



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

**Continuous Ambient Air Quality Monitoring Program
Monthly Report
June 2016**

July 30, 2016

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

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

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

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

Company	Facility	LSD	EPEA Approval Number
Advantage Oil & Gas Ltd.	Glacier	05-02-076-13-W6	262479-00-00
Alberta Power (2000) Ltd. (an ATCO company)	Sturgeon	SW-06-069-21-W5	10283-02-02
ATCO Power Canada	Poplar Hill	11-19-073-08-W6	67774-01-01
ATCO Power Canada	Valleyview	SW-06-069-21-W5	147709-01-01
AltaGas Ltd.	Pouce Coupe	03-03-081-13-W6	247673-00-00
	Ante Creek	02-26-068-25-W5	266694-00-00
	Gordondale	16-31-78-11-W6M	287474-00-00
Apache Canada Ltd.	House Mountain	01-08-070-10-W5	10137-02-02
Birchcliff Energy Ltd.	Pouce Coupe	03-22-078-12-W6	252529-00-00
Canadian Natural Resources Limited	Bonanza	11-25-081-11-W6	00000029-01-00
	Progress/Gordondale	01-01-077-10-W6	00010036-02-00
	Gold Creek	13-26-067-05-W6	00010446-02-00

Company	Facility	LSD	EPEA Approval Number
	Teepee Creek	SE-2-074-04-W6	00001635-02-00
	Sturgeon/Valleyview	02-02-069-22-W5	1633-02-00
Canfor Forest Products	Grande Prairie	SW-23-071-06-W6	152645-01-00
Conocophillips Canada Energy Partnership	Wembley	06-19-073-08-W6	00000212-01-00
Devon Canada	NW Belloy (Dunvegan)	16-36-079-03-W6	00009810-02-00
	Eaglesham (South)	02-14-077-25-W5	00047669-01-00
	North Normanville	03-36-079-23-W5	00047455-01-00
	West Culp	05-34-078-25-W6	00136284-00-00
	Cecil	08-15-084-08-W6	00010032-02-00
Encana Corporation	Sexsmith	04-08-075-07-W6	00010002-01-00
Enerplus Resources	Pouce Coupe	SW-06-069-21-W5	1464-02-03
Exshaw Oil Corporation	Spirit River	03-10-077-07-W6	344521-00-00
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	00238762-00-00
Long Run Exploration	Eaglesham	01-25-076-01-W6	00241532-00-00
	Kakut	14-12-075-03-W6	00248469-00-00
	Donnelly	06-01-077-21-W5	00000087-02-00
	Puskwaskau	03-26-074-01-W6	00017524-01-00
Longview Oil Corp.	Sunset House	06-22-070-20-W5	138884-01-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	00001746-02-00

Company	Facility	LSD	EPEA Approval Number
	Pouce Coupe	16-07-078-11-W6	00000614-01-00
Petrus Resources	Rycroft	08-25-077-06-W6	11351-02-00
	Spirit River	08-34-077-06-W6	11096-02-00
Spectra Energy Midstream Corporation	Fourth Creek	16-11-082-09-W6	00000263-01-00
	Gordondale	11-26-079-09-W6	00011495-01-01
	Pouce Coupe/Bonanza	3-23-080-13-W6	00070203-01-01
Suncor Energy Inc.	Progress	07-22-078-09-W6	00011428-02-00
TAQA North Ltd.	Valhalla	13-21-076-09-W6	00017620-01-00
Veresen Energy	Hythe Brainard	11-18-074-12-W6	00010910-02-00
Weyerhaeuser Canada	Grande Prairie Pulp and Wood Plant	01-14-070-05-W6	00000113-02-00

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

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

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

Henry Pirker Station:

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

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 June.

Smoky Heights Station:

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

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 June.

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 June.

Rycroft-Portable Station:

- ◆ The measured ambient air quality was within the AAAQO for the Rycroft-Portable station, with the exception of the PM_{2.5} analyzer, which recorded one (1) exceedance of the 1-hour guideline of 80 µg/m³:
 - o June 21 16:00h 111 µg/m³ Alberta Environment Reference # 312948
- ◆ All analyzers and sensors at the Rycroft-Portable station had an operational uptime greater than 90% for the month of June.

Passive Monitoring - 46 Stations throughout the PAZA zone:

There were five duplicate sites sampled in the month of June: Spirit River, Clairmont Lake, Gold Creek, Jean Cote, and Girouxville 3 (H₂S). The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO₂ passives ranged from below detection level to 0.3 ppb, with a mean of 0.1 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.1 ppb to 3.4 ppb, with a mean of 0.7 ppb.
- Monthly average concentrations for O₃ passives ranged from 21.6 ppb to 38.3 ppb, with a mean of 30.0 ppb.
- Monthly average concentrations for H₂S passives ranged from 0.1 ppb to 0.3 ppb, with a mean of 0.2 ppb.

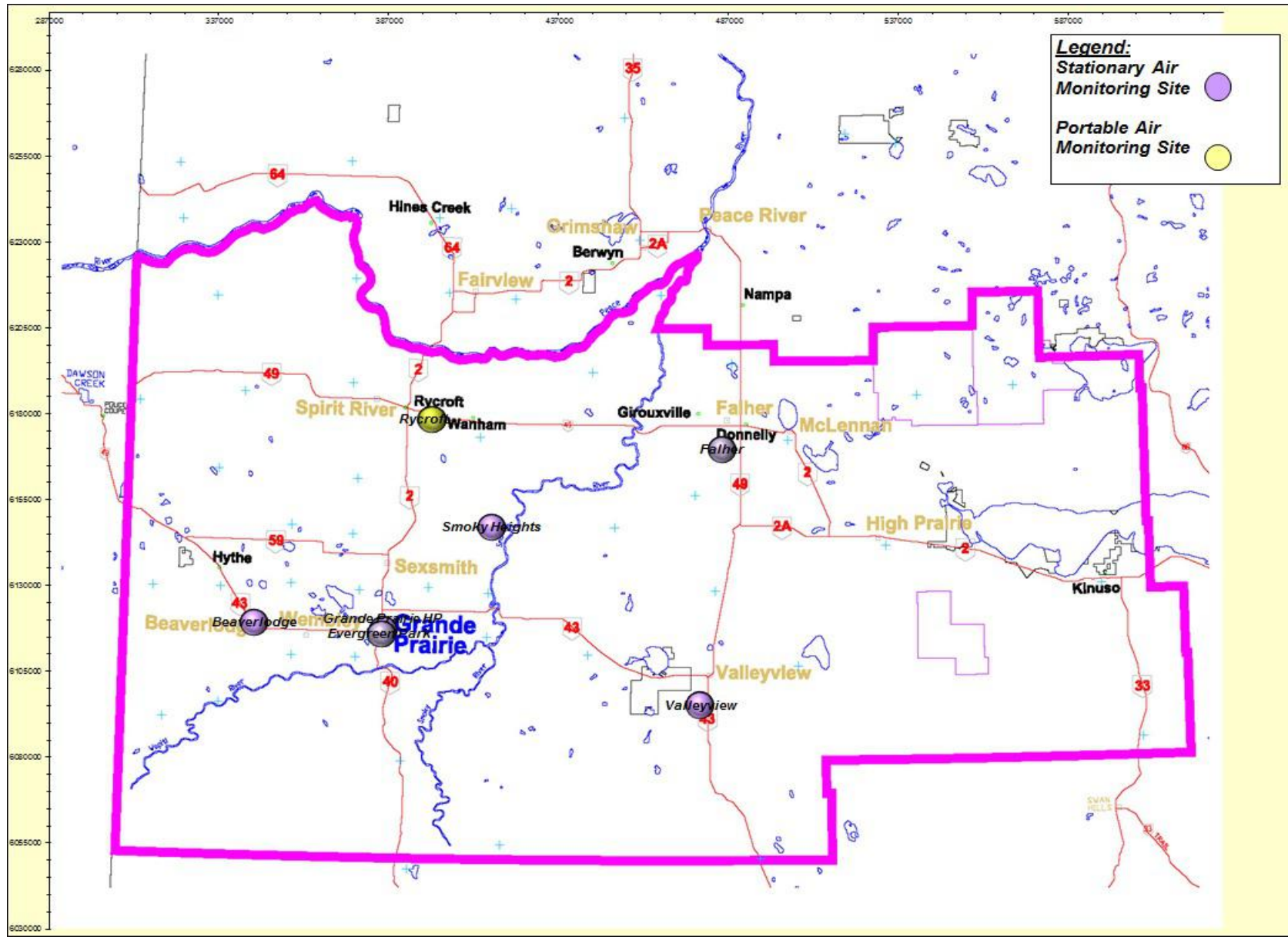
If you have any questions or concerns, please contact Patrick Andersen at 403.505.1041 or the PAZA office at 780.833.4343.

On Behalf of the
Peace Airshed Zone Association



Patrick Andersen, B.Sc.
Program Manager

Location of PAZA Continuous Monitoring Stations



PAZA Monthly Continuous Data Summary

Jun-2016 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		Conc	Day	Conc	Day	Operational Time (%)	Calibration Date
	1-hr	24-hr			1-hr	24-hr						
SO ₂ (ppb)	172	48	Henry Pirker	0.0	0	0	2.5	Jun-06 14:00	0.4	Jun-06	100.0%	Jun-10
SO ₂ (ppb)	172	48	Evergreen Park	0.1	0	0	1.0	Jun-09 11:00	0.2	Jun-19	100.0%	Jun-14
SO ₂ (ppb)	172	48	Smoky Heights	0.3	0	0	15.0	Jun-23 00:00	1.2	Jun-22	100.0%	Jun-06
SO ₂ (ppb)	172	48	Beaverlodge	0.1	0	0	2.8	Jun-21 23:00	0.2	Jun-20	99.4%	Jun-08
SO ₂ (ppb)	172	48	Valleyview	0.9	0	0	11.9	Jun-15 03:00	5.4	Jun-12	100.0%	Jun-15
SO ₂ (ppb)	172	48	Falher-Idle	-	0	0	-	-	-	-	-	-
SO ₂ (ppb)	172	48	Rycroft-Portable	0.3	0	0	3.7	Jun-06 10:00	1.0	Jun-20	100.0%	Jun-16
NO (ppb)			Henry Pirker	0.5	0	0	10.4	Jun-29 07:00	1.4	Jun-29	100.0%	Jun-10
NO ₂ (ppb)	159	106	Henry Pirker	2.9	0	0	19.8	Jun-08 08:00	5.6	Jun-29	100.0%	Jun-10
NO _x (ppb)			Henry Pirker	3.7	0	0	24.0	Jun-08 08:00	7.4	Jun-29	100.0%	Jun-10
NO (ppb)			Beaverlodge	0.2	0	0	4.7	Jun-28 08:00	0.6	Jun-29	99.4%	Jun-08
NO ₂ (ppb)	159	106	Beaverlodge	1.7	0	0	11.0	Jun-06 07:00	3.4	Jun-29	99.4%	Jun-08
NO _x (ppb)			Beaverlodge	1.9	0	0	13.8	Jun-06 08:00	4.0	Jun-29	99.4%	Jun-08
NO (ppb)			Rycroft-Portable	0.4	0	0	5.6	Jun-08 07:00	1.7	Jun-08	100.0%	Jun-16
NO ₂ (ppb)	159	106	Rycroft-Portable	2.3	0	0	22.2	Jun-08 01:00	8.3	Jun-08	100.0%	Jun-16
NO _x (ppb)			Rycroft-Portable	2.6	0	0	25.4	Jun-08 01:00	10.2	Jun-08	100.0%	Jun-16
O ₃ (ppb)	82		Henry Pirker	30.2	0	-	64.0	Jun-05 17:00	49.7	Jun-04	100.0%	Jun-10
O ₃ (ppb) - 8-hr			Henry Pirker		0				31.6	Jun-04		-
O ₃ (ppb)	82		Beaverlodge	4.0	0	-	64.2	Jun-04 13:00	52.5	Jun-04	99.4%	Jun-08
O ₃ (ppb) - 8-hr			Beaverlodge		0				61.5	Jun-04		-
O ₃ (ppb)	82		Rycroft-Portable	30.1	0	-	63.7	Jun-05 19:00	49.8	Jun-04	100.0%	Jun-16
O ₃ (ppb) - 8-hr			Rycroft-Portable		0				61.1	Jun-05		-
CO (ppm)	13		Henry Pirker	0.15	0	-	0.4	Jul-01 00:00	0.2	Jun-29	100.0%	Jun-09
CO (ppm) - 8-hr	5		Henry Pirker		0				0.2	Jun-30		-

PAZA Monthly Continuous Data Summary – continued

Jun-2016 Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
THC (ppm)			Henry Pirker	1.9	-	-	2.4	Jul-01 00:00	2.1	Jun-28	100.0%	Jun-09
CH ₄ (ppm)			Henry Pirker	1.9	-	-	2.4	Jul-01 00:00	2.1	Jun-28	100.0%	Jun-09
NMHC (ppm)			Henry Pirker	0.0	-	-	0.0	Jun-16 12:00	0.0	Jun-16	100.0%	Jun-09
THC (ppm)			Rycroft-Portable	1.9	-	-	2.1	Jun-30 14:00	1.9	Jun-20	96.9%	Jun-26
TRS (ppb)			Henry Pirker	0.2	-	-	1.3	Jun-26 05:00	0.4	Jun-28	100.0%	Jun-09
TRS (ppb)			Evergreen Park	0.3	-	-	2.5	Jun-09 12:00	0.5	Jun-09	100.0%	Jun-14
TRS (ppb)			Smoky Heights	0.1	-	-	0.4	Jun-29 06:00	0.2	Jun-29	90.0%	Jun-06
TRS (ppb)			Rycroft-Portable	0.3	-	-	1.6	Jun-30 13:00	0.5	Jun-27	100.0%	Jun-17
H ₂ S (ppb)	10	3	Valleyview	0.2	0	0	5.8	Jun-09 12:00	0.6	Jun-12	100.0%	Jun-15
H ₂ S (ppb)	10	3	Falher-Idle	-	0	0	-	-	-	-	-	-
PM _{2.5} (µg/m ³)	80	30	Henry Pirker	4.5	0	0	43.5	Jul-01 00:00	11.0	Jun-28	100.0%	Jun-10
PM _{2.5} (µg/m ³)	80	30	Evergreen Park	3.1	0	0	30.0	Jun-07 21:00	10.9	Jun-06	99.4%	Jun-14
PM _{2.5} (µg/m ³)	80	30	Smoky Heights	4.3	0	0	39.5	Jun-28 21:00	9.3	Jun-28	100.0%	Jun-06
PM _{2.5} (µg/m ³)	80	30	Beaverlodge	4.0	0	0	14.2	Jun-29 13:00	8.9	Jun-28	99.2%	Jun-22
PM _{2.5} (µg/m ³)	80	30	Rycroft-Portable	2.4	1	0	111.3	Jun-21 16:00	11.5	Jun-21	98.8%	Mar-03
RH (%)			Henry Pirker	58.7	-	-	89.6	Jun-10 06:00	86.0	Jun-09	100.0%	-
RH (%)			Evergreen Park	64.8	-	-	100.0	Jun-10 05:00	95.9	Jun-09	99.9%	-
RH (%)			Beaverlodge	66.2	-	-	100.0	Jun-09 00:00	99.2	Jun-09	99.4%	-
RH (%)			Valleyview	59.7	-	-	99.4	Jun-25 06:00	92.8	Jun-09	100.0%	-
SR (W/m ²)			Henry Pirker	226.0	-	-	811.6	Jun-04 13:00	316.8	Jun-04	100.0%	-
Temp (°C)			Henry Pirker	16.3	-	-	28.5	Jun-28 15:00	21.3	Jun-27	100.0%	-
Temp (°C)			Evergreen Park	15.5	-	-	28.2	Jun-06 16:00	19.9	Jun-21	99.9%	-
Temp (°C)			Smoky Heights	15.3	-	-	28.1	Jun-28 13:00	20.2	Jun-28	100.0%	-
Temp (°C)			Beaverlodge	15.0	-	-	26.6	Jun-06 16:00	20.1	Jun-28	99.4%	-
Temp (°C)			Valleyview	15.9	-	-	28.3	Jun-29 14:00	20.4	Jun-06	100.0%	-
Temp (°C)			Falher-Idle	-	-	-	-	-	-	-	-	-
Temp (°C)			Rycroft-Portable	16.1	-	-	28.6	Jun-28 15:00	20.8	Jun-28	100.0%	-

PAZA Monthly Continuous Data Summary – continued

Jun-2016Peace Airshed Zone Association							Maximum Recorded Values					
							1-hr		24-hr / 8-hr			
WSPD s (km/hr)			Henry Pirker	9.5	-	-	42.0	Jun-15 17:00	31.7	Jun-15	100.0%	-
WSPD s (km/hr)			Evergreen Park	14.8	-	-	63.0	Jun-15 17:00	51.1	Jun-15	99.9%	-
WSPD s (km/hr)			Smoky Heights	13.9	-	-	55.0	Jun-15 18:00	39.0	Jun-15	100.0%	-
WSPD s (km/hr)			Beaverlodge	13.8	-	-	59.0	Jun-15 17:00	41.0	Jun-15	99.4%	-
WSPD s (km/hr)			Valleyview	5.1	-	-	23.0	Jun-12 14:00	13.2	Jun-16	100.0%	-
WSPD s (km/hr)			Falher-Idle	-	-	-	-	-	-	-	-	-
WSPD s (km/hr)			Rycroft-Portable	10.5	-	-	38.0	Jun-16 17:00	31.0	Jun-16	100.0%	-
WSPD v (km/hr)			Henry Pirker	6.5	-	-	42.0	Jun-15 17:00	31.5	Jun-15	100.0%	-
WSPD v (km/hr)			Evergreen Park	11.1	-	-	63.0	Jun-15 17:00	50.7	Jun-15	99.9%	-
WSPD v (km/hr)			Smoky Heights	10.4	-	-	55.0	Jun-15 18:00	38.8	Jun-15	100.0%	-
WSPD v (km/hr)			Beaverlodge	8.0	-	-	59.0	Jun-15 17:00	40.8	Jun-15	99.4%	-
WSPD v (km/hr)			Valleyview	3.4	-	-	23.0	Jun-12 14:00	12.6	Jun-16	100.0%	-
WSPD v (km/hr)			Falher-Idle	-	-	-	-	-	-	-	-	-
WSPD v (km/hr)			Rycroft-Portable	6.5	-	-	38.0	Jun-16 17:00	30.7	Jun-16	100.0%	-
WDIR			Henry Pirker	SW	-	-	-	-	-	-	100.0%	-
WDIR			Evergreen Park	WSW	-	-	-	-	-	-	99.9%	-
WDIR			Smoky Heights	SW	-	-	-	-	-	-	100.0%	-
WDIR			Beaverlodge	W	-	-	-	-	-	-	99.4%	-
WDIR			Valleyview	W	-	-	-	-	-	-	100.0%	-
WDIR			Falher-Idle	-	-	-	-	-	-	-	-	-
WDIR			Rycroft-Portable	WSW	-	-	-	-	-	-	100.0%	-

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
NOx/NO/NO ₂	TEI	42i	No operational issues observed.
O ₃	TEI	49i	No operational issues observed.
CO	TEI	48C	No operational issues observed.
THC/CH ₄ /NMHC	TEI	55i	No operational issues observed.
TRS	TEI	45C/43C	No operational issues observed.
PM _{2.5}	Sharp	5030	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

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM _{2.5}	Sharp	5030	The PM _{2.5} analyzer returned an uptime of 99.4% due to invalid data being recorded intermittently throughout the month.
ET	Met One/Gill	083D	One hour of data flagged as “not valid” due to invalid data being recorded.
RH	Met One/Gill		One hour of data flagged as “not valid” due to invalid data being recorded.
WS / WD	Met One/ Gill		One hour of data flagged as “not valid” due to invalid data being recorded.

PAZA – Smoky Heights Station

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
TRS	TEI	43C	The TRS analyzer returned an uptime of 90.0% for the month of June, due to analyzer malfunctioning and maintenance. The analyzer was not operational 3 June 10:00 MST through 6 June 17:00 MST.
PM _{2.5}	Sharp	5030	No operational issues observed.
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Beaverlodge Station

General Station Issues

Power outage on June 12, data logger malfunction on June 22.

Parameter	Make	Model	Notes
SO ₂	TEI	43CTL	Refer to general station issues.
NO _x /NO/NO ₂	TEI	42C	Refer to general station issues.
O ₃	TEI	49C	Refer to general station issues.
PM _{2.5}	Sharp	5030	The PM _{2.5} analyzer returned an uptime of 99.2% for the month of June due to the power outage, two hours of data flagged as “not valid” due to data logger malfunctioning, and maintenance.
ET	n/a	n/a	Refer to general station issues.
RH	n/a	n/a	Refer to general station issues.
WS / WD	Blue Sky	857	Refer to general station issues.

PAZA – Valleyview Station

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
H ₂ S	TEI	43A	No operational issues observed.
ET	Gill	Met Pak 3	No operational issues observed.
RH	Gill	Met Pak 3	No operational issues observed.
WS / WD	Gill	Met Pak 3	No operational issues observed.

PAZA – Portable-Rycroft

General Station Issues

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
NO _x	TEI	42i	No operational issues observed.
O ₃	TEI	49i	No operational issues observed.
TRS	TEI	39C	No operational issues observed.
THC	TEI	51C	The THC analyzer returned an uptime of 96.9% for the month of June due to instrument malfunctioning.
PM _{2.5}	Sharp	5030	The PM _{2.5} analyzer returned an uptime of 98.8% for the month of June due to maintenance and instrument malfunctioning. 1 exceedance of the one-hour AAAQG occurred in June. Refer to the attached non-compliance report for details. Reference #312948
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

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - June 2016

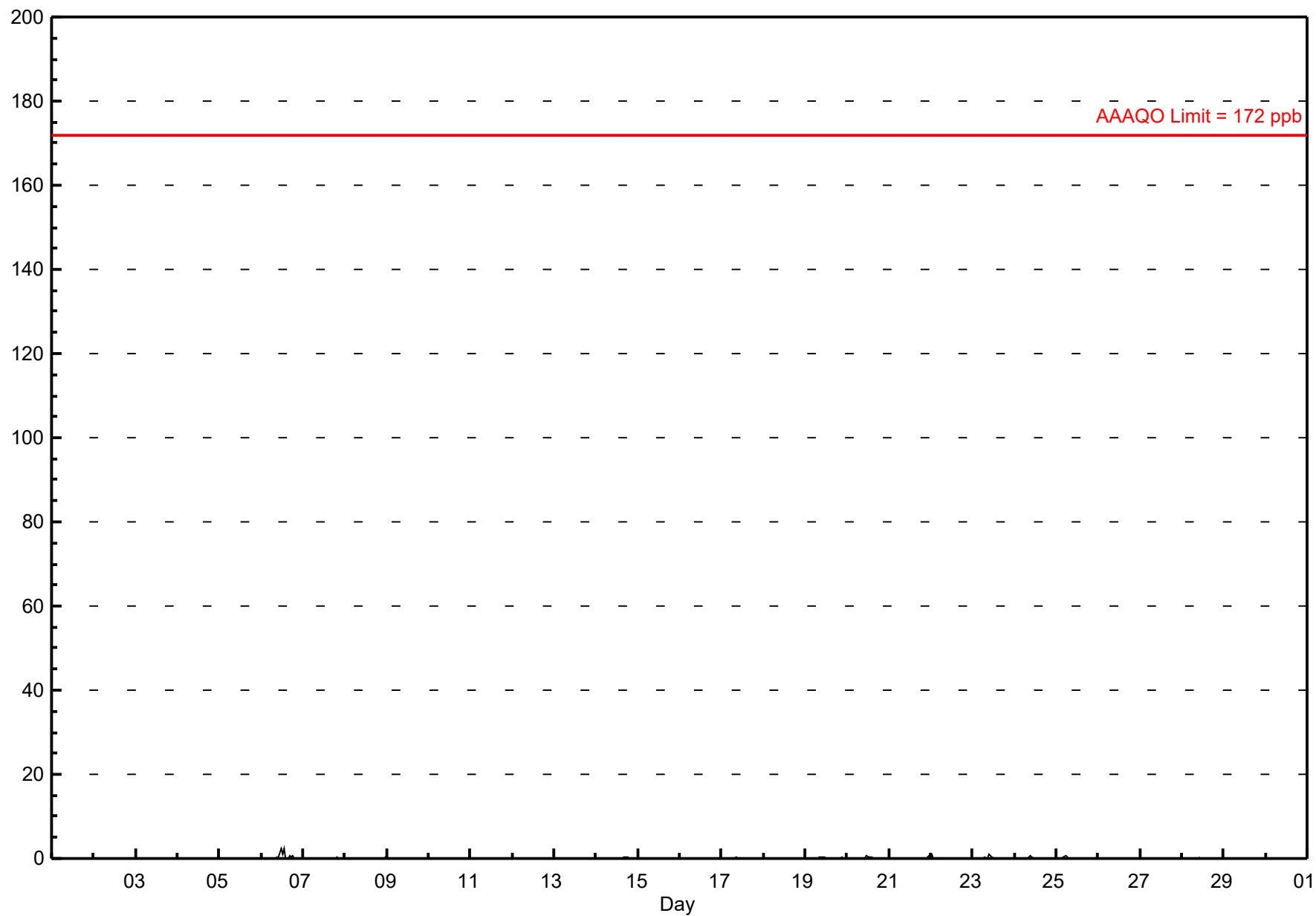
Number of Exceedences (AAAQO): Maximum Value: 2.5 ppb on Jun 6 14:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 0.4 ppb on Jun 6				Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0			
Minimum Value: 0 ppb on Jun 1 08:00 Maximum Diurnal Average: 0.1 ppb at hour 12 Monthly Average: 0.04 ppb																				Minimum Daily Average: 0.0 ppb on Jun 2 Minimum Diurnal Average: 0.0 ppb at hour 4 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.1 P ₉₉ = 0.8							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
2-Jun	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	
3-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
4-Jun	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	
5-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
6-Jun	0	0	0	0	0	0	0	A	0	0	0	2	1	3	0	0	1	0	1	0	0	0	0	0	0.4	2.5	
7-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	
8-Jun	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	0.4	
9-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
10-Jun	0	0	0	A	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
11-Jun	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	
12-Jun	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
13-Jun	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	
14-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.5	
15-Jun	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	
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.0	
17-Jun	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	0.4	
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.0	
19-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.5	
20-Jun	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.7	
21-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0.0	0.6	
22-Jun	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	0.9	
23-Jun	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	1.0	
24-Jun	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8	
25-Jun	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6	
26-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
27-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
28-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	
29-Jun	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
30-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
																								Diurnal Average	Diurnal Maximum		
																								0.9	0.6		
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																											

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

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - June 2016



Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

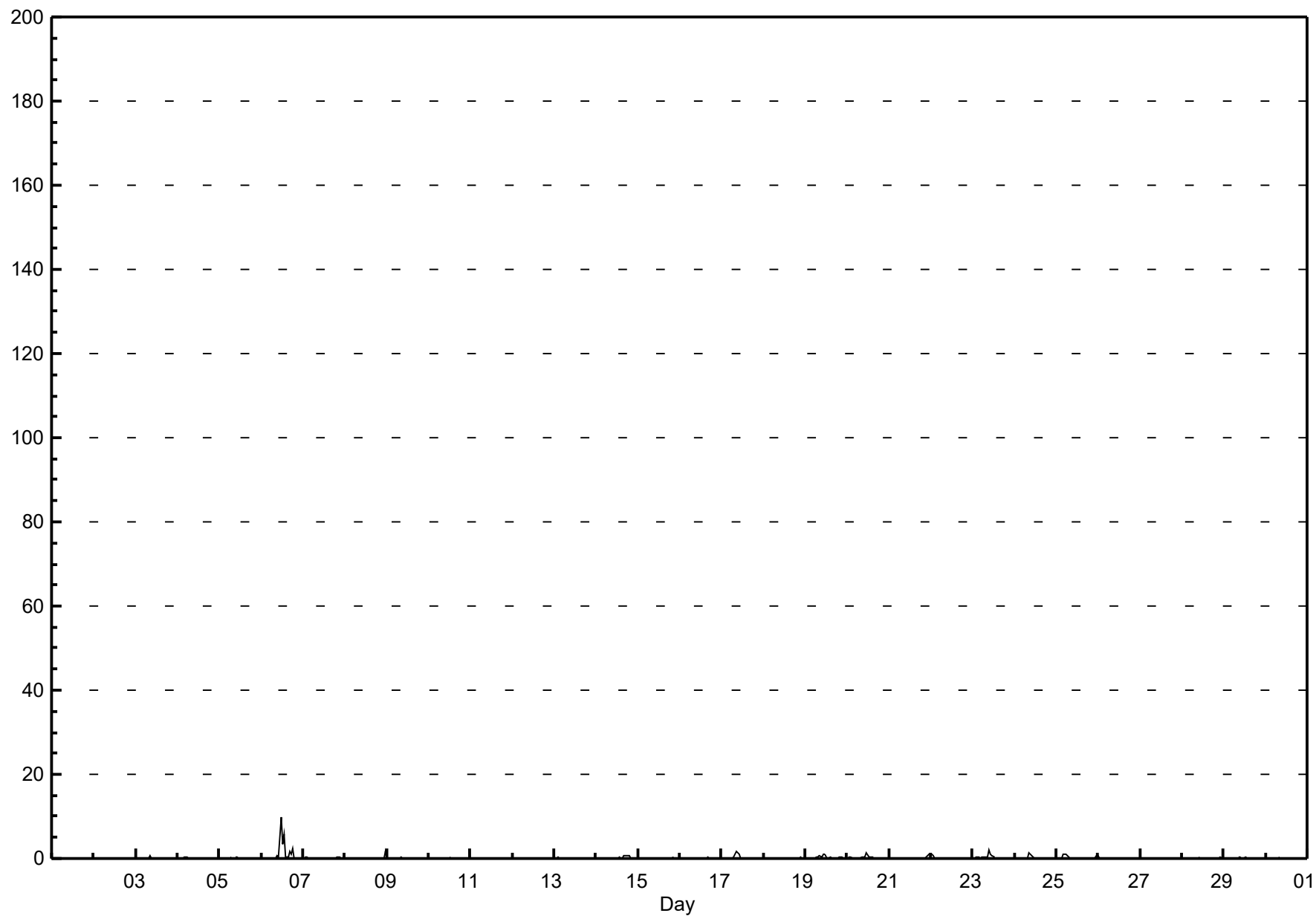
Henry Pirker - June 2016

Maximum Value: 9.7 ppb on Jun 6 12:00																				Maximum Daily Average: 1.1 ppb on Jun 6					Hours in Service: 720				
Minimum Value: 0 ppb on Jun 9 14:00																				Minimum Daily Average: 0.0 ppb on Jun 2					Hours of Data: 685				
Maximum Diurnal Average: 0.5 ppb at hour 12																				Minimum Diurnal Average: 0.0 ppb at hour 16					Hours of Missing Data: 35				
Monthly Average: 0.13 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.3 P ₉₉ = 1.8					Hours of Calibration: 35				
																				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-Jun	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	0.2			
2-Jun	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			
3-Jun	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.6			
4-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4			
5-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3			
6-Jun	0	0	0	0	0	0	0	A	0	1	0	10	3	6	0	0	2	1	2	0	0	0	0	0	1.1	9.7			
7-Jun	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			
8-Jun	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1	1.8				
9-Jun	0	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			
10-Jun	0	0	0	A	0	0	0	0	C	C	C	C	1	0	0	0	0	0	0	0	0	0	0	0	0.0	0.5			
11-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1			
12-Jun	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			
13-Jun	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	0.3			
14-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	A	0	0.2	0.8			
15-Jun	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	0.3			
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.3			
17-Jun	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	1.6			
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.3			
19-Jun	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.3	1.0			
20-Jun	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0.2	1.3			
21-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	0.1	1.0			
22-Jun	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	1.1			
23-Jun	0	0	0	0	0	0	0	0	0	2	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0.3	2.2			
24-Jun	0	0	0	0	0	0	0	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2			
25-Jun	0	0	0	0	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0.2	1.0			
26-Jun	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	0.5			
27-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2			
28-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3			
29-Jun	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4			
30-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3			
Diurnal Average																													
Diurnal Maximum																													
C - Calibration A - Automated Daily Zero Span																													

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

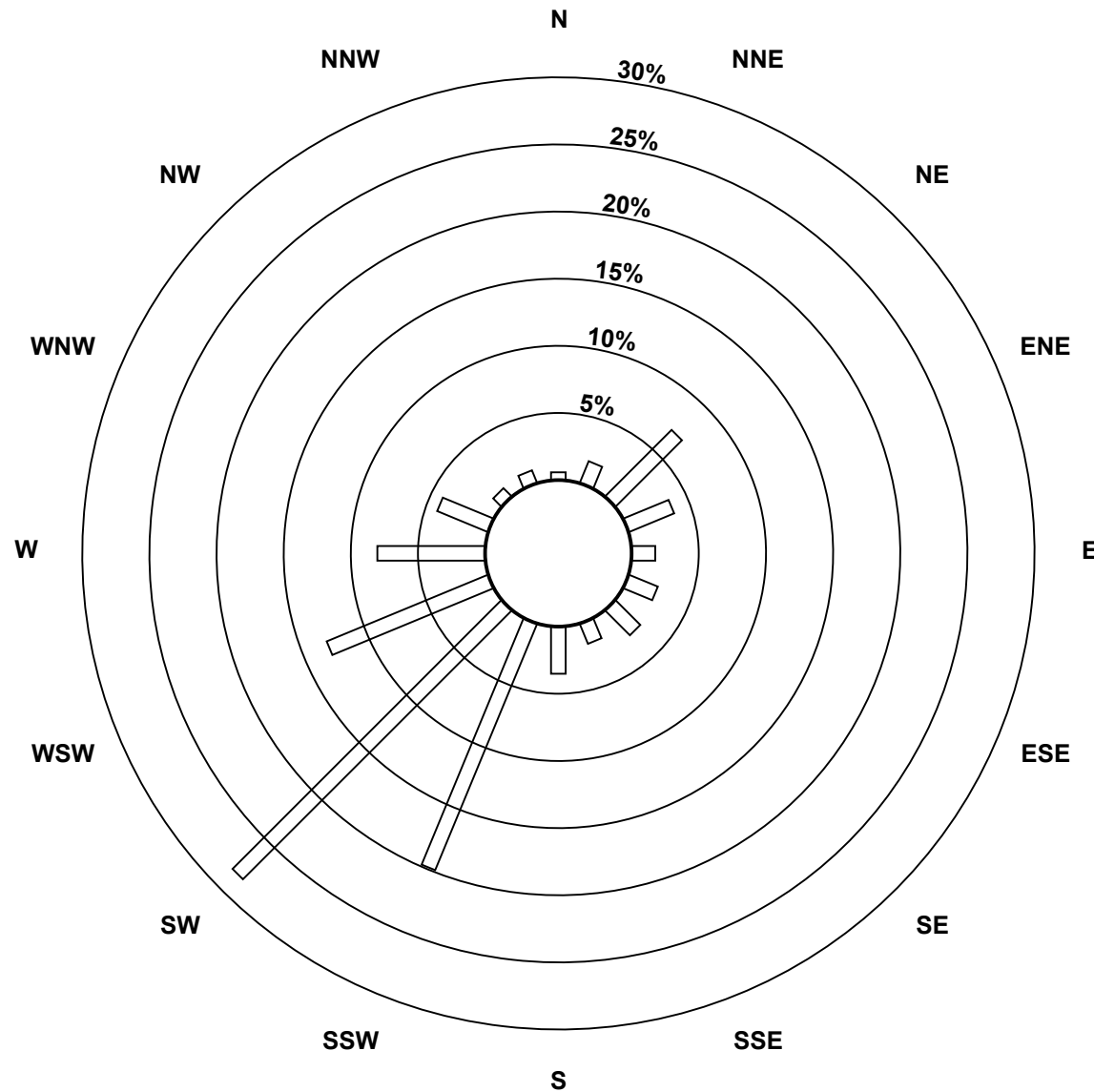
Henry Pirker - June 2016



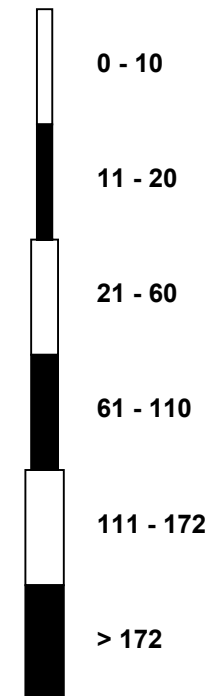
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - June 2016

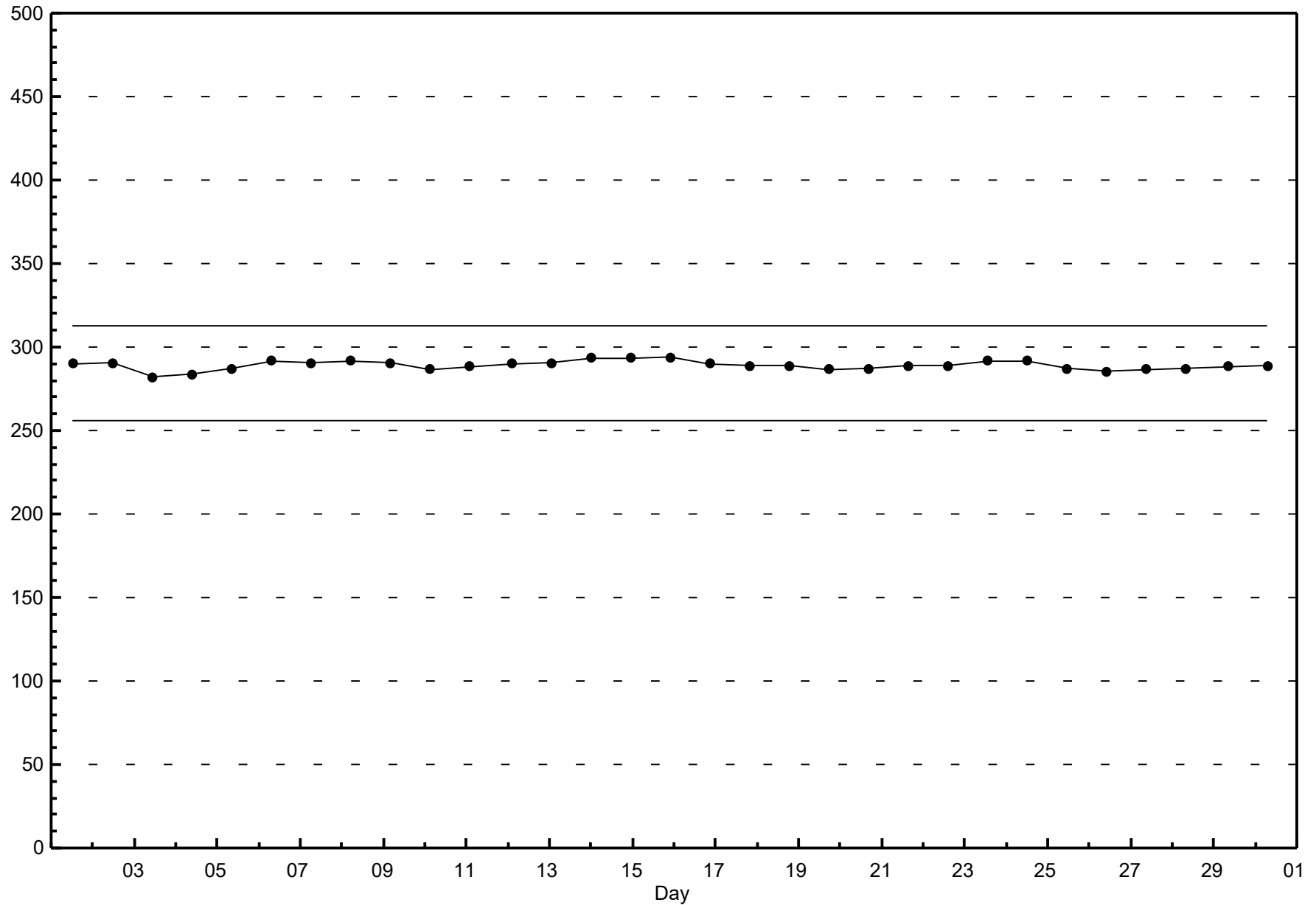


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - June 2016



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																								Hours in Service: 720			
Maximum Value: 1.3 ppb on Jun 29 05:00																								Maximum Daily Average: 0.4 ppb on Jun 28		Hours of Data: 682	
Minimum Value: 0 ppb on Jun 1 01:00																								Hours of Missing Data: 38			
Maximum Diurnal Average: 0.3 ppb at hour 5																								Hours of Calibration: 38			
Monthly Average: 0.19 ppb																								Percent Operational Time: 100.0			
Minimum Daily Average: 0.0 ppb on Jun 1																											
Minimum Diurnal Average: 0.2 ppb at hour 15																											
Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.8																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
2-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
3-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
4-Jun	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	
5-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
6-Jun	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
7-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
8-Jun	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
9-Jun	0	0	0	0	A	0	0	0	C	C	C	C	C	C	C	1	1	1	1	0	0	0	0	1	--	0.8	
10-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
11-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
12-Jun	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	0.1	
13-Jun	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2	
14-Jun	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	
15-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.2	
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3	
17-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3	
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.2	
19-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.2	
20-Jun	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	
21-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2	
22-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
23-Jun	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	
24-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
25-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
26-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
27-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
28-Jun	0	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0	
29-Jun	0	1	1	1	1	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.3	
30-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.6	
																								Diurnal Average	Diurnal Maximum		
																								0.2	0.6		
																								0.4	1.3		

C - CalibrationA - Automated Daily Zero Span

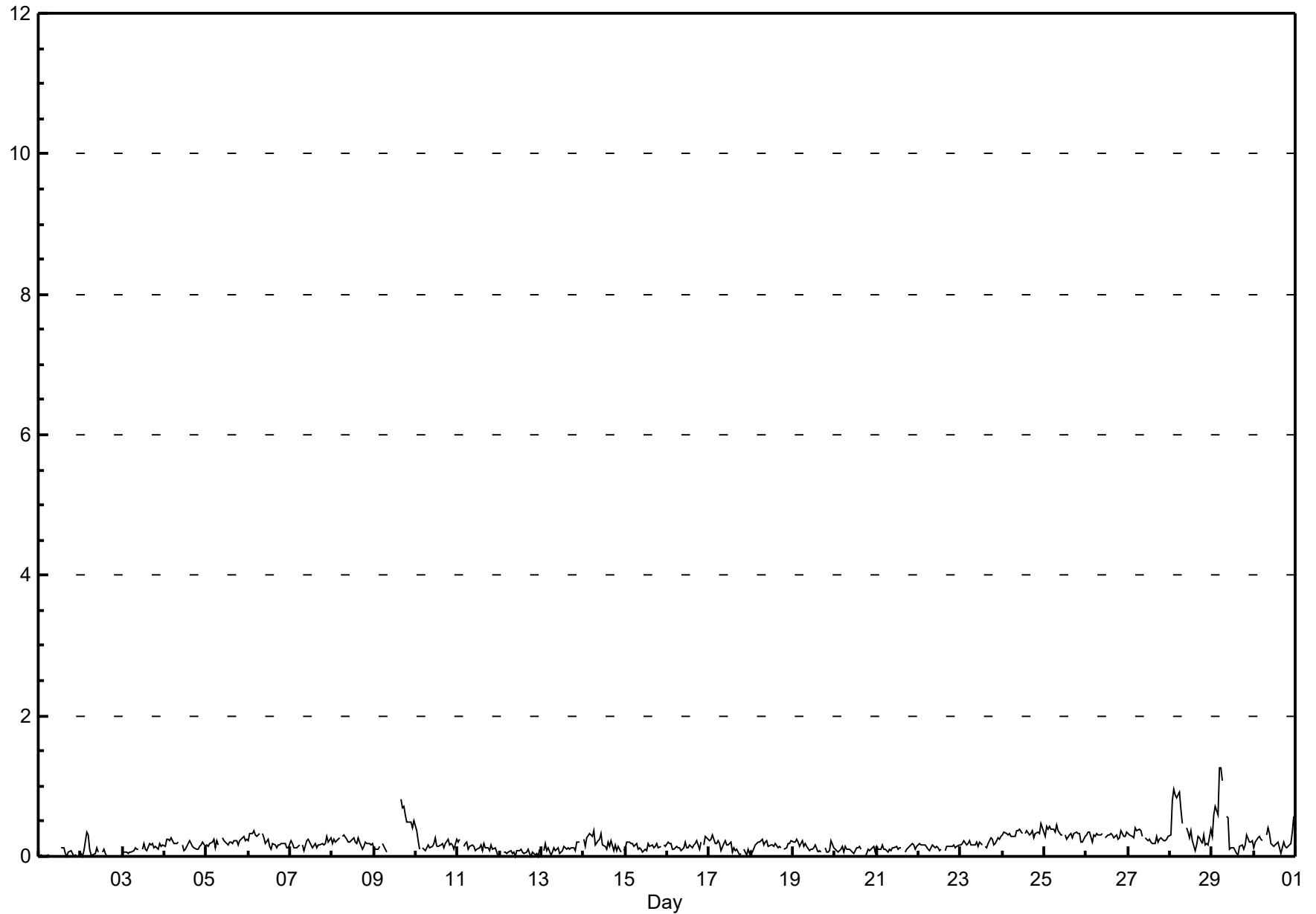
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb

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

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - June 2016



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

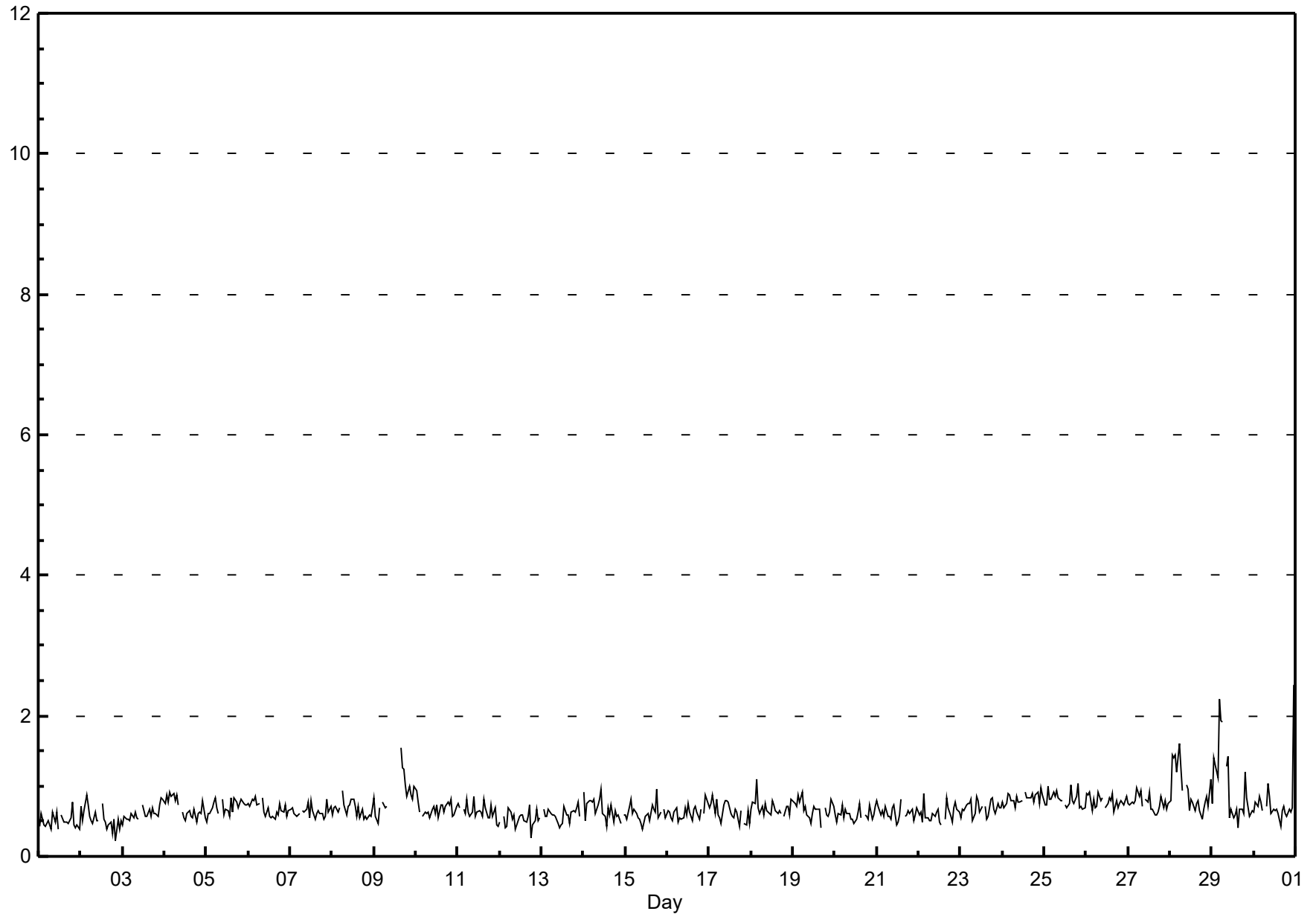
Henry Pirker - June 2016

Maximum Value: 2.4 ppb on Jul 1 00:00																			Maximum Daily Average: 1.0 ppb on Jun 29										Hours in Service: 720	
Minimum Value: 0 ppb on Jun 2 21:00																			Minimum Daily Average: 0.5 ppb on Jun 1										Hours of Data: 682	
Maximum Diurnal Average: 0.8 ppb at hour 6																			Minimum Diurnal Average: 0.6 ppb at hour 12										Hours of Missing Data: 38	
Monthly Average: 0.69 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 of Calibration: 38	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Jun	0	1	1	0	0	1	0	0	1	0	1	0	A	1	0	0	0	0	1	1	0	0	0	0	0.5	0.8				
2-Jun	1	1	1	1	1	1	1	0	1	1	0	A	1	1	0	0	0	0	0	1	0	1	0	0	0.5	0.9				
3-Jun	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8				
4-Jun	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.7	0.9				
5-Jun	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8				
6-Jun	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
7-Jun	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8				
8-Jun	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
9-Jun	1	1	0	1	A	1	1	1	C	C	C	C	C	C	C	2	1	1	1	1	1	1	1	1	--	1.5				
10-Jun	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
11-Jun	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.6	0.8				
12-Jun	0	A	1	0	0	1	1	1	1	0	0	1	1	1	1	0	1	1	0	0	1	1	1	1	0.5	0.7				
13-Jun	A	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0	1	1	1	1	1	1	A	0.6	0.8				
14-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0	A	1	0.7	1.0				
15-Jun	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	0.6	1.0				
16-Jun	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.6	0.9				
17-Jun	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	A	0	0	1	0	0.6	0.9				
18-Jun	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				
19-Jun	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	A	1	1	1	1	1	1	0.7	0.9				
20-Jun	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	0.6	0.8				
21-Jun	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	A	1	1	1	1	1	1	1	1	0.6	0.8				
22-Jun	1	1	0	1	1	1	1	1	1	1	1	1	0	0	A	1	1	1	1	0	1	1	1	1	0.6	0.9				
23-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
24-Jun	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0				
25-Jun	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0				
26-Jun	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	0.9				
27-Jun	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0				
28-Jun	1	1	1	1	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6				
29-Jun	1	1	1	1	2	2	2	A	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1.0	2.2				
30-Jun	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	2	0.8	2.4				
																								Diurnal Average						
																								Diurnal Maximum						
C - Calibration																								A - Automated Daily Zero Span						

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

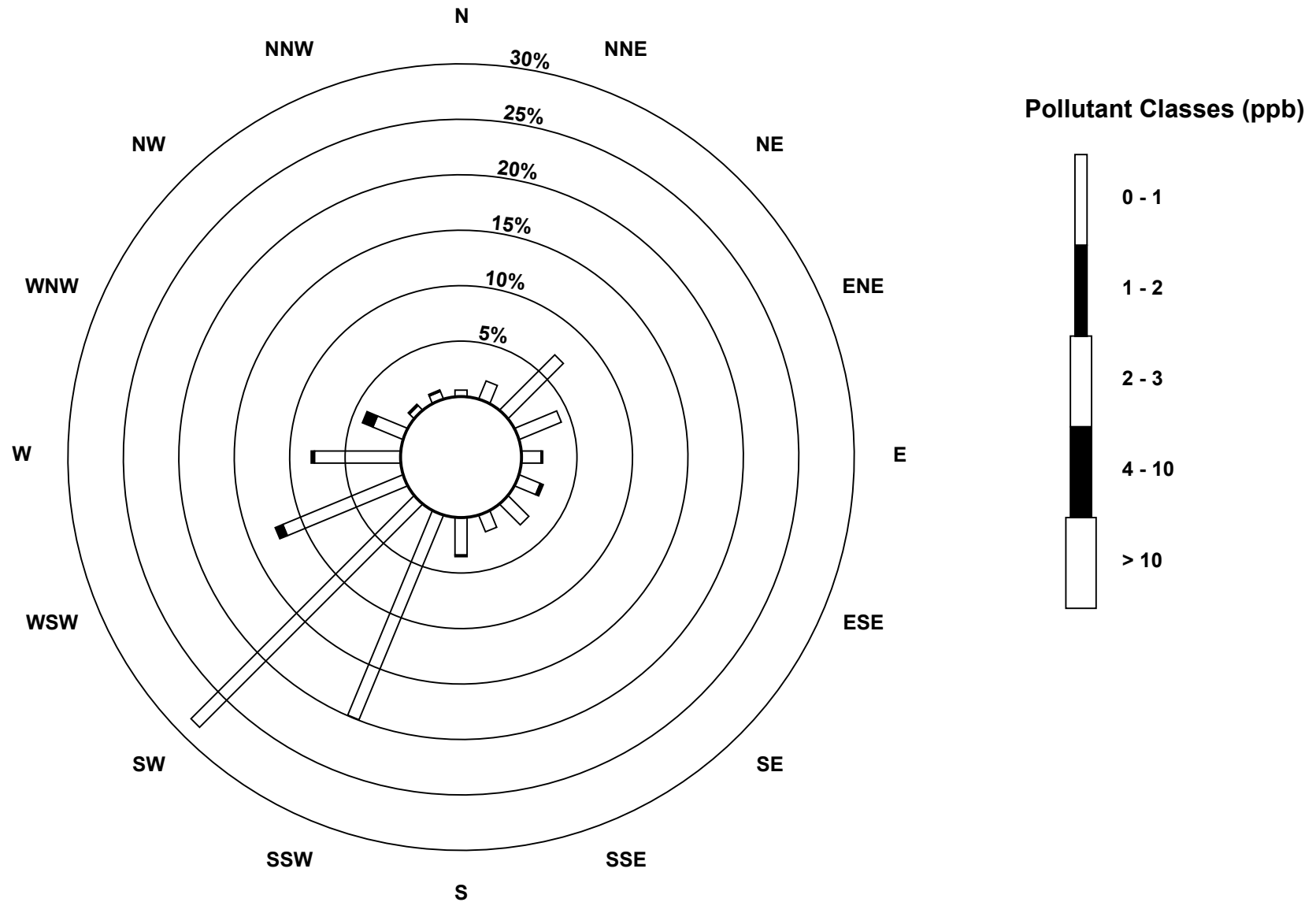
Henry Pirker - June 2016

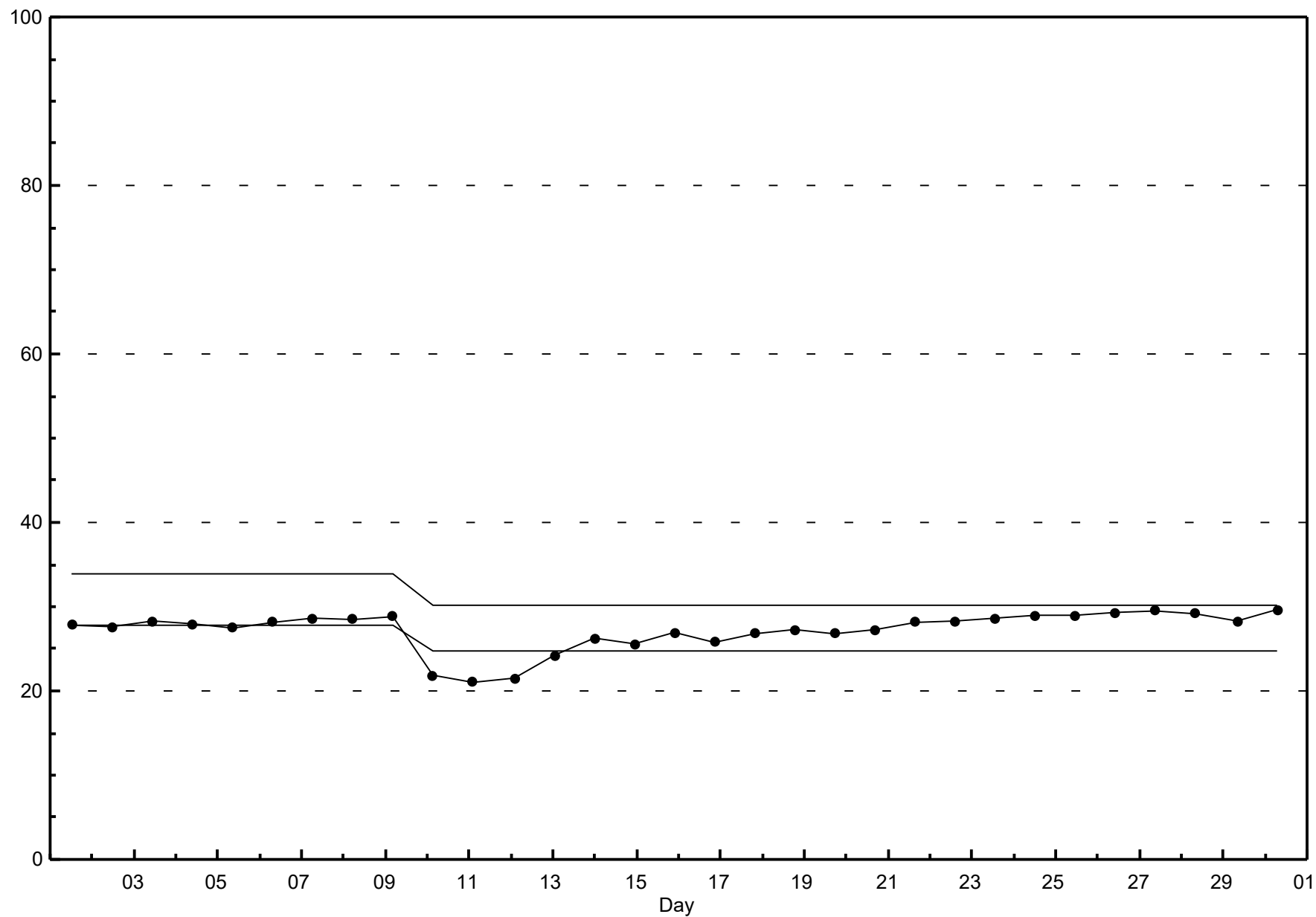


Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - June 2016





Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

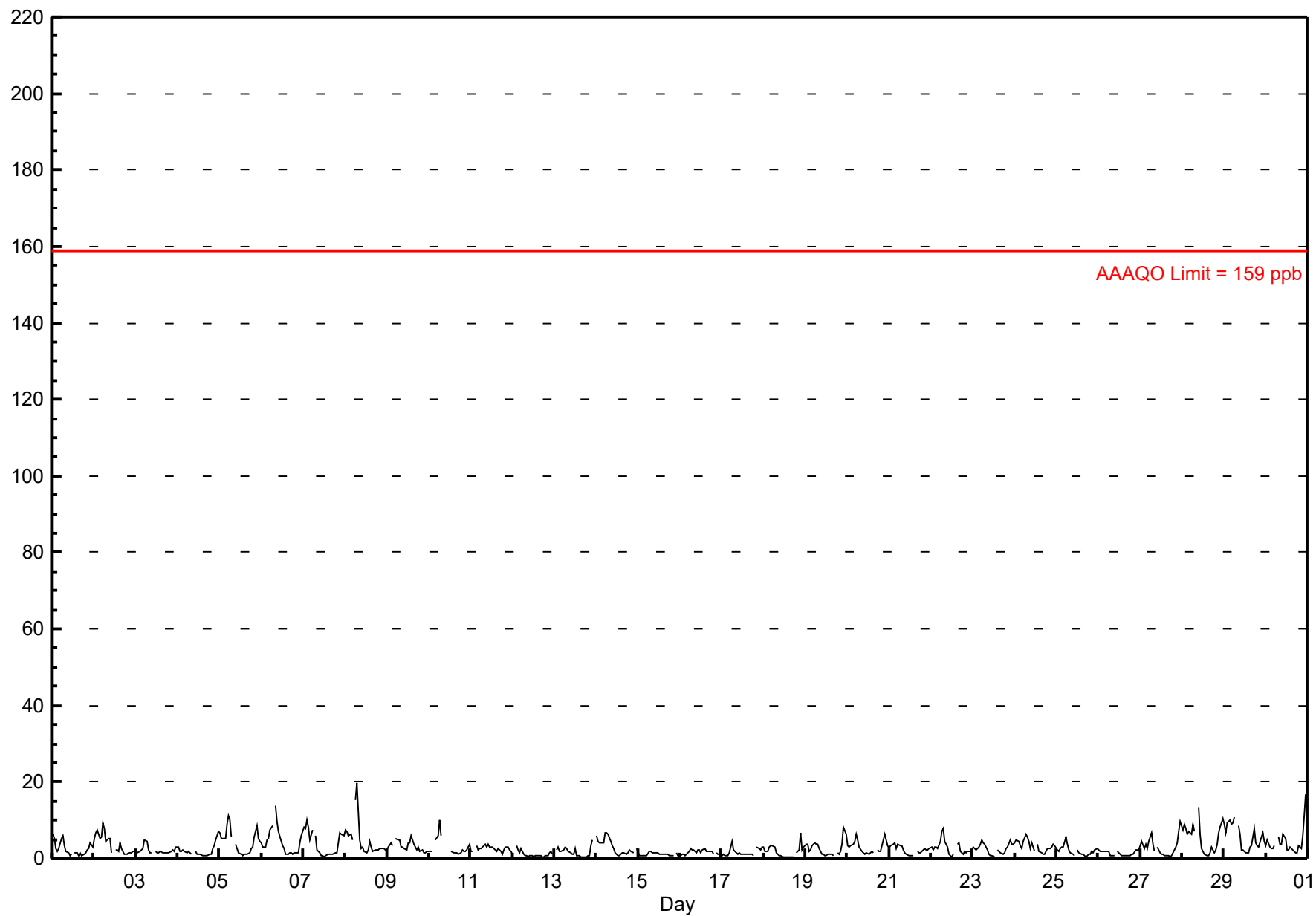
Henry Pirker - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 19.8 ppb on Jun 8 08:00																				Maximum Daily Average: 5.6 ppb on Jun 29		Hours of Data: 684				
Minimum Value: 0 ppb on Jun 18 18:00																				Minimum Daily Average: 1.1 ppb on Jun 12		Hours of Missing Data: 36				
Maximum Diurnal Average: 5.6 ppb at hour 7																				Minimum Diurnal Average: 1.5 ppb at hour 19		Hours of Calibration: 36				
Monthly Average: 2.89 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.8 Q ₁ = 1.3 Median = 2.1 Q ₃ = 3.7 P ₉₀ = 6.2 P ₉₉ = 11.0		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-Jun	6	5	2	2	2	5	6	3	2	1	1	1	A	2	1	1	1	1	1	2	2	3	4	3	2.6	6.5
2-Jun	5	7	8	5	6	9	8	5	5	5	2	A	2	2	2	4	3	1	1	1	1	2	2	2	3.8	9.5
3-Jun	1	1	2	2	3	5	4	2	2	1	A	2	1	2	2	1	1	1	1	1	2	2	2	3	2.0	5.0
4-Jun	3	2	2	2	2	2	2	1	1	A	2	1	1	1	1	1	1	1	1	1	3	3	5	7	2.0	7.0
5-Jun	7	5	5	5	9	11	10	6	A	4	3	1	1	1	1	1	1	2	3	3	6	9	5	5	4.5	11.0
6-Jun	4	3	3	5	5	8	9	A	14	10	7	4	3	2	1	1	2	2	1	1	2	1	4	6	4.3	13.7
7-Jun	8	8	10	8	5	8	A	6	2	1	1	1	1	1	1	1	1	1	2	2	4	7	6	6	3.9	9.9
8-Jun	7	7	6	6	5	A	15	20	5	3	3	2	2	2	4	3	2	2	2	2	3	3	3	2	4.7	19.8
9-Jun	2	3	4	3	A	5	5	5	3	3	3	2	4	4	6	4	3	2	3	2	2	2	1	2	3.2	6.1
10-Jun	2	2	2	A	5	6	10	6	C	C	C	C	C	2	1	1	2	1	2	2	2	2	2	4	2.9	10.0
11-Jun	2	2	A	3	2	3	3	3	4	3	4	3	3	2	2	2	3	2	1	2	3	3	2	2	2.6	3.7
12-Jun	1	A	3	2	2	3	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	2	1	1.1	3.3
13-Jun	A	2	3	2	2	2	3	3	2	1	1	1	2	1	1	0	1	0	0	1	1	3	5	A	1.7	4.7
14-Jun	6	4	4	4	4	7	7	6	4	4	3	1	1	1	1	1	1	1	2	2	2	2	A	2	3.1	6.8
15-Jun	2	1	1	1	1	1	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1.1	1.8
16-Jun	1	1	1	1	1	2	3	2	2	2	2	2	2	2	2	2	2	2	2	1	A	2	1	1	1.7	2.5
17-Jun	1	1	1	1	1	3	4	2	2	1	1	1	1	1	1	1	1	1	1	A	3	3	2	3	1.7	4.3
18-Jun	3	2	2	3	3	3	3	2	1	1	0	0	0	0	0	0	0	0	A	2	2	7	2	3	1.8	6.8
19-Jun	4	4	2	2	3	4	4	4	2	1	1	1	1	1	1	1	1	A	2	1	2	4	8	6	2.6	8.1
20-Jun	4	3	3	4	5	6	5	3	2	1	1	1	1	2	2	1	A	2	2	2	3	6	5	3	3.0	6.5
21-Jun	3	3	4	4	3	4	3	3	2	2	1	1	1	1	1	A	2	1	1	2	3	2	2	3	2.3	4.3
22-Jun	3	2	3	3	3	4	7	8	5	3	1	1	0	1	A	4	4	2	1	2	2	2	2	2	2.8	7.8
23-Jun	3	3	2	3	4	5	4	4	2	1	1	1	1	A	2	2	1	1	2	3	3	5	4	4	2.6	5.0
24-Jun	4	5	5	3	2	4	7	6	5	3	4	2	A	4	2	2	1	1	2	2	3	3	4	3	3.3	6.5
25-Jun	2	2	3	3	3	5	4	2	1	1	1	A	2	1	1	1	1	1	1	1	2	1	2	2	1.9	5.5
26-Jun	2	2	2	2	2	2	2	1	1	1	A	2	1	1	1	1	1	1	1	1	1	2	2	2	1.4	2.3
27-Jun	3	4	3	4	3	5	7	4	2	A	3	1	1	1	1	1	1	1	1	1	3	4	7	10	3.0	9.8
28-Jun	8	9	8	6	7	6	9	7	A	13	6	2	2	1	1	1	1	3	2	2	4	7	8	10	5.4	13.3
29-Jun	9	7	9	10	9	9	11	A	9	6	2	2	2	2	2	3	3	8	4	3	3	6	7	4	5.6	10.9
30-Jun	4	5	3	3	3	3	A	6	4	4	6	5	2	2	3	2	2	2	2	3	3	6	11	17	4.3	16.8
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - June 2016



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

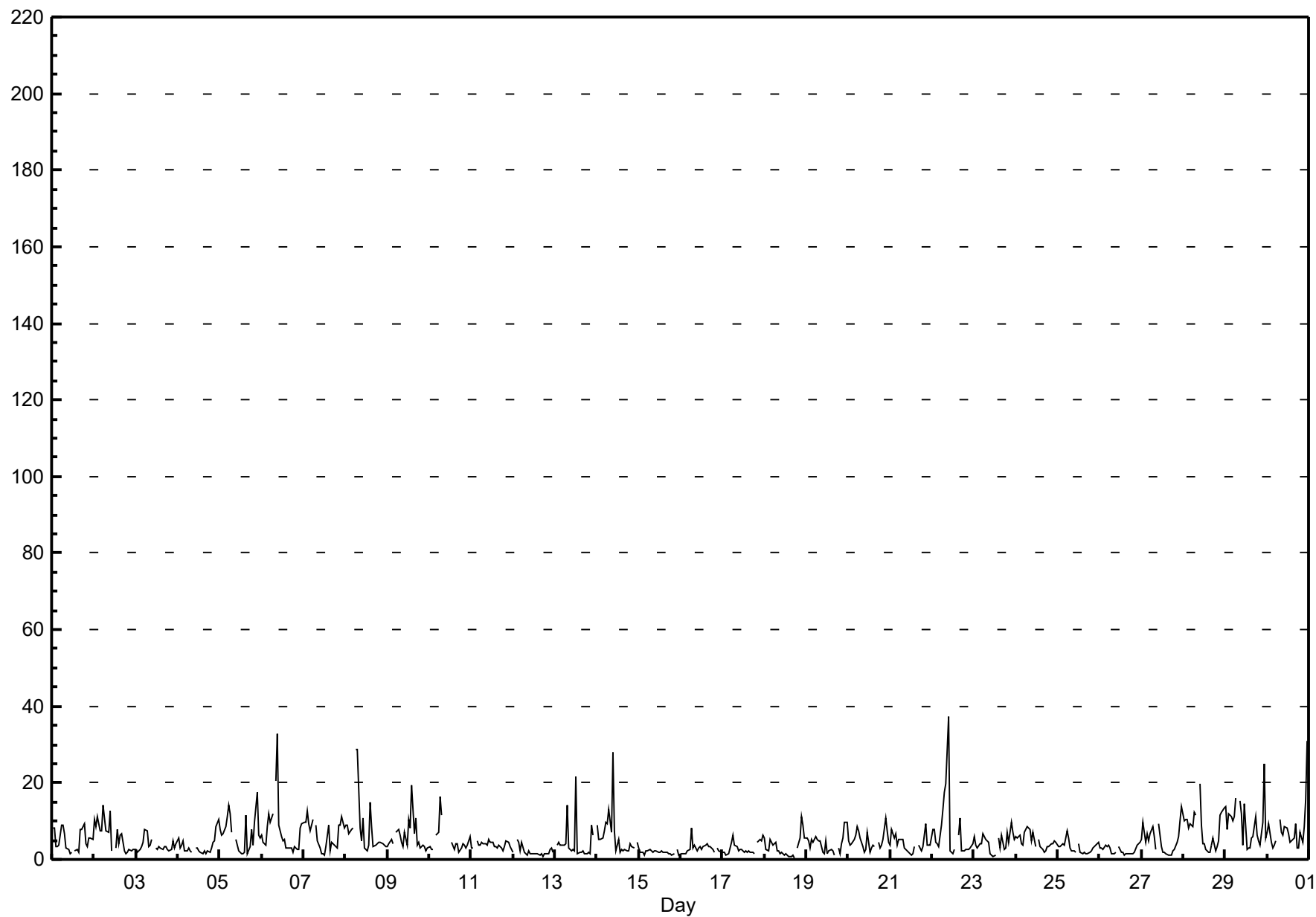
Henry Pirker - June 2016

Maximum Value: 37.4 ppb on Jun 22 10:00																								Maximum Daily Average: 9.3 ppb on Jun 29										Hours in Service: 720	
Minimum Value: 0 ppb on Jun 18 18:00																								Minimum Daily Average: 1.9 ppb on Jun 15										Hours of Data: 684	
Maximum Diurnal Average: 8.6 ppb at hour 7																								Minimum Diurnal Average: 3.0 ppb at hour 19										Hours of Missing Data: 36	
Monthly Average: 5.04 ppb																								Percentiles: P ₁ = 1.0 P ₁₀ = 1.6 Q ₁ = 2.4 Median = 3.7 Q ₃ = 6.4 P ₉₀ = 9.5 P ₉₉ = 24.2										Hours of Calibration: 36	
																								Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Jun	8	8	3	3	4	9	9	7	3	2	2	2	A	2	3	2	8	8	9	4	3	6	6	5	5.1	9.5									
2-Jun	11	9	11	7	7	14	11	7	7	13	2	A	3	8	4	6	7	2	2	2	3	2	3	3	6.3	14.1									
3-Jun	3	2	3	4	5	8	8	3	4	5	A	3	3	4	3	3	3	3	3	2	3	5	3	4	3.7	7.9									
4-Jun	6	3	4	5	2	2	3	2	2	A	3	3	2	2	1	2	1	2	2	3	4	5	9	11	3.5	10.6									
5-Jun	8	6	7	9	11	14	12	7	A	5	4	2	1	1	2	12	2	4	8	4	10	18	6	6	6.8	17.6									
6-Jun	6	4	4	9	12	10	12	A	21	33	9	6	5	5	3	3	3	3	2	3	3	2	8	9	7.6	32.9									
7-Jun	10	10	13	9	7	11	A	9	5	3	2	1	1	3	9	2	5	4	3	3	9	9	11	8	6.4	12.7									
8-Jun	9	9	7	8	8	A	29	29	8	5	11	3	2	4	15	9	3	4	4	5	5	4	4	3	8.1	28.6									
9-Jun	3	4	5	4	A	7	8	6	4	3	7	4	11	8	19	7	11	4	4	3	4	3	2	3	5.9	19.2									
10-Jun	3	2	3	A	6	7	16	12	C	C	C	C	C	5	3	4	4	2	3	4	4	3	4	6	5.0	16.4									
11-Jun	3	3	A	5	4	4	4	4	4	4	5	4	5	4	3	3	4	3	2	3	5	5	3	3	3.7	5.1									
12-Jun	2	A	5	4	2	4	2	2	1	2	1	1	1	1	1	1	1	1	1	1	2	3	3	2	2.0	5.1									
13-Jun	A	4	5	4	4	4	4	14	3	2	3	2	22	1	2	2	2	2	1	2	1	9	6	A	4.5	21.8									
14-Jun	9	5	5	6	7	10	9	13	7	28	8	2	5	2	2	2	3	2	2	4	3	3	A	5	6.2	27.8									
15-Jun	3	2	2	1	2	2	3	2	2	2	2	2	2	2	2	2	2	1	1	1	1	A	3	1	1.9	3.1									
16-Jun	1	2	1	1	2	2	8	3	4	2	3	3	3	3	4	4	3	3	3	2	A	3	2	2	2.9	8.1									
17-Jun	2	2	1	1	3	5	6	4	3	2	3	3	2	2	2	2	2	2	1	A	4	5	5	6	3.0	6.5									
18-Jun	6	3	2	5	5	4	5	2	2	1	2	1	1	1	1	1	1	0	A	3	5	11	9	6	3.4	11.3									
19-Jun	6	5	3	5	5	6	5	5	5	2	2	5	1	2	2	2	1	A	3	2	4	6	10	10	4.1	9.6									
20-Jun	5	4	4	5	6	9	7	6	3	2	3	7	2	3	4	3	A	5	3	4	5	11	7	5	4.8	10.7									
21-Jun	4	8	6	7	4	5	5	5	3	3	2	2	1	2	3	A	4	3	2	3	9	4	4	4	4.0	9.3									
22-Jun	8	8	4	4	4	9	13	18	20	37	2	2	2	3	A	6	11	2	2	3	3	3	3	4	7.4	37.4									
23-Jun	6	4	3	4	4	7	6	5	4	2	1	1	1	A	6	3	6	3	3	7	4	10	7	5	4.4	9.5									
24-Jun	6	6	6	4	4	7	8	8	8	5	7	3	A	5	3	3	2	2	3	3	4	4	5	5	4.9	8.4									
25-Jun	3	3	4	4	4	8	6	3	2	2	2	A	4	2	2	2	2	2	2	2	3	3	4	5	3.1	7.5									
26-Jun	3	3	3	4	3	4	3	1	1	2	A	3	2	2	1	2	2	2	2	1	2	4	4	4	2.5	4.3									
27-Jun	5	10	4	7	5	7	9	6	3	A	10	3	2	2	1	1	1	1	2	3	5	6	10	14	5.0	13.9									
28-Jun	10	11	11	8	9	8	12	12	A	20	9	4	4	3	2	2	4	6	2	3	5	12	12	13	7.9	19.6									
29-Jun	14	8	12	11	10	11	16	A	15	12	4	15	2	3	3	6	6	11	6	5	4	10	25	5	9.3	25.1									
30-Jun	7	9	5	3	4	5	A	10	7	6	9	8	7	4	5	5	9	3	3	7	4	9	16	31	7.7	31.0									
5.8 5.4 5.0 5.2 5.3 6.9 8.6 7.3 5.6 7.6 4.3 3.6 3.6 3.1 3.8 3.5 3.9 3.1 3.0 3.2 4.2 6.1 6.7 6.4																								Diurnal Average											
13.9 10.6 12.7 11.4 11.9 14.1 28.6 20.5 37.4 11.0 14.7 21.8 8.0 19.2 11.6 11.0 11.4 9.5 7.1 9.6 17.6 25.1 31.0																								Diurnal Maximum											
C - Calibration A - Automated Daily Zero Span																																			

Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

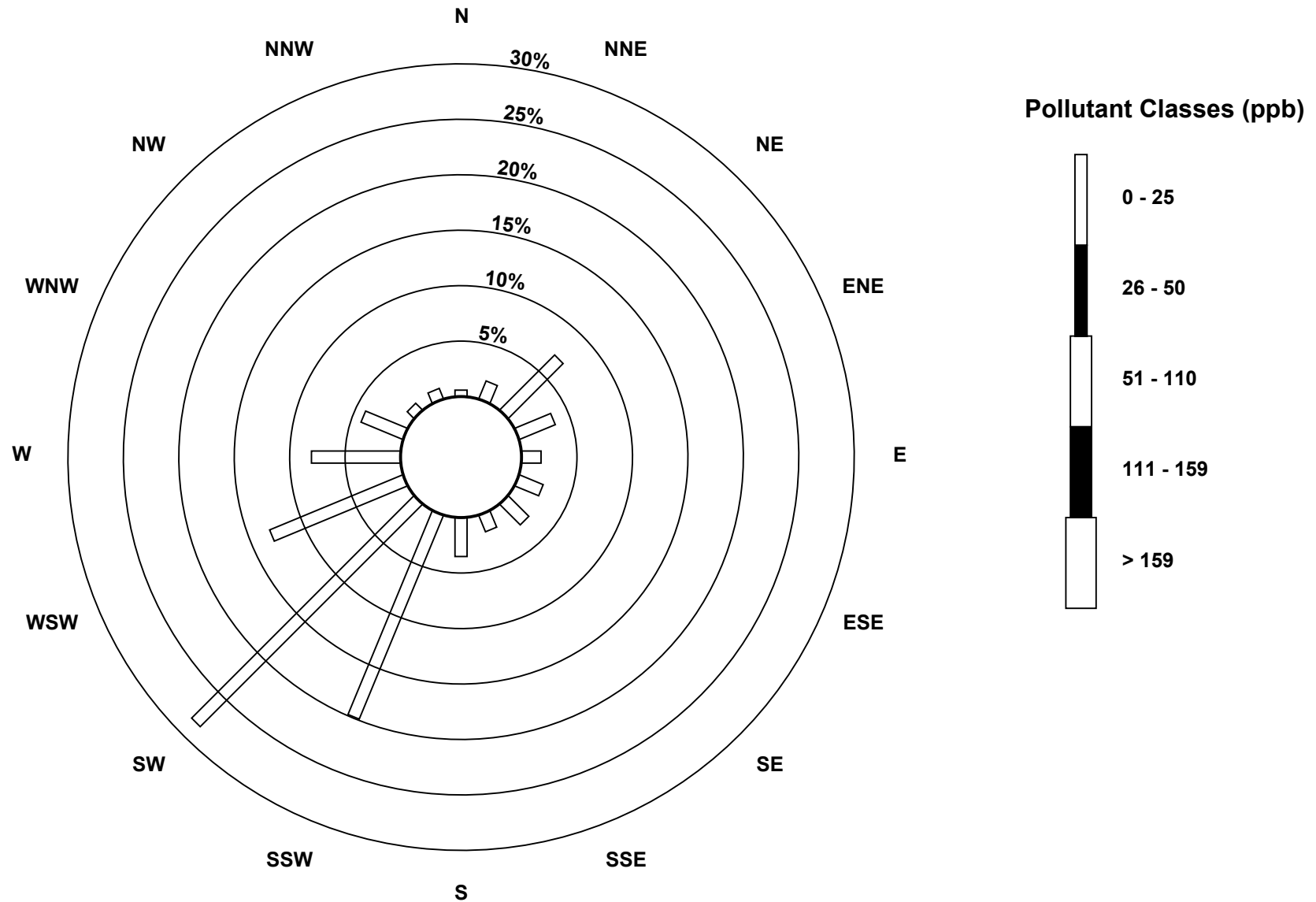
Henry Pirker - June 2016



Pollutant Rose

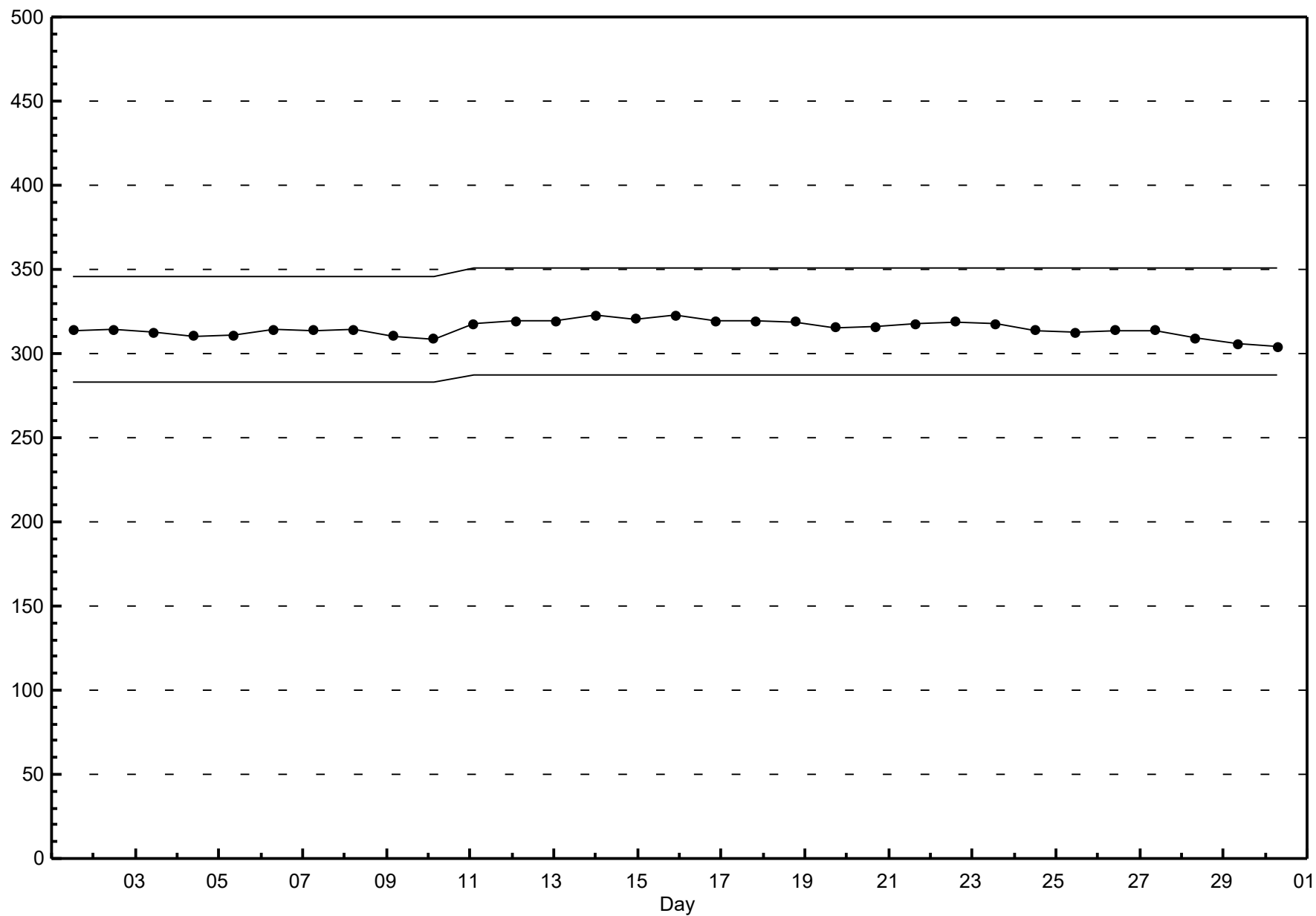
Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - June 2016



Span Responses

Nitrogen Dioxide (NO₂)
Henry Pirker - June 2016



Hourly Averages

Nitrogen Oxide (NO) - ppb

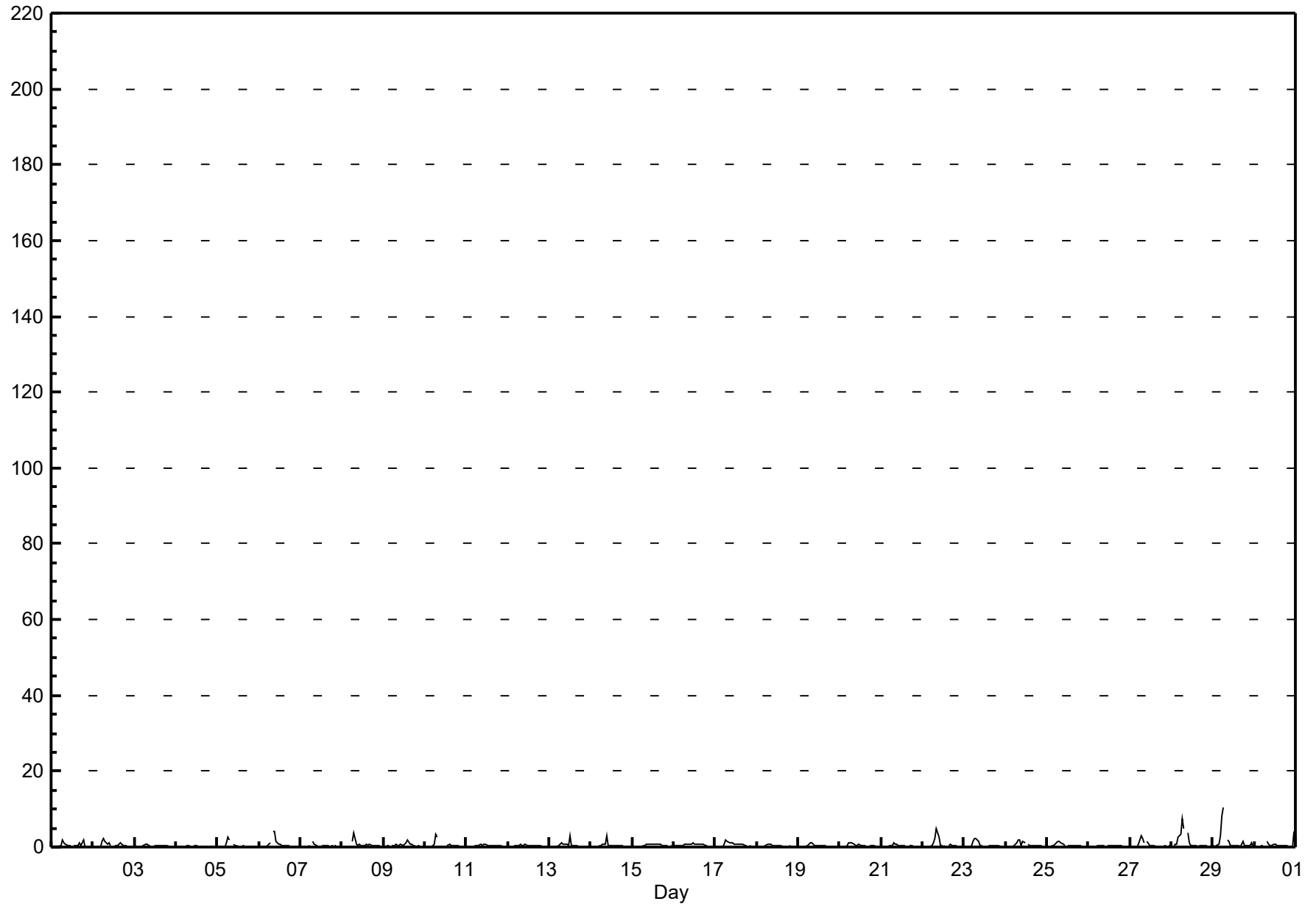
Henry Pirker - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10.4 ppb on Jun 29 07:00 Maximum Daily Average: 1.4 ppb on Jun 29																								Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Jun 6 23:00 Minimum Daily Average: 0.1 ppb on Jun 4 Maximum Diurnal Average: 1.7 ppb at hour 7 Minimum Diurnal Average: 0.1 ppb at hour 1 Monthly Average: 0.48 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.5 P ₉₀ = 1.0 P ₉₉ = 4.1																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	0	0	0	0	0	1	2	1	1	0	0	0	A	0	0	0	1	0	2	0	0	0	0	0	0.5	1.8
2-Jun	0	0	0	0	0	1	2	2	1	1	1	A	0	0	0	1	1	0	0	0	0	0	0	0	0.5	2.1
3-Jun	0	0	0	0	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
4-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
5-Jun	0	0	0	0	0	1	3	2	A	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.4	2.7
6-Jun	0	0	0	0	0	0	1	A	4	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.6	4.1
7-Jun	0	0	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.5
8-Jun	0	0	0	0	0	A	2	4	1	0	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0.5	3.7
9-Jun	0	0	0	0	A	0	0	1	1	0	1	1	1	1	2	1	1	0	0	0	0	0	0	0	0.4	1.7
10-Jun	0	0	0	A	0	1	3	3	C	C	C	C	C	0	1	1	1	0	0	0	0	0	0	0	0.6	3.4
11-Jun	0	0	A	0	0	0	0	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0.4	0.8
12-Jun	0	A	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
13-Jun	A	0	0	0	0	0	1	1	1	1	1	1	3	0	0	0	0	0	0	0	0	0	0	A	0.4	3.0
14-Jun	0	0	0	0	0	0	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	2.8
15-Jun	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	A	0	0	0.4	0.8
16-Jun	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0.5	1.0
17-Jun	0	0	0	0	0	1	2	2	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0	0.6	1.9
18-Jun	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0.3	0.7
19-Jun	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	1.1
20-Jun	0	0	0	0	0	1	1	1	1	1	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0.4	1.3
21-Jun	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	1.2
22-Jun	0	0	0	0	0	0	1	2	5	3	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0.7	4.7
23-Jun	0	0	0	0	0	1	2	2	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.5	2.2
24-Jun	0	0	0	0	0	0	1	2	2	1	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0.5	1.9
25-Jun	0	0	0	0	0	1	1	1	1	1	1	A	0	1	0	0	0	0	0	0	0	0	0	0	0.5	1.4
26-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
27-Jun	0	0	0	0	0	1	3	2	1	A	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.9
28-Jun	0	0	1	1	3	3	7	5	A	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.2	7.4
29-Jun	0	0	0	1	3	8	10	A	2	1	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1.4	10.4
30-Jun	0	0	0	0	0	0	A	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	4	0.6	4.2
0.1 0.1 0.1 0.1 0.3 0.9 1.7 1.4 1.1 1.0 0.6 0.5 0.5 0.4 0.4 0.4 0.4 0.3 0.3 0.2 0.2 0.1 0.1 0.2																								Diurnal Average		
0.3 0.3 0.7 0.9 2.9 8.3 10.4 4.7 4.7 4.0 1.6 1.3 3.0 1.0 1.7 0.8 1.2 1.3 1.8 0.5 0.4 0.3 1.3 4.2																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Nitrogen Oxide (NO) - ppb

Henry Pirker - June 2016



Hourly Maximums

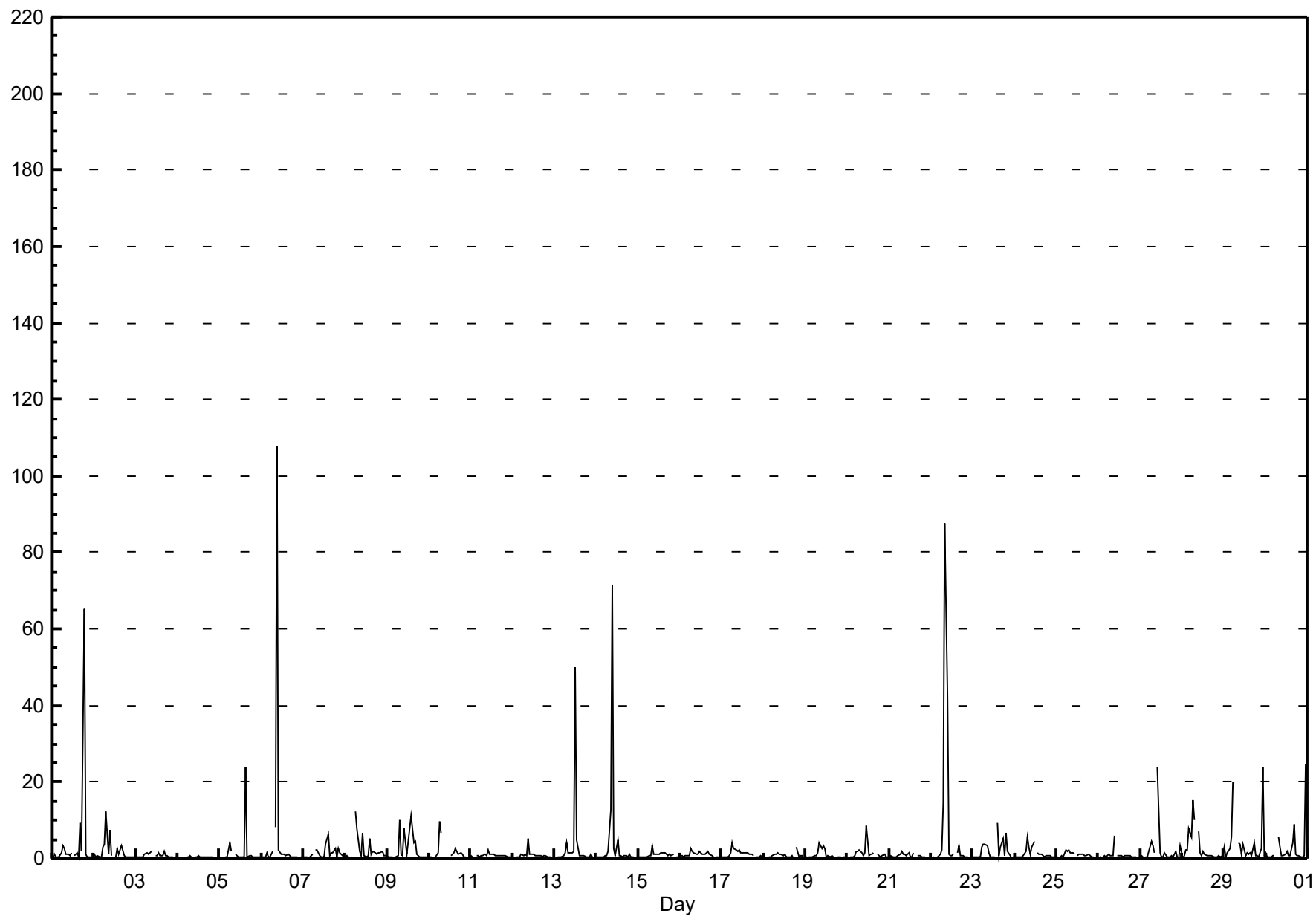
Nitrogen Oxide (NO) - ppb

Henry Pirker - June 2016

Maximum Value: 107.7 ppb on Jun 6 10:00																				Maximum Daily Average: 6.9 ppb on Jun 22										Hours in Service: 720	
Minimum Value: 0 ppb on Jun 3 23:00																				Minimum Daily Average: 0.4 ppb on Jun 4										Hours of Data: 684	
Maximum Diurnal Average: 10.1 ppb at hour 10																				Minimum Diurnal Average: 0.4 ppb at hour 2										Hours of Missing Data: 36	
Monthly Average: 2.09 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.7 Q ₃ = 1.4 P ₉₀ = 3.3 P ₉₉ = 19.0										Hours of Calibration: 36	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jun	0	1	0	0	0	2	3	3	1	1	1	1	A	1	1	1	9	2	65	1	0	0	0	0	4.1	65.2					
2-Jun	1	0	1	0	0	3	4	12	1	7	1	A	1	2	1	2	3	1	0	0	0	0	0	0	1.9	12.4					
3-Jun	0	0	0	0	0	1	1	1	1	2	A	1	1	2	1	1	2	1	1	0	0	0	0	0	0.7	1.9					
4-Jun	0	0	0	0	0	0	0	1	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.4	0.9					
5-Jun	0	0	0	0	0	2	4	2	A	1	1	0	0	0	0	24	0	1	1	0	0	1	0	0	1.7	23.8					
6-Jun	0	0	0	1	1	1	2	A	8	108	2	1	1	1	1	1	1	0	0	0	0	0	0	0	5.7	107.7					
7-Jun	0	0	0	0	0	1	A	2	2	1	0	0	0	4	6	1	2	1	3	0	3	2	1	0	1.3	6.3					
8-Jun	0	1	0	0	0	A	12	8	2	1	7	1	0	1	5	1	2	2	1	2	2	2	1	1	2.2	12.3					
9-Jun	1	0	0	0	A	0	1	10	1	1	8	1	5	8	11	4	4	1	1	0	0	0	0	0	2.6	11.1					
10-Jun	0	0	0	A	0	1	10	7	C	C	C	C	C	1	1	3	2	1	2	1	0	0	0	0	1.7	9.8					
11-Jun	1	0	A	1	1	0	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0.8	2.2					
12-Jun	0	A	0	0	0	1	1	1	1	5	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0.9	5.4					
13-Jun	A	0	0	0	0	1	1	4	1	1	1	2	50	5	1	1	1	1	0	0	0	1	0	A	3.3	49.9					
14-Jun	1	0	0	0	0	1	1	2	13	72	3	1	5	1	1	1	1	1	0	1	0	0	A	0	4.5	71.7					
15-Jun	0	0	0	0	1	0	1	1	3	1	1	1	1	2	1	1	1	1	1	1	1	A	0	0	0.9	3.3					
16-Jun	1	1	0	1	1	1	3	2	1	1	1	2	1	1	1	2	2	1	1	1	A	0	0	0	1.1	2.6					
17-Jun	0	0	0	0	1	1	4	3	2	2	2	1	1	2	1	1	1	1	1	A	0	0	1	0	1.2	4.2					
18-Jun	0	0	0	0	0	1	1	1	2	1	1	1	1	0	1	0	1	0	A	A	3	0	1	1	0	0.7	2.8				
19-Jun	0	0	0	0	0	1	1	1	4	3	3	3	0	1	0	1	0	A	0	0	0	0	0	0	0.9	4.0					
20-Jun	0	0	0	0	1	2	2	2	2	1	1	9	1	1	1	1	A	1	1	0	1	1	0	0	1.3	8.7					
21-Jun	0	1	0	0	0	1	1	2	1	1	1	2	0	0	2	A	1	1	1	0	0	0	0	0	0.7	1.8					
22-Jun	0	0	0	0	0	1	2	15	87	42	1	1	1	1	A	1	3	1	1	0	0	0	0	0	6.9	87.5					
23-Jun	0	0	0	0	0	3	4	4	3	1	0	0	0	A	9	1	3	5	1	7	2	1	0	0	2.0	9.2					
24-Jun	0	0	0	0	0	1	2	5	3	1	3	5	A	1	1	1	1	0	1	1	1	0	0	0	1.2	5.4					
25-Jun	0	0	0	1	1	2	2	2	2	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0.9	2.3					
26-Jun	0	0	0	1	0	1	1	1	1	6	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0.7	5.9					
27-Jun	1	1	0	0	0	2	5	3	2	A	24	2	0	0	2	0	0	0	1	0	2	0	0	3	2.1	24.0					
28-Jun	0	1	2	2	8	6	15	10	A	7	2	1	2	1	1	1	1	1	0	0	0	1	0	1	2.7	15.3					
29-Jun	3	0	2	3	5	20	20	A	4	4	1	4	1	1	1	2	1	4	1	1	0	3	24	1	4.5	23.9					
30-Jun	2	0	0	0	1	1	A	5	3	1	1	1	2	1	1	4	9	1	1	1	0	0	1	25	2.6	24.8					
																									Diurnal Average						
																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Henry Pirker - June 2016

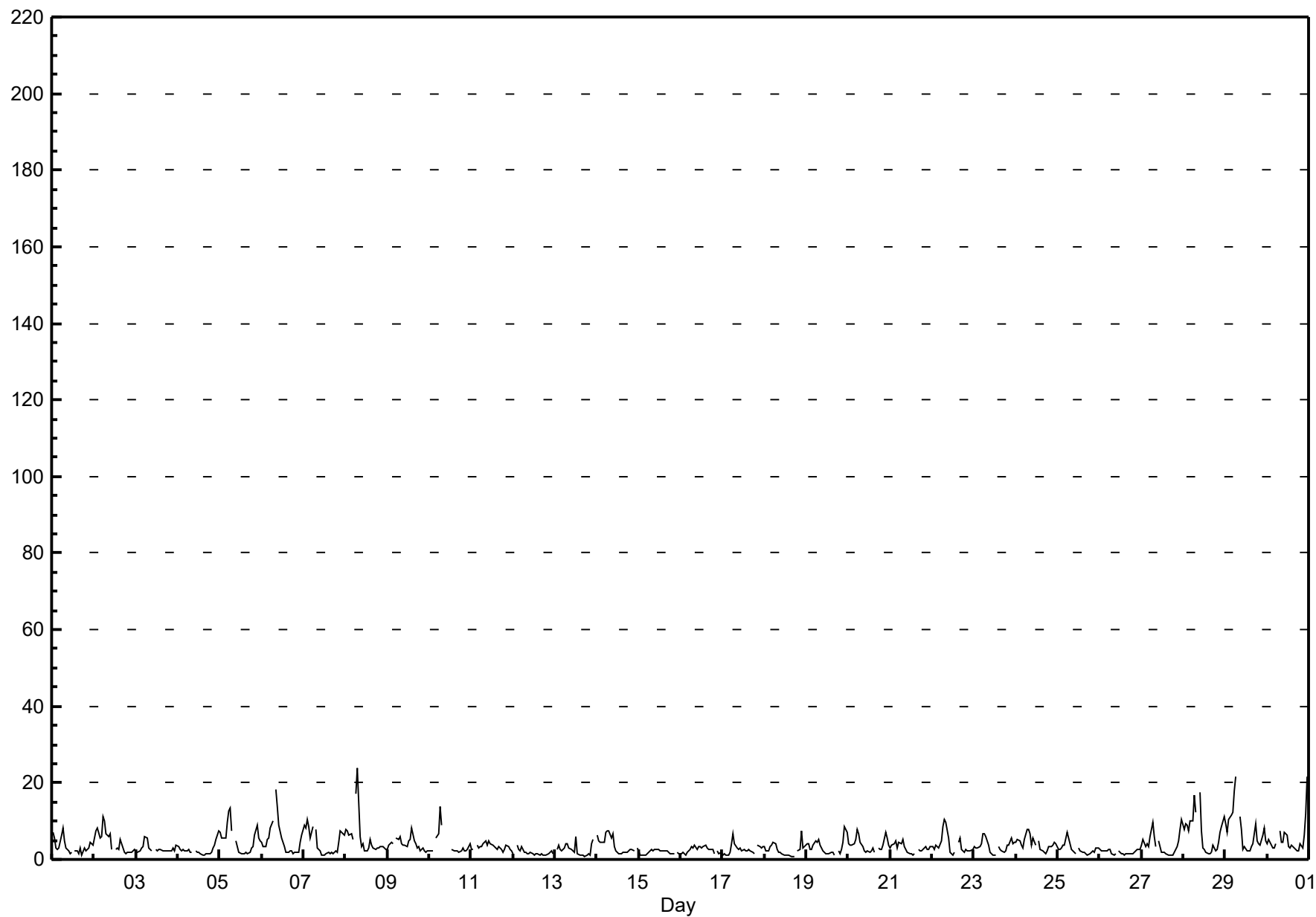


Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 24.0 ppb on Jun 8 08:00 Maximum Daily Average: 7.4 ppb on Jun 29																								Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0		
Minimum Value: 1 ppb on Jun 18 18:00 Maximum Diurnal Average: 7.7 ppb at hour 7 Monthly Average: 3.74 ppb																								Minimum Daily Average: 1.8 ppb on Jun 12 Minimum Diurnal Average: 2.1 ppb at hour 19 Percentiles: P ₁ = 1.0 P ₁₀ = 1.4 Q ₁ = 2.0 Median = 2.8 Q ₃ = 4.5 P ₉₀ = 7.3 P ₉₉ = 17.1		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	7	6	3	3	3	6	8	5	3	2	2	2	A	2	2	1	3	1	3	2	3	3	4	4	3.4	8.2
2-Jun	6	7	8	6	6	11	10	7	6	7	2	A	3	3	3	5	4	2	2	2	2	2	2	2	4.7	11.3
3-Jun	2	2	2	3	3	6	6	3	2	2	A	3	2	2	3	2	2	2	2	2	2	3	2	4	2.8	5.8
4-Jun	4	2	2	3	2	2	3	2	2	A	2	2	2	2	1	1	1	1	1	2	3	4	5	7	2.5	7.4
5-Jun	7	5	6	6	10	13	13	8	A	5	3	2	1	1	2	2	2	2	3	3	6	9	6	5	5.2	13.3
6-Jun	5	3	4	5	6	8	10	A	18	14	9	5	4	3	2	2	2	2	2	2	2	2	5	6	5.3	18.2
7-Jun	9	8	10	9	5	8	A	8	3	2	1	1	1	2	2	2	2	2	2	2	5	7	7	7	4.5	10.4
8-Jun	8	7	6	7	5	A	17	24	6	3	4	2	2	3	5	4	3	3	3	3	3	3	3	3	5.6	24.0
9-Jun	3	4	4	4	A	6	5	6	4	4	4	3	5	5	8	5	4	3	3	2	3	2	2	2	4.0	8.1
10-Jun	2	2	2	A	5	7	14	9	C	C	C	C	C	3	2	2	2	2	2	3	2	2	3	4	3.9	13.8
11-Jun	2	2	A	4	3	3	3	4	5	4	5	4	4	3	3	3	4	3	2	3	4	3	3	2	3.3	4.8
12-Jun	2	A	4	3	2	4	2	2	1	1	2	1	1	2	1	1	1	1	1	1	1	2	2	1	1.8	3.8
13-Jun	A	3	4	2	2	3	4	4	3	2	2	2	6	1	1	1	1	1	1	1	1	4	5	A	2.5	5.8
14-Jun	7	5	5	5	5	7	8	7	6	7	3	2	1	2	2	2	2	2	2	3	2	2	A	3	3.8	7.5
15-Jun	2	1	1	1	1	1	2	2	2	2	3	2	2	2	2	2	2	2	2	1	1	A	2	1	1.9	2.7
16-Jun	1	2	2	1	2	3	4	3	4	3	3	3	3	3	4	3	3	3	3	2	A	2	2	2	2.5	3.7
17-Jun	1	2	1	1	2	4	7	4	3	3	3	2	2	2	2	3	2	2	2	A	4	3	3	4	2.7	6.6
18-Jun	3	2	2	3	4	4	4	3	2	2	1	1	1	1	1	1	1	1	A	2	3	7	3	4	2.5	7.4
19-Jun	4	4	2	3	4	5	5	4	2	2	1	1	1	2	2	2	1	A	2	2	3	4	9	7	3.3	8.6
20-Jun	4	4	4	4	5	8	7	5	3	2	2	2	2	2	3	2	A	3	2	3	4	7	5	4	3.8	7.9
21-Jun	3	4	4	5	3	4	4	5	3	2	2	1	1	1	1	A	3	2	2	3	3	3	3	3	2.9	5.1
22-Jun	3	3	4	4	3	5	9	11	10	6	2	1	1	2	A	5	5	3	2	3	2	2	2	3	3.8	10.5
23-Jun	3	3	3	4	4	7	7	6	4	2	2	1	1	A	3	3	2	2	2	4	4	5	4	4	3.5	6.7
24-Jun	5	5	5	4	3	5	8	8	7	4	6	4	A	5	3	2	2	2	2	3	3	4	4	4	4.2	8.0
25-Jun	3	3	3	4	4	7	5	4	3	2	2	A	3	2	2	2	2	2	1	2	2	2	3	3	2.8	7.1
26-Jun	3	2	2	2	2	3	3	2	1	1	A	2	2	1	1	1	1	1	1	2	2	3	3	3	1.9	2.8
27-Jun	4	5	3	4	3	6	10	6	3	A	5	2	2	2	1	1	1	1	1	2	3	5	8	10	3.9	10.5
28-Jun	8	9	9	7	10	10	17	12	A	17	8	3	3	2	1	1	2	4	2	3	4	7	9	11	7.0	17.4
29-Jun	9	7	10	11	12	18	22	A	11	8	3	3	2	2	2	4	4	9	5	4	4	6	8	5	7.4	21.7
30-Jun	4	5	4	3	3	4	A	7	5	4	7	6	3	3	4	3	3	2	2	4	3	6	12	21	5.2	21.5
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - June 2016



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

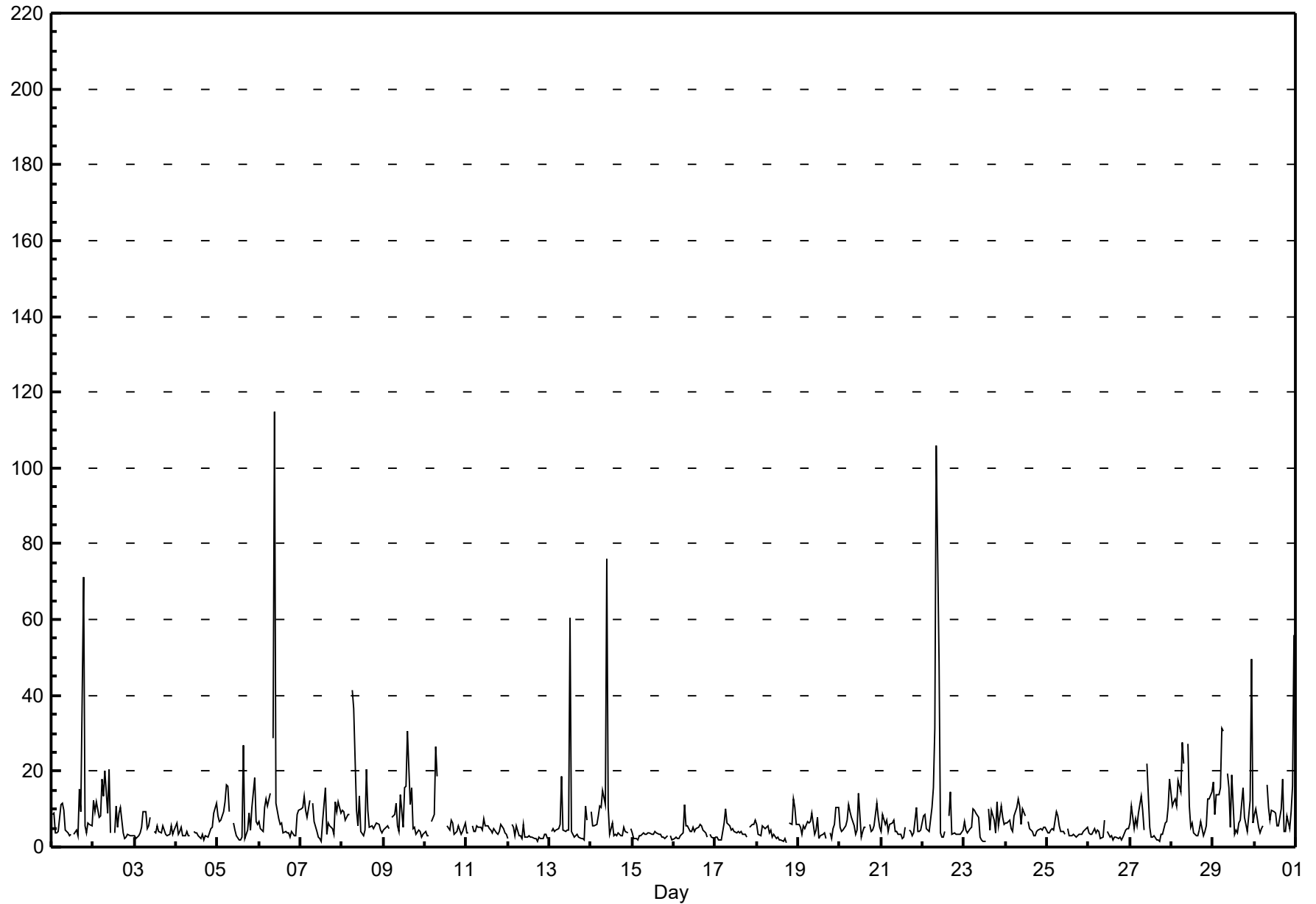
Henry Pirker - June 2016

Maximum Value: 114.9 ppb on Jun 6 10:00																				Maximum Daily Average: 13.8 ppb on Jun 29					Hours in Service: 720	
Minimum Value: 1 ppb on Jun 18 18:00																				Minimum Daily Average: 3.1 ppb on Jun 15					Hours of Data: 684	
Maximum Diurnal Average: 14.9 ppb at hour 10																				Minimum Diurnal Average: 4.3 ppb at hour 20					Hours of Missing Data: 36	
Monthly Average: 7.13 ppb																				Percentiles: P ₁ = 1.7 P ₁₀ = 2.6 Q ₁ = 3.5 Median = 4.7 Q ₃ = 7.9 P ₉₀ = 12.0 P ₉₉ = 47.5					Hours of Calibration: 36	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	9	9	4	4	4	11	12	10	4	4	3	3	A	3	4	3	15	9	71	6	4	6	6	6	9.1	71.4
2-Jun	12	9	12	8	8	18	13	20	9	20	4	A	4	11	5	9	10	4	2	3	3	3	3	3	8.4	20.5
3-Jun	3	2	3	4	5	9	9	5	6	8	A	4	4	5	4	4	6	4	3	3	3	6	3	5	4.7	9.5
4-Jun	6	3	4	5	3	3	4	3	3	A	4	4	4	3	2	3	2	3	3	4	5	5	9	12	4.2	11.6
5-Jun	8	7	7	9	12	17	16	9	A	6	5	3	2	2	3	27	2	4	9	4	10	18	7	6	8.4	26.8
6-Jun	7	5	4	10	13	11	14	A	29	115	12	8	6	6	4	4	4	4	3	4	3	3	9	10	12.4	114.9
7-Jun	10	10	13	10	8	12	A	12	7	4	2	2	2	7	16	3	6	6	5	3	12	9	12	9	7.9	15.6
8-Jun	10	9	7	8	9	A	41	36	10	6	13	4	3	4	20	10	5	6	5	6	6	6	4	4	10.2	41.4
9-Jun	4	5	6	5	A	8	8	12	6	4	14	5	16	16	31	11	16	5	5	3	4	4	3	3	8.4	30.7
10-Jun	4	3	3	A	7	9	27	19	C	C	C	C	C	6	4	7	6	3	4	5	4	3	4	6	7.0	26.6
11-Jun	4	4	A	5	4	4	5	5	5	5	8	6	6	5	4	4	5	4	3	4	6	5	4	3	4.7	7.6
12-Jun	2	A	6	5	3	6	3	3	2	6	3	3	3	3	2	2	2	2	2	2	2	3	4	2	3.1	6.1
13-Jun	A	4	5	4	4	5	6	19	5	4	4	5	61	4	3	3	3	3	2	2	2	11	7	A	7.5	60.5
14-Jun	9	5	5	6	8	11	10	15	11	76	10	3	6	3	3	3	4	3	3	5	4	4	A	5	9.3	76.0
15-Jun	4	2	2	2	3	3	4	3	3	4	4	3	3	4	4	3	3	2	3	2	3	A	3	2	3.1	4.0
16-Jun	2	2	2	2	3	4	11	5	5	4	4	5	4	5	5	6	6	5	4	3	A	4	3	2	4.2	11.3
17-Jun	3	2	2	2	4	6	10	6	6	4	5	4	4	4	4	4	3	3	2	A	5	6	6	7	4.5	10.2
18-Jun	6	3	3	6	5	5	6	4	4	3	3	2	3	2	2	2	2	1	A	6	6	13	10	6	4.4	12.6
19-Jun	6	5	4	6	5	7	6	7	9	3	4	8	2	3	3	4	2	A	4	2	5	6	10	10	5.3	10.3
20-Jun	5	4	4	6	7	11	9	8	5	3	4	14	3	4	5	5	A	6	4	5	6	11	8	5	6.3	14.3
21-Jun	4	8	6	7	4	6	6	7	4	4	3	3	2	2	5	A	5	4	3	4	10	4	4	4	4.9	10.3
22-Jun	8	8	5	5	4	10	16	31	106	49	4	3	3	4	A	8	15	3	4	4	3	3	3	5	13.2	106.0
23-Jun	7	5	4	5	5	10	10	9	8	3	2	1	2	A	10	4	10	7	4	12	6	11	8	6	6.4	11.8
24-Jun	6	6	7	5	4	8	10	13	11	6	10	8	A	7	5	4	3	3	4	4	5	5	5	5	6.3	12.5
25-Jun	4	4	4	5	5	9	8	6	4	4	3	A	5	3	3	3	3	3	3	3	4	4	4	5	4.3	9.5
26-Jun	4	4	3	5	4	4	4	2	2	7	A	4	3	3	2	3	3	2	3	2	3	5	5	5	3.5	7.2
27-Jun	6	11	5	7	5	9	13	10	4	A	22	5	2	3	3	2	2	2	3	3	6	7	10	18	6.9	22.0
28-Jun	11	12	13	11	18	15	28	22	A	27	11	5	6	4	3	3	4	7	3	4	5	13	13	14	10.9	27.6
29-Jun	17	9	14	14	16	31	31	A	19	16	5	19	3	5	4	6	7	16	8	6	4	12	50	6	13.8	49.6
30-Jun	9	10	5	4	5	6	A	16	10	7	10	9	9	6	6	10	18	4	4	8	5	9	16	56	10.5	55.9
6.6 5.9 5.6 6.0 6.4 9.2 12.2 11.3 11.1 14.9 6.6 5.4 6.2 4.7 5.9 5.5 5.9 4.4 6.1 4.3 5.0 6.9 8.1 8.0																									Diurnal Average	
17.1 11.8 13.8 13.7 17.6 31.2 41.4 36.5 106.0 114.9 22.0 18.9 60.5 16.1 30.7 26.8 17.8 15.8 71.4 11.8 11.9 18.4 49.6 55.9																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

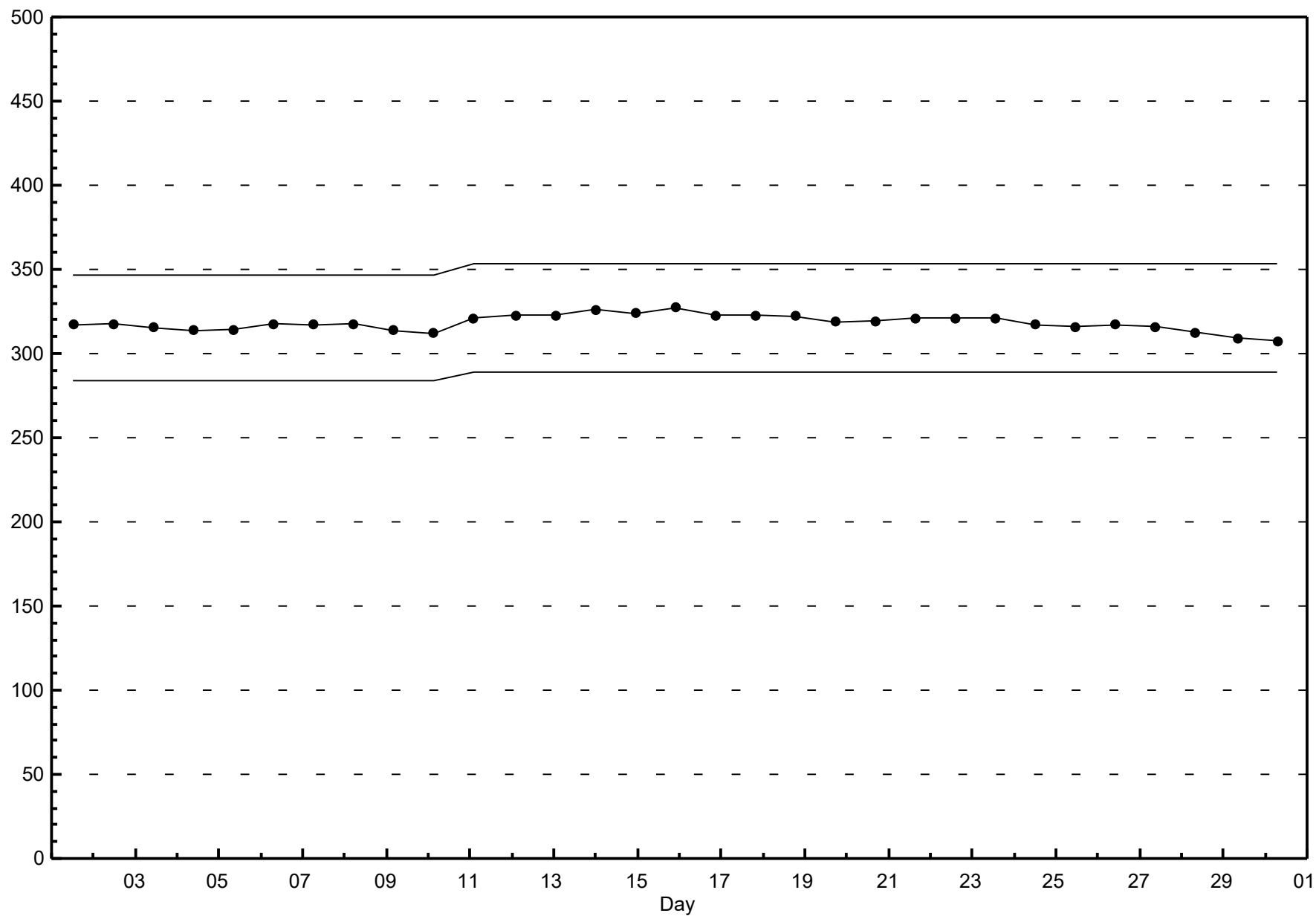
Henry Pirker - June 2016



Span Responses

Oxides of Nitrogen (NO_x)

Henry Pirker - June 2016



Hourly Averages

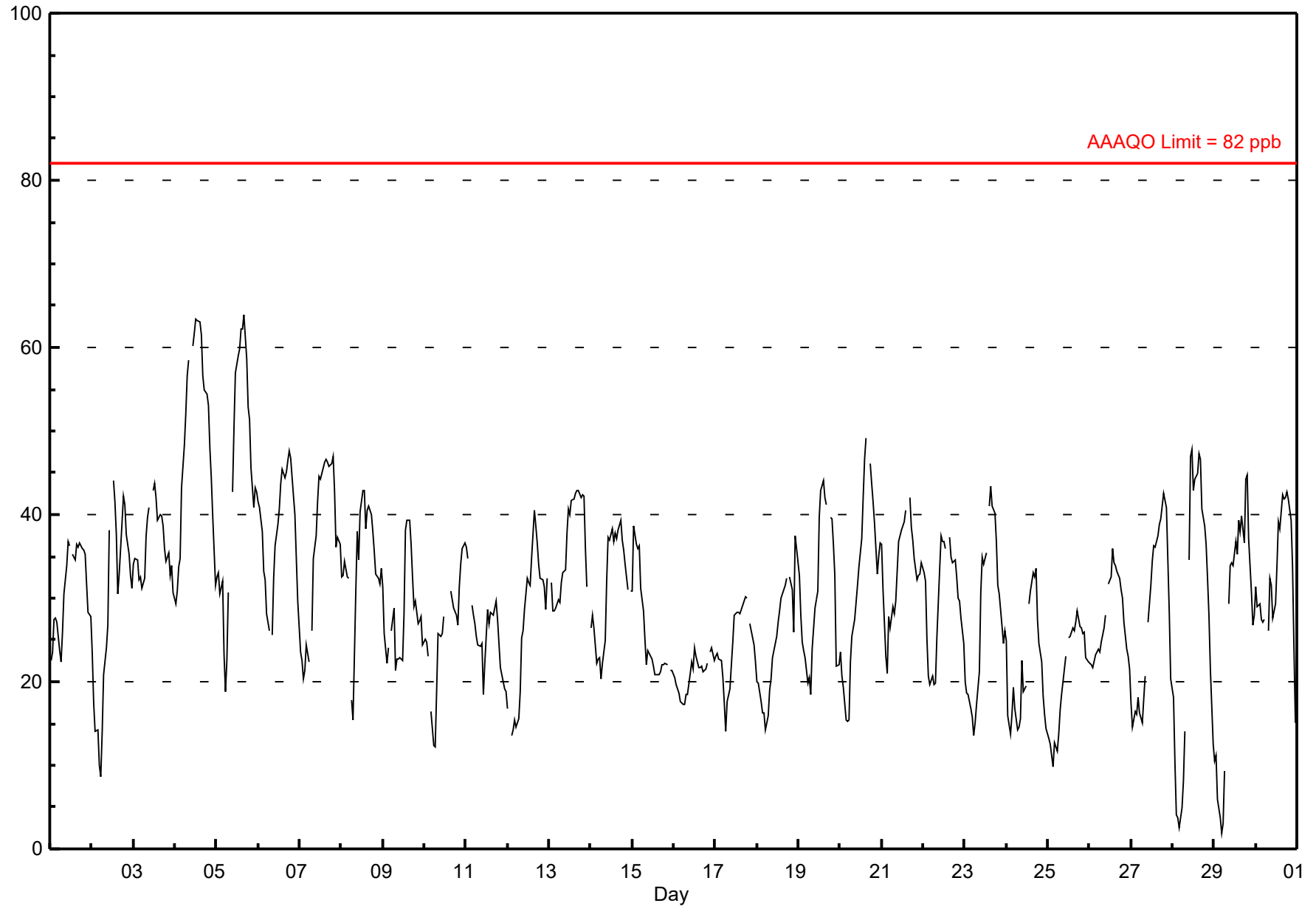
Ozone (O₃) - ppb

Henry Pirker - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 64.0 ppb on Jun 5 17:00 Maximum Daily Average: 49.7 ppb on Jun 4																								Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0			
Minimum Value: 2 ppb on Jun 29 05:00 Minimum Daily Average: 20.6 ppb on Jun 25 Maximum Diurnal Average: 38.4 ppb at hour 16 Minimum Diurnal Average: 20.5 ppb at hour 6 Monthly Average: 30.24 ppb Percentiles: P ₁ = 4.5 P ₁₀ = 17.5 Q ₁ = 22.6 Median = 30.0 Q ₃ = 36.8 P ₉₀ = 42.8 P ₉₉ = 61.5																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jun	23	24	27	28	27	24	22	26	31	34	37	36	A	35	35	36	36	37	36	36	35	32	28	28	30.9	36.7	
2-Jun	23	17	14	14	10	9	14	21	24	27	38	A	44	41	38	31	33	39	42	41	38	35	33	31	28.6	44.0	
3-Jun	34	35	35	32	32	31	32	37	40	41	A	43	44	42	39	40	40	39	36	34	35	33	34	31	36.5	43.8	
4-Jun	29	31	34	35	43	48	52	57	58	A	60	62	63	63	63	61	57	55	54	53	48	44	40	31	49.7	63.3	
5-Jun	33	33	31	32	23	19	22	31	A	43	50	57	59	60	62	62	64	59	53	51	46	41	43	43	44.2	64.0	
6-Jun	42	41	38	33	32	28	26	A	26	32	36	39	41	44	45	44	45	46	48	47	42	40	35	30	38.3	47.6	
7-Jun	24	23	20	21	24	22	A	26	35	37	41	45	44	45	46	47	46	46	46	47	43	36	37	36	36.5	47.0	
8-Jun	33	33	34	33	32	A	18	15	31	38	35	40	43	43	38	40	41	40	38	36	33	32	32	34	34.4	42.9	
9-Jun	31	26	22	24	A	26	29	21	23	23	22	28	38	39	39	36	33	29	30	27	27	28	24	24	28.2	39.4	
10-Jun	25	25	23	A	16	12	12	19	26	25	26	28	C	C	C	31	30	29	28	27	31	34	36	37	26.0	36.6	
11-Jun	36	35	A	29	28	27	25	24	24	25	18	22	29	27	28	28	28	30	27	25	22	20	19	19	25.9	36.1	
12-Jun	17	A	14	14	15	15	16	19	25	26	29	32	32	31	35	40	39	37	34	32	32	31	29	32	27.2	40.5	
13-Jun	A	32	29	28	29	30	29	32	33	33	38	41	40	42	42	42	43	43	42	42	42	36	31	A	36.3	42.9	
14-Jun	26	28	26	22	23	23	20	22	25	32	37	37	38	37	38	37	38	39	37	36	34	31	A	31	31.2	39.3	
15-Jun	31	39	36	36	36	31	29	25	22	24	23	23	22	21	21	21	21	22	22	22	22	A	21	21	25.7	38.6	
16-Jun	20	20	19	19	18	17	17	18	18	21	22	21	24	23	22	22	22	21	22	22	A	24	24	23	20.8	24.1	
17-Jun	23	23	23	23	21	18	14	18	19	22	25	28	28	28	28	29	29	30	30	A	27	25	24	22	24.2	30.2	
18-Jun	20	20	18	16	16	14	16	19	20	23	24	25	27	28	30	31	32	32	A	32	31	26	37	36	25.0	37.5	
19-Jun	33	28	25	24	23	20	21	18	24	29	30	31	40	43	44	42	41	A	40	40	36	33	22	22	30.7	44.0	
20-Jun	24	21	19	15	15	15	22	25	27	30	32	34	37	42	47	49	A	46	44	42	39	33	35	37	31.7	49.2	
21-Jun	36	31	23	21	28	27	29	28	30	33	37	38	39	39	40	A	42	38	37	35	32	33	33	34	33.2	42.1	
22-Jun	33	32	25	21	20	21	20	20	25	34	37	37	37	36	A	37	35	34	35	33	30	30	28	25	29.6	37.4	
23-Jun	20	19	18	17	16	14	15	17	21	31	35	34	35	A	41	43	41	40	37	32	30	27	25	26	27.6	43.4	
24-Jun	25	16	14	16	19	17	14	15	16	23	19	19	A	29	31	33	32	34	27	25	22	18	16	14	21.5	33.6	
25-Jun	13	13	11	10	13	12	14	17	19	21	23	A	25	25	26	26	27	28	27	26	26	26	23	22	20.6	28.4	
26-Jun	22	22	22	23	24	24	24	25	26	28	A	32	33	36	34	34	33	32	31	30	27	24	23	22	27.4	35.9	
27-Jun	17	15	16	16	18	16	15	18	21	A	27	32	34	36	36	37	39	40	41	43	41	35	28	20	27.9	42.5	
28-Jun	18	10	4	4	3	5	8	14	A	35	47	48	43	44	45	47	47	41	39	36	32	28	21	12	27.5	47.9	
29-Jun	11	11	6	4	2	3	9	A	29	34	34	34	37	35	39	38	40	37	44	45	37	31	27	28	26.7	44.8	
30-Jun	31	29	29	28	27	28	A	26	32	31	28	29	34	39	38	42	42	42	43	42	39	34	24	15	32.7	42.8	
																									Diurnal Average	Diurnal Maximum	
																									Diurnal Average	Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																											

Hourly Averages

Ozone (O₃) - ppb
Henry Pirker - June 2016



Hourly Maximums

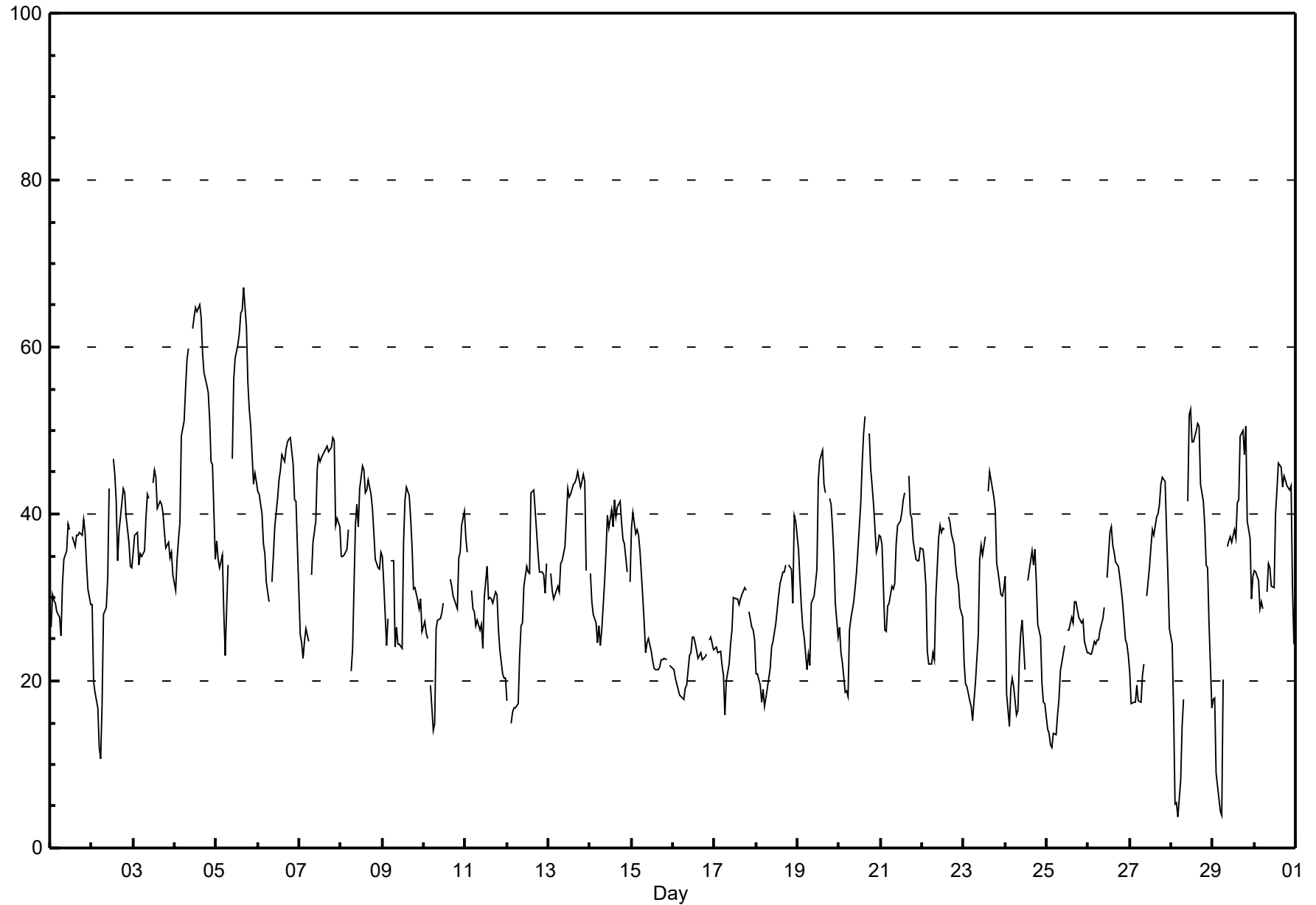
Ozone (O₃) - ppb

Henry Pirker - June 2016

Maximum Value: 67.1 ppb on Jun 5 17:00																				Maximum Daily Average: 52.3 ppb on Jun 4					Hours in Service: 720	
Minimum Value: 4 ppb on Jun 28 05:00																				Minimum Daily Average: 22.0 ppb on Jun 25					Hours of Data: 686	
Maximum Diurnal Average: 40.9 ppb at hour 15																				Minimum Diurnal Average: 23.1 ppb at hour 6					Hours of Missing Data: 34	
Monthly Average: 32.77 ppb																				Percentiles: P ₁ = 7.9 P ₁₀ = 19.5 Q ₁ = 24.9 Median = 32.8 Q ₃ = 39.5 P ₉₀ = 45.4 P ₉₉ = 63.5					Hours of Calibration: 34	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	26	30	30	29	28	28	25	32	35	36	39	38	A	37	36	37	37	38	37	39	38	34	31	29	33.5	39.3
2-Jun	29	20	19	17	12	11	17	28	29	32	43	A	47	45	42	34	38	41	43	43	40	37	34	33	31.8	46.6
3-Jun	35	38	38	34	35	35	36	39	42	42	A	44	45	44	41	41	41	40	38	36	37	35	35	33	38.4	45.2
4-Jun	31	35	37	39	49	51	55	58	60	A	62	64	65	64	65	64	59	57	55	55	51	46	46	35	52.3	65.1
5-Jun	37	35	34	35	28	23	29	34	A	47	56	59	60	62	64	64	67	62	56	53	50	44	45	44	47.2	67.1
6-Jun	43	42	40	36	35	32	30	A	32	35	38	42	44	45	47	46	48	49	49	49	46	42	42	36	41.2	49.1
7-Jun	26	25	23	25	26	25	A	33	37	39	45	47	46	47	48	48	48	47	48	49	49	39	40	39	39.0	49.1
8-Jun	35	35	35	36	38	A	21	24	39	41	38	43	46	45	43	43	44	42	41	38	35	34	33	35	37.6	45.7
9-Jun	35	32	24	28	A	34	34	24	26	24	24	24	37	42	43	42	40	36	31	31	30	29	30	26	31.6	43.2
10-Jun	27	26	25	A	20	14	15	26	27	27	28	29	C	C	C	32	31	30	29	29	35	35	39	40	28.3	40.4
11-Jun	37	35	A	31	29	28	27	27	26	27	24	30	34	30	30	30	29	31	30	26	24	21	20	20	28.1	37.1
12-Jun	18	A	15	16	17	17	17	23	27	27	31	34	33	33	43	43	40	38	35	33	33	33	31	34	29.1	42.8
13-Jun	A	33	31	30	30	31	31	34	34	36	40	43	42	42	44	44	44	45	43	44	45	44	33	A	38.3	45.1
14-Jun	33	30	28	27	25	27	24	26	32	35	40	38	41	38	42	40	41	42	39	37	36	33	A	32	34.1	41.7
15-Jun	38	40	38	38	38	36	30	27	23	25	25	24	22	22	21	21	22	23	23	23	23	A	22	22	27.1	40.1
16-Jun	21	20	20	19	18	18	18	19	20	23	23	25	25	25	23	23	23	23	23	23	A	25	25	24	22.0	25.3
17-Jun	24	24	23	24	22	21	16	20	22	24	26	30	30	30	29	30	30	31	31	A	28	26	26	25	25.8	31.1
18-Jun	21	21	20	18	19	17	19	20	22	24	25	27	29	30	32	33	33	34	A	34	33	29	40	39	26.8	39.8
19-Jun	36	32	29	26	25	21	23	22	29	30	32	33	44	46	48	44	43	A	42	41	38	35	29	25	33.7	47.7
20-Jun	26	23	22	19	19	18	26	27	29	31	33	36	41	46	50	52	A	50	45	43	41	35	36	37	34.3	51.7
21-Jun	37	36	26	26	29	29	31	31	32	36	39	39	40	42	43	A	45	40	39	37	35	34	34	36	35.5	44.6
22-Jun	36	34	31	24	22	22	23	23	30	37	39	38	38	38	A	40	39	38	36	34	32	32	29	28	32.2	39.6
23-Jun	22	20	19	18	17	15	18	20	25	35	36	35	37	A	43	45	44	42	40	34	33	30	30	31	30.0	45.0
24-Jun	33	18	15	19	20	19	16	16	23	26	27	21	A	32	33	36	34	36	32	27	25	20	17	17	24.4	35.7
25-Jun	14	14	12	12	14	14	16	18	21	23	24	A	26	26	28	27	29	30	28	27	27	27	25	23	22.0	29.5
26-Jun	23	23	23	25	24	25	25	26	27	29	A	32	38	38	36	35	34	34	32	31	29	25	24	23	28.9	38.4
27-Jun	21	17	18	18	20	18	18	21	22	A	30	34	36	38	37	40	40	41	44	44	44	38	33	26	30.3	44.4
28-Jun	24	16	5	6	4	8	15	18	A	42	52	53	49	49	50	51	50	43	42	39	34	33	27	17	31.5	52.5
29-Jun	18	18	9	6	4	4	20	A	36	37	37	37	38	37	41	42	49	50	47	51	39	37	30	32	31.3	50.6
30-Jun	33	33	32	29	30	29	A	31	34	34	31	31	40	43	46	46	43	45	44	43	43	43	31	24	36.4	46.1
29.0 27.8 24.8 24.4 24.0 23.1 24.1 26.7 30.0 32.3 35.3 36.8 39.7 39.9 40.9 40.4 40.3 39.9 38.7 37.7 36.3 33.6 31.6 29.9																									Diurnal Average	
42.7 42.4 40.0 38.9 49.3 51.1 55.0 58.4 59.9 46.7 62.2 63.6 64.8 64.3 65.1 64.4 67.1 62.3 55.8 54.6 51.4 46.3 46.0 43.8																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

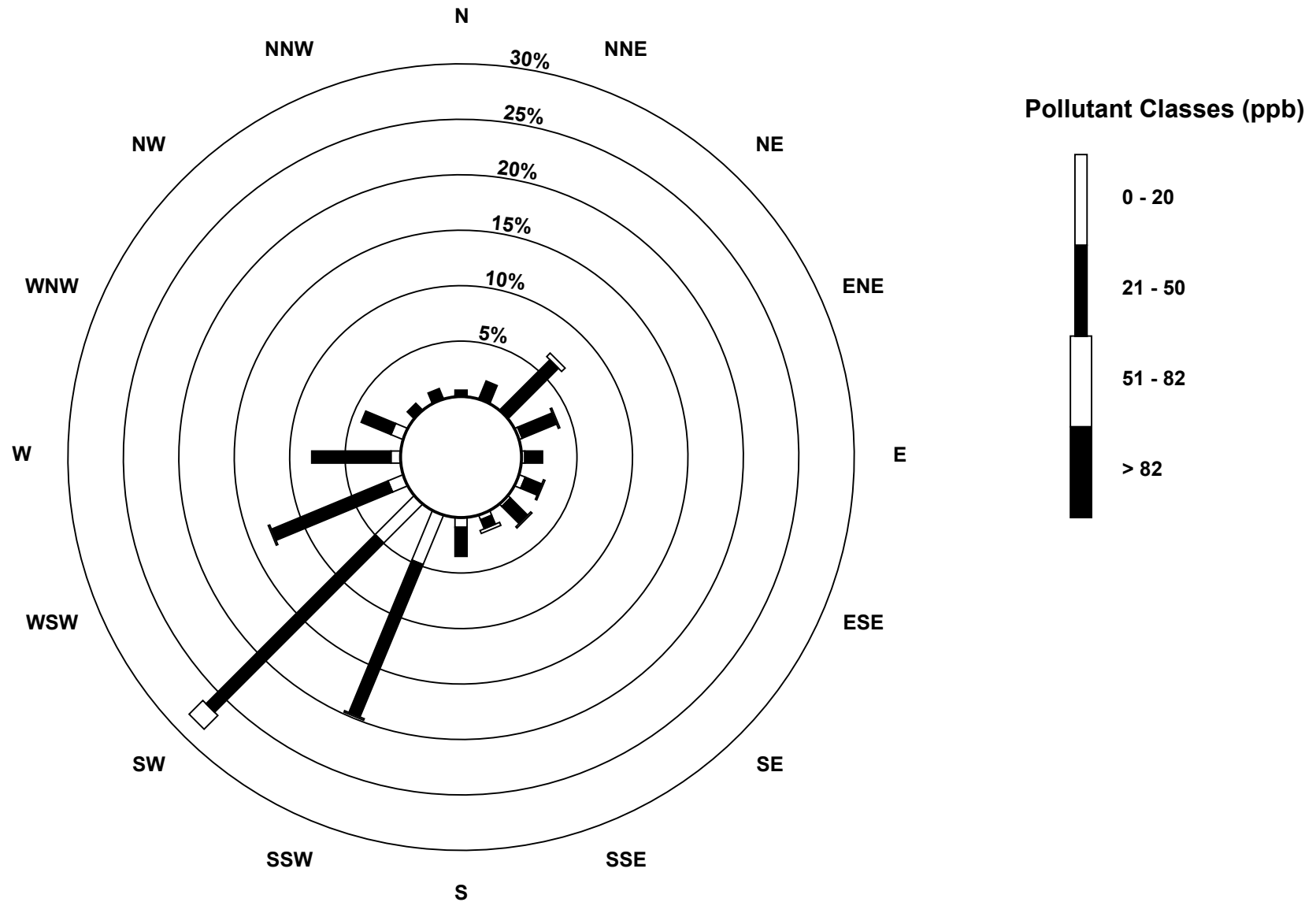
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - June 2016



Pollutant Rose

Ozone (O₃) - ppb
Henry Pirker - June 2016



Eight Hour Running Averages

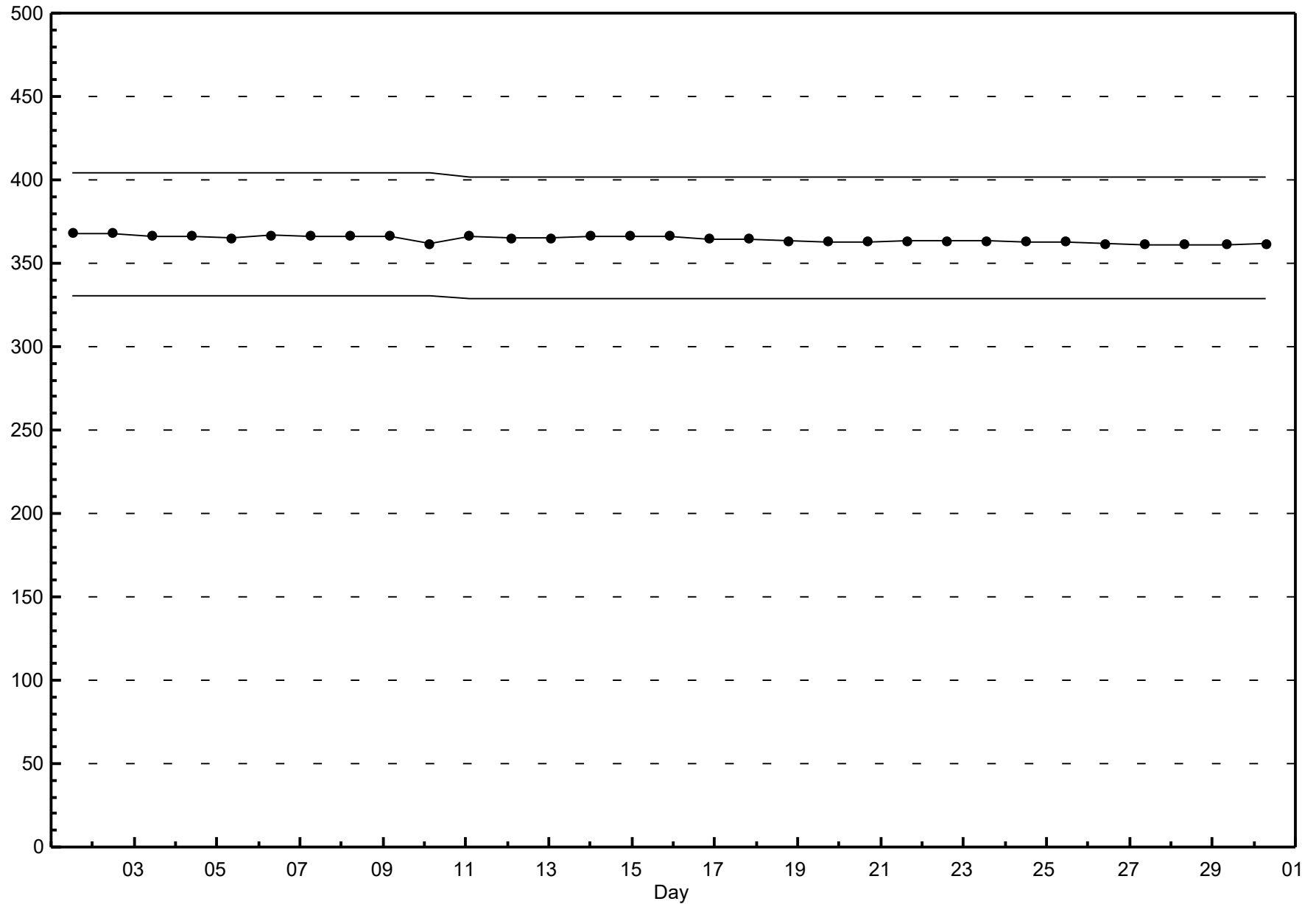
Ozone (O₃) - ppb

Henry Pirker - June 2016

Maximum Value: 61.6 ppb on Jun 4 16:00																								Hours in Service: 720	
Minimum Value: 6.5 ppb on Jun 29 08:00																								Hours of Data: 714	
Percentiles: P ₁ = 9.8 P ₁₀ = 19.2 Q ₁ = 23.7 Median = 29.9 Q ₃ = 35.9 P ₉₀ = 40.9 P ₉₉ = 59.3																								Hours of Missing Data: 6	
																								Hours of Calibration: 6	
																								Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jun	29	27	26	26	24	24	24	25	26	27	29	30	30	32	33	35	36	36	36	36	36	35	35	33	36.0
2-Jun	32	29	27	24	21	18	16	15	15	17	20	20	25	30	33	35	36	38	38	39	38	37	36	36	38.6
3-Jun	37	36	35	34	33	33	33	34	34	35	35	37	38	40	41	41	41	41	40	39	38	37	36	35	41.3
4-Jun	34	33	33	33	34	36	38	41	45	47	51	54	57	59	61	62	61	61	60	59	57	55	52	48	61.6
5-Jun	45	42	39	37	33	30	28	28	27	29	31	35	40	46	52	56	57	59	59	59	57	55	52	50	59.5
6-Jun	47	45	43	41	39	38	35	34	32	31	31	31	33	35	38	38	41	43	44	45	45	45	43	42	47.1
7-Jun	39	36	33	29	27	25	23	23	25	27	30	33	36	39	40	43	44	45	46	46	46	45	43	42	45.9
8-Jun	40	39	37	36	34	34	31	28	28	29	29	30	31	33	35	39	40	40	40	40	39	37	37	36	40.5
9-Jun	34	33	31	29	29	28	27	26	24	24	24	26	27	29	31	32	33	34	34	34	33	31	29	29	34.4
10-Jun	28	27	26	26	24	22	20	19	19	19	20	21	21	23	N	N	N	N	N	N	29	30	31	31	31.4
11-Jun	32	33	34	34	34	32	31	29	28	26	25	24	24	24	25	25	26	26	27	28	27	26	25	24	34.0
12-Jun	22	21	19	18	17	16	16	16	17	18	20	22	24	26	29	31	33	34	35	35	35	35	34	33	35.1
13-Jun	33	32	31	30	30	30	30	30	30	30	32	33	34	36	38	39	40	41	42	42	42	42	40	40	42.3
14-Jun	38	35	33	30	28	26	24	24	24	24	26	27	29	31	33	35	37	38	38	38	37	36	36	35	37.7
15-Jun	34	34	34	34	34	34	34	33	32	30	28	27	25	24	23	22	22	22	22	21	21	22	22	22	34.3
16-Jun	22	21	21	20	20	19	19	19	18	18	19	19	20	21	21	22	22	22	22	22	22	22	22	22	22.4
17-Jun	23	23	23	23	23	22	21	20	20	20	20	20	21	23	25	26	27	28	29	29	29	28	28	27	29.0
18-Jun	26	24	22	22	20	19	18	17	17	18	19	20	21	23	25	26	28	29	29	30	31	31	32	32	32.4
19-Jun	33	32	31	30	29	28	26	24	23	23	24	26	29	32	35	37	39	40	41	41	39	36	33	33	41.3
20-Jun	31	30	27	24	21	19	19	20	20	21	23	25	28	31	34	37	39	41	43	44	44	43	41	39	44.0
21-Jun	39	37	34	32	30	30	29	28	27	27	29	31	32	34	36	37	38	39	39	39	38	37	36	36	39.1
22-Jun	34	34	32	30	29	27	26	24	23	23	25	27	29	31	32	35	36	36	36	35	34	33	33	31	36.2
23-Jun	29	27	25	23	21	19	18	17	17	19	21	23	25	27	31	34	37	39	39	38	38	36	34	32	38.8
24-Jun	30	27	24	22	21	20	18	17	16	17	17	18	17	19	22	24	27	28	29	30	29	28	26	24	30.2
25-Jun	21	19	17	15	14	13	12	13	13	14	16	17	19	21	22	24	25	26	27	27	27	27	26	26	26.6
26-Jun	25	24	24	23	23	23	23	23	24	24	25	26	27	29	30	32	33	33	33	33	32	31	29	28	33.4
27-Jun	26	24	22	20	19	18	17	17	17	17	19	21	23	26	29	32	35	35	37	38	39	39	38	36	39.1
28-Jun	33	30	25	20	15	12	9	8	7	10	16	23	29	34	39	44	44	45	44	43	41	39	36	32	45.2
29-Jun	28	24	20	16	12	9	7	7	9	12	16	21	26	30	35	35	36	37	38	39	39	39	37	36	39.4
30-Jun	35	34	32	30	29	28	29	28	28	29	29	29	30	31	32	34	35	37	39	40	41	40	38	35	40.9
47.1 44.9 43.0 40.8 39.1 37.5 37.9 41.1 44.8 46.7 50.5 54.4 57.2 59.4 60.9 61.6 61.4 60.6 59.8 58.8 57.1 54.7 52.4 49.9																									Diurnal Maximums
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - June 2016



Hourly Averages

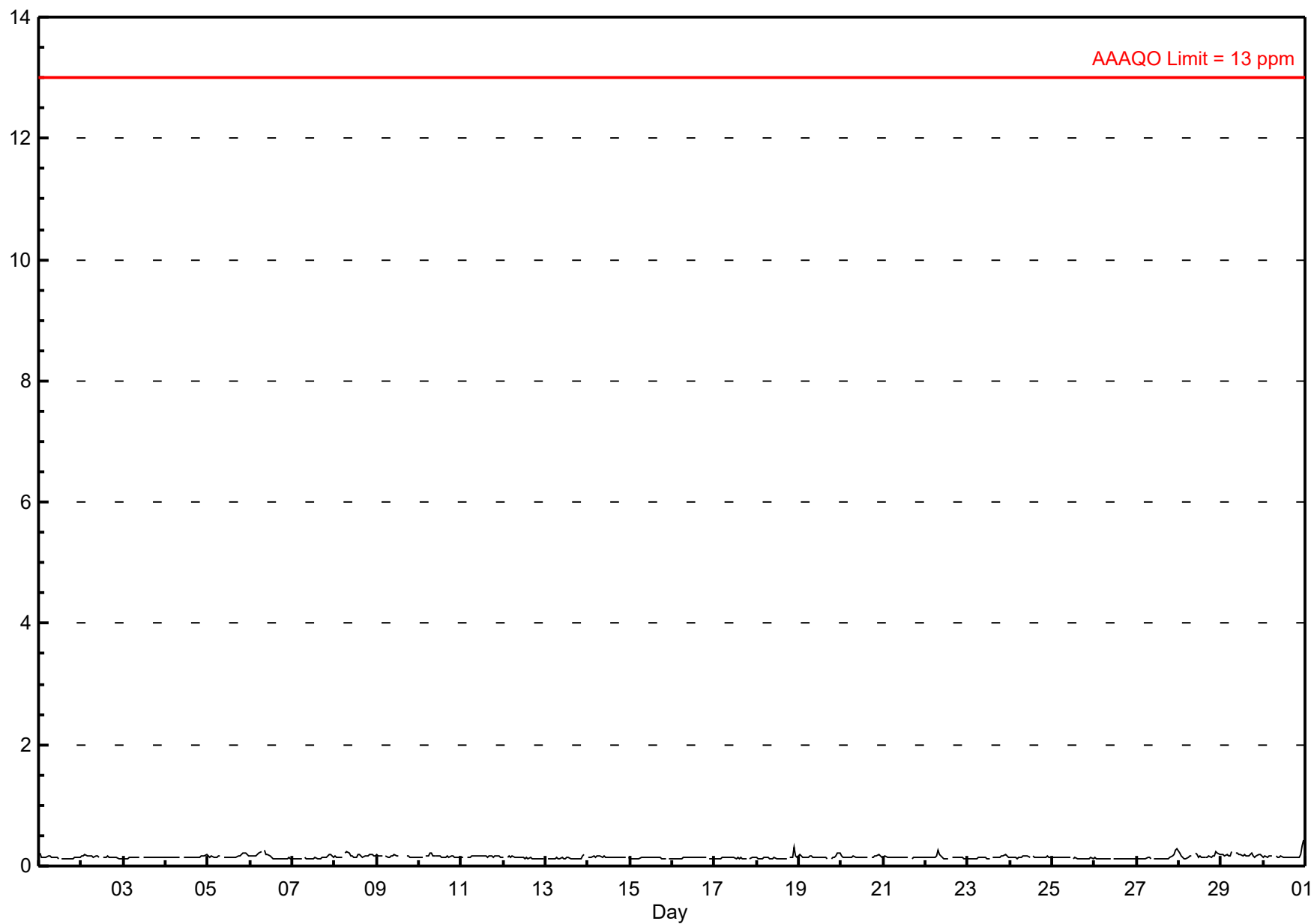
Carbon Monoxide (CO) - ppm

Henry Pirker - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.42 ppm on Jul 1 00:00 Maximum Daily Average: 0.18 ppm on Jun 29																				Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Minimum Value: 0.1 ppm on Jun 26 14:00 Maximum Diurnal Average: 0.17 ppm at hour 23 Monthly Average: 0.147 ppm										Minimum Daily Average: 0.11 ppm on Jun 26 Minimum Diurnal Average: 0.14 ppm at hour 17 Percentiles: P ₁ = 0.11 P ₁₀ = 0.12 Q ₁ = 0.13 Median = 0.14 Q ₃ = 0.16 P ₉₀ = 0.17 P ₉₉ = 0.25																
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-Jun	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14	0.21
2-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	A	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15	0.18
3-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14	0.15
4-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.15	0.19
5-Jun	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	A	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.21
6-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.16	0.25
7-Jun	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.14	0.20
8-Jun	0.2	0.2	0.1	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.25
9-Jun	0.2	0.2	0.2	0.2	A	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	C	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.16	0.18
10-Jun	0.1	0.2	0.1	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.16	0.22
11-Jun	0.2	0.1	A	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.15	0.17
12-Jun	0.1	A	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14	0.17
13-Jun	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.13	0.19
14-Jun	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.15	0.17
15-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.13	0.14
16-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	A	0.1	0.1	0.1	0.14	0.15
17-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.13	0.15
18-Jun	0.1	0.1	0.1	0.1	0.1	0.1	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	0.3	0.2	0.2	0.14	0.31
19-Jun	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	0.2	0.2	0.15	0.21
20-Jun	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.15	0.20
21-Jun	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	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14	0.16
22-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14	0.26
23-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.14	0.18
24-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	A	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.15	0.17
25-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.14
26-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.13
27-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.14	0.28
28-Jun	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	A	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.16	0.23
29-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.23
30-Jun	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.4	0.17	0.42
0.15 0.14 0.14 0.14 0.14 0.15 0.16 0.16 0.15 0.15 0.15 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.15 0.16 0.17 0.16 Diurnal Average																										
0.22 0.20 0.18 0.18 0.18 0.21 0.24 0.26 0.25 0.22 0.19 0.19 0.17 0.18 0.18 0.17 0.17 0.21 0.17 0.18 0.21 0.31 0.32 0.42 Diurnal Maximum																										
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na																										

Hourly Averages

Carbon Monoxide (CO) - ppm
Henry Pirker - June 2016



Hourly Maximums

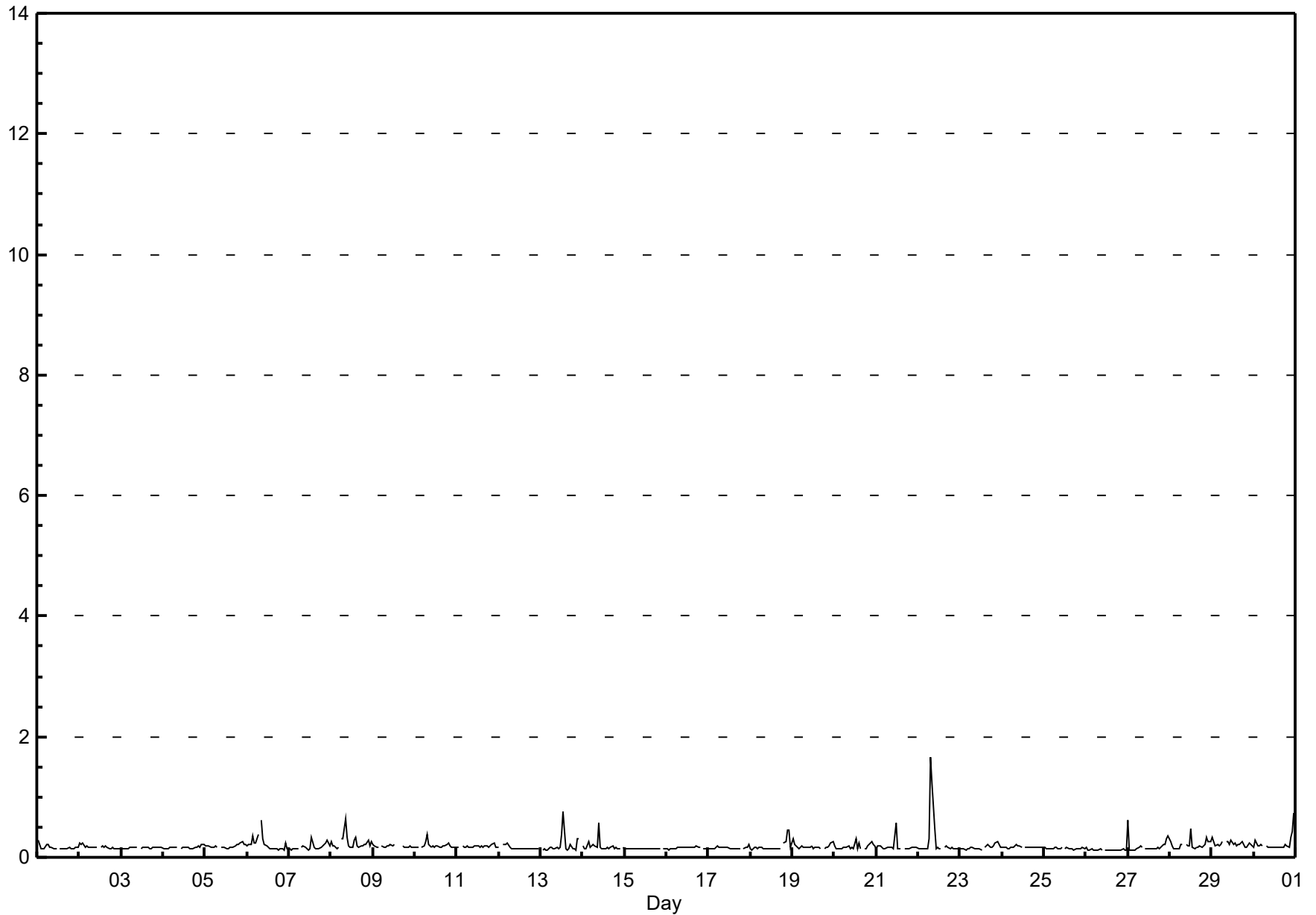
Carbon Monoxide (CO) - ppm

Henry Pirker - June 2016

Maximum Value: 1.67 ppm on Jun 22 08:00																					Maximum Daily Average: 0.28 ppm on Jun 22					Hours in Service: 720	
Minimum Value: 0.1 ppm on Jun 27 05:00																					Minimum Daily Average: 0.13 ppm on Jun 26					Hours of Data: 685	
Maximum Diurnal Average: 0.24 ppm at hour 9																					Minimum Diurnal Average: 0.16 ppm at hour 16					Hours of Missing Data: 35	
Monthly Average: 0.182 ppm																					Percentiles: P ₁ = 0.12 P ₁₀ = 0.14 Q ₁ = 0.15 Median = 0.16 Q ₃ = 0.18 P ₉₀ = 0.23 P ₉₉ = 0.62					Hours of Calibration: 35	
																					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-Jun	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.16	0.28	
2-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	A	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.17	0.25	
3-Jun	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	A	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.15	0.17	
4-Jun	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16	0.21	
5-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.18	0.26	
6-Jun	0.2	0.2	0.2	0.4	0.2	0.2	0.4	A	0.6	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.22	0.63	
7-Jun	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.17	0.34	
8-Jun	0.3	0.2	0.2	0.2	0.2	A	0.3	0.3	0.6	0.3	0.2	0.2	0.2	0.3	0.3	C	C	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.24	0.64	
9-Jun	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.22	
10-Jun	0.2	0.2	0.2	A	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.38	
11-Jun	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.23	
12-Jun	0.2	A	0.2	0.2	0.2	0.2	0.2	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	0.1	0.1	0.16	0.23	
13-Jun	A	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.4	0.8	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.3	A	0.20	0.76	
14-Jun	0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	A	0.2	0.19	0.56	
15-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.14	0.15	
16-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.1	0.1	0.1	0.15	0.18	
17-Jun	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.2	0.15	0.20	
18-Jun	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.3	0.5	0.4	0.2	0.2	0.18	0.46	
19-Jun	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	A	0.1	0.2	0.2	0.2	0.2	0.3	0.18	0.30	
20-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.18	0.32	
21-Jun	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.6	0.1	0.1	0.1	A	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.18	0.57	
22-Jun	0.1	0.1	0.1	0.1	0.1	0.2	0.3	1.7	1.2	0.5	0.1	0.2	0.1	0.2	A	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.28	1.67	
23-Jun	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.16	0.26	
24-Jun	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.20	
25-Jun	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	A	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.15	0.17	
26-Jun	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13	0.17	
27-Jun	0.6	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	A	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.19	0.62	
28-Jun	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.5	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.21	0.48	
29-Jun	0.3	0.3	0.2	0.2	0.2	0.2	0.3	A	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.23	0.33	
30-Jun	0.2	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.7	0.22	0.73	
0.20 0.17 0.16 0.17 0.16 0.17 0.19 0.23 0.24 0.20 0.17 0.18 0.18 0.19 0.16 0.16 0.16 0.16 0.16 0.17 0.17 0.21 0.21 0.20																									Diurnal Average		
0.62 0.28 0.23 0.36 0.25 0.25 0.37 1.67 1.23 0.56 0.22 0.57 0.48 0.76 0.34 0.22 0.22 0.26 0.22 0.23 0.26 0.46 0.44 0.73																									Diurnal Maximum		
C - Calibration																									A - Automated Daily Zero Span		

Hourly Maximums

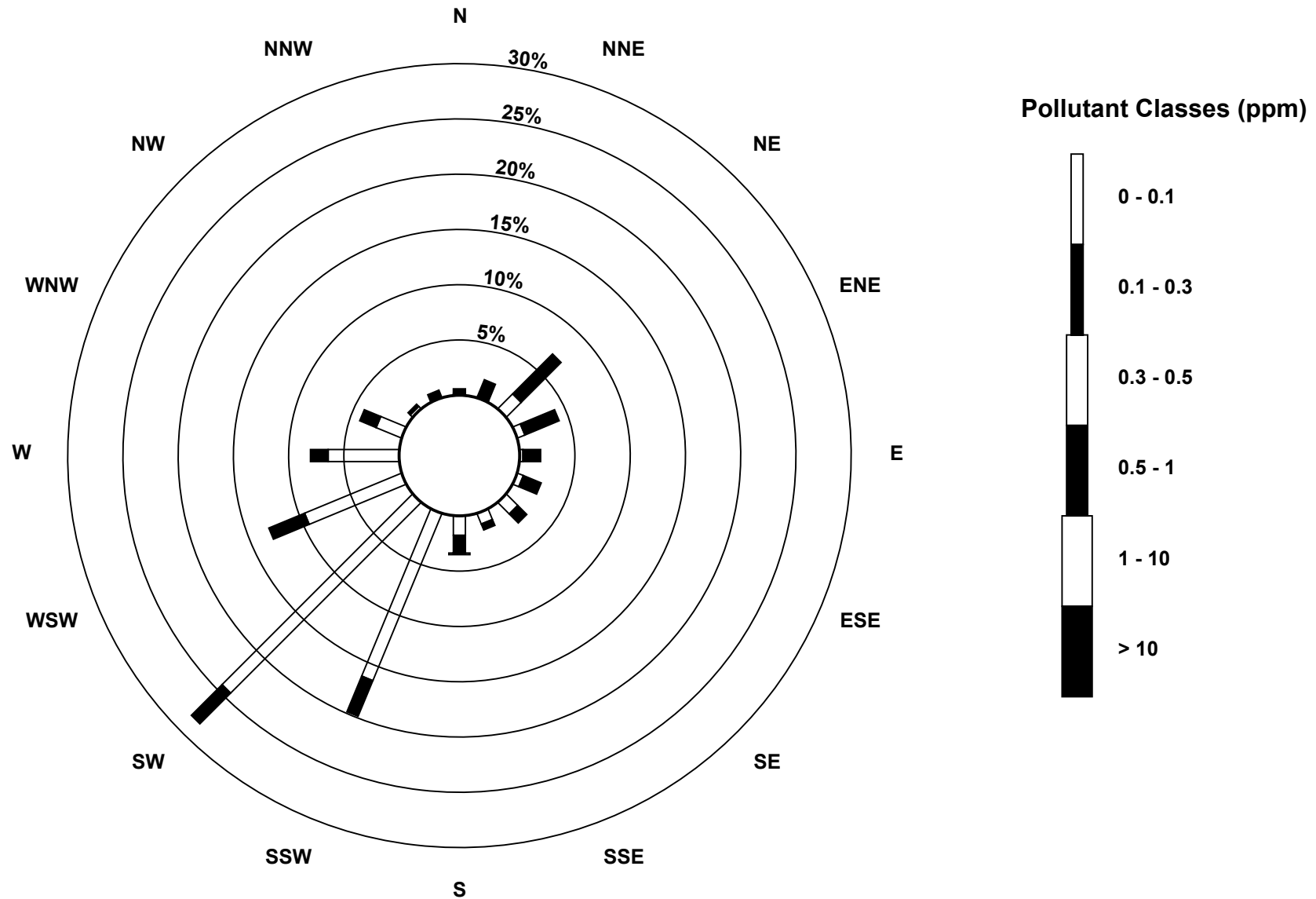
Carbon Monoxide (CO) - ppm
Henry Pirker - June 2016



Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - June 2016



Eight Hour Running Averages

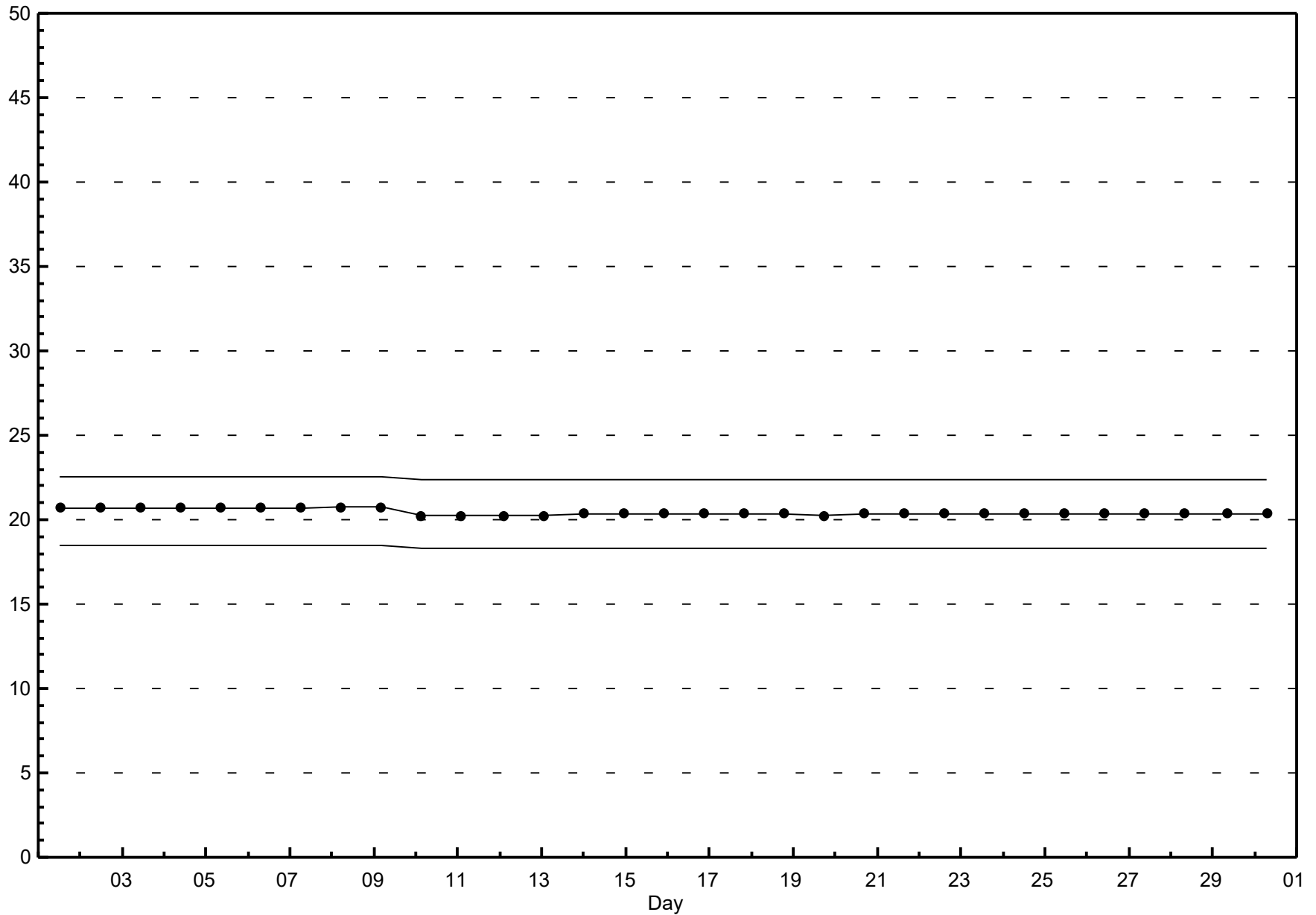
Carbon Monoxide (CO) - ppm

Henry Pirker - June 2016

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 0.21 ppm on Jul 1 00:00																									Hours in Service: 720 Hours of Data: 713 Hours of Missing Data: 7 Hours of Calibration: 7 Percent Operational Time: 100.0
Minimum Value: 0.11 ppm on Jun 26 18:00 Percentiles: P ₁ = 0.11 P ₁₀ = 0.13 Q ₁ = 0.13 Median = 0.14 Q ₃ = 0.16 P ₉₀ = 0.17 P ₉₉ = 0.20																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
1-Jun	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	0.18
2-Jun	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
3-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
4-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.16
5-Jun	0.2	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.18
6-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.21
7-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.15
8-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
9-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	N	N	N	N	N	N	N	0.2	0.2	0.18
10-Jun	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18
11-Jun	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.16
12-Jun	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
13-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
14-Jun	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
15-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
16-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
17-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
18-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.17
19-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.18
20-Jun	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	0.2	0.2	0.2	0.16
21-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
22-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
23-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.16
24-Jun	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.16
25-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
26-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13
27-Jun	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.18
28-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.19
29-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
30-Jun	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.21
0.19 0.19 0.19 0.20 0.19 0.19 0.19 0.19 0.20 0.20 0.21 0.20 0.20 0.20 0.19 0.19 0.18 0.18 0.18 0.17 0.17 0.17 0.18 0.21 Diurnal Maximums																									
N - Not Valid Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

Span Responses

Carbon Monoxide (CO)
Henry Pirker - June 2016



Hourly Averages

Total Hydrocarbons (THC) - ppm

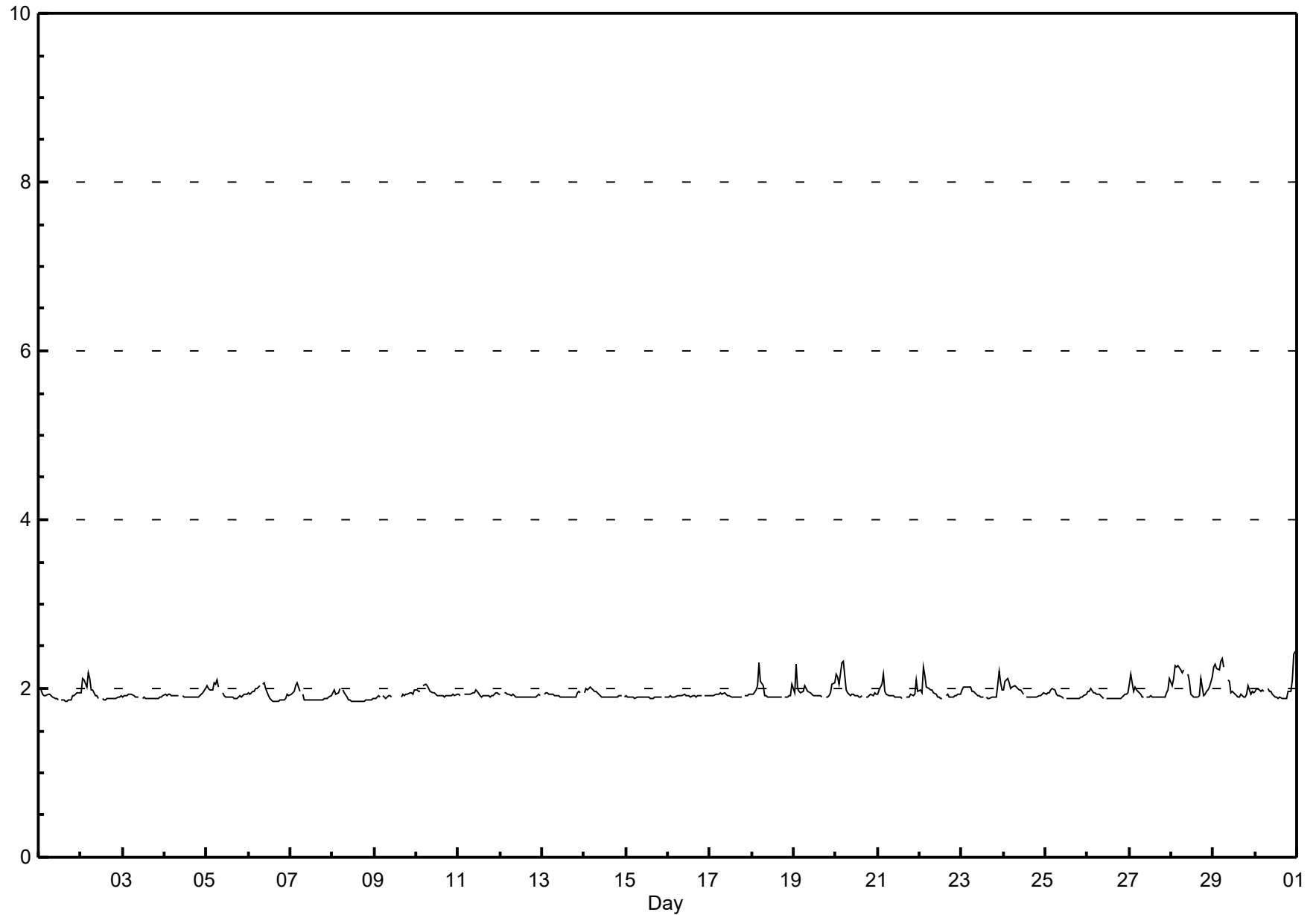
Henry Pirker - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.44 ppm on Jul 1 00:00 Maximum Daily Average: 2.06 ppm on Jun 28																								Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0		
Minimum Value: 1.8 ppm on Jun 6 16:00 Maximum Diurnal Average: 2.02 ppm at hour 5 Monthly Average: 1.942 ppm												Minimum Daily Average: 1.89 ppm on Jun 8 Minimum Diurnal Average: 1.89 ppm at hour 15 Percentiles: P ₁ = 1.85 P ₁₀ = 1.88 Q ₁ = 1.90 Median = 1.91 Q ₃ = 1.95 P ₉₀ = 2.03 P ₉₉ = 2.31														
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-Jun	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.01
2-Jun	2.0	2.1	2.1	2.0	2.2	2.1	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.18
3-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.94
4-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.92	1.99
5-Jun	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.11
6-Jun	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.07
7-Jun	1.9	1.9	2.0	2.0	2.1	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.07
8-Jun	1.9	2.0	1.9	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	2.00
9-Jun	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.92	1.98	
10-Jun	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.04
11-Jun	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.93	1.98
12-Jun	1.9	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.95
13-Jun	A	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	1.92	1.96
14-Jun	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.93	2.01
15-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.89	1.92
16-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.91	1.93
17-Jun	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.92	1.96
18-Jun	1.9	1.9	2.0	2.0	2.3	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.0	1.95	2.31
19-Jun	2.0	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.1	2.1	1.97	2.28
20-Jun	2.2	2.1	2.1	2.3	2.3	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.99	2.32
21-Jun	1.9	2.0	2.1	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.0	1.94	2.17
22-Jun	2.0	1.9	2.3	2.2	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.26
23-Jun	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.1	2.0	1.96	2.21
24-Jun	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.13
25-Jun	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	2.00
26-Jun	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	2.00
27-Jun	2.0	2.2	2.0	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	1.95	2.17
28-Jun	2.0	2.1	2.3	2.2	2.3	2.2	2.2	2.2	A	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	2.0	2.0	2.0	2.1	2.06	2.28
29-Jun	2.2	2.3	2.2	2.2	2.3	2.3	2.3	A	2.1	2.1	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.05	2.35
30-Jun	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.4	2.4	1.99	2.44
1.97 2.00 2.01 2.01 2.02 2.00 1.98 1.95 1.94 1.94 1.92 1.90 1.90 1.89 1.89 1.89 1.89 1.90 1.89 1.90 1.91 1.94 1.96 1.97																								Diurnal Average		
2.25 2.28 2.27 2.31 2.32 2.35 2.25 2.22 2.10 2.18 2.09 1.96 1.93 1.92 1.91 1.92 1.93 2.12 1.93 1.96 2.04 2.21 2.40 2.44																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - June 2016



Hourly Maximums

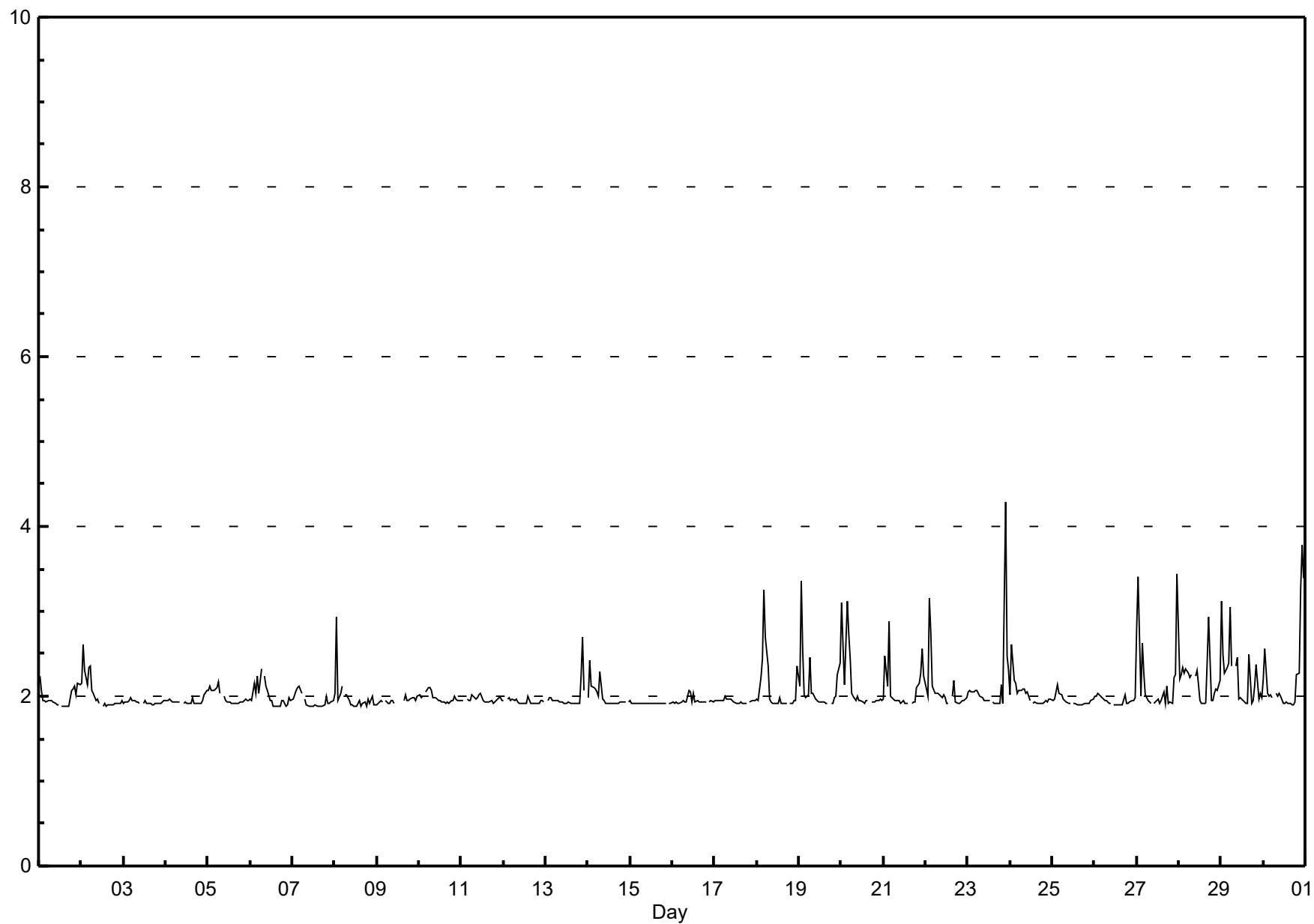
Total Hydrocarbons (THC) - ppm

Henry Pirker - June 2016

Maximum Value: 4.28 ppm on Jun 23 22:00																					Maximum Daily Average: 2.23 ppm on Jun 29					Hours in Service: 720	
Minimum Value: 1.9 ppm on Jun 6 14:00																					Minimum Daily Average: 1.92 ppm on Jun 15					Hours of Data: 685	
Maximum Diurnal Average: 2.25 ppm at hour 2																					Minimum Diurnal Average: 1.92 ppm at hour 14					Hours of Missing Data: 35	
Monthly Average: 2.027 ppm																					Percentiles: P ₁ = 1.88 P ₁₀ = 1.91 Q ₁ = 1.92 Median = 1.94 Q ₃ = 2.02 P ₉₀ = 2.23 P ₉₉ = 3.24					Hours of Calibration: 35	
																					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-Jun	2.2	2.1	2.0	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.1	2.1	2.1	2.0	2.1	2.1	1.98	2.24	
2-Jun	2.2	2.6	2.3	2.1	2.3	2.3	2.1	2.0	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.03	2.61	
3-Jun	1.9	1.9	1.9	2.0	2.0	1.9	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	1.98	
4-Jun	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	1.94	2.07	
5-Jun	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.99	2.17	
6-Jun	2.0	2.0	2.1	2.0	2.2	2.0	2.3	A	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	2.00	2.32	
7-Jun	2.0	2.0	2.1	2.1	2.1	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.94	2.12	
8-Jun	2.0	2.9	1.9	2.0	2.1	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.99	2.94	
9-Jun	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	1.9	C	C	C	C	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.95	2.02	
10-Jun	2.0	2.0	2.0	A	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.98	2.10	
11-Jun	1.9	2.0	A	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	1.96	2.03	
12-Jun	2.0	A	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	1.99	
13-Jun	A	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.7	2.1	A	1.99	2.70	
14-Jun	2.0	2.4	2.1	2.1	2.1	2.1	2.0	2.3	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.00	2.42	
15-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.92	1.94	
16-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.1	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.95	2.07	
17-Jun	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	1.94	1.99	
18-Jun	2.0	2.0	2.2	2.4	3.3	2.7	2.4	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.4	2.09	3.26	
19-Jun	2.1	3.3	2.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	2.3	2.4	2.11	3.35	
20-Jun	3.1	2.6	2.1	3.1	2.7	2.4	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	A	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.15	3.11	
21-Jun	2.0	2.5	2.1	2.9	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.1	2.2	2.3	2.6	2.2	2.08	2.88	
22-Jun	2.1	2.0	3.2	2.7	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	A	2.0	2.2	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.08	3.16	
23-Jun	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.0	A	1.9	1.9	1.9	1.9	1.9	2.1	1.9	4.3	2.5	2.3	2.12	4.28	
24-Jun	2.0	2.6	2.2	2.2	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.03	2.61	
25-Jun	2.0	2.0	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.95	2.14	
26-Jun	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	1.94	2.03	
27-Jun	2.8	3.4	2.0	2.6	2.3	2.0	2.0	1.9	1.9	A	1.9	2.0	2.0	1.9	1.9	2.1	1.9	2.1	1.9	1.9	1.9	2.2	2.3	3.4	2.19	3.44	
28-Jun	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.3	A	2.2	2.3	2.1	2.0	1.9	1.9	1.9	2.4	2.9	1.9	2.0	2.0	2.1	2.1	2.2	2.18	2.93	
29-Jun	3.1	2.5	2.3	2.3	2.4	3.1	2.4	A	2.4	2.5	2.0	2.0	2.0	1.9	1.9	1.9	2.5	1.9	2.0	2.1	2.4	2.0	2.0	2.0	2.23	3.11	
30-Jun	2.2	2.6	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3	2.3	3.3	3.8	3.4	2.22	3.77	
2.12 2.25 2.11 2.16 2.13 2.09 2.06 2.00 1.98 1.99 1.96 1.94 1.93 1.92 1.92 1.92 1.96 1.96 1.93 1.97 1.99 2.13 2.09 2.12																									Diurnal Average		
3.11 3.40 3.16 3.11 3.26 3.05 2.47 2.29 2.36 2.45 2.31 2.14 2.04 1.98 1.99 2.05 2.49 2.93 2.06 2.25 2.37 4.28 3.77 3.44																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

Hourly Maximums

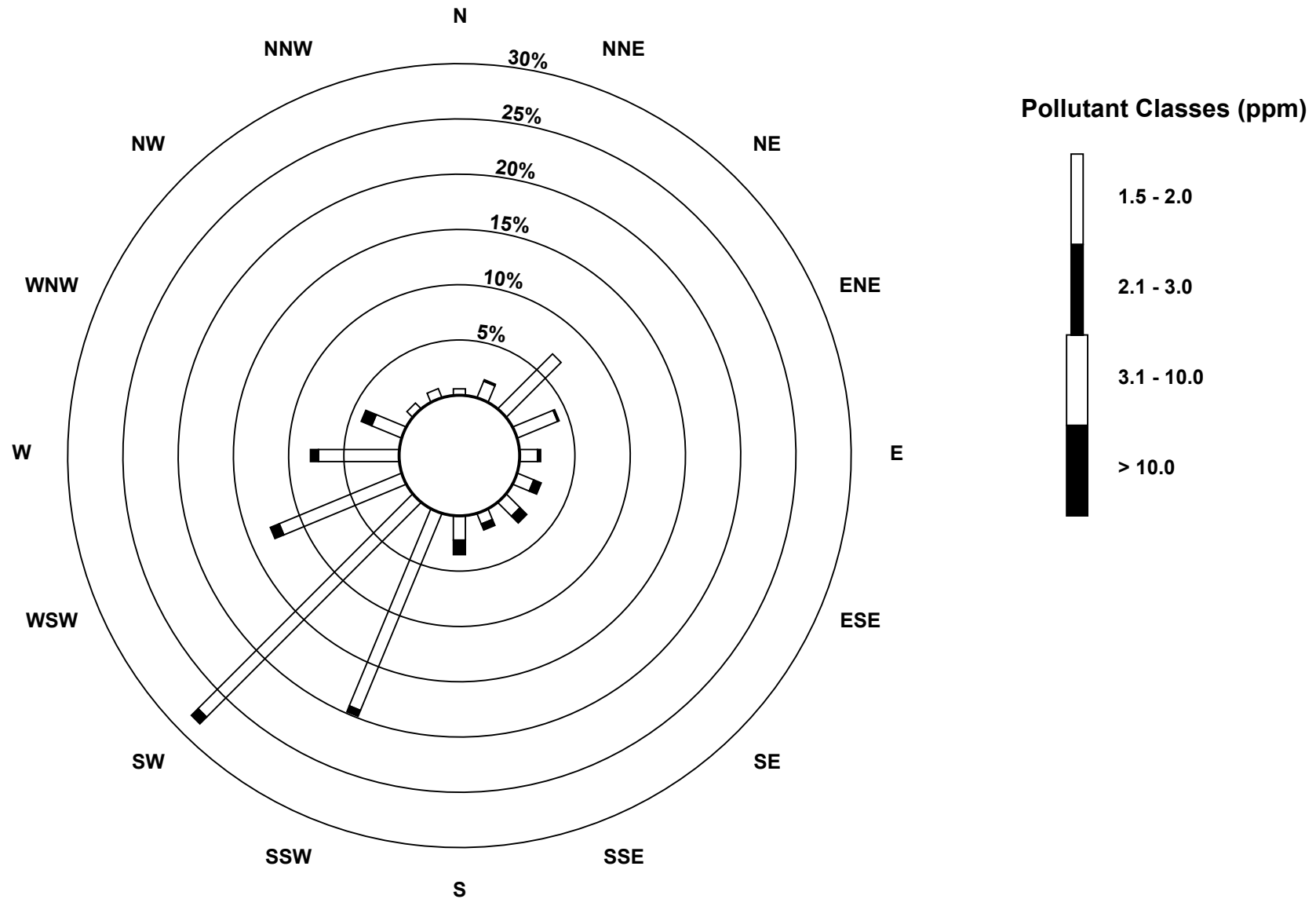
Total Hydrocarbons (THC) - ppm
Henry Pirker - June 2016



Pollutant Rose

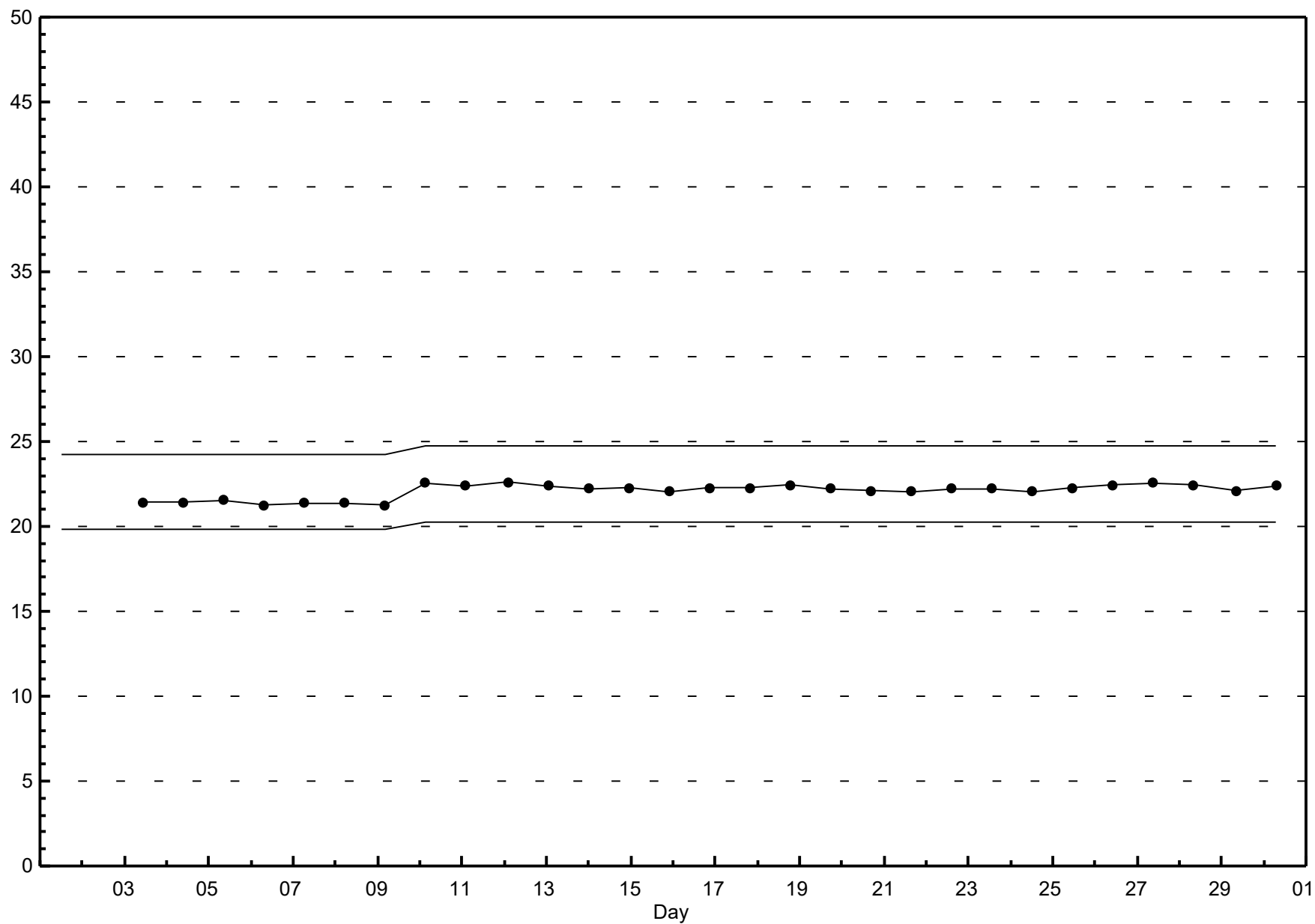
Total Hydrocarbons (THC) - ppm

Henry Pirker - June 2016



Span Responses

Total Hydrocarbons (THC)
Henry Pirker - June 2016



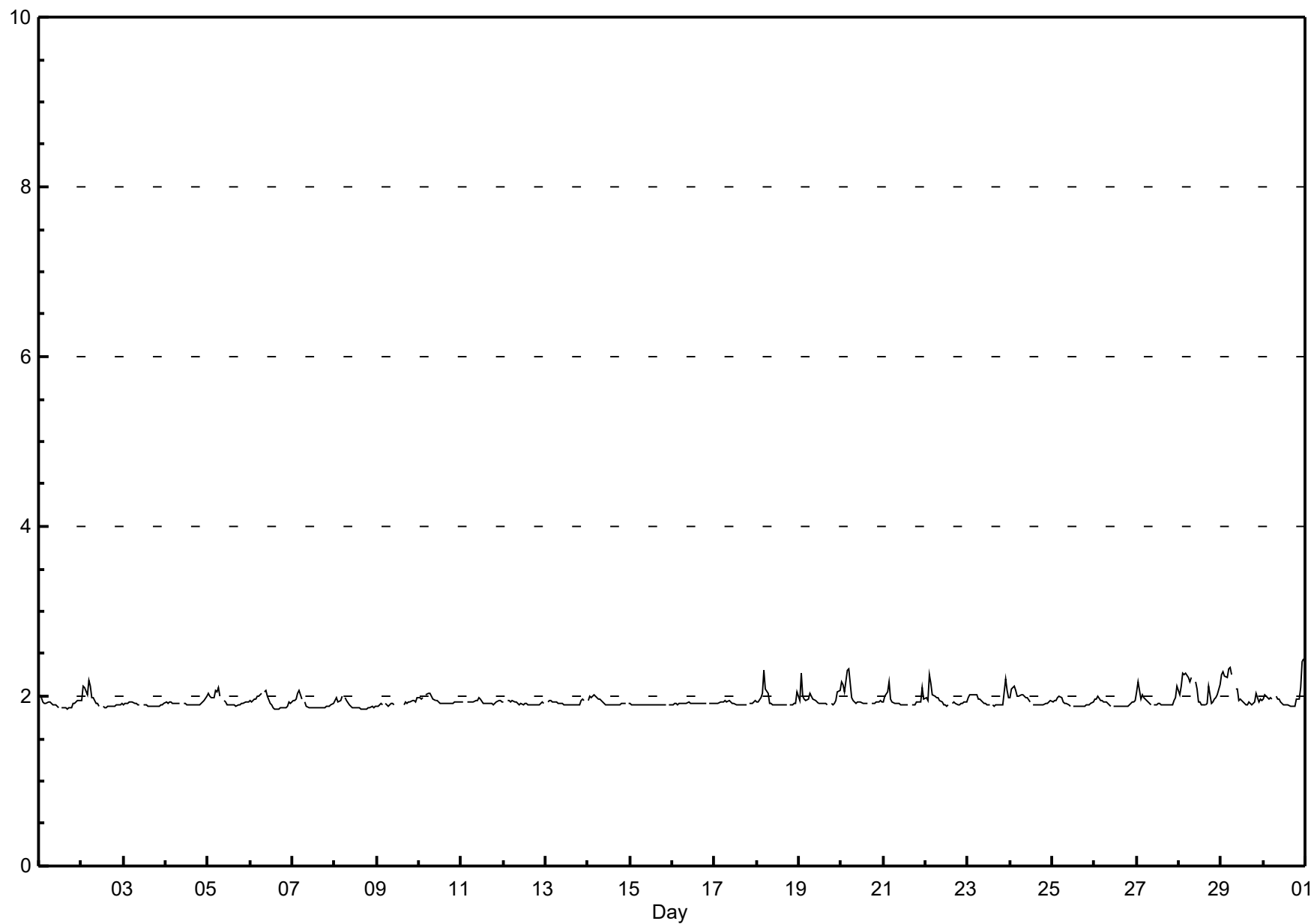
Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																					Hours in Service: 720						
Maximum Value: 2.44 ppm on Jul 1 00:00																					Maximum Daily Average: 2.06 ppm on Jun 28		Hours of Data: 685				
Minimum Value: 1.9 ppm on Jun 6 16:00																					Minimum Daily Average: 1.89 ppm on Jun 8		Hours of Missing Data: 35				
Maximum Diurnal Average: 2.02 ppm at hour 5																					Minimum Diurnal Average: 1.89 ppm at hour 15		Hours of Calibration: 35				
Monthly Average: 1.943 ppm																					Percentiles: P ₁ = 1.86 P ₁₀ = 1.89 Q ₁ = 1.90 Median = 1.92 Q ₃ = 1.96 P ₉₀ = 2.03 P ₉₉ = 2.31		Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jun	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.01	
2-Jun	2.0	2.1	2.1	2.0	2.2	2.1	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.18	
3-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.94	
4-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.92	1.99	
5-Jun	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.11	
6-Jun	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.07	
7-Jun	1.9	1.9	2.0	2.0	2.1	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	2.06	
8-Jun	1.9	2.0	1.9	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.89	2.00	
9-Jun	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.92	1.98	
10-Jun	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.04	
11-Jun	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.93	1.98	
12-Jun	1.9	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.95	
13-Jun	A	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	A	1.92	1.96	
14-Jun	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.93	2.01	
15-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.90	1.92	
16-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.91	1.93	
17-Jun	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.92	1.96	
18-Jun	1.9	1.9	2.0	2.0	2.3	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	1.95	2.31	
19-Jun	2.0	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.1	2.1	1.97	2.28	
20-Jun	2.2	2.1	2.1	2.3	2.3	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.99	2.32	
21-Jun	1.9	2.0	2.0	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.0	1.95	2.17	
22-Jun	2.0	1.9	2.3	2.2	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.26	
23-Jun	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.1	2.0	1.96	2.21	
24-Jun	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.97	2.13	
25-Jun	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	1.99	
26-Jun	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	2.00	
27-Jun	2.0	2.2	2.0	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	1.95	2.16	
28-Jun	2.0	2.1	2.3	2.2	2.3	2.2	2.2	2.2	A	2.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	2.0	2.0	2.0	2.1	2.06	2.27	
29-Jun	2.2	2.3	2.2	2.2	2.3	2.3	2.3	A	2.1	2.1	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.05	2.35	
30-Jun	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.4	2.4	1.99	2.44	
		1.97	2.00	2.01	2.01	2.02	2.00	1.98	1.95	1.94	1.94	1.92	1.91	1.90	1.89	1.89	1.89	1.90	1.90	1.90	1.90	1.92	1.94	1.96	1.97	Diurnal Average	
		2.25	2.28	2.27	2.31	2.32	2.35	2.25	2.22	2.09	2.18	2.09	1.96	1.93	1.92	1.91	1.92	1.93	2.12	1.94	1.96	2.04	2.21	2.40	2.44	Diurnal Maximum	
C - Calibration		A - Automated Daily Zero Span																									

Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - June 2016



Hourly Maximums

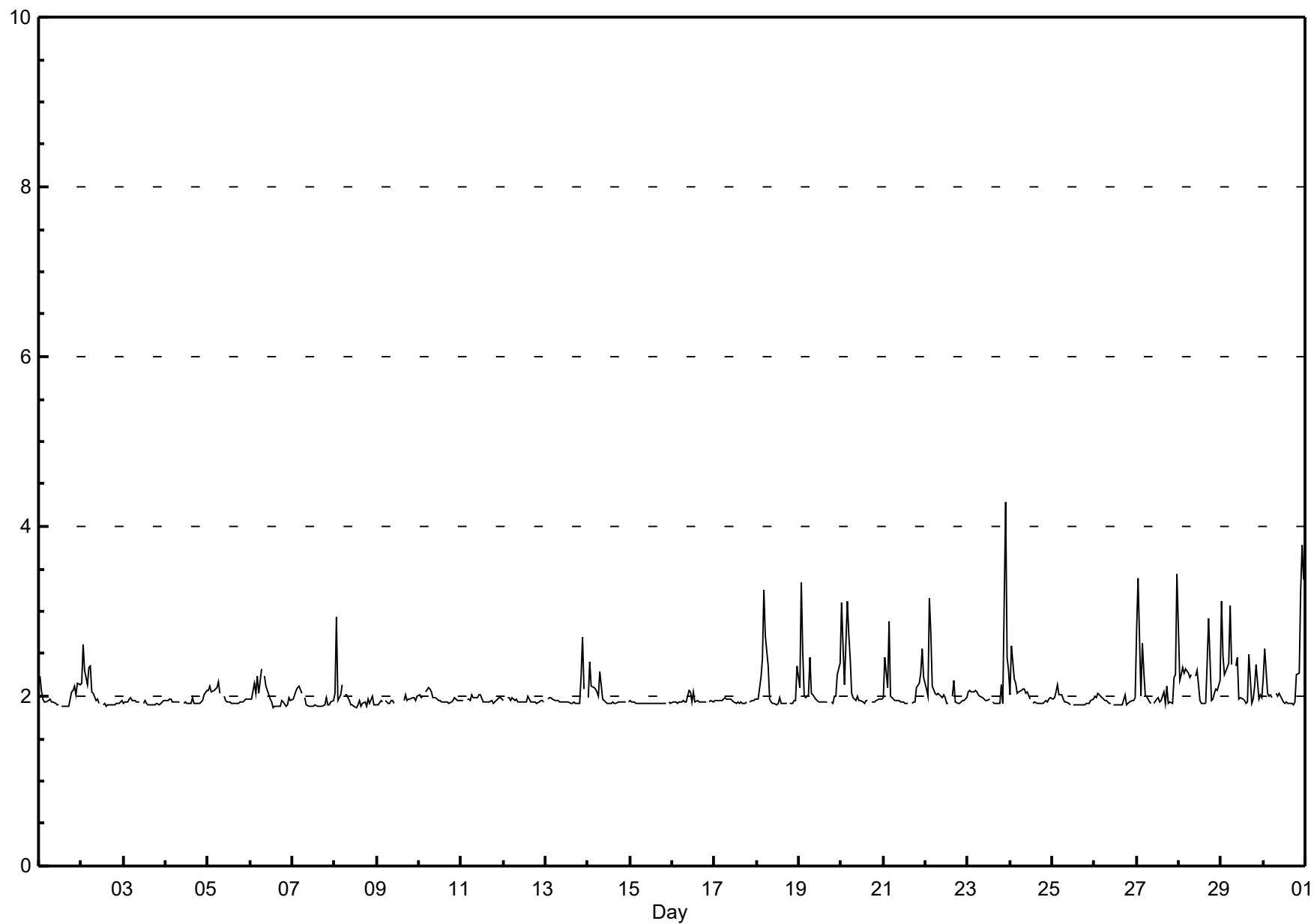
Methane (CH₄) - ppm

Henry Pirker - June 2016

Maximum Value: 4.29 ppm on Jun 23 22:00																				Maximum Daily Average: 2.23 ppm on Jun 29					Hours in Service: 720	
Minimum Value: 1.9 ppm on Jun 6 14:00																				Minimum Daily Average: 1.92 ppm on Jun 15					Hours of Data: 685	
Maximum Diurnal Average: 2.25 ppm at hour 2																				Minimum Diurnal Average: 1.92 ppm at hour 14					Hours of Missing Data: 35	
Monthly Average: 2.028 ppm																				Percentiles: P ₁ = 1.88 P ₁₀ = 1.91 Q ₁ = 1.92 Median = 1.95 Q ₃ = 2.02 P ₉₀ = 2.23 P ₉₉ = 3.23					Hours of Calibration: 35	
																									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-Jun	2.2	2.1	2.0	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.1	2.1	2.1	2.0	2.1	2.1	1.98	2.24
2-Jun	2.2	2.6	2.3	2.1	2.3	2.4	2.1	2.0	1.9	2.0	1.9	A	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.03	2.61
3-Jun	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	1.98
4-Jun	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	1.94	2.06
5-Jun	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.99	2.17
6-Jun	2.0	2.0	2.1	2.0	2.2	2.0	2.3	A	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	2.00	2.32
7-Jun	2.0	2.0	2.1	2.1	2.1	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.94	2.12
8-Jun	2.0	2.9	2.0	2.0	2.1	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.99	2.93
9-Jun	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	1.9	C	C	C	C	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.95	2.01
10-Jun	2.0	2.0	2.0	A	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.98	2.09
11-Jun	1.9	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	1.96	2.02
12-Jun	2.0	A	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.94	1.99
13-Jun	A	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.7	2.1	A	1.99	2.70
14-Jun	2.0	2.4	2.1	2.1	2.1	2.1	2.0	2.3	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.00	2.41
15-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.92	1.95
16-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	1.9	1.95	2.07
17-Jun	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	1.94	1.99
18-Jun	2.0	2.0	2.2	2.4	3.3	2.7	2.4	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.4	2.09	3.26
19-Jun	2.1	3.3	2.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	2.3	2.4	2.11	3.35
20-Jun	3.1	2.6	2.1	3.1	2.7	2.4	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	2.0	2.0	A	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.15	3.12
21-Jun	2.0	2.5	2.1	2.9	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.1	2.2	2.3	2.6	2.2	2.08	2.88
22-Jun	2.1	2.0	3.2	2.7	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	A	2.0	2.2	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.08	3.16
23-Jun	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	2.1	1.9	4.3	2.5	2.3	2.12	4.29
24-Jun	2.0	2.6	2.2	2.2	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.03	2.60
25-Jun	2.0	2.0	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.95	2.13
26-Jun	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	1.94	2.03
27-Jun	2.8	3.4	2.0	2.6	2.3	2.0	2.0	1.9	1.9	A	1.9	2.0	2.0	1.9	2.0	2.0	1.9	2.1	1.9	1.9	1.9	2.2	2.3	3.4	2.19	3.45
28-Jun	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.3	A	2.2	2.3	2.1	2.0	1.9	1.9	1.9	2.4	2.9	1.9	2.0	2.0	2.1	2.1	2.2	2.18	2.92
29-Jun	3.1	2.5	2.3	2.3	2.4	3.1	2.4	A	2.4	2.5	2.0	2.0	2.0	1.9	1.9	1.9	2.5	1.9	2.0	2.1	2.4	2.0	2.0	2.0	2.23	3.12
30-Jun	2.2	2.6	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3	2.3	3.3	3.8	3.4	2.22	3.77
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration																								A - Automated Daily Zero Span		

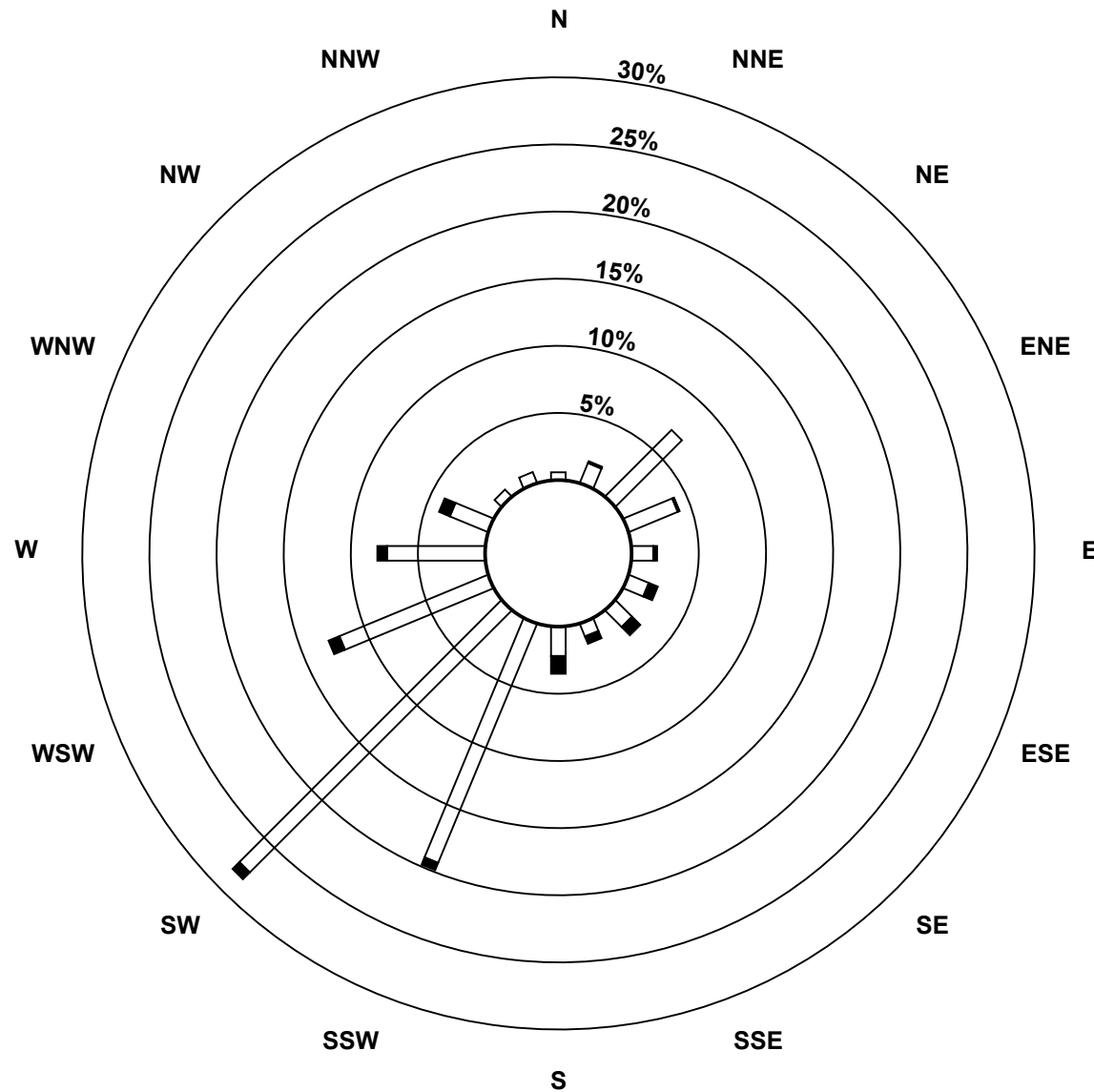
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - June 2016

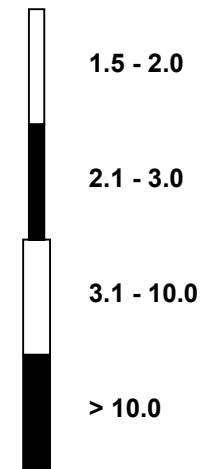


Pollutant Rose

Methane (CH₄) - ppm
Henry Pirker - June 2016

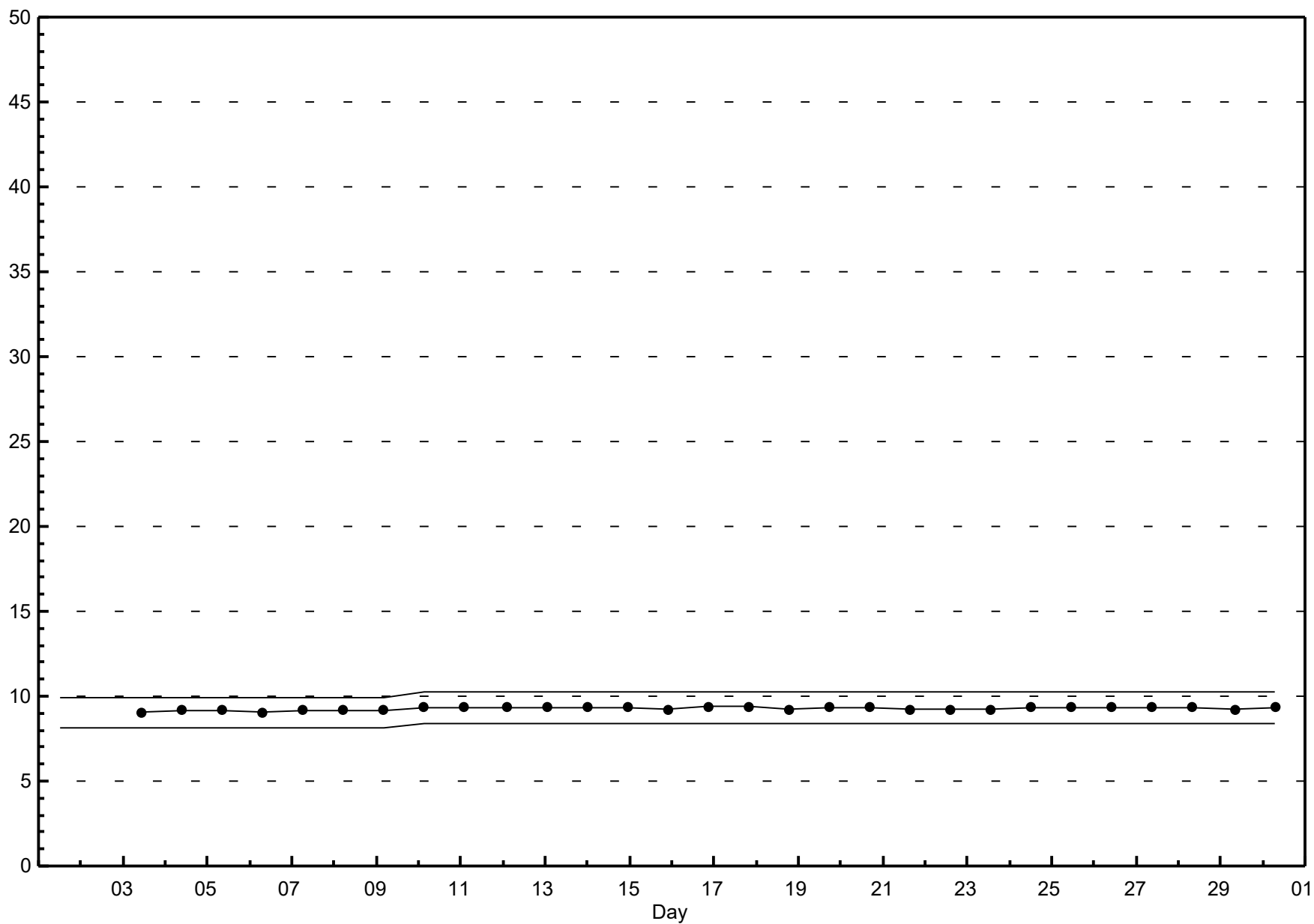


Pollutant Classes (ppm)



Span Responses

Methane (CH₄)
Henry Pirker - June 2016

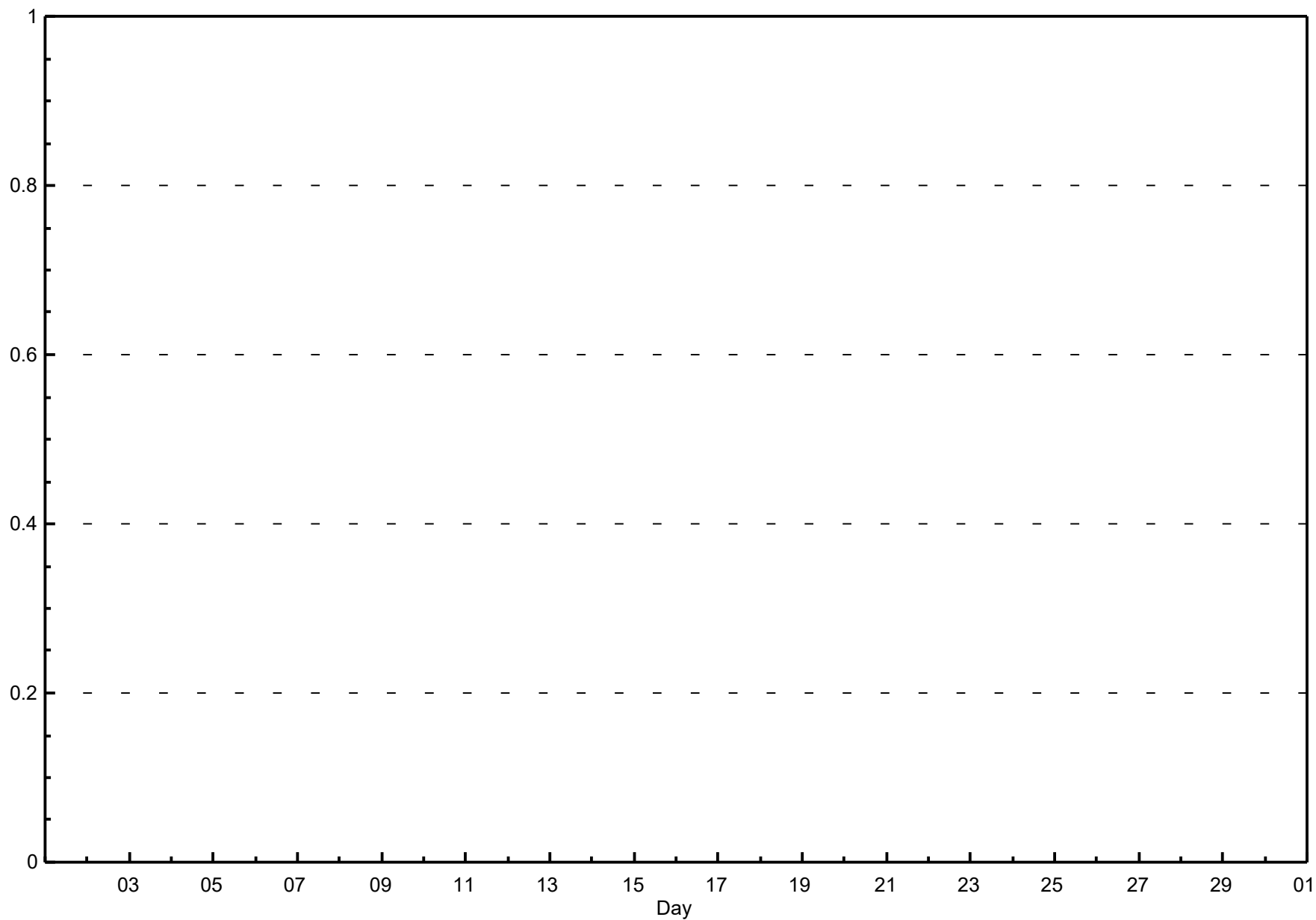


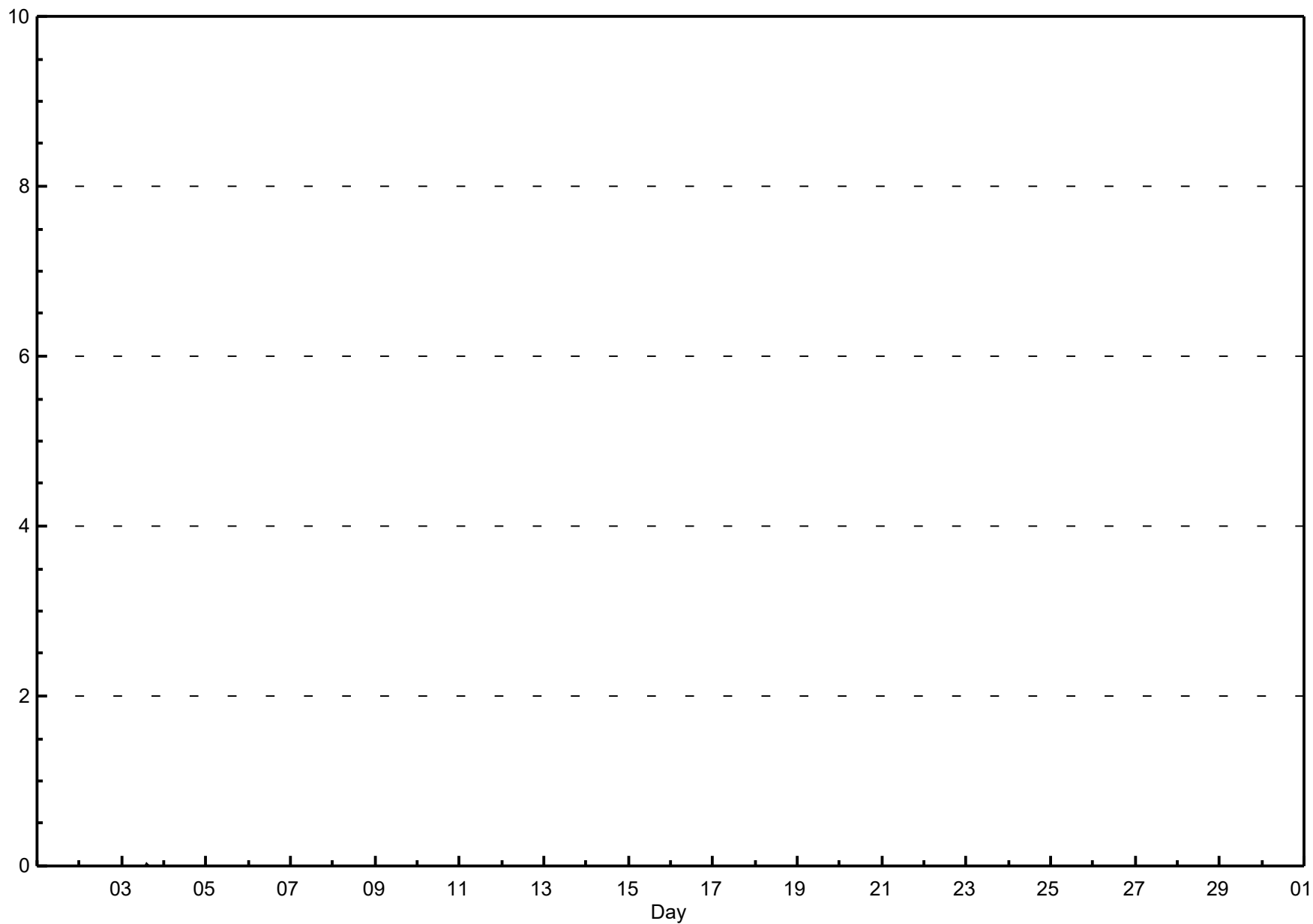
Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.00 ppm on Jun 16 12:00 Maximum Daily Average: 0.00 ppm on Jun 16																							Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0			
Minimum Value: 0.0 ppm on Jun 1 01:00 Maximum Diurnal Average: 0.00 ppm at hour 4 Monthly Average: 0.000 ppm											Minimum Daily Average: 0.00 ppm on Jun 1 Minimum Diurnal Average: 0.00 ppm at hour 21 Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.00															
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-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
2-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
3-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
4-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
5-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
6-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
7-Jun	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
8-Jun	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
9-Jun	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
10-Jun	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11-Jun	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
12-Jun	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
13-Jun	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.00	0.00
14-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.00	0.00
15-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.00	0.00
16-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.00
17-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.00	0.00
18-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.00	0.00
19-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
20-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
21-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
22-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
23-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
24-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
25-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
26-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
27-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
28-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
29-Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
30-Jun	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
0.00 0.00																									Diurnal Average	
0.00 0.00																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

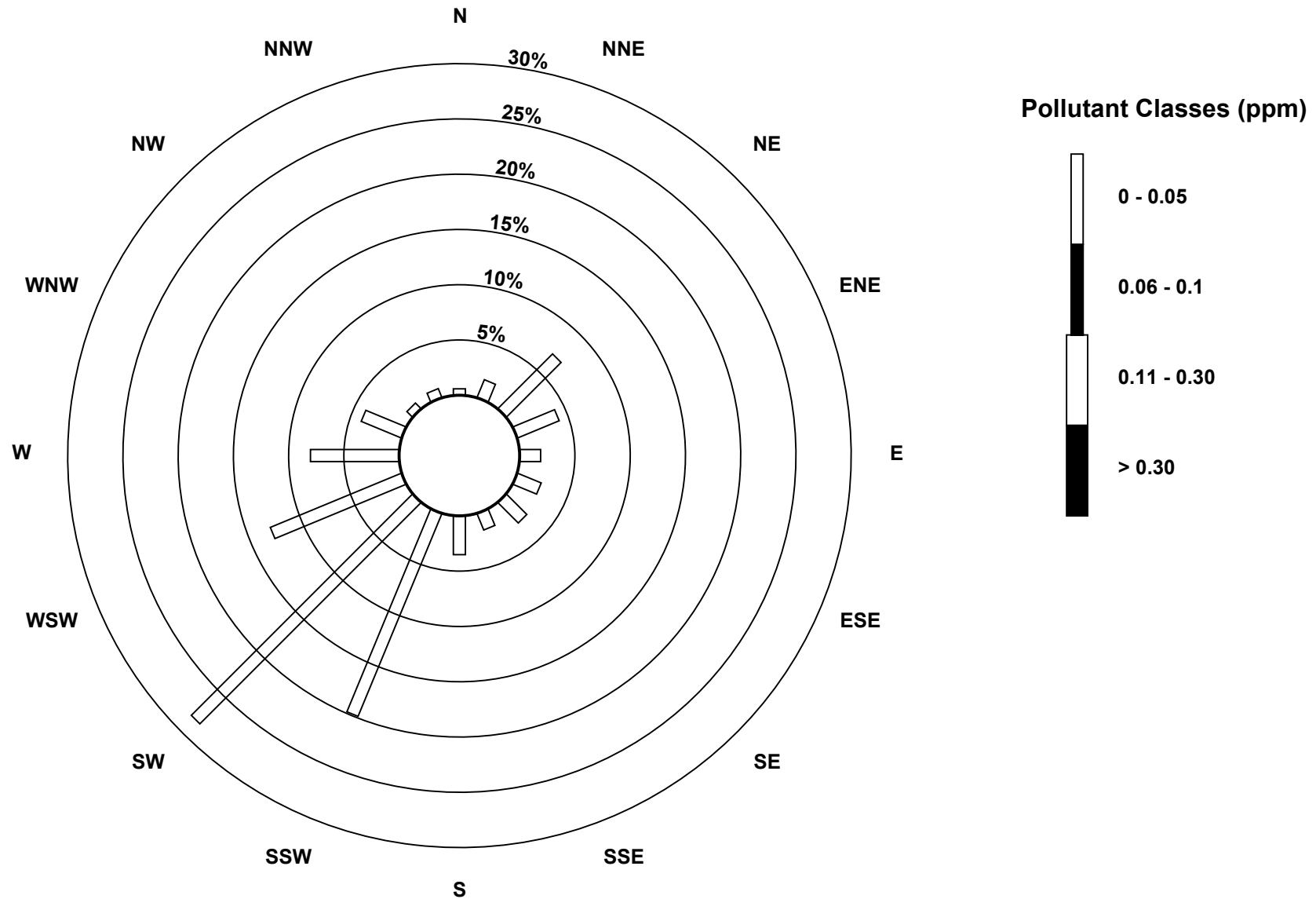


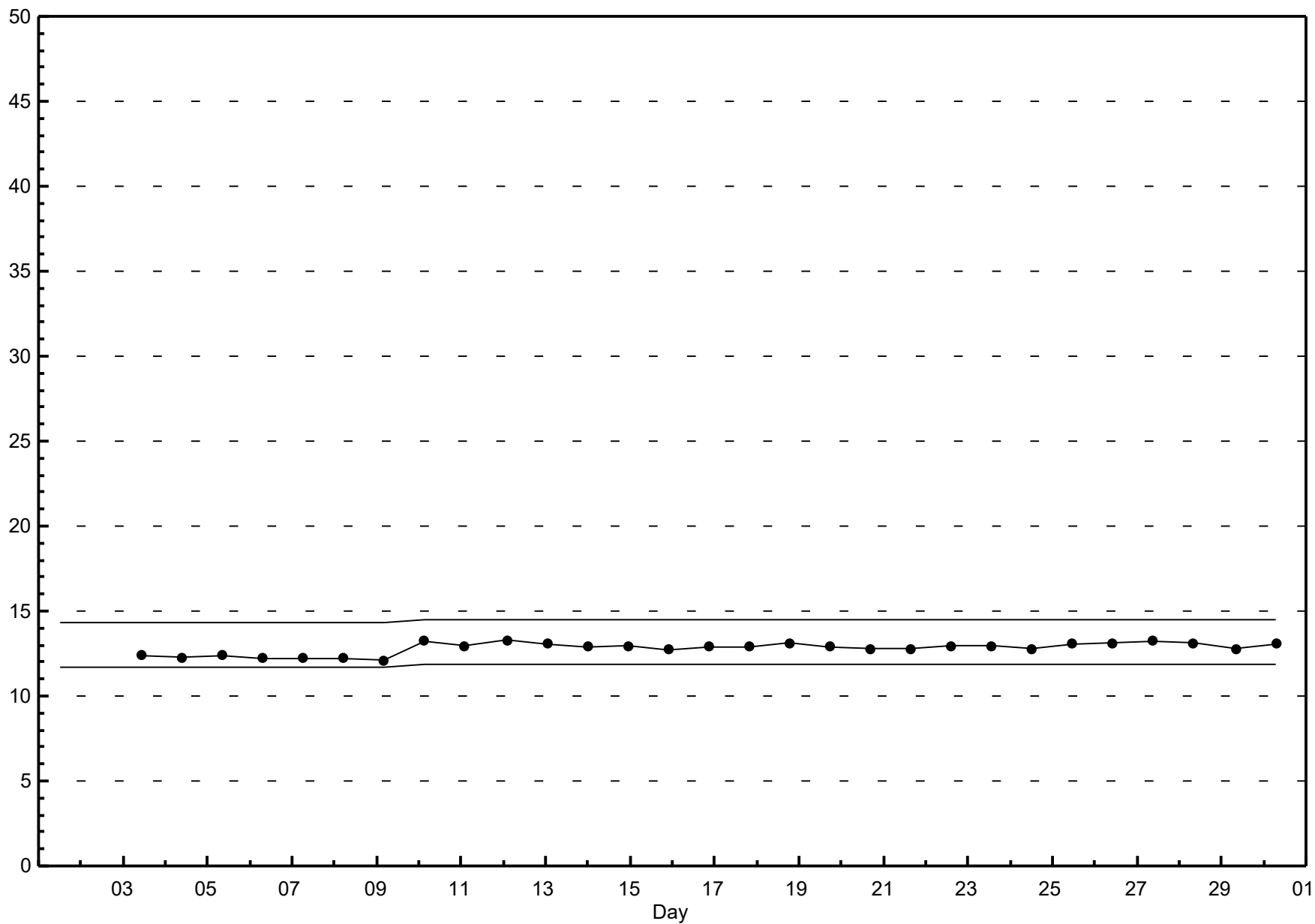


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - June 2016



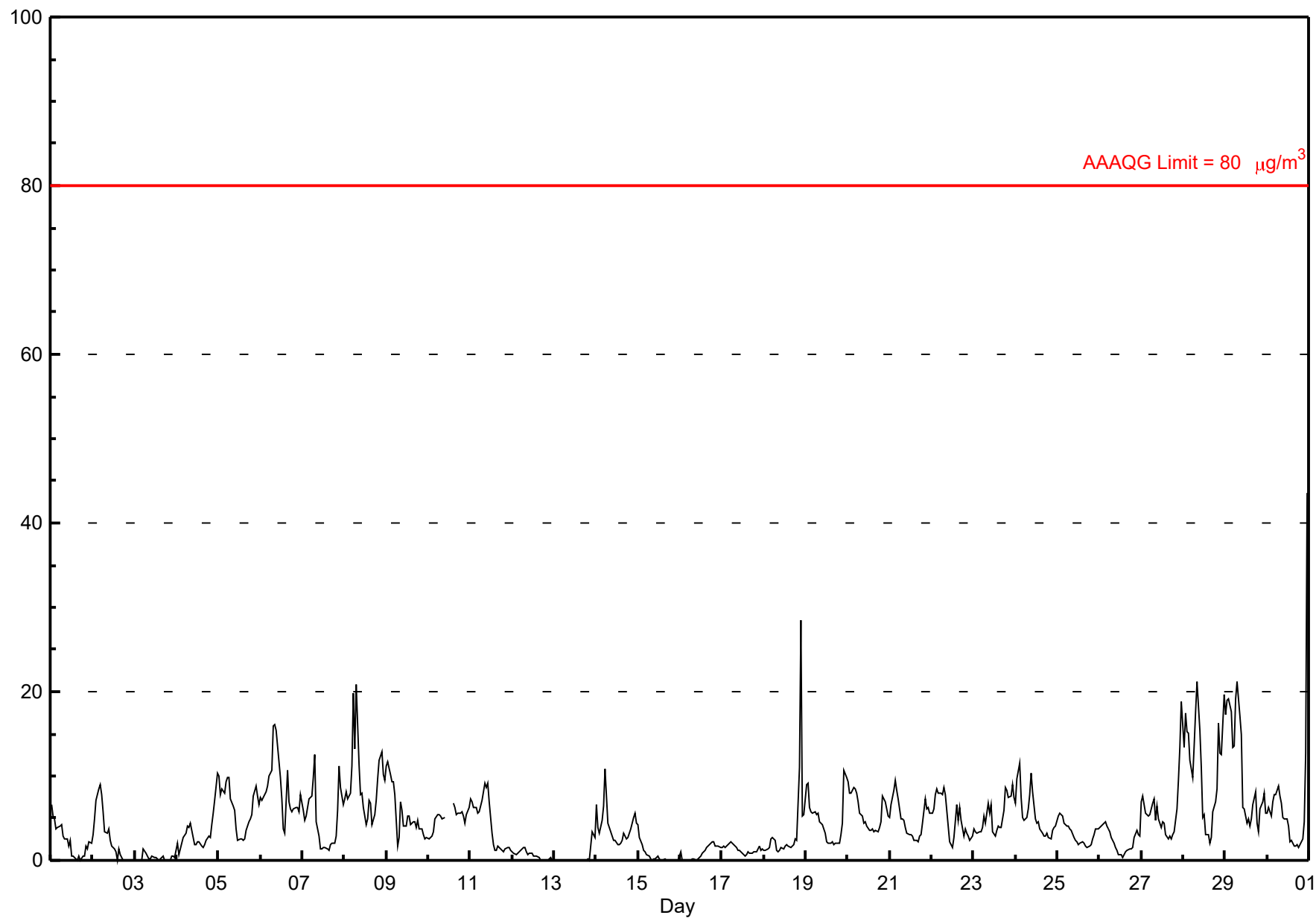


Hourly Averages

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

Henry Pirker - June 2016

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 43.5 µg/m³ on Jul 1 00:00 Maximum Daily Average: 11.0 µg/m³ on Jun 28																								Hours in Service: 720 Hours of Data: 716 Hours of Missing Data: 4 Hours of Calibration: 4 Percent Operational Time: 100.0		
Minimum Value: 0 µg/m³ on Jun 1 16:00 Maximum Diurnal Average: 6.6 µg/m³ at hour 24 Monthly Average: 4.47 µg/m³																								Minimum Daily Average: 0.3 µg/m³ on Jun 3 Minimum Diurnal Average: 2.3 µg/m³ at hour 14 Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 1.6 Median = 3.5 Q ₃ = 6.3 P ₉₀ = 9.1 P ₉₉ = 19.5		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	7	5	5	4	4	4	4	3	3	3	2	2	1	0	0	0	0	0	0	1	2	1	2	2	2.3	6.6
2-Jun	3	5	7	8	9	8	6	3	3	4	2	2	1	1	0	1	1	0	0	0	0	0	0	0	2.7	8.9
3-Jun	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.3	1.4
4-Jun	2	1	1	2	3	3	4	4	4	3	2	2	2	2	2	2	2	2	3	3	4	6	7	10	3.2	10.4
5-Jun	10	8	8	8	9	10	10	7	6	6	4	2	3	3	2	3	3	5	5	5	8	9	8	7	6.2	10.0
6-Jun	8	7	8	8	9	10	11	16	16	15	14	10	7	4	3	11	7	6	6	6	6	6	6	8	8.6	16.2
7-Jun	6	5	5	6	7	8	10	13	5	3	1	1	1	1	1	1	2	2	2	3	6	11	9	7	4.9	12.6
8-Jun	7	8	7	8	11	20	13	21	11	8	8	6	4	5	7	7	4	5	7	10	12	13	10	9	9.3	20.8
9-Jun	11	12	10	9	9	8	2	3	7	6	4	4	5	5	4	5	5	4	5	4	4	3	3	3	5.5	11.7
10-Jun	3	3	3	3	5	5	5	5	5	5	C	C	C	C	7	6	5	6	6	6	5	4	5	6	5.0	6.9
11-Jun	7	7	6	6	6	6	6	7	9	9	9	7	3	2	1	1	2	1	1	1	1	2	2	1	4.3	9.1
12-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0.6	1.5
13-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3	0.3	3.4
14-Jun	7	4	3	5	7	11	8	4	3	3	2	2	2	2	2	2	3	3	3	3	4	5	6	4	4.0	10.8
15-Jun	4	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.3
16-Jun	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	2	2	2	2	2	2	1	0.8	2.2
17-Jun	1	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.3	2.2
18-Jun	1	1	1	2	2	3	2	1	1	1	2	1	2	2	2	1	2	2	3	2	11	28	5	5	3.5	28.5
19-Jun	9	9	6	6	6	6	5	6	5	4	4	3	2	2	2	2	2	2	2	2	3	4	11	10	4.7	10.7
20-Jun	9	8	8	9	9	8	7	6	5	4	5	4	4	3	4	3	4	3	4	5	8	7	6	5	5.7	9.4
21-Jun	5	7	8	10	8	7	5	5	5	4	3	3	3	3	2	2	2	3	3	4	7	6	6	6	4.9	9.6
22-Jun	6	6	8	8	8	8	8	9	8	4	2	2	2	3	7	5	6	5	3	4	3	3	2	3	5.0	8.7
23-Jun	4	3	3	3	3	4	5	4	7	6	7	3	3	4	4	4	4	6	9	8	8	8	9	7	5.2	9.0
24-Jun	7	10	11	8	5	5	5	6	8	10	8	5	4	5	4	3	3	3	3	3	3	4	4	4	5.4	11.4
25-Jun	5	6	5	5	4	4	4	4	4	3	2	2	2	2	2	2	2	1	2	2	3	3	4	4	3.2	5.6
26-Jun	4	4	4	5	4	4	3	3	2	2	1	1	1	0	1	1	1	1	1	2	3	4	3	3	2.3	4.6
27-Jun	7	8	6	5	5	5	7	7	5	6	5	4	4	4	3	3	3	3	3	3	6	9	13	19	6.0	18.8
28-Jun	13	17	15	15	12	10	13	18	21	15	11	5	5	3	3	2	3	6	7	8	16	13	13	20	11.0	21.2
29-Jun	17	19	19	18	13	14	19	21	17	15	6	6	4	5	4	5	7	8	4	3	6	7	8	6	10.5	21.1
30-Jun	6	6	5	7	8	8	9	8	7	5	5	5	4	2	2	2	2	2	2	2	3	5	13	44	6.6	43.5
5.7 5.8 5.7 5.7 5.7 6.1 5.9 6.2 5.6 4.9 3.9 3.0 2.5 2.3 2.4 2.6 2.6 2.7 2.9 3.1 4.4 5.5 5.4 6.6																								Diurnal Average		
17.3 18.9 19.2 17.6 13.4 19.8 19.1 21.1 21.2 15.5 13.6 9.8 7.2 5.2 7.0 10.7 7.0 8.2 8.7 9.7 16.3 28.5 13.4 43.5																								Diurnal Maximum		
C - Calibration																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										



Hourly Maximums

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

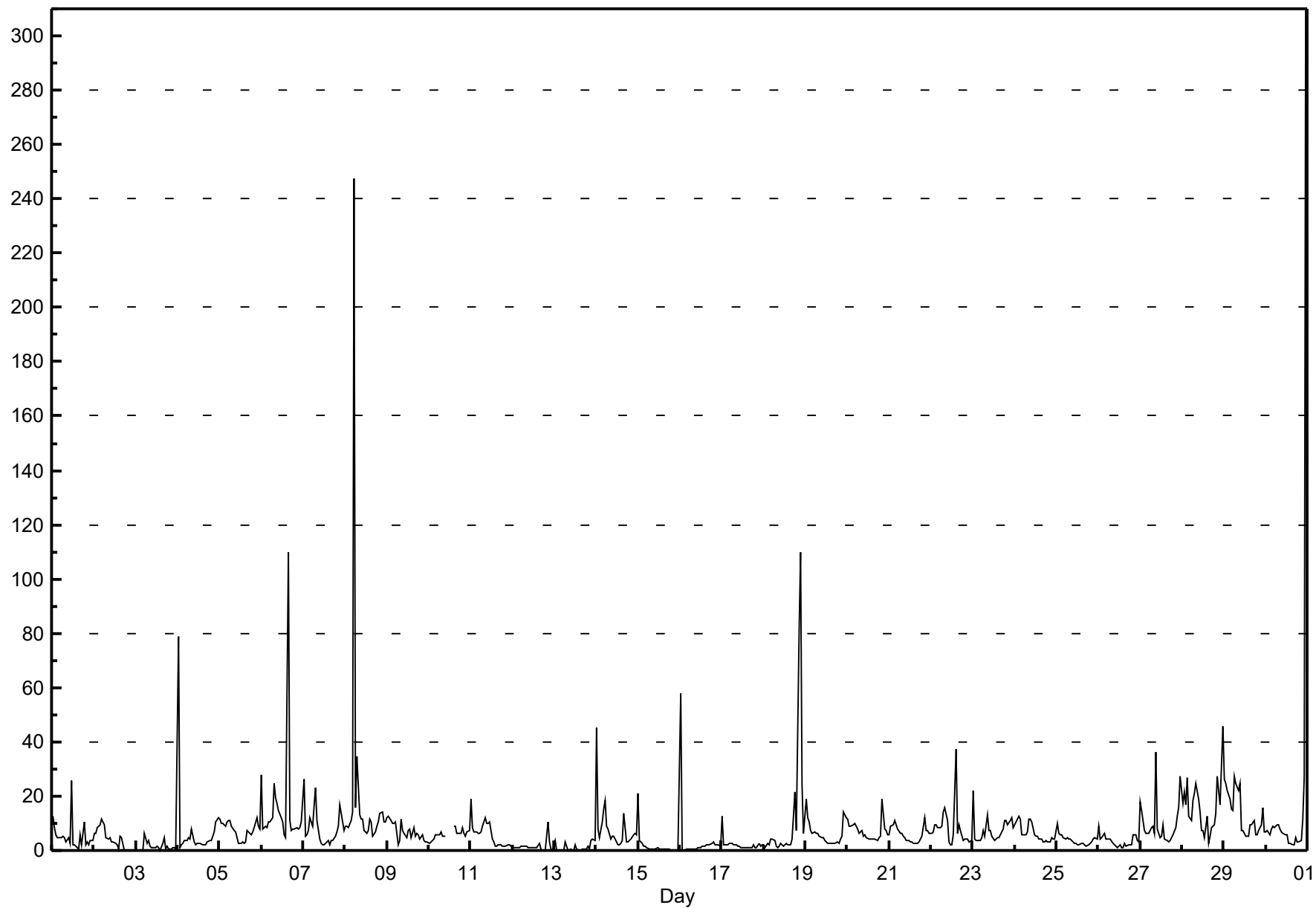
Henry Pirker - June 2016

Maximum Value: 309.3 μg/m ³ on Jul 1 00:00																								Maximum Daily Average: 21.2 μg/m ³ on Jun 8										Hours in Service: 720	
Minimum Value: 0 μg/m ³ on Jun 2 19:00																								Minimum Daily Average: 1.2 μg/m ³ on Jun 13										Hours of Data: 716	
Maximum Diurnal Average: 17.3 μg/m ³ at hour 24																								Minimum Diurnal Average: 3.4 μg/m ³ at hour 14										Hours of Missing Data: 4	
Monthly Average: 7.62 μg/m ³																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.9 Q ₁ = 2.2 Median = 4.6 Q ₃ = 8.7 P ₉₀ = 12.8 P ₉₉ = 44.1										Hours of Calibration: 4	
																								Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Jun	13	8	6	5	5	5	5	5	3	5	3	26	2	2	1	0	6	2	11	2	3	2	4	3	5.2	26.0									
2-Jun	6	6	9	10	12	10	10	5	4	5	3	3	2	2	1	5	5	0	0	0	0	0	0	0	4.1	11.6									
3-Jun	0	0	0	0	0	6	3	4	2	1	1	1	2	1	0	3	5	1	2	1	1	1	1	1	1.4	6.1									
4-Jun	79	1	2	3	4	4	5	4	8	3	2	2	3	3	2	2	2	3	3	4	5	7	10	12	7.2	78.8									
5-Jun	12	10	10	9	10	11	11	9	7	7	5	3	3	3	3	3	8	6	6	7	9	12	9	8	7.5	11.8									
6-Jun	28	8	9	9	10	11	12	25	19	18	15	12	11	6	5	110	11	7	8	8	8	8	8	10	15.6	110.0									
7-Jun	26	5	6	7	12	9	16	23	11	4	2	2	2	2	3	2	4	3	5	7	9	17	13	7	8.4	26.4									
8-Jun	9	9	9	11	14	247	16	35	13	11	12	7	6	7	11	10	5	7	9	11	14	14	11	10	21.2	247.4									
9-Jun	12	12	11	10	10	10	2	4	12	7	6	5	7	8	5	8	5	6	6	4	6	3	3	3	6.9	12.5									
10-Jun	3	3	3	4	6	6	6	7	5	5	C	C	C	C	9	9	6	6	6	8	6	5	7	7	6.0	9.0									
11-Jun	19	9	7	7	6	6	7	9	12	10	10	10	4	3	2	2	2	2	1	1	2	2	2	1	5.7	18.8									
12-Jun	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	3	0	0	0	0	10	3	1	0	1.5	10.3									
13-Jun	3	0	0	0	0	0	3	2	0	1	0	0	2	1	0	0	0	0	1	2	1	4	4	4	1.2	4.1									
14-Jun	45	8	5	10	15	19	9	8	4	5	5	4	2	2	3	3	14	3	3	4	4	6	6	6	8.1	45.0									
15-Jun	21	3	3	2	1	1	1	1	0	0	1	1	1	0	1	1	0	0	0	0	0	0	0	0	1.6	20.9									
16-Jun	58	0	0	0	0	0	0	1	1	0	1	1	1	2	2	2	2	2	3	3	2	2	2	2	3.6	57.9									
17-Jun	12	2	2	2	3	3	3	2	2	2	2	1	1	1	1	1	1	1	2	1	1	3	2	2	2.2	12.5									
18-Jun	2	1	2	2	4	4	3	1	1	2	3	2	2	2	2	2	4	13	21	7	82	110	24	6	12.7	109.8									
19-Jun	19	12	11	7	6	7	6	6	5	5	5	4	3	3	3	3	2	3	3	2	4	5	14	12	6.2	18.8									
20-Jun	11	9	9	10	10	9	8	7	7	5	6	5	4	4	4	4	4	4	5	5	19	8	7	6	7.1	19.1									
21-Jun	6	9	9	11	10	8	6	6	5	5	4	3	3	3	3	3	3	3	4	5	12	7	7	6	5.9	12.0									
22-Jun	7	7	9	10	8	8	9	14	16	11	3	2	2	6	38	6	10	7	3	4	4	4	3	4	8.2	37.6									
23-Jun	22	4	4	4	4	5	8	5	13	7	7	5	4	4	5	5	6	8	11	11	10	11	12	8	7.6	22.2									
24-Jun	9	10	12	12	6	6	6	7	11	12	11	6	5	5	4	4	3	3	4	3	3	5	4	4	6.5	12.5									
25-Jun	10	6	6	6	5	4	5	4	4	3	3	3	2	2	3	3	2	2	2	3	3	4	5	4	3.9	10.2									
26-Jun	9	4	5	6	4	4	4	4	3	2	2	1	2	1	1	3	2	2	2	2	6	6	4	3	3.4	8.8									
27-Jun	18	15	7	6	6	6	8	9	6	36	8	5	5	9	4	3	3	4	5	6	8	13	16	27	9.8	36.1									
28-Jun	17	21	17	27	13	11	18	21	25	19	14	7	8	5	13	3	5	9	9	14	27	22	17	46	16.2	45.9									
29-Jun	26	25	22	19	15	15	27	25	22	25	7	7	5	5	5	9	9	11	6	6	8	10	16	7	13.9	27.5									
30-Jun	7	8	6	8	9	8	10	9	8	7	6	6	6	3	3	2	2	5	3	3	4	12	27	309	19.6	309.3									
17.0 7.3 6.7 7.2 7.0 14.8 7.6 8.8 7.8 7.4 5.1 4.7 3.5 3.4 4.5 7.2 4.4 4.1 4.8 4.5 9.0 10.2 8.0 17.3																								Diurnal Average											
78.8 24.7 22.0 26.8 15.4 247.4 27.5 34.6 24.7 36.1 14.7 26.0 10.8 9.4 37.6 110.0 13.6 12.6 21.4 13.7 82.0 109.8 26.8 309.3																								Diurnal Maximum											
C - Calibration																																			

Hourly Maximums

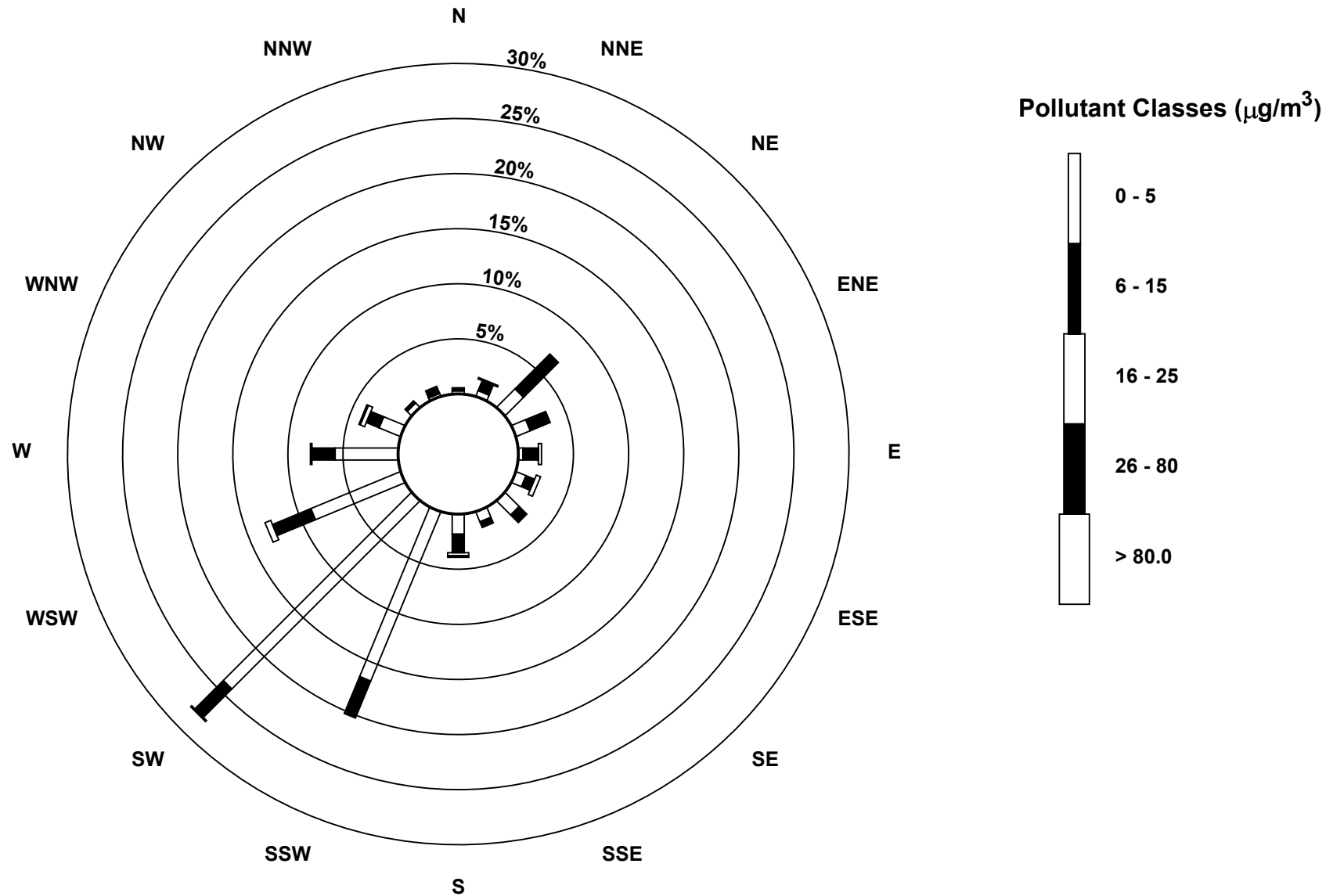
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Henry Pirker - June 2016



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Henry Pirker - June 2016



Hourly Averages

External Temperature (ET) - °C

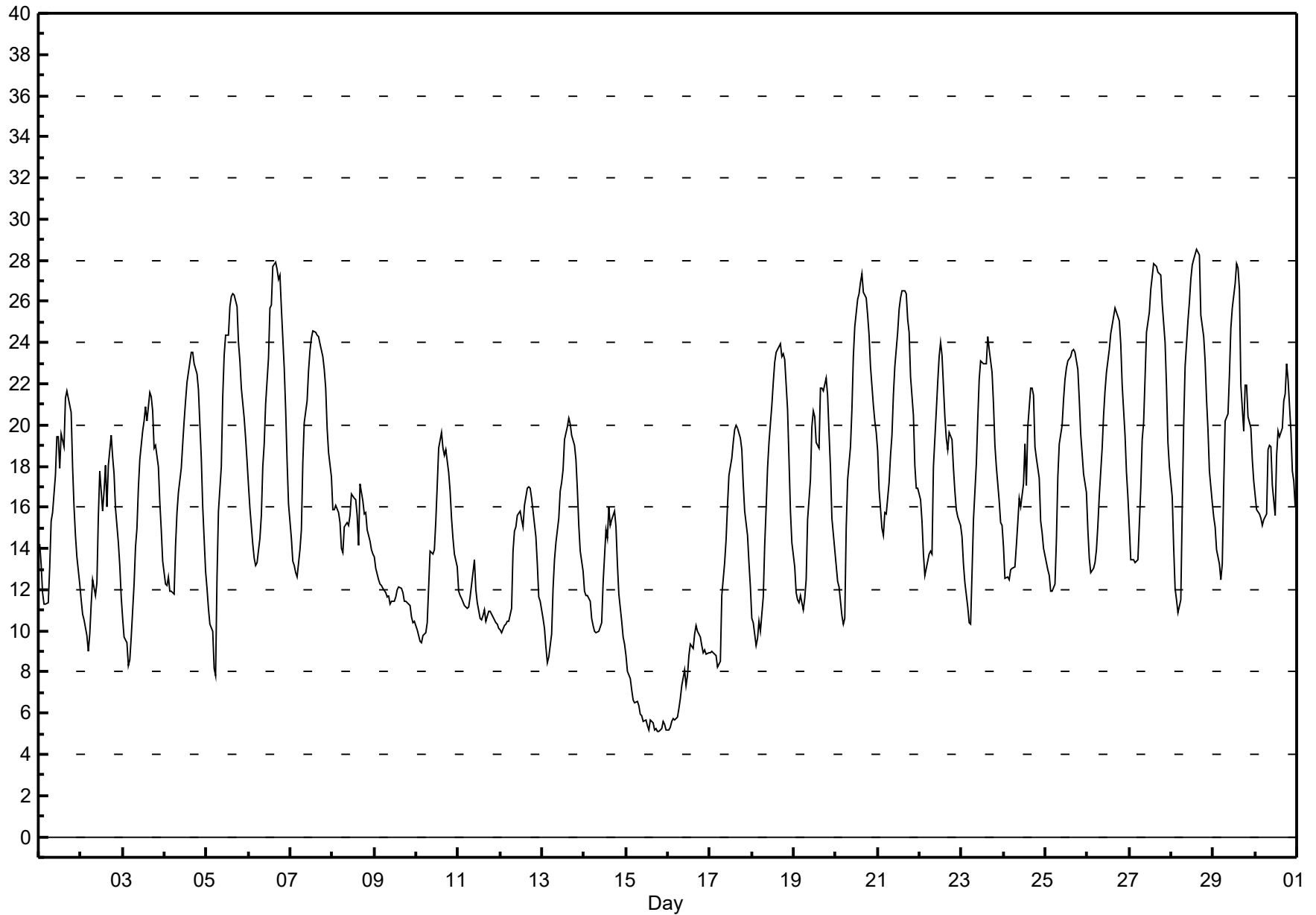
Henry Pirker - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.5 °C on Jun 28 15:00 Maximum Daily Average: 21.3 °C on Jun 27																				Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 5 °C on Jun 15 20:00 Maximum Diurnal Average: 20.7 °C at hour 16 Monthly Average: 16.32 °C										Minimum Daily Average: 6.0 °C on Jun 15 Minimum Diurnal Average: 11.2 °C at hour 5 Percentiles: P ₁ = 5.3 P ₁₀ = 9.9 Q ₁ = 12.0 Median = 15.8 Q ₃ = 20.2 P ₉₀ = 24.0 P ₉₉ = 27.9																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	14	13	12	11	11	11	13	15	16	18	19	19	18	20	19	21	22	21	21	18	16	15	14	12	16.2	21.6
2-Jun	11	11	11	10	9	10	11	12	12	12	16	18	16	17	18	16	18	20	18	18	16	14	13	12	14.1	19.5
3-Jun	11	10	9	8	9	10	12	14	15	17	18	20	20	21	20	22	21	21	19	19	18	16	15	13	15.7	21.6
4-Jun	12	12	13	12	12	12	14	16	17	18	19	20	21	22	23	24	24	23	23	22	20	18	16	13	17.7	23.5
5-Jun	12	11	10	10	8	8	13	16	18	21	23	24	24	26	26	26	26	26	24	23	22	20	19	18	19.0	26.4
6-Jun	17	16	14	13	13	13	15	16	18	19	21	23	26	26	28	28	28	27	27	26	23	21	18	16	20.5	27.9
7-Jun	15	13	13	13	13	14	15	18	20	21	23	24	24	25	25	24	24	24	23	23	22	20	19	17	19.6	24.6
8-Jun	16	16	16	16	15	14	14	15	15	15	16	17	16	16	16	14	17	16	16	15	14	14	14	14	15.4	17.1
9-Jun	14	13	13	12	12	12	12	12	12	11	11	11	12	12	12	12	11	11	11	11	11	10	10	10	11.7	13.6
10-Jun	10	10	10	9	10	10	10	12	14	14	14	15	17	19	20	19	19	19	18	17	15	14	14	13	14.2	19.6
11-Jun	12	12	12	11	11	11	11	12	13	13	12	11	11	11	11	10	11	11	11	11	10	10	10	10	11.2	13.4
12-Jun	10	10	10	10	10	10	11	14	15	15	16	16	15	15	16	17	17	17	16	16	15	13	12	11	13.7	17.0
13-Jun	11	10	9	8	9	10	12	13	14	16	17	17	18	19	20	20	20	20	19	18	17	15	14	13	15.0	20.3
14-Jun	12	12	12	11	11	10	10	10	10	10	10	12	15	14	16	15	15	16	15	13	12	10	10	9	12.2	16.1
15-Jun	9	8	8	7	7	7	7	6	6	6	6	6	5	5	6	6	5	5	5	5	5	6	5	5	6.0	8.8
16-Jun	5	5	6	6	6	6	6	7	7	8	7	8	9	9	9	10	10	10	10	9	9	9	9	9	7.9	10.2
17-Jun	9	9	9	9	8	8	8	12	13	14	16	18	18	19	20	20	20	19	19	17	16	15	13	12	14.3	20.0
18-Jun	11	10	9	10	10	10	12	14	16	18	19	21	22	23	24	24	24	23	23	23	21	18	16	14	17.3	24.0
19-Jun	13	12	11	11	12	11	12	13	15	17	20	21	20	19	19	22	22	22	22	21	20	18	15	14	16.8	22.3
20-Jun	13	12	12	11	10	11	15	17	19	21	23	25	26	26	27	27	26	26	25	24	23	21	20	20	20.1	27.4
21-Jun	19	17	15	15	16	16	17	19	19	21	23	24	26	26	27	27	26	25	25	22	20	18	17	17	20.7	26.5
22-Jun	16	15	14	13	13	14	14	14	18	21	22	23	24	23	20	19	19	20	19	18	17	16	16	15	17.6	24.0
23-Jun	15	13	12	11	10	10	13	15	18	20	22	23	23	23	23	24	24	23	21	19	18	16	15	15	17.8	24.3
24-Jun	14	13	13	12	13	13	13	14	15	16	16	17	19	17	20	22	22	21	19	18	17	15	15	14	16.2	21.8
25-Jun	13	13	13	12	12	12	14	17	19	20	21	22	23	23	23	24	24	24	23	21	20	19	18	17	18.6	23.7
26-Jun	15	14	13	13	13	14	15	17	19	20	22	23	24	24	25	25	26	25	25	24	22	19	18	17	19.6	25.7
27-Jun	15	13	13	13	13	13	17	19	20	22	25	26	27	27	28	28	27	27	27	26	24	22	19	18	21.3	27.9
28-Jun	17	14	12	11	11	12	16	20	23	25	26	27	28	28	29	28	28	25	24	23	21	20	18	16	20.9	28.5
29-Jun	16	15	14	13	12	13	17	20	21	22	25	26	27	28	28	27	22	20	22	22	20	20	18	17	20.2	27.9
30-Jun	17	16	16	15	15	15	16	19	19	19	17	16	19	20	19	20	21	22	23	22	20	18	17	16	18.1	23.0
13.1 12.3 11.7 11.3 11.2 11.4 12.8 14.6 15.9 17.1 18.2 19.1 19.7 20.1 20.5 20.7 20.7 20.3 19.8 18.9 17.5 16.1 14.9 14.0																									Diurnal Average	
18.8 16.9 16.1 15.8 15.7 15.7 17.2 20.2 22.8 25.1 26.0 27.1 27.7 28.1 28.5 28.4 28.3 27.4 27.3 25.9 24.0 21.9 20.2 19.6																									Diurnal Maximum	

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - June 2016



Hourly Averages

Relative Humidity (RH) - %

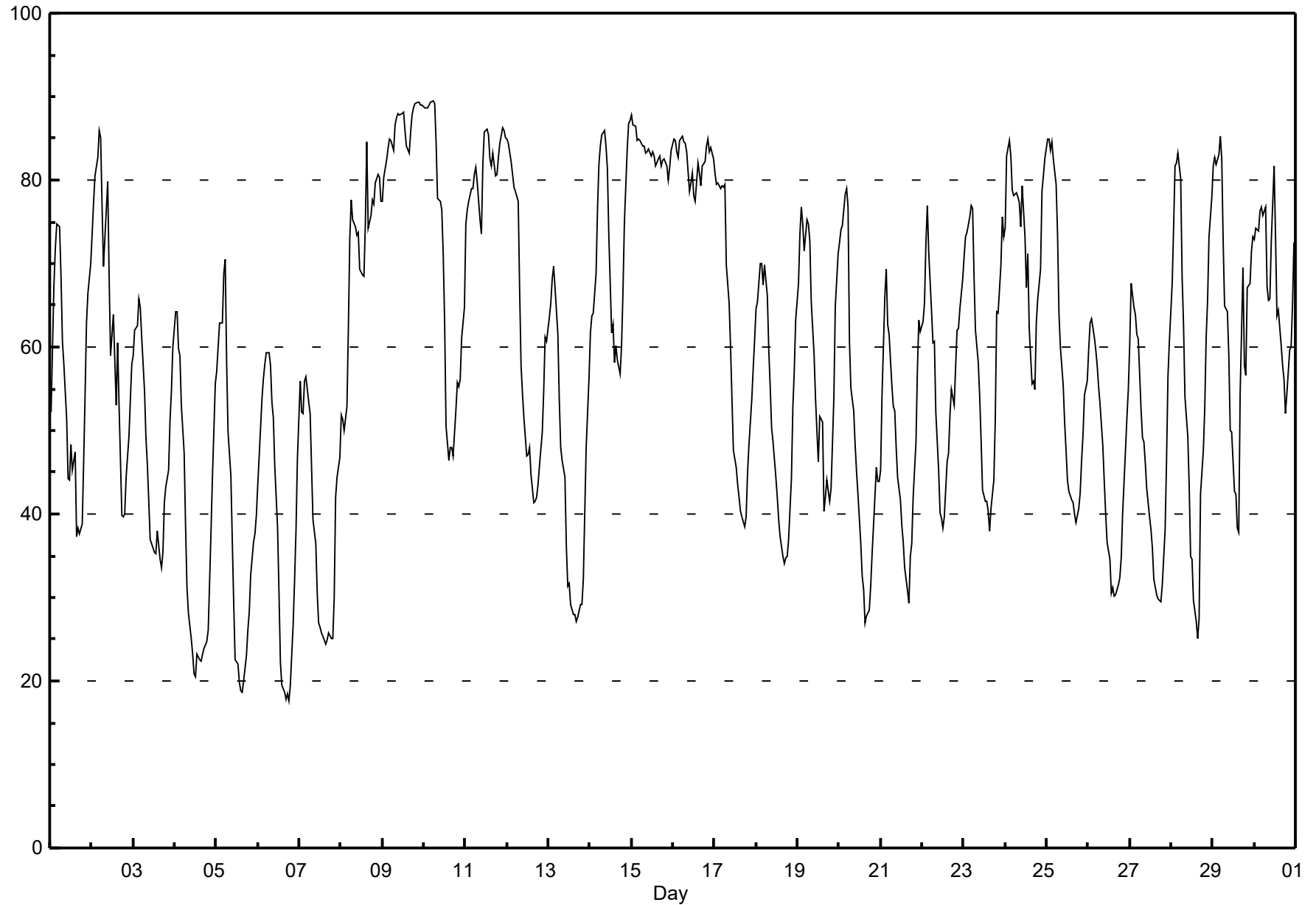
Henry Pirker - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 89.6 % on Jun 10 06:00 Maximum Daily Average: 86.0 % on Jun 9																								Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 18 % on Jun 6 19:00 Maximum Diurnal Average: 73.5 % at hour 5 Monthly Average: 58.74 %												Minimum Daily Average: 36.3 % on Jun 4 Minimum Diurnal Average: 44.9 % at hour 16 Percentiles: P ₁ = 19.3 P ₁₀ = 31.5 Q ₁ = 43.8 Median = 59.7 Q ₃ = 76.4 P ₉₀ = 83.5 P ₉₉ = 89.0														
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-Jun	52	60	67	72	75	74	69	61	58	51	44	44	48	45	47	37	38	38	39	46	54	63	67	70	55.0	74.8
2-Jun	74	77	81	83	86	85	77	70	76	80	68	59	64	58	53	61	53	40	40	40	44	49	54	58	63.7	85.9
3-Jun	59	62	63	66	65	61	55	49	46	41	37	36	35	35	38	35	34	35	41	43	45	51	55	60	47.8	65.8
4-Jun	64	64	60	59	53	47	39	31	28	25	23	21	20	23	23	22	23	24	25	26	32	38	45	56	36.3	64.2
5-Jun	57	60	63	63	69	70	58	50	45	37	29	23	22	20	19	19	20	23	26	28	33	37	38	40	39.5	70.5
6-Jun	44	47	54	56	58	59	59	58	53	52	46	38	31	22	19	19	18	18	18	19	27	32	38	47	38.8	59.4
7-Jun	56	52	52	56	56	53	52	46	39	36	30	27	26	26	25	24	25	26	25	25	30	42	44	47	38.4	56.4
8-Jun	52	51	50	53	62	73	78	75	74	73	74	69	69	68	75	85	74	76	78	77	80	81	80	77	71.0	84.6
9-Jun	78	80	82	84	85	85	84	87	87	88	88	88	88	86	84	83	86	88	89	89	89	89	89	89	86.0	89.4
10-Jun	89	89	89	89	89	90	89	84	78	77	76	71	63	51	46	48	48	47	52	56	55	56	61	65	69.1	89.6
11-Jun	75	76	77	79	79	81	82	80	75	74	82	86	86	85	82	82	83	81	81	83	84	86	86	85	81.2	86.2
12-Jun	85	84	82	81	79	79	77	67	58	54	52	47	47	48	45	41	42	42	44	46	50	55	61	61	59.4	85.0
13-Jun	64	65	68	70	67	61	54	48	46	44	36	31	32	29	28	28	27	28	29	29	32	40	48	56	44.2	69.6
14-Jun	62	64	64	69	77	82	84	85	86	84	81	73	62	63	58	60	59	57	60	67	75	84	87	87	72.0	87.1
15-Jun	88	87	87	85	85	85	84	84	83	83	84	83	83	83	82	83	83	82	82	83	82	80	82	84	83.5	87.8
16-Jun	85	85	83	83	85	85	85	84	83	79	80	81	78	77	82	81	79	82	82	84	85	83	84	83	82.4	85.3
17-Jun	81	80	80	79	79	79	80	70	65	60	54	48	46	44	42	40	40	39	40	45	48	54	58	61	58.7	80.8
18-Jun	65	65	70	70	67	70	66	60	55	50	49	44	42	39	37	35	34	35	35	37	44	53	57	63	51.8	70.0
19-Jun	68	74	77	75	72	75	75	73	65	59	54	50	46	52	51	40	42	44	42	43	48	54	65	71	58.9	76.7
20-Jun	73	74	75	78	79	77	61	55	52	48	45	42	36	33	31	27	28	29	31	35	39	46	44	44	49.2	79.1
21-Jun	45	54	66	69	63	62	55	53	52	48	44	42	39	37	34	31	29	35	37	42	49	57	63	62	48.6	69.4
22-Jun	63	65	72	77	71	64	61	61	52	45	40	40	38	40	46	47	52	55	53	58	62	62	65	68	56.6	76.9
23-Jun	71	73	74	76	77	77	68	62	58	54	49	43	41	42	40	38	41	44	51	64	64	70	76	73	59.4	76.9
24-Jun	74	83	85	83	79	78	78	78	77	74	79	73	67	71	62	56	56	55	63	66	69	79	80	83	72.9	84.8
25-Jun	85	85	84	85	82	80	74	64	60	55	51	48	44	43	42	41	40	39	41	43	46	49	54	56	57.9	85.0
26-Jun	60	63	63	61	60	58	55	53	48	44	40	37	35	31	31	30	30	31	32	35	40	48	52	55	45.5	63.3
27-Jun	60	68	65	64	62	61	53	49	49	46	43	40	38	36	32	30	30	30	30	31	38	46	56	61	46.6	67.6
28-Jun	68	74	82	82	83	80	68	63	54	49	43	35	35	30	27	25	28	42	48	53	61	66	73	78	56.1	83.2
29-Jun	82	83	82	83	85	83	73	65	64	59	50	50	43	42	38	38	54	70	58	57	67	68	72	73	64.1	85.3
30-Jun	73	74	74	76	77	76	77	67	66	66	73	82	73	64	64	60	58	56	52	54	60	60	65	73	67.5	81.6
68.2 70.6 72.3 73.4 73.5 73.0 68.9 64.4 61.2 58.0 54.8 51.6 49.3 47.4 46.2 44.9 45.1 46.3 47.4 50.1 54.5 59.2 63.2 66.1																								Diurnal Average		
88.6 88.7 88.7 89.0 89.4 89.6 89.2 86.6 87.4 88.0 87.7 88.0 88.2 85.9 84.1 84.6 85.8 87.7 88.7 89.1 89.3 89.4 89.0 88.9																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - June 2016



Hourly Averages

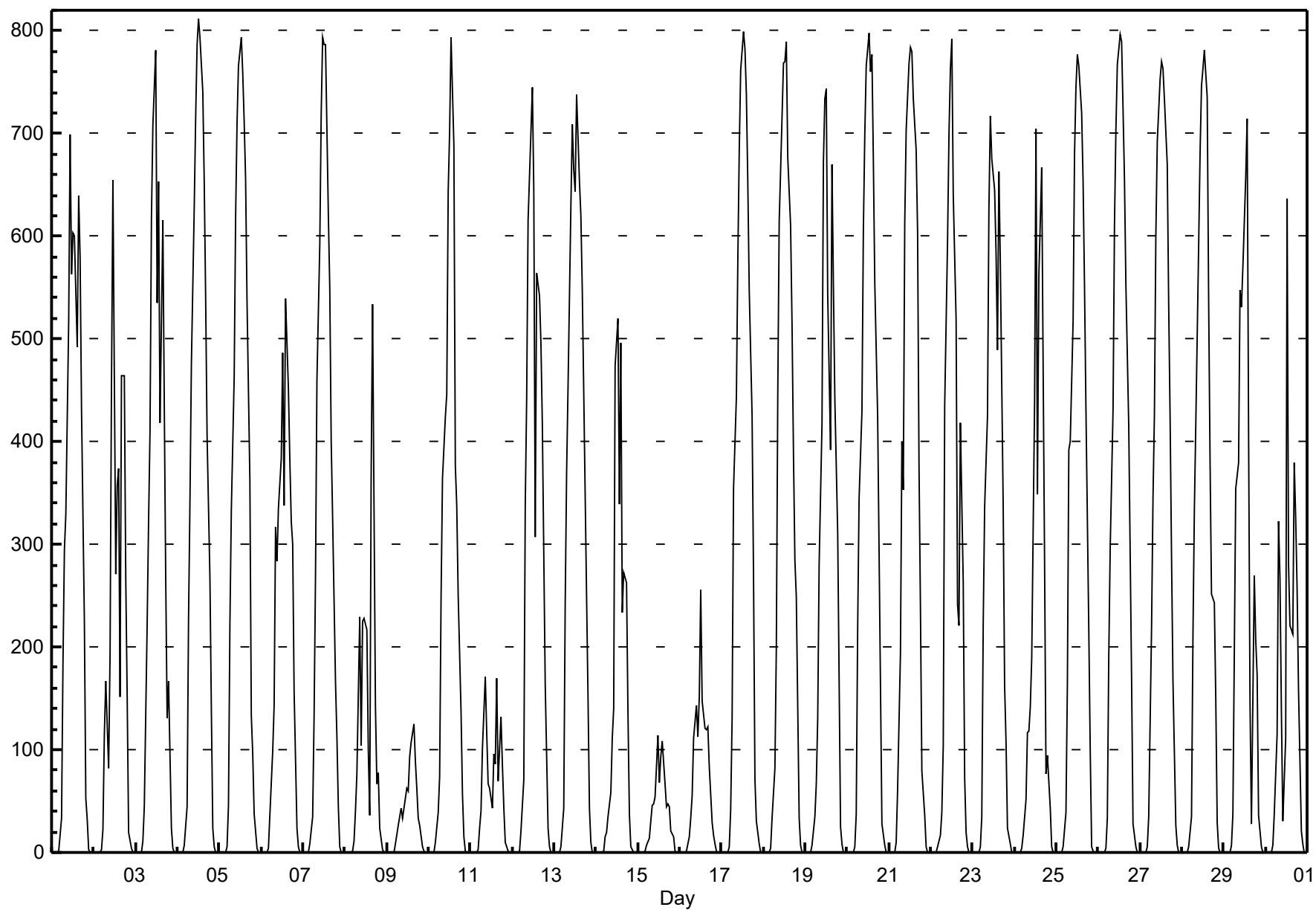
Solar Radiation (SR) - W/m²

Henry Pirker - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 811.6 W/m ² on Jun 4 13:00 Maximum Daily Average: 316.8 W/m ² on Jun 4																								Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 0 W/m ² on Jun 1 01:00 Maximum Diurnal Average: 595.8 W/m ² at hour 13 Monthly Average: 226.02 W/m ²																								Minimum Daily Average: 34.3 W/m ² on Jun 15 Minimum Diurnal Average: 0.0 W/m ² at hour 3 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 92.6 Q ₃ = 424.4 P ₉₀ = 674.1 P ₉₉ = 793.2		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	0	0	0	0	2	33	185	294	330	517	700	564	603	601	492	640	580	431	225	53	32	3	0	0	261.8	699.6
2-Jun	0	0	0	0	3	23	115	167	83	193	456	655	271	357	374	151	464	465	266	151	20	4	0	0	175.8	655.2
3-Jun	0	0	0	0	11	44	222	322	410	617	707	781	535	654	419	615	436	269	130	167	23	5	0	0	265.3	781.3
4-Jun	0	0	0	0	7	45	226	341	476	628	715	786	812	793	741	653	539	406	267	139	23	5	0	0	316.8	811.6
5-Jun	0	0	0	0	6	46	222	333	463	618	711	766	793	758	711	656	537	363	134	96	38	4	0	0	302.3	793.5
6-Jun	0	0	0	0	5	36	99	143	317	283	334	384	486	338	539	452	382	323	300	157	23	6	0	0	192.0	539.4
7-Jun	0	0	0	0	8	35	132	269	460	592	719	793	786	786	621	549	400	325	167	113	45	6	0	0	283.7	793.3
8-Jun	0	0	0	0	2	11	41	76	229	105	226	228	217	100	37	367	534	143	66	78	24	3	0	0	103.6	534.1
9-Jun	0	0	0	0	1	8	27	35	43	33	42	63	60	93	107	125	89	62	33	26	5	2	0	0	35.6	124.6
10-Jun	0	0	0	0	9	39	74	248	364	424	446	643	701	794	688	377	338	250	137	57	15	1	0	0	233.7	794.1
11-Jun	0	0	0	0	3	24	41	101	171	117	67	63	43	95	86	169	69	132	84	44	10	1	0	0	55.0	170.7
12-Jun	0	0	0	0	1	21	70	336	442	615	658	745	645	307	564	541	497	416	290	164	23	6	0	0	264.2	744.8
13-Jun	0	0	0	0	6	43	241	370	453	629	709	664	643	739	653	620	546	450	249	151	43	10	0	0	300.7	738.5
14-Jun	0	0	0	0	2	15	19	34	59	111	140	474	520	339	496	233	272	263	136	38	6	0	0	0	131.5	519.8
15-Jun	0	0	0	0	1	7	14	30	46	47	54	114	68	93	108	66	45	47	45	21	15	1	0	0	34.3	113.7
16-Jun	0	0	0	0	1	16	33	56	112	144	112	152	256	147	121	120	122	83	29	16	9	1	0	0	63.7	255.5
17-Jun	0	0	0	0	6	41	131	355	443	575	684	762	799	782	738	652	547	425	271	71	30	9	0	0	305.0	798.6
18-Jun	0	0	0	0	4	33	81	200	445	615	664	768	769	790	676	611	514	389	285	249	33	8	0	0	297.3	789.6
19-Jun	0	0	0	0	7	34	67	131	281	417	673	734	743	544	392	670	552	442	312	170	25	8	0	0	258.3	742.9
20-Jun	0	0	0	0	6	38	219	344	430	605	699	765	798	760	777	674	555	425	295	161	28	7	0	0	316.0	798.1
21-Jun	0	0	0	0	9	61	194	400	352	612	703	769	784	780	734	684	605	377	238	80	37	5	0	0	309.4	783.6
22-Jun	0	0	0	0	6	17	39	104	435	595	698	762	792	641	519	242	221	418	262	72	19	5	0	0	243.6	792.2
23-Jun	0	0	0	0	5	35	222	337	425	627	717	675	646	583	489	663	573	338	163	107	24	8	0	0	276.5	717.0
24-Jun	0	0	0	0	4	17	51	117	118	141	190	438	705	348	562	667	472	285	76	95	43	5	0	0	180.6	705.2
25-Jun	0	0	0	0	6	39	163	392	401	517	680	745	777	766	720	653	552	433	217	100	6	2	0	0	298.7	776.6
26-Jun	0	0	0	0	4	34	190	296	431	610	703	767	797	789	724	656	553	416	292	169	27	6	0	0	311.0	797.0
27-Jun	0	0	0	0	5	34	219	345	427	600	692	753	770	764	734	670	533	423	287	166	26	7	0	0	310.7	769.7
28-Jun	0	0	0	0	6	35	210	333	417	591	680	747	763	782	736	539	381	251	244	150	29	5	0	0	287.4	781.7
29-Jun	0	0	0	0	7	37	195	354	379	547	530	569	658	714	410	147	28	270	207	173	36	6	0	0	219.4	714.0
30-Jun	0	0	0	0	6	38	115	323	267	138	30	111	637	281	221	213	380	326	257	158	20	8	0	0	147.1	637.0
0.0 0.0 0.0 0.0 4.9 31.2 128.6 239.6 323.6 428.8 504.7 574.6 595.8 543.9 506.3 469.2 410.5 321.5 198.9 113.1 24.5 4.8 0.0 0.0																									Diurnal Average	
0.0 0.1 0.0 0.2 10.9 61.1 240.6 400.1 475.8 629.3 719.4 793.3 811.6 794.1 776.7 684.5 604.5 464.8 311.7 249.2 45.0 9.7 0.2 0.0																									Diurnal Maximum	

Hourly Averages

Solar Radiation (SR) - W/m²
Henry Pirker - June 2016



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	0	7	3	6	4	4	6	7	7	8	7	8	9	7	7	7	5	2	3	3	3	5	3	1	3.9	9.4
Dir	343	276	262	275	251	205	212	216	216	212	222	216	177	234	254	224	291	305	282	230	140	136	141	133	226.5	176.7
2 Spd	1	0	1	3	1	2	7	8	6	3	3	5	7	4	9	9	8	19	21	22	21	17	12	7	7.3	21.9
Dir	68	160	61	111	134	161	182	202	181	234	245	272	269	221	213	166	188	217	214	215	216	216	213	194	209.8	215.3
3 Spd	6	8	7	5	6	5	8	17	16	17	17	13	12	14	16	20	24	22	20	17	15	9	8	5	12.6	23.7
Dir	187	196	196	192	196	202	209	223	220	210	208	209	216	210	219	217	224	226	233	220	209	198	201	198	213.7	223.6
4 Spd	6	6	11	10	9	10	12	20	20	21	19	22	21	20	16	16	15	16	16	15	9	10	5	2	13.4	21.6
Dir	196	193	203	219	232	258	227	217	226	229	226	230	220	228	236	232	228	231	229	229	223	213	225	246	225.7	230.2
5 Spd	3	2	2	3	2	1	1	5	5	3	2	3	3	2	2	2	4	6	9	8	6	7	7	6	1.2	9.1
Dir	206	243	246	255	252	272	236	202	211	197	181	149	149	209	113	125	70	42	47	50	46	52	52	54	79.5	47.0
6 Spd	7	7	2	1	1	1	1	1	5	8	9	10	11	13	13	15	18	17	19	18	12	11	8	6	7.1	19.0
Dir	55	72	82	35	49	60	71	179	220	212	214	226	211	225	238	237	231	233	234	237	245	256	251	282	232.7	234.0
7 Spd	9	7	6	2	3	4	2	4	9	10	10	10	9	9	9	11	8	7	4	2	3	5	5	4	4.3	11.1
Dir	287	292	292	123	132	190	208	232	262	263	252	255	261	277	272	276	283	304	305	43	25	45	41	51	276.2	275.9
8 Spd	1	3	4	4	6	2	1	2	6	8	8	11	10	8	6	12	11	9	7	8	7	7	4	6	4.9	11.5
Dir	53	45	45	99	143	242	348	92	99	69	67	66	52	38	340	13	24	29	359	20	9	29	20	342	38.0	12.9
9 Spd	4	5	3	3	5	7	9	12	10	10	11	9	6	10	10	7	8	6	6	5	6	7	4	3	5.8	11.5
Dir	310	296	276	258	250	250	223	227	252	256	250	248	303	326	330	338	311	289	289	271	278	278	273	252	274.4	226.9
10 Spd	3	2	1	1	1	1	2	4	8	7	9	10	11	13	13	15	13	13	10	9	8	6	7	7	6.0	15.1
Dir	254	238	274	133	193	288	353	63	72	84	68	62	62	64	54	49	50	52	40	49	126	117	113	84	64.8	49.3
11 Spd	8	9	9	7	6	6	5	1	2	4	7	11	14	17	17	17	17	20	17	12	8	6	6	8	5.6	20.5
Dir	56	47	53	53	44	57	64	94	204	224	187	199	202	209	214	211	212	221	229	220	216	211	202	215	204.8	220.7
12 Spd	6	7	5	6	5	7	8	16	27	30	27	32	34	31	34	33	32	31	28	26	23	17	8	13	20.1	34.2
Dir	212	224	217	220	244	219	241	219	215	216	221	229	229	228	224	227	221	222	215	216	215	209	200	212	220.9	229.2
13 Spd	10	13	11	9	10	10	12	13	14	15	17	20	16	11	9	9	8	7	5	3	0	3	4	3	8.4	20.1
Dir	197	207	205	195	191	215	216	225	217	215	222	234	237	237	227	264	270	281	269	288	137	81	113	139	222.5	234.0
14 Spd	2	0	0	3	4	4	1	8	6	10	9	10	8	7	7	7	6	7	7	10	10	10	11	14	5.8	14.4
Dir	285	183	258	103	149	115	95	224	246	244	238	254	246	258	253	260	261	268	264	268	268	251	243	226	246.8	226.1
15 Spd	16	21	20	23	22	25	24	26	31	33	32	38	39	41	38	41	42	40	39	37	36	35	30	27	31.5	41.6
Dir	223	215	217	219	216	216	214	213	213	213	211	211	211	212	210	208	211	210	210	210	213	210	209	213	212.1	210.8
16 Spd	24	22	22	21	17	17	17	18	17	20	18	18	20	19	18	17	19	18	17	13	12	14	14	14	17.1	23.6
Dir	211	208	213	214	213	212	218	217	220	226	220	217	224	220	221	232	234	229	232	256	257	252	250	249	224.6	210.9
17 Spd	13	13	11	11	11	8	7	9	10	13	14	14	17	17	18	20	21	22	22	17	15	9	8	7	13.2	22.3
Dir	247	239	241	243	228	219	212	214	209	212	208	214	208	210	203	207	203	221	222	217	217	205	201	208	216.5	221.0
18 Spd	3	5	1	0	3	3	3	6	10	15	12	10	9	7	7	7	7	6	6	3	2	2	8	5	4.4	15.1
Dir	191	213	128	258	154	113	178	218	214	223	229	241	241	232	243	239	246	265	252	262	270	292	61	145	227.8	222.8
19 Spd	1	2	5	7	7	5	4	5	6	10	10	17	20	16	8	13	13	10	8	6	3	2	2	2	7.0	19.7
Dir	237	141	221	237	236	235	240	217	240	257	255	260	268	261	260	223	262	269	249	247	224	183	164	174	248.1	267.7
20 Spd	1	3	3	2	2	1	5	9	11	9	5	4	3	3	5	2	5	7	9	8	7	5	6	6	0.5	10.5
Dir	172	215	218	172	183	208	210	209	217	221	222	222	257	286	298	58	96	52	51	48	52	46	50	49	164.2	216.9
21 Spd	7	2	3	4	7	5	9	9	9	11	11	8	7	8	9	11	12	11	11	7	4	4	3	3	6.1	11.5
Dir	41	85	303	187	210	201	215	216	227	233	239	260	232	225	227	206	220	218	204	169	261	243	204	210	221.2	220.0
22 Spd	3	4	3	3	4	5	5	3	5	10	11	8	8	12	17	12	11	15	15	10	8	6	5	4	6.8	16.6
Dir	210	232	135	185	218	225	220	231	231	219	236	243	253	218	182	163	153	200	207	225	187	190	188	228	205.5	181.6

Hourly Averages

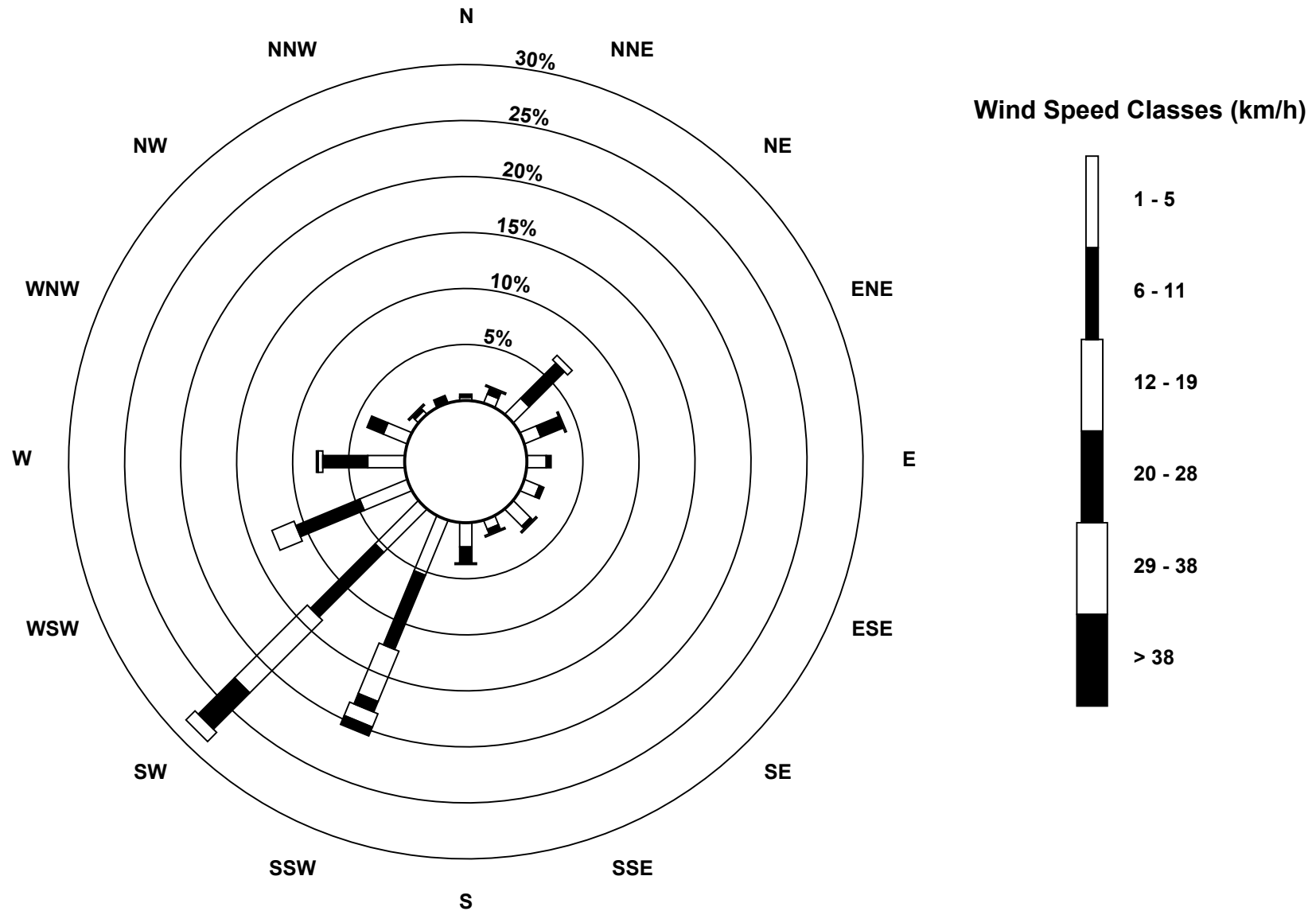
Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - June 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24												
23 Spd	4	5	9	7	5	6	6	6	4	4	2	2	4	3	3	4	6	7	12	6	3	1	3	2	3.3	12.3										
Dir	211	206	214	215	214	209	228	211	261	243	231	215	240	214	258	278	294	303	312	345	28	115	183	236	246.7	311.8										
24 Spd	3	2	3	4	7	5	6	5	5	5	4	10	14	12	10	7	7	7	6	7	10	5	6	7	6.3	14.2										
Dir	251	265	230	206	218	211	206	201	213	243	210	202	209	215	221	213	239	237	248	232	220	234	215	227	220.4	208.7										
25 Spd	5	6	5	4	7	5	5	8	10	13	16	16	17	18	20	19	19	16	16	19	14	12	8	7	11.7	19.8										
Dir	223	226	212	204	213	228	236	225	227	234	229	220	216	218	216	220	223	249	231	217	216	234	225	196	223.2	215.6										
26 Spd	4	5	4	5	6	8	11	12	14	17	18	17	13	14	14	12	11	11	13	15	12	7	6	5	10.5	18.2										
Dir	192	193	214	224	233	218	210	212	209	208	212	221	221	222	208	211	208	212	209	213	211	197	197	203	211.9	212.4										
27 Spd	2	1	4	4	5	4	4	6	7	6	5	4	4	3	4	3	4	3	2	2	5	3	2	1	2.4	7.1										
Dir	260	240	238	221	209	212	207	212	204	215	238	268	261	250	212	215	262	252	263	18	65	80	116	18	225.2	204.0										
28 Spd	1	1	1	2	1	2	2	1	1	1	3	4	3	6	6	4	1	12	11	6	2	2	1	2	1.1	12.0										
Dir	256	288	260	284	260	292	254	266	181	182	99	75	22	46	65	1	207	225	265	268	254	266	263	301	273.1	224.9										
29 Spd	1	1	1	0	1	1	1	2	5	4	5	4	7	8	10	7	12	6	7	6	5	4	3	4	3.5	11.9										
Dir	113	239	293	242	259	300	120	90	118	81	63	41	49	37	60	43	126	65	59	111	123	47	39	58	72.3	126.3										
30 Spd	2	4	7	9	10	7	3	3	7	9	8	12	13	10	9	8	8	5	1	2	4	3	2	1	2.1	13.1										
Dir	31	50	50	50	53	70	203	270	278	216	184	213	245	225	221	244	280	289	231	144	210	140	127	185	226.6	245.4										
Spd	2.9	3.6	3.5	3.7	4.3	4.3	5.4	7.5	8.4	9.6	9.0	9.5	9.3	9.0	8.8	8.4	8.5	8.9	8.5	7.1	6.1	4.5	3.4	3.4	Diurnal Average											
Dir	220.9	219.2	219.9	213.4	210.9	215.4	215.4	215.8	218.8	221.2	219.5	225.5	226.6	226.7	223.7	223.2	225.2	232.0	232.0	225.1	218.6	216.0	205.1	212.7	Diurnal Maximum											
Spd	23.6	22.2	21.6	23.2	22.4	25.0	23.7	26.1	31.0	32.9	31.6	37.8	39.0	40.9	38.3	41.0	41.6	40.2	39.4	37.5	36.0	34.6	29.6	27.2												
Dir	210.9	207.7	213.4	218.6	216.3	216.2	214.0	213.2	212.6	212.8	210.8	211.0	211.3	212.1	209.9	207.8	210.8	209.8	209.8	210.3	212.8	210.3	208.6	212.8												
Maximum Speed Value: 42 km/h on Jun 15 17:00																								Minimum Speed Value: 0 km/h on Jun 2 02:00										Hours in Service:		720
Maximum Daily Speed Average: 31.5 km/h on Jun 15																								Minimum Daily Speed Average: 0.5 km/h on Jun 28										Hours of Data:		720
Maximum Diurnal Speed Average: 9.6 km/h at hour 10																								Minimum Diurnal Speed Average: 2.9 km/h at hour 1										Hours of Missing Data:		0
Monthly Average Velocity: 6.53 km/h 221.74 deg																								Speed Percentiles: P ₁ = 0.5 P ₁₀ = 2.0 Q ₁ = 3.9 Median = 7.1 Q ₃ = 11.7 P ₉₀ = 18.4 P ₉₉ = 37.9										Percent Operational Time:		100.0
All monthly, daily, and diurnal averages have been calculated using vector methods																																				
Frequency Distribution																																				
Speed Range (km/h)																																				
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																							
North	8		7		1		0		0		0		16																							
NorthEast	24		44		6		0		0		0		74																							
East	18		9		0		0		0		0		27																							
SouthEast	29		7		2		0		0		0		38																							
South	27		35		4		0		0		0		66																							
SouthWest	70		120		109		39		17		7		362																							
West	49		59		11		1		0		0		120																							
NorthWest	9		7		1		0		0		0		17																							
Total	234		288		134		40		17		7		720																							

Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - June 2016



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - June 2016

Maximum Speed: 42 km/h on Jun 15 17:00																				Maximum Daily Speed Average: 31.7 km/h on Jun 15										Hours in Service: 720	
Minimum Speed: 0 km/h on Jun 14 02:00																				Minimum Daily Speed Average: 3.7 km/h on Jun 28										Hours of Data: 720	
Maximum Diurnal Speed Average: 13.1 km/h at hour 17																				Minimum Diurnal Speed Average: 5.5 km/h at hour 1										Hours of Missing Data: 0	
Monthly Average Speed: 9.46 km/h																				Percentiles: P ₁ = 0.8 P ₁₀ = 2.3 Q ₁ = 4.5 Median = 7.5 Q ₃ = 12.2 P ₉₀ = 18.6 P ₉₉ = 38.1										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-Jun	1	7	3	6	5	4	6	7	7	8	7	9	10	10	8	8	6	4	4	5	4	5	3	2	5.8	9.9					
2-Jun	2	0	2	3	1	2	7	8	7	3	3	6	7	5	10	9	11	19	21	22	21	18	12	8	8.6	22.1					
3-Jun	6	8	7	5	6	6	8	17	16	17	18	14	13	15	17	21	24	22	20	17	15	9	8	6	13.1	24.3					
4-Jun	6	6	11	10	9	10	13	20	20	21	20	22	21	20	17	17	16	17	16	15	10	10	5	2	13.9	22.1					
5-Jun	4	2	2	3	2	2	2	5	5	4	3	4	5	4	4	3	5	7	9	8	6	7	7	7	4.5	9.2					
6-Jun	7	7	2	1	1	1	1	3	5	8	9	10	11	14	14	16	18	18	19	18	12	12	8	7	9.3	19.3					
7-Jun	9	7	6	2	3	4	2	4	10	11	10	10	9	10	10	11	8	8	4	2	3	5	5	4	6.6	11.4					
8-Jun	2	3	4	4	8	3	2	3	6	8	9	12	11	8	9	12	11	9	7	8	7	7	5	6	6.7	12.0					
9-Jun	5	5	3	3	5	7	9	12	10	10	11	9	7	10	11	8	8	6	6	5	6	7	4	3	7.2	11.6					
10-Jun	3	2	1	0	1	1	2	4	8	8	10	11	11	14	14	15	14	13	10	9	8	6	7	7	7.6	15.4					
11-Jun	8	9	9	7	7	6	5	2	3	4	7	11	14	17	17	17	17	21	17	12	8	6	6	8	10.0	20.7					
12-Jun	6	7	5	6	6	7	8	16	27	30	28	33	34	32	34	33	32	31	28	26	23	17	8	14	20.5	34.4					
13-Jun	10	13	11	10	11	10	12	14	15	15	18	20	16	12	9	9	8	7	6	3	0	3	5	4	10.0	20.4					
14-Jun	2	0	1	3	5	5	1	9	6	10	9	10	8	8	7	8	6	7	7	10	10	11	11	15	7.0	14.6					
15-Jun	16	21	20	23	23	25	24	26	31	33	32	38	39	41	39	41	42	40	40	38	36	35	30	27	31.7	41.8					
16-Jun	24	22	22	21	17	17	17	18	17	20	19	19	20	19	18	17	19	18	17	14	12	14	14	14	17.8	23.8					
17-Jun	13	13	11	11	11	8	7	9	10	13	14	15	17	17	19	20	22	23	22	17	15	9	8	7	13.8	22.6					
18-Jun	3	5	1	1	3	3	3	6	10	15	12	11	9	7	8	8	8	6	6	4	3	2	9	5	6.2	15.4					
19-Jun	2	3	5	7	7	5	4	5	7	10	10	17	20	16	9	14	13	10	8	6	4	2	2	2	7.8	19.9					
20-Jun	1	3	3	2	2	1	6	9	11	10	6	5	4	4	5	5	6	7	10	8	7	5	6	6	5.4	10.8					
21-Jun	7	5	4	4	7	6	9	10	10	11	11	9	8	9	10	11	12	12	11	7	6	4	3	4	7.8	11.9					
22-Jun	4	4	3	4	5	5	5	3	6	10	11	9	9	13	17	12	12	16	15	10	8	6	5	4	8.1	17.2					
23-Jun	4	5	9	8	5	7	7	6	5	4	3	3	5	4	4	5	7	8	13	7	3	1	4	2	5.3	12.9					
24-Jun	3	2	4	4	7	5	6	5	5	5	4	10	14	12	10	8	8	7	6	7	10	5	6	7	6.8	14.5					
25-Jun	6	6	5	4	7	5	5	8	11	13	16	17	18	19	20	19	19	17	17	19	14	12	8	7	12.1	20.2					
26-Jun	4	5	5	6	6	8	11	13	14	17	19	18	14	14	14	13	12	12	13	15	12	7	6	6	10.9	18.5					
27-Jun	3	2	4	4	5	4	4	6	7	7	5	5	4	4	5	5	5	3	3	3	5	3	2	2	4.2	7.4					
28-Jun	1	2	1	2	1	2	2	1	1	2	4	5	5	6	7	5	5	12	11	6	3	2	1	2	3.7	12.4					
29-Jun	2	1	1	0	1	1	1	2	6	5	6	5	8	8	11	7	14	6	7	7	6	5	3	4	4.9	13.7					
30-Jun	2	4	7	9	10	7	5	4	8	10	9	12	13	11	9	8	8	5	1	3	6	3	2	2	6.6	13.3					
5.5 6.0 5.8 5.8 6.2 5.9 6.4 8.4 10.1 11.4 11.4 12.5 12.8 12.8 12.8 12.8 13.1 13.0 12.5 11.0 9.4 7.9 6.7 6.4																									Diurnal Average						
23.8 22.4 21.7 23.4 22.6 25.2 23.9 26.3 31.1 33.1 31.8 38.0 39.2 41.2 38.6 41.3 41.8 40.5 39.7 37.7 36.2 34.8 29.9 27.4																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - June 2016

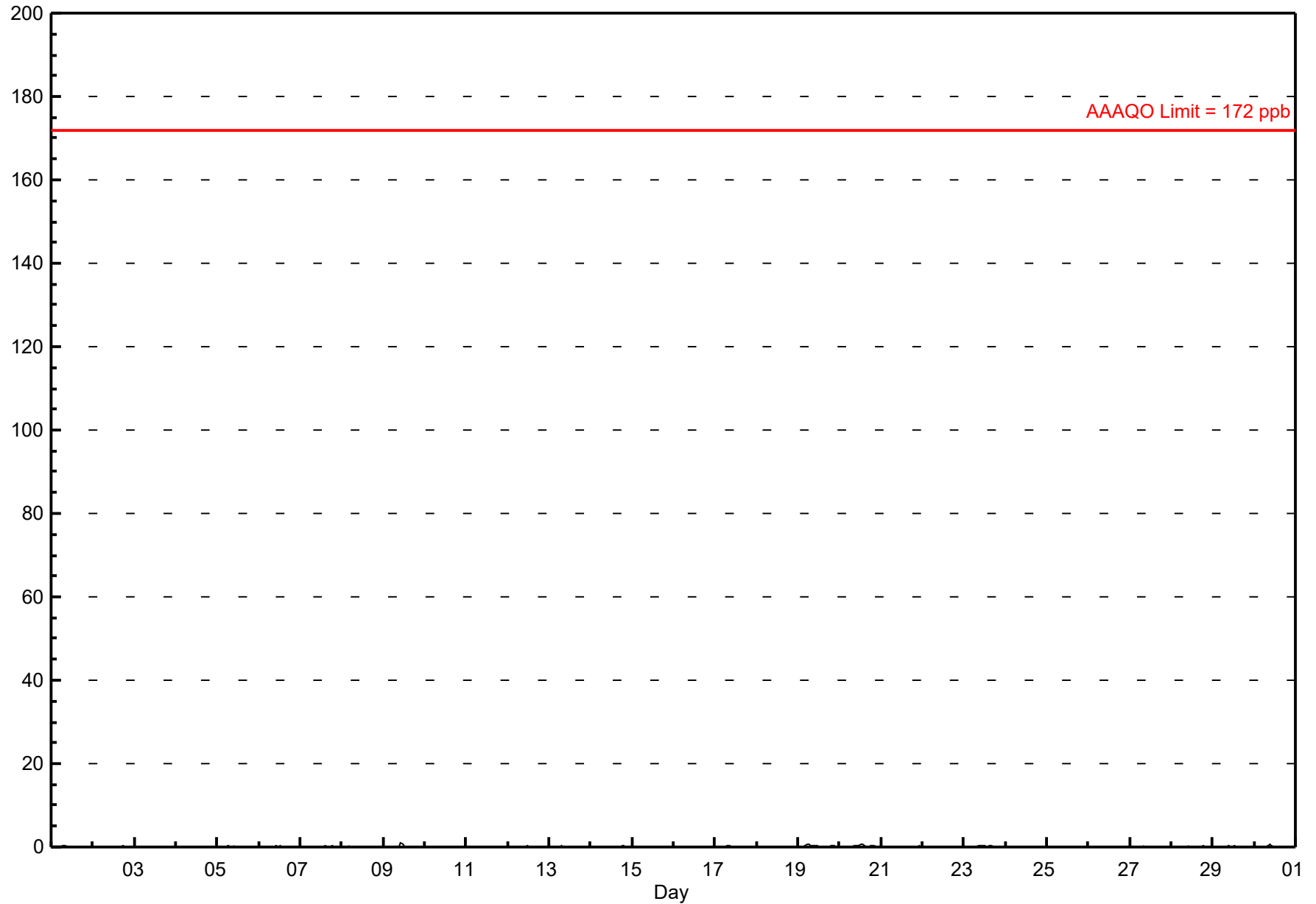
Maximum Value: 94.2 deg on Jun 28 17:00																		Hours in Service: 720							
Minimum Value: 5.4 deg on Jun 15 02:00																		Hours of Data: 720							
Percentiles: P ₁ = 6.0 P ₁₀ = 7.8 Q ₁ = 10.2 Median = 14.8 Q ₃ = 24.7 P ₉₀ = 46.3 P ₉₉ = 83.4																		Hours of Missing Data: 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-Jun	75	16	13	8	18	16	11	16	19	17	23	27	18	46	25	25	39	69	55	63	66	16	20	28	75.3
2-Jun	40	79	46	30	52	26	20	17	12	30	27	28	21	33	25	15	42	12	9	8	7	7	10	15	78.7
3-Jun	10	9	8	9	10	13	14	10	12	14	16	21	23	17	13	10	13	9	11	11	8	9	10	13	22.5
4-Jun	8	11	12	12	14	9	15	9	9	11	14	13	13	15	17	13	20	17	10	9	15	8	26	54	54.0
5-Jun	26	26	15	16	28	30	38	13	18	22	56	65	61	77	82	65	54	24	9	9	9	6	7	7	81.8
6-Jun	7	9	66	26	37	49	57	65	17	13	17	14	13	13	14	16	11	10	11	8	7	8	10	10	65.8
7-Jun	7	7	6	41	27	14	34	21	11	15	16	21	21	24	25	13	17	24	25	52	18	10	12	12	52.3
8-Jun	38	12	12	25	42	38	74	83	15	17	15	15	13	17	44	16	17	16	21	15	18	12	29	16	83.2
9-Jun	25	17	14	17	14	14	15	7	11	9	9	9	27	11	12	15	13	13	11	18	14	8	10	12	27.2
10-Jun	9	23	18	89	53	16	22	20	14	19	18	17	16	15	16	12	10	10	11	10	15	12	12	15	88.8
11-Jun	18	10	8	9	10	13	17	78	37	28	15	14	12	10	8	9	7	9	11	9	9	10	12	10	77.9
12-Jun	18	12	12	16	15	12	11	12	7	8	11	9	7	8	8	7	8	9	7	8	7	10	10	11	17.7
13-Jun	10	9	11	10	8	11	9	11	11	13	13	11	13	19	24	22	23	27	20	39	57	52	21	29	56.6
14-Jun	17	76	84	23	27	55	46	25	13	11	12	10	13	15	18	18	15	18	11	8	9	9	8	9	84.4
15-Jun	12	5	7	7	7	7	7	7	6	6	7	7	7	6	7	7	7	7	7	7	5	6	8	6	12.1
16-Jun	7	7	7	6	8	7	7	7	7	6	9	9	8	8	8	9	8	7	7	20	9	7	7	6	20.2
17-Jun	8	7	7	9	8	15	9	12	14	12	14	15	14	13	13	13	10	10	9	7	6	10	9	12	14.8
18-Jun	10	12	66	82	18	14	39	22	13	12	14	13	17	27	21	20	19	17	15	47	24	20	30	18	82.3
19-Jun	62	44	30	11	12	9	9	13	13	12	13	9	9	12	22	15	13	15	12	9	23	9	18	18	62.0
20-Jun	53	39	19	31	16	40	21	10	13	13	24	30	43	47	42	86	42	43	10	11	8	7	6	6	85.9
21-Jun	9	84	24	42	9	17	13	10	13	11	14	19	22	25	21	19	15	21	15	20	48	28	24	22	83.8
22-Jun	16	17	32	27	29	28	18	25	23	15	15	19	21	29	16	11	19	18	15	15	13	11	12	25	32.2
23-Jun	19	12	7	10	15	15	18	19	23	29	57	58	40	56	38	45	34	22	18	29	25	74	42	37	73.9
24-Jun	29	38	19	21	8	14	14	16	24	21	28	13	12	14	16	25	23	22	12	18	14	16	10	11	37.7
25-Jun	18	10	15	14	7	11	13	15	13	13	13	13	12	15	12	13	12	9	13	8	7	15	13	11	17.5
26-Jun	10	9	25	29	17	11	9	10	12	9	12	13	19	15	20	19	17	20	13	11	12	8	8	12	28.7
27-Jun	56	46	9	20	10	12	14	21	16	18	26	32	47	57	53	57	68	42	72	69	15	20	21	69	71.6
28-Jun	53	25	23	22	33	21	39	73	56	49	43	55	54	30	35	50	94	14	10	9	74	36	25	26	94.2
29-Jun	85	64	24	87	37	47	78	43	21	31	30	37	25	17	17	16	41	24	10	26	15	20	23	18	87.3
30-Jun	22	8	10	8	8	18	56	42	29	26	14	17	9	26	16	17	16	23	67	76	42	33	50	63	76.1
	85.4	83.8	84.4	88.8	53.0	54.7	78.3	83.2	55.7	49.2	56.6	65.4	61.4	76.9	81.8	85.9	94.2	69.4	71.6	76.1	73.6	73.9	49.7	69.4	

PAZA
Evergreen Park Station
Monthly Summary Tables, Graphs and
Roses

Number of Exceedences (AAAQO): Maximum Value: 1.0 ppb on Jun 9 11:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 0.2 ppb on Jun 19						Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0			
Minimum Value: 0 ppb on Jun 2 04:00 Maximum Diurnal Average: 0.1 ppb at hour 11 Monthly Average: 0.07 ppb																			Minimum Daily Average: 0.0 ppb on Jun 10 Minimum Diurnal Average: 0.0 ppb at hour 3 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.5									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3		
2-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2		
3-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2		
4-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1		
5-Jun	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	0.3		
6-Jun	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3		
7-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2		
8-Jun	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2		
9-Jun	0	0	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0		
10-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0		
11-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1		
12-Jun	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4		
13-Jun	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	0.3		
14-Jun	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	A	0	0.1	0.3		
15-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.1		
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.1		
17-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.3		
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.0		
19-Jun	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.8		
20-Jun	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	0.2	0.6		
21-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.3		
22-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.1		
23-Jun	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.5		
24-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1		
25-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2		
26-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1		
27-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2		
28-Jun	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		
29-Jun	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2		
30-Jun	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6		
																									Diurnal Average			
																									Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																												
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																												

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - June 2016



Hourly Maximums

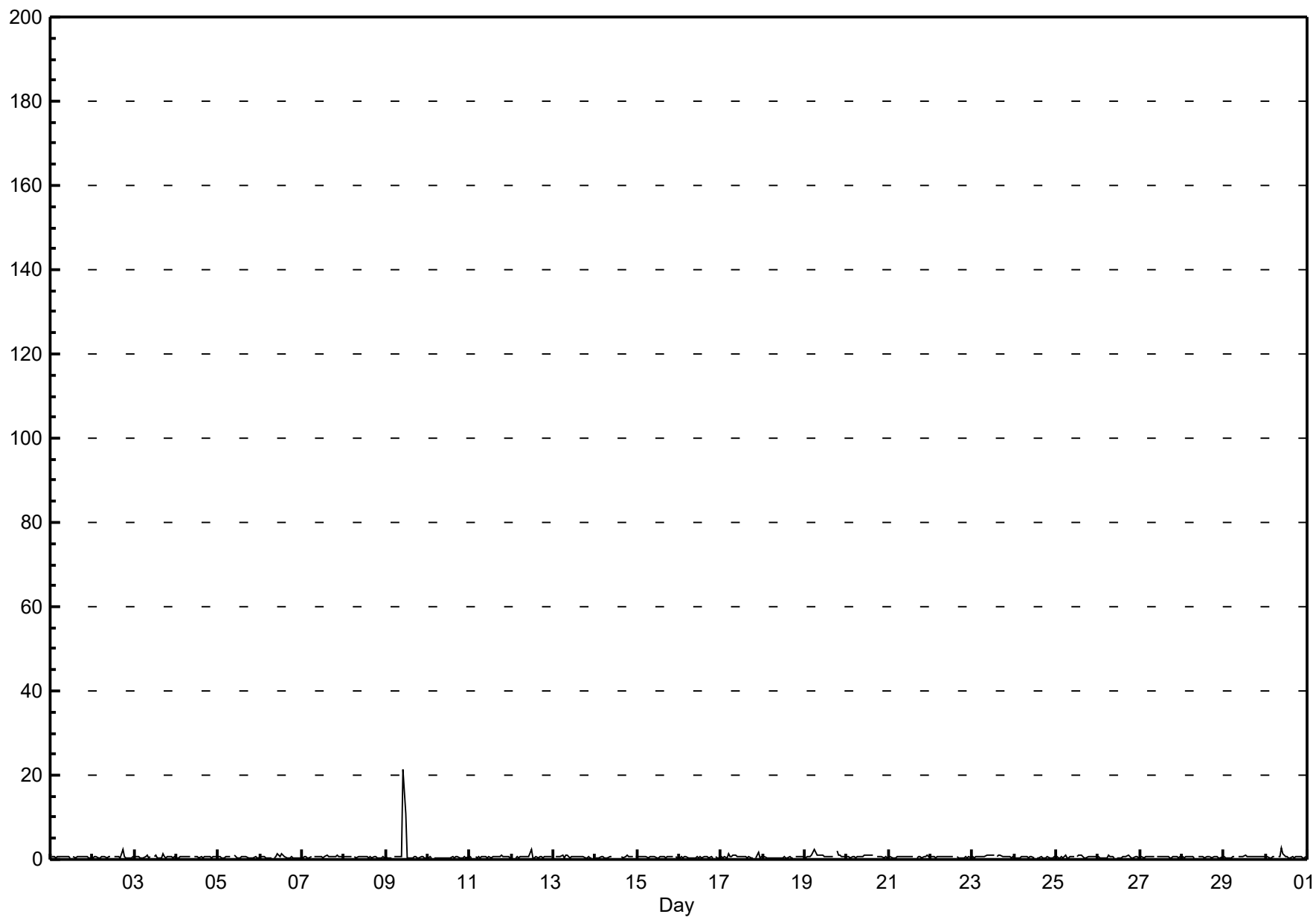
Sulphur Dioxide (SO₂) - ppb

Evergreen Park - June 2016

Maximum Value: 21.4 ppb on Jun 9 11:00																				Maximum Daily Average: 1.9 ppb on Jun 9										Hours in Service: 720									
Minimum Value: 0 ppb on Jun 6 04:00																				Minimum Daily Average: 0.5 ppb on Jun 10										Hours of Data: 684									
Maximum Diurnal Average: 1.5 ppb at hour 11																				Minimum Diurnal Average: 0.5 ppb at hour 4										Hours of Missing Data: 36									
Monthly Average: 0.65 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.7 P ₉₀ = 0.8 P ₉₉ = 1.9										Hours of Calibration: 36									
																				Percent Operational Time: 100.0																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Jun	1	1	1	0	1	1	1	1	1	1	1	0	A	1	0	1	1	1	1	1	1	1	0	0	0.6	0.8													
2-Jun	0	1	1	0	0	1	1	1	0	1	1	A	1	1	1	1	0	2	1	0	0	0	0	1	0.7	2.4													
3-Jun	1	1	1	0	0	0	1	1	0	1	A	1	1	1	0	0	1	1	0	1	1	1	0	1	0.6	1.2													
4-Jun	0	0	1	1	1	1	1	1	1	A	1	1	1	0	1	0	1	1	1	1	0	1	1	1	0.6	0.8													
5-Jun	1	1	1	0	1	1	1	1	A	1	1	0	0	1	1	1	1	1	0	0	0	1	0	0	0.6	0.9													
6-Jun	1	1	1	0	0	0	0	A	0	1	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0.6	1.3													
7-Jun	0	1	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9													
8-Jun	1	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	0	1	1	0	0	0	1	0	0.6	0.8													
9-Jun	1	0	0	0	A	1	1	1	1	1	21	11	0	0	1	1	1	1	0	0	1	1	0	0	1.9	21.4													
10-Jun	0	1	0	A	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	1	1	0.5	0.6													
11-Jun	1	1	A	1	1	1	0	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	0	0.6	0.9													
12-Jun	0	A	0	1	0	1	1	1	1	1	1	2	0	0	1	0	1	1	0	1	1	1	1	1	0.7	2.4													
13-Jun	A	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	0	0	1	0	0	A	0.6	1.0													
14-Jun	0	0	0	1	1	1	0	0	1	1	C	C	C	C	C	1	0	1	1	1	1	1	A	1	0.6	0.9													
15-Jun	1	1	1	1	1	1	0	1	1	1	1	0	0	1	1	1	0	1	1	1	1	A	1	0	0.6	0.8													
16-Jun	0	1	0	1	1	0	0	0	0	0	1	0	1	0	1	1	1	0	1	0	A	1	0	0	0.5	0.7													
17-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	A	0	2	0	1	1	0.7	1.6													
18-Jun	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	A	1	1	1	1	1	0.5	0.7													
19-Jun	0	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	0.9	2.2													
20-Jun	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	0.7	1.1													
21-Jun	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	1	1	1	1	1	0.6	0.9													
22-Jun	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	0	0	0	1	1	0	1	0	0.6	0.8													
23-Jun	1	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	0.7	1.2													
24-Jun	0	0	0	0	1	1	1	1	0	1	1	0	A	0	0	1	0	1	0	1	0	0	0	1	0.5	0.7													
25-Jun	1	0	0	1	0	1	0	0	1	1	1	A	1	1	1	1	1	0	1	1	1	1	1	1	0.6	1.1													
26-Jun	1	0	0	0	0	1	1	1	1	0	A	0	0	0	1	1	1	1	1	0	0	1	1	0	0.6	1.1													
27-Jun	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0	1	1	1	0	1	0.6	0.8													
28-Jun	1	0	1	1	1	1	1	0	A	1	1	1	1	0	1	1	1	0	1	1	1	0	0	1	0.6	0.8													
29-Jun	1	0	0	0	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.9													
30-Jun	1	1	0	0	1	1	A	1	1	3	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0.7	2.6													
0.5 0.5 0.5 0.5 0.6 0.6 0.6 0.6 0.7 0.7 1.5 1.0 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.5 0.6																									Diurnal Average														
0.8 0.8 0.8 0.7 1.5 2.2 1.8 1.1 1.0 2.6 21.4 10.8 1.3 1.1 1.1 0.9 1.2 2.4 2.0 1.0 0.9 1.6 0.9 0.7																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

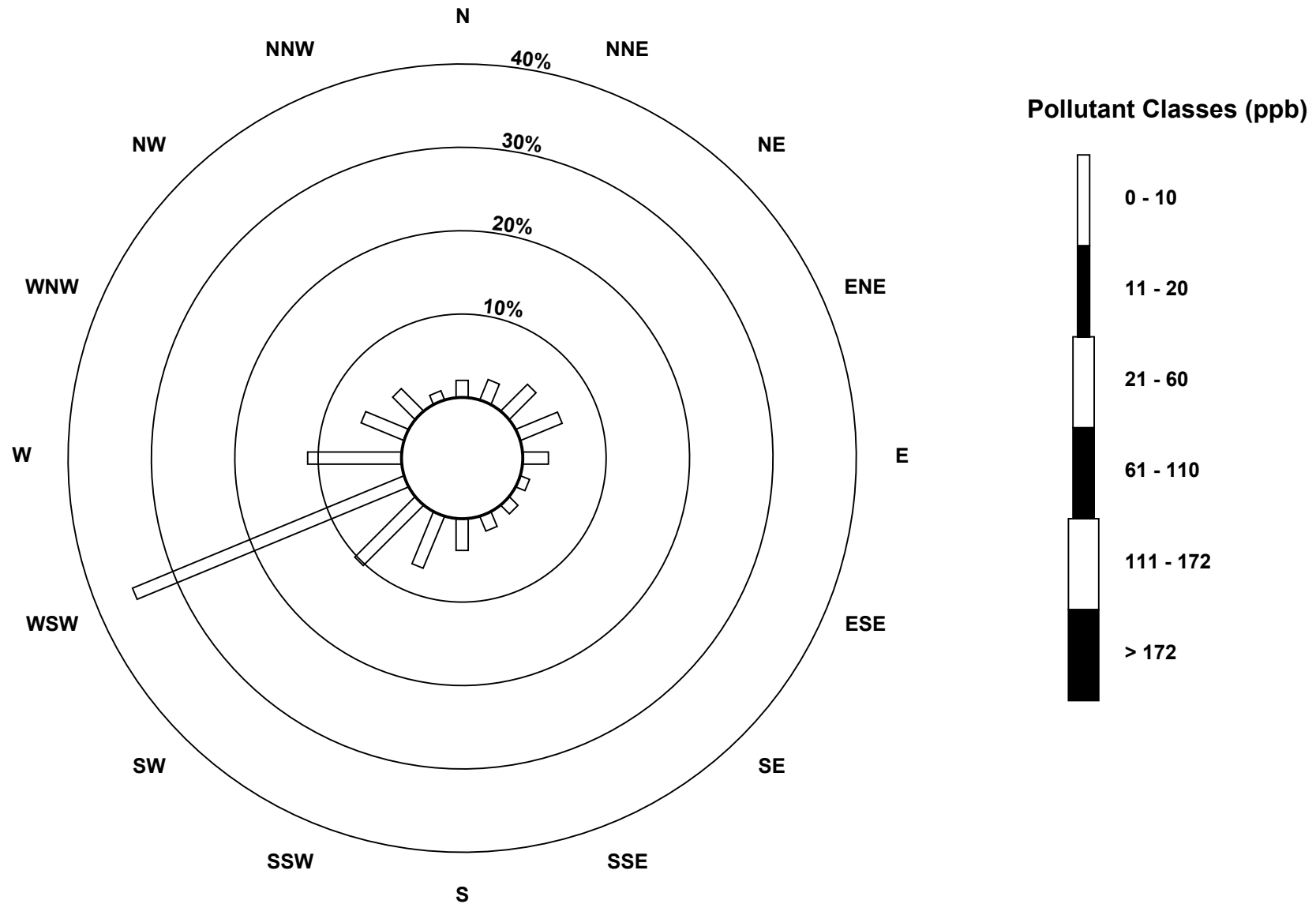
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - June 2016



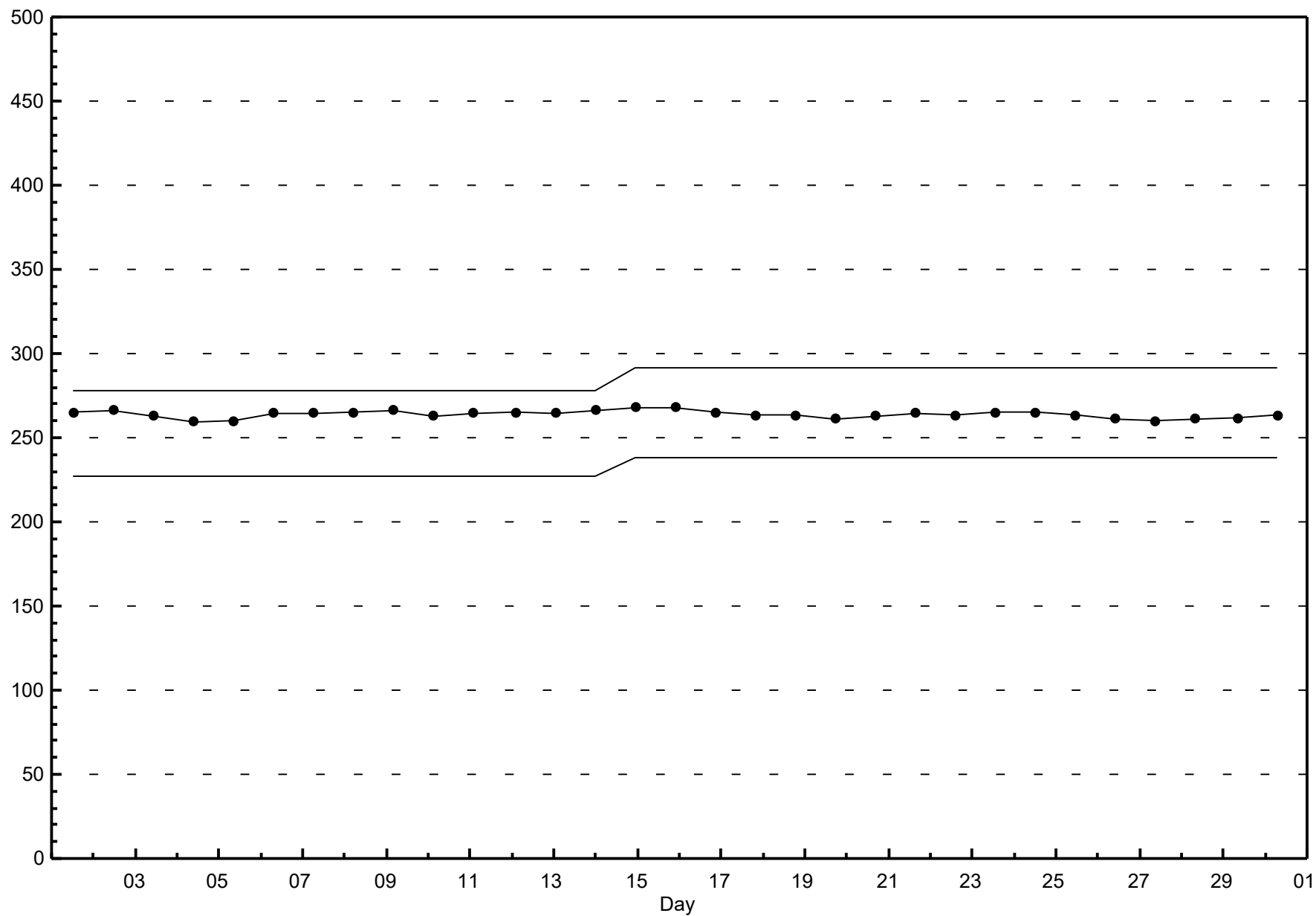
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - June 2016



Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - June 2016



Hourly Averages

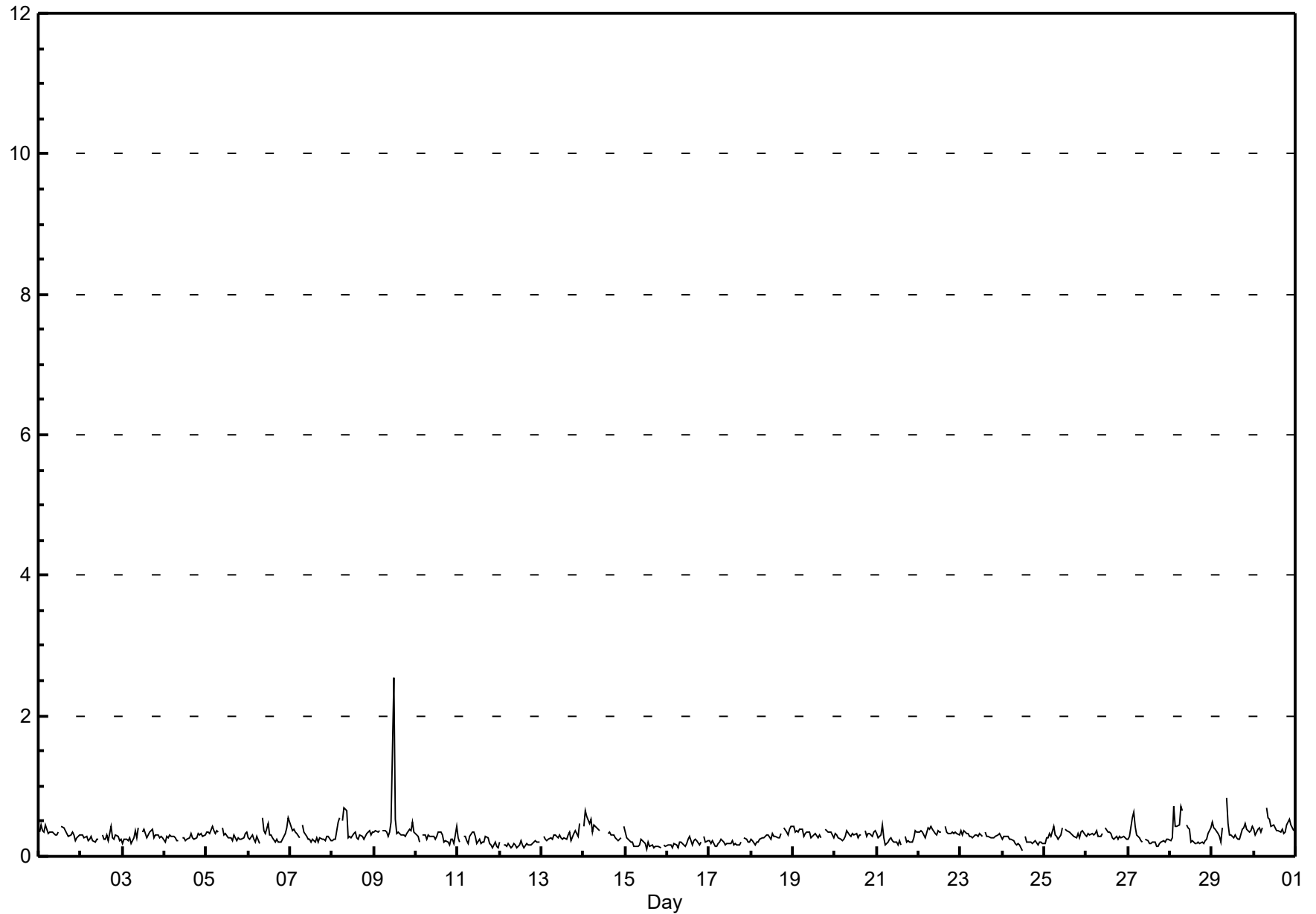
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - June 2016

Number of Exceedences (AAAQO): Maximum Value: 2.5 ppb on Jun 9 12:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 0.5 ppb on Jun 9					Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0				
Minimum Value: 0 ppb on Jun 24 12:00 Maximum Diurnal Average: 0.4 ppb at hour 12 Monthly Average: 0.29 ppb																			Minimum Daily Average: 0.2 ppb on Jun 12 Minimum Diurnal Average: 0.3 ppb at hour 19 Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 0.6									
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-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5		
2-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4		
3-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4		
4-Jun	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	0.3		
5-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4		
6-Jun	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	0.6		
7-Jun	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		
8-Jun	0	0	0	0	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7		
9-Jun	0	0	0	A	A	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0.5	2.5		
10-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4		
11-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3		
12-Jun	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2		
13-Jun	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		
14-Jun	0	1	1	0	1	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	A	0	0.4	0.7		
15-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4		
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3		
17-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.3		
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.4		
19-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.4		
20-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.4		
21-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.4		
22-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.4		
23-Jun	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		
24-Jun	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		
25-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4		
26-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4		
27-Jun	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6		
28-Jun	0	0	1	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7		
29-Jun	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8		
30-Jun	0	0	0	0	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.4	0.7		
0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 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 0.3																								Diurnal Average				
0.5 0.7 0.7 0.6 0.5 0.4 0.7 0.7 0.8 0.5 0.5 2.5 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.5 0.5 0.5 0.5 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																												

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - June 2016



Hourly Maximums

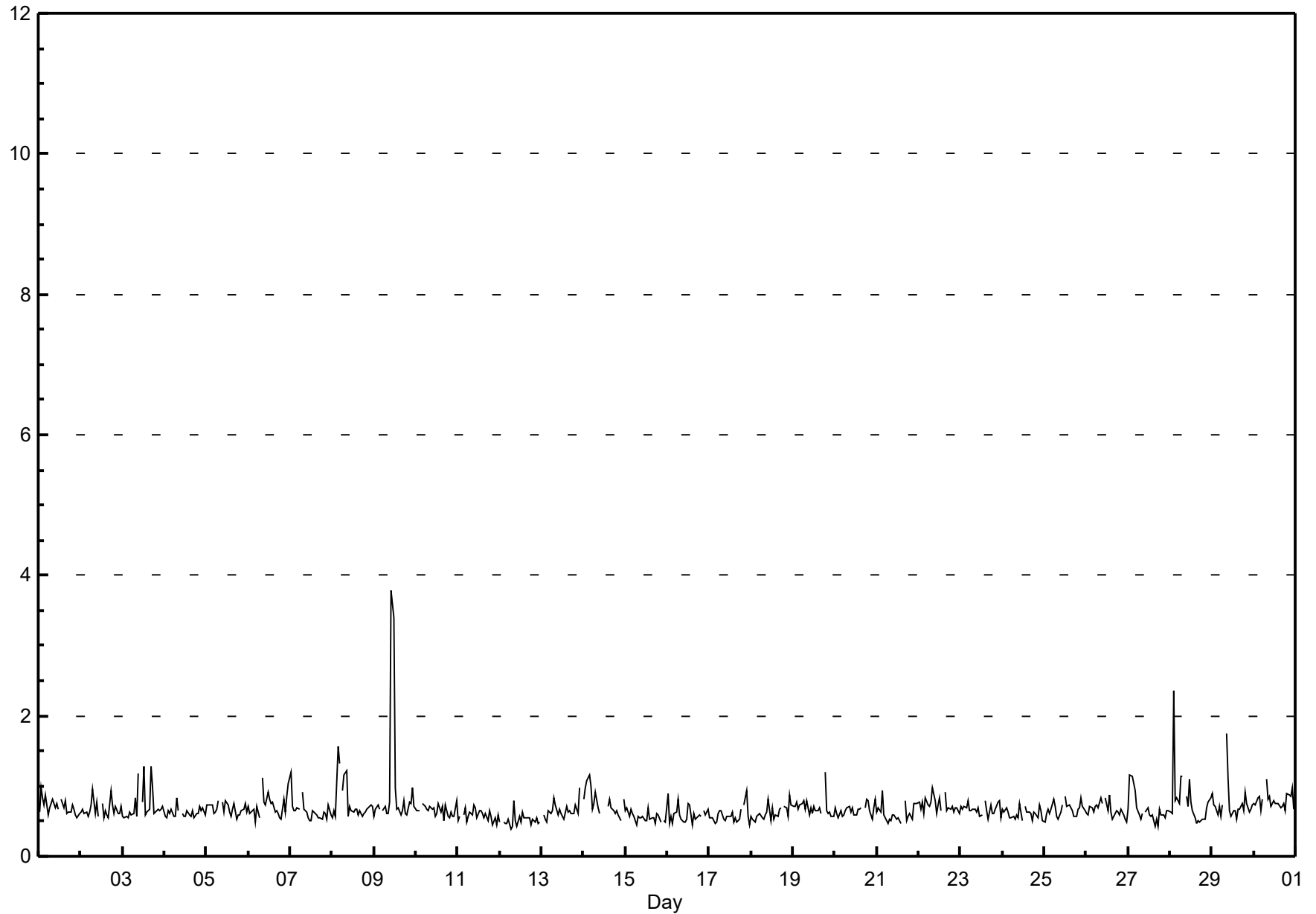
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - June 2016

Maximum Value: 3.8 ppb on Jun 9 11:00																			Maximum Daily Average: 1.0 ppb on Jun 9						Hours in Service: 720	
Minimum Value: 0 ppb on Jun 12 07:00																			Minimum Daily Average: 0.5 ppb on Jun 12						Hours of Data: 685	
Maximum Diurnal Average: 0.8 ppb at hour 11																			Minimum Diurnal Average: 0.6 ppb at hour 15						Hours of Missing Data: 35	
Monthly Average: 0.68 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 = 1.3						Hours of Calibration: 35	
																			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-Jun	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
2-Jun	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
3-Jun	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
4-Jun	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
5-Jun	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
6-Jun	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
7-Jun	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.2
8-Jun	1	1	1	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.6
9-Jun	1	1	1	1	A	1	1	1	1	1	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1.0	3.8
10-Jun	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.8
11-Jun	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0.6	0.7
12-Jun	0	A	0	0	0	1	0	0	1	1	0	1	0	1	1	1	1	1	0	1	0	1	0	0	0.5	0.8
13-Jun	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.6	1.0
14-Jun	1	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	A	1	0.8	1.2
15-Jun	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	A	1	0	0.6	0.7
16-Jun	1	0	1	0	1	1	1	1	1	0	0	1	1	1	0	1	1	1	1	1	1	A	1	1	0.6	0.9
17-Jun	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	1	0	1	1	A	1	1	1	0	0.6	0.9
18-Jun	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.6	0.9
19-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.7	1.2
20-Jun	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	0.8
21-Jun	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	0.6	0.9
22-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	1.0
23-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	0.8
24-Jun	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.7
25-Jun	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9
26-Jun	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0.7	0.9
27-Jun	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	0	1	1	1	1	1	1	0.7	1.2
28-Jun	1	1	2	1	1	1	1	1	A	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0.8	2.4
29-Jun	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.8
30-Jun	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
0.7 0.7 0.7 0.7 0.7 0.6 0.7 0.7 0.7 0.7 0.8 0.8 0.7 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.7 0.7 0.7																									Diurnal Average	
1.2 1.2 2.4 1.6 1.3 0.8 1.1 1.2 1.8 1.2 3.8 3.4 1.3 0.9 0.8 0.9 1.3 1.0 1.2 0.9 0.9 0.9 1.0 1.0																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

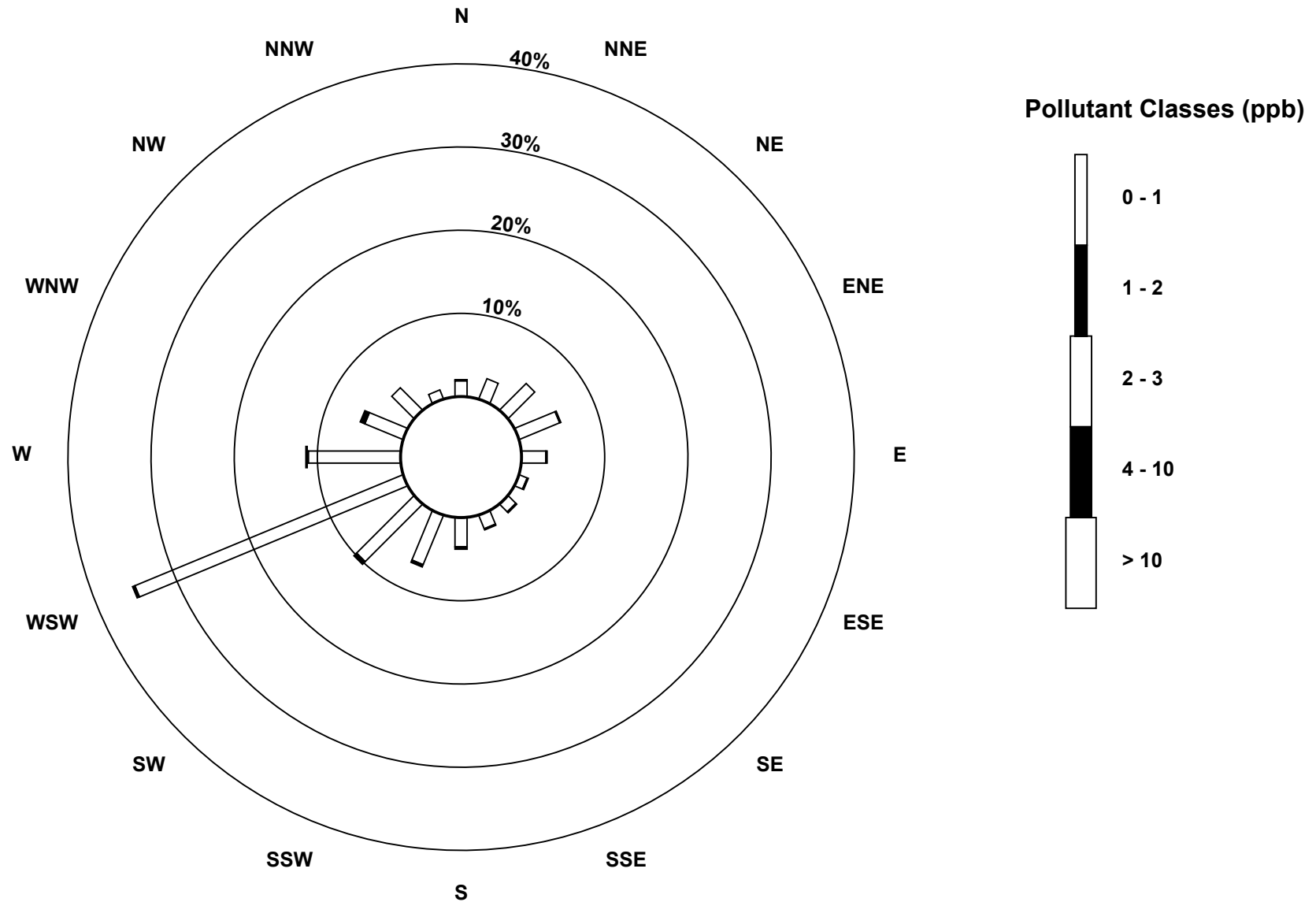
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - June 2016



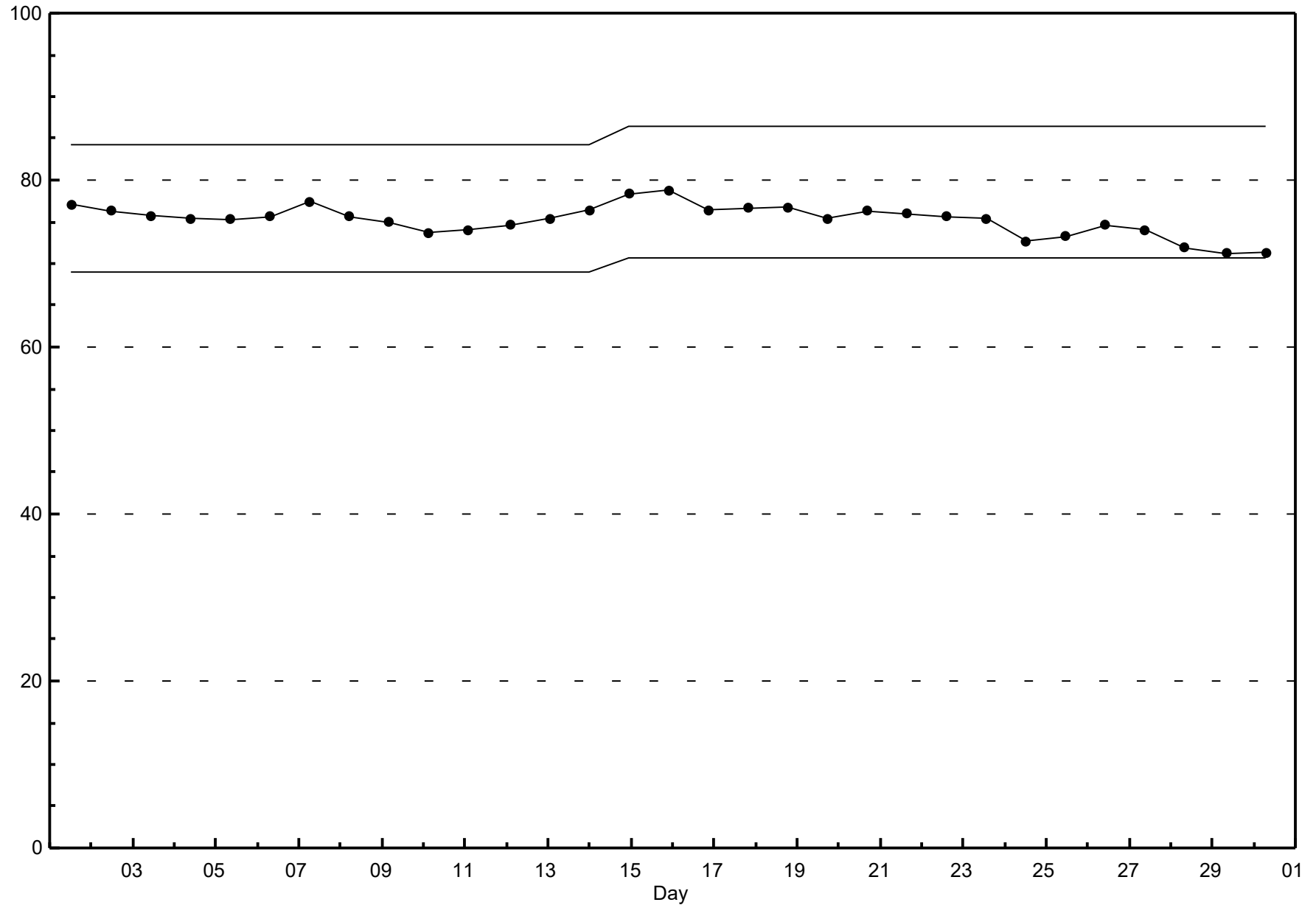
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - June 2016



Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - June 2016

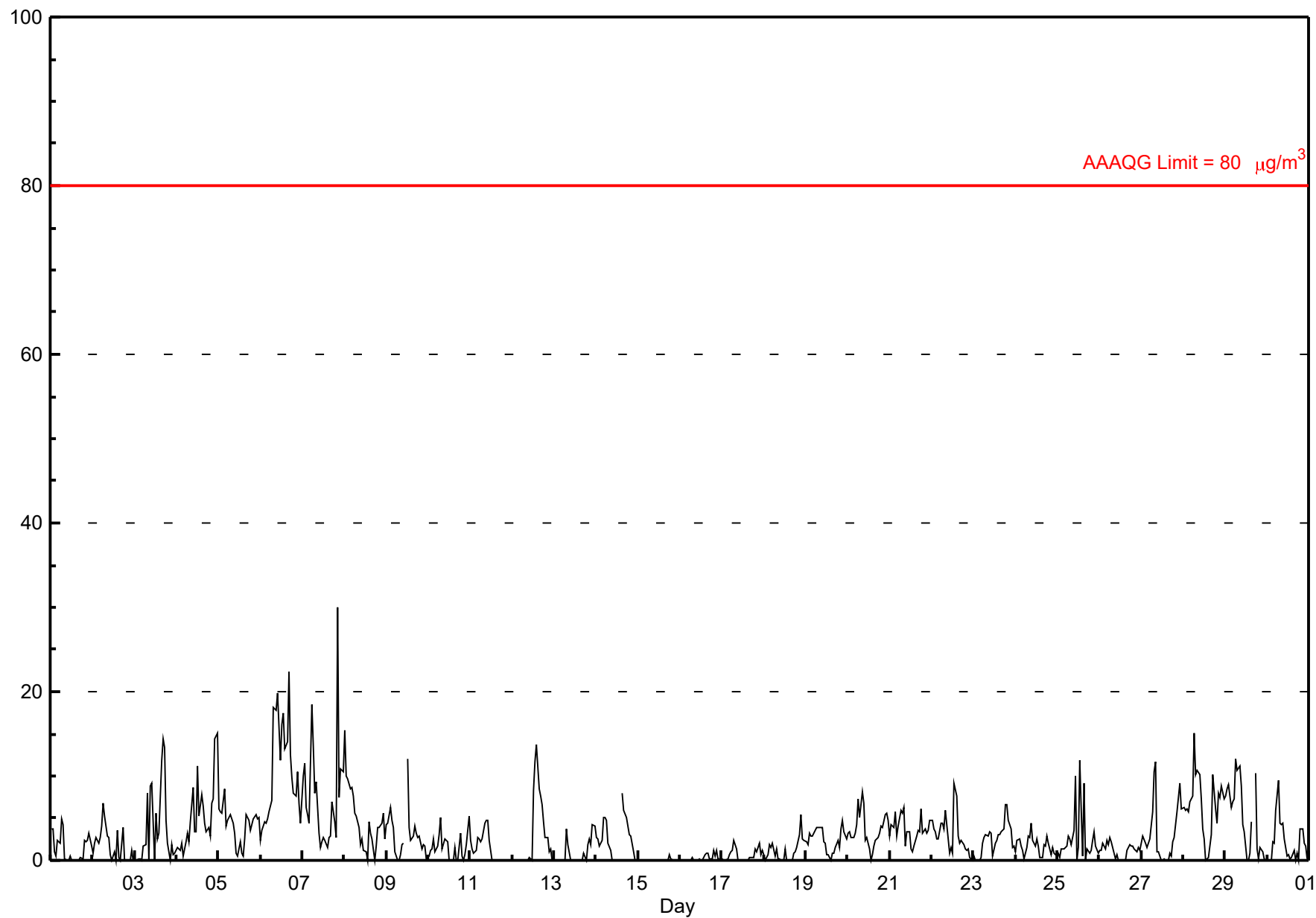


Hourly Averages

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

Evergreen Park - June 2016

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 30.0 µg/m³ on Jun 7 21:00 Minimum Value: 0 µg/m³ on Jun 1 11:00 Maximum Diurnal Average: 4.6 µg/m³ at hour 8 Monthly Average: 3.06 µg/m³																								Hours in Service: 720 Hours of Data: 713 Hours of Missing Data: 7 Hours of Calibration: 3 Percent Operational Time: 99.4		
Maximum Daily Average: 10.9 µg/m³ on Jun 6 Minimum Daily Average: 0.0 µg/m³ on Jun 15 Minimum Diurnal Average: 1.6 µg/m³ at hour 12 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.3 Median = 2.0 Q ₃ = 4.2 P ₉₀ = 7.7 P ₉₉ = 17.8																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	4	4	1	0	2	2	5	4	0	0	0	0	0	0	0	0	0	0	0	2	2	2	3	2	1.5	4.9
2-Jun	1	2	3	2	3	4	7	5	3	3	1	0	1	0	4	0	0	4	0	0	0	0	1	0	1.8	6.8
3-Jun	0	0	0	0	0	2	2	8	0	9	9	0	6	3	3	12	14	13	5	2	0	2	1	1	3.8	14.5
4-Jun	2	1	1	2	0	2	3	2	5	9	3	3	11	5	8	7	4	3	4	3	7	7	14	15	5.1	15.1
5-Jun	6	6	6	8	4	5	5	5	4	3	1	1	2	1	1	3	5	5	3	4	5	5	5	5	4.1	8.4
6-Jun	2	4	5	4	5	6	7	18	18	18	20	12	16	17	13	14	22	13	10	8	8	11	7	4	10.9	22.4
7-Jun	10	12	6	5	4	18	14	8	9	3	2	2	3	2	1	3	3	7	5	3	30	7	11	11	7.5	30.0
8-Jun	15	10	10	9	9	8	6	5	4	2	3	1	1	0	5	3	3	0	2	4	4	4	6	3	4.7	15.4
9-Jun	4	4	6	5	4	1	0	0	1	2	2	N	12	4	2	3	4	3	3	3	1	2	2	0	3.0	12.0
10-Jun	1	1	1	3	1	2	3	5	1	2	2	2	0	0	0	1	0	0	3	1	0	1	2	5	1.6	5.2
11-Jun	2	1	1	1	3	3	2	3	4	5	5	2	0	0	0	0	0	0	0	0	0	0	0	0	1.3	4.8
12-Jun	0	0	0	0	0	0	0	0	0	0	0	0	8	12	14	8	8	7	5	3	3	1	1	0	2.9	13.7
13-Jun	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	1	0	2	2	2	4	4	0.9	4.3
14-Jun	3	3	2	2	5	5	5	2	1	0	N	N	C	C	C	8	6	5	4	3	3	1	0	0	3.0	8.0
15-Jun	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	0.8
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0	1	0	0	0.3	1.1
17-Jun	0	0	0	0	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	0.6	2.4
18-Jun	1	0	1	2	2	2	1	1	0	0	0	0	1	0	0	0	0	1	1	2	3	5	3	2	1.1	5.4
19-Jun	2	2	3	3	3	4	4	4	4	4	2	2	1	1	0	1	1	2	2	1	4	5	3	3	2.5	4.7
20-Jun	3	3	3	3	3	4	7	5	8	7	2	3	1	0	1	2	2	3	3	4	4	5	6	5	3.6	8.2
21-Jun	3	4	4	6	3	4	6	6	6	2	3	3	1	1	2	3	3	3	6	3	4	3	4	5	3.7	6.2
22-Jun	5	4	3	3	3	4	4	4	6	3	1	1	1	9	8	3	2	2	2	1	1	1	0	0	3.0	9.2
23-Jun	1	0	0	0	0	2	3	3	3	3	3	1	2	2	3	3	3	4	7	7	5	4	2	2	2.5	6.7
24-Jun	1	2	3	2	1	0	1	3	3	4	2	2	2	2	0	0	2	2	3	2	1	1	1	1	1.7	4.5
25-Jun	1	0	1	1	1	2	3	2	2	4	10	0	1	12	1	9	0	1	1	1	2	3	2	1	2.6	11.9
26-Jun	1	1	2	1	2	2	3	2	1	0	1	0	0	0	0	0	1	2	2	2	1	1	1	1	1.2	2.8
27-Jun	2	3	2	2	2	2	6	11	12	1	1	0	0	0	0	0	1	0	2	3	6	8	9	6	3.2	11.8
28-Jun	6	6	6	6	7	8	15	10	11	10	7	4	3	0	0	2	3	10	6	4	8	7	9	7	6.5	15.0
29-Jun	8	8	9	6	7	7	12	11	11	9	4	3	0	0	1	4	N	10	1	0	2	1	0	0	5.0	12.0
30-Jun	0	0	0	2	2	6	9	4	4	4	3	0	1	0	0	1	0	1	0	4	4	2	2	0	2.1	9.4
2.8 2.7 2.6 2.6 2.6 3.5 4.4 4.6 4.1 3.6 3.0 1.6 2.6 2.5 2.3 3.0 3.1 3.4 2.7 2.5 3.7 3.2 3.3 2.8																								Diurnal Average		
15.4 11.5 9.7 8.5 8.7 18.4 15.0 18.1 18.0 17.8 19.8 11.8 16.1 17.5 13.7 14.0 22.4 13.4 9.8 8.0 30.0 10.5 14.4 15.1																								Diurnal Maximum		
C - Calibration N - Not Valid																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										



Hourly Maximums

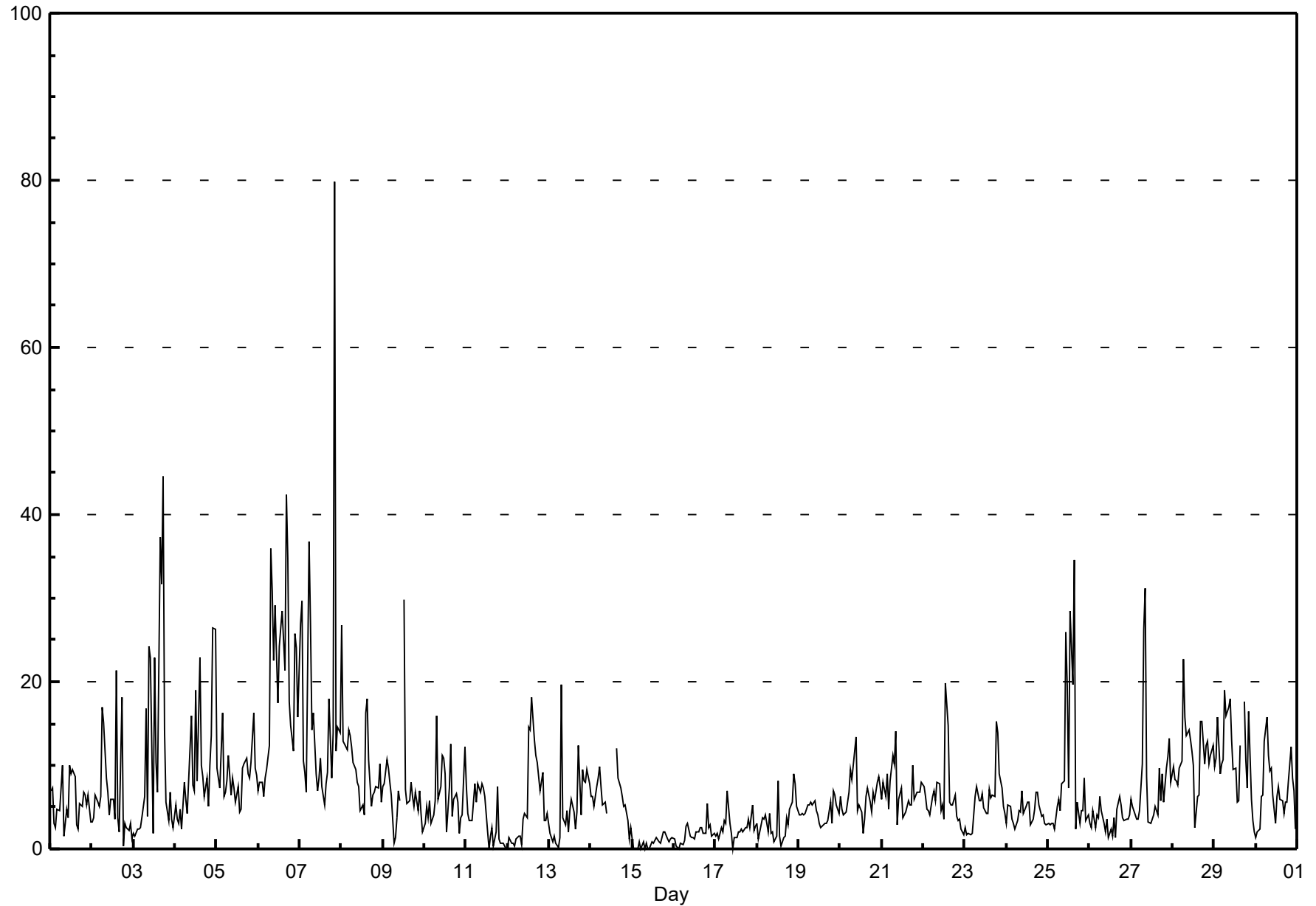
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Evergreen Park - June 2016

Maximum Value: 79.9 µg/m³ on Jun 7 21:00																				Maximum Daily Average: 20.1 µg/m³ on Jun 6					Hours in Service: 720	
Minimum Value: 0 µg/m³ on Jun 11 14:00																				Minimum Daily Average: 0.8 µg/m³ on Jun 15					Hours of Data: 713	
Maximum Diurnal Average: 10.1 µg/m³ at hour 8																				Minimum Diurnal Average: 4.8 µg/m³ at hour 5					Hours of Missing Data: 7	
Monthly Average: 7.23 µg/m³																				Percentiles: P ₁ = 0.0 P ₁₀ = 1.6 Q ₁ = 3.1 Median = 5.5 Q ₃ = 8.7 P ₉₀ = 14.4 P ₉₉ = 34.0					Hours of Calibration: 3	
																				Percent Operational Time: 99.4						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	7	7	3	3	5	5	7	10	2	5	4	10	9	9	3	2	6	5	7	7	5	6	3	5.7	9.9	
2-Jun	3	4	6	6	5	6	17	15	8	7	4	6	6	4	21	4	2	18	0	3	3	2	3	1	6.5	21.4
3-Jun	2	2	2	2	3	4	6	17	4	24	23	2	23	10	7	37	32	45	14	6	3	7	4	3	11.7	44.6
4-Jun	5	4	3	5	2	8	6	4	8	16	8	7	19	8	23	10	9	6	8	5	10	13	26	26	10.0	26.5
5-Jun	10	8	7	16	6	7	8	11	7	8	7	6	7	4	5	10	10	11	9	8	10	16	10	9	8.8	16.2
6-Jun	7	8	8	6	8	9	12	36	31	23	29	17	24	26	28	21	42	35	18	15	12	26	24	16	20.1	42.4
7-Jun	27	30	11	9	7	37	27	14	16	9	7	8	11	7	5	8	9	18	8	14	80	12	15	14	16.8	79.9
8-Jun	27	13	13	12	14	14	12	10	9	8	7	5	5	4	16	18	11	5	6	7	7	7	10	6	10.3	26.7
9-Jun	7	8	11	10	8	7	1	1	4	7	6	N	30	7	5	6	8	6	5	7	5	7	4	2	7.0	29.8
10-Jun	3	5	4	6	3	4	6	16	6	7	11	11	9	2	7	13	4	6	7	6	2	4	4	12	6.5	16.0
11-Jun	7	4	3	3	6	8	6	8	7	8	7	6	2	0	2	3	0	2	7	1	1	1	0	0	3.8	7.7
12-Jun	0	1	1	1	0	1	2	2	1	3	4	4	15	14	18	13	11	10	9	7	9	3	3	4	5.7	18.2
13-Jun	2	1	1	2	1	0	1	20	4	3	5	2	5	6	4	2	4	12	4	9	8	8	9	8	5.1	19.7
14-Jun	6	6	5	7	8	10	7	5	6	4	N	N	C	C	C	12	8	7	6	5	5	3	1	3	6.2	12.1
15-Jun	1	0	0	0	1	0	1	0	1	0	0	1	1	1	1	1	1	1	2	2	1	1	1	1	0.8	2.1
16-Jun	1	0	0	0	1	1	1	3	3	2	1	1	1	2	2	3	3	2	2	6	3	3	2	2	1.8	5.5
17-Jun	2	2	1	3	2	3	3	7	3	2	0	1	1	2	2	2	2	3	3	3	3	5	2	3	2.5	7.0
18-Jun	3	1	3	4	4	4	2	4	2	2	1	2	8	2	0	1	2	4	3	5	6	9	8	5	3.5	8.9
19-Jun	4	4	4	4	4	5	5	6	5	6	5	4	3	3	3	3	3	6	3	7	6	5	4	4	4.4	7.0
20-Jun	6	5	4	4	6	7	9	8	12	13	5	5	4	2	4	6	7	6	4	7	6	8	9	7	6.4	13.3
21-Jun	6	8	6	9	5	8	11	10	14	3	6	7	4	4	4	6	5	5	10	6	7	7	7	8	6.9	14.1
22-Jun	7	6	5	5	4	6	7	6	8	8	5	5	4	20	15	6	5	5	6	4	3	4	2	2	6.1	19.9
23-Jun	3	2	2	2	2	4	6	7	6	6	7	5	4	4	7	6	6	6	15	14	9	7	5	4	5.8	15.3
24-Jun	3	5	5	4	3	2	3	5	4	7	4	5	6	6	3	4	5	7	7	5	4	4	3	3	4.4	7.0
25-Jun	3	3	3	3	2	5	6	5	8	8	26	19	7	28	20	35	2	6	3	5	5	8	3	4	9.0	34.6
26-Jun	3	3	5	3	4	4	6	5	3	2	4	1	2	2	4	1	5	6	5	4	3	4	4	4	3.6	6.3
27-Jun	6	5	4	4	4	5	10	26	31	9	3	3	4	4	5	4	10	6	9	6	10	11	13	8	8.2	31.1
28-Jun	10	8	8	8	10	11	23	16	14	14	13	12	10	3	6	6	15	15	10	12	13	10	11	12	11.3	22.8
29-Jun	10	11	16	9	10	11	19	16	17	18	13	9	10	6	6	12	N	18	11	7	16	6	3	2	11.1	18.9
30-Jun	1	2	2	6	6	13	16	11	9	10	6	3	6	7	6	6	4	6	6	8	12	8	7	2	6.9	15.8
6.1 5.5 4.9 5.1 4.8 6.9 8.3 10.1 8.4 8.0 7.6 6.0 8.3 6.8 8.2 8.7 7.9 9.5 7.0 6.5 8.9 7.2 6.9 5.9																									Diurnal Average	
27.0 29.7 15.8 16.2 14.3 36.7 27.0 36.0 31.1 24.3 29.2 19.4 29.8 28.5 28.5 37.2 42.4 44.6 17.7 14.8 79.9 25.8 26.5 26.2																									Diurnal Maximum	
C - Calibration N - Not Valid																										

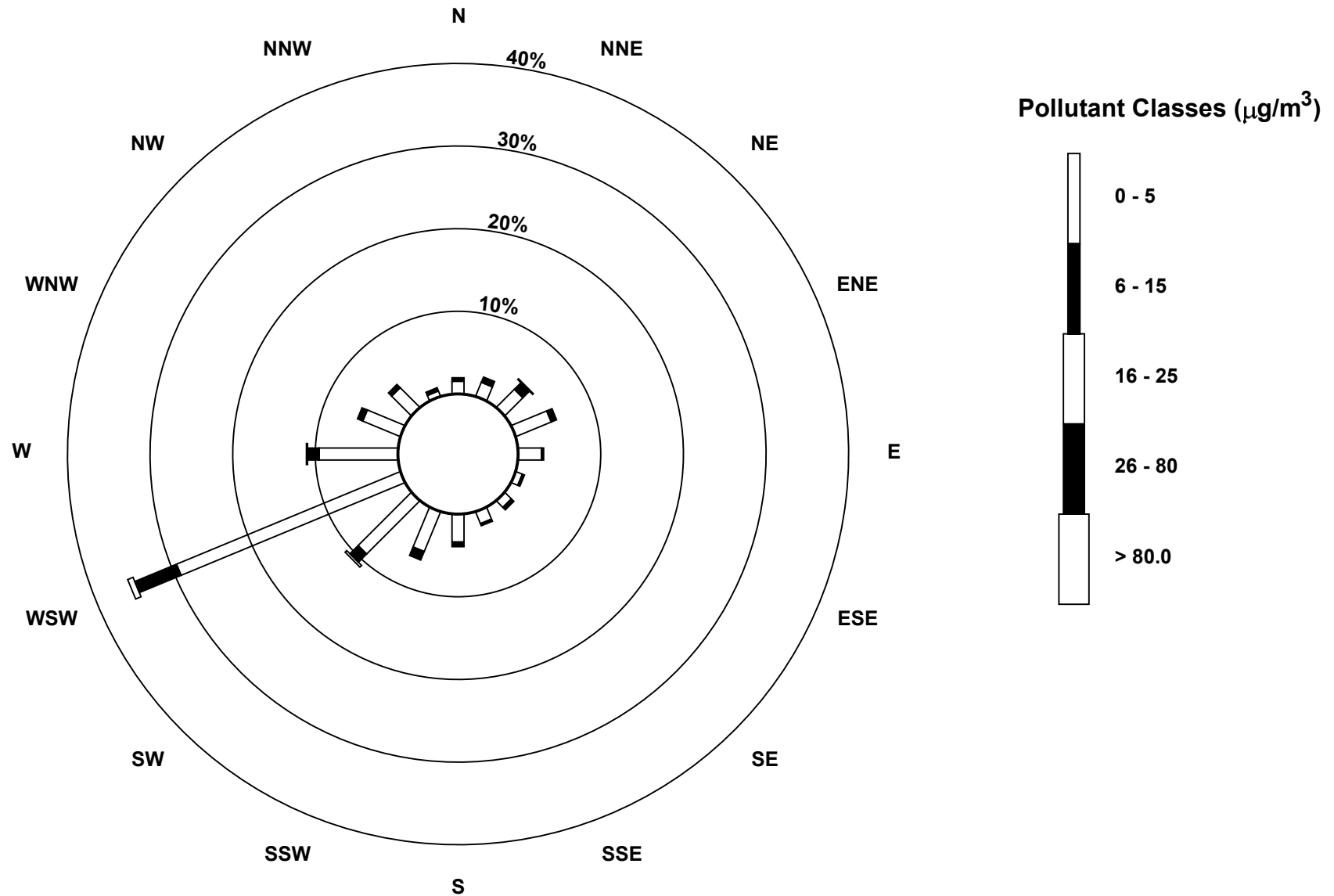
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - June 2016



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Evergreen Park - June 2016



Hourly Averages

External Temperature (ET) - °C

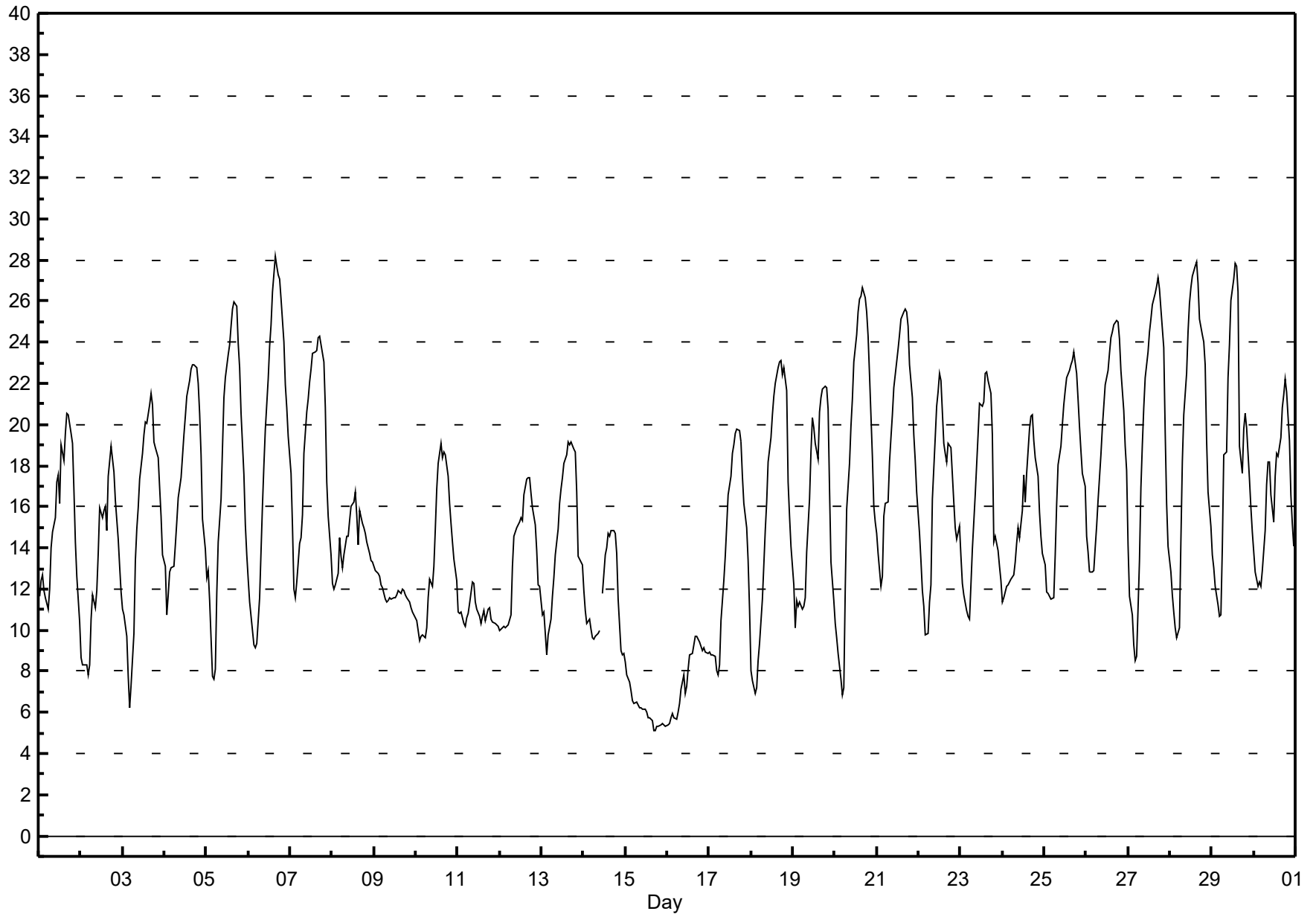
Evergreen Park - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																						Hours in Service: 720							
Maximum Value: 28.2 °C on Jun 6 16:00																						Maximum Daily Average: 19.9 °C on Jun 21				Hours of Data: 719			
Minimum Value: 5 °C on Jun 15 18:00																						Minimum Daily Average: 6.1 °C on Jun 15				Hours of Missing Data: 1			
Maximum Diurnal Average: 20.1 °C at hour 17																						Minimum Diurnal Average: 10.2 °C at hour 5				Hours of Calibration: 0			
Monthly Average: 15.53 °C																						Percentiles: P ₁ = 5.4 P ₁₀ = 8.9 Q ₁ = 11.4 Median = 14.8 Q ₃ = 19.5 P ₉₀ = 23.1 P ₉₉ = 27.1				Percent Operational Time: 99.9			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-Jun	12	12	13	12	12	11	12	14	15	15	17	18	16	19	18	20	21	20	20	19	17	14	13	10	15.4	20.6			
2-Jun	9	8	8	8	8	8	11	12	11	12	14	16	15	16	15	17	19	18	18	18	16	14	13	12	13.1	18.9			
3-Jun	11	11	10	8	6	7	10	13	15	16	17	19	19	20	20	21	22	21	19	19	18	17	16	14	15.4	21.5			
4-Jun	13	11	12	13	13	13	14	15	16	17	18	19	20	21	22	23	23	23	23	22	21	19	15	14	17.6	22.9			
5-Jun	13	13	11	8	8	8	12	14	16	19	21	22	23	24	25	26	26	26	24	23	21	18	15	14	17.8	26.0			
6-Jun	12	11	10	9	9	9	12	14	16	18	20	22	24	25	26	28	28	27	27	26	24	22	21	19	19.2	28.2			
7-Jun	18	15	12	12	12	14	15	16	19	21	21	22	23	23	24	24	24	24	23	23	21	17	16	14	18.8	24.3			
8-Jun	12	12	12	13	15	14	13	14	15	15	16	16	17	16	14	16	15	15	15	14	14	13	13	13	14.3	16.7			
9-Jun	13	13	13	13	12	12	11	11	11	12	12	12	12	12	12	12	12	12	12	12	11	11	11	11	11.8	13.1			
10-Jun	10	10	10	10	10	10	10	12	12	12	13	15	17	18	19	18	19	19	18	16	15	14	13	12	13.8	19.1			
11-Jun	11	11	11	10	10	11	11	11	12	12	11	11	11	10	11	11	10	11	11	11	10	10	10	10	10.8	12.3			
12-Jun	10	10	10	10	10	10	11	13	15	15	15	15	15	17	17	17	17	17	17	16	15	14	12	12	13.7	17.4			
13-Jun	11	11	10	9	10	11	12	13	14	15	16	17	17	18	19	19	19	19	19	19	17	14	13	13	14.7	19.2			
14-Jun	12	11	10	11	10	10	10	10	10	10	N	12	14	14	15	15	15	15	15	14	12	9	9	9	11.6	14.9			
15-Jun	8	8	7	7	7	6	7	6	6	6	6	6	6	6	6	6	5	5	5	5	5	5	5	5	6.1	8.4			
16-Jun	5	5	6	6	6	6	6	6	7	8	7	7	8	9	9	9	10	10	9	9	9	9	9	9	7.7	9.7			
17-Jun	9	9	9	9	8	8	8	10	12	14	15	17	18	19	19	20	20	20	19	17	16	15	13	11	13.9	19.8			
18-Jun	8	8	7	7	9	9	11	13	15	16	18	19	20	21	22	23	23	23	22	23	22	17	16	14	16.1	23.1			
19-Jun	12	10	11	11	11	11	11	12	14	16	19	20	20	19	18	21	21	22	22	22	21	17	13	11	16.1	21.8			
20-Jun	10	10	9	8	7	7	12	16	18	20	21	23	24	25	26	26	27	26	25	24	22	18	16	15	18.2	26.6			
21-Jun	15	14	12	13	16	16	16	18	19	21	22	23	24	24	25	25	26	25	25	23	21	19	18	17	19.9	25.6			
22-Jun	15	13	12	11	10	10	11	12	16	19	21	22	23	22	19	19	18	19	19	18	16	15	14	15	16.2	22.5			
23-Jun	14	12	12	11	11	11	12	14	17	18	20	21	21	21	22	23	22	22	20	14	15	14	13	12	16.2	22.6			
24-Jun	11	12	12	12	12	12	13	13	14	15	15	16	18	16	18	20	20	20	19	18	18	16	15	14	15.4	20.5			
25-Jun	13	12	12	12	11	12	14	16	18	19	20	21	22	22	23	23	23	24	22	21	20	19	18	17	18.0	23.5			
26-Jun	15	14	13	13	13	14	15	16	19	20	21	22	23	23	24	25	25	25	25	24	23	21	19	18	19.5	25.1			
27-Jun	14	12	11	9	8	9	13	17	19	21	22	24	25	25	26	26	27	27	27	26	24	20	16	14	19.2	27.2			
28-Jun	13	12	11	10	10	10	14	18	20	22	25	26	27	27	28	28	27	25	24	24	23	19	17	15	19.8	27.9			
29-Jun	14	13	12	11	11	11	14	18	19	22	24	26	27	28	28	26	19	18	20	21	20	17	16	15	18.7	27.9			
30-Jun	14	13	12	12	12	13	15	17	18	18	17	15	17	19	18	19	21	21	22	22	19	17	15	14	16.7	22.2			
11.9 11.1 10.6 10.2 10.2 10.4 11.8 13.5 15.0 16.1 17.3 18.1 18.8 19.3 19.6 20.0 20.1 20.0 19.5 18.7 17.5 15.5 14.1 13.1																									Diurnal Average				
17.6 15.1 12.8 12.9 15.6 16.1 16.2 18.5 20.5 22.5 24.5 26.0 27.1 27.9 27.7 28.2 27.7 27.3 27.1 26.1 24.0 21.9 20.8 19.4																									Diurnal Maximum				
N - Not Valid																													

Hourly Averages

External Temperature (ET) - °C

Evergreen Park - June 2016



Hourly Averages

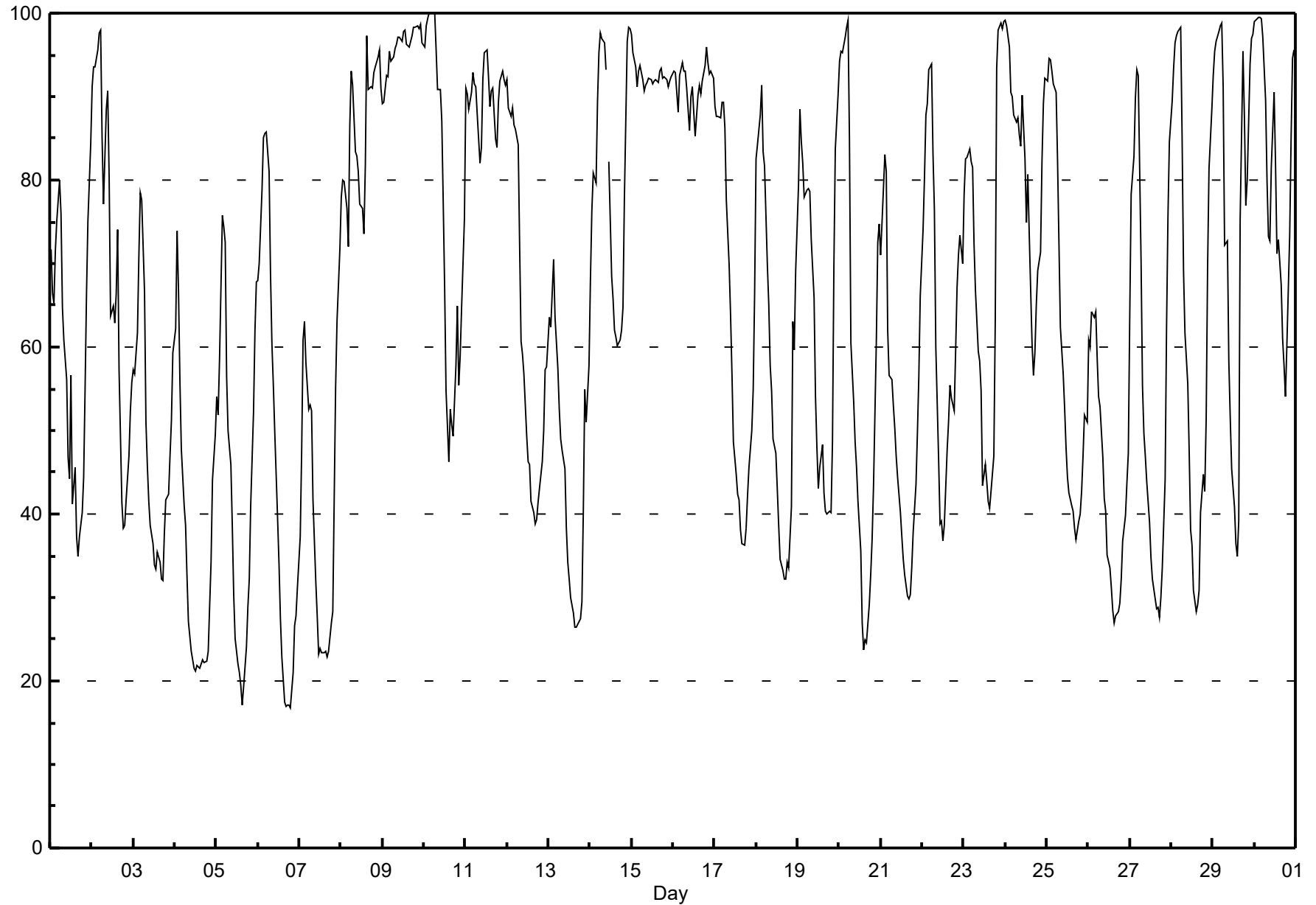
Relative Humidity (RH) - %

Evergreen Park - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100.0 % on Jun 10 05:00 Maximum Daily Average: 95.9 % on Jun 9																								Hours in Service: 720 Hours of Data: 719 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9		
Minimum Value: 17 % on Jun 6 20:00 Maximum Diurnal Average: 84.6 % at hour 4 Monthly Average: 64.78 %												Minimum Daily Average: 35.3 % on Jun 4 Minimum Diurnal Average: 47.5 % at hour 17 Percentiles: P ₁ = 19.0 P ₁₀ = 30.8 Q ₁ = 43.1 Median = 64.9 Q ₃ = 89.3 P ₉₀ = 95.2 P ₉₉ = 99.2														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	72	66	65	71	75	80	76	65	61	56	47	44	57	41	46	37	35	37	40	44	55	66	75	84	58.2	84.5
2-Jun	91	94	93	96	98	98	85	77	89	91	80	64	65	63	66	74	57	41	38	39	42	47	52	56	70.6	97.9
3-Jun	57	57	62	71	78	78	67	51	46	42	39	36	34	33	35	34	32	32	38	42	42	47	51	59	48.5	78.5
4-Jun	62	74	67	56	48	41	39	33	27	23	23	22	21	22	22	22	23	22	22	24	29	34	44	50	35.3	73.9
5-Jun	54	52	59	76	74	73	56	50	46	39	30	25	22	21	19	17	19	24	29	32	41	52	62	68	43.4	75.7
6-Jun	68	70	79	85	86	86	81	69	60	55	50	39	34	28	23	18	17	17	17	17	21	27	28	31	46.0	85.8
7-Jun	37	48	61	63	58	52	53	52	42	32	28	23	24	23	23	24	23	24	27	28	42	55	63	72	40.7	71.7
8-Jun	78	80	80	77	72	86	93	91	83	83	81	77	77	74	82	97	91	91	91	93	93	95	96	91	85.5	97.4
9-Jun	89	89	92	92	95	94	95	96	96	97	97	97	98	98	96	96	97	97	98	98	98	98	99	97	95.9	98.6
10-Jun	96	99	99	100	100	100	100	96	91	91	87	78	67	55	46	52	51	49	58	65	55	59	65	75	76.4	100.0
11-Jun	91	90	88	90	93	92	91	88	82	84	92	95	96	92	89	91	91	85	84	89	92	93	92	91	90.1	95.6
12-Jun	92	89	88	89	87	86	84	72	61	59	57	49	46	46	42	40	39	39	41	43	46	50	57	58	60.8	92.1
13-Jun	64	62	66	71	64	57	53	49	48	45	38	34	32	30	28	26	27	27	27	30	40	55	51	58	45.1	70.6
14-Jun	68	76	81	80	89	95	98	97	96	93	N	82	68	66	62	61	60	61	62	65	78	97	98	98	79.7	98.3
15-Jun	98	95	94	91	93	94	92	91	91	92	92	92	92	92	92	92	93	93	92	92	92	91	92	92	92.5	97.5
16-Jun	93	93	90	88	93	94	93	93	91	86	90	91	88	85	90	91	90	92	94	96	94	93	93	92	91.4	96.0
17-Jun	89	88	88	87	89	89	86	78	70	64	57	49	45	42	42	38	36	36	38	42	46	50	55	66	61.3	89.4
18-Jun	82	84	88	91	83	82	70	65	58	55	49	47	43	39	35	33	32	32	34	34	41	63	60	69	57.0	91.3
19-Jun	79	89	85	82	78	79	79	79	73	66	54	48	43	46	48	43	40	40	40	40	49	70	84	90	63.4	90.3
20-Jun	94	95	95	97	98	99	85	60	53	49	46	41	36	27	24	25	25	29	33	37	43	61	73	75	58.3	99.2
21-Jun	71	75	83	81	62	57	56	53	50	47	44	40	37	35	33	30	30	30	34	38	43	50	56	66	50.1	83.0
22-Jun	74	80	88	89	93	94	83	76	60	46	39	39	37	39	48	51	55	54	52	60	67	71	73	70	64.1	94.0
23-Jun	78	82	83	84	82	82	72	67	60	58	55	43	46	44	41	41	43	47	63	93	98	99	98	99	69.1	99.0
24-Jun	99	98	96	91	90	88	87	87	85	84	90	83	75	81	74	60	57	59	65	69	71	82	89	92	81.4	99.1
25-Jun	92	94	94	93	91	91	82	72	62	57	53	48	44	43	41	40	38	37	39	40	43	47	52	51	60.2	94.5
26-Jun	61	60	64	64	64	59	54	53	47	42	40	35	34	31	29	27	28	28	29	32	37	40	44	47	43.7	64.3
27-Jun	64	78	83	90	93	93	70	55	50	47	44	39	35	32	31	29	29	28	30	34	44	62	76	84	54.9	93.3
28-Jun	89	93	96	97	98	98	85	69	62	56	47	38	36	31	28	29	31	40	45	43	51	70	81	88	62.6	98.2
29-Jun	93	95	97	98	98	99	91	72	73	58	52	45	41	36	35	39	75	95	88	77	80	94	97	98	76.1	98.8
30-Jun	99	99	100	100	99	97	90	80	73	73	81	90	82	71	73	67	61	58	54	60	73	85	95	96	81.5	99.6
79.2 81.5 83.4 84.6 84.1 83.7 78.2 71.2 66.2 62.3 58.0 54.5 51.8 48.8 48.1 47.5 47.5 48.2 50.1 53.2 58.3 66.7 71.7 75.5																								Diurnal Average		
99.1 99.1 99.6 100.0 100.0 99.9 99.9 97.0 96.5 97.1 97.2 96.6 97.8 97.9 96.2 97.4 96.7 97.3 98.3 98.4 98.4 98.8 98.6 99.0																								Diurnal Maximum		
N - Not Valid																										

Hourly Averages

Relative Humidity (RH) - %
Evergreen Park - June 2016



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	0	10	15	7	5	9	9	11	11	15	15	16	16	17	20	12	11	4	3	3	8	4	2	0	7.9	19.6
Dir	61	294	310	306	265	240	259	254	239	246	254	254	220	245	304	267	295	306	234	253	196	199	218	68	261.0	304.5
2 Spd	2	0	1	2	1	5	10	12	7	3	7	9	11	6	13	14	19	31	33	30	26	21	15	14	10.8	32.6
Dir	47	149	111	188	199	181	219	227	226	300	321	313	295	265	235	205	214	241	249	247	246	239	226	218	239.9	248.5
3 Spd	14	19	8	7	9	3	10	25	24	30	26	21	25	28	30	30	31	33	27	24	26	18	16	13	20.1	32.7
Dir	214	220	229	208	198	175	222	238	245	242	246	258	238	243	245	244	243	256	263	246	237	228	216	210	239.1	256.3
4 Spd	14	6	18	21	24	17	17	32	30	35	32	32	38	35	32	31	30	30	21	18	17	12	5	6	22.6	38.0
Dir	211	220	214	238	239	247	257	239	244	241	255	249	247	248	256	244	244	246	262	266	240	235	230	252	244.8	246.6
5 Spd	6	6	4	3	1	4	9	11	10	7	4	4	7	6	5	5	4	11	7	5	3	3	3	2	1.6	10.9
Dir	254	249	284	328	258	256	267	252	235	247	258	201	236	203	176	147	71	38	57	62	53	61	55	55	245.7	252.1
6 Spd	3	2	0	1	0	0	1	6	11	11	13	15	21	19	16	21	28	25	23	25	24	17	16	12	11.8	28.2
Dir	64	76	286	46	290	11	78	234	246	242	245	266	242	241	253	265	269	263	256	264	275	295	294	303	263.8	269.3
7 Spd	10	2	2	5	6	7	6	4	10	17	18	19	16	15	19	18	13	8	7	4	1	3	3	1	6.6	19.5
Dir	309	259	142	184	195	226	265	307	263	268	282	294	292	303	311	317	310	345	22	24	54	52	62	48	296.1	311.0
8 Spd	1	2	1	5	10	4	1	6	6	6	11	13	9	9	9	17	11	10	5	7	7	5	3	6	4.5	17.2
Dir	81	41	77	199	222	253	11	132	105	83	96	101	65	49	10	48	57	64	32	41	43	54	22	11	63.8	47.6
9 Spd	4	5	1	5	9	10	15	18	18	14	15	4	9	8	13	12	7	8	10	7	10	9	6	6	6.8	18.4
Dir	3	327	311	253	270	260	243	248	254	281	264	272	294	5	20	21	2	326	323	320	314	305	302	274	294.1	247.6
10 Spd	4	4	1	3	1	1	2	5	8	8	11	14	15	14	19	17	14	14	11	5	10	9	8	8	6.7	18.6
Dir	272	201	139	185	326	8	64	94	119	106	81	99	93	78	84	74	73	75	63	90	168	158	154	127	97.1	84.4
11 Spd	6	8	7	5	3	3	2	2	7	12	14	24	24	24	30	29	32	34	26	21	14	10	13	18	12.3	33.6
Dir	58	63	72	67	60	81	61	255	250	238	217	221	223	233	239	236	239	243	254	244	241	235	235	231	235.6	243.0
12 Spd	17	12	9	7	9	7	14	37	44	41	38	42	46	50	53	46	43	41	40	38	33	26	11	21	29.9	53.0
Dir	220	245	242	249	254	242	239	237	242	236	243	257	249	247	249	247	255	254	253	251	244	232	228	239	245.7	249.2
13 Spd	13	24	16	22	22	26	30	30	19	23	23	22	21	17	16	12	12	6	8	3	4	2	8	9	14.0	29.8
Dir	220	236	231	214	223	231	234	239	249	243	250	262	274	256	275	280	289	318	307	339	85	98	168	184	244.1	234.3
14 Spd	3	1	2	3	7	5	1	9	8	14	N	13	13	12	14	14	11	11	10	17	17	21	16	19	8.8	20.5
Dir	307	71	92	144	187	157	10	256	274	254	N	287	270	299	267	257	273	301	276	301	260	242	244	246	263.9	241.9
15 Spd	30	37	38	38	40	44	41	51	50	54	51	57	60	60	59	60	63	59	62	57	57	55	49	45	50.7	63.1
Dir	244	241	244	247	247	243	243	242	239	240	239	237	240	239	236	235	234	234	239	239	240	238	241	242	239.7	234.0
16 Spd	43	37	34	35	33	33	34	31	33	34	33	32	34	36	31	30	27	28	25	17	16	18	20	19	29.1	43.2
Dir	240	239	242	242	241	237	242	242	244	247	245	242	247	242	243	244	247	246	246	269	292	279	270	266	246.8	240.0
17 Spd	18	19	18	17	15	16	15	16	18	20	22	25	28	30	30	35	33	30	29	25	22	12	12	4	20.8	35.4
Dir	268	257	253	256	253	247	248	250	249	244	247	239	239	238	242	239	246	258	262	249	245	216	212	215	246.4	239.1
18 Spd	2	5	3	2	3	2	6	0	10	15	22	17	16	15	16	16	14	14	8	10	4	0	10	6	6.6	21.5
Dir	192	184	177	93	136	167	188	27	229	242	257	261	260	268	259	252	276	258	301	311	321	2	84	203	254.0	256.8
19 Spd	2	1	7	9	13	13	10	11	13	12	18	22	32	22	12	20	20	18	14	10	5	4	3	2	10.8	31.8
Dir	210	138	244	262	260	257	250	248	248	259	299	299	313	296	289	251	258	248	262	263	232	190	185	187	269.1	313.4
20 Spd	3	1	3	1	2	1	2	14	17	15	12	5	4	4	8	1	1	8	11	8	4	2	2	3	1.9	17.0
Dir	186	216	192	197	198	186	229	236	240	253	272	272	215	199	207	177	90	46	43	50	45	53	52	52	242.7	239.6
21 Spd	5	0	1	9	12	15	13	13	16	19	17	15	16	15	15	18	23	18	18	13	6	4	4	4	11.1	22.5
Dir	59	213	18	209	236	232	250	258	257	271	267	255	271	265	264	264	248	258	243	218	243	285	246	198	252.7	248.1
22 Spd	4	5	6	3	1	1	4	5	6	17	17	16	13	27	28	18	30	30	22	11	12	8	10	6	11.0	29.7
Dir	188	196	186	188	49	355	292	314	262	252	264	275	277	238	224	197	201	232	241	235	205	205	207	252	232.0	200.9

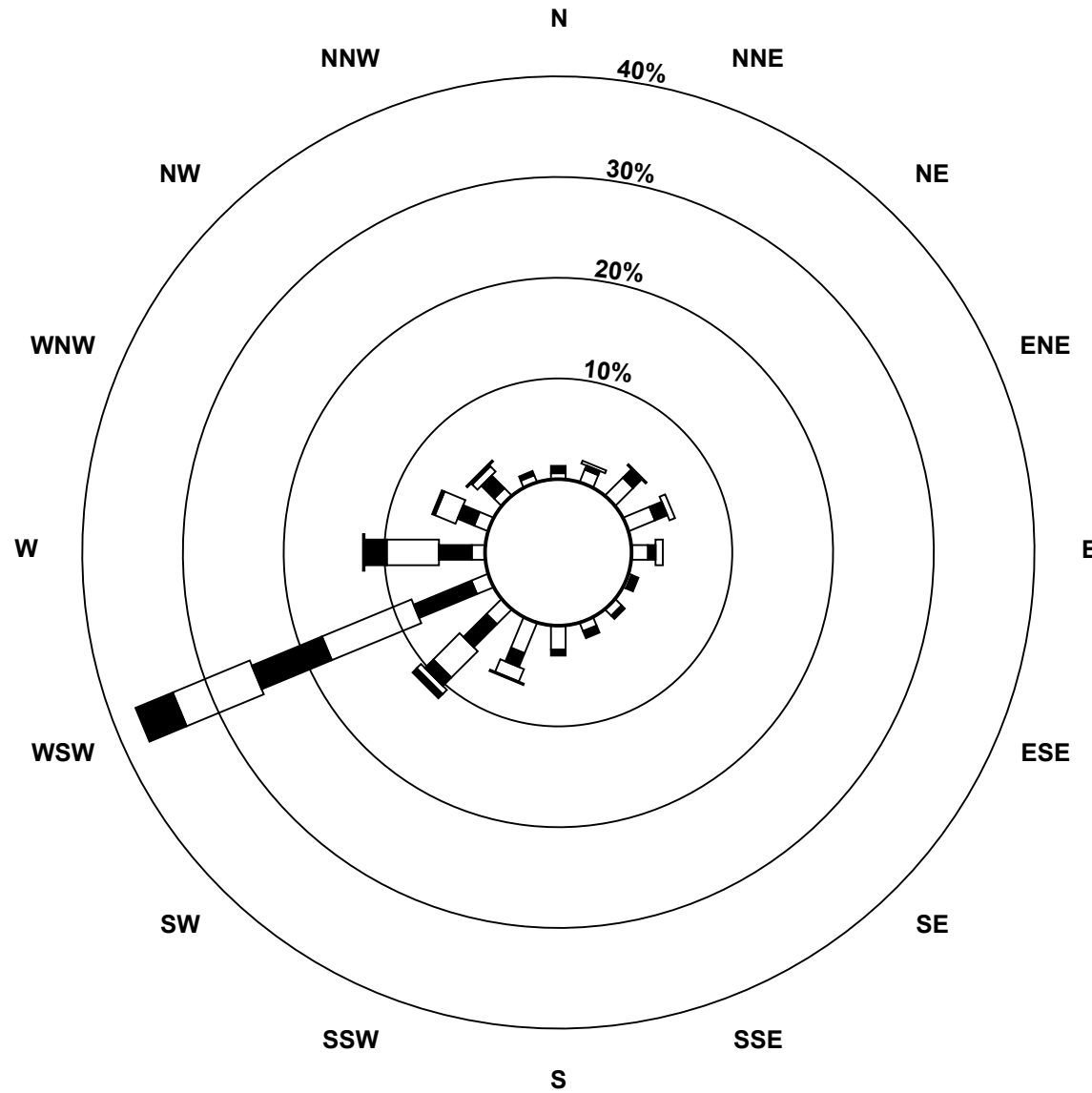
Hourly Averages

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

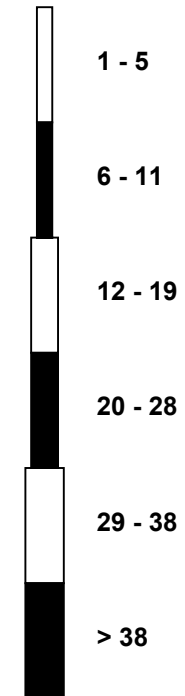
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	6	7	9	8	9	9	11	13	8	7	5	6	6	4	8	5	3	3	1	7	1	4	2	0	3.9	13.4
Dir	234	231	226	242	250	242	260	251	280	253	232	269	340	315	332	349	20	45	203	32	171	197	260	298	264.6	251.1
24 Spd	2	5	6	9	5	6	10	11	12	15	16	19	26	21	15	16	10	13	8	13	15	8	6	7	11.2	25.8
Dir	201	272	255	252	256	253	237	240	251	257	241	242	241	247	240	249	272	240	255	249	248	256	241	242	247.3	240.7
25 Spd	6	4	5	8	7	5	4	11	21	23	28	30	31	30	31	28	26	22	23	28	19	11	6	12	17.2	31.4
Dir	261	294	278	249	248	286	283	264	262	269	254	247	245	248	245	253	253	272	262	247	248	266	270	233	254.8	244.7
26 Spd	4	9	7	7	3	9	18	17	23	29	29	27	22	24	24	26	21	20	21	21	18	14	9	9	16.9	29.5
Dir	222	225	228	234	264	246	237	240	237	244	234	250	269	256	254	249	252	253	247	247	243	232	222	222	244.5	234.4
27 Spd	2	3	1	2	1	0	5	11	14	14	11	8	10	11	8	5	6	3	5	5	3	1	0	1	3.9	14.2
Dir	211	329	189	199	196	187	229	253	258	248	259	255	253	296	296	297	302	256	17	41	58	188	199	26	268.9	248.3
28 Spd	0	0	0	1	0	1	2	2	4	3	4	4	5	10	8	6	4	19	16	15	1	1	0	1	2.3	18.5
Dir	111	38	197	23	160	183	232	226	232	203	141	110	25	5	355	35	292	266	299	316	345	314	352	41	311.8	265.7
29 Spd	1	2	1	0	1	2	3	3	5	7	6	3	9	12	11	5	17	3	5	5	7	3	3	2	3.3	17.1
Dir	185	180	41	78	191	47	200	145	166	119	136	75	113	86	94	92	193	33	74	146	167	64	85	52	122.8	193.1
30 Spd	2	2	4	6	5	4	5	5	8	12	14	16	17	18	16	11	7	4	2	5	3	4	1	2	3.9	17.8
Dir	24	78	61	60	57	86	244	269	301	240	210	240	279	243	230	252	302	15	78	157	291	169	159	201	248.1	243.1
Spd	5.4	6.2	5.7	6.5	7.4	7.6	9.6	13.1	14.4	16.1	15.5	15.2	16.0	15.7	15.4	14.3	14.9	14.2	12.8	11.2	10.3	7.9	6.2	6.6	Diurnal Average	
Dir	238.7	241.0	239.5	236.9	238.4	239.4	243.1	243.4	245.4	247.0	249.1	252.5	254.4	252.2	253.2	248.8	249.7	255.9	259.9	256.8	246.3	240.3	234.6	237.3	Diurnal Maximum	
Spd	43.2	37.5	38.3	37.6	39.6	44.5	41.5	50.8	50.2	53.6	50.6	56.9	60.2	60.1	59.4	60.2	63.1	59.1	62.1	56.7	56.8	55.3	49.5	45.4	Diurnal Maximum	
Dir	240.0	239.2	244.1	247.0	246.6	243.4	243.1	242.3	239.0	240.4	239.4	237.4	240.2	238.7	235.9	234.8	234.0	234.5	238.7	239.2	240.0	238.5	240.8	242.1		
Maximum Speed Value: 63 km/h on Jun 15 17:00																								Minimum Speed Value: 0 km/h on Jun 27 06:00		
Maximum Daily Speed Average: 50.7 km/h on Jun 15																								Minimum Daily Speed Average: 1.6 km/h on Jun 28		
Maximum Diurnal Speed Average: 16.1 km/h at hour 10																								Minimum Diurnal Speed Average: 5.4 km/h at hour 1		
Monthly Average Velocity: 11.09 km/h 247.96 deg																								Speed Percentiles: P ₁ = 0.3 P ₁₀ = 2.0 Q ₁ = 4.8 Median = 10.6 Q ₃ = 19.0 P ₉₀ = 30.2 P ₉₉ = 58.8		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
N - Not Valid																										
Frequency Distribution																										
		Speed Range (km/h)																								
Direction		0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																		
North		16	9	2	0	0	0	27																		
NorthEast		42	18	2	0	0	0	62																		
East		23	11	9	0	0	0	43																		
SouthEast		10	9	0	0	0	0	19																		
South		43	17	2	0	1	0	63																		
SouthWest		18	44	61	40	53	26	242																		
West		23	49	79	34	13	6	204																		
NorthWest		14	24	15	5	1	0	59																		
Total		189	181	170	79	68	32	719																		

Wind Rose

Wind Speed (WS) (km/h)
Evergreen Park - June 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - June 2016

Maximum Speed: 63 km/h on Jun 15 17:00																				Maximum Daily Speed Average: 51.1 km/h on Jun 15					Hours in Service: 720	
Minimum Speed: 0 km/h on Jun 27 06:00																				Minimum Daily Speed Average: 6.0 km/h on Jun 29					Hours of Data: 719	
Maximum Diurnal Speed Average: 21.9 km/h at hour 15																				Minimum Diurnal Speed Average: 8.1 km/h at hour 3					Hours of Missing Data: 1	
Monthly Average Speed: 14.76 km/h																				Percentiles: P ₁ = 0.8 P ₁₀ = 2.7 Q ₁ = 5.7 Median = 11.7 Q ₃ = 19.9 P ₉₀ = 31.5 P ₉₉ = 59.4					Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	5	11	15	7	6	9	9	12	12	16	16	18	17	19	21	14	14	7	4	4	9	6	3	2	10.7	21.1
2-Jun	2	2	3	3	2	5	10	12	8	4	8	12	12	7	14	14	20	32	33	31	26	22	16	14	13.0	33.2
3-Jun	15	20	8	7	9	4	11	26	25	30	27	22	26	29	32	31	32	34	28	25	27	18	16	13	21.4	33.6
4-Jun	14	7	19	21	24	17	18	32	31	36	33	33	39	36	33	32	31	31	22	19	17	12	5	6	23.6	39.0
5-Jun	6	6	4	3	2	4	9	12	10	8	6	8	9	9	9	8	9	12	8	6	4	3	3	3	6.7	11.8
6-Jun	3	2	1	1	1	1	1	6	11	12	13	15	21	19	18	22	29	25	24	26	24	18	17	13	13.5	29.1
7-Jun	10	3	3	5	6	7	8	5	11	19	20	21	19	18	21	19	14	9	8	4	2	3	3	1	9.9	21.4
8-Jun	4	2	1	6	12	7	4	6	7	7	11	14	10	10	14	18	12	10	6	7	8	5	3	7	7.9	18.1
9-Jun	4	5	2	6	10	11	15	19	19	14	16	4	10	9	14	12	8	8	11	7	11	9	6	6	9.8	18.8
10-Jun	5	4	1	3	1	1	2	5	9	9	11	15	17	16	20	18	15	15	11	8	10	9	8	9	9.3	20.1
11-Jun	6	8	7	5	4	3	3	3	8	12	14	24	24	24	30	29	32	34	27	21	14	10	13	18	15.6	34.0
12-Jun	17	12	9	7	9	7	14	37	44	42	38	43	47	50	54	46	43	42	41	38	34	27	12	21	30.6	53.7
13-Jun	13	25	16	22	22	26	30	30	20	24	23	23	22	19	19	15	14	9	9	4	4	3	9	10	17.2	30.0
14-Jun	3	2	3	4	8	6	2	10	8	14	N	14	15	13	15	15	12	13	11	18	20	21	16	20	11.4	20.7
15-Jun	30	37	39	38	40	45	42	51	51	54	51	57	61	61	60	61	63	59	63	57	57	56	50	46	51.1	63.5
16-Jun	44	38	34	35	33	33	34	32	33	35	33	32	35	36	32	30	27	28	26	20	16	18	21	19	30.1	43.6
17-Jun	19	19	19	17	16	16	16	16	19	20	22	25	29	30	31	36	34	31	29	25	22	13	12	4	21.7	36.3
18-Jun	3	5	5	3	4	3	7	3	11	16	23	18	17	18	18	16	16	9	11	5	1	12	7	10.2	22.6	
19-Jun	3	4	8	9	13	13	10	11	14	13	20	23	33	24	14	21	22	19	15	10	6	4	3	3	13.0	32.7
20-Jun	3	2	3	1	2	1	2	14	17	15	13	7	8	8	11	10	8	11	12	8	5	2	2	3	7.1	17.3
21-Jun	5	4	2	10	13	15	14	14	16	20	19	17	18	16	16	20	23	19	19	14	11	6	5	5	13.3	23.4
22-Jun	4	6	7	4	2	1	5	5	7	18	19	18	15	28	29	19	30	31	23	12	13	9	11	8	13.4	30.6
23-Jun	7	7	9	8	9	9	12	14	9	9	8	8	8	7	10	10	5	3	5	9	1	5	3	1	7.3	13.8
24-Jun	2	6	6	9	5	7	11	11	13	15	16	19	26	21	16	17	12	14	9	13	16	9	7	7	11.9	26.1
25-Jun	6	4	5	8	7	5	4	12	22	24	29	31	32	31	32	30	27	23	23	28	20	13	6	12	18.1	32.1
26-Jun	5	9	7	7	4	10	18	17	23	30	30	28	24	25	26	27	22	21	21	21	18	14	10	10	17.8	30.2
27-Jun	2	4	2	2	1	0	5	12	14	15	12	10	12	13	11	9	9	6	7	5	3	1	1	1	6.6	14.9
28-Jun	1	1	1	1	2	1	2	2	4	5	6	8	10	12	11	8	11	19	17	16	4	1	0	1	6.0	19.3
29-Jun	1	3	2	2	2	2	3	4	6	8	6	7	12	14	12	6	21	5	6	6	8	3	4	3	6.0	21.0
30-Jun	2	3	5	6	5	5	8	8	12	14	15	17	17	19	16	12	8	5	4	5	5	5	3	2	8.4	19.1
																									Diurnal Average	
																									Diurnal Maximum	
N - Not Valid																										
All monthly, daily, and diurnal averages have been calculated using scalar methods																										

N - Not Valid

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

Hourly Standard Deviations

Wind Direction (WD) - deg
Evergreen Park - June 2016

Maximum Value: 98.8 deg on Jun 20 16:00																		Hours in Service: 720							
Minimum Value: 5.3 deg on Jun 3 23:00																		Hours of Data: 719							
Percentiles: P ₁ = 6.3 P ₁₀ = 8.4 Q ₁ = 12.7 Median = 21.1 Q ₃ = 37.8 P ₉₀ = 65.9 P ₉₉ = 92.0																		Hours of Missing Data: 1							
																		Hours of Calibration: 0							
																		Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Jun	86	49	17	15	29	12	20	17	21	16	23	30	22	30	23	38	43	61	49	61	44	43	72	95	95.3
2-Jun	40	91	86	28	46	56	24	20	16	60	34	43	25	38	21	11	23	12	11	9	8	11	11	11	91.5
3-Jun	9	7	13	23	10	67	30	10	12	12	15	20	20	15	17	14	15	13	13	12	8	11	5	6	67.0
4-Jun	6	46	10	7	7	11	18	8	11	11	14	15	14	14	16	15	13	13	18	15	8	9	26	29	46.3
5-Jun	13	13	32	41	86	31	24	22	15	24	73	82	64	55	61	66	68	30	23	24	19	19	17	11	86.4
6-Jun	16	58	73	37	83	80	72	60	14	16	20	15	12	11	23	20	14	15	15	12	13	14	12	12	82.9
7-Jun	14	63	48	18	14	13	41	35	30	25	27	25	37	40	24	24	33	36	30	15	32	10	16	77	77.3
8-Jun	73	21	59	63	35	66	78	26	25	31	23	20	27	28	42	21	25	24	38	21	23	28	34	16	77.6
9-Jun	27	24	52	44	16	20	8	10	19	16	29	37	28	32	17	17	20	15	10	24	13	16	15	18	52.2
10-Jun	39	53	56	43	48	44	30	28	26	39	30	23	26	24	25	23	25	20	23	44	15	17	21	37	55.8
11-Jun	22	21	27	19	22	36	44	71	34	15	12	9	11	11	7	9	7	9	12	8	16	16	9	10	71.3
12-Jun	8	17	18	17	18	18	11	6	8	10	9	11	10	8	10	10	11	12	11	10	9	11	33	10	32.7
13-Jun	17	9	11	11	8	8	7	8	18	14	17	18	20	29	33	37	43	66	39	52	20	34	15	20	66.5
14-Jun	53	92	57	36	32	57	56	20	32	17	N	23	30	23	26	23	29	28	22	16	27	7	9	14	92.3
15-Jun	9	6	7	8	9	7	7	7	7	6	7	7	7	8	5	7	7	7	7	7	6	7	6	7	8.8
16-Jun	7	7	7	8	7	6	7	7	8	9	8	7	8	8	7	8	8	7	8	35	17	12	12	11	35.1
17-Jun	12	10	10	13	13	9	11	13	14	15	15	12	13	12	14	13	13	14	14	9	7	11	8	55	54.9
18-Jun	85	12	54	60	36	57	18	87	32	30	18	25	25	30	24	30	29	28	24	29	42	74	37	33	86.5
19-Jun	40	93	25	23	14	13	12	11	12	19	23	19	13	19	31	18	19	18	25	23	29	12	34	47	92.8
20-Jun	22	80	62	75	25	88	63	9	10	16	24	69	70	74	59	99	95	44	28	24	19	12	15	14	98.8
21-Jun	17	81	85	29	8	9	16	18	18	17	24	26	29	27	29	23	17	20	13	19	64	71	32	52	85.4
22-Jun	42	38	12	61	73	58	33	25	44	19	24	26	31	25	15	13	13	14	15	24	9	8	8	35	73.2
23-Jun	34	26	15	21	14	16	19	14	30	45	63	54	42	63	49	72	77	45	75	74	65	89	49	68	89.3
24-Jun	22	32	25	13	29	18	12	15	20	18	11	11	10	13	21	19	32	24	18	14	11	16	13	12	32.0
25-Jun	21	19	19	19	20	17	33	23	16	17	15	12	12	16	12	15	15	19	14	9	10	27	24	7	33.0
26-Jun	17	11	8	15	28	13	7	11	9	12	12	16	26	21	18	15	19	19	13	10	8	7	8	21	28.4
27-Jun	50	48	75	48	58	89	31	25	19	18	25	52	48	40	64	64	67	74	49	25	18	78	58	75	89.1
28-Jun	78	83	88	85	88	98	56	63	49	58	55	79	80	42	46	59	77	18	22	15	78	73	70	62	98.4
29-Jun	90	51	77	79	84	51	21	68	34	42	33	76	57	37	31	29	65	60	31	34	30	39	59	37	90.2
30-Jun	22	37	23	22	13	60	68	76	47	25	14	16	18	22	11	30	33	44	64	28	93	48	71	41	93.0
	90.2	92.8	88.4	85.4	88.4	98.4	77.6	86.5	48.5	59.5	72.6	81.6	80.1	73.9	63.7	98.8	94.7	74.1	75.4	73.8	93.0	89.3	71.6	95.3	
N - Not Valid																									

PAZA

Smoky Heights Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

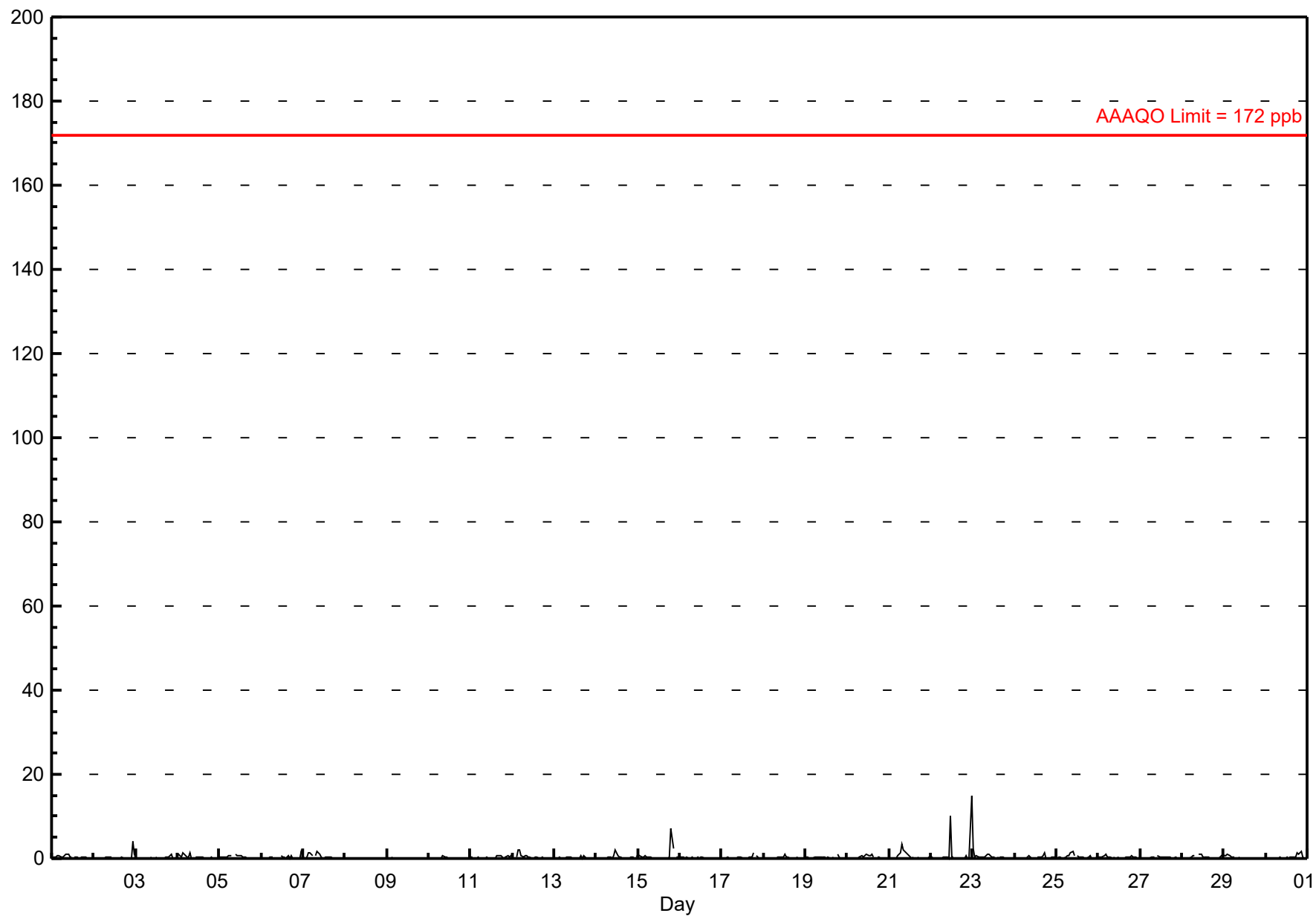
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 15.0 ppb on Jun 23 00:00 Maximum Daily Average: 1.2 ppb on Jun 22																								Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0		
Minimum Value: 0 ppb on Jun 2 07:00 Maximum Diurnal Average: 0.8 ppb at hour 24 Monthly Average: 0.33 ppb																								Minimum Daily Average: 0.0 ppb on Jun 8 Minimum Diurnal Average: 0.1 ppb at hour 22 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.7 P ₉₉ = 2.3		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	0	0	0	1	1	0	0	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
2-Jun	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	4	1	0.3	4.0
3-Jun	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.9
4-Jun	1	1	0	1	1	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.4
5-Jun	0	0	0	0	0	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9
6-Jun	0	0	0	0	0	0	0	A	C	C	C	1	0	0	0	1	0	1	0	0	0	0	0	2	0.3	1.6
7-Jun	0	0	0	1	1	1	A	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.8
8-Jun	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
9-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
10-Jun	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
11-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	1	0.3	0.8
12-Jun	1	A	0	2	2	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.2
13-Jun	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	A	0.2	0.7
14-Jun	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	A	0	0.3	1.9
15-Jun	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	2	A	0	0	0.7	7.1
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.3
17-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	A	1	0	0	0	0.2	1.5
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	A	0	0	0	0	0.2	1.1
19-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0.2	0.9
20-Jun	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0.3	1.1
21-Jun	0	0	0	0	0	1	2	3	2	2	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0.6	3.4
22-Jun	0	0	0	0	0	0	0	0	0	0	0	10	0	0	A	0	0	0	0	0	1	0	0	15	1.2	15.0
23-Jun	2	0	1	0	0	0	0	0	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	2.3
24-Jun	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	1	1	0	0	0	0	0	0	0.3	1.3
25-Jun	0	0	0	0	0	0	1	1	1	2	1	A	1	0	0	0	0	0	0	1	0	0	0	0	0.4	1.8
26-Jun	0	0	0	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0.3	1.1
27-Jun	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
28-Jun	0	0	0	0	0	0	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.4	1.2
29-Jun	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
30-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0.3	1.6
0.3 0.2 0.2 0.3 0.3 0.2 0.3 0.5 0.5 0.5 0.4 0.7 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.4 0.3 0.1 0.3 0.8																								Diurnal Average		
2.3 0.8 1.0 2.2 2.1 0.8 1.5 3.4 2.0 1.8 1.2 10.1 1.1 0.7 1.0 0.8 0.7 1.3 1.5 7.1 2.4 0.5 4.0 15.0																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - June 2016



Hourly Maximums

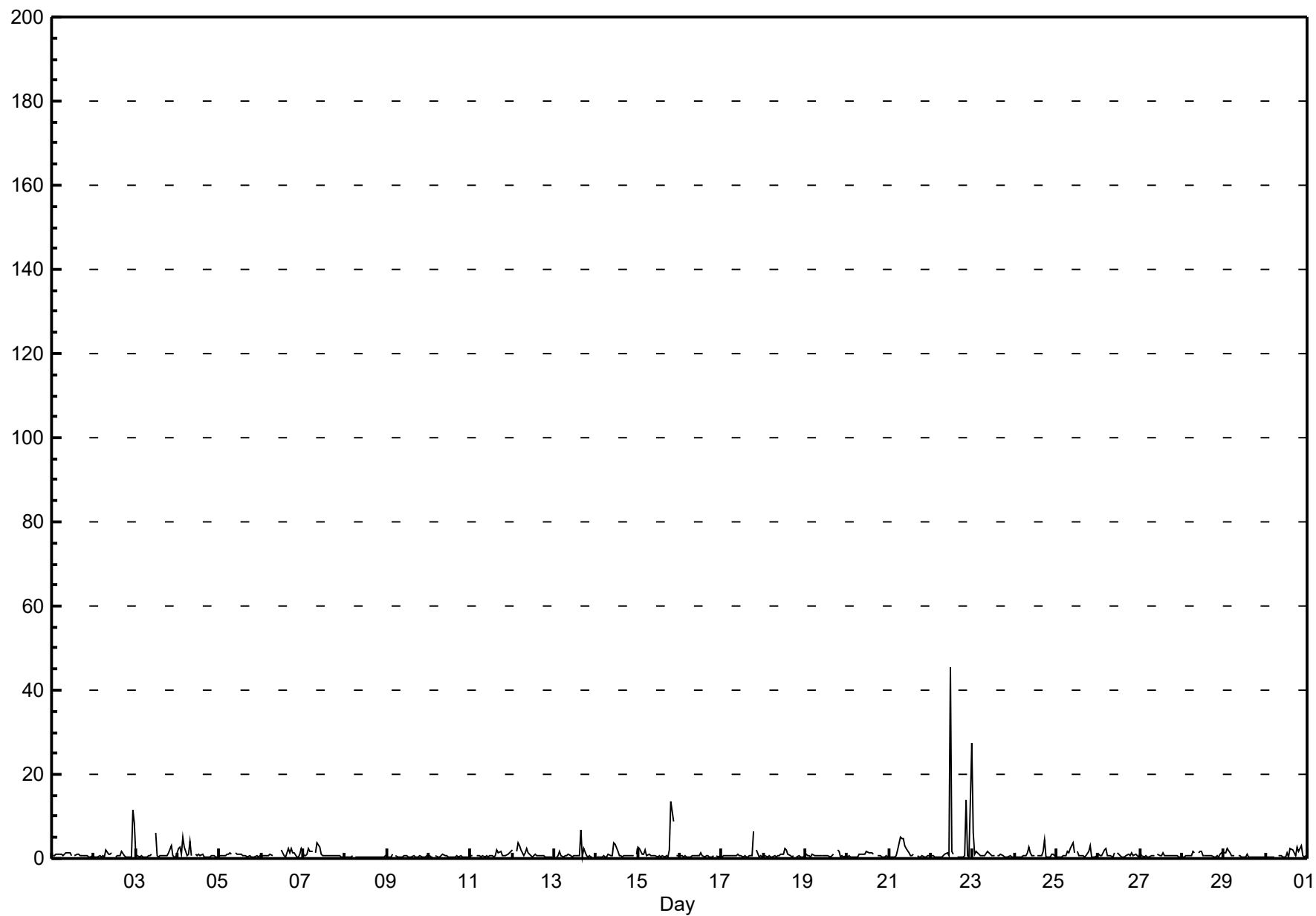
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - June 2016

Maximum Value: 45.3 ppb on Jun 22 12:00																			Maximum Daily Average: 4.3 ppb on Jun 22										Hours in Service: 720	
Minimum Value: 0 ppb on Jun 8 21:00																			Minimum Daily Average: 0.4 ppb on Jun 8										Hours of Data: 686	
Maximum Diurnal Average: 2.7 ppb at hour 12																			Minimum Diurnal Average: 0.6 ppb at hour 22										Hours of Missing Data: 34	
Monthly Average: 1.05 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.9 P ₉₀ = 1.7 P ₉₉ = 8.5										Hours of Calibration: 34	
																			Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Jun	1	1	1	1	1	1	1	1	1	2	1	1	A	1	1	1	1	1	1	1	1	0	0	1	0.9	1.5				
2-Jun	0	0	0	1	0	1	0	2	1	1	1	A	0	1	1	1	2	1	0	0	0	0	12	9	1.5	11.6				
3-Jun	1	1	0	1	0	0	0	1	1	1	A	6	1	0	1	1	1	1	1	1	3	1	0	0	1.0	5.9				
4-Jun	2	3	1	5	3	1	1	4	1	A	1	1	1	1	1	0	0	0	0	1	1	1	0	0	1.3	5.1				
5-Jun	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	0	0	1	1	0	1	0.8	1.5				
6-Jun	0	1	1	1	1	1	1	A	C	C	C	2	1	1	0	2	1	2	1	1	0	0	1	2	1.1	2.4				
7-Jun	1	1	1	2	2	2	A	1	4	3	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1.1	3.7				
8-Jun	0	0	1	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.4	0.6				
9-Jun	0	0	0	1	A	1	0	0	0	0	1	1	0	0	0	1	0	0	0	1	0	0	0	1	0.5	1.1				
10-Jun	1	0	0	A	1	0	0	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0.5	1.1				
11-Jun	1	1	A	1	1	1	1	1	0	1	0	1	1	0	1	2	1	2	1	1	1	1	1	2	0.8	2.0				
12-Jun	2	A	2	4	3	2	1	1	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1.2	3.8				
13-Jun	A	0	1	2	1	0	1	1	1	1	0	1	1	1	1	7	0	3	1	0	1	0	0	A	1.0	6.8				
14-Jun	0	0	0	0	1	0	0	1	1	1	4	3	2	1	1	0	1	1	1	1	1	1	A	1	0.9	3.7				
15-Jun	3	2	1	1	2	1	1	1	1	1	1	1	1	0	1	1	1	0	2	14	9	A	1	1	1.9	13.6				
16-Jun	1	1	1	1	0	0	0	1	1	1	1	1	1	1	0	1	1	0	0	1	A	1	0	1	0.6	1.2				
17-Jun	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	7	A	2	0	1	0	0.9	6.5				
18-Jun	1	1	0	1	0	0	1	0	1	1	1	1	2	2	1	1	0	1	A	A	1	1	0	0	0.7	2.4				
19-Jun	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	A	2	2	0	1	1	1	0.8	2.1				
20-Jun	0	1	0	0	0	0	0	1	1	1	1	2	1	1	1	1	A	1	1	1	0	0	1	0	0.8	1.7				
21-Jun	0	0	0	0	1	2	5	5	5	3	2	1	1	1	1	A	1	0	0	1	0	0	1	1	1.4	4.9				
22-Jun	1	1	0	0	0	0	1	1	1	1	1	45	2	1	A	0	0	0	0	1	14	1	0	27	4.3	45.3				
23-Jun	6	1	2	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	0	1	0	1	0	0	1.0	5.9				
24-Jun	0	0	0	1	0	1	1	1	3	1	1	1	A	1	1	1	2	4	0	0	0	1	1	1	1.0	4.4				
25-Jun	1	0	0	0	1	1	2	1	2	4	1	A	2	1	1	1	0	1	2	3	0	0	0	1	1.1	3.8				
26-Jun	1	1	1	2	2	1	1	1	0	2	A	1	1	0	0	0	1	1	1	1	1	1	1	0	0.9	2.5				
27-Jun	1	1	1	1	0	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.7	1.3				
28-Jun	0	0	1	1	1	1	2	1	A	1	2	2	1	1	1	1	1	0	0	0	1	0	1	2	0.8	1.8				
29-Jun	1	1	2	1	1	1	1	A	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0.7	2.5				
30-Jun	0	0	0	0	0	0	A	1	1	1	0	0	1	0	2	2	2	1	3	2	3	1	0	1	1.0	3.0				
																								Diurnal Average						
																								Diurnal Maximum						
1.0 0.7 0.7 1.1 0.9 0.7 0.8 1.1 1.2 1.2 1.0 2.7 0.9 0.7 0.7 1.0 0.8 0.9 1.0 1.2 1.5 0.6 1.0 1.9																														
5.9 2.7 2.5 5.1 3.0 2.1 4.9 4.9 4.8 3.8 3.7 45.3 2.4 1.9 2.4 6.8 1.6 4.4 6.5 13.6 13.9 1.1 11.6 27.5																														
C - Calibration A - Automated Daily Zero Span																														

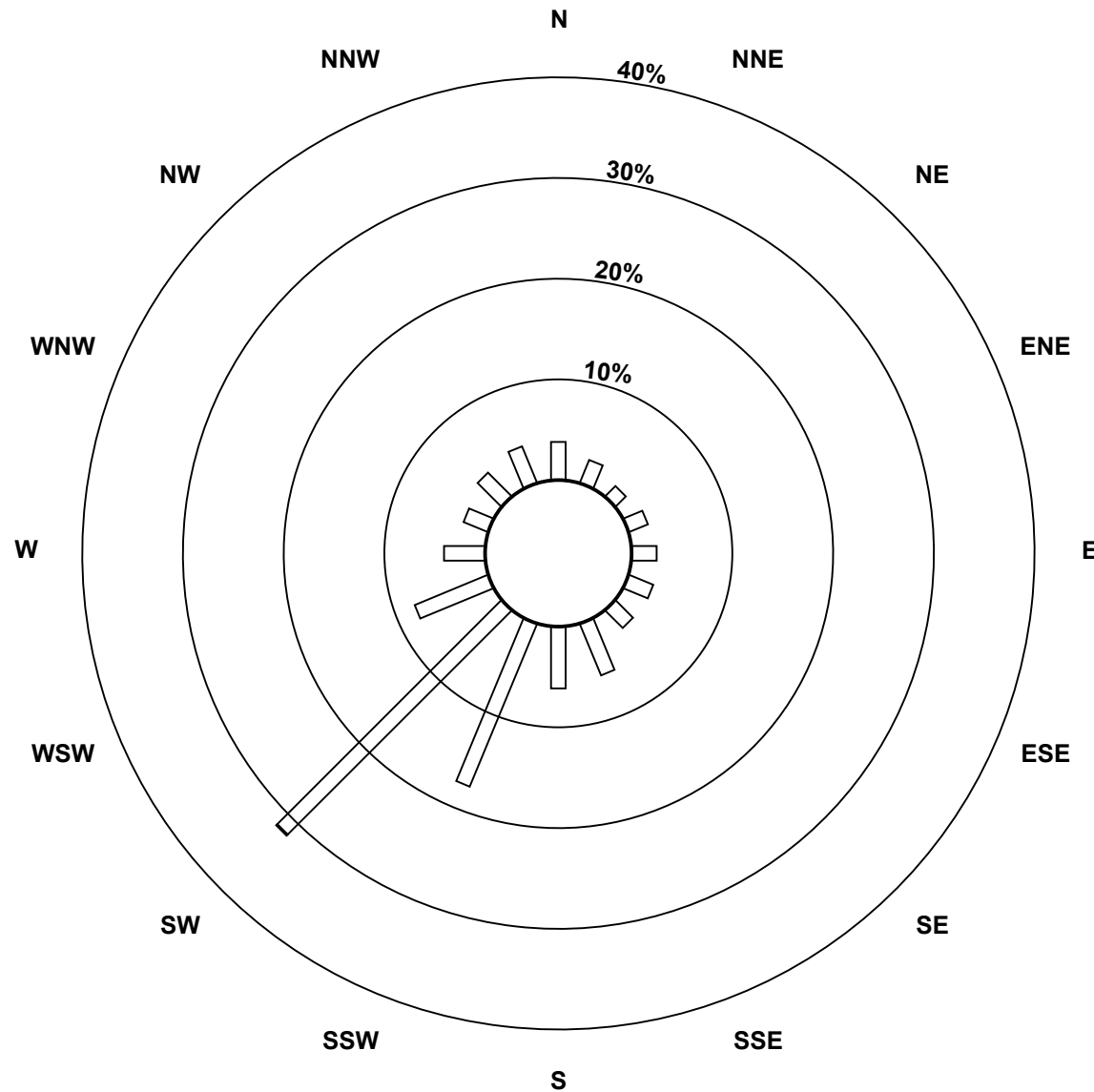
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - June 2016

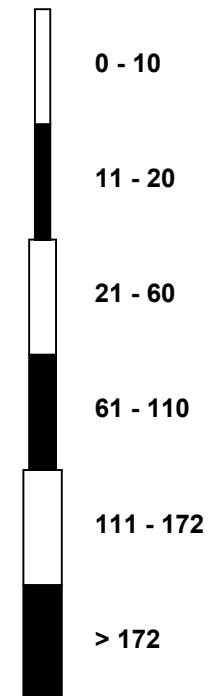


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - June 2016

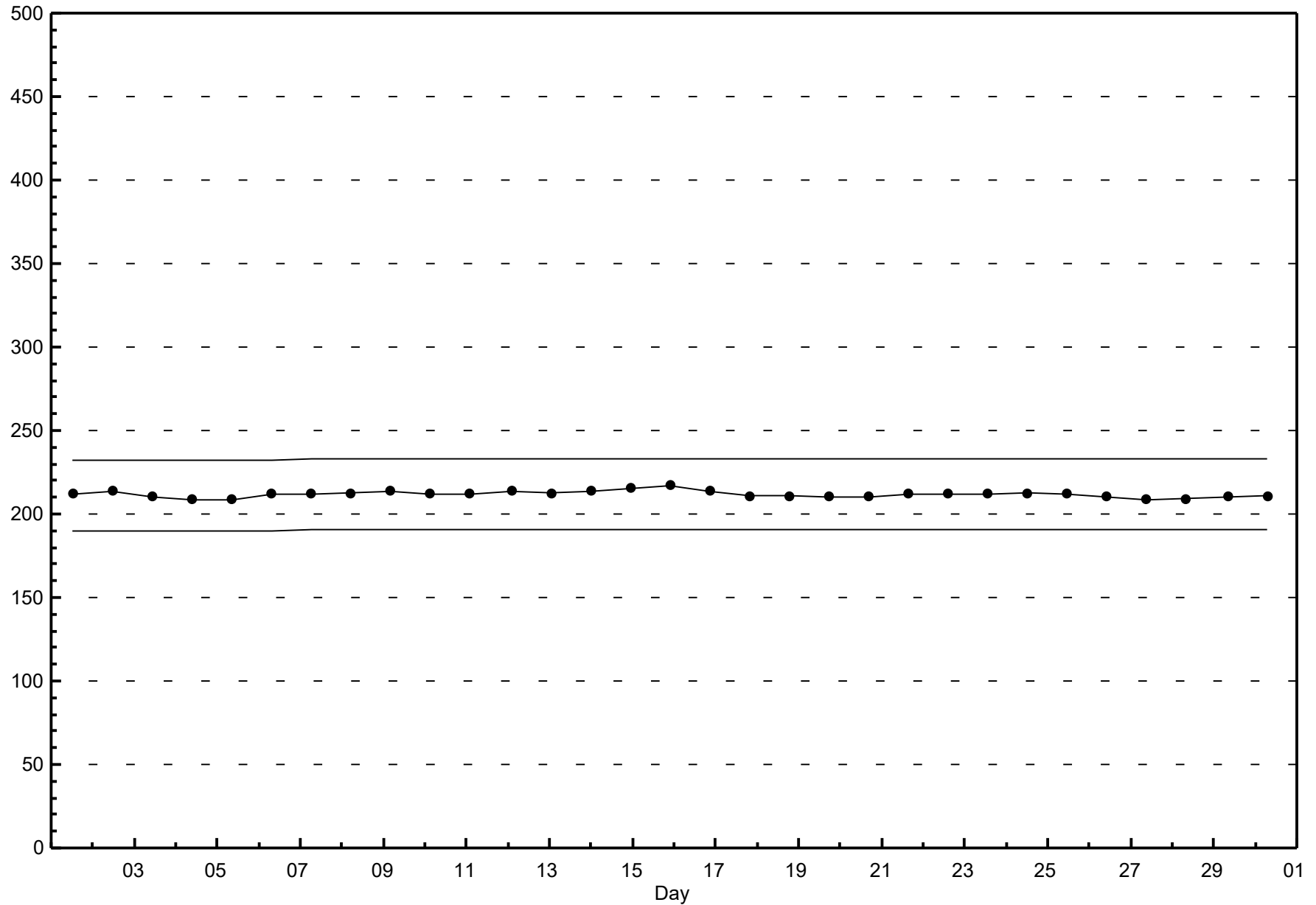


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - June 2016



Hourly Averages

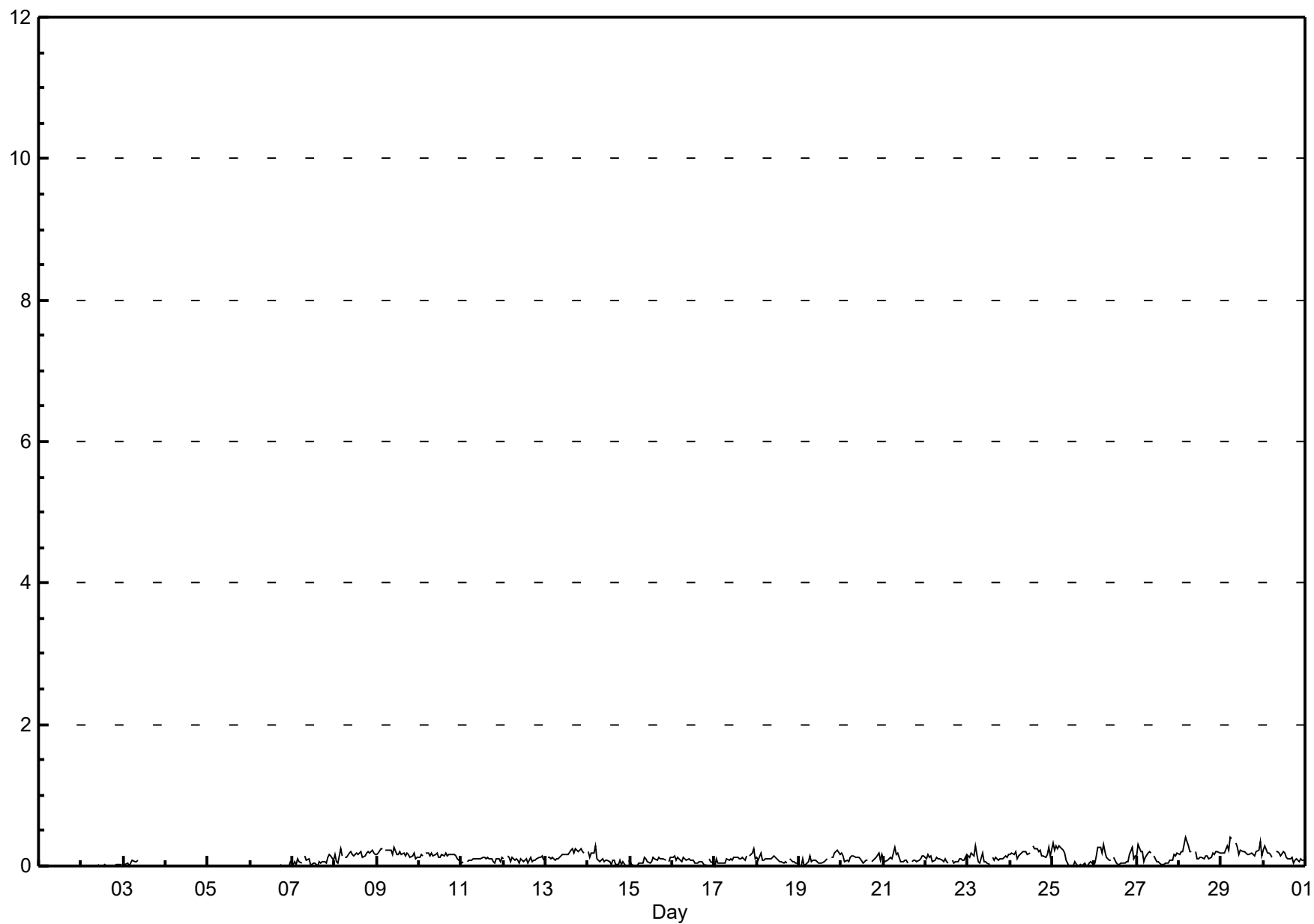
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																								Hours in Service: 720			
Maximum Value: 0.4 ppb on Jun 29 06:00																								Maximum Daily Average: 0.2 ppb on Jun 29		Hours of Data: 613	
Minimum Value: 0 ppb on Jun 1 01:00																								Hours of Missing Data: 107			
Minimum Daily Average: 0.0 ppb on Jun 1																								Hours of Calibration: 35			
Maximum Diurnal Average: 0.1 ppb at hour 7																								Percent Operational Time: 90.0			
Monthly Average: 0.11 ppb																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.3			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
2-Jun	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	
3-Jun	0	0	0	0	0	0	0	0	0	M	M	M	M	M	M	M	M	M	M	N	N	N	N	N	--	0.1	
4-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
5-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--	
6-Jun	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	--	0.1	
7-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
8-Jun	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	
9-Jun	0	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	
10-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2	
11-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	
12-Jun	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	0.1	
13-Jun	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	
14-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.3	
15-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.1	
16-Jun	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	
17-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2	
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.2	
19-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.2	
20-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.2	
21-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.3	
22-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.1	0.2	
23-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
24-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
25-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
26-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
27-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
28-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
29-Jun	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
30-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
0.1 0.1																								Diurnal Average			
0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.2 0.3 0.3 0.3 0.2 0.2 0.3 0.2 0.3 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.2																								Diurnal Maximum			
C - Calibration M - Maintenance N - Not Valid A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																											

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - June 2016



Hourly Maximums

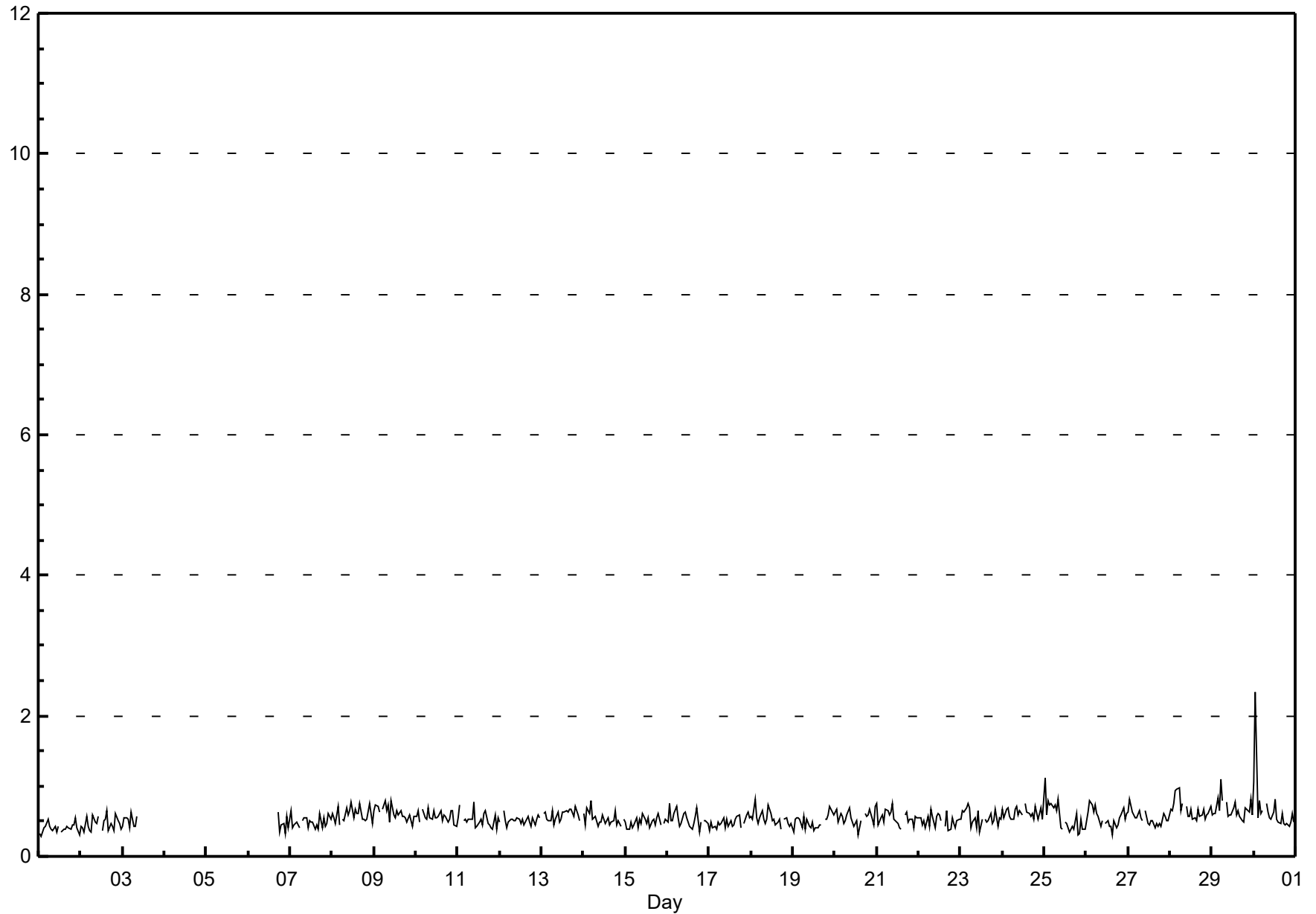
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - June 2016

Maximum Value: 2.3 ppb on Jun 30 02:00																				Maximum Daily Average: 0.7 ppb on Jun 30										Hours in Service: 720	
Minimum Value: 0 ppb on Jun 1 02:00																				Minimum Daily Average: 0.4 ppb on Jun 1										Hours of Data: 613	
Maximum Diurnal Average: 0.6 ppb at hour 2																				Minimum Diurnal Average: 0.5 ppb at hour 19										Hours of Missing Data: 107	
Monthly Average: 0.55 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.7 P ₉₉ = 0.9										Hours of Calibration: 35	
																														Percent Operational Time: 90.0	
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-Jun	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0.4	0.6					
2-Jun	0	0	0	1	0	0	0	1	0	0	1	A	0	1	1	1	0	0	0	0	1	1	0	0	0.5	0.7					
3-Jun	0	1	1	1	0	1	0	0	1	M	M	M	M	M	M	M	M	M	M	N	N	N	N	N	--	0.6					
4-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--					
5-Jun	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	--					
6-Jun	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	C	1	0	0	0	0	1	0	--	0.6					
7-Jun	1	0	0	0	0	0	A	1	1	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	0.5	0.7					
8-Jun	1	1	0	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.6	0.8					
9-Jun	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0.6	0.8					
10-Jun	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0.6	0.7					
11-Jun	1	1	A	1	1	0	1	1	1	1	0	0	0	1	0	1	1	0	0	0	0	1	0	1	0.5	0.8					
12-Jun	0	A	1	1	0	0	1	1	1	1	1	1	0	1	0	1	1	0	0	1	0	1	1	1	0.5	0.7					
13-Jun	A	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	0.6	0.7					
14-Jun	1	0	1	1	1	1	1	1	0	0	0	1	0	1	1	0	0	1	1	0	1	0	A	1	0.5	0.8					
15-Jun	0	0	0	0	0	0	1	0	1	0	1	1	0	1	0	1	1	0	1	1	0	A	0	1	0.5	0.6					
16-Jun	0	1	1	1	1	1	1	0	0	1	1	1	0	0	0	0	1	1	0	0	A	1	1	0	0.5	0.7					
17-Jun	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	1	1	0	A	0	1	1	1	0.5	0.6					
18-Jun	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0	0	1	0	A	1	1	0	0	0	0.5	0.8					
19-Jun	0	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	A	1	1	1	1	1	1	0.5	0.7					
20-Jun	1	1	0	1	1	0	1	1	1	1	0	0	1	0	0	1	A	1	1	1	1	1	0	1	0.5	0.7					
21-Jun	1	0	1	1	0	1	1	1	1	1	1	0	0	0	0	A	1	1	0	1	1	0	1	1	0.6	0.8					
22-Jun	1	1	0	1	0	1	0	1	1	0	1	1	1	1	A	0	1	0	0	1	0	0	1	1	0.5	0.7					
23-Jun	1	1	1	1	1	1	0	0	1	0	1	0	1	A	1	0	1	1	0	1	1	0	1	1	0.5	0.7					
24-Jun	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8					
25-Jun	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	1	0	0	1	0	0	0.6	1.1					
26-Jun	1	1	1	1	1	1	1	1	0	1	A	0	1	0	0	0	1	0	0	1	1	1	1	1	0.5	0.8					
27-Jun	1	1	1	1	1	1	1	1	1	1	A	1	0	0	1	1	0	0	0	0	1	1	1	1	0.5	0.8					
28-Jun	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					
29-Jun	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.7	1.1					
30-Jun	1	2	1	1	1	1	A	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	1	0	0.7	2.3					
																								Diurnal Average							
																								Diurnal Maximum							
C - Calibration				M - Maintenance				N - Not Valid				A - Automated Daily Zero Span																			

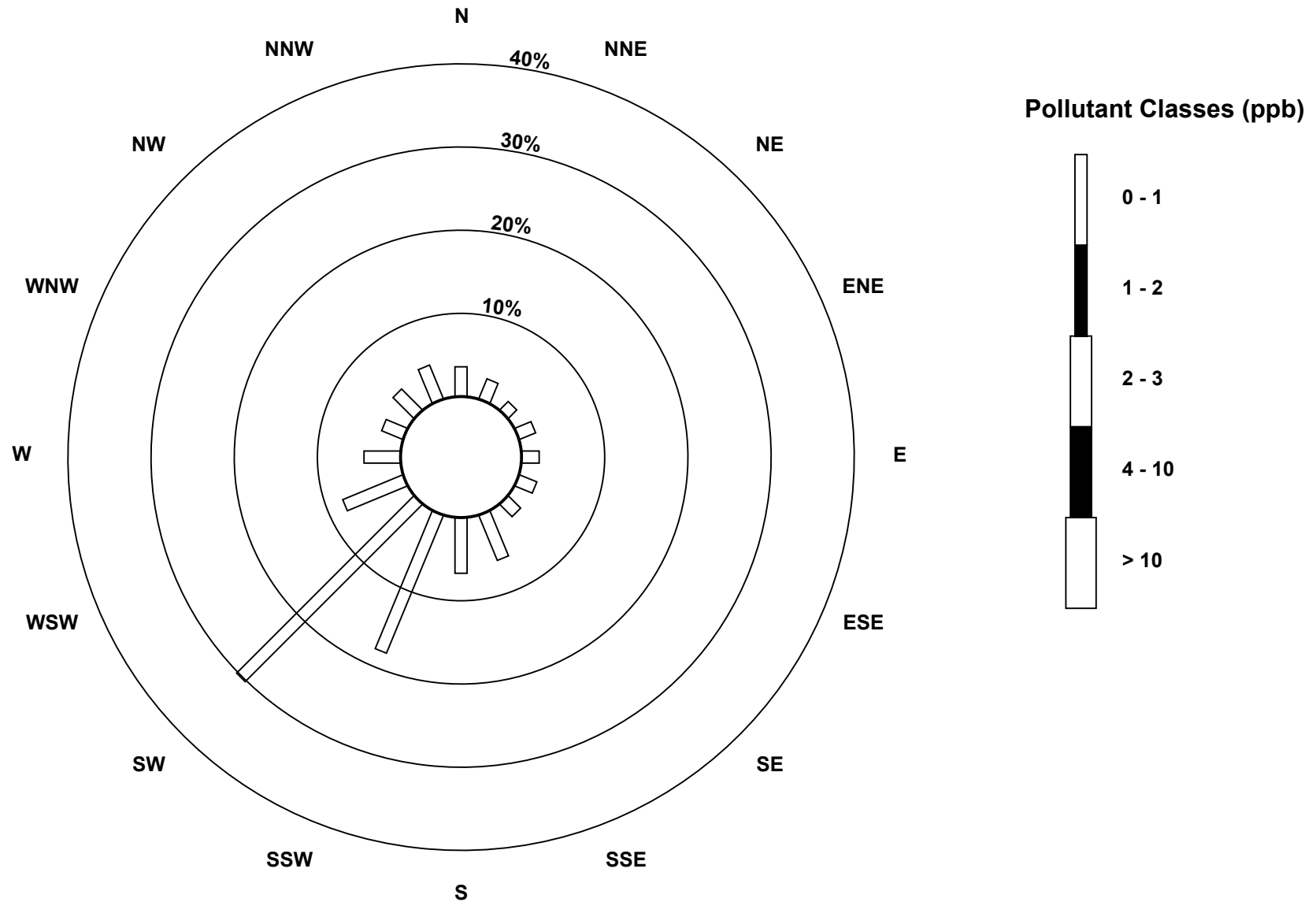
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - June 2016



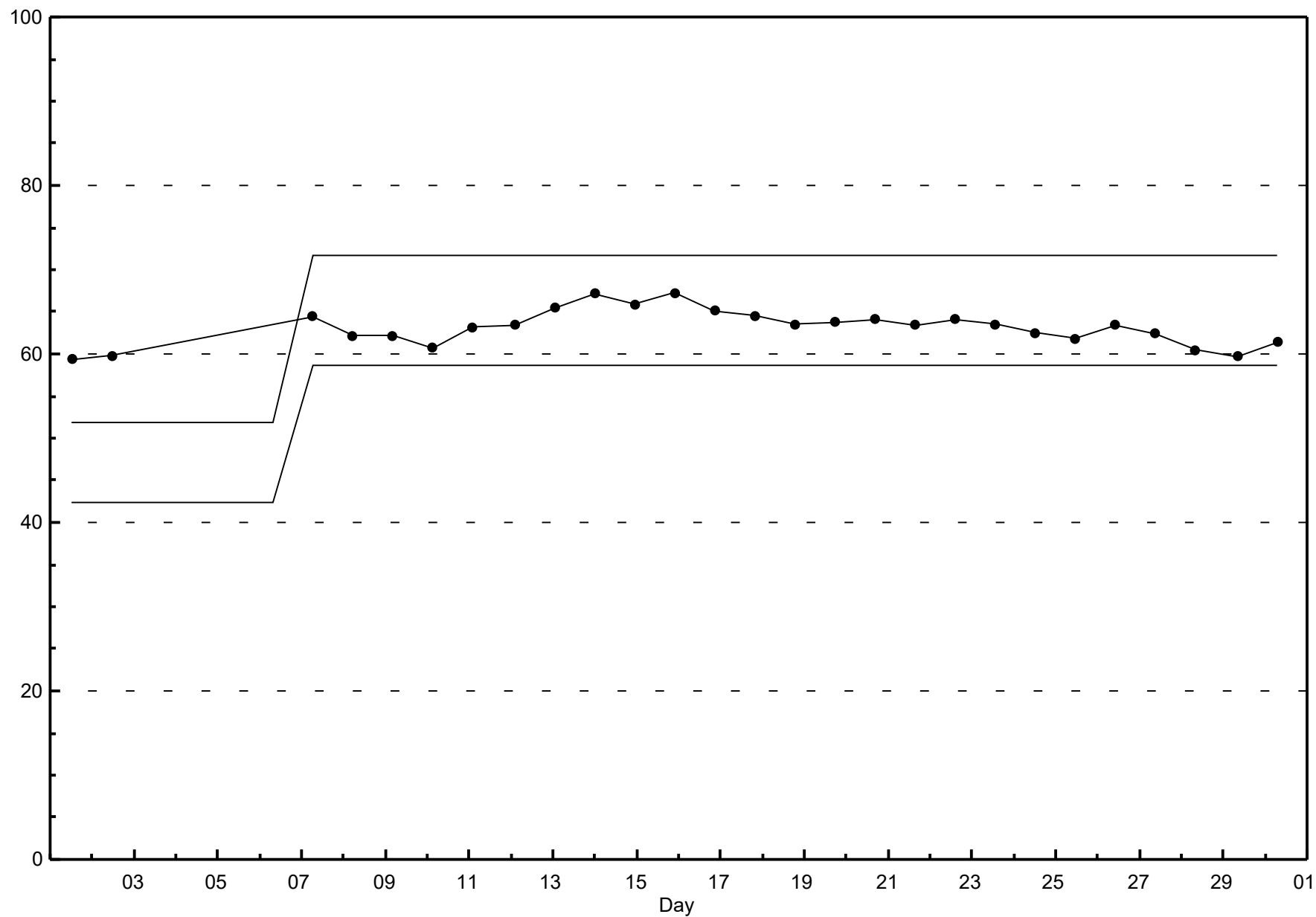
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - June 2016



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - June 2016

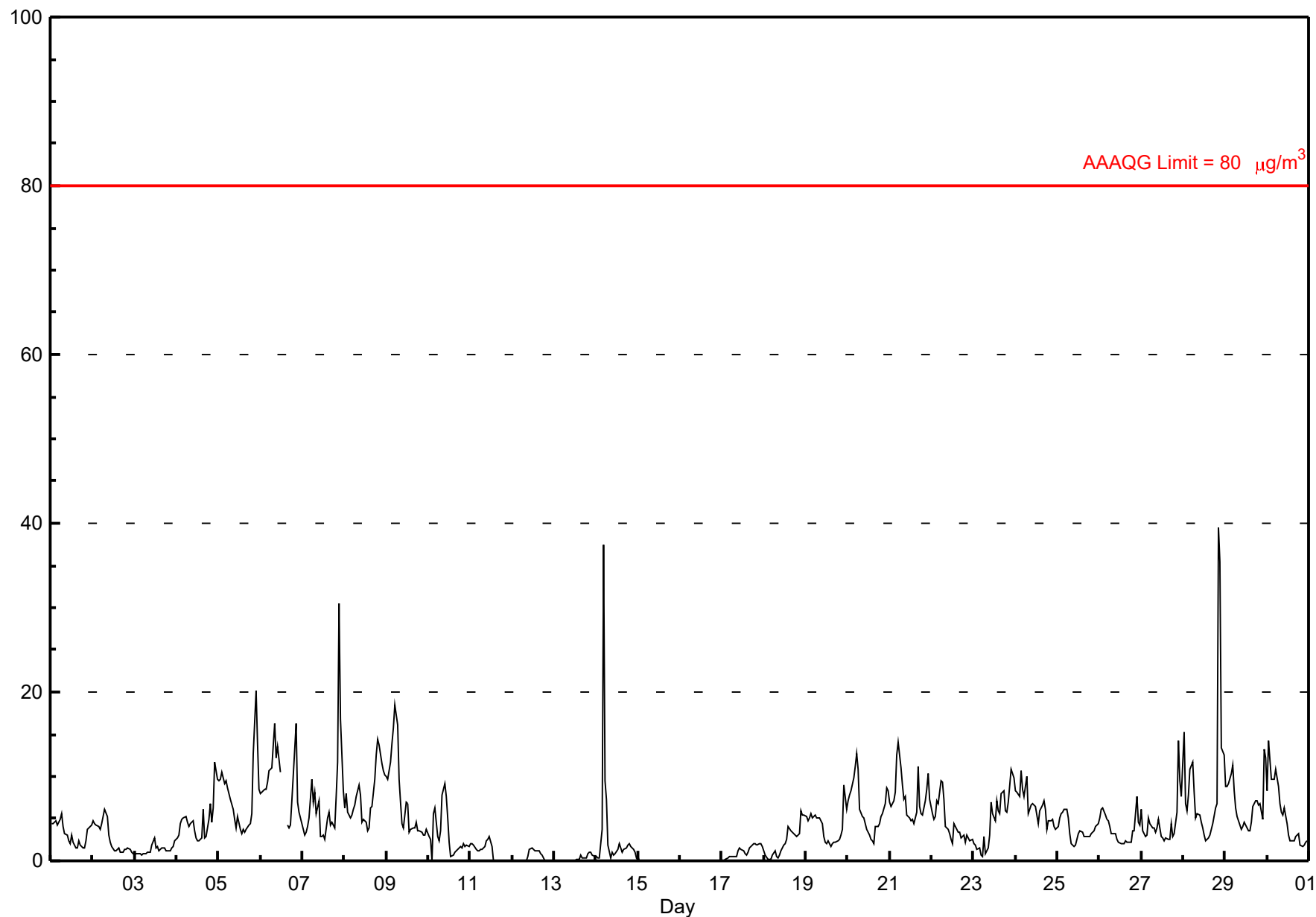


Hourly Averages

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

Smoky Heights - June 2016

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 39.5 µg/m³ on Jun 28 21:00 Maximum Daily Average: 9.3 µg/m³ on Jun 28																								Hours in Service: 720 Hours of Data: 717 Hours of Missing Data: 3 Hours of Calibration: 3 Percent Operational Time: 100.0			
Minimum Value: 0 µg/m³ on Jun 11 14:00 Maximum Diurnal Average: 6.7 µg/m³ at hour 22 Monthly Average: 4.28 µg/m³												Minimum Daily Average: 0.0 µg/m³ on Jun 16 Minimum Diurnal Average: 2.4 µg/m³ at hour 14 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 1.4 Median = 3.4 Q ₃ = 6.0 P ₉₀ = 9.4 P ₉₉ = 15.7															
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-Jun	4	4	5	5	4	5	6	4	3	3	2	2	3	2	2	2	2	2	1	1	2	4	4	4	3.2	5.7	
2-Jun	5	4	4	4	4	4	5	6	5	3	2	2	1	1	1	2	1	1	1	1	1	1	1	1	2.7	6.1	
3-Jun	1	1	1	1	1	1	1	1	1	1	2	3	1	2	1	1	1	1	1	1	1	2	2	2	1.3	2.6	
4-Jun	3	3	4	5	5	5	5	4	4	5	4	3	2	2	3	6	3	3	5	7	5	6	12	10	4.7	11.7	
5-Jun	9	10	10	9	9	9	8	7	6	5	4	5	4	3	4	3	4	4	4	6	13	20	14	8	7.5	20.2	
6-Jun	8	8	8	8	9	11	11	14	16	12	14	11	C	C	C	4	4	4	7	10	16	7	6	5	9.3	16.3	
7-Jun	4	3	3	4	5	10	7	8	6	7	3	3	3	3	5	6	4	5	4	8	12	31	17	8	6.9	30.5	
8-Jun	6	8	6	5	5	6	7	8	9	8	5	5	5	4	4	6	6	10	13	14	14	12	11	10	7.7	14.3	
9-Jun	10	10	12	14	16	18	16	10	7	4	4	7	7	3	4	4	4	5	4	3	3	3	3	4	7.2	18.4	
10-Jun	3	3	0	6	6	3	2	4	8	9	8	5	2	0	1	1	1	1	2	1	2	2	2	2	3.0	9.1	
11-Jun	2	2	2	1	1	1	1	1	2	2	3	3	2	0	0	0	0	0	0	0	0	0	0	0	1.0	2.8	
12-Jun	0	0	0	0	0	0	0	0	0	1	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0.4	1.6	
13-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	0.3	1.0	
14-Jun	0	0	0	4	37	9	7	2	0	1	1	1	1	2	2	1	1	1	2	2	2	1	1	0	3.4	37.5	
15-Jun	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.5	
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
17-Jun	0	0	0	0	1	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	1.1	2.0	
18-Jun	1	1	0	0	0	1	1	1	0	1	1	2	2	3	4	4	3	3	3	3	3	6	5	5	2.2	5.9	
19-Jun	5	5	5	6	5	5	5	5	5	4	3	2	2	2	2	2	2	2	2	3	3	4	9	6	4.0	9.0	
20-Jun	7	8	8	10	11	13	11	6	5	5	4	4	3	2	2	2	4	4	4	5	6	7	9	8	6.2	12.8	
21-Jun	7	6	7	8	12	14	11	9	7	8	6	5	5	5	4	6	11	6	6	5	7	9	10	7	7.6	14.1	
22-Jun	6	5	5	7	7	9	9	7	4	4	3	3	2	4	4	3	3	3	3	2	3	3	2	3	4.4	9.5	
23-Jun	2	2	1	2	1	1	3	1	2	3	7	6	5	7	6	6	8	8	6	6	7	11	10	10	4.9	10.8	
24-Jun	8	8	8	11	8	8	10	6	6	7	7	6	5	4	6	7	7	6	4	5	5	5	4	4	6.4	10.8	
25-Jun	4	5	6	6	6	6	5	3	2	2	2	2	3	4	3	3	3	3	3	3	3	4	4	4	3.7	6.1	
26-Jun	5	6	6	5	5	5	4	3	3	3	2	2	2	2	2	2	2	2	2	4	4	8	5	4	3.7	7.6	
27-Jun	6	4	3	3	5	4	4	4	3	4	5	3	3	2	3	3	3	4	3	3	6	14	9	8	4.5	14.2	
28-Jun	15	7	6	8	11	12	8	5	6	5	5	4	3	2	3	3	4	4	6	7	40	35	13	13	9.3	39.5	
29-Jun	9	9	9	10	11	8	6	5	4	4	4	5	4	4	4	5	6	7	7	7	7	5	13	12	6.9	13.2	
30-Jun	8	14	10	10	10	11	9	7	6	6	6	4	3	2	2	2	3	3	3	2	2	2	2	2	5.4	14.3	
4.7 4.5 4.4 5.0 6.6 6.0 5.4 4.4 4.1 3.9 3.6 3.3 2.6 2.4 2.5 2.9 3.2 3.2 3.3 3.7 5.6 6.7 5.7 4.8																								Diurnal Average			
15.2 14.3 11.8 13.9 37.5 18.4 16.2 13.8 16.3 12.3 13.6 10.5 6.8 7.1 6.0 6.6 11.3 9.6 12.5 14.3 39.5 35.4 16.8 12.6																								Diurnal Maximum			
C - Calibration Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																											



Hourly Maximums

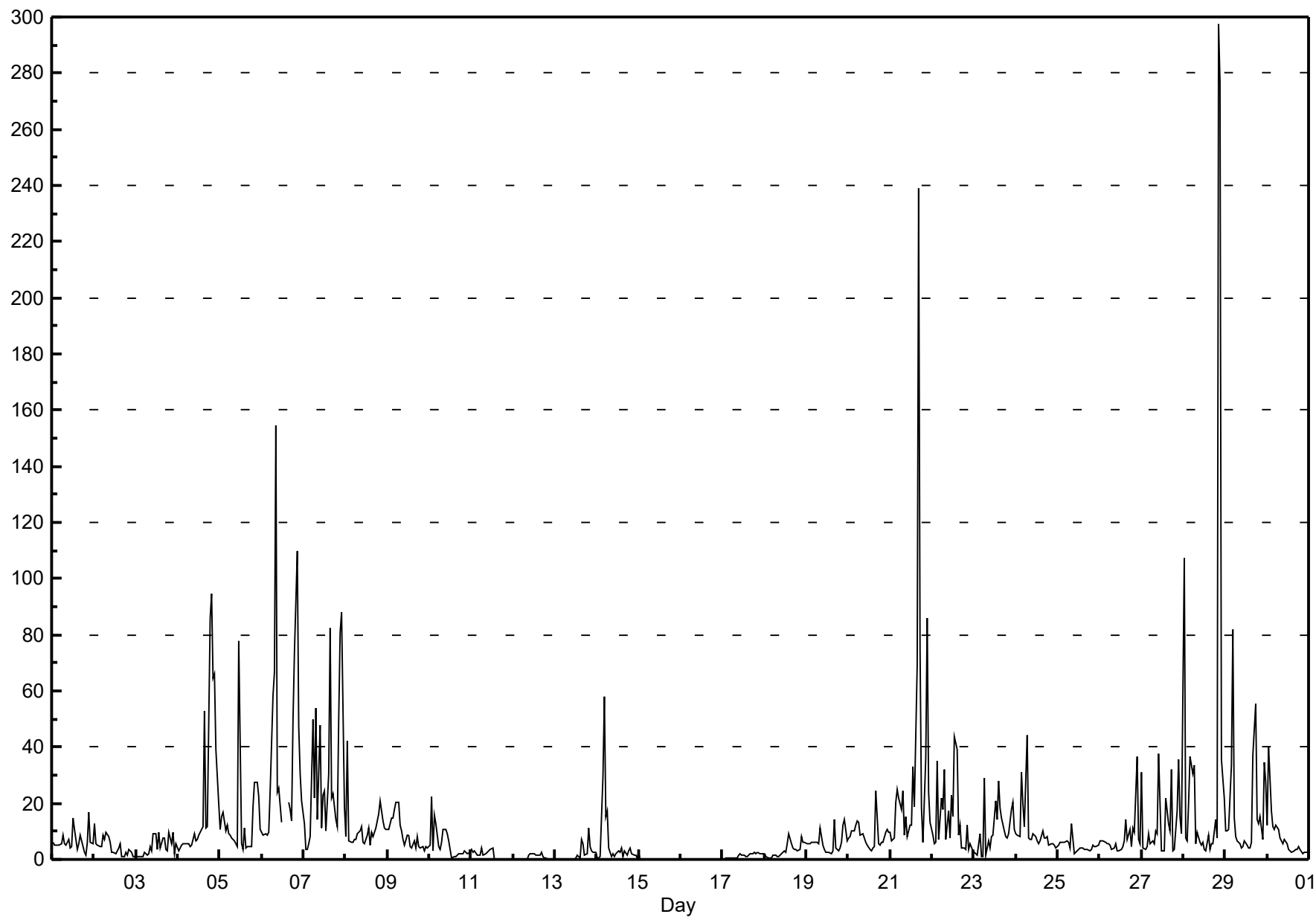
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Smoky Heights - June 2016

Maximum Value: 297.3 μg/m³ on Jun 28 21:00																								Maximum Daily Average: 39.9 μg/m³ on Jun 28										Hours in Service: 720	
Minimum Value: 0 μg/m³ on Jun 11 14:00																								Minimum Daily Average: 0.0 μg/m³ on Jun 16										Hours of Data: 717	
Maximum Diurnal Average: 26.1 μg/m³ at hour 22																								Minimum Diurnal Average: 5.5 μg/m³ at hour 3										Hours of Missing Data: 3	
Monthly Average: 11.01 μg/m³																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 2.1 Median = 5.4 Q ₃ = 10.5 P ₉₀ = 22.6 P ₉₉ = 86.1										Hours of Calibration: 3	
Percent Operational Time: 100.0																																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Jun	6	5	5	5	5	5	9	5	5	7	4	5	15	10	3	5	9	7	3	2	6	17	6	6	6.4	16.6									
2-Jun	13	6	5	5	4	9	7	9	8	6	2	2	2	3	4	5	1	1	3	2	3	2	1	1	4.4	12.9									
3-Jun	1	1	1	1	1	2	1	2	4	3	9	9	3	10	4	8	8	4	3	10	6	10	2	5	4.5	9.7									
4-Jun	3	4	5	5	6	6	6	5	5	9	7	7	9	10	12	53	11	12	86	95	64	66	39	20	22.6	94.7									
5-Jun	11	15	17	10	12	9	9	8	7	5	5	78	6	3	11	4	4	4	5	19	27	27	22	10	13.8	77.9									
6-Jun	9	9	9	9	10	25	59	67	154	24	26	13	C	C	C	20	18	14	50	74	110	47	31	21	37.9	154.4									
7-Jun	13	3	4	6	8	50	22	54	14	48	11	23	25	10	31	83	22	23	14	12	50	81	88	19	29.7	87.9									
8-Jun	8	42	7	6	6	7	7	9	10	12	6	5	9	11	5	10	8	11	14	16	21	14	11	10	11.1	42.5									
9-Jun	11	10	15	15	18	21	21	12	10	7	5	9	9	4	4	7	4	8	4	4	4	3	5	4	8.9	20.5									
10-Jun	5	22	3	16	13	5	4	6	11	11	9	7	4	1	1	1	1	2	2	2	3	3	2	2	5.6	22.2									
11-Jun	3	2	3	2	1	1	4	2	2	3	3	4	4	0	0	0	0	0	0	0	0	0	0	0	1.4	3.9									
12-Jun	0	0	0	0	0	0	0	0	0	1	2	2	2	1	1	1	2	1	0	0	0	0	0	0	0.7	2.4									
13-Jun	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	7	5	2	2	11	5	3	2	3	1.8	11.4									
14-Jun	1	0	1	29	58	15	17	4	1	2	1	2	3	3	4	1	3	2	3	4	2	2	1	1	6.7	57.9									
15-Jun	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	2.4									
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0									
17-Jun	0	0	0	0	1	1	1	1	1	2	2	2	1	1	1	1	2	2	2	2	2	2	2	2	1.4	2.4									
18-Jun	2	1	0	0	0	2	2	1	1	1	2	3	3	5	9	6	4	4	3	3	4	8	6	6	3.2	9.0									
19-Jun	6	6	6	6	6	6	6	5	11	5	4	2	3	3	2	3	14	4	3	4	6	12	14	7	6.0	14.4									
20-Jun	8	8	10	10	12	14	13	9	9	8	6	5	4	3	4	5	24	5	5	6	6	10	10	10	8.5	24.5									
21-Jun	10	7	8	20	25	22	18	24	9	15	8	12	12	33	19	69	239	75	18	6	36	86	24	13	33.7	239.2									
22-Jun	9	6	6	35	7	22	18	32	7	17	8	23	15	44	39	9	12	4	4	3	12	4	6	3	14.4	44.0									
23-Jun	2	2	2	9	1	1	29	1	7	4	8	9	21	14	28	19	15	10	8	8	9	18	20	11	10.7	28.8									
24-Jun	9	9	8	31	20	12	44	8	7	7	9	8	7	5	7	10	8	8	8	5	5	6	5	4	10.4	44.2									
25-Jun	5	6	6	6	6	7	6	4	13	2	2	3	4	4	4	3	3	4	3	4	5	4	4	5	4.7	12.7									
26-Jun	7	7	7	6	5	5	5	4	4	5	3	3	4	4	7	14	7	11	5	11	10	37	7	5	7.6	36.6									
27-Jun	31	4	3	4	9	6	7	5	10	9	38	3	3	3	22	13	10	32	3	4	17	35	15	9	12.4	37.6									
28-Jun	108	8	7	20	36	30	33	6	10	6	5	6	4	3	9	3	5	5	14	8	297	277	36	22	39.9	297.3									
29-Jun	10	10	11	34	82	15	8	7	5	4	4	7	5	4	4	6	37	55	14	13	15	7	34	28	17.5	82.0									
30-Jun	12	40	17	12	10	12	11	8	7	6	7	6	4	3	3	3	3	4	5	4	2	2	2	3	7.7	40.1									
10.1 7.8 5.5 10.1 12.2 10.3 12.1 9.9 11.1 7.7 6.5 8.6 6.2 6.9 8.2 12.3 16.1 10.5 9.5 11.0 24.3 26.1 13.3 7.6																								Diurnal Average											
107.5 42.5 17.3 35.1 82.0 50.1 58.6 66.7 154.4 47.6 37.6 77.9 24.7 44.0 39.3 82.5 239.2 75.0 85.7 94.7 297.3 276.6 87.9 27.6																								Diurnal Maximum											
C - Calibration																																			

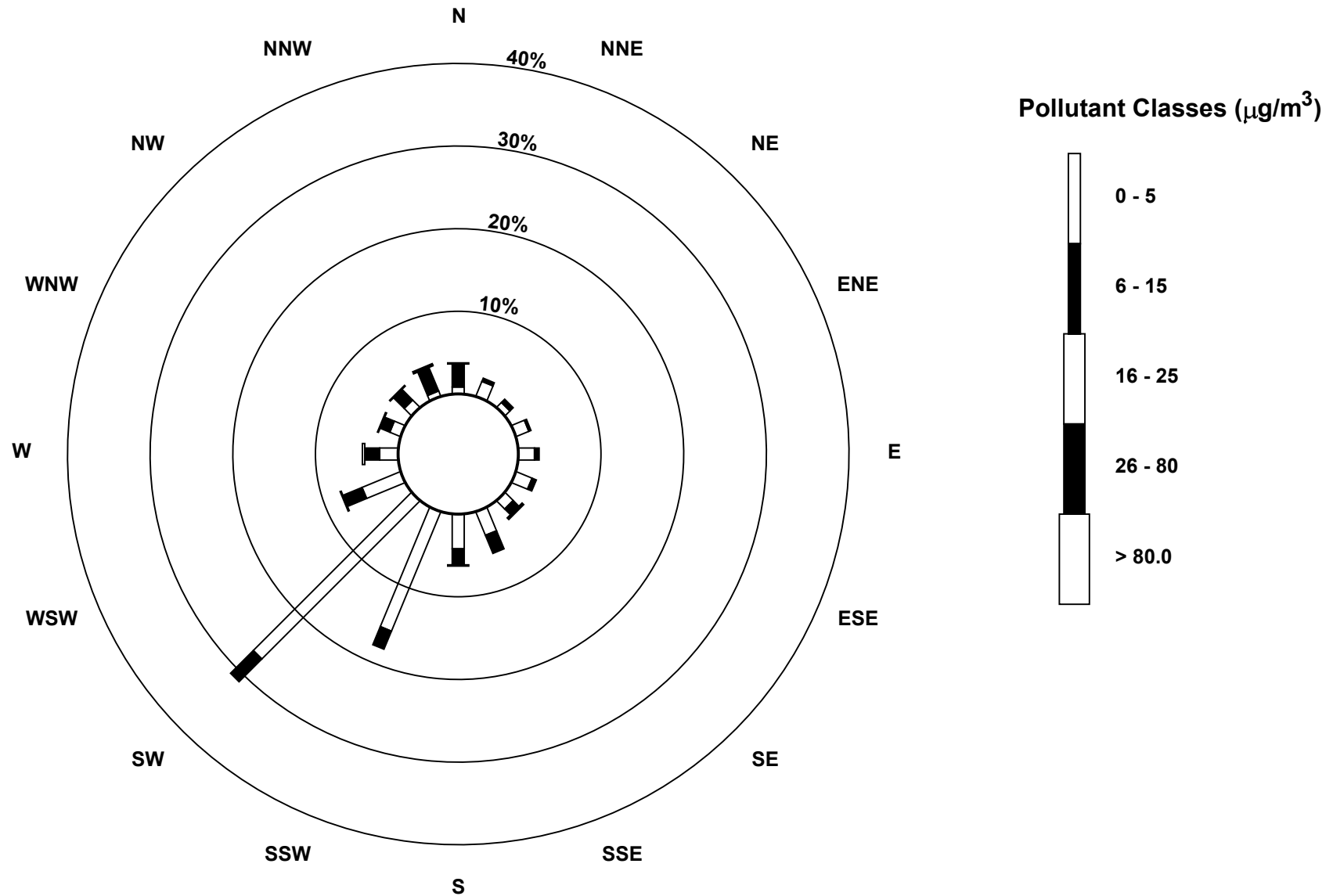
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Smoky Heights - June 2016



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Smoky Heights - June 2016



Hourly Averages

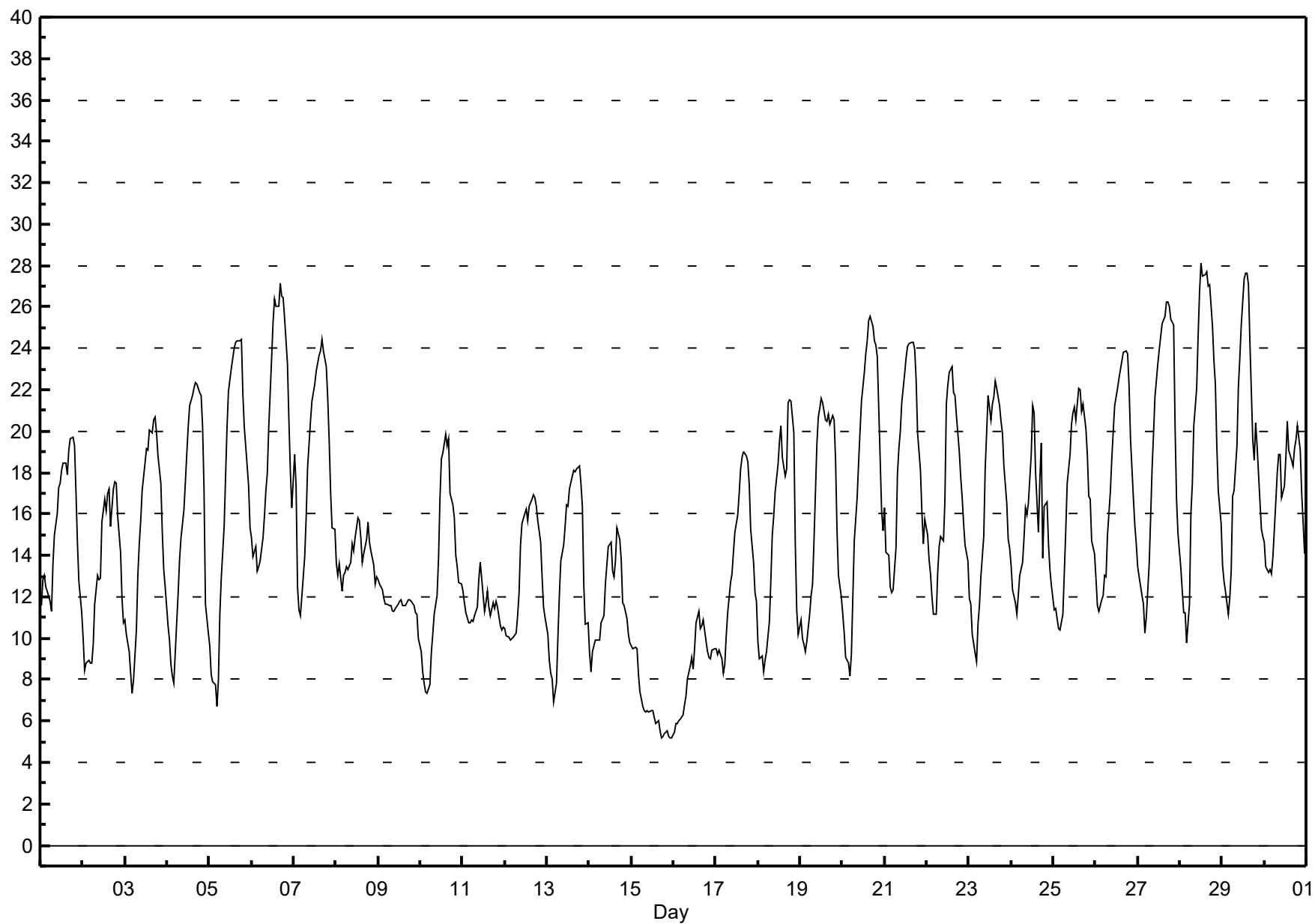
External Temperature (ET) - °C

Smoky Heights - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.1 °C on Jun 28 13:00 Maximum Daily Average: 20.2 °C on Jun 28																								Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0			
Minimum Value: 5 °C on Jun 15 23:00 Minimum Daily Average: 6.7 °C on Jun 15 Maximum Diurnal Average: 19.6 °C at hour 15 Minimum Diurnal Average: 9.9 °C at hour 5 Monthly Average: 15.32 °C Percentiles: P ₁ = 5.5 P ₁₀ = 9.2 Q ₁ = 11.3 Median = 14.6 Q ₃ = 19.1 P ₉₀ = 22.8 P ₉₉ = 27.3																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jun	12	13	13	12	12	12	11	14	15	16	17	17	18	18	18	19	20	20	19	17	15	13	11	15.4	19.7		
2-Jun	10	8	9	9	9	9	10	12	13	13	13	16	17	16	17	15	17	18	17	16	14	12	11	13.2	17.5		
3-Jun	11	10	9	8	7	8	10	13	15	16	17	18	19	19	20	20	21	21	20	19	17	15	13	12	15.0	20.6	
4-Jun	11	10	9	8	8	11	12	14	15	16	17	19	20	21	22	22	22	22	22	22	20	17	12	10	15.9	22.3	
5-Jun	10	8	8	8	7	8	11	13	15	18	20	22	23	24	24	24	24	24	24	22	20	18	17	15	17.0	24.4	
6-Jun	15	14	14	13	13	14	15	16	17	18	20	24	25	26	26	26	27	27	26	25	23	21	18	16	20.0	27.1	
7-Jun	19	17	12	11	11	13	14	16	18	20	21	22	22	23	24	24	24	24	23	22	20	17	15	15	18.7	24.4	
8-Jun	14	13	14	12	13	13	13	13	14	15	14	15	16	16	15	14	14	15	16	15	14	14	13	13	14.0	15.8	
9-Jun	13	13	12	12	12	12	12	12	11	11	11	12	12	12	12	12	12	12	12	12	12	11	11	10	11.7	12.9	
10-Jun	9	8	8	7	7	8	9	10	11	12	14	17	19	19	20	19	20	17	16	16	14	13	13	13	13.3	19.9	
11-Jun	12	12	11	11	11	11	11	11	11	13	14	13	11	12	12	12	11	12	11	12	12	11	10	11	11.5	13.6	
12-Jun	10	10	10	10	10	10	10	11	12	14	16	16	16	16	16	17	17	17	16	16	15	13	12	11	13.4	16.9	
13-Jun	10	9	8	8	7	8	10	12	14	14	15	16	16	17	18	18	18	18	18	16	13	11	11	11	13.5	18.3	
14-Jun	9	8	9	10	10	10	10	11	11	13	14	14	15	13	13	14	15	15	14	12	12	11	10	10	11.7	15.3	
15-Jun	10	10	10	10	8	7	7	7	6	6	6	6	6	6	6	6	6	5	5	5	6	5	5	5	6.7	9.6	
16-Jun	5	6	6	6	6	6	7	7	8	9	9	8	9	11	11	10	11	11	10	9	9	9	9	9	8.5	11.3	
17-Jun	9	9	9	9	8	9	10	11	13	13	14	15	16	17	18	19	19	19	19	17	15	14	12	12	13.6	19.0	
18-Jun	10	9	9	8	9	9	11	13	15	16	17	18	20	20	19	18	18	21	22	21	20	15	11	10	15.0	21.5	
19-Jun	11	10	10	9	10	11	12	13	15	19	21	21	22	21	21	20	21	20	21	21	19	15	13	12	16.1	21.6	
20-Jun	11	10	9	9	8	9	12	15	17	18	20	21	23	24	24	25	26	25	24	24	24	19	16	15	17.9	25.5	
21-Jun	16	14	14	13	12	12	14	18	19	20	21	23	24	24	24	24	24	24	22	20	18	16	15	16	18.7	24.3	
22-Jun	15	14	13	12	11	11	13	14	15	15	17	21	22	23	23	22	22	21	19	18	17	16	15	14	16.7	23.1	
23-Jun	12	12	10	9	9	11	12	13	15	18	20	22	21	21	22	22	22	21	20	20	18	16	15	14	16.5	22.4	
24-Jun	13	12	12	11	12	13	14	15	16	16	16	16	19	21	21	18	15	18	19	14	16	17	15	13	13	15.4	21.3
25-Jun	11	11	11	10	10	11	13	15	17	19	20	21	21	21	22	22	21	21	20	19	17	17	15	14	16.7	22.1	
26-Jun	13	12	11	12	12	13	13	15	17	19	20	21	22	23	23	23	24	24	24	22	20	17	15	15	17.9	23.9	
27-Jun	13	13	12	12	10	11	14	16	18	20	22	23	24	25	25	26	26	26	26	25	25	20	17	15	19.3	26.3	
28-Jun	13	12	11	11	10	12	16	17	20	22	25	27	28	27	28	28	27	27	25	23	22	19	17	16	20.2	28.1	
29-Jun	14	13	12	11	12	13	17	17	19	22	24	25	27	28	28	27	24	20	19	20	19	17	15	15	19.1	27.7	
30-Jun	15	13	13	13	13	14	17	18	19	19	17	17	19	20	19	19	18	19	20	20	19	17	16	14	17.0	20.5	
11.9 11.1 10.7 10.2 9.9 10.6 12.0 13.3 14.8 16.0 17.1 18.4 19.1 19.5 19.6 19.4 19.5 19.5 18.9 18.3 17.1 14.9 13.3 12.6																								Diurnal Average			
18.9 17.4 14.4 13.3 13.4 13.9 16.9 18.0 20.3 22.1 24.6 26.8 28.1 27.7 27.6 27.7 27.1 27.1 26.5 25.5 25.1 20.5 18.1 16.3																								Diurnal Maximum			

Hourly Averages

External Temperature (ET) - °C
Smoky Heights - June 2016



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	1	3	2	12	8	4	7	7	5	6	9	12	9	15	20	18	14	7	8	7	6	7	9	5	6.3	20.3
Dir	214	282	293	282	300	320	138	132	155	182	194	209	216	195	229	210	233	222	209	188	143	167	212	163	209.4	229.5
2 Spd	5	2	2	3	4	2	7	12	19	21	17	13	18	18	17	19	20	17	20	24	22	23	16	18	13.5	24.5
Dir	243	223	195	111	191	207	154	192	204	204	233	239	231	216	217	228	221	201	203	213	215	218	225	220	214.7	212.8
3 Spd	22	22	19	19	11	10	16	24	31	33	28	32	30	28	33	34	32	33	33	30	21	15	14	16	24.2	33.7
Dir	215	214	214	203	231	212	201	215	220	222	223	228	219	226	217	220	217	227	222	227	217	210	204	206	218.5	220.0
4 Spd	14	13	8	10	6	18	16	25	30	30	31	25	29	33	33	31	28	26	24	16	10	11	8	11	19.7	33.0
Dir	205	207	212	214	210	221	232	228	225	224	222	219	221	227	233	235	233	236	234	255	282	279	244	236	229.3	233.4
5 Spd	13	15	16	16	16	6	6	7	6	5	4	5	6	5	7	6	7	6	4	5	4	5	5	1	2.2	16.2
Dir	241	233	239	236	235	201	134	138	121	109	102	96	95	63	121	127	126	83	85	46	6	353	15	318	178.3	236.3
6 Spd	3	3	3	4	4	6	6	7	13	11	14	16	26	27	24	14	27	28	29	25	21	16	16	15	13.2	28.8
Dir	352	351	104	166	156	178	196	184	184	188	193	202	232	227	235	222	234	228	233	238	242	244	262	264	226.4	233.2
7 Spd	22	14	8	10	7	11	17	17	18	19	19	19	18	12	9	8	5	7	6	5	2	2	4	5	8.6	22.4
Dir	273	264	189	208	183	220	222	220	219	221	223	222	223	225	254	257	257	352	351	332	355	342	340	326	236.8	272.8
8 Spd	4	4	3	4	2	8	4	9	6	9	7	6	8	12	10	9	14	11	13	10	8	9	9	8	4.6	14.4
Dir	340	349	323	259	315	145	160	142	152	116	73	23	23	27	8	351	3	6	5	9	345	340	341	334	12.3	3.0
9 Spd	8	9	8	7	7	9	9	10	9	10	8	9	14	17	13	9	7	10	12	5	7	7	2	2	7.1	16.5
Dir	328	326	327	306	293	277	269	284	300	307	324	341	332	323	323	313	265	252	248	221	252	279	171	157	298.6	323.1
10 Spd	2	1	3	5	5	2	2	4	4	3	6	7	9	18	11	12	10	10	2	4	7	5	7	7	3.4	17.8
Dir	287	135	223	233	244	25	23	18	40	54	56	16	58	94	76	44	63	108	205	208	39	74	161	126	75.4	94.0
11 Spd	10	6	6	7	8	7	7	6	6	4	2	6	11	18	26	26	27	29	21	16	17	16	10	13	7.1	28.9
Dir	113	71	341	0	29	27	27	18	23	36	143	182	164	186	218	228	228	224	227	229	237	226	220	212	219.8	224.4
12 Spd	14	11	13	13	13	18	22	22	20	34	45	50	49	50	49	51	48	44	39	37	31	22	20	21	30.5	51.3
Dir	214	197	212	216	220	210	214	218	225	229	230	230	229	223	221	224	220	220	216	218	214	208	210	209	220.5	224.1
13 Spd	22	19	22	19	14	15	17	27	32	32	27	22	21	23	17	17	14	12	7	7	7	2	3	3	16.1	31.6
Dir	211	211	212	223	206	207	213	215	220	217	216	217	222	221	221	231	221	213	196	183	138	213	315	260	215.5	220.5
14 Spd	5	5	3	3	6	5	3	12	17	14	11	12	8	6	15	14	11	16	5	5	4	8	16	15	7.1	16.6
Dir	230	183	158	174	135	133	312	253	238	240	217	210	235	340	240	235	228	227	240	108	304	298	263	235	234.4	238.2
15 Spd	14	14	8	19	28	34	38	37	39	44	43	45	46	46	51	48	50	55	50	49	48	45	41	40	38.8	54.9
Dir	230	213	200	217	222	221	223	219	222	221	218	218	217	216	220	213	215	220	219	222	221	221	221	220	219.2	220.1
16 Spd	38	37	33	32	29	26	25	24	24	20	23	26	28	27	25	23	24	28	30	26	27	21	26	27	25.9	38.1
Dir	222	221	221	221	221	217	219	221	219	224	230	217	213	217	244	245	246	252	257	260	260	253	262	261	233.6	222.3
17 Spd	29	24	19	17	15	13	16	15	16	17	24	23	24	27	28	30	31	33	29	27	20	12	13	15	19.8	32.9
Dir	262	256	249	234	248	254	282	268	252	212	206	203	208	210	209	207	208	204	216	221	218	218	212	214	224.4	204.5
18 Spd	13	14	9	8	10	7	7	11	18	19	18	16	15	17	8	4	11	7	4	2	1	14	6	10	6.8	18.7
Dir	224	229	199	183	190	165	181	198	210	204	212	46	215	212	242	293	217	230	211	66	37	21	114	230	208.3	203.8
19 Spd	15	9	10	8	9	7	4	3	6	1	3	3	19	20	33	23	18	16	15	16	13	10	10	7	9.7	32.8
Dir	230	215	223	220	224	229	177	155	169	166	88	88	274	286	238	226	210	204	213	211	214	218	234	151	224.1	237.9
20 Spd	7	6	7	8	7	9	10	13	16	17	15	14	13	12	11	6	6	4	8	5	4	3	5	5	6.3	16.9
Dir	178	187	162	162	173	163	161	191	201	203	204	201	200	197	214	143	149	112	92	82	65	351	348	352	181.6	203.1
21 Spd	5	2	0	4	3	6	8	11	17	17	14	12	13	12	15	14	13	15	14	17	16	10	6	0	9.3	17.3
Dir	88	83	16	168	208	204	217	218	217	217	212	201	191	192	207	208	208	208	191	167	173	210	259	323	200.9	217.2
22 Spd	3	6	4	5	8	5	9	15	19	13	4	16	17	14	18	27	25	23	26	22	11	13	10	7	12.7	27.2
Dir	244	233	161	175	178	158	165	219	223	207	175	226	225	217	200	213	202	202	212	220	217	176	206	216	207.9	212.9

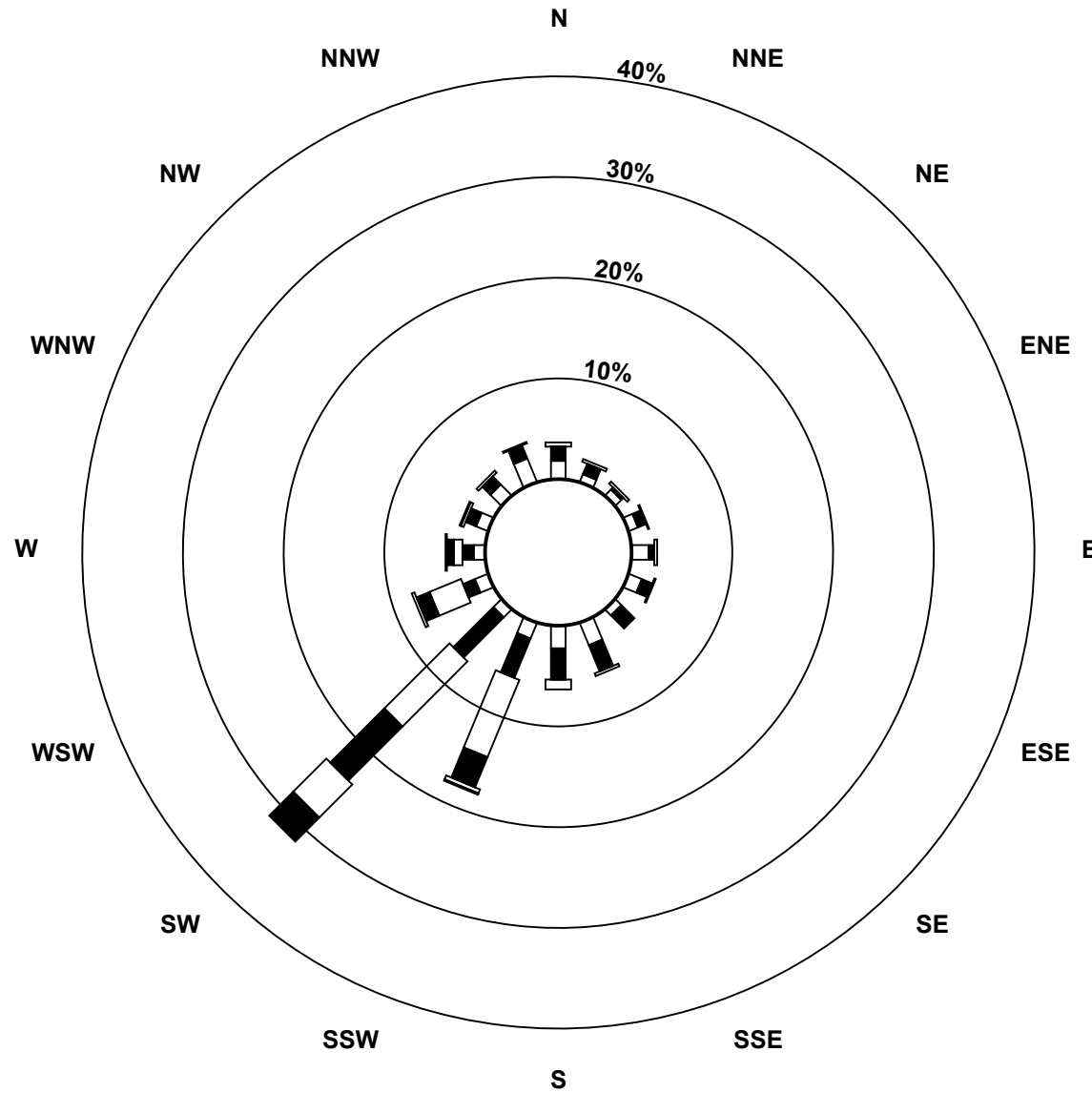
Hourly Averages

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

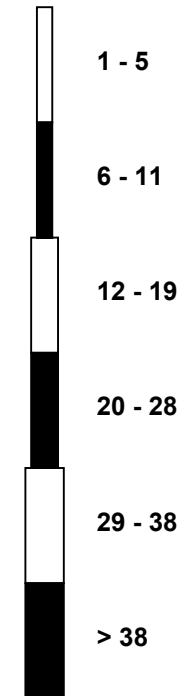
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	6	6	4	7	5	5	6	4	6	4	4	2	7	5	5	3	7	9	13	10	5	4	6	4	2.0	13.1
Dir	215	236	183	177	169	180	165	161	203	144	147	149	201	287	216	280	308	325	352	339	327	280	146	230	230.2	352.4
24 Spd	5	4	3	2	1	2	2	6	5	6	10	6	5	4	25	17	13	5	8	8	8	9	11	4	5.0	24.6
Dir	246	239	273	248	301	94	248	315	331	300	264	288	327	221	217	225	227	175	120	182	208	226	235	174	232.3	216.6
25 Spd	7	9	13	13	8	4	8	13	14	20	20	19	20	19	20	24	17	16	15	15	11	15	11	9	13.7	23.7
Dir	192	211	236	228	218	201	215	217	218	219	224	213	213	222	219	249	249	243	226	252	251	246	220	228	227.4	249.2
26 Spd	5	6	10	14	11	13	11	13	23	24	23	21	20	20	21	20	17	15	14	10	11	12	12	14	14.8	24.2
Dir	197	178	221	227	207	213	202	207	215	215	222	220	216	202	209	217	214	212	210	214	220	236	244	240	216.0	215.4
27 Spd	14	16	6	5	6	7	9	8	10	10	8	10	12	12	9	9	4	2	4	4	2	2	6	7	6.3	16.0
Dir	238	234	199	149	157	160	152	155	187	205	192	174	190	220	231	206	190	173	114	89	177	204	244	252	197.3	234.4
28 Spd	2	3	1	3	3	1	1	4	3	5	4	3	2	6	4	4	4	3	5	3	1	3	3	4	1.2	5.9
Dir	269	297	196	275	243	260	1	93	133	107	98	117	27	5	341	11	345	19	345	11	132	312	323	344	2.8	5.2
29 Spd	1	1	1	1	7	2	2	6	5	3	3	2	5	8	13	12	15	17	4	5	1	5	3	4	2.0	17.4
Dir	324	292	326	274	281	293	90	87	66	61	106	52	59	72	80	111	67	193	0	352	273	263	333	346	70.1	192.6
30 Spd	4	5	4	4	4	7	6	5	7	8	12	21	18	14	22	18	12	9	7	7	7	5	2	1	5.3	21.7
Dir	340	354	336	345	355	355	6	171	158	111	164	215	241	214	211	221	230	221	203	220	220	180	159	193	216.4	211.2
Spd	8.1	7.5	6.5	7.5	6.7	6.7	7.2	9.7	12.4	12.7	12.6	12.2	13.8	13.4	16.3	15.1	14.0	13.9	11.6	10.3	8.8	7.8	7.7	7.6	Diurnal Average	
Dir	231.1	227.6	222.0	219.5	219.5	210.7	209.5	212.6	215.5	214.0	215.0	217.0	221.4	219.7	222.8	223.9	222.5	220.7	222.7	225.3	226.6	232.5	233.0	229.8	Diurnal Maximum	
Spd	38.1	37.4	33.5	31.9	29.2	33.9	38.3	37.0	39.4	43.9	44.9	50.1	49.0	49.9	51.0	51.3	49.7	54.9	50.2	49.4	48.0	44.6	40.7	40.0	Diurnal Maximum	
Dir	222.3	220.8	220.6	221.5	221.2	220.6	222.8	219.4	222.1	220.7	230.2	230.3	228.9	223.5	219.6	224.1	215.5	220.1	219.1	222.3	220.8	221.2	221.0	220.3		
Maximum Speed Value: 55 km/h on Jun 15 18:00																								Hours in Service: 720		
Maximum Daily Speed Average: 38.8 km/h on Jun 15																								Hours of Data: 720		
Maximum Diurnal Speed Average: 16.3 km/h at hour 15																								Hours of Missing Data: 0		
Minimum Speed Value: 0 km/h on Jun 22 00:00																										
Minimum Daily Speed Average: 1.2 km/h on Jun 28																										
Minimum Diurnal Speed Average: 6.5 km/h at hour 3																										
Monthly Average Velocity: 10.38 km/h 221.17 deg Speed Percentiles: P ₁ = 0.9 P ₁₀ = 3.3 Q ₁ = 5.6 Median = 10.4 Q ₃ = 17.9 P ₉₀ = 27.7 P ₉₉ = 49.6																								Percent Operational Time: 100.0		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	28		20		5		0		0		0		53													
NorthEast	14		11		4		0		0		0		29													
East	20		11		3		0		0		0		34													
SouthEast	13		29		0		0		0		0		42													
South	27		49		27		3		0		0		106													
SouthWest	19		56		124		85		38		27		349													
West	17		18		16		11		2		0		64													
NorthWest	23		17		3		0		0		0		43													
Total	161		211		182		99		40		27		720													

Wind Rose

Wind Speed (WS) (km/h)
Smoky Heights - June 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - June 2016

Maximum Speed: 55 km/h on Jun 15 18:00																				Maximum Daily Speed Average: 39.0 km/h on Jun 15										Hours in Service: 720																				
Minimum Speed: 1 km/h on Jun 29 03:00																				Minimum Daily Speed Average: 3.9 km/h on Jun 28										Hours of Data: 720																				
Maximum Diurnal Speed Average: 20.5 km/h at hour 15																				Minimum Diurnal Speed Average: 9.0 km/h at hour 3										Hours of Missing Data: 0																				
Monthly Average Speed: 13.91 km/h																				Percentiles: P ₁ = 1.9 P ₁₀ = 4.1 Q ₁ = 6.4 Median = 11.1 Q ₃ = 18.3 P ₉₀ = 27.9 P ₉₉ = 49.9										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-Jun	3	5	5	12	9	6	7	7	6	7	10	13	10	16	21	18	15	9	8	8	6	8	10	6	9.4	20.7																								
2-Jun	5	3	3	4	4	4	7	12	19	21	17	13	18	19	17	19	21	17	21	25	22	23	16	18	14.5	24.7																								
3-Jun	22	22	19	20	12	12	16	25	31	33	28	32	31	29	33	34	32	33	33	30	21	15	14	16	24.7	34.1																								
4-Jun	14	13	8	11	7	18	16	25	31	30	31	26	30	33	34	31	28	26	24	16	10	11	9	11	20.7	33.7																								
5-Jun	13	15	16	16	16	8	6	7	6	5	5	5	7	7	9	8	8	7	5	5	4	5	5	3	8.0	16.3																								
6-Jun	3	5	4	5	4	6	7	7	13	12	14	17	27	28	25	14	28	28	29	26	21	16	16	15	15.3	29.0																								
7-Jun	22	14	9	10	8	12	17	17	19	19	19	20	19	13	11	9	7	8	6	5	3	2	4	5	11.5	22.4																								
8-Jun	5	5	4	5	5	10	7	10	6	10	8	6	9	12	10	9	15	11	13	11	8	9	9	8	8.5	14.8																								
9-Jun	8	9	9	7	7	9	9	11	9	10	8	9	14	17	13	9	7	10	12	7	8	7	5	3	9.1	16.7																								
10-Jun	2	2	3	5	6	3	2	4	4	5	6	7	11	18	12	12	11	13	3	6	8	8	7	7	6.9	18.1																								
11-Jun	10	7	6	7	8	7	7	6	6	5	3	7	14	18	26	27	27	29	21	16	17	16	10	13	13.1	29.0																								
12-Jun	15	11	13	13	13	18	22	22	20	34	45	50	49	50	49	52	48	44	40	37	31	22	20	21	30.9	51.5																								
13-Jun	22	20	22	19	14	15	17	27	32	32	27	23	22	23	18	17	14	13	8	7	7	2	4	8	17.2	31.9																								
14-Jun	6	5	4	4	6	7	7	12	17	14	12	12	10	8	15	14	12	16	8	5	5	8	16	16	10.0	16.7																								
15-Jun	14	14	8	20	29	34	38	37	40	44	43	45	46	46	51	48	50	55	50	50	48	45	41	40	39.0	55.0																								
16-Jun	38	37	34	32	29	26	25	24	24	21	23	26	28	28	25	23	24	28	30	27	27	21	26	27	27.3	38.2																								
17-Jun	29	24	19	17	15	13	17	15	16	18	24	23	24	27	28	30	31	33	29	27	20	12	13	15	21.7	33.1																								
18-Jun	13	14	9	8	10	7	7	12	18	19	18	30	15	18	12	5	11	8	4	3	2	15	9	10	11.6	29.9																								
19-Jun	15	9	10	8	9	7	4	3	7	4	5	5	20	21	33	23	18	16	15	16	13	10	10	7	12.0	33.3																								
20-Jun	7	6	7	8	7	9	10	13	16	17	15	14	13	12	11	7	7	7	8	5	4	3	5	5	9.0	17.1																								
21-Jun	5	2	2	5	5	6	8	11	17	17	14	13	14	12	16	15	14	15	15	17	16	11	7	6	10.9	17.5																								
22-Jun	4	7	4	5	9	6	9	15	19	14	6	17	17	14	18	27	26	24	26	22	13	13	11	7	13.8	27.5																								
23-Jun	7	6	5	7	5	5	6	5	7	5	5	5	7	7	7	5	8	9	15	10	5	4	6	6	6.5	15.5																								
24-Jun	6	5	5	3	3	3	3	6	5	6	10	7	6	7	25	18	13	13	10	9	8	9	12	5	8.2	24.8																								
25-Jun	7	10	13	13	9	5	8	13	14	20	20	19	20	19	20	25	17	17	15	16	11	15	11	9	14.4	24.7																								
26-Jun	6	7	10	14	12	13	11	14	23	24	23	21	21	21	22	20	18	16	14	11	11	12	12	14	15.3	24.4																								
27-Jun	15	16	9	6	6	7	9	8	11	11	9	10	12	12	10	9	6	4	4	4	2	3	6	7	8.2	16.1																								
28-Jun	3	3	2	4	3	2	2	4	4	5	4	4	4	7	6	6	4	3	5	3	4	4	4	4	3.9	6.5																								
29-Jun	2	2	1	3	7	3	2	6	5	4	4	3	6	10	14	12	15	19	9	6	3	5	4	5	6.2	19.3																								
30-Jun	5	5	5	4	5	7	6	8	9	9	14	21	19	16	22	18	12	9	7	8	7	6	2	2	9.4	22.1																								
																									10.8	10.1	9.0	9.8	9.4	9.6	10.4	12.9	15.1	15.9	15.7	16.8	18.0	18.9	20.5	18.9	18.2	18.0	16.2	14.5	12.3	11.4	10.8	10.6	Diurnal Average	
																									38.2	37.5	33.5	31.9	29.3	34.0	38.4	37.1	39.5	44.0	45.1	50.4	49.4	50.1	51.2	51.5	50.0	55.0	50.3	49.5	48.1	44.7	40.8	40.1	Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																																																		

Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - June 2016

Maximum Value: 95.0 deg on Jun 1 01:00																								Hours in Service: 720	
Minimum Value: 2.3 deg on Jun 26 04:00																								Hours of Data: 720	
																								Hours of Missing Data: 0	
Percentiles: P ₁ = 3.0 P ₁₀ = 4.8 Q ₁ = 7.5 Median = 12.8 Q ₃ = 26.5 P ₉₀ = 51.9 P ₉₉ = 87.4																								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-Jun	95	82	77	28	11	61	11	11	35	38	27	19	32	19	12	14	23	36	23	29	12	29	28	35	95.0
2-Jun	13	34	36	42	20	52	15	10	6	6	10	15	14	13	13	12	11	9	16	8	4	4	4	5	52.1
3-Jun	5	4	4	8	18	26	9	6	7	8	10	10	9	13	9	10	8	8	7	7	5	4	4	7	25.9
4-Jun	13	6	20	13	53	6	7	7	6	7	9	14	14	11	11	13	11	9	6	15	8	7	22	10	52.8
5-Jun	5	5	3	6	3	43	17	11	20	26	35	40	40	59	46	46	29	26	38	16	12	9	21	80	79.6
6-Jun	48	42	61	29	35	25	15	7	10	14	9	22	9	10	9	13	10	6	7	7	4	4	6	5	60.7
7-Jun	3	13	34	7	37	14	6	6	7	9	11	10	13	18	50	36	65	26	15	9	26	27	11	9	65.4
8-Jun	19	13	50	41	76	51	64	27	16	25	29	23	15	13	22	14	13	12	11	14	17	12	12	8	76.2
9-Jun	9	11	14	15	9	10	15	9	12	8	12	10	10	9	9	10	26	16	12	59	7	49	84	33	83.9
10-Jun	53	64	26	13	35	47	24	19	28	55	23	29	38	11	31	15	22	46	59	44	46	50	9	15	64.1
11-Jun	7	38	17	21	9	13	14	13	15	46	69	32	46	14	7	6	5	5	5	7	5	5	8	4	69.1
12-Jun	7	4	7	5	5	3	5	6	6	8	5	5	7	5	5	6	7	6	5	5	5	5	6	6	8.1
13-Jun	5	6	7	9	5	11	11	4	7	8	10	13	13	11	15	13	15	17	20	22	9	63	45	65	64.5
14-Jun	13	29	37	48	24	43	69	5	7	10	10	11	60	38	8	12	13	7	76	35	34	20	5	21	76.1
15-Jun	15	16	34	16	14	4	4	4	4	5	4	4	5	4	4	5	5	4	4	4	4	3	4	3	33.9
16-Jun	3	3	4	3	4	3	5	4	5	7	10	5	6	8	6	5	6	7	7	6	5	8	5	6	10.2
17-Jun	4	4	5	6	4	8	10	14	11	14	8	8	7	9	9	9	8	6	9	5	4	7	2	4	14.3
18-Jun	5	3	20	9	8	18	15	12	10	8	12	87	17	20	60	32	24	21	28	59	68	28	54	12	86.5
19-Jun	9	13	8	5	9	5	20	50	43	88	59	53	27	13	13	10	11	12	6	5	4	9	10	22	88.0
20-Jun	8	15	12	7	9	8	5	8	8	8	11	11	12	15	14	40	55	53	11	5	8	20	6	17	54.9
21-Jun	22	59	92	27	56	17	17	8	9	8	12	14	16	14	13	14	11	8	17	6	7	20	25	92	92.2
22-Jun	53	12	20	14	11	27	12	11	4	18	43	12	11	19	14	8	13	10	6	5	37	7	16	11	52.9
23-Jun	36	22	20	9	25	26	16	25	27	45	38	84	19	62	54	65	23	14	33	20	22	31	26	41	83.7
24-Jun	24	14	62	66	84	66	52	14	27	17	12	47	52	80	9	17	8	68	36	21	6	9	25	47	83.5
25-Jun	15	12	4	3	19	17	8	7	8	8	9	9	8	10	10	16	7	12	4	16	16	10	8	4	18.8
26-Jun	33	24	7	2	11	5	8	12	6	7	9	13	14	14	12	15	15	10	6	6	8	6	8	4	32.9
27-Jun	3	3	57	28	15	10	5	12	14	19	26	18	17	18	23	23	53	75	36	17	17	39	7	3	75.3
28-Jun	55	39	89	32	50	71	75	22	20	20	40	37	88	26	72	60	38	51	8	14	79	25	57	22	88.8
29-Jun	73	87	58	89	14	45	51	14	23	37	31	60	43	35	19	11	14	26	68	16	90	32	54	47	89.5
30-Jun	23	18	26	11	31	11	14	63	38	22	29	7	15	27	11	5	7	10	11	13	7	27	55	76	76.1
	95.0	86.9	92.2	88.9	83.5	71.2	74.6	62.8	43.2	88.0	69.1	86.5	87.6	79.6	72.2	65.4	65.4	75.3	76.1	58.9	89.5	62.7	83.9	91.7	

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

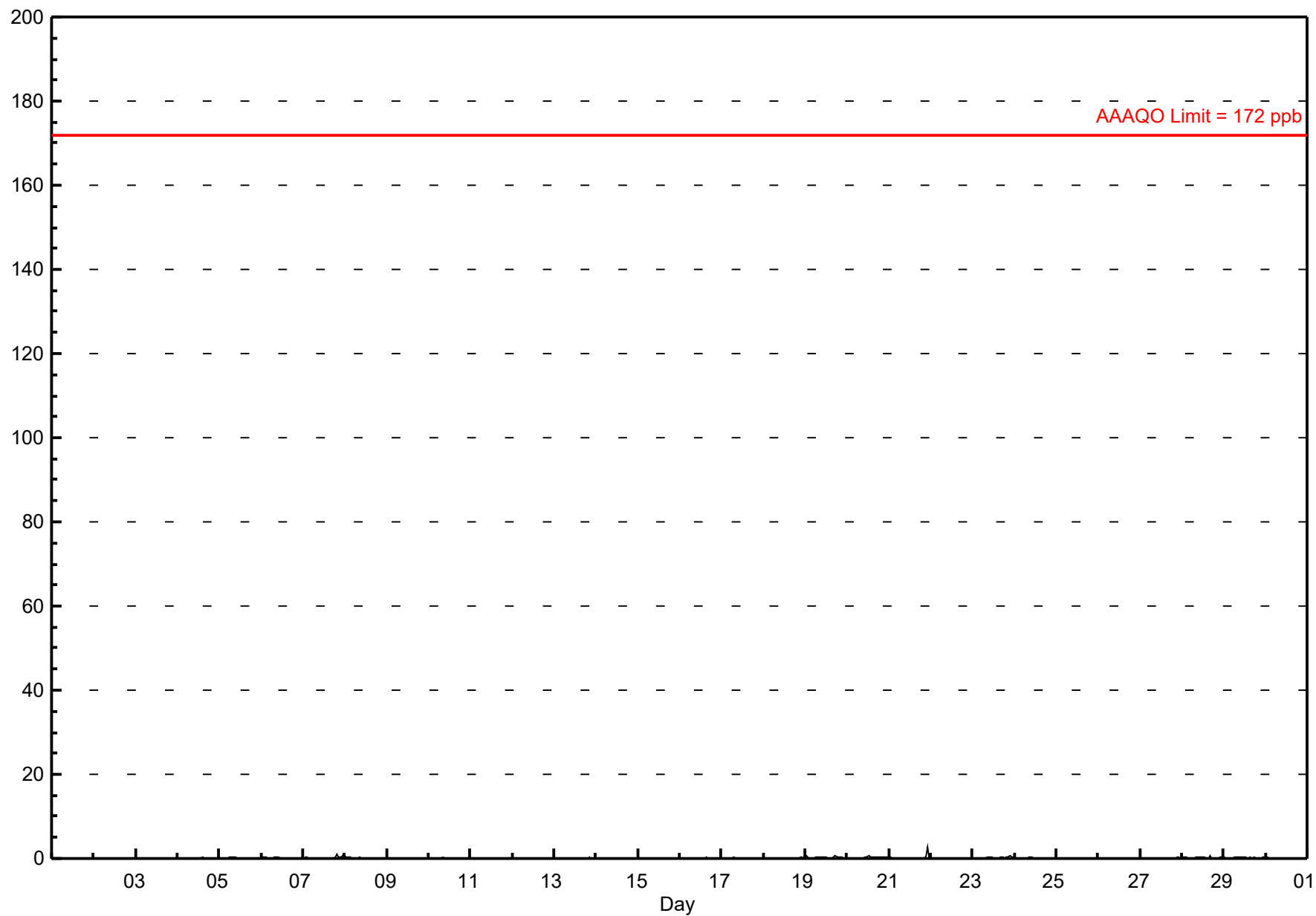
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.8 ppb on Jun 21 23:00 Maximum Daily Average: 0.2 ppb on Jun 20																								Hours in Service: 720 Hours of Data: 683 Hours of Missing Data: 37 Hours of Calibration: 33 Percent Operational Time: 99.4		
Minimum Value: 0 ppb on Jun 1 17:00 Minimum Daily Average: 0.0 ppb on Jun 12 Maximum Diurnal Average: 0.2 ppb at hour 23 Minimum Diurnal Average: 0.1 ppb at hour 6 Monthly Average: 0.10 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.6																										
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-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
2-Jun	0	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
3-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
4-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
5-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
6-Jun	0	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
7-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.2	1.0
8-Jun	0	0	0	0	A	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0.1	0.3
9-Jun	0	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
10-Jun	0	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-Jun	0	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
12-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	P	P	0	0	0	0	0	0	0	0	0	0.0	0.0
13-Jun	0	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-Jun	0	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
15-Jun	0	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
16-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
17-Jun	0	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
18-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
19-Jun	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.6
20-Jun	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
21-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0.2	2.8
22-Jun	0	0	0	0	A	0	0	0	0	0	N	N	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
23-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.7
24-Jun	0	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
25-Jun	0	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
26-Jun	0	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
27-Jun	0	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-Jun	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	0.7
29-Jun	0	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
30-Jun	0	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
0.1 0.1 0.1 0.1 -- 0.1 0.1 0.1 0.1 0.1 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																								Diurnal Average		
0.5 0.4 0.3 0.3 -- 0.2 0.2 0.2 0.3 0.4 0.4 0.5 0.6 0.4 0.4 0.5 0.7 0.6 0.4 0.9 0.4 0.7 2.8 1.0																								Diurnal Maximum		
C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - June 2016



Hourly Maximums

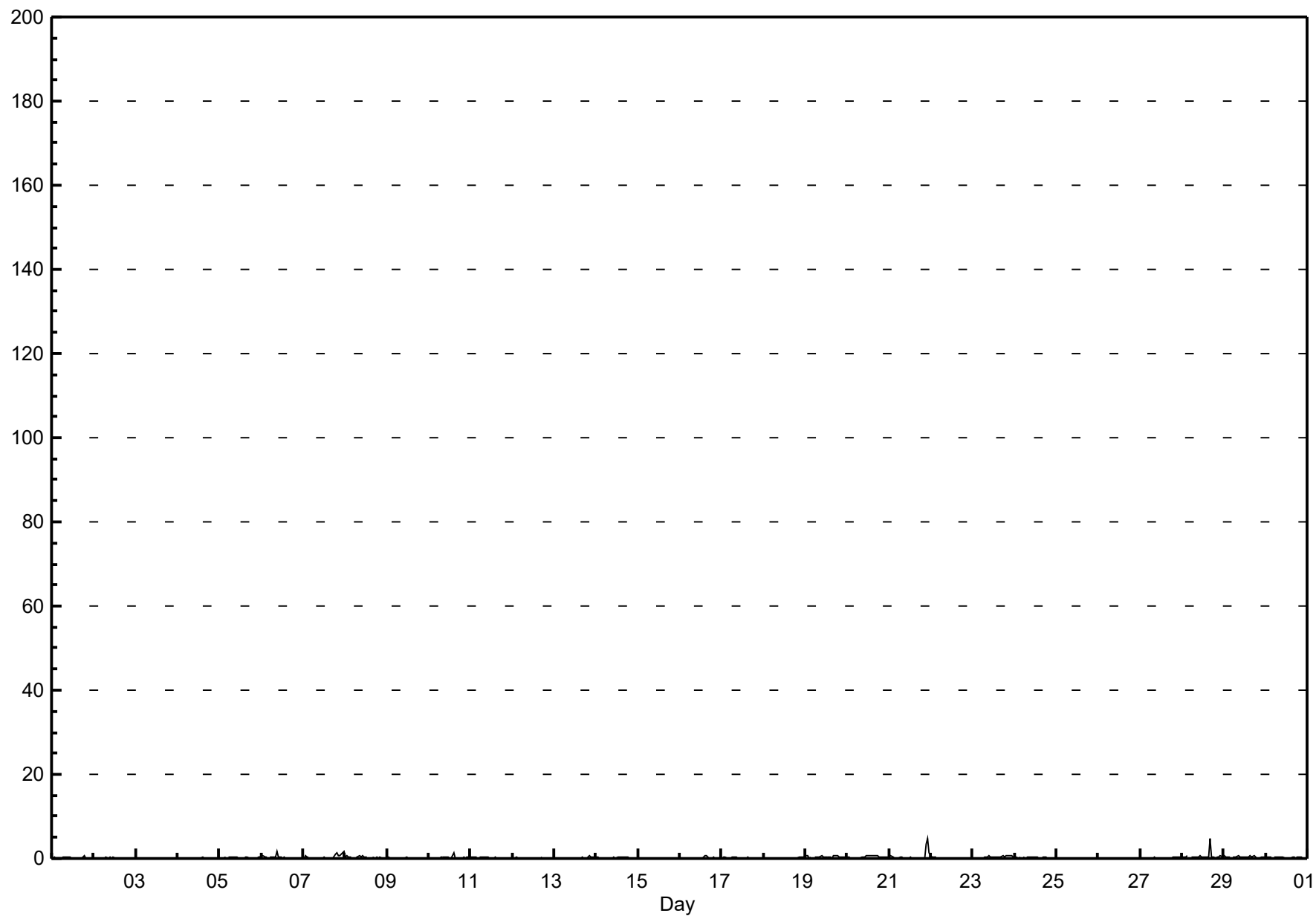
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - June 2016

Maximum Value: 4.6 ppb on Jun 21 23:00																				Maximum Daily Average: 0.6 ppb on Jun 21					Hours in Service: 720				
Minimum Value: 0 ppb on Jun 17 23:00																				Minimum Daily Average: 0.1 ppb on Jun 26					Hours of Data: 683				
Maximum Diurnal Average: 0.4 ppb at hour 23																				Minimum Diurnal Average: 0.2 ppb at hour 6					Hours of Missing Data: 37				
Monthly Average: 0.23 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 1.3					Hours of Calibration: 33				
																									Percent Operational Time: 99.4				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.2	0.6			
2-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2			
3-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2			
4-Jun	0	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			
5-Jun	0	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-Jun	1	1	0	0	A	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.6			
7-Jun	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	1	2	0.4	1.8			
8-Jun	0	1	0	0	A	0	0	0	1	0	1	0	C	C	C	0	0	0	0	0	0	0	0	0	0.3	0.7			
9-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2			
10-Jun	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	1.3			
11-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3			
12-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	P	P	0	0	0	0	0	0	0	0	0.1	0.2			
13-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.6			
14-Jun	0	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			
15-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2			
16-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.2	0.6			
17-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4			
18-Jun	0	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-Jun	1	1	0	0	A	0	0	0	0	1	0	0	1	0	0	0	1	1	1	0	0	0	0	0	0.4	0.8			
20-Jun	0	0	0	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0.3	0.7			
21-Jun	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	1	0	0.6	4.6			
22-Jun	0	0	0	0	A	0	0	0	0	0	N	N	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2			
23-Jun	0	0	0	0	A	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	1	1	0	0.3	0.8			
24-Jun	0	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			
25-Jun	0	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			
26-Jun	0	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-Jun	0	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			
28-Jun	0	0	0	1	A	0	0	0	0	0	1	0	0	0	0	0	5	0	0	0	0	0	1	0	0.5	4.6			
29-Jun	1	0	0	0	A	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0.4	0.6			
30-Jun	0	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			
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 0.2 0.3 0.2 0.2 0.2 0.2 0.3 0.4 0.3																									Diurnal Average				
0.8 0.7 0.4 0.6 -- 0.3 0.3 0.4 0.6 1.6 0.5 0.7 0.7 0.6 1.3 0.6 4.6 0.8 1.1 1.5 0.8 3.2 4.6 1.8																									Diurnal Maximum				
C - Calibration					P - Power Failure					N - Not Valid					A - Automated Daily Zero Span														

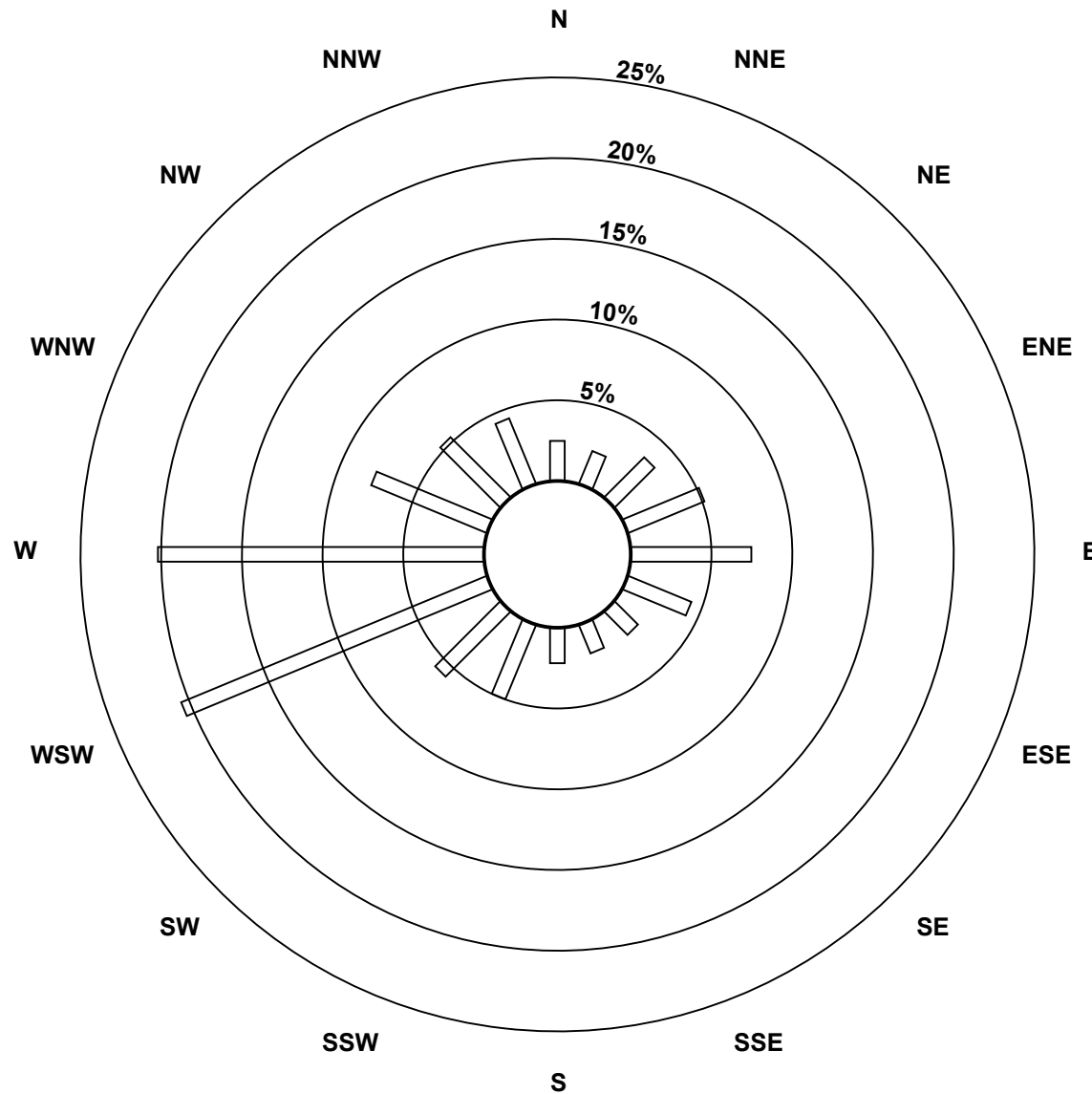
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - June 2016

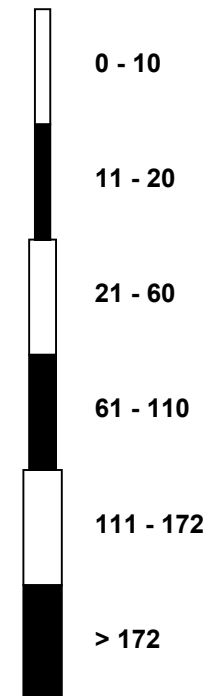


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - June 2016

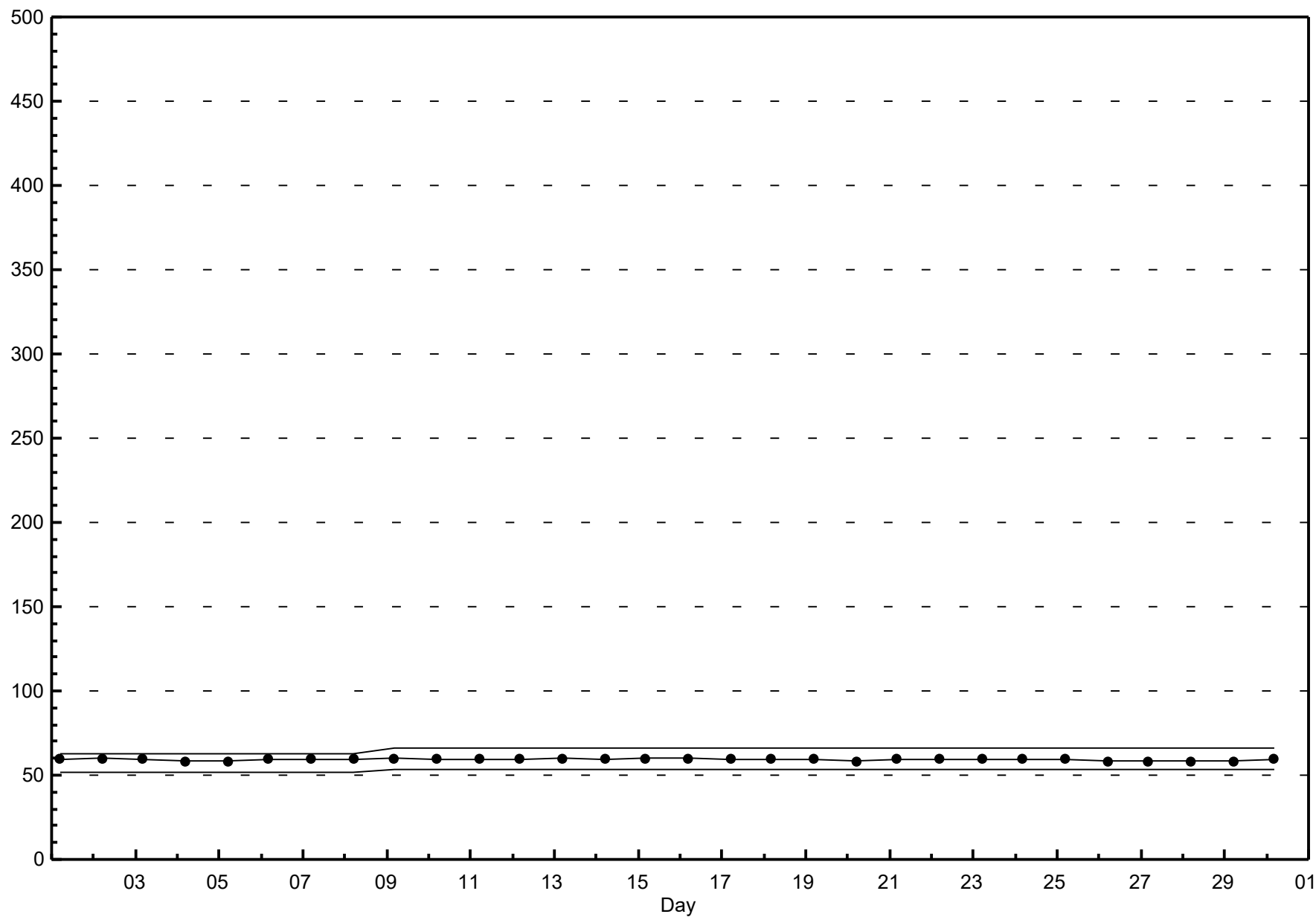


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - June 2016



Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

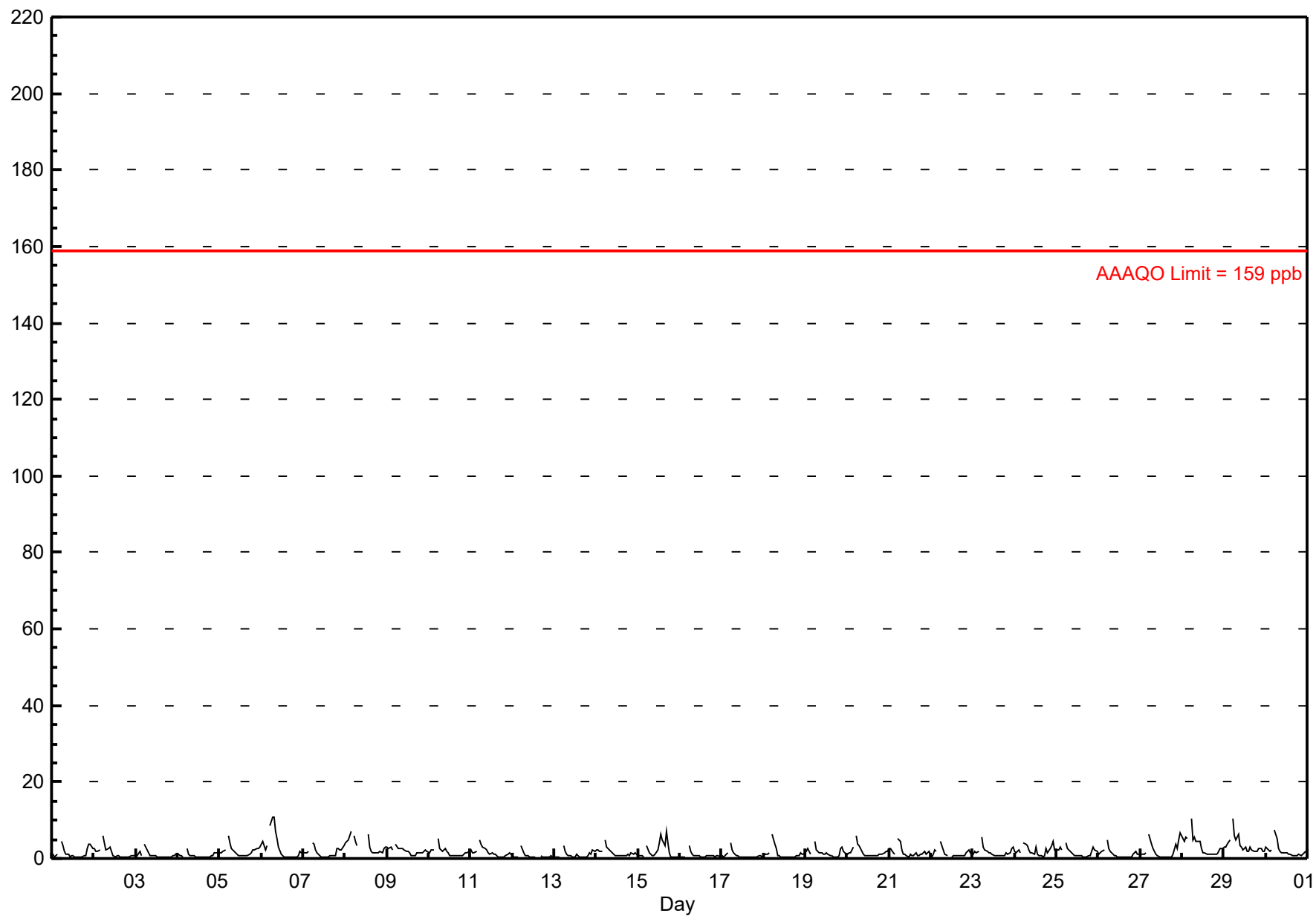
Beaverlodge - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11.0 ppb on Jun 6 07:00 Maximum Daily Average: 3.4 ppb on Jun 29																								Hours in Service: 720 Hours of Data: 681 Hours of Missing Data: 39 Hours of Calibration: 35 Percent Operational Time: 99.4																								
Minimum Value: 0 ppb on Jun 12 20:00 Minimum Daily Average: 0.7 ppb on Jun 12 Maximum Diurnal Average: 5.2 ppb at hour 6 Minimum Diurnal Average: 0.8 ppb at hour 18 Monthly Average: 1.69 ppb Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.2 Q ₃ = 2.2 P ₉₀ = 3.7 P ₉₉ = 7.2																																																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Jun	1	0	1	1	A	5	3	2	1	1	1	1	1	0	0	0	0	0	1	1	2	4	4	2	1.4	4.6																						
2-Jun	3	2	2	2	A	6	4	2	3	3	2	1	1	1	0	0	0	0	0	1	1	1	1	1	1.6	5.8																						
3-Jun	1	1	2	1	A	4	2	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	0.9	3.8																						
4-Jun	1	1	1	1	A	3	1	1	1	1	1	0	0	0	1	0	0	0	0	1	1	2	2	1	0.8	2.8																						
5-Jun	1	2	2	2	A	6	4	3	2	2	1	1	1	1	1	1	1	1	1	2	2	3	3	3	1.9	5.9																						
6-Jun	4	4	2	3	A	9	11	11	7	5	3	1	1	0	0	0	0	0	0	0	0	1	2	2	3.0	11.0																						
7-Jun	1	1	1	2	A	4	4	2	1	1	1	0	0	0	0	1	1	1	1	3	2	2	2	3	1.6	4.2																						
8-Jun	4	5	5	7	A	6	4	3	C	C	C	C	C	6	3	2	1	1	2	2	2	2	3	3	3.4	7.2																						
9-Jun	3	2	3	2	A	4	3	2	3	2	2	2	2	1	1	1	1	1	2	2	2	2	2	2	2.0	3.7																						
10-Jun	1	2	2	2	A	5	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	1.6	5.1																						
11-Jun	2	2	2	2	A	5	4	3	3	2	2	1	1	1	1	1	0	0	0	0	1	1	1	1	1.6	4.8																						
12-Jun	1	1	0	1	A	3	1	1	1	1	1	1	0	0	P	P	1	0	0	0	0	0	1	0	0.7	3.2																						
13-Jun	0	1	0	1	A	3	2	1	1	1	1	1	0	1	0	0	0	0	0	1	1	1	2	2	0.9	3.3																						
14-Jun	2	2	2	2	A	5	3	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.5	4.9																						
15-Jun	1	1	1	0	A	3	1	1	1	1	1	2	4	6	5	3	7	4	2	0	0	0	0	0	2.0	7.0																						
16-Jun	0	0	0	0	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.8	3.4																						
17-Jun	1	0	1	2	A	4	2	2	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.8	3.9																						
18-Jun	1	1	1	2	A	6	4	3	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1.2	6.4																						
19-Jun	2	3	2	1	A	5	2	2	2	2	1	1	2	1	1	1	0	0	0	1	3	3	2	1	1.6	4.6																						
20-Jun	1	1	1	3	A	6	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.6	6.1																						
21-Jun	3	3	1	1	A	5	4	2	1	1	1	0	1	1	1	1	1	1	1	1	2	1	1	2	1.6	5.2																						
22-Jun	1	1	2	2	A	4	4	2	1	1	N	N	0	1	1	1	1	1	1	1	1	2	2	1	1.4	4.3																						
23-Jun	1	2	2	2	A	6	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	3	3	1.7	5.6																						
24-Jun	2	1	2	1	A	4	4	3	2	2	1	1	3	1	1	1	1	1	3	1	3	3	5	2	2.1	4.6																						
25-Jun	2	2	3	2	A	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	2	3	2	2	1.6	4.2																						
26-Jun	1	2	2	2	A	5	3	2	1	1	1	1	0	0	0	0	0	0	0	1	1	2	1	1	1.2	4.7																						
27-Jun	1	1	1	2	A	6	4	2	2	1	1	0	0	0	0	0	0	0	0	1	4	3	5	7	1.9	6.8																						
28-Jun	5	4	6	5	A	11	5	6	5	4	4	3	2	1	1	1	1	1	1	1	1	2	2	3	3.3	10.6																						
29-Jun	3	3	4	5	A	11	6	5	6	4	3	2	3	2	2	3	2	2	2	2	3	3	2	2	3.4	10.5																						
30-Jun	3	2	2	2	A	7	5	3	2	2	1	1	2	1	1	1	1	1	1	1	1	1	2	2	1.9	7.4																						
																								1.8	1.8	1.9	2.0	--	5.2	3.5	2.6	2.0	1.6	1.2	0.9	1.0	1.1	0.9	0.8	0.9	0.8	0.8	1.0	1.4	1.7	1.9	1.8	Diurnal Average
																								5.2	4.5	5.7	7.2	--	10.6	11.0	10.9	7.2	5.1	4.4	2.6	4.1	6.3	4.9	3.2	7.0	4.3	2.5	2.7	3.7	3.7	5.0	6.8	Diurnal Maximum
C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span																																																
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																																																

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - June 2016



Hourly Maximums

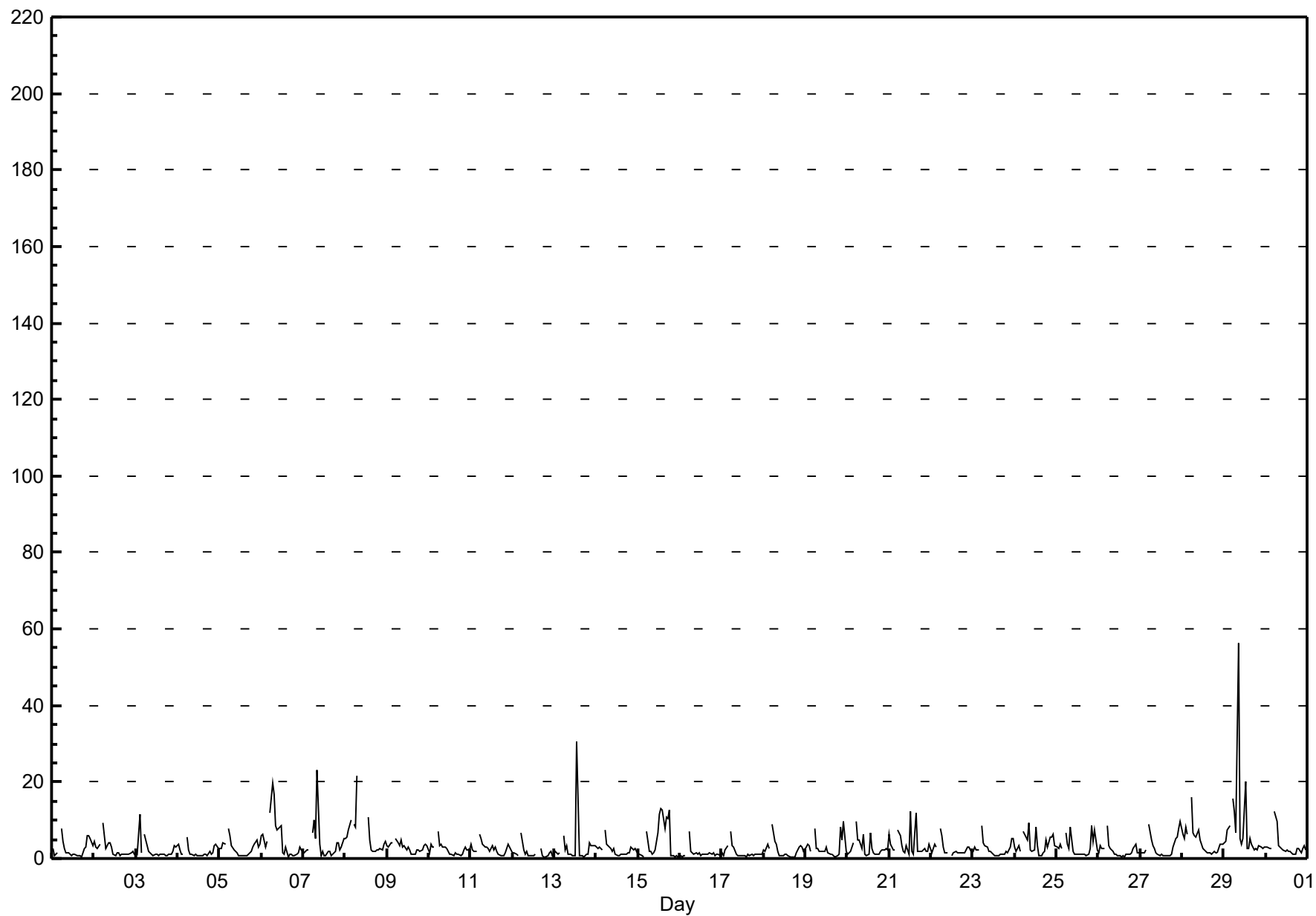
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - June 2016

Maximum Value: 56.2 ppb on Jun 29 09:00																				Maximum Daily Average: 8.0 ppb on Jun 29					Hours in Service: 720	
Minimum Value: 0 ppb on Jun 18 17:00																				Minimum Daily Average: 1.3 ppb on Jun 16					Hours of Data: 681	
Maximum Diurnal Average: 8.3 ppb at hour 6																				Minimum Diurnal Average: 1.4 ppb at hour 18					Hours of Missing Data: 39	
Monthly Average: 3.07 ppb																				Percentiles: P ₁ = 0.5 P ₁₀ = 0.8 Q ₁ = 1.1 Median = 2.0 Q ₃ = 3.4 P ₉₀ = 6.7 P ₉₉ = 15.7					Hours of Calibration: 35	
																				Percent Operational Time: 99.4						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	3	1	1	2	A	8	4	3	2	2	1	1	1	1	1	1	1	1	3	3	6	6	5	3	2.5	7.7
2-Jun	5	3	3	4	A	9	6	3	4	4	3	1	1	1	2	1	1	1	1	1	1	2	2	1	2.6	9.3
3-Jun	2	1	11	2	A	6	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3	2.1	11.4
4-Jun	4	2	1	1	A	6	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	3	4	3	1.8	5.6
5-Jun	3	3	4	4	A	8	6	3	2	2	1	1	1	1	1	1	1	1	2	3	4	5	3	4	2.7	8.0
6-Jun	6	6	3	5	A	12	20	17	9	8	8	8	2	1	3	0	1	1	1	1	1	2	3	2	5.1	19.8
7-Jun	2	2	2	2	A	7	10	5	23	4	1	2	1	1	2	2	1	1	2	4	4	2	3	5	3.8	23.0
8-Jun	5	6	7	10	A	9	8	22	C	C	C	C	C	11	5	2	2	2	2	2	3	2	4	4	5.9	21.5
9-Jun	3	3	4	4	A	5	4	3	5	3	3	2	3	2	1	1	1	2	2	2	2	3	4	3	3.0	5.2
10-Jun	2	4	3	3	A	7	3	4	3	3	2	2	1	1	1	1	1	1	1	1	2	3	2	2	2.3	7.2
11-Jun	4	2	2	2	A	6	5	4	3	3	3	2	3	2	3	2	1	1	1	1	1	4	3	2	2.6	6.4
12-Jun	1	1	1	1	A	7	2	1	2	1	1	1	1	1	P	P	3	1	1	1	1	1	2	1	1.5	6.8
13-Jun	2	2	1	2	A	6	2	3	1	1	1	1	1	31	1	1	1	0	1	1	4	3	3	3	3.2	30.8
14-Jun	3	3	3	2	A	7	4	3	3	2	3	1	1	1	1	1	1	1	2	1	3	2	3	2	2.3	7.3
15-Jun	1	1	1	1	A	7	2	2	1	1	2	7	12	13	12	8	11	10	13	1	1	1	1	0	4.7	12.9
16-Jun	1	0	1	1	A	7	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	7.0
17-Jun	1	1	2	3	A	7	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.6	7.0
18-Jun	2	2	4	3	A	9	5	4	2	1	1	1	1	1	1	0	0	1	1	2	3	3	3	2	2.1	9.1
19-Jun	3	4	4	2	A	8	3	3	2	2	2	2	3	2	1	1	1	1	1	1	8	5	10	2	2.9	9.6
20-Jun	1	2	2	4	A	10	5	5	2	6	1	1	1	7	2	1	1	1	1	2	2	2	3	2	2.8	9.9
21-Jun	6	4	2	2	A	7	6	3	2	2	3	1	12	2	1	12	2	2	2	2	3	2	2	4	3.7	12.2
22-Jun	2	3	4	3	A	8	6	3	2	1	N	N	1	2	2	1	1	1	2	2	2	3	3	1	2.5	7.9
23-Jun	2	3	2	2	A	9	4	3	3	2	2	1	1	1	1	1	1	1	1	2	1	3	5	5	2.5	8.6
24-Jun	3	2	3	2	A	7	6	5	9	2	2	2	8	3	1	1	1	2	5	3	6	6	6	3	3.8	9.2
25-Jun	3	3	4	3	A	7	4	3	8	2	1	1	1	1	1	1	1	1	1	3	8	5	8	2	3.0	8.5
26-Jun	2	3	3	2	A	9	3	2	2	1	1	1	1	1	1	1	1	1	1	2	3	4	2	1	2.0	8.5
27-Jun	2	2	1	2	A	9	5	3	3	1	1	1	1	1	1	1	1	1	1	3	5	6	8	10	2.9	9.7
28-Jun	7	5	8	7	A	16	7	6	6	7	5	4	3	2	1	1	2	1	2	2	1	3	4	4	4.4	15.9
29-Jun	4	4	7	8	A	16	12	7	56	5	4	5	20	2	3	5	4	2	3	2	3	3	3	3	8.0	56.2
30-Jun	3	3	3	3	A	12	10	4	3	2	2	2	2	2	2	1	1	1	3	3	2	3	3	2	3.1	12.2
2.8 2.6 3.2 3.0 -- 8.3 5.4 4.4 5.6 2.5 2.1 1.9 2.9 3.2 1.8 1.8 1.5 1.4 1.9 1.8 2.9 3.0 3.5 2.8																									Diurnal Average	
6.5 6.3 11.4 10.2 -- 15.9 19.8 21.5 56.2 7.6 7.8 8.5 20.3 30.8 12.5 12.0 10.6 10.3 12.6 4.0 8.5 6.1 9.6 9.7																									Diurnal Maximum	
C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span																										

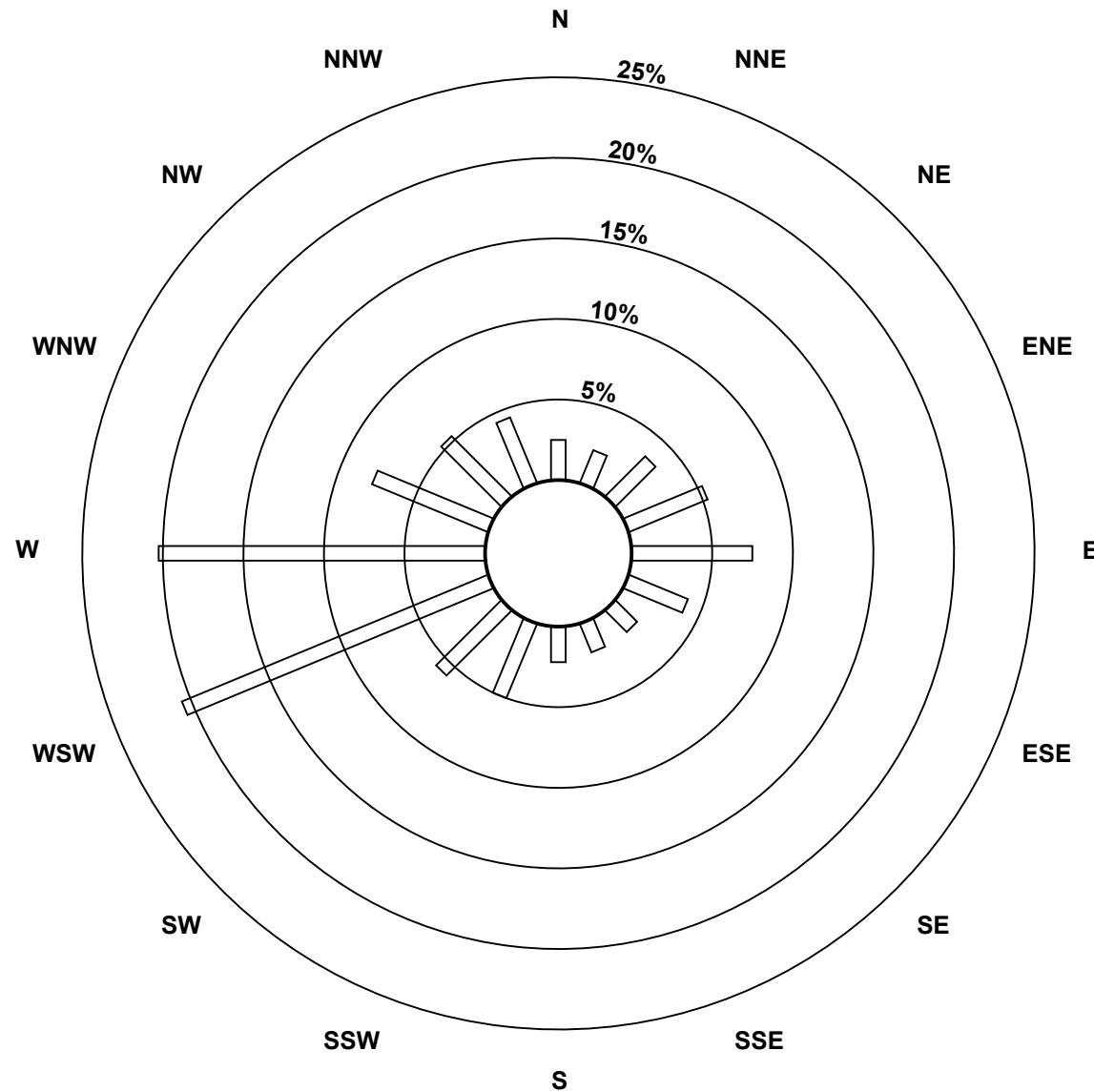
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - June 2016

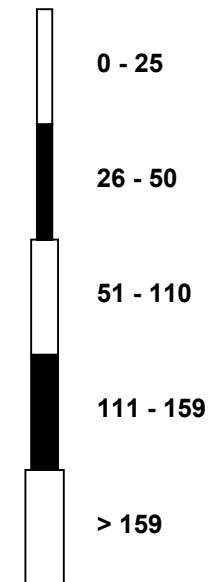


Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - June 2016

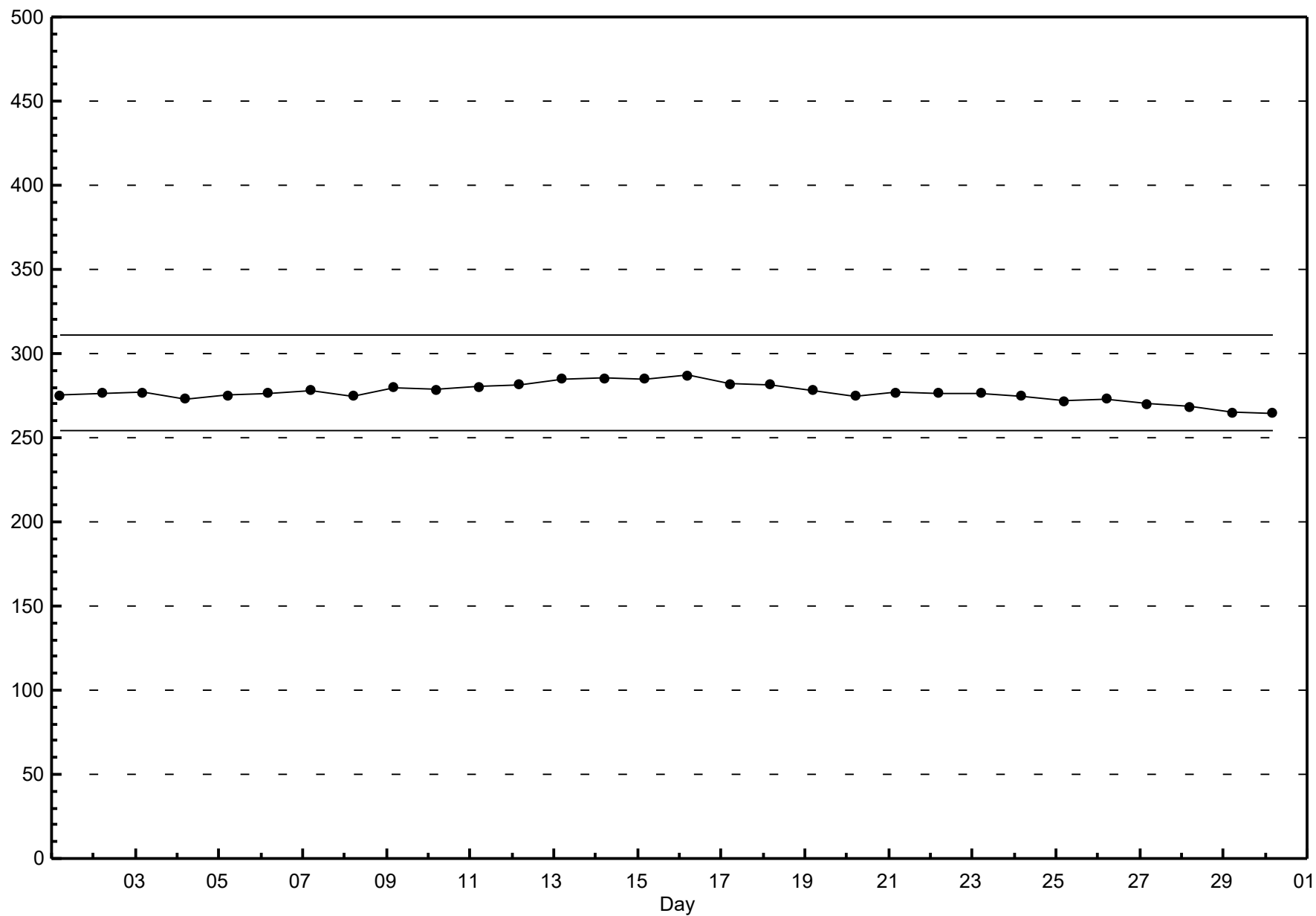


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - June 2016



Hourly Averages

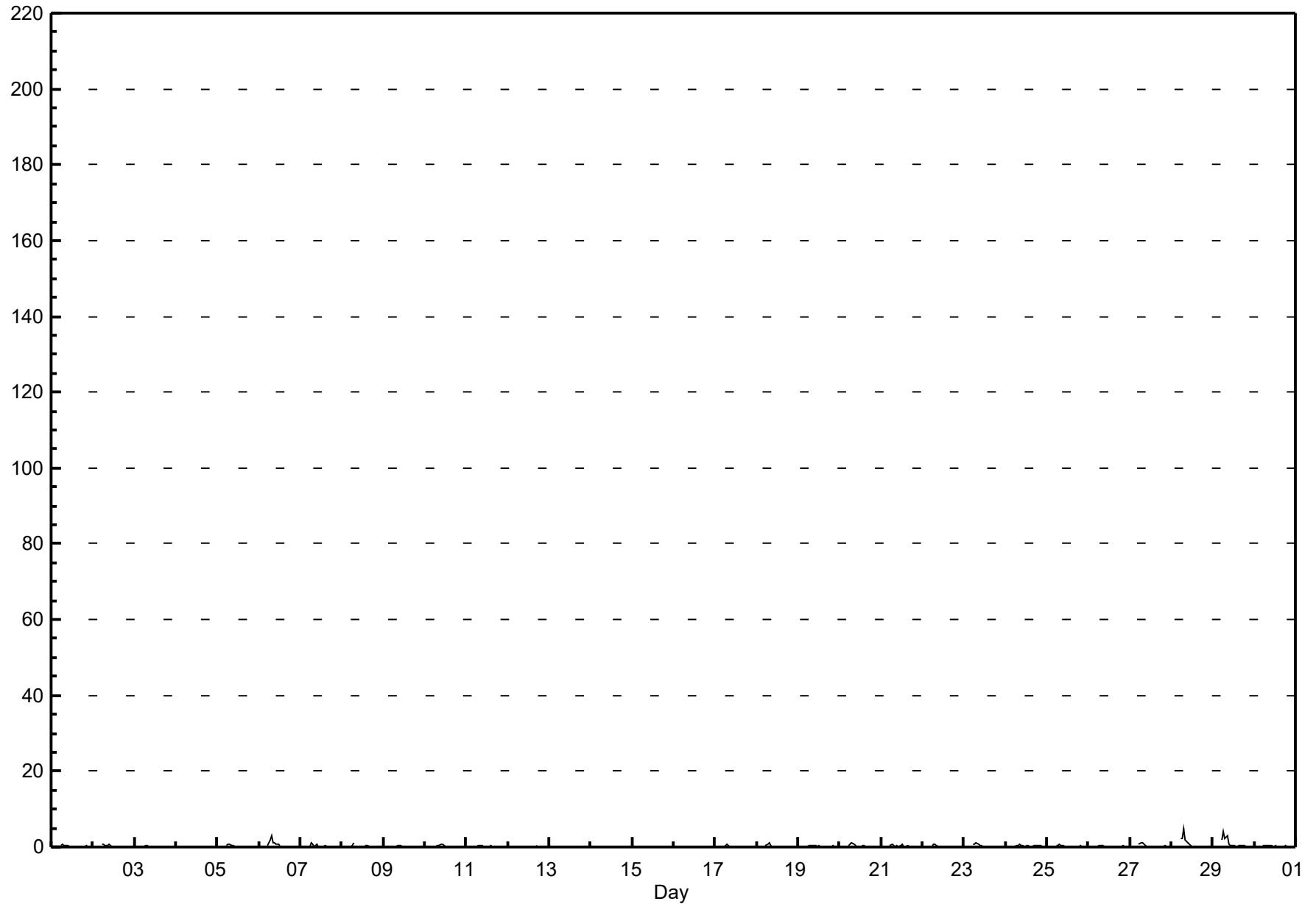
Nitrogen Oxide (NO) - ppb

Beaverlodge - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 4.7 ppb on Jun 28 08:00																				Maximum Daily Average: 0.6 ppb on Jun 29		Hours of Data: 681				
Minimum Value: 0 ppb on Jun 7 01:00																				Minimum Daily Average: 0.0 ppb on Jun 13		Hours of Missing Data: 39				
Maximum Diurnal Average: 0.8 ppb at hour 8																				Minimum Diurnal Average: 0.0 ppb at hour 4		Hours of Calibration: 35				
Monthly Average: 0.19 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 2.0		Percent Operational Time: 99.4				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
2-Jun	0	0	0	0	A	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
3-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
4-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
5-Jun	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
6-Jun	0	0	0	0	A	0	2	3	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.9
7-Jun	0	0	0	0	A	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
8-Jun	0	0	0	0	A	0	0	1	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
9-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
10-Jun	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
11-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
12-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	P	P	0	0	0	0	0	0	0	0	0.1	0.3
13-Jun	0	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
14-Jun	0	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
15-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
16-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
17-Jun	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
18-Jun	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
19-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
20-Jun	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
21-Jun	0	0	0	0	A	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
22-Jun	0	0	0	0	A	0	1	1	0	0	N	N	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
23-Jun	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
24-Jun	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
25-Jun	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
26-Jun	0	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
27-Jun	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
28-Jun	0	0	0	0	A	2	2	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.7
29-Jun	0	0	0	0	A	2	4	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.3
30-Jun	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
0.0 0.0 0.0 0.0 -- 0.3 0.7 0.8 0.5 0.3 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0																									Diurnal Average	
0.1 0.1 0.1 0.1 -- 2.1 4.3 4.7 3.0 1.1 0.9 0.7 0.7 0.2 0.3 0.2 0.5 0.2 0.5 0.2 0.4 0.2 0.1 0.1																									Diurnal Maximum	
C - Calibration					P - Power Failure					N - Not Valid					A - Automated Daily Zero Span											

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - June 2016



Hourly Maximums

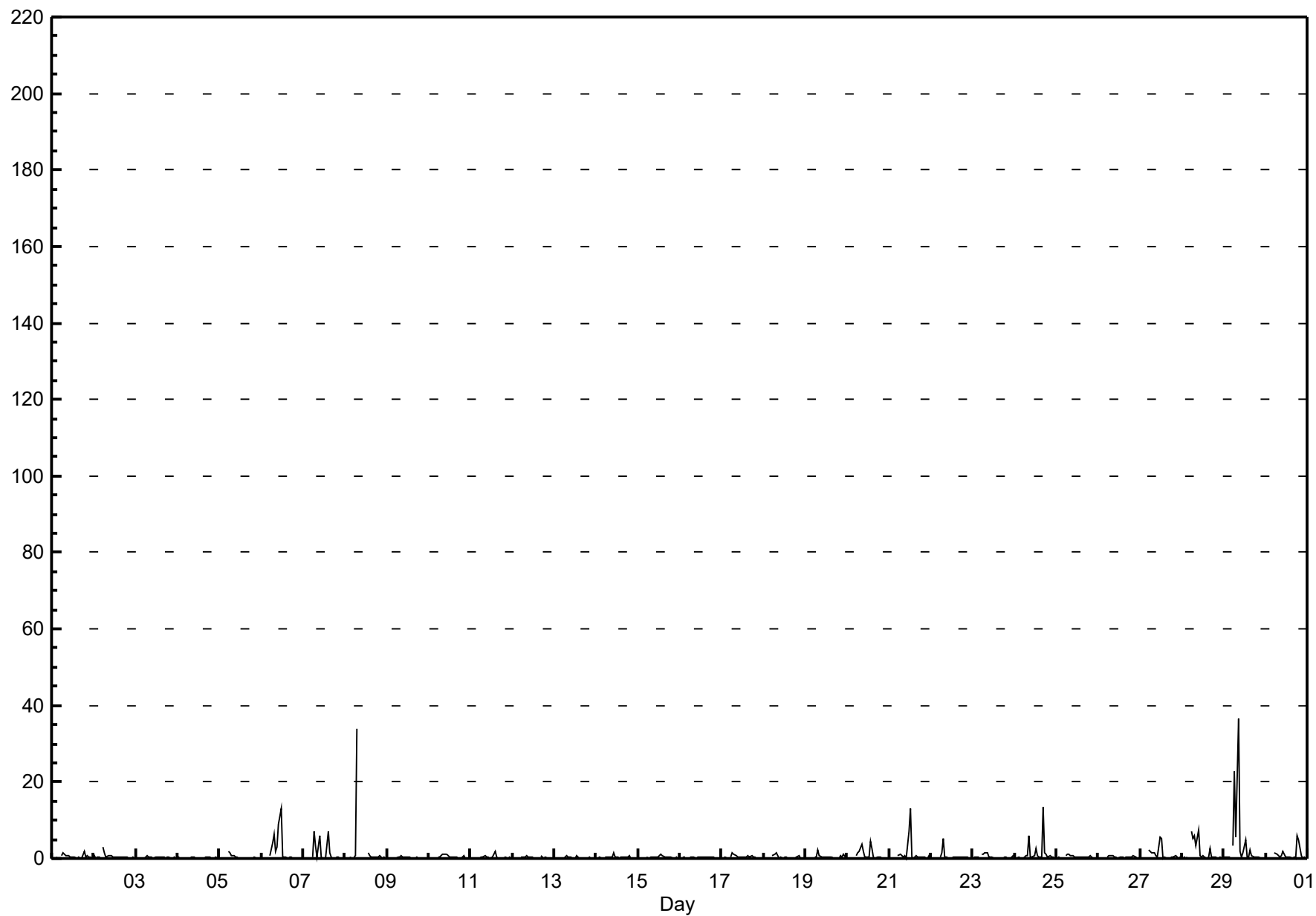
Nitrogen Oxide (NO) - ppb

Beaverlodge - June 2016

Maximum Value: 36.6 ppb on Jun 29 09:00																			Maximum Daily Average: 3.6 ppb on Jun 29						Hours in Service: 720	
Minimum Value: 0 ppb on Jun 13 01:00																			Minimum Daily Average: 0.2 ppb on Jun 4						Hours of Data: 681	
Maximum Diurnal Average: 2.7 ppb at hour 8																			Minimum Diurnal Average: 0.2 ppb at hour 2						Hours of Missing Data: 39	
Monthly Average: 0.75 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 1.0 P ₉₉ = 7.5						Hours of Calibration: 35	
																									Percent Operational Time: 99.4	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	0	0	0	0	A	1	1	1	1	1	1	0	0	0	0	0	0	0	2	0	1	0	0	0	0.5	2.1
2-Jun	1	0	0	0	A	3	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.9
3-Jun	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
4-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
5-Jun	0	0	0	0	A	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0
6-Jun	0	0	0	0	A	1	4	6	2	3	9	13	0	0	0	0	0	0	0	0	0	0	0	0	1.8	13.1
7-Jun	0	0	0	0	A	0	7	4	1	6	0	0	0	0	7	2	0	0	0	0	0	0	0	0	1.2	7.2
8-Jun	0	0	0	0	A	0	1	34	C	C	C	C	C	2	1	0	0	0	0	0	1	0	0	0	2.2	33.8
9-Jun	0	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
10-Jun	0	0	0	0	A	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0.4	1.1
11-Jun	0	0	0	0	A	0	0	0	1	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0.3	1.8
12-Jun	0	0	0	0	A	0	1	0	1	0	0	0	0	0	P	P	1	0	0	0	0	0	0	0	0.3	0.6
13-Jun	0	0	0	0	A	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.7
14-Jun	0	0	0	0	A	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	1.7
15-Jun	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.1
16-Jun	0	0	0	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
17-Jun	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0.4	1.4
18-Jun	0	0	0	0	A	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.4	1.6
19-Jun	0	0	0	0	A	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.4	2.3
20-Jun	0	0	0	0	A	1	1	2	4	2	0	1	0	5	3	0	0	0	0	0	0	0	0	0	0.9	4.6
21-Jun	0	0	0	0	A	1	1	1	1	1	0	7	13	1	0	1	1	0	0	0	0	0	0	1	1.2	13.2
22-Jun	0	0	0	0	A	0	1	5	0	0	N	N	0	0	0	0	0	0	0	0	0	0	0	0	0.5	5.2
23-Jun	0	0	0	0	A	1	1	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	1.6
24-Jun	0	0	0	0	A	0	1	1	6	1	0	1	2	1	0	0	13	2	1	0	1	0	0	0	1.4	13.3
25-Jun	0	0	0	0	A	1	1	1	1	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0.4	1.1
26-Jun	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.3	0.8
27-Jun	0	0	0	0	A	2	1	1	1	1	0	6	5	0	0	0	0	0	0	0	1	0	0	0	1.0	5.7
28-Jun	0	0	0	0	A	7	5	6	3	7	1	0	1	0	0	0	3	0	0	0	0	0	0	0	1.6	7.4
29-Jun	0	0	0	0	A	3	23	6	37	2	1	1	5	0	0	2	1	1	0	0	0	0	0	0	3.6	36.6
30-Jun	0	0	0	0	A	1	1	1	0	1	2	0	0	0	0	0	0	0	6	5	1	0	0	0	0.9	6.1
0.2					0.9					2.7					1.1					0.5					Diurnal Average	
0.7					7.1					33.8					7.4					4.6					Diurnal Maximum	
C - Calibration					P - Power Failure					N - Not Valid					A - Automated Daily Zero Span											

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - June 2016



Hourly Averages

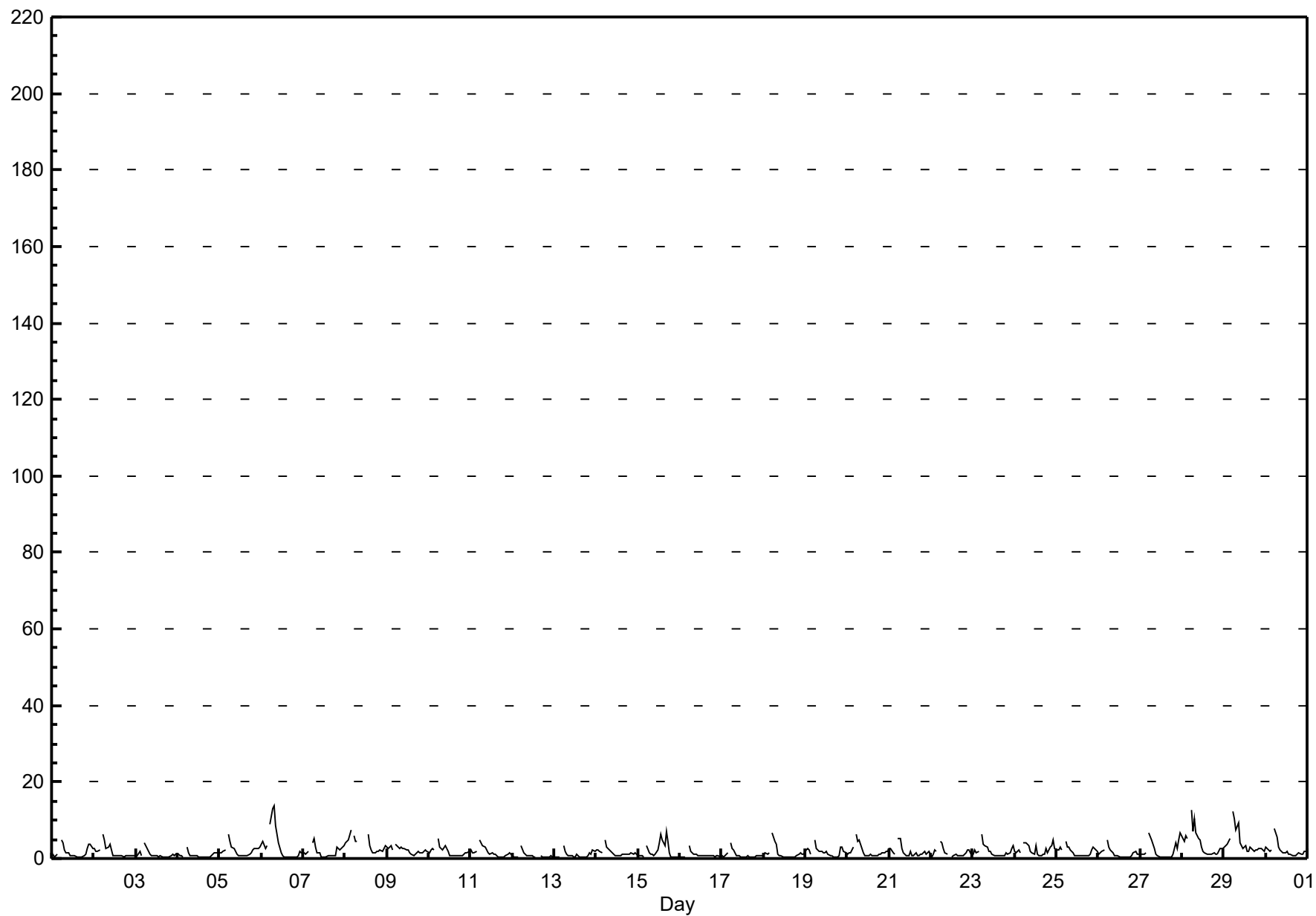
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13.8 ppb on Jun 6 08:00 Maximum Daily Average: 4.0 ppb on Jun 29																				Hours in Service: 720 Hours of Data: 681 Hours of Missing Data: 39 Hours of Calibration: 35 Percent Operational Time: 99.4						
Minimum Value: 0 ppb on Jun 12 20:00 Maximum Diurnal Average: 5.6 ppb at hour 6 Monthly Average: 1.87 ppb										Minimum Daily Average: 0.7 ppb on Jun 12 Minimum Diurnal Average: 0.9 ppb at hour 18 Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.7 Median = 1.3 Q ₃ = 2.4 P ₉₀ = 4.1 P ₉₉ = 9.2																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	1	1	1	1	A	5	4	2	2	1	1	1	1	1	0	0	0	0	1	1	3	4	4	3	1.6	4.9
2-Jun	3	2	2	2	A	6	5	3	3	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.8	6.5
3-Jun	1	1	2	1	A	4	2	2	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1.0	4.0
4-Jun	1	1	1	1	A	3	1	1	1	1	1	1	0	0	1	1	0	0	0	1	1	2	2	1	0.9	2.8
5-Jun	1	2	2	2	A	6	5	3	2	2	1	1	1	1	1	1	1	1	1	2	3	3	3	3	2.0	6.3
6-Jun	4	5	2	3	A	9	13	14	8	6	4	2	1	1	0	0	0	0	0	0	0	1	2	2	3.4	13.8
7-Jun	1	1	1	2	A	4	5	3	2	1	1	1	0	0	1	1	1	1	1	3	3	2	2	3	1.8	5.1
8-Jun	4	5	5	7	A	6	5	5	C	C	C	C	C	6	3	2	2	2	2	2	2	2	3	3	3.6	7.3
9-Jun	3	3	3	2	A	4	3	3	3	3	3	2	2	2	1	1	1	2	2	2	2	2	2	2	2.2	3.8
10-Jun	1	2	2	2	A	5	3	3	2	3	3	2	1	1	1	1	1	1	1	1	1	2	2	2	1.8	5.2
11-Jun	2	2	2	2	A	5	4	3	3	2	2	1	2	1	1	1	0	0	0	0	1	1	1	1	1.7	4.9
12-Jun	1	1	0	1	A	3	2	1	1	1	1	1	1	0	P	P	1	0	0	0	0	0	1	0	0.7	3.3
13-Jun	0	0	0	0	A	3	2	1	1	1	1	1	0	1	0	0	0	0	0	1	2	1	2	2	0.9	3.3
14-Jun	2	2	2	2	A	5	3	3	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1.6	4.9
15-Jun	1	1	1	0	A	3	1	1	1	1	1	2	4	6	5	3	7	4	2	0	0	0	0	0	2.1	7.1
16-Jun	0	0	0	0	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0.8	3.5
17-Jun	1	0	1	2	A	4	3	2	1	1	1	1	0	0	0	1	0	1	0	0	1	1	1	1	0.9	4.1
18-Jun	1	1	1	2	A	7	4	4	1	1	1	1	1	0	0	0	0	0	0	1	1	2	1	1	1.4	6.7
19-Jun	2	3	2	1	A	5	2	2	2	2	1	1	2	1	1	1	1	0	0	1	3	3	2	1	1.7	4.7
20-Jun	1	1	1	3	A	6	4	5	3	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1.8	6.4
21-Jun	3	3	1	1	A	5	5	3	1	1	1	1	2	1	1	2	1	1	1	1	2	1	1	2	1.8	5.4
22-Jun	0	1	2	2	A	4	4	3	1	1	N	N	1	1	1	1	1	1	1	1	1	2	2	1	1.5	4.4
23-Jun	1	2	2	2	A	6	4	3	3	2	2	1	1	1	1	1	1	1	1	2	1	2	3	3	1.9	6.2
24-Jun	2	1	2	1	A	4	4	4	3	2	2	1	3	1	1	1	1	1	3	2	3	3	5	2	2.3	4.7
25-Jun	2	2	3	2	A	4	3	3	2	2	1	1	1	1	1	1	1	1	1	1	2	3	2	2	1.8	4.3
26-Jun	1	2	2	2	A	5	3	2	1	1	1	1	0	0	0	0	0	1	1	1	1	2	1	1	1.3	4.8
27-Jun	1	1	1	2	A	7	5	4	3	1	1	1	1	0	0	0	1	0	1	1	4	3	5	7	2.1	6.9
28-Jun	5	5	6	5	A	13	7	10	7	5	5	3	2	2	1	1	1	1	1	1	1	2	2	3	3.9	12.7
29-Jun	3	3	4	5	A	12	10	7	9	4	3	2	3	2	2	3	3	2	2	2	3	3	2	2	4.0	12.3
30-Jun	3	3	2	2	A	8	6	3	2	2	2	1	2	1	1	1	1	1	1	1	1	1	2	2	2.1	7.8
1.8 1.8 1.9 2.1 -- 5.6 4.1 3.4 2.5 1.9 1.4 1.1 1.2 1.2 1.0 0.9 1.0 0.9 0.9 1.1 1.5 1.7 1.9 1.8 5.2 4.6 5.8 7.3 -- 12.7 13.0 13.8 9.4 6.2 5.0 2.9 4.2 6.4 5.0 3.3 7.1 4.3 2.7 2.9 4.0 3.8 5.0 6.9																									Diurnal Average	Diurnal Maximum
C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb
Beaverlodge - June 2016



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

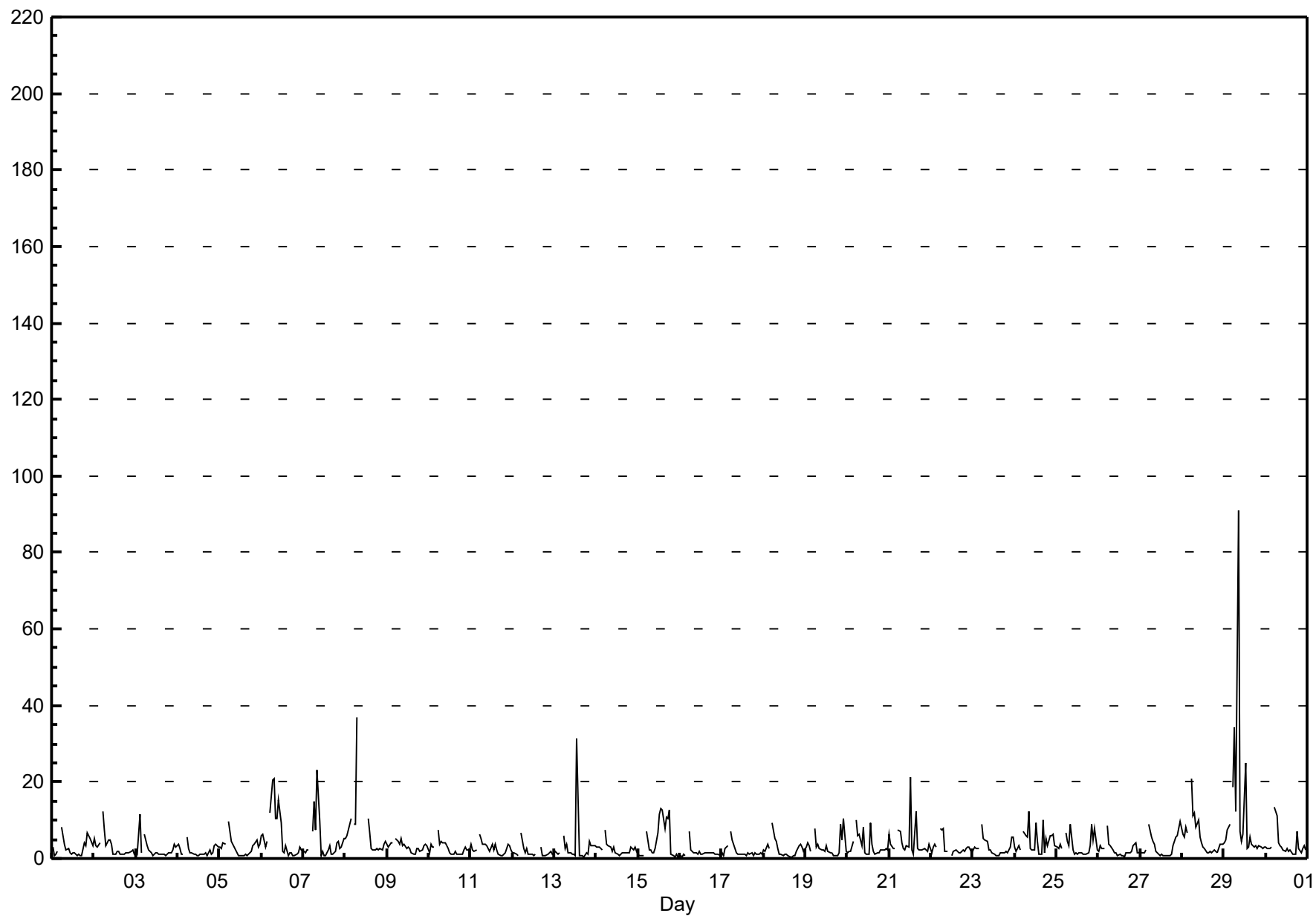
Beaverlodge - June 2016

Maximum Value: 91.1 ppb on Jun 29 09:00																				Maximum Daily Average: 11.3 ppb on Jun 29					Hours in Service: 720	
Minimum Value: 0 ppb on Jun 13 18:00																				Minimum Daily Average: 1.5 ppb on Jun 16					Hours of Data: 681	
Maximum Diurnal Average: 8.9 ppb at hour 6																				Minimum Diurnal Average: 1.6 ppb at hour 18					Hours of Missing Data: 39	
Monthly Average: 3.57 ppb																				Percentiles: P ₁ = 0.6 P ₁₀ = 0.9 Q ₁ = 1.4 Median = 2.3 Q ₃ = 3.8 P ₉₀ = 7.5 P ₉₉ = 20.6					Hours of Calibration: 35	
																				Percent Operational Time: 99.4						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	3	1	1	2	A	8	6	4	2	3	2	1	1	2	1	1	1	1	4	3	7	6	5	3	2.9	8.3
2-Jun	5	3	3	4	A	12	8	3	5	5	4	1	1	2	2	1	1	1	1	1	1	2	2	1	3.1	12.1
3-Jun	2	1	12	2	A	6	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	4	3	2.3	11.6
4-Jun	4	3	1	1	A	6	2	1	1	1	1	1	1	1	1	1	1	1	2	1	2	3	4	3	1.9	5.7
5-Jun	3	3	4	4	A	10	7	4	3	2	2	1	1	1	1	1	1	1	2	3	4	5	3	4	3.0	9.8
6-Jun	6	6	3	5	A	12	20	21	10	10	15	9	2	1	3	1	1	1	1	1	1	1	3	2	6.0	20.9
7-Jun	2	2	2	2	A	7	15	7	23	10	1	2	1	1	2	3	1	1	2	4	5	2	3	5	4.5	23.2
8-Jun	5	6	7	10	A	9	9	37	C	C	C	C	C	10	7	3	2	2	3	2	3	2	4	5	7.0	37.0
9-Jun	4	3	4	4	A	5	4	4	5	3	4	3	3	3	1	1	3	2	2	2	3	4	3	3.1	5.3	
10-Jun	2	4	3	3	A	8	4	5	4	4	3	2	1	1	1	2	1	1	1	1	2	3	2	2	2.6	7.5
11-Jun	4	2	2	2	A	6	5	4	4	3	3	2	4	2	4	2	1	1	1	1	2	4	3	2	2.8	6.4
12-Jun	2	1	1	1	A	7	3	1	3	1	1	1	1	1	P	P	3	1	1	1	1	2	2	1	1.6	6.8
13-Jun	2	2	1	2	A	6	3	4	1	1	1	1	1	31	1	1	1	0	1	1	5	3	4	3	3.3	31.4
14-Jun	3	3	3	2	A	7	4	3	3	2	3	1	1	1	1	1	1	1	2	1	3	2	3	2	2.4	7.4
15-Jun	1	1	1	1	A	7	2	2	1	1	2	7	12	13	13	8	11	10	13	1	1	1	1	1	4.7	13.0
16-Jun	1	1	1	1	A	7	2	2	2	2	1	2	1	1	1	1	1	2	1	2	1	1	1	1	1.5	7.0
17-Jun	2	1	3	3	A	7	5	4	2	1	1	1	1	1	1	2	1	2	1	2	1	1	1	1	1.9	7.0
18-Jun	2	2	4	3	A	9	5	5	3	1	1	1	1	1	1	1	1	1	1	2	3	4	3	2	2.4	9.3
19-Jun	3	4	3	2	A	8	3	4	3	2	2	2	3	2	1	1	1	1	1	1	9	5	11	2	3.2	10.6
20-Jun	1	2	2	4	A	10	6	7	3	8	2	1	1	9	4	2	1	1	1	2	2	2	3	2	3.3	10.0
21-Jun	6	4	3	3	A	8	7	4	3	2	4	3	21	2	1	12	3	2	2	3	2	2	4	4.4	21.2	
22-Jun	2	3	4	3	A	8	7	8	2	2	N	N	1	2	2	2	2	2	2	2	3	3	1	2.9	7.9	
23-Jun	2	3	3	3	A	9	5	5	5	2	2	1	1	1	1	1	1	1	2	2	1	3	6	5	2.8	8.8
24-Jun	3	2	3	2	A	7	6	6	12	3	2	2	9	5	1	1	10	2	5	3	6	6	6	3	4.6	12.2
25-Jun	3	3	4	3	A	7	5	3	9	2	1	1	1	2	1	1	1	1	1	3	9	5	8	2	3.3	8.9
26-Jun	2	4	3	2	A	9	4	3	2	2	1	1	1	1	1	1	1	2	2	3	4	2	2	2.2	8.6	
27-Jun	2	2	2	2	A	9	6	5	4	2	1	1	1	1	1	1	1	1	3	6	6	8	10	3.2	9.8	
28-Jun	6	6	8	7	A	21	11	12	8	10	6	4	3	3	1	2	2	1	2	2	3	4	4	5.5	21.1	
29-Jun	4	5	7	9	A	19	34	12	91	7	4	6	25	3	3	6	4	3	3	3	3	3	3	3	11.3	91.1
30-Jun	3	3	3	3	A	14	11	4	3	3	2	2	3	2	2	1	1	1	7	2	2	3	4	2	3.5	13.5
2.9 2.7 3.3 3.1 -- 8.9 7.0 6.2 7.5 3.4 2.6 2.2 3.6 3.5 2.1 2.1 2.0 1.6 2.3 2.0 3.1 3.1 3.6 2.8																								Diurnal Average		
6.5 6.2 11.6 10.5 -- 21.1 34.1 37.0 91.1 10.5 15.4 9.4 24.8 31.4 12.5 12.3 10.7 10.3 12.7 4.3 9.0 6.1 10.6 9.8																								Diurnal Maximum		
C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span																										

Hourly Maximums

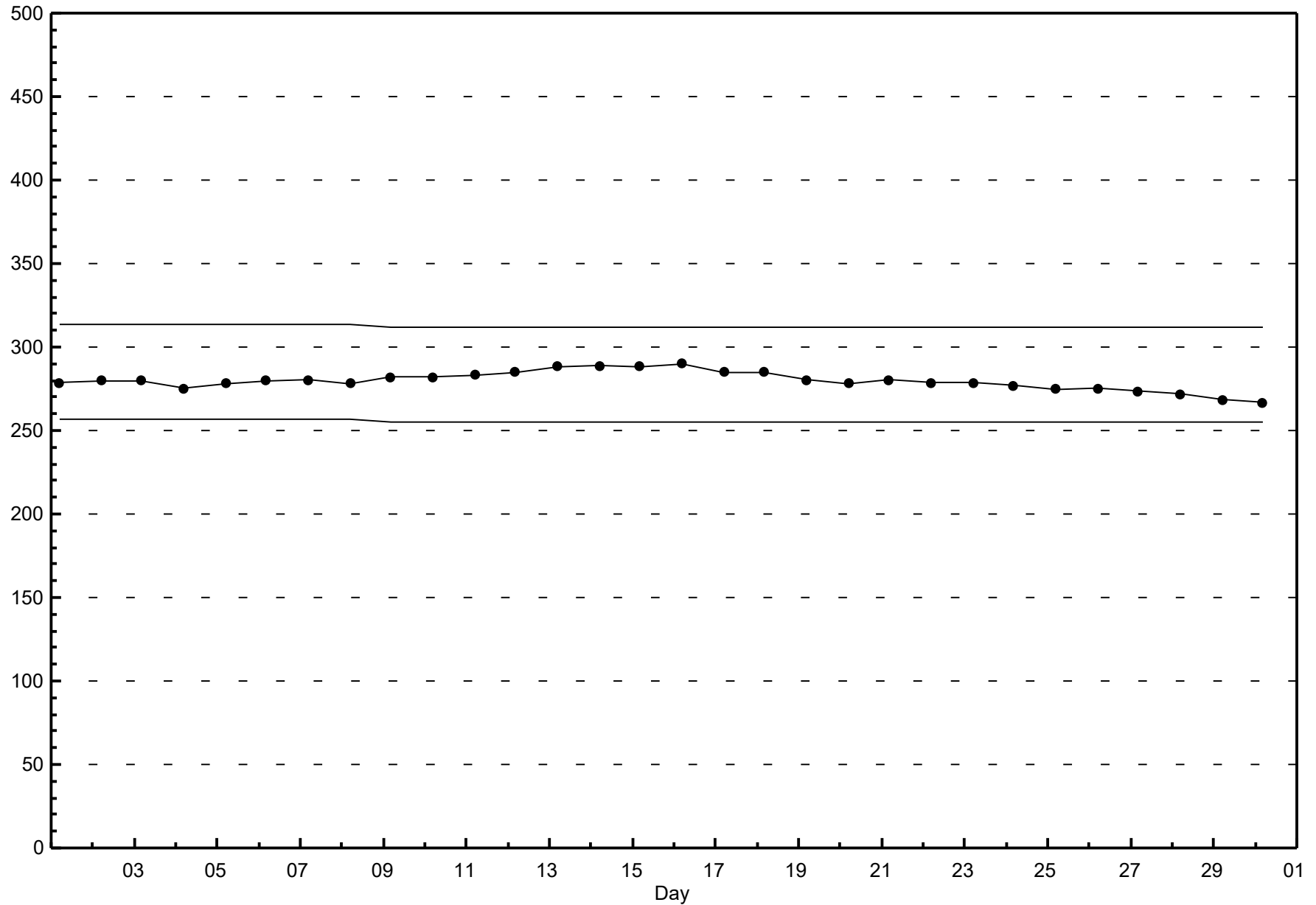
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - June 2016



Span Responses

Oxides of Nitrogen (NO_x)
Beaverlodge - June 2016



Hourly Averages

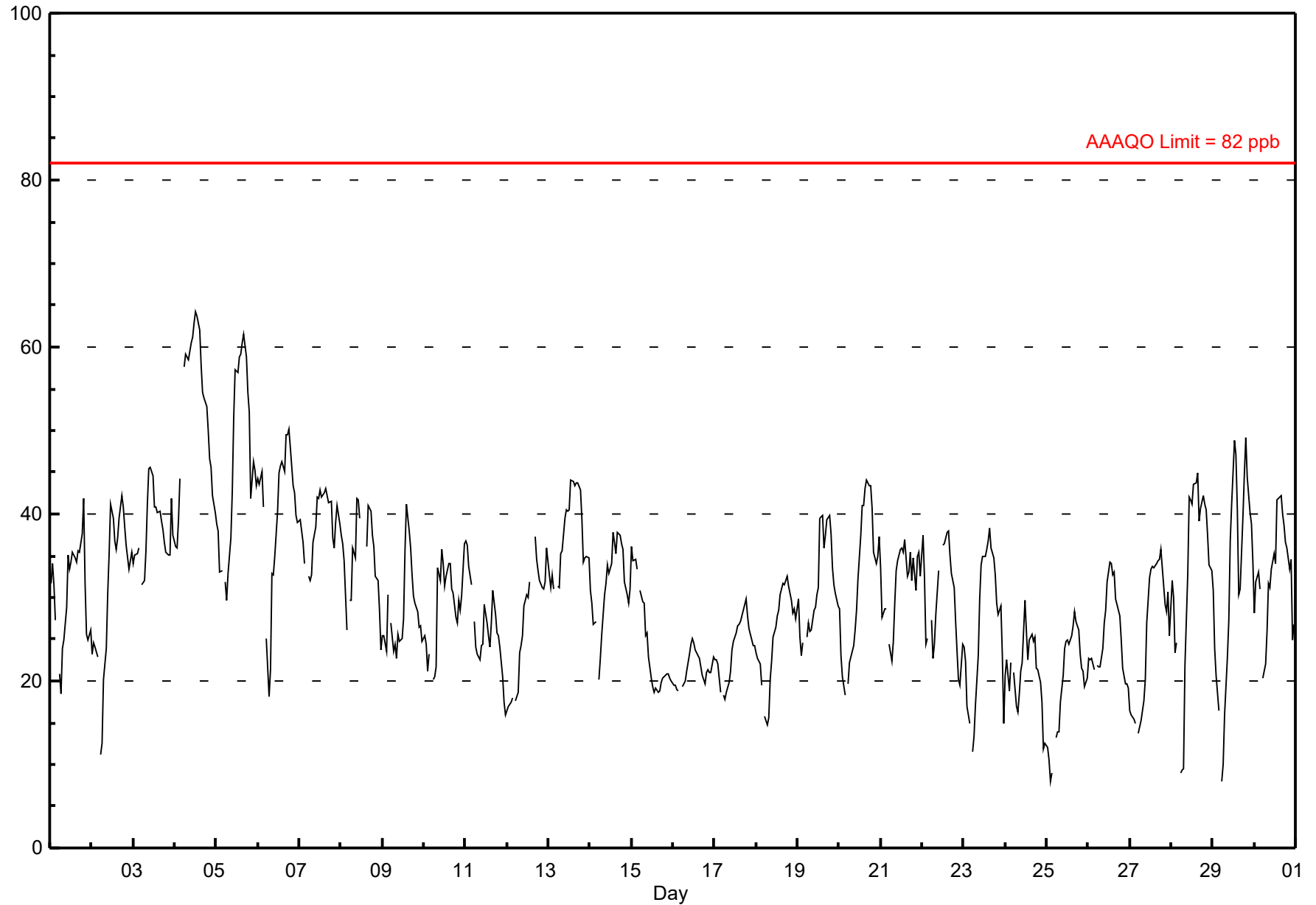
Ozone (O₃) - ppb

Beaverlodge - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 64.2 ppb on Jun 4 13:00 Maximum Daily Average: 52.5 ppb on Jun 4																					Hours in Service: 720 Hours of Data: 683 Hours of Missing Data: 37 Hours of Calibration: 33 Percent Operational Time: 99.4					
Minimum Value: 8 ppb on Jun 25 03:00 Maximum Diurnal Average: 37.0 ppb at hour 15 Monthly Average: 30.98 ppb										Minimum Daily Average: 19.8 ppb on Jun 25 Minimum Diurnal Average: 22.4 ppb at hour 7 Percentiles: P ₁ = 10.2 P ₁₀ = 19.5 Q ₁ = 23.8 Median = 31.0 Q ₃ = 36.6 P ₉₀ = 42.5 P ₉₉ = 60.3																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	32	34	32	27	A	21	18	24	25	29	35	33	34	35	35	34	36	35	38	42	32	26	25	26	30.8	41.9
2-Jun	23	25	24	23	A	11	13	20	24	31	35	41	40	37	36	37	39	42	41	39	36	33	34	35	31.3	42.2
3-Jun	34	35	35	36	A	32	32	36	41	45	46	45	41	41	40	40	39	38	37	35	35	35	42	38	38.1	45.6
4-Jun	36	36	39	44	A	58	59	59	58	61	61	63	64	64	62	58	55	54	53	50	47	46	42	40	52.5	64.2
5-Jun	39	38	33	33	A	32	30	33	37	43	52	57	57	59	59	60	62	59	55	52	42	46	45	43	46.3	61.5
6-Jun	44	43	45	41	A	25	18	21	33	33	35	40	45	46	46	45	50	50	50	48	43	43	40	39	40.1	50.2
7-Jun	39	38	37	34	A	33	32	33	37	38	42	42	43	42	43	43	42	41	41	37	36	39	41	39	38.8	43.0
8-Jun	38	36	34	26	A	30	30	36	35	42	42	40	C	C	C	36	41	40	37	36	33	32	29	24	34.8	41.8
9-Jun	25	25	23	30	A	27	24	24	23	26	25	25	27	36	41	38	36	33	30	29	28	26	27	25	28.4	41.2
10-Jun	25	24	21	23	A	20	21	22	34	32	36	34	31	33	34	34	31	31	28	27	30	29	30	36	28.9	36.4
11-Jun	37	36	34	31	A	27	24	23	23	24	24	29	27	25	24	27	31	28	26	25	24	20	17	16	26.3	36.8
12-Jun	16	17	17	18	A	18	19	23	24	25	29	30	30	32	P	P	37	34	33	32	31	31	32	36	26.9	37.2
13-Jun	33	31	33	31	A	31	31	35	36	39	41	40	40	44	44	43	44	44	43	39	34	35	35	35	37.4	44.0
14-Jun	31	29	27	27	A	20	23	26	30	32	34	33	34	38	37	35	38	38	36	36	32	30	29	31	31.5	37.8
15-Jun	36	34	35	33	A	31	30	29	25	26	23	20	19	19	19	19	19	20	20	21	21	21	20	20	24.3	36.1
16-Jun	20	19	19	19	A	19	20	20	21	23	24	25	25	24	23	23	22	21	20	21	21	21	21	23	21.5	25.0
17-Jun	23	23	22	19	A	18	18	19	20	21	24	25	26	27	27	27	28	29	30	28	26	25	24	24	23.9	29.8
18-Jun	23	23	22	20	A	16	15	16	20	22	25	26	28	29	30	32	32	32	33	31	30	28	29	27	25.6	32.6
19-Jun	30	25	23	25	A	25	27	26	26	28	29	30	31	40	40	36	37	39	40	38	34	32	30	29	31.3	39.8
20-Jun	29	23	21	18	A	20	22	23	24	26	29	32	37	41	41	43	44	43	43	41	35	34	35	37	32.3	44.0
21-Jun	33	28	29	29	A	24	22	25	29	33	34	36	36	36	37	33	33	35	32	35	31	35	35	33	31.9	37.0
22-Jun	37	32	24	25	A	27	23	24	28	33	N	N	36	36	38	38	35	33	31	27	24	20	20	24	29.4	38.0
23-Jun	24	22	17	15	A	11	13	17	23	30	34	35	35	36	37	38	36	35	33	29	28	29	23	15	26.8	38.3
24-Jun	21	22	19	22	A	21	17	16	18	21	22	30	26	23	25	26	25	25	21	21	20	17	12	13	21.0	29.7
25-Jun	12	11	8	9	A	13	14	14	17	21	24	25	25	24	25	27	28	27	26	23	22	21	19	20	19.8	28.3
26-Jun	23	23	23	21	A	22	22	22	24	27	28	32	34	34	33	33	30	29	28	25	22	20	20	19	25.7	34.2
27-Jun	16	16	15	15	A	14	15	16	18	20	27	32	33	34	34	34	34	35	36	34	29	28	31	25	25.7	35.8
28-Jun	32	30	23	25	A	9	9	10	22	33	42	42	41	44	44	45	39	41	42	41	40	38	34	33	33.0	44.9
29-Jun	31	24	21	16	A	8	10	16	23	27	37	41	49	47	41	30	31	40	45	49	44	40	39	34	32.3	49.2
30-Jun	28	32	33	31	A	20	22	26	32	31	33	35	34	42	42	42	40	39	37	36	33	35	25	27	32.8	42.1
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Beaverlodge - June 2016



Hourly Maximums

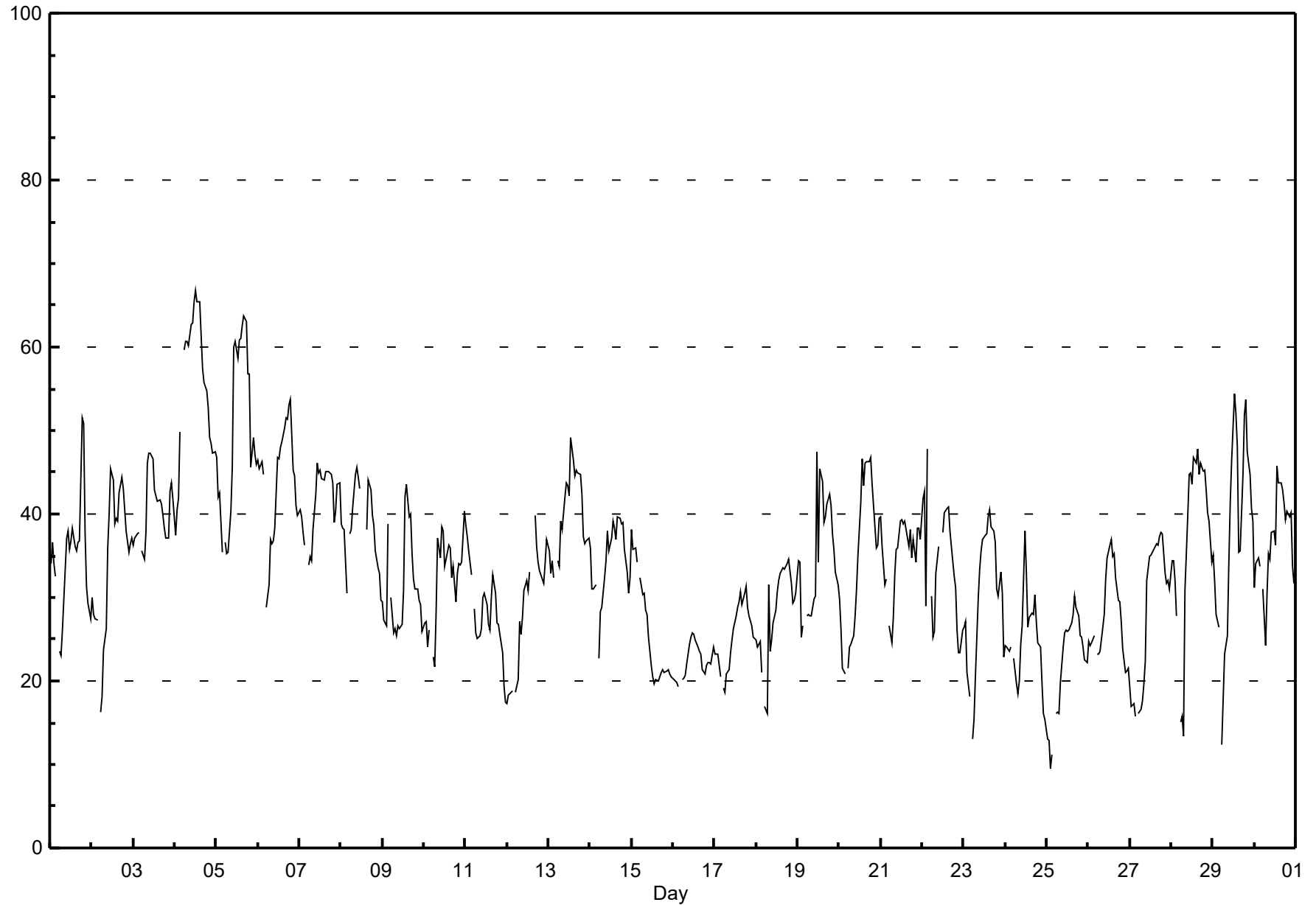
Ozone (O₃) - ppb

Beaverlodge - June 2016

Maximum Value: 66.7 ppb on Jun 4 13:00																								Maximum Daily Average: 55.4 ppb on Jun 4										Hours in Service: 720	
Minimum Value: 10 ppb on Jun 25 03:00																								Minimum Daily Average: 21.9 ppb on Jun 25										Hours of Data: 683	
Maximum Diurnal Average: 39.5 ppb at hour 14																								Minimum Diurnal Average: 25.6 ppb at hour 7										Hours of Missing Data: 37	
Monthly Average: 33.95 ppb																								Percentiles: P ₁ = 14.8 P ₁₀ = 21.1 Q ₁ = 26.3 Median = 34.1 Q ₃ = 39.8 P ₉₀ = 46.1 P ₉₉ = 62.9										Hours of Calibration: 33	
																								Percent Operational Time: 99.4											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Jun	34	37	34	33	A	23	23	26	30	37	38	36	37	38	36	36	37	37	52	51	38	31	29	27	34.8	51.5									
2-Jun	30	28	27	27	A	16	18	24	26	36	40	45	44	39	40	39	43	44	43	40	38	35	36	37	34.7	45.5									
3-Jun	36	37	38	38	A	36	35	38	46	47	47	47	43	42	42	42	41	40	38	37	37	43	44	42	40.6	47.3									
4-Jun	37	41	42	50	A	60	61	61	60	63	63	65	67	65	65	61	57	56	55	53	49	49	47	47	55.4	66.7									
5-Jun	47	42	42	35	A	37	35	35	40	46	60	61	59	61	61	63	64	63	57	57	46	49	47	46	50.1	63.7									
6-Jun	46	45	46	45	A	29	32	37	36	37	38	47	47	48	49	50	52	51	53	54	45	45	41	40	44.0	53.7									
7-Jun	40	40	38	36	A	34	35	34	38	42	46	45	45	44	44	45	45	45	45	44	39	40	44	44	41.4	46.2									
8-Jun	39	38	38	31	A	38	38	41	45	46	44	43	C	C	C	38	44	43	40	39	36	34	33	30	38.8	45.5									
9-Jun	29	27	27	39	A	30	26	26	25	27	26	27	31	42	44	40	40	35	32	31	31	30	29	26	31.3	43.6									
10-Jun	27	27	24	26	A	23	22	28	37	35	39	38	34	35	36	36	32	34	30	33	34	34	34	40	32.0	40.4									
11-Jun	39	37	36	33	A	29	26	25	25	26	30	31	29	27	26	30	33	31	27	27	26	23	19	17	28.3	38.7									
12-Jun	17	18	19	19	A	19	20	27	26	28	31	32	31	33	P	P	40	36	34	33	32	32	34	37	28.4	39.8									
13-Jun	36	33	34	32	A	34	34	39	38	42	44	43	42	49	46	45	45	45	45	42	37	36	37	37	39.9	49.2									
14-Jun	36	31	31	31	A	23	28	29	32	34	38	36	37	39	38	37	40	39	39	39	36	33	31	32	34.3	39.6									
15-Jun	38	36	36	34	A	32	30	30	28	28	25	22	21	20	20	20	20	21	21	21	21	21	21	21	25.6	38.1									
16-Jun	20	20	20	19	A	20	20	21	22	24	25	26	26	25	24	24	23	21	21	22	22	22	22	24	22.3	25.8									
17-Jun	23	23	23	21	A	19	19	21	21	23	25	26	28	29	30	31	29	30	31	29	28	27	25	25	25.5	31.4									
18-Jun	25	24	25	21	A	17	16	32	24	25	27	29	31	32	33	34	33	34	34	35	32	29	30	30	28.2	34.6									
19-Jun	34	34	25	27	A	28	28	28	28	30	30	47	34	45	44	39	40	41	42	41	38	36	33	32	34.9	47.4									
20-Jun	30	26	22	21	A	22	24	24	25	28	31	35	41	47	43	46	46	46	47	44	41	36	36	39	34.8	46.8									
21-Jun	40	36	31	32	A	27	25	28	33	36	36	39	39	39	39	37	36	38	35	37	34	38	38	37	35.2	39.7									
22-Jun	42	43	29	48	A	30	25	26	33	36	N	N	38	40	41	41	38	36	33	31	26	23	23	26	33.7	47.7									
23-Jun	26	27	21	18	A	13	15	21	30	33	36	37	37	38	40	41	38	38	37	31	30	33	30	23	30.2	40.5									
24-Jun	24	24	24	24	A	23	20	18	20	24	27	38	33	26	28	28	28	30	27	25	24	20	16	15	24.6	38.0									
25-Jun	13	13	10	11	A	16	16	16	20	24	26	26	26	26	27	28	30	29	28	25	25	24	23	22	21.9	30.1									
26-Jun	25	24	25	25	A	23	23	24	26	28	32	35	36	37	35	35	32	30	29	27	24	21	21	22	27.8	37.0									
27-Jun	19	17	17	16	A	16	17	18	20	22	32	35	35	35	36	36	36	37	38	38	33	32	32	31	28.2	37.8									
28-Jun	34	34	32	28	A	15	16	13	31	40	45	45	44	47	46	48	45	46	45	45	43	40	39	34	37.2	47.8									
29-Jun	35	32	28	26	A	12	18	23	25	34	41	46	54	52	48	35	36	45	52	54	48	45	41	39	37.8	54.4									
30-Jun	31	34	35	34	A	31	24	30	35	35	38	38	36	46	44	44	43	41	39	40	40	40	34	32	36.7	45.8									
31.8 31.0 29.3 29.3 -- 25.8 25.6 28.1 30.9 33.8 36.6 38.6 38.1 39.5 39.4 38.9 38.9 38.8 38.3 37.4 34.4 33.4 32.3 31.8																								Diurnal Average											
46.8 45.5 46.3 49.8 -- 59.6 60.7 60.7 60.1 62.7 62.9 65.4 66.7 65.5 65.3 62.6 63.7 63.0 56.8 56.8 49.2 49.2 47.3 47.5																								Diurnal Maximum											
C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span																																			

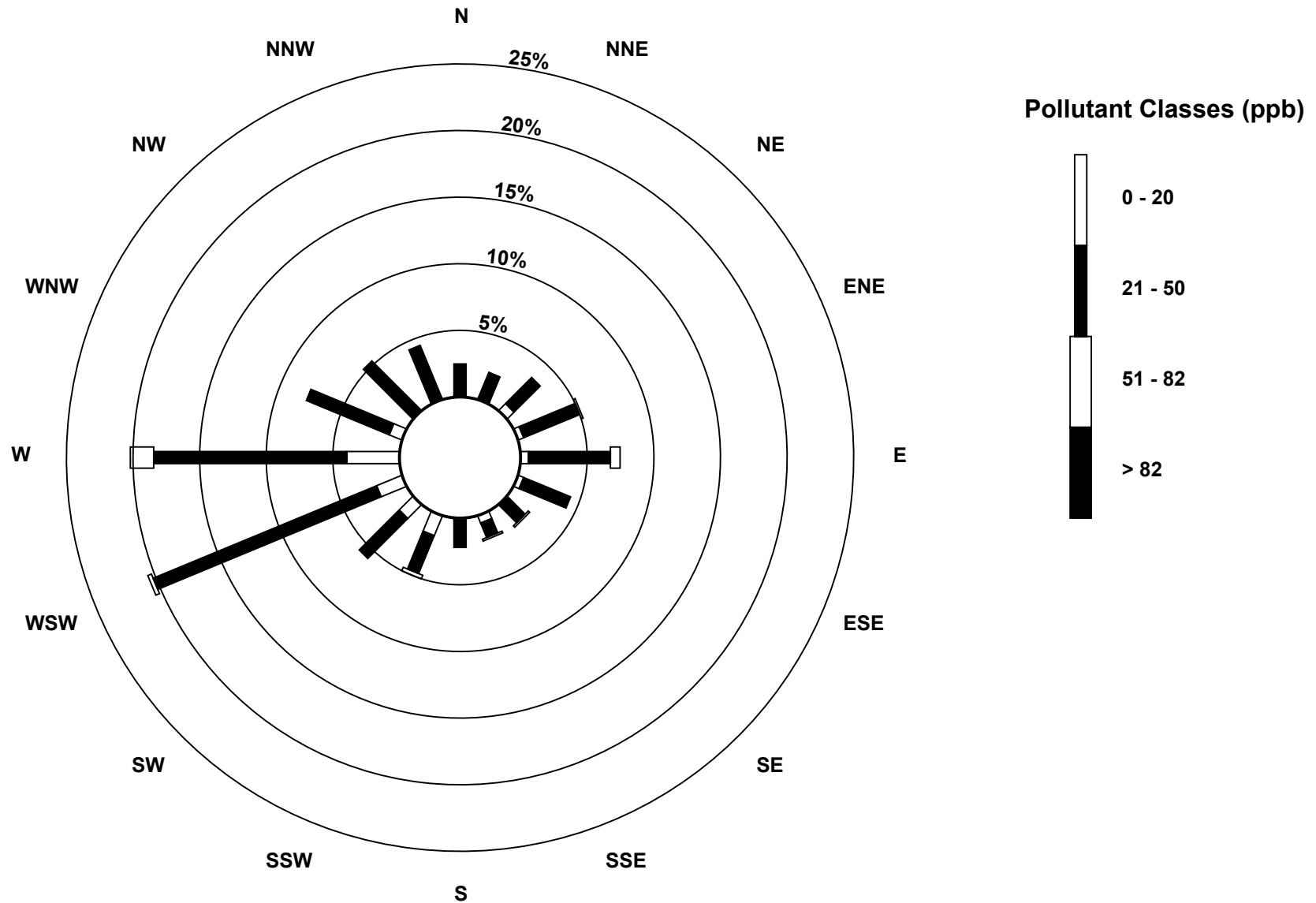
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - June 2016



Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - June 2016



Eight Hour Running Averages

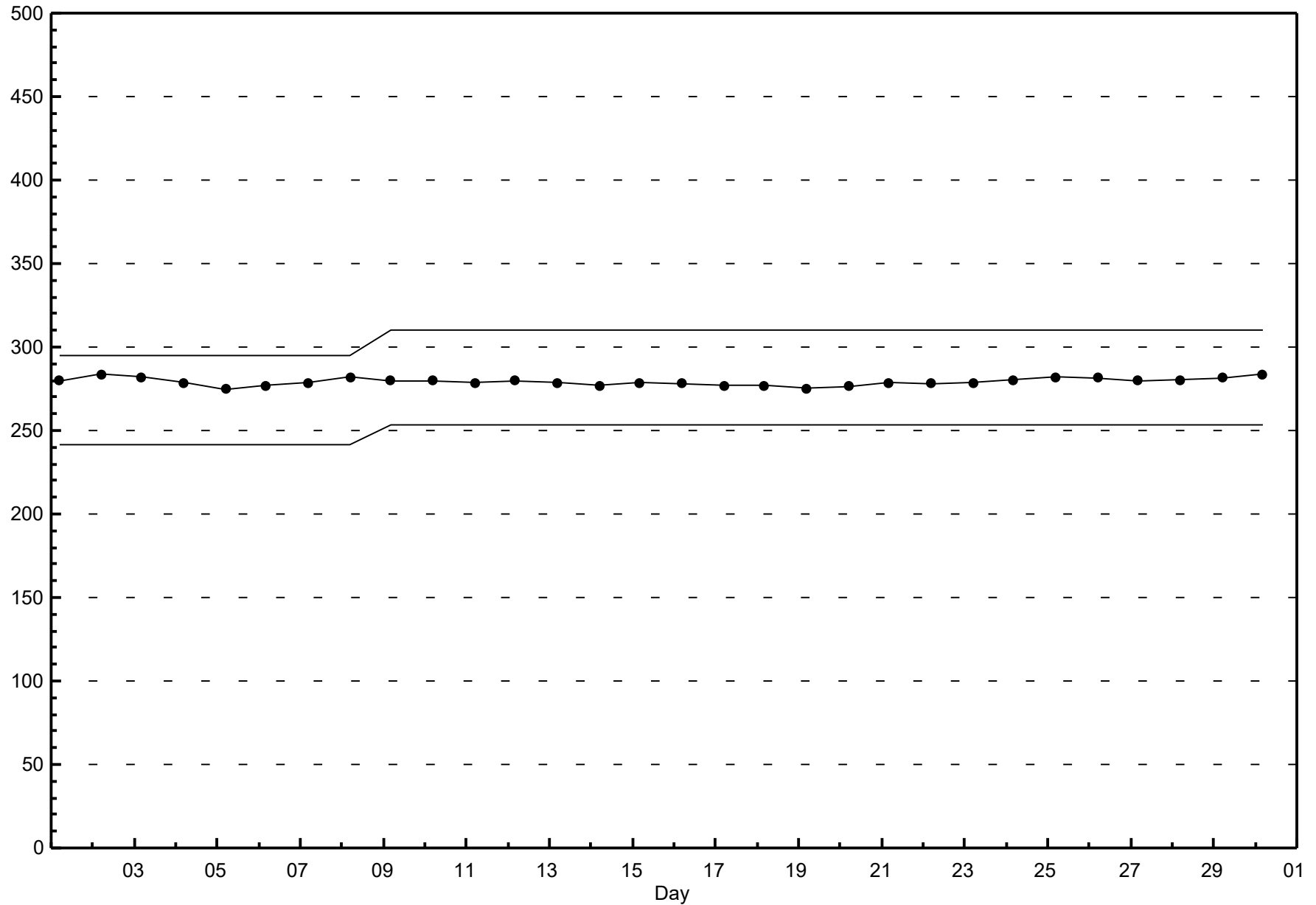
Ozone (O₃) - ppb

Beaverlodge - June 2016

Maximum Value: 61.5 ppb on Jun 4 15:00																								Hours in Service: 720	
Minimum Value: 11.1 ppb on Jun 25 06:00																								Hours of Data: 713	
																								Hours of Missing Data: 7	
Percentiles: P ₁ = 13.7 P ₁₀ = 20.2 Q ₁ = 24.5 Median = 30.7 Q ₃ = 35.9 P ₉₀ = 41.2 P ₉₉ = 59.6																								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-Jun	32	32	32	31	30	29	27	27	26	25	26	27	27	29	31	33	34	35	35	36	36	35	33	32	36.2
2-Jun	31	29	28	25	24	22	21	20	20	21	22	25	27	30	33	35	37	38	39	39	38	38	38	38	39.1
3-Jun	37	36	35	35	35	35	34	34	35	37	38	39	40	41	42	42	42	41	40	39	38	37	38	37	42.4
4-Jun	37	37	37	38	39	42	44	47	50	54	57	60	60	61	61	61	61	60	59	57	55	53	50	48	61.5
5-Jun	46	44	42	40	39	37	35	34	34	34	37	40	42	46	50	53	56	58	58	58	56	54	53	51	58.4
6-Jun	48	46	45	44	44	41	37	34	32	31	29	29	31	34	37	40	42	45	46	47	47	47	46	45	48.3
7-Jun	44	43	41	39	39	37	36	35	35	35	35	37	37	39	40	41	42	42	42	42	41	40	40	40	44.0
8-Jun	39	38	38	36	36	35	33	33	32	33	34	36	36	37	N	N	N	N	N	N	37	37	36	34	39.0
9-Jun	32	30	28	28	27	26	26	26	25	25	25	25	26	28	30	32	33	33	33	34	34	33	31	29	33.9
10-Jun	28	27	26	25	25	24	23	22	24	25	27	28	29	30	32	33	33	33	32	31	31	30	30	30	33.4
11-Jun	31	32	32	33	33	33	32	30	28	27	25	25	25	25	26	27	27	27	27	27	26	26	25	23	33.3
12-Jun	22	20	19	18	17	17	17	18	19	21	22	24	25	27	28	28	31	32	33	33	33	33	33	33	33.4
13-Jun	33	32	32	32	32	32	32	32	33	34	35	36	37	38	40	41	42	43	43	43	42	41	40	39	42.8
14-Jun	37	35	33	32	31	29	27	26	26	26	27	28	29	31	33	34	35	36	36	36	36	35	34	34	36.9
15-Jun	34	33	33	33	33	33	33	33	31	30	28	26	25	24	23	21	20	20	19	19	20	20	20	20	33.5
16-Jun	20	20	20	20	20	20	19	19	20	20	21	22	22	23	23	24	24	23	23	22	22	21	21	21	23.6
17-Jun	21	22	22	22	22	21	21	20	20	20	20	21	21	22	23	24	25	26	27	28	28	27	27	27	27.7
18-Jun	26	25	24	23	23	22	20	19	19	19	19	20	21	23	25	27	28	29	30	31	31	31	31	30	30.9
19-Jun	30	29	28	27	27	26	26	26	25	26	27	27	28	30	31	33	34	35	37	38	38	37	36	35	37.9
20-Jun	34	32	29	27	26	24	23	22	22	22	23	25	27	29	32	34	37	39	41	42	42	41	40	39	41.8
21-Jun	38	36	34	33	32	31	29	27	27	27	28	29	30	31	33	34	35	35	35	35	34	34	34	34	37.8
22-Jun	34	34	33	32	32	31	29	28	26	26	27	N	29	30	33	35	36	36	35	34	33	31	28	27	36.1
23-Jun	25	24	22	21	20	19	18	17	17	18	21	23	25	28	31	33	35	36	36	35	34	33	31	28	35.7
24-Jun	27	25	23	22	22	20	20	20	19	19	20	21	21	22	23	24	25	25	25	24	23	23	21	19	26.6
25-Jun	18	16	14	13	12	11	11	12	12	14	16	18	19	21	22	24	25	26	26	26	25	25	24	23	25.9
26-Jun	23	22	22	21	21	22	22	22	22	23	24	25	26	28	29	31	31	32	31	31	29	27	26	24	31.6
27-Jun	22	21	19	18	17	16	16	15	16	16	18	20	22	24	27	29	31	33	34	34	34	33	33	31	34.1
28-Jun	31	31	29	28	28	25	22	20	18	19	21	24	26	30	35	39	41	42	42	42	42	41	40	39	42.2
29-Jun	38	35	33	30	28	24	20	18	17	17	20	23	26	31	35	37	38	39	41	42	41	40	40	40	41.5
30-Jun	40	39	37	35	34	31	29	27	28	28	28	29	29	32	34	36	37	38	39	39	39	38	36	34	40.0
48.3 46.4 45.2 43.8 44.1 41.8 44.2 47.3 50.5 54.0 57.1 59.8 60.3 61.1 61.5 61.4 60.9 60.0 59.0 57.8 55.9 54.4 52.6 50.5																									Diurnal Maximums
N - Not Valid																									

Span Responses

Ozone (O₃)
Beaverlodge - June 2016



Hourly Averages

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

Beaverlodge - June 2016

Number of Exceedences: 1-hr: 0 24-hr: 0 Maximum Value: 14.2 µg/m³ on Jun 29 13:00 Maximum Daily Average: 8.9 µg/m³ on Jun 28																								Hours in Service: 720 Hours of Data: 711 Hours of Missing Data: 9 Hours of Calibration: 3 Percent Operational Time: 99.2			
Minimum Value: 1 µg/m³ on Jun 3 02:00 Maximum Diurnal Average: 4.7 µg/m³ at hour 24 Monthly Average: 3.98 µg/m³												Minimum Daily Average: 1.1 µg/m³ on Jun 3 Minimum Diurnal Average: 3.2 µg/m³ at hour 16 Percentiles: P ₁ = 0.8 P ₁₀ = 1.1 Q ₁ = 2.0 Median = 3.3 Q ₃ = 5.6 P ₉₀ = 7.8 P ₉₉ = 12.0															
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jun	5	5	4	4	4	4	3	3	2	2	1	1	1	1	1	1	1	2	2	2	2	2	3	2.4	5.4		
2-Jun	2	2	2	2	2	2	2	2	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1.5	2.7		
3-Jun	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	2	1.1	1.8		
4-Jun	3	4	5	4	3	4	4	4	5	4	4	3	3	3	3	2	2	3	3	3	4	5	5	3.5	5.0		
5-Jun	5	6	5	5	5	5	4	4	4	5	5	4	4	5	5	5	4	3	5	7	9	9	8	6	5.3	9.1	
6-Jun	6	6	6	8	7	7	10	11	11	10	9	6	4	4	5	5	7	9	9	8	7	7	7	8	7.4	11.4	
7-Jun	7	7	7	7	6	6	5	5	4	4	3	3	3	2	3	3	7	4	5	7	11	7	6	6	5.3	10.5	
8-Jun	6	7	7	8	7	7	7	6	6	7	6	M	M	9	8	6	4	3	4	7	8	12	13	12	7.3	13.1	
9-Jun	10	9	9	5	1	1	2	1	2	2	2	3	4	4	3	3	3	3	3	3	3	3	3	3	3.6	9.8	
10-Jun	2	2	2	2	2	3	4	4	2	2	2	4	3	4	3	3	2	2	3	4	3	4	3	4	3.0	4.0	
11-Jun	4	3	3	3	3	4	4	4	8	10	7	2	2	2	2	2	2	2	2	2	2	2	2	2	3.3	10.1	
12-Jun	2	2	2	2	2	3	3	2	3	3	3	3	3	3	P	P	1	1	1	1	1	1	1	1	2.1	3.3	
13-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	1.4	3.0	
14-Jun	3	3	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	3	3	5	5	5	4	3	2.6	4.8	
15-Jun	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.7	
16-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1.2	1.5	
17-Jun	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	4	4	4	4	3	3	3	2.5	3.8	
18-Jun	2	3	3	3	3	3	2	2	1	2	2	2	3	2	2	2	2	3	3	4	4	6	6	6	2.9	6.0	
19-Jun	6	6	6	6	6	5	4	3	4	5	5	5	5	4	3	4	3	3	3	3	3	3	4	5	4.3	6.5	
20-Jun	6	7	7	8	8	7	4	3	4	5	4	4	4	4	4	4	3	4	4	6	7	8	7	8	5.4	7.9	
21-Jun	9	10	9	7	7	7	7	6	6	6	5	4	5	5	4	6	6	8	6	6	6	5	6	6	6.3	9.8	
22-Jun	5	5	5	6	6	5	5	4	3	2	N	N	C	C	C	1	3	3	3	2	4	4	4	2	3.9	6.1	
23-Jun	2	2	2	2	2	2	3	3	4	7	9	8	6	6	6	6	7	6	6	7	8	7	7	9	5.3	9.2	
24-Jun	6	4	3	3	2	3	5	4	4	6	7	7	6	4	4	3	2	1	2	2	3	3	4	4	3.8	7.2	
25-Jun	4	4	4	4	3	3	3	2	1	1	2	2	2	2	2	2	2	2	2	3	4	4	5	3	2.7	4.8	
26-Jun	4	5	5	5	4	4	3	3	3	2	2	2	2	2	2	3	3	3	3	3	3	5	4	3	3.2	5.0	
27-Jun	3	3	3	3	3	3	3	3	4	4	4	3	3	3	3	3	3	4	4	5	5	7	6	7	3.9	7.3	
28-Jun	9	12	12	11	11	11	9	10	10	10	10	10	9	8	6	6	6	7	7	6	6	8	9	11	8.9	12.2	
29-Jun	9	7	8	8	9	8	9	10	11	14	12	12	14	10	9	12	10	7	6	4	6	7	6	6	8.9	14.2	
30-Jun	11	9	8	9	7	9	10	8	4	3	3	4	4	2	2	2	2	3	4	5	6	4	5	5	5.4	11.3	
4.6 4.6 4.5 4.4 4.1 4.1 4.1 3.8 3.9 4.3 4.1 3.7 3.6 3.4 3.3 3.2 3.2 3.3 3.4 3.8 4.3 4.6 4.6 4.7																								Diurnal Average			
11.3 12.1 12.2 10.7 11.4 10.9 10.3 11.4 10.9 14.0 11.8 11.8 14.2 9.9 9.5 11.5 9.6 9.3 8.6 7.8 10.5 12.3 13.1 12.5																								Diurnal Maximum			
C - Calibration P - Power Failure M - Maintenance N - Not Valid																											
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																											



Hourly Maximums

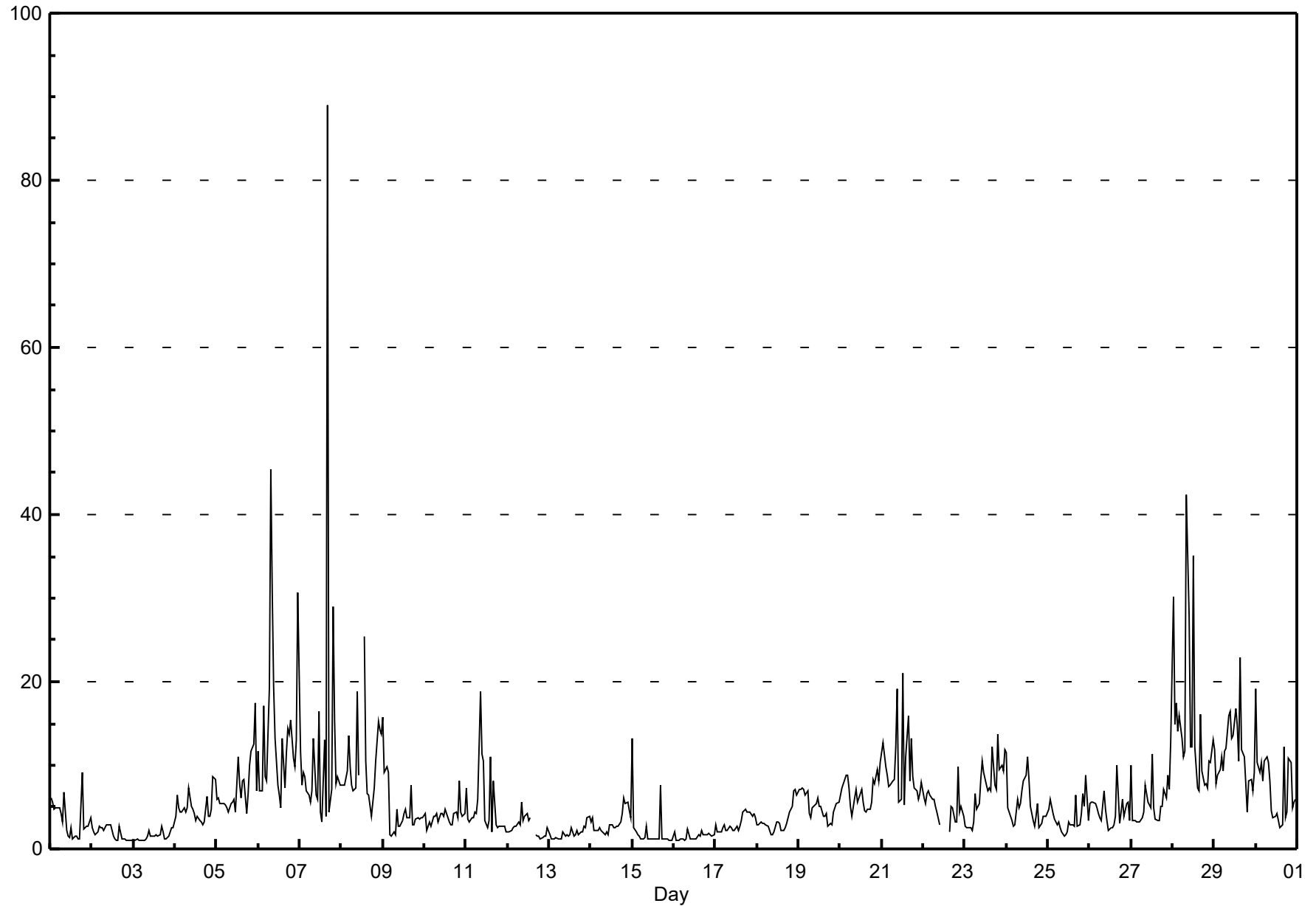
Particulate Matter 2.5 (PM_{2.5}) - µg/m³

Beaverlodge - June 2016

Maximum Value: 88.9 μg/m³ on Jun 7 17:00																				Maximum Daily Average: 15.3 μg/m³ on Jun 28					Hours in Service: 720	
Minimum Value: 1 μg/m³ on Jun 3 00:00																				Minimum Daily Average: 1.5 μg/m³ on Jun 16					Hours of Data: 711	
Maximum Diurnal Average: 8.8 μg/m³ at hour 17																				Minimum Diurnal Average: 4.5 μg/m³ at hour 18					Hours of Missing Data: 9	
Monthly Average: 5.84 μg/m³																				Percentiles: P ₁ = 1.0 P ₁₀ = 1.5 Q ₁ = 2.5 Median = 4.2 Q ₃ = 7.4 P ₉₀ = 11.5 P ₉₉ = 29.8					Hours of Calibration: 3	
																				Percent Operational Time: 99.2						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	6	6	5	5	5	5	4	3	7	2	1	1	2	1	1	1	1	1	9	2	2	3	3	4	3.5	9.2
2-Jun	2	2	2	2	3	3	3	2	3	3	3	3	2	1	1	1	3	1	1	1	1	1	1	1	1.9	3.0
3-Jun	1	1	1	1	1	1	1	1	1	2	2	2	1	2	2	2	3	2	1	1	1	2	2	2	1.6	2.7
4-Jun	4	6	5	4	4	5	4	5	7	5	5	4	3	4	3	3	3	3	6	4	4	5	9	8	4.8	8.6
5-Jun	6	6	5	5	5	5	5	4	5	6	6	4	11	8	6	8	8	4	7	10	12	13	17	7	7.3	17.4
6-Jun	12	7	7	17	9	8	19	45	31	19	13	8	6	5	13	7	12	14	14	15	11	10	13	31	14.4	45.4
7-Jun	12	8	9	9	7	6	6	7	13	6	6	16	4	3	13	4	89	4	7	29	15	8	9	8	12.4	88.9
8-Jun	8	8	8	9	13	10	8	7	7	19	9	M	M	25	11	7	6	4	6	7	11	15	14	14	10.2	25.5
9-Jun	16	9	10	9	2	2	2	2	5	3	3	3	4	5	4	4	8	3	3	3	4	3	4	4	4.7	15.7
10-Jun	4	2	3	3	3	4	4	4	3	4	4	4	5	4	3	3	3	4	4	4	8	4	4	4	3.9	8.1
11-Jun	7	3	3	4	4	4	4	6	19	11	11	3	2	3	11	2	8	3	2	3	3	3	3	2	5.2	18.9
12-Jun	2	2	2	2	3	3	3	3	6	3	4	4	3	4	P	P	2	2	1	1	1	2	2	2	2.6	5.7
13-Jun	2	1	1	1	1	1	1	1	2	1	2	1	2	2	2	2	2	2	2	2	3	2	4	4	1.9	3.9
14-Jun	3	4	2	2	2	2	2	2	2	2	2	3	3	2	2	3	3	3	4	6	5	6	5	4	3.1	6.1
15-Jun	13	2	2	2	2	1	1	1	3	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	2.2	13.3
16-Jun	2	1	1	1	1	1	1	1	2	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1.5	2.4
17-Jun	3	2	2	2	2	3	2	2	3	2	2	2	3	2	3	3	4	5	4	4	4	4	4	4	3.1	4.7
18-Jun	3	3	3	3	3	3	3	2	2	2	2	3	3	3	2	2	2	3	4	4	5	7	7	6	3.4	7.1
19-Jun	7	7	7	7	6	7	4	4	5	5	5	6	5	5	4	4	4	3	3	3	4	5	5	6	5.1	7.4
20-Jun	6	7	8	9	9	7	5	4	6	7	6	6	7	6	5	4	5	5	6	8	8	10	8	10	6.7	10.3
21-Jun	12	13	10	9	7	8	8	8	12	19	6	6	21	5	11	16	8	13	9	7	7	6	7	8	9.8	21.1
22-Jun	6	5	7	7	6	6	6	5	4	3	N	N	C	C	C	2	5	5	3	3	10	4	5	4	5.1	9.8
23-Jun	3	2	2	2	2	3	7	5	5	8	11	9	8	7	7	7	12	8	7	14	10	10	9	12	7.1	13.7
24-Jun	12	5	4	3	3	3	6	5	5	7	8	9	11	8	5	3	3	4	5	2	3	4	4	4	5.3	11.5
25-Jun	5	6	5	4	3	3	3	2	2	2	2	2	3	3	3	3	6	3	3	4	7	5	9	3	3.8	8.8
26-Jun	5	6	6	5	5	4	4	3	7	5	3	2	2	2	3	4	10	3	4	6	4	5	6	3	4.6	10.1
27-Jun	10	3	3	3	3	3	4	4	8	7	6	5	11	5	3	3	3	5	5	7	6	9	7	13	5.8	12.8
28-Jun	30	15	17	14	16	13	11	12	42	28	12	12	35	12	7	7	16	9	8	8	7	11	10	13	15.3	42.5
29-Jun	12	8	9	10	11	9	12	12	16	16	13	14	17	15	11	23	12	11	8	4	8	8	7	9	11.4	22.8
30-Jun	19	10	9	10	8	11	11	10	8	5	4	4	4	3	2	3	12	4	4	11	10	5	6	6	7.5	19.1
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration P - Power Failure M - Maintenance N - Not Valid																										

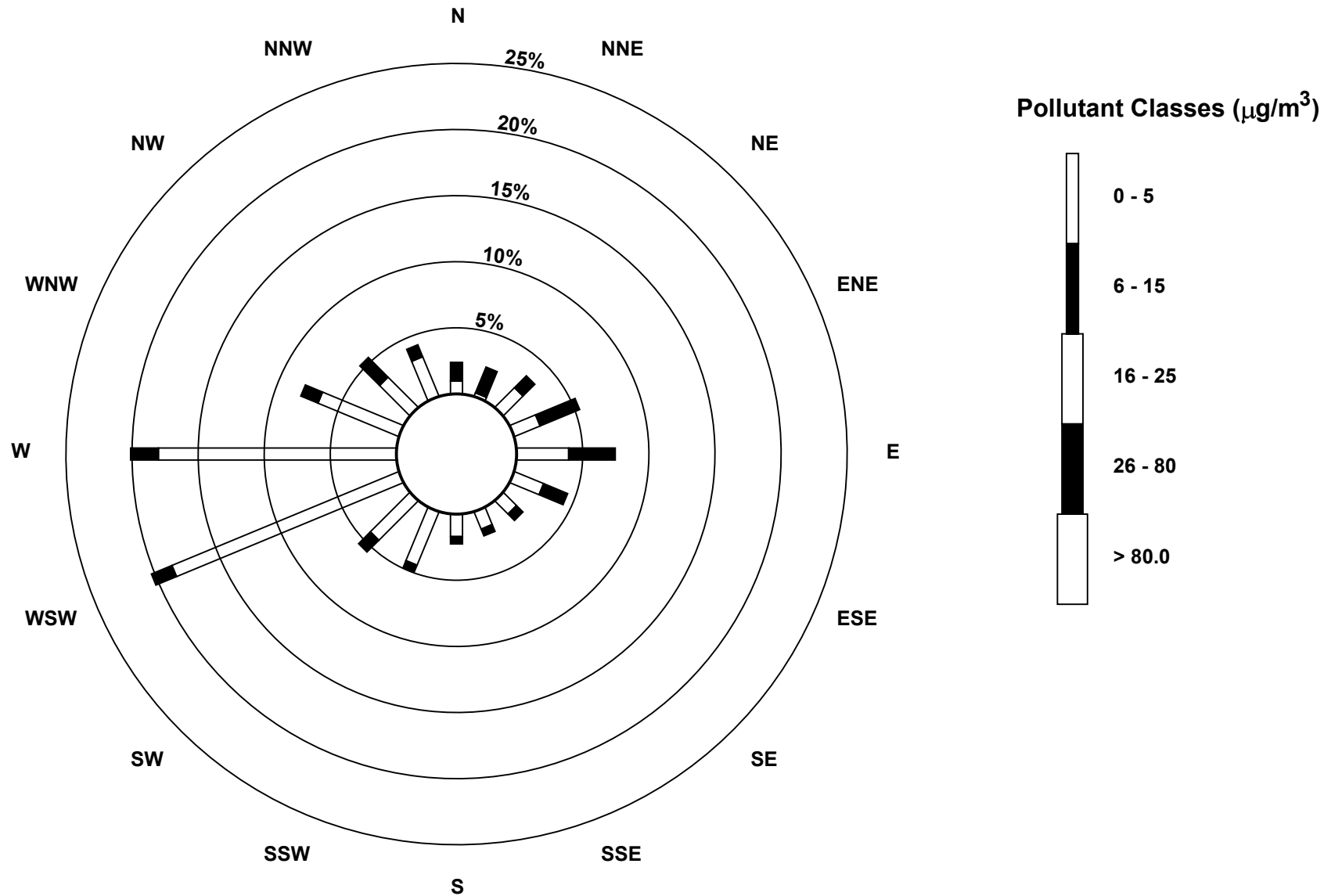
Hourly Maximums

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Beaverlodge - June 2016



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Beaverlodge - June 2016



Hourly Averages

External Temperature (ET) - °C

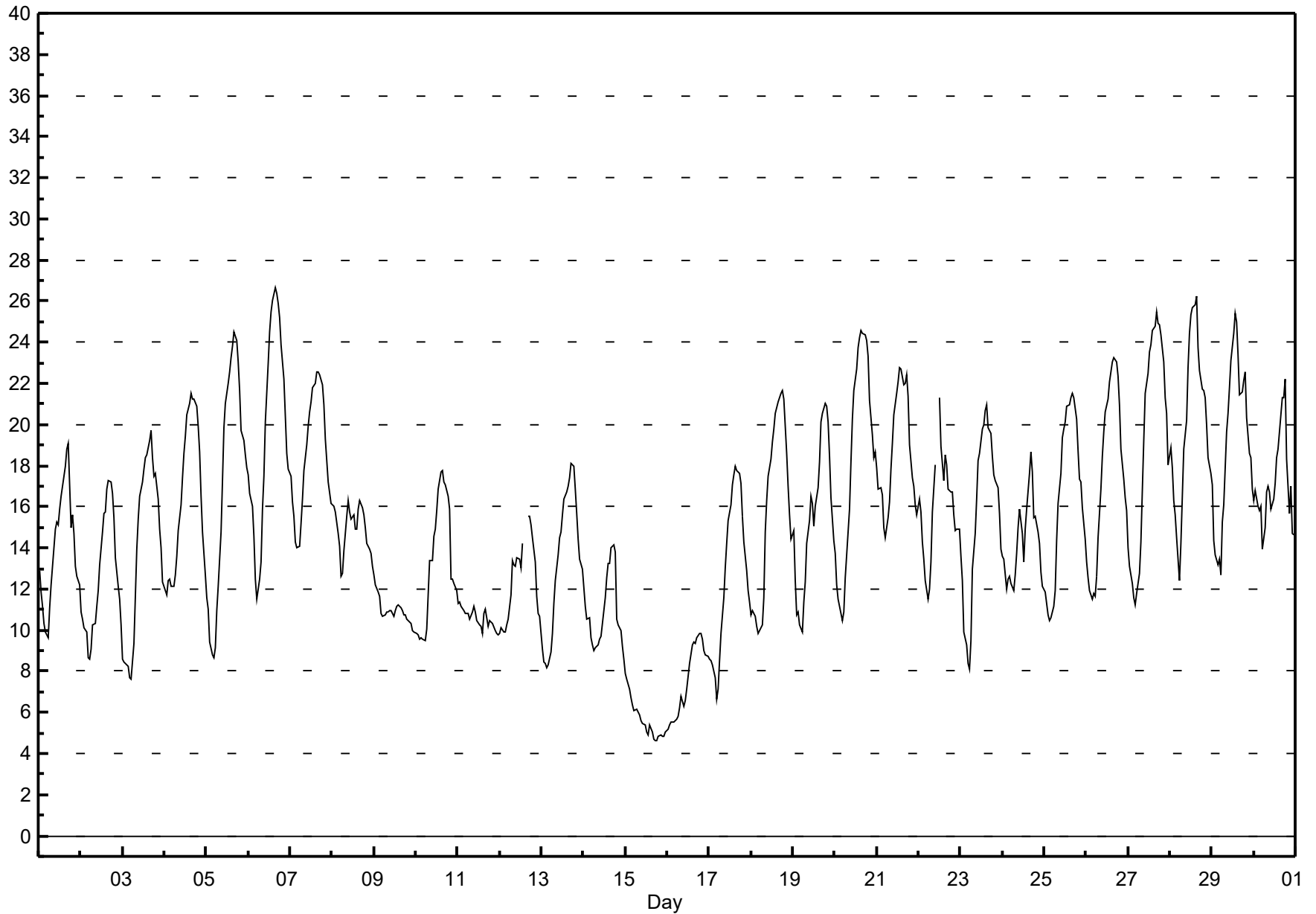
Beaverlodge - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720											
Maximum Value: 26.6 °C on Jun 6 16:00																			Maximum Daily Average: 20.1 °C on Jun 28						Hours of Data: 716					
Minimum Value: 5 °C on Jun 15 19:00																			Minimum Daily Average: 5.6 °C on Jun 15						Hours of Missing Data: 4					
Maximum Diurnal Average: 18.9 °C at hour 16																			Minimum Diurnal Average: 10.5 °C at hour 6						Hours of Calibration: 0					
Monthly Average: 14.98 °C																			Percentiles: P ₁ = 4.8 P ₁₀ = 9.3 Q ₁ = 11.1 Median = 14.8 Q ₃ = 18.4 P ₉₀ = 21.7 P ₉₉ = 25.6						Percent Operational Time: 99.4					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Jun	13	12	11	10	10	10	11	12	13	15	15	15	16	16	17	18	19	19	15	16	15	13	13	12	14.0	19.1				
2-Jun	11	11	10	10	9	9	9	10	10	11	12	13	15	16	16	17	17	17	17	16	13	12	11	10	12.6	17.2				
3-Jun	9	8	8	8	8	8	9	12	14	15	16	17	18	18	19	19	20	18	17	18	16	15	14	12	14.1	19.7				
4-Jun	12	12	12	12	12	12	13	14	15	16	17	19	19	20	21	21	21	21	21	20	19	17	15	13	16.4	21.5				
5-Jun	12	11	9	9	9	9	11	12	15	17	20	21	22	23	23	24	25	24	23	22	20	19	19	18	17.3	24.5				
6-Jun	18	17	16	15	12	11	12	13	16	17	20	23	24	25	26	27	26	26	25	24	22	20	19	18	19.8	26.6				
7-Jun	17	16	16	14	14	14	15	16	18	19	20	21	21	22	22	23	23	22	22	21	19	18	17	16	18.6	22.6				
8-Jun	16	16	16	15	14	13	13	14	16	16	16	15	16	15	16	16	16	16	15	14	14	14	13	13	14.9	16.3				
9-Jun	13	12	12	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	10	10	10	10	11.0	12.7				
10-Jun	10	10	10	10	10	10	10	12	13	13	15	15	16	17	18	18	17	17	16	16	13	12	12	12	13.3	17.8				
11-Jun	11	11	11	11	11	11	11	11	11	11	11	10	10	10	10	11	11	10	10	10	10	10	10	10	10.6	11.3				
12-Jun	10	10	10	10	10	11	12	13	13	13	14	13	13	14	P	P	16	16	15	14	13	12	11	11	12.4	15.6				
13-Jun	9	8	8	8	8	9	10	11	12	14	15	15	16	16	17	17	17	18	18	17	16	14	13	13	13.4	18.1				
14-Jun	12	11	11	11	10	9	9	9	9	10	10	10	12	13	13	13	14	14	14	11	10	10	9	9	10.9	14.2				
15-Jun	8	8	7	7	6	6	6	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.6	7.9				
16-Jun	5	5	6	6	6	6	6	6	7	6	7	7	8	8	9	9	9	10	10	10	10	9	9	9	7.6	9.8				
17-Jun	9	8	8	8	7	7	9	10	12	13	14	15	16	17	18	18	18	18	17	16	14	13	12	11	12.8	17.9				
18-Jun	11	11	11	10	10	10	10	12	15	16	18	18	19	20	21	21	21	22	22	21	19	17	16	14	16.0	21.7				
19-Jun	15	12	11	11	10	10	11	12	14	15	16	16	15	16	17	18	20	21	21	21	20	18	16	14	15.6	21.0				
20-Jun	14	12	12	11	10	11	13	14	16	18	20	22	23	24	24	25	24	24	24	23	21	19	18	19	18.4	24.6				
21-Jun	18	17	17	17	15	15	15	16	18	19	20	22	22	23	23	22	22	22	21	19	17	17	16	16	18.7	22.8				
22-Jun	16	16	14	13	12	12	12	13	16	18	N	N	21	19	17	19	18	17	17	17	16	15	15	15	15.8	21.3				
23-Jun	14	12	10	9	8	8	9	13	15	16	18	19	20	20	21	21	20	20	18	18	17	17	16	14	15.5	21.0				
24-Jun	14	13	12	13	13	12	12	13	14	15	16	15	13	15	16	18	19	18	15	16	15	14	13	12	14.3	18.6				
25-Jun	12	11	11	10	11	11	12	14	16	18	19	20	20	21	21	21	22	21	20	19	17	17	16	14	16.5	21.5				
26-Jun	13	13	12	12	12	12	13	14	17	18	20	21	21	22	23	23	23	23	22	21	19	17	16	16	17.6	23.3				
27-Jun	14	13	12	12	11	12	13	14	17	19	22	22	24	24	25	25	25	25	25	24	23	21	21	18	19.2	25.5				
28-Jun	19	18	16	16	14	12	14	17	19	20	23	24	25	26	26	26	24	23	22	22	21	20	18	18	20.1	26.2				
29-Jun	17	14	14	13	13	13	15	16	20	21	22	23	24	25	25	23	21	22	22	23	20	19	18	17	19.2	25.4				
30-Jun	16	17	16	16	16	14	15	17	17	17	16	16	17	18	19	20	21	21	22	18	16	17	15	15	17.2	22.2				
12.9 12.2 11.6 11.2 10.7 10.5 11.4 12.6 14.1 15.2 16.1 16.7 17.4 18.0 18.5 18.9 18.9 18.7 18.1 17.3 16.0 15.1 14.2 13.4																								Diurnal Average						
18.9 17.9 16.9 16.6 16.0 14.5 15.5 16.7 19.6 20.6 22.8 24.4 25.4 25.7 26.1 26.6 26.4 25.9 25.2 24.4 23.1 21.3 20.5 18.6																								Diurnal Maximum						
P - Power Failure N - Not Valid																														

Hourly Averages

External Temperature (ET) - °C

Beaverlodge - June 2016



Hourly Averages

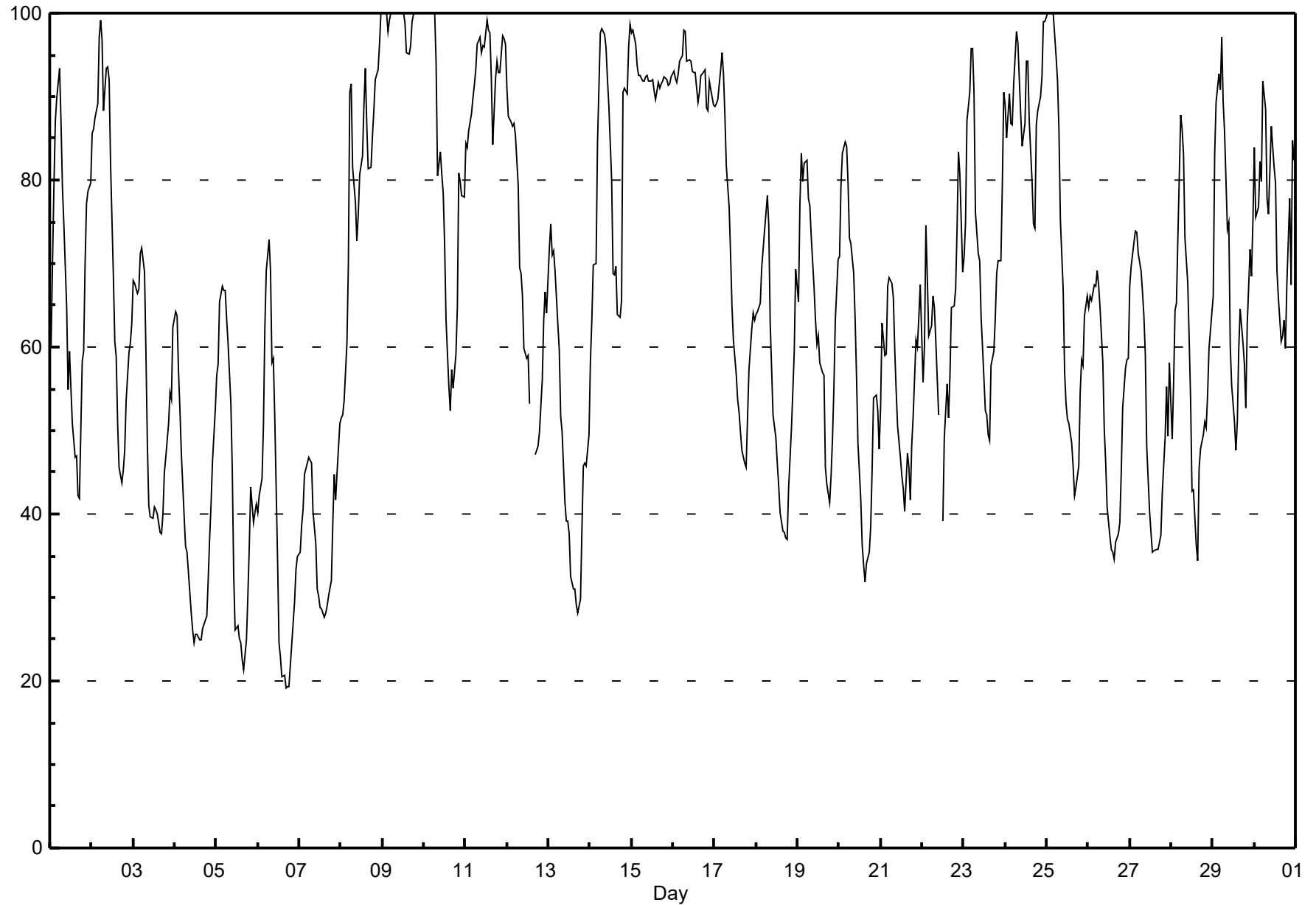
Relative Humidity (RH) - %

Beaverlodge - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100.0 % on Jun 9 00:00 Maximum Daily Average: 99.2 % on Jun 9																								Hours in Service: 720 Hours of Data: 716 Hours of Missing Data: 4 Hours of Calibration: 0 Percent Operational Time: 99.4		
Minimum Value: 19 % on Jun 6 17:00 Maximum Diurnal Average: 81.8 % at hour 6 Monthly Average: 66.22 %												Minimum Daily Average: 37.5 % on Jun 4 Minimum Diurnal Average: 51.6 % at hour 17 Percentiles: P ₁ = 22.4 P ₁₀ = 36.9 Q ₁ = 49.1 Median = 65.5 Q ₃ = 87.0 P ₉₀ = 94.8 P ₉₉ = 100.0														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	60	70	79	87	90	93	87	79	75	65	55	59	55	51	47	47	42	42	58	60	70	77	79	80	66.9	93.4
2-Jun	86	86	87	89	97	99	97	88	93	94	92	82	69	61	59	51	46	44	45	48	54	59	60	63	72.8	99.1
3-Jun	68	68	67	67	71	72	69	59	49	41	40	40	41	41	40	38	38	40	45	47	51	55	54	62	52.4	71.9
4-Jun	64	64	57	53	47	40	36	35	33	28	26	25	26	26	25	25	26	27	28	32	37	41	46	53	37.5	64.2
5-Jun	57	58	65	67	67	67	63	60	53	45	33	26	27	25	25	23	21	25	30	36	43	39	40	41	43.2	67.4
6-Jun	40	42	44	50	62	69	73	69	58	59	52	34	25	23	21	21	19	19	19	22	27	30	33	35	39.5	72.9
7-Jun	36	39	41	45	45	47	46	46	40	36	31	30	29	29	28	28	29	30	32	39	45	42	45	51	37.8	50.9
8-Jun	51	52	54	61	70	91	92	82	77	73	76	81	83	89	93	87	81	81	85	88	92	93	96	100	80.3	100.0
9-Jun	100	100	100	98	99	100	100	100	100	100	100	100	100	99	95	95	96	99	100	100	100	100	100	100	99.2	100.0
10-Jun	100	100	100	100	100	100	100	94	81	83	81	79	72	63	55	52	57	55	59	65	81	80	78	78	79.7	100.0
11-Jun	84	84	86	88	90	91	93	96	97	95	96	96	99	98	98	92	84	92	94	93	93	97	97	96	93.0	99.2
12-Jun	91	88	87	87	87	85	79	69	69	66	60	59	59	53	P	P	47	48	48	50	56	63	67	64	67.3	91.1
13-Jun	72	75	71	71	69	63	60	52	50	41	39	39	38	33	31	31	29	28	30	38	46	46	46	49	47.8	74.8
14-Jun	58	63	70	70	84	91	98	98	97	96	92	89	80	69	69	70	64	64	66	91	91	90	96	99	81.4	98.6
15-Jun	98	98	96	94	92	93	92	92	92	93	92	92	92	91	90	92	91	91	92	92	92	91	92	92	92.6	98.0
16-Jun	93	92	92	93	94	95	98	98	94	94	94	93	93	93	89	91	93	93	93	89	88	92	91	89	92.6	98.0
17-Jun	89	89	90	93	95	93	88	82	77	71	65	61	57	54	52	50	48	46	46	51	57	62	64	63	68.4	95.3
18-Jun	64	64	65	70	72	74	78	75	63	58	52	49	46	43	40	38	38	37	37	43	50	55	59	69	55.8	78.1
19-Jun	65	77	83	80	82	82	78	77	73	67	63	60	61	58	57	57	46	44	41	45	49	55	63	71	63.9	83.2
20-Jun	71	79	83	85	84	80	73	72	69	63	56	49	42	36	34	32	34	35	38	45	54	54	52	48	57.1	84.6
21-Jun	53	63	59	59	67	68	68	66	60	55	50	47	45	43	40	47	46	42	48	52	61	60	64	68	55.4	68.3
22-Jun	56	60	75	68	61	63	66	65	61	52	N	N	39	49	56	52	57	65	65	67	74	83	81	69	62.8	83.5
23-Jun	71	75	87	91	96	96	90	76	71	70	64	60	52	52	50	49	58	59	63	69	70	70	79	91	71.2	95.8
24-Jun	89	85	90	87	87	91	98	96	92	88	84	87	94	94	87	80	75	74	87	88	90	92	99	99	88.9	99.0
25-Jun	100	100	100	100	100	95	92	86	75	67	57	53	51	51	48	46	42	43	46	55	59	58	64	66	68.9	100.0
26-Jun	65	66	66	67	67	69	67	65	58	50	46	41	37	36	35	35	37	38	39	45	53	57	58	59	52.4	69.2
27-Jun	67	70	73	74	74	71	69	67	64	59	48	40	38	35	36	36	36	37	37	43	49	55	49	58	53.5	73.9
28-Jun	49	56	64	65	73	88	86	83	73	68	61	54	43	43	36	34	45	48	49	51	50	54	60	64	58.3	87.8
29-Jun	66	83	89	93	91	97	89	86	74	75	60	56	51	48	51	60	65	60	58	53	63	72	68	75	70.1	97.2
30-Jun	84	76	77	82	80	92	89	78	76	81	87	82	80	69	66	61	61	63	60	68	78	67	85	82	75.9	91.8
71.6 74.0 76.6 77.8 79.8 81.8 80.5 76.4 71.5 67.8 63.9 60.7 57.4 55.1 53.5 52.3 51.6 52.3 54.7 58.7 64.1 66.4 68.9 71.1																								Diurnal Average		
100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 99.9 98.7 97.6 95.1 96.1 98.9 99.8 100.0 100.0 100.0 100.0																								Diurnal Maximum		
P - Power Failure N - Not Valid																										

Hourly Averages

Relative Humidity (RH) - %
Beaverlodge - June 2016



Hourly Averages

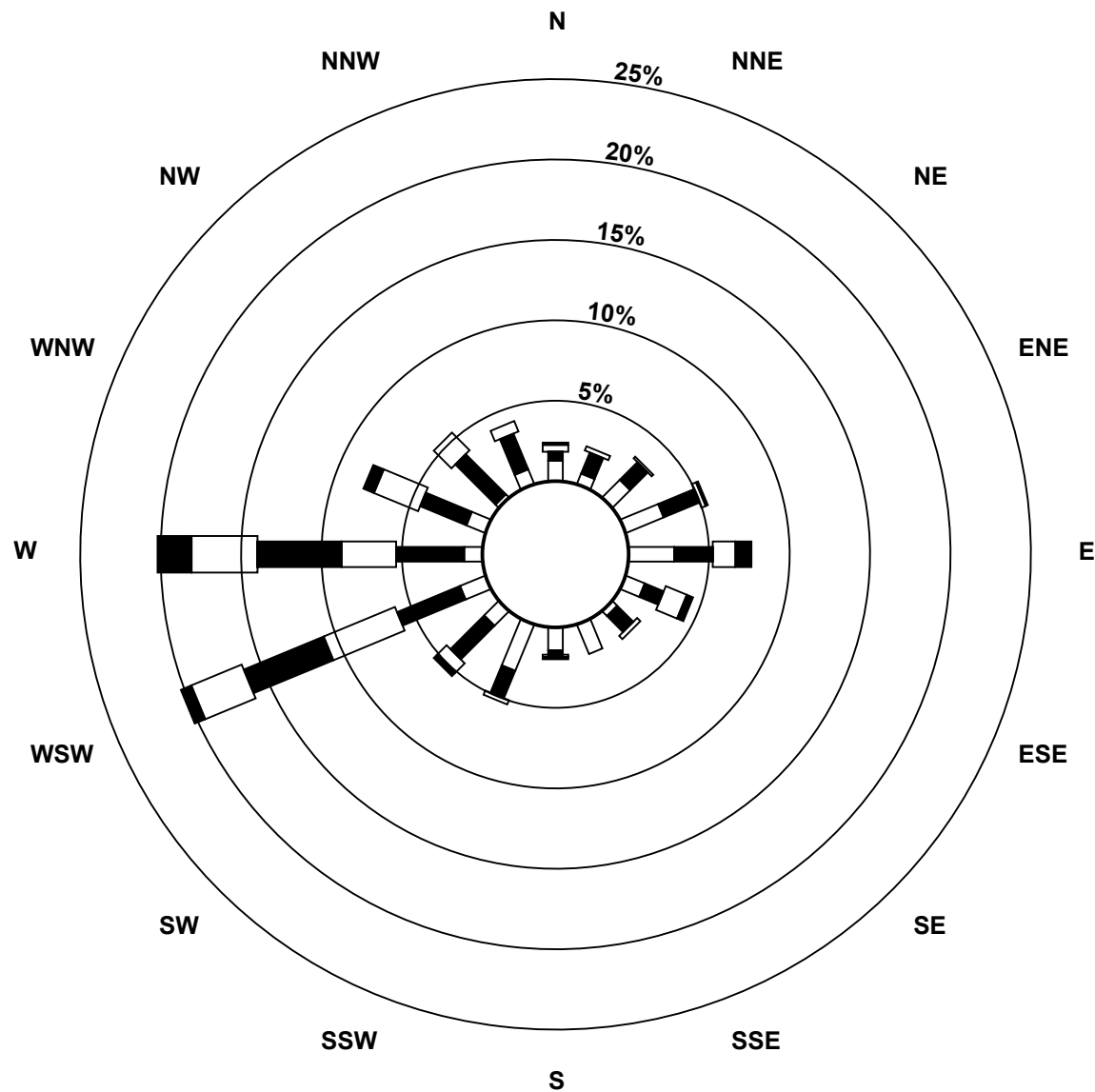
Wind Speed (km/h)
Wind Direction (deg)
Beaverlodge - June 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	11	12	4	1	2	3	1	4	5	8	13	9	18	13	9	8	5	2	9	6	5	3	2	4	4.1	17.5
Dir	310	325	332	183	260	254	157	199	205	197	255	240	279	268	306	307	300	331	248	60	240	155	148	51	272	279
2 Spd	2	2	4	2	3	2	6	5	4	4	8	9	14	18	21	31	28	26	31	32	26	21	22	19	12.6	32.2
Dir	82	48	56	62	267	34	217	217	201	251	305	295	271	273	269	268	262	252	243	242	247	248	250	246	256	242
3 Spd	10	5	8	10	10	4	10	13	24	30	36	36	33	38	36	38	34	40	33	27	22	19	22	16	22.8	39.8
Dir	227	231	239	247	237	234	233	238	248	261	257	263	262	261	253	253	254	263	271	254	247	244	251	251	254	263
4 Spd	16	15	20	25	22	29	28	31	30	31	36	32	26	27	26	29	29	30	27	20	11	9	4	3	22.9	35.6
Dir	252	257	250	255	270	269	265	259	257	262	259	257	259	264	280	277	262	263	264	268	276	270	292	298	263	259
5 Spd	1	4	4	2	5	4	2	3	4	4	1	2	2	6	7	9	12	16	11	9	10	9	9	12	4.9	15.5
Dir	91	64	97	121	58	50	110	198	205	245	203	206	164	131	80	81	94	86	81	78	91	80	84	98	92	86
6 Spd	6	4	6	2	3	5	2	7	4	6	7	20	22	25	36	35	39	37	38	33	26	15	10	8	14.1	39.1
Dir	119	118	80	188	257	45	282	309	208	214	238	251	249	254	263	255	260	262	263	266	272	290	298	330	262	260
7 Spd	9	10	6	8	10	9	12	12	20	20	22	16	12	11	9	8	9	11	7	6	6	7	10	10	6.4	21.9
Dir	336	323	323	314	321	304	284	289	293	281	271	280	300	329	333	359	23	55	83	92	58	58	62	91	322	271
8 Spd	9	5	5	4	10	2	6	8	4	11	15	15	13	4	16	13	23	19	15	10	10	6	4	5	8.0	22.8
Dir	86	101	108	177	192	58	39	21	114	136	102	92	97	98	58	82	77	83	78	52	64	76	120	330	85	77
9 Spd	7	7	8	13	10	9	13	16	14	16	17	18	15	15	22	17	15	12	11	11	11	8	8	8	11.0	22.2
Dir	9	346	312	306	296	265	281	285	289	297	299	300	331	353	3	355	347	331	314	311	328	347	332	339	320	3
10 Spd	6	3	3	3	1	5	8	3	12	13	16	21	27	28	25	23	25	24	20	18	11	3	8	11	10.9	28.0
Dir	339	322	267	334	197	351	33	72	121	128	117	121	101	94	98	109	93	93	90	109	174	138	130	124	104	94
11 Spd	19	23	20	16	12	7	5	8	8	10	13	15	7	6	6	22	30	21	17	18	15	9	7	6	5.2	29.6
Dir	99	89	97	106	107	116	181	220	276	271	259	266	256	242	220	254	264	269	268	269	273	260	232	214	242	264
12 Spd	8	9	6	5	8	8	13	26	34	35	38	38	32	43	P	P	46	44	40	33	27	22	20	21	25.0	46.4
Dir	251	266	265	294	288	267	250	259	249	244	253	250	249	259	P	P	260	259	260	256	246	243	245	253	255	260
13 Spd	15	18	15	17	19	29	22	19	21	31	29	26	25	20	19	14	10	4	7	10	7	6	7	8	12.3	30.8
Dir	244	247	254	241	243	237	246	250	247	253	255	251	240	273	288	301	327	300	0	39	49	52	44	60	259	253
14 Spd	3	6	1	3	2	5	10	5	7	7	8	12	13	6	10	9	9	12	13	6	13	13	13	14	6.7	14.5
Dir	185	248	342	358	133	154	260	207	259	241	248	288	290	252	292	307	290	307	302	336	333	322	304	284	288	284
15 Spd	28	26	28	33	31	29	32	34	33	42	50	52	54	54	50	51	59	54	49	40	41	41	39	33	40.8	59.0
Dir	268	271	267	268	266	265	264	263	256	259	260	259	258	255	254	257	259	261	264	264	264	265	267	267	262	257
16 Spd	31	31	30	28	27	27	29	22	27	23	23	27	29	27	28	25	24	20	18	21	19	17	17	21	24.4	31.2
Dir	265	266	269	269	273	274	274	279	276	274	271	280	275	277	280	280	274	282	276	286	297	290	291	287	277	266
17 Spd	20	18	17	10	8	11	11	10	16	20	25	27	28	28	32	31	33	32	31	26	17	14	12	8	19.2	32.6
Dir	289	280	279	287	295	294	290	267	240	242	236	241	240	243	243	244	243	252	258	249	248	247	250	250	254	243
18 Spd	10	7	5	4	4	3	6	6	15	18	19	16	13	10	10	13	14	13	9	4	10	10	8	4	8.2	19.0
Dir	237	248	240	193	185	208	210	208	253	253	262	268	271	295	279	273	269	290	304	340	298	308	300	359	268	262
19 Spd	3	6	9	7	3	6	7	6	7	12	14	11	17	10	13	11	15	10	7	7	5	3	3	3	6.3	16.9
Dir	3	264	263	261	293	343	327	333	303	322	321	337	327	325	258	253	274	277	302	281	246	73	65	88	301	327
20 Spd	2	3	3	2	1	1	3	8	7	8	9	9	5	5	7	9	12	13	13	11	10	7	9	8	3.8	12.9
Dir	86	92	62	99	154	113	203	217	225	238	243	235	206	168	143	140	117	110	102	94	94	80	90	77	132	110
21 Spd	4	7	12	6	10	7	4	8	14	15	12	16	16	15	14	13	15	17	14	15	6	10	8	3	8.4	17.2
Dir	296	289	312	251	246	238	192	220	232	248	245	242	239	251	273	229	242	247	227	310	287	32	22	355	256	247
22 Spd	10	10	3	7	10	9	6	7	11	14	N	N	11	19	14	14	22	28	12	10	13	7	2	6	9.7	27.7
Dir	302	233	181	233	260	247	204	224	234	250	N	N	280	205	203	177	191	228	256	226	227	227	280	290	229	228

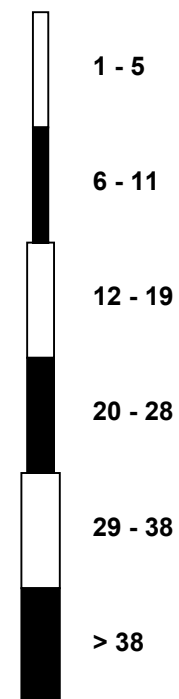
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
23 Spd	7	4	6	7	3	5	4	1	6	4	3	3	5	6	3	8	12	13	15	11	6	2	2	3	2.9	15.4				
Dir	265	245	119	251	76	196	195	263	317	349	6	315	69	68	90	23	36	18	18	25	26	6	352	340	15	18				
24 Spd	7	10	8	6	8	9	8	6	7	10	7	3	4	7	7	10	10	8	3	7	8	4	4	2	4.5	10.4				
Dir	346	322	294	320	311	310	297	272	270	301	280	288	162	188	196	205	194	224	226	250	259	266	212	216	265	301				
25 Spd	1	3	3	2	2	3	3	2	8	16	26	27	28	26	28	25	26	24	23	15	8	5	6	5	11.5	28.2				
Dir	174	59	65	84	80	56	56	168	267	264	267	259	255	255	258	266	276	273	265	248	268	268	239	218	263	258				
26 Spd	4	6	4	3	5	8	8	14	15	24	23	21	20	21	19	20	22	23	23	18	11	7	6	2	12.9	24.3				
Dir	215	212	186	155	202	207	210	214	228	245	249	252	272	263	246	238	237	240	244	244	244	239	240	202	240	245				
27 Spd	3	3	3	2	2	2	6	7	6	6	8	7	4	4	1	4	5	8	7	5	6	5	6	3	1.0	7.8				
Dir	57	95	110	97	100	159	192	201	218	227	261	261	256	275	258	109	91	46	52	87	127	63	53	61	126	261				
28 Spd	6	2	1	5	3	2	3	2	3	5	3	6	8	8	7	4	16	16	13	8	7	8	4	2	1.5	16.3				
Dir	66	32	74	43	30	275	51	192	219	189	162	112	120	120	113	143	264	321	351	9	13	18	84	258	32	321				
29 Spd	8	3	3	3	5	1	1	4	3	5	10	11	12	16	15	2	2	13	10	9	10	9	7	10	4.9	16.2				
Dir	307	27	8	22	31	45	218	253	156	174	134	95	98	91	109	95	218	145	125	135	105	77	78	84	104	91				
30 Spd	9	9	10	10	10	8	10	15	14	14	9	3	7	16	12	4	4	9	5	0	1	1	3	4	1.7	15.6				
Dir	79	77	77	75	105	236	320	319	294	239	265	160	305	288	274	244	76	47	85	185	41	199	86	61	326	288				
Spd	3.9	4.2	3.3	4.3	4.6	5.6	6.7	8.2	10.6	12.9	13.8	13.0	11.6	11.5	10.1	10.6	12.1	11.1	10.0	7.9	6.8	4.5	3.8	2.9	Diurnal Average					
Dir	279	276	272	265	263	263	261	257	253	254	258	258	261	260	264	258	259	265	268	267	266	278	273	277						
Spd	30.7	31.2	29.6	32.9	31.1	29.1	32.1	33.8	33.5	42.3	49.5	51.9	53.5	54.0	49.6	50.6	59.0	54.3	49.0	40.5	40.8	40.6	39.1	33.4	Diurnal Maximum					
Dir	265	266	269	268	266	265	264	263	249	259	260	259	259	258	255	254	257	259	261	264	264	265	267	267						
Maximum Speed Value: 59 km/h on Jun 15 17:00																					Minimum Speed Value: 0 km/h on Jun 30 20:00				Hours in Service:				720	
Maximum Daily Speed Average: 40.8 km/h on Jun 15																					Minimum Daily Speed Average: 1.0 km/h on Jun 27				Hours of Data:				716	
Maximum Diurnal Speed Average: 13.8 km/h at hour 11																					Minimum Diurnal Speed Average: 2.9 km/h at hour 24				Hours of Missing Data:				4	
Monthly Average Velocity: 8.02 km/h 262.4 deg																					Speed Percentiles: P ₁ = 0.9 P ₁₀ = 3.0 Q ₁ = 5.7 Median = 9.9 Q ₃ = 18.8 P ₉₀ = 28.5 P ₉₉ = 49.0				Percent Operational Time:				99.4	
All monthly, daily, and diurnal averages have been calculated using vector methods																														
P - Power Failure N - Not Valid																														
Frequency Distribution																														
Speed Range (km/h)																														
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total																	
North	13		15		6		1		0		0		35																	
NorthEast	27		23		4		0		0		0		54																	
East	28		32		18		10		1		0		89																	
SouthEast	15		14		7		1		0		0		37																	
South	28		10		2		1		0		0		41																	
SouthWest	21		50		22		22		8		0		123																	
West	19		48		55		60		47		22		251																	
NorthWest	10		48		26		2		0		0		86																	
Total	161		240		140		97		56		22		716																	

Wind Rose

Wind Speed (WS) (km/h)
Beaverlodge - June 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - June 2016

Maximum Speed: 59 km/h on Jun 15 17:00																				Maximum Daily Speed Average: 41.0 km/h on Jun 15						Hours in Service: 720																							
Minimum Speed: 1 km/h on Jun 30 21:00																				Minimum Daily Speed Average: 5.7 km/h on Jun 27						Hours of Data: 716																							
Maximum Diurnal Speed Average: 21.0 km/h at hour 17																				Minimum Diurnal Speed Average: 9.0 km/h at hour 5						Hours of Missing Data: 4																							
Monthly Average Speed: 13.81 km/h																				Percentiles: P ₁ = 2.3 P ₁₀ = 4.0 Q ₁ = 6.4 Median = 10.3 Q ₃ = 19.4 P ₉₀ = 28.9 P ₉₉ = 49.2						Percent Operational Time: 99.4																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Jun	11	12	4	3	2	4	2	4	6	9	13	10	19	14	10	9	7	5	11	6	6	5	4	4	7.5	18.9																							
2-Jun	4	3	5	3	5	7	6	6	4	5	8	9	15	19	22	31	29	26	31	32	26	21	22	19	14.9	32.4																							
3-Jun	10	5	8	10	10	4	10	13	24	31	37	37	34	39	37	38	34	40	33	28	23	19	22	16	23.4	40.2																							
4-Jun	16	15	20	25	22	29	28	31	30	32	36	33	27	27	27	29	29	31	27	20	11	9	6	5	23.6	36.1																							
5-Jun	4	4	4	4	5	4	3	3	4	4	4	5	6	8	8	10	13	16	12	9	10	9	9	12	7.1	16.0																							
6-Jun	7	6	6	4	3	5	3	8	5	6	8	21	22	25	37	35	39	38	38	33	26	15	10	8	17.0	39.3																							
7-Jun	9	10	6	8	10	10	12	12	20	21	22	17	12	12	11	10	10	12	8	6	7	8	10	10	11.4	22.5																							
8-Jun	9	6	7	5	11	6	7	8	7	12	16	15	14	5	16	14	23	19	15	10	11	8	4	7	10.6	23.1																							
9-Jun	7	7	9	13	10	9	13	16	14	17	17	18	15	16	22	17	15	12	11	11	11	8	8	8	12.7	22.4																							
10-Jun	7	4	3	4	4	7	8	4	13	14	17	22	27	28	25	23	26	24	20	22	12	5	9	12	14.1	28.3																							
11-Jun	19	23	20	16	13	8	6	8	9	10	13	15	8	7	7	22	30	21	17	18	15	9	7	6	13.6	29.7																							
12-Jun	8	9	6	6	8	8	13	26	34	35	39	38	32	44	P	P	47	44	40	33	27	22	20	21	25.4	46.9																							
13-Jun	15	18	15	17	19	29	22	20	21	31	29	27	25	21	20	15	11	6	8	10	7	6	7	8	17.0	31.1																							
14-Jun	5	7	2	4	6	5	12	7	8	7	9	12	13	7	11	10	9	12	14	9	13	14	13	15	9.3	14.6																							
15-Jun	28	26	28	33	31	29	32	34	33	42	50	52	54	54	50	51	59	54	49	41	41	41	39	34	41.0	59.2																							
16-Jun	31	31	30	28	28	27	29	24	27	23	23	27	29	27	28	25	24	20	18	21	19	17	17	21	24.8	31.3																							
17-Jun	20	18	17	10	8	11	11	10	16	20	25	27	28	28	32	31	33	33	31	26	18	14	12	8	20.3	32.9																							
18-Jun	10	7	6	4	4	3	6	6	15	18	19	16	14	11	11	14	15	13	10	6	10	10	8	8	10.2	19.4																							
19-Jun	4	7	9	7	5	7	7	6	7	12	15	12	17	11	14	12	16	11	7	7	5	3	3	4	8.7	17.5																							
20-Jun	3	3	3	3	2	2	3	8	7	8	10	10	8	8	9	10	12	13	13	11	10	7	9	8	7.4	13.2																							
21-Jun	9	8	12	11	10	7	4	9	14	15	13	18	16	16	15	14	15	17	15	15	7	10	8	4	11.7	17.5																							
22-Jun	12	11	4	8	10	10	7	7	12	14	N	N	12	20	15	14	23	28	13	10	13	7	5	6	11.9	28.0																							
23-Jun	8	5	19	20	4	6	5	3	7	5	5	4	6	7	5	9	12	13	15	11	7	3	3	6	7.8	19.6																							
24-Jun	8	10	8	6	8	9	8	6	7	11	8	5	5	7	7	11	11	9	4	7	8	4	5	4	7.3	10.8																							
25-Jun	2	3	3	3	3	3	3	2	8	16	26	27	28	27	29	26	27	25	23	15	9	5	6	5	13.4	28.6																							
26-Jun	4	6	4	3	5	8	8	14	16	24	23	21	21	22	20	20	22	23	23	19	11	7	7	3	13.9	24.5																							
27-Jun	4	3	3	3	3	2	6	7	6	6	9	9	6	7	5	8	7	8	7	6	6	5	6	4	5.7	9.0																							
28-Jun	6	3	3	5	5	4	5	3	3	5	3	7	9	9	8	4	18	17	14	8	7	9	5	3	6.7	17.6																							
29-Jun	8	5	5	5	6	3	3	4	3	6	10	11	13	17	15	2	8	13	11	9	11	9	8	10	8.2	16.6																							
30-Jun	9	9	10	10	12	9	11	16	15	15	11	4	7	16	12	5	7	9	5	6	1	4	4	5	8.8	16.0																							
																									9.8	9.5	9.4	9.3	9.0	9.1	9.8	10.8	13.1	15.9	17.8	18.2	18.0	18.6	18.2	17.9	21.0	20.4	18.1	15.5	12.9	10.4	9.9	9.4	Diurnal Average
																									30.8	31.3	29.7	32.9	31.1	29.3	32.2	34.0	33.6	42.4	49.7	52.0	53.7	54.1	49.8	50.7	59.2	54.4	49.1	40.6	40.9	40.7	39.1	33.5	Diurnal Maximum
P - Power Failure N - Not Valid																																																	
All monthly, daily, and diurnal averages have been calculated using scalar methods																																																	

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - June 2016

Maximum Value: 97.2 deg on Jun 29 07:00																			Hours in Service: 720						
Minimum Value: 2.8 deg on Jun 2 22:00																			Hours of Data: 716						
																			Hours of Missing Data: 4						
Percentiles: P ₁ = 3.3 P ₁₀ = 4.8 Q ₁ = 7.5 Median = 13.8 Q ₃ = 28.4 P ₉₀ = 53.8 P ₉₉ = 88.8																			Hours of Calibration: 0						
																			Percent Operational Time: 99.4						
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-Jun	9	7	56	76	60	50	72	47	41	26	21	19	24	21	43	25	57	81	85	21	75	51	46	15	85.3
2-Jun	80	67	24	42	55	71	22	28	19	45	14	26	18	14	15	7	12	9	4	5	3	3	3	4	80.3
3-Jun	8	49	27	9	9	24	9	7	8	9	8	9	12	8	10	8	7	8	7	9	4	6	4	4	49.2
4-Jun	3	6	3	5	8	5	4	5	7	8	9	10	16	13	13	10	11	10	6	5	9	25	63	60	63.3
5-Jun	93	21	29	57	19	14	57	24	18	41	77	79	85	54	46	39	14	15	7	4	7	8	5	3	92.9
6-Jun	35	45	5	58	39	13	48	28	50	20	17	13	9	10	7	9	7	7	5	6	5	9	12	23	58.4
7-Jun	15	4	10	6	5	9	8	13	7	12	15	24	22	27	39	38	29	11	13	12	8	11	5	10	39.1
8-Jun	6	14	50	32	32	85	23	7	50	19	12	11	8	45	16	27	9	11	12	10	19	74	48	42	85.3
9-Jun	13	11	15	9	13	8	10	5	6	6	5	15	11	20	7	7	10	16	6	18	9	19	11	8	19.8
10-Jun	12	32	32	19	85	41	5	50	15	12	14	8	11	9	11	15	16	5	4	37	35	61	30	8	84.7
11-Jun	5	6	6	8	5	12	29	12	19	7	8	6	40	91	78	5	6	4	7	4	6	11	11	10	91.3
12-Jun	12	7	9	18	9	7	7	6	5	6	7	6	5	8	P	P	9	7	6	5	4	3	4	7	17.6
13-Jun	11	5	8	3	4	4	5	14	12	7	11	13	10	18	20	24	28	63	34	9	6	6	9	12	63.1
14-Jun	53	16	72	44	72	36	29	76	7	14	39	13	18	35	27	24	31	12	19	41	8	10	9	23	75.8
15-Jun	4	5	4	4	4	6	5	5	5	5	4	4	4	3	4	4	4	4	4	4	4	4	4	5	6.1
16-Jun	4	4	4	5	5	5	9	46	4	6	5	6	5	5	6	5	4	5	6	6	5	5	5	5	46.5
17-Jun	4	6	4	7	6	5	6	18	7	7	7	6	10	9	10	10	8	8	8	4	4	4	4	8	17.7
18-Jun	10	31	21	16	14	17	8	16	15	14	14	18	24	29	25	19	20	18	21	41	9	6	65	56	64.8
19-Jun	36	24	13	6	43	27	10	19	15	10	11	22	16	24	25	15	20	26	18	22	8	63	24	28	63.0
20-Jun	27	23	13	27	48	49	18	8	13	16	17	25	50	58	53	34	15	14	7	4	7	5	4	4	58.2
21-Jun	80	64	13	58	12	10	12	15	8	10	13	24	15	26	14	19	11	8	23	9	15	11	19	69	80.3
22-Jun	51	22	50	33	7	26	22	14	11	15	N	N	22	24	16	10	13	8	18	16	3	7	52	21	52.2
23-Jun	26	26	71	89	48	33	25	89	23	46	58	71	48	28	70	28	10	13	7	6	35	49	49	57	89.3
24-Jun	35	6	18	8	7	10	10	12	12	17	34	59	49	23	11	13	16	69	90	18	9	32	43	58	89.9
25-Jun	82	59	10	26	28	9	16	42	8	8	9	9	9	13	9	13	12	9	6	4	21	12	21	24	81.5
26-Jun	19	27	21	33	19	10	9	6	18	6	10	14	15	16	16	13	8	5	4	3	4	7	21	58	58.0
27-Jun	49	40	31	38	38	32	9	9	16	22	39	40	78	65	96	76	42	19	16	29	6	24	7	49	96.3
28-Jun	8	67	70	15	85	68	64	28	38	21	46	28	21	28	27	38	31	15	22	14	12	26	41	44	85.2
29-Jun	19	69	58	61	45	94	97	38	37	29	15	13	16	14	20	40	82	13	18	10	23	6	15	14	97.2
30-Jun	8	5	8	6	49	27	18	13	21	46	42	47	38	13	13	46	69	18	37	87	24	80	51	14	87.2
	92.9	68.7	72.1	89.3	85.2	94.0	97.2	89.0	50.4	46.1	76.8	79.4	84.8	91.3	96.3	76.5	81.6	81.2	89.9	87.2	75.0	80.1	64.8	68.9	
P - Power Failure N - Not Valid																									

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

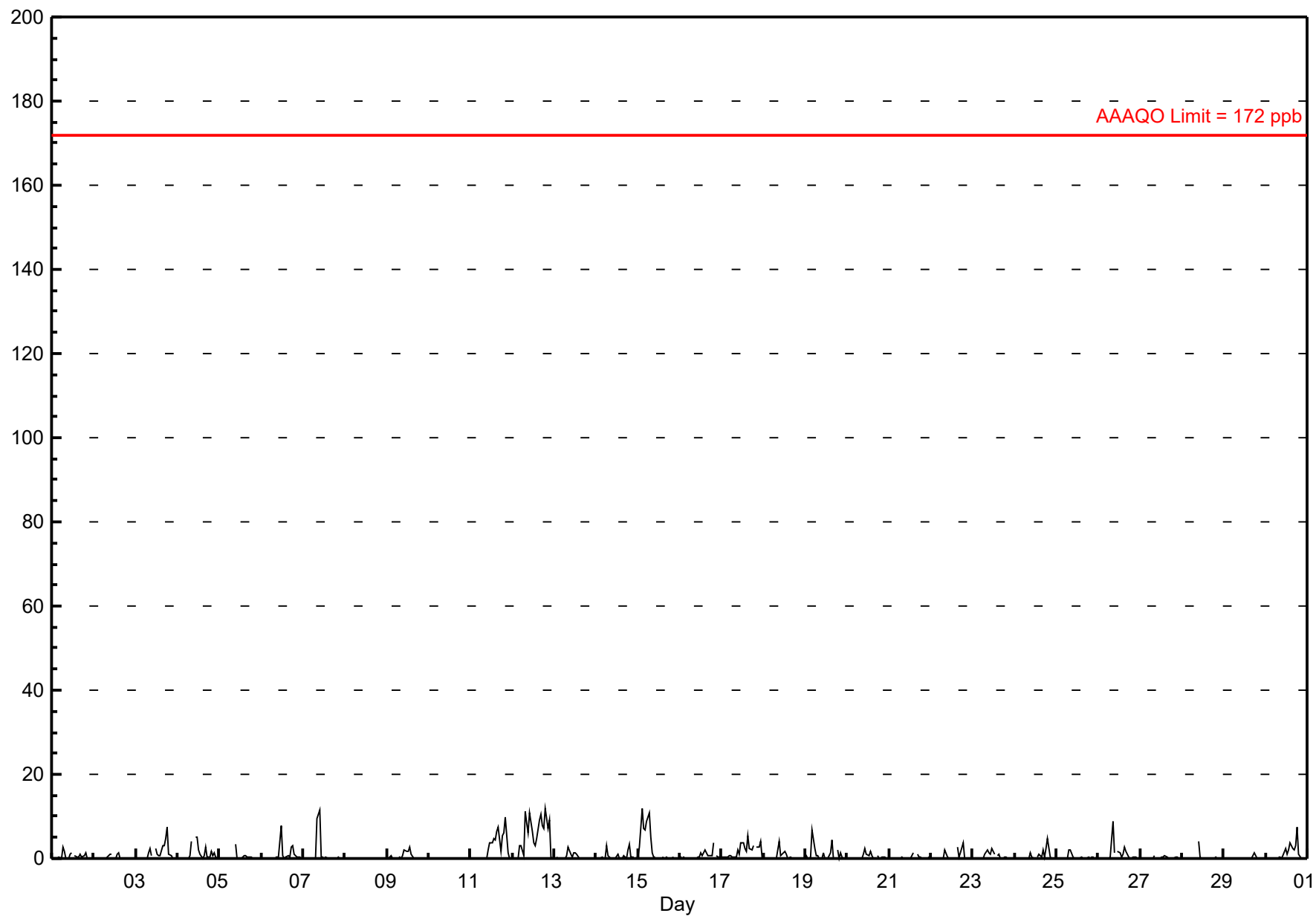
Sulphur Dioxide (SO₂) - ppb

Valleyview - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11.9 ppb on Jun 15 03:00 Maximum Daily Average: 5.4 ppb on Jun 12																					Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0					
Minimum Value: 0 ppb on Jun 1 02:00 Minimum Daily Average: 0.0 ppb on Jun 10 Maximum Diurnal Average: 1.7 ppb at hour 9 Minimum Diurnal Average: 0.1 ppb at hour 1 Monthly Average: 0.87 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.7 P ₉₀ = 2.7 P ₉₉ = 10.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	0	0	0	0	0	0	3	2	0	0	1	1	A	1	0	0	1	0	1	1	0	0	0	0	0.5	2.9
2-Jun	0	0	0	0	0	0	0	0	1	1	1	A	0	1	1	0	0	0	0	0	0	0	0	0	0.2	1.4
3-Jun	0	0	0	0	0	0	0	1	2	1	A	2	1	1	1	3	3	5	7	1	1	0	0	0	1.3	7.5
4-Jun	0	0	0	0	0	0	0	1	4	A	5	5	2	1	0	1	3	0	0	2	1	1	0	0	1.2	5.2
5-Jun	0	0	0	0	0	0	0	0	A	3	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0.3	3.4
6-Jun	0	0	0	0	0	0	0	A	0	0	0	8	1	0	0	1	0	3	3	1	0	0	0	0	0.8	7.8
7-Jun	0	0	0	0	0	0	A	0	10	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	11.4
8-Jun	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
9-Jun	0	0	1	0	A	0	0	0	0	1	2	2	2	3	1	0	0	0	0	0	0	0	0	0	0.5	2.8
10-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Jun	0	0	A	0	0	0	0	0	0	0	2	4	4	5	5	7	7	2	5	6	10	1	0	0	2.5	9.9
12-Jun	0	A	0	0	3	3	1	11	9	6	11	6	4	3	5	9	11	8	7	12	7	9	0	0	5.4	11.9
13-Jun	A	0	0	0	0	0	0	1	3	1	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0.4	2.8
14-Jun	0	0	0	0	0	0	3	1	0	0	0	0	1	0	0	0	1	0	2	4	0	0	A	0	0.5	3.5
15-Jun	0	3	12	7	7	9	11	5	1	0	0	C	C	C	0	0	0	0	0	0	0	A	0	0	2.9	11.9
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	1	1	4	A	1	0	0	0.6	3.7
17-Jun	0	0	0	0	1	1	0	0	0	2	1	4	4	2	2	6	2	2	3	A	3	3	4	0	1.8	5.6
18-Jun	0	0	0	0	0	0	0	0	2	4	1	1	2	1	0	0	0	0	A	0	0	0	0	0	0.5	4.1
19-Jun	1	0	0	0	7	2	1	1	0	0	1	0	0	0	1	5	0	A	2	0	1	0	0	0	1.0	6.6
20-Jun	0	0	0	0	0	0	0	0	0	1	2	1	1	2	1	0	A	1	0	0	0	0	0	0	0.4	2.3
21-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0.2	1.3
22-Jun	0	0	0	0	0	0	0	0	2	0	0	0	0	0	A	3	0	1	4	0	0	0	0	0	0.5	3.6
23-Jun	0	0	0	0	0	0	0	1	2	1	1	2	1	A	1	1	0	0	0	0	0	0	0	0	0.5	2.4
24-Jun	0	0	0	0	0	0	0	0	0	1	0	0	A	0	1	0	2	0	2	5	0	0	0	0	0.6	4.6
25-Jun	0	0	0	0	0	0	0	2	2	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.9
26-Jun	0	0	0	0	0	0	0	0	9	1	A	2	1	0	1	3	2	0	0	0	0	0	0	0	0.9	8.7
27-Jun	0	0	0	0	0	0	0	0	1	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	0.7
28-Jun	0	0	0	0	0	0	0	0	A	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	4.2
29-Jun	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0.1	1.4
30-Jun	0	0	0	0	0	0	A	0	0	0	1	2	1	2	4	2	2	3	7	1	0	0	0	0	1.2	7.4
0.1 0.1 0.5 0.3 0.6 0.5 0.7 0.9 1.7 1.5 1.1 1.6 1.0 0.9 1.0 1.5 1.3 1.0 1.6 1.3 0.9 0.6 0.2 0.1																								Diurnal Average		
0.6 2.6 11.9 7.2 6.9 8.9 10.8 11.2 9.6 11.4 10.9 7.8 3.8 4.6 4.8 9.0 10.6 7.8 7.5 11.9 9.9 9.1 4.1 0.5																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Valleyview - June 2016



Hourly Maximums

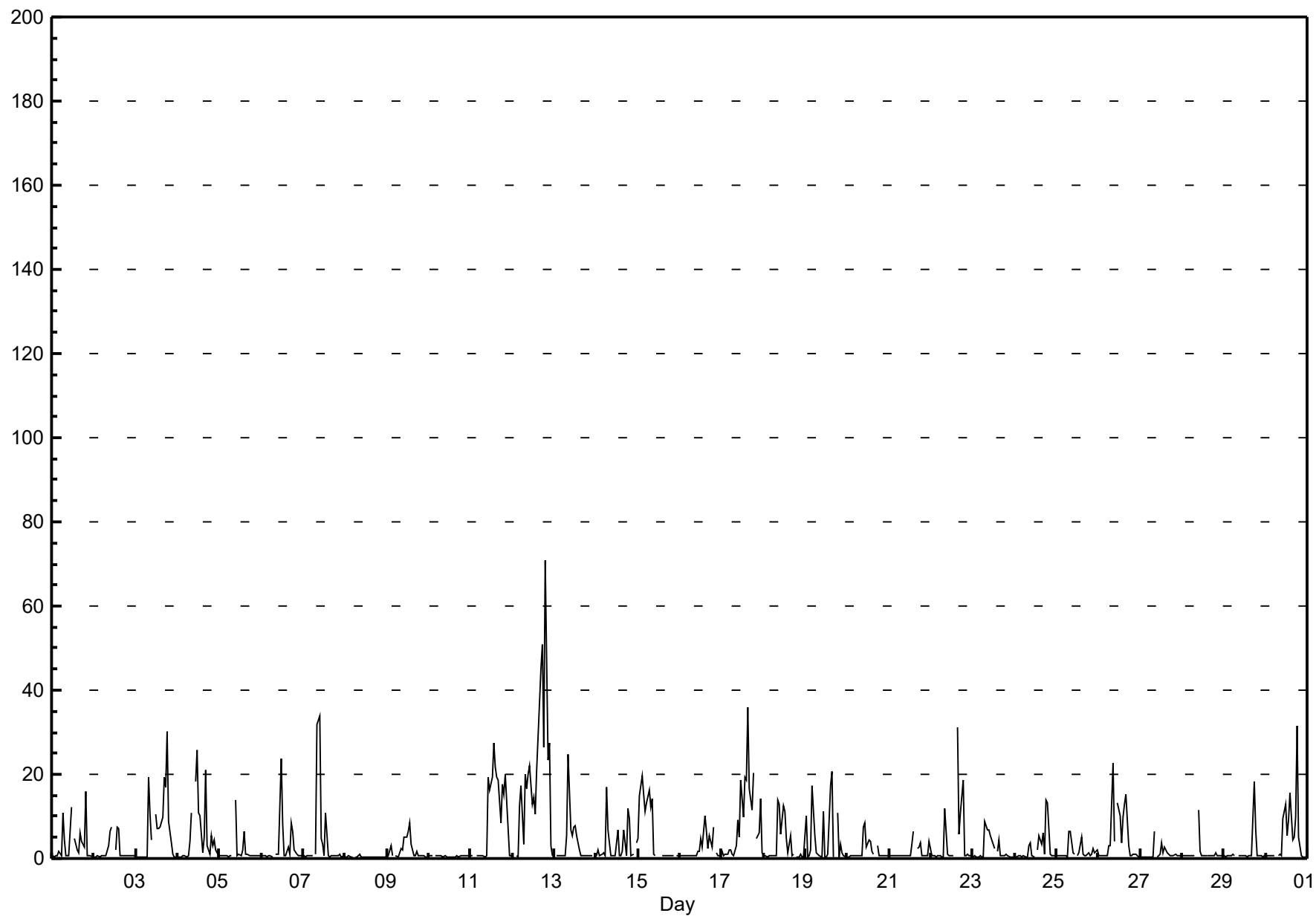
Sulphur Dioxide (SO₂) - ppb

Valleyview - June 2016

Maximum Value: 70.8 ppb on Jun 12 20:00																				Maximum Daily Average: 19.9 ppb on Jun 12					Hours in Service: 720				
Minimum Value: 0 ppb on Jun 9 23:00																				Minimum Daily Average: 0.5 ppb on Jun 8					Hours of Data: 686				
Maximum Diurnal Average: 7.4 ppb at hour 19																				Minimum Diurnal Average: 0.8 ppb at hour 24					Hours of Missing Data: 34				
Monthly Average: 3.93 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 4.2 P ₉₀ = 12.8 P ₉₉ = 31.4					Hours of Calibration: 34				
																									Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Jun	1	0	1	1	2	1	11	4	1	1	6	12	A	5	2	1	6	4	3	16	1	1	1	0	3.4	16.0			
2-Jun	0	0	1	0	1	1	1	1	3	6	7	A	2	7	7	1	1	1	1	1	1	1	1	1	1.9	7.5			
3-Jun	1	0	0	0	0	0	0	19	10	4	A	10	7	7	8	10	19	17	30	9	4	1	0	0	7.0	30.1			
4-Jun	0	1	1	1	1	0	1	4	11	A	18	26	11	10	1	5	21	3	1	6	3	5	2	1	5.7	25.9			
5-Jun	1	1	1	1	1	0	1	1	A	14	1	1	1	2	7	1	1	1	1	1	1	1	1	1	1.5	14.0			
6-Jun	1	1	1	0	1	1	0	A	1	1	1	24	8	1	1	3	1	9	7	2	1	1	1	1	2.8	23.8			
7-Jun	1	0	1	1	1	1	A	1	32	34	5	4	1	11	1	0	1	1	1	1	1	1	1	1	4.2	33.9			
8-Jun	1	1	1	0	0	A	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	1	1	0	0.5	1.0			
9-Jun	1	1	3	1	A	1	0	1	3	2	5	5	6	9	4	1	1	2	1	1	1	1	0	0	2.0	8.5			
10-Jun	1	1	1	A	1	1	1	1	0	1	0	0	0	0	0	0	1	0	1	1	1	1	1	1	0.5	0.5			
11-Jun	1	1	A	1	1	1	1	1	1	1	19	16	19	27	22	19	19	9	18	15	20	7	1	1	9.4	27.3			
12-Jun	0	A	1	0	13	17	3	20	17	20	22	13	15	10	21	37	45	51	27	71	23	27	3	1	19.9	70.8			
13-Jun	A	1	1	1	1	1	1	5	25	7	6	7	8	6	2	1	1	1	1	1	1	1	1	A	3.3	24.6			
14-Jun	1	2	1	1	2	1	17	7	1	1	1	1	7	1	1	2	7	1	12	10	1	1	A	4	3.3	16.9			
15-Jun	5	15	20	15	11	13	16	12	14	1	1	C	C	C	1	1	1	1	1	1	1	A	1	1	6.4	19.8			
16-Jun	1	1	1	1	1	1	1	1	1	1	2	2	5	3	10	7	2	5	3	7	A	1	1	1	2.4	10.2			
17-Jun	2	1	1	1	2	2	1	1	3	9	5	19	10	19	19	36	17	11	20	A	5	6	14	1	8.9	35.8			
18-Jun	1	1	0	1	1	1	1	1	14	13	6	12	11	5	1	6	1	1	A	1	1	1	0	0	3.3	13.9			
19-Jun	10	0	1	2	17	5	1	1	1	0	11	0	0	1	17	21	0	A	11	0	3	1	1	0	4.7	20.6			
20-Jun	1	1	1	1	1	1	1	1	1	7	8	3	4	4	2	1	A	3	1	1	1	1	1	1	1.8	8.4			
21-Jun	1	1	1	1	1	1	1	1	1	1	1	1	1	3	7	A	2	3	4	1	1	1	1	4	1.4	6.6			
22-Jun	1	1	1	0	1	1	0	0	12	1	1	1	1	1	A	31	6	11	19	1	1	1	1	1	3.9	31.1			
23-Jun	0	1	0	0	1	0	0	9	7	7	5	4	2	A	2	4	1	1	1	1	1	0	0	0	2.1	8.7			
24-Jun	0	0	1	1	0	1	0	0	3	4	1	0	A	2	5	4	6	1	14	13	1	1	1	1	2.6	13.9			
25-Jun	1	1	1	1	1	1	0	7	6	1	1	A	1	1	5	1	1	1	1	1	1	2	1	2	1.6	6.6			
26-Jun	1	1	1	1	1	1	3	3	23	4	A	13	10	4	10	13	15	3	1	1	1	1	1	1	4.7	22.7			
27-Jun	1	1	1	0	1	1	1	1	6	A	1	1	4	2	3	1	1	1	1	1	1	1	1	1	1.2	6.3			
28-Jun	1	1	1	1	1	1	1	1	A	12	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	11.6			
29-Jun	1	0	1	1	1	1	1	A	1	1	1	1	1	0	1	1	1	18	7	1	1	1	0	1	1.6	18.4			
30-Jun	1	1	1	1	1	1	A	1	1	1	9	13	6	9	16	4	5	10	32	5	1	1	0	0	5.1	31.5			
1.0 1.1 1.3 1.1 2.0 1.8 2.3 3.7 7.0 5.5 5.2 7.0 5.2 5.4 6.0 7.3 6.2 5.8 7.4 5.7 2.6 2.3 1.2 0.8																								Diurnal Average					
10.2 14.7 19.8 15.4 17.3 17.3 16.9 20.1 32.0 33.9 22.0 25.9 19.2 27.3 21.8 36.8 44.9 50.8 31.5 70.8 23.5 27.5 14.4 4.1																								Diurnal Maximum					
C - Calibration A - Automated Daily Zero Span																													

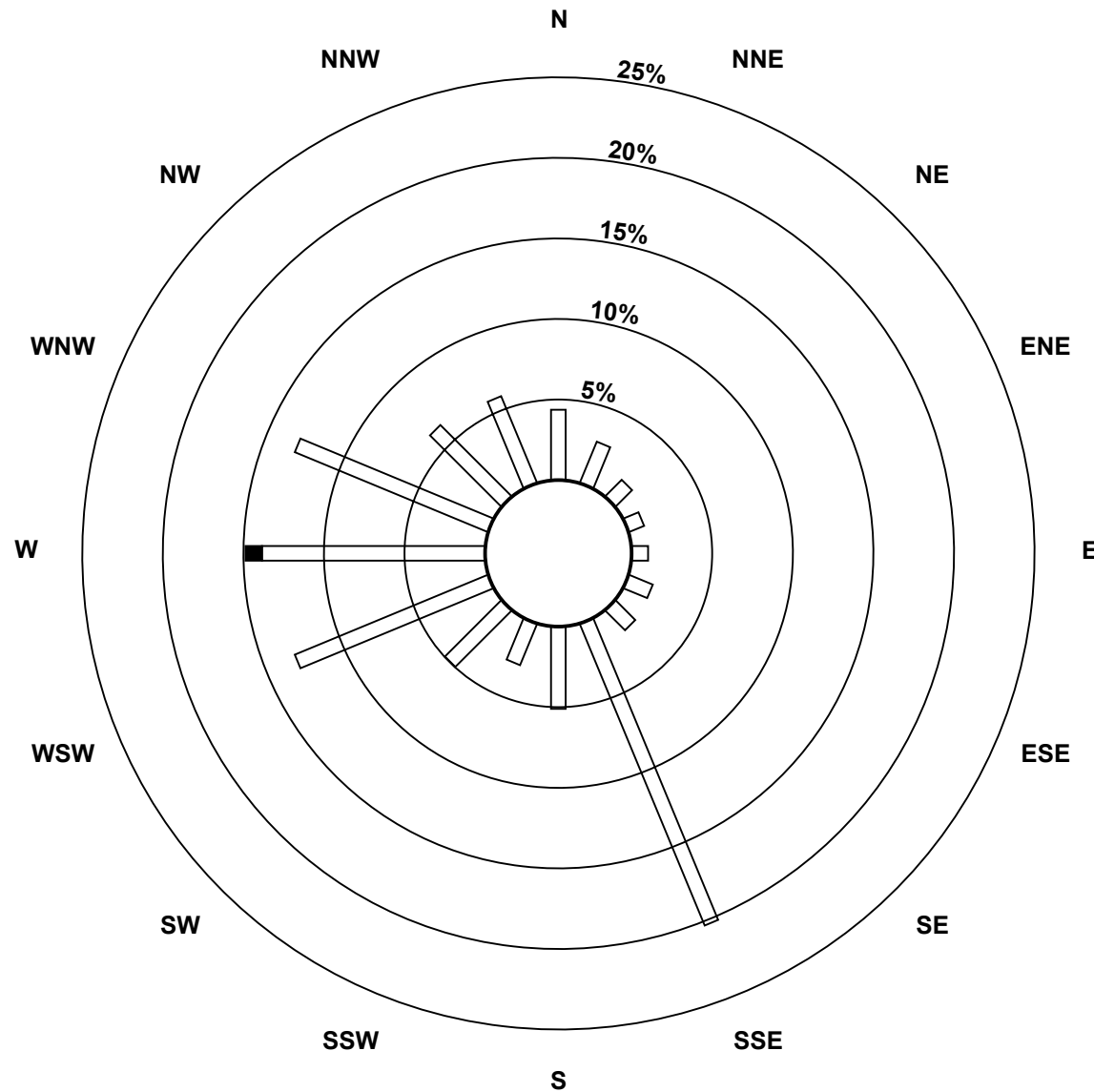
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - June 2016

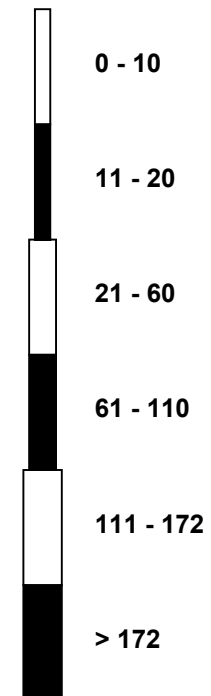


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - June 2016

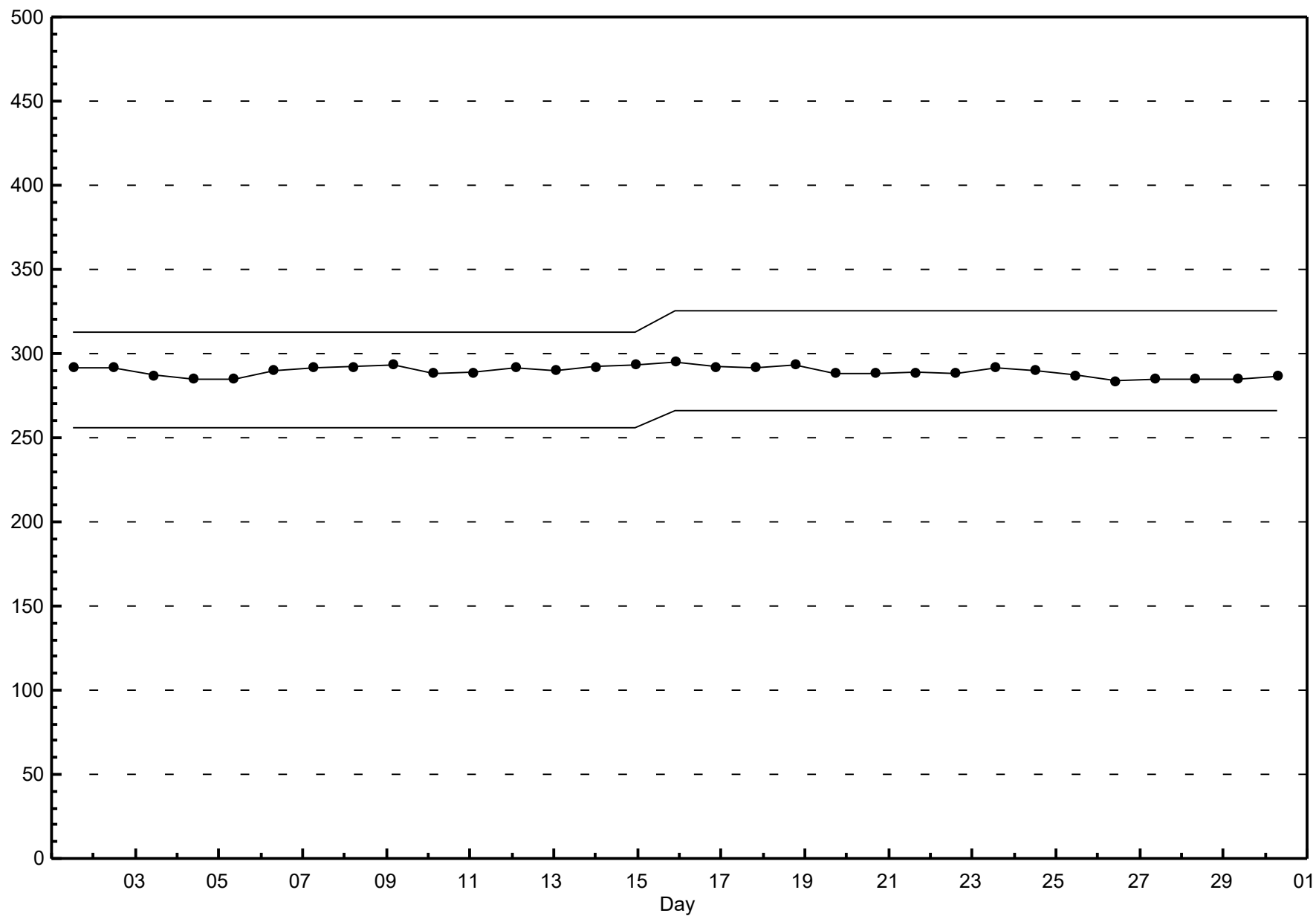


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - June 2016



Hourly Averages

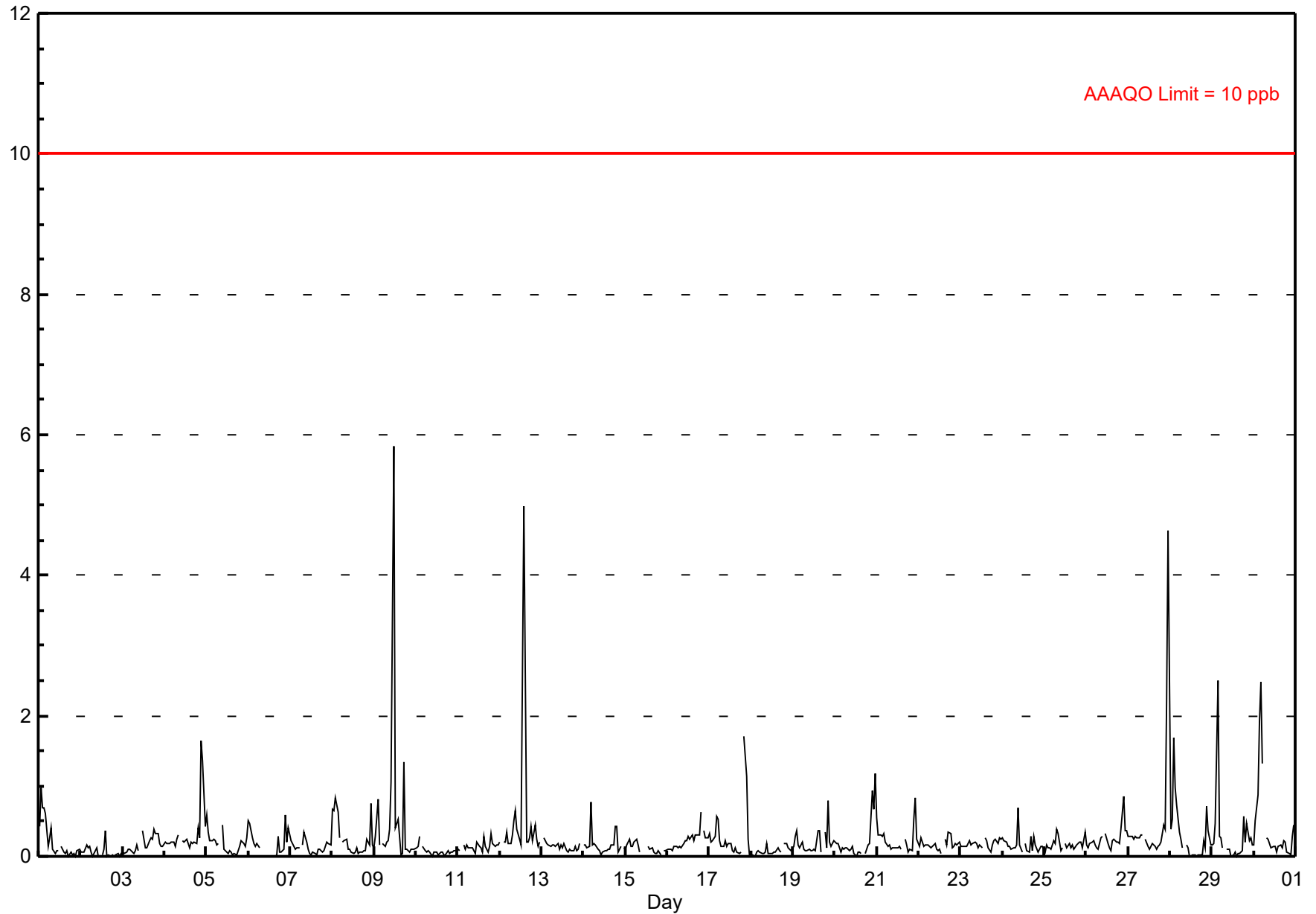
Hydrogen Sulphide (H₂S) - ppb

Valleyview - June 2016

Number of Exceedences (AAAQO): Maximum Value: 5.8 ppb on Jun 9 12:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 0.6 ppb on Jun 12					Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0				
Minimum Value: 0 ppb on Jun 1 22:00 Maximum Diurnal Average: 0.4 ppb at hour 24 Monthly Average: 0.24 ppb										Minimum Daily Average: 0.1 ppb on Jun 2 Minimum Diurnal Average: 0.1 ppb at hour 13 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 2.1																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Jun	0	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0			
2-Jun	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			
3-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4			
4-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0.3	1.6			
5-Jun	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6			
6-Jun	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.6			
7-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3			
8-Jun	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.8			
9-Jun	0	0	1	0	A	0	0	0	0	0	1	6	0	0	0	1	0	0	1	0	0	0	0	0	0.6	5.8			
10-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.1	0.3			
11-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3			
12-Jun	0	A	0	0	0	0	0	0	1	1	0	0	0	3	5	0	0	0	0	0	0	0	0	0	0.6	5.0			
13-Jun	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			
14-Jun	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.8			
15-Jun	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3			
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0.2	0.6			
17-Jun	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	2	1	0	0	0.3	1.7			
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	A	0	0	0	0	0	0.1	0.2			
19-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.2	0.8			
20-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	0.2	1.2			
21-Jun	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0.2	0.8			
22-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.4			
23-Jun	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			
24-Jun	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7			
25-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4			
26-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0.9			
27-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0.5	4.6			
28-Jun	0	1	2	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.3	1.7			
29-Jun	0	0	0	3	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.3	2.5			
30-Jun	0	1	1	2	2	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.5			
		0.2	0.3	0.3	0.4	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.1	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	Diurnal Average			
		0.7	1.0	1.7	2.5	2.5	1.3	0.3	0.4	0.5	0.7	1.1	5.8	0.4	2.6	5.0	0.4	0.3	1.3	0.6	0.6	1.7	1.6	2.2	4.6	Diurnal Maximum			
C - Calibration		A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																													

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Valleyview - June 2016



Hourly Maximums

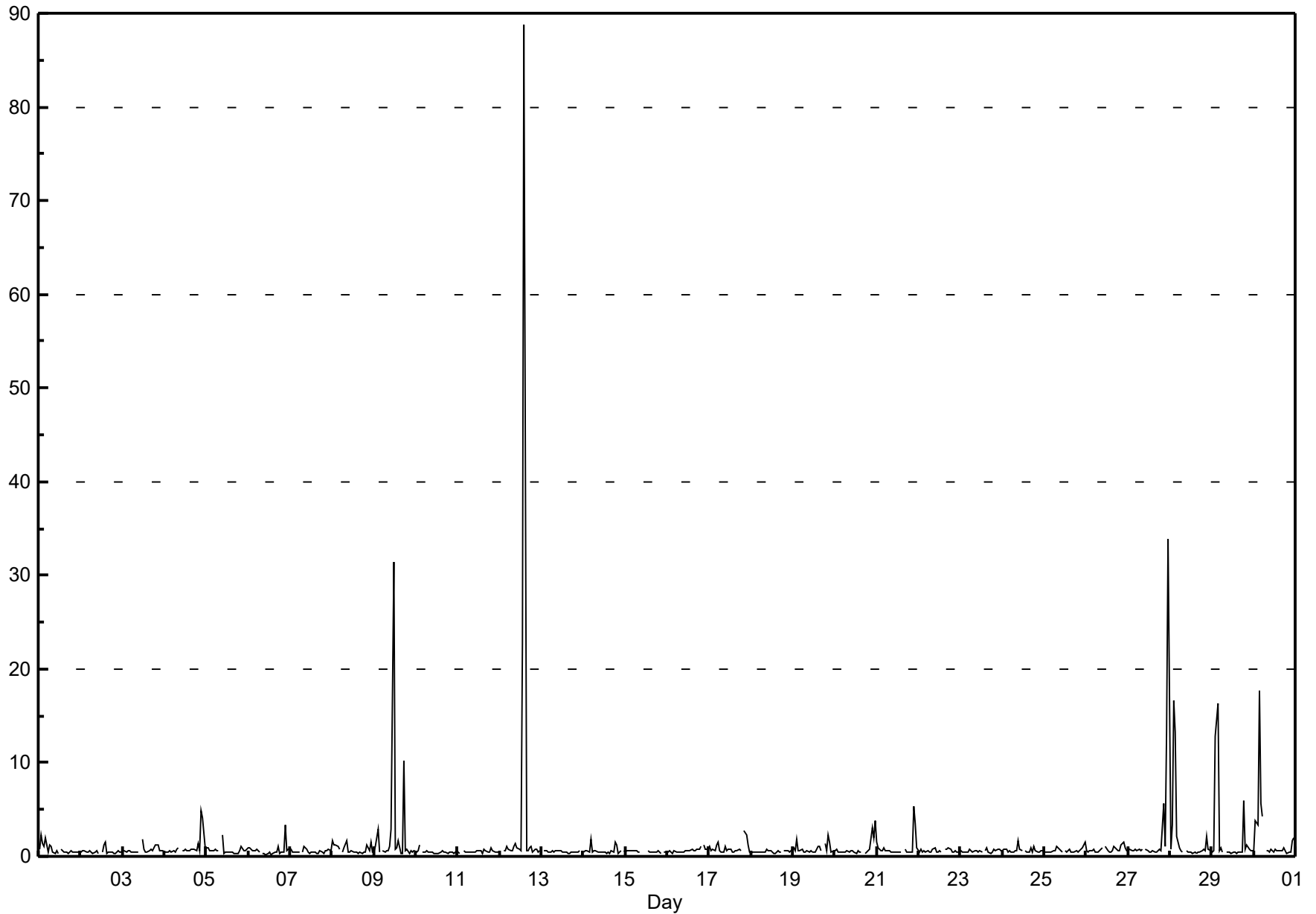
Hydrogen Sulphide (H₂S) - ppb

Valleyview - June 2016

Maximum Value: 88.7 ppb on Jun 12 15:00																				Maximum Daily Average: 5.5 ppb on Jun 12					Hours in Service: 720	
Minimum Value: 0 ppb on Jun 6 11:00																				Minimum Daily Average: 0.5 ppb on Jun 10					Hours of Data: 685	
Maximum Diurnal Average: 3.6 ppb at hour 15																				Minimum Diurnal Average: 0.5 ppb at hour 13					Hours of Missing Data: 35	
Monthly Average: 1.11 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 = 16.3					Hours of Calibration: 35	
																				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-Jun	1	2	1	1	2	0	1	1	0	0	1	0	A	1	0	0	0	0	1	0	0	0	0	0	0.8	2.2
2-Jun	0	1	1	1	0	1	0	0	0	1	0	A	0	1	1	0	1	0	0	0	0	1	0	0	0.5	1.5
3-Jun	1	1	0	1	1	1	0	0	0	0	A	2	1	1	0	1	1	1	1	1	1	1	1	1	0.7	1.9
4-Jun	1	1	0	1	1	1	0	1	1	A	1	1	1	1	1	1	1	1	1	1	1	5	4	1	1.0	4.8
5-Jun	1	1	1	1	1	1	1	1	A	2	0	1	0	1	0	0	0	0	0	1	1	1	1	1	0.7	2.2
6-Jun	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	3	1	1	0.6	3.3
7-Jun	1	0	1	1	0	0	A	0	1	1	0	0	0	0	0	0	0	1	0	0	1	1	1	1	0.5	1.0
8-Jun	2	1	1	1	1	A	0	1	2	0	1	1	0	1	0	0	0	0	0	0	1	1	2	0	0.8	1.7
9-Jun	0	1	3	1	A	1	0	1	1	1	3	31	1	1	2	0	0	10	1	1	0	1	0	1	2.6	31.4
10-Jun	0	1	1	A	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5	1.2
11-Jun	0	0	A	1	0	0	0	0	0	0	0	1	1	1	0	1	1	0	0	1	1	1	0	0	0.5	0.9
12-Jun	1	A	1	1	1	1	1	1	1	1	1	1	1	23	89	1	1	1	1	1	1	1	1	1	5.5	88.7
13-Jun	A	1	1	1	1	0	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	1	A	0.5	0.7
14-Jun	0	1	1	0	2	1	1	1	0	1	0	0	0	0	1	0	1	1	2	1	0	1	A	1	0.6	1.8
15-Jun	0	1	1	1	1	1	1	0	0	C	C	C	C	1	0	0	0	0	1	1	0	A	0	0	0.5	0.7
16-Jun	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.6	1.2
17-Jun	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	1	1	1	1	A	3	2	1	0	0.9	2.8
18-Jun	0	0	1	0	0	0	0	0	1	1	1	1	0	0	0	1	0	0	A	1	1	1	0	1	0.5	0.8
19-Jun	1	1	2	1	1	1	0	0	1	1	1	0	0	0	1	1	1	A	1	1	2	2	0	1	0.8	2.3
20-Jun	1	1	1	0	0	0	0	1	1	1	1	0	0	1	0	1	A	0	1	1	1	3	2	4	0.9	3.8
21-Jun	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	A	1	1	0	1	0	5	4	1	1.0	5.3
22-Jun	0	1	1	1	1	1	1	0	1	1	0	0	1	0	A	1	1	1	1	1	1	1	1	1	0.6	1.0
23-Jun	1	1	0	0	0	1	1	1	1	1	0	1	0	A	1	1	0	0	0	1	1	1	1	1	0.6	0.9
24-Jun	1	1	1	0	1	0	0	1	1	2	1	1	A	1	1	0	1	1	1	1	0	0	1	1	0.7	1.7
25-Jun	0	0	0	0	1	1	1	1	1	1	0	A	1	0	1	1	0	0	1	0	1	1	1	2	0.6	1.6
26-Jun	1	0	1	1	1	1	1	0	1	1	A	1	1	0	0	1	1	1	1	1	1	2	1	1	0.7	1.6
27-Jun	1	1	1	1	1	1	1	1	1	A	1	1	0	0	1	0	0	1	1	1	6	1	14	34	2.9	33.9
28-Jun	1	3	17	13	2	1	1	0	A	1	1	0	0	0	1	0	0	0	1	1	1	2	1	1	2.1	16.6
29-Jun	0	1	13	16	1	1	0	A	0	1	0	0	1	0	0	0	0	0	6	1	1	1	1	1	2.0	16.4
30-Jun	1	4	3	18	6	4	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	2	2	2.1	17.8
0.7 0.9 1.8 2.2 0.9 0.7 0.5 0.6 0.6 0.7 0.6 1.7 0.5 1.3 3.6 0.5 0.6 0.9 0.8 0.7 1.0 1.3 1.4 1.9																									Diurnal Average	
1.7 3.7 16.6 17.8 5.7 4.3 1.2 1.1 1.7 2.2 3.0 31.4 0.8 22.7 88.7 1.1 1.0 10.3 6.0 1.3 5.6 5.3 13.6 33.9																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

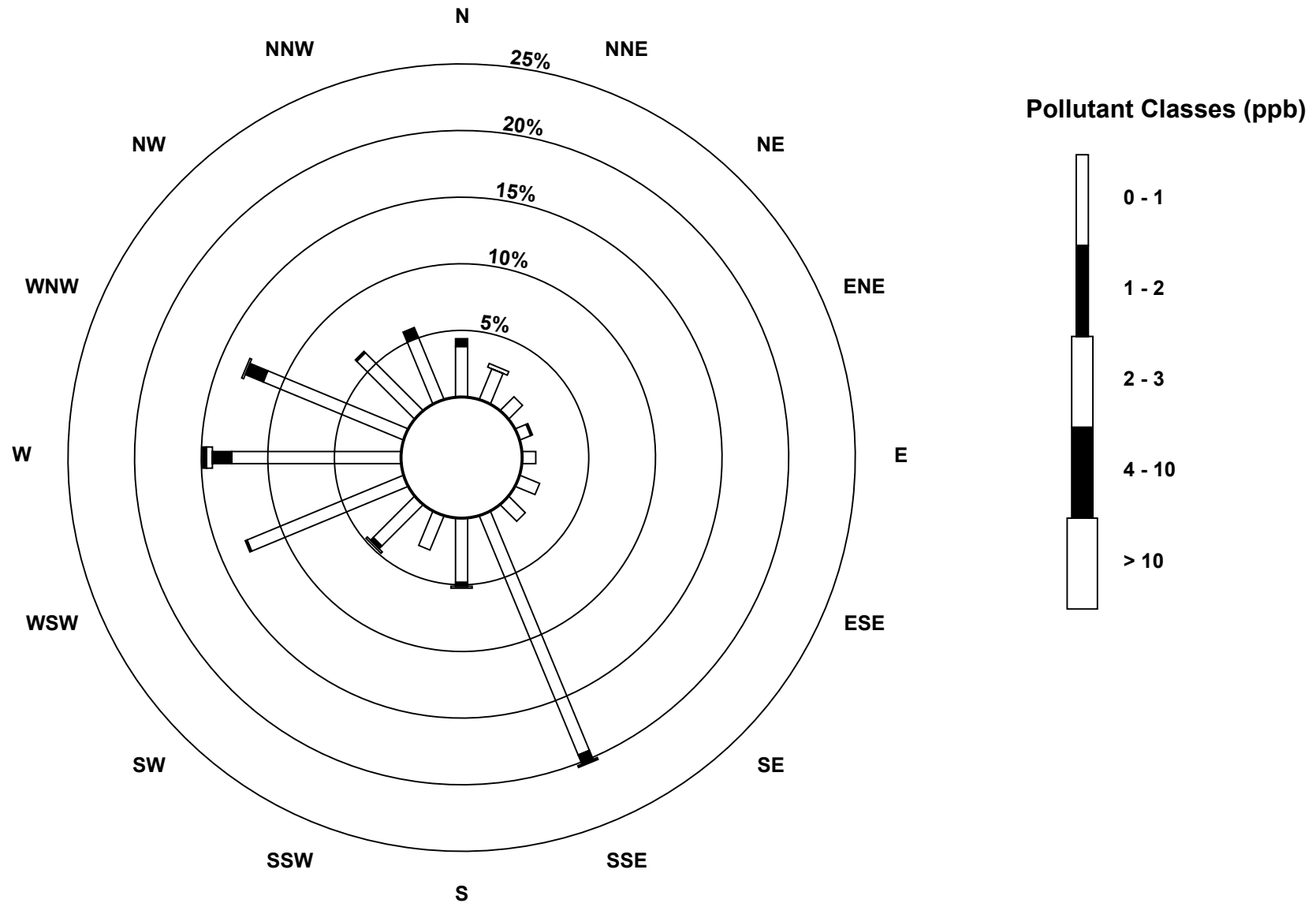
Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb
Valleyview - June 2016



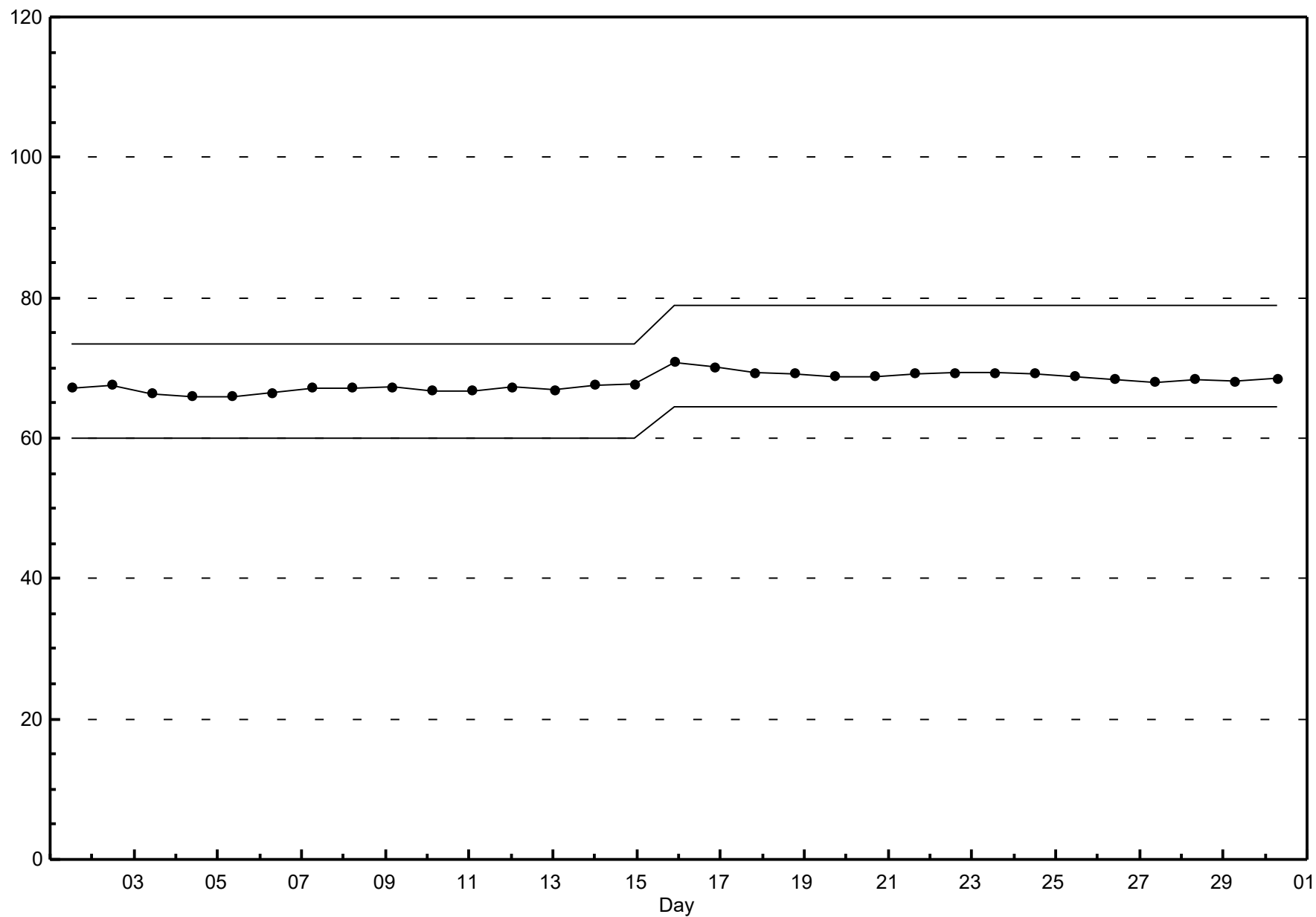
Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb
Valleyview - June 2016



Span Responses

Hydrogen Sulphide (H₂S)
Valleyview - June 2016



Hourly Averages

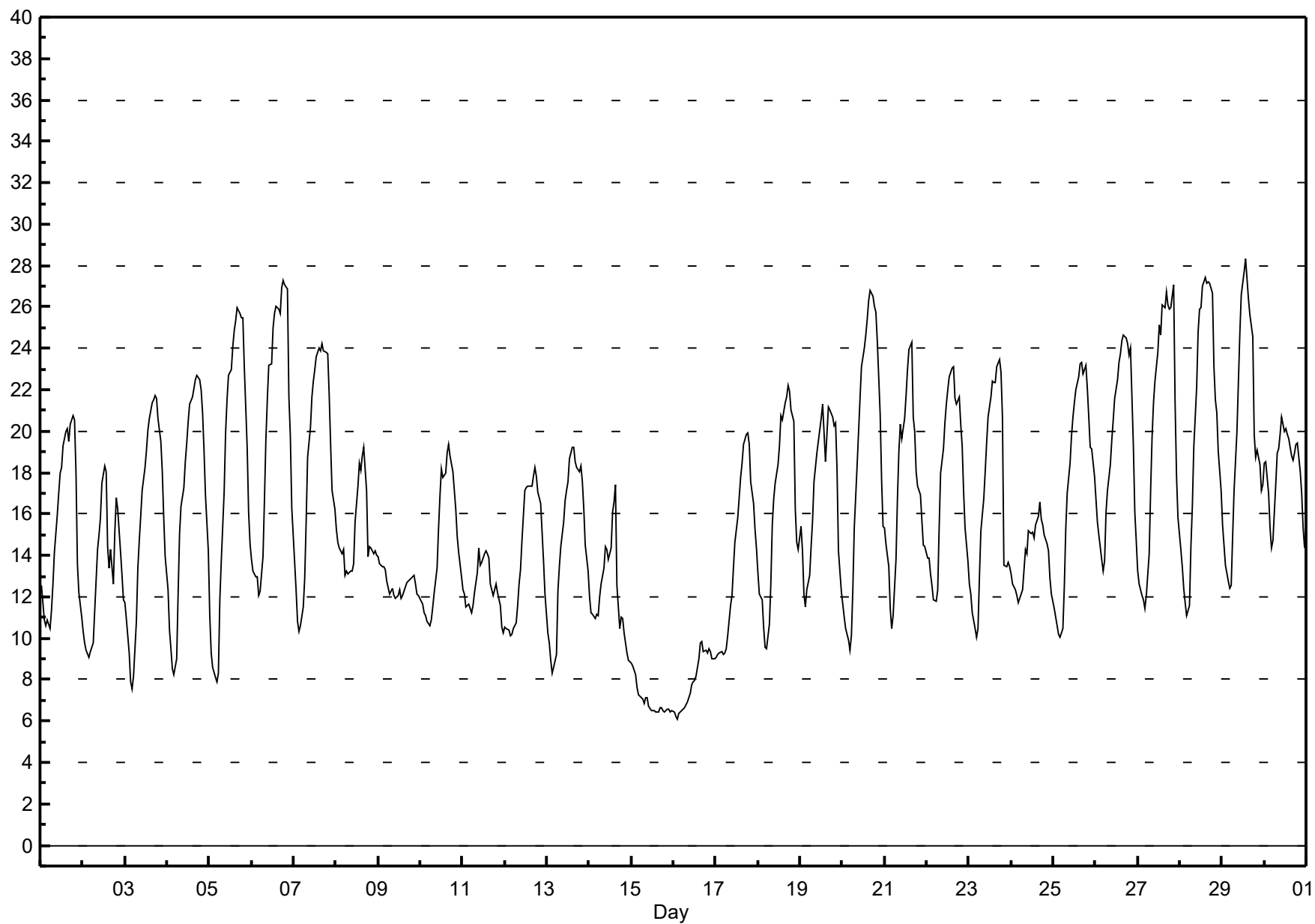
External Temperature (ET) - °C

Valleyview - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.3 °C on Jun 29 14:00 Maximum Daily Average: 20.4 °C on Jun 6																								Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 6 °C on Jun 16 03:00 Maximum Diurnal Average: 20.1 °C at hour 16 Monthly Average: 15.91 °C												Minimum Daily Average: 7.0 °C on Jun 15 Minimum Diurnal Average: 10.6 °C at hour 5 Percentiles: P ₁ = 6.4 P ₁₀ = 9.4 Q ₁ = 12.1 Median = 15.1 Q ₃ = 19.8 P ₉₀ = 23.2 P ₉₉ = 27.1														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	13	12	11	11	11	10	11	13	14	16	17	18	18	19	20	20	19	20	21	21	18	14	12	11	15.4	20.8
2-Jun	10	10	9	9	9	10	10	11	14	15	16	17	18	18	14	13	14	13	15	17	16	14	13	12	13.3	18.4
3-Jun	12	11	9	8	8	8	11	13	15	16	17	18	19	20	21	21	22	22	22	21	20	18	16	14	15.8	21.7
4-Jun	12	10	9	8	8	9	12	15	16	17	19	19	20	21	22	22	23	23	22	22	21	19	17	14	16.8	22.7
5-Jun	11	9	9	8	8	8	12	14	17	20	21	23	23	24	25	25	26	26	25	25	23	19	16	15	18.0	26.0
6-Jun	14	13	13	13	12	12	14	17	20	21	23	23	25	26	26	26	26	27	27	27	27	22	20	16	20.4	27.3
7-Jun	14	12	11	10	11	12	13	16	19	20	22	22	23	24	24	24	24	24	24	24	22	19	17	16	18.6	24.2
8-Jun	15	15	14	14	14	13	13	13	13	13	14	16	17	18	19	19	19	17	14	14	14	14	14	14	15.1	19.2
9-Jun	14	14	13	13	13	13	12	12	12	12	12	12	12	12	12	12	13	13	13	13	13	13	12	12	12.6	14.0
10-Jun	12	12	11	11	11	11	11	11	12	13	15	17	18	18	18	19	19	19	18	17	16	15	14	13	14.7	19.4
11-Jun	12	12	12	12	11	11	12	12	13	14	14	14	14	14	14	14	13	12	12	13	12	12	11	10	12.5	14.4
12-Jun	11	10	10	10	10	10	11	12	13	13	15	17	17	17	17	17	18	18	18	17	17	15	14	12	14.2	18.3
13-Jun	10	10	9	8	9	9	12	13	14	16	17	17	18	19	19	19	19	18	18	18	18	16	15	13	14.7	19.2
14-Jun	12	11	11	11	11	11	12	13	13	14	14	14	14	16	17	17	13	10	11	11	10	9	9	9	12.3	17.4
15-Jun	9	9	8	8	7	7	7	7	7	7	7	7	7	6	6	6	7	7	6	6	7	7	6	6	7.0	8.8
16-Jun	6	6	6	6	6	7	7	7	7	7	8	8	8	8	9	10	10	9	9	9	9	9	9	9	8.0	9.9
17-Jun	9	9	9	9	9	9	9	10	12	12	13	15	16	17	18	18	19	20	20	19	18	16	15	14	14.1	19.9
18-Jun	13	12	12	11	10	10	11	13	15	17	17	18	19	21	21	21	22	22	22	21	20	16	15	14	16.4	22.2
19-Jun	15	14	12	12	12	13	14	16	18	19	20	20	21	21	19	20	21	21	21	20	20	18	14	12	17.2	21.3
20-Jun	12	11	10	10	9	10	12	15	18	20	22	23	24	25	25	26	27	27	26	26	24	21	18	15	19.0	26.8
21-Jun	15	15	13	11	10	11	14	17	19	20	20	21	22	23	24	24	21	20	18	17	17	16	15	14	17.4	24.3
22-Jun	14	14	13	13	12	12	12	15	18	19	20	21	22	23	23	23	22	21	22	20	19	17	15	14	17.7	23.1
23-Jun	13	12	11	10	10	10	13	15	17	18	19	21	22	22	22	22	23	23	23	21	14	13	14	13	16.8	23.5
24-Jun	13	13	12	12	12	12	12	13	14	14	15	15	15	15	15	16	17	16	15	15	15	14	13	12	14.0	16.6
25-Jun	11	11	11	10	10	10	12	15	17	18	20	21	21	22	23	23	23	23	23	22	21	19	19	18	17.7	23.3
26-Jun	17	16	15	14	13	14	16	17	18	20	21	22	22	23	24	24	25	24	24	24	24	19	16	15	19.4	24.6
27-Jun	13	13	12	12	11	12	14	17	20	21	22	24	25	25	26	26	27	26	26	26	27	21	18	16	20.0	27.1
28-Jun	14	13	12	12	11	12	14	16	19	22	25	26	26	27	27	27	27	27	27	23	22	21	19	17	20.3	27.4
29-Jun	15	15	14	13	12	13	15	17	20	22	25	27	28	28	27	26	26	25	20	19	19	18	17	17	19.9	28.3
30-Jun	18	19	17	15	14	15	17	19	19	20	21	20	20	20	20	19	19	19	19	19	18	17	15	14	18.1	20.7
12.7 12.1 11.4 10.8 10.6 10.8 12.2 13.8 15.5 16.7 17.6 18.5 19.2 19.8 19.9 20.1 20.0 19.7 19.4 18.9 18.0 16.1 14.6 13.5																								Diurnal Average		
18.5 18.5 17.0 15.3 14.3 14.7 17.5 18.9 20.0 22.3 24.8 26.6 27.7 28.3 27.4 27.2 27.2 27.2 27.3 27.1 27.1 21.7 19.8 17.8																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C
Valleyview - June 2016



Hourly Averages

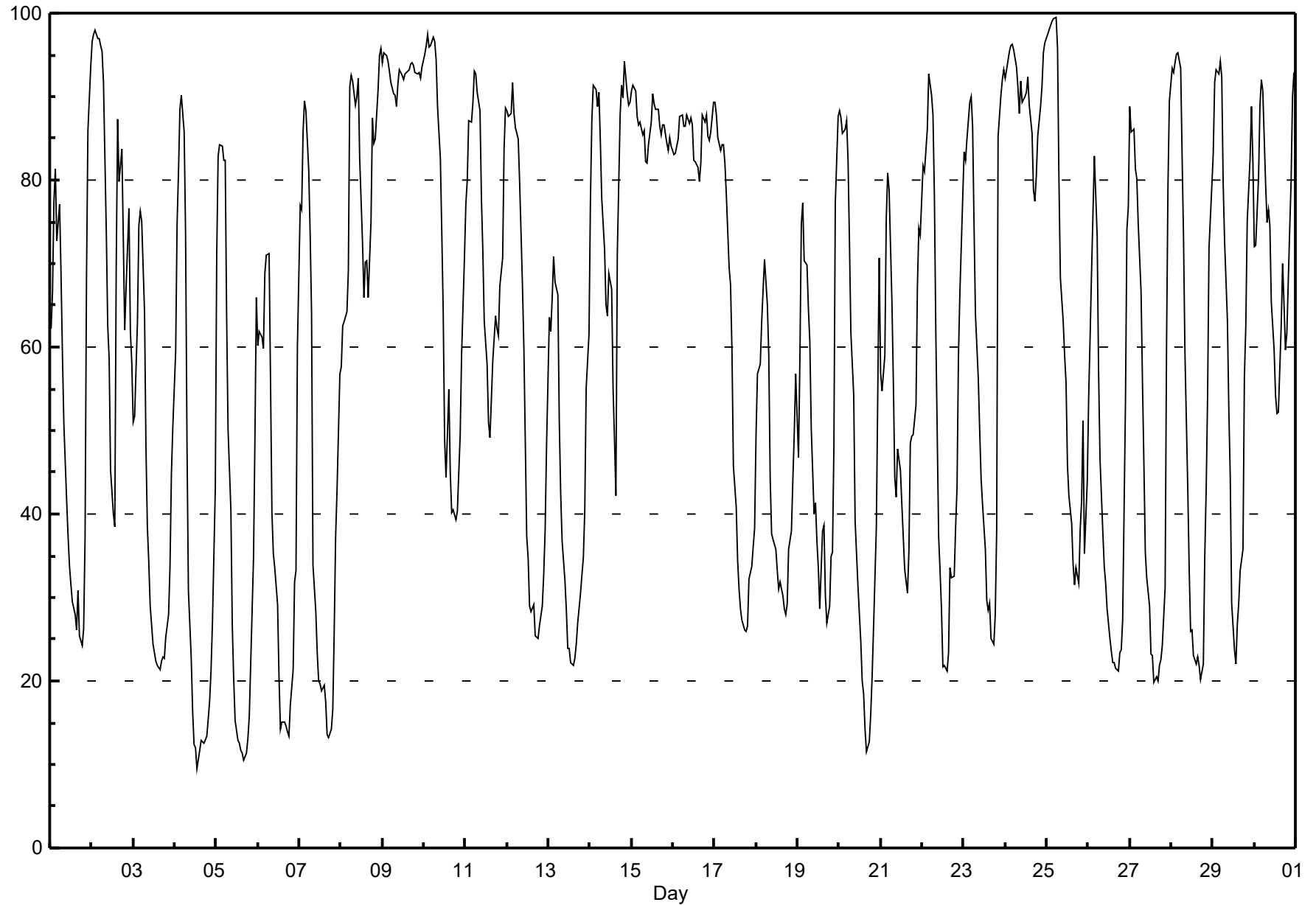
Relative Humidity (RH) - %

Valleyview - June 2016

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 99.4 % on Jun 25 06:00 Maximum Daily Average: 92.8 % on Jun 9																								Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 10 % on Jun 4 14:00 Maximum Diurnal Average: 85.0 % at hour 5 Monthly Average: 59.67 %												Minimum Daily Average: 37.2 % on Jun 4 Minimum Diurnal Average: 38.6 % at hour 14 Percentiles: P ₁ = 12.0 P ₁₀ = 22.7 Q ₁ = 33.8 Median = 63.0 Q ₃ = 85.6 P ₉₀ = 92.0 P ₉₉ = 97.2														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	62	67	77	81	73	77	69	59	51	41	37	34	31	30	28	26	31	25	24	26	37	68	86	94	51.5	93.6
2-Jun	97	97	98	97	97	96	95	92	74	63	59	45	40	39	70	87	80	84	73	62	67	77	62	58	75.3	97.9
3-Jun	51	52	63	74	76	75	64	48	38	34	29	24	23	22	22	21	22	23	23	25	28	34	45	50	40.4	76.3
4-Jun	59	75	81	89	90	86	73	48	31	23	16	12	12	10	12	13	13	13	13	15	18	21	27	43	37.2	90.2
5-Jun	71	83	84	84	82	82	64	50	41	27	20	15	13	12	12	11	11	11	13	16	22	35	49	66	40.6	84.2
6-Jun	60	62	61	60	69	71	71	56	40	35	34	29	21	14	15	15	15	14	13	17	21	32	33	60	38.3	71.2
7-Jun	77	76	86	89	88	81	73	64	34	28	23	20	20	19	19	17	14	13	14	17	26	37	43	57	43.2	89.5
8-Jun	58	63	63	64	69	91	93	92	89	90	92	83	73	66	70	66	75	88	84	85	91	95	96	79.3	95.7	
9-Jun	94	95	95	94	93	92	90	90	89	92	93	93	92	93	93	93	94	94	94	93	93	93	92	94	92.8	95.2
10-Jun	95	96	97	96	96	97	97	94	89	83	74	64	49	44	55	45	40	41	39	40	45	49	59	71	69.0	97.4
11-Jun	77	80	87	87	89	93	93	90	88	78	71	63	58	51	49	54	58	64	62	61	67	71	84	89	73.5	93.1
12-Jun	88	88	88	92	88	86	85	80	74	67	60	37	35	29	28	29	25	25	25	27	29	33	38	48	54.3	91.7
13-Jun	63	62	66	71	68	66	51	42	37	32	28	24	24	22	22	23	24	27	31	33	35	40	55	61	42.0	70.9
14-Jun	77	87	91	91	89	90	85	78	72	65	64	69	67	55	49	42	71	88	91	90	94	90	89	89	78.1	94.2
15-Jun	91	91	91	88	87	87	85	86	82	82	84	87	90	89	88	88	87	85	87	87	84	84	85	84	86.7	91.4
16-Jun	83	83	84	85	88	88	86	86	88	87	87	87	82	82	82	80	82	88	87	88	85	85	86	89	85.3	89.4
17-Jun	89	88	85	83	84	84	82	78	69	67	59	46	41	34	31	29	27	26	26	27	32	34	36	38	54.1	89.3
18-Jun	49	57	58	63	67	70	65	59	44	38	37	36	33	31	32	30	29	28	29	36	38	44	50	57	45.0	70.5
19-Jun	47	59	75	77	70	70	65	61	50	40	41	37	34	29	38	39	30	27	29	35	35	48	77	88	50.0	87.7
20-Jun	88	87	86	86	87	82	73	62	54	39	35	31	25	20	18	14	12	13	16	20	26	38	55	71	47.5	88.4
21-Jun	57	55	59	75	81	79	65	56	44	42	48	45	41	37	33	31	36	48	49	50	53	67	74	73	54.2	80.9
22-Jun	82	81	84	86	93	90	88	78	62	37	33	29	22	22	21	23	34	32	33	38	43	59	66	78	54.7	92.7
23-Jun	83	82	85	89	90	86	75	64	56	50	44	41	36	30	28	29	25	24	28	38	85	90	92	93	60.3	93.3
24-Jun	92	93	95	96	96	96	94	91	88	92	89	90	91	92	89	86	79	77	80	85	89	91	95	97	90.2	96.5
25-Jun	97	98	99	99	99	99	96	80	68	63	59	56	46	42	39	34	32	34	32	38	41	51	35	44	61.7	99.4
26-Jun	54	61	69	83	78	73	57	47	38	34	32	29	25	24	22	22	22	21	23	24	27	54	74	77	44.5	82.9
27-Jun	89	86	86	81	80	75	67	56	46	36	32	29	23	23	20	21	20	22	23	24	31	60	79	89	49.9	89.4
28-Jun	93	93	94	95	95	93	83	73	59	43	33	26	26	23	22	23	22	20	22	35	43	54	72	79	55.1	95.2
29-Jun	83	92	93	93	94	92	80	73	63	52	45	29	24	22	27	29	33	36	57	63	75	83	89	82	62.8	94.2
30-Jun	72	72	80	89	92	91	79	75	76	75	65	60	54	52	52	62	70	65	60	62	74	80	90	93	72.5	92.8
76.1 78.7 82.0 84.6 85.0 84.7 78.1 70.3 61.2 54.5 50.9 45.6 41.7 38.6 39.6 39.6 40.1 41.5 42.8 45.2 51.1 59.7 67.1 73.6																								Diurnal Average		
97.5 98.0 98.5 98.9 99.3 99.4 96.5 94.4 89.0 91.8 93.2 92.5 92.0 92.7 93.0 93.1 93.9 94.0 93.7 92.9 94.2 92.8 95.3 96.5																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Valleyview - June 2016



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	0	0	0	0	1	1	5	6	5	5	6	6	6	5	2	5	3	5	2	3	3	6	1	1	2.5	6.5
Dir	206	325	290	352	267	219	261	283	299	311	288	283	281	295	257	285	223	255	310	268	201	159	231	162	271	281
2 Spd	1	0	0	1	1	1	1	1	4	4	3	2	5	5	5	2	4	2	2	3	1	1	5	2	1.6	5.0
Dir	159	161	177	319	163	244	234	159	279	274	290	331	321	289	250	159	216	204	190	231	193	187	252	238	253	321
3 Spd	5	3	1	1	1	2	2	3	9	10	10	11	11	10	10	11	12	11	11	8	5	3	0	0	5.7	12.2
Dir	250	234	159	181	159	154	152	237	258	250	259	277	280	280	280	275	274	271	271	287	286	242	181	190	266	274
4 Spd	1	0	0	1	1	1	1	2	9	14	13	13	16	16	17	16	12	13	12	9	7	5	2	1	7.3	17.5
Dir	220	185	262	156	155	166	154	261	280	275	275	276	279	282	292	286	284	303	302	283	286	276	293	325	283	292
5 Spd	1	1	1	1	1	1	1	2	1	2	1	2	4	1	2	1	1	2	2	1	0	1	0	0	0.1	4.2
Dir	156	159	160	161	154	160	150	149	146	222	252	312	318	299	307	147	70	91	71	74	32	350	328	218	208	318
6 Spd	0	0	0	0	1	1	0	0	4	4	3	8	10	13	9	7	5	1	1	0	0	1	2	1	2.2	12.6
Dir	282	212	246	246	259	320	151	119	162	163	217	269	291	302	302	291	279	270	138	154	214	300	295	159	278	302
7 Spd	1	0	1	1	1	1	1	1	5	6	9	8	7	6	9	10	10	8	5	2	2	0	2	0	3.2	10.4
Dir	166	180	166	159	161	164	153	172	276	281	288	298	319	306	345	334	333	343	335	350	11	18	321	151	319	333
8 Spd	1	2	1	1	2	0	2	4	4	5	4	4	5	4	3	6	6	13	7	1	2	1	1	5	2.1	12.6
Dir	303	350	353	339	168	171	331	346	347	13	73	120	123	101	37	51	25	344	34	131	305	315	327	341	20	344
9 Spd	2	2	4	4	5	7	8	8	8	7	7	7	8	11	6	5	2	5	6	4	2	3	3	1	4.6	10.7
Dir	354	274	290	300	297	297	292	284	285	280	274	280	275	275	294	14	324	291	335	352	335	341	332	16	298	275
10 Spd	2	0	1	2	3	2	1	0	1	1	1	3	2	3	1	1	1	2	3	2	2	3	2	2	0.7	3.3
Dir	314	156	233	327	324	356	312	190	158	100	105	59	117	120	197	22	117	149	153	149	151	159	156	127	130	59
11 Spd	2	1	2	1	1	1	1	1	1	5	12	10	10	13	17	16	16	12	11	13	12	11	10	5	6.9	16.9
Dir	32	42	339	55	34	31	43	109	181	219	251	266	257	264	257	269	265	257	260	272	265	257	245	232	261	257
12 Spd	2	2	1	1	7	7	6	9	13	12	10	20	20	23	21	20	18	18	18	16	14	11	5	1	11.1	22.7
Dir	210	196	186	175	258	250	245	264	271	274	273	270	262	269	276	266	264	268	274	269	277	263	251	206	266	269
13 Spd	1	2	2	2	2	1	1	5	7	7	5	8	6	6	5	6	6	4	4	2	3	2	1	3	1.8	7.7
Dir	171	159	163	160	154	172	175	258	251	244	253	253	265	299	323	343	6	1	355	351	2	5	159	172	282	253
14 Spd	0	0	0	2	1	1	1	3	3	5	6	6	8	7	7	7	3	4	9	2	2	5	8	4	3.0	8.6
Dir	209	3	342	300	218	168	254	317	290	330	326	327	323	344	322	328	6	298	260	255	196	254	252	244	300	260
15 Spd	5	9	10	12	17	17	18	19	19	18	13	7	5	7	7	8	9	12	11	12	15	19	16	18	11.7	19.3
Dir	246	258	266	263	264	266	267	263	255	246	236	214	180	188	199	206	216	218	220	228	238	243	241	246	243	255
16 Spd	18	17	16	14	12	11	11	11	12	12	13	13	13	14	14	13	12	11	13	13	12	12	12	9	12.6	18.3
Dir	249	252	252	246	244	242	242	243	243	250	258	258	260	256	261	256	255	255	257	268	282	286	289	288	257	249
17 Spd	9	13	15	13	10	11	10	9	9	10	8	8	10	9	10	9	7	11	11	9	7	8	6	6	9.2	14.8
Dir	293	291	288	287	281	284	291	307	295	288	287	279	270	268	256	260	247	255	261	272	277	276	265	255	277	288
18 Spd	1	1	1	1	1	2	2	1	4	9	10	7	5	3	4	5	5	4	5	4	2	9	5	11	2.7	10.7
Dir	179	162	162	158	159	156	156	154	261	279	292	293	301	292	299	328	324	312	334	2	20	28	1	311	312	311
19 Spd	4	1	3	1	3	2	4	5	6	7	8	10	9	12	12	11	13	10	7	4	4	0	1	0	5.2	13.2
Dir	255	249	316	168	250	273	309	318	312	342	313	318	313	294	282	283	291	295	280	287	269	205	167	180	296	291
20 Spd	0	1	1	1	1	1	3	2	1	5	3	3	3	3	2	1	1	2	2	1	1	1	0	1	0.4	5.3
Dir	161	171	169	164	162	159	159	158	166	271	277	239	261	336	34	168	189	348	41	35	92	77	296	159	237	271
21 Spd	1	1	1	0	0	1	3	3	2	2	3	2	2	1	3	5	4	5	5	2	1	0	1	3	0.8	5.1
Dir	154	153	201	231	241	165	157	156	154	147	149	155	126	72	331	5	285	252	230	175	150	10	221	240	200	230
22 Spd	1	2	1	1	2	1	2	2	2	7	7	6	6	6	6	8	11	10	7	8	4	1	1	1	3.2	11.1
Dir	225	253	219	159	151	152	155	145	232	293	306	301	332	304	309	253	239	284	271	245	238	200	216	161	270	239

Hourly Averages

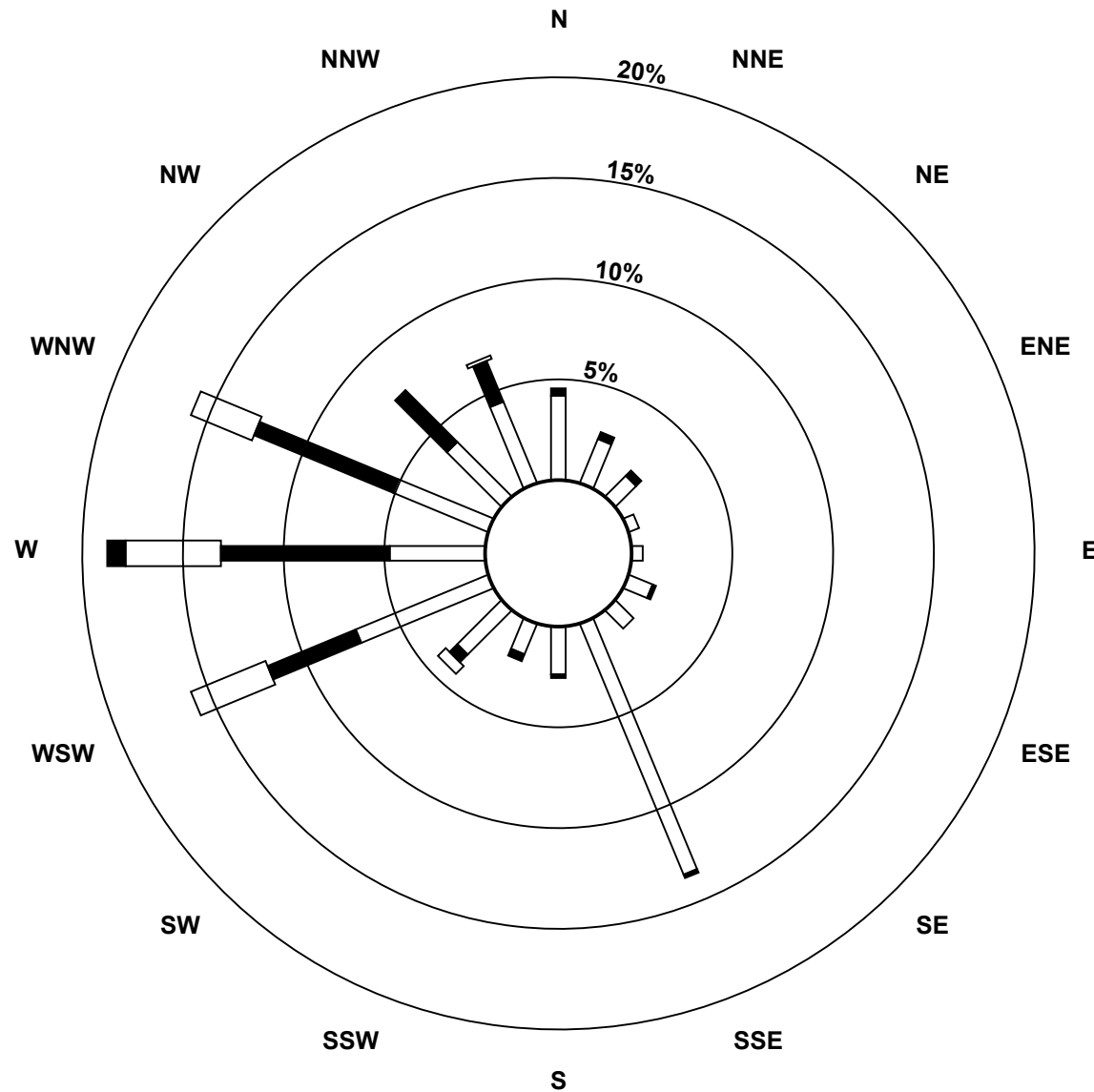
Wind Speed (km/h)
Wind Direction (deg)
Valleyview - June 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	1	1	1	0	1	1	1	1	2	2	1	1	1	1	3	3	3	3	4	1	2	1	0	1	0.4	4.2
Dir	159	169	161	167	167	156	159	186	241	238	269	41	31	56	290	351	344	332	338	279	158	125	100	151	312	338
24 Spd	1	0	0	0	1	1	1	0	1	2	2	3	2	4	4	4	8	9	3	2	1	0	0	1	1.5	9.4
Dir	167	180	167	226	149	162	160	158	200	254	164	230	244	249	247	250	286	286	275	251	155	154	172	159	251	286
25 Spd	1	1	1	1	1	1	1	3	7	8	9	9	11	12	10	11	13	9	10	8	2	3	9	4	5.3	12.7
Dir	159	160	153	152	153	140	156	266	279	286	302	306	317	294	296	295	298	305	297	321	323	260	284	245	294	298
26 Spd	1	1	0	0	1	0	1	1	8	11	10	8	6	5	7	4	7	9	8	7	1	1	1	1	3.4	11.0
Dir	190	147	166	167	154	149	198	222	270	283	268	279	276	258	258	267	299	307	323	322	290	181	170	160	281	283
27 Spd	1	1	1	1	2	2	2	1	2	2	4	3	2	2	1	3	1	4	4	2	0	0	0	0	0.3	4.1
Dir	159	157	162	165	160	156	153	158	265	248	255	246	232	330	274	25	10	358	7	16	162	104	227	166	269	358
28 Spd	0	0	0	0	0	0	0	1	1	1	1	1	3	2	2	5	6	5	5	4	2	1	0	1	1.1	5.6
Dir	165	188	292	158	268	102	206	159	150	128	89	346	2	345	15	7	353	354	5	290	288	328	163	189	349	353
29 Spd	0	0	0	0	0	0	0	1	1	1	0	2	3	2	5	6	3	3	4	1	0	0	0	2	0.8	5.7
Dir	168	158	189	183	272	174	152	141	187	167	179	161	151	138	106	106	95	238	333	33	343	142	170	149	130	106
30 Spd	5	0	0	0	1	1	1	1	3	1	2	12	8	10	9	8	4	5	4	1	1	0	0	0	2.4	12.4
Dir	146	152	265	11	26	327	93	132	237	157	228	273	277	258	264	280	297	283	263	213	163	168	4	169	263	273
Spd	1.4	1.4	1.5	1.4	1.7	1.6	1.8	2.3	4.2	4.9	5.0	5.5	5.4	5.8	5.7	4.9	5.1	5.5	4.5	3.6	2.7	2.3	2.5	1.8	Diurnal Average	
Dir	240	249	261	255	250	251	252	261	265	271	273	277	282	280	282	288	283	287	286	278	269	264	264	252	Diurnal Maximum	
Spd	18.3	17.1	15.9	14.1	17.4	17.1	18.1	18.9	19.3	18.1	13.3	20.3	19.9	22.7	21.1	20.0	18.2	17.9	17.6	15.7	15.2	18.9	15.5	17.9	Diurnal Maximum	
Dir	249	252	252	246	264	266	267	263	255	246	275	270	262	269	276	266	264	268	274	269	238	243	241	246		
Maximum Speed Value: 23 km/h on Jun 12 14:00								Minimum Speed Value: 0 km/h on Jun 27 21:00												Hours in Service:				720		
Maximum Daily Speed Average: 12.6 km/h on Jun 16								Minimum Daily Speed Average: 0.1 km/h on Jun 5												Hours of Data:				720		
Maximum Diurnal Speed Average: 5.8 km/h at hour 14								Minimum Diurnal Speed Average: 1.4 km/h at hour 4												Hours of Missing Data:				0		
Monthly Average Velocity: 3.36 km/h 273.6 deg								Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.5 Q ₁ = 1.0 Median = 2.7 Q ₃ = 7.4 P ₉₀ = 11.7 P ₉₉ = 18.7												Percent Operational Time:				100.0		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	49		9		1		0		0		0		59													
NorthEast	18		4		0		0		0		0		22													
East	18		2		0		0		0		0		20													
SouthEast	76		1		0		0		0		0		77													
South	132		3		0		0		0		0		135													
SouthWest	57		10		15		0		0		0		82													
West	67		88		57		6		0		0		218													
NorthWest	51		49		7		0		0		0		107													
Total	468		166		80		6		0		0		720													

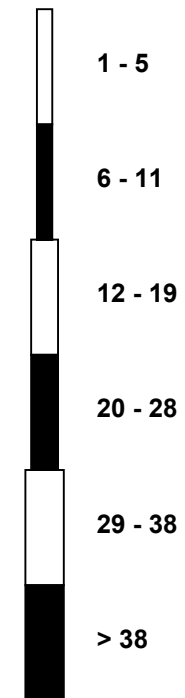
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - June 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - June 2016

Maximum Speed: 23 km/h on Jun 12 14:00																				Maximum Daily Speed Average: 13.2 km/h on Jun 16					Hours in Service: 720	
Minimum Speed: 0 km/h on Jun 27 21:00																				Minimum Daily Speed Average: 1.8 km/h on Jun 5					Hours of Data: 720	
Maximum Diurnal Speed Average: 8.0 km/h at hour 14																				Minimum Diurnal Speed Average: 2.3 km/h at hour 2					Hours of Missing Data: 0	
Monthly Average Speed: 5.09 km/h																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.6 Q ₁ = 1.3 Median = 3.6 Q ₃ = 7.9 P ₉₀ = 12.0 P ₉₉ = 18.9					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-Jun	0	0	1	1	2	2	5	7	6	6	7	7	7	6	4	5	4	5	3	3	4	6	1	1	3.8	7.2
2-Jun	1	0	1	1	1	1	1	2	4	4	4	4	6	5	5	2	6	3	2	4	1	1	5	3	2.8	6.2
3-Jun	5	3	1	1	1	2	2	4	9	10	10	12	12	11	10	12	13	12	11	9	5	3	0	1	6.7	12.7
4-Jun	1	1	1	1	2	1	1	3	10	14	14	14	17	17	18	16	13	14	12	10	7	5	3	1	8.1	17.9
5-Jun	1	1	1	1	1	1	1	2	2	2	3	4	5	4	3	2	2	3	2	1	0	1	0	0	1.8	5.4
6-Jun	0	1	0	0	1	1	0	0	4	4	4	9	11	13	10	7	5	2	1	0	0	2	2	1	3.3	13.1
7-Jun	1	0	1	1	1	1	1	1	5	6	9	8	8	8	10	11	11	8	5	2	2	1	2	1	4.3	11.0
8-Jun	2	2	2	1	2	1	3	5	5	5	5	4	6	5	3	6	6	13	8	4	2	2	2	5	4.2	13.4
9-Jun	3	3	4	4	5	7	8	8	9	8	7	7	8	11	8	5	3	5	6	4	2	4	3	1	5.5	10.9
10-Jun	2	0	1	2	3	2	1	1	1	1	2	4	3	4	1	2	1	2	3	2	2	3	2	2	2.1	4.3
11-Jun	2	1	2	1	1	1	2	1	2	6	12	10	11	14	17	16	17	12	11	13	13	12	11	5	8.1	17.2
12-Jun	3	2	2	1	7	7	6	9	13	12	11	21	20	23	22	20	19	18	18	16	14	11	5	1	11.7	23.2
13-Jun	1	2	2	2	2	1	2	5	7	8	6	9	7	7	7	7	7	4	4	2	3	2	2	4	4.2	8.7
14-Jun	2	1	1	3	1	1	2	3	3	6	6	6	8	8	7	8	7	5	9	3	3	6	8	4	4.6	8.8
15-Jun	5	9	10	12	18	17	18	19	20	18	13	8	6	7	8	9	10	13	12	12	16	19	16	18	13.1	19.6
16-Jun	19	17	16	14	13	11	12	11	12	13	13	13	13	14	15	13	13	11	13	14	13	13	12	10	13.2	18.6
17-Jun	9	13	15	13	11	11	10	9	9	10	9	9	10	10	11	10	8	11	11	10	7	9	6	6	9.9	15.1
18-Jun	1	1	1	1	1	2	2	2	5	9	10	8	6	5	5	6	5	5	5	4	2	10	6	11	4.7	11.2
19-Jun	6	1	4	2	3	3	5	6	6	7	9	10	10	12	12	12	14	11	7	4	4	0	1	0	6.1	13.6
20-Jun	0	1	1	1	1	1	3	2	1	6	4	4	5	4	3	2	2	3	3	1	1	1	1	1	2.1	5.9
21-Jun	1	1	1	0	0	1	3	3	2	3	3	2	2	2	4	6	6	5	7	2	1	1	1	4	2.5	6.8
22-Jun	2	2	1	2	2	2	2	2	2	8	8	7	7	7	7	9	12	10	8	8	4	1	1	1	4.7	11.9
23-Jun	1	1	1	1	1	1	1	1	2	3	3	3	3	2	4	4	4	4	4	5	3	1	1	2	2.2	4.8
24-Jun	1	1	1	0	1	1	1	0	1	2	2	3	3	4	4	4	8	10	3	2	1	0	1	1	2.2	9.6
25-Jun	1	1	1	1	1	1	1	4	8	8	9	9	11	12	11	12	13	10	11	9	3	4	9	4	6.5	13.1
26-Jun	1	1	0	0	1	0	2	2	8	11	10	8	7	6	8	5	8	9	8	7	1	1	1	1	4.4	11.3
27-Jun	1	1	1	1	2	2	2	1	3	3	4	4	3	4	3	3	2	5	4	2	0	0	0	0	2.2	4.6
28-Jun	0	0	0	0	0	0	0	1	1	1	1	2	4	3	4	6	6	6	5	5	2	1	0	1	2.2	6.0
29-Jun	1	0	0	0	0	0	1	1	1	1	1	3	3	2	6	6	3	6	6	3	0	0	1	2	2.1	6.4
30-Jun	5	1	0	1	1	1	1	2	3	2	4	13	9	10	9	8	4	5	4	1	1	0	0	0	3.6	13.0
2.6 2.3 2.4 2.4 2.8 2.7 3.2 3.9 5.5 6.6 6.8 7.5 7.7 8.0 7.9 7.8 7.7 7.6 6.9 5.4 4.0 3.9 3.5 3.1																									Diurnal Average	
18.6 17.3 16.1 14.4 17.7 17.3 18.4 19.2 19.6 18.4 13.7 20.7 20.5 23.2 21.6 20.5 18.7 18.4 17.9 16.0 15.8 19.2 15.9 18.1																									Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using scalar methods																										

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - June 2016

Maximum Value: 96.0 deg on Jun 29 11:00																								Hours in Service: 720	
Minimum Value: 6.9 deg on Jun 27 07:00																								Hours of Data: 720	
																								Hours of Missing Data: 0	
Percentiles: P ₁ = 8.8 P ₁₀ = 11.5 Q ₁ = 16.0 Median = 27.3 Q ₃ = 48.7 P ₉₀ = 71.5 P ₉₉ = 89.7																								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-Jun	87	63	89	88	82	45	32	15	21	31	36	42	28	43	74	56	42	39	52	31	30	20	50	21	88.7
2-Jun	13	72	77	29	69	50	54	23	59	43	51	73	45	21	48	17	40	38	34	35	26	34	22	24	76.6
3-Jun	13	28	13	24	15	22	16	49	14	20	26	18	19	27	22	17	19	18	12	13	27	26	21	51	51.1
4-Jun	28	27	80	25	74	48	20	63	18	15	15	17	15	16	13	12	21	21	15	12	9	16	48	91	90.7
5-Jun	21	13	19	11	24	30	62	14	59	54	67	80	54	85	68	77	86	47	30	40	36	44	75	53	85.5
6-Jun	66	41	77	42	55	82	76	59	30	17	45	16	19	15	21	23	14	73	39	34	60	67	17	44	82.5
7-Jun	24	39	51	29	38	27	35	49	24	24	20	29	33	36	22	21	15	17	12	17	25	80	45	83	83.2
8-Jun	69	69	89	71	34	83	79	52	52	34	48	25	25	41	34	29	21	21	38	90	44	52	77	13	89.8
9-Jun	24	43	25	19	11	15	12	16	14	12	13	14	13	11	36	18	31	19	14	23	18	18	23	30	43.4
10-Jun	64	60	43	36	19	59	54	66	51	85	63	49	47	50	39	87	50	16	13	11	12	9	11	22	87.1
11-Jun	38	50	32	56	41	44	52	49	38	40	20	16	15	16	12	12	11	10	11	13	11	11	16	36	56.4
12-Jun	32	29	26	24	22	19	27	12	11	12	14	11	13	12	12	12	13	14	10	11	10	10	30	31	31.7
13-Jun	21	11	18	14	13	28	33	40	26	33	41	32	32	42	56	42	13	13	15	35	13	25	60	33	60.4
14-Jun	82	84	87	27	40	34	57	33	36	34	21	16	15	26	21	33	71	25	14	55	35	22	15	33	87.4
15-Jun	27	18	11	10	11	9	10	9	10	11	19	35	31	25	25	26	26	27	21	25	21	11	15	12	34.8
16-Jun	12	9	9	13	12	14	12	16	16	11	10	10	11	9	12	12	11	10	9	10	11	10	12	12	16.2
17-Jun	15	11	11	11	10	10	11	14	22	23	24	22	19	27	23	35	27	15	14	11	10	9	9	11	34.9
18-Jun	26	10	14	12	7	8	7	11	53	22	19	31	47	84	31	44	32	27	22	15	11	17	41	19	84.2
19-Jun	59	82	61	62	33	55	28	27	21	15	33	20	22	17	10	20	15	15	16	17	19	30	24	45	82.2
20-Jun	50	9	43	14	9	13	10	14	39	29	45	49	64	48	81	53	81	55	37	26	47	85	70	59	84.8
21-Jun	24	14	44	59	62	22	9	13	20	35	14	28	23	74	55	43	78	48	49	28	51	92	57	57	91.9
22-Jun	63	49	44	26	13	10	12	30	58	20	23	26	28	29	32	34	25	13	23	21	26	31	44	36	62.8
23-Jun	28	28	27	26	29	25	29	69	65	52	87	75	76	69	59	47	55	62	13	81	57	44	62	16	87.4
24-Jun	29	44	44	43	15	28	29	38	53	49	26	32	50	34	45	26	15	11	34	46	26	23	29	37	53.2
25-Jun	11	15	18	23	18	30	20	50	17	18	16	19	18	18	20	19	16	13	19	26	75	55	11	16	74.8
26-Jun	28	19	22	25	24	20	51	73	21	13	21	24	30	47	38	42	23	20	19	13	58	28	20	32	72.6
27-Jun	13	19	10	9	8	8	7	17	72	64	34	54	59	85	87	57	84	31	28	27	82	76	80	79	86.8
28-Jun	35	64	64	58	81	60	75	25	27	64	65	79	57	64	79	46	23	23	15	28	37	38	70	29	80.9
29-Jun	58	64	76	82	67	54	79	43	43	64	96	40	30	45	25	24	28	72	65	81	91	59	41	16	96.0
30-Jun	13	88	85	96	71	40	73	21	49	43	54	18	24	11	16	14	18	20	24	48	16	61	90	68	95.8
	86.9	87.6	89.0	95.8	81.9	83.0	79.3	72.6	72.1	84.6	96.0	80.5	75.7	85.2	86.8	87.1	85.5	73.4	64.8	89.8	91.1	91.9	90.1	90.7	

PAZA

Portable – Rycroft Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

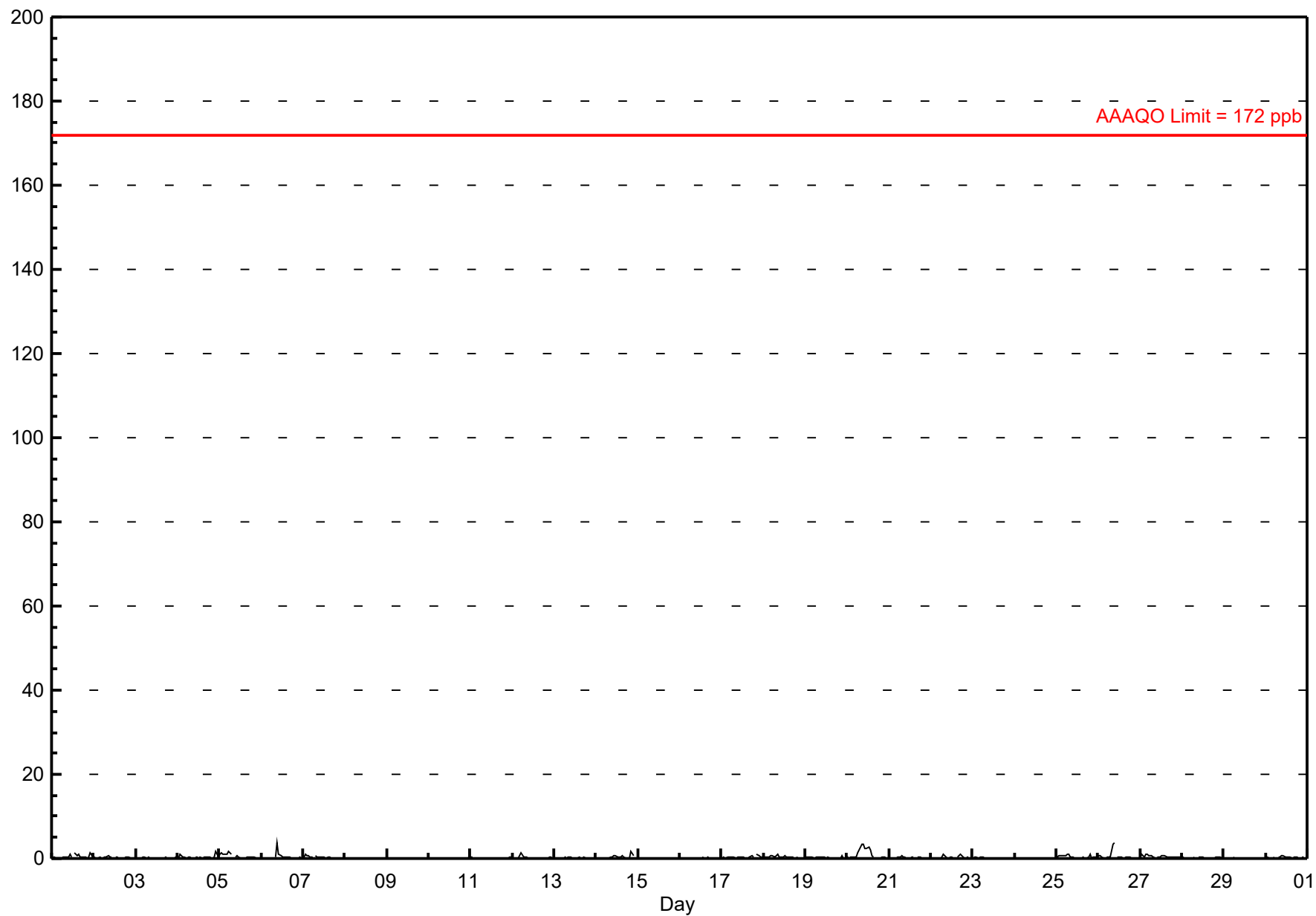
Sulphur Dioxide (SO₂) - ppb

Portable Rycroft - June 2016

Number of Exceedences (AAAQO): Maximum Value: 3.7 ppb on Jun 6 10:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 1.0 ppb on Jun 20					Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0				
Minimum Value: 0 ppb on Jun 1 06:00 Maximum Diurnal Average: 0.6 ppb at hour 10 Monthly Average: 0.25 ppb																			Minimum Daily Average: 0.0 ppb on Jun 24 Minimum Diurnal Average: 0.1 ppb at hour 24 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 2.3									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Jun	0	0	0	0	0	0	0	0	0	0	1	0	A	1	1	1	0	0	0	0	0	0	1	0	0.4	1.3		
2-Jun	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8		
3-Jun	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		
4-Jun	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0.3	1.8		
5-Jun	1	1	1	1	1	2	1	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.7		
6-Jun	0	0	0	0	0	0	0	A	0	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.7		
7-Jun	0	1	1	1	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0		
8-Jun	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1		
9-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1		
10-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2		
11-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3		
12-Jun	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2		
13-Jun	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		
14-Jun	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	0	0	0	0	2	1	A	0	0.3	1.6		
15-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1		
16-Jun	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0	0	A	0	0	0	0.1	0.5		
17-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	A	1	1	0	0	0.3	1.0		
18-Jun	0	0	0	0	1	1	0	1	1	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0.4	0.9		
19-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	1	0	0	0.2	0.8		
20-Jun	0	0	0	0	0	1	1	2	3	3	2	2	3	2	1	0	A	0	0	0	0	0	0	0	1.0	3.3		
21-Jun	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.6		
22-Jun	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0.2	1.1		
23-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.4		
24-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0		
25-Jun	0	1	1	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0.4	0.9		
26-Jun	1	1	0	0	0	0	0	0	3	4	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	3.7		
27-Jun	0	1	0	1	1	1	1	1	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0.5	1.1		
28-Jun	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4		
29-Jun	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3		
30-Jun	0	0	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6		
																									Diurnal Average			
																									Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																												
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																												

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Portable Rycroft - June 2016



Hourly Maximums

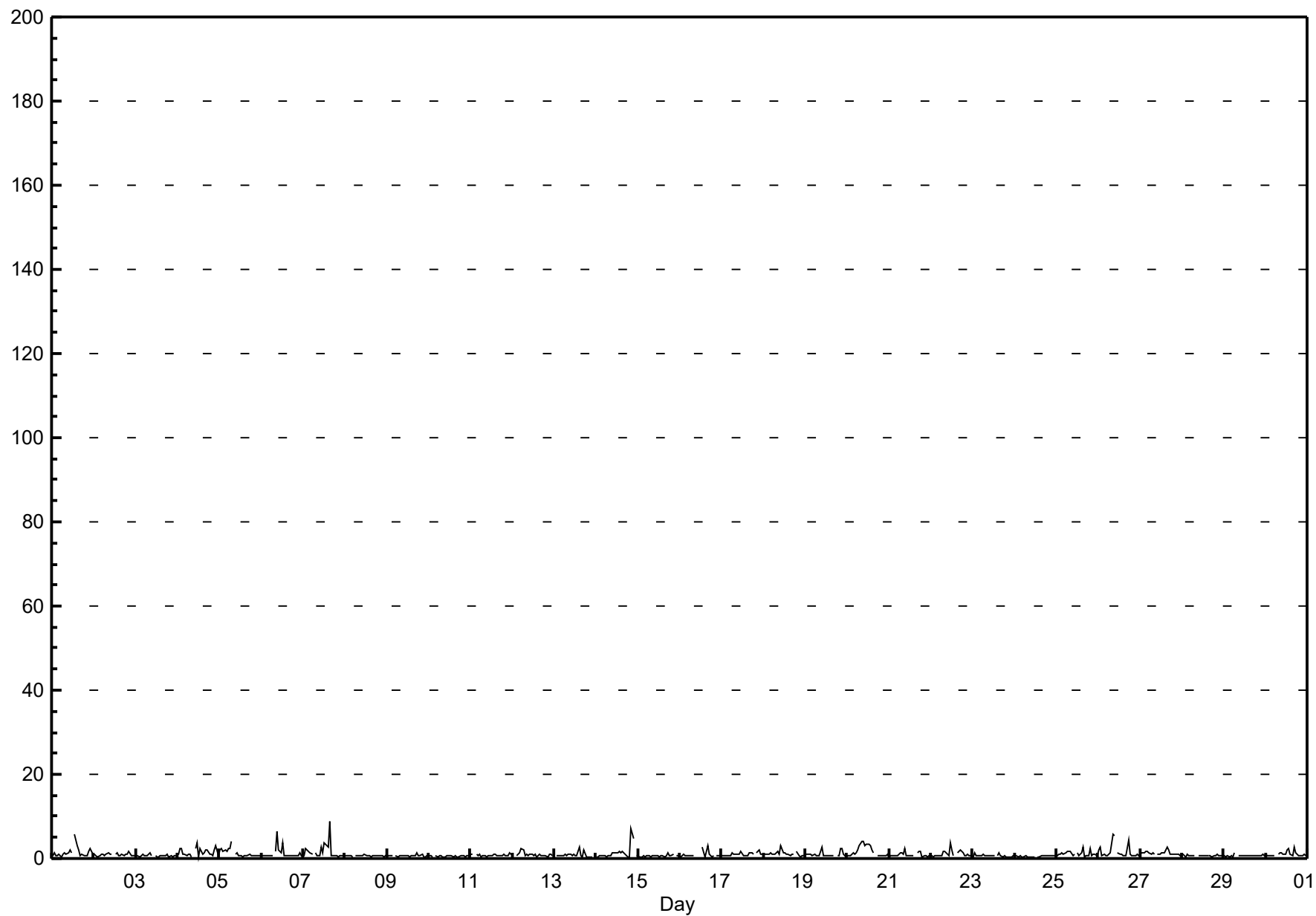
Sulphur Dioxide (SO₂) - ppb

Portable Rycroft - June 2016

Maximum Value: 8.7 ppb on Jun 7 16:00																			Maximum Daily Average: 1.8 ppb on Jun 20						Hours in Service: 720	
Minimum Value: 0 ppb on Jun 9 01:00																			Minimum Daily Average: 0.5 ppb on Jun 24						Hours of Data: 685	
Maximum Diurnal Average: 1.5 ppb at hour 10																			Minimum Diurnal Average: 0.7 ppb at hour 24						Hours of Missing Data: 35	
Monthly Average: 1.03 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.7 Median = 0.8 Q ₃ = 1.1 P ₉₀ = 1.8 P ₉₉ = 4.4						Hours of Calibration: 35	
																			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-Jun	1	1	1	1	1	0	1	1	1	1	2	1	A	6	3	2	1	1	1	1	1	2	2	1	1.4	5.8
2-Jun	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	1	1	1	0.9	1.6
3-Jun	1	1	0	1	1	1	1	1	1	1	A	1	0	0	1	1	1	1	1	0	1	0	1	1	0.7	1.2
4-Jun	1	2	2	1	1	1	1	1	0	A	2	4	0	2	1	1	2	2	1	1	1	2	3	1	1.5	3.6
5-Jun	2	2	2	2	2	2	2	4	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1.3	4.2
6-Jun	1	1	1	1	1	1	1	A	2	6	2	1	4	1	1	1	1	1	1	1	1	1	1	1	1.3	6.3
7-Jun	1	2	2	2	1	1	A	1	1	1	3	1	4	3	3	9	1	1	1	1	0	1	1	1	1.7	8.7
8-Jun	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	0.6	0.9
9-Jun	0	1	1	1	A	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0.6	1.2
10-Jun	1	1	0	A	1	1	1	1	0	0	1	1	1	1	0	1	1	0	1	1	1	0	1	1	0.6	0.8
11-Jun	1	1	A	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
12-Jun	1	A	1	1	1	2	2	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	0.9	2.4
13-Jun	A	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	0	2	0	0	0	0	1	A	0.8	2.8
14-Jun	0	0	1	1	1	1	0	1	1	1	1	1	1	2	1	2	1	1	0	0	7	5	A	1	1.4	7.2
15-Jun	1	0	0	1	0	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	0.6	1.3
16-Jun	0	1	1	1	1	1	1	1	1	C	C	C	C	3	0	2	3	1	0	1	A	1	1	1	1.0	3.1
17-Jun	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	2	1	1	1.0	1.9
18-Jun	1	1	1	1	1	1	1	1	2	1	3	1	1	1	1	1	1	1	A	2	1	0	1	1	1.1	3.2
19-Jun	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	A	1	1	2	2	1	0	1.0	2.8
20-Jun	1	1	1	1	1	1	2	3	4	4	3	3	3	3	2	1	A	1	1	1	1	1	1	1	1.8	4.2
21-Jun	0	1	1	1	1	1	1	1	1	2	1	1	1	1	1	A	1	2	2	0	1	1	0	1	1.0	2.4
22-Jun	1	0	1	1	1	1	1	2	2	1	1	4	2	1	A	1	2	2	1	1	1	1	1	1	1.2	3.9
23-Jun	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	0	0	0	1	1	0.7	1.4
24-Jun	1	1	1	1	0	0	1	0	0	0	0	0	A	0	0	1	1	1	1	1	1	1	1	1	0.5	0.8
25-Jun	1	1	1	1	1	1	2	2	2	1	1	A	1	1	1	3	0	1	1	2	1	1	1	1	1.2	2.8
26-Jun	2	3	1	1	1	1	1	1	6	6	A	1	1	1	1	1	1	4	1	1	1	1	1	1	1.6	5.9
27-Jun	1	1	1	2	2	1	1	1	1	A	1	1	1	1	1	3	2	1	1	1	1	1	1	1	1.3	2.8
28-Jun	1	1	0	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0.8	1.1
29-Jun	1	0	1	0	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
30-Jun	1	1	1	1	1	1	A	1	1	1	1	1	2	2	1	1	3	1	1	1	1	1	1	1	1.1	2.5
0.8 1.0 0.8 0.9 0.9 0.9 1.0 1.2 1.3 1.5 1.2 1.2 1.2 1.3 1.1 1.3 1.0 1.1 0.8 0.8 1.0 1.0 0.9 0.7																									Diurnal Average	
1.9 2.9 2.2 1.9 1.8 2.4 2.3 4.2 5.9 6.3 3.2 3.9 3.8 5.8 2.9 8.7 3.1 4.4 1.8 2.3 7.2 4.7 3.0 1.0																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

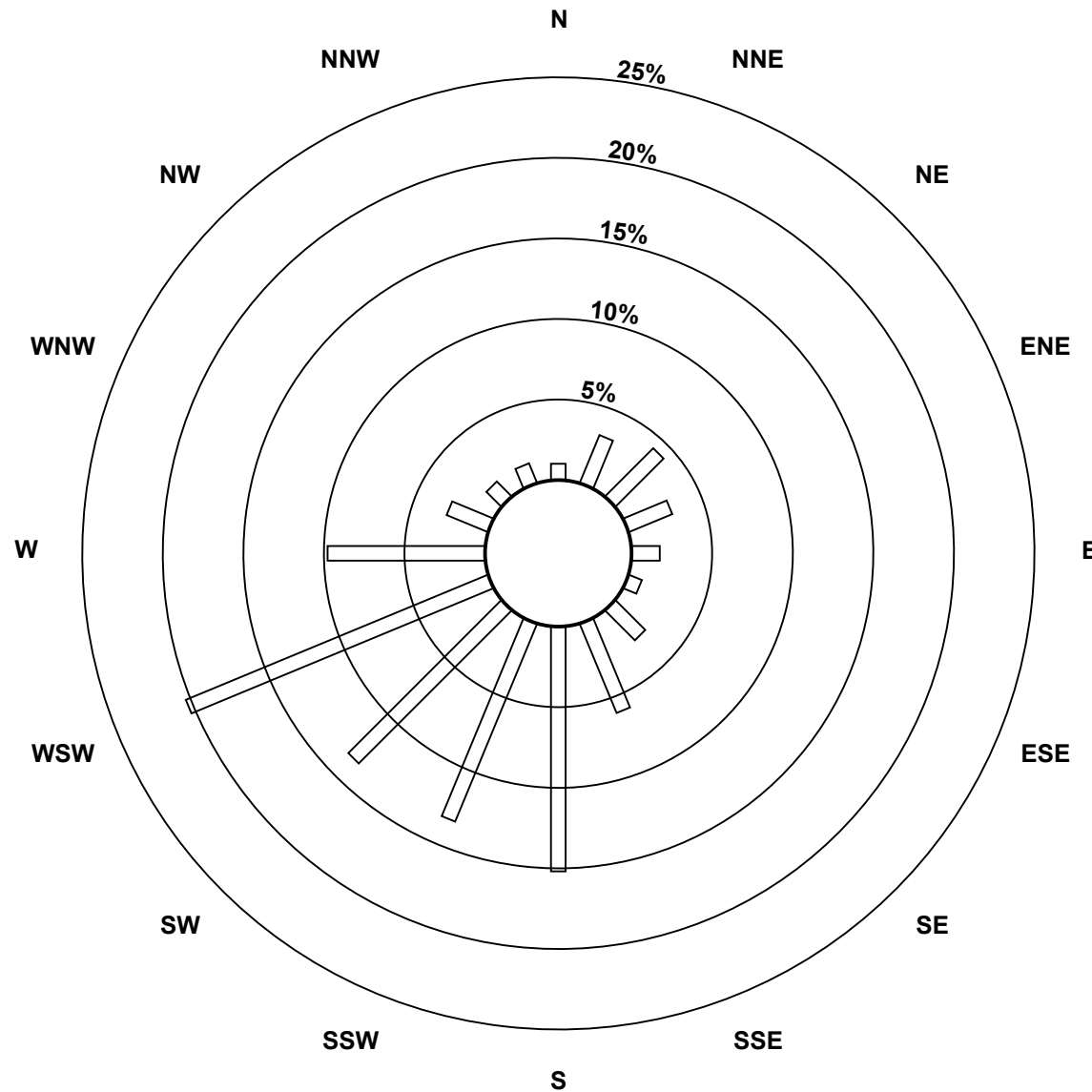
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Portable Rycroft - June 2016

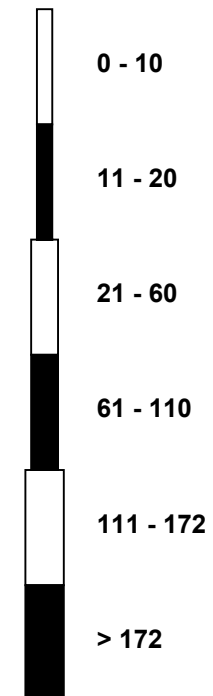


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Portable Rycroft - June 2016

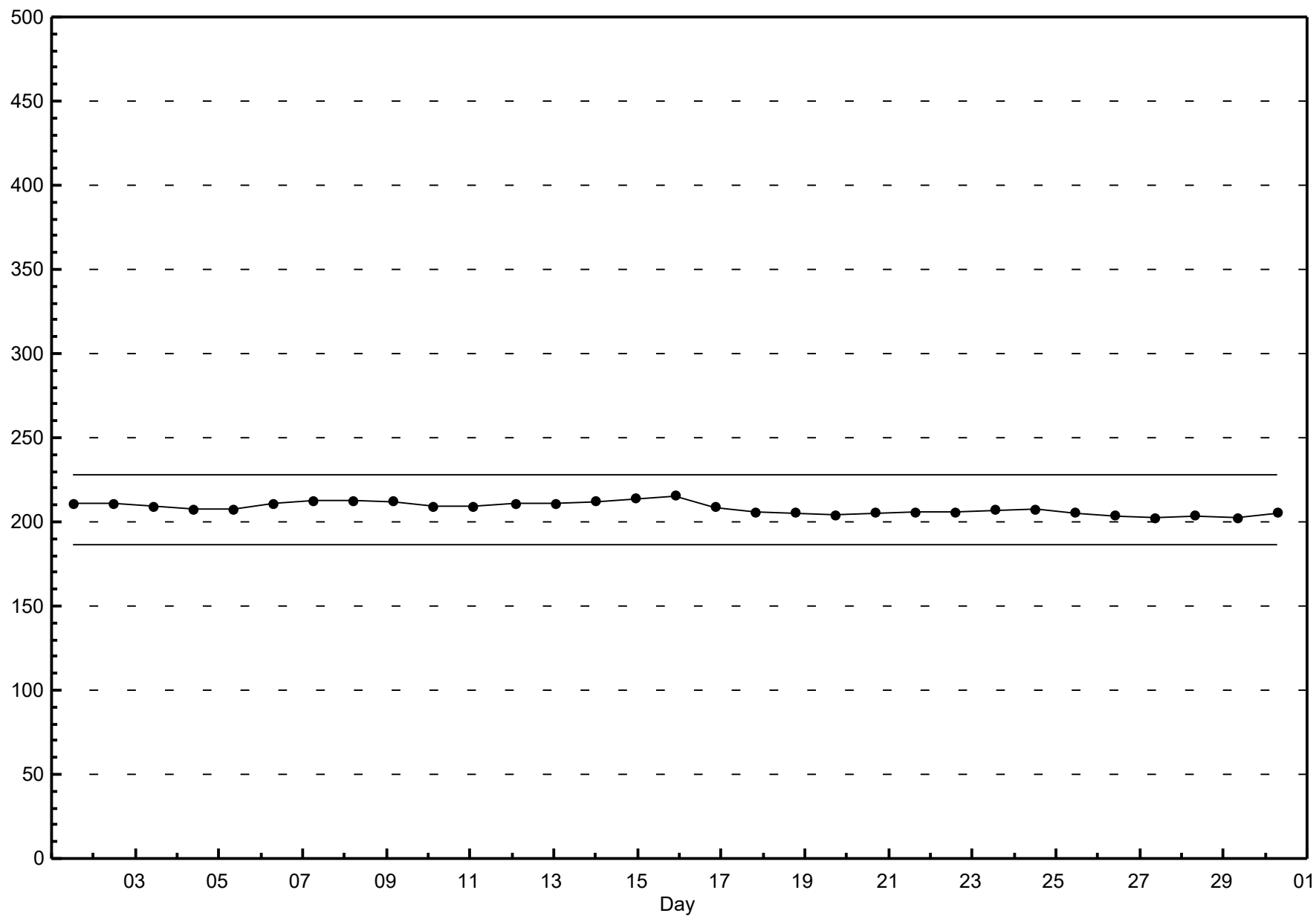


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Portable Rycroft - June 2016



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.6 ppb on Jun 30 13:00 Maximum Daily Average: 0.5 ppb on Jun 27																				Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Jun 14 17:00 Maximum Diurnal Average: 0.4 ppb at hour 5 Monthly Average: 0.34 ppb																				Minimum Daily Average: 0.2 ppb on Jun 15 Minimum Diurnal Average: 0.3 ppb at hour 17 Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 0.6						
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-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
2-Jun	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0	0.4	0.6
3-Jun	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
4-Jun	0	1	0	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
5-Jun	0	1	1	1	1	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
6-Jun	0	0	0	1	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
7-Jun	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
8-Jun	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
9-Jun	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
10-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
11-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
12-Jun	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
13-Jun	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.4
14-Jun	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
15-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.2
16-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.3
17-Jun	0	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.5
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.4	0.5
19-Jun	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.5
20-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.5
21-Jun	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.6
22-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.4
23-Jun	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	0.5
24-Jun	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
25-Jun	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	1	0.3	0.6
26-Jun	1	0	0	0	1	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	1	1	1	0.5	0.7
27-Jun	1	1	1	1	1	1	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0.7
28-Jun	1	1	1	0	1	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
29-Jun	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
30-Jun	0	0	0	0	1	1	A	1	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0.5	1.6
																								Diurnal Average	Diurnal Maximum	
																								0.4	0.6	
																								0.7	0.6	

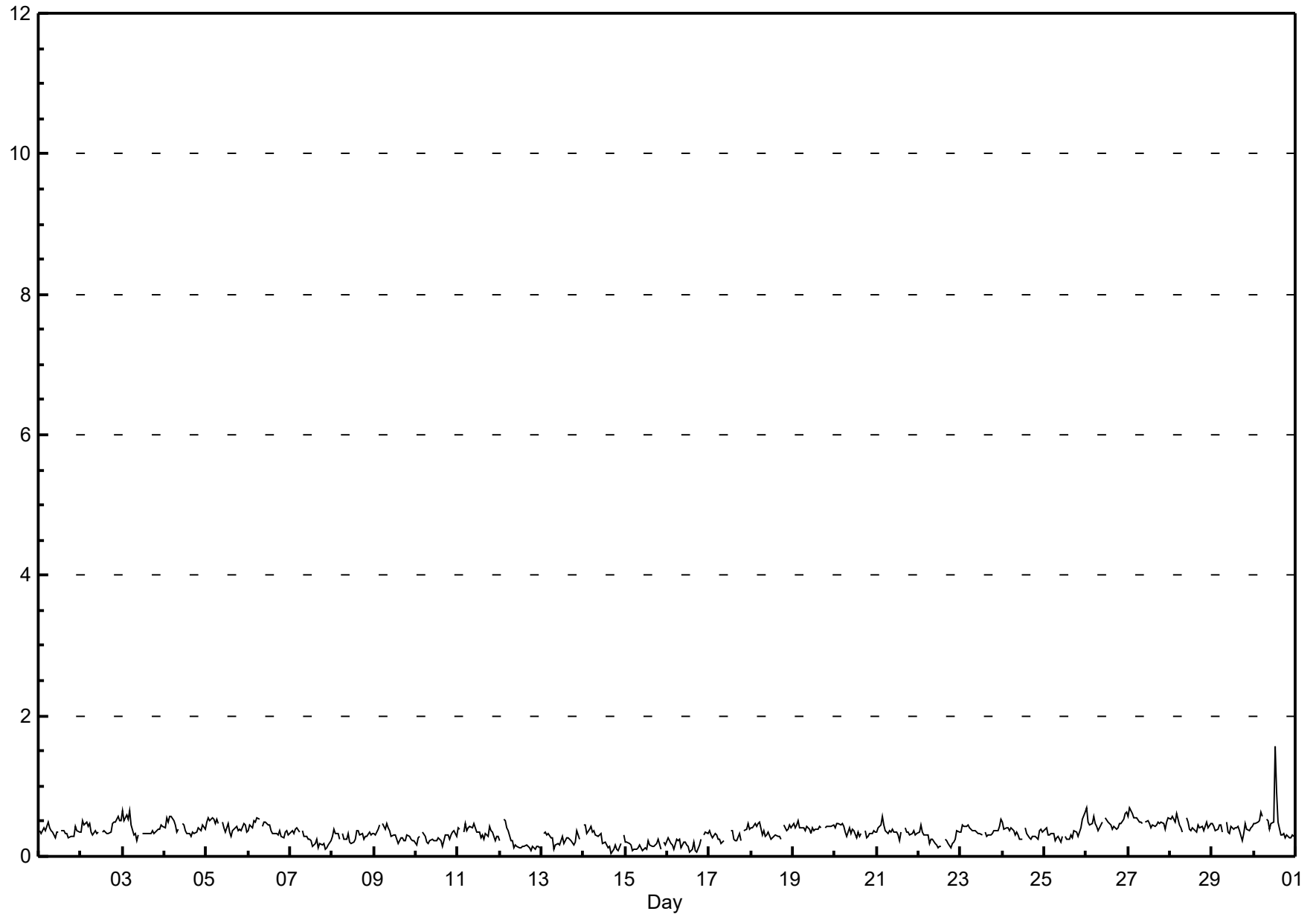
C - CalibrationA - Automated Daily Zero Span

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

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

Hourly Averages

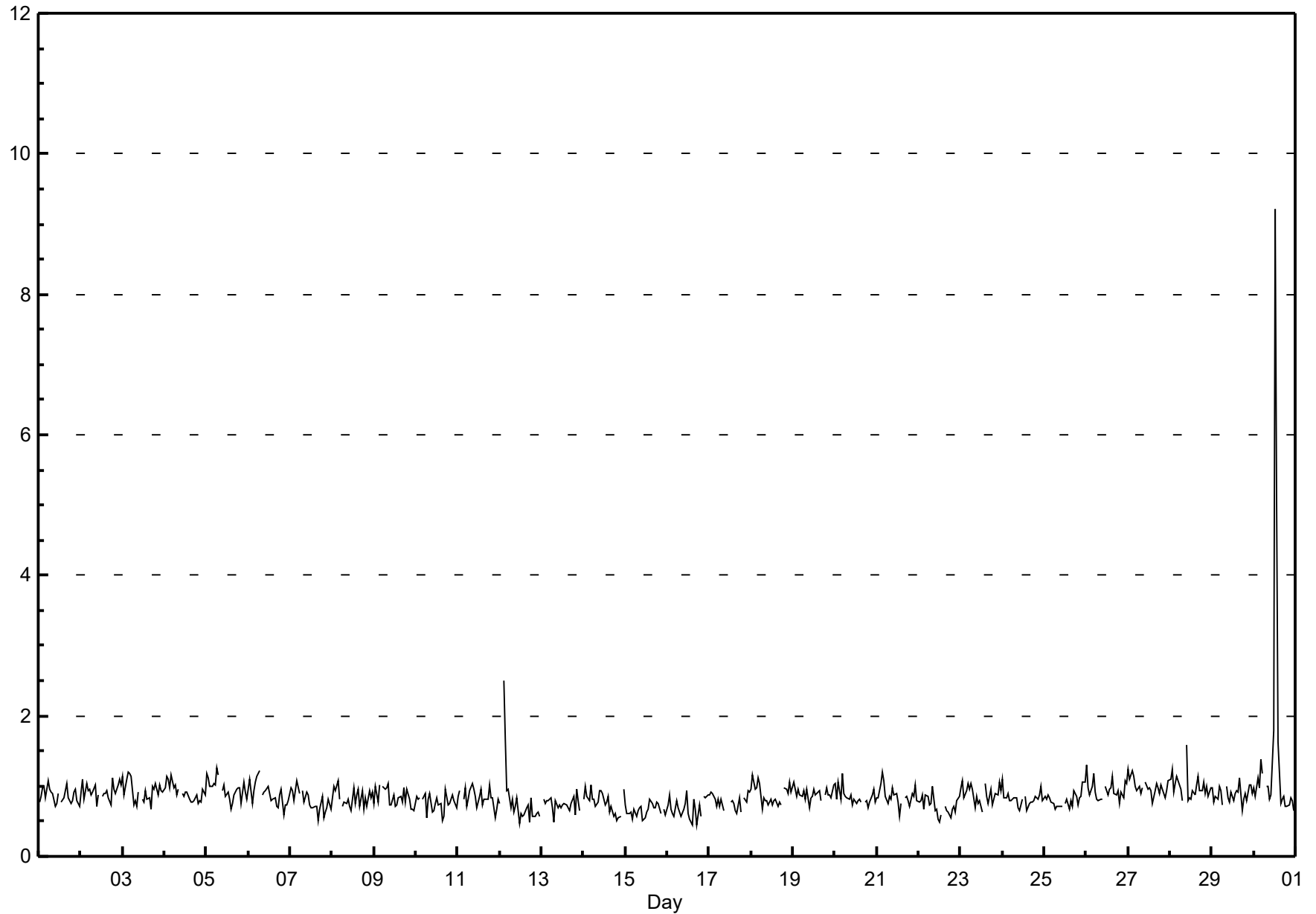
Total Reduced Sulphur (TRS) - ppb
Portable Rycroft - June 2016



Page 219 of 360

Hourly Maximums

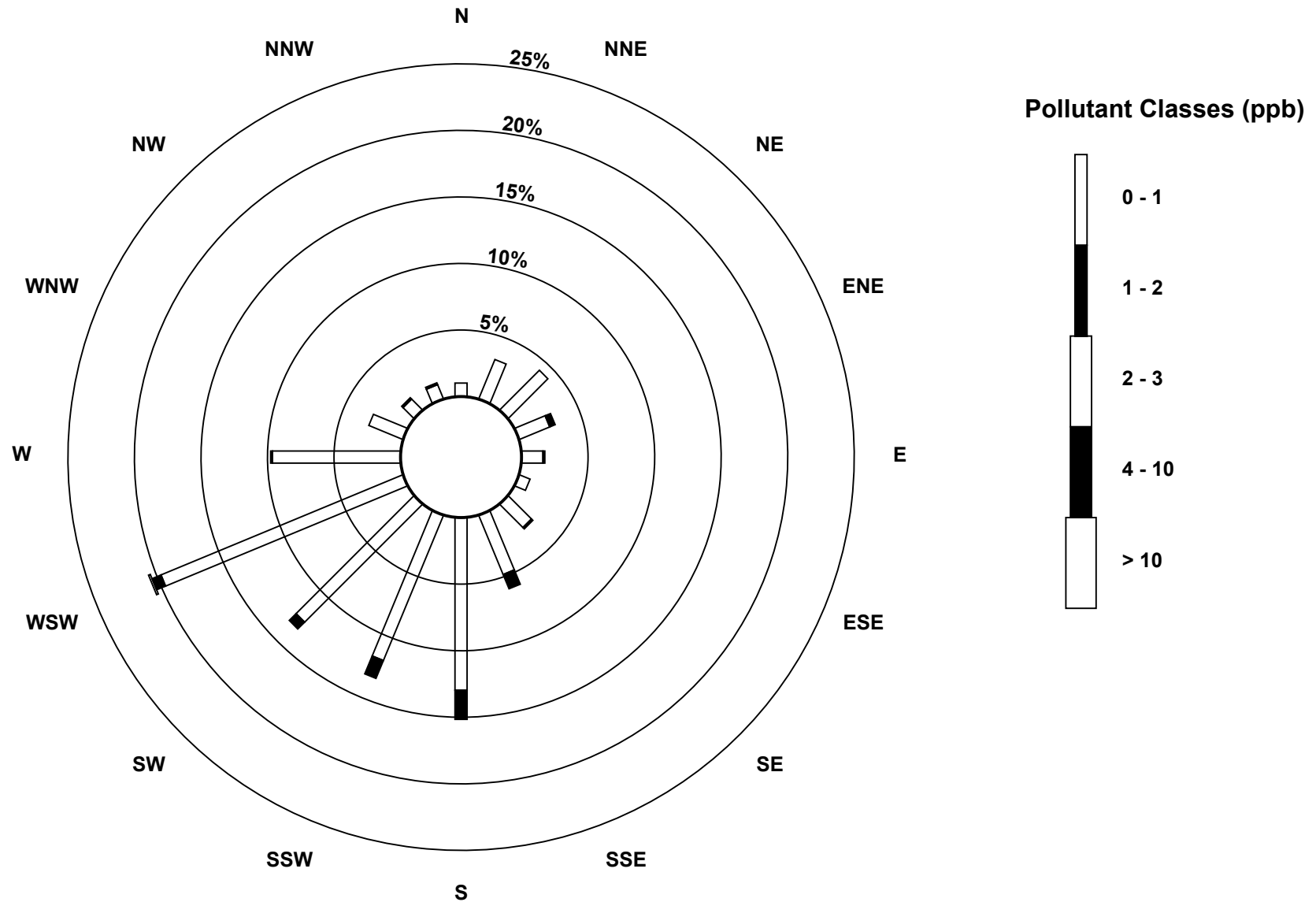
Total Reduced Sulphur (TRS) - ppb
Portable Rycroft - June 2016



Pollutant Rose

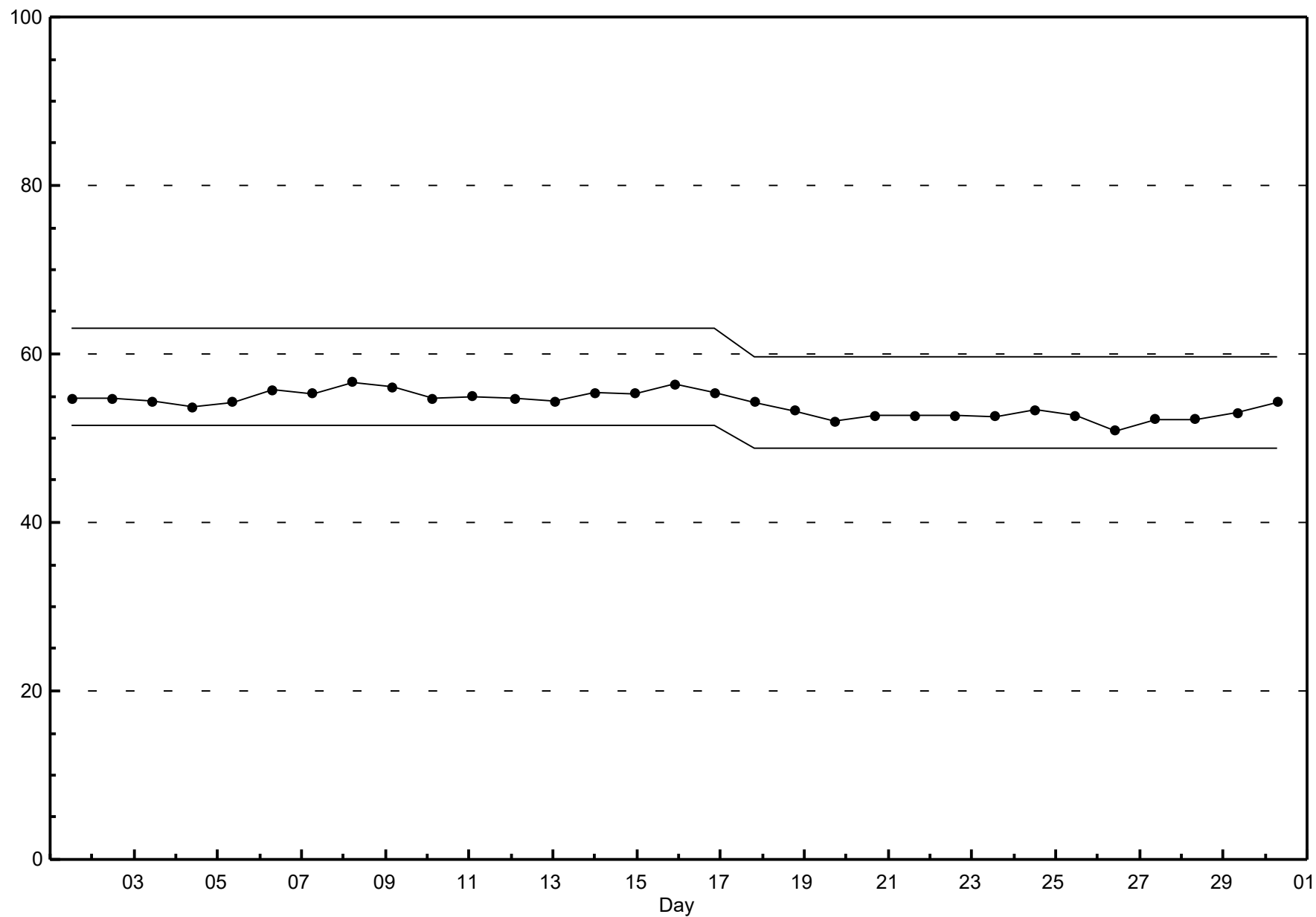
Total Reduced Sulphur (TRS) - ppb

Portable Rycroft - June 2016



Span Responses

Total Reduced Sulphur (TRS)
Portable Rycroft - June 2016



Hourly Averages

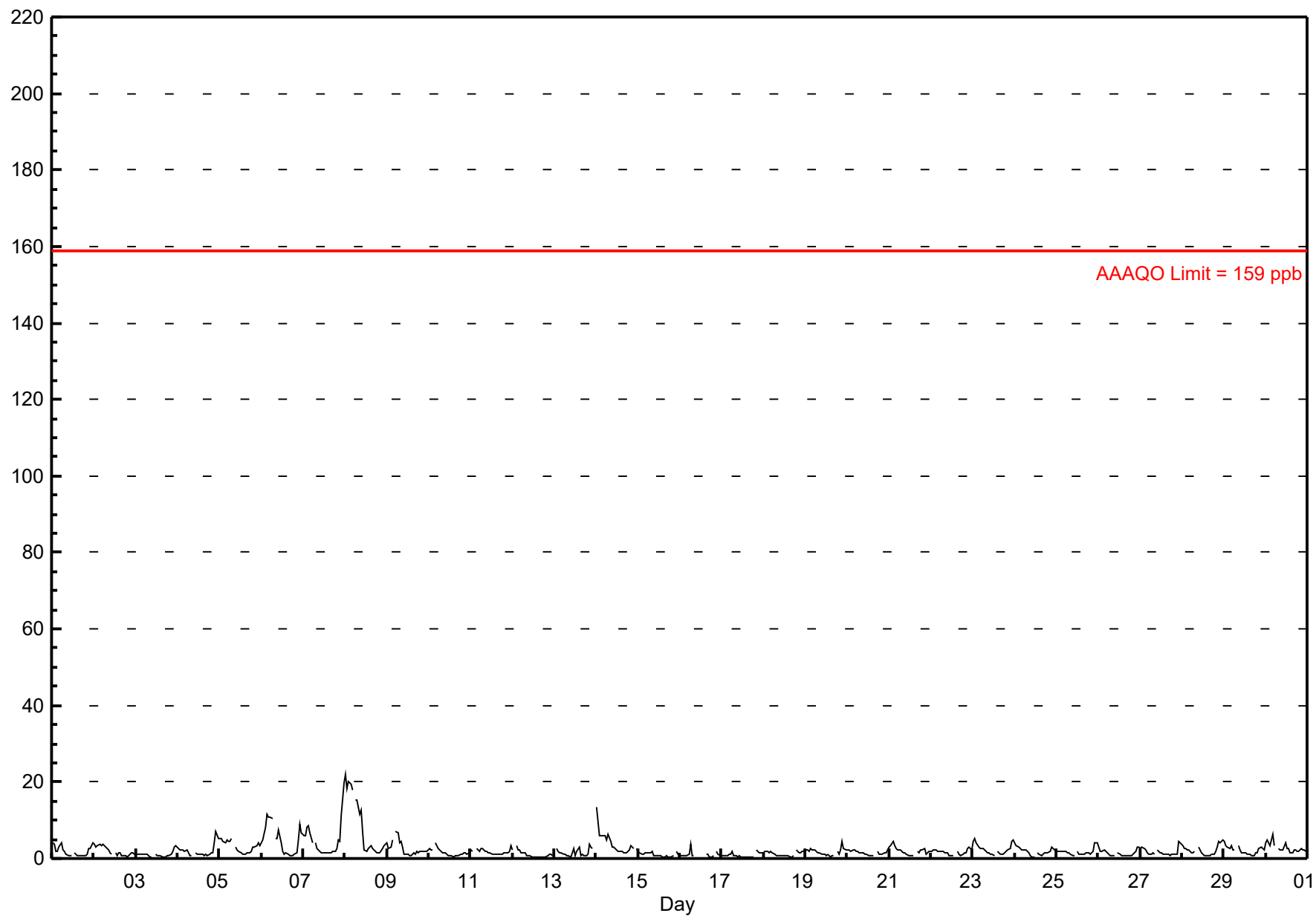
Nitrogen Dioxide (NO₂) - ppb

Portable Rycroft - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																								Hours in Service: 720			
Maximum Value: 22.2 ppb on Jun 8 01:00																								Maximum Daily Average: 8.3 ppb on Jun 8		Hours of Data: 683	
Minimum Value: 0 ppb on Jun 17 18:00																								Minimum Daily Average: 0.8 ppb on Jun 17		Hours of Missing Data: 37	
Maximum Diurnal Average: 4.0 ppb at hour 1																								Minimum Diurnal Average: 1.0 ppb at hour 16		Hours of Calibration: 37	
Monthly Average: 2.26 ppb																								Percentiles: P ₁ = 0.3 P ₁₀ = 0.7 Q ₁ = 1.0 Median = 1.6 Q ₃ = 2.5 P ₉₀ = 4.3 P ₉₉ = 14.4		Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jun	4	4	2	2	3	4	2	2	1	1	1	1	A	1	1	1	1	1	1	1	1	3	3	4	1.8	4.1	
2-Jun	4	3	3	4	3	4	3	3	2	2	1	A	1	1	1	1	1	1	1	1	1	2	1	1	1.9	3.9	
3-Jun	1	1	1	1	1	1	1	1	0	0	A	1	1	1	1	1	0	1	1	1	1	2	3	3	1.0	3.2	
4-Jun	2	2	2	2	2	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	4	7	5	1.9	7.0	
5-Jun	5	5	4	4	5	4	4	5	A	3	2	2	1	1	1	1	1	2	2	3	3	4	4	4	3.1	5.3	
6-Jun	4	5	8	12	11	11	10	A	5	5	8	4	2	1	1	1	1	1	1	1	1	5	9	7	5.0	11.5	
7-Jun	6	6	8	8	7	4	A	4	3	2	2	1	1	1	1	2	2	2	2	3	5	4	11	20	4.5	19.6	
8-Jun	22	18	20	19	18	A	15	15	11	13	7	2	2	2	3	3	3	2	2	1	1	2	4	4	8.3	22.2	
9-Jun	4	3	3	5	A	7	7	4	5	3	1	1	1	1	1	1	1	2	1	2	2	2	2	2	2.6	7.1	
10-Jun	3	2	2	A	4	3	2	2	2	1	1	1	1	1	0	1	1	1	1	1	2	2	1	2	1.5	4.2	
11-Jun	2	2	A	3	2	2	2	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	2	3	1.7	3.3	
12-Jun	2	A	4	2	2	2	2	1	1	1	1	0	1	0	0	1	0	0	0	0	1	1	1	1	1.1	3.5	
13-Jun	A	3	2	1	1	1	1	1	1	1	1	3	1	2	3	1	1	1	1	1	4	3	3	A	1.6	3.7	
14-Jun	13	10	6	6	6	6	5	6	5	3	3	3	2	2	2	2	2	1	2	2	3	2	A	3	4.1	13.4	
15-Jun	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0	1	1	0	0	1	A	2	1	1.0	1.8	
16-Jun	1	1	1	1	1	1	4	1	1	C	C	C	C	C	C	1	1	1	1	1	A	2	1	1	--	3.9	
17-Jun	1	1	1	1	1	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	A	2	2	1	1	0.8	2.4
18-Jun	2	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	2	1	2	2	1.2	2.1
19-Jun	2	2	2	2	2	2	2	2	1	1	1	1	1	1	0	1	1	A	2	1	2	5	3	2	1.8	4.6	
20-Jun	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	A	2	1	1	1	2	1	2	1.5	2.4	
21-Jun	3	3	5	4	3	2	2	2	2	2	1	1	1	1	1	A	2	1	2	2	3	1	1	2	2.0	4.5	
22-Jun	2	2	2	2	2	2	2	2	1	1	1	1	1	1	A	2	1	1	1	1	2	3	3	2	1.7	3.1	
23-Jun	4	5	4	3	3	2	2	2	2	2	1	1	1	A	2	2	1	1	1	2	2	3	5	5	2.4	5.3	
24-Jun	4	3	3	2	2	2	2	2	1	1	1	1	A	2	1	1	1	1	1	1	2	3	2	2	1.8	4.2	
25-Jun	2	2	2	2	2	2	1	1	1	1	1	A	2	1	1	1	1	1	1	1	2	2	4	4	1.7	4.2	
26-Jun	3	2	2	2	2	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	2	3	3	1.4	3.1	
27-Jun	3	3	3	2	2	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1	1	4	4	1.8	4.4	
28-Jun	3	3	2	2	2	2	2	2	A	3	2	1	1	1	1	1	1	1	1	1	2	3	4	5	2.1	4.8	
29-Jun	4	3	3	3	3	2	2	A	3	2	2	2	2	1	1	1	1	1	1	2	2	3	2	2	2.2	4.3	
30-Jun	4	5	3	5	6	3	A	3	2	2	2	4	3	3	2	1	2	2	2	2	3	2	2	2	2.9	6.2	
4.0 3.6 3.5 3.6 3.5 2.8 3.0 2.6 2.1 2.0 1.8 1.4 1.2 1.1 1.1 1.0 1.1 1.1 1.2 1.4 1.9 2.5 3.2 3.4																								Diurnal Average			
22.2 18.4 20.1 19.3 17.9 10.9 15.2 15.2 11.5 12.7 7.6 4.2 2.8 2.7 2.8 3.2 2.7 2.3 2.2 2.8 4.8 5.0 11.2 19.6																								Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																											

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Portable Rycroft - June 2016



Hourly Maximums

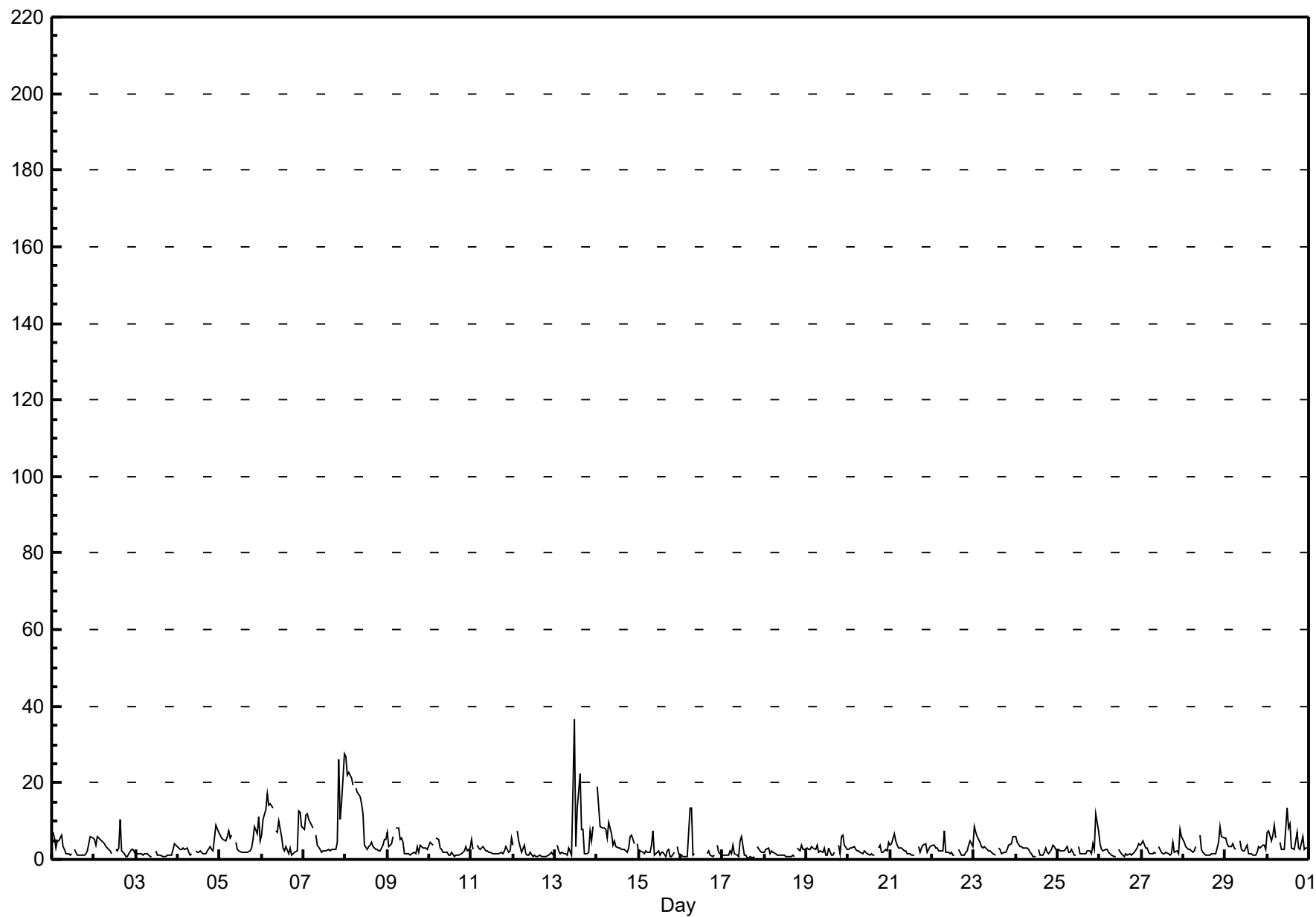
Nitrogen Dioxide (NO₂) - ppb

Portable Rycroft - June 2016

Maximum Value: 36.5 ppb on Jun 13 12:00																				Maximum Daily Average: 10.3 ppb on Jun 8					Hours in Service: 720	
Minimum Value: 0 ppb on Jun 17 16:00																				Minimum Daily Average: 1.5 ppb on Jun 3					Hours of Data: 683	
Maximum Diurnal Average: 5.7 ppb at hour 1																				Minimum Diurnal Average: 1.9 ppb at hour 18					Hours of Missing Data: 37	
Monthly Average: 3.60 ppb																				Percentiles: P ₁ = 0.6 P ₁₀ = 1.1 Q ₁ = 1.5 Median = 2.5 Q ₃ = 3.9 P ₉₀ = 7.1 P ₉₉ = 21.6					Hours of Calibration: 37	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	7	6	3	5	5	6	3	3	1	1	1	1	A	2	1	1	1	1	1	1	2	4	6	6	3.1	7.1
2-Jun	5	4	6	5	5	5	4	3	3	2	1	A	3	2	3	10	2	1	1	1	2	3	2	2	3.3	10.3
3-Jun	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	3	4	4	1.5	4.0
4-Jun	3	3	3	3	3	3	2	1	1	A	2	2	2	2	1	2	2	2	4	3	2	6	9	7	2.9	9.1
5-Jun	6	6	5	5	6	8	5	6	A	4	3	2	2	2	2	2	2	2	3	5	9	7	11	5	4.7	11.0
6-Jun	6	10	13	17	14	14	13	A	8	7	10	6	3	2	3	2	3	1	1	2	2	13	12	9	7.5	17.0
7-Jun	8	11	12	10	10	8	A	6	4	3	2	2	2	2	2	2	3	2	3	4	26	10	15	28	7.7	27.7
8-Jun	27	22	23	21	19	A	19	18	16	14	12	4	3	3	4	4	3	3	2	2	2	4	5	5	10.3	26.9
9-Jun	7	3	4	6	A	8	8	5	6	4	2	1	1	1	2	2	2	3	2	4	3	3	3	2	3.6	8.2
10-Jun	4	4	4	A	6	5	3	2	2	2	2	1	1	2	1	1	1	1	1	2	2	4	2	3	2.4	5.7
11-Jun	5	3	A	4	3	3	3	3	2	2	2	2	2	1	1	1	2	2	2	2	3	2	2	6	2.5	5.6
12-Jun	4	A	7	5	3	2	4	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1.9	7.5
13-Jun	A	4	2	2	2	1	2	1	3	1	18	37	3	14	22	8	8	1	2	2	7	5	8	A	6.9	36.5
14-Jun	19	14	9	8	8	8	6	10	7	4	5	3	3	3	3	3	2	2	3	6	6	4	A	4	6.0	19.1
15-Jun	2	2	2	1	2	2	2	4	7	1	1	2	1	2	2	1	2	3	1	1	2	A	3	1	2.1	7.3
16-Jun	1	1	1	1	1	13	14	1	1	C	C	C	C	C	C	2	2	1	1	1	A	4	2	1	--	13.5
17-Jun	1	1	1	1	2	1	4	1	1	1	5	6	1	1	1	0	1	1	1	A	3	2	2	2	1.7	6.1
18-Jun	2	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	A	3	2	4	3	3	1.7	3.8
19-Jun	3	3	3	3	3	3	3	4	2	2	3	1	1	3	1	1	2	A	4	2	6	6	4	3	2.7	6.2
20-Jun	3	3	3	3	3	2	2	2	2	2	2	2	1	1	1	1	A	3	4	2	2	3	2	4	2.3	4.3
21-Jun	4	4	7	5	4	3	3	3	2	2	2	1	1	1	1	A	3	2	3	4	4	2	2	3	2.9	6.8
22-Jun	4	4	3	3	2	2	2	7	2	2	1	2	1	1	A	3	2	1	1	2	2	4	5	3	2.6	7.5
23-Jun	8	7	6	4	3	3	3	3	2	2	2	2	1	A	3	3	2	2	2	3	4	4	6	6	3.5	8.5
24-Jun	6	5	3	3	3	3	3	3	2	1	1	1	A	3	1	1	2	3	2	2	3	4	3	3	2.6	6.0
25-Jun	3	2	2	2	2	3	2	2	3	1	1	A	3	2	2	1	1	2	2	2	4	3	12	7	2.8	11.9
26-Jun	4	3	2	2	3	2	1	1	1	1	A	3	1	1	1	1	1	2	1	1	2	3	4	4	2.0	4.3
27-Jun	4	5	3	3	2	2	1	2	2	A	3	2	2	1	2	2	1	1	4	2	2	1	8	6	2.7	8.0
28-Jun	4	3	3	3	3	2	2	3	A	6	3	2	1	1	1	1	1	1	2	3	4	8	6	6	3.1	8.5
29-Jun	5	4	3	3	4	3	3	A	5	3	2	2	4	2	1	2	1	1	2	3	3	4	4	3	2.9	5.4
30-Jun	7	8	5	6	9	6	A	4	3	3	3	13	8	9	3	3	5	7	3	3	6	3	3	3	5.3	13.4
5.7 5.1 4.9 4.8 4.6 4.3 4.3 3.6 3.2 2.8 3.4 3.9 2.0 2.4 2.4 2.1 2.0 1.9 2.0 2.3 4.1 4.2 5.2 4.8																									Diurnal Average	
26.9 21.8 22.9 21.2 19.4 14.4 18.8 17.6 16.2 14.4 18.2 36.5 8.3 13.5 22.4 10.3 7.8 7.0 4.4 6.1 26.2 12.8 14.8 27.7																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

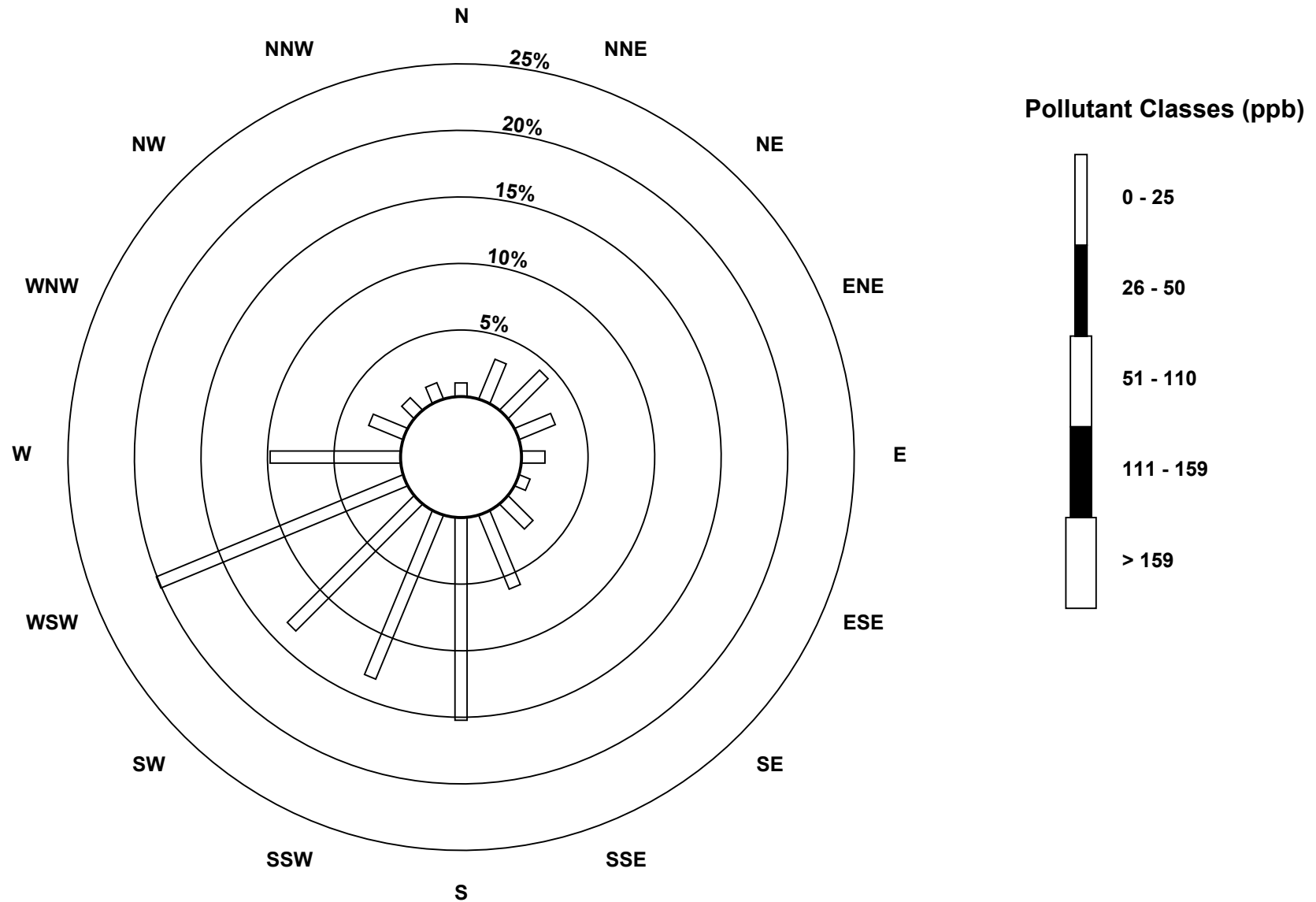
Nitrogen Dioxide (NO₂) - ppb
Portable Rycroft - June 2016



Pollutant Rose

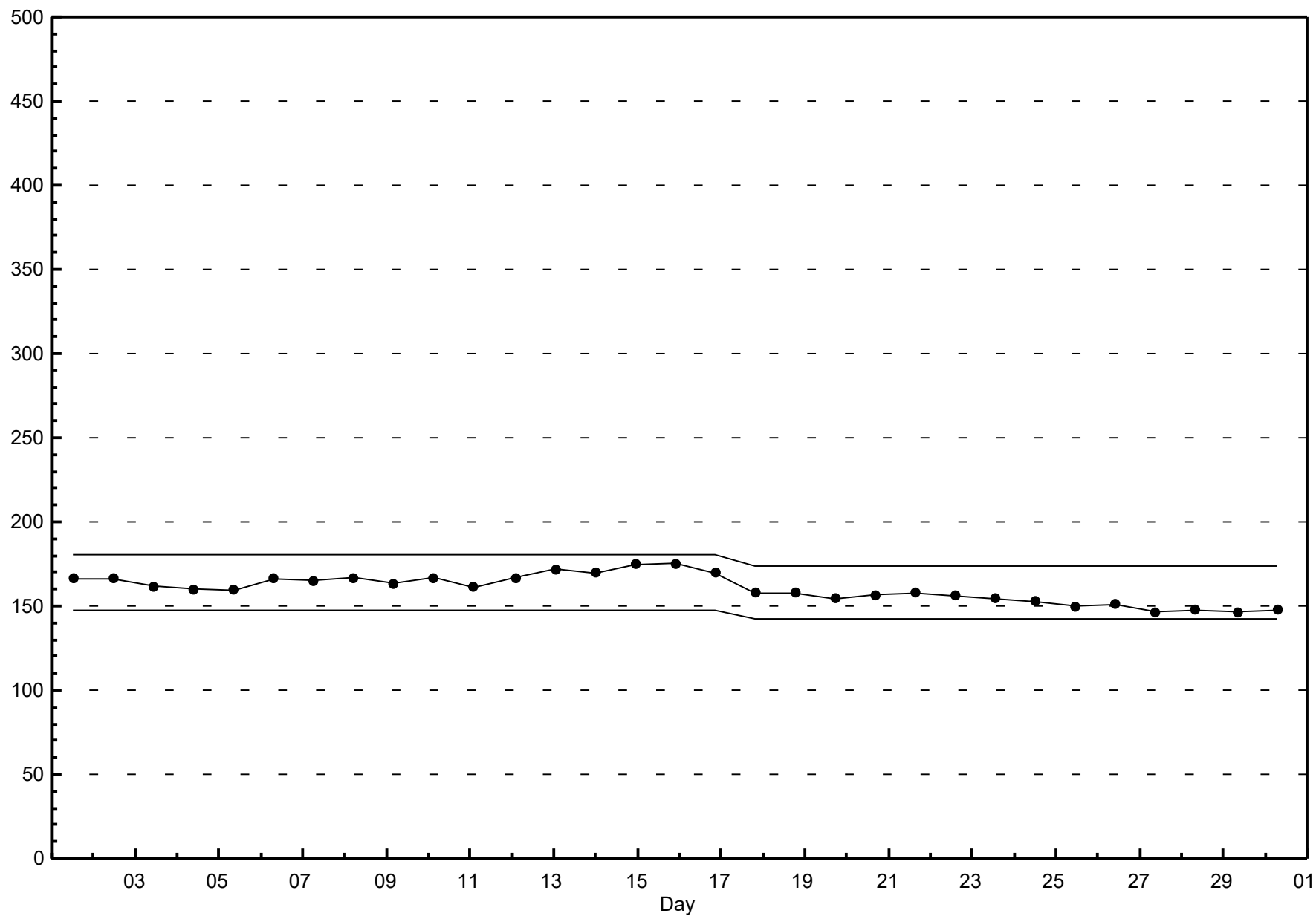
Nitrogen Dioxide (NO₂) - ppb

Portable Rycroft - June 2016



Span Responses

Nitrogen Dioxide (NO₂)
Portable Rycroft - June 2016



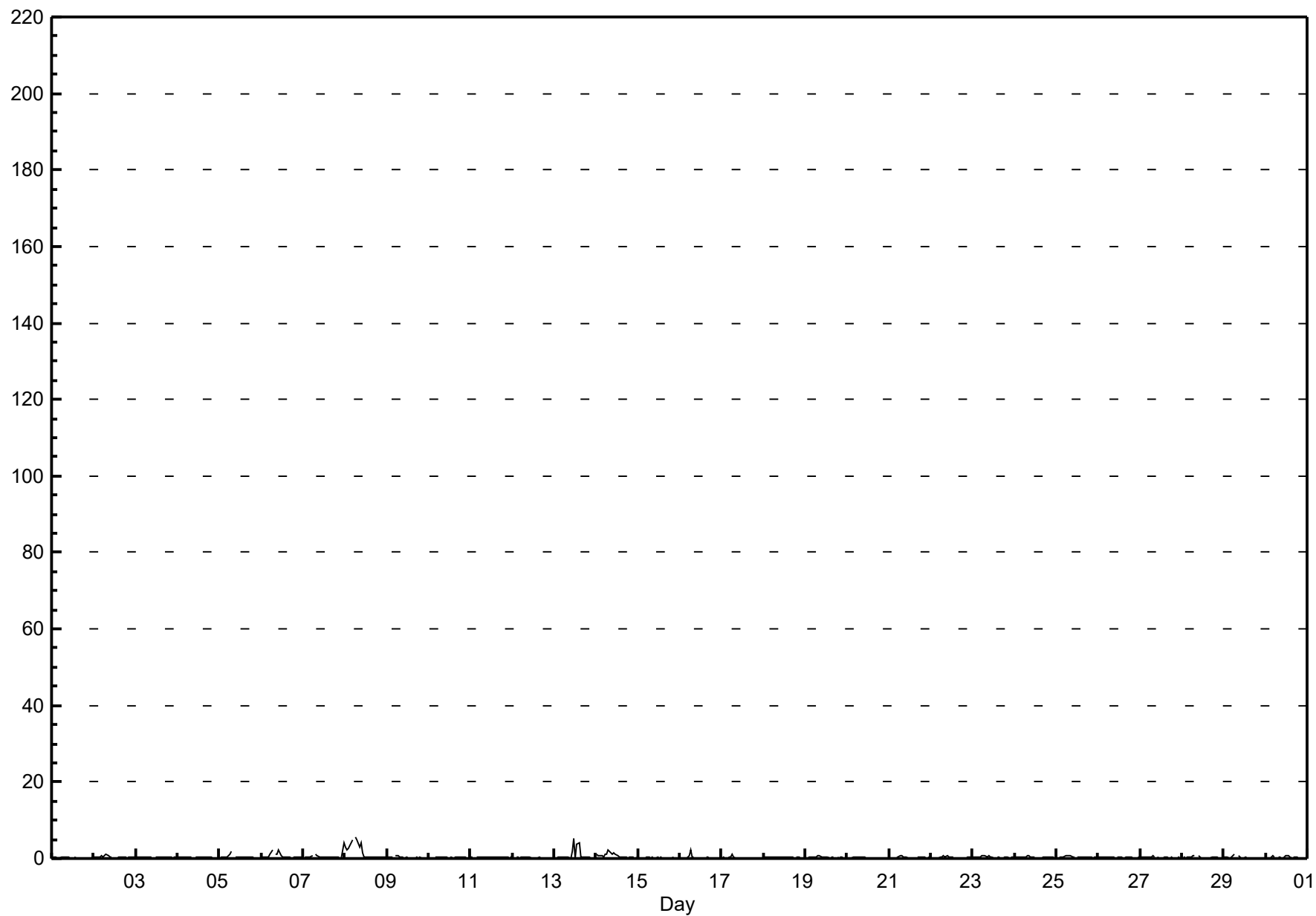
Hourly Averages

Nitrogen Oxide (NO) - ppb
Portable Rycroft - June 2016

Number of Exceedences (AAAQO):		1-hr: 0	24-hr: 0	Hours in Service: 720																							
Maximum Value: 5.6 ppb on Jun 8 07:00		Maximum Daily Average: 1.7 ppb on Jun 8		Hours of Data: 683																							
Minimum Value: 0 ppb on Jun 16 19:00		Minimum Daily Average: 0.2 ppb on Jun 15		Hours of Missing Data: 37																							
Maximum Diurnal Average: 0.9 ppb at hour 7		Minimum Diurnal Average: 0.2 ppb at hour 22		Hours of Calibration: 37																							
Monthly Average: 0.37 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.6 P ₉₉ = 4.0		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-Jun	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
2-Jun	0	0	0	0	1	0	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2	
3-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
4-Jun	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4	
5-Jun	0	0	0	0	0	1	1	2	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.7	
6-Jun	0	0	0	0	0	1	2	A	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	2.2	
7-Jun	0	0	1	0	0	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.6	4.1	
8-Jun	3	2	3	4	5	A	6	5	3	4	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1.7	5.6	
9-Jun	0	0	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
10-Jun	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
11-Jun	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
12-Jun	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
13-Jun	A	0	0	0	0	0	0	0	0	0	2	5	0	4	4	0	1	0	0	0	0	0	0	A	0.9	5.2	
14-Jun	1	1	1	1	0	1	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	A	0	0.7	2.2	
15-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.3	
16-Jun	0	0	0	0	0	1	2	0	0	C	C	C	C	C	C	0	0	0	0	0	A	0	0	0	--	2.3	
17-Jun	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	1.0	
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.4	
19-Jun	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.6	
20-Jun	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.5	
21-Jun	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.7	
22-Jun	0	0	0	0	0	0	0	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.8	
23-Jun	0	0	0	0	0	1	1	1	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.4	0.8	
24-Jun	0	0	0	0	0	0	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6	
25-Jun	0	0	0	0	0	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
26-Jun	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
27-Jun	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.7	
28-Jun	0	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
29-Jun	0	0	0	0	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1	
30-Jun	0	0	0	0	1	1	A	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.9	
0.3		0.3	0.3	0.4	0.4	0.5	0.9	0.8	0.6	0.5	0.5	0.5	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	Diurnal Average		
2.8		2.4	2.6	4.0	4.8	1.3	5.6	4.8	2.9	4.0	2.1	5.2	0.9	3.8	4.3	0.4	0.6	0.4	0.4	0.4	0.4	0.5	0.4	0.4	Diurnal Maximum		
C - Calibration		A - Automated Daily Zero Span																									

Hourly Averages

Nitrogen Oxide (NO) - ppb
Portable Rycroft - June 2016



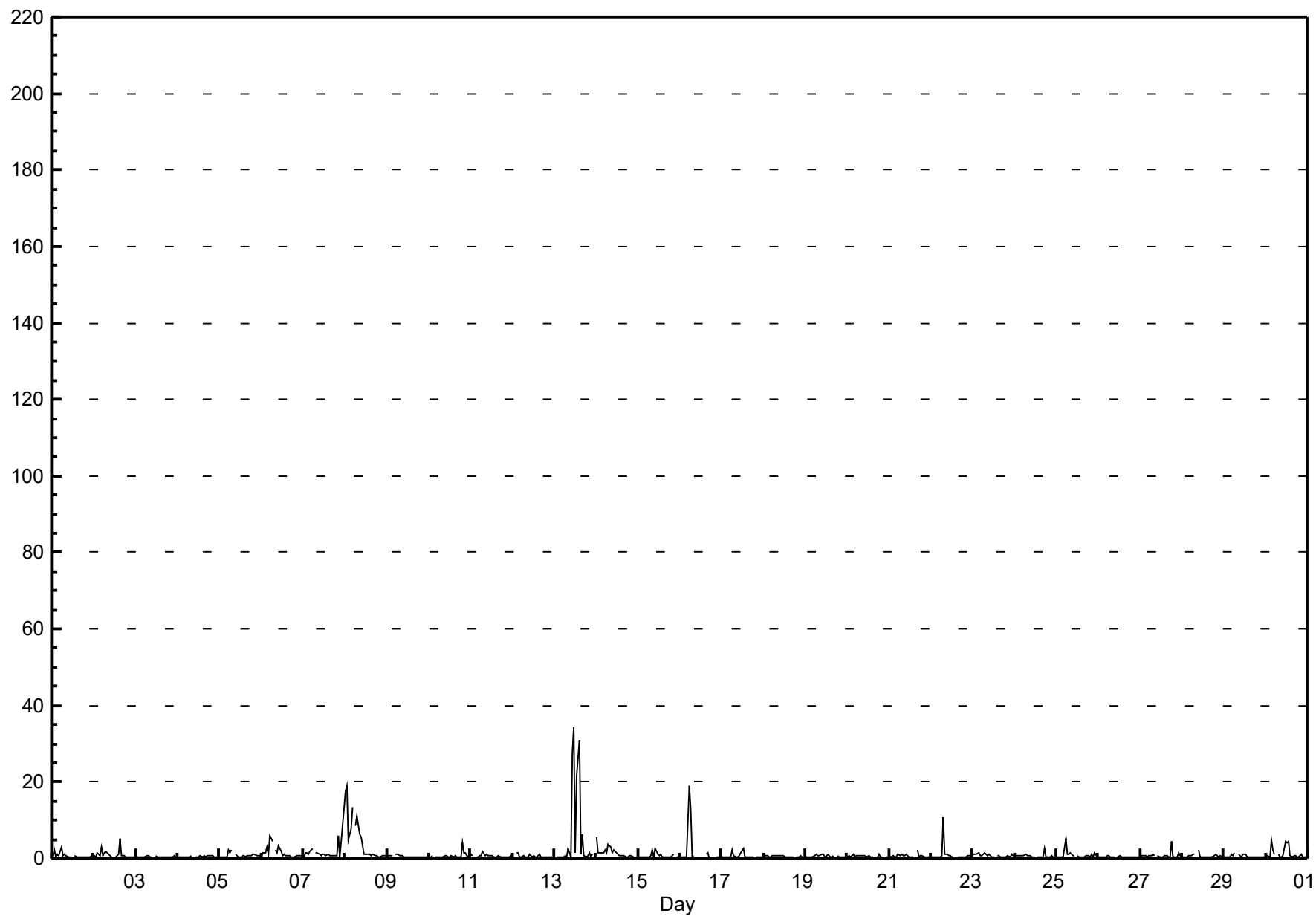
Hourly Maximums

Nitrogen Oxide (NO) - ppb Portable Rycroft - June 2016

Maximum Value: 34.2 ppb on Jun 13 12:00																				Maximum Daily Average: 6.1 ppb on Jun 13					Hours in Service: 720	
Minimum Value: 0 ppb on Jun 16 19:00																				Minimum Daily Average: 0.5 ppb on Jun 26					Hours of Data: 683	
Maximum Diurnal Average: 2.1 ppb at hour 12																				Minimum Diurnal Average: 0.5 ppb at hour 22					Hours of Missing Data: 37	
Monthly Average: 1.15 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.9 P ₉₀ = 1.6 P ₉₉ = 16.9					Hours of Calibration: 37	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	1	2	0	1	1	3	1	1	1	1	1	0	A	1	0	0	0	0	0	0	0	0	1	1	0.8	3.0
2-Jun	1	0	2	1	3	1	1	2	1	1	0	A	0	1	1	5	1	1	1	0	0	0	0	0	1.0	5.1
3-Jun	0	0	0	0	0	0	1	1	0	1	A	1	0	1	0	0	0	0	0	0	0	0	1	1	0.5	0.7
4-Jun	0	0	0	0	0	1	1	0	1	A	1	1	0	1	0	1	1	1	1	1	1	0	0	0	0.5	0.8
5-Jun	0	1	0	0	1	2	2	2	A	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	0.9	2.4
6-Jun	1	1	1	3	1	6	5	A	2	2	3	2	1	1	1	1	1	0	0	0	1	1	1	1	1.5	6.0
7-Jun	1	2	2	1	2	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	6	0	4	13	2.0	13.2
8-Jun	17	19	5	8	14	A	9	11	6	6	3	1	1	1	1	1	1	1	1	1	1	1	1	1	4.7	18.9
9-Jun	1	1	1	1	A	1	1	1	1	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0.6	1.2
10-Jun	1	0	1	A	1	0	0	0	0	1	1	0	0	1	0	1	0	0	1	4	1	2	1	0	0.8	3.9
11-Jun	1	1	A	1	0	1	1	2	1	1	1	1	1	0	0	0	1	0	1	0	0	0	0	1	0.6	1.7
12-Jun	0	A	2	1	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0.6	1.6
13-Jun	A	0	0	0	0	0	1	0	3	0	28	34	2	22	31	1	6	1	1	1	1	0	1	A	6.1	34.2
14-Jun	5	2	2	2	1	2	2	4	3	1	2	2	1	1	1	1	1	1	0	1	1	0	A	0	1.5	5.4
15-Jun	0	0	0	0	0	0	0	1	2	0	3	1	1	1	0	0	0	0	0	0	1	A	0	0	0.7	2.5
16-Jun	0	0	0	0	0	19	13	1	1	C	C	C	C	C	C	1	1	0	0	0	A	0	0	0	--	18.8
17-Jun	0	0	0	0	0	0	2	1	0	0	1	2	2	0	0	0	0	0	0	A	0	0	0	0	0.6	2.5
18-Jun	0	1	1	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	A	1	0	1	0	0	0.5	0.8
19-Jun	0	0	0	0	1	1	1	1	1	1	1	0	1	1	0	0	1	A	1	0	0	0	0	0	0.6	1.2
20-Jun	0	1	0	1	0	1	1	1	1	1	1	0	1	0	0	0	A	0	1	0	0	0	0	0	0.5	1.1
21-Jun	0	0	1	1	0	1	1	1	1	1	1	0	0	0	0	A	2	0	1	1	0	0	0	0	0.7	2.4
22-Jun	0	0	0	0	0	0	1	11	1	1	1	1	0	0	A	0	0	0	0	0	0	1	1	1	0.9	10.9
23-Jun	1	1	1	1	1	1	1	2	1	1	1	1	0	A	1	1	0	0	0	0	1	0	1	1	0.8	1.6
24-Jun	1	1	1	1	1	1	1	1	1	1	0	1	A	0	0	0	0	2	0	0	0	1	0	0	0.7	2.5
25-Jun	0	0	0	0	0	5	1	1	2	1	1	A	1	0	0	0	0	1	1	0	1	0	1	0	0.9	5.2
26-Jun	0	0	0	0	1	1	1	1	1	0	A	0	1	0	0	0	1	1	0	0	0	0	0	0	0.5	0.9
27-Jun	0	1	1	1	0	1	1	1	1	A	1	0	0	0	1	1	0	0	4	0	0	0	2	1	0.8	4.4
28-Jun	0	0	0	0	1	1	1	1	A	2	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0.6	2.1
29-Jun	0	0	0	0	1	1	2	A	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0.6	1.6
30-Jun	1	1	0	5	2	1	A	1	1	0	1	5	4	5	1	0	1	1	0	0	1	0	0	0	1.4	4.8
1.3 1.3 0.8 1.1 1.2 1.9 1.8 1.8 1.2 1.0 2.0 2.1 0.9 1.5 1.6 0.7 0.8 0.5 0.7 0.6 0.8 0.5 0.7 0.9																									Diurnal Average	
17.4 18.9 4.8 7.7 13.6 18.8 12.8 11.2 6.5 5.6 27.7 34.2 4.1 21.8 31.0 5.1 6.3 2.5 4.4 3.9 5.9 1.6 4.4 13.2																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Portable Rycroft - June 2016



Hourly Averages

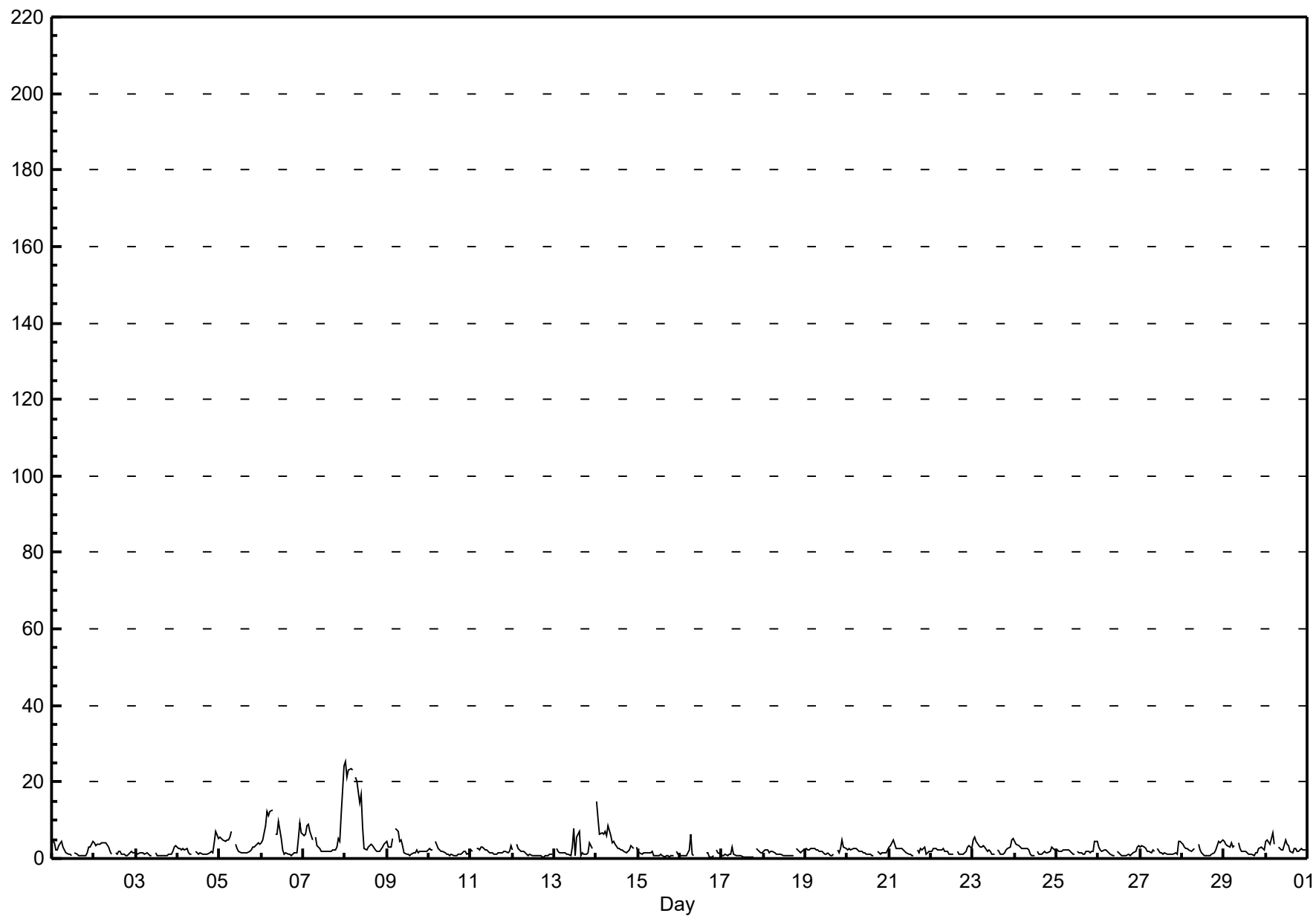
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 25.4 ppb on Jun 8 01:00 Maximum Daily Average: 10.2 ppb on Jun 8																				Hours of Data: 683						
Minimum Value: 0 ppb on Jun 17 18:00 Minimum Daily Average: 1.0 ppb on Jun 17																				Hours of Missing Data: 37						
Maximum Diurnal Average: 4.3 ppb at hour 1 Minimum Diurnal Average: 1.2 ppb at hour 16																				Hours of Calibration: 37						
Monthly Average: 2.63 ppb Percentiles: P ₁ = 0.4 P ₁₀ = 0.8 Q ₁ = 1.2 Median = 1.9 Q ₃ = 2.8 P ₉₀ = 4.7 P ₉₉ = 21.1																				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-Jun	4	4	2	2	3	4	3	2	1	1	1	1	A	2	1	1	1	1	1	1	1	3	3	4	2.1	4.4
2-Jun	4	3	4	4	4	4	4	4	3	2	1	A	2	1	2	2	1	1	1	1	1	2	2	1	2.3	4.2
3-Jun	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	2	3	3	1.3	3.5
4-Jun	3	3	2	3	2	2	2	1	1	A	2	1	1	1	1	1	1	1	1	2	2	4	7	5	2.2	7.2
5-Jun	5	5	5	5	5	5	6	7	A	4	3	2	1	1	1	1	2	2	2	3	3	4	4	4	3.5	7.0
6-Jun	4	5	8	12	11	12	13	A	7	6	10	5	2	1	2	1	1	1	1	1	2	5	9	7	5.5	12.8
7-Jun	6	6	9	9	7	5	A	5	4	3	2	2	2	2	2	2	2	2	2	3	5	4	11	24	5.1	24.1
8-Jun	25	21	23	24	23	A	21	20	14	17	8	2	2	3	3	4	3	2	2	2	2	3	4	4	10.2	25.4
9-Jun	4	3	3	5	A	8	7	5	5	3	1	1	1	1	1	1	2	1	2	2	2	2	2	2	2.8	7.7
10-Jun	3	2	2	A	4	3	2	2	2	2	1	1	1	1	1	1	1	1	1	2	2	2	1	2	1.7	4.4
11-Jun	2	2	A	3	2	2	3	3	2	2	2	2	2	1	1	1	1	1	1	2	2	2	2	4	2.0	3.5
12-Jun	2	A	4	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1.3	3.9
13-Jun	A	3	2	2	2	1	1	1	1	1	3	8	1	6	7	1	1	1	1	1	4	3	3	A	2.4	8.0
14-Jun	15	10	6	7	6	7	6	9	6	4	4	4	3	2	2	2	2	2	2	2	4	3	A	3	4.8	14.8
15-Jun	2	1	1	1	1	1	2	2	2	1	1	1	1	1	1	0	1	1	0	1	1	A	2	1	1.1	2.0
16-Jun	1	1	1	1	1	2	6	1	1	C	C	C	C	C	C	1	1	1	0	1	A	2	1	1	--	6.2
17-Jun	1	1	1	1	1	1	3	1	1	1	1	1	0	0	0	0	0	0	0	A	3	2	2	1	1.0	2.9
18-Jun	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	A	2	2	2	2	2	1.4	2.4
19-Jun	3	2	2	3	3	3	3	2	2	2	1	1	1	1	1	1	1	A	2	1	2	5	3	2	2.0	4.8
20-Jun	2	3	2	3	3	2	2	2	2	2	1	1	1	1	1	1	A	2	1	1	1	2	1	2	1.7	2.6
21-Jun	3	3	5	4	3	3	3	3	2	2	1	1	1	1	1	A	2	2	3	2	3	1	2	2	2.2	4.7
22-Jun	2	3	2	2	2	2	2	3	2	2	1	1	1	1	A	2	1	1	1	1	2	3	3	2	1.9	3.3
23-Jun	5	6	4	3	3	3	3	3	2	2	2	1	1	A	2	2	1	1	2	2	3	3	5	5	2.8	5.7
24-Jun	5	4	3	3	3	3	3	3	2	1	1	1	A	2	1	1	1	2	2	1	2	3	3	2	2.2	4.6
25-Jun	2	2	2	2	2	2	2	2	2	1	1	A	2	1	1	1	1	2	2	1	2	2	5	4	2.0	4.5
26-Jun	3	2	2	2	2	2	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	2	3	3	1.6	3.4
27-Jun	3	3	3	2	2	2	2	2	2	A	3	2	2	1	1	1	1	1	1	1	1	1	5	4	2.0	4.6
28-Jun	4	3	3	3	2	2	2	3	A	4	2	2	1	1	1	1	1	1	1	2	3	4	4	5	2.4	4.9
29-Jun	5	4	3	3	4	3	3	A	4	2	2	2	2	1	1	1	1	1	2	2	3	3	3	2	2.4	4.5
30-Jun	4	5	4	5	7	4	A	3	3	2	2	5	4	3	2	2	3	3	2	2	3	2	2	2	3.2	6.9
4.3 3.9 3.9 4.0 4.0 3.3 3.9 3.3 2.7 2.6 2.2 1.9 1.4 1.5 1.4 1.2 1.3 1.3 1.4 1.6 2.1 2.6 3.3 3.7																								Diurnal Average		
25.4 21.1 23.0 23.6 23.0 12.3 21.1 20.3 14.5 16.8 9.7 8.0 3.6 5.7 7.1 3.6 3.3 2.6 2.5 3.1 5.1 5.4 11.4 24.1																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb
Portable Rycroft - June 2016



Hourly Maximums

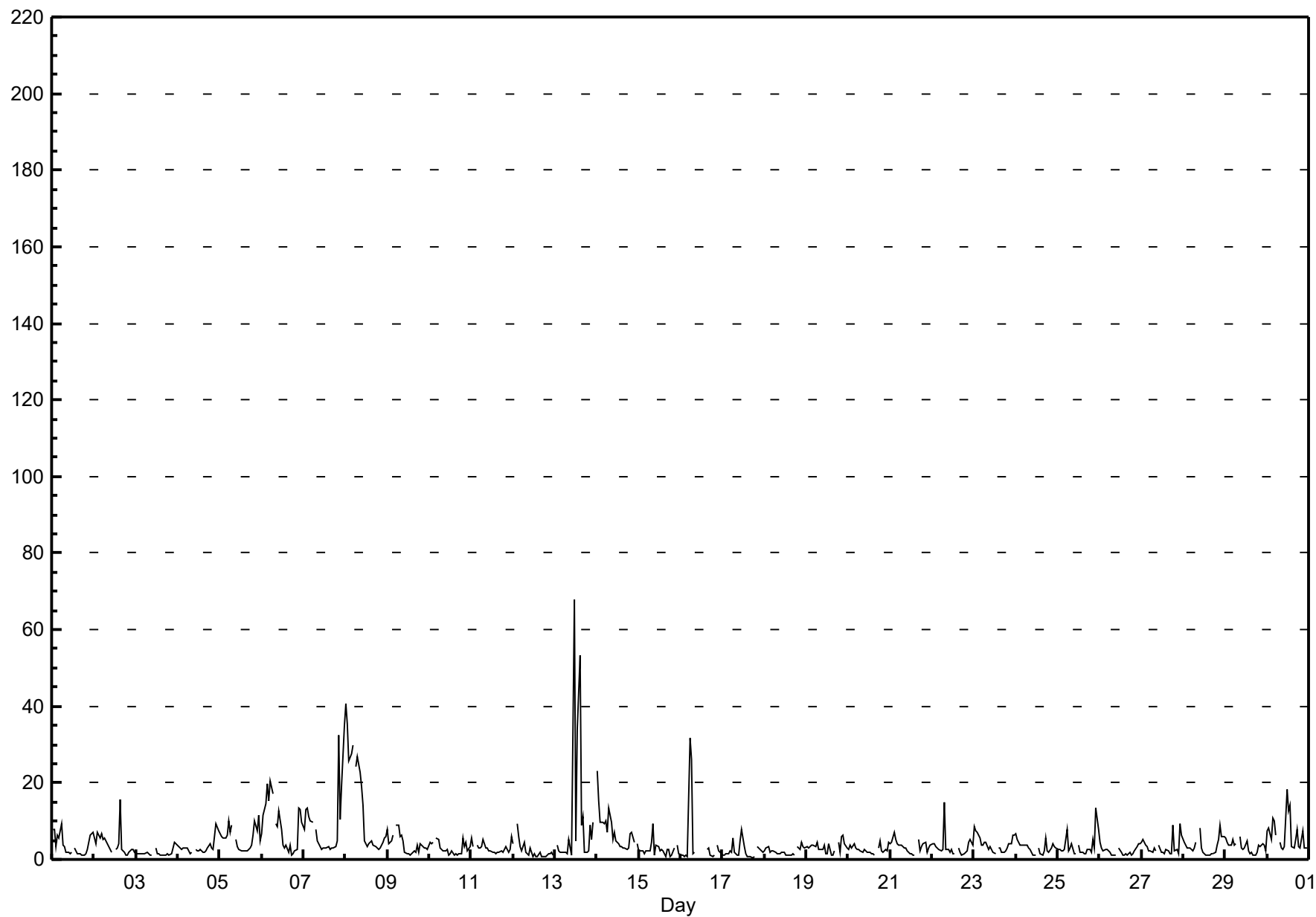
Oxides of Nitrogen (NO_x) - ppb

Portable Rycroft - June 2016

Maximum Value: 67.7 ppb on Jun 13 12:00																				Maximum Daily Average: 13.9 ppb on Jun 8					Hours in Service: 720	
Minimum Value: 1 ppb on Jun 17 18:00																				Minimum Daily Average: 1.8 ppb on Jun 3					Hours of Data: 683	
Maximum Diurnal Average: 6.6 ppb at hour 1																				Minimum Diurnal Average: 2.3 ppb at hour 18					Hours of Missing Data: 37	
Monthly Average: 4.49 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.3 Q ₁ = 1.8 Median = 2.9 Q ₃ = 4.6 P ₉₀ = 8.8 P ₉₉ = 33.7					Hours of Calibration: 37	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	8	8	3	6	5	9	4	3	2	2	1	2	A	3	1	1	1	1	1	1	2	4	6	7	3.7	9.1
2-Jun	6	4	7	5	7	5	5	5	3	3	2	A	3	3	4	16	3	2	1	1	2	3	3	2	4.1	15.6
3-Jun	1	1	2	1	2	1	2	1	1	1	A	3	1	1	1	1	1	1	1	1	2	3	5	4	1.8	4.6
4-Jun	3	3	3	3	3	3	2	1	2	A	3	2	2	3	2	2	2	3	4	3	3	6	9	7	3.3	9.4
5-Jun	7	6	5	5	6	10	7	9	A	5	3	3	2	2	2	2	2	3	4	6	10	7	11	5	5.4	11.4
6-Jun	7	12	15	20	15	21	17	A	9	8	13	8	4	3	4	2	4	1	2	2	3	14	13	10	8.9	20.6
7-Jun	8	13	13	11	10	10	A	8	5	3	3	3	3	3	3	3	3	3	3	5	33	11	19	35	9.2	35.2
8-Jun	41	35	26	28	30	A	24	27	23	19	14	5	3	4	4	5	4	3	3	3	3	4	6	6	13.9	40.8
9-Jun	8	4	5	6	A	9	9	6	6	5	2	2	1	1	2	2	2	4	2	4	3	3	3	3	4.0	9.0
10-Jun	4	4	5	A	6	5	3	3	2	2	2	1	1	2	1	1	1	1	2	5	3	4	2	3	2.9	5.7
11-Jun	6	3	A	4	3	3	3	5	3	3	2	2	2	2	2	2	2	2	2	3	4	2	2	6	3.0	6.0
12-Jun	4	A	9	6	4	2	4	2	1	1	3	1	1	1	1	2	1	1	1	1	1	1	2	1	2.2	9.2
13-Jun	A	4	2	2	2	2	2	1	5	1	34	68	5	34	54	9	11	2	2	2	9	5	10	A	12.0	67.7
14-Jun	23	15	10	10	9	10	7	13	10	5	7	5	4	4	3	3	3	2	3	7	7	4	A	4	7.3	23.2
15-Jun	2	2	2	2	2	2	2	4	9	1	4	3	2	3	2	1	2	3	1	1	3	A	4	1	2.6	9.4
16-Jun	1	1	1	1	1	32	26	2	2	C	C	C	C	C	C	3	3	1	1	1	A	4	2	1	--	31.7
17-Jun	1	1	2	2	2	2	6	2	1	1	5	8	3	1	1	1	1	1	1	A	4	3	2	2	2.2	7.7
18-Jun	2	3	4	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	A	3	3	4	3	3	2.1	4.3
19-Jun	3	3	3	4	4	3	5	3	3	3	4	2	2	4	1	1	2	A	4	2	6	6	4	3	3.2	6.5
20-Jun	3	4	3	4	3	3	3	2	2	3	2	2	2	2	2	1	A	3	5	2	2	3	2	4	2.6	4.8
21-Jun	4	4	7	5	4	4	4	3	3	3	2	2	2	1	1	A	5	2	3	4	4	2	3	4	3.3	6.9
22-Jun	4	4	3	3	3	2	2	15	3	3	2	2	2	1	A	3	2	1	1	2	2	5	5	4	3.3	15.1
23-Jun	9	8	7	6	4	4	5	5	3	3	2	2	1	A	3	3	2	2	2	3	4	4	6	6	4.1	8.7
24-Jun	7	5	4	4	4	4	4	3	3	2	1	1	A	3	1	1	2	6	2	2	3	4	3	3	3.1	6.9
25-Jun	3	3	2	2	3	8	2	3	4	2	2	A	4	2	2	2	1	3	3	2	5	3	13	8	3.5	13.4
26-Jun	5	3	2	3	3	2	2	1	1	1	A	3	2	1	1	2	1	2	1	1	2	3	4	4	2.2	4.6
27-Jun	4	5	4	3	2	2	2	3	2	A	4	2	2	2	3	2	1	1	9	2	3	2	9	6	3.3	9.2
28-Jun	4	4	3	3	3	2	3	5	A	8	3	2	1	1	1	1	1	2	2	4	5	9	6	6	3.5	8.8
29-Jun	6	5	4	4	5	4	4	A	6	3	3	3	5	2	1	2	1	1	2	4	3	4	4	2	3.4	6.0
30-Jun	7	8	5	11	10	6	A	5	3	3	3	18	13	14	3	3	5	8	3	3	7	3	3	3	6.5	18.3
6.6 6.1 5.5 5.7 5.4 5.9 5.8 5.1 4.2 3.6 4.7 5.8 2.8 3.7 3.9 2.6 2.5 2.3 2.5 2.8 4.8 4.5 5.8 5.3																									Diurnal Average	
40.8 35.5 25.7 27.7 29.9 31.7 26.2 26.7 22.8 19.1 33.8 67.7 12.5 33.7 53.5 15.6 11.3 7.9 8.8 6.7 32.5 13.6 19.4 35.2																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

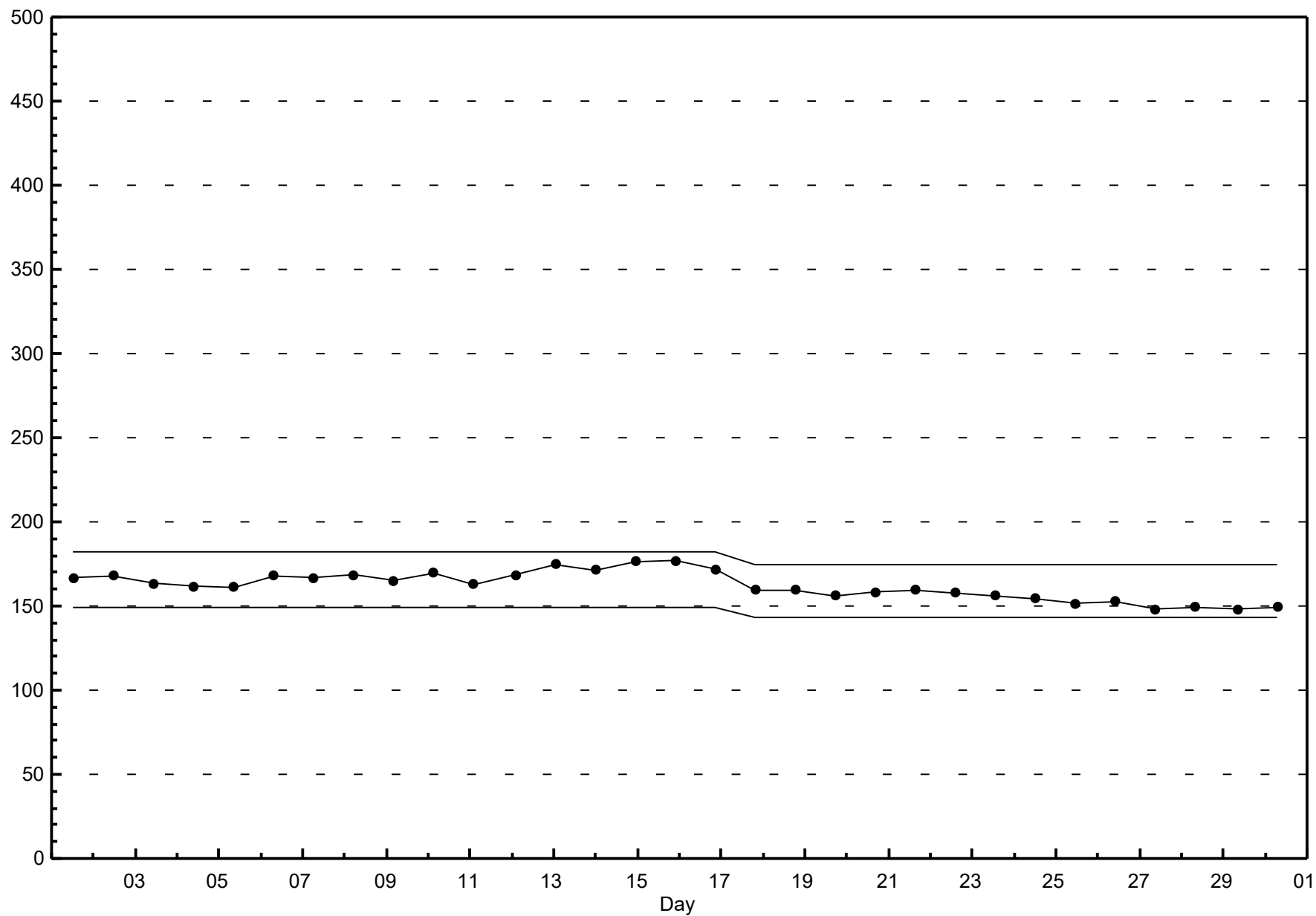
Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb
Portable Rycroft - June 2016



Span Responses

Oxides of Nitrogen (NO_x)
Portable Rycroft - June 2016



Hourly Averages

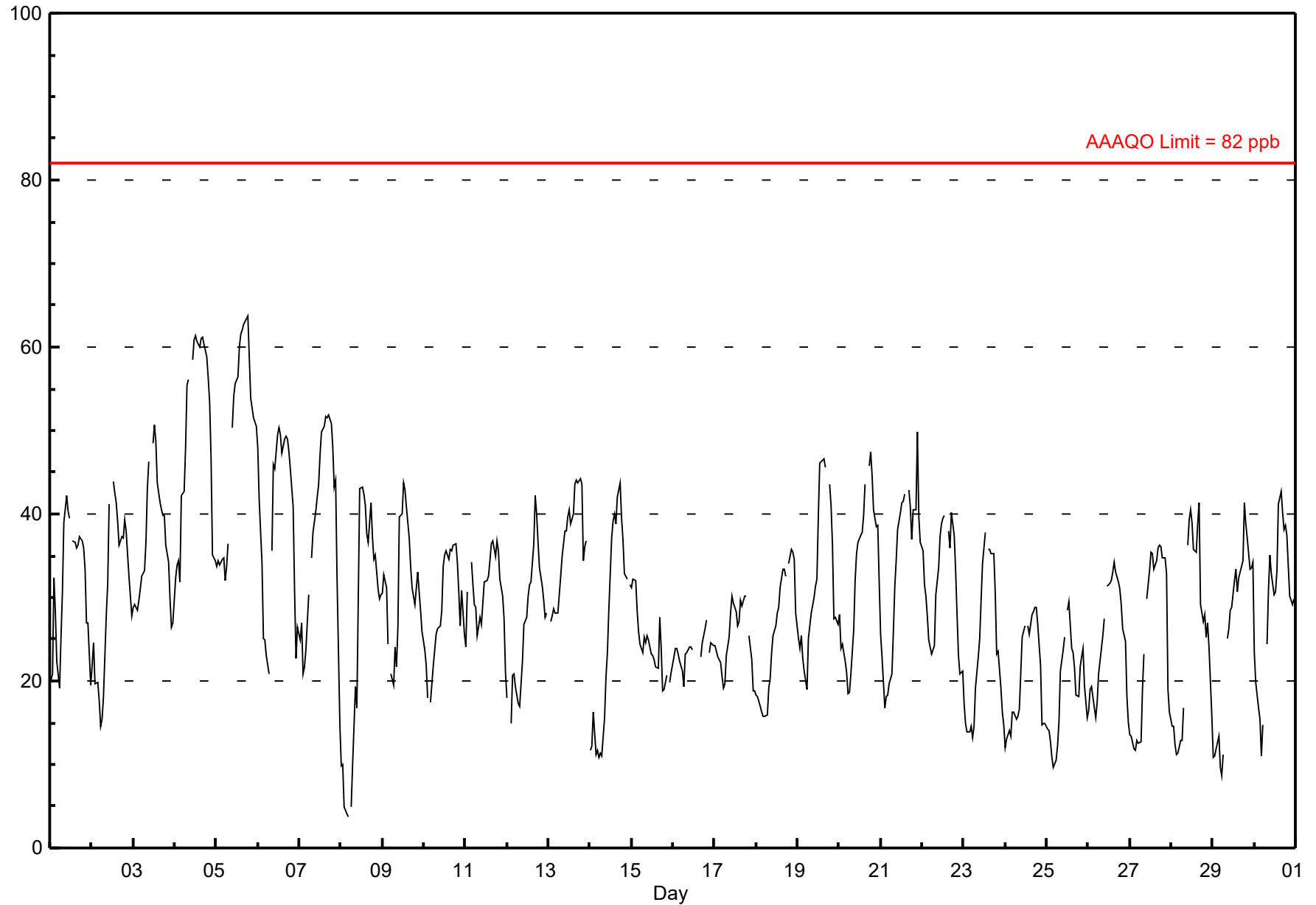
Ozone (O₃) - ppb

Portable Rycroft - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 63.7 ppb on Jun 5 19:00 Maximum Daily Average: 49.8 ppb on Jun 4																								Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0		
Minimum Value: 4 ppb on Jun 8 05:00 Minimum Daily Average: 19.0 ppb on Jun 25 Maximum Diurnal Average: 38.9 ppb at hour 16 Minimum Diurnal Average: 20.0 ppb at hour 5 Monthly Average: 30.13 ppb Percentiles: P ₁ = 9.7 P ₁₀ = 15.7 Q ₁ = 22.4 Median = 29.8 Q ₃ = 36.8 P ₉₀ = 43.7 P ₉₉ = 61.2																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	20	21	32	28	22	19	25	31	39	42	40	40	A	37	37	36	36	37	37	36	33	27	27	20	31.4	42.2
2-Jun	22	25	20	20	18	15	15	18	28	32	41	A	44	43	41	39	36	37	37	39	38	33	30	28	30.3	44.0
3-Jun	29	29	28	30	31	33	33	37	43	46	A	48	51	49	44	41	40	40	40	36	34	30	26	27	36.8	50.7
4-Jun	32	34	34	32	42	43	48	55	56	A	59	61	61	61	60	61	61	60	59	56	53	47	35	34	49.8	61.4
5-Jun	34	34	34	35	35	32	34	36	A	50	54	56	56	60	61	62	63	63	64	59	54	51	51	50	49.1	63.7
6-Jun	48	42	34	25	25	23	21	A	36	46	45	49	50	49	47	49	49	49	48	45	41	31	23	26	39.2	50.3
7-Jun	25	27	21	22	24	30	A	35	38	40	42	44	47	50	51	52	52	52	51	48	43	44	32	15	38.4	51.8
8-Jun	10	10	5	4	4	A	5	10	19	17	30	43	43	42	41	38	37	41	37	35	35	31	30	30	25.9	43.2
9-Jun	30	33	31	24	A	21	19	24	22	26	40	40	44	43	41	37	34	31	30	29	33	31	28	26	31.2	43.7
10-Jun	24	22	18	A	17	22	24	26	26	27	28	34	35	36	35	36	36	36	36	34	31	27	31	26	28.9	36.4
11-Jun	24	31	A	34	31	29	29	25	28	27	29	32	32	32	34	36	37	35	37	36	32	30	27	21	30.9	36.9
12-Jun	18	A	15	21	21	19	17	17	20	22	27	28	30	32	32	36	42	40	37	34	31	30	28	28	27.1	42.2
13-Jun	A	27	28	29	28	28	30	32	35	38	38	40	41	39	40	43	44	44	44	44	34	36	37	A	36.3	44.2
14-Jun	12	12	16	11	12	11	11	11	16	21	23	28	37	39	40	39	42	44	40	37	33	32	A	31	26.0	43.7
15-Jun	31	32	32	28	26	24	23	25	25	25	25	23	23	23	22	21	28	24	19	19	21	A	20	21	24.4	32.2
16-Jun	23	24	24	23	22	21	19	23	23	24	24	24	C	C	C	C	23	25	26	27	A	23	25	24	23.6	27.3
17-Jun	24	24	23	22	21	19	20	23	25	28	30	29	28	27	27	30	29	30	30	A	25	23	19	19	25.0	30.2
18-Jun	18	18	17	16	16	16	16	19	20	23	25	27	28	29	31	33	33	33	A	34	36	35	35	28	25.5	35.7
19-Jun	25	24	25	23	21	19	25	27	28	30	31	32	40	46	46	47	46	A	44	41	36	27	28	27	32.1	46.6
20-Jun	28	24	24	22	21	18	19	21	26	32	35	37	37	38	40	43	A	46	47	45	41	38	39	32	32.8	47.5
21-Jun	26	23	17	18	18	20	21	26	31	34	38	40	41	41	42	A	43	41	37	41	41	50	40	37	33.3	49.8
22-Jun	36	32	30	28	25	23	24	24	30	34	37	39	40	40	A	38	36	40	38	33	28	23	21	21	31.2	40.1
23-Jun	17	15	14	14	15	13	15	19	23	25	30	34	38	A	36	36	35	35	31	23	24	19	16	15	23.5	37.8
24-Jun	12	13	14	13	16	16	15	16	17	21	25	27	A	27	26	28	28	29	29	27	22	15	15	15	20.2	28.8
25-Jun	14	14	13	11	10	10	12	15	21	24	25	A	28	30	24	23	22	18	18	22	23	24	19	16	19.0	29.5
26-Jun	17	19	19	17	16	17	21	22	25	27	A	31	32	32	33	34	33	32	31	29	26	25	18	15	24.9	34.2
27-Jun	13	13	12	12	13	13	13	19	23	A	30	33	35	35	33	34	36	36	36	35	35	33	19	16	25.1	36.3
28-Jun	15	15	12	11	11	13	13	17	A	36	39	40	39	36	35	39	41	29	27	28	25	27	24	16	25.6	41.3
29-Jun	11	11	12	13	10	9	11	A	25	26	28	29	32	33	31	32	33	34	41	39	37	33	33	34	26.1	41.3
30-Jun	23	20	17	15	11	15	A	24	31	35	33	30	31	33	41	43	40	38	39	37	30	30	29	30	29.4	42.7
22.8 23.0 21.4 20.8 20.0 20.4 20.7 24.2 27.8 30.7 34.1 36.3 38.7 38.6 38.3 38.9 38.4 37.9 37.5 36.1 33.6 31.2 27.7 25.1																								Diurnal Average		
48.0 41.7 34.4 34.6 42.2 42.7 47.9 55.4 56.0 50.3 58.5 60.9 61.4 60.7 61.5 62.0 62.7 63.3 63.7 58.8 53.9 51.4 51.0 50.4																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Portable Rycroft - June 2016



Hourly Maximums

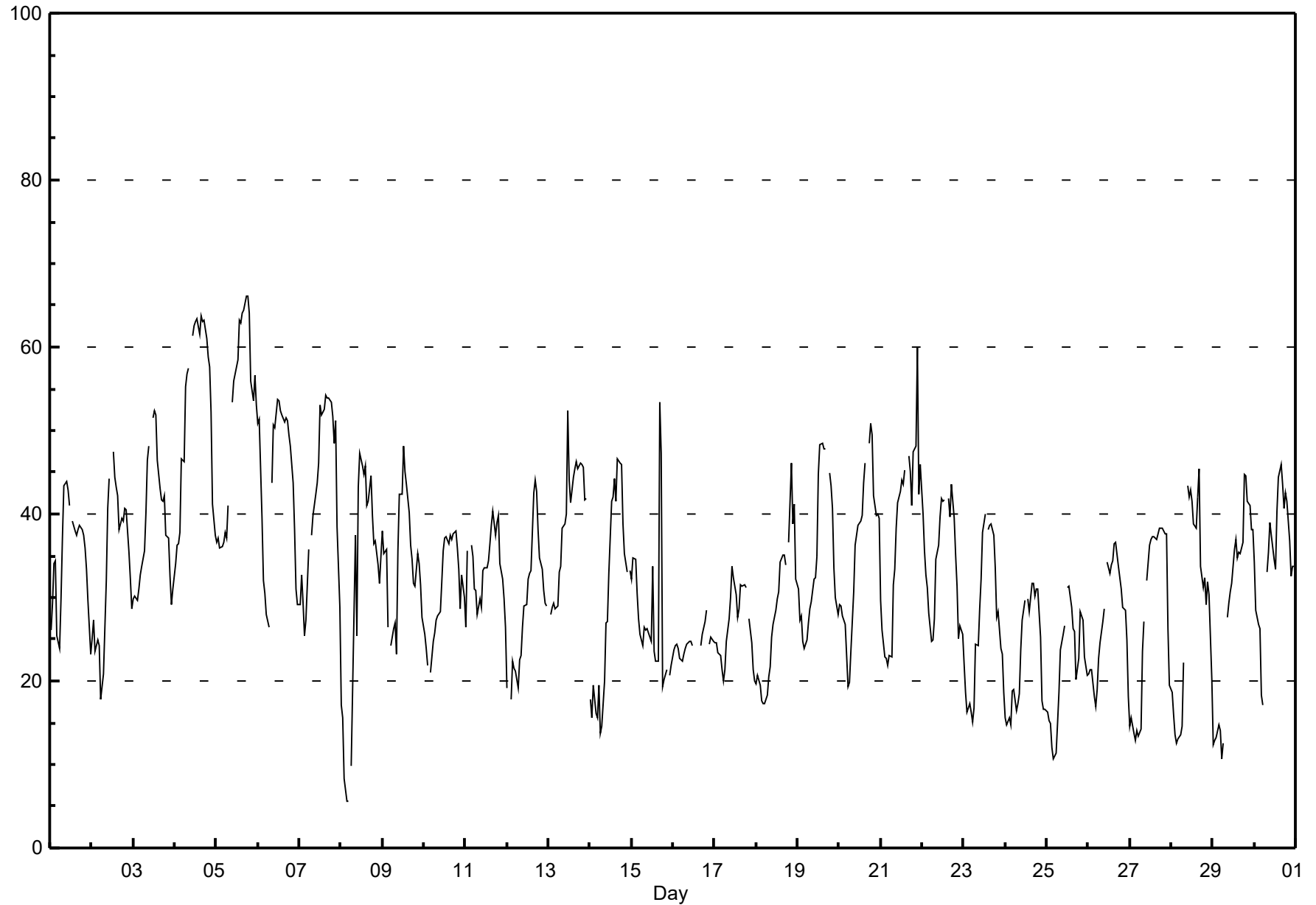
Ozone (O₃) - ppb

Portable Rycroft - June 2016

Maximum Value: 66.2 ppb on Jun 5 18:00																				Maximum Daily Average: 52.9 ppb on Jun 4					Hours in Service: 720	
Minimum Value: 6 ppb on Jun 8 04:00																				Minimum Daily Average: 21.9 ppb on Jun 25					Hours of Data: 685	
Maximum Diurnal Average: 41.9 ppb at hour 17																				Minimum Diurnal Average: 22.7 ppb at hour 5					Hours of Missing Data: 35	
Monthly Average: 33.26 ppb																				Percentiles: P ₁ = 11.8 P ₁₀ = 18.7 Q ₁ = 25.0 Median = 32.7 Q ₃ = 40.5 P ₉₀ = 47.8 P ₉₉ = 63.2					Hours of Calibration: 35	
																									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-Jun	26	29	34	34	25	24	30	37	43	44	43	41	A	39	38	38	38	39	38	37	36	33	30	23	34.8	43.9
2-Jun	25	27	24	25	24	18	19	21	32	41	44	A	47	44	43	42	38	40	39	41	41	35	32	29	33.5	47.4
3-Jun	30	30	30	31	33	34	36	40	46	48	A	51	52	52	47	43	42	42	42	37	37	33	29	31	38.9	52.4
4-Jun	34	36	36	38	47	46	55	57	57	A	61	63	63	63	62	64	63	63	61	59	58	52	41	37	52.9	63.6
5-Jun	37	37	36	36	37	38	37	41	A	53	56	57	58	63	63	64	64	66	66	64	56	54	57	53	51.9	66.2
6-Jun	51	51	40	32	30	28	27	A	44	51	50	54	54	52	52	51	52	51	50	48	44	38	31	29	43.8	53.7
7-Jun	29	33	29	25	27	36	A	38	40	42	44	46	53	52	53	54	54	54	53	52	49	51	38	29	42.6	54.3
8-Jun	17	16	8	6	6	A	10	19	37	25	43	47	46	45	46	41	41	45	40	36	37	34	32	35	30.9	47.3
9-Jun	38	35	36	26	A	24	26	27	23	36	42	42	48	45	44	40	36	35	32	31	35	34	32	28	34.6	48.1
10-Jun	26	24	22	A	21	25	26	27	28	28	32	36	37	37	36	37	37	38	38	36	33	29	33	30	31.1	37.9
11-Jun	26	36	A	36	35	31	31	28	30	29	33	34	34	34	36	39	40	37	39	40	34	32	30	26	33.5	40.3
12-Jun	19	A	18	22	22	21	19	23	23	26	29	29	32	33	33	43	44	43	38	35	33	31	29	29	29.3	44.1
13-Jun	A	28	29	29	29	29	33	34	38	39	40	52	44	41	44	45	46	45	46	46	46	42	42	A	39.5	52.4
14-Jun	18	16	19	16	16	19	14	15	20	27	27	33	42	42	44	41	47	46	46	39	35	33	A	33	29.9	46.7
15-Jun	32	35	35	31	28	26	24	27	26	26	26	25	34	24	22	22	53	47	19	20	21	A	21	22	28.0	53.3
16-Jun	24	24	24	24	23	22	23	24	24	25	25	24	C	C	C	C	24	26	27	28	A	24	25	25	24.6	28.4
17-Jun	25	25	23	23	21	20	21	25	27	30	34	32	30	28	29	32	31	32	31	A	27	25	21	20	26.6	33.8
18-Jun	20	21	20	18	17	17	18	20	22	25	27	28	30	31	34	35	35	34	A	37	46	39	41	32	28.1	46.1
19-Jun	31	27	28	25	24	25	27	29	29	32	32	35	45	48	48	48	48	A	45	43	41	34	30	28	34.9	48.5
20-Jun	29	29	28	27	23	19	20	24	31	36	37	39	39	40	44	46	A	48	51	50	42	40	40	39	35.7	50.9
21-Jun	30	26	23	23	22	23	23	31	33	38	41	43	44	44	45	A	47	45	41	47	48	60	42	46	37.6	60.0
22-Jun	40	36	33	31	28	25	25	27	35	36	40	42	42	42	A	42	40	44	39	35	31	25	27	26	34.3	43.6
23-Jun	22	19	16	17	16	15	17	24	24	29	32	38	40	A	38	39	39	37	34	28	28	24	23	19	26.9	40.0
24-Jun	16	15	16	15	19	19	16	17	18	24	27	30	A	30	28	32	32	30	31	31	25	18	17	17	22.7	31.7
25-Jun	16	15	15	12	11	11	15	19	24	26	27	A	31	31	29	26	26	20	23	28	28	27	23	21	21.9	31.4
26-Jun	21	21	21	18	17	19	23	25	27	29	A	34	33	34	34	36	37	34	32	31	29	28	25	18	27.2	36.5
27-Jun	15	16	14	13	14	13	14	24	27	A	32	36	37	37	37	37	38	38	38	38	38	38	26	19	27.8	38.4
28-Jun	19	16	14	13	13	14	15	22	A	43	42	43	41	39	38	42	45	34	31	32	29	32	30	20	29.0	45.5
29-Jun	12	13	13	15	14	11	13	A	28	29	31	32	36	37	35	35	35	37	45	45	42	41	38	38	29.2	44.7
30-Jun	34	28	27	26	18	17	A	33	35	39	37	35	33	40	44	46	44	41	42	41	37	32	34	34	34.8	45.9
26.2 26.3 24.4 23.7 22.7 23.1 23.4 27.7 31.2 34.2 37.0 39.3 41.7 41.0 41.0 41.5 41.9 41.0 40.0 39.2 37.4 35.1 31.7 28.8																								Diurnal Average		
50.8 51.4 39.5 37.7 46.5 46.3 55.3 56.9 57.4 53.3 61.3 62.5 63.1 63.3 62.9 64.1 64.5 66.2 66.1 64.0 57.5 60.0 56.5 53.1																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

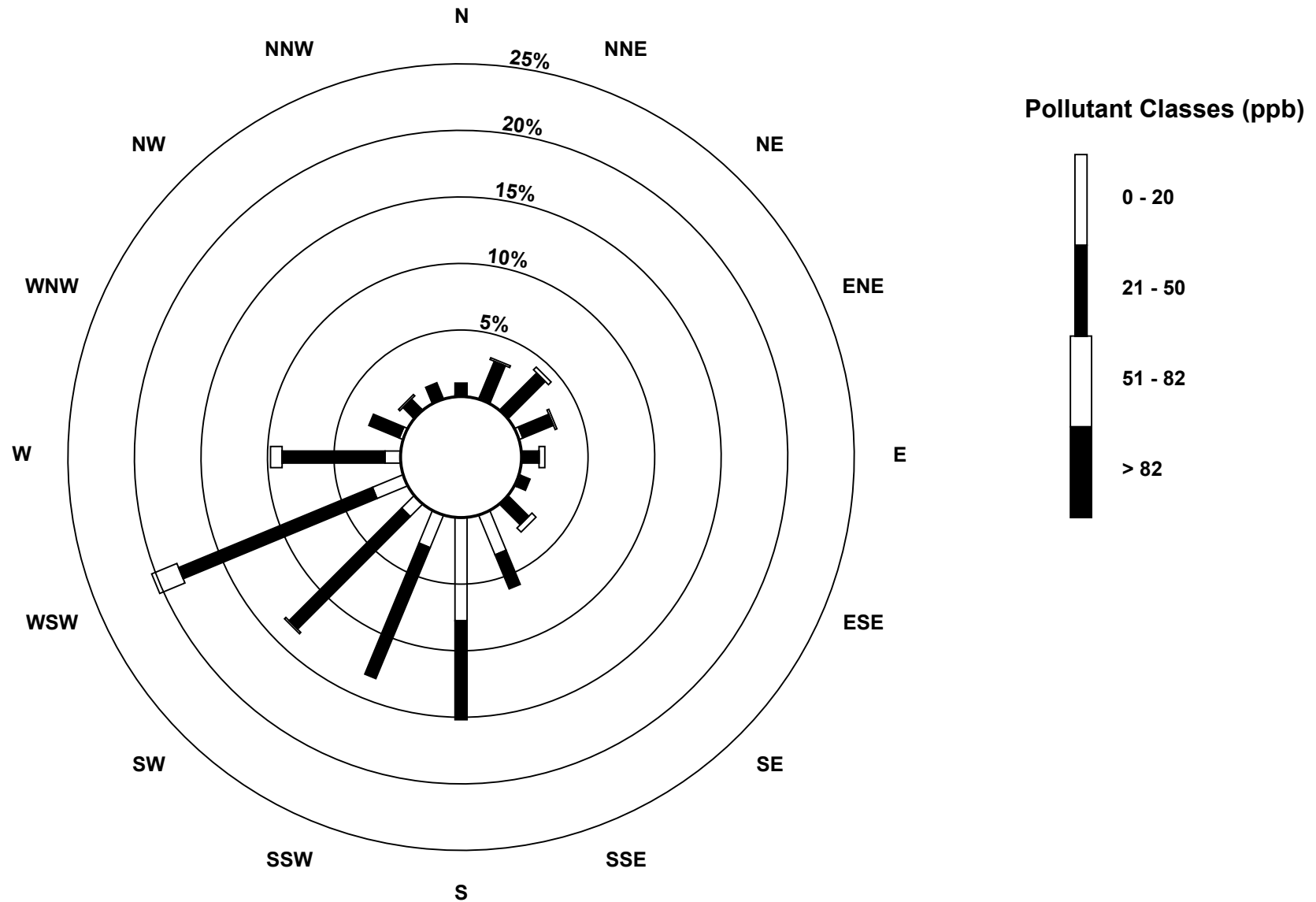
Hourly Maximums

Ozone (O₃) - ppb
Portable Rycroft - June 2016



Pollutant Rose

Ozone (O₃) - ppb
Portable Rycroft - June 2016



Eight Hour Running Averages

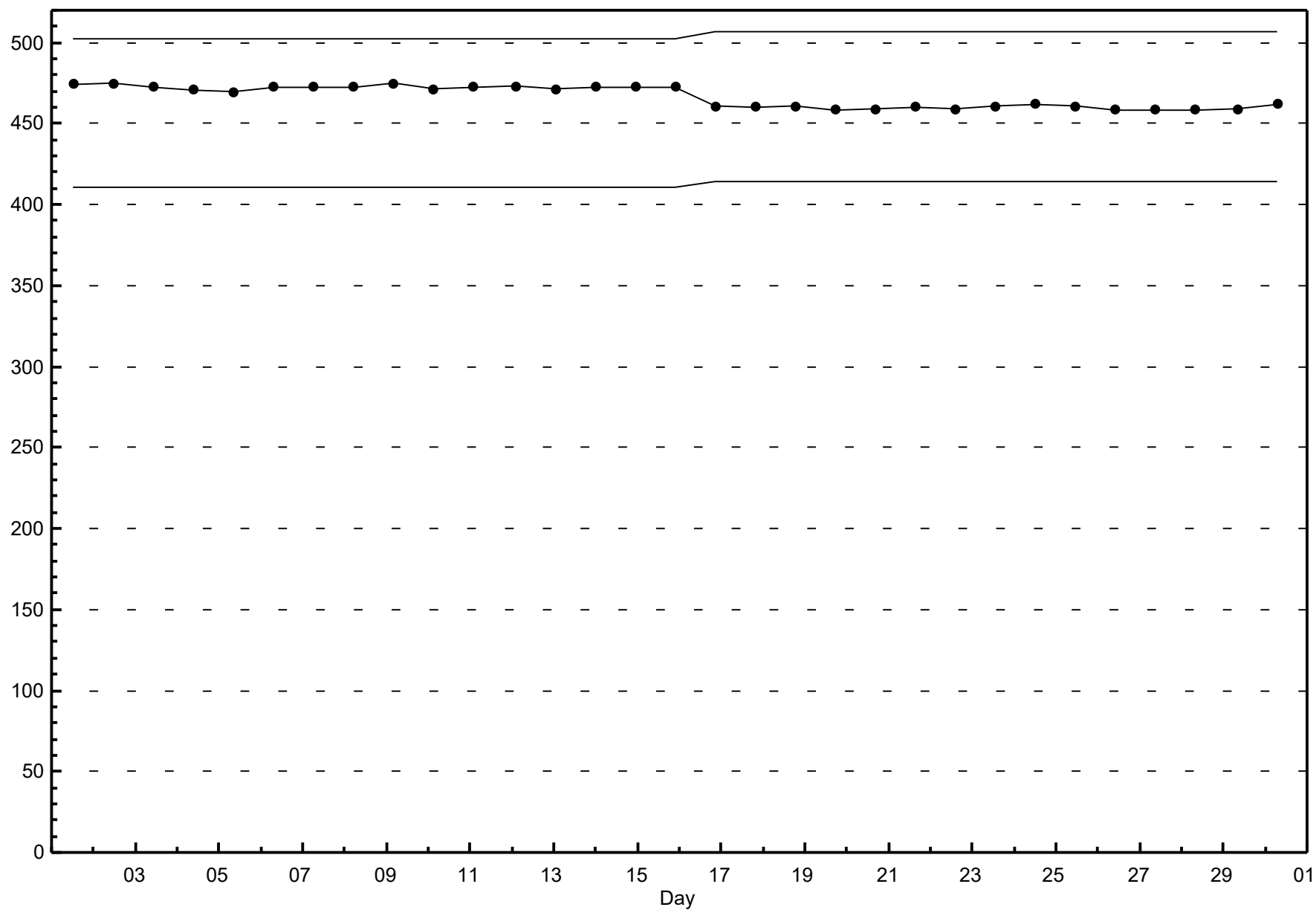
Ozone (O₃) - ppb

Portable Rycroft - June 2016

Maximum Value: 61.1 ppb on Jun 5 20:00																								Hours in Service: 720	
Minimum Value: 6.8 ppb on Jun 8 08:00																								Hours of Data: 712	
																								Hours of Missing Data: 8	
Percentiles: P ₁ = 12.0 P ₁₀ = 18.3 Q ₁ = 23.1 Median = 29.6 Q ₃ = 35.7 P ₉₀ = 41.9 P ₉₉ = 59.6																								Hours of Calibration: 8	
																								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-Jun	29	28	27	27	26	25	24	25	27	30	31	32	34	36	38	39	38	38	37	37	36	35	34	32	38.6
2-Jun	30	28	26	24	22	21	19	19	20	21	23	24	28	32	35	38	39	40	40	40	39	38	36	35	40.3
3-Jun	34	33	32	31	30	30	30	31	33	35	36	39	42	44	45	46	46	45	44	43	41	38	36	34	46.0
4-Jun	33	32	32	31	32	34	37	40	43	44	48	52	55	57	59	60	61	61	61	60	59	57	54	51	60.6
5-Jun	47	44	41	38	36	34	34	34	34	37	39	42	46	50	53	57	58	59	61	61	61	60	58	57	61.1
6-Jun	55	52	49	44	41	37	34	31	29	30	32	35	39	42	46	47	48	49	49	48	47	45	42	39	55.1
7-Jun	36	33	30	27	25	25	25	26	28	30	33	36	39	42	43	45	47	49	50	50	50	49	47	42	50.2
8-Jun	37	32	26	20	15	11	7	7	8	9	13	18	24	26	31	34	36	39	40	39	38	37	35	35	40.3
9-Jun	34	33	32	31	30	29	27	26	25	24	25	27	29	32	35	37	38	39	37	36	35	33	32	30	38.7
10-Jun	29	28	26	26	24	22	22	22	22	23	24	25	28	29	31	32	33	34	35	35	35	34	33	32	35.5
11-Jun	31	30	29	29	29	29	29	29	30	29	29	29	29	29	30	31	32	34	34	35	35	35	34	32	35.0
12-Jun	30	29	26	23	22	20	19	18	18	19	20	21	23	24	26	28	31	33	35	35	35	35	35	34	35.5
13-Jun	32	31	29	29	28	28	28	29	30	31	32	34	35	37	38	39	40	41	42	42	42	41	41	40	42.3
14-Jun	36	31	27	23	19	16	12	12	13	14	14	17	20	23	27	30	34	37	39	40	39	38	38	37	39.7
15-Jun	35	34	33	31	30	29	29	28	27	26	25	25	24	24	24	23	24	24	23	22	22	22	22	22	35.4
16-Jun	21	21	22	22	22	22	22	23	23	23	23	23	23	N	N	N	N	N	N	N	N	N	25	25	24.8
17-Jun	25	25	24	24	23	23	22	22	22	23	24	24	25	26	27	28	29	29	29	29	28	28	27	25	28.8
18-Jun	23	22	20	19	18	17	17	17	17	18	19	20	22	23	25	27	29	30	31	32	33	34	34	33	34.1
19-Jun	32	31	30	29	27	25	24	24	24	25	26	27	29	32	35	38	40	41	43	44	44	41	38	35	44.1
20-Jun	33	32	29	27	25	24	23	22	22	23	24	26	28	31	33	36	38	39	41	42	43	43	43	41	42.9
21-Jun	39	36	32	29	26	24	22	21	22	23	26	29	31	34	37	38	40	41	41	41	41	42	42	41	42.0
22-Jun	40	39	38	36	35	31	29	28	27	27	28	30	31	33	35	37	38	38	39	38	36	34	32	30	40.1
23-Jun	28	24	22	19	17	16	15	15	16	17	19	22	25	26	29	32	33	35	35	33	31	30	27	25	35.0
24-Jun	22	19	17	16	15	15	14	15	15	16	17	19	20	21	22	24	26	27	28	28	27	25	24	22	27.6
25-Jun	21	19	17	15	13	13	12	12	13	15	16	17	20	22	24	25	25	24	23	23	22	22	21	20	25.1
26-Jun	20	20	20	19	18	17	18	18	20	21	21	23	25	27	29	31	32	32	32	32	31	30	29	26	32.5
27-Jun	24	21	19	17	15	14	13	13	15	15	17	20	24	27	30	32	34	34	35	35	35	35	33	31	35.2
28-Jun	28	25	22	19	17	14	13	13	13	16	20	24	28	32	35	38	38	37	36	34	33	32	30	27	38.3
29-Jun	23	21	19	17	15	13	12	11	13	15	18	20	23	26	29	30	31	32	33	35	35	35	36	36	35.7
30-Jun	35	33	30	27	23	21	19	18	19	21	23	26	28	31	32	35	36	36	37	38	38	37	36	34	37.8
55.1 52.4 48.7 44.5 40.8 37.3 36.5 40.1 43.1 44.4 47.8 52.0 54.7 57.3 59.0 59.8 60.5 60.5 60.7 61.1 60.8 59.7 58.4 56.9																									Diurnal Maximums
N - Not Valid																									

Span Responses

Ozone (O₃)
Portable Rycroft - June 2016



Hourly Averages

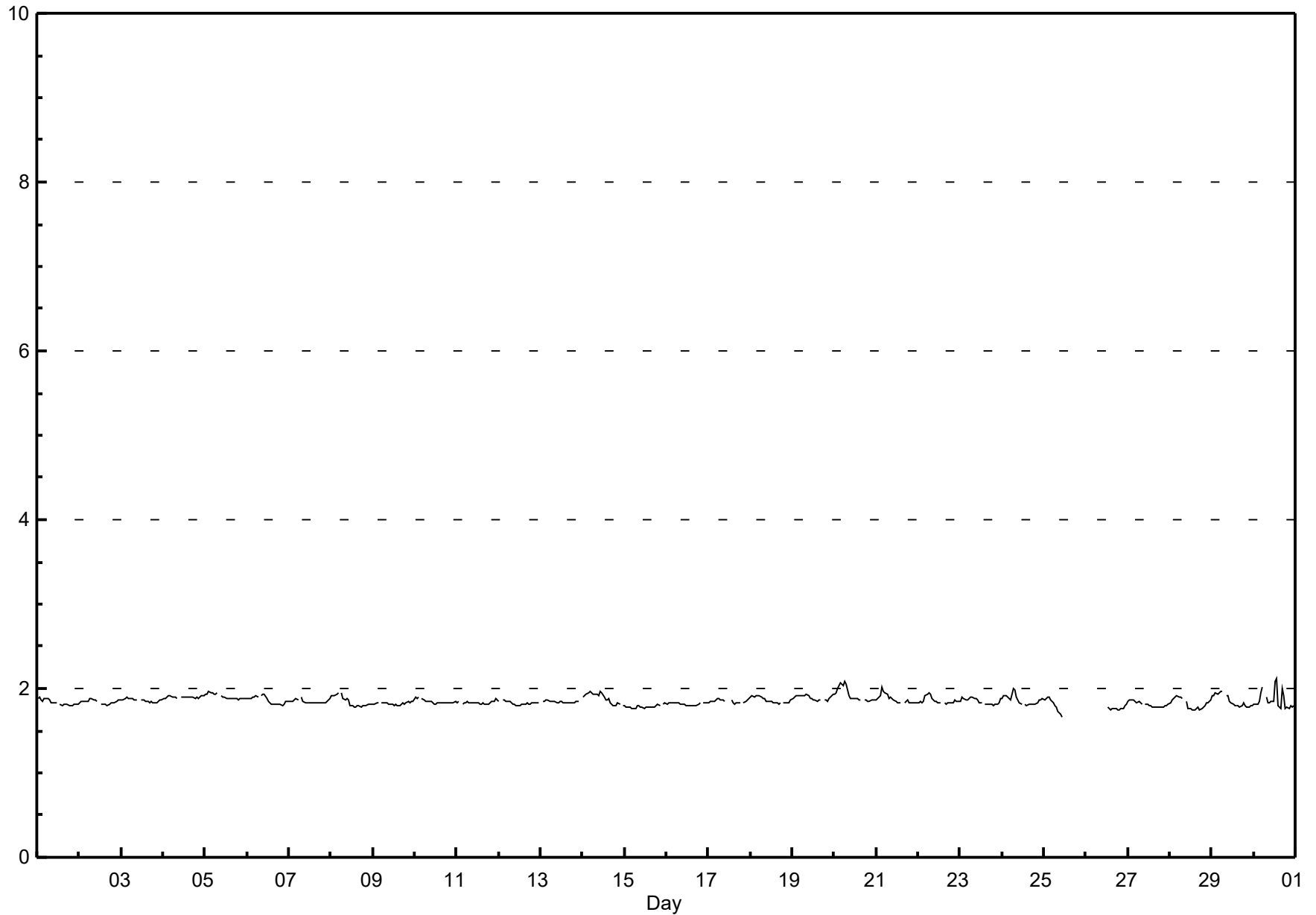
Total Hydrocarbons (THC) - ppm

Portable Rycroft - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.12 ppm on Jun 30 14:00 Maximum Daily Average: 1.92 ppm on Jun 20																								Hours in Service: 720 Hours of Data: 663 Hours of Missing Data: 57 Hours of Calibration: 35 Percent Operational Time: 96.9		
Minimum Value: 1.7 ppm on Jun 25 11:00 Maximum Diurnal Average: 1.90 ppm at hour 5 Monthly Average: 1.850 ppm												Minimum Daily Average: 1.78 ppm on Jun 15 Minimum Diurnal Average: 1.82 ppm at hour 16 Percentiles: P ₁ = 1.75 P ₁₀ = 1.79 Q ₁ = 1.82 Median = 1.84 Q ₃ = 1.88 P ₉₀ = 1.92 P ₉₉ = 2.04														
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-Jun	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.90
2-Jun	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.84	1.89
3-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.86	1.89
4-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.92
5-Jun	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.90	1.96
6-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.86	1.93
7-Jun	1.8	1.8	1.8	1.9	1.9	1.9	A	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.84	1.90
8-Jun	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.95
9-Jun	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.82	1.86
10-Jun	1.9	1.9	1.9	A	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.84	1.89
11-Jun	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.83	1.87
12-Jun	1.9	A	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.87
13-Jun	A	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.84	1.86
14-Jun	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.89	1.97
15-Jun	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.78	1.82
16-Jun	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.82	1.84
17-Jun	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	C	C	C	1.9	1.8	1.8	1.8	1.8	1.8	A	1.8	1.9	1.9	1.9	1.85	1.88
18-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.86	1.92
19-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.89	1.93
20-Jun	1.9	1.9	2.0	2.1	2.0	2.0	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	2.09
21-Jun	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.87	2.02
22-Jun	1.8	1.8	1.8	1.8	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.85	1.95
23-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.85	1.90
24-Jun	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.86	1.99
25-Jun	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	A	N	N	N	N	N	N	N	N	N	N	N	N	--	1.89
26-Jun	N	N	N	N	N	N	N	N	N	N	C	C	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.8	1.8	--	1.81
27-Jun	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.81	1.87
28-Jun	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.82	1.91
29-Jun	1.9	1.9	2.0	1.9	2.0	2.0	2.0	A	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.86	1.97
30-Jun	1.8	1.8	1.8	1.8	1.9	2.0	A	1.9	1.8	1.8	1.8	1.8	2.1	2.1	1.8	1.8	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.86	2.12
1.86 1.87 1.88 1.89 1.90 1.89 1.89 1.88 1.86 1.85 1.84 1.84 1.84 1.83 1.82 1.82 1.82 1.82 1.82 1.82 1.82 1.83 1.84 1.85																								Diurnal Average		
1.94 1.94 2.00 2.07 2.05 2.04 2.09 2.06 1.94 1.93 1.97 1.96 2.09 2.12 1.90 1.90 1.99 1.92 1.89 1.89 1.88 1.91 1.92 1.93																								Diurnal Maximum		
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Averages

Total Hydrocarbons (THC) - ppm
Portable Rycroft - June 2016



Hourly Maximums

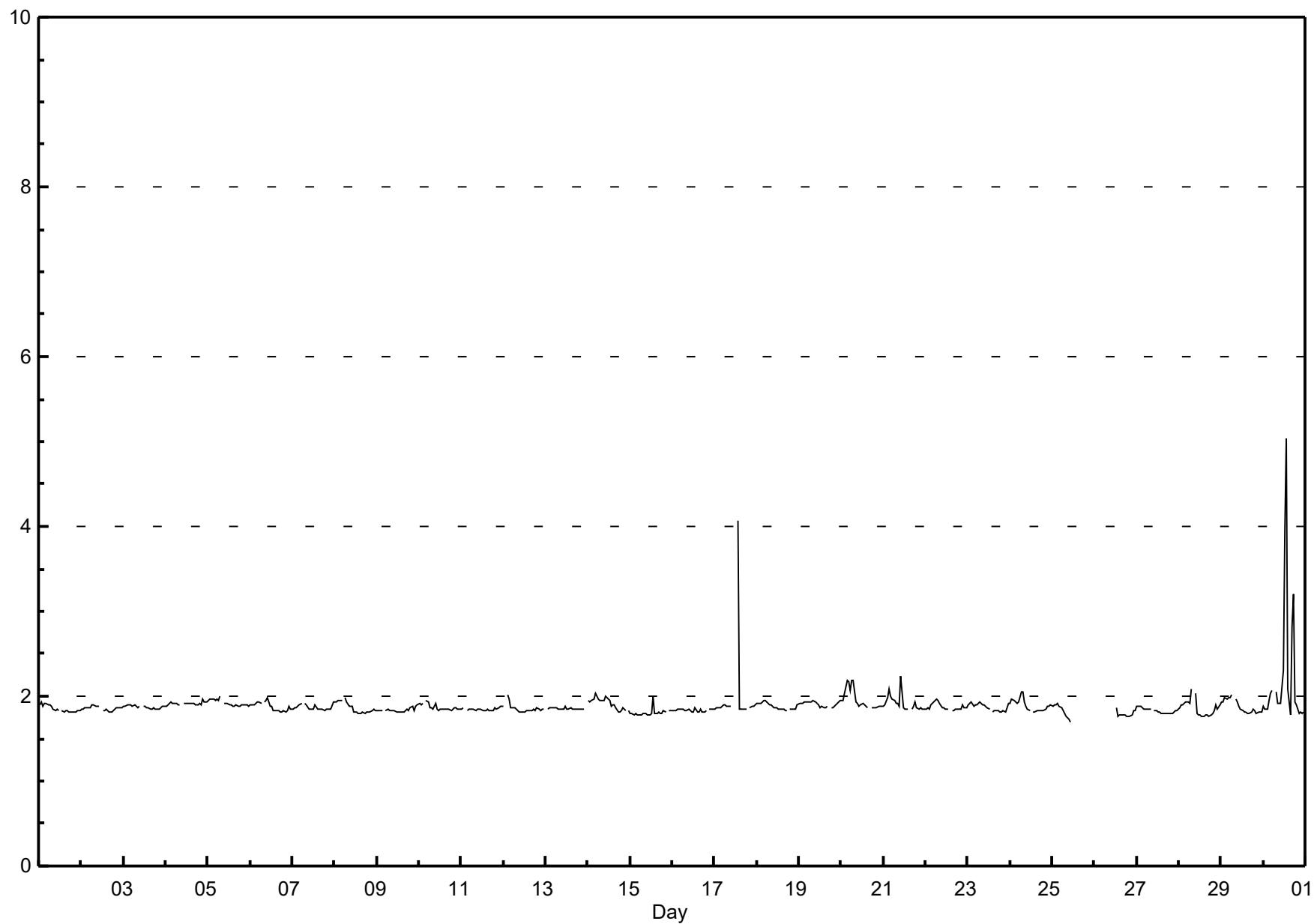
Total Hydrocarbons (THC) - ppm

Portable Rycroft - June 2016

Maximum Value: 5.03 ppm on Jun 30 14:00																					Maximum Daily Average: 2.25 ppm on Jun 30				Hours in Service: 720	
Minimum Value: 1.7 ppm on Jun 25 11:00																					Minimum Daily Average: 1.81 ppm on Jun 15				Hours of Data: 663	
Maximum Diurnal Average: 2.04 ppm at hour 14																					Minimum Diurnal Average: 1.83 ppm at hour 16				Hours of Missing Data: 57	
Monthly Average: 1.887 ppm																					Percentiles: P ₁ = 1.77 P ₁₀ = 1.81 Q ₁ = 1.83 Median = 1.86 Q ₃ = 1.90 P ₉₀ = 1.95 P ₉₉ = 2.22				Hours of Calibration: 35	
																					Percent Operational Time: 96.9					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.85	1.93
2-Jun	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.86	1.90
3-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.87	1.91
4-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.91	1.96
5-Jun	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.92	2.01
6-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.88	1.98
7-Jun	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.87	1.93
8-Jun	1.9	1.9	1.9	1.9	2.0	A	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.87	1.98
9-Jun	1.8	1.8	1.8	1.8	A	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.8	1.9	1.9	1.9	1.84	1.89
10-Jun	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.87	1.94
11-Jun	1.8	1.9	A	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.85	1.89
12-Jun	1.9	A	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.85	2.02
13-Jun	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.86	1.88
14-Jun	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.8	A	1.8	1.92	2.04
15-Jun	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.81	1.99
16-Jun	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.83	1.86
17-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	4.1	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.98	4.07
18-Jun	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	1.88	1.95
19-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.95
20-Jun	1.9	2.0	2.0	2.2	2.2	2.1	2.2	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.96	2.19
21-Jun	1.9	1.9	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.2	1.9	1.8	1.8	1.8	A	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.92	2.23
22-Jun	1.8	1.9	1.8	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.87	1.96
23-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.87	1.94
24-Jun	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.89	2.05
25-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	A	N	N	N	N	N	N	N	N	N	N	N	N	--	1.91
26-Jun	N	N	N	N	N	N	N	N	N	N	C	C	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	--	1.87
27-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.83	1.89
28-Jun	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	A	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.86	2.08
29-Jun	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.88	2.02
30-Jun	1.9	1.8	1.9	2.0	2.0	2.1	A	2.0	1.9	1.9	1.9	2.3	4.0	5.0	2.1	1.8	2.8	3.2	1.9	1.9	1.8	1.8	1.8	1.8	2.25	5.03
1.89 1.89 1.91 1.92 1.92 1.91 1.92 1.92 1.88 1.88 1.87 1.87 1.93 2.04 1.84 1.83 1.87 1.88 1.84 1.84 1.84 1.84 1.85 1.86 1.87																									Diurnal Average	
1.95 1.97 2.04 2.18 2.17 2.07 2.19 2.18 1.96 2.03 2.23 2.30 3.95 5.03 2.09 1.91 2.83 3.20 1.93 1.91 1.89 1.96 1.94 1.95																									Diurnal Maximum	
C - Calibration N - Not Valid A - Automated Daily Zero Span																										

Hourly Maximums

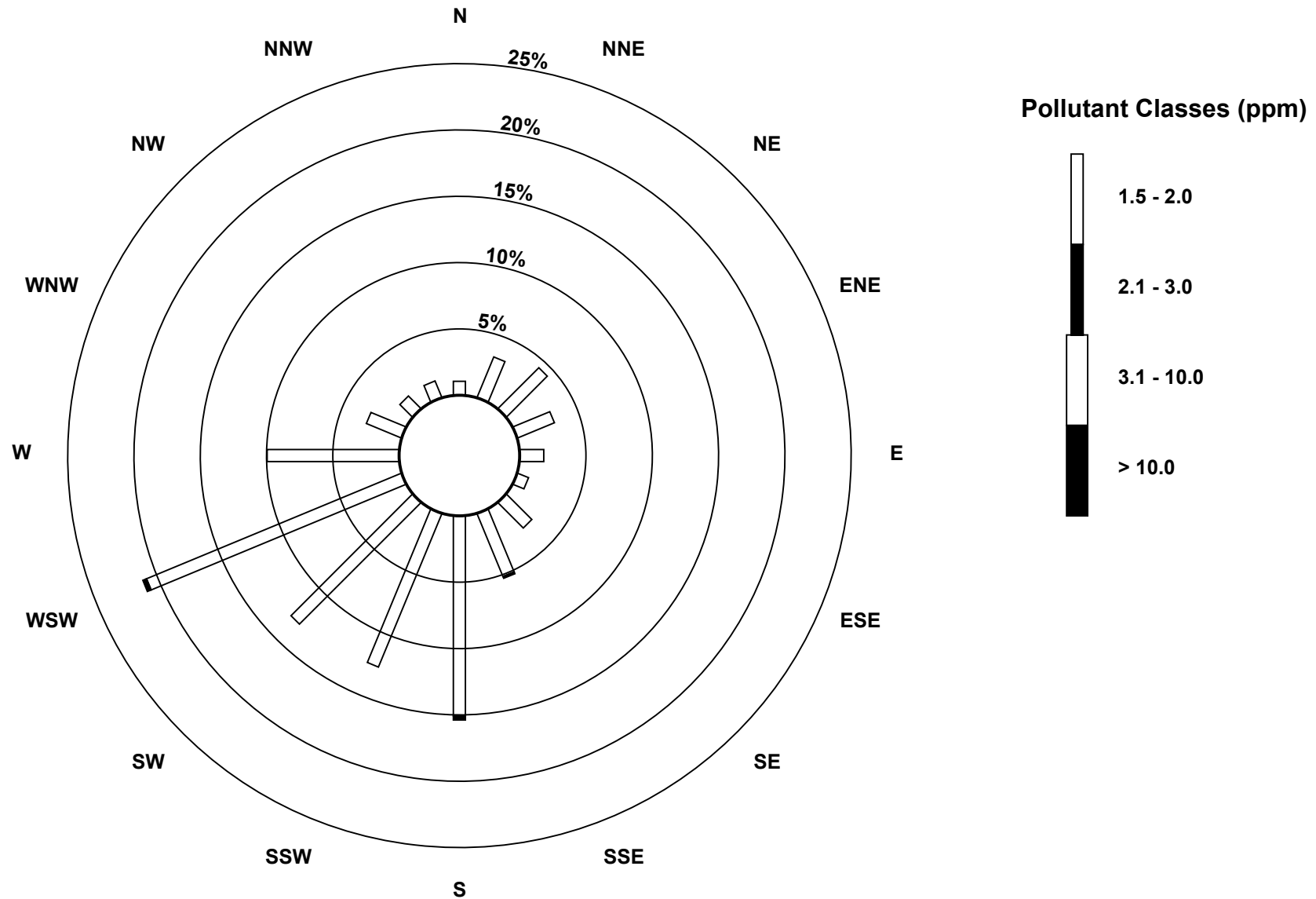
Total Hydrocarbons (THC) - ppm
Portable Rycroft - June 2016



Pollutant Rose

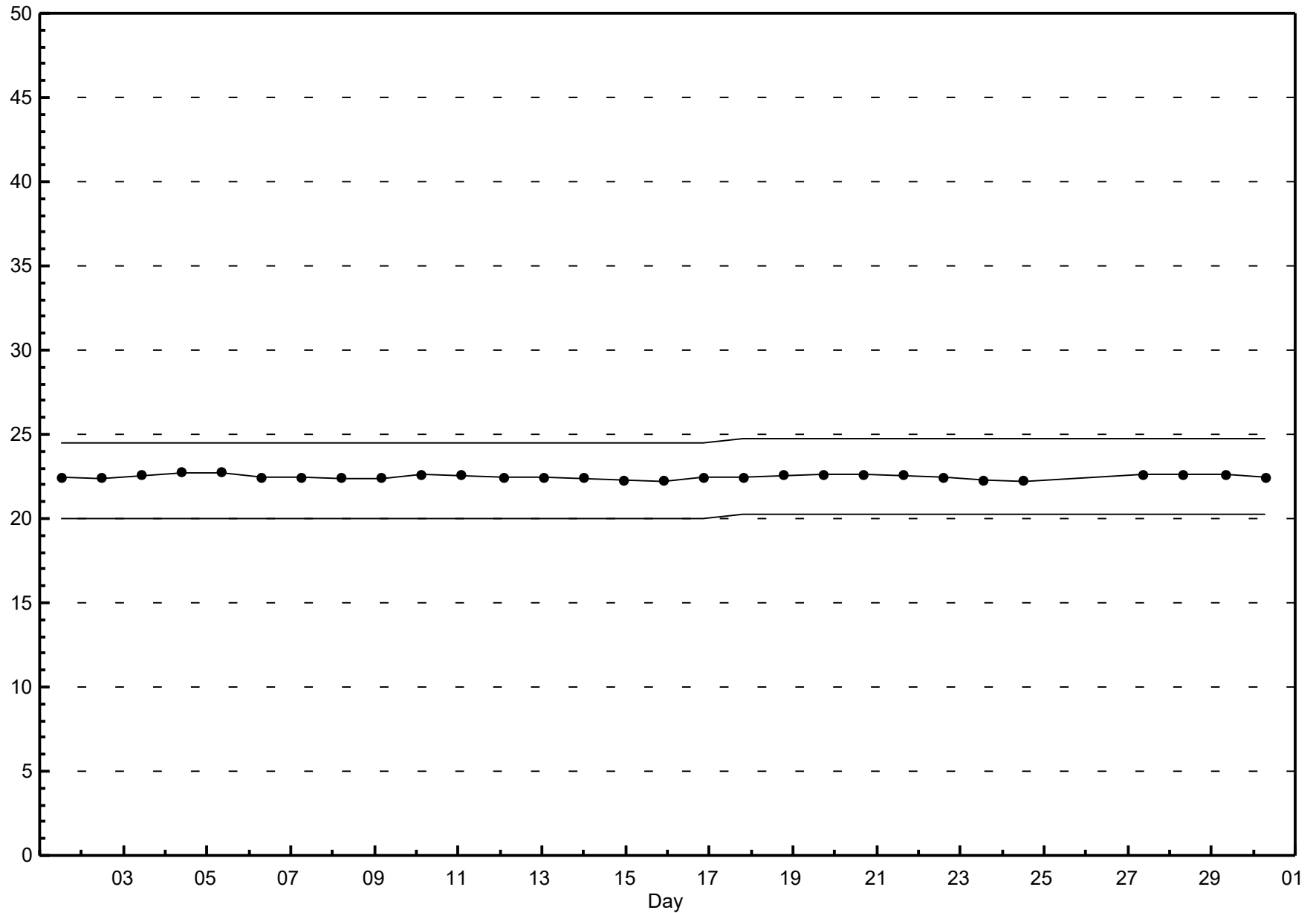
Total Hydrocarbons (THC) - ppm

Portable Rycroft - June 2016



Span Responses

Total Hydrocarbons (THC)
Portable Rycroft - June 2016



Hourly Averages

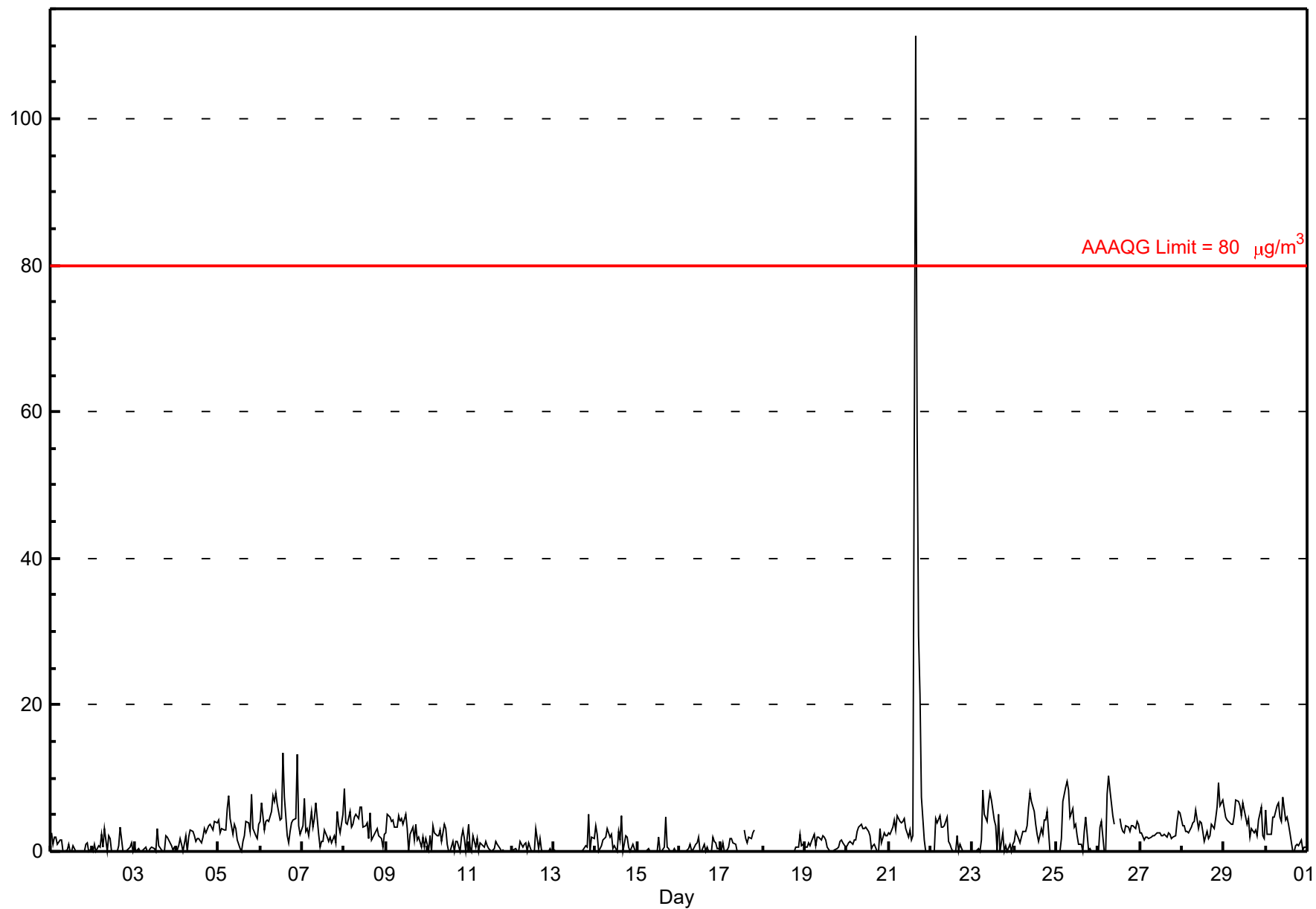
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - June 2016

Number of Exceedences: 1-hr: 1 24-hr: 0 Maximum Value: 111.3 µg/m³ on Jun 21 16:00 Minimum Value: 0 µg/m³ on Jun 1 09:00 Maximum Diurnal Average: 5.2 µg/m³ at hour 16 Monthly Average: 2.37 µg/m³																								Hours in Service: 720 Hours of Data: 711 Hours of Missing Data: 9 Hours of Calibration: 0 Percent Operational Time: 98.8		
Maximum Daily Average: 11.5 µg/m³ on Jun 21 Minimum Daily Average: 0.2 µg/m³ on Jun 18 Minimum Diurnal Average: 1.4 µg/m³ at hour 23 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 1.7 Q ₃ = 3.3 P ₉₀ = 4.9 P ₉₉ = 8.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jun	3	1	2	2	1	2	2	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1	0	0	0.7	2.5
2-Jun	0	1	0	1	1	2	1	3	0	2	2	0	0	0	0	1	3	0	0	0	0	1	1	0	0.8	3.2
3-Jun	1	0	0	0	0	0	1	0	0	0	1	0	0	3	1	0	0	0	2	2	1	1	0	1	0.6	3.1
4-Jun	0	1	2	1	0	2	0	2	3	3	2	1	2	2	1	2	3	3	3	4	3	3	4	4	2.1	4.0
5-Jun	4	3	3	3	3	6	8	4	2	4	3	2	0	0	1	2	4	4	3	8	3	2	2	4	3.2	7.9
6-Jun	4	7	3	4	4	4	5	8	7	8	7	4	5	14	7	2	1	3	4	4	5	13	4	2	5.3	13.5
7-Jun	4	7	3	3	2	5	3	4	7	2	1	1	1	3	2	1	2	1	2	1	6	4	3	5	3.1	7.3
8-Jun	9	4	4	5	3	4	5	5	4	6	6	3	3	4	2	5	2	2	3	3	2	2	1	2	3.7	8.6
9-Jun	3	5	5	4	4	3	3	5	4	5	4	5	3	0	2	3	1	4	2	2	1	2	1	2	3.0	5.1
10-Jun	0	2	0	4	3	2	2	3	1	4	3	1	0	0	1	0	1	1	0	2	3	2	0	4	1.6	3.6
11-Jun	1	0	2	1	2	0	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0.6	2.1
12-Jun	0	0	0	0	0	1	1	1	1	0	1	0	0	0	3	0	2	0	0	0	0	0	0	0	0.5	3.2
13-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	0	2	2	0.4	5.0
14-Jun	4	2	0	1	2	2	2	3	2	2	0	1	0	3	2	5	0	2	2	1	0	1	0	0	1.5	4.9
15-Jun	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	1	0	0	0	0	0	0	0.4	4.6
16-Jun	0	0	0	0	0	0	1	0	0	1	1	2	0	0	1	0	1	0	0	2	1	1	0	0	0.5	1.9
17-Jun	0	1	0	0	1	2	2	1	1	0	M	M	M	3	2	1	2	2	2	3	N	N	N	N	--	3.0
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	0.2	2.3
19-Jun	1	1	1	1	1	2	1	2	2	1	2	2	2	1	0	0	0	0	0	1	1	2	1	1	1.1	2.3
20-Jun	1	1	1	1	1	1	3	3	4	3	3	3	3	2	0	1	1	0	0	3	1	3	2	2	1.9	3.7
21-Jun	2	2	3	4	3	5	4	4	4	5	3	2	3	2	2	111	57	29	21	7	1	0	0	0	11.5	111.3
22-Jun	0	0	0	4	4	5	3	3	4	5	1	1	0	0	0	2	0	1	0	0	0	0	0	0	1.4	4.9
23-Jun	0	0	0	0	0	2	8	5	4	7	8	7	4	4	0	5	0	3	0	1	0	1	0	1	2.5	8.3
24-Jun	1	3	2	1	2	3	3	4	6	8	7	6	4	2	1	3	2	4	4	5	0	0	0	0	3.0	8.1
25-Jun	0	0	0	2	7	9	9	8	5	6	3	4	2	1	1	0	3	5	0	0	0	0	0	0	2.7	9.5
26-Jun	0	3	4	0	0	8	10	8	5	4	M	M	5	3	3	3	4	3	3	4	4	3	4	4	3.8	10.3
27-Jun	2	3	1	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2	2	4	6	5	2.5	5.5
28-Jun	3	3	3	3	3	3	4	4	6	3	4	4	3	1	3	2	2	4	3	5	6	9	6	7	3.9	9.3
29-Jun	6	5	4	4	4	4	5	7	7	6	5	7	5	4	4	2	3	2	3	2	4	6	2	2	4.2	7.0
30-Jun	6	2	2	2	5	5	6	7	5	4	7	4	5	4	3	0	0	1	1	1	2	0	1	1	3.0	7.4
																								Diurnal Average	Diurnal Maximum	
M - Maintenance N - Not Valid Alberta Ambient Air Quality Guideline (AAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAQO): 24-hr 30 µg/m³																										

Hourly Averages

PM2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Rycroft - June 2016



Hourly Maximums

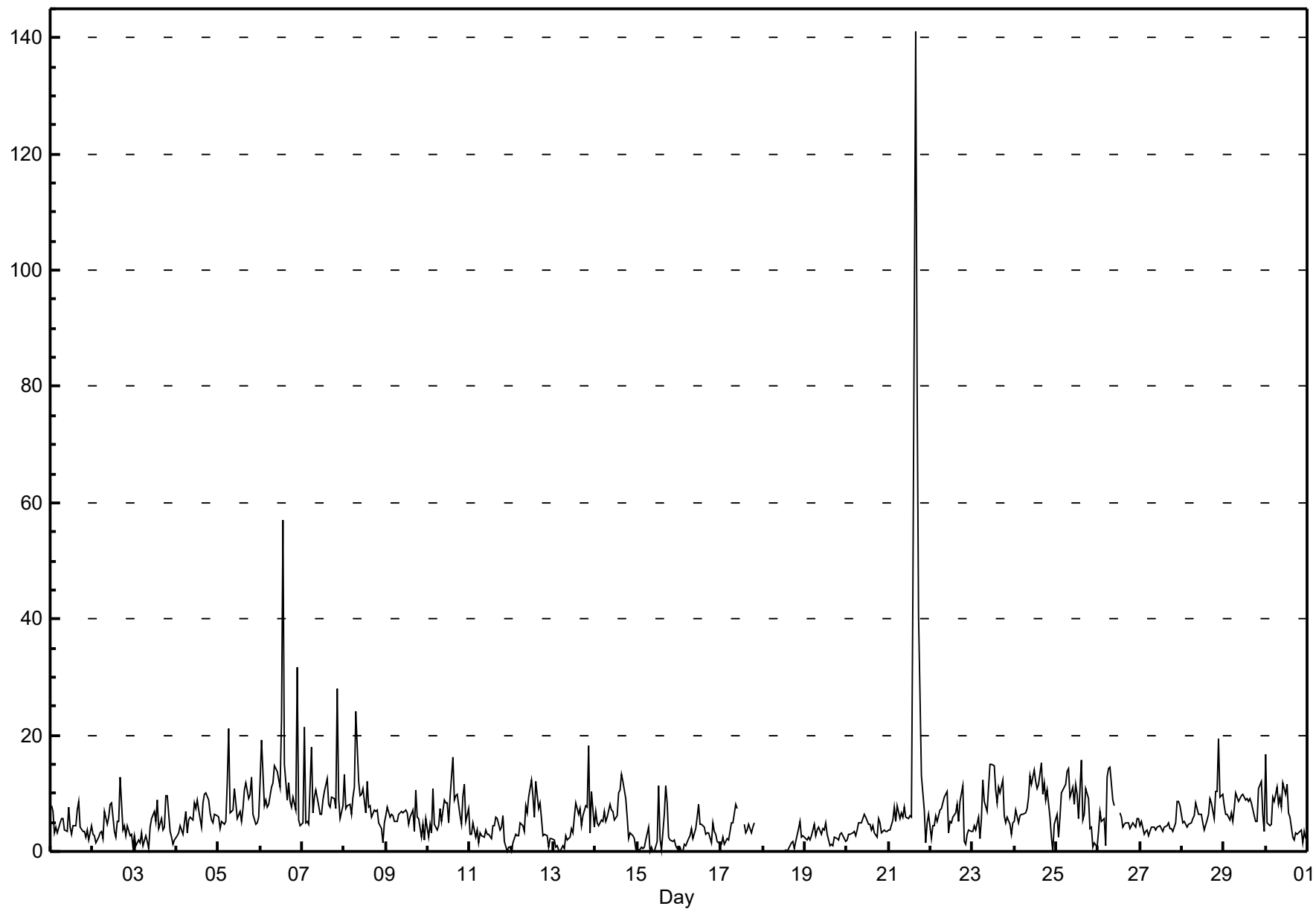
PM2.5 (PM_{2.5}) - µg/m³

Portable Rycroft - June 2016

Maximum Value: 141.1 μg/m ³ on Jun 21 16:00																								Maximum Daily Average: 18.6 μg/m ³ on Jun 21										Hours in Service: 720	
Minimum Value: 0 μg/m ³ on Jun 11 22:00																								Minimum Daily Average: 0.9 μg/m ³ on Jun 18										Hours of Data: 711	
Maximum Diurnal Average: 11.3 μg/m ³ at hour 16																								Minimum Diurnal Average: 3.8 μg/m ³ at hour 23										Hours of Missing Data: 9	
Monthly Average: 6.31 μg/m ³																								Percentiles: P ₁ = 0.0 P ₁₀ = 1.6 Q ₁ = 3.1 Median = 5.1 Q ₃ = 8.0 P ₉₀ = 11.0 P ₉₉ = 25.8										Hours of Calibration: 0	
																								Percent Operational Time: 98.8											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Jun	8	7	3	4	3	5	6	6	4	3	8	4	3	4	5	7	9	4	3	3	2	4	2	4	4.6	8.6									
2-Jun	3	3	1	3	3	4	2	7	5	6	8	8	4	3	5	5	13	4	5	3	4	3	3	1	4.3	12.8									
3-Jun	3	1	2	2	3	1	3	2	1	4	6	7	5	9	4	6	4	4	10	10	3	3	1	2	3.9	9.7									
4-Jun	3	3	4	4	3	7	3	5	6	5	8	7	9	7	4	8	10	10	9	7	5	5	6	6	6.1	10.0									
5-Jun	6	4	5	5	5	12	21	7	7	11	8	6	7	5	7	11	12	9	10	13	6	5	5	6	8.0	21.2									
6-Jun	12	19	8	9	8	8	11	12	15	14	14	11	23	57	15	9	12	9	8	9	7	32	5	4	13.7	57.0									
7-Jun	5	21	5	5	5	18	7	9	11	8	6	6	9	10	13	8	7	9	9	7	28	9	6	8	9.6	28.0									
8-Jun	13	7	8	8	6	9	11	24	12	10	10	11	7	12	8	8	6	7	7	7	5	4	2	5	8.6	24.0									
9-Jun	6	8	6	6	6	5	5	6	7	7	7	7	7	5	6	7	3	10	6	6	3	5	2	6	5.8	10.5									
10-Jun	2	5	3	11	5	4	4	7	5	9	8	8	5	9	16	9	10	10	6	5	9	12	5	7	7.3	16.2									
11-Jun	3	3	5	2	4	2	3	3	2	4	3	3	2	4	4	6	6	4	4	6	2	0	1	1	3.2	6.1									
12-Jun	0	2	3	3	3	5	4	3	8	7	9	12	9	6	12	7	8	6	3	3	3	1	2	2	5.1	12.2									
13-Jun	2	1	1	0	0	1	1	3	2	2	4	3	6	8	6	7	4	6	8	8	18	3	10	4	4.6	18.2									
14-Jun	7	5	5	5	5	7	5	6	8	7	7	5	6	10	11	13	12	9	6	2	3	3	2	1	6.3	13.2									
15-Jun	1	0	1	1	1	2	4	0	1	0	0	2	11	2	0	6	11	8	2	2	2	2	1	0	2.5	11.3									
16-Jun	1	0	0	1	1	2	3	4	2	4	6	8	5	5	4	3	3	3	1	5	3	3	2	1	2.9	8.1									
17-Jun	1	2	1	2	2	3	5	5	8	7	M	M	M	5	3	4	5	3	4	5	N	N	N	N	--	8.2									
18-Jun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	2	4	5	3	3	0.9	5.2									
19-Jun	2	2	2	2	3	5	3	4	4	3	4	4	5	3	1	1	1	2	2	2	3	3	3	2	2.7	4.9									
20-Jun	2	3	3	3	3	3	4	5	5	6	6	6	5	5	4	4	3	3	6	5	3	4	3	4	4.0	6.3									
21-Jun	4	4	5	8	5	8	6	7	6	8	6	6	6	6	44	141	80	40	27	13	7	1	5	6	18.6	141.1									
22-Jun	2	4	4	6	5	7	7	8	9	10	3	5	5	6	7	8	5	9	11	2	1	3	4	3	5.7	11.3									
23-Jun	4	4	4	6	2	6	12	9	7	11	15	15	15	11	8	11	10	12	6	5	6	5	3	5	8.0	15.1									
24-Jun	5	7	5	6	6	6	7	7	9	13	12	14	12	11	11	15	10	12	9	10	6	2	0	5	8.4	15.3									
25-Jun	6	2	6	10	11	12	14	14	9	11	8	12	10	6	16	5	6	11	9	4	4	1	2	1	7.9	15.8									
26-Jun	3	7	5	6	1	13	14	15	9	8	M	M	7	6	4	5	5	5	4	4	5	4	6	6	6.4	14.6									
27-Jun	4	5	3	3	4	3	4	4	4	4	4	4	4	4	4	5	5	4	4	4	5	9	9	8	4.6	8.7									
28-Jun	5	5	5	4	5	5	6	6	8	6	6	6	5	4	5	6	9	8	6	10	10	19	9	10	7.1	19.5									
29-Jun	8	6	6	5	7	5	7	10	8	9	10	10	9	9	9	9	8	6	5	5	11	12	6	3	7.7	12.0									
30-Jun	17	5	4	5	9	9	11	8	9	8	12	10	11	7	6	3	2	3	3	3	4	1	3	2	6.4	16.7									
4.6 4.8 3.8 4.5 4.1 5.8 6.4 6.9 6.4 6.8 7.1 7.2 7.2 7.9 8.1 11.3 9.4 7.8 6.4 5.7 6.0 5.6 3.8 4.0																								Diurnal Average											
16.7 21.5 7.9 10.9 10.7 17.9 21.2 24.0 14.9 14.2 14.9 15.1 22.6 57.0 43.8 141.1 79.9 40.2 27.0 13.1 28.0 31.7 10.4 9.9																								Diurnal Maximum											
M - Maintenance N - Not Valid																																			

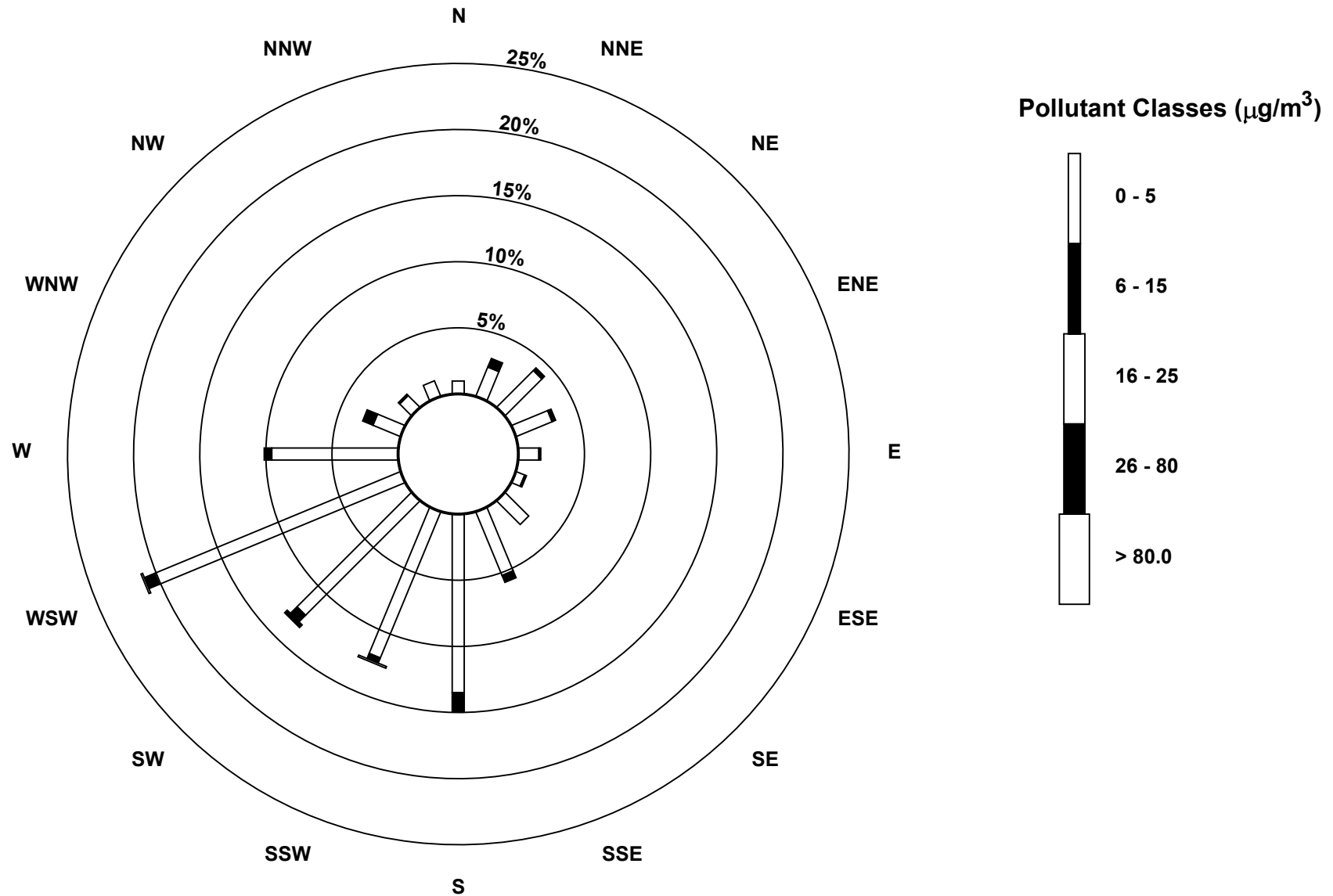
Hourly Maximums

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Rycroft - June 2016



Pollutant Rose

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Rycroft - June 2016



Hourly Averages

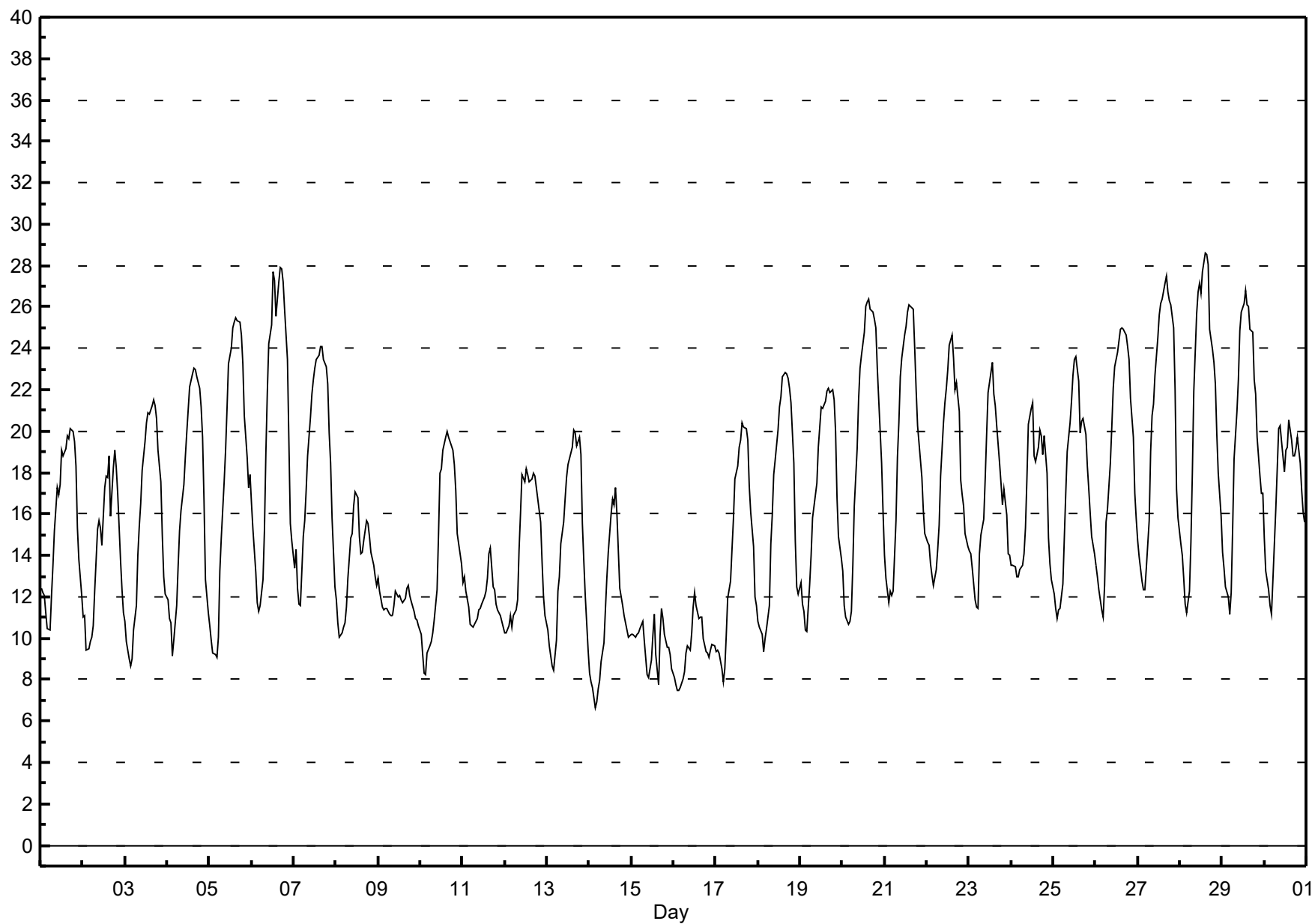
External Temperature (ET) - °C

Portable Rycroft - June 2016

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.6 °C on Jun 28 15:00 Maximum Daily Average: 20.8 °C on Jun 28																								Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 7 °C on Jun 14 04:00 Maximum Diurnal Average: 20.7 °C at hour 16 Monthly Average: 16.13 °C												Minimum Daily Average: 9.5 °C on Jun 16 Minimum Diurnal Average: 10.4 °C at hour 5 Percentiles: P ₁ = 7.8 P ₁₀ = 10.1 Q ₁ = 11.6 Median = 15.3 Q ₃ = 20.0 P ₉₀ = 23.6 P ₉₉ = 27.7														
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-Jun	12	12	12	11	10	10	12	13	15	17	17	17	19	19	20	20	20	20	20	18	15	14	12	12	15.7	20.2
2-Jun	11	11	9	9	10	10	11	12	15	16	15	14	17	18	18	19	16	18	19	18	17	14	12	11	14.3	19.1
3-Jun	11	10	9	9	9	10	12	14	15	17	18	20	20	21	21	21	22	21	21	19	18	15	13	12	15.7	21.5
4-Jun	12	11	11	9	10	12	13	15	16	17	19	20	21	22	23	23	23	23	22	21	20	17	13	11	16.8	23.0
5-Jun	11	10	9	9	9	10	13	15	18	19	21	23	24	25	25	25	25	25	25	23	21	19	17	18	18.3	25.5
6-Jun	17	15	13	12	11	12	13	15	19	22	24	25	28	27	26	27	28	28	27	26	23	19	16	15	20.3	27.9
7-Jun	13	14	12	12	12	15	16	17	19	21	22	22	23	23	24	24	24	23	23	22	20	18	16	13	18.7	24.1
8-Jun	12	11	10	10	11	11	12	13	15	15	16	17	17	15	14	14	15	16	16	15	14	13	13	13	13.6	17.1
9-Jun	13	12	12	11	11	11	11	11	11	12	12	12	12	12	12	12	12	13	12	12	11	11	11	11	11.7	12.9
10-Jun	10	9	8	8	9	10	10	10	11	12	15	18	18	19	20	20	20	19	19	18	17	15	15	14	14.4	20.0
11-Jun	13	13	12	11	11	11	11	11	11	11	11	12	12	12	13	14	14	13	12	12	11	11	11	11	11.8	14.3
12-Jun	10	10	11	11	11	11	11	12	14	16	18	18	18	18	18	18	18	18	17	17	16	14	12	11	14.4	18.2
13-Jun	10	10	9	9	8	10	12	13	15	16	17	18	18	19	19	20	20	19	20	19	16	14	12	9	14.6	20.0
14-Jun	8	8	8	7	7	8	8	9	10	11	13	14	16	17	16	17	16	12	12	12	11	10	10	10	11.3	17.3
15-Jun	10	10	10	10	10	10	11	10	9	8	8	9	10	11	9	8	10	11	11	10	10	10	9	9	9.8	11.5
16-Jun	8	8	7	7	8	8	8	9	10	9	10	11	12	12	11	11	11	10	9	9	9	9	10	10	9.5	12.2
17-Jun	9	9	9	9	8	8	10	12	13	14	16	18	18	19	20	20	20	20	20	17	16	14	12	12	14.3	20.4
18-Jun	11	11	10	9	10	10	12	15	16	18	19	20	21	22	23	23	23	23	22	21	18	15	13	12	16.5	22.9
19-Jun	13	12	11	10	10	13	14	16	16	17	19	20	21	21	21	22	22	22	22	22	20	17	15	14	17.1	22.0
20-Jun	13	12	11	11	11	11	14	16	19	21	23	24	25	26	26	26	26	26	25	25	23	20	18	16	19.5	26.4
21-Jun	14	13	12	12	12	12	16	19	20	23	24	25	25	26	26	26	26	24	22	20	19	18	16	15	19.3	26.1
22-Jun	15	15	14	13	13	13	14	15	18	20	21	22	23	24	25	24	22	22	21	18	17	16	15	14	18.1	24.7
23-Jun	14	14	13	12	11	11	14	15	16	18	20	22	23	23	22	21	20	18	17	16	17	16	14	14	16.8	23.3
24-Jun	14	14	13	13	13	13	14	14	15	18	20	21	21	19	19	19	20	20	19	20	18	15	14	13	16.6	21.4
25-Jun	12	11	11	11	11	13	15	17	19	20	21	23	23	24	22	20	20	21	20	18	17	16	15	14	17.3	23.6
26-Jun	14	13	12	11	11	13	16	16	18	20	22	23	24	24	25	25	25	25	24	23	22	20	17	16	19.1	25.0
27-Jun	15	14	13	12	12	13	16	19	21	21	23	25	26	26	26	27	27	27	26	26	25	22	17	16	20.6	27.5
28-Jun	15	14	13	12	11	12	15	18	22	26	27	27	27	28	29	29	28	25	24	23	22	20	18	16	20.8	28.6
29-Jun	14	13	12	12	11	12	15	19	21	22	25	26	26	27	26	26	25	25	22	22	20	18	17	17	19.8	26.8
30-Jun	15	13	12	12	11	13	16	18	20	20	20	18	19	19	21	20	19	19	19	20	18	17	16	16	17.1	20.6
12.3 11.7 11.0 10.5 10.4 11.3 12.8 14.3 15.9 17.3 18.5 19.4 20.3 20.6 20.6 20.7 20.6 20.2 19.6 18.8 17.5 15.6 14.0 13.1																								Diurnal Average		
16.5 15.3 13.6 13.0 13.0 14.9 16.2 19.0 21.9 25.7 26.7 27.1 27.7 27.7 28.6 28.6 28.0 27.9 27.2 26.1 25.0 22.0 18.5 17.9																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C
Portable Rycroft - June 2016



Hourly Averages

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

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1 Spd	5	7	12	4	3	1	3	5	4	3	5	7	9	12	6	6	7	5	4	5	4	6	3	7	4.5	11.9
Dir	169	244	247	251	251	212	194	171	176	203	265	221	226	248	209	230	230	183	187	174	138	157	148	173	212.0	246.9
2 Spd	6	6	2	5	5	5	6	6	5	8	9	8	9	12	19	16	17	16	12	16	10	4	11	10	8.4	19.0
Dir	153	146	188	181	153	183	176	184	195	194	205	219	215	220	246	240	232	233	226	229	227	211	183	187	212.4	246.0
3 Spd	11	8	8	7	10	11	10	8	22	25	26	20	16	13	15	15	23	18	15	14	12	7	7	10	13.1	26.2
Dir	187	195	192	196	192	196	200	208	233	233	240	234	232	221	205	222	232	229	223	200	194	194	182	176	216.1	240.2
4 Spd	9	10	8	6	6	7	11	27	32	25	21	22	18	24	28	32	35	34	32	27	17	8	5	6	17.7	34.8
Dir	181	180	191	196	223	204	223	237	241	240	244	245	241	249	251	248	252	254	256	258	237	226	201	186	240.3	251.9
5 Spd	8	9	11	8	6	4	2	7	6	2	1	2	4	5	5	5	5	7	7	4	1	1	2	3	1.6	10.6
Dir	174	170	171	171	172	177	259	261	289	264	278	322	25	280	34	52	99	84	73	80	129	133	131	98	151.0	171.0
6 Spd	3	2	4	2	3	3	2	1	3	4	13	16	23	21	14	8	12	14	11	13	17	9	5	7	6.7	22.6
Dir	84	53	37	88	32	73	60	51	160	227	261	255	255	240	235	226	228	207	210	228	238	230	194	187	232.3	255.5
7 Spd	7	10	7	6	6	11	4	15	21	22	25	22	19	17	16	16	15	12	12	14	3	4	5	2	10.4	25.1
Dir	194	231	188	180	204	243	260	248	266	274	265	260	255	257	255	260	261	259	276	307	31	134	155	193	254.8	265.2
8 Spd	7	3	2	6	2	1	1	1	1	7	4	6	6	7	10	12	22	22	19	16	16	8	10	5	6.0	22.3
Dir	172	186	151	164	187	71	240	2	62	20	57	124	102	69	36	42	35	40	35	26	34	11	17	8	43.7	40.1
9 Spd	7	11	7	7	9	10	9	11	11	10	17	19	23	16	6	4	7	7	9	13	12	5	6	5	7.1	23.1
Dir	333	330	316	287	281	271	282	289	288	323	9	353	343	347	284	212	234	240	235	247	241	261	232	267	299.5	343.4
10 Spd	5	3	3	3	2	3	3	3	3	0	3	11	11	12	9	15	18	19	16	13	8	7	4	4	4.6	19.5
Dir	240	165	181	222	234	237	236	245	171	0	50	26	47	63	87	46	46	48	59	59	60	161	131	143	63.0	48.4
11 Spd	3	3	7	13	10	10	11	11	12	10	13	13	11	11	9	4	11	17	19	17	13	13	9	3	3.2	18.9
Dir	145	84	65	56	37	39	51	38	40	50	47	46	32	20	34	21	277	274	264	248	238	237	236	219	4.4	264.0
12 Spd	4	5	4	15	9	6	4	6	7	12	16	24	25	32	35	35	33	29	28	21	14	9	10	11	16.1	35.4
Dir	185	189	237	245	230	217	239	193	211	228	233	234	233	234	235	237	235	230	230	227	222	215	193	195	228.6	236.5
13 Spd	10	9	10	9	9	9	9	9	11	15	13	12	9	8	8	7	7	9	7	6	5	3	1	1	7.0	15.2
Dir	195	194	194	193	189	193	199	205	218	230	229	229	219	210	231	221	230	262	287	275	295	30	50	228	219.6	230.3
14 Spd	6	7	6	4	2	3	2	4	4	8	13	12	15	12	11	9	4	10	8	14	17	23	23	18	7.4	22.9
Dir	178	165	177	207	176	172	204	256	197	216	274	276	271	259	243	226	61	43	237	243	254	253	261	273	247.7	261.3
15 Spd	15	15	14	11	11	12	12	16	9	10	11	9	12	24	16	16	5	29	35	30	25	28	26	30	16.1	35.4
Dir	273	275	284	282	276	267	270	239	213	200	200	202	235	242	210	190	215	258	257	242	238	242	241	240	244.0	257.2
16 Spd	31	33	31	30	28	28	26	30	30	27	28	29	32	35	35	36	38	34	33	32	30	26	32	28	30.7	37.9
Dir	238	239	239	240	241	243	244	249	249	244	242	246	251	255	253	254	256	258	260	261	258	257	256	255	249.9	256.1
17 Spd	28	28	25	22	22	11	15	16	16	16	14	10	10	12	9	12	10	18	25	18	13	4	4	4	14.4	28.3
Dir	257	256	257	255	254	235	251	251	244	239	240	224	204	194	214	228	225	230	236	236	235	198	193	193	239.7	256.7
18 Spd	7	2	3	6	5	6	6	5	4	11	12	8	7	8	13	11	15	15	14	12	10	4	7	7	5.7	14.6
Dir	177	260	192	187	183	170	171	191	208	266	257	253	243	269	270	269	265	270	263	269	2	128	167	181	244.1	270.2
19 Spd	6	6	4	3	5	3	6	9	18	17	16	25	29	29	19	20	21	21	14	9	5	4	8	8	11.4	29.0
Dir	209	184	191	193	190	195	235	240	261	258	252	253	272	249	236	251	254	253	242	232	226	205	167	167	242.8	271.5
20 Spd	6	0	2	7	7	7	7	7	7	9	10	5	4	4	5	5	6	6	4	2	1	3	5	4	4.0	9.7
Dir	154	62	120	167	167	177	173	182	182	258	260	201	196	246	192	176	172	165	153	131	125	139	138	159	182.2	260.1
21 Spd	3	5	3	4	5	6	4	6	7	5	6	8	8	5	6	8	7	12	6	8	7	21	8	5	5.7	21.2
Dir	191	192	222	197	171	157	170	258	269	266	258	254	243	220	216	212	222	231	243	243	229	247	292	316	235.5	247.0
22 Spd	3	5	6	7	8	9	9	7	6	4	14	15	14	12	8	9	13	14	11	9	9	8	4	4	7.0	14.6
Dir	145	174	153	176	178	175	181	185	230	285	267	258	254	256	245	209	191	191	199	192	180	243	196	242	212.6	258.3



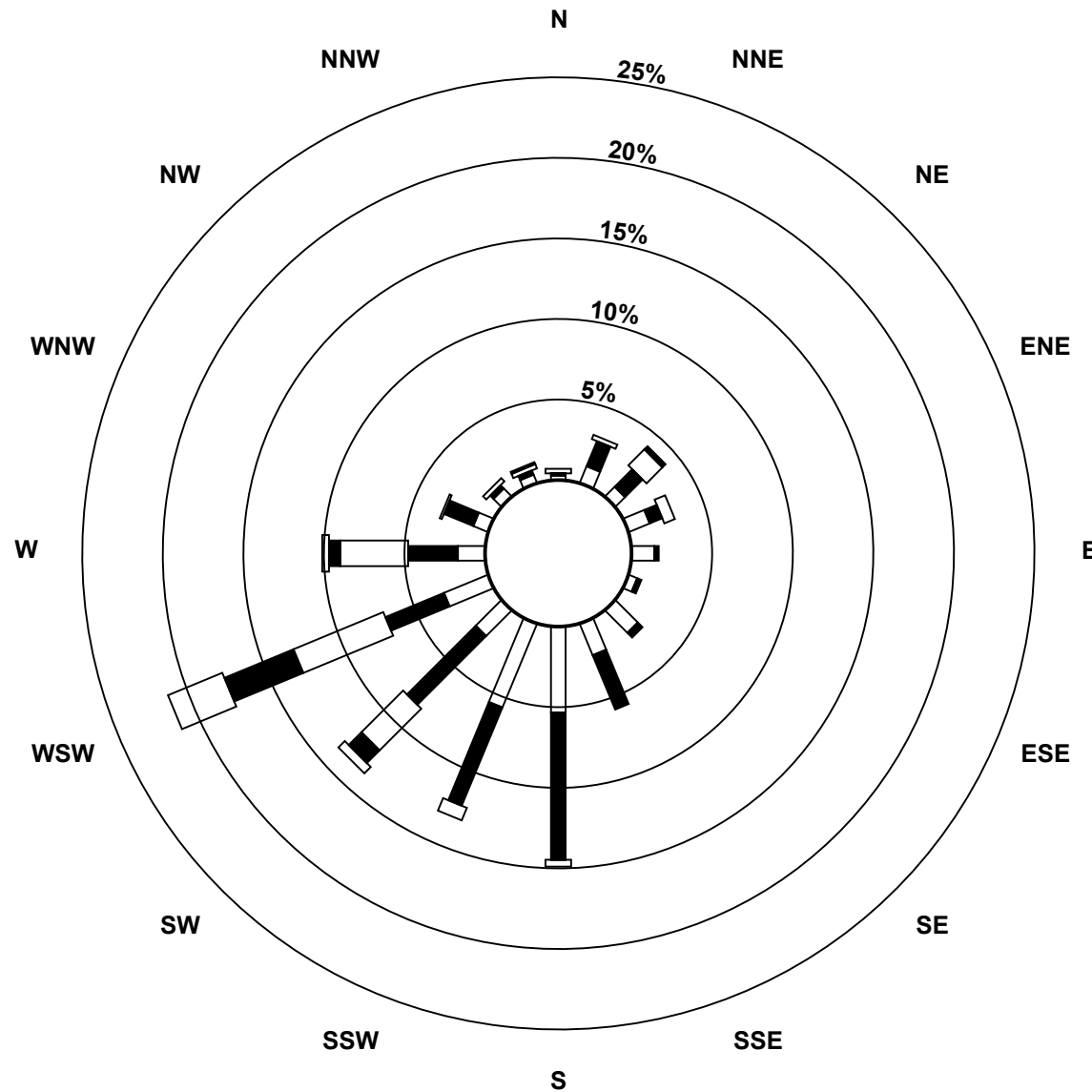
Hourly Averages

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

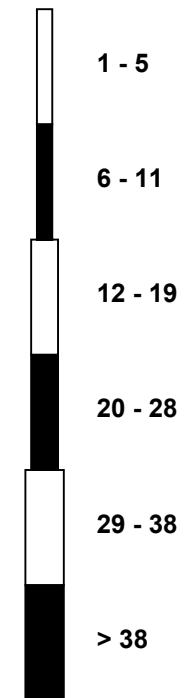
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	4	5	3	4	5	5	3	6	6	6	5	3	4	7	10	7	15	12	14	2	4	2	7	6	4.4	14.6
Dir	213	241	195	164	167	166	244	274	271	246	249	285	320	290	271	256	321	333	276	336	266	221	255	251	268.3	321.2
24 Spd	3	7	6	8	7	6	7	9	7	2	2	6	5	2	3	3	5	4	7	5	2	2	5	6	3.4	8.6
Dir	266	253	254	262	259	277	265	267	286	301	283	289	251	338	126	80	211	193	185	189	201	198	186	167	243.7	267.3
25 Spd	6	6	6	6	6	6	4	4	16	16	16	17	14	14	8	9	7	4	5	7	6	4	5	3	6.7	16.7
Dir	171	180	179	180	176	174	166	214	257	261	258	263	257	265	206	194	195	195	214	221	234	221	249	193	227.7	262.6
26 Spd	5	6	6	7	6	9	9	9	7	8	7	7	7	8	8	8	14	17	16	10	3	2	6	6	5.6	16.8
Dir	154	150	157	152	149	163	182	189	198	197	200	216	191	194	195	228	263	261	258	301	329	170	172	161	207.3	261.2
27 Spd	6	5	7	7	7	6	6	6	8	12	9	5	6	6	8	7	3	3	3	2	1	2	3	5	4.1	11.6
Dir	214	181	153	167	165	182	176	234	255	260	250	215	236	244	266	272	287	195	209	181	147	99	182	186	217.3	259.9
28 Spd	7	8	8	7	8	8	7	4	2	1	4	5	6	7	5	1	0	9	3	2	4	2	4	6	1.6	9.2
Dir	176	166	172	177	176	174	174	174	258	337	17	31	50	26	8	83	321	17	68	257	286	206	173	179	154.0	17.5
29 Spd	7	8	6	5	8	6	3	2	4	7	8	10	11	11	14	17	14	10	9	3	4	2	5	5	4.0	16.9
Dir	173	172	174	164	184	181	179	318	21	22	22	22	29	41	43	49	60	110	145	69	66	113	61	83	73.6	49.4
30 Spd	3	1	1	1	3	7	6	6	5	4	1	19	18	18	12	18	13	10	7	5	4	5	3	4	4.9	19.3
Dir	208	110	179	246	321	58	65	162	226	242	195	245	256	256	237	247	257	262	258	245	189	179	108	78	242.2	244.6
Spd	5.7	5.3	4.9	5.2	4.8	4.6	4.5	6.5	7.6	7.9	8.2	8.4	8.4	9.2	8.3	8.0	8.2	8.3	9.2	8.1	5.8	5.5	4.8	4.9	Diurnal Average	
Dir	206.8	214.6	212.0	210.6	211.4	206.3	217.7	233.6	243.7	248.8	253.8	252.8	254.7	251.4	241.2	239.0	247.8	248.8	245.3	245.8	240.6	229.1	218.1	211.9	Diurnal Maximum	
Spd	30.7	32.7	31.3	30.0	28.2	28.4	26.5	30.1	32.1	27.0	27.6	28.6	31.9	35.1	35.4	36.1	37.9	34.3	35.4	31.9	29.9	27.6	32.5	29.7	Diurnal Maximum	
Dir	238.2	238.8	239.1	240.2	240.9	243.1	243.7	249.0	240.6	243.9	242.5	245.6	251.4	255.2	235.1	254.4	256.1	258.3	257.2	261.1	258.1	241.6	256.0	240.1		
Maximum Speed Value: 38 km/h on Jun 16 17:00								Minimum Speed Value: 0 km/h on Jun 28 17:00												Hours in Service:				720		
Maximum Daily Speed Average: 30.7 km/h on Jun 16								Minimum Daily Speed Average: 1.6 km/h on Jun 5												Hours of Data:				720		
Maximum Diurnal Speed Average: 9.2 km/h at hour 19								Minimum Diurnal Speed Average: 4.5 km/h at hour 7												Hours of Missing Data:				0		
Monthly Average Velocity: 6.49 km/h 236.67 deg								Speed Percentiles: P ₁ = 1.0 P ₁₀ = 2.9 Q ₁ = 4.8 Median = 7.4 Q ₃ = 13.0 P ₉₀ = 21.6 P ₉₉ = 34.7												Percent Operational Time:				100.0		
All monthly, daily, and diurnal averages have been calculated using vector methods																										
Frequency Distribution																										
Speed Range (km/h)																										
Direction	0 to 5		5 to 11		11 to 19		19 to 28		28 to 38		> 38		Total													
North	7		9		4		1		0		0		21													
NorthEast	17		18		18		4		0		0		57													
East	16		7		0		0		0		0		23													
SouthEast	23		14		0		0		0		0		37													
South	59		125		9		0		0		0		193													
SouthWest	37		76		50		23		16		0		202													
West	20		50		57		19		22		0		168													
NorthWest	10		6		3		0		0		0		19													
Total	189		305		141		47		38		0		720													

Wind Rose

Wind Speed (WS) (km/h)
Portable Rycroft - June 2016



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Rycroft - June 2016

Maximum Speed: 38 km/h on Jun 16 17:00																				Maximum Daily Speed Average: 31.0 km/h on Jun 16										Hours in Service: 720	
Minimum Speed: 1 km/h on Jun 20 21:00																				Minimum Daily Speed Average: 5.6 km/h on Jun 28										Hours of Data: 720	
Maximum Diurnal Speed Average: 15.0 km/h at hour 18																				Minimum Diurnal Speed Average: 7.3 km/h at hour 7										Hours of Missing Data: 0	
Monthly Average Speed: 10.51 km/h																				Percentiles: P ₁ = 1.8 P ₁₀ = 3.7 Q ₁ = 5.4 Median = 7.9 Q ₃ = 13.3 P ₉₀ = 21.9 P ₉₉ = 35.1										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-Jun	5	8	12	5	3	2	3	5	4	5	7	8	10	12	8	7	8	6	5	5	4	6	4	7	6.1	12.1					
2-Jun	6	6	2	6	5	6	6	6	5	8	9	8	10	13	19	16	17	16	13	16	10	4	11	10	9.5	19.3					
3-Jun	11	8	8	7	10	11	10	9	22	25	26	20	17	14	16	16	24	18	15	14	12	7	7	10	14.1	26.4					
4-Jun	9	10	8	6	6	7	12	27	32	26	22	22	19	24	28	33	35	34	32	27	17	8	5	6	18.9	35.2					
5-Jun	8	9	11	8	6	4	2	8	7	4	4	5	6	7	7	8	7	8	8	4	1	2	2	3	5.7	10.6					
6-Jun	3	3	4	3	3	3	2	3	4	7	13	16	23	21	14	9	12	14	11	14	17	10	5	7	9.3	23.2					
7-Jun	7	10	7	6	7	12	6	15	21	23	25	22	19	18	16	16	16	13	13	14	4	4	5	2	12.6	25.5					
8-Jun	8	5	5	6	3	3	4	4	8	7	5	7	7	8	10	12	22	22	19	16	16	9	10	6	9.3	22.4					
9-Jun	8	11	8	7	9	10	10	11	11	11	18	19	23	16	8	4	7	8	9	13	12	5	6	6	10.4	23.1					
10-Jun	5	3	3	3	2	3	3	4	3	3	4	12	12	12	10	16	18	20	16	13	8	7	5	4	7.9	19.8					
11-Jun	3	4	8	13	10	10	11	11	12	10	13	13	11	11	9	5	12	17	19	17	13	13	9	4	10.7	19.0					
12-Jun	4	5	4	16	9	7	5	6	8	12	17	25	26	32	36	36	34	29	28	21	14	9	10	11	16.7	35.6					
13-Jun	10	9	10	9	9	9	9	9	11	16	13	12	9	8	9	9	9	10	8	7	6	4	2	1	8.7	15.5					
14-Jun	6	7	7	5	3	4	2	5	5	9	13	12	15	13	11	10	13	11	8	14	17	23	23	18	10.5	22.9					
15-Jun	15	15	14	11	11	12	12	16	10	10	11	9	14	24	17	16	8	29	36	30	25	28	27	30	17.9	35.6					
16-Jun	31	33	31	30	28	28	27	30	30	27	28	29	32	35	35	36	38	34	33	32	30	26	33	28	31.0	38.0					
17-Jun	28	28	25	22	22	11	15	16	16	17	14	10	10	12	9	12	10	18	25	19	13	4	4	4	15.2	28.3					
18-Jun	7	4	3	6	5	6	6	5	4	12	13	9	8	9	14	12	15	15	14	12	15	5	8	7	8.8	14.9					
19-Jun	7	6	4	3	5	3	6	9	19	17	16	25	29	29	19	21	22	21	14	9	5	4	8	8	12.8	29.4					
20-Jun	6	4	3	8	7	7	7	7	7	10	10	7	5	5	6	6	7	6	5	2	1	3	5	4	5.7	10.0					
21-Jun	4	5	3	6	5	6	4	6	7	6	7	9	8	8	7	8	7	12	7	8	8	22	8	10	7.4	21.7					
22-Jun	4	6	6	7	8	9	9	7	7	5	14	15	15	13	9	9	13	14	11	9	9	9	5	4	9.1	15.2					
23-Jun	5	5	6	5	5	5	4	7	6	7	6	5	6	8	11	8	16	13	14	3	5	3	7	6	6.9	16.3					
24-Jun	4	7	6	8	7	6	7	9	7	3	4	7	5	8	4	4	7	5	7	5	2	2	5	6	5.7	8.6					
25-Jun	6	6	6	6	7	6	4	5	16	16	17	17	14	14	8	9	7	5	5	7	6	5	5	3	8.4	17.0					
26-Jun	5	6	6	7	6	9	9	9	8	8	7	7	8	8	9	10	14	17	17	11	3	2	6	6	8.3	17.1					
27-Jun	7	6	7	7	7	6	6	7	8	12	9	5	7	8	8	8	4	4	4	2	1	2	3	5	6.0	11.9					
28-Jun	8	8	8	7	8	8	7	4	2	2	4	5	6	7	6	4	5	10	3	4	4	3	4	6	5.6	9.9					
29-Jun	7	8	6	5	8	6	3	3	5	7	8	10	11	11	14	17	14	11	9	4	5	3	6	5	7.8	17.1					
30-Jun	4	2	2	2	4	8	6	6	6	4	6	19	19	18	13	19	14	10	7	5	4	5	3	4	7.8	19.4					
8.0 8.2 7.9 8.1 7.6 7.6 7.3 8.9 10.3 10.9 12.1 13.0 13.5 14.2 13.0 13.2 14.5 15.0 13.8 12.0 9.6 7.9 8.0 7.8																									Diurnal Average						
30.8 32.8 31.3 30.1 28.2 28.4 26.5 30.1 32.2 27.0 27.7 28.7 32.2 35.2 35.5 36.2 38.0 34.4 35.6 31.9 29.9 27.6 32.5 29.7																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

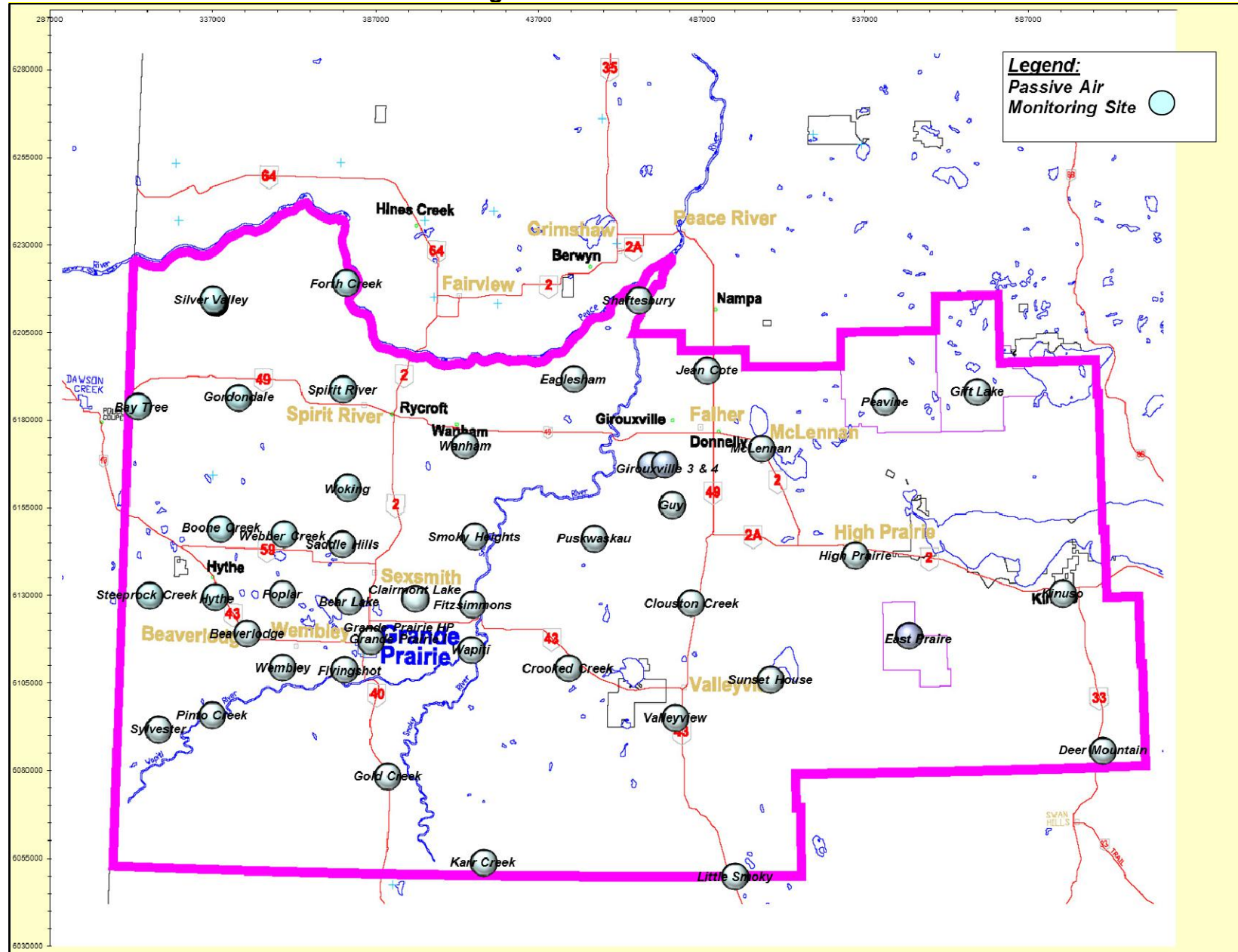
Wind Direction (WD) - deg
Portable Rycroft - June 2016

Maximum Value: 100.2 deg on Jun 10 10:00																			Hours in Service: 720						
Minimum Value: 2.5 deg on Jun 28 02:00																			Hours of Data: 720						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 2.8 P ₁₀ = 5.0 Q ₁ = 7.9 Median = 13.9 Q ₃ = 28.0 P ₉₀ = 46.6 P ₉₉ = 84.7																			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-Jun	12	36	14	23	25	73	21	17	29	51	49	31	28	19	41	39	34	30	45	13	14	15	25	11	73.0
2-Jun	12	19	25	14	13	16	10	8	17	11	12	15	15	19	11	10	11	10	12	6	7	12	5	5	25.4
3-Jun	5	5	5	8	6	5	8	10	11	7	8	11	16	17	15	13	11	10	12	7	5	5	6	4	17.2
4-Jun	4	4	9	7	11	14	17	6	5	6	14	13	14	10	11	9	9	7	6	5	4	12	8	11	16.5
5-Jun	4	5	3	6	12	15	76	16	23	75	87	82	74	50	60	69	50	32	17	25	51	64	56	30	87.2
6-Jun	27	73	19	54	49	28	23	80	31	51	14	10	14	10	6	25	23	11	9	12	5	24	7	6	79.6
7-Jun	5	11	8	26	25	55	66	7	12	12	11	14	15	19	18	17	16	17	17	16	31	27	10	20	66.3
8-Jun	9	60	90	13	72	76	80	91	86	18	45	28	33	24	21	9	7	7	7	7	5	13	17	40	91.3
9-Jun	24	10	16	9	10	4	23	10	9	32	7	6	5	7	40	24	12	48	7	8	6	31	26	37	47.9
10-Jun	14	35	15	38	45	29	41	46	33	100	50	13	23	22	33	16	11	10	9	8	25	19	33	21	100.2
11-Jun	33	51	20	5	10	6	5	4	11	7	7	7	10	8	14	38	32	13	5	8	8	4	5	33	50.9
12-Jun	10	17	28	9	8	20	39	18	17	13	11	9	10	6	5	7	6	6	5	6	7	8	9	5	39.3
13-Jun	5	5	5	5	5	5	8	8	13	12	14	16	17	18	27	43	40	31	34	37	21	29	77	37	76.6
14-Jun	22	12	27	33	44	37	27	42	22	23	17	11	12	16	23	18	83	48	22	5	6	4	3	9	82.6
15-Jun	9	5	6	4	5	5	5	10	16	6	7	8	29	5	18	9	44	6	4	4	6	3	3	3	44.3
16-Jun	3	3	3	3	3	3	3	3	3	4	5	5	6	4	4	4	4	3	3	3	3	3	3	3	6.4
17-Jun	3	2	2	3	3	8	5	6	6	7	10	17	18	10	12	13	13	7	5	4	7	18	14	13	17.8
18-Jun	8	58	11	7	9	8	7	13	32	17	23	29	37	32	17	18	15	11	9	7	59	29	21	9	58.7
19-Jun	17	8	19	16	12	17	20	16	11	8	10	6	10	8	11	12	11	7	11	11	9	21	5	4	21.3
20-Jun	11	89	65	23	8	5	6	7	10	31	17	41	57	56	49	44	34	31	37	34	66	18	13	23	88.5
21-Jun	13	9	20	46	16	11	26	21	14	35	46	30	28	59	26	25	17	9	24	27	32	13	17	64	64.0
22-Jun	48	22	14	7	5	6	5	7	30	29	14	18	16	19	37	23	7	8	10	11	8	21	32	25	48.1
23-Jun	25	23	65	68	9	13	33	16	26	28	42	66	56	36	19	24	38	17	7	53	64	52	34	10	67.9
24-Jun	68	11	13	5	6	18	4	6	13	61	61	37	47	78	38	37	47	41	10	13	24	27	5	11	78.3
25-Jun	9	5	5	4	13	10	13	25	7	10	10	12	19	14	17	7	10	16	25	17	38	24	16	16	38.4
26-Jun	18	8	10	7	8	8	6	8	10	12	19	28	23	23	20	40	21	11	9	27	34	23	8	19	40.2
27-Jun	31	32	9	5	8	14	8	26	32	16	29	38	43	45	28	33	64	44	42	23	46	33	13	6	63.6
28-Jun	10	2	3	5	4	3	8	19	71	44	31	28	24	30	33	83	82	22	33	85	16	36	35	8	85.3
29-Jun	5	8	4	12	5	7	45	57	34	13	12	14	14	16	11	10	18	26	9	35	40	63	16	22	62.6
30-Jun	49	58	54	51	40	20	18	17	34	36	82	6	11	14	15	14	6	8	20	23	13	8	18	31	82.0
	68.3	88.5	89.9	67.9	72.0	76.4	80.1	91.3	86.2	100.2	87.2	82.0	73.9	78.3	60.5	82.9	82.6	47.9	44.5	85.3	66.0	64.3	76.6	64.0	

PAZA

Monthly Passive Data Summary

Location of PAZA Passive Monitoring Stations



PAZA Passive Results for June 2016

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
9a	Spirit River	0.4	29.5	0.9		
9b	Spirit River	0.2	28.8	1.1		
28a	Clairmont Lake	0.1	33.4	0.9		
28b	Clairmont Lake	0.1	32.5	1.4		
32a	Gold Creek	0.0	19.9	0.6		
32b	Gold Creek	0.1	28.1	0.5		
35a	Jean Cote	0.1	29.6	1.4		
35b	Jean Cote	0.1	29.4	1.2		
63a	Girouxville 3				0.1	
63b	Girouxville 3				0.1	
1	Silver Valley	0.2	N/S	0.7		08-27-081-11 W6M
2	Bay Tree	0.1	30.0	0.2		13-16-078-13 W6M
3	Fourth Creek	0.1	32.0	0.3		04-13-082-07 W6M
4	Gordondale	0.3	29.6	0.9		04-34-078-10 W6M
5	Boone Creek	0.1	26.2	0.3		16-36-074-11 W6M
7	Steeprock Creek	0.1	29.3	N/S		09-35-072-13 W6M
9	Spirit River	0.3	29.2	1.0		08-12-079-07 W6M
10	Woking	0.2	28.5	0.4		01-13-076-07 W6M
11	Webber Creek	0.1	30.0	0.8		09-36-074-09 W6M
12	Hythe	0.1	30.2	0.5		14-36-072-11 W6M
14	Sylvester	0.0	26.3	0.3		08-06-069-12 W6M
16	Beaverlodge	0.1	32.7	0.4		15-36-071-10 W6M
17	Poplar	0.2	30.5	1.3		13-06-073-08 W6M
18	Saddle Hills	0.2	28.5	0.5		04-25-074-07 W6M
19	Wanham	0.3	36.5	0.3		16-22-077-03 W6M
20	Shaftesbury	0.1	29.3	0.7		04-03-082-23 W5M
21	Eaglesham	0.1	27.1	0.8		16-21-079-25 W5M
23	Bear Lake	0.1	31.8	1.1		15-31-072-06 W6M
24	Wembley	0.2	31.9	1.4		12-31-070-08 W6M
25	Pinto Creek	0.1	34.2	0.2		04-24-069-11 W6M
26	Flyingshot	0.1	34.5	0.7		15-36-070-07 W6M
27	Grande Prairie I	0.1	36.4	1.6		08-15-071-06 W6M

PAZA Passive Results for June 2016 (Continued)

28	Clairmont Lake	0.1	32.9	1.2	09-06-073-04 W6M
29	Smoky Heights	0.3	34.0	0.4	04-06-075-02 W6M
30	Fitzsimmons	0.1	25.1	0.7	15-36-072-03 W6M
32	Gold Creek	0.1	24.0	0.6	06-33-067-05 W6M
33	Wapiti	0.1	27.9	0.6	02-25-071-03 W6M
34	Puskwaskau	0.1	21.6	0.2	15-35-074-25 W5M
35	Jean Cote	0.1	29.5	1.3	12-35-079-21 W5M
36	Guy	0.1	30.2	3.4	03-04-076-22 W5M
37	Crooked Creek	0.0	29.6	0.4	16-01-071-26 W5M
38	Karr Creek	0.1	28.3	0.5	10-16-065-02 W6M
39	Clouston Creek	0.1	30.1	1.1	12-01-073-22 W5M
40	McLennan	0.2	35.0	1.6	03-29-077-19 W5M
41	Valleyview	0.1	31.1	0.5	09-30-069-22 W5M
42	Sunset House	0.1	38.3	0.5	05-32-070-19 W5M
43	High Prairie	0.1	30.8	0.6	16-13-074-17 W5M
44	Peavine	0.1	25.6	0.1	03-05-079-15 W5M
45	Gift Lake	0.1	25.4	0.1	10-07-079-12 W5M
46	Little Smoky	0.0	28.0	0.9	12-01-065-21 W5M
47	Kinuso	0.0	27.8	0.2	12-10-073-10 W5M
65	Deer Mountain 2	0.1	26.6	0.2	15-22-068-09 W5M
49	Grande Prairie HP	0.1	36.0	1.1	17-26-071-06 W6M
50	East Prairie	0.1	28.4	BDL	13-02-072-15 W5M
63	Girouxville 3			0.1	14-02-077-23 W5M
64	Girouxville 4			0.3	4-08-077-22 W5M

*BDL = Below Detection Level

*NS - No sample

Passive Summary for June 2016

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

Passive Summary for June 2016 (PAZA Zone)				
Mean	0.1	30.0	0.7	0.2
Standard Deviation	0.1	3.6	0.6	0.1
Minimum	BDL	21.6	0.1	0.1
Minimum At	Sylvester (#14)	Puskwaskau (#34)	Gift Lake (#45)	Gift Lake (#45)
Maximum	0.3	38.3	3.4	0.3
Maximum At	Spirit River (#9)	Sunset House (#42)	Guy (#36)	Girouxville 4 (#64)

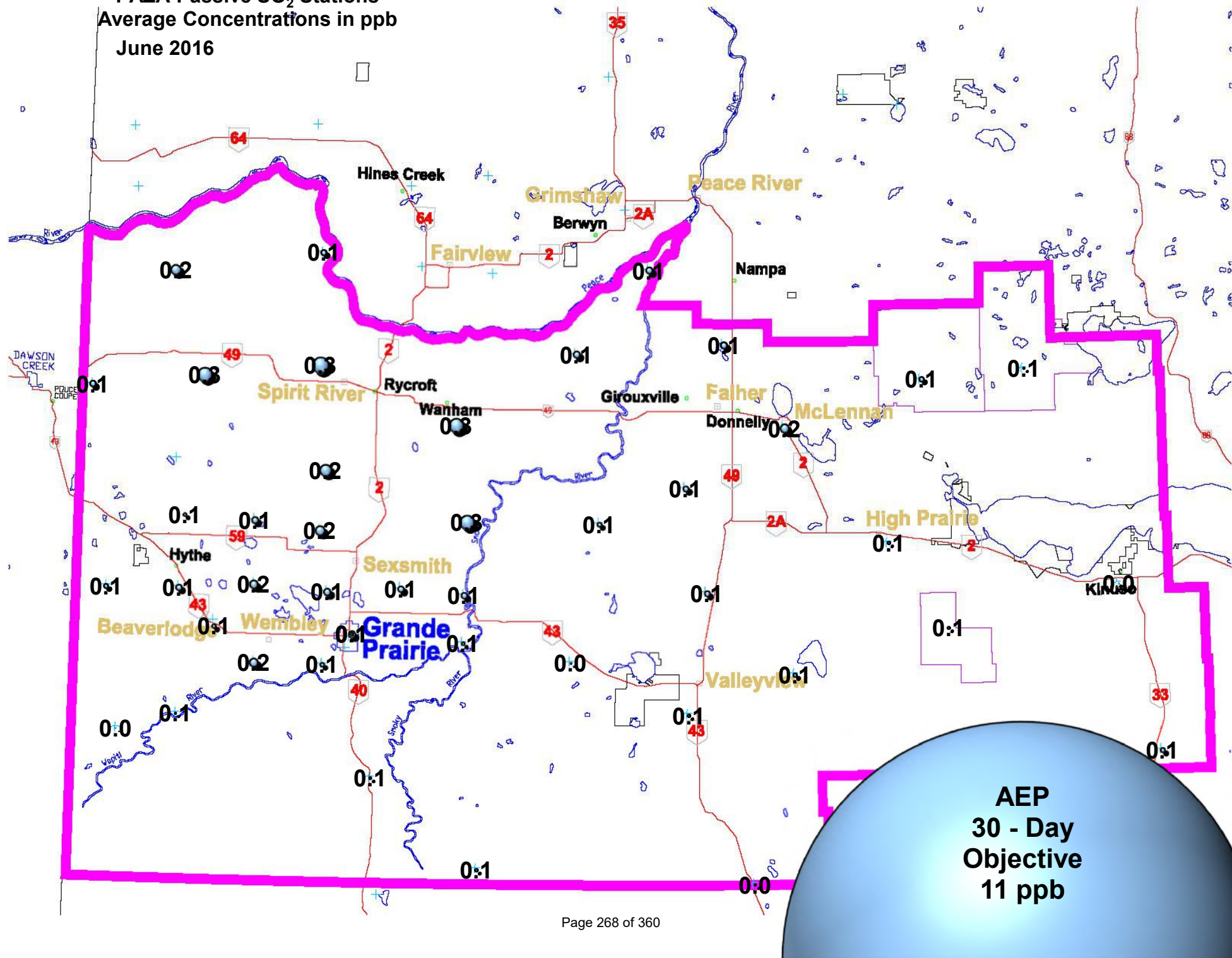
Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

	SO ₂	O ₃	NO ₂
PAZA Beaverlodge station	0.1	33.7	1.8
PAZA Beaverlodge passive	0.1	32.7	0.4

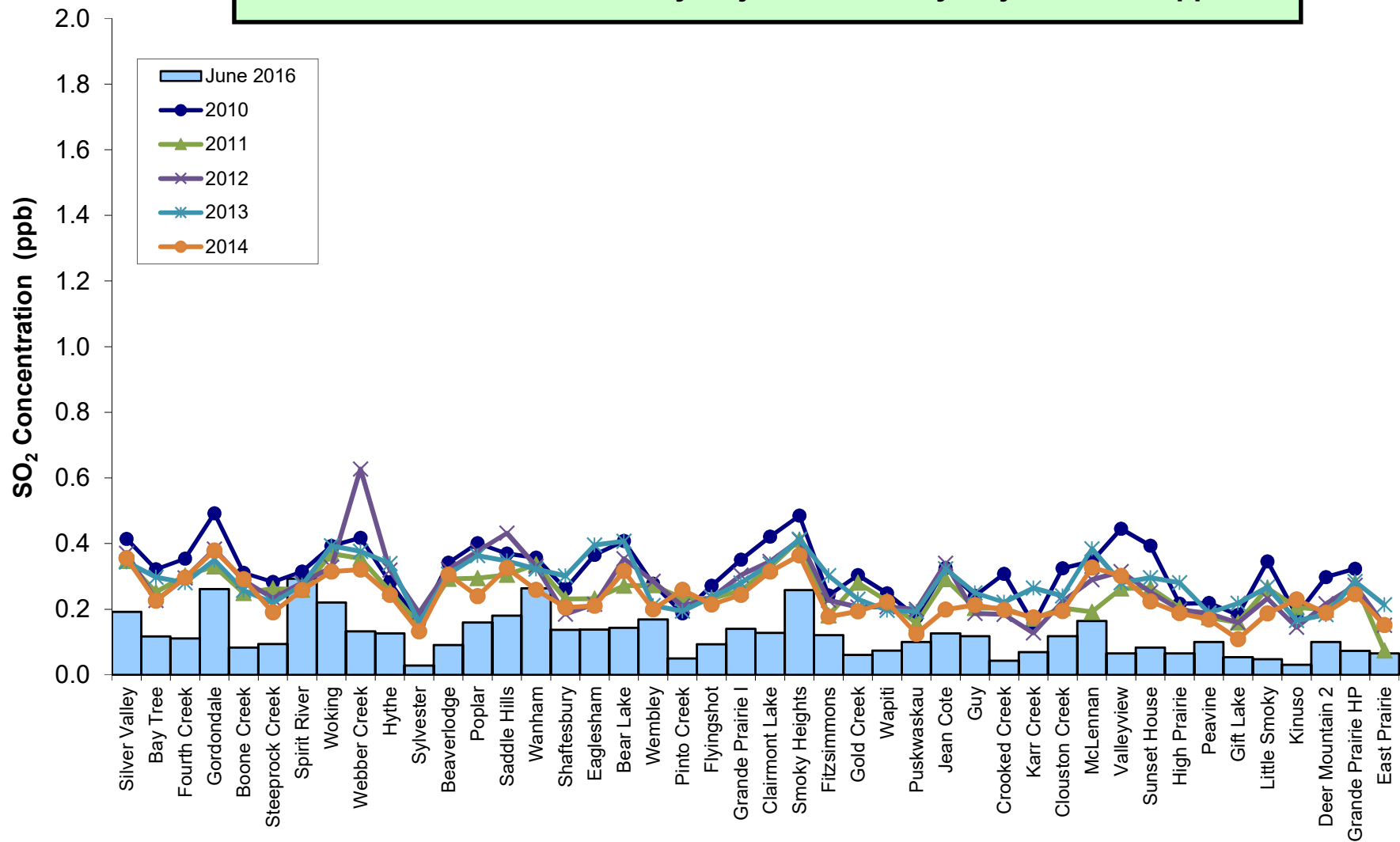
Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)

	SO ₂	O ₃	NO ₂
PAZA Henry Pirker station	0.1	29.6	4.2
PAZA Grande Prairie passive	0.1	36.0	1.1

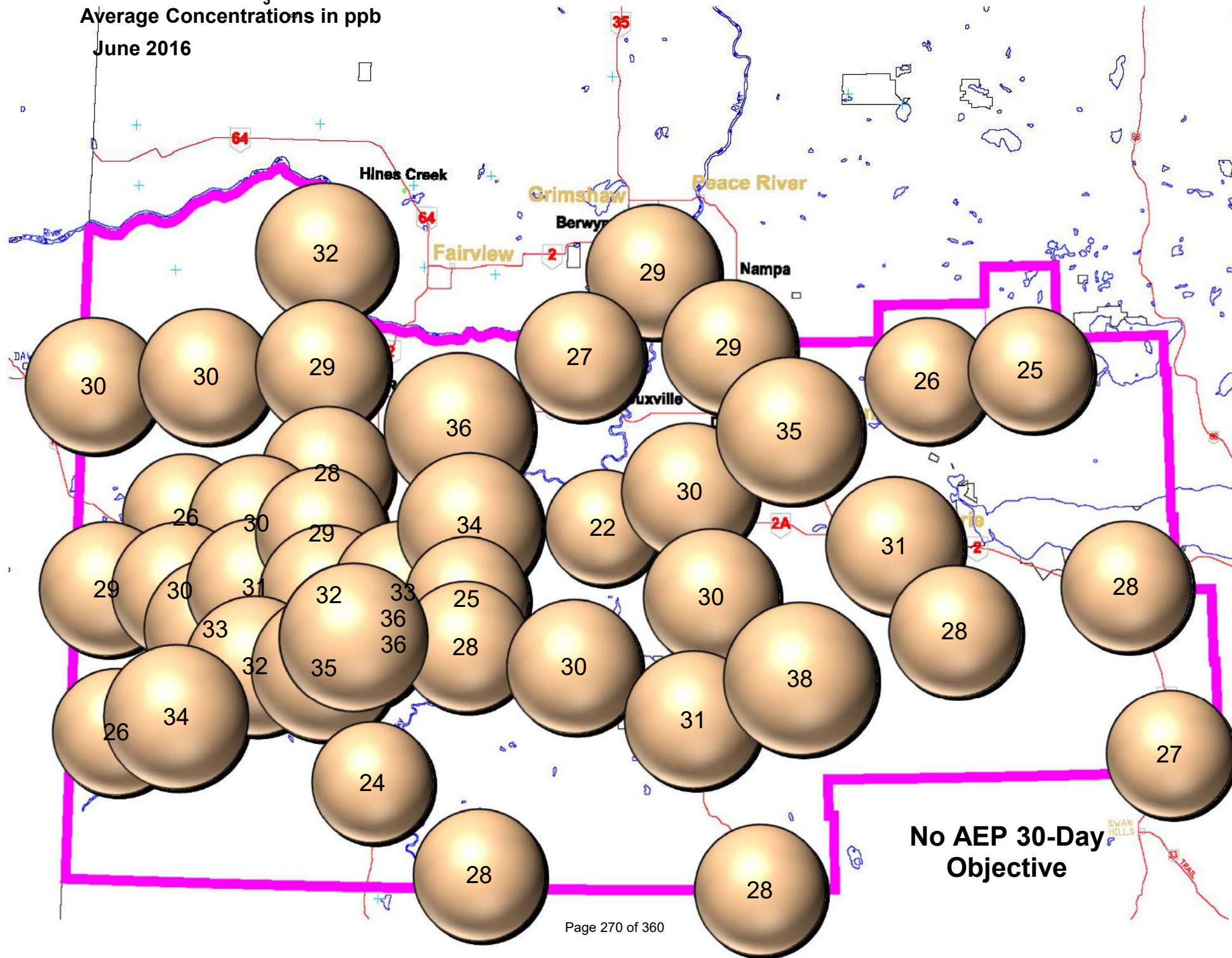
PAZA Passive SO₂ Stations
Average Concentrations in ppb
June 2016



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

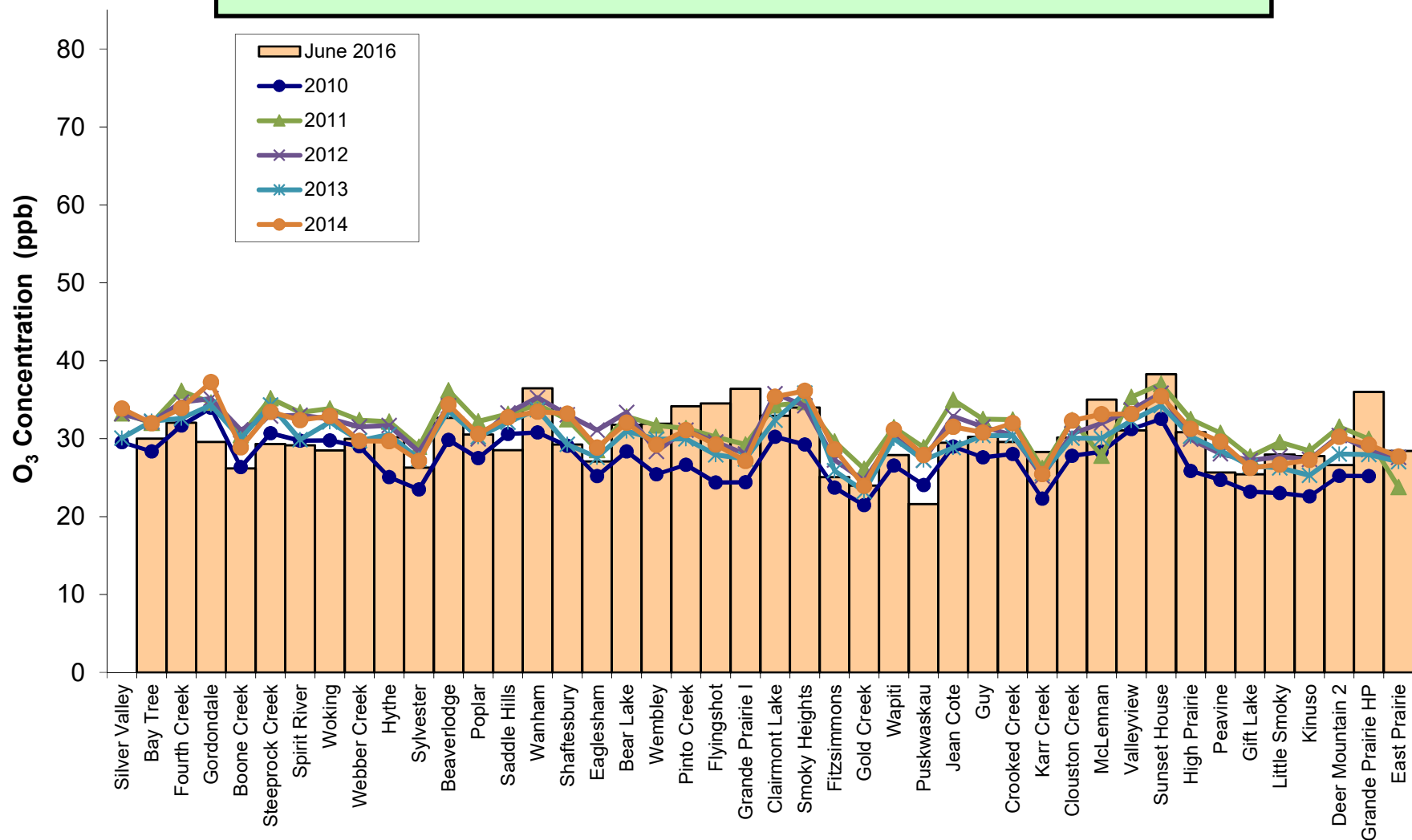


PAZA Passive O₃ Stations
Average Concentrations in ppb
June 2016

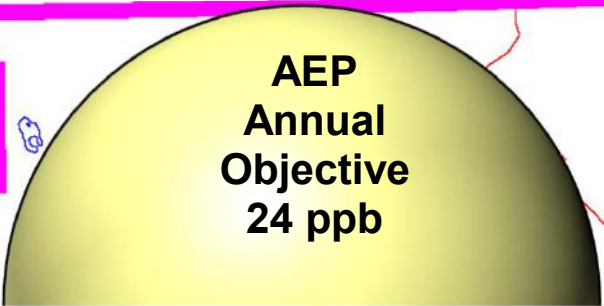


**No AEP 30-Day
Objective**

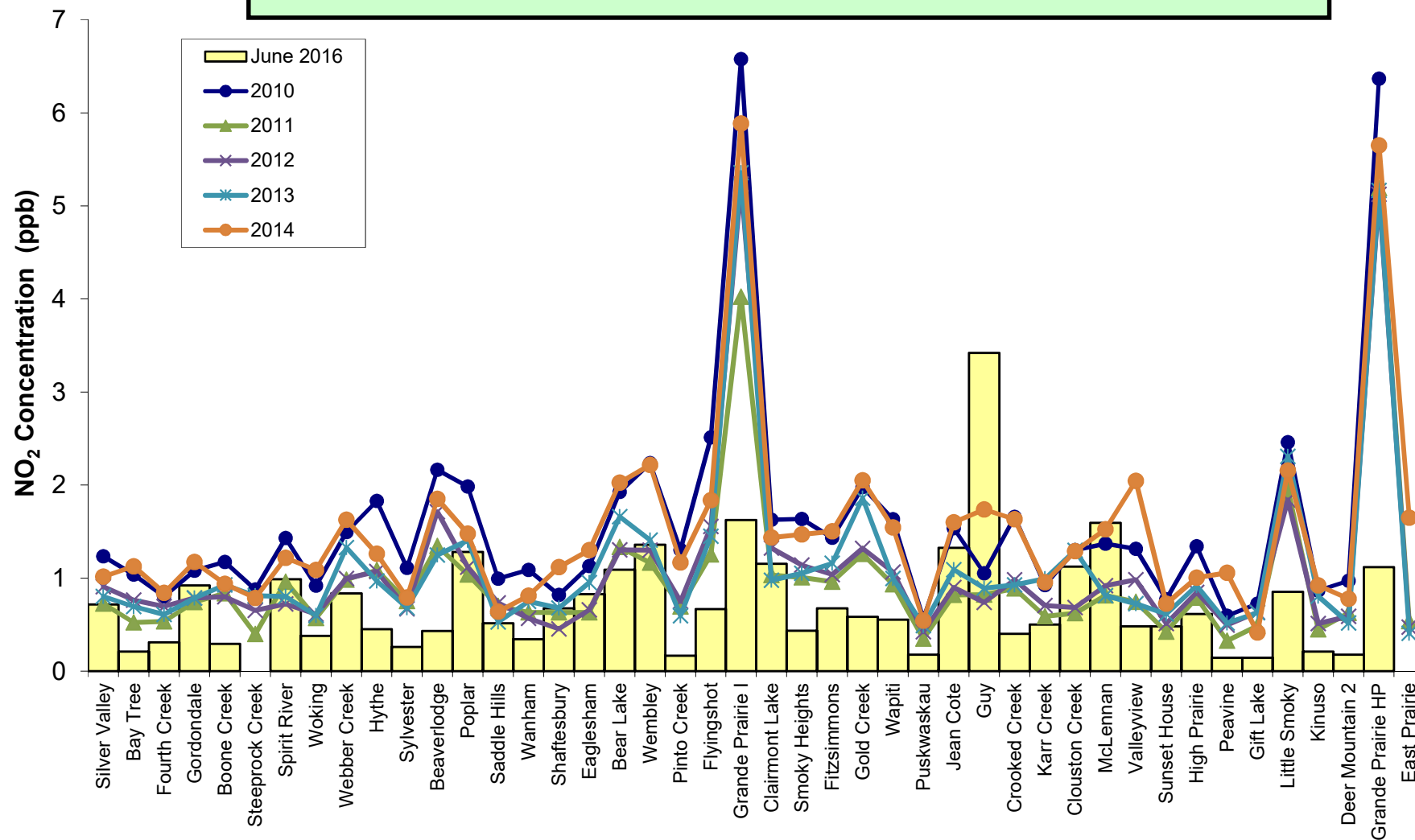
Alberta Ambient Air Quality Objective - No Annual O₃ Objective



June 2016



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



PAZA Passive H₂S Stations
Average Concentrations in ppb
June 2016

No AEP 30-Day Objective

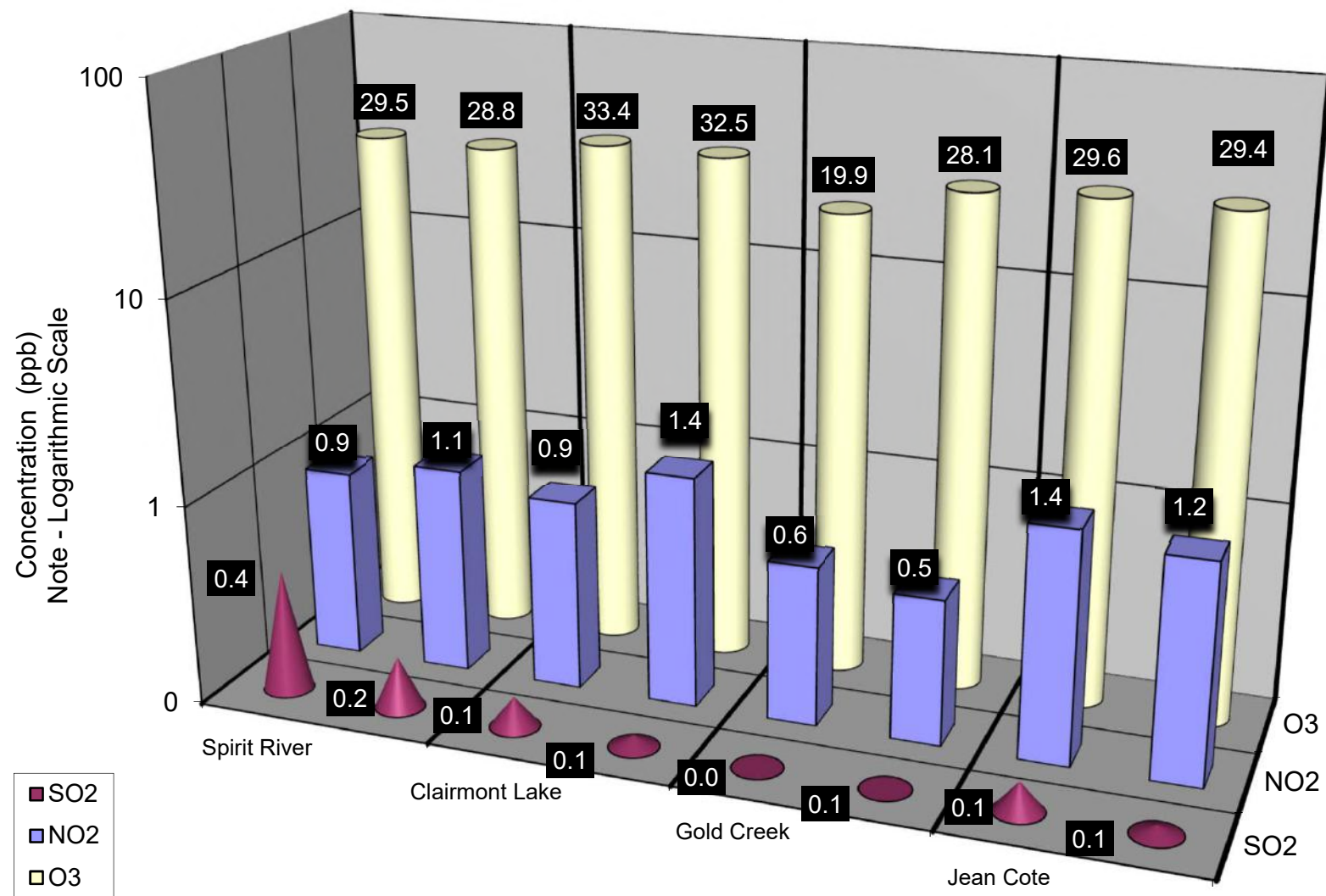
Page 274 of 360

PAZA Passive H₂S Stations
Average Concentrations in ppb
June 2016

The map displays the following locations and features:

- Towns and Communities:** Hines Creek, Grimshaw, Berwyn, Fairview, Nampa, Spirit River, Rycroft, Wanham, Girouxville, Falher, McLennan, Hythe, Sexsmith, Beaverlodge, Wembley, Grande Prairie, Valleyview, High Prairie, Kinuso, and Swan Hills.
- Rivers and Waterways:** Peace River, Spirit River, Smoky River, and Dawson Creek.
- Highways:** 64, 49, 2, 2A, 59, 43, 40, and 33.
- Other Features:** A large pink boundary, a black circle labeled 0013, and a note in the bottom right corner stating "No AEP 30-Day Objective".

Page 274 of 360



Duplicate Summary Chart

June 2016 Calibration Reports

PAZA - Henry Pirker Station with the following calibrations:
SO₂, NO, NO₂, NO_x, O₃, CO, THC, TRS, PM_{2.5}

PAZA – Evergreen Park Station with the following calibrations:
SO₂, TRS, PM_{2.5}

PAZA – Smoky Heights Station with the following calibrations:
SO₂, TRS, PM_{2.5}

PAZA – Beaverlodge Station with the following calibrations:
SO₂, NO, NO₂, NO_x, O₃, PM_{2.5}

PAZA – Valleyview Station with the following calibrations:
SO₂ & H₂S

PAZA – Rycroft Station with the following calibrations:
SO₂, NO, NO₂, NO_x, O₃, THC, TRS

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	June 10, 2016	Previous Calibration	May 2, 2016
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
			Other:
Start Time (MST)	8:50	End Time (MST)	11:25
Barometric Pressure	728.000 mm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Conc	49.7 ppm	Cal Gas Cert Date	October 5, 2018
		Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.993629	Calculated slope	0.989153
Calculated intercept	1.380484	Calculated intercept	0.884810
Analyzer make	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	1.52		1.52	
Coefficient	0.977		0.977	
Pressure	672.5	mm Hg	670.4	mm Hg
Flow	0.444	lpm	0.441	lpm
Lamp intensity	82	Hz	82	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4996	0.00	0.0	0.1	N/A
4998	39.94	394.0	398.1	0.9897
4997	19.99	198.0	198.3	0.9986
4999	9.89	98.1	97.6	1.0055
4996	0.00	0.0	0.1	As Found Zero
4996	39.93	394.1	398.1	As Found Span
Average Correction Factor				0.9979

Calculated value of As Found Response: 396.8 ppb Percent Change of As Found: -0.7%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	284.8	ppb	287.8	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



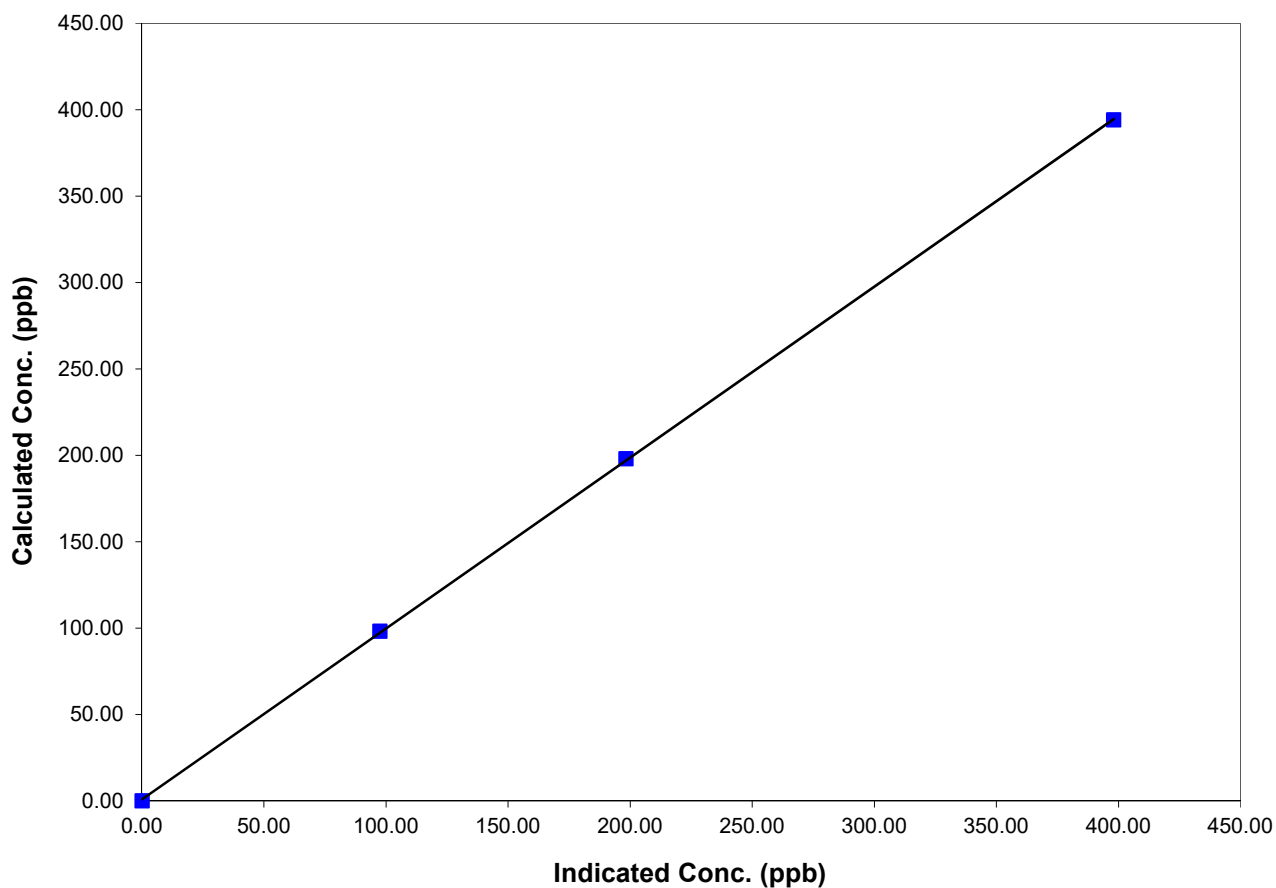
Station Information

Calibration Date	June 10, 2016	Previous Calibration	May 2, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:50	End Time (MST)	11:25
Analyzer make/model	TEI 43I-TLE	Analyzer serial #	1507864682 (AMU 2006)

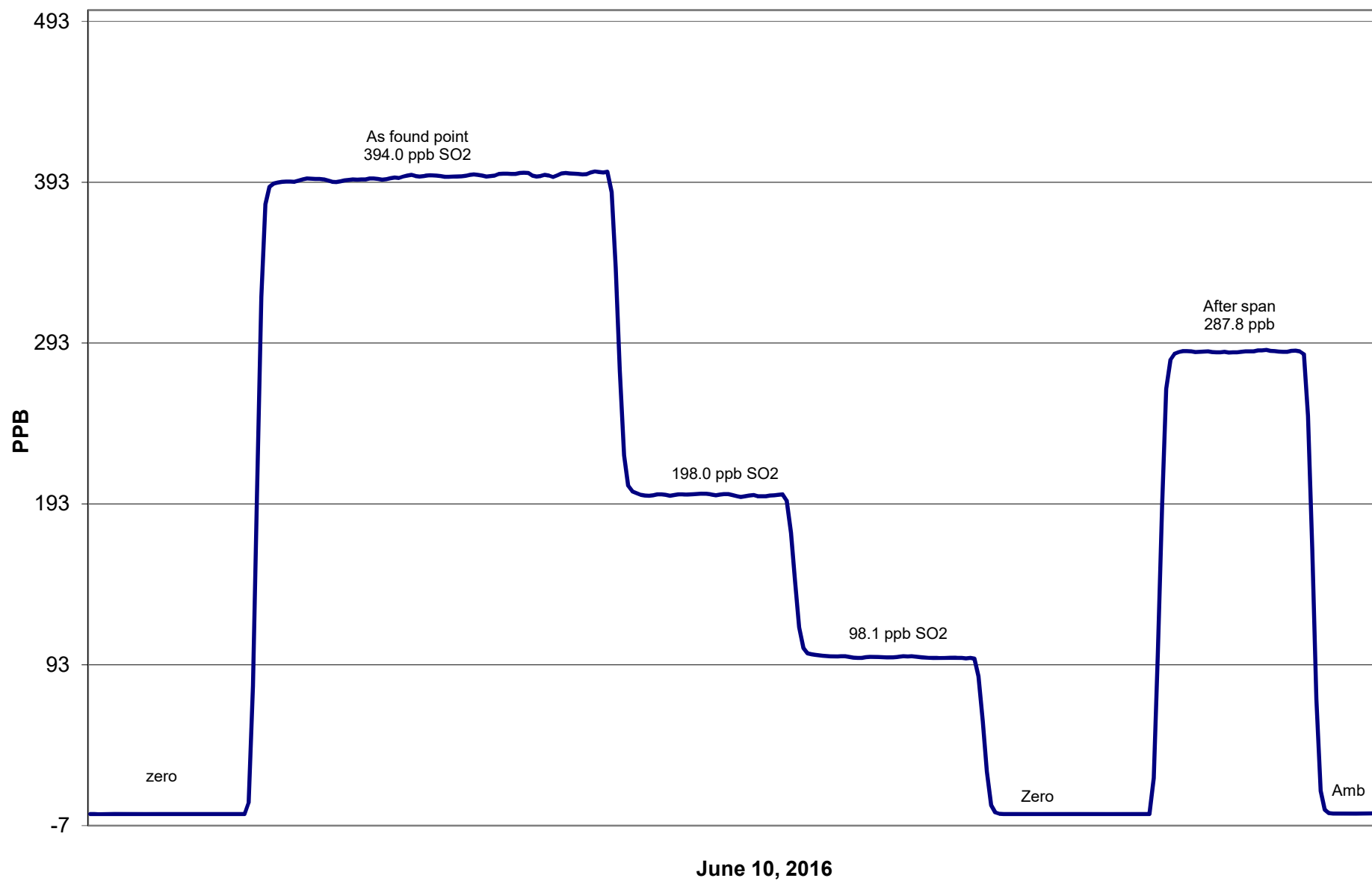
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999965
394.0	398.1	0.9897		
198.0	198.3	0.9986		
98.1	97.6	1.0055	Slope	0.989153
			Intercept	0.884810

SO2 Calibration Curve



SO2 Calibration



Parameter

Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Calibration Date	June 10, 2016		Previous Calibration	May 2, 2016	
Station Number	1		Station Location	Henry Pirker	
Reason:	Routine	Installation	Removal	Other:	
Start Time (MST)	8:50		End Time (MST)	12:55	
Barometric Pressure	721.000	mm	Station Temperature	21.0	Deg C
Calibrator	Envionics		Serial Number	906535067(AMU 197:	
NO Cal Gas Conc	50.9	ppm	Cal Gas Expiry Date	October 5, 2018	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL103793	

DACS Information

DACS make		CR3000		DACS serial No.		5408	
	Parameter	NO2	NOx	NO			
Before	Data Slope	1.005084	1.003926	0.998324			
	Data Offset	0.364654	0.702426	0.346181			
After	Data Slope	1.002705	1.004354	0.997813			
	Data Offset	0.314781	0.239074	-0.000959			
Channel #		8	6	7			
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC			

Analyzer Information

Analyzer make/model	42i	Analyzer serial #	906535087	
Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	6.0	mV	6.6	mV
NOx bkgnd	6.4	mV	6.1	mV
NO coefficient	0.941		0.960	
NOx coefficient	1.000		1.000	
NO2 conv temp	325.8	Deg C	325.8	Deg C
Cooler Temp	-2.9	Deg C	-2.9	Deg C
PMT Volt	-844.3	mV	-844.3	mV
R Cell Press	167.4	in Hg	168.3	in Hg
Sample Flow	0.614	LPM	0.612	LPM

Notes: Span adjustment made

Calibration Report

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

Station Information

Calibration Date: June 10, 2016 Station Location: Henry Pirker

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4996	0.00	0.0	0.0	0.0	0.1	0.5	0.0	N/A	N/A
1	4997	39.96	406.2	403.8	2.4	404.4	405.1	-0.1	1.0045	0.9969
2	4998	19.95	203.6	202.4	1.2	202.3	202.2	-0.1	1.0064	1.0006
3	4997	9.94	101.6	101.0	0.6	100.6	101.0	0.0	1.0107	1.0009
AFZ	4996	0.00	0.0	0.0	0.0	0.1	0.5	0.0	0.0000	0.0000
AFS	4996	39.92	405.9	403.5	0.8	396.1	396.7	-0.1	1.0247	1.0171
Average Correction Factor									1.0072	0.9995

As Found Concentrations: NO_x= 398.2 NO= 395.8 As Found Percent Change NO_x= -1.9% NO= -1.9%

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	0.5	0.5	0.0	0.1	0.5	0.0	N/A	N/A	N/A	N/A
NO point	406.9	406.9	0.0	406.4	406.9	-0.2	1.0012	1.0000	N/A	N/A
300	406.9	71.1	335.8	406.4	71.1	334.9	1.0011	1.0000	1.0028	99.7%
200	406.9	179.5	227.4	406.6	179.5	226.2	1.0007	1.0000	1.0051	99.5%
100	406.9	295.6	111.3	406.9	295.6	110.3	0.9999	1.0000	1.0089	99.1%
Average Correction Factor							1.0006	1.0000	1.0056	99.4%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	0.0	0.5	ppb	0.1	0.0	0.5	ppb
Auto span	314.7	311.4	3.0	ppb	318.8	315.3	3.3	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



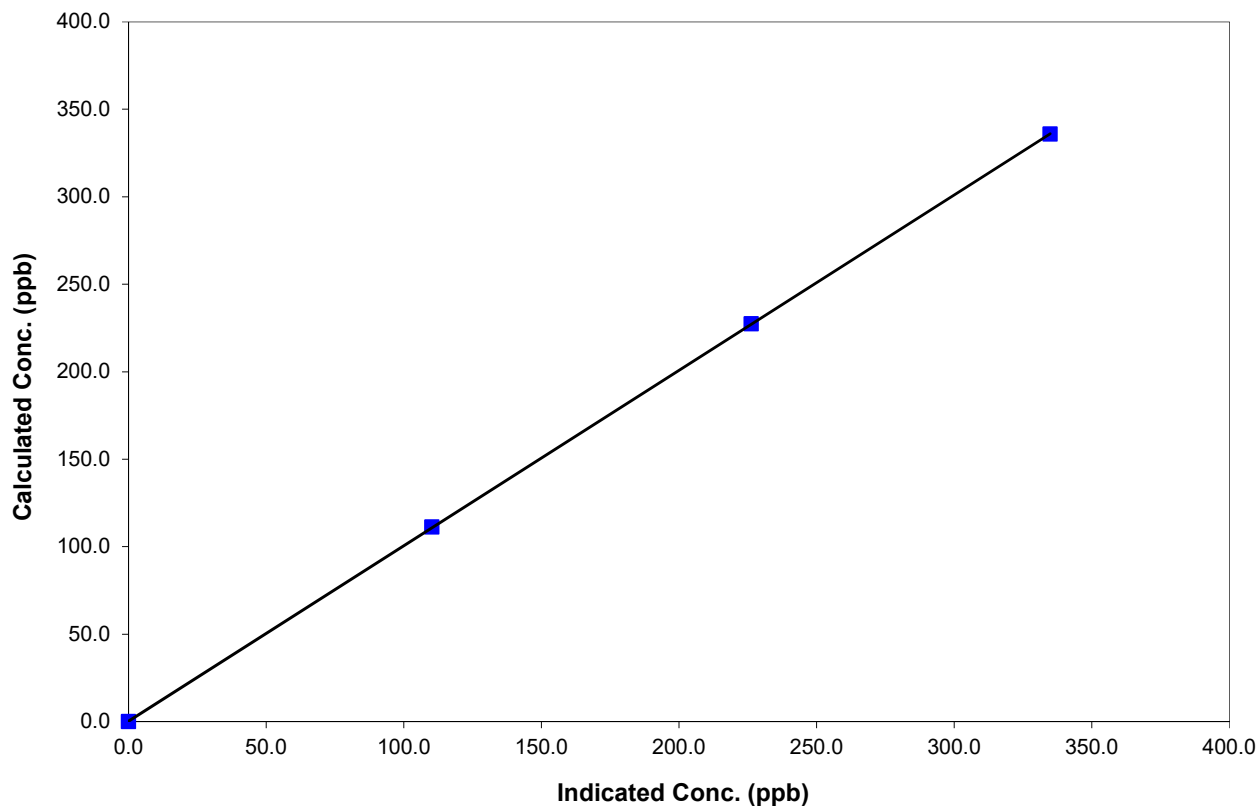
Station Information

Calibration Date	June 10, 2016	Previous Calibration	May 2, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:50	End Time (MST)	12:55
Analyzer make	42i	Analyzer serial #	906535087

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999994
335.8	334.9	1.0028		
227.4	226.2	1.0051		
111.3	110.3	1.0089	Slope	1.002705
			Intercept	0.314781

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



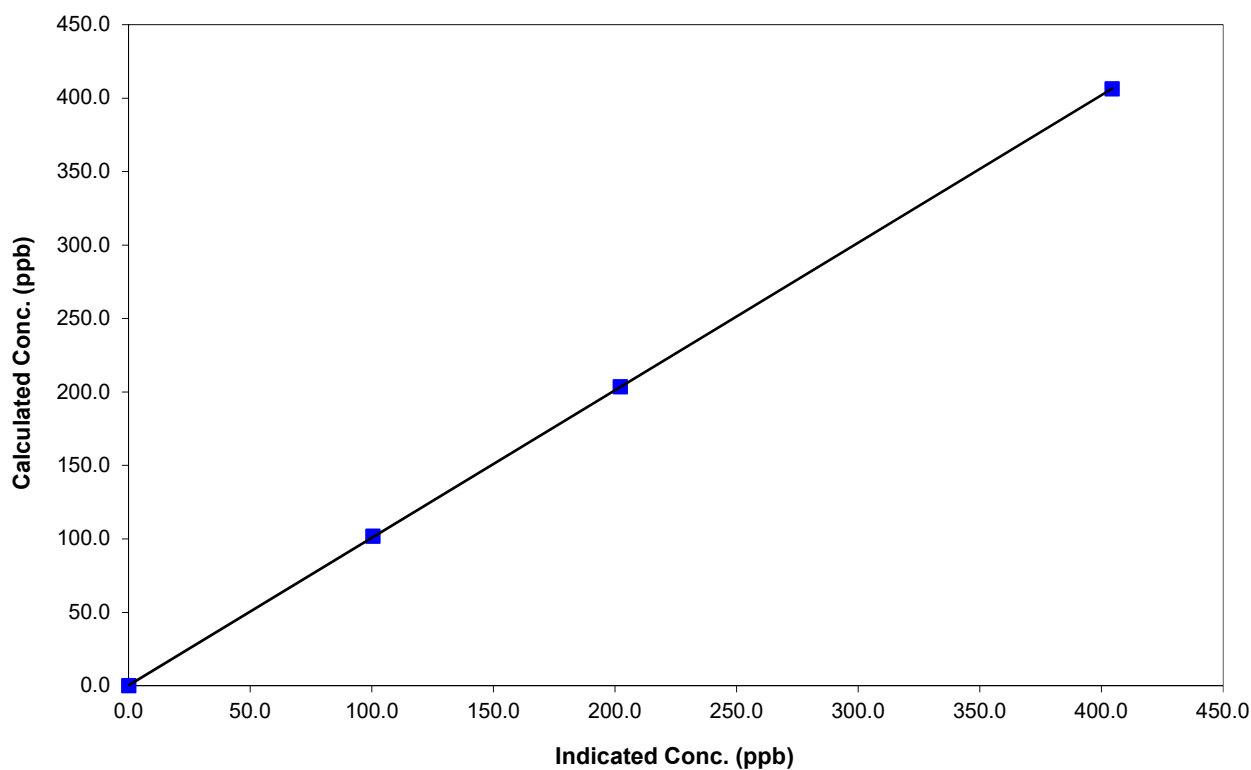
Station Information

Calibration Date	June 10, 2016	Previous Calibration	May 2, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:50	End Time (MST)	12:55
Analyzer make	42i	Analyzer serial #	906535087

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999996
406.2	404.4	1.0045		
203.6	202.3	1.0064		
101.6	100.6	1.0107	Slope	1.004354
			Intercept	0.239074

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



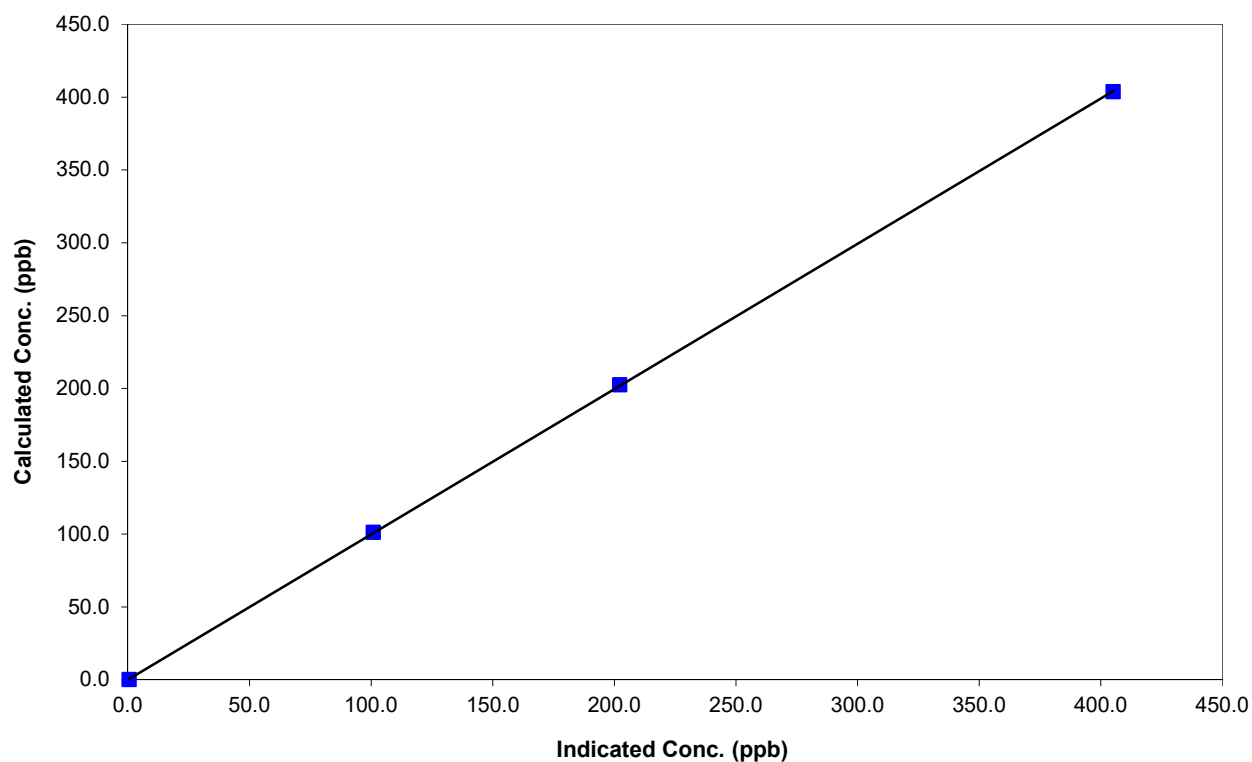
Station Information

Calibration Date	June 10, 2016	Previous Calibration	May 2, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:50	End Time (MST)	12:55
Analyzer make	42i	Analyzer serial #	906535087

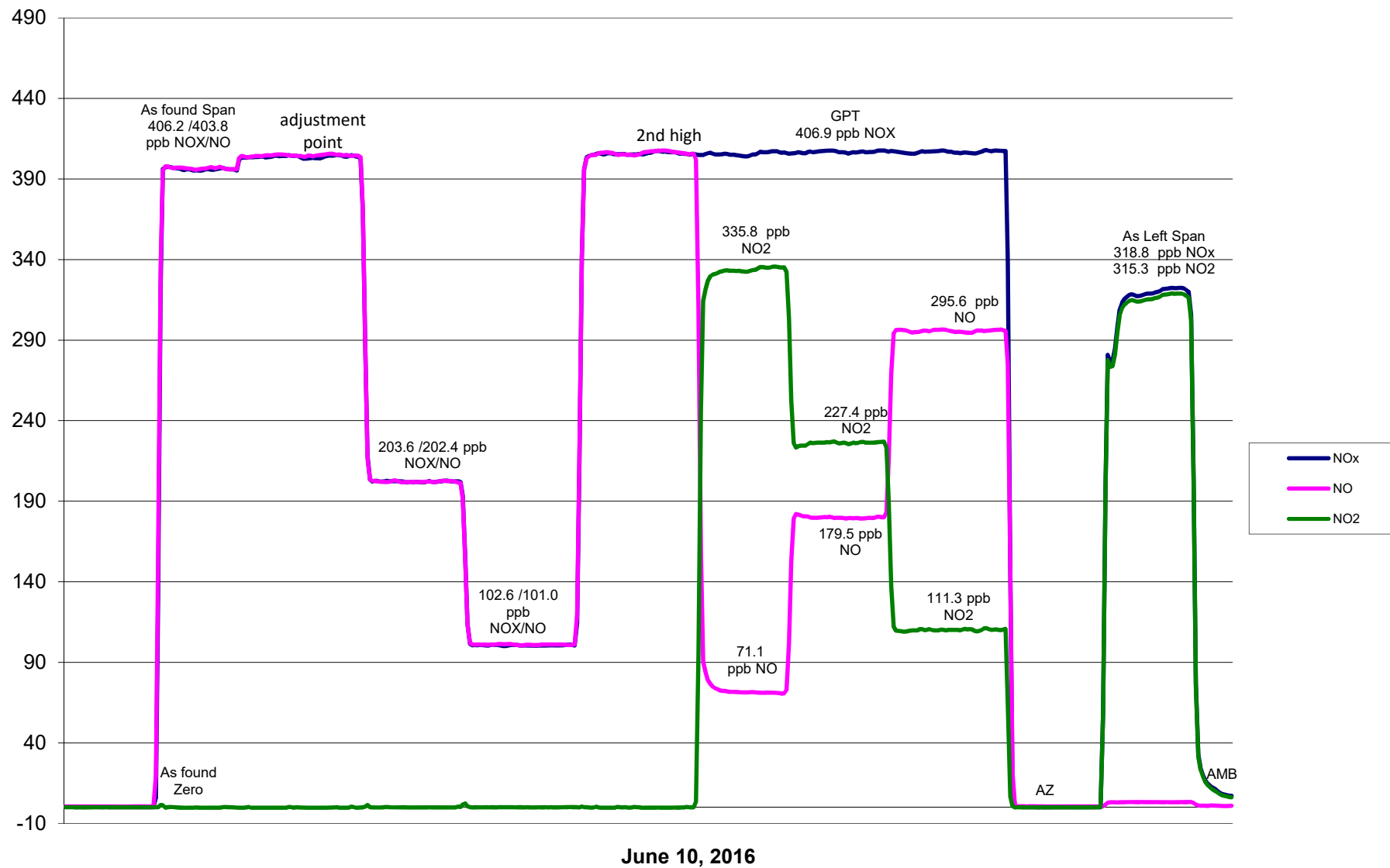
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999991
403.8	405.1	0.9969		
202.4	202.2	1.0006		
101.0	101.0	1.0009	Slope	0.997813
			Intercept	-0.000959

NO Calibration Curve



NO_x Calibration



Calibration Report



AIR QUALITY MONITORING

Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	June 10, 2016	Previous Calibration	May 2, 2016
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	12:23	End Time (MST)	14:40:00 PM
Barometric Pressure	728.000 mm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	0.997418	Calculated slope	1.001439
Calculated intercept	0.998348	Calculated intercept	0.497742

Analyzer make	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-1.10	ppb	-1.10	ppb
slope	1.017		1.017	
Lamp temp	53.7	mV	53.5	mV
Lamp Intensity A/B	77335/84717	mV	77124/85320	mV
Pressure	693.4	mm Hg	697	mm Hg
Flow A	0.732	ccm	0.735	ccm
Flow B	0.734	ccm	0.735	ccm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4997	0.0	0.0	0.1	N/A
4999	0.3	335.8	335.8	1.0000
4999	0.2	227.4	225.2	1.0097
4998	0.1	111.3	110.5	1.0076
4997	0.0	0.0	0.1	As found zero
4997	0.3	335.8	335.8	As found span
Average Correction Factor				1.0058

Calculated value of As Found Response: 335.8 ppm Percent Change of As Found: 0.0%

	before calibration		after calibration	
Auto zero	0.3	ppb	1.0	ppb
Auto span	366.6	ppb	367.1	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter O3

Air Monitoring Network PAZA



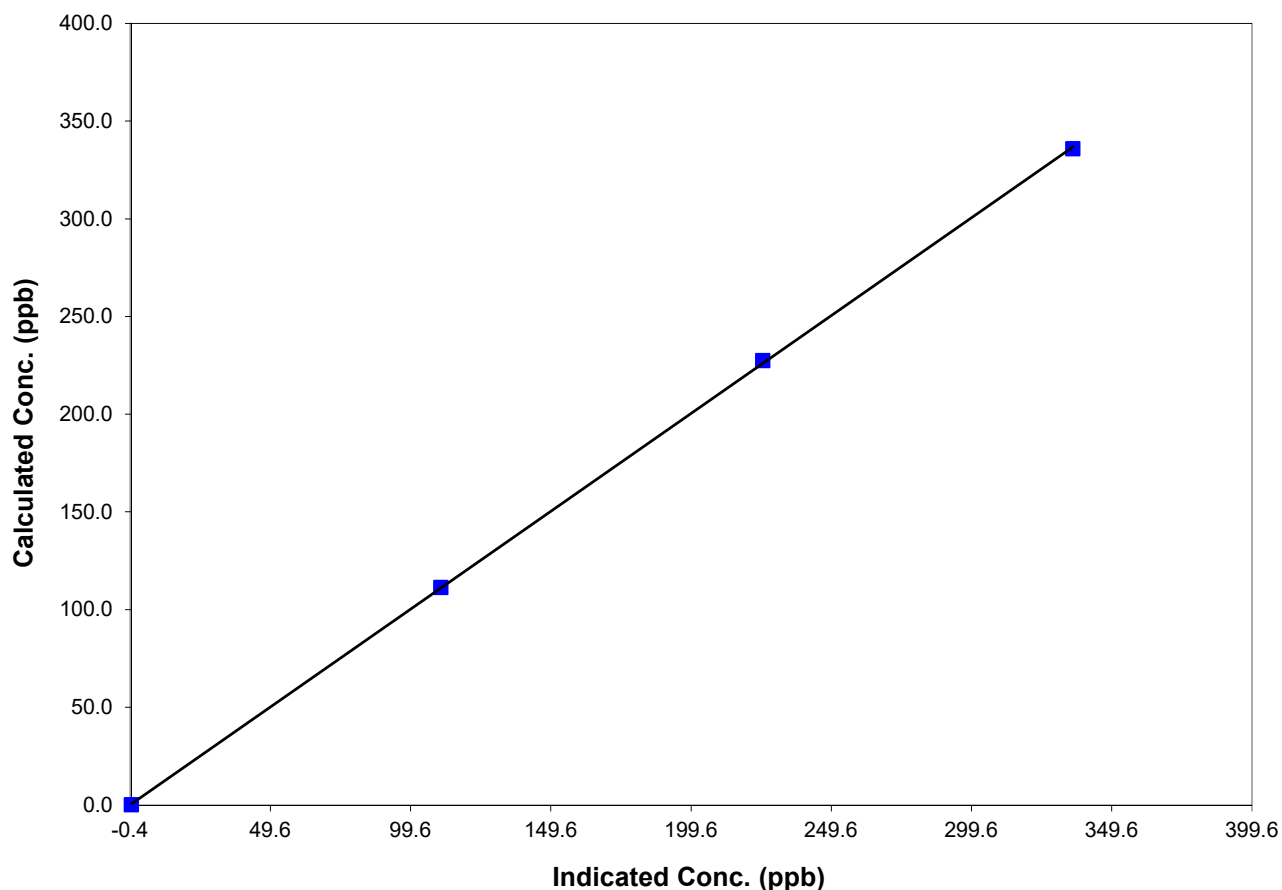
Station Information

Calibration Date	June 10, 2016	Previous Calibration	May 2, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:23	End Time (MST)	14:40:00 PM
Analyzer make/model	Teco 49I	Analyzer serial #	1507964699 (AMU:2015)

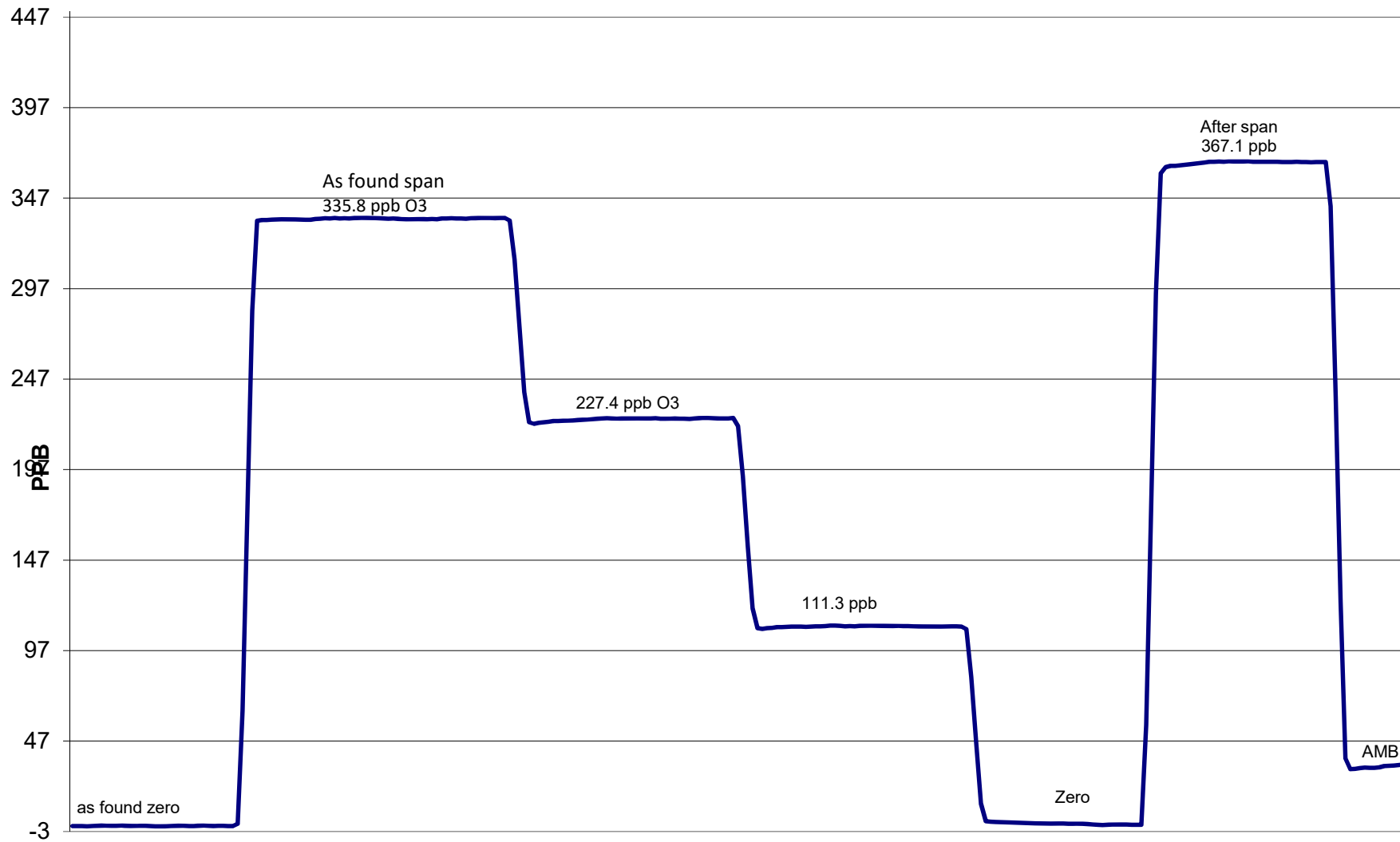
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA		
335.8	335.8	1.0000	Correlation Coefficient	0.999950
227.4	225.2	1.0097		
111.3	110.5	1.0076	Slope	1.001439
			Intercept	0.497742

O3 Calibration Curve



O3 Calibration



June 10, 2016

Calibration Report

Parameter CO

Air Monitoring Network PAZA



Station Information

Calibration Date	June 9, 2016	Previous Calibration	May 3, 2016
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	13:45:00 PM	End Time (MST)	16:25:00 PM
Barometric Pressure	726.0 mm/hg	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	6586
Cal Gas Conc	2906 ppm	Cal Gas Expiry Date	7/7/2023
		Cal Gas Cylinder #	LL109096
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	0.999377	Calculated slope	1.008010
Calculated intercept	-0.210734	Calculated intercept	-0.178105
Analyzer make	Model 48I-TLE	Analyzer serial #	1408761378

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO zero setting	5.477		5.761	
CO span setting	1.047		1.047	
Sample pressure	692.6	mm Hg	690.2	mm Hg
Sample Flow	0.448	LPM	0.447	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	0.00	N/A
4999	69.80	40.02	39.76	1.0064
4998	34.97	20.19	20.35	0.9924
4995	17.96	10.41	10.66	0.9767
4995	0.00	0.00	0.26	As Found Zero
4995	69.80	40.05	40.44	As Found Span
Average Correction Factor				0.9918

Calculated value of As Found Response: 39.940 ppm Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	0.07	ppm	0.01	ppm
Auto span	20.44	ppm	20.27	ppm

Notes: Zero adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CO

Air Monitoring Network PAZA



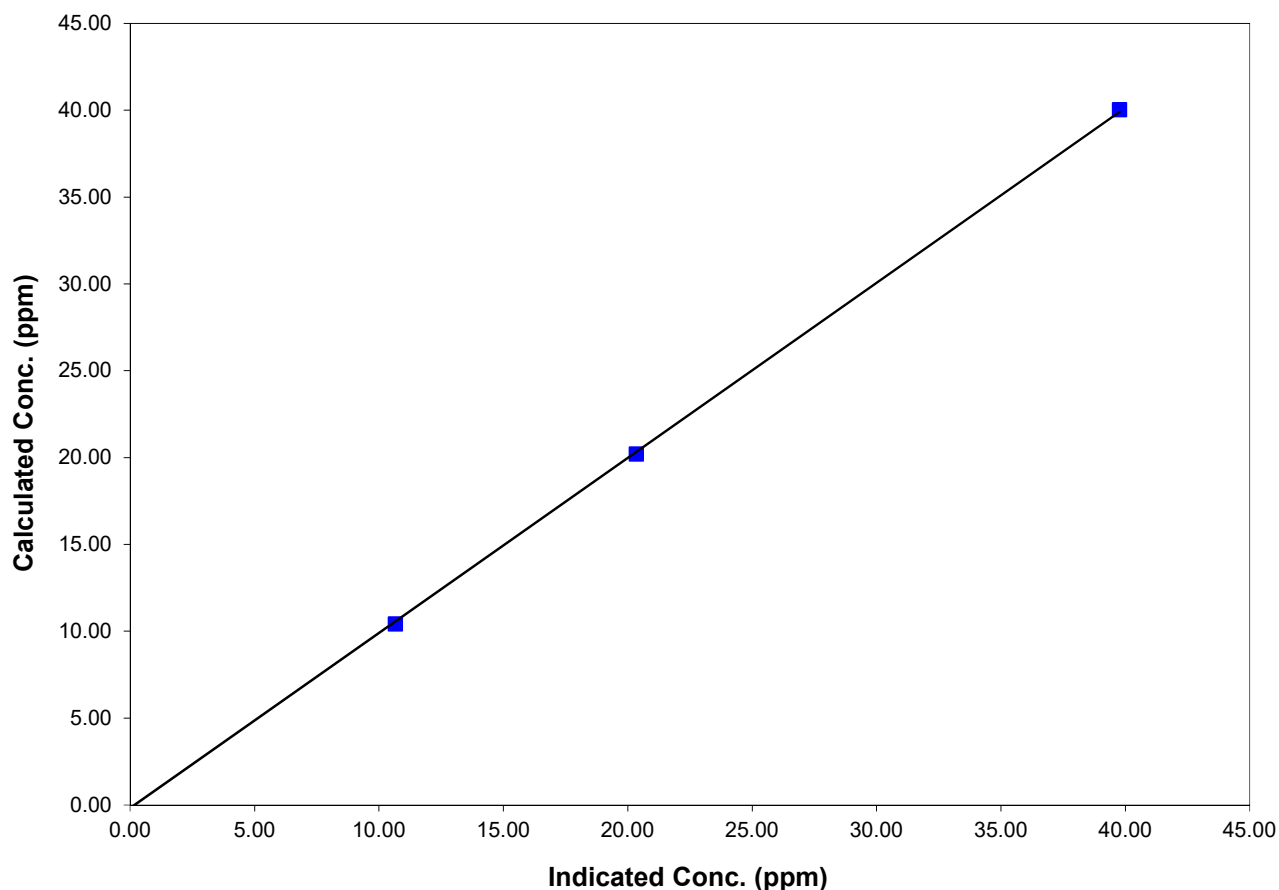
Station Information

Calibration Date	June 9, 2016	Previous Calibration	May 3, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	13:45:00 PM	End Time (MST)	16:25:00 PM
Analyzer make/model	Model 48I-TLE	Analyzer serial #	1408761378

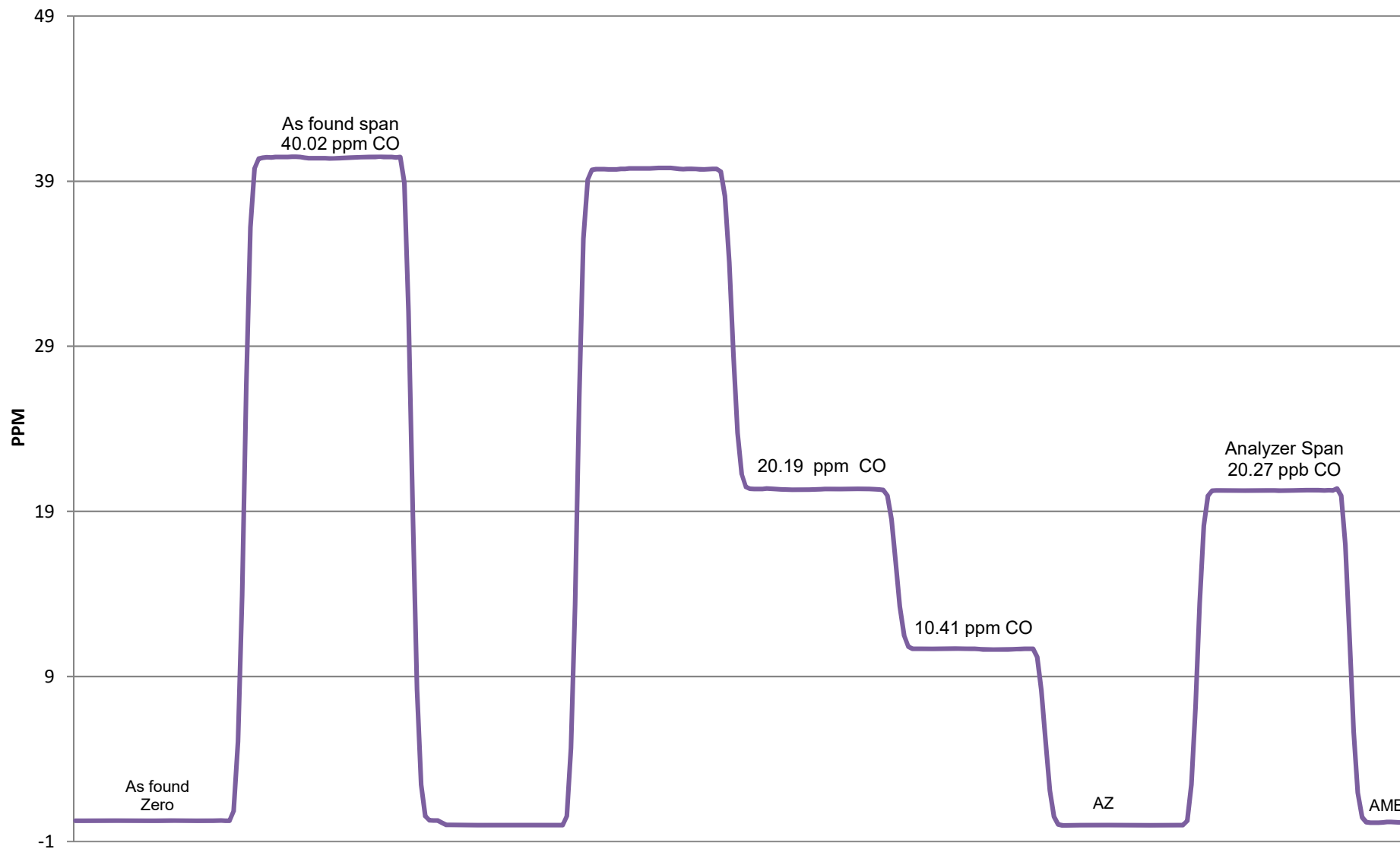
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.004	N/A	Correlation Coefficient	0.999897
40.017	39.764	1.0064		
20.191	20.346	0.9924		
10.411	10.660	0.9767	Slope	1.008010
			Intercept	-0.178105

CO Calibration Curve



CO Calibration



June 9, 2016

Calibration Report

Parameter CH4 / NMHC / THC

Air Monitoring Network

PAZA



Station Information

Calibration Date	June 9, 2016	Previous Calibration	May 3, 2016
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
			Other:

Start Time (MST)	12:10	End Time (MST)	14:35:00 PM
Barometric Pressure	726.00 mm/hg	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas CH4 Conc	386 ppm CH4	Cal Gas Expiry Date	3/28/2014
Cal Gas C3H8 Conc	207 569.25 ppm CH4	Cal Gas Cylinder #	LL34318
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 11,12,13

Analyzer make	TEI 55I	Analyzer serial #	1134650658
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	before		after	
Concentration range	0-20 (CH4, NMHC); 0-40 (THC)	ppm	0-20 (CH4, NMHC); 0-40 (THC)	ppm
Air pressure	27.8	PSI	27.8	PSI
Fuel pressure	42.1	PSI	42.1	PSI
Carrier pressure	30.3	PSI	30.3	PSI
CH4 cal factor	6.24		6.26	E ⁻⁴
NMHC cal factor	2.61		2.84	E ⁻⁴
Rt	12.74	Sec	12.74	Sec
Pk Index	23.22		23.22	

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1995	0.00	0.00	0.02	N/A
1997	68.96	12.88	12.91	0.9979
1998	40.99	7.76	7.77	0.9990
1999	15.97	3.06	3.06	0.9996
1995	0.00	0.00	0.02	As Found Zero
1995	68.93	12.89	12.64	As Found Span
Average Correction Factor				0.9988

Calculated value of As Found Response: 12.616 ppm Percent Change of As Found: 2.1%

	Before		After
Calculated slope	0.998962	Calculated slope	0.999114
Calculated intercept	0.005264	Calculated intercept	-0.008403

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	9.02	ppm	9.33	ppm

NMHC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1995	0.00	0.00	0.02	N/A
1997	68.96	19.00	19.01	0.9998
1998	40.99	11.44	11.78	0.9714
1999	15.97	4.51	4.97	0.9086
1995	0.00	0.00	0.02	As Found Zero
1995	68.93	19.01	17.95	As Found Span
Average Correction Factor				0.9599

Calculated value of As Found Response: 17.728 ppm Percent Change of As Found: 6.8%

	Before		After
Calculated slope	0.996224	Calculated slope	1.004767
Calculated intercept	-0.134373	Calculated intercept	-0.246211

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	13.11	ppm	13.16	ppm

THC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1995	0.00	0.00	0.03	N/A
1997	68.96	31.89	31.89	0.9999
1998	40.99	19.20	19.53	0.9834
1999	15.97	7.57	8.01	0.9453
1995	0.00	0.00	0.03	As Found Zero
1995	68.93	31.90	30.57	As Found Span
Average Correction Factor				0.9762

Calculated value of As Found Response: 30.344 ppm Percent Change of As Found: 4.9%

	Before		After
Calculated slope	0.997650	Calculated slope	1.003261
Calculated intercept	-0.119521	Calculated intercept	-0.248183

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	22.13	ppm	22.49	ppm

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



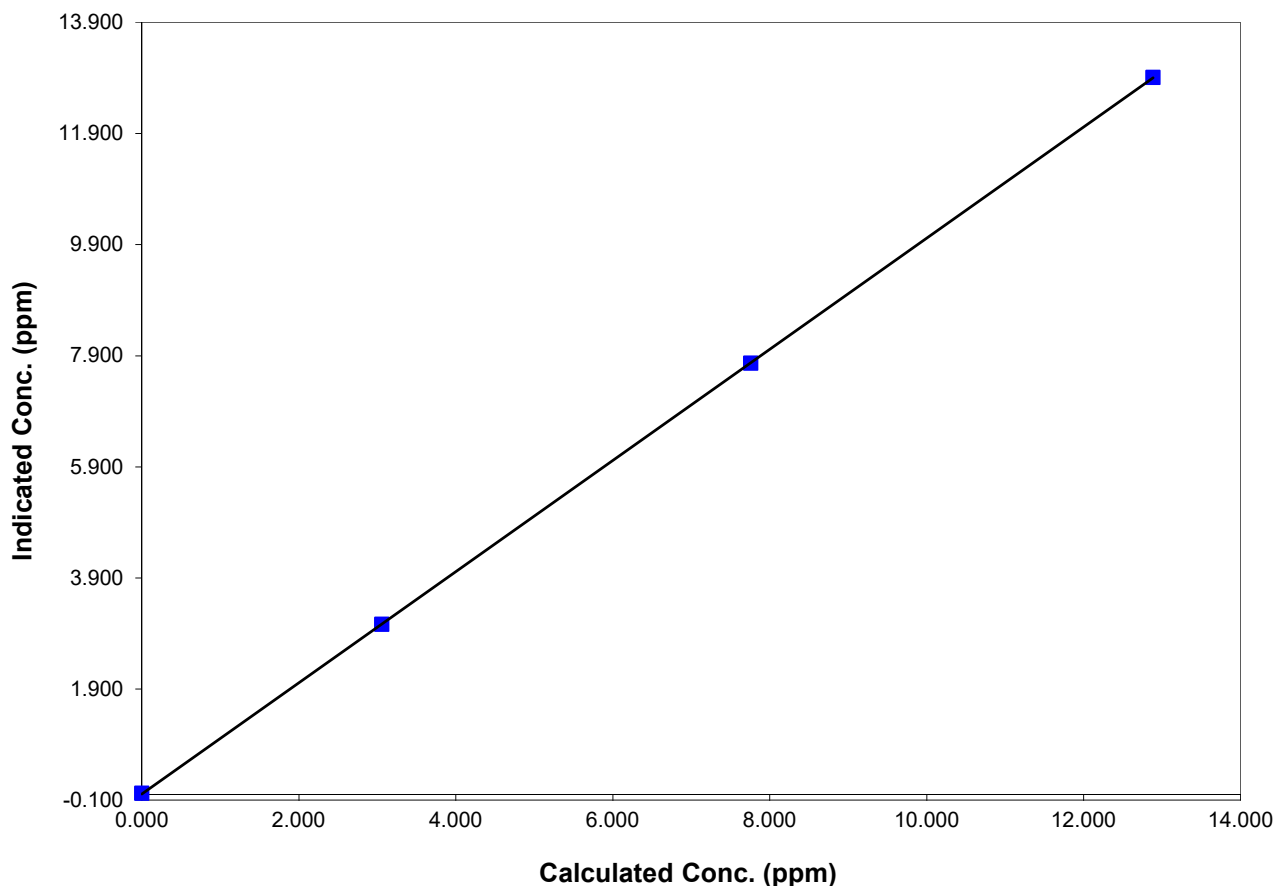
Station Information

Calibration Date	June 9, 2016	Previous Calibration	May 3, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:10	End Time (MST)	14:35:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.019	N/A	Correlation Coefficient	0.999997
12.884	12.911	0.9979		
7.760	7.767	0.9990		
3.059	3.061	0.9996	Slope	0.999114
			Intercept	-0.008403

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



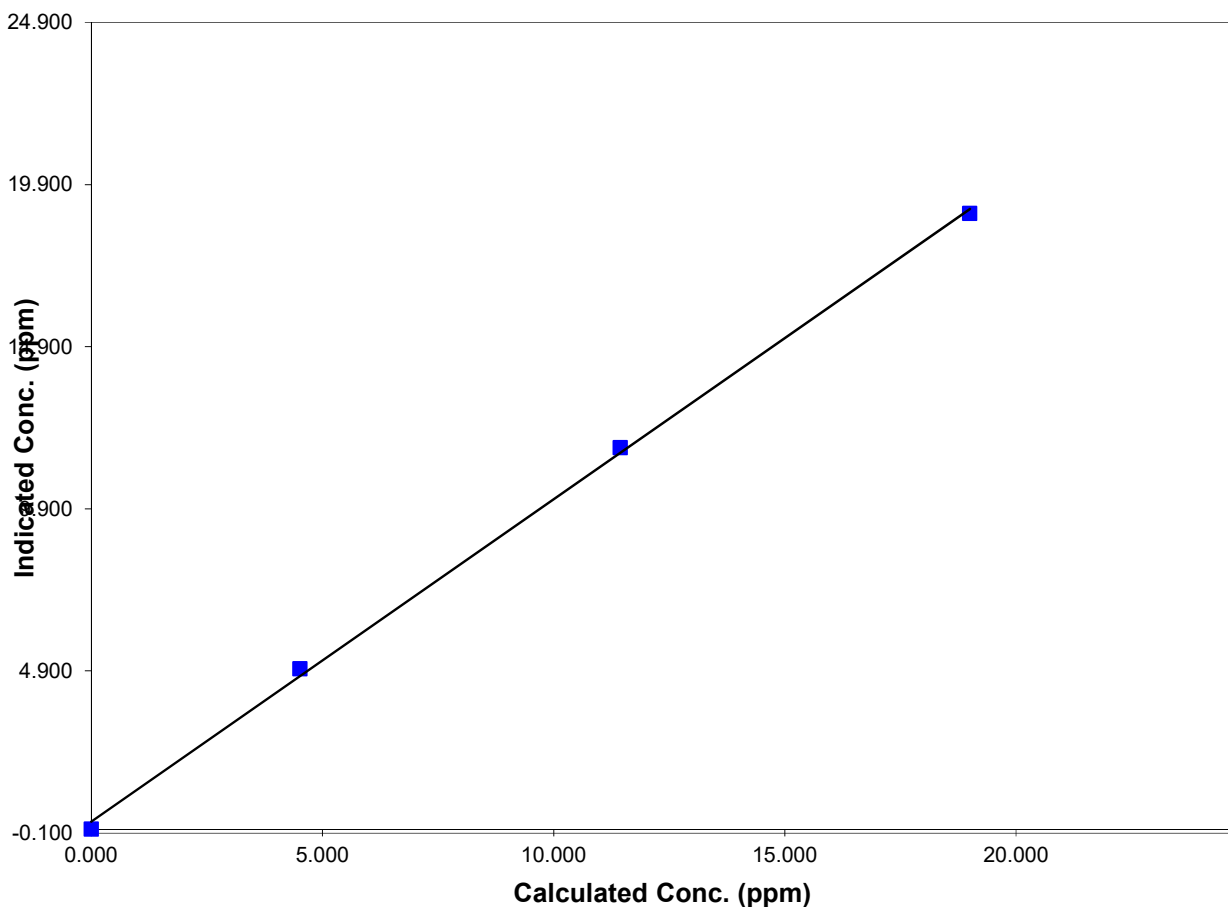
Station Information

Calibration Date	June 9, 2016	Previous Calibration	May 3, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:10	End Time (MST)	14:35:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.019	N/A	Correlation Coefficient	0.999279
19.001	19.006	0.9998		
11.444	11.781	0.9714		
4.512	4.965	0.9086	Slope	1.004767
			Intercept	-0.246211

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



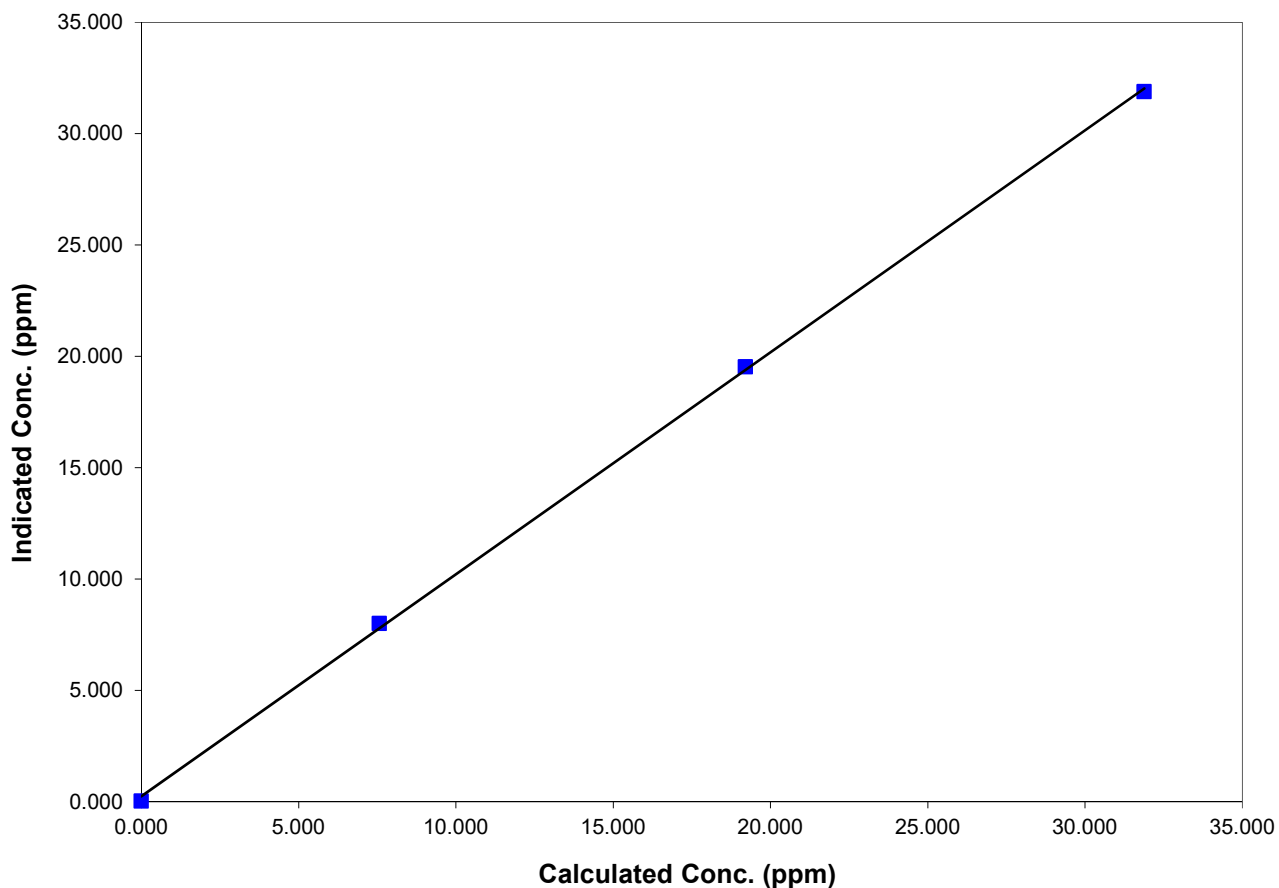
Station Information

Calibration Date	June 9, 2016	Previous Calibration	May 3, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	12:10	End Time (MST)	14:35:00 PM
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

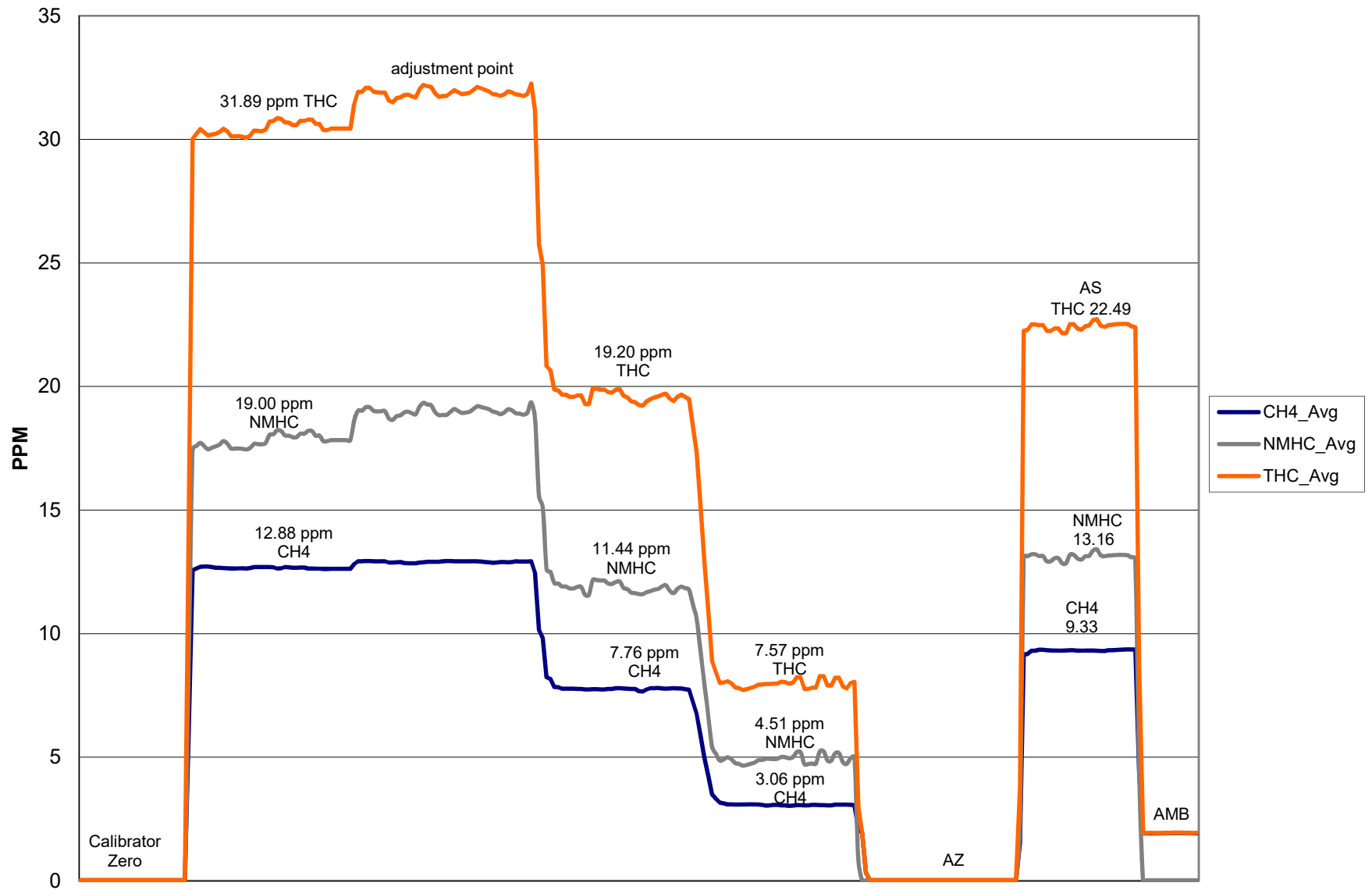
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.032	N/A	Correlation Coefficient	0.999773
31.885	31.890	0.9999		
19.203	19.528	0.9834		
7.571	8.009	0.9453	Slope	1.003261
			Intercept	-0.248183

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	June 9, 2016	Previous Calibration	May 3, 2016
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	8:55	End Time (MST)	15:05:00 PM
Barometric Pressure	726.00 mm/Hg	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Conc	10.2 ppb	Cal Gas Expiry Date	02/23/2019
		Cal Gas Cylinder #	EY0000380
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.990291	Calculated slope	0.987062
Calculated intercept	0.586037	Calculated intercept	-0.392416

Analyzer make	TEI 45C	Analyzer serial #	630718528
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	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	0.997		0.997	
Background	20.5		20.5	
Pressure	661.8	mm Hg	660.5	mm Hg
Flow	0.444	ccm	0.443	ccm
Lamp Voltage	904	V	904	V

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4997	0.00	0.00	0.27	N/A
4999	39.97	80.91	82.30	0.9831
4999	19.98	40.61	41.63	0.9754
6998	10.01	14.56	15.25	0.9546
4997	0.00	0.00	-0.09	As Found Zero
4997	39.93	80.86	82.47	As Found Span
Average Correction Factor				0.9710

Calculated value of As Found Response: 82.3 ppb Percent Change of As Found: -1.8%

	before calibration		after calibration	
Auto zero	0.18	ppb	0.27	ppb
Auto span	31.85	ppb	32.48	ppb

Notes: On the first cal attempt got non-linear response, replaced scrubber and one of the broken fittings in the ozydizer, on the second attempt left 80% point run longer to let the new scrubber to stabilize.

Skipped on scrubber check because the new Sox material was installed.

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



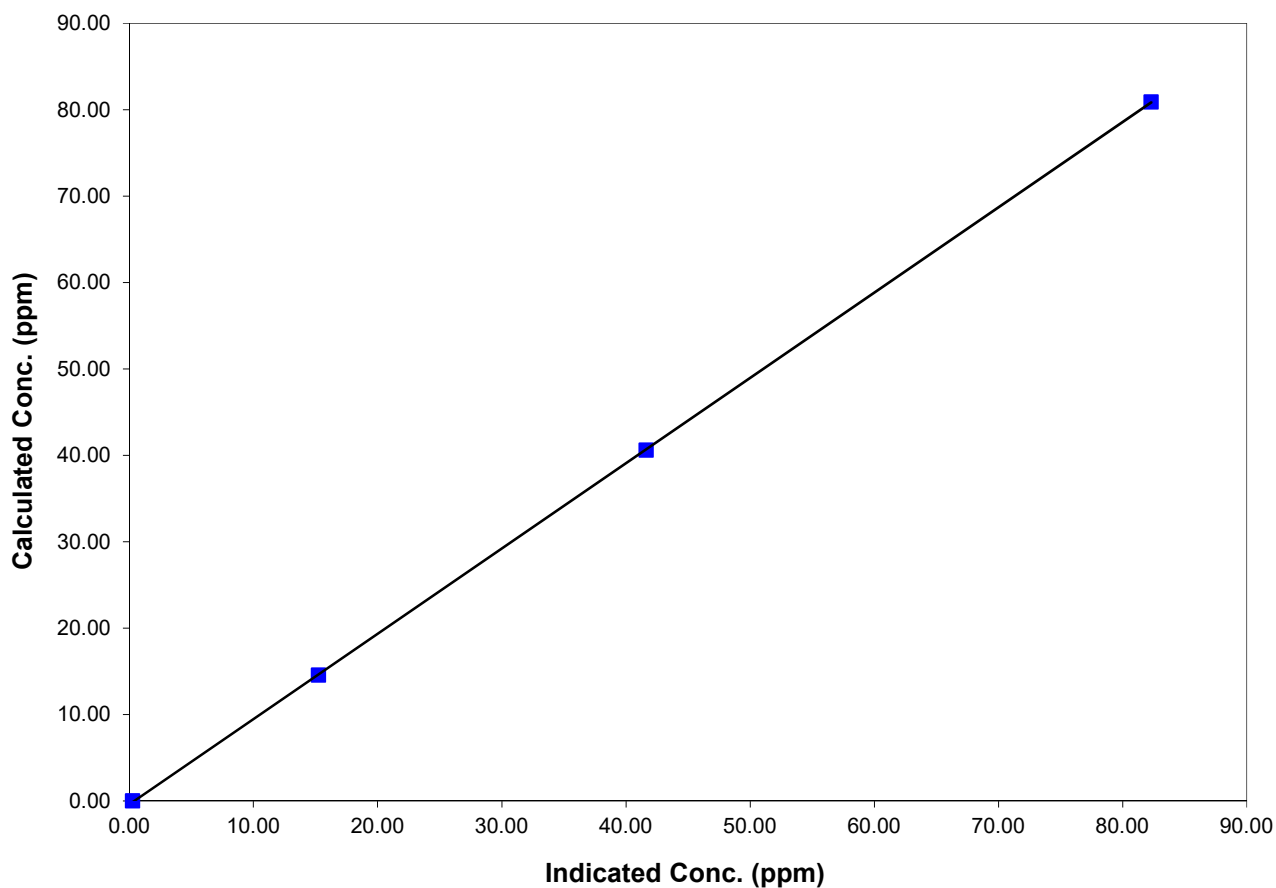
Station Information

Calibration Date	June 9, 2016	Previous Calibration	May 3, 2016
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	8:55	End Time (MST)	15:05:00 PM
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

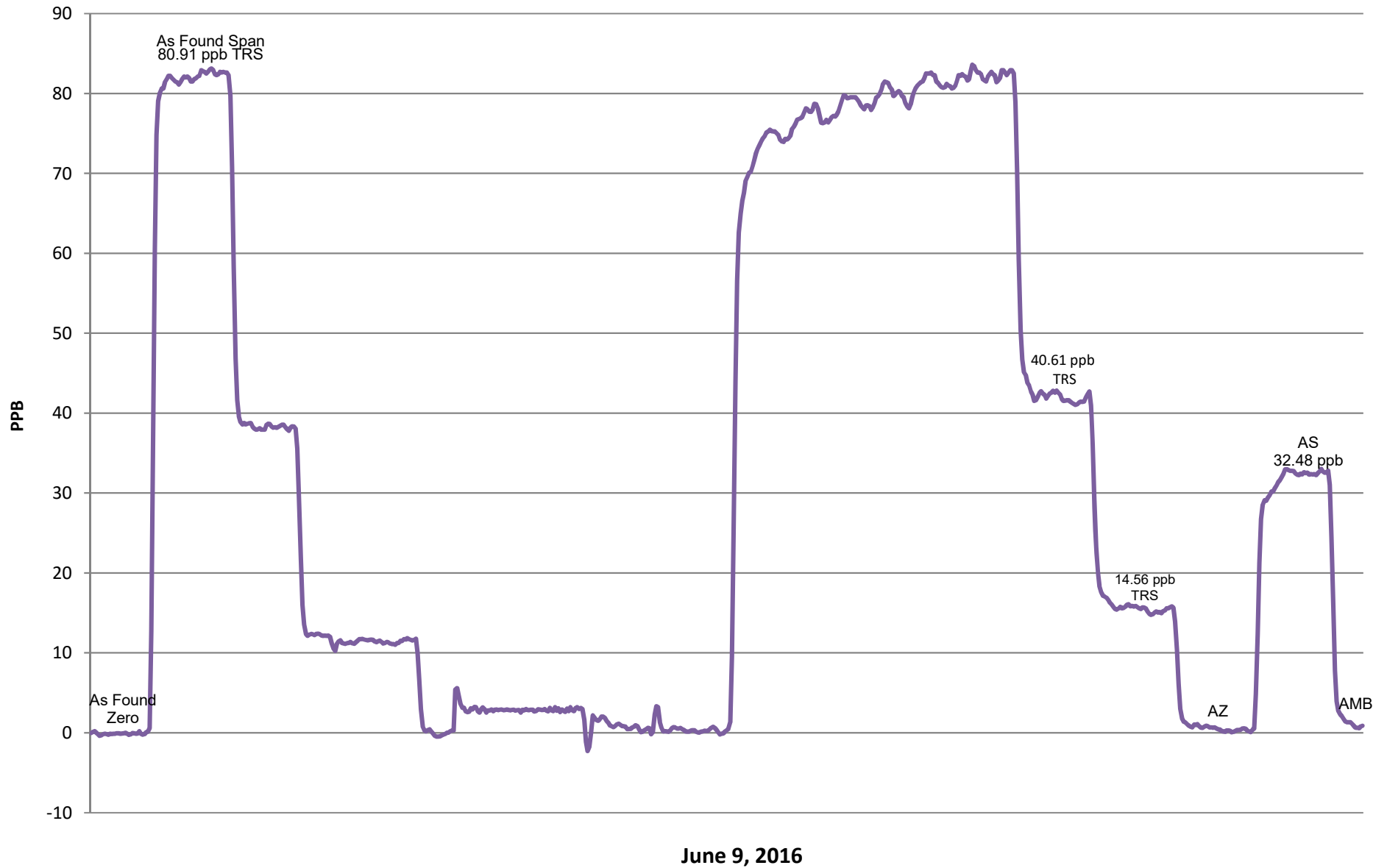
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.266	N/A	Correlation Coefficient	0.999989
80.908	82.300	0.9831		
40.605	41.629	0.9754		
14.562	15.254	0.9546	Slope	0.987062
			Intercept	-0.392416

TRS Calibration Curve



TRS Calibration



SHARP 5030 PM2.5 Calibration



STATION: Henry Pirker
 LOCATION: Muskoseepi park
 START TIME (MST): 10:00

OPERATOR: Dmytro Dolotii
 DATE: June 10 2016
 END TIME (MST): 15:05:00 PM

MONITOR INFO / PARAMETER VALUES:

Make/Model SHARP 5030
 Configuration PM 2.5
 Serial Number AMU 1860

Audit Device Model Delta cal
 Audit Device S/N AMU 1789
 Certification Date 01-Oct-15

AUDIT / CALIBRATION RESULTS:

		Ambient Temp. (°C)	Ambient Pres. (mbar)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
As Found Data	Audit values (I)	18.6	937	16.70	16.67	13:30:00 PM
	MEASURED (AF)	18.8	937	16.70	16.74	13:30:00 PM
	AF Difference (AF-I)	0.2	0	0.00	0.07	0:01
Adjusted Data	MEASURED (M)	18.8	937	16.70	16.73	13:32 PM
	Adj Difference (M-I)	0.2	0	0.00	0.06	0:01
	LIMITS	± 4.0 °C	6.7 mbar	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: Cleaned sample head

Status of sampling tape: 60% full

Nozzle Inspection / cleanliness: _____

COMMENTS: _____

Foil calibration Old value 6938 New value 6989

Nephelometer zero. Analog as found = 0.0 No adjustment required

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	June 14 2016	Previous Calibration	May 13 2016
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	10:37	End Time (MST)	
Barometric Pressure	0.920 ATM	Station Temperature	21.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	49.7 ppm	Cal Gas Expiry Date	10/5/2018
Correction factor	0.031167	Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	0.988653	Calculated slope	0.988653
Calculated intercept	0.890879	Calculated intercept	0.890879

Analyzer make	Teco 43i	Analyzer serial #	701120008
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.9		11.9	
coefficient	1.257		1.257	
Lamp Voltage	831	volts	831	volts
Chamber Temp	830	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	661.3	mm Hg	663.1	mm Hg
Sample Flow	0.446	ccm	0.446	ccm
Lamp Intensity	89	%	89	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4996	0.0	0.00	0.5	N/A
4998	39.95	394.1	398.5	0.9891
4998	19.96	197.7	198.3	0.9970
4997	9.99	99.2	98.0	1.0115
4996	0.0	0.0	0.5	As Found Zero
4996	39.93	394.9	398.5	As Found Span
Average Correction Factor				0.9992

Calculated value of As Found Response: 394.308 ppm Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	0.6	ppm	0.6	ppm
Auto span	256.2	ppm	256.2	ppm

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



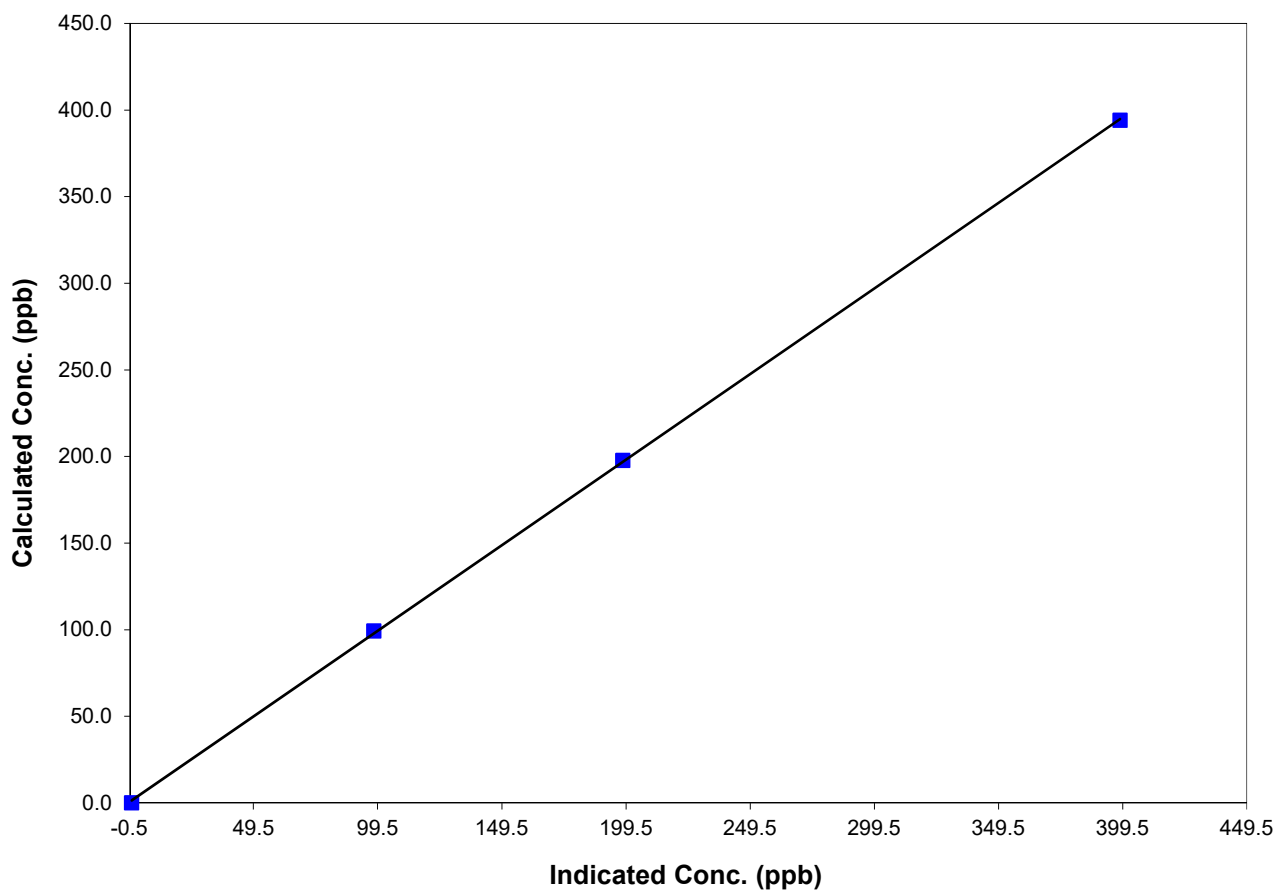
Station Information

Calibration Date	June14 2016	Previous Calibration	May 13 2016
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:37	End Time (MST)	0:00
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

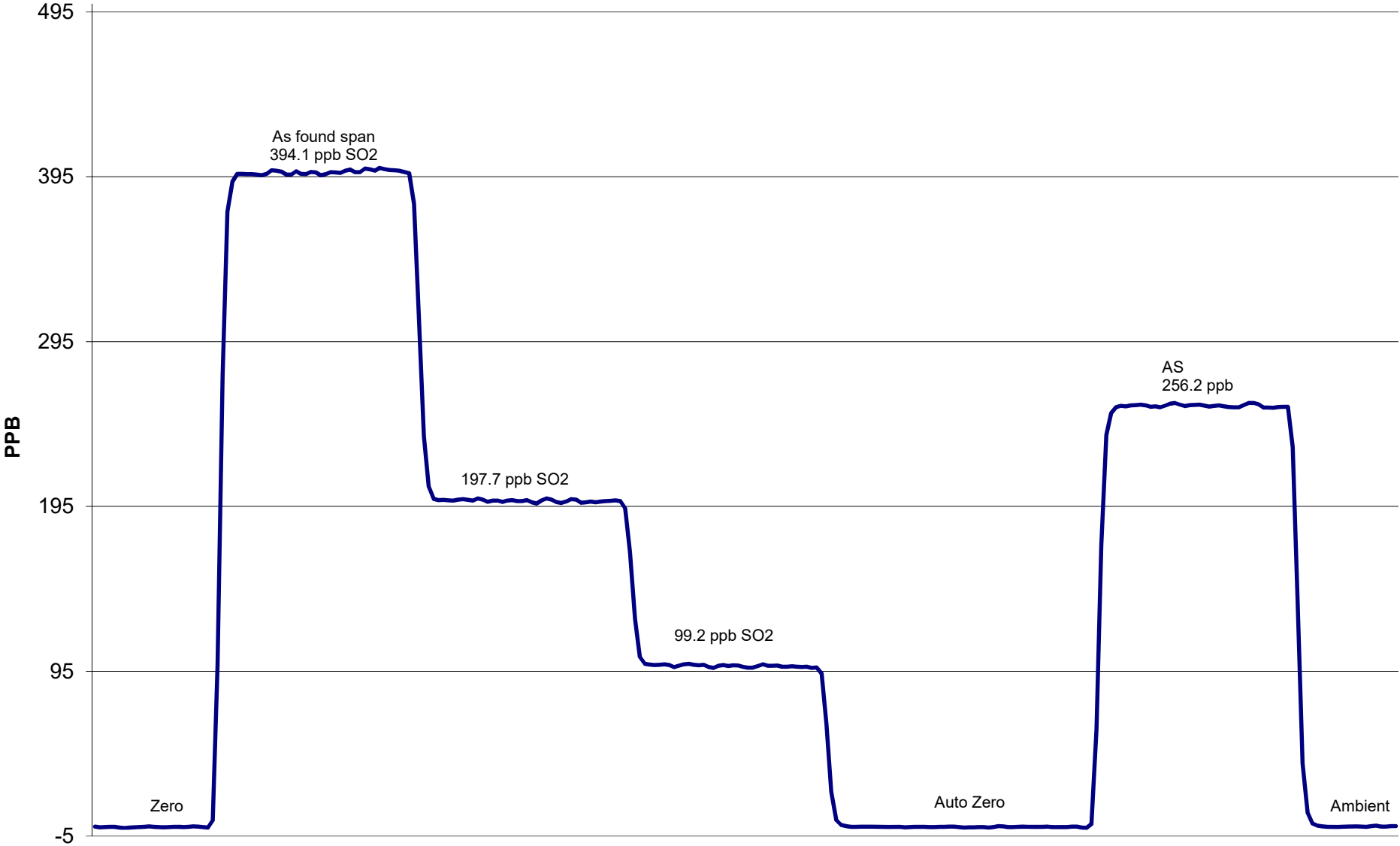
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.5	N/A	Correlation Coefficient	0.999942
394.1	398.5	0.9891		
197.7	198.3	0.9970		
99.2	98.0	1.0115	Slope	0.988653
			Intercept	0.890879

SO2 Calibration Curve



SO2 Calibration



June14 2016

Calibration Report

Parameter TRS

Air Monitoring Network PAZA



Station Information

Calibration Date	June 14 2016	Previous Calibration	May 13 2016
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	10:00	End Time (MST)	13:15:00 PM
Barometric Pressure	0.920 ATM	Station Temperature	21.0 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Conc	10.2 ppm	Cal Gas Expiry Date	7/8/2016
Correction factor	0.031167	Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	1.008661	Calculated slope	0.995955
Calculated intercept	-0.104991	Calculated intercept	-0.600750

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	15.4	ppb	15.4	ppb
coefficient	1.006		1.006	
Lamp Voltage	986	volts	984	volts
Chamber Temp	44.7	Deg C	44.7	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	640.8	mm Hg	640.1	mm Hg
Sample Flow	0.559	ccm	0.552	ccm
Lamp Intensity	37,040	mv	37,103	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4996	0.00	0.00	0.4	N/A
4995	39.95	80.93	81.8	0.9893
4998	19.96	40.57	41.4	0.9803
6997	9.89	14.40	15.2	0.9448
4999	9.98		0.9	Sox Test
4996	0.00	0.00	0.4	As Found Zero
4996	39.93	80.88	81.8	As Found Span
Average Correction Factor				0.9715

Calculated value of As Found Response: 81.97 ppm Percent Change of As Found: **-1.4%**

	before calibration		after calibration	
Auto zero	0.3	ppm	0.5	ppm
Auto span	76.9	ppm	78.5	ppm

Notes: No adjustments done
Sox scrubber check performed

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



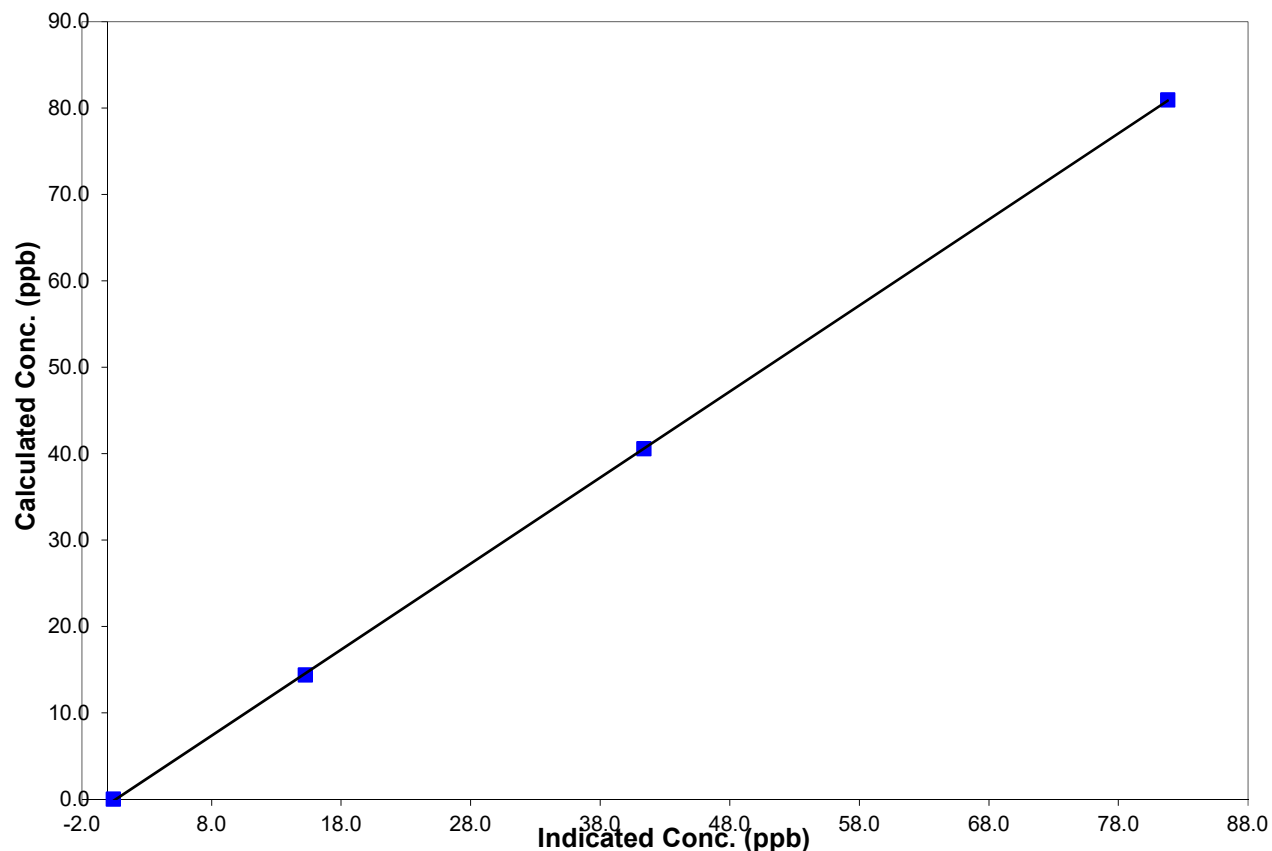
Station Information

Calibration Date	June 14 2016	Previous Calibration	May 13 2016
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	10:00	End Time (MST)	13:15:00 PM
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

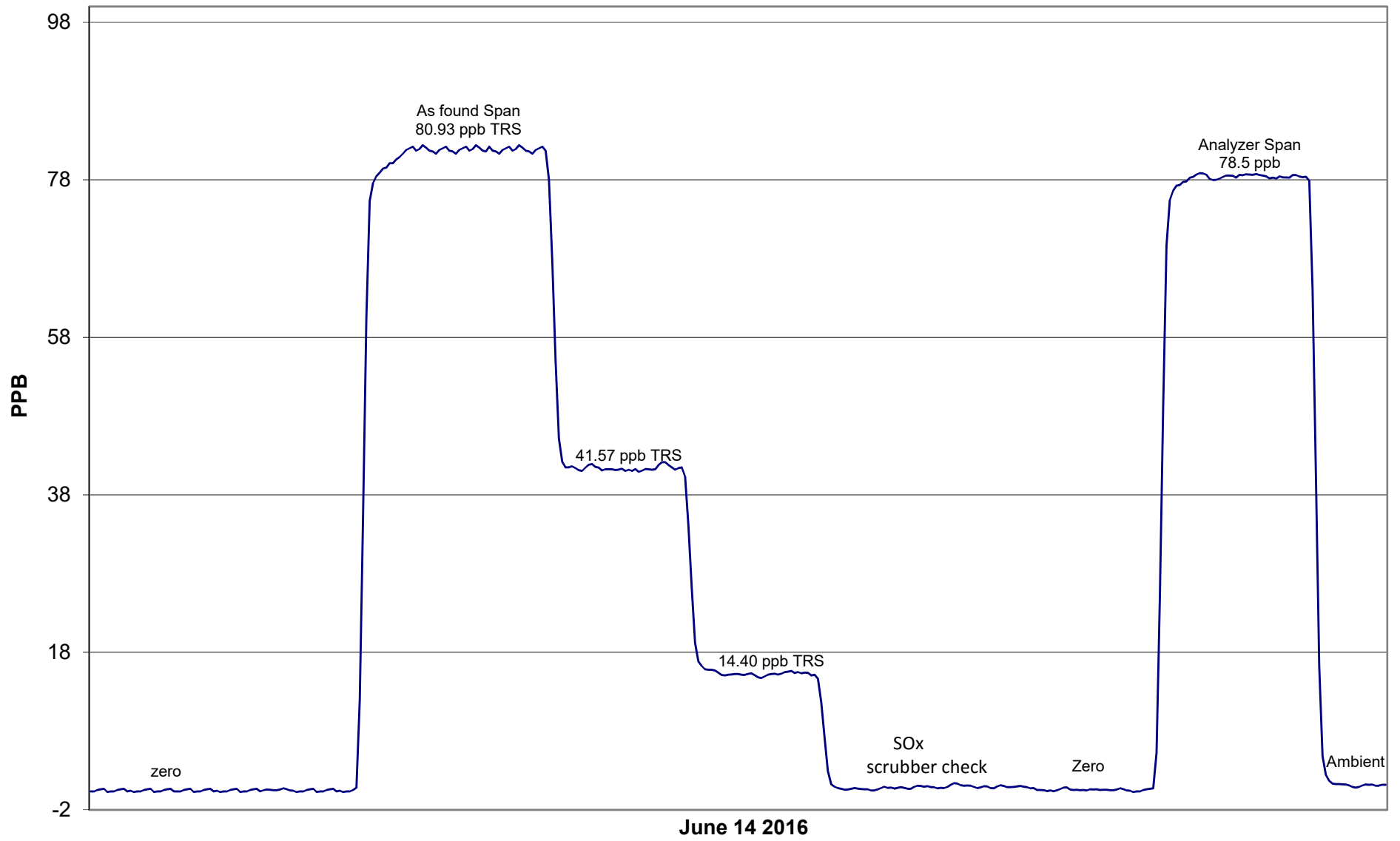
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999982
80.9	81.8	0.9893		
40.6	41.4	0.9803		
14.4	15.2	0.9448	Slope	0.995955
			Intercept	-0.600750

TRS Calibration Curve



TRS Calibration



AB TEOM PM2.5 Calibration



STATION: Evergreen Park
 LOCATION: PAZA - Grande Prairie

OPERATOR: Dmytro Dolotii
 DATE: 14-Jun-16

MONITOR INFO / PARAMETER VALUES:

Make/Model	TEOM AB
Configuration	PM2.5
Serial Number	21554
Site Number	2
Inlet Type	PM 10 / SCC
FAdj. Main Setting	1.000
FAdj. Aux. Setting	1.000
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	
Previous Calibration	4-Feb-15

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	0.006	0.110
PUMP OFF	0.002	0.010
NET	0.004	0.100
LIMITS	<0.15	<0.60

	Ambient Temp. (^o C)	Ambient Pres. (atm)	Ko *	Bypass flow (lpm)	Sample flow (lpm)
SET POINT (S)	na	na	16198	13.67	3.000
INDICATED (I)	15.2	0.913	16198	13.66	2.990
MEASURED (AF)	14.9	0.914	16198	13.68	2.930
MEASURED (M)	14.9	0.914	16250	13.68	2.930
DIFFERENCE (M-I)	-0.3	0.001	0.3%	0.01	-0.07
LIMITS	± 2^o C	± 0.005 atm	± 2.5 %	± 1.0 L/min	± 0.2 L/min

As Found Data
 Adjusted Data

Ko Audit Filter data Weight: 0.11014 Serial #: CVK 2123

COMMENTS: Pass.

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

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	June 6, 2016	Previous Calibration	May 18, 2016
Station Number	3	Station Location	Smokey Heights
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	8:35	End Time (MST)	10:40
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Concentration	49.7 ppm	Cal Gas Cert Date	11/5/2018
Correction factor	0.031511	Cal Gas Cylinder #	LL103793
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	1.007355	Calculated slope	0.997376
Calculated intercept	1.396029	Calculated intercept	0.491883
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	12.7		12.8	
coefficient	0.939		0.939	
Lamp Voltage	939	volts	939	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	665.7	mm Hg	666.1	mm Hg
Sample Flow	0.445	lpm	0.446	lpm
Lamp Intensity	88	%	88	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4996	0.0	0.00	0.4	N/A
4998	39.95	394.11	394.9	0.9979
4998	19.98	197.89	198.0	0.9995
4998	9.99	99.14	97.7	1.0152
4996	0.0	0.00	0.4	As Found Zero
4998	39.95	394.11	394.9	As Found Span
Average Correction Factor				1.0042

Calculated value of As Found Response: 398.809 ppm Percent Change of As Found: -1.2%

	before calibration		after calibration	
Auto zero	0.4	ppb	0.5	ppb
Auto span	209.5	ppb	211.9	ppb

Notes: No adjustmet made

Calibration Performed By: Dmytro Dolotii, Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



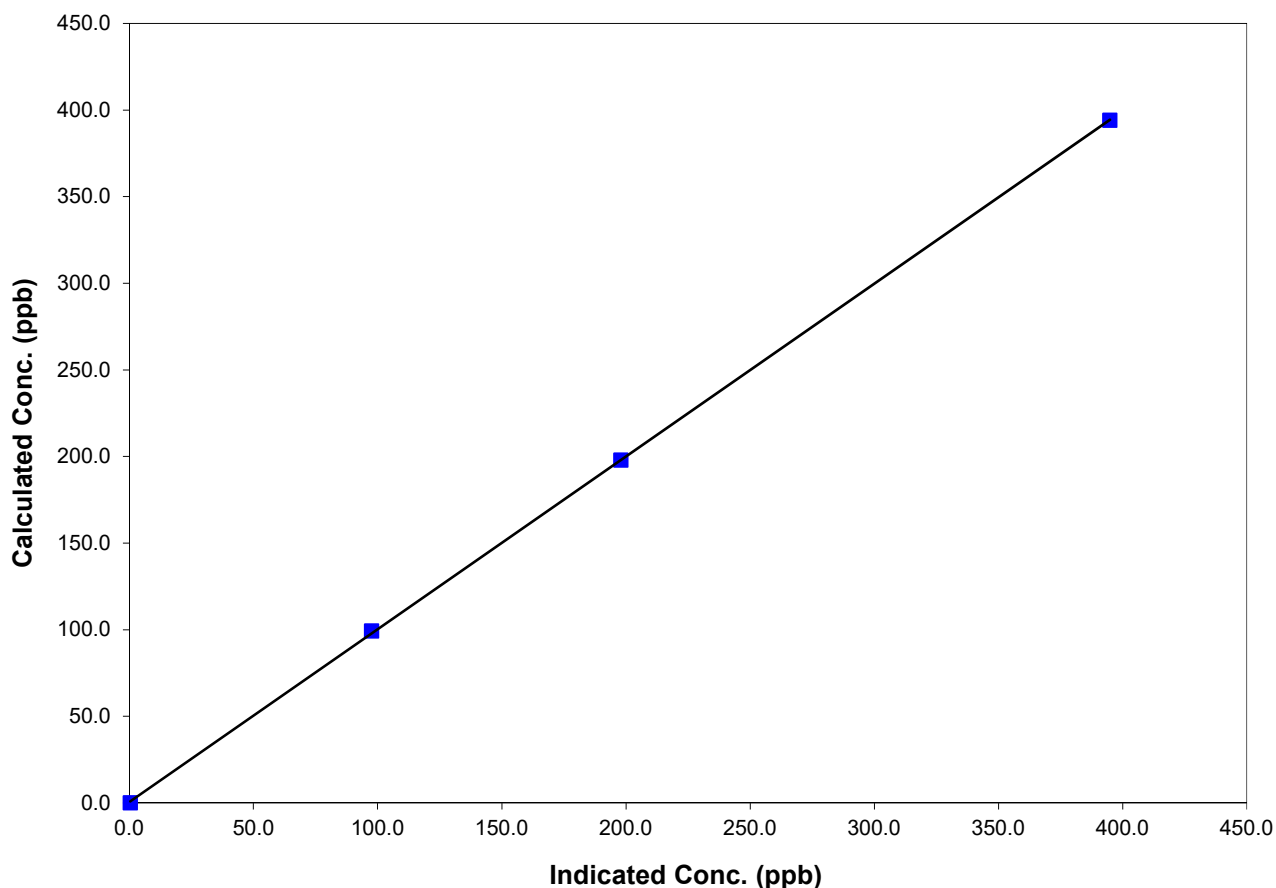
Station Information

Calibration Date	June 6, 2016	Previous Calibration	May 18, 2016
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	8:35	End Time (MST)	10:40
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

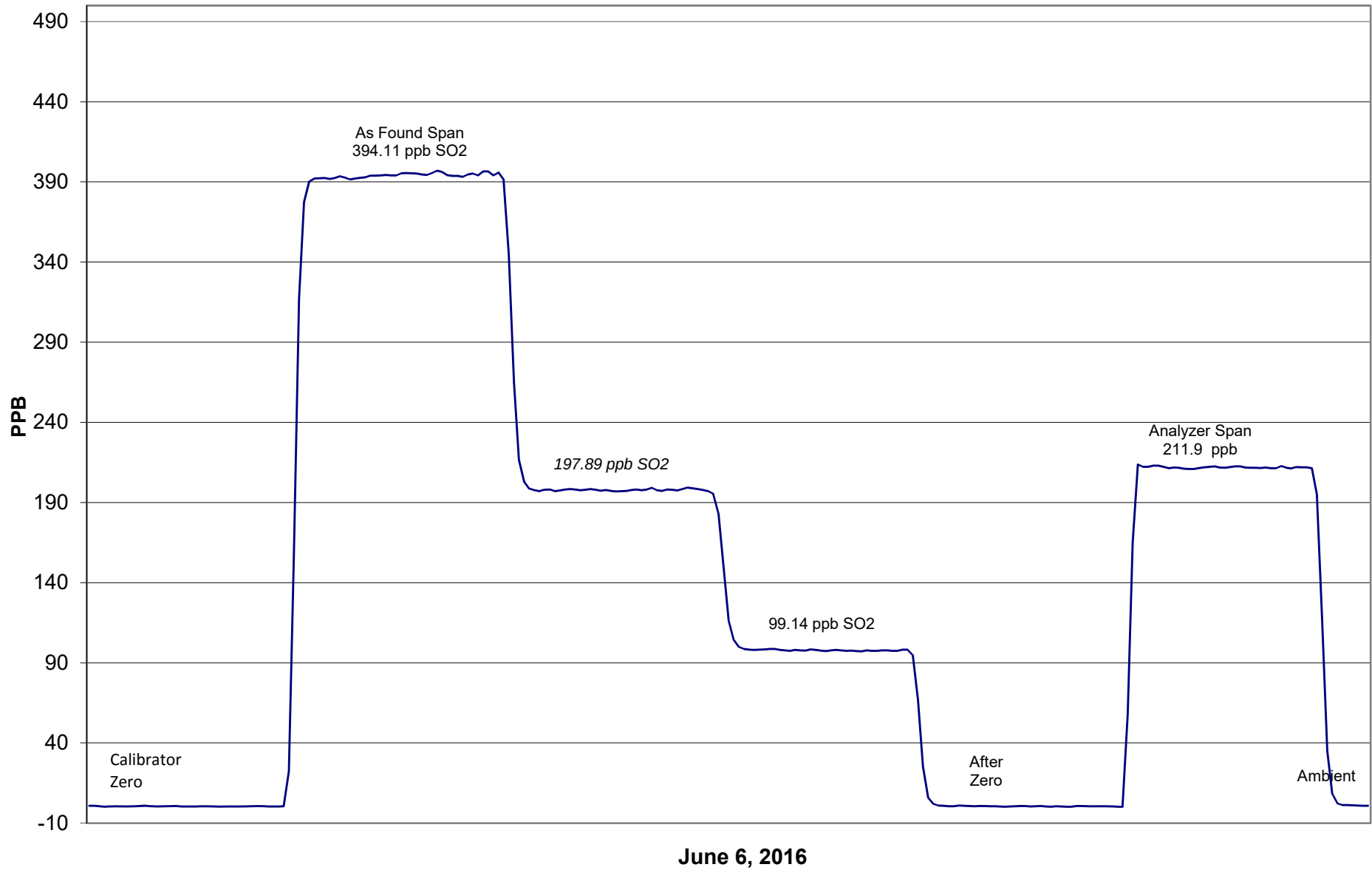
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999971
394.1	394.9	0.9979		
197.9	198.0	0.9995		
99.1	97.7	1.0152	Slope	0.997376
			Intercept	0.491883

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



Calibration Report



AIR QUALITY MONITORING

Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	June 6, 2016	Previous Calibration	May 31, 2016
Station Number	3	Station Location	Smokey Heights
Reason:	☐ Routine ☒ Install ☐ Removal ☐ Other:		
Start Time (MST)	9:00	End Time (MST)	PM
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	3474
Cal Gas Conc	10.32 ppm	Cal Gas Expiry Date	7/8/2016
Correction factor	0.031511	Cal Gas Cylinder #	BLM00586
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.981065	Calculated slope	0.981019
Calculated intercept	0.742332	Calculated intercept	0.743957

Analyzer make TEI Model 43I APSAA Analyzer serial # 1153630151

	before		after	
Concentration range	100	ppb	100	ppb
Background	14.7	ppb	14.2	ppb
coefficient	1.098		1.021	
Lamp Voltage	795	volts	801	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	678.9	mm Hg	761	mm Hg
Sample Flow	0.425	lpm	0.418	lpm
Lamp Intensity	90	mv	90	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.00	0.0	N/A
4989	39.85	81.78	83.0	0.9854
4987	19.91	41.04	40.6	1.0104
4990	9.92	20.48	19.4	1.0557
4990	9.92		0.1	Sox test
4990	0.0	0.00	0.0	As Found Zero
4989	39.85	81.78	68.6	As Found Span
Average Correction Factor				1.0171

Calculated value of As Found Response: 67.98 ppm Percent Change of As Found: 16.9%

	before calibration		after calibration	
Auto zero	0.4	ppm	0.1	ppm
Auto span	47.2	ppm	72.5	ppm

Notes: PMT & regular adjustment along with oxydizer tem adjust were done

Calibration Performed By: Grover Christiansen

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



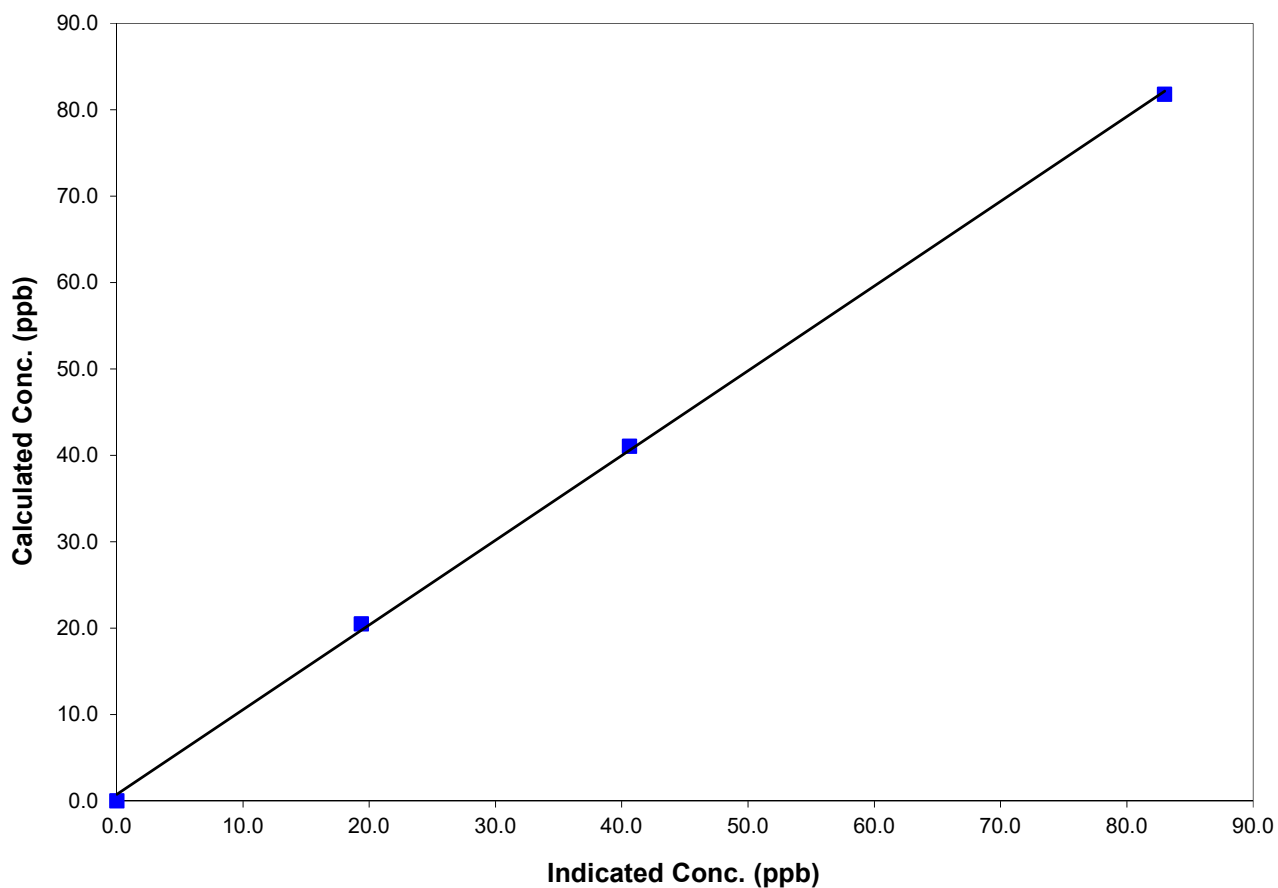
Station Information

Calibration Date	June 6, 2016	Previous Calibration	May 31, 2016
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	9:00	End Time (MST)	PM
Analyzer make/model	TEI Model 43I APSAA	Analyzer serial #	1153630151

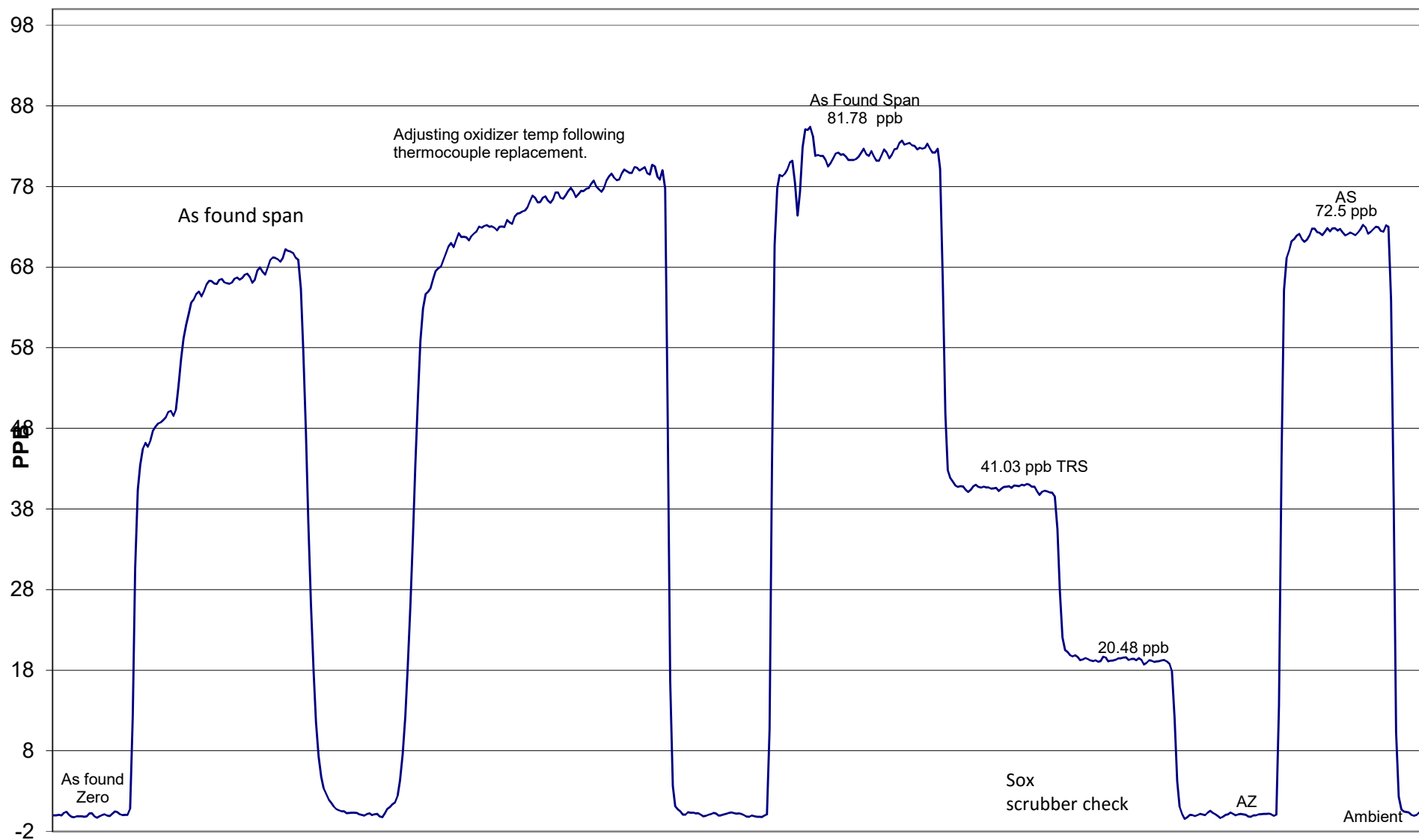
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999608
81.8	83.0	0.9854		
41.0	40.6	1.0104		
20.5	19.4	1.0557	Slope	0.981019
			Intercept	0.743957

TRS Calibration Curve



Smokey Heights TRS Calibration



June 6, 2016

Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	June 6, 2016	Previous Calibration	May 31, 2016
Station Number	3	Station Location	Smokey Heights
Reason:	☐ Routine	☒ Install	☐ Removal
			☐ Other:
Start Time (MST)	10:15	End Time (MST)	17:15:00 PM
Barometric Pressure	0.927 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Conc	10.32 ppm	Cal Gas Expiry Date	7/8/2016
Correction factor	0.031511	Cal Gas Cylinder #	BLM00586
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	0.981065	Calculated slope	0.998685
Calculated intercept	0.742332	Calculated intercept	0.713060

Analyzer make TEI Model 43I APSAA Analyzer serial # 1153630151

	before		after	
Concentration range	100	ppb	100	ppb
Background	14.7	ppb	14.2	ppb
coefficient	1.098		1.021	
Lamp Voltage	795	volts	801	volts
Chamber Temp	45	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	678.9	mm Hg	761	mm Hg
Sample Flow	0.425	lpm	0.418	lpm
Lamp Intensity	90	mv	90	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.00	0.1	N/A
4989	39.85	81.78	81.8	1.0001
4987	19.91	41.04	39.2	1.0466
6990	9.92	14.63	13.7	1.0694
4990	9.92			Sox test
4990	0.0	0.00	0.1	As Found Zero
4989	39.85	81.78	81.8	As Found Span
Average Correction Factor				1.0387

Calculated value of As Found Response: 80.86 ppm Percent Change of As Found: 1.1%

	before calibration		after calibration	
Auto zero	0.4	ppm	0.1	ppm
Auto span	47.2	ppm	68.8	ppm

Notes: PMT & regular adjustment along with oxydizer tem adjust were done
On the last dilution point put wrong gas concentration on the calibrator,which caused a spike

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



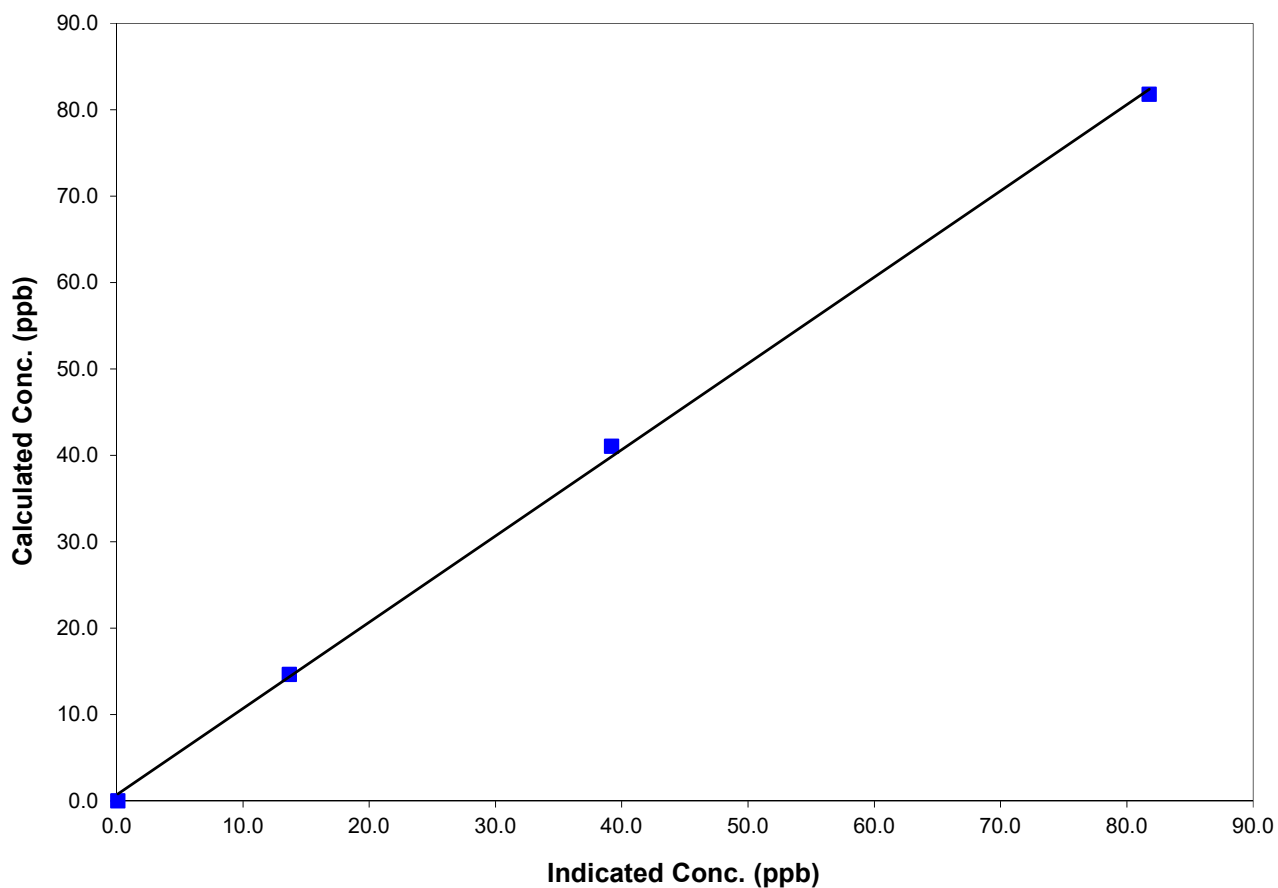
Station Information

Calibration Date	June 6, 2016	Previous Calibration	May 31, 2016
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:15	End Time (MST)	17:15:00 PM
Analyzer make/model	TEI Model 43I APSAA	Analyzer serial #	1153630151

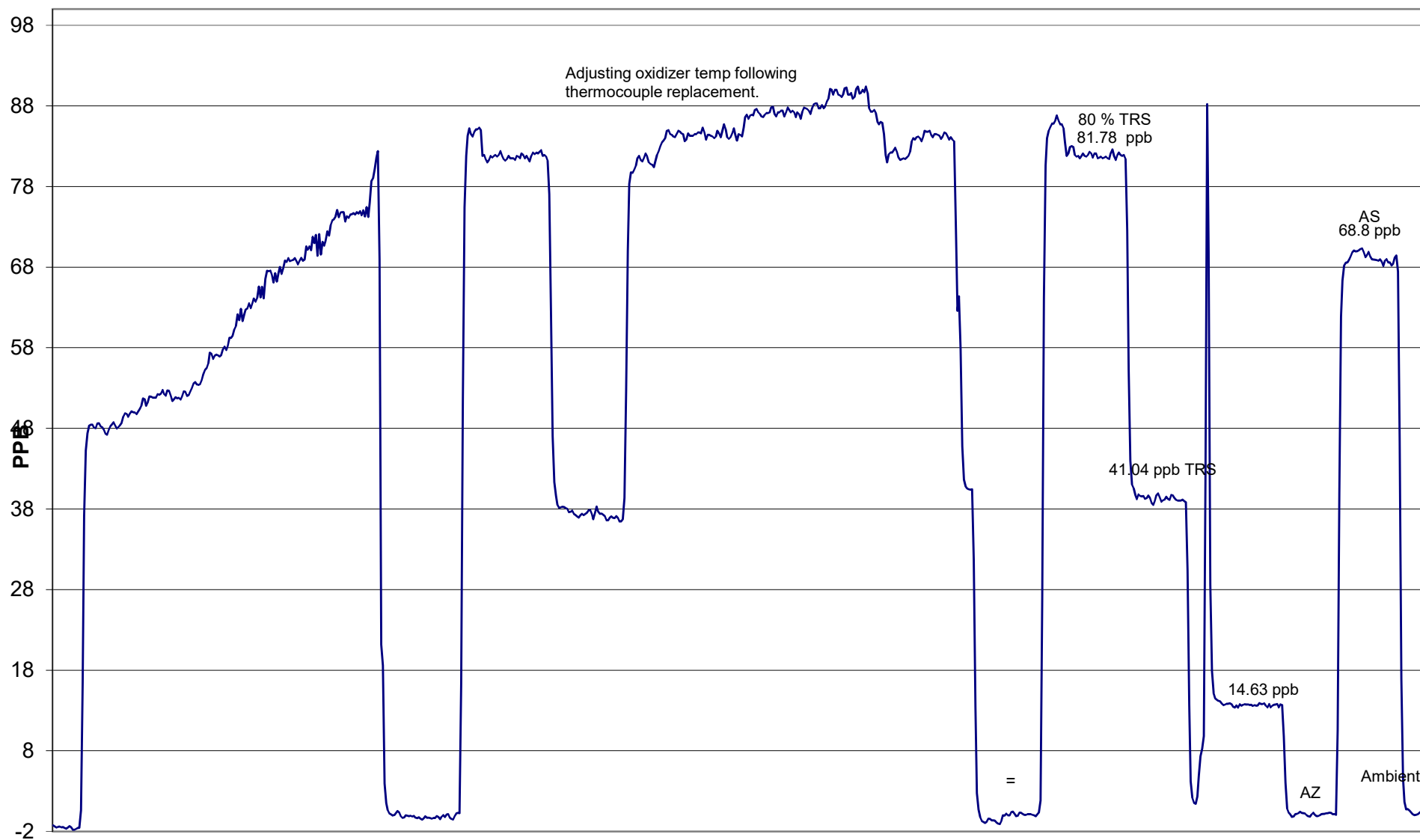
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999364
81.8	81.8	1.0001		
41.0	39.2	1.0466		
14.6	13.7	1.0694	Slope	0.998685
			Intercept	0.713060

TRS Calibration Curve



Smokey Heights TRS Calibration



June 6, 2016

SHARP 5030 PM2.5 Calibration



STATION: Smokey Heights
 LOCATION: Smokey Heights
 START TIME (MST): 12:30

OPERATOR: Grover Christiansen/Dmytro Dc
 DATE: June 6 2016
 END TIME (MST): 15:00:PM

MONITOR INFO / PARAMETER VALUES:

Make/Model SHARP 5030
 Configuration PM 2.5
 Serial Number CM-0271

Audit Device Model Delta cal
 Audit Device S/N AMU 2024
 Certification Date 16-May-15

AUDIT / CALIBRATION RESULTS:

		Ambient Temp. (^o C)	Ambient Pres. (mbar)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
As Found Data	Audit values (I)	25.3	922	16.67	16.66	14:17
	MEASURED (AF)	24.7	923	16.10	16.10	14:07
	AF Difference (AF-I)	-0.6	1	0.57	-0.56	2:24
Adjusted Data	MEASURED (M)	24.7	923	16.65	16.65	14:20:00 PM
	Adj Difference (M-I)	-0.6	1	-0.02	-0.01	0:01
	LIMITS	± 4.0 ^o C	6.7 mbar	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: Cleaned sample head

Status of sampling tape: 40% full

Nozzle Inspection / cleanliness: Good

COMMENTS: Full installation cal performed.

Foil calibration Old value 7080 New value 7093

Nephelometer zero. Analog as found = 1.4. After adjustment=0.1

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	June 8, 2016	Previous Calibration	May 11, 2016
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	13:50:00 PM	End Time (MST)	15:55:00 PM
Barometric Pressure	0.928 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	10.5 ppm	Cal Gas Expiry Date	1/12/2019
Gas Cert Reference	FF16108		
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.001988	Calculated slope	1.011988
Calculated intercept	-0.171338	Calculated intercept	-0.290359
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.55		2.52	
Coefficient	0.969		0.969	
PMT	-768.5	V	-768.1	V
UV Lamp Voltage	1102	V	1109	V
Chamber Temp	44.9	Deg C	45	Deg C
Pressure	658	mm Hg	662.8	mm Hg
Sample Flow	0.458	LPM	0.463	LPM
Lamp Intensity	96	%	96	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.2	N/A
4998	39.95	83.3	82.5	1.0096
4996	19.98	41.8	41.8	1.0010
4994	9.99	21.0	21.0	0.9973
4994	0.00	0.0	0.2	As found zero
4994	39.92	83.3	82.5	As found span
Average Correction Factor				1.0026

Calculated value of As Found Response: 82.277 ppm Percent Change of As Found: 1.2%

	before calibration		after calibration	
Auto zero	0.0	ppb	-0.1	ppb
Auto span	57.5	ppb	60.2	ppb

Notes: No adjustment made

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



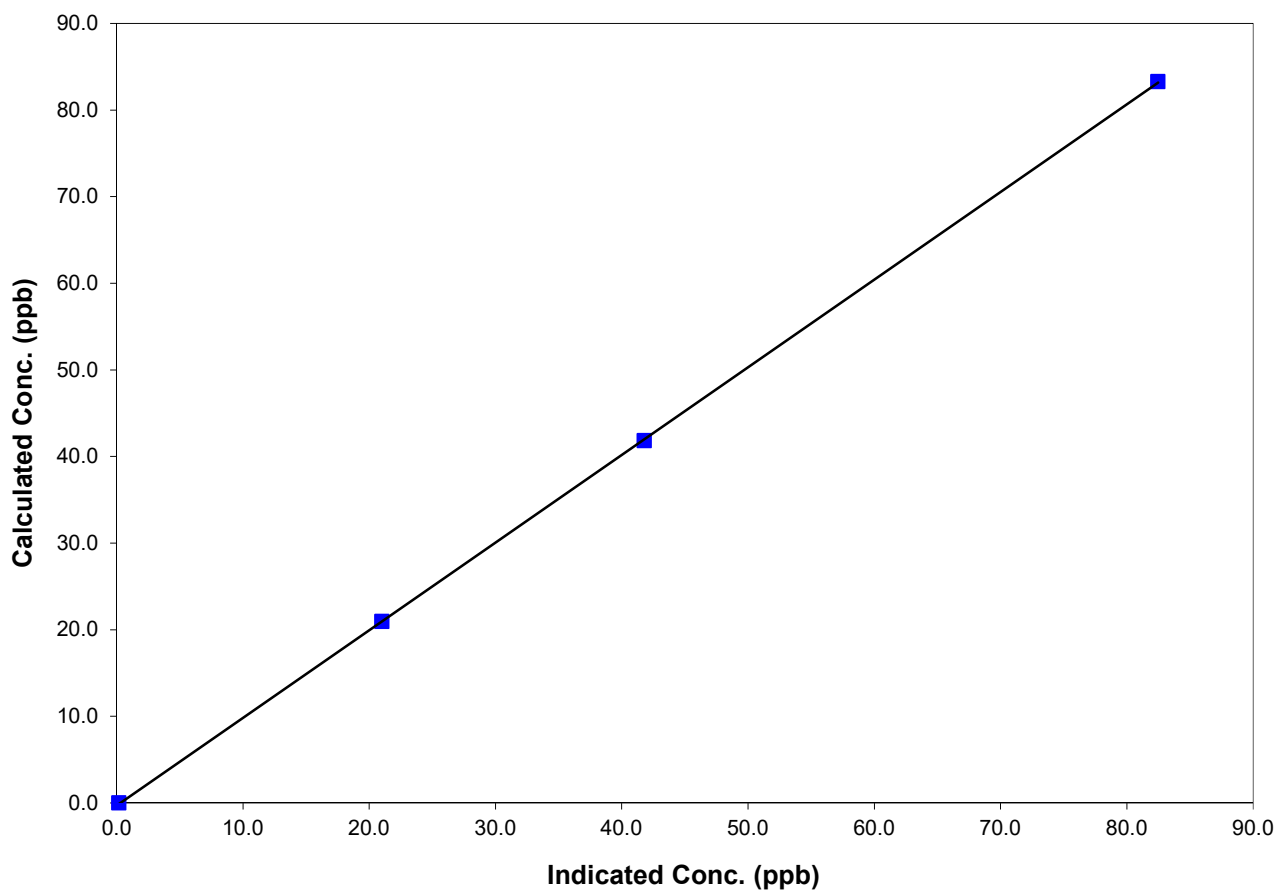
Station Information

Calibration Date	June 8, 2016	Previous Calibration	May 11, 2016
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:50:00 PM	End Time (MST)	15:55:00 PM
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

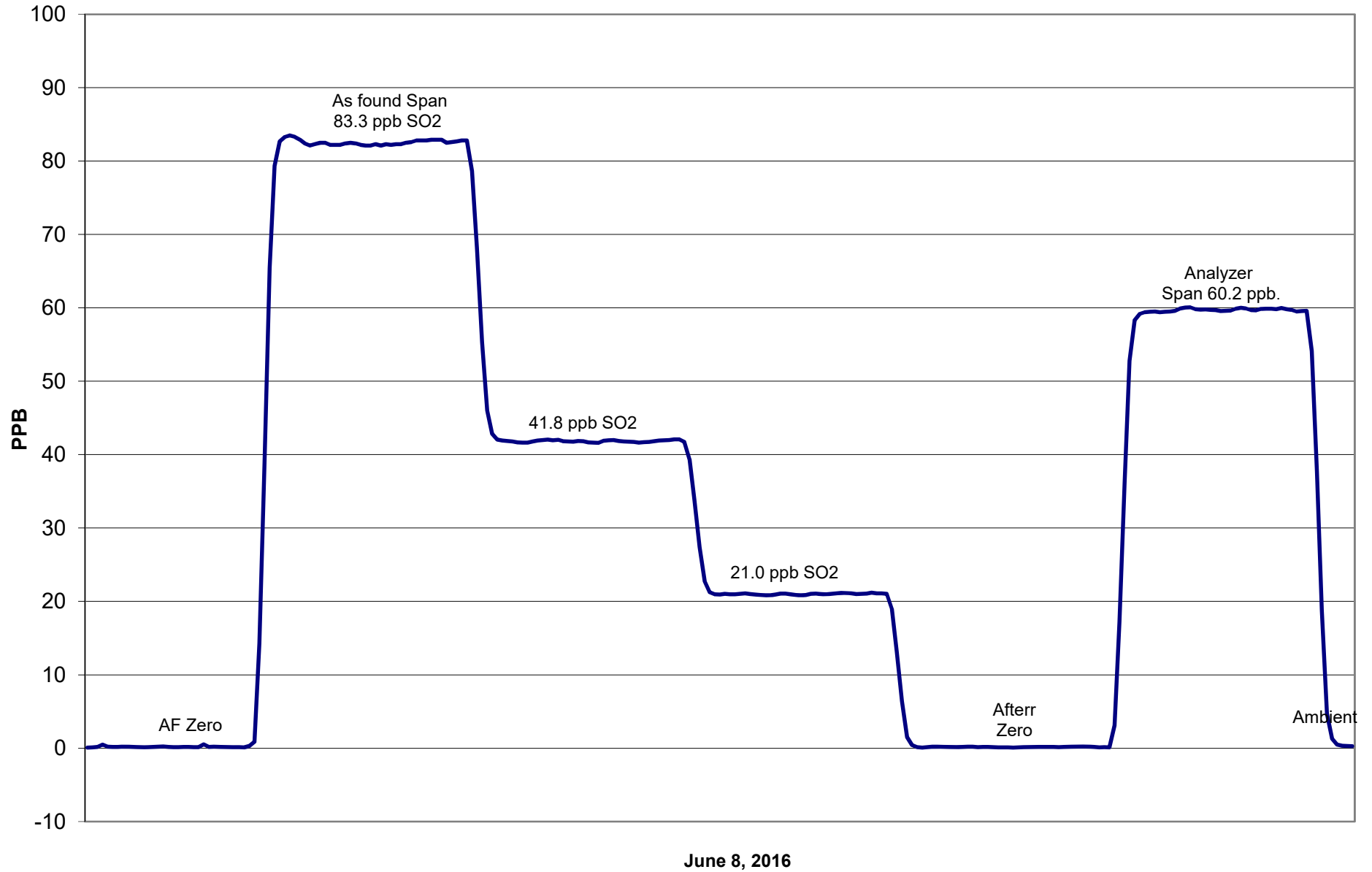
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999987
83.3	82.5	1.0096		
41.8	41.8	1.0010		
21.0	21.0	0.9973	Slope	1.011988
			Intercept	-0.290359

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

PAZA



Station Information

Calibration Date	June 8, 2016	Previous Calibration	May 11, 2016		
Station Number	4	Station Location	Beaverlodge		
Reason:	☒ Routine	☐ Installation	☐ Removal		
Start Time (MST)	8:50	End Time (MST)	13:20:00 PM		
Barometric Pressure	0.928	Atm	Station Temperature	20.0	Deg C
Calibrator	Envionics	Serial Number	6586		
NO Cal Gas Conc	50.9	ppm	Cal Gas Expiry Date	November 5, 2018	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL103793	

DACS Information

DACS make	CR3000	DACS serial No.	5237	
Parameter	NO2	NOx	NO	
Before	Data Slope	0.995942	0.998782	0.999728
	Data Offset	-0.435515	0.721620	0.791293
After	Data Slope	0.995545	0.998832	0.998556
	Data Offset	-0.977138	0.374850	0.684026
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	2.6	mV	2.7	mV
NOx bkgnd	3.1	mV	3.2	mV
NO coefficient	1.108		1.151	
NOx coefficient	1.005		1.005	
NO2 conv temp	326.8	Deg C	323.8	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-730.0	mV	-730.0	mV
R Cell Press	186.4	in Hg	185.6	in Hg
Sample Flow	0.702	LPM	0.700	LPM

Notes: Span adjustment made

By accident submitted 2nd dilution point instead of running adjusting point NOx, noticed a mistake, went back up to 80% point, adjust it, ran adjustment point.

Calibration Report

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



Station Information

Calibration Date: June 8, 2016 Station Location: Beaverlodge

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.3	0.0	0.1	N/A	N/A
1	4998	39.99	406.4	404.0	2.4	406.8	404.4	1.6	0.9991	0.9992
2	4997	19.98	203.9	202.7	1.2	203.6	201.7	1.0	1.0015	1.0049
3	4999	9.99	102.1	101.5	0.6	101.0	100.4	0.4	1.0107	1.0107
AFZ	4995	0.00	0.0	0.0	0.0	0.3	0.0	0.1	0.0000	0.0000
AFS	4995	39.92	405.9	403.6	0.8	391.5	388.8	2.0	1.0368	1.0381
Average Correction Factor									1.0037	1.0049

As Found Concentrations: NO_x= 391.5 NO= 389.4 As Found Percent Change NO_x= -3.6% NO= -3.5%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NOx high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.3	0.0	0.1	N/A	N/A	N/A	N/A
NO point	404.0	404.0	0.0	405.9	404.0	1.1	0.9953	1.0000	N/A	N/A
300	404.0	71.1	332.9	406.7	71.1	334.6	0.9935	1.0000	0.9950	100.5%
200	404.0	179.5	224.5	407.6	179.5	227.2	0.9912	1.0000	0.9881	101.2%
100	404.0	294.4	109.6	407.1	294.4	112.0	0.9925	1.0000	0.9786	102.2%
Average Correction Factor							0.9924	1.0000	0.9872	101.3%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.1	-0.2	0.0	ppb	-0.1	-0.2	0.0	ppb
Auto span	283.3	280.5	2.0	ppb	290.9	287.9	2.2	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



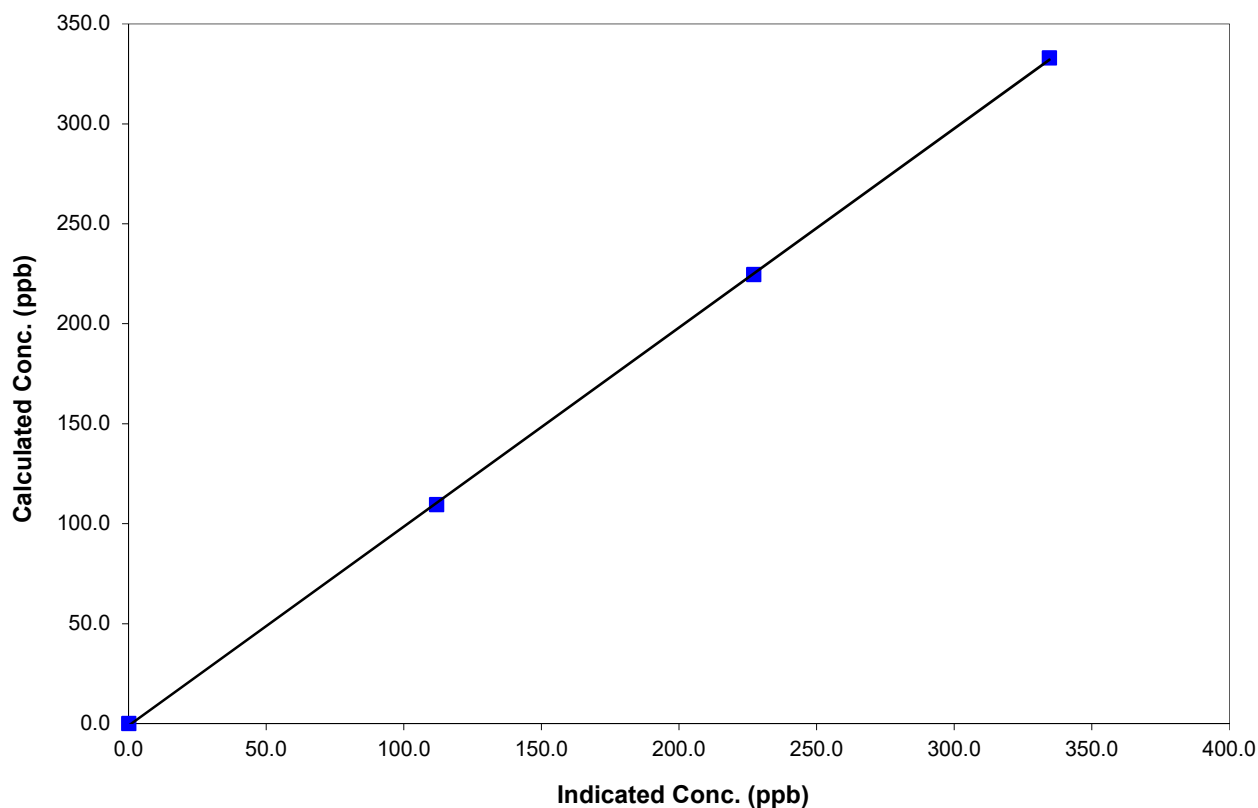
Station Information

Calibration Date	June 8, 2016	Previous Calibration	May 11, 2016
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:50	End Time (MST)	13:20:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999957
332.9	334.6	0.9950		
224.5	227.2	0.9881		
109.6	112.0	0.9786	Slope	0.995545
			Intercept	-0.977138

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



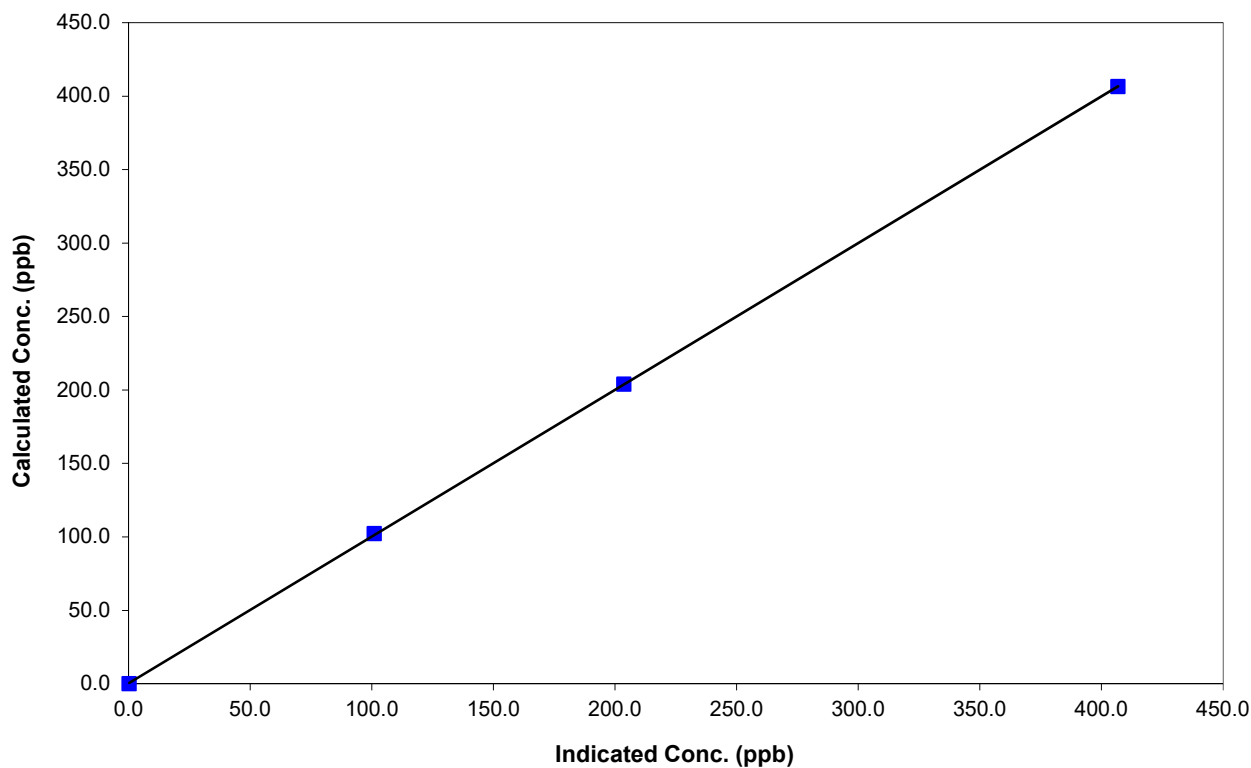
Station Information

Calibration Date	June 8, 2016	Previous Calibration	May 11, 2016
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:50	End Time (MST)	13:20:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A	Correlation Coefficient	0.999986
406.4	406.8	0.9991		
203.9	203.6	1.0015		
102.1	101.0	1.0107	Slope	0.998832
			Intercept	0.374850

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



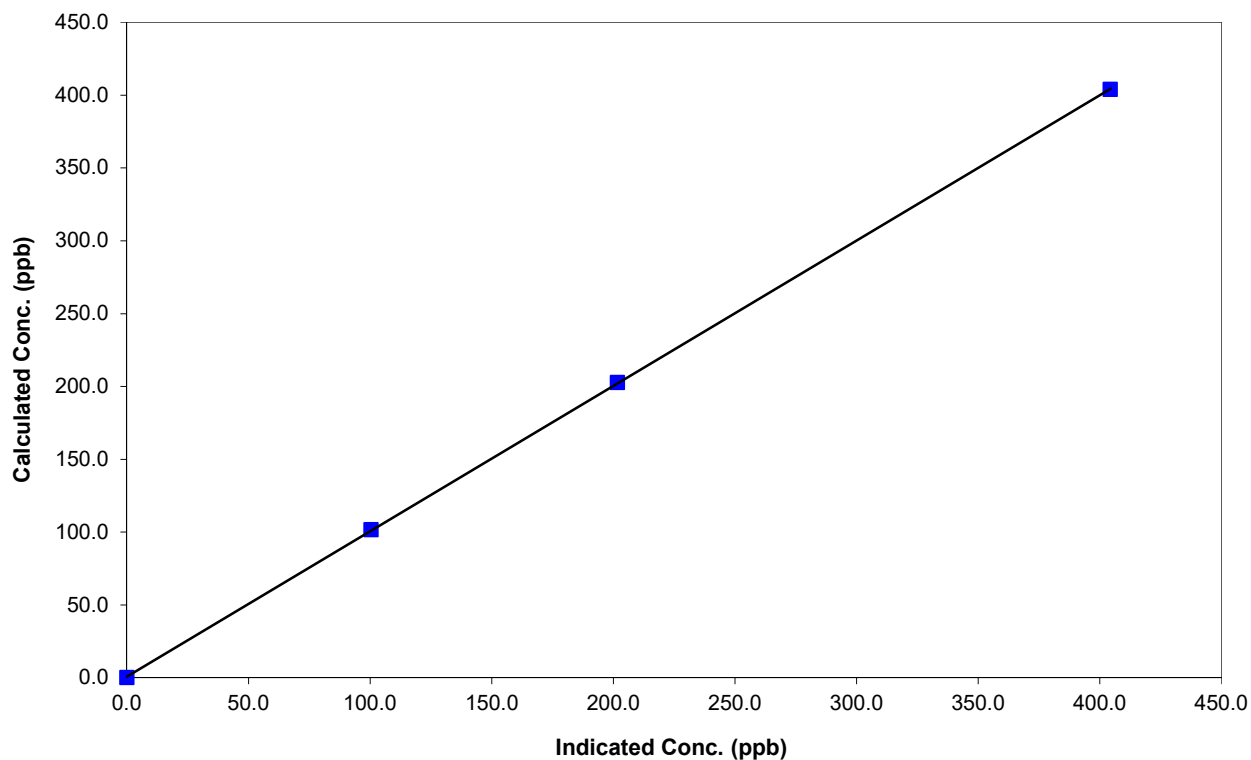
Station Information

Calibration Date	June 8, 2016	Previous Calibration	May 11, 2016
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:50	End Time (MST)	13:20:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

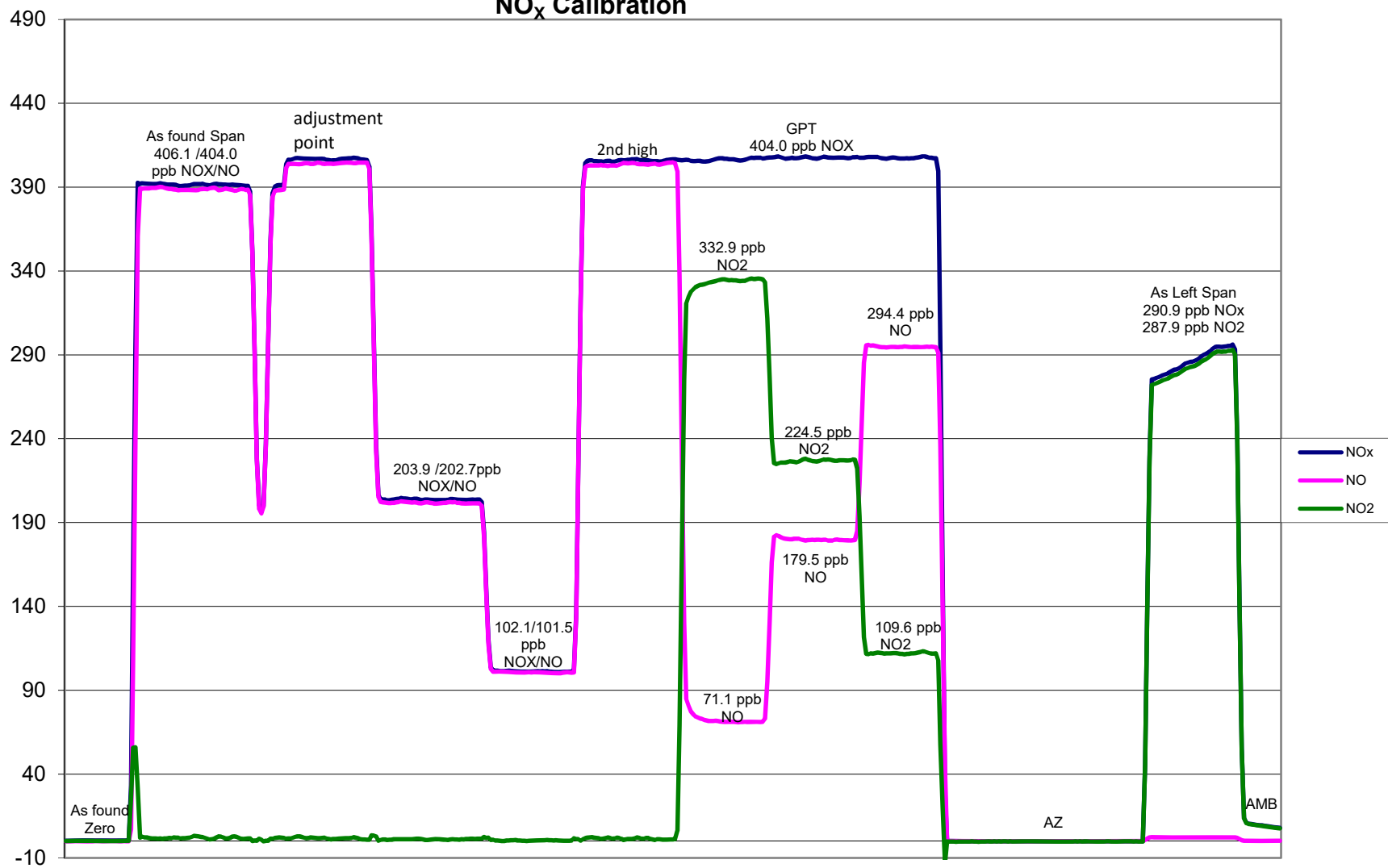
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999985
404.0	404.4	0.9992		
202.7	201.7	1.0049		
101.5	100.4	1.0107	Slope	0.998556
			Intercept	0.684026

NO Calibration Curve



NO_x Calibration



June 8, 2016

Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	June 8, 2016	Previous Calibration	May 11, 2016
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	☐ Install	☐ Removal
		☐ Other:	

Start Time (MST)	11:50	End Time (MST)	14:35:00 PM
Barometric Pressure	0.928 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	0.985947	Calculated slope	0.998519
Calculated intercept	0.290575	Calculated intercept	0.369326

Analyzer make	Teco 49i	Analyzer serial #	1136451236,AMU 1879
---------------	----------	-------------------	---------------------

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.30	ppb	-0.30	ppb
slope	1.090		1.061	
Lamp temp	53.8	mV	53.8	mV
Lamp Intensity A/B	48227/53708	mV	48211/53697	mV
Pressure	677.2	mm Hg	674.2	mm Hg
Flow A	0.788	LPM	0.785	LPM
Flow B	0.738	LPM	0.737	LPM

Calibration Data

Dilution air flow rate (cc/min)	Calibrator Setting	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5035	0.00	0.0	0.3	N/A
5035	0.30	332.9	333.9	0.9969
5035	0.20	224.5	223.3	1.0056
5035	0.10	109.6	109.0	1.0051
5035	0.00	0.0	0.3	As found zero
5035	0.30	332.9	333.9	As found span
Average Correction Factor				1.0025

Calculated value of As Found Response: 329.3 ppm Percent Change of As Found: -1.1%

	before calibration		after calibration	
Auto zero	0.6	ppb	0.5	ppb
Auto span	265.4	ppb	270.8	ppb

Notes: Span adjustment made

On the after zero span compared calibrator zero with internal analyzer zero,as a result saw couple minor spikes in internal zero-could be a zero valve issue. Will be adressd on the next visit

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



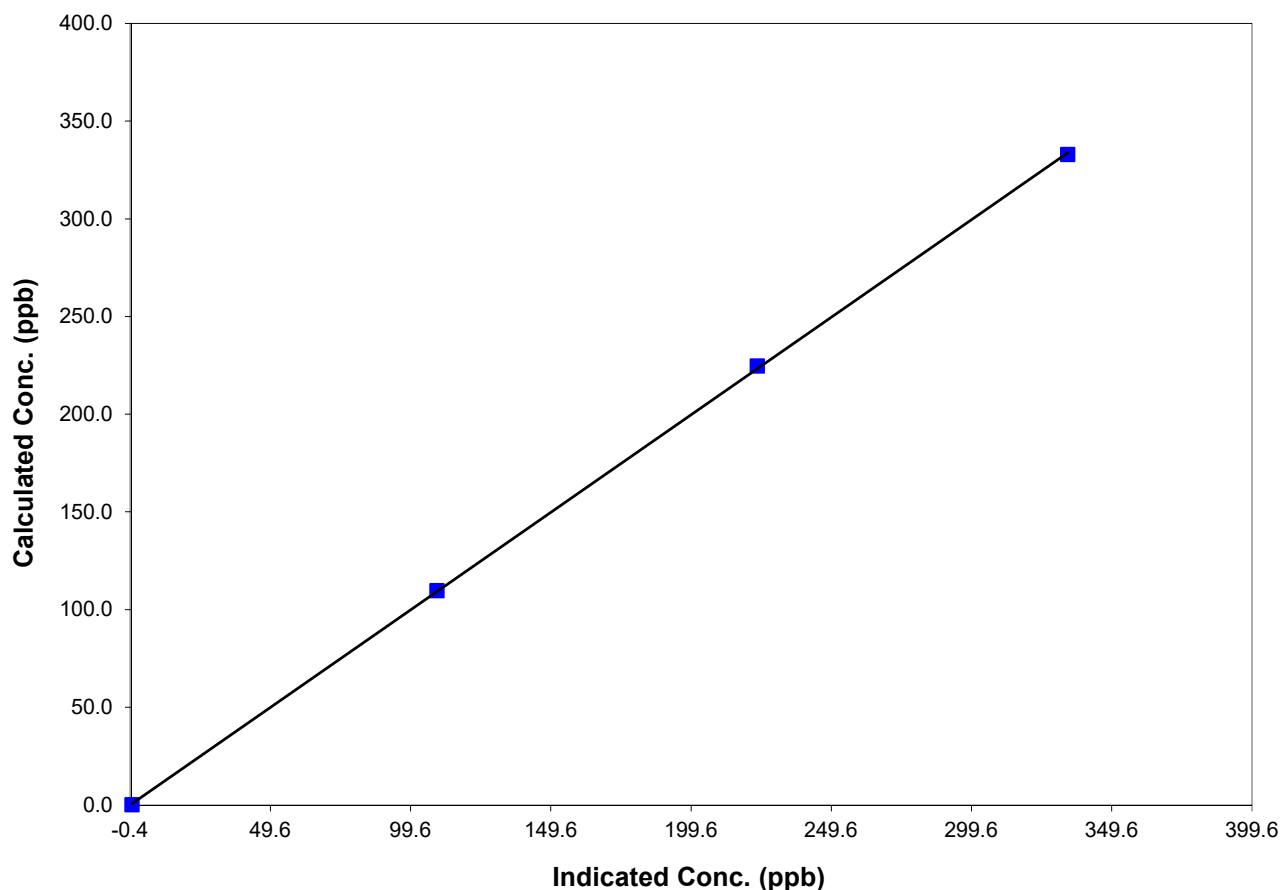
Station Information

Calibration Date	June 8, 2016	Previous Calibration	May 11, 2016
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	11:50	End Time (MST)	14:35:00 PM
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236,AMU 1879

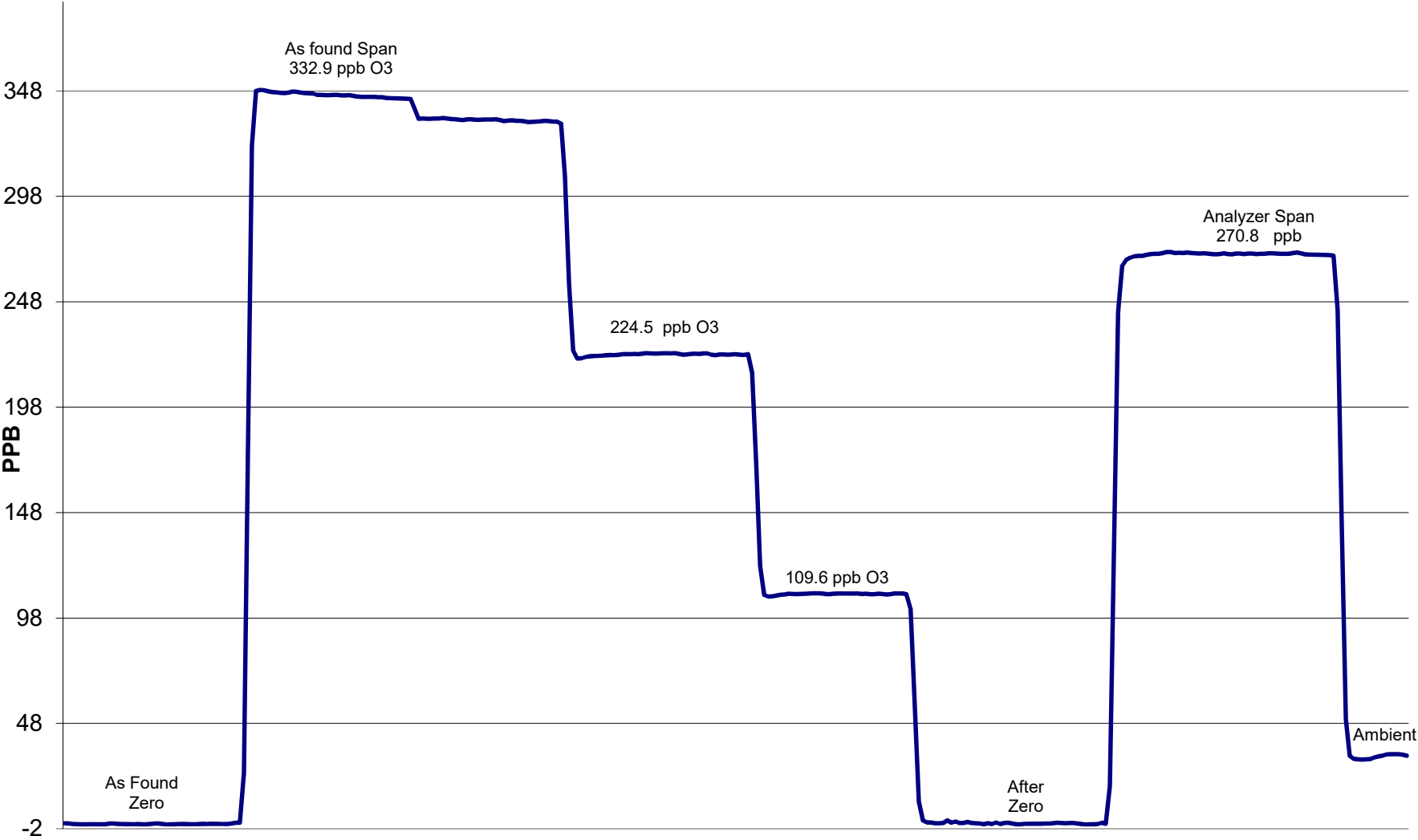
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	NA	Correlation Coefficient	0.999954
332.9	333.9	0.9969		
224.5	223.3	1.0056		
109.6	109.0	1.0051	Slope	0.998519
			Intercept	0.369326

O3 Calibration Curve



O3 Calibration



June 8, 2016

SHARP 5030 PM2.5 Calibration



STATION: Beaverlodge
 LOCATION: Beaverlodge agriculture centre
 START TIME (MST): 10:00

OPERATOR: Dmytro Dolotii
 DATE: June 22 2016
 END TIME (MST): 15:31:00 PM

MONITOR INFO / PARAMETER VALUES:

Make/Model SHARP 5030
 Configuration PM 2.5
 Serial Number AMU 1969

Audit Device Model Delta cal
 Audit Device S/N AMU 1789
 Certification Date 01-Oct-15

AUDIT / CALIBRATION RESULTS:

		Ambient Temp. (°C)	Ambient Pres. (mbar)	Leak Check (L/min)	Flow Rate (lpm)	Time settings (hh:mm)
As Found Data	Audit values (I)	19.0	925	16.67	16.67	14:40:00 PM
	MEASURED (AF)	18.0	925	16.50	16.73	14:44:00 PM
	AF Difference (AF-I)	-1.0	0	0.17	0.06	0:01
Adjusted Data	MEASURED (M)	18.0	925	16.50	16.72	14:40:00 PM
	Adj Difference (M-I)	-1.0	0	-0.17	0.05	0:01
	LIMITS	± 4.0 °C	6.7 mbar	1.0 L/min	± 1.0 L/min	±2 min

Sample Head Inspect/Cleaning: Cleaned sample head

Status of sampling tape: 90% full

Nozzle Inspection / cleanliness: _____

COMMENTS: _____

Foil calibration Old value 6995 New value 7008

Nephelometer zero. Analog as found = 0.7 adsuted conc = -0.0

Calibration Report



AIR QUALITY MONITORING

Parameter SO2

Air Monitoring Network PAZA

Station Information

Calibration Date	June 15 2016	Previous Calibration	May 9 2016
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	11:40	End Time (MST)	13:55:00 PM
Barometric Pressure	0.927 atm	Station Temperature	20.5 Deg C
Calibrator	Envionics	Serial Number	3016
Cal Gas Concentration	49.7 ppm	Cal Gas Exp Date	November 5, 2018
Gas Cylinder Num.	LL103793		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.001323	Calculated slope	1.000076
Calculated intercept	0.559616	Calculated intercept	0.065676
Analyzer make	TEI 43C	Analyzer serial #	609716239

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	16		16	
Coefficient	1.031		1.031	
UV Lamp Voltage	732	LPM	732	LPM
Chamber Temp	43	V	43	V
Perm Gas Temp	45	C	45	C
Pressure	658.3	in Hg	662.7	in Hg
Sample Flow	0.478	LPM	0.483	LPM
Lamp Intensity	47780	Hz	47800	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	1.0	N/A
4997	39.93	394.0	394.5	0.9988
4999	19.99	197.9	197.2	1.0039
4995	9.95	98.8	97.8	1.0103
4995	0.00	0.0	1.0	As found zero
4995	39.93	394.2	394.5	As found span
Average Correction Factor				1.0043

Calculated value of As Found Response: 394.6 ppm Percent Change of As Found: -0.1%

	before calibration		after calibration	
Auto zero	0.9	ppm	0.8	ppm
Auto span	285.2	ppm	294.3	ppm

Notes: No adjustment made

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



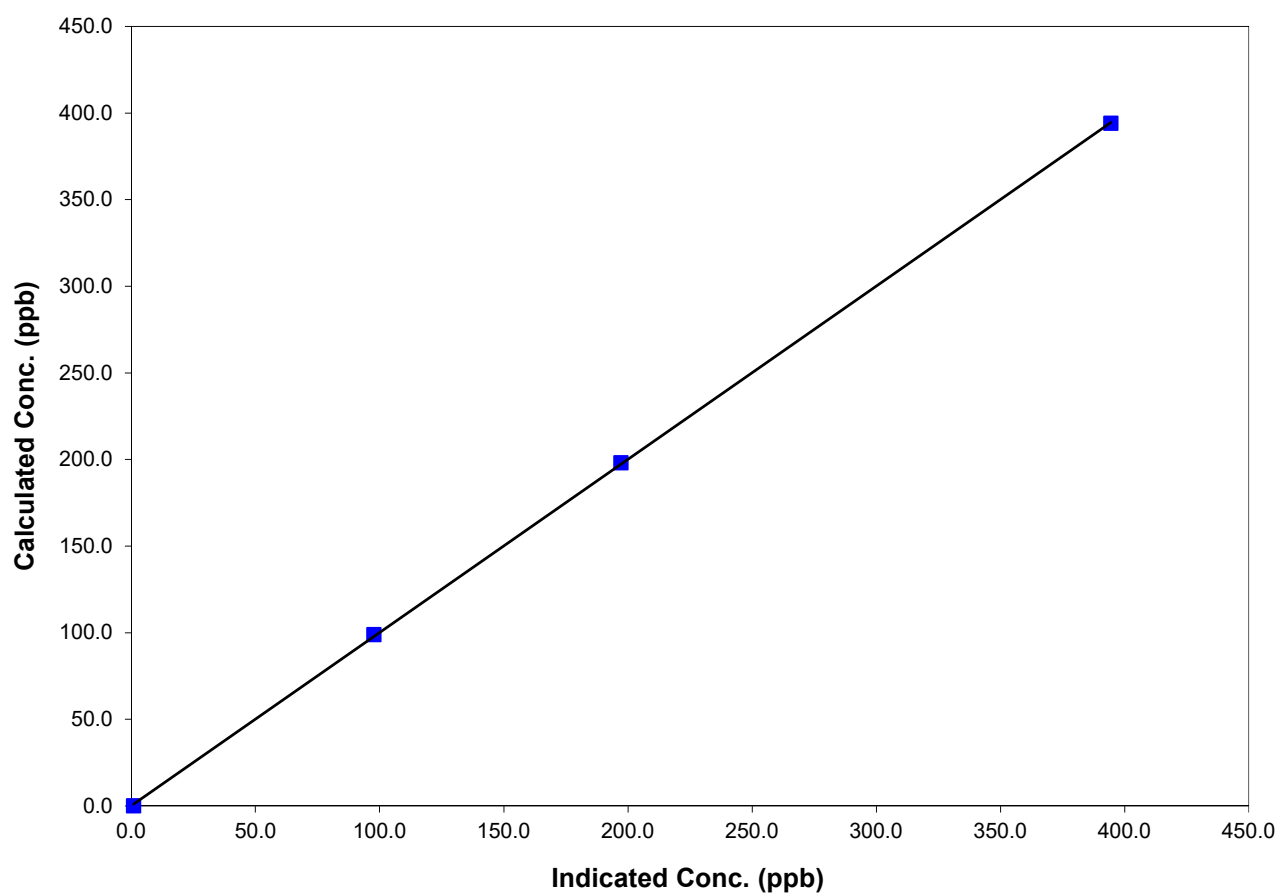
Station Information

Calibration Date	June 15 2016	Previous Calibration	May 9 2016
Station Number	6	Station Location	Valleyview
Start Time (MST)	11:40	End Time (MST)	13:55:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	609716239

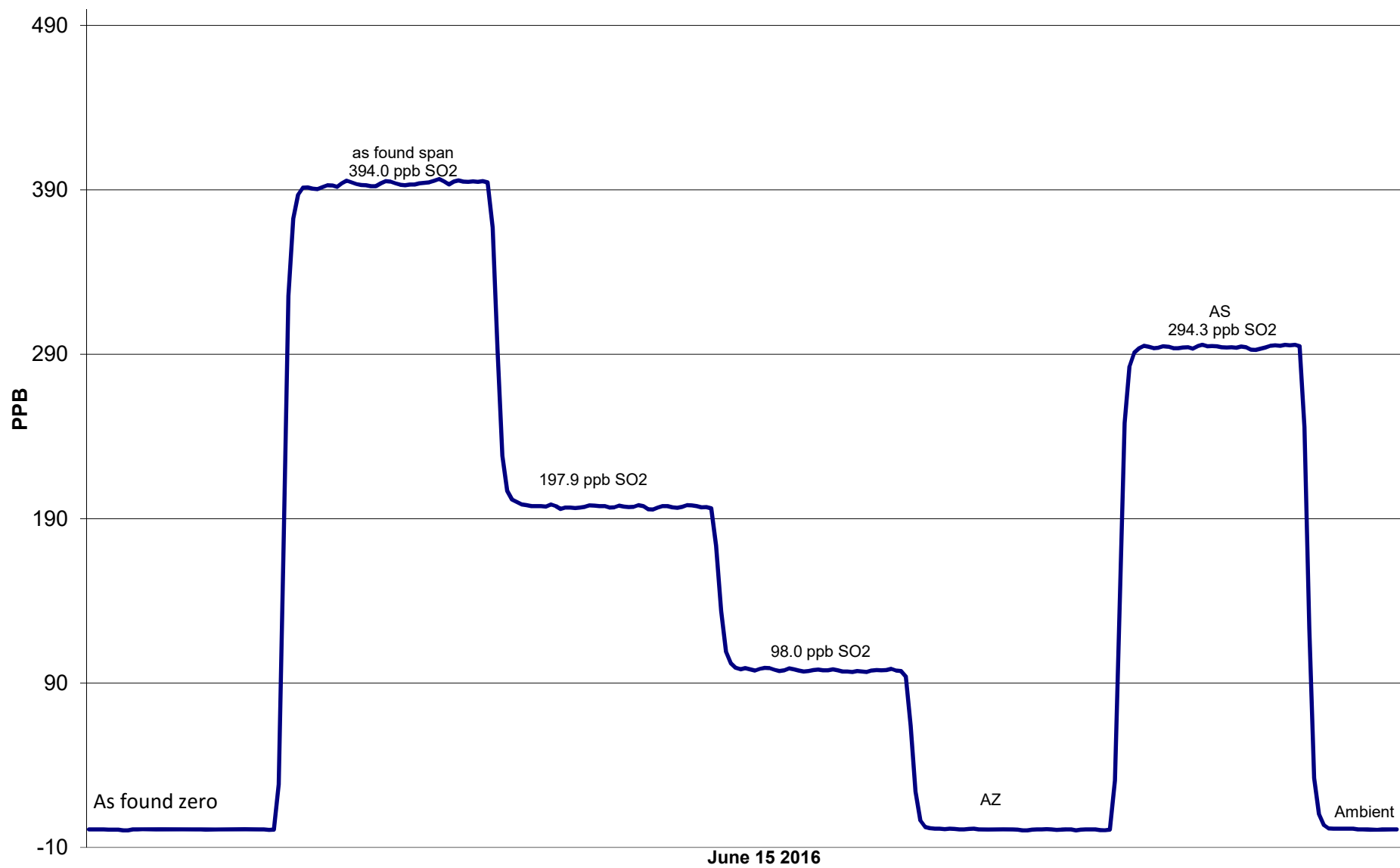
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.0	N/A	Correlation Coefficient	0.999968
394.0	394.5	0.9988		
197.9	197.2	1.0039		
98.8	97.8	1.0103	Slope	1.000076
			Intercept	0.065676

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	June 15 2016	Previous Calibration	May 9 2016
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	9:50	End Time (MST)	12:55
Barometric Pressure	0.927 atm	Station Temperature	20.5 Deg C
Calibrator	Envionics	Serial Number	6586
Cal Gas Concentration	10.2 ppm	Cal Gas Expiry Date	July 03 2016
Gas Cert Reference	LL110781		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.002646	Calculated slope	0.994813
Calculated intercept	-0.226570	Calculated intercept	0.054909
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	8.0	ppb	8.3	ppb
Coefficient	0.864		0.898	
Lamp Voltage	790	V	790	V
Chamber Temp	45	c	45	c
Perm Oven Temp	45	c	45	c
Pressure	533.00	mm Hg	534.20	mm Hg
Sample Flow	0.366	ccm	0.367	lpm
Lamp Intensity	91	%	91	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4996	0.00	0.0	0.2	N/A
4998	39.98	80.9	81.5	0.9933
4998	19.96	40.6	40.4	1.0042
6999	10.09	14.7	14.6	1.0053
4997	9.97		2.8	Sox Test
4997	0.00	0.0	0.2	As found zero
4997	39.93	80.9	78.0	As found span
Average Correction Factor				1.0009

Calculated value of As Found Response: 77.79 ppm Percent Change of As Found: 3.8%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.4	ppm
Auto span	66.6	ppm	72.1	ppm

Notes: Span adjustment,ran adjustment point
Sox scrubber check is done

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



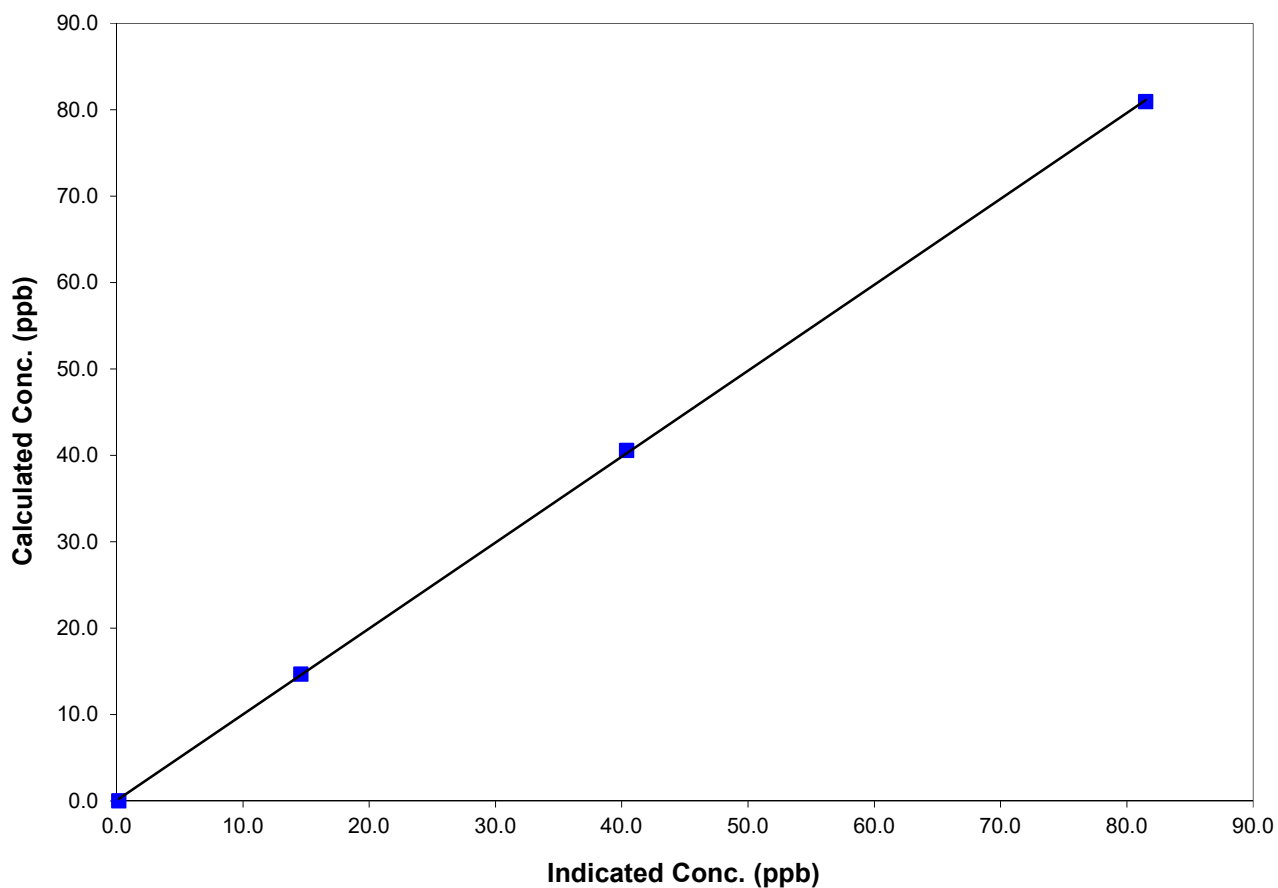
Station Information

Calibration Date	June 15 2016	Previous Calibration	May 9 2016
Station Number	6	Station Location	Valleyview
Start Time (MST)	9:50	End Time (MST)	12:55
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

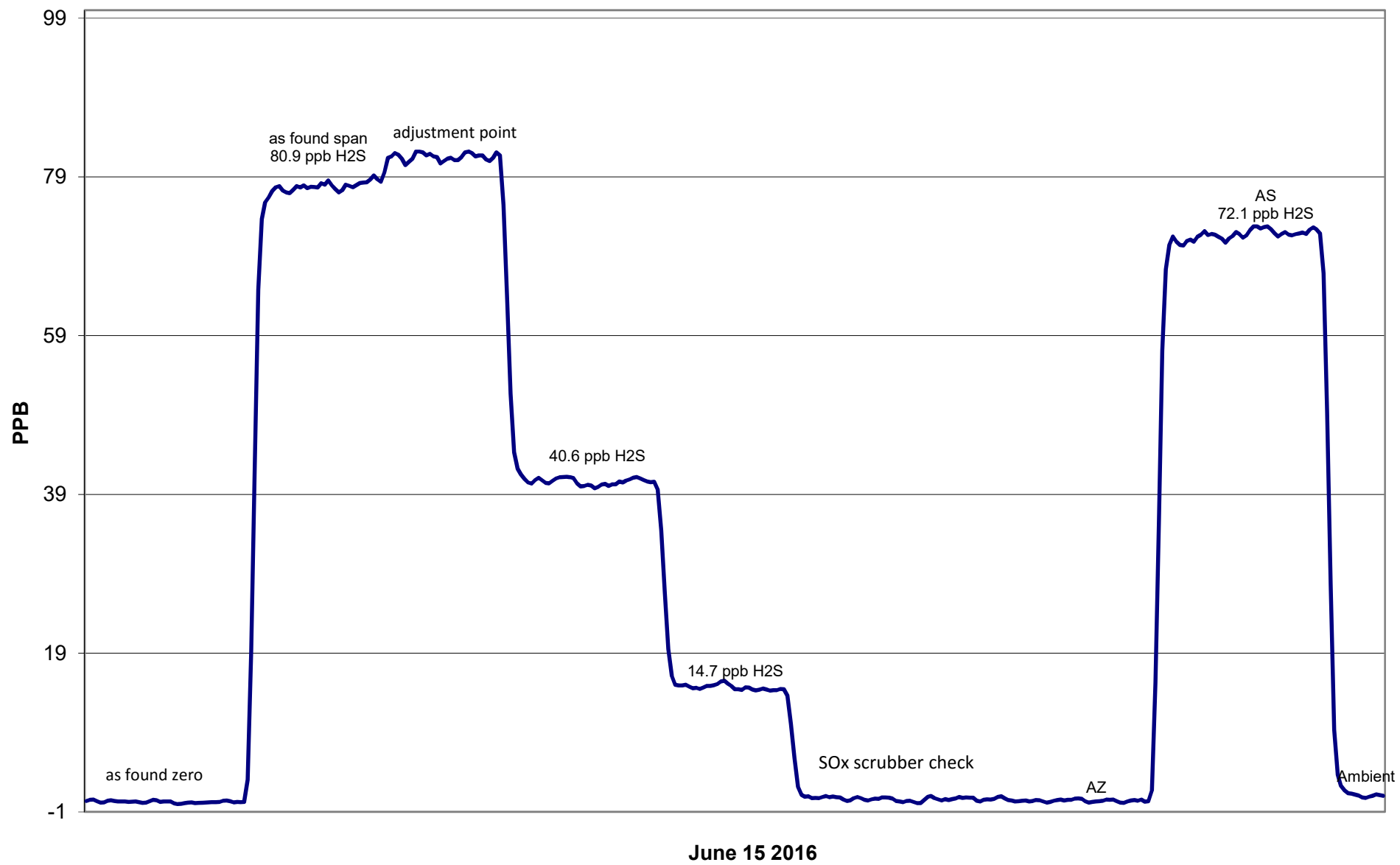
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999946
80.9	81.5	0.9933		
40.6	40.4	1.0042		
14.7	14.6	1.0053	Slope	0.994813
			Intercept	0.054909

H2S Calibration Curve



H2S Calibration



Calibration Report

Parameter SO2
Air Monitoring Network PAZA



Station Information

Calibration Date	June 16, 2016	Previous Calibration	May 5, 2016
Station Number	10	Station Location	Clairmont
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	9:40	End Time (MST)	12:15
Barometric Pressure	0.929 Atm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	49.8 ppm	Cal Gas Expiry Date	3/10/2017
Gas Cert Reference	LL119493		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.985134	Calculated slope	1.000511
Calculated intercept	1.178760	Calculated intercept	1.252912
Analyzer make	TEI 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	24		23.6	
Coefficient	1.077		1.058	
UV Lamp Voltage	888	V	887	V
Chamber Temp	44.3	C	44.2	C
Perm Gas Temp	45	C	45	C
Pressure	669.3	mm Hg	669.2	mm Hg
Sample Flow	0.466	LPM	0.466	LPM
Lamp Intesity	30284	Hz	30289	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4998	0.00	0.0	0.1	N/A
4996	39.95	395.1	394.5	1.0015
4997	19.98	198.3	195.6	1.0137
4999	9.94	98.8	96.7	1.0223
4998	0.00	0.0	0.1	As found zero
4999	39.93	394.6	402.2	As found span
Average Correction Factor				1.0125

Calculated value of As Found Response: 397.309 ppm Percent Change of As Found: -0.7%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	207.6	ppm	208.2	ppm

Notes: Span adjustment made

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



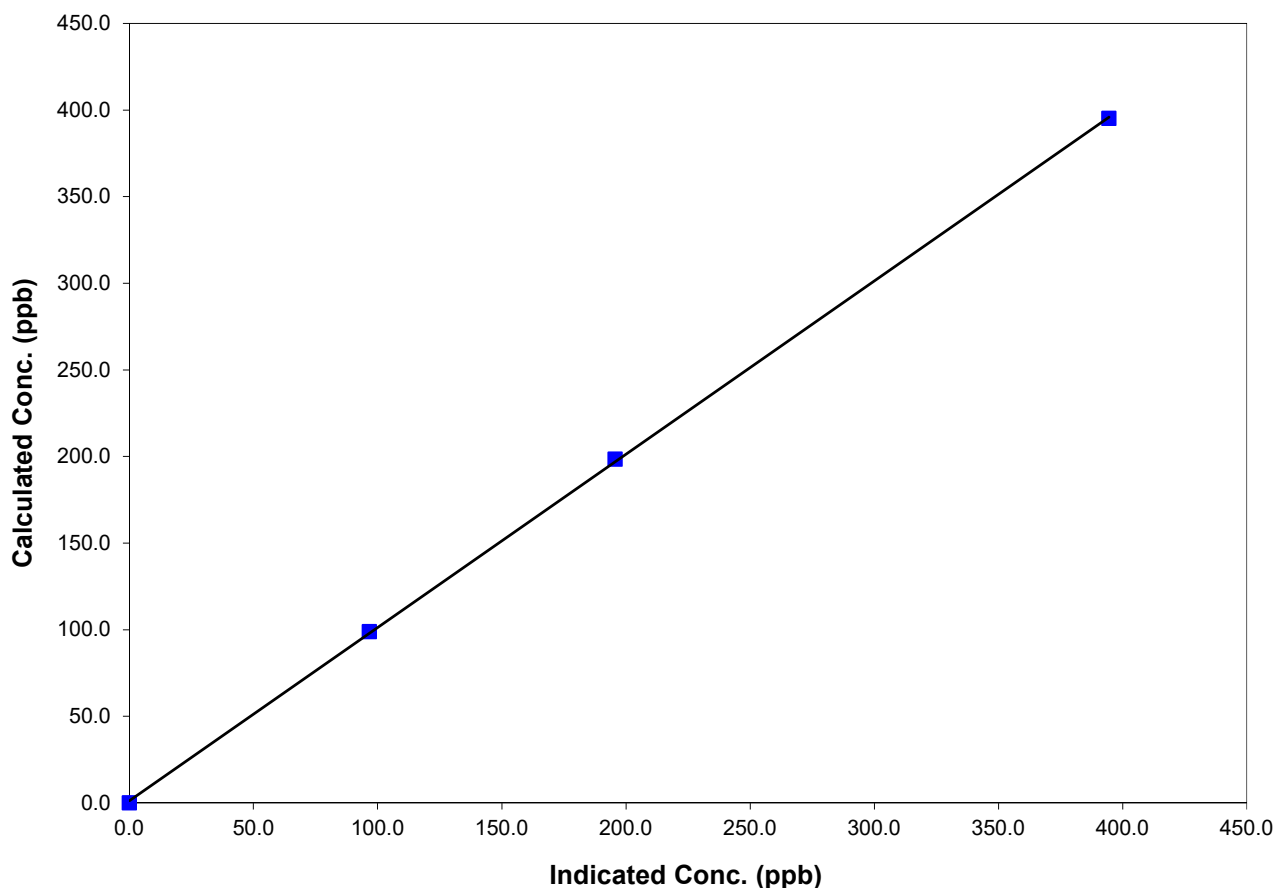
Station Information

Calibration Date	June 16, 2016	Previous Calibration	May 5, 2016
Station Number	10	Station Location	Clairmont
Start Time (MST)	9:40	End Time (MST)	12:15
Analyzer make/model	TEI 43C	Analyzer serial #	436610005

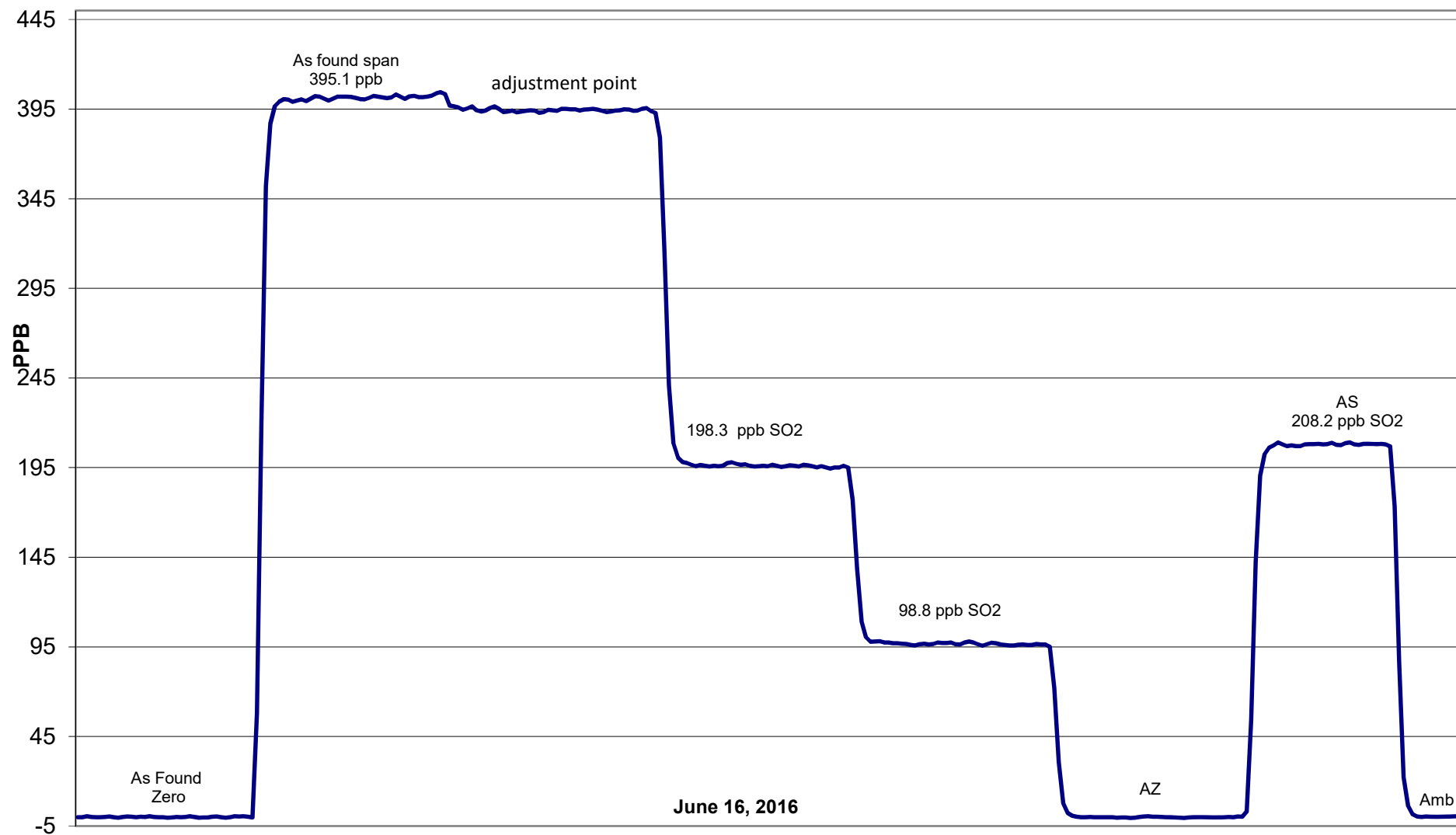
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999942
395.1	394.5	1.0015		
198.3	195.6	1.0137		
98.8	96.7	1.0223	Slope	1.000511
			Intercept	1.252912

SO2 Calibration Curve



SO2 Calibration



Parameter

Air Monitoring Network

NO_x-NO-NO₂
PAZA



Station Information

Calibration Date	June 16, 2016		Previous Calibration	May 5, 2016	
Station Number	10		Station Location	Rycroft	
Reason:	Routine Installation Removal		Other:		
Start Time (MST)	9:45		End Time (MST)	14:00:00 PM	
Barometric Pressure	0.929	Atm	Station Temperature	21.0	Deg C
Calibrator	EnviroNics		Serial Number	6586	
NO Cal Gas Conc	50.9	ppm	Cal Gas Expiry Date	March 10, 2017	
NOx Cal Gas Conc	51.2	ppm	Cal Gas Serial #	LL119493	

DACS Information

DACS make CR3000 DACS serial No. 5407

Parameter		NO2	NOx	NO
Before	Data Slope	1.001572	1.005934	1.003312
	Data Offset	-0.885030	0.754755	0.313896
After	Data Slope	0.997829	1.006380	1.004732
	Data Offset	0.651723	2.138174	1.708379
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	0701120011	
Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	7.8	mV	7.7	mV
NOx bkgnd	8.2	mV	8.0	mV
NO coefficient	1.336		1.311	
NOx coefficient	0.999		0.999	
NO2 conv temp	323.7	Deg C	326.8	Deg C
PMT Temp	-3.0	Deg C	-3.0	Deg C
PMT Volt	-834.5	mV	-834.5	mV
R Cell Press	209.5	in Hg	210.4	in Hg
Sample Flow	0.681	LPM	0.688	LPM

Notes: Span adjustment made

Calibration Report

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

Station Information

Calibration Date: June 16, 2016 Station Location: Rycroft

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4994	0.00	0.0	0.0	0.0	-0.6	-0.3	-0.4	N/A	N/A
1	4995	39.92	405.9	403.6	2.4	402.4	401.0	-0.5	1.0088	1.0063
2	4994	19.96	203.8	202.6	1.2	198.4	198.1	-0.6	1.0271	1.0231
3	4998	9.98	102.0	101.4	0.6	98.5	98.7	-0.4	1.0356	1.0273
AFZ	4994	0.00	0.0	0.0	0.0	-0.6	-0.3	-0.4	0.0000	0.0000
AFS	4999	39.92	405.6	403.2	0.8	412.9	411.7	-0.7	0.9824	0.9795
Average Correction Factor									1.0238	1.0189

As Found Concentrations: NO_x= 416.7 NO= 413.7 As Found Percent Change NO_x= 2.7% NO= 2.6%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NOx high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.3	-0.3	0.0	-0.6	-0.3	-0.4	N/A	N/A	N/A	N/A
NO point	396.6	396.6	0.0	397.8	396.6	-0.9	0.9970	1.0000	N/A	N/A
300	396.6	66.1	330.4	398.1	66.1	330.3	0.9961	1.0000	1.0005	99.9%
200	396.6	173.4	223.2	399.2	173.4	223.7	0.9935	1.0000	0.9978	100.2%
100	396.6	287.1	109.5	397.7	287.1	108.5	0.9972	1.0000	1.0097	99.0%
Average Correction Factor							0.9956	1.0000	1.0027	99.7%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	-0.5	-0.2	-0.2	ppb	-0.7	-0.4	-0.5	ppb
Auto span	163.3	161.8	0.9	ppb	160.5	158.8	0.8	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



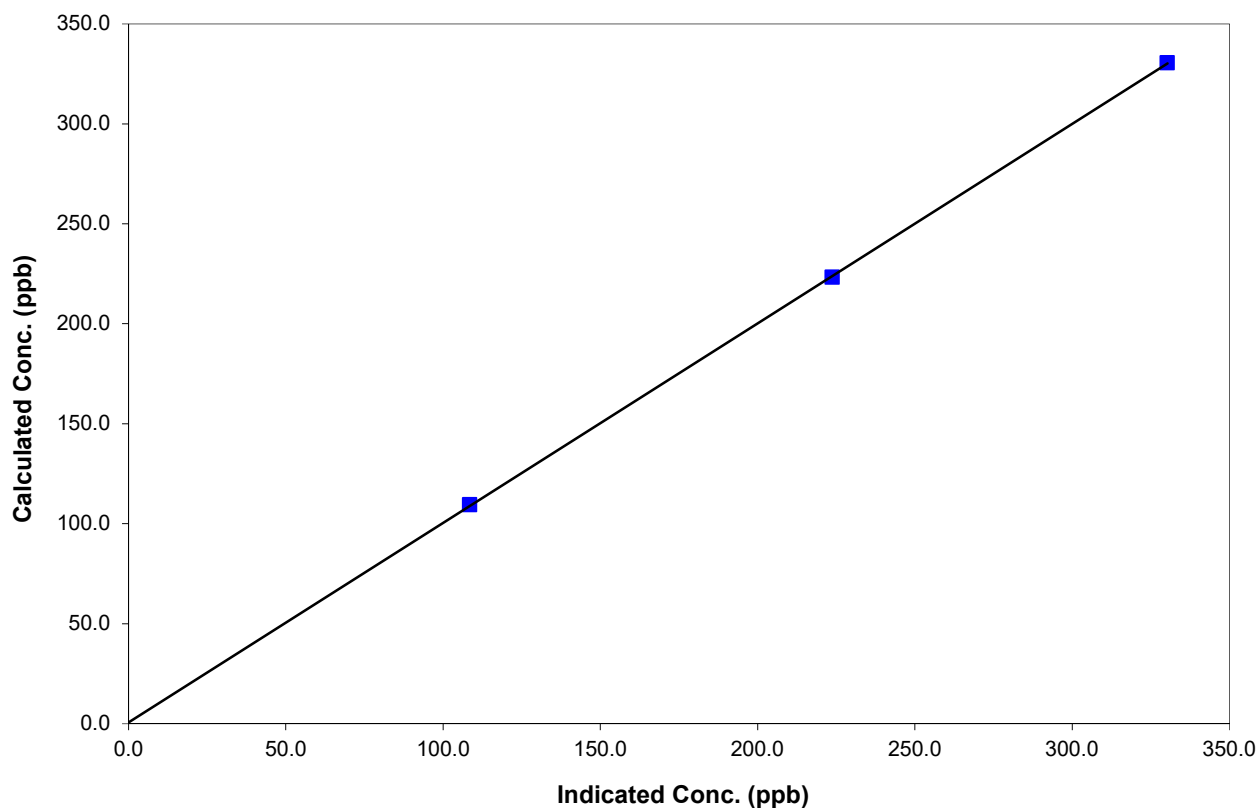
Station Information

Calibration Date	June 16, 2016	Previous Calibration	May 5, 2016
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:45	End Time (MST)	14:00:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A	Correlation Coefficient	0.999985
330.4	330.3	1.0005		
223.2	223.7	0.9978		
109.5	108.5	1.0097	Slope	0.997829
			Intercept	0.651723

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



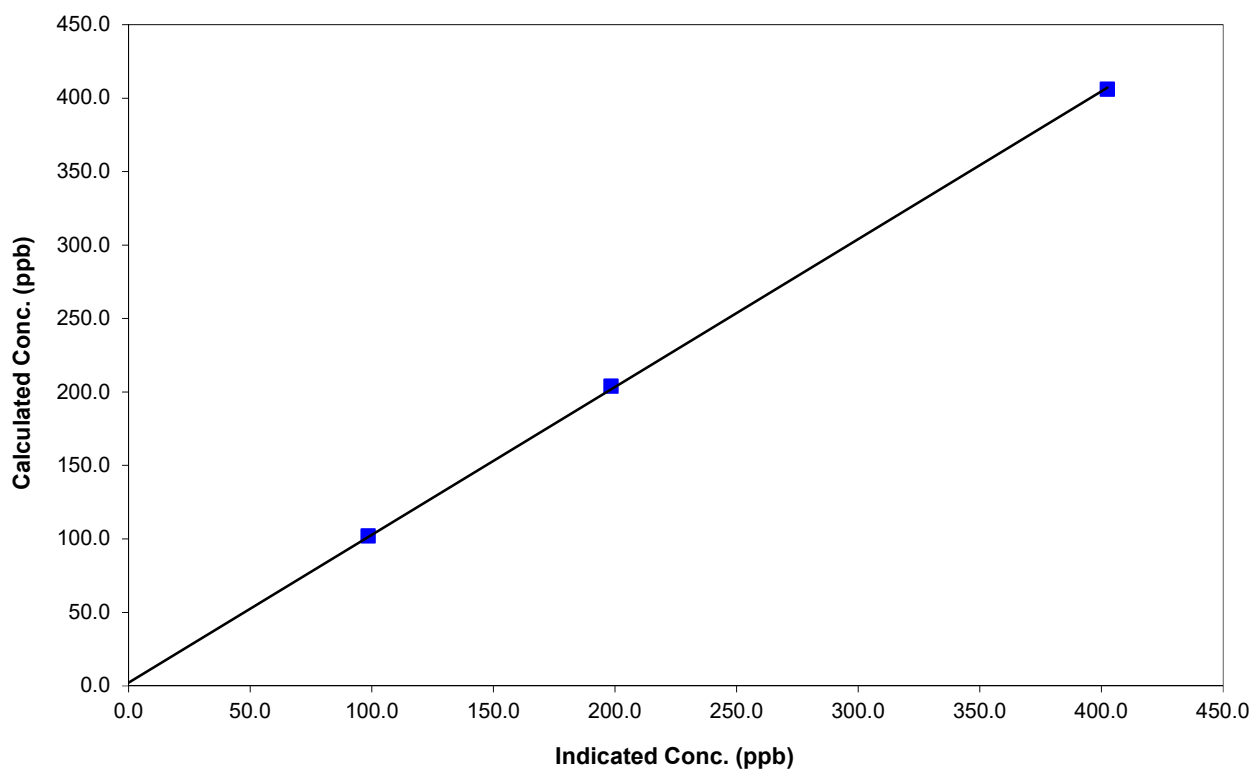
Station Information

Calibration Date	June 16, 2016	Previous Calibration	May 5, 2016
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:45	End Time (MST)	14:00:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.6	N/A	Correlation Coefficient	0.999908
405.9	402.4	1.0088		
203.8	198.4	1.0271		
102.0	98.5	1.0356	Slope	1.006380
			Intercept	2.138174

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



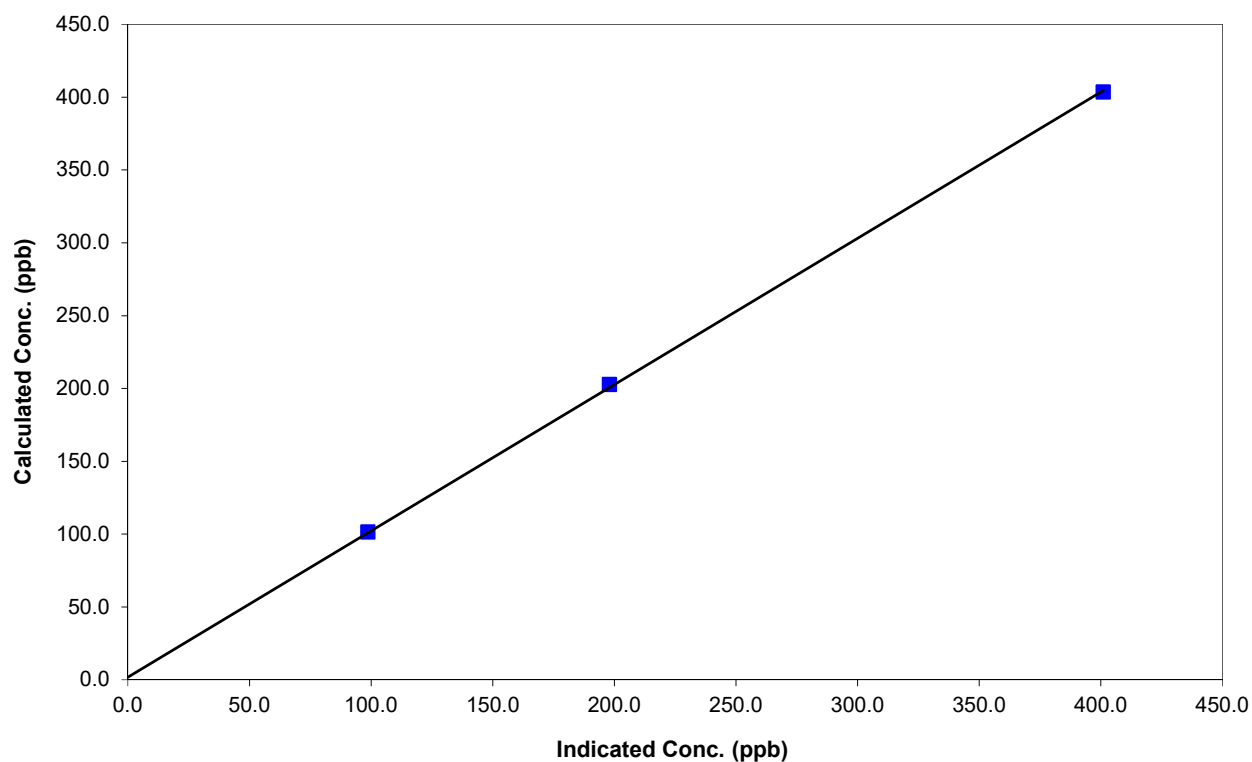
Station Information

Calibration Date	June 16, 2016	Previous Calibration	May 5, 2016
Station Number	10	Station Location	Rycroft
Start Time (MST)	9:45	End Time (MST)	14:00:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

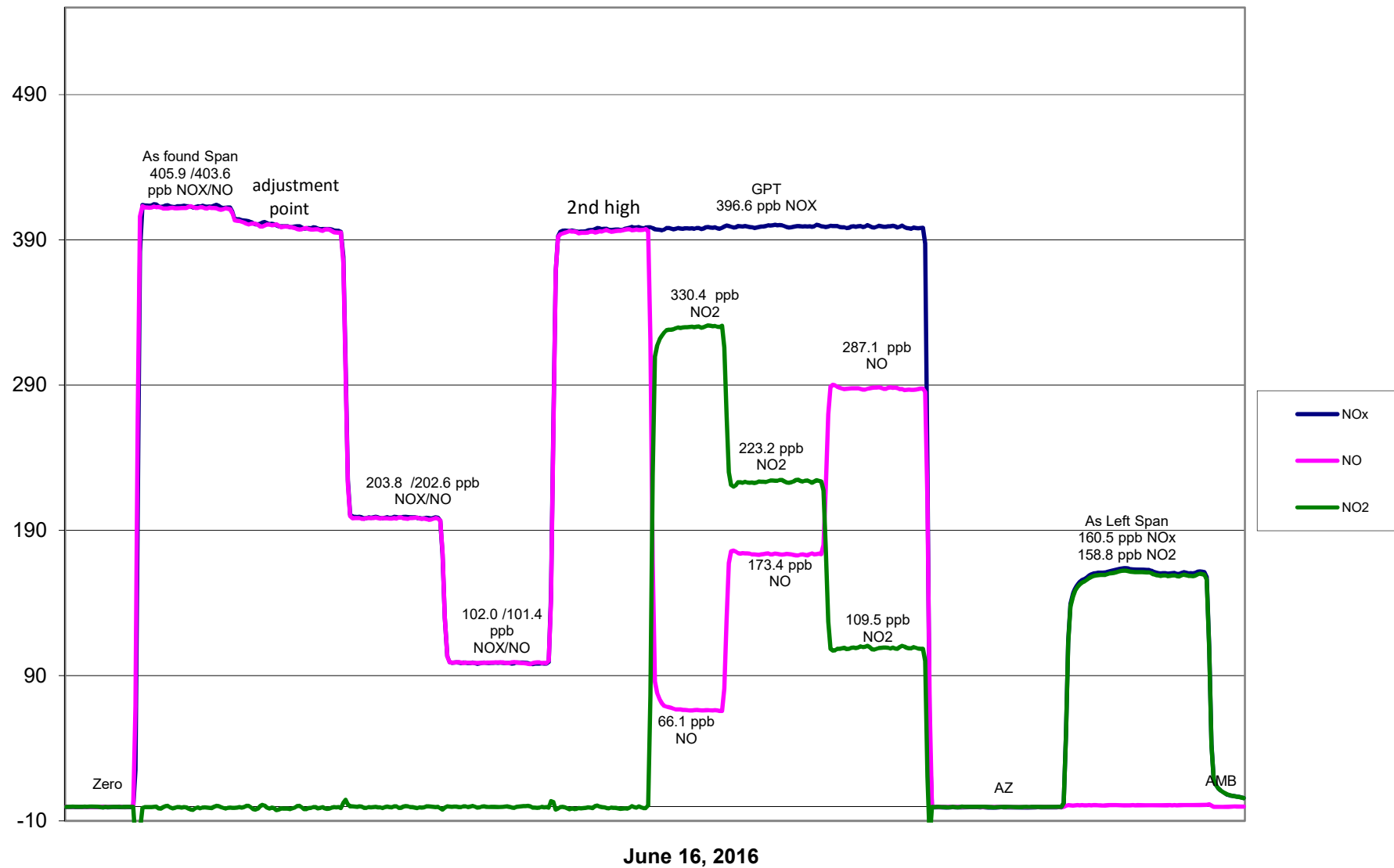
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	N/A	Correlation Coefficient	0.999921
403.6	401.0	1.0063		
202.6	198.1	1.0231		
101.4	98.7	1.0273	Slope	1.004732
			Intercept	1.708379

NO Calibration Curve



NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	June 16 2016	Previous Calibration	May 5 2016
Station Number	10	Station Location	Rycroft
Reason:	☐ Routine	☒ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:40	End Time (MST)	15:40:00 PM
Barometric Pressure	0.929 atm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	0.991704	Calculated slope	0.999563
Calculated intercept	1.688310	Calculated intercept	0.496297
Analyzer make	Model 49-I	Analyzer serial #	1153630156

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	-0.6	ppb	-0.6	ppb
Span	0.994		0.994	
Cell A intensity	97110	Hz	97110	Hz
Cell B intensity	128897	Hz	128897	Hz
Pressure	690.10	in Hg	690.10	in Hg
Cell A Flow	0.690	ccm	0.690	ccm
Cell B Flow	0.688	cmm	0.688	cmm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5015	0.00	0.0	0.3	N/A
5020	0.30	330.4	331.2	0.9977
5025	0.20	223.2	221.4	1.0083
5020	0.10	109.5	108.6	1.0085
5015	0.00	0.0	-0.6	As found zero
5020	0.30	330.4	336.0	As found span
Average Correction Factor				1.0048

Calculated value of As Found Response: 335.5 ppm Percent Change of As Found: 1.6%

	before calibration		after calibration	
Auto zero	0.3	ppb	-0.2	ppb
Auto span	455.1	ppb	460.3	ppb

Notes: Zero & span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



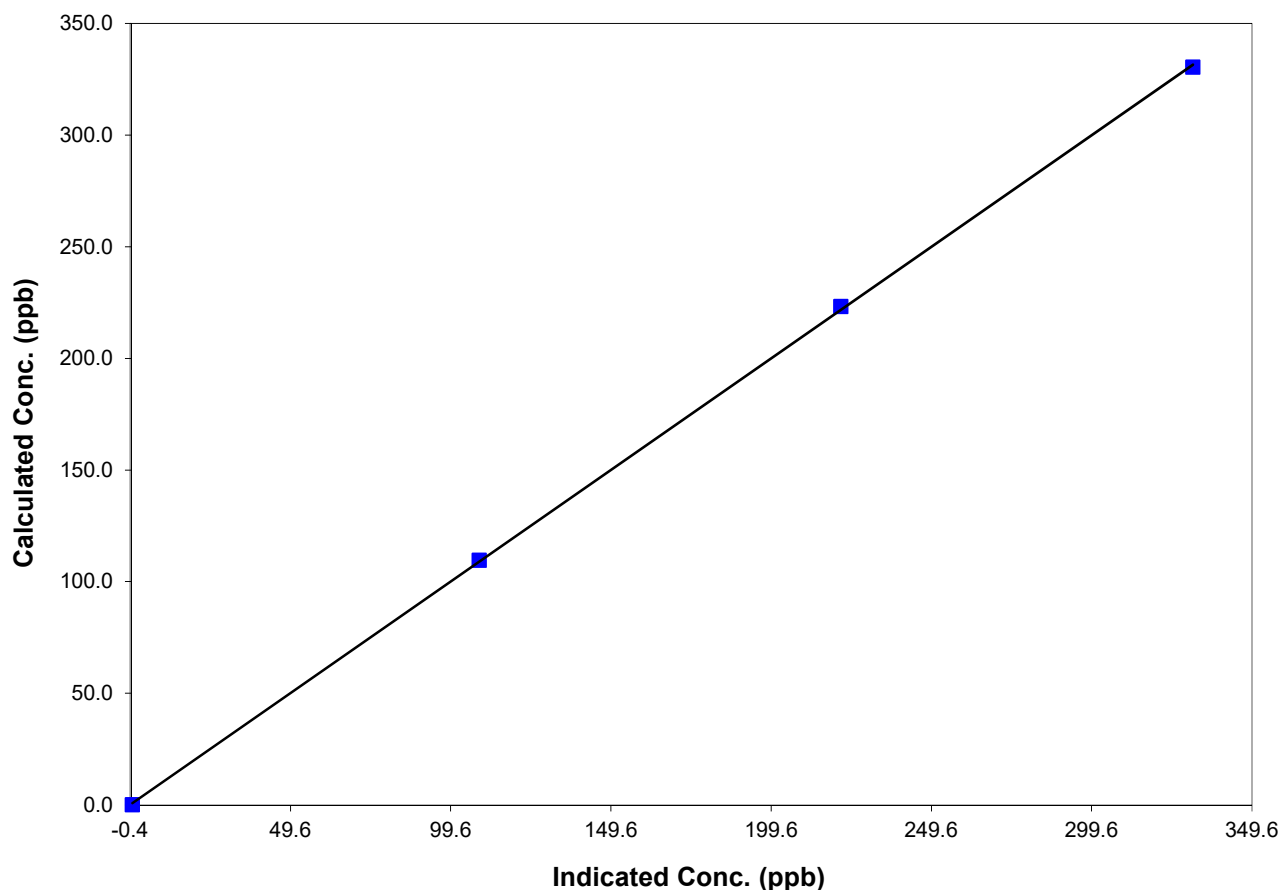
Station Information

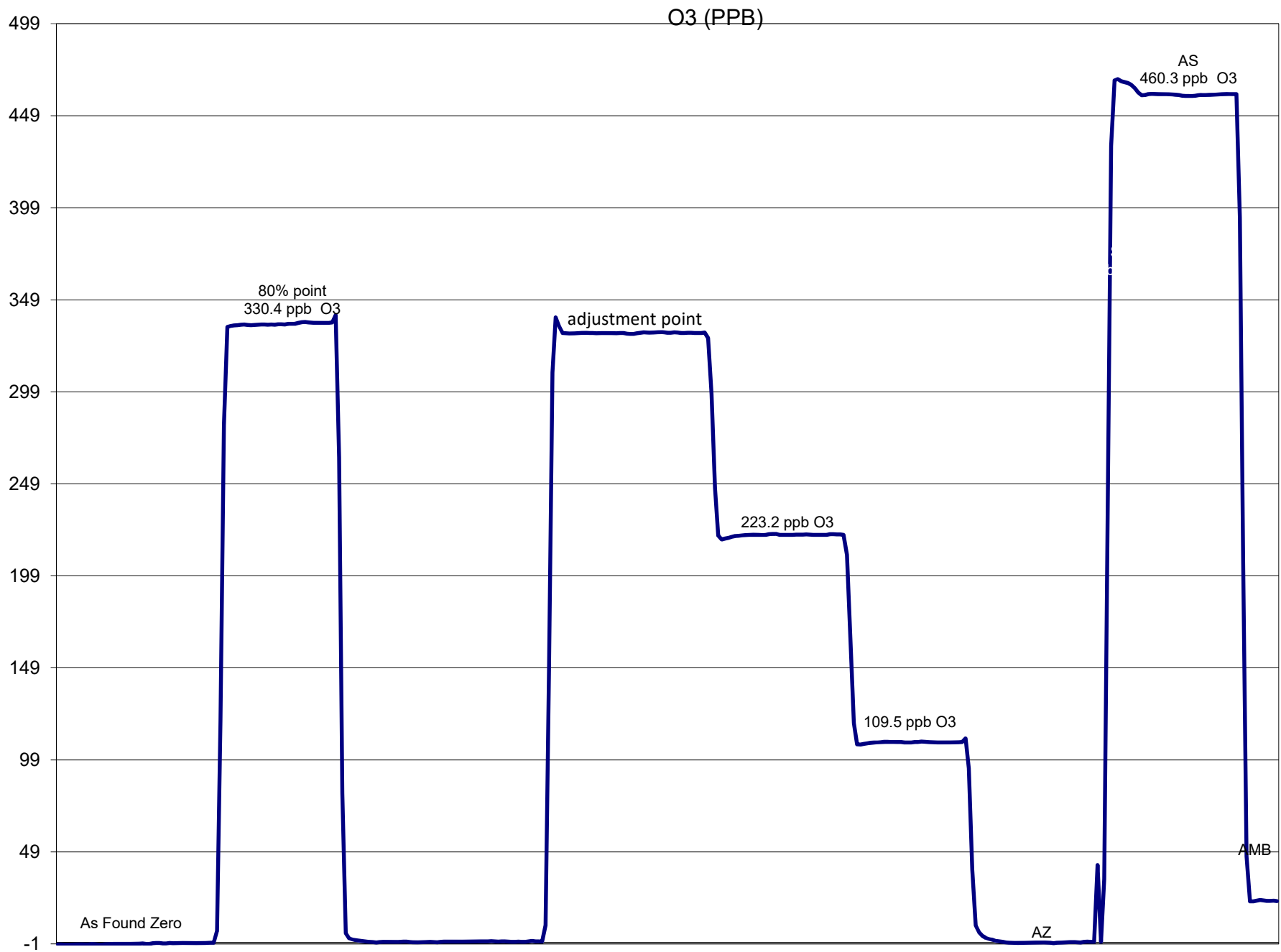
Calibration Date	June 16 2016	Previous Calibration	May 5 2016
Station Number	10	Station Location	Rycroft
Start Time (MST)	12:40	End Time (MST)	15:40:00 PM
Analyzer make/model	Model 49-I	Analyzer serial #	1153630156

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	NA	Correlation Coefficient	0.999931
330.4	331.2	0.9977		
223.2	221.4	1.0083		
109.5	108.6	1.0085	Slope	0.999563
			Intercept	0.496297

O3 Calibration Curve





June 16 2016

Calibration Report



Parameter THC

Air Monitoring Network PAZA

Station Information

Calibration Date	June 17, 2016	Previous Calibration	May 6, 2016
Station Number	10	Station Location	Rycroft Rover
Reason:	Routine	Install	Removal
Start Time (MST)	11:00	End Time (MST)	13:25:00 PM
Barometric Pressure	0.925 ATM	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	404 ppm CH4/ 201 ppm C3H8	Cal Gas Expiry Date	3/28/2014
Cal Gas CH4 equiv	956.75 ppm	Cal Gas Cylinder #	LL34989
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 1 volt	DACS channel #	12
	<u>Before</u>		<u>After</u>
Calculated slope	0.994643	Calculated slope	0.994075
Calculated intercept	0.159637	Calculated intercept	0.186416
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.50	psi	6.50	psi
THC zero counts	1510	capture	1510	capture
THC span counts	11040	capture	11040	capture
THC zero offset	2273	capture	2273	capture
THC span offset	2267	capture	2267	capture

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2993	0.00	0.00	0.02	N/A
2998	69.93	21.81	21.83	0.9990
2997	29.94	9.46	9.18	1.0304
2998	9.97	3.17	2.87	1.1061
2993	0.00	0.00	0.02	As Found Zero
2996	69.93	21.82	21.83	As Found Span
Average Correction Factor				1.0452

Calculated value of As Found Response: 21.857 ppm Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	0.04	ppm	0.02	ppm
Auto span	22.57	ppm	22.53	ppm

Notes: NO adjustment made

Calibration Summary

Parameter THC

Air Monitoring Network PAZA



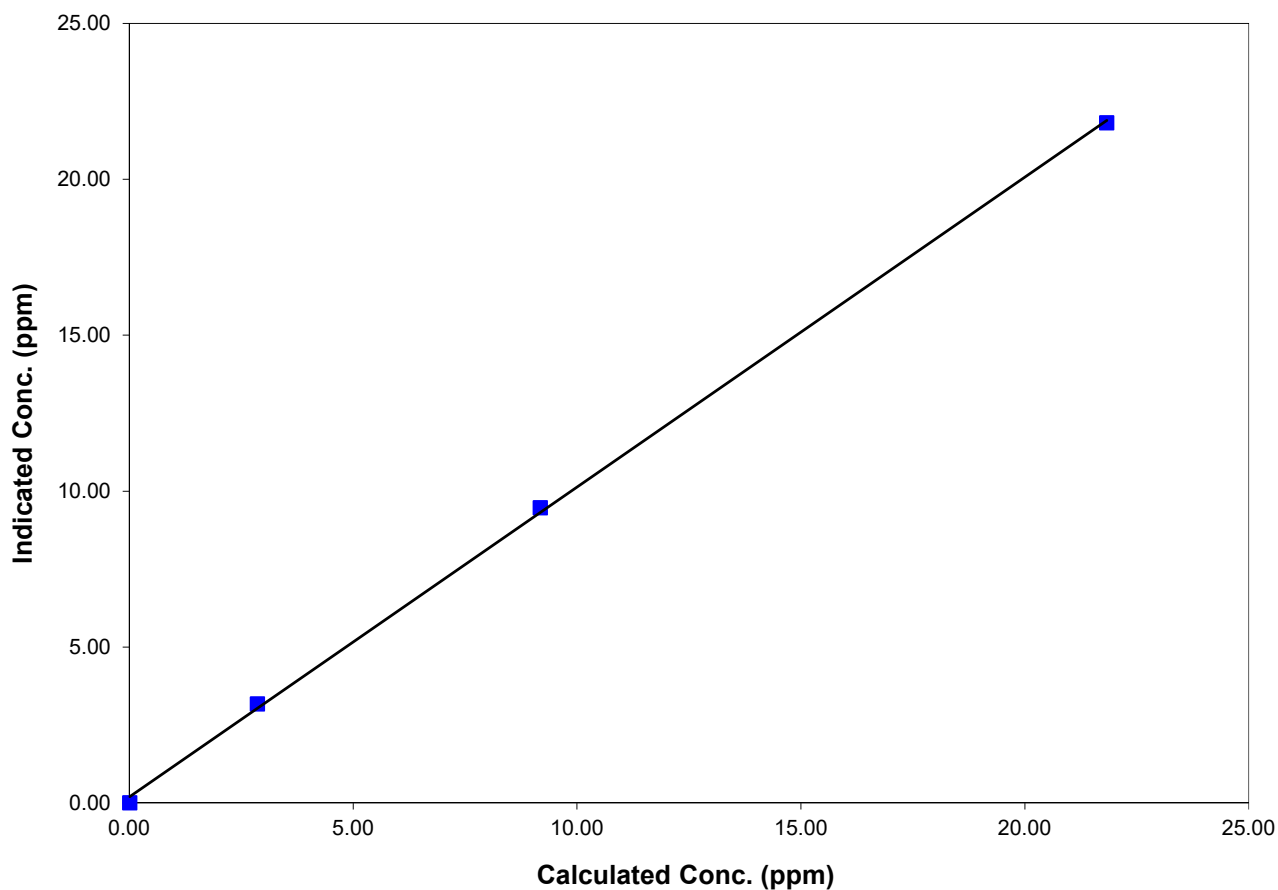
Station Information

Calibration Date	June 17, 2016	Previous Calibration	May 6, 2016
Station Number	10	Station Location	Rycroft Rover
Start Time (MST)	11:00	End Time (MST)	13:25:00 PM
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

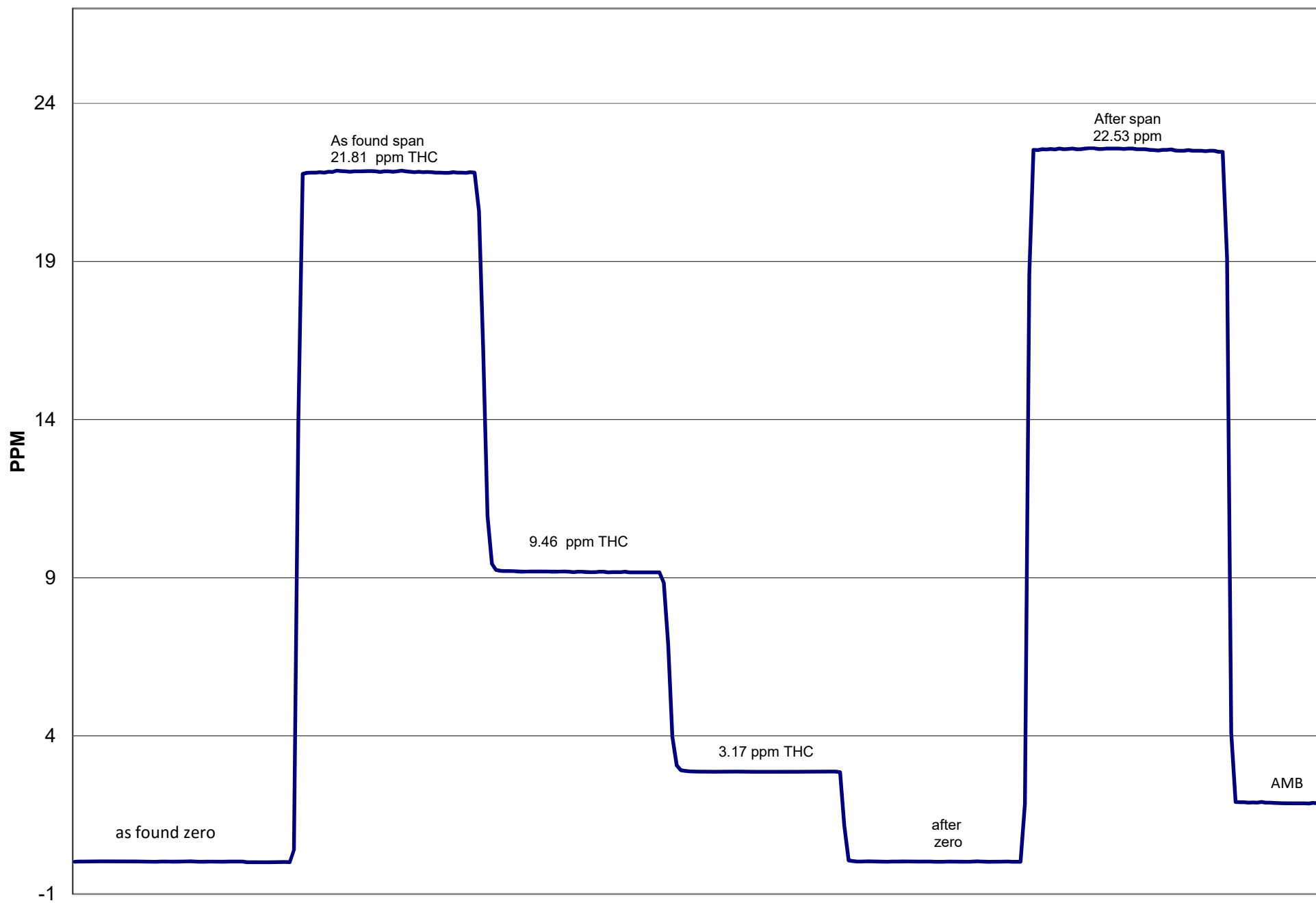
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.016	N/A	Correlation Coefficient	0.999687
21.81	21.83	0.9990		
9.46	9.18	1.0304		
3.17	2.87	1.1061	Slope	0.994075
			Intercept	0.186416

THC Calibration Curve



THC Calibration



Calibration Report



Parameter THC
Air Monitoring Network PAZA

Station Information

Calibration Date	June 26, 2016	Previous Calibration	June 17, 2016
Station Number	10	Station Location	Rycroft Rover
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	9:40	End Time (MST)	12:25
Barometric Pressure	0.925 ATM	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	6586
Cal Gas Concentration	404 ppm CH4/ 201 ppm C3H8	Cal Gas Expiry Date	3/28/2014
Cal Gas CH4 equiv	956.75 ppm	Cal Gas Cylinder #	LL34989
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 1 volt	DACS channel #	12
	<u>Before</u>		<u>After</u>
Calculated slope	0.994643	Calculated slope	1.003289
Calculated intercept	0.159637	Calculated intercept	0.192663
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.50	psi	6.50	psi
THC zero counts	1510	capture	1510	capture
THC span counts	11040	capture	11040	capture
THC zero offset	2273	capture	2273	capture
THC span offset	2267	capture	2267	capture

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2996	0.00	0.00	-0.02	N/A
2998	69.96	21.82	21.63	1.0088
2997	29.98	9.48	9.12	1.0395
2998	9.99	3.18	2.87	1.1088
2996	0.00	0.00	0.02	As Found Zero
2996	69.93	21.82	21.63	As Found Span
Average Correction Factor				1.0524

Calculated value of As Found Response: 21.648 ppm Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	0.04	ppm	0.03	ppm
Auto span	22.57	ppm	22.23	ppm

Notes: NO adjustment made
Hydrogen cylinder changed

Calibration Summary

Parameter THC

Air Monitoring Network PAZA



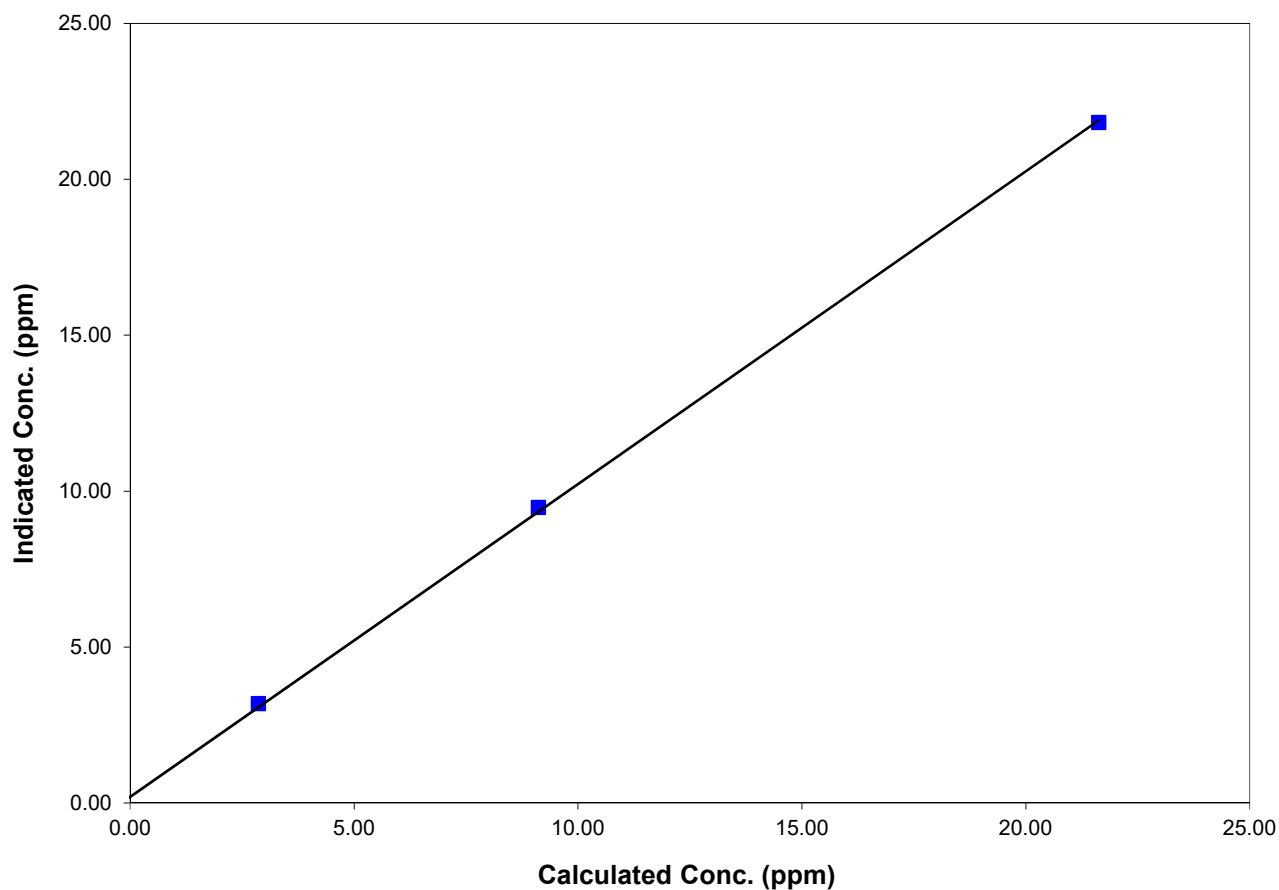
Station Information

Calibration Date	June 26, 2016	Previous Calibration	June 17, 2016
Station Number	10	Station Location	Rycroft Rover
Start Time (MST)	9:40	End Time (MST)	12:25
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

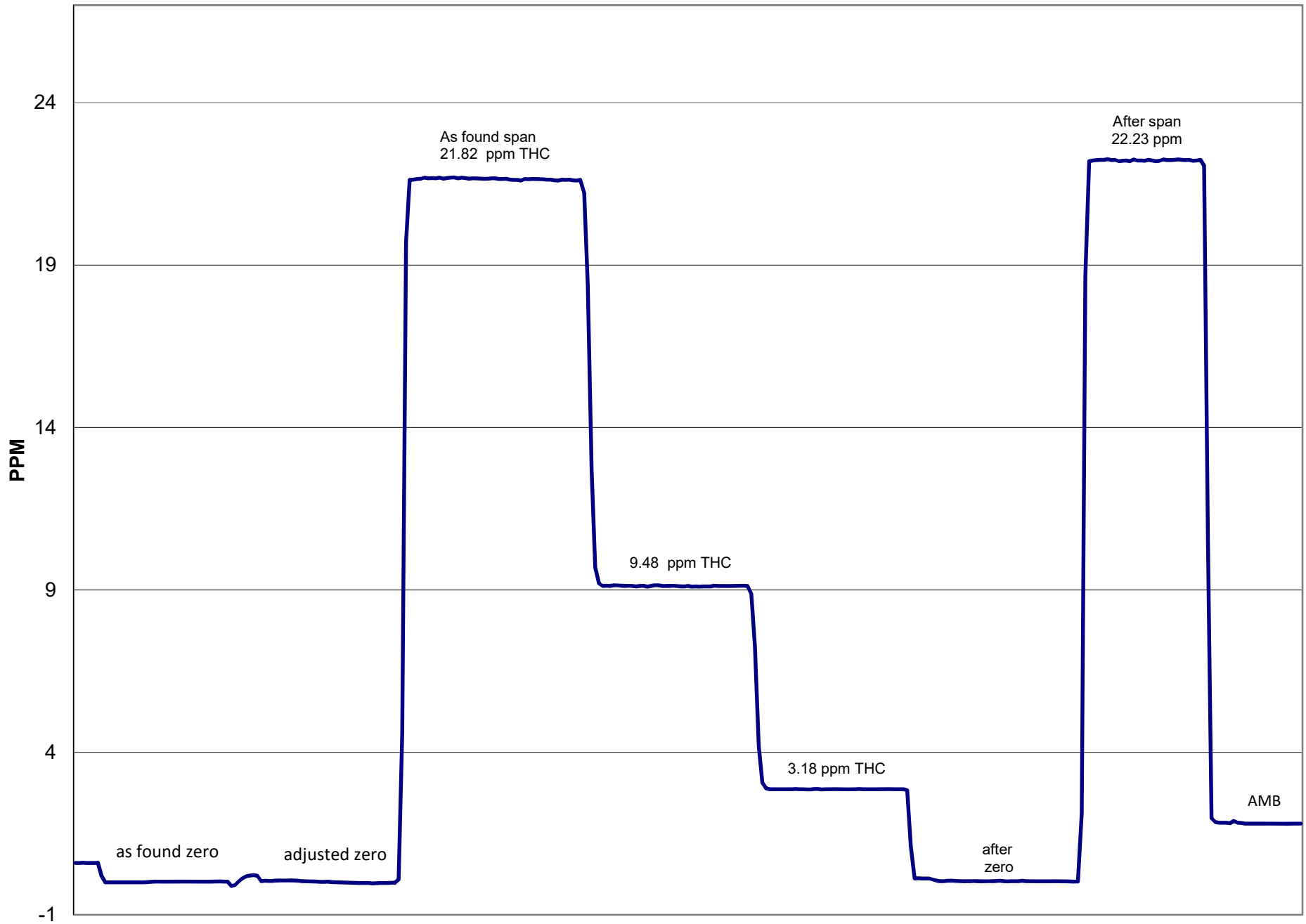
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.018	N/A		
21.82	21.63	1.0088	Correlation Coefficient	0.999760
9.48	9.12	1.0395		
3.18	2.87	1.1088	Slope	1.003289
			Intercept	0.192663

THC Calibration Curve



THC Calibration



Calibration Report

Parameter **TRS**
Air Monitoring Network

PAZA



Station Information

Calibration Date	June 17, 2016	Previous Calibration	May 6, 2016
Station Name	PAZA Rover	Station Location	Rycroft
Reason:	Routine	Install	Removal
Start Time (MST)	9:00 AM	End Time (MST)	12:00
Barometric Pressure	0.925 Atm	Station Temperature	21.0 Deg C
Calibrator	EnviroNics	Serial Number	6586
Cal Gas Concentration	10.2 ppm	Cal Gas Expiry Date	02/23/2019
Gas Cert Reference	EY0000380		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	1
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.992431	Calculated slope	0.993195
Calculated intercept	-0.002324	Calculated intercept	-0.162311
Analyzer make	TEI 43C	Analyzer serial #	609716238

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	27.0	ppb	26.1	ppb
Coefficient	0.986		0.956	
Lamp Voltage	793	V	793	V
Chamber Temp	43.9	C	43.8	C
Perm gas Temp	45	C	45	C
Pressure	664.7	mmHg	666.3	mmHg
Sample Flow	0.449	lpm	0.450	lpm
Lamp Intensity	43895	Hz	43399	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4996	0.0	0.0	0.2	N/A
4997	39.94	80.9	81.6	0.9912
4997	19.91	40.5	40.9	0.9889
6998	9.97	14.5	14.8	0.9833
4996	9.97		0.8	Sox Test
4995	0.00	0.0	0.2	As found zero
4995	39.93	80.9	83.2	As found span
Average Correction Factor				0.9878

Calculated value of As Found Response: 82.43 ppm Percent Change of As Found: -1.9%

	before calibration		after calibration	
Auto zero	0.4	ppm	0.3	ppm
Auto span	58.1	ppm	55.7	ppm

Notes: Span adjustments made
Sox scrubber check performed

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



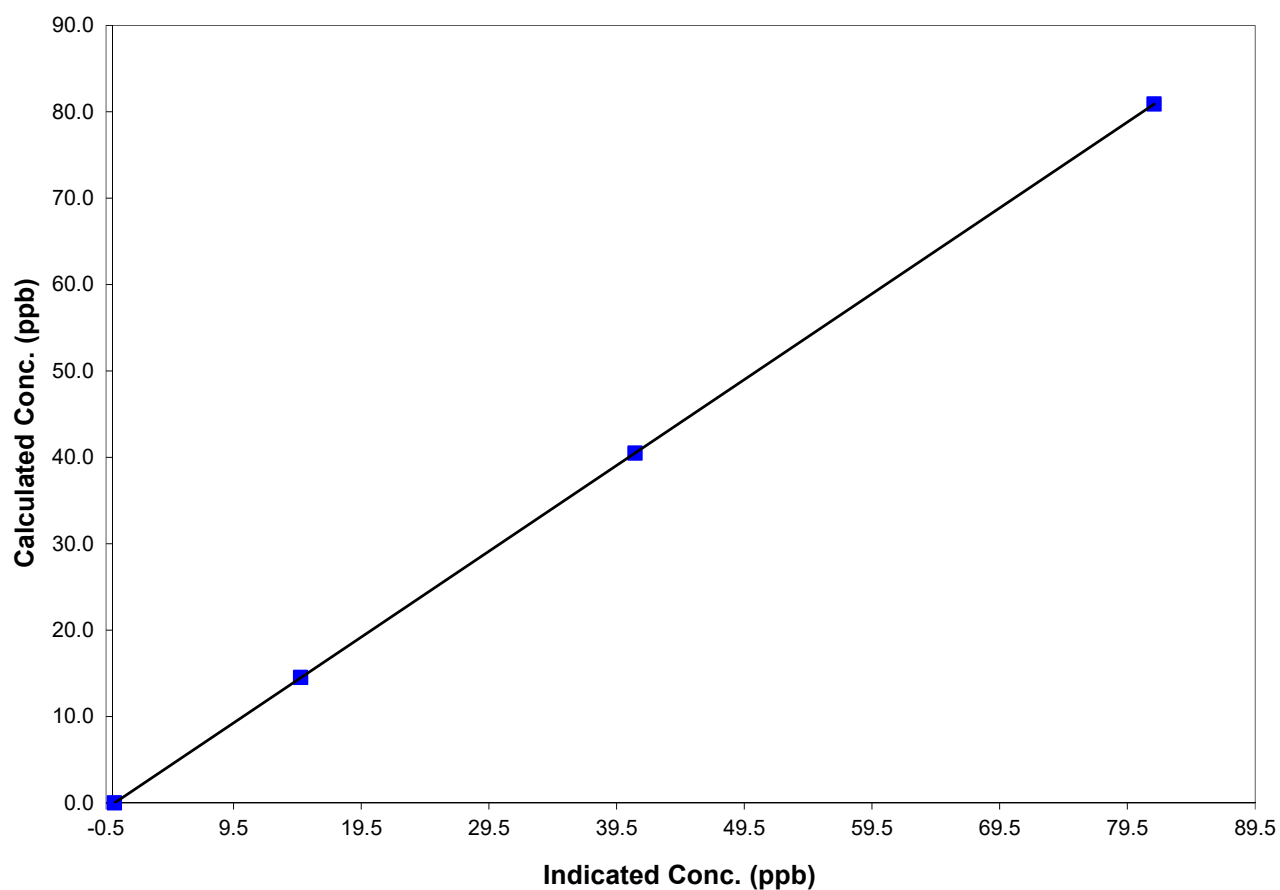
Station Information

Calibration Date	June 17, 2016	Previous Calibration	May 6, 2016
Station Number	PAZA Rover	Station Location	Rycroft
Start Time (MST)	9:00	End Time (MST)	12:00
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

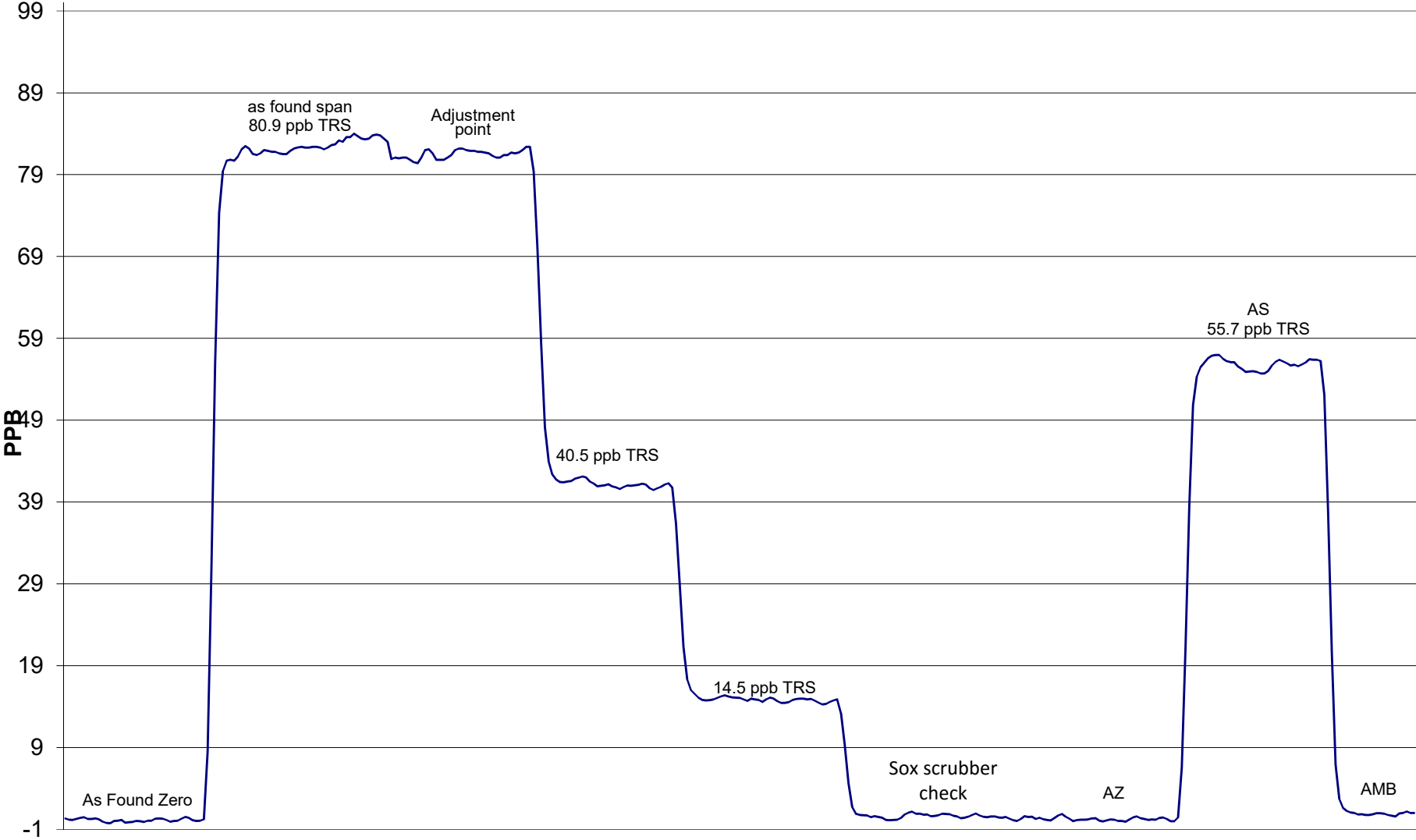
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	1.000000
80.9	81.6	0.9912		
40.5	40.9	0.9889		
14.5	14.8	0.9833	Slope	0.993195
			Intercept	-0.162311

TRS Calibration Curve



TRS Calibration



June 17, 2016

PAZA

ALBERTA ENVIRONMENT AND PARKS INCIDENT REPORT

June 2016

Air Monitoring Directive Exceedance Report

Alberta Environmental Monitoring, Evaluation and Reporting Agency

Energy & Environmental Response

111 Twin Atria Building

4999 – 98th Avenue

Edmonton, Alberta T6B 2X3

erc.environment@gov.ab.ca

Phone: (780) 422-4505

Fax: (780) 427-1044

Reference Number: 312948		Reported To (AESRD Contact): Steven	
Date & Time Incident Reported to AESRD:	June 22 2016 08:35	Reported By:	Dmytro Dolotii
Reported on Behalf of:	PAZA	Approval Number (if applicable):	N/A
Location(s) of Incident: Rycroft Rover station			
Start Date & Time of Incident:	June 21, 2016 15:00 MST	End Date & Time of Incident:	June 21, 2016 16:00 MST
Reason or Nature of Incident:			
The PM_{2.5} analyzer (TEOM) within the Rycroft station, currently located on Secure Energy property in Rycroft AB, exceeded the AENV 1 hour average PM_{2.5} guideline (80 µg/m³) as detailed below: 15:00-16:00 MST, June 21 2016: PM2.5 111.3 ug / m3 WS: 7.6 km / hr, WD: 211.9 degrees, Temp: 26.0 C			
Immediate Actions Taken:			
Confirmed validity of data and called in the exceedance to AEMERA Called Sam Purvis at Secure Energy to inquire about any activity that occurred near monitoring trailer that may have contributed to the PM2.5 hourly exceedance.			
Investigation Details:			
Spraying for weed control was done in the area when exceedance occurred. ATV's and other equipment were used to spray for weed control. This activity created road dust from gravel road located within 50 feet of monitoring trailer causing an elevated reading for PM 2.5.			
Actions Taken to Prevent Reoccurrence (if any):			
Sam Purvis to notify WSP AQM department next time any work which could cause an exceedance or adversely affect the monitoring parameters is done in the area.			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Dmytro Dolotii	Date Report Submitted:	June 22 2016
7-Day Letter Due Date:	June 29 2016		