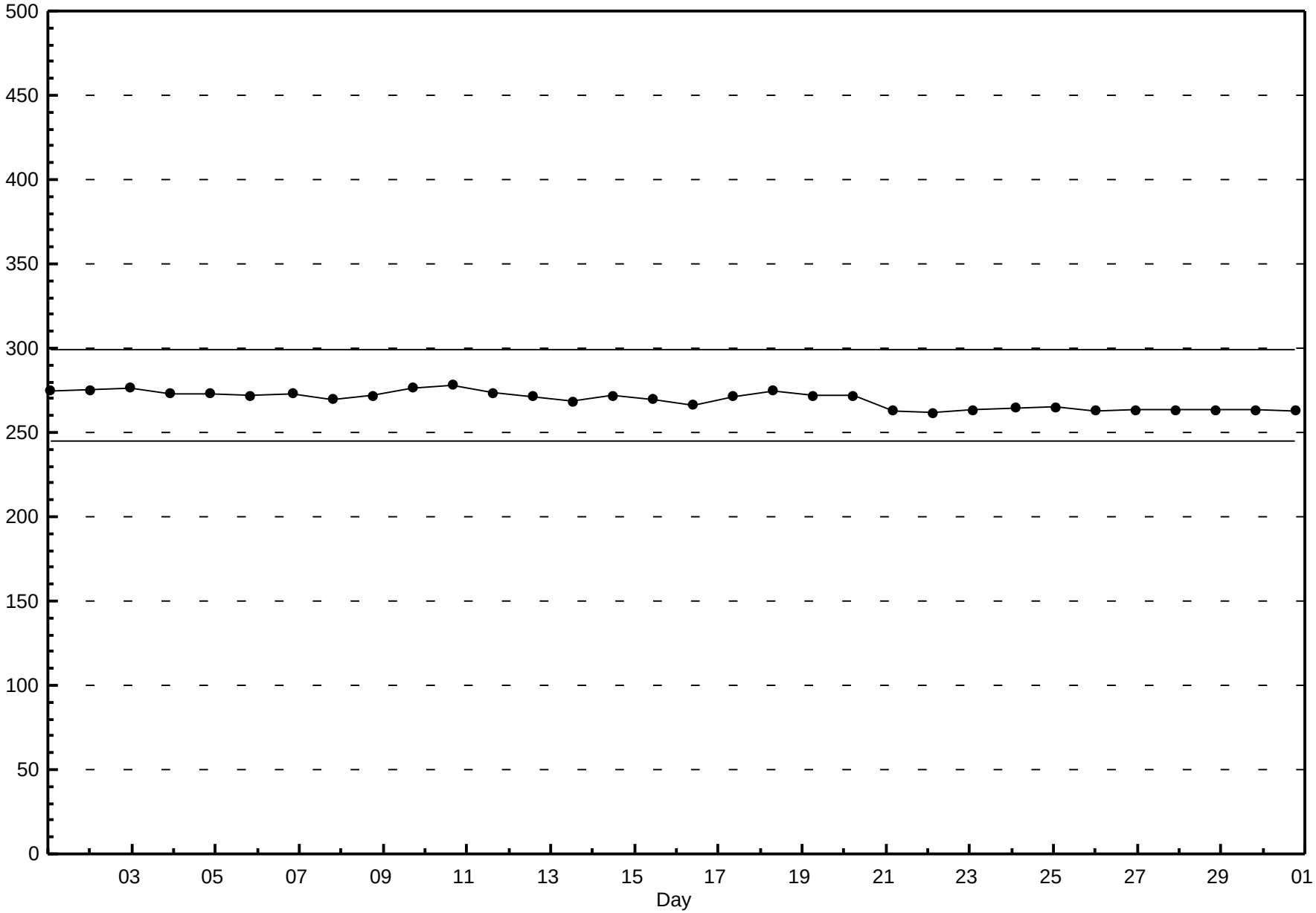


Peace Airshed Zone Association

Span Responses

Sulphur Dioxide (SO_2)

Sunset House - September 2012



Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Sunset House - September 2012

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

Maximum Value: 0.8 ppb on Sep 25 12:00

Maximum Daily Average: 0.4 ppb on Sep 25

Minimum Value: 0 ppb on Sep 19 22:00

Minimum Daily Average: 0.1 ppb on Sep 20

Maximum Diurnal Average: 0.3 ppb at hour 12

Minimum Diurnal Average: 0.2 ppb at hour 17

Monthly Average: 0.25 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.2 $Q_3 = 0.3$ $P_{90} = 0.4$ $P_{99} = 0.5$

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

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

C - Calibration A - Automated Daily Zero Span

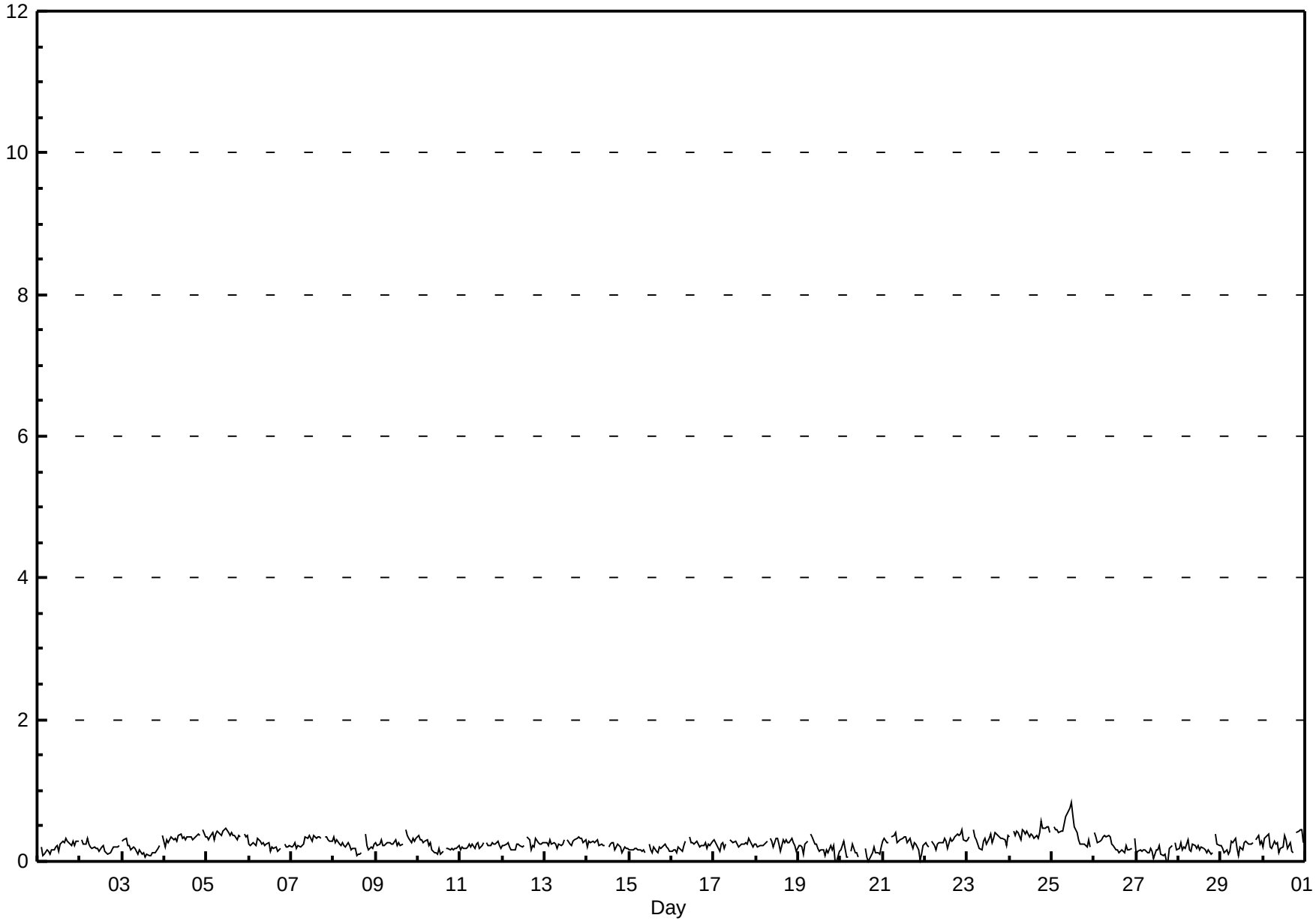
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

Peace Airshed Zone Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Sunset House - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Sunset House - September 2012

Maximum Value: 1.3 ppb on Sep 25 12:00

Maximum Daily Average: 0.9 ppb on Sep 24

Minimum Value: 0 ppb on Sep 27 18:00

Minimum Daily Average: 0.6 ppb on Sep 27

Maximum Diurnal Average: 0.8 ppb at hour 22

Minimum Diurnal Average: 0.6 ppb at hour 1

Monthly Average: 0.65 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.5$ $Q_1 = 0.6$ Median = 0.6 $Q_3 = 0.7$ $P_{90} = 0.8$ $P_{99} = 1.1$

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

C - Calibration

A - Automated Daily Zero Span

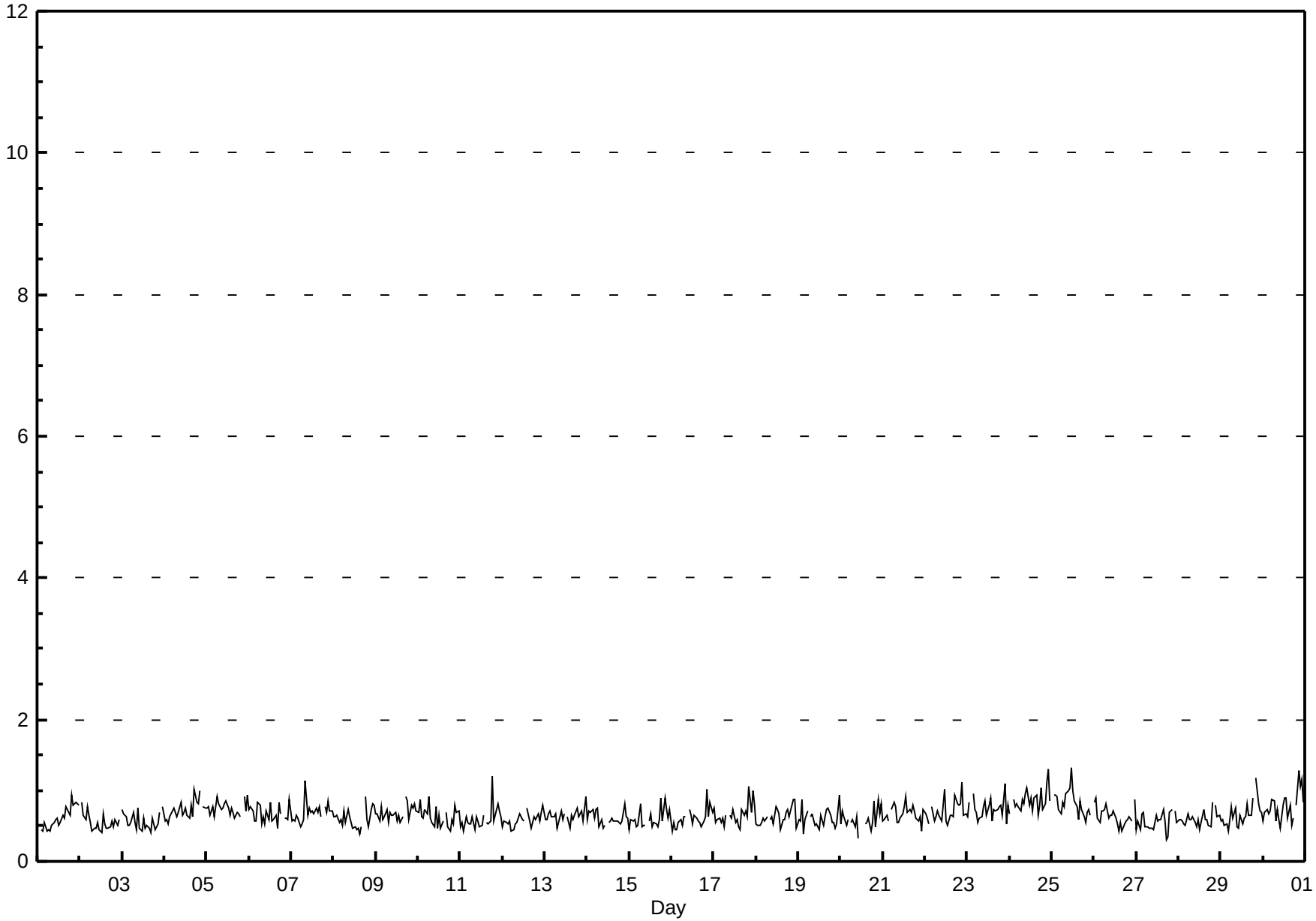
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

Sunset House - September 2012

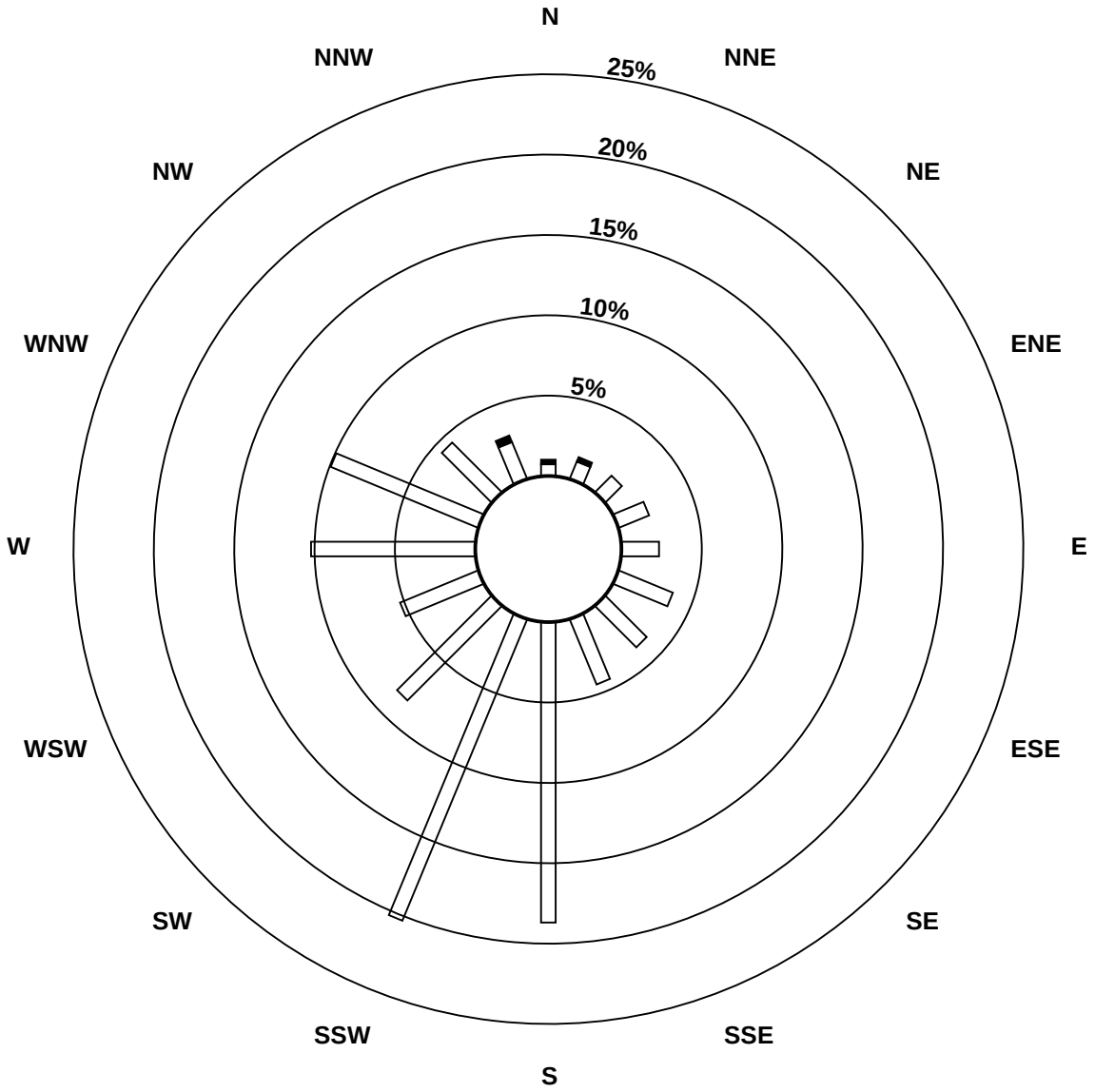


FOCUS AIR QUALITY MONITORING

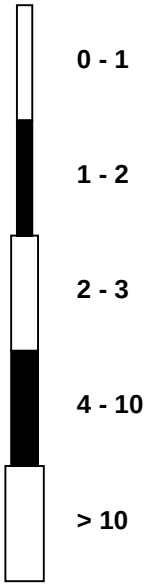
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Sunset House - September 2012



Pollutant Classes (ppb)

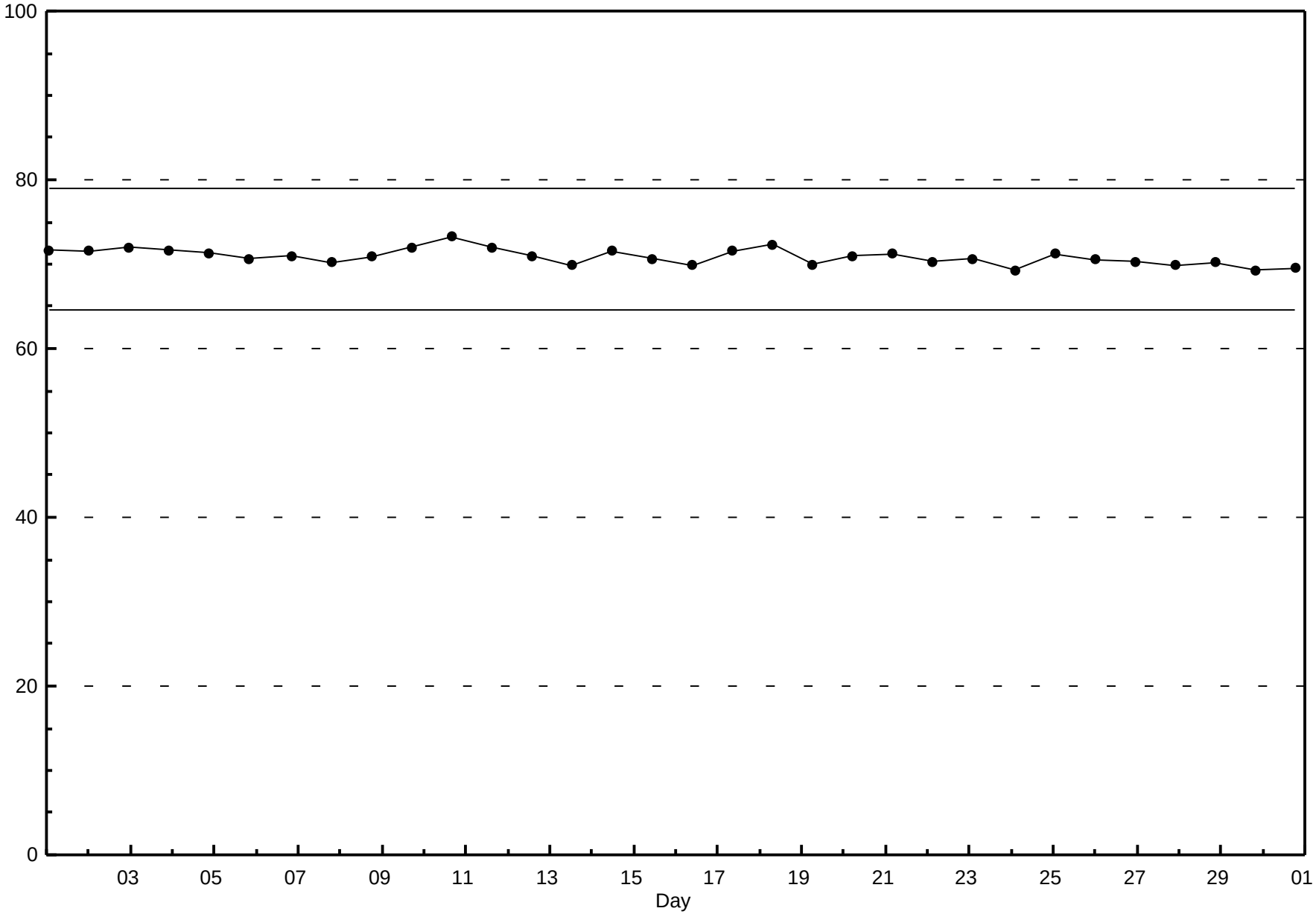


Peace Airshed Zone Association

Span Responses

Total Reduced Sulphur (TRS)

Sunset House - September 2012



Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Sunset House - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.0 ppb on Sep 24 03:00 Maximum Daily Average: 2.4 ppb on Sep 24

Minimum Value: 0 ppb on Sep 3 17:00 Minimum Daily Average: 0.6 ppb on Sep 15
Maximum Diurnal Average: 1.5 ppb at hour 8 Minimum Diurnal Average: 0.6 ppb at hour 17
Monthly Average: 1.07 ppb Percentiles: $P_1 = 0.2$ $P_{10} = 0.4$ $Q_1 = 0.6$ Median = 0.9 $Q_3 = 1.4$ $P_{90} = 1.9$ $P_{99} = 3.3$

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	A	2	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1.1	2.4
2-Sep	A	3	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	A	0.9	2.6
3-Sep	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	2	0.6	1.9
4-Sep	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	1	1	1	0	A	2	1	0.9	1.9
5-Sep	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	2	1	1	0.7	1.8
6-Sep	1	1	1	1	1	2	2	1	1	1	1	1	1	0	0	0	0	0	1	A	2	1	1	1	1.0	1.6
7-Sep	1	1	1	1	1	1	1	1	1	1	1	0	3	1	1	1	1	0	A	2	1	1	0	1	1.0	3.2
8-Sep	1	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	A	2	1	1	1	1	1	1.5	2.5
9-Sep	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0	1	A	2	2	1	1	1	1	1	1.1	2.0
10-Sep	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	1	1	1	1	1	1	1	1	0.7	1.2
11-Sep	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	1	0	0	0	0	1	0	0	1	0.6	1.1
12-Sep	0	1	1	1	1	1	1	1	1	1	0	0	0	A	1	1	1	1	1	1	1	1	1	0	0.7	1.3
13-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	0	0	0	1	0.7	1.4
14-Sep	2	2	1	1	1	1	1	1	1	1	1	A	1	0	0	0	0	0	1	1	1	1	1	1	0.8	1.7
15-Sep	1	1	1	1	0	0	1	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0.6	1.5
16-Sep	0	0	0	0	0	0	1	3	2	A	2	1	1	1	1	1	1	1	1	1	1	0	1	1	0.9	2.9
17-Sep	1	1	1	1	2	2	2	2	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.4
18-Sep	1	1	1	1	1	1	1	A	2	1	1	1	1	0	0	0	0	0	1	1	1	1	1	0	0.7	1.8
19-Sep	1	1	1	1	2	3	A	3	2	2	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1.3	3.2
20-Sep	1	1	1	1	1	A	1	C	C	C	C	C	2	2	2	1	1	1	1	1	1	1	1	1	1.1	2.3
21-Sep	1	1	1	1	A	2	2	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	2	2	1.3	2.2
22-Sep	2	2	3	A	4	3	3	3	3	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1	2.1	3.8
23-Sep	1	1	A	2	1	1	1	1	1	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1.3	2.6
24-Sep	1	A	4	3	3	3	4	4	4	3	3	3	2	2	2	2	1	2	2	2	2	1	1	1	2.4	4.0
25-Sep	A	3	3	2	2	2	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0	1	A	1.2	2.9
26-Sep	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1.1	2.3
27-Sep	2	2	2	2	2	2	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1.6	2.5
28-Sep	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1.4	2.3
29-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	A	1	1	1	1	0.8	1.4
30-Sep	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	2	1	1	1	1	0.8	1.6
	1.1	1.2	1.4	1.3	1.3	1.4	1.4	1.5	1.4	1.3	1.2	1.1	1.1	0.8	0.8	0.7	0.6	0.7	0.9	0.9	0.8	0.8	0.9	1.0	Diurnal Average	
	2.3	2.9	4.0	3.2	3.8	3.3	3.8	3.8	3.7	3.3	2.7	2.8	3.2	2.4	2.1	1.6	1.5	1.9	2.2	1.6	1.6	1.8	2.5	2.3	Diurnal Maximum	

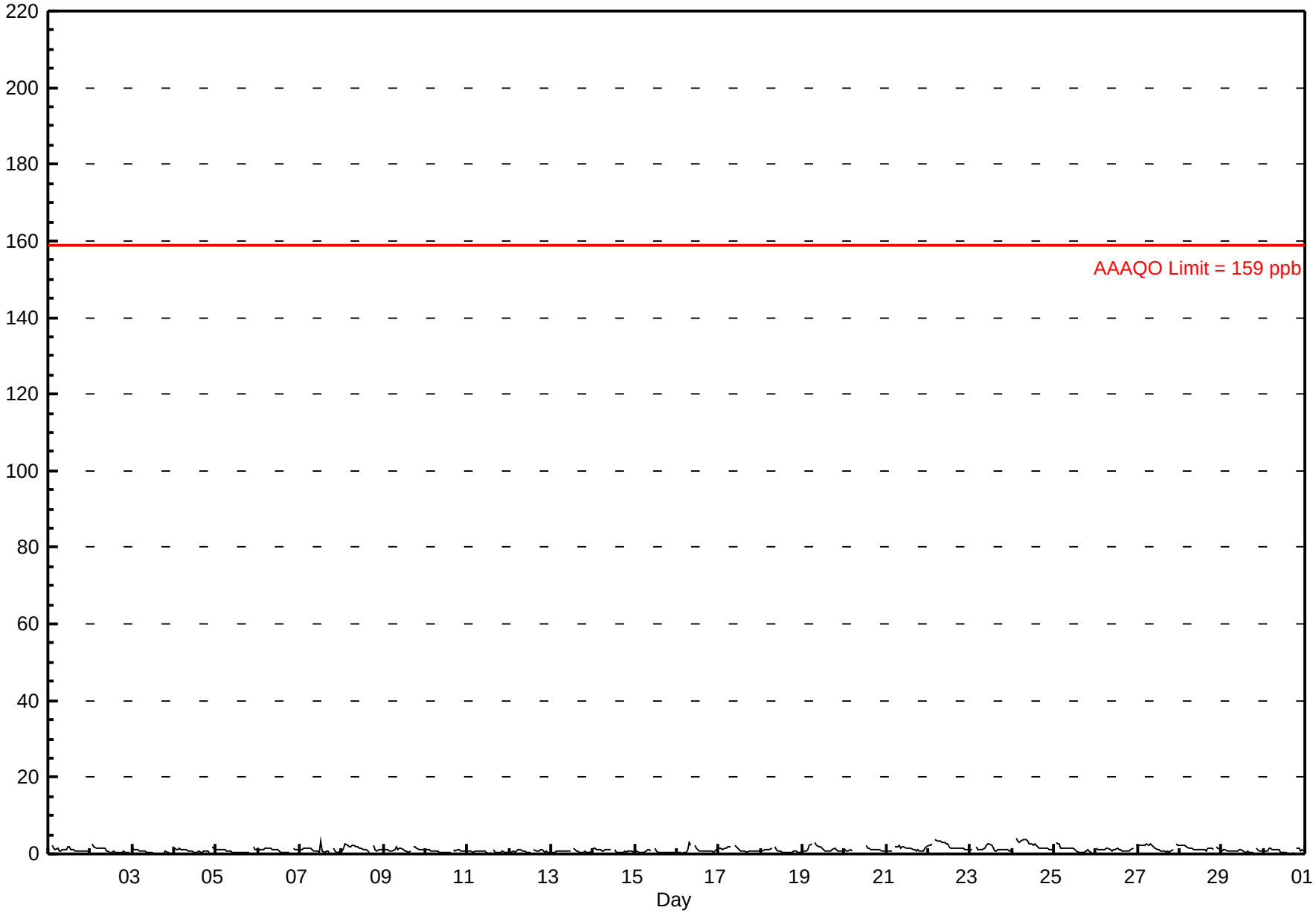
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb

Peace Airshed Zone Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Sunset House - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Sunset House - September 2012

Maximum Value: 255.7 ppb on Sep 7 13:00

Maximum Daily Average: 13.9 ppb on Sep 7

Minimum Value: 0 ppb on Sep 3 17:00

Minimum Daily Average: 0.8 ppb on Sep 15

Maximum Diurnal Average: 10.4 ppb at hour 13

Minimum Diurnal Average: 1.2 ppb at hour 18

Monthly Average: 2.08 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.7$ $Q_1 = 0.9$ Median = 1.3 $Q_3 = 1.9$ $P_{90} = 2.9$ $P_{99} = 12.0$

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	1	A	4	2	1	3	1	1	1	2	2	2	3	2	2	1	1	1	1	1	1	1	1	1	1.6	4.1
2-Sep	A	4	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1.3	4.4
3-Sep	3	2	2	2	1	1	1	1	1	2	1	0	0	0	0	0	0	0	2	3	1	1	A	3	1.2	3.3
4-Sep	2	1	2	2	2	1	1	1	1	1	1	3	3	0	27	4	1	1	1	6	1	A	3	2	2.9	27.3
5-Sep	1	2	2	2	1	1	1	1	1	1	1	0	1	0	0	0	1	1	1	2	A	3	1	1	1.1	3.3
6-Sep	2	1	1	1	2	2	2	2	1	1	1	3	1	1	1	1	1	1	1	A	3	1	1	1	1.3	2.9
7-Sep	1	1	2	2	2	2	2	2	1	1	1	1	256	7	6	14	13	1	A	3	1	1	1	1	13.9	255.7
8-Sep	1	2	3	3	2	2	2	3	2	2	2	2	1	3	19	2	1	A	29	1	1	9	2	1	4.2	29.2
9-Sep	2	2	2	1	1	1	2	2	2	2	2	1	1	1	1	1	A	3	6	3	1	1	1	1	1.7	5.9
10-Sep	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	A	4	3	2	3	1	1	1	1	1.3	3.6
11-Sep	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	4	1	2	1	1	1	1	1	1	1.0	4.2
12-Sep	1	1	1	1	1	2	2	1	1	1	2	1	1	A	2	1	1	1	2	2	1	1	1	1	1.1	2.4
13-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	4	1	1	1	2	1.1	4.5
14-Sep	2	2	2	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	2	1	1	1	1	1	1.2	2.5
15-Sep	1	1	1	1	1	1	1	1	1	1	A	3	1	1	1	1	0	0	1	1	1	1	1	1	0.8	2.7
16-Sep	0	1	0	0	1	1	3	3	3	A	3	2	2	1	1	1	1	1	2	1	1	1	1	2	1.4	3.2
17-Sep	2	2	2	2	2	2	2	2	A	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.5	3.2
18-Sep	1	1	1	1	2	2	2	A	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	3.1
19-Sep	1	1	1	2	3	3	A	4	3	2	2	2	1	1	1	1	1	2	4	2	1	1	1	1	1.8	4.3
20-Sep	1	1	1	1	1	A	2	C	C	C	C	C	3	2	14	1	1	1	1	1	1	1	1	1	2.1	14.4
21-Sep	1	1	1	1	A	3	3	3	2	3	2	2	2	2	2	1	1	1	1	1	1	2	2	2	1.7	2.7
22-Sep	3	3	3	A	5	4	4	4	3	3	3	3	2	2	2	2	2	2	2	2	1	2	1	1	2.5	4.9
23-Sep	1	1	A	3	2	1	1	1	2	3	5	5	5	2	1	1	1	1	1	1	1	1	1	1	2.0	5.4
24-Sep	2	A	5	4	3	4	4	4	4	4	3	3	3	3	3	2	2	2	2	2	2	1	1	2	2.8	4.8
25-Sep	A	3	3	3	2	4	4	2	2	2	2	2	1	1	1	1	1	1	1	3	1	1	1	A	1.8	3.8
26-Sep	3	2	1	2	1	2	2	2	1	1	1	1	2	2	1	1	1	1	1	1	2	1	A	3	1.5	3.1
27-Sep	2	2	2	2	2	3	3	3	3	2	2	2	1	1	1	1	1	1	1	1	1	A	4	2	1.9	3.5
28-Sep	3	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	3	4	2	2	A	3	2	2	2.0	3.7
29-Sep	1	2	2	1	1	1	1	1	1	1	1	4	4	1	1	1	1	1	1	A	2	1	1	1	1.4	4.4
30-Sep	1	1	1	2	2	1	1	1	1	2	1	1	1	1	0	0	0	1	A	2	2	1	2	1	1.2	2.4
	1.5	1.6	1.7	1.7	1.7	1.8	1.9	1.9	1.8	1.7	1.6	1.8	10.4	1.5	3.2	1.6	1.4	1.2	2.5	1.9	1.2	1.4	1.3	1.4	Diurnal Average	
	3.1	4.4	4.8	3.7	4.9	3.8	4.3	4.3	4.0	3.7	4.5	5.4	255.7	7.3	27.3	14.5	12.6	3.7	29.2	6.3	2.9	9.2	3.5	3.1	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

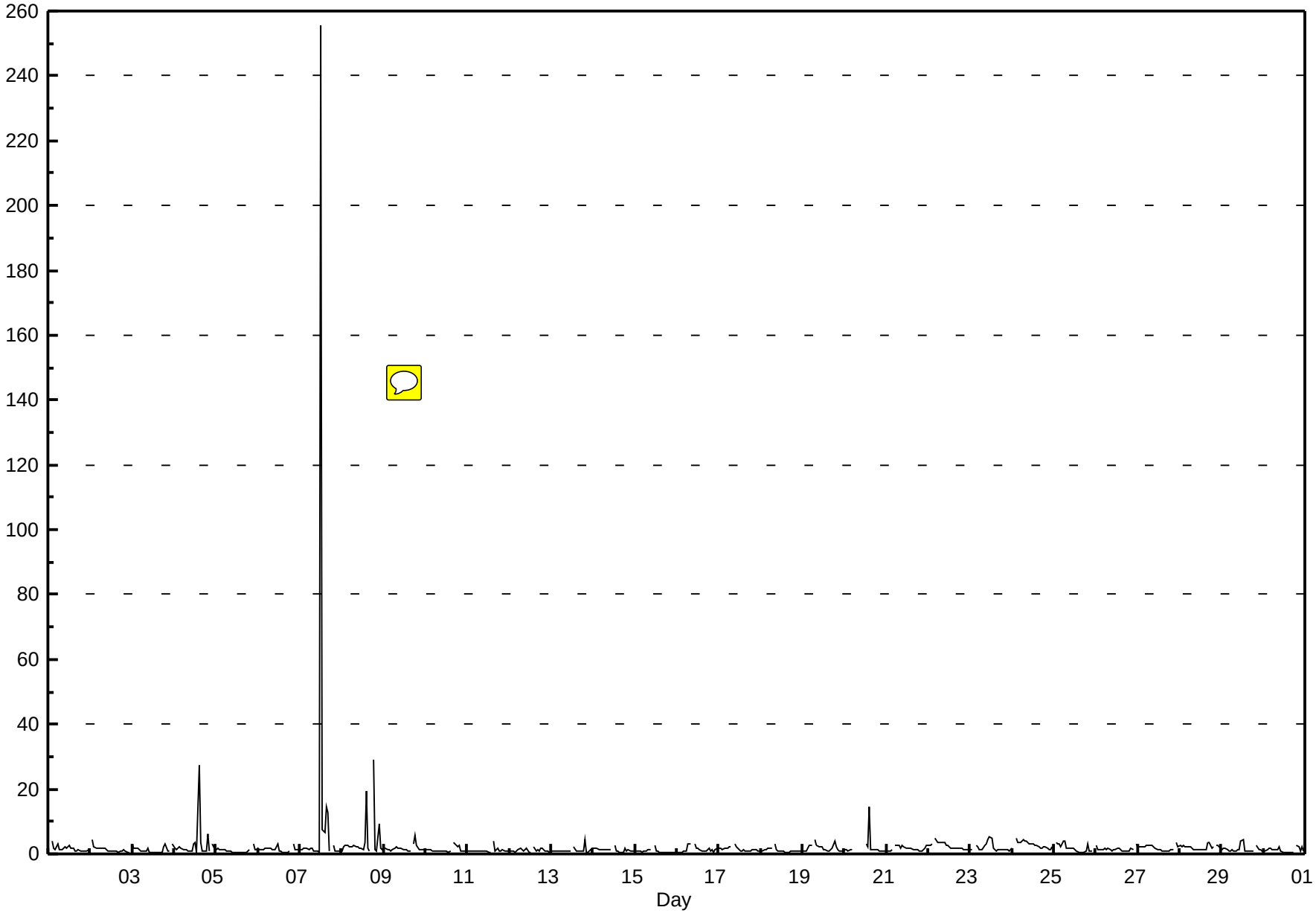
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Dioxide (NO_2) - ppb

Sunset House - September 2012

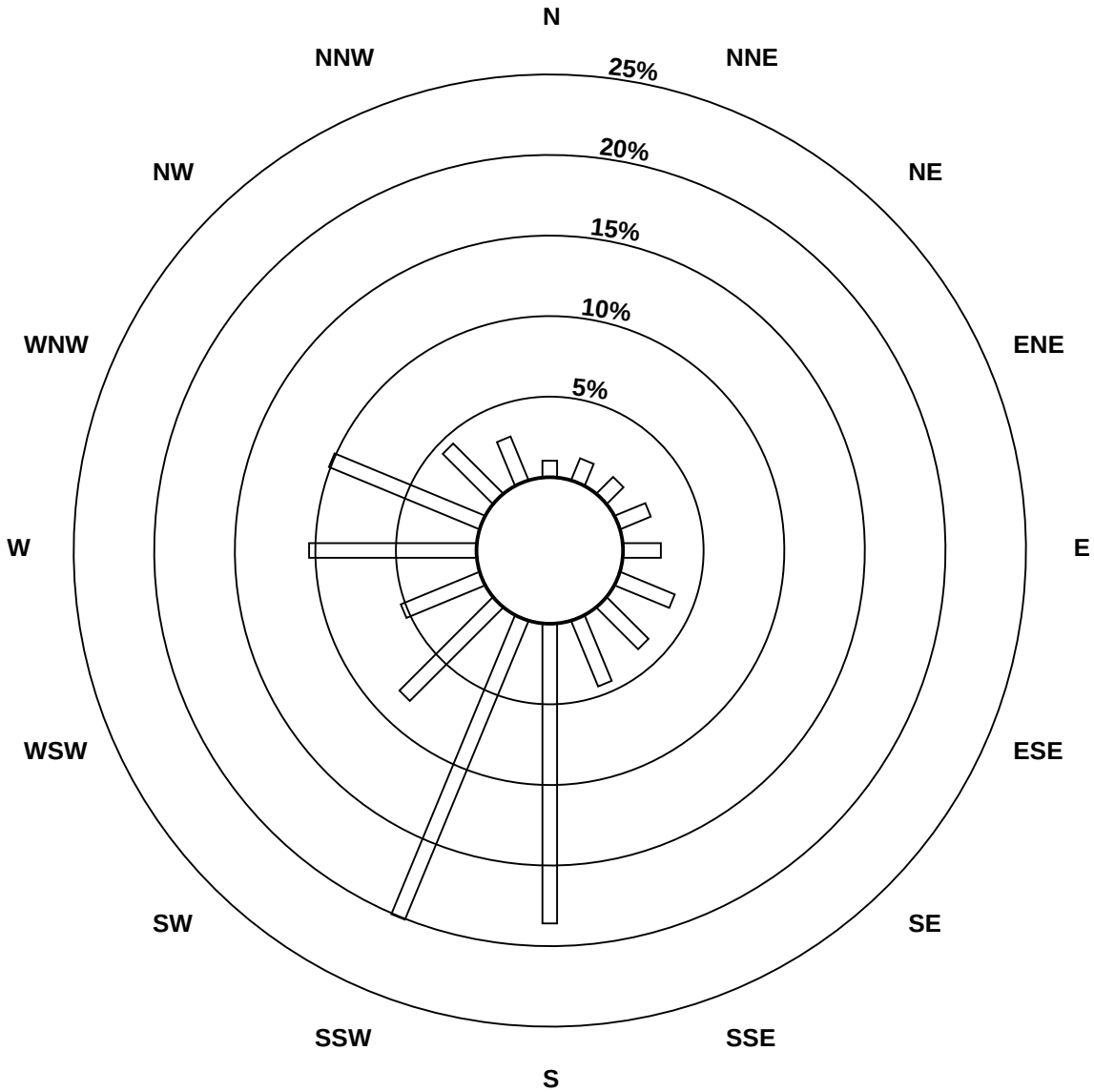


Peace Airshed Zone Association

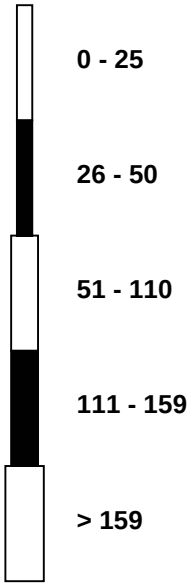
Pollutant Rose

Nitrogen Dioxide (NO_2) - ppb

Sunset House - September 2012



Pollutant Classes (ppb)



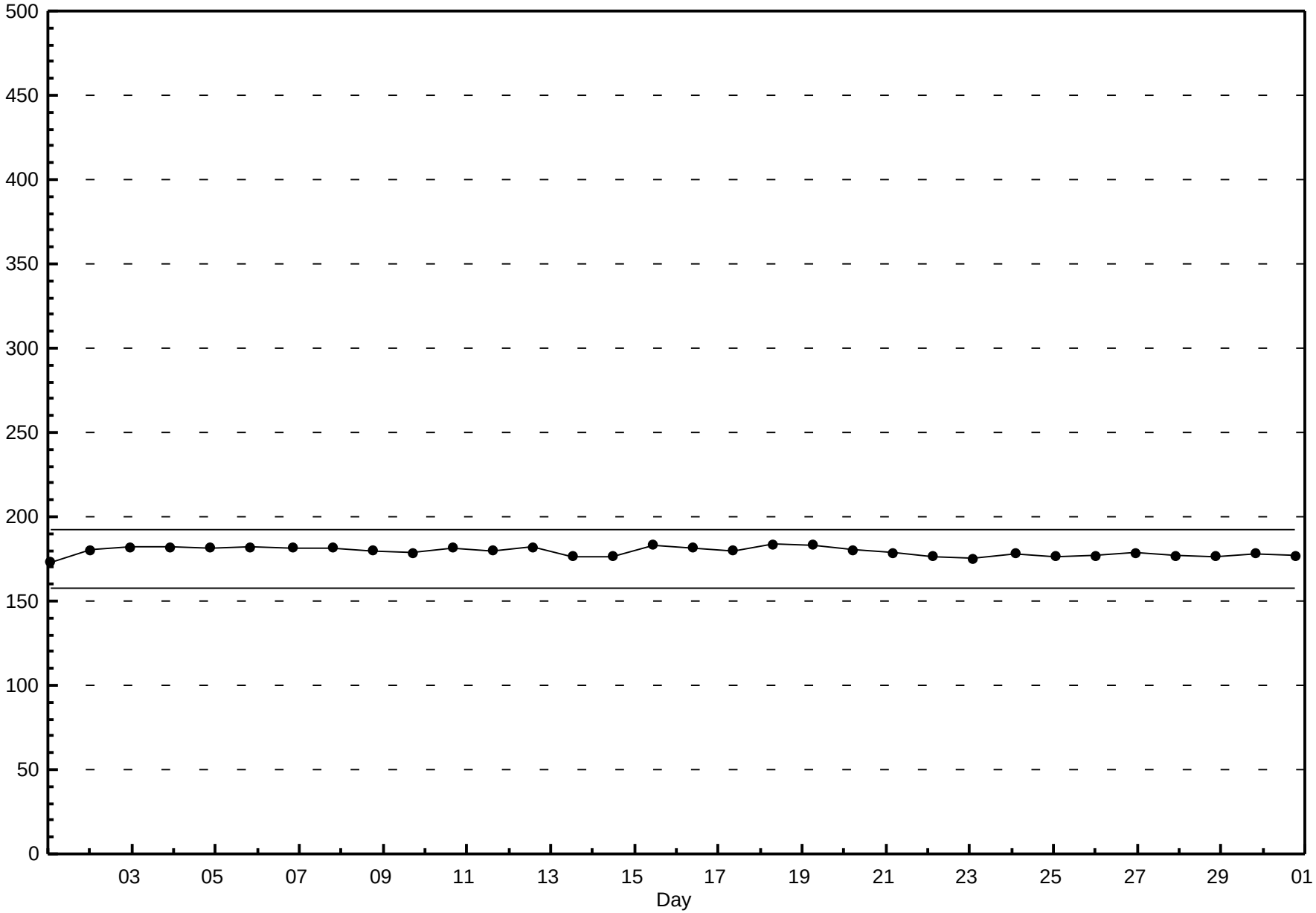
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Nitrogen Dioxide (NO_2)

Sunset House - September 2012



Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Sunset House - September 2012

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

Maximum Value: 1.6 ppb on Sep 7 13:00 Maximum Daily Average: 0.2 ppb on Sep 8

Minimum Value: 0 ppb on Sep 2 17:00 Minimum Daily Average: 0.0 ppb on Sep 18

Maximum Diurnal Average: 0.3 ppb at hour 10 Minimum Diurnal Average: 0.0 ppb at hour 18

Monthly Average: 0.11 ppb Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 0.1 $Q_3 = 0.1$ $P_{90} = 0.3$ $P_{99} = 0.6$

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

C - Calibration A - Automated Daily Zero Span

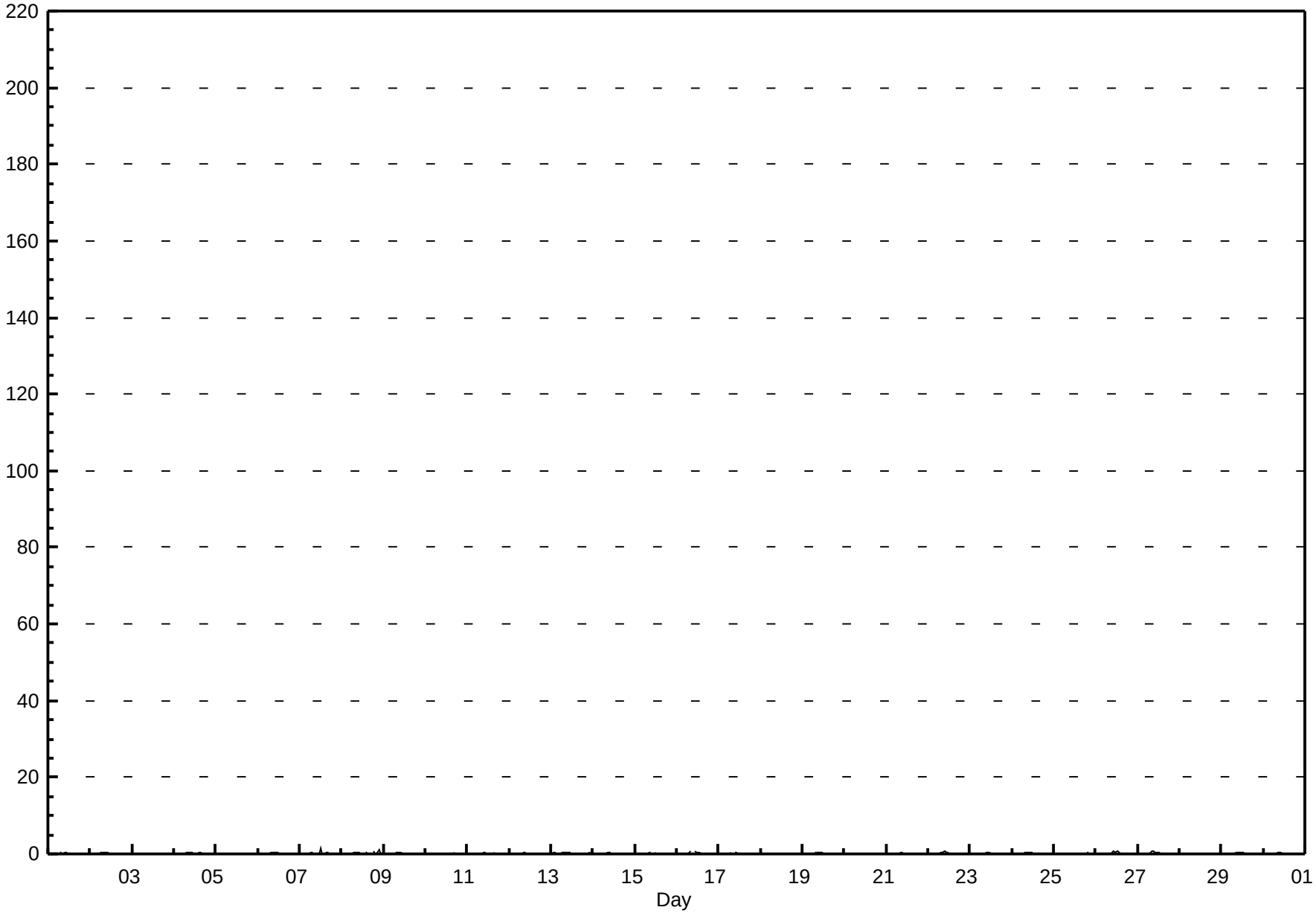
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Sunset House - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Sunset House - September 2012

Maximum Value: 77.2 ppb on Sep 8 22:00

Maximum Daily Average: 5.6 ppb on Sep 8

Minimum Value: 0 ppb on Sep 20 13:00

Minimum Daily Average: 0.2 ppb on Sep 18

Maximum Diurnal Average: 3.0 ppb at hour 22

Minimum Diurnal Average: 0.2 ppb at hour 24

Monthly Average: 0.72 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.1$ $Q_1 = 0.2$ Median = 0.3 $Q_3 = 0.3$ $P_{90} = 0.7$ $P_{99} = 9.2$

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	A	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
2-Sep	A	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	A	0.3	0.8
3-Sep	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	2	2	0	0	A	0	0.5	2.2
4-Sep	0	0	0	0	0	0	0	1	1	1	0	2	4	0	18	4	0	0	0	2	1	A	0	0	1.5	17.7
5-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	A	0	0	0	0.5	5.9
6-Sep	0	0	0	0	0	0	0	1	1	1	1	2	0	0	0	0	0	0	0	A	0	0	0	0	0.4	2.4
7-Sep	0	0	0	0	0	0	1	0	0	0	1	0	68	2	4	10	11	3	A	0	0	0	0	0	4.5	68.1
8-Sep	0	0	0	0	0	0	0	1	1	1	0	0	0	2	13	0	0	A	30	0	0	77	0	0	5.6	77.2
9-Sep	0	0	0	0	0	0	0	0	1	0	2	0	0	2	0	0	A	0	2	1	0	0	0	0	0.5	2.2
10-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	3	2	0	1	0	0	0	0	0.5	2.8
11-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	5	0	1	0	1	0	0	0	0	0.5	5.0
12-Sep	0	0	0	0	0	0	0	0	1	1	1	0	0	A	0	0	0	0	1	0	0	0	0	0	0.3	1.2
13-Sep	0	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	2	0	0	0	0	0.4	2.1
14-Sep	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.7
15-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	0.5
16-Sep	0	0	0	0	0	0	0	1	1	A	1	2	0	0	0	0	0	0	3	0	4	0	0	0	0.7	3.8
17-Sep	0	0	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.3	0.9
18-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	0.5
19-Sep	0	0	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
20-Sep	0	0	0	0	0	A	0	C	C	C	C	C	0	0	4	0	0	0	0	0	0	0	0	0	0.3	4.2
21-Sep	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.2	0.9
22-Sep	0	0	0	A	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
23-Sep	0	0	A	0	0	0	0	0	0	1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0.4	2.0
24-Sep	0	A	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0.3	1.1
25-Sep	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0.3	1.1
26-Sep	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0.3	0.8
27-Sep	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0.3	0.8
28-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	0.3
29-Sep	0	0	0	0	0	0	0	0	0	0	0	2	4	1	0	0	0	1	0	A	0	0	0	0	0.5	3.8
30-Sep	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0.3	1.8
	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.6	0.7	2.9	0.5	1.5	0.8	0.6	0.4	1.5	0.7	0.4	3.0	0.2	0.2	Diurnal Average	
	0.3	0.4	0.4	0.3	0.6	0.4	0.7	0.7	1.0	1.8	1.9	2.4	68.1	2.2	17.7	9.5	10.7	2.9	30.2	5.9	3.8	77.2	0.4	0.4	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

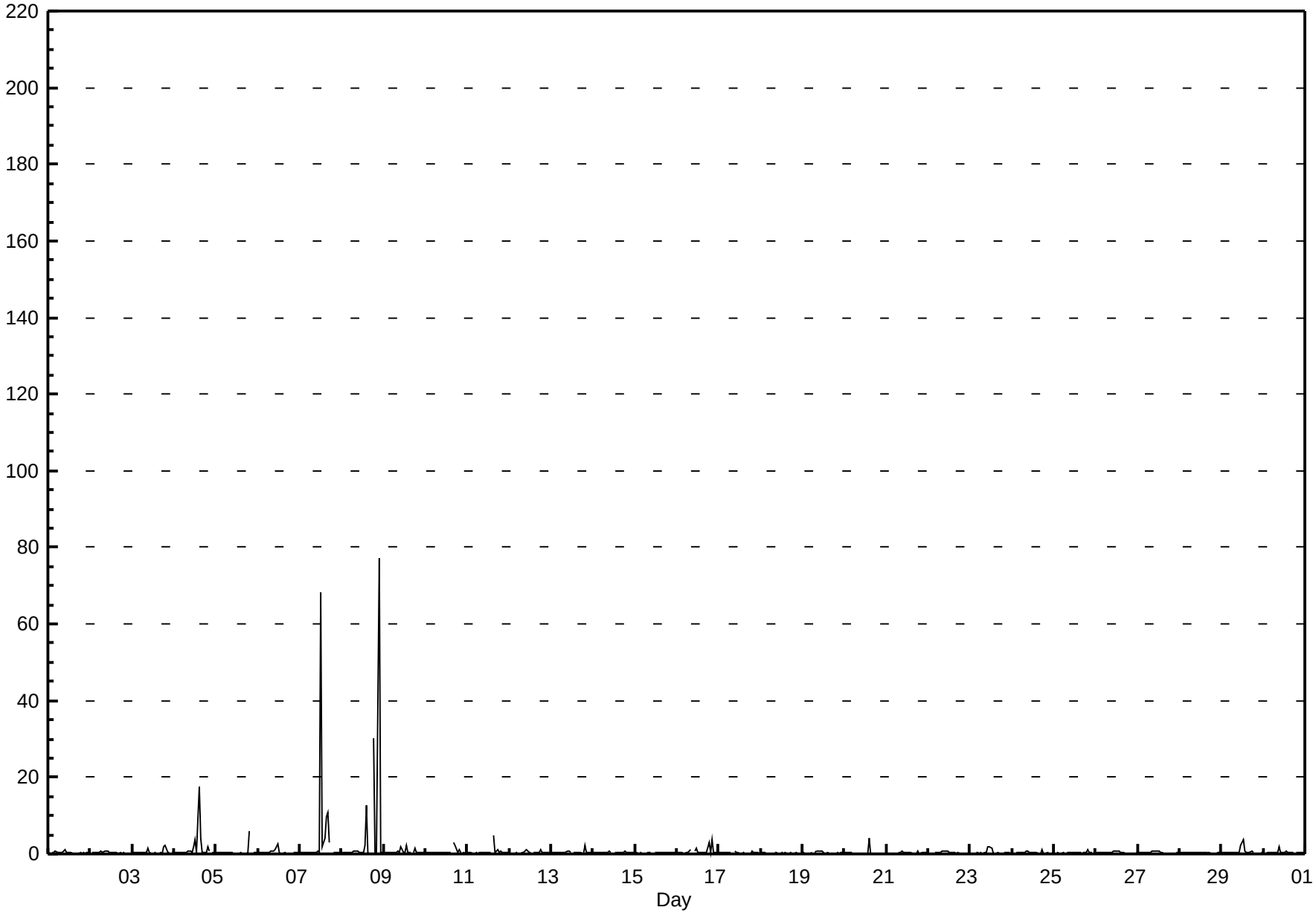
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Sunset House - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Sunset House - September 2012

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

Maximum Value: 4.7 ppb on Sep 7 13:00

Maximum Daily Average: 2.4 ppb on Sep 24

Minimum Value: 0 ppb on Sep 3 17:00

Minimum Daily Average: 0.6 ppb on Sep 3

Maximum Diurnal Average: 1.7 ppb at hour 8

Minimum Diurnal Average: 0.6 ppb at hour 17

Monthly Average: 1.13 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.4$ $Q_1 = 0.6$ Median = 1.0 $Q_3 = 1.5$ $P_{90} = 2.1$ $P_{99} = 3.7$

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	0	A	2	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1.1	2.4
2-Sep	A	3	2	2	2	1	2	1	2	1	1	1	1	1	0	0	0	0	0	1	0	0	0	A	0.9	2.7
3-Sep	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	2	0.6	2.0
4-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	A	2	1	1.0	1.9
5-Sep	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	2	1	1	0.7	1.8
6-Sep	1	1	1	1	1	2	2	2	2	1	1	1	1	0	0	0	0	0	1	A	2	1	1	1	1.1	1.8
7-Sep	1	1	1	2	2	2	2	1	1	1	1	0	5	1	1	1	1	0	A	2	1	1	1	1	1.2	4.7
8-Sep	1	2	3	2	2	2	2	3	3	2	2	2	1	1	2	1	1	A	3	1	1	2	1	1	1.7	2.8
9-Sep	1	1	1	1	1	1	1	2	1	2	2	1	1	1	1	1	A	2	2	1	1	1	1	1	1.2	2.0
10-Sep	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	A	1	1	1	1	1	1	1	1	0.8	1.4
11-Sep	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	1	0	0	0	0	1	1	0	0	0.6	1.4
12-Sep	0	0	0	0	0	1	1	1	1	1	0	0	0	A	1	1	1	1	1	1	1	1	1	1	0.7	1.3
13-Sep	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	0.8	1.5
14-Sep	2	2	1	1	1	1	1	1	1	1	1	A	1	0	1	0	0	0	1	1	1	1	1	1	0.9	1.7
15-Sep	1	1	1	0	0	0	1	1	1	1	A	2	1	1	0	0	0	0	0	1	1	0	0	0	0.6	1.7
16-Sep	0	0	0	0	0	0	1	3	3	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1.0	3.1
17-Sep	2	2	1	1	2	2	2	2	A	3	2	1	1	1	1	1	0	1	1	1	1	1	1	1	1.2	2.9
18-Sep	1	1	1	1	1	1	1	A	2	1	1	1	1	0	0	0	0	0	0	1	1	0	1	0	0.7	1.9
19-Sep	1	0	1	1	2	3	A	3	3	2	2	2	1	1	1	1	1	1	2	1	1	1	1	1	1.3	3.3
20-Sep	1	1	1	1	1	A	1	C	C	C	C	C	2	1	1	1	1	1	1	1	1	1	1	1	1.0	2.1
21-Sep	1	1	1	1	A	2	2	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	2	2	1.3	2.3
22-Sep	2	2	3	A	4	3	3	3	3	4	3	3	2	2	2	1	1	1	1	1	1	1	1	1	2.2	3.9
23-Sep	1	1	A	2	1	1	1	1	1	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1.3	3.0
24-Sep	1	A	4	3	3	3	4	4	4	4	3	3	2	3	2	2	1	2	1	2	1	1	1	1	2.4	4.1
25-Sep	A	3	3	3	2	2	1	1	1	2	2	2	1	1	0	0	0	0	1	1	1	0	1	A	1.3	3.0
26-Sep	2	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	A	2	1.3	2.4
27-Sep	2	2	2	2	2	3	2	3	3	2	2	2	1	1	1	1	1	1	1	1	1	A	3	2	1.7	3.0
28-Sep	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1.5	2.5
29-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	A	1	1	1	1	0.8	1.4
30-Sep	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	A	2	1	1	1	1	0.8	1.6
	1.1	1.3	1.4	1.3	1.3	1.4	1.4	1.7	1.6	1.5	1.4	1.3	1.2	0.8	0.8	0.7	0.6	0.7	0.9	0.9	0.9	0.9	0.9	1.0	Diurnal Average	
	2.3	3.0	4.0	3.3	3.9	3.4	3.9	4.0	4.1	3.7	3.1	3.0	4.7	2.5	2.1	1.6	1.5	1.9	2.8	1.6	1.6	2.4	2.5	2.4	Diurnal Maximum	

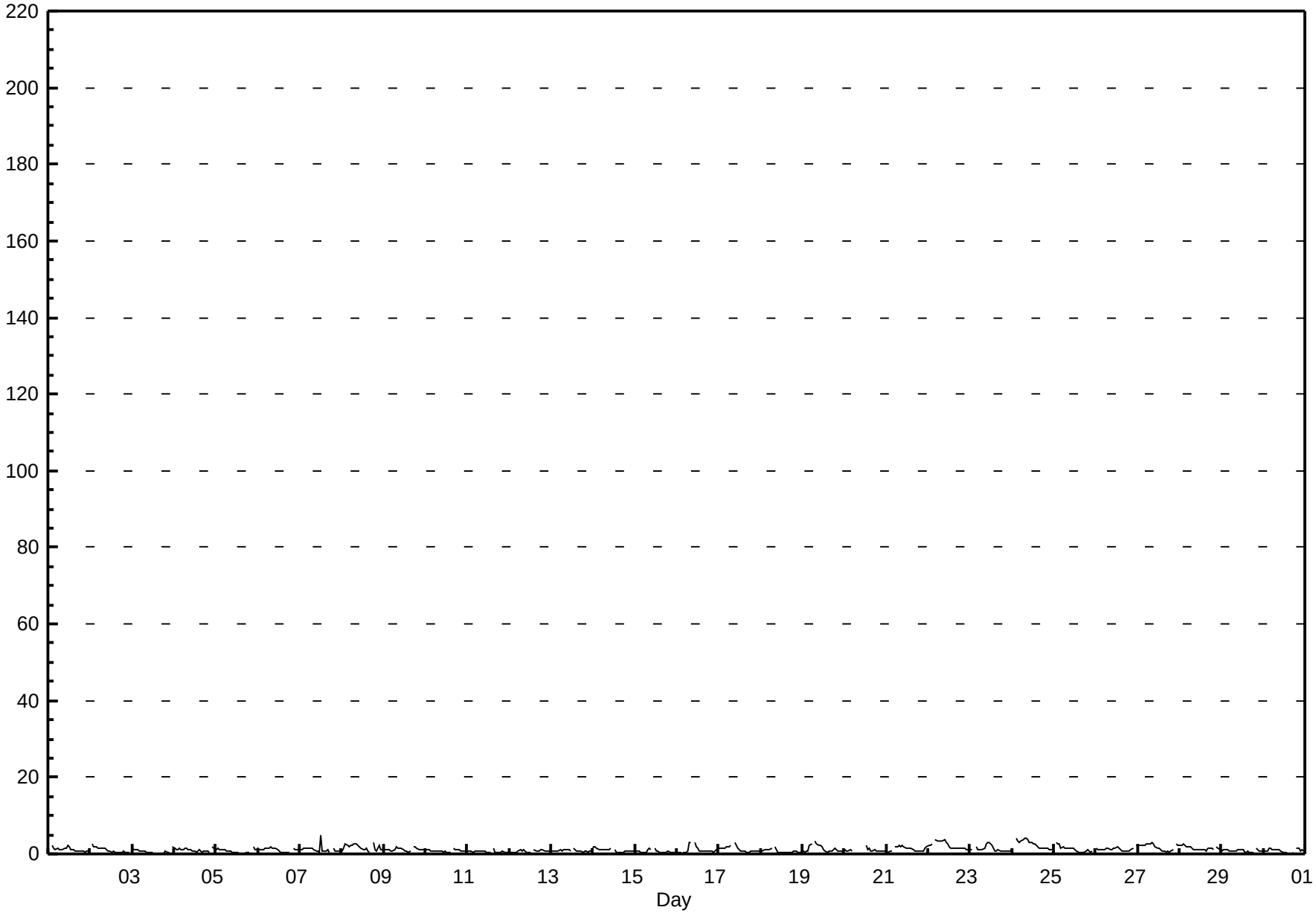
C - Calibration A - Automated Daily Zero Span

Peace Airshed Zone Association

Hourly Averages

Oxides of Nitrogen (NO_X) - ppb

Sunset House - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Sunset House - September 2012

Maximum Value: 314.9 ppb on Sep 7 13:00

Maximum Daily Average: 17.7 ppb on Sep 7

Minimum Value: 0 ppb on Sep 3 18:00

Minimum Daily Average: 0.9 ppb on Sep 15

Maximum Diurnal Average: 12.9 ppb at hour 13

Minimum Diurnal Average: 1.3 ppb at hour 23

Monthly Average: 2.51 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.7$ $Q_1 = 0.9$ Median = 1.4 $Q_3 = 2.1$ $P_{90} = 3.3$ $P_{99} = 21.6$

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	0	A	4	2	1	3	1	1	2	3	2	3	3	2	2	1	1	1	1	1	1	1	1	1	1.6	4.1
2-Sep	A	4	2	2	2	2	2	2	2	2	2	1	1	1	1	1	0	1	1	1	1	0	0	A	1.4	4.4
3-Sep	3	2	2	2	1	1	1	1	1	3	1	0	0	0	0	0	0	0	4	5	1	1	A	3	1.5	5.4
4-Sep	2	2	1	2	2	1	2	1	1	1	1	5	7	0	45	7	1	1	1	8	1	A	3	2	4.2	45.0
5-Sep	1	2	2	2	2	1	1	1	1	1	1	0	0	0	0	0	0	1	1	7	A	3	1	1	1.3	7.2
6-Sep	2	1	1	1	2	2	2	2	2	2	2	4	1	1	0	0	1	1	1	A	3	1	1	1	1.5	4.4
7-Sep	1	1	2	2	2	2	2	2	1	1	2	1	315	9	11	22	23	2	A	3	1	1	1	1	17.7	314.9
8-Sep	1	3	3	3	2	2	3	3	3	3	2	2	1	5	32	2	1	A	59	1	1	55	2	1	8.2	59.2
9-Sep	2	2	2	1	1	1	2	3	2	2	3	1	1	2	1	1	A	3	8	3	1	1	1	1	2.0	7.5
10-Sep	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	A	5	5	2	3	1	1	1	1	1.5	5.4
11-Sep	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	9	1	3	1	1	1	1	1	1	1.3	9.2
12-Sep	1	1	1	0	1	1	1	1	1	2	3	1	1	A	2	1	1	1	2	2	1	1	1	1	1.2	3.1
13-Sep	1	1	1	1	1	1	1	1	1	1	2	1	A	2	1	1	1	1	1	6	1	1	1	2	1.3	6.4
14-Sep	2	2	2	1	1	1	1	1	1	1	2	A	2	1	1	1	1	1	2	1	1	1	1	1	1.3	2.4
15-Sep	1	1	1	1	1	1	1	1	2	1	A	3	1	1	1	1	1	1	1	1	1	1	1	1	0.9	3.1
16-Sep	1	0	1	0	1	1	3	3	4	A	4	3	2	1	1	1	1	1	3	1	2	1	1	2	1.6	3.7
17-Sep	2	2	2	2	2	2	2	2	A	4	2	2	1	1	1	1	1	1	1	2	1	1	1	1	1.6	3.7
18-Sep	1	1	1	1	2	2	2	A	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	3.5
19-Sep	1	1	1	2	3	3	A	4	3	3	3	3	1	1	1	1	1	2	4	2	1	1	1	1	1.8	4.3
20-Sep	1	1	1	1	1	A	2	C	C	C	C	C	3	2	19	1	1	1	1	1	1	1	1	1	2.3	18.9
21-Sep	1	1	1	1	A	3	3	3	2	3	2	2	2	2	2	1	1	1	1	1	1	2	2	2	1.6	3.2
22-Sep	3	3	3	A	5	4	4	4	4	4	3	3	3	2	2	2	2	2	2	1	1	2	1	2	2.6	4.9
23-Sep	1	1	A	3	2	1	1	1	3	3	6	8	6	2	1	1	1	1	1	1	1	1	1	1	2.2	7.5
24-Sep	2	A	5	4	3	4	4	4	4	4	3	3	3	3	3	2	2	3	2	2	2	1	1	2	2.9	4.8
25-Sep	A	4	3	3	2	4	4	2	2	2	2	2	2	1	1	1	0	1	1	4	1	1	1	A	1.9	4.0
26-Sep	3	2	1	2	1	2	2	2	1	1	2	2	2	2	2	1	1	1	1	1	2	1	A	3	1.6	3.1
27-Sep	2	2	2	2	2	3	3	3	3	3	2	2	2	1	1	1	1	1	1	1	1	A	3	2	2.0	3.5
28-Sep	3	2	3	2	2	2	2	2	2	1	1	2	2	1	1	1	4	4	2	2	A	3	2	2	2.1	3.8
29-Sep	1	2	2	1	1	1	1	1	1	1	1	6	8	1	1	1	1	1	1	A	3	1	1	1	1.8	8.2
30-Sep	1	1	1	2	2	1	1	1	1	4	1	1	1	1	0	0	0	0	A	2	2	1	2	1	1.3	3.7
	1.4	1.7	1.8	1.7	1.7	1.8	1.9	2.0	2.0	2.1	2.0	2.2	12.9	1.7	4.6	2.2	1.8	1.3	3.7	2.4	1.3	3.1	1.3	1.4	Diurnal Average	
	3.1	4.4	4.8	3.8	4.9	4.0	4.3	4.3	4.3	4.2	6.4	7.5	314.9	9.3	45.0	22.0	23.2	4.6	59.2	7.8	2.8	55.3	3.5	3.1	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

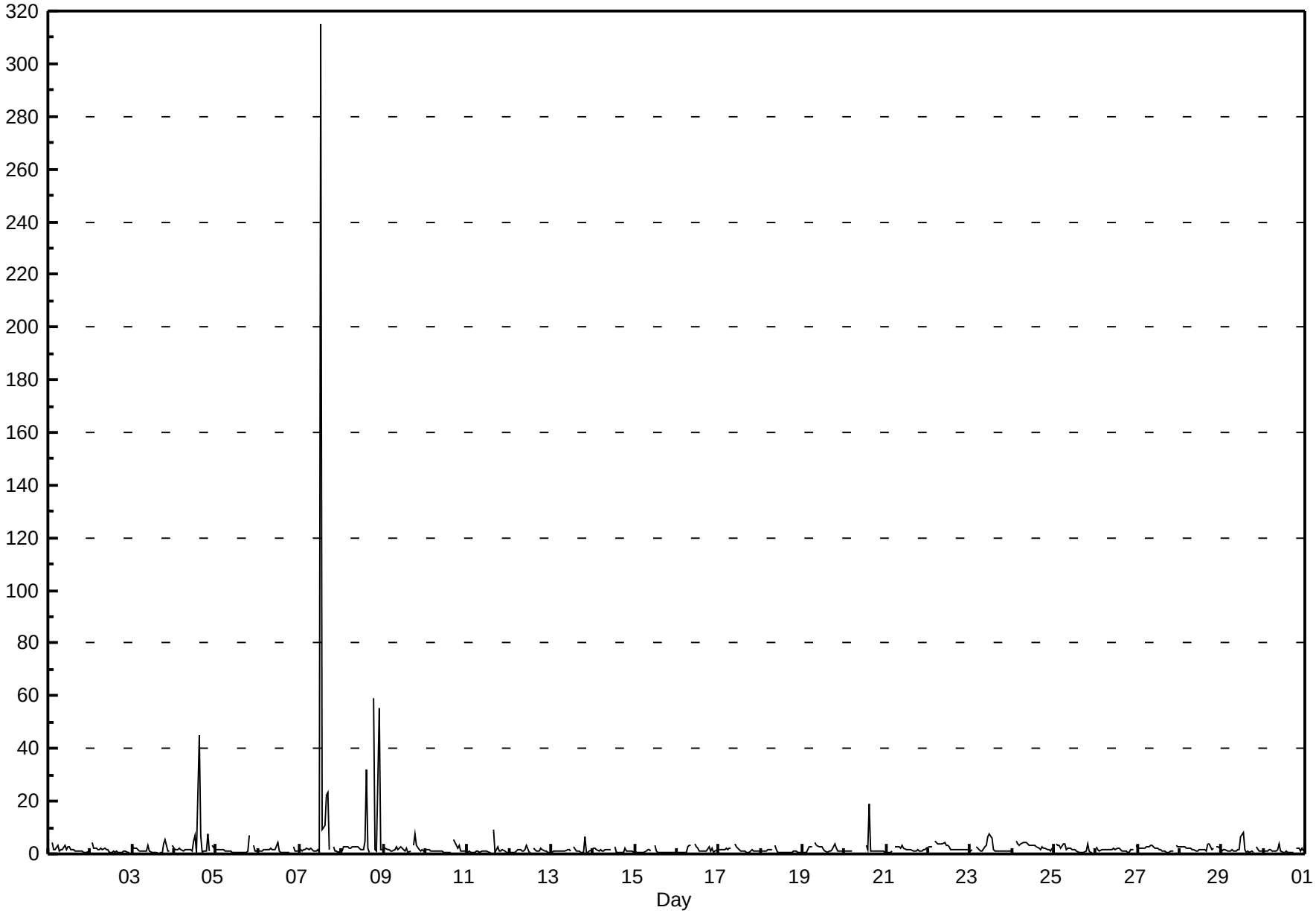
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Oxides of Nitrogen (NO_X) - ppb

Sunset House - September 2012



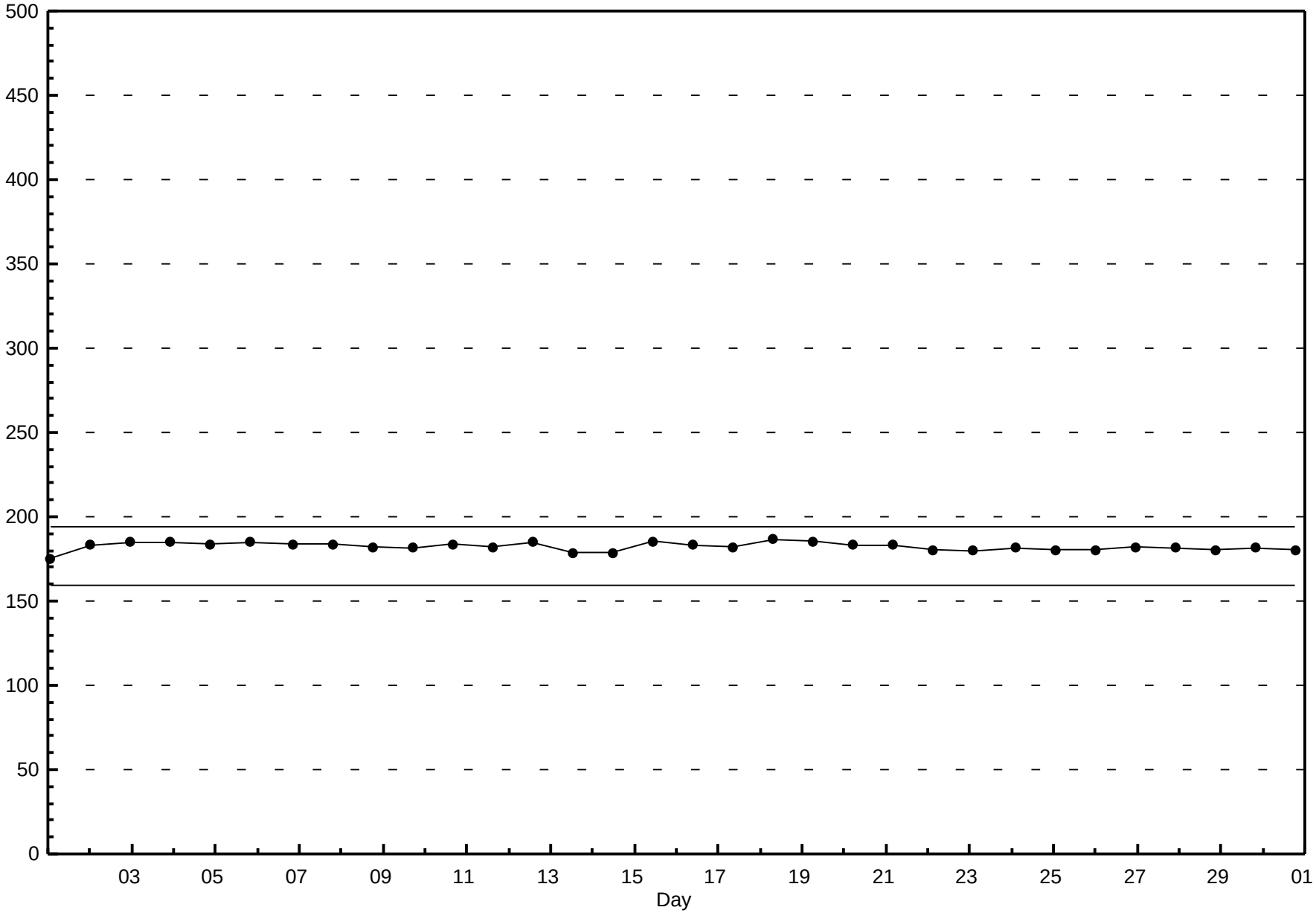
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Span Responses

Oxides of Nitrogen (NO_X)

Sunset House - September 2012



Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Sunset House - September 2012

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 48.4 ppb on Sep 21 17:00
Maximum Daily Average: 39.6 ppb on Sep 28

Minimum Value: 8 ppb on Sep 2 08:00
Maximum Diurnal Average: 37.2 ppb at hour 16
Monthly Average: 29.41 ppb

Minimum Daily Average: 19.1 ppb on Sep 2
Minimum Diurnal Average: 24.5 ppb at hour 8
Percentiles: P_1 = 10.4 P_{10} = 19.7 Q_1 = 24.1 Median = 29.0 Q_3 = 34.4 P_{90} = 40.3 P_{99} = 47.3

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	23	A	16	13	11	12	10	16	25	22	24	26	23	20	21	40	42	43	40	41	42	37	32	31	26.5	42.6
2-Sep	A	30	25	14	11	10	8	8	10	11	13	15	17	17	21	26	28	29	26	27	26	25	25	A	19.1	30.1
3-Sep	23	23	23	23	24	23	21	22	28	29	30	31	32	33	34	35	35	34	33	31	27	24	A	21	27.8	34.7
4-Sep	20	19	17	16	17	17	17	17	17	19	24	27	29	30	30	30	31	29	28	26	26	A	24	23	23.3	30.6
5-Sep	24	22	20	21	19	19	19	21	21	22	25	26	27	28	28	29	30	30	29	15	A	17	18	18	22.9	30.1
6-Sep	21	23	22	21	19	19	19	19	19	20	21	24	28	30	31	33	34	34	32	A	32	30	28	27	25.5	34.2
7-Sep	25	24	24	22	21	22	21	23	28	30	31	33	34	36	36	36	36	35	A	20	23	28	31	31	28.3	36.1
8-Sep	32	30	28	28	28	28	27	26	26	27	29	31	32	32	33	34	30	A	16	23	25	22	19	26	27.5	34.0
9-Sep	24	18	13	25	29	29	24	22	27	28	32	35	35	38	40	45	A	39	44	38	39	40	37	31	31.8	44.8
10-Sep	32	32	30	30	30	33	29	28	31	30	33	29	28	30	30	A	30	30	29	29	30	30	29	29	30.0	33.1
11-Sep	29	27	26	26	24	24	23	23	23	23	25	27	28	29	A	29	31	30	28	27	25	25	24	24	26.1	30.6
12-Sep	24	23	23	22	22	21	20	21	22	24	28	28	29	A	31	30	29	30	28	25	26	27	26	25	25.5	31.0
13-Sep	25	24	22	21	21	20	20	21	22	21	25	26	A	29	31	31	31	29	25	16	16	18	24	26	23.7	31.4
14-Sep	23	23	23	24	25	27	26	24	21	22	26	A	41	44	43	42	41	41	39	37	36	30	30	29	31.1	43.7
15-Sep	28	24	24	21	18	20	23	21	26	24	A	29	32	33	34	33	33	32	29	18	24	25	26	22	26.0	33.8
16-Sep	21	19	17	22	18	16	21	22	23	A	25	31	34	37	38	38	37	35	23	20	24	33	33	31	26.8	38.3
17-Sep	29	28	28	28	28	28	29	30	A	32	35	39	41	43	44	43	41	42	43	45	46	46	44	42	37.1	46.2
18-Sep	42	41	40	39	40	38	35	A	35	38	38	39	39	40	40	40	41	40	38	27	25	25	29	29	36.5	42.2
19-Sep	29	33	35	35	33	31	A	29	30	31	32	36	39	40	42	43	41	39	37	29	29	25	27	25	33.4	42.5
20-Sep	24	25	25	25	25	A	32	31	29	28	C	C	C	38	38	38	38	37	24	25	24	25	28	30	29.4	38.3
21-Sep	32	32	33	36	A	32	30	34	35	28	38	42	43	47	48	48	48	44	29	33	34	41	47	46	38.3	48.4
22-Sep	45	43	41	A	35	31	30	27	26	25	27	30	34	36	38	38	39	35	28	26	27	26	27	28	32.2	44.9
23-Sep	25	25	A	23	22	25	25	21	30	27	31	34	37	39	40	41	40	39	34	28	33	33	33	24	31.0	41.4
24-Sep	33	A	33	32	34	36	34	34	34	33	35	38	41	43	47	44	34	31	30	30	28	27	25	22	33.9	46.8
25-Sep	A	27	25	27	30	30	28	27	25	25	25	25	26	28	29	28	32	31	22	12	10	12	15	A	24.5	32.1
26-Sep	23	22	22	18	20	19	18	18	19	16	14	17	22	27	32	35	36	33	25	33	35	34	A	32	24.8	35.8
27-Sep	32	32	31	30	30	29	28	27	25	26	29	31	35	39	41	41	42	42	43	43	41	A	39	37	34.3	43.0
28-Sep	36	36	35	35	36	37	37	39	41	42	43	45	46	48	48	47	42	41	40	36	A	35	33	33	39.6	48.3
29-Sep	34	31	30	31	27	26	29	29	32	31	32	31	34	35	37	38	39	36	35	A	33	32	31	30	32.4	39.4
30-Sep	29	29	30	29	28	30	29	28	28	30	33	35	36	39	41	42	40	38	A	34	31	30	27	28	32.4	41.8
	28.0	27.3	26.4	25.5	25.1	25.1	24.6	24.5	26.1	26.4	28.7	30.7	33.0	34.8	36.0	37.2	36.2	35.4	31.3	28.3	29.2	28.7	28.9	28.6	Diurnal Average	
	44.9	43.1	41.0	39.5	40.2	37.8	37.2	38.8	41.0	42.1	43.4	44.9	45.8	47.8	48.3	48.3	48.4	43.9	43.9	45.1	46.2	45.7	46.8	46.1	Diurnal Maximum	

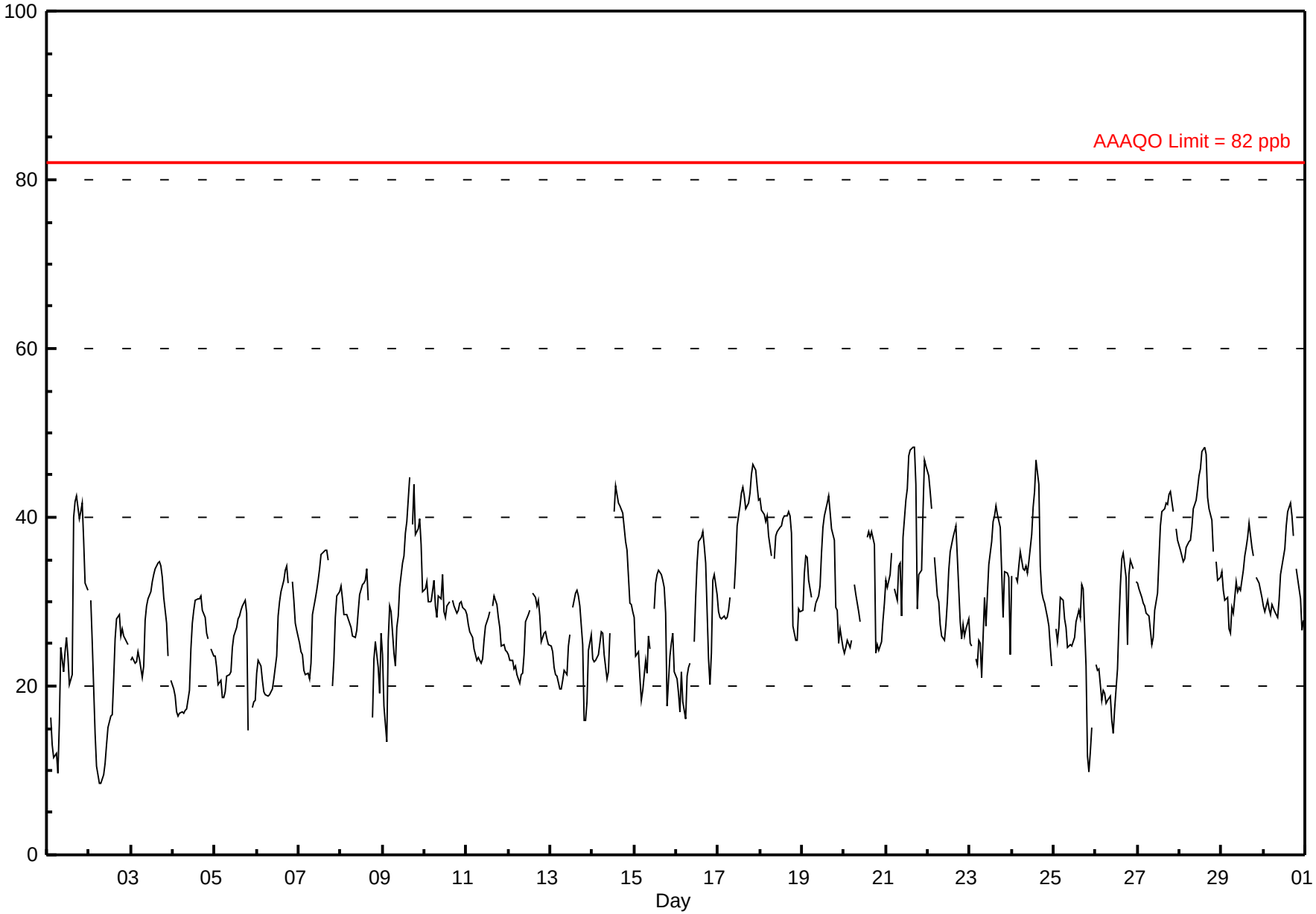
C - Calibration A - Automated Daily Zero Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na

Peace Airshed Zone Association

Hourly Averages

Ozone (O_3) - ppb

Sunset House - September 2012



Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

Sunset House - September 2012

Maximum Value: 49.7 ppb on Sep 28 15:00

Maximum Daily Average: 41.5 ppb on Sep 21

Minimum Value: 9 ppb on Sep 2 07:00

Minimum Daily Average: 20.7 ppb on Sep 2

Maximum Diurnal Average: 38.6 ppb at hour 16

Minimum Diurnal Average: 26.4 ppb at hour 7

Monthly Average: 31.62 ppb

Percentiles: P_1 = 13.4 P_{10} = 22.3 Q_1 = 26.8 Median = 31.3 Q_3 = 36.4 P_{90} = 42.1 P_{99} = 49.1

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	27	A	24	19	14	14	14	28	27	24	26	28	27	23	32	45	44	47	42	47	45	40	39	33	30.8	47.2
2-Sep	A	31	29	20	12	10	9	9	10	12	15	17	18	19	22	28	29	30	28	28	27	26	26	A	20.7	31.2
3-Sep	24	24	24	24	25	26	22	25	30	30	32	33	34	34	35	35	35	35	34	33	29	25	A	22	29.1	35.4
4-Sep	21	19	18	17	18	18	18	18	18	23	27	29	30	32	32	31	32	30	29	28	27	A	26	24	24.7	31.8
5-Sep	25	24	22	22	20	19	21	23	25	24	27	27	28	29	30	30	30	31	31	26	A	22	21	21	25.1	31.3
6-Sep	24	25	24	22	20	20	19	20	20	21	22	26	31	31	32	34	35	35	35	A	33	33	29	28	26.9	35.3
7-Sep	27	25	25	23	22	22	23	28	29	32	32	34	36	37	37	37	38	37	A	28	32	32	32	32	30.4	37.6
8-Sep	33	32	29	29	29	28	28	27	26	28	30	32	34	34	35	36	34	A	23	27	27	27	24	27	29.5	35.7
9-Sep	27	21	17	29	31	33	28	26	29	31	36	36	38	42	42	47	A	47	47	41	43	44	47	36	35.6	47.4
10-Sep	34	36	32	32	33	35	31	30	36	33	36	33	30	31	31	A	31	31	31	31	31	31	30	30	32.0	35.7
11-Sep	29	28	27	26	25	24	24	24	23	24	27	28	29	29	A	30	32	30	30	28	26	26	25	25	27.0	31.7
12-Sep	25	24	24	23	23	23	21	22	23	27	29	29	30	A	32	32	31	31	30	28	27	28	27	26	26.7	31.7
13-Sep	26	25	24	22	22	21	21	22	23	23	26	28	A	31	32	32	32	31	29	19	17	22	28	28	25.4	32.3
14-Sep	24	24	24	25	27	27	27	26	22	24	29	A	45	45	44	43	42	42	41	38	37	35	35	34	33.0	44.5
15-Sep	33	29	29	25	22	25	26	26	27	26	A	32	33	34	35	34	34	33	32	21	26	27	28	27	28.8	34.7
16-Sep	25	23	21	27	21	20	24	23	24	A	28	34	37	38	39	39	38	36	34	23	31	34	34	33	29.8	39.2
17-Sep	30	30	29	29	29	29	30	32	A	33	36	41	42	44	45	45	42	43	44	47	47	47	45	44	38.3	47.1
18-Sep	43	42	41	40	42	39	37	A	37	40	39	40	40	41	41	41	41	41	39	34	29	27	34	34	38.4	43.1
19-Sep	33	37	37	37	33	32	A	30	31	32	33	39	40	42	43	43	42	40	39	34	36	31	33	27	35.8	43.1
20-Sep	26	27	31	29	29	A	33	32	31	29	C	C	C	38	39	39	40	40	31	30	31	29	31	34	32.4	39.5
21-Sep	36	36	36	40	A	35	34	36	36	35	43	43	46	49	49	49	49	49	33	41	38	47	47	47	41.5	49.4
22-Sep	46	44	42	A	37	34	32	29	27	27	29	32	36	37	39	40	40	39	34	32	30	32	37	36	35.3	45.7
23-Sep	36	33	A	25	25	30	31	29	34	30	34	36	40	40	41	43	42	40	37	34	36	37	36	35	35.0	42.7
24-Sep	38	A	39	37	39	37	35	35	36	35	36	40	43	46	49	47	42	37	33	31	30	30	27	26	36.9	49.3
25-Sep	A	29	28	29	33	33	29	28	27	27	27	27	28	31	31	30	34	33	30	15	13	15	23	A	27.3	34.3
26-Sep	23	23	23	21	21	21	19	19	20	18	16	20	25	30	35	36	37	37	33	34	36	35	A	33	26.9	37.2
27-Sep	33	32	31	30	30	29	29	28	26	27	30	33	38	41	42	42	43	43	44	44	41	A	39	38	35.4	44.2
28-Sep	37	36	35	36	37	38	38	40	43	43	45	46	48	49	50	49	46	43	41	40	A	36	35	34	41.1	49.7
29-Sep	35	33	32	32	32	32	33	33	34	33	33	34	35	36	38	39	40	38	36	A	34	33	32	32	34.3	40.3
30-Sep	30	30	31	31	30	31	30	29	29	32	35	36	38	40	42	43	42	39	A	35	32	32	29	30	33.8	42.8
	30.3	29.4	28.5	27.7	26.9	27.2	26.4	26.8	27.7	28.4	30.7	32.6	34.8	36.3	37.7	38.6	37.8	37.5	34.6	32.0	31.9	31.6	32.1	31.2	Diurnal Average	
	45.7	44.2	42.2	40.4	42.2	39.2	38.3	39.8	42.8	42.8	45.3	46.3	48.3	49.1	49.7	49.3	49.4	49.1	47.1	46.6	47.1	47.2	47.5	46.7	Diurnal Maximum	

C - Calibration

A - Automated Daily Zero Span

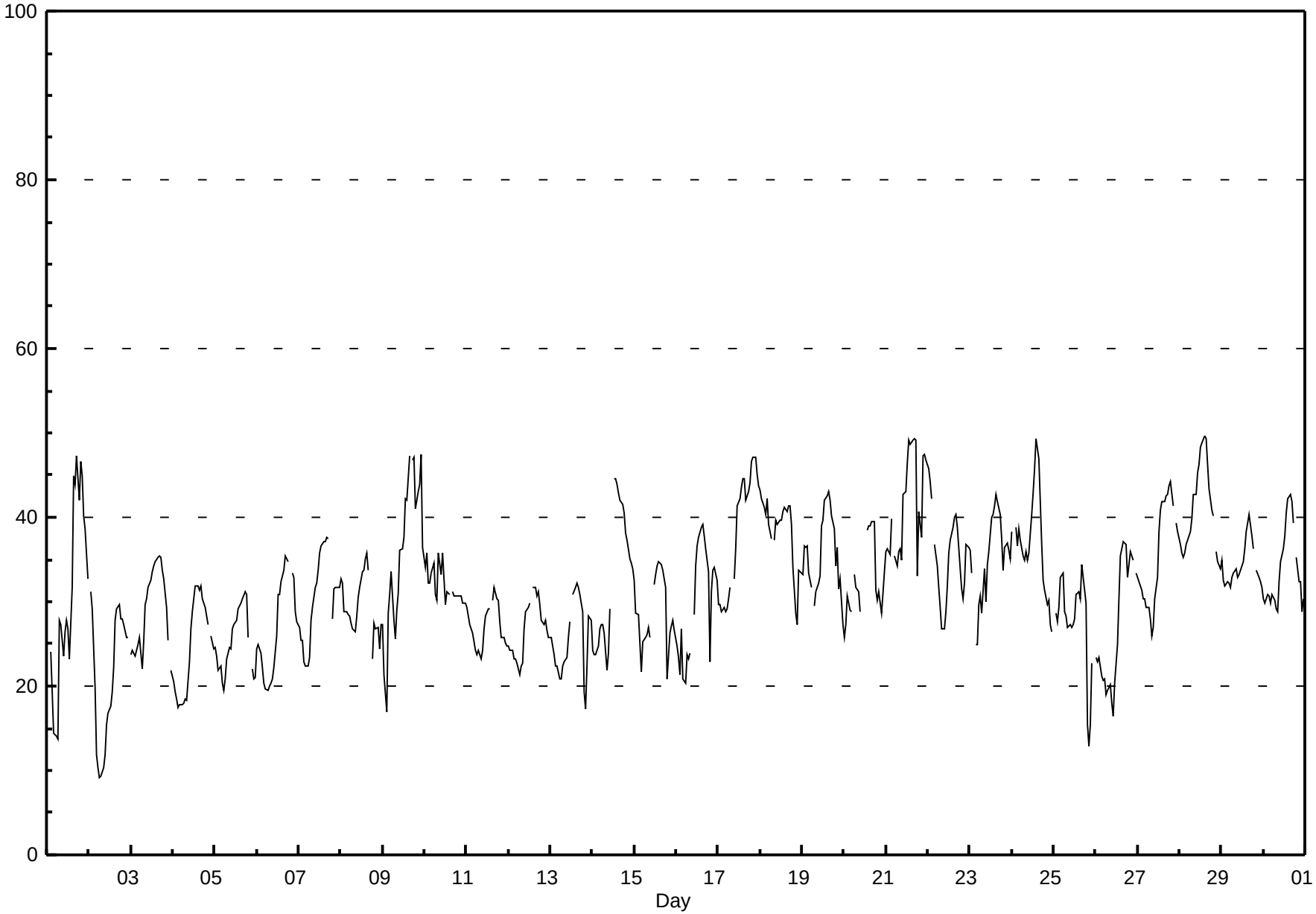
FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Maximums

Ozone (O_3) - ppb

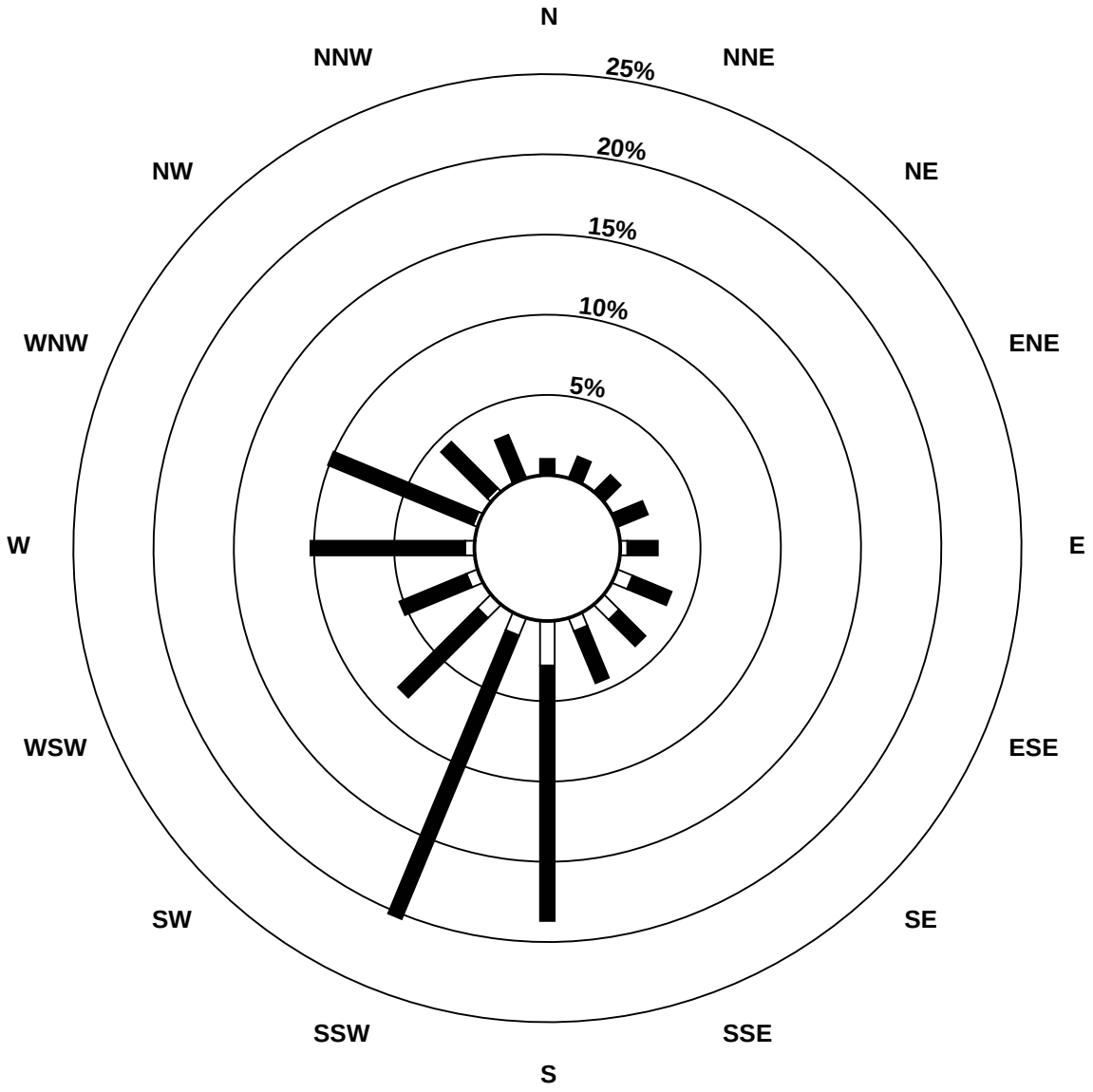
Sunset House - September 2012



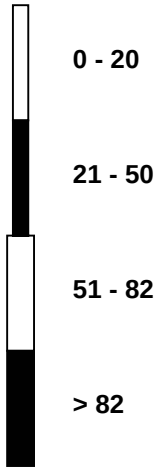
Pollutant Rose

Ozone (O_3) - ppb

Sunset House - September 2012



Pollutant Classes (ppb)



Peace Airshed Zone Association

Eight Hour Running Averages

Ozone (O_3) - ppb

Sunset House - September 2012

Maximum Value: 45.3 ppb on Sep 28 17:00

Minimum Value: 10.6 ppb on Sep 2 11:00

Percentiles: P_1 = 14.5 P_{10} = 21.1 Q_1 = 24.6 Median = 29.1 Q_3 = 33.7 P_{90} = 38.7 P_{99} = 43.7

Hours in Service:	720
Hours of Data:	713
Hours of Missing Data:	7
Hours of Calibration:	7
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Sep	25	24	23	21	19	18	16	14	15	16	17	18	20	21	22	25	27	30	32	34	36	38	40	38	39.5
2-Sep	38	36	34	30	26	22	19	15	15	12	11	11	11	12	14	16	18	21	22	24	25	26	26	26	37.9
3-Sep	26	25	25	24	24	23	23	23	23	24	25	26	27	29	30	32	33	33	33	33	33	32	31	29	33.4
4-Sep	27	25	23	20	19	18	18	17	17	17	18	20	21	23	24	26	28	29	29	29	29	29	28	27	29.4
5-Sep	26	25	24	23	22	21	21	21	20	20	21	21	22	24	25	26	27	28	28	27	27	25	24	22	28.3
6-Sep	21	20	19	20	20	20	20	20	20	20	20	20	21	22	24	26	27	29	31	32	32	32	32	31	32.3
7-Sep	30	28	27	26	25	24	23	23	23	24	25	26	28	29	31	33	34	35	35	33	32	31	30	29	35.0
8-Sep	29	28	28	29	30	30	29	28	28	27	27	28	28	29	29	30	31	32	30	29	28	26	24	23	31.5
9-Sep	22	22	21	22	22	23	24	23	24	25	27	28	29	30	32	35	36	38	39	40	40	41	40	38	40.5
10-Sep	37	37	35	34	33	32	31	31	30	30	31	30	30	30	30	30	30	30	29	29	30	30	29	29	37.4
11-Sep	29	29	29	28	28	27	26	25	25	24	24	24	25	25	26	26	28	28	29	29	28	28	27	27	29.2
12-Sep	26	25	24	24	23	23	22	22	22	22	23	23	24	25	26	27	29	29	30	29	29	28	28	27	29.5
13-Sep	26	26	25	24	24	23	22	22	21	21	21	22	22	23	25	27	28	29	29	28	26	25	24	23	29.0
14-Sep	22	21	21	22	23	24	25	24	24	24	24	24	27	29	31	34	37	40	41	41	40	39	37	35	41.4
15-Sep	34	31	30	28	25	24	23	22	22	22	22	23	25	27	29	30	31	32	32	30	29	28	27	26	33.6
16-Sep	24	23	21	22	21	20	19	20	20	20	21	22	25	28	30	32	34	34	34	33	31	31	30	29	34.3
17-Sep	28	28	28	29	30	29	29	29	29	29	30	32	33	36	38	39	40	41	42	43	43	44	44	44	43.6
18-Sep	44	44	43	43	42	41	40	39	38	38	38	38	37	38	38	39	39	40	40	38	36	35	33	32	43.7
19-Sep	30	30	29	30	31	32	32	32	32	32	31	31	32	34	35	36	38	39	39	39	37	36	34	31	39.5
20-Sep	29	28	26	26	25	25	26	27	27	28	28	N	N	N	N	N	N	N	35	34	33	31	30	29	35.4
21-Sep	28	28	29	30	31	32	32	33	33	33	33	34	35	37	39	41	43	45	44	43	42	41	41	40	44.9
22-Sep	40	40	41	42	43	41	39	36	33	31	29	29	29	29	30	32	33	35	35	34	33	32	31	29	42.6
23-Sep	28	26	26	26	25	25	25	24	25	25	26	27	29	31	33	35	36	38	38	37	37	36	35	33	38.2
24-Sep	32	31	31	32	32	32	32	34	34	34	34	35	36	37	38	39	39	39	39	38	36	34	31	28	39.4
25-Sep	28	27	26	26	26	27	27	28	27	27	27	27	26	26	26	26	27	28	28	26	24	22	20	19	28.0
26-Sep	18	17	16	17	19	20	20	20	20	19	18	18	18	19	21	23	25	27	28	30	32	33	33	33	33.0
27-Sep	32	32	33	32	31	31	30	30	29	28	28	28	29	30	32	33	35	37	39	41	41	42	41	41	41.6
28-Sep	40	39	38	37	36	36	36	36	37	38	39	40	41	43	44	45	45	45	45	44	43	41	39	37	45.3
29-Sep	36	34	33	32	32	31	30	30	29	29	30	30	31	32	33	34	35	35	36	36	36	36	35	34	36.4
30-Sep	33	32	31	31	30	30	29	29	29	29	29	30	31	32	34	36	37	38	39	38	38	37	35	33	38.7
	43.7	43.6	43.3	42.5	42.6	41.1	39.8	39.5	38.4	38.0	38.9	40.1	41.3	42.6	44.0	45.1	45.3	45.1	44.6	43.5	43.2	43.6	43.6	43.5	
	Diurnal Maximums																								

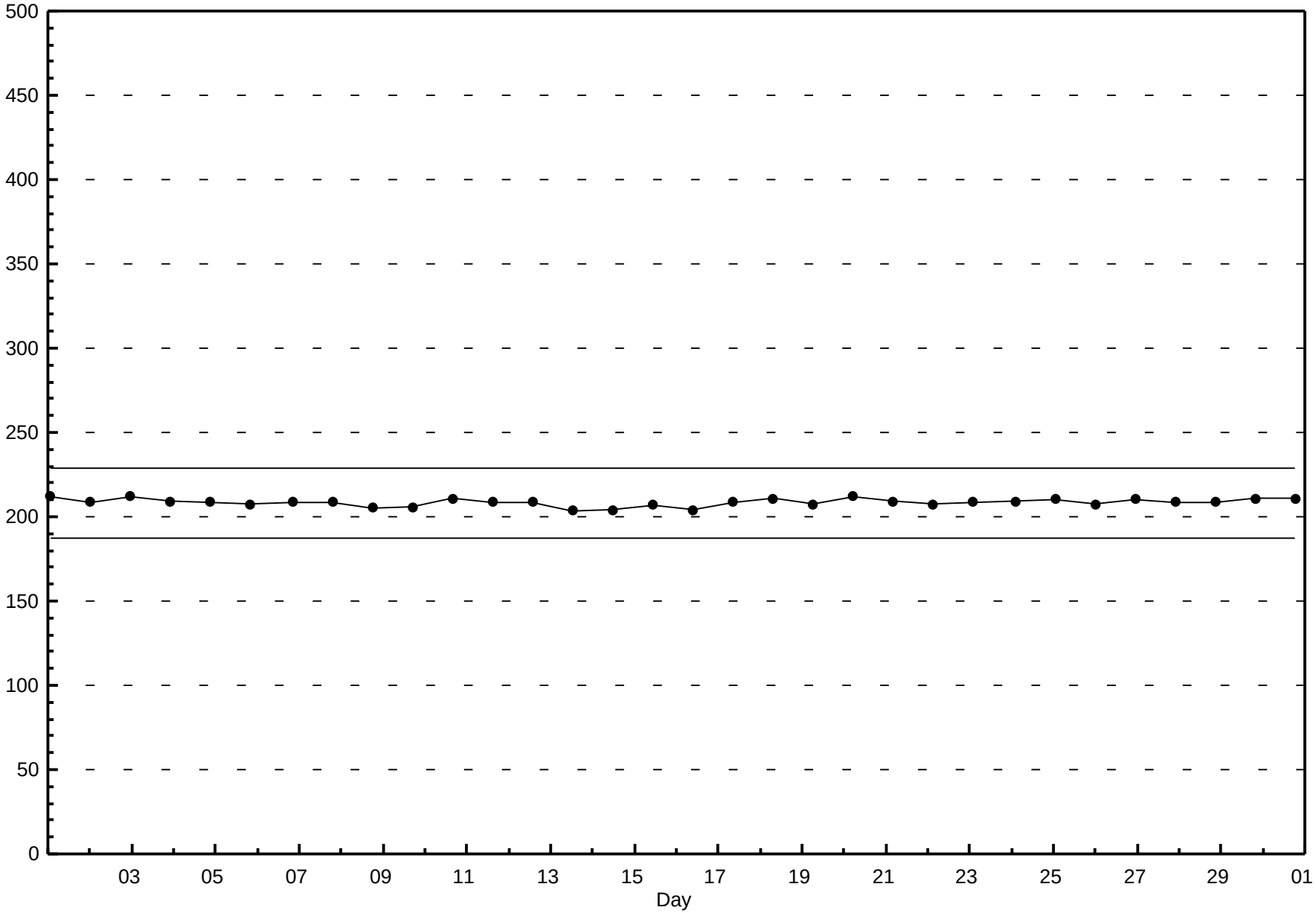
N - Not Valid

Peace Airshed Zone Association

Span Responses

Ozone (O_3)

Sunset House - September 2012



Peace Airshed Zone Association

Hourly Averages

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

Sunset House - September 2012

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

Maximum Value: 36.0 $\mu g/m^3$ on Sep 25 09:00

Maximum Daily Average: 12.3 $\mu g/m^3$ on Sep 25

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

Maximum Diurnal Average: 5.8 $\mu g/m^3$ at hour 8

Monthly Average: 3.76 $\mu g/m^3$

Minimum Daily Average: 0.2 $\mu g/m^3$ on Sep 29

Minimum Diurnal Average: 2.0 $\mu g/m^3$ at hour 15

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.0$ Median = 2.0 $Q_3 = 6.0$ $P_{90} = 11.0$ $P_{99} = 20.4$

Hours in Service:	720
Hours of Data:	708
Hours of Missing Data:	12
Hours of Calibration:	0
Percent Operational Time:	98.3

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	0	0	0	3	0	11	0	1	3	3	2	5	8	2	3	3	3	0	0	0	0	0	2.0	11.0
2-Sep	0	0	0	0	0	0	1	1	0	1	2	0	0	1	0	N	0	1	1	1	1	0	0	0	0.4	2.0
3-Sep	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	3	5	4	3	0.8	5.0
4-Sep	3	2	2	2	1	1	1	2	3	2	0	0	0	0	0	1	1	2	1	2	2	3	2	3	1.5	3.0
5-Sep	2	2	2	1	3	3	6	5	4	3	0	0	0	0	0	0	0	0	0	6	2	0	0	0	1.6	6.0
6-Sep	0	0	0	0	1	0	0	2	0	3	3	2	0	0	1	0	1	1	4	2	1	3	3	2	1.2	4.0
7-Sep	3	2	2	2	2	2	3	6	7	10	11	10	10	7	7	6	6	7	9	8	5	3	5	7	5.8	11.0
8-Sep	6	8	8	7	8	7	7	8	8	8	10	7	5	0	0	2	7	8	17	N	0	5	6	5	6.4	17.0
9-Sep	7	6	3	0	0	0	3	6	0	2	1	4	2	0	0	0	4	5	7	9	2	1	3	2	2.8	9.0
10-Sep	3	4	2	0	0	N	0	0	N	0	0	0	N	N	0	0	0	0	0	2	0	0	0	0	0.6	4.0
11-Sep	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	N	1	1	1	1	0	0.3	1.0
12-Sep	0	1	1	1	1	0	0	0	0	0	0	1	0	0	2	0	0	1	1	1	1	1	1	1	0.6	2.0
13-Sep	1	1	1	1	1	2	2	2	3	4	2	3	1	0	0	0	0	0	4	5	0	0	0	1	1.4	5.0
14-Sep	2	0	0	0	0	0	0	2	3	3	6	0	N	N	0	0	0	0	0	1	1	3	1	2	1.1	6.0
15-Sep	2	2	2	2	3	2	3	2	0	2	3	1	0	0	0	0	0	0	4	4	2	2	1	1	1.6	4.0
16-Sep	0	1	0	1	0	0	4	0	0	1	3	0	0	0	0	0	0	1	7	2	0	0	0	1	0.9	7.0
17-Sep	2	1	1	0	0	1	0	1	2	2	2	2	0	0	1	1	1	1	2	0	0	0	0	0	0.8	2.0
18-Sep	0	2	1	3	4	4	7	8	9	7	4	6	14	1	0	0	0	0	0	5	3	3	1	1	3.5	14.0
19-Sep	2	1	2	3	5	5	6	5	4	4	4	2	4	1	0	2	4	4	3	7	6	4	2	4	3.5	7.0
20-Sep	4	3	3	3	3	4	2	6	8	8	7	5	4	M	M	22	14	15	18	9	9	8	7	6	7.6	22.0
21-Sep	4	7	6	6	6	6	7	8	8	12	8	8	9	9	8	6	5	9	12	6	6	7	11	10	7.7	12.0
22-Sep	8	8	8	10	11	10	11	12	13	12	14	14	10	11	10	11	15	16	14	11	12	13	12	12	11.6	16.0
23-Sep	12	10	10	10	10	11	10	19	16	12	12	14	12	6	2	7	10	11	13	13	11	11	12	11	11.0	19.0
24-Sep	5	8	11	11	10	12	12	13	12	10	10	12	11	8	8	12	21	10	5	8	8	6	5	7	9.8	21.0
25-Sep	5	7	7	7	5	8	14	28	36	32	31	31	18	9	9	9	3	0	4	1	2	6	8	14	12.3	36.0
26-Sep	13	12	14	16	19	17	17	16	19	19	11	13	9	5	1	0	0	2	0	2	0	6	7	6	9.3	19.0
27-Sep	4	3	3	4	5	4	4	7	6	5	1	1	0	0	0	0	0	0	0	2	5	6	4	4	2.8	7.0
28-Sep	4	2	3	1	1	0	1	1	1	2	1	3	1	1	2	0	8	7	6	6	5	3	2	0	2.5	8.0
29-Sep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	0	1	1	0	1	1	0.2	1.0
30-Sep	1	1	0	0	0	1	1	2	2	1	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0.5	2.0
	3.1	3.1	3.1	3.1	3.3	3.6	4.1	5.8	5.7	5.5	5.0	4.7	4.0	2.4	2.0	2.8	3.6	3.5	4.7	4.0	3.0	3.3	3.3	3.5	Diurnal Average	
	13.0	12.0	14.0	16.0	19.0	17.0	17.0	28.0	36.0	32.0	31.0	31.0	18.0	11.0	10.0	22.0	21.0	16.0	18.0	13.0	12.0	13.0	12.0	14.0	Diurnal Maximum	

M - Maintenance N - Not Valid

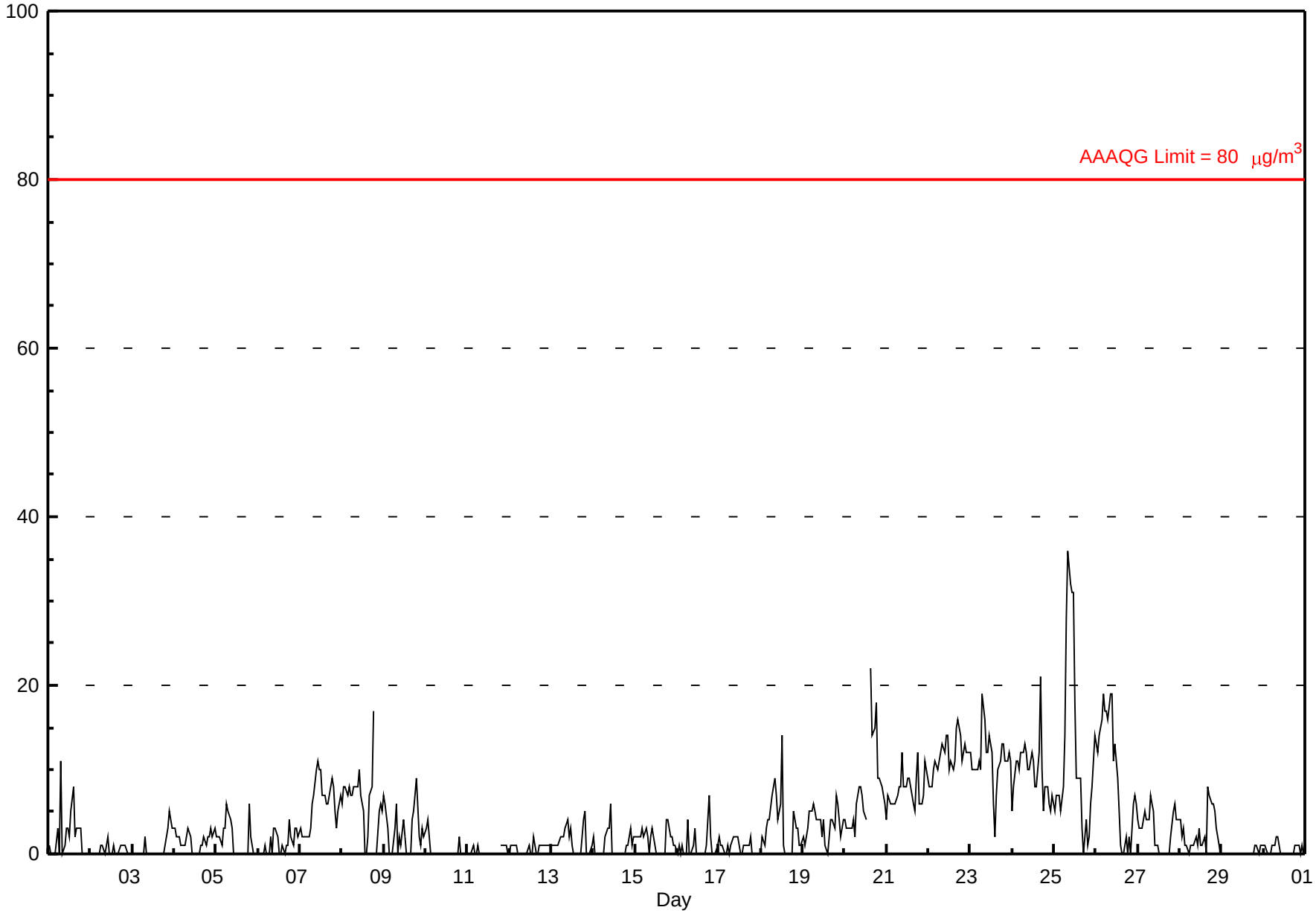
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 $\mu g/m^3$ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 $\mu g/m^3$

Peace Airshed Zone Association

Hourly Averages

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

Sunset House - September 2012



Peace Airshed Zone Association

Hourly Maximums

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

Sunset House - September 2012

Maximum Value: 40.6 $\mu g/m^3$ on Sep 25 09:00

Maximum Daily Average: 17.7 $\mu g/m^3$ on Sep 25

Minimum Value: 0 $\mu g/m^3$ on Sep 2 17:00

Minimum Daily Average: 1.7 $\mu g/m^3$ on Sep 10

Maximum Diurnal Average: 10.2 $\mu g/m^3$ at hour 8

Minimum Diurnal Average: 5.3 $\mu g/m^3$ at hour 2

Monthly Average: 7.06 $\mu g/m^3$

Percentiles: $P_1 = 0.0$ $P_{10} = 1.2$ $Q_1 = 2.6$ Median = 5.0 $Q_3 = 10.0$ $P_{90} = 15.1$ $P_{99} = 34.7$

Hours in Service:	720
Hours of Data:	717
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	4	2	3	4	5	8	1	16	12	3	5	6	8	8	10	4	5	6	7	3	2	1	1	1	5.2	16.0
2-Sep	3	2	2	2	3	1	2	3	2	4	4	3	3	8	4	1	0	3	3	4	3	6	0	2	2.7	8.1
3-Sep	2	2	4	2	0	2	2	19	1	0	4	0	0	8	3	1	1	0	1	4	5	9	6	6	3.4	19.1
4-Sep	5	4	4	3	3	3	3	5	5	4	2	3	2	1	5	4	5	4	4	4	5	4	5	9	4.0	9.0
5-Sep	4	3	4	6	7	7	9	13	7	7	2	0	2	0	2	1	1	2	3	12	4	8	3	0	4.4	12.8
6-Sep	2	2	4	2	3	1	2	21	3	5	7	7	2	1	16	3	13	5	6	4	3	5	7	4	5.3	20.6
7-Sep	7	4	4	4	5	5	8	9	11	13	13	11	13	10	9	9	10	11	12	12	11	6	7	9	8.9	13.4
8-Sep	8	10	10	9	11	8	9	9	10	12	13	9	9	6	6	6	27	18	30	7	4	11	26	32	12.5	32.2
9-Sep	12	9	5	2	6	3	7	12	3	7	11	8	7	13	4	7	15	22	19	13	8	3	8	4	8.6	21.5
10-Sep	5	6	4	5	2	0	0	0	0	3	0	4	0	0	0	0	0	0	0	8	0	1	1	1	1.7	8.3
11-Sep	0	2	2	4	3	1	7	1	3	2	3	1	0	0	3	1	2	3	N	5	3	3	3	4	2.5	7.5
12-Sep	4	2	3	2	3	2	2	1	1	2	2	3	2	3	5	1	2	4	3	3	3	4	3	2	2.5	5.2
13-Sep	3	2	2	3	2	3	3	6	5	6	6	5	3	4	2	1	4	1	19	16	2	1	0	4	4.3	18.9
14-Sep	4	2	1	0	0	0	1	6	6	6	8	8	1	0	3	3	1	2	2	3	3	10	6	6	3.4	9.9
15-Sep	5	5	7	6	4	4	5	8	2	5	6	3	2	2	3	3	2	3	8	9	3	4	3	3	4.4	9.1
16-Sep	2	3	3	4	3	2	6	3	2	5	7	1	1	0	1	3	1	4	20	8	8	3	4	4	4.0	19.7
17-Sep	3	4	2	2	2	3	3	4	3	5	6	6	4	4	4	3	3	3	4	2	1	3	3	4	3.4	6.0
18-Sep	3	3	3	5	9	7	9	13	12	13	7	17	23	5	3	1	0	1	2	12	8	8	5	4	7.2	23.2
19-Sep	5	3	3	6	8	7	7	8	7	7	7	6	9	6	5	5	9	6	6	18	11	7	6	7	7.2	18.4
20-Sep	5	5	6	5	6	6	4	9	10	10	10	9	10	M	M	30	18	19	26	12	12	11	10	9	11.1	30.0
21-Sep	8	10	9	8	8	11	8	10	9	17	11	11	12	11	11	10	9	20	22	10	8	13	13	12	11.2	22.2
22-Sep	10	12	11	12	13	12	13	14	14	15	16	17	13	13	13	14	17	21	18	14	16	16	14	15	14.3	21.2
23-Sep	16	14	15	12	11	14	14	29	35	15	16	18	15	12	5	10	15	18	16	17	15	14	17	14	15.7	35.0
24-Sep	8	11	14	14	13	14	15	15	14	14	15	15	17	17	13	19	40	31	19	13	11	11	13	10	15.6	39.6
25-Sep	9	9	9	11	9	11	21	36	41	36	35	40	26	18	25	13	7	10	8	5	6	10	13	17	17.7	40.6
26-Sep	16	14	17	20	21	21	18	20	22	23	16	17	12	12	9	4	3	13	7	4	3	10	12	12	13.5	23.1
27-Sep	7	5	6	7	7	6	8	10	10	9	6	5	2	2	4	3	1	0	1	8	8	8	7	6	5.7	10.4
28-Sep	6	4	5	3	4	2	4	4	3	5	5	15	10	6	8	7	19	10	12	9	7	7	4	2	6.6	19.5
29-Sep	0	2	0	0	1	0	0	0	2	6	6	2	1	2	3	4	1	1	1	2	3	3	4	3	1.9	5.9
30-Sep	4	3	2	2	2	4	4	4	5	7	3	2	3	1	1	1	2	2	3	3	3	2	4	3	2.8	6.9
	5.6	5.3	5.5	5.5	5.8	5.6	6.6	10.2	8.7	8.8	8.4	8.4	7.1	6.0	6.1	5.7	7.8	8.1	9.7	8.2	5.9	6.6	6.9	7.0	Diurnal Average	
	16.2	14.5	16.8	19.5	20.9	20.8	20.8	35.6	40.6	36.0	35.5	39.8	25.6	18.2	25.4	30.0	39.6	31.1	30.5	18.4	16.1	15.8	26.3	32.2	Diurnal Maximum	

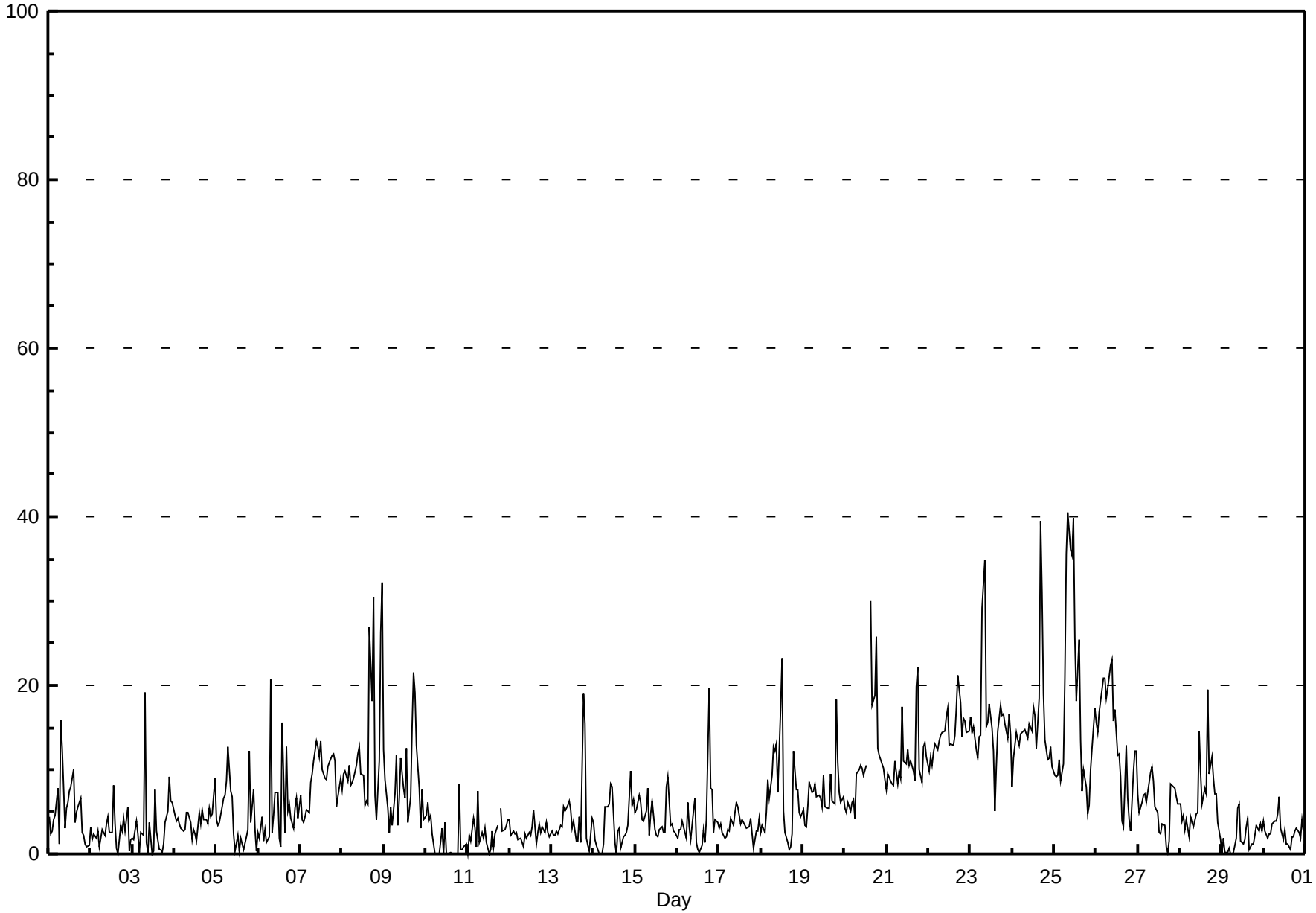
M - Maintenance N - Not Valid

Peace Airshed Zone Association

Hourly Maximums

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

Sunset House - September 2012

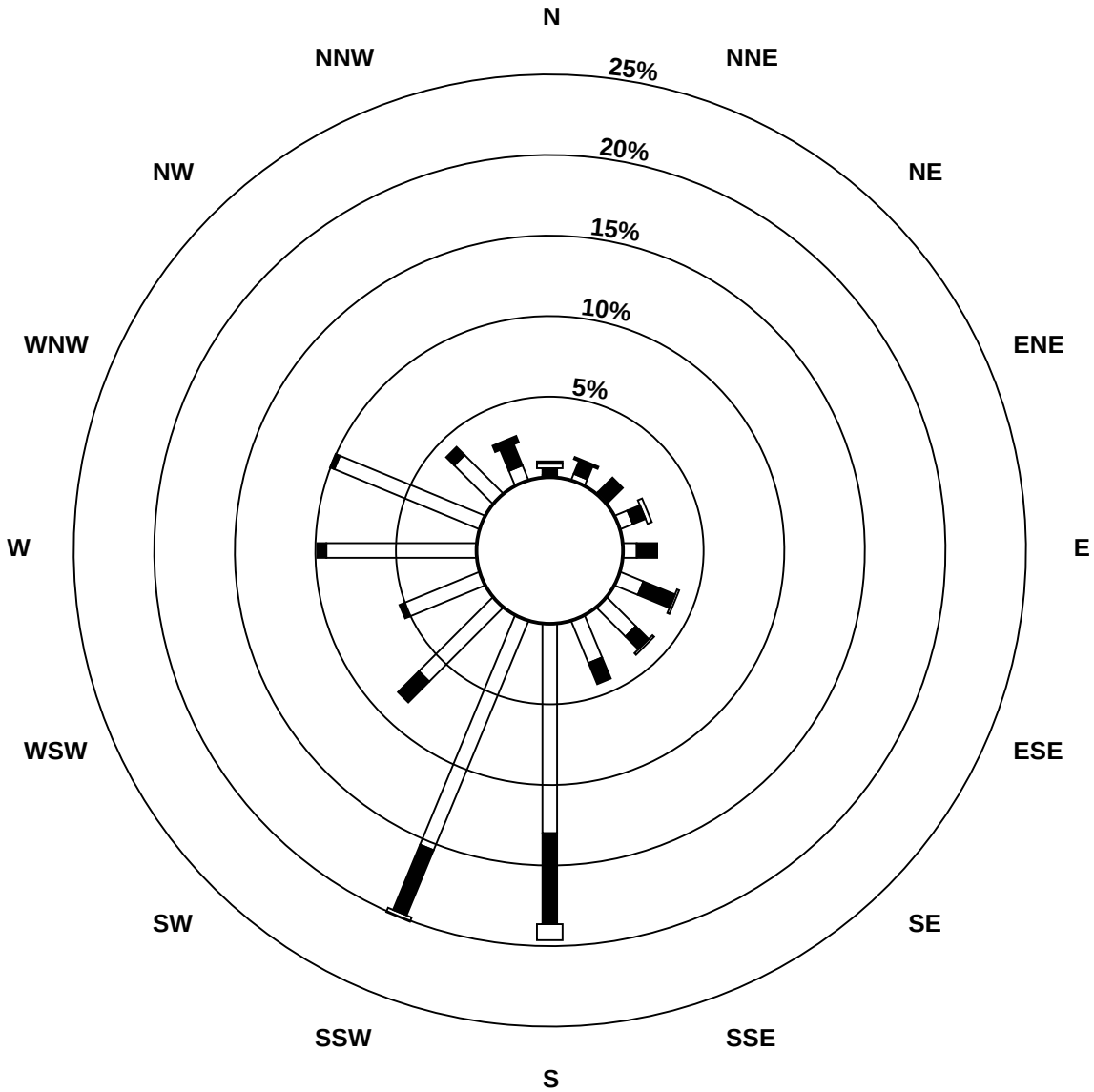


Peace Airshed Zone Association

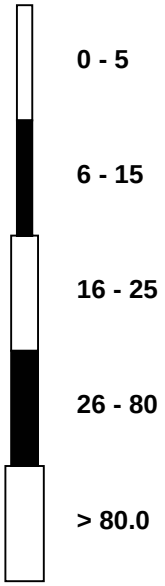
Pollutant Rose

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

Sunset House - September 2012



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



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Sunset House - September 2012

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

Maximum Value: 27.2 ^{o}C on Sep 23 16:00

Maximum Daily Average: 18.2 ^{o}C on Sep 28

Minimum Value: 0 ^{o}C on Sep 15 06:00

Minimum Daily Average: 8.2 ^{o}C on Sep 15

Maximum Diurnal Average: 19.2 ^{o}C at hour 16

Minimum Diurnal Average: 8.4 ^{o}C at hour 7

Monthly Average: 12.85 ^{o}C

Percentiles: P_1 = 1.7 P_{10} = 6.4 Q_1 = 9.2 Median = 12.3 Q_3 = 16.4 P_{90} = 20.7 P_{99} = 25.4

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

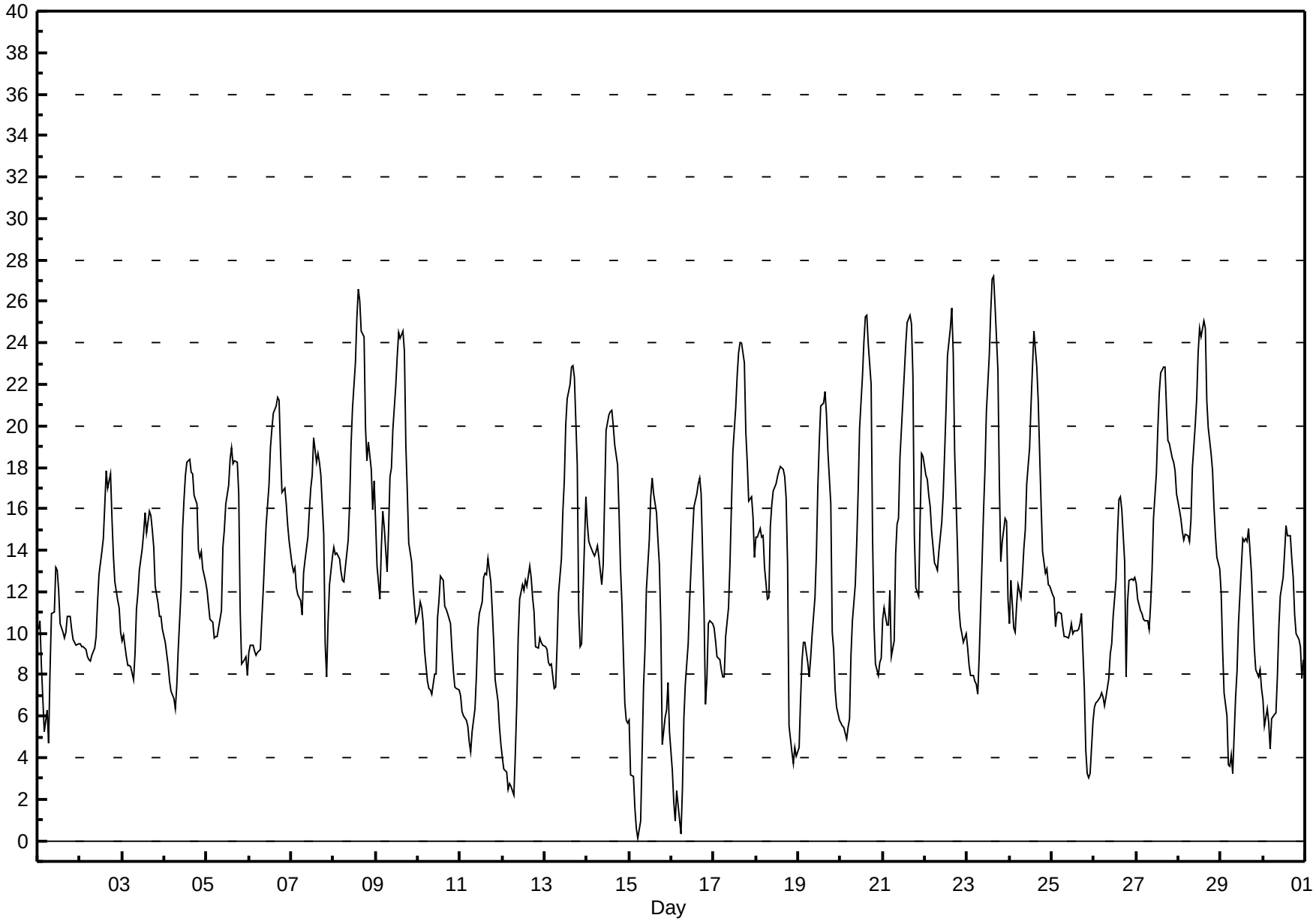
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	10	11	8	7	5	6	5	8	11	11	13	13	12	10	10	10	10	11	11	10	10	10	9	9	9.6	13.2
2-Sep	9	9	9	9	9	9	9	9	9	10	12	13	14	15	16	18	17	18	16	14	12	12	11	10	12.0	17.8
3-Sep	10	10	9	8	8	8	8	9	11	12	13	14	15	16	15	16	16	15	14	12	11	11	11	10	11.8	15.9
4-Sep	10	9	8	8	7	7	6	7	9	12	15	16	18	18	18	18	18	17	16	14	14	14	13	13	12.7	18.4
5-Sep	12	11	11	11	10	10	10	10	11	14	15	16	17	18	19	18	18	18	17	11	9	9	9	8	13.0	19.0
6-Sep	9	9	9	9	9	9	9	11	12	14	15	17	19	20	21	21	21	21	19	17	17	16	15	14	14.8	21.4
7-Sep	13	13	13	12	12	12	11	13	14	15	16	17	18	19	18	19	18	18	15	9	8	11	12	14	14.1	19.5
8-Sep	14	14	14	14	13	13	12	13	14	16	19	21	23	25	27	26	25	24	20	18	19	18	16	17	18.2	26.6
9-Sep	15	13	12	14	16	15	13	15	18	18	20	22	23	25	24	25	24	19	17	14	13	12	11	11	17.0	24.6
10-Sep	11	11	11	11	9	8	7	7	7	8	8	11	12	13	13	11	11	11	10	9	8	7	7	7	9.6	12.8
11-Sep	7	6	6	6	6	5	4	5	6	8	10	11	11	13	13	13	14	12	11	10	8	7	5	5	8.4	13.6
12-Sep	4	3	3	2	3	3	2	4	7	10	12	12	12	13	12	13	13	12	11	9	9	10	10	9	8.3	13.2
13-Sep	9	9	9	8	9	7	7	9	12	14	16	17	20	21	22	23	23	22	18	11	9	10	12	17	14.0	22.9
14-Sep	15	14	14	14	14	14	14	14	12	13	16	20	21	21	21	20	19	18	16	13	11	7	6	6	14.7	20.7
15-Sep	6	3	3	2	1	0	1	4	7	9	12	15	17	18	17	16	15	13	10	5	6	6	8	5	8.2	17.5
16-Sep	3	2	1	2	2	0	2	6	8	9	12	13	15	16	17	17	18	17	11	7	8	10	11	10	9.0	17.5
17-Sep	10	10	9	9	8	8	8	10	11	13	16	19	21	22	24	24	24	23	20	18	16	17	16	14	15.4	24.0
18-Sep	15	15	15	15	15	13	12	12	15	16	17	17	18	18	18	18	18	16	13	6	4	4	5	4	13.2	18.0
19-Sep	4	7	9	10	10	9	8	9	10	12	14	17	19	21	21	22	21	19	16	10	9	7	6	6	12.3	21.6
20-Sep	6	6	5	5	5	6	9	11	12	14	17	20	22	24	25	25	24	22	15	10	9	8	9	9	13.2	25.3
21-Sep	11	11	10	10	12	9	10	14	15	16	18	21	22	24	25	25	25	22	15	12	12	15	19	19	16.4	25.4
22-Sep	18	17	17	16	15	13	13	13	14	15	17	19	21	23	25	26	23	19	14	11	10	10	10	10	16.2	25.7
23-Sep	9	8	8	8	8	8	7	9	13	16	18	21	23	25	27	27	26	23	17	13	14	16	15	12	15.5	27.2
24-Sep	10	13	10	10	11	12	12	13	14	15	17	19	21	23	25	23	21	19	16	14	13	13	12	12	15.4	24.6
25-Sep	12	12	10	11	11	11	10	10	10	10	10	10	10	10	10	10	10	11	7	4	3	3	3	6	9.0	11.9
26-Sep	6	7	7	7	7	7	7	7	8	9	10	11	13	15	16	17	16	13	8	12	13	13	13	13	10.5	16.6
27-Sep	12	12	11	11	11	11	11	10	11	13	16	18	20	22	23	23	23	21	19	19	18	18	18	17	16.1	22.9
28-Sep	16	16	15	15	15	15	14	15	18	20	21	24	25	24	25	25	21	20	19	18	16	15	14	13	18.2	25.1
29-Sep	12	9	7	6	4	4	4	3	7	8	10	12	15	14	15	14	15	13	11	9	8	8	8	7	9.3	15.0
30-Sep	7	6	6	6	4	6	6	6	8	10	12	13	14	15	15	15	14	13	11	10	10	9	8	9	9.6	15.2
	10.2	9.9	9.4	9.1	8.9	8.5	8.4	9.6	11.2	12.7	14.5	16.3	17.6	18.7	19.2	19.2	18.6	17.3	14.4	11.7	11.0	10.8	10.7	10.5	Diurnal Average	
	17.6	17.4	16.7	16.1	15.9	15.1	14.4	15.5	18.0	20.0	21.3	23.5	24.7	25.5	27.1	27.2	25.9	24.3	20.0	19.1	19.2	18.3	18.7	18.5	Diurnal Maximum	

Peace Airshed Zone Association

Hourly Averages

External Temperature (ET) - ^{o}C

Sunset House - September 2012



FOCUS AIR QUALITY MONITORING

Peace Airshed Zone Association

Hourly Averages

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

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	9	8	4	3	4	9	5	1	4	5	8	6	6	7	9	10	8	8	6	12	11	12	9	9	3.5	12.2
Dir	176	178	108	122	173	187	161	96	228	236	236	270	320	325	344	16	315	300	285	303	300	307	283	270	280.2	307.2
2 Spd	8	9	5	8	6	6	5	6	6	6	9	10	9	6	9	15	16	15	16	13	10	9	9	8	8.7	16.3
Dir	279	286	254	233	227	253	255	233	238	257	274	282	274	261	274	279	284	277	274	274	251	239	262	232	264.9	274.4
3 Spd	7	7	5	7	7	6	8	7	17	19	19	16	18	17	17	18	19	15	13	7	6	6	11	7	11.0	19.4
Dir	245	261	246	267	268	242	202	228	285	292	287	277	282	284	283	285	289	289	283	263	247	274	289	271	276.3	287.0
4 Spd	6	4	5	5	7	8	8	9	10	10	10	12	12	11	11	11	9	6	6	4	7	8	6	10	7.1	12.0
Dir	282	265	220	215	215	216	209	208	213	222	259	278	276	268	270	272	276	275	271	224	224	258	212	199	245.5	277.7
5 Spd	10	5	5	6	4	9	9	9	9	9	12	13	13	14	12	12	13	11	6	4	6	7	7	9	4.6	13.6
Dir	201	225	203	221	237	321	343	327	300	326	341	321	322	321	329	331	322	318	315	120	128	143	158	170	308.8	320.9
6 Spd	10	11	12	12	14	15	14	15	14	12	12	12	14	15	14	14	12	10	10	13	15	13	9	9	12.4	15.0
Dir	182	184	184	185	184	183	180	183	190	196	195	195	203	206	204	198	206	208	185	175	182	191	199	201	191.3	181.9
7 Spd	11	12	13	14	14	11	5	10	15	17	16	13	8	5	4	4	4	6	7	6	7	10	12	17	3.2	17.4
Dir	190	193	196	191	192	198	249	344	10	14	25	45	54	41	104	98	124	117	123	119	120	150	161	168	134.4	168.5
8 Spd	24	24	23	23	23	21	22	21	19	16	12	12	10	7	6	6	6	6	5	10	11	3	8	9	12.3	24.3
Dir	168	169	172	177	178	177	177	179	187	188	196	193	199	212	252	207	161	107	106	101	115	201	167	153	174.4	167.9
9 Spd	3	4	5	9	13	7	6	16	16	11	9	9	6	7	12	14	11	2	10	10	12	9	3	4	4.8	16.3
Dir	201	154	101	92	103	150	231	183	188	192	197	201	174	140	122	176	173	82	322	66	57	68	285	179	152.4	188.5
10 Spd	5	4	10	7	6	6	8	8	10	9	10	11	16	18	19	16	17	13	11	13	12	12	13	12	10.5	19.2
Dir	211	240	278	271	249	250	219	209	274	277	304	261	281	278	281	283	286	284	273	275	264	264	271	269	270.9	281.5
11 Spd	13	11	11	15	11	10	9	11	11	16	19	23	22	21	22	23	23	18	15	17	9	8	9	9	13.9	23.3
Dir	272	265	269	286	285	283	280	283	282	286	289	298	297	288	293	291	289	287	293	290	264	224	206	202	282.2	288.5
12 Spd	10	11	11	10	11	11	12	10	10	10	13	17	14	15	14	10	11	12	7	5	8	7	7	10	8.4	16.5
Dir	200	197	204	196	200	194	190	200	216	244	273	285	286	279	283	282	263	274	272	219	208	221	208	200	237.1	284.9
13 Spd	10	9	8	9	9	10	10	12	11	11	9	11	10	11	11	12	10	8	4	5	5	9	11	19	7.5	18.7
Dir	203	206	208	203	199	187	186	190	199	204	227	229	268	260	263	274	261	260	183	121	120	129	160	177	208.7	176.5
14 Spd	16	15	16	18	18	18	18	13	10	9	10	14	19	24	21	25	22	19	15	13	8	4	3	5	9.5	24.6
Dir	180	178	177	174	181	181	187	196	194	205	235	254	268	276	285	287	283	290	293	304	308	181	219	197	236.5	286.7
15 Spd	7	6	4	4	5	7	7	7	7	6	6	5	2	6	9	10	12	10	5	4	9	10	8	2	1.6	12.1
Dir	195	179	156	150	127	141	155	170	200	220	224	259	288	322	320	11	29	46	58	84	65	62	79	131	99.9	29.1
16 Spd	6	4	6	8	5	4	8	10	11	10	11	14	15	13	10	8	6	4	4	5	8	11	13	12	7.5	14.7
Dir	118	153	126	141	151	187	179	191	194	201	206	192	192	205	215	219	246	257	134	124	161	181	184	195	186.8	192.4
17 Spd	7	12	14	13	13	13	12	11	11	10	10	10	11	11	10	10	9	9	12	9	8	11	9	9	9.8	14.0
Dir	218	193	186	192	190	188	194	207	207	229	233	235	246	255	251	258	244	219	196	205	201	205	210	193	212.9	185.7
18 Spd	10	8	10	7	7	5	4	5	9	17	16	19	20	21	21	20	17	13	6	4	4	5	8	8	6.2	21.1
Dir	203	201	203	204	267	223	220	296	331	345	315	330	327	316	309	311	315	310	319	116	128	126	144	151	301.3	309.0
19 Spd	8	11	14	17	16	16	16	13	13	11	8	8	7	9	13	11	10	9	6	5	3	4	5	8	5.0	16.9
Dir	167	180	181	183	184	189	187	192	200	215	253	267	271	288	308	302	328	340	335	37	77	109	160	136	211.8	182.5
20 Spd	8	8	6	8	8	8	12	15	14	11	10	9	8	9	8	8	8	6	5	5	3	3	5	7	3.8	15.0
Dir	134	142	171	174	151	170	191	188	198	209	224	239	260	294	310	352	2	33	126	121	119	127	124	141	185.3	187.9
21 Spd	9	11	9	10	11	8	9	13	14	11	15	15	12	9	7	7	8	7	7	8	9	13	16	16	10.0	16.3
Dir	177	180	176	180	178	193	197	192	198	220	189	206	205	203	203	206	199	181	127	149	157	169	170	171	185.2	170.2
22 Spd	15	16	14	15	13	10	12	12	11	8	8	7	6	4	2	3	6	5	6	6	3	3	4	3	5.5	15.6
Dir	170	179	183	190	193	197	198	197	200	214	214	202	200	250	279	305	26	61	84	87	108	95	55	117	183.3	178.5

Peace Airshed Zone Association

Hourly Averages

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

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	4	4	6	6	5	4	5	6	6	6	5	4	3	3	5	5	6	8	9	8	8	3	2.3	9.3
Dir	135	149	132	121	126	147	183	178	201	230	215	234	260	277	299	343	27	58	90	87	76	100	118	108	134.6	76.1
24 Spd	7	6	8	7	9	10	11	11	11	11	7	8	7	6	5	7	2	5	8	8	9	6	7	2	2.9	11.2
Dir	153	175	171	179	180	193	186	192	203	204	216	217	229	257	324	359	65	35	29	46	62	75	75	79	177.5	203.0
25 Spd	2	3	5	5	6	14	13	11	5	5	7	9	12	13	12	9	5	1	2	5	6	7	6	10	2.1	14.0
Dir	185	216	194	208	257	303	340	22	331	347	352	347	2	20	47	51	82	152	172	130	127	141	185	192	8.2	303.5
26 Spd	12	12	14	17	17	13	13	15	17	12	14	13	12	9	7	8	9	7	9	13	16	17	18	19	12.5	19.3
Dir	187	184	183	180	178	187	187	181	190	206	212	207	195	193	223	212	199	184	172	174	176	176	171	173	186.7	173.1
27 Spd	19	18	19	20	18	19	18	21	20	18	16	16	16	16	13	16	13	11	13	16	18	22	21	19	17.1	21.8
Dir	174	174	178	179	177	173	180	180	186	186	192	196	196	196	206	195	198	184	171	170	167	171	177	177	181.7	170.8
28 Spd	17	17	15	15	15	14	14	13	14	13	13	9	7	11	8	6	2	8	6	10	8	5	5	9	7.6	17.3
Dir	174	177	181	178	180	177	178	177	182	191	184	202	203	208	229	231	277	338	310	308	300	261	247	283	200.4	173.8
29 Spd	9	4	5	5	7	6	7	9	9	9	10	8	13	15	10	11	18	19	15	7	5	7	6	5	7.3	19.0
Dir	281	246	216	209	192	187	196	183	197	214	222	252	287	286	272	278	285	291	287	268	222	243	235	221	252.7	291.2
30 Spd	6	7	9	10	10	11	10	11	10	12	21	25	20	22	22	21	20	10	6	4	5	4	4	4	9.3	24.9
Dir	207	200	207	196	186	196	207	206	215	246	282	285	278	289	287	281	287	288	287	259	244	213	191	193	256.0	285.4
Spd	7.7	8.0	8.1	8.6	8.5	8.2	8.2	8.2	8.2	7.1	7.4	8.0	7.8	8.2	7.7	7.2	6.6	4.9	2.9	1.5	3.0	4.5	5.5	7.1	Diurnal Average	
Dir	190.2	190.4	189.0	189.3	188.5	194.7	195.5	196.4	211.4	230.5	245.7	253.6	263.5	270.1	278.8	279.8	280.4	286.6	267.7	197.7	173.0	180.6	187.0	188.1		
Spd	24.3	23.6	22.5	23.4	22.5	21.0	21.8	21.3	20.2	19.3	21.0	24.9	21.7	24.3	22.4	24.6	23.3	19.0	16.3	17.0	18.5	21.8	20.8	19.3	Diurnal Maximum	
Dir	167.9	169.2	172.4	177.1	178.0	176.7	176.9	179.6	186.5	292.4	282.4	285.4	296.8	276.3	287.5	286.7	288.5	291.2	274.4	289.9	167.5	170.8	176.6	173.1		

Maximum Speed Value: 25 km/h on Sep 30 12:00
Maximum Daily Speed Average: 17.1 km/h on Sep 27
Maximum Diurnal Speed Average: 8.6 km/h at hour 4

Minimum Speed Value: 1 km/h on Sep 1 08:00
Minimum Daily Speed Average: 1.6 km/h on Sep 23
Minimum Diurnal Speed Average: 1.5 km/h at hour 20

Monthly Average Velocity: 5.39 km/h 220.53 deg

Speed Percentiles: $P_1 = 2.2$ $P_{10} = 4.6$ $Q_1 = 6.5$ Median = 9.5 $Q_3 = 13.0$ $P_{90} = 16.9$ $P_{99} = 23.2$

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

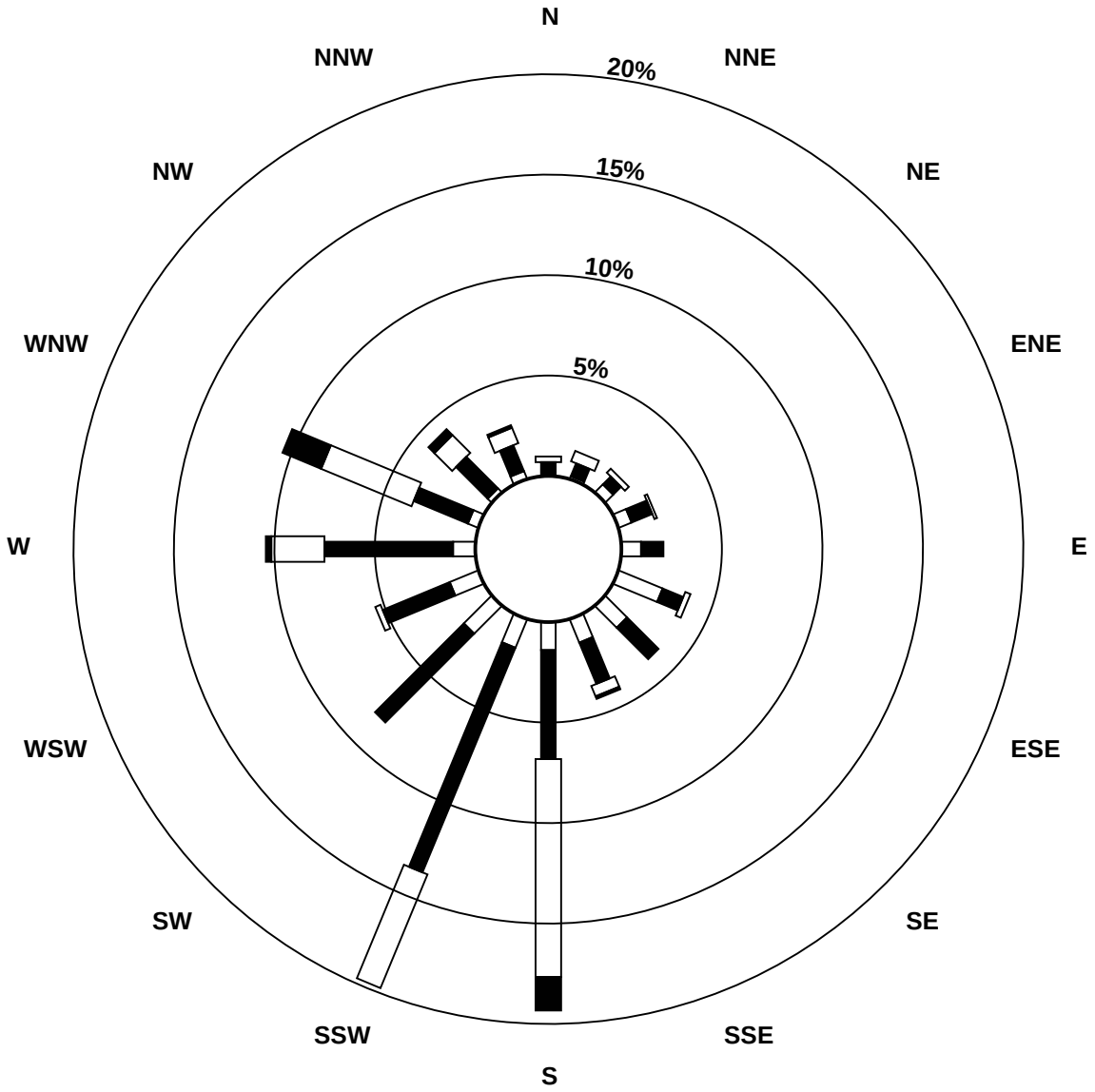
Frequency Distribution

Direction	Speed Range (km/h) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	2	12	8	0	0	0	22
NorthEast	4	16	5	0	0	0	25
East	13	15	1	0	0	0	29
SouthEast	22	39	2	0	0	0	63
South	15	84	125	14	0	0	238
SouthWest	17	96	21	0	0	0	134
West	12	70	53	19	0	0	154
NorthWest	2	26	20	7	0	0	55
Total	87	358	235	40	0	0	720

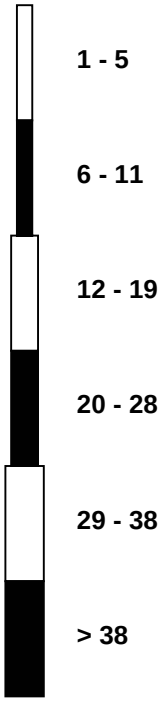
Wind Rose

Wind Speed (WS) (km/h)

Sunset House - September 2012



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Sunset House - September 2012

Maximum Speed: 25 km/h on Sep 30 12:00

Maximum Daily Speed Average: 17.6 km/h on Sep 27

Minimum Speed: 2 km/h on Sep 25 18:00

Minimum Daily Speed Average: 5.6 km/h on Sep 23

Maximum Diurnal Speed Average: 12.6 km/h at hour 14

Minimum Diurnal Speed Average: 8.6 km/h at hour 20

Monthly Average Speed: 10.64 km/h

Percentiles: P_1 = 2.7 P_{10} = 5.2 Q_1 = 7.1 Median = 9.9 Q_3 = 13.3 P_{90} = 17.3 P_{99} = 23.4

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

Day	Hourly Period Ending At (MST) 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	9	8	6	4	6	9	6	2	4	5	8	7	8	7	9	10	8	9	7	12	11	12	9	9	7.8	12.4
2-Sep	8	10	6	8	6	6	5	6	6	7	10	11	9	7	9	16	16	15	17	14	11	10	10	8	9.6	16.7
3-Sep	7	8	5	7	8	8	8	8	17	20	20	17	19	17	17	19	19	15	13	7	7	7	11	7	12.2	19.7
4-Sep	6	5	5	5	7	8	8	9	10	10	11	13	12	12	12	12	10	7	7	5	7	8	7	10	8.6	12.5
5-Sep	11	6	5	6	5	10	10	9	9	10	13	13	13	15	13	13	13	12	6	4	6	8	7	9	9.4	14.6
6-Sep	11	12	12	13	14	15	14	15	14	13	13	13	14	15	15	15	12	10	10	13	15	13	9	9	12.8	15.1
7-Sep	11	12	13	14	14	11	7	11	15	17	17	14	9	7	7	6	6	6	7	6	7	10	12	17	10.8	17.5
8-Sep	24	24	23	24	23	21	22	21	19	16	12	13	11	8	7	7	7	6	6	10	12	6	8	9	14.0	24.4
9-Sep	5	4	6	9	13	10	7	16	16	12	9	9	7	8	12	14	12	10	15	11	13	10	6	4	9.9	16.4
10-Sep	5	5	11	8	7	7	8	8	12	11	10	12	17	18	20	16	18	14	12	14	13	13	13	12	11.7	19.6
11-Sep	13	11	12	16	12	10	9	11	11	16	19	23	22	21	23	23	24	18	16	17	10	9	9	9	15.2	23.7
12-Sep	10	11	11	10	11	11	12	11	10	11	14	17	15	16	14	10	11	12	7	5	8	7	7	10	10.9	16.9
13-Sep	10	9	8	9	9	10	10	12	12	11	10	11	11	12	11	13	11	9	6	5	6	9	12	19	10.2	18.8
14-Sep	16	15	17	18	18	18	18	13	10	9	10	15	20	25	21	25	22	19	16	13	8	5	5	6	15.1	24.9
15-Sep	8	6	5	5	6	7	7	7	7	6	6	7	5	8	10	12	12	10	6	4	10	11	8	3	7.3	12.5
16-Sep	7	5	6	8	7	4	8	10	11	10	11	14	15	14	11	9	7	5	4	5	9	11	13	12	9.0	15.2
17-Sep	8	12	14	13	13	13	12	12	11	11	11	11	12	12	10	11	10	9	12	9	8	11	10	9	11.0	14.0
18-Sep	10	9	10	8	9	6	5	6	10	18	17	19	21	22	22	21	17	13	6	4	4	5	8	8	11.5	21.6
19-Sep	9	11	14	17	16	16	16	14	14	11	9	9	8	10	13	12	10	9	6	6	5	6	5	8	10.5	16.9
20-Sep	8	8	7	8	8	8	12	15	14	11	10	9	9	10	9	9	8	6	5	6	4	4	5	8	8.3	15.1
21-Sep	9	11	9	10	11	8	9	13	14	11	15	15	12	10	8	8	8	7	7	8	9	13	16	16	10.9	16.3
22-Sep	15	16	14	15	13	10	12	12	11	9	8	7	7	5	4	4	6	6	6	6	3	4	5	4	8.4	15.7
23-Sep	5	4	4	4	6	6	5	4	6	6	7	7	5	5	4	4	5	5	6	8	9	8	8	3	5.6	9.4
24-Sep	7	6	8	8	9	10	11	11	11	11	7	9	8	7	6	7	3	5	8	8	9	6	7	4	7.7	11.3
25-Sep	3	3	5	5	6	14	13	12	6	5	7	9	12	14	12	9	5	2	3	5	6	7	7	10	7.5	14.2
26-Sep	12	12	14	17	17	13	13	15	17	12	14	14	13	10	8	9	9	7	9	13	16	17	18	19	13.1	19.4
27-Sep	19	18	19	20	18	19	18	21	21	18	17	17	16	17	14	16	14	12	13	16	19	22	21	19	17.6	21.9
28-Sep	17	17	15	15	15	14	14	13	14	13	13	10	8	12	9	6	2	8	7	11	9	5	5	9	10.9	17.4
29-Sep	9	4	5	6	7	6	8	9	10	9	10	9	14	15	11	11	19	19	16	7	5	8	6	6	9.5	19.1
30-Sep	6	8	9	11	10	12	10	12	10	13	21	25	20	23	23	22	20	11	6	4	5	4	4	4	12.1	25.2
	9.9	9.6	9.9	10.6	10.8	10.7	10.6	11.2	11.8	11.4	11.9	12.6	12.5	12.6	12.2	12.3	11.5	9.8	8.8	8.6	8.7	8.9	9.0	9.4	Diurnal Average	
	24.4	23.7	22.6	23.5	22.6	21.1	21.9	21.4	20.5	19.6	21.4	25.2	22.0	24.9	22.8	24.9	23.7	19.1	16.7	17.3	18.5	21.9	21.0	19.4	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

Sunset House - September 2012

Maximum Value: 83.9 deg on Sep 9 18:00

Minimum Value: 2.5 deg on Sep 26 20:00

Percentiles: P_1 = 3.8 P_{10} = 5.7 Q_1 = 9.6 Median = 14.3 Q_3 = 21.5 P_{90} = 30.8 P_{99} = 61.4

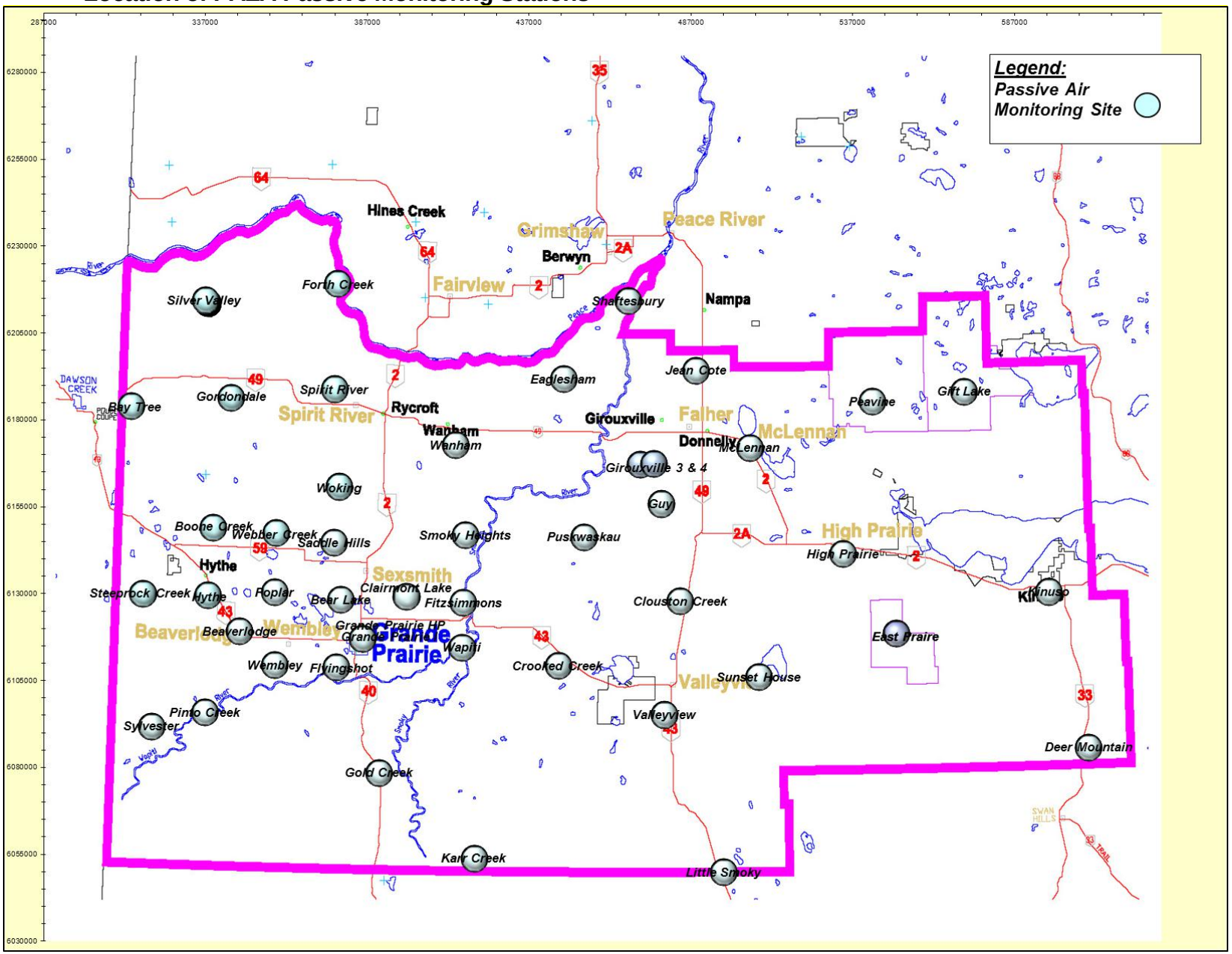
Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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	11	9	51	57	52	10	31	70	32	21	23	25	39	19	15	15	25	14	19	10	10	10	21	23	70.1
2-Sep	27	14	31	17	17	18	30	17	15	20	24	19	20	26	22	17	13	15	13	16	21	25	25	21	30.6
3-Sep	22	28	27	25	21	39	12	25	12	9	10	16	15	18	12	16	11	10	12	22	23	35	10	21	38.9
4-Sep	17	20	14	14	13	10	12	11	13	17	23	18	21	24	26	22	22	26	21	40	21	21	20	7	39.7
5-Sep	9	22	17	28	28	15	13	19	13	21	20	21	17	21	22	22	18	16	18	29	8	12	10	7	28.9
6-Sep	10	7	5	5	5	4	4	7	8	16	16	21	14	14	15	15	18	16	9	3	5	10	10	11	21.0
7-Sep	10	8	10	6	6	35	43	30	10	12	18	16	27	56	62	55	47	20	6	22	7	11	4	5	61.8
8-Sep	5	6	5	6	5	4	5	5	8	7	13	12	15	31	36	38	34	14	20	8	11	61	24	10	60.6
9-Sep	54	40	32	6	6	55	33	13	6	13	16	18	25	24	12	17	20	84	60	22	13	18	80	30	83.9
10-Sep	22	25	20	28	24	22	13	10	32	33	24	21	18	14	13	13	11	12	16	20	16	17	17	18	33.0
11-Sep	16	18	18	12	14	16	21	12	13	12	12	10	8	12	11	10	12	12	17	12	20	19	10	8	21.0
12-Sep	6	7	10	9	11	10	7	11	14	23	17	12	12	14	15	21	20	16	22	29	14	14	11	7	29.0
13-Sep	7	9	13	10	12	8	6	7	15	13	17	14	29	25	25	22	24	22	38	19	5	5	13	5	38.3
14-Sep	6	5	6	5	6	6	8	14	7	11	17	24	18	15	12	9	12	8	10	7	25	34	55	38	55.3
15-Sep	18	15	31	27	25	22	5	15	19	17	21	36	73	54	23	42	12	14	21	21	12	20	31	59	73.1
16-Sep	24	36	8	6	48	17	9	5	7	13	15	13	16	18	28	30	31	31	29	7	21	4	5	20	48.0
17-Sep	26	14	5	4	5	6	11	23	12	18	14	17	19	18	22	19	18	15	8	12	18	9	14	11	26.2
18-Sep	10	10	11	11	36	22	19	43	17	15	15	14	16	14	13	13	14	12	16	31	24	38	9	10	42.6
19-Sep	12	5	4	5	9	7	7	6	12	16	22	27	28	31	16	18	17	9	10	41	73	48	27	9	73.3
20-Sep	7	11	14	11	5	13	7	6	6	12	15	19	29	26	30	23	19	12	17	23	23	20	10	17	30.2
21-Sep	11	5	5	5	7	24	15	9	8	14	10	13	17	25	36	24	15	19	5	19	13	6	4	5	35.6
22-Sep	5	6	6	5	4	6	6	6	7	12	17	18	26	50	80	49	22	20	3	10	22	39	12	48	79.7
23-Sep	12	16	20	10	9	15	14	18	15	12	18	14	26	57	58	57	28	14	7	7	9	14	4	41	58.2
24-Sep	12	13	11	11	8	7	5	7	8	10	16	17	29	29	42	19	39	24	19	9	5	8	6	65	65.0
25-Sep	61	41	11	18	23	9	20	16	27	14	11	12	13	13	11	18	23	56	44	13	6	3	18	6	61.1
26-Sep	5	4	4	5	5	8	6	5	9	13	13	14	20	24	29	28	18	14	5	2	4	5	5	7	29.1
27-Sep	6	5	6	5	6	4	6	6	10	8	9	10	11	13	16	14	11	10	4	5	4	5	6	7	16.1
28-Sep	5	5	6	4	4	5	19	7	8	8	11	30	36	21	28	29	46	12	26	27	13	27	21	11	45.7
29-Sep	12	30	13	17	14	18	19	10	14	13	16	24	15	11	16	16	10	8	9	16	16	26	21	25	29.5
30-Sep	14	12	11	6	6	18	14	8	12	16	11	9	10	13	10	10	10	10	18	31	18	21	12	12	30.7
	61.1	41.0	51.5	57.1	51.8	55.3	42.9	70.1	32.3	33.0	24.0	35.6	73.1	56.8	79.7	57.5	46.8	83.9	59.7	40.9	73.3	60.6	79.6	65.0	

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for September 2012

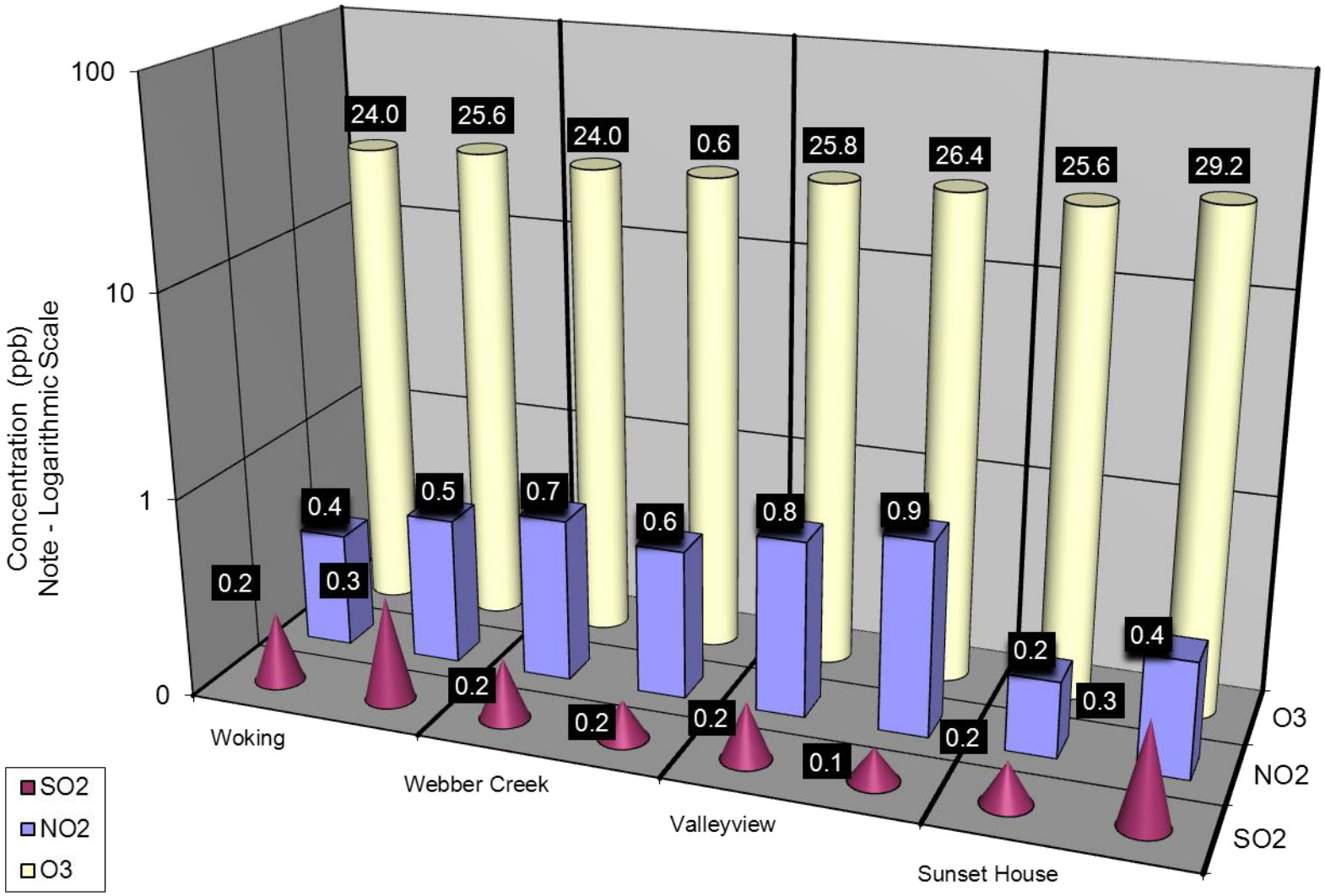
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
10a	Woking	**0.2**	**24.0**	**0.4**		
10b	Woking	**0.3**	**25.6**	**0.5**		
11a	Webber Creek	**0.2**	**24.0**	**0.7**		
11b	Webber Creek	**0.2**	**24.5**	**0.6**		
41a	Valleyview	**0.2**	**25.8**	**0.8**		
41b	Valleyview	**0.1**	**26.4**	**0.9**		
42a	Sunset House	**0.2**	**25.6**	**0.2**		
42b	Sunset House	**0.3**	**29.2**	**0.4**		
63a	Girouxville 3				**0.1**	
63b	Girouxville 3				**0.3**	
1	Silver Valley	**0.3**	**26.6**	**0.8**		08-27-081-11 W6M
2	Bay Tree	**0.3**	**28.7**	**0.2**		13-16-078-13 W6M
3	Fourth Creek	**0.5**	**25.3**	**0.4**		04-13-082-07 W6M
4	Gordondale	**0.3**	**27.5**	**0.5**		04-34-078-10 W6M
5	Boone Creek	**0.3**	**23.1**	**0.4**		16-36-074-11 W6M
7	Steeprock Creek	**0.2**	**27.0**	**BDL**		09-35-072-13 W6M
9	Spirit River	**0.5**	**27.0**	**0.9**		08-12-079-07 W6M
10	Woking	**0.3**	**24.8**	**0.5**		01-13-076-07 W6M
11	Webber Creek	**0.2**	**24.2**	**0.6**		09-36-074-09 W6M
12	Hythe	**0.4**	**22.6**	**0.5**		14-36-072-11 W6M
14	Sylvester	**0.2**	**20.8**	**0.3**		08-06-069-12 W6M
16	Beaverlodge	**0.6**	**31.7**	**0.6**		15-36-071-10 W6M
17	Poplar	**0.2**	**23.9**	**0.5**		13-06-073-08 W6M
18	Saddle Hills	**0.3**	**23.0**	**0.4**		04-25-074-07 W6M
19	Wanham	**0.5**	**26.1**	**0.7**		16-22-077-03 W6M
20	Shaftesbury	**0.1**	**27.2**	**0.4**		04-03-082-23 W5M
21	Eaglesham	**BDL**	**22.2**	**0.4**		16-21-079-25 W5M
23	Bear Lake	**0.3**	**24.1**	**0.9**		15-31-072-06 W6M

PAZA Passive Results for September 2012 (Continued)

24	Wembley	**0.6**	**21.3**	**0.9**		12-31-070-08 W6M
25	Pinto Creek	**0.3**	**N/S**	**0.4**		04-24-069-11 W6M
26	Flyingshot	**0.2**	**21.9**	**0.5**		15-36-070-07 W6M
27	Grande Prairie I	**0.2**	**23.1**	**2.4**		08-15-071-06 W6M
28	Clairmont Lake	**0.2**	**25.9**	**1.1**		09-06-073-04 W6M
29	Smoky Heights	**0.5**	**26.1**	**1.0**		04-06-075-02 W6M
30	Fitzsimmons	**0.3**	**17.2**	**0.5**		15-36-072-03 W6M
32	Gold Creek	**0.3**	**20.1**	**0.8**		06-33-067-05 W6M
33	Wapiti	**0.2**	**22.9**	**0.6**		02-25-071-03 W6M
34	Puskwaskau	**0.1**	**15.7**	**0.3**		15-35-074-25 W5M
35	Jean Cote	**0.6**	**24.2**	**0.8**		12-35-079-21 W5M
36	Guy	**0.1**	**24.2**	**0.5**		03-04-076-22 W5M
37	Crooked Creek	**0.1**	**23.0**	**0.5**		16-01-071-26 W5M
38	Karr Creek	**0.1**	**17.5**	**0.3**		10-16-065-02 W6M
39	Clouston Creek	**0.1**	**22.6**	**0.4**		12-01-073-22 W5M
40	McLennan	**0.3**	**20.5**	**1.3**		03-29-077-19 W5M
41	Valleyview	**0.2**	**26.1**	**0.9**		09-30-069-22 W5M
42	Sunset House	**0.2**	**27.4**	**0.3**		05-32-070-19 W5M
43	High Prairie	**0.2**	**21.0**	**0.4**		16-13-074-17 W5M
44	Peavine	**0.1**	**18.6**	**0.1**		03-05-079-15 W5M
45	Gift Lake	**0.1**	**14.6**	**0.3**	**0.1**	10-07-079-12 W5M
46	Little Smoky	**0.1**	**15.7**	**1.3**		12-01-065-21 W5M
47	Kinuso	**0.1**	**15.9**	**0.3**		12-10-073-10 W5M
48	Deer Mountain	**0.1**	**21.6**	**0.3**		15-22-068-09 W5M
49	Grande Prairie HP	**0.3**	**21.9**	**3.1**		17-26-071-06 W6M
62	East Prairie	**0.2**	**17.1**	**0.3**		13-02-072-15 W5M
63	Girouxville 3				**0.2**	14-02-077-23 W5M
64	Girouxville 4				**0.2**	4-08-077-22 W5M

*BDL = Below Detection Level

*N/S - No sample



Duplicate Summary Chart

Passive Summary for September 2012

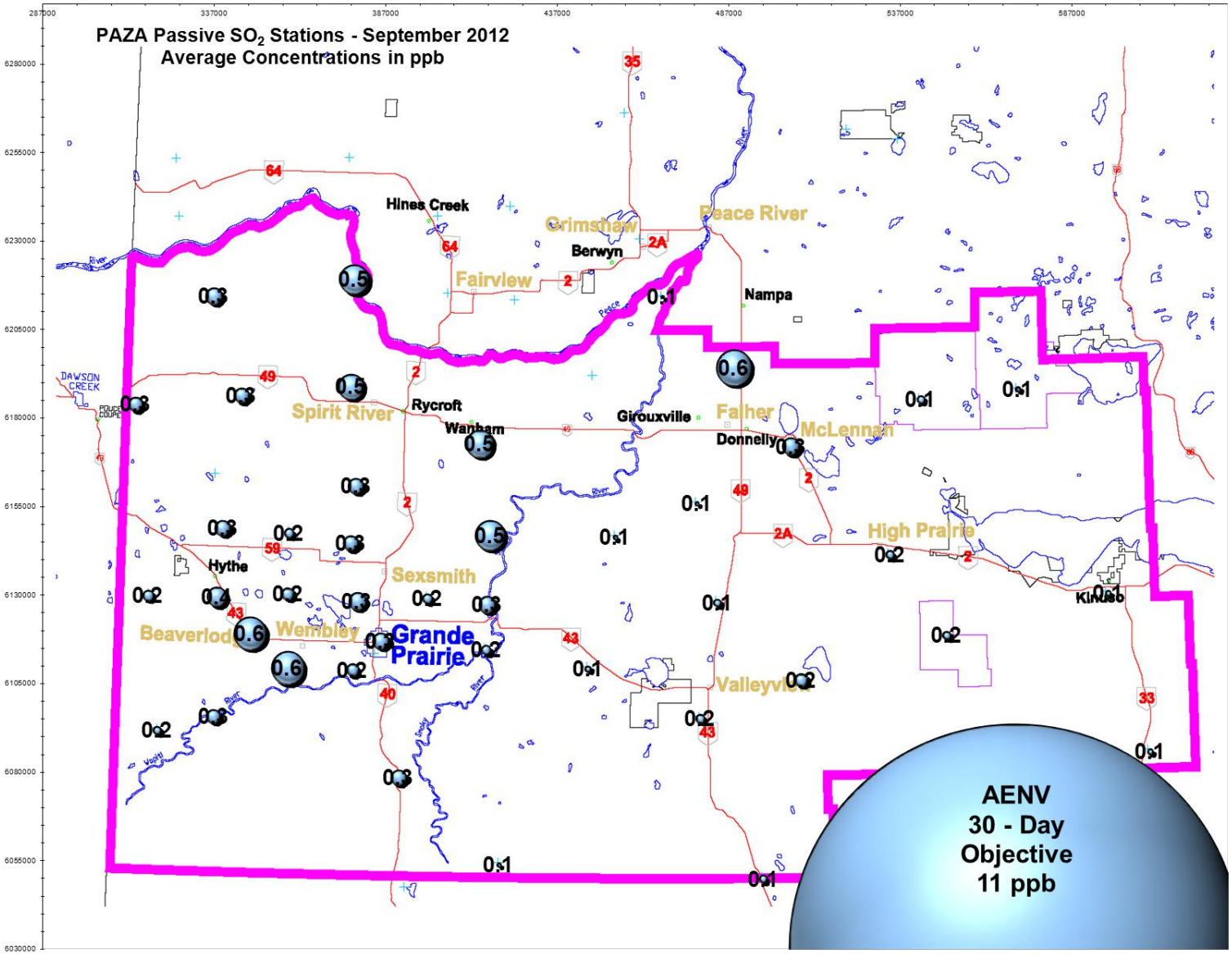
Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2	Hydrogen Sulphide H_2S
	ppb	ppb	ppb	ppb
	Passive Summary for September 2012 (PAZA Zone)			
Mean	**0.3**	**22.8**	**0.7**	**0.2**
Standard Deviation	**0.1**	**3.9**	**0.5**	**0.1**
Minimum	**0.1**	**14.6**	**0.1**	**0.1**
Minimum At	**Shaftesbury (#20)**	**Gift Lake (#45)**	**Peavine (#44)**	**Gift Lake (#45)**
Maximum	**0.6**	**31.7**	**3.1**	**0.2**
Maximum At	**Jean Cote (#35)**	**Beaverlodge (#16)**	**Grande Prairie HP**	**Girouxville 4**

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

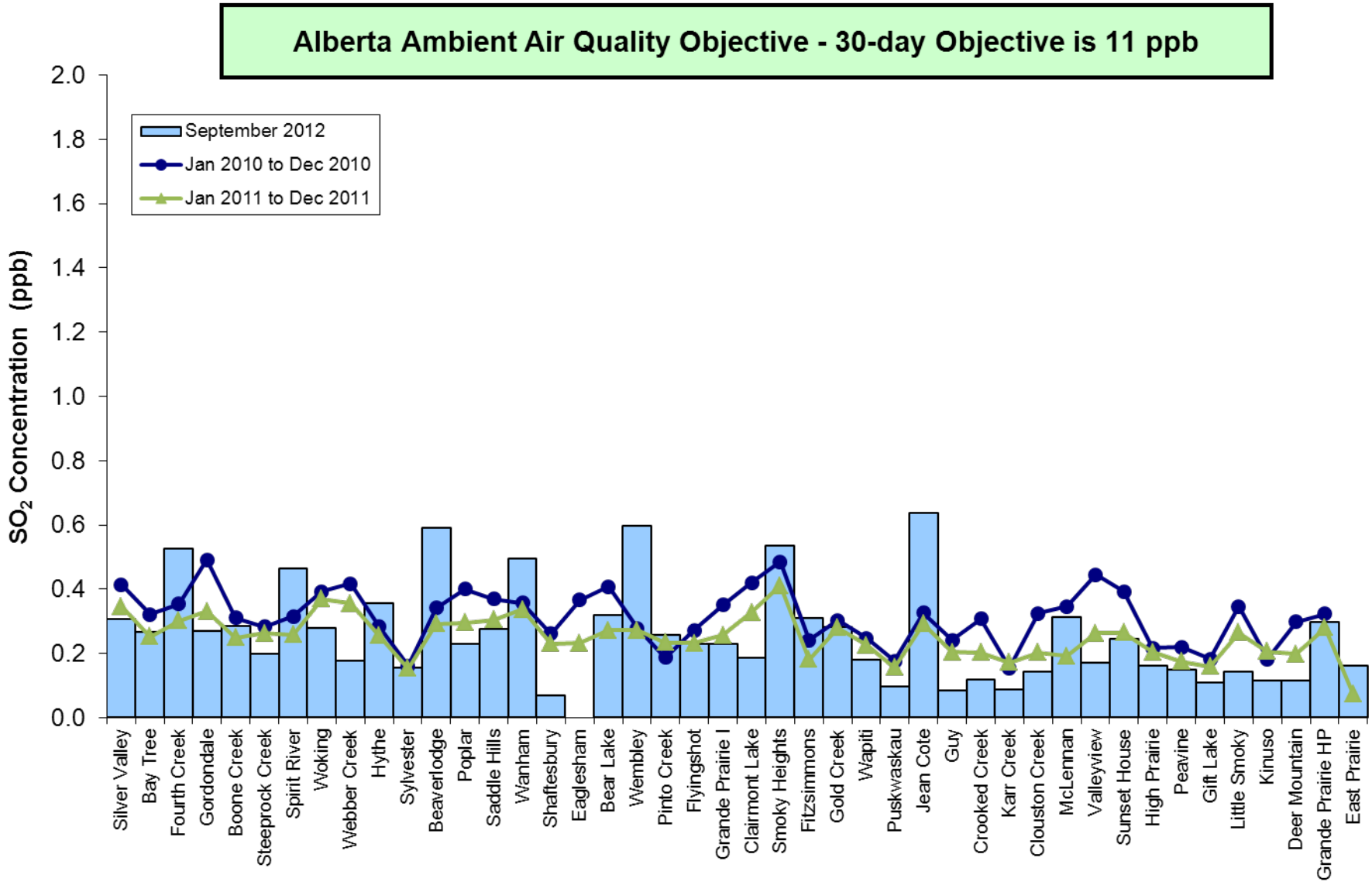
	SO_2	O_3	NO_2
PAZA Beaverlodge station	**0.2**	**29.5**	**4.5**
PAZA Beaverlodge passive	**0.6**	**31.7**	**0.6**

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

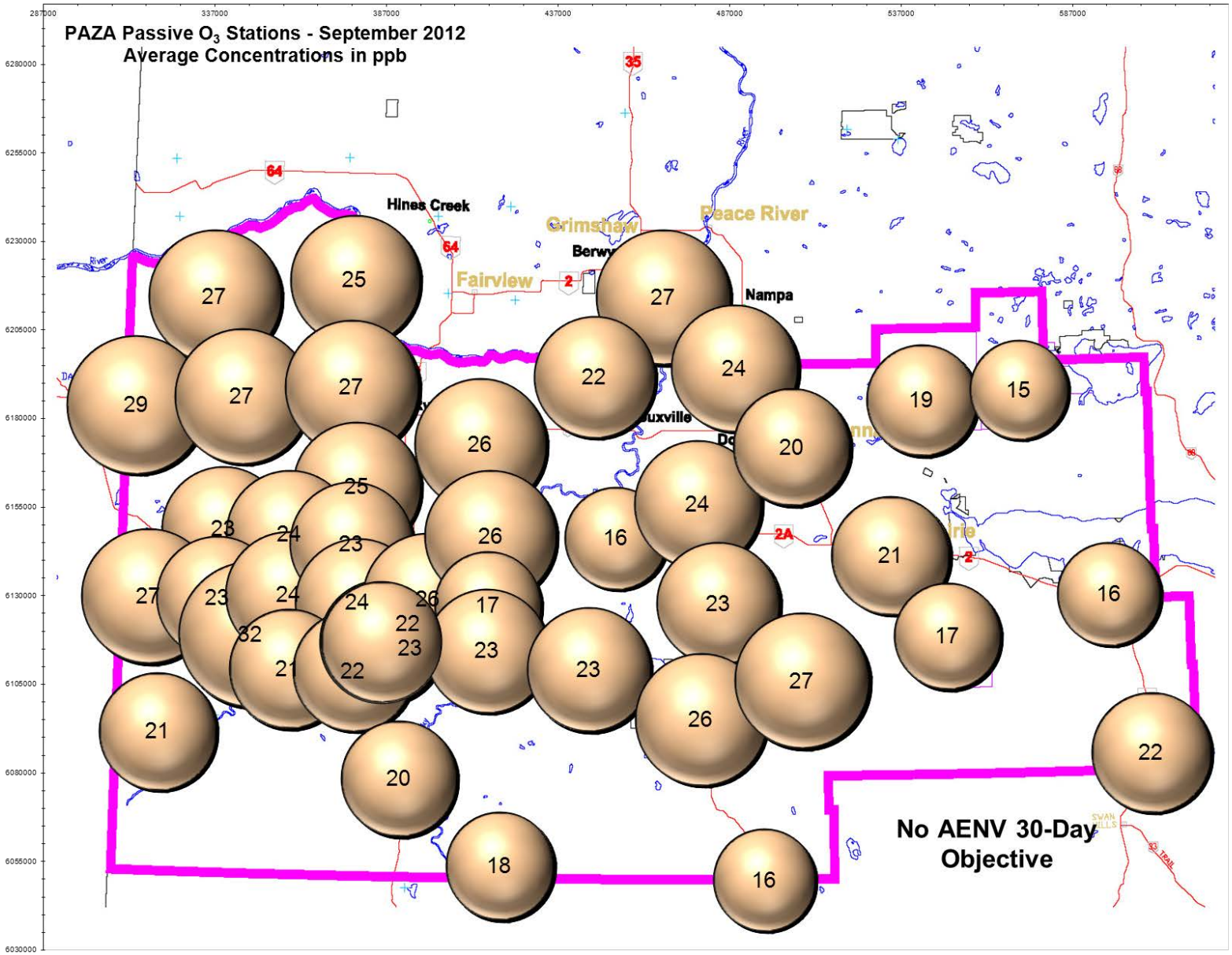
	SO_2	O_3	NO_2
PAZA Henry Pirker station	**0.2**	**22.3**	**7.8**
PAZA Grande Prairie passive	**0.3**	**21.9**	**3.1**



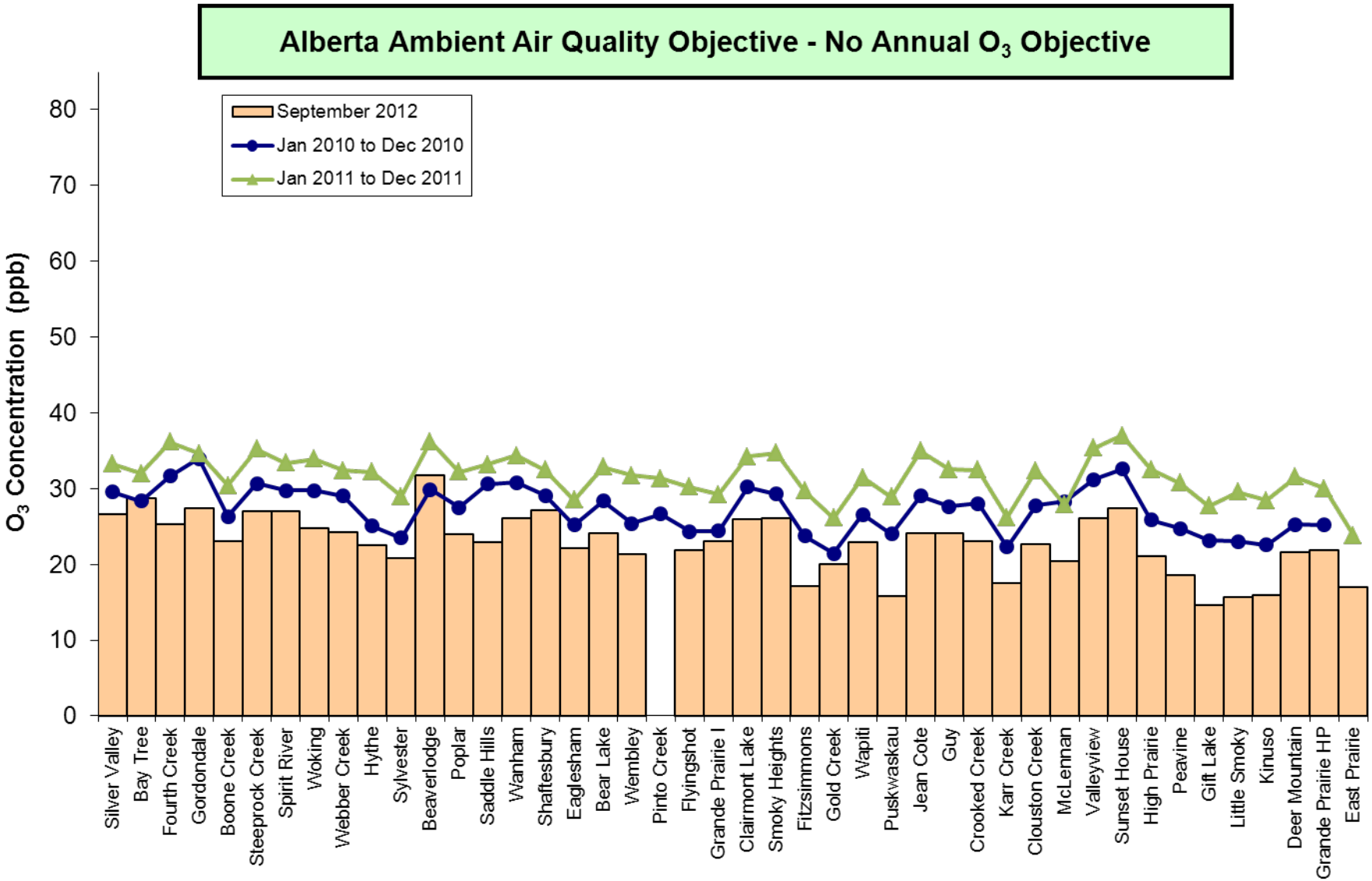
SO_2 Bubble Chart



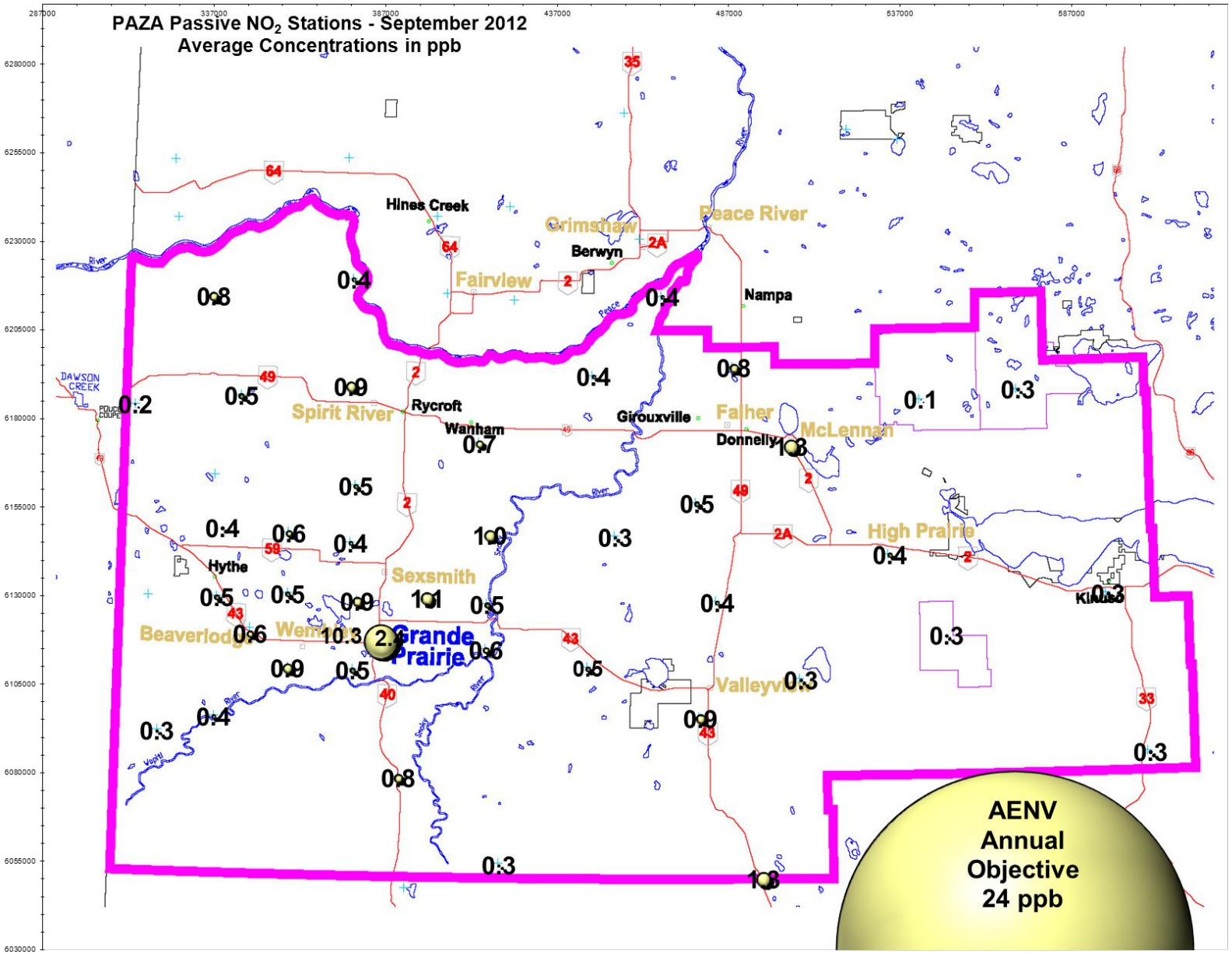
SO_2 Summary Chart



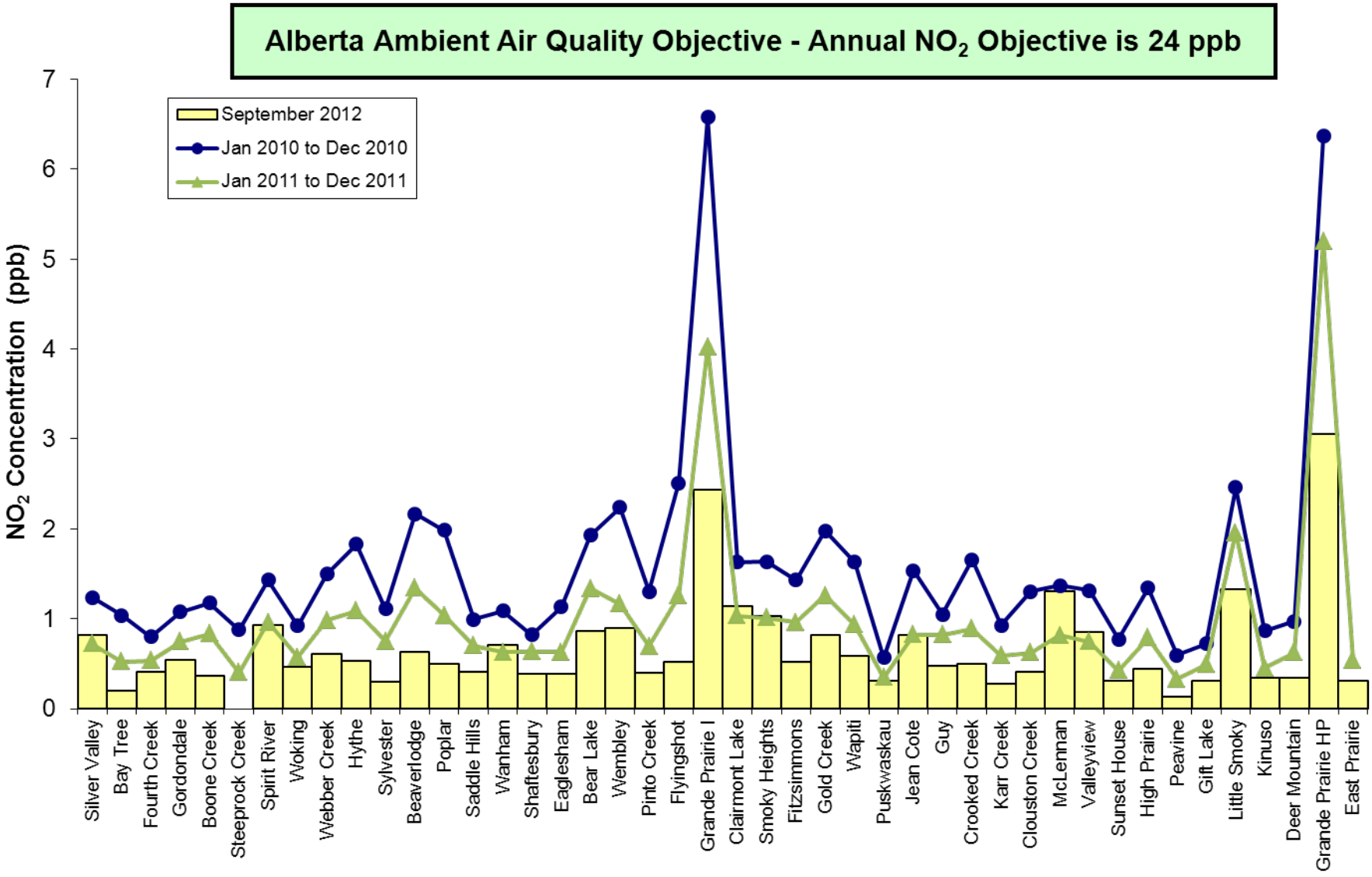
O_3 Bubble Chart



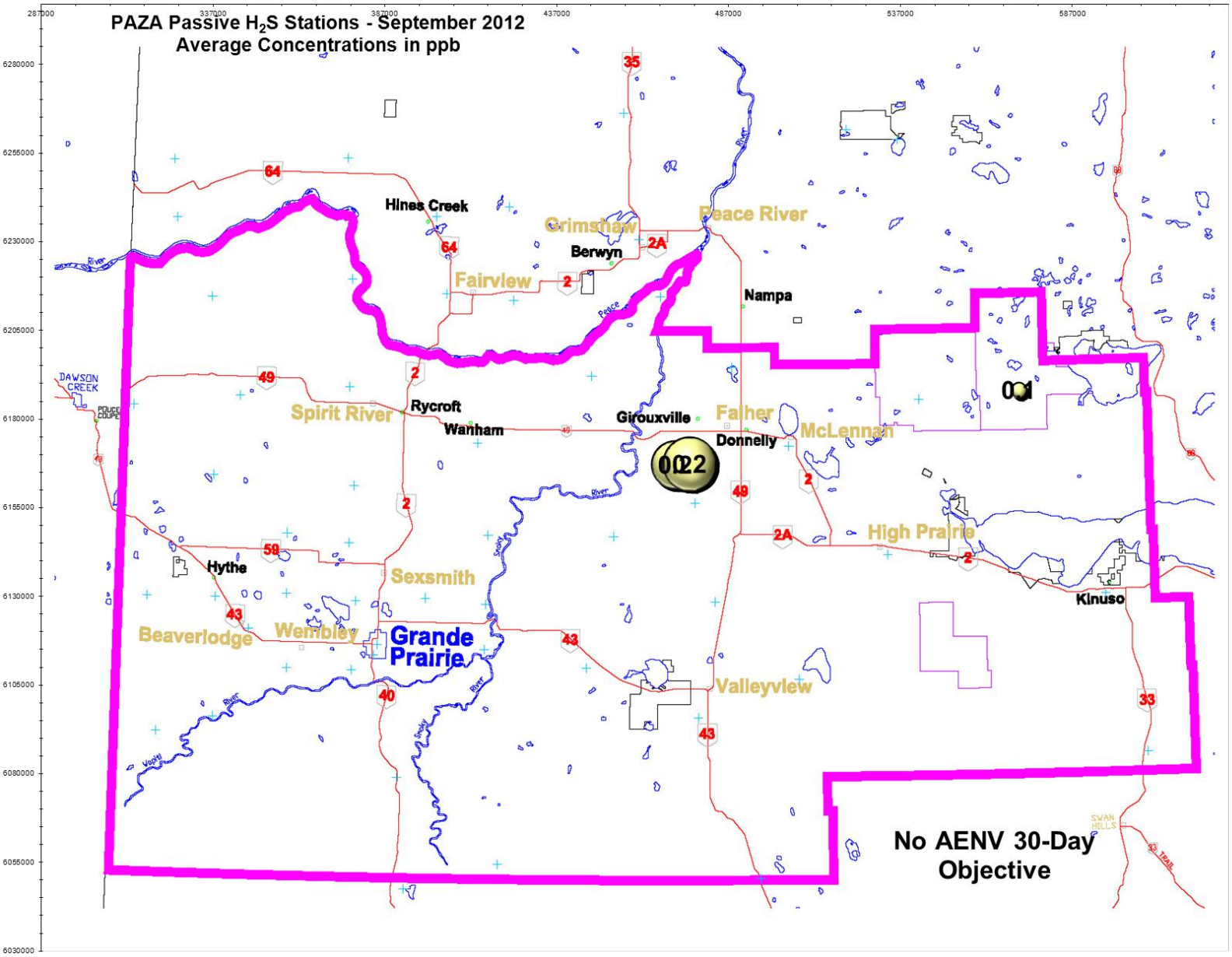
O_3 Summary Chart



NO_2 Bubble Chart



NO_2 Summary Chart



H_2S Bubble Chart

PAZA

ALBERTA ENVIRONMENT AND SUSTAINABLE RESOURCES INCIDENCE REPORT

September 2012

Air Monitoring Directive Exceedence Report

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

Reference Number:	**263203**	**Reported To (AENV Contact):**	Laura
Date & Time Incident Reported to AENV:	September 16, 2012	**Reported By:**	Focus-Lee Loran
Reported on Behalf of:	PAZA	**Approval Number (if applicable):**	Not applicable
Location(s) of Incident:	Smoky Heights Air Quality Station		
Start Date & Time of Incident:	September 16, 2012 @ 20:00 MST	**End Date & Time of Incident:**	September 16, 2012 @ 21:00 MST

Reason or Nature of Incident:

The $PM_{2.5}$ analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 1-hour average of $PM_{2.5}$ which is 80 µg/m^3.

September 16, 2012 20:00–21:00 MST $PM_{2.5}$= 114.2 µg/m^3 WS= 8.0 km/h WD=273.2 deg

Immediate Actions Taken:

Confirmed validity of data and reported to AESRD Environmental Service Response Centre.

Investigation Details:

Operation of the $PM_{2.5}$ analyzer appeared to be normal during the time of this report.

Actions Taken to Prevent Reoccurrence (if any):

Not applicable

Additional Actions Required (if any):

Not applicable

Report Completed By:	Lee Loran	Date Report Submitted:	
7-Day Letter Due Date:	September 23, 2012		

Air Monitoring Directive Exceedence Report

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

Reference Number:	**263368**	**Reported To (AENV Contact):**	Karla
Date & Time Incident Reported to AENV:	September 20, 2012	**Reported By:**	Focus-Lenin Flores
Reported on Behalf of:	PAZA	**Approval Number (if applicable):**	Not applicable
Location(s) of Incident:	Smoky Heights Air Quality Station		
Start Date & Time of Incident:	September 16, 2012 @ 19:00 MST	**End Date & Time of Incident:**	September 16, 2012 @ 20:00 MST

Reason or Nature of Incident:

The $PM_{2.5}$ analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 1-hour average of $PM_{2.5}$ which is 80 µg/m^3.

September 20, 2012 19:00–20:00 MST $PM_{2.5}$= 88.8 µg/m^3 WS= 3.6 km/h WD=277.7 deg

Immediate Actions Taken:

Confirmed validity of data and reported to AESRD Environmental Service Response Centre.

Investigation Details:

Operation of the $PM_{2.5}$ analyzer appeared to be normal during the time of this report.

Actions Taken to Prevent Reoccurrence (if any):

Not applicable

Additional Actions Required (if any):

Not applicable

Report Completed By:	Lenin Flores	Date Report Submitted:	
7-Day Letter Due Date:	September 27, 2012		

Air Monitoring Directive Exceedence Report

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

Reference Number:	**263412**	**Reported To (AENV Contact):**	Karla
Date & Time Incident Reported to AENV:	September 21, 2012 20:45 MST	**Reported By:**	Focus-Lenin Flores
Reported on Behalf of:	PAZA	**Approval Number (if applicable):**	Not applicable
Location(s) of Incident:	Smoky Heights Air Quality Station		
Start Date & Time of Incident:	September 21, 2012 @ 19:00 MST	**End Date & Time of Incident:**	September 21, 2012 @ 20:00 MST

Reason or Nature of Incident:

The $PM_{2.5}$ analyzer exceeded the Alberta Air Quality Ambient Guideline limit for a 1-hour average of $PM_{2.5}$ which is 80 µg/m^3.

September 21, 2012 19:00–20:00 MST $PM_{2.5}$= 123.5 µg/m^3 WS=7.3 km/h WD=253.7 deg

Immediate Actions Taken:

Confirmed validity of data and reported to AESRD Environmental Service Response Centre.

Investigation Details:

Operation of the $PM_{2.5}$ analyzer appeared to be normal during the time of this report.

Actions Taken to Prevent Reoccurrence (if any):

Not applicable

Additional Actions Required (if any):

Not applicable

Report Completed By:	Lenin Flores	Date Report Submitted:	
7-Day Letter Due Date:	September 28, 2012		

September 2012 Calibration Reports

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

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

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

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

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

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

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 5, 2012	Previous Calibration	August 7, 2012
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	7:15	End Time (MST)	11:20
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Conc	50.8 ppm	Cal Gas Cert Date	March 12, 2014
		Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.999712	Calculated slope	0.992151
Calculated intercept	0.247861	Calculated intercept	1.912744
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	9.0		9.0	
Coefficient	0.790		0.790	
Pressure	645.6	mm Hg	642.1	mm Hg
Flow	0.509	lpm	0.504	lpm
Lamp Voltage	44033	Hz	44108	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.1	N/A
4995	39.94	403.0	405.7	0.9933
4995	19.96	202.2	199.4	1.0140
4995	9.94	100.9	98.8	1.0215
4995	0.00	0.0	0.1	As Found Zero
4995	39.94	403.0	398.2	As Found Span
			Average Correction Factor	1.0096

Calculated value of As Found Response: 398.2 ppb Percent Change of As Found: 1.2%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	235.4	ppb	240.1	ppb

Notes: Slight adjust 80% point SO2.
After final internal span the spike was caused by input of cal gas rather than sample line.

Calibration Performed By: Stephanie Tandy

Calibration Summary

Parameter **SO2**

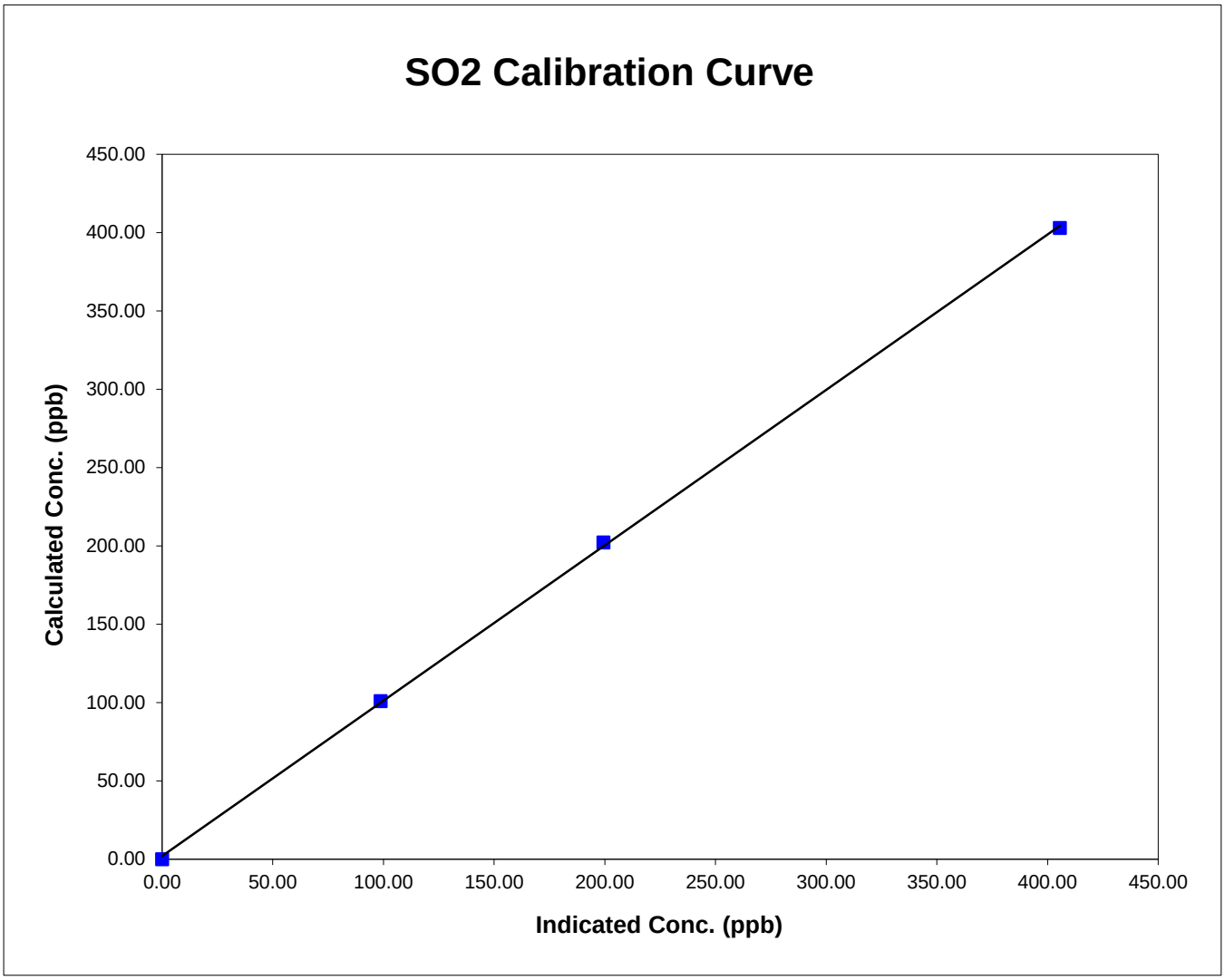
Air Monitoring Network **PAZA**

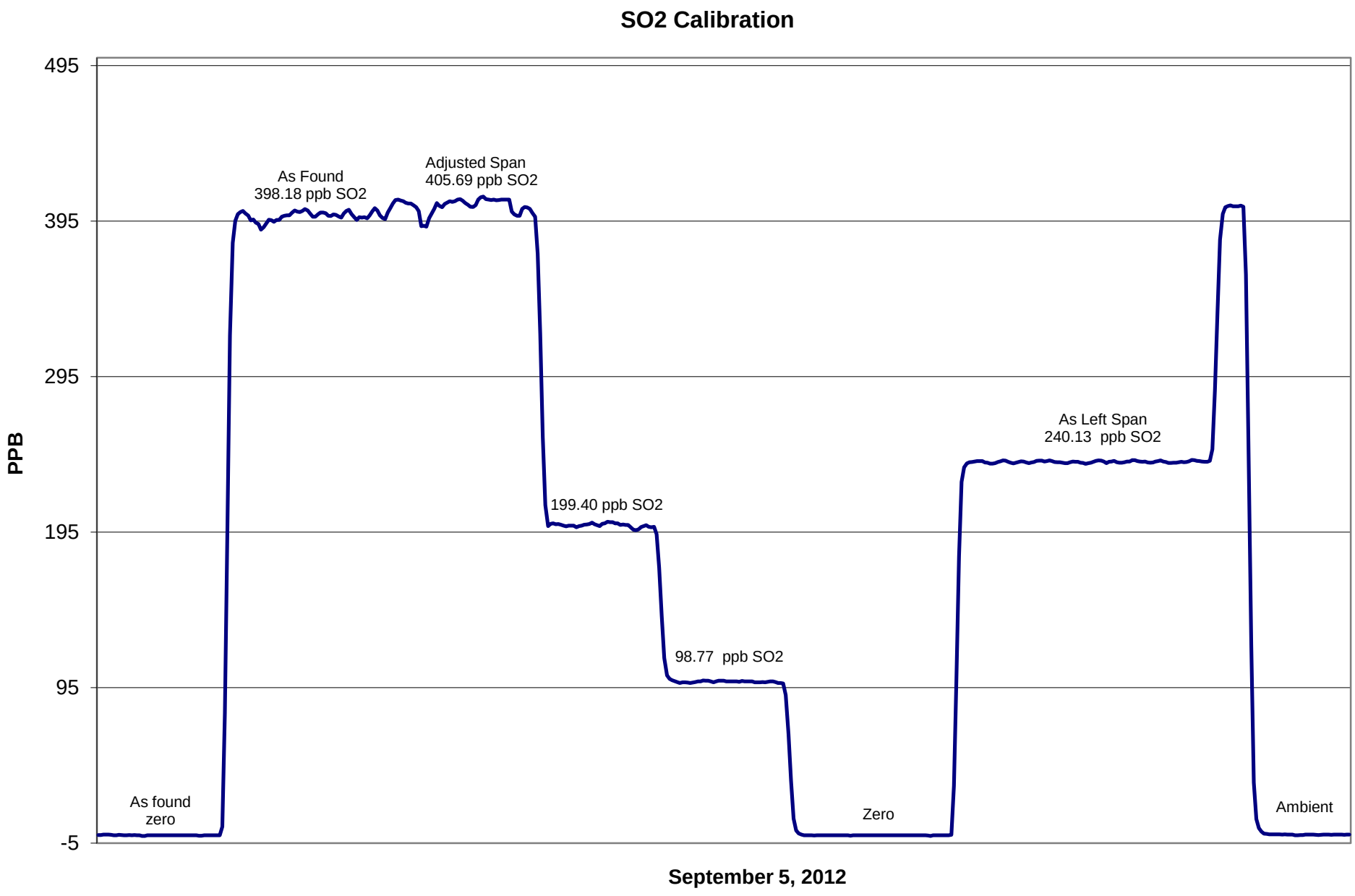
Station Information

Calibration Date	September 5, 2012	Previous Calibration	August 7, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:15	End Time (MST)	11:20
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
403.0	405.7	0.9933	Correlation Coefficient	0.999854
202.2	199.4	1.0140		
100.9	98.8	1.0215	Slope	0.992151
			Intercept	1.912744




SO2 Calibration
495
395
295
195
95
-5
PPB
As Found
398.18 ppb SO2
Adjusted Span
405.69 ppb SO2
199.40 ppb SO2
98.77 ppb SO2
As Left Span
240.13 ppb SO2
As found
zero
Zero
Ambient
September 5, 2012

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 5, 2012	Previous Calibration	August 24, 2012
Station Number	1	Station Location	Henry Pirker

Reason: Routine Installation Removal Other: Trouble shoot Nox

Start Time (MST)	7:20		End Time (MST)	13:00	
Barometric Pressure	0.922	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3474	
NO Cal Gas Conc	51.2	ppm	Cal Gas Expiry Date	March 12, 2014	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL107272	

DACS Information

DACS make	CR3000	DACS serial No.	5408

Parameter		NO2	NOx	NO
Before	Data Slope	1.010759	0.997921	0.998992
	Data Offset	0.261913	2.346872	1.912338
After	Data Slope	0.994522	1.001840	1.002994
	Data Offset	-0.058617	2.415921	1.863206
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42C	Analyzer serial #	508011073

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	12.9	mV	12.9	mV
NOx bkgnd	13.8	mV	15.2	mV
NO coefficient	1.106		1.106	
NOx coefficient	1.003		1.003	
NO2 conv temp	319.0	Deg C	318.0	Deg C
PMT Temp	-2.5	Deg C	-2.5	Deg C
PMT Volt	-786.0	mV	-768.0	mV
R Cell Press	178.8	in Hg	178.1	in Hg

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Calibration Date: September 5, 2012 Station Location: Henry Pirker

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	-0.5	0.0	-0.5	N/A	N/A
1	4995	39.94	406.1	406.1	0.0	404.0	404.0	-0.1	1.0053	1.0053
2	4995	19.96	203.8	203.8	0.0	199.8	200.2	-0.5	1.0199	1.0177
3	4995	9.94	101.7	101.7	0.0	97.4	97.8	-0.3	1.0443	1.0397
AFZ	4995	0.00	0.0	0.0	0.0	-0.5	0.0	-0.5	0.0000	0.0000
AFS	4995	39.94	406.1	406.1	0.0	407.7	406.4	1.2	0.9961	0.9994
							Average Correction Factor		1.0232	1.0209

As Found Concentrations: NO_X= 410.6 NO= 408.3 As Found Percent Change NO_X= 1.1% NO= 0.5%

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	-0.5	0.0	-0.5	N/A	N/A	N/A	N/A
NO point	404.2	404.2	0.0	404.0	404.2	-0.4	1.0006	1.0000	N/A	N/A
300	404.2	93.2	311.0	404.3	93.2	312.4	1.0000	1.0000	0.9956	100.4%
200	404.2	193.8	210.5	404.8	193.8	211.9	0.9986	1.0000	0.9931	100.7%
100	404.2	294.6	109.7	321.2	294.6	111.0	1.2584	1.0000	0.9880	101.2%
					Average Correction Factor		1.0857	1.0000	0.9922	100.8%

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	0.0	0.0	ppb	-0.4	-0.3	0.0	ppb
Auto span	168.4	169.5	1.2	ppb	304.7	303.8	2.5	ppb

Calibration Performed By: Stephanie Tandy

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

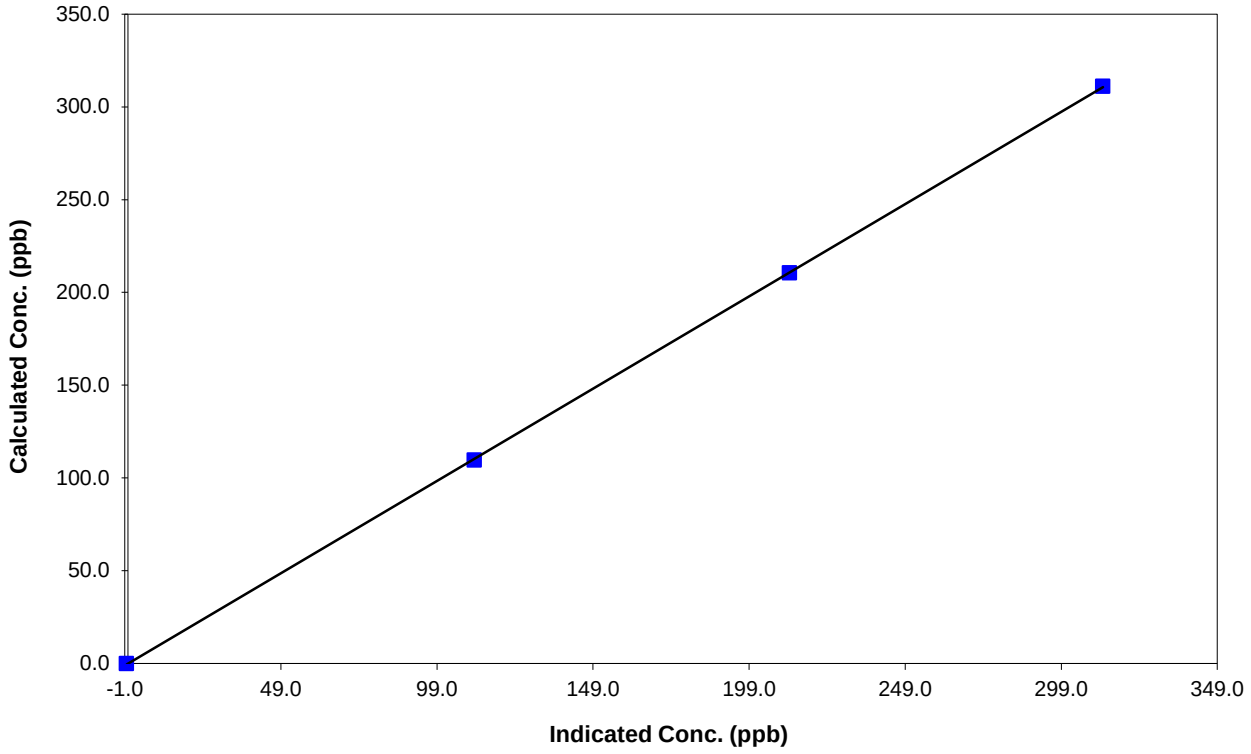
Station Information

Calibration Date	September 5, 2012	Previous Calibration	August 24, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:20	End Time (MST)	13:00
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.5	N/A		
311.0	312.4	0.9956	Correlation Coefficient	0.999983
210.5	211.9	0.9931		
109.7	111.0	0.9880	Slope	0.994522
			Intercept	-0.058617

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

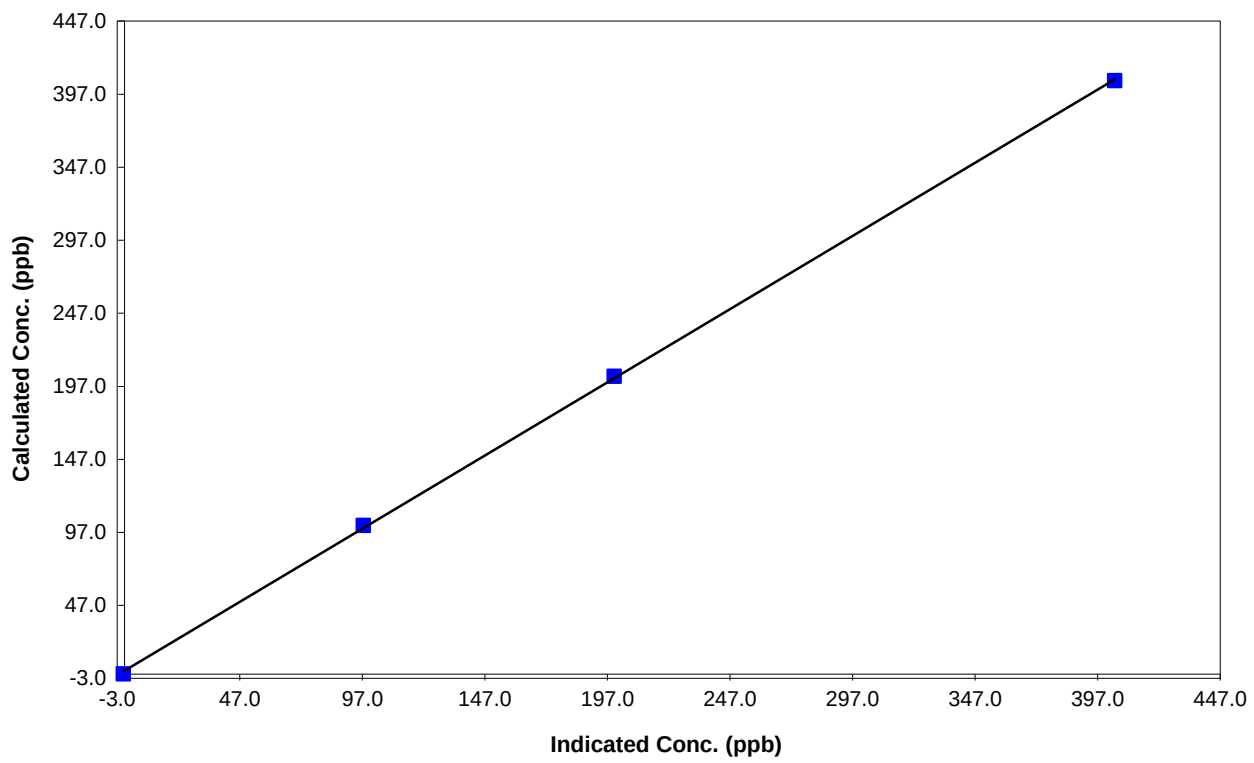
Station Information

Calibration Date	September 5, 2012	Previous Calibration	August 24, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:20	End Time (MST)	13:00
Analyzer make	TEI 42C	Analyzer serial #	508011073

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.5	N/A		
406.1	404.0	1.0053	Correlation Coefficient	0.999900
203.8	199.8	1.0199		
101.7	97.4	1.0443	Slope	1.001840
			Intercept	2.415921

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

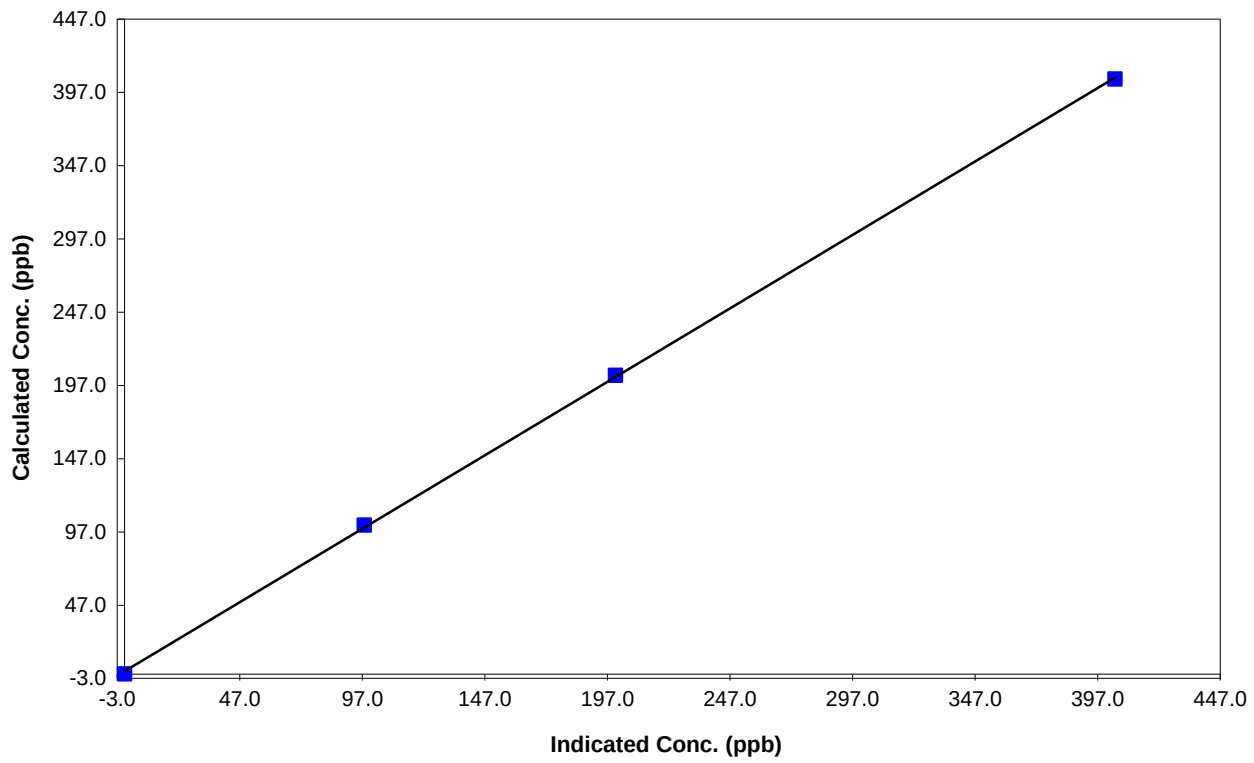
Station Information

Calibration Date	September 5, 2012	Previous Calibration	August 24, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:20	End Time (MST)	13:00
Analyzer make	TEI 42C	Analyzer serial #	508011073

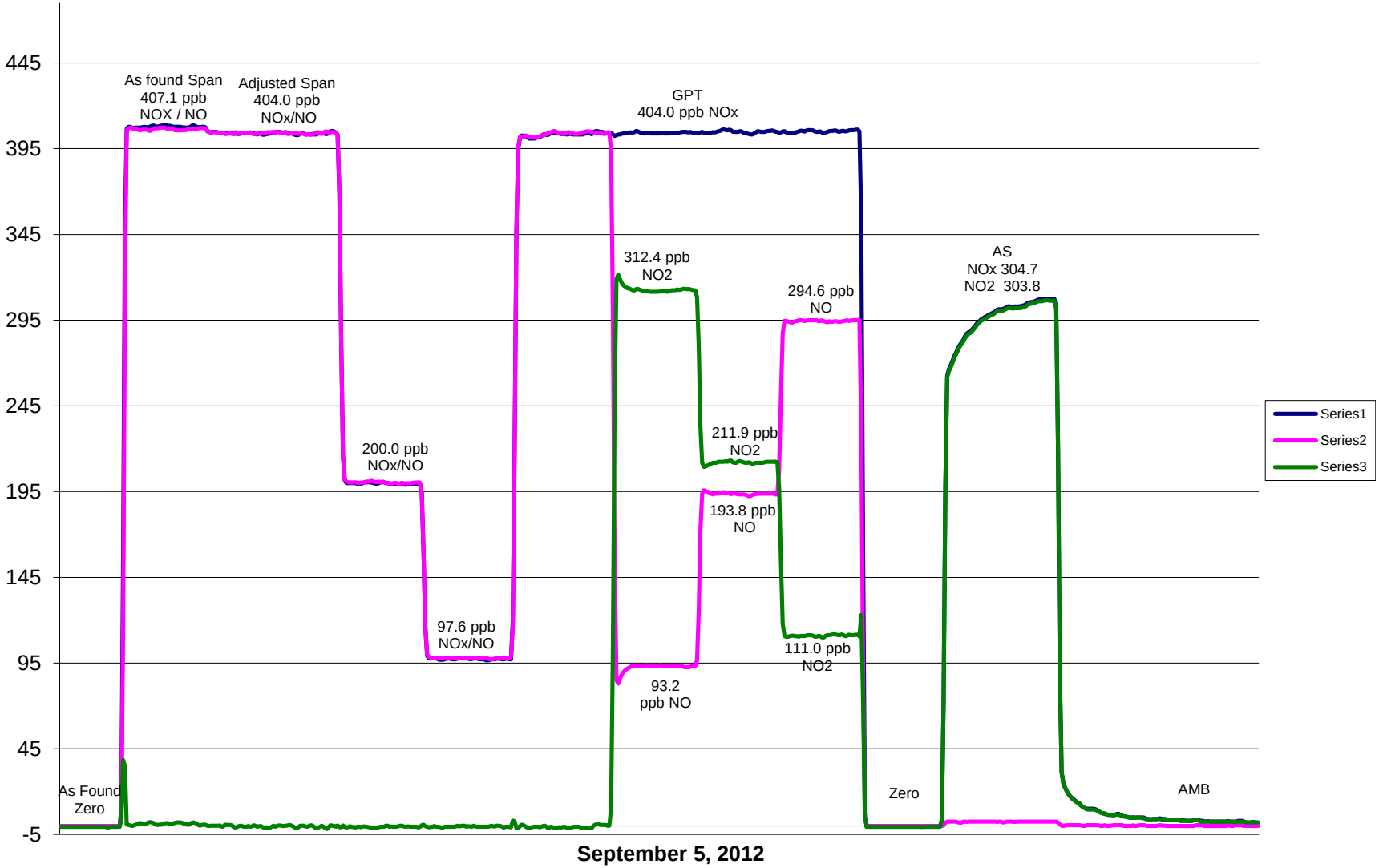
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
406.1	404.0	1.0053	Correlation Coefficient	0.999906
203.8	200.2	1.0177		
101.7	97.8	1.0397	Slope	1.002994
			Intercept	1.863206

NO Calibration Curve



PAZA
NO_X Calibration



Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 5, 2012	Previous Calibration	August 7, 2012
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:05	End Time (MST)	15:05
Barometric Pressure	0.922 atm	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
Calculated slope	1.028197	Calculated slope	1.002527
Calculated intercept	-0.675329	Calculated intercept	-0.131778
Analyzer make	TECO 49C	Analyzer serial #	607415761

	before		after	
Concentration range	500	ppb	500	ppb
offset	-0.7	ppb	-0.7	ppb
slope	1.146		1.146	
O3 Lamp temp	71.1	Deg C	71.1	Deg C
Intensities	77440/68375	mV	77540/68410	mV
Pressure	692.1	inches Hg	699	inches Hg
Flow A	0.724	ccm	0.723	ccm
Flow B	0.738	ccm	0.738	ccm

Calibration Data

Dilution air flow rate (cc/min)	Referenced concentration (ppb)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5036	0	0.0	0.5	N/A
5036	300	311.0	310.7	1.0011
5036	200	210.5	209.8	1.0033
5036	100	109.7	109.2	1.0045
5036	0	0.0	0.5	As found zero
5036	300	311.0	302.3	As found span
			Average Correction Factor	1.0030

Calculated value of As Found Response: 309.7 ppm Percent Change of As Found: -0.4%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.3	ppb
Auto span	154.9	ppb	160.9	ppb

Notes: Adjust high point.

Calibration Performed By: Stephanie Tandy

Calibration Summary

Parameter **O3**

Air Monitoring Network **PAZA**

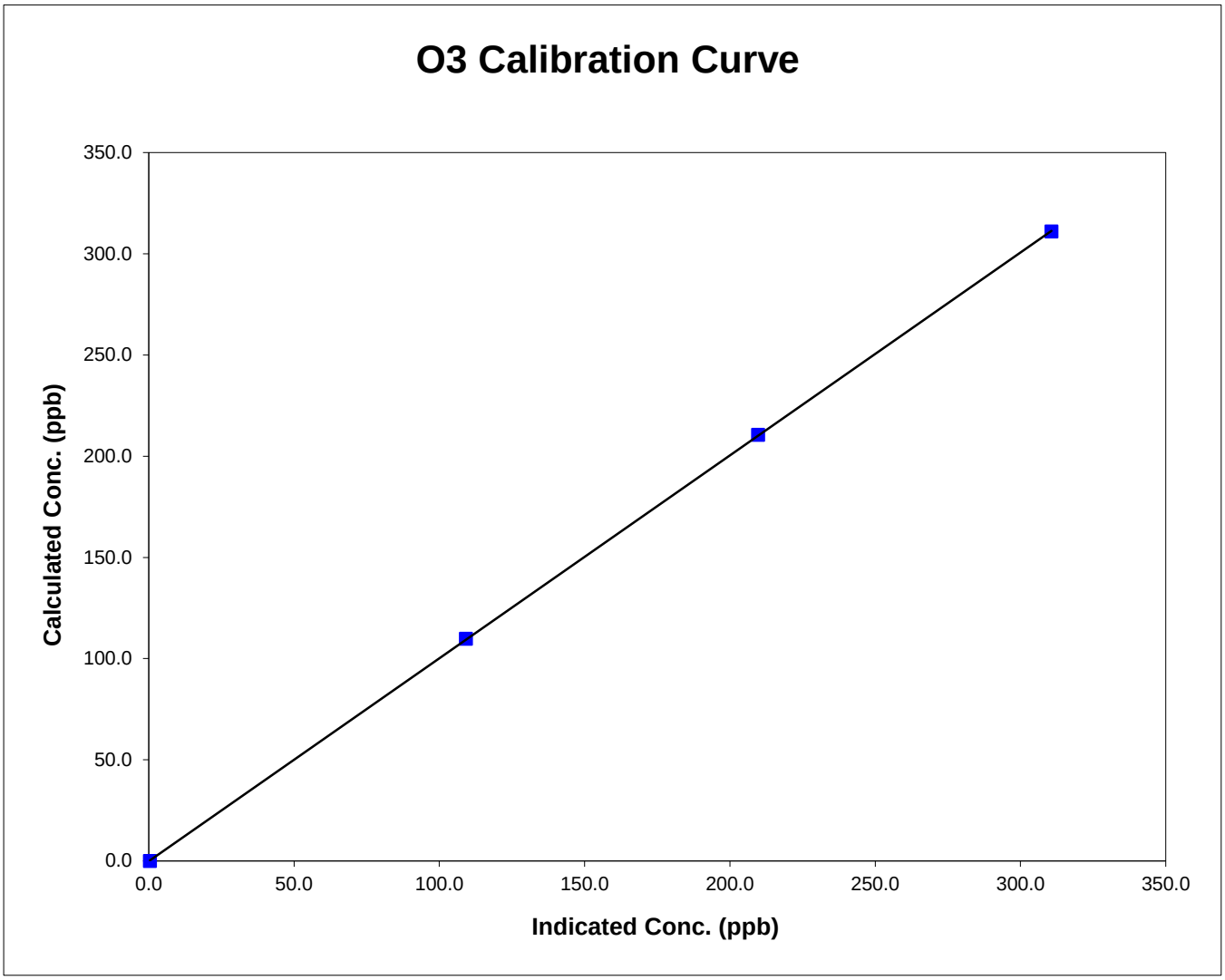
FOCUS AIR QUALITY MONITORING

Station Information

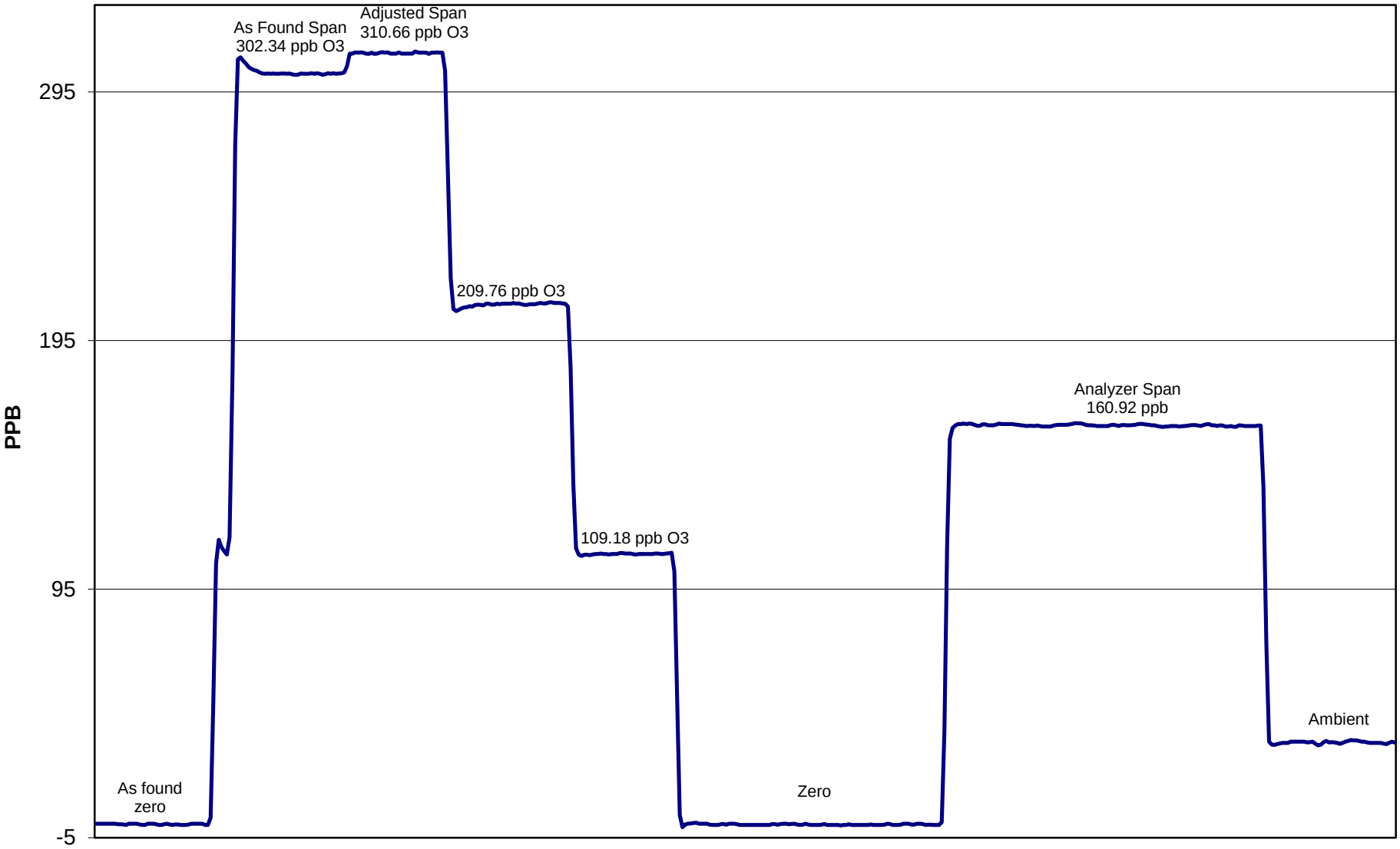
Calibration Date	September 5, 2012	Previous Calibration	August 7, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:05	End Time (MST)	15:05
Analyzer make/model	TECO 49C	Analyzer serial #	607415761

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	NA		
311.0	310.7	1.0011	Correlation Coefficient	0.999992
210.5	209.8	1.0033		
109.7	109.2	1.0045	Slope	1.002527
			Intercept	-0.131778



O3 Calibration



September 5, 2012

Calibration Report

Parameter **CO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 4, 2012	Previous Calibration	August 8, 2012
Station Number	1	Station Location	Henry Pirker

Reason: Routine | Install | Removal | Other:

Start Time (MST)	14:00:00 PM MST	End Time (MST)	17:00:00 PM MST
Barometric Pressure	0.922 ATM	Station Temperature	21.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Conc	2898 ppm	Cal Gas Expiry Date	2/4/2013
		Cal Gas Cylinder #	LL83909
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.999390	Calculated slope	0.994595
Calculated intercept	-0.399581	Calculated intercept	-0.296085

Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.110		1.110	
CO zero setting	3.076		3.077	
Sample pressure	687	mm Hg	686.9	mm Hg
Sample Flow	1.130	LPM	1.130	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	0.45	N/A
4995	69.94	40.02	40.61	0.9853
4995	34.95	20.14	20.47	0.9839
4995	18.95	10.95	11.15	0.9819
4995	0.00	0.00	0.45	As Found Zero
4995	69.95	40.02	40.61	As Found Span
			Average Correction Factor	0.9837

Calculated value of As Found Response: 39.738 ppm Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.56	ppm	19.80	ppm

Notes: DAS reading 0.4 ppb above analyzer reading.

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter **CO**

Air Monitoring Network **PAZA**

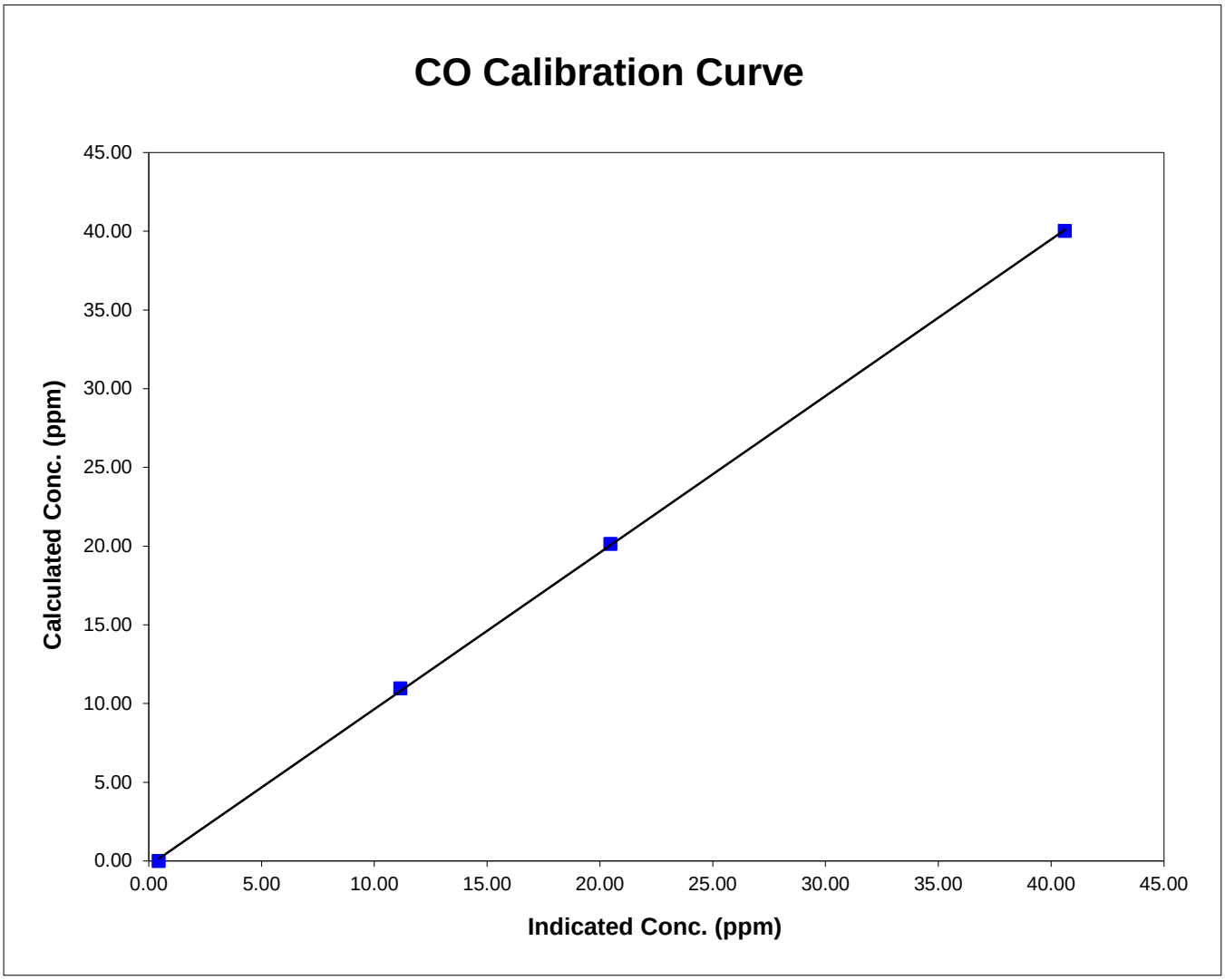
FOCUS AIR QUALITY MONITORING

Station Information

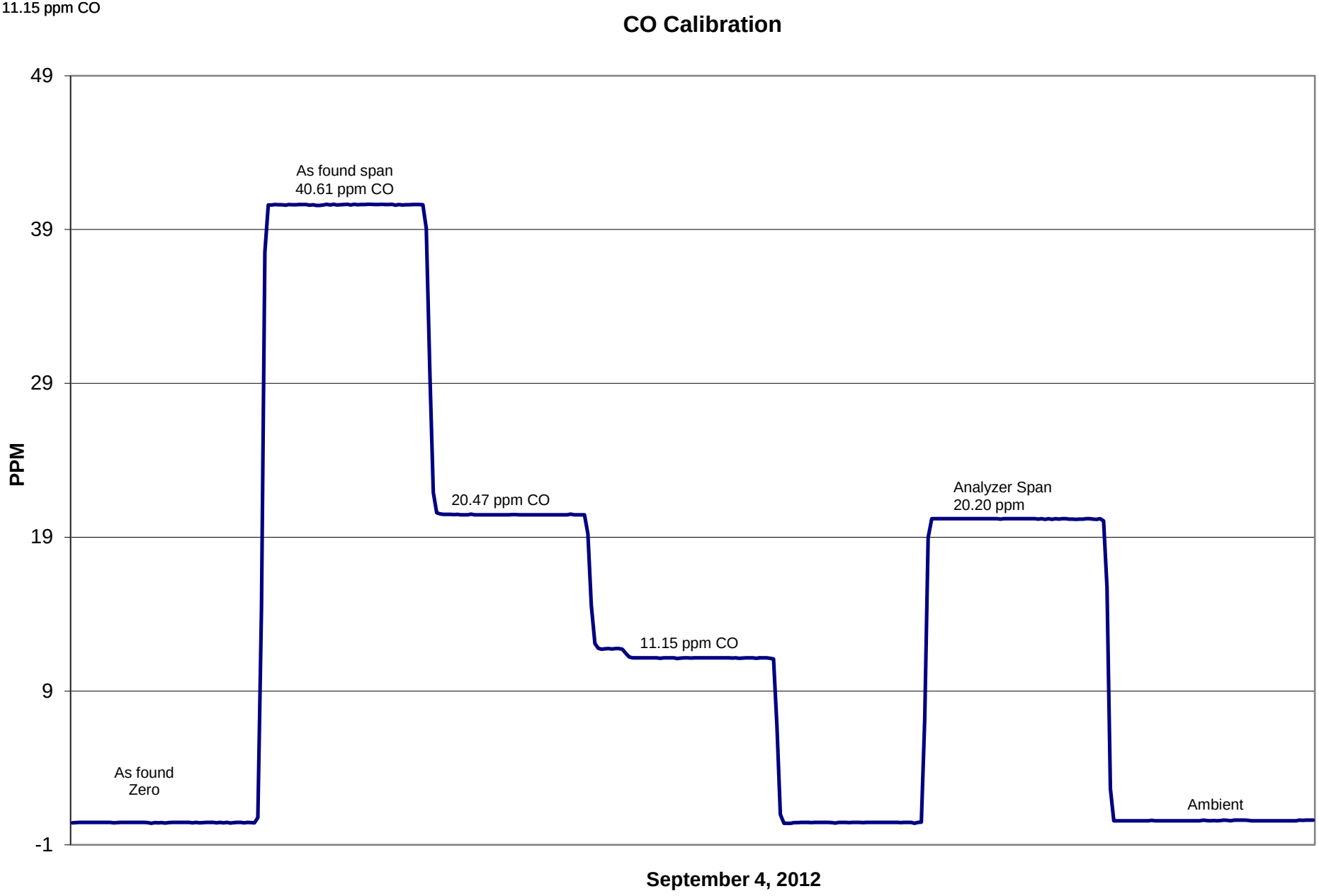
Calibration Date	September 4, 2012	Previous Calibration	August 8, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	14:00:00 PM MST	End Time (MST)	17:00:00 PM MST
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.451	N/A		
40.017	40.613	0.9853	Correlation Coefficient	0.999931
20.136	20.466	0.9839		
10.953	11.155	0.9819	Slope	0.994595
			Intercept	-0.296085



11.15 ppm CO


CO Calibration
49
39
29
19
9
-1
PPM
As found span
40.61 ppm CO
20.47 ppm CO
11.15 ppm CO
Analyzer Span
20.20 ppm
As found
Zero
Ambient
September 4, 2012

Calibration Report

Parameter **THC**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 4, 2012	Previous Calibration	August 7, 2012
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other: Maintenance
Start Time (MST)	10:20:00 AM MST	End Time (MST)	14:55:00 PM MST
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	404 ppm CH4/ 201 ppm C3H8	Cal Gas Expiry Date	2/4/2010
Cal Gas CH4 equiv	956.75 ppm	Cal Gas Cylinder #	ALM 004476
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.029716	Calculated slope	1.039034
Calculated intercept	0.170969	Calculated intercept	0.093231
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.50	psi	6.50	psi
THC span counts	9616	capture	11511	capture
THC zero counts	447	capture	1861	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)
2995	0.00	0.00	0.03	N/A
2995	69.95	21.84	20.97	1.0414
2995	29.96	9.48	8.96	1.0579
2995	9.98	3.18	2.88	1.1031
2995	0.00	0.00	0.03	As Found Zero
2995	69.95	21.84	20.97	As Found Span
			Average Correction Factor	1.0674

Calculated value of As Found Response: 21.734 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.10	ppm	0.08	ppm
Auto span	21.83	ppm	22.47	ppm

Notes: DAS reading 0.3 to 0.5 ppb higher than analyzer

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter **THC**

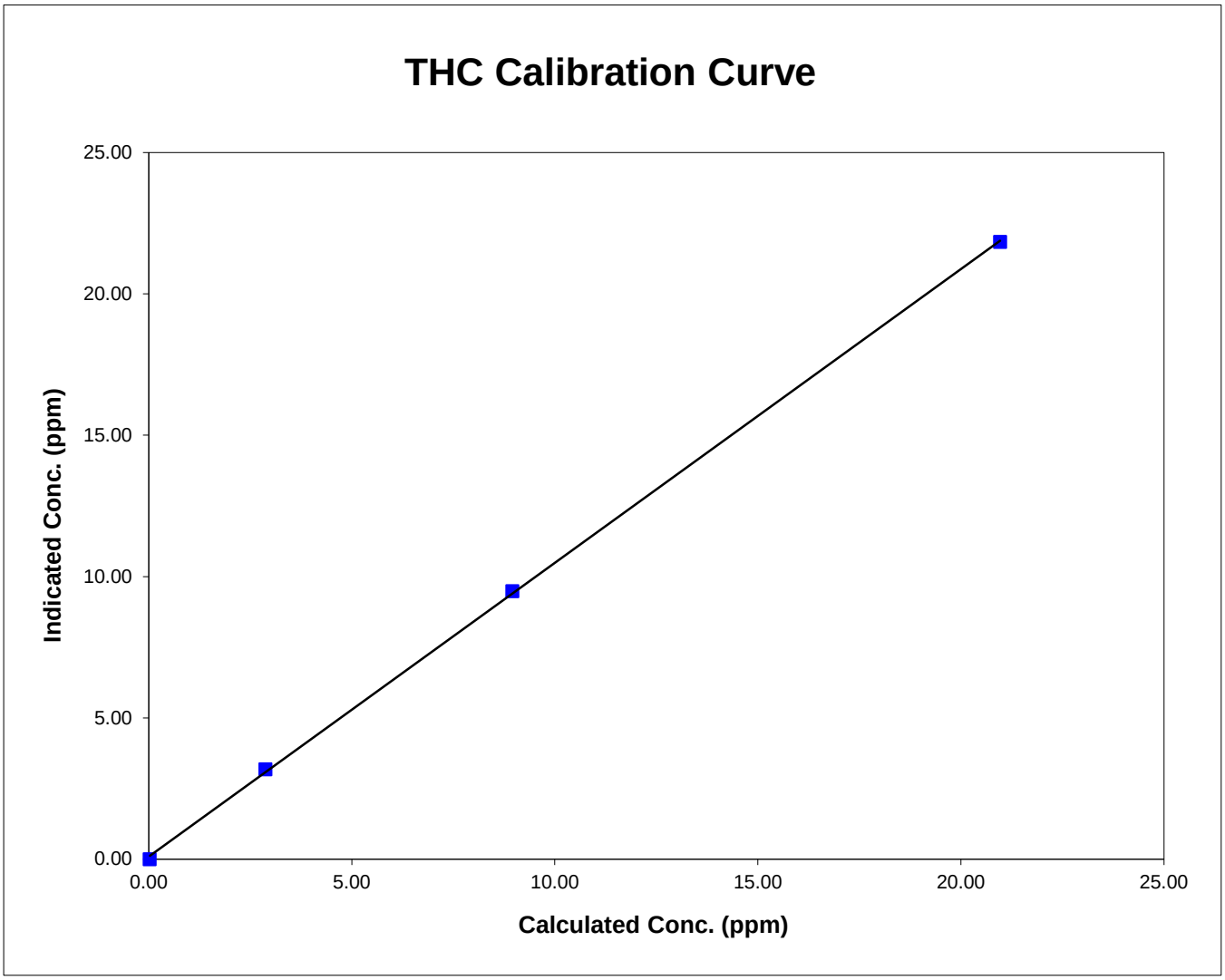
Air Monitoring Network **PAZA**

Station Information

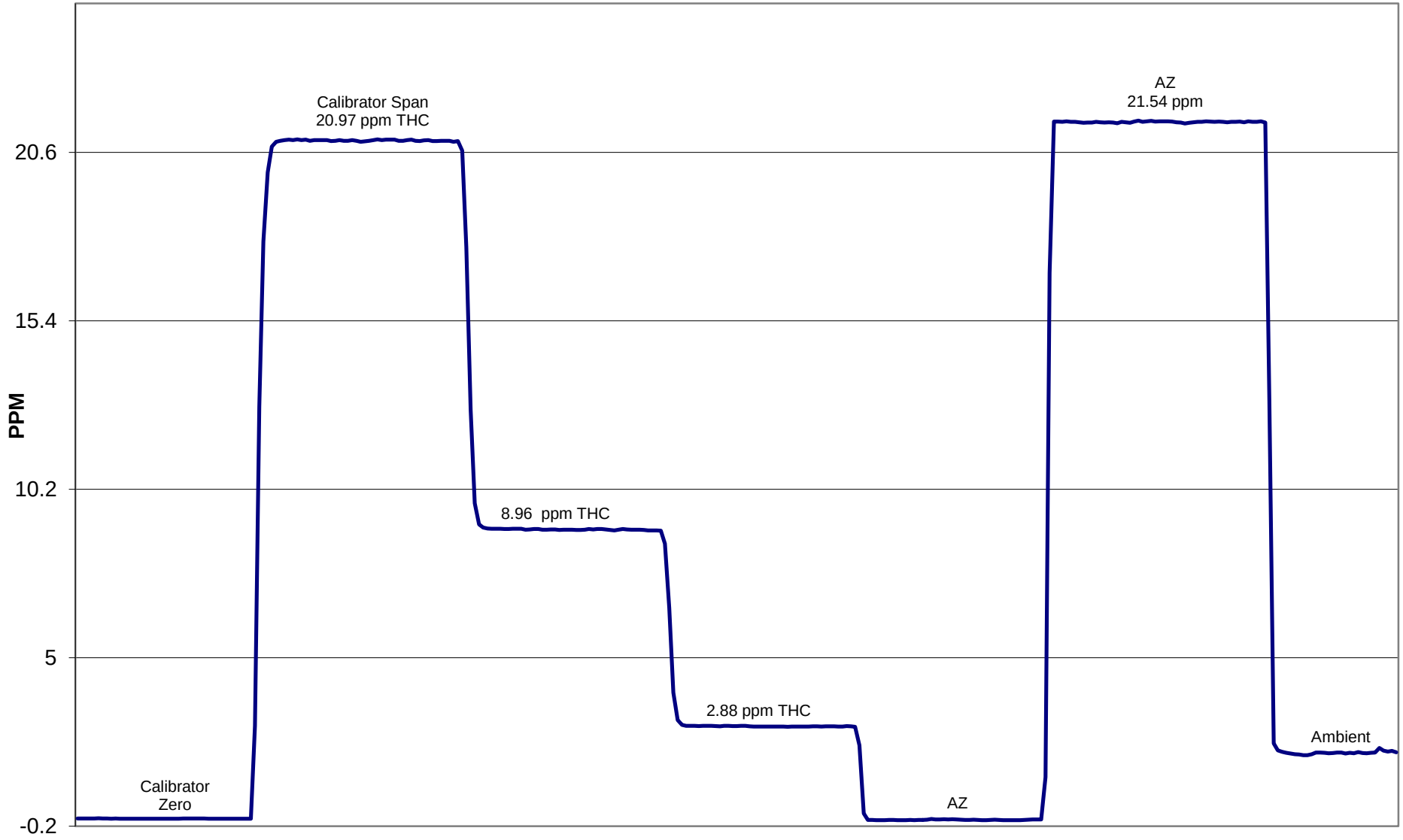
Calibration Date	September 4, 2012	Previous Calibration	August 7, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:20:00 AM MST	End Time (MST)	14:55:00 PM MST
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.028	N/A		
21.835	20.968	1.0414	Correlation Coefficient	0.999889
9.476	8.958	1.0579		
3.178	2.880	1.1031	Slope	1.039034
			Intercept	0.093231



THC Calibration



September 4, 2012

Calibration Report

Parameter **THC**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 24, 2012	Previous Calibration	September 4, 2012
Station Number	1	Station Location	Henry Pirker
Reason: Routine	Install	Removal	Other: Maintenance
Start Time (MST)	12:20	End Time (MST)	14:40:00 PM
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	404 ppm CH4/ 201 ppm C3H8	Cal Gas Expiry Date	2/4/2010
Cal Gas CH4 equiv	956.75 ppm	Cal Gas Cylinder #	ALM 004476
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	1.039034	Calculated slope	1.059039
Calculated intercept	0.093231	Calculated intercept	0.057365
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.50	psi	6.50	psi
THC span counts	11511	capture	11511	capture
THC zero counts	1861	capture	1782	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)
2995	0.00	0.00	0.03	N/A
2995	69.95	21.84	20.60	1.0601
2995	29.96	9.48	8.84	1.0725
2995	9.98	3.18	2.89	1.0995
2995	0.00	0.00	0.03	As Found Zero
2995	69.95	21.84	20.60	As Found Span
			Average Correction Factor	1.0774

Calculated value of As Found Response: 21.465 ppm Percent Change of As Found: 1.7%

	before calibration		after calibration	
Auto zero	0.08	ppm	0.08	ppm
Auto span	22.47	ppm	22.51	ppm

Notes: Span and zero relay grounds moved; second zero followed internal span to confirm nothing changed.

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter **THC**

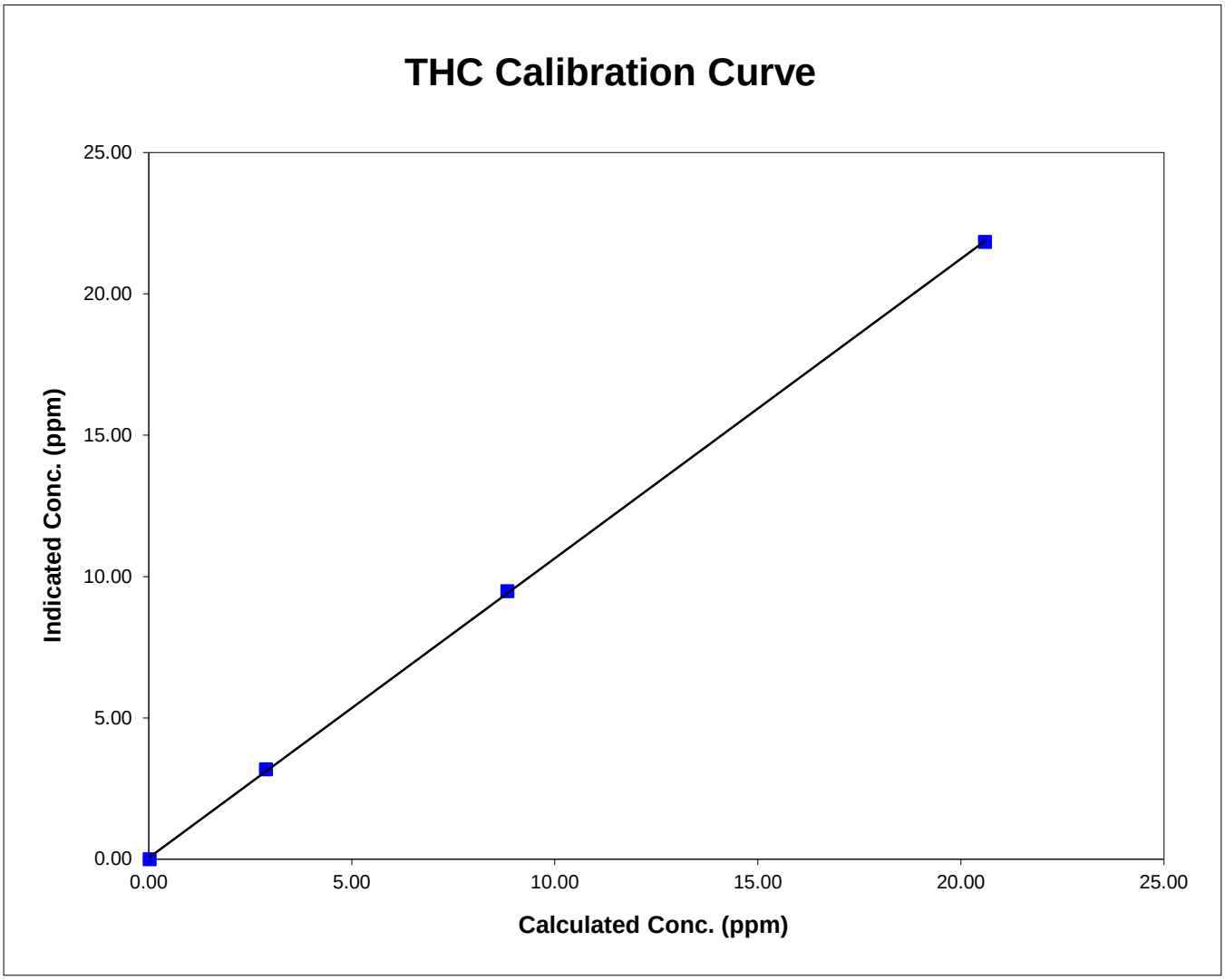
Air Monitoring Network **PAZA**

Station Information

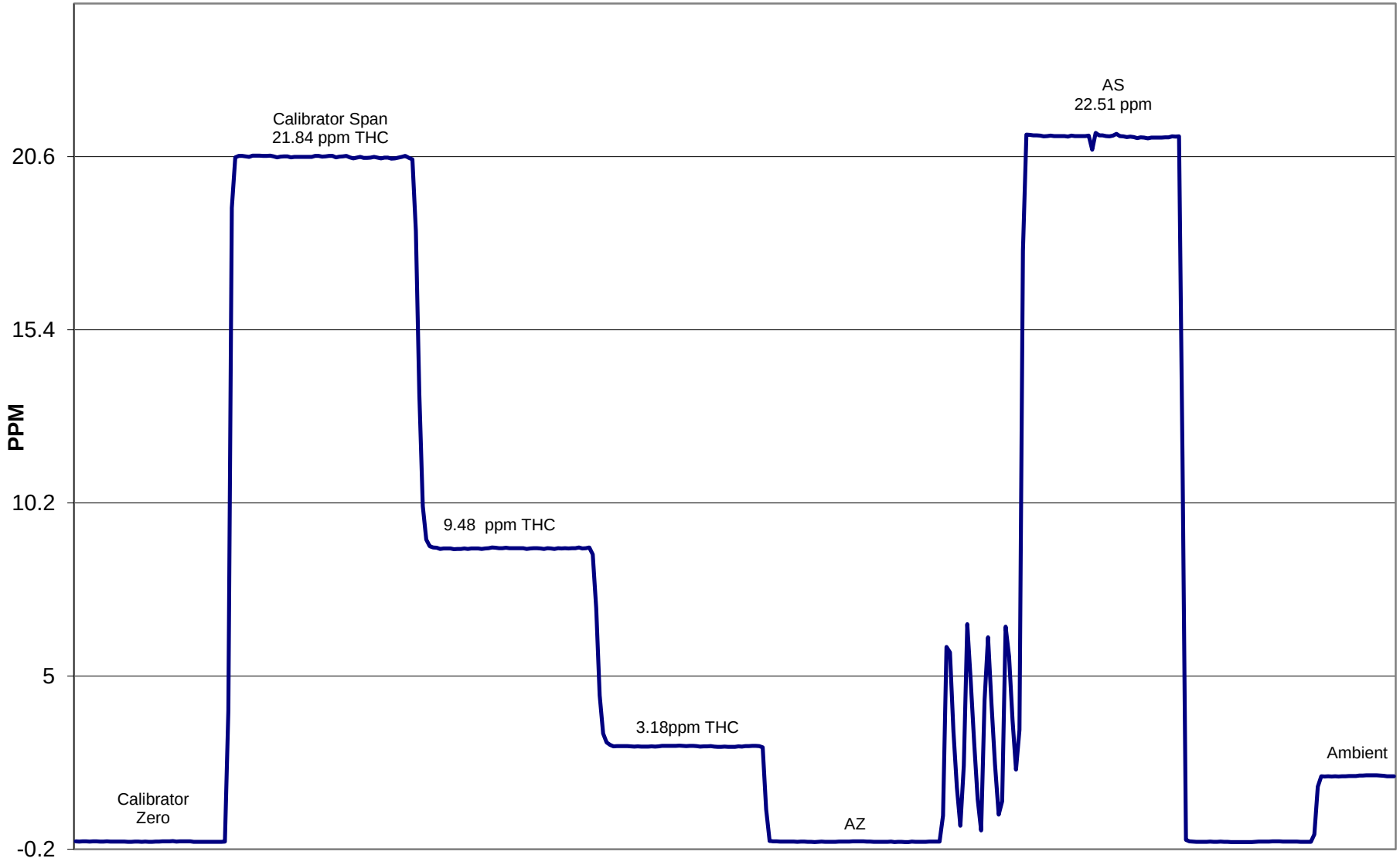
Calibration Date	September 24, 2012	Previous Calibration	September 4, 2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:20	End Time (MST)	14:40:00 PM
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.028	N/A		
21.835	20.597	1.0601	Correlation Coefficient	0.999942
9.476	8.835	1.0725		
3.178	2.890	1.0995	Slope	1.059039
			Intercept	0.057365



THC Calibration



September 24, 2012

Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 05,2012	Previous Calibration	August 08,2012
Station Number	1	Station Location	Henry Pirker
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	12:45	End Time (MST)	15:40
Barometric Pressure	0.922 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	10.1 ppb	Cal Gas Expiry Date	11/5/2013
		Cal Gas Cylinder #	LL160692
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.996323	Calculated slope	1.023160
Calculated intercept	0.159892	Calculated intercept	0.211845
Analyzer make	TEI 45C	Analyzer serial #	630718528

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.132		1.32	
Background	11.4		11.4	
Pressure	661.7	mm Hg	660.8	mm Hg
Flow	0.454	ccm	0.456	ccm
Lamp Voltage	820	V	819	V

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)		Correction factor (Cc/Ic)
4995	0.00	0.00	-0.19	N/A
4995	39.93	80.10	78.00	1.0269
4995	19.95	40.18	39.24	1.0239
8995	8.94	10.03	9.47	1.0591
4995	0.00	0.00	-0.19	As Found Zero
4995	39.93	80.10	78.00	As Found Span
			Average Correction Factor	1.0366

Calculated value of As Found Response: 78.1 ppb Percent Change of As Found: 2.5%

	before calibration		after calibration	
Auto zero	-0.29	ppb	0.54	ppb
Auto span	33.10	ppb	35.16	ppb

Notes: Slow response noted.

Calibration Performed By: Stephanie Tandy

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

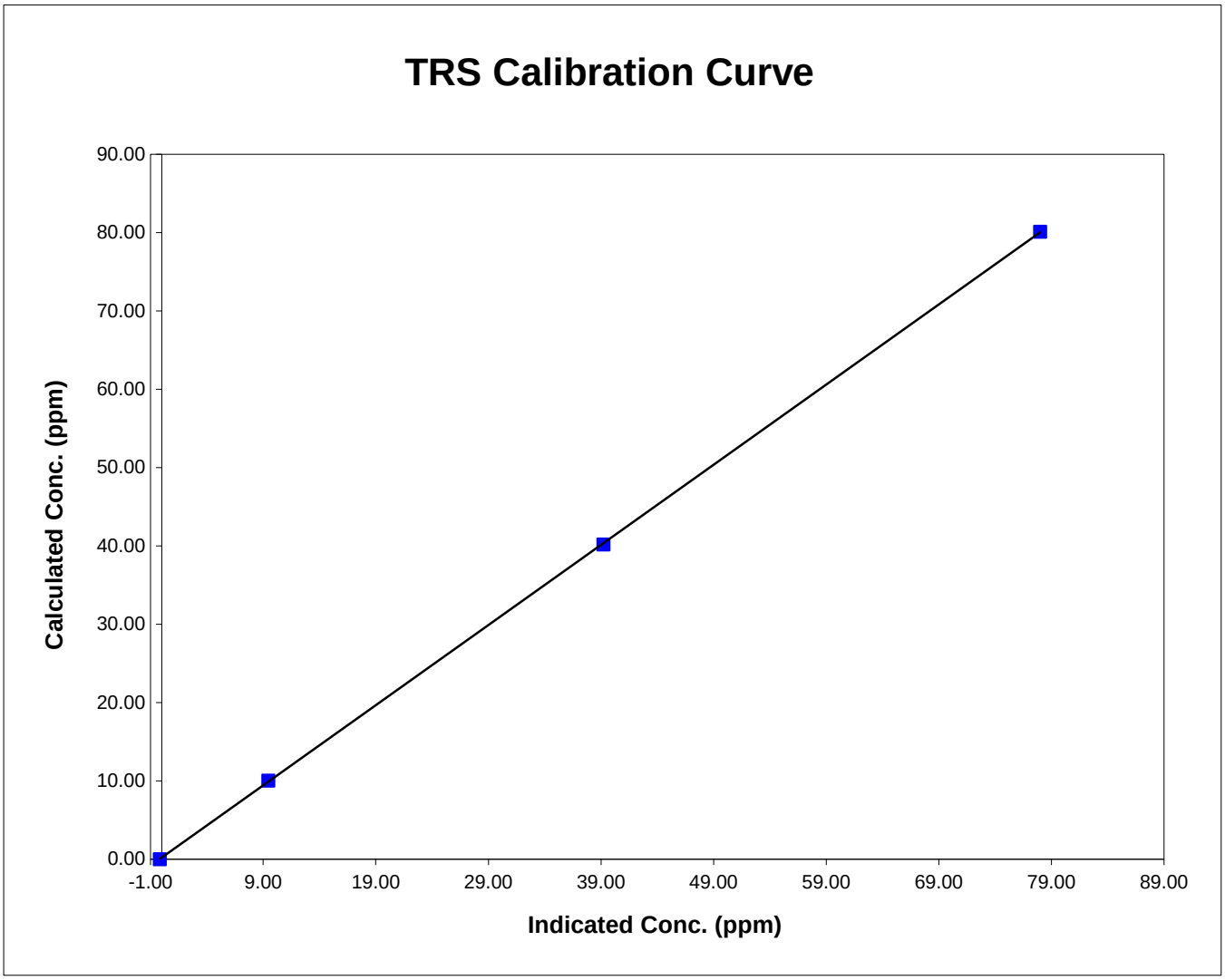
FOCUS AIR QUALITY MONITORING

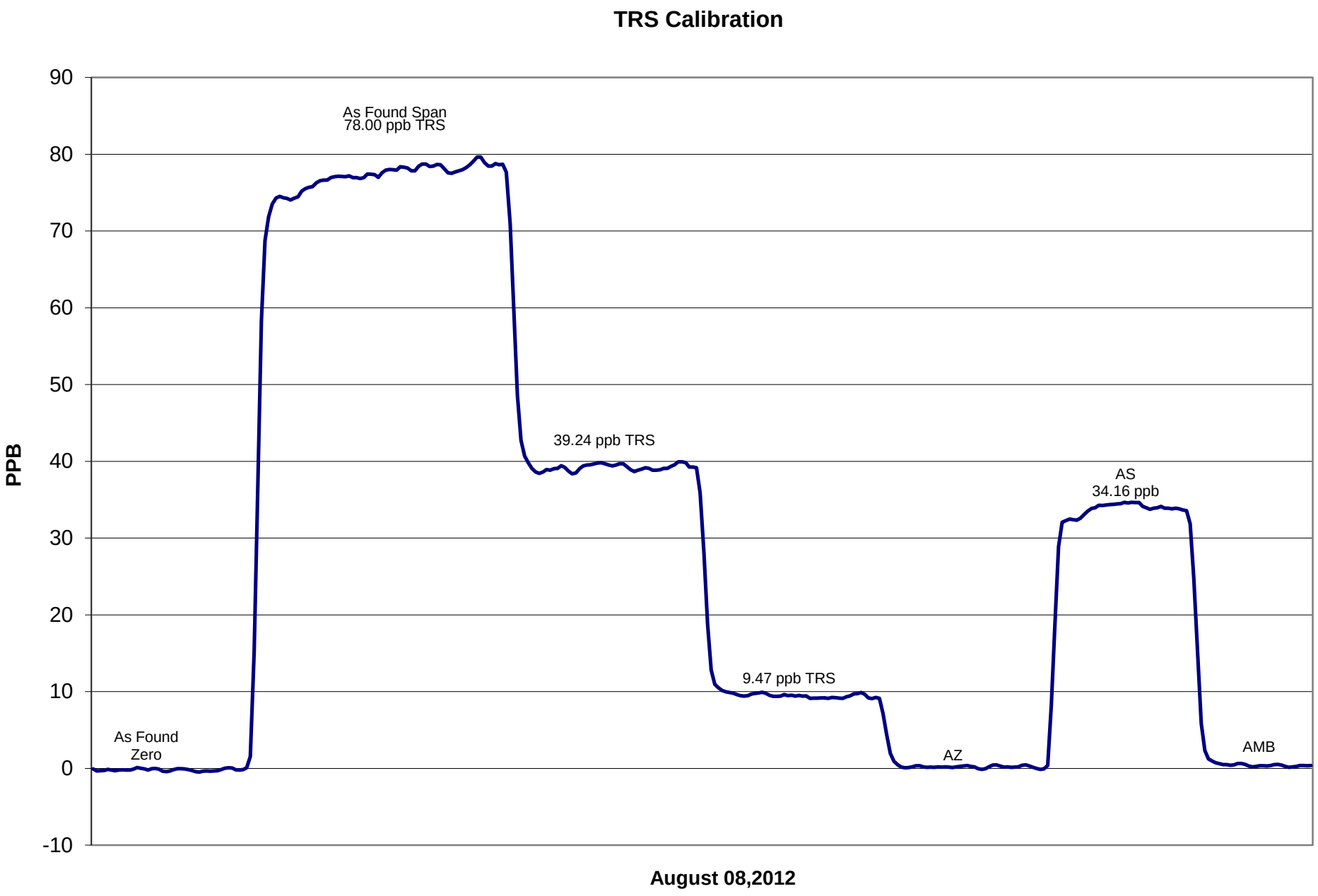
Station Information

Calibration Date	September 05,2012	Previous Calibration	August 08,2012
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:45	End Time (MST)	15:40
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	-0.186	N/A		
80.099	78.004	1.0269	Correlation Coefficient	0.999985
40.179	39.242	1.0239		
10.028	9.469	1.0591	Slope	1.023160
			Intercept	0.211845




TRS Calibration
90
80
70
60
50
40
30
20
10
0
-10
PPB
As Found Span
78.00 ppb TRS
39.24 ppb TRS
9.47 ppb TRS
AS
34.16 ppb
As Found
Zero
AZ
AMB
August 08,2012

Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 14, 2012	Previous Calibration	August 23, 2012
Station Number	2	Station Location	Evergreen Park
Reason: Routine	Install	Removal	Other:

Start Time (MST)	9:55	End Time (MST)	11:45
Barometric Pressure	0.920 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Concentratior	50.8 ppm	Cal Gas Expiry Date	3/12/2014
Correction factor	0.031273	Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.993784	Calculated slope	0.995192
Calculated intercept	1.198922	Calculated intercept	2.098470

Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.2		11.1	
coefficient	1.186		1.171	
Lamp Voltage	822	volts	824	volts
Chamber Temp	44.8	Deg C	45.2	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	667.7	mm Hg	667.7	mm Hg
Sample Flow	0.449	ccm	0.446	ccm
Lamp Intensity	89	%	90	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.0	N/A
4995	39.93	402.9	403.7	0.9979
4995	19.97	202.3	200.1	1.0107
4995	9.97	101.2	97.4	1.0388
4995	0.0	0.0	0.0	As Found Zero
4995	39.93	402.9	398.1	As Found Span
			Average Correction Factor	1.0158

Calculated value of As Found Response: 396.771 ppm Percent Change of As Found: 1.5%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	287.4	ppm	288.1	ppm

Notes: Slight adjust up on 80% point.

Calibration Performed By: Stephanie Tandy

Calibration Summary

Parameter **SO2**

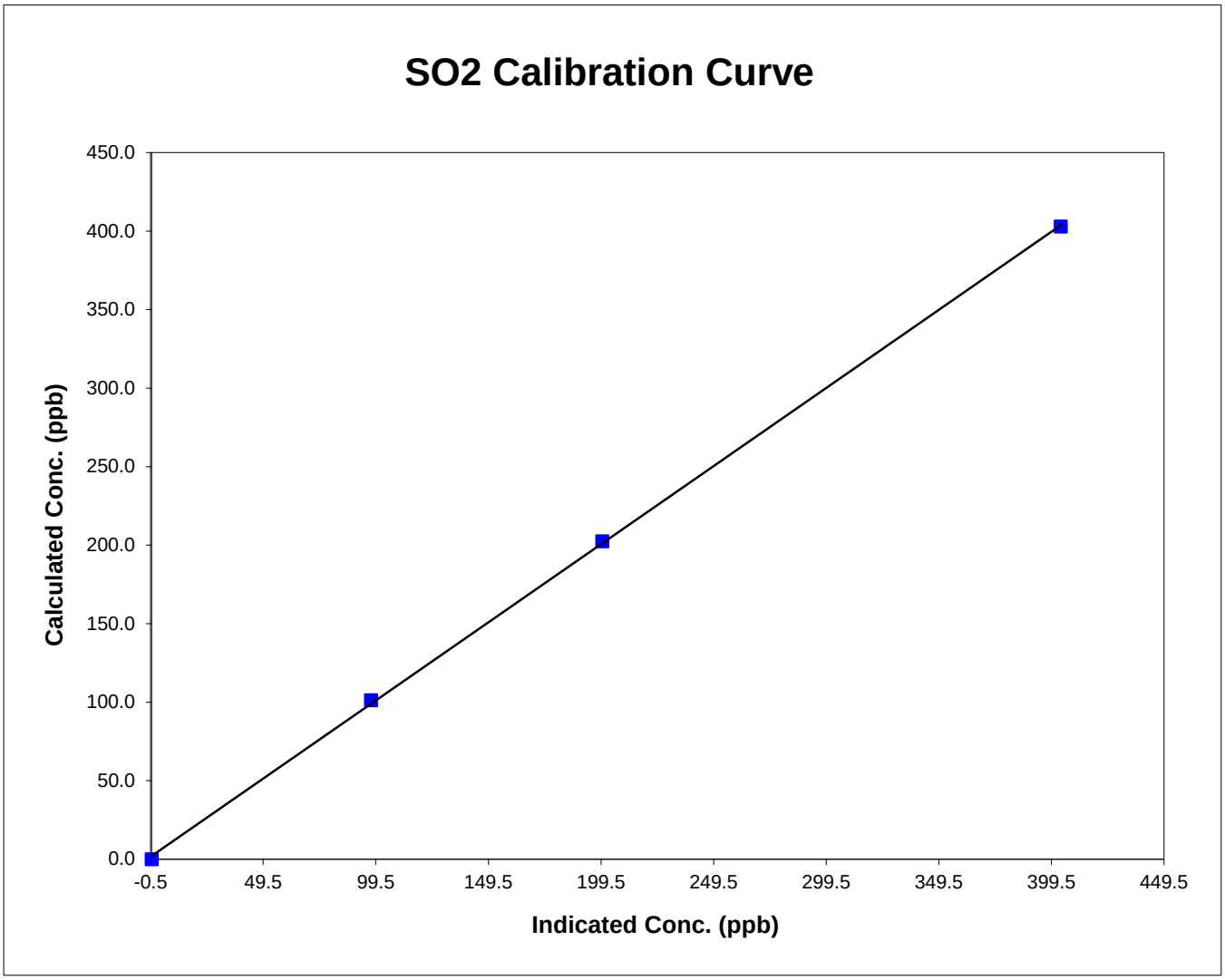
Air Monitoring Network **PAZA**

Station Information

Calibration Date	September 14, 2012	Previous Calibration	August 23, 2012
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	9:55	End Time (MST)	11:45
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

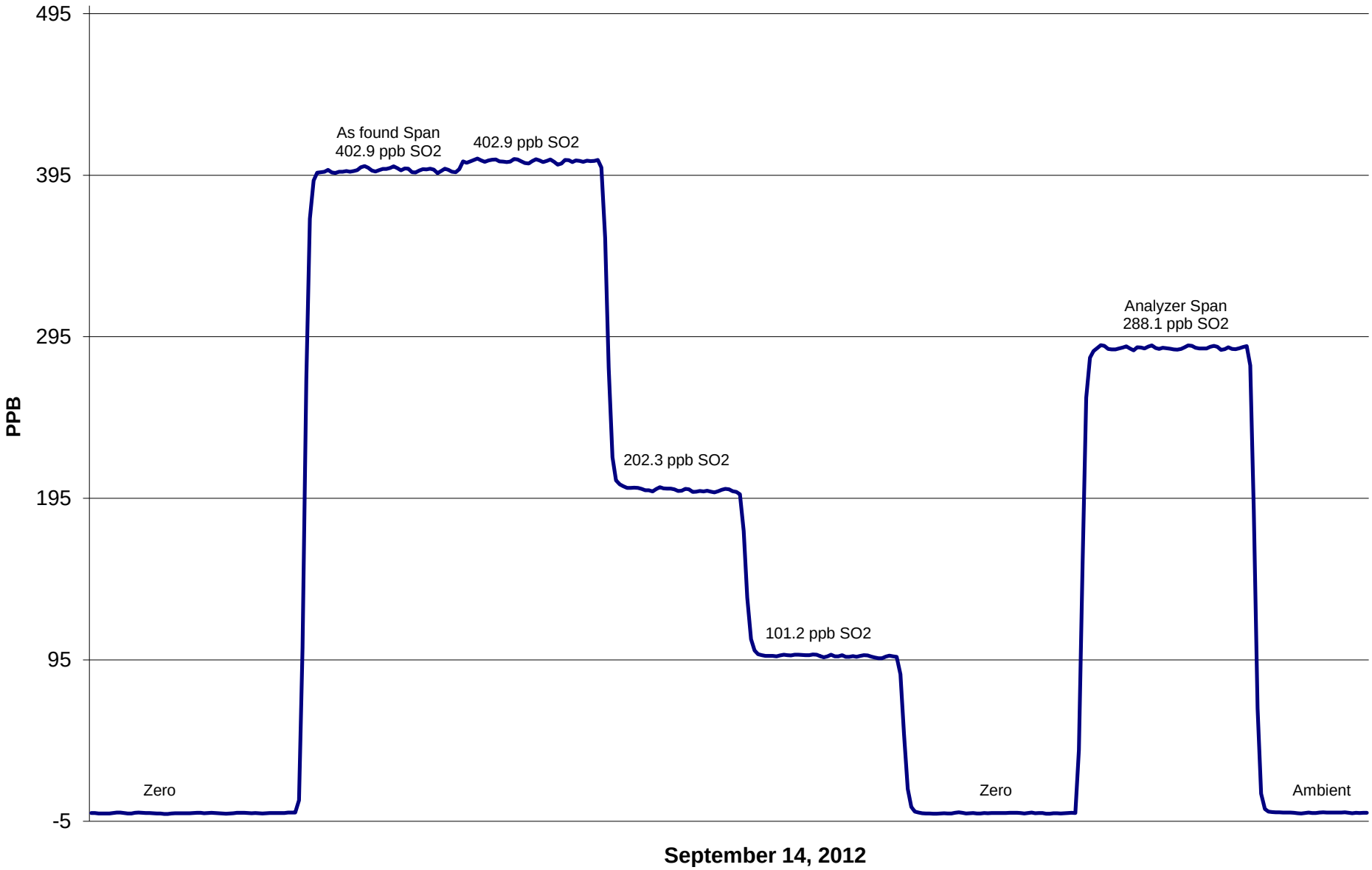
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
402.9	403.7	0.9979	Correlation Coefficient	0.999873
202.3	200.1	1.0107		
101.2	97.4	1.0388	Slope	0.995192
			Intercept	2.098470



202.1 ppb SO2

SO2 Calibration



Calibration Report

Parameter **TRS**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 14, 2012	Previous Calibration	August 23, 2012
Station Number	2	Station Location	Evergreen Park

Reason: Routine | Install | Removal | Other:

Start Time (MST)	10:35	End Time (MST)	14:35
Barometric Pressure	0.920 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics	Serial Number	3474
Cal Gas Conc	10.1 ppm	Cal Gas Expiry Date	5/11/2013
Correction factor	0.031273	Cal Gas Cylinder #	LL160692
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	1.019442	Calculated slope	0.999710
Calculated intercept	0.047402	Calculated intercept	-0.251029

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	32.1	ppb	32	ppb
coefficient	1.019		1.019	
Lamp Voltage	1006	volts	993	volts
Chamber Temp	44.1	Deg C	44.1	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	638.1	mm Hg		mm Hg
Sample Flow	0.599	ccm	0.589	ccm
Lamp Intensity	320,040	mv	32,271	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.6	N/A
4995	39.93	80.10	80.5	0.9946
4995	19.96	40.20	40.2	1.0002
8995	8.97	10.06	10.1	0.9943
4995	0.00	0.00	0.6	As Found Zero
4995	39.95	80.14	78.9	As Found Span
			Average Correction Factor	0.9964

Calculated value of As Found Response: 79.85 ppm Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.6	ppm
Auto span	81.6	ppm	82.7	ppm

Notes: **Slight adjust up on 80% point.**

Calibration Performed By: Stephanie Tandy

Calibration Summary

Parameter **TRS**

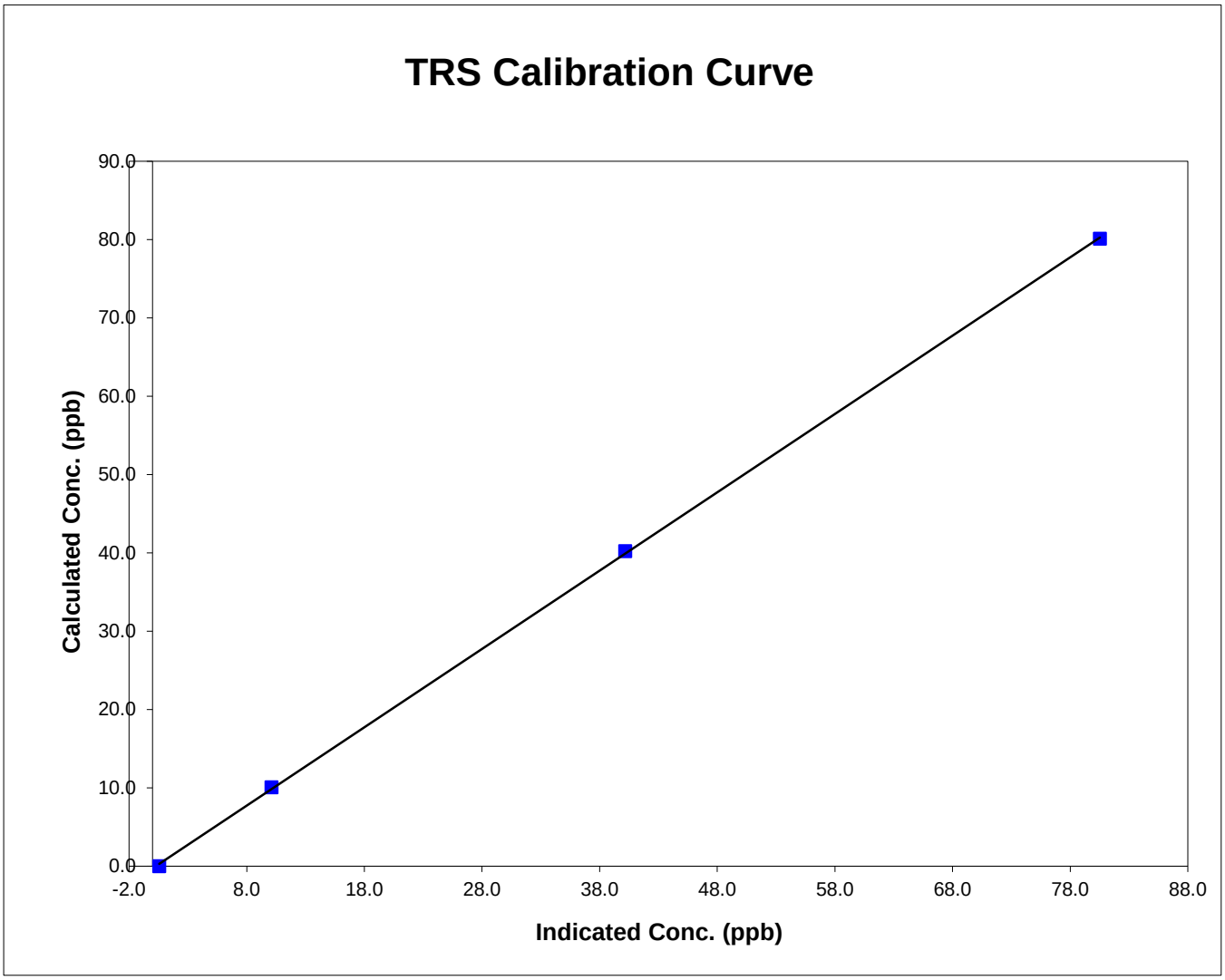
Air Monitoring Network **PAZA**

Station Information

Calibration Date	September 14, 2012	Previous Calibration	August 23, 2012
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:35	End Time (MST)	14:35
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

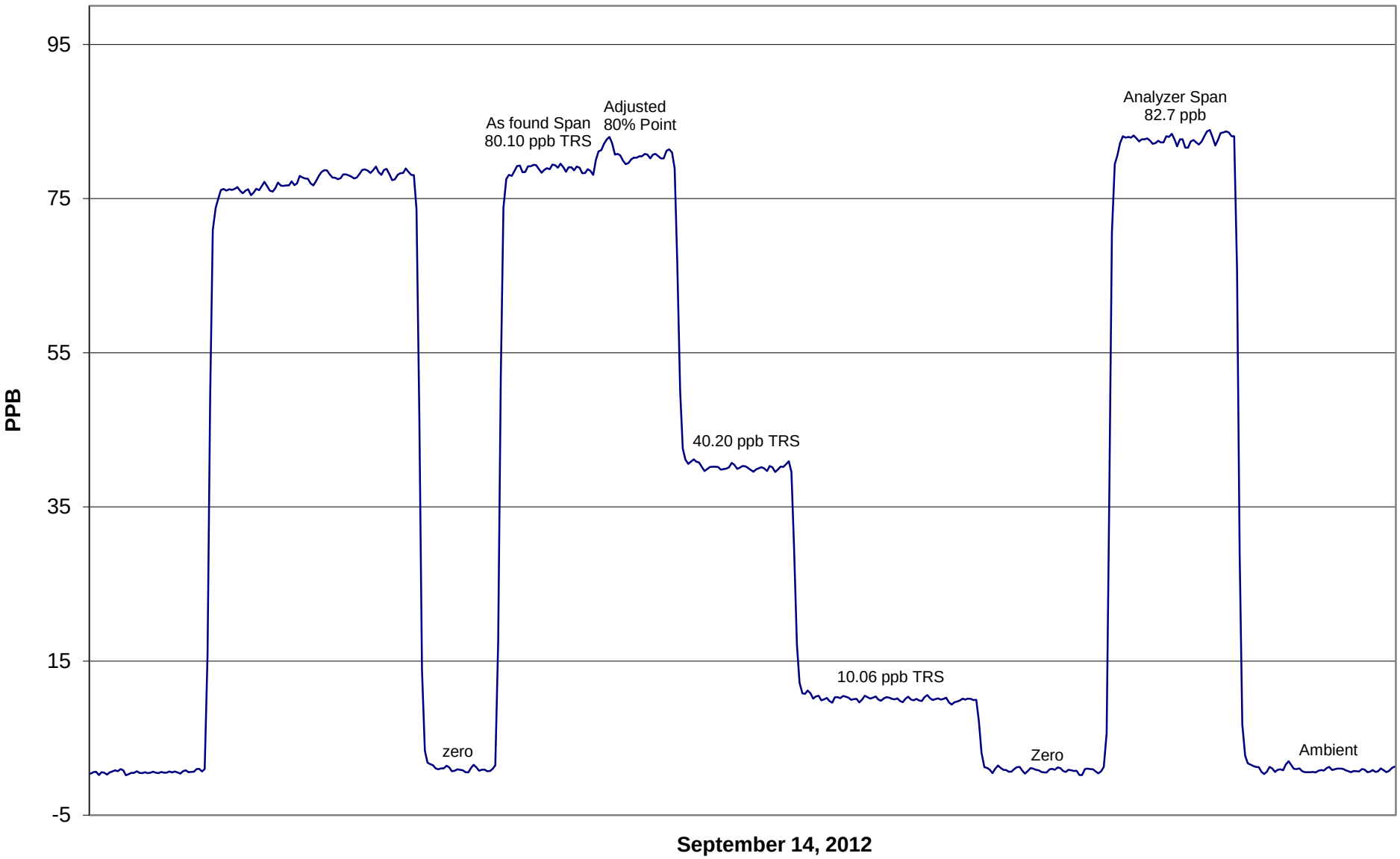
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A		
80.1	80.5	0.9946	Correlation Coefficient	0.999940
40.2	40.2	1.0002		
10.1	10.1	0.9943	Slope	0.999710
			Intercept	-0.251029



As found Span
80.10 ppb TRS

TRS Calibration



Calibration Report

Parameter **SO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 25, 2012	Previous Calibration	August 24, 2012
Station Number	3	Station Location	Smokey Heights
Reason: Routine	Install	Removal	Other:

Start Time (MST)	10:46	End Time (MST)	13:43
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentratior	50.8 ppm	Cal Gas Cert Date	3/12/2014
Correction factor	0.031511	Cal Gas Cylinder #	LL107272
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.996559	Calculated slope	0.997730
Calculated intercept	2.189114	Calculated intercept	2.055317

Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	10.8		10.8	
coefficient	0.975		0.975	
Lamp Voltage	918	volts	918	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	670.8	mm Hg	670.4	mm Hg
Sample Flow	0.449	ccm	0.449	ccm
Lamp Intensity	88	%	88	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.3	N/A
4995	39.93	402.87	402.8	1.0002
4995	19.97	202.29	199.7	1.0128
4995	9.97	101.19	96.9	1.0439
4995	0.0	0.00	0.3	As Found Zero
4995	39.93	402.87	402.8	As Found Span
			Average Correction Factor	1.0190

Calculated value of As Found Response: 403.321 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.2	ppb
Auto span	304.5	ppb	260.6	ppb

Notes:

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **SO2**

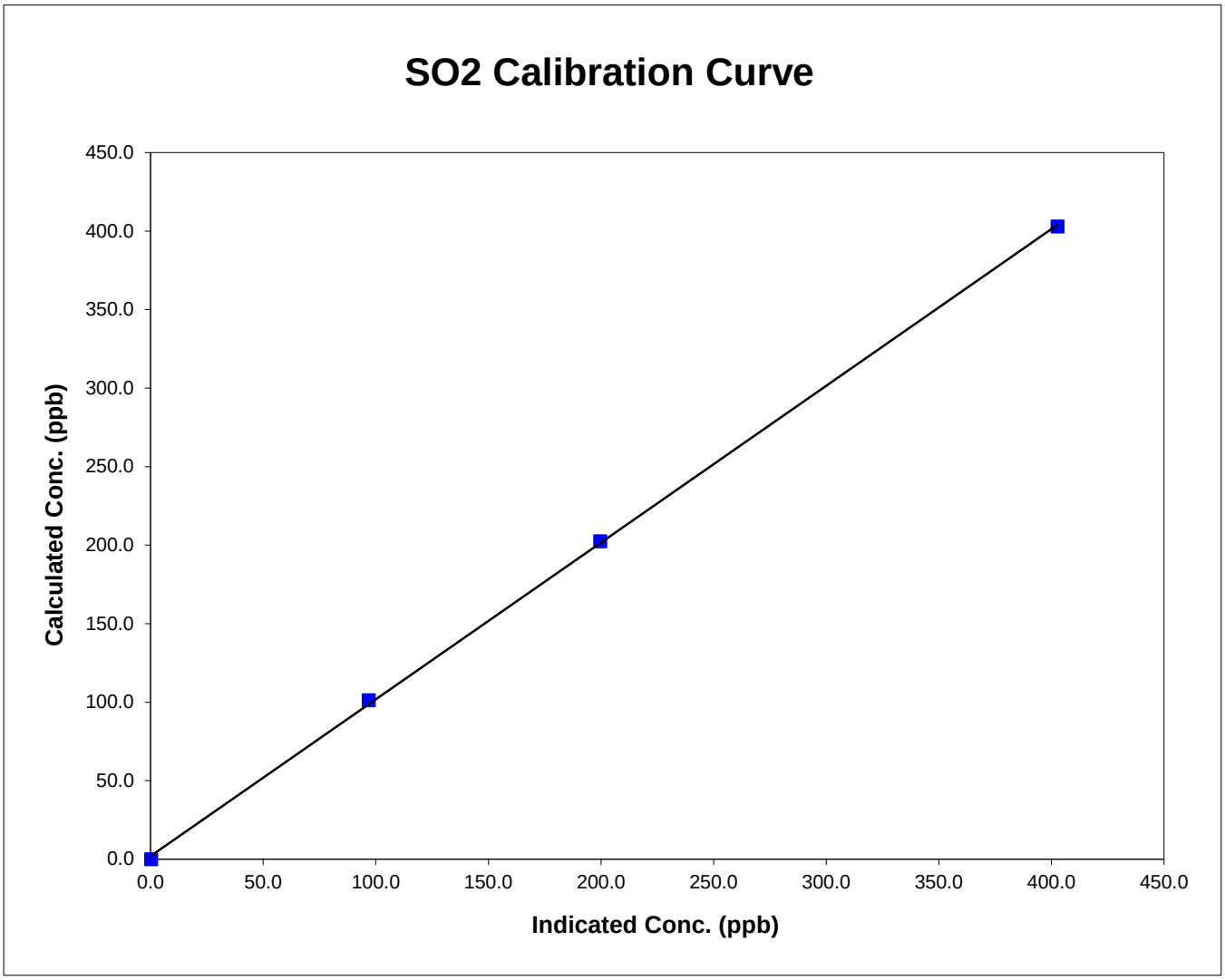
Air Monitoring Network **PAZA**

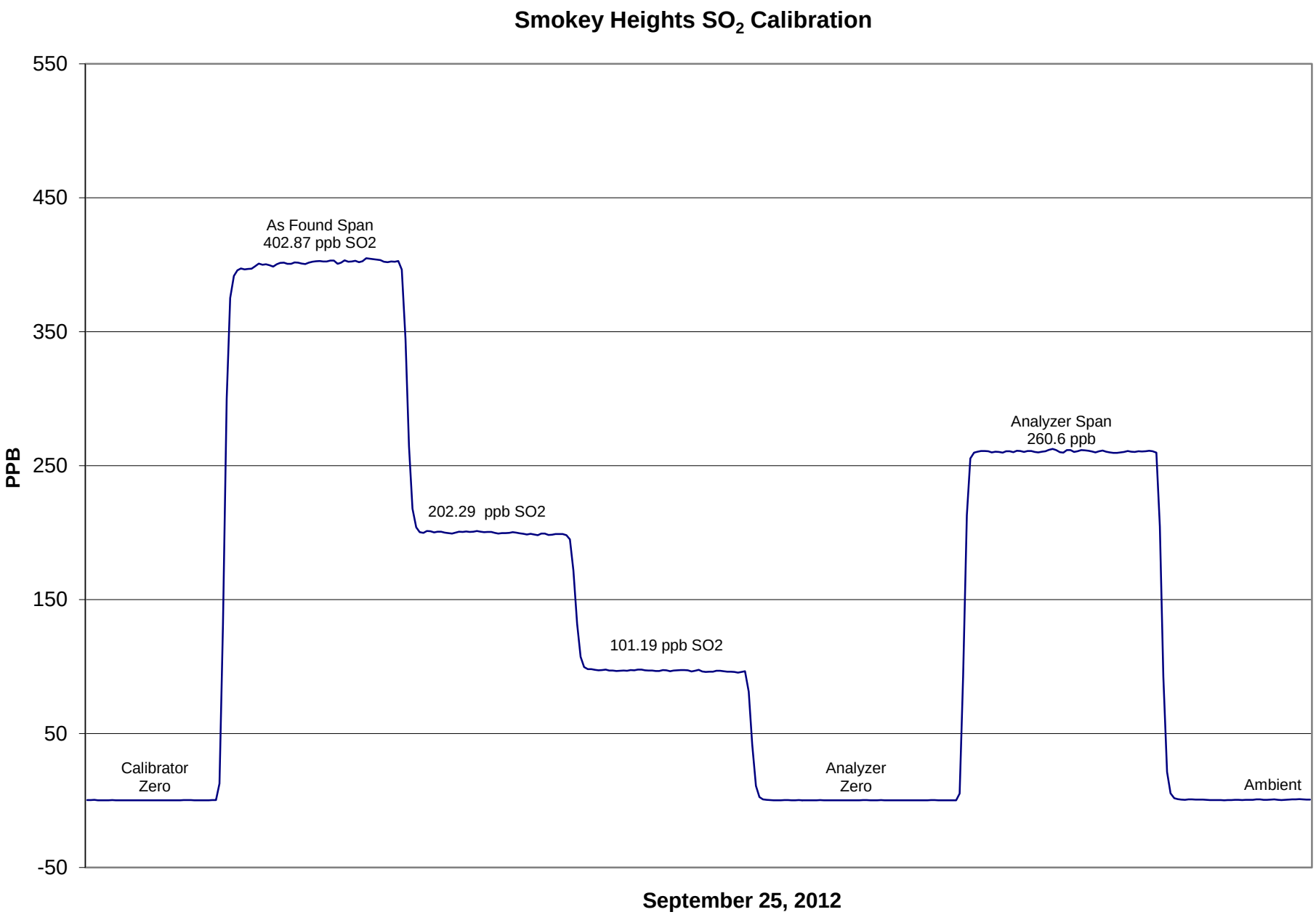
Station Information

Calibration Date	September 25, 2012	Previous Calibration	August 24, 2012
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:46	End Time (MST)	13:43
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
402.9	402.8	1.0002	Correlation Coefficient	0.999851
202.3	199.7	1.0128		
101.2	96.9	1.0439	Slope	0.997730
			Intercept	2.055317




Smokey Heights SO_2 Calibration
550
450
350
250
150
50
-50
PPB
As Found Span
402.87 ppb SO2
202.29 ppb SO2
101.19 ppb SO2
Analyzer Span
260.6 ppb
Calibrator
Zero
Analyzer
Zero
Ambient
September 25, 2012

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

Air Monitoring Network **PAZA**

Station Information

Calibration Date	September 25, 2012	Previous Calibration	July 29, 2012
Station Number	3	Station Location	Smokey Heights
Reason: Routine	Install	Removal	Other: Maintenance

Start Time (MST)	7:36	End Time (MST)	12:06
Barometric Pressure	0.925 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Conc	10.1 ppm	Cal Gas Expiry Date	5/11/2013
Correction factor	0.031443	Cal Gas Cylinder #	LL160692
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.988649	Calculated slope	1.013371
Calculated intercept	0.386148	Calculated intercept	-0.055477

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005

	before		after	
Concentration range	100	ppb	100	ppb
Background	17.8	ppb	17.8	ppb
coefficient	0.933		0.933	
Lamp Voltage	805	volts	805	volts
Chamber Temp	43.5	Deg C	43.5	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	554.6	mm Hg	541	mm Hg
Sample Flow	0.592	ccm	0.582	ccm
Lamp Intensity	35,472	mv	35,472	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.2	N/A
4995	39.94	80.12	79.2	1.0118
4995	19.97	40.22	39.6	1.0145
8995	8.96	10.05	9.8	1.0220
4995	0.0	0.00	0.4	As Found Zero
4995	39.94	80.12	79.2	As Found Span
			Average Correction Factor	1.0161

Calculated value of As Found Response: 78.29 ppm Percent Change of As Found: 2.3%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.2	ppm
Auto span	52.9	ppm	32.3	ppm

Notes: No adjustment. Calibrator issue briefly interupted after 80% point.

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter **TRS**

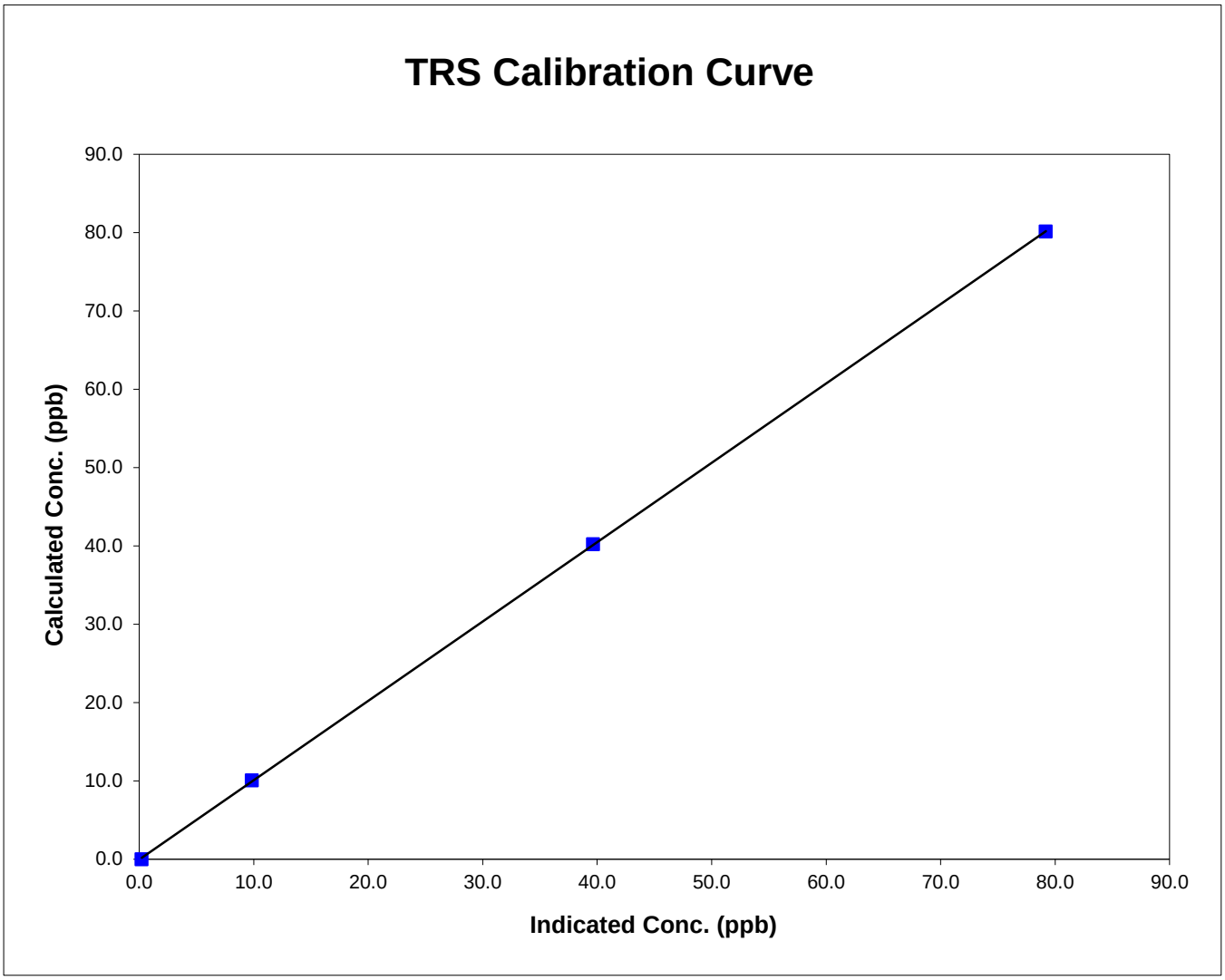
Air Monitoring Network **PAZA**

Station Information

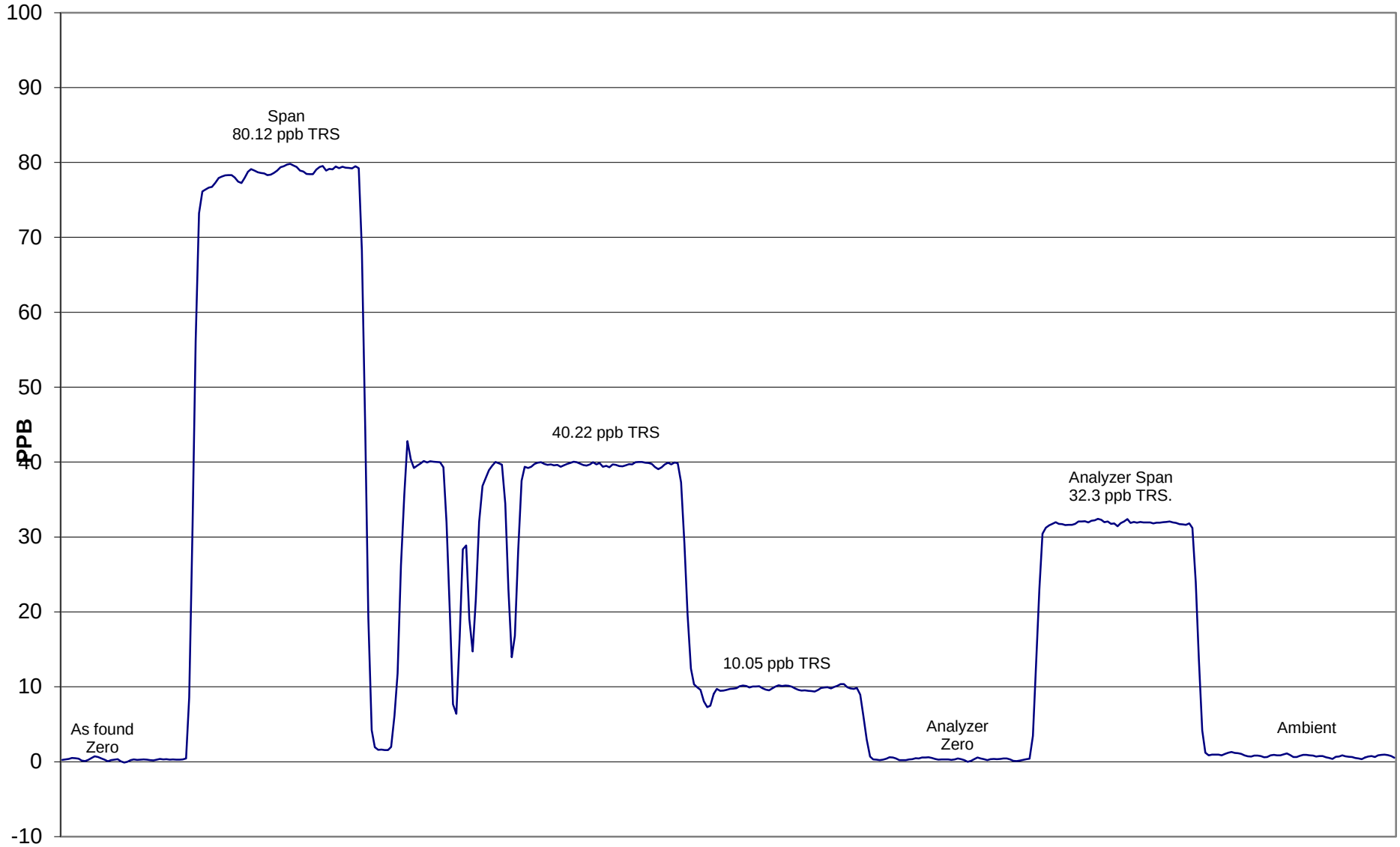
Calibration Date	September 25, 2012	Previous Calibration	July 29, 2012
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	7:36	End Time (MST)	12:06
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
80.1	79.2	1.0118	Correlation Coefficient	0.999984
40.2	39.6	1.0145		
10.1	9.8	1.0220	Slope	1.013371
			Intercept	-0.055477



Smokey Heights TRS Calibration



September 25, 2012

AB TEOM PM2.5 Calibration

FOCUS AIR QUALITY MONITORING

STATION: **Smokey Heights**

LOCATION: PASZA - Grande Prairie

OPERATOR: Grover Christansen

DATE: 25-Sep-12

MONITOR INFO / PARAMETER VALUES:

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

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

RECENT CALIBRATION AND AUDIT HISTORY

Previous Audit	27-Aug-12
Previous Calibration	NA

PUMP CAPACITY CHECK *	PASS

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

"FAIL" indicates that pump requires service.

LEAK CHECK	Indicated Flow (lpm)	
	Main	Auxiliary
PUMP ON	0.010	0.050
PUMP OFF	0.010	-0.070
NET	0.000	0.120
LIMITS	*<0.15*	*<0.60*

		Ambient Temp. (^{0} C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
	SET POINT (S)	na	na	12122	13.67	3.000
	INDICATED (I)	10.7	0.931		13.69	3.000
As Found Data	MEASURED (AF)	10.5	0.930		13.60	3.009
Adjusted Data	MEASURED (M)	10.5	0.930	12102	13.68	3.009
	DIFFERENCE (M-I)	-0.2	-0.001	-0.2%	0.07	0.01
	LIMITS	*± 2 ^{0} C*	*± 0.005 atm*	*± 2.5 %*	*± 1.0 L/min*	*± 0.2 L/min*

Ko Audit Filter data *Weight:* 0.11251 *Serial #:* *CVK 3316*

COMMENTS: PASS

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

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 6, 2012	Previous Calibration	August 16, 2012
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	13:55	End Time (MST)	16:30
Barometric Pressure	0.918 atm	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	10.8 ppm	Cal Gas Expiry Date	9/28/2012
Gas Cert Reference	FF14871		
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.981885	Calculated slope	1.003875
Calculated intercept	0.105477	Calculated intercept	-0.010095
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.41		2.39	
Coefficient	1.071		1.071	
PMT	-767.8	V	-767.6	V
UV Lamp Voltage	1050	V	1046	V
Chamber Temp	45	Deg C	45.2	Deg C
Pressure	664	mm Hg	668.8	mm Hg
Sample Flow	0.483	LPM	0.487	LPM
Lamp Intesity	97%	%	96%	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.2	N/A
4995	39.93	85.7	85.4	1.0032
4995	19.97	43.0	42.9	1.0030
4995	9.97	21.5	21.2	1.0150
4995	0.00	0.0	0.2	As found zero
4995	39.93	85.7	85.4	As found span
			Average Correction Factor	1.0071

Calculated value of As Found Response: 83.758 ppm Percent Change of As Found: 2.2%

	before calibration		after calibration	
Auto zero	0.3	ppb	0.2	ppb
Auto span	58.5	ppb	59.9	ppb

Notes: No adjustments made.

Calibration Performed By: Stephanie Tandy

Calibration Summary

Parameter **SO2**

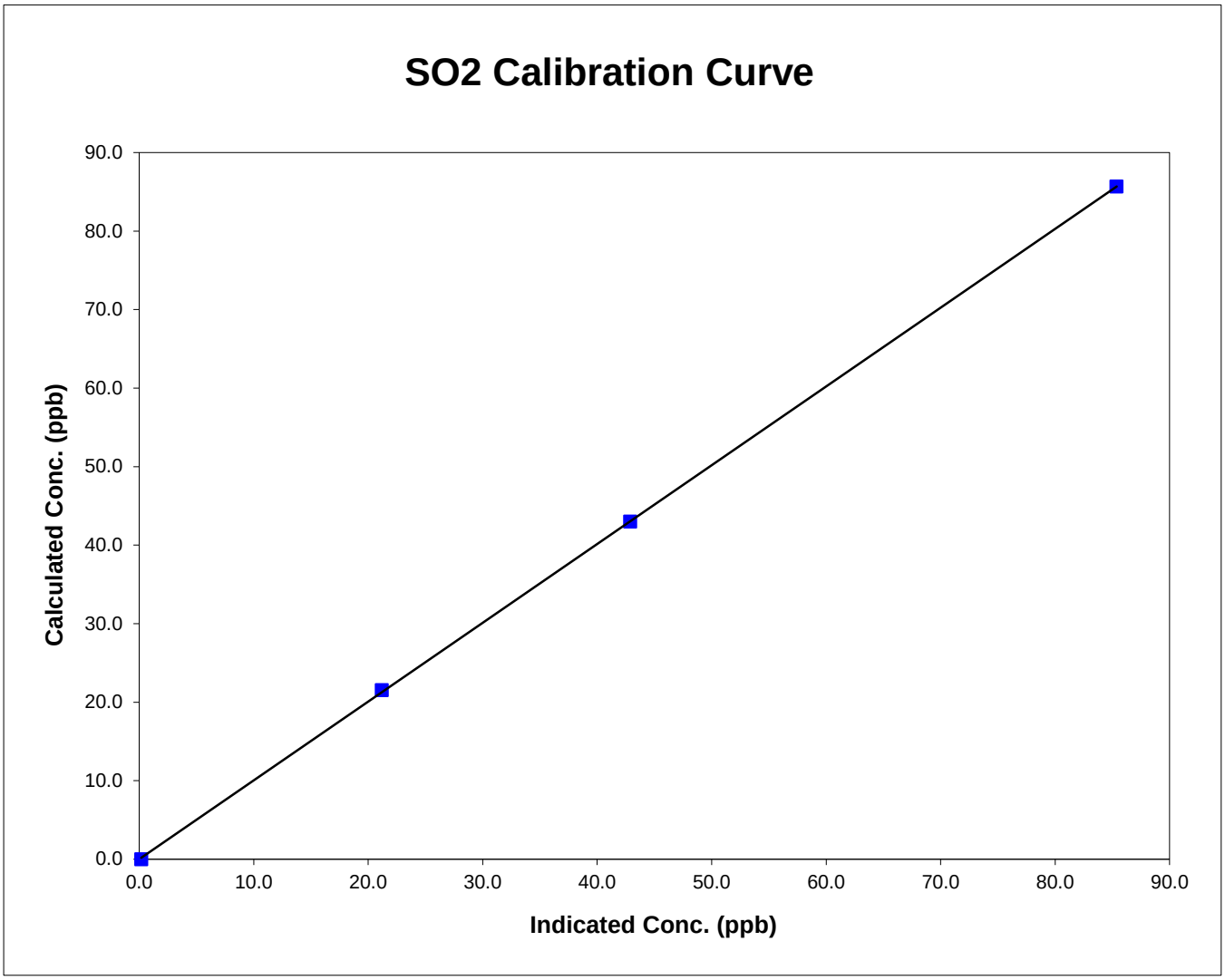
Air Monitoring Network **PAZA**

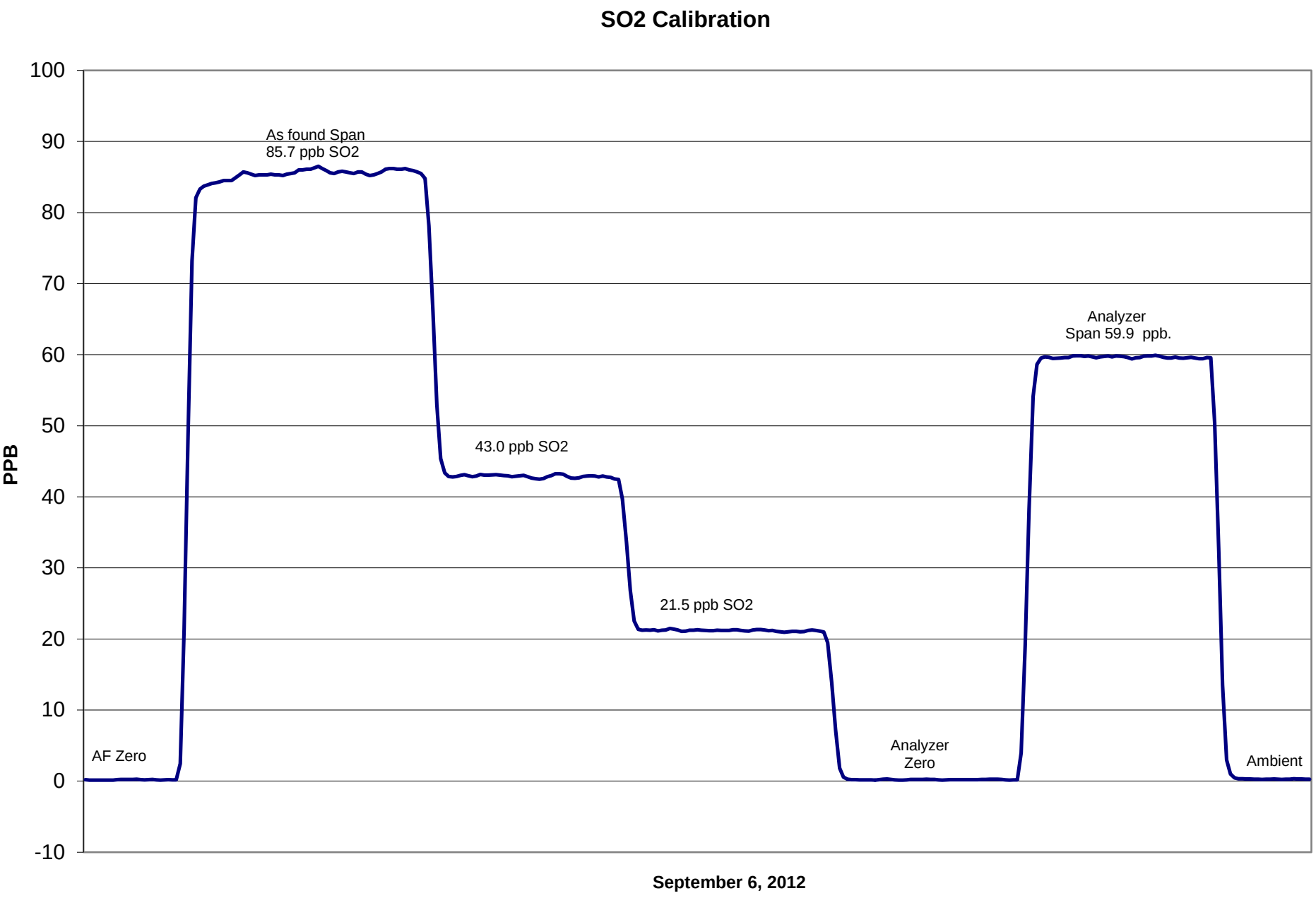
Station Information

Calibration Date	September 6, 2012	Previous Calibration	August 16, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:55	End Time (MST)	16:30
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		
85.7	85.4	1.0032	Correlation Coefficient	0.999977
43.0	42.9	1.0030		
21.5	21.2	1.0150	Slope	1.003875
			Intercept	-0.010095




SO2 Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As found Span
85.7 ppb SO2
43.0 ppb SO2
21.5 ppb SO2
Analyzer
Span 59.9 ppb.
AF Zero
Analyzer
Zero
Ambient
September 6, 2012

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 6, 2012	Previous Calibration	August 16, 2012
Station Number	4	Station Location	Beaverlodge

Reason: Routine Installation Removal Other:

Start Time (MST)	8:30		End Time (MST)	13:30	
Barometric Pressure	0.916	Atm	Station Temperature	23.0	Deg C
Calibrator	Environics		Serial Number	2844	
NO Cal Gas Conc	51.2	ppm	Cal Gas Expiry Date	March 12, 2014	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL107272	

DACS Information

DACS make: CR3000 DACS serial No.: 5237

Parameter		NO2	NOx	NO
Before	Data Slope	0.997105	0.997494	0.999148
	Data Offset	0.132207	1.653389	1.525301
After	Data Slope	1.003083	0.995540	0.998107
	Data Offset	1.010524	1.865759	1.738605
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	2.0	mV	2.1	mV
NOx bkgnd	2.5	mV	2.6	mV
NO coefficient	1.357		1.396	
NOx coefficient	1.002		0.997	
NO2 conv temp	324.5325.0	Deg C	326.0	Deg C
PMT Temp	-2.9	Deg C	-2.8	Deg C
PMT Volt	-671.2	mV	-671.9	mV
R Cell Press	168.1	in Hg	167.8	in Hg
Sample Flow	0.804	ccm	0.803	ccm

Notes: Slight Adjust up on 80% point.

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: September 6, 2012 Station Location: Beaverlodge

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	-0.1	-0.1	-0.2	N/A	N/A
1	4995	39.94	406.1	406.1	0.0	406.9	406.0	0.1	0.9982	1.0004
2	4995	19.97	203.9	203.9	0.0	202.3	201.7	-0.3	1.0080	1.0108
3	4995	9.97	102.0	102.0	0.0	98.7	98.8	-0.2	1.0337	1.0325
AFZ	4995	0.00	0.0	0.0	0.0	-0.1	-0.1	-0.2	0.0000	0.0000
AFS	4995	39.94	406.1	406.1	0.8	399.2	398.3	0.2	1.0174	1.0197
							Average Correction Factor		1.0133	1.0145

As Found Concentrations: NO_X= 400.9 NO= 399.9 As Found Percent Change NO_X= -1.3% NO= -1.5%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.94 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.1	-0.1	0.0	-0.1	-0.1	-0.2	N/A	N/A	N/A	N/A
NO point	406.7	406.7	0.0	406.2	406.7	-0.5	1.0011	1.0000	N/A	N/A
300	406.7	106.2	300.5	406.1	106.2	299.3	1.0015	1.0000	1.0042	99.6%
200	406.7	201.8	204.9	405.4	201.8	202.8	1.0030	1.0000	1.0103	99.0%
100	406.7	299.4	107.2	404.8	299.4	104.8	1.0046	1.0000	1.0228	97.8%
					Average Correction Factor		1.0031	1.0000	1.0124	98.8%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	-0.1	0.0	ppb	-0.2	-0.3	-0.1	ppb
Auto span	205.5	203.2	1.6	ppb	204.8	202.7	1.4	ppb

Calibration Performed By: Stephanie Tandy

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

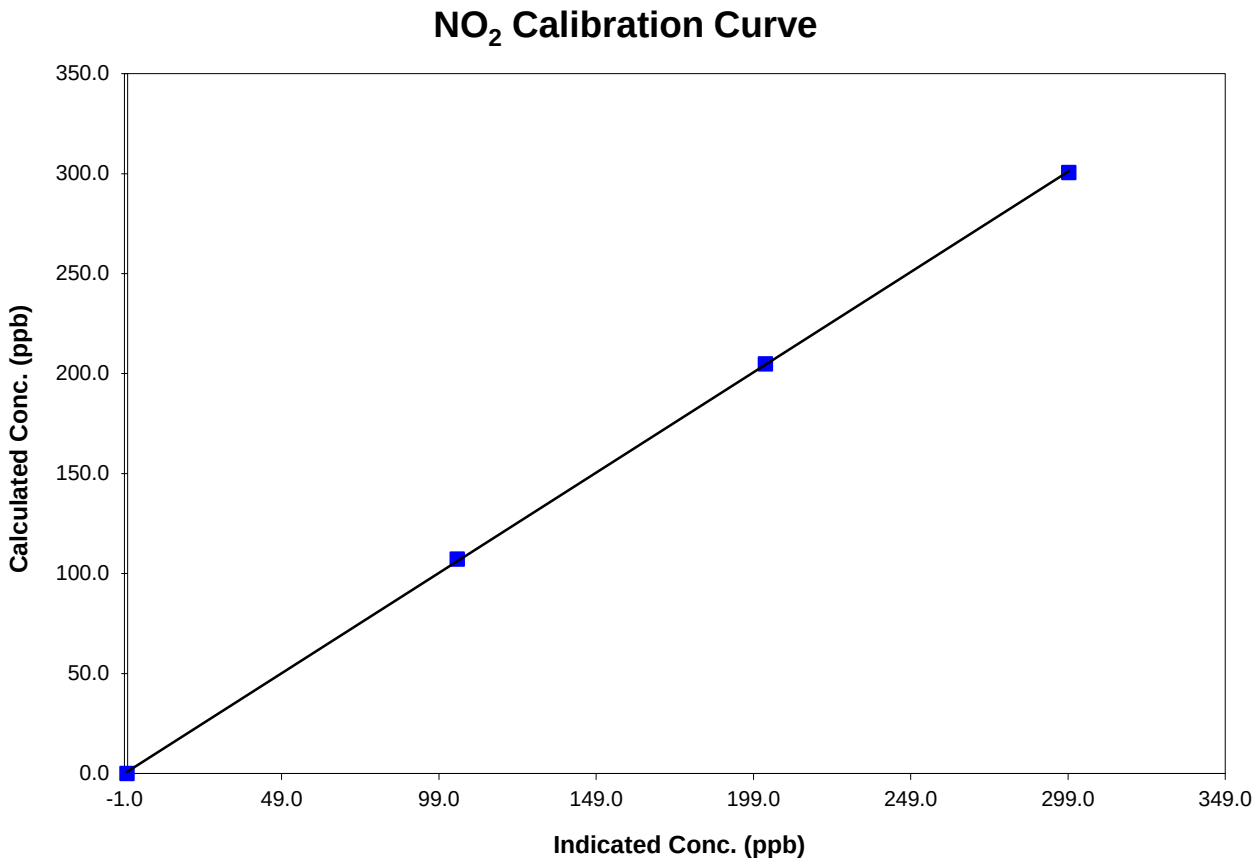
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 6, 2012	Previous Calibration	August 16, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:30	End Time (MST)	13:30
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	-0.2	N/A		
300.5	299.3	1.0042	Correlation Coefficient	0.999950
204.9	202.8	1.0103		
107.2	104.8	1.0228	Slope	1.003083
			Intercept	1.010524



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

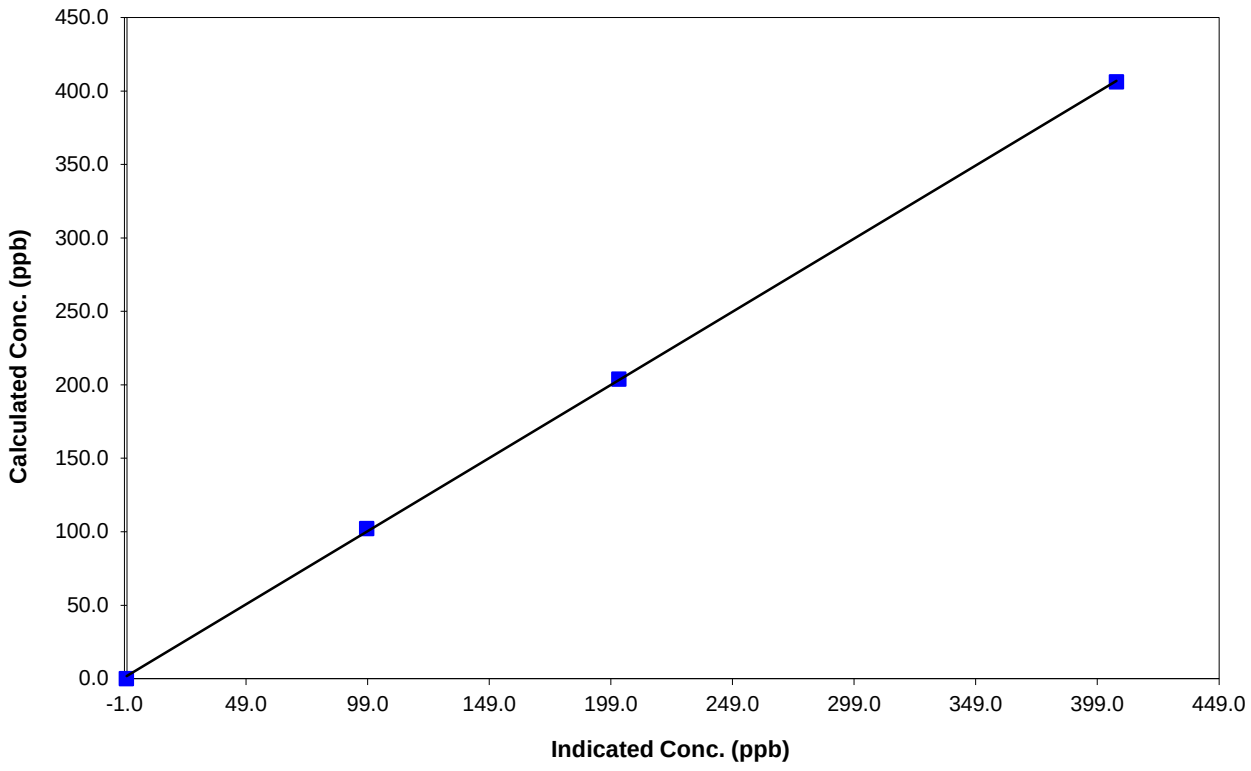
Station Information

Calibration Date	September 6, 2012	Previous Calibration	August 16, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:30	End Time (MST)	13:30
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
406.1	406.9	0.9982	Correlation Coefficient	0.999914
203.9	202.3	1.0080		
102.0	98.7	1.0337	Slope	0.995540
			Intercept	1.865759

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

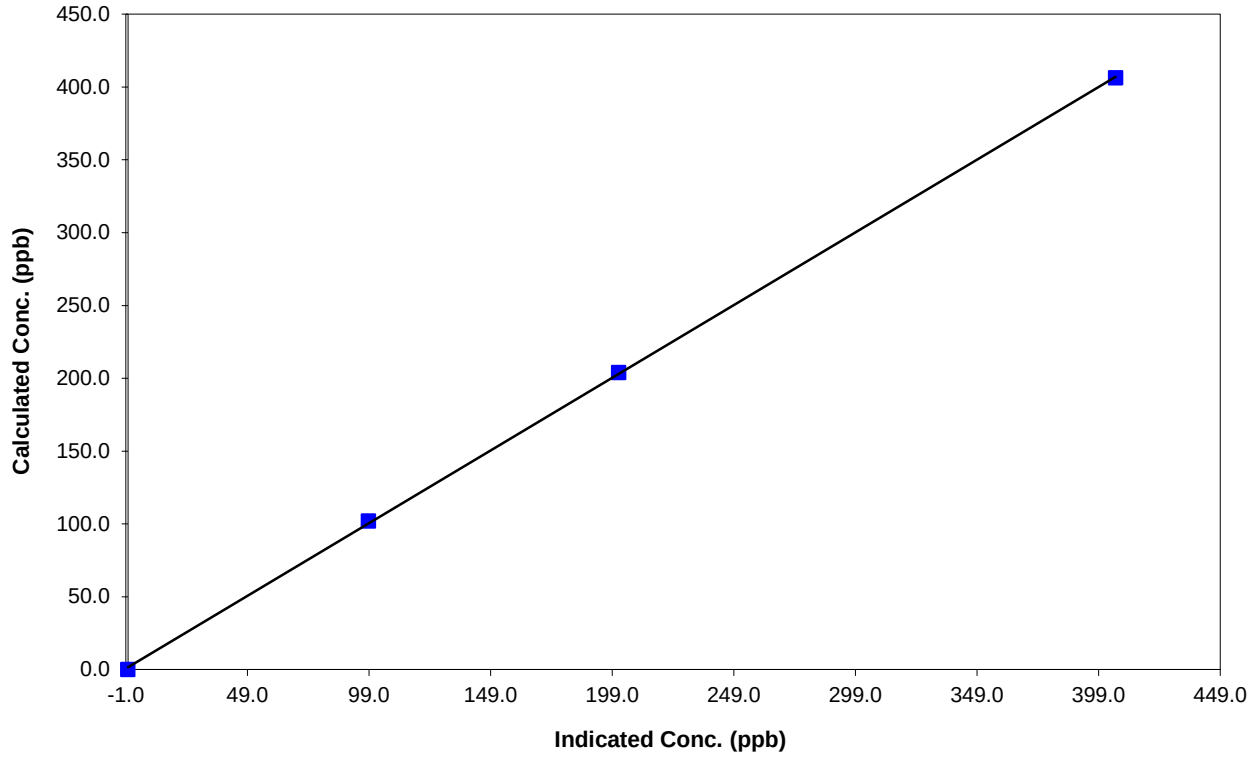
Station Information

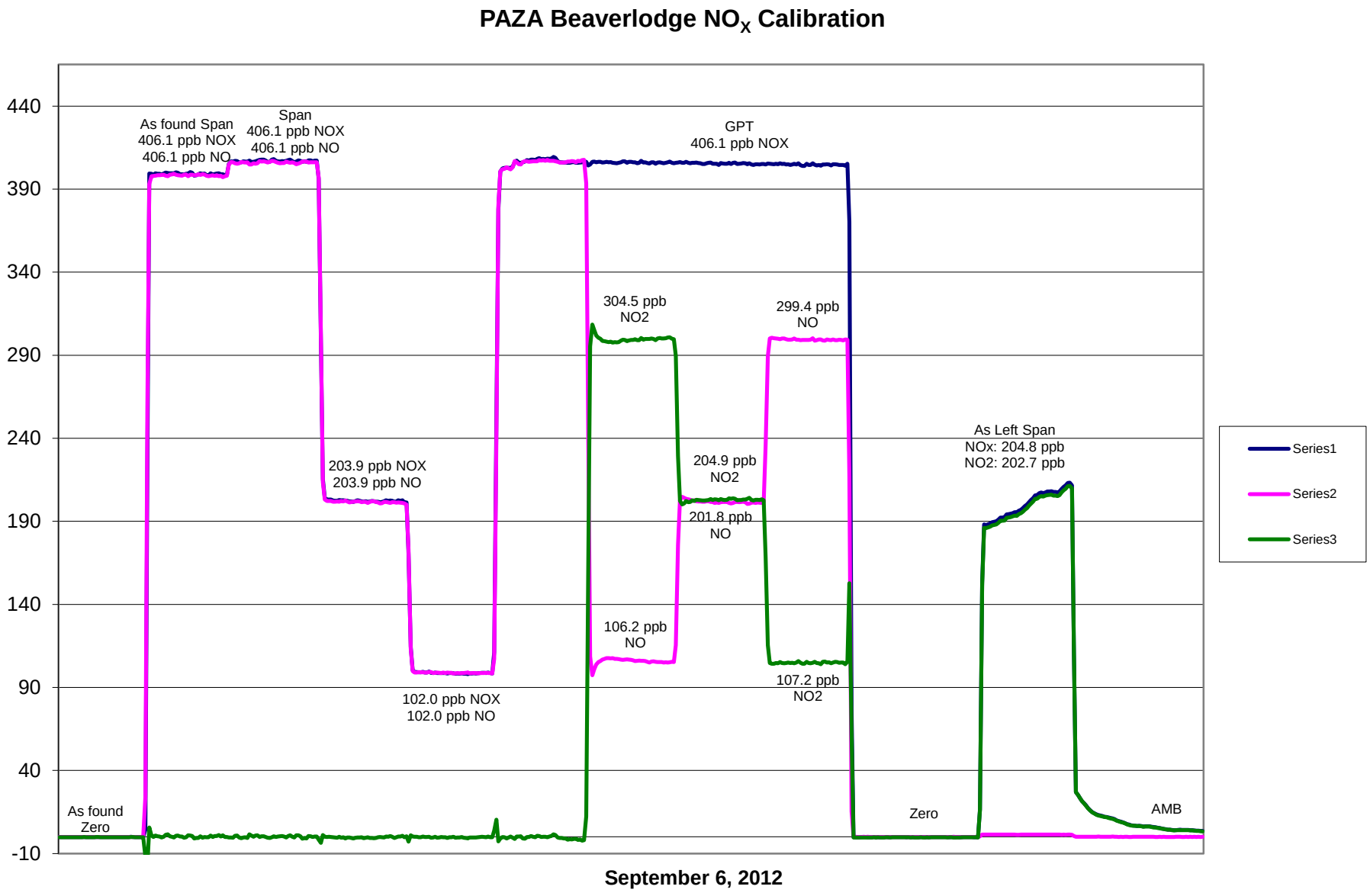
Calibration Date	September 6, 2012	Previous Calibration	August 16, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:30	End Time (MST)	13:30
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
406.1	406.0	1.0004	Correlation Coefficient	0.999924
203.9	201.7	1.0108		
102.0	98.8	1.0325	Slope	0.998107
			Intercept	1.738605

NO Calibration Curve




PAZA Beaverlodge NOX Calibration
440
390
340
290
240
190
140
90
40
-10
As found Span
406.1 ppb NOX
406.1 ppb NO
Span
406.1 ppb NOX
406.1 ppb NO
GPT
406.1 ppb NOX
304.5 ppb
NO2
299.4 ppb
NO
203.9 ppb NOX
203.9 ppb NO
204.9 ppb
NO2
201.8 ppb
NO
As Left Span
NOx: 204.8 ppb
NO2: 202.7 ppb
106.2 ppb
NO
107.2 ppb
NO2
102.0 ppb NOX
102.0 ppb NO
As found
Zero
Zero
AMB
Series1
Series2
Series3
September 6, 2012

Calibration Report

Parameter **O3**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 6, 2012	Previous Calibration	August 16, 2012
Station Number	4	Station Location	Beaverlodge
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:55	End Time (MST)	14:45
Barometric Pressure	0.916 atm	Station Temperature	23.0 Deg C
Calibrator	Environics 6100	Serial Number	2844
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	0.981508	Calculated slope	1.000168
Calculated intercept	0.772552	Calculated intercept	0.868903
Analyzer make	Teco 49C	Analyzer serial #	49C-76443-383

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.50	ppb	-1.50	ppb
slope	1.036		1.036	
Lamp temp	56.4	mV	56.4	mV
Lamp Intensity A/B	53755/57810	mV	53980/58000	mV
Pressure	681.7	mm Hg	685.6	mm Hg
Flow A	0.76	ccm	0.762	ccm
Flow B	0.709	ccm	0.712	ccm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5035	0.0	0.0	0.0	N/A
5035	0.3	300.5	300.6	0.9998
5035	0.2	204.9	203.0	1.0093
5035	0.1	107.2	105.4	1.0169
5035	0.0	0.0	0.0	As found zero
5035	0.3	304.5	300.6	As found span
			Average Correction Factor	1.0087

Calculated value of As Found Response: 295.7 ppm Percent Change of As Found: -2.9%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.9	ppb
Auto span	110.0	ppb	110.7	ppb

Notes:

Calibration Performed By: Stephanie Tandy

Calibration Summary

Parameter **O3**

Air Monitoring Network **PAZA**

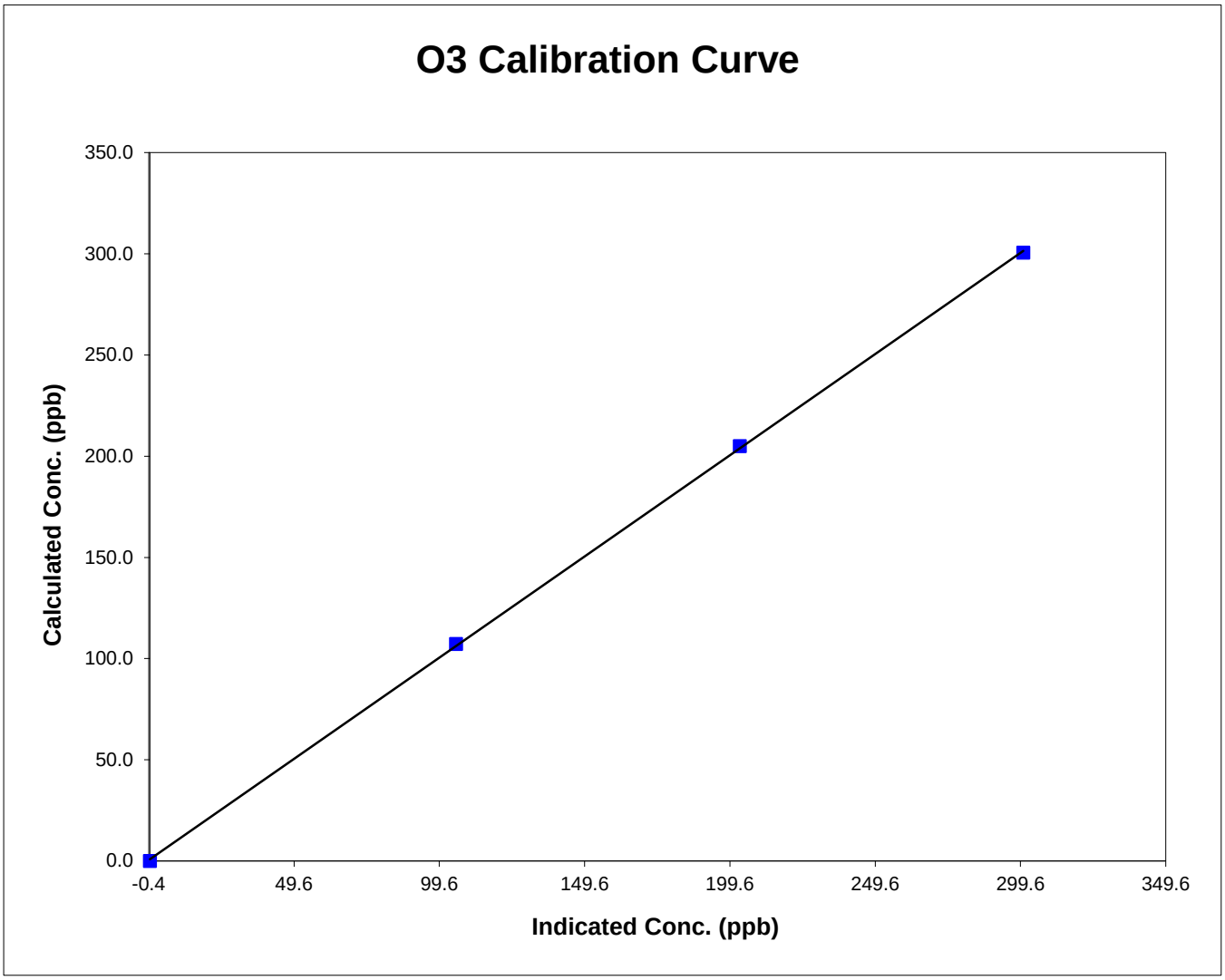
FOCUS AIR QUALITY MONITORING

Station Information

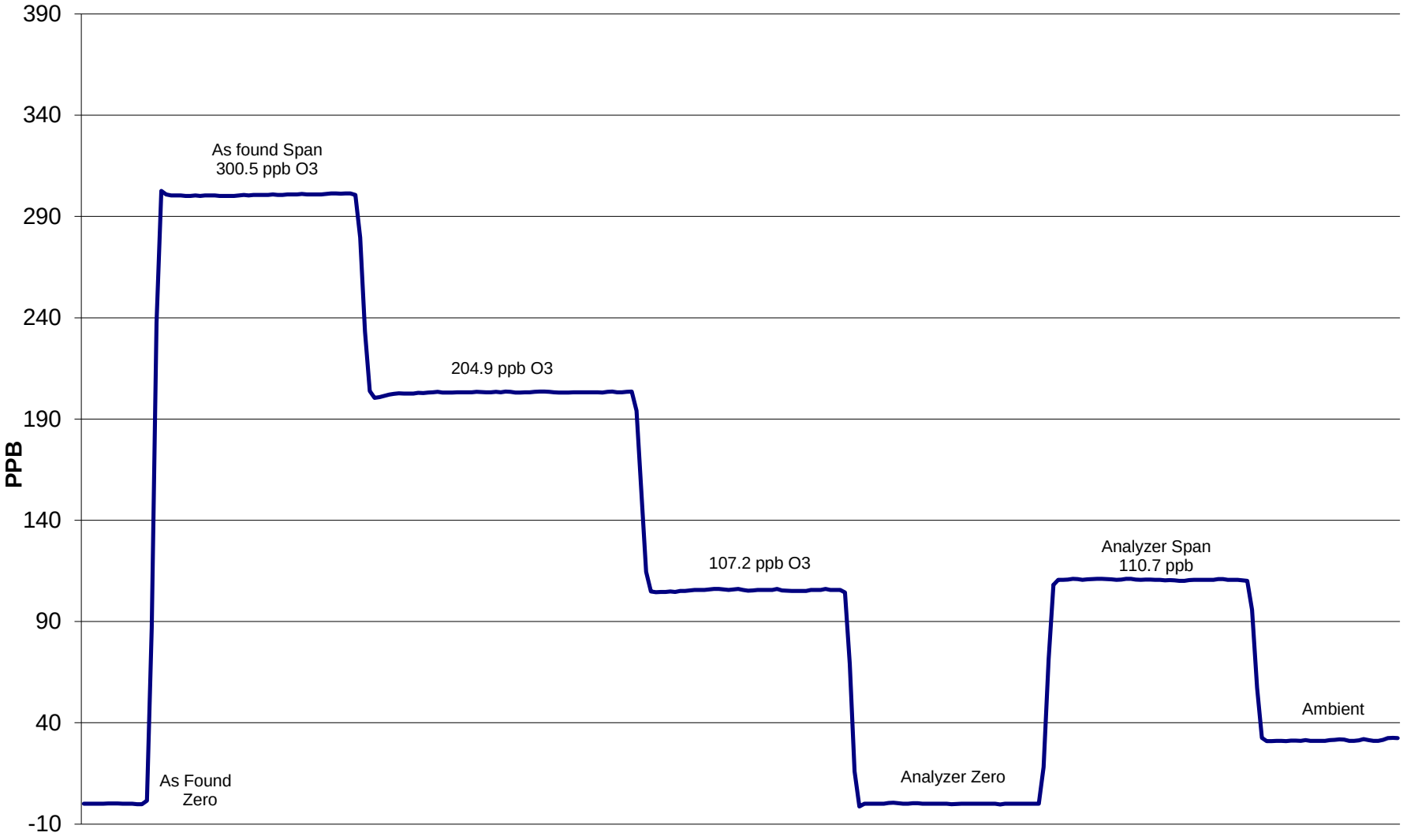
Calibration Date	September 6, 2012	Previous Calibration	August 16, 2012
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	11:55	End Time (MST)	14:45
Analyzer make/model	Teco 49C	Analyzer serial #	49C-76443-383

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	NA		
300.5	300.6	0.9998	Correlation Coefficient	0.999929
204.9	203.0	1.0093		
107.2	105.4	1.0169	Slope	1.000168
			Intercept	0.868903



O3 Calibration



September 6, 2012

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 19, 2012	Previous Calibration	August 28, 2012
Station Number	6	Station Location	Valleyview
Reason: Routine	Install	Removal	Other:

Start Time (MST)	11:06	End Time (MST)	13:50
Barometric Pressure	702.00 mmHg	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Concentration	50.8 ppm	Cal Gas Cert Date	3/12/2013
Gas Cylinder Num.	LL107272	Cal gas Exp. Date	3/12/2014
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.997926	Calculated slope	0.995775
Calculated intercept	2.049293	Calculated intercept	2.283586

Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0 - 1000	ppb	0 - 1000	ppb
Background	31.4		32.6	
Coefficient	0.879		0.882	
UV Lamp Voltage	970	LPM	969	LPM
Chamber Temp	43.9	V	43.9	V
Perm Gas Temp	23.7	C	23.3	C
Pressure	607.2	in Hg	607	in Hg
Sample Flow	0.559	LPM	0.559	LPM
Lamp Intensity	48030	Hz	48054	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.0	N/A
4995	39.94	403.0	403.6	0.9985
4995	19.97	202.3	199.4	1.0145
4995	9.94	100.9	97.0	1.0399
4995	0.00	0.0	0.0	As found zero
4995	39.94	403.0	399.6	As found span
			Average Correction Factor	1.0176

Calculated value of As Found Response: 400.9 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	160.1	ppm	156.1	ppm

Notes: Slight adjust zero and 80% points.

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

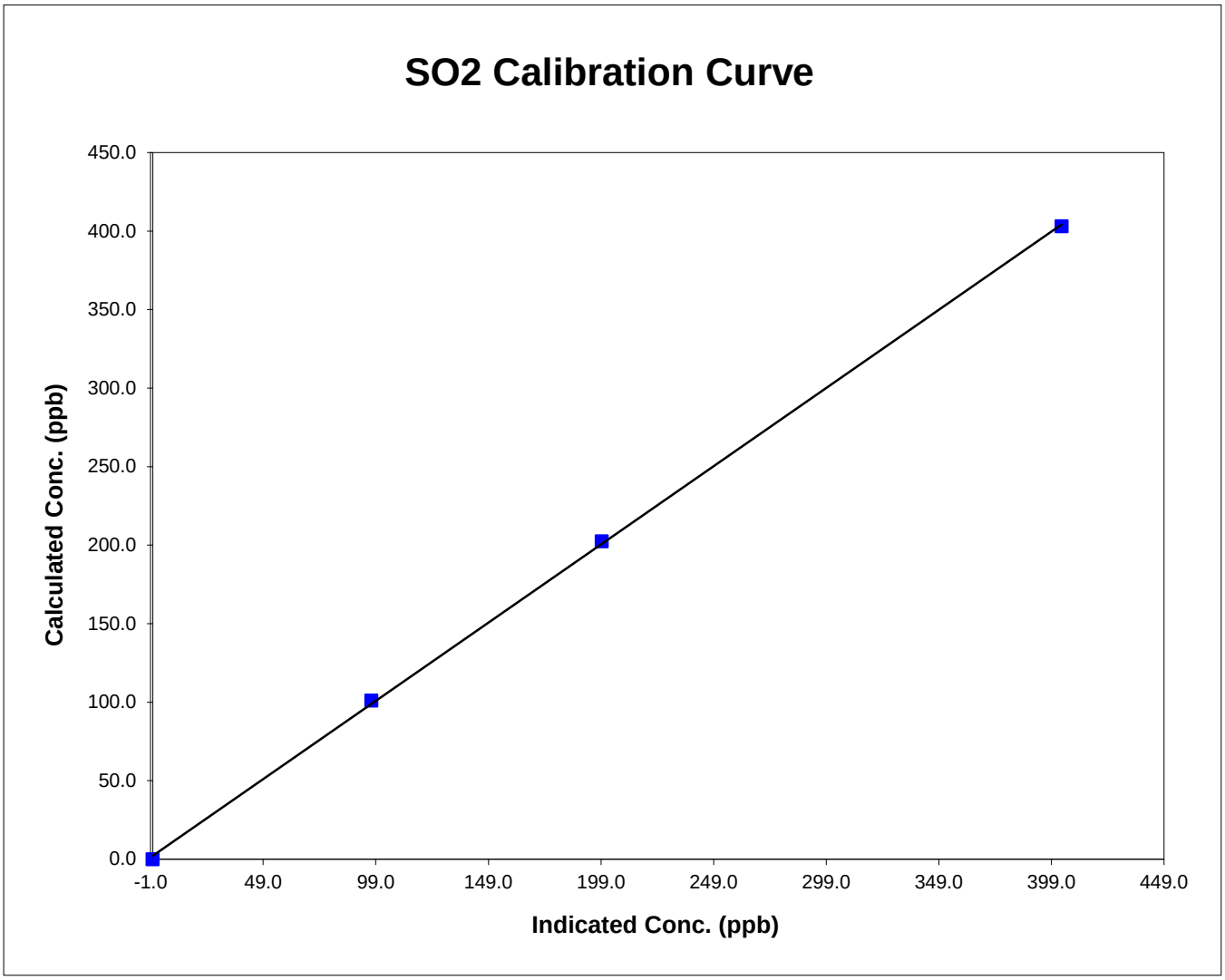
FOCUS AIR QUALITY MONITORING

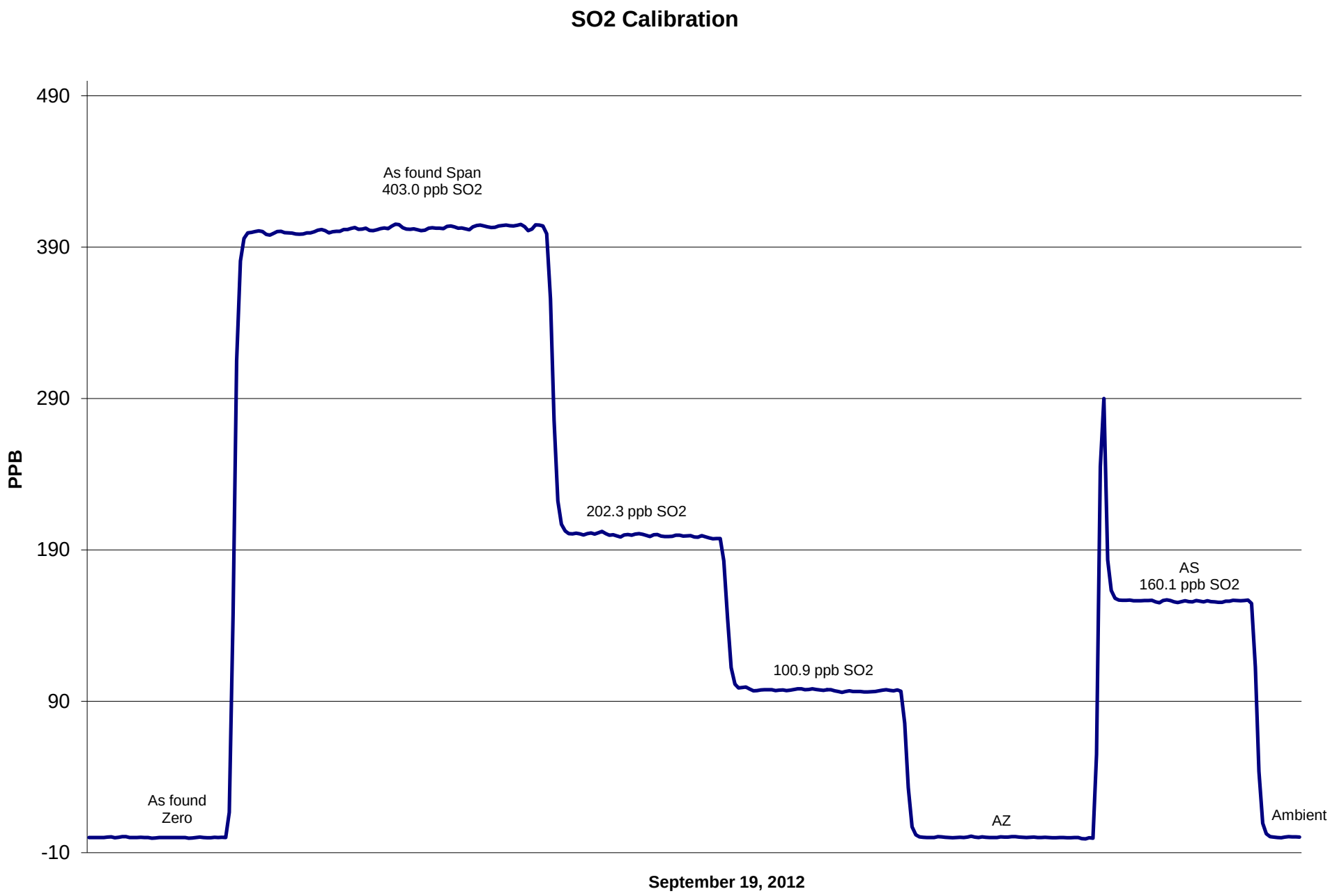
Station Information

Calibration Date	September 19, 2012	Previous Calibration	August 28, 2012
Station Number	6	Station Location	Valleyview
Start Time (MST)	11:06	End Time (MST)	14:42
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
403.0	403.6	0.9985	Correlation Coefficient	0.999858
202.3	199.4	1.0145		
100.9	97.0	1.0399	Slope	0.995775
			Intercept	2.283586




SO2 Calibration
490
390
290
190
90
-10
PPB
As found Span
403.0 ppb SO2
202.3 ppb SO2
100.9 ppb SO2
AZ
AS
160.1 ppb SO2
As found
Zero
Ambient
September 19, 2012

Calibration Report

Parameter **H2S**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 19, 2012	Previous Calibration	August 28, 2012
Station Number	6	Station Location	Valleyview
Reason:	Routine / Install	Removal	Other:
Start Time (MST)	8:55	End Time (MST)	11:43
Barometric Pressure	702.00 mm	Station Temperature	21.0 Deg C
Calibrator	Environics 6100	Serial Number	LL160692
Cal Gas Concentration	10.1 ppm	Cal Gas Expiry Date	5/11/2013
Gas Cert Reference	5/15/2012		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.998226	Calculated slope	0.994420
Calculated intercept	0.662543	Calculated intercept	0.504731
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	7.9	ppb	8.0	ppb
Coefficient	1.056		1.073	
Lamp Voltage	782	V	782	V
Chamber Temp	45.1	c	45.1	c
Perm Oven Temp	44.33	c	44.33	c
Pressure	617.00	mm Hg	616.70	mm Hg
Sample Flow	0.418	ccm	0.418	ccm
Lamp Intensity	92.0	%	92.0	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	-0.4	N/A
4995	39.95	80.1	80.1	1.0002
4995	19.97	40.2	39.9	1.0087
8979	8.96	10.1	9.5	1.0582
4995	0.00	0.0	-0.4	As found zero
4995	39.95	80.1	78.9	As found span
			Average Correction Factor	1.0223

Calculated value of As Found Response: 79.83 ppm Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.3	ppm
Auto span	70.6	ppm	73.7	ppm

Notes: Slight adjust 80% point.

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter **H2S**

Air Monitoring Network **PAZA**

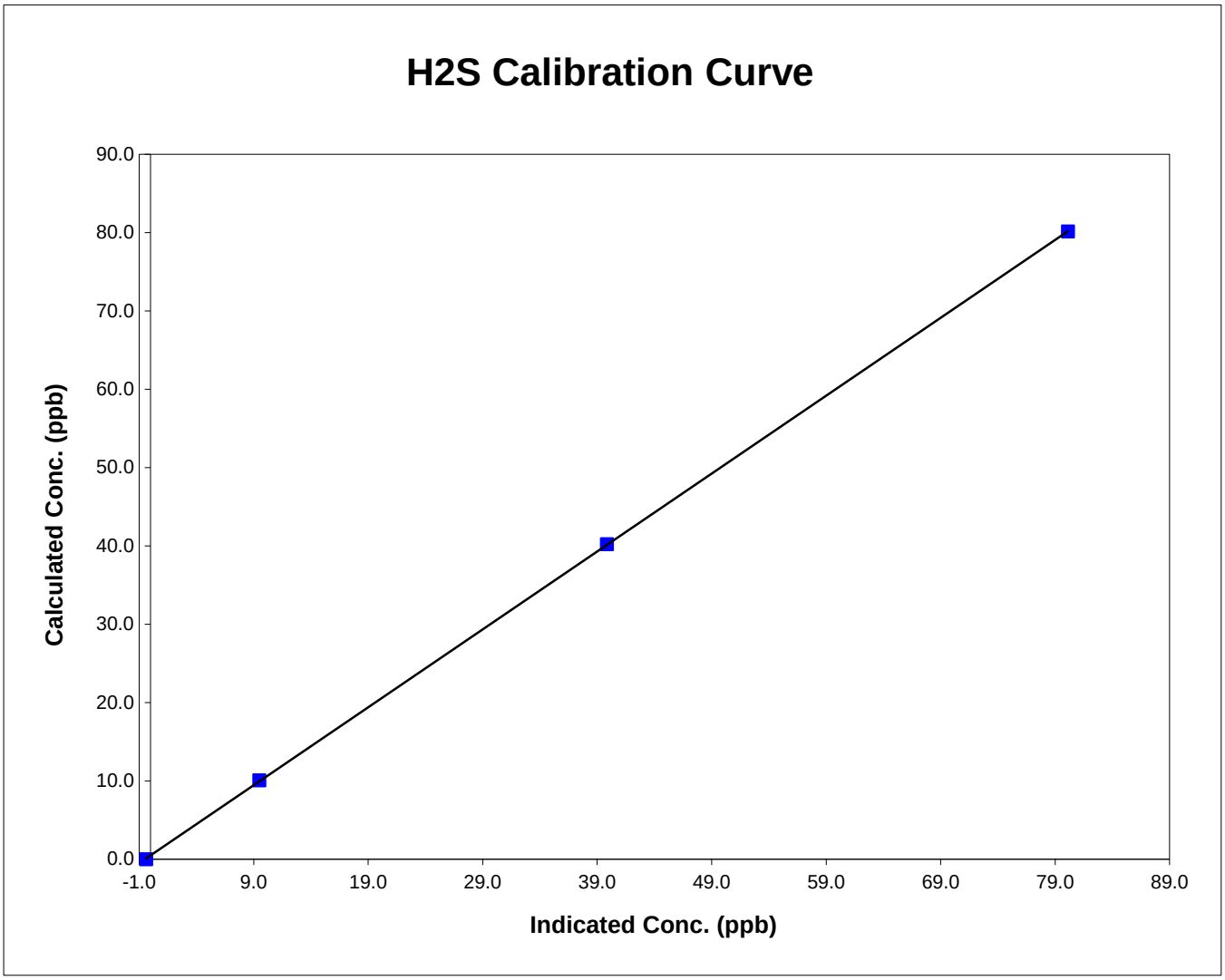
FOCUS AIR QUALITY MONITORING

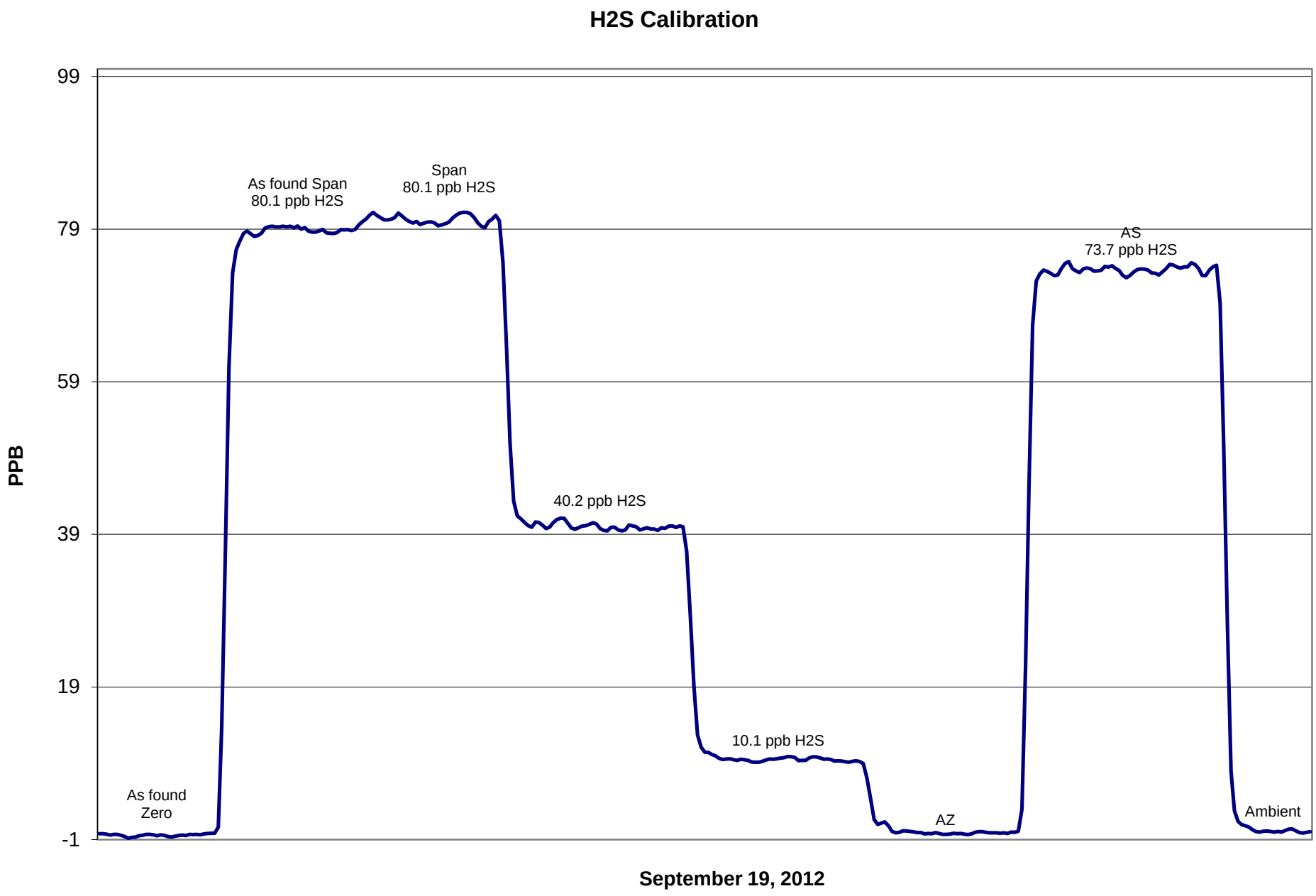
Station Information

Calibration Date	September 19, 2012	Previous Calibration	August 28, 2012
Station Number	6	Station Location	Valleyview
Start Time (MST)	8:55	End Time (MST)	11:43
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A		
80.1	80.1	1.0002	Correlation Coefficient	0.999992
40.2	39.9	1.0087		
10.1	9.5	1.0582	Slope	0.994420
			Intercept	0.504731




H2S Calibration
99
79
59
39
19
-1
PPB
As found Span
80.1 ppb H2S
Span
80.1 ppb H2S
40.2 ppb H2S
10.1 ppb H2S
AS
73.7 ppb H2S
As found
Zero
AZ
Ambient
September 19, 2012

Calibration Report

Parameter **SO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	August 29, 2011	Previous Calibration	August 29, 2011
Station Number	9	Station Location	Sunset House
Reason: Routine	Install	Removal	Other:
Start Time (MST)	7:15	End Time (MST)	9:51
Barometric Pressure	31.70 inches Hg	Station Temperature	19.7 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Concentration	50.8 ppm	Cal Gas Expiry Date	4/6/2012
Gas Cert Reference	LL85275		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.996059	Calculated slope	1.000623
Calculated intercept	2.674875	Calculated intercept	1.287437
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	17.3		17.2	
Coefficient	0.983		0.983	
UV Lamp Voltage	826	V	829	V
Chamber Temp	44.8	C	44.9	C
Perm Gas Temp	45	C	45	C
Pressure	665.8	mm Hg	665	mm Hg
Sample Flow	0.483	LPM	0.483	LPM
Lamp Intesity	37112	Hz	37100	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.1	N/A
4995	39.93	402.9	402.0	1.0021
4995	19.97	202.3	200.1	1.0108
4995	9.96	101.1	98.4	1.0273
4995	0.00	0.0	0.1	As found zero
4995	39.93	402.9	402.0	As found span
			Average Correction Factor	1.0134

Calculated value of As Found Response: 403.003 ppm Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	264.0	ppm	266.0	ppm

Notes:

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter **SO2**

Air Monitoring Network **PAZA**

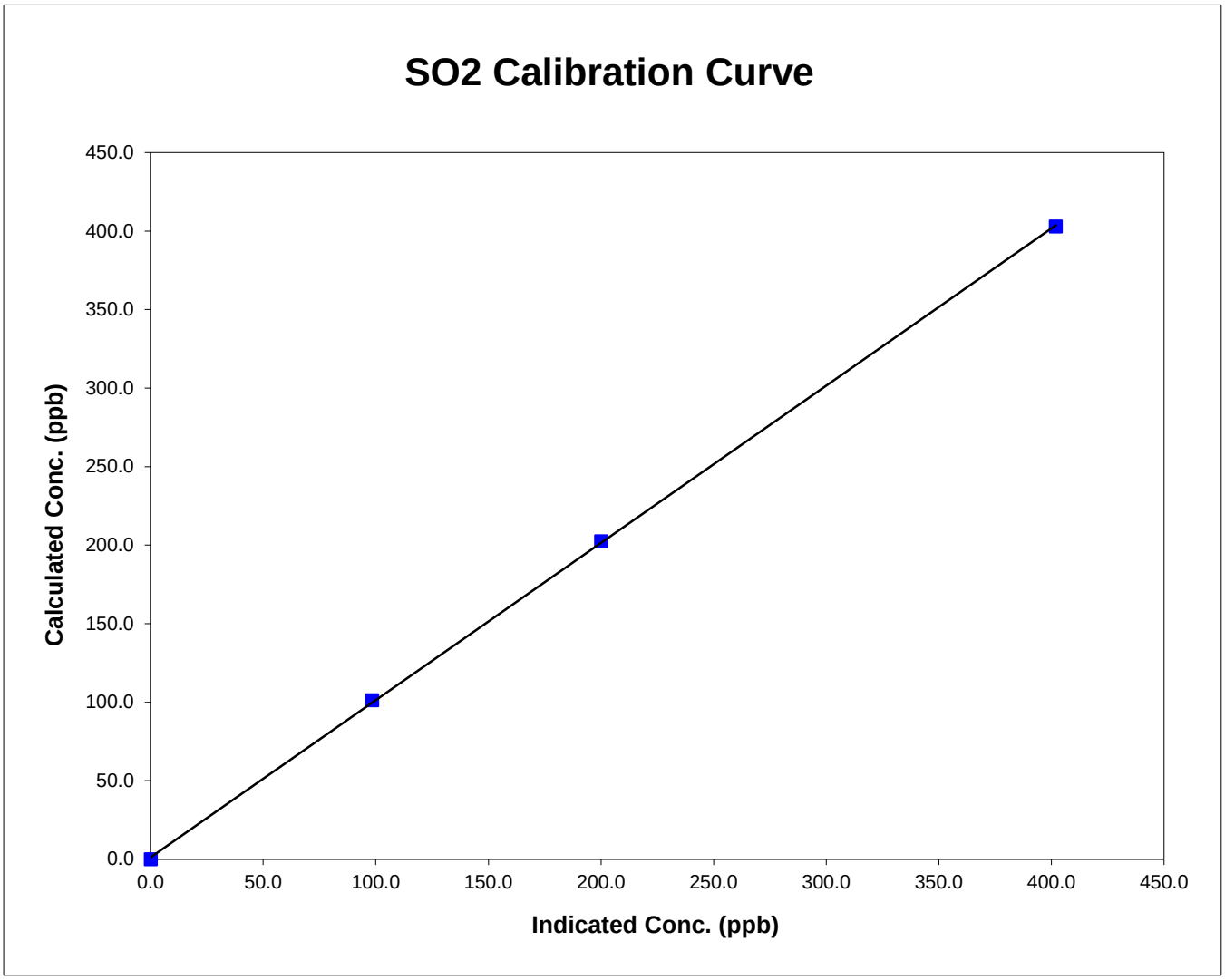
FOCUS AIR QUALITY MONITORING

Station Information

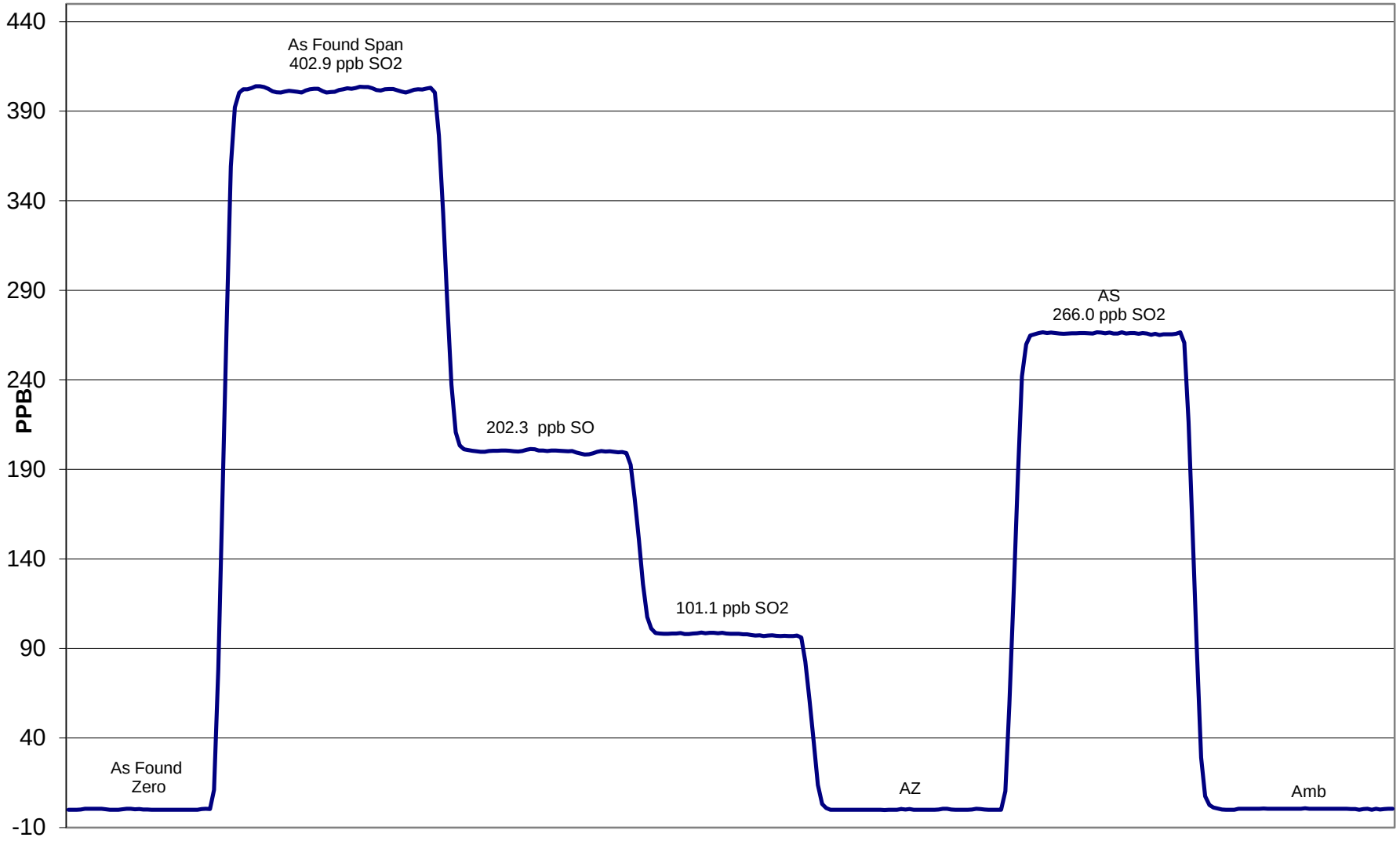
Calibration Date	August 29, 2011	Previous Calibration	August 29, 2011
Station Number	9	Station Location	Sunset House
Start Time (MST)	7:15	End Time (MST)	9:51
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A		
402.9	402.0	1.0021	Correlation Coefficient	0.999947
202.3	200.1	1.0108		
101.1	98.4	1.0273	Slope	1.000623
			Intercept	1.287437



SO2 Calibration



August 29, 2011

Calibration Report

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	September 20, 2012	Previous Calibration	August 29, 2012
Station Number	9	Station Location	Sunset House

Reason: Routine Install Removal Other:

Start Time (MST)	7:15		End Time (MST)	11:36	
Barometric Pressure	0.917	Atm	Station Temperature	20.0	Deg C
Calibrator	Environics		Serial Number	3016	
NO Cal Gas Conc	51.2	ppm	Cal Gas Expiry Date	March 12, 2014	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL107272	

DACS Information

DACS make: CR3000 DACS serial No.: 5407

Parameter		NO2	NOx	NO
Before	Data Slope	1.005163	0.996340	1.001437
	Data Offset	-0.331816	0.738560	0.690118
After	Data Slope	0.998644	1.000775	1.006582
	Data Offset	-0.147830	0.718673	0.224606
Channel #		5	3	4
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

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

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	4.7	mV	4.7	mV
NOx bkgnd	5.0	mV	5.0	mV
NO coefficient	1.138		1.138	
NOx coefficient	0.997		0.997	
NO2 conv temp	325.0	Deg C	325.0	Deg C
PMT Temp	-2.8	Deg C	-2.8	Deg C
PMT Volt	-797.4	mV	-797.4	mV
R Cell Press	176.6	in Hg	171.4	in Hg
Sample Flow	0.791	ccm	0.784	ccm

NOTES: Wavy trend in after span noted along with Nox internal temperature ranging from 24.6 to 30 degrees.

Calibration Report

Parameter **NOX-NO-NO2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: September 20, 2012 Station Location: Sunset House

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.3	0.6	-0.3	N/A	N/A
1	4995	39.93	406.0	406.0	0.0	405.4	403.5	0.1	1.0017	1.0064
2	4995	19.97	203.9	203.9	0.0	202.9	202.2	-0.2	1.0047	1.0083
3	4995	9.96	101.9	101.9	0.0	99.8	100.1	-0.1	1.0206	1.0184
AFZ	4995	0.00	0.0	0.0	0.0	0.3	0.6	-0.3	0.0000	0.0000
AFS	4995	39.93	406.0	406.0	0.0	405.4	403.5	0.1	1.0017	1.0064
							Average Correction Factor		1.0090	1.0110

As Found Concentrations: NO_X= 405.8 NO= 403.6 As Found Percent Change NO_X= -0.1% 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	0.6	0.6	0.0	0.3	0.6	-0.3	N/A	N/A	N/A	N/A
NO point	406.2	406.2	0.0	408.1	406.2	-0.1	0.9952	1.0000	N/A	N/A
300	406.2	107.1	299.0	408.0	107.1	299.2	0.9955	1.0000	0.9994	100.1%
200	406.2	202.6	203.6	409.0	202.6	204.3	0.9932	1.0000	0.9968	100.3%
100	406.2	299.8	106.4	409.2	299.8	107.2	0.9926	1.0000	0.9917	100.8%
					Average Correction Factor		0.9938	1.0000	0.9960	100.4%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.8	0.2	0.7	ppb	0.3	-0.1	0.4	ppb
Auto span	169.8	167.0	2.2	ppb	175.5	173.0	1.5	ppb

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

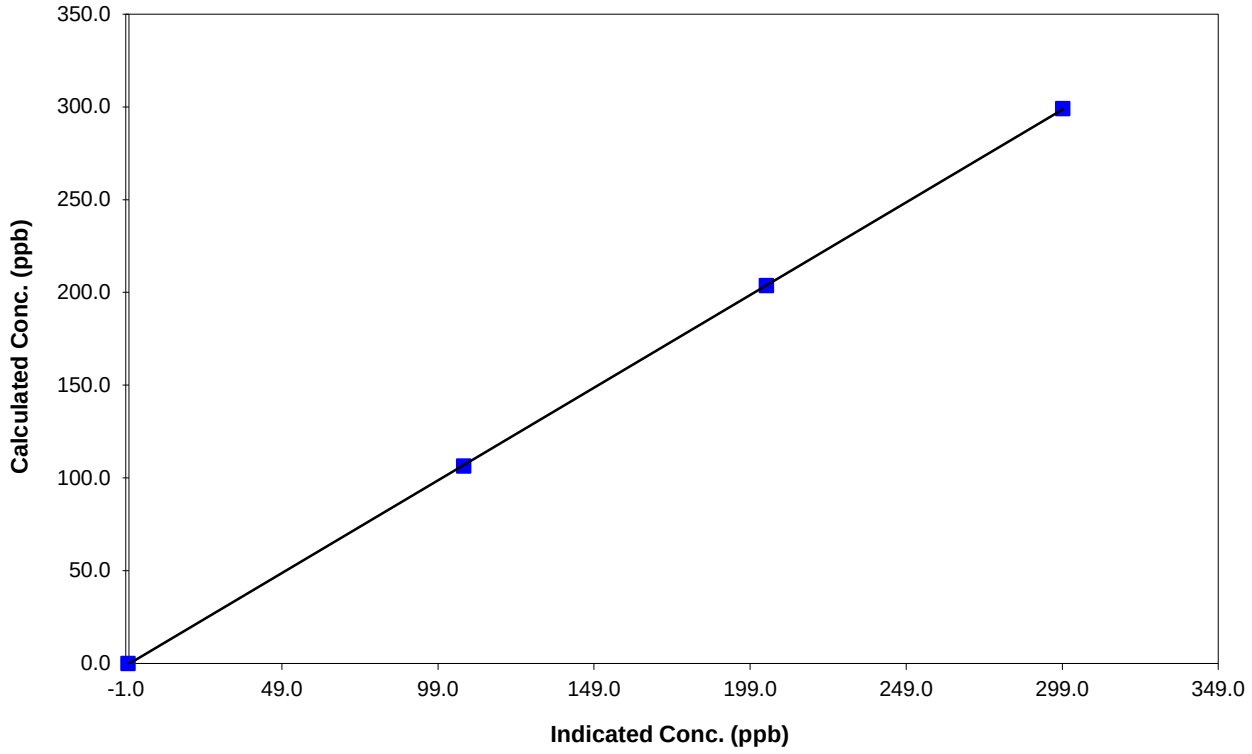
Station Information

Calibration Date	September 20, 2012	Previous Calibration	August 29, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	7:15	End Time (MST)	11:36
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		
299.0	299.2	0.9994	Correlation Coefficient	0.999985
203.6	204.3	0.9968		
106.4	107.2	0.9917	Slope	0.998644
			Intercept	-0.147830

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

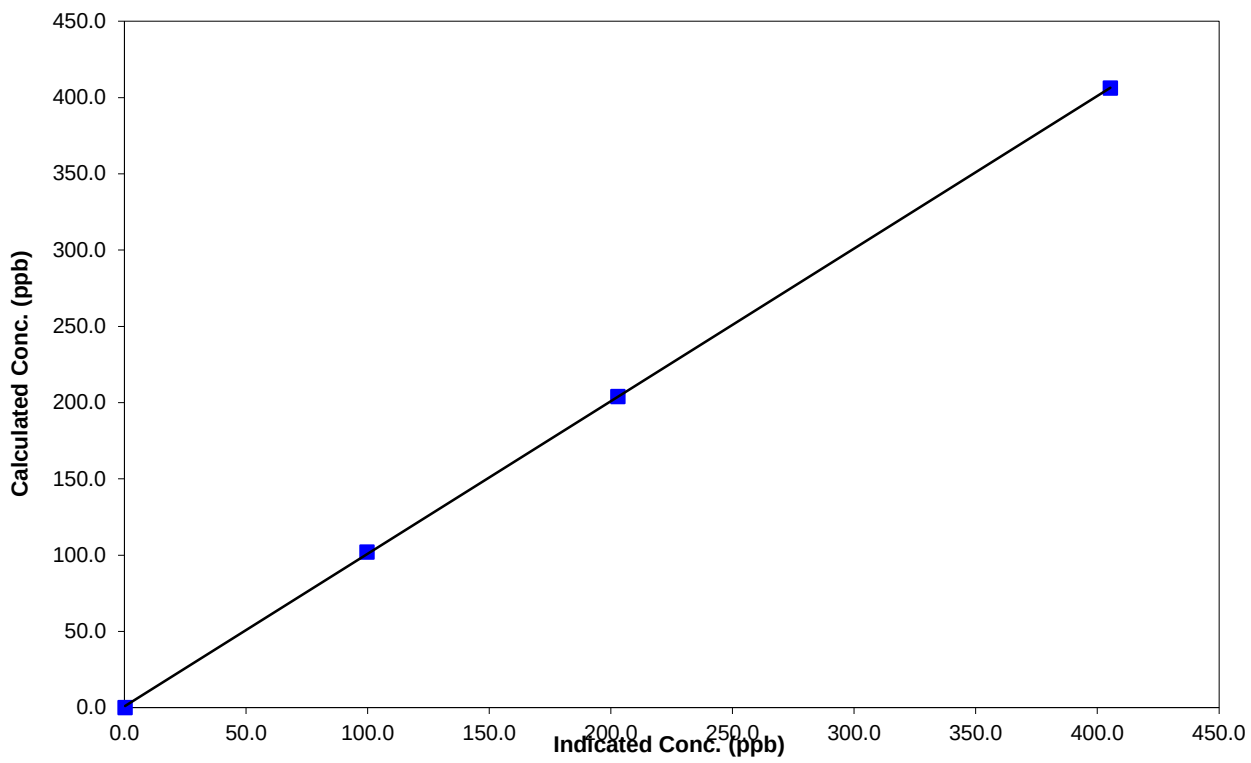
Station Information

Calibration Date	September 20, 2012	Previous Calibration	August 29, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	7:15	End Time (MST)	11:36
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		
406.0	405.4	1.0017	Correlation Coefficient	0.999970
203.9	202.9	1.0047		
101.9	99.8	1.0206	Slope	1.000775
			Intercept	0.718673

NOx Calibration Curve



Calibration Summary

Parameter **NO**

Air Monitoring Network **PAZA**

FOCUS AIR QUALITY MONITORING

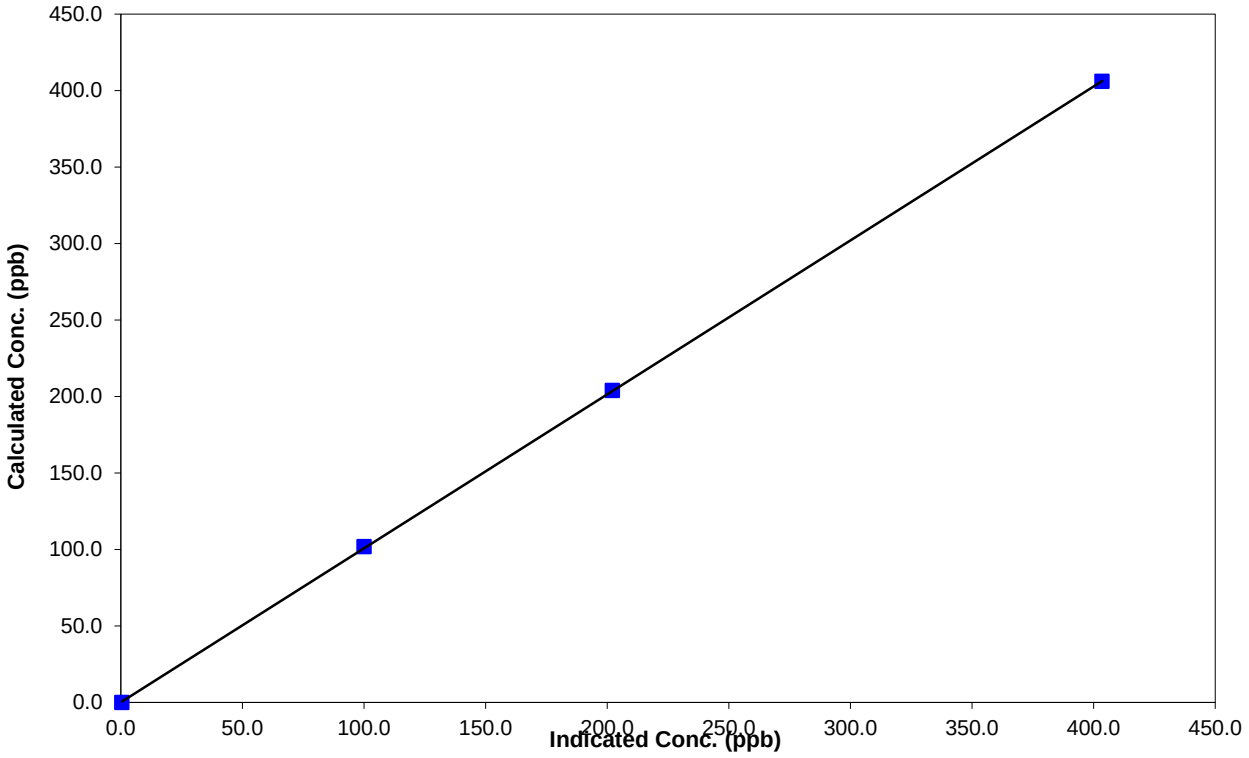
Station Information

Calibration Date	September 20, 2012	Previous Calibration	August 29, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	7:15	End Time (MST)	11:36
Analyzer make	TEI 42i	Analyzer serial #	0701120011

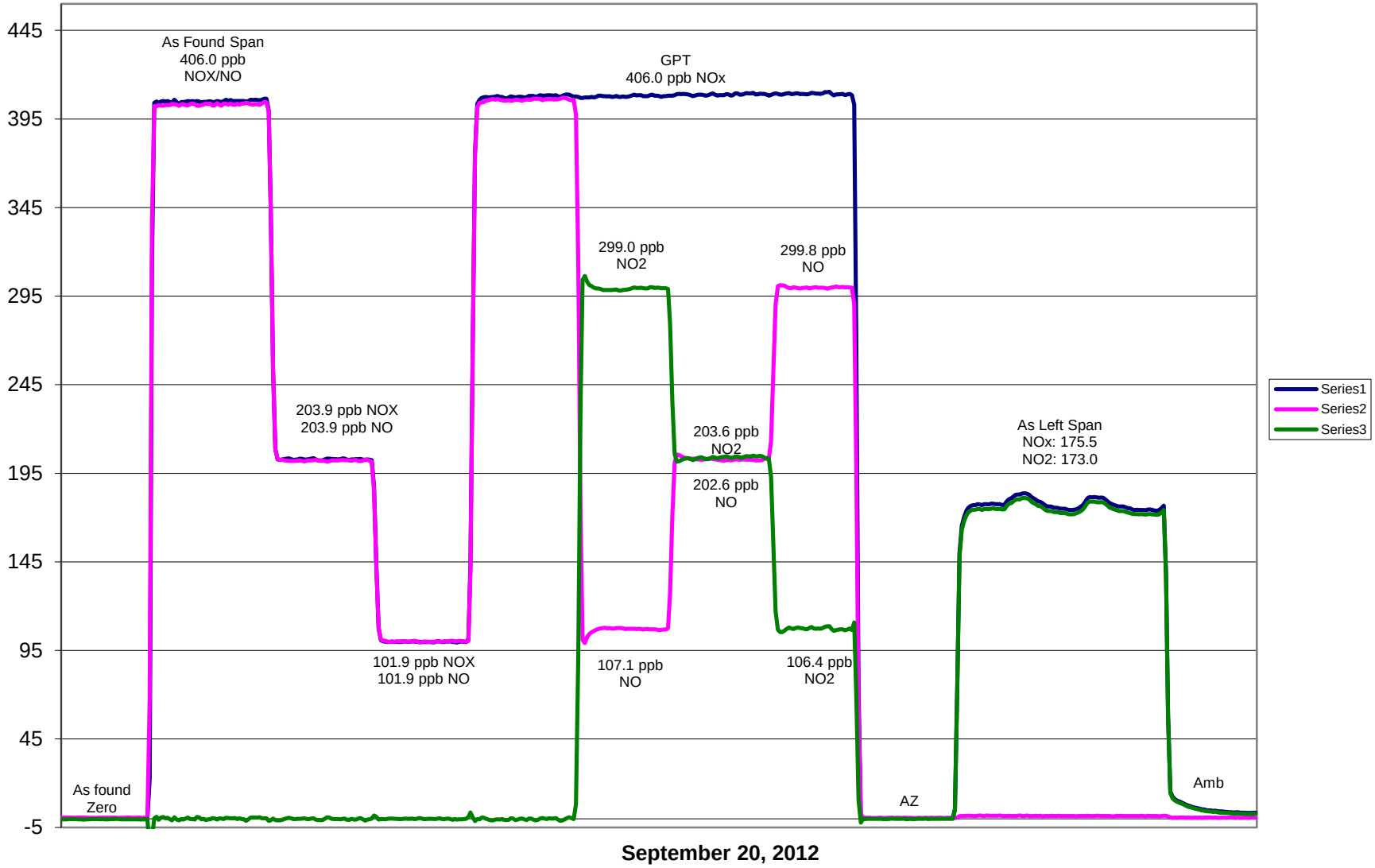
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A		
406.0	403.5	1.0064	Correlation Coefficient	0.999982
203.9	202.2	1.0083		
101.9	100.1	1.0184	Slope	1.006582
			Intercept	0.224606

NO Calibration Curve



PASZA Sunset House NO_X Calibration



Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **O3**

Air Monitoring Network **PAZA**

Station Information

Calibration Date	September 20, 2012	Previous Calibration	August 29, 2012
Station Number	9	Station Location	Sunset House
Reason: Routine	Install	Removal remove	Other:
Start Time (MST)	9:56	End Time (MST)	13:08
Barometric Pressure	0.913 atm	Station Temperature	15.7 Deg C
Calibrator	Environics 6100	Serial Number	3474
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	0.993081	Calculated slope	0.996609
Calculated intercept	0.635250	Calculated intercept	0.175427
Analyzer make	TEI Model 49C	Analyzer serial #	49C-0609716240

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0.3	ppb	0.3	ppb
Span	1.035		1.035	
Cell A intensity	91101	Hz	91101	Hz
Cell B intensity	84258	Hz	84258	Hz
Pressure	678.50	in Hg	678.50	in Hg
CellA Flow	0.938	ccm	0.938	ccm
Cell B Flow	0.719	cmm	0.719	cmm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5040	0.00	0.0	0.1	N/A
5040	0.30	299.0	300.4	0.9954
5040	0.20	203.6	203.3	1.0013
5040	0.10	106.4	106.6	0.9985
5040	0.00	0.0	0.1	As found zero
5040	0.30	299.0	300.4	As found span
			Average Correction Factor	0.9984

Calculated value of As Found Response: 298.8 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.6	ppb	0.3	ppb
Auto span	137.7	ppb	203.0	ppb

Notes: No adjust.

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter **O3**

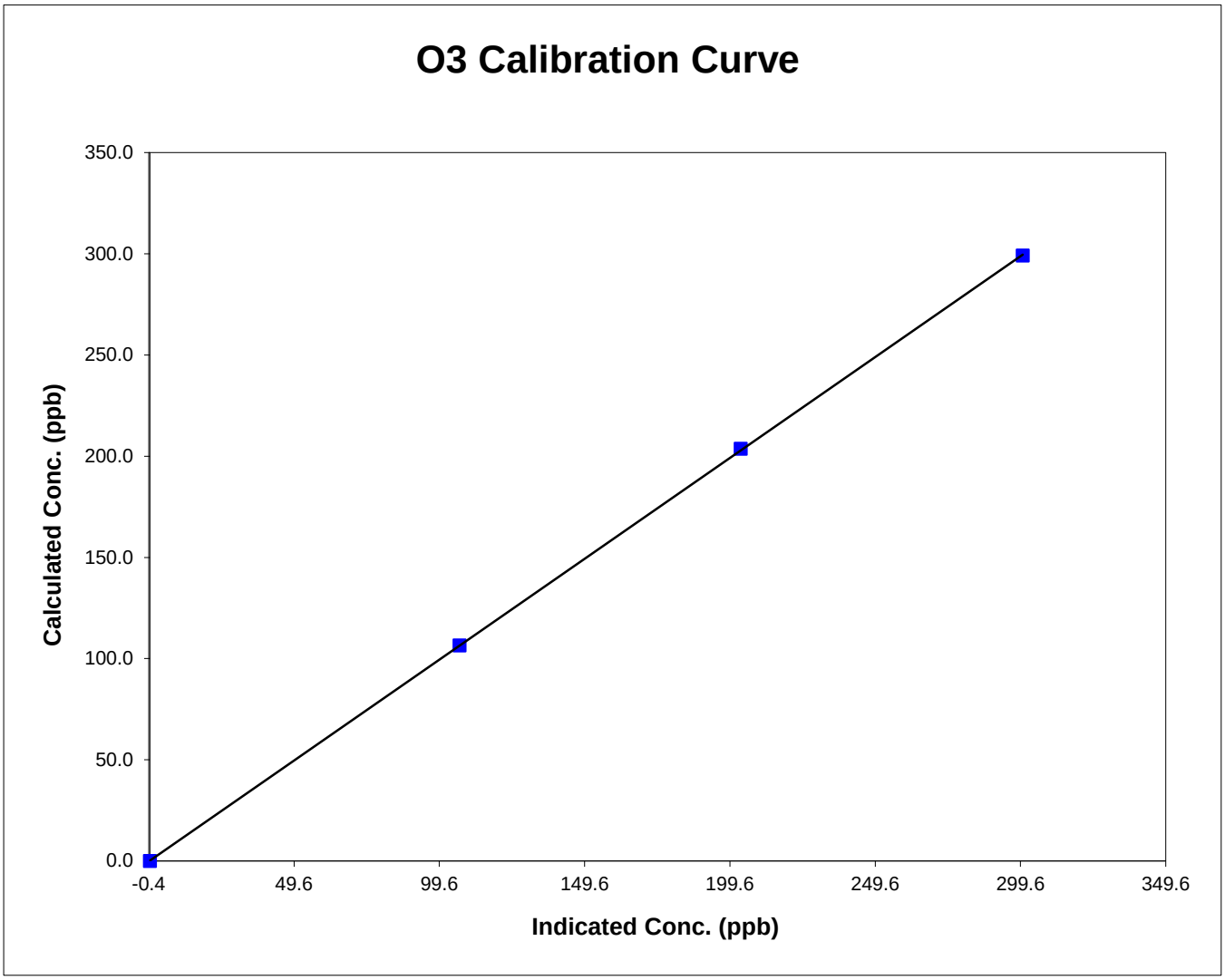
Air Monitoring Network **PAZA**

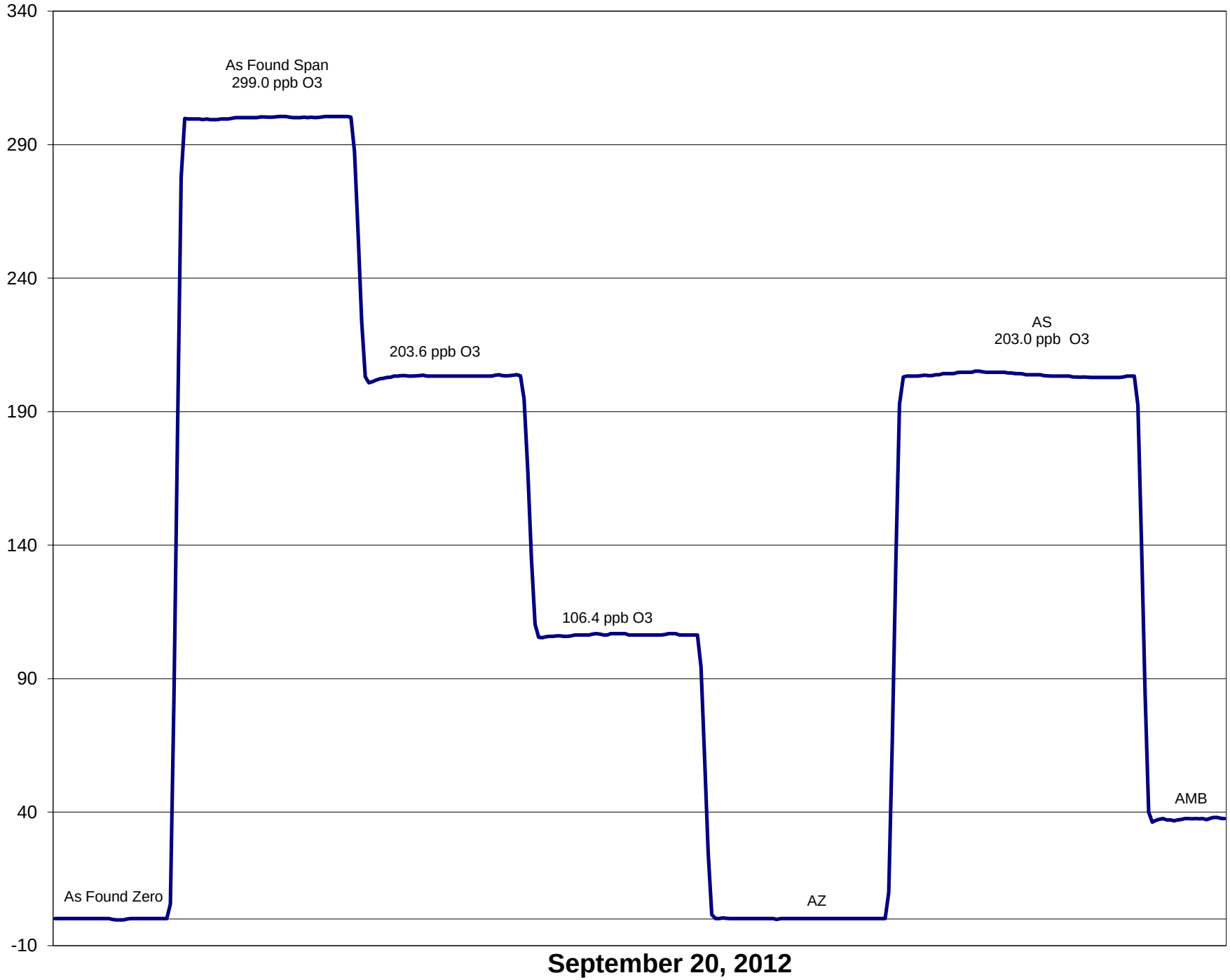
Station Information

Calibration Date	September 20, 2012	Previous Calibration	August 29, 2012
Station Number	9	Station Location	Sunset House
Start Time (MST)	9:56	End Time (MST)	13:08
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-0609716240

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA		
299.0	300.4	0.9954	Correlation Coefficient	0.999981
203.6	203.3	1.0013		
106.4	106.6	0.9985	Slope	0.996609
			Intercept	0.175427




340
290
240
190
140
90
40
-10
As Found Span
299.0 ppb O3
203.6 ppb O3
106.4 ppb O3
AS
203.0 ppb O3
AMB
As Found Zero
AZ
September 20, 2012

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

Air Monitoring Network **PAZA**

Station Information

Calibration Date	September 20, 2012	Previous Calibration	August 29, 2012
Station Name	PAZA Rover	Station Location	Sunset House
Reason: Routine	Install	Removal	Other:
Start Time (MST)	11:05	End Time (MST)	14:22
Barometric Pressure	27.5 inches Hg	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3474
Cal Gas Concentration	10.1 ppm	Cal Gas Expiry Date	9/3/2011
Gas Cert Reference	BLM001434		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.992682	Calculated slope	1.018031
Calculated intercept	0.662489	Calculated intercept	0.466784
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	14.2	ppb	14.2	ppb
Coefficient	1.424		1.424	
Lamp Voltage	790	V	791	V
Chamber Temp	44.1	C	43.8	C
Perm gas Temp	45.0	C	45.0	C
Pressure	651.1	mmHg	652.0	mmHg
Sample Flow	0.426	ccm	0.428	ccm
Lamp Intensity	38432.0	Hz	39160.0	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.0	-0.3	N/A
4995	39.94	80.1	78.5	1.0207
4995	19.94	40.2	38.4	1.0447
8995	8.94	10.0	9.6	1.0496
4995	0.00	0.0	-0.7	As found zero
4995	39.94	80.1	78.5	As found span
			Average Correction Factor	1.0384

Calculated value of As Found Response: 79.31 ppm Percent Change of As Found: 1.0%

	before calibration		after calibration	
Auto zero	-0.6	ppm	0.1	ppm
Auto span	69.6	ppm	68.8	ppm

Notes:

Calibration Performed By: Grover Christiansen and Stephanie Tandy

Calibration Summary

Parameter **TRS**

Air Monitoring Network **PAZA**

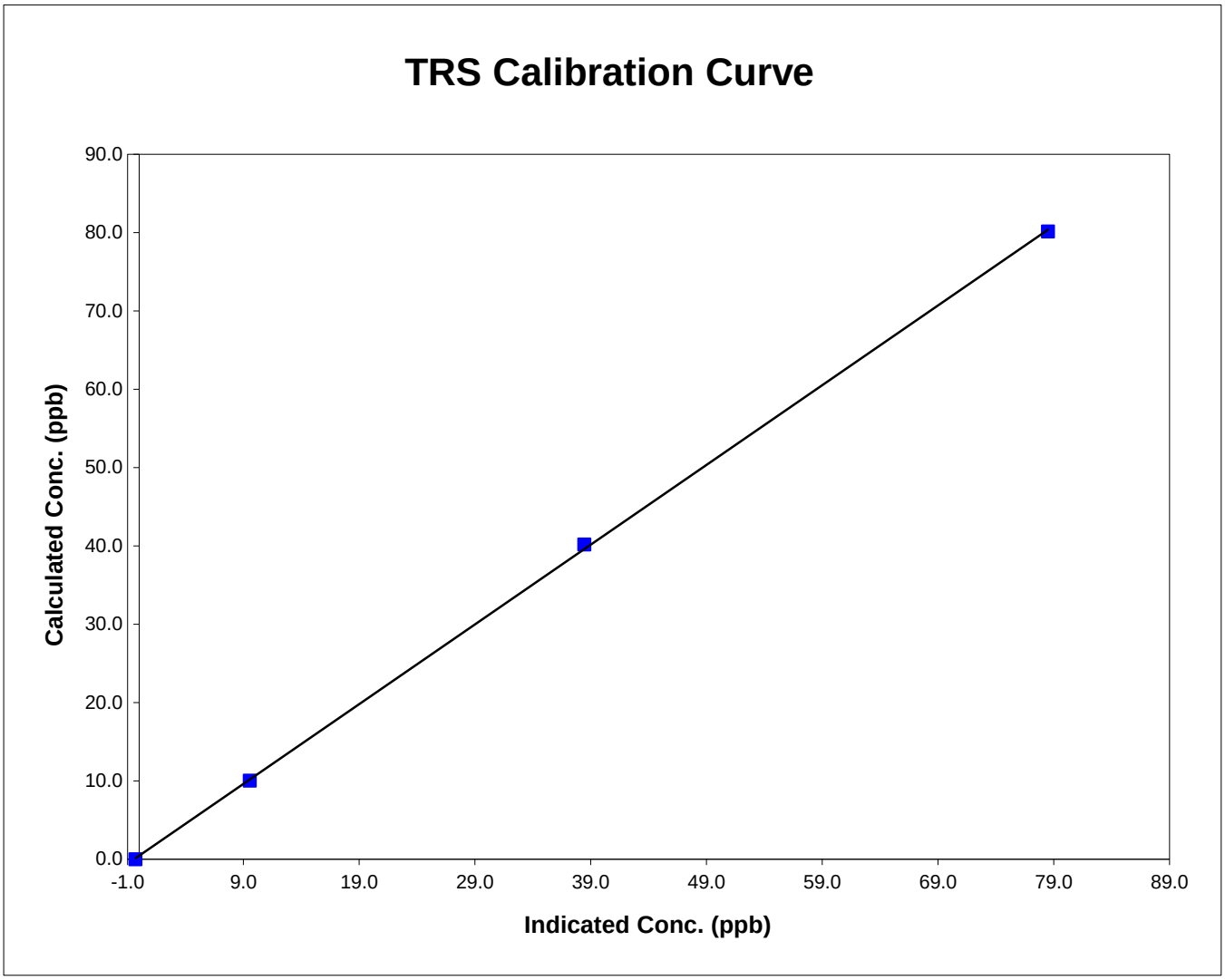
FOCUS AIR QUALITY MONITORING

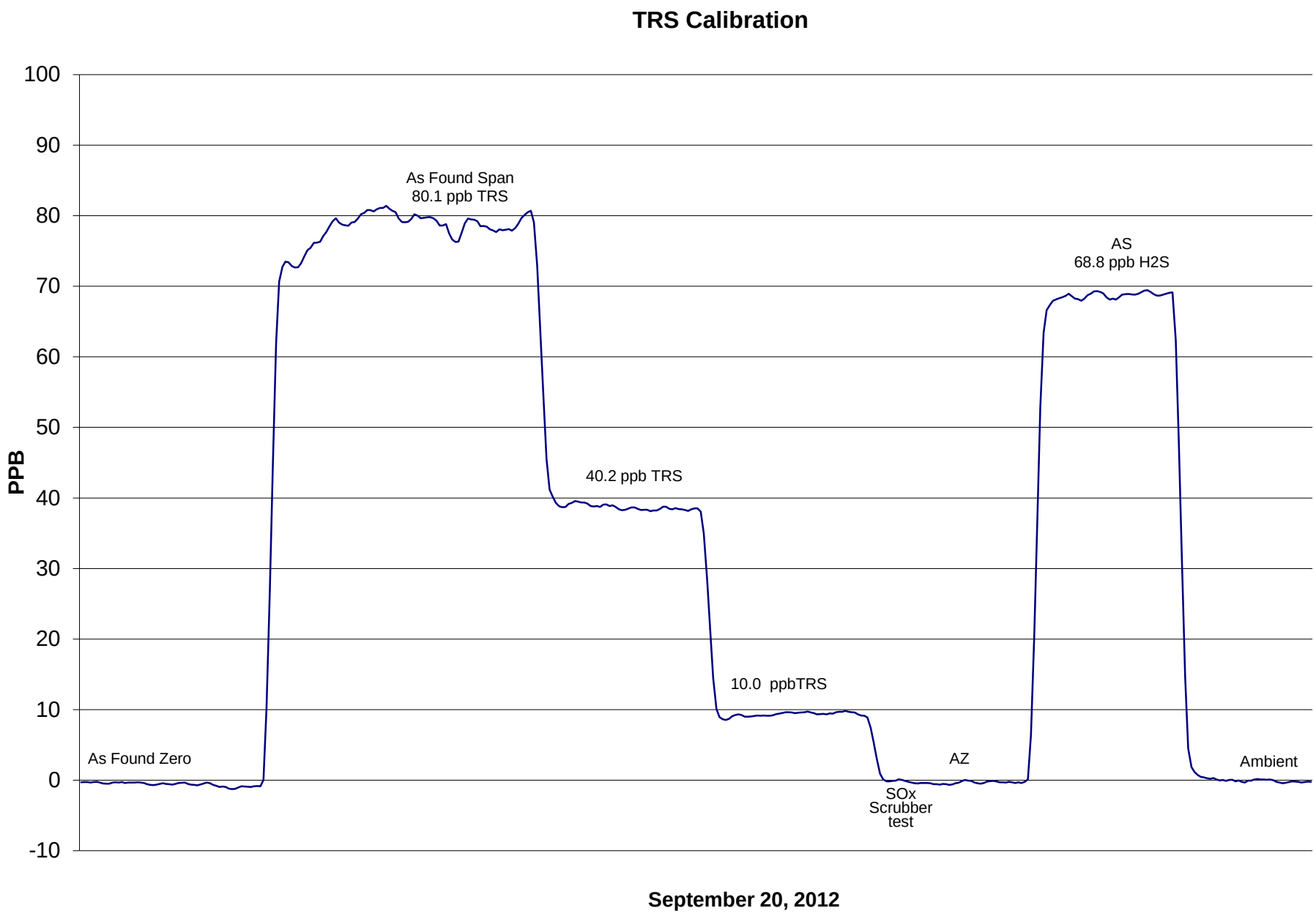
Station Information

Calibration Date	September 20, 2012	Previous Calibration	August 29, 2012
Station Number	PAZA Rover	Station Location	Sunset House
Start Time (MST)	11:05	End Time (MST)	14:22
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A		
80.1	78.5	1.0207	Correlation Coefficient	0.999892
40.2	38.4	1.0447		
10.0	9.6	1.0496	Slope	1.018031
			Intercept	0.466784




TRS Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As Found Span
80.1 ppb TRS
40.2 ppb TRS
10.0 ppbTRS
As Found Zero
SOx
Scrubber
test
AZ
AS
68.8 ppb H2S
Ambient
September 20, 2012