



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

**Continuous Ambient Air Quality Monitoring Program
Monthly Report
July 2014**

August 28th, 2014

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

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

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

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

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

Company	Facility	LSD	EPEA Approval Number
Canfor Forest Products	Teepee Creek	SE-2-074-04-W6	00001635-02-00
	Sturgeon/Valleyview	02-02-069-22-W5	1633-02-00
	Grande Prairie	SW-23-071-06-W6	152645-01-00
Conocophillips Canada Energy Partnership	Wembley	06-19-073-08-W6	00000212-01-00
Devon Canada	NW Belloy (Dunvegan)	16-36-079-03-W6	00009810-02-00
	Eaglesham (South)	02-14-077-25-W5	00047669-01-00
	North Normanville	03-36-079-23-W5	00047455-01-00
	West Culp	05-34-078-25-W6	00136284-00-00
	Cecil	08-15-084-08-W6	00010032-02-00
Encana Corporation	Sexsmith	04-08-075-07-W6	00010002-01-00
Enerplus Resources	Pouce Coupe	SW-06-069-21-W5	1464-02-03
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	00238762-00-00
Long Run Exploration	Eaglesham	01-25-076-01-W6	00241532-00-00
	Kakut	14-12-075-03-W6	00248469-00-00
	Donnelly	06-01-077-21-W5	00000087-02-00
	Puskwaskau	03-26-074-01-W6	00017524-01-00
Longview Oil Corp.	Sunset House	06-22-070-20-W5	138884-01-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	00001746-02-00
	Pouce Coupe	16-07-078-11-W6	00000614-01-00

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

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

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

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

Henry Pirker Station:

- ♦ The measured ambient air quality was within the AAAQO for the Henry Pirker station with the exception of the PM_{2.5} analyzer, which recorded seventeen (17) 1-hour exceedences of the guideline of 80 µg/m³ and five (5) 24-hour exceedences of the guideline of 30 µg/m³:
 - o July 13 08:00 132 µg/m³ Alberta Environment Reference # 286654
 - o July 13 09:00 382 µg/m³ Alberta Environment Reference # 286654
 - o July 13 10:00 234 µg/m³ Alberta Environment Reference # 286654

- o July 13 11:00 134 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286654
 - o July 13 12:00 89 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286654
 - o July 14 11:00 83 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286729
 - o July 14 12:00 110 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286729
 - o July 14 13:00 180 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286729
 - o July 14 14:00 206 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286729
 - o July 15 08:00 111 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286767
 - o July 15 09:00 189 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286767
 - o July 15 10:00 138 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286767
 - o July 15 11:00 114 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286767
 - o July 16 15:00 91 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520992
 - o July 16 18:00 86 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520992
 - o July 16 19:00 137 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520992
 - o July 16 20:00 131 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520992
 - o July 11 24h 31 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286599
 - o July 13 24h 65 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286695
 - o July 14 24h 49 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286729
 - o July 15 24h 65 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286767
 - o July 16 24h 46 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520992
- ◆ All analyzers and sensors at the Henry Pirker station had an operational uptime greater than 90% for the month of July.

Evergreen Park Station:

- ◆ The measured ambient air quality was within the AAAQO for the Evergreen Park station with the exception of the $\text{PM}_{2.5}$ analyzer, which recorded eleven (11) 1-hour exceedences of the guideline of $80 \mu\text{g}/\text{m}^3$ and three (3) 24-hour exceedences of the guideline of $30 \mu\text{g}/\text{m}^3$:
- o July 13 07:00 104 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286652
 - o July 13 08:00 136 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286652
 - o July 13 09:00 115 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286652
 - o July 13 10:00 83 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286652
 - o July 14 13:00 113 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286730
 - o July 15 09:00 85 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286766
 - o July 15 10:00 87 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286766
 - o July 18 18:00 101 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520995
 - o July 18 19:00 99 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520995
 - o July 18 20:00 98 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520995
 - o July 18 21:00 86 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520995
 - o July 13 24h 37 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286652
 - o July 15 24h 43 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286766
 - o July 18 24h 34 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520995
- ◆ All analyzers and sensors at the Evergreen Park station had an operational uptime greater than 90% for the month of July.

Smoky Heights Station:

- ◆ The measured ambient air quality was within the AAAQO for the Smoky Heights station with the exception of the PM_{2.5} analyzer, which recorded six (6) 1-hour exceedences of the guideline of 80 µg/m³ and four (4) 24-hour exceedences of the guideline of 30 µg/m³:
 - o July 8 21:00 84 µg/m³ Alberta Environment Reference # 286413
 - o July 8 23:00 92 µg/m³ Alberta Environment Reference # 286413
 - o July 9 00:00 108 µg/m³ Alberta Environment Reference # 286413
 - o July 13 13:00 86 µg/m³ Alberta Environment Reference # 286661
 - o July 15 22:00 93 µg/m³ Alberta Environment Reference # 286805
 - o July 15 23:00 94 µg/m³ Alberta Environment Reference # 286805
 - o July 13 24h 31 µg/m³ Alberta Environment Reference # 286661
 - o July 15 24h 38 µg/m³ Alberta Environment Reference # 286805
 - o July 16 24h 36 µg/m³ Alberta Environment Reference # 286881
 - o July 18 24h 32 µg/m³ Alberta Environment Reference # 520997
- ◆ All analyzers and sensors at the Smoky Heights station had an operational uptime greater than 90% for the month of July.

Beaverlodge Station:

- ◆ The measured ambient air quality was within the AAAQO for the Beaverlodge station with the exception of the PM_{2.5} analyzer, which recorded eighteen (18) 1-hour exceedences of the guideline of 80 µg/m³ and five (5) 24-hour exceedences of the guideline of 30 µg/m³:
 - o July 11 08:00 84 µg/m³ Alberta Environment Reference # 286572
 - o July 11 09:00 95 µg/m³ Alberta Environment Reference # 286572
 - o July 11 10:00 92 µg/m³ Alberta Environment Reference # 286572
 - o July 12 08:00 104 µg/m³ Alberta Environment Reference # 286621
 - o July 12 09:00 104 µg/m³ Alberta Environment Reference # 286621
 - o July 12 10:00 83 µg/m³ Alberta Environment Reference # 286621
 - o July 13 11:00 86 µg/m³ Alberta Environment Reference # 286656
 - o July 14 17:00 94 µg/m³ Alberta Environment Reference # 286731
 - o July 15 08:00 83 µg/m³ Alberta Environment Reference # 286762
 - o July 15 09:00 123 µg/m³ Alberta Environment Reference # 286762
 - o July 15 10:00 134 µg/m³ Alberta Environment Reference # 286762
 - o July 15 11:00 99 µg/m³ Alberta Environment Reference # 286762
 - o July 18 15:00 96 µg/m³ Alberta Environment Reference # 520993
 - o July 18 16:00 131 µg/m³ Alberta Environment Reference # 520993
 - o July 18 17:00 124 µg/m³ Alberta Environment Reference # 520993
 - o July 18 19:00 88 µg/m³ Alberta Environment Reference # 520993
 - o July 18 20:00 85 µg/m³ Alberta Environment Reference # 520993
 - o July 21 09:00 102 µg/m³ Alberta Environment Reference # 521065

- o July 11 24h 40 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286572
- o July 13 24h 32 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286656
- o July 14 24h 33 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286731
- o July 15 24h 46 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286762
- o July 18 24h 44 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520993
- ◆ All analyzers and sensors at the Beaverlodge station had an operational uptime greater than 90% for the month of July.

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 July.

Falher Station:

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

Clairmont Station:

- ◆ The measured ambient air quality was within the AAAQO for the Clairmont station with the exception of the $\text{PM}_{2.5}$ analyzer, which recorded six (6) 1-hour exceedences of the guideline of 80 $\mu\text{g}/\text{m}^3$ and four (4) 24-hour exceedences of the guideline of 30 $\mu\text{g}/\text{m}^3$:
 - o July 13 11:00 102 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286657
 - o July 13 13:00 93 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286657
 - o July 15 21:00 88 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286806
 - o July 15 22:00 87 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286806
 - o July 18 17:00 89 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520991
 - o July 18 18:00 84 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520991
 - o July 18 20:00 96 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520991
 - o July 13 24h 31 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286657
 - o July 15 24h 37 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 286806
 - o July 18 24h 36 $\mu\text{g}/\text{m}^3$ Alberta Environment Reference # 520991
- ◆ All analyzers and sensors at the Clairmont station had an operational uptime greater than 90% for the month of July.

Passive Monitoring - 46 Stations throughout the PAZA zone:

There were five duplicate sites sampled in the month of July: Gordondale, Spirit River, Wembley, Peavine, and Gift Lake. 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 0.1 ppb to 0.4 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO₂ passives ranged from 0.2 ppb to 2.2 ppb, with a mean of 0.8 ppb.
- Monthly average concentrations for O₃ passives ranged from 18.0 ppb to 39.4 ppb, with a mean of 26.1 ppb.
- Monthly average concentrations for H₂S ranged from 0.1 ppb to 0.2 ppb, with a mean of 0.2 ppb.

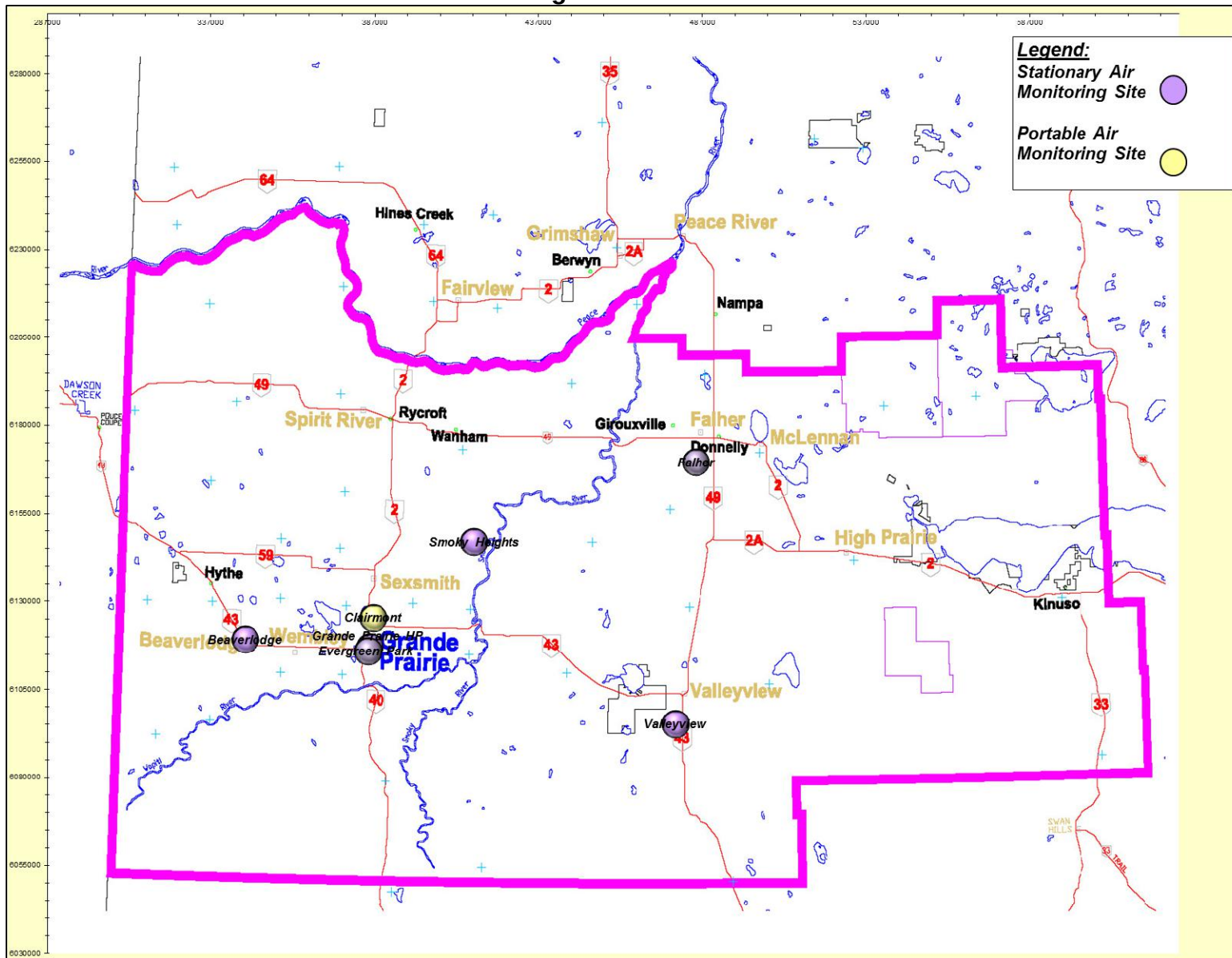
If you have any questions or concerns, please contact Patrick Andersen at 403.505.1041 or the PAZA office at 780.833.4343.

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

Jul-2014Peace 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 (%)
	1-hr	24-hr			1-hr	24-hr					
SO ₂ (ppb)	172	48	Henry Pirker	0.2	0	0	6.1	Jul-30 10:00	0.8	Jul-26	100%
SO ₂ (ppb)	172	48	Evergreen Park	0.2	0	0	8.4	Jul-30 10:00	0.6	Jul-30	100%
SO ₂ (ppb)	172	48	Smoky Heights	0.2	0	0	5.7	Jul-26 07:00	0.8	Jul-26	100%
SO ₂ (ppb)	172	48	Beaverlodge	0.6	0	0	8.9	Jul-16 14:00	1.7	Jul-16	100%
SO ₂ (ppb)	172	48	Valleyview	0.6	0	0	11.6	Jul-26 09:00	2.9	Jul-26	100%
SO ₂ (ppb)	172	48	Falher	0.2	0	0	2.0	Jul-12 09:00	0.4	Jul-02	100%
SO ₂ (ppb)	172	48	Clairmont	0.3	0	0	4.8	Jul-25 12:00	0.9	Jul-26	100%
NO (ppb)			Henry Pirker	0.9	0	0	24.1	Jul-14 07:00	2.3	Jul-18	96%
NO ₂ (ppb)	159	106	Henry Pirker	5.0	0	0	21.9	Jul-13 23:00	9.6	Jul-15	96%
NO _x (ppb)			Henry Pirker	5.9	0	0	41.6	Jul-14 07:00	11.7	Jul-15	96%
NO (ppb)			Beaverlodge	0.3	0	0	9.3	Jul-23 09:00	0.7	Jul-18	100%
NO ₂ (ppb)	159	106	Beaverlodge	2.4	0	0	122.0	Jul-14 06:00	5.2	Jul-14	100%
NO _x (ppb)			Beaverlodge	2.7	0	0	15.2	Jul-14 06:00	5.8	Jul-14	100%
NO (ppb)			Clairmont	0.8	0	0	12.4	Jul-11 07:00	1.9	Jul-18	100%
NO ₂ (ppb)	159	106	Clairmont	3.9	0	0	18.1	Jul-31 01:00	8.0	Jul-15	100%
NO _x (ppb)			Clairmont	4.7	0	0	27.2	Jul-08 06:00	9.7	Jul-18	100%
O ₃ (ppb)	82		Henry Pirker	25.1	0	-	70.3	Jul-14 14:00	36.6	Jul-29	100%
O ₃ (ppb) - 8-hr			Henry Pirker		0				51.9	Jul-14	
O ₃ (ppb)	82		Beaverlodge	28.2	0	-	66.6	Jul-29 18:00	39.8	Jul-29	100%
O ₃ (ppb) - 8-hr			Beaverlodge		0				53.8	Jul-29	
O ₃ (ppb)	82		Clairmont	25.8	0	-	69.8	Jul-14 13:00	39.5	Jul-14	100%
O ₃ (ppb) - 8-hr			Clairmont		0				55.5	Jul-14	
CO (ppm)	13		Henry Pirker	0.22	0	-	2.5	Jul-13 10:00	0.6	Jul-13	100%
CO (ppm) - 8-hr	5		Henry Pirker		0				1.2	Jul-13	

PAZA Monthly Continuous Data Summary – continued

Jul-2014Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
THC (ppm)			Henry Pirker	2.0	-	-	3.0	Jul-11 02:00	2.2	Jul-15	100%
CH ₄ (ppm)			Henry Pirker	2.0	-	-	3.0	Jul-11 02:00	2.2	Jul-15	100%
NMHC (ppm)			Henry Pirker	0.0	-	-	0.5	Jul-30 10:00	0.0	Jul-30	100%
THC (ppm)			Clairmont	2.13	-	-	4.5	Jul-15 22:00	3.0	Jul-15	93%
TRS (ppb)			Henry Pirker	0.3	-	-	0.8	Jul-13 03:00	0.4	Jul-13	99%
TRS (ppb)			Evergreen Park	0.3	-	-	1.4	Jul-18 10:00	0.6	Jul-14	100%
TRS (ppb)			Smoky Heights	0.1	-	-	2.6	Jul-17 04:00	0.5	Jul-17	100%
TRS (ppb)			Clairmont	0.5	-	-	2.9	Jul-18 05:00	0.8	Jul-18	97%
H ₂ S (ppb)	10	3	Valleyview	0.2	0	0	4.6	Jul-10 10:00	0.6	Jul-10	100%
H ₂ S (ppb)	10	3	Falher	0.3	0	0	4.7	Jul-17 06:00	0.6	Jul-17	100%
PM _{2.5} (µg/m3)	80	30	Henry Pirker	16.7	17	6	381.7	Jul-13 09:00	65.2	Jul-15	100%
PM _{2.5} (µg/m3)	80	30	Evergreen Park	12.6	11	3	136.2	Jul-13 08:00	42.5	Jul-15	100%
PM _{2.5} (µg/m3)	80	30	Smoky Heights	11.9	6	4	107.8	Jul-09 00:00	37.6	Jul-15	100%
PM _{2.5} (µg/m3)	80	30	Beaverlodge	14.2	18	6	133.8	Jul-15 10:00	49.1	Jul-15	100%
PM _{2.5} (µg/m3)	80	30	Clairmont	10.7	7	3	102.2	Jul-13 11:00	36.8	Jul-15	100%
RH (%)			Henry Pirker	55.9	-	-	90.2	Jul-18 06:00	81.4	Jul-18	100%
RH (%)			Evergreen Park	60.2	-	-	95.5	Jul-20 06:00	89.6	Jul-18	100%
RH (%)			Beaverlodge	63.5	-	-	100.0	Jul-15 05:00	91.7	Jul-18	100%
RH (%)			Valleyview	67.3	-	-	100.0	Jul-24 05:00	94.1	Jul-24	100%
SR (W/m ²)			Henry Pirker	234.7	-	-	810.7	Jul-09 13:00	307.6	Jul-01	100%
Temp (°C)			Henry Pirker	19.7	-	-	34.5	Jul-13 16:00	24.8	Jul-15	100%
Temp (°C)			Evergreen Park	19.2	-	-	33.2	Jul-13 17:00	24.3	Jul-15	100%
Temp (°C)			Smoky Heights	19.0	-	-	33.4	Jul-13 18:00	24.6	Jul-14	100%
Temp (°C)			Beaverlodge	18.6	-	-	33.7	Jul-13 18:00	24.4	Jul-13	100%
Temp (°C)			Valleyview	19.1	-	-	33.8	Jul-13 16:00	24.3	Jul-29	100%
Temp (°C)			Falher	18.4	-	-	307.0	Jul-14 15:00	23.2	Jul-14	100%
Temp (°C)			Clairmont	19.6	-	-	34.0	Jul-13 18:00	24.7	Jul-15	100%

PAZA Monthly Continuous Data Summary – continued

Jul-2014 Peace Airshed Zone Association							Maximum Recorded Values				
							1-hr		24-hr / 8-hr		
WSPD s (km/hr)			Henry Pirker	8.5	-	-	33.0	Jul-09 12:00	17.5	Jul-09	100%
WSPD s (km/hr)			Evergreen Park	10.4	-	-	42.0	Jul-04 15:00	24.1	Jul-04	100%
WSPD s (km/hr)			Smoky Heights	11.5	-	-	42.0	Jul-09 11:00	23.0	Jul-04	100%
WSPD s (km/hr)			Beaverlodge	10.7	-	-	43.0	Jul-09 10:00	21.6	Jul-09	100%
WSPD s (km/hr)			Valleyview	3.9	-	-	19.0	Jul-09 13:00	9.6	Jul-25	100%
WSPD s (km/hr)			Falher	11.7	-	-	34.0	Jul-09 15:00	19.7	Jul-02	100%
WSPD s (km/hr)			Clairmont	9.8	-	-	31.0	Jul-09 11:00	16.7	Jul-04	100%
WSPD v (km/hr)			Henry Pirker	3.8	-	-	32.0	Jul-09 12:00	16.0	Jul-09	100%
WSPD v (km/hr)			Evergreen Park	5.5	-	-	41.0	Jul-04 15:00	22.7	Jul-04	100%
WSPD v (km/hr)			Smoky Heights	6.0	-	-	41.0	Jul-09 11:00	22.4	Jul-04	100%
WSPD v (km/hr)			Beaverlodge	3.1	-	-	42.0	Jul-09 10:00	20.0	Jul-09	100%
WSPD v (km/hr)			Valleyview	1.5	-	-	18.0	Jul-09 13:00	9.1	Jul-25	100%
WSPD v (km/hr)			Falher	3.5	-	-	33.0	Jul-09 15:00	19.3	Jul-02	100%
WSPD v (km/hr)			Clairmont	3.6	-	-	31.0	Jul-09 11:00	15.9	Jul-04	100%
WDIR			Henry Pirker	W	-	-	-	-	-	-	100%
WDIR			Evergreen Park	W	-	-	-	-	-	-	100%
WDIR			Smoky Heights	WSW	-	-	-	-	-	-	100%
WDIR			Beaverlodge	W	-	-	-	-	-	-	100%
WDIR			Valleyview	WNW	-	-	-	-	-	-	100%
WDIR			Falher	SSW	-	-	-	-	-	-	100%
WDIR			Clairmont	WSW	-	-	-	-	-	-	100%

Continuous Network Equipment Summary

PAZA – Henry Pirker Station

General Station Issues

Routine monthly calibrations were performed on July 3rd (SO₂, NO_x O₃) and 4th (CO, THC, TRS). Two hours of data lost due to power failure on July 12. Spray-paint vandalism to trailer in overnight period of July 28-29.

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
NO _x /NO/NO ₂	TEI	42C	Analyzer cooling fan failed July 28 th . Case removed to allow for airflow until replacement fan arrives and allowed to stabilize before recalibration July 29 th . Dryer July 29 th .
O ₃	TEI	49C	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	Seventeen 1-hour and five 24-hour exceedences recorded. AE Reference #286599, 286654, 286729, 286767, 520992
RH	Met One	083D	No operational issues observed.
ET	Met One	083D	No operational issues observed.
SR	Met One	096-1	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Evergreen Park Station

General Station Issues

Routine monthly calibration performed on July 5th (SO₂, TRS).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM _{2.5}	R&P	1400AB	Eleven 1-hour and three 24-hour exceedences recorded. AE Reference #286652, 286730, 286766, 520995
ET	Met One/Gill	083D	No operational issues observed.
RH	Met One/Gill		No operational issues observed.
WS / WD	Met One/ Gill		No operational issues observed.

PAZA – Smoky Heights Station

General Station Issues

Routine monthly calibration performed on July 10th (SO₂, TRS). Brief power outage July 15th caused loss of one (1) hour of data.

Parameter	Make	Model	Notes
SO ₂	TEI	43C	No operational issues observed.
TRS	TEI	43C	No operational issues observed.
PM _{2.5}	R&P	1400AB	Glassware cleaned during calibration period. Six 1-hour and four 24-hour exceedences recorded. AE Reference #286413, 286661, 286805, 286881, 520997
ET	Met One	083D	No operational issues observed.
WS / WD	Met One	010C/020C	No operational issues observed.

PAZA – Beaverlodge Station

General Station Issues

Routine monthly calibrations performed on July 7th (NO_x, O₃) and 8th (SO₂).

Parameter	Make	Model	Notes
SO ₂	TEI	43CTL	No operational issues observed.
NO _x /NO/NO ₂	TEI	42C	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
PM _{2.5}	R&P	1400AB	Eighteen 1-hour and five 24-hour exceedences recorded. AE Reference #286572, 286612, 286656, 286731, 286762, 520993
ET	n/a	n/a	No operational issues observed.
RH	n/a	n/a	No operational issues observed.
WS / WD	Blue Sky	857	No operational issues observed.

PAZA – Valleyview Station

General Station Issues

Routine monthly calibrations were performed on July 22nd (SO₂ & H₂S).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	External span system failed on July 15 th , repaired July 18 th . System failed again July 29 th , analyzer in process of being replaced with internal span system.
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 – Falher Station

General Station Issues

Routine monthly calibrations were performed on July 24th (SO₂ & H₂S).

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
H ₂ S	Thermo	450i	Irregular span July 16 th checked, no adjustments made.
ET	Gill	RM Young 5103	No operational issues observed.
WS / WD	Gill	RM Young 5103	No operational issues observed.

PAZA – Portable-Clairmont

General Station Issues

Routine monthly calibrations were performed on July 15th (SO₂, NO_x, TRS), July 16th (O₃) and July 17th (THC). All channels taken offline during O₃ calibration on July 16th for manifold cleaning.

Parameter	Make	Model	Notes
SO ₂	TEI	43i	No operational issues observed.
NO _x	TEI	42i	No operational issues observed.
O ₃	TEI	49C	No operational issues observed.
TRS	TEI	39C	Maintenance to o-rings and permeation kicker performed on July 14 th , allowed to stabilize and calibrated on July 15 th .
THC	TEI	51C	Zero-air pump failed July 13 th , spare installed on July 14 th . Zero-switching valve failed July 16 th , replaced and allowed to stabilize before calibration on July 17 th .
PM _{2.5}	R&P	1400AB	Seven 1-hour and three 24-hour exceedences recorded. AE Reference #286657, 286806, 520991
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

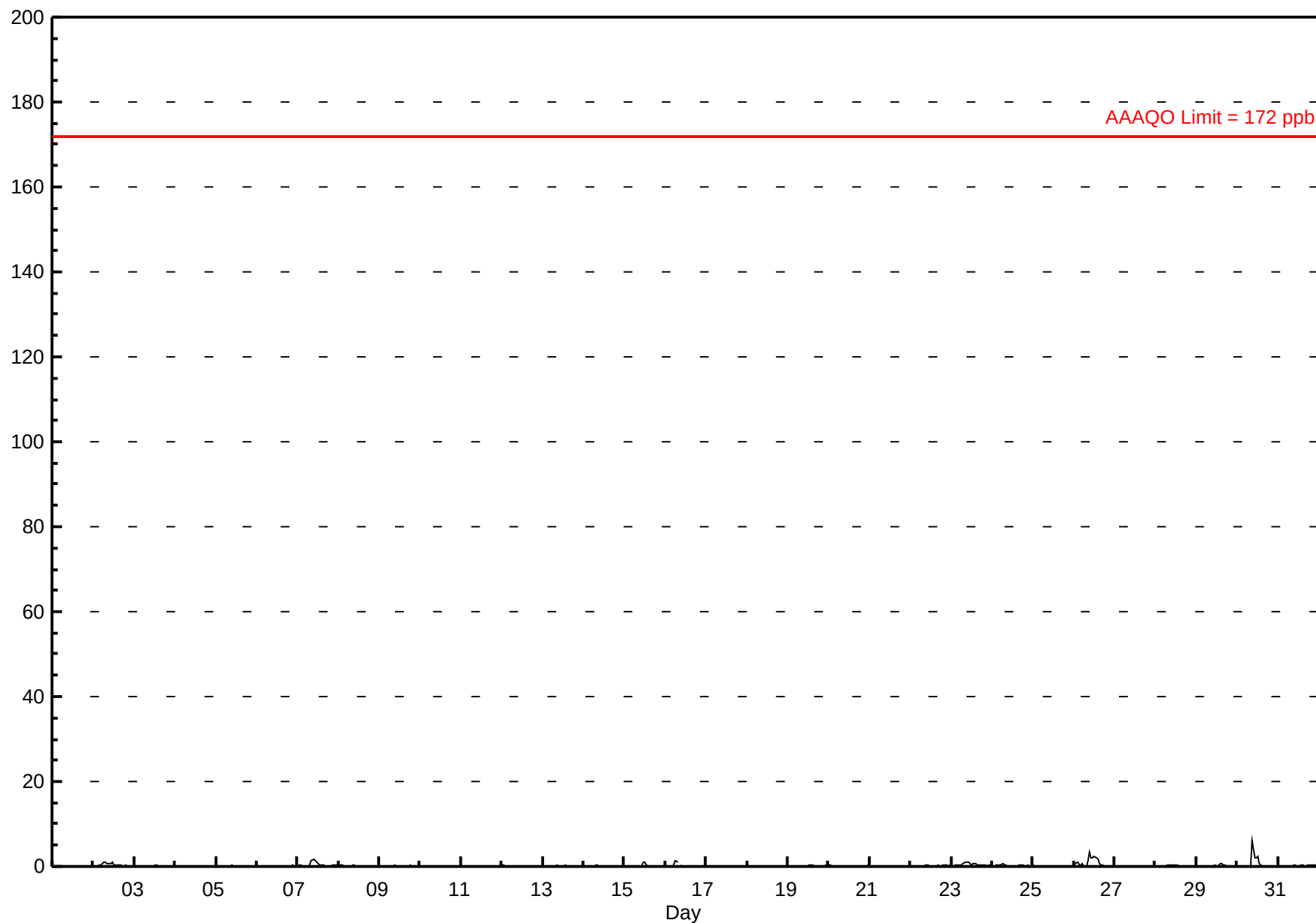
Henry Pirker - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6.1 ppb on Jul 30 10:00 Maximum Daily Average: 0.8 ppb on Jul 26																				Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 36 Percent Operational Time: 99.7						
Minimum Value: 0 ppb on Jul 1 11:00 Maximum Diurnal Average: 0.5 ppb at hour 10 Monthly Average: 0.15 ppb										Minimum Daily Average: 0.0 ppb on Jul 11 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 = 0.1 P ₉₀ = 0.3 P ₉₉ = 2.0																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	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	0.2
2-Jul	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.9
3-Jul	0	0	0	0	0	0	0	0	C	C	C	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.5
4-Jul	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
5-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.2
6-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.2
7-Jul	0	0	0	0	0	0	0	0	2	2	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0.4	1.7
8-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3
9-Jul	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	0.4
10-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.1
11-Jul	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
12-Jul	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	P	0	0	0	0	P	0	0	0	0.0	0.3
13-Jul	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
14-Jul	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
15-Jul	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.1	1.1
16-Jul	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.4
17-Jul	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2
18-Jul	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
19-Jul	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	0.7
20-Jul	0	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
21-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
22-Jul	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	0.5
23-Jul	0	A	0	0	0	0	0	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0.5	1.2
24-Jul	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.5
25-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.2
26-Jul	0	1	1	0	0	1	0	0	1	3	2	2	2	2	1	0	0	0	0	0	0	A	0	0	0.8	3.4
27-Jul	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
28-Jul	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
29-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0.1	0.7
30-Jul	0	0	0	0	0	0	0	0	0	6	2	2	2	1	0	0	0	A	0	0	0	0	0	0	0.6	6.1
31-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0.1	0.5
0.1 0.1 0.1 0.0 0.1 0.1 0.1 0.2 0.2 0.5 0.3 0.3 0.3 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1																									Diurnal Average	
0.3 0.7 0.9 0.3 0.4 0.7 1.4 1.2 1.5 6.1 2.0 2.1 2.4 2.1 1.7 0.7 0.5 0.4 0.3 0.4 0.3 0.3 0.5 0.7																									Diurnal Maximum	
C - Calibration P - Power Failure A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - July 2014



Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

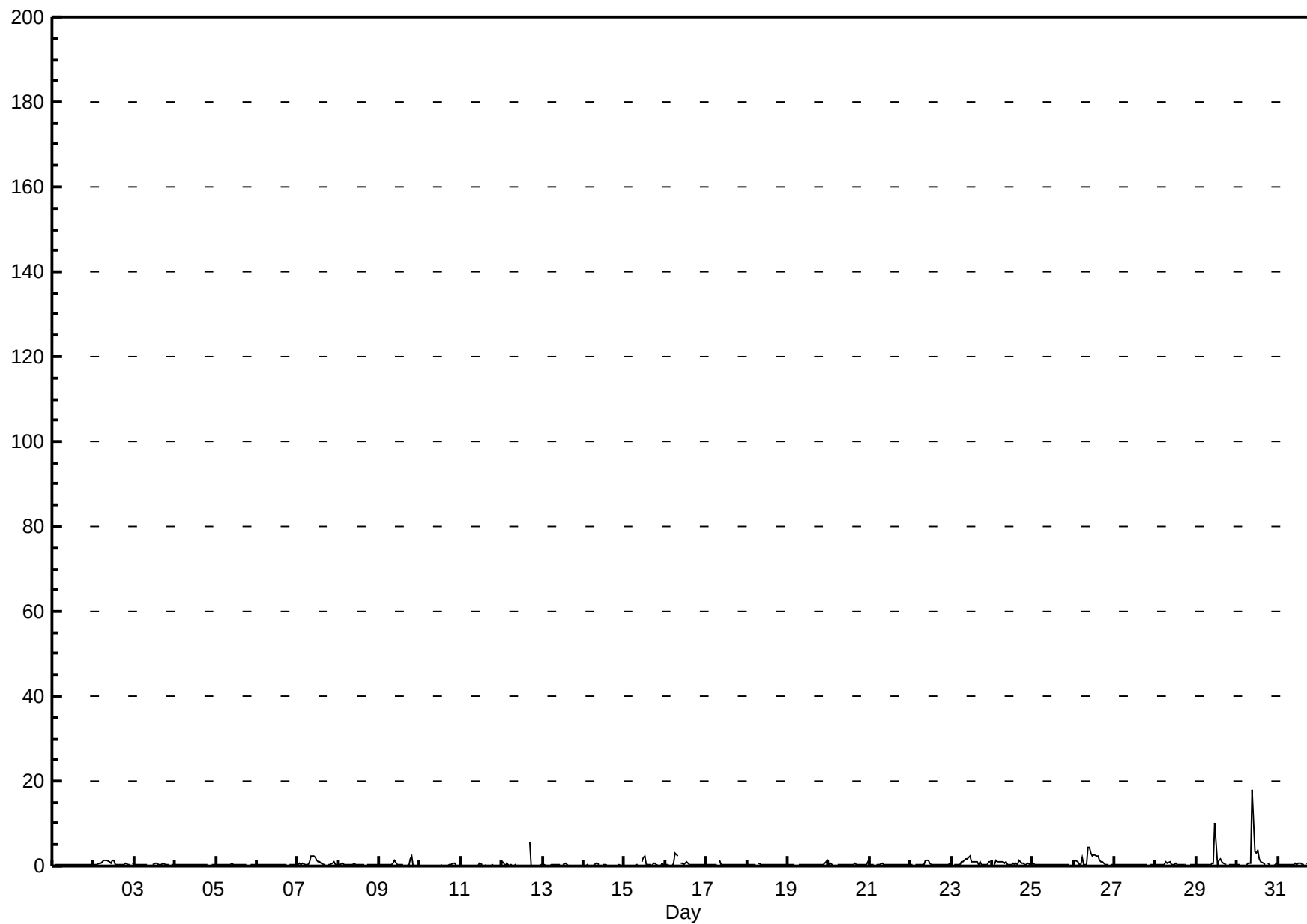
Henry Pirker - July 2014

Maximum Value: 17.9 ppb on Jul 30 10:00																				Maximum Daily Average: 1.6 ppb on Jul 30				Hours in Service: 744		
Minimum Value: 0 ppb on Jul 12 21:00																				Minimum Daily Average: 0.2 ppb on Jul 10				Hours of Data: 706		
Maximum Diurnal Average: 1.3 ppb at hour 10																				Minimum Diurnal Average: 0.3 ppb at hour 5				Hours of Missing Data: 38		
Monthly Average: 0.51 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.4 P ₉₀ = 0.9 P ₉₉ = 3.5				Hours of Calibration: 36		
																				Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.4
2-Jul	0	0	0	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	1	0	0	0	A	1	0.7	1.3
3-Jul	0	0	0	0	0	0	0	0	C	C	C	0	1	1	0	0	0	1	0	0	0	A	0	0	0.3	0.8
4-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.4
5-Jul	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0.4	0.7
6-Jul	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	0.4
7-Jul	0	1	0	1	0	0	0	1	2	2	2	1	1	1	1	0	0	A	0	0	1	1	0	0	0.8	2.4
8-Jul	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	0.8
9-Jul	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	A	0	0	2	2	0	0	0	0.4	2.4
10-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	2	1	1	0	0	0.2	0.6
11-Jul	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.6
12-Jul	1	1	0	1	0	0	0	0	0	0	0	0	A	0	0	P	6	0	0	P	0	0	0	0	0.4	5.8
13-Jul	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0.2	0.6
14-Jul	0	0	0	0	0	0	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
15-Jul	0	0	0	0	0	0	0	0	0	0	A	1	2	2	0	0	0	0	1	1	0	0	1	0	0.4	2.5
16-Jul	0	0	0	0	0	1	3	2	A	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0.6	3.1
17-Jul	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
18-Jul	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
19-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.5	1.4
20-Jul	0	1	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.4	0.9
21-Jul	0	0	0	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
22-Jul	0	0	A	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.4	1.3
23-Jul	0	A	0	0	0	0	1	1	2	2	2	2	1	1	1	1	0	1	0	0	0	0	1	1	0.9	2.3
24-Jul	A	0	1	1	1	1	1	1	1	0	0	0	1	0	1	0	1	1	1	0	0	1	0	A	0.7	1.5
25-Jul	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	0.7
26-Jul	0	1	1	0	0	2	0	0	4	4	3	2	3	2	1	1	1	0	0	0	A	0	0	0	1.4	4.4
27-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4
28-Jul	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0.5	0.9
29-Jul	0	0	0	0	0	0	0	0	0	1	1	10	0	1	2	1	1	0	A	0	0	0	0	0	0.9	10.2
30-Jul	0	0	0	0	0	0	1	1	1	18	4	3	4	2	1	1	0	A	1	0	0	0	0	1	1.6	17.9
31-Jul	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	A	1	0	0	0	0	0	1	0.4	1.2
Diurnal Average																										
Diurnal Maximum																										
C - Calibration																										
P - Power Failure																										
A - Automated Daily Zero Span																										

Hourly Maximums

Sulphur Dioxide (SO₂) - ppb

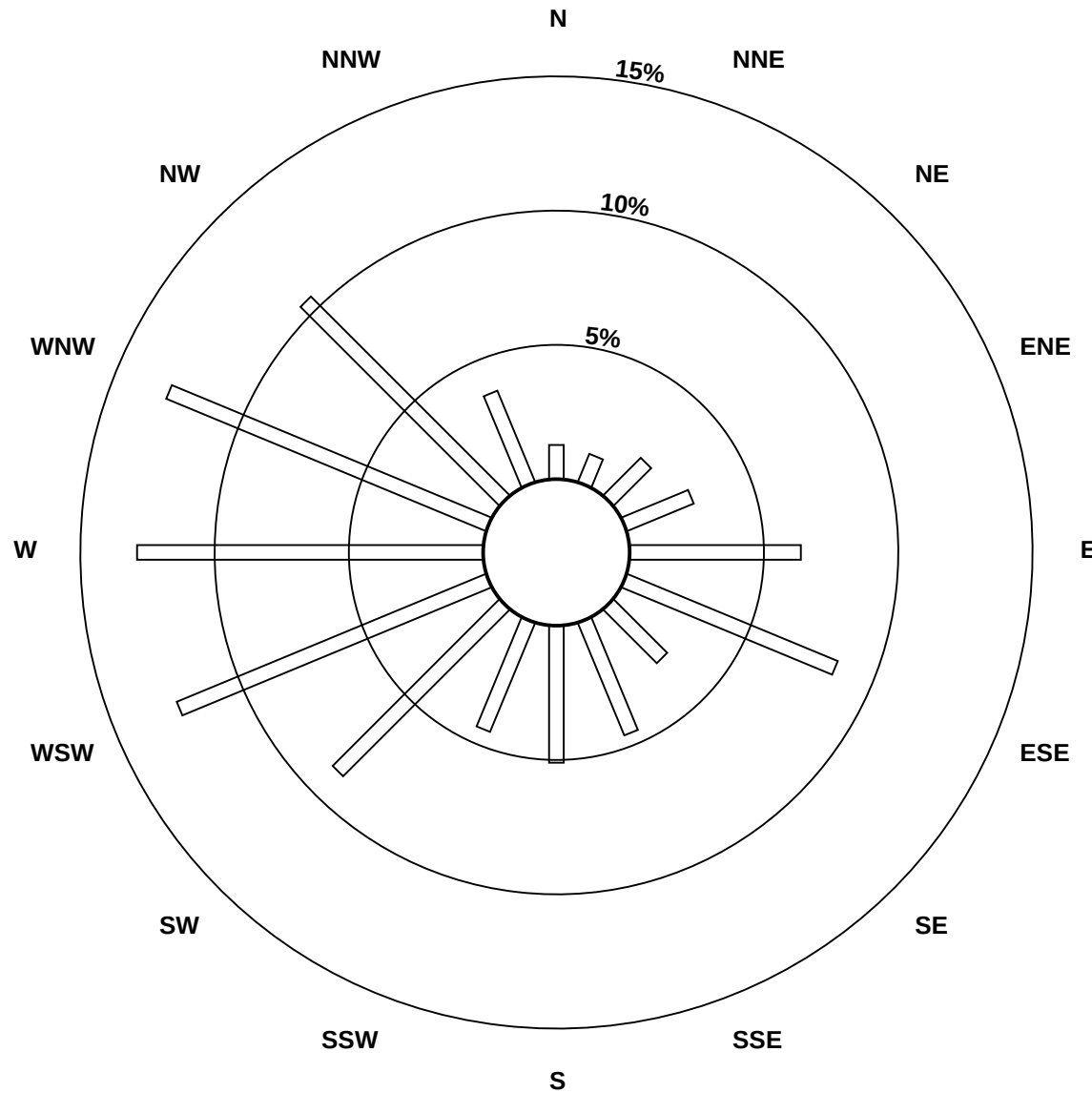
Henry Pirker - July 2014



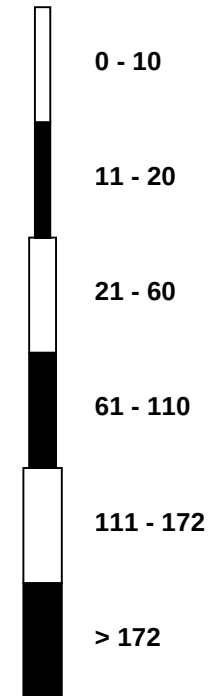
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Henry Pirker - July 2014

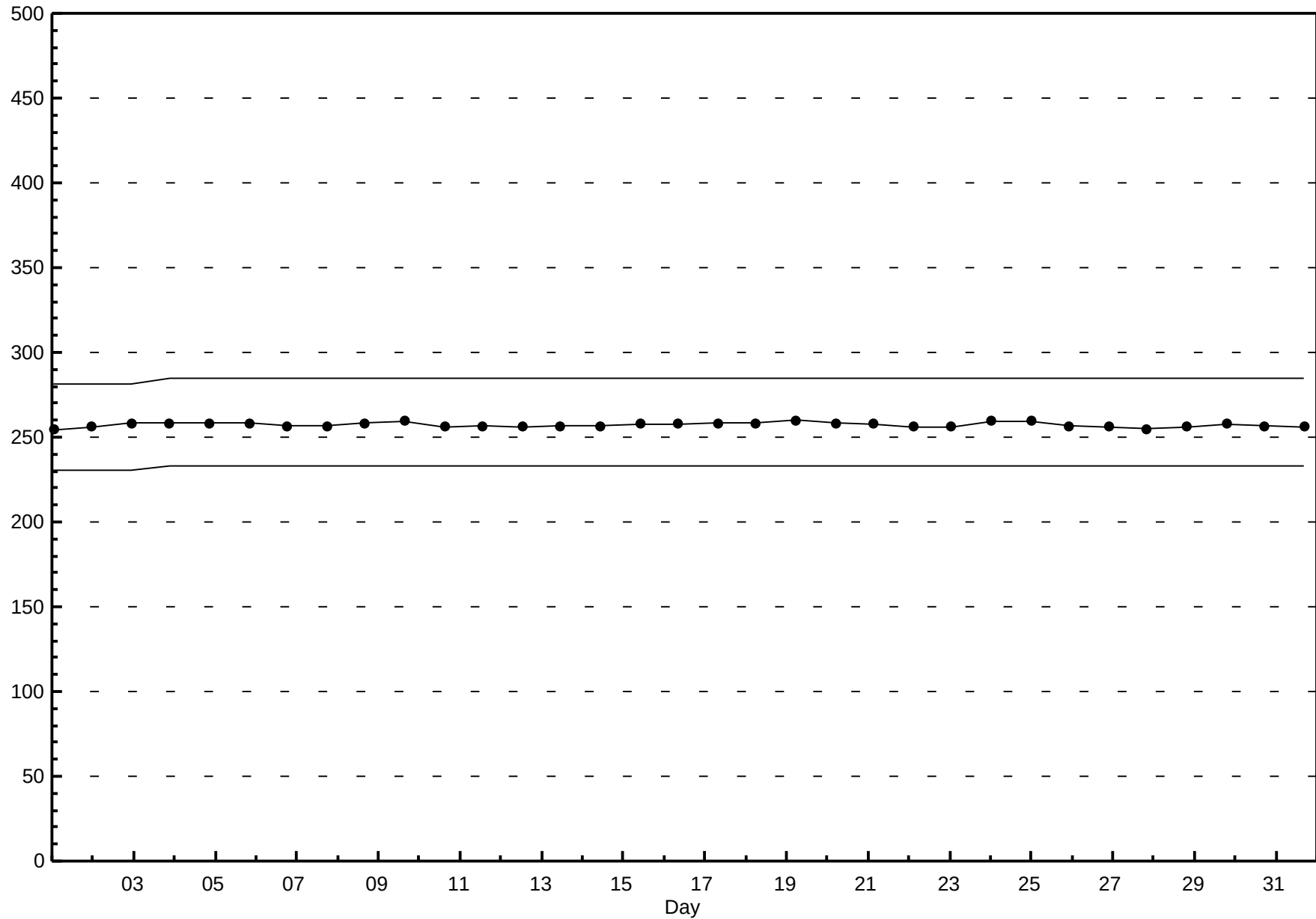


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Henry Pirker - July 2014



Hourly Averages

Total Reduced Sulphur (TRS) - ppb

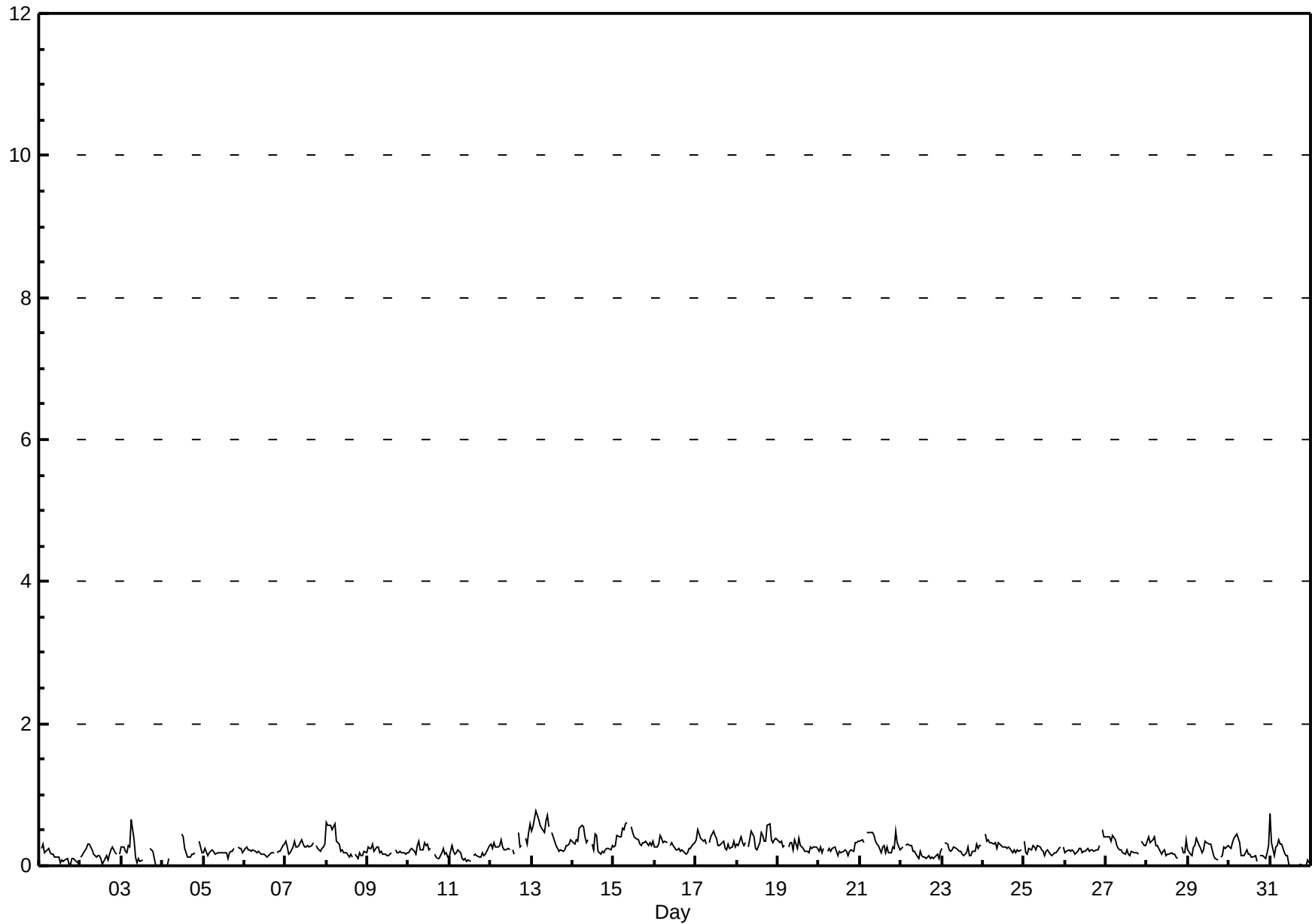
Henry Pirker - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.8 ppb on Jul 13 03:00 Maximum Daily Average: 0.4 ppb on Jul 13																				Hours in Service: 744 Hours of Data: 699 Hours of Missing Data: 45 Hours of Calibration: 39 Percent Operational Time: 99.2						
Minimum Value: 0 ppb on Jul 3 21:00 Maximum Diurnal Average: 0.3 ppb at hour 6 Monthly Average: 0.25 ppb										Minimum Daily Average: 0.1 ppb on Jul 1 Minimum Diurnal Average: 0.2 ppb at hour 18 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 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-Jul	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
2-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3
3-Jul	0	0	0	0	0	0	1	0	0	0	0	0	M	M	M	M	0	0	0	0	A	0	0	0	0.2	0.7
4-Jul	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	A	0	0	0	--	0.5
5-Jul	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
6-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.3
7-Jul	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
8-Jul	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.6
9-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.3
10-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.3
11-Jul	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
12-Jul	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	P	0	0	0	P	0	0	0	1	0.3	0.6
13-Jul	0	1	1	1	1	1	1	0	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8
14-Jul	0	0	0	0	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
15-Jul	0	0	0	0	0	1	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
16-Jul	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
17-Jul	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
18-Jul	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0.4	0.6
19-Jul	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
20-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
21-Jul	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	0.5
22-Jul	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
23-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
24-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.3	0.4
25-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.2	0.3
26-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0.2	0.5
27-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	0.4
28-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.4
29-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4
30-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.4
31-Jul	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.7
0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.3																									Diurnal Average	
0.7 0.6 0.8 0.7 0.7 0.6 0.7 0.6 0.6 0.7 0.6 0.5 0.5 0.4 0.5 0.4 0.5 0.3 0.6 0.6 0.4 0.5 0.5 0.6																									Diurnal Maximum	
C - Calibration P - Power Failure M - Maintenance 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 - July 2014



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

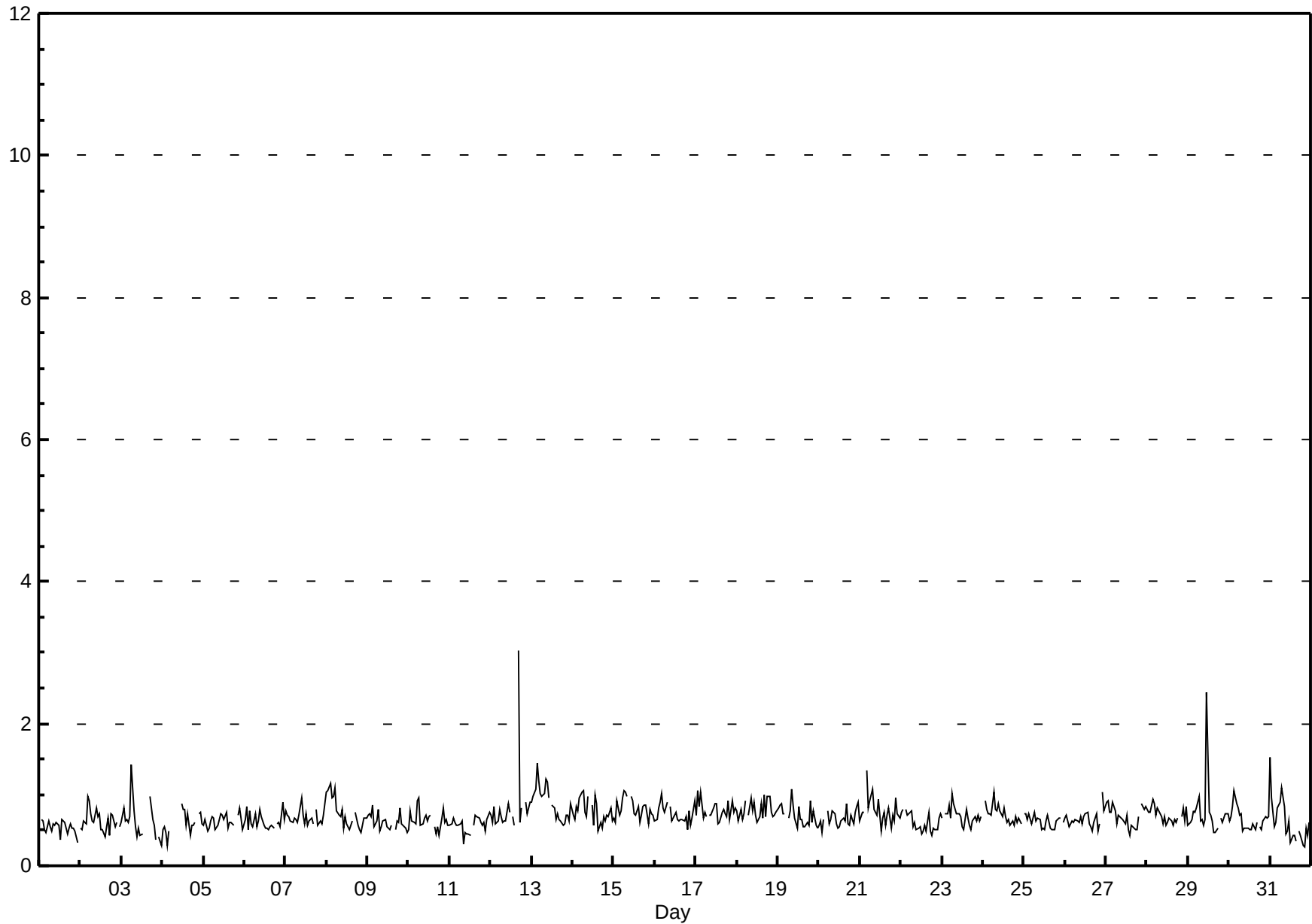
Henry Pirker - July 2014

Maximum Value: 3.0 ppb on Jul 12 17:00																			Maximum Daily Average: 0.9 ppb on Jul 13										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 31 21:00																			Minimum Daily Average: 0.5 ppb on Jul 1										Hours of Data: 699	
Maximum Diurnal Average: 0.8 ppb at hour 7																			Minimum Diurnal Average: 0.6 ppb at hour 16										Hours of Missing Data: 45	
Monthly Average: 0.69 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.6 Median = 0.7 Q ₃ = 0.8 P ₉₀ = 0.9 P ₉₉ = 1.2										Hours of Calibration: 39	
																													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-Jul	A	1	1	1	0	1	1	0	1	1	1	1	0	1	1	1	0	1	1	1	1	0	0	A	0.5	0.7				
2-Jul	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	1	1	1	1	A	1	0.6	1.0				
3-Jul	1	1	1	1	1	1	1	1	1	0	1	0	0	M	M	M	M	1	1	1	0	A	0	0	0.6	1.4				
4-Jul	1	1	0	0	0	C	C	C	C	C	C	1	1	1	1	1	0	1	1	1	A	1	1	1	--	0.9				
5-Jul	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.6	0.8				
6-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.6	0.9				
7-Jul	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	0.9				
8-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	0.7	1.2				
9-Jul	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	0.6	0.9				
10-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	0	1	1	1	1	1	0.6	0.9				
11-Jul	1	1	1	1	1	1	1	1	0	0	0	0	0	A	1	1	1	1	1	1	0	1	1	1	0.6	0.7				
12-Jul	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	P	3	1	1	P	1	1	1	1	0.8	3.0				
13-Jul	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.4				
14-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	1	1	1	1	1	1	1	0.8	1.1				
15-Jul	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1				
16-Jul	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				
17-Jul	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1				
18-Jul	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	1.0				
19-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1				
20-Jul	1	1	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9				
21-Jul	1	1	1	A	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3				
22-Jul	1	1	A	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0	0	1	1	1	1	1	0.6	0.8				
23-Jul	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0				
24-Jul	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	1.0				
25-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	0.6	0.8				
26-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	A	1	1	1	0.6	1.0				
27-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	A	1	1	1	0.7	0.9				
28-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	0.9				
29-Jul	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	0	0	1	A	1	1	1	1	1	0.7	2.4				
30-Jul	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	1.1				
31-Jul	2	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	A	0	0	0	0	1	0	1	0.6	1.5				
0.7 0.7 0.7 0.7 0.8 0.8 0.8 0.7 0.7 0.7 0.7 0.7 0.6 0.6 0.6 0.6 0.7 0.6 0.6 0.6 0.6 0.7 0.7 0.7																									Diurnal Average					
1.5 1.1 1.2 1.4 1.3 1.1 1.4 1.1 1.2 1.2 1.0 2.4 0.9 1.0 0.9 0.8 3.0 1.0 1.0 1.0 1.0 0.9 1.0 1.0																									Diurnal Maximum					
C - Calibration				P - Power Failure				M - Maintenance				A - Automated Daily Zero Span																		

Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

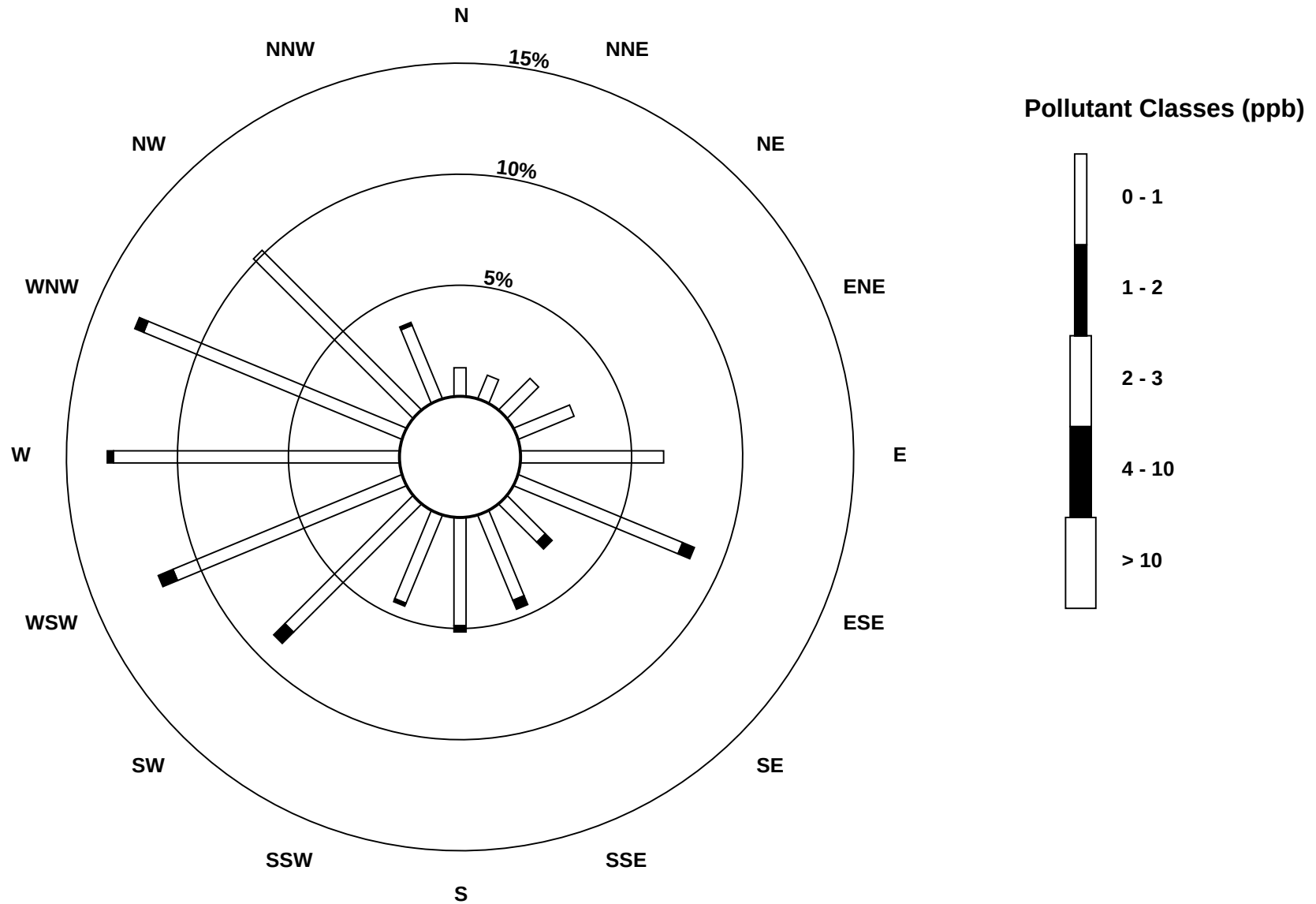
Henry Pirker - July 2014



Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

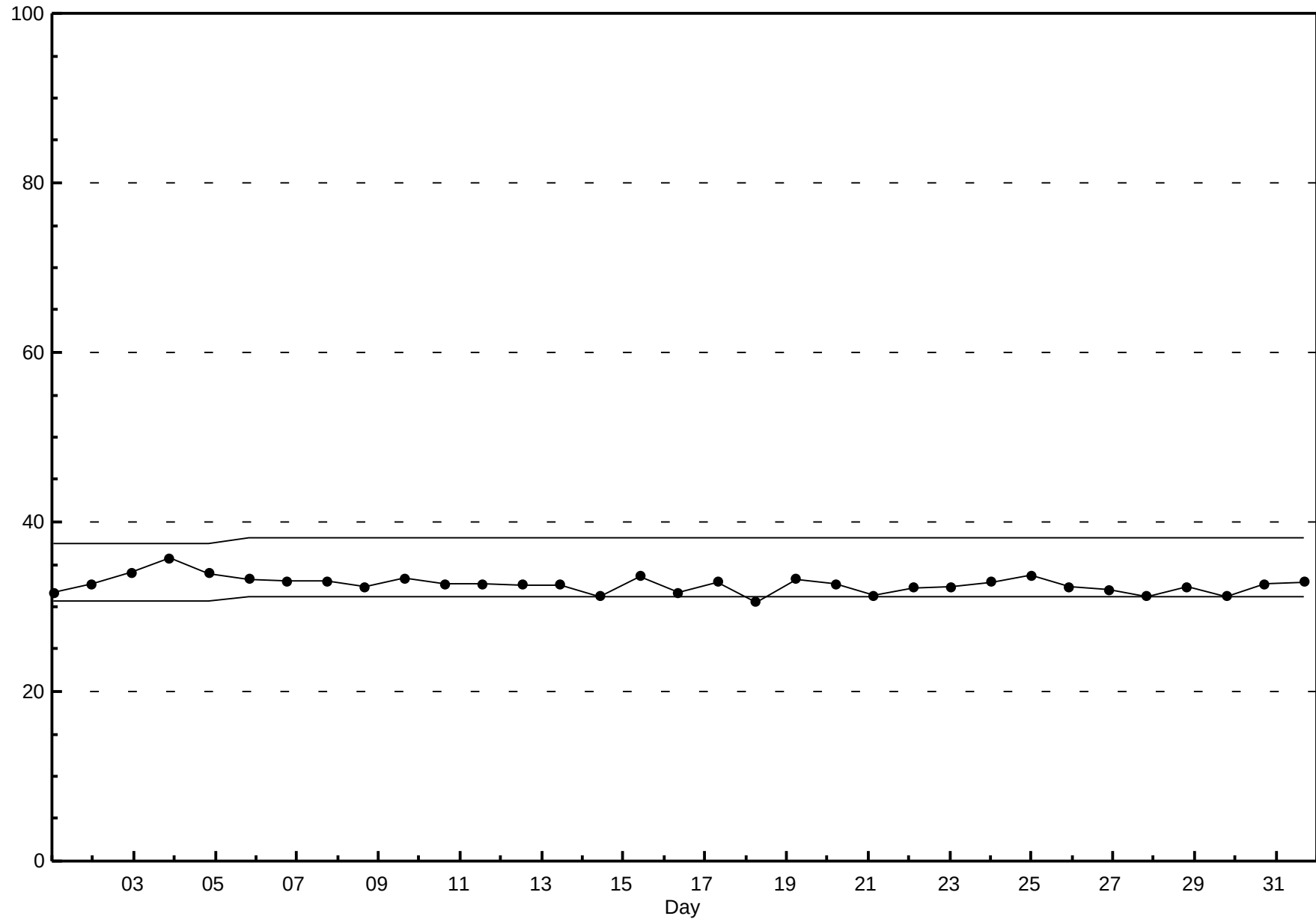
Henry Pirker - July 2014



Span Responses

Total Reduced Sulphur (TRS)

Henry Pirker - July 2014



Hourly Averages

Nitrogen Dioxide (NO₂) - ppb

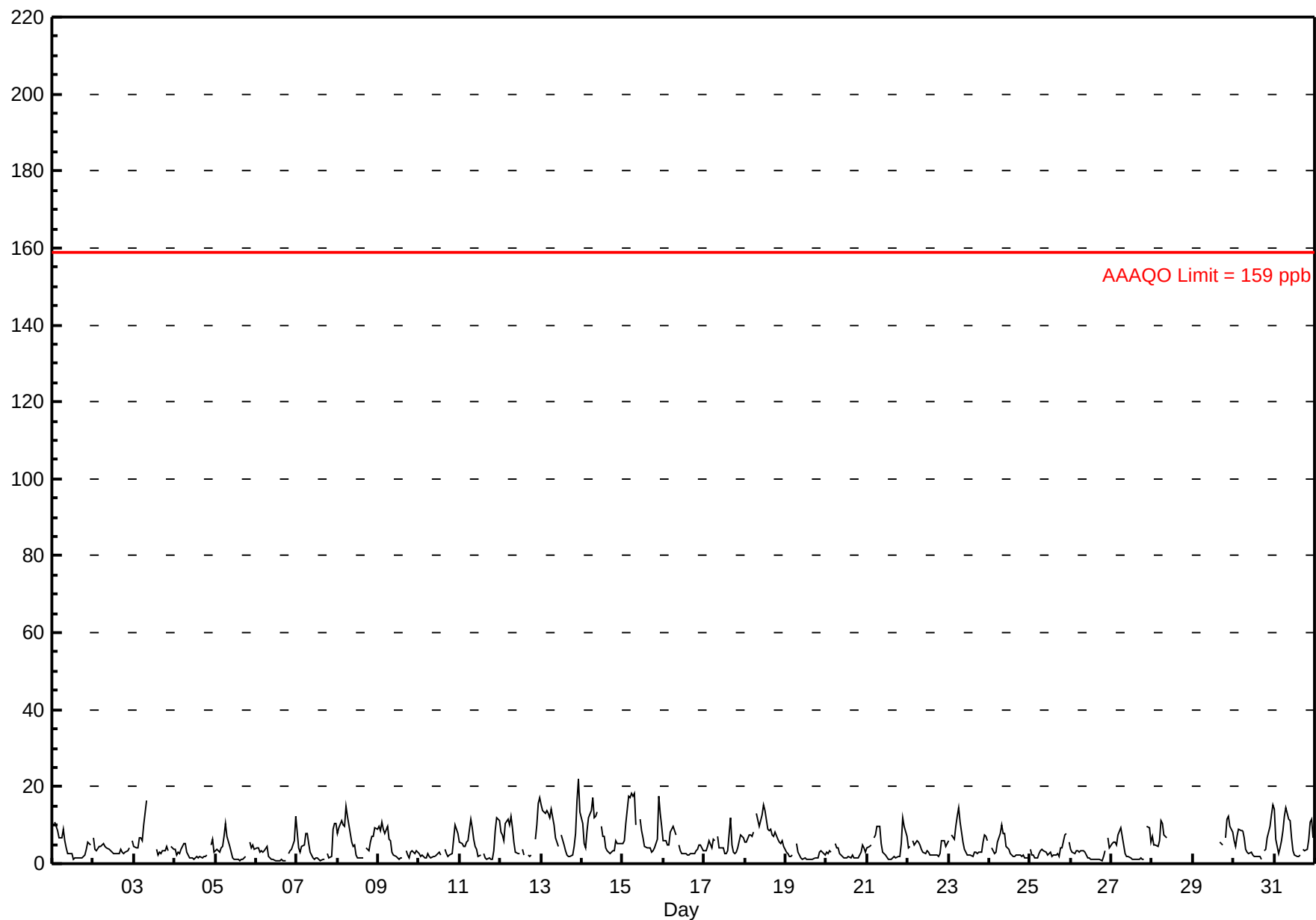
Henry Pirker - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 21.9 ppb on Jul 13 23:00 Maximum Daily Average: 9.6 ppb on Jul 15																					Hours in Service: 744 Hours of Data: 674						
Minimum Value: 1 ppb on Jul 6 12:00 Minimum Daily Average: 2.1 ppb on Jul 19 Maximum Diurnal Average: 8.7 ppb at hour 7 Minimum Diurnal Average: 2.2 ppb at hour 15 Monthly Average: 4.95 ppb Percentiles: P ₁ = 0.9 P ₁₀ = 1.4 Q ₁ = 2.3 Median = 3.8 Q ₃ = 6.8 P ₉₀ = 10.2 P ₉₉ = 17.2																					Hours of Missing Data: 70 Hours of Calibration: 43 Percent Operational Time: 96.4						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jul	A	11	10	9	7	7	9	6	4	3	3	3	1	1	2	1	2	1	2	2	4	6	5	A	4.4	10.8	
2-Jul	7	4	3	5	5	5	5	4	4	4	3	3	3	3	3	3	4	3	3	3	3	4	A	6	3.8	6.7	
3-Jul	4	4	4	7	7	6	10	16	C	C	C	C	C	4	2	3	3	3	3	5	4	A	5	4	5.2	16.4	
4-Jul	4	2	3	3	4	5	5	3	2	2	1	1	1	2	2	2	2	2	2	2	A	5	6	3	2.8	6.2	
5-Jul	3	4	3	4	4	7	10	7	5	3	1	1	1	1	1	1	1	1	2	A	6	4	5	4	3.5	10.3	
6-Jul	4	4	3	3	3	3	4	2	1	1	1	1	1	1	1	1	1	1	A	3	3	4	6	12	2.8	12.3	
7-Jul	8	4	3	4	5	8	8	5	3	2	1	2	1	1	1	1	1	A	3	2	2	9	11	11	4.1	10.6	
8-Jul	8	9	11	10	10	15	12	8	5	5	5	2	2	2	1	2	A	4	3	6	7	7	9	9	6.6	14.8	
9-Jul	10	8	11	9	8	10	6	6	3	2	2	2	1	1	1	A	3	2	2	3	3	2	3	3	4.5	10.8	
10-Jul	3	2	2	1	1	3	2	2	2	2	2	3	3	2	A	4	3	2	2	3	6	10	9	8	3.3	9.9	
11-Jul	6	5	5	5	6	6	11	9	6	4	4	2	2	A	3	2	1	1	1	1	3	9	12	11	5.0	12.0	
12-Jul	8	7	6	10	11	10	12	10	6	3	3	3	A	4	2	P	2	2	2	P	6	10	16	17	7.1	17.2	
13-Jul	15	14	13	14	13	12	14	10	7	5	5	A	8	5	3	2	2	2	2	4	8	17	22	14	9.1	21.9	
14-Jul	10	5	4	8	12	14	17	12	12	13	A	10	7	7	4	3	3	3	3	3	6	5	5	5	7.6	17.3	
15-Jul	5	6	11	17	17	18	18	18	10	A	12	9	7	4	4	4	4	3	3	4	6	18	13	10	9.6	18.3	
16-Jul	6	6	5	5	8	9	10	8	A	5	3	2	3	3	2	2	3	3	2	3	4	5	5	3	4.6	9.7	
17-Jul	4	3	4	6	4	6	6	A	7	4	4	4	3	3	3	12	5	3	3	3	4	8	7	7	4.9	11.8	
18-Jul	5	5	7	7	7	8	A	13	10	11	13	15	14	9	9	7	7	8	6	6	5	6	5	5	8.4	15.1	
19-Jul	3	3	2	2	2	A	5	3	2	1	1	1	1	1	1	1	1	1	2	3	3	3	2	2	2.1	5.3	
20-Jul	3	3	3	3	A	5	4	4	3	2	1	1	1	2	2	2	2	1	1	1	3	5	4	3	2.6	5.3	
21-Jul	4	5	5	A	7	7	10	10	5	3	3	2	1	1	1	1	2	2	2	2	5	12	10	7	4.6	12.0	
22-Jul	4	4	A	6	5	6	6	5	4	3	3	3	3	2	2	2	2	2	2	3	6	6	5	5	3.8	5.9	
23-Jul	6	A	8	6	10	12	15	11	6	4	3	2	2	2	2	3	3	3	3	3	5	8	7	6	5.6	14.7	
24-Jul	A	4	3	3	3	5	8	10	8	8	4	4	3	2	2	2	2	2	2	2	2	1	1	A	3.7	9.9	
25-Jul	4	2	2	2	2	3	3	4	3	3	2	3	3	2	2	2	2	2	4	4	7	8	A	6	3.3	8.0	
26-Jul	4	3	3	3	4	3	3	4	3	2	2	1	1	1	1	1	1	1	1	2	3	A	7	4	2.6	6.8	
27-Jul	5	5	6	5	8	9	7	5	2	2	2	1	1	1	1	1	1	2	1	1	A	10	9	6	4.0	9.6	
28-Jul	7	5	5	5	6	11	10	7	7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	11.2	
29-Jul	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	6	5	A	7	12	12	10	8	--	12.4
30-Jul	6	4	7	9	9	9	7	4	3	3	3	2	2	2	2	2	2	1	A	4	4	7	10	13	15	5.4	15.3
31-Jul	14	7	2	4	6	8	12	15	12	11	7	3	2	2	2	2	2	A	4	3	4	6	11	12	7	6.8	14.5
																									Diurnal Average	Diurnal Maximum	
																									6.1	15.4	
																									5.2	13.8	
																									5.3	13.1	
																									6.0	17.5	
																									6.6	17.0	
																									8.0	18.2	
																									8.7	17.7	
																									7.6	18.3	
																									5.2	12.4	
																									4.1	13.4	
																									3.5	12.8	
																									3.2	15.1	
																									2.9	13.7	
																									2.5	9.0	
																									2.2	8.7	
																									2.7	11.8	
																									2.5	7.3	
																									2.4	7.0	
																									2.5	8.0	
																									3.1	6.8	
																									5.1	11.7	
																									7.6	17.7	
																									8.0	21.9	
																									7.1	17.2	
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

Henry Pirker - July 2014



Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

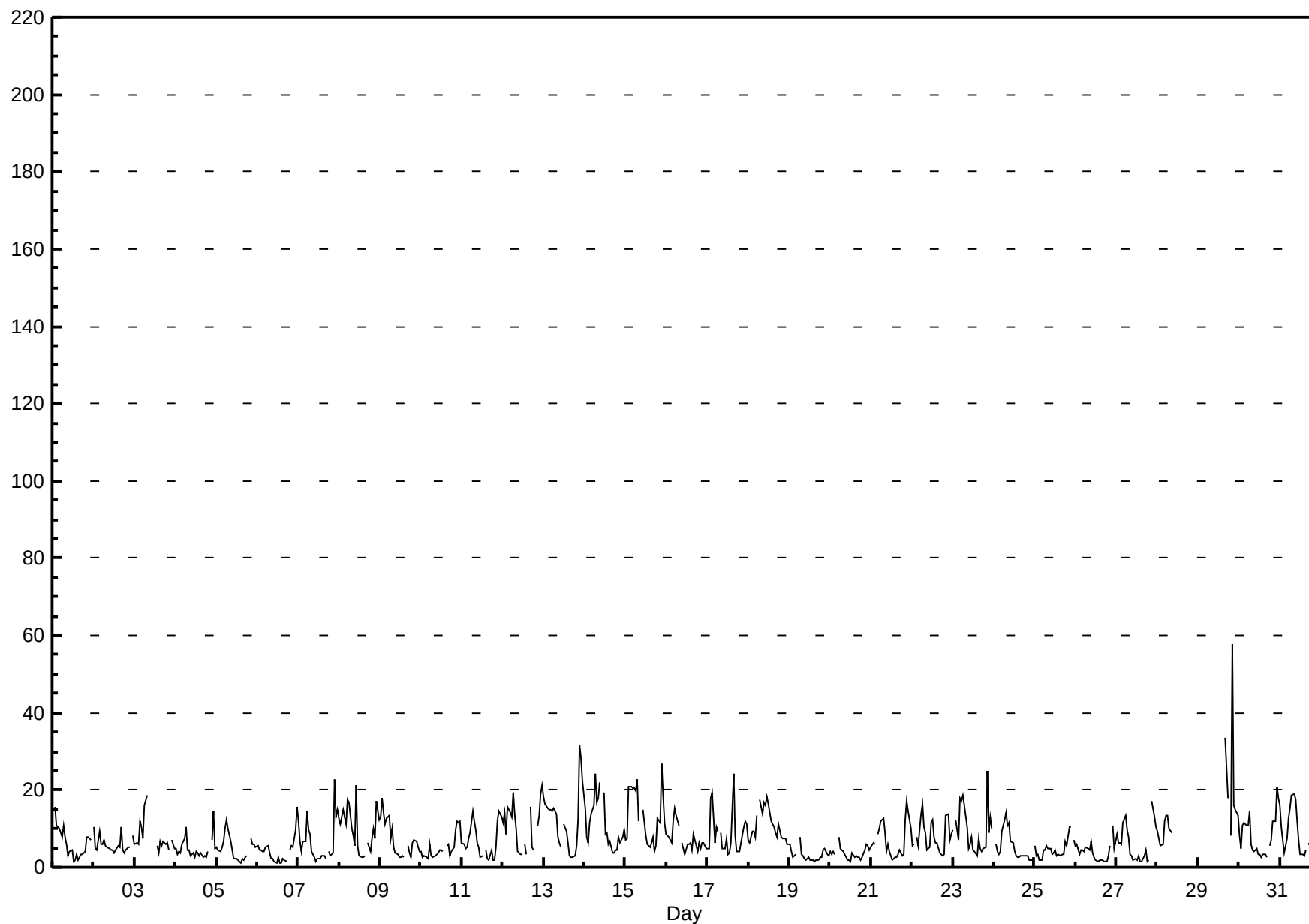
Henry Pirker - July 2014

Maximum Value: 57.9 ppb on Jul 29 21:00																				Maximum Daily Average: 13.1 ppb on Jul 15										Hours in Service: 744									
Minimum Value: 1 ppb on Jul 6 12:00																				Minimum Daily Average: 3.2 ppb on Jul 19										Hours of Data: 674									
Maximum Diurnal Average: 12.1 ppb at hour 7																				Minimum Diurnal Average: 3.9 ppb at hour 15										Hours of Missing Data: 70									
Monthly Average: 7.53 ppb																				Percentiles: P ₁ = 1.5 P ₁₀ = 2.5 Q ₁ = 3.5 Median = 5.8 Q ₃ = 10.5 P ₉₀ = 15.2 P ₉₉ = 24.3										Hours of Calibration: 43									
																				Percent Operational Time: 96.4																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
1-Jul	A	16	11	11	10	8	11	8	6	3	4	5	2	2	3	2	3	3	4	4	8	8	7	A	6.3	15.7													
2-Jul	11	5	5	9	6	6	7	6	5	5	5	4	5	6	5	10	5	4	5	5	5	A	A	8	5.8	10.6													
3-Jul	6	6	6	12	11	8	16	19	C	C	C	C	C	5	4	7	5	7	6	6	5	A	7	5	7.8	18.6													
4-Jul	5	4	4	4	6	8	11	5	5	3	4	2	4	4	3	4	3	3	3	4	A	7	14	5	4.8	14.5													
5-Jul	5	5	4	5	7	10	12	10	7	5	2	2	2	2	1	2	2	3	3	A	7	6	6	5	4.9	12.4													
6-Jul	6	5	5	4	4	5	6	4	2	2	2	1	3	1	1	2	2	2	A	5	6	5	10	16	4.2	15.6													
7-Jul	12	7	4	7	7	15	10	9	4	3	2	2	2	2	3	3	2	A	4	3	4	23	13	15	6.7	22.8													
8-Jul	13	11	15	13	11	18	17	10	8	6	21	5	3	3	3	3	A	6	4	8	10	8	17	12	9.7	21.3													
9-Jul	13	18	14	11	13	14	8	10	5	4	3	3	2	3	3	A	5	4	3	6	7	7	5	4	7.1	17.9													
10-Jul	4	3	3	3	2	6	3	3	3	4	4	4	4	4	A	6	6	3	4	5	10	12	12	12	5.1	12.0													
11-Jul	6	6	5	5	7	9	14	12	10	7	5	3	3	A	5	2	2	4	2	2	5	12	14	13	6.7	14.4													
12-Jul	11	14	9	16	14	13	19	14	10	4	4	3	A	6	3	P	16	5	5	P	11	13	19	21	11.0	21.3													
13-Jul	18	16	15	15	15	15	15	14	8	6	5	A	11	9	6	3	2	2	3	5	12	32	28	22	12.2	31.5													
14-Jul	15	8	7	11	14	16	24	17	18	22	A	19	8	9	6	7	4	4	4	4	8	6	8	10	10.9	24.2													
15-Jul	7	7	21	21	20	20	20	23	12	A	15	11	8	6	5	6	8	4	5	13	11	27	19	11	13.1	26.9													
16-Jul	8	8	7	6	12	15	13	11	A	6	5	3	6	6	6	4	8	6	4	6	5	6	6	5	7.2	15.4													
17-Jul	5	5	18	20	6	10	9	A	9	5	5	7	3	4	6	24	8	4	4	4	6	10	12	11	8.6	24.4													
18-Jul	7	6	9	9	8	13	A	17	14	17	16	18	16	12	11	10	9	8	11	8	7	7	7	6	10.9	18.4													
19-Jul	6	4	3	3	4	A	8	4	3	2	2	3	2	2	2	2	2	2	2	3	4	5	3	3	3.2	7.9													
20-Jul	4	4	4	4	A	8	5	4	4	2	2	2	2	4	3	3	2	2	2	3	4	6	5	4	3.6	8.0													
21-Jul	5	6	6	A	9	10	12	13	9	4	6	4	2	2	2	2	3	5	3	4	12	17	14	10	7.0	17.3													
22-Jul	5	6	A	8	5	14	16	11	9	4	5	12	12	8	6	6	4	3	3	4	13	14	7	8	8.0	16.3													
23-Jul	10	A	12	7	18	17	19	16	10	5	6	8	4	4	3	8	5	4	5	5	25	9	13	10	9.7	24.9													
24-Jul	A	6	4	3	4	9	12	14	11	11	7	6	4	3	2	2	3	3	3	3	3	2	2	A	5.5	14.1													
25-Jul	5	3	3	2	2	4	4	5	5	5	3	4	4	3	3	3	4	3	7	5	10	10	A	7	4.7	10.5													
26-Jul	6	6	3	5	5	4	5	5	4	7	4	2	2	2	2	2	2	2	1	3	5	A	11	5	4.0	10.9													
27-Jul	8	6	6	6	11	13	10	8	3	3	2	2	2	3	2	2	3	5	2	2	A	17	13	10	6.1	17.3													
28-Jul	10	7	6	6	12	13	14	10	9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	13.5													
29-Jul	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	34	18	A	8	58	16	15	13	--	57.9												
30-Jul	8	5	11	11	11	11	15	6	4	4	5	4	4	3	3	3	3	3	A	5	7	12	12	21	18	8.1	20.9												
31-Jul	16	10	4	5	7	13	15	19	19	17	12	7	4	3	3	4	A	6	5	5	10	19	17	9	10.1	18.9													
																									Diurnal Average														
																									Diurnal Maximum														
C - Calibration					P - Power Failure					N - Not Valid					A - Automated Daily Zero Span																								

Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb

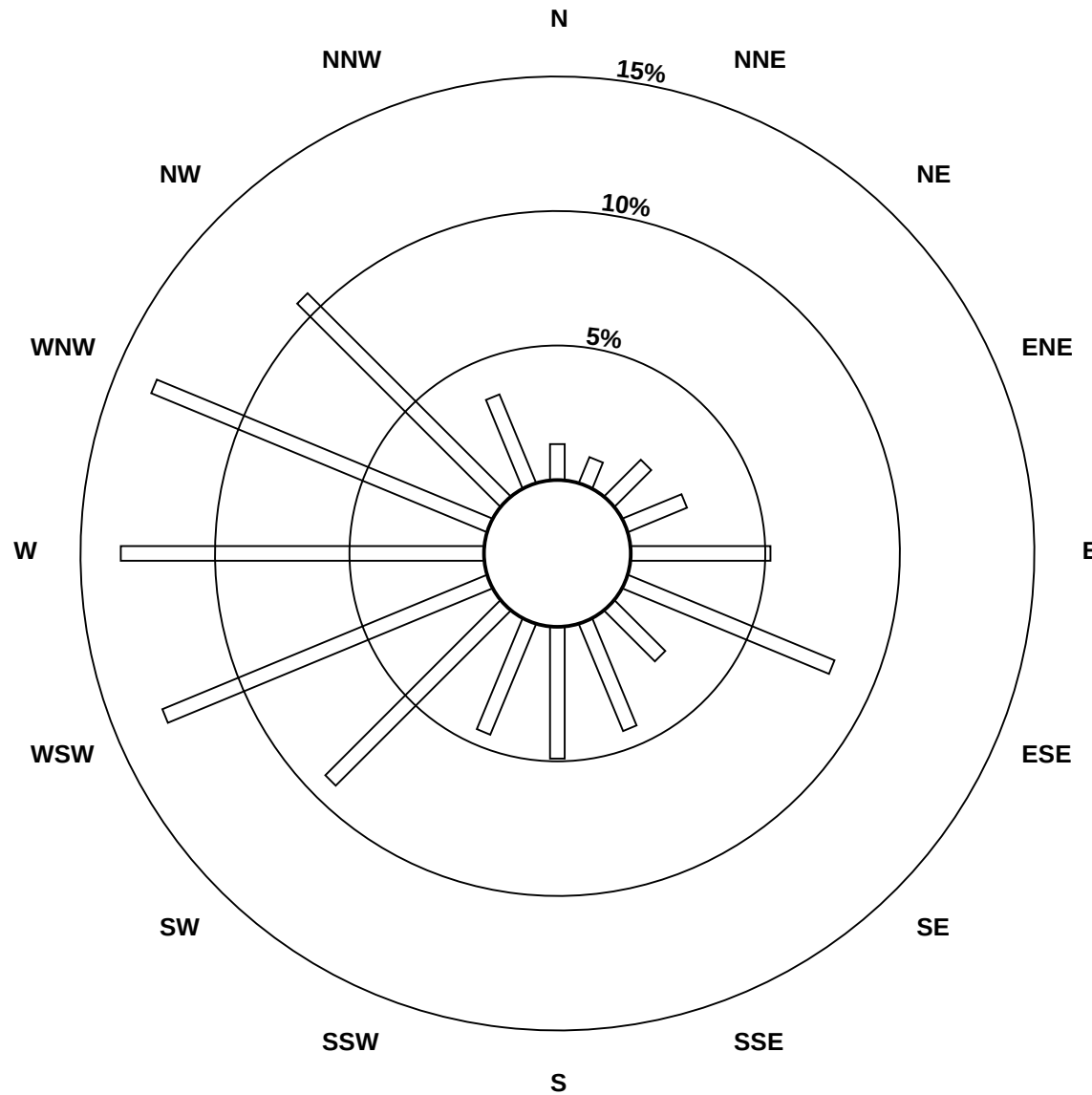
Henry Pirker - July 2014



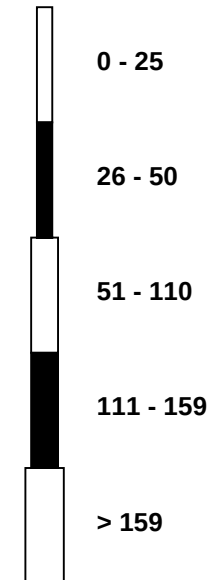
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb

Henry Pirker - July 2014



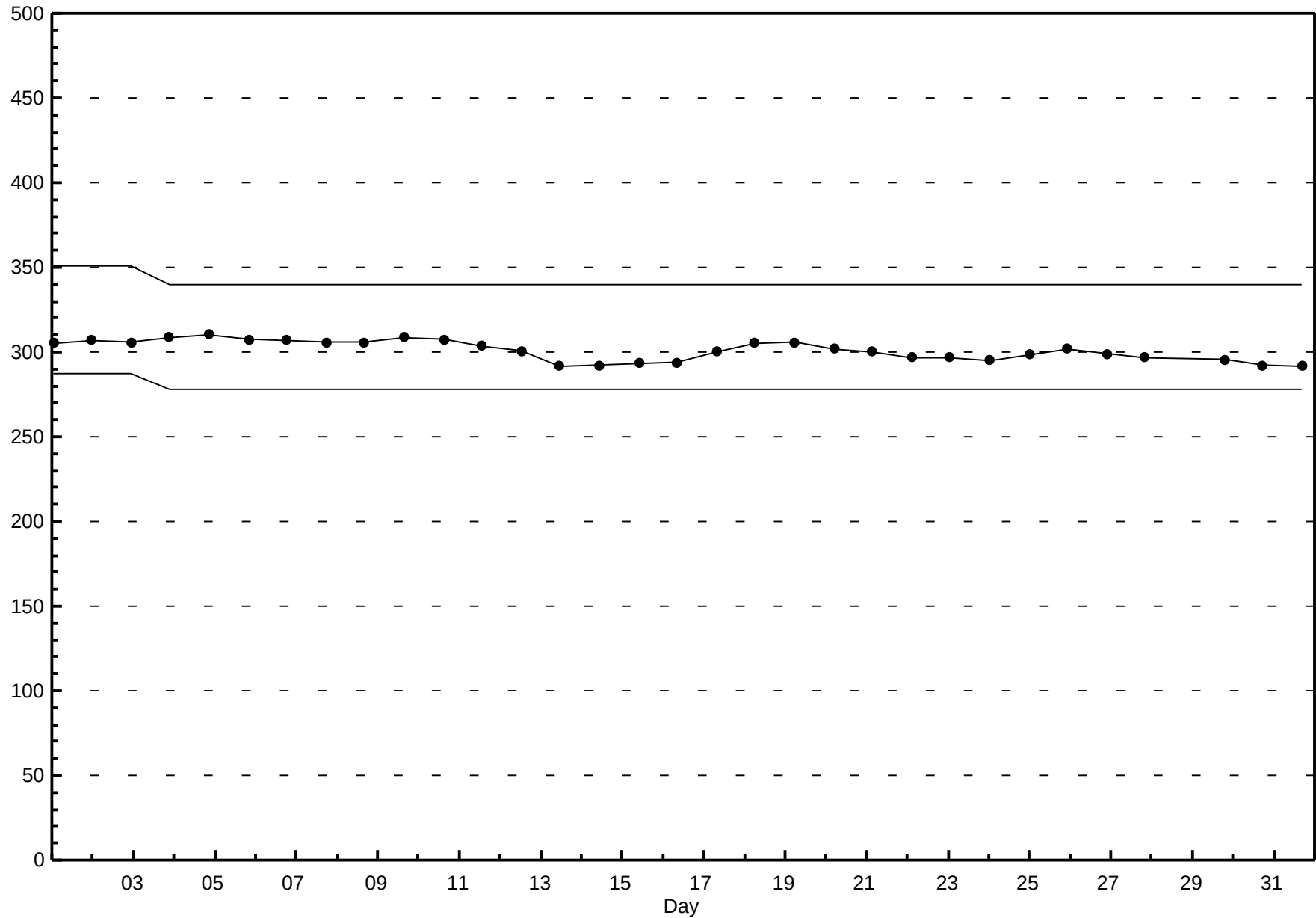
Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)

Henry Pirker - July 2014



Hourly Averages

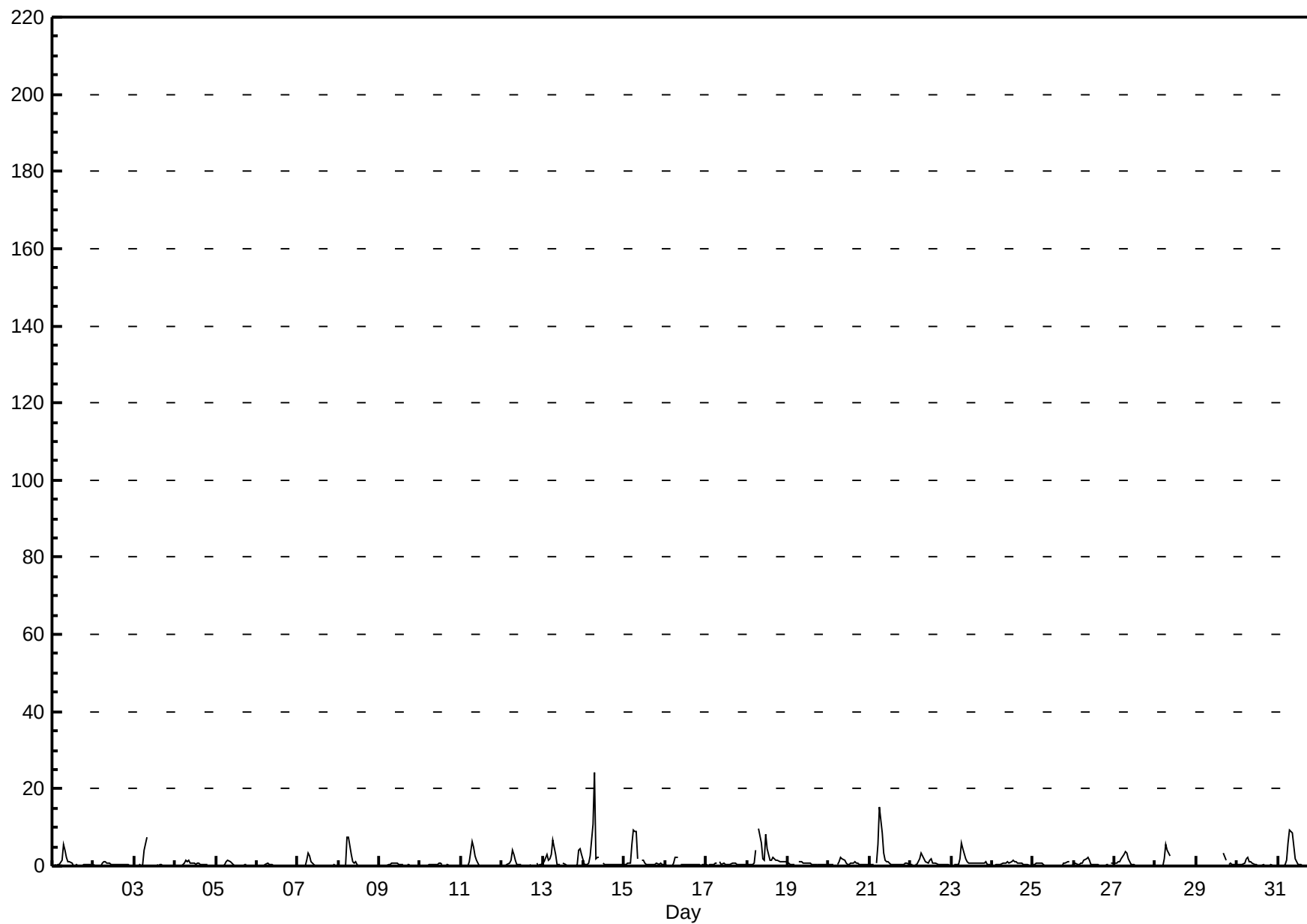
Nitrogen Oxide (NO) - ppb

Henry Pirker - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744							
Maximum Value: 24.1 ppb on Jul 14 07:00 Maximum Daily Average: 2.3 ppb on Jul 18																				Hours of Data: 674							
Minimum Value: 0 ppb on Jul 3 19:00 Minimum Daily Average: 0.1 ppb on Jul 6																				Hours of Missing Data: 70							
Maximum Diurnal Average: 4.3 ppb at hour 7 Minimum Diurnal Average: 0.3 ppb at hour 2																				Hours of Calibration: 43							
Monthly Average: 0.89 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.4 Q ₃ = 0.8 P ₉₀ = 1.9 P ₉₉ = 9.1																				Percent Operational Time: 96.4							
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-Jul	A	0	0	0	0	1	6	4	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0.9	5.5	
2-Jul	0	0	0	0	0	1	1	1	1	1	0	0	0	0	1	0	0	0	0	1	0	0	A	0	0.4	1.2	
3-Jul	0	0	0	0	0	1	4	7	C	C	C	C	C	0	0	0	0	0	0	0	0	A	0	0	0.7	7.5	
4-Jul	0	0	0	0	0	1	2	1	1	1	1	1	0	1	1	1	0	1	0	0	A	0	0	0	0.4	1.6	
5-Jul	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	1.3	
6-Jul	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.8	
7-Jul	0	0	0	0	0	2	3	3	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.4	3.2	
8-Jul	0	0	0	0	0	8	7	3	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0	1.0	7.6	
9-Jul	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.8	
10-Jul	0	0	0	0	0	0	0	0	0	0	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0.2	0.8	
11-Jul	0	0	0	0	0	1	6	5	3	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0	0.8	6.2	
12-Jul	0	0	0	0	1	2	4	3	1	0	0	0	A	0	0	P	0	0	0	P	1	0	0	1	0.7	4.2	
13-Jul	1	1	3	2	2	3	7	3	1	0	0	A	1	0	0	0	0	0	0	0	0	4	5	3	1.5	6.8	
14-Jul	0	0	0	1	2	11	24	2	2	2	A	1	0	0	0	1	0	0	0	0	0	0	0	1	2.3	24.1	
15-Jul	0	0	1	1	6	9	9	9	2	A	2	1	1	0	0	0	0	0	0	1	0	1	1	0	2.0	9.2	
16-Jul	0	0	0	0	0	1	2	2	A	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0.5	2.2	
17-Jul	0	0	0	1	0	1	1	A	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0.5	0.9	
18-Jul	0	0	0	0	1	4	A	10	6	2	2	8	5	1	1	2	2	2	2	1	1	1	1	1	2.3	9.8	
19-Jul	1	0	0	0	0	A	1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	0	0	0	0.6	1.0	
20-Jul	0	0	0	0	A	1	1	2	2	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0.7	2.1	
21-Jul	0	0	0	A	1	6	15	9	3	1	1	1	0	0	0	1	1	0	0	0	0	1	1	0	1.9	15.3	
22-Jul	0	1	A	0	1	2	3	3	2	1	1	2	2	1	1	1	0	0	0	0	0	0	0	0	0.9	3.2	
23-Jul	0	A	0	0	0	2	6	4	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1.1	5.8	
24-Jul	A	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	A	0.6	1.4	
25-Jul	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	0	0.3	1.0	
26-Jul	1	1	1	1	1	1	1	2	2	2	0	1	0	0	0	0	0	0	0	0	0	A	1	1	0.6	2.1	
27-Jul	1	1	1	1	2	3	4	4	2	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.9	3.7	
28-Jul	0	0	0	0	0	2	6	4	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	5.7	
29-Jul	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	C	3	2	A	0	1	0	0	1	--	3.2
30-Jul	1	1	0	1	1	2	2	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0.5	2.4	
31-Jul	0	0	0	0	0	2	6	9	8	5	2	1	0	0	0	0	A	0	0	0	0	1	0	0	1.6	9.4	
0.3 0.3 0.3 0.3 0.7 2.2 4.3 3.3 1.8 1.1 0.7 0.9 0.6 0.4 0.3 0.4 0.5 0.4 0.3 0.3 0.4 0.4 0.4 0.4																									Diurnal Average		
0.8 1.2 3.1 1.6 5.5 10.6 24.1 9.8 8.4 5.1 2.0 8.4 4.6 1.5 1.3 2.2 3.2 1.6 1.6 1.3 1.2 4.1 4.5 2.8																									Diurnal Maximum		
C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span																											

Hourly Averages

Nitrogen Oxide (NO) - ppb
Henry Pirker - July 2014



Hourly Maximums

Nitrogen Oxide (NO) - ppb

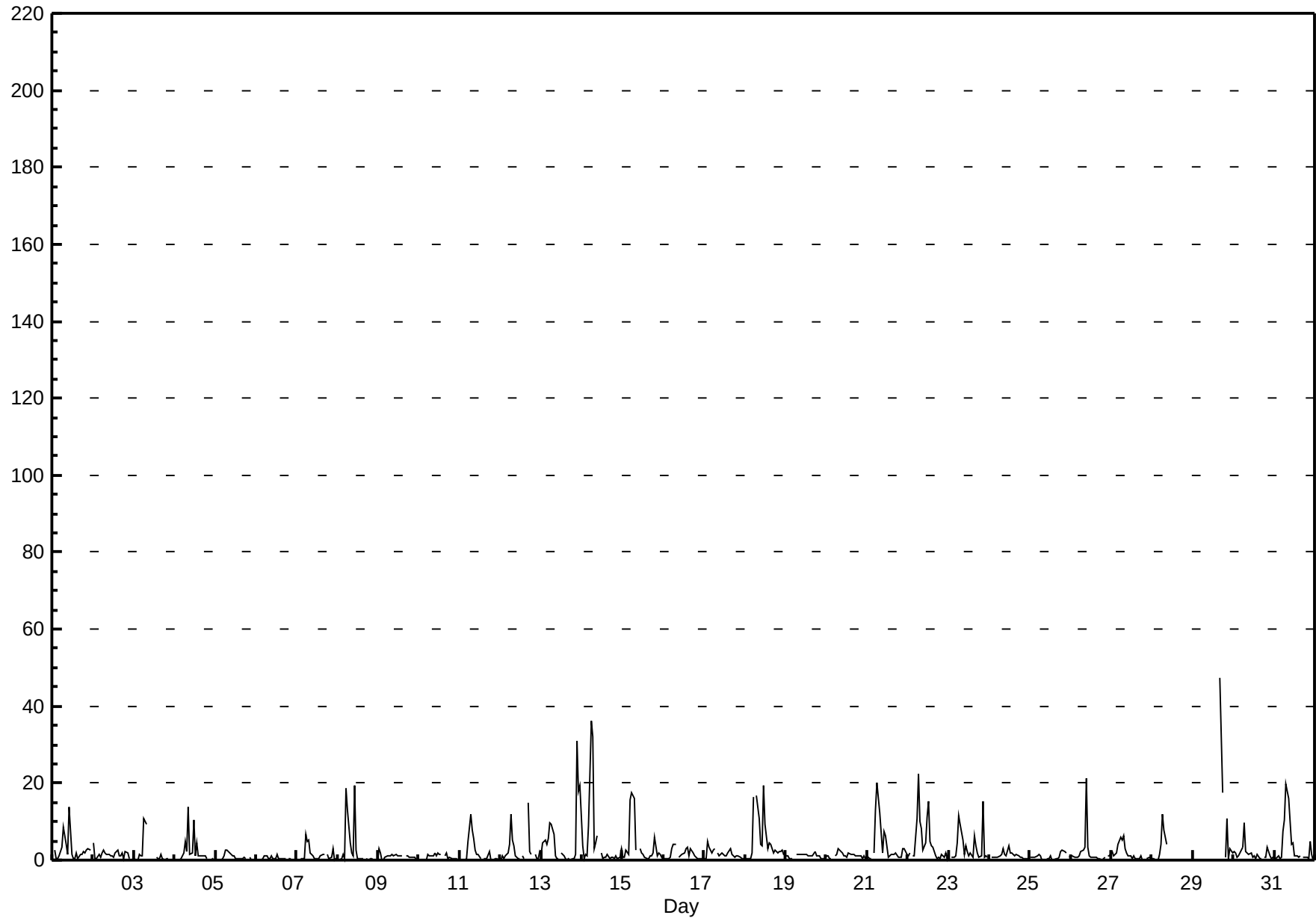
Henry Pirker - July 2014

Maximum Value: 47.4 ppb on Jul 29 17:00																				Maximum Daily Average: 5.4 ppb on Jul 13										Hours in Service: 744									
Minimum Value: 0 ppb on Jul 25 09:00																				Minimum Daily Average: 0.5 ppb on Jul 6										Hours of Data: 674									
Maximum Diurnal Average: 8.2 ppb at hour 7																				Minimum Diurnal Average: 0.8 ppb at hour 2										Hours of Missing Data: 70									
Monthly Average: 2.47 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 1.0 Q ₃ = 2.0 P ₉₀ = 5.4 P ₉₉ = 19.8										Hours of Calibration: 43									
																				Percent Operational Time: 96.4																			
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-Jul	A	3	1	1	1	3	9	6	4	1	14	1	1	1	2	1	1	2	2	2	3	3	2	A	2.9	13.7													
2-Jul	5	0	0	1	1	2	2	2	1	2	1	1	1	2	3	1	1	2	1	2	2	0	A	0	1.5	4.6													
3-Jul	0	0	0	2	1	1	11	9	C	C	C	C	C	1	1	1	1	1	0	0	0	A	0	0	1.6	10.8													
4-Jul	0	0	0	0	0	2	5	2	14	2	2	10	1	5	1	1	1	1	1	1	A	0	1	0	2.2	13.8													
5-Jul	0	0	0	0	0	1	2	2	2	2	1	1	1	1	0	1	1	1	1	A	1	0	0	0	0.7	2.5													
6-Jul	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0	A	0	0	0	0	0	0.5	1.4													
7-Jul	0	0	0	1	1	7	5	5	2	1	1	1	1	1	1	2	1	A	1	1	1	3	0	1	1.5	6.9													
8-Jul	1	0	1	1	1	19	13	5	2	1	19	2	1	1	1	1	A	0	0	1	1	0	0	0	3.0	19.2													
9-Jul	3	2	0	0	1	1	1	1	2	1	1	1	1	1	1	A	1	1	1	1	1	1	0	0	1.0	2.9													
10-Jul	0	0	0	0	0	1	1	1	1	2	1	2	2	1	A	1	2	1	1	0	0	0	0	0	0.8	2.0													
11-Jul	0	0	0	0	1	5	12	8	6	3	2	2	1	A	1	0	0	2	0	0	0	1	0	0	1.8	11.8													
12-Jul	0	1	0	1	2	4	12	5	4	1	1	1	A	1	1	P	15	2	1	P	1	1	1	2	2.7	14.8													
13-Jul	2	4	5	4	5	10	9	7	1	1	1	A	2	1	1	0	0	0	0	1	1	31	18	19	5.4	30.9													
14-Jul	4	1	1	1	9	36	32	3	5	6	A	2	1	1	1	1	1	1	1	1	1	1	1	3	4.8	36.1													
15-Jul	1	1	3	1	16	18	17	16	2	A	3	2	1	1	1	1	1	1	2	6	1	2	1	1	4.2	17.5													
16-Jul	1	1	1	1	1	3	4	4	A	1	1	1	2	3	4	1	3	2	1	1	1	0	1	1	1.5	4.0													
17-Jul	1	1	5	3	2	3	3	A	2	1	2	1	1	1	2	3	1	1	1	1	1	1	0	0	1.6	4.7													
18-Jul	0	0	0	0	2	16	A	17	11	4	4	19	9	3	4	4	3	2	2	2	2	2	2	2	5.0	19.4													
19-Jul	1	1	1	1	1	A	2	1	1	1	1	1	2	1	1	1	1	2	1	1	1	1	1	1	1.1	2.2													
20-Jul	1	1	1	1	A	1	1	3	2	2	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1.2	3.0													
21-Jul	1	1	1	A	2	13	20	12	7	2	7	6	1	1	1	1	2	2	1	1	1	3	3	2	3.9	20.0													
22-Jul	1	2	A	1	1	11	23	10	8	2	4	11	15	5	4	4	1	1	1	1	1	1	2	1	4.8	22.5													
23-Jul	2	A	1	1	1	5	12	9	5	2	4	2	1	2	1	6	4	2	1	1	15	1	1	1	3.4	15.2													
24-Jul	A	1	1	1	1	1	1	2	3	2	1	4	2	2	1	1	2	1	1	1	0	0	1	A	1.3	3.8													
25-Jul	1	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	1	1	2	2	2	2	A	1	0.8	2.4													
26-Jul	1	1	1	1	1	1	2	3	3	21	3	1	1	1	1	1	0	0	0	0	1	A	1	1	2.0	21.3													
27-Jul	2	1	1	2	4	6	5	6	3	2	1	1	0	1	1	1	1	1	0	0	A	0	1	1	1.8	6.5													
28-Jul	0	0	0	0	1	4	12	8	4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	11.8													
29-Jul	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	47	17	A	1	11	1	3	2	--	47.4												
30-Jul	2	2	1	1	3	4	10	2	2	2	2	1	1	1	1	1	1	1	A	1	1	3	1	1	1	1.7	9.6												
31-Jul	1	1	1	1	1	8	11	20	16	10	4	4	1	1	1	1	A	1	1	1	0	5	2	0	3.9	19.9													
																									Diurnal Average														
																									Diurnal Maximum														
C - Calibration																									P - Power Failure					N - Not Valid					A - Automated Daily Zero Span				

Hourly Maximums

Nitrogen Oxide (NO) - ppb

Henry Pirker - July 2014



Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

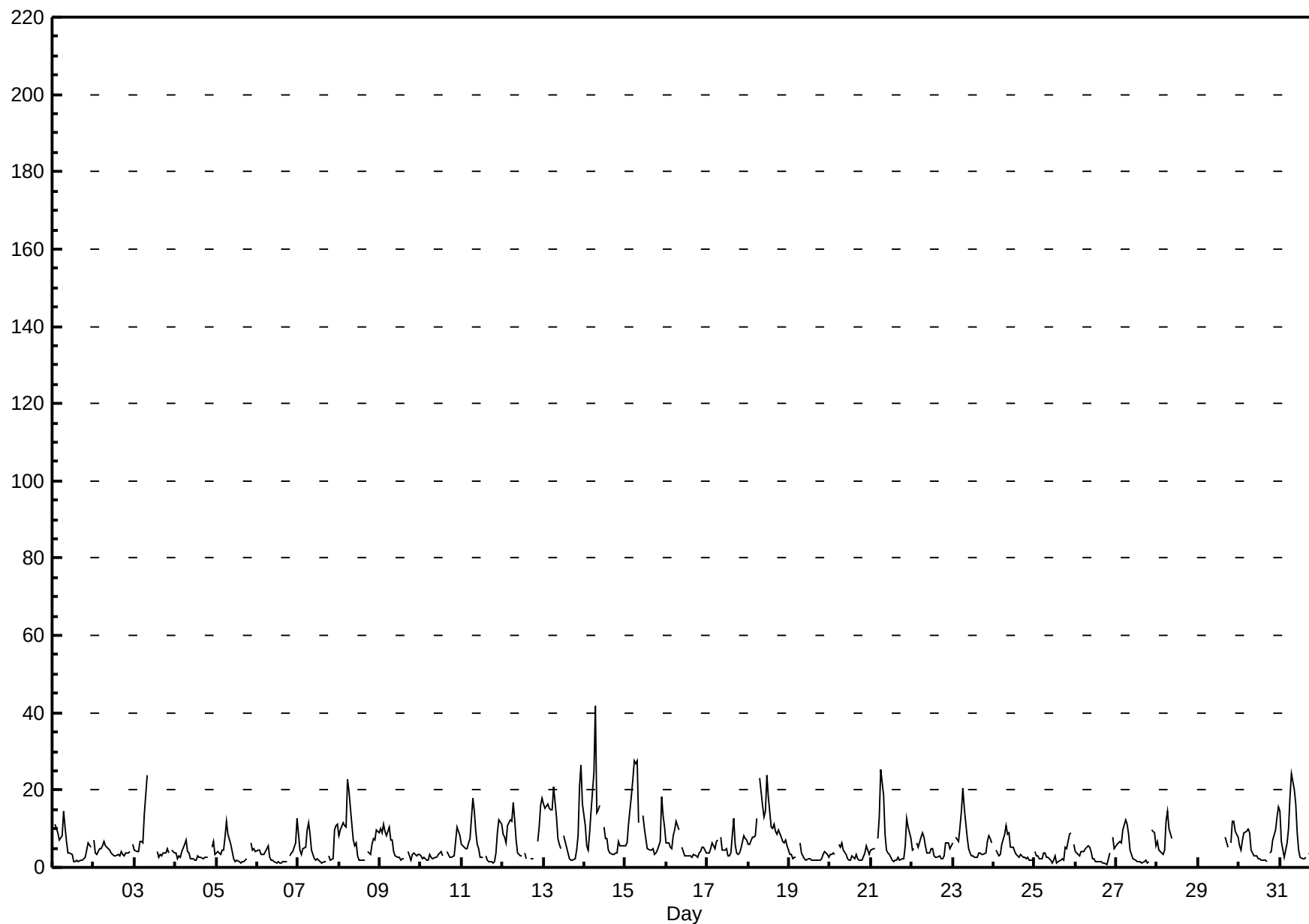
Henry Pirker - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 41.6 ppb on Jul 14 07:00 Maximum Daily Average: 11.7 ppb on Jul 15																				Hours in Service: 744 Hours of Data: 674 Hours of Missing Data: 70 Hours of Calibration: 43 Percent Operational Time: 96.4							
Minimum Value: 1 ppb on Jul 26 19:00 Minimum Daily Average: 2.7 ppb on Jul 19 Maximum Diurnal Average: 13.1 ppb at hour 7 Minimum Diurnal Average: 2.7 ppb at hour 15 Monthly Average: 5.93 ppb Percentiles: P ₁ = 1.2 P ₁₀ = 1.9 Q ₁ = 2.7 Median = 4.2 Q ₃ = 7.6 P ₉₀ = 12.0 P ₉₉ = 24.2																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jul	A	11	10	9	7	8	14	10	7	4	4	3	2	2	1	2	2	2	3	4	6	5	A	5.4	14.5		
2-Jul	7	4	4	5	5	6	7	6	5	5	4	3	3	3	3	4	3	3	4	4	4	A	6	4.3	7.2		
3-Jul	4	4	4	7	7	6	14	24	C	C	C	C	C	4	2	3	3	4	4	5	4	A	5	4	6.0	23.7	
4-Jul	4	2	3	3	4	6	7	4	4	2	2	2	2	3	2	3	2	3	2	3	A	5	7	3	3.4	7.1	
5-Jul	4	4	3	4	5	8	12	9	6	4	2	2	2	1	1	2	2	2	2	A	6	4	5	4	4.1	11.9	
6-Jul	4	4	3	3	3	4	5	3	2	2	2	1	1	1	1	1	1	A	3	4	4	6	13	3.3	12.8		
7-Jul	9	5	3	5	5	10	11	8	5	2	2	2	2	2	1	2	1	A	3	2	2	10	11	4.9	11.5		
8-Jul	8	10	12	11	10	23	20	11	7	6	6	3	2	2	2	A	4	4	3	6	8	7	10	9	7.8	22.8	
9-Jul	10	9	11	9	8	10	7	7	4	3	3	2	2	2	2	A	4	3	2	4	4	3	4	3	5.1	11.1	
10-Jul	3	2	3	2	2	3	3	2	3	3	3	4	4	3	A	4	3	2	3	3	7	10	9	8	3.9	10.4	
11-Jul	6	5	5	5	6	8	18	15	9	6	5	2	2	A	3	2	1	2	1	1	4	9	12	11	6.1	18.0	
12-Jul	8	8	6	11	12	12	17	12	7	4	3	3	A	4	2	P	2	2	2	P	7	10	16	18	7.9	17.8	
13-Jul	16	15	16	15	15	15	21	13	7	6	5	A	8	5	4	2	2	2	2	5	8	21	27	16	10.7	26.6	
14-Jul	11	5	4	9	14	24	42	14	15	16	A	10	7	8	5	4	3	3	4	4	7	6	6	6	9.9	41.6	
15-Jul	6	6	11	19	23	28	27	28	12	A	13	10	8	5	5	5	5	3	4	5	7	18	13	10	11.7	27.6	
16-Jul	6	6	5	5	8	10	12	10	A	5	4	3	3	3	3	3	3	3	4	4	5	5	4	4	5.1	11.9	
17-Jul	4	4	5	6	5	7	7	A	8	5	5	5	3	3	4	13	6	4	3	4	5	8	7	7	5.5	12.7	
18-Jul	6	6	8	8	8	13	A	23	16	13	15	24	18	11	10	11	9	9	10	8	7	6	7	6	10.9	23.8	
19-Jul	3	3	2	2	3	A	6	4	3	2	2	2	2	2	2	2	2	2	2	2	4	4	3	3	2.7	6.3	
20-Jul	3	3	4	3	A	6	5	6	4	3	2	2	2	3	2	3	2	2	2	2	4	6	5	3	3.4	6.2	
21-Jul	4	5	5	A	8	13	25	19	9	5	4	3	2	2	2	2	3	2	2	2	6	13	10	7	6.6	25.4	
22-Jul	5	5	A	6	5	8	9	8	6	4	4	5	5	3	3	3	3	2	2	3	6	6	5	6	4.8	9.0	
23-Jul	6	A	8	7	10	14	21	15	8	5	4	3	3	3	3	4	4	3	3	4	7	8	7	6	6.8	20.6	
24-Jul	A	4	4	3	3	6	9	11	9	9	5	5	4	3	3	3	3	3	3	2	2	2	2	A	4.5	10.9	
25-Jul	4	3	3	2	2	4	4	3	2	2	1	2	3	1	2	2	2	2	5	5	9	9	A	6	3.4	9.0	
26-Jul	4	4	3	4	4	4	5	5	5	4	2	2	2	1	1	1	1	1	2	4	A	8	5	3.3	7.9		
27-Jul	6	6	7	6	10	12	11	9	4	3	2	2	2	1	1	1	1	2	1	1	A	10	9	6	5.0	12.5	
28-Jul	7	4	4	3	5	12	15	10	8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	14.7	
29-Jul	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	8	5	A	6	12	12	9	8	--	12.1
30-Jul	6	4	7	9	9	10	9	5	4	3	3	2	2	2	2	2	2	1	A	4	4	7	10	13	16	5.8	15.6
31-Jul	14	7	3	4	6	10	18	24	20	16	9	4	3	2	2	3	A	4	3	4	6	12	12	7	8.5	24.1	
6.4 5.5 5.7 6.4 7.4 10.3 13.1 10.9 7.1 5.2 4.3 4.2 3.6 3.0 2.7 3.2 3.0 2.9 2.9 3.5 5.6 8.2 8.5 7.6																								Diurnal Average			
16.3 15.2 16.4 18.5 22.7 27.5 41.6 27.6 20.2 16.3 14.6 23.8 18.4 10.6 10.1 12.7 9.3 8.8 9.7 7.7 12.0 20.8 26.6 17.8																								Diurnal Maximum			
C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span																											

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb

Henry Pirker - July 2014



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

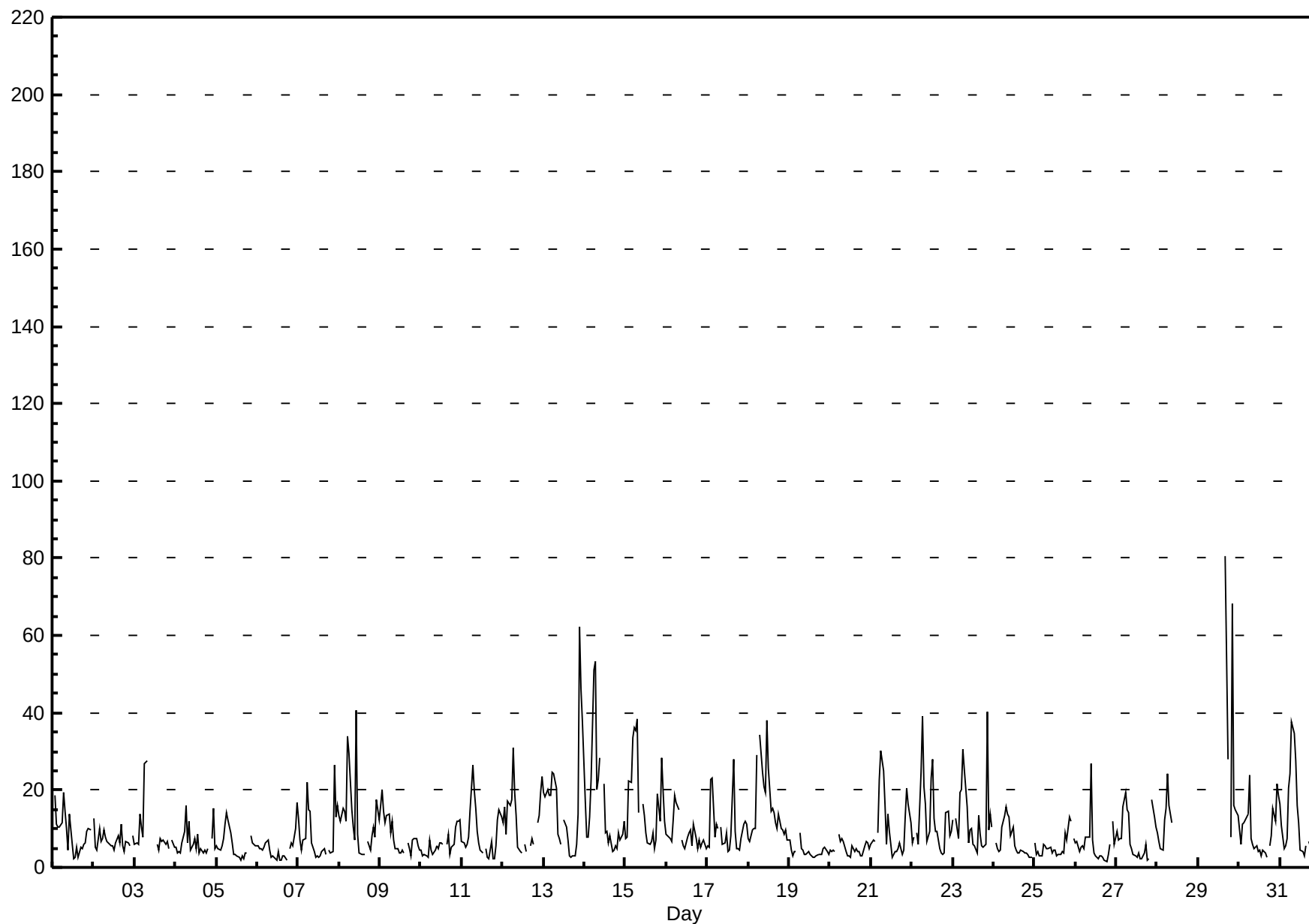
Henry Pirker - July 2014

Maximum Value: 80.6 ppb on Jul 29 17:00																				Maximum Daily Average: 17.1 ppb on Jul 13										Hours in Service: 744									
Minimum Value: 1 ppb on Jul 26 19:00																				Minimum Daily Average: 4.1 ppb on Jul 19										Hours of Data: 674									
Maximum Diurnal Average: 19.9 ppb at hour 7																				Minimum Diurnal Average: 4.8 ppb at hour 19										Hours of Missing Data: 70									
Monthly Average: 9.81 ppb																				Percentiles: P ₁ = 1.9 P ₁₀ = 3.2 Q ₁ = 4.5 Median = 6.9 Q ₃ = 12.1 P ₉₀ = 20.1 P ₉₉ = 39.4										Hours of Calibration: 43									
																														Percent Operational Time: 96.4									
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-Jul	A	18	11	11	10	12	19	15	10	5	14	6	2	3	5	3	5	5	6	6	9	10	10	A	8.9	19.3													
2-Jul	13	5	5	10	7	8	10	8	7	6	6	6	4	6	8	6	11	6	4	7	7	6	A	8	7.0	12.7													
3-Jul	6	6	6	14	10	8	27	27	C	C	C	C	C	6	4	8	7	7	6	7	5	A	7	5	9.3	27.5													
4-Jul	5	4	4	4	6	9	16	6	12	5	6	8	5	9	4	5	4	4	4	5	A	7	15	5	6.6	15.9													
5-Jul	5	5	4	5	7	11	14	12	9	6	3	3	3	3	2	3	2	4	4	A	8	6	6	5	5.8	14.0													
6-Jul	6	5	5	4	5	6	7	4	2	3	3	2	4	2	2	3	3	2	A	5	6	6	10	17	4.9	16.6													
7-Jul	13	7	5	7	7	22	15	15	6	4	2	3	3	3	4	5	3	A	4	4	4	26	13	16	8.3	26.4													
8-Jul	13	12	15	14	12	34	30	15	10	7	41	9	4	4	3	3	A	7	4	8	10	8	17	12	12.8	40.8													
9-Jul	16	20	14	11	13	14	9	12	7	5	5	4	4	4	4	A	6	5	3	7	8	7	5	4	8.2	20.1													
10-Jul	4	3	3	3	3	7	4	3	4	6	5	6	6	6	A	6	9	3	5	6	10	12	12	12	6.1	12.2													
11-Jul	7	6	5	6	8	14	26	20	15	9	7	4	4	A	5	3	2	7	2	2	6	12	15	13	8.7	26.4													
12-Jul	12	16	9	17	16	17	31	20	13	5	4	4	A	6	4	P	5	7	6	P	11	14	20	23	12.4	30.8													
13-Jul	19	18	20	19	19	25	24	21	8	7	6	A	12	10	7	3	2	3	3	6	14	62	46	37	17.1	62.1													
14-Jul	17	8	8	13	22	51	53	20	23	28	A	21	9	10	6	8	4	4	5	5	9	7	9	12	15.4	53.4													
15-Jul	7	8	23	22	34	36	35	38	14	A	17	14	9	7	6	7	9	5	7	19	12	28	20	12	16.9	38.5													
16-Jul	9	8	7	7	12	18	17	15	A	7	5	5	8	9	10	5	11	7	5	7	5	7	7	5	8.6	18.5													
17-Jul	5	5	23	23	8	11	10	A	10	6	6	9	4	4	8	28	9	5	5	5	7	11	12	11	9.9	27.8													
18-Jul	8	7	10	10	10	29	A	34	25	21	19	38	26	15	15	14	12	10	14	10	10	9	10	7	15.6	38.2													
19-Jul	7	4	3	4	4	A	9	5	4	3	3	4	3	3	3	3	3	3	3	4	5	5	4	4	4.1	9.0													
20-Jul	5	4	5	4	A	9	7	8	7	4	3	3	3	5	4	5	4	4	3	3	6	7	6	5	4.8	8.6													
21-Jul	6	7	7	A	9	23	30	25	16	6	14	9	3	3	4	4	5	6	4	5	13	20	17	12	10.7	30.2													
22-Jul	6	8	A	9	6	24	39	21	16	7	9	23	28	13	9	9	5	4	3	4	14	15	8	9	12.7	39.2													
23-Jul	12	A	13	8	19	20	31	25	16	6	10	10	6	6	4	14	9	6	5	6	40	10	14	11	13.0	40.4													
24-Jul	A	6	5	4	4	10	13	16	14	13	8	10	6	5	4	4	5	4	4	4	3	2	2	A	6.7	15.8													
25-Jul	6	4	4	3	3	6	5	5	5	5	4	4	5	3	3	3	4	4	9	7	13	12	A	8	5.4	13.1													
26-Jul	6	7	4	5	6	5	8	8	8	27	7	4	3	2	3	3	2	2	1	3	6	A	12	6	6.0	26.9													
27-Jul	9	7	8	8	16	19	15	14	6	5	3	3	3	4	2	2	4	6	2	2	A	17	13	10	7.7	19.2													
28-Jul	9	7	5	4	12	15	24	16	11	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	24.1													
29-Jul	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	C	81	28	A	8	68	16	15	13	--	80.6												
30-Jul	10	6	11	12	13	14	24	7	6	5	6	4	5	3	5	4	3	A	6	8	15	12	22	19	9.4	23.8													
31-Jul	17	11	5	6	8	21	24	38	35	28	16	12	5	4	3	6	A	7	5	7	11	24	19	9	13.8	37.6													
																									Diurnal Average														
																									Diurnal Maximum														
C - Calibration																									P - Power Failure					N - Not Valid					A - Automated Daily Zero Span				

Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

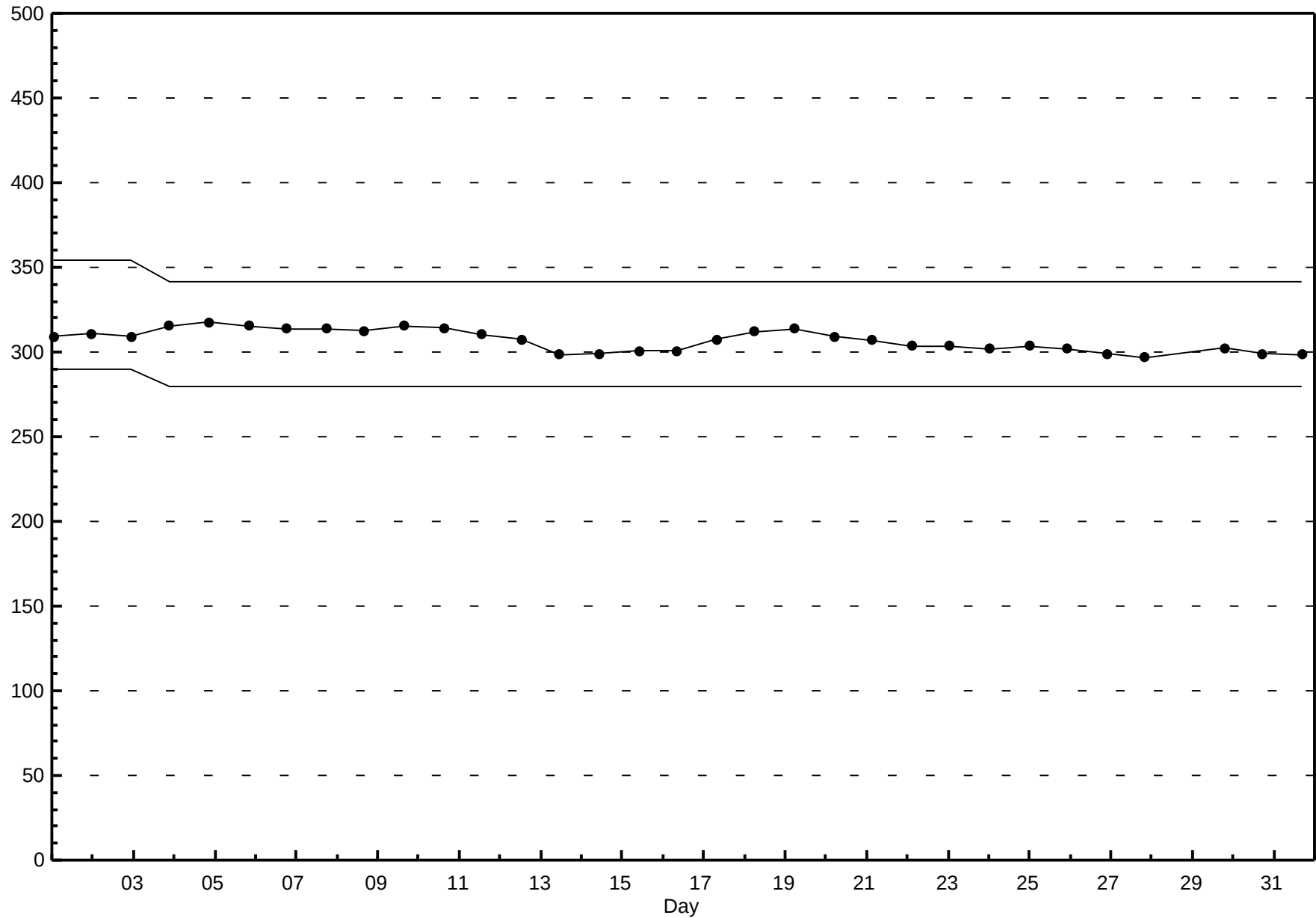
Henry Pirker - July 2014



Span Responses

Oxides of Nitrogen (NO_x)

Henry Pirker - July 2014



Hourly Averages

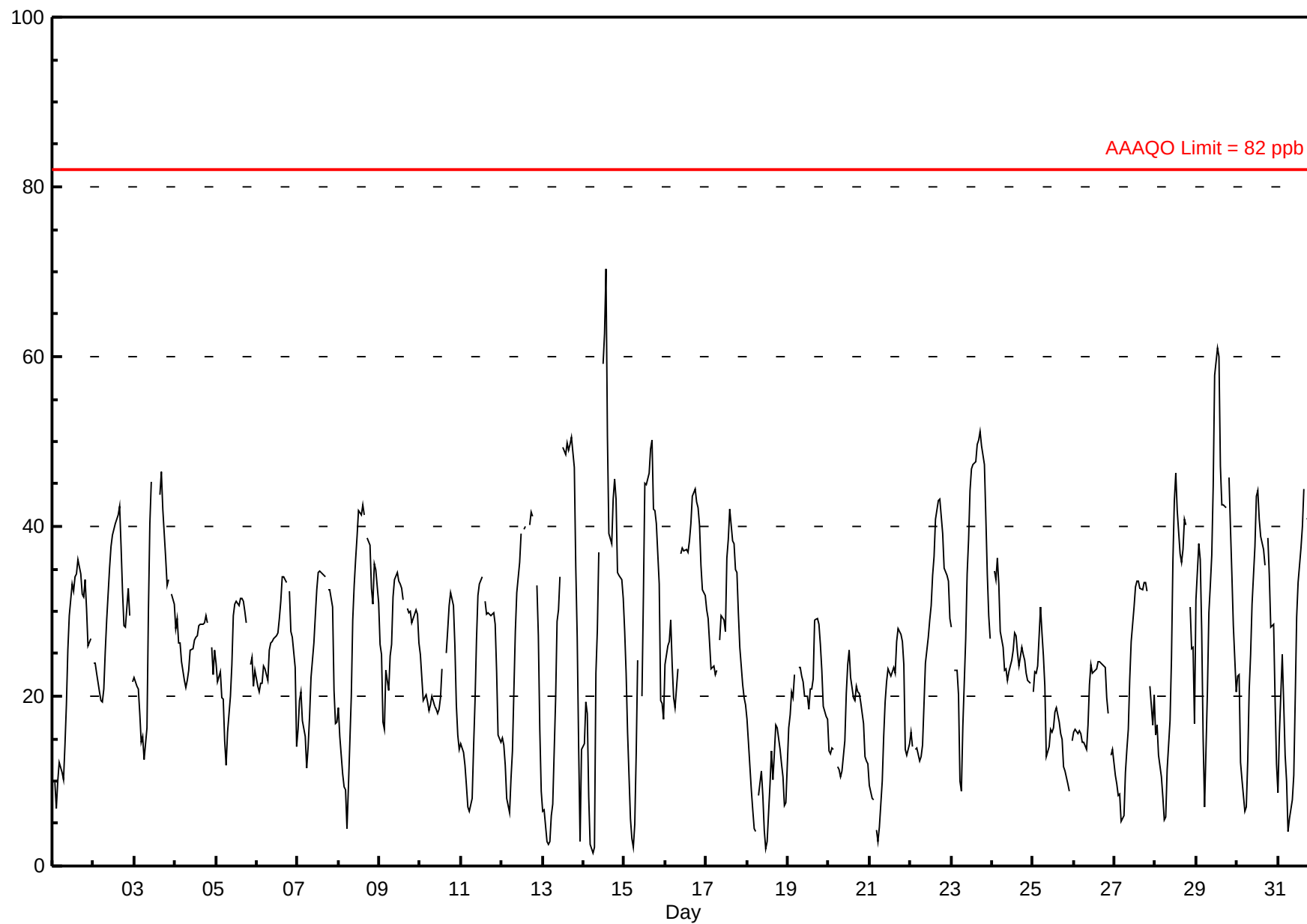
Ozone (O₃) - ppb

Henry Pirker - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 70.3 ppb on Jul 14 14:00 Maximum Daily Average: 36.6 ppb on Jul 29																								Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 37 Percent Operational Time: 99.7		
Minimum Value: 2 ppb on Jul 14 06:00 Maximum Diurnal Average: 34.9 ppb at hour 14 Monthly Average: 25.12 ppb												Minimum Daily Average: 9.7 ppb on Jul 18 Minimum Diurnal Average: 12.5 ppb at hour 6 Percentiles: P ₁ = 2.9 P ₁₀ = 10.2 Q ₁ = 16.5 Median = 24.1 Q ₃ = 33.0 P ₉₀ = 40.8 P ₉₉ = 47.5														
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-Jul	A	10	7	10	12	11	10	14	19	25	29	33	32	34	34	36	34	32	32	34	30	26	27	A	24.2	36.1
2-Jul	24	24	23	21	19	19	21	25	29	35	38	39	40	40	41	42	38	32	28	28	33	29	A	22	30.0	42.3
3-Jul	22	21	21	18	15	15	13	16	30	40	45	C	C	C	C	44	46	42	36	33	34	A	32	31	29.2	46.5
4-Jul	28	29	26	26	24	22	21	22	23	25	26	27	27	27	28	29	29	29	30	29	A	26	22	25	26.0	29.5
5-Jul	24	22	23	20	20	15	12	16	20	24	30	31	31	31	32	32	31	30	29	A	24	25	21	23	24.4	31.6
6-Jul	21	20	21	22	24	23	22	25	26	26	27	27	28	29	31	34	34	33	A	32	28	27	23	14	26.1	34.1
7-Jul	16	19	21	17	15	12	14	18	22	26	29	33	35	35	35	34	34	A	33	33	31	21	17	17	24.6	34.7
8-Jul	19	15	11	9	9	4	9	20	29	33	36	39	42	41	43	41	A	39	38	33	31	36	35	31	27.9	42.5
9-Jul	26	25	17	16	23	21	25	26	32	34	35	34	33	33	31	A	30	30	30	29	29	30	30	26	28.0	34.5
10-Jul	25	22	20	20	19	18	19	20	19	19	18	18	20	23	A	25	28	31	32	31	26	19	15	14	21.8	32.2
11-Jul	14	13	12	9	7	7	8	14	20	27	32	33	34	A	31	30	30	29	30	30	29	23	15	15	21.4	34.0
12-Jul	15	14	12	8	6	10	14	21	28	32	36	39	A	40	40	P	40	42	41	P	33	27	16	9	24.9	41.8
13-Jul	7	7	3	3	3	6	7	20	29	30	34	A	49	48	50	49	50	50	47	35	27	14	3	14	25.4	50.5
14-Jul	14	19	18	8	3	2	2	23	28	37	A	59	63	70	51	39	38	43	46	43	35	34	34	32	32.1	70.3
15-Jul	28	23	16	6	3	2	5	13	24	A	20	32	45	45	46	49	50	42	42	40	33	19	19	17	27.0	50.1
16-Jul	24	26	26	29	24	20	19	23	A	37	38	37	37	37	38	40	44	44	43	42	40	35	33	32	33.4	44.4
17-Jul	30	29	26	23	24	23	23	A	27	30	29	28	36	39	42	38	38	35	35	30	26	21	20	19	29.1	42.1
18-Jul	17	15	9	7	4	4	A	8	11	8	4	2	3	10	14	10	13	17	16	14	12	11	7	7	9.7	17.3
19-Jul	16	18	20	20	23	A	23	23	22	22	20	20	18	21	21	22	29	29	29	26	23	19	18	17	21.7	29.1
20-Jul	14	13	14	14	A	12	11	10	11	15	20	24	25	22	20	20	21	20	20	19	17	13	12	12	16.6	25.5
21-Jul	10	8	8	A	4	3	5	10	15	19	22	23	22	23	23	23	26	28	27	26	24	14	13	14	17.0	27.9
22-Jul	16	14	A	14	14	12	13	14	19	24	27	29	31	34	37	41	43	43	41	39	35	34	33	29	27.7	43.3
23-Jul	28	A	23	23	20	10	9	16	27	34	38	44	47	47	48	50	50	51	50	47	41	34	30	27	34.5	51.1
24-Jul	A	35	34	36	33	28	26	23	23	22	23	24	25	28	27	25	24	26	25	24	23	22	22	A	26.2	36.3
25-Jul	21	23	23	24	30	27	25	21	13	14	16	16	16	18	19	17	16	15	12	11	10	9	A	15	17.8	30.5
26-Jul	16	16	16	16	16	15	15	14	17	21	24	23	23	23	24	24	24	24	23	20	18	A	13	14	19.0	24.1
27-Jul	11	10	8	9	5	6	11	14	16	22	26	30	33	34	34	33	33	33	33	32	A	21	17	20	21.3	33.6
28-Jul	15	17	13	11	8	5	6	11	17	24	36	43	46	42	37	36	37	41	40	A	30	26	26	17	25.4	46.3
29-Jul	31	38	36	28	15	7	21	30	33	37	45	58	61	60	47	42	43	42	A	46	40	34	28	20	36.6	61.0
30-Jul	22	23	12	10	6	7	12	21	25	31	38	44	44	41	39	37	35	A	39	34	28	29	20	12	26.5	44.3
31-Jul	9	16	25	19	13	10	4	6	8	11	20	29	33	38	40	44	A	41	41	39	33	24	22	28	24.0	44.4
19.4 19.4 18.1 16.5 14.7 12.5 14.1 17.9 22.0 26.1 28.6 31.6 33.8 34.9 34.5 34.0 34.1 34.3 33.3 31.4 28.3 24.2 21.5 19.8 31.3 37.9 36.1 36.3 33.2 27.6 25.7 29.9 33.1 40.3 45.2 59.1 62.7 70.3 50.6 49.6 50.2 51.1 49.5 47.3 41.1 35.7 34.8 31.8																								Diurnal Average	Diurnal Maximum	
C - Calibration P - Power Failure A - Automated Daily Zero Span Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na																										

Hourly Averages

Ozone (O₃) - ppb
Henry Pirker - July 2014



Hourly Maximums

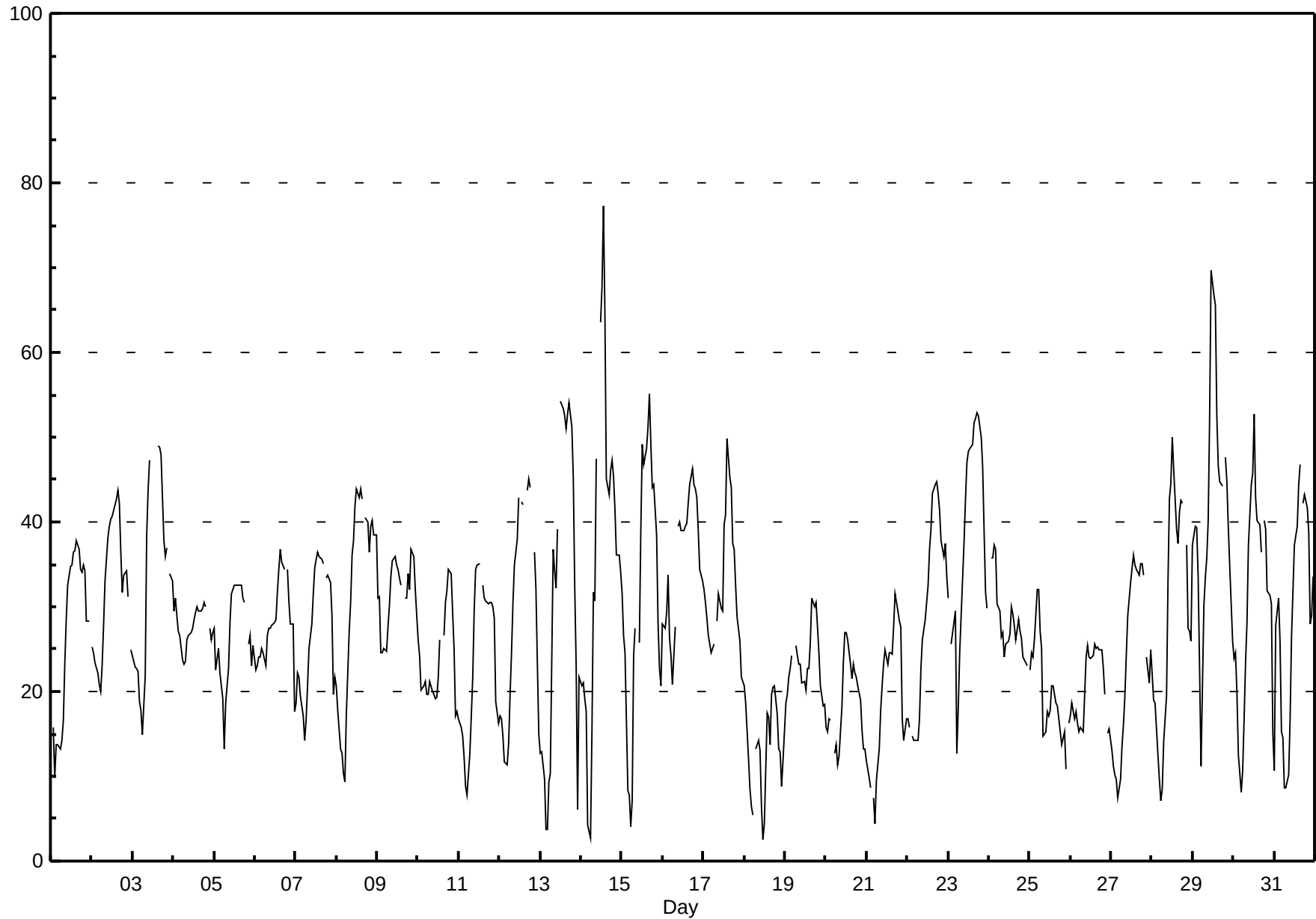
Ozone (O₃) - ppb

Henry Pirker - July 2014

Maximum Value: 77.3 ppb on Jul 14 14:00																					Maximum Daily Average: 41.7 ppb on Jul 29				Hours in Service: 744	
Minimum Value: 2 ppb on Jul 18 12:00																					Minimum Daily Average: 13.0 ppb on Jul 18				Hours of Data: 705	
Maximum Diurnal Average: 37.6 ppb at hour 14																					Minimum Diurnal Average: 15.1 ppb at hour 6				Hours of Missing Data: 39	
Monthly Average: 28.07 ppb																					Percentiles: P ₁ = 4.0 P ₁₀ = 13.3 Q ₁ = 19.7 Median = 27.4 Q ₃ = 35.5 P ₉₀ = 43.8 P ₉₉ = 62.8				Hours of Calibration: 37	
																					Percent Operational Time: 99.7					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	A	16	10	14	14	13	14	17	23	29	33	35	35	37	37	38	37	34	34	35	34	28	28	A	27.0	37.9
2-Jul	25	25	23	22	21	20	23	28	33	38	39	40	41	41	43	44	42	37	32	34	34	31	A	25	32.2	43.7
3-Jul	24	23	23	22	19	18	15	22	38	44	47	C	C	C	C	49	49	48	38	36	37	A	34	33	32.6	49.0
4-Jul	30	31	29	27	27	24	23	24	26	27	27	28	28	29	30	29	29	30	30	30	A	28	26	27	27.8	31.0
5-Jul	28	23	25	22	21	19	13	19	23	28	31	32	32	32	32	33	33	31	31	A	26	27	23	25	26.4	32.5
6-Jul	22	23	24	24	25	25	23	27	27	27	28	28	29	32	34	37	35	34	A	34	31	28	28	18	28.0	36.8
7-Jul	19	22	22	19	17	14	17	21	25	28	31	35	36	37	36	36	35	A	33	34	33	29	20	22	26.9	36.5
8-Jul	21	18	13	13	10	9	17	27	31	36	38	42	44	43	44	43	A	40	40	36	39	40	38	38	31.4	43.9
9-Jul	31	31	25	25	25	25	28	30	33	35	36	35	34	33	33	A	31	31	34	32	37	36	32	29	31.4	36.7
10-Jul	26	24	20	21	21	20	20	21	20	20	19	19	22	26	A	27	31	32	34	34	29	25	17	18	23.7	34.4
11-Jul	17	16	15	12	9	8	13	17	22	30	34	35	35	A	33	31	31	30	31	31	30	29	19	16	23.5	35.2
12-Jul	17	17	15	12	11	14	20	25	31	35	38	43	A	42	42	P	44	45	44	P	36	32	23	15	28.6	45.1
13-Jul	13	13	10	4	4	9	10	37	34	32	39	A	54	53	53	51	53	54	51	45	32	23	6	22	30.5	54.3
14-Jul	21	21	19	18	4	3	15	32	31	47	A	63	68	77	65	45	43	46	47	45	42	36	36	34	37.4	77.3
15-Jul	32	27	25	8	8	4	7	24	28	A	26	39	49	47	49	51	55	49	44	44	38	28	23	21	31.5	55.1
16-Jul	28	27	29	34	26	24	21	28	A	39	40	39	39	39	40	42	44	46	44	44	43	39	34	33	35.8	46.2
17-Jul	32	31	29	27	25	25	26	A	28	32	30	30	40	41	50	45	44	37	37	33	29	26	22	21	32.0	49.8
18-Jul	21	19	12	8	6	5	A	13	14	13	6	2	4	17	17	14	20	20	21	17	13	13	9	12	13.0	20.7
19-Jul	19	20	22	23	24	A	25	24	23	23	21	21	20	23	23	26	31	30	31	28	25	21	18	19	23.4	31.0
20-Jul	16	15	17	17	A	13	14	11	12	18	23	27	27	26	23	22	23	22	22	21	19	15	13	13	18.7	27.0
21-Jul	12	10	9	A	7	4	10	13	18	21	23	25	23	25	25	24	28	32	30	28	28	17	14	17	19.1	31.5
22-Jul	17	16	A	15	14	14	14	17	23	26	28	31	33	37	39	43	44	45	43	41	38	36	37	34	29.8	44.8
23-Jul	31	A	26	28	30	13	18	25	33	37	43	47	48	49	49	52	52	53	53	50	46	39	32	30	38.4	52.9
24-Jul	A	36	36	37	37	30	29	26	27	24	26	26	27	30	29	28	26	28	27	26	24	24	23	A	28.5	37.3
25-Jul	22	25	24	26	32	32	27	25	15	15	18	17	18	21	21	19	18	17	15	14	15	11	A	16	20.1	32.0
26-Jul	17	19	17	18	16	15	16	15	20	24	25	24	24	24	26	25	25	25	25	23	20	A	15	16	20.5	25.5
27-Jul	13	11	10	10	7	10	14	16	20	24	29	33	35	36	35	34	34	35	35	34	A	24	21	25	23.7	36.0
28-Jul	22	19	19	13	10	7	9	14	20	33	43	45	50	46	39	37	41	43	42	A	37	27	27	26	29.0	50.0
29-Jul	37	40	39	34	23	11	30	33	36	40	53	70	67	66	52	47	45	44	A	48	45	39	35	26	41.7	69.7
30-Jul	24	24	20	13	8	11	17	23	28	37	44	46	53	43	40	40	36	A	40	39	32	31	30	15	30.2	52.8
31-Jul	11	28	31	26	15	15	9	9	10	17	26	32	37	39	44	47	A	42	43	42	39	28	29	34	28.4	46.8
22.3 22.2 21.2 19.6 17.2 15.1 17.9 22.1 25.0 29.3 31.5 34.0 36.3 37.6 37.3 36.5 36.5 36.6 35.6 34.2 32.1 27.9 24.6 23.4																									Diurnal Average	
37.3 39.6 39.4 37.3 36.8 32.0 30.1 36.8 38.3 47.4 52.5 69.7 67.8 77.3 64.8 51.6 55.1 54.0 52.6 50.0 46.5 40.1 38.5 38.5																									Diurnal Maximum	
C - Calibration P - Power Failure A - Automated Daily Zero Span																										

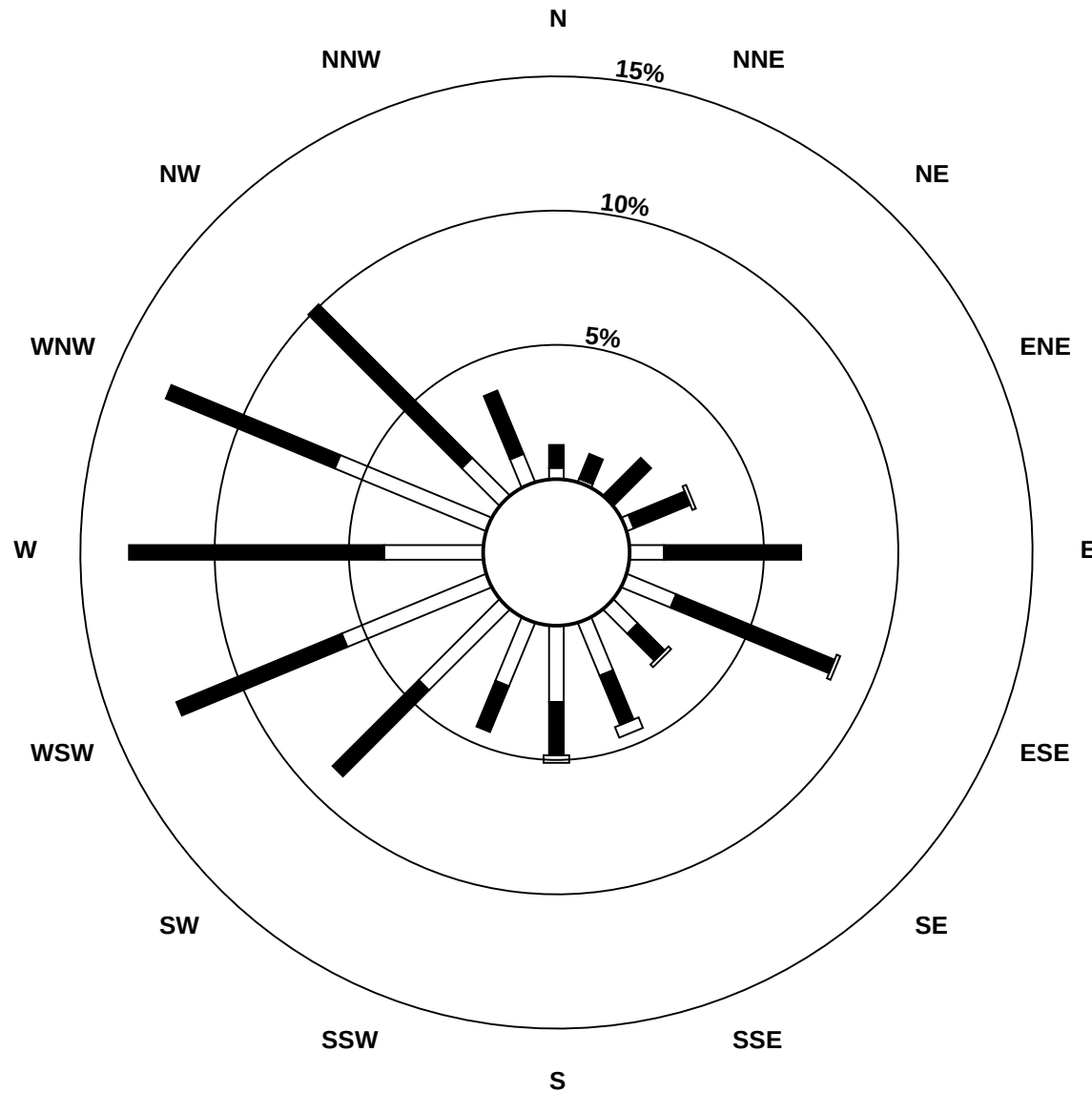
Hourly Maximums

Ozone (O₃) - ppb
Henry Pirker - July 2014

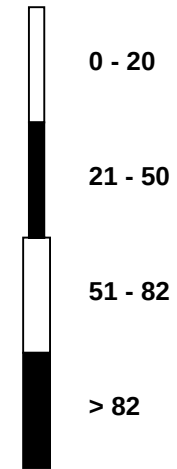


Pollutant Rose

Ozone (O₃) - ppb
Henry Pirker - July 2014



Pollutant Classes (ppb)



Eight Hour Running Averages

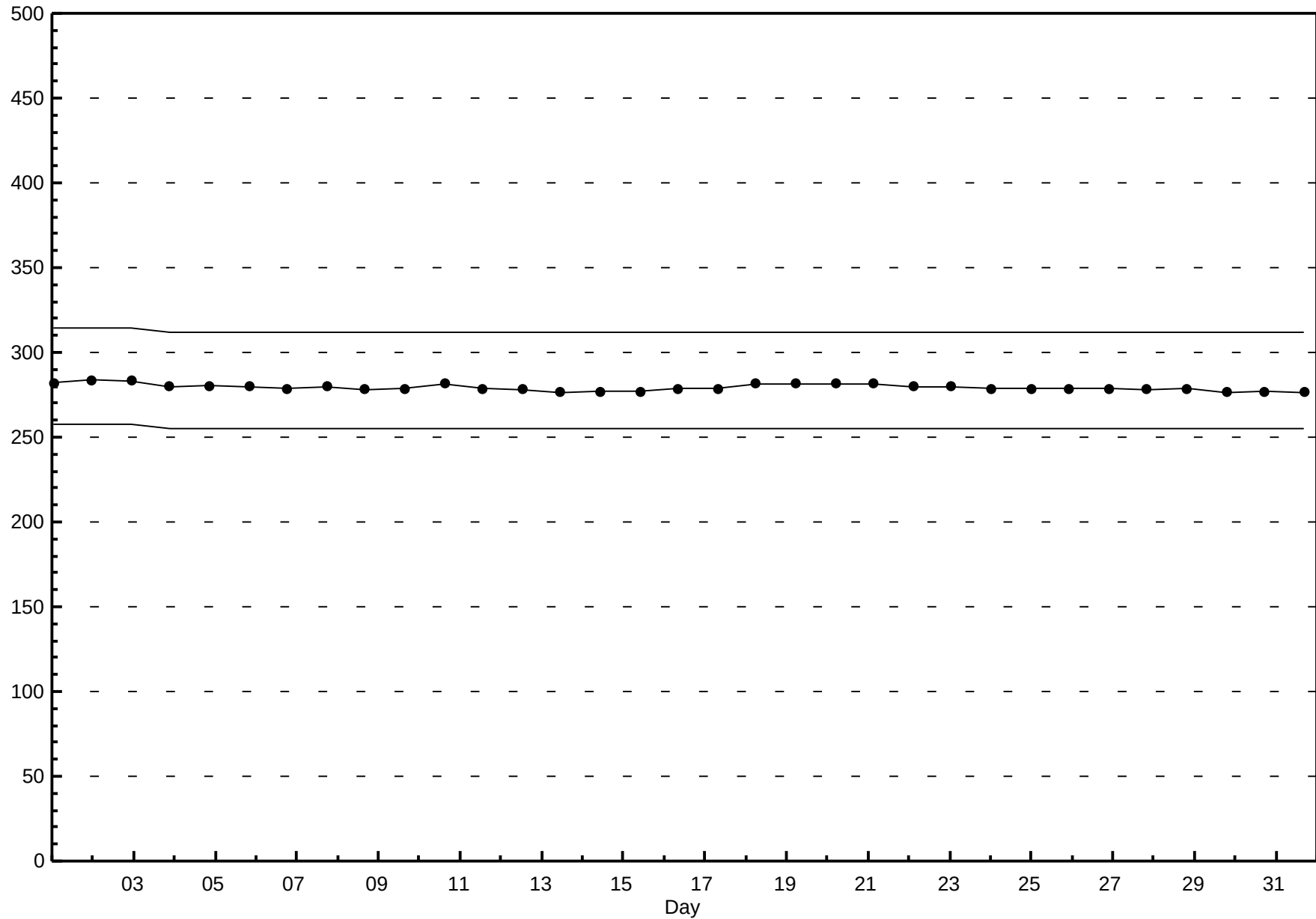
Ozone (O₃) - ppb

Henry Pirker - July 2014

Maximum Value: 51.9 ppb on Jul 14 18:00																								Hours in Service: 744	
Minimum Value: 5.4 ppb on Jul 13 07:00																								Hours of Data: 736	
																								Hours of Missing Data: 8	
Percentiles: P ₁ = 6.8 P ₁₀ = 12.5 Q ₁ = 18.0 Median = 24.3 Q ₃ = 31.3 P ₉₀ = 38.5 P ₉₉ = 48.8																								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-Jul	21	18	14	12	10	9	9	11	12	14	16	19	22	25	28	31	32	33	34	34	33	32	31	31	33.6
2-Jul	29	28	27	25	23	22	22	22	23	24	26	28	31	33	36	38	39	39	38	36	35	34	33	30	39.2
3-Jul	28	26	25	24	21	19	18	18	19	21	24	25	27	N	N	N	N	N	N	N	39	39	38	36	39.2
4-Jul	34	32	30	29	28	27	26	25	24	24	24	24	24	25	26	26	27	28	28	28	28	28	27	27	33.7
5-Jul	26	25	24	23	23	21	20	19	18	19	19	21	22	24	27	29	30	31	31	31	30	29	27	26	30.8
6-Jul	25	23	22	22	22	22	22	22	23	24	24	25	26	26	27	29	30	30	31	32	32	31	30	27	31.7
7-Jul	25	23	23	21	19	17	16	17	17	18	19	21	24	26	29	31	33	33	34	34	33	31	29	26	33.9
8-Jul	24	23	20	17	15	13	12	12	13	16	19	22	27	31	35	38	39	40	40	39	38	37	36	35	40.3
9-Jul	33	32	29	27	26	24	23	22	23	24	26	28	30	31	32	33	33	32	32	31	30	30	30	29	33.5
10-Jul	29	28	26	25	24	23	21	20	20	19	19	19	19	19	20	20	22	23	25	27	28	27	26	24	28.6
11-Jul	23	21	18	15	13	11	11	11	11	13	15	18	22	24	27	29	31	31	31	31	30	29	27	25	31.3
12-Jul	23	21	19	16	14	12	12	12	14	16	19	23	26	30	34	36	38	39	40	N	39	37	33	30	40.3
13-Jul	25	20	14	13	9	7	5	7	10	13	16	18	25	31	37	41	44	47	49	47	45	40	34	30	49.1
14-Jul	26	22	18	15	12	10	10	11	13	15	15	22	30	40	47	50	51	52	51	49	46	41	39	38	51.9
15-Jul	37	34	30	26	22	18	14	12	11	10	11	14	20	26	32	37	41	41	44	45	43	40	37	33	45.0
16-Jul	30	28	26	24	23	23	23	24	24	25	27	28	30	33	35	38	38	39	40	41	41	41	40	39	41.1
17-Jul	37	36	33	31	29	27	26	25	25	25	26	28	30	33	34	35	36	36	37	37	35	33	30	28	37.4
18-Jul	25	23	20	17	14	12	11	9	8	7	6	6	6	7	8	8	8	9	11	12	13	13	12	12	25.3
19-Jul	13	13	13	14	15	16	18	21	21	22	22	22	21	21	21	21	22	23	24	24	25	25	24	24	24.9
20-Jul	22	20	18	16	15	14	14	13	12	12	13	15	16	17	19	20	21	22	22	21	20	19	18	17	21.8
21-Jul	15	14	12	11	10	8	7	7	8	9	11	13	15	17	20	21	23	24	25	25	25	24	23	22	25.1
22-Jul	20	19	17	16	14	14	14	14	14	16	17	19	21	24	27	30	33	36	37	39	39	39	39	37	39.2
23-Jul	35	34	32	29	27	24	20	19	18	20	22	25	28	33	38	42	45	47	48	49	48	46	44	41	48.7
24-Jul	40	38	35	34	33	32	31	31	30	28	27	25	24	24	24	25	25	25	25	25	25	24	24	23	40.0
25-Jul	23	23	22	22	23	24	25	24	23	22	21	20	19	17	17	16	16	17	16	15	15	13	13	12	24.6
26-Jul	12	13	13	14	15	15	15	15	15	16	17	18	19	20	21	22	23	24	24	23	23	22	21	19	23.5
27-Jul	17	15	13	12	10	9	9	9	10	11	14	16	20	23	26	28	31	32	33	33	33	31	29	27	33.1
28-Jul	25	22	19	16	15	13	12	11	11	12	15	19	24	28	32	35	38	40	40	40	38	35	34	31	40.3
29-Jul	30	30	29	29	27	25	24	26	26	26	27	31	36	43	46	48	49	50	50	49	46	42	39	36	50.5
30-Jul	33	31	28	24	20	16	14	14	15	16	19	23	28	32	35	37	39	40	40	39	36	34	32	28	39.8
31-Jul	24	23	21	20	18	15	13	13	13	12	11	13	15	19	23	28	31	35	38	40	39	38	35	33	39.5
40.0 37.6 35.4 33.8 32.7 31.7 31.2 30.6 29.7 28.1 27.0 30.6 36.3 43.0 47.2 49.5 51.0 51.9 51.1 49.1 48.0 46.3 44.1 41.2																									Diurnal Maximums
N - Not Valid																									

Span Responses

Ozone (O₃)
Henry Pirker - July 2014



Hourly Averages

Carbon Monoxide (CO) - ppm

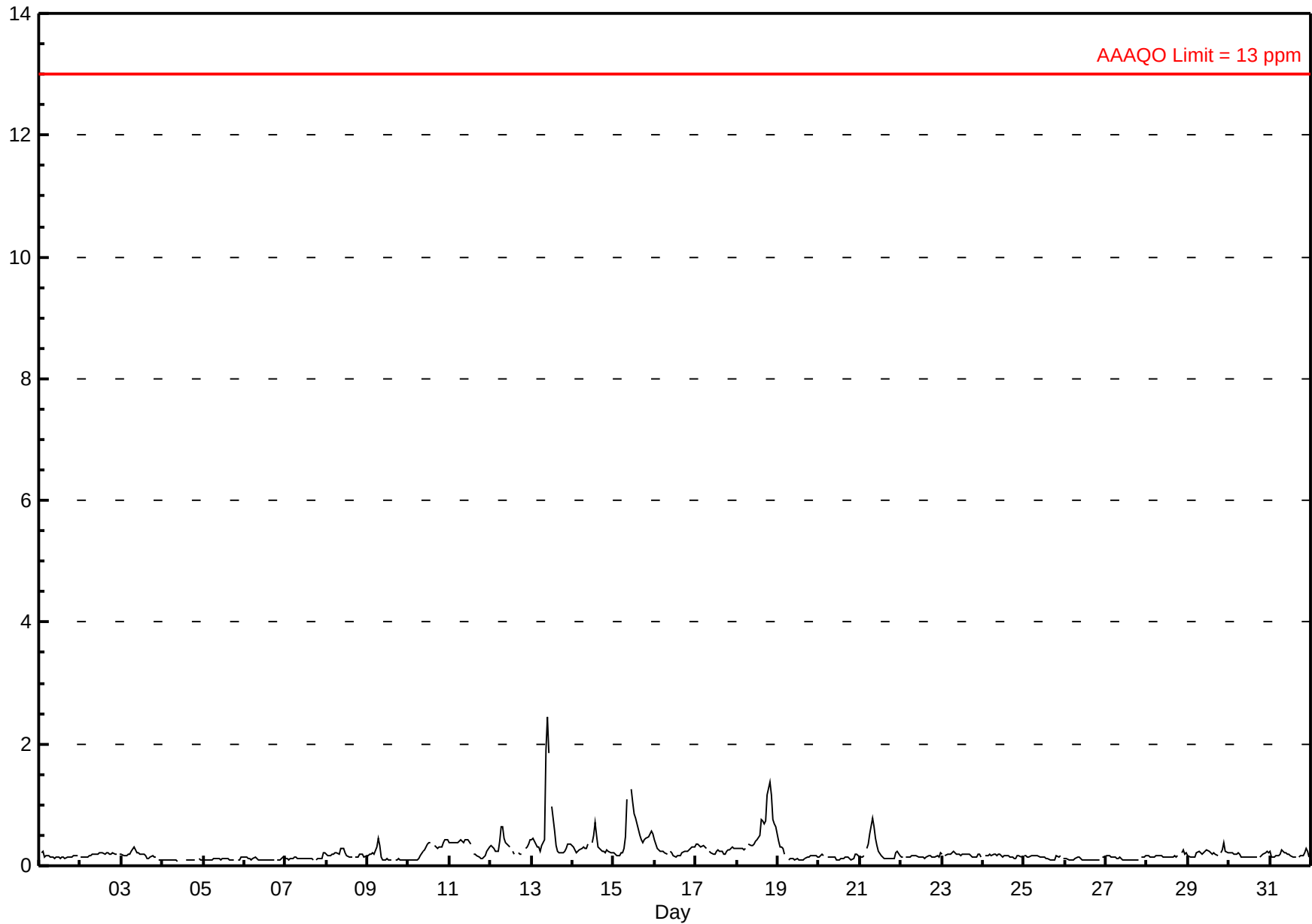
Henry Pirker - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.45 ppm on Jul 13 10:00 Maximum Daily Average: 0.58 ppm on Jul 13																					Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 37 Percent Operational Time: 99.7					
Minimum Value: 0.1 ppm on Jul 4 10:00 Maximum Diurnal Average: 0.30 ppm at hour 9 Monthly Average: 0.220 ppm										Minimum Daily Average: 0.10 ppm on Jul 4 Minimum Diurnal Average: 0.18 ppm at hour 18 Percentiles: P ₁ = 0.09 P ₁₀ = 0.10 Q ₁ = 0.13 Median = 0.17 Q ₃ = 0.23 P ₉₀ = 0.38 P ₉₉ = 1.16																
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-Jul	A	0.2	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	0.1	0.1	0.2	0.2	0.2	0.2	0.2	A	0.15	0.25
2-Jul	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	A	0.2	0.18	0.20
3-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	A	0.1	0.1	0.18	0.31
4-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.10	0.11
5-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.11	0.15
6-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.11	0.14
7-Jul	0.1	0.1	0.1	0.1	0.1	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	0.12	0.21
8-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.19	0.29
9-Jul	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.3	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	0.15	0.46
10-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4	A	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.26	0.43
11-Jul	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	A	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.30	0.43
12-Jul	0.3	0.3	0.3	0.2	0.2	0.4	0.6	0.6	0.5	0.4	0.3	0.3	A	0.2	0.2	P	0.2	0.2	0.2	P	0.3	0.3	0.4	0.4	0.33	0.64
13-Jul	0.4	0.5	0.4	0.3	0.3	0.2	0.3	0.4	1.9	2.5	1.8	A	1.0	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.58	2.45
14-Jul	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	A	0.4	0.5	0.7	0.5	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.31	0.72
15-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	1.1	A	1.3	1.1	0.8	0.8	0.6	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.52	1.26
16-Jul	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.24	0.42
17-Jul	0.4	0.3	0.3	0.3	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.26	0.36
18-Jul	0.3	0.3	0.3	0.3	0.3	0.3	A	0.4	0.3	0.3	0.4	0.4	0.5	0.8	0.7	0.7	0.7	1.2	1.4	1.2	0.8	0.7	0.6	0.57	1.38	
19-Jul	0.4	0.3	0.3	0.3	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.16	0.40	
20-Jul	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.14	0.19
21-Jul	0.1	0.1	0.2	A	0.3	0.4	0.5	0.8	0.6	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.25	0.79
22-Jul	0.1	0.1	A	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.15	0.20
23-Jul	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	0.1	0.1	0.2	0.2	0.2	0.1	0.18	0.24
24-Jul	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	A	0.16	0.19
25-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	A	0.1	0.14	0.18
26-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.2	0.1	0.11	0.15
27-Jul	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	A	0.1	0.1	0.2	0.13	0.18
28-Jul	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	A	0.2	0.3	0.2	0.2	0.16	0.25
29-Jul	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.3	0.4	0.2	0.2	0.21	0.37
30-Jul	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	A	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.24
31-Jul	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.18	0.28
0.21 0.20 0.19 0.18 0.19 0.20 0.23 0.25 0.30 0.28 0.29 0.22 0.24 0.22 0.20 0.19 0.18 0.18 0.20 0.21 0.23 0.24 0.23 0.23																								Diurnal Average		
0.43 0.45 0.38 0.37 0.38 0.40 0.63 0.79 1.89 2.45 1.85 1.05 0.97 0.79 0.75 0.73 0.69 0.73 1.16 1.38 1.17 0.77 0.68 0.63																								Diurnal Maximum		
C - Calibration P - Power Failure A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm 24-hr na																										

Hourly Averages

Carbon Monoxide (CO) - ppm

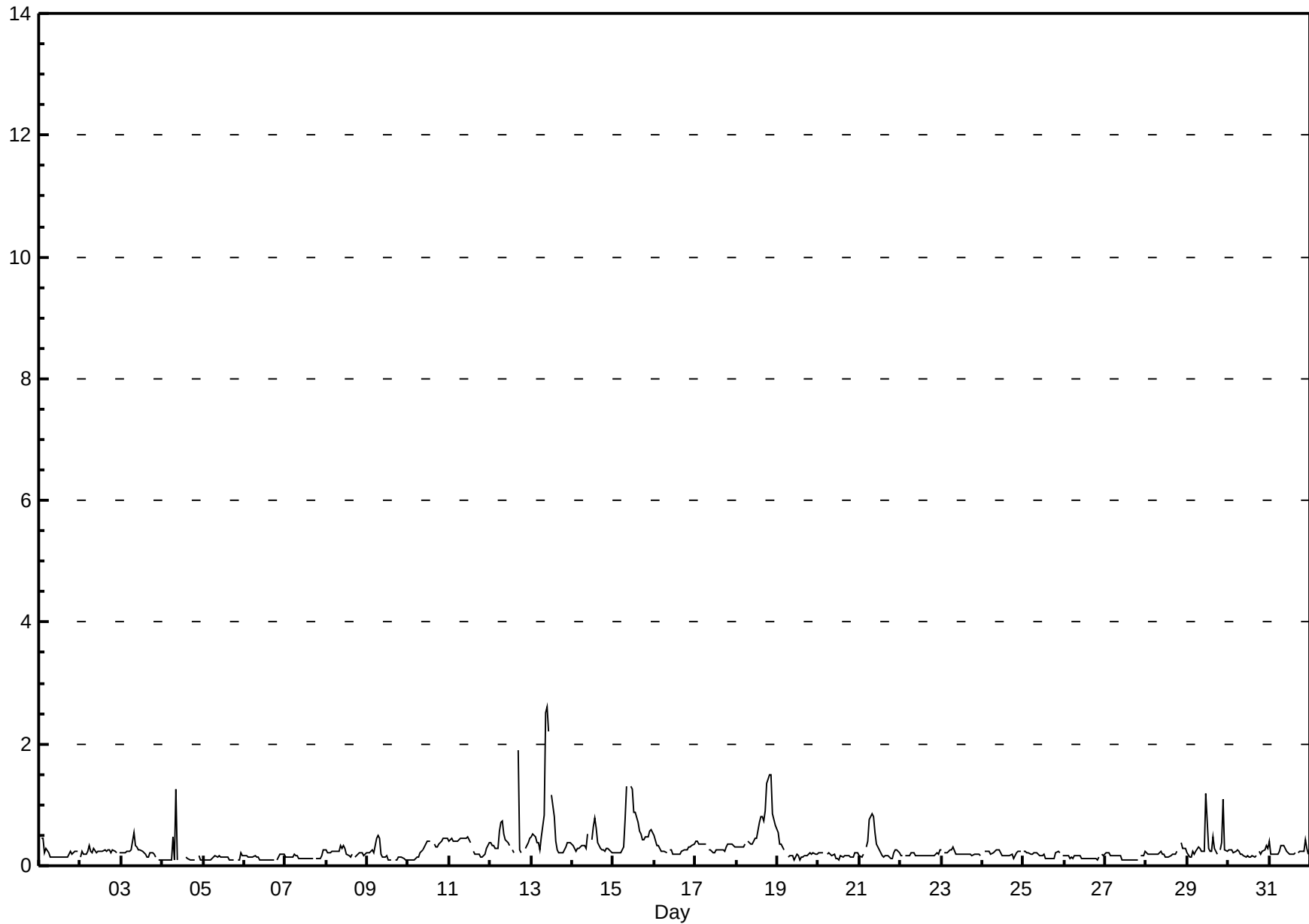
Henry Pirker - July 2014



Hourly Maximums

Carbon Monoxide (CO) - ppm

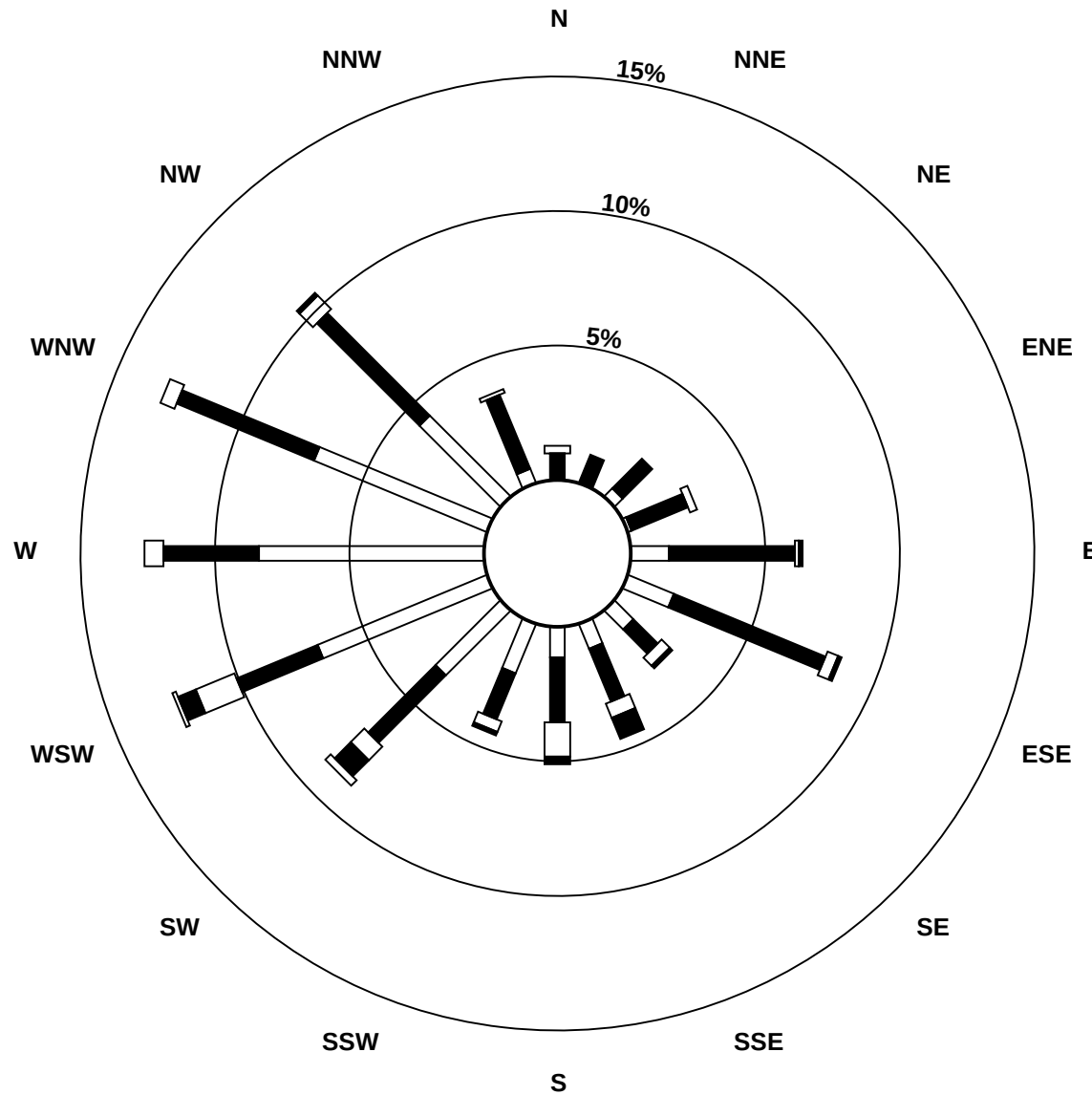
Henry Pirker - July 2014



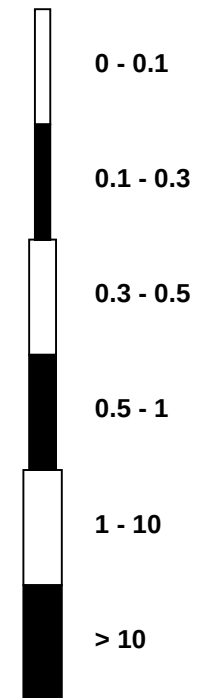
Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - July 2014



Pollutant Classes (ppm)



Eight Hour Running Averages

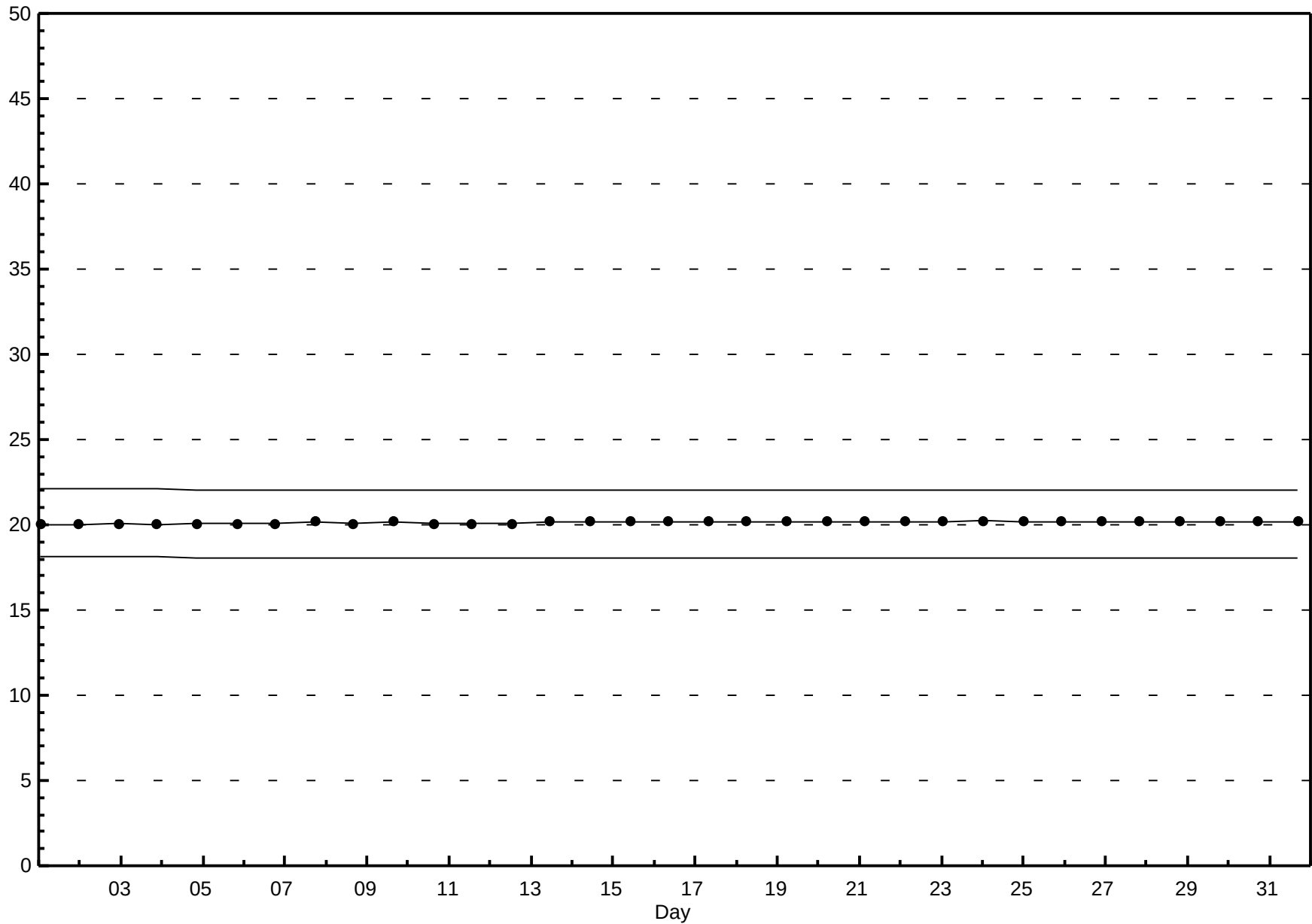
Carbon Monoxide (CO) - ppm

Henry Pirker - July 2014

Number of Exceedences (AAAQO): 8-hr: 0 Maximum Value: 1.22 ppm on Jul 13 15:00																								Hours in Service: 744 Hours of Data: 736	
Minimum Value: 0.09 ppm on Jul 4 12:00																								Hours of Missing Data: 8 Hours of Calibration: 8	
Percentiles: P ₁ = 0.09 P ₁₀ = 0.11 Q ₁ = 0.13 Median = 0.17 Q ₃ = 0.24 P ₉₀ = 0.39 P ₉₉ = 0.92																								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-Jul	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	0.1	0.1	0.25
2-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
3-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.23
4-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	N	N	N	N	N	N	N	0.1	0.1	0.1	0.1	0.1	0.13
5-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12
6-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.13
7-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
8-Jul	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	0.2	0.2	0.2	0.2	0.23
9-Jul	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.25
10-Jul	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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.36
11-Jul	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.41
12-Jul	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	N	0.2	0.2	0.3	0.3	0.45
13-Jul	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.8	1.0	1.1	1.2	1.2	1.2	1.2	0.9	0.6	0.4	0.4	0.3	0.3	0.3	0.3	1.22
14-Jul	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.44
15-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.5	0.7	0.7	0.8	0.9	0.9	0.8	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.88
16-Jul	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.47
17-Jul	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.33
18-Jul	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.92
19-Jul	0.9	0.8	0.7	0.6	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.86
20-Jul	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	0.1	0.1	0.16
21-Jul	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.48
22-Jul	0.2	0.2	0.2	0.2	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	0.2	0.2	0.2	0.17
23-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
24-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.18
25-Jul	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
26-Jul	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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-Jul	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
28-Jul	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.19
29-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
30-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.24
31-Jul	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.20
0.86 0.81 0.70 0.57 0.44 0.40 0.39 0.39 0.54 0.79 0.98 1.07 1.17 1.22 1.22 1.19 0.95 0.73 0.67 0.79 0.89 0.92 0.91 0.90																									
Diurnal Maximums																									
N - Not Valid																									
Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm																									

Span Responses

Carbon Monoxide (CO)
Henry Pirker - July 2014



Hourly Averages

Total Hydrocarbons (THC) - ppm

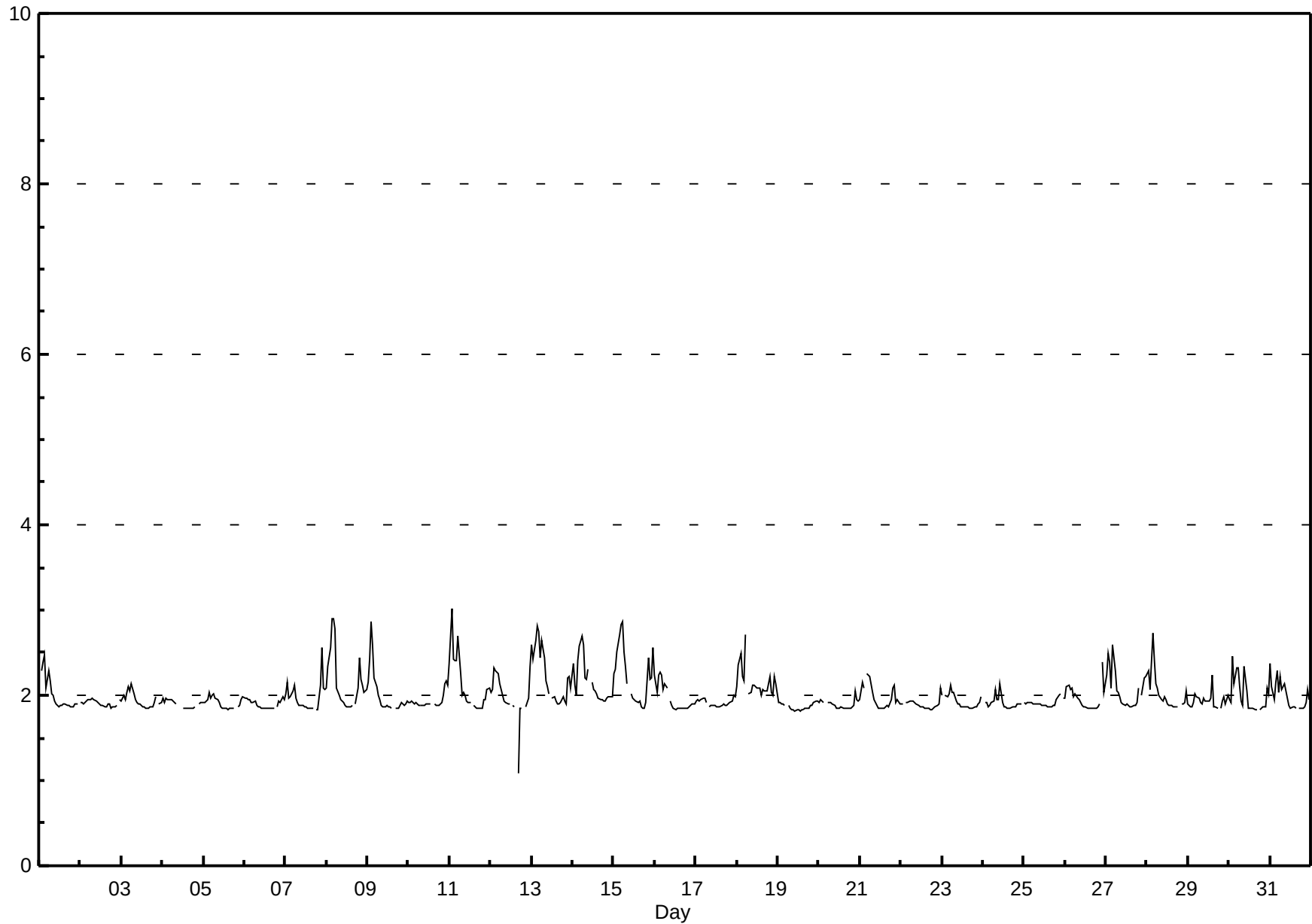
Henry Pirker - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.02 ppm on Jul 11 02:00 Maximum Daily Average: 2.22 ppm on Jul 15																					Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 36 Percent Operational Time: 99.7					
Minimum Value: 1.1 ppm on Jul 12 17:00 Maximum Diurnal Average: 2.19 ppm at hour 5 Monthly Average: 1.991 ppm										Minimum Daily Average: 1.87 ppm on Jul 19 Minimum Diurnal Average: 1.84 ppm at hour 17 Percentiles: P ₁ = 1.83 P ₁₀ = 1.85 Q ₁ = 1.87 Median = 1.92 Q ₃ = 2.03 P ₉₀ = 2.24 P ₉₉ = 2.80																
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-Jul	A	2.3	2.4	2.5	2.1	2.3	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.01	2.47
2-Jul	1.9	1.9	1.9	1.9	2.0	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	1.8	1.9	1.9	1.9	A	2.0	1.91	1.96
3-Jul	1.9	2.0	1.9	2.0	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	2.0	A	1.9	1.9	1.94	2.14
4-Jul	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	C	C	C	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.9	1.9	1.90	1.96
5-Jul	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.8	A	1.9	1.9	1.9	2.0	1.91	2.04
6-Jul	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.9	1.9	1.9	2.0	1.9	1.90	1.99
7-Jul	2.0	2.2	2.0	2.0	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	A	1.8	1.8	2.1	2.6	2.1	2.1	1.98	2.57
8-Jul	2.1	2.3	2.6	2.9	2.9	2.8	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.1	2.4	2.2	2.1	2.0	2.1	2.16	2.91
9-Jul	2.2	2.4	2.9	2.6	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	2.02	2.87
10-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.1	1.94	2.17
11-Jul	2.4	3.0	2.4	2.4	2.4	2.7	2.3	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.8	1.9	1.8	2.0	2.0	2.1	2.1	2.11	3.02
12-Jul	2.0	2.1	2.3	2.3	2.3	2.1	2.1	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	P	1.1	1.8	1.8	P	1.9	1.9	2.0	2.3	1.97	2.35
13-Jul	2.6	2.4	2.6	2.8	2.7	2.4	2.6	2.4	2.2	2.1	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.2	2.2	2.1	2.21	2.81
14-Jul	2.4	2.1	2.0	2.4	2.6	2.7	2.6	2.2	2.2	2.3	A	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.15	2.69
15-Jul	2.2	2.3	2.5	2.7	2.8	2.9	2.5	2.3	2.1	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.9	2.4	2.2	2.2	2.6	2.22	2.86
16-Jul	2.2	2.0	2.2	2.3	2.2	2.1	2.1	2.1	A	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.97	2.27
17-Jul	1.9	2.0	1.9	1.9	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	1.9	1.9	1.9	2.0	2.0	1.91	2.00
18-Jul	2.1	2.4	2.5	2.2	2.2	2.7	A	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.2	2.0	2.0	2.2	2.1	2.15	2.71
19-Jul	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.93
20-Jul	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.89	2.05
21-Jul	2.0	2.2	2.1	A	2.3	2.2	2.2	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.1	2.1	1.9	2.0	1.9	1.98	2.26
22-Jul	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	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.1	1.89	2.08
23-Jul	2.0	A	2.0	2.0	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	2.0	1.93	2.11
24-Jul	A	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.0	2.0	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.91	2.14
25-Jul	1.9	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	2.0	2.0	2.0	A	2.0	1.91	2.01
26-Jul	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	A	2.4	2.0	1.96	2.38
27-Jul	2.2	2.5	2.4	2.1	2.6	2.3	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	2.1	A	2.0	2.2	2.2	2.07	2.60
28-Jul	2.3	2.3	2.1	2.7	2.4	2.1	2.1	2.0	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.03	2.72
29-Jul	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.2	1.9	1.9	1.8	A	1.9	1.9	2.0	1.9	2.0	1.94	2.24
30-Jul	1.9	1.9	2.5	2.1	2.3	2.3	2.1	1.9	1.9	2.3	2.1	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.9	2.1	2.0	2.00	2.45
31-Jul	2.4	2.1	1.9	2.2	2.3	2.0	2.2	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.9	1.9	1.9	2.1	2.0	2.00	2.37
2.07 2.12 2.15 2.18 2.19 2.18 2.08 2.01 1.96 1.96 1.93 1.90 1.89 1.89 1.88 1.87 1.84 1.87 1.88 1.92 1.95 1.98 2.02 2.04																								Diurnal Average		
2.59 3.02 2.87 2.91 2.90 2.86 2.65 2.43 2.18 2.33 2.14 2.15 2.09 2.08 2.24 2.06 2.06 2.04 2.09 2.44 2.45 2.57 2.38 2.55																								Diurnal Maximum		
C - Calibration P - Power Failure A - Automated Daily Zero Span																										

Hourly Averages

Total Hydrocarbons (THC) - ppm

Henry Pirker - July 2014



Hourly Maximums

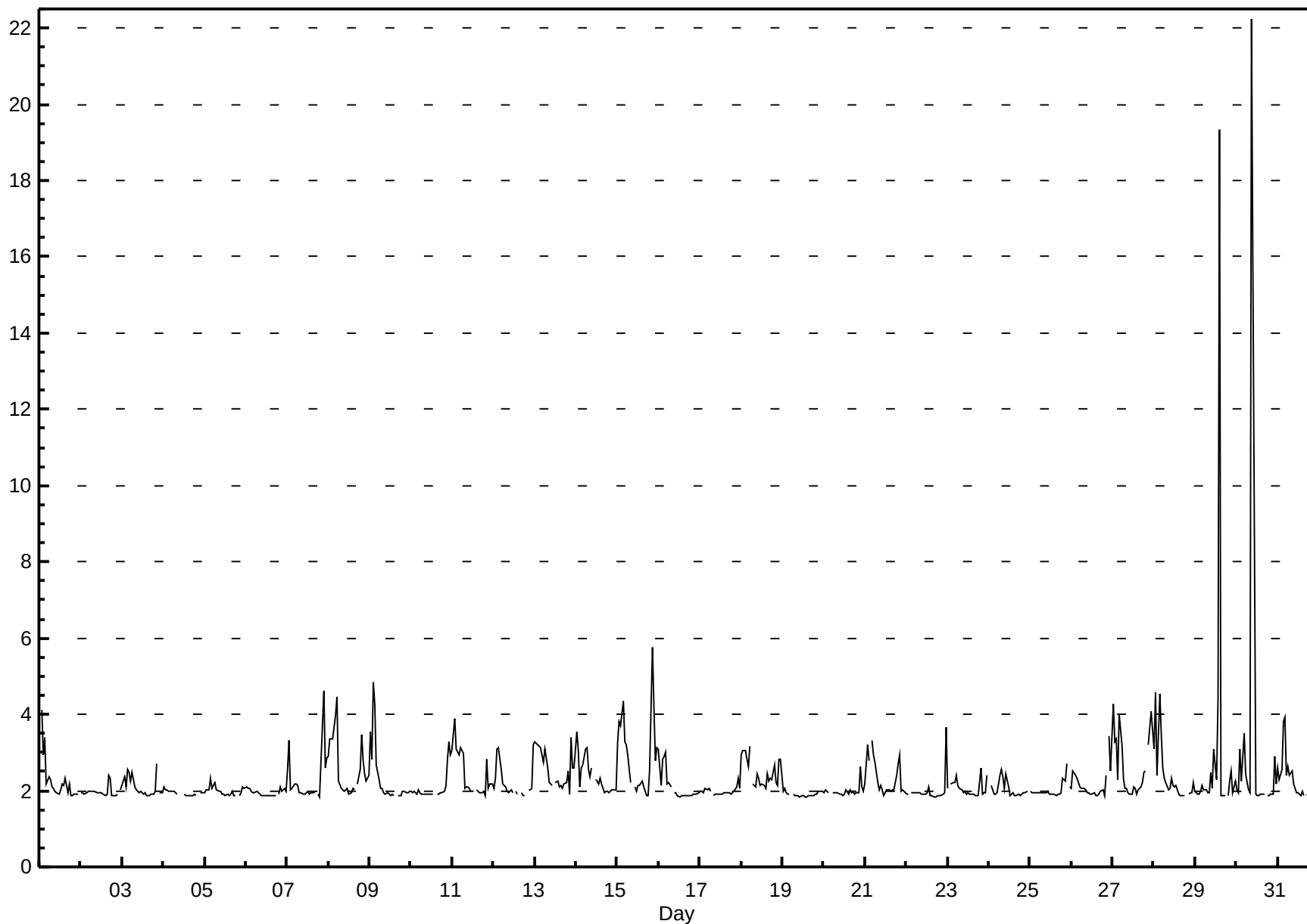
Total Hydrocarbons (THC) - ppm

Henry Pirker - July 2014

Maximum Value: 22.23 ppm on Jul 30 10:00																					Maximum Daily Average: 3.32 ppm on Jul 30					Hours in Service: 744	
Minimum Value: 1.8 ppm on Jul 19 14:00																					Minimum Daily Average: 1.90 ppm on Jul 19					Hours of Data: 706	
Maximum Diurnal Average: 2.73 ppm at hour 10																					Minimum Diurnal Average: 1.95 ppm at hour 17					Hours of Missing Data: 38	
Monthly Average: 2.281 ppm																					Percentiles: P ₁ = 1.85 P ₁₀ = 1.88 Q ₁ = 1.92 Median = 1.99 Q ₃ = 2.27 P ₉₀ = 3.05 P ₉₉ = 4.56					Hours of Calibration: 36	
																										Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	A	4.1	2.9	3.4	2.2	2.4	2.3	2.1	2.1	2.0	1.9	1.9	2.0	2.2	2.1	2.3	2.0	2.2	1.9	1.9	1.9	1.9	1.9	A	2.0	2.25	4.12
2-Jul	1.9	1.9	1.9	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	2.4	2.3	1.9	1.9	1.9	1.9	A	2.0	1.97	2.42	
3-Jul	2.1	2.4	2.1	2.6	2.5	2.3	2.5	2.1	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.7	A	1.9	2.0	2.09	2.69	
4-Jul	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	1.94	2.10	
5-Jul	1.9	2.0	2.0	2.3	2.1	2.1	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	A	1.9	1.9	2.1	2.1	1.99	2.31	
6-Jul	2.1	2.0	2.1	2.0	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	A	1.9	2.1	2.0	2.1	2.0	1.95	2.09	
7-Jul	2.6	3.3	2.0	2.1	2.2	2.2	2.1	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	2.0	A	1.9	1.8	3.7	4.6	2.6	2.9	2.32	4.61	
8-Jul	2.9	3.4	3.3	3.7	4.0	4.5	2.3	2.1	2.0	2.0	2.0	2.0	1.9	2.0	2.1	2.0	A	2.2	2.6	3.5	2.8	2.5	2.2	2.4	2.61	4.45	
9-Jul	3.6	2.8	4.9	4.3	2.7	2.3	2.1	2.0	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	1.9	1.9	2.0	2.32	4.85	
10-Jul	2.0	2.0	2.0	1.9	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	2.0	2.1	2.8	3.3	2.9	2.08	3.28	
11-Jul	3.0	3.9	3.1	3.0	2.9	3.1	3.0	2.1	2.1	2.1	2.0	2.0	2.0	A	2.0	2.0	2.0	1.9	2.0	1.9	2.8	2.1	2.2	2.2	2.41	3.90	
12-Jul	2.1	2.3	3.1	3.1	2.6	2.2	2.1	2.1	2.0	1.9	2.0	2.0	A	2.0	1.9	P	1.9	1.9	1.9	P	2.0	2.0	2.1	3.2	2.20	3.19	
13-Jul	3.3	3.2	3.2	3.1	3.0	2.7	3.1	2.6	2.2	2.2	2.1	A	2.2	2.3	2.1	2.1	2.1	2.2	2.2	2.5	1.9	3.4	2.6	2.6	2.56	3.40	
14-Jul	3.5	3.1	2.1	2.6	2.7	3.1	3.1	2.5	2.4	2.6	A	2.3	2.3	2.2	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.38	3.55	
15-Jul	3.3	3.8	3.7	4.4	3.3	3.2	2.9	2.5	2.2	A	2.1	2.0	2.1	2.1	2.3	2.1	2.0	1.9	1.9	2.5	5.8	4.2	2.8	3.1	2.88	5.78	
16-Jul	3.1	2.1	2.8	2.9	3.0	2.2	2.2	2.1	A	2.0	2.0	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.12	3.08	
17-Jul	2.0	2.0	2.0	2.0	2.0	2.1	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.1	2.3	2.1	1.98	2.32	
18-Jul	3.0	3.1	3.0	2.8	2.6	3.2	A	2.2	2.1	2.5	2.3	2.1	2.2	2.1	2.0	2.5	2.3	2.3	2.3	2.7	2.2	2.1	2.8	2.8	2.49	3.15	
19-Jul	2.0	2.1	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.90	2.05	
20-Jul	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	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	2.6	2.1	2.0	1.98	2.65	
21-Jul	2.2	3.2	2.8	A	3.3	3.0	2.8	2.2	2.0	2.1	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.7	2.9	2.0	2.0	1.9	2.33	3.32	
22-Jul	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	2.0	3.7	1.99	3.66	
23-Jul	2.0	A	2.2	2.2	2.2	2.4	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	2.6	1.9	1.9	2.0	2.4	2.05	2.61	
24-Jul	A	2.1	2.0	1.9	1.9	1.9	2.4	2.6	2.4	2.1	2.4	2.1	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	A	2.04	2.55	
25-Jul	2.0	1.9	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	1.9	1.9	1.9	2.0	2.3	2.3	2.7	A	2.1	2.00	2.71	
26-Jul	2.1	2.5	2.4	2.3	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.4	A	3.5	2.5	2.15	3.45	
27-Jul	4.3	3.3	3.4	2.3	4.0	3.2	2.3	2.1	2.0	2.0	1.9	1.9	2.1	2.1	1.9	2.0	2.1	2.2	2.5	2.5	A	3.2	4.1	3.6	2.64	4.28	
28-Jul	3.1	4.6	2.4	4.6	3.4	2.6	2.3	2.2	2.0	2.1	2.3	2.1	2.1	2.1	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.2	2.40	4.58	
29-Jul	2.0	1.9	1.9	2.0	2.1	2.0	2.0	2.0	1.9	2.5	2.1	3.1	2.3	4.4	19.3	1.9	1.9	1.9	A	1.9	2.2	2.5	1.9	2.2	2.95	19.33	
30-Jul	2.0	1.9	3.1	2.2	3.5	2.5	2.2	2.0	1.9	22.2	8.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.9	2.2	3.32	22.23	
31-Jul	2.6	2.3	2.6	3.8	3.9	2.4	2.6	2.4	2.5	2.2	2.1	1.9	1.9	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	2.0	3.2	2.0	2.33	3.91	
2.50 2.64 2.56 2.64 2.60 2.44 2.28 2.12 2.03 2.73 2.24 1.99 1.98 2.06 2.54 1.97 1.95 1.97 1.98 2.12 2.30 2.34 2.35 2.37																								Diurnal Average			
4.28 4.58 4.85 4.56 3.99 4.45 3.13 2.61 2.52 22.23 8.79 3.09 2.28 4.41 19.33 2.46 2.42 2.32 2.57 3.46 5.78 4.61 4.09 3.66																								Diurnal Maximum			
C - Calibration P - Power Failure A - Automated Daily Zero Span																											

Hourly Maximums

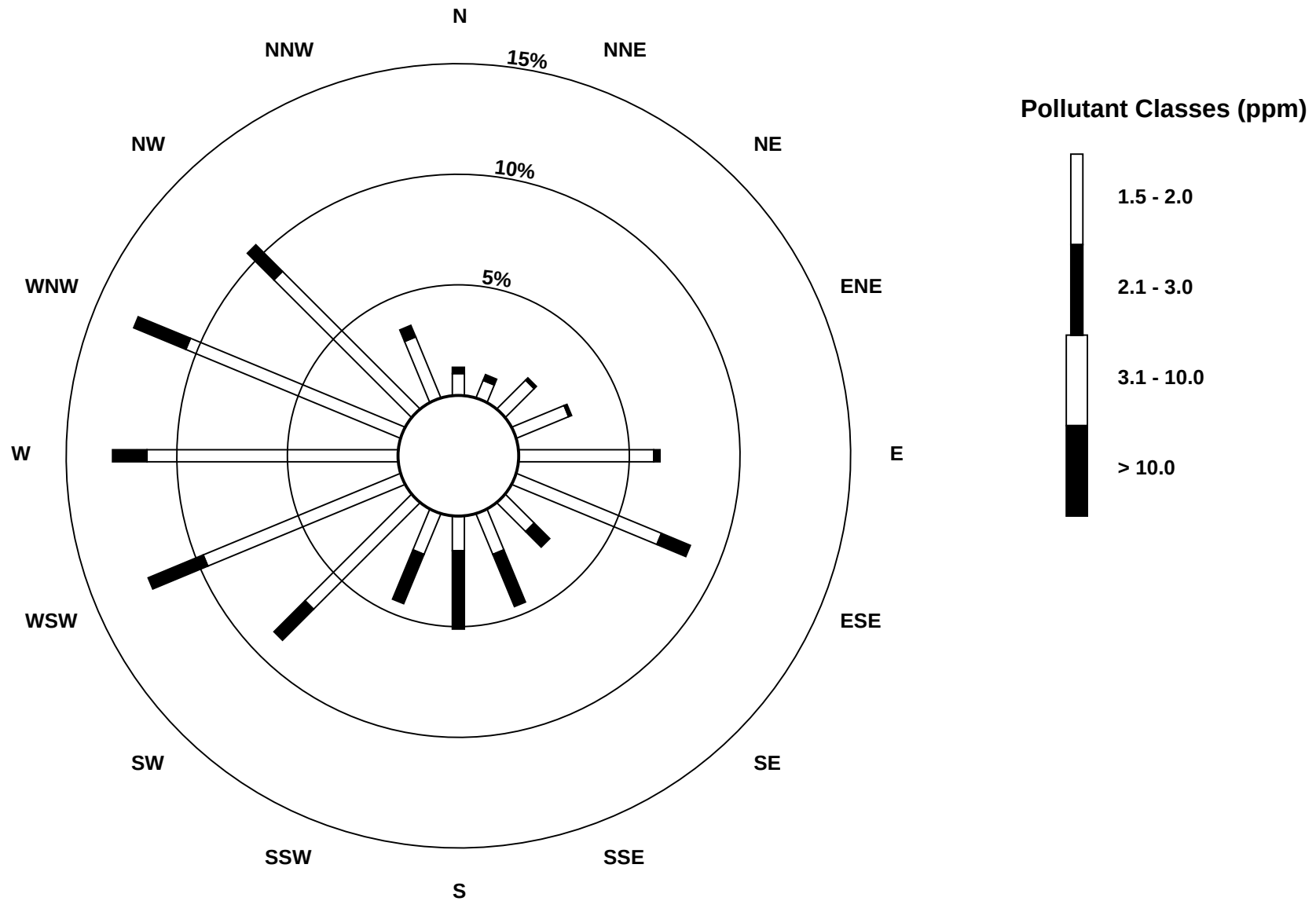
Total Hydrocarbons (THC) - ppm
Henry Pirker - July 2014



Pollutant Rose

Total Hydrocarbons (THC) - ppm

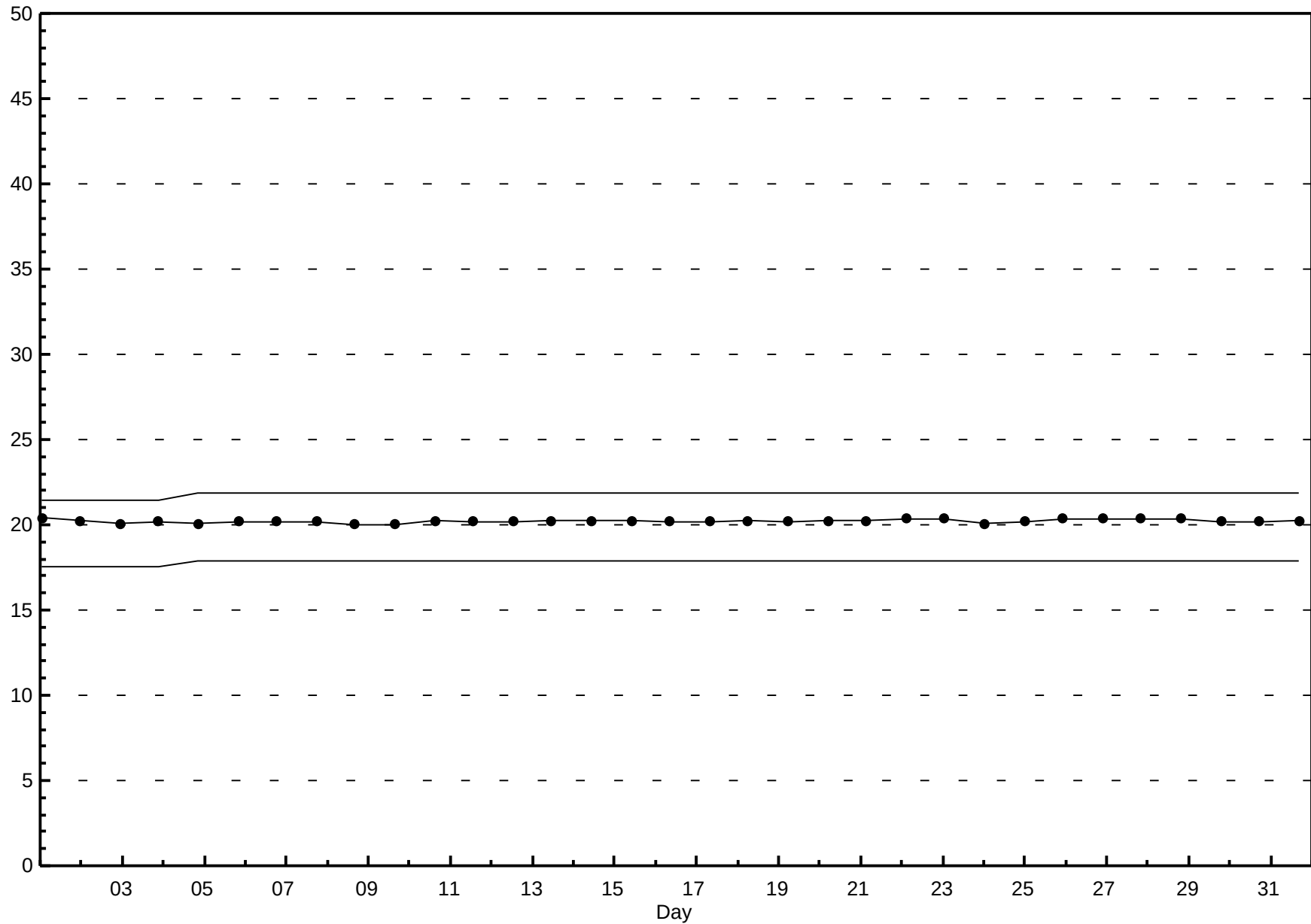
Henry Pirker - July 2014



Span Responses

Total Hydrocarbons (THC)

Henry Pirker - July 2014



Hourly Averages

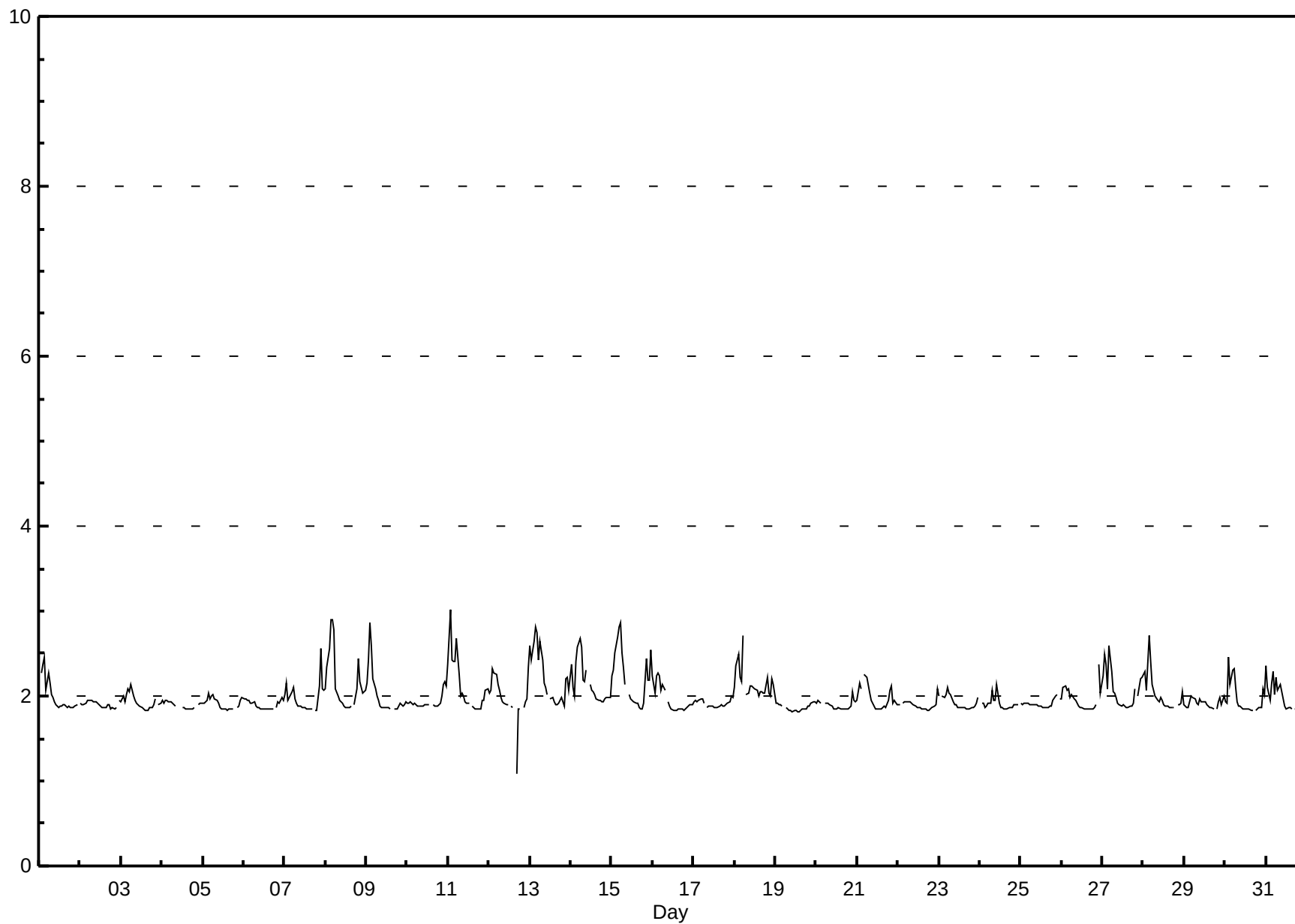
Methane (CH₄) - ppm

Henry Pirker - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.01 ppm on Jul 11 02:00 Maximum Daily Average: 2.22 ppm on Jul 15																				Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 36 Percent Operational Time: 99.7						
Minimum Value: 1.1 ppm on Jul 12 17:00 Minimum Daily Average: 1.87 ppm on Jul 19 Maximum Diurnal Average: 2.19 ppm at hour 5 Minimum Diurnal Average: 1.84 ppm at hour 17 Monthly Average: 1.988 ppm Percentiles: P ₁ = 1.83 P ₁₀ = 1.85 Q ₁ = 1.87 Median = 1.92 Q ₃ = 2.03 P ₉₀ = 2.23 P ₉₉ = 2.80																										
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-Jul	A	2.3	2.4	2.5	2.1	2.3	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.00	2.46
2-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	A	1.9	1.90	1.95
3-Jul	1.9	2.0	1.9	2.0	2.1	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	2.0	A	1.9	1.9	1.93	2.13
4-Jul	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.89	1.95
5-Jul	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.8	A	1.9	1.9	1.9	2.0	1.91	2.03
6-Jul	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.9	1.9	1.9	2.0	1.9	1.89	1.98
7-Jul	2.0	2.2	2.0	2.0	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	A	1.8	1.8	2.1	2.6	2.1	2.1	1.97	2.56
8-Jul	2.1	2.3	2.6	2.9	2.9	2.8	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.1	2.4	2.2	2.1	2.0	2.1	2.16	2.90
9-Jul	2.2	2.4	2.9	2.6	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.9	1.8	1.9	1.9	1.9	1.9	1.9	2.02	2.86
10-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.1	1.93	2.16
11-Jul	2.4	3.0	2.4	2.4	2.4	2.7	2.3	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.8	1.9	1.8	2.0	2.0	2.1	2.1	2.11	3.01
12-Jul	2.0	2.1	2.3	2.3	2.3	2.1	2.1	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	P	1.1	1.8	1.8	P	1.9	1.9	2.0	2.3	1.97	2.34
13-Jul	2.6	2.4	2.6	2.8	2.7	2.4	2.6	2.4	2.2	2.1	2.0	A	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.2	2.2	2.1	2.21	2.81
14-Jul	2.4	2.1	2.0	2.4	2.6	2.7	2.6	2.2	2.2	2.3	A	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.14	2.69
15-Jul	2.2	2.3	2.5	2.7	2.8	2.9	2.5	2.3	2.1	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	2.4	2.2	2.2	2.5	2.22	2.86
16-Jul	2.2	2.0	2.2	2.3	2.2	2.1	2.1	2.1	A	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.96	2.27
17-Jul	1.9	2.0	1.9	1.9	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	1.9	1.9	1.9	2.0	2.0	1.91	2.00
18-Jul	2.1	2.4	2.5	2.2	2.2	2.7	A	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.2	2.0	2.0	2.2	2.1	2.15	2.71
19-Jul	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.87	1.93
20-Jul	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.89	2.04
21-Jul	2.0	2.2	2.1	A	2.3	2.2	2.2	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.1	2.1	1.9	2.0	1.9	1.98	2.26
22-Jul	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	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.1	1.89	2.08
23-Jul	2.0	A	2.0	2.0	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	2.0	1.93	2.11
24-Jul	A	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.0	2.0	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.91	2.13
25-Jul	1.9	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	2.0	2.0	2.0	A	2.0	1.91	2.01
26-Jul	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	A	2.4	2.0	1.96	2.38
27-Jul	2.2	2.5	2.4	2.1	2.6	2.3	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	2.1	A	2.0	2.2	2.2	2.07	2.59
28-Jul	2.2	2.3	2.1	2.7	2.4	2.1	2.1	2.0	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.02	2.72
29-Jul	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.9	1.9	2.0	1.9	2.0	1.92	2.01
30-Jul	1.9	1.9	2.4	2.1	2.3	2.3	2.1	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	1.9	1.9	2.1	2.0	1.97	2.45
31-Jul	2.4	2.1	1.9	2.2	2.3	2.0	2.2	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.9	1.9	2.1	2.0	2.00	2.36
2.07 2.12 2.15 2.18 2.19 2.17 2.08 2.00 1.96 1.94 1.92 1.90 1.89 1.88 1.87 1.87 1.84 1.87 1.88 1.92 1.95 1.98 2.02 2.04																								Diurnal Average		
2.59 3.01 2.86 2.90 2.89 2.86 2.64 2.43 2.18 2.30 2.13 2.14 2.09 2.08 2.01 2.06 2.05 2.04 2.09 2.43 2.44 2.56 2.38 2.55																								Diurnal Maximum		
C - Calibration P - Power Failure A - Automated Daily Zero Span																										

Hourly Averages

Methane (CH₄) - ppm
Henry Pirker - July 2014



Hourly Maximums

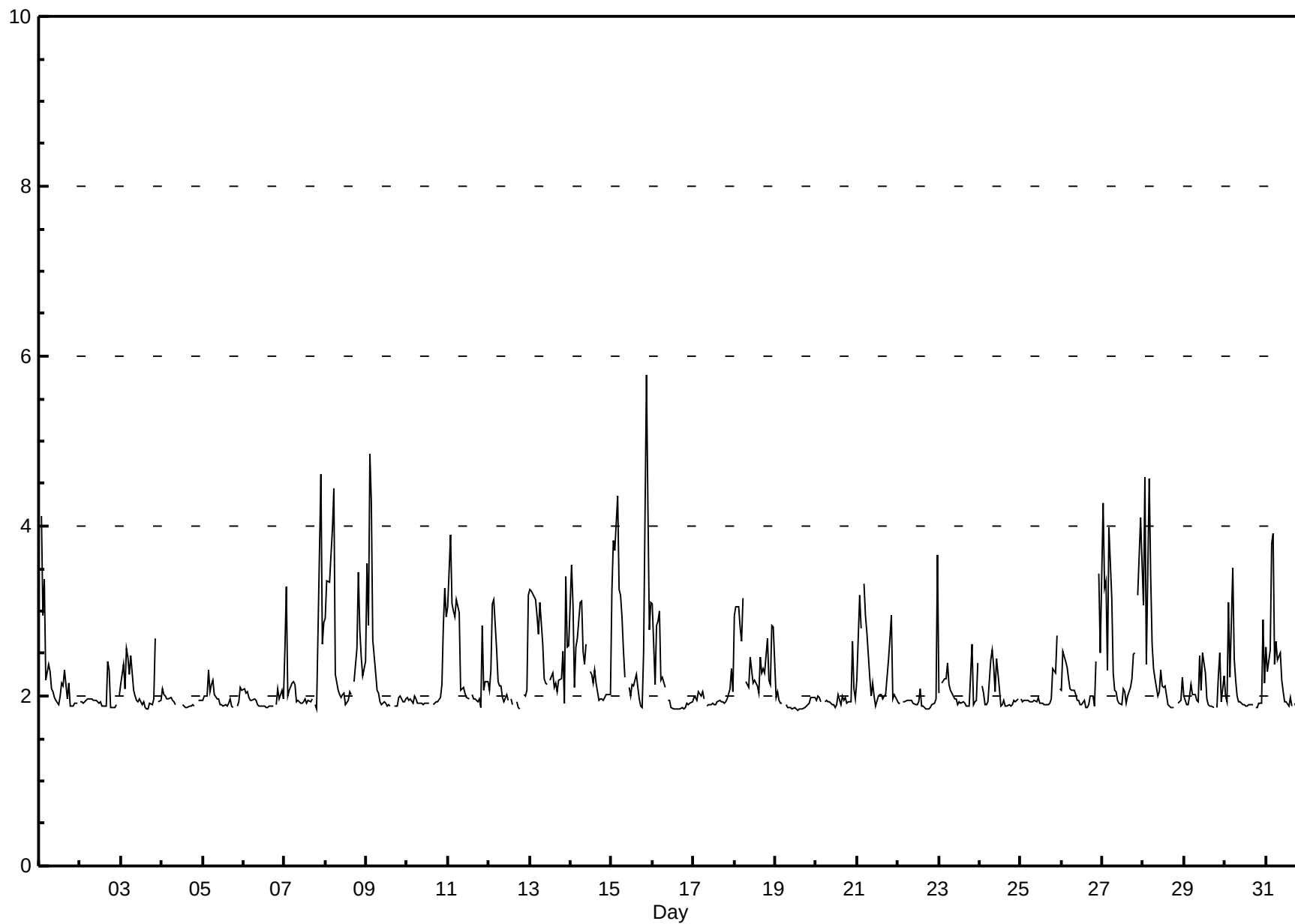
Methane (CH₄) - ppm

Henry Pirker - July 2014

Maximum Value: 5.78 ppm on Jul 15 21:00																				Maximum Daily Average: 2.87 ppm on Jul 15					Hours in Service: 744		
Minimum Value: 1.8 ppm on Jul 19 14:00																				Minimum Daily Average: 1.90 ppm on Jul 19					Hours of Data: 706		
Maximum Diurnal Average: 2.64 ppm at hour 2																				Minimum Diurnal Average: 1.95 ppm at hour 17					Hours of Missing Data: 38		
Monthly Average: 2.210 ppm																				Percentiles: P ₁ = 1.85 P ₁₀ = 1.88 Q ₁ = 1.92 Median = 1.98 Q ₃ = 2.25 P ₉₀ = 2.95 P ₉₉ = 4.29					Hours of Calibration: 36		
																									Percent Operational Time: 99.7		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jul	A	4.1	2.9	3.4	2.2	2.4	2.3	2.1	2.1	2.0	1.9	1.9	2.0	2.1	2.1	2.3	2.0	2.1	1.9	1.9	1.9	1.9	1.9	A	2.0	2.24	4.11
2-Jul	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	2.4	2.3	1.9	1.9	1.9	1.9	A	1.9	1.96	2.41	
3-Jul	2.1	2.4	2.1	2.6	2.5	2.3	2.5	2.1	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.7	A	1.9	1.9	2.09	2.67	
4-Jul	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.93	2.09	
5-Jul	1.9	2.0	2.0	2.3	2.0	2.1	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	A	1.9	1.9	2.1	2.1	1.98	2.31	
6-Jul	2.1	2.0	2.0	2.0	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	A	1.9	2.1	2.0	2.1	2.0	1.94	2.09	
7-Jul	2.5	3.3	2.0	2.1	2.2	2.2	2.1	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	2.0	A	1.9	1.9	3.7	4.6	2.6	2.9	2.32	4.62	
8-Jul	2.9	3.4	3.3	3.7	4.0	4.4	2.3	2.1	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	A	2.2	2.6	3.5	2.8	2.5	2.2	2.4	2.61	4.44	
9-Jul	3.6	2.8	4.8	4.3	2.7	2.3	2.1	2.0	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	1.9	1.9	2.0	2.32	4.85	
10-Jul	2.0	2.0	2.0	1.9	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	2.0	2.1	2.8	3.3	2.9	2.08	3.27	
11-Jul	3.0	3.9	3.1	3.0	2.9	3.1	3.0	2.1	2.1	2.1	2.0	2.0	2.0	A	2.0	2.0	2.0	1.9	2.0	1.9	2.8	2.1	2.2	2.2	2.40	3.90	
12-Jul	2.1	2.3	3.1	3.1	2.5	2.2	2.1	2.1	2.0	1.9	2.0	2.0	A	2.0	1.9	P	1.9	1.9	1.9	P	2.0	2.0	2.1	3.2	2.20	3.19	
13-Jul	3.3	3.2	3.2	3.1	2.9	2.7	3.1	2.6	2.2	2.2	2.1	A	2.2	2.3	2.1	2.1	2.1	2.2	2.2	2.5	1.9	3.4	2.6	2.6	2.56	3.40	
14-Jul	3.5	3.1	2.1	2.6	2.7	3.1	3.1	2.5	2.4	2.6	A	2.3	2.3	2.2	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.38	3.54	
15-Jul	3.2	3.8	3.7	4.3	3.3	3.2	2.9	2.5	2.2	A	2.1	2.0	2.1	2.1	2.3	2.1	2.0	1.9	1.9	2.5	5.8	4.2	2.8	3.1	2.87	5.78	
16-Jul	3.1	2.1	2.8	2.9	3.0	2.2	2.2	2.1	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	2.12	3.08	
17-Jul	2.0	2.0	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	2.0	1.9	1.9	1.9	1.9	2.0	2.1	2.3	2.0	1.97	2.33	
18-Jul	3.0	3.0	3.0	2.8	2.6	3.2	A	2.2	2.1	2.5	2.3	2.2	2.2	2.1	2.0	2.5	2.3	2.3	2.3	2.7	2.2	2.1	2.8	2.8	2.49	3.15	
19-Jul	2.0	2.0	2.0	1.9	1.9	A	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.90	2.04	
20-Jul	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	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	2.6	2.1	2.0	1.98	2.64	
21-Jul	2.2	3.2	2.8	A	3.3	2.9	2.7	2.2	2.0	2.2	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.7	2.9	2.0	2.0	2.0	2.32	3.32	
22-Jul	1.9	1.9	A	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	2.0	3.7	1.99	3.66	
23-Jul	2.0	A	2.2	2.2	2.2	2.4	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	2.6	1.9	1.9	2.0	2.4	2.05	2.61	
24-Jul	A	2.1	2.0	1.9	1.9	1.9	2.4	2.5	2.4	2.0	2.4	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	A	2.04	2.55	
25-Jul	2.0	1.9	1.9	2.0	2.0	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	2.0	2.3	2.3	2.7	A	2.1	2.00	2.71	
26-Jul	2.1	2.5	2.4	2.3	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.4	A	3.4	2.5	2.14	3.45	
27-Jul	4.3	3.3	3.3	2.3	4.0	3.2	2.3	2.1	2.0	2.0	1.9	1.9	2.1	2.1	1.9	2.0	2.1	2.2	2.5	2.5	A	3.2	4.1	3.6	2.64	4.28	
28-Jul	3.1	4.6	2.4	4.6	3.4	2.6	2.3	2.2	2.0	2.0	2.3	2.1	2.1	2.1	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.2	2.40	4.57	
29-Jul	2.0	1.9	1.9	2.0	2.1	2.0	2.0	2.0	1.9	2.5	2.1	2.5	2.3	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	2.2	2.5	1.9	2.2	2.06	2.51
30-Jul	2.0	1.9	3.1	2.2	3.5	2.4	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.9	2.2	2.14	3.52	
31-Jul	2.6	2.3	2.5	3.8	3.9	2.4	2.6	2.4	2.5	2.2	2.1	1.9	1.9	1.9	2.0	1.9	A	1.9	1.9	1.9	1.9	2.0	3.2	2.0	2.33	3.91	
2.50 2.64 2.56 2.64 2.59 2.43 2.27 2.11 2.03 2.03 2.00 1.97 1.97 1.97 1.96 1.97 1.95 1.97 1.98 2.12 2.30 2.34 2.35 2.37																									Diurnal Average		
4.28 4.57 4.85 4.56 3.99 4.44 3.12 2.61 2.51 2.61 2.44 2.51 2.27 2.27 2.31 2.45 2.41 2.33 2.57 3.46 5.78 4.62 4.09 3.66																									Diurnal Maximum		
C - Calibration P - Power Failure A - Automated Daily Zero Span																											

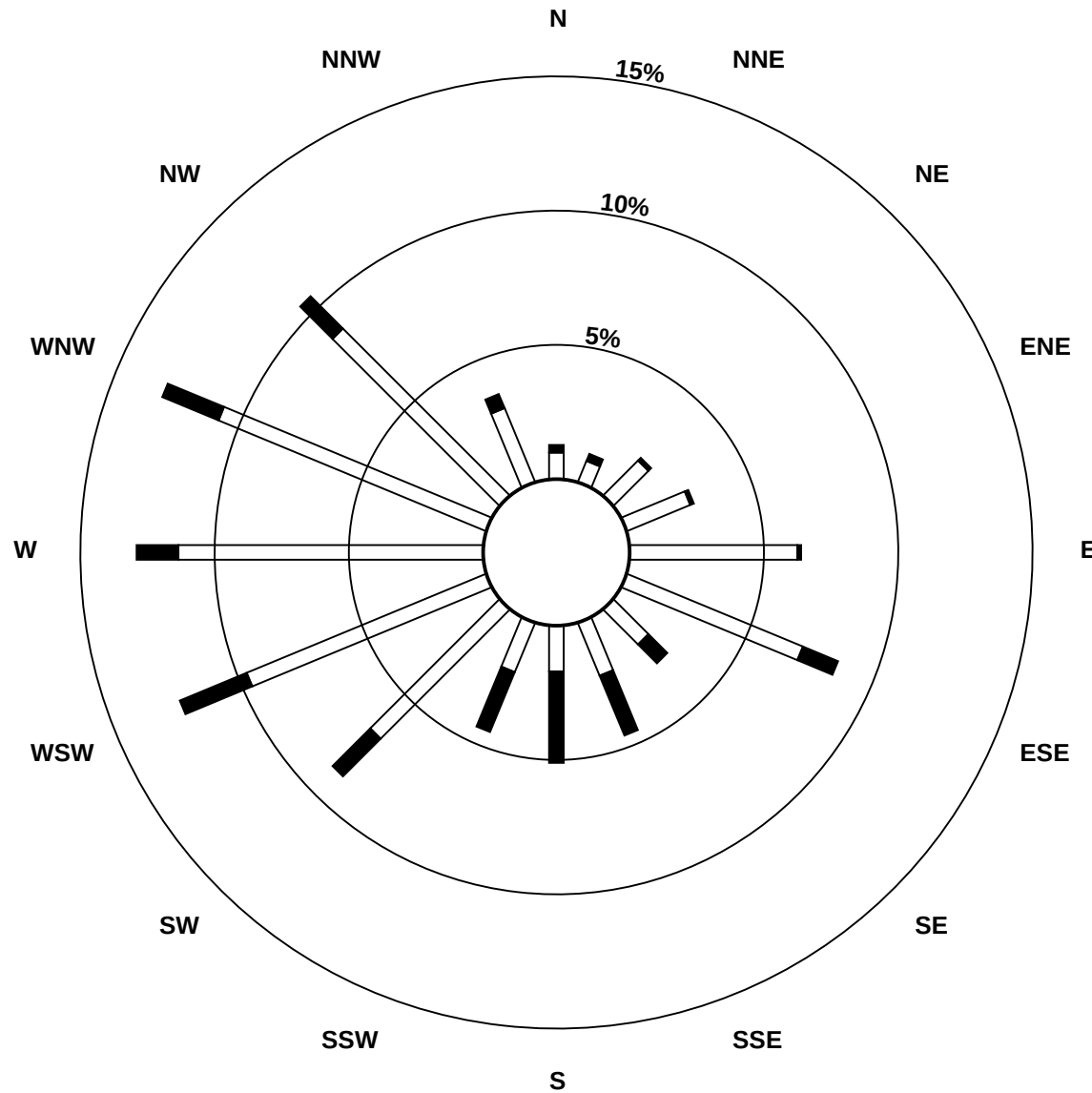
Hourly Maximums

Methane (CH₄) - ppm
Henry Pirker - July 2014

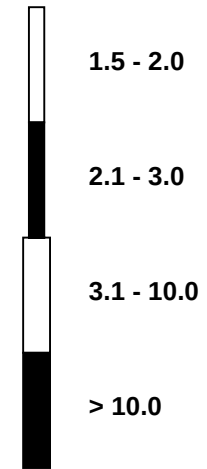


Pollutant Rose

Methane (CH₄) - ppm
Henry Pirker - July 2014

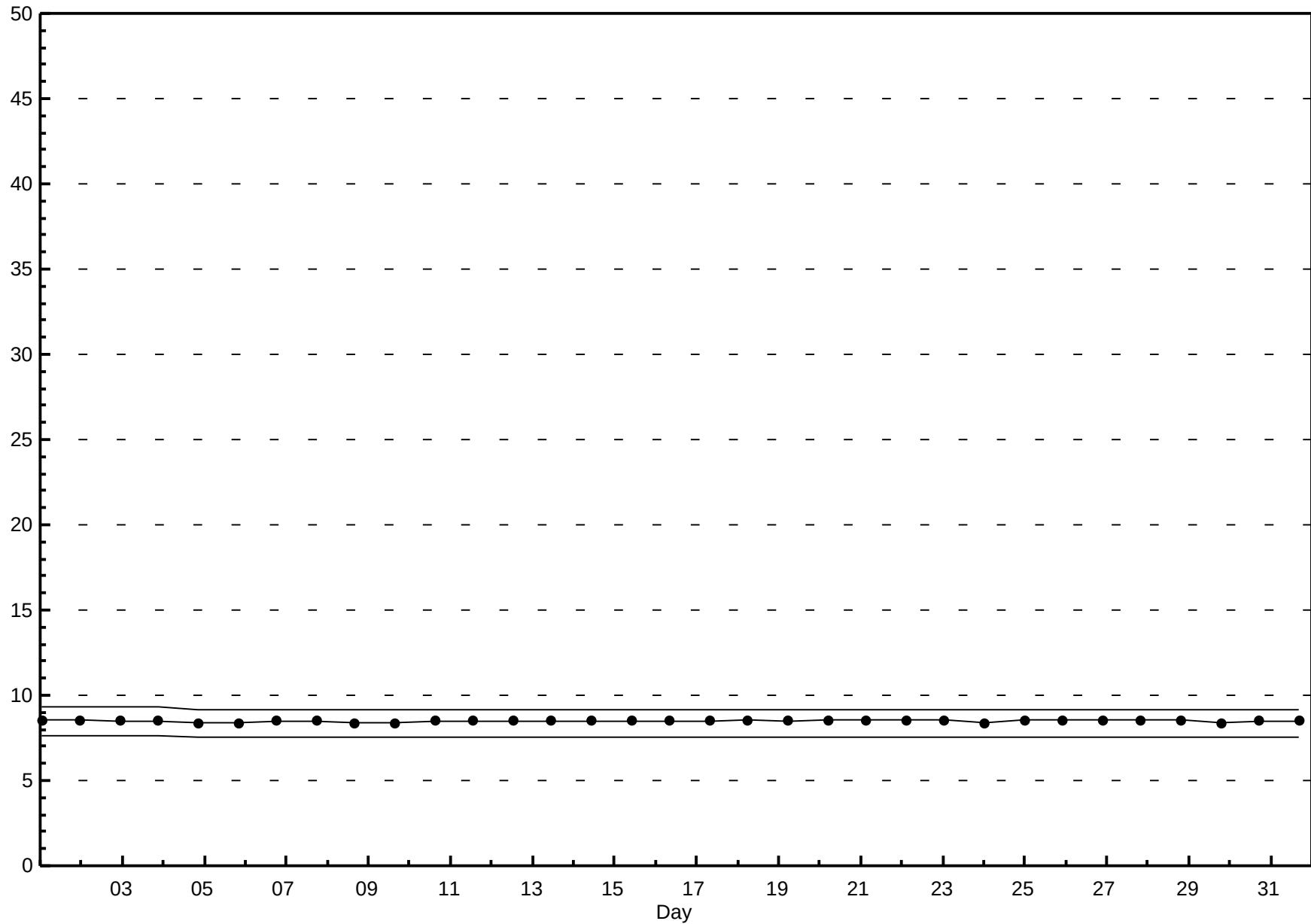


Pollutant Classes (ppm)



Span Responses

Methane (CH₄)
Henry Pirker - July 2014

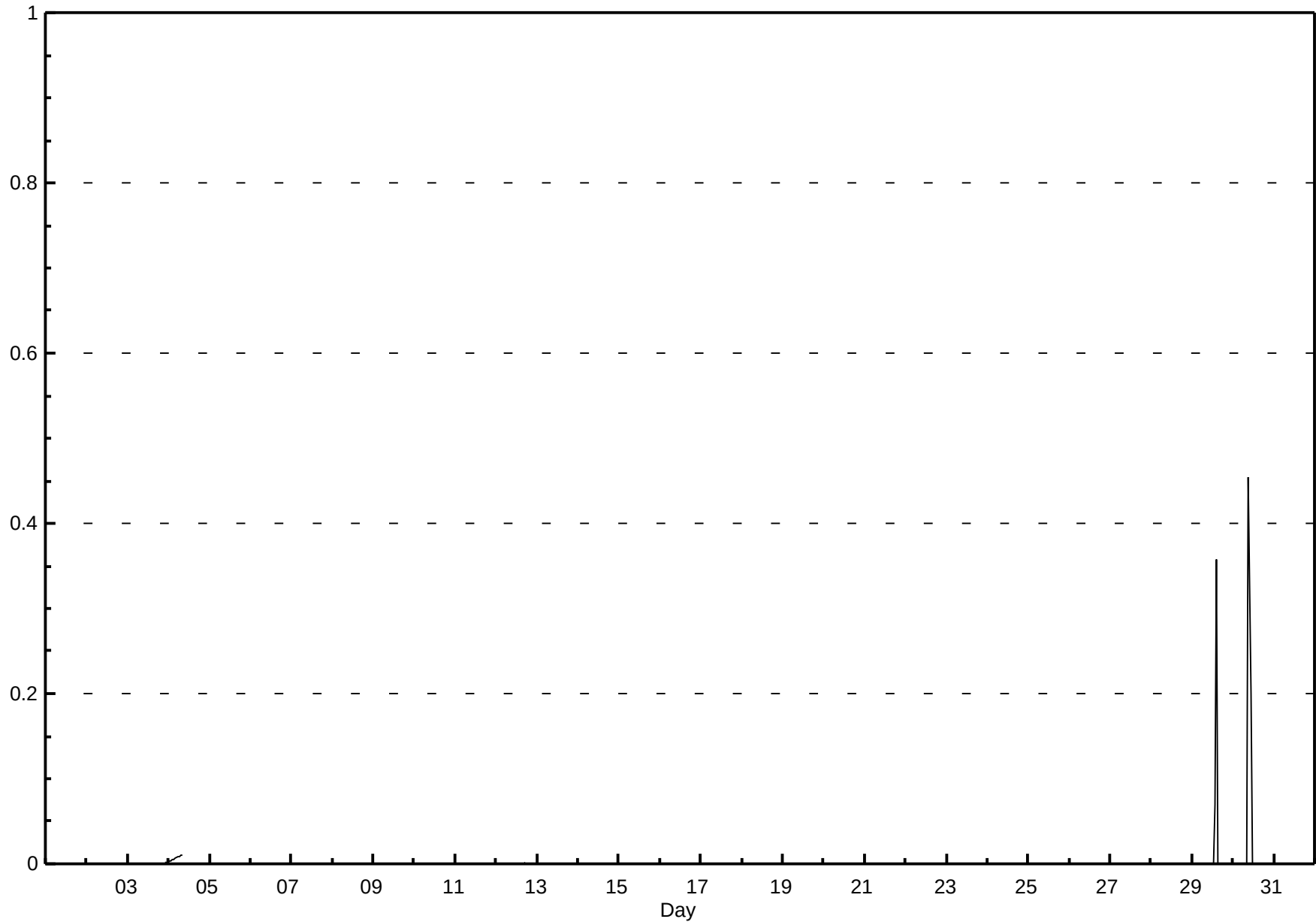


Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.45 ppm on Jul 30 10:00 Maximum Daily Average: 0.03 ppm on Jul 30																								Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 36 Percent Operational Time: 99.7		
Minimum Value: 0.0 ppm on Jul 1 02:00 Minimum Daily Average: 0.00 ppm on Jul 1 Maximum Diurnal Average: 0.02 ppm at hour 10 Minimum Diurnal Average: 0.00 ppm at hour 18 Monthly Average: 0.002 ppm Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.01																										
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-Jul	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
2-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
3-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
4-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.01
5-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
6-Jul	0.0	0.0	0.0	0.0	0.0	0.0	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
7-Jul	0.0	0.0	0.0	0.0	0.0	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
8-Jul	0.0	0.0	0.0	0.0	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
9-Jul	0.0	0.0	0.0	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
10-Jul	0.0	0.0	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
11-Jul	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
12-Jul	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	P	0.0	0.0	0.0	P	0.0	0.0	0.0	0.0	0.00	0.00
13-Jul	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
14-Jul	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
15-Jul	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
16-Jul	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
17-Jul	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
18-Jul	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
19-Jul	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
20-Jul	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
21-Jul	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
22-Jul	0.0	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
23-Jul	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
24-Jul	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
25-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
26-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
27-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
28-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
29-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.02	0.36
30-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	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	0.03	0.45
31-Jul	0.0	0.0	0.0	0.0	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
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.02 0.01 0.00 0.00 0.00 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																								Diurnal Average		
0.00 0.00 0.00 0.01 0.01 0.01 0.01 0.01 0.01 0.45 0.20 0.00 0.00 0.07 0.36 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00																								Diurnal Maximum		
C - Calibration P - Power Failure A - Automated Daily Zero Span																										

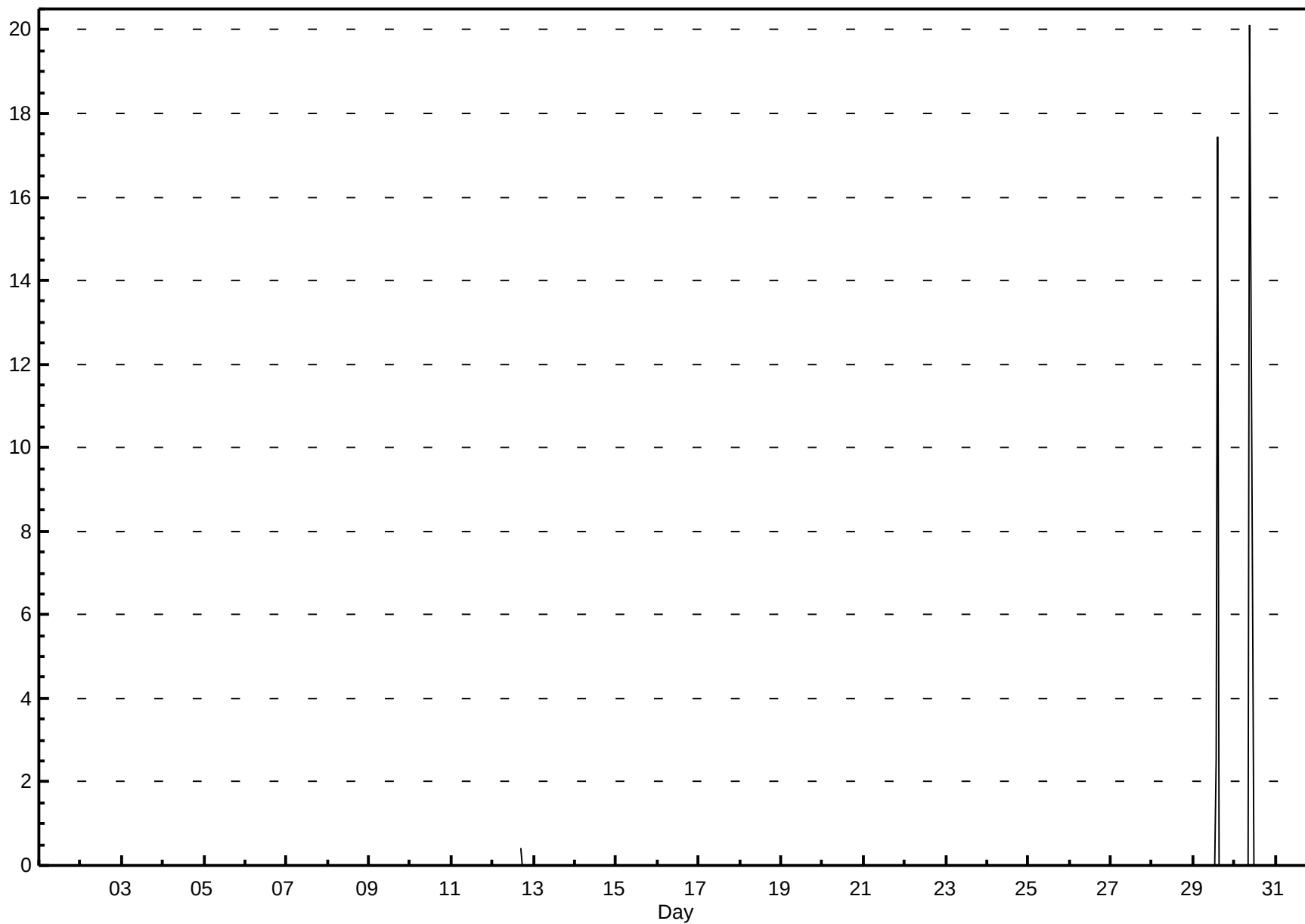


Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - July 2014

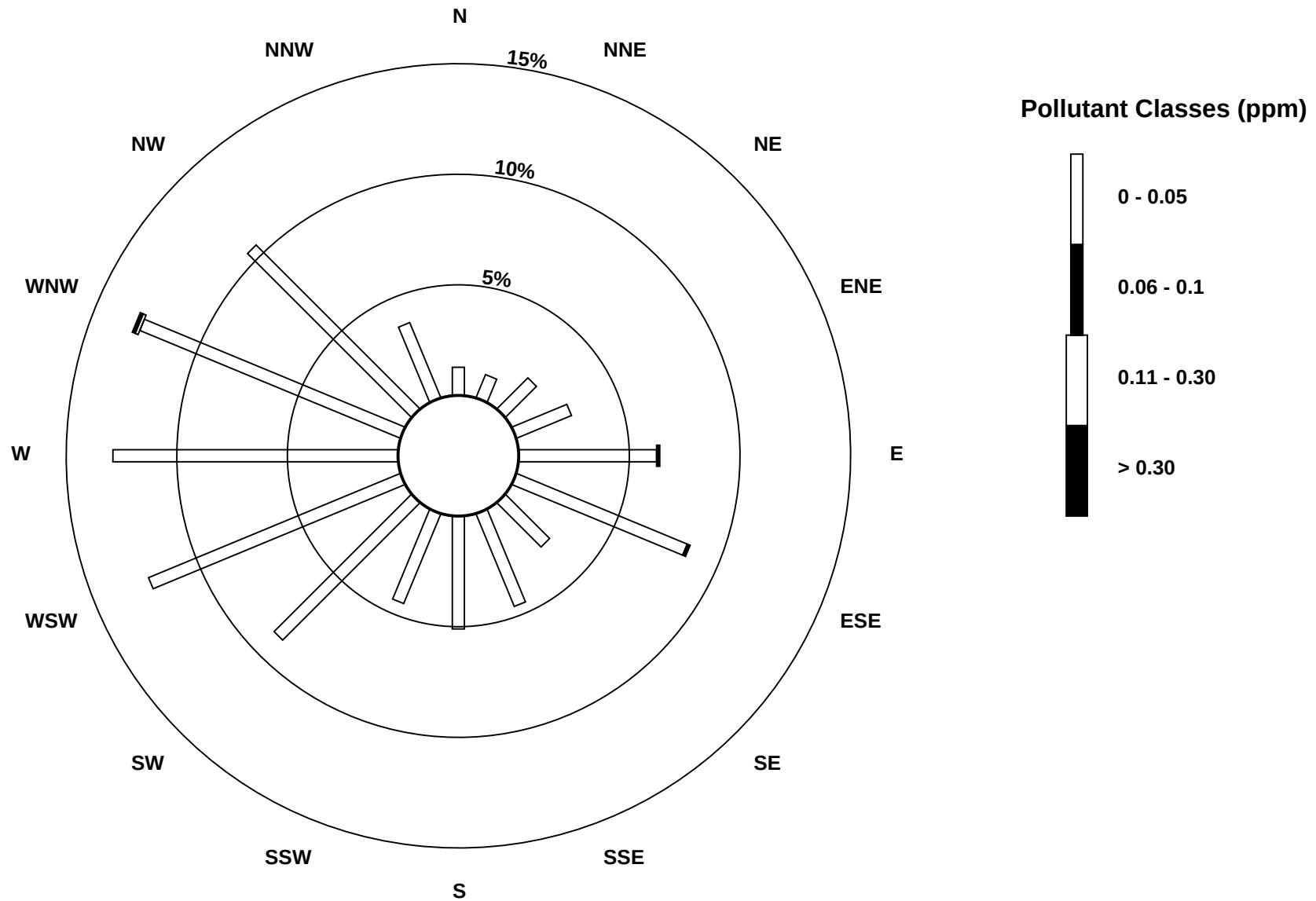
Maximum Value: 20.11 ppm on Jul 30 10:00																					Maximum Daily Average: 1.18 ppm on Jul 30				Hours in Service: 744	
Minimum Value: 0.0 ppm on Jul 1 04:00																					Minimum Daily Average: 0.00 ppm on Jul 21				Hours of Data: 706	
Maximum Diurnal Average: 0.69 ppm at hour 10																					Minimum Diurnal Average: 0.00 ppm at hour 19				Hours of Missing Data: 38	
Monthly Average: 0.068 ppm																					Percentiles: P ₁ = 0.00 P ₁₀ = 0.00 Q ₁ = 0.00 Median = 0.00 Q ₃ = 0.00 P ₉₀ = 0.00 P ₉₉ = 0.01				Hours of Calibration: 36	
																					Percent Operational Time: 99.7					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	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
2-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
3-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
4-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.00	0.01
5-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
6-Jul	0.0	0.0	0.0	0.0	0.0	0.0	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
7-Jul	0.0	0.0	0.0	0.0	0.0	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
8-Jul	0.0	0.0	0.0	0.0	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
9-Jul	0.0	0.0	0.0	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
10-Jul	0.0	0.0	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
11-Jul	0.0	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
12-Jul	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	P	0.4	0.0	0.0	P	0.0	0.0	0.0	0.0	0.02	0.42
13-Jul	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
14-Jul	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
15-Jul	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
16-Jul	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
17-Jul	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
18-Jul	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
19-Jul	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
20-Jul	0.0	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
21-Jul	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
22-Jul	0.0	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
23-Jul	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
24-Jul	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
25-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
26-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
27-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
28-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
29-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	17.4	0.0	0.0	0.0	A	0.0	0.0	0.0	0.0	0.0	0.87	17.44
30-Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.1	6.9	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	1.18	20.11
31-Jul	0.0	0.0	0.0	0.0	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
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.69 0.24 0.00 0.00 0.08 0.58 0.00 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00																									Diurnal Average	
0.00 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 20.11 6.94 0.00 0.00 2.52 17.44 0.00 0.42 0.00 0.00 0.00 0.00 0.00 0.00 0.00																									Diurnal Maximum	
C - Calibration P - Power Failure A - Automated Daily Zero Span																										

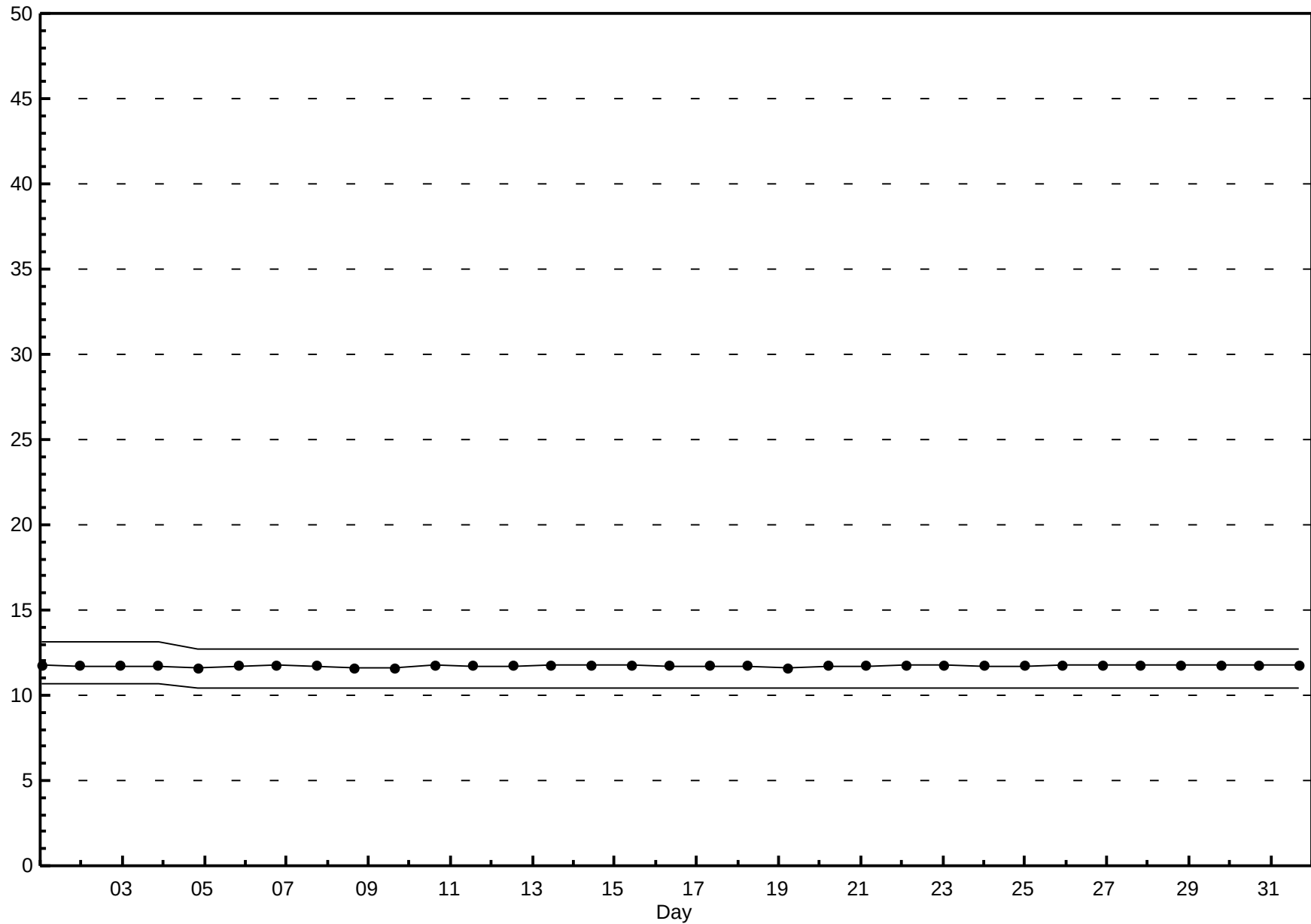


Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - July 2014



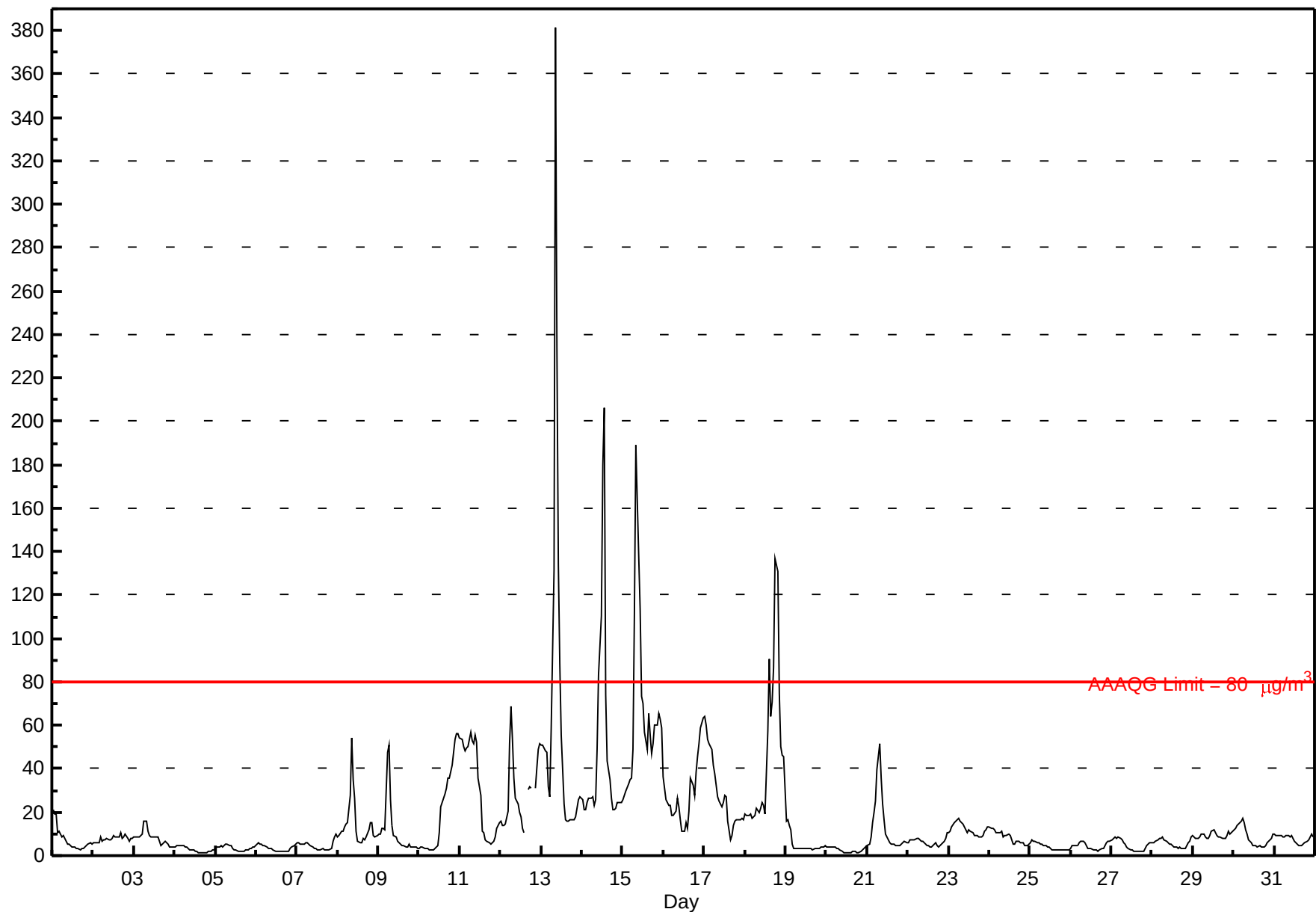


Hourly Averages

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

Henry Pirker - July 2014

Number of Exceedences: 1-hr: 17 24-hr: 5 Maximum Value: 381.7 µg/m³ on Jul 13 09:00 Minimum Value: 1 µg/m³ on Jul 4 18:00 Maximum Diurnal Average: 32.0 µg/m³ at hour 9 Monthly Average: 16.71 µg/m³																								Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7		
Maximum Daily Average: 65.2 µg/m³ on Jul 15 Minimum Daily Average: 2.6 µg/m³ on Jul 20 Minimum Diurnal Average: 11.7 µg/m³ at hour 16 Percentiles: P ₁ = 1.5 P ₁₀ = 2.8 Q ₁ = 4.3 Median = 7.8 Q ₃ = 16.7 P ₉₀ = 47.8 P ₉₉ = 135.5																										
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-Jul	21	19	19	11	11	9	9	8	7	5	5	4	4	4	3	3	3	3	3	4	4	5	6	5	7.3	21.0
2-Jul	6	6	6	6	8	7	7	7	8	7	7	8	9	9	9	9	11	8	9	10	8	6	8	8	7.9	10.9
3-Jul	9	9	8	9	9	10	16	16	11	9	8	8	9	8	8	6	5	5	6	6	5	4	4	4	8.1	15.9
4-Jul	4	5	5	5	4	4	4	4	3	3	3	2	2	2	2	2	1	1	1	2	2	2	2	3	2.9	4.9
5-Jul	3	4	4	4	4	5	5	5	5	5	3	3	2	2	2	2	2	2	2	3	3	3	4	4	3.5	5.5
6-Jul	5	6	5	5	5	5	4	3	3	4	3	2	2	2	2	2	2	2	2	2	3	4	5	6	3.5	5.7
7-Jul	6	6	5	5	5	6	6	6	5	4	3	3	3	3	3	3	3	3	3	3	4	6	9	10	4.6	10.1
8-Jul	9	9	11	12	13	15	15	28	54	35	27	11	7	6	6	8	8	8	12	15	15	9	8	9	14.6	54.4
9-Jul	10	10	12	13	12	48	51	26	14	9	9	7	6	5	5	4	4	4	5	4	4	4	4	3	11.4	50.7
10-Jul	4	4	4	4	3	3	3	3	3	3	4	5	10	22	27	29	31	36	36	42	48	54	56	56	20.3	56.1
11-Jul	54	53	50	48	49	50	57	53	52	55	52	36	28	11	11	7	6	6	6	6	6	9	13	15	30.6	57.1
12-Jul	16	14	14	15	20	51	69	54	35	27	24	20	18	12	10	P	30	32	31	P	31	40	49	52	30.2	69.0
13-Jul	51	51	48	48	32	27	58	132	382	234	134	89	56	24	17	16	16	17	17	16	18	22	25	27	64.8	381.7
14-Jul	26	21	21	25	26	27	27	23	26	49	83	110	180	206	74	44	35	26	21	21	22	24	24	25	48.6	206.3
15-Jul	26	28	30	33	35	36	49	111	189	138	114	73	70	57	49	65	56	47	52	60	60	65	63	59	65.2	188.9
16-Jul	37	26	25	23	23	18	19	21	27	23	16	11	11	15	13	20	36	32	28	38	46	51	59	63	28.4	63.2
17-Jul	64	60	54	51	49	42	38	32	27	25	23	25	28	27	16	7	9	14	16	16	17	17	17	17	28.8	64.3
18-Jul	19	18	18	19	17	18	18	22	20	22	24	23	19	57	91	64	70	86	137	131	75	50	46	46	46.4	136.8
19-Jul	16	16	14	12	5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	5.3	16.3
20-Jul	4	4	4	4	4	4	3	3	3	2	2	1	1	1	1	2	2	2	2	2	2	3	4	4	2.6	4.1
21-Jul	4	5	8	15	20	25	40	52	35	24	16	10	7	6	5	5	5	5	4	4	5	6	6	6	13.3	51.9
22-Jul	6	7	8	8	8	8	8	7	7	6	6	5	5	4	4	5	6	5	4	4	5	7	8	10	6.2	10.4
23-Jul	10	11	13	15	16	16	17	16	15	14	12	11	12	11	10	9	9	9	8	9	9	11	12	13	12.1	17.0
24-Jul	13	13	13	12	11	11	11	11	9	9	9	10	9	7	5	5	6	6	6	6	6	5	5	5	8.4	12.9
25-Jul	6	7	7	6	6	6	6	5	5	4	4	4	3	3	3	3	2	2	2	3	2	3	3	3	4.0	7.0
26-Jul	4	5	5	5	5	6	7	7	6	5	3	3	3	3	2	2	2	3	3	3	5	6	6	7	4.4	6.7
27-Jul	7	8	8	8	8	8	7	6	5	4	4	3	2	2	2	2	2	2	2	2	4	5	6	6	4.7	8.3
28-Jul	6	6	6	7	8	8	8	7	7	6	6	5	5	4	4	4	4	3	4	3	4	6	6	8	5.7	8.5
29-Jul	9	8	8	8	8	10	10	8	8	8	9	11	12	11	9	8	8	8	8	8	9	11	10	11	9.1	11.6
30-Jul	12	13	14	15	16	17	15	12	10	7	6	5	4	4	4	4	4	4	4	5	6	7	8	10	8.6	17.3
31-Jul	10	9	9	9	9	8	9	10	9	9	9	8	6	5	5	5	5	5	6	6	7	9	10	9	7.8	10.0
15.4 14.8 14.7 14.8 14.6 16.4 19.3 22.6 32.0 24.4 20.3 16.7 17.3 17.4 13.1 11.7 12.5 12.6 14.3 14.6 14.2 14.8 15.8 16.4																								Diurnal Average		
64.3 60.1 53.7 51.3 49.3 51.3 69.0 131.7 381.7 234.3 134.0 110.4 180.0 206.3 90.6 65.4 70.5 86.4 136.8 130.9 74.6 65.4 63.0 63.2																								Diurnal Maximum		
P - Power Failure																										
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

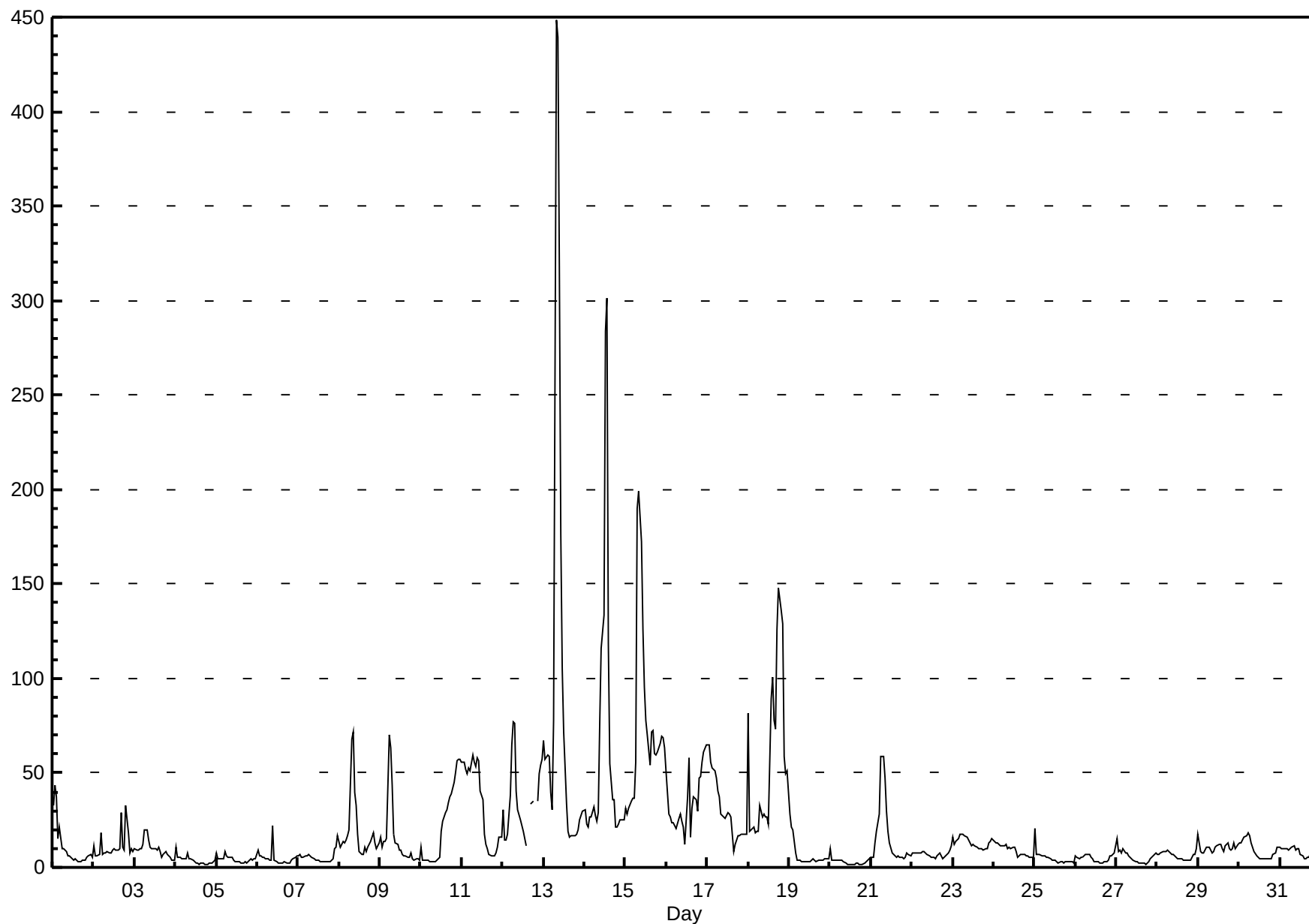
Henry Pirker - July 2014

Maximum Value: 448.4 µg/m³ on Jul 13 08:00																					Maximum Daily Average: 91.1 µg/m³ on Jul 13					Hours in Service: 744	
Minimum Value: 2 µg/m³ on Jul 4 18:00																					Minimum Daily Average: 3.1 µg/m³ on Jul 20					Hours of Data: 742	
Maximum Diurnal Average: 39.6 µg/m³ at hour 8																					Minimum Diurnal Average: 13.7 µg/m³ at hour 16					Hours of Missing Data: 2	
Monthly Average: 20.51 µg/m³																					Percentiles: P ₁ = 1.7 P ₁₀ = 3.2 Q ₁ = 4.9 Median = 9.1 Q ₃ = 20.0 P ₉₀ = 52.3 P ₉₉ = 181.5					Hours of Calibration: 0	
																					Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jul	33	43	37	15	21	10	10	9	8	6	6	5	4	4	4	3	3	3	4	4	6	6	7	6	10.7	43.2	
2-Jul	11	6	6	7	18	7	8	8	8	8	8	9	10	9	9	10	29	11	9	33	18	7	10	8	11.2	32.9	
3-Jul	10	9	9	10	10	12	20	20	15	11	10	10	10	9	10	8	5	7	9	7	6	5	4	4	9.6	19.8	
4-Jul	11	5	5	5	5	5	5	8	5	4	4	3	2	2	2	2	2	2	2	2	2	2	3	4	3.8	10.6	
5-Jul	8	5	4	5	5	9	6	6	6	6	4	3	3	3	2	2	3	3	3	3	4	4	5	5	4.4	8.7	
6-Jul	9	6	6	6	5	5	5	4	3	22	3	3	3	2	2	2	3	2	2	2	4	5	6	6	4.8	22.0	
7-Jul	6	7	6	5	6	6	7	6	6	4	4	3	3	3	3	3	3	3	3	3	5	10	11	17	5.5	16.6	
8-Jul	14	11	14	13	15	17	20	68	72	39	32	17	9	7	7	11	9	11	14	16	18	13	10	13	19.5	72.0	
9-Jul	16	11	14	14	15	70	64	44	17	13	12	9	9	7	6	6	5	5	8	5	4	5	4	4	15.2	69.8	
10-Jul	11	4	4	4	4	3	3	3	3	3	4	6	19	24	29	31	34	37	39	45	50	56	57	57	22.1	57.3	
11-Jul	55	56	52	49	52	51	59	56	53	58	56	41	36	17	12	10	7	6	6	6	7	11	16	16	32.8	59.2	
12-Jul	31	15	15	17	38	65	77	76	41	30	26	22	19	15	12	P	33	35	35	P	35	50	54	57	36.2	76.9	
13-Jul	67	57	59	59	40	31	78	448	440	317	176	105	72	34	19	16	17	17	17	17	20	25	27	30	91.1	448.4	
14-Jul	30	23	22	26	27	32	28	25	29	76	116	134	284	301	119	55	36	36	22	22	23	25	25	25	64.1	301.1	
15-Jul	32	28	31	35	36	37	56	190	199	172	126	95	77	70	54	72	72	61	60	61	66	69	69	63	76.3	199.0	
16-Jul	51	28	27	24	24	22	21	26	28	24	21	12	37	58	16	31	37	36	29	47	48	56	61	65	34.6	64.6	
17-Jul	65	65	56	53	51	47	41	37	28	27	26	28	29	28	26	8	12	15	17	17	17	17	18	18	31.1	65.2	
18-Jul	82	19	20	21	18	19	19	33	27	28	27	26	23	90	101	78	73	126	148	136	129	59	50	51	58.4	148.2	
19-Jul	28	22	20	14	8	4	3	3	3	3	3	3	3	3	4	3	3	4	4	4	4	4	4	4	6.7	28.3	
20-Jul	10	4	4	4	4	4	4	3	3	3	2	2	2	2	2	2	2	2	2	2	3	3	4	4	3.1	9.9	
21-Jul	5	5	13	19	23	28	59	59	47	30	19	13	8	7	6	6	6	5	5	5	5	7	7	6	16.4	59.0	
22-Jul	8	7	8	8	8	8	8	8	7	7	6	5	5	5	4	6	8	6	4	5	6	8	9	12	7.0	11.6	
23-Jul	16	12	14	16	18	17	18	17	16	14	13	11	12	12	11	10	10	10	9	10	10	13	14	15	13.2	17.7	
24-Jul	15	13	13	12	11	11	11	12	10	10	10	11	11	8	5	6	7	7	7	6	6	5	5	5	9.1	14.8	
25-Jul	20	7	7	7	6	6	6	5	5	5	4	4	4	3	3	3	3	3	3	3	3	3	3	3	4.9	20.4	
26-Jul	6	5	5	5	5	6	7	7	7	5	4	3	3	3	3	3	2	3	3	4	6	6	7	7	4.9	7.4	
27-Jul	15	9	9	8	10	8	8	6	6	5	4	3	3	2	2	2	2	2	2	3	5	6	7	8	5.6	15.3	
28-Jul	7	7	8	8	9	9	9	8	7	7	6	6	5	5	4	4	4	4	4	4	5	7	7	10	6.3	9.9	
29-Jul	17	8	8	8	9	11	10	9	8	8	11	12	12	12	10	9	12	13	10	9	10	13	10	12	10.4	17.2	
30-Jul	13	13	15	16	17	18	17	13	11	9	6	5	5	5	5	5	4	4	4	5	6	8	10	11	9.4	18.3	
31-Jul	10	10	10	10	10	9	10	11	12	9	10	10	7	6	5	5	5	5	7	7	8	9	10	9	8.5	11.6	
23.0 16.8 16.7 16.2 17.0 18.9 22.4 39.6 36.5 31.1 24.5 20.0 23.5 24.4 16.0 13.7 14.6 15.5 15.8 16.3 17.4 16.7 17.2 17.9																									Diurnal Average		
81.5 65.0 59.1 59.1 52.4 69.8 78.0 448.4 439.5 317.2 175.9 133.6 283.9 301.1 118.5 77.6 73.2 125.6 148.2 135.8 128.9 69.3 68.9 64.6																									Diurnal Maximum		
P - Power Failure																											

Hourly Maximums

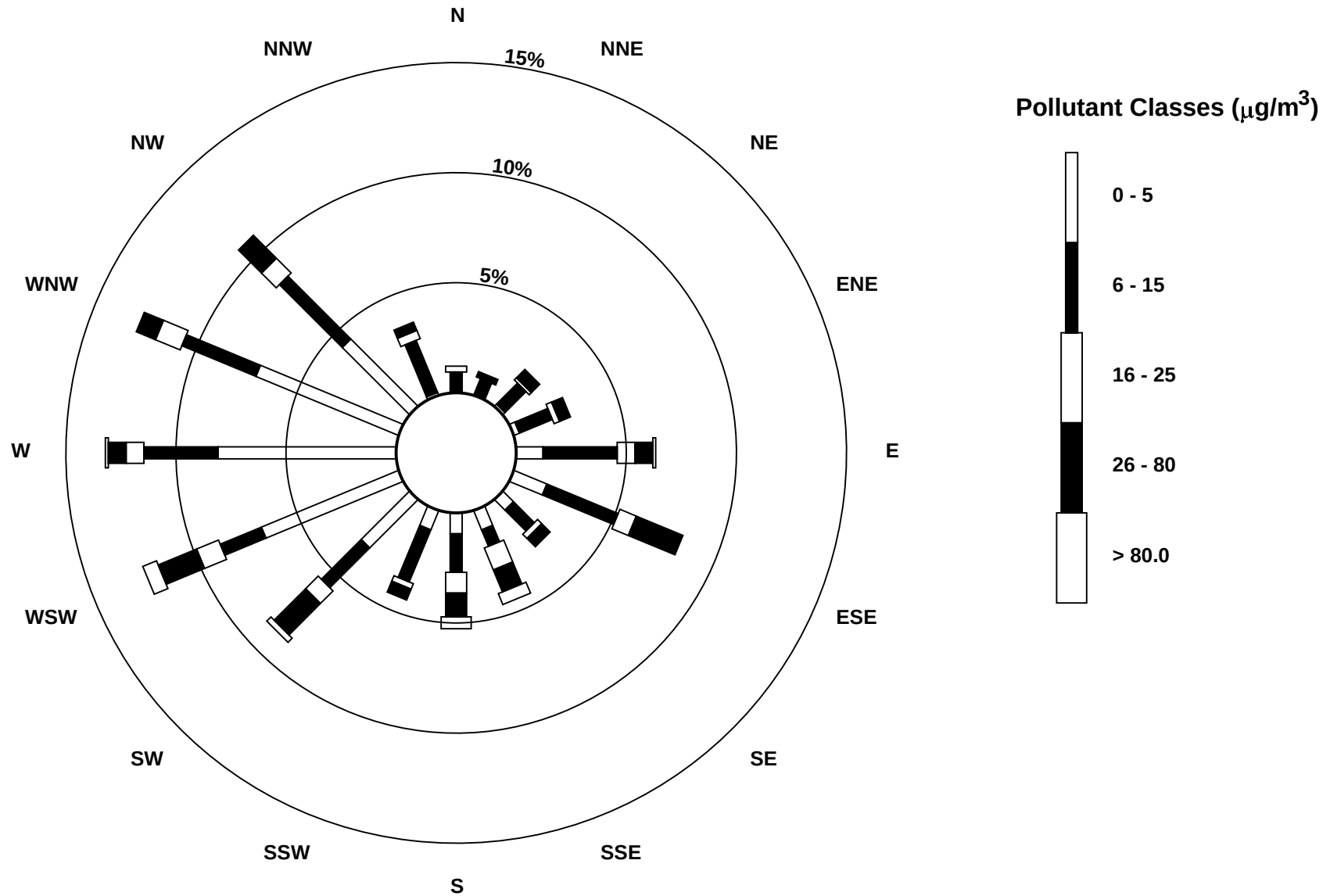
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Henry Pirker - July 2014



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Henry Pirker - July 2014



Hourly Averages

External Temperature (ET) - °C

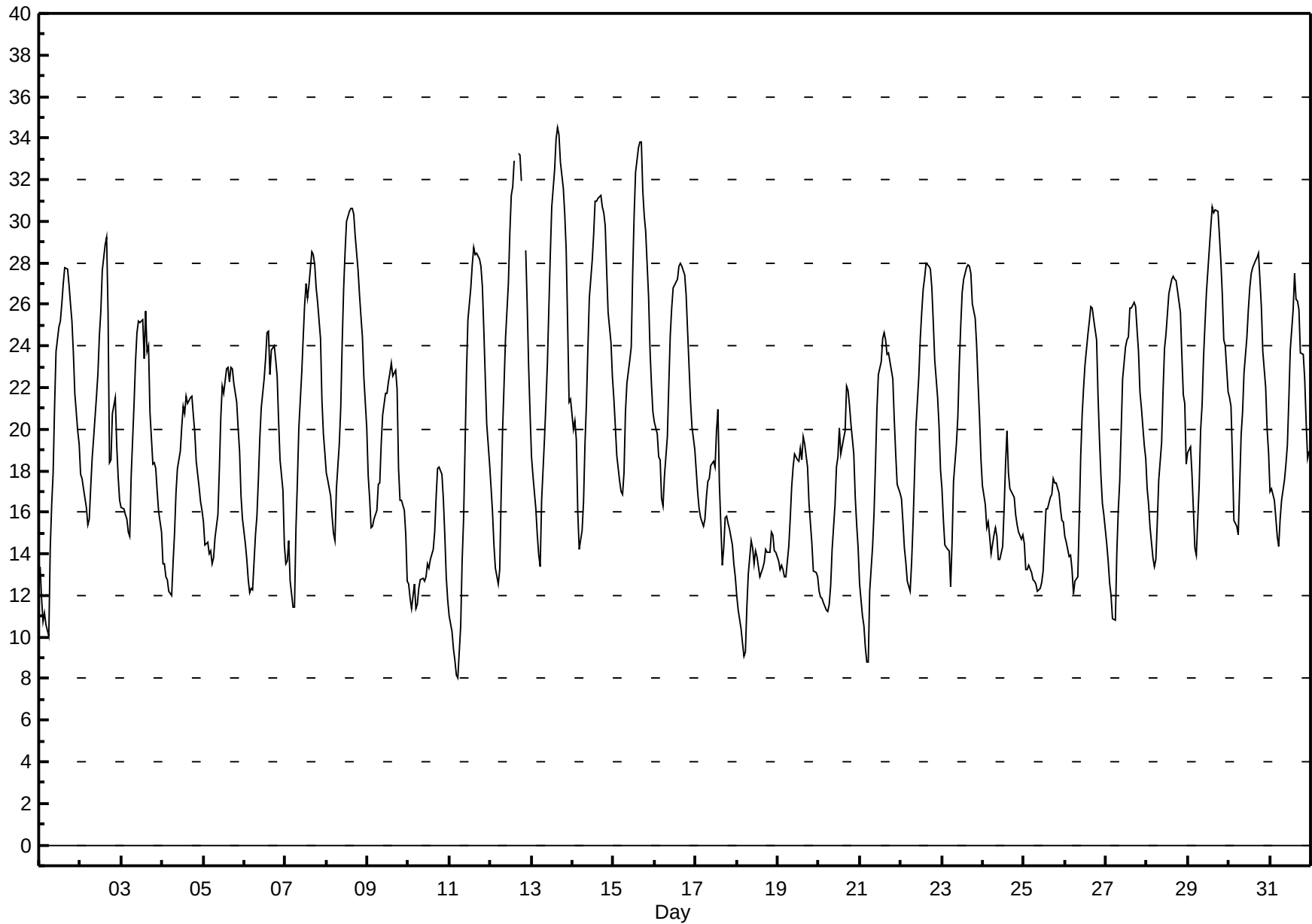
Henry Pirker - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 34.5 °C on Jul 13 16:00 Maximum Daily Average: 24.8 °C on Jul 15																								Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7		
Minimum Value: 8 °C on Jul 11 06:00 Maximum Diurnal Average: 25.2 °C at hour 15 Monthly Average: 19.65 °C												Minimum Daily Average: 12.9 °C on Jul 18 Minimum Diurnal Average: 13.0 °C at hour 6 Percentiles: P ₁ = 9.4 P ₁₀ = 12.9 Q ₁ = 15.0 Median = 18.7 Q ₃ = 24.0 P ₉₀ = 27.7 P ₉₉ = 33.0														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	13	12	11	11	11	10	14	16	18	21	24	25	25	26	27	28	27	26	25	24	22	20	19	20.1	27.8	
2-Jul	18	18	17	16	15	16	17	19	20	22	23	25	26	28	29	29	26	18	19	21	21	19	18	17	20.6	29.3
3-Jul	16	16	16	16	15	15	18	21	23	25	25	25	25	23	26	24	24	21	18	18	18	17	16	15	19.9	25.7
4-Jul	14	14	13	13	12	12	14	15	17	18	19	20	21	21	22	21	21	22	21	20	18	17	17	16	17.3	21.6
5-Jul	16	14	15	14	14	14	14	15	16	18	21	22	22	23	23	22	23	23	22	21	20	19	17	16	18.4	23.0
6-Jul	15	14	13	12	12	12	15	16	18	20	21	22	23	25	25	23	24	24	23	23	20	19	17	14	18.7	24.7
7-Jul	13	14	15	13	11	11	15	17	20	23	24	26	27	26	27	29	28	28	27	26	24	21	20	19	21.1	28.6
8-Jul	18	18	17	16	15	15	17	19	21	24	27	29	30	31	31	31	30	29	28	26	25	24	23	20	23.4	30.6
9-Jul	18	17	15	15	16	16	17	17	19	21	22	22	22	23	23	23	23	22	18	17	17	16	15	13	18.6	23.2
10-Jul	13	12	11	13	11	12	12	13	13	13	13	14	13	14	14	15	17	18	18	18	17	15	13	12	13.8	18.2
11-Jul	11	10	9	9	8	8	11	14	16	19	23	25	27	28	29	28	28	28	28	27	25	22	20	18	19.7	28.7
12-Jul	17	16	14	13	13	13	17	20	22	24	27	29	31	32	33	P	33	33	32	P	29	26	23	21	23.6	33.2
13-Jul	19	18	16	15	14	13	17	20	21	23	26	28	31	32	34	35	34	33	32	30	29	25	21	21	24.5	34.5
14-Jul	20	20	19	16	14	15	17	19	21	24	26	28	29	31	31	31	31	31	30	30	28	26	24	23	24.4	31.3
15-Jul	21	20	19	17	17	17	18	21	22	23	24	27	30	32	34	34	34	31	30	30	26	24	22	21	24.8	33.8
16-Jul	20	20	19	19	17	16	18	20	22	24	26	27	27	27	28	28	28	27	26	25	23	21	20	19	22.8	28.0
17-Jul	18	17	16	16	15	16	17	17	18	18	18	18	20	21	17	13	14	16	16	15	15	14	14	13	16.4	21.0
18-Jul	12	11	10	10	9	9	11	13	15	14	14	14	14	13	13	13	14	14	14	14	15	15	14	14	12.9	15.0
19-Jul	14	13	13	13	13	13	14	16	17	18	19	19	18	19	19	20	19	18	16	15	14	13	13	13	15.9	19.6
20-Jul	12	12	12	12	11	11	12	13	14	16	18	19	20	19	20	20	22	22	21	20	19	17	15	14	16.3	22.1
21-Jul	13	11	11	10	9	9	12	14	16	18	21	23	23	24	25	24	24	24	23	22	20	19	17	17	17.8	24.7
22-Jul	17	16	14	14	13	12	14	15	18	20	23	24	26	27	27	28	28	28	27	25	23	22	20	18	20.7	28.0
23-Jul	17	16	14	14	14	12	15	18	19	21	23	25	27	27	28	28	28	27	26	25	24	22	21	19	21.2	27.9
24-Jul	17	16	15	16	15	14	15	15	15	14	14	14	16	18	20	18	17	17	17	16	15	15	15	15	15.8	19.9
25-Jul	14	13	13	13	13	13	13	13	12	12	13	13	15	16	16	17	17	18	17	17	17	16	16	16	14.7	17.6
26-Jul	15	15	14	14	13	12	13	13	16	19	21	22	23	25	25	26	26	25	24	22	20	18	16	16	18.8	25.9
27-Jul	14	14	13	12	11	11	14	16	17	20	22	24	24	24	26	26	26	26	25	24	22	21	19	19	19.6	26.1
28-Jul	17	16	15	14	13	14	16	18	19	22	24	25	26	27	27	27	27	27	27	26	24	22	21	18	21.3	27.4
29-Jul	19	19	18	16	14	14	17	20	21	23	25	27	29	30	31	30	31	30	29	28	26	24	24	22	23.7	30.7
30-Jul	22	21	19	16	15	15	17	20	21	23	24	26	27	27	28	28	28	28	27	26	24	22	20	19	22.6	28.4
31-Jul	17	17	17	16	15	14	16	17	18	18	19	21	24	26	27	26	26	26	24	24	22	20	19	19	20.3	27.5
16.1 15.4 14.6 13.9 13.2 13.0 15.0 16.7 18.2 20.0 21.5 22.8 23.9 24.7 25.2 24.8 25.1 24.6 23.6 22.5 21.5 19.8 18.4 17.2																								Diurnal Average		
21.5 21.1 19.5 18.5 17.0 16.9 17.9 21.2 23.3 24.6 27.0 29.4 31.2 32.5 33.9 34.5 34.2 33.2 31.9 30.4 28.6 26.0 24.1 22.5																								Diurnal Maximum		
P - Power Failure																										

Hourly Averages

External Temperature (ET) - °C

Henry Pirker - July 2014



Hourly Averages

Relative Humidity (RH) - %

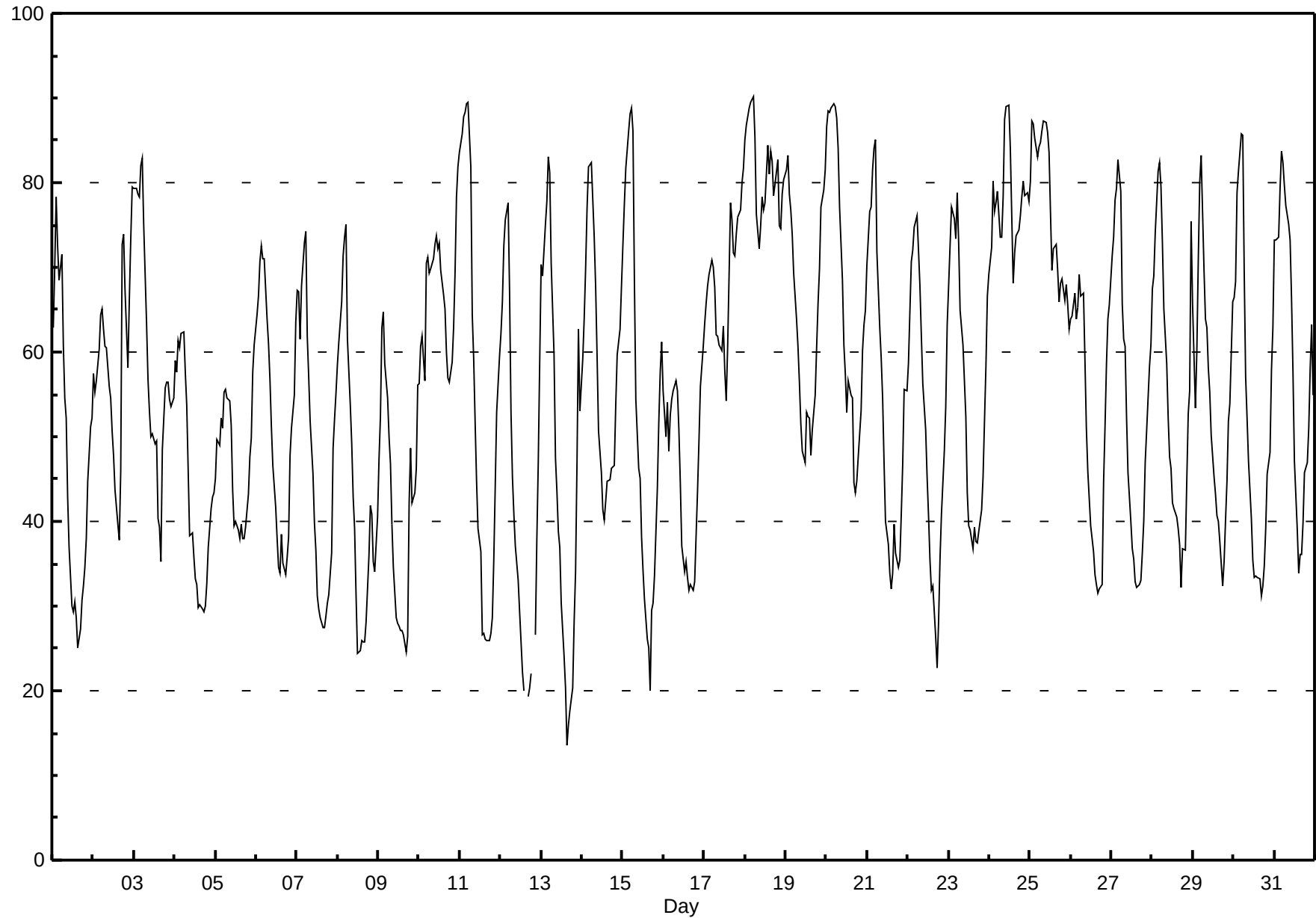
Henry Pirker - July 2014

Number of Exceedences (AAAQO): Maximum Value: 90.2 % on Jul 18 06:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 81.4 % on Jul 18				Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7			
Minimum Value: 14 % on Jul 13 16:00 Maximum Diurnal Average: 75.7 % at hour 6 Monthly Average: 55.92 %										Minimum Daily Average: 41.9 % on Jul 9 Minimum Diurnal Average: 39.2 % at hour 17 Percentiles: P ₁ = 20.3 P ₁₀ = 32.1 Q ₁ = 40.0 Median = 56.1 Q ₃ = 71.0 P ₉₀ = 80.1 P ₉₉ = 88.9																	
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-Jul	63	70	78	73	68	72	61	55	52	43	37	30	29	30	29	25	27	31	32	35	38	45	51	52	46.9	78.3	
2-Jul	57	55	57	60	64	65	63	61	61	56	55	51	48	44	40	38	46	73	74	67	58	66	73	79	58.8	79.5	
3-Jul	79	79	79	78	82	83	75	63	57	53	50	50	49	49	40	39	35	49	56	56	56	54	53	55	59.3	83.0	
4-Jul	59	58	61	60	62	62	58	54	46	38	39	36	33	33	30	30	30	29	30	33	37	42	43	43	43.6	62.3	
5-Jul	45	50	49	52	51	55	56	55	54	51	44	39	40	39	38	40	38	38	39	43	48	50	58	61	47.2	60.8	
6-Jul	64	67	71	73	71	71	64	61	57	51	47	42	38	35	34	38	35	34	36	38	48	51	55	63	51.8	72.5	
7-Jul	67	67	62	68	73	74	62	57	52	46	40	37	31	30	29	27	27	29	30	31	36	49	52	55	47.1	74.3	
8-Jul	58	61	66	71	74	75	61	54	49	43	39	31	24	25	26	26	26	28	36	42	41	35	34	40	44.4	75.1	
9-Jul	47	52	63	65	59	55	50	47	40	35	29	28	28	27	27	27	25	26	42	49	42	43	46	56	41.9	64.8	
10-Jul	56	61	62	57	70	71	69	70	71	73	74	72	73	70	67	65	60	57	57	59	63	69	78	82	66.9	81.9	
11-Jul	84	86	88	88	89	90	82	64	59	52	45	39	36	27	27	26	26	26	27	29	35	44	53	60	53.4	89.6	
12-Jul	62	66	72	76	78	67	53	45	41	37	33	29	26	22	20	P	19	20	22	P	27	38	47	59	43.6	77.6	
13-Jul	70	69	75	78	83	81	71	60	47	43	39	37	30	24	20	14	16	18	20	28	34	47	63	53	46.7	83.1	
14-Jul	59	64	70	77	82	82	78	74	68	60	51	46	41	40	42	45	45	46	46	47	54	60	63	68	58.6	82.5	
15-Jul	73	78	82	86	88	89	86	68	54	46	45	38	34	31	26	25	20	29	30	34	44	52	58	61	53.2	88.9	
16-Jul	55	50	54	48	53	54	55	57	55	51	45	37	34	35	33	32	33	32	33	38	44	49	56	61	45.6	60.6	
17-Jul	63	66	68	69	71	70	68	62	62	61	60	63	58	54	61	78	76	72	71	74	76	77	80	82	68.3	81.7	
18-Jul	85	87	89	89	90	90	85	76	72	75	78	77	78	84	81	84	83	79	80	83	75	74	79	80	81.4	90.2	
19-Jul	82	83	79	77	74	69	64	61	57	51	48	47	53	52	52	48	51	55	60	66	70	77	79	82	64.0	83.2	
20-Jul	87	88	88	89	89	89	88	84	77	69	61	57	53	57	55	55	45	43	45	48	53	60	63	65	66.9	89.3	
21-Jul	70	77	77	82	84	85	72	63	59	55	47	40	37	34	32	34	40	36	35	36	41	47	56	55	53.8	85.1	
22-Jul	59	65	71	72	75	76	72	68	62	56	51	45	41	35	32	32	26	23	28	36	41	48	54	63	51.3	76.2	
23-Jul	68	73	77	76	73	79	73	65	61	57	52	43	40	39	37	39	38	37	39	41	45	52	58	67	55.4	78.8	
24-Jul	69	72	80	77	78	79	74	74	78	87	89	89	84	76	68	72	74	74	76	78	80	78	79	78	77.6	89.1	
25-Jul	80	87	87	85	83	84	85	86	87	87	86	84	76	70	72	73	70	66	68	69	66	68	66	63	77.0	87.4	
26-Jul	64	64	67	64	65	69	67	67	59	51	46	43	39	37	34	33	32	32	33	45	51	59	64	66	52.0	69.2	
27-Jul	71	74	78	79	83	79	66	62	61	52	46	40	37	36	33	32	32	33	36	40	47	51	58	61	53.6	82.7	
28-Jul	68	69	74	81	82	80	73	65	59	52	48	46	42	41	40	39	37	32	37	37	45	53	55	75	55.5	82.3	
29-Jul	66	53	60	71	80	83	70	64	63	58	55	50	45	43	41	40	38	32	35	40	45	52	54	66	54.4	83.2	
30-Jul	66	68	79	81	86	86	70	57	52	47	40	35	33	33	33	33	31	32	35	39	46	48	58	63	52.2	85.8	
31-Jul	73	73	74	79	84	82	80	77	75	73	66	58	47	39	34	36	36	40	46	47	51	58	63	55	60.3	83.8	
66.8 68.8 72.1 73.6 75.6 75.7 69.3 63.7 59.6 55.1 51.0 47.1 43.9 41.6 39.8 40.8 39.2 40.4 43.1 46.8 49.6 54.7 59.6 63.5																								Diurnal Average			
86.6 88.5 88.9 89.5 89.9 90.2 87.7 86.1 87.4 87.4 88.9 89.1 84.0 84.5 81.1 83.7 82.6 78.6 79.9 82.8 80.2 78.4 80.0 81.9																								Diurnal Maximum			
P - Power Failure																											

Hourly Averages

Relative Humidity (RH) - %

Henry Pirker - July 2014



Hourly Averages

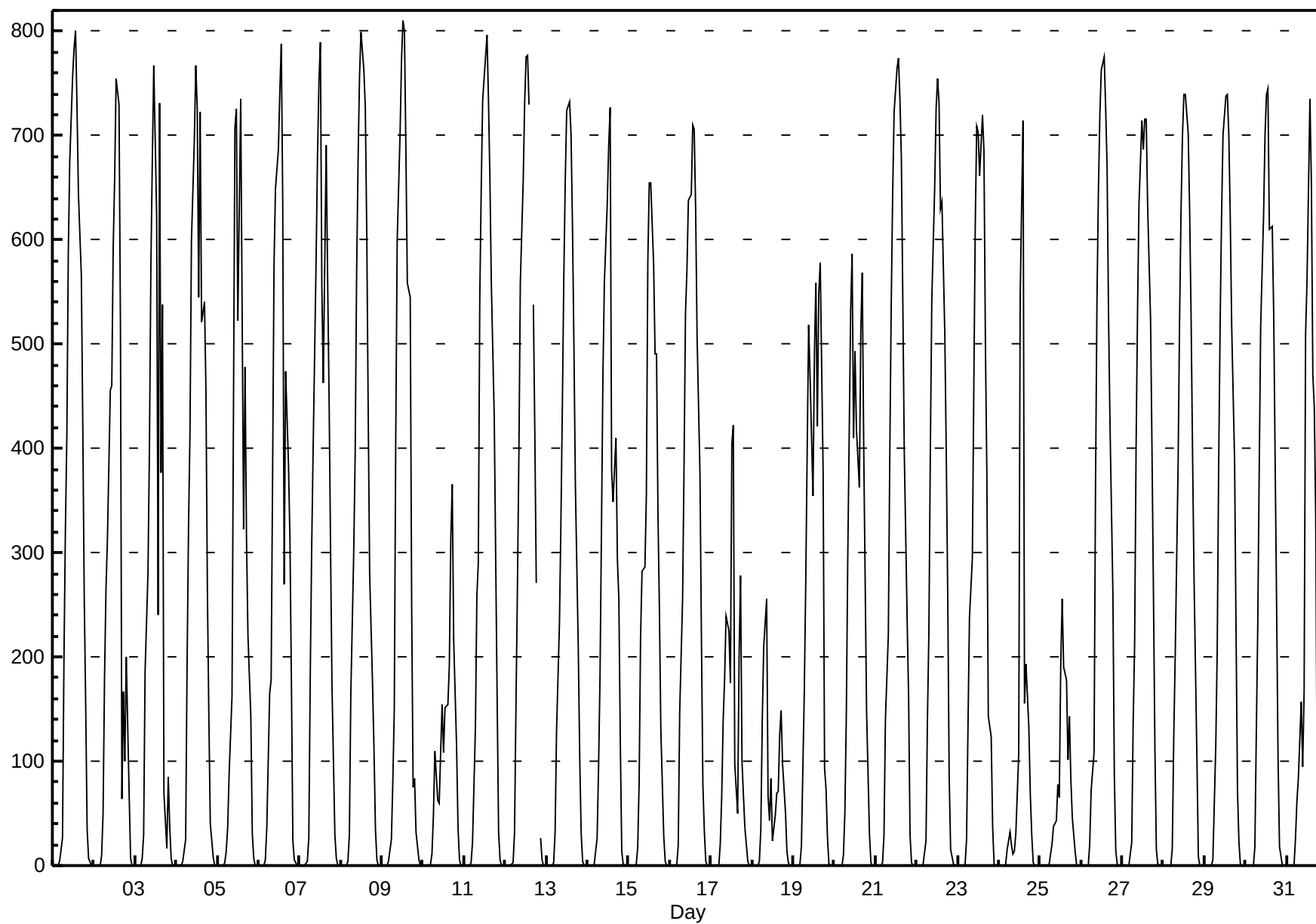
Solar Radiation (SR) - W/m²

Henry Pirker - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 810.7 W/m ² on Jul 9 13:00 Maximum Daily Average: 307.6 W/m ² on Jul 1																								Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7		
Minimum Value: 0 W/m ² on Jul 1 01:00 Maximum Diurnal Average: 628.6 W/m ² at hour 14 Monthly Average: 234.74 W/m ²												Minimum Daily Average: 60.8 W/m ² on Jul 25 Minimum Diurnal Average: 0.0 W/m ² at hour 1 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 106.6 Q ₃ = 462.6 P ₉₀ = 685.2 P ₉₉ = 787.0														
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-Jul	0	0	0	0	4	27	197	323	413	588	675	757	784	801	728	643	566	421	258	155	35	8	0	0	307.6	800.5
2-Jul	0	0	0	0	9	50	179	264	313	455	459	593	658	755	729	515	64	167	100	200	68	7	0	0	232.9	755.2
3-Jul	0	0	0	0	7	29	186	281	400	575	676	767	621	240	731	377	537	70	17	85	38	7	0	0	235.2	767.5
4-Jul	0	0	0	0	4	26	195	326	417	599	696	767	726	545	723	522	541	455	264	144	41	8	0	0	291.6	766.6
5-Jul	0	0	0	0	3	13	36	87	163	436	707	725	523	735	529	322	478	312	221	141	30	6	0	0	227.9	735.4
6-Jul	0	0	0	0	6	37	165	178	372	577	649	686	742	788	638	270	474	384	312	175	23	5	0	0	270.1	788.0
7-Jul	0	0	0	0	4	27	183	306	400	577	680	753	789	556	463	691	562	450	306	172	30	6	0	0	289.8	789.0
8-Jul	0	0	0	0	4	29	164	301	394	567	675	756	799	763	727	607	436	279	174	111	35	6	0	0	284.4	799.0
9-Jul	0	0	0	0	4	24	81	151	407	599	702	773	811	801	687	559	545	248	75	83	31	6	0	0	274.5	810.7
10-Jul	0	0	0	0	1	11	47	110	63	59	108	155	109	151	154	192	312	365	217	114	36	5	0	0	92.0	365.1
11-Jul	0	0	0	0	3	22	132	259	290	542	649	734	776	797	735	659	558	430	294	160	32	6	0	0	294.8	796.7
12-Jul	0	0	0	0	2	32	154	266	394	558	658	732	776	776	730	P	538	415	272	P	26	6	0	0	287.9	776.3
13-Jul	0	0	0	0	3	31	130	232	328	439	562	657	725	732	702	613	497	364	208	103	30	4	0	0	265.0	731.8
14-Jul	0	0	0	0	2	27	95	181	323	468	559	636	691	727	379	349	409	294	256	119	13	2	0	0	230.5	727.5
15-Jul	0	0	0	0	2	16	80	219	282	287	356	580	655	655	577	491	491	338	245	129	28	4	0	0	226.4	654.7
16-Jul	0	0	0	0	1	20	148	256	384	530	571	638	644	711	706	630	507	375	219	78	33	4	0	0	268.9	710.9
17-Jul	0	0	0	0	1	20	66	139	179	239	225	175	405	423	97	50	200	278	100	67	36	5	0	0	112.6	422.7
18-Jul	0	0	0	0	4	35	141	210	256	67	43	83	24	49	69	71	125	149	97	51	14	3	0	0	62.1	255.6
19-Jul	0	0	0	0	2	19	166	272	399	518	468	354	490	559	422	549	578	377	94	74	27	2	0	0	223.7	578.1
20-Jul	0	0	0	0	0	10	50	143	295	532	587	410	494	419	363	512	569	403	274	147	29	3	0	0	218.3	586.9
21-Jul	0	0	0	0	2	29	140	222	392	538	645	723	764	775	736	678	542	397	235	161	29	2	0	0	292.1	774.7
22-Jul	0	0	0	0	1	24	140	224	399	542	650	727	755	731	630	637	509	393	258	86	15	1	0	0	280.1	755.3
23-Jul	0	0	0	0	1	25	135	238	295	458	614	709	703	662	719	685	502	376	143	124	37	2	0	0	267.8	719.4
24-Jul	0	0	0	0	2	16	32	19	11	13	30	107	545	631	714	156	194	131	68	29	3	0	0	0	112.6	714.2
25-Jul	0	0	0	0	0	2	12	20	37	44	77	65	191	255	191	179	102	143	82	46	12	0	0	0	60.8	255.2
26-Jul	0	0	0	0	0	21	72	108	363	540	647	720	763	775	727	670	527	424	261	87	13	1	0	0	280.0	775.3
27-Jul	0	0	0	0	1	22	138	213	400	530	634	714	687	716	716	631	525	397	260	112	16	1	0	0	279.7	716.1
28-Jul	0	0	0	0	1	17	122	200	384	520	625	699	740	740	702	625	522	393	276	102	8	1	0	0	278.2	740.0
29-Jul	0	0	0	0	0	6	114	206	382	517	621	701	738	739	702	622	517	387	226	73	23	1	0	0	274.0	739.4
30-Jul	0	0	0	0	0	19	128	232	381	517	622	701	739	744	611	612	527	387	248	103	19	1	0	0	274.6	744.3
31-Jul	0	0	0	0	0	25	61	83	157	94	168	509	562	735	654	471	439	336	69	69	18	1	0	0	185.5	735.0
0.0 0.0 0.0 0.0 2.4 23.0 119.0 202.3 311.9 436.3 517.4 584.1 626.6 628.6 580.5 486.2 448.2 333.5 197.7 110.0 26.7 3.6 0.0 0.0																								Diurnal Average		
0.0 0.0 0.0 0.0 9.4 50.4 197.1 326.4 417.0 599.2 707.1 773.1 810.7 800.9 735.9 690.8 578.1 455.3 311.7 200.5 67.9 8.0 0.1 0.0																								Diurnal Maximum		
P - Power Failure																										

Hourly Averages

Solar Radiation (SR) - W/m²
Henry Pirker - July 2014



Hourly Averages

Wind Speed (km/h)
Wind Direction (deg)
Henry Pirkner - July 2014

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	3	3	2	3	3	3	2	4	5	5	2	3	4	6	4	3	4	7	8	9	6	7	7	8	1.3	9.0
Dir	305	287	256	241	310	311	267	229	245	254	272	145	157	130	157	197	116	105	85	89	54	58	64	68	104.4	88.7
2 Spd	7	9	8	7	7	7	8	10	9	10	11	14	17	16	15	15	4	21	11	10	8	6	3	10	5.3	20.9
Dir	67	85	92	94	92	101	111	109	103	126	108	101	109	112	107	105	234	328	330	346	9	343	286	295	83.4	328.1
3 Spd	7	9	2	2	3	2	2	1	4	4	8	12	14	13	14	19	15	14	8	5	5	10	15	14	6.6	19.1
Dir	358	242	4	123	120	173	154	290	268	266	301	311	310	297	321	311	314	295	281	291	222	242	253	254	289.0	310.9
4 Spd	9	9	9	13	11	12	15	17	17	21	19	17	16	19	23	23	22	19	22	19	14	10	7	8	15.0	23.4
Dir	234	228	250	242	250	243	243	255	245	254	268	272	264	266	257	255	261	249	260	273	288	277	236	231	256.5	257.1
5 Spd	7	7	4	4	6	3	4	8	10	12	15	13	12	15	9	8	10	15	18	17	13	11	5	7	9.0	18.3
Dir	284	306	252	200	230	240	220	240	237	233	256	269	254	298	301	243	227	268	265	262	266	262	281	277	260.2	265.1
6 Spd	6	7	7	7	8	7	6	13	16	19	19	17	17	15	15	16	17	17	17	12	10	9	5	3	11.5	19.3
Dir	272	243	263	268	278	287	254	262	266	277	276	292	288	297	298	297	296	291	307	297	290	282	271	295	284.1	276.7
7 Spd	3	6	9	6	6	4	9	10	9	8	7	8	9	9	4	5	7	7	8	6	3	1	3	2	5.4	10.4
Dir	291	270	269	285	291	295	259	270	277	286	287	290	278	302	297	305	315	314	324	321	325	131	146	136	288.6	270.3
8 Spd	3	3	2	2	3	4	7	9	10	8	7	7	6	8	8	9	9	7	7	6	5	6	6	3	4.9	9.8
Dir	107	127	125	164	180	241	266	255	245	238	236	221	236	228	199	223	219	206	176	176	201	246	235	302	222.1	245.4
9 Spd	1	1	3	3	5	7	11	12	26	27	30	32	32	28	21	22	27	25	23	8	13	22	14	11	16.0	31.7
Dir	101	32	193	203	263	296	260	263	260	258	262	267	285	279	289	273	262	262	307	308	280	267	257	244	270.5	267.0
10 Spd	13	15	16	17	15	16	22	27	25	26	24	25	24	21	21	18	18	14	10	7	5	4	4	5	14.9	26.7
Dir	250	245	246	274	290	270	282	290	291	294	296	293	298	310	313	314	309	306	305	296	268	211	187	176	288.0	290.0
11 Spd	5	4	4	4	4	4	4	5	7	8	5	6	7	6	7	9	7	7	5	3	1	4	4	3	2.9	9.0
Dir	166	169	163	173	169	176	229	232	236	236	253	291	295	281	290	310	318	335	311	332	206	172	185	186	253.3	309.7
12 Spd	4	4	4	2	3	2	2	3	6	7	5	4	2	8	4	P	2	3	4	P	4	5	2	2	1.8	8.4
Dir	165	169	195	236	320	318	315	239	234	238	222	262	271	204	233	P	334	24	71	P	110	154	139	105	215.8	204.0
13 Spd	1	1	1	1	0	0	1	4	6	6	5	4	4	5	4	5	5	8	6	5	5	1	2	1	2.1	7.9
Dir	122	119	216	276	297	274	298	275	238	231	218	182	165	166	162	162	185	172	178	117	112	359	356	61	182.9	171.6
14 Spd	2	5	5	1	1	0	1	2	3	3	3	4	7	6	5	6	8	8	9	8	6	7	5	3	3.8	9.2
Dir	115	113	122	281	348	131	221	161	162	179	169	176	164	166	127	114	105	116	101	103	99	100	97	77	122.5	101.0
15 Spd	1	3	2	1	1	2	2	3	7	7	6	5	5	4	4	6	11	16	12	4	1	2	4	4	3.1	16.3
Dir	79	121	163	232	238	235	233	238	248	257	240	237	235	218	239	254	274	319	330	319	253	197	160	167	260.6	318.7
16 Spd	6	6	4	5	3	5	8	10	9	7	3	6	7	9	10	9	8	4	6	7	9	8	8	7	2.5	10.0
Dir	251	285	285	229	236	332	294	317	315	304	348	49	45	27	10	36	35	19	73	95	98	111	113	115	17.2	317.0
17 Spd	6	7	7	6	6	7	8	11	11	13	11	10	9	7	10	5	15	13	14	9	7	5	4	3	2.6	15.2
Dir	97	114	110	103	81	50	66	37	49	78	85	92	109	79	341	28	276	296	297	300	285	260	229	245	41.7	276.0
18 Spd	3	2	2	2	4	4	3	4	6	5	2	1	5	3	3	4	3	5	6	8	9	5	4	7	2.8	9.3
Dir	229	205	206	155	163	178	131	133	118	175	256	254	270	312	83	112	132	161	152	183	217	233	190	208	181.3	216.9
19 Spd	12	11	13	13	12	16	16	18	20	23	21	22	19	20	21	19	21	18	14	12	9	7	8	7	13.2	23.1
Dir	238	217	223	227	246	254	253	264	268	283	290	281	313	314	314	311	317	324	310	310	324	303	296	297	285.5	282.5
20 Spd	6	5	8	9	7	6	6	6	7	8	7	5	3	7	7	6	9	10	11	10	7	5	6	8	6.5	10.8
Dir	310	297	269	263	229	231	247	249	258	251	250	298	242	210	247	195	230	234	238	236	240	235	232	249	245.6	238.0
21 Spd	4	4	3	3	3	2	2	5	6	6	4	4	5	6	5	10	9	5	5	4	3	2	3	5	3.4	9.8
Dir	275	241	211	221	182	179	212	223	231	237	233	212	235	237	202	210	186	174	164	160	164	88	70	89	203.6	210.0
22 Spd	8	7	8	10	10	10	10	7	7	8	6	6	8	7	9	9	11	13	14	12	8	7	4	1	8.0	13.7
Dir	92	91	90	97	102	93	104	121	125	118	121	120	117	131	122	103	98	101	105	104	96	89	16	19	103.6	105.5



Hourly Averages

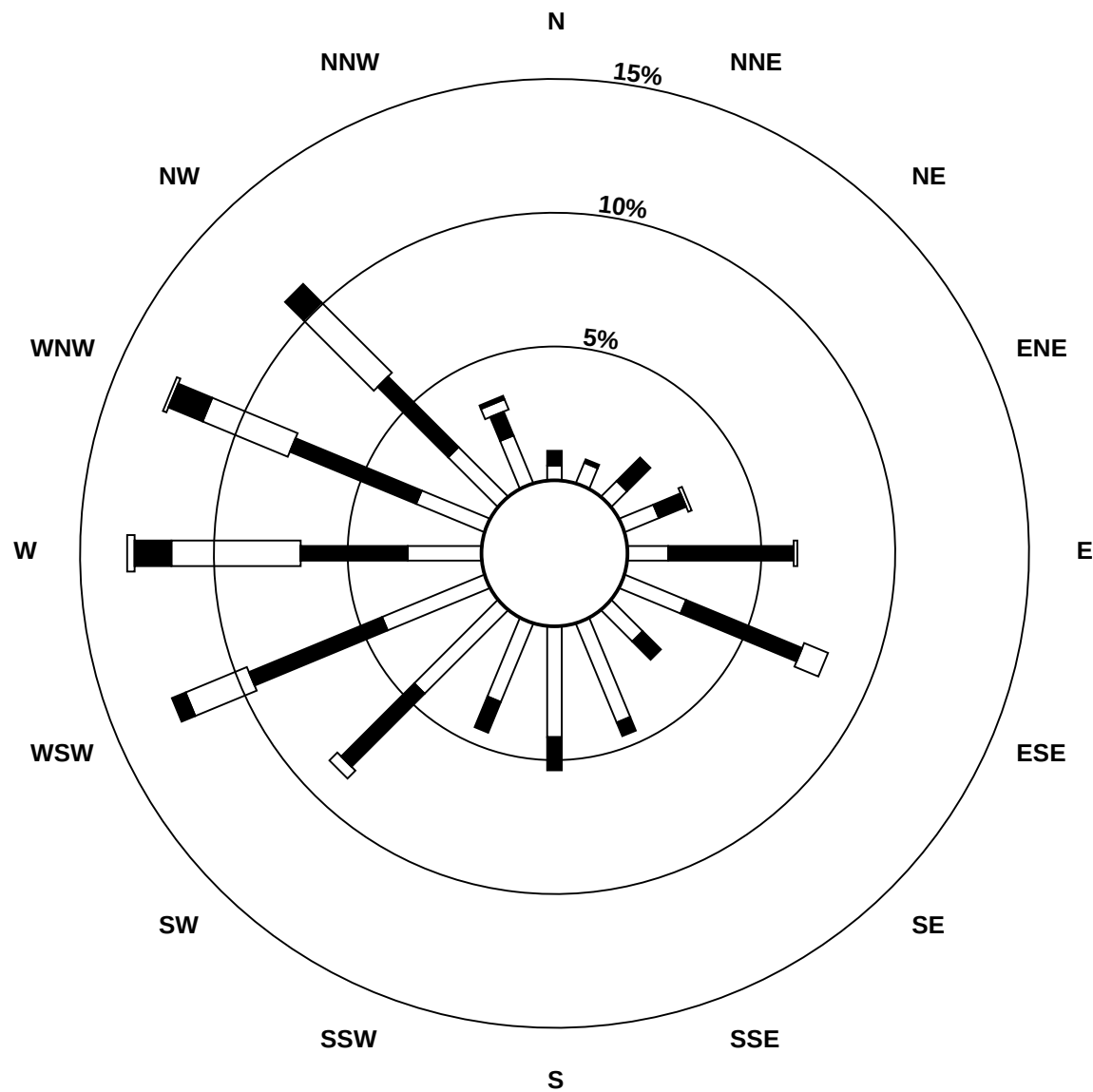
Wind Speed (km/h)
Wind Direction (deg)
Henry Pirker - July 2014

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	3	1	6	3	3	5	4	5	8	12	8	9	6	8	8	9	7	6	7	6	3	1	5	4	2.9	11.9					
Dir	44	52	341	354	285	240	266	263	282	306	314	328	304	304	310	354	54	62	112	125	90	61	48	315	330.9	306.0					
24 Spd	12	11	12	17	12	8	5	9	11	12	9	12	16	18	21	18	17	17	14	15	13	16	15	14	12.0	20.9					
Dir	324	305	309	331	332	325	329	194	214	264	303	318	320	316	308	308	310	316	312	313	299	294	295	281	305.6	307.9					
25 Spd	17	16	15	16	18	18	19	18	15	13	14	13	16	15	10	7	7	8	5	3	4	3	5	9	11.5	19.4					
Dir	268	259	266	271	279	269	276	276	277	288	291	289	277	285	295	300	303	302	317	294	239	230	247	262	277.6	276.1					
26 Spd	6	4	4	7	7	6	9	8	10	13	12	12	11	8	8	8	8	10	6	11	7	5	4	5	7.2	13.2					
Dir	292	277	286	269	268	298	273	289	269	263	271	263	266	254	269	276	270	230	224	246	251	212	204	192	261.3	262.7					
27 Spd	3	4	2	3	3	3	4	5	6	8	5	3	6	7	5	5	3	4	6	6	5	4	3	3	3.5	8.3					
Dir	164	181	235	288	228	231	265	252	242	258	268	276	219	206	215	226	223	186	171	174	170	124	170	198	216.2	257.5					
28 Spd	3	3	2	2	3	3	3	4	4	2	4	6	7	8	8	9	9	9	9	8	2	3	4	4	2.7	9.4					
Dir	197	158	289	192	193	243	220	246	247	159	199	174	155	121	106	94	91	96	95	106	87	76	65	342	124.9	90.7					
29 Spd	7	11	8	1	3	3	4	6	7	3	4	2	1	4	5	7	8	8	9	7	3	2	4	5	4.1	11.3					
Dir	79	99	113	48	327	29	78	99	128	183	140	170	168	112	81	96	78	103	98	102	93	70	71	351	95.7	99.2					
30 Spd	3	3	1	4	3	7	7	11	14	13	12	12	11	11	10	10	7	4	6	5	3	2	1	3	6.1	13.8					
Dir	45	81	254	321	309	304	299	289	291	294	298	310	322	320	320	307	321	301	319	315	338	98	330	335	310.2	291.4					
31 Spd	2	7	3	3	3	4	2	1	2	5	5	4	3	4	2	5	5	6	5	6	5	2	1	4	0.4	7.3					
Dir	293	287	105	171	347	315	235	179	249	309	332	326	316	345	244	89	147	128	113	113	102	75	40	54	43.6	287.3					
Spd	1.7	2.2	2.4	2.7	2.8	3.2	4.1	5.4	6.7	7.4	6.5	5.9	5.6	5.2	5.0	4.1	4.8	4.4	3.1	2.0	1.8	2.1	1.8	2.3	Diurnal Average						
Dir	268.4	233.8	242.4	256.2	266.2	269.9	261.7	262.0	258.7	263.5	272.4	279.6	279.5	283.4	293.4	290.2	283.2	289.0	294.6	280.3	270.5	254.8	243.6	258.0	Diurnal Maximum						
Spd	16.8	16.5	15.9	16.8	18.4	17.8	22.2	26.7	25.5	27.3	29.9	31.7	31.5	27.6	23.4	23.1	27.5	24.6	22.8	18.9	14.2	22.3	15.3	14.4	Diurnal Maximum						
Dir	267.9	258.8	245.6	274.0	279.2	269.0	281.6	290.0	260.3	257.7	262.0	267.0	285.4	278.8	257.1	255.4	261.5	262.0	307.0	272.8	288.5	266.9	253.4	253.7							
Maximum Speed Value: 32 km/h on Jul 9 12:00																				Minimum Speed Value: 0 km/h on Jul 13 06:00					Hours in Service:					744	
Maximum Daily Speed Average: 16.0 km/h on Jul 9																				Minimum Daily Speed Average: 0.4 km/h on Jul 13					Hours of Data:					742	
Maximum Diurnal Speed Average: 7.4 km/h at hour 10																				Minimum Diurnal Speed Average: 1.7 km/h at hour 1					Hours of Missing Data:					2	
Monthly Average Velocity: 3.76 km/h 271.47 deg										Speed Percentiles: P ₁ = 0.7 P ₁₀ = 2.4 Q ₁ = 3.9 Median = 6.7 Q ₃ = 10.2 P ₉₀ = 16.3 P ₉₉ = 26.2										Percent Operational Time:					99.7						
All monthly, daily, and diurnal averages have been calculated using vector methods																															
P - Power Failure																															
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	14		8		0		0		0		0		22																		
NorthEast	13		16		0		0		0		0		29																		
East	27		55		12		0		0		0		94																		
SouthEast	29		26		0		0		0		0		55																		
South	62		18		0		0		0		0		80																		
SouthWest	56		65		12		0		0		0		133																		
West	33		69		55		24		3		0		184																		
NorthWest	35		52		44		14		0		0		145																		
Total	269		309		123		38		3		0		742																		

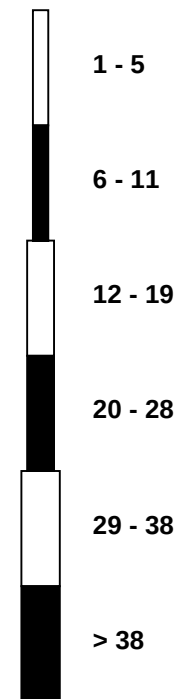
Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - July 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - July 2014

Maximum Speed: 33 km/h on Jul 9 12:00																				Maximum Daily Speed Average: 17.5 km/h on Jul 9										Hours in Service: 744	
Minimum Speed: 0 km/h on Jul 13 06:00																				Minimum Daily Speed Average: 3.7 km/h on Jul 13										Hours of Data: 742	
Maximum Diurnal Speed Average: 11.6 km/h at hour 17																				Minimum Diurnal Speed Average: 5.7 km/h at hour 23										Hours of Missing Data: 2	
Monthly Average Speed: 8.50 km/h																				Percentiles: P ₁ = 0.8 P ₁₀ = 2.9 Q ₁ = 4.5 Median = 7.2 Q ₃ = 10.7 P ₉₀ = 16.6 P ₉₉ = 26.1										Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Jul	3	3	2	3	4	3	2	4	6	5	4	5	6	8	7	5	6	8	9	9	6	7	7	8	5.5	9.4					
2-Jul	7	9	8	7	7	7	8	10	9	11	11	14	18	16	15	15	20	22	12	11	8	7	7	10	11.3	21.7					
3-Jul	8	10	3	5	4	3	2	2	5	5	8	13	14	13	14	20	16	14	9	5	6	10	15	15	9.1	19.6					
4-Jul	9	9	9	13	11	12	16	18	17	21	20	18	17	20	24	24	23	20	22	19	14	10	7	8	15.9	23.9					
5-Jul	8	7	6	5	7	3	4	8	11	12	15	14	13	16	10	9	11	16	19	17	13	11	6	7	10.3	18.7					
6-Jul	6	7	7	7	9	7	7	14	16	20	20	18	18	16	16	16	17	17	17	12	10	9	6	3	12.3	19.8					
7-Jul	3	6	10	6	6	4	9	11	9	9	8	8	10	10	5	7	8	8	8	6	3	2	3	3	6.7	10.6					
8-Jul	3	3	2	3	3	4	7	9	10	8	8	8	8	9	9	10	9	7	7	6	6	7	6	3	6.4	10.1					
9-Jul	2	2	3	3	6	7	12	12	26	28	31	33	32	28	22	24	28	25	24	9	14	23	14	11	17.5	32.6					
10-Jul	13	15	16	17	15	16	22	27	26	26	24	25	25	22	22	18	19	15	11	7	6	5	4	5	16.7	26.9					
11-Jul	5	4	4	4	4	4	4	5	8	9	6	7	8	8	8	10	9	8	5	4	2	4	4	3	5.8	10.2					
12-Jul	4	4	5	2	3	2	2	4	6	8	6	6	4	9	7	P	5	5	5	P	4	5	2	2	4.5	8.8					
13-Jul	2	1	1	1	0	0	1	4	7	6	5	4	4	5	5	6	6	8	7	5	5	2	2	2	3.7	8.2					
14-Jul	3	5	5	1	1	1	1	2	3	3	4	5	8	7	6	6	9	9	9	8	6	7	5	3	4.9	9.4					
15-Jul	3	3	2	1	1	2	2	3	7	7	6	6	6	5	6	7	15	17	12	5	3	2	4	5	5.4	16.6					
16-Jul	6	6	5	5	4	6	8	10	9	7	7	7	8	10	10	10	9	6	6	8	9	8	8	8	7.5	10.4					
17-Jul	7	8	8	6	6	7	9	11	11	14	12	10	9	8	12	7	16	13	14	9	7	5	4	3	9.0	15.7					
18-Jul	3	2	2	2	4	4	4	4	6	6	3	2	6	3	3	4	4	5	6	8	9	6	4	8	4.6	9.5					
19-Jul	12	12	13	13	12	16	16	19	21	23	21	23	19	20	21	20	22	18	15	12	9	7	8	7	15.7	23.4					
20-Jul	6	5	8	9	7	6	6	7	7	8	8	6	4	8	8	7	10	11	11	10	7	5	6	8	7.4	11.1					
21-Jul	4	4	3	3	3	2	2	5	6	7	5	5	6	7	7	11	10	7	6	5	4	2	3	5	5.2	10.6					
22-Jul	8	7	8	10	10	10	10	8	7	8	7	7	9	8	9	10	12	14	14	12	8	8	7	3	8.9	14.0					
23-Jul	3	3	6	4	4	5	4	5	8	12	8	10	7	9	9	11	8	7	7	7	3	1	5	6	6.4	12.2					
24-Jul	13	12	12	17	12	8	6	10	12	12	9	12	17	18	21	18	17	17	14	15	13	16	15	14	13.8	21.4					
25-Jul	17	17	15	16	19	18	20	19	15	14	14	13	17	15	10	8	7	8	5	3	4	4	5	9	12.1	19.6					
26-Jul	6	4	4	7	7	6	9	8	10	13	12	13	12	9	9	9	9	10	7	11	7	5	5	5	8.2	13.5					
27-Jul	4	4	2	4	3	3	4	6	7	9	6	5	7	8	6	7	5	5	6	6	5	5	3	4	5.2	8.7					
28-Jul	4	5	4	2	3	4	4	4	4	3	5	7	8	9	8	9	10	9	9	8	2	4	4	7	5.7	10.0					
29-Jul	9	11	8	2	3	3	4	6	7	4	4	4	4	5	6	8	8	9	9	7	3	2	4	6	5.7	11.4					
30-Jul	3	4	2	5	4	7	8	12	14	13	13	12	11	11	11	10	7	5	6	6	4	2	2	3	7.3	13.9					
31-Jul	2	8	5	3	4	5	4	5	3	6	5	5	4	5	3	7	6	7	5	6	5	2	1	4	4.6	8.3					
6.0 6.5 6.1 6.0 5.9 6.1 7.0 8.8 10.1 10.9 10.2 10.4 11.0 11.2 10.7 11.1 11.6 11.3 10.2 8.5 6.6 6.2 5.7 6.1																								Diurnal Average							
17.0 16.6 16.1 17.4 18.6 17.9 22.4 26.9 25.9 27.8 31.0 32.6 32.1 28.2 23.9 23.9 28.0 25.4 23.6 19.1 14.3 22.9 15.5 14.6																								Diurnal Maximum							
P - Power Failure																															
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - July 2014

Maximum Value: 91.3 deg on Jul 9 01:00																		Hours in Service: 744							
Minimum Value: 5.4 deg on Jul 7 05:00																		Hours of Data: 742							
																		Hours of Missing Data: 2							
Percentiles: P ₁ = 6.8 P ₁₀ = 8.9 Q ₁ = 12.0 Median = 18.6 Q ₃ = 30.8 P ₉₀ = 50.7 P ₉₉ = 84.2																		Hours of Calibration: 0							
																		Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Jul	13	31	22	42	18	19	38	20	19	28	79	75	54	51	67	67	61	33	18	17	16	14	12	16	78.7
2-Jul	12	8	8	8	8	11	12	12	15	18	17	14	12	15	17	13	75	16	15	27	20	23	79	21	78.9
3-Jul	27	66	57	76	44	57	45	65	26	42	26	19	15	16	15	13	16	19	29	30	31	12	7	10	76.3
4-Jul	18	13	12	10	14	12	12	11	14	13	13	15	18	19	13	15	14	15	12	9	7	12	13	13	19.5
5-Jul	33	23	43	22	13	40	16	12	15	13	15	15	20	21	35	30	18	21	11	12	10	12	30	14	42.7
6-Jul	26	12	18	19	18	17	21	10	13	11	16	13	16	15	15	11	11	8	14	10	7	7	27	11	26.6
7-Jul	32	21	10	14	5	8	15	12	17	16	21	28	29	31	41	57	36	30	22	15	21	84	21	21	84.3
8-Jul	9	9	24	37	26	24	23	18	13	16	21	21	42	31	40	33	24	25	9	11	23	13	8	43	43.2
9-Jul	91	87	35	28	22	15	15	11	11	11	16	13	11	12	14	22	11	15	15	25	21	14	12	11	91.3
10-Jul	9	9	11	14	9	7	7	7	7	7	7	8	7	9	9	10	11	14	15	12	16	36	8	11	35.5
11-Jul	6	10	7	14	16	12	15	19	15	16	36	28	27	54	33	30	44	48	28	30	54	10	8	13	54.4
12-Jul	16	13	18	30	20	20	23	40	15	13	33	51	56	20	61	P	85	58	44	P	16	11	14	28	85.5
13-Jul	17	29	73	55	18	15	25	20	17	16	21	38	41	37	47	49	37	17	11	22	7	70	42	37	73.4
14-Jul	82	31	17	58	42	89	49	33	36	37	44	34	28	38	39	26	20	16	13	10	10	9	13	20	89.0
15-Jul	89	53	30	31	42	29	19	19	11	11	17	16	24	43	57	34	42	12	8	28	78	57	16	31	88.9
16-Jul	20	19	29	23	39	34	11	9	14	21	65	38	38	29	26	34	28	54	21	22	8	10	9	10	65.2
17-Jul	14	10	10	19	15	22	21	15	15	13	14	18	18	35	43	52	16	11	11	9	10	23	25	43	52.4
18-Jul	59	19	29	51	10	24	22	18	14	37	59	43	27	22	23	24	42	24	20	13	10	40	19	16	58.9
19-Jul	11	15	8	9	11	8	9	11	11	10	12	15	9	11	9	11	9	12	10	9	13	15	9	11	15.3
20-Jul	10	17	11	16	11	13	23	13	21	20	23	24	54	20	30	43	20	18	14	12	11	13	9	14	53.9
21-Jul	37	21	27	17	9	26	34	20	16	23	41	50	43	47	64	23	25	49	35	24	29	14	9	9	64.3
22-Jul	6	7	7	7	8	7	13	14	20	23	28	36	33	43	22	25	17	13	12	8	11	7	58	78	78.5
23-Jul	25	71	22	35	55	18	29	21	24	13	21	22	35	29	45	51	33	30	19	13	26	15	15	54	70.7
24-Jul	11	24	13	7	6	7	57	27	23	20	13	10	9	10	12	8	9	7	9	8	10	9	7	8	56.5
25-Jul	10	8	8	8	8	7	7	10	12	10	12	15	8	10	9	8	8	10	13	25	17	15	16	9	25.1
26-Jul	18	16	8	7	10	10	8	10	12	12	19	21	20	34	30	30	31	18	20	17	24	16	17	31	33.8
27-Jul	47	23	22	23	20	23	29	33	19	18	28	74	34	32	41	51	60	48	23	10	6	26	22	53	73.5
28-Jul	41	67	65	50	28	25	45	25	28	57	51	35	37	30	30	26	22	15	14	13	10	14	15	58	66.7
29-Jul	47	8	10	48	22	20	25	13	22	41	43	84	80	56	37	25	18	18	12	10	21	21	16	41	84.4
30-Jul	25	46	73	21	64	14	13	8	9	9	11	17	18	18	19	17	27	49	18	14	34	16	65	26	72.6
31-Jul	35	40	66	36	49	41	64	81	60	64	30	52	55	61	74	38	39	27	19	18	12	13	31	23	80.9
91.3 87.5 73.4 76.3 63.7 89.0 64.0 80.9 60.5 63.8 78.7 84.4 80.2 60.6 74.5 67.1 85.5 58.5 44.0 30.5 77.5 84.3 78.9 78.5																									
P - Power Failure																									

PAZA

Evergreen Park Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

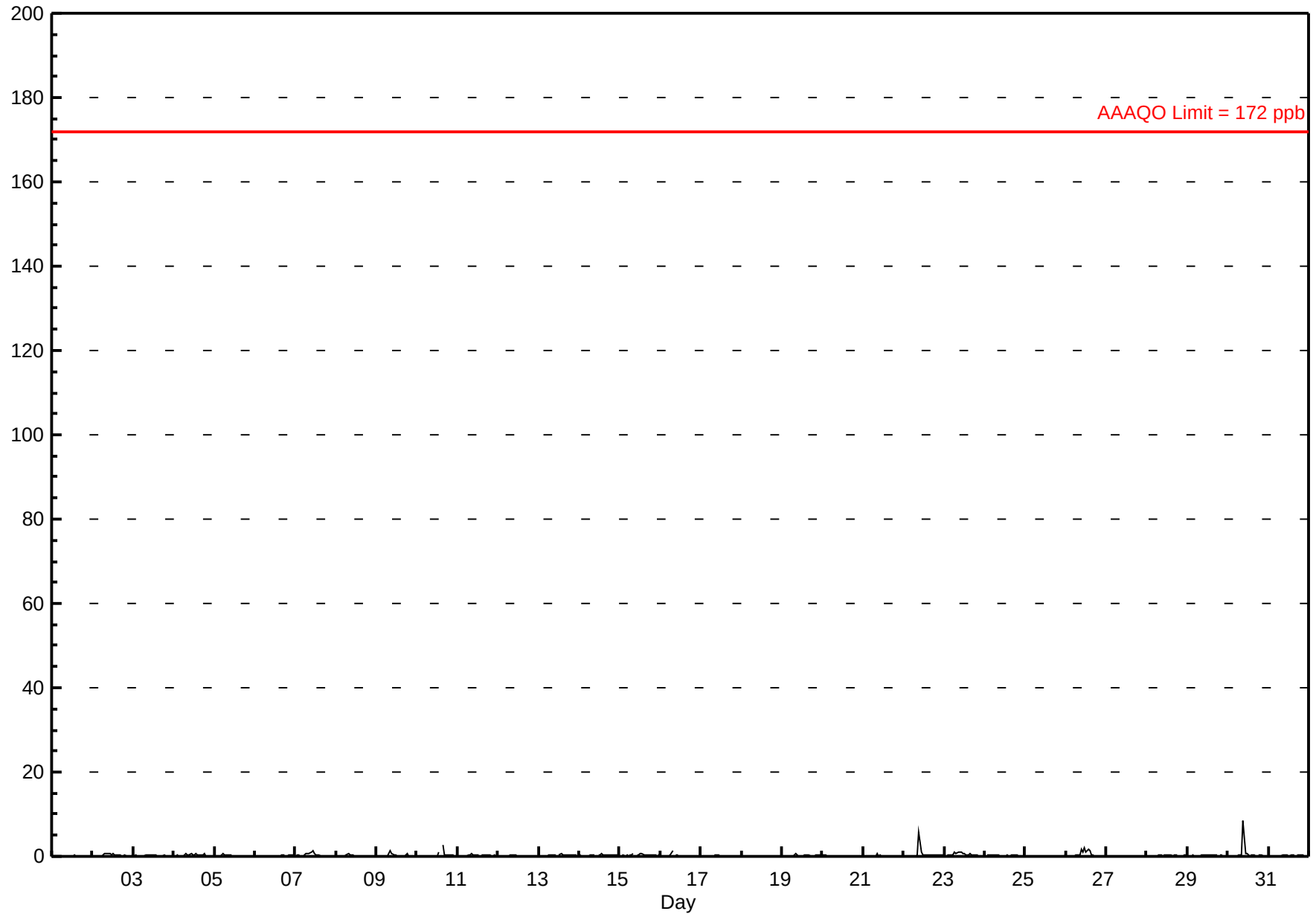
Sulphur Dioxide (SO₂) - ppb

Evergreen Park - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 8.4 ppb on Jul 30 10:00																				Maximum Daily Average: 0.6 ppb on Jul 30		Hours of Data: 707				
Minimum Value: 0 ppb on Jul 5 22:00																				Minimum Daily Average: 0.1 ppb on Jul 27		Hours of Missing Data: 37				
Maximum Diurnal Average: 0.8 ppb at hour 10																				Minimum Diurnal Average: 0.1 ppb at hour 2		Hours of Calibration: 37				
Monthly Average: 0.22 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 1.4		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-Jul	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
2-Jul	0	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	A	0	0.3	0.6
3-Jul	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
4-Jul	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	A	0	0	0	0.3	0.8
5-Jul	0	0	0	0	0	1	0	0	0	0	0	C	C	C	C	0	0	0	0	A	0	0	0	0	0.1	0.5
6-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	0.4
7-Jul	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.4	1.3
8-Jul	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.6
9-Jul	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0.2	1.4
10-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	3	0	0	0	0	0	0	0	0	0.3	2.8
11-Jul	0	0	0	0	0	0	0	0	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.7
12-Jul	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
13-Jul	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0	0	0	0	0	0	0	0.2	0.6
14-Jul	0	0	0	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0.3	0.5
15-Jul	0	0	0	0	0	0	0	0	1	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	0.5
16-Jul	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.5
17-Jul	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
18-Jul	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
19-Jul	0	0	0	0	0	A	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
20-Jul	0	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
21-Jul	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
22-Jul	0	0	A	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	5.8
23-Jul	0	A	0	0	0	0	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0.4	1.0
24-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.3
25-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.2
26-Jul	0	0	0	0	0	0	0	0	0	2	1	2	1	2	1	0	0	0	0	0	0	A	0	0	0.5	2.1
27-Jul	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
28-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.4
29-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.4
30-Jul	0	0	0	0	0	0	0	0	0	8	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.6	8.4
31-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.4
0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.3 0.4 0.8 0.4 0.3 0.3 0.3 0.2 0.3 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1																									Diurnal Average	
0.4 0.3 0.3 0.3 0.4 0.5 0.9 1.5 1.4 8.4 1.3 2.1 0.9 1.8 1.2 2.8 0.5 0.4 0.8 0.4 0.3 0.3 0.2 0.3																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																										

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - July 2014



Hourly Maximums

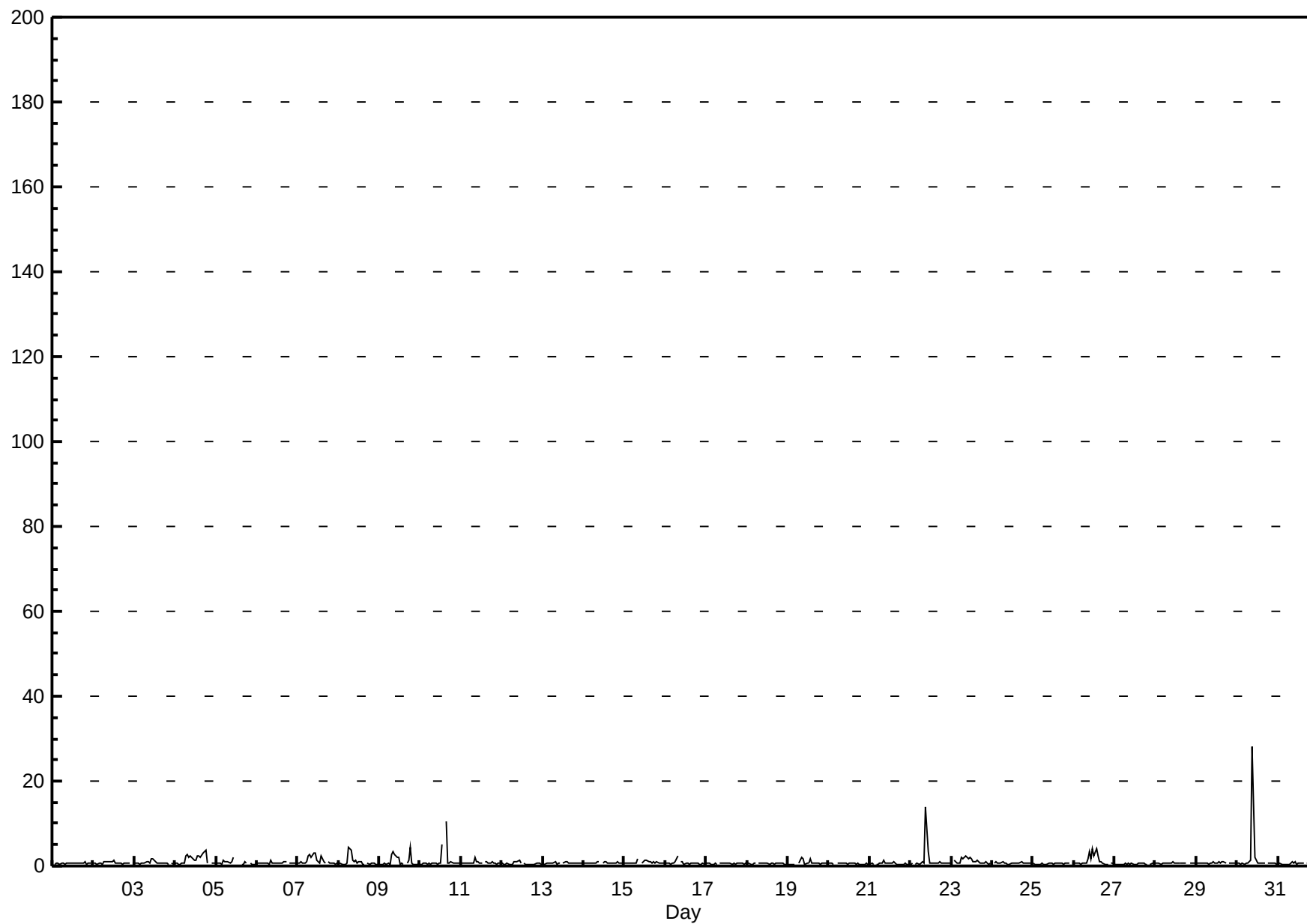
Sulphur Dioxide (SO₂) - ppb

Evergreen Park - July 2014

Maximum Value: 28.2 ppb on Jul 30 10:00																				Maximum Daily Average: 2.0 ppb on Jul 30										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 27 03:00																				Minimum Daily Average: 0.5 ppb on Jul 27										Hours of Data: 707	
Maximum Diurnal Average: 2.4 ppb at hour 10																				Minimum Diurnal Average: 0.5 ppb at hour 4										Hours of Missing Data: 37	
Monthly Average: 0.86 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.5 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.8 P ₉₀ = 1.2 P ₉₉ = 4.1										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-Jul	A	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.6	0.9					
2-Jul	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	0.8	1.4					
3-Jul	1	1	1	0	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.8					
4-Jul	1	1	0	0	1	1	2	3	2	2	2	1	1	3	2	2	3	3	4	1	A	1	1	1	1.6	3.6					
5-Jul	1	1	1	0	1	1	1	1	1	1	2	C	C	C	C	0	0	1	1	A	1	0	0	0	0.8	2.1					
6-Jul	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	1.3					
7-Jul	1	1	1	1	1	1	2	3	2	3	3	1	1	1	2	1	1	A	1	1	1	1	0	1	1.2	3.1					
8-Jul	1	1	1	0	0	1	4	4	1	1	1	1	1	1	0	0	A	1	1	1	1	1	0	1	1.0	4.3					
9-Jul	0	0	0	1	0	1	1	3	3	3	2	2	0	1	0	A	1	2	5	1	1	0	0	1	1.2	4.5					
10-Jul	0	1	1	1	0	1	0	1	1	1	0	1	1	5	A	10	1	1	1	1	1	1	1	1	1.3	10.5					
11-Jul	1	1	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	0.8	1.9					
12-Jul	1	0	0	1	0	0	0	1	1	1	1	1	A	1	0	0	0	0	0	0	1	1	1	0	0.6	1.3					
13-Jul	0	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1					
14-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1					
15-Jul	1	1	1	1	1	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.6					
16-Jul	1	1	1	0	1	1	1	2	A	1	1	0	1	1	1	1	1	1	1	1	0	0	1	0	0.7	2.4					
17-Jul	1	1	1	0	0	1	0	A	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	0.6	0.7					
18-Jul	1	1	0	0	1	1	A	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	0	1	0.6	0.7					
19-Jul	0	1	0	0	0	A	1	1	2	2	0	1	1	2	1	1	1	1	1	0	1	1	1	1	0.8	2.0					
20-Jul	1	1	1	1	A	1	1	1	1	1	1	0	1	1	1	1	0	1	0	0	0	0	1	0	0.6	0.8					
21-Jul	0	1	1	A	0	0	1	1	2	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0.6	1.5					
22-Jul	0	1	A	0	1	1	1	1	1	14	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1.4	13.7					
23-Jul	1	A	1	1	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	0	1	1.2	2.4					
24-Jul	A	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	A	0.7	1.0					
25-Jul	1	0	1	0	0	1	0	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	0.5	0.7					
26-Jul	1	1	1	1	0	1	1	1	2	3	2	4	2	4	2	1	1	1	0	0	0	A	1	1	1.3	4.2					
27-Jul	0	0	0	0	0	0	1	1	1	0	1	0	0	1	1	1	1	1	0	0	A	0	1	1	0.5	0.8					
28-Jul	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	0.9					
29-Jul	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.0					
30-Jul	1	1	0	1	0	1	1	1	1	28	2	1	1	1	1	1	1	A	1	1	1	1	1	0	2.0	28.2					
31-Jul	1	1	0	0	0	0	0	0	1	1	1	0	1	1	1	1	A	1	1	1	1	1	1	1	0.6	1.0					
0.6 0.6 0.6 0.5 0.6 0.6 0.9 1.1 1.2 2.4 1.2 1.0 0.8 1.1 0.9 1.1 0.8 0.8 0.9 0.6 0.6 0.6 0.6 0.6																									Diurnal Average						
0.8 0.8 1.3 0.8 1.3 1.2 4.3 3.7 3.3 28.2 3.3 4.0 2.2 5.2 2.5 10.5 3.0 3.4 4.5 0.9 0.9 0.8 0.8 0.8																									Diurnal Maximum						
C - Calibration																									A - Automated Daily Zero Span						

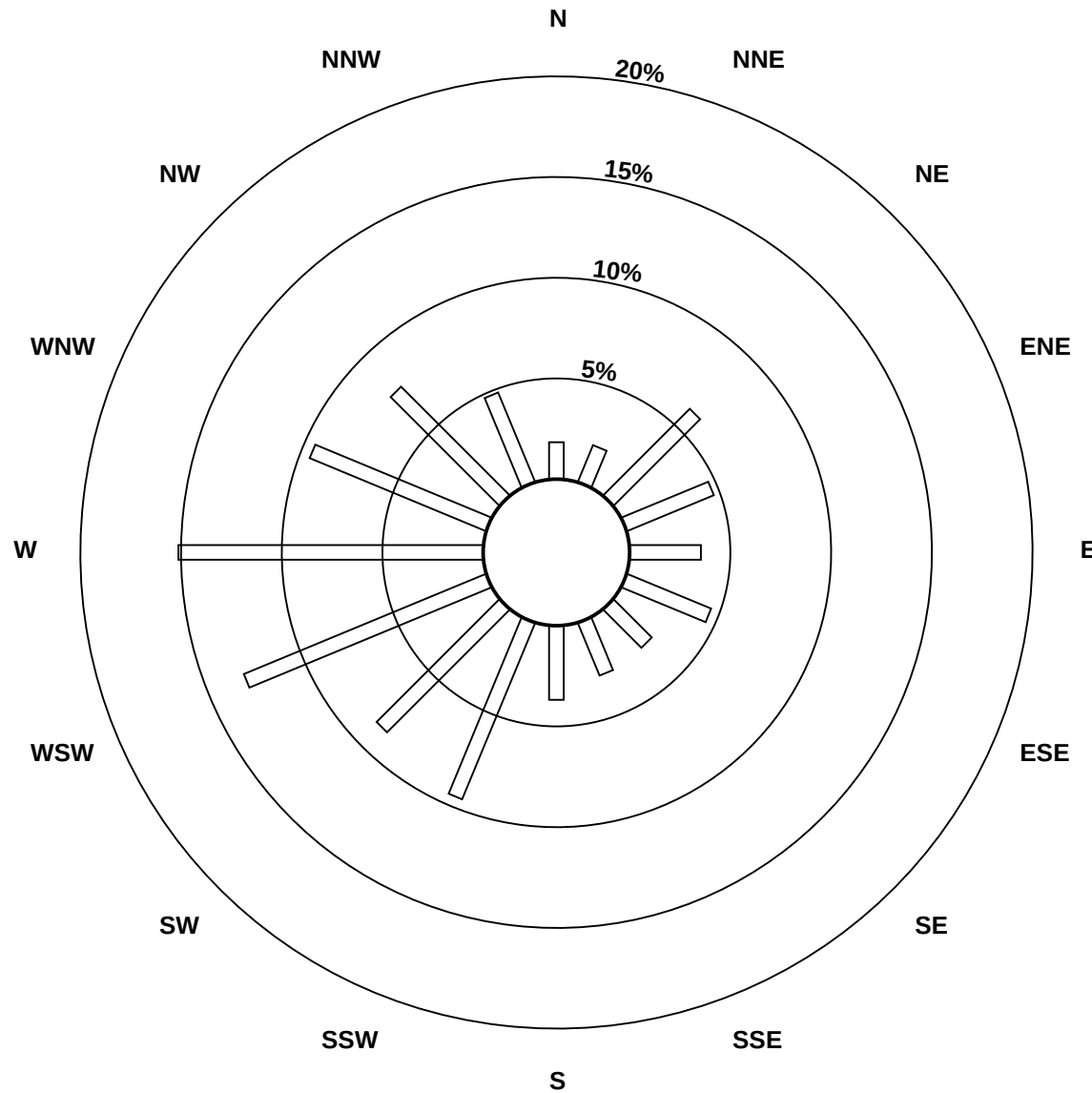
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - July 2014

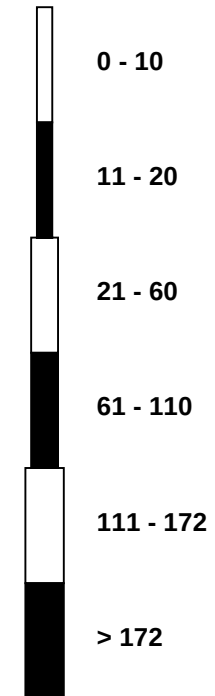


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Evergreen Park - July 2014

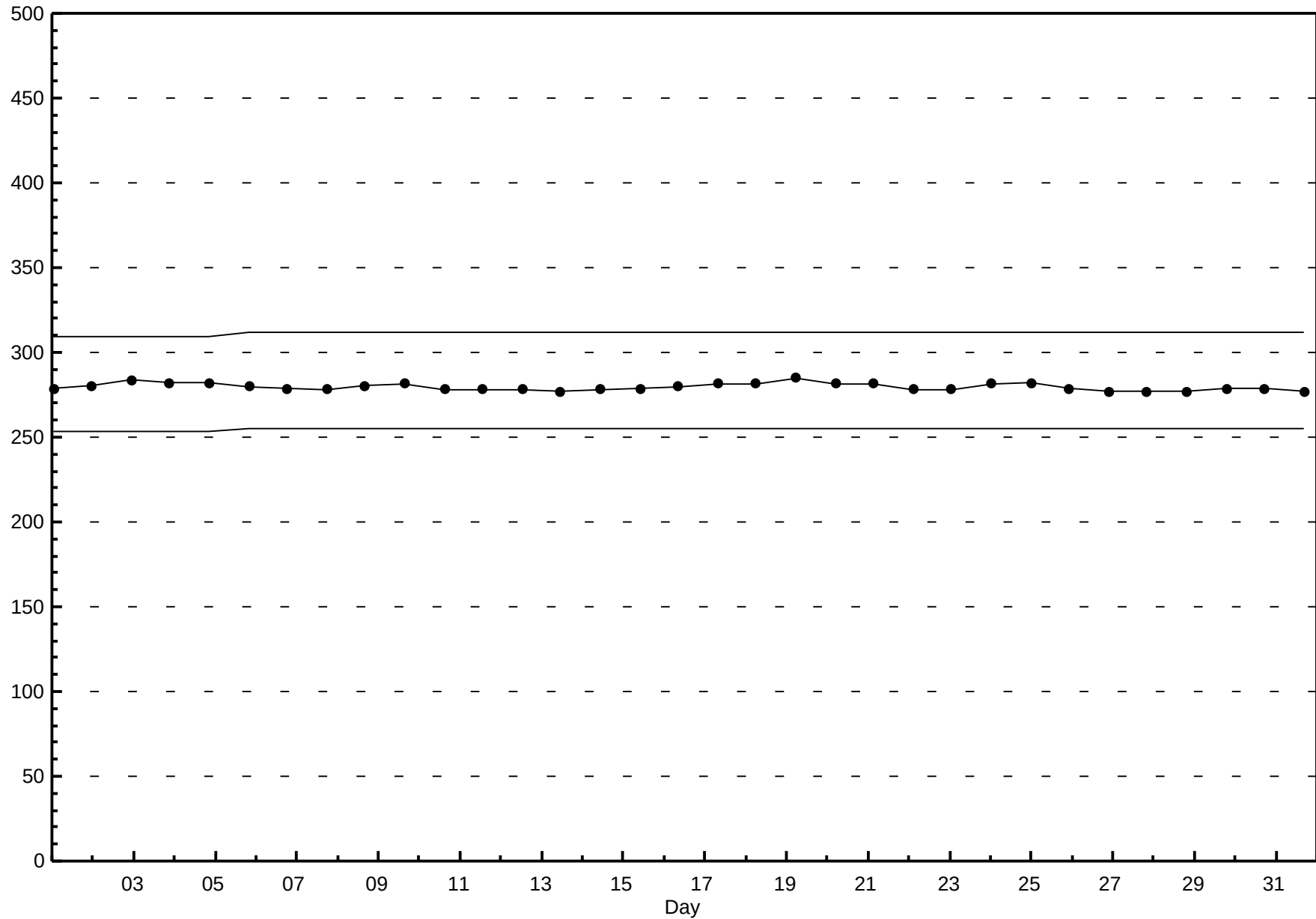


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Evergreen Park - July 2014



Hourly Averages

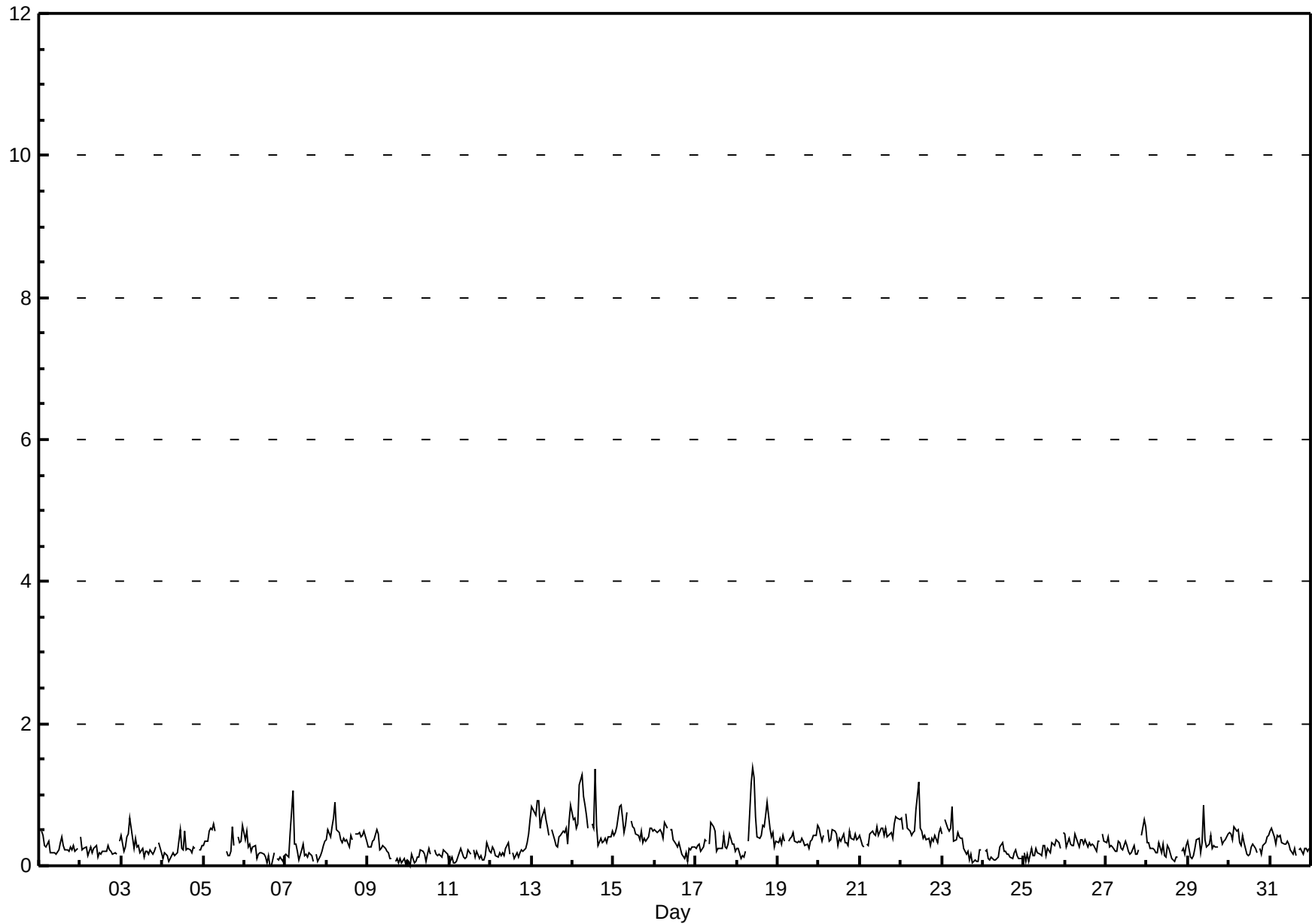
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 1.4 ppb on Jul 18 10:00																				Maximum Daily Average: 0.6 ppb on Jul 14		Hours of Data: 706				
Minimum Value: 0 ppb on Jul 6 16:00																				Minimum Daily Average: 0.1 ppb on Jul 11		Hours of Missing Data: 38				
Maximum Diurnal Average: 0.4 ppb at hour 6																				Minimum Diurnal Average: 0.2 ppb at hour 16		Hours of Calibration: 38				
Monthly Average: 0.32 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.5 P ₉₉ = 1.1		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-Jul	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
2-Jul	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
3-Jul	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.7
4-Jul	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.5
5-Jul	0	0	0	0	1	1	1	0	C	C	C	C	C	0	0	0	0	1	0	A	0	0	0	1	0.4	0.6
6-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.5
7-Jul	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	1.1
8-Jul	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.9
9-Jul	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.5
10-Jul	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
11-Jul	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
12-Jul	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	0.6
13-Jul	1	1	1	1	1	1	1	1	1	1	0	A	1	0	0	0	0	0	0	0	1	0	1	1	0.6	0.9
14-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0.6	1.4
15-Jul	0	0	1	1	1	1	0	1	1	A	1	1	1	0	0	0	0	0	0	0	0	1	1	0	0.5	0.9
16-Jul	1	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	0.6
17-Jul	0	0	0	0	0	0	0	A	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
18-Jul	0	0	0	0	0	0	A	0	1	1	1	0	0	0	1	1	1	1	1	1	0	0	0	0	0.5	1.4
19-Jul	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	0.6
20-Jul	1	0	0	0	A	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
21-Jul	0	0	0	A	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	0	1	1	1	1	0.5	0.7
22-Jul	1	0	A	1	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.5	1.2
23-Jul	0	A	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8
24-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.3
25-Jul	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	0.5
26-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.5
27-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0.3	0.7
28-Jul	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
29-Jul	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.9
30-Jul	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.6
31-Jul	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.5
0.4 0.3 0.3 0.4 0.4 0.4 0.4 0.3 0.4 0.4 0.4 0.3 0.3 0.3 0.3 0.2 0.2 0.3 0.3 0.3 0.3 0.3 0.3 0.4																								Diurnal Average		
0.8 0.8 0.7 0.9 1.1 1.3 1.0 0.9 1.2 1.4 1.2 0.7 0.5 1.4 0.6 0.6 0.6 0.7 0.9 0.5 0.6 0.7 0.7 0.9																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - July 2014



Hourly Maximums

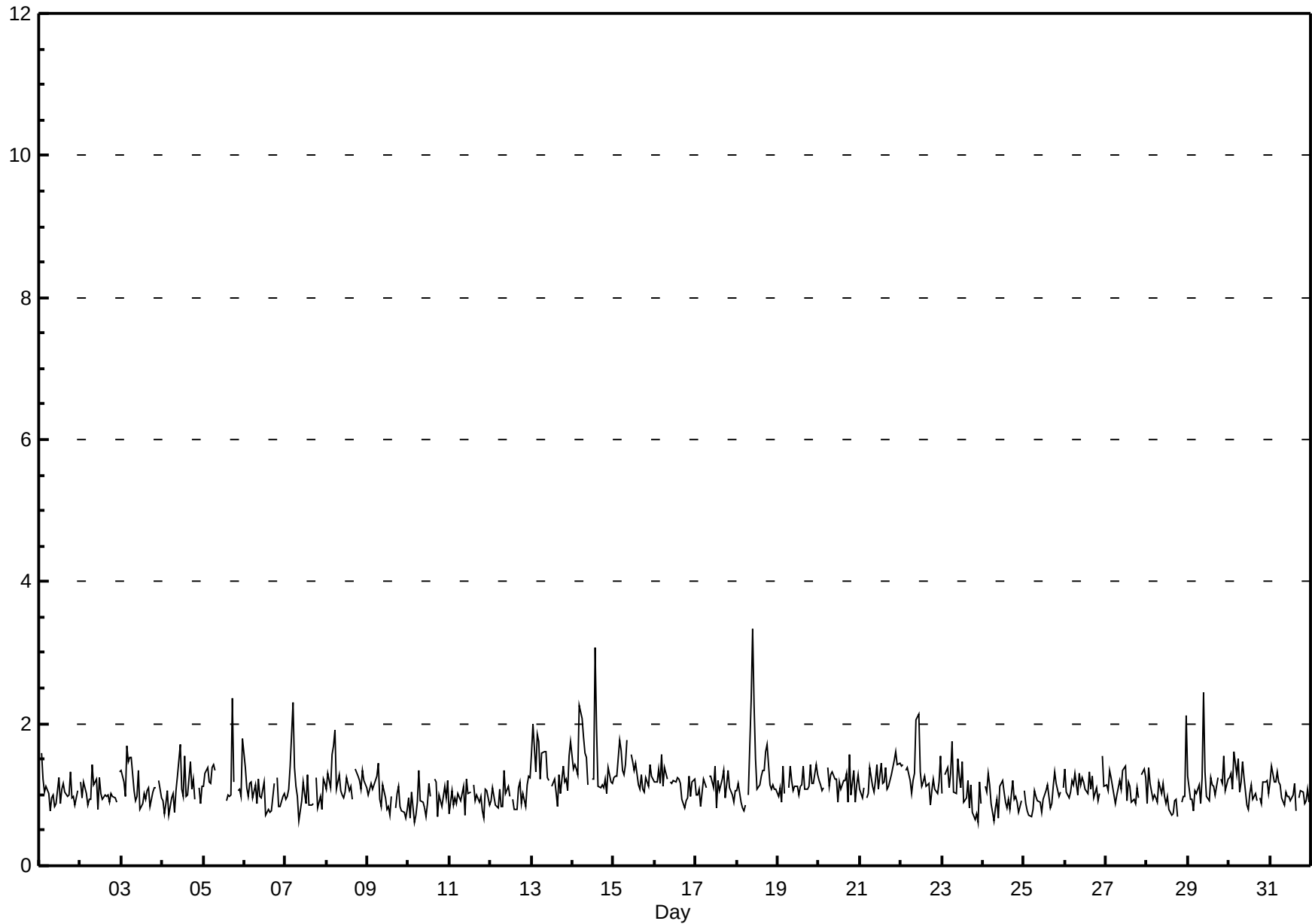
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - July 2014

Maximum Value: 3.3 ppb on Jul 18 10:00																				Maximum Daily Average: 1.5 ppb on Jul 14										Hours in Service: 744									
Minimum Value: 1 ppb on Jul 23 22:00																				Minimum Daily Average: 0.9 ppb on Jul 10										Hours of Data: 706									
Maximum Diurnal Average: 1.2 ppb at hour 10																				Minimum Diurnal Average: 1.0 ppb at hour 21										Hours of Missing Data: 38									
Monthly Average: 1.13 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 0.8 Q ₁ = 1.0 Median = 1.1 Q ₃ = 1.2 P ₉₀ = 1.4 P ₉₉ = 2.2										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-Jul	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.6													
2-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.4													
3-Jul	1	1	1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.1	1.7													
4-Jul	1	1	1	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	A	1	1	1	1.1	1.7													
5-Jul	1	1	1	1	1	1	1	1	C	C	C	C	C	1	1	1	1	2	1	A	1	1	1	2	1.3	2.4													
6-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.4													
7-Jul	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.1	2.3													
8-Jul	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.2	1.9													
9-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.0	1.5													
10-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.3													
11-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.9	1.2													
12-Jul	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3													
13-Jul	2	2	1	2	2	1	2	2	2	1	1	A	1	1	1	1	1	1	1	1	1	1	2	2	1.4	2.0													
14-Jul	1	1	1	1	2	2	2	2	2	1	A	1	1	3	2	1	1	1	1	1	1	1	1	1	1.5	3.1													
15-Jul	1	1	1	2	2	1	1	1	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	1.8													
16-Jul	1	1	1	1	2	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.6													
17-Jul	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.4													
18-Jul	1	1	1	1	1	1	A	1	2	3	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1.3	3.3													
19-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1.4													
20-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1.2	1.6													
21-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1.2	1.6													
22-Jul	1	1	A	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1.3	2.1													
23-Jul	1	A	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.8													
24-Jul	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1.0	1.3													
25-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.3													
26-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1.1	1.6													
27-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.1	1.4													
28-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	2	1	1.0	2.1													
29-Jul	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1	2	1	1	1.2	2.4													
30-Jul	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.1	1.6													
31-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.0	1.4													
1.1 1.2 1.1 1.2 1.2 1.2 1.2 1.1 1.2 1.2 1.2 1.1 1.0 1.1 1.1 1.0 1.1 1.1 1.1 1.1 1.0 1.1 1.1 1.2																									Diurnal Average														
1.6 2.0 1.4 1.9 2.3 2.1 1.8 1.6 2.3 3.3 2.3 1.5 1.5 3.1 1.9 1.4 1.5 2.4 1.7 1.4 1.5 1.6 1.6 2.1																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

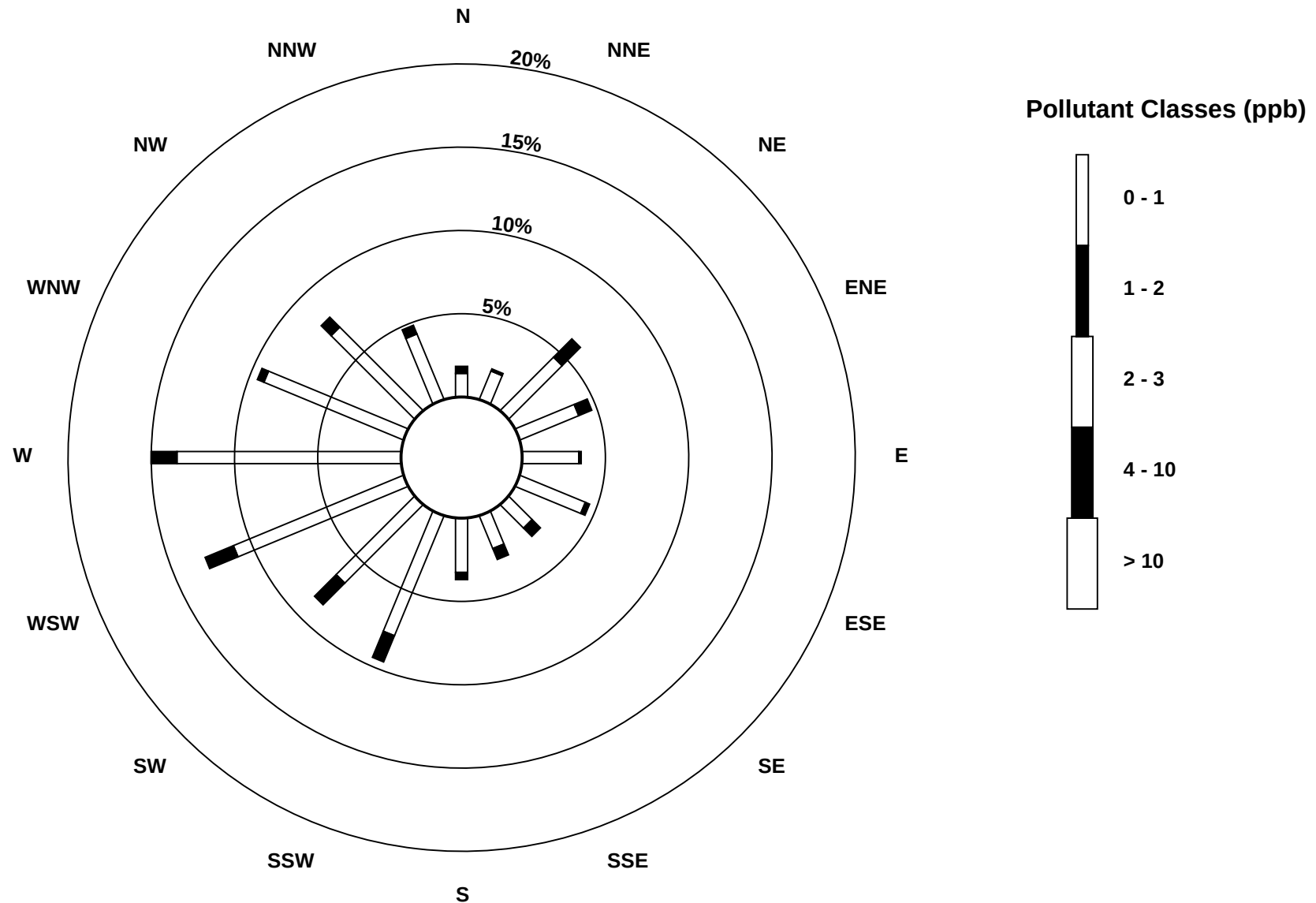
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - July 2014



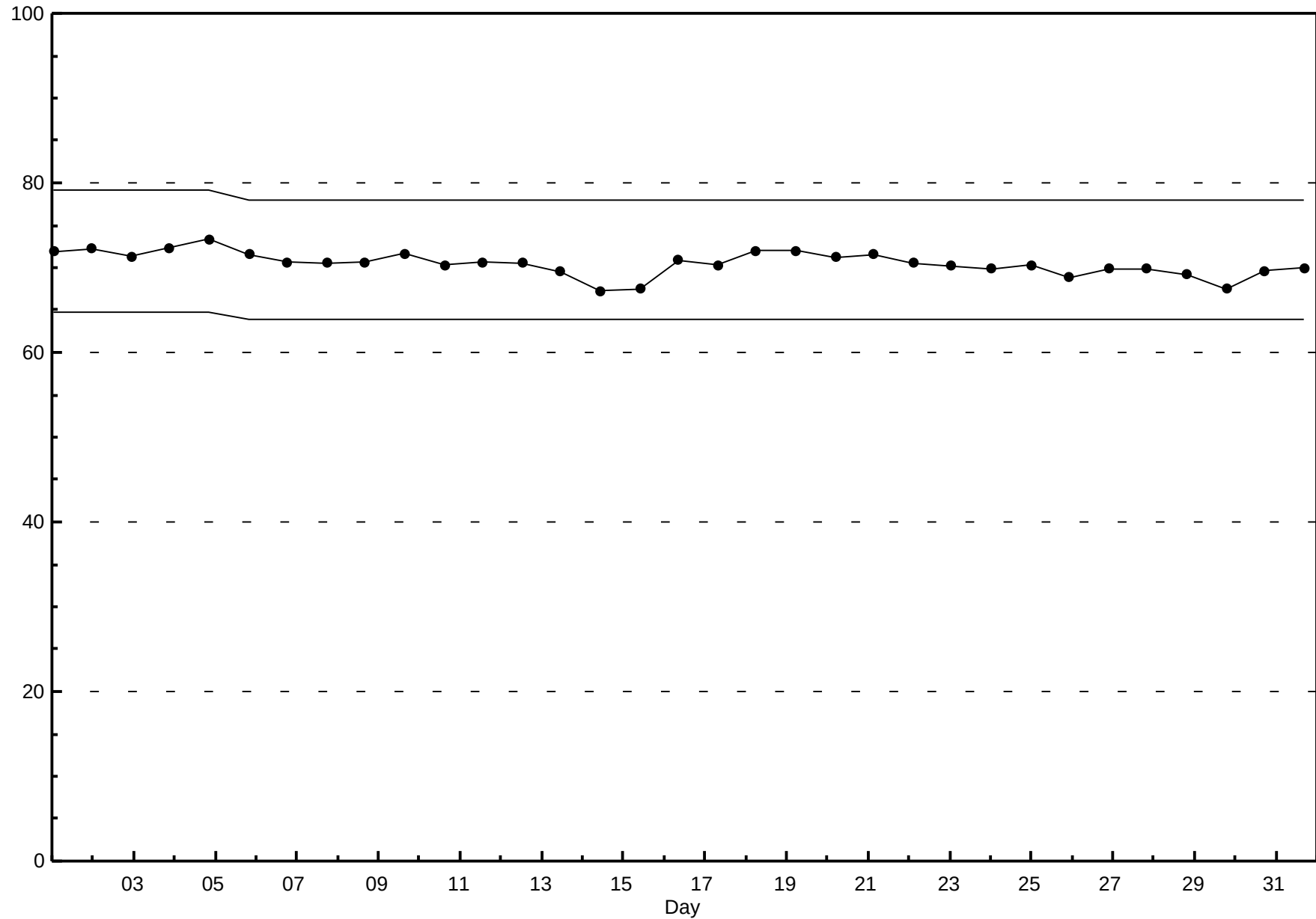
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Evergreen Park - July 2014



Span Responses

Total Reduced Sulphur (TRS)
Evergreen Park - July 2014



Hourly Averages

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

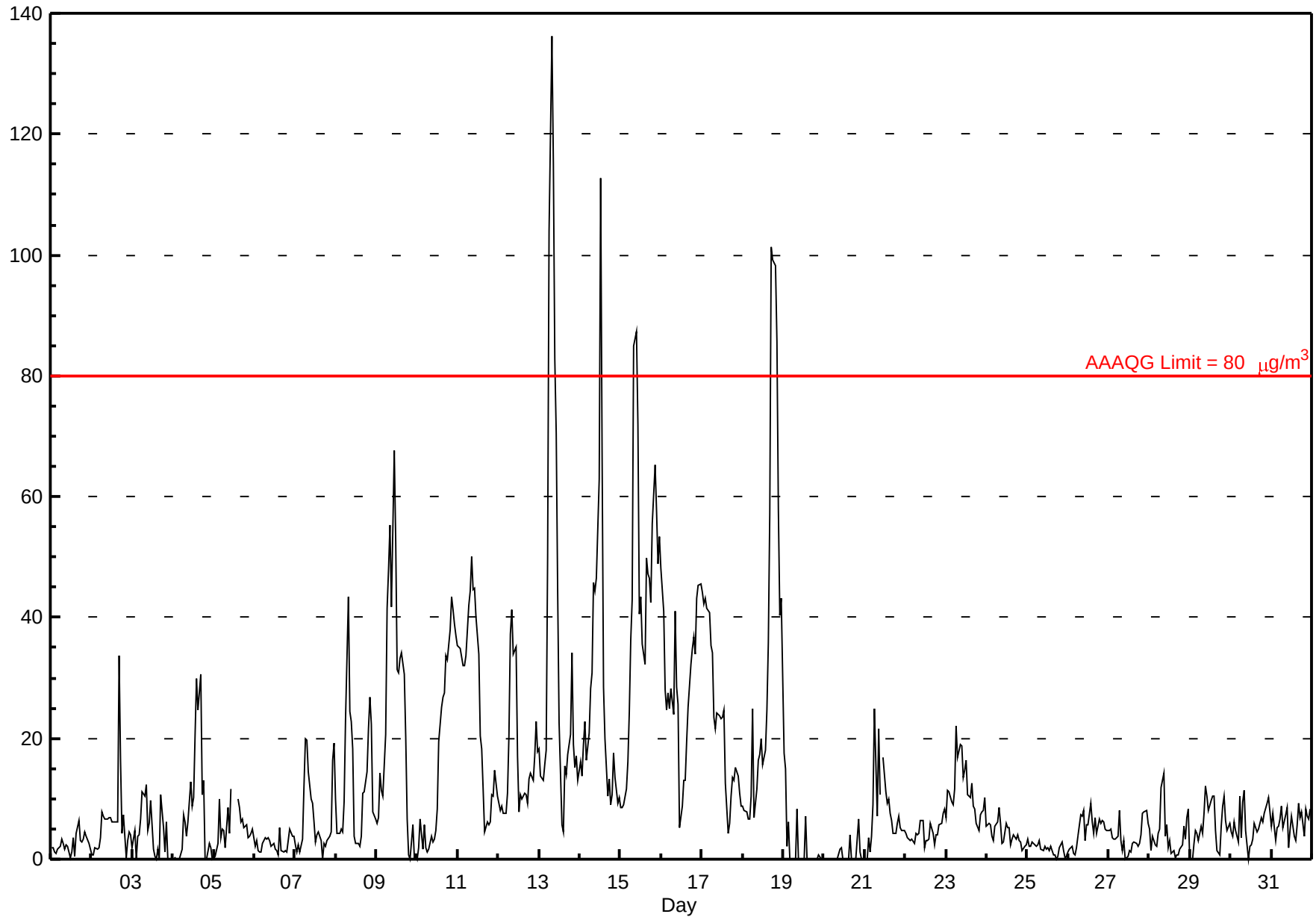
Evergreen Park - July 2014

Number of Exceedences: 1-hr: 11 24-hr: 3 Maximum Value: 136.2 µg/m³ on Jul 13 08:00 Maximum Daily Average: 42.5 µg/m³ on Jul 15																								Hours in Service: 744 Hours of Data: 740 Hours of Missing Data: 4 Hours of Calibration: 3 Percent Operational Time: 99.9		
Minimum Value: 0 µg/m³ on Jul 3 03:00 Maximum Diurnal Average: 21.2 µg/m³ at hour 9 Monthly Average: 12.59 µg/m³ Minimum Daily Average: 0.6 µg/m³ on Jul 20 Minimum Diurnal Average: 7.8 µg/m³ at hour 5 Percentiles: P ₁ = 0.0 P ₁₀ = 0.7 Q ₁ = 2.7 Median = 6.2 Q ₃ = 14.5 P ₉₀ = 35.1 P ₉₉ = 97.5																										
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-Jul	2	2	1	1	2	2	3	3	2	2	2	0	1	4	0	4	6	3	3	3	5	4	3	2	2.5	6.4
2-Jul	1	1	2	2	2	3	8	7	7	7	7	7	6	6	6	6	34	16	4	7	0	3	5	4	6.3	33.7
3-Jul	2	5	0	4	4	7	11	11	12	5	6	10	2	0	0	2	0	11	5	1	6	0	0	0	4.3	12.3
4-Jul	0	0	0	0	0	2	7	6	4	6	13	9	10	20	30	25	31	11	13	0	0	3	2	0	8.0	30.5
5-Jul	0	0	3	10	3	5	5	2	8	4	12	C	C	C	10	9	6	7	5	6	4	4	4	5	5.3	11.5
6-Jul	2	3	1	1	1	3	4	3	4	3	2	3	2	1	1	5	1	1	2	1	3	5	4	4	2.5	5.2
7-Jul	2	1	2	1	3	12	20	20	14	10	9	6	3	4	5	3	0	3	2	3	4	4	16	19	7.0	19.9
8-Jul	10	4	4	5	4	9	23	43	24	23	18	4	3	3	2	4	11	11	14	21	27	22	8	7	12.7	43.3
9-Jul	6	7	14	11	10	21	42	48	55	42	68	53	31	31	33	34	31	20	7	1	0	6	0	1	23.8	67.7
10-Jul	0	2	7	2	6	2	1	2	4	3	3	5	8	19	25	27	28	34	33	38	43	41	39	37	17.0	43.4
11-Jul	35	35	33	32	32	34	42	44	50	45	45	40	34	20	18	12	4	6	6	6	11	10	15	10	25.9	50.1
12-Jul	9	8	9	8	7	11	20	37	41	34	35	17	8	11	10	11	11	9	13	14	13	17	23	18	16.5	41.3
13-Jul	18	14	13	16	18	50	104	136	115	83	70	44	23	6	4	15	14	17	21	34	19	15	17	13	36.7	136.2
14-Jul	16	14	19	23	16	21	28	31	46	44	47	63	113	67	28	20	11	13	9	11	17	14	9	10	28.8	112.8
15-Jul	9	9	9	12	16	24	36	43	85	87	72	41	43	36	32	50	47	46	42	56	65	58	49	54	42.5	87.3
16-Jul	48	41	28	25	28	25	28	24	41	28	26	5	9	13	13	20	25	32	35	37	34	43	45	46	29.1	48.1
17-Jul	44	42	43	42	41	35	34	24	22	24	24	23	24	25	13	4	6	10	13	13	15	14	11	9	23.1	44.1
18-Jul	9	8	8	7	7	10	25	7	12	16	17	20	16	18	25	36	57	101	99	98	86	58	40	43	34.3	101.3
19-Jul	18	15	2	6	0	0	0	0	8	0	0	0	0	7	0	0	0	0	0	0	0	1	0	0	2.4	17.7
20-Jul	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	4	0	0	0	0	7	1	0	0	0.6	6.7
21-Jul	0	0	4	1	4	9	25	7	22	11	N	17	11	9	10	8	6	4	4	6	7	5	5	5	7.8	24.9
22-Jul	4	4	3	3	3	3	4	4	4	6	6	2	3	3	3	6	4	2	4	4	6	6	8	8	4.4	8.3
23-Jul	7	11	11	9	9	12	22	17	19	19	13	15	16	11	10	13	9	8	6	5	7	8	8	10	11.5	22.1
24-Jul	5	6	6	4	3	5	6	9	6	3	3	6	5	5	2	3	4	3	4	3	3	1	2	2	4.2	8.6
25-Jul	3	2	2	3	2	2	2	3	2	2	2	2	2	1	2	1	1	0	1	2	3	1	0	1	1.7	3.3
26-Jul	1	2	2	1	1	2	4	7	7	8	3	6	6	9	6	4	7	4	7	6	6	6	5	5	4.8	9.3
27-Jul	5	5	4	3	3	4	8	3	1	3	0	0	1	1	3	3	3	2	3	4	8	8	8	6	3.7	8.2
28-Jul	5	1	4	2	2	4	5	12	14	4	6	2	3	1	1	0	1	1	2	2	5	3	7	8	4.0	14.3
29-Jul	0	0	3	5	4	3	5	4	8	12	10	8	10	10	10	5	1	1	6	9	10	6	5	6	5.9	12.2
30-Jul	4	4	6	5	3	10	4	10	11	5	0	2	2	3	6	5	5	6	7	6	8	9	10	8	5.8	11.4
31-Jul	5	8	3	5	5	7	9	5	7	8	2	5	7	4	3	6	9	7	8	4	8	7	7	8	6.1	9.2
8.8 8.2 8.0 8.0 7.8 10.9 17.3 18.5 21.2 17.7 17.5 13.8 13.4 11.7 10.1 11.0 12.0 12.6 12.2 13.0 13.9 12.4 11.4 11.2																								Diurnal Average		
48.1 42.2 43.2 41.6 40.7 50.1 104.1 136.2 115.2 87.3 72.0 62.9 112.8 67.5 33.2 49.8 57.1 101.3 99.1 98.3 85.6 58.0 48.9 53.5																								Diurnal Maximum		
C - Calibration 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

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

Evergreen Park - July 2014



Hourly Maximums

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

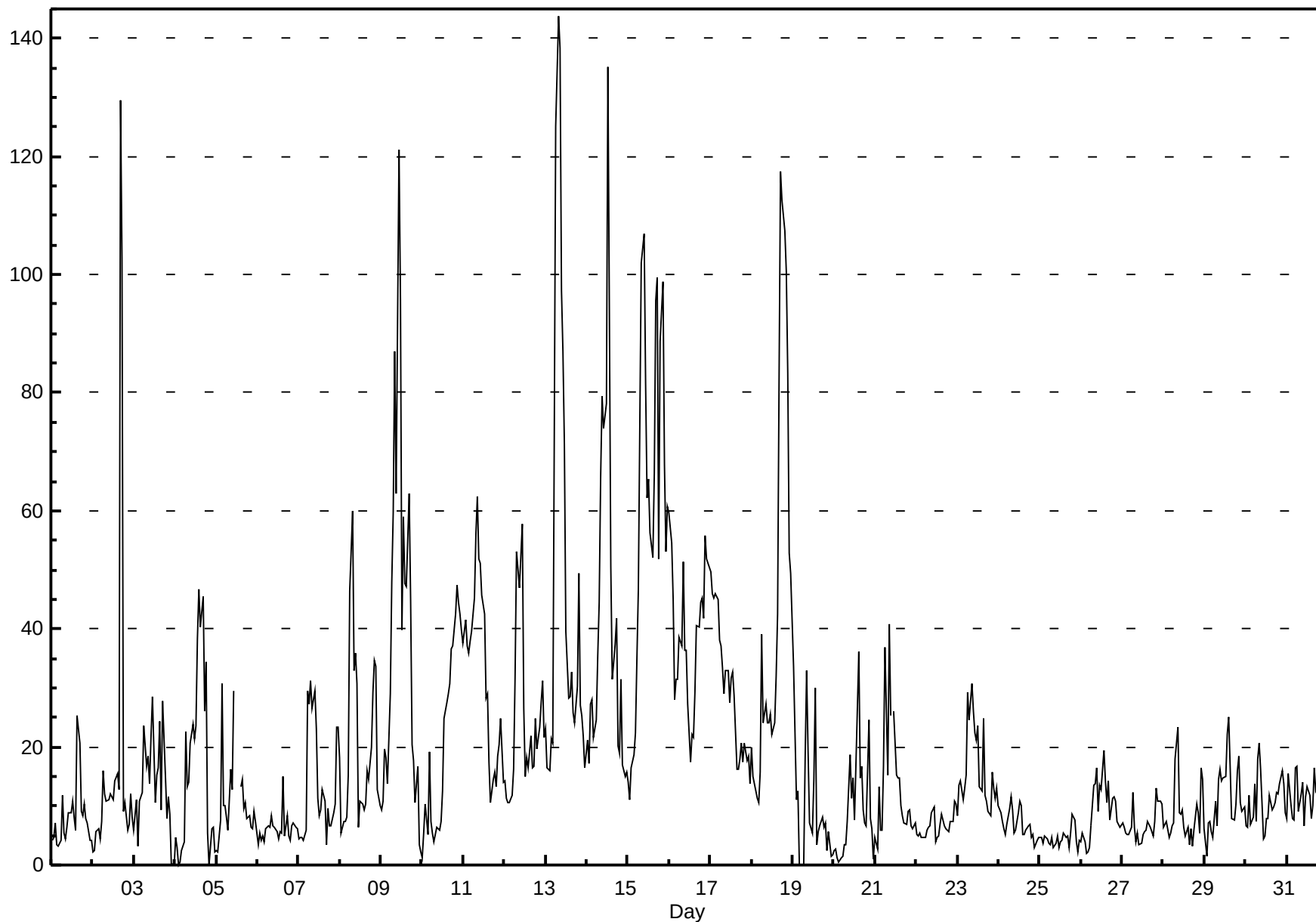
Evergreen Park - July 2014

Maximum Value: 143.8 µg/m ³ on Jul 13 08:00																								Maximum Daily Average: 60.3 µg/m ³ on Jul 15								Hours in Service: 744	
Minimum Value: 0 µg/m ³ on Jul 4 00:00																								Minimum Daily Average: 4.4 µg/m ³ on Jul 25								Hours of Data: 740	
Maximum Diurnal Average: 31.3 µg/m ³ at hour 9																								Minimum Diurnal Average: 11.4 µg/m ³ at hour 5								Hours of Missing Data: 4	
Monthly Average: 20.01 µg/m ³																								Percentiles: P ₁ = 0.4 P ₁₀ = 4.3 Q ₁ = 6.5 Median = 11.9 Q ₃ = 24.8 P ₉₀ = 46.0 P ₉₉ = 114.2								Hours of Calibration: 3	
																																Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
1-Jul	4	5	7	3	3	4	12	5	4	6	9	9	11	8	6	25	21	9	8	10	8	7	4	4	8.1	25.2							
2-Jul	2	2	6	6	4	7	16	12	11	11	12	12	11	14	16	13	130	103	9	11	6	7	12	8	18.4	129.5							
3-Jul	6	11	3	11	12	12	24	17	18	14	22	28	11	15	16	24	9	28	15	8	12	9	0	0	13.5	28.5							
4-Jul	5	3	0	0	2	4	23	13	14	21	24	21	24	38	47	40	46	26	34	5	0	6	6	2	16.9	46.7							
5-Jul	2	2	8	31	10	10	8	6	16	13	29	C	C	C	13	15	10	11	8	8	6	6	9	7	10.9	30.6							
6-Jul	4	6	4	5	4	6	7	6	8	7	7	6	5	6	6	15	5	8	5	4	7	7	6	6	6.2	15.0							
7-Jul	4	5	5	4	6	29	27	31	27	29	23	11	8	9	13	11	3	10	7	7	9	10	23	23	14.0	31.1							
8-Jul	18	5	7	7	8	15	47	60	33	36	31	6	11	10	9	10	16	15	20	29	35	34	13	10	20.3	59.9							
9-Jul	9	11	20	18	14	29	48	60	87	63	121	96	40	59	48	47	63	45	20	18	11	17	3	2	39.5	121.2							
10-Jul	1	5	10	5	19	7	5	4	6	6	6	7	13	25	27	29	31	37	37	43	47	45	43	40	20.8	47.5							
11-Jul	38	42	37	36	38	39	45	56	62	52	51	46	43	28	29	17	11	15	16	13	18	20	25	14	33.0	62.3							
12-Jul	14	11	11	11	12	16	32	53	50	47	58	26	15	18	17	22	16	17	25	20	23	28	31	22	24.8	57.7							
13-Jul	23	17	16	21	21	71	125	144	138	97	87	71	40	28	28	33	26	24	30	49	27	25	22	17	49.2	143.8							
14-Jul	21	17	27	28	22	24	35	45	66	79	74	78	135	95	51	31	37	42	20	19	31	17	15	16	42.7	135.1							
15-Jul	14	11	17	19	22	35	47	74	102	107	82	62	65	56	52	66	96	100	52	89	99	68	53	61	60.3	107.0							
16-Jul	60	55	45	28	31	31	39	37	51	36	36	27	17	22	22	29	41	40	45	45	42	56	52	50	39.1	59.7							
17-Jul	50	46	45	46	45	38	37	33	29	33	33	27	32	33	29	16	16	18	21	17	21	18	18	14	29.8	49.7							
18-Jul	20	15	13	11	11	16	39	24	27	24	24	26	22	24	32	43	82	118	113	107	100	83	53	49	44.8	117.5							
19-Jul	34	22	11	13	0	0	0	18	33	19	7	5	15	30	3	6	7	8	7	7	3	6	1	2	10.7	33.6							
20-Jul	3	3	1	1	1	2	4	3	7	19	11	15	8	17	36	15	17	9	7	7	25	8	6	1	9.4	36.2							
21-Jul	5	3	13	6	6	17	37	15	41	25	N	26	15	15	15	10	8	7	7	9	9	7	6	7	13.5	40.9							
22-Jul	5	5	6	5	5	5	6	6	7	9	10	4	5	5	7	9	7	6	6	6	7	7	11	10	6.6	10.9							
23-Jul	8	14	14	11	13	15	29	25	31	26	22	21	24	13	13	25	12	11	9	8	16	13	11	13	16.6	30.6							
24-Jul	10	9	7	6	5	7	10	12	9	5	6	9	11	10	5	5	6	7	7	5	5	3	4	5	7.0	11.7							
25-Jul	5	5	4	5	4	4	3	5	3	4	5	3	4	4	5	5	5	3	5	9	8	4	2	4	4.4	8.7							
26-Jul	4	6	4	2	2	3	7	14	14	16	9	14	13	19	14	11	14	8	11	12	11	7	7	6	9.5	19.4							
27-Jul	7	6	6	5	5	6	12	6	4	6	3	4	5	6	6	7	6	6	5	7	13	11	11	10	6.8	13.1							
28-Jul	6	7	7	5	6	7	7	18	23	9	9	9	6	5	7	3	6	3	6	10	9	6	16	15	8.6	23.2							
29-Jul	6	1	7	7	6	5	11	7	15	16	14	15	15	22	25	17	8	8	10	16	18	11	9	10	11.6	25.0							
30-Jul	7	6	12	7	8	14	7	18	21	16	4	5	8	8	12	9	10	11	12	12	14	16	14	9	10.9	20.7							
31-Jul	8	15	10	8	8	17	17	9	12	14	7	12	13	12	8	10	16	13	13	8	17	10	8	10	11.5	17.5							
13.0 12.0 12.4 12.0 11.4 16.0 24.7 27.0 31.3 27.9 27.9 23.4 21.4 21.9 19.9 20.0 25.1 24.6 19.0 20.0 21.2 18.4 16.0 14.5																								Diurnal Average									
59.7 54.6 45.3 46.0 45.1 70.9 125.1 143.8 138.4 107.0 121.2 95.5 135.1 94.5 52.0 66.5 129.5 117.5 112.6 107.3 100.4 83.4 53.1 60.7																								Diurnal Maximum									
C - Calibration N - Not Valid																																	

Hourly Maximums

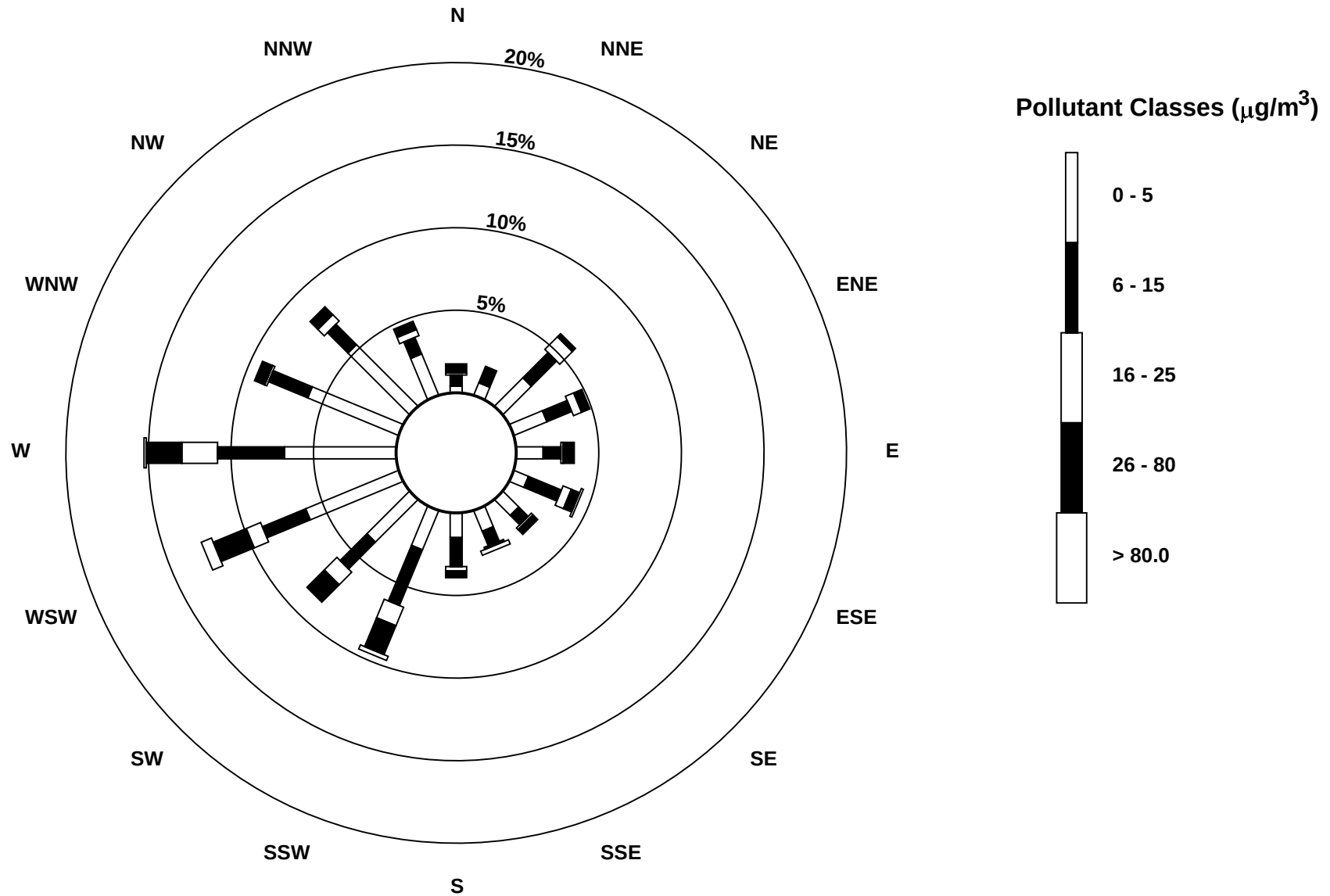
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Evergreen Park - July 2014



Pollutant Rose

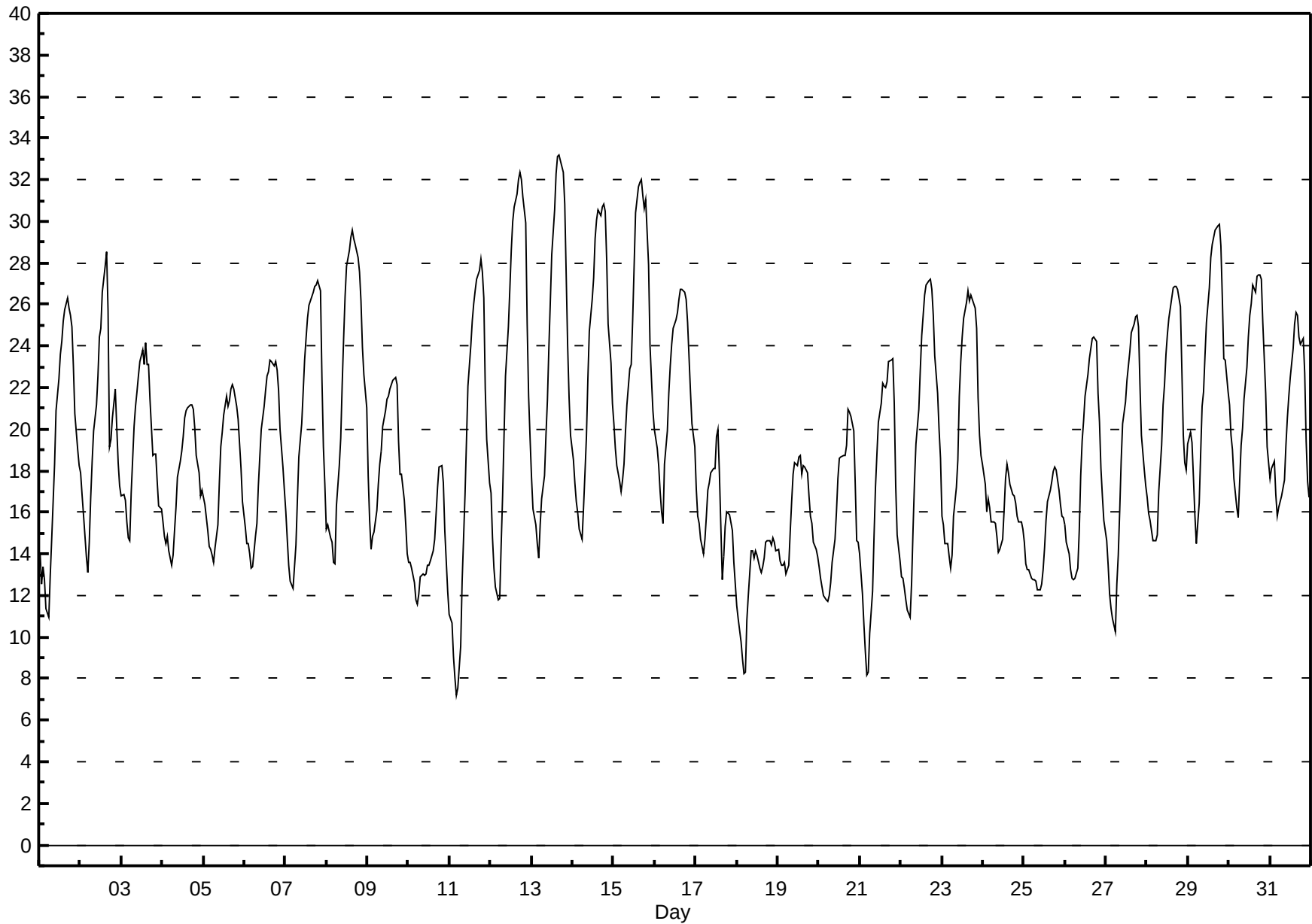
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Evergreen Park - July 2014



Hourly Averages

External Temperature (ET) - °C

Evergreen Park - July 2014



Hourly Averages

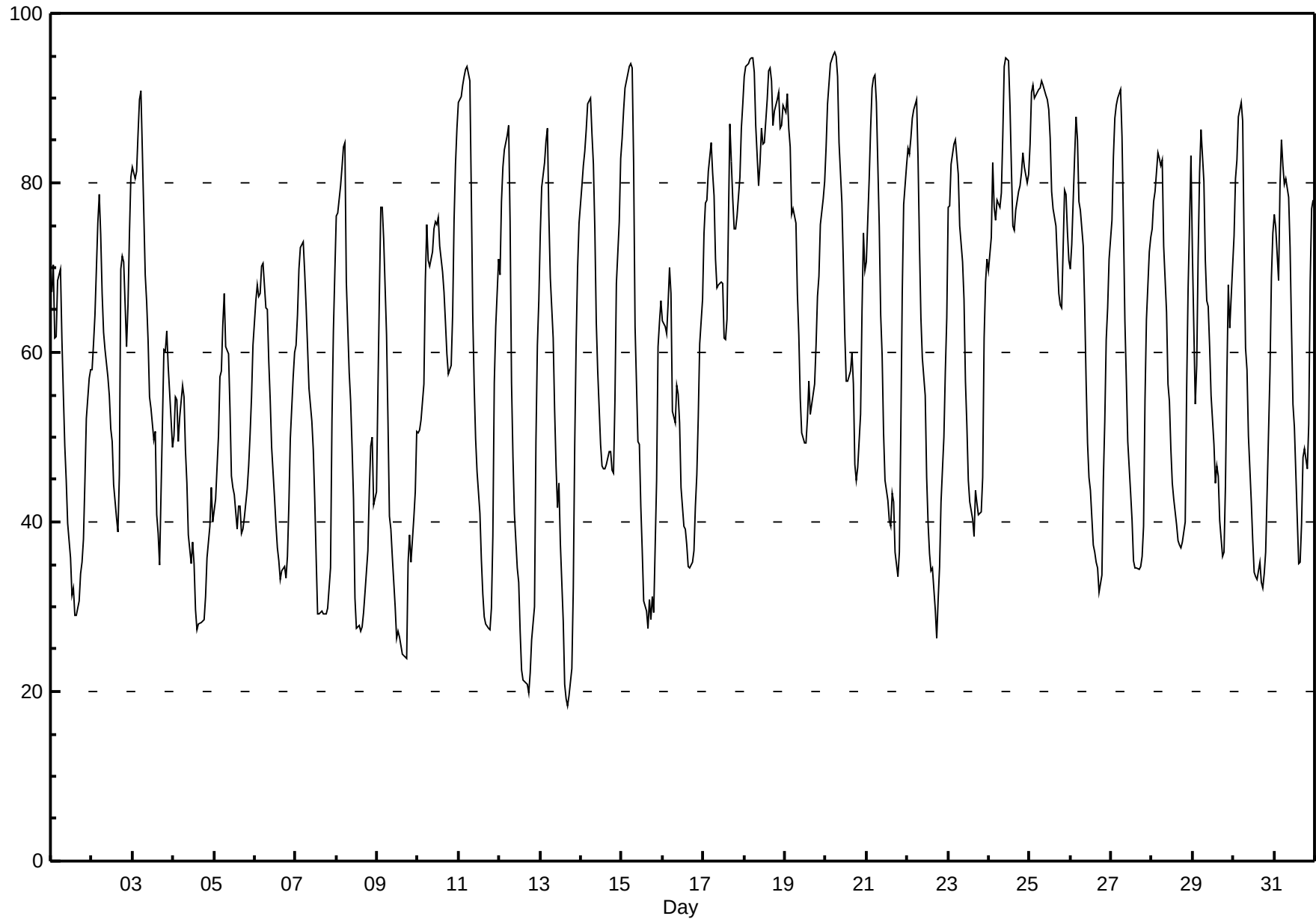
Relative Humidity (RH) - %

Evergreen Park - July 2014

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 95.5 % on Jul 20 06:00 Maximum Daily Average: 89.6 % on Jul 18																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 18 % on Jul 13 17:00 Maximum Diurnal Average: 81.7 % at hour 5 Monthly Average: 60.15 %												Minimum Daily Average: 40.5 % on Jul 4 Minimum Diurnal Average: 42.1 % at hour 17 Percentiles: P ₁ = 21.3 P ₁₀ = 33.5 Q ₁ = 42.7 Median = 60.8 Q ₃ = 77.2 P ₉₀ = 86.8 P ₉₉ = 94.5														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	67	70	62	62	69	70	62	55	49	45	40	36	31	32	29	29	31	34	35	38	45	52	57	58	48.2	70.4
2-Jul	58	61	64	75	79	74	67	62	60	57	55	51	49	44	40	39	46	70	71	71	61	66	74	81	61.5	80.6
3-Jul	82	81	81	86	90	91	84	69	66	61	55	53	50	51	41	39	35	43	60	60	63	58	55	49	62.6	90.9
4-Jul	50	55	54	50	52	56	55	49	45	39	35	38	35	30	27	28	28	28	28	31	36	39	44	40	40.5	56.2
5-Jul	41	43	50	57	58	63	67	61	60	53	45	44	43	39	42	42	39	39	40	44	47	50	55	61	49.3	66.9
6-Jul	66	68	67	67	70	71	65	65	59	54	49	43	40	37	35	33	34	35	33	36	42	50	57	60	51.5	70.5
7-Jul	61	64	70	72	73	70	65	61	56	52	48	43	36	29	29	30	29	29	29	30	35	52	63	69	49.8	73.1
8-Jul	76	76	80	82	84	85	68	58	54	49	43	31	27	28	27	28	29	32	37	44	49	50	42	44	50.9	84.8
9-Jul	56	67	77	77	73	62	52	41	39	36	30	26	27	26	25	24	24	24	35	38	35	41	43	51	43.0	77.1
10-Jul	50	51	52	56	68	75	71	70	72	75	75	76	73	69	67	64	60	58	59	64	76	82	86		67.7	86.5
11-Jul	89	90	92	93	93	94	92	79	65	56	50	46	41	36	32	29	28	27	27	30	38	56	63	71	59.0	93.7
12-Jul	69	78	82	84	86	87	75	56	48	41	35	33	27	23	21	21	21	20	22	26	30	50	61	66	48.4	86.9
13-Jul	74	79	82	85	87	76	69	62	53	47	42	45	37	28	21	19	18	20	23	32	49	61	70	75	52.3	86.5
14-Jul	80	82	84	86	89	90	86	82	75	64	58	49	47	46	46	47	48	48	46	46	54	68	75	83	65.8	90.0
15-Jul	85	88	91	93	94	94	93	82	63	50	49	42	37	31	30	27	31	29	31	29	45	61	64	66	58.5	94.1
16-Jul	64	63	62	66	70	67	53	52	56	55	52	44	40	39	37	35	35	35	37	42	46	52	61	66	51.1	70.1
17-Jul	74	78	78	81	85	81	79	71	68	68	68	68	62	61	64	87	82	78	75	75	76	81	86	89	75.6	89.4
18-Jul	93	94	94	95	95	95	93	87	80	82	86	85	85	90	93	94	92	87	89	90	91	87	87	89	89.6	94.8
19-Jul	88	90	86	84	76	77	75	67	62	55	51	49	49	52	57	53	54	56	61	67	69	75	78	80	67.2	90.5
20-Jul	84	89	92	94	95	96	95	93	85	78	70	62	57	57	58	60	56	47	45	47	53	65	74	70	71.6	95.5
21-Jul	71	80	86	91	92	93	90	75	64	60	51	45	43	40	39	43	42	36	34	36	51	67	77	82	62.0	92.8
22-Jul	84	83	85	88	89	90	83	73	64	59	55	45	40	36	34	35	30	26	31	35	42	50	58	64	57.4	89.8
23-Jul	77	77	82	85	85	83	81	75	71	66	57	51	45	42	40	38	44	42	41	41	45	62	68	71	61.3	85.1
24-Jul	70	73	82	77	76	78	77	79	86	94	95	94	89	82	75	74	77	79	80	81	84	82	80	81	81.0	94.7
25-Jul	85	91	92	90	91	91	91	92	92	90	90	89	85	79	77	75	71	67	66	65	79	79	74	71	82.1	92.0
26-Jul	70	73	83	88	85	78	77	73	66	57	49	45	44	37	36	35	35	32	34	45	52	61	65	71	57.9	87.8
27-Jul	76	83	88	89	90	91	85	75	64	57	49	43	40	35	35	35	34	35	36	39	54	64	72	74	60.1	91.0
28-Jul	75	78	79	84	83	82	83	72	65	56	54	49	45	43	40	38	37	37	38	40	56	68	75	83	60.7	83.6
29-Jul	72	54	59	72	81	86	80	71	66	65	61	55	49	45	47	45	40	36	36	44	57	68	63	70	59.2	86.2
30-Jul	74	80	83	88	90	87	73	60	58	50	42	38	34	34	33	35	33	32	34	36	43	58	69	74	55.8	89.5
31-Jul	76	75	68	80	85	82	80	80	78	72	63	54	51	40	35	35	40	48	49	46	52	68	77	78	63.0	85.1
72.1 74.7 77.0 79.8 81.7 81.1 76.3 69.2 64.1 59.4 54.9 50.7 47.1 44.0 42.4 42.5 42.1 42.3 43.9 46.5 52.9 61.8 66.8 70.1																								Diurnal Average		
92.6 93.7 94.1 94.6 95.1 95.5 95.0 92.6 91.6 93.8 94.7 94.4 89.1 89.8 93.2 93.6 92.0 86.9 88.5 89.8 90.8 86.5 86.8 89.4																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %
Evergreen Park - July 2014



Hourly Averages

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

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	2	5	3	4	6	8	12	12	7	4	5	6	6	3	5	3	11	10	6	5	4	4	6	0.6	12.5
Dir	323	322	286	309	215	210	245	250	252	268	241	331	171	174	122	99	27	38	57	63	41	52	50	61	292.2	251.7
2 Spd	7	5	1	1	1	2	3	8	7	10	11	15	19	19	17	16	7	21	14	11	6	4	6	9	4.0	21.0
Dir	65	80	71	24	59	61	99	106	96	123	116	111	106	122	120	116	287	333	343	351	33	31	282	288	81.4	333.0
3 Spd	6	15	1	3	2	4	3	2	6	8	11	13	17	15	18	26	20	20	8	4	7	15	11	18	7.8	25.6
Dir	33	246	73	184	89	210	218	281	275	291	291	296	330	315	323	324	337	303	263	300	213	233	254	250	292.2	324.1
4 Spd	17	16	15	28	23	20	24	30	28	28	30	21	20	32	41	36	32	31	28	20	18	11	5	10	22.7	40.7
Dir	238	234	235	247	252	258	251	254	254	250	260	291	278	257	250	257	256	257	272	282	295	268	227	247	257.8	250.2
5 Spd	12	7	3	2	3	3	5	10	10	16	22	14	9	17	13	11	15	14	16	16	12	13	6	6	9.4	21.7
Dir	254	259	147	186	200	205	211	222	231	247	267	290	274	307	311	271	248	255	266	259	260	257	286	291	262.2	267.2
6 Spd	3	9	14	13	7	6	11	9	19	26	23	24	23	22	18	25	21	18	19	16	10	9	3	5	14.2	25.8
Dir	269	270	258	262	288	262	263	277	267	275	284	281	288	295	291	286	309	301	305	307	284	265	255	262	283.7	275.0
7 Spd	6	5	4	5	8	8	15	15	14	12	12	12	13	11	9	10	13	10	7	5	0	1	0	0	7.6	14.8
Dir	273	314	331	322	316	276	271	274	277	275	264	275	298	268	280	274	315	312	298	313	163	185	261	212	285.8	271.0
8 Spd	2	0	1	0	1	2	10	11	16	11	9	13	7	9	10	9	9	8	5	4	5	2	4	2	5.2	16.0
Dir	47	54	59	321	232	242	261	265	255	260	252	263	254	207	206	207	210	171	182	202	205	215	222	207	233.3	255.2
9 Spd	1	1	2	2	1	4	9	24	35	36	39	37	36	36	37	39	35	31	30	14	21	29	22	14	20.9	39.1
Dir	80	174	213	220	297	335	281	269	269	255	252	280	272	272	266	266	271	272	315	319	312	281	250	251	272.9	251.9
10 Spd	14	17	20	17	17	17	22	29	28	24	28	27	26	28	27	23	21	17	13	9	5	5	2	2	16.4	28.8
Dir	243	238	253	273	290	265	275	284	285	292	299	299	303	315	324	324	313	312	302	295	245	196	203	203	290.4	284.5
11 Spd	2	2	0	1	0	1	2	1	7	15	16	10	11	9	11	13	6	6	3	4	2	2	4	1	4.8	15.5
Dir	222	207	214	212	199	218	197	183	242	254	253	263	257	278	278	267	297	247	190	176	209	202	206	211	250.9	253.2
12 Spd	2	1	1	2	1	2	5	9	7	12	13	8	7	11	9	7	4	4	4	4	2	1	1	0	3.5	12.9
Dir	203	50	215	210	209	204	213	251	256	263	267	249	262	284	255	320	310	335	16	63	139	209	196	51	264.6	267.1
13 Spd	1	1	1	1	4	9	6	9	13	14	10	6	6	5	4	4	7	7	5	2	0	0	1	1	3.6	13.5
Dir	50	46	234	217	206	225	239	250	250	256	252	194	230	198	220	173	164	178	143	104	37	342	7	70	222.5	256.0
14 Spd	1	1	1	0	1	1	0	1	4	2	3	6	7	7	5	5	9	8	9	7	4	2	0	2	2.5	9.3
Dir	56	66	221	279	53	226	347	336	237	207	236	197	160	167	134	116	109	113	121	123	106	66	193	47	136.8	120.9
15 Spd	0	1	0	0	1	3	3	5	13	14	12	13	14	10	6	7	8	22	11	3	3	1	3	2	4.8	22.3
Dir	125	50	173	196	221	231	210	266	257	262	252	253	266	274	319	249	225	329	349	2	204	190	192	214	271.4	329.5
16 Spd	4	1	2	2	1	3	7	9	9	7	9	11	11	13	11	11	11	8	7	5	6	4	4	3	3.5	12.7
Dir	215	9	347	198	216	347	263	310	321	350	300	43	58	54	49	61	48	49	81	84	96	126	106	103	38.9	54.1
17 Spd	3	3	3	2	4	7	5	11	10	13	9	8	9	8	15	5	17	16	13	11	10	5	6	1	2.8	17.5
Dir	65	88	82	39	62	63	73	42	53	78	62	96	119	57	354	37	280	302	302	302	272	240	214	189	13.4	279.7
18 Spd	2	0	2	2	1	3	2	5	7	4	3	3	7	3	3	3	2	1	4	6	8	8	2	6	2.5	8.4
Dir	239	219	187	204	205	207	171	166	138	201	319	268	265	217	118	119	131	106	160	208	202	216	187	227	199.9	215.5
19 Spd	11	15	21	22	20	15	14	21	23	26	23	25	25	25	20	26	26	29	20	15	13	9	8	10	15.3	28.5
Dir	240	222	227	230	245	243	243	253	269	281	296	290	292	309	311	332	334	339	327	318	330	302	310	308	288.7	338.6
20 Spd	10	9	8	10	9	6	6	6	10	15	12	10	8	7	8	6	9	14	17	12	5	2	5	6	8.1	17.4
Dir	316	295	277	264	243	230	232	241	250	242	250	255	266	299	266	238	236	249	257	251	233	215	204	232	254.3	256.8
21 Spd	5	1	5	0	0	2	5	7	8	6	9	3	8	5	8	10	12	6	7	3	1	1	2	1	3.5	12.1
Dir	228	224	191	209	215	216	205	220	242	215	289	278	240	243	286	202	214	186	164	152	67	36	39	50	224.4	213.7
22 Spd	2	2	3	4	4	4	4	7	8	10	9	10	9	9	9	12	13	16	16	10	6	5	3	1	6.4	16.2
Dir	56	73	71	78	82	79	93	132	138	148	148	139	136	135	105	68	104	93	116	104	81	70	358	358	107.9	93.3

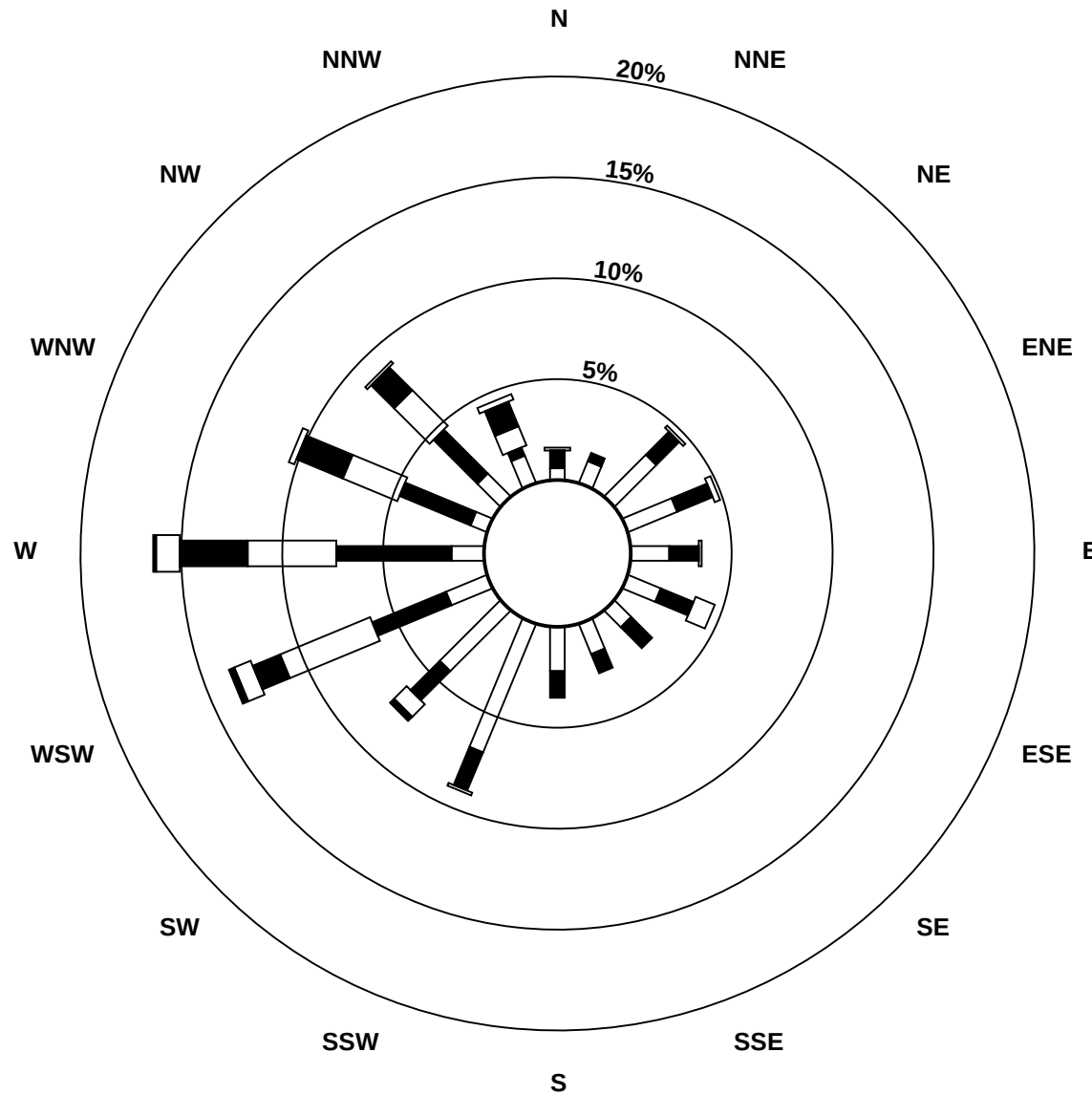
Hourly Averages

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

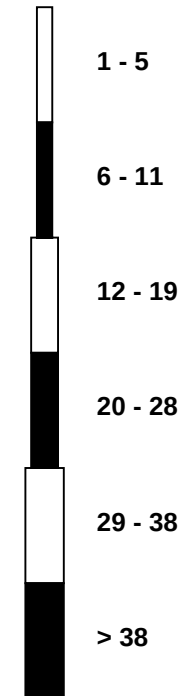
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
23 Spd	0	6	5	2	4	8	12	11	15	15	10	11	11	10	8	9	11	9	7	7	3	2	3	5	4.2	14.6									
Dir	335	295	339	16	243	266	270	282	275	267	306	278	267	330	336	322	29	60	84	124	91	58	40	268	302.1	275.5									
24 Spd	17	15	17	20	16	9	4	12	15	13	12	14	27	22	30	23	20	18	21	18	19	19	16	20	15.1	30.1									
Dir	335	305	317	342	349	343	164	233	228	287	310	328	335	330	335	315	299	316	320	313	302	298	290	266	312.4	335.5									
25 Spd	27	25	25	25	23	25	27	27	26	22	25	20	20	19	13	9	9	9	7	4	2	1	1	3	15.9	27.3									
Dir	267	263	262	265	269	270	272	272	271	276	276	271	265	268	275	307	307	313	307	286	209	217	181	250	271.9	271.9									
26 Spd	3	3	1	0	2	2	3	6	12	18	18	20	14	17	12	11	11	13	10	14	5	3	2	3	7.6	20.3									
Dir	315	23	224	205	252	268	305	302	284	277	276	277	270	280	288	296	245	250	236	250	234	191	196	198	269.8	277.2									
27 Spd	2	0	1	2	4	3	2	10	13	13	10	10	10	9	8	7	5	7	6	5	1	1	1	3	4.1	13.1									
Dir	157	242	216	212	207	205	257	251	254	257	280	299	265	271	310	204	247	218	169	160	188	174	223	131	247.4	254.4									
28 Spd	4	2	4	3	2	3	5	4	3	3	8	8	8	8	7	8	10	10	9	4	0	1	2	4	2.6	10.5									
Dir	221	147	219	214	234	217	213	276	238	178	210	171	172	149	129	128	93	83	102	85	28	36	32	16	148.7	92.7									
29 Spd	6	10	4	1	0	1	1	4	5	6	4	3	2	4	9	11	11	9	7	4	2	2	4	4	3.2	11.3									
Dir	70	94	138	126	349	45	52	61	157	190	195	201	116	123	51	53	53	57	69	58	46	36	75	345	76.7	52.8									
30 Spd	1	1	4	4	2	10	9	14	16	17	17	16	17	15	11	12	10	11	7	3	2	0	1	1	7.4	17.0									
Dir	48	89	213	287	220	272	304	284	280	300	305	288	289	319	307	332	321	305	305	51	20	109	35	18	300.4	304.6									
31 Spd	0	3	5	3	3	5	5	3	4	5	6	7	8	6	4	5	6	7	5	6	3	1	1	3	0.9	8.1									
Dir	152	279	159	189	337	253	263	166	281	314	350	3	357	52	355	89	132	100	126	121	102	39	53	39	45.4	357.1									
Spd	2.9	3.3	3.6	4.0	3.7	4.5	6.0	8.1	10.5	10.8	10.9	9.0	8.3	7.6	7.3	6.2	6.2	6.4	4.3	3.0	2.6	3.0	2.2	3.0	Diurnal Average										
Dir	269.8	260.2	251.6	261.1	267.2	257.4	256.1	262.8	262.0	264.6	272.9	280.4	279.8	287.2	297.1	294.9	291.4	304.1	302.7	297.0	284.6	265.2	257.3	263.6	Diurnal Maximum										
Spd	26.8	25.2	24.6	27.5	23.1	24.6	27.3	30.0	34.5	35.5	39.1	37.2	35.6	36.3	40.7	38.7	34.6	30.8	29.6	20.0	20.6	29.1	22.0	20.0	Diurnal Maximum										
Dir	266.7	262.6	262.1	247.4	269.1	270.1	271.9	253.6	268.8	255.1	251.9	280.2	271.8	272.1	250.2	266.0	271.0	257.5	315.3	281.9	311.8	281.3	249.8	266.0											
Maximum Speed Value: 41 km/h on Jul 4 15:00																		Minimum Speed Value: 0 km/h on Jul 7 23:00						Hours in Service: 744											
Maximum Daily Speed Average: 22.7 km/h on Jul 4																		Minimum Daily Speed Average: 0.6 km/h on Jul 18						Hours of Data: 744											
Maximum Diurnal Speed Average: 10.9 km/h at hour 11																		Minimum Diurnal Speed Average: 2.2 km/h at hour 23						Hours of Missing Data: 0											
Monthly Average Velocity: 5.52 km/h 275.39 deg																		Speed Percentiles: P ₁ = 0.2 P ₁₀ = 1.2 Q ₁ = 3.3 Median = 7.3 Q ₃ = 13.0 P ₉₀ = 21.0 P ₉₉ = 34.8						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	17		7		4		1		1		0		30																						
NorthEast	50		18		8		0		0		0		76																						
East	29		19		6		0		0		0		54																						
SouthEast	19		23		3		1		0		0		46																						
South	44		19		0		0		0		0		63																						
SouthWest	81		44		16		4		0		0		145																						
West	19		65		69		40		18		3		214																						
NorthWest	19		35		33		26		3		0		116																						
Total	278		230		139		72		22		3		744																						

Wind Rose

Wind Speed (WS) (km/h)
Evergreen Park - July 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - July 2014

Maximum Speed: 42 km/h on Jul 4 15:00 Maximum Daily Speed Average: 24.1 km/h on Jul 4																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Percent Operational Time: 100.0		
Minimum Speed: 0 km/h on Jul 7 23:00 Minimum Daily Speed Average: 4.4 km/h on Jul 18 Maximum Diurnal Speed Average: 15.7 km/h at hour 14 Minimum Diurnal Speed Average: 4.8 km/h at hour 23 Monthly Average Speed: 10.40 km/h Percentiles: P ₁ = 0.4 P ₁₀ = 1.7 Q ₁ = 4.0 Median = 8.9 Q ₃ = 14.1 P ₉₀ = 22.2 P ₉₉ = 35.8																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	1	4	5	4	5	6	8	12	13	8	6	7	9	10	7	8	9	12	10	7	5	4	4	6	7.2	12.7
2-Jul	7	5	1	1	1	2	4	8	8	11	12	16	20	21	18	17	20	23	14	12	6	5	9	10	10.4	23.0
3-Jul	7	15	4	6	4	4	4	3	7	9	13	16	18	16	21	28	21	23	11	5	7	16	12	18	12.0	27.8
4-Jul	17	16	15	28	23	20	24	30	28	29	31	23	21	34	42	37	33	31	29	21	18	12	5	10	24.1	41.6
5-Jul	12	8	4	2	3	3	5	10	10	17	24	16	12	20	14	13	16	15	17	16	12	13	7	7	11.5	23.5
6-Jul	4	10	14	13	8	6	12	10	20	27	25	26	25	24	19	27	23	19	21	17	11	9	3	5	15.7	27.3
7-Jul	7	5	4	5	8	8	15	15	15	14	13	14	15	13	13	13	15	12	10	6	2	1	0	0	9.3	15.4
8-Jul	2	0	1	1	2	3	10	12	16	12	10	14	11	11	13	11	10	8	5	4	5	3	4	2	7.1	16.4
9-Jul	2	2	2	2	2	5	10	24	35	36	40	39	37	38	38	40	36	31	32	15	22	31	22	14	23.1	40.0
10-Jul	14	17	20	18	18	17	22	29	29	25	29	28	27	30	28	24	23	18	14	9	6	5	2	2	18.9	29.6
11-Jul	2	2	1	1	2	1	2	2	8	17	16	11	13	12	14	15	9	9	5	5	2	2	4	2	6.6	16.6
12-Jul	2	1	1	2	1	2	6	9	8	13	14	10	9	13	12	10	8	6	7	5	2	1	2	0	6.0	13.9
13-Jul	1	2	1	1	4	9	6	9	14	14	11	7	7	7	6	7	9	8	5	2	0	0	1	2	5.6	14.1
14-Jul	1	1	1	1	1	1	0	2	4	4	6	7	9	9	7	6	10	9	10	8	4	3	1	2	4.4	10.1
15-Jul	1	2	1	1	2	3	3	6	13	14	12	13	15	11	9	9	12	24	12	3	3	3	3	3	7.4	23.6
16-Jul	4	3	5	3	2	4	8	10	10	9	10	12	12	14	13	13	12	9	8	5	6	4	4	3	7.7	14.4
17-Jul	3	4	3	3	5	7	6	11	11	13	10	8	11	10	18	11	19	17	14	11	10	6	6	3	9.1	18.6
18-Jul	3	2	2	2	1	3	3	5	7	6	4	5	8	4	3	3	3	3	4	6	8	9	3	6	4.4	9.1
19-Jul	11	15	21	22	20	15	14	21	24	27	25	26	27	28	22	27	27	29	21	16	14	9	8	11	20.0	29.4
20-Jul	10	9	9	10	9	6	7	7	10	16	14	12	10	10	11	9	11	16	18	12	5	2	5	6	9.7	17.7
21-Jul	6	2	5	1	1	2	5	8	8	7	10	9	11	11	10	11	13	8	7	4	1	1	2	1	6.0	12.6
22-Jul	2	3	3	4	4	4	5	8	9	11	10	11	11	12	12	13	15	17	17	11	6	5	6	3	8.4	17.3
23-Jul	3	7	6	2	5	9	12	11	15	15	12	13	14	12	11	12	13	11	8	7	3	2	3	7	8.9	15.2
24-Jul	18	17	18	20	17	10	7	13	17	14	12	14	28	23	31	25	21	19	21	19	19	20	17	20	18.2	30.7
25-Jul	27	26	25	25	24	25	28	28	27	23	25	21	20	19	13	9	9	9	7	5	2	1	1	3	16.7	27.9
26-Jul	4	3	1	0	2	2	4	6	13	18	19	22	17	18	15	14	11	14	11	14	6	3	2	3	9.3	21.7
27-Jul	2	0	1	2	4	3	2	11	13	14	12	11	11	11	12	11	10	9	7	5	1	2	2	5	6.7	13.6
28-Jul	5	6	7	3	3	4	5	5	4	5	9	10	11	11	10	10	12	11	10	4	1	1	2	6	6.4	11.8
29-Jul	7	10	5	4	1	1	2	4	7	7	6	7	6	8	11	12	12	10	8	4	2	2	4	5	6.0	12.2
30-Jul	2	1	6	4	4	10	10	15	17	19	18	17	18	17	14	14	12	12	9	4	3	2	2	1	9.6	18.7
31-Jul	2	5	7	4	4	5	8	5	5	6	7	8	11	9	9	8	9	8	5	6	3	1	1	3	5.8	11.0
6.0 6.6 6.4 6.3 6.0 6.5 8.3 11.3 13.8 14.8 15.0 14.6 15.3 15.7 15.4 15.0 14.8 14.5 12.2 8.7 6.4 5.7 4.8 5.5																								Diurnal Average		
27.1 25.6 24.9 27.7 23.6 25.0 27.9 30.4 35.1 36.3 39.8 39.0 36.7 37.7 41.6 40.0 35.8 31.4 31.8 20.8 21.9 30.6 22.4 20.3																								Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using scalar methods																										

Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - July 2014

Maximum Value: 100.0 deg on Jul 27 23:00																		Hours in Service: 744							
Minimum Value: 4.6 deg on Jul 19 03:00																		Hours of Data: 744							
Percentiles: P ₁ = 7.8 P ₁₀ = 12.2 Q ₁ = 17.1 Median = 28.8 Q ₃ = 50.7 P ₉₀ = 70.1 P ₉₉ = 92.1																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
1-Jul	72	86	37	43	26	8	14	13	12	30	56	58	63	65	73	68	93	26	23	24	11	8	8	12	93.1
2-Jul	14	20	52	43	36	23	37	25	30	37	26	20	21	22	25	19	85	26	14	29	22	28	79	25	84.8
3-Jul	32	47	84	77	69	50	65	76	63	33	35	37	19	25	26	25	18	28	53	40	29	12	19	9	83.6
4-Jul	13	15	11	6	9	7	9	9	9	13	15	23	21	15	12	14	12	12	16	17	14	21	64	11	64.0
5-Jul	10	29	48	56	38	17	10	8	22	18	24	27	46	31	26	33	20	23	14	10	11	12	29	34	55.6
6-Jul	53	30	9	12	24	39	18	26	16	16	21	21	21	24	22	21	23	19	24	18	19	12	15	8	53.5
7-Jul	20	14	16	18	11	14	11	13	19	26	30	31	35	47	51	50	33	44	49	34	90	80	87	78	90.4
8-Jul	20	52	38	88	66	60	18	18	13	24	30	26	58	46	47	35	25	21	17	13	20	53	12	56	88.2
9-Jul	74	83	67	55	43	32	21	10	11	12	11	18	14	16	14	16	15	14	23	20	23	21	10	7	83.5
10-Jul	9	10	8	12	13	10	11	12	11	15	15	16	15	17	15	17	18	24	25	15	31	11	64	55	63.7
11-Jul	57	51	81	30	89	59	46	78	39	34	23	41	43	51	47	41	64	58	68	49	25	57	10	82	89.1
12-Jul	68	66	49	52	64	18	15	14	22	24	22	45	51	34	59	53	74	68	70	23	22	55	78	39	78.2
13-Jul	57	81	90	33	26	8	20	15	15	17	25	34	41	53	70	70	48	28	20	31	27	68	48	85	89.8
14-Jul	86	62	86	76	49	59	58	54	32	65	72	45	38	51	45	45	25	33	24	20	13	27	90	47	89.8
15-Jul	88	70	77	96	70	21	29	29	13	16	12	16	21	31	55	42	43	20	26	74	74	93	36	40	96.4
16-Jul	50	94	69	53	73	43	32	17	25	48	50	29	28	33	39	31	34	40	27	20	21	35	10	23	94.5
17-Jul	21	22	18	46	27	21	25	19	27	29	29	26	46	42	37	50	20	18	20	17	12	30	13	76	76.2
18-Jul	77	94	61	55	80	65	44	32	28	54	54	54	27	56	31	44	73	68	30	29	14	65	82	32	94.2
19-Jul	11	7	5	8	8	10	8	10	13	17	21	15	20	28	28	20	16	15	17	16	13	16	21	16	27.7
20-Jul	17	14	24	13	14	14	16	21	21	18	29	36	46	51	64	52	31	38	11	11	23	27	10	16	64.5
21-Jul	51	97	53	73	95	59	17	19	25	38	29	74	53	79	34	33	17	42	31	33	41	40	57	72	96.7
22-Jul	26	33	16	17	18	14	24	24	26	30	38	38	38	49	52	28	28	22	19	17	16	11	55	77	77.3
23-Jul	78	31	38	41	40	16	15	19	16	17	36	34	52	43	59	46	37	29	33	22	32	17	39	59	78.3
24-Jul	15	27	22	11	12	34	73	21	26	22	18	17	15	16	12	18	17	17	12	16	15	15	18	10	73.4
25-Jul	9	10	9	9	13	11	12	10	13	15	13	10	9	13	21	13	12	16	15	38	15	51	41	16	50.7
26-Jul	26	50	24	80	18	43	24	23	21	14	19	23	35	19	42	35	26	22	25	18	34	55	51	18	80.3
27-Jul	51	60	59	54	9	45	55	13	14	20	37	33	30	52	55	57	64	48	37	27	81	72	100	78	100.0
28-Jul	58	81	52	52	59	49	17	38	71	73	32	53	49	46	59	40	31	29	25	27	32	40	41	45	80.8
29-Jul	26	18	29	81	69	62	50	23	56	50	60	86	91	67	39	27	25	31	23	19	14	30	15	48	90.5
30-Jul	76	78	62	39	78	17	15	16	16	26	20	26	26	29	38	41	44	29	38	45	43	89	89	58	89.0
31-Jul	90	57	48	71	61	49	52	66	59	51	41	40	51	63	80	61	51	32	21	19	43	79	57	37	89.8
89.8 96.7 89.8 96.4 94.6 64.9 73.4 78.3 70.6 73.2 72.0 86.4 90.5 78.9 80.2 70.0 93.1 68.5 69.5 73.9 90.4 93.0 100.0 85.2																									

PAZA
Smoky Heights Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

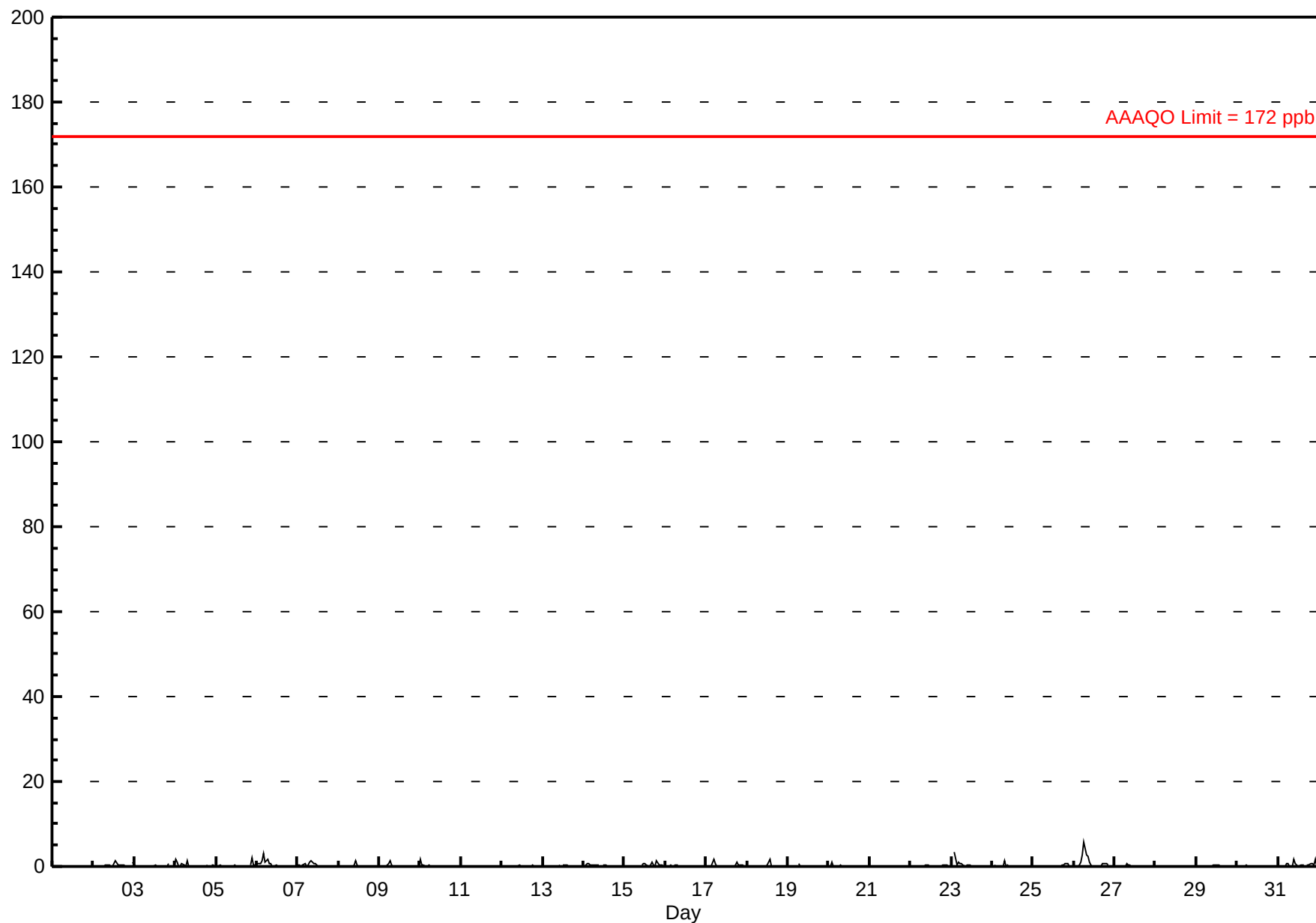
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - July 2014

Number of Exceedences (AAAQO):		1-hr: 0	24-hr: 0	Hours in Service: 744																						
Maximum Value: 5.7 ppb on Jul 26 07:00		Maximum Daily Average: 0.8 ppb on Jul 26																		Hours of Data: 706						
Minimum Value: 0 ppb on Jul 8 02:00		Minimum Daily Average: 0.0 ppb on Jul 28																		Hours of Missing Data: 38						
Maximum Diurnal Average: 0.4 ppb at hour 7		Minimum Diurnal Average: 0.1 ppb at hour 15																		Hours of Calibration: 38						
Monthly Average: 0.17 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.4 P ₉₉ = 1.6																		Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
2-Jul	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	A	1	0.3	1.3
3-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0.1	0.8
4-Jul	2	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	1.8
5-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	2	0	0	0.2	1.9
6-Jul	1	1	1	1	3	1	2	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.5	3.0
7-Jul	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	1.4
8-Jul	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	1.3
9-Jul	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	1.5
10-Jul	2	0	0	0	0	0	0	0	0	C	C	C	C	C	A	0	0	0	0	0	0	0	0	0	0.2	1.8
11-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.0	0.2
12-Jul	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
13-Jul	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
14-Jul	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
15-Jul	0	0	0	0	0	0	0	0	0	A	0	1	1	0	0	0	1	0	0	1	0	0	0	0	0.3	1.4
16-Jul	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
17-Jul	0	0	0	0	2	1	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.2	1.6
18-Jul	0	0	0	0	0	0	A	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0.1	1.7
19-Jul	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.8
20-Jul	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.0
21-Jul	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
22-Jul	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
23-Jul	0	A	3	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	3.3
24-Jul	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	1.3
25-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0.1	0.6
26-Jul	0	0	0	0	1	3	6	3	3	1	0	0	0	0	0	0	1	1	1	0	A	0	0	0	0.8	5.7
27-Jul	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.5
28-Jul	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
29-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.4
30-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.2
31-Jul	0	0	0	0	0	1	1	0	0	2	1	0	0	0	0	A	0	0	1	1	0	2	0	0	0.4	1.8
		0.2	0.1	0.2	0.1	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	Diurnal Average
		1.8	1.1	3.3	1.3	3.0	2.6	5.7	2.7	2.5	1.8	1.3	0.8	0.8	1.7	0.2	0.3	1.0	0.8	0.9	1.4	0.8	1.9	1.8	1.2	Diurnal Maximum
C - Calibration		A - Automated Daily Zero Span																								
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 172 ppb		24-hr 48 ppb		30-day 11 ppb																				

Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - July 2014



Hourly Maximums

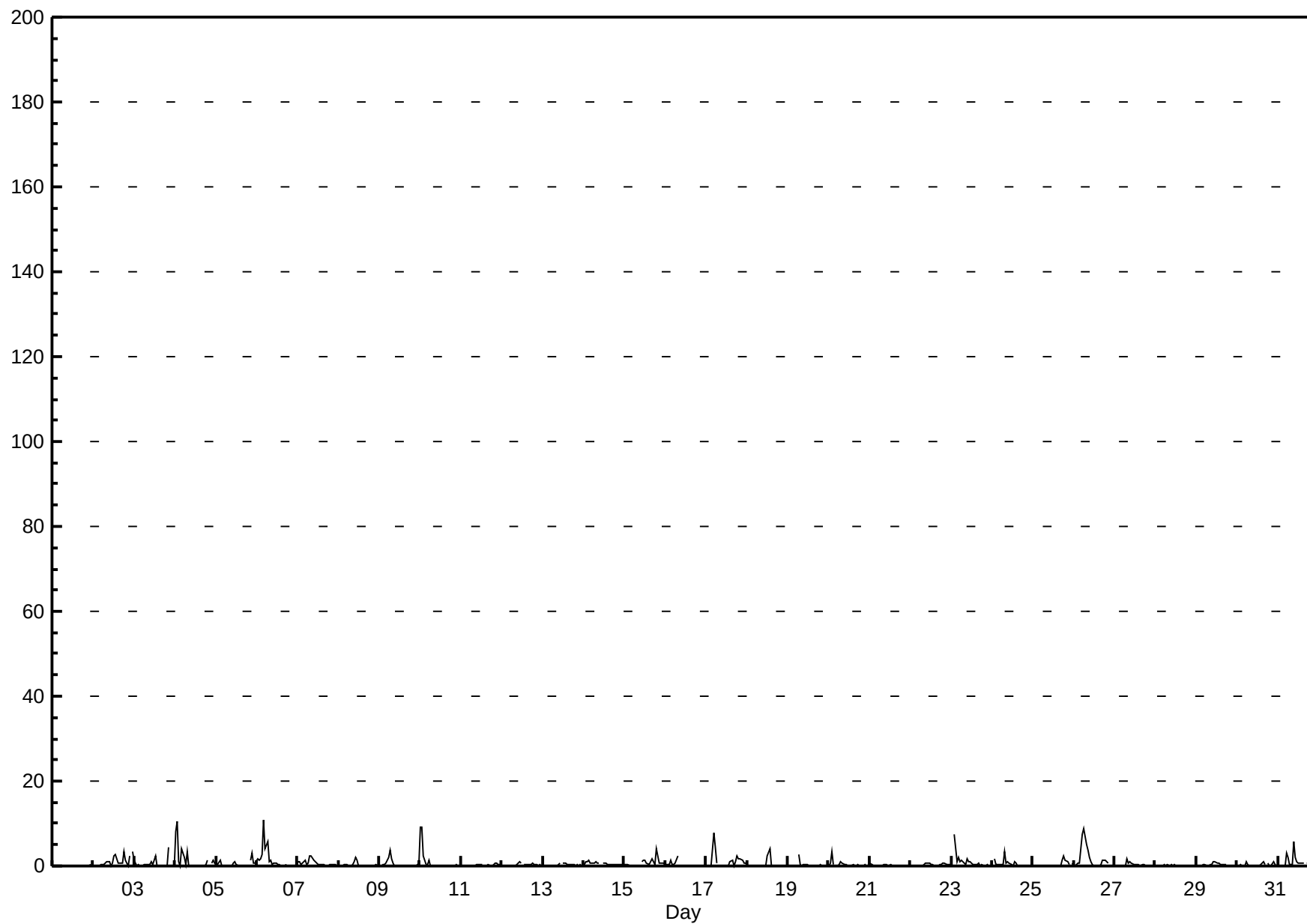
Sulphur Dioxide (SO₂) - ppb

Smoky Heights - July 2014

Maximum Value: 10.7 ppb on Jul 6 05:00																		Hours in Service: 744								
Maximum Daily Average: 1.7 ppb on Jul 26																		Hours of Data: 706								
Minimum Value: 0 ppb on Jul 9 18:00																		Hours of Missing Data: 38								
Maximum Diurnal Average: 1.1 ppb at hour 5																		Hours of Calibration: 38								
Monthly Average: 0.58 ppb																		Percent Operational Time: 100.0								
Minimum Daily Average: 0.1 ppb on Jul 1																										
Minimum Diurnal Average: 0.2 ppb at hour 17																										
Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.6 P ₉₀ = 1.3 P ₉₉ = 7.9																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.4
2-Jul	0	0	0	0	0	0	0	1	1	1	0	1	2	3	1	1	1	1	3	1	0	2	A	3	1.0	3.5
3-Jul	1	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	5	A	0	0	0.5	4.5
4-Jul	8	11	1	0	4	2	0	3	0	0	0	0	0	0	0	0	0	0	0	1	A	1	2	1	1.5	10.7
5-Jul	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	A	1	3	1	1	0.5	3.2
6-Jul	2	1	2	3	11	4	6	1	1	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	1.5	10.7
7-Jul	1	1	0	1	1	0	1	2	2	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0	0.7	2.4
8-Jul	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	A	0	0	0	0	0	0	0.3	2.1
9-Jul	0	0	0	0	1	2	4	2	1	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0.5	3.6
10-Jul	9	9	2	0	0	1	0	0	0	C	C	C	C	C	A	0	0	0	0	0	0	0	0	0	1.3	9.1
11-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	0	0	0.2	0.6
12-Jul	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	1	0	0	0	0	0	0.3	0.9
13-Jul	0	0	0	0	0	0	0	0	0	0	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.7
14-Jul	0	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0.6	1.3
15-Jul	0	0	0	0	0	0	0	0	0	0	A	1	1	1	1	0	1	2	1	0	4	1	1	1	0.7	4.0
16-Jul	0	0	0	1	0	0	1	2	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.3
17-Jul	0	0	0	0	8	4	1	A	0	0	0	0	0	0	1	1	0	1	2	2	2	1	1	1	1.1	7.9
18-Jul	0	0	0	0	0	0	A	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0.3	4.2
19-Jul	0	0	0	0	0	A	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2.7
20-Jul	0	1	3	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	3.3
21-Jul	1	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	0.8
22-Jul	0	0	A	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0.3	0.8
23-Jul	0	A	8	1	2	1	1	1	0	2	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0.9	7.6
24-Jul	A	2	0	1	0	0	0	4	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	A	0.5	3.6
25-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	1	1	0	A	1	0.3	2.5
26-Jul	0	0	1	1	4	7	9	5	4	2	1	0	0	0	0	0	1	1	1	1	1	A	0	0	1.7	8.8
27-Jul	0	0	0	0	0	0	0	2	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	1.8
28-Jul	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
29-Jul	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0.3	0.9
30-Jul	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	A	1	0	0	1	0	0	0.2	1.0
31-Jul	0	0	0	0	0	3	2	0	0	6	2	1	1	1	1	1	A	1	1	1	2	1	4	0	1.2	5.6
																								Diurnal Average		
																								Diurnal Maximum		
0.8 0.9 0.7 0.3 1.1 1.0 1.0 0.9 0.5 0.7 0.6 0.4 0.5 0.5 0.3 0.3 0.2 0.3 0.5 0.5 0.5 0.5 0.4 0.3																										
9.1 10.7 7.6 2.6 10.7 7.3 8.8 5.1 3.8 5.6 2.1 1.4 2.5 4.2 0.9 1.2 1.8 1.5 3.2 4.0 4.5 3.2 4.1 3.5																										
C - Calibration A - Automated Daily Zero Span																										

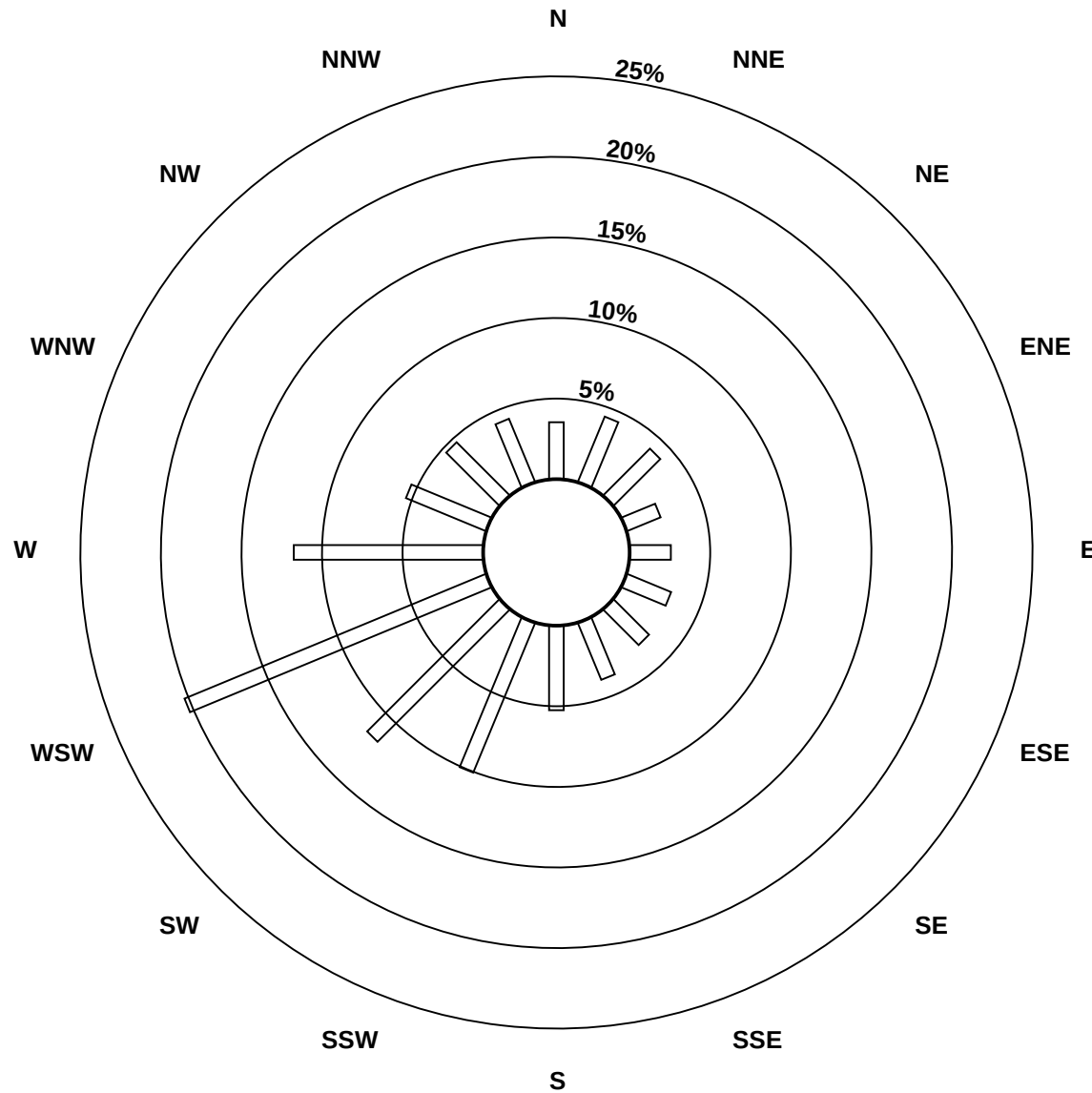
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - July 2014

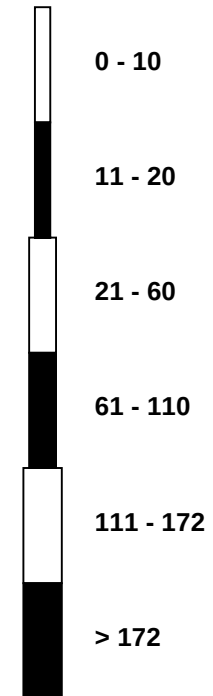


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Smoky Heights - July 2014

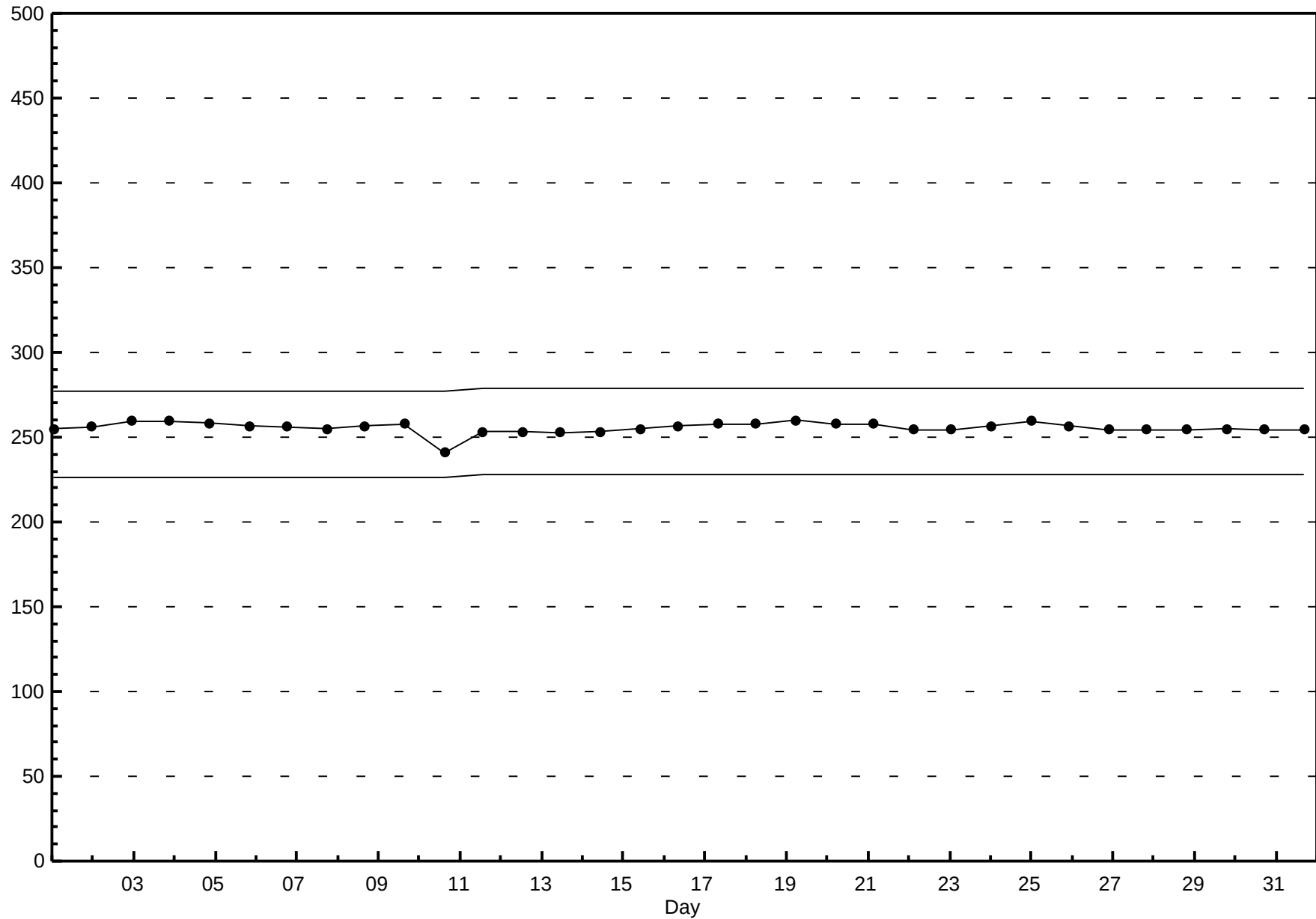


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Smoky Heights - July 2014



Hourly Averages

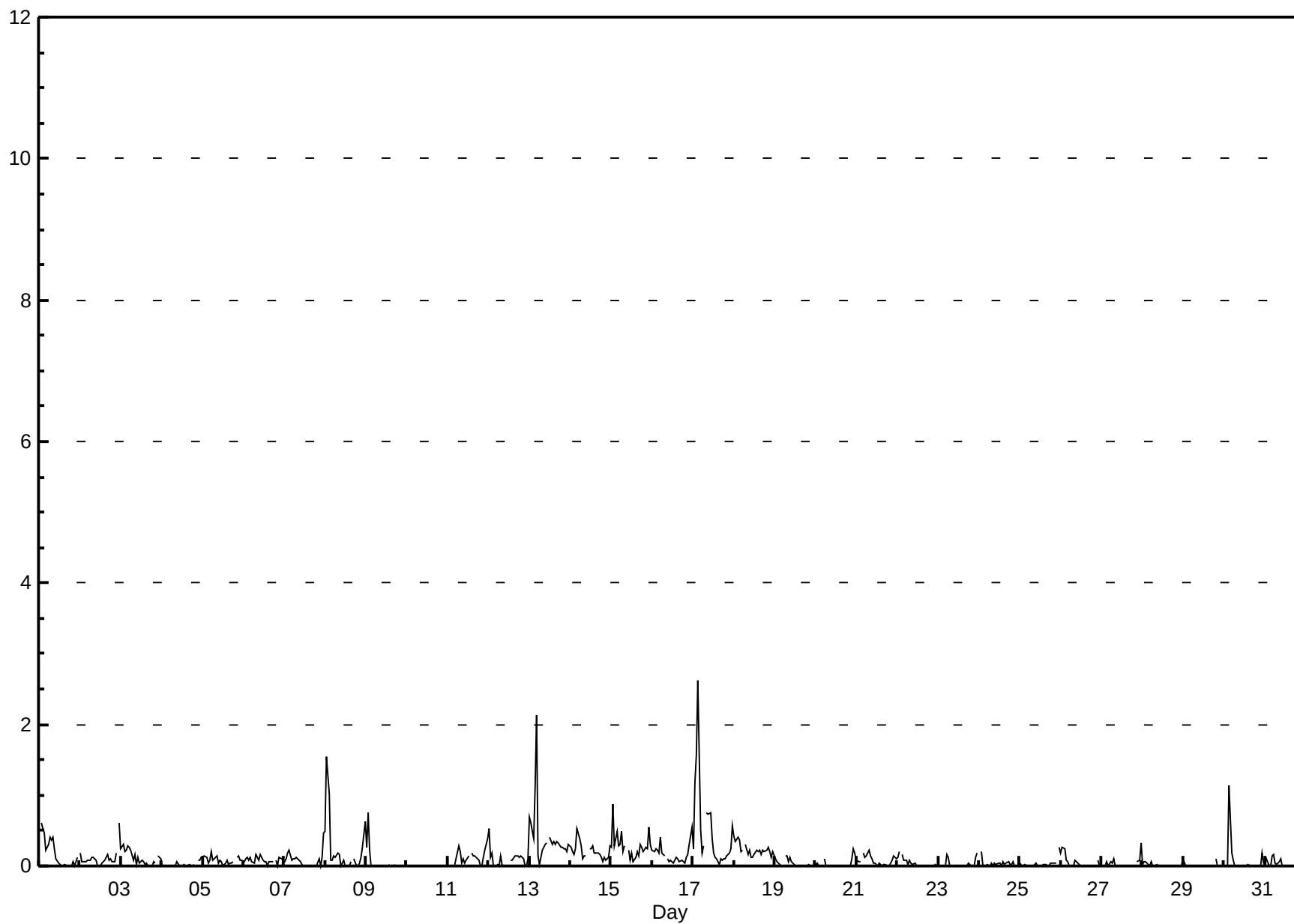
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0		Maximum Value: 2.6 ppb on Jul 17 04:00		Maximum Daily Average: 0.5 ppb on Jul 17		Hours in Service: 744		Hours of Data: 708		Hours of Missing Data: 36		Hours of Calibration: 36		Percent Operational Time: 100.0													
Minimum Value: 0 ppb on Jul 1 15:00		Minimum Daily Average: 0.0 ppb on Jul 10		Minimum Diurnal Average: 0.0 ppb at hour 12		Maximum Diurnal Average: 0.3 ppb at hour 2		Monthly Average: 0.11 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 1.1																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jul	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6	
2-Jul	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	0.6	
3-Jul	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	
4-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.0	0.1	
5-Jul	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	
6-Jul	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	
7-Jul	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	
8-Jul	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	0.2	1.6	
9-Jul	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.8	
10-Jul	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	
11-Jul	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
12-Jul	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
13-Jul	1	1	0	1	2	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.1	
14-Jul	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5	
15-Jul	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3	0.9	
16-Jul	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	0.6	
17-Jul	0	1	2	3	1	0	0	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5	2.6	
18-Jul	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	
19-Jul	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	
20-Jul	0	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	
21-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
22-Jul	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	0.2	
23-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	
24-Jul	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	0.2	
25-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.0	0.3	
26-Jul	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	
27-Jul	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	
28-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.0	0.1	
29-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.1	
30-Jul	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	1.1	
31-Jul	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	0.2	
		0.2	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	Diurnal Average	
		0.7	1.6	1.6	2.6	2.1	0.4	0.5	0.4	0.8	0.7	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.6	Diurnal Maximum		
C - Calibration		A - Automated Daily Zero Span																									
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 10 ppb		24-hr 3 ppb																							

Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - July 2014



Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

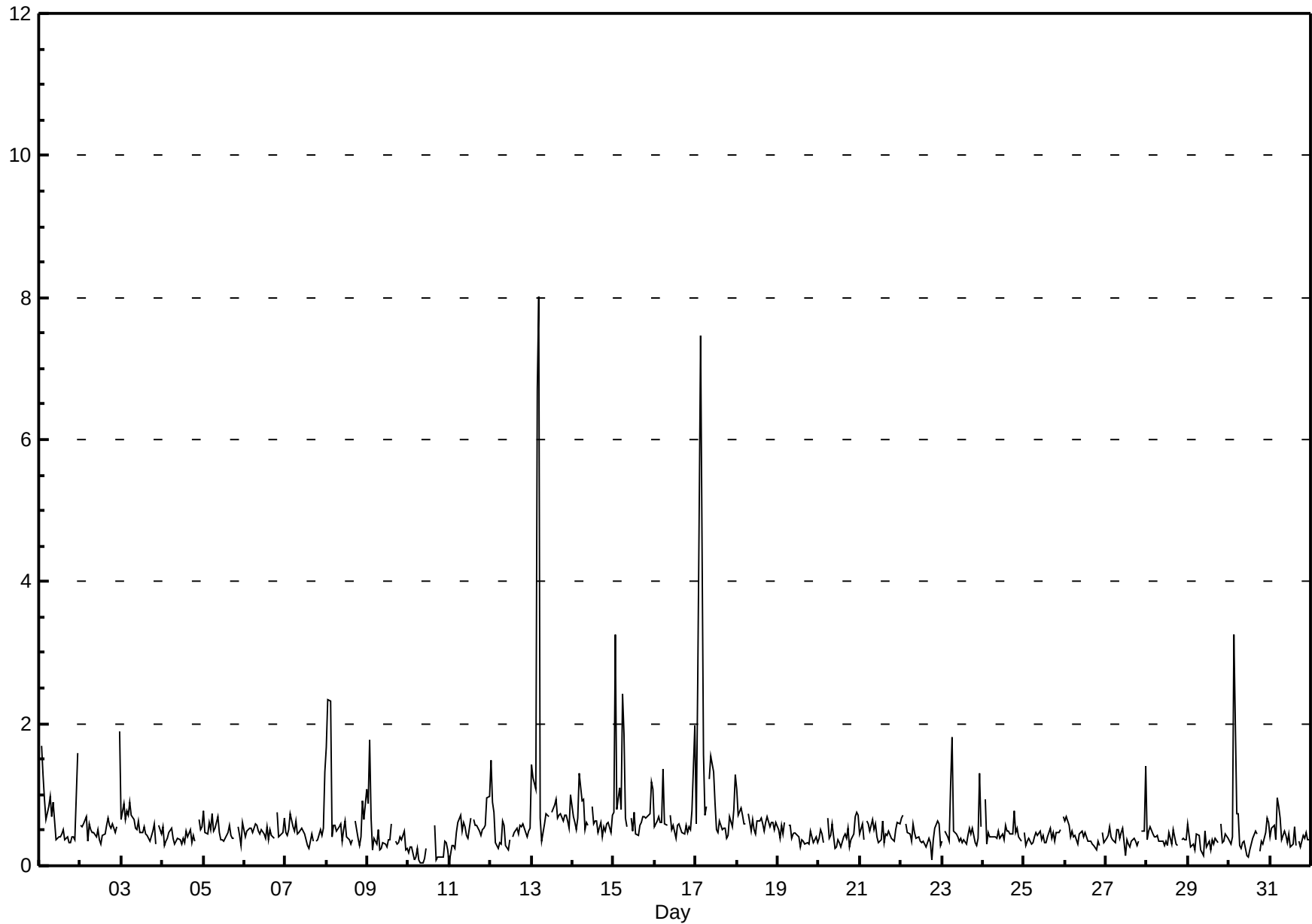
Smoky Heights - July 2014

Maximum Value: 8.0 ppb on Jul 13 05:00																				Maximum Daily Average: 1.4 ppb on Jul 13					Hours in Service: 744	
Minimum Value: 0 ppb on Jul 10 08:00																				Minimum Daily Average: 0.2 ppb on Jul 10					Hours of Data: 708	
Maximum Diurnal Average: 1.0 ppb at hour 4																				Minimum Diurnal Average: 0.4 ppb at hour 19					Hours of Missing Data: 36	
Monthly Average: 0.56 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 2.2					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-Jul	A	2	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	2	A	0.7	1.7
2-Jul	1	1	1	1	0	1	1	0	0	0	1	0	0	0	0	1	1	1	1	1	0	1	A	2	0.6	1.9
3-Jul	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	1	0	A	1	0	0.6	0.9
4-Jul	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	1	1	1	0.4	0.6
5-Jul	1	0	0	1	1	1	0	1	1	0	0	0	0	0	0	1	0	0	0	A	1	0	0	1	0.5	0.8
6-Jul	0	0	1	1	1	0	1	1	0	0	1	0	0	1	0	1	0	0	A	1	0	0	0	1	0.5	0.8
7-Jul	0	0	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0.5	1.3
8-Jul	2	2	2	0	1	1	0	1	1	0	1	1	0	0	0	0	A	1	0	0	0	0	1	1	0.7	2.3
9-Jul	1	2	1	0	0	0	1	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0	0	0.4	1.8
10-Jul	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	1	0	0	0	0	0	0	0	0	0.2	0.6
11-Jul	0	0	0	0	0	1	1	0	1	1	0	0	1	A	1	1	1	0	0	1	1	1	1	1	0.5	1.0
12-Jul	1	1	1	0	0	0	0	1	1	0	0	0	A	0	0	1	0	1	1	1	0	0	0	1	0.5	1.5
13-Jul	1	1	1	7	8	1	0	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.4	8.0
14-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0	1	0	1	0	1	1	0	1	0.6	1.3
15-Jul	1	3	1	1	1	2	2	1	1	A	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1.0	3.3
16-Jul	1	1	1	1	1	1	1	1	A	1	1	1	0	1	1	1	0	0	1	0	1	1	1	2	0.7	2.0
17-Jul	1	3	5	7	2	1	1	A	1	2	1	1	1	0	1	1	1	1	0	0	1	1	1	1	1.3	7.5
18-Jul	1	1	1	1	1	1	A	1	0	1	1	0	1	1	1	1	0	1	1	1	1	1	0	1	0.6	1.1
19-Jul	1	0	1	0	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
20-Jul	0	1	0	0	A	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0.4	0.7
21-Jul	0	1	0	A	1	1	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0.5	0.7
22-Jul	1	1	A	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0.4	0.7
23-Jul	0	A	0	0	0	1	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	0.5	1.8
24-Jul	A	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	A	0.5	0.9
25-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	A	1	0.4	0.7
26-Jul	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	0.7
27-Jul	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	1	0.4	1.4
28-Jul	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0.4	0.5
29-Jul	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0.3	0.6
30-Jul	0	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0.5	3.3
31-Jul	0	1	1	0	1	1	1	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0.5	1.0
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration																										
A - Automated Daily Zero Span																										

Hourly Maximums

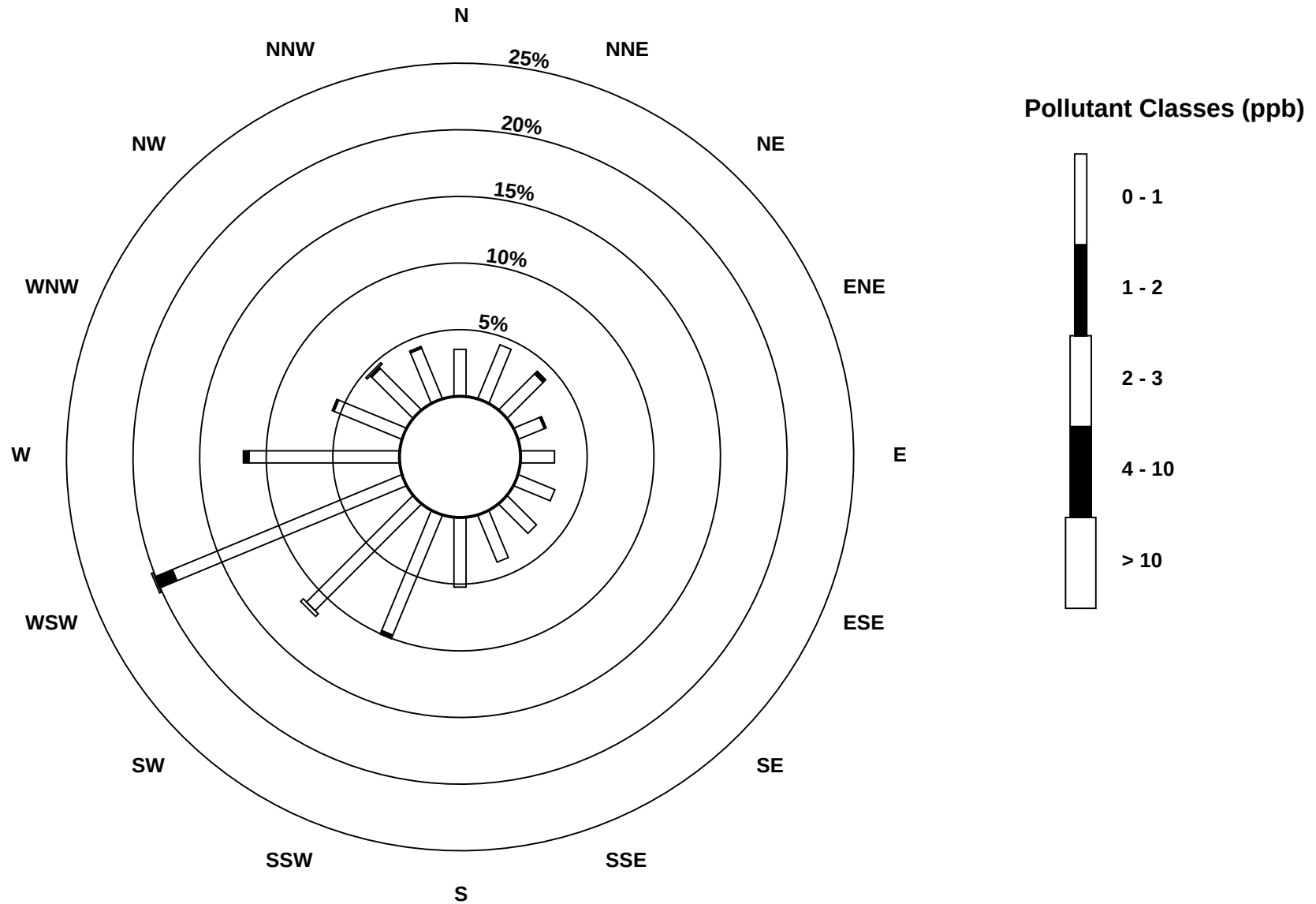
Total Reduced Sulphur (TRS) - ppb

Smoky Heights - July 2014



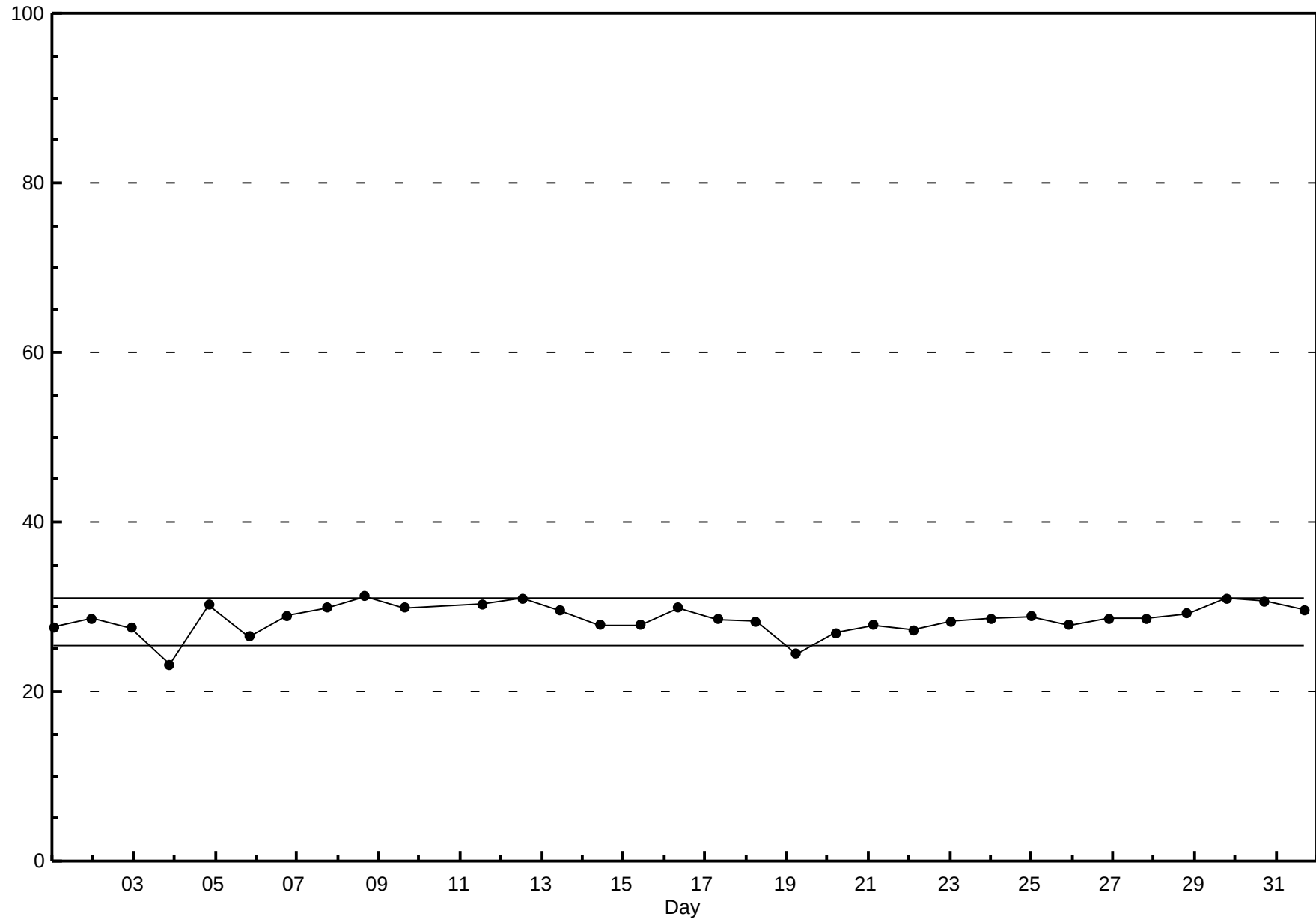
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Smoky Heights - July 2014



Span Responses

Total Reduced Sulphur (TRS)
Smoky Heights - July 2014

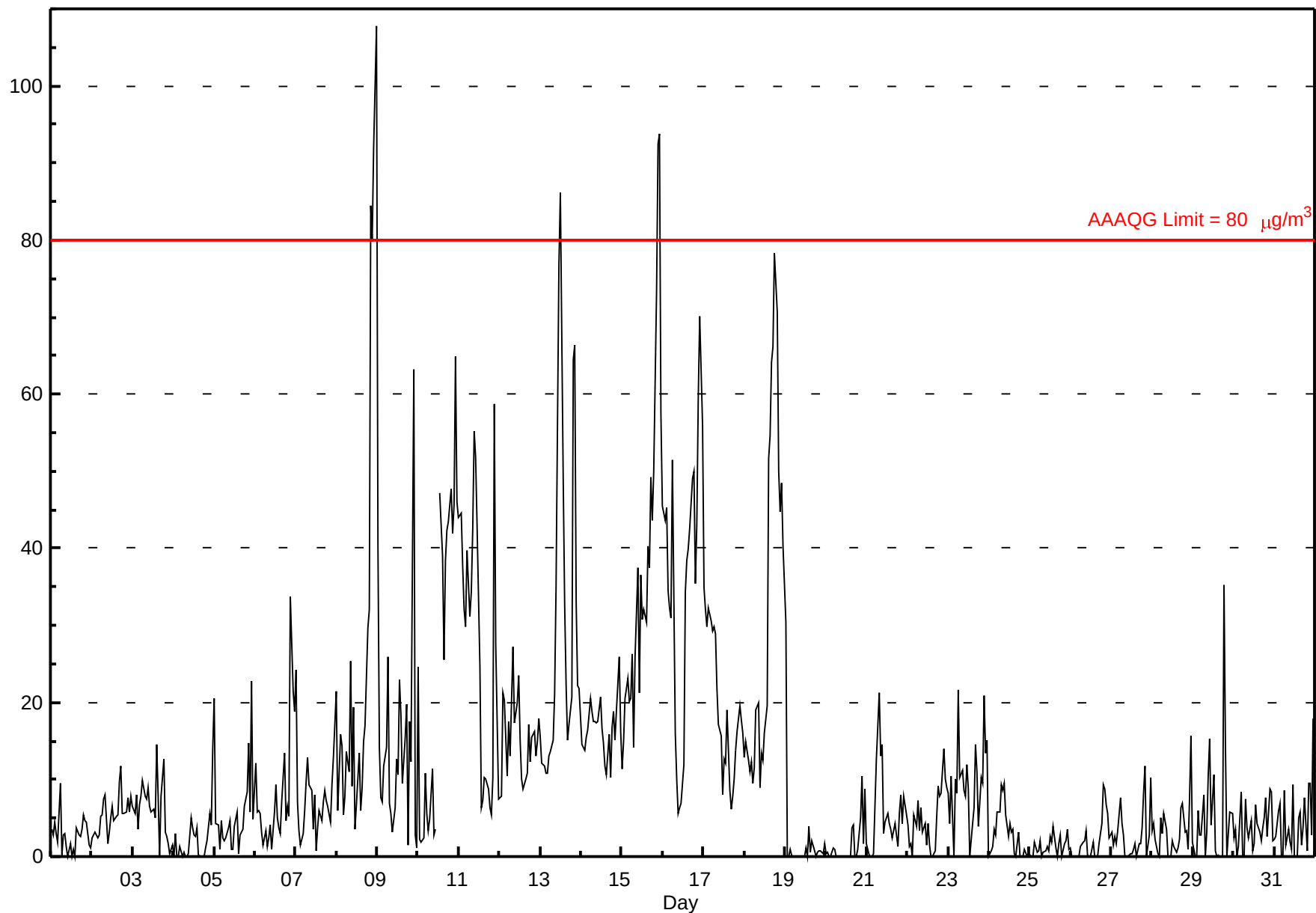


Number of Exceedences: 1-hr: 6 24-hr: 4 Maximum Value: 107.8 µg/m³ on Jul 9 00:00 Maximum Daily Average: 37.6 µg/m³ on Jul 15																				Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7						
Minimum Value: 0 µg/m³ on Jul 1 11:00 Maximum Diurnal Average: 21.9 µg/m³ at hour 22 Monthly Average: 11.87 µg/m³																				Minimum Daily Average: 1.3 µg/m³ on Jul 25 Minimum Diurnal Average: 7.8 µg/m³ at hour 4 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 1.9 Median = 5.8 Q ₃ = 14.7 P ₉₀ = 32.5 P ₉₉ = 75.4						
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-Jul	3	3	4	3	2	9	0	3	3	1	0	2	0	1	0	4	3	3	3	5	5	4	2	1	2.7	9.5
2-Jul	2	3	3	2	3	5	5	7	8	2	3	5	7	5	5	5	10	12	6	6	6	8	6	8	5.5	11.8
3-Jul	7	6	8	3	7	8	10	8	7	9	7	6	6	5	15	8	0	8	13	3	3	2	0	2	6.2	14.6
4-Jul	0	3	0	0	1	0	1	0	0	0	5	4	3	3	4	0	0	0	0	1	2	6	4	14	2.1	13.9
5-Jul	20	4	4	1	5	2	2	2	4	5	1	1	4	6	0	3	3	4	7	8	15	6	23	5	5.6	22.8
6-Jul	12	6	6	6	3	1	3	1	3	4	1	6	9	5	4	3	7	13	5	7	5	34	21	19	7.7	33.7
7-Jul	24	7	3	2	3	6	10	13	9	8	4	8	1	4	6	5	7	9	7	7	4	9	13	17	7.7	24.2
8-Jul	21	6	16	14	5	8	14	11	25	9	19	4	7	13	6	9	15	17	30	32	84	80	92	108	26.9	107.8
9-Jul	41	14	8	7	12	14	26	7	6	3	6	13	11	23	18	9	15	20	2	17	12	63	3	1	14.6	63.2
10-Jul	25	2	2	2	11	6	3	5	11	3	4	M	M	47	39	26	38	42	43	48	42	46	65	46	25.2	64.9
11-Jul	44	45	38	32	30	40	31	34	43	55	52	43	25	6	7	10	10	9	6	5	10	59	28	7	27.9	58.7
12-Jul	8	8	21	20	10	18	13	20	27	17	20	24	15	10	9	10	11	17	12	16	16	13	15	18	15.3	27.2
13-Jul	15	12	12	11	11	13	14	15	21	35	56	77	86	49	33	22	15	17	21	65	66	33	22	22	30.9	86.2
14-Jul	15	14	14	15	16	21	19	17	17	17	18	21	17	15	12	11	16	10	17	19	15	19	26	16	16.5	25.9
15-Jul	11	15	20	23	20	21	26	14	26	38	21	37	31	32	30	40	38	49	44	50	74	92	94	57	37.6	93.8
16-Jul	46	44	45	35	32	31	51	16	10	6	6	7	12	34	38	40	43	49	50	35	43	59	70	56	35.8	70.0
17-Jul	35	32	30	32	31	29	30	29	22	17	16	8	13	12	19	9	6	8	10	14	16	20	18	16	19.6	34.8
18-Jul	13	15	13	11	12	10	12	19	20	9	13	12	16	20	52	55	64	66	78	71	50	45	48	40	31.8	78.3
19-Jul	30	0	0	1	0	0	0	0	0	0	0	0	1	0	4	1	2	1	0	1	1	1	0	2	1.8	30.4
20-Jul	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	4	4	0	0	1	5	10	2	9	1.6	10.4
21-Jul	2	0	0	0	0	6	13	21	13	15	3	4	6	4	4	2	3	4	1	6	8	4	8	5	5.6	21.3
22-Jul	4	1	2	0	5	4	7	3	6	3	4	2	4	1	0	0	1	5	9	8	8	14	10	9	4.7	14.0
23-Jul	8	4	10	0	10	8	22	10	11	9	8	12	9	0	4	6	14	11	4	10	10	21	13	15	9.6	21.6
24-Jul	0	1	1	4	3	6	6	9	9	10	5	3	4	3	3	0	0	3	0	0	0	1	0	0	3.0	9.5
25-Jul	0	0	0	2	1	1	2	0	1	1	1	1	3	2	4	1	0	2	3	0	2	2	4	1	1.3	3.9
26-Jul	1	0	0	0	0	0	1	2	2	3	0	0	0	2	0	0	0	2	4	9	9	7	6	2	2.1	9.4
27-Jul	3	1	3	2	3	8	4	3	0	0	0	0	0	1	2	0	2	2	4	8	12	0	3	10	2.9	11.7
28-Jul	3	4	2	0	0	5	3	6	4	0	0	0	2	1	1	1	2	6	7	3	3	1	7	16	3.3	15.6
29-Jul	2	0	0	6	3	3	8	0	3	10	15	4	11	1	0	0	0	0	35	14	0	3	6	6	5.4	35.2
30-Jul	2	4	0	1	8	0	0	7	4	2	5	1	2	7	4	3	2	4	5	8	3	9	8	2	3.8	8.7
31-Jul	2	3	6	7	0	0	9	1	4	2	1	9	0	0	5	6	2	4	8	1	10	9	3	18	4.5	17.9
																									Diurnal Average	
																									Diurnal Maximum	
M - Maintenance																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

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

Smoky Heights - July 2014



Hourly Maximums

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

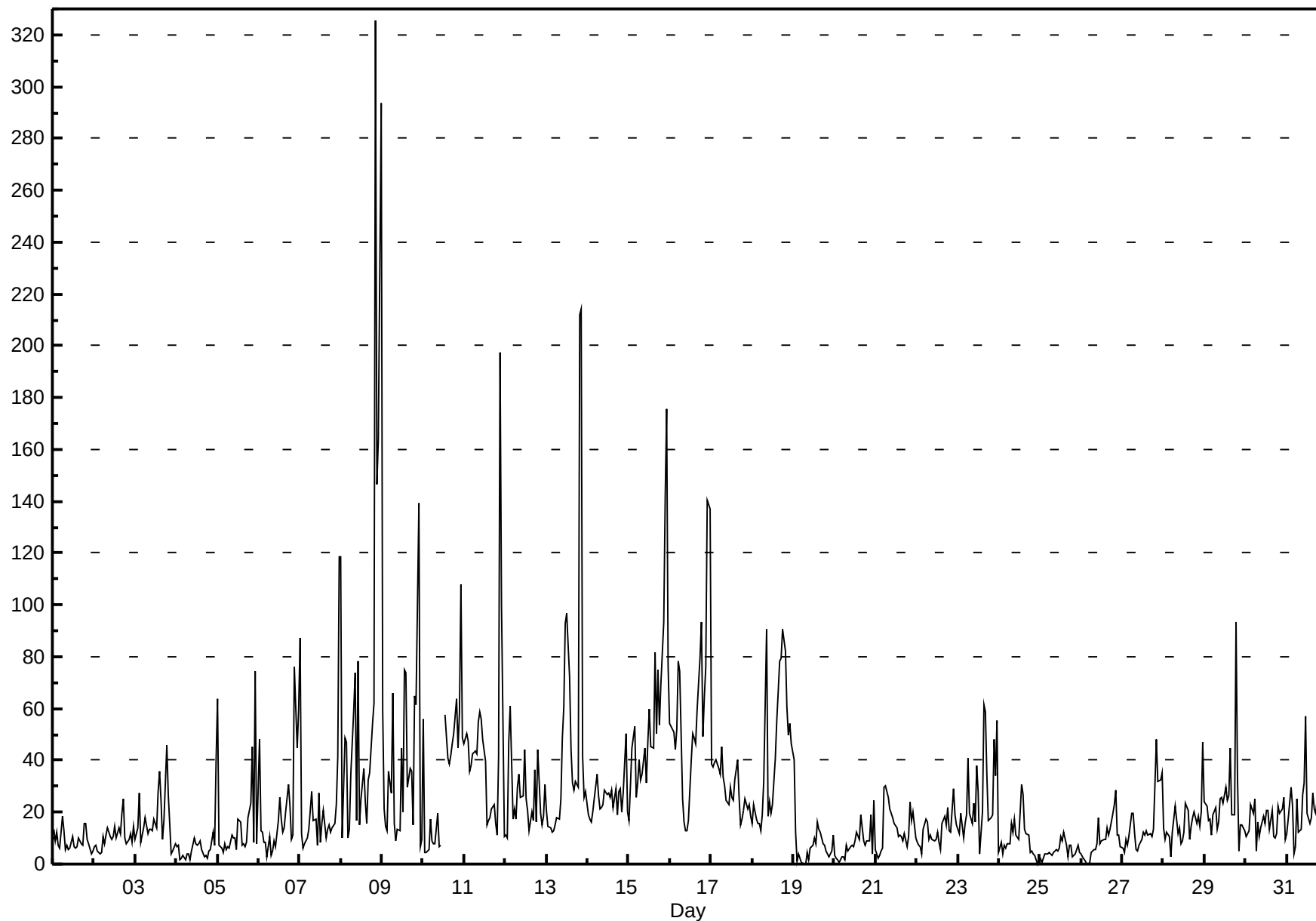
Smoky Heights - July 2014

Maximum Value: 325.7 μg/m³ on Jul 8 21:00																								Maximum Daily Average: 72.5 μg/m³ on Jul 8										Hours in Service: 744	
Minimum Value: 0 μg/m³ on Jul 19 07:00																								Minimum Daily Average: 5.3 μg/m³ on Jul 25										Hours of Data: 742	
Maximum Diurnal Average: 42.2 μg/m³ at hour 21																								Minimum Diurnal Average: 14.1 μg/m³ at hour 5										Hours of Missing Data: 2	
Monthly Average: 24.78 μg/m³																								Percentiles: P ₁ = 0.6 P ₁₀ = 4.9 Q ₁ = 8.9 Median = 15.9 Q ₃ = 29.1 P ₉₀ = 52.4 P ₉₉ = 152.5										Hours of Calibration: 0	
																								Percent Operational Time: 99.7											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
1-Jul	13	9	12	7	6	18	13	6	7	5	6	11	7	6	7	10	8	7	16	15	9	8	4	5	8.9	18.3									
2-Jul	7	7	5	4	5	11	8	11	14	11	10	11	14	10	14	12	20	25	10	8	9	12	8	14	10.8	24.9									
3-Jul	10	14	27	8	11	14	18	12	13	13	13	17	14	28	36	25	9	17	46	27	16	4	5	8	16.9	46.0									
4-Jul	7	7	1	2	3	2	4	4	2	5	10	8	7	8	9	5	3	3	2	5	5	12	7	40	6.8	39.6									
5-Jul	64	7	6	4	8	6	7	6	11	10	10	6	17	16	7	8	7	9	18	24	45	8	74	8	16.1	74.3									
6-Jul	48	13	12	8	8	3	11	3	5	9	7	17	26	17	13	14	20	31	22	10	11	76	45	60	20.4	76.3									
7-Jul	87	12	6	8	10	14	21	28	17	18	7	28	8	15	20	10	13	15	13	14	16	23	41	119	23.4	118.5									
8-Jul	119	10	48	47	10	13	35	59	74	17	78	15	25	37	24	15	32	35	54	62	326	146	164	294	72.5	325.7									
9-Jul	60	21	15	13	36	28	66	16	9	14	13	45	20	75	74	30	37	36	15	65	61	140	7	10	37.6	139.5									
10-Jul	56	4	5	5	17	9	8	8	20	7	7	M	M	57	41	38	42	47	50	64	45	59	108	49	33.9	107.8									
11-Jul	47	51	47	36	38	43	44	43	55	59	56	48	40	15	17	18	21	23	16	11	41	198	100	11	44.8	197.5									
12-Jul	11	10	47	61	18	21	17	30	34	26	26	44	25	21	13	20	17	36	16	44	20	15	19	31	25.9	61.1									
13-Jul	21	14	14	13	13	15	18	18	25	48	61	93	97	72	44	32	29	32	30	212	214	41	26	28	50.4	214.3									
14-Jul	19	17	16	20	25	35	26	21	22	23	28	27	27	26	29	22	29	19	28	29	20	27	50	20	25.3	50.4									
15-Jul	17	30	45	53	26	31	40	32	35	45	32	47	60	45	44	82	50	75	54	70	93	142	176	77	58.3	175.9									
16-Jul	54	52	51	44	52	78	74	25	16	13	13	17	40	50	48	46	59	80	94	49	64	76	140	137	57.3	140.3									
17-Jul	39	38	39	40	37	35	45	33	30	25	23	30	25	24	33	40	26	15	17	21	25	21	23	19	29.3	45.3									
18-Jul	16	23	17	16	16	13	19	32	90	18	24	19	23	41	55	66	78	79	91	82	61	50	54	46	42.9	90.7									
19-Jul	40	12	1	4	2	0	0	0	5	1	6	7	10	8	16	13	12	8	7	5	4	3	5	11	7.6	40.3									
20-Jul	3	2	1	1	3	3	2	7	5	7	7	7	9	13	10	19	14	9	7	9	9	19	4	25	8.1	24.7									
21-Jul	5	2	3	5	6	30	30	26	21	19	18	15	14	11	11	11	9	12	7	11	24	17	20	10	14.1	30.4									
22-Jul	8	7	7	4	13	17	16	10	11	9	9	10	12	8	6	15	18	15	22	13	12	29	19	15	12.8	29.1									
23-Jul	13	12	19	10	15	19	41	19	16	23	16	38	28	4	20	61	59	35	17	18	19	48	34	55	26.7	61.3									
24-Jul	4	8	4	7	6	8	8	15	12	17	11	10	20	31	27	13	12	11	4	5	4	3	0	2	10.1	31.0									
25-Jul	2	1	2	4	4	5	4	3	5	6	5	6	11	9	12	7	3	7	7	3	4	5	7	4	5.3	12.3									
26-Jul	4	3	1	0	0	0	4	6	6	8	18	8	9	9	10	14	11	14	19	23	29	11	11	7	9.4	28.7									
27-Jul	6	4	9	7	11	19	19	12	6	5	7	9	12	11	13	11	12	11	14	30	48	32	32	35	15.7	47.8									
28-Jul	14	10	12	11	3	12	17	22	12	14	8	9	13	24	21	10	14	18	20	15	18	15	20	47	15.8	46.9									
29-Jul	24	22	17	17	11	19	22	13	16	25	26	24	30	25	26	45	19	19	93	34	5	15	15	13	24.0	93.3									
30-Jul	11	12	13	23	20	25	5	16	10	14	19	15	21	21	13	21	11	10	12	22	20	21	26	10	16.2	25.9									
31-Jul	12	17	29	22	4	7	25	12	13	27	32	57	20	16	18	27	21	20	25	17	31	29	17	26	21.8	57.2									
27.1 14.6 17.2 16.3 14.1 17.8 21.5 17.7 19.9 17.5 19.6 23.2 22.7 24.3 23.6 24.5 23.1 24.9 27.3 32.8 42.2 42.1 40.7 39.8																								Diurnal Average											
118.7 51.9 50.9 61.1 51.8 78.5 74.2 59.2 90.4 58.7 78.5 93.1 96.5 75.1 73.6 81.6 78.5 79.6 93.6 211.8 325.7 197.5 175.9 293.9																								Diurnal Maximum											
M - Maintenance																																			

Hourly Maximums

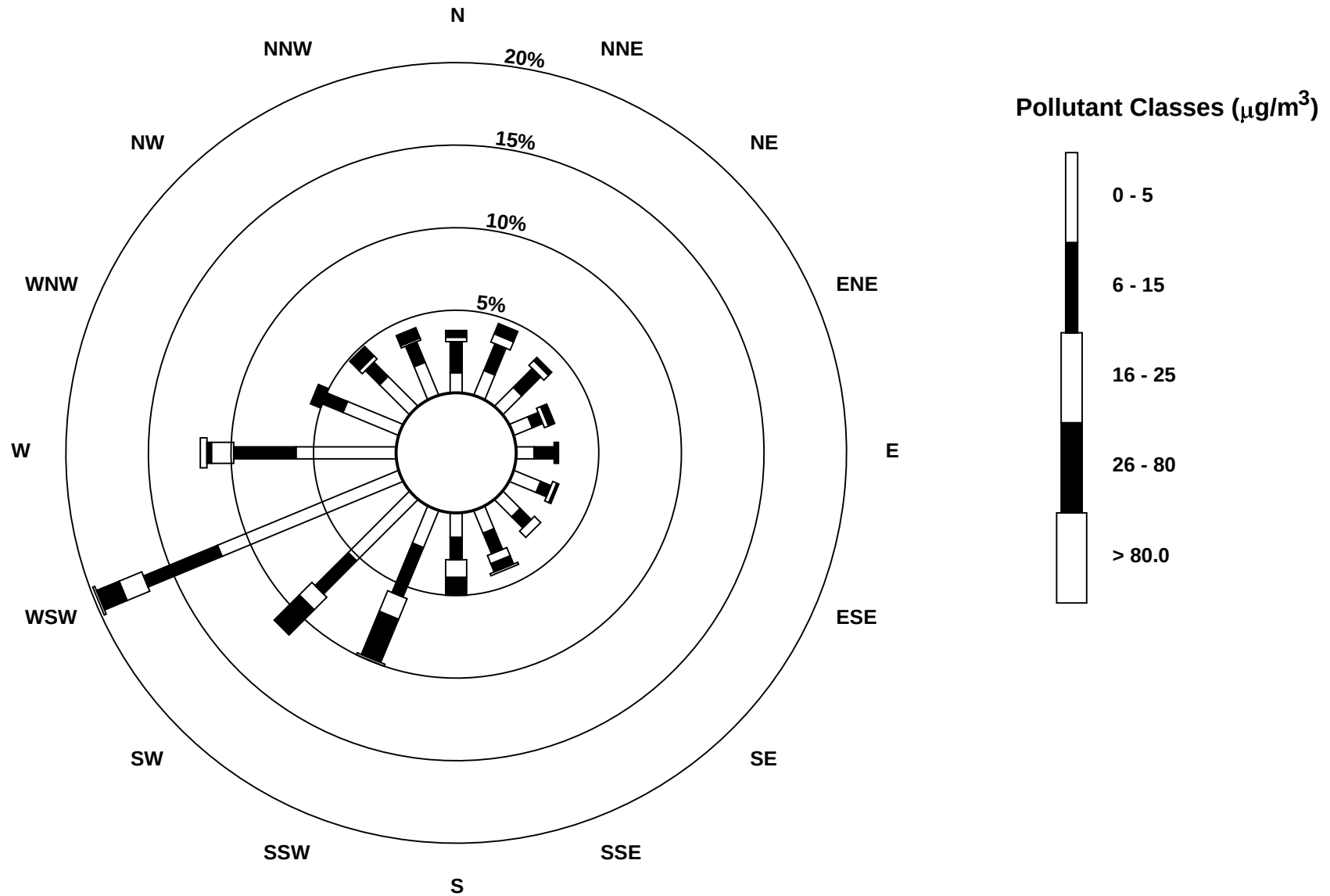
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Smoky Heights - July 2014



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Smoky Heights - July 2014



Hourly Averages

External Temperature (ET) - °C

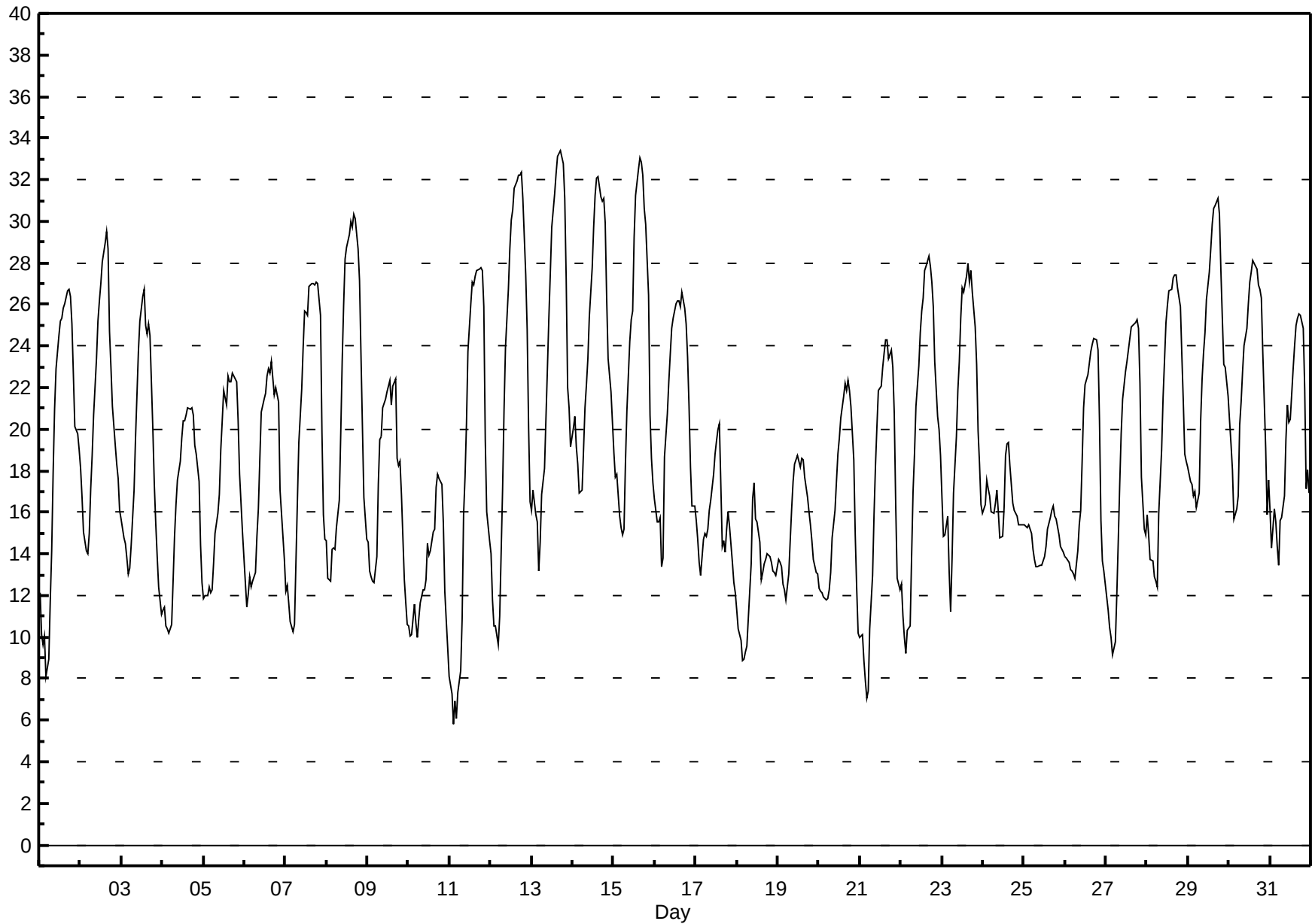
Smoky Heights - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 33.4 °C on Jul 13 18:00 Maximum Daily Average: 24.6 °C on Jul 14																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 6 °C on Jul 11 03:00 Maximum Diurnal Average: 24.8 °C at hour 17 Monthly Average: 18.95 °C												Minimum Daily Average: 12.8 °C on Jul 18 Minimum Diurnal Average: 12.4 °C at hour 5 Percentiles: P ₁ = 7.9 P ₁₀ = 11.9 Q ₁ = 14.2 Median = 18.0 Q ₃ = 23.6 P ₉₀ = 27.3 P ₉₉ = 32.3														
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-Jul	12	10	10	10	8	9	12	14	18	21	23	24	25	25	26	26	27	27	26	25	23	20	20	19	19.2	26.7
2-Jul	18	17	15	14	14	15	17	19	21	23	25	26	27	28	29	30	29	25	23	21	19	18	18	16	21.1	29.5
3-Jul	16	15	14	14	13	13	14	17	20	22	24	25	26	27	25	25	25	24	20	17	15	14	12	11	18.7	26.7
4-Jul	11	11	11	10	10	11	13	15	16	18	18	20	20	20	21	21	21	21	21	19	19	17	14	13	16.3	21.1
5-Jul	12	12	12	12	12	12	13	15	16	17	19	20	22	21	23	22	22	23	23	22	20	18	16	15	17.5	22.7
6-Jul	13	11	12	13	12	13	13	15	16	19	21	21	22	23	23	23	23	22	22	22	21	17	15	14	17.7	23.3
7-Jul	12	12	12	11	10	11	14	16	19	22	24	26	26	25	27	27	27	27	27	27	25	20	16	15	19.9	27.1
8-Jul	15	13	13	14	14	14	15	17	20	23	26	28	29	29	30	30	30	30	29	27	24	20	17	15	21.7	30.3
9-Jul	15	13	13	13	13	13	14	17	20	20	21	21	22	22	21	22	22	19	18	18	17	13	12	11	17.4	22.4
10-Jul	11	10	10	12	11	10	11	12	12	12	13	15	14	14	15	15	17	18	18	17	15	12	11	10	13.1	17.8
11-Jul	8	7	6	7	6	7	8	11	16	18	20	24	26	27	27	27	28	28	28	28	26	20	16	15	18.0	27.8
12-Jul	14	12	11	11	10	11	14	17	21	24	27	29	30	31	32	32	32	32	32	31	27	25	20	17	22.5	32.4
13-Jul	16	17	16	16	13	15	17	18	21	23	25	27	30	31	32	33	33	33	33	31	27	22	21	19	23.7	33.4
14-Jul	20	21	19	18	17	17	19	21	22	23	25	28	30	31	32	32	31	31	31	30	26	23	22	20	24.6	32.1
15-Jul	19	18	18	16	15	15	15	18	21	24	25	26	29	31	33	33	33	32	31	30	26	21	19	17	23.5	33.1
16-Jul	17	16	16	16	13	14	19	21	22	24	25	25	26	26	26	26	27	26	25	23	21	18	16	16	21.0	26.6
17-Jul	16	15	14	13	15	15	15	15	16	17	18	19	19	20	20	14	15	14	15	16	15	14	13	12	15.6	20.3
18-Jul	11	10	10	9	9	9	10	11	14	17	17	16	16	15	13	13	14	14	14	14	14	13	13	13	12.8	17.4
19-Jul	14	14	13	13	12	12	13	15	16	17	18	19	18	18	19	18	18	17	16	15	15	14	13	13	15.4	18.7
20-Jul	12	12	12	12	12	12	12	13	15	16	18	19	20	21	22	22	22	22	22	21	19	15	12	10	16.3	22.4
21-Jul	10	10	9	8	7	7	10	13	16	18	20	22	22	23	24	24	24	23	24	23	21	16	13	12	16.7	24.3
22-Jul	13	11	10	9	10	11	14	17	19	21	23	25	26	26	28	28	28	28	27	26	23	21	20	19	20.1	28.3
23-Jul	17	15	15	16	13	11	14	17	20	22	23	25	27	27	27	28	27	28	27	25	23	20	18	16	20.8	28.0
24-Jul	16	16	18	17	17	16	16	16	17	16	15	15	16	19	19	19	18	16	16	16	16	15	15	15	16.6	19.4
25-Jul	15	15	15	15	15	14	14	13	13	13	13	14	14	14	15	16	16	16	16	16	15	14	14	14	14.7	16.3
26-Jul	14	14	14	13	13	13	13	14	15	16	18	21	22	23	23	24	24	24	24	24	20	16	14	13	17.9	24.4
27-Jul	12	11	10	10	9	10	12	15	17	20	21	23	23	24	24	25	25	25	25	25	22	18	15	15	18.2	25.3
28-Jul	16	15	14	14	13	13	12	16	19	22	23	25	26	27	27	27	27	27	27	26	24	21	19	18	20.7	27.4
29-Jul	18	17	17	17	17	16	17	20	22	24	25	26	28	29	30	31	31	31	30	28	25	23	23	22	23.6	31.1
30-Jul	20	19	18	16	16	17	20	21	23	24	25	26	27	28	28	28	28	27	27	26	24	19	16	18	22.5	28.1
31-Jul	16	14	16	16	14	13	16	16	17	19	21	20	21	23	24	25	25	26	26	25	22	17	18	17	19.4	25.6
14.4 13.7 13.2 13.0 12.4 12.6 14.2 16.1 18.0 19.8 21.3 22.6 23.5 24.1 24.6 24.7 24.8 24.4 23.9 23.1 21.0 17.9 16.2 15.1 20.4 20.6 19.1 18.3 17.0 17.1 20.2 21.3 22.8 24.2 26.7 28.7 30.1 31.3 32.5 33.2 33.3 33.4 32.8 31.1 27.4 24.8 23.0 21.6																								Diurnal Average		
																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Smoky Heights - July 2014



Hourly Averages

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

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	2	1	9	5	5	7	7	6	6	7	5	6	7	10	5	6	6	4	4	8	8	7	8	9	2.5	10.3
Dir	356	277	268	277	207	197	183	179	176	175	149	148	167	167	147	185	187	131	52	66	48	37	53	62	149.6	167.2
2 Spd	9	6	7	5	6	5	7	7	7	13	18	20	18	19	20	21	19	15	16	21	19	16	6	1	6.4	20.7
Dir	54	44	31	22	19	22	30	40	62	105	120	129	109	102	115	117	114	273	339	346	351	358	21	311	66.7	346.4
3 Spd	10	3	4	3	2	4	3	3	3	6	5	8	9	8	21	19	20	23	23	6	10	12	11	11	6.9	23.0
Dir	273	45	163	95	329	20	224	239	142	161	197	244	257	281	292	318	308	304	285	237	242	246	257	246	275.8	284.8
4 Spd	16	15	14	15	16	15	19	24	29	36	34	32	30	27	28	29	31	33	31	25	19	13	6	9	22.4	35.7
Dir	252	250	258	253	256	244	241	247	244	242	249	231	238	247	249	257	249	246	253	260	269	272	222	261	248.9	241.7
5 Spd	10	9	9	10	9	11	11	12	12	13	18	22	19	21	16	20	23	20	21	22	16	14	15	15	14.8	23.4
Dir	260	264	239	217	267	246	239	222	212	231	239	246	254	269	256	244	242	249	254	260	262	253	265	253	248.7	241.8
6 Spd	12	14	16	20	21	22	24	25	26	23	19	19	20	20	18	20	23	23	21	13	8	10	12	14	17.5	25.9
Dir	264	262	248	249	253	251	248	251	255	259	269	263	268	276	306	297	277	286	289	298	309	284	271	267	268.7	255.3
7 Spd	14	15	14	15	10	6	8	9	7	5	5	4	6	10	17	14	10	7	8	4	5	4	0	3	6.8	17.1
Dir	267	264	266	265	255	223	220	225	225	193	199	177	226	238	246	259	268	278	272	15	64	52	334	218	250.0	245.9
8 Spd	5	7	6	5	6	8	9	8	10	12	11	10	14	12	15	17	13	17	13	10	10	7	8	9	9.1	16.8
Dir	244	258	241	226	192	197	215	208	211	213	225	193	216	243	247	246	209	189	190	188	194	258	262	261	220.2	245.7
9 Spd	5	7	9	17	14	17	19	33	31	38	41	38	35	37	19	24	29	23	18	11	9	9	16	15	20.1	41.1
Dir	258	238	255	245	262	264	251	257	254	250	251	262	266	273	308	265	263	318	314	266	321	250	252	249	264.7	250.5
10 Spd	15	17	19	17	13	21	22	23	35	28	27	30	32	27	27	22	19	16	13	8	5	6	7	5	17.4	35.4
Dir	242	239	256	261	251	251	262	271	277	283	283	297	298	307	316	305	305	301	289	284	249	228	251	229	279.9	277.1
11 Spd	5	5	6	9	8	8	10	11	16	14	10	8	2	9	9	8	9	6	6	4	2	4	6	6	5.3	16.4
Dir	209	224	200	208	218	214	191	194	222	224	211	194	248	312	314	298	304	318	312	331	10	251	271	246	239.9	222.3
12 Spd	5	6	6	8	11	10	10	10	11	12	9	8	12	14	11	12	8	5	2	6	10	8	3	3	5.7	14.0
Dir	257	206	215	214	220	199	191	192	195	209	203	214	233	243	236	224	246	266	257	45	64	88	10	338	216.0	242.5
13 Spd	6	7	5	6	9	7	9	9	8	9	10	9	6	7	5	3	6	5	6	4	4	4	5	3	4.0	9.8
Dir	256	252	232	252	229	218	186	186	174	165	165	166	163	155	178	197	120	103	153	179	335	39	20	120	183.3	164.8
14 Spd	7	12	3	5	5	5	5	8	9	10	10	7	6	9	10	11	11	11	10	8	8	4	2	1	6.8	12.4
Dir	150	157	175	186	212	210	208	188	184	189	168	166	164	161	160	168	137	131	125	133	147	125	173	215	163.0	157.4
15 Spd	0	4	5	6	2	2	4	9	10	12	13	12	11	10	13	12	16	11	9	6	1	3	8	7	6.0	15.9
Dir	247	203	237	235	243	277	184	198	208	209	228	219	208	211	207	218	229	310	337	359	25	275	257	247	230.5	229.3
16 Spd	6	7	12	6	2	9	9	11	12	14	13	12	10	7	9	9	8	8	6	6	5	0	1	1	3.9	14.1
Dir	236	226	235	253	258	280	337	349	7	14	40	28	47	15	352	349	37	59	66	88	85	110	224	295	5.7	14.1
17 Spd	2	1	4	3	7	9	11	15	14	13	13	10	10	9	4	20	11	20	16	13	10	15	12	11	3.4	20.1
Dir	339	239	316	217	347	30	18	13	37	58	40	81	84	99	350	287	289	242	251	267	252	250	253	258	311.2	286.8
18 Spd	8	7	5	8	6	7	7	7	5	9	8	9	8	11	5	1	4	8	6	5	8	7	11	11	6.3	11.5
Dir	248	226	209	202	191	205	204	187	173	158	185	235	265	252	170	201	198	225	203	192	193	182	193	206	206.1	192.8
19 Spd	20	21	16	14	14	13	18	23	28	28	23	24	24	28	26	23	18	17	14	13	10	5	6	6	15.8	28.1
Dir	222	235	242	238	238	247	253	255	266	268	281	293	298	305	305	308	314	312	302	300	296	277	233	256	276.0	265.8
20 Spd	6	8	10	10	9	10	11	10	12	12	9	9	10	12	12	13	18	15	17	15	10	4	7	6	10.4	17.9
Dir	240	252	259	250	245	233	245	239	244	235	229	211	232	225	234	226	208	228	250	243	232	245	258	253	236.6	208.1
21 Spd	10	12	7	6	7	7	7	9	10	9	9	11	7	6	4	12	9	12	7	5	4	1	2	1	6.3	12.4
Dir	253	262	236	214	229	213	198	200	218	209	216	205	233	224	198	179	189	207	181	171	179	320	16	88	212.2	262.2
22 Spd	1	2	2	4	5	5	3	3	5	11	15	13	18	16	16	15	17	17	20	16	7	8	8	6	7.7	20.4
Dir	268	282	327	28	15	24	32	66	105	135	125	131	125	112	147	150	113	116	138	133	100	50	58	65	115.4	138.0

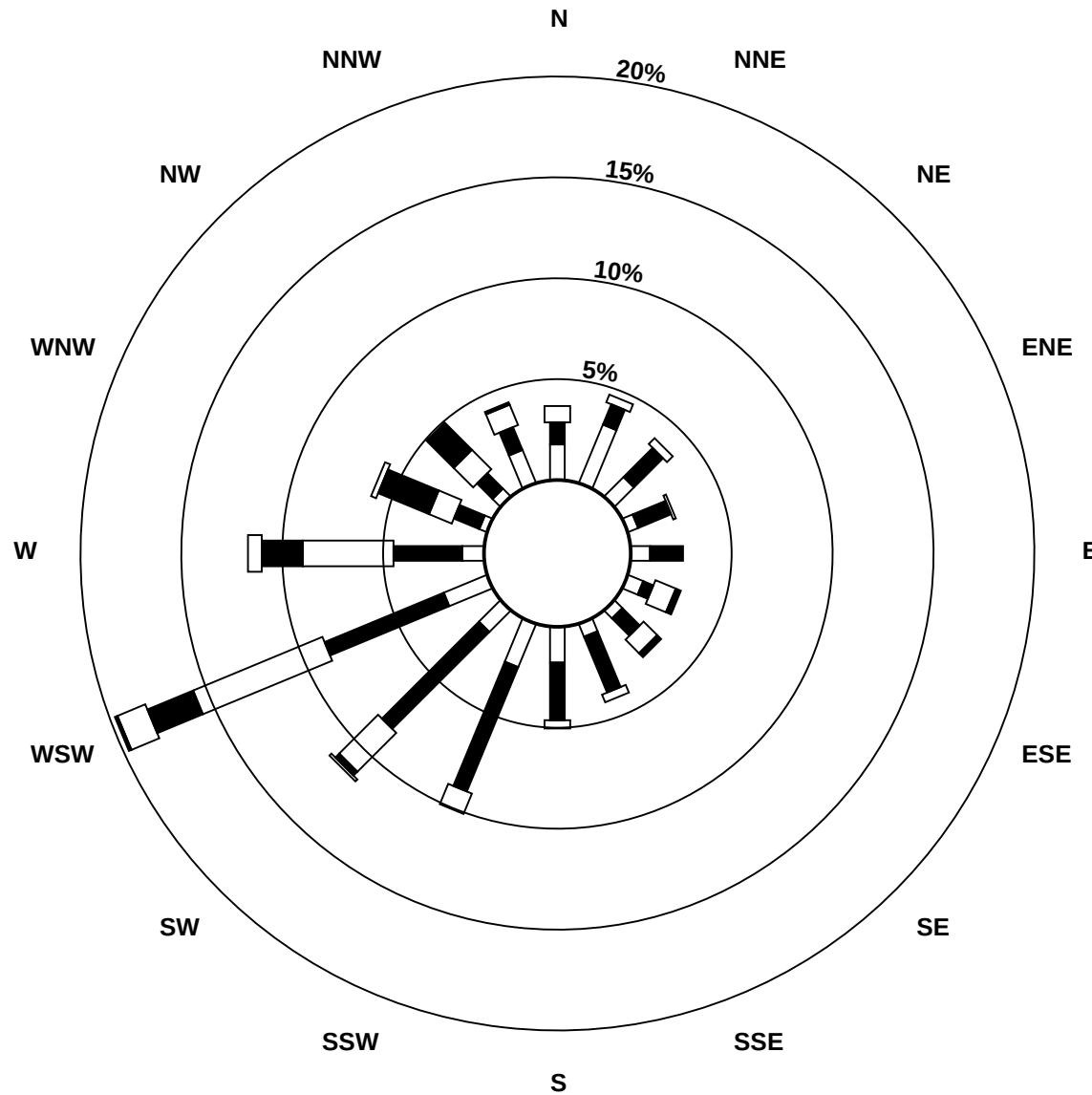
Hourly Averages

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

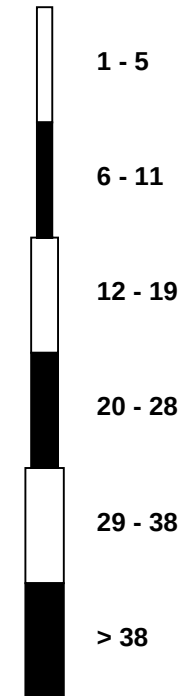
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	4	5	7	9	4	1	2	3	3	3	4	3	4	10	7	4	11	9	8	10	5	5	5	3	3.0	11.1	
Dir	11	17	347	339	32	352	191	279	296	41	334	353	90	146	114	120	342	37	54	91	58	13	20	5	31.6	342.3	
24 Spd	5	8	13	12	18	17	16	13	5	8	14	10	4	5	9	13	18	21	20	23	20	19	21	19	12.1	22.6	
Dir	351	337	347	335	338	347	356	8	344	212	267	274	312	351	332	317	336	321	317	316	311	301	299	290	320.3	315.6	
25 Spd	17	17	19	26	22	22	21	23	25	27	26	22	18	18	20	23	20	19	18	19	17	12	11	8	18.7	27.4	
Dir	281	272	272	307	295	288	293	298	295	286	287	283	279	266	258	265	259	259	249	255	257	263	251	261	276.6	285.8	
26 Spd	9	10	12	12	15	18	18	15	14	13	15	20	19	17	14	14	12	11	11	7	10	9	7	5	12.4	19.8	
Dir	260	263	259	255	253	253	253	248	247	226	247	267	263	259	256	271	276	250	255	235	240	263	225	240	254.2	267.1	
27 Spd	5	5	10	6	7	6	6	9	11	13	15	11	11	11	12	10	11	8	8	6	3	0	1	4	7.5	15.0	
Dir	236	238	266	235	207	194	212	221	224	223	224	228	244	227	236	227	226	224	199	193	168	250	274	209	224.7	223.7	
28 Spd	6	6	3	7	5	7	8	8	8	10	9	4	3	6	6	5	6	8	10	8	6	7	4	4	2.6	10.5	
Dir	169	206	186	221	247	205	207	208	225	211	226	202	152	146	133	117	86	83	85	63	46	59	14	30	162.2	211.1	
29 Spd	2	10	3	6	3	0	6	9	9	12	13	12	8	6	5	5	6	4	6	6	7	3	3	5	3.9	12.6	
Dir	19	158	67	1	347	73	196	187	164	134	129	133	128	116	111	128	105	88	72	44	84	50	20	14	116.4	128.6	
30 Spd	4	4	3	6	4	6	19	17	9	10	18	15	12	9	9	9	13	12	8	4	3	3	2	5	7.2	19.1	
Dir	25	51	357	245	268	0	327	323	287	292	296	302	316	287	318	329	353	346	353	35	28	353	37	332	323.0	326.6	
31 Spd	4	1	10	8	7	10	9	7	5	5	3	8	9	7	6	5	5	5	2	4	4	2	8	11	1.4	11.3	
Dir	338	49	235	201	266	289	274	214	234	258	352	66	65	54	85	53	92	95	22	341	358	347	360	13	343.8	13.2	
Spd	5.2	5.7	6.6	6.8	6.4	6.3	6.9	7.6	8.4	8.5	8.1	7.3	6.6	6.7	6.2	7.6	6.3	6.6	5.7	3.6	2.8	3.3	3.9	4.2	Diurnal Average		
Dir	255.7	246.4	255.7	253.7	258.3	252.9	250.2	247.3	244.5	233.8	241.5	241.8	250.5	255.3	262.9	261.6	261.3	271.5	271.9	275.8	284.9	283.7	273.2	266.2	Diurnal Maximum		
Spd	19.8	20.9	19.4	25.8	21.5	22.4	23.6	33.3	35.4	38.0	41.1	38.3	35.0	37.1	28.4	28.7	30.5	32.5	30.8	24.6	20.1	18.7	20.6	18.8	Diurnal Maximum		
Dir	222.1	234.8	272.3	307.1	295.1	251.4	247.6	257.5	277.1	250.2	250.5	262.2	266.5	272.9	249.3	257.3	248.8	246.2	252.9	260.1	311.2	301.3	298.8	290.4			
Maximum Speed Value: 41 km/h on Jul 9 11:00																		Minimum Speed Value: 0 km/h on Jul 27 22:00						Hours in Service: 744			
Maximum Daily Speed Average: 22.4 km/h on Jul 4																		Minimum Daily Speed Average: 1.4 km/h on Jul 23						Hours of Data: 744			
Maximum Diurnal Speed Average: 8.5 km/h at hour 10																		Minimum Diurnal Speed Average: 2.8 km/h at hour 21						Hours of Missing Data: 0			
Monthly Average Velocity: 6.00 km/h 255.49 deg																		Speed Percentiles: P ₁ = 0.9 P ₁₀ = 3.6 Q ₁ = 5.8 Median = 9.2 Q ₃ = 14.5 P ₉₀ = 20.6 P ₉₉ = 34.5						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		31	20	14	2	0	0	67																			
NorthEast		21	32	5	0	0	0	58																			
East		11	15	3	1	0	0	30																			
SouthEast		8	19	13	5	0	0	45																			
South		20	61	7	0	0	0	88																			
SouthWest		21	99	54	9	5	0	188																			
West		14	62	61	43	12	3	195																			
NorthWest		12	16	19	24	2	0	73																			
Total		138	324	176	84	19	3	744																			

Wind Rose

Wind Speed (WS) (km/h)
Smoky Heights - July 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - July 2014

Maximum Speed: 42 km/h on Jul 9 11:00																				Maximum Daily Speed Average: 23.0 km/h on Jul 4										Hours in Service: 744	
Minimum Speed: 0 km/h on Jul 27 22:00																				Minimum Daily Speed Average: 6.3 km/h on Jul 23										Hours of Data: 744	
Maximum Diurnal Speed Average: 15.0 km/h at hour 11																				Minimum Diurnal Speed Average: 7.4 km/h at hour 22										Hours of Missing Data: 0	
Monthly Average Speed: 11.50 km/h																				Percentiles: P ₁ = 1.2 P ₁₀ = 4.4 Q ₁ = 6.5 Median = 9.8 Q ₃ = 15.0 P ₉₀ = 21.0 P ₉₉ = 35.3										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-Jul	4	2	9	7	5	7	7	6	6	7	6	7	9	11	7	8	7	4	5	8	8	8	8	9	6.9	11.4					
2-Jul	9	7	7	5	6	5	7	7	7	13	19	20	19	20	21	21	20	23	17	21	20	17	7	7	13.5	23.4					
3-Jul	10	5	6	4	3	4	5	3	4	7	7	9	11	9	22	19	20	23	24	11	11	12	11	11	10.5	24.2					
4-Jul	16	16	15	15	16	16	19	24	29	36	35	33	31	28	29	29	31	33	31	25	19	14	6	9	23.0	36.0					
5-Jul	10	10	10	10	9	11	11	12	12	13	18	23	20	21	17	20	24	21	21	22	16	14	15	15	15.6	23.8					
6-Jul	12	14	16	20	21	22	24	25	26	23	19	19	20	21	18	21	23	24	21	13	9	10	12	14	18.7	26.0					
7-Jul	14	15	14	16	10	6	8	9	8	6	6	7	8	12	18	15	11	9	8	6	5	4	1	4	9.2	18.1					
8-Jul	5	7	7	5	6	8	9	8	10	12	12	11	15	13	16	18	14	17	14	10	10	8	8	9	10.5	18.1					
9-Jul	6	7	9	18	15	17	19	34	32	38	42	39	36	38	19	25	30	26	19	11	11	10	16	15	22.1	41.5					
10-Jul	15	17	19	17	14	21	22	23	36	28	27	31	32	28	27	23	19	17	13	8	6	6	7	5	19.2	35.6					
11-Jul	5	5	7	9	8	8	10	11	17	15	11	9	7	12	11	11	11	7	7	5	3	4	6	7	8.5	16.6					
12-Jul	6	6	6	8	11	10	10	10	11	12	9	9	13	15	13	14	11	7	3	6	10	9	3	3	9.0	14.8					
13-Jul	7	7	5	6	9	7	9	9	9	9	10	10	7	8	7	6	8	6	6	4	4	4	5	4	6.9	10.2					
14-Jul	8	12	5	5	6	5	5	9	9	11	11	7	7	9	11	12	11	11	10	8	8	5	2	1	7.9	12.5					
15-Jul	0	4	6	6	3	2	4	9	11	12	14	12	11	11	14	13	16	15	10	6	1	4	8	7	8.2	16.3					
16-Jul	7	8	13	9	4	9	9	11	13	15	14	13	11	9	10	10	8	9	7	6	5	0	1	2	8.4	14.6					
17-Jul	2	5	4	4	7	9	11	15	15	14	13	11	10	10	6	21	12	20	16	13	11	15	12	11	11.2	21.2					
18-Jul	8	7	6	8	6	7	7	7	6	9	10	9	8	11	5	1	4	8	6	6	8	7	12	11	7.4	11.7					
19-Jul	20	21	16	14	14	13	18	23	28	28	24	25	24	28	26	24	18	18	15	13	10	5	6	8	18.3	28.4					
20-Jul	6	8	10	10	9	10	11	11	12	12	10	10	11	13	13	14	18	16	18	15	10	5	7	6	11.1	18.3					
21-Jul	10	12	8	6	7	7	7	9	10	9	10	12	9	10	7	12	11	13	8	5	4	1	2	2	8.0	12.6					
22-Jul	1	2	3	4	5	5	3	4	5	11	15	14	18	17	18	15	18	17	21	16	8	8	8	6	10.2	20.9					
23-Jul	4	5	7	9	4	1	4	3	4	5	6	5	6	11	9	7	12	10	8	10	5	5	5	3	6.3	12.1					
24-Jul	5	8	13	12	18	17	16	13	6	10	14	11	6	6	10	14	18	21	20	23	20	19	21	19	14.2	22.7					
25-Jul	17	17	20	26	22	22	21	23	25	28	26	22	19	18	20	23	20	19	18	19	17	12	11	8	19.7	27.5					
26-Jul	9	10	12	12	15	18	18	15	14	13	15	20	19	18	15	14	12	11	11	7	11	9	8	5	13.0	20.2					
27-Jul	5	5	10	6	8	7	6	9	12	13	15	12	12	12	13	11	12	9	9	6	3	0	1	4	8.4	15.4					
28-Jul	7	7	4	7	6	9	8	8	8	11	10	6	6	8	8	7	7	9	11	8	6	7	4	5	7.3	10.8					
29-Jul	10	11	4	6	3	2	7	9	9	12	13	12	9	7	6	6	7	5	7	6	8	4	4	6	7.2	13.1					
30-Jul	4	5	4	7	6	7	19	18	10	11	18	15	13	10	10	11	13	12	9	4	3	3	2	5	9.1	19.3					
31-Jul	5	2	16	9	8	10	11	7	6	6	6	8	9	8	7	7	6	5	4	4	4	2	8	11	7.0	15.8					
7.9 8.6 9.4 9.7 9.2 9.7 11.2 12.4 13.2 14.5 15.0 14.6 14.1 14.6 13.9 14.6 14.6 14.3 12.8 10.5 8.8 7.4 7.4 7.5																									Diurnal Average						
19.9 21.0 19.9 26.0 21.9 22.4 23.7 33.5 35.6 38.3 41.5 39.1 36.4 38.5 28.7 29.3 30.9 32.8 31.1 24.7 20.2 18.8 20.8 18.9																									Diurnal Maximum						

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - July 2014

Maximum Value: 87.1 deg on Jul 29 01:00																			Hours in Service: 744						
Minimum Value: 2.8 deg on Jul 26 03:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 3.4 P ₁₀ = 6.2 Q ₁ = 9.8 Median = 15.0 Q ₃ = 27.6 P ₉₀ = 45.0 P ₉₉ = 79.8																			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-Jul	60	69	10	56	30	22	10	15	21	23	34	30	50	29	62	49	48	39	24	10	11	10	16	13	68.8
2-Jul	14	22	6	7	7	9	7	12	15	17	11	11	15	18	15	13	11	81	21	10	10	25	26	78	80.6
3-Jul	26	73	50	47	53	44	84	42	69	32	61	34	39	24	13	12	11	13	19	61	15	4	10	13	83.6
4-Jul	11	21	7	4	6	7	5	8	8	8	8	11	13	12	8	12	9	7	8	5	8	13	20	10	20.9
5-Jul	10	16	16	21	8	7	8	7	10	11	14	12	18	10	25	11	10	10	13	10	6	6	9	10	25.1
6-Jul	11	13	6	5	3	3	4	4	5	8	15	15	13	19	11	10	9	21	10	12	10	8	9	5	21.4
7-Jul	4	3	4	3	28	12	11	14	22	34	57	69	53	39	20	22	31	39	23	52	9	23	66	30	68.8
8-Jul	10	9	23	16	17	17	11	15	11	17	22	28	23	33	28	23	22	12	5	6	7	29	4	7	32.7
9-Jul	25	17	15	13	11	4	4	6	9	7	8	12	16	16	13	21	12	28	13	15	29	17	17	10	28.6
10-Jul	9	3	10	4	17	9	5	6	6	6	6	8	6	8	9	11	10	14	12	10	14	18	10	20	19.6
11-Jul	20	12	11	7	6	9	7	8	9	13	17	29	83	42	40	58	38	44	49	36	51	19	11	15	82.7
12-Jul	22	16	10	6	5	8	5	7	14	11	20	36	24	23	38	29	61	43	76	13	7	11	32	23	75.7
13-Jul	17	5	12	10	9	10	10	10	14	14	16	18	46	37	58	83	37	39	23	39	21	28	15	64	82.6
14-Jul	13	6	73	12	31	11	22	9	12	16	13	26	30	21	25	16	17	11	12	13	14	34	42	26	72.7
15-Jul	57	19	13	15	24	56	32	13	9	9	13	16	12	21	13	18	13	37	16	12	22	33	8	10	56.8
16-Jul	21	19	22	75	82	22	9	11	18	16	17	25	26	41	27	29	31	20	22	11	13	43	45	40	81.5
17-Jul	36	78	30	44	32	25	17	11	12	16	13	30	18	28	43	23	21	8	8	13	18	5	5	3	77.7
18-Jul	13	10	22	13	7	7	9	11	20	15	32	9	11	6	31	20	16	10	21	22	13	6	11	7	32.4
19-Jul	6	6	6	6	6	4	5	6	9	8	12	12	12	10	12	13	13	14	12	7	7	22	15	34	34.2
20-Jul	9	7	5	6	12	11	7	7	12	19	22	31	27	30	30	21	13	23	12	11	6	23	11	22	30.8
21-Jul	10	6	32	20	9	8	7	12	15	21	31	24	50	62	78	22	41	15	25	12	15	33	29	45	78.2
22-Jul	51	26	49	20	10	11	11	40	29	22	12	24	15	18	21	19	17	13	13	12	19	10	11	30	51.2
23-Jul	35	15	15	14	13	51	55	40	50	63	54	64	66	33	57	79	25	34	14	8	13	12	13	15	78.9
24-Jul	14	22	9	9	7	12	12	17	42	45	13	27	51	23	19	18	13	9	7	6	6	6	7	5	50.5
25-Jul	10	6	12	7	11	6	6	7	9	5	6	5	5	5	5	4	4	4	4	5	5	5	13	8	13.2
26-Jul	5	3	3	7	4	4	4	6	8	8	18	12	14	15	23	21	17	15	19	15	24	5	35	11	35.1
27-Jul	18	12	8	16	23	10	14	11	13	13	13	24	30	29	24	32	31	35	15	18	41	44	32	33	43.6
28-Jul	39	35	55	25	28	37	13	14	13	13	21	71	77	50	45	57	31	23	15	10	9	11	19	24	77.4
29-Jul	87	26	46	26	43	84	44	13	9	14	17	15	32	53	47	50	38	47	22	8	15	34	34	28	87.1
30-Jul	29	25	18	20	52	21	9	12	30	19	13	17	21	24	40	33	17	15	22	18	14	39	34	13	52.5
31-Jul	49	68	77	24	27	9	35	21	28	31	67	12	16	20	30	38	46	35	72	14	15	42	12	9	76.7
	87.1	77.7	76.7	75.2	81.5	83.8	83.6	42.2	68.6	62.6	67.4	70.8	82.7	62.4	78.2	82.6	60.9	80.6	75.7	60.9	50.8	43.6	66.2	78.2	

PAZA
Beaverlodge Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

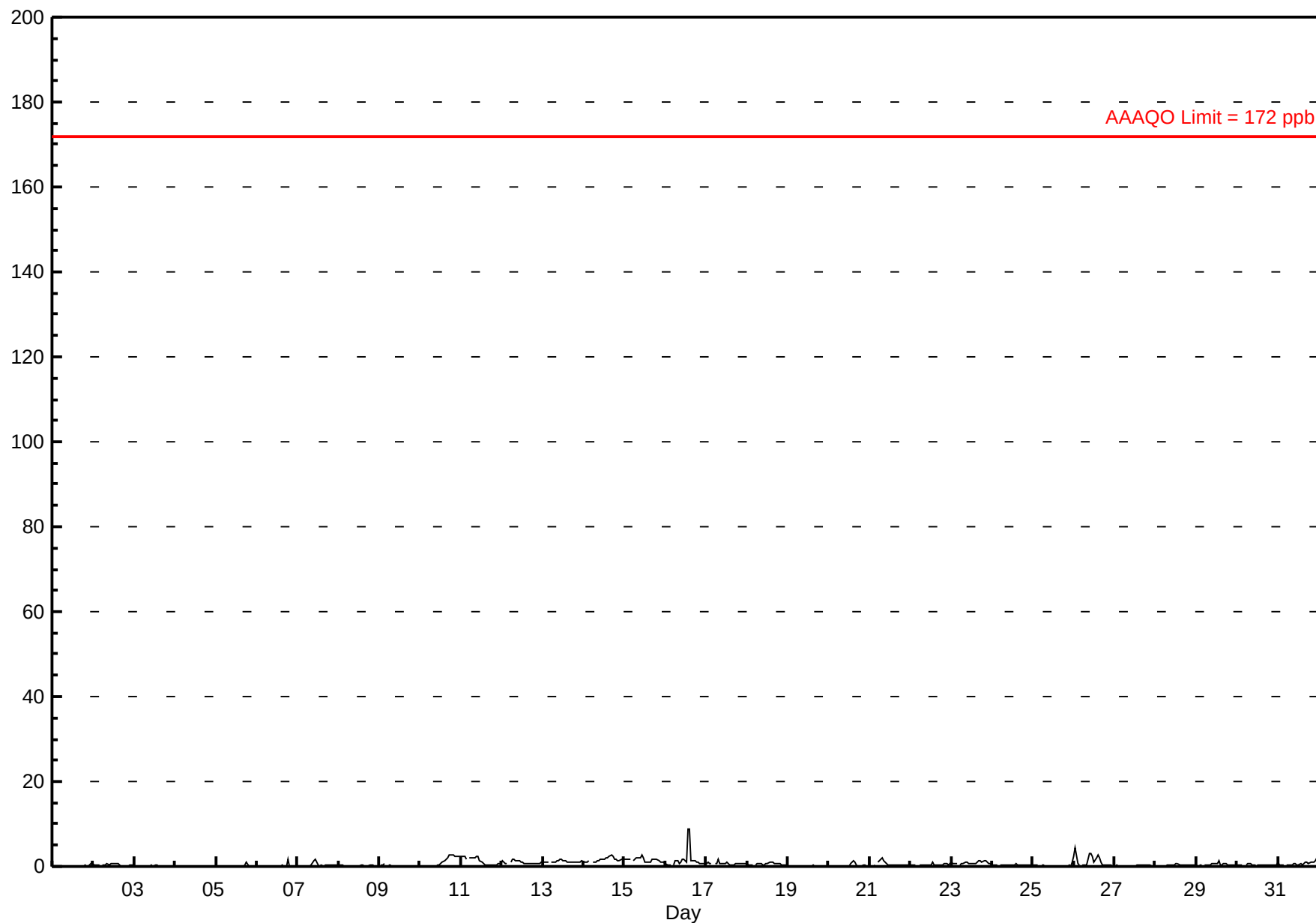
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744							
Maximum Value: 8.9 ppb on Jul 16 14:00																				Maximum Daily Average: 1.7 ppb on Jul 16		Hours of Data: 709					
Minimum Value: 0 ppb on Jul 2 17:00																				Minimum Daily Average: 0.0 ppb on Jul 4		Hours of Missing Data: 35					
Maximum Diurnal Average: 0.9 ppb at hour 14																				Minimum Diurnal Average: 0.4 ppb at hour 4		Hours of Calibration: 35					
Monthly Average: 0.59 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.4 Q ₃ = 0.8 P ₉₀ = 1.5 P ₉₉ = 2.8		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-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	0.9	
2-Jul	0	0	0	0	A	0	0	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	0.7
3-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
4-Jul	0	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
5-Jul	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	0.1	0.9
6-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0.1	1.6
7-Jul	0	0	0	0	A	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.8
8-Jul	0	0	0	0	A	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
9-Jul	0	0	0	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6
10-Jul	0	0	0	0	A	0	0	0	0	0	0	0	1	1	1	2	2	3	3	3	2	2	2	2	2	1.1	2.8
11-Jul	2	2	2	2	A	2	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1.3	2.5
12-Jul	1	1	1	1	A	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.8
13-Jul	1	1	1	1	A	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.7
14-Jul	1	1	1	1	A	1	1	1	1	2	2	2	2	2	2	2	3	2	2	2	2	1	2	2	2	1.6	2.6
15-Jul	2	2	2	2	A	1	2	2	2	2	3	2	1	1	1	1	2	2	2	2	1	1	1	1	1	1.5	2.8
16-Jul	1	0	0	0	A	0	1	1	1	1	2	2	1	9	9	1	1	1	1	1	1	1	1	1	1	1.7	8.9
17-Jul	1	1	1	1	A	1	1	2	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	0.7	1.7
18-Jul	1	0	0	0	A	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.6	1.1
19-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
20-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0.3	1.3
21-Jul	0	0	0	0	A	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.9
22-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1	0.4	0.9	
23-Jul	1	1	1	1	A	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0.9	1.5
24-Jul	1	0	0	0	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.4	0.6
25-Jul	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	1.1	
26-Jul	3	4	1	0	A	0	0	0	2	3	3	2	1	2	3	2	1	0	0	0	0	0	0	0	0	1.3	4.5
27-Jul	0	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
28-Jul	0	0	0	0	A	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
29-Jul	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0.5	1.3
30-Jul	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	0.4	0.8
31-Jul	1	0	0	0	A	0	0	0	0	1	1	0	0	1	0	1	1	1	1	1	1	1	1	2	2	0.7	2.1
																									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
Beaverlodge - July 2014



Hourly Maximums

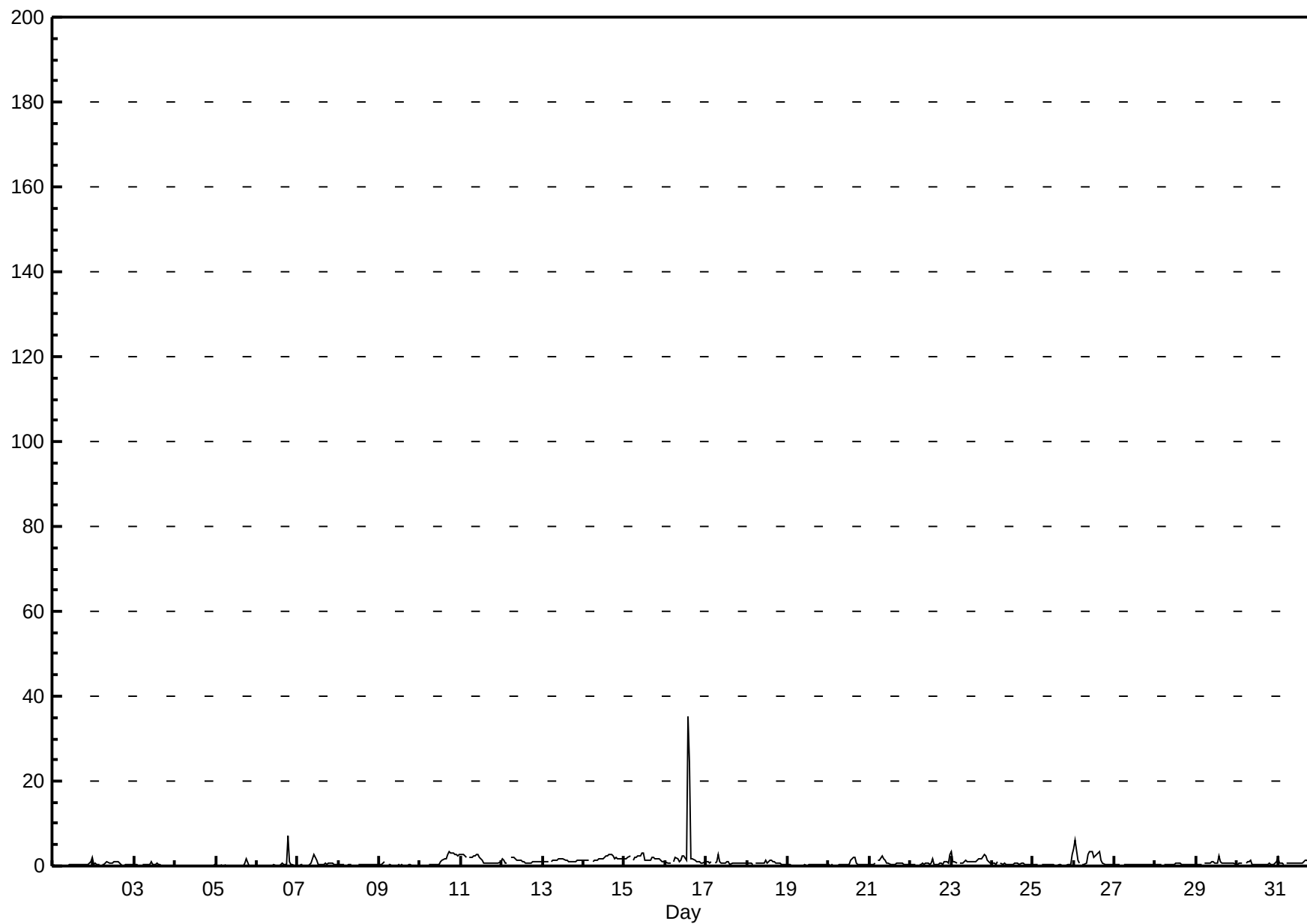
Sulphur Dioxide (SO₂) - ppb

Beaverlodge - July 2014

Maximum Value: 35.3 ppb on Jul 16 14:00																				Maximum Daily Average: 3.8 ppb on Jul 16					Hours in Service: 744		
Minimum Value: 0 ppb on Jul 3 23:00																				Minimum Daily Average: 0.1 ppb on Jul 4					Hours of Data: 709		
Maximum Diurnal Average: 2.0 ppb at hour 14																				Minimum Diurnal Average: 0.6 ppb at hour 4					Hours of Missing Data: 35		
Monthly Average: 0.85 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.5 Q ₃ = 1.0 P ₉₀ = 1.8 P ₉₉ = 3.2					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-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0.3	2.0	
2-Jul	0	1	0	0	A	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.5	1.0
3-Jul	0	0	0	0	A	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.3	1.1
4-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
5-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0.2	1.8
6-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	1	0	0	7	1	0	0	0	0	0	0.5	7.2
7-Jul	0	0	0	0	A	0	0	0	1	3	2	1	0	0	0	0	1	0	1	1	1	0	0	0	0	0.6	2.6
8-Jul	0	0	0	0	A	0	0	0	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.4
9-Jul	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.9
10-Jul	0	0	0	0	A	0	0	0	0	0	0	0	1	1	2	2	3	3	3	3	3	3	2	3	1.3	3.4	
11-Jul	3	3	2	2	A	2	2	2	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	2.6
12-Jul	2	1	1	1	A	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	2.2
13-Jul	1	1	1	1	A	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1.3	1.8
14-Jul	1	1	1	1	A	1	1	1	2	2	2	2	2	2	2	3	3	2	2	2	2	2	2	2	2	1.8	2.8
15-Jul	2	2	2	2	A	2	2	2	2	3	3	3	2	1	1	1	2	2	2	2	2	2	1	1	1	1.8	3.0
16-Jul	1	1	1	1	A	1	2	2	1	1	2	3	1	35	24	2	2	2	1	1	1	1	1	1	1	3.8	35.3
17-Jul	1	1	1	1	A	1	1	3	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0.9	2.5
18-Jul	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0.7	1.4
19-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
20-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0.5	2.1
21-Jul	0	0	0	1	A	1	1	2	2	1	1	1	1	0	0	0	1	1	1	1	0	0	0	0	0	0.7	2.3
22-Jul	0	0	0	0	A	0	0	1	0	1	1	1	1	2	0	0	0	1	1	0	1	1	1	3	0.7	2.8	
23-Jul	3	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	2	1	1	1	1.3	3.5	
24-Jul	1	1	0	1	A	1	0	1	0	0	0	0	0	1	1	1	0	1	1	0	0	0	0	0	0	0.5	1.0
25-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3	2.8	
26-Jul	4	6	1	1	A	0	1	1	3	4	4	3	2	3	3	3	1	1	0	0	0	0	0	0	0	1.8	6.0
27-Jul	0	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	0.3
28-Jul	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	0.3	0.7
29-Jul	0	0	0	0	A	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	0	0.7	2.4	
30-Jul	1	1	1	1	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0.6	1.2
31-Jul	2	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4	1.1	4.1	
0.8 0.8 0.6 0.6 -- 0.6 0.7 0.8 0.8 0.9 0.9 0.9 0.7 2.0 1.6 0.8 0.8 0.8 1.0 0.8 0.7 0.7 0.6 0.9																									Diurnal Average		
4.2 6.0 2.5 2.2 -- 2.2 2.2 2.5 2.8 3.5 3.6 3.4 2.0 35.3 24.4 3.2 2.8 3.4 7.2 3.2 2.6 2.6 2.5 4.1																									Diurnal Maximum		
C - Calibration																									A - Automated Daily Zero Span		

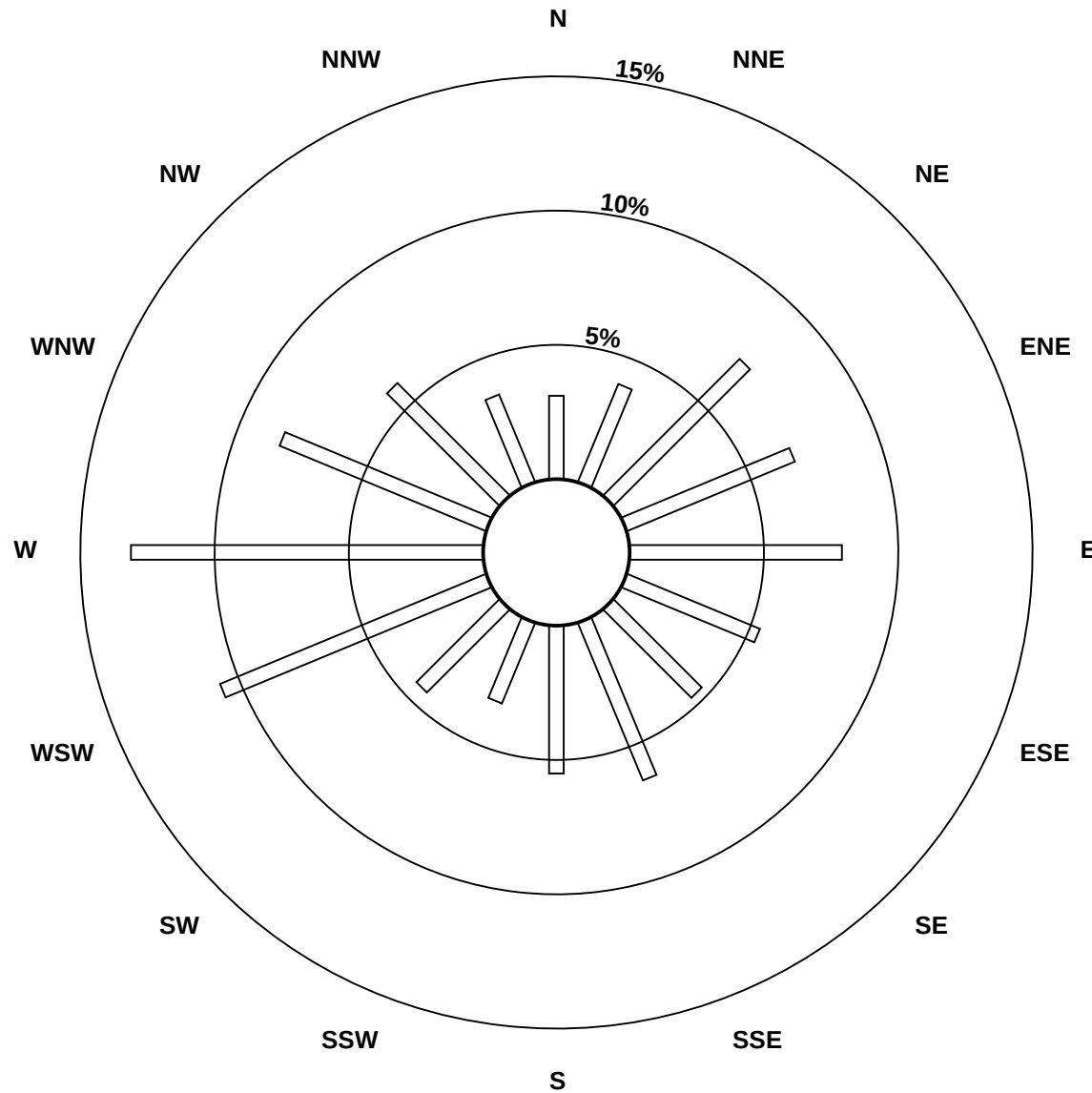
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - July 2014



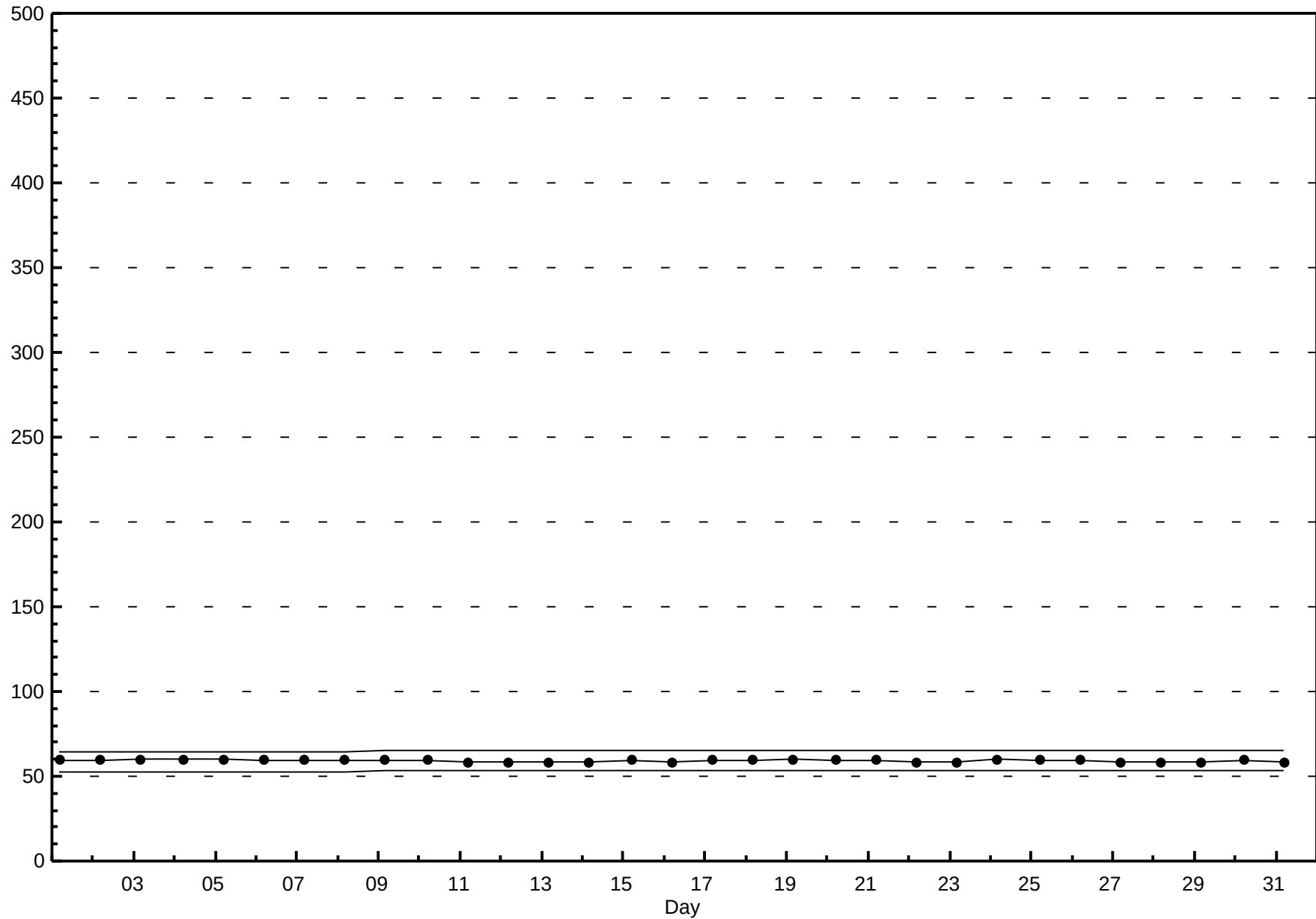
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Beaverlodge - July 2014



Span Responses

Sulphur Dioxide (SO₂)
Beaverlodge - July 2014



Hourly Averages

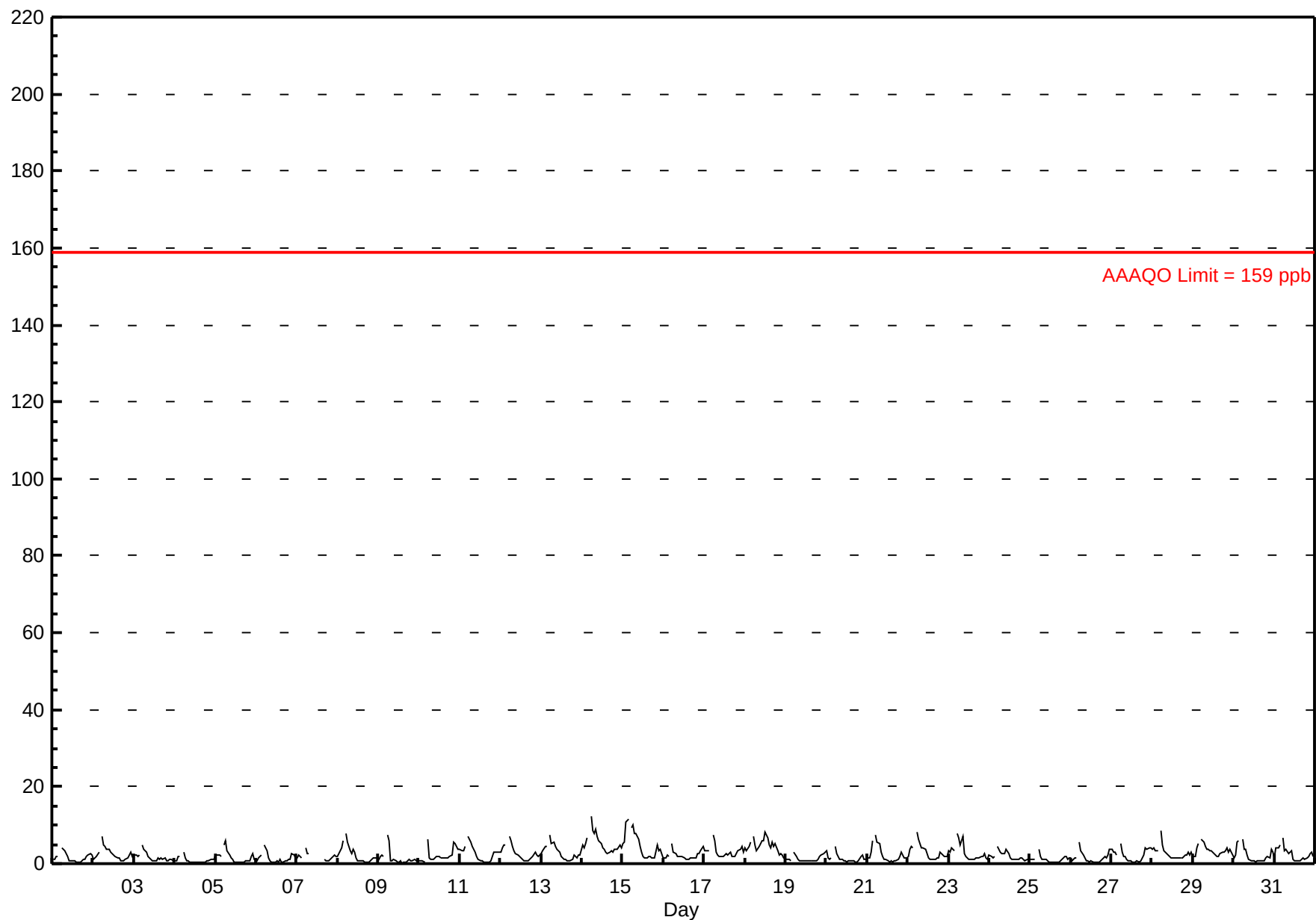
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12.2 ppb on Jul 14 06:00 Maximum Daily Average: 5.2 ppb on Jul 14																				Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 39 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Jul 9 15:00 Maximum Diurnal Average: 6.3 ppb at hour 6 Monthly Average: 2.37 ppb										Minimum Daily Average: 0.9 ppb on Jul 4 Minimum Diurnal Average: 1.1 ppb at hour 16 Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 1.0 Median = 1.8 Q ₃ = 3.2 P ₉₀ = 5.0 P ₉₉ = 8.4																
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-Jul	1	1	2	2	A	4	4	3	2	2	1	1	1	1	1	1	1	1	1	1	2	2	3	2	1.6	4.3
2-Jul	1	1	2	3	A	7	5	5	4	4	3	2	2	2	2	2	1	1	1	1	2	2	3	2	2.5	7.2
3-Jul	2	2	2	2	A	5	4	3	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1.7	5.0
4-Jul	1	1	2	2	A	3	2	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.9	2.8
5-Jul	2	2	2	2	A	5	6	3	2	2	1	1	1	0	1	1	0	1	1	1	1	2	2	1	1.7	6.0
6-Jul	1	2	2	2	A	5	3	1	1	0	0	0	1	0	1	0	0	1	1	1	1	3	2	1	1.3	4.8
7-Jul	1	2	2	2	A	4	3	2	C	C	C	C	C	C	C	C	1	1	1	1	2	2	2	2	--	4.1
8-Jul	2	3	4	6	A	8	6	3	2	4	3	1	1	1	1	0	1	0	1	1	1	1	1	1	2.3	7.8
9-Jul	1	2	2	2	A	7	6	1	1	1	1	1	0	1	0	0	0	1	1	1	1	1	1	1	1.4	7.4
10-Jul	1	1	1	0	A	6	1	1	1	1	2	2	2	2	1	1	1	1	2	2	6	5	4	4	2.2	6.3
11-Jul	4	3	3	4	A	7	6	5	4	3	2	1	1	1	0	0	0	1	1	2	3	3	3	3	2.6	7.2
12-Jul	3	4	5	5	A	7	6	4	4	3	2	2	1	1	1	1	1	1	1	2	3	2	2	2	2.7	7.3
13-Jul	3	3	4	5	A	8	5	6	4	4	3	3	2	1	1	1	1	1	1	2	2	2	2	2	2.8	7.6
14-Jul	5	4	5	7	A	12	9	8	9	7	6	5	4	4	3	2	3	3	3	4	4	4	5	4	5.2	12.2
15-Jul	5	6	11	12	A	9	10	8	8	6	4	3	2	2	2	2	2	1	1	2	5	3	4	3	4.7	11.7
16-Jul	1	2	2	2	A	5	3	3	2	2	2	2	1	1	1	1	1	1	1	2	2	3	3	4	2.1	5.3
17-Jul	4	3	3	4	A	7	6	3	2	2	2	2	2	3	2	3	2	2	2	3	3	4	4	3	3.1	7.4
18-Jul	4	3	5	6	A	7	5	3	5	5	6	6	8	7	5	4	6	4	5	3	2	2	2	1	4.6	8.3
19-Jul	1	1	1	1	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	1.3	3.1
20-Jul	3	1	1	2	A	5	3	2	1	1	1	1	1	1	1	1	1	0	0	1	2	2	1	1	1.4	4.7
21-Jul	1	1	3	6	A	7	6	5	3	2	1	1	1	1	1	1	1	1	1	2	3	2	1	1	2.2	7.3
22-Jul	2	4	4	4	A	8	6	5	4	4	4	2	1	1	1	1	1	1	2	3	3	2	2	2	3.0	8.2
23-Jul	3	3	4	3	A	8	7	5	7	2	2	1	1	1	1	1	1	2	2	2	2	3	2	1	2.8	8.0
24-Jul	2	2	1	2	A	4	3	3	3	3	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1.9	4.5
25-Jul	1	1	1	1	A	4	2	1	1	1	1	1	0	0	1	0	0	1	1	1	2	2	1	2	1.1	3.6
26-Jul	1	1	1	2	A	6	3	2	1	1	1	1	1	1	1	0	0	1	1	1	2	2	2	4	1.5	5.5
27-Jul	4	3	3	2	A	5	3	2	2	1	1	1	1	0	0	1	1	1	1	2	4	4	4	4	2.2	5.4
28-Jul	4	4	3	3	A	8	5	3	3	2	2	2	1	1	1	1	2	2	2	2	2	3	2	3	2.7	8.5
29-Jul	2	2	4	5	A	6	6	4	4	4	4	3	3	2	2	2	3	3	3	4	4	3	4	2	3.4	6.4
30-Jul	2	2	6	6	A	6	4	4	2	1	1	1	1	1	1	1	1	1	1	2	2	2	4	3	2.2	6.2
31-Jul	2	4	4	5	A	7	4	4	3	3	3	1	1	1	1	1	1	1	1	1	2	3	3	2	2.5	6.9
2.3 2.4 3.1 3.5 -- 6.3 4.5 3.4 2.9 2.4 2.1 1.7 1.5 1.3 1.1 1.1 1.2 1.2 1.4 1.7 2.3 2.3 2.5 2.2 Diurnal Average																										
5.2 5.5 10.8 11.7 -- 12.2 10.0 7.9 9.1 7.1 5.9 6.0 8.3 6.7 4.7 4.2 5.6 4.4 5.1 3.7 5.7 5.3 4.9 4.4 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
Beaverlodge - July 2014



Hourly Maximums

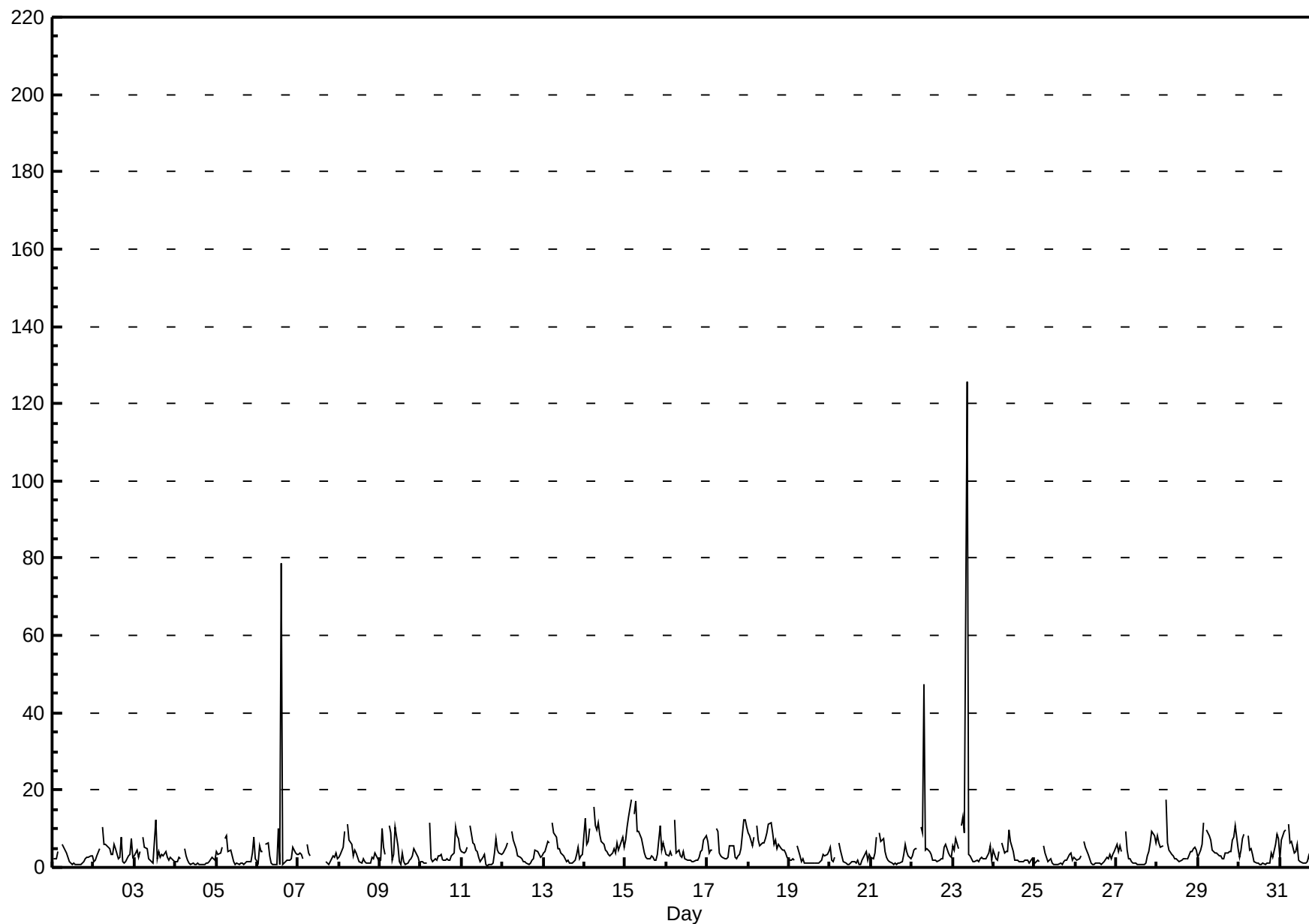
Nitrogen Dioxide (NO₂) - ppb

Beaverlodge - July 2014

Maximum Value: 125.7 ppb on Jul 23 09:00																				Maximum Daily Average: 9.5 ppb on Jul 23					Hours in Service: 744	
Minimum Value: 1 ppb on Jul 11 16:00																				Minimum Daily Average: 1.6 ppb on Jul 4					Hours of Data: 705	
Maximum Diurnal Average: 9.4 ppb at hour 6																				Minimum Diurnal Average: 1.7 ppb at hour 16					Hours of Missing Data: 39	
Monthly Average: 4.13 ppb																				Percentiles: P ₁ = 0.7 P ₁₀ = 1.0 Q ₁ = 1.7 Median = 3.0 Q ₃ = 5.0 P ₉₀ = 8.0 P ₉₉ = 14.5					Hours of Calibration: 39	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	2	2	2	4	A	6	5	5	4	2	1	1	1	1	1	1	1	1	1	2	3	3	3	3	2.4	6.1
2-Jul	2	2	3	5	A	10	6	6	6	5	3	3	6	5	2	3	8	1	1	1	3	3	7	3	4.1	10.3
3-Jul	3	4	3	4	A	8	5	5	2	2	2	1	12	2	4	3	3	3	4	3	2	3	2	2	3.5	12.3
4-Jul	1	1	3	2	A	5	3	2	1	1	1	1	1	1	1	1	1	1	1	1	2	3	2	2	1.6	4.9
5-Jul	4	3	4	5	A	7	8	4	4	3	1	1	1	1	1	1	1	1	2	1	1	4	8	2	3.0	8.0
6-Jul	1	5	4	4	A	6	6	3	1	1	1	1	10	1	79	1	1	2	2	2	2	5	4	3	6.3	78.6
7-Jul	3	4	4	2	A	6	4	3	C	C	C	C	C	C	C	C	1	1	1	1	3	2	4	2	--	5.9
8-Jul	3	4	5	9	A	11	7	6	3	5	4	3	1	1	2	2	1	1	1	3	2	4	3	2	3.5	11.1
9-Jul	2	10	5	3	A	11	9	2	3	10	6	1	1	4	2	1	1	2	2	3	5	3	3	1	3.9	10.6
10-Jul	2	1	1	1	A	12	2	2	2	2	3	3	3	2	2	2	2	2	3	4	10	8	7	5	3.5	11.6
11-Jul	4	4	4	5	A	11	6	6	4	4	3	2	3	3	1	1	1	1	1	4	7	5	4	3	3.7	10.9
12-Jul	4	5	5	6	A	9	7	6	5	3	3	2	2	1	1	1	1	2	2	4	4	3	2	3	3.6	9.5
13-Jul	4	4	7	6	A	12	9	8	5	5	4	4	3	1	2	1	1	1	2	3	5	2	3	3	4.1	11.6
14-Jul	12	6	7	10	A	15	11	10	12	9	7	6	5	4	3	3	4	5	4	6	4	5	8	5	7.0	15.5
15-Jul	7	10	13	18	A	14	17	10	9	7	6	4	2	2	2	3	2	2	2	3	11	5	6	5	7.0	17.5
16-Jul	3	3	4	3	A	12	4	4	3	3	4	2	2	2	2	2	2	2	2	3	4	4	7	8	3.7	12.2
17-Jul	7	4	4	4	A	10	9	4	3	3	2	2	2	6	5	6	3	2	3	3	5	12	12	11	5.3	12.3
18-Jul	9	8	6	8	A	11	7	6	6	6	7	9	11	11	9	6	7	5	6	5	5	4	4	2	6.9	11.5
19-Jul	2	2	2	2	A	6	3	2	2	1	1	1	1	1	1	1	1	1	1	2	3	3	3	4	2.0	5.6
20-Jul	5	2	2	3	A	6	4	3	1	1	1	1	1	1	1	1	2	1	1	2	3	4	2	3	2.3	6.3
21-Jul	2	2	4	8	A	9	7	7	4	3	2	1	1	1	1	1	1	1	2	3	6	4	3	2	3.3	9.0
22-Jul	3	4	5	5	A	11	9	47	4	5	4	3	2	2	2	2	2	2	2	5	6	4	3	3	5.8	47.3
23-Jul	6	5	7	5	A	11	13	9	126	3	3	2	2	1	2	1	2	3	2	2	3	4	6	2	9.5	125.7
24-Jul	5	2	2	4	A	6	4	4	4	10	7	4	2	2	2	1	1	2	2	2	2	1	2	2	3.1	9.6
25-Jul	1	1	2	2	A	5	4	3	2	2	1	1	1	1	1	1	1	2	2	2	3	4	2	2	1.9	5.5
26-Jul	2	2	2	3	A	7	5	3	2	1	1	1	1	1	1	1	1	2	3	2	3	2	3	4	2.3	6.8
27-Jul	6	4	6	4	A	9	5	2	2	2	1	1	1	1	1	1	1	1	3	4	6	9	8	6	3.7	9.2
28-Jul	8	6	5	6	A	17	6	5	3	3	2	2	2	2	2	2	2	2	2	4	4	5	5	4	4.4	17.4
29-Jul	3	5	6	12	A	10	8	7	4	4	4	4	3	3	2	2	4	4	4	4	7	8	11	5	5.3	11.6
30-Jul	3	4	7	9	A	8	4	5	3	1	1	1	1	1	1	1	1	1	1	4	3	6	9	7	3.6	8.7
31-Jul	2	7	9	10	A	11	6	7	4	4	6	2	2	1	1	1	2	3	1	2	3	4	5	3	4.2	11.2
3.9 4.1 4.6 5.5 -- 9.4 6.6 6.2 7.9 3.7 3.0 2.3 2.9 2.2 4.6 1.7 2.0 1.9 2.1 3.0 4.2 4.4 4.9 3.7																									Diurnal Average	
12.5 10.3 13.2 17.5 -- 17.4 17.3 47.3 125.7 10.4 7.3 8.8 12.3 11.5 78.6 5.8 7.7 5.0 5.9 6.2 10.8 12.2 12.3 10.6																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

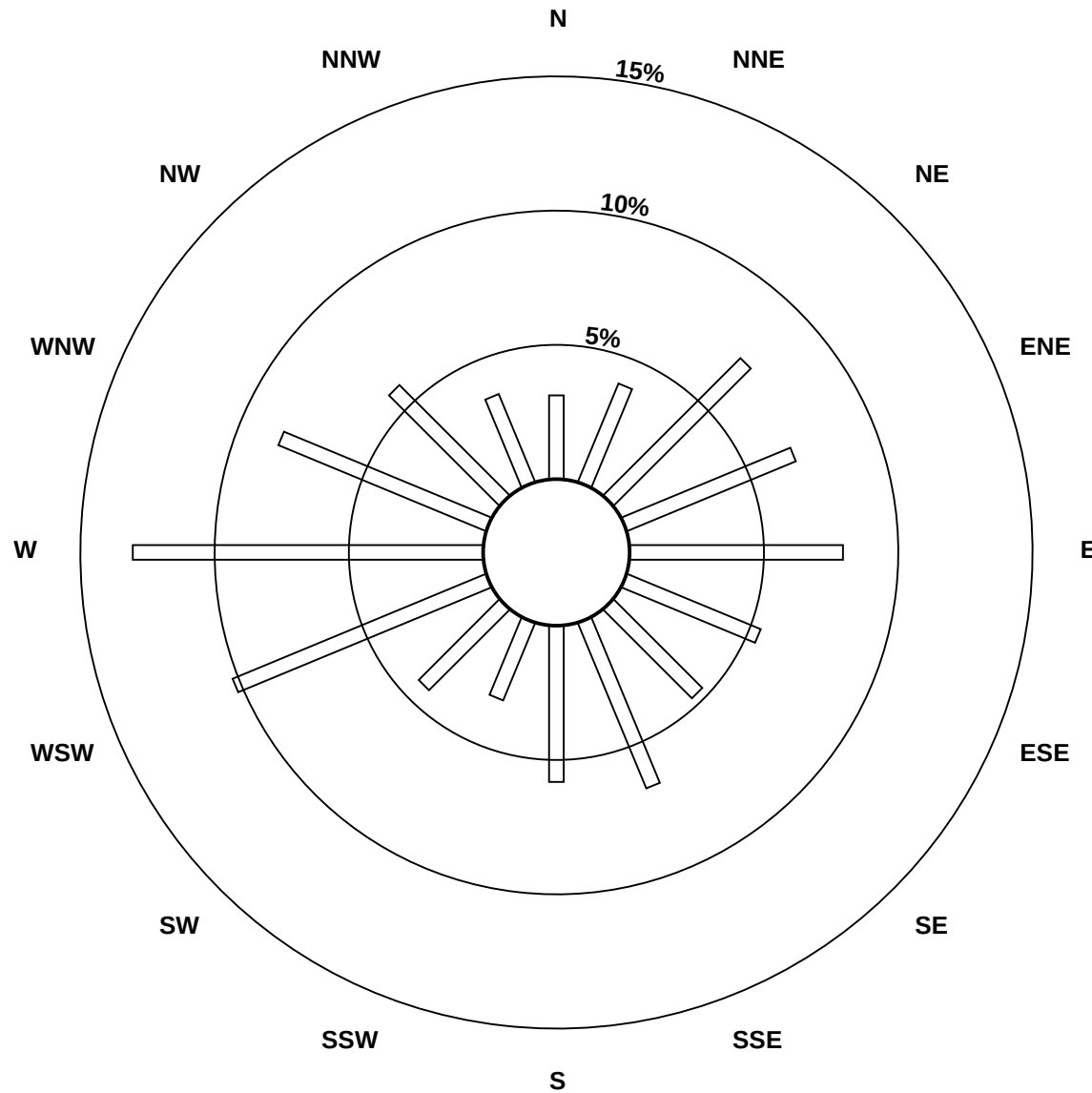
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - July 2014



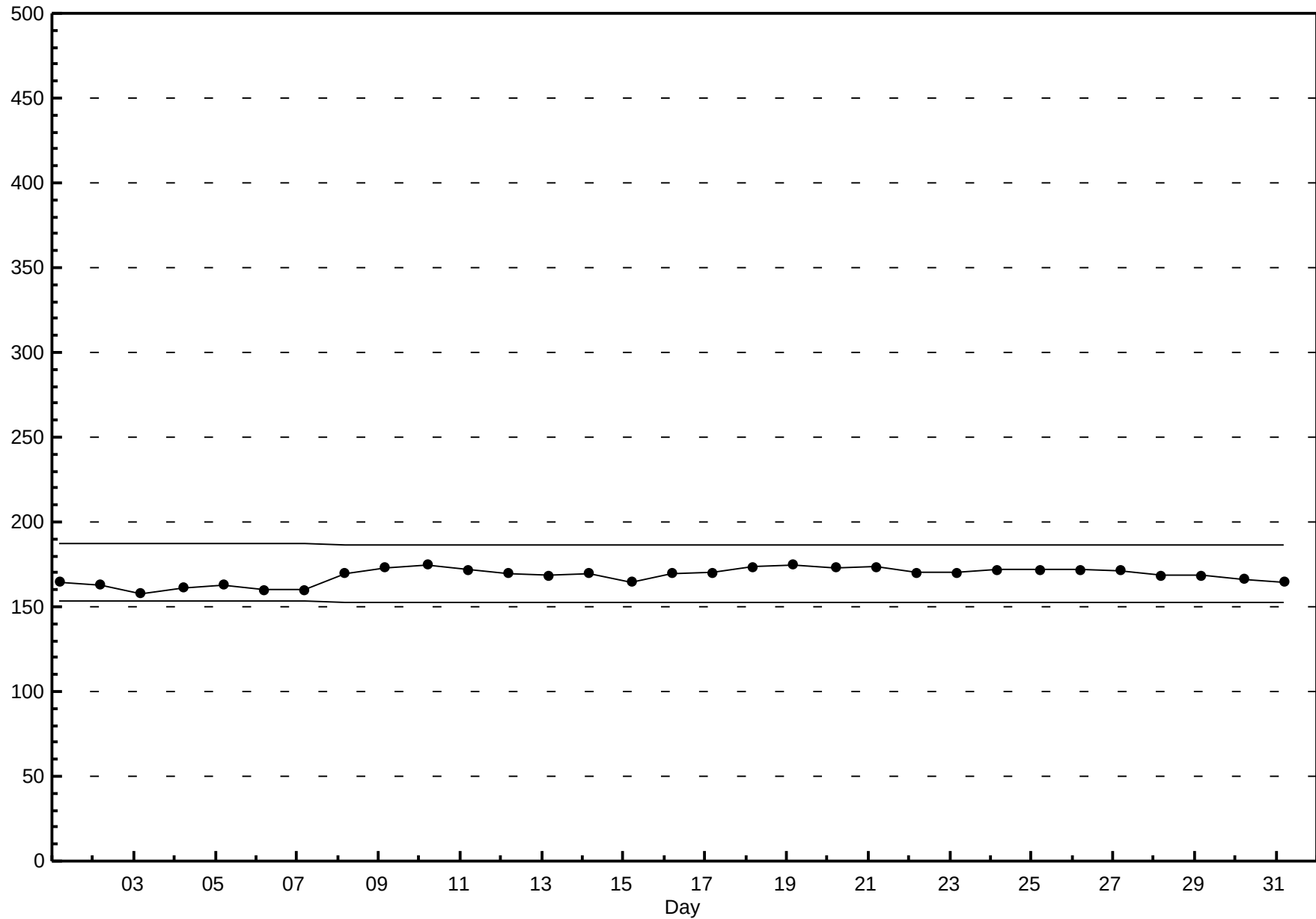
Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Beaverlodge - July 2014



Span Responses

Nitrogen Dioxide (NO₂)
Beaverlodge - July 2014



Hourly Averages

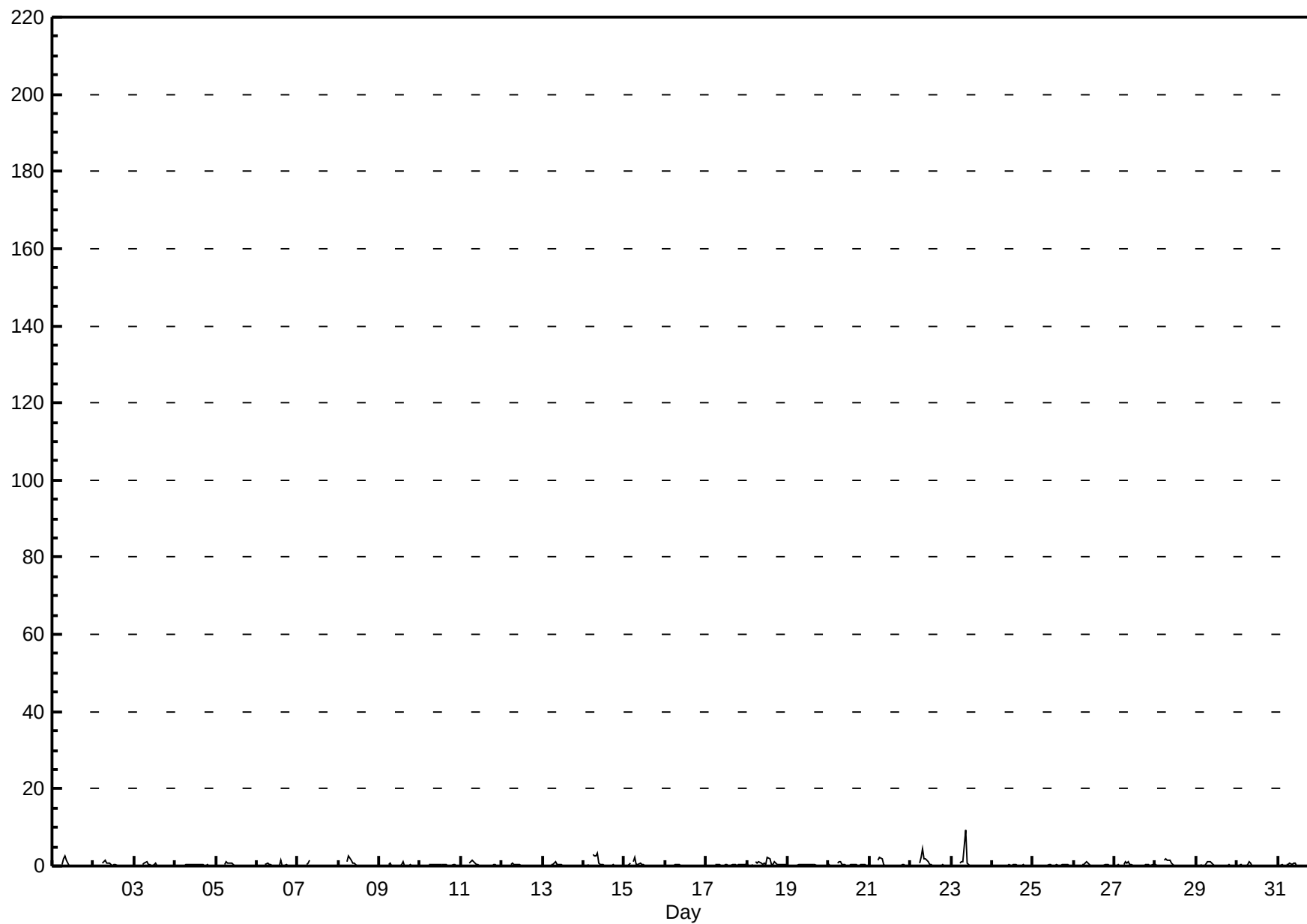
Nitrogen Oxide (NO) - ppb

Beaverlodge - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744							
Maximum Value: 9.3 ppb on Jul 23 09:00																			Maximum Daily Average: 0.7 ppb on Jul 18		Hours of Data: 705					
Minimum Value: 0 ppb on Jul 7 17:00																			Minimum Daily Average: 0.1 ppb on Jul 16		Hours of Missing Data: 39					
Maximum Diurnal Average: 1.1 ppb at hour 8																			Minimum Diurnal Average: 0.1 ppb at hour 2		Hours of Calibration: 39					
Monthly Average: 0.29 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.7 P ₉₉ = 2.7		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-Jul	0	0	0	0	A	0	2	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.6
2-Jul	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
3-Jul	0	0	0	0	A	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
4-Jul	0	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-Jul	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
6-Jul	0	0	0	0	A	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0.2	1.7
7-Jul	0	0	0	0	A	0	1	1	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	--	1.4
8-Jul	0	0	0	0	A	1	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	2.8
9-Jul	0	0	0	0	A	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.2	1.1
10-Jul	0	0	0	0	A	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
11-Jul	0	0	0	0	A	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.5
12-Jul	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
13-Jul	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.2
14-Jul	0	0	0	0	A	3	3	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	3.2
15-Jul	0	0	0	1	A	1	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.3
16-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3
17-Jul	0	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
18-Jul	1	0	0	0	A	1	1	1	1	1	1	1	2	2	0	0	1	1	1	1	0	0	0	0	0.7	2.3
19-Jul	0	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
20-Jul	0	0	0	0	A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
21-Jul	0	0	0	0	A	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	2.3
22-Jul	0	0	0	0	A	1	2	5	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.6
23-Jul	0	0	0	0	A	1	1	1	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	9.3
24-Jul	0	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-Jul	0	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-Jul	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	1.0
27-Jul	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
28-Jul	0	0	0	0	A	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.8
29-Jul	0	0	0	0	A	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
30-Jul	0	0	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
31-Jul	0	0	0	0	A	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.8
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Averages

Nitrogen Oxide (NO) - ppb
Beaverlodge - July 2014



Hourly Maximums

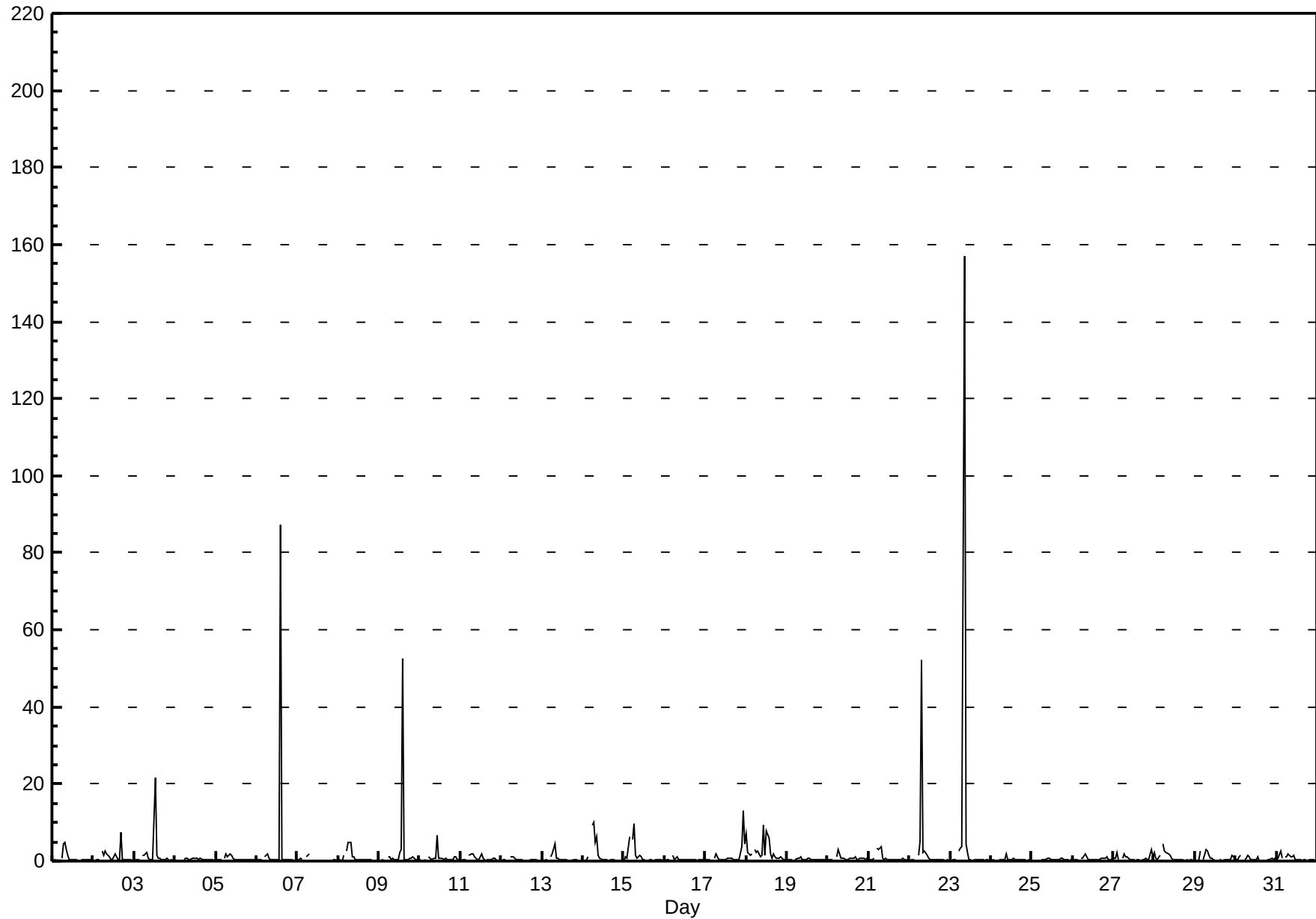
Nitrogen Oxide (NO) - ppb

Beaverlodge - July 2014

Maximum Value: 157.0 ppb on Jul 23 09:00																				Maximum Daily Average: 7.7 ppb on Jul 23					Hours in Service: 744	
Minimum Value: 0 ppb on Jul 7 18:00																				Minimum Daily Average: 0.3 ppb on Jul 16					Hours of Data: 705	
Maximum Diurnal Average: 6.4 ppb at hour 9																				Minimum Diurnal Average: 0.3 ppb at hour 18					Hours of Missing Data: 39	
Monthly Average: 1.30 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.7 P ₉₀ = 1.8 P ₉₉ = 8.3					Hours of Calibration: 39	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	0	0	0	0	A	1	4	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	4.8
2-Jul	0	0	0	0	A	3	2	2	2	1	0	0	1	2	0	0	7	0	0	0	0	0	0	0	1.1	7.3
3-Jul	0	1	0	0	A	2	1	2	1	0	0	0	22	1	1	1	1	0	1	1	0	0	0	0	1.5	21.5
4-Jul	0	0	0	0	A	1	1	1	1	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0.4	0.8
5-Jul	0	1	1	0	A	1	2	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1.8
6-Jul	0	0	0	0	A	1	2	1	0	0	0	0	0	0	87	0	0	0	0	0	0	0	0	0	4.3	87.4
7-Jul	0	0	1	0	A	1	1	2	C	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	--	1.8
8-Jul	0	0	0	2	A	3	5	5	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0.9	4.9
9-Jul	0	0	1	0	A	1	1	0	1	0	0	0	2	3	53	0	0	0	1	1	1	0	0	0	2.9	52.7
10-Jul	0	0	0	0	A	1	1	0	1	1	7	1	1	1	0	1	0	0	0	0	1	1	0	0	0.8	6.6
11-Jul	0	0	0	0	A	2	2	2	1	1	0	0	2	1	0	0	0	0	0	1	1	0	0	0	0.6	2.0
12-Jul	0	0	0	0	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.2
13-Jul	0	0	0	0	A	1	2	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	4.5
14-Jul	0	0	0	1	A	9	10	5	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	9.9
15-Jul	0	1	1	6	A	5	10	2	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1.3	9.7
16-Jul	0	0	0	0	A	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.4
17-Jul	0	0	0	0	A	1	2	1	0	0	0	0	0	1	1	1	1	0	0	0	1	4	13	4	1.4	12.9
18-Jul	7	2	2	2	A	3	2	3	1	1	9	1	8	6	2	1	2	1	1	1	1	1	1	1	2.5	9.4
19-Jul	0	0	0	0	A	0	1	1	1	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0.4	0.9
20-Jul	0	0	0	0	A	1	3	2	1	1	0	0	1	1	1	1	1	0	0	1	1	1	0	1	0.7	2.9
21-Jul	1	0	0	1	A	3	3	4	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0.8	3.8
22-Jul	0	0	0	0	A	1	5	52	2	3	1	1	0	0	0	0	0	0	0	1	0	0	0	0	3.1	52.0
23-Jul	0	0	0	0	A	2	3	4	157	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7.7	157.0
24-Jul	0	0	0	0	A	0	0	0	0	2	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0.4	1.7
25-Jul	0	0	0	0	A	0	0	0	0	1	1	0	1	1	0	0	0	1	1	0	0	0	0	0	0.4	0.8
26-Jul	0	0	0	0	A	1	1	2	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0.5	1.8
27-Jul	1	1	2	0	A	1	2	1	1	1	0	0	0	0	0	0	0	0	0	1	1	0	3	1	0.8	3.1
28-Jul	2	1	0	1	A	4	3	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	4.4
29-Jul	0	0	0	2	A	0	3	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	2	1	0.7	2.8
30-Jul	0	0	1	2	A	0	1	2	1	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	0.6	1.7
31-Jul	0	1	3	1	A	1	1	2	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.7	2.7
0.5 0.4 0.5 0.7 -- 1.7 2.4 3.6 6.4 1.0 1.1 0.4 1.5 0.8 5.0 0.3 0.6 0.3 0.3 0.4 0.4 0.4 0.8 0.4																									Diurnal Average	
6.9 2.4 2.7 6.3 -- 9.4 9.9 52.0 157.0 4.5 9.4 1.4 21.5 5.8 87.4 0.8 7.3 1.2 0.8 0.8 1.2 3.6 12.9 4.3																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Beaverlodge - July 2014



Hourly Averages

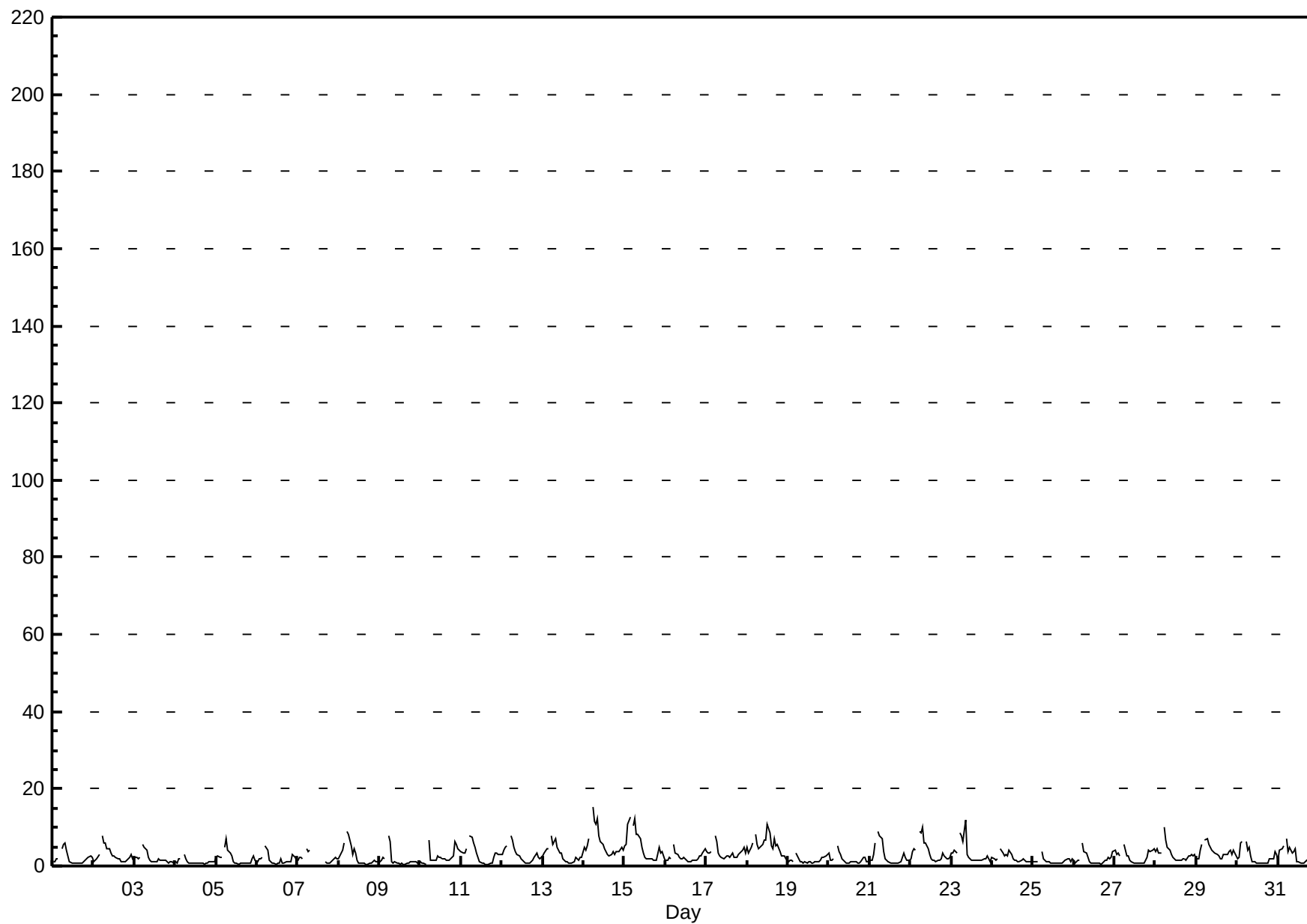
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 15.2 ppb on Jul 14 06:00 Maximum Daily Average: 5.8 ppb on Jul 14																				Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 39 Percent Operational Time: 100.0							
Minimum Value: 0 ppb on Jul 9 13:00 Maximum Diurnal Average: 6.9 ppb at hour 6 Monthly Average: 2.67 ppb										Minimum Daily Average: 1.1 ppb on Jul 4 Minimum Diurnal Average: 1.2 ppb at hour 16 Percentiles: P ₁ = 0.5 P ₁₀ = 0.7 Q ₁ = 1.1 Median = 1.9 Q ₃ = 3.5 P ₉₀ = 5.6 P ₉₉ = 10.7																	
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-Jul	1	1	2	2	A	5	6	6	4	3	1	1	1	1	1	1	1	1	1	1	2	2	3	2	2.0	6.1	
2-Jul	1	2	2	3	A	8	6	6	5	4	3	3	3	2	2	2	1	1	1	1	2	2	3	2	2.8	8.0	
3-Jul	2	2	2	2	A	5	5	4	2	2	1	1	1	1	2	1	2	1	2	1	1	1	1	1	1.9	5.4	
4-Jul	1	1	2	2	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	3.0	
5-Jul	2	2	2	2	A	5	7	4	3	2	1	1	1	1	1	1	1	1	1	1	1	2	3	1	2.0	7.0	
6-Jul	1	2	2	2	A	5	4	2	1	1	1	1	1	1	2	1	1	1	1	1	1	3	2	1	1.6	5.1	
7-Jul	2	2	2	2	A	5	4	4	C	C	C	C	C	C	C	C	1	1	1	1	2	2	2	2	--	4.6	
8-Jul	2	3	4	6	A	9	8	5	3	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	2.6	8.9	
9-Jul	1	2	2	2	A	8	6	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1.5	7.7	
10-Jul	1	1	1	1	A	7	2	1	1	2	2	2	2	2	2	2	2	2	2	2	3	6	5	5	4	2.4	6.8
11-Jul	4	3	3	4	A	8	7	6	5	3	2	1	1	1	0	0	1	1	1	2	3	3	3	3	2.9	8.0	
12-Jul	3	4	5	5	A	8	7	5	4	3	3	2	1	1	1	1	1	1	2	2	3	2	2	2	2.9	7.7	
13-Jul	3	3	4	5	A	8	6	7	5	4	3	3	2	1	1	1	1	1	1	2	2	2	2	2	3.0	7.8	
14-Jul	5	4	5	7	A	15	11	11	12	8	6	6	4	4	3	2	3	4	3	4	4	4	5	4	5.8	15.2	
15-Jul	5	6	11	13	A	11	12	8	8	7	5	3	2	2	2	2	2	1	2	2	5	3	4	3	5.1	12.5	
16-Jul	1	2	2	2	A	5	3	3	2	2	2	2	1	1	1	1	1	1	1	2	3	3	3	5	2.2	5.5	
17-Jul	4	4	3	4	A	8	6	3	3	2	2	2	3	3	2	3	2	2	2	3	4	4	5	3	3.4	7.7	
18-Jul	5	3	5	6	A	8	6	4	5	6	7	7	11	9	5	4	7	5	6	4	3	3	3	2	5.3	10.7	
19-Jul	1	1	1	1	A	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	1.5	3.3	
20-Jul	4	2	1	2	A	5	4	3	2	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1.7	5.3	
21-Jul	1	2	3	6	A	9	8	7	4	2	1	1	1	1	1	1	1	1	1	2	3	2	1	1	2.6	8.9	
22-Jul	2	4	5	4	A	9	8	10	6	6	5	3	2	1	1	1	1	2	2	3	3	2	2	2	3.7	9.9	
23-Jul	4	3	4	3	A	9	8	6	12	3	2	2	1	1	1	1	2	2	2	2	2	3	2	1	3.3	11.8	
24-Jul	2	2	1	2	A	5	3	3	3	3	4	3	2	2	1	1	1	1	2	1	1	1	1	1	2.0	4.6	
25-Jul	1	1	1	1	A	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2	1.2	3.6	
26-Jul	2	1	2	2	A	6	4	3	2	1	1	1	1	1	1	1	0	1	2	2	2	2	4	4	1.7	5.8	
27-Jul	4	3	3	2	A	6	4	3	3	1	1	1	1	1	1	1	1	1	2	2	4	4	4	4	2.4	5.7	
28-Jul	4	4	3	3	A	10	7	5	4	3	2	2	2	1	2	2	2	2	2	2	2	3	2	3	3.2	10.0	
29-Jul	2	2	4	6	A	7	7	6	5	4	4	3	3	3	2	2	3	3	3	4	4	3	4	2	3.7	7.0	
30-Jul	2	2	6	6	A	6	4	5	3	1	1	1	1	1	1	1	1	1	1	2	2	2	4	3	2.3	6.4	
31-Jul	2	4	4	5	A	7	4	5	3	4	4	1	1	1	1	1	1	2	1	1	2	3	3	2	2.7	7.2	
2.4 2.5 3.2 3.6 -- 6.9 5.6 4.5 3.8 2.9 2.4 1.9 1.7 1.5 1.3 1.2 1.3 1.3 1.5 1.9 2.4 2.4 2.6 2.3 Diurnal Average																											
5.2 5.6 10.9 12.5 -- 15.2 12.3 10.7 12.4 7.9 6.6 6.6 10.7 8.8 5.1 4.5 6.9 5.1 5.6 3.7 6.2 5.4 5.0 4.5 Diurnal Maximum																											
C - Calibration A - Automated Daily Zero Span																											

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb
Beaverlodge - July 2014



Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb

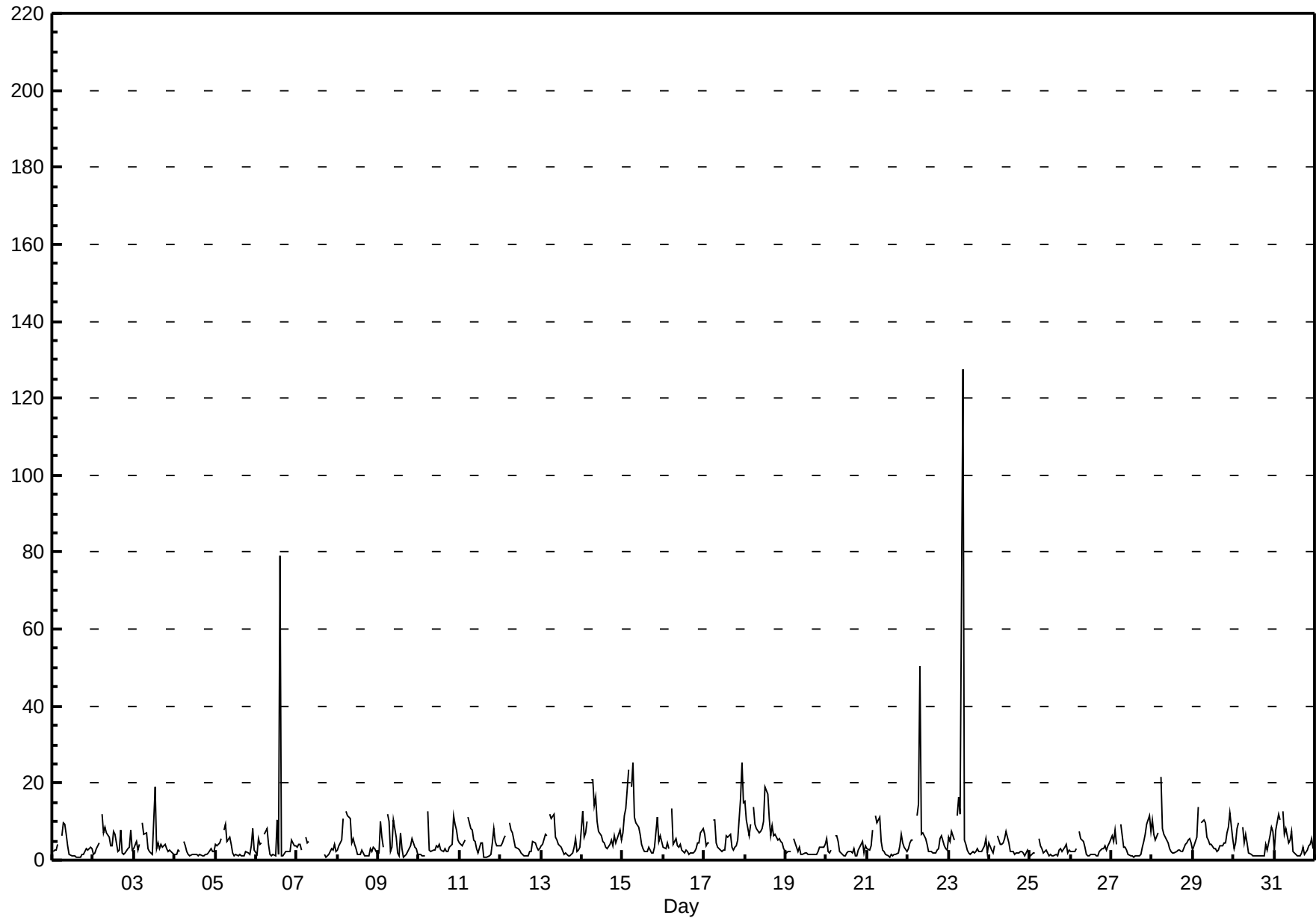
Beaverlodge - July 2014

Maximum Value: 127.7 ppb on Jul 23 09:00																				Maximum Daily Average: 10.2 ppb on Jul 23					Hours in Service: 744	
Minimum Value: 1 ppb on Jul 11 16:00																				Minimum Daily Average: 2.0 ppb on Jul 4					Hours of Data: 705	
Maximum Diurnal Average: 10.6 ppb at hour 6																				Minimum Diurnal Average: 2.0 ppb at hour 16					Hours of Missing Data: 39	
Monthly Average: 4.78 ppb																				Percentiles: P ₁ = 0.9 P ₁₀ = 1.3 Q ₁ = 2.0 Median = 3.3 Q ₃ = 5.6 P ₉₀ = 9.5 P ₉₉ = 20.5					Hours of Calibration: 39	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	2	3	3	4	A	6	10	9	7	4	2	1	1	1	1	1	1	2	2	2	3	3	3	3	3.1	9.7
2-Jul	2	2	3	5	A	12	7	8	7	6	4	4	7	2	3	8	2	2	2	2	3	3	8	3	4.7	11.7
3-Jul	3	5	3	4	A	10	7	7	3	2	2	2	19	3	5	3	4	3	4	3	2	3	2	2	4.4	19.1
4-Jul	2	1	3	2	A	5	4	2	2	1	2	1	1	1	1	1	1	2	2	2	3	2	2	2	2.0	5.0
5-Jul	4	4	4	6	A	8	9	5	6	4	2	1	1	1	1	1	1	2	2	1	4	8	3	3	3.5	9.2
6-Jul	1	6	4	4	A	7	8	4	2	1	1	1	10	1	79	1	1	2	2	2	2	5	4	4	6.7	79.0
7-Jul	3	4	4	3	A	6	5	5	C	C	C	C	C	C	C	C	1	1	1	1	3	3	4	2	--	6.1
8-Jul	3	4	5	11	A	13	12	11	4	6	4	3	2	1	3	2	1	1	1	3	2	4	3	2	4.3	12.8
9-Jul	2	10	6	3	A	12	10	2	3	10	6	2	1	7	3	1	2	2	3	4	6	3	3	1	4.4	11.7
10-Jul	2	2	1	1	A	13	3	2	3	2	4	3	4	2	2	3	2	2	3	4	12	9	8	5	4.0	12.7
11-Jul	4	4	4	5	A	11	8	8	5	5	3	2	5	4	1	1	1	1	2	4	8	5	4	4	4.3	11.3
12-Jul	4	5	6	6	A	10	8	7	5	3	3	3	2	1	1	1	1	2	2	5	4	3	3	3	3.8	9.8
13-Jul	4	4	7	6	A	12	11	12	6	5	4	4	3	2	2	1	1	1	2	3	5	2	3	3	4.5	12.1
14-Jul	13	6	7	10	A	21	21	14	16	10	7	6	5	4	3	3	4	5	4	6	4	5	8	5	8.3	20.8
15-Jul	7	12	13	23	A	19	25	11	10	9	7	4	3	2	2	3	3	2	2	3	11	5	6	5	8.2	25.4
16-Jul	3	3	4	3	A	14	4	6	4	3	4	3	2	2	2	2	2	2	2	3	4	4	7	8	4.0	13.5
17-Jul	7	4	4	5	A	11	10	5	3	3	2	3	3	6	6	7	3	3	3	4	5	16	25	15	6.6	25.3
18-Jul	15	10	7	9	A	14	9	8	7	7	8	10	19	17	11	6	9	6	7	5	5	5	4	3	8.8	18.8
19-Jul	2	2	2	2	A	6	3	2	3	1	2	2	2	2	1	2	1	1	1	2	4	3	4	4	2.4	5.7
20-Jul	6	2	2	3	A	6	6	5	2	2	1	1	2	2	2	2	3	1	1	3	4	5	2	4	2.9	6.5
21-Jul	3	3	4	8	A	11	10	11	5	3	2	2	1	1	1	1	1	1	2	4	7	5	3	2	4.0	11.5
22-Jul	3	5	5	5	A	12	14	50	7	7	5	4	2	2	2	2	2	3	3	6	6	4	3	3	6.7	50.3
23-Jul	6	5	7	5	A	12	16	12	128	5	4	3	2	2	2	2	2	3	2	2	3	4	6	2	10.2	127.7
24-Jul	5	3	2	4	A	6	4	4	4	6	7	4	2	2	2	2	2	2	2	2	2	1	3	2	3.2	7.4
25-Jul	1	1	2	2	A	6	4	3	2	3	2	1	1	1	1	1	1	2	3	2	3	4	2	3	2.3	5.5
26-Jul	2	2	2	3	A	7	6	5	3	1	1	1	1	1	1	1	1	2	3	3	4	3	4	4	2.8	7.5
27-Jul	6	5	8	4	A	9	6	3	3	3	1	1	1	1	1	1	1	3	5	7	9	11	7	7	4.4	11.5
28-Jul	10	7	5	7	A	22	8	7	5	4	3	2	2	2	2	2	3	2	2	4	4	5	6	4	5.2	21.6
29-Jul	3	5	6	14	A	10	10	10	6	5	4	4	3	3	2	3	4	4	4	4	7	9	12	5	6.0	13.8
30-Jul	3	5	8	10	A	8	5	7	4	2	2	1	1	1	1	1	1	1	4	3	6	9	8	8	3.9	9.8
31-Jul	2	8	12	10	A	13	7	8	5	5	7	2	2	1	1	1	2	3	1	3	4	4	6	3	4.8	12.6
4.3 4.5 5.0 6.1 -- 10.6 8.7 8.2 9.0 4.3 3.5 2.7 3.7 2.9 4.9 2.0 2.3 2.2 2.5 3.3 4.6 4.7 5.6 4.0																									Diurnal Average	
15.2 11.6 13.5 23.4 -- 21.6 25.4 50.3 127.7 10.5 8.1 9.9 19.1 17.3 79.0 6.5 8.8 6.2 6.8 6.3 11.6 15.9 25.3 14.8																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										

Hourly Maximums

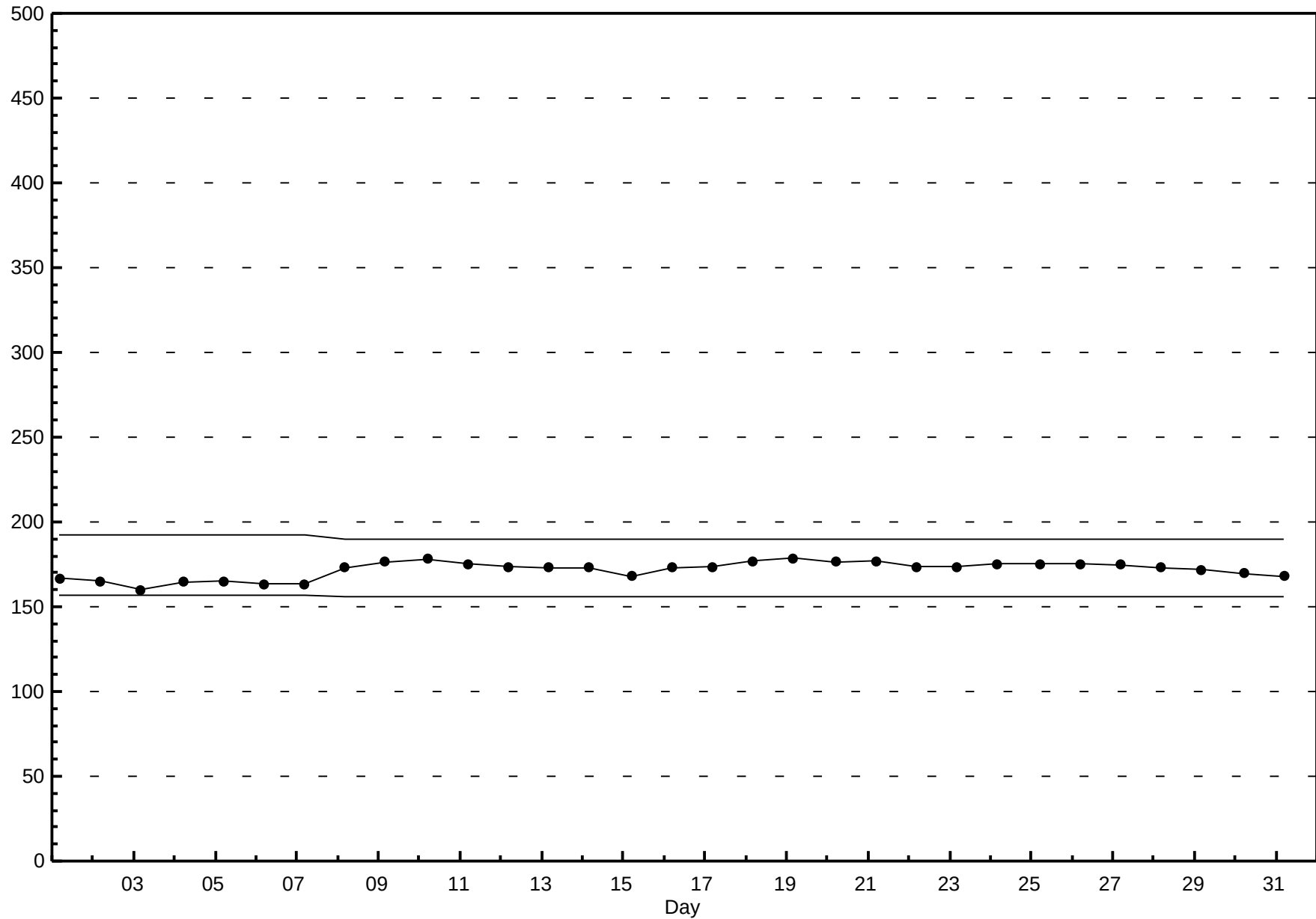
Oxides of Nitrogen (NO_x) - ppb

Beaverlodge - July 2014



Span Responses

Oxides of Nitrogen (NO_x)
Beaverlodge - July 2014



Hourly Averages

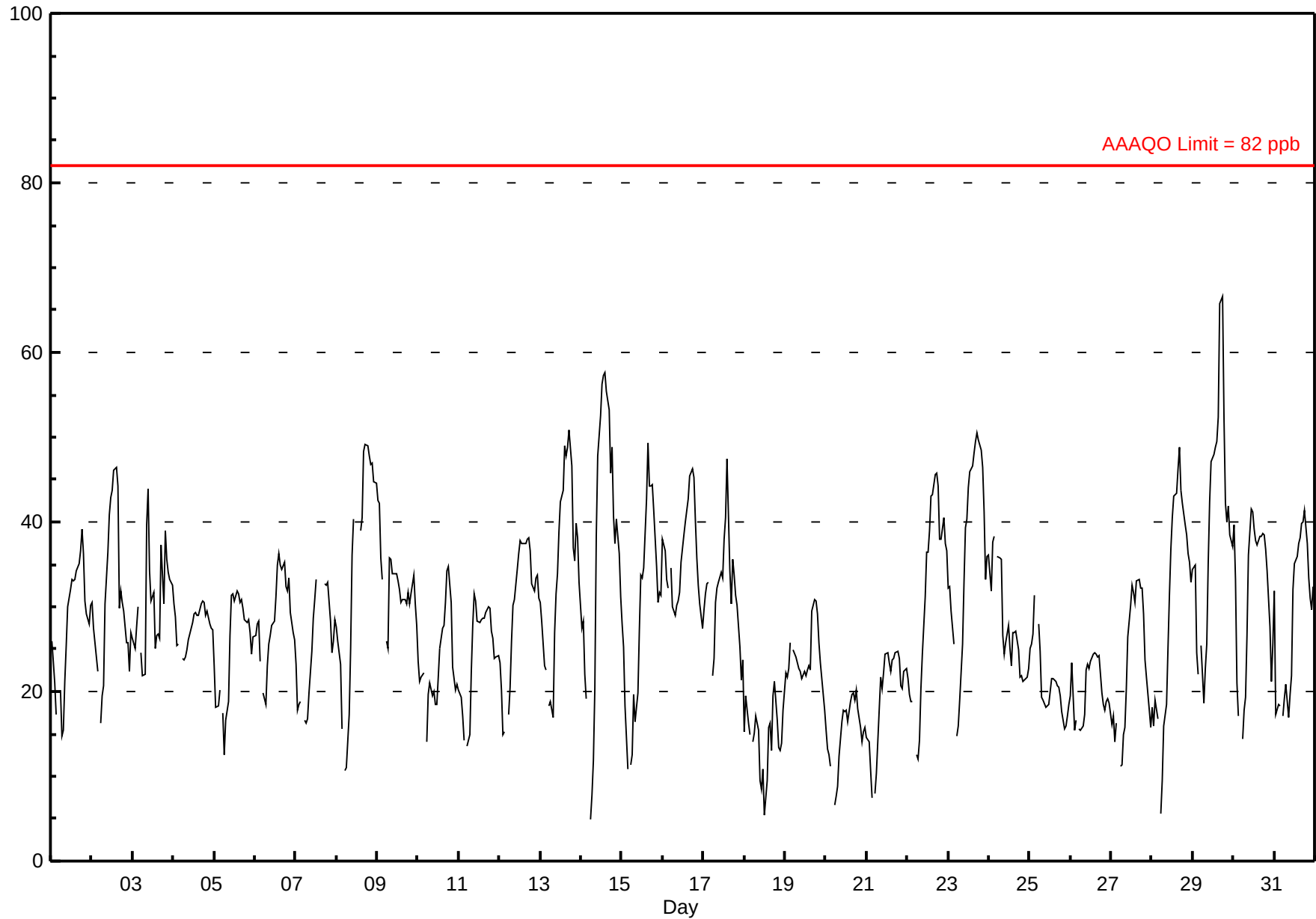
Ozone (O₃) - ppb

Beaverlodge - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 66.6 ppb on Jul 29 18:00 Maximum Daily Average: 39.8 ppb on Jul 29																								Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0		
Minimum Value: 5 ppb on Jul 14 06:00 Maximum Diurnal Average: 36.1 ppb at hour 18 Monthly Average: 28.21 ppb												Minimum Daily Average: 14.4 ppb on Jul 18 Minimum Diurnal Average: 17.6 ppb at hour 6 Percentiles: P ₁ = 7.8 P ₁₀ = 15.9 Q ₁ = 20.3 Median = 27.5 Q ₃ = 34.5 P ₉₀ = 42.2 P ₉₉ = 51.9														
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-Jul	26	24	21	17	A	20	15	15	21	25	30	32	33	33	33	34	35	37	39	36	31	29	28	30	28.1	39.1
2-Jul	31	27	26	22	A	16	20	21	30	36	41	43	44	46	46	44	30	32	31	29	26	26	22	27	31.1	46.4
3-Jul	26	25	28	30	A	25	22	22	40	44	34	31	32	25	27	27	26	37	30	39	36	34	33	33	30.6	43.9
4-Jul	30	29	25	26	A	24	24	24	25	26	27	28	29	29	29	29	30	31	31	29	29	28	28	27	27.7	30.6
5-Jul	23	18	18	20	A	17	13	17	19	27	31	31	31	32	32	31	31	30	28	28	29	27	24	26	25.3	31.8
6-Jul	27	28	28	24	A	20	19	23	26	27	28	28	31	35	36	35	34	35	32	32	33	29	27	26	28.8	36.3
7-Jul	23	18	18	19	A	17	16	17	20	25	29	31	33	C	C	C	C	33	33	33	28	24	26	28	24.8	33.2
8-Jul	28	26	23	16	A	11	11	17	25	36	40	C	C	C	39	40	48	49	49	48	47	47	45	45	34.5	49.1
9-Jul	42	42	36	33	A	26	25	36	36	34	34	34	33	32	31	31	31	30	32	30	32	34	30	28	32.6	42.5
10-Jul	24	21	22	22	A	14	20	21	20	20	18	19	22	25	27	28	31	34	35	31	23	22	20	21	23.4	34.7
11-Jul	20	19	17	14	A	14	15	22	28	31	31	28	28	29	29	29	29	30	30	27	26	24	24	24	24.7	31.5
12-Jul	23	20	15	15	A	17	20	26	30	31	34	36	38	37	38	37	38	38	37	33	32	33	34	31	30.2	38.1
13-Jul	30	28	23	23	A	18	19	17	27	31	34	39	42	44	49	48	49	51	47	37	35	40	38	33	34.9	50.9
14-Jul	27	28	22	19	A	5	8	12	20	38	48	53	56	57	58	56	53	46	49	41	37	40	36	31	36.6	57.6
15-Jul	28	25	18	11	A	11	13	20	16	20	27	34	33	34	43	49	44	44	44	41	35	31	32	31	29.8	49.4
16-Jul	38	37	33	32	A	35	30	29	30	31	32	35	39	40	41	43	45	46	45	40	36	33	30	28	36.0	46.3
17-Jul	30	32	33	33	A	22	24	31	32	33	34	33	38	41	48	34	30	36	34	31	30	25	21	24	31.6	47.5
18-Jul	15	19	16	15	A	14	15	17	15	10	9	11	6	9	16	16	13	19	21	17	13	13	14	18	14.4	21.2
19-Jul	22	22	23	26	A	25	24	23	23	22	22	22	22	22	23	22	30	31	31	29	26	23	20	18	23.9	30.9
20-Jul	15	13	13	11	A	7	8	9	12	16	18	18	18	16	19	20	20	19	20	18	16	14	15	16	15.2	20.2
21-Jul	15	14	11	7	A	8	10	18	22	20	22	24	25	23	22	24	24	25	25	24	21	20	22	23	19.5	24.7
22-Jul	22	20	19	19	A	12	12	14	20	24	31	36	36	39	43	43	46	46	44	38	38	40	37	37	31.2	45.7
23-Jul	32	32	30	26	A	15	16	19	26	33	39	40	44	46	47	48	49	50	50	48	46	41	33	36	36.8	50.5
24-Jul	36	32	38	38	A	36	36	36	27	24	26	28	25	23	27	27	27	25	22	22	21	21	22	23	27.9	38.2
25-Jul	25	26	27	31	A	28	25	19	19	18	18	18	20	22	22	21	21	20	20	18	16	16	17	18	21.1	31.4
26-Jul	19	23	15	17	A	16	15	16	17	23	23	23	23	24	25	24	24	24	20	19	18	19	19	19	20.2	24.6
27-Jul	16	17	14	16	A	11	11	15	16	20	26	30	32	32	31	33	33	32	32	29	24	22	18	16	22.9	33.2
28-Jul	18	16	19	17	A	6	9	16	18	25	31	37	41	43	43	46	49	44	42	40	39	36	35	33	30.6	48.8
29-Jul	34	35	25	22	A	25	19	23	26	35	42	47	48	49	49	52	66	67	52	42	40	42	38	37	39.8	66.6
30-Jul	40	33	21	17	A	14	18	19	27	36	41	41	39	38	37	38	38	39	38	37	34	28	21	26	31.4	41.5
31-Jul	32	17	19	18	A	17	19	21	17	20	22	32	35	36	37	38	40	40	41	38	33	31	30	32	28.9	41.4
26.4 24.8 22.4 21.2 -- 17.6 17.7 20.4 23.5 27.2 29.8 31.5 32.5 33.2 34.8 34.9 35.5 36.1 34.9 32.3 30.0 28.8 27.2 27.2																								Diurnal Average		
42.5 42.2 37.6 38.2 -- 35.9 35.7 35.7 39.7 43.9 47.8 52.5 56.3 57.3 57.6 55.5 65.8 66.6 52.2 48.4 46.8 47.0 44.7 44.5																								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
Beaverlodge - July 2014



Hourly Maximums

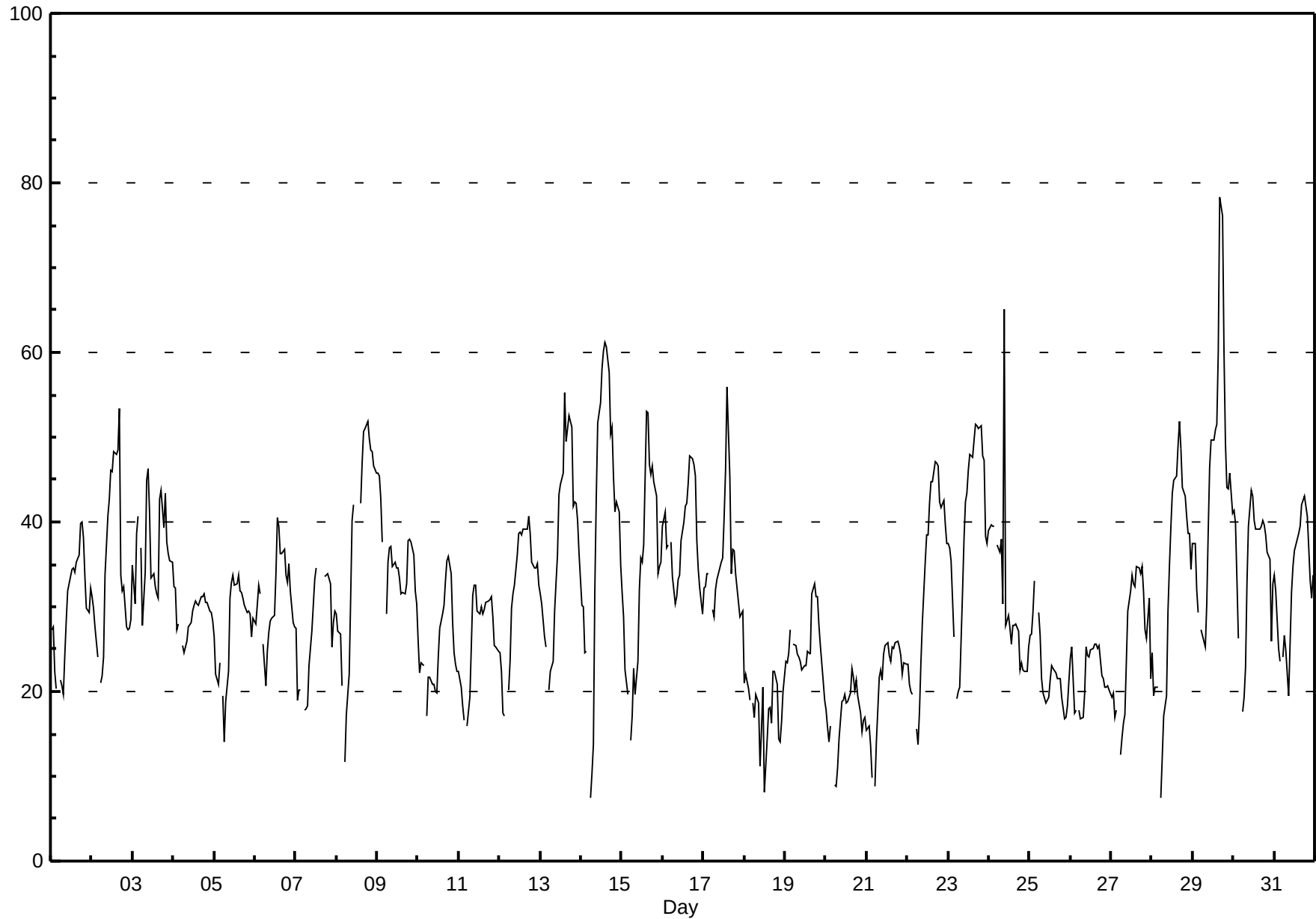
Ozone (O₃) - ppb

Beaverlodge - July 2014

Maximum Value: 78.3 ppb on Jul 29 17:00																					Maximum Daily Average: 44.8 ppb on Jul 29					Hours in Service: 744	
Minimum Value: 7 ppb on Jul 14 06:00																					Minimum Daily Average: 17.1 ppb on Jul 20					Hours of Data: 706	
Maximum Diurnal Average: 38.9 ppb at hour 17																					Minimum Diurnal Average: 20.7 ppb at hour 6					Hours of Missing Data: 38	
Monthly Average: 31.03 ppb																					Percentiles: P ₁ = 10.1 P ₁₀ = 18.6 Q ₁ = 23.0 Median = 30.4 Q ₃ = 37.7 P ₉₀ = 45.4 P ₉₉ = 60.0					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-Jul	27	28	22	20	A	21	21	20	24	28	32	34	34	35	34	35	36	40	40	38	34	30	29	32	30.2	40.1	
2-Jul	31	30	28	24	A	21	22	24	34	41	43	46	46	48	48	49	53	34	32	32	28	27	28	29	34.6	53.5	
3-Jul	35	30	39	41	A	37	28	34	45	46	41	33	34	32	32	31	43	44	39	43	38	36	35	35	37.0	46.3	
4-Jul	32	32	27	28	A	25	25	25	26	28	28	29	30	31	30	30	31	31	32	31	30	29	29	28	29.1	32.4	
5-Jul	27	22	21	23	A	20	14	19	22	31	33	34	33	33	34	32	32	31	30	29	29	29	27	29	27.5	33.7	
6-Jul	28	30	33	32	A	26	21	25	27	28	29	29	34	41	39	36	36	37	34	33	35	32	28	28	31.3	40.6	
7-Jul	27	19	20	20	A	18	18	18	23	27	30	33	35	C	C	C	C	33	34	34	33	25	28	29	26.6	34.6	
8-Jul	29	27	27	21	A	12	17	22	31	40	42	C	C	C	42	47	51	51	52	50	48	48	47	46	37.5	51.9	
9-Jul	46	45	43	38	A	29	35	37	37	35	35	35	33	32	32	32	32	33	38	38	38	36	32	30	35.7	45.8	
10-Jul	26	22	23	23	A	17	22	22	21	21	20	20	24	28	29	30	33	35	36	34	28	25	23	22	25.4	36.0	
11-Jul	22	20	18	17	A	16	19	25	31	33	32	29	29	30	29	30	30	31	31	31	29	25	25	25	26.5	32.6	
12-Jul	25	22	17	17	A	20	24	30	32	33	36	39	39	38	39	39	39	41	39	35	35	35	35	33	32.2	40.7	
13-Jul	32	30	26	25	A	20	22	24	30	33	36	43	44	46	55	49	51	53	51	42	42	42	40	36	38.0	55.3	
14-Jul	30	30	25	25	A	7	10	14	32	43	52	54	58	60	61	61	58	50	51	45	41	42	41	35	40.3	61.2	
15-Jul	32	29	22	20	A	14	17	23	20	24	32	36	35	37	53	53	47	46	47	45	43	34	35	35	33.8	53.1	
16-Jul	40	41	37	37	A	38	33	30	31	33	34	38	40	42	42	45	48	47	47	45	38	34	32	29	38.4	47.7	
17-Jul	32	32	34	34	A	30	29	32	33	34	35	36	41	46	56	45	34	37	37	34	32	29	29	30	35.2	56.0	
18-Jul	21	22	20	19	A	19	17	20	19	11	15	21	8	14	18	18	16	22	22	21	14	14	16	20	17.8	22.4	
19-Jul	24	23	25	27	A	26	25	24	24	24	23	23	23	25	25	24	32	33	31	31	28	25	21	19	25.4	32.7	
20-Jul	18	16	14	16	A	9	9	11	14	19	19	20	19	19	20	23	22	20	21	19	17	15	17	17	17.1	22.8	
21-Jul	15	16	13	10	A	9	14	22	23	21	24	25	26	24	24	25	25	26	26	25	24	22	23	23	21.2	25.9	
22-Jul	23	21	20	20	A	16	14	18	23	28	35	38	38	42	45	45	47	47	47	42	42	43	40	37	33.5	47.2	
23-Jul	37	37	35	26	A	19	20	21	32	38	42	43	46	48	48	50	51	51	51	51	48	47	38	37	39.9	51.5	
24-Jul	39	40	40	39	A	37	36	38	30	65	28	29	28	26	28	28	28	27	23	23	23	22	22	25	31.5	65.1	
25-Jul	27	27	29	33	A	29	27	22	20	19	19	19	21	23	23	22	22	21	22	19	17	17	18	21	22.5	33.0	
26-Jul	24	25	17	18	A	18	17	17	20	25	24	24	25	25	26	26	25	26	22	22	20	21	21	20	22.0	25.6	
27-Jul	19	20	17	18	A	13	15	16	17	23	30	32	34	33	32	35	35	34	35	32	27	26	31	22	25.8	34.7	
28-Jul	25	20	21	21	A	8	12	17	20	29	35	39	43	45	45	49	52	49	44	43	41	39	39	34	33.4	51.8	
29-Jul	38	37	32	29	A	27	26	25	30	39	46	50	50	51	52	60	78	76	60	49	44	44	46	41	44.8	78.3	
30-Jul	41	40	33	26	A	18	19	23	33	39	44	43	40	39	39	39	40	40	40	38	36	36	26	33	35.0	43.7	
31-Jul	34	32	25	23	A	24	27	25	19	26	32	35	37	38	39	39	42	43	43	41	37	33	31	34	32.9	43.1	
29.2 28.0 26.0 24.8 -- 20.7 21.1 23.3 26.5 31.1 32.5 33.6 34.3 35.6 37.3 37.6 38.9 38.3 37.2 35.4 32.9 31.1 30.1 29.5																									Diurnal Average		
45.8 45.4 42.8 40.7 -- 37.7 36.5 38.0 45.0 65.1 51.6 54.1 58.1 60.2 61.2 60.7 78.3 76.1 60.0 51.3 48.5 48.4 46.6 45.8																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											

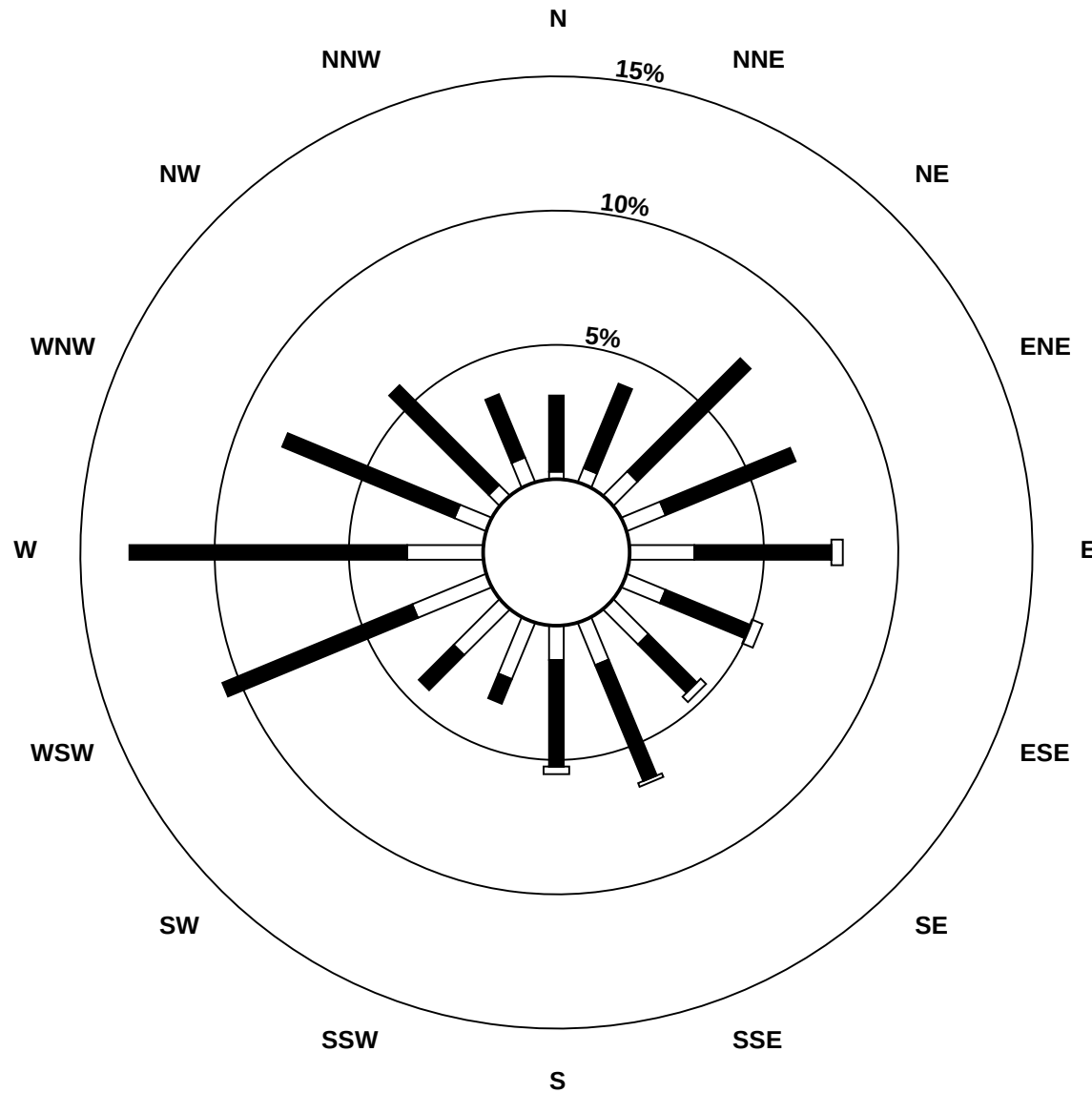
Hourly Maximums

Ozone (O₃) - ppb
Beaverlodge - July 2014

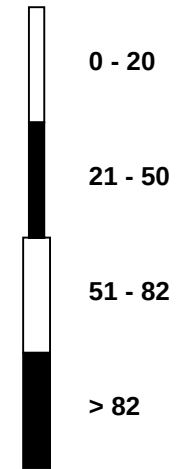


Pollutant Rose

Ozone (O₃) - ppb
Beaverlodge - July 2014



Pollutant Classes (ppb)



Eight Hour Running Averages

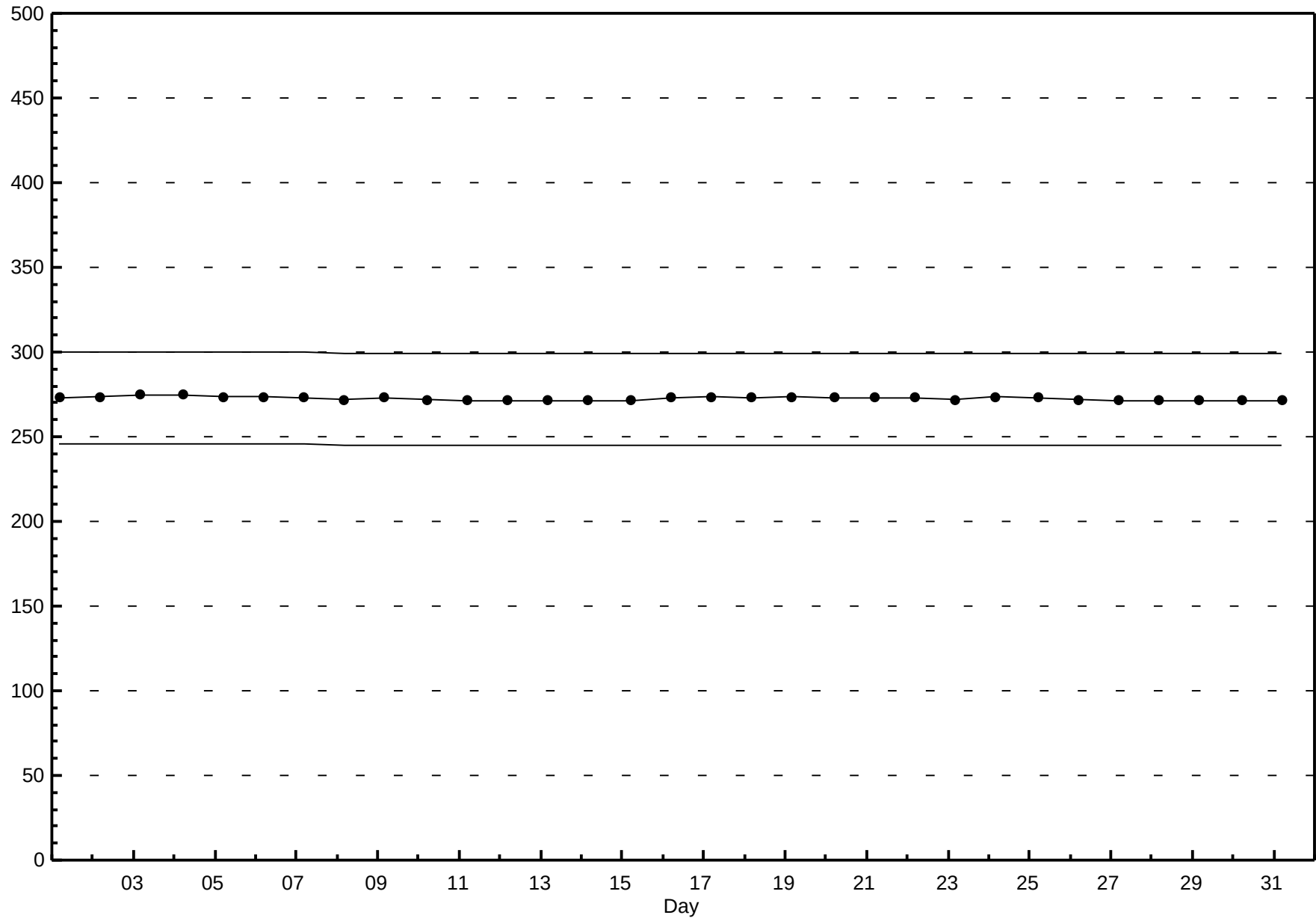
Ozone (O₃) - ppb

Beaverlodge - July 2014

Maximum Value: 53.8 ppb on Jul 29 19:00																								Hours in Service: 744	
Minimum Value: 10.3 ppb on Jul 20 09:00																								Hours of Data: 731	
																								Hours of Missing Data: 13	
Percentiles: P ₁ = 11.5 P ₁₀ = 17.5 Q ₁ = 21.5 Median = 26.9 Q ₃ = 33.4 P ₉₀ = 40.4 P ₉₉ = 52.1																								Hours of Calibration: 13	
																								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-Jul	27	26	25	24	23	22	21	20	19	19	21	23	24	26	28	30	32	33	35	35	35	34	34	33	35.1
2-Jul	33	31	30	28	28	26	25	23	23	24	27	30	31	35	38	41	41	41	39	38	36	33	30	28	41.4
3-Jul	27	27	26	26	26	26	26	25	27	30	31	31	31	31	32	32	31	30	29	30	31	32	33	34	33.5
4-Jul	34	33	32	31	30	29	27	26	25	25	25	25	26	27	27	28	29	29	30	30	30	29	29	29	34.0
5-Jul	28	27	25	24	23	22	20	18	17	19	21	22	23	25	27	29	31	31	31	30	30	29	28	28	31.0
6-Jul	27	27	27	27	26	25	24	24	24	24	24	24	25	27	29	31	32	33	33	34	34	33	32	31	34.1
7-Jul	30	28	26	24	23	21	20	18	18	19	20	22	23	24	26	N	N	N	N	N	N	N	29	29	29.8
8-Jul	29	28	27	25	24	22	20	19	18	20	22	23	23	N	N	N	N	N	N	N	46	46	46	47	47.1
9-Jul	46	46	44	42	41	38	36	34	33	32	32	32	32	33	34	33	32	32	32	31	31	31	31	31	46.4
10-Jul	30	29	28	27	26	23	21	20	20	20	19	19	19	20	21	22	24	25	28	29	29	29	28	27	29.9
11-Jul	26	24	22	20	19	18	17	17	18	20	22	24	25	27	28	29	29	29	29	29	29	28	27	27	29.2
12-Jul	26	25	23	22	21	20	19	20	21	22	25	28	29	32	34	35	36	37	37	37	36	36	35	34	37.4
13-Jul	33	32	31	29	29	27	25	23	22	23	24	26	28	32	35	39	42	44	46	46	45	44	43	41	46.0
14-Jul	39	36	33	30	30	25	20	17	16	18	21	26	30	37	43	48	52	53	53	52	50	47	45	42	53.4
15-Jul	39	36	32	28	27	23	20	18	16	16	17	20	22	25	28	32	36	39	41	42	42	41	40	38	42.0
16-Jul	37	36	35	34	33	34	34	33	32	31	31	32	32	33	35	36	38	40	42	42	42	41	40	38	42.5
17-Jul	36	34	33	32	31	29	29	29	29	30	30	30	31	33	36	37	36	37	37	36	35	34	30	29	36.7
18-Jul	27	25	23	21	19	18	17	16	16	15	14	13	12	11	12	11	11	12	14	15	16	16	16	16	27.1
19-Jul	17	17	18	19	20	21	23	24	24	24	24	23	23	23	22	22	23	24	25	26	27	27	26	26	26.8
20-Jul	24	22	20	17	16	14	12	11	10	11	12	12	13	14	16	17	18	18	19	19	18	18	18	17	24.1
21-Jul	17	16	15	13	13	12	12	12	13	14	15	18	19	21	22	23	23	24	24	24	23	23	23	23	24.0
22-Jul	23	22	21	21	21	19	18	17	17	17	19	22	23	27	31	34	37	40	42	42	42	42	42	41	42.2
23-Jul	39	37	36	34	33	30	27	24	23	23	25	27	29	33	37	40	43	46	47	48	48	48	46	44	48.1
24-Jul	43	40	39	38	36	36	36	36	35	33	32	30	30	28	27	26	26	26	25	25	24	24	23	23	42.7
25-Jul	23	23	23	24	25	26	26	26	25	24	23	21	21	20	20	20	20	20	20	20	20	19	19	18	26.3
26-Jul	18	18	18	18	18	18	18	17	17	17	18	19	20	21	22	23	24	24	23	23	22	22	21	20	23.9
27-Jul	19	18	18	17	17	16	15	14	14	15	17	19	20	23	25	28	30	31	32	32	31	29	28	26	31.9
28-Jul	24	22	20	19	18	16	14	14	14	16	18	20	23	28	32	36	39	42	43	43	43	42	41	40	43.5
29-Jul	38	37	35	32	31	30	28	26	25	25	27	31	33	36	40	44	49	53	54	53	52	51	50	48	53.8
30-Jul	45	41	37	34	33	29	26	23	21	22	25	28	30	32	35	37	39	39	39	38	38	36	34	33	44.8
31-Jul	32	29	27	24	23	21	21	20	18	19	19	21	23	25	27	30	33	35	37	38	38	37	36	36	38.2
46.4 45.5 43.9 42.1 41.4 38.4 35.9 35.9 34.5 33.4 31.9 32.0 33.1 36.5 42.8 48.2 52.3 53.2 53.8 53.2 52.2 51.3 49.9 48.1																									
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Beaverlodge - July 2014



Hourly Averages

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

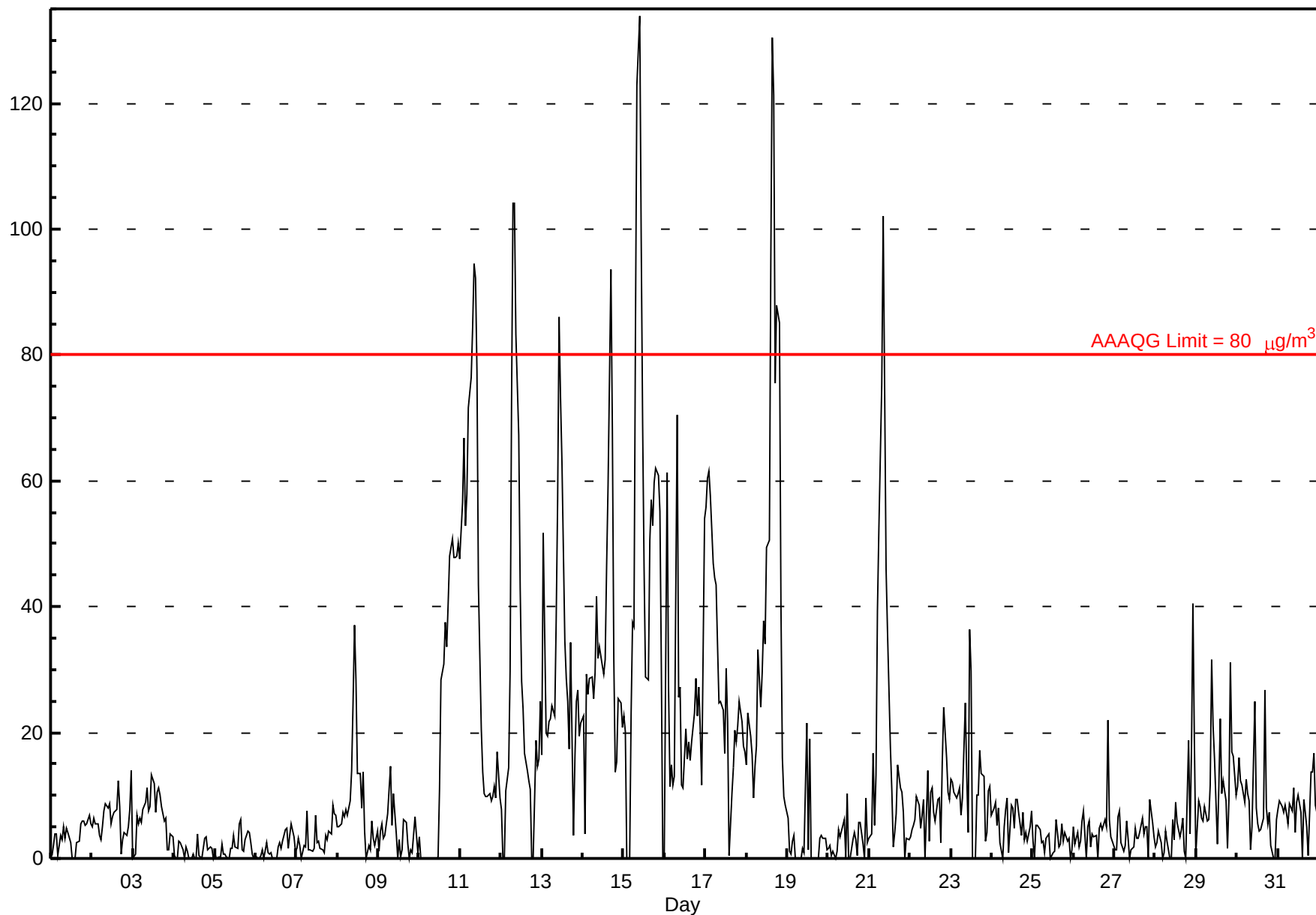
Beaverlodge - July 2014

Number of Exceedences: 1-hr: 18 24-hr: 5 Maximum Value: 133.8 µg/m³ on Jul 15 10:00 Minimum Value: 0 µg/m³ on Jul 1 13:00 Maximum Diurnal Average: 22.6 µg/m³ at hour 10 Monthly Average: 14.23 µg/m³																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Maximum Daily Average: 49.1 µg/m³ on Jul 15 Minimum Daily Average: 1.2 µg/m³ on Jul 4 Minimum Diurnal Average: 8.7 µg/m³ at hour 1 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 2.5 Median = 6.4 Q ₃ = 16.4 P ₉₀ = 38.4 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-Jul	0	2	4	4	1	4	3	5	3	5	4	3	0	0	0	3	3	6	6	6	5	5	7	5	3.4	6.9
2-Jul	5	6	5	5	4	3	5	8	9	8	9	5	7	7	8	12	8	1	3	4	4	5	8	14	6.4	14.0
3-Jul	0	1	7	6	6	6	8	9	11	8	8	13	12	7	10	11	10	8	6	7	1	1	4	3	6.8	13.3
4-Jul	0	0	0	3	3	1	0	2	1	0	0	1	0	0	4	1	0	2	3	3	1	2	2	0	1.2	3.9
5-Jul	1	0	0	0	2	1	1	0	0	2	2	4	2	2	6	6	1	1	3	4	4	2	1	0	1.8	6.1
6-Jul	0	0	0	0	1	0	2	1	1	1	0	0	0	2	3	2	3	5	5	2	4	6	4	1	1.7	5.5
7-Jul	2	3	2	0	2	2	8	1	1	1	2	7	3	3	2	1	1	4	3	4	4	9	7	7	3.2	8.5
8-Jul	5	5	6	7	7	8	7	9	14	25	37	28	14	13	8	14	4	0	2	1	6	3	2	4	9.6	37.0
9-Jul	1	4	6	3	4	7	11	15	5	10	4	0	3	0	1	6	6	2	0	1	1	7	4	1	4.3	14.7
10-Jul	3	0	0	0	0	0	0	0	0	0	0	0	11	28	31	38	34	41	48	51	48	48	48	50	19.9	50.7
11-Jul	48	57	67	53	58	72	76	84	94	92	77	44	21	14	10	10	10	10	9	10	11	10	17	10	40.1	94.5
12-Jul	8	0	0	11	14	30	72	104	104	83	67	43	28	24	17	14	12	11	0	0	19	15	16	25	29.8	104.2
13-Jul	16	52	20	20	22	22	24	23	38	57	86	73	63	35	29	25	17	34	4	16	25	27	19	22	32.0	85.9
14-Jul	23	4	29	26	29	29	25	30	42	32	34	31	29	32	46	59	94	68	32	14	15	25	25	21	33.0	93.6
15-Jul	23	20	0	0	23	38	37	83	123	134	99	69	46	29	28	50	57	53	60	62	61	55	30	0	49.1	133.8
16-Jul	0	61	27	11	15	12	13	70	26	27	12	11	21	16	18	16	19	23	29	23	27	21	12	54	23.4	70.4
17-Jul	56	60	61	58	47	45	43	34	25	25	24	17	30	22	0	10	14	20	18	21	25	22	18	17	29.7	61.5
18-Jul	15	23	19	16	10	15	18	33	24	29	38	34	49	51	96	130	121	75	88	85	41	16	10	9	43.6	130.5
19-Jul	6	1	1	3	4	0	0	0	0	2	1	22	1	19	0	0	0	0	0	3	4	3	3	1	3.1	21.6
20-Jul	2	2	0	1	0	1	5	3	4	6	0	10	0	0	3	4	3	1	6	6	2	0	10	3	3.0	10.3
21-Jul	3	4	17	5	13	39	52	75	102	75	46	36	18	11	2	4	7	15	11	10	7	0	3	3	23.3	102.0
22-Jul	3	5	5	6	10	9	5	7	9	0	14	3	10	11	7	6	9	10	3	15	24	16	10	9	8.6	24.0
23-Jul	13	12	11	10	10	11	7	10	25	13	4	36	30	0	0	10	10	17	14	13	3	4	11	11	11.8	36.4
24-Jul	7	8	9	5	8	2	0	5	8	10	1	9	8	5	9	9	7	4	7	3	4	3	5	7	6.0	9.5
25-Jul	3	0	5	5	5	2	3	1	3	4	0	1	1	1	6	2	2	5	3	4	3	3	0	1	2.6	6.2
26-Jul	5	2	4	2	3	6	8	0	5	6	2	4	3	4	0	5	6	5	6	5	22	6	3	3	4.7	21.9
27-Jul	1	1	7	8	3	1	2	6	3	0	1	2	5	3	3	4	6	4	5	5	0	9	6	3	3.7	9.4
28-Jul	2	2	4	3	0	1	4	3	0	0	6	3	9	6	4	4	6	1	0	19	4	17	41	19	6.6	40.5
29-Jul	1	9	8	6	6	8	6	6	12	32	21	16	2	11	22	10	12	9	2	9	31	17	16	10	11.9	31.6
30-Jul	11	16	12	12	9	13	10	9	1	5	25	8	5	4	5	6	27	8	5	7	2	0	0	6	8.7	26.9
31-Jul	8	9	8	7	8	7	5	9	8	11	4	9	10	7	0	9	7	5	0	14	14	17	8	7	8.0	16.7
8.7 12.0 11.1 9.6 10.5 12.7 14.9 20.8 22.6 22.6 20.2 17.4 14.2 11.8 12.2 15.6 16.7 14.4 12.2 13.8 13.6 12.0 11.2 10.6																								Diurnal Average		
55.7 61.3 66.8 57.7 57.9 71.7 76.4 104.1 122.9 133.8 98.6 73.2 62.9 50.6 95.7 130.5 121.3 75.5 87.8 85.2 60.8 55.1 48.1 54.1																								Diurnal Maximum		
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

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

Beaverlodge - July 2014



Hourly Maximums

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

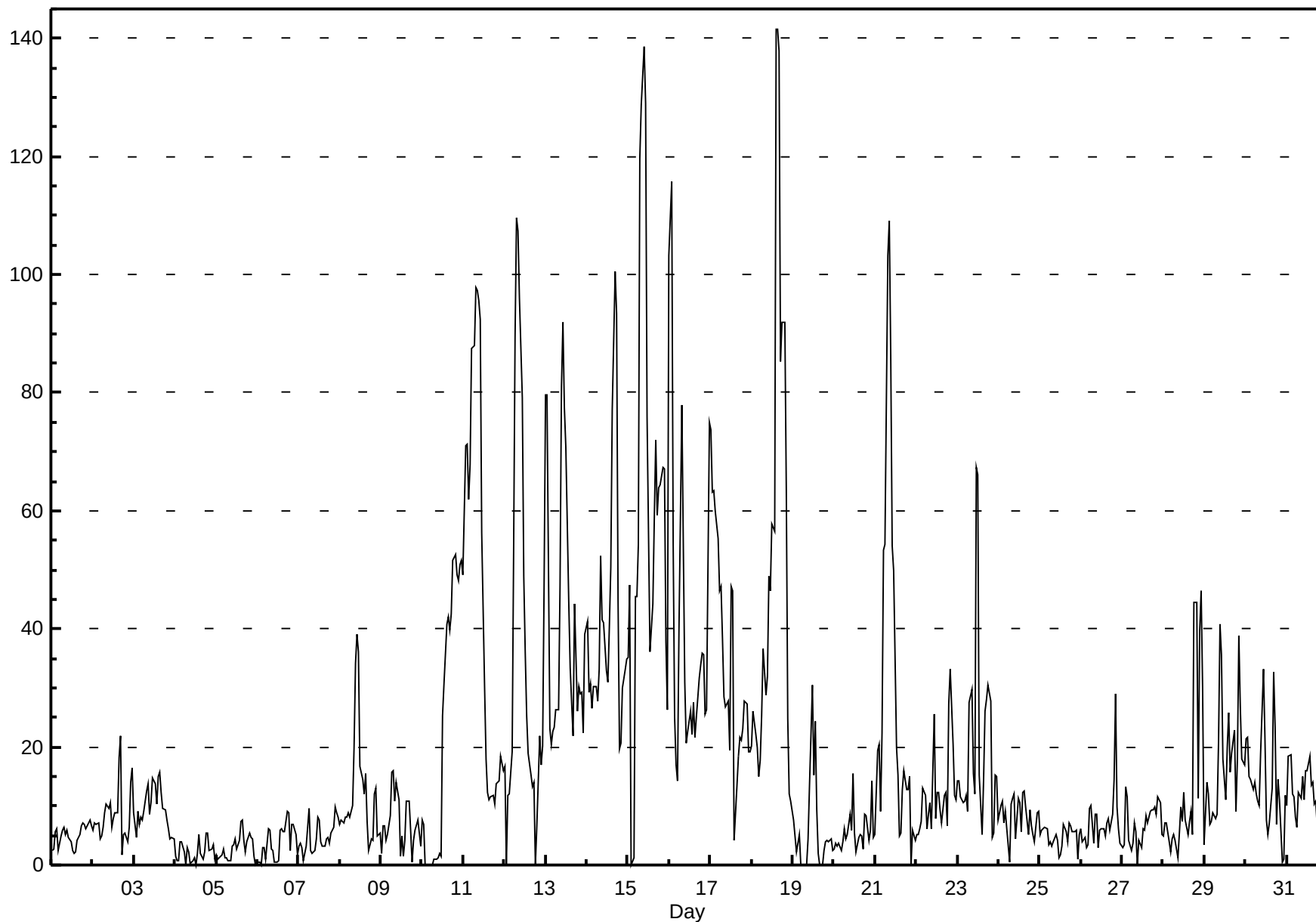
Beaverlodge - July 2014

Maximum Value: 141.6 μg/m ³ on Jul 18 16:00																								Maximum Daily Average: 61.4 μg/m ³ on Jul 15				Hours in Service: 744	
Minimum Value: 0 μg/m ³ on Jul 4 07:00																								Minimum Daily Average: 2.2 μg/m ³ on Jul 4				Hours of Data: 744	
Maximum Diurnal Average: 27.4 μg/m ³ at hour 10																								Minimum Diurnal Average: 11.9 μg/m ³ at hour 4				Hours of Missing Data: 0	
Monthly Average: 19.21 μg/m ³																								Percentiles: P ₁ = 0.0 P ₁₀ = 2.3 Q ₁ = 5.0 Median = 9.6 Q ₃ = 23.1 P ₉₀ = 49.7 P ₉₉ = 111.0				Hours of Calibration: 0	
																								Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-Jul	3	3	6	6	2	5	6	6	5	6	5	4	2	2	4	5	7	7	7	6	7	8	7	5.0	7.5				
2-Jul	6	7	7	7	4	5	6	9	10	10	11	6	8	9	18	22	2	5	6	4	6	14	16	8.6	21.8				
3-Jul	9	5	9	7	8	8	9	13	14	9	11	15	14	10	15	16	12	10	9	8	6	4	5	4	9.5	15.8			
4-Jul	2	1	1	4	4	2	0	3	2	0	1	1	0	2	5	2	1	2	5	5	3	3	3	1	2.2	5.4			
5-Jul	2	1	1	2	3	1	1	1	1	3	3	4	3	4	7	8	4	2	4	5	5	5	1	0	3.0	7.5			
6-Jul	1	0	0	3	3	1	6	6	3	2	0	1	1	6	6	6	6	9	9	2	7	7	5	2	3.8	9.0			
7-Jul	3	4	3	1	3	6	9	2	2	2	4	8	8	4	3	3	4	5	4	5	6	10	9	8	4.9	9.9			
8-Jul	7	8	7	8	8	9	8	10	20	34	39	36	17	14	12	15	7	2	4	4	12	13	5	5	12.8	39.0			
9-Jul	2	7	7	4	5	8	16	16	11	14	11	1	5	1	4	11	11	6	1	4	6	8	5	3	7.0	15.9			
10-Jul	8	7	0	0	0	0	0	1	1	1	2	2	25	31	41	42	40	43	52	53	49	48	51	52	22.8	52.7			
11-Jul	49	71	71	62	68	87	88	98	97	96	93	56	30	18	12	11	11	12	10	14	14	14	18	16	46.5	97.7			
12-Jul	17	0	12	12	19	53	90	110	107	96	79	49	36	25	19	15	13	14	0	7	22	17	20	47	36.6	109.5			
13-Jul	80	80	23	20	23	23	26	26	47	81	92	77	71	45	34	28	22	44	26	30	29	29	22	39	42.4	91.9			
14-Jul	41	29	31	26	30	30	28	33	52	41	41	33	31	40	50	77	100	93	45	20	21	30	33	35	41.4	100.4			
15-Jul	35	47	0	1	45	45	54	120	129	139	129	76	56	36	44	59	72	59	64	64	67	67	38	26	61.4	138.7			
16-Jul	103	116	55	25	17	14	40	78	54	31	21	23	26	22	28	22	25	32	34	36	36	25	26	75	40.1	115.8			
17-Jul	74	63	63	60	55	47	47	38	29	27	28	19	47	47	4	13	18	22	21	23	28	27	19	19	35.0	73.6			
18-Jul	20	26	22	20	15	18	25	37	29	32	49	47	58	57	142	142	138	85	92	92	64	25	12	11	52.3	141.6			
19-Jul	8	5	2	4	5	0	0	0	0	4	13	31	15	24	9	2	0	0	3	4	4	4	4	2	6.0	30.6			
20-Jul	3	4	3	4	2	4	6	4	5	9	6	16	5	2	5	5	5	3	9	8	4	6	14	5	5.7	15.6			
21-Jul	5	19	20	9	22	53	54	103	109	86	54	50	20	15	5	5	13	16	13	13	15	0	6	4	29.6	109.0			
22-Jul	5	5	6	7	13	12	6	9	11	6	26	8	12	12	9	7	12	12	7	27	33	20	12	11	12.0	33.1			
23-Jul	14	14	11	11	11	12	9	27	30	16	12	67	66	15	5	14	26	28	31	28	5	5	15	15	20.3	67.3			
24-Jul	8	10	11	7	9	6	1	10	11	12	4	11	11	6	12	13	10	5	9	7	5	4	9	9	8.3	12.5			
25-Jul	5	6	6	6	6	4	4	3	4	5	4	1	2	3	7	6	4	7	7	6	6	6	1	5	4.7	7.1			
26-Jul	6	4	5	3	3	10	10	4	9	9	3	6	6	6	5	7	8	6	9	15	29	10	6	4	7.5	29.1			
27-Jul	3	4	13	11	4	2	4	7	6	0	4	3	6	6	8	7	9	9	9	10	9	12	11	5	6.7	13.2			
28-Jul	5	7	7	4	2	4	5	4	1	5	10	7	12	8	5	7	9	5	44	44	11	40	46	30	13.6	46.5			
29-Jul	3	14	12	7	7	9	8	9	21	41	36	18	11	20	26	16	19	23	9	18	39	27	18	17	17.8	40.7			
30-Jul	21	22	15	14	13	14	12	11	10	19	33	21	8	5	7	13	33	23	7	15	11	0	1	12	14.2	33.1			
31-Jul	10	18	19	12	12	8	6	12	11	15	11	16	16	19	14	14	10	11	7	22	19	21	16	16	13.9	22.0			
17.9 19.6 14.5 11.9 13.7 16.2 18.9 26.1 27.1 27.4 26.9 23.0 20.2 16.6 17.9 19.6 21.6 19.3 17.9 19.4 18.5 16.1 14.7 16.2																								Diurnal Average					
103.2 115.8 71.3 61.9 67.8 87.4 89.5 119.6 128.8 138.7 129.1 77.5 70.7 56.5 141.5 141.6 137.9 93.4 91.8 92.0 67.3 67.2 51.0 75.0																								Diurnal Maximum					

Hourly Maximums

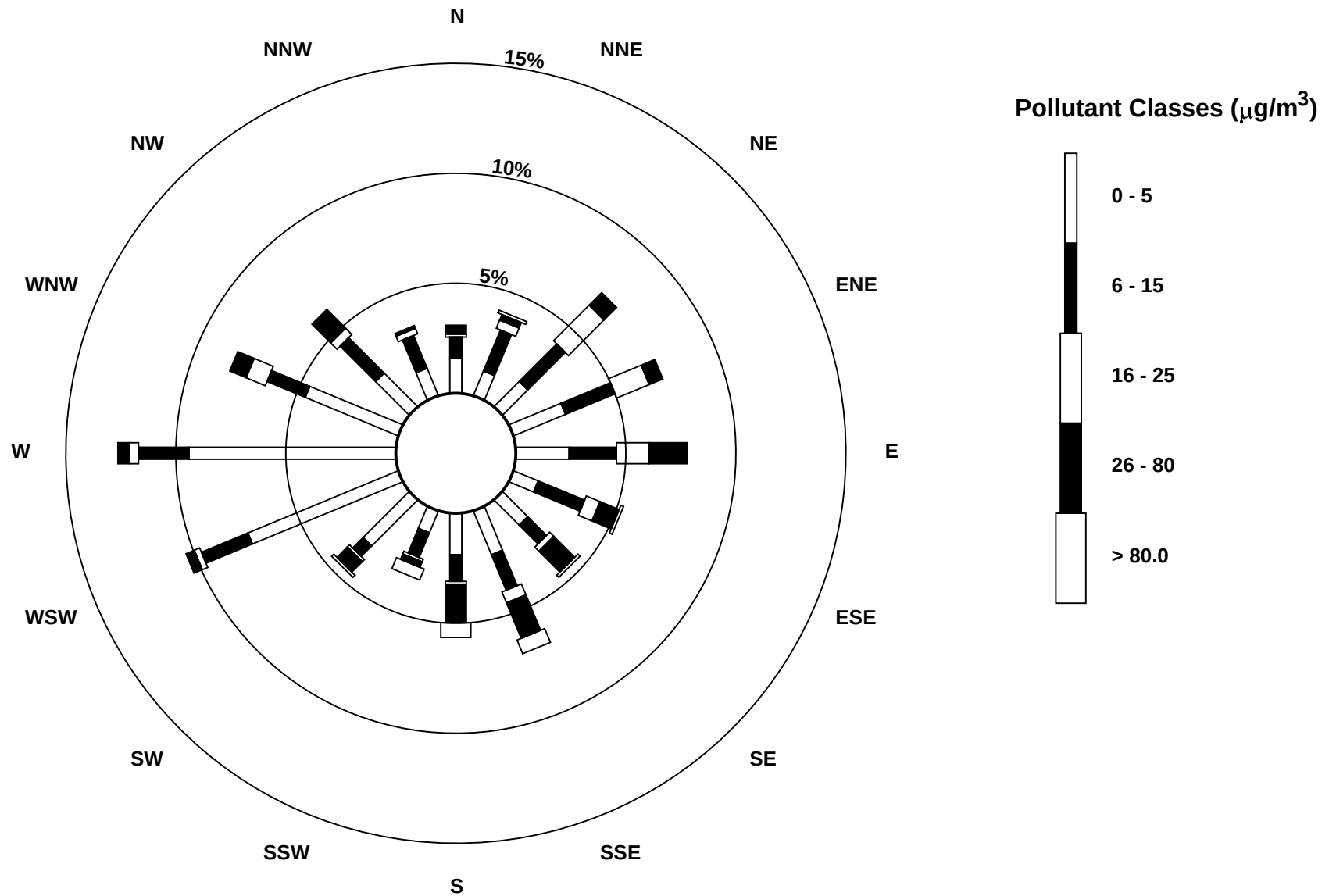
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$

Beaverlodge - July 2014



Pollutant Rose

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Beaverlodge - July 2014

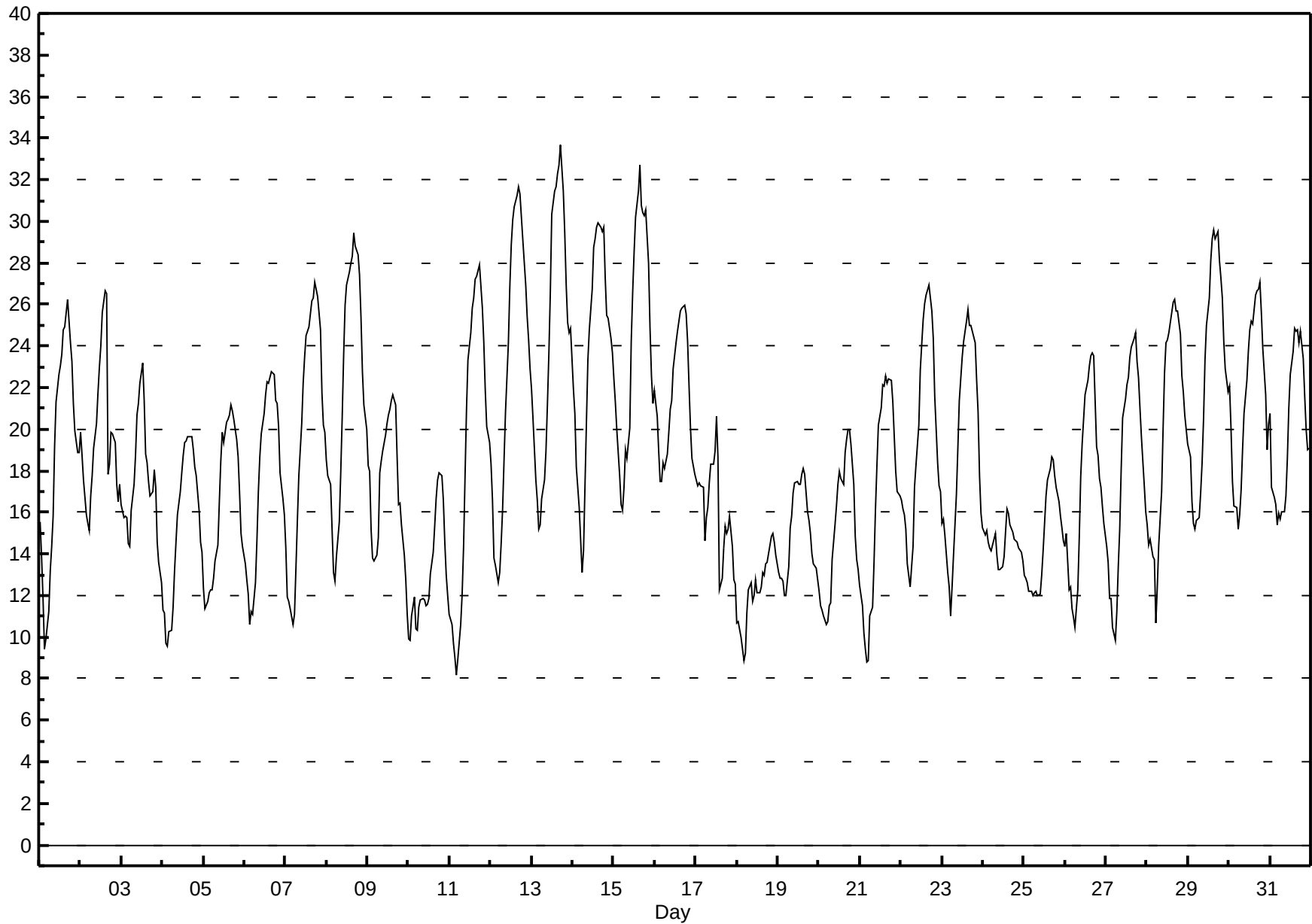




Hourly Averages

External Temperature (ET) - °C

Beaverlodge - July 2014



Hourly Averages

Relative Humidity (RH) - %

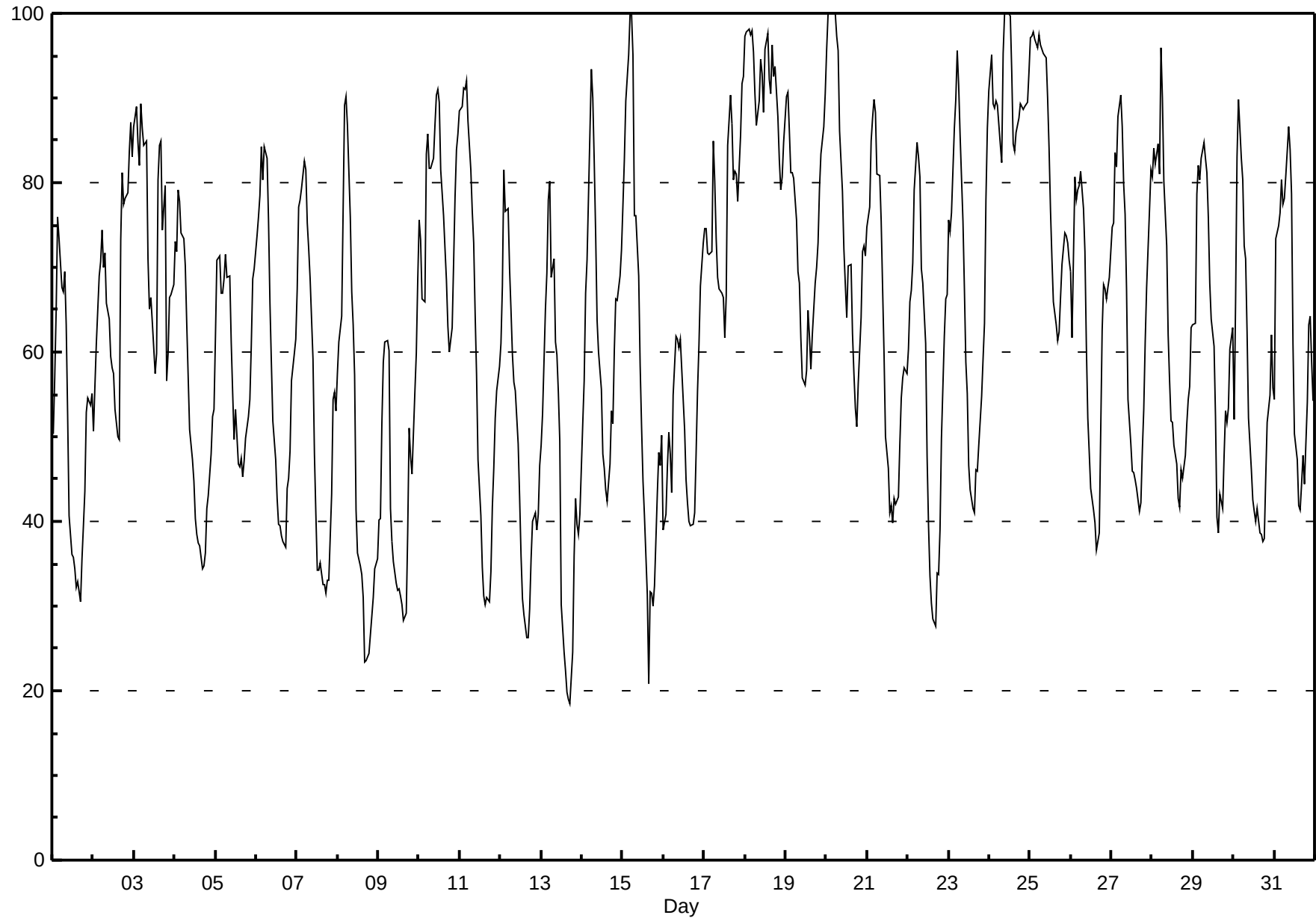
Beaverlodge - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100.0 % on Jul 15 05:00 Maximum Daily Average: 91.7 % on Jul 18																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 18 % on Jul 13 18:00 Maximum Diurnal Average: 82.9 % at hour 6 Monthly Average: 63.48 %												Minimum Daily Average: 44.6 % on Jul 9 Minimum Diurnal Average: 46.2 % at hour 16 Percentiles: P ₁ = 24.5 P ₁₀ = 37.5 Q ₁ = 47.2 Median = 63.8 Q ₃ = 80.2 P ₉₀ = 89.5 P ₉₉ = 100.0														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	50	57	65	76	73	68	67	69	63	53	41	36	36	34	32	33	31	36	39	43	53	55	54	55	50.8	75.9
2-Jul	51	56	61	69	71	74	70	72	66	64	59	58	58	53	50	50	73	81	77	78	79	84	87	83	67.7	87.1
3-Jul	87	89	85	82	89	86	84	85	71	65	66	64	57	60	80	84	85	74	80	57	60	66	67	68	74.7	89.3
4-Jul	73	72	79	78	74	73	70	63	57	51	47	45	40	38	37	37	34	35	36	42	43	48	52	53	53.3	79.1
5-Jul	62	71	71	67	67	69	71	69	69	61	55	50	53	47	47	48	45	47	50	52	54	61	69	70	59.3	71.5
6-Jul	74	76	79	84	80	84	83	76	66	59	52	47	43	40	39	38	38	37	44	45	48	57	60	61	58.7	84.3
7-Jul	68	77	78	79	83	82	75	72	69	59	48	41	34	34	35	33	33	32	33	33	43	54	55	53	54.3	82.6
8-Jul	58	61	64	77	89	90	87	76	67	63	57	41	36	35	34	31	23	24	24	27	29	31	34	36	49.8	90.2
9-Jul	40	40	51	59	61	61	60	41	38	35	33	32	32	31	30	28	29	39	51	48	46	55	60	68	44.6	68.4
10-Jul	76	73	66	66	83	86	82	82	83	87	90	91	90	82	76	72	68	63	60	63	70	78	84	86	77.4	91.1
11-Jul	88	89	91	91	92	87	82	77	73	65	57	47	41	34	31	30	31	31	34	42	46	52	55	58	59.4	92.0
12-Jul	61	68	81	77	77	70	65	60	56	55	49	43	36	31	29	26	26	30	36	40	41	39	41	47	49.3	81.5
13-Jul	49	53	65	69	78	80	69	71	61	60	55	50	30	25	22	20	19	18	25	36	43	40	39	41	46.5	80.2
14-Jul	51	57	67	71	78	93	90	83	74	64	60	56	48	46	44	42	47	53	52	60	66	66	69	72	62.9	93.3
15-Jul	77	83	90	95	100	100	95	76	76	69	58	51	45	41	31	21	32	31	30	32	43	48	47	50	59.3	100.0
16-Jul	39	41	46	51	48	43	55	62	61	61	61	58	51	45	42	40	39	40	41	48	55	61	68	73	51.2	72.9
17-Jul	75	75	72	72	72	85	80	73	69	68	67	66	62	67	84	90	87	80	81	81	78	86	92	92	77.2	92.5
18-Jul	97	98	98	97	98	95	90	87	90	95	93	88	96	98	92	90	96	93	94	88	83	79	81	85	91.7	98.2
19-Jul	90	91	86	81	81	81	76	69	68	62	57	56	58	65	62	58	62	68	70	73	79	83	87	90	73.1	90.7
20-Jul	96	100	100	100	100	100	97	96	86	79	72	68	64	70	70	62	57	53	51	56	64	72	73	71	77.5	100.0
21-Jul	75	77	85	88	90	88	81	81	75	67	60	50	46	41	42	40	43	42	43	49	55	57	58	57	62.1	89.8
22-Jul	60	66	67	70	79	85	83	81	70	68	61	48	40	34	30	28	28	34	34	39	50	62	66	67	56.2	84.8
23-Jul	76	74	76	86	90	96	92	86	75	67	59	55	47	44	42	41	46	46	49	55	59	63	78	87	66.2	95.6
24-Jul	91	95	89	89	90	89	85	82	95	100	100	100	100	93	85	84	86	88	89	89	89	89	89	93	90.8	100.0
25-Jul	97	97	98	97	96	97	96	96	95	95	90	84	77	71	66	63	61	62	66	70	74	74	73	71	82.0	97.7
26-Jul	70	62	81	78	79	80	81	77	72	61	52	48	44	41	40	37	38	39	63	68	68	66	68	69	61.6	81.3
27-Jul	75	75	84	82	88	90	87	80	76	68	54	49	46	46	45	44	41	42	48	53	61	68	77	82	65.0	90.3
28-Jul	81	84	82	85	81	96	90	80	73	62	57	52	52	49	47	43	42	46	45	48	52	54	56	63	63.2	95.9
29-Jul	63	63	79	82	80	83	85	83	81	76	68	64	61	52	41	39	43	42	48	53	52	53	60	63	63.1	84.8
30-Jul	52	66	83	90	83	80	72	71	62	52	46	42	41	40	41	39	38	38	38	45	52	55	62	56	56.1	89.8
31-Jul	54	73	75	76	80	78	78	81	87	84	79	61	50	47	42	41	44	48	44	54	63	64	59	54	63.3	86.6
69.5 72.9 77.3 79.5 81.6 82.9 79.9 76.0 71.8 66.8 61.5 56.2 52.0 49.4 48.0 46.2 47.3 48.1 50.8 53.8 58.0 62.0 65.1 66.9																								Diurnal Average		
97.2 100.0 100.0 100.0 100.0 100.0 97.3 95.7 95.3 100.0 100.0 100.0 99.6 97.6 92.2 90.4 96.3 92.6 93.7 89.0 88.7 88.9 91.7 93.0																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %

Beaverlodge - July 2014



Hourly Averages

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

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	9	5	3	3	2	2	2	4	5	4	4	6	10	10	2	4	2	10	14	13	11	12	14	13	3.2	14.2
Dir	285	282	126	110	76	15	58	213	166	161	168	130	126	128	185	171	178	50	43	31	25	26	35	58	67	35
2 Spd	19	17	10	7	8	2	2	4	11	13	21	26	22	21	20	10	10	17	15	21	6	9	17	12	8.0	26.2
Dir	76	83	91	108	85	89	166	158	121	120	96	88	99	115	113	117	271	24	23	33	337	347	276	332	79	88
3 Spd	6	8	10	2	4	4	6	9	10	9	16	13	12	10	1	11	6	10	7	20	17	15	12	11	5.9	20.2
Dir	24	239	46	263	35	49	93	238	254	282	304	315	326	352	347	28	291	288	256	259	262	250	268	234	287	259
4 Spd	9	6	2	10	13	12	18	21	20	28	30	32	36	35	35	32	34	29	27	18	15	14	11	7	20.0	36.3
Dir	257	188	136	230	235	238	237	248	240	252	263	262	265	262	256	254	255	247	253	252	250	262	266	289	253	265
5 Spd	0	3	3	4	3	3	2	3	7	12	10	15	12	13	13	14	21	23	22	23	21	11	6	6	8.6	22.7
Dir	177	84	80	158	152	112	118	200	217	228	231	270	305	284	276	262	259	257	250	256	263	276	233	242	256	257
6 Spd	11	10	7	2	1	3	1	5	13	22	27	24	19	23	25	20	18	18	14	13	11	7	6	7	12.0	26.9
Dir	270	266	253	73	147	173	140	234	263	273	271	275	282	272	254	281	288	291	303	291	276	262	278	290	274	271
7 Spd	2	4	3	3	4	5	2	2	3	8	8	9	10	9	6	6	6	3	7	5	4	6	7	5	0.5	9.5
Dir	303	70	83	71	69	58	91	142	199	257	267	249	250	233	305	238	298	275	74	57	66	64	55	67	308	250
8 Spd	5	7	3	3	2	3	1	5	5	5	5	7	11	18	13	17	29	28	25	23	19	15	13	8	7.4	28.8
Dir	102	67	168	156	171	59	60	195	185	168	157	178	164	189	202	247	260	261	261	264	272	281	292	300	244	260
9 Spd	2	2	2	3	3	2	6	29	38	42	42	37	37	33	33	33	30	24	12	18	20	18	20	16	19.7	42.5
Dir	33	355	135	95	160	89	238	254	249	245	257	271	259	260	267	262	252	273	263	289	268	268	248	245	259	245
10 Spd	13	13	15	21	10	8	25	27	27	25	21	18	17	18	16	19	16	14	13	7	4	2	3	4	13.3	26.9
Dir	244	242	256	279	295	279	279	285	281	289	288	288	306	305	314	308	306	301	295	287	231	156	70	71	287	281
11 Spd	4	3	3	4	4	2	3	4	5	6	6	8	8	4	5	4	7	4	9	7	7	5	5	5	2.0	8.9
Dir	104	121	82	119	133	134	162	191	196	212	242	258	254	294	336	268	174	122	126	127	117	76	86	73	156	126
12 Spd	4	4	3	4	4	3	3	4	4	5	4	5	5	8	8	7	7	18	17	12	9	9	7	6	5.3	17.9
Dir	76	94	88	194	148	146	173	164	164	168	156	187	138	93	135	147	113	77	79	84	75	74	79	80	106	77
13 Spd	7	3	1	2	1	3	2	2	4	5	5	6	5	8	9	9	0	3	9	6	6	8	8	7	2.5	9.1
Dir	75	142	83	64	55	48	271	118	196	169	167	164	154	169	171	182	241	129	51	37	42	53	55	57	111	51
14 Spd	2	6	6	4	1	1	4	1	2	2	4	5	6	8	11	11	10	8	11	7	8	9	5	8	3.5	10.8
Dir	113	282	39	32	218	290	39	90	132	182	173	153	187	180	125	114	123	144	107	62	49	48	76	74	106	107
15 Spd	2	3	9	0	2	4	1	2	2	3	3	6	8	10	10	29	17	12	11	6	3	2	7	1	1.4	28.8
Dir	118	324	329	310	301	53	358	213	192	173	179	161	166	160	207	270	325	6	41	87	87	234	247	315	277	270
16 Spd	5	1	2	3	2	6	9	14	16	15	11	9	11	16	17	14	15	11	11	9	7	9	10	11	5.7	17.2
Dir	265	261	72	46	349	323	352	335	305	305	315	336	27	43	47	45	65	74	76	78	65	92	95	97	29	47
17 Spd	13	14	15	16	9	6	10	21	15	10	18	15	8	8	20	16	15	18	12	8	7	3	2	3	5.6	20.8
Dir	93	90	97	94	92	308	21	47	55	71	82	88	105	356	36	293	303	298	291	297	292	45	84	43	43	47
18 Spd	3	5	4	2	3	3	2	4	3	3	1	1	2	6	3	3	11	9	10	9	15	7	9	11	2.3	14.8
Dir	85	53	65	100	79	73	116	164	194	264	273	282	128	85	28	148	145	156	173	221	229	267	238	237	184	229
19 Spd	12	12	14	14	16	13	17	27	29	31	27	26	24	19	21	22	19	15	12	10	9	6	4	4	14.2	31.1
Dir	238	234	246	243	246	250	259	265	267	273	279	277	280	324	320	308	335	335	339	338	313	305	346	346	284	273
20 Spd	6	5	5	4	5	3	4	4	2	5	6	10	6	13	10	5	13	18	15	14	10	9	10	6	7.4	17.9
Dir	279	265	257	244	225	226	218	240	284	264	258	251	237	242	310	246	257	242	245	236	232	245	253	234	249	242
21 Spd	7	5	2	1	3	3	2	3	5	6	7	6	5	7	5	10	9	8	6	7	5	7	9	8	3.1	9.5
Dir	221	213	137	129	58	79	121	161	191	190	214	172	159	188	244	180	179	157	153	133	74	49	46	52	157	180
22 Spd	10	9	8	9	6	4	3	7	5	7	9	11	13	13	12	16	18	19	21	16	4	16	15	15	8.7	21.2
Dir	70	78	82	79	105	154	130	127	112	157	118	101	107	100	102	106	94	105	98	96	321	344	29	24	89	98

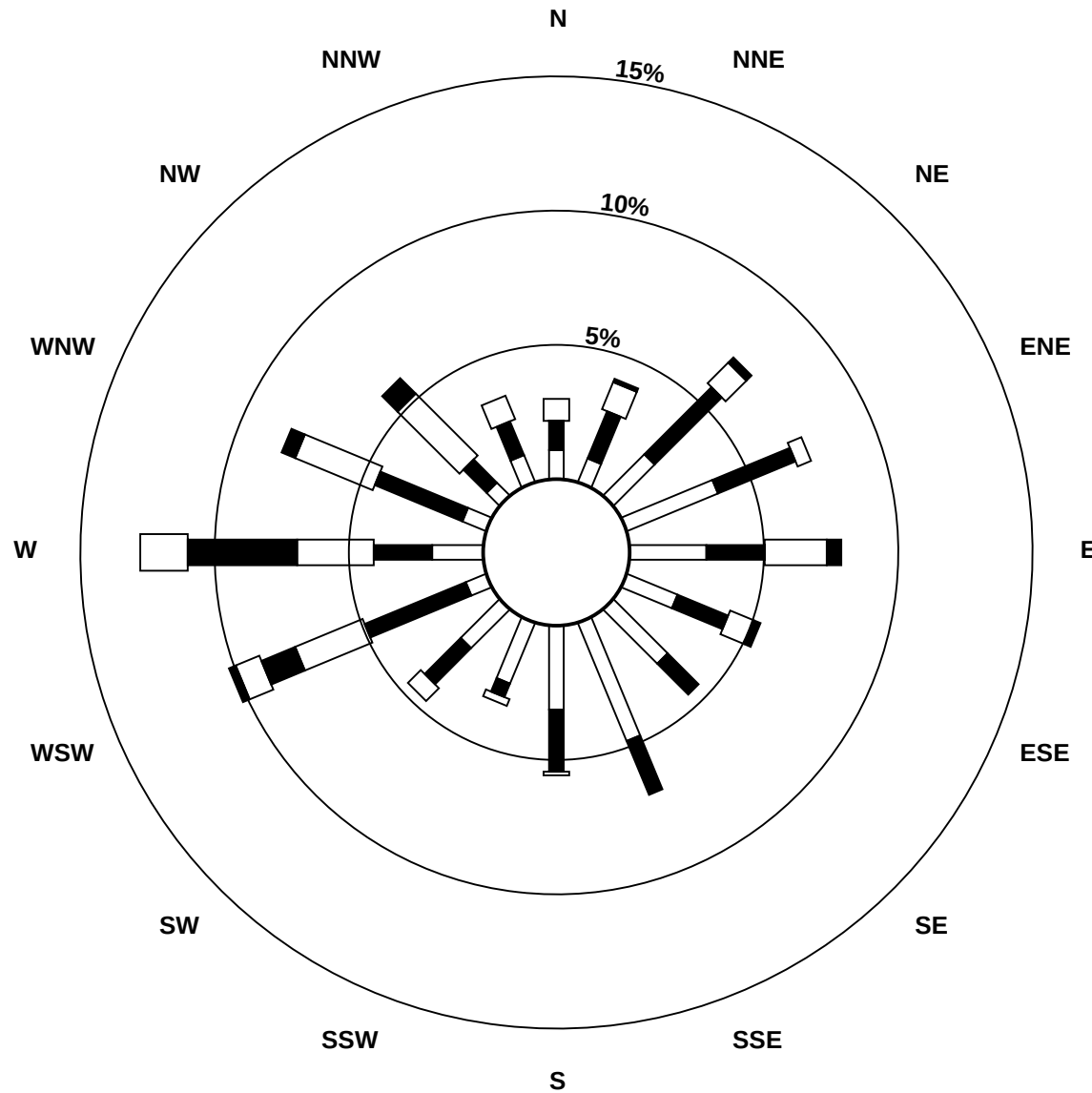
Hourly Averages

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

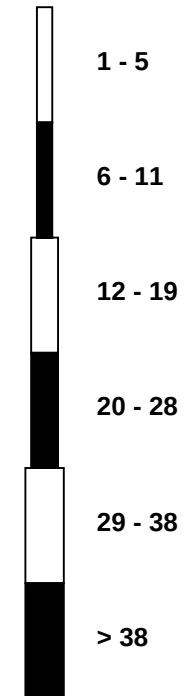
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	16	14	10	13	10	2	6	8	11	10	11	11	13	12	10	10	15	12	8	8	8	12	10	18	7.8	17.5
Dir	326	350	350	315	310	24	306	295	293	300	286	301	307	311	302	40	56	53	51	41	6	1	257	318	332	318
24 Spd	17	8	11	15	16	14	12	5	10	10	10	15	20	23	26	19	21	18	17	19	16	17	17	15	13.5	26.2
Dir	329	271	330	1	13	5	3	10	236	247	289	311	318	313	313	321	312	313	312	310	304	292	293	286	314	313
25 Spd	12	10	15	18	18	22	23	18	22	21	26	24	27	25	23	23	24	21	13	7	6	8	7	1	17.0	26.7
Dir	284	283	280	287	276	271	270	264	264	269	270	271	271	270	275	274	272	269	260	257	238	245	240	251	270	271
26 Spd	2	7	3	5	9	5	3	4	7	14	18	14	18	12	11	10	8	8	14	2	7	5	5	3	6.5	18.4
Dir	42	259	133	176	204	192	180	215	215	264	271	254	271	267	260	258	205	184	202	47	222	231	233	188	238	271
27 Spd	3	2	2	4	3	3	4	3	5	3	3	4	5	6	5	7	7	8	8	8	6	2	2	2	3.2	8.5
Dir	205	221	94	47	66	115	54	143	170	170	265	218	168	171	195	159	164	163	158	131	155	280	147	95	158	158
28 Spd	3	3	1	3	4	2	2	5	2	2	3	4	6	9	10	13	13	16	17	10	6	8	10	10	4.3	16.5
Dir	160	64	247	320	305	159	191	261	231	3	128	124	175	146	115	104	110	96	83	90	57	40	40	62	94	83
29 Spd	6	1	7	4	7	8	1	5	5	5	2	3	3	3	8	9	16	17	13	8	5	5	4	12	4.2	17.4
Dir	72	162	297	44	61	74	290	230	184	174	154	156	173	141	114	122	87	85	82	91	93	44	28	30	88	85
30 Spd	10	8	6	4	16	10	9	8	11	15	13	10	11	10	7	6	5	7	5	8	5	5	4	8	6.3	15.9
Dir	27	334	4	331	323	327	327	296	295	295	294	301	286	276	358	34	10	26	38	68	349	9	25	21	332	323
31 Spd	9	1	2	3	6	8	4	0	4	4	3	4	5	8	6	9	10	10	7	8	9	9	9	9	4.5	10.0
Dir	18	208	203	221	13	336	356	143	213	272	347	345	337	1	41	40	75	54	48	39	30	32	34	33	25	75
Spd	1.4	0.9	0.9	0.7	1.0	1.2	2.4	4.6	6.4	7.8	7.1	6.3	5.8	4.9	4.2	4.9	4.5	2.9	1.1	2.0	3.4	3.5	2.5	2.6	Diurnal Average	
Dir	344	280	3	309	313	311	287	256	248	256	265	267	267	266	280	271	275	295	321	319	288	321	309	356	Diurnal Maximum	
Spd	19.2	17.5	15.4	20.9	18.0	21.7	24.5	29.1	38.5	42.5	41.6	37.5	36.9	35.3	34.5	32.6	34.5	29.3	27.1	23.5	21.1	18.3	20.5	17.5	Diurnal Maximum	
Dir	76	83	97	279	276	271	279	254	249	245	257	271	259	262	256	262	255	247	253	264	263	268	248	318		
Maximum Speed Value: 42 km/h on Jul 9 10:00																								Hours in Service: 744		
Maximum Daily Speed Average: 20.0 km/h on Jul 9																								Hours of Data: 744		
Maximum Diurnal Speed Average: 7.8 km/h at hour 10																								Hours of Missing Data: 0		
Minimum Speed Value: 0 km/h on Jul 5 01:00																								Percent Operational Time: 100.0		
Minimum Daily Speed Average: 0.5 km/h on Jul 27																										
Minimum Diurnal Speed Average: 0.7 km/h at hour 4																										
Monthly Average Velocity: 3.09 km/h 278.4 deg																										
Speed Percentiles: P ₁ = 1.0 P ₁₀ = 2.4 Q ₁ = 4.2 Median = 8.1 Q ₃ = 13.4 P ₉₀ = 20.5 P ₉₉ = 34.4																										
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	15	14	9	0	0	0	38																			
NorthEast	31	45	20	3	0	0	99																			
East	39	37	25	5	0	0	106																			
SouthEast	43	32	1	2	0	0	78																			
South	48	34	3	0	0	0	85																			
SouthWest	24	36	19	1	1	1	82																			
West	16	48	40	43	20	2	169																			
NorthWest	11	29	40	7	0	0	87																			
Total	227	275	157	61	21	3	744																			

Wind Rose

Wind Speed (WS) (km/h)
Beaverlodge - July 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - July 2014

Maximum Speed: 43 km/h on Jul 9 10:00																				Maximum Daily Speed Average: 21.6 km/h on Jul 9										Hours in Service: 744	
Minimum Speed: 1 km/h on Jul 13 05:00																				Minimum Daily Speed Average: 5.5 km/h on Jul 27										Hours of Data: 744	
Maximum Diurnal Speed Average: 15.6 km/h at hour 17																				Minimum Diurnal Speed Average: 6.4 km/h at hour 6										Hours of Missing Data: 0	
Monthly Average Speed: 10.65 km/h																				Percentiles: P ₁ = 2.2 P ₁₀ = 3.5 Q ₁ = 5.1 Median = 8.7 Q ₃ = 13.9 P ₉₀ = 20.6 P ₉₉ = 34.8										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-Jul	9	7	3	3	2	4	3	5	6	4	4	7	10	12	6	6	4	11	14	13	11	12	14	14	7.7	14.2					
2-Jul	19	18	10	7	8	5	3	5	11	14	22	26	22	22	20	17	19	17	16	22	7	10	18	12	14.6	26.4					
3-Jul	13	12	10	8	5	5	6	10	10	10	16	14	13	10	7	11	13	13	8	20	17	15	12	12	11.2	20.4					
4-Jul	9	8	5	10	13	13	18	21	20	29	31	33	37	36	35	32	35	30	27	18	15	14	11	8	21.1	36.6					
5-Jul	4	4	4	4	4	3	2	4	7	12	11	18	13	14	13	14	21	23	22	23	21	11	8	7	11.1	22.9					
6-Jul	12	10	8	4	5	4	2	6	13	22	27	24	20	24	25	21	19	19	15	13	11	7	6	7	13.4	27.3					
7-Jul	4	4	3	3	4	5	3	2	4	8	9	11	10	10	7	8	7	5	8	6	5	6	7	6	6.1	10.8					
8-Jul	5	7	3	3	3	4	5	5	5	5	5	8	11	18	14	18	29	29	25	24	19	15	13	8	11.8	29.1					
9-Jul	3	2	2	3	3	3	7	29	39	43	42	38	37	34	34	33	30	25	14	20	22	19	21	16	21.6	42.7					
10-Jul	13	13	15	21	10	8	25	27	27	25	21	18	18	18	16	19	16	14	13	8	4	3	4	4	14.9	27.0					
11-Jul	4	3	4	4	5	4	3	5	5	6	7	9	9	7	8	7	7	6	9	7	7	5	5	5	5.8	9.4					
12-Jul	4	4	4	5	4	3	3	4	4	5	4	6	7	10	10	8	10	18	17	12	9	9	7	6	7.3	18.0					
13-Jul	7	3	3	3	1	3	2	3	4	5	6	6	5	9	9	10	9	8	10	6	6	8	8	7	5.9	9.6					
14-Jul	4	6	6	5	2	4	4	3	2	3	4	5	7	9	12	12	11	8	11	7	8	9	5	8	6.4	12.2					
15-Jul	5	5	9	3	4	4	2	3	2	3	3	6	8	11	15	30	19	13	11	6	4	3	8	5	7.6	29.5					
16-Jul	5	5	3	4	4	7	10	14	16	15	12	10	13	17	18	14	16	11	11	9	7	9	10	11	10.4	18.0					
17-Jul	13	14	15	16	10	9	12	21	15	10	18	16	9	13	20	17	16	18	13	8	7	3	3	4	12.5	20.9					
18-Jul	3	5	4	4	4	5	2	4	6	3	2	3	3	6	4	4	11	10	10	10	15	8	9	11	6.0	15.5					
19-Jul	12	12	14	14	16	13	17	27	29	31	28	26	25	19	22	22	20	16	12	11	9	6	4	5	17.1	31.3					
20-Jul	6	6	5	4	5	3	4	4	3	6	7	11	8	14	10	9	15	18	15	14	10	9	10	7	8.4	18.3					
21-Jul	7	5	3	2	3	3	2	3	6	7	8	7	7	9	8	10	10	8	7	7	6	7	9	8	6.3	10.4					
22-Jul	10	9	8	9	7	6	4	7	6	8	9	12	14	13	13	16	19	19	21	16	15	17	15	15	12.0	21.3					
23-Jul	16	15	12	13	10	5	7	8	11	11	11	12	14	13	12	13	16	12	8	8	8	12	13	18	11.6	17.9					
24-Jul	17	10	11	16	16	14	12	13	12	11	10	15	20	23	26	19	21	18	17	19	16	17	17	16	16.0	26.4					
25-Jul	12	10	15	19	18	22	23	18	22	21	26	24	27	25	24	23	24	21	13	7	6	8	7	2	17.4	26.8					
26-Jul	4	8	3	5	9	5	3	4	7	15	19	14	19	13	12	11	9	9	15	5	8	6	6	3	8.7	18.8					
27-Jul	5	4	3	4	3	4	5	4	5	5	4	6	7	7	7	8	8	8	9	8	7	4	5	3	5.5	8.6					
28-Jul	4	4	2	4	5	3	3	5	3	3	4	4	7	9	11	13	14	17	17	10	6	8	10	10	7.3	16.6					
29-Jul	6	3	7	4	7	8	5	5	5	5	3	4	4	7	9	11	17	18	13	8	5	5	4	12	7.3	17.7					
30-Jul	10	9	8	8	16	10	9	8	11	16	13	10	12	12	7	8	8	8	5	8	5	6	5	8	9.2	16.2					
31-Jul	9	7	4	3	7	9	8	7	5	5	5	5	6	9	8	10	11	10	8	8	9	9	9	9	7.6	10.8					
																									Diurnal Average						
																									Diurnal Maximum						

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

Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - July 2014

Maximum Value: 94.9 deg on Jul 8 07:00																		Hours in Service: 744							
Minimum Value: 2.4 deg on Jul 10 01:00																		Hours of Data: 744							
																		Hours of Missing Data: 0							
Percentiles: P ₁ = 3.3 P ₁₀ = 5.7 Q ₁ = 9.2 Median = 18.1 Q ₃ = 35.0 P ₉₀ = 61.1 P ₉₉ = 90.8																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Jul	5	67	27	30	43	64	61	39	19	29	36	33	27	32	87	61	71	33	9	5	5	3	4	16	87.2
2-Jul	4	6	16	27	8	89	56	28	17	15	12	7	8	17	12	64	74	9	12	14	27	31	21	24	89.3
3-Jul	72	69	9	84	48	57	20	24	15	29	14	16	17	16	92	16	70	39	40	8	5	6	19	21	92.4
4-Jul	17	40	73	4	7	14	7	9	11	10	7	7	8	9	9	8	9	8	6	7	5	18	22	28	72.9
5-Jul	81	46	39	30	50	31	47	17	9	10	19	40	19	18	17	16	7	8	7	5	3	11	43	16	81.3
6-Jul	8	13	31	75	75	52	53	14	16	10	10	12	14	19	7	19	19	12	10	9	7	9	12	9	75.4
7-Jul	63	15	25	14	9	8	30	21	39	24	29	34	29	30	45	47	43	71	39	19	12	6	4	16	71.4
8-Jul	12	6	36	19	57	44	95	24	24	21	28	25	17	14	24	21	8	5	4	4	6	4	5	9	94.9
9-Jul	43	53	59	28	35	35	43	6	6	5	10	12	9	15	12	9	7	19	42	26	26	27	5	3	58.6
10-Jul	2	3	13	8	9	10	6	5	6	5	5	5	11	7	9	9	9	11	8	9	18	38	20	11	38.2
11-Jul	18	31	18	17	29	48	34	18	16	22	28	37	35	62	61	71	22	66	19	7	17	7	18	6	70.9
12-Jul	16	29	35	37	18	25	30	11	14	20	23	35	44	44	39	39	45	8	5	9	9	4	9	10	44.6
13-Jul	13	42	73	53	65	18	36	56	22	11	10	11	20	17	13	20	94	73	19	6	7	8	10	12	94.1
14-Jul	65	29	11	58	76	92	15	70	33	64	20	18	31	18	28	22	16	13	13	16	7	6	19	11	91.6
15-Jul	71	71	24	90	61	11	69	35	31	22	39	16	19	27	45	13	28	18	11	43	46	86	53	75	90.4
16-Jul	15	89	48	47	70	38	14	14	10	12	15	32	34	19	18	14	19	28	15	11	27	7	8	3	89.4
17-Jul	4	4	5	3	23	69	32	6	7	17	9	11	37	54	7	26	9	8	5	9	8	34	53	82	81.6
18-Jul	33	10	30	55	53	54	35	20	69	34	52	92	73	19	33	56	9	13	10	26	20	26	8	5	92.5
19-Jul	9	7	3	5	7	4	5	5	5	7	11	7	14	11	13	13	18	13	12	10	12	17	20	21	20.9
20-Jul	14	8	20	20	13	24	34	18	46	36	37	21	43	21	16	77	32	11	11	4	3	7	5	31	77.0
21-Jul	24	15	47	51	31	27	29	16	18	21	25	33	60	54	71	32	29	18	20	5	31	6	4	5	71.1
22-Jul	9	6	6	6	12	48	37	20	40	34	17	16	15	18	22	13	15	10	6	5	77	23	6	6	76.9
23-Jul	13	22	31	4	8	84	38	15	15	13	20	17	22	25	33	42	15	13	12	19	8	14	72	18	84.1
24-Jul	6	34	11	11	6	9	8	74	43	18	13	5	5	6	9	9	8	7	6	5	10	4	5	8	74.1
25-Jul	6	7	6	6	7	7	5	6	4	4	5	6	5	7	10	12	12	8	4	9	9	4	5	81	80.6
26-Jul	56	47	34	14	5	12	16	10	16	15	12	19	13	28	30	27	42	13	14	88	29	23	26	23	87.9
27-Jul	59	70	54	31	40	52	30	19	18	58	65	48	49	28	48	35	28	14	11	7	14	93	81	66	93.2
28-Jul	40	38	93	40	72	47	68	12	37	83	60	38	30	29	32	21	15	19	7	18	14	9	6	14	92.9
29-Jul	14	69	34	20	18	12	88	15	22	25	66	72	62	78	38	32	12	11	6	12	52	17	34	8	88.1
30-Jul	7	26	52	69	11	8	10	9	11	9	13	21	27	32	30	51	57	33	27	17	29	34	34	12	69.2
31-Jul	10	78	81	41	31	35	61	88	41	45	71	27	40	27	56	51	23	13	38	6	3	5	3	5	88.3
	81.3	89.4	92.9	90.4	76.1	91.6	94.9	88.3	69.0	82.6	71.0	92.5	72.6	77.8	92.4	77.0	94.1	72.7	42.1	87.9	76.9	93.2	80.6	81.6	

PAZA
Valleyview Station
Monthly Summary Tables, Graphs and
Roses

Hourly Averages

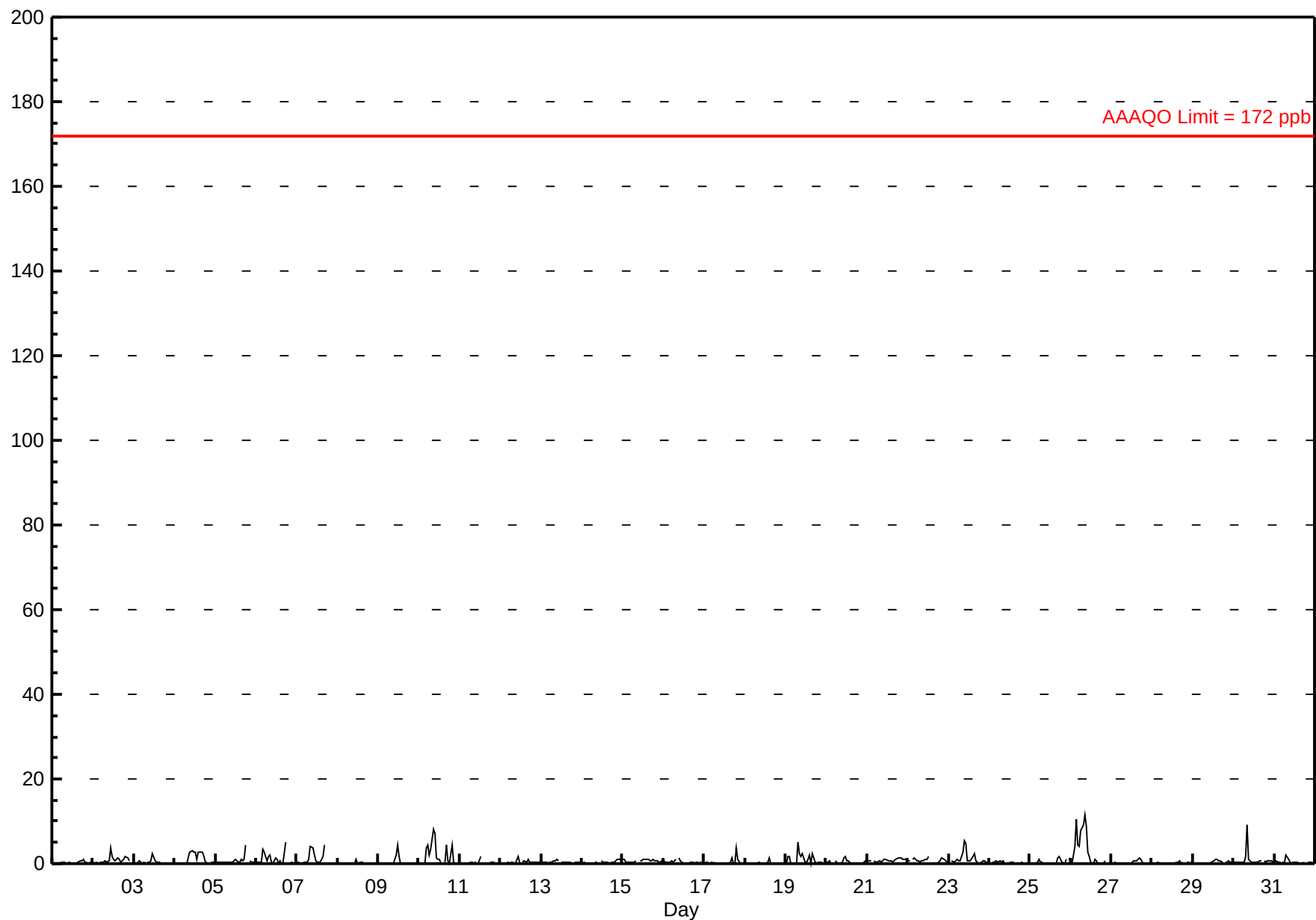
Sulphur Dioxide (SO₂) - ppb

Valleyview - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11.6 ppb on Jul 26 09:00 Maximum Daily Average: 2.9 ppb on Jul 26																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0						
Minimum Value: 0 ppb on Jul 1 04:00 Maximum Diurnal Average: 1.6 ppb at hour 9 Monthly Average: 0.62 ppb										Minimum Daily Average: 0.1 ppb on Jul 18 Minimum Diurnal Average: 0.2 ppb at hour 1 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.3 Q ₃ = 0.6 P ₉₀ = 1.4 P ₉₉ = 7.5																
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-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	A	0.2	0.9
2-Jul	0	0	0	0	0	0	0	1	0	1	4	2	1	1	1	1	0	1	1	2	1	1	A	0	0.9	3.6
3-Jul	0	0	0	1	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	A	0	0	0.3	2.4
4-Jul	0	0	0	0	0	0	0	0	1	3	3	3	3	1	3	3	3	2	0	0	A	0	0	0	1.1	2.9
5-Jul	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	4	A	1	0	0	0	0.7	4.3
6-Jul	0	0	0	0	3	3	1	2	2	0	0	1	1	0	1	0	0	5	A	0	0	0	0	0	0.9	5.1
7-Jul	0	0	0	0	0	0	0	1	4	4	2	1	0	0	0	2	4	A	0	0	0	0	0	0	0.9	4.4
8-Jul	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	1.0
9-Jul	0	0	0	0	0	0	0	0	0	0	2	4	2	0	0	A	0	0	0	0	0	0	0	0	0.4	4.4
10-Jul	0	0	0	0	4	4	2	3	8	7	2	1	1	0	A	0	5	1	0	4	0	0	0	0	1.9	8.3
11-Jul	0	0	0	0	0	0	0	0	0	0	0	0	2	A	0	0	0	0	0	0	0	0	0	0	0.2	1.9
12-Jul	0	0	0	0	0	0	0	0	0	0	2	0	A	0	1	0	1	0	0	0	0	0	0	0	0.3	1.6
13-Jul	0	0	0	0	0	0	0	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.0
14-Jul	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	1	1	1	1	0.4	1.4
15-Jul	1	1	0	0	0	0	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0.6	1.0
16-Jul	1	0	0	0	0	1	0	1	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.2
17-Jul	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	2	0	0	4	1	0	0	0	0.4	3.8
18-Jul	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.1	1.4
19-Jul	0	2	2	0	0	A	0	5	3	2	2	0	0	1	2	0	2	0	0	0	0	0	0	0	1.0	5.1
20-Jul	0	0	1	0	A	1	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	1	0.4	1.9
21-Jul	1	1	1	A	1	0	0	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0.8	1.3
22-Jul	1	1	A	1	1	1	1	0	1	1	1	1	2	C	C	C	C	0	0	1	2	1	1	0	0.8	1.6
23-Jul	0	A	1	0	1	1	1	1	3	5	5	1	1	1	2	2	1	0	0	0	1	1	0	0	1.1	5.3
24-Jul	A	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.8
25-Jul	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	1	A	1	0.4	1.8
26-Jul	0	0	4	11	4	4	8	9	12	9	3	2	0	0	1	1	0	0	0	0	1	A	0	0	2.9	11.6
27-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	A	0	0	0	0.2	1.2
28-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	0.1	0.6
29-Jul	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	A	0	0	1	0	0	0.3	0.9
30-Jul	0	0	0	0	0	0	0	2	9	1	0	0	0	0	0	1	1	A	1	0	1	1	1	0	0.9	9.2
31-Jul	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	2.2
																									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
Valleyview - July 2014



Hourly Maximums

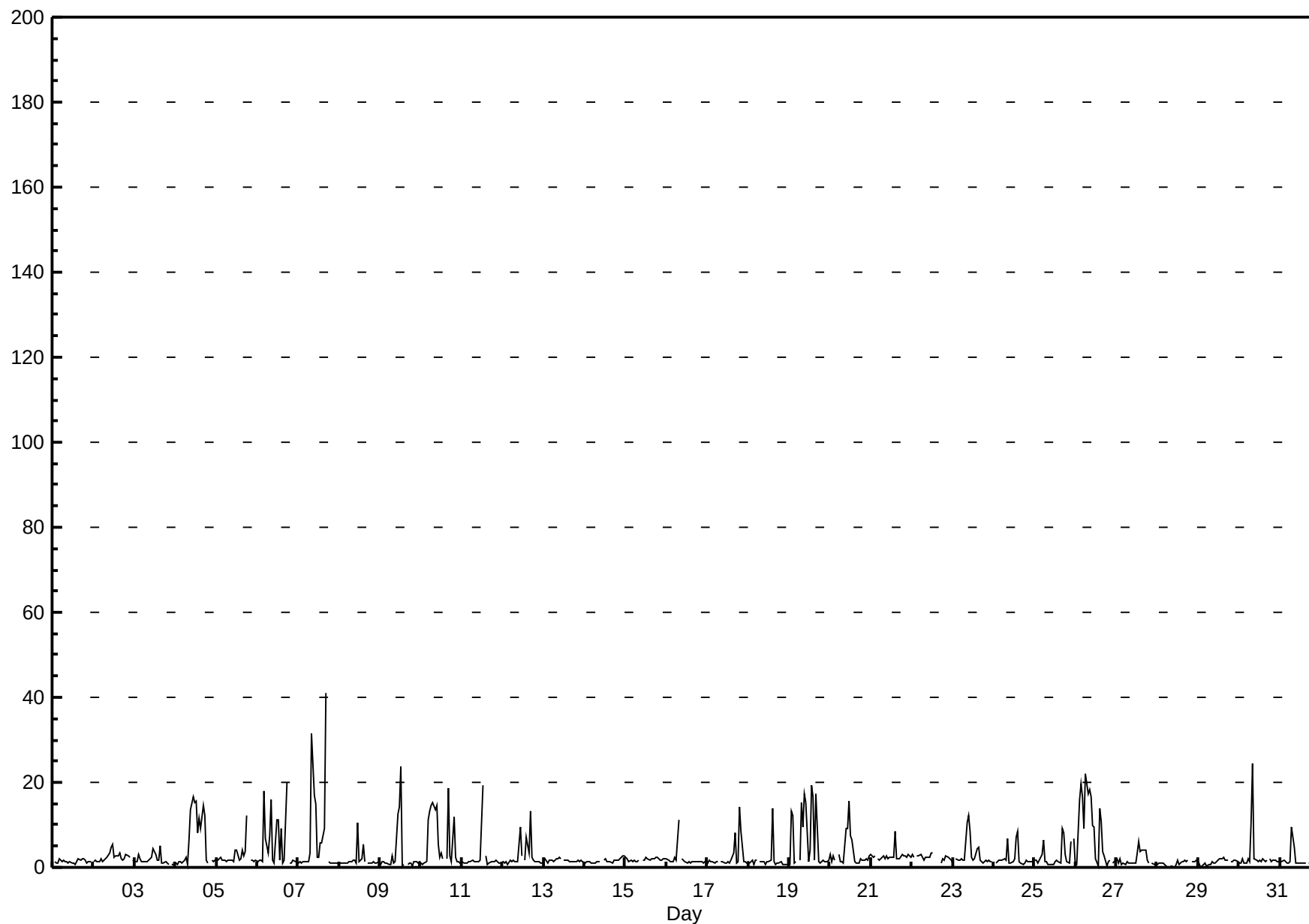
Sulphur Dioxide (SO₂) - ppb

Valleyview - July 2014

Maximum Value: 41.2 ppb on Jul 7 17:00																				Maximum Daily Average: 8.5 ppb on Jul 26										Hours in Service: 744									
Minimum Value: 0 ppb on Jul 28 07:00																				Minimum Daily Average: 0.9 ppb on Jul 28										Hours of Data: 707									
Maximum Diurnal Average: 5.7 ppb at hour 9																				Minimum Diurnal Average: 1.4 ppb at hour 23										Hours of Missing Data: 37									
Monthly Average: 3.03 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 1.0 Q ₁ = 1.2 Median = 1.5 Q ₃ = 2.3 P ₉₀ = 8.5 P ₉₉ = 19.7										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-Jul	A	1	1	1	2	1	2	1	1	1	1	1	1	1	1	2	2	2	2	2	1	2	1	A	1.4	2.2													
2-Jul	1	2	1	1	2	2	2	2	2	3	5	5	3	3	3	3	2	2	2	3	3	2	A	2	2.4	5.5													
3-Jul	1	1	3	2	1	1	1	1	2	2	2	4	3	2	2	5	1	1	1	1	1	A	1	1	1.8	4.9													
4-Jul	1	1	1	1	1	2	2	1	6	14	17	15	15	8	11	9	15	12	2	1	A	2	1	2	6.1	16.7													
5-Jul	2	2	2	2	2	2	1	2	2	2	1	4	4	2	2	4	3	4	12	A	2	2	1	2	2.6	12.2													
6-Jul	1	2	2	1	18	7	3	8	16	2	1	11	11	2	9	1	2	20	A	1	1	2	1	1	5.3	20.0													
7-Jul	1	2	1	1	2	2	1	4	32	17	15	2	3	6	6	9	41	A	1	1	1	1	1	1	6.5	41.2													
8-Jul	1	1	1	1	1	1	1	1	2	2	1	11	1	2	6	2	A	1	1	1	1	1	1	1	1.8	10.5													
9-Jul	1	1	1	1	1	1	1	3	1	1	13	14	24	0	1	A	1	1	1	0	1	1	1	1	3.1	23.7													
10-Jul	1	1	1	1	11	13	14	15	13	14	5	2	3	2	A	2	19	3	1	12	2	1	1	1	6.2	18.8													
11-Jul	1	1	1	1	1	1	2	1	1	1	1	2	19	A	3	1	1	1	1	1	2	2	1	1	2.1	19.2													
12-Jul	1	1	1	1	2	1	2	1	1	1	10	3	A	2	7	3	13	3	2	1	1	1	1	1	2.6	13.1													
13-Jul	2	2	1	2	2	2	1	2	2	2	2	A	2	2	2	1	1	1	1	1	2	1	2	1	1.6	2.3													
14-Jul	1	1	1	1	1	1	1	1	1	1	A	2	2	1	1	1	1	2	2	2	2	2	3	3	1.5	2.7													
15-Jul	3	2	1	2	1	2	1	1	2	A	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.9	2.5													
16-Jul	2	2	1	1	1	2	2	11	A	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1.9	11.2													
17-Jul	1	2	1	1	1	1	1	A	1	2	1	1	1	1	2	4	8	1	1	14	9	1	1	1	2.5	14.1													
18-Jul	1	1	2	1	2	2	A	1	1	1	1	1	1	2	14	1	1	1	1	2	1	1	1	1	1.7	13.8													
19-Jul	1	13	12	1	1	A	2	15	9	17	15	2	4	19	17	2	17	1	1	1	2	1	1	2	6.9	19.4													
20-Jul	3	1	3	2	A	3	1	1	1	9	9	15	8	7	1	1	1	1	2	2	2	2	2	3	3.5	15.5													
21-Jul	3	2	3	A	2	2	2	3	2	3	2	2	2	2	9	2	2	2	3	3	3	2	3	2	2.6	8.6													
22-Jul	3	2	A	3	3	3	2	2	2	2	2	3	3	C	C	C	C	1	2	2	3	2	2	2	2.4	3.4													
23-Jul	1	A	2	2	2	2	2	2	11	12	8	2	2	2	4	5	2	1	1	2	1	2	1	1	3.0	12.2													
24-Jul	A	1	1	2	2	2	2	2	7	1	1	1	2	7	9	1	1	1	1	2	1	1	1	A	2.2	8.6													
25-Jul	2	2	1	2	3	6	1	1	1	1	1	1	1	2	1	1	9	8	3	1	1	6	A	7	2.6	9.1													
26-Jul	1	1	16	20	17	9	22	17	18	16	10	10	2	1	14	11	4	3	0	1	2	A	1	1	8.5	22.0													
27-Jul	2	1	2	1	1	1	1	1	1	1	1	1	3	6	4	4	4	4	2	1	A	1	1	1	1.9	6.0													
28-Jul	1	1	1	1	1	0	0	0	0	0	0	1	2	1	2	1	2	1	2	A	1	1	1	2	0.9	1.7													
29-Jul	2	0	0	1	1	0	1	1	1	1	1	1	2	2	2	2	2	2	A	1	1	2	2	1	1.3	2.3													
30-Jul	1	1	2	1	1	2	1	11	24	2	2	1	2	2	2	1	2	A	2	1	2	2	1	1	2.9	24.4													
31-Jul	1	1	2	1	1	1	1	10	5	1	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1.7	9.5													
1.5 1.7 2.4 2.0 2.9 2.5 2.6 4.1 5.7 4.5 4.5 4.1 4.4 3.1 4.7 2.9 5.7 2.9 1.9 2.3 1.8 1.7 1.4 1.6																									Diurnal Average														
3.1 13.3 16.1 19.8 18.1 13.1 22.0 17.4 31.5 17.3 16.7 15.5 23.7 19.4 16.7 10.7 41.2 20.0 12.2 14.1 8.5 6.0 2.9 6.8																									Diurnal Maximum														
C - Calibration																									A - Automated Daily Zero Span														

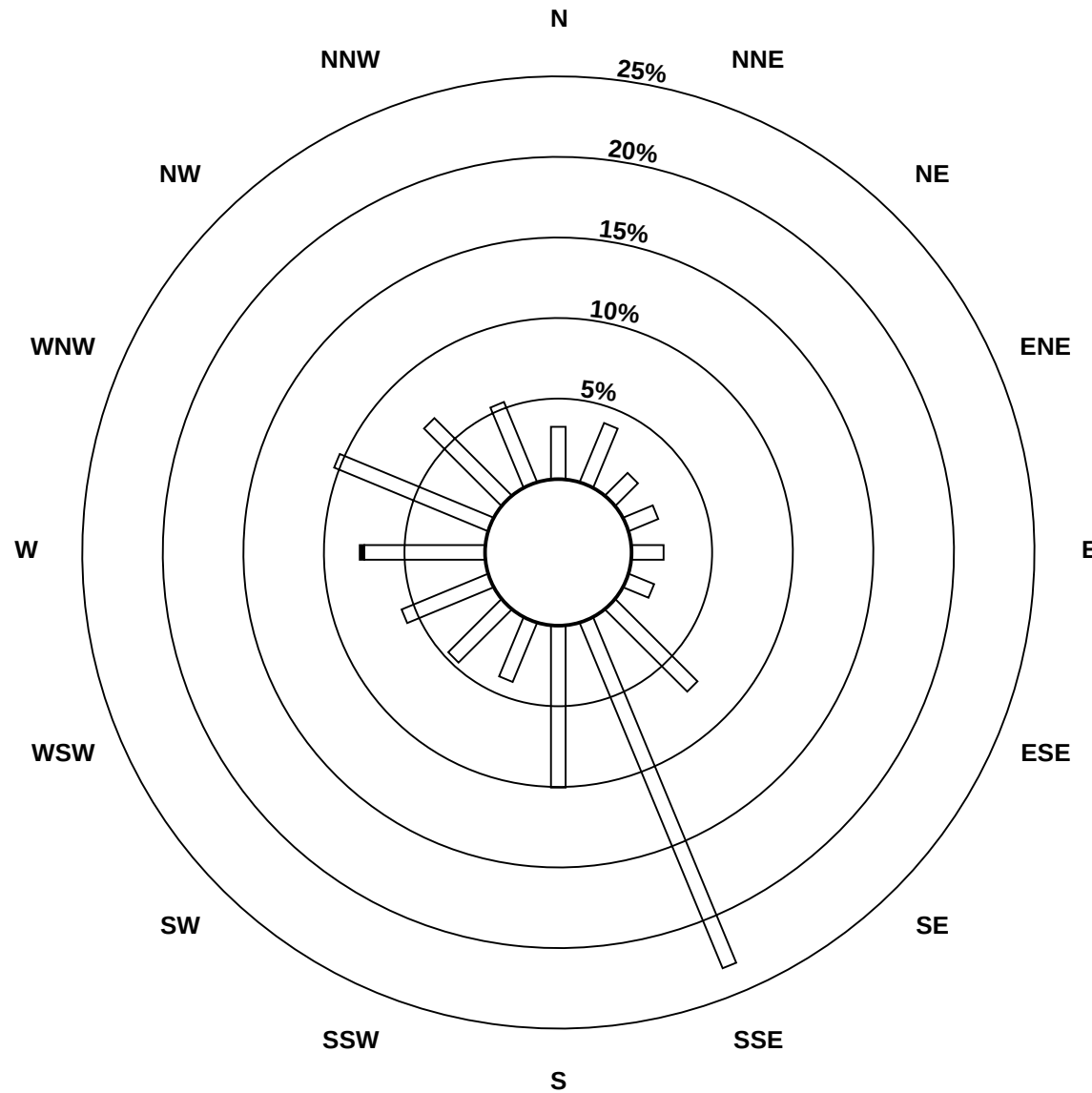
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Valleyview - July 2014

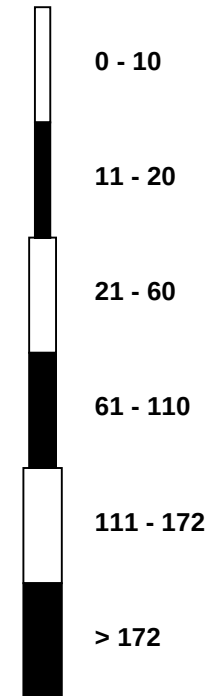


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Valleyview - July 2014

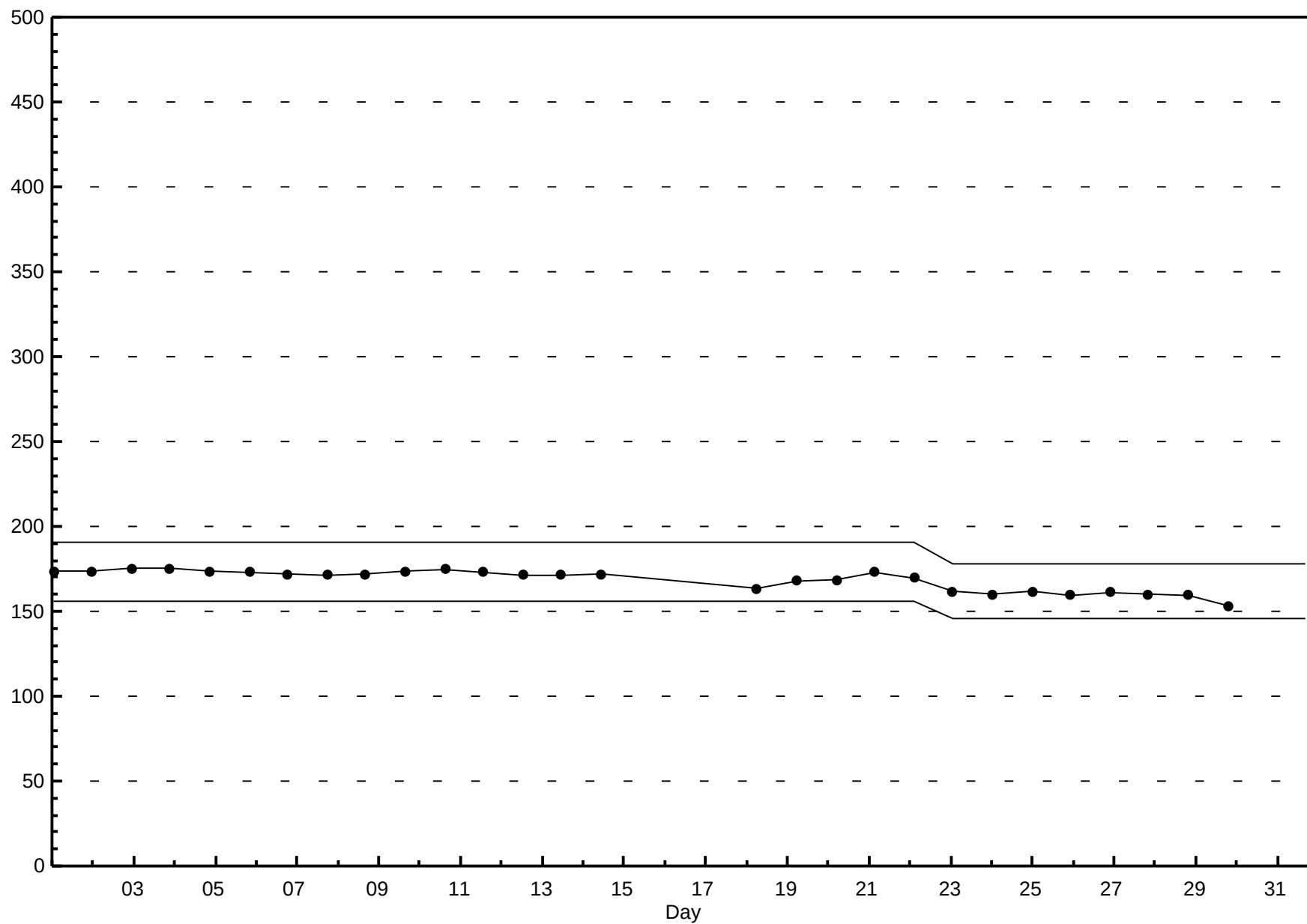


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Valleyview - July 2014



Hourly Averages

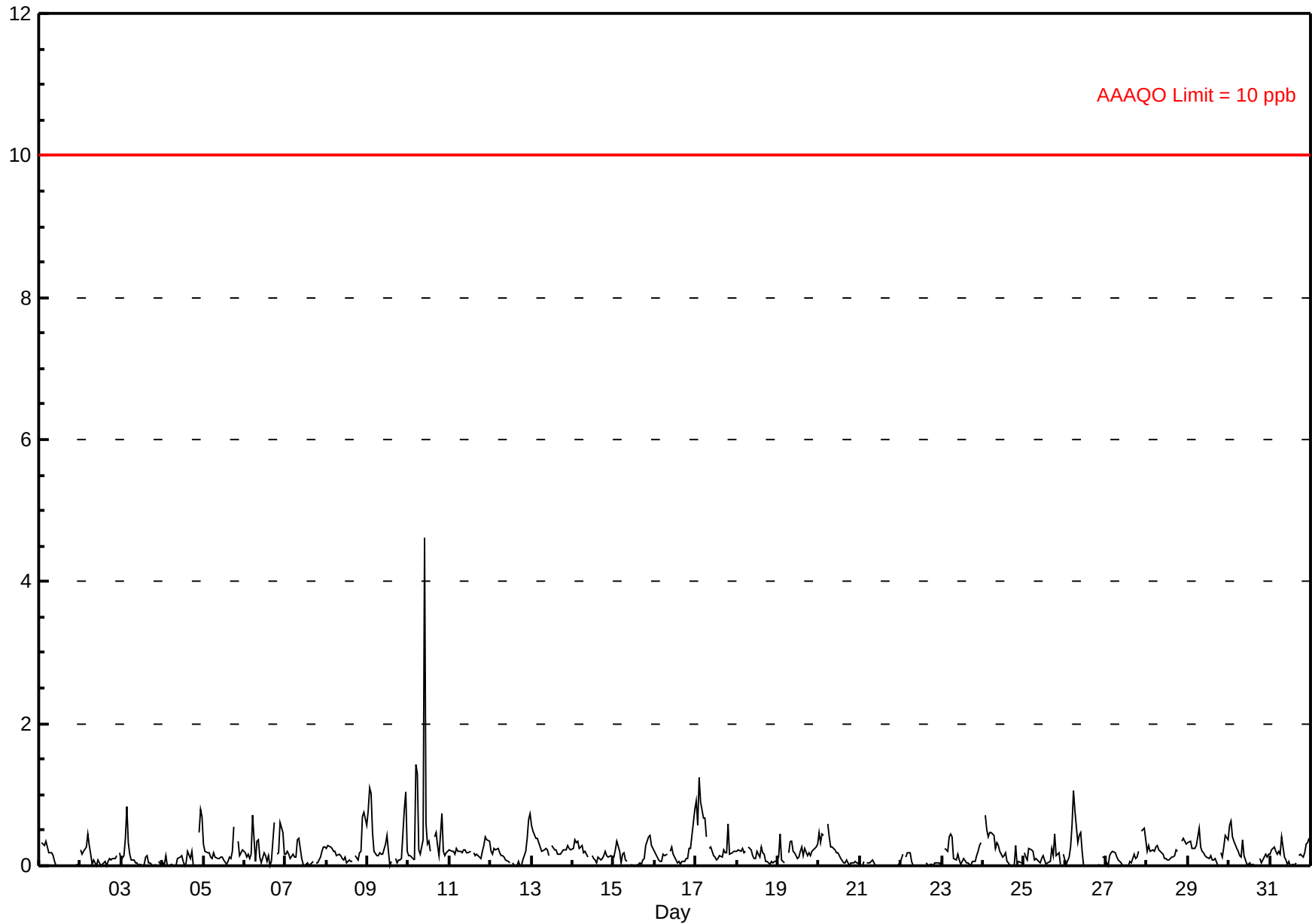
Hydrogen Sulphide (H₂S) - ppb

Valleyview - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 4.6 ppb on Jul 10 10:00																				Maximum Daily Average: 0.6 ppb on Jul 10		Hours of Data: 706				
Minimum Value: 0 ppb on Jul 1 11:00																				Minimum Daily Average: 0.0 ppb on Jul 21		Hours of Missing Data: 38				
Maximum Diurnal Average: 0.3 ppb at hour 6																				Minimum Diurnal Average: 0.1 ppb at hour 14		Hours of Calibration: 38				
Monthly Average: 0.19 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 1.0		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-Jul	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
2-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.4
3-Jul	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.8
4-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0.1	0.8
5-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0.2	0.5
6-Jul	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	1	0	0	0.2	0.7
7-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.4
8-Jul	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	0.7
9-Jul	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0	0.3	1.1
10-Jul	0	0	0	0	1	1	0	0	0	5	1	0	0	0	A	0	0	0	0	1	0	0	0	0	0.6	4.6
11-Jul	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
12-Jul	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1	0.2	0.7
13-Jul	1	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	0.6
14-Jul	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
15-Jul	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
16-Jul	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0.8
17-Jul	1	1	1	1	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.4	1.3
18-Jul	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
19-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
20-Jul	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.6
21-Jul	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
22-Jul	0	0	A	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.1	0.2
23-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
24-Jul	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.7
25-Jul	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
26-Jul	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	1.1
27-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0.1	0.5
28-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.2	0.4
29-Jul	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.5
30-Jul	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6
31-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.4
0.2 0.3 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.3 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.3 0.3 0.3																									Diurnal Average	
0.9 1.1 1.3 0.9 1.4 1.3 0.8 0.4 0.4 4.6 0.6 0.4 0.3 0.2 0.3 0.4 0.5 0.6 0.5 0.7 0.4 0.8 1.0 0.8																									Diurnal Maximum	
C - Calibration A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Valleyview - July 2014



Hourly Maximums

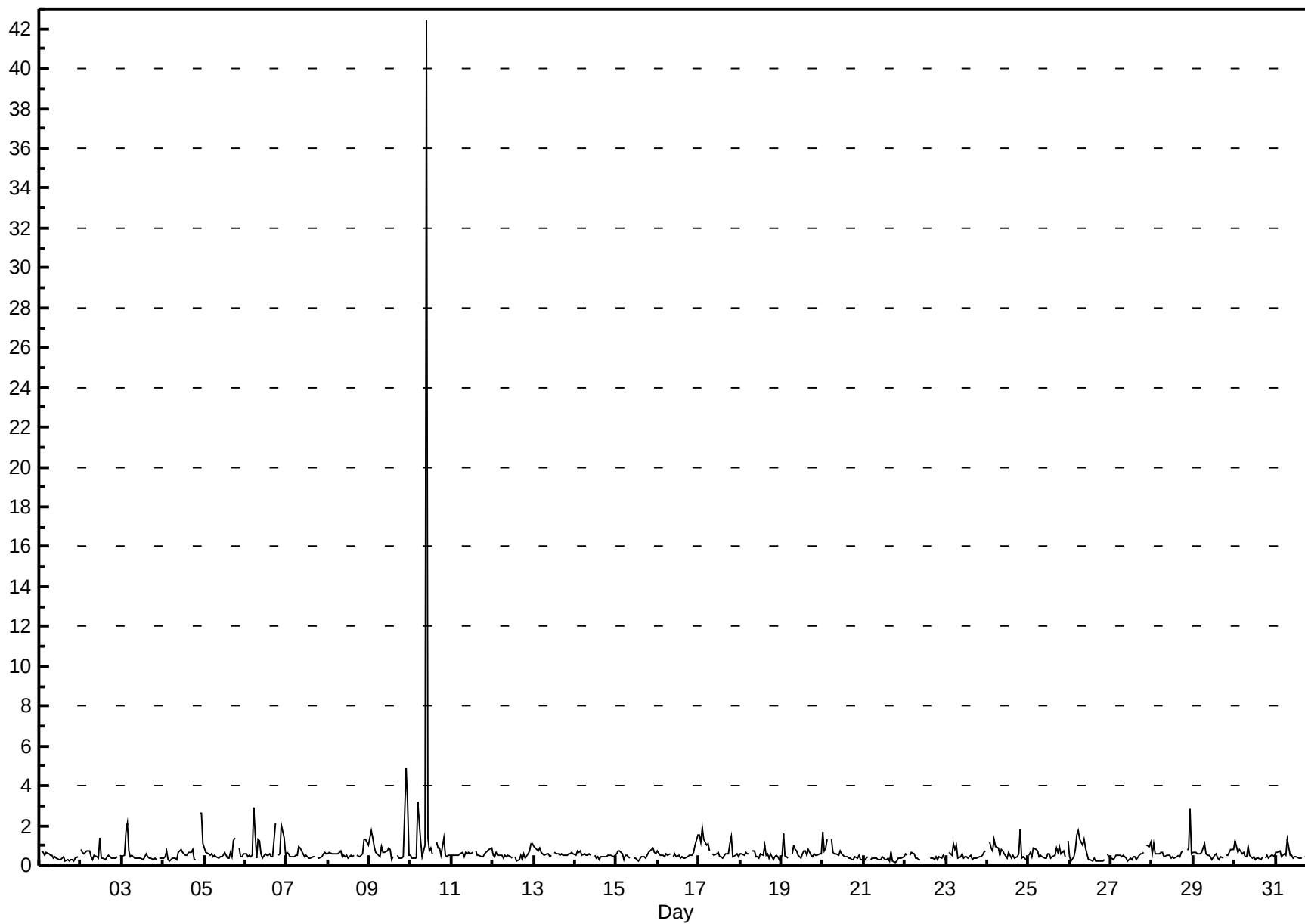
Hydrogen Sulphide (H₂S) - ppb

Valleyview - July 2014

Maximum Value: 42.4 ppb on Jul 10 10:00																				Maximum Daily Average: 2.7 ppb on Jul 10										Hours in Service: 744									
Minimum Value: 0 ppb on Jul 21 19:00																				Minimum Daily Average: 0.3 ppb on Jul 21										Hours of Data: 706									
Maximum Diurnal Average: 1.9 ppb at hour 10																				Minimum Diurnal Average: 0.4 ppb at hour 14										Hours of Missing Data: 38									
Monthly Average: 0.66 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.9 P ₉₉ = 2.5										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-Jul	A	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	0.7													
2-Jul	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	A	1	0.5	1.4													
3-Jul	0	1	2	2	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	A	0	0	0.5	2.1													
4-Jul	0	0	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	A	3	3	1	0.7	2.6													
5-Jul	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	1	0	1	1	A	1	0	0	1	0.6	1.4													
6-Jul	1	0	1	0	1	3	0	1	1	1	0	1	1	0	1	0	0	2	A	1	1	2	1	1	0.8	2.9													
7-Jul	1	1	0	0	0	1	1	1	1	1	0	1	0	0	0	0	0	A	0	0	0	1	1	1	0.5	0.9													
8-Jul	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	A	1	0	0	1	1	1	1	0.6	1.3													
9-Jul	1	2	1	1	1	1	0	1	1	1	1	1	1	0	0	A	1	0	0	0	0	5	3	0	1.0	4.9													
10-Jul	0	0	0	0	3	2	1	0	1	42	1	1	1	1	A	1	1	1	1	1	0	0	1	1	2.7	42.4													
11-Jul	1	0	1	1	1	1	1	0	1	1	1	1	1	A	1	1	1	0	0	1	1	1	1	1	0.6	0.9													
12-Jul	1	0	1	1	1	1	0	1	0	1	0	0	A	0	0	0	0	0	1	0	1	1	1	1	0.5	1.1													
13-Jul	1	1	1	1	1	1	1	1	1	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.0													
14-Jul	1	1	1	1	1	1	1	0	1	1	A	0	0	0	0	0	0	0	0	1	0	1	0	1	0.5	0.7													
15-Jul	1	1	1	1	0	0	1	0	0	A	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0.5	0.9													
16-Jul	1	1	0	1	0	1	1	1	A	0	1	0	1	0	0	0	0	0	0	1	1	1	1	2	0.6	1.5													
17-Jul	2	1	2	1	1	1	1	A	1	1	1	1	0	0	0	1	1	1	1	1	0	1	1	0	0.8	1.9													
18-Jul	1	1	1	1	1	1	A	1	1	0	0	0	1	0	1	1	1	0	1	0	0	0	0	0	0.5	1.0													
19-Jul	1	2	0	0	0	A	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1	1	1	1	0.6	1.6													
20-Jul	2	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0.6	1.7													
21-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0.3	0.7													
22-Jul	1	1	A	0	1	1	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.4	0.6													
23-Jul	0	A	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.5	1.1													
24-Jul	A	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	1	2	0	0	0	A	0.7	1.9													
25-Jul	1	1	0	1	1	1	0	0	0	0	0	1	1	0	0	1	1	1	1	1	1	0	A	1	0.6	1.2													
26-Jul	0	0	0	1	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	A	1	0	0.6	1.7													
27-Jul	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	A	1	1	1	0.5	1.1													
28-Jul	1	1	1	1	1	1	1	0	0	1	1	0	0	0	0	1	0	1	1	A	1	1	3	1	0.7	2.8													
29-Jul	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	0	0	0	A	0	1	1	1	1	0.6	1.1													
30-Jul	1	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	A	0	1	0	0	1	0	0.5	1.2													
31-Jul	1	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	1	0.6	1.3													
																									Diurnal Average	Diurnal Maximum													
																									0.7	1.5													
																									1.7	42.4													
C - Calibration																																							
A - Automated Daily Zero Span																																							

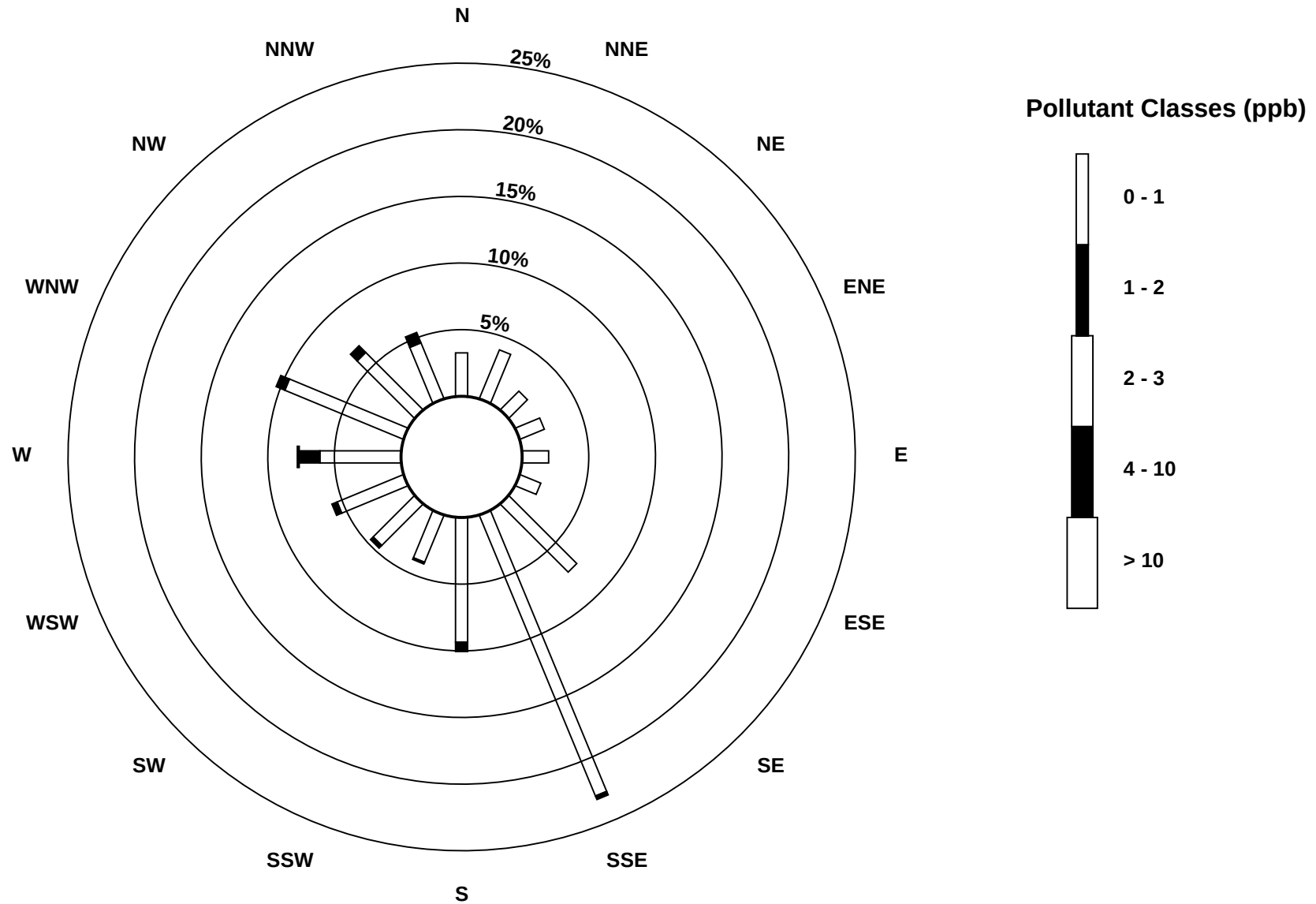
Hourly Maximums

Hydrogen Sulphide (H₂S) - ppb
Valleyview - July 2014



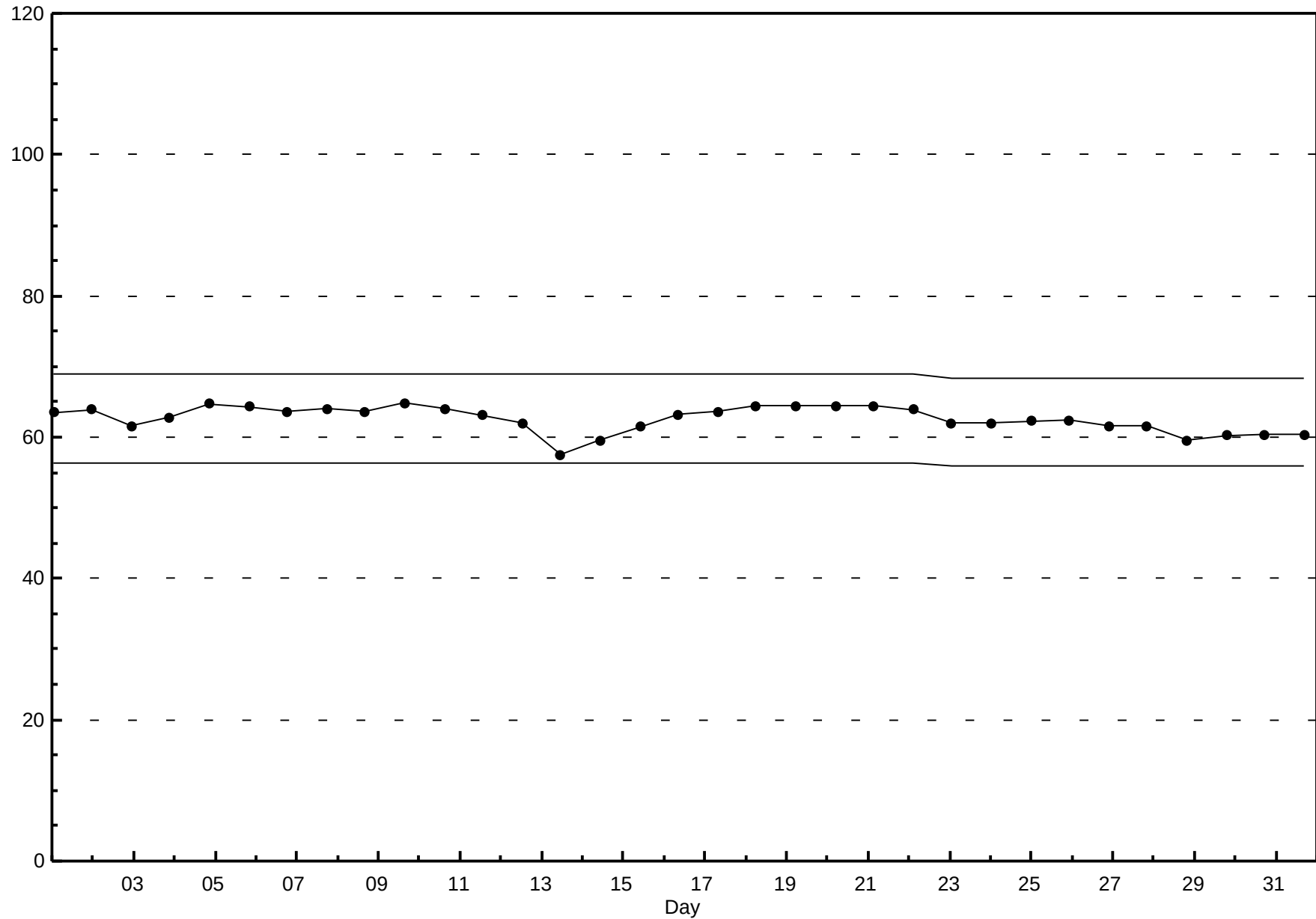
Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb
Valleyview - July 2014



Span Responses

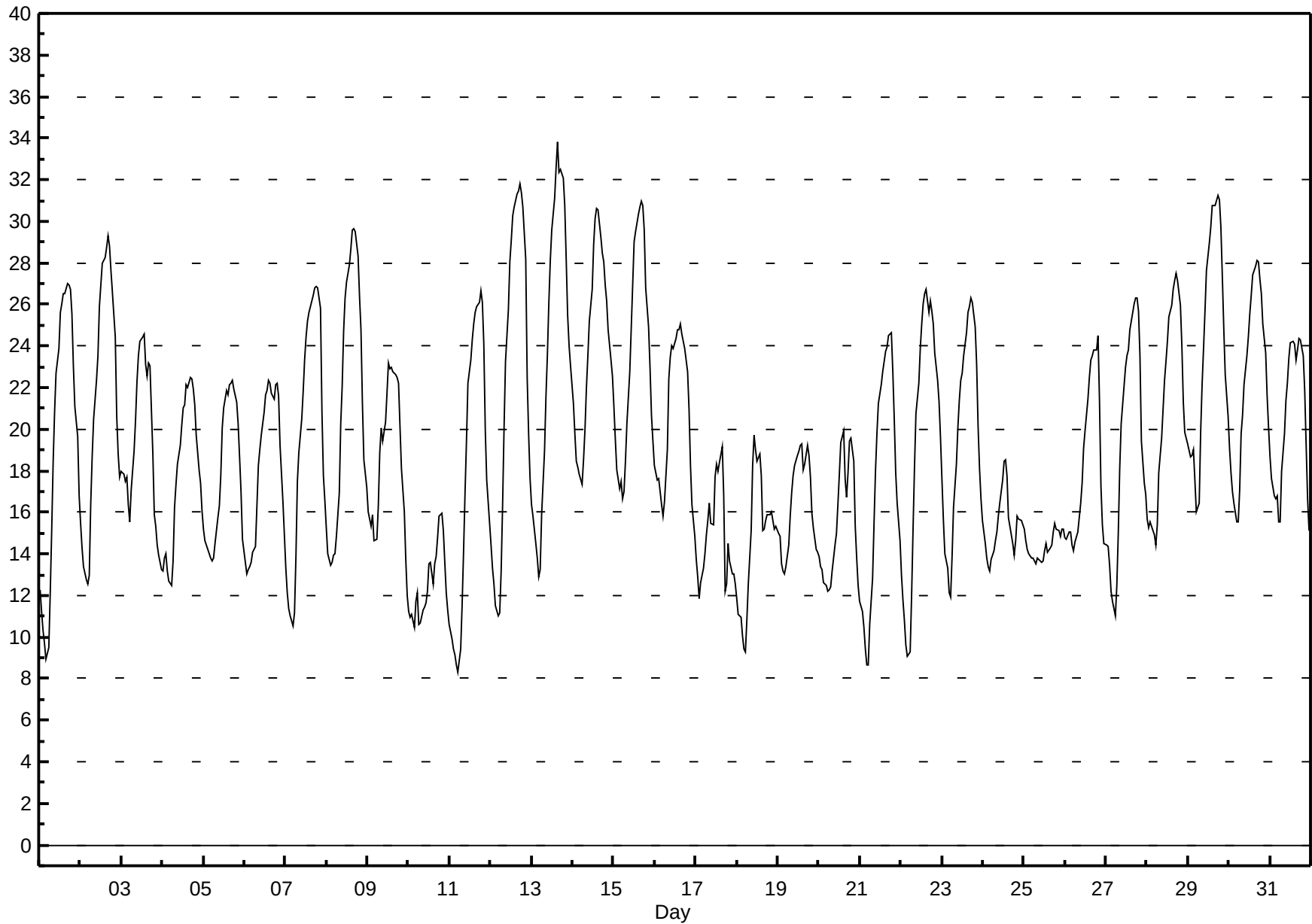
Hydrogen Sulphide (H_2S)
Valleyview - July 2014



Hourly Averages

External Temperature (ET) - °C

Valleyview - July 2014



Hourly Averages

Relative Humidity (RH) - %

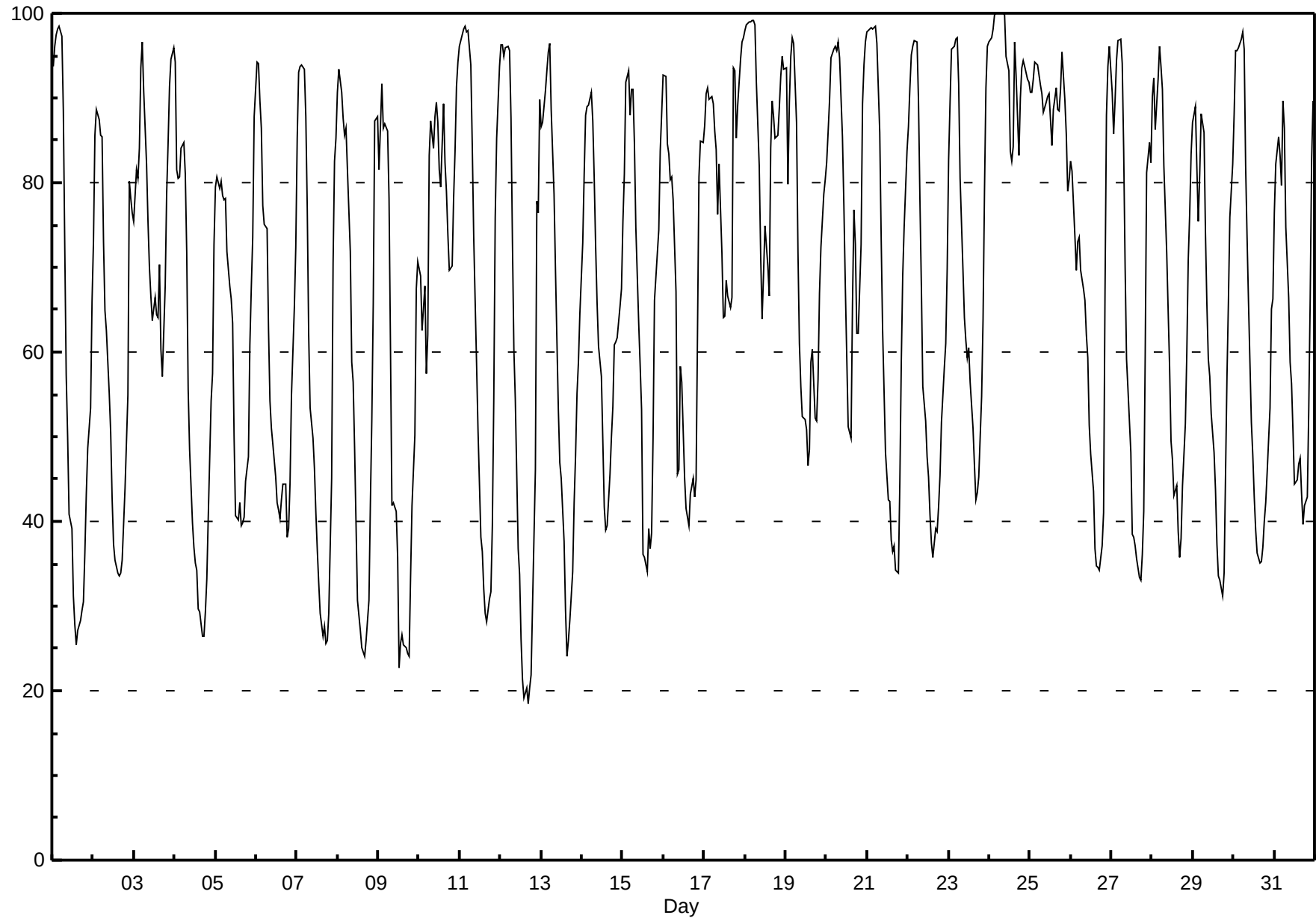
Valleyview - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100.0 % on Jul 24 05:00 Maximum Daily Average: 94.1 % on Jul 24																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 19 % on Jul 12 17:00 Maximum Diurnal Average: 90.3 % at hour 6 Monthly Average: 67.25 %												Minimum Daily Average: 52.3 % on Jul 9 Minimum Diurnal Average: 44.2 % at hour 15 Percentiles: P ₁ = 24.0 P ₁₀ = 35.4 Q ₁ = 45.6 Median = 70.1 Q ₃ = 88.0 P ₉₀ = 94.7 P ₉₉ = 99.6														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jul	94	96	97	98	99	97	88	72	57	50	41	39	31	28	25	27	28	29	30	36	43	49	53	66	57.4	98.5
2-Jul	73	86	89	88	86	85	73	65	62	55	51	43	37	35	34	34	34	35	40	44	55	80	78	76	59.9	88.7
3-Jul	75	82	81	84	94	97	91	82	75	70	67	64	66	64	64	70	60	57	68	79	85	91	95	96	77.3	96.5
4-Jul	94	82	81	81	84	85	81	72	56	49	40	37	35	34	30	29	26	26	29	33	41	54	57	73	54.5	94.3
5-Jul	79	81	79	80	78	78	78	72	68	66	63	50	41	40	42	40	40	40	45	48	61	68	74	88	62.5	87.9
6-Jul	94	94	90	86	77	75	75	63	54	51	49	45	42	41	40	43	44	44	38	39	45	55	65	72	59.3	94.2
7-Jul	85	93	94	94	93	88	77	62	53	50	46	41	37	33	29	27	28	26	26	29	45	70	83	85	58.1	93.9
8-Jul	91	93	91	88	86	86	81	72	59	56	49	40	31	27	25	25	24	26	31	42	52	66	87	88	58.9	93.5
9-Jul	81	87	92	86	87	86	78	60	42	42	41	36	23	26	27	25	25	24	24	33	42	50	67	71	52.3	91.7
10-Jul	70	69	63	68	58	62	83	87	84	88	90	87	82	80	89	82	79	74	70	70	78	84	91	94	78.4	94.2
11-Jul	96	97	98	98	98	98	94	84	74	66	59	51	38	37	32	29	28	31	32	39	54	76	85	94	66.2	98.4
12-Jul	96	96	95	96	96	96	88	73	60	54	37	34	26	21	19	20	19	20	22	30	46	78	76	90	57.9	96.3
13-Jul	87	87	91	93	95	96	89	79	70	61	53	47	45	38	29	24	26	28	34	42	48	55	59	65	60.0	96.5
14-Jul	73	81	88	89	89	91	87	81	72	66	61	57	49	42	39	39	46	50	54	61	61	62	65	68	65.4	90.7
15-Jul	75	81	92	93	88	91	91	85	75	63	59	53	36	36	34	39	37	39	50	66	72	74	84	88	66.7	93.2
16-Jul	93	93	85	83	80	81	78	67	46	46	58	56	45	42	41	39	43	45	43	45	63	81	85	85	63.4	92.7
17-Jul	87	91	91	90	90	89	86	84	76	82	72	64	64	69	67	65	67	94	93	85	89	95	97	97	82.6	97.1
18-Jul	98	99	99	99	99	99	99	92	82	72	64	69	75	70	67	84	90	88	85	86	89	93	95	93	86.8	99.2
19-Jul	94	80	89	95	97	96	87	72	61	56	52	52	51	47	49	59	60	52	52	57	67	72	79	80	69.0	97.1
20-Jul	82	86	90	95	96	96	96	97	95	85	77	68	60	51	50	66	77	73	62	62	73	89	94	97	79.8	96.7
21-Jul	98	98	98	98	98	98	96	86	73	62	55	48	43	42	38	37	37	34	34	45	59	69	75	84	66.9	98.4
22-Jul	87	91	95	96	97	97	90	78	68	56	52	48	45	41	38	36	39	39	42	45	52	58	61	70	63.2	96.8
23-Jul	83	90	96	96	97	97	92	81	70	64	61	59	60	56	51	47	43	43	45	55	64	79	91	96	71.5	97.2
24-Jul	97	97	98	100	100	100	100	100	100	100	95	93	84	83	84	97	93	83	90	94	94	94	92	92	94.1	100.0
25-Jul	91	91	92	94	94	93	92	90	88	89	90	90	88	84	89	91	89	89	91	95	90	86	79	80	89.4	95.5
26-Jul	83	81	74	70	73	74	70	67	66	62	59	51	48	44	37	35	35	34	37	41	67	88	94	96	61.9	96.1
27-Jul	91	86	90	94	97	97	94	84	70	59	56	48	39	38	37	36	33	33	36	41	60	81	85	82	65.2	96.9
28-Jul	90	92	86	92	96	94	91	82	72	65	58	49	47	43	44	39	36	38	44	52	60	71	76	83	66.7	96.1
29-Jul	87	89	82	75	81	88	86	74	66	59	57	53	48	44	37	34	33	31	34	46	57	66	76	82	61.9	88.9
30-Jul	88	96	96	96	97	98	96	82	74	66	52	48	43	39	36	35	35	37	40	42	46	53	65	66	63.5	97.8
31-Jul	76	82	85	83	80	90	86	75	66	59	56	51	44	45	47	47	43	40	42	43	53	66	83	90	63.9	89.7
86.7 88.6 89.2 89.7 89.7 90.3 86.8 78.0 68.8 63.6 58.7 53.9 48.5 45.8 44.2 45.1 45.0 45.3 47.2 52.4 61.6 72.7 78.9 83.5																								Diurnal Average		
98.0 98.7 99.1 99.9 100.0 100.0 100.0 100.0 100.0 99.8 94.9 93.3 87.5 84.4 89.4 96.6 92.7 93.6 93.3 95.5 94.4 94.6 96.7 97.1																								Diurnal Maximum		

Hourly Averages

Relative Humidity (RH) - %

Valleyview - July 2014



Hourly Averages

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

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	1	1	1	1	1	2	2	1	1	2	2	3	2	2	1	3	2	2	3	2	1	1	0.9	3.0
Dir	181	170	18	172	172	165	154	149	139	149	155	48	174	176	167	145	101	60	73	80	89	80	36	323	116	89
2 Spd	0	0	1	0	0	0	0	1	1	3	3	6	8	7	8	7	6	7	7	6	3	5	7	6	3.8	8.3
Dir	354	46	351	270	245	258	244	197	167	131	124	136	136	137	136	134	141	137	135	134	131	143	131	120	135	136
3 Spd	2	0	3	1	0	1	1	1	1	1	0	2	1	4	3	9	8	11	11	11	1	2	1	2	1.9	11.3
Dir	131	151	249	270	175	113	166	129	69	190	230	39	54	19	346	315	335	355	331	350	94	246	153	172	341	331
4 Spd	2	2	1	2	1	2	1	1	6	9	11	10	10	9	10	10	10	11	9	5	1	0	1	0	4.5	11.3
Dir	163	209	244	204	168	169	172	168	253	264	282	271	273	295	279	285	280	286	313	326	330	249	290	188	278	286
5 Spd	0	0	0	1	1	1	2	2	2	2	2	1	2	0	6	6	6	7	4	3	0	1	1	0	1.2	6.5
Dir	175	176	170	164	164	160	149	159	159	163	160	192	239	239	322	266	266	286	269	294	201	184	230	159	251	286
6 Spd	0	1	1	1	3	1	1	8	11	13	13	11	13	12	11	13	8	8	8	8	3	1	1	1	5.5	13.0
Dir	173	164	177	180	241	232	225	282	284	294	293	286	291	296	318	344	354	275	294	314	313	265	217	188	297	291
7 Spd	1	1	1	1	1	2	1	3	6	4	4	4	3	4	5	6	6	4	4	1	0	0	0	0	1.8	6.3
Dir	149	145	152	149	146	157	153	286	274	277	261	305	330	312	297	279	268	291	299	337	124	175	197	169	279	279
8 Spd	0	0	0	0	0	0	1	1	2	2	1	2	4	4	3	1	1	1	1	1	0	0	1	1	0.6	4.2
Dir	181	188	240	217	233	221	216	202	155	156	176	278	308	278	281	172	180	138	126	157	159	344	158	290	227	278
9 Spd	1	0	1	1	1	2	1	5	12	8	8	11	18	18	16	18	18	17	15	14	7	2	1	1	7.3	18.3
Dir	335	222	159	155	172	160	164	290	290	294	286	275	286	301	301	302	308	301	306	340	329	298	170	180	299	286
10 Spd	1	1	3	1	5	10	8	11	12	12	12	12	14	13	11	13	10	12	9	5	2	2	1	2	6.9	13.5
Dir	183	213	224	182	269	275	248	260	264	272	282	281	284	291	293	281	279	287	293	270	232	206	165	159	274	284
11 Spd	1	1	1	3	1	2	3	3	2	2	2	2	6	8	8	8	7	5	0	1	0	0	0	0	1.0	8.4
Dir	161	161	160	160	164	160	162	159	159	161	157	213	274	279	312	322	327	332	98	110	165	202	177	172	275	279
12 Spd	0	0	0	0	0	0	1	1	1	1	2	1	4	3	3	2	3	3	2	0	0	0	0	0	0.7	3.7
Dir	171	186	200	168	187	173	165	156	162	158	260	180	260	251	256	239	294	300	17	92	74	23	246	198	249	260
13 Spd	0	1	0	0	0	0	1	1	3	3	2	2	2	2	1	0	4	2	1	1	2	2	3	2	1.0	4.1
Dir	183	248	232	214	183	158	157	161	161	158	160	160	154	158	165	98	3	61	73	21	129	149	154	163	144	3
14 Spd	1	0	0	1	0	1	1	1	3	4	3	3	3	4	5	5	4	2	2	1	1	1	2	2	2.1	5.0
Dir	163	155	147	162	207	244	161	156	162	163	163	160	158	160	159	156	148	138	133	130	148	134	160	167	157	156
15 Spd	1	0	0	1	2	1	1	1	3	2	2	2	4	5	2	2	2	1	1	0	1	0	1	0	1.1	5.0
Dir	169	330	209	169	164	210	158	162	159	156	157	167	246	242	233	152	154	160	352	177	214	204	169	169	187	242
16 Spd	1	1	2	2	1	1	1	1	5	8	11	14	12	10	10	10	10	8	5	4	0	0	0	1	3.8	14.5
Dir	168	169	162	162	162	175	160	176	287	309	335	6	13	15	10	12	14	13	7	10	105	18	282	341	2	6
17 Spd	0	0	1	0	0	4	2	5	5	8	5	5	2	2	1	2	6	1	2	3	1	1	1	1	0.4	7.7
Dir	299	305	325	334	190	335	38	117	130	18	109	133	86	82	146	320	273	158	235	269	231	168	175	165	96	18
18 Spd	1	2	0	0	1	0	2	3	2	2	4	3	2	3	10	1	1	0	2	1	0	1	1	1	1.3	9.7
Dir	155	155	173	177	166	204	156	159	160	161	160	159	159	164	257	328	164	139	178	167	198	160	161	159	180	257
19 Spd	1	7	4	3	2	1	2	8	13	13	15	14	13	15	13	14	11	13	13	12	9	4	5	4	8.0	15.2
Dir	200	264	236	207	163	162	221	264	281	286	279	297	293	287	283	302	285	303	310	318	317	299	307	306	289	287
20 Spd	3	3	1	2	3	2	1	1	2	4	5	6	6	1	3	2	1	1	1	1	1	1	0	0	1.2	6.0
Dir	294	300	296	224	242	252	234	148	156	231	260	283	297	241	304	79	103	118	187	148	148	171	163	174	261	283
21 Spd	1	1	0	0	0	0	1	1	2	2	2	2	2	2	1	1	1	1	1	2	1	2	1	0	1.1	2.5
Dir	165	162	165	189	178	154	152	160	156	154	153	156	162	144	238	155	144	140	166	132	129	151	155	203	155	132
22 Spd	1	0	0	0	0	0	0	0	1	6	7	7	7	6	6	7	7	4	5	5	5	3	3	1	3.4	7.2
Dir	308	236	194	326	342	232	171	150	151	157	149	143	136	141	137	144	146	145	136	136	134	145	157	162	144	149

Hourly Averages

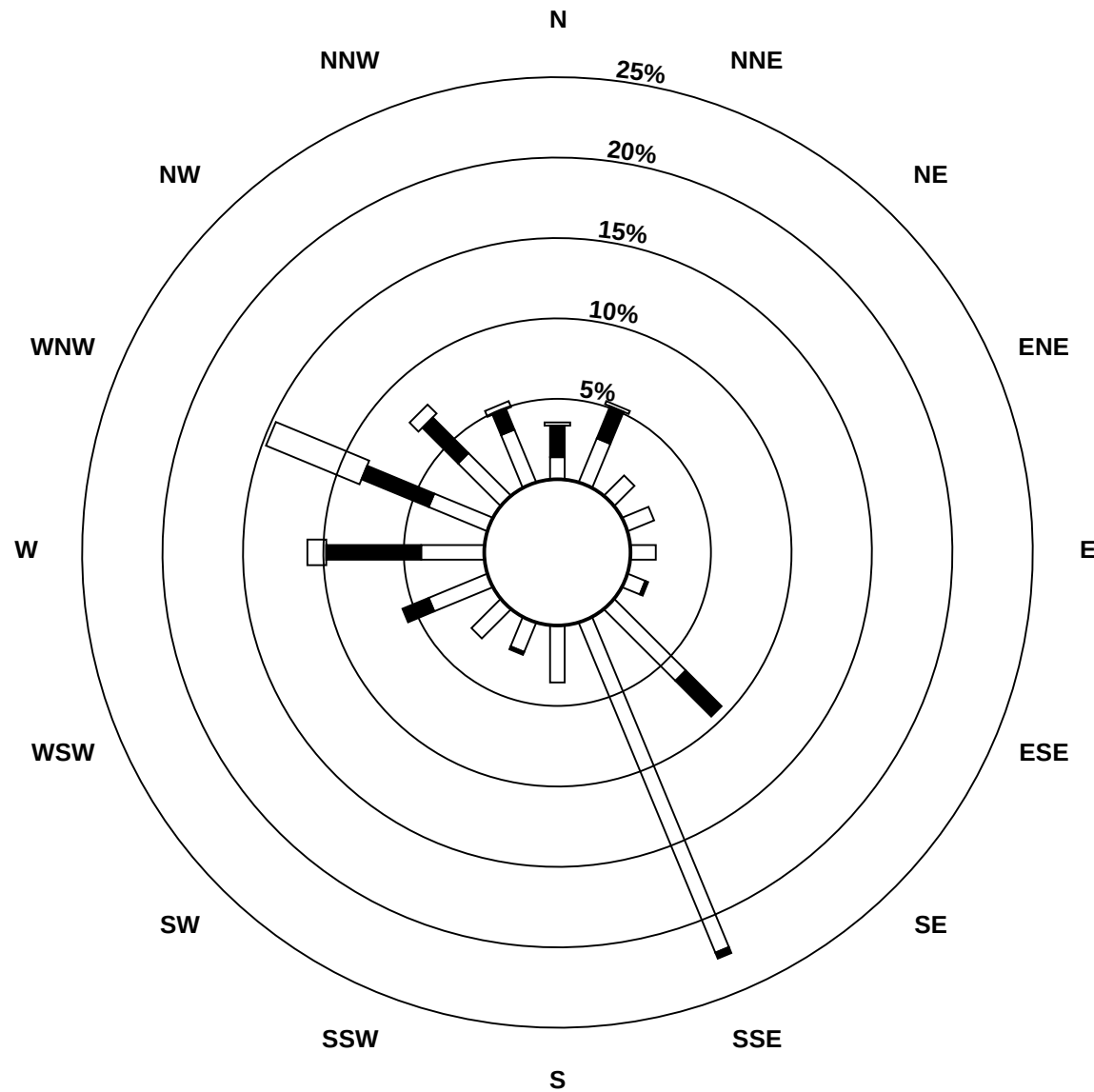
Wind Speed (km/h)
Wind Direction (deg)
Valleyview - July 2014

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	0	1	1	0	1	0	0	1	1	0	2	2	2	1	1	1	3	2	2	1	1	1	0	1	0.5	3.4	
Dir	108	13	344	234	315	195	181	160	267	10	140	139	150	199	121	16	43	65	83	110	67	358	60	346	88	43	
24 Spd	1	1	1	1	0	0	4	1	3	5	5	6	9	4	6	5	6	3	2	3	6	7	9	10	3.0	10.2	
Dir	328	338	319	305	342	295	13	45	314	308	333	356	316	278	239	231	210	259	181	286	296	307	306	295	298	295	
25 Spd	12	13	12	10	11	10	14	14	14	14	13	14	13	12	8	4	9	3	0	1	4	7	6	6	9.1	14.3	
Dir	284	282	288	279	278	282	282	283	288	301	288	287	295	297	295	308	274	258	289	214	252	252	274	250	284	287	
26 Spd	8	8	6	11	8	6	4	4	4	6	5	7	4	4	6	4	5	4	4	1	0	0	0	0	4.2	10.9	
Dir	247	244	251	261	265	272	266	257	260	270	288	282	314	335	277	274	288	315	321	307	169	195	189	168	273	261	
27 Spd	1	1	1	1	0	0	1	2	1	1	2	1	3	3	2	3	2	2	1	0	0	0	0	4	0.4	3.6	
Dir	147	343	21	246	181	164	163	148	147	170	128	152	331	311	258	269	286	264	136	76	137	327	312	200	226	200	
28 Spd	2	2	1	0	1	3	1	1	1	1	1	1	2	2	3	3	4	3	3	3	1	2	4	1	0.9	4.4	
Dir	164	218	176	66	203	254	149	154	221	170	102	22	21	36	25	20	17	44	51	37	8	346	342	80	26	17	
29 Spd	1	1	3	3	1	0	0	1	1	2	3	3	2	1	0	3	5	2	2	2	1	1	1	1	0.6	5.0	
Dir	41	123	342	9	129	176	307	142	144	152	152	157	167	182	159	2	15	60	55	67	84	48	345	311	72	15	
30 Spd	0	0	0	0	0	0	1	1	7	8	9	9	9	8	6	7	7	6	7	6	5	1	2	1	3.2	9.1	
Dir	245	182	187	212	224	173	163	228	268	295	303	306	331	304	325	309	343	18	5	11	10	37	140	63	323	331	
31 Spd	0	0	1	2	1	1	2	3	3	3	5	4	7	9	10	7	8	7	7	6	1	0	0	0	2.8	10.1	
Dir	326	235	339	301	326	186	188	246	257	336	15	17	21	13	7	3	18	17	11	11	23	311	147	219	4	7	
Spd	0.7	1.0	0.9	0.9	1.0	1.0	0.9	1.5	2.6	2.6	2.5	2.4	3.3	3.2	3.4	3.1	3.0	2.5	2.0	1.7	0.5	0.4	0.4	0.6	Diurnal Average		
Dir	238	252	260	243	241	251	226	239	258	274	276	287	296	297	296	305	309	316	325	344	331	246	224	223	Diurnal Maximum		
Spd	11.9	13.2	11.9	10.9	11.2	10.4	13.5	13.9	14.2	13.7	15.2	14.5	18.3	17.6	16.1	17.8	17.8	16.6	15.1	13.8	9.1	6.9	9.4	10.2	Diurnal Maximum		
Dir	284	282	288	261	278	275	282	283	288	301	279	6	286	301	301	302	308	301	306	340	317	307	306	295			
Maximum Speed Value: 18 km/h on Jul 9 13:00																		Minimum Speed Value: 0 km/h on Jul 11 19:00						Hours in Service: 744			
Maximum Daily Speed Average: 9.1 km/h on Jul 25																		Minimum Daily Speed Average: 0.4 km/h on Jul 23						Hours of Data: 744			
Maximum Diurnal Speed Average: 3.4 km/h at hour 15																		Minimum Diurnal Speed Average: 0.4 km/h at hour 23						Hours of Missing Data: 0			
Monthly Average Velocity: 1.52 km/h 285.5 deg																		Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.8 Median = 1.8 Q ₃ = 4.9 P ₉₀ = 9.6 P ₉₉ = 14.5						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		39	24	5	0	0	0	68																			
NorthEast		28	0	0	0	0	0	28																			
East		25	1	0	0	0	0	26																			
SouthEast		106	21	0	0	0	0	127																			
South		194	0	0	0	0	0	194																			
SouthWest		67	4	0	0	0	0	71																			
West		47	43	30	0	0	0	120																			
NorthWest		57	34	19	0	0	0	110																			
Total		563	127	54	0	0	0	744																			

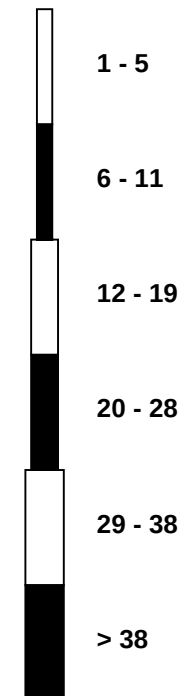
Wind Rose

Wind Speed (WS) (km/h)

Valleyview - July 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - July 2014

Maximum Speed: 19 km/h on Jul 9 13:00																				Maximum Daily Speed Average: 9.6 km/h on Jul 25										Hours in Service: 744	
Minimum Speed: 0 km/h on Jul 12 03:00																				Minimum Daily Speed Average: 1.4 km/h on Jul 21										Hours of Data: 744	
Maximum Diurnal Speed Average: 6.7 km/h at hour 13																				Minimum Diurnal Speed Average: 1.6 km/h at hour 1										Hours of Missing Data: 0	
Monthly Average Speed: 3.86 km/h																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.5 Q ₁ = 1.1 Median = 2.3 Q ₃ = 5.4 P ₉₀ = 10.1 P ₉₉ = 14.8										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-Jul	0	0	2	1	1	1	1	2	2	1	2	3	2	3	3	2	1	3	3	3	3	2	1	1	1.8	3.5					
2-Jul	0	0	1	0	0	0	1	1	2	3	3	7	8	8	9	7	6	8	7	6	4	5	8	7	4.2	8.5					
3-Jul	3	1	4	2	1	2	1	1	2	2	2	3	2	5	5	10	8	11	12	12	3	3	2	2	4.1	12.2					
4-Jul	2	3	1	2	1	2	1	1	6	10	12	10	11	10	11	10	11	12	9	5	2	1	1	0	5.6	11.9					
5-Jul	0	0	1	1	1	1	2	2	2	2	2	4	3	3	6	6	7	7	4	3	1	1	1	1	2.5	7.1					
6-Jul	0	1	1	1	3	2	1	8	12	13	13	12	14	13	13	13	10	9	8	9	3	1	1	1	6.7	13.5					
7-Jul	1	1	1	2	1	2	1	4	6	5	5	4	4	6	6	7	6	5	4	2	0	0	0	0	3.1	7.1					
8-Jul	0	0	0	0	0	0	2	1	2	2	2	4	6	5	5	2	2	2	1	1	0	1	1	1	1.7	5.7					
9-Jul	2	1	1	2	1	2	1	6	12	9	9	12	19	18	17	18	18	17	16	14	7	3	1	1	8.7	18.9					
10-Jul	1	2	4	2	6	10	8	11	12	12	12	12	14	14	11	13	11	12	9	5	2	2	1	2	7.7	14.0					
11-Jul	1	1	1	3	1	2	3	3	2	2	2	3	7	9	10	9	8	6	1	1	0	0	0	0	3.2	9.7					
12-Jul	0	0	0	0	0	0	1	1	1	1	3	2	5	4	5	3	5	3	2	0	0	1	1	0	1.6	4.7					
13-Jul	0	1	0	0	0	0	1	1	3	3	2	2	2	2	1	1	4	2	2	1	2	2	3	2	1.7	4.4					
14-Jul	1	0	0	1	0	1	1	1	3	5	4	3	3	4	5	5	4	2	2	1	1	1	2	2	2.2	5.1					
15-Jul	1	1	0	1	2	1	1	1	3	2	3	3	5	5	2	2	2	1	1	1	1	1	1	0	1.7	5.1					
16-Jul	1	1	2	2	1	1	1	2	5	9	11	15	13	11	11	10	11	8	5	4	1	0	1	1	5.2	14.8					
17-Jul	1	1	1	0	1	4	4	6	5	9	7	5	4	2	1	3	7	2	3	3	2	1	1	1	3.1	9.2					
18-Jul	1	2	0	1	1	0	2	3	3	2	4	3	2	3	10	2	1	1	2	2	0	1	1	2	2.0	10.4					
19-Jul	1	7	4	3	2	1	3	9	13	14	16	15	14	16	14	15	11	14	13	12	9	5	5	4	9.1	15.9					
20-Jul	3	3	1	2	3	2	1	1	2	4	5	7	6	3	4	4	2	1	1	1	1	1	0	0	2.4	6.6					
21-Jul	1	1	0	0	1	0	1	1	2	2	3	3	3	3	3	2	2	2	1	3	1	2	1	0	1.4	3.0					
22-Jul	1	0	0	0	0	0	0	1	1	6	7	7	7	7	7	7	7	4	6	5	5	3	3	1	3.6	7.4					
23-Jul	0	1	1	0	1	0	1	1	2	2	2	3	2	2	2	3	4	3	2	1	1	1	0	1	1.6	3.8					
24-Jul	1	1	1	1	1	1	5	2	3	5	6	6	10	5	6	5	7	4	3	4	6	7	9	10	4.6	10.4					
25-Jul	12	13	12	11	11	10	14	14	14	14	13	15	14	12	8	4	10	3	1	1	4	7	6	6	9.6	14.6					
26-Jul	8	8	6	11	8	6	4	4	4	6	5	8	4	5	8	5	5	5	4	1	0	0	0	1	4.9	11.0					
27-Jul	1	2	2	1	1	0	1	2	2	2	3	2	4	4	3	4	3	2	1	1	0	1	1	4	2.0	4.4					
28-Jul	2	2	2	2	1	3	1	1	1	2	2	2	3	3	4	4	5	3	3	3	1	2	4	2	2.5	4.7					
29-Jul	2	2	3	4	2	1	1	1	2	3	3	3	2	2	2	4	5	3	2	2	1	1	1	1	2.2	5.2					
30-Jul	0	0	0	0	0	0	1	2	7	9	9	9	10	9	7	8	8	6	7	6	5	1	2	3	4.6	9.6					
31-Jul	1	1	3	3	3	1	2	4	3	4	5	5	7	9	10	7	8	7	7	6	2	1	0	0	4.1	10.5					
1.6 1.9 1.9 1.9 1.8 1.9 2.1 3.2 4.6 5.3 5.7 6.1 6.7 6.6 6.7 6.3 6.4 5.4 4.6 3.8 2.2 1.8 2.0 1.9																									Diurnal Average						
12.1 13.4 12.1 11.0 11.4 10.5 13.7 14.1 14.4 14.0 15.7 15.0 18.9 18.0 17.1 18.5 18.3 17.0 15.5 14.4 9.2 7.1 9.5 10.4																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - July 2014

Maximum Value: 99.5 deg on Jul 23 10:00																				Hours in Service: 744					
Minimum Value: 6.1 deg on Jul 11 04:00																				Hours of Data: 744					
																				Hours of Missing Data: 0					
																				Hours of Calibration: 0					
Percentiles: P ₁ = 8.2 P ₁₀ = 12.0 Q ₁ = 17.4 Median = 32.6 Q ₃ = 55.7 P ₉₀ = 73.3 P ₉₉ = 89.4																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Jul	46	19	87	44	18	10	20	21	22	65	73	56	55	42	53	41	58	34	41	35	24	24	31	66	86.6
2-Jul	58	59	26	72	51	85	71	53	67	14	40	23	14	14	15	15	14	11	10	12	33	13	36	43	84.7
3-Jul	28	73	78	76	76	77	44	50	65	71	89	72	66	45	73	30	19	11	22	25	66	80	51	27	89.4
4-Jul	25	37	87	38	30	18	33	40	33	19	18	21	20	24	20	18	21	15	18	24	59	66	76	67	86.6
5-Jul	58	84	75	20	41	10	15	10	28	20	22	71	61	91	31	29	28	25	22	23	54	27	48	78	90.8
6-Jul	27	21	24	21	33	53	49	24	14	14	15	17	17	17	35	19	31	22	12	19	18	49	43	37	53.1
7-Jul	26	18	18	16	10	13	17	79	18	34	41	46	53	58	49	28	31	39	24	48	52	30	66	60	79.4
8-Jul	88	59	70	58	66	59	60	50	24	22	43	74	52	55	65	55	54	22	18	10	72	82	51	67	88.3
9-Jul	87	87	63	53	31	17	25	68	13	20	21	16	15	13	19	16	14	13	14	16	13	40	40	20	86.9
10-Jul	33	33	22	27	18	10	16	10	10	10	10	11	15	13	14	11	13	13	16	14	27	23	12	8	33.1
11-Jul	17	8	10	6	9	6	8	13	16	25	30	59	26	26	39	25	24	26	71	34	24	45	33	26	71.5
12-Jul	50	31	60	43	53	70	17	13	26	35	69	60	56	63	56	64	62	59	37	47	68	86	73	48	86.4
13-Jul	68	34	45	47	50	12	21	26	13	14	19	28	34	30	55	79	22	44	35	32	43	9	8	13	78.8
14-Jul	13	57	47	45	52	36	24	17	13	10	11	13	19	14	13	12	13	12	13	29	13	39	20	13	56.5
15-Jul	30	76	56	14	8	37	33	19	10	21	16	31	40	18	51	22	16	10	81	81	60	64	28	41	81.4
16-Jul	53	51	25	12	10	58	21	51	38	21	19	13	15	18	14	14	11	8	10	8	74	91	74	44	91.5
17-Jul	58	84	44	88	85	66	75	20	30	35	44	20	67	42	60	56	47	47	59	44	50	28	29	32	88.1
18-Jul	39	10	65	51	35	69	11	14	20	21	14	9	11	21	37	72	55	63	42	32	51	41	19	87	87.0
19-Jul	50	29	25	32	16	21	37	16	12	17	14	16	15	16	17	19	16	16	14	11	11	18	14	14	49.6
20-Jul	23	29	54	25	23	24	52	37	18	42	27	25	33	84	60	59	50	25	33	29	22	24	42	27	84.4
21-Jul	14	21	75	56	33	66	59	13	30	33	30	34	58	46	73	62	40	73	66	17	64	17	52	79	79.3
22-Jul	56	61	46	71	75	74	84	64	51	13	14	13	13	16	17	14	12	15	12	12	10	13	12	54	83.8
23-Jul	92	83	76	72	55	81	69	24	62	100	38	46	29	58	68	80	39	43	41	24	45	67	83	57	99.5
24-Jul	81	26	56	77	88	93	34	90	50	40	46	36	27	33	19	46	36	38	39	46	18	14	10	13	92.7
25-Jul	11	10	12	12	11	13	9	10	11	11	11	10	12	12	18	22	16	47	83	36	8	9	10	12	83.2
26-Jul	9	9	21	9	12	10	13	21	19	23	30	27	33	37	38	38	38	28	23	87	17	17	46	55	86.6
27-Jul	22	80	45	52	48	32	38	11	38	62	30	60	67	52	76	70	84	64	32	50	56	83	73	31	84.4
28-Jul	42	44	74	93	58	17	55	41	62	48	68	67	52	53	66	44	22	28	40	24	32	18	59	78	92.6
29-Jul	78	67	66	55	75	79	84	54	35	20	21	19	37	61	87	41	17	27	36	38	43	61	66	50	86.9
30-Jul	73	55	57	50	52	27	15	63	16	20	20	21	18	22	19	25	28	31	14	11	13	56	28	65	73.3
31-Jul	90	78	81	63	82	38	34	47	56	51	29	33	25	22	15	13	14	13	11	7	68	76	87	69	90.0
92.1 86.9 86.6 92.6 88.0 92.7 83.8 90.0 67.2 99.5 89.4 73.9 66.9 90.8 86.9 79.7 84.4 73.3 83.2 86.6 74.4 91.5 86.8 87.0																									

PAZA

Falher Station

Monthly Summary Tables, Graphs and
Roses

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

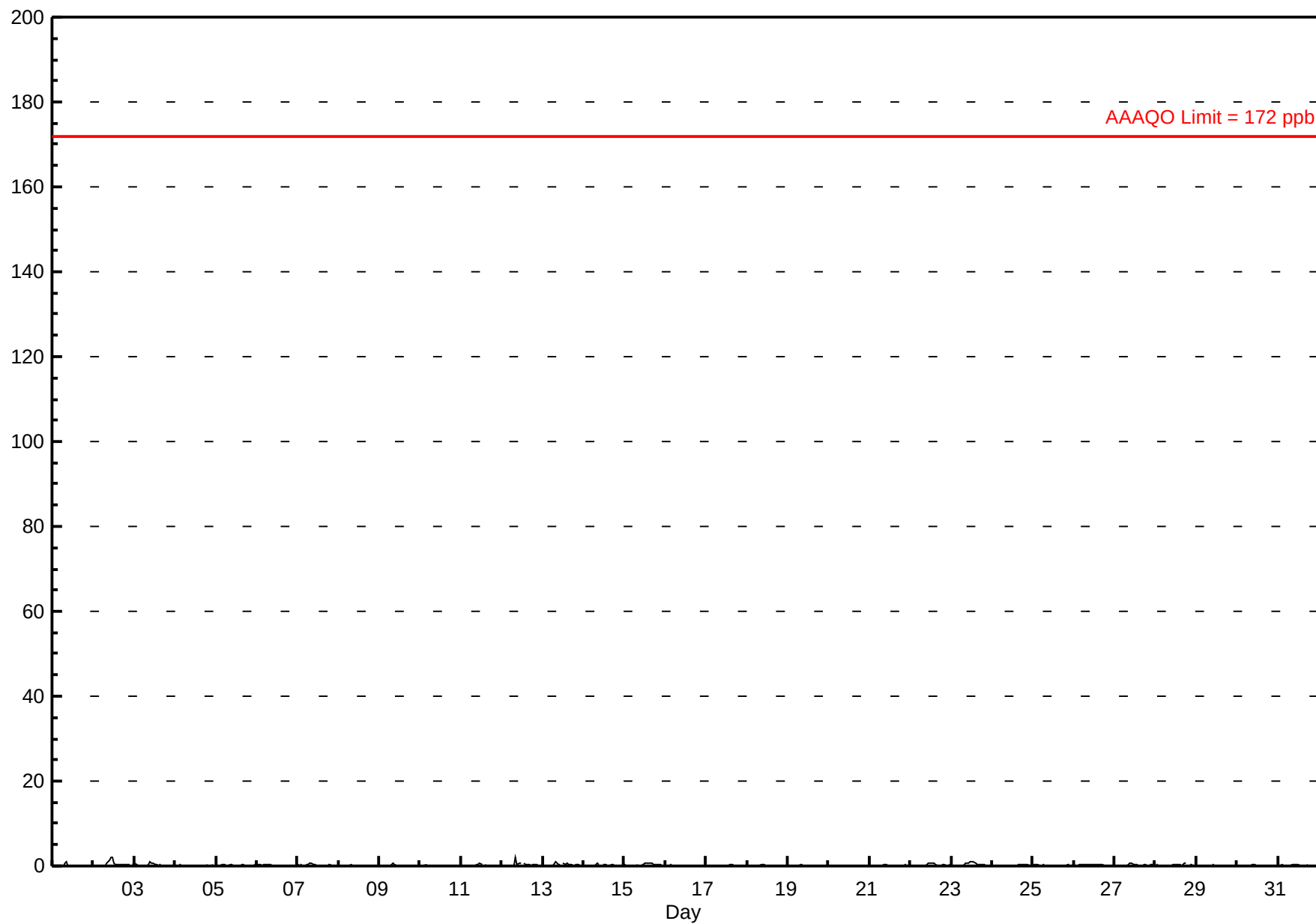
Falher - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.0 ppb on Jul 12 09:00 Maximum Daily Average: 0.4 ppb on Jul 2																				Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0							
Minimum Value: 0 ppb on Jul 1 05:00 Maximum Diurnal Average: 0.3 ppb at hour 9 Monthly Average: 0.16 ppb										Minimum Daily Average: 0.0 ppb on Jul 29 Minimum Diurnal Average: 0.1 ppb at hour 23 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 0.9																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jul	A	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.9	
2-Jul	0	0	0	0	0	0	0	0	1	1	2	2	1	0	0	0	0	0	0	0	0	0	A	0	0	0.4	2.0
3-Jul	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.9
4-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.1	0.5
5-Jul	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	0.2	0.4
6-Jul	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.5
7-Jul	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	0.2	0.6
8-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.2
9-Jul	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.6
10-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.2
11-Jul	0	0	0	0	0	0	0	0	0	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
12-Jul	0	0	0	0	0	0	0	0	2	0	1	1	A	1	0	0	0	0	0	0	0	0	0	0	0	0.3	2.0
13-Jul	0	0	0	0	0	0	0	1	1	0	0	A	1	0	1	0	0	0	0	0	0	0	0	0	0	0.3	1.0
14-Jul	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	0.2	0.7
15-Jul	0	0	0	0	0	0	0	0	0	A	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0.3	0.8
16-Jul	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	0.2
17-Jul	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	0.2
18-Jul	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	0.4
19-Jul	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	0.3
20-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
21-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
22-Jul	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.7
23-Jul	0	A	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.4	1.0
24-Jul	A	0	0	0	0	0	0	0	0	0	0	0	0	C	C	0	0	0	0	0	0	0	0	0	A	0.1	0.3
25-Jul	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	0.1	0.3
26-Jul	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	0.2	0.4
27-Jul	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.6
28-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0.2	0.6
29-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.3
30-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.3
31-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.3
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1																								Diurnal Average			
0.5 0.3 0.3 0.2 0.2 0.5 0.3 1.0 2.0 1.5 2.0 1.9 1.0 1.0 0.8 0.7 0.6 0.5 0.6 0.5 0.3 0.3 0.2 0.3																								Diurnal Maximum			
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb																											

Hourly Averages

Sulphur Dioxide (SO₂) - ppb

Falher - July 2014



Hourly Maximums

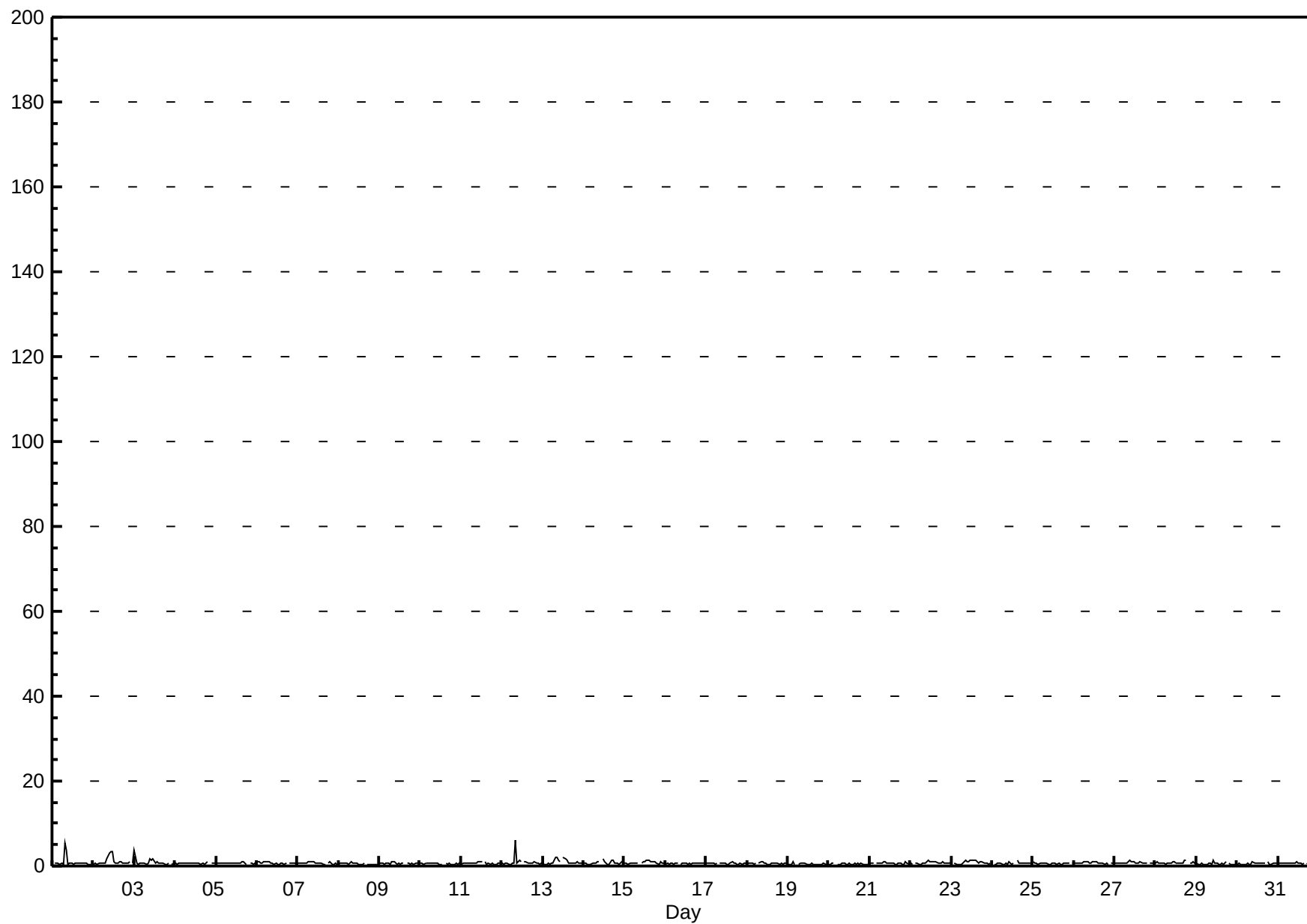
Sulphur Dioxide (SO₂) - ppb

Falher - July 2014

Maximum Value: 6.2 ppb on Jul 12 09:00																			Maximum Daily Average: 1.1 ppb on Jul 2																			Hours in Service: 744	
Minimum Value: 0 ppb on Jul 8 20:00																			Minimum Daily Average: 0.5 ppb on Jul 20																			Hours of Data: 709	
Maximum Diurnal Average: 1.1 ppb at hour 9																			Minimum Diurnal Average: 0.6 ppb at hour 3																			Hours of Missing Data: 35	
Monthly Average: 0.69 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.6 Q ₃ = 0.8 P ₉₀ = 1.0 P ₉₉ = 3.1																			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-Jul	A	1	1	1	0	1	0	5	4	0	1	1	0	1	1	1	1	1	1	1	1	0	0	A	0.9	5.4													
2-Jul	0	1	0	1	1	1	1	1	2	3	3	3	1	1	1	1	1	1	1	1	1	1	A	1	1.1	3.4													
3-Jul	4	1	1	1	1	1	1	0	1	2	1	2	1	1	1	1	1	1	0	0	1	A	0	1	0.9	3.9													
4-Jul	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	A	1	1	1	0.7	0.9													
5-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	0	1	0.7	1.1													
6-Jul	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0	1	A	1	1	1	1	0	0.7	1.1													
7-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	A	1	1	0	0	1	0	0.7	1.2													
8-Jul	0	1	1	1	1	1	0	1	1	1	1	1	0	0	0	1	A	0	0	0	0	0	0	0	0.5	0.9													
9-Jul	1	1	1	0	1	1	0	1	1	1	0	1	0	1	1	A	1	1	0	1	0	1	1	1	0.6	1.1													
10-Jul	1	1	0	1	1	1	1	1	1	1	1	1	0	0	A	1	0	1	0	0	0	1	0	1	0.5	0.8													
11-Jul	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0	1	0	1	0	0	0	1	1	0.7	1.1													
12-Jul	1	0	1	1	0	0	1	1	6	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	6.2													
13-Jul	1	0	0	1	0	1	1	2	2	1	1	A	2	2	1	1	1	1	1	1	1	1	1	1	0.9	2.2													
14-Jul	1	1	0	0	0	1	1	1	1	1	A	2	1	1	0	0	1	1	1	1	1	0	1	1	0.8	1.6													
15-Jul	1	1	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.8	1.2													
16-Jul	0	1	0	1	1	0	1	1	A	0	1	1	1	0	1	0	1	1	1	1	1	1	1	1	0.6	0.8													
17-Jul	1	1	1	1	1	0	1	A	1	1	1	1	0	0	1	1	1	1	0	0	1	0	1	1	0.6	0.9													
18-Jul	0	1	1	1	1	1	A	1	1	1	1	1	0	0	1	1	1	1	1	0	1	0	1	1	0.6	1.1													
19-Jul	0	0	0	1	0	A	0	1	1	1	1	0	0	0	1	1	0	0	0	0	0	1	0	0	0.5	0.9													
20-Jul	0	0	1	1	A	0	0	0	1	1	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0.5	0.7													
21-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	1	1	0	0	0.6	1.1													
22-Jul	1	0	A	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3													
23-Jul	1	A	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0.9	1.4													
24-Jul	A	0	0	1	1	1	0	0	1	0	1	0	1	C	C	1	1	1	1	1	1	1	1	A	0.6	1.3													
25-Jul	1	1	1	0	1	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	1	1	A	1	0.6	0.9													
26-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	A	1	1	0.7	1.0													
27-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.3													
28-Jul	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.3													
29-Jul	1	0	0	1	0	0	0	1	1	0	1	1	1	0	0	1	0	1	A	1	0	0	0	0	0.6	1.4													
30-Jul	0	1	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	A	1	0	0	1	1	1	0.6	0.9													
31-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	0	1	0	1	0	0	0.6	0.9													
0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.9 1.1 0.9 0.9 0.9 0.7 0.7 0.7 0.7 0.6 0.7 0.6 0.6 0.6 0.6 0.6 0.6 0.6																									Diurnal Average														
3.9 0.9 0.8 0.9 0.9 1.1 0.9 5.4 6.2 3.2 3.4 3.3 2.2 1.5 1.3 1.3 1.3 1.4 1.3 0.9 0.9 1.1 1.0 0.8																									Diurnal Maximum														
C - Calibration A - Automated Daily Zero Span																																							

Hourly Maximums

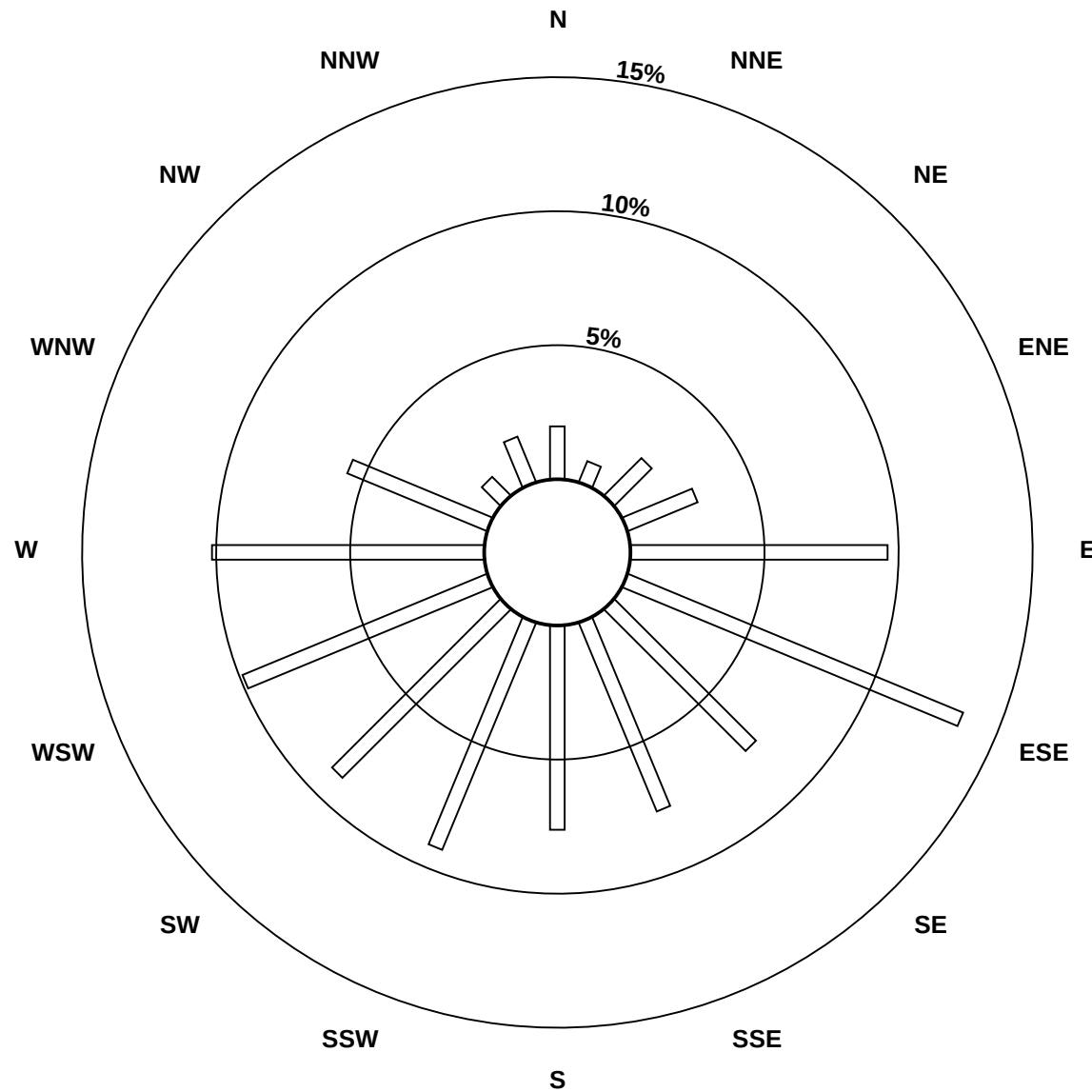
Sulphur Dioxide (SO₂) - ppb
Falher - July 2014



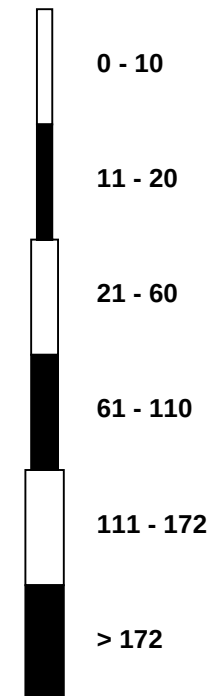
Pollutant Rose

Sulphur Dioxide (SO₂) - ppb

Falher - July 2014



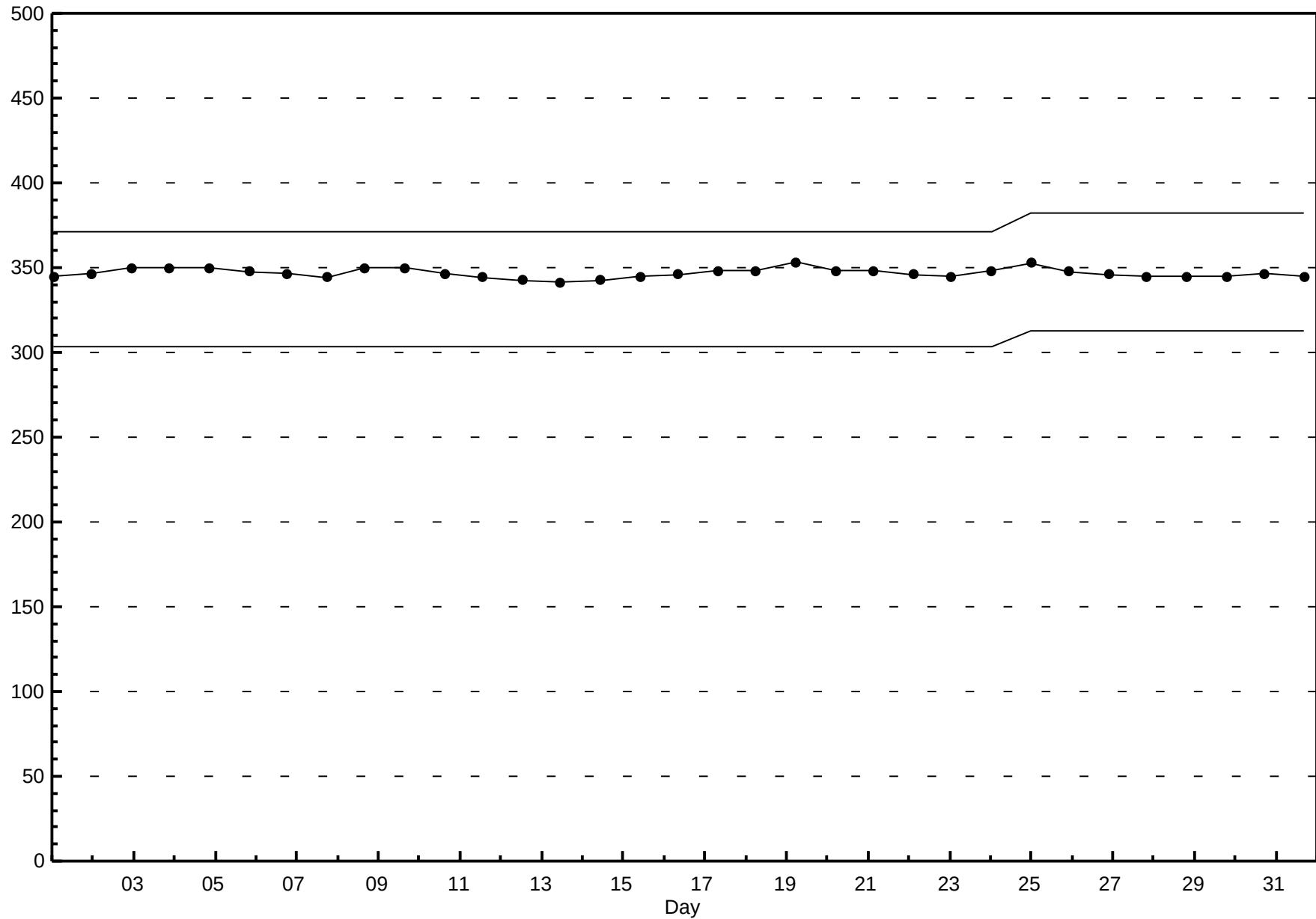
Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)

Falher - July 2014



Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

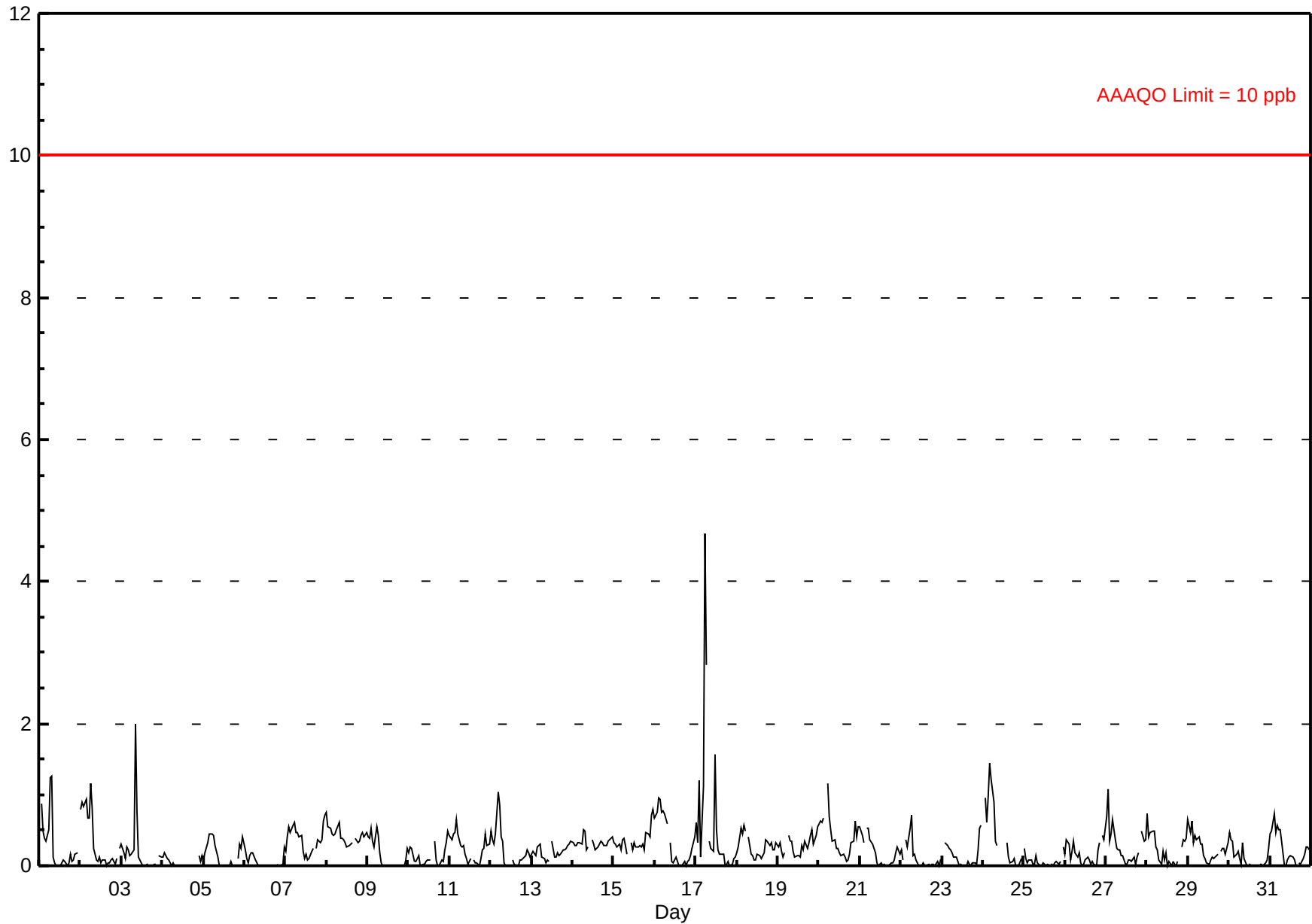
Falher - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.7 ppb on Jul 17 06:00 Maximum Daily Average: 0.6 ppb on Jul 17																				Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0							
Minimum Value: 0 ppb on Jul 1 11:00 Maximum Diurnal Average: 0.6 ppb at hour 6 Monthly Average: 0.25 ppb										Minimum Daily Average: 0.0 ppb on Jul 4 Minimum Diurnal Average: 0.1 ppb at hour 18 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 1.2																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Jul	A	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3
2-Jul	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.4	1.2
3-Jul	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	2.0
4-Jul	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	0.2
5-Jul	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	0.2	0.4
6-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.1	0.3
7-Jul	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	0.4	0.7
8-Jul	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.4	0.7
9-Jul	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.5
10-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.5
11-Jul	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
12-Jul	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.0
13-Jul	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	0.3
14-Jul	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
15-Jul	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.3	0.8
16-Jul	1	1	1	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	1.0
17-Jul	1	0	1	0	1	5	3	A	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.7
18-Jul	0	0	1	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
19-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.3	0.6
20-Jul	1	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.4	1.2
21-Jul	1	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.5
22-Jul	0	0	A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
23-Jul	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	0.6
24-Jul	A	1	1	1	1	1	1	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	A	--	1.4
25-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3
26-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.4
27-Jul	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.3	1.1
28-Jul	1	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	0.7
29-Jul	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.3	0.7
30-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.1	0.5
31-Jul	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.2	0.7
0.4 0.4 0.4 0.4 0.4 0.6 0.5 0.3 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.3 0.3																									Diurnal Average		
0.8 1.1 1.2 1.0 1.4 4.7 2.8 1.3 2.0 0.8 0.4 1.6 0.5 0.3 0.3 0.3 0.4 0.4 0.3 0.5 0.5 0.6 0.7 0.8																									Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																											

Hourly Averages

Hydrogen Sulphide (H₂S) - ppb

Falher - July 2014



Hourly Maximums

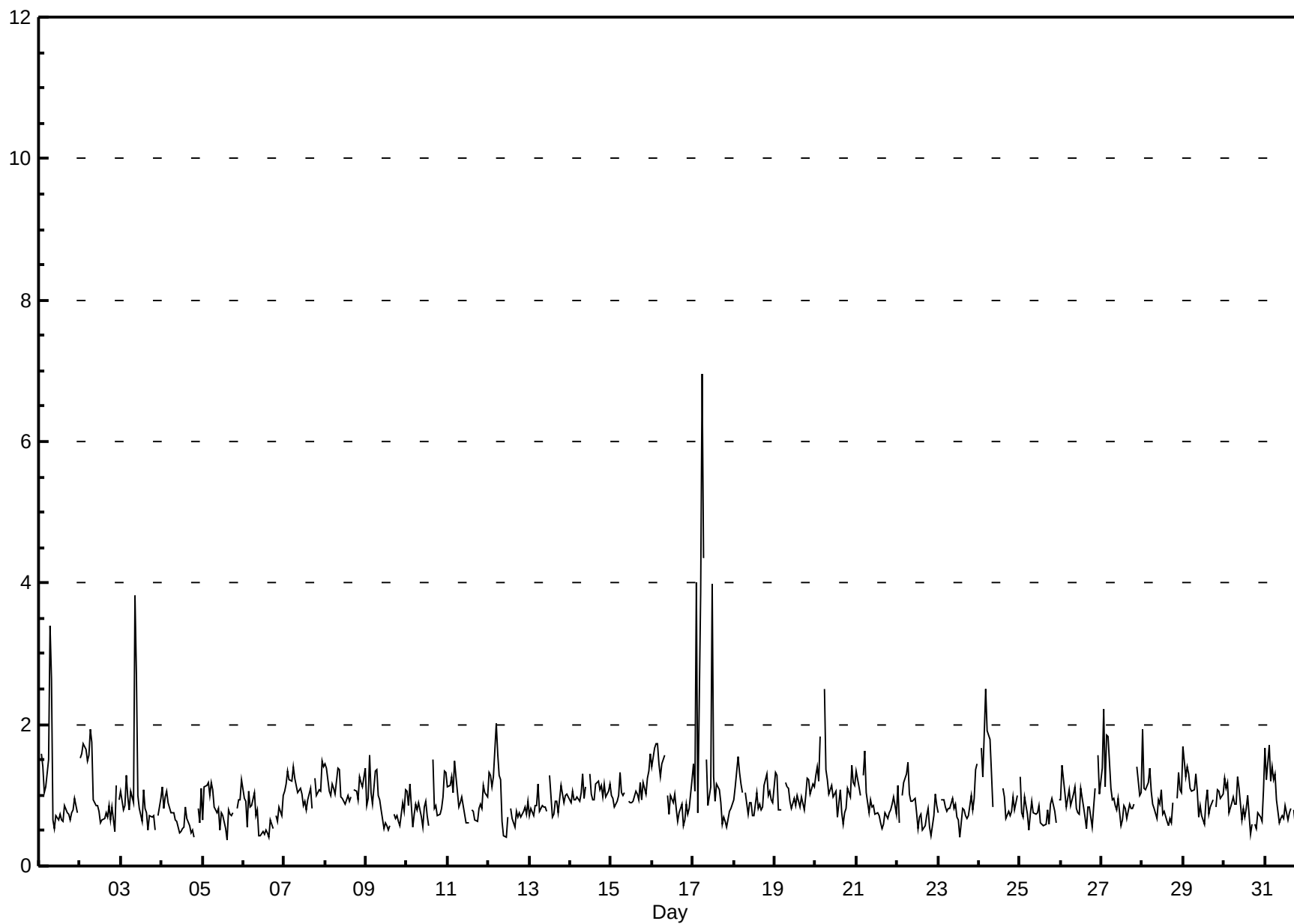
Hydrogen Sulphide (H₂S) - ppb

Falher - July 2014

Maximum Value: 7.0 ppb on Jul 17 06:00																				Maximum Daily Average: 1.7 ppb on Jul 17										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 5 15:00																				Minimum Daily Average: 0.7 ppb on Jul 6										Hours of Data: 706	
Maximum Diurnal Average: 1.4 ppb at hour 6																				Minimum Diurnal Average: 0.8 ppb at hour 17										Hours of Missing Data: 38	
Monthly Average: 0.99 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.9 Q ₃ = 1.1 P ₉₀ = 1.4 P ₉₉ = 3.2										Hours of Calibration: 38	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Jul	A	2	1	1	1	2	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	3.4				
2-Jul	2	2	2	2	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1.1	1.9				
3-Jul	1	1	1	1	1	1	1	1	4	3	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.0	3.8				
4-Jul	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	0	1	0	A	1	1	1	0.7	1.1				
5-Jul	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	A	1	1	1	1	0.8	1.2				
6-Jul	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	1	1	A	1	1	1	1	1	1	0.7	1.1				
7-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1.1	1.5				
8-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.1	1.5				
9-Jul	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.6				
10-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	0.9	1.5				
11-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.9	1.5				
12-Jul	1	1	1	1	2	2	1	1	1	0	0	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.9	2.0				
13-Jul	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3				
14-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.3				
15-Jul	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1.1	1.6				
16-Jul	1	2	2	2	1	1	1	2	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.7				
17-Jul	1	1	4	1	4	7	4	A	2	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1.7	7.0				
18-Jul	1	1	2	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.6				
19-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.3				
20-Jul	1	1	1	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.1	2.5				
21-Jul	1	1	1	A	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.6				
22-Jul	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.8	1.5				
23-Jul	1	A	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0.8	1.4				
24-Jul	A	2	1	2	3	2	2	1	1	C	C	C	C	C	1	1	1	1	1	1	1	1	1	1	A	--	2.5				
25-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	0.8	1.3				
26-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	0.9	1.6				
27-Jul	1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.1	2.2				
28-Jul	2	1	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	1.9				
29-Jul	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.7				
30-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	1	1	1	1	0.9	1.3				
31-Jul	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.0	1.7				
		1.2	1.2	1.2	1.1	1.3	1.4	1.3	1.1	1.0	0.9	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	1.0	1.0	1.1	Diurnal Average					
		1.9	2.2	4.0	1.9	3.9	7.0	4.4	2.7	3.8	2.7	1.1	4.0	1.3	1.1	1.2	1.5	1.2	1.2	1.2	1.3	1.3	1.4	1.6	1.6	Diurnal Maximum					
C - Calibration		A - Automated Daily Zero Span																													

Hourly Maximums

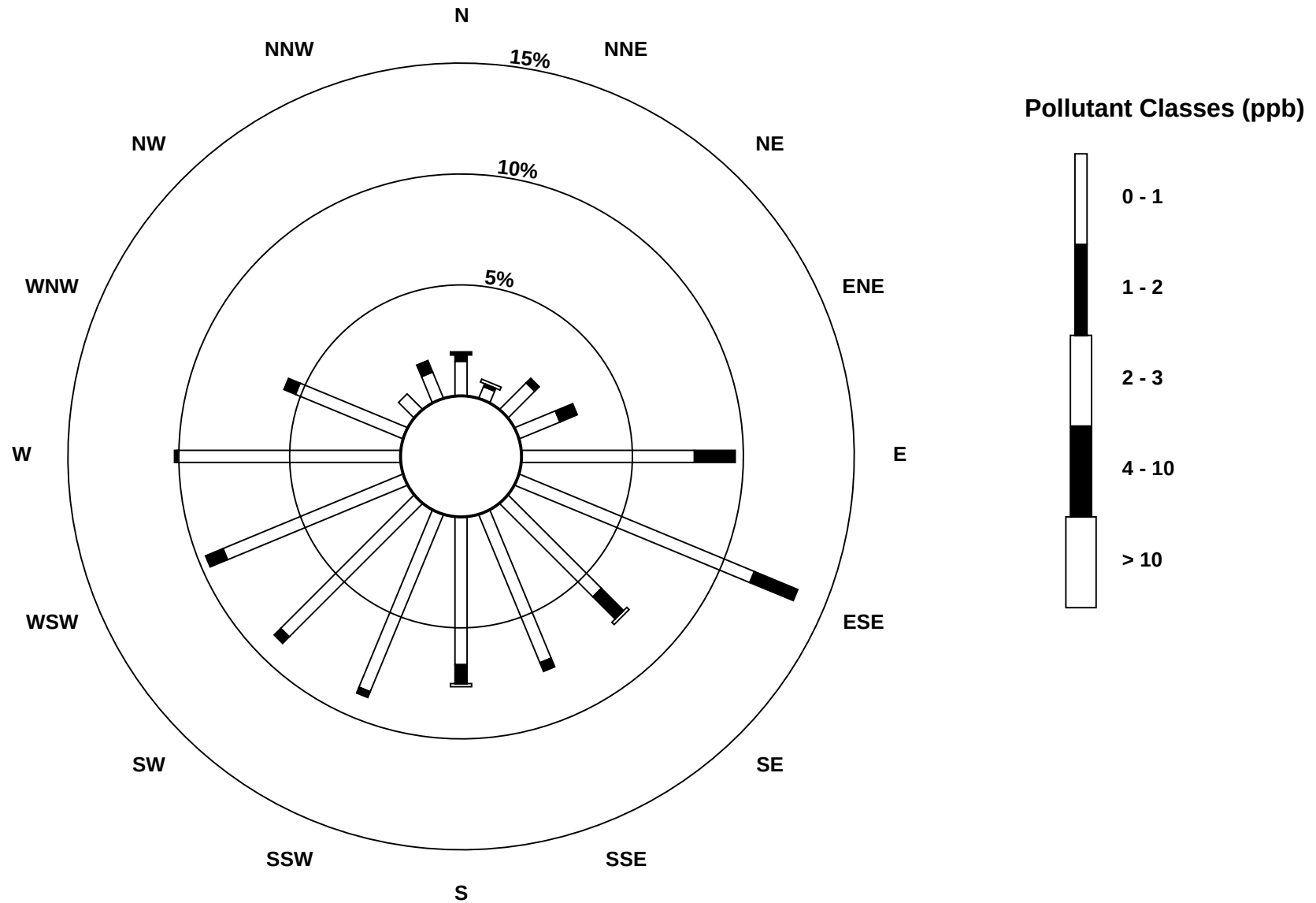
Hydrogen Sulphide (H₂S) - ppb
Falher - July 2014



Pollutant Rose

Hydrogen Sulphide (H₂S) - ppb

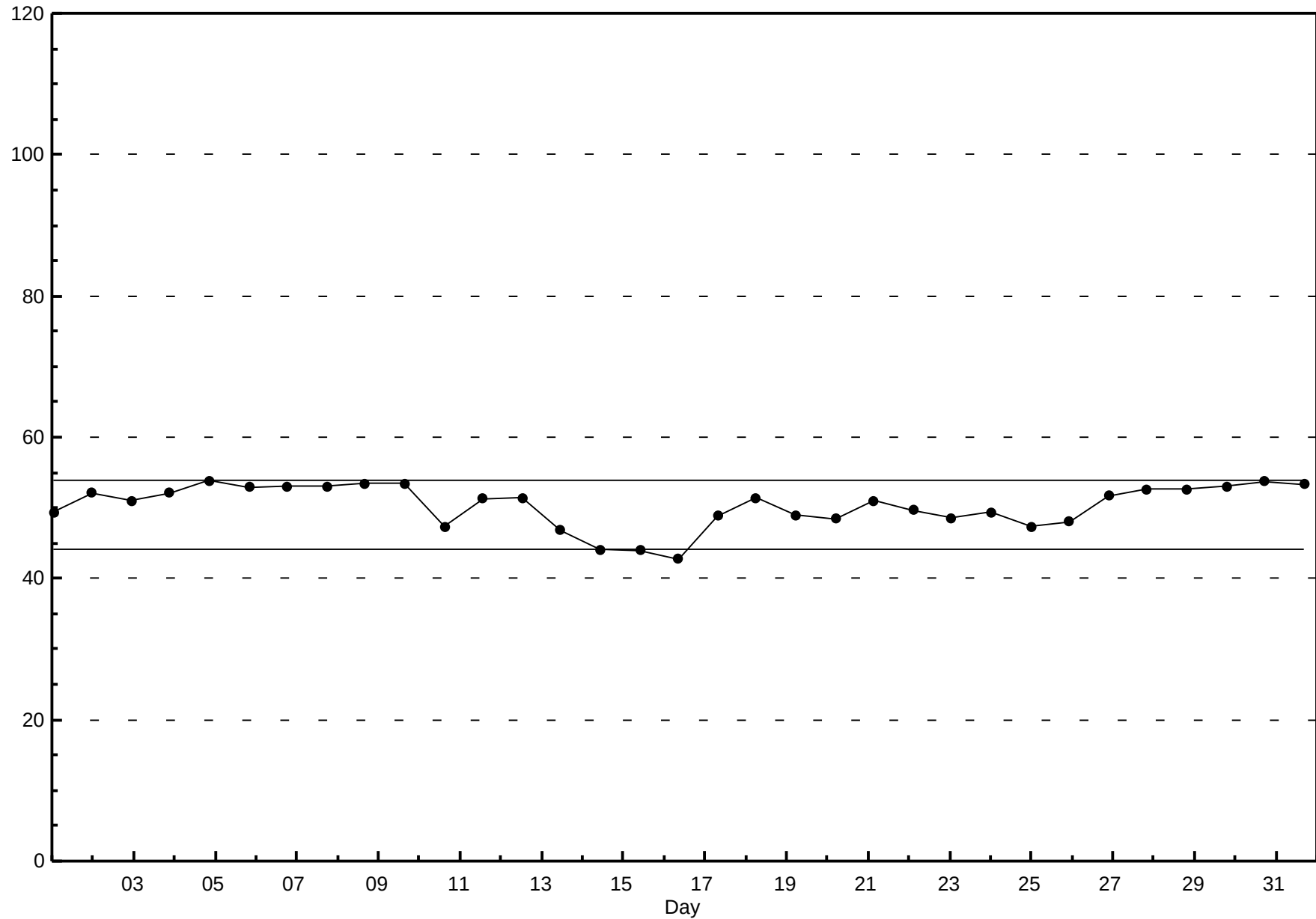
Falher - July 2014



Span Responses

Hydrogen Sulphide (H_2S)

Falher - July 2014



Hourly Averages

External Temperature (ET) - °C

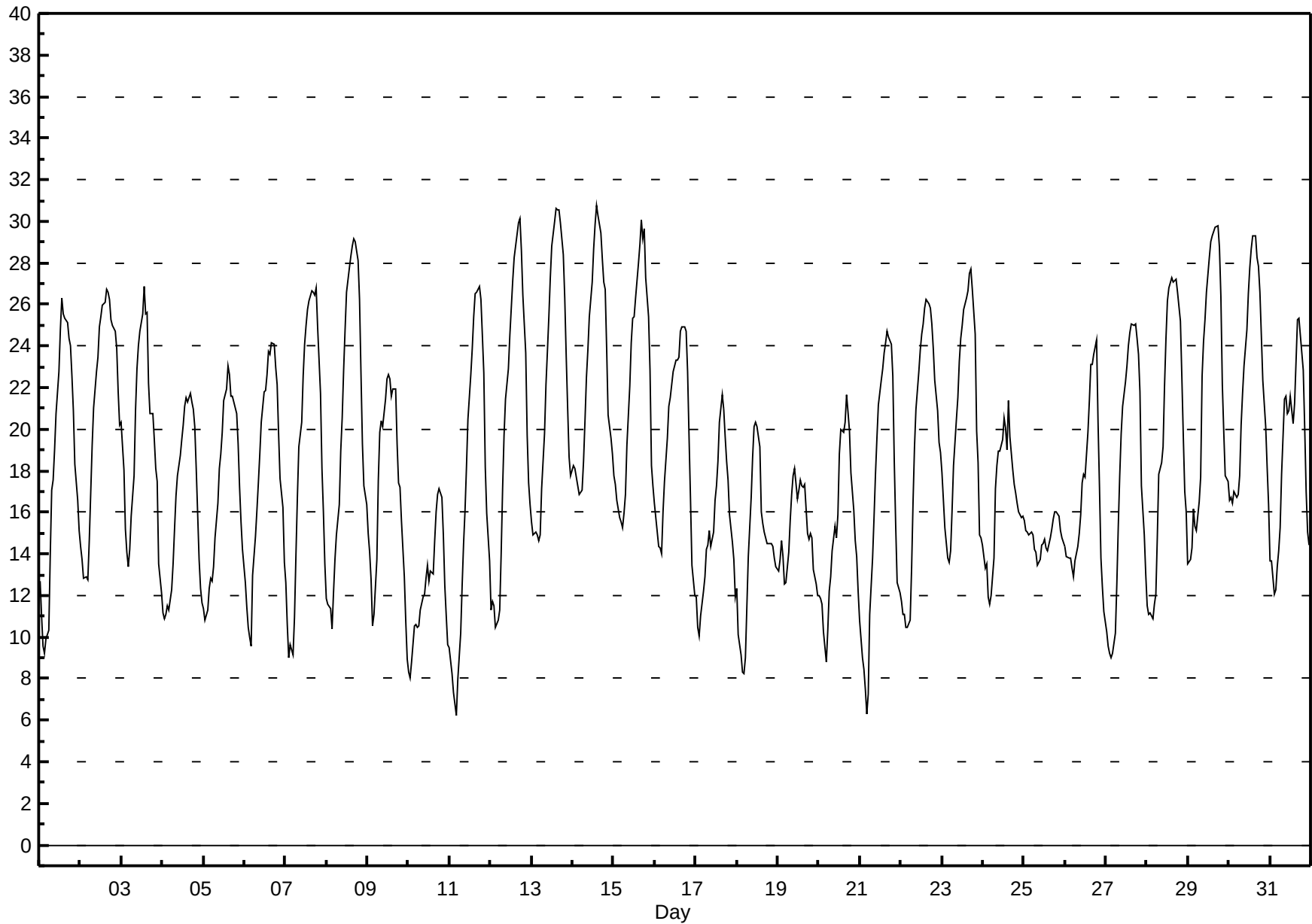
Falher - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 30.7 °C on Jul 14 15:00 Maximum Daily Average: 23.2 °C on Jul 14																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 6 °C on Jul 11 05:00 Maximum Diurnal Average: 24.3 °C at hour 17 Monthly Average: 18.38 °C												Minimum Daily Average: 12.4 °C on Jul 10 Minimum Diurnal Average: 11.9 °C at hour 5 Percentiles: P ₁ = 8.0 P ₁₀ = 11.3 Q ₁ = 13.9 Median = 17.7 Q ₃ = 22.8 P ₉₀ = 26.3 P ₉₉ = 30.0														
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-Jul	13	11	10	9	10	10	14	17	18	19	21	23	25	26	26	25	25	24	24	23	21	18	17	15	18.4	26.3
2-Jul	14	14	13	13	13	15	17	19	21	23	23	25	25	26	26	27	27	26	25	25	25	24	22	20	21.1	26.8
3-Jul	20	18	15	14	13	14	16	18	21	23	24	25	26	27	26	26	22	21	21	20	18	17	14	12	19.6	26.9
4-Jul	11	11	11	11	11	12	14	15	17	18	19	20	20	21	22	21	22	21	21	20	18	14	12	12	16.4	21.7
5-Jul	11	11	11	12	13	13	13	15	16	18	19	20	21	22	23	23	22	22	21	21	19	17	16	14	17.2	23.0
6-Jul	13	11	10	10	10	13	15	16	17	19	20	22	22	23	24	24	24	24	23	22	20	18	16	14	17.9	24.2
7-Jul	13	11	9	10	9	11	14	17	19	20	23	24	25	26	26	27	27	26	27	25	22	18	16	14	19.0	26.8
8-Jul	12	12	11	10	12	14	15	16	19	21	23	25	27	28	28	29	29	29	28	26	23	19	17	16	20.4	29.1
9-Jul	15	14	13	11	11	14	18	20	20	20	21	22	23	22	22	22	19	17	17	16	13	11	9	9	17.2	22.6
10-Jul	8	8	9	11	11	10	11	11	12	12	13	13	13	13	13	15	16	17	17	17	15	12	11	10	12.4	17.2
11-Jul	10	8	7	7	6	8	10	13	15	16	18	20	23	24	25	27	27	27	26	25	23	18	16	14	17.1	26.9
12-Jul	11	12	11	10	11	11	14	17	20	21	23	25	26	27	28	29	30	30	29	26	24	20	17	16	20.4	30.1
13-Jul	16	15	15	15	15	15	17	20	22	24	25	27	29	30	31	31	31	30	28	26	24	21	19	18	22.6	30.6
14-Jul	18	18	18	17	17	17	18	20	22	24	25	27	29	30	31	30	29	28	27	27	24	21	20	19	23.2	30.7
15-Jul	18	17	17	16	16	15	16	17	19	22	24	25	25	26	28	29	30	29	30	27	25	23	18	17	22.1	30.1
16-Jul	16	15	14	14	14	16	17	20	21	22	22	23	23	23	23	25	25	25	25	23	20	17	13	12	19.5	25.0
17-Jul	12	10	10	11	12	13	14	14	15	14	15	17	17	18	20	22	21	20	18	18	16	15	14	12	15.4	21.6
18-Jul	12	10	9	8	8	9	11	14	17	19	20	20	20	19	16	15	15	15	15	14	14	14	14	13	14.3	20.3
19-Jul	13	14	15	14	13	13	14	16	17	18	18	17	17	18	17	17	17	15	15	15	15	13	13	12	15.1	18.1
20-Jul	12	12	12	10	9	10	12	13	14	15	15	16	19	20	20	20	22	21	20	18	16	15	14	12	15.3	21.7
21-Jul	11	9	8	7	6	7	11	14	16	18	20	21	22	23	24	24	25	24	24	23	18	15	13	12	16.5	24.7
22-Jul	12	11	11	10	10	11	13	17	19	21	23	24	25	25	26	26	26	26	25	24	22	21	19	19	19.4	26.3
23-Jul	18	17	15	14	14	14	16	18	20	22	23	24	25	26	26	27	27	28	27	25	20	18	15	15	20.6	27.7
24-Jul	14	13	13	12	12	12	14	17	18	19	19	19	21	20	19	21	20	18	17	17	16	16	16	16	16.7	21.4
25-Jul	16	15	15	15	15	15	14	14	13	14	14	14	15	14	14	15	15	16	16	16	16	15	15	15	14.8	16.0
26-Jul	14	14	14	14	13	13	14	14	15	16	17	18	18	20	21	23	23	24	24	20	17	14	12	11	16.9	24.3
27-Jul	10	10	9	9	9	10	13	15	18	20	21	22	23	24	25	25	25	25	24	24	22	17	15	13	17.8	25.1
28-Jul	12	11	11	11	12	12	15	18	18	19	22	24	26	27	27	27	27	27	27	25	22	20	17	16	19.7	27.3
29-Jul	14	14	14	16	15	15	16	18	23	24	25	27	28	29	29	30	30	30	29	26	22	20	18	18	22.0	29.8
30-Jul	17	17	16	17	17	17	18	20	22	23	25	27	28	29	29	29	28	28	27	25	22	20	18	16	22.2	29.3
31-Jul	14	14	12	12	13	14	15	18	21	22	21	21	22	20	21	23	25	25	25	23	20	17	15	14	18.7	25.3
13.5 12.8 12.3 12.0 11.9 12.7 14.5 16.5 18.3 19.5 20.7 21.8 22.8 23.4 23.8 24.3 24.3 23.9 23.3 22.0 19.8 17.4 15.5 14.4																								Diurnal Average		
20.3 18.1 17.7 17.3 16.9 17.0 18.5 20.4 22.5 24.3 25.4 27.3 28.8 30.0 30.7 30.6 30.6 30.1 29.6 27.3 25.4 23.9 21.8 20.2																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C

Falher - July 2014



Hourly Averages

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

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	3	6	7	8	2	3	3	4	8	8	8	5	4	5	4	6	5	8	9	9	10	10	9	8	3.3	9.9
Dir	43	135	154	40	31	195	90	132	175	154	154	194	225	279	202	110	64	52	44	48	51	54	72	63	91	51
2 Spd	8	8	9	12	11	12	16	15	19	21	22	26	27	29	29	30	30	29	26	24	26	19	11	13	19.3	30.2
Dir	63	66	66	82	89	99	100	104	99	100	101	111	107	99	103	102	103	101	100	98	99	103	105	117	100	103
3 Spd	9	10	7	2	8	4	2	7	4	5	7	8	10	6	6	11	22	18	13	18	14	5	11	12	4.9	22.2
Dir	112	257	274	212	78	59	31	81	187	176	187	202	216	254	255	265	274	300	274	238	189	197	173	172	230	274
4 Spd	12	14	11	12	15	20	20	21	25	28	26	25	28	29	24	22	25	24	23	15	9	12	13	13	17.9	28.7
Dir	180	179	191	200	215	217	223	229	231	232	238	237	236	237	237	235	239	239	249	250	240	175	167	168	225	237
5 Spd	12	8	10	11	10	9	8	11	14	14	15	18	17	15	15	14	11	8	7	6	6	10	12	13	10.8	17.8
Dir	180	167	188	195	208	197	193	207	221	228	228	214	217	220	238	228	207	230	243	243	224	193	210	206	213	214
6 Spd	11	8	7	6	8	8	10	16	22	20	17	16	19	22	23	22	18	19	20	14	11	9	8	7	12.5	22.5
Dir	228	225	237	224	166	217	234	245	263	267	264	270	275	267	269	278	294	299	301	308	291	288	304	248	269	269
7 Spd	4	3	6	6	6	3	2	7	7	7	8	9	7	9	12	8	9	8	2	4	9	11	11	12	3.6	12.2
Dir	252	110	167	153	191	216	183	244	264	248	261	262	265	262	256	250	229	230	256	147	109	119	113	117	213	256
8 Spd	9	10	11	13	9	7	9	9	10	11	9	8	6	7	11	12	13	13	11	11	11	13	13	13	7.8	13.4
Dir	109	111	96	96	89	92	101	109	144	144	179	198	198	205	214	207	200	196	164	168	168	162	172	183	156	96
9 Spd	13	11	8	9	7	6	7	13	19	15	23	27	27	29	33	29	24	33	24	15	12	6	3	13	13.3	33.3
Dir	189	190	175	132	156	171	210	250	242	229	240	252	250	267	281	276	271	290	292	281	280	289	272	170	255	281
10 Spd	14	13	14	16	15	14	17	22	24	25	24	22	26	24	22	20	19	12	11	4	9	10	10	9	13.0	25.7
Dir	168	177	203	238	252	228	229	253	261	261	262	269	280	291	300	306	308	294	292	245	216	210	202	183	257	280
11 Spd	10	8	7	8	10	7	6	9	14	13	10	8	9	9	10	8	10	7	7	6	7	11	14	11	6.1	13.6
Dir	175	161	150	143	137	140	134	152	186	195	209	237	256	251	282	273	275	252	251	209	176	153	157	150	191	157
12 Spd	6	4	8	8	10	10	10	12	13	12	10	7	6	5	6	6	4	3	7	8	10	13	12	12	7.0	13.4
Dir	138	143	82	77	94	95	103	114	141	151	171	149	164	167	191	203	197	82	110	95	99	107	107	96	122	141
13 Spd	11	12	13	13	13	11	13	13	14	14	14	14	14	13	14	16	15	13	14	13	12	12	11	12	12.3	16.1
Dir	95	92	98	95	99	100	105	125	142	150	149	146	141	147	131	110	109	109	104	106	106	99	104	111	116	110
14 Spd	14	15	14	12	11	12	14	14	15	18	17	18	19	19	20	15	10	13	12	14	9	12	12	12	13.4	19.7
Dir	104	102	103	99	95	99	111	118	138	143	137	152	151	147	154	147	127	114	109	114	117	97	103	107	123	154
15 Spd	11	13	11	11	10	10	8	9	13	12	9	10	9	9	7	6	3	5	2	1	5	5	9	8	5.5	13.1
Dir	105	104	100	96	101	106	116	133	148	160	190	209	213	222	225	214	211	208	214	157	246	236	142	148	152	104
16 Spd	5	6	6	2	3	9	10	13	20	23	25	20	15	14	9	8	7	5	3	3	9	11	10	7	6.0	25.1
Dir	128	45	108	95	267	327	353	346	359	1	358	0	337	334	340	328	326	345	352	81	132	159	154	127	0	358
17 Spd	8	10	9	8	6	5	4	5	14	9	8	11	10	2	2	7	10	14	5	9	12	11	8	8	0.8	14.4
Dir	128	103	104	69	63	352	17	24	30	43	90	137	114	341	240	258	247	280	295	222	225	223	233	222	163	280
18 Spd	7	7	7	8	7	9	8	8	8	12	13	14	12	11	13	11	4	6	7	8	11	10	12	11	7.8	13.9
Dir	235	170	172	165	171	163	167	154	167	157	146	149	168	214	258	255	225	194	151	146	160	160	170	177	175	149
19 Spd	13	15	21	20	16	15	18	21	21	25	31	27	25	26	26	25	21	18	14	8	8	6	7	6	15.9	31.5
Dir	190	202	214	219	220	225	227	254	262	259	263	274	271	276	277	277	281	302	294	270	290	252	274	252	257	263
20 Spd	6	6	6	5	3	7	7	8	9	10	7	6	4	4	4	7	10	9	7	2	6	8	9	7	3.7	10.4
Dir	258	245	243	255	206	213	232	243	247	268	356	110	252	217	209	211	233	229	211	224	46	88	136	138	223	233
21 Spd	8	7	7	8	6	8	7	7	8	10	13	12	10	9	7	10	6	8	7	12	10	11	11	13	7.2	13.0
Dir	155	146	135	139	131	125	139	162	185	193	190	199	187	204	183	193	214	198	169	132	127	123	95	94	159	190
22 Spd	11	12	12	11	11	10	13	16	17	16	16	17	19	22	24	24	27	27	27	23	22	20	17	18	17.8	27.1
Dir	98	94	98	97	91	97	100	110	109	114	123	119	114	103	104	113	106	100	103	107	100	102	104	103	105	103

Hourly Averages

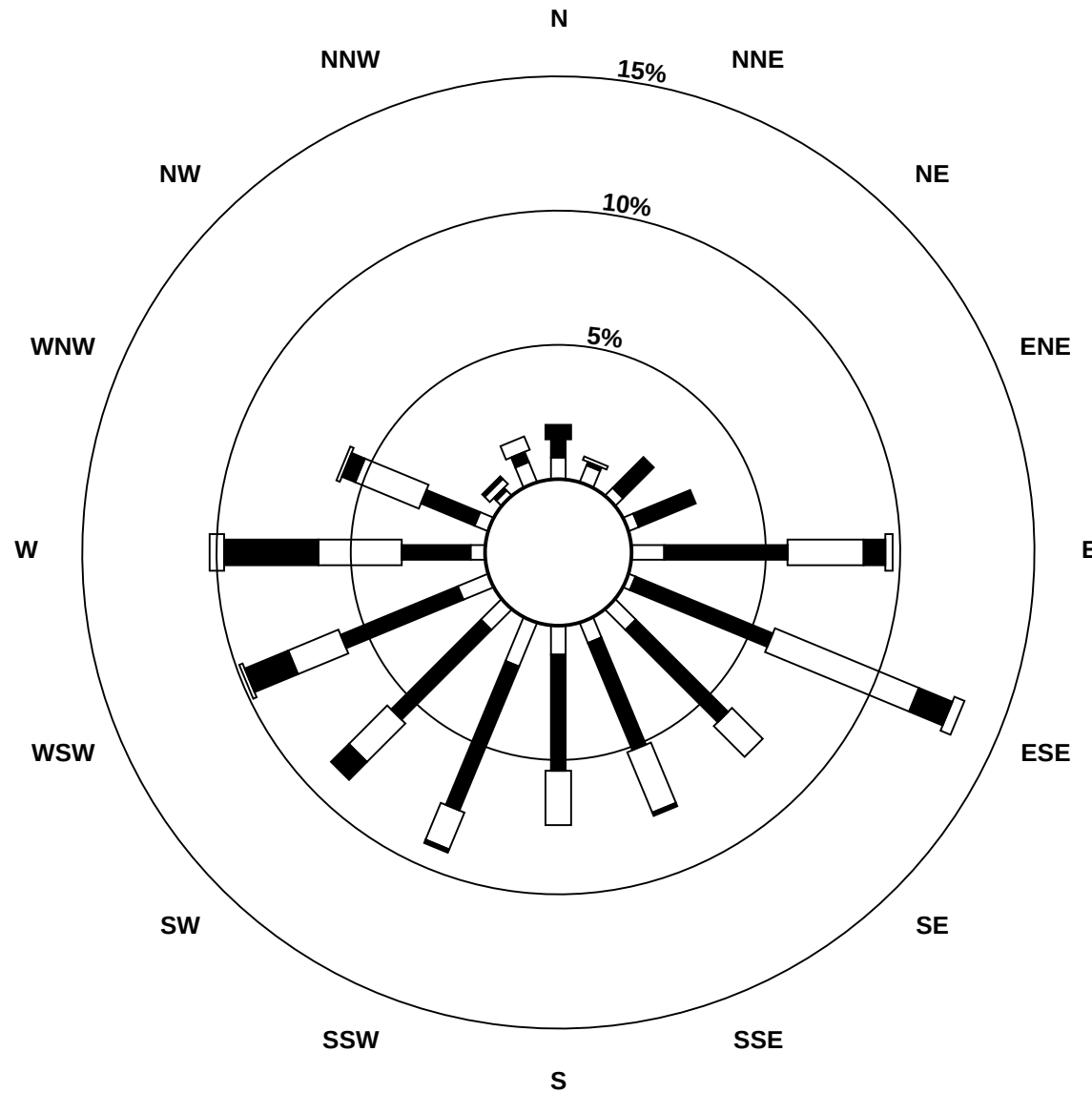
Wind Speed (km/h)
Wind Direction (deg)
Falher - July 2014

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	16	13	11	11	11	10	11	13	9	7	3	4	4	5	8	7	5	1	4	7	16	9	9	8	4.1	15.7								
Dir	100	100	91	99	102	99	101	114	154	183	129	67	151	180	240	266	292	65	179	24	327	2	68	72	98	327								
24 Spd	7	5	6	5	6	5	4	4	6	6	12	10	12	17	13	16	15	10	14	19	17	11	15	13	6.9	18.7								
Dir	79	93	39	355	301	345	15	42	53	197	206	248	247	265	294	265	273	278	298	302	290	278	281	271	282	302								
25 Spd	10	15	18	14	15	17	19	18	22	23	24	23	26	20	20	19	17	16	15	15	13	6	6	3	16.4	26.2								
Dir	254	249	258	261	267	269	269	260	264	268	268	266	274	265	258	260	261	262	259	259	257	267	273	288	264	274								
26 Spd	6	6	7	7	6	4	7	7	8	10	10	11	7	7	5	8	4	1	5	12	11	11	11	8	4.7	12.2								
Dir	242	208	209	230	218	217	211	208	212	225	238	226	202	210	196	238	133	350	261	111	111	112	107	119	193	111								
27 Spd	9	8	9	8	8	9	8	8	9	11	9	10	11	10	8	9	7	7	8	5	6	8	8	8	5.3	11.4								
Dir	108	121	126	125	126	137	173	195	221	241	238	228	230	233	238	227	223	205	201	199	169	124	95	102	184	230								
28 Spd	9	11	7	9	10	7	5	9	9	7	6	3	1	4	2	3	5	4	4	5	6	6	7	6	4.2	10.6								
Dir	117	128	109	126	114	119	144	176	185	203	175	181	331	332	163	110	140	159	97	81	74	78	53	69	125	128								
29 Spd	7	6	9	10	3	4	4	5	2	6	9	13	13	14	16	14	12	7	9	10	12	11	9	10	7.6	15.5								
Dir	103	76	102	62	238	236	93	316	322	138	107	101	109	117	124	111	118	132	110	107	104	102	75	83	105	124								
30 Spd	11	9	11	12	13	9	6	11	11	13	15	17	17	16	16	17	18	19	13	10	9	8	8	1	5.8	18.9								
Dir	93	94	87	96	102	118	144	202	261	265	277	291	286	290	285	282	290	295	292	288	298	296	296	314	284	295								
31 Spd	5	3	1	7	8	8	9	11	16	11	4	7	8	4	4	4	1	3	3	6	6	2	10	11	2.8	16.0								
Dir	131	86	338	201	216	298	303	303	292	302	224	231	278	295	6	177	291	10	181	177	173	47	359	9	285	292								
Spd	5.7	5.4	4.8	4.3	4.0	3.2	3.5	4.1	5.6	6.4	6.5	6.5	6.7	6.5	6.2	6.0	4.8	3.6	2.2	2.1	2.8	4.4	4.5	5.6	Diurnal Average									
Dir	140	140	141	135	145	158	164	193	213	215	218	219	228	240	244	239	244	256	240	170	152	137	134	137	Diurnal Maximum									
Spd	15.6	15.2	21.0	20.4	16.1	19.9	20.2	21.7	24.8	28.2	31.5	27.1	28.3	29.1	33.3	29.5	30.2	32.8	27.1	23.8	26.3	19.7	17.5	17.9	Diurnal Maximum									
Dir	100	202	214	219	220	217	223	253	231	232	263	252	236	99	281	102	103	290	103	98	99	102	104	103										
Maximum Speed Value: 33 km/h on Jul 9 15:00																									Minimum Speed Value: 1 km/h on Jul 23 18:00									
Maximum Daily Speed Average: 19.3 km/h on Jul 2																									Minimum Daily Speed Average: 0.8 km/h on Jul 28									
Maximum Diurnal Speed Average: 6.7 km/h at hour 13																									Minimum Diurnal Speed Average: 2.1 km/h at hour 20									
Monthly Average Velocity: 3.48 km/h 192.0 deg																									Speed Percentiles: P ₁ = 1.6 P ₁₀ = 4.6 Q ₁ = 7.0 Median = 9.9 Q ₃ = 13.6 P ₉₀ = 20.1 P ₉₉ = 29.0									
All monthly, daily, and diurnal averages have been calculated using vector methods																									Percent Operational Time: 100.0									
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	9	8	2	4	0	0	23																											
NorthEast	9	20	1	0	0	0	30																											
East	10	65	60	16	5	0	156																											
SouthEast	10	61	39	4	0	0	114																											
South	13	68	30	0	0	0	111																											
SouthWest	17	77	29	13	3	0	139																											
West	10	40	43	36	5	0	134																											
NorthWest	5	12	16	4	0	0	37																											
Total	83	351	220	77	13	0	744																											

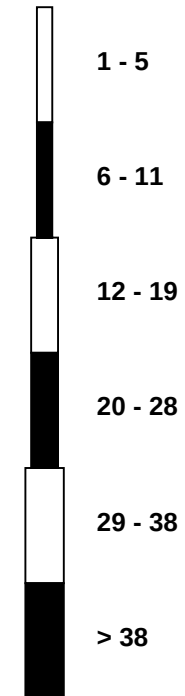
Wind Rose

Wind Speed (WS) (km/h)

Falher - July 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Falher - July 2014

Maximum Speed: 34 km/h on Jul 9 15:00																				Maximum Daily Speed Average: 19.7 km/h on Jul 2										Hours in Service: 744	
Minimum Speed: 2 km/h on Jul 15 20:00																				Minimum Daily Speed Average: 6.9 km/h on Jul 28										Hours of Data: 744	
Maximum Diurnal Speed Average: 14.3 km/h at hour 13																				Minimum Diurnal Speed Average: 9.2 km/h at hour 6										Hours of Missing Data: 0	
Monthly Average Speed: 11.66 km/h																				Percentiles: P ₁ = 3.2 P ₁₀ = 6.0 Q ₁ = 7.6 Median = 10.3 Q ₃ = 13.8 P ₉₀ = 20.1 P ₉₉ = 29.2										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-Jul	4	7	7	8	4	3	4	5	9	8	8	6	5	6	6	7	6	8	9	9	10	10	9	8	6.9	9.9					
2-Jul	8	8	9	12	11	12	16	15	19	21	22	26	27	29	29	30	30	29	26	24	26	20	12	13	19.7	30.3					
3-Jul	10	11	8	4	9	7	5	8	5	5	8	9	10	8	6	12	23	18	14	19	19	10	11	12	10.4	22.7					
4-Jul	13	14	11	12	15	20	20	21	25	28	27	26	29	29	24	22	25	24	23	15	10	12	13	13	19.6	29.0					
5-Jul	12	8	10	11	10	9	8	11	14	14	16	18	17	16	16	14	11	9	7	6	6	10	12	13	11.5	18.0					
6-Jul	11	8	7	6	9	9	10	16	22	20	18	16	20	22	23	22	19	20	20	14	11	10	8	7	14.4	23.0					
7-Jul	5	4	6	7	6	4	3	7	8	7	8	10	8	10	13	9	10	9	2	5	9	11	11	12	7.7	13.0					
8-Jul	9	10	11	13	9	7	9	9	11	11	10	8	7	8	12	13	13	13	11	11	11	13	13	13	10.6	13.4					
9-Jul	14	12	9	9	7	6	8	13	19	15	23	27	27	29	34	29	25	33	25	15	13	7	4	13	17.3	33.6					
10-Jul	14	13	14	16	15	14	17	22	24	25	24	22	26	24	22	20	19	13	11	5	9	10	10	9	16.6	25.7					
11-Jul	10	8	7	8	10	7	6	9	14	13	10	9	9	10	11	9	10	7	7	6	7	11	14	11	9.3	13.8					
12-Jul	6	4	8	8	10	10	10	12	14	12	11	8	7	7	7	7	5	4	7	8	10	13	13	12	8.8	13.8					
13-Jul	11	12	13	13	13	11	13	13	15	14	14	14	14	14	14	16	15	13	14	13	12	12	11	12	13.2	16.2					
14-Jul	14	15	14	12	11	12	14	14	16	18	18	18	19	20	20	15	10	13	12	14	9	12	12	12	14.3	19.9					
15-Jul	11	13	11	11	10	10	9	9	13	12	9	10	10	9	8	7	3	5	3	2	5	5	9	8	8.5	13.2					
16-Jul	5	7	7	6	5	9	10	13	20	23	25	20	15	14	9	9	8	5	3	4	9	11	10	7	10.7	25.3					
17-Jul	8	10	10	9	7	8	7	8	14	9	10	11	10	3	5	8	11	16	6	9	13	11	8	8	9.1	15.9					
18-Jul	7	7	7	9	7	9	8	8	9	12	13	14	12	12	13	11	4	6	7	8	11	10	12	11	9.4	14.2					
19-Jul	13	15	21	20	16	15	18	21	21	25	32	27	25	26	26	25	21	18	14	8	9	6	7	6	18.2	31.7					
20-Jul	6	6	6	5	3	7	7	8	9	11	10	8	6	6	6	8	11	9	7	6	6	9	10	8	7.4	10.9					
21-Jul	8	7	7	8	6	8	7	7	8	10	13	13	11	10	9	11	8	8	8	12	10	11	11	13	9.4	13.4					
22-Jul	11	12	12	11	11	10	13	16	18	16	16	18	20	22	24	24	27	27	27	23	22	20	17	18	18.1	27.2					
23-Jul	16	13	11	11	11	10	11	13	10	8	5	5	8	6	9	8	6	3	4	10	16	9	10	8	9.3	15.9					
24-Jul	8	6	7	6	6	6	5	5	7	7	12	12	13	17	14	16	15	10	14	19	17	11	15	13	10.9	19.2					
25-Jul	10	15	18	14	15	17	19	18	22	23	24	24	26	20	20	19	17	16	15	15	13	7	7	3	16.6	26.3					
26-Jul	6	6	7	7	6	4	7	7	8	10	10	11	8	7	7	9	7	8	7	12	11	11	11	8	8.2	12.3					
27-Jul	9	8	9	8	8	9	8	8	9	11	10	11	12	11	10	10	8	8	8	5	6	9	8	8	8.8	12.0					
28-Jul	10	11	7	9	10	7	6	9	10	7	6	5	4	6	6	7	6	5	5	5	6	6	7	6	6.9	10.7					
29-Jul	8	8	10	11	6	6	8	7	3	7	10	13	14	14	16	14	13	8	9	10	12	11	10	10	9.8	16.2					
30-Jul	11	9	11	12	13	10	8	12	11	13	16	18	17	17	17	18	18	19	14	10	9	8	8	4	12.6	19.1					
31-Jul	6	4	4	7	9	8	9	11	16	11	5	8	8	6	4	5	4	4	5	7	6	6	10	11	7.3	16.1					
9.5 9.5 9.7 9.7 9.3 9.2 9.8 11.5 13.6 13.8 14.3 14.3 14.3 14.2 14.2 13.9 13.1 12.5 11.1 10.6 11.1 10.4 10.4 10.0																									Diurnal Average						
15.6 15.4 21.1 20.4 16.1 20.0 20.3 21.9 24.9 28.3 31.7 27.4 28.6 29.3 33.6 29.7 30.3 33.1 27.2 23.8 26.4 19.8 17.5 17.9																									Diurnal Maximum						
All monthly, daily, and diurnal averages have been calculated using scalar methods																															

Hourly Standard Deviations

Wind Direction (WD) - deg

Falher - July 2014

Maximum Value: 91.9 deg on Jul 3 07:00																		Hours in Service: 744							
Minimum Value: 1.3 deg on Jul 13 22:00																		Hours of Data: 744							
Percentiles: P ₁ = 2.3 P ₁₀ = 4.0 Q ₁ = 6.1 Median = 10.8 Q ₃ = 21.5 P ₉₀ = 41.4 P ₉₉ = 82.6																		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-Jul	25	39	22	12	71	31	16	34	15	16	16	43	46	34	60	39	41	10	6	6	4	5	11	5	71.0
2-Jul	6	6	9	3	5	3	2	5	4	4	8	5	7	6	4	5	4	4	3	3	3	20	18	7	20.1
3-Jul	17	33	13	76	29	83	92	39	44	25	25	26	19	55	18	13	13	11	20	11	43	84	12	5	91.9
4-Jul	15	13	22	5	5	7	4	4	7	5	9	8	8	9	10	8	8	8	5	6	15	9	5	9	21.7
5-Jul	4	3	6	3	5	4	6	4	6	9	7	8	11	20	18	16	7	9	7	7	12	3	6	5	20.4
6-Jul	8	8	12	32	34	13	8	12	8	7	12	11	11	10	11	10	15	16	8	6	15	16	9	15	34.1
7-Jul	41	80	28	30	13	75	55	12	17	21	17	17	42	27	21	21	22	29	60	36	8	8	3	7	79.9
8-Jul	3	8	4	4	3	4	4	5	14	8	26	22	31	40	24	16	18	11	10	6	9	4	7	6	40.0
9-Jul	12	11	23	9	9	22	28	5	6	8	8	8	12	10	8	8	11	9	8	8	17	27	39	12	38.6
10-Jul	4	6	8	16	11	5	6	9	4	4	4	9	4	8	5	9	12	14	11	26	8	6	5	7	26.1
11-Jul	2	5	9	7	4	12	9	7	10	11	21	26	16	20	27	22	19	19	12	17	8	11	5	5	27.0
12-Jul	14	26	6	6	9	10	11	5	14	13	16	26	32	43	32	39	57	47	10	7	11	6	7	2	56.9
13-Jul	4	5	3	3	3	4	4	10	10	8	9	11	12	13	19	7	6	4	4	5	3	1	6	4	18.8
14-Jul	2	1	2	4	2	5	3	4	9	6	9	8	9	9	9	5	12	4	3	4	5	3	2	3	11.9
15-Jul	4	3	3	3	3	5	12	7	7	17	17	22	12	13	21	26	46	10	48	69	9	19	8	5	69.2
16-Jul	27	24	40	70	49	8	9	6	7	8	8	8	14	15	19	32	22	35	36	33	7	9	6	14	69.8
17-Jul	19	8	23	26	48	47	56	76	15	19	40	15	23	40	80	26	20	27	26	15	13	10	7	9	79.9
18-Jul	6	15	16	13	16	3	10	10	14	13	13	11	16	21	12	7	26	13	14	8	7	5	8	5	26.0
19-Jul	3	7	3	3	4	3	9	9	6	8	7	6	7	7	7	8	7	17	9	10	33	9	8	9	33.2
20-Jul	5	7	8	11	42	7	10	11	11	18	53	40	48	61	60	38	19	16	18	80	18	26	9	16	80.2
21-Jul	15	9	5	5	12	5	7	19	15	12	13	20	29	43	42	34	50	29	27	13	5	7	9	6	49.6
22-Jul	5	6	5	5	5	10	6	4	7	9	11	14	10	11	12	10	7	7	5	4	3	2	2	3	14.2
23-Jul	3	2	3	4	2	5	4	9	22	36	78	52	70	49	30	29	44	83	50	73	10	15	11	21	83.5
24-Jul	13	25	33	29	18	35	44	43	34	28	14	25	24	16	23	12	10	13	12	13	5	8	8	3	44.2
25-Jul	8	5	5	4	5	4	5	4	4	4	5	4	6	5	6	4	4	4	4	4	4	6	31	33	33.3
26-Jul	13	6	15	10	7	10	5	6	7	7	13	13	12	23	70	34	60	87	47	8	4	2	3	16	87.1
27-Jul	13	8	6	5	13	13	5	14	11	13	21	27	19	24	42	31	41	33	12	9	13	15	6	14	42.2
28-Jul	8	8	6	12	8	11	24	15	15	23	27	59	87	57	88	68	60	49	36	14	8	17	11	24	87.6
29-Jul	32	32	19	50	72	58	64	39	73	22	21	16	14	15	18	15	22	34	9	4	10	7	12	9	73.5
30-Jul	8	15	5	3	2	39	39	25	12	10	11	12	13	13	15	13	7	7	6	5	5	10	10	81	80.8
31-Jul	49	25	61	20	38	24	8	9	6	9	49	26	16	46	34	52	90	60	62	12	23	77	19	4	90.4
48.6 79.9 60.9 75.9 71.9 83.5 91.9 75.7 73.5 35.9 77.7 58.8 86.7 61.1 87.6 68.2 90.4 87.1 61.7 80.2 43.4 84.3 38.6 80.8																									

PAZA

Portable – Clairmont Station
Monthly Summary Tables, Graphs and
Roses

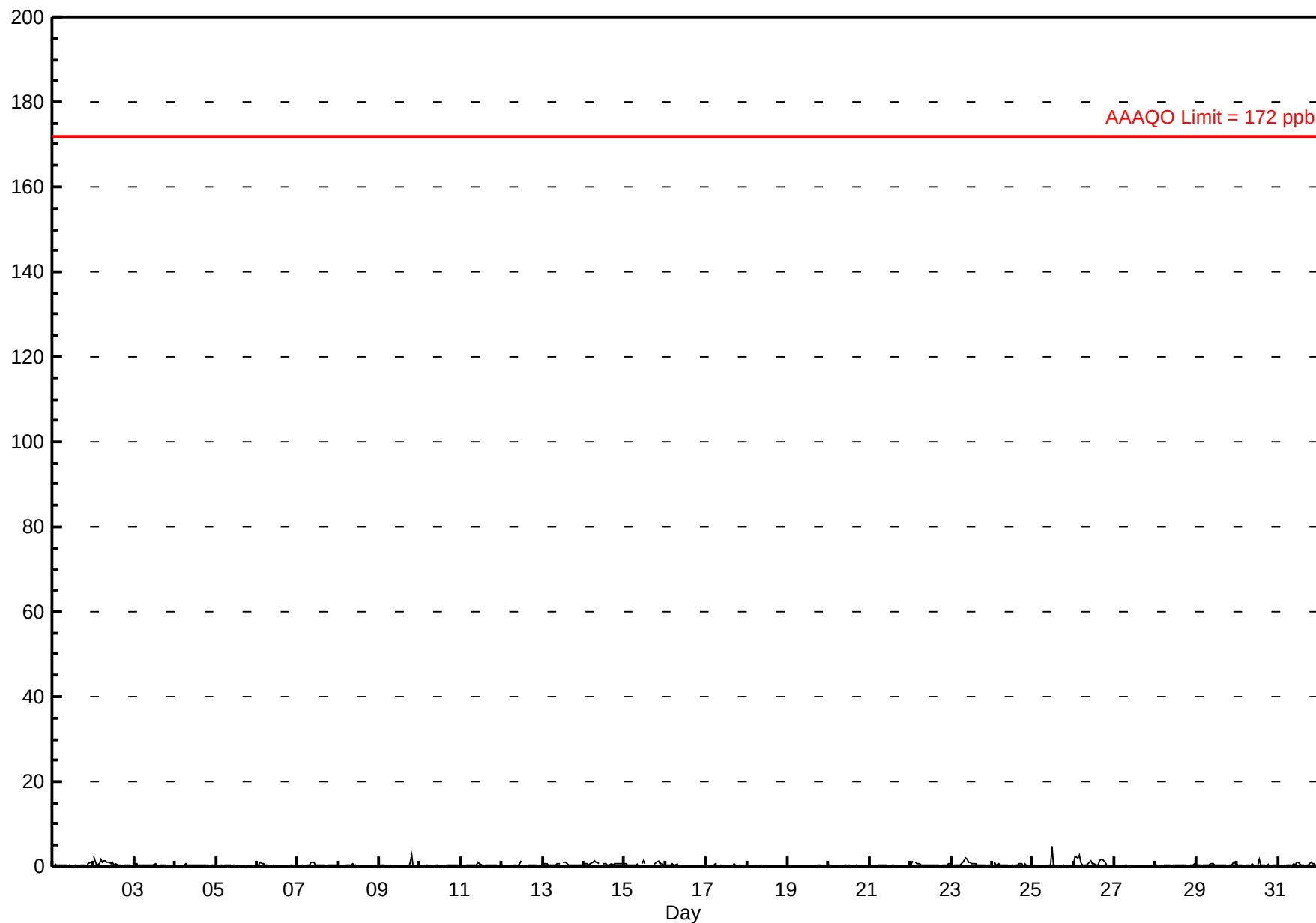
Hourly Averages

Sulphur Dioxide (SO₂) - ppb Portable Clairmont - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.8 ppb on Jul 25 12:00 Maximum Daily Average: 0.9 ppb on Jul 26																				Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 37 Percent Operational Time: 99.9						
Minimum Value: 0 ppb on Jul 5 22:00 Maximum Diurnal Average: 0.5 ppb at hour 12 Monthly Average: 0.33 ppb										Minimum Daily Average: 0.1 ppb on Jul 18 Minimum Diurnal Average: 0.2 ppb at hour 22 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.7 P ₉₉ = 2.1																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0.3	1.0	
2-Jul	2	1	0	1	2	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	A	1	0.7	2.2	
3-Jul	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0	0.3	0.7	
4-Jul	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.5	
5-Jul	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	0.5	
6-Jul	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.2	0.9	
7-Jul	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	1.2	
8-Jul	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.7	
9-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	3	0	0	0	0	0.3	2.6	
10-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.3	
11-Jul	0	0	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0.3	1.2	
12-Jul	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	0	0	0.2	1.2	
13-Jul	0	1	1	0	0	0	0	0	1	1	1	A	1	1	1	0	0	0	0	0	0	0	0	0.4	1.0	
14-Jul	1	1	1	0	1	1	1	1	1	1	A	1	1	1	0	0	1	1	1	1	1	1	1	0.7	1.2	
15-Jul	1	1	0	0	0	0	0	0	1	A	1	1	1	C	C	C	C	1	1	1	1	1	0	0.7	1.4	
16-Jul	0	0	0	0	1	0	0	1	A	0	0	0	0	M	0	0	0	0	0	0	0	0	0	0.2	0.7	
17-Jul	0	0	0	0	0	1	1	A	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.7	
18-Jul	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	
19-Jul	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	
20-Jul	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5	
21-Jul	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
22-Jul	0	1	A	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	1.5	
23-Jul	1	A	0	0	0	0	1	1	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0.6	2.2	
24-Jul	A	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	A	0.3	0.9	
25-Jul	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	A	0	0.4	4.8	
26-Jul	1	2	2	3	1	0	0	0	1	1	1	1	1	0	1	1	2	2	1	0	0	A	0	0.9	2.5	
27-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3	
28-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	0.3	0.8	
29-Jul	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	A	0	0	1	1	0.4	1.0	
30-Jul	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	A	1	0	0	0	0	0.3	1.8	
31-Jul	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	A	0	0	1	1	1	0	0	0.4	0.9
0.3 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.5 0.3 0.3 0.2 0.3 0.3 0.3 0.3 0.4 0.3 0.2 0.3 0.3																								Diurnal Average		
2.2 2.2 2.2 2.5 1.6 1.1 1.3 1.3 2.2 1.5 1.4 4.8 1.0 1.8 0.8 1.2 1.6 1.7 1.1 2.6 1.4 0.8 1.0 0.8																								Diurnal Maximum		
C - Calibration M - Maintenance 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 Clairmont - July 2014



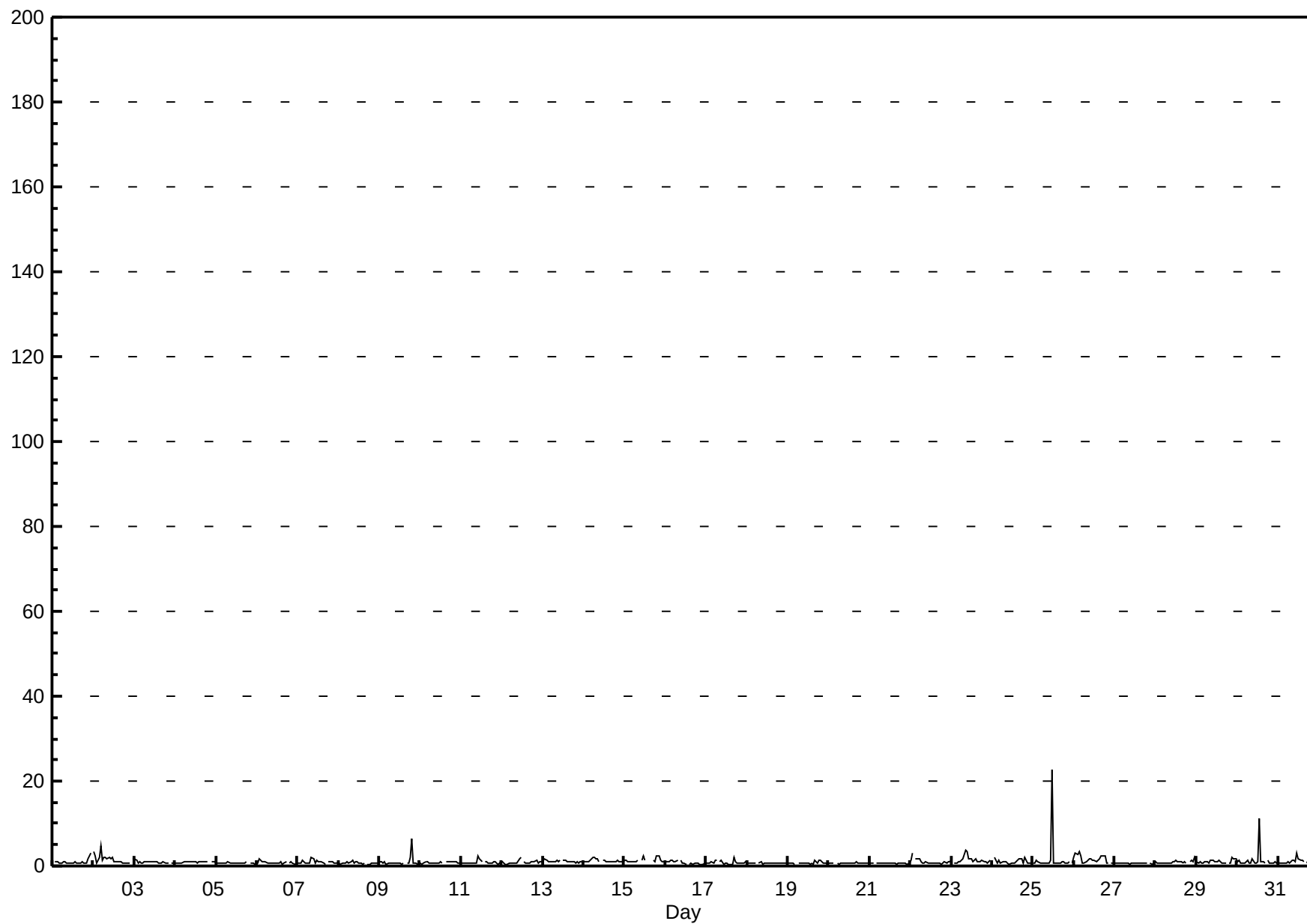
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb Portable Clairmont - July 2014

Maximum Value: 22.8 ppb on Jul 25 12:00																				Maximum Daily Average: 1.8 ppb on Jul 25										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 6 16:00																				Minimum Daily Average: 0.7 ppb on Jul 18										Hours of Data: 706	
Maximum Diurnal Average: 1.8 ppb at hour 12																				Minimum Diurnal Average: 0.8 ppb at hour 22										Hours of Missing Data: 38	
Monthly Average: 1.01 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.6 Q ₁ = 0.7 Median = 0.8 Q ₃ = 1.1 P ₉₀ = 1.5 P ₉₉ = 3.2										Hours of Calibration: 37	
																				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-Jul	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	A	0.9	3.0					
2-Jul	3	3	1	2	5	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	A	2	1.6	4.6					
3-Jul	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.6					
4-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.9	1.1					
5-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0.7	1.2					
6-Jul	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	0	1	0.8	1.6					
7-Jul	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	0	A	1	1	1	1	1	1	0.9	2.2					
8-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	0	1	1	1	1	1	1	0.7	1.5					
9-Jul	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	A	1	1	2	7	1	1	0	1	1.0	6.5					
10-Jul	1	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.8	1.0					
11-Jul	1	1	1	1	1	1	1	1	1	1	2	2	1	A	1	1	1	1	1	1	1	1	0	1	0.9	2.5					
12-Jul	1	1	0	0	1	1	1	1	1	1	2	2	A	1	1	1	1	1	1	1	1	1	1	1	0.9	2.0					
13-Jul	1	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.1	1.5					
14-Jul	1	1	1	1	1	2	2	2	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.0					
15-Jul	1	1	1	1	1	1	1	1	1	A	1	2	1	C	C	C	C	2	1	3	3	1	1	1	1.4	2.5					
16-Jul	1	1	1	1	1	1	1	1	A	1	1	1	0	M	0	1	0	1	1	1	0	0	0	1	0.8	1.4					
17-Jul	1	1	1	1	1	1	1	A	1	1	0	1	1	0	0	0	2	1	1	1	1	1	1	1	0.8	2.1					
18-Jul	1	1	1	1	1	1	A	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0					
19-Jul	1	1	1	1	0	A	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	0	0.7	1.2					
20-Jul	1	1	1	1	A	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	0.9					
21-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	0.7	0.8					
22-Jul	1	3	A	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1.1	3.1					
23-Jul	1	A	1	1	1	1	1	2	4	3	2	2	2	1	2	1	1	1	1	1	1	1	1	1	1.4	3.9					
24-Jul	A	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1	2	2	1	2	1	1	1	A	1.1	2.0					
25-Jul	1	1	1	1	1	1	1	1	1	1	1	23	1	1	1	1	1	1	1	1	1	A	1	1	1.8	22.8					
26-Jul	2	3	3	3	2	1	1	1	1	2	2	1	1	1	1	2	2	2	2	1	1	A	1	1	1.6	3.3					
27-Jul	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1	0	1	0.7	1.0					
28-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	0.9	1.9					
29-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	2	2	2	1.0	1.9					
30-Jul	1	1	1	1	1	1	1	1	1	2	1	1	1	11	1	1	1	A	1	1	1	1	1	1	1.4	11.1					
31-Jul	1	1	1	1	1	1	1	1	1	1	1	3	2	1	1	1	A	1	1	2	1	1	1	1	1.2	2.9					
1.0 1.1 0.9 1.0 1.0 0.9 1.0 0.9 1.1 1.1 1.0 1.8 1.0 1.2 0.9 0.8 0.9 0.9 0.9 1.1 0.9 0.8 0.9 0.9																									Diurnal Average						
3.5 3.1 2.8 3.3 4.6 2.0 2.0 2.0 3.9 3.3 2.5 22.8 1.8 11.1 1.6 1.9 2.3 2.3 2.3 6.5 2.5 1.9 3.0 1.9																									Diurnal Maximum						
C - Calibration					M - Maintenance					A - Automated Daily Zero Span																					

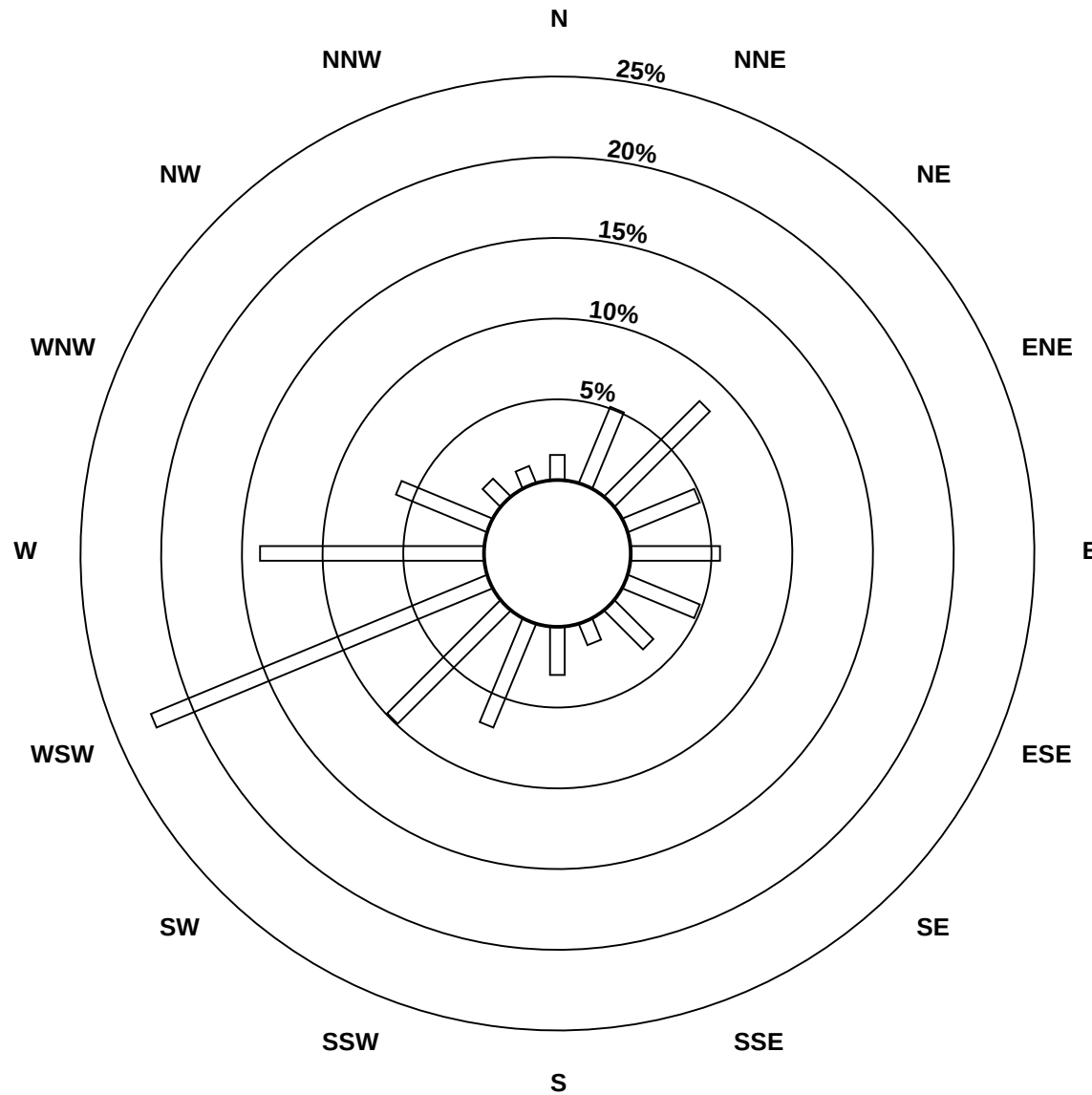
Hourly Maximums

Sulphur Dioxide (SO₂) - ppb
Portable Clairmont - July 2014

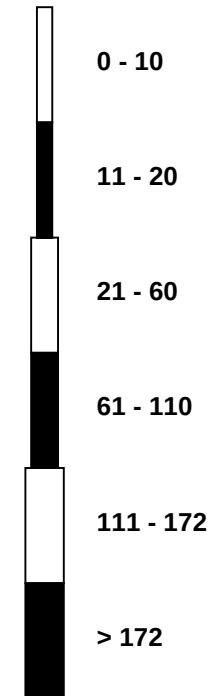


Pollutant Rose

Sulphur Dioxide (SO₂) - ppb
Portable Clairmont - July 2014

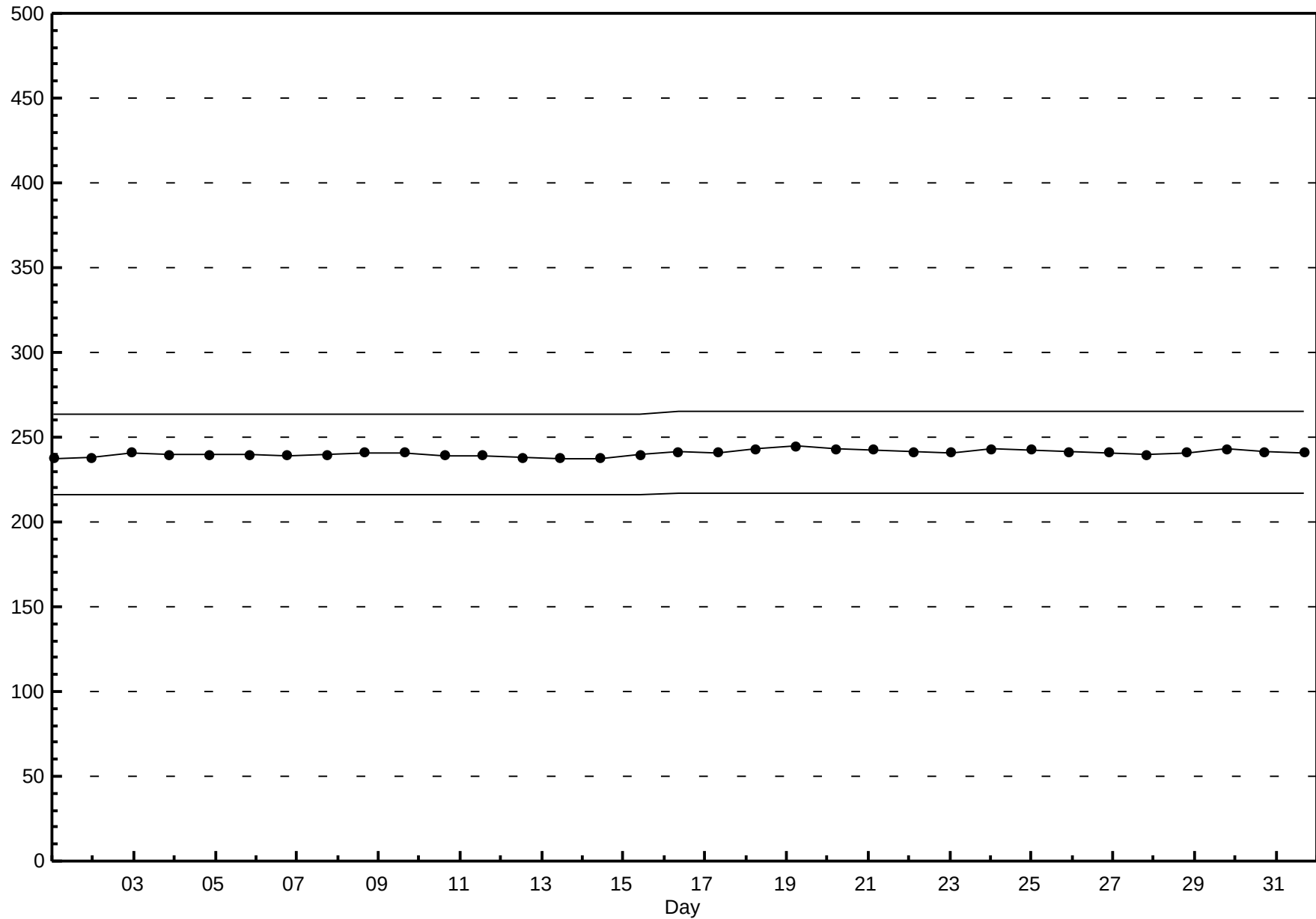


Pollutant Classes (ppb)



Span Responses

Sulphur Dioxide (SO₂)
Portable Clairmont - July 2014



Hourly Averages

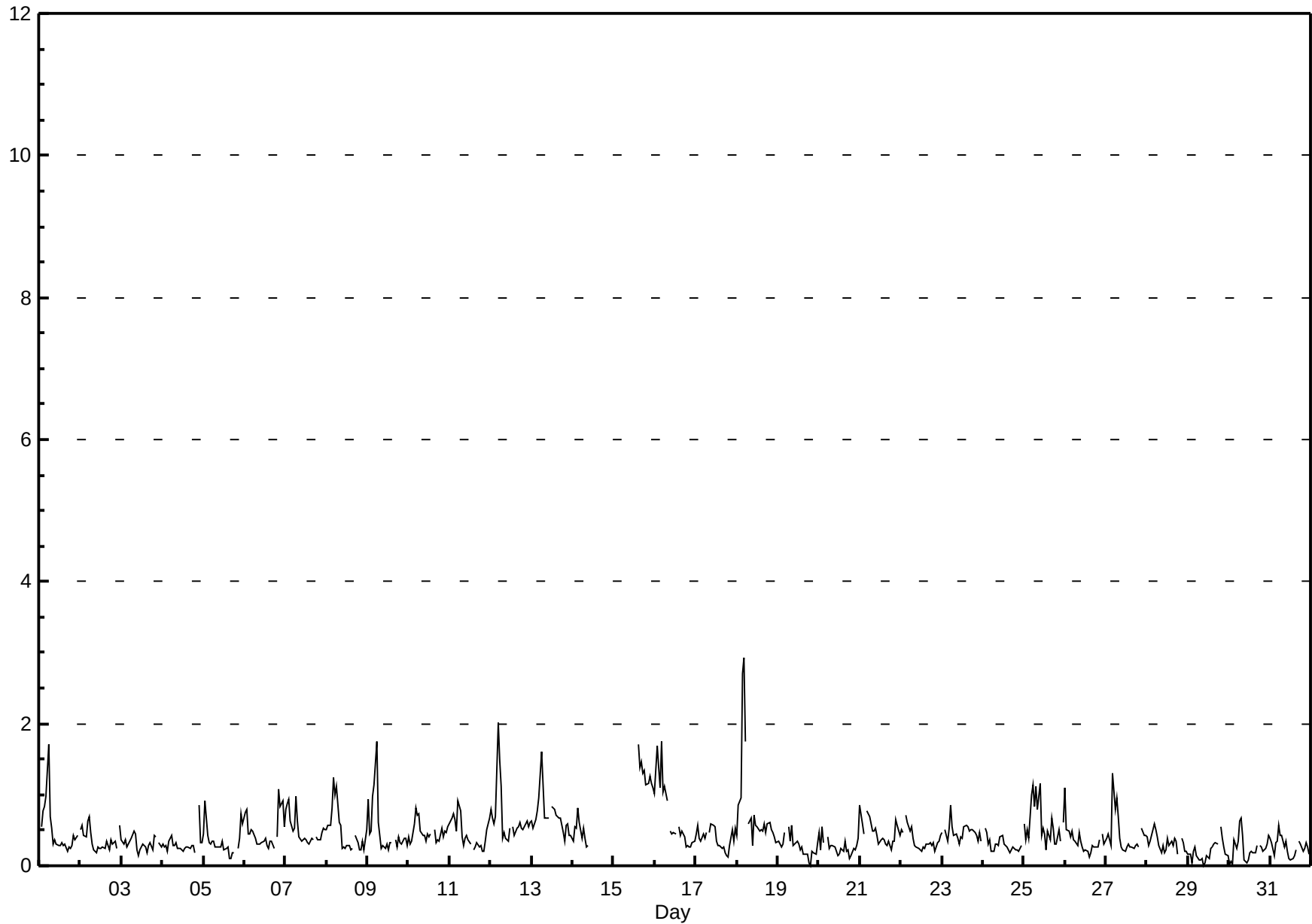
Total Reduced Sulphur (TRS) - ppb

Portable Clairmont - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.9 ppb on Jul 18 05:00 Maximum Daily Average: 0.8 ppb on Jul 18																				Hours in Service: 744 Hours of Data: 684 Hours of Missing Data: 60 Hours of Calibration: 38 Percent Operational Time: 97.0						
Minimum Value: 0 ppb on Jul 19 20:00 Minimum Daily Average: 0.2 ppb on Jul 29 Maximum Diurnal Average: 0.8 ppb at hour 5 Minimum Diurnal Average: 0.3 ppb at hour 13 Monthly Average: 0.45 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.5 P ₉₀ = 0.8 P ₉₉ = 1.7																										
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-Jul	A	1	1	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.5	1.7
2-Jul	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0.4	0.7
3-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.5
4-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0.3	0.9
5-Jul	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	1	1	0.3	0.9
6-Jul	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	0.5	1.1
7-Jul	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	0.5	1.0
8-Jul	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	0.5	1.2
9-Jul	1	0	0	1	1	2	1	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.5	1.8
10-Jul	0	0	0	1	1	1	1	0	0	0	0	0	0	0	A	1	0	0	0	1	0	0	0	1	0.5	0.8
11-Jul	1	1	1	1	0	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	1	1	0.4	0.9
12-Jul	1	1	1	1	2	1	1	0	0	0	0	1	A	1	0	1	1	1	1	1	1	1	1	1	0.7	2.0
13-Jul	1	1	1	1	1	1	2	1	1	1	1	A	1	1	1	1	1	1	0	0	1	1	0	0	0.7	1.6
14-Jul	0	1	1	1	1	0	1	0	0	0	A	M	M	M	M	M	N	N	N	N	N	N	N	N	--	0.8
15-Jul	N	N	N	N	N	N	N	N	C	C	C	C	C	C	2	1	1	1	1	1	1	1	1	1	--	1.7
16-Jul	1	2	1	1	2	1	1	1	A	0	0	0	0	M	1	0	0	0	0	0	0	0	0	0	0.7	1.7
17-Jul	0	1	0	0	0	0	0	A	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0.4	0.6
18-Jul	0	1	1	3	3	2	A	1	1	0	1	1	1	0	1	0	1	0	1	1	1	0	0	0	0.8	2.9
19-Jul	0	0	0	0	0	A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
20-Jul	0	0	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.6
21-Jul	1	1	0	A	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.5	0.8
22-Jul	1	0	A	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
23-Jul	0	A	1	0	1	1	1	0	0	0	0	0	0	1	1	1	0	1	1	0	0	0	0	0	0.5	0.8
24-Jul	A	1	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
25-Jul	1	0	1	0	1	1	1	1	1	1	0	1	0	0	0	0	1	1	0	0	1	0	A	1	0.6	1.2
26-Jul	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.4	1.1
27-Jul	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0.4	1.3
28-Jul	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.3	0.6
29-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0.2	0.5
30-Jul	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.7
31-Jul	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.3	0.6
0.5 0.5 0.5 0.6 0.8 0.8 0.6 0.5 0.4 0.3 0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.3 0.3 0.4 0.4 0.4 0.4																									Diurnal Average	
1.1 1.7 1.4 2.7 2.9 1.8 1.6 1.1 0.8 1.2 0.7 0.6 0.8 0.8 1.7 1.4 1.5 1.3 1.3 1.1 1.2 1.3 1.2 1.1																									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
Portable Clairmont - July 2014



Hourly Maximums

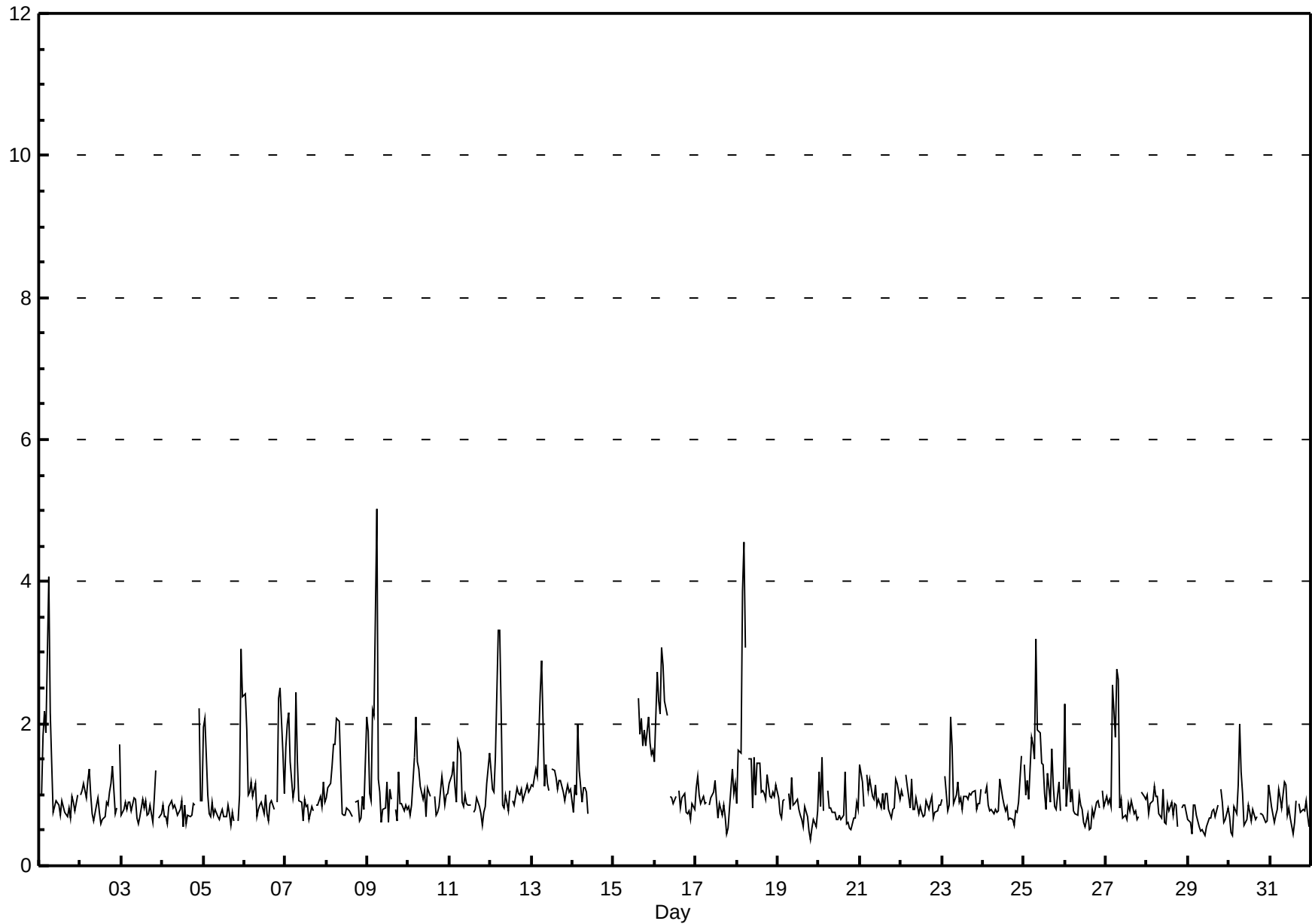
Total Reduced Sulphur (TRS) - ppb

Portable Clairmont - July 2014

Maximum Value: 5.0 ppb on Jul 9 06:00																			Maximum Daily Average: 1.5 ppb on Jul 18										Hours in Service: 744	
Minimum Value: 0 ppb on Jul 19 20:00																			Minimum Daily Average: 0.7 ppb on Jul 29										Hours of Data: 684	
Maximum Diurnal Average: 1.6 ppb at hour 6																			Minimum Diurnal Average: 0.8 ppb at hour 14										Hours of Missing Data: 60	
Monthly Average: 1.04 ppb																			Percentiles: P ₁ = 0.5 P ₁₀ = 0.7 Q ₁ = 0.8 Median = 0.9 Q ₃ = 1.1 P ₉₀ = 1.6 P ₉₉ = 3.2										Hours of Calibration: 38	
																			Percent Operational Time: 97.0											
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-Jul	A	1	2	2	2	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1.2	4.1				
2-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1.0	1.7				
3-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.3				
4-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	2	1	1	0.8	2.2				
5-Jul	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	3	2	1.0	3.0				
6-Jul	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	2	3	2	1	1.2	2.5				
7-Jul	2	2	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.1	2.4				
8-Jul	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1.1	2.1				
9-Jul	2	1	1	2	2	5	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.2	5.0				
10-Jul	1	1	1	2	2	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.1	2.1				
11-Jul	1	1	1	1	1	2	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	2	1.0	1.8				
12-Jul	1	1	1	2	3	3	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.3	3.3				
13-Jul	1	1	1	1	2	2	3	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1.3	2.9				
14-Jul	1	1	1	2	1	1	1	1	1	1	A	M	M	M	M	M	N	N	N	N	N	N	N	N	--	2.0				
15-Jul	N	N	N	N	N	N	N	N	C	C	C	C	C	C	2	2	2	2	2	2	2	2	2	2	--	2.4				
16-Jul	1	3	2	2	3	3	2	2	A	1	1	1	1	M	1	1	1	1	1	1	1	1	1	1	1.4	3.1				
17-Jul	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0.9	1.4				
18-Jul	1	2	2	4	5	3	A	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	4.6				
19-Jul	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0.8	1.2				
20-Jul	1	1	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.5				
21-Jul	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.4				
22-Jul	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3				
23-Jul	1	A	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	2.1				
24-Jul	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	0.9	1.5				
25-Jul	1	1	1	1	2	2	2	3	2	2	1	1	1	1	1	1	2	1	1	1	1	1	A	1	1.3	3.2				
26-Jul	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	2.3				
27-Jul	1	1	1	1	3	2	3	3	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.1	2.8				
28-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.8	1.1				
29-Jul	1	1	0	1	1	1	1	0	1	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	0.7	1.1				
30-Jul	1	0	0	1	1	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	2.0				
31-Jul	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	1	1	1	1	1	1	0.8	1.2				
1.2 1.1 1.1 1.3 1.5 1.6 1.4 1.2 0.9 0.9 0.8 0.9 0.8 0.8 0.9 0.9 0.9 0.9 0.8 0.9 0.9 1.0 1.0 1.1																									Diurnal Average					
2.4 2.7 2.3 3.9 4.6 5.0 2.9 3.2 1.9 1.9 1.5 1.4 1.4 1.4 2.4 1.9 2.1 1.7 1.9 1.7 2.4 2.5 3.0 2.4																									Diurnal Maximum					
C - Calibration				M - Maintenance				N - Not Valid				A - Automated Daily Zero Span																		

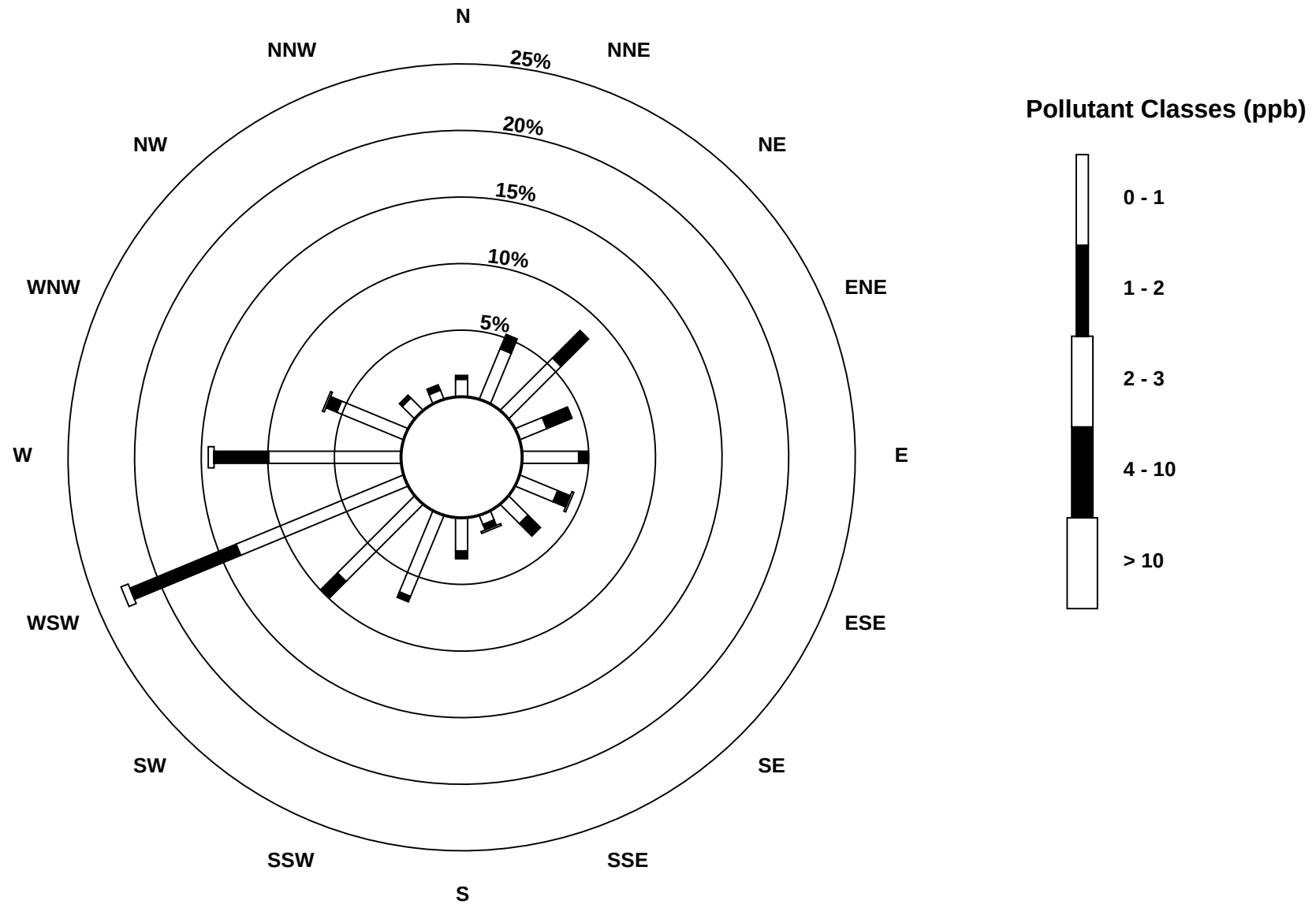
Hourly Maximums

Total Reduced Sulphur (TRS) - ppb
Portable Clairmont - July 2014



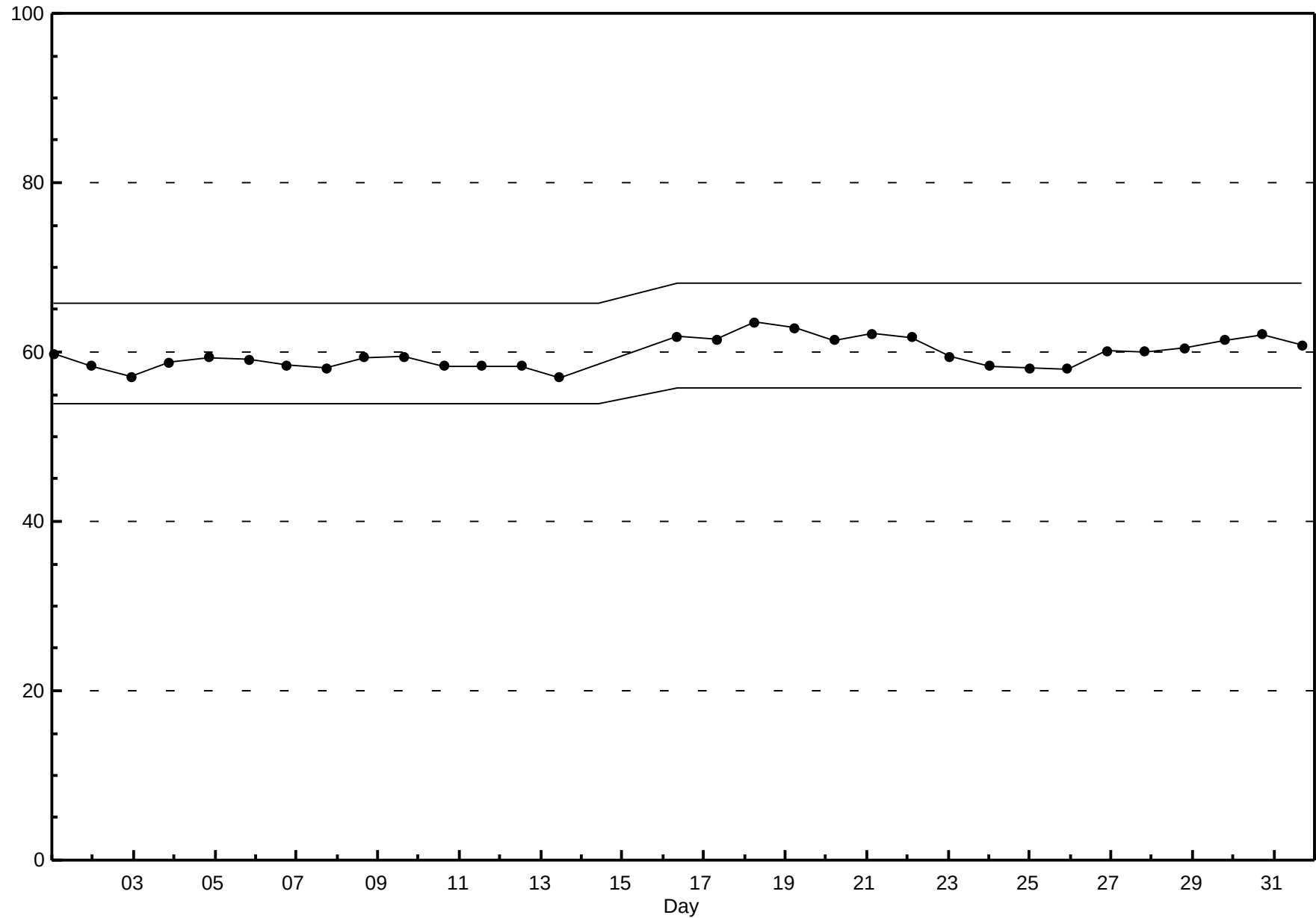
Pollutant Rose

Total Reduced Sulphur (TRS) - ppb
Portable Clairmont - July 2014



Span Responses

Total Reduced Sulphur (TRS)
Portable Clairmont - July 2014



Hourly Averages

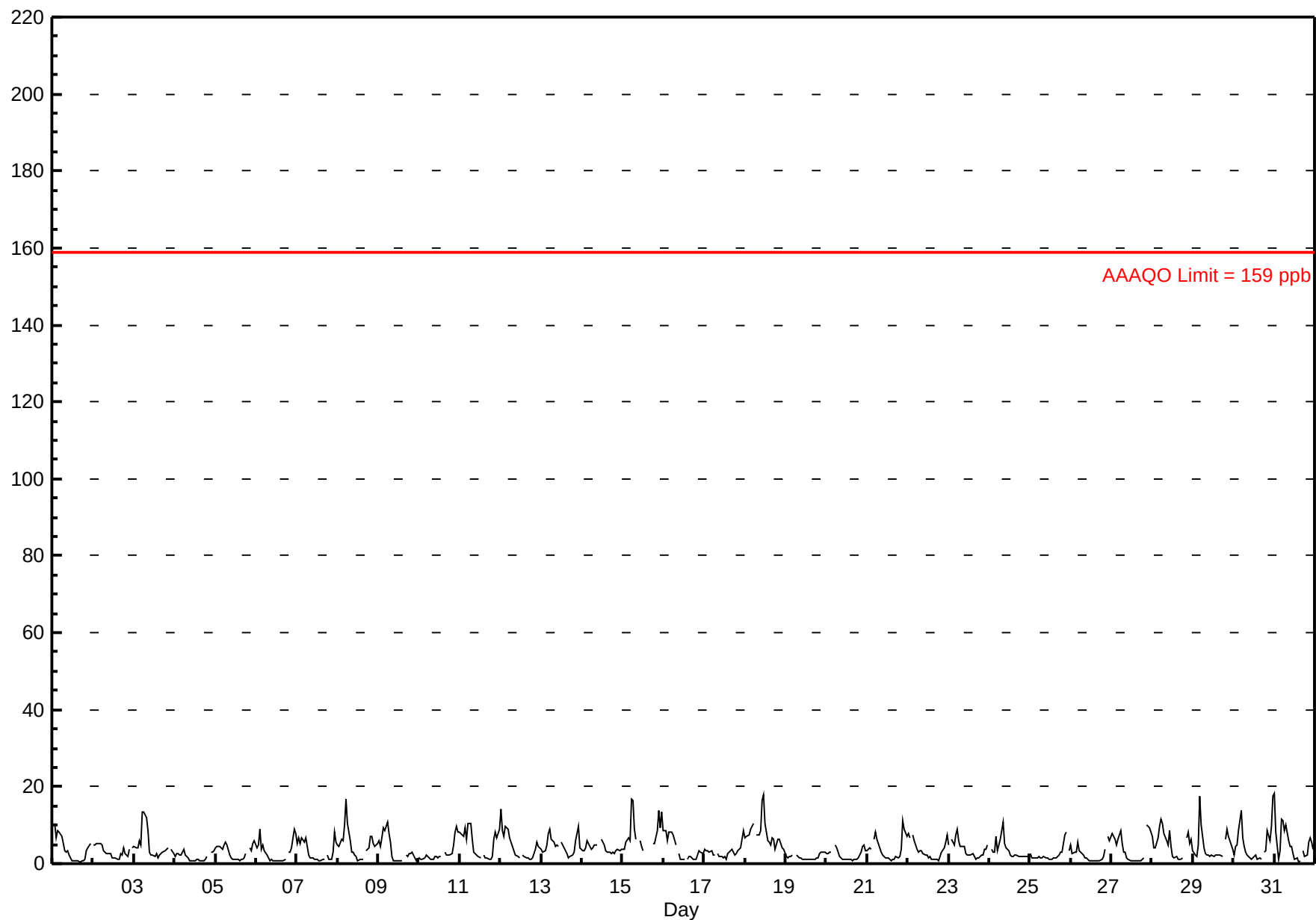
Nitrogen Dioxide (NO₂) - ppb

Portable Clairmont - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 18.1 ppb on Jul 31 01:00 Maximum Daily Average: 8.0 ppb on Jul 15																				Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 38 Percent Operational Time: 99.9						
Minimum Value: 0 ppb on Jul 31 15:00 Minimum Daily Average: 1.7 ppb on Jul 19 Maximum Diurnal Average: 7.5 ppb at hour 6 Minimum Diurnal Average: 1.6 ppb at hour 15 Monthly Average: 3.90 ppb Percentiles: P ₁ = 0.7 P ₁₀ = 1.0 Q ₁ = 1.6 Median = 3.0 Q ₃ = 5.4 P ₉₀ = 8.2 P ₉₉ = 16.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	A	10	7	8	8	7	5	3	3	3	2	1	1	1	1	0	1	1	1	3	4	5	A	3.5	10.3	
2-Jul	5	5	5	5	5	5	3	3	3	3	2	1	1	1	1	3	2	4	2	2	4	A	4	3.2	5.2	
3-Jul	5	4	4	6	5	13	13	12	8	3	2	2	2	3	2	3	3	3	4	4	A	4	3	4.8	13.3	
4-Jul	2	2	3	2	2	4	2	2	1	1	1	1	1	1	1	1	1	1	2	A	3	3	3	1.8	3.7	
5-Jul	4	4	5	4	4	5	5	5	2	1	1	1	1	1	1	1	1	3	A	4	3	5	6	3.0	6.0	
6-Jul	4	5	9	4	5	3	2	1	1	1	1	1	1	1	1	1	1	A	3	3	4	9	8	3.0	9.1	
7-Jul	5	7	5	7	6	7	4	2	2	1	1	1	1	1	1	1	A	2	1	1	3	8	5	3.2	8.0	
8-Jul	5	4	6	6	10	17	11	6	3	3	2	2	1	1	1	A	3	4	7	7	5	5	5	5.0	16.9	
9-Jul	6	4	7	9	8	11	8	5	2	1	1	1	1	1	1	A	2	2	3	2	3	2	1	1	3.5	10.9
10-Jul	2	1	1	2	2	2	2	1	1	2	2	2	2	2	A	3	2	2	2	3	5	8	10	8	2.9	9.6
11-Jul	8	8	7	9	6	10	10	6	3	2	2	2	1	A	2	2	2	1	1	2	6	8	7	9	5.0	10.3
12-Jul	14	9	7	10	9	7	6	4	3	2	2	2	A	2	2	1	1	1	1	2	4	6	4	4	4.5	14.3
13-Jul	4	3	3	5	8	9	6	6	5	5	5	A	5	4	4	3	2	2	2	3	6	8	10	4	4.8	9.8
14-Jul	3	4	4	6	5	4	4	5	5	5	A	6	6	5	4	3	3	2	3	3	3	4	3	4	4.0	6.4
15-Jul	4	4	6	7	6	17	16	9	6	A	6	4	3	C	C	C	C	C	5	5	8	14	9	14	8.0	16.7
16-Jul	9	9	6	8	8	8	7	5	A	2	1	1	1	M	1	2	2	1	1	1	2	3	3	3	3.9	8.6
17-Jul	4	3	3	3	3	2	2	A	2	2	2	1	2	1	3	3	4	3	2	2	3	4	6	9	3.1	8.7
18-Jul	7	7	8	9	10	11	A	8	7	9	17	18	11	6	6	5	7	6	4	6	7	5	4	4	7.7	17.8
19-Jul	2	2	2	2	2	A	2	2	1	2	1	1	1	1	1	1	1	1	1	2	3	3	3	3	1.7	3.0
20-Jul	3	3	3	3	A	5	4	3	2	1	1	1	1	1	1	1	1	1	1	3	5	5	3	2.3	4.7	
21-Jul	3	4	4	A	6	8	6	4	3	2	2	2	1	1	1	1	1	2	2	2	4	11	9	7	3.7	11.0
22-Jul	8	7	A	8	6	4	3	3	3	2	2	2	1	2	1	1	1	1	1	2	3	4	6	7	3.4	7.9
23-Jul	5	A	6	5	7	9	6	5	4	4	3	2	2	2	2	2	1	2	2	2	2	4	4	5	3.8	8.8
24-Jul	A	4	3	3	7	3	6	9	11	5	4	3	2	2	2	2	2	2	2	2	2	2	A	3.6	10.8	
25-Jul	2	2	1	2	1	2	2	1	2	1	1	1	1	1	1	2	2	2	3	3	7	8	A	3	2.3	8.2
26-Jul	5	2	3	3	5	3	3	2	2	1	1	1	1	1	1	1	1	1	2	4	A	7	6	2.5	7.2	
27-Jul	8	7	6	5	6	9	5	3	3	2	1	1	1	1	1	1	1	1	2	A	10	9	8	4.0	10.2	
28-Jul	7	4	4	7	10	12	10	8	6	5	8	5	2	1	2	1	1	1	2	A	7	8	5	6	5.3	11.7
29-Jul	3	2	2	5	18	10	4	3	2	2	2	2	2	2	2	2	2	2	A	6	9	7	6	4	4.3	17.7
30-Jul	2	5	5	8	14	7	4	3	2	2	1	2	2	2	1	2	1	A	3	3	8	6	10	17	4.8	17.4
31-Jul	18	8	1	3	12	11	9	10	6	5	5	2	1	1	0	1	A	3	2	2	5	7	6	4	5.3	18.1
5.4 4.7 4.5 5.4 6.8 7.5 5.8 4.6 3.5 2.7 2.8 2.4 2.0 1.7 1.6 1.7 1.8 1.9 2.2 2.7 4.5 5.6 5.8 5.8																								Diurnal Average		
18.1 10.3 9.1 9.8 17.7 16.9 16.2 11.8 10.8 8.7 16.5 17.8 10.6 5.8 5.5 4.7 6.7 6.3 5.2 7.1 8.8 13.7 9.8 17.4																								Diurnal Maximum		
C - Calibration M - Maintenance A - Automated Daily Zero Span																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																										

Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Portable Clairmont - July 2014



Hourly Maximums

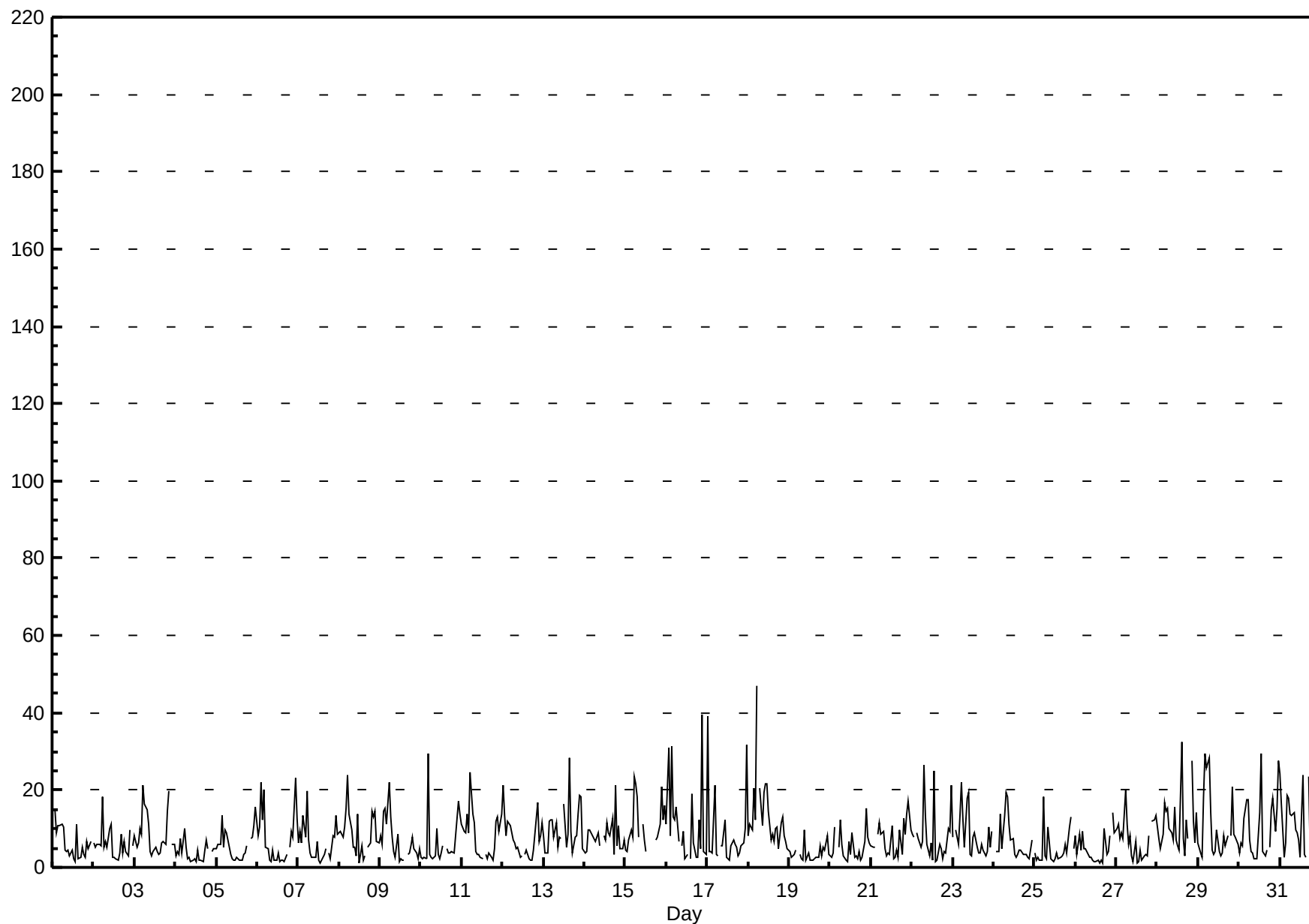
Nitrogen Dioxide (NO₂) - ppb

Portable Clairmont - July 2014

Maximum Value: 46.8 ppb on Jul 18 06:00																					Maximum Daily Average: 13.5 ppb on Jul 18				Hours in Service: 744		
Minimum Value: 1 ppb on Jul 8 13:00																					Minimum Daily Average: 3.6 ppb on Jul 19				Hours of Data: 705		
Maximum Diurnal Average: 15.0 ppb at hour 6																					Minimum Diurnal Average: 4.5 ppb at hour 17				Hours of Missing Data: 39		
Monthly Average: 7.84 ppb																					Percentiles: P ₁ = 1.4 P ₁₀ = 2.1 Q ₁ = 3.3 Median = 5.9 Q ₃ = 10.2 P ₉₀ = 15.8 P ₉₉ = 30.8				Hours of Calibration: 38		
																					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-Jul	A	15	9	11	11	11	10	5	4	4	3	4	2	1	11	2	3	5	3	3	7	5	7	A	6.2	14.9	
2-Jul	6	5	6	6	6	18	5	7	5	10	11	3	2	2	2	4	8	4	7	4	3	10	A	5	6.1	18.4	
3-Jul	8	5	6	10	9	21	16	15	11	4	3	4	5	4	3	4	6	7	6	14	20	A	6	6	8.5	21.1	
4-Jul	3	4	3	8	4	10	5	2	3	1	2	2	2	4	2	2	2	4	7	5	A	4	5	5	3.9	10.1	
5-Jul	5	6	6	14	5	10	9	7	3	2	2	2	3	2	2	2	3	4	6	A	7	8	11	16	5.8	15.5	
6-Jul	8	11	22	12	20	5	5	2	1	5	2	2	4	2	2	2	2	3	A	5	9	8	23	13	7.2	23.0	
7-Jul	6	9	6	13	8	20	7	4	2	3	3	7	2	1	2	3	5	A	4	2	8	8	14	9	6.3	19.7	
8-Jul	9	9	8	10	15	24	14	10	5	5	3	14	1	6	2	3	A	5	6	15	13	15	7	6	8.9	23.8	
9-Jul	8	6	15	15	11	22	13	8	4	3	9	2	2	2	2	A	3	4	6	8	5	4	2	5	6.8	22.0	
10-Jul	3	2	3	2	29	3	3	2	3	10	3	2	4	5	A	5	4	4	4	4	8	13	17	14	6.4	29.4	
11-Jul	11	9	9	14	9	25	14	12	4	3	3	3	2	A	3	2	4	3	2	5	12	13	9	14	8.0	24.6	
12-Jul	21	13	8	12	11	9	7	6	5	5	3	3	A	3	5	2	2	2	5	9	17	7	8	12	7.6	21.4	
13-Jul	8	4	4	12	12	12	8	12	5	8	8	A	17	5	9	28	9	4	8	8	14	19	18	5	10.3	28.5	
14-Jul	4	4	10	10	9	7	7	8	9	6	A	8	7	12	9	8	13	3	21	5	11	5	5	7	8.1	21.1	
15-Jul	5	4	7	10	8	24	21	18	8	A	11	7	4	C	C	C	C	C	7	8	11	21	12	16	11.2	23.5	
16-Jul	11	31	8	31	13	12	16	7	A	5	9	2	3	M	2	19	6	3	3	12	5	39	4	3	11.2	39.4	
17-Jul	39	4	4	4	21	3	3	A	5	6	12	3	2	2	6	7	6	5	3	4	5	6	10	32	8.4	39.2	
18-Jul	8	11	10	20	12	47	A	21	11	20	22	21	14	7	9	7	10	10	5	12	13	8	7	5	13.5	46.8	
19-Jul	4	3	3	3	4	A	3	2	2	10	2	4	2	2	2	2	2	3	6	3	5	4	8	3	3.6	9.7	
20-Jul	3	3	4	10	A	5	12	6	3	2	2	7	3	9	3	3	2	4	2	3	7	15	8	6	5.3	15.1	
21-Jul	5	5	5	A	9	12	9	9	5	3	4	3	11	2	3	4	3	10	3	13	9	14	17	10	7.3	17.2	
22-Jul	9	8	A	9	7	5	7	26	14	6	3	6	2	25	2	2	6	5	2	4	4	10	9	21	8.4	26.4	
23-Jul	8	A	10	6	14	22	13	5	18	19	4	3	8	9	5	4	4	6	4	3	4	10	5	9	8.4	21.8	
24-Jul	A	4	4	4	14	5	13	19	18	11	7	7	3	3	3	5	5	3	3	3	3	2	7	A	6.8	19.2	
25-Jul	4	2	3	2	2	18	3	2	10	2	2	2	2	4	2	3	3	4	6	4	11	13	A	5	4.7	18.3	
26-Jul	8	3	9	5	9	5	5	3	3	3	2	1	1	2	1	2	1	10	3	4	8	A	14	9	4.9	14.1	
27-Jul	10	11	7	9	7	20	11	6	8	3	2	7	1	2	4	2	3	3	3	8	A	12	12	13	7.2	20.0	
28-Jul	10	7	5	9	17	14	15	10	9	7	16	7	6	4	32	8	3	12	7	A	28	12	6	14	11.3	32.3	
29-Jul	6	4	3	18	29	26	28	14	4	3	4	10	4	3	4	8	5	8	A	8	21	9	8	6	10.2	29.4	
30-Jul	4	6	5	13	18	17	7	4	4	2	2	8	14	29	4	3	4	A	5	15	18	10	15	28	10.3	29.3	
31-Jul	24	16	2	6	19	18	14	13	14	10	9	7	3	24	3	3	A	23	3	4	19	12	11	5	11.4	24.3	
9.0 7.6 6.8 10.3 12.1 15.0 10.1 8.9 6.7 6.0 5.5 5.3 4.6 6.3 4.8 5.1 4.5 5.8 5.2 6.7 10.4 10.8 9.9 10.4																								Diurnal Average			
39.2 31.0 21.8 31.3 29.4 46.8 28.3 26.4 18.3 19.6 21.8 21.5 16.5 29.3 32.3 28.5 12.6 23.5 21.1 15.0 27.8 39.4 23.0 31.6																								Diurnal Maximum			
C - Calibration				M - Maintenance				A - Automated Daily Zero Span																			

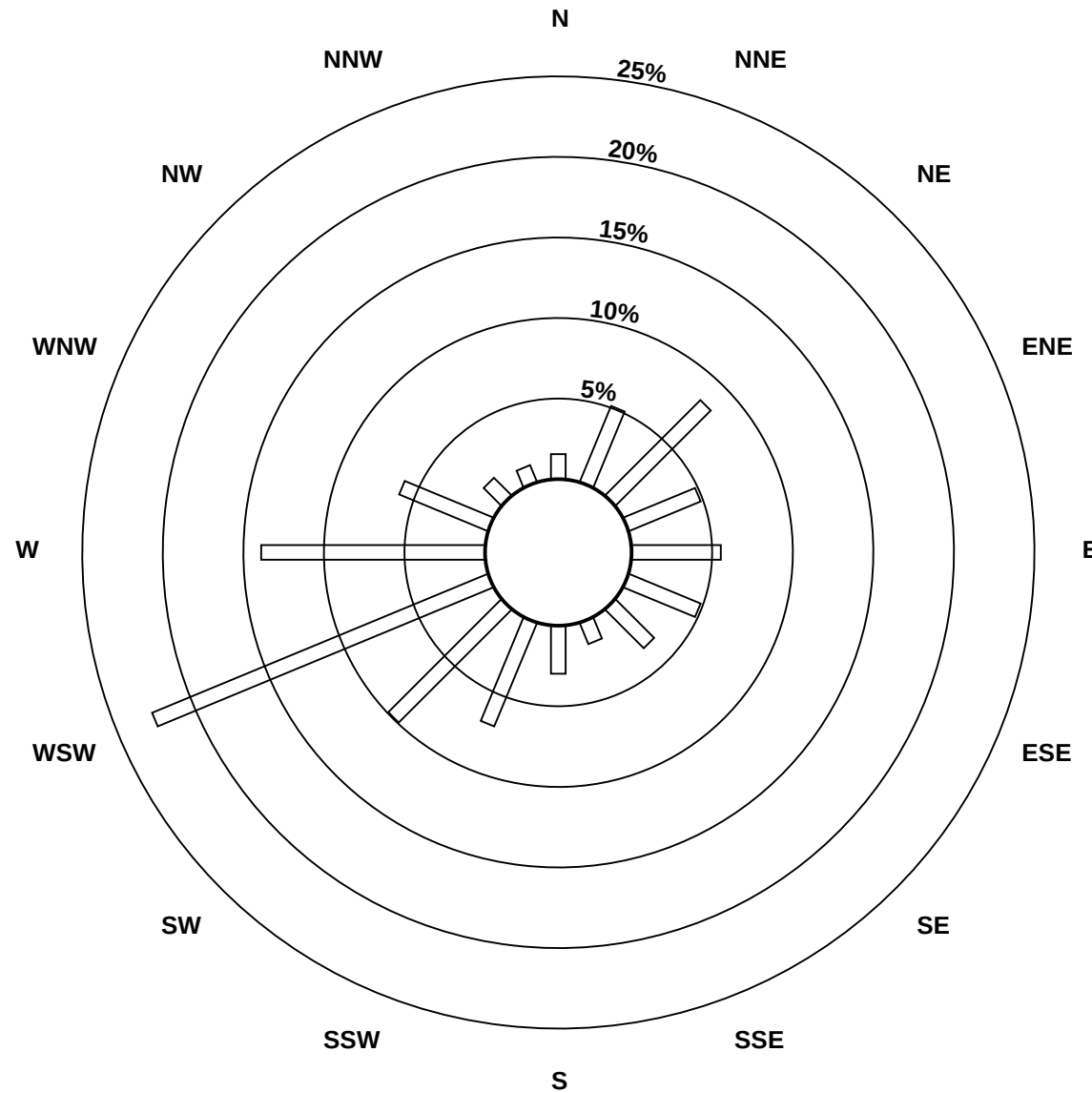
Hourly Maximums

Nitrogen Dioxide (NO₂) - ppb
Portable Clairmont - July 2014

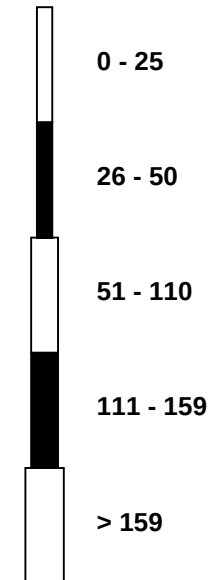


Pollutant Rose

Nitrogen Dioxide (NO₂) - ppb
Portable Clairmont - July 2014

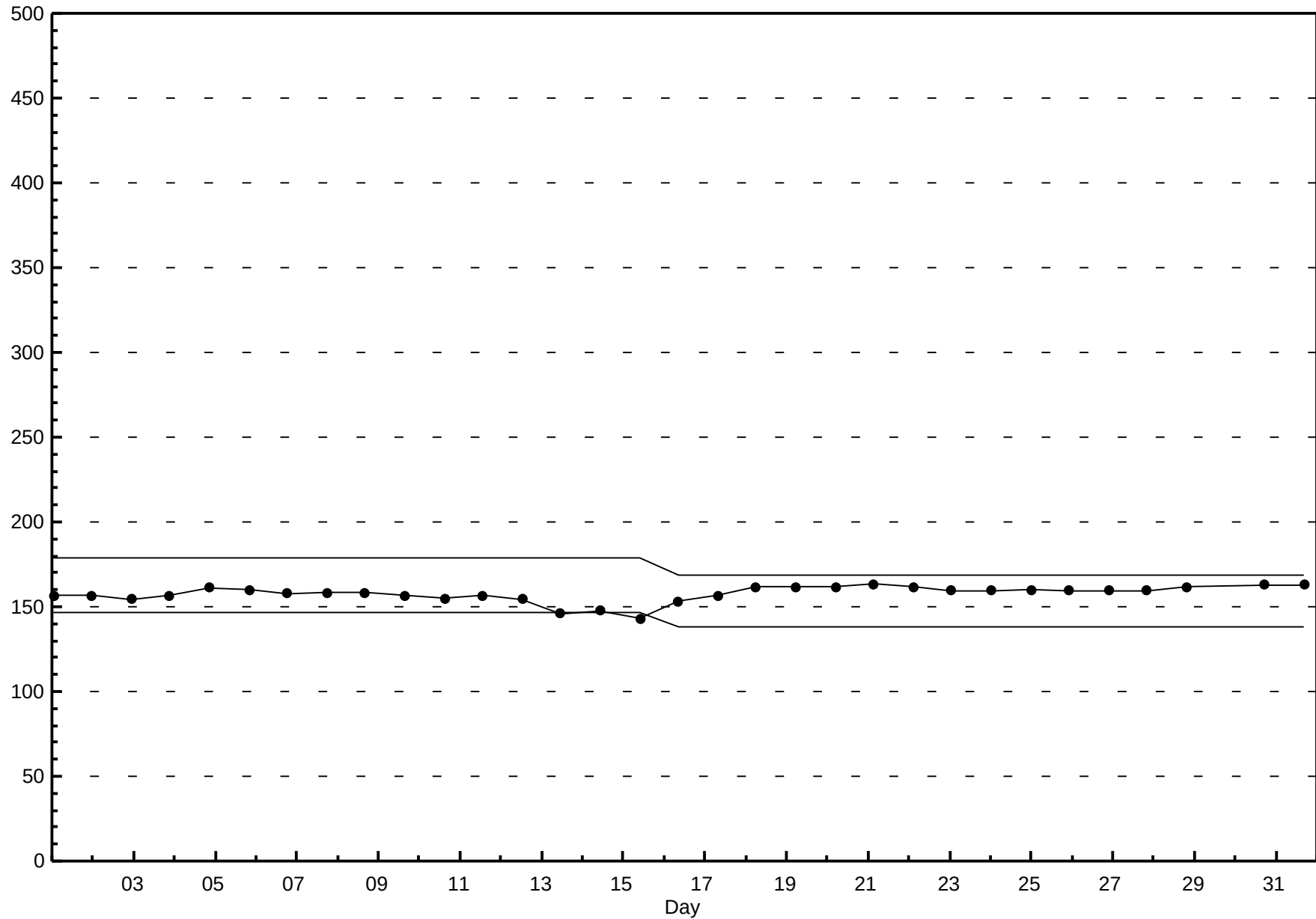


Pollutant Classes (ppb)



Span Responses

Nitrogen Dioxide (NO₂)
Portable Clairmont - July 2014



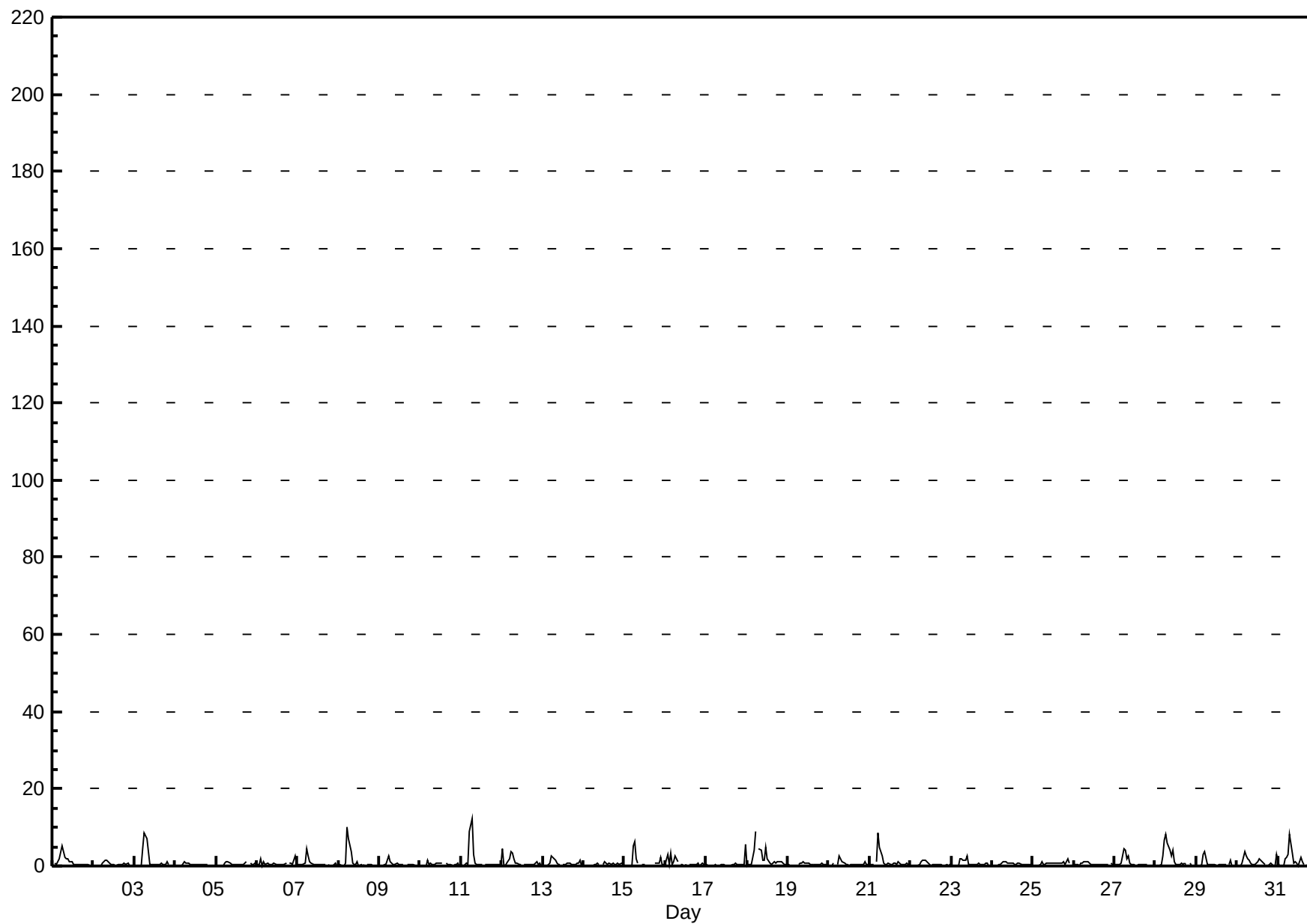
Hourly Averages

Nitrogen Oxide (NO) - ppb Portable Clairmont - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 744						
Maximum Value: 12.4 ppb on Jul 11 07:00 Maximum Daily Average: 1.9 ppb on Jul 18																				Hours of Data: 705						
Minimum Value: 0 ppb on Jul 8 00:00 Minimum Daily Average: 0.4 ppb on Jul 14																				Hours of Missing Data: 39						
Maximum Diurnal Average: 3.1 ppb at hour 6 Minimum Diurnal Average: 0.2 ppb at hour 3																				Hours of Calibration: 38						
Monthly Average: 0.81 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.7 P ₉₀ = 1.8 P ₉₉ = 8.2																				Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	A	1	1	1	2	5	4	2	2	2	1	1	0	0	0	0	1	0	0	0	1	0	0	A	1.2	5.3
2-Jul	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	1	0	1	A	0	0.5
3-Jul	0	0	0	0	0	4	9	7	4	0	0	0	0	0	0	0	1	0	0	1	1	A	0	0	1.3	8.7
4-Jul	0	0	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0	1	0	0	A	0	0	0	0.4	1.0
5-Jul	0	0	0	0	0	1	1	1	1	0	0	0	0	0	1	0	0	1	1	A	1	0	1	1	0.5	1.3
6-Jul	0	0	2	0	1	0	1	0	0	1	1	0	0	0	0	0	0	1	A	1	1	0	2	0	0.6	2.5
7-Jul	0	0	0	1	1	4	3	1	1	1	0	0	0	0	0	0	0	A	1	0	0	0	1	0	0.7	4.3
8-Jul	0	0	0	0	1	10	7	4	1	1	0	1	0	0	0	0	0	A	0	0	0	0	0	0	1.2	10.1
9-Jul	0	0	0	0	0	3	1	1	0	0	1	0	0	0	0	0	A	1	0	0	0	0	0	0	0.5	2.8
10-Jul	0	0	0	0	1	0	1	0	0	1	1	1	1	1	A	1	1	0	0	0	0	0	1	0	0.5	1.5
11-Jul	0	0	0	1	0	9	12	3	1	0	0	0	0	A	0	0	0	0	0	0	0	0	0	1	1.4	12.4
12-Jul	5	0	0	1	2	4	4	2	1	1	0	0	A	0	0	0	0	0	0	0	1	1	1	1	1.0	4.5
13-Jul	0	0	0	0	1	3	2	1	1	0	0	A	0	0	1	1	1	0	0	0	1	1	1	0	0.7	2.8
14-Jul	0	0	0	0	0	0	0	0	1	0	A	0	1	1	0	1	0	1	1	0	1	0	1	0	0.4	0.9
15-Jul	0	0	0	0	0	5	7	2	1	A	1	1	0	C	C	C	C	C	1	1	1	2	1	0	1.2	6.5
16-Jul	0	3	0	3	0	1	2	1	A	0	0	0	0	M	0	0	0	0	0	1	0	1	1	0	0.7	3.3
17-Jul	0	0	0	0	0	0	0	A	0	0	1	0	0	0	0	0	1	1	0	0	0	0	6	0.5	5.7	
18-Jul	0	0	0	2	4	9	A	5	4	2	2	5	2	1	0	1	1	1	1	1	1	1	0	0	1.9	9.1
19-Jul	0	0	0	0	0	A	0	1	1	1	1	1	1	0	1	0	0	0	0	0	1	0	1	0	0.4	1.1
20-Jul	0	0	0	1	A	0	3	2	1	1	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0.6	2.6
21-Jul	0	0	0	A	1	8	5	3	1	0	0	1	1	0	1	1	0	1	1	0	0	0	1	0	1.1	8.4
22-Jul	0	0	A	0	0	1	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.5
23-Jul	0	A	0	0	0	2	2	1	1	3	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0.6	2.6
24-Jul	A	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	A	0.5	1.2
25-Jul	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	2	1	A	0	0.6	2.0
26-Jul	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0.5	1.0
27-Jul	0	1	0	0	1	5	4	2	2	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.9	4.7
28-Jul	0	0	0	0	3	7	8	6	4	2	4	1	0	0	0	1	0	1	0	A	1	0	0	0	1.7	8.3
29-Jul	0	0	0	0	3	4	1	0	0	0	0	0	0	0	0	0	0	0	A	0	1	0	0	0	0.5	3.8
30-Jul	0	0	0	1	4	3	2	2	1	0	0	1	1	2	1	1	0	A	0	0	1	0	0	3	1.0	3.6
31-Jul	1	0	0	0	2	2	3	8	3	1	1	1	0	2	1	0	A	0	0	0	0	0	0	0	1.2	8.1
0.3 0.3 0.2 0.5 1.0 3.1 2.9 2.1 1.3 0.8 0.7 0.6 0.4 0.5 0.4 0.5 0.5 0.5 0.5 0.4 0.6 0.4 0.4 0.5																									Diurnal Average	
4.5 3.0 1.7 3.3 4.1 10.1 12.4 8.1 4.1 2.6 3.9 5.0 1.8 2.1 1.4 0.9 1.3 1.0 1.2 1.1 2.0 2.1 2.5 5.7																									Diurnal Maximum	
C - Calibration				M - Maintenance				A - Automated Daily Zero Span																		

Hourly Averages

Nitrogen Oxide (NO) - ppb
Portable Clairmont - July 2014



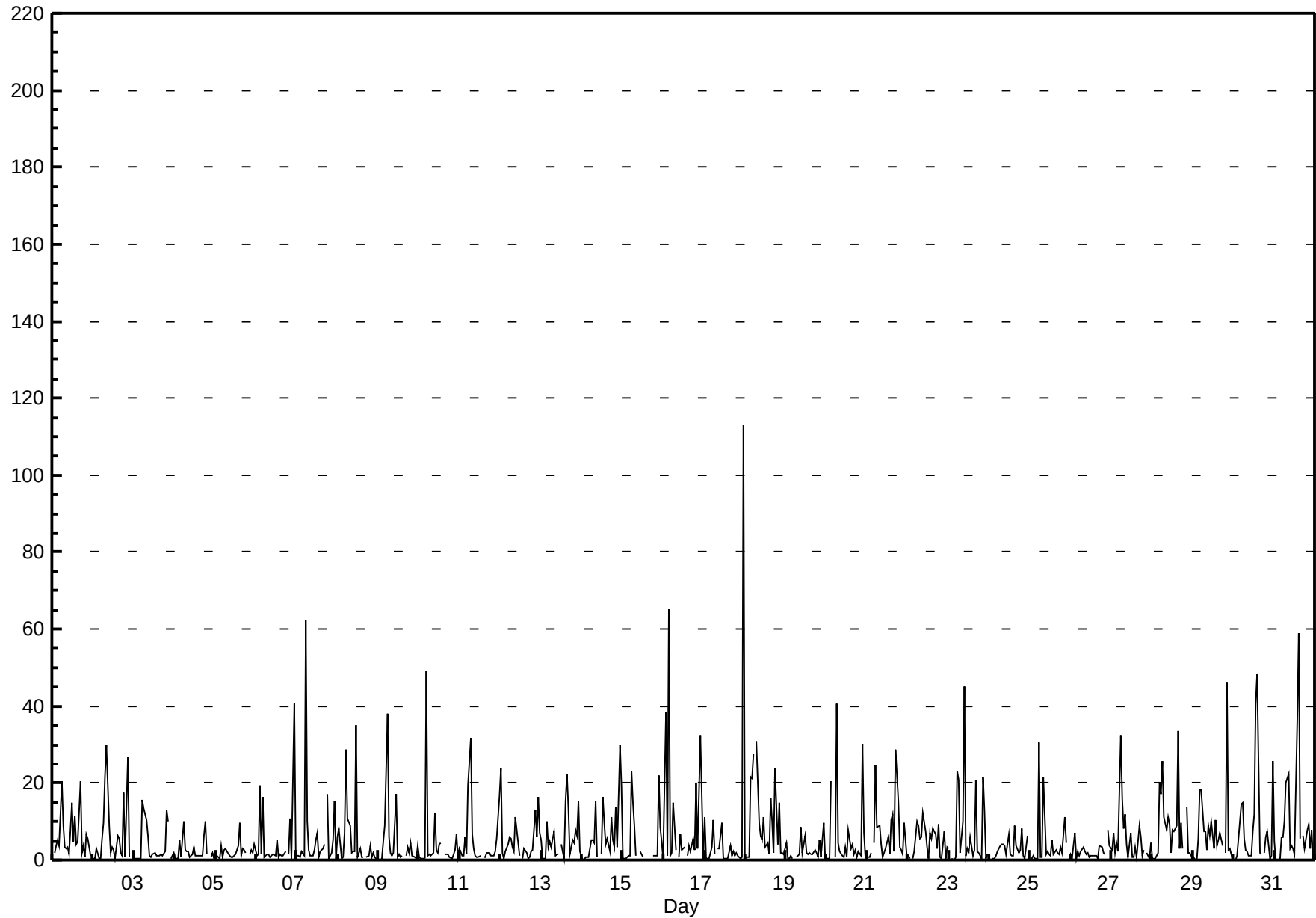
Hourly Maximums

Nitrogen Oxide (NO) - ppb Portable Clairmont - July 2014

Maximum Value: 113.0 ppb on Jul 18 00:00																				Maximum Daily Average: 10.4 ppb on Jul 16					Hours in Service: 744	
Minimum Value: 0 ppb on Jul 30 02:00																				Minimum Daily Average: 2.2 ppb on Jul 5					Hours of Data: 705	
Maximum Diurnal Average: 15.5 ppb at hour 6																				Minimum Diurnal Average: 1.6 ppb at hour 3					Hours of Missing Data: 39	
Monthly Average: 5.79 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 1.0 Median = 2.2 Q ₃ = 6.4 P ₉₀ = 15.2 P ₉₉ = 44.9					Hours of Calibration: 38	
																									Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	A	2	4	5	4	20	9	3	3	3	2	15	5	12	4	5	21	2	4	1	7	5	1	A	6.2	20.5
2-Jul	0	0	3	0	0	6	10	22	30	9	2	3	3	0	6	6	2	1	18	1	27	1	A	0	6.5	29.7
3-Jul	0	0	0	0	0	16	13	10	6	1	1	2	2	1	1	1	1	1	2	13	10	A	0	2	3.7	15.8
4-Jul	0	0	0	5	1	10	2	2	2	1	1	3	1	1	1	1	1	6	10	1	A	1	2	0	2.4	10.1
5-Jul	0	1	0	4	1	2	3	2	1	1	1	1	2	4	10	1	3	3	2	A	1	3	2	4	2.2	9.7
6-Jul	1	2	19	1	16	1	2	2	1	1	2	1	5	1	1	1	1	2	A	2	11	0	41	1	5.0	40.8
7-Jul	1	1	1	2	1	62	10	3	1	1	3	5	7	1	2	3	4	A	17	0	2	5	15	0	6.4	62.3
8-Jul	6	8	0	1	7	29	11	9	2	2	2	35	1	3	1	1	A	1	1	4	1	2	1	0	5.5	35.0
9-Jul	0	0	0	5	9	38	6	2	1	2	17	1	1	1	1	A	1	3	2	5	1	1	0	4	4.4	38.0
10-Jul	1	0	0	0	49	1	1	1	2	12	3	2	4	5	A	1	1	1	1	0	2	3	7	1	4.3	49.3
11-Jul	3	1	1	6	1	19	32	7	3	1	1	1	1	A	1	1	2	2	1	1	1	2	6	17	4.8	31.9
12-Jul	24	2	1	2	4	6	6	3	2	11	4	1	A	0	3	2	0	1	2	3	13	6	17	7	5.2	23.8
13-Jul	5	0	0	10	4	5	3	7	1	1	1	A	4	0	15	23	14	2	5	5	8	6	15	2	6.0	22.6
14-Jul	0	0	1	1	1	5	5	5	15	1	A	1	16	10	4	6	2	11	5	3	14	3	30	19	6.9	30.0
15-Jul	0	0	0	1	1	23	15	9	1	A	2	2	1	C	C	C	C	C	1	1	1	22	8	5	5.2	23.2
16-Jul	1	38	1	65	1	2	15	3	A	1	7	3	3	M	1	4	2	6	2	20	3	17	33	0	10.4	65.3
17-Jul	11	0	0	0	3	11	1	A	3	3	10	0	1	0	0	4	1	2	1	2	1	1	1	113	7.4	113.0
18-Jul	0	1	1	22	21	28	A	31	10	6	5	11	3	5	1	16	10	2	24	4	15	2	2	1	9.6	31.1
19-Jul	4	0	0	1	0	A	1	1	1	9	2	6	2	2	2	2	3	2	1	5	1	10	1	2.5	9.5	
20-Jul	0	0	0	21	A	1	41	4	2	1	1	4	1	8	3	4	1	3	1	2	1	30	7	1	6.0	40.7
21-Jul	1	1	2	A	4	25	9	9	4	1	2	3	6	2	11	12	2	29	15	3	2	2	10	0	6.7	28.6
22-Jul	1	0	A	0	2	10	9	5	6	12	7	4	1	7	5	8	7	3	9	1	0	7	0	3	4.8	12.4
23-Jul	3	A	0	0	1	23	21	2	10	45	1	3	2	6	1	2	21	2	2	1	22	13	0	2	7.9	45.1
24-Jul	A	0	0	0	1	2	4	4	4	4	2	7	1	1	1	9	4	2	2	8	1	0	6	A	2.9	8.9
25-Jul	0	0	1	0	0	31	1	1	22	1	2	1	1	5	1	3	2	2	3	2	11	5	A	0	4.2	30.6
26-Jul	2	1	7	0	2	1	2	4	2	2	2	1	1	1	1	1	0	4	3	2	2	A	8	4	2.3	8.0
27-Jul	2	7	2	4	2	33	16	8	12	4	1	7	1	1	3	1	9	6	1	2	A	2	0	4	5.6	32.6
28-Jul	0	0	1	2	20	17	26	11	8	11	9	2	8	7	9	34	3	10	3	A	14	2	2	1	8.6	33.5
29-Jul	1	0	0	6	18	18	8	7	2	9	6	10	3	11	4	5	7	4	A	2	46	3	3	0	7.5	46.2
30-Jul	0	0	1	6	15	15	6	3	2	1	1	7	12	41	49	2	2	A	2	6	8	1	1	26	8.9	48.6
31-Jul	5	0	0	1	6	6	10	20	22	3	4	3	1	36	59	6	A	6	3	8	9	3	8	0	9.5	58.8
2.6 2.3 1.6 5.7 6.6 15.5 9.9 6.7 6.1 5.4 3.4 4.8 3.3 6.1 7.0 5.6 4.5 4.2 5.0 3.6 8.2 5.1 8.1 7.6																									Diurnal Average	
23.8 38.3 19.3 65.3 49.3 62.3 40.7 31.1 29.7 45.1 17.1 35.0 16.3 40.7 58.8 33.5 20.7 28.6 23.9 20.3 46.2 30.0 40.8 113.0																									Diurnal Maximum	
C - Calibration M - Maintenance A - Automated Daily Zero Span																										

Hourly Maximums

Nitrogen Oxide (NO) - ppb
Portable Clairmont - July 2014



Hourly Averages

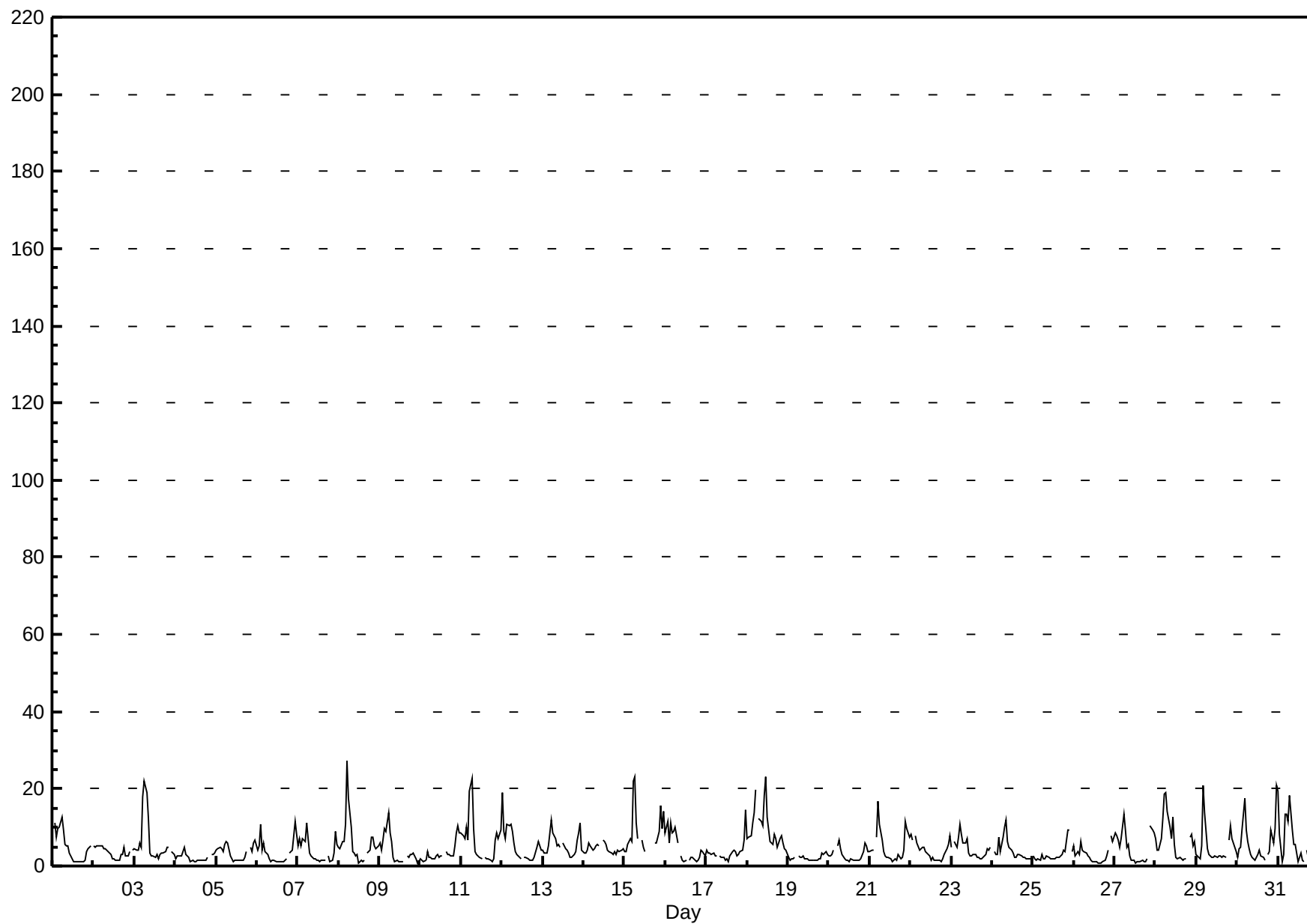
Oxides of Nitrogen (NO_x) - ppb

Portable Clairmont - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 27.2 ppb on Jul 8 06:00 Maximum Daily Average: 9.7 ppb on Jul 18																				Hours in Service: 744 Hours of Data: 705 Hours of Missing Data: 39 Hours of Calibration: 38 Percent Operational Time: 99.9						
Minimum Value: 1 ppb on Jul 26 16:00 Maximum Diurnal Average: 10.7 ppb at hour 6 Monthly Average: 4.74 ppb										Minimum Daily Average: 2.2 ppb on Jul 19 Minimum Diurnal Average: 2.0 ppb at hour 15 Percentiles: P ₁ = 1.0 P ₁₀ = 1.4 Q ₁ = 2.0 Median = 3.5 Q ₃ = 6.0 P ₉₀ = 9.6 P ₉₉ = 20.4																
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-Jul	A	11	7	10	10	13	9	6	5	5	3	2	1	1	1	1	1	1	1	1	4	4	5	A	4.7	12.5
2-Jul	5	5	5	5	5	5	4	4	4	4	3	2	2	2	1	2	3	3	5	3	3	4	A	4	3.6	5.3
3-Jul	5	4	4	6	5	18	22	19	12	3	3	2	2	3	2	3	3	3	4	5	5	A	4	3	6.1	22.2
4-Jul	2	3	3	2	2	5	3	3	2	1	1	1	1	2	1	1	1	1	1	2	A	3	3	3	2.2	4.8
5-Jul	4	4	5	4	4	5	6	6	3	2	1	1	2	1	1	2	1	2	4	A	5	4	6	7	3.5	6.7
6-Jul	4	5	11	4	6	4	3	2	1	1	1	1	1	1	1	1	1	2	A	3	4	4	11	8	3.6	11.4
7-Jul	5	7	5	7	6	11	7	3	2	2	2	2	2	1	1	1	2	A	3	1	1	3	9	5	3.9	11.2
8-Jul	5	5	6	6	11	27	18	10	4	3	2	3	1	1	1	1	A	3	4	8	7	5	4	5	6.2	27.2
9-Jul	6	4	7	10	9	14	9	6	2	1	1	1	1	1	1	A	3	2	3	3	3	2	1	1	4.0	13.8
10-Jul	2	1	1	2	4	2	2	2	2	3	3	2	2	3	A	4	3	3	2	3	5	8	10	8	3.4	10.4
11-Jul	8	8	7	10	7	19	23	10	4	3	3	2	2	A	2	2	2	2	1	2	7	9	7	9	6.4	22.8
12-Jul	19	9	7	11	11	11	9	6	4	3	2	2	A	2	2	2	2	2	2	2	5	6	5	4	5.5	19.0
13-Jul	4	3	3	5	9	12	9	7	5	5	5	A	6	4	4	3	2	2	3	4	7	9	11	4	5.5	11.8
14-Jul	3	4	4	6	5	4	4	5	6	5	A	7	6	5	4	4	3	3	4	3	4	4	4	4	4.5	6.8
15-Jul	4	4	6	7	6	22	23	11	7	A	7	5	4	C	C	C	C	C	6	6	9	16	10	14	9.2	23.0
16-Jul	9	12	6	11	9	9	10	6	A	3	1	1	1	M	1	2	2	2	1	2	2	4	4	3	4.6	11.6
17-Jul	4	3	3	3	3	3	2	A	3	2	2	1	2	1	3	4	4	4	2	3	4	4	7	15	3.6	14.5
18-Jul	7	8	8	11	14	20	A	12	12	10	18	23	12	6	6	5	8	7	5	7	8	6	4	4	9.7	23.1
19-Jul	2	2	2	2	2	A	3	2	2	3	2	2	2	2	2	1	1	1	2	2	3	3	4	3	2.2	3.6
20-Jul	3	3	3	4	A	5	7	5	3	2	1	2	1	2	2	1	1	1	1	2	4	6	5	4	2.9	6.9
21-Jul	4	4	4	A	8	17	11	7	4	2	2	2	2	1	1	2	2	3	2	2	4	12	10	7	4.9	16.9
22-Jul	8	7	A	8	6	4	4	5	5	4	3	3	2	2	1	1	2	1	1	2	3	4	6	8	3.9	8.1
23-Jul	5	A	6	5	8	11	8	6	6	7	3	2	3	3	3	2	2	2	2	2	3	4	4	5	4.5	10.7
24-Jul	A	4	3	3	7	4	7	10	12	6	5	4	3	2	2	3	3	2	2	2	2	2	2	A	4.2	12.1
25-Jul	3	2	2	2	2	3	2	2	3	2	2	2	2	2	2	2	3	3	4	4	9	9	A	4	3.0	9.5
26-Jul	5	3	4	3	6	4	4	3	3	2	1	1	1	1	1	1	1	1	2	2	4	A	8	6	2.9	7.9
27-Jul	8	8	7	5	7	13	9	5	6	2	1	1	1	1	1	1	1	1	1	2	A	10	9	9	4.9	13.4
28-Jul	7	4	4	7	12	19	19	14	10	7	13	6	2	2	2	2	2	2	2	A	7	8	5	6	7.1	18.9
29-Jul	3	2	2	5	21	14	4	3	3	2	2	3	2	2	2	2	3	2	A	7	10	7	6	4	4.9	21.0
30-Jul	2	4	5	9	18	10	6	5	3	2	2	2	3	4	3	2	1	A	3	4	9	6	10	21	5.8	20.8
31-Jul	19	8	1	3	13	13	12	18	9	5	6	3	1	3	2	1	A	4	2	3	6	7	6	4	6.6	19.5
5.7 5.0 4.7 5.9 7.9 10.7 8.7 6.7 4.9 3.5 3.4 3.1 2.4 2.3 2.0 2.1 2.3 2.4 2.6 3.2 5.1 6.0 6.2 6.3																									Diurnal Average	
19.5 11.6 10.9 11.4 21.0 27.2 23.0 19.0 12.4 10.3 18.4 23.1 12.5 6.5 5.8 5.4 8.0 7.2 5.9 7.6 10.4 15.8 11.4 20.8																									Diurnal Maximum	
C - Calibration			M - Maintenance						A - Automated Daily Zero Span																	

Hourly Averages

Oxides of Nitrogen (NO_x) - ppb
Portable Clairmont - July 2014



Hourly Maximums

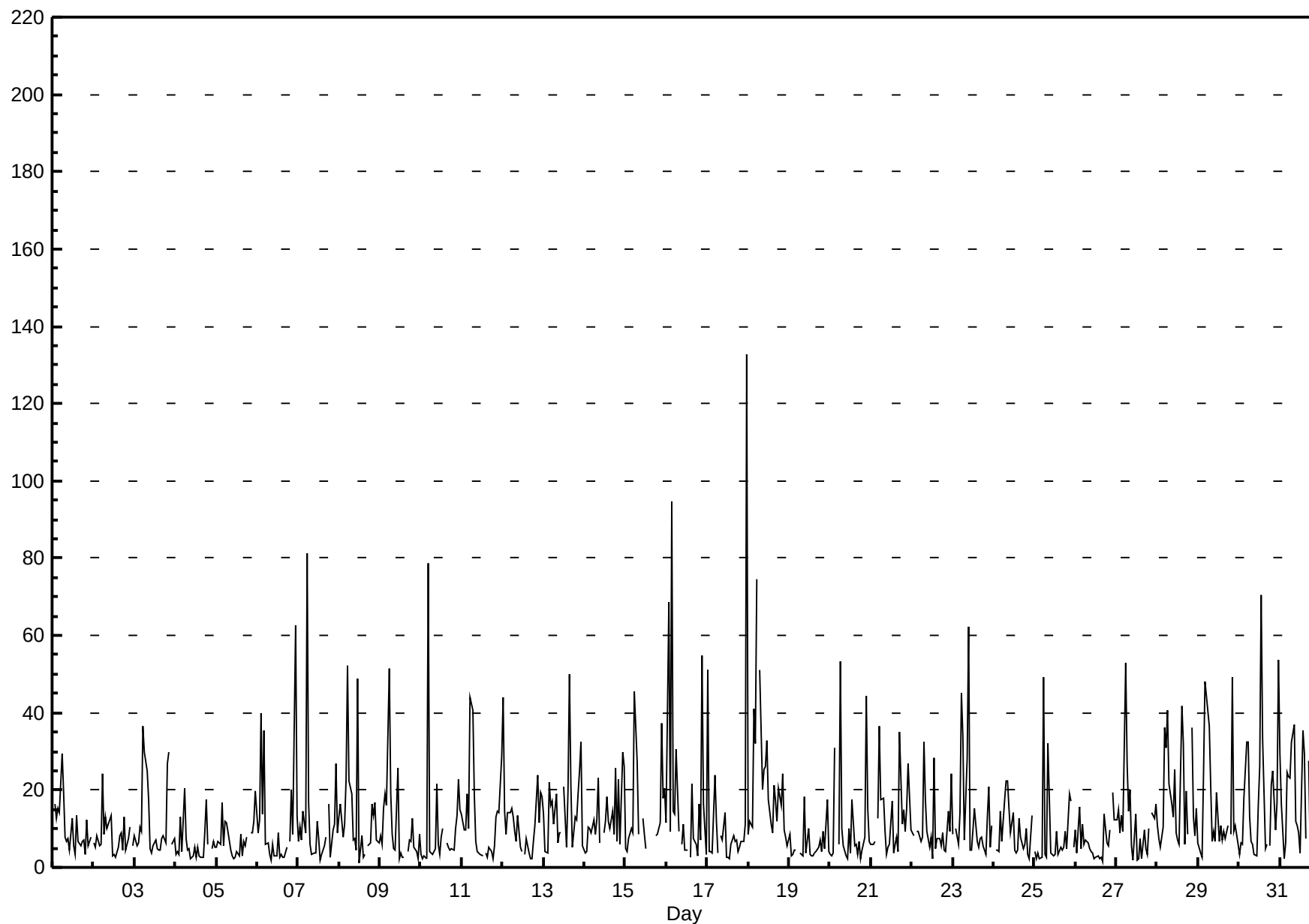
Oxides of Nitrogen (NO_x) - ppb

Portable Clairmont - July 2014

Maximum Value: 132.8 ppb on Jul 18 00:00																					Maximum Daily Average: 22.0 ppb on Jul 18					Hours in Service: 744	
Minimum Value: 1 ppb on Jul 8 13:00																					Minimum Daily Average: 5.9 ppb on Jul 19					Hours of Data: 705	
Maximum Diurnal Average: 29.8 ppb at hour 6																					Minimum Diurnal Average: 7.0 ppb at hour 17					Hours of Missing Data: 39	
Monthly Average: 12.52 ppb																					Percentiles: P ₁ = 2.1 P ₁₀ = 3.3 Q ₁ = 4.8 Median = 8.2 Q ₃ = 15.1 P ₉₀ = 26.9 P ₉₉ = 67.8					Hours of Calibration: 38	
																					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-Jul	A	16	13	15	14	29	19	8	7	8	4	13	6	3	13	7	6	7	7	3	12	6	8	A	10.2	29.4	
2-Jul	6	5	8	6	6	24	9	13	10	12	13	3	3	3	5	8	9	5	13	5	7	11	A	6	8.2	24.3	
3-Jul	8	6	6	10	9	37	30	25	18	5	4	6	7	5	4	5	7	8	6	27	30	A	6	8	12.0	36.7	
4-Jul	3	4	3	13	4	20	7	5	5	2	3	5	3	5	3	3	3	9	17	6	A	5	7	5	6.2	20.3	
5-Jul	5	7	6	17	5	12	12	9	4	3	2	3	4	3	9	3	7	5	8	A	9	9	12	20	7.6	19.9	
6-Jul	9	12	40	14	36	6	6	3	2	6	3	3	9	2	3	3	3	5	A	7	20	8	63	13	12.0	62.6	
7-Jul	7	10	7	15	9	81	17	6	4	4	4	12	7	2	3	6	8	A	16	3	10	11	27	9	12.0	81.4	
8-Jul	13	16	8	11	23	52	23	19	7	7	5	49	1	8	2	4	A	6	7	16	14	17	7	6	13.9	52.3	
9-Jul	8	6	15	19	16	52	19	9	5	5	26	2	4	3	2	A	4	7	7	13	5	4	2	9	10.5	51.5	
10-Jul	3	2	3	2	79	4	4	3	5	21	6	4	8	10	A	6	5	5	5	4	10	13	23	15	10.4	78.8	
11-Jul	14	10	10	19	10	44	41	19	7	4	4	3	3	A	4	3	5	4	2	6	13	15	14	29	12.2	43.8	
12-Jul	44	14	9	14	14	15	13	9	7	13	5	4	A	3	8	4	2	2	7	11	24	11	20	18	11.8	43.8	
13-Jul	14	4	4	22	16	17	11	19	6	9	9	A	21	5	20	50	21	5	13	12	19	25	32	6	15.7	49.9	
14-Jul	4	4	10	10	9	12	9	12	23	6	A	9	12	18	12	10	15	9	26	7	23	6	30	26	13.1	29.7	
15-Jul	5	4	7	10	9	46	37	27	9	A	13	9	5	C	C	C	C	C	8	9	12	37	18	21	15.8	45.6	
16-Jul	11	69	9	95	14	14	31	9	A	6	11	5	4	M	2	21	7	6	3	16	7	55	16	3	18.9	94.8	
17-Jul	51	4	4	4	24	12	4	A	8	7	14	3	2	2	6	8	7	7	4	5	7	7	11	133	14.5	132.8	
18-Jul	9	12	10	41	32	75	A	51	20	26	26	33	17	11	9	21	17	12	21	16	24	10	8	6	22.0	74.7	
19-Jul	9	3	3	4	4	A	4	3	3	18	4	10	3	3	3	4	4	5	7	4	9	5	17	4	5.9	18.4	
20-Jul	3	3	4	31	A	6	53	10	5	3	2	10	4	17	5	6	3	7	2	5	8	44	15	7	11.1	53.3	
21-Jul	6	6	7	A	13	37	18	18	9	3	5	6	17	4	6	8	4	35	11	15	9	15	27	10	12.5	36.5	
22-Jul	9	8	A	9	9	7	8	32	17	9	5	8	2	28	5	8	7	6	9	4	4	15	10	24	10.6	32.3	
23-Jul	9	A	10	6	14	45	34	7	28	62	4	4	10	15	7	5	7	8	6	3	13	21	5	11	14.6	62.4	
24-Jul	A	4	4	4	14	7	17	22	22	15	9	14	5	4	5	13	8	5	6	10	3	2	13	A	9.4	22.4	
25-Jul	4	2	4	2	2	49	3	3	32	4	3	3	3	9	3	5	5	5	9	5	19	17	A	5	8.6	49.1	
26-Jul	10	4	16	5	11	6	7	7	5	4	4	2	2	3	2	3	2	14	6	6	10	A	19	12	6.9	19.3	
27-Jul	12	15	9	13	9	53	27	14	20	6	2	14	2	2	7	2	10	5	3	10	A	14	13	16	12.2	52.9	
28-Jul	11	8	5	11	36	31	41	21	17	13	25	9	7	6	42	32	6	20	8	A	36	13	8	15	18.3	41.6	
29-Jul	6	4	3	24	48	44	36	21	7	9	7	19	7	11	7	9	8	11	A	9	49	9	11	6	15.9	49.2	
30-Jul	3	6	6	18	32	33	13	7	6	3	3	16	26	70	33	5	6	A	5	21	25	10	17	54	18.2	70.4	
31-Jul	29	16	2	6	25	24	23	33	37	12	11	9	4	35	29	8	A	28	4	9	27	12	17	5	17.6	36.8	
11.2 9.5 8.2 15.7 18.3 29.8 19.1 14.9 11.8 10.3 7.9 9.6 7.0 10.5 9.0 9.2 7.0 8.9 8.5 9.2 15.8 14.7 16.4 17.2																									Diurnal Average		
51.0 68.7 40.0 94.8 78.8 81.4 53.3 51.2 36.8 62.4 25.9 48.8 26.2 70.4 41.6 49.9 21.3 34.9 25.5 26.9 49.2 54.7 62.6 132.8																									Diurnal Maximum		
C - Calibration M - Maintenance A - Automated Daily Zero Span																											

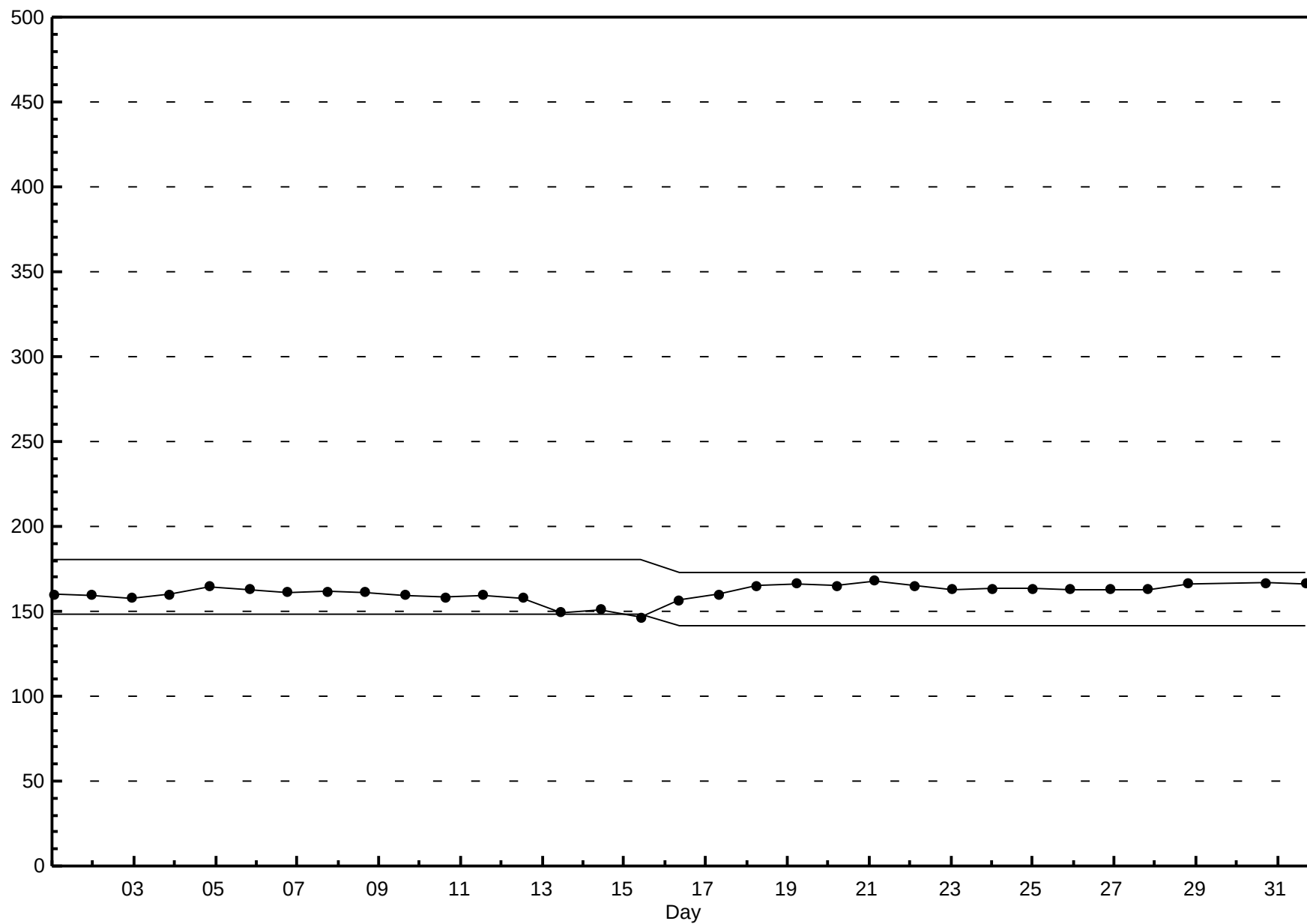
Hourly Maximums

Oxides of Nitrogen (NO_x) - ppb
Portable Clairmont - July 2014



Span Responses

Oxides of Nitrogen (NO_x)
Portable Clairmont - July 2014



Hourly Averages

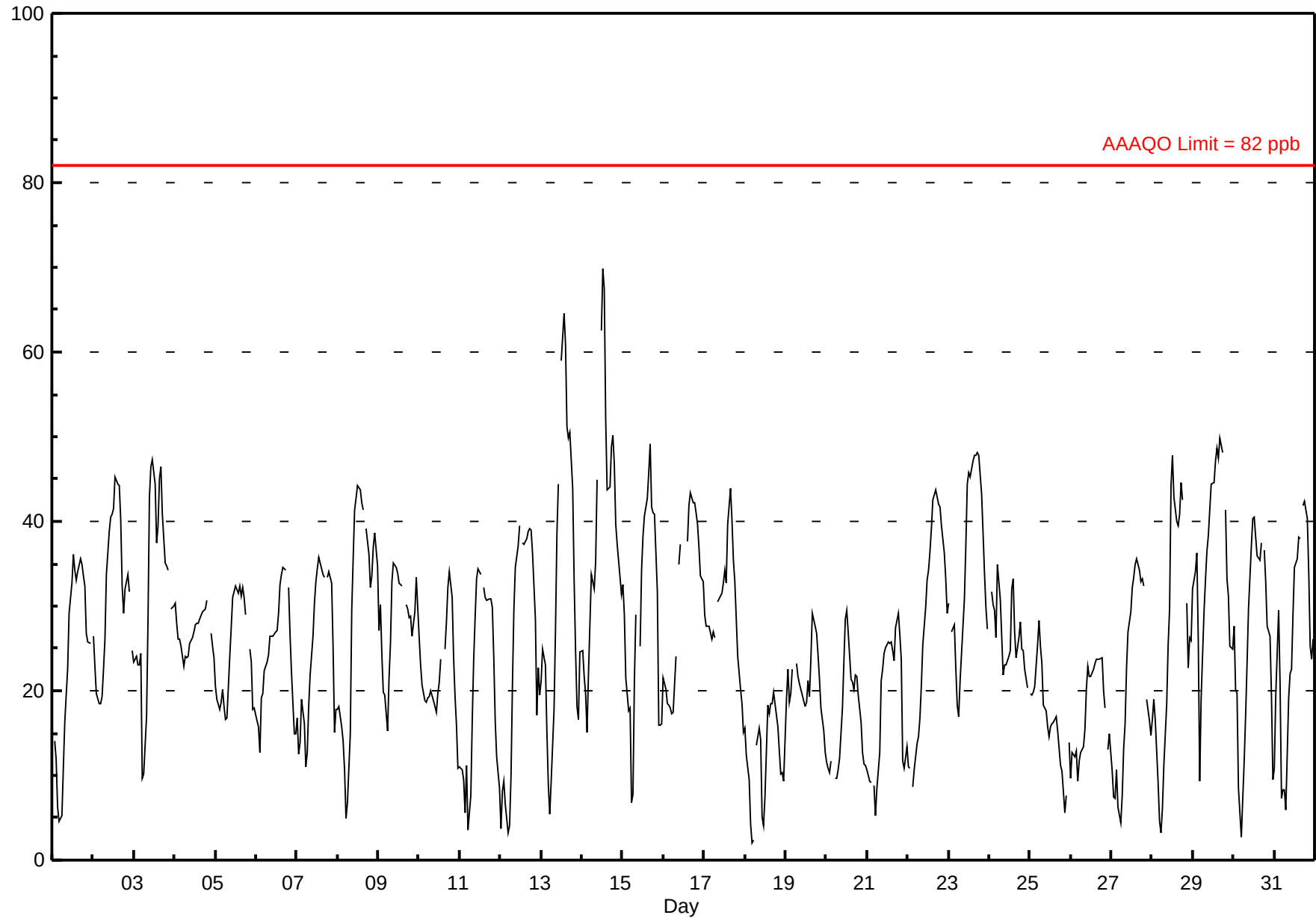
Ozone (O₃) - ppb

Portable Clairmont - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 69.8 ppb on Jul 14 13:00 Maximum Daily Average: 39.5 ppb on Jul 14																								Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0		
Minimum Value: 2 ppb on Jul 18 05:00 Maximum Diurnal Average: 35.4 ppb at hour 15 Monthly Average: 25.81 ppb												Minimum Daily Average: 12.0 ppb on Jul 18 Minimum Diurnal Average: 13.7 ppb at hour 6 Percentiles: P ₁ = 4.0 P ₁₀ = 10.7 Q ₁ = 17.9 Median = 25.2 Q ₃ = 33.4 P ₉₀ = 41.3 P ₉₉ = 48.0														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Jul	A	14	12	6	5	5	11	16	20	23	29	33	36	34	33	34	36	35	34	32	27	26	26	A	23.9	36.1
2-Jul	26	23	20	18	18	19	23	26	34	39	40	41	42	45	44	44	40	32	29	32	34	32	A	25	31.6	45.3
3-Jul	23	24	23	23	24	10	10	17	28	43	46	47	44	37	40	45	46	41	35	35	34	A	30	30	32.1	47.3
4-Jul	30	28	26	26	25	23	24	24	24	26	26	27	28	28	28	28	29	29	30	31	A	27	25	24	26.8	30.6
5-Jul	20	19	18	19	20	18	17	17	24	27	31	32	32	31	32	31	32	31	29	A	25	23	18	18	24.6	32.3
6-Jul	16	16	13	19	20	22	23	24	26	26	26	27	27	29	32	34	35	34	A	32	27	22	15	15	24.4	34.6
7-Jul	17	12	14	19	16	11	13	18	22	26	30	33	34	36	35	34	33	A	33	34	33	25	15	18	24.4	35.7
8-Jul	18	18	16	14	11	5	7	15	29	36	41	43	44	44	42	41	A	39	36	32	34	37	39	35	29.3	44.3
9-Jul	27	30	24	20	19	15	21	26	33	35	35	34	33	33	32	A	30	30	29	29	26	29	33	30	28.4	35.1
10-Jul	26	23	21	19	19	19	19	20	19	18	18	20	21	24	A	25	28	32	34	31	24	19	16	11	22.0	34.0
11-Jul	11	11	9	6	11	4	8	17	24	29	33	34	34	A	32	31	31	31	31	30	24	16	12	8	20.7	34.4
12-Jul	4	8	9	7	3	4	10	21	30	35	37	39	A	37	37	38	39	39	39	36	29	17	23	19	24.3	39.5
13-Jul	21	25	23	15	9	5	9	18	27	39	44	A	59	65	61	51	50	50	44	33	25	18	17	25	31.9	64.6
14-Jul	25	22	20	15	22	34	33	32	35	45	A	63	70	68	52	44	44	49	50	47	40	37	33	31	39.5	69.8
15-Jul	32	29	22	18	18	7	8	21	29	A	25	34	38	41	43	46	49	42	41	41	32	16	16	16	28.8	49.1
16-Jul	21	20	18	18	18	17	18	24	A	35	37	C	C	C	38	42	43	42	42	41	40	37	34	33	30.9	43.4
17-Jul	29	28	28	28	26	27	26	A	31	31	31	33	34	33	40	44	40	35	33	28	24	20	18	15	29.7	43.9
18-Jul	16	12	10	4	2	2	A	14	16	14	5	4	8	18	17	19	18	20	19	16	13	10	10	9	12.0	19.8
19-Jul	19	23	19	20	22	A	23	22	21	20	19	18	19	21	19	24	29	28	27	24	21	18	15	13	21.0	29.1
20-Jul	12	11	10	12	A	10	10	11	12	18	23	28	29	27	21	21	20	22	22	19	16	13	11	11	17.0	29.5
21-Jul	11	9	9	A	9	5	8	13	21	23	24	25	26	26	26	25	24	27	29	27	24	12	11	13	18.5	29.2
22-Jul	11	11	A	9	11	14	15	17	21	25	30	33	34	37	39	43	44	43	42	42	39	36	33	29	28.5	43.8
23-Jul	30	A	27	28	23	18	17	21	28	31	37	44	46	45	47	48	48	48	48	43	39	34	30	27	35.1	48.1
24-Jul	A	32	30	30	26	35	31	26	22	23	23	24	25	32	33	27	24	26	28	25	25	23	20	A	26.8	34.9
25-Jul	20	20	20	21	25	28	25	23	18	18	16	15	16	16	16	17	15	13	11	10	6	8	A	14	17.0	28.2
26-Jul	10	13	12	13	9	12	13	13	15	20	23	22	22	23	23	24	24	24	24	20	18	A	13	15	17.5	23.8
27-Jul	11	7	7	11	6	4	8	13	16	23	27	29	32	33	35	36	34	33	33	32	A	19	16	15	20.9	35.7
28-Jul	17	19	17	9	5	3	6	11	18	25	30	44	48	43	40	40	41	44	43	A	30	23	26	26	26.4	47.8
29-Jul	32	34	36	26	9	19	29	33	36	38	41	44	45	47	49	48	50	48	A	41	33	31	25	25	35.7	49.9
30-Jul	28	20	20	9	3	7	12	17	23	30	37	40	41	38	36	35	37	A	37	33	28	26	20	9	25.4	40.5
31-Jul	11	20	29	21	7	8	8	6	19	22	23	29	35	36	38	38	A	42	42	40	34	25	24	26	25.4	42.4
19.8 19.3 18.7 16.7 14.8 13.7 16.1 19.2 24.0 28.0 29.7 32.4 34.5 35.4 35.4 35.2 35.0 34.9 33.5 31.6 27.6 23.4 21.5 20.2 32.5 34.1 36.3 29.5 26.3 34.9 32.9 33.1 36.5 44.8 46.5 62.5 69.8 67.5 60.8 51.2 49.9 50.5 50.1 46.7 39.7 37.3 38.7 34.8																								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
Portable Clairmont - July 2014



Hourly Maximums

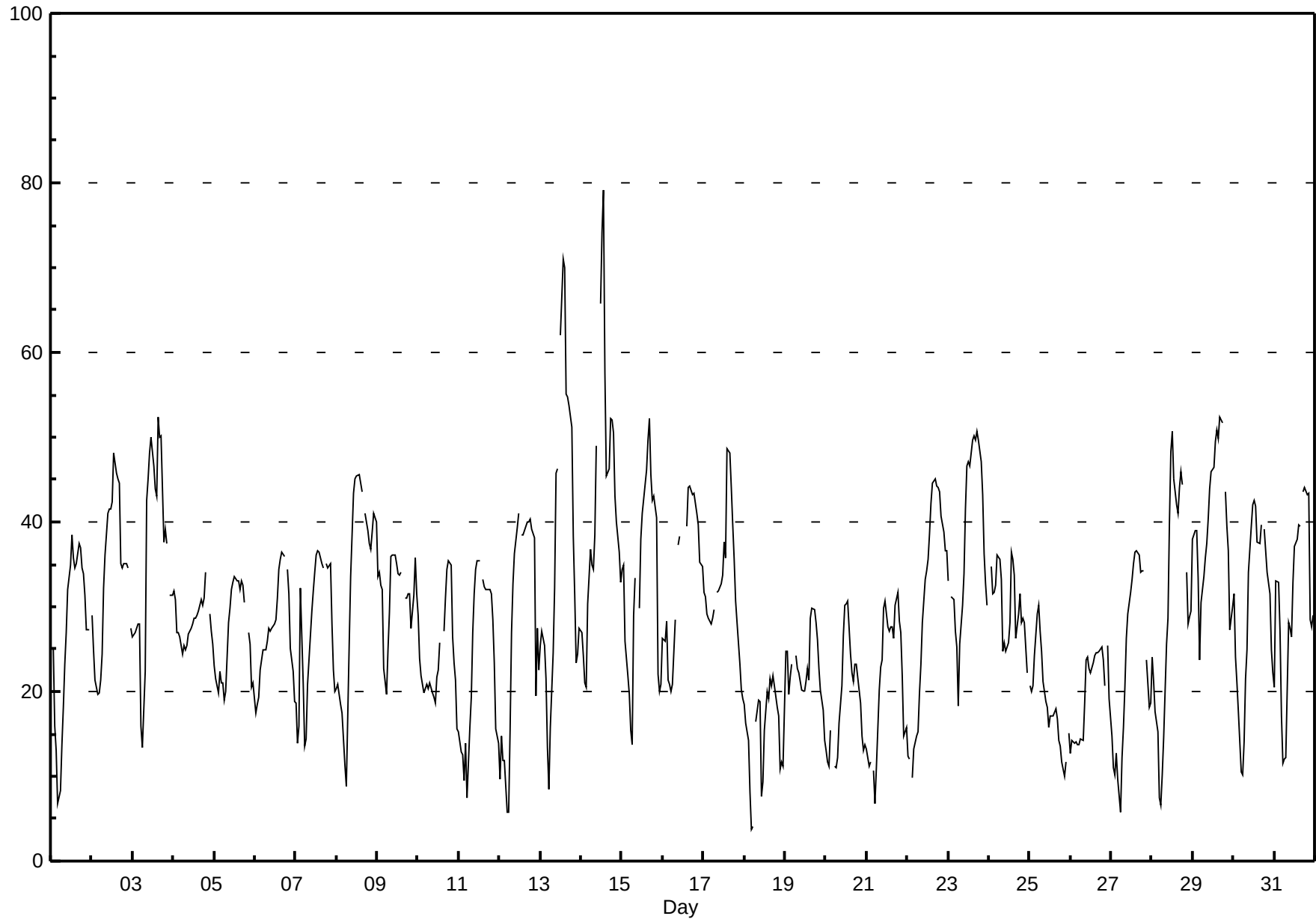
Ozone (O₃) - ppb

Portable Clairmont - July 2014

Maximum Value: 79.2 ppb on Jul 14 14:00																								Hours in Service: 744		
Maximum Daily Average: 43.1 ppb on Jul 14																								Hours of Data: 708		
Minimum Value: 4 ppb on Jul 18 05:00																								Hours of Missing Data: 36		
Maximum Diurnal Average: 38.0 ppb at hour 14																								Hours of Calibration: 36		
Monthly Average: 28.85 ppb																								Percent Operational Time: 100.0		
Minimum Daily Average: 15.0 ppb on Jul 18																										
Minimum Diurnal Average: 17.0 ppb at hour 6																										
Percentiles: P ₁ = 6.5 P ₁₀ = 14.1 Q ₁ = 20.6 Median = 28.2 Q ₃ = 36.0 P ₉₀ = 43.8 P ₉₉ = 55.0																										
Day	Hourly Period Ending At (MST)																							Daily Average	Daily Maximum	
1-Jul	A	25	16	13	7	8	14	18	23	27	32	35	39	36	35	35	37	37	35	34	31	27	27	A	26.9	38.5
2-Jul	29	25	21	20	20	21	24	32	36	41	42	42	42	48	46	45	45	35	35	35	35	35	A	27	33.9	48.1
3-Jul	26	27	27	28	28	16	13	22	43	45	48	50	47	44	43	52	50	50	38	39	37	A	31	31	36.4	52.3
4-Jul	32	31	27	27	26	24	25	25	25	27	27	28	29	29	29	30	31	30	31	34	A	29	27	26	28.2	34.1
5-Jul	23	22	20	22	21	21	19	20	28	30	32	33	34	33	33	32	33	33	31	A	27	26	20	21	26.6	33.6
6-Jul	17	18	19	22	24	25	25	26	27	27	27	28	28	31	34	36	37	36	A	34	32	25	22	19	27.0	36.5
7-Jul	19	14	16	32	21	14	14	21	24	29	32	34	36	37	36	35	35	A	35	35	35	28	23	20	27.1	36.5
8-Jul	20	21	18	17	14	11	9	26	34	39	43	45	45	46	45	44	A	41	39	38	37	39	41	40	32.7	45.6
9-Jul	34	34	33	32	23	20	25	29	36	36	36	35	34	34	34	A	31	31	32	32	27	31	36	32	31.5	36.1
10-Jul	29	24	22	20	20	21	20	21	20	19	19	22	23	26	A	27	31	34	35	35	26	23	21	16	24.1	35.5
11-Jul	15	13	12	9	14	7	16	19	27	31	34	35	35	A	33	32	32	32	32	31	28	23	16	14	23.7	35.5
12-Jul	10	15	12	12	6	6	15	27	33	36	39	41	A	38	39	40	40	40	40	39	38	19	28	22	27.6	41.0
13-Jul	25	27	25	22	13	8	16	25	32	46	46	A	62	71	70	55	55	54	51	38	31	23	24	27	36.9	71.0
14-Jul	27	24	21	20	30	37	35	34	38	49	A	66	74	79	58	45	46	52	52	51	43	40	36	33	43.1	79.2
15-Jul	34	35	26	22	20	15	14	29	33	A	30	38	41	43	46	50	52	46	43	43	41	22	20	21	33.2	52.2
16-Jul	26	26	28	21	21	20	21	28	A	37	38	C	C	C	39	44	44	43	43	42	41	40	35	35	33.8	44.3
17-Jul	32	31	29	29	28	29	30	A	32	32	33	34	38	36	49	48	44	40	36	31	28	23	20	19	32.5	48.6
18-Jul	18	16	14	8	4	4	A	16	19	19	8	9	15	20	19	22	21	22	21	18	17	11	12	11	15.0	21.9
19-Jul	25	25	20	22	23	A	24	23	22	21	20	20	21	23	21	29	30	30	28	26	23	20	18	14	22.9	29.8
20-Jul	13	12	11	15	A	11	11	12	16	21	27	30	30	31	24	22	21	23	23	22	19	15	13	14	19.0	30.6
21-Jul	13	11	12	A	11	7	11	20	23	24	30	31	28	27	28	28	26	30	32	28	27	22	15	16	21.6	31.7
22-Jul	12	12	A	10	13	15	15	20	23	28	33	34	36	39	42	45	45	44	44	44	41	39	37	37	30.7	45.1
23-Jul	33	A	31	31	27	25	18	26	30	34	42	47	47	47	50	50	50	51	50	47	43	36	33	30	38.1	50.6
24-Jul	A	35	32	32	33	36	36	33	25	26	25	26	28	36	36	34	26	29	32	28	29	28	22	A	30.2	36.4
25-Jul	21	20	21	24	29	30	27	25	21	19	18	16	17	17	17	18	17	14	14	12	10	12	A	15	18.8	30.2
26-Jul	13	14	14	14	14	14	14	14	19	24	24	23	22	23	24	25	25	25	24	21	A	25	19		19.9	25.4
27-Jul	15	11	10	13	10	6	12	16	21	26	29	32	33	35	37	36	34	34	34	A	24	18	19		23.5	36.7
28-Jul	24	21	18	15	7	7	10	15	26	29	40	48	51	45	42	41	44	46	44	A	34	28	29	30	30.1	50.7
29-Jul	38	39	39	33	24	31	34	36	38	40	44	46	46	49	51	50	52	52	A	43	40	37	27	30	39.9	52.3
30-Jul	32	24	21	18	10	10	14	22	25	34	40	42	43	42	38	37	40	A	39	37	34	32	25	22	29.5	42.6
31-Jul	20	33	33	27	17	11	12	12	28	27	26	33	37	38	40	40	A	44	44	43	43	29	28	29	30.2	44.0
23.3 22.8 21.6 21.0 18.6 17.0 19.2 23.1 27.5 30.8 32.1 34.5 36.6 38.0 37.9 37.5 37.1 37.1 35.7 34.4 31.7 27.1 25.2 23.7																								Diurnal Average		
38.0 39.0 39.0 33.3 32.6 36.8 35.7 35.8 42.5 49.0 48.1 65.8 74.2 79.2 70.0 55.2 54.8 53.8 52.1 50.6 43.4 40.0 41.1 40.1																								Diurnal Maximum		
C - Calibration A - Automated Daily Zero Span																										

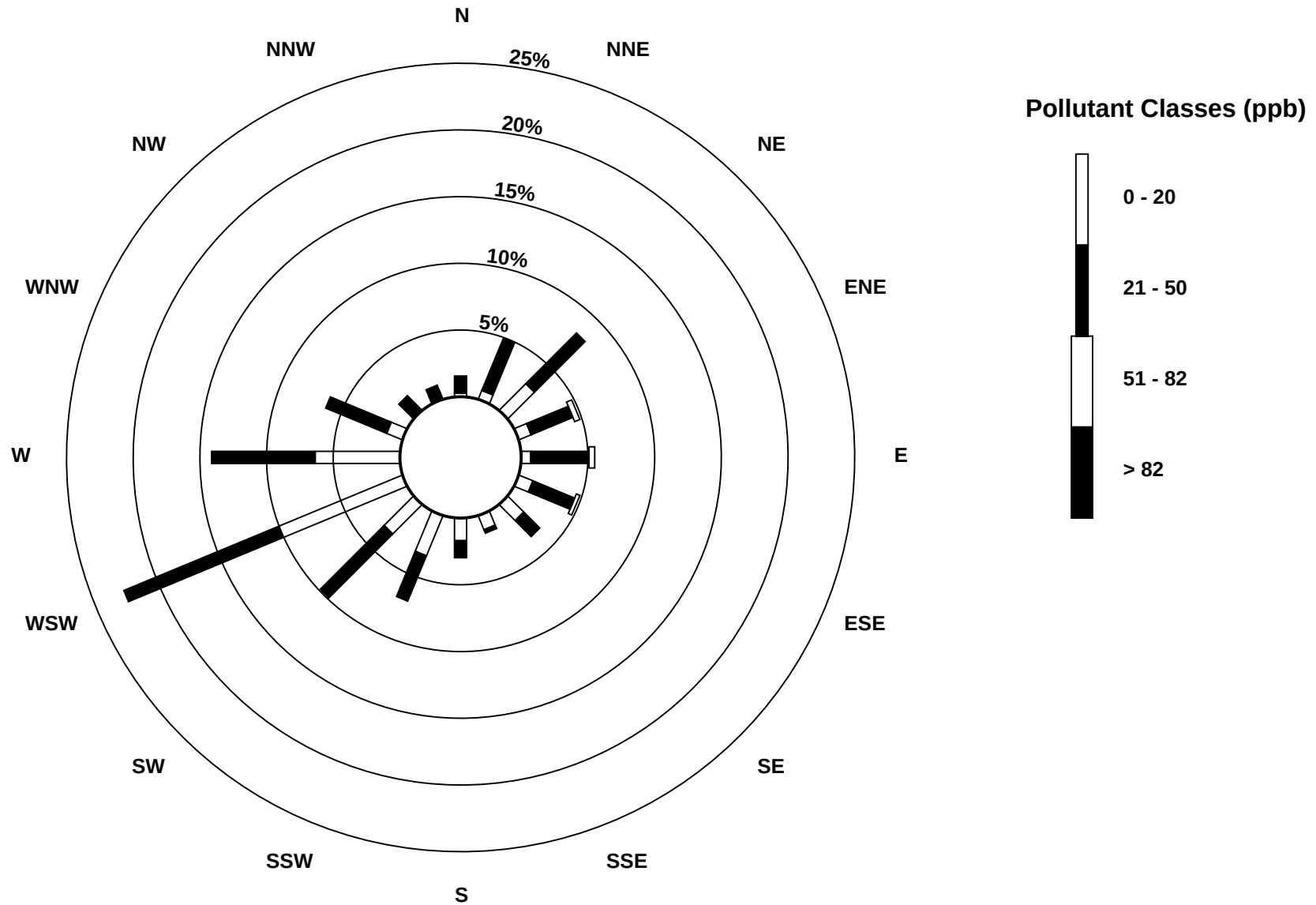
Hourly Maximums

Ozone (O₃) - ppb
Portable Clairmont - July 2014



Pollutant Rose

Ozone (O₃) - ppb
Portable Clairmont - July 2014



Eight Hour Running Averages

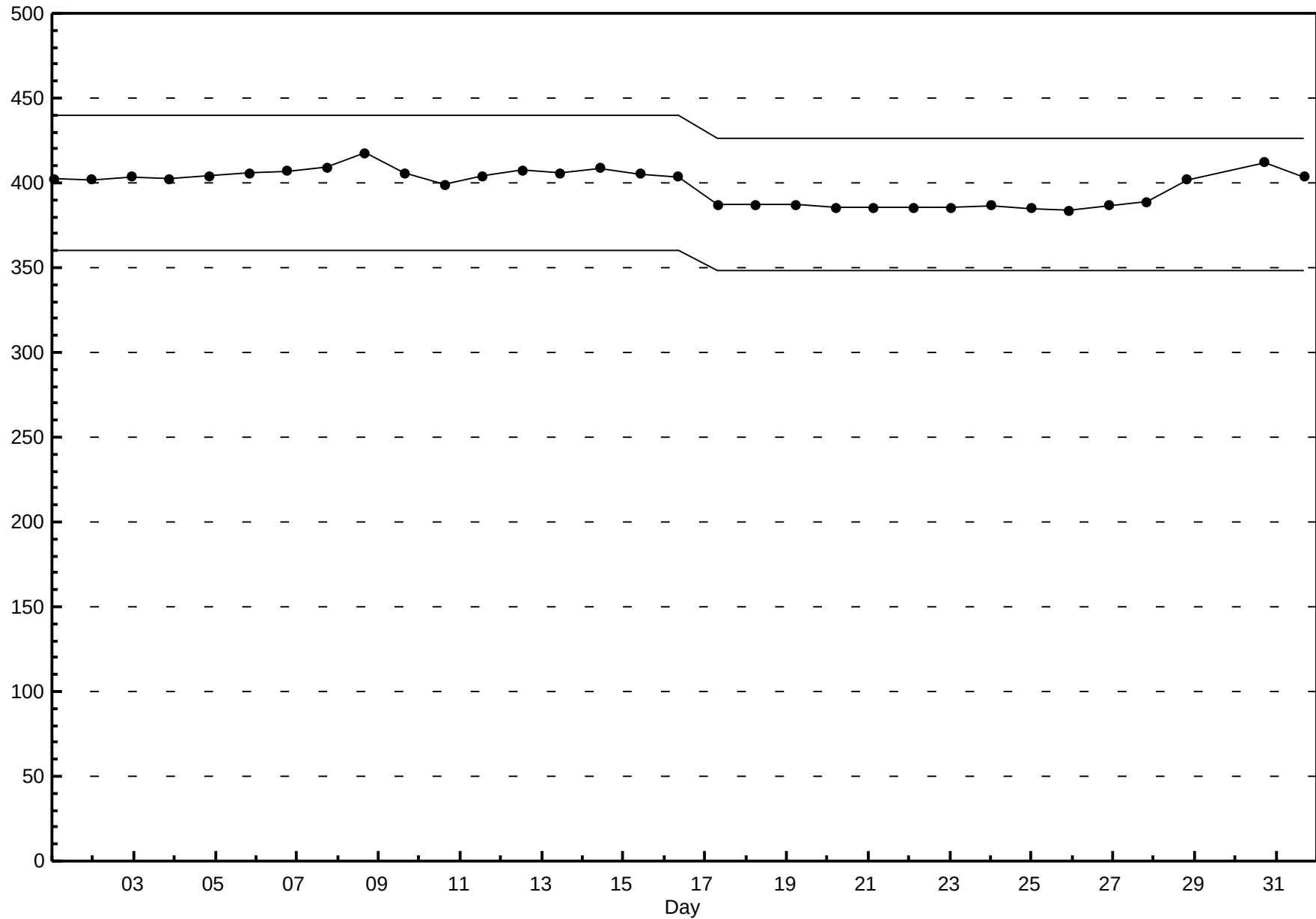
Ozone (O₃) - ppb

Portable Clairmont - July 2014

Maximum Value: 55.5 ppb on Jul 14 18:00																								Hours in Service: 744	
Minimum Value: 6.6 ppb on Jul 12 07:00																								Hours of Data: 737	
																								Hours of Missing Data: 7	
Percentiles: P ₁ = 8.5 P ₁₀ = 12.9 Q ₁ = 18.8 Median = 25.2 Q ₃ = 31.9 P ₉₀ = 39.2 P ₉₉ = 52.2																								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-Jul	20	17	15	11	9	8	9	10	11	12	14	18	22	25	28	30	32	34	34	34	33	32	31	31	34.3
2-Jul	29	28	26	24	22	22	21	22	23	25	27	30	33	36	39	41	42	41	40	39	38	36	35	32	42.0
3-Jul	30	28	28	26	25	22	20	19	20	22	25	28	31	34	38	41	44	43	42	40	39	39	38	36	43.7
4-Jul	34	32	30	29	28	27	27	26	25	25	25	25	25	26	26	27	28	28	28	29	29	29	28	28	33.6
5-Jul	27	25	23	22	21	20	19	18	19	20	22	23	25	26	28	30	31	32	31	31	30	29	27	25	31.7
6-Jul	23	21	18	19	18	18	18	19	20	22	24	24	25	26	27	29	30	31	31	32	32	31	28	26	31.9
7-Jul	23	20	19	18	16	15	15	15	16	17	19	21	23	27	29	31	33	34	34	34	34	32	30	27	34.3
8-Jul	25	24	22	20	17	14	13	13	14	16	20	23	27	32	37	40	42	42	41	40	38	37	37	36	42.1
9-Jul	35	34	32	31	29	26	24	23	24	24	26	27	29	31	32	33	33	32	31	31	30	29	29	30	34.8
10-Jul	29	28	27	26	25	24	22	21	20	19	19	19	19	20	20	21	22	24	26	28	28	28	26	24	29.0
11-Jul	22	20	17	13	12	10	9	9	11	13	16	20	23	25	29	31	32	32	32	31	30	28	26	23	32.3
12-Jul	20	17	14	11	8	7	7	8	11	15	18	22	25	30	34	36	38	38	38	38	37	34	32	30	38.4
13-Jul	28	26	24	22	19	18	16	16	16	18	21	22	29	37	45	49	53	54	54	52	47	42	36	33	54.3
14-Jul	30	26	23	21	20	22	24	25	27	29	31	38	44	49	52	54	55	56	55	53	49	45	43	41	55.5
15-Jul	40	38	34	30	28	24	21	19	19	17	18	20	23	28	33	37	39	40	42	43	42	39	35	32	42.5
16-Jul	28	25	23	20	18	18	18	19	19	21	24	25	N	N	N	N	N	N	N	41	41	41	40	39	41.4
17-Jul	37	35	34	32	30	29	28	27	28	28	29	29	30	31	33	35	36	36	36	36	35	33	30	27	37.2
18-Jul	24	21	18	15	12	10	9	9	9	9	8	8	9	11	12	13	13	14	15	17	17	16	16	14	23.8
19-Jul	14	15	15	15	17	17	19	21	21	21	21	21	20	20	20	20	21	22	23	24	24	24	23	22	24.2
20-Jul	20	18	16	14	13	12	11	11	11	12	14	16	18	20	21	23	24	24	24	23	21	19	18	17	24.1
21-Jul	16	14	13	12	10	9	9	9	11	13	15	16	18	21	23	24	25	25	26	26	26	24	22	21	26.1
22-Jul	19	17	15	13	11	11	12	12	14	16	18	21	24	26	29	33	36	38	39	40	41	41	40	39	41.0
23-Jul	37	36	34	32	29	27	25	23	23	24	25	27	30	34	37	41	43	45	47	47	46	44	42	40	46.8
24-Jul	38	36	34	32	30	30	30	30	29	28	27	26	26	26	26	26	26	27	27	27	27	26	25	24	38.4
25-Jul	24	23	22	21	21	22	23	23	23	22	22	21	20	18	17	16	16	15	15	14	13	12	11	11	23.8
26-Jul	10	10	10	11	11	12	12	12	13	13	15	16	17	19	20	21	22	23	23	23	22	22	21	20	23.0
27-Jul	18	15	13	12	10	9	9	8	9	11	14	16	19	23	26	29	31	32	33	34	34	32	29	26	33.8
28-Jul	24	22	19	16	15	13	11	11	11	12	13	18	23	28	32	36	39	41	43	43	40	37	35	33	42.8
29-Jul	32	31	30	29	27	26	27	27	28	28	29	31	36	39	42	44	45	46	47	47	45	43	39	36	47.2
30-Jul	33	29	28	24	20	17	15	14	14	15	17	21	26	30	33	35	37	38	38	37	35	33	31	27	37.9
31-Jul	23	23	22	20	18	16	14	14	15	15	14	15	19	22	26	30	31	34	37	39	39	37	35	33	38.7
Diurnal Maximums																									
N - Not Valid																									

Span Responses

Ozone (O₃)
Portable Clairmont - July 2014



Hourly Averages

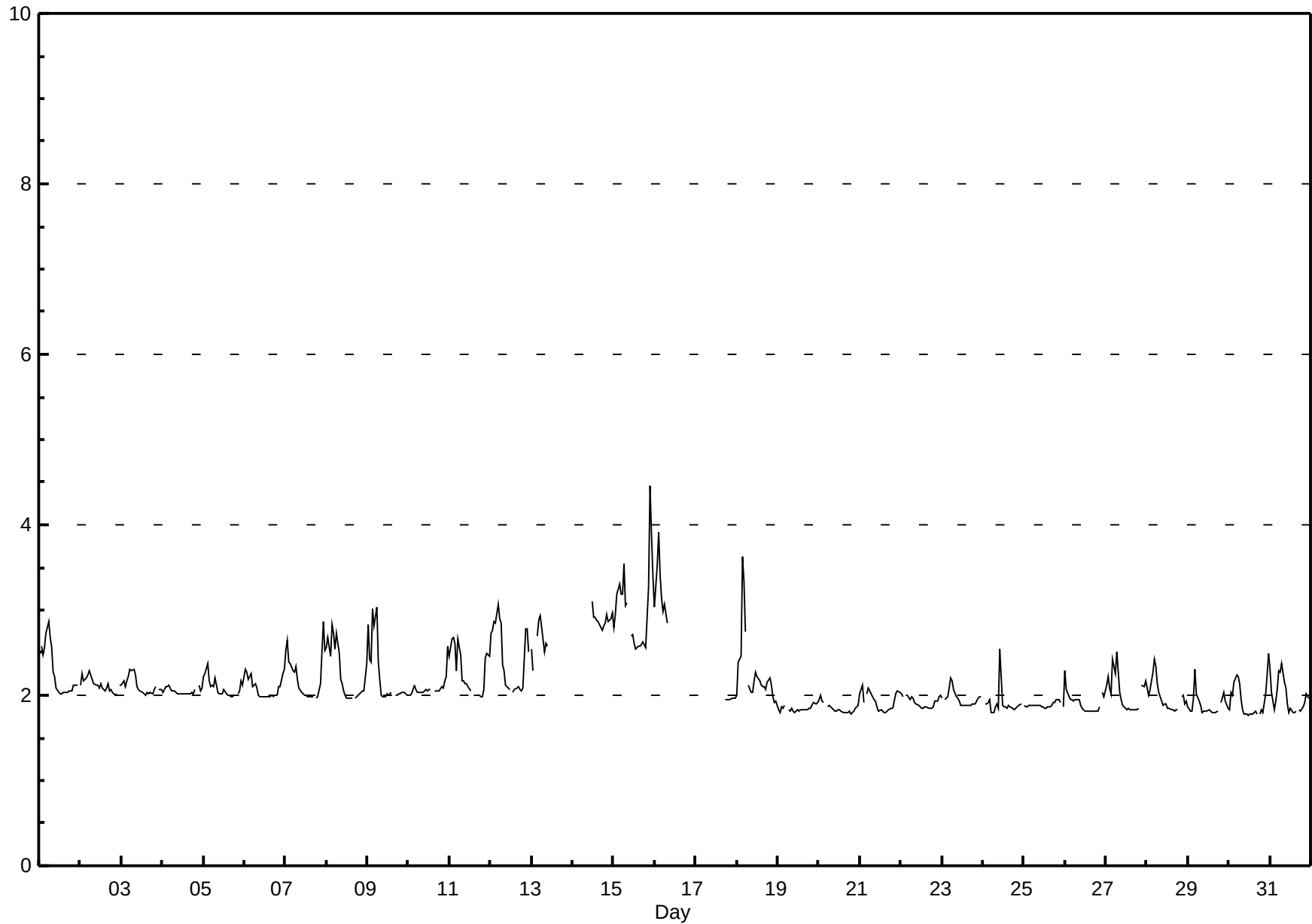
Total Hydrocarbons (THC) - ppm

Portable Clairmont - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.46 ppm on Jul 15 22:00 Maximum Daily Average: 3.02 ppm on Jul 15																				Hours in Service: 744 Hours of Data: 655 Hours of Missing Data: 89 Hours of Calibration: 36 Percent Operational Time: 92.9						
Minimum Value: 1.8 ppm on Jul 30 12:00 Maximum Diurnal Average: 2.38 ppm at hour 5 Monthly Average: 2.129 ppm																				Minimum Daily Average: 1.84 ppm on Jul 19 Minimum Diurnal Average: 1.98 ppm at hour 15 Percentiles: P ₁ = 1.79 P ₁₀ = 1.83 Q ₁ = 1.89 Median = 2.02 Q ₃ = 2.18 P ₉₀ = 2.66 P ₉₉ = 3.41						
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-Jul	A	2.6	2.5	2.6	2.7	2.9	2.7	2.6	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	A	2.26	2.87
2-Jul	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	A	2.1	2.13	2.30
3-Jul	2.1	2.2	2.1	2.2	2.2	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	A	2.1	2.1	2.1	2.11	2.31
4-Jul	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	A	2.1	2.0	2.1	2.05	2.12	
5-Jul	2.2	2.3	2.4	2.2	2.1	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.2	2.1	2.09	2.37	
6-Jul	2.3	2.3	2.2	2.2	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.1	2.1	2.3	2.3	2.10	2.31
7-Jul	2.5	2.6	2.4	2.4	2.3	2.3	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.1	2.5	2.9	2.5	2.22	2.87
8-Jul	2.6	2.7	2.5	2.8	2.7	2.5	2.7	2.5	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.25	2.82
9-Jul	2.8	2.4	2.4	3.0	2.8	3.0	2.4	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.23	3.03
10-Jul	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.6	2.09	2.57
11-Jul	2.5	2.7	2.7	2.6	2.3	2.7	2.5	2.2	2.2	2.1	2.1	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.5	2.5	2.26	2.67
12-Jul	2.7	2.8	2.9	2.8	3.1	2.9	2.8	2.4	2.3	2.1	2.1	2.1	A	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.8	2.8	2.5	N	2.43	3.06
13-Jul	2.5	2.3	N	2.7	2.9	2.9	2.8	2.5	2.6	2.6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	2.94
14-Jul	N	N	N	N	N	N	N	N	N	N	A	3.1	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.9	2.9	2.9	3.0	--	3.10
15-Jul	2.8	3.0	3.2	3.3	3.2	3.2	3.5	3.1	3.1	A	2.7	2.7	2.6	2.5	2.6	2.6	2.6	2.6	2.6	2.6	3.3	4.5	3.9	3.4	3.02	4.46
16-Jul	3.0	3.5	3.9	3.4	3.1	3.0	3.1	2.8	A	M	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	3.91
17-Jul	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	2.0	1.9	1.9	2.0	2.0	2.0	--	1.97
18-Jul	2.0	2.4	2.5	3.6	3.3	2.7	A	2.1	2.0	2.0	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.1	2.0	1.9	1.9	1.9	2.27	3.63
19-Jul	1.8	1.8	1.9	1.8	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.84	1.91
20-Jul	1.9	2.0	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	1.9	1.9	1.9	1.85	2.00
21-Jul	2.0	2.1	1.9	A	2.0	2.1	2.1	2.0	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	2.0	2.1	2.0	1.93	2.12
22-Jul	2.0	2.0	A	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	2.0	2.0	1.92	2.02
23-Jul	2.0	A	2.0	2.0	2.1	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.96	2.20
24-Jul	A	1.9	1.9	1.9	2.0	1.8	1.8	1.9	1.9	1.8	2.5	1.9	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	A	1.90	2.54
25-Jul	1.9	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	2.0	1.9	1.9	A	1.9	1.88	1.95
26-Jul	2.3	2.1	2.0	1.9	1.9	1.9	2.0	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	A	2.0	2.0	1.91	2.29
27-Jul	2.1	2.2	2.1	2.0	2.4	2.3	2.5	2.3	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	2.1	2.1	2.2	2.03	2.51
28-Jul	2.1	2.0	2.1	2.3	2.4	2.3	2.1	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	2.0	2.0	1.9	1.9	1.98	2.42
29-Jul	1.9	1.8	1.8	2.0	2.3	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	2.0	2.0	1.9	1.8	1.88	2.30
30-Jul	1.8	2.0	2.0	2.2	2.2	2.2	2.1	1.9	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	2.0	2.2	2.5	1.95	2.50
31-Jul	2.3	2.0	1.8	1.9	2.1	2.3	2.3	2.4	2.1	2.1	1.9	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.9	2.0	2.0	2.0	1.99	2.37
2.24 2.28 2.26 2.36 2.38 2.35 2.29 2.18 2.08 2.00 2.01 2.02 2.00 1.99 1.98 1.98 1.99 1.99 1.99 2.01 2.09 2.20 2.20 2.19																								Diurnal Average		
3.03 3.53 3.91 3.63 3.34 3.18 3.54 3.06 3.08 2.57 2.70 3.10 2.92 2.91 2.88 2.86 2.80 2.77 2.81 2.85 3.27 4.46 3.90 3.40																								Diurnal Maximum		
C - Calibration				M - Maintenance				N - Not Valid				A - Automated Daily Zero Span														

Hourly Averages

Total Hydrocarbons (THC) - ppm
Portable Clairmont - July 2014



Hourly Maximums

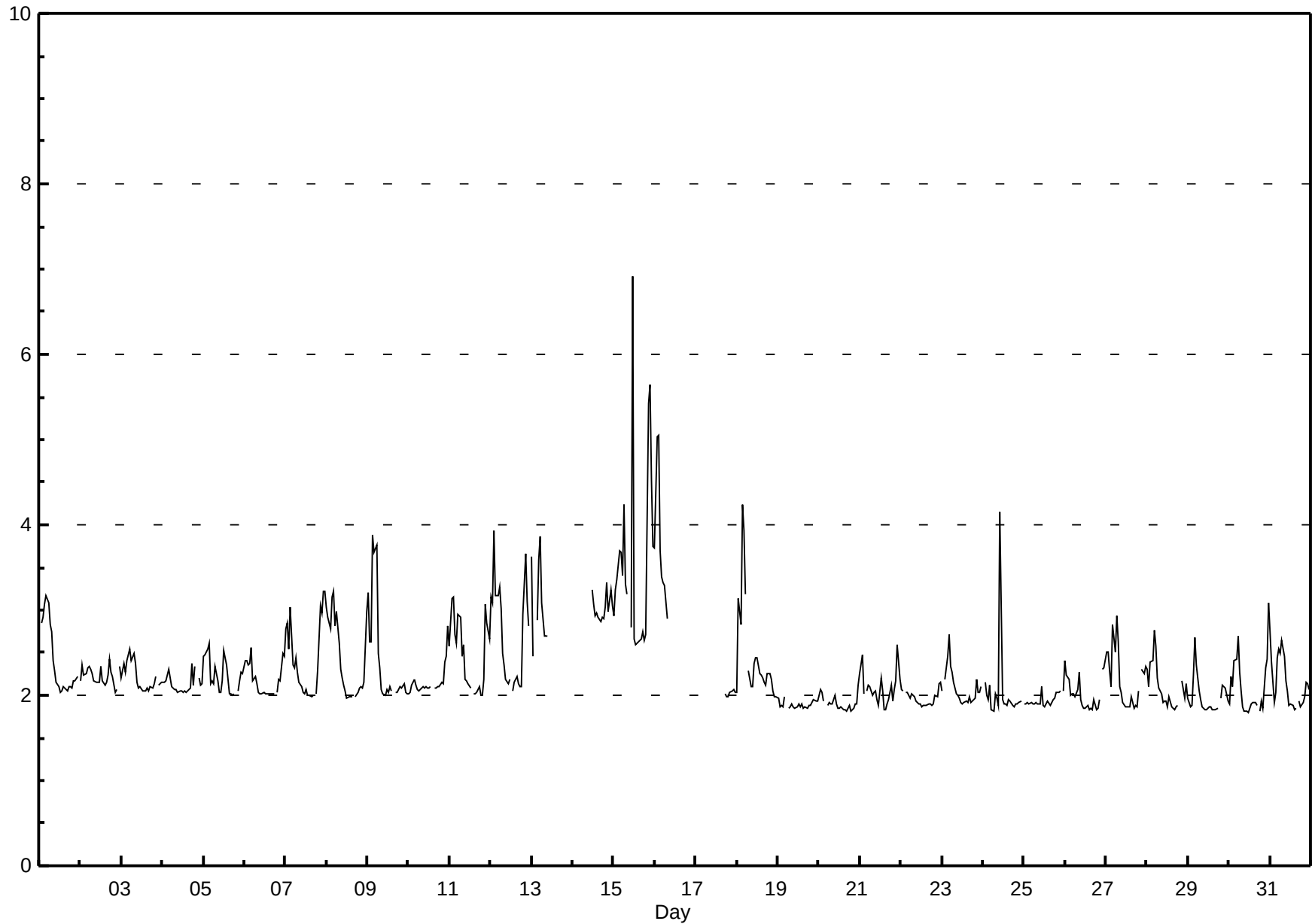
Total Hydrocarbons (THC) - ppm

Portable Clairmont - July 2014

Maximum Value: 6.91 ppm on Jul 15 12:00																					Maximum Daily Average: 3.54 ppm on Jul 15					Hours in Service: 744	
Minimum Value: 1.8 ppm on Jul 30 12:00																					Minimum Daily Average: 1.89 ppm on Jul 19					Hours of Data: 655	
Maximum Diurnal Average: 2.67 ppm at hour 5																					Minimum Diurnal Average: 2.03 ppm at hour 16					Hours of Missing Data: 89	
Monthly Average: 2.279 ppm																					Percentiles: P ₁ = 1.82 P ₁₀ = 1.87 Q ₁ = 1.96 Median = 2.10 Q ₃ = 2.39 P ₉₀ = 2.96 P ₉₉ = 4.22					Hours of Calibration: 36	
																					Percent Operational Time: 92.9						
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-Jul	A	2.9	2.9	3.1	3.2	3.1	2.8	2.7	2.4	2.3	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	A	2.40	3.17	
2-Jul	2.2	2.4	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.3	2.2	2.1	2.1	2.2	2.4	2.3	2.2	2.0	2.1	A	2.3	2.23	2.43	
3-Jul	2.2	2.4	2.3	2.4	2.5	2.5	2.4	2.5	2.4	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	A	2.1	2.2	2.22	2.54	
4-Jul	2.1	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.1	2.3	A	2.2	2.1	2.1	2.13	2.38	
5-Jul	2.5	2.5	2.5	2.6	2.1	2.2	2.1	2.3	2.2	2.0	2.0	2.2	2.5	2.4	2.2	2.0	2.0	2.0	2.0	A	2.0	2.2	2.3	2.3	2.22	2.60	
6-Jul	2.4	2.4	2.4	2.4	2.6	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.2	2.2	2.5	2.5	2.18	2.55	
7-Jul	2.8	2.8	2.5	3.0	2.4	2.3	2.4	2.3	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	A	2.0	2.3	3.1	3.0	3.2	3.2	2.42	3.21	
8-Jul	3.0	2.9	2.8	3.2	3.2	2.8	3.0	2.6	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.1	2.1	2.1	2.2	3.0	2.42	3.22	
9-Jul	3.2	2.6	2.6	3.9	3.7	3.8	2.5	2.3	2.1	2.0	2.0	2.1	2.0	2.1	2.1	A	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.41	3.88	
10-Jul	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.5	2.8	2.15	2.81	
11-Jul	2.6	3.1	3.2	2.7	2.6	2.9	2.9	2.5	2.6	2.2	2.2	2.1	2.1	A	2.0	2.0	2.0	2.1	2.0	2.0	2.2	3.1	2.8	2.7	2.46	3.16	
12-Jul	3.2	3.1	3.9	3.2	3.2	3.3	3.0	2.5	2.4	2.2	2.1	2.2	A	2.1	2.1	2.2	2.1	2.1	2.1	2.9	3.7	3.1	2.8	N	2.70	3.93	
13-Jul	3.6	2.5	N	2.9	3.6	3.9	3.1	2.7	2.7	2.7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	3.86	
14-Jul	N	N	N	N	N	N	N	N	N	N	A	3.2	3.1	2.9	3.0	2.9	2.9	2.9	2.9	3.0	3.3	3.0	3.2	3.1	--	3.32	
15-Jul	2.9	3.2	3.4	3.7	3.7	3.4	4.2	3.3	3.2	A	2.8	6.9	2.7	2.6	2.6	2.6	2.7	2.7	2.7	2.7	5.4	5.6	4.5	3.7	3.54	6.91	
16-Jul	3.7	5.0	5.1	3.7	3.4	3.3	3.3	2.9	A	M	N	N	N	N	N	N	N	N	N	N	N	N	N	N	--	5.05	
17-Jul	N	N	N	N	N	N	N	N	N	N	N	N	C	C	C	C	C	2.0	2.0	2.0	2.0	2.1	2.1	2.0	--	2.07	
18-Jul	2.0	3.1	2.8	4.2	3.9	3.2	A	2.3	2.1	2.1	2.4	2.4	2.4	2.3	2.2	2.2	2.1	2.1	2.2	2.3	2.2	2.1	2.0	2.0	2.47	4.23	
19-Jul	2.0	1.9	1.9	1.9	2.0	A	1.8	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.89	1.99	
20-Jul	2.0	2.1	2.0	1.9	A	1.9	1.9	1.9	1.9	2.0	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	2.1	1.91	2.11	
21-Jul	2.2	2.5	2.0	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.2	2.0	1.8	1.8	1.9	1.9	2.1	1.9	2.1	2.2	2.6	2.2	2.08	2.60	
22-Jul	2.1	2.1	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	2.0	2.0	2.1	2.2	1.97	2.15	
23-Jul	2.1	A	2.2	2.5	2.7	2.3	2.3	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.2	2.0	2.0	2.1	2.08	2.72	
24-Jul	A	2.1	2.0	1.9	2.1	1.8	1.8	2.0	2.0	1.9	4.1	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.03	4.15	
25-Jul	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	A	2.1	1.94	2.11	
26-Jul	2.4	2.2	2.2	2.0	2.0	2.0	2.0	2.1	2.3	2.0	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.9	1.9	A	2.3	2.3	2.01	2.41	
27-Jul	2.5	2.5	2.3	2.1	2.8	2.5	2.9	2.6	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.8	1.8	1.9	1.9	2.0	A	2.3	2.3	2.19	2.93	
28-Jul	2.3	2.1	2.4	2.4	2.8	2.6	2.2	2.1	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.8	1.8	1.8	1.9	1.9	A	2.2	2.1	2.0	2.1	2.09	2.76
29-Jul	2.0	1.9	1.9	2.2	2.7	2.4	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	A	2.0	2.1	2.1	2.1	1.9	1.98	2.67	
30-Jul	1.9	2.2	2.1	2.4	2.4	2.7	2.3	2.1	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	A	1.8	1.9	1.9	2.3	2.4	3.1	2.10	3.09	
31-Jul	2.8	2.4	1.9	2.0	2.4	2.5	2.5	2.6	2.5	2.2	2.1	1.9	1.9	1.9	1.8	1.9	A	1.9	1.9	1.9	2.0	2.2	2.1	2.1	2.14	2.75	
2.46 2.53 2.51 2.60 2.67 2.57 2.44 2.30 2.18 2.06 2.13 2.22 2.08 2.05 2.03 2.03 2.04 2.07 2.05 2.13 2.33 2.38 2.38 2.40																									Diurnal Average		
3.72 5.04 5.05 4.23 3.94 3.86 4.24 3.31 3.18 2.69 4.15 6.91 3.07 2.93 2.96 2.91 2.87 2.91 2.90 3.03 5.42 5.64 4.52 3.74																									Diurnal Maximum		
C - Calibration M - Maintenance N - Not Valid A - Automated Daily Zero Span																											

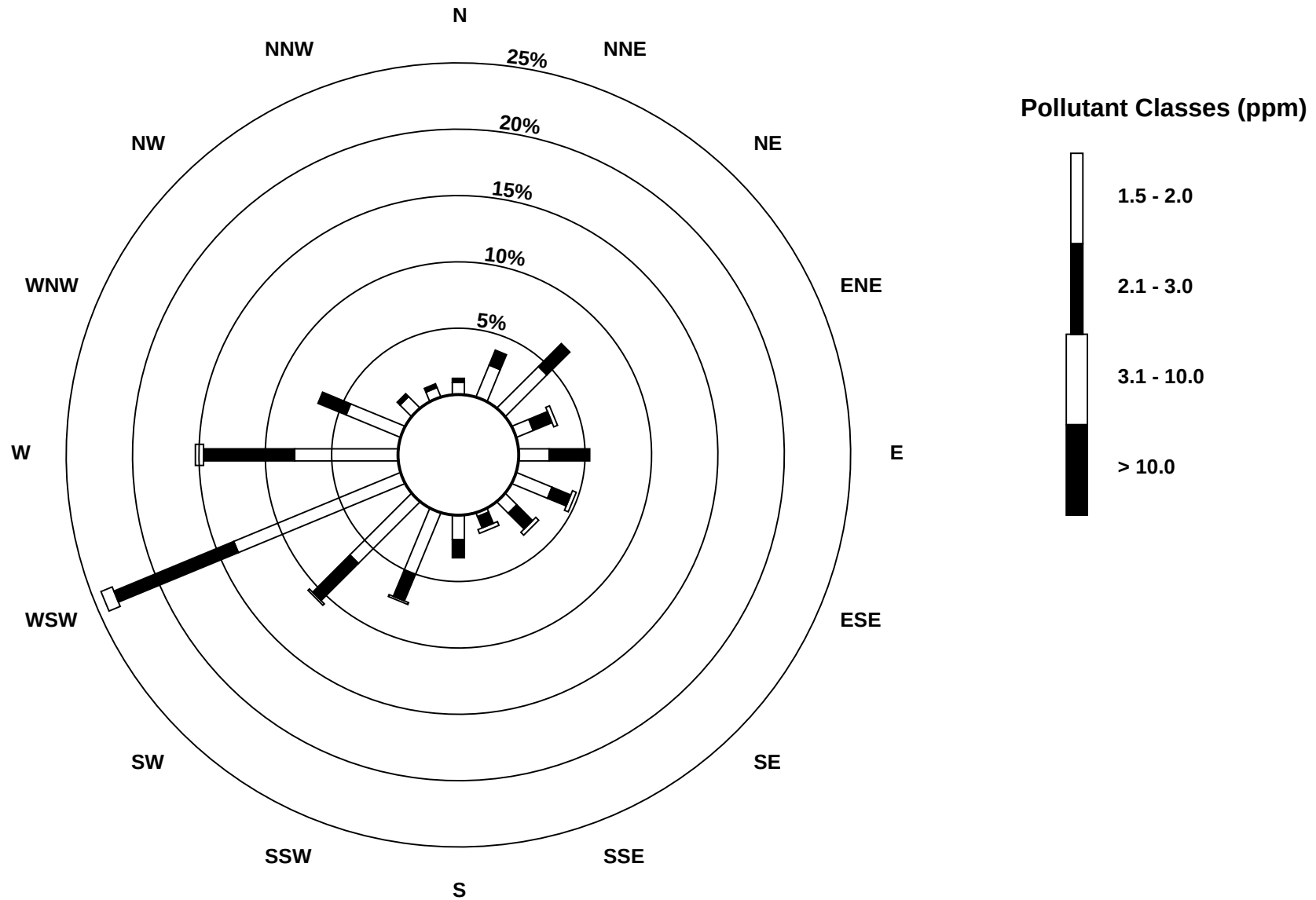
Hourly Maximums

Total Hydrocarbons (THC) - ppm
Portable Clairmont - July 2014



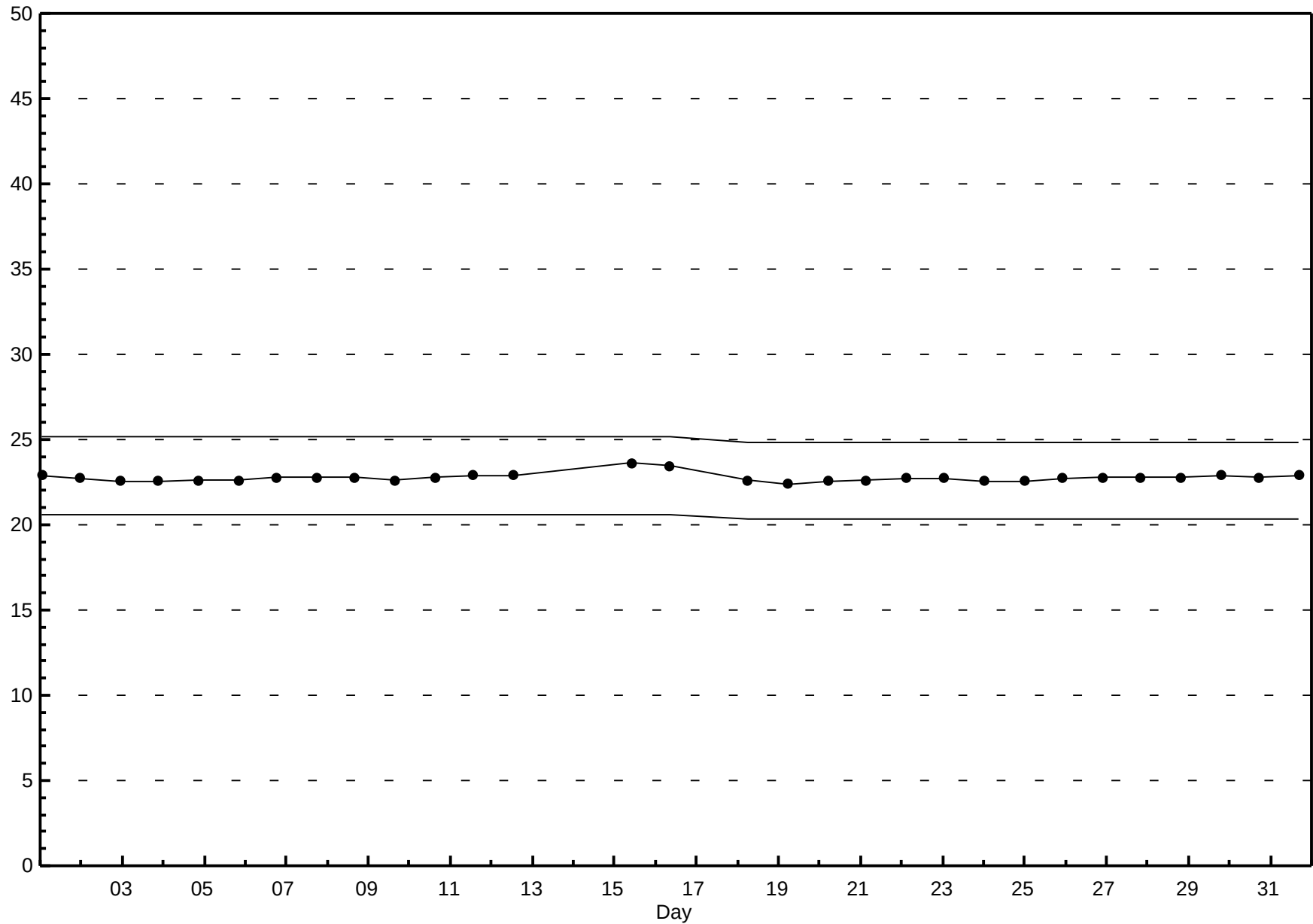
Pollutant Rose

Total Hydrocarbons (THC) - ppm
Portable Clairmont - July 2014



Span Responses

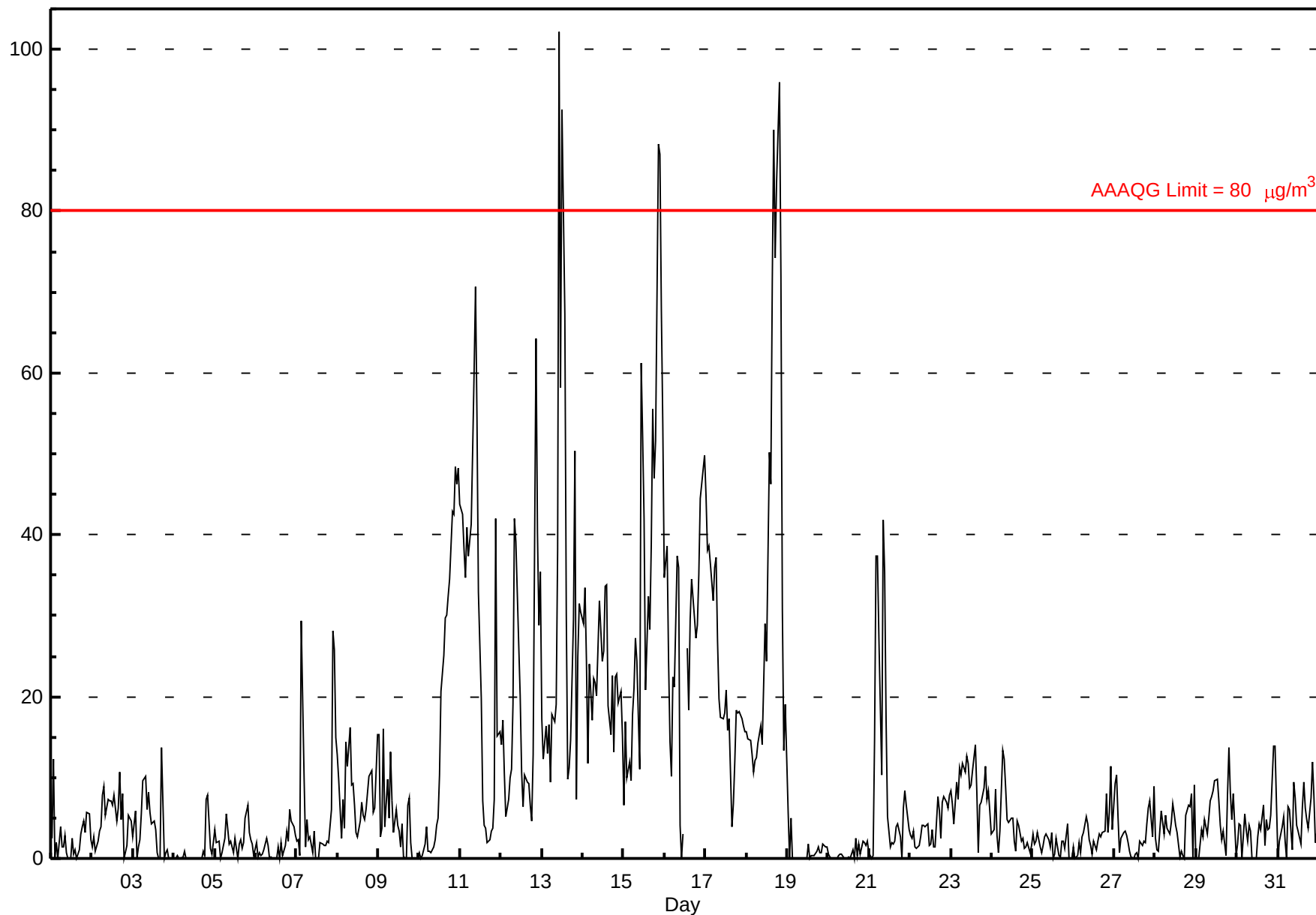
Total Hydrocarbons (THC)
Portable Clairmont - July 2014



Number of Exceedences: 1-hr: 7 24-hr: 3 Maximum Value: 102.2 µg/m³ on Jul 13 11:00 Maximum Daily Average: 36.8 µg/m³ on Jul 15																				Hours in Service: 744 Hours of Data: 743 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9						
Minimum Value: 0 µg/m³ on Jul 1 03:00 Maximum Diurnal Average: 15.6 µg/m³ at hour 22 Monthly Average: 10.67 µg/m³ Minimum Daily Average: 0.7 µg/m³ on Jul 20 Minimum Diurnal Average: 7.4 µg/m³ at hour 3 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 1.6 Median = 4.3 Q ₃ = 12.6 P ₉₀ = 31.5 P ₉₉ = 80.6																										
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-Jul	2	12	0	2	0	4	1	1	3	1	0	0	2	1	1	0	1	3	4	5	3	6	5	2	2.5	12.3
2-Jul	1	3	1	2	3	4	8	9	5	7	7	7	7	8	5	6	11	5	8	0	2	5	5	5	5.1	10.6
3-Jul	3	6	0	1	2	5	10	10	6	8	6	4	5	4	1	0	0	14	0	1	1	0	0	0	3.6	13.7
4-Jul	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	7	8	1	1	2	0.9	7.8
5-Jul	4	2	2	0	1	2	3	5	2	2	1	1	3	0	2	2	1	2	5	7	3	2	2	0	2.2	6.6
6-Jul	2	0	1	0	1	1	2	2	0	0	0	0	0	1	0	2	0	2	3	2	6	5	4	3	1.6	6.0
7-Jul	2	2	0	29	10	1	5	2	3	1	3	0	0	0	2	2	2	2	2	2	6	28	26	15	6.1	29.4
8-Jul	13	10	2	7	4	14	11	16	9	9	7	3	3	5	7	5	5	6	10	10	11	6	6	15	8.1	16.2
9-Jul	15	3	4	16	4	10	5	13	7	3	6	4	3	1	4	0	0	7	7	2	0	0	0	0	4.8	15.9
10-Jul	1	0	0	2	4	1	1	1	1	2	4	5	10	21	25	30	30	32	34	43	43	48	46	48	18.0	48.5
11-Jul	44	43	38	35	41	37	41	50	60	71	54	33	20	7	4	4	2	2	3	4	7	42	15	16	28.1	70.7
12-Jul	14	17	11	5	7	10	11	19	42	39	26	20	11	6	10	9	9	7	5	13	64	40	29	35	19.2	64.2
13-Jul	17	12	16	13	17	9	18	17	19	38	102	58	93	67	30	10	11	15	30	50	7	25	32	30	30.7	102.2
14-Jul	29	33	24	12	24	17	22	22	20	26	32	24	26	34	34	19	15	23	13	22	23	19	21	15	22.9	33.7
15-Jul	7	17	10	12	10	18	21	27	24	11	61	52	42	21	32	28	39	56	47	52	88	87	68	54	36.8	88.2
16-Jul	35	39	25	14	10	22	21	37	36	4	0	3	M	26	18	29	35	30	27	29	35	44	46	50	26.8	49.8
17-Jul	45	38	39	37	32	36	37	27	20	17	17	18	21	16	17	4	7	12	18	18	18	17	16	16	22.6	44.8
18-Jul	16	15	15	13	11	12	13	14	16	14	21	29	24	50	46	71	90	74	84	96	72	31	13	19	35.8	95.9
19-Jul	6	0	5	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	1	1	1	2	1	1	0.9	5.9
20-Jul	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	3	0	2	0	2	2	2	2	0.7	2.6
21-Jul	1	0	0	15	37	37	27	10	42	35	17	5	1	2	2	2	4	4	3	0	6	8	7	4	11.3	41.9
22-Jul	3	3	3	1	1	2	3	4	4	4	4	2	2	4	1	1	8	6	2	7	8	7	6	8	3.9	7.8
23-Jul	8	7	4	9	7	11	10	12	11	13	12	9	9	11	14	8	1	7	7	9	11	7	8	6	8.8	14.0
24-Jul	3	4	9	3	1	3	13	12	9	5	4	5	5	2	1	5	4	2	2	1	1	2	1	2	4.1	13.4
25-Jul	3	2	2	3	1	1	2	3	3	2	1	3	0	1	3	0	0	2	2	1	4	0	0	0	1.7	4.2
26-Jul	1	0	0	2	1	3	3	5	4	2	2	0	2	1	2	3	3	3	3	8	3	6	11	4	3.1	11.4
27-Jul	9	10	5	1	2	3	3	3	2	1	0	0	1	1	0	2	2	2	2	4	6	7	3	9	3.3	10.3
28-Jul	2	1	1	6	4	3	5	4	3	4	7	5	4	3	0	1	0	0	5	7	6	8	0	9	3.8	9.0
29-Jul	0	0	2	4	3	5	3	5	7	8	8	10	10	7	4	2	3	0	8	14	8	5	8	0	5.2	13.8
30-Jul	2	4	4	0	5	4	2	4	3	0	0	0	3	4	4	6	2	5	4	4	5	14	14	7	4.1	13.9
31-Jul	0	2	4	5	2	0	6	6	1	9	7	4	3	2	6	9	6	5	4	7	12	8	2	3	4.8	12.0
9.3 9.2 7.4 8.1 7.9 8.9 10.0 11.0 11.7 10.9 13.3 9.9 10.3 9.8 9.0 8.5 9.4 10.6 11.2 13.7 15.2 15.6 12.8 12.2																									Diurnal Average	
44.8 42.5 38.7 36.5 40.9 37.4 41.3 50.4 59.9 70.7 102.2 58.2 92.6 67.2 46.3 71.3 90.1 74.3 83.7 95.9 88.2 87.0 67.8 53.6																									Diurnal Maximum	
M - Maintenance																										
Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³																										

Hourly Averages

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Clairmont - July 2014



Hourly Maximums

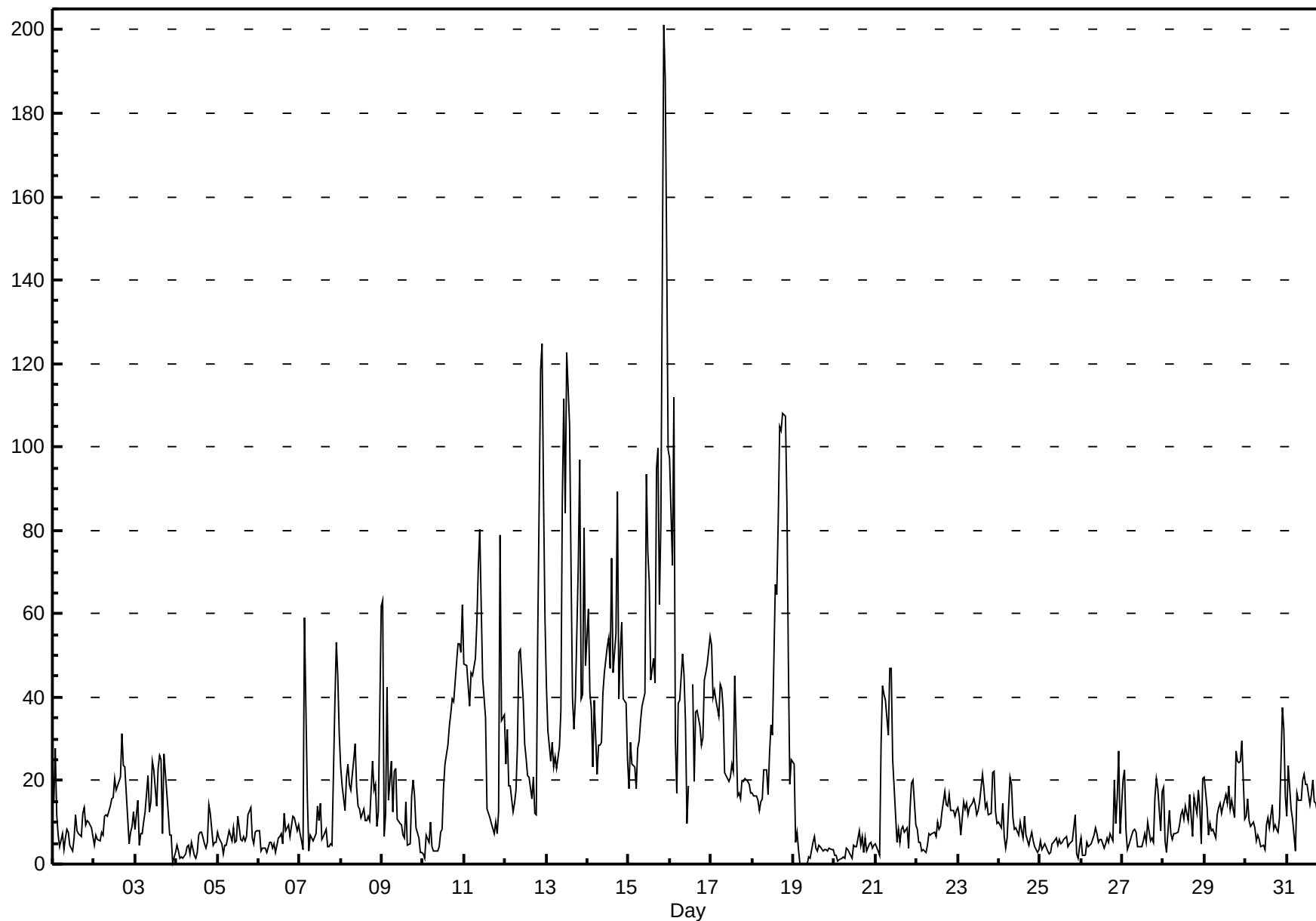
PM2.5 (PM_{2.5}) - µg/m³

Portable Clairmont - July 2014

Maximum Value: 201.1 µg/m³ on Jul 15 21:00																								Maximum Daily Average: 68.0 µg/m³ on Jul 15				Hours in Service: 744	
Minimum Value: 0 µg/m³ on Jul 19 05:00																								Minimum Daily Average: 3.5 µg/m³ on Jul 20				Hours of Data: 743	
Maximum Diurnal Average: 30.8 µg/m³ at hour 22																								Minimum Diurnal Average: 13.1 µg/m³ at hour 5				Hours of Missing Data: 1	
Monthly Average: 19.94 µg/m³																								Percentiles: P ₁ = 1.0 P ₁₀ = 3.8 Q ₁ = 6.2 Median = 11.9 Q ₃ = 23.5 P ₉₀ = 45.4 P ₉₉ = 105.8				Hours of Calibration: 0	
Percent Operational Time: 99.9																													
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-Jul	15	28	12	7	4	7	4	6	8	8	4	3	6	12	8	7	6	12	14	9	10	10	9	7	9.0	27.6			
2-Jul	4	7	6	6	8	7	11	12	12	14	16	16	20	18	20	21	31	23	23	17	5	7	9	13	13.6	31.1			
3-Jul	8	15	5	7	7	10	13	21	13	15	25	23	14	23	26	25	7	26	17	12	7	7	0	3	13.7	26.5			
4-Jul	5	3	1	2	1	2	4	4	3	5	2	2	3	7	8	7	5	4	5	14	12	5	5	5	4.8	14.4			
5-Jul	8	6	5	3	4	4	6	8	5	9	5	5	11	6	6	7	6	6	12	14	6	5	8	8	6.8	13.7			
6-Jul	8	3	4	4	4	3	5	5	4	5	3	6	7	7	5	12	8	9	7	9	12	11	8	9	6.5	12.0			
7-Jul	7	6	3	59	16	3	7	6	6	7	14	10	15	6	6	8	4	4	5	5	39	53	45	31	15.3	59.1			
8-Jul	23	19	13	21	24	19	18	25	29	18	14	13	11	13	11	10	11	10	25	18	19	9	12	62	18.7	61.7			
9-Jul	63	7	12	43	15	25	13	22	23	11	10	9	7	6	15	5	5	16	20	16	9	6	3	3	15.1	63.2			
10-Jul	2	1	7	5	10	4	3	3	3	4	8	8	19	24	29	33	36	40	39	48	53	53	51	62	22.7	62.3			
11-Jul	48	48	43	38	46	45	49	58	71	80	62	44	35	13	12	11	10	7	10	7	12	79	35	36	37.5	80.4			
12-Jul	24	32	19	19	13	15	18	29	51	51	39	29	25	21	21	16	21	12	12	54	119	125	89	59	38.0	124.9			
13-Jul	43	32	25	29	23	26	23	28	37	88	112	84	123	105	71	40	32	40	72	97	40	41	81	47	55.7	122.8			
14-Jul	61	41	37	23	39	21	29	28	29	41	46	52	54	47	73	46	55	89	40	51	58	40	39	25	44.4	89.4			
15-Jul	18	29	24	23	18	28	29	34	38	41	93	75	67	44	49	43	95	100	62	82	201	188	148	99	68.0	201.1			
16-Jul	97	71	112	30	17	38	39	50	45	34	10	19	M	43	20	36	37	33	28	30	44	46	48	55	42.8	111.9			
17-Jul	53	40	42	39	35	43	42	37	22	21	20	21	24	22	45	16	17	16	20	20	20	20	19	17	28.0	52.6			
18-Jul	17	16	16	15	13	15	16	22	23	17	27	33	31	67	65	82	105	104	108	108	86	49	19	25	44.9	108.2			
19-Jul	24	5	8	3	0	0	0	0	0	2	1	5	7	4	3	5	4	3	4	4	3	4	4	3	4.0	24.1			
20-Jul	2	2	1	1	1	2	1	4	4	2	2	4	4	4	8	4	6	3	6	3	5	5	4	5	3.5	8.1			
21-Jul	5	3	2	29	43	41	39	31	47	47	25	18	5	8	5	8	9	8	9	4	13	20	20	9	18.7	46.9			
22-Jul	9	5	5	3	3	3	5	7	7	7	8	7	10	8	9	12	18	14	14	17	13	13	11	13	9.2	17.5			
23-Jul	14	12	7	15	13	15	12	14	15	16	14	12	13	15	22	18	14	15	12	12	22	22	13	10	14.3	22.4			
24-Jul	10	9	15	7	4	6	21	19	11	8	9	7	10	8	6	11	7	5	6	8	5	4	3	3	8.5	20.8			
25-Jul	6	3	4	5	3	2	3	5	5	6	4	6	5	5	6	6	4	5	5	6	12	3	1	4	4.8	11.7			
26-Jul	6	2	2	5	4	5	5	7	9	7	5	6	6	4	5	6	5	7	6	20	10	16	27	7	7.6	26.9			
27-Jul	20	22	8	3	4	7	8	8	7	4	4	4	6	7	5	10	6	6	5	16	21	18	8	17	9.5	22.5			
28-Jul	18	6	3	13	7	6	7	7	8	9	12	13	11	14	10	17	11	7	16	12	18	13	5	21	11.0	20.6			
29-Jul	21	14	7	10	8	8	6	12	13	15	12	14	17	15	19	13	15	11	27	25	24	25	29	11	15.4	29.4			
30-Jul	12	16	10	9	10	9	5	7	6	4	4	4	9	11	9	14	9	9	8	8	11	37	32	16	11.3	37.4			
31-Jul	12	24	13	11	7	3	17	15	15	20	22	19	19	14	17	20	15	15	13	19	24	22	15	15	16.0	23.7			
21.4 17.0 15.2 15.7 13.1 13.6 14.8 17.3 18.3 19.9 20.4 18.5 19.8 19.5 19.7 18.5 19.8 21.3 20.9 24.6 30.1 30.8 25.8 22.6																								Diurnal Average					
97.4 71.5 111.9 59.1 45.9 45.3 49.2 58.2 71.1 88.0 111.5 84.2 122.8 105.2 73.3 82.2 104.8 103.9 108.2 107.5 201.1 188.3 147.6 99.3																								Diurnal Maximum					
M - Maintenance																													

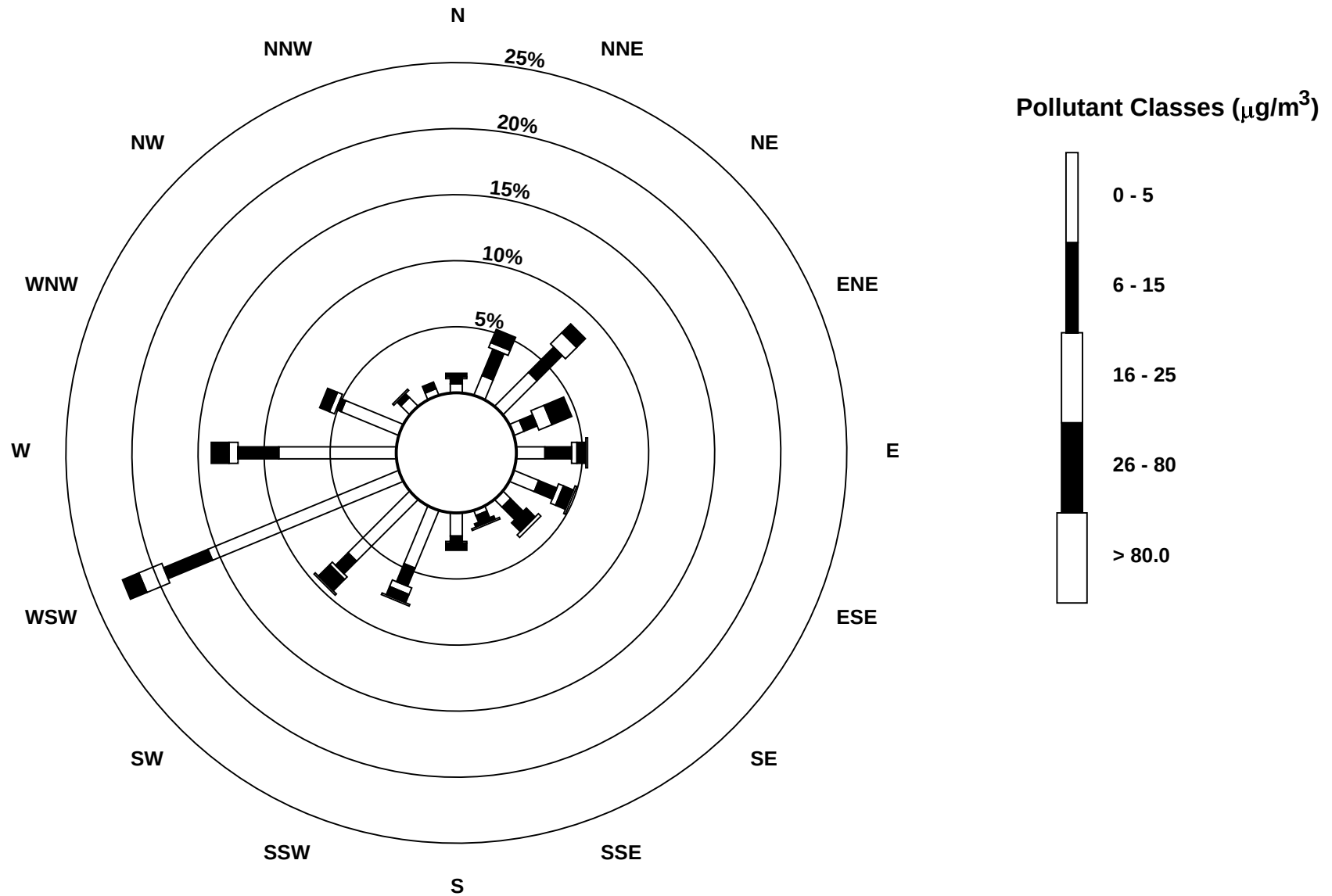
Hourly Maximums

PM2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Clairmont - July 2014



Pollutant Rose

PM_{2.5} (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Portable Clairmont - July 2014



Hourly Averages

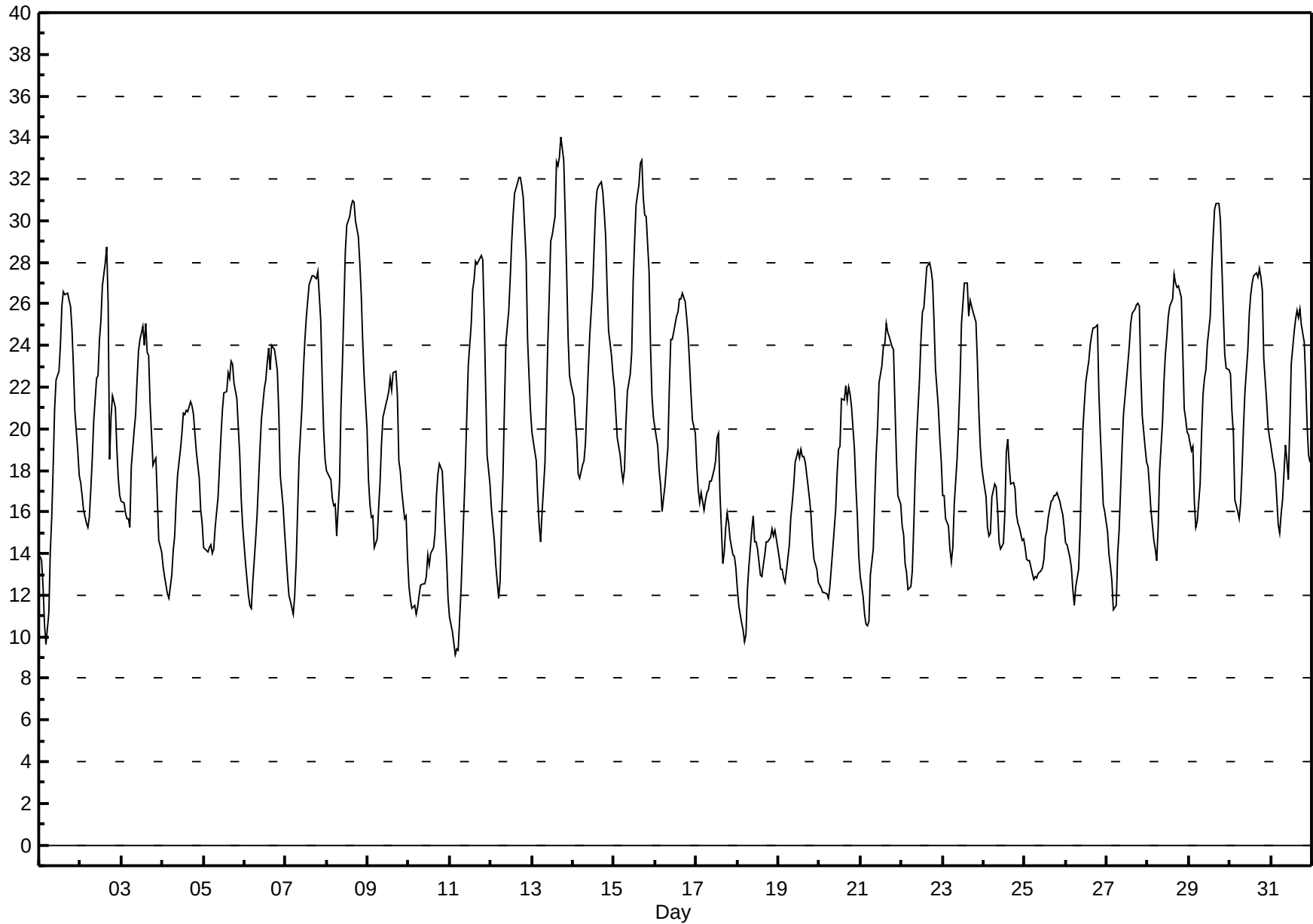
External Temperature (ET) - °C

Portable Clairmont - July 2014

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 34.0 °C on Jul 13 18:00 Maximum Daily Average: 24.7 °C on Jul 15																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Minimum Value: 9 °C on Jul 11 04:00 Maximum Diurnal Average: 24.8 °C at hour 17 Monthly Average: 19.57 °C												Minimum Daily Average: 13.4 °C on Jul 18 Minimum Diurnal Average: 13.5 °C at hour 5 Percentiles: P ₁ = 10.2 P ₁₀ = 13.0 Q ₁ = 15.2 Median = 18.7 Q ₃ = 23.7 P ₉₀ = 27.2 P ₉₉ = 32.5														
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-Jul	14	14	12	11	10	11	14	16	18	21	22	23	24	26	27	26	27	26	26	25	23	21	19	18	19.7	26.6
2-Jul	17	17	16	15	15	16	17	19	20	22	23	24	25	27	28	29	26	18	21	22	21	19	18	17	20.5	28.7
3-Jul	16	16	16	16	16	15	18	20	21	22	24	24	25	24	25	24	24	21	18	18	19	17	15	14	19.5	25.0
4-Jul	13	13	13	12	12	13	14	15	17	18	19	20	21	21	21	21	21	21	21	20	19	18	16	15	17.2	21.3
5-Jul	14	14	14	14	14	14	14	15	17	18	20	21	22	22	23	22	23	23	22	21	20	19	17	15	18.3	23.2
6-Jul	14	13	12	12	11	13	15	16	17	19	20	22	22	23	24	23	24	24	23	23	21	18	16	15	18.3	24.0
7-Jul	14	13	12	12	11	12	14	16	19	21	23	24	25	26	27	27	27	27	27	28	25	22	20	19	20.5	27.6
8-Jul	18	18	18	17	16	16	15	17	21	23	26	29	30	30	31	31	31	30	29	28	26	24	22	20	23.6	31.0
9-Jul	18	16	16	16	14	15	16	17	19	21	21	21	22	22	22	23	23	22	18	18	17	16	16	14	18.4	22.8
10-Jul	12	12	11	12	11	11	12	12	13	13	13	14	13	14	14	15	17	18	18	18	17	15	14	12	13.8	18.3
11-Jul	11	10	10	9	9	9	12	14	16	18	21	23	25	27	27	28	28	28	28	28	25	22	19	17	19.4	28.3
12-Jul	16	15	15	13	12	13	16	18	21	24	26	27	29	30	31	32	32	32	32	31	28	24	23	21	23.4	32.1
13-Jul	20	19	18	17	15	15	16	18	21	24	26	29	29	30	33	33	33	34	33	30	28	24	23	22	24.6	34.0
14-Jul	21	20	20	18	18	18	18	19	21	23	25	27	29	31	31	32	32	31	30	29	27	25	24	23	24.6	31.9
15-Jul	22	21	20	19	18	18	18	20	22	23	24	27	29	31	32	33	33	31	30	30	28	24	22	21	24.7	32.9
16-Jul	20	19	18	17	16	17	17	19	22	24	24	25	25	26	26	26	27	26	25	25	23	22	20	20	22.1	26.6
17-Jul	18	17	16	17	16	17	17	17	17	17	18	18	20	20	17	14	14	15	16	15	15	14	14	13	16.4	19.8
18-Jul	12	11	11	10	10	10	12	13	15	16	15	15	14	13	13	13	14	15	15	15	15	15	15	15	13.4	15.8
19-Jul	14	13	13	13	13	13	14	16	16	17	18	19	19	19	19	19	18	17	17	16	15	14	13	13	15.7	19.0
20-Jul	12	12	12	12	12	12	12	13	14	16	18	19	19	21	21	22	21	22	22	21	19	17	16	14	16.7	22.1
21-Jul	13	12	11	11	11	11	13	14	17	19	20	22	23	24	24	25	25	24	24	24	21	19	17	16	18.3	25.0
22-Jul	15	15	14	13	12	12	13	15	18	20	22	24	26	26	27	28	28	28	27	25	23	21	20	18	20.4	28.0
23-Jul	17	17	16	15	14	14	14	16	19	20	22	25	26	27	27	25	26	26	26	25	23	21	19	18	20.8	27.0
24-Jul	18	17	15	15	15	17	17	17	16	15	14	15	16	19	20	18	17	17	17	16	15	15	15	15	16.3	19.5
25-Jul	14	14	14	14	13	13	13	13	13	13	13	14	15	15	16	17	17	17	17	17	17	16	16	15	14.7	17.0
26-Jul	14	14	14	13	12	12	12	13	15	18	20	21	22	23	24	25	25	25	25	22	20	18	16	16	18.4	25.0
27-Jul	15	14	13	13	11	12	14	15	17	19	21	22	23	24	25	26	26	26	26	26	23	21	19	18	19.5	26.0
28-Jul	18	17	16	15	14	14	15	18	20	22	24	24	25	26	26	27	27	27	27	26	24	21	20	20	21.4	27.4
29-Jul	20	19	19	17	15	16	17	20	22	22	23	24	25	28	29	31	31	31	30	28	26	24	23	23	23.4	30.8
30-Jul	23	21	20	17	16	16	16	18	20	22	24	26	26	27	27	27	27	28	27	27	23	21	20	20	22.5	27.7
31-Jul	19	19	18	17	15	15	16	17	19	18	18	20	23	25	25	26	25	26	25	24	22	20	19	18	20.4	25.7
16.3 15.6 14.9 14.2 13.5 13.7 15.0 16.4 18.2 19.7 20.8 22.2 23.2 24.1 24.6 24.7 24.8 24.4 24.0 23.2 21.5 19.5 18.2 17.2																								Diurnal Average		
22.6 20.8 19.8 18.7 18.0 18.3 18.4 20.3 21.9 24.3 26.5 29.1 29.8 30.7 32.9 32.8 33.0 34.0 32.9 31.1 28.1 24.7 23.5 22.8																								Diurnal Maximum		

Hourly Averages

External Temperature (ET) - °C
Portable Clairmont - July 2014



Hourly Averages

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

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	6	7	8	6	5	5	5	5	5	4	2	6	5	8	5	3	4	6	8	12	8	12	13	15	2.4	14.6
Dir	281	268	248	251	247	260	248	239	252	223	79	49	49	104	103	61	19	52	44	35	15	21	34	28	13.1	27.9
2 Spd	17	14	14	14	13	13	10	11	13	14	15	18	22	22	19	19	7	22	10	10	10	8	3	11	8.7	22.2
Dir	31	45	38	35	37	41	46	47	81	94	93	87	87	89	92	99	134	291	302	359	2	344	44	265	55.9	87.0
3 Spd	6	5	5	6	6	3	1	3	4	6	8	11	13	11	13	20	15	13	9	5	5	8	11	11	6.1	19.7
Dir	332	204	271	30	92	205	264	79	300	301	258	279	290	260	278	283	282	269	289	265	199	208	222	225	267.5	283.1
4 Spd	12	13	11	13	14	11	18	21	20	19	19	19	19	21	22	23	25	22	21	17	14	10	6	7	15.9	24.6
Dir	215	199	202	208	210	220	227	229	221	230	219	240	237	237	236	242	239	245	241	247	254	256	229	204	231.0	239.2
5 Spd	6	4	2	5	9	8	7	6	12	12	15	14	13	15	12	10	12	14	17	14	13	9	6	8	9.8	16.6
Dir	247	265	220	188	203	230	229	220	227	222	241	253	265	258	246	235	221	247	244	245	236	253	248	242	239.5	243.9
6 Spd	6	6	4	5	5	6	5	7	17	21	20	17	18	16	17	18	18	19	18	14	8	7	4	4	11.6	21.4
Dir	263	254	243	259	240	230	272	260	257	251	253	248	259	266	261	241	255	262	276	272	255	250	270	275	257.3	250.6
7 Spd	6	6	5	7	8	8	9	11	12	9	9	11	11	12	11	9	8	7	6	3	2	3	3	6	6.4	11.8
Dir	266	259	244	244	247	252	254	254	254	255	253	241	252	257	229	242	253	246	261	225	7	37	97	53	251.1	257.0
8 Spd	4	3	2	3	3	4	5	7	8	7	5	5	7	8	9	13	11	10	8	8	7	8	6	5	5.2	13.2
Dir	78	85	108	104	150	229	240	247	256	258	246	223	188	204	198	196	207	201	198	186	188	198	202	248	206.9	196.1
9 Spd	3	2	3	4	6	7	5	6	20	30	31	29	26	23	22	23	24	18	10	8	9	14	17	17	14.6	30.5
Dir	250	212	184	258	254	259	246	224	234	230	236	252	247	253	262	250	243	260	260	234	231	234	241	227	243.6	236.3
10 Spd	16	16	11	13	17	21	25	25	24	24	22	25	23	20	22	18	16	13	12	8	5	5	4	2	14.9	25.1
Dir	220	231	253	258	258	255	259	263	266	268	270	272	277	286	289	288	279	287	278	264	228	191	188	40	265.6	272.3
11 Spd	1	3	5	4	3	5	5	8	8	7	8	9	9	8	8	8	11	6	3	5	5	1	1	2	4.1	11.4
Dir	62	130	143	136	168	145	175	207	223	239	262	256	250	238	259	251	254	246	220	206	215	174	39	13	227.6	254.1
12 Spd	1	2	2	3	4	4	4	6	6	5	7	9	7	8	10	8	4	3	5	2	3	4	5	4	2.9	9.9
Dir	225	52	93	241	257	260	248	251	242	247	269	255	266	267	258	246	270	308	333	34	102	66	57	69	265.2	258.2
13 Spd	4	6	5	2	1	4	4	5	5	5	5	4	7	8	6	8	7	3	5	6	2	2	2	6	1.6	7.9
Dir	64	51	77	32	228	257	247	237	239	216	203	213	80	71	101	74	73	140	136	109	334	350	13	52	95.5	70.9
14 Spd	7	8	8	2	4	6	7	7	6	5	6	8	8	7	6	8	10	9	7	7	6	5	5	5	6.1	9.8
Dir	67	59	48	13	48	52	47	46	88	73	53	78	86	100	119	105	111	105	86	91	80	63	58	58	76.0	111.4
15 Spd	7	6	2	3	3	2	2	5	8	9	7	6	9	10	8	8	15	16	10	5	2	1	2	2	3.8	16.3
Dir	46	58	140	119	147	209	242	242	239	228	227	235	262	259	283	265	261	297	301	301	223	135	65	152	261.3	296.8
16 Spd	5	6	4	6	5	7	10	10	8	6	12	12	12	11	9	14	10	8	9	10	10	9	9	9	3.9	13.9
Dir	226	243	274	260	271	263	265	260	257	8	38	43	19	18	24	21	358	33	49	41	66	84	91	101	17.0	20.5
17 Spd	8	6	9	7	12	18	18	22	27	30	23	18	11	15	13	9	16	14	16	12	9	7	5	4	6.8	29.9
Dir	42	60	124	63	30	30	25	16	30	42	45	66	62	38	309	15	251	271	272	267	249	241	209	216	19.1	41.7
18 Spd	4	4	2	2	0	0	3	7	9	6	4	4	7	8	2	4	5	8	8	9	7	7	9	11	3.2	11.1
Dir	209	244	234	259	115	158	96	96	105	137	212	253	243	275	357	102	137	136	121	163	180	209	197	191	175.5	190.6
19 Spd	17	15	14	10	8	12	14	17	20	20	22	21	23	21	21	22	21	17	14	12	10	10	11	9	13.8	22.6
Dir	206	193	196	207	249	241	242	250	256	247	247	274	286	283	286	283	292	299	281	278	282	274	272	263	261.4	285.5
20 Spd	9	7	6	7	7	8	7	7	6	10	10	7	5	9	10	10	10	12	11	11	8	8	9	7	7.8	12.1
Dir	269	269	244	239	211	193	206	226	228	252	237	258	293	211	213	220	231	217	226	220	208	204	210	242	227.9	217.3
21 Spd	5	5	4	5	5	4	4	6	8	5	3	4	1	4	4	7	8	9	8	8	5	2	1	4	3.1	8.6
Dir	262	252	245	199	213	235	237	238	231	236	289	178	171	192	148	197	217	206	126	126	137	40	28	36	204.5	206.4
22 Spd	8	9	13	13	13	13	13	10	10	11	13	10	14	10	11	10	11	14	16	15	8	11	6	4	9.5	16.2
Dir	37	45	34	38	41	40	49	73	95	82	113	111	109	93	101	99	100	102	106	97	59	35	19	1	74.5	106.1

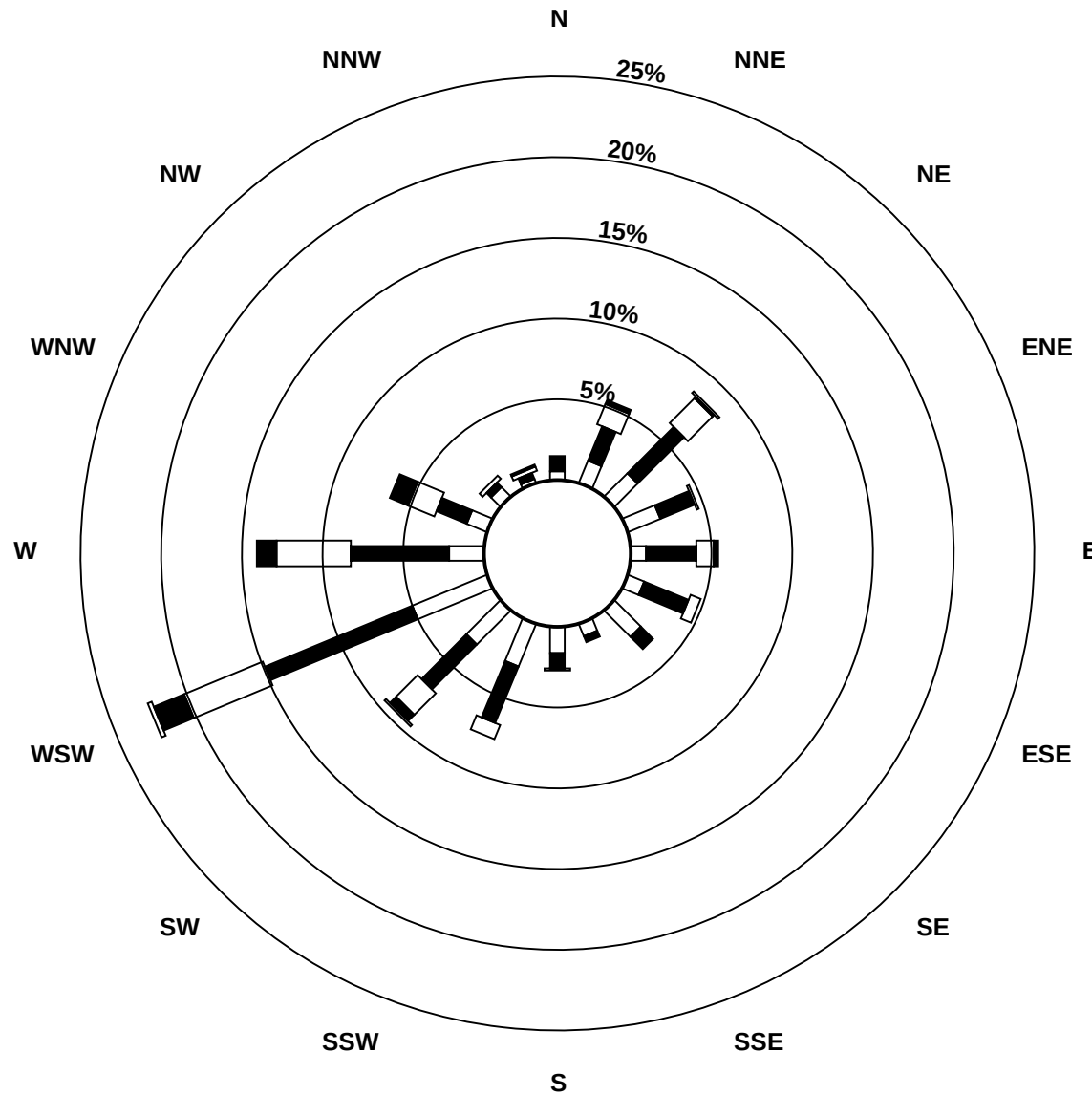
Hourly Averages

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

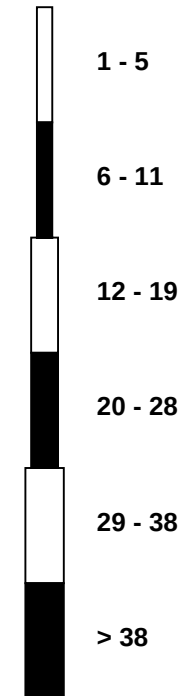
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	10	9	5	5	4	8	11	11	12	10	8	5	8	9	12	16	12	12	9	10	9	9	9	5	4.7	15.9
Dir	9	19	324	36	227	255	270	264	262	272	265	235	247	256	332	15	34	44	34	16	22	22	26	324	333.4	15.3
24 Spd	11	11	13	10	8	17	25	7	12	12	11	13	15	17	17	14	15	16	15	15	16	14	15	18	12.1	25.2
Dir	287	288	267	284	295	329	339	339	180	219	264	287	285	289	286	276	281	305	295	284	273	269	268	263	284.6	338.6
25 Spd	18	18	17	19	17	17	19	19	15	17	18	16	16	15	11	10	9	7	5	2	3	4	6	5	12.4	19.3
Dir	264	251	254	263	257	257	256	257	264	260	258	256	258	254	261	260	255	261	286	244	183	193	211	234	255.9	255.9
26 Spd	3	6	6	6	5	6	8	7	7	11	15	15	13	10	10	9	8	6	7	10	5	4	0	3	7.3	15.4
Dir	283	273	240	234	242	247	235	232	253	252	246	256	249	249	250	251	254	252	192	212	227	205	247	201	242.5	255.5
27 Spd	3	6	3	5	5	3	4	5	5	7	8	9	9	4	3	6	4	4	6	4	5	4	6	3	3.1	8.6
Dir	139	154	174	232	237	255	243	250	244	257	261	257	255	305	204	145	205	187	187	145	125	125	144	109	211.0	256.6
28 Spd	6	5	6	5	1	3	3	5	5	6	5	6	9	8	8	9	12	10	11	9	5	5	9	2	3.8	12.2
Dir	171	175	290	146	170	255	220	200	191	165	135	97	106	92	88	106	96	79	99	107	76	26	18	22	108.3	96.0
29 Spd	10	11	9	2	3	5	7	8	12	9	7	6	7	5	7	10	10	9	10	8	3	5	7	7	5.9	11.6
Dir	77	63	83	136	283	35	44	63	102	106	65	52	42	86	103	115	113	109	113	112	39	31	32	353	79.1	102.4
30 Spd	6	3	7	5	3	9	10	14	15	16	14	13	13	12	11	11	7	6	7	7	7	2	2	4	6.6	16.3
Dir	27	41	51	266	302	264	249	254	256	262	274	274	272	276	278	273	294	297	298	315	357	43	64	274	280.1	262.3
31 Spd	3	7	5	5	3	7	6	2	6	7	7	8	4	5	5	7	8	7	6	9	6	6	5	8	2.6	8.8
Dir	298	298	73	122	306	280	219	166	273	279	305	312	290	306	51	52	48	83	47	41	40	25	22	28	360.0	40.6
Spd	1.7	1.4	1.5	2.1	2.7	3.8	4.4	4.7	5.9	6.2	6.2	5.8	5.4	5.3	5.1	4.1	5.3	4.8	3.0	1.7	1.4	1.3	0.9	1.8	Diurnal Average	
Dir	277.0	250.1	236.1	244.2	252.7	264.9	265.1	254.4	242.5	245.2	250.8	259.6	265.0	264.1	263.6	255.2	252.7	264.4	261.2	249.3	253.5	265.3	254.1	260.8	Diurnal Maximum	
Spd	18.5	18.1	17.2	18.9	17.2	20.7	25.2	24.7	26.8	30.4	30.5	28.6	26.4	22.8	22.5	23.4	24.6	22.4	20.9	16.6	15.7	14.5	16.9	17.6	Diurnal Maximum	
Dir	263.7	251.4	254.4	262.8	256.6	254.9	338.6	263.3	30.4	230.2	236.3	251.8	247.1	252.5	235.7	250.3	239.2	245.4	240.6	246.7	273.4	269.1	241.4	263.5		
Maximum Speed Value: 31 km/h on Jul 9 11:00																									Minimum Speed Value: 0 km/h on Jul 18 05:00	
Maximum Daily Speed Average: 15.9 km/h on Jul 4																									Minimum Daily Speed Average: 1.6 km/h on Jul 13	
Maximum Diurnal Speed Average: 6.2 km/h at hour 10																									Minimum Diurnal Speed Average: 0.9 km/h at hour 23	
Monthly Average Velocity: 3.58 km/h 256.47 deg																									Speed Percentiles: P ₁ = 1.1 P ₁₀ = 3.3 Q ₁ = 5.3 Median = 8.1 Q ₃ = 12.0 P ₉₀ = 17.3 P ₉₉ = 24.1	
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	9	18	5	2	0	0	34																			
NorthEast	24	53	25	2	1	0	105																			
East	15	49	12	3	0	0	79																			
SouthEast	19	19	1	0	0	0	39																			
South	20	20	7	0	0	0	47																			
SouthWest	42	88	32	14	2	0	178																			
West	28	96	80	25	1	0	230																			
NorthWest	10	15	7	0	0	0	32																			
Total	167	358	169	46	4	0	744																			

Wind Rose

Wind Speed (WS) (km/h)
Portable Clairmont - July 2014



Wind Speed Classes (km/h)



Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Clairmont - July 2014

Maximum Speed: 31 km/h on Jul 9 11:00																				Maximum Daily Speed Average: 16.7 km/h on Jul 4										Hours in Service: 744	
Minimum Speed: 1 km/h on Jul 21 23:00																				Minimum Daily Speed Average: 5.3 km/h on Jul 13										Hours of Data: 744	
Maximum Diurnal Speed Average: 12.6 km/h at hour 16																				Minimum Diurnal Speed Average: 7.0 km/h at hour 5										Hours of Missing Data: 0	
Monthly Average Speed: 9.82 km/h																				Percentiles: P ₁ = 2.0 P ₁₀ = 4.2 Q ₁ = 5.9 Median = 8.5 Q ₃ = 12.4 P ₉₀ = 17.7 P ₉₉ = 23.9										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-Jul	6	7	8	6	6	5	5	6	5	5	5	6	7	9	7	7	6	7	9	12	9	12	13	15	7.6	14.6					
2-Jul	17	15	14	14	13	13	10	11	13	14	15	19	23	22	19	19	19	23	11	11	10	9	9	12	14.8	22.6					
3-Jul	8	9	6	7	7	4	3	5	6	7	9	12	13	12	13	20	16	15	12	6	5	8	12	12	9.4	20.2					
4-Jul	12	13	11	13	14	11	18	21	20	19	19	19	19	21	23	23	25	23	21	17	14	10	7	7	16.7	25.1					
5-Jul	6	4	3	5	9	8	8	6	12	12	16	15	13	16	13	11	12	15	17	14	13	10	6	8	10.5	16.8					
6-Jul	7	6	5	5	5	6	6	7	17	22	20	18	18	17	18	19	18	19	18	14	8	7	4	5	12.1	21.6					
7-Jul	6	6	6	7	8	8	9	11	12	10	10	12	12	12	12	10	9	8	6	4	3	3	4	6	8.0	12.3					
8-Jul	4	3	3	3	3	4	5	7	8	7	6	7	8	9	11	14	12	11	8	8	7	8	6	6	7.1	13.9					
9-Jul	4	4	3	4	6	8	6	7	21	31	31	29	27	23	23	24	24	23	13	9	9	14	17	17	15.6	31.1					
10-Jul	16	16	12	13	17	21	25	25	24	24	23	25	23	20	22	18	17	13	12	8	6	5	4	3	16.3	25.3					
11-Jul	2	3	5	4	3	5	5	8	8	7	9	10	10	9	9	9	12	8	5	5	5	3	2	2	6.1	11.8					
12-Jul	2	2	2	4	4	4	4	6	6	6	8	9	7	9	10	9	6	5	6	4	3	4	5	4	5.5	10.4					
13-Jul	4	6	5	3	3	4	4	5	6	5	6	5	7	8	8	8	8	6	6	6	2	2	3	6	5.3	8.1					
14-Jul	7	8	8	4	5	6	7	7	6	6	7	9	9	7	6	8	10	9	7	7	6	5	6	6	6.9	9.9					
15-Jul	7	6	3	3	4	3	3	6	8	9	8	7	9	10	8	9	16	16	10	5	2	3	5	4	6.8	16.4					
16-Jul	6	6	4	6	6	8	10	10	8	9	13	12	13	13	11	15	11	9	10	10	10	9	9	10	9.6	14.5					
17-Jul	8	8	9	8	12	18	19	23	27	30	24	18	12	15	15	12	17	14	17	12	9	8	6	4	14.4	30.1					
18-Jul	5	4	3	3	2	2	4	7	9	8	5	4	7	9	3	4	5	8	8	10	8	8	9	11	6.1	11.3					
19-Jul	17	16	14	11	8	12	15	17	20	20	22	22	23	21	22	22	22	17	15	12	10	10	11	9	16.1	23.0					
20-Jul	9	7	6	7	7	9	8	8	7	10	10	8	7	10	12	12	11	13	12	11	8	8	9	7	8.9	12.7					
21-Jul	5	6	5	5	5	4	4	6	8	7	5	7	6	7	7	10	9	10	9	8	5	3	1	4	6.1	9.7					
22-Jul	8	9	13	13	13	13	13	11	11	11	13	11	14	10	11	10	12	14	16	15	9	11	9	5	11.5	16.3					
23-Jul	10	9	8	5	6	8	11	12	13	10	8	6	9	10	16	16	12	12	9	10	9	9	9	8	9.8	16.5					
24-Jul	11	12	13	10	8	17	25	15	12	12	12	14	15	17	17	15	15	16	15	15	16	15	16	18	14.6	25.3					
25-Jul	19	18	17	19	17	17	19	19	15	17	18	16	16	15	12	10	9	7	5	2	3	4	6	6	12.8	19.4					
26-Jul	3	6	6	6	5	6	8	7	8	11	15	16	14	11	10	9	9	7	8	11	6	4	2	4	8.1	15.8					
27-Jul	4	6	3	6	6	3	4	5	6	8	9	9	9	7	7	9	6	7	7	5	6	4	6	4	6.1	9.2					
28-Jul	7	8	6	6	3	4	3	6	6	7	6	8	10	9	9	10	12	11	11	9	5	5	9	6	7.3	12.4					
29-Jul	12	12	9	5	4	5	7	8	12	9	7	7	7	6	7	10	11	9	10	8	3	5	7	11	7.9	12.1					
30-Jul	7	4	7	6	5	10	10	14	15	16	14	13	13	12	11	12	8	7	8	8	7	4	4	5	9.1	16.5					
31-Jul	4	11	9	6	3	7	7	5	7	8	8	9	5	7	7	8	9	8	6	9	7	6	6	8	7.1	11.2					
7.8 8.1 7.3 7.0 7.0 8.2 9.2 10.0 11.5 12.2 12.3 12.3 12.5 12.5 12.2 12.6 12.4 11.9 10.5 9.3 7.2 7.0 7.1 7.5																									Diurnal Average						
18.7 18.2 17.3 19.0 17.3 20.8 25.3 24.9 26.9 30.8 31.1 29.0 26.9 23.5 22.8 23.8 25.1 22.8 21.1 16.8 15.9 14.6 17.2 17.8																									Diurnal Maximum						

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

Hourly Standard Deviations

Wind Direction (WD) - deg
Portable Clairmont - July 2014

Maximum Value: 91.2 deg on Jul 29 04:00																			Hours in Service: 744						
Minimum Value: 3.3 deg on Jul 2 00:00																			Hours of Data: 744						
																			Hours of Missing Data: 0						
Percentiles: P ₁ = 5.1 P ₁₀ = 7.8 Q ₁ = 10.2 Median = 15.7 Q ₃ = 27.7 P ₉₀ = 48.4 P ₉₉ = 86.2																			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-Jul	21	14	10	14	13	15	22	18	23	52	85	21	43	34	56	68	60	31	22	4	7	6	5	3	85.1
2-Jul	5	12	7	9	6	6	11	10	10	13	8	10	9	11	9	9	61	15	23	42	15	25	87	21	86.8
3-Jul	46	82	35	39	33	47	77	63	56	28	25	18	14	25	16	14	15	24	43	33	32	10	11	14	81.6
4-Jul	9	10	12	8	8	11	13	8	11	12	14	15	14	13	9	14	12	10	8	8	11	9	25	23	25.5
5-Jul	16	26	49	17	12	10	17	21	12	13	14	15	20	13	16	22	18	12	8	8	9	7	10	15	49.4
6-Jul	13	19	22	21	20	15	22	22	11	9	11	16	13	20	18	9	15	11	11	9	9	6	12	12	22.0
7-Jul	9	9	17	7	6	7	7	9	12	17	23	19	18	18	24	28	34	30	45	61	62	36	31	9	61.5
8-Jul	17	22	68	43	50	23	33	13	16	20	40	54	42	42	31	19	24	22	14	11	9	8	14	11	68.3
9-Jul	30	52	26	19	7	10	26	22	13	8	11	10	11	14	12	10	10	39	36	12	16	9	12	10	52.5
10-Jul	7	7	28	11	9	7	7	7	10	7	8	8	9	9	9	11	14	12	11	14	14	16	47	43	47.1
11-Jul	50	17	6	41	25	13	23	15	18	22	21	24	24	26	38	33	17	39	69	23	10	65	51	27	68.7
12-Jul	71	30	31	48	14	16	17	14	20	39	19	23	24	19	17	24	58	67	26	59	27	16	9	18	70.9
13-Jul	14	9	15	44	84	14	14	16	23	35	28	48	15	12	47	15	20	61	40	36	34	27	63	23	83.6
14-Jul	14	9	7	80	21	12	7	11	17	22	16	15	15	18	16	8	7	7	11	9	10	15	13	13	79.7
15-Jul	15	23	56	30	36	59	44	16	14	12	15	24	13	14	19	23	12	8	7	20	57	77	75	73	77.1
16-Jul	43	12	30	9	26	27	13	10	26	71	19	20	24	29	41	18	25	29	17	7	8	9	10	34	70.9
17-Jul	11	40	13	16	7	9	13	9	6	5	10	13	22	11	37	55	15	12	9	9	7	9	12	15	55.2
18-Jul	26	28	31	50	75	80	43	17	12	46	22	15	15	11	56	45	27	11	11	25	20	13	8	9	80.2
19-Jul	9	8	9	20	20	7	8	8	8	9	10	14	11	10	11	11	11	13	11	9	10	9	12		20.0
20-Jul	9	10	9	9	21	8	13	14	23	17	21	33	47	34	34	30	17	18	23	13	11	9	12	21	47.0
21-Jul	12	12	33	13	16	16	16	19	20	41	72	76	89	67	70	62	34	28	22	10	11	46	8	8	88.8
22-Jul	5	9	4	5	5	5	8	18	10	12	11	13	10	19	18	18	15	12	6	9	16	6	62	43	61.8
23-Jul	11	10	43	25	74	10	8	10	11	15	21	49	43	28	49	16	9	9	9	7	7	9	5	53	74.3
24-Jul	11	21	14	8	15	8	5	90	12	15	19	8	8	8	10	10	11	16	10	10	10	8	9	8	89.9
25-Jul	10	7	8	7	8	7	5	8	9	8	8	8	7	7	9	10	7	12	12	28	14	11	11	21	28.2
26-Jul	16	8	8	6	11	9	8	8	20	15	12	14	20	24	20	21	26	22	30	18	26	32	91	38	90.8
27-Jul	49	13	27	23	23	20	23	28	26	23	21	18	24	60	86	53	77	62	41	41	17	12	9	38	86.2
28-Jul	33	75	33	44	89	46	42	25	23	32	43	42	30	22	22	16	11	15	12	8	26	16	10	87	89.3
29-Jul	53	21	15	91	38	22	14	14	12	17	21	16	13	33	20	12	8	8	6	5	25	11	10	50	91.2
30-Jul	25	46	35	34	43	17	7	7	7	9	14	16	15	21	17	18	31	34	28	29	8	67	61	27	67.0
31-Jul	46	62	53	53	27	14	36	76	29	32	30	23	49	51	47	47	26	33	22	15	23	16	12	12	76.2
70.9 81.6 68.3 91.2 89.3 80.2 76.7 89.9 56.2 70.9 85.1 76.0 88.8 66.6 86.2 67.7 76.8 67.4 68.7 60.6 61.5 77.1 90.8 87.5																									

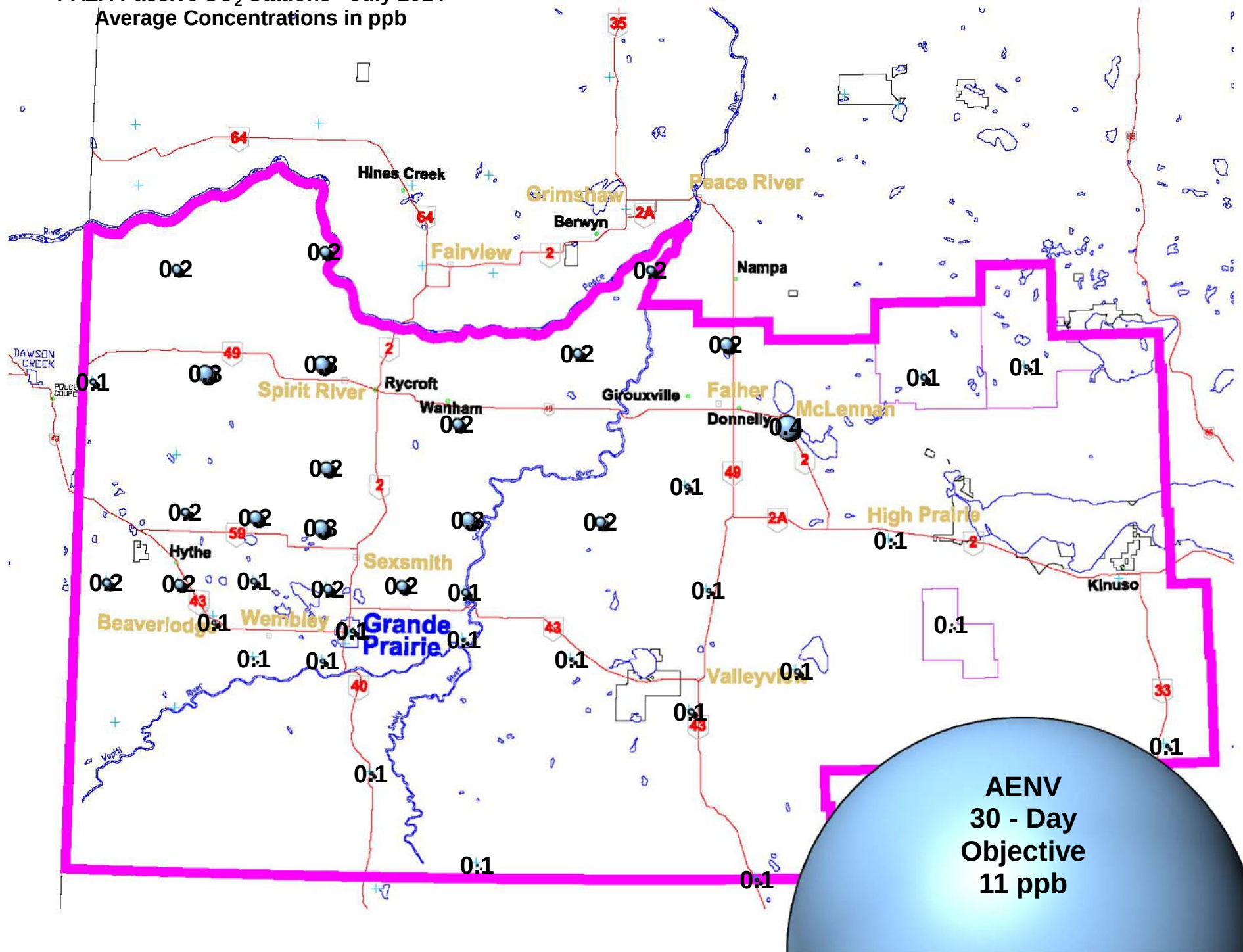
PAZA

Monthly Passive Data Summary

[illegible]

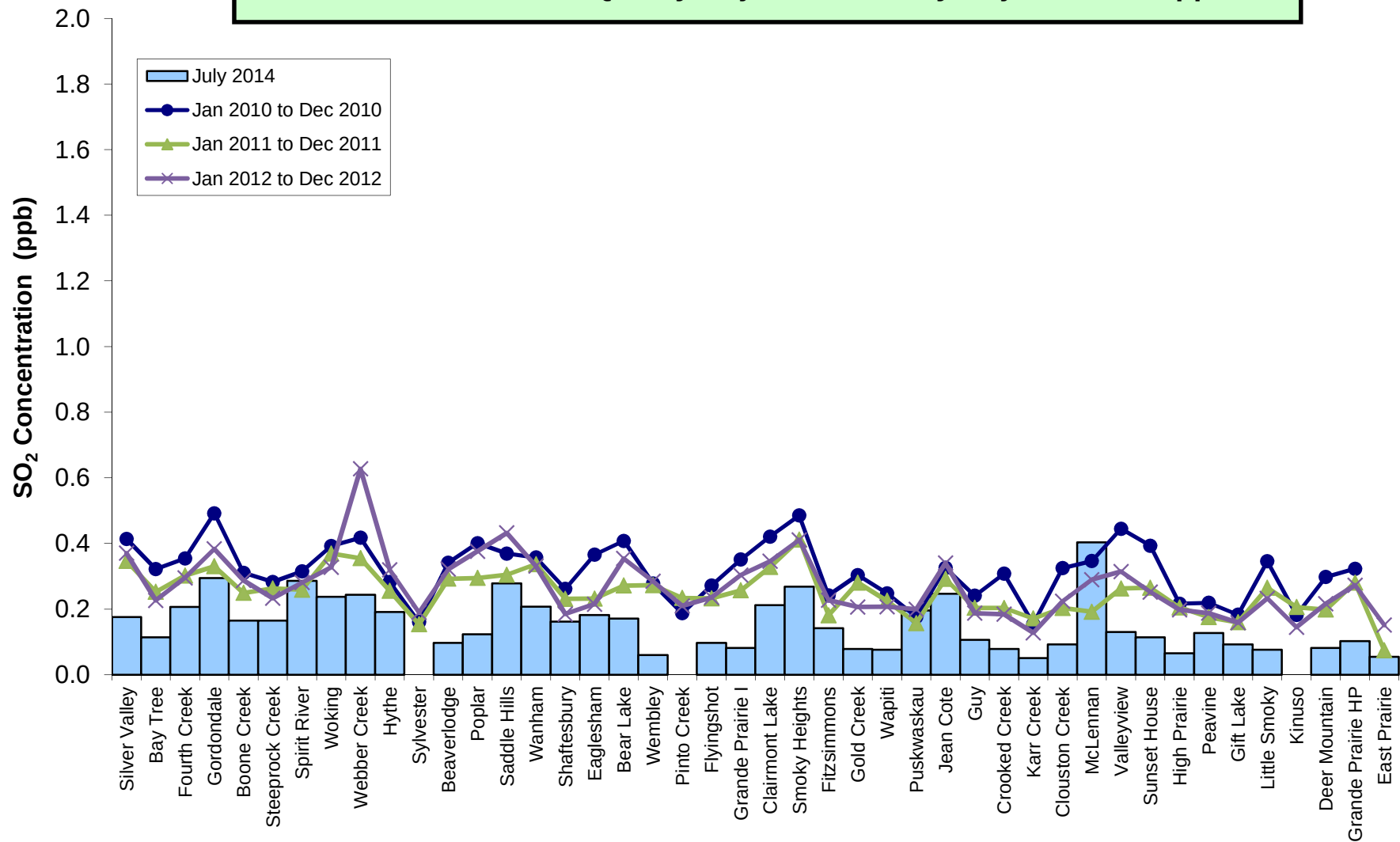
PAZA Passive SO₂ Stations - July 2014

Average Concentrations in ppb



**AENV
30 - Day
Objective
11 ppb**

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



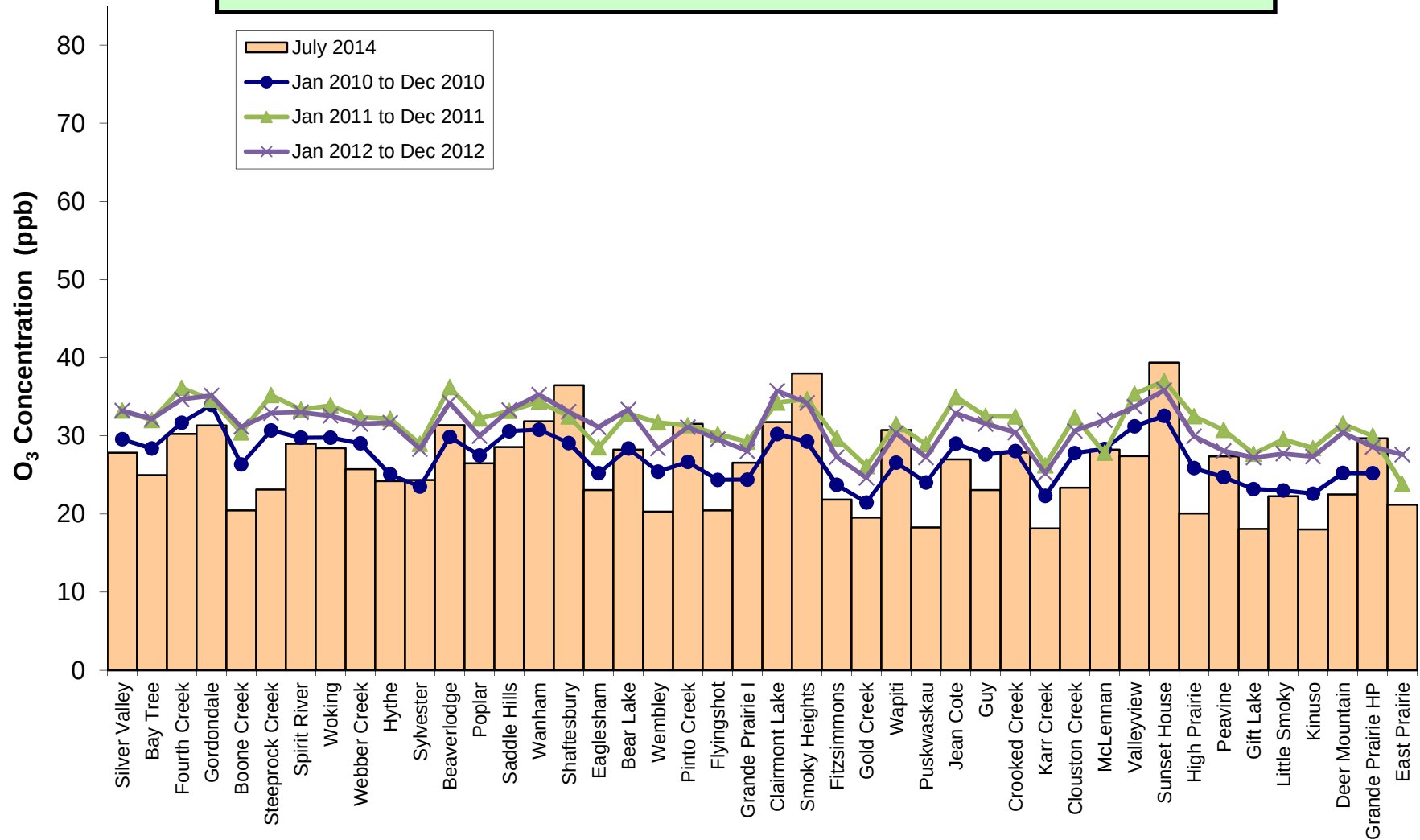
PAZA Passive O₃ Stations - July 2014
Average Concentrations in ppb

The map shows the following average concentrations at 36 stations (values in ppb):

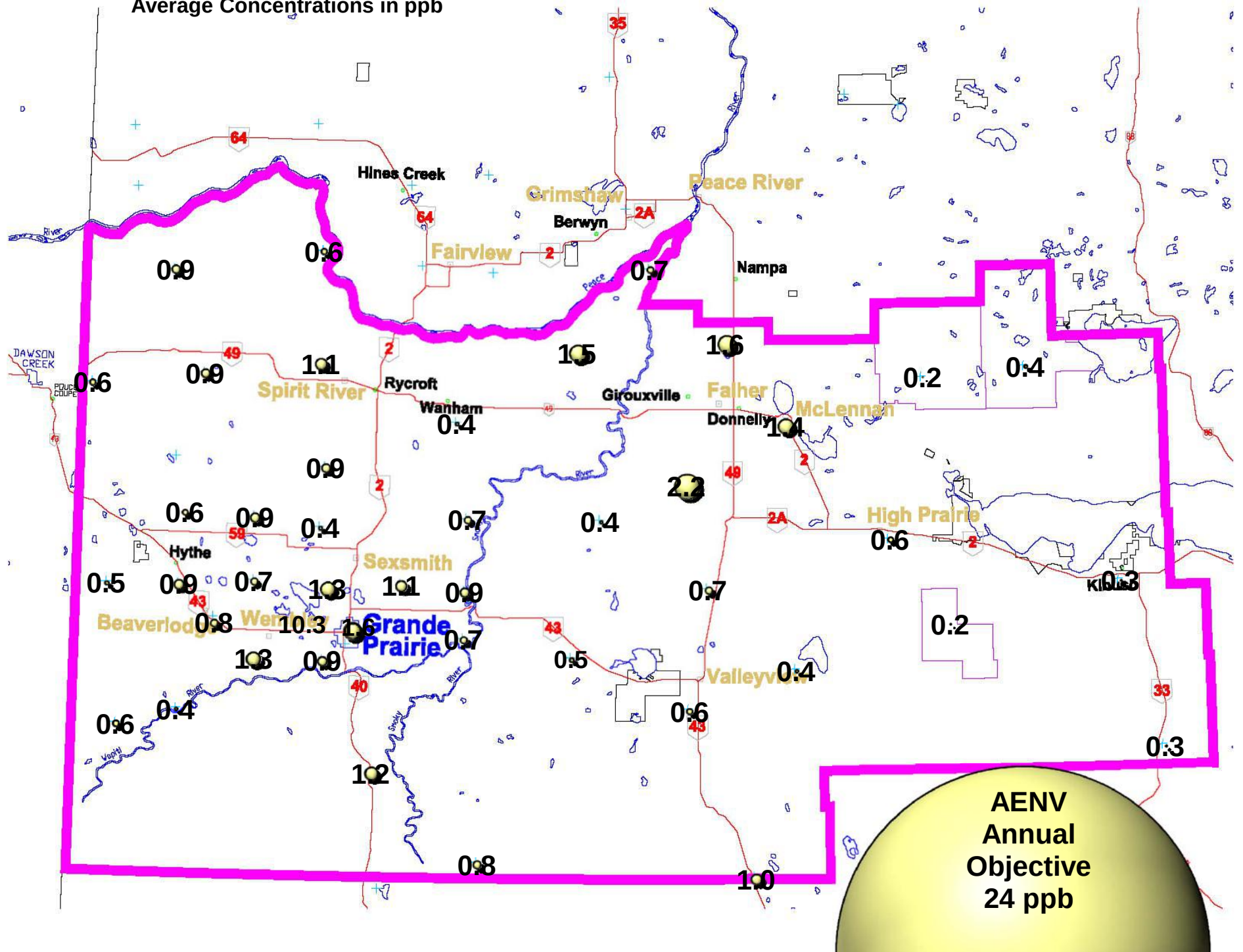
- Station 1: 28
- Station 2: 30
- Station 3: 25
- Station 4: 31
- Station 5: 29
- Station 6: 36
- Station 7: 23
- Station 8: 27
- Station 9: 27
- Station 10: 18
- Station 11: 32
- Station 12: 20
- Station 13: 26
- Station 14: 28
- Station 15: 29
- Station 16: 38
- Station 17: 18
- Station 18: 23
- Station 19: 20
- Station 20: 21
- Station 21: 18
- Station 22: 23
- Station 23: 20
- Station 24: 24
- Station 25: 26
- Station 26: 28
- Station 27: 30
- Station 28: 27
- Station 29: 31
- Station 30: 22
- Station 31: 31
- Station 32: 28
- Station 33: 27
- Station 34: 39
- Station 35: 23
- Station 36: 18

No AENV 30-Day Objective

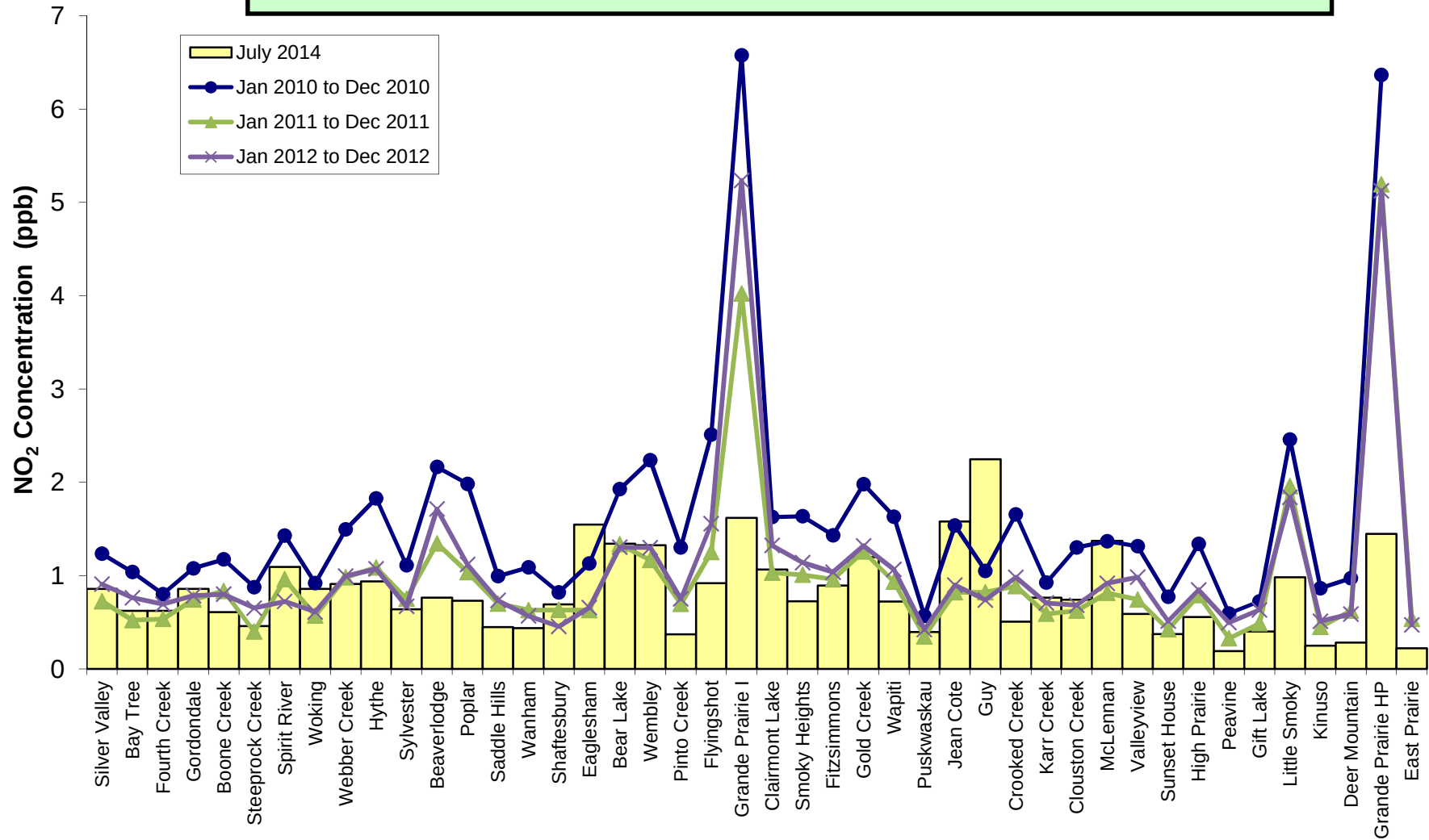
Alberta Ambient Air Quality Objective - No Annual O₃ Objective



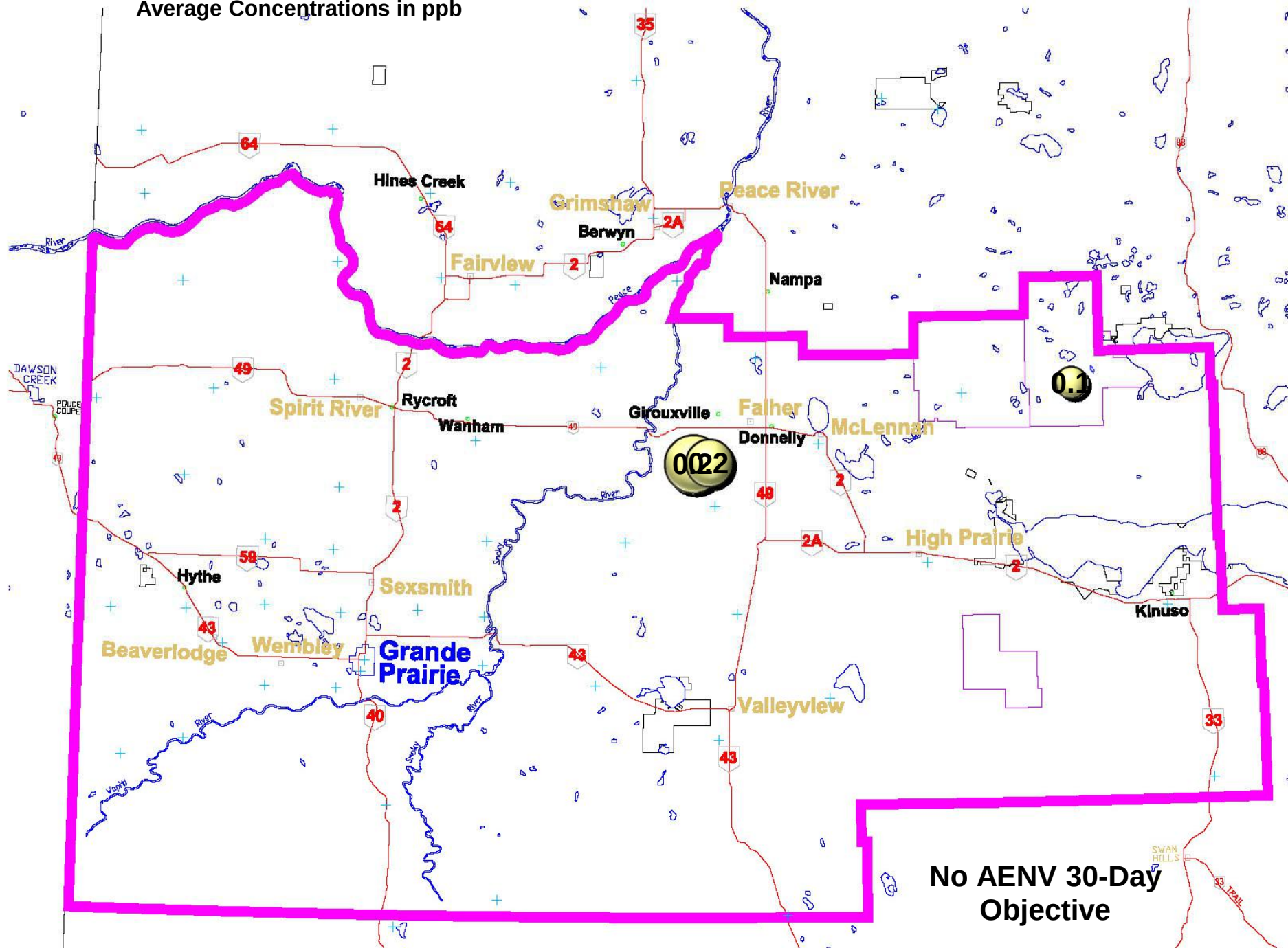
PAZA Passive NO₂ Stations - July 2014
Average Concentrations in ppb



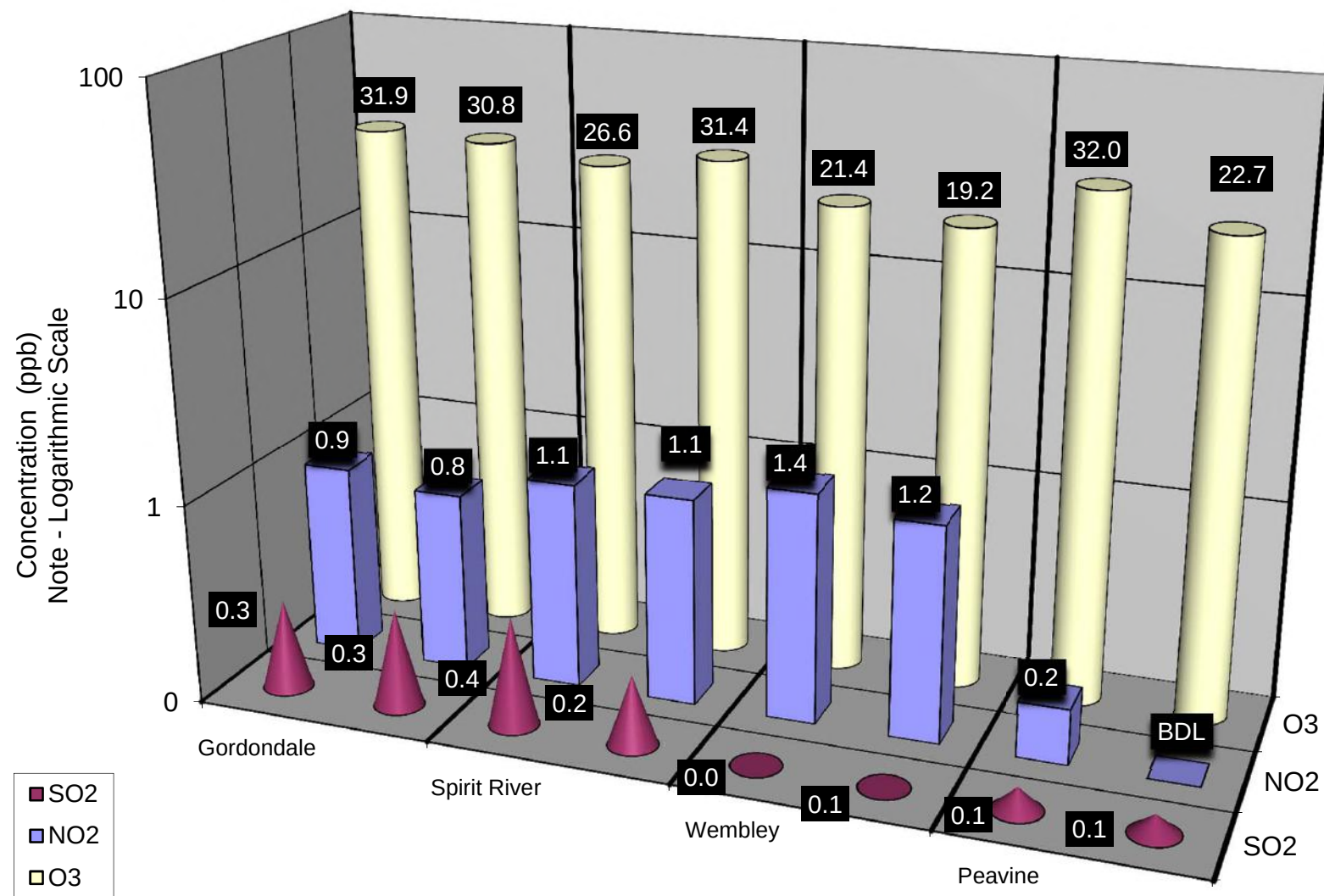
Alberta Ambient Air Quality Objective - Annual NO₂ Objective is 24 ppb



PAZA Passive H₂S Stations - July 2014
Average Concentrations in ppb



No AENV 30-Day
Objective



Duplicate Summary Chart

PAZA Passive Results for July 2014

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	Site Legal
Duplicates						
4a	Gordondale	0.3	31.9	0.9		
4b	Gordondale	0.3	30.8	0.8		
9a	Spirit River	0.4	26.6	1.1		
9b	Spirit River	0.2	31.4	1.1		
24a	Wembley	0.0	21.4	1.4		
24b	Wembley	0.1	19.2	1.2		
44a	Peavine	0.1	32.0	0.2		
44b	Peavine	0.1	22.7	BDL		
45a	Gift Lake				0.1	
45b	Gift Lake				0.1	
1	Silver Valley	0.2	27.8	0.9		08-27-081-11 W6M
2	Bay Tree	0.1	25.0	0.6		13-16-078-13 W6M
3	Fourth Creek	0.2	30.2	0.6		04-13-082-07 W6M
4	Gordondale	0.3	31.3	0.9		04-34-078-10 W6M
5	Boone Creek	0.2	20.5	0.6		16-36-074-11 W6M
7	Steeprock Creek	0.2	23.1	0.5		09-35-072-13 W6M
9	Spirit River	0.3	29.0	1.1		08-12-079-07 W6M
10	Woking	0.2	28.4	0.9		01-13-076-07 W6M
11	Webber Creek	0.2	25.7	0.9		09-36-074-09 W6M
12	Hythe	0.2	24.2	0.9		14-36-072-11 W6M
14	Sylvester	BDL	24.3	0.6		08-06-069-12 W6M
16	Beaverlodge	0.1	31.3	0.8		15-36-071-10 W6M
17	Poplar	0.1	26.5	0.7		13-06-073-08 W6M
18	Saddle Hills	0.3	28.6	0.4		04-25-074-07 W6M
19	Wanham	0.2	31.9	0.4		16-22-077-03 W6M
20	Shaftesbury	0.2	36.5	0.7		04-03-082-23 W5M
21	Eaglesham	0.2	23.1	1.5		16-21-079-25 W5M
23	Bear Lake	0.2	28.2	1.3		15-31-072-06 W6M
24	Wembley	0.1	20.3	1.3		12-31-070-08 W6M
25	Pinto Creek	BDL	31.5	0.4		04-24-069-11 W6M
26	Flyingshot	0.1	20.5	0.9		15-36-070-07 W6M
27	Grande Prairie I	0.1	26.6	1.6		08-15-071-06 W6M

PAZA Passive Results for July 2014 (Continued)

28	Clairmont Lake	0.2	31.8	1.1	09-06-073-04 W6M
29	Smoky Heights	0.3	38.0	0.7	04-06-075-02 W6M
30	Fitzsimmons	0.1	21.8	0.9	15-36-072-03 W6M
32	Gold Creek	0.1	19.5	1.2	06-33-067-05 W6M
33	Wapiti	0.1	30.7	0.7	02-25-071-03 W6M
34	Puskwaskau	0.2	18.3	0.4	15-35-074-25 W5M
35	Jean Cote	0.2	27.0	1.6	12-35-079-21 W5M
36	Guy	0.1	23.1	2.2	03-04-076-22 W5M
37	Crooked Creek	0.1	27.9	0.5	16-01-071-26 W5M
38	Karr Creek	0.1	18.1	0.8	10-16-065-02 W6M
39	Clouston Creek	0.1	23.3	0.7	12-01-073-22 W5M
40	McLennan	0.4	28.2	1.4	03-29-077-19 W5M
41	Valleyview	0.1	27.4	0.6	09-30-069-22 W5M
42	Sunset House	0.1	39.4	0.4	05-32-070-19 W5M
43	High Prairie	0.1	20.1	0.6	16-13-074-17 W5M
44	Peavine	0.1	27.4	0.2	03-05-079-15 W5M
45	Gift Lake	0.1	18.1	0.4	0.1 10-07-079-12 W5M
46	Little Smoky	0.1	22.3	1.0	12-01-065-21 W5M
47	Kinuso	BDL	18.0	0.3	12-10-073-10 W5M
48	Deer Mountain	0.1	22.5	0.3	15-22-068-09 W5M
49	Grande Prairie HP	0.1	29.7	1.4	17-26-071-06 W6M
50	East Prairie	0.1	21.2	0.2	13-02-072-15 W5M
63	Girouxville 3			0.2	14-02-077-23 W5M
64	Girouxville 4			0.2	4-08-077-22 W5M

*BDL = Below Detection Level

*NS - No sample

Passive Summary for July 2014

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

Passive Summary for July 2014 (PAZA Zone)				
Mean	0.2	26.1	0.8	0.2
Standard Deviation	0.1	5.3	0.4	0.1
Minimum	0.1	18.0	0.2	0.1
Minimum At	Karr Creek (#38)	Kinuso (#47)	Peavine (#44a)	Gift Lake (#45)
Maximum	0.4	39.4	2.2	0.2
Maximum At	McLennan (#40)	Sunset House (#42)	Guy (#36)	Girouxville 3 (#63)

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

	SO ₂	O ₃	NO ₂
PAZA Beaverlodge station	0.6	28.2	2.4
PAZA Beaverlodge passive	0.1	31.3	0.8

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

	SO ₂	O ₃	NO ₂
PAZA Henry Pirker station	0.2	25.1	5.0
PAZA Grande Prairie passive	0.1	29.7	1.4

PAZA

ALBERTA ENVIRONMENT AND SUSTAINABLE RESOURCES INCIDENCE REPORT

July 2014

Air Monitoring Directive Exceedence 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:	286652	Reported To (AESRD Contact):	Tayrn/ Nacy
Date & Time Incident Reported to AESRD:	July 13, 2014, 10:00/ July 14 2014, 12:40	Reported By:	Christopher Hendrickson
Reported on Behalf of:	PAZA	Approval Number (if applicable):	NA
Location(s) of Incident:	Evergreen Park Air Quality Monitoring station		
Start Date & Time of Incident:	July 13 2014, 07:00	End Date & Time of Incident:	July 13 2014, 10:00, 24 Hour exceedence
Reason or Nature of Incident:			
Four one-hour and one 24-hour exceedence were detected, details as follows:			
07:00 HRS MST	PM2.5=104.0 µg/m ³	WS=6.1 km/hr	WD=238.9 deg
08:00 HRS MST	PM2.5=136.2 µg/m ³	WS=9.2 km/hr	WD=249.7 deg
09:00 HRS MST	PM2.5=115.2 µg/m ³	WS=13.1 km/hr	WD=250.4 deg
10:00 HRS MST	PM2.5=82.7 µg/m ³	WS=13.5 km/hr	WD=256.0 deg
24-hour Average	PM2.5=36.7 µg/m ³	WS=4.9 km/hr	WD=178.5 deg
Immediate Actions Taken:			
Reviewed the real time data and confirmed it as valid. Called it in to AE.			
Investigation Details:			
Forest fires reported in BC and Alberta			
Actions Taken to Prevent Reoccurrence (if any):			
NA			
Additional Actions Required (if any):			
NA			
Report Completed By:	Christopher Hendrickson	Date Report Submitted:	July 13 2014
7-Day Letter Due Date:	July 20 2014		

Air Monitoring Directive Exceedence Report

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Reference Number:	286730	Reported To (AESRD Contact):	Jasmina
Date & Time Incident Reported to AESRD:	July 14 2014, 18:12	Reported By:	Grover Christiansen
Reported on Behalf of:	PAZA	Approval Number (if applicable):	NA
Location(s) of Incident:	Evergreen Park Air Quality Monitoring station		
Start Date & Time of Incident:	July 14 2014, 12:00	End Date & Time of Incident:	July 14 2014, 13:00
Reason or Nature of Incident:			
A one-hour exceedence was detected, details as follows: 13:00 HRS MST PM2.5=112.8 µg/m ³ WS=7.2 km/hr WD=160.3 deg			
Immediate Actions Taken:			
Reviewed the real time data and confirmed it as valid. Called it in to AE. Called in all hourly PM2.5 exceedences into AE.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	July 14, 2014
7-Day Letter Due Date:	July 21, 2014		

Air Monitoring Directive Exceedence Report

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Reference Number:	286766	Reported To (AESRD Contact):	Tim/Megan
Date & Time Incident Reported to AESRD:	July 15 2014, 11:40	Reported By:	Grover Christiansen
Reported on Behalf of:	PAZA	Approval Number (if applicable):	N/A
Location(s) of Incident:	Evergreen Park Air Quality Monitoring station		
Start Date & Time of Incident:	July 15 2014, 09:00	End Date & Time of Incident:	July 15 2014, 00:00
Reason or Nature of Incident:			
Two one-hour and one 24-hour exceedence were detected, details as follows:			
09:00 HRS MST	PM2.5=84.9 µg/m ³	WS=12.9 km/hr	WD=257.3 deg
10:00 HRS MST	PM2.5=87.3 µg/m ³	WS=13.7 km/hr	WD=261.7 deg
<u>24-hour Average</u>	PM2.5=42.5 µg/m ³	WS=6.5 km/hr	WD=221.2 deg
Immediate Actions Taken:			
Call all hourly PM2.5 exceedences & 24-hr exceedence into AESRD.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	July 15, 2014
7-Day Letter Due Date:	July 22, 2015		

Air Monitoring Directive Exceedence Report

Alberta Environmental Monitoring, Evaluation and Reporting Agency

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Phone: (780) 422-4505

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Reference Number: 520995		Reported To (AESRD Contact): Taryn	
Date & Time Incident Reported to AESRD: July 18 2014, 21:50		Reported By: Grover Christiansen	
Reported on Behalf of: Paza		Approval Number (if applicable):	
Location(s) of Incident: Evergreen Park			
Start Date & Time of Incident: July 18 2014, 18:00		End Date & Time of Incident: July 18 2014, 00:00	
Reason or Nature of Incident:			
Time: 18:00 PM2.5: 101.3 ug/m3 WS: 1.3 km/h WD:106.3 Time: 19:00 PM2.5: 99.1 ug/m3 WS: 3.9 km/h WD: 160.2 Time: 20:00 PM2.5: 98.3 ug/m3 WS: 5.7 km/h WD: 208.2 Time: 21:00 PM2.5: 85.6 ug/m3 WS: 7.9 km/h WD: 201.9 PM2.5: 34.3 ug/m3 WS: 3.6 km/h WD: 194.5 Phoned in to Taryn @ 01:25 July 19, 2014.			
Immediate Actions Taken:			
Call all hourly PM2.5 exceedences & 24 hr exceedence into AESRD.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	
7-Day Letter Due Date:			

Air Monitoring Directive Exceedence Report

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Reference Number:	286599	Reported To (AESRD Contact):	Nancy
Date & Time Incident Reported to AESRD:	July 12 2014, 01:15	Reported By:	Dmytro Dolotii
Reported on Behalf of:	PAZA	Approval Number (if applicable):	NA
Location(s) of Incident:	Henry Pirker Air Quality Monitoring station		
Start Date & Time of Incident:	July 11 2014, 01:00	End Date & Time of Incident:	July 11 2014, 00:00
Reason or Nature of Incident:			
A 24-hour exceedence was calculated, details as follows: <u>24 hour average</u> PM2.5=30.6 µg/m3 WS=5.2 km/hr WD=238.1 deg			
Immediate Actions Taken:			
Reviewed the real time data and confirmed it as valid. Called it in to AE			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
NA			
Additional Actions Required (if any):			
NA			
Report Completed By:	Dmytro Dolotii	Date Report Submitted:	July12, 2014
7-Day Letter Due Date:	July 19, 2014		

Air Monitoring Directive Exceedence Report

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Reference Number:	286654	Reported To (AESRD Contact):	Vince
Date & Time Incident Reported to AESRD:	July 13, 2014, 10:40	Reported By:	Christopher Hendrickson
Reported on Behalf of:	PAZA	Approval Number (if applicable):	NA
Location(s) of Incident:	Henry Pirker Air Quality Monitoring station		
Start Date & Time of Incident:	July 13 2014, 08:00	End Date & Time of Incident:	July 13 2014, 10:00
Reason or Nature of Incident:			
Five one-hour exceedences were detected, details as follows:			
08:00 HRS MST	PM2.5=131.7 µg/m ³	WS=4.2 km/hr	WD=274.6 deg
09:00 HRS MST	PM2.5=381.7 µg/m ³	WS=6.4 km/hr	WD=237.7 deg
10:00 HRS MST	PM2.5=234.3 µg/m ³	WS=5.9 km/hr	WD=231.2 deg
11:00 HRS MST	PM2.5=134.0 µg/m ³	WS=5.2 km/hr	WD=218.3 deg
12:00 HRS MST	PM2.5=88.7 µg/m ³	WS=3.6 km/hr	WD=182.3 deg
Immediate Actions Taken:			
Reviewed the real time data and confirmed it as valid. Called it in to AE.			
Investigation Details:			
Forest fires reported in BC and Alberta.			
Actions Taken to Prevent Reoccurrence (if any):			
NA			
Additional Actions Required (if any):			
NA			
Report Completed By:	Christopher Hendrickson	Date Report Submitted:	July 13 2014
7-Day Letter Due Date:	July 20 2014		

Air Monitoring Directive Exceedence Report

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Reference Number:	286695	Reported To (AESRD Contact):	Raynold
Date & Time Incident Reported to AESRD:	July 14, 2014 10:00	Reported By:	Dmytro Dolotii
Reported on Behalf of:	PAZA	Approval Number (if applicable):	NA
Location(s) of Incident:	Henry Pirker Air Quality Monitoring station		
Start Date & Time of Incident:	July 13 2014, 01:00	End Date & Time of Incident:	July 13 2014, 00:00
Reason or Nature of Incident:			
One 24-hour exceedence was detected, details as follows: 24-hour Average PM2.5=64.8 µg/m ³ WS=3.3 km/hr WD=205.9 deg			
Immediate Actions Taken:			
Reviewed the real time data and confirmed it as valid. Called it in to AE.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
NA			
Additional Actions Required (if any):			
NA			
Report Completed By:	Dmytro Dolotii	Date Report Submitted:	July 14, 2014
7-Day Letter Due Date:	July 21, 2014		

Air Monitoring Directive Exceedence Report

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Reference Number:	286729	Reported To (AESRD Contact):	Jasmina/Megan
Date & Time Incident Reported to AESRD:	July 14 2014, 18:06	Reported By:	Grover Christiansen
Reported on Behalf of:	PAZA	Approval Number (if applicable):	N/A
Location(s) of Incident:	Henry Pirker Air Quality Monitoring station		
Start Date & Time of Incident:	July 14 2014, 11:00	End Date & Time of Incident:	July 14 2014, 00:00
Reason or Nature of Incident:			
Four one-hour and one 24-hour exceedence were detected, details as follows:			
11:00 HRS MST	PM2.5=83.3 µg/m ³	WS=3.0 km/hr	WD=169.3 deg
12:00 HRS MST	PM2.5=110.4 µg/m ³	WS=4.3 km/hr	WD=175.7 deg
13:00 HRS MST	PM2.5=180.0 µg/m ³	WS=7.4 km/hr	WD=164.4 deg
14:00 HRS MST	PM2.5=206.3 µg/m ³	WS=5.8 km/hr	WD=166.3 deg
<u>24-hour Average</u>	PM2.5=48.6 µg/m ³	WS=4.5 km/hr	WD=147.8 deg
Immediate Actions Taken:			
Call all hourly PM2.5 exceedences into AESRD.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	July 14, 2014
7-Day Letter Due Date:	July 21, 2014		

Air Monitoring Directive Exceedence Report

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Reference Number:	286767	Reported To (AESRD Contact):	Tim/Megan
Date & Time Incident Reported to AESRD:	July 15 2014, 11:40	Reported By:	Grover Christiansen
Reported on Behalf of:	PAZA	Approval Number (if applicable):	N/A
Location(s) of Incident:	Henry Pirker Air Quality Monitoring station		
Start Date & Time of Incident:	July 15 2014, 08:00	End Date & Time of Incident:	July 15 2014, 11:00
Reason or Nature of Incident:			
Four one-hour and one 24-hour exceedence were detected, details as follows:			
08:00 HRS MST	PM2.5=111.3 µg/m ³	WS=3.2 km/hr	WD=238.1 deg
09:00 HRS MST	PM2.5=188.9 µg/m ³	WS=6.9 km/hr	WD=247.5 deg
10:00 HRS MST	PM2.5=138.2 µg/m ³	WS=7.1 km/hr	WD=257.3 deg
11:00 HRS MST	PM2.5=114.0 µg/m ³	WS=6.0 km/hr	WD=240.2 deg
<u>24-hour Average</u>	PM2.5=65.2 µg/m ³	WS=4.8 km/hr	WD=228.6 deg
Immediate Actions Taken:			
Call all hourly PM2.5 exceedences & 24 hr exceedence into AESRD.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	July 15, 2014
7-Day Letter Due Date:	July 22, 2014		

Air Monitoring Directive Exceedence Report

Alberta Environmental Monitoring, Evaluation and Reporting Agency

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Phone: (780) 422-4505

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Reference Number: 520992		Reported To (AESRD Contact): Iona	
Date & Time Incident Reported to AESRD: July 18 2014, 18:25		Reported By: Grover Christiansen	
Reported on Behalf of: Paza		Approval Number (if applicable):	
Location(s) of Incident: Henry Pirker			
Start Date & Time of Incident: July 18 2014, 15:00		End Date & Time of Incident: July 18 2014, 11:00	
Reason or Nature of Incident:			
Time: 15:00 PM2.5: 90.6 ug/m3 WS: 2.6 km/h WD: 83.3 Time: 18:00 PM2.5: 86.4 ug/m3 WS: 4.9 km/h WD: 161.1 Time: 19:00 PM2.5: 136.8 ug/m3 WS: 5.9 km/h WD: 152.4 Time: 20:00 PM2.5: 131.3 ug/m3 WS: 7.8 km/h WD: 184 24 Hr exceedence July 18 2014 PM2.5: 46.4 ug/m3 WS: 4.2 km/h WD: 185.5 Phoned in to Taryn @ 01:25 July 19, 2014.			
Immediate Actions Taken:			
Call all hourly PM2.5 exceedences & 24 hr exceedence into AESRD.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area & others.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	
7-Day Letter Due Date:			

Air Monitoring Directive Exceedence Report

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Reference Number:	286572	Reported To (AESRD Contact):	Taryn
Date & Time Incident Reported to AESRD:	July 11 2014	Reported By:	Christopher Hendrickson/ Dmytro Dolotii
Reported on Behalf of:	PAZA	Approval Number (if applicable):	NA
Location(s) of Incident: Beaverlodge Air Quality Monitoring station			
Start Date & Time of Incident:	July 11 2014, 01:00	End Date & Time of Incident:	July 11 2014, 00:00
Reason or Nature of Incident:			
Three 1-hour exceedence and one 24-hour exceedence detected, details as follows:			
08:00 HRS MST	PM2.5=84.3 µg/m ³	WS=4.5 km/h	WD=191.2 deg
09:00 HRS MST	PM2.5=94.5 µg/m ³	WS=4.9 km/h	WD=196.4 deg
10:00 HRS MST	PM2.5=92.1 µg/m ³	WS=5.6 km/h	WD=211.7 deg
<u>24 hour average</u>	PM2.5=40.1 µg/m ³	WS=5.0 km/h	WD=167.0 deg
Immediate Actions Taken:			
Reviewed and deemed the data as valid. Called it in to AE			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
NA			
Additional Actions Required (if any):			
NA			
Report Completed By:	Chris Hendrickson	Date Report Submitted:	July 11, 2014
7-Day Letter Due Date:	July 18, 2014		

Air Monitoring Directive Exceedence Report

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Reference Number:	286612	Reported To (AESRD Contact):	Raymon
Date & Time Incident Reported to AESRD:	July 12 2014, 10:45	Reported By:	Christopher Hendrickson
Reported on Behalf of:	PAZA	Approval Number (if applicable):	NA
Location(s) of Incident:	Beaverlodge Air Quality Monitoring station		
Start Date & Time of Incident:	July 12 2014, 08:00	End Date & Time of Incident:	July 13 2014, 10:00
Reason or Nature of Incident:			
Three one-hour exceedences detected, details as follows:			
08:00 HRS MST	PM2.5=104.1 µg/m3	WS=3.6 km/hr	WD:163.9 deg
09:00 HRS MST	PM2.5=104.2 µg/m3	WS=4.0 km/hr	WD:164.0 deg
10:00 HRS MST	PM2.5=83.2 µg/m3	WS=5.1 km/hr	WD:167.9 deg
Immediate Actions Taken:			
Reviewed the real time data and confirmed it as valid. Called it in to AE.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
NA			
Additional Actions Required (if any):			
NA			
Report Completed By:	Christopher Hendrickson	Date Report Submitted:	July 12 2014
7-Day Letter Due Date:	July 19 2014		

Air Monitoring Directive Exceedence Report

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Reference Number:	286656	Reported To (AESRD Contact):	Taryn/ Nacy
Date & Time Incident Reported to AESRD:	July 13, 2014, 11:40 July 14, 2014, 12:59	Reported By:	Christopher Hendrickson
Reported on Behalf of:	PAZA	Approval Number (if applicable):	NA
Location(s) of Incident:	Beaverlodge Air Quality Monitoring station		
Start Date & Time of Incident:	July 13 2014, 11:00	End Date & Time of Incident:	July 13 2014, 11:00 24 Hour Exceedence
Reason or Nature of Incident:			
A one-hour and a 24-hour exceedence were detected, details as follows:			
11:00 HRS MST	PM2.5=85.9 µg/m ³	WS=5.5 km/hr	WD=166.6 deg
<u>24-hour Average</u>	PM2.5=32.0 µg/m ³	WS=4.9 km/hr	WD=120.6 deg
Immediate Actions Taken:			
Reviewed the real time data and confirmed it as valid. Called it in to AE.			
Investigation Details:			
Forest fires reported in BC and Alberta.			
Actions Taken to Prevent Reoccurrence (if any):			
NA			
Additional Actions Required (if any):			
NA			
Report Completed By:	Christopher Hendrickson	Date Report Submitted:	July 13 2014
7-Day Letter Due Date:	July 20 2014		

Air Monitoring Directive Exceedence Report

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Reference Number:	286731	Reported To (AESRD Contact):	Raymond/Megan
Date & Time Incident Reported to AESRD:	July 14 2014, 19:58	Reported By:	Grover Christiansen
Reported on Behalf of:	PAZA	Approval Number (if applicable):	NA
Location(s) of Incident:	Beaverlodge Air Quality Monitoring station		
Start Date & Time of Incident:	July 14 2014, 16:00 MST	End Date & Time of Incident:	July 14 2014, 00:00 MST
Reason or Nature of Incident:			
A one-hour and one 24-hour exceedence were detected, details as follows:			
17:00 HRS MST	PM2.5=93.6 µg/m ³	WS=10.2 km/hr	WD=123.2 deg
<u>24-hour Average</u>	PM2.5=33.0 µg/m ³	WS=5.7 km/hr	WD=126.3 deg
Immediate Actions Taken:			
Reviewed the real time data and confirmed it as valid. Called it in to AE. Called in all hourly PM2.5 exceedences & 24 Hr exceedence into AE.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	July 14, 2014
7-Day Letter Due Date:	July 21, 2014		

Air Monitoring Directive Exceedence Report

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Reference Number:	286762	Reported To (AESRD Contact):	Tim/Megan
Date & Time Incident Reported to AESRD:	July 15 2014, 11:40	Reported By:	Grover Christiansen
Reported on Behalf of:	PAZA	Approval Number (if applicable):	N/A
Location(s) of Incident:	Beaverlodge Air Quality Monitoring station		
Start Date & Time of Incident:	July 15 2014, 08:00 MST	End Date & Time of Incident:	July 15 2014, 11:00 MST
Reason or Nature of Incident:			
Four one-hour and one 24-hour exceedence were detected, details as follows:			
08:00 HRS MST	PM2.5=83.1 µg/m ³	WS=2.5 km/hr	WD=213.4 deg
09:00 HRS MST	PM2.5=122.9 µg/m ³	WS=2.1 km/hr	WD=191.7 deg
10:00 HRS MST	PM2.5=133.8 µg/m ³	WS=2.9 km/hr	WD=172.9 deg
11:00 HRS MST	PM2.5=98.6 µg/m ³	WS=2.8 km/hr	WD=179.0 deg
<u>24-hour Average</u>	PM2.5=46.1 µg/m ³	WS=6.4 km/hr	WD=202.4 deg
Immediate Actions Taken:			
Reviewed the real time data and confirmed it as valid. Called in all hourly PM2.5 exceedences & 24 Hr exceedence into AESRD.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	July 15, 2014
7-Day Letter Due Date:	July 22, 2014		

Air Monitoring Directive Exceedence 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: 520993		Reported To (AESRD Contact): Iona	
Date & Time Incident Reported to AESRD: July 18 2014, 18:25		Reported By: Grover Christiansen	
Reported on Behalf of: Paza		Approval Number (if applicable):	
Location(s) of Incident: BeaverLodge			
Start Date & Time of Incident: July 18 2014, 15:00 MST		End Date & Time of Incident: July 18 2014, 11:00 MST	
Reason or Nature of Incident:			
Time: 15:00 PM2.5: 95.7 ug/m3 WS: 3.3 km/h WD: 27.7 Time: 16:00 PM2.5: 130.5 ug/m3 WS: 2.8 km/h WD: 147.8 Time: 17:00 PM2.5: 124.1 ug/m3 WS: 10.7 km/h WD: 144.5 Time: 19:00 PM2.5: 87.8 ug/m3 WS: 10.1 km/h WD: 172.9 Time: 20:00 PM2.5: 85.2 ug/m3 WS: 9.1 km/h WD: 221.3 24 Hr exceedence: PM2.5: 43.6 ug/m3 WS: 5.3 km/h WD: 158.5 Phoned in to Taryn @ 01:25 July 19, 2014.			
Immediate Actions Taken:			
Call all hourly PM2.5 exceedences & 24 Hr exceedence into AESRD.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area, BC & fires closer to Grande Prairie.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	
7-Day Letter Due Date:			

Air Monitoring Directive Exceedence Report

Alberta Environmental Monitoring, Evaluation and Reporting Agency Energy & Environmental Response

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4999 – 98th Avenue
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erc.environment@gov.ab.ca
Phone: (780) 422-4505
Fax: (780) 427-1044

Reference Number:	521065	Reported To (AESRD Contact):	Iona
Date & Time Incident Reported to AESRD:	July 21 2014, 10:20	Reported By:	Dmytro Dolotii
Reported on Behalf of:	PAZA	Approval Number (if applicable):	N/A
Location(s) of Incident:	Beaverlodge Air Quality Monitoring station		
Start Date & Time of Incident:	July 21 2014, 08:00HRS MST	End Date & Time of Incident:	July 21 2014, 09:00HRS MST
Reason or Nature of Incident:			
On July 21, 2014 the PM2.5 analyzer exceeded once the 1-hour AAAQ Guideline of 80µg/m ³ , details as follows:			
09:00 HRS MST	PM2.5 =102.0 µg/m ³	WS=5.3 km/hr	WD=190.5 degrees
Immediate Actions Taken:			
Reviewed and deemed the data as valid, called it in to AESRD.			
Investigation Details:			
Reports of forest fires burning in BC and Alberta areas			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Dmytro Dolotii	Date Report Submitted:	July 21, 2014
7-Day Letter Due Date:	July 28, 2014		

Air Monitoring Directive Exceedence Report

Alberta Environmental Monitoring, Evaluation and Reporting Agency Energy & Environmental Response

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4999 – 98th Avenue
Edmonton, Alberta T6B 2X3
erc.environment@gov.ab.ca
Phone: (780) 422-4505
Fax: (780) 427-1044

Reference Number:	286661	Reported To (AESRD Contact):	Taryn/ Vincent/ Nacy
Date & Time Incident Reported to AESRD:	July 13, 2014, 14:30 July 14, 2014, 12:59	Reported By:	Christopher Hendrickson
Reported on Behalf of:	PAZA	Approval Number (if applicable):	NA
Location(s) of Incident:	Smoky Heights Air Quality Monitoring station		
Start Date & Time of Incident:	July 13 2014, 13:00	End Date & Time of Incident:	July 13 2014, 13:00, 24 Hour exceedence
Reason or Nature of Incident:			
A one-hour and one 24-hour exceedence were detected, details as follows:			
13:00 HRS MST	PM2.5=86.2 µg/m ³	WS=5.9 km/hr	WD=163.1 deg
<u>24 Hour Average</u>	PM2.5=30.9 µg/m ³	WS=6.3 km/hr	WD=176.8 deg
Immediate Actions Taken:			
Reviewed the real time data and confirmed it as valid. Called it in to AE.			
Investigation Details:			
Forest Fires reported in BC and Alberta.			
Actions Taken to Prevent Reoccurrence (if any):			
NA			
Additional Actions Required (if any):			
NA			
Report Completed By:	Christopher Hendrickson	Date Report Submitted:	July 13 2014
7-Day Letter Due Date:	July 20 2014		

Air Monitoring Directive Exceedence Report

Alberta Environmental Monitoring, Evaluation and Reporting Agency Energy & Environmental Response

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4999 – 98th Avenue
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Phone: (780) 422-4505
Fax: (780) 427-1044

Reference Number:	286805	Reported To (AESRD Contact):	Megan
Date & Time Incident Reported to AESRD:	July 15 2014, 00:29	Reported By:	Grover Christiansen
Reported on Behalf of:	PAZA	Approval Number (if applicable):	N/A
Location(s) of Incident:	Smoky Heights Air Quality Monitoring station		
Start Date & Time of Incident:	July 15 2014, 22:00 MST	End Date & Time of Incident:	July 15 2014, 00:00 MST
Reason or Nature of Incident:			
Two one-hour and one 24-hour exceedence were detected, details as follows:			
22:00 HRS MST	PM2.5=92.5 µg/m ³	WS=3.0 km/hr	WD=275.3 deg
23:00 HRS MST	PM2.5=93.8 µg/m ³	WS=8.0 km/hr	WD=257.4 deg
<u>24-hour Average</u>	PM2.5=37.6 µg/m ³	WS=7.8 km/hr	WD=232.2 deg
Immediate Actions Taken:			
Call all hourly PM2.5 exceedences & 24 hr exceedence into AESRD.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	July 15, 2014
7-Day Letter Due Date:	July 22, 2014		

Air Monitoring Directive Exceedence Report

Alberta Environmental Monitoring, Evaluation and Reporting Agency

Energy & Environmental Response

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Edmonton, Alberta T6B 2X3

erc.environment@gov.ab.ca

Phone: (780) 422-4505

Fax: (780) 427-1044

Reference Number: 286881		Reported To (AESRD Contact): Raymond	
Date & Time Incident Reported to AESRD:	July 17 2014, 08:15	Reported By:	Grover Christiansen
Reported on Behalf of:	Paza	Approval Number (if applicable):	
Location(s) of Incident: Smokey Heights			
Start Date & Time of Incident:	July 16 2014, 01:00 MST	End Date & Time of Incident:	July 16 2014, 00:00 MST
Reason or Nature of Incident:			
PM2.5: 35.8 ug/m3 WS: 7.6 km/h WD: 166.2			
Immediate Actions Taken:			
Call 24 hr exceedence into AESRD.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	
7-Day Letter Due Date:			

Air Monitoring Directive Exceedence Report

Alberta Environmental Monitoring, Evaluation and Reporting Agency

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Edmonton, Alberta T6B 2X3

erc.environment@gov.ab.ca

Phone: (780) 422-4505

Fax: (780) 427-1044

Reference Number: 520997		Reported To (AESRD Contact): Taryn	
Date & Time Incident Reported to AESRD: July 19 2014, 01:30		Reported By: Grover Christiansen	
Reported on Behalf of: Paza		Approval Number (if applicable):	
Location(s) of Incident: Smokey Heights			
Start Date & Time of Incident: July 18 2014, 01:00 MST		End Date & Time of Incident: July 18 2014, 00:00 MST	
Reason or Nature of Incident:			
24 Hr PM2.5 exceedence: PM2.5: 31.8 ug/m3 WS: 7.1 km/h WD: 204.2			
Immediate Actions Taken:			
Call 24 hr exceedence into AESRD.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area & other areas.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	
7-Day Letter Due Date:			

Air Monitoring Directive Exceedence Report

Alberta Environment and Sustainable Resource Development

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:	286413	Reported To (AESRD Contact):	Jasmina
Date & Time Incident Reported to AESRD:	July 8 2014, 22:00 & July 9 2014, 8:40	Reported By:	Christopher Hendrickson
Reported on Behalf of:	PASZA	Approval Number (if applicable):	
Location(s) of Incident:	Smoky Heights		
Start Date & Time of Incident:	July 8 2014 20:00	End Date & Time of Incident:	July 8 2014 00:00
Reason or Nature of Incident:			
PM2.5 hourly expedience Time. 21:00 PM2.5 ug/m3: 84.4 WS:10.1 WD:193.6 Time. 23:00 PM2.5 ug/m3: 92.0 WS:8.5 WD:262.3 Time. 00:00 PM2.5 ug/m3: 107.8 WS:8.8 WD:261.4			
Immediate Actions Taken:			
Contacted Alberta Environment			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			

Report Completed By:	Christopher Hendrickson	Date Report Submitted:	July 8 2014
7-Day Letter Due Date:	July 15 2014		

Air Monitoring Directive Exceedence 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:	286657	Reported To (AESRD Contact):	Taryn/ Vincent/ Nacy
Date & Time Incident Reported to AESRD:	July 13, 2014, 11:50/15:30 July 14, 2014, 12:59	Reported By:	Christopher Hendrickson
Reported on Behalf of:	PAZA	Approval Number (if applicable):	NA
Location(s) of Incident:	Clairmont Air Quality Monitoring station		
Start Date & Time of Incident:	July 13 2014, 11:00/13:00	End Date & Time of Incident:	July 13 2014, 11:00/13:00 24 Hour Exceedence
Reason or Nature of Incident:			
Two one-hour and a 24-hour exceedence were detected, details as follows:			
11:00 HRS MST	PM2.5=102.2 µg/m ³	WS=5.5 km/hr	WD=202.6 deg
13:00 HRS MST	PM2.5=92.6 µg/m ³	WS=7.2 km/hr	WD=79.7 deg
<u>24 Hour Average</u>	PM2.5=30.7 µg/m ³	WS=4.7 km/hr	WD=149.9 deg
Immediate Actions Taken:			
Reviewed the real time data and confirmed it as valid. Called it in to AE.			
Investigation Details:			
Forest fires reported in BC and Alberta			
Actions Taken to Prevent Reoccurrence (if any):			
NA			
Additional Actions Required (if any):			
NA			
Report Completed By:	Christopher Hendrickson	Date Report Submitted:	July 13 2014
7-Day Letter Due Date:	July 20 2014		

Air Monitoring Directive Exceedence Report

Alberta Environmental Monitoring, Evaluation and Reporting Agency Energy & Environmental Response

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4999 – 98th Avenue
Edmonton, Alberta T6B 2X3
erc.environment@gov.ab.ca
Phone: (780) 422-4505
Fax: (780) 427-1044

Reference Number:	286806	Reported To (AESRD Contact):	Megan
Date & Time Incident Reported to AESRD:	July 15 2014, 00:29	Reported By:	Grover Christiansen
Reported on Behalf of:	PAZA	Approval Number (if applicable):	N/A
Location(s) of Incident:	Clairmont Air Quality Monitoring station		
Start Date & Time of Incident:	July 15 2014, 21:00 MST	End Date & Time of Incident:	July 15 2014, 00:00 MST
Reason or Nature of Incident:			
Two one-hour and one 24-hour exceedence were detected, details as follows:			
21:00 HRS MST	PM2.5=88.2 µg/m ³	WS=1.6 km/hr	WD=223.3 deg
22:00 HRS MST	PM2.5=87.0 µg/m ³	WS=1.4 km/hr	WD=134.7 deg
24-hour Average	PM2.5=36.8 µg/m ³	WS=6.2 km/hr	WD=205.5 deg
Immediate Actions Taken:			
Call all hourly PM2.5 exceedences & 24 hr exceedence into AESRD.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	July 15, 2014
7-Day Letter Due Date:	July 25, 2014		

Air Monitoring Directive Exceedence Report

Alberta Environmental Monitoring, Evaluation and Reporting Agency

Energy & Environmental Response

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4999 – 98th Avenue

Edmonton, Alberta T6B 2X3

erc.environment@gov.ab.ca

Phone: (780) 422-4505

Fax: (780) 427-1044

Reference Number: 520991		Reported To (AESRD Contact): Iona	
Date & Time Incident Reported to AESRD: July 18 2014, 18:25		Reported By: Grover Christiansen	
Reported on Behalf of: Paza		Approval Number (if applicable):	
Location(s) of Incident: Clairmont			
Start Date & Time of Incident: July 18 2014, 17:00 MST		End Date & Time of Incident: July 18 2014, 00:00 MST	
Reason or Nature of Incident:			
Time: 17:00 PM2.5: 89.2 ug/m3 WS: 4.4 km/h WD: 137.2 Time: 19:00 PM2.5: 83.7 ug/m3 WS: 8.3 km/h WD: 121.0 Time: 20:00 PM2.5: 95.9 ug/m3 WS: 8.7 km/h WD: 162.9 24 Hr exceedence: PM2.5: 35.8 ug/m3 WS: 5.5 km/h WD: 184.5 Phoned in to Taryn @ 01:25 July 19, 2014.			
Immediate Actions Taken:			
Call all hourly PM2.5 exceedences & 24 hr exceedence into AESRD.			
Investigation Details:			
Reports of forest fires burning in the Tumbler Ridge area & other fires burning closer to Grande Prairie.			
Actions Taken to Prevent Reoccurrence (if any):			
N/A			
Additional Actions Required (if any):			
N/A			
Report Completed By:	Grover Christiansen	Date Report Submitted:	
7-Day Letter Due Date:			

July 2014 Calibration Reports

PAZA - Henry Pirker Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃, CO, THC, TRS

PAZA – Evergreen Park Station with the following calibrations:

SO₂, TRS

PAZA – Smoky Heights Station with the following calibrations:

SO₂, TRS

PAZA – Beaverlodge Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃

PAZA – Valleyview Station with the following calibrations:

SO₂ & H₂S

PAZA – Falher Station with the following calibrations:

SO₂ & H₂S

PAZA – Clairmont Station with the following calibrations:

SO₂, NO, NO₂, NO_x, O₃, TRS

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	July 3, 2014	Previous Calibration	June 4, 2014
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	7:30	End Time (MST)	10:45
Barometric Pressure	717.000 mm	Station Temperature	20.5 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Conc	49.8 ppm	Cal Gas Cert Date	March 12, 2014
		Cal Gas Cylinder #	LL105159
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	10
	Before		After
Calculated slope	0.994695	Calculated slope	0.994942
Calculated intercept	2.056631	Calculated intercept	2.270281
Analyzer make	TEI 43C	Analyzer serial #	610816292

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	9.4		9.4	
Coefficient	0.781		0.781	
Pressure	636.7	mm Hg	641.0	mm Hg
Flow	0.476	lpm	0.479	lpm
Lamp intensity	44160	Hz	43479	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.4	N/A
4995	39.93	394.9	396.2	0.9969
4995	19.97	198.3	195.0	1.0169
4995	9.97	99.2	95.3	1.0412
4995	0.00	0.0	0.4	As Found Zero
4995	39.93	394.9	396.2	As Found Span
Average Correction Factor				1.0183

Calculated value of As Found Response: 395.8 ppb Percent Change of As Found: -0.2%

	before calibration		after calibration	
Auto zero	0.1	ppb	0.1	ppb
Auto span	250.7	ppb	258.4	ppb

Notes: No adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



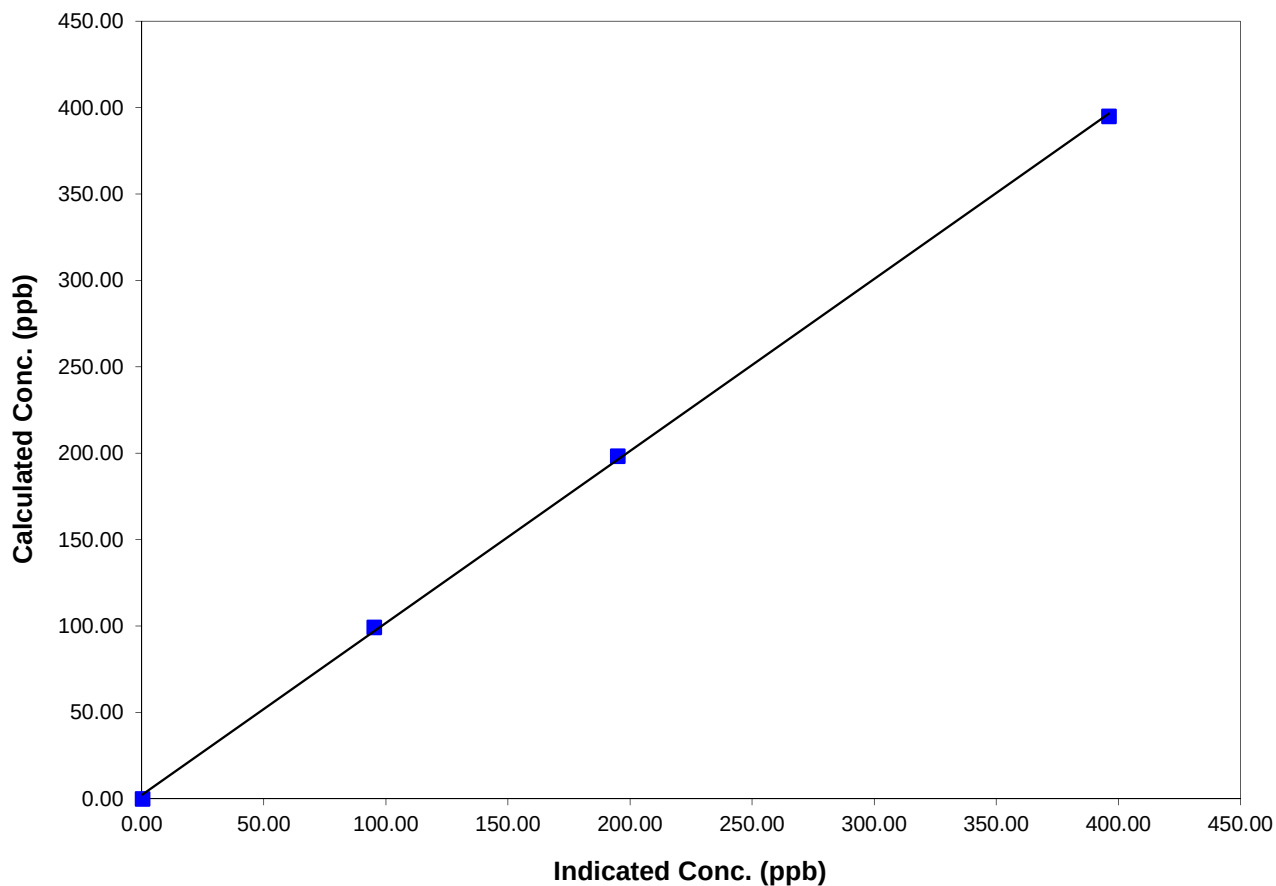
Station Information

Calibration Date	July 3, 2014	Previous Calibration	June 4, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:30	End Time (MST)	10:45
Analyzer make/model	TEI 43C	Analyzer serial #	610816292

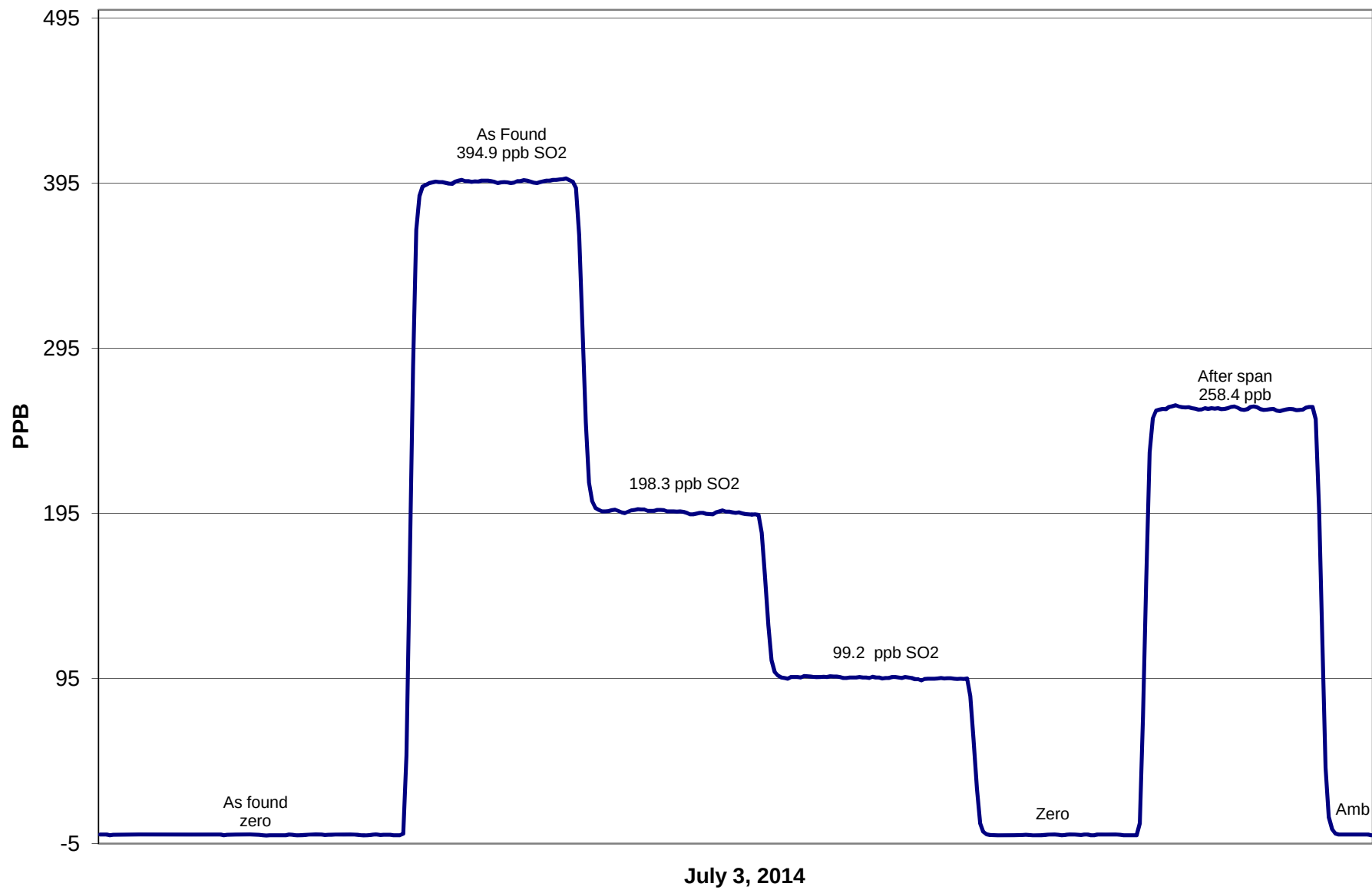
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999791
394.9	396.2	0.9969		
198.3	195.0	1.0169		
99.2	95.3	1.0412	Slope	0.994942
			Intercept	2.270281

SO2 Calibration Curve



SO2 Calibration



Parameter

Air Monitoring Network



Station Information

Calibration Date	July 3, 2014		Previous Calibration	June 4, 2014	
Station Number	1		Station Location	Henry Pirker	
Reason:	Routine Installation Removal		Other:		
Start Time (MST)	7:52		End Time (MST)	12:20	
Barometric Pressure	717.000	Atm	Station Temperature	20.5	Deg C
Calibrator	EnviroNics		Serial Number	3016	
NO Cal Gas Conc	52.1	ppm	Cal Gas Expiry Date	March 12, 2014	
NOx Cal Gas Conc	52.4	ppm	Cal Gas Serial #	LL105159	

DACS Information

DACS make		CR3000		DACS serial No.		5237	
	Parameter	NO2	NOx	NO			
Before	Data Slope	0.995378	0.997178	0.993273			
	Data Offset	0.245102	1.463553	1.638851			
After	Data Slope	0.995831	1.006817	1.003545			
	Data Offset	-0.101189	1.544427	1.652440			
Channel #		8	6	7			
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC			

Analyzer Information

Analyzer make/model	CR3000	Analyzer serial #	5408	
Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	13.8	mV	13.8	mV
NOx bkgnd	14.2	mV	14.2	mV
NO coefficient	1.126		1.126	
NOx coefficient	1.000		1.000	
NO2 conv temp	319.0	Deg C	318.0	Deg C
PMT Temp	-2.4	Deg C	-2.5	Deg C
PMT Volt	-774.0	mV	-774.0	mV
R Cell Press	211.3	in Hg	211.9	in Hg
Sample Flow	0.677	LPM	0.675	LPM

Notes: No adjustments made

Calibration Report

Parameter **NOX-NO-NO2**
Air Monitoring Network **0**



Station Information

Calibration Date: July 3, 2014 Station Location: Henry Pirker

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.0	-0.1	0.0	N/A	N/A
1	4995	39.92	415.5	413.1	2.4	412.0	410.8	1.0	1.0084	1.0054
2	4995	19.96	208.6	207.4	1.2	204.5	203.9	0.4	1.0199	1.0169
3	4995	9.93	104.0	103.4	0.6	100.4	100.0	0.2	1.0356	1.0340
AFZ	4995	0.00	0.0	0.0	0.0	0.0	-0.1	0.0	0.0000	0.0000
AFS	4995	39.92	415.5	413.1	0.8	412.0	410.8	1.0	1.0084	1.0054
Average Correction Factor									1.0213	1.0188

As Found Concentrations: NO_x= 412.3 NO= 409.8 As Found Percent Change NO_x= -0.8% NO= -0.8%

GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.1	-0.1	0.0	0.0	-0.1	0.0	N/A	N/A	N/A	N/A
NO point	409.6	409.6	0.0	410.2	409.6	0.5	0.9986	1.0000	N/A	N/A
300	409.6	99.6	310.0	410.6	99.6	311.2	0.9976	1.0000	0.9961	100.4%
200	409.6	200.8	208.8	410.7	200.8	210.0	0.9973	1.0000	0.9942	100.6%
100	409.6	300.2	109.4	410.2	300.2	110.0	0.9985	1.0000	0.9944	100.6%
Average Correction Factor							0.9978	1.0000	0.9949	100.5%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero				ppb	-0.1	0.0	-0.1	ppb
Auto span	329.9	327.5	2.4	ppb	317.2	315.2	2.1	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network 0



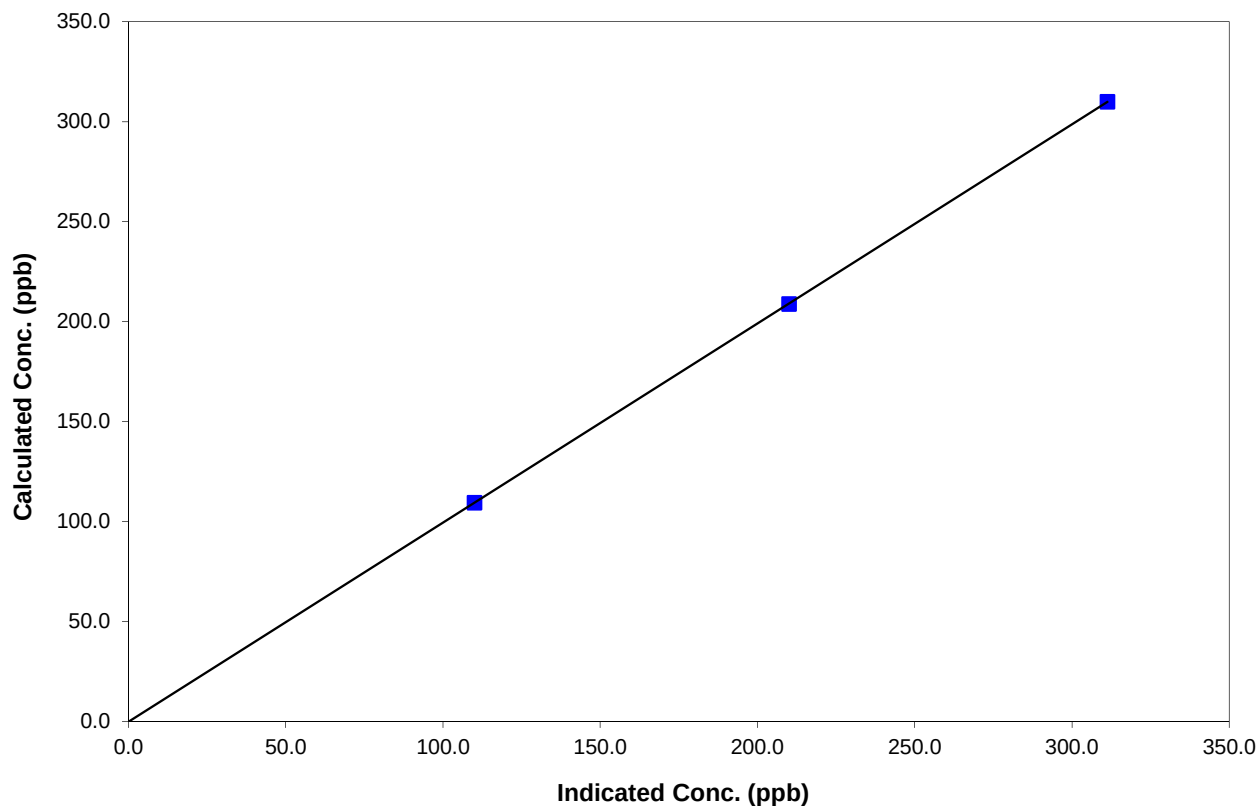
Station Information

Calibration Date	July 3, 2014	Previous Calibration	June 4, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:52	End Time (MST)	12:20
Analyzer make	CR3000	Analyzer serial #	5408

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999998
310.0	311.2	0.9961		
208.8	210.0	0.9942		
109.4	110.0	0.9944	Slope	0.995831
			Intercept	-0.101189

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network 0



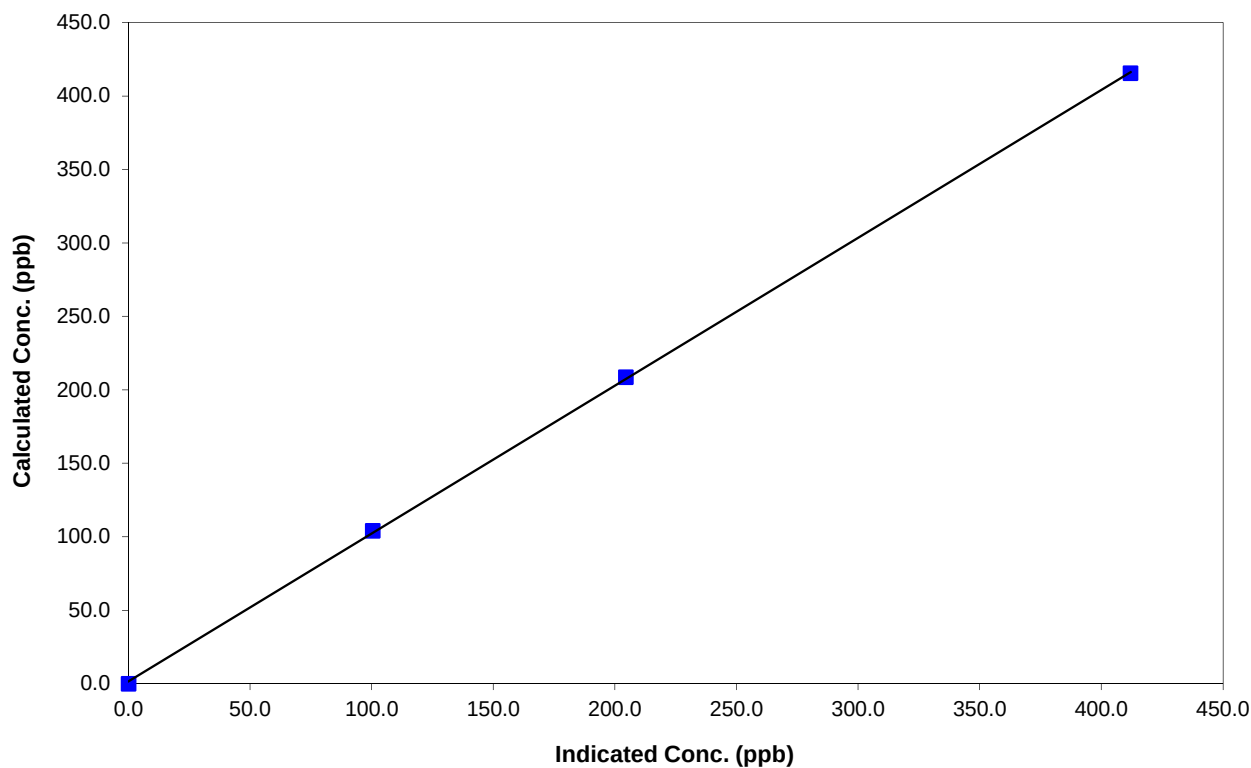
Station Information

Calibration Date	July 3, 2014	Previous Calibration	June 4, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:52	End Time (MST)	12:20
Analyzer make	CR3000	Analyzer serial #	5408

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999932
415.5	412.0	1.0084		
208.6	204.5	1.0199		
104.0	100.4	1.0356	Slope	1.006817
			Intercept	1.544427

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network 0



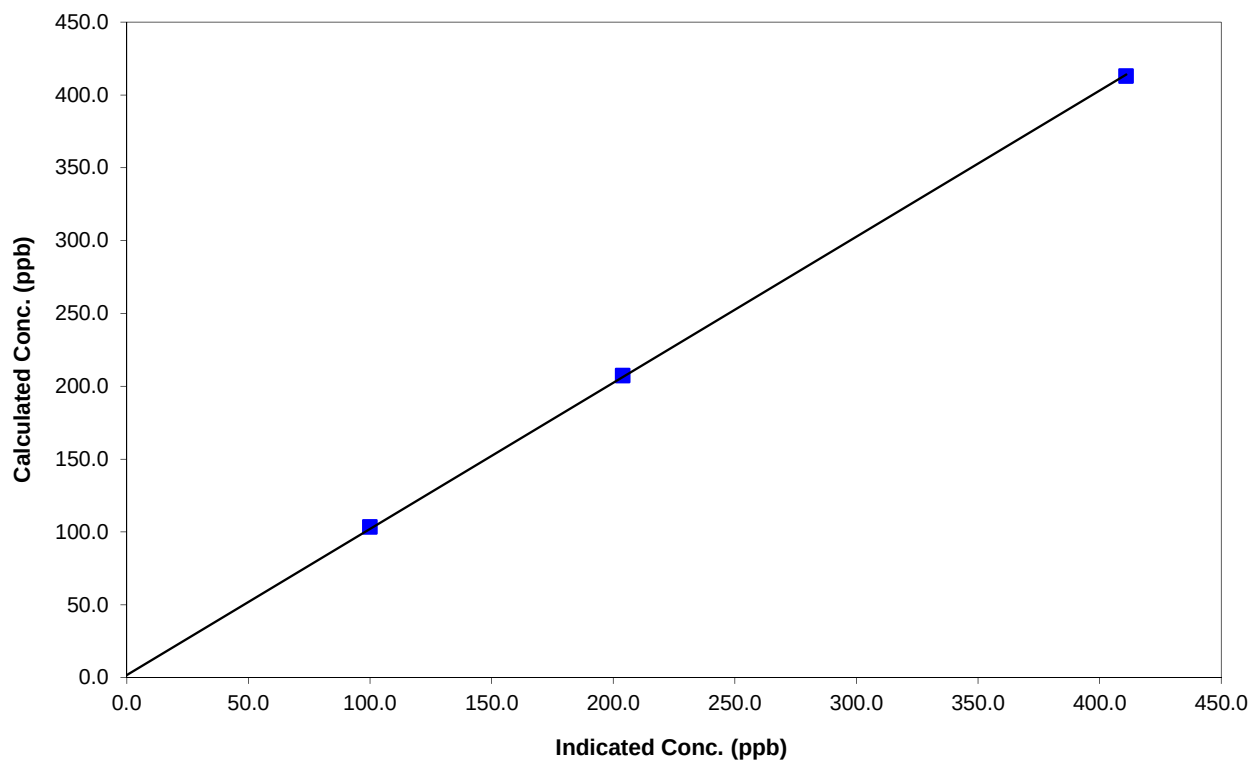
Station Information

Calibration Date	July 3, 2014	Previous Calibration	June 4, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	7:52	End Time (MST)	12:20
Analyzer make	CR3000	Analyzer serial #	5408

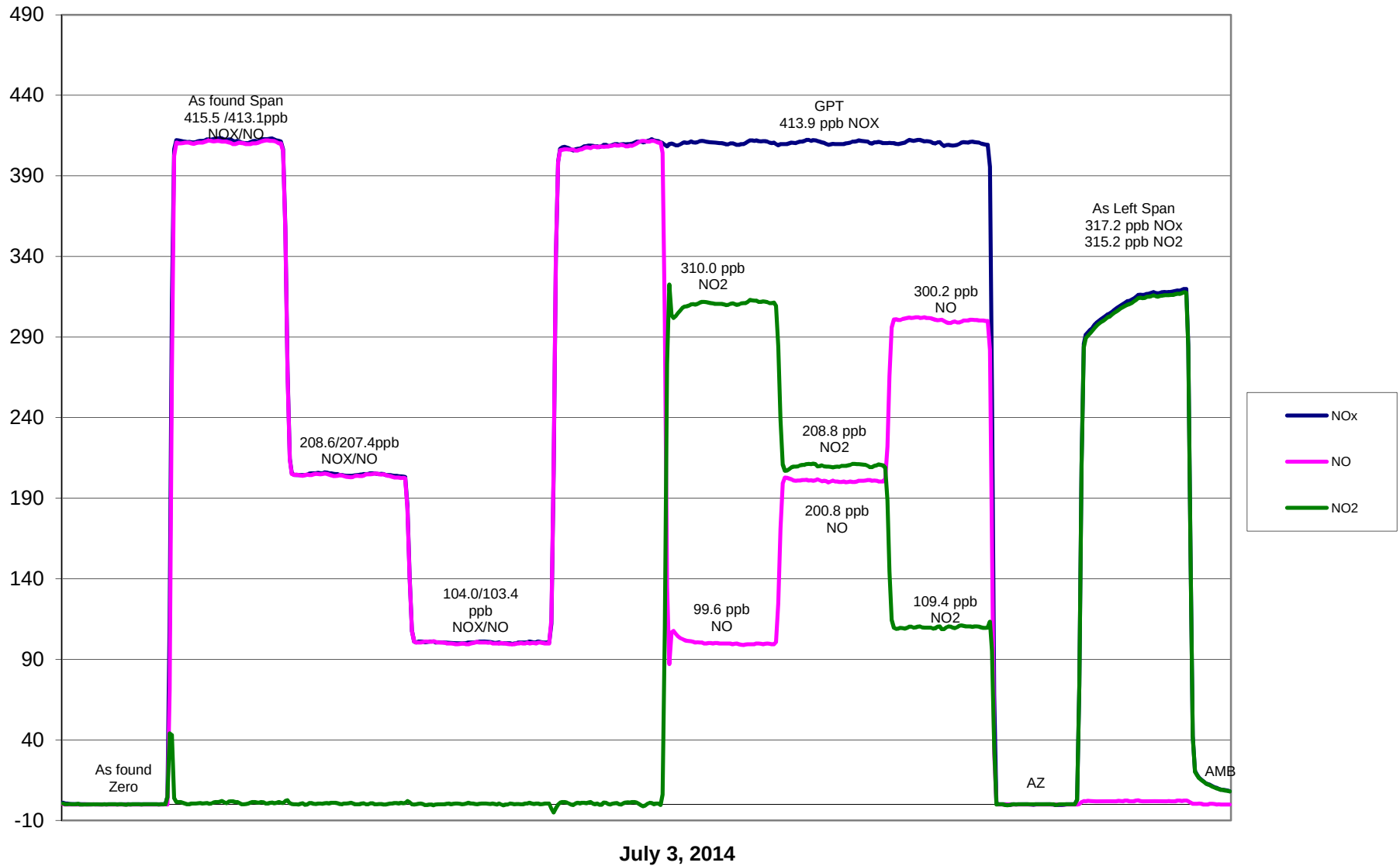
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A	Correlation Coefficient	0.999931
413.1	410.8	1.0054		
207.4	203.9	1.0169		
103.4	100.0	1.0340	Slope	1.003545
			Intercept	1.652440

NO Calibration Curve



NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	July 3, 2014	Previous Calibration	June 4, 2014
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	11:16	End Time (MST)	14:20:00 PM
Barometric Pressure	mm	Station Temperature	20.5 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	0.994793	Calculated slope	0.985684
Calculated intercept	0.549220	Calculated intercept	0.153084

Analyzer make	Teco 49C	Analyzer serial #	607415761
---------------	----------	-------------------	-----------

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.20	ppb	-0.20	ppb
slope	1.031		1.031	
Lamp temp	56.7	mV	56.7	mV
Lamp Intensity A/B	59834/74305	mV	59775/74227	mV
Pressure	685.9	mm Hg	686.1	mm Hg
Flow A	0.857	ccm	0.86	ccm
Flow B	0.835	ccm	0.835	ccm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5035	0.0	0.0	0.1	N/A
5035	0.3	310.0	314.5	0.9857
5035	0.2	208.8	211.7	0.9865
5035	0.1	109.4	110.5	0.9904
5035	0.0	0.0	0.1	As found zero
5035	0.3	310.0	314.5	As found span
Average Correction Factor				0.9875

Calculated value of As Found Response: 313.3 ppm Percent Change of As Found: 1.1%

	before calibration		after calibration	
Auto zero	1.0	ppb	0.1	ppb
Auto span	355.0	ppb	281.5	ppb

Notes: No adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



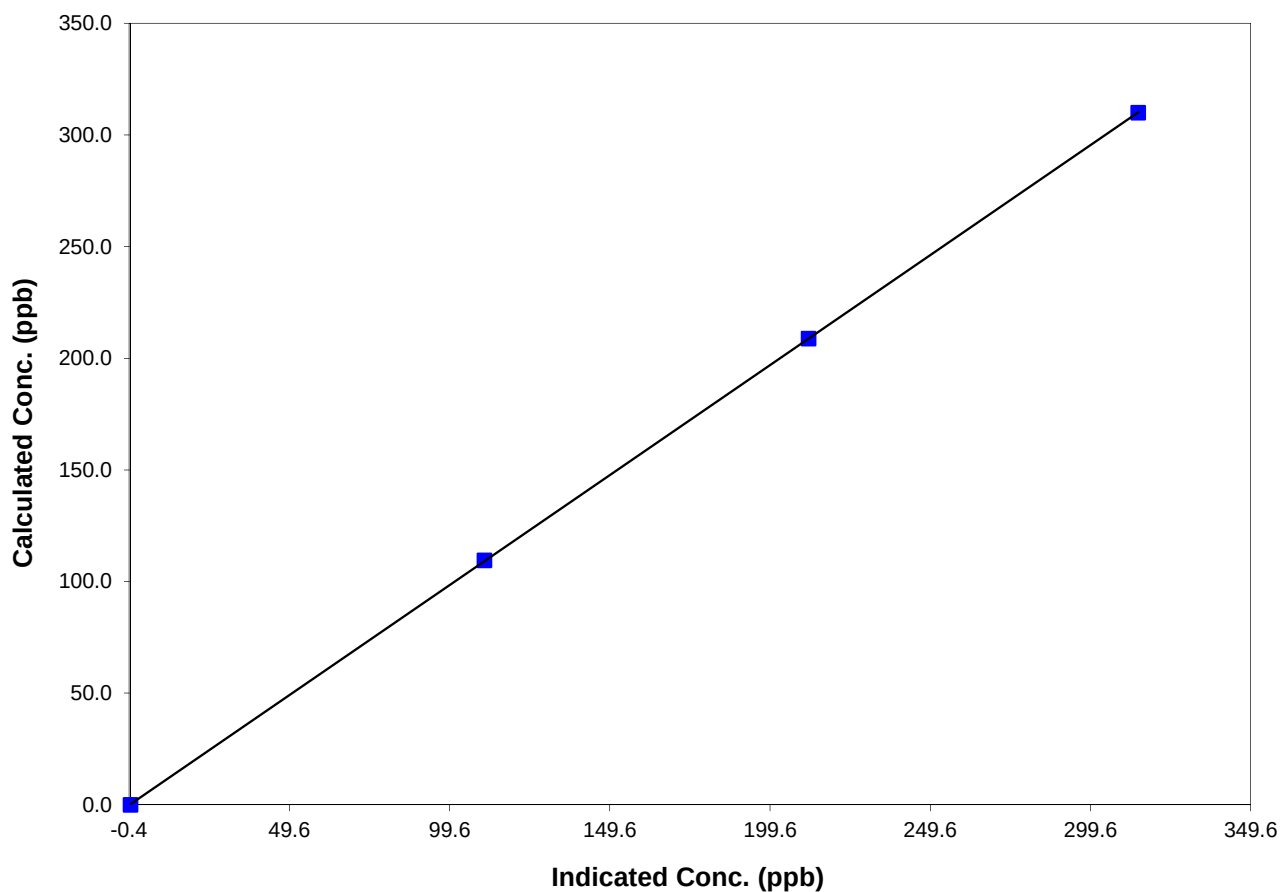
Station Information

Calibration Date	July 3, 2014	Previous Calibration	June 4, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	11:16	End Time (MST)	14:20:00 PM
Analyzer make/model	Teco 49C	Analyzer serial #	607415761

Calibration Data

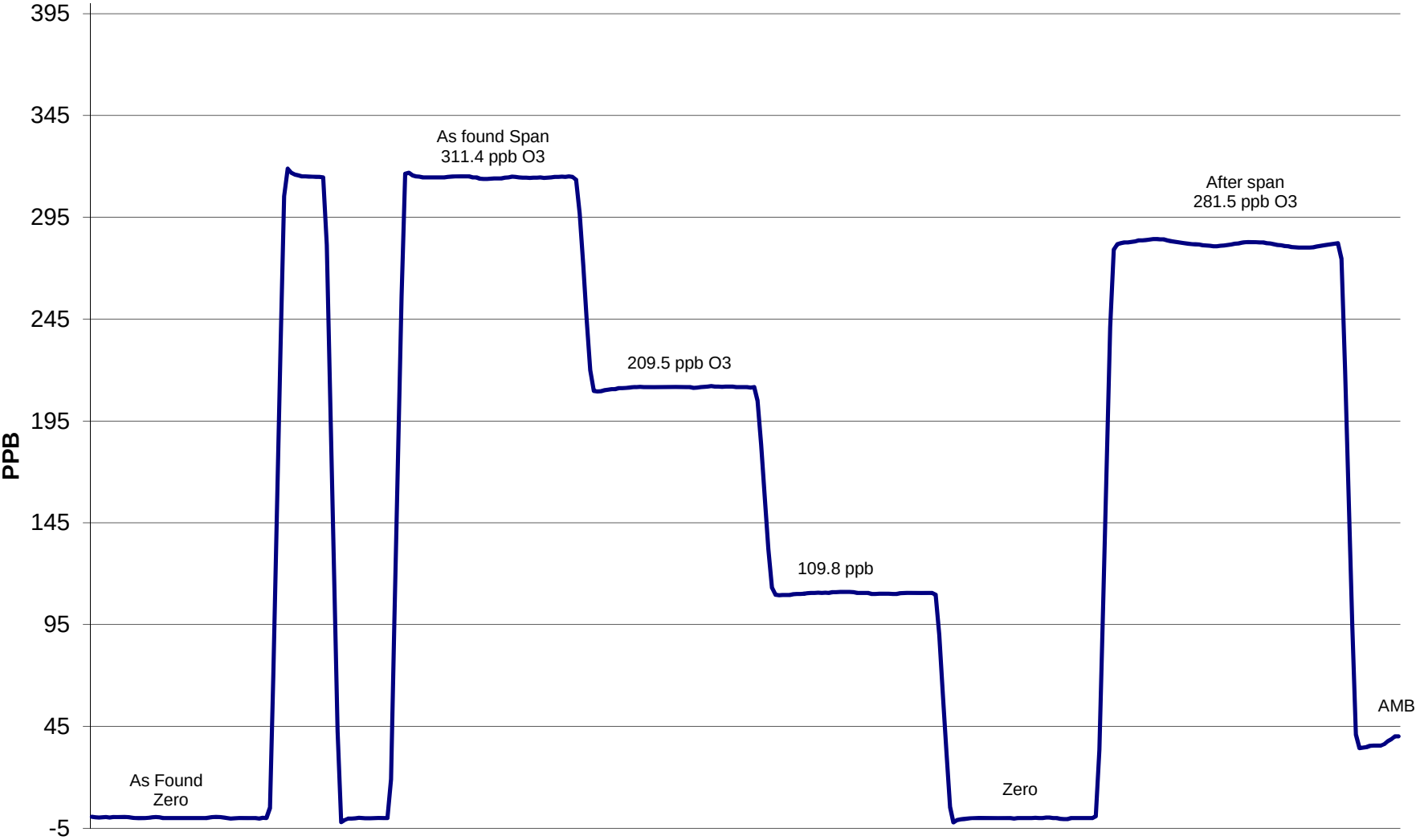
Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	NA	Correlation Coefficient	0.999996
310.0	314.5	0.9857		
208.8	211.7	0.9865		
109.4	110.5	0.9904	Slope	0.985684
			Intercept	0.153084

O3 Calibration Curve



As Found
Zero

O3 Calibration



July 3, 2014

Calibration Report

Parameter CO

Air Monitoring Network PAZA



Station Information

Calibration Date	July 4, 2014	Previous Calibration	June 5, 2014
Station Number	1	Station Location	Henry Pirker
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	10:35	End Time (MST)	13:25:00 PM
Barometric Pressure	704.0 mm/hg	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Conc	2898 ppm	Cal Gas Expiry Date	04/02/2013
		Cal Gas Cylinder #	LL83909
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.993459	Calculated slope	1.000912
Calculated intercept	0.064063	Calculated intercept	0.183974
Analyzer make	TEI Model 48C	Analyzer serial #	508011062

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO span setting	1.300		1.398	
CO zero setting	1.014		1.014	
Sample pressure	675.4	mm Hg	684.1	mm Hg
Sample Flow	1.115	LPM	1.121	LPM

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.01	N/A
4995	69.94	40.02	39.91	1.0028
4995	34.96	20.14	19.81	1.0168
4995	17.96	10.38	10.02	1.0363
4995	0.00	0.00	0.17	As Found Zero
4995	69.94	40.02	39.91	As Found Span
Average Correction Factor				1.0187

Calculated value of As Found Response: 39.540 ppm Percent Change of As Found: 1.2%

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	19.81	ppm	20.11	ppm

Notes: Adjust zero from 0.108 to -0.001

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CO

Air Monitoring Network PAZA



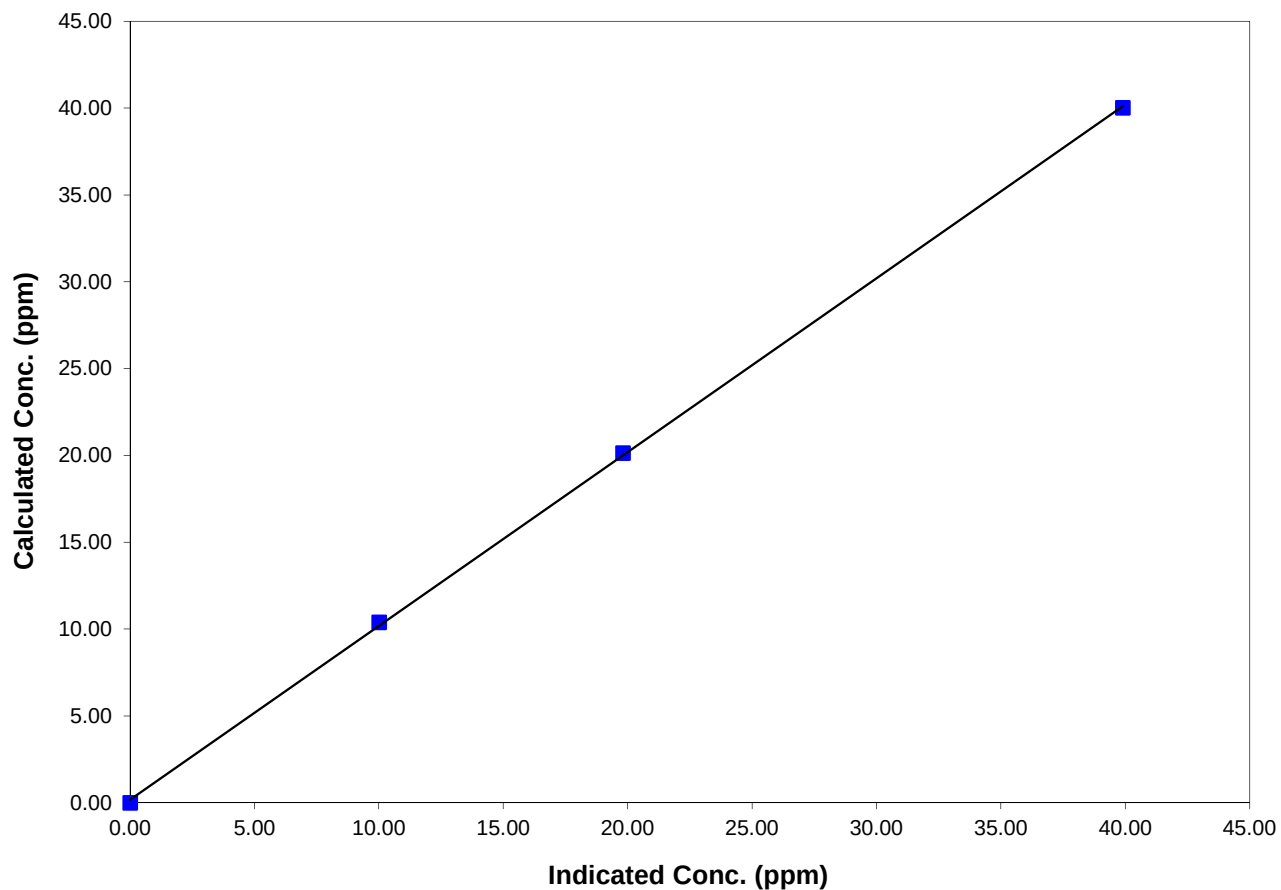
Station Information

Calibration Date	July 4, 2014	Previous Calibration	June 5, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	10:35	End Time (MST)	13:25:00 PM
Analyzer make/model	TEI Model 48C	Analyzer serial #	508011062

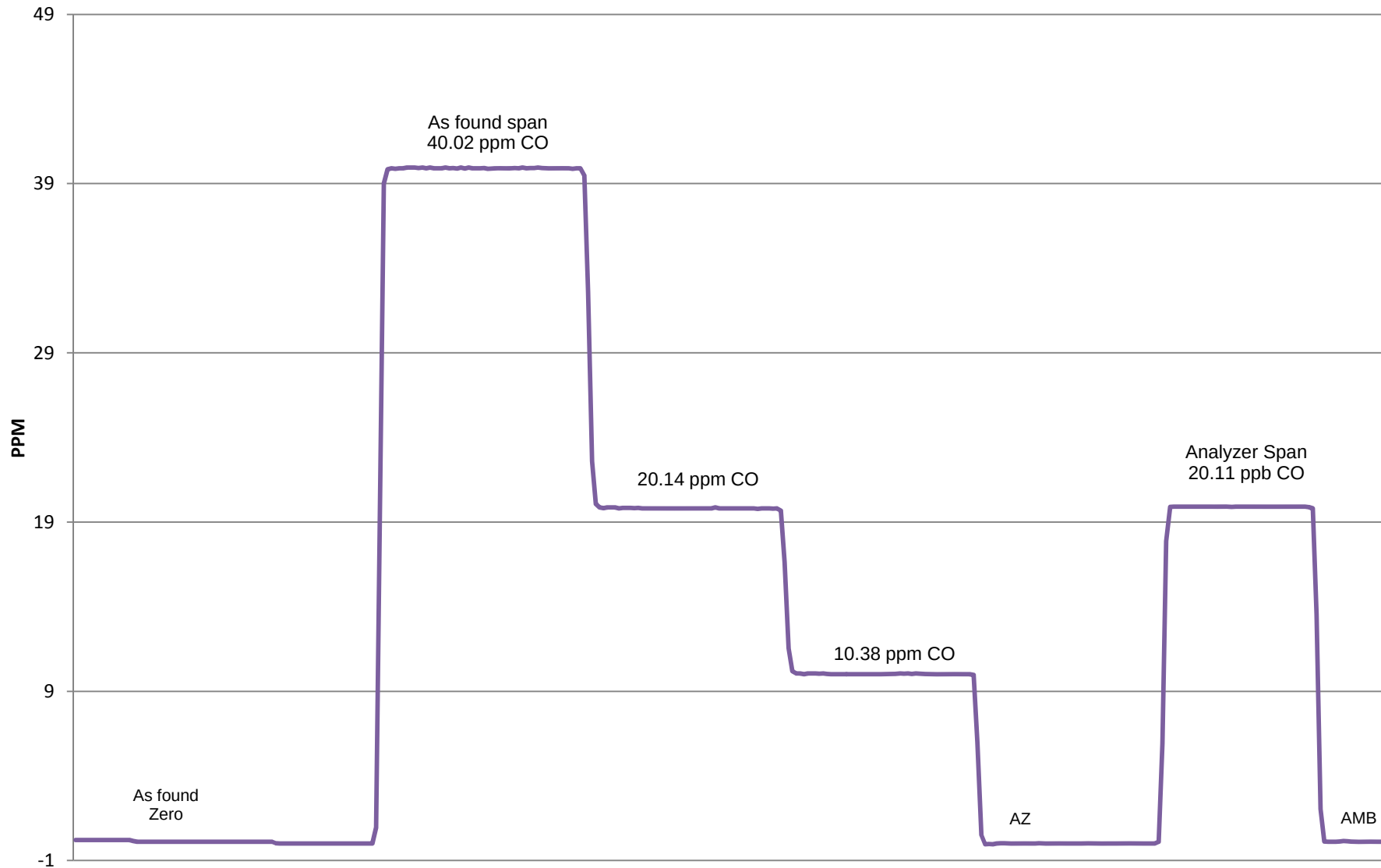
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.010	N/A	Correlation Coefficient	0.999890
40.017	39.905	1.0028		
20.142	19.809	1.0168		
10.383	10.019	1.0363	Slope	1.000912
			Intercept	0.183974

CO Calibration Curve



CO Calibration



July 4, 2014

Calibration Report

Parameter CH4 / NMHC / THC

Air Monitoring Network

PAZA



Station Information

Calibration Date	July 4, 2014	Previous Calibration	June 26, 2014
Station Number	1	Station Location	Henry Pirker
Reason:	☐ Routine	☐ Install	☐ Removal
			☐ Other:
Start Time (MST)	9:02	End Time (MST)	11:50
Barometric Pressure	704.00 mm/hg	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	3016
Cal Gas CH4 Conc	386 ppm CH4	Cal Gas Expiry Date	28/03/2014
Cal Gas C3H8 Conc	207 569.25 ppm CH4	Cal Gas Cylinder #	LL34318
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 5 volt	DACS channel #	SE 11,12,13

Analyzer make TEI 55I Analyzer serial # 1134650658

	before		after	
Concentration range	0-20 (CH4, NMHC); 0-40 (THC)	ppm	0-20 (CH4, NMHC); 0-40 (THC)	ppm
Air pressure	27.9	PSI	27.9	PSI
Fuel pressure	42.1	PSI	42.1	PSI
Carrier pressure	30.3	PSI	30.3	PSI
CH4 cal factor	5.68		5.68	E ⁻⁴
NMHC cal factor	1.64		1.64	E ⁻⁴
Rt	12.60	Sec	12.60	Sec
Pk Index	23.00		23.00	

CH4 Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1996	0.00	0.00	0.02	N/A
1996	68.96	12.89	12.83	1.0048
1996	40.96	7.76	7.65	1.0143
1996	15.99	3.07	2.98	1.0308
1996	0.00	0.00	0.02	As Found Zero
1996	68.93	12.89	12.83	As Found Span
Average Correction Factor				1.0166

Calculated value of As Found Response: 12.847 ppm Percent Change of As Found: 0.3%

	Before		After
Calculated slope	1.001390	Calculated slope	1.005023
Calculated intercept	0.019210	Calculated intercept	0.031599

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.03	ppm	0.03	ppm
Auto span	9.11	ppm	8.38	ppm

NMHC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1996	0.00	0.00	0.02	N/A
1996	68.96	19.01	18.91	1.0055
1996	40.96	11.45	11.45	0.9994
1996	15.99	4.52	4.50	1.0051
1996	0.00	0.00	0.02	As Found Zero
1996	68.93	19.00	18.91	As Found Span
Average Correction Factor				1.0033

Calculated value of As Found Response: 18.990 ppm Percent Change of As Found: 0.1%

	Before		After
Calculated slope	1.005379	Calculated slope	1.005391
Calculated intercept	0.000611	Calculated intercept	-0.021311

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	12.55	ppm	11.59	ppm

THC Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
1996	0.00	0.00	0.03	N/A
1996	68.96	31.90	31.71	1.0061
1996	40.96	19.21	19.09	1.0061
1996	15.99	7.59	7.47	1.0169
1996	0.00	0.00	0.03	As Found Zero
1996	68.93	31.89	31.71	As Found Span
Average Correction Factor				1.0097

Calculated value of As Found Response: 31.844 ppm Percent Change of As Found: 0.1%

	Before		After
Calculated slope	1.004443	Calculated slope	1.005869
Calculated intercept	0.025695	Calculated intercept	0.015413

Final Zero/Span Data

	before calibration		after calibration	
Auto zero	0.02	ppm	0.02	ppm
Auto span	21.66	ppm	19.95	ppm

Notes:

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



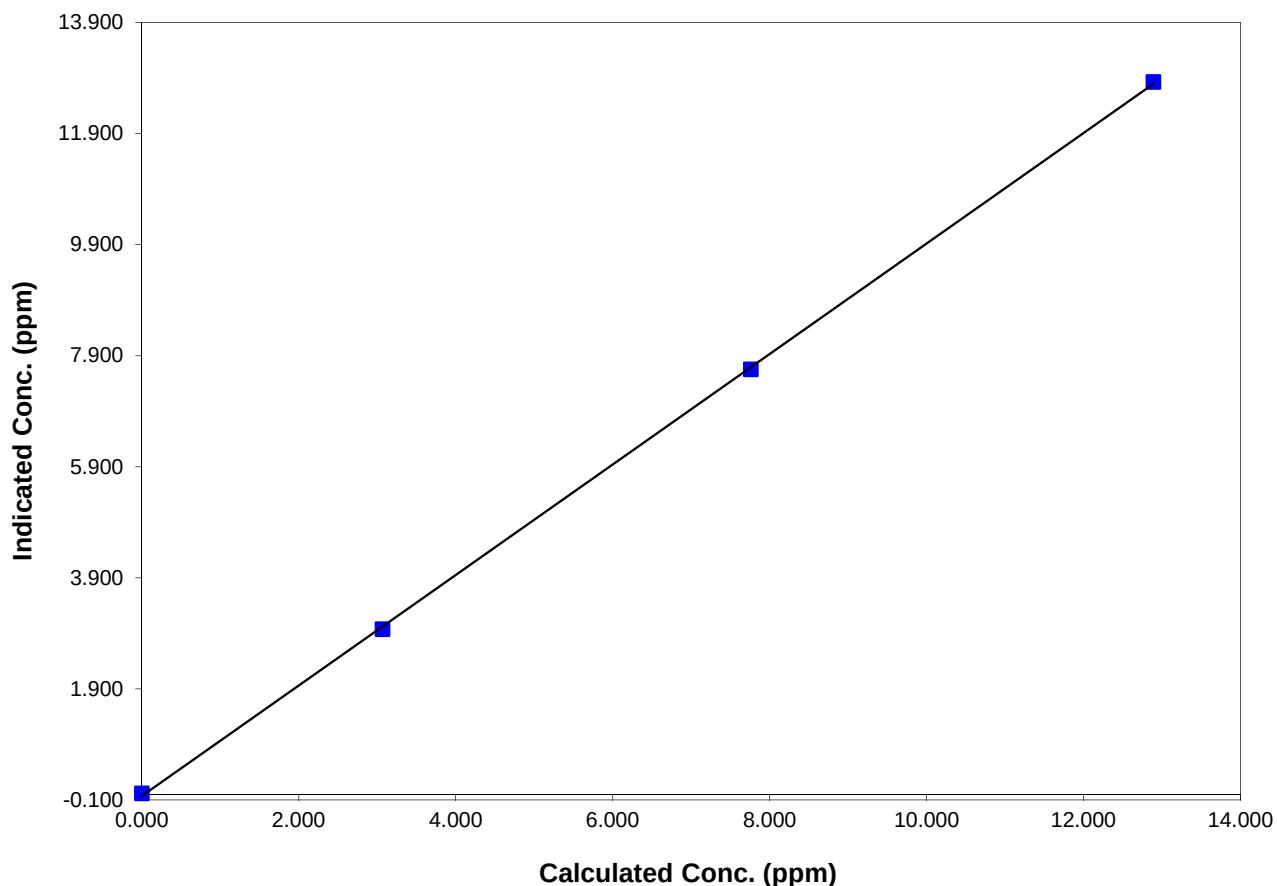
Station Information

Calibration Date	July 4, 2014	Previous Calibration	June 26, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:02	End Time (MST)	11:50
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	0.999924
12.891	12.828	1.0048		
7.762	7.653	1.0143		
3.068	2.976	1.0308	Slope	1.005023
			Intercept	0.031599

CH4 Calibration Data



Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



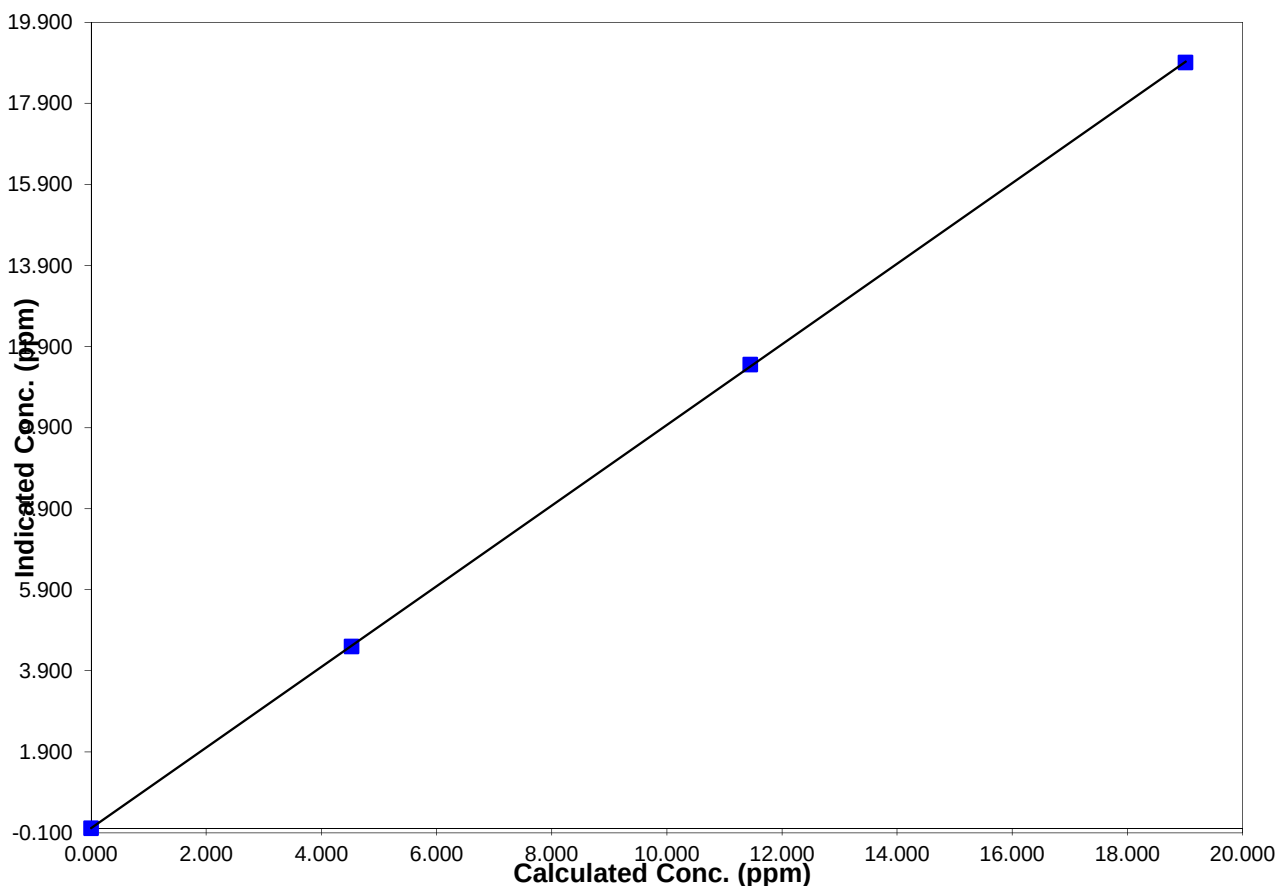
Station Information

Calibration Date	July 4, 2014	Previous Calibration	June 26, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:02	End Time (MST)	11:50
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.018	N/A	Correlation Coefficient	0.999984
19.010	18.906	1.0055		
11.447	11.454	0.9994		
4.524	4.501	1.0051	Slope	1.005391
			Intercept	-0.021311

NMHC Calibration Data



Calibration Summary

Parameter THC

Air Monitoring Network PAZA



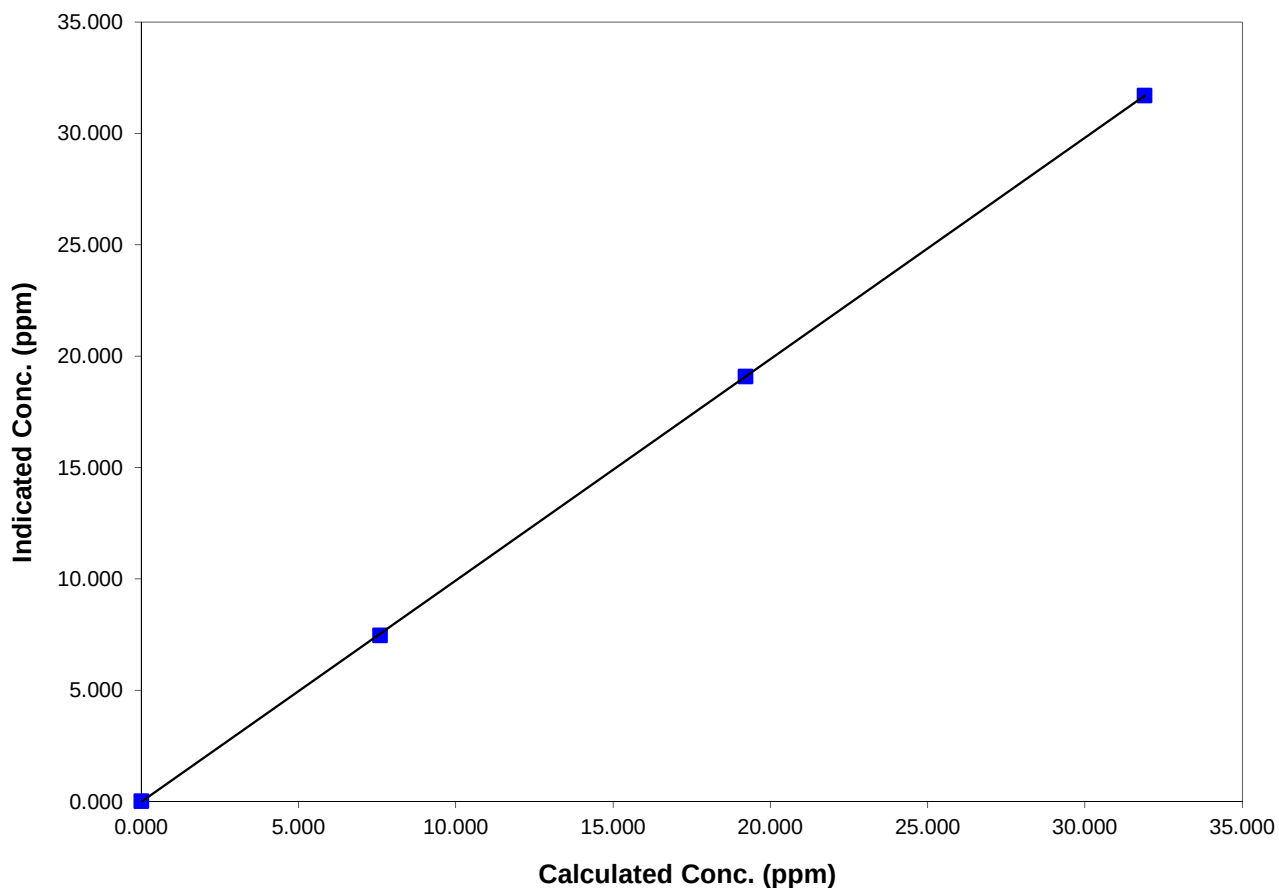
Station Information

Calibration Date	July 4, 2014	Previous Calibration	June 26, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	9:02	End Time (MST)	11:50
Analyzer make/model	TEI 55I	Analyzer serial #	1134650658

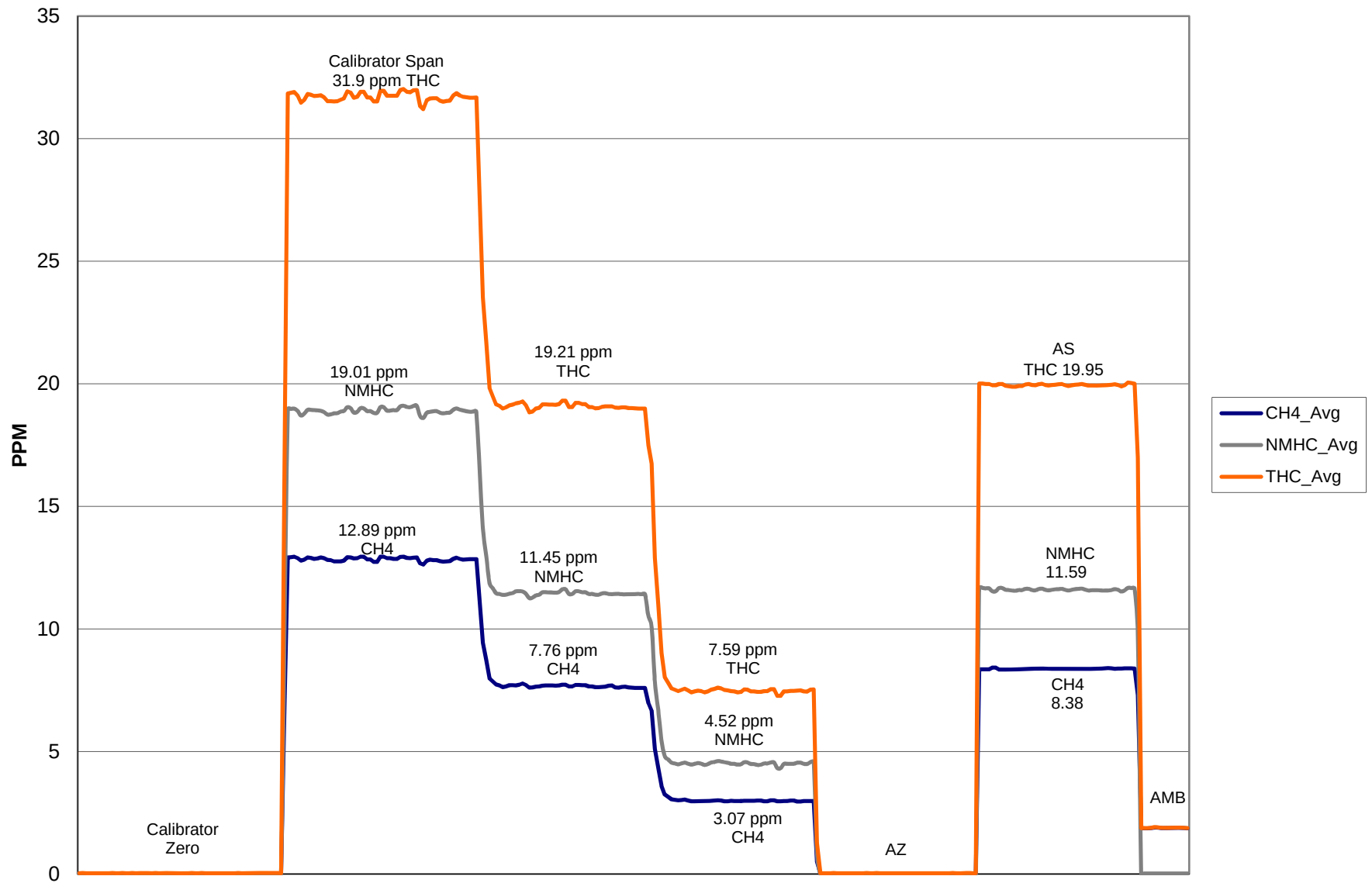
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.031	N/A		
31.901	31.709	1.0061	Correlation Coefficient	0.999988
19.209	19.092	1.0061		
7.592	7.466	1.0169	Slope	1.005869
			Intercept	0.015413

THC Calibration Data



THC/CH₄/NMHC Calibration



Calibration Report

Parameter TR5

Air Monitoring Network PAZA



Station Information

Calibration Date	July 4, 2014	Previous Calibration	July 3, 2014
Station Number	1	Station Location	Henry Pirker
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	5:15	End Time (MST)	10:10
Barometric Pressure	704.00 mm/Hg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Conc	10.4 ppb	Cal Gas Expiry Date	08/07/2016
		Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5408
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
Calculated slope	0.970619	Calculated slope	0.977556
Calculated intercept	0.503366	Calculated intercept	0.381393

Analyzer make	TEI 45C	Analyzer serial #	630718528
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	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Coefficient	1.085		0.985	
Background	19.4		17.6	
Pressure	657.0	mm Hg	657.1	mm Hg
Flow	0.451	ccm	0.45	ccm
Lamp Voltage	880	v	881	v

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	-0.20	N/A
4995	39.93	82.48	84.14	0.9803
4995	19.95	41.37	41.63	0.9937
8995	8.95	10.34	10.14	1.0193
4995	0.00	0.00	-0.20	As Found Zero
4995	39.93	82.48	91.52	As Found Span
Average Correction Factor				0.9978

Calculated value of As Found Response: 89.5 ppb Percent Change of As Found: -8.6%

	before calibration		after calibration	
Auto zero	-0.92	ppb	0.19	ppb
Auto span	33.06	ppb	36.78	ppb

Notes: Span adjustment made
Due to the slow response on the as found span -analyzer and zero air supply will need some maintenance.

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



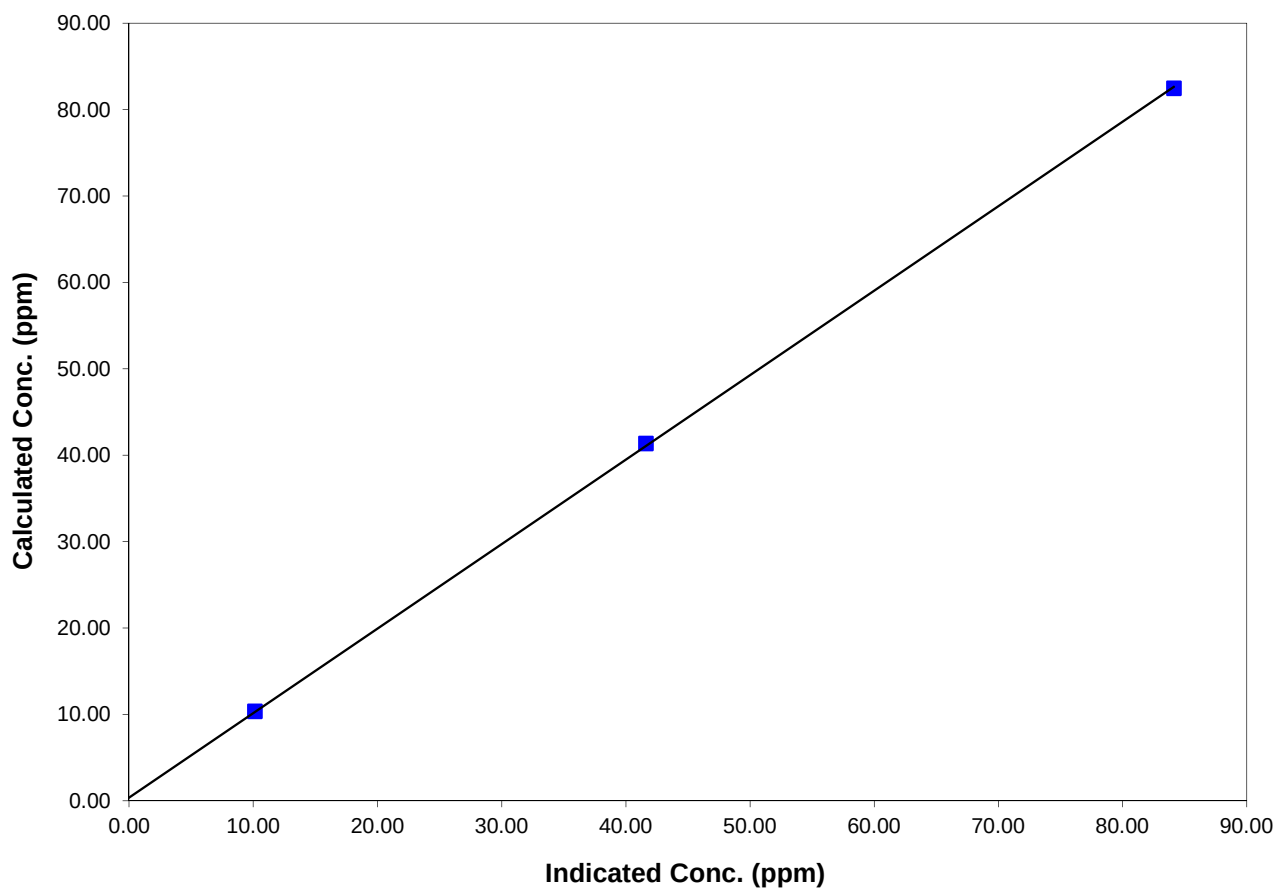
Station Information

Calibration Date	July 4, 2014	Previous Calibration	July 3, 2014
Station Number	1	Station Location	Henry Pirker
Start Time (MST)	5:15	End Time (MST)	10:10
Analyzer make/model	TEI 45C	Analyzer serial #	630718528

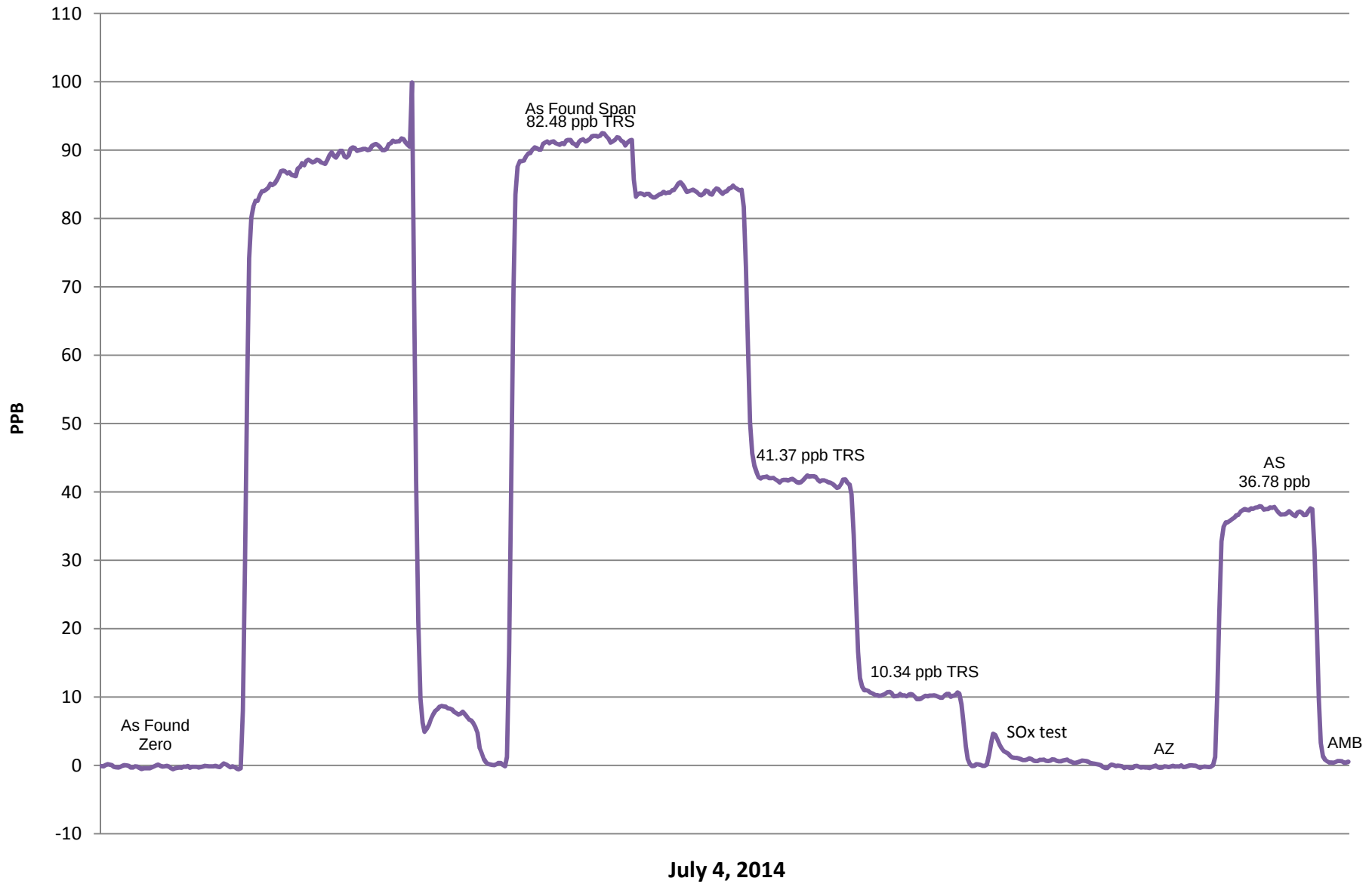
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.202	N/A		
82.478	84.135	0.9803	Correlation Coefficient	0.999965
41.372	41.633	0.9937		
10.338	10.142	1.0193	Slope	0.977556
			Intercept	0.381393

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	July 5 2014	Previous Calibration	June 7 2014
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	11:30	End Time (MST)	14:35:00 PM
Barometric Pressure	0.924 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Concentration	49.8 ppm	Cal Gas Expiry Date	25/02/2025
Correction factor	0.031409	Cal Gas Cylinder #	LL105159
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
Calculated slope	0.987344	Calculated slope	0.981951
Calculated intercept	2.288524	Calculated intercept	2.223372
Analyzer make	Teco 43i	Analyzer serial #	701120008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	11.5		11.5	
coefficient	1.22		1.22	
Lamp Voltage	830	volts	827	volts
Chamber Temp	45.2	Deg C	44.9	Deg C
Perm Gas Temp	45	Deg C	45.01	Deg C
Pressure	666.5	mm Hg	666.8	mm Hg
Sample Flow	0.451	ccm	0.452	ccm
Lamp Intensity	89	%	88	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.2	N/A
4995	39.93	394.9	401.2	0.9843
4995	19.97	198.3	198.1	1.0010
4995	9.97	99.2	96.6	1.0267
4995	0.0	0.0	0.2	As Found Zero
4995	39.93	394.9	401.2	As Found Span
Average Correction Factor				1.0040

Calculated value of As Found Response: 398.284 ppm Percent Change of As Found: -0.9%

	before calibration		after calibration	
Auto zero	1.8	ppm	0.1	ppm
Auto span	290.1	ppm	282.3	ppm

Notes: No adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



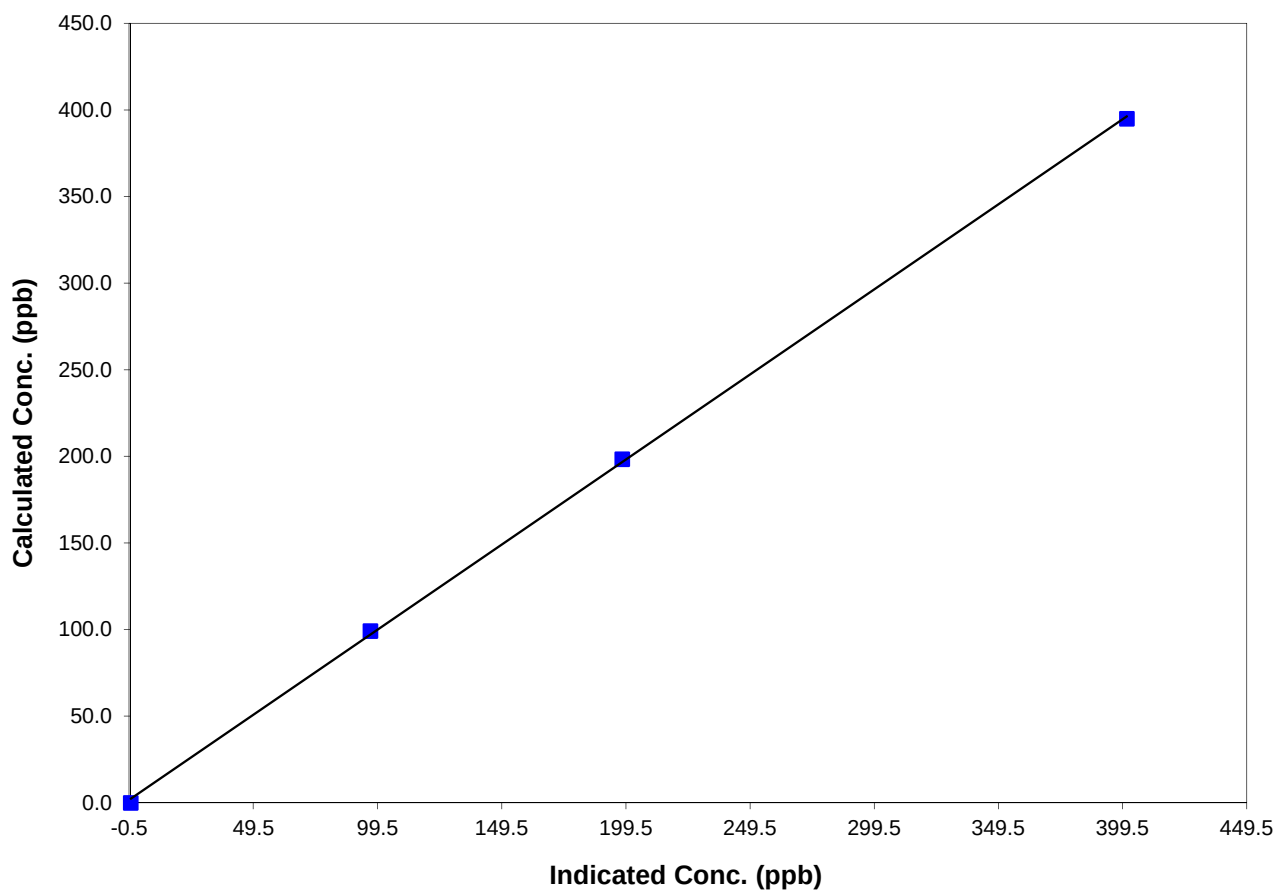
Station Information

Calibration Date	July 5 2014	Previous Calibration	June 7 2014
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	11:30	End Time (MST)	14:35:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	701120008

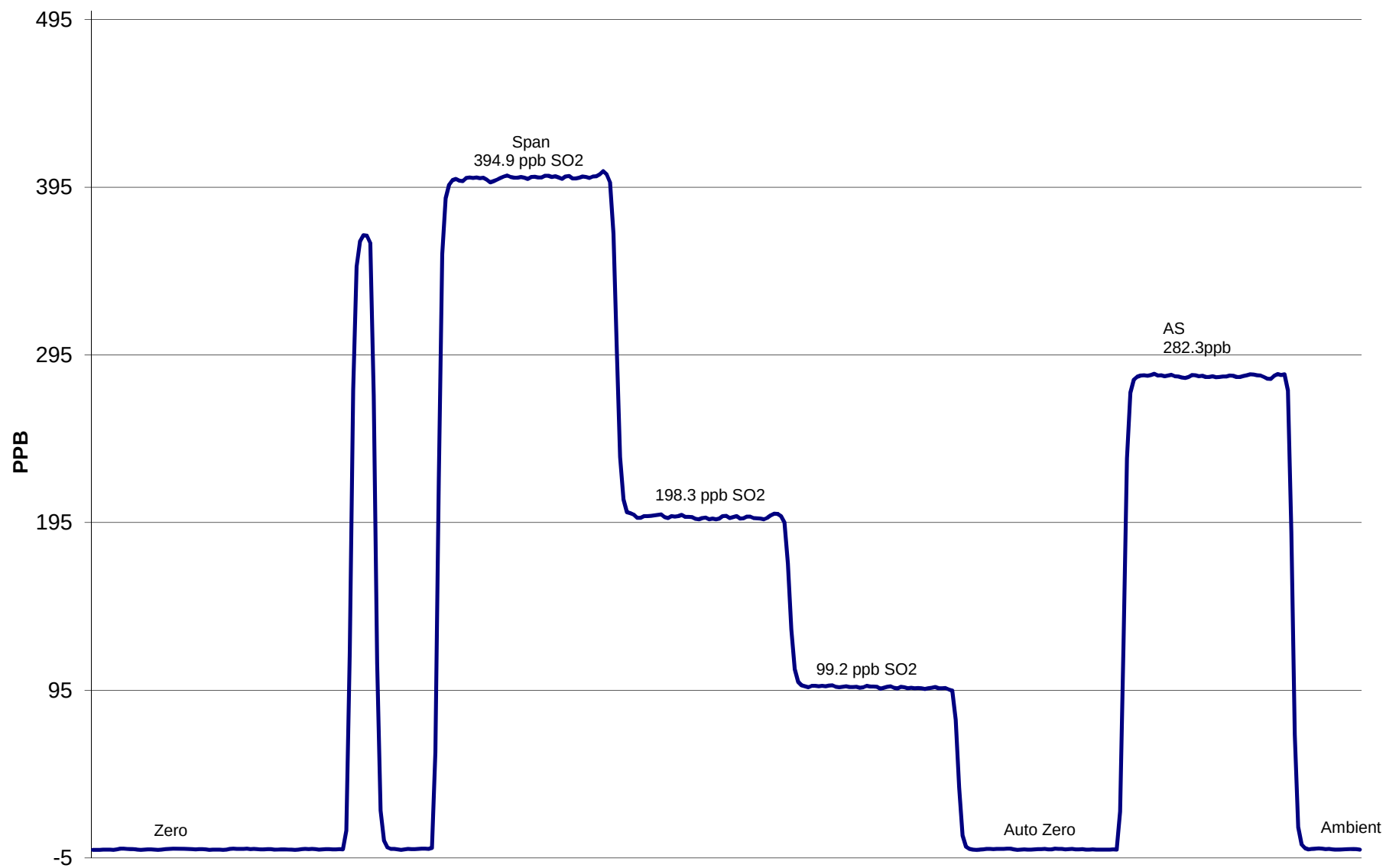
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999834
394.9	401.2	0.9843		
198.3	198.1	1.0010		
99.2	96.6	1.0267	Slope	0.981951
			Intercept	2.223372

SO2 Calibration Curve



SO2 Calibration



July 5 2014

Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	July 5 2014	Previous Calibration	June 7 2014
Station Number	2	Station Location	Evergreen Park
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	8:45	End Time (MST)	12:35
Barometric Pressure	0.907 ATM	Station Temperature	22.0 Deg C
Calibrator	Envionics	Serial Number	3016
Cal Gas Conc	10.4 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.030622	Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5236
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
Calculated slope	0.983226	Calculated slope	0.996998
Calculated intercept	0.161616	Calculated intercept	-0.407578

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

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	39.9	ppb	38.6	ppb
coefficient	1.043		1.01	
Lamp Voltage	1033	volts	1032	volts
Chamber Temp	44.3	Deg C	44.4	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	637.4	mm Hg	636.7	mm Hg
Sample Flow	0.631	ccm	0.630	ccm
Lamp Intensity	31,442	mv	31,504	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.4	N/A
4995	39.93	82.48	83.2	0.9913
4995	19.97	41.41	41.8	0.9914
8995	8.97	10.36	11.0	0.9458
4995	9.97	102.79	2.0	Sox Test
4995	0.00	0.00	0.4	As Found Zero
4995	39.93	82.48	85.1	As Found Span
Average Correction Factor				0.9762

Calculated value of As Found Response: 83.43 ppm Percent Change of As Found: **-1.2%**

	before calibration		after calibration	
Auto zero	-0.2	ppm	0.1	ppm
Auto span	82.2	ppm	72.8	ppm

Notes: Span adjustment made
Sox scrubber check performed

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



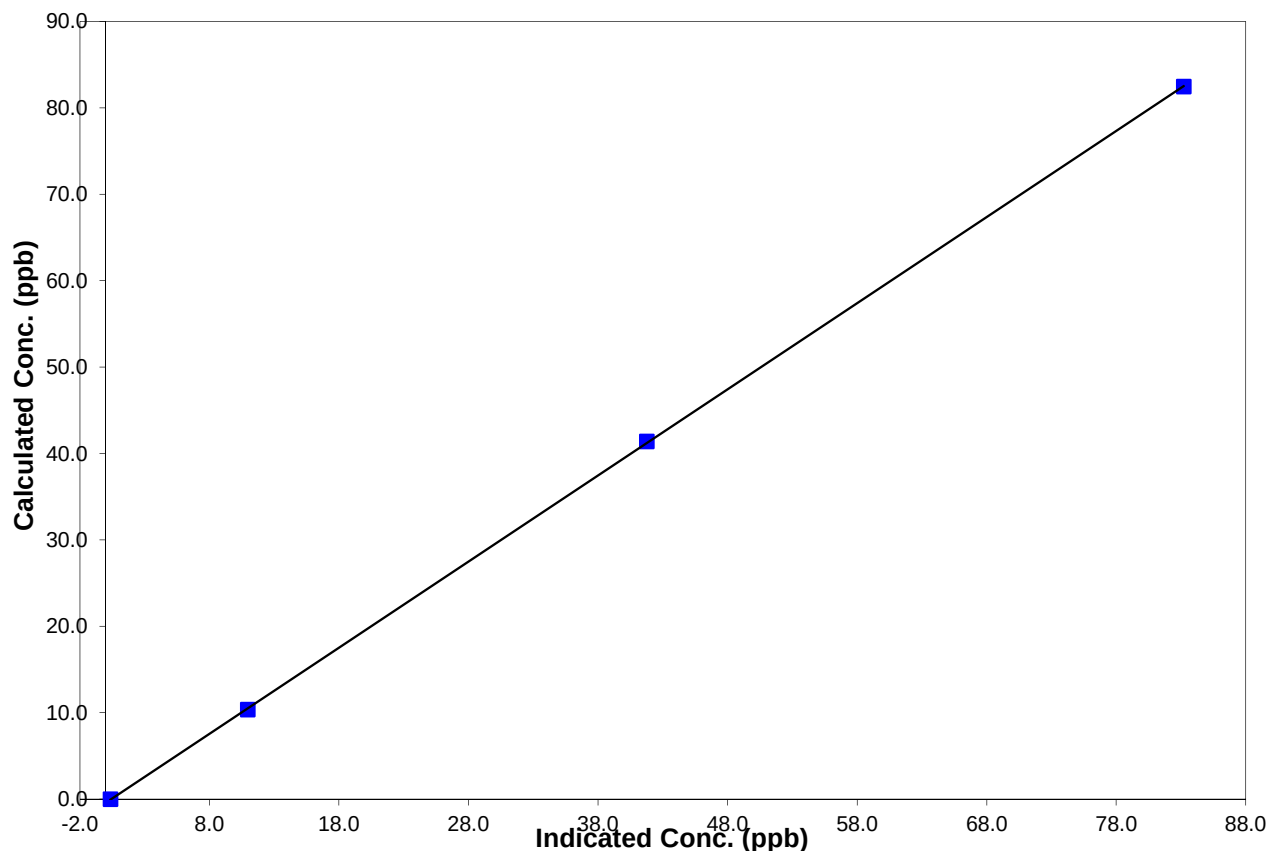
Station Information

Calibration Date	July 5 2014	Previous Calibration	June 7 2014
Station Number	2	Station Location	Evergreen Park
Start Time (MST)	8:45	End Time (MST)	12:35
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

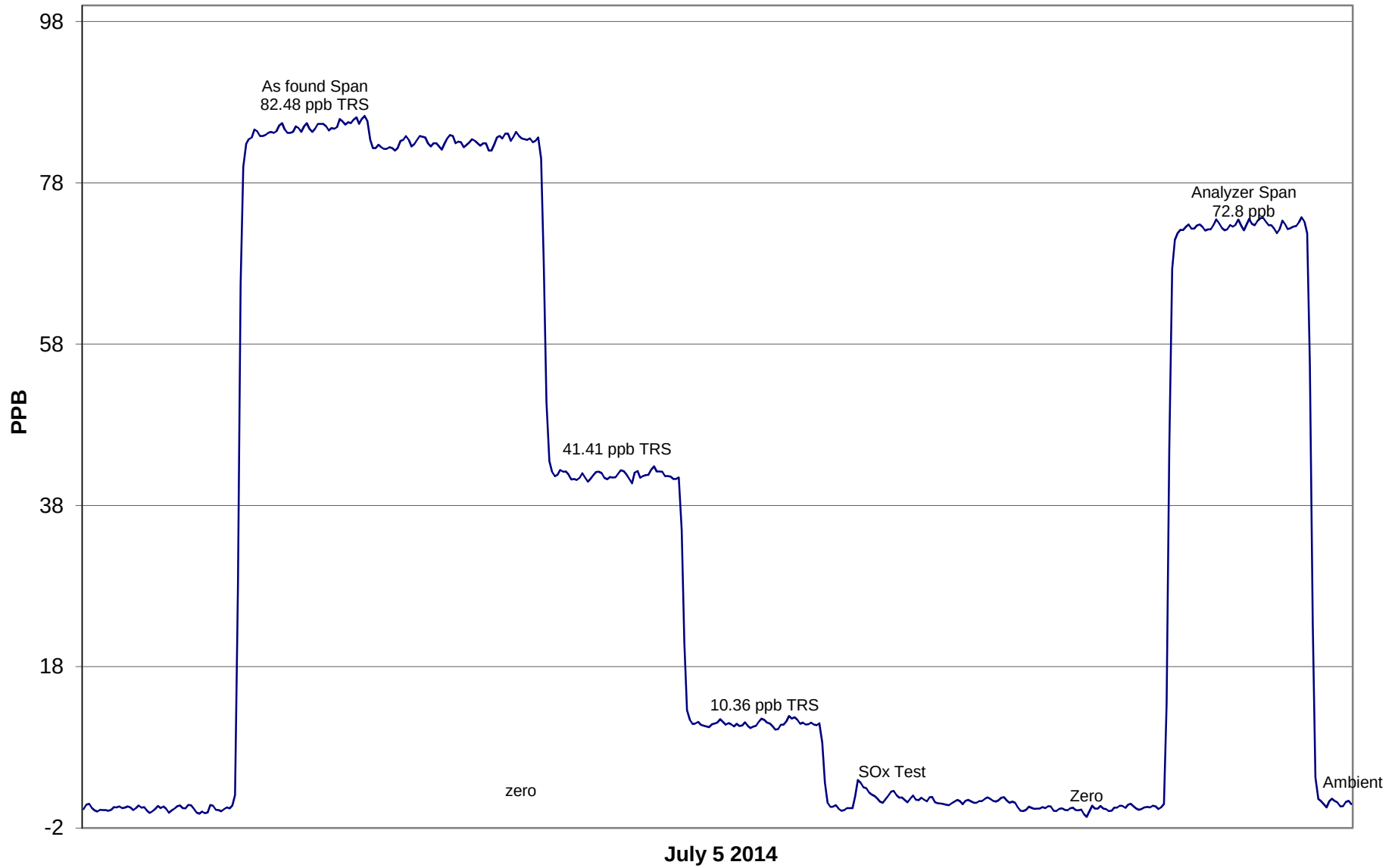
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A	Correlation Coefficient	0.999985
82.5	83.2	0.9913		
41.4	41.8	0.9914		
10.4	11.0	0.9458	Slope	0.996998
			Intercept	-0.407578

TRS Calibration Curve



TRS Calibration



Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	July 10, 2014	Previous Calibration	June 6, 2014
Station Number	3	Station Location	Smokey Heights
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	9:20	End Time (MST)	12:15
Barometric Pressure	0.935 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Concentration	49.8 ppm	Cal Gas Cert Date	20/01/2016
Correction factor	0.031783	Cal Gas Cylinder #	LL1105159
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.995695	Calculated slope	0.985408
Calculated intercept	2.112191	Calculated intercept	2.962567
Analyzer make	Teco 43i	Analyzer serial #	701120009

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	12.2		12.2	
coefficient	0.952		0.952	
Lamp Voltage	929	volts	928	volts
Chamber Temp	44.9	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	667.5	mm Hg	668.7	mm Hg
Sample Flow	0.447	lpm	0.447	lpm
Lamp Intensity	88	%	88	%

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	0.2	N/A
4995	39.93	394.94	399.4	0.9889
4995	19.97	198.31	196.4	1.0098
4995	9.97	99.20	94.7	1.0470
4995	0.0	0.00	0.2	As Found Zero
4995	39.93	394.94	399.4	As Found Span
Average Correction Factor				1.0152

Calculated value of As Found Response: 399.618 ppm Percent Change of As Found: -1.2%

	before calibration		after calibration	
Auto zero	1.6	ppb	0.2	ppb
Auto span	248.2	ppb	255.3	ppb

Notes: NO adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



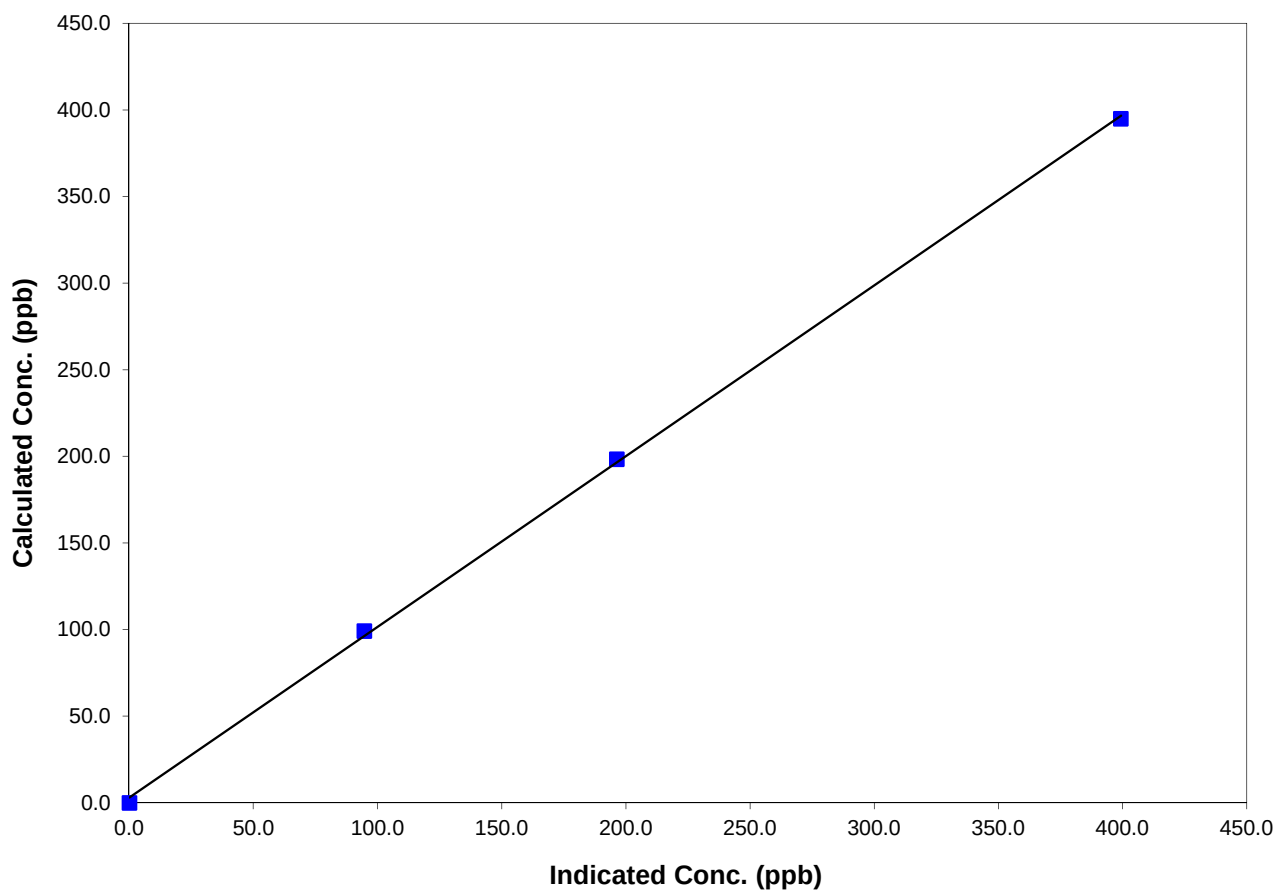
Station Information

Calibration Date	July 10, 2014	Previous Calibration	June 6, 2014
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	9:20	End Time (MST)	12:15
Analyzer make/model	Teco 43i	Analyzer serial #	701120009

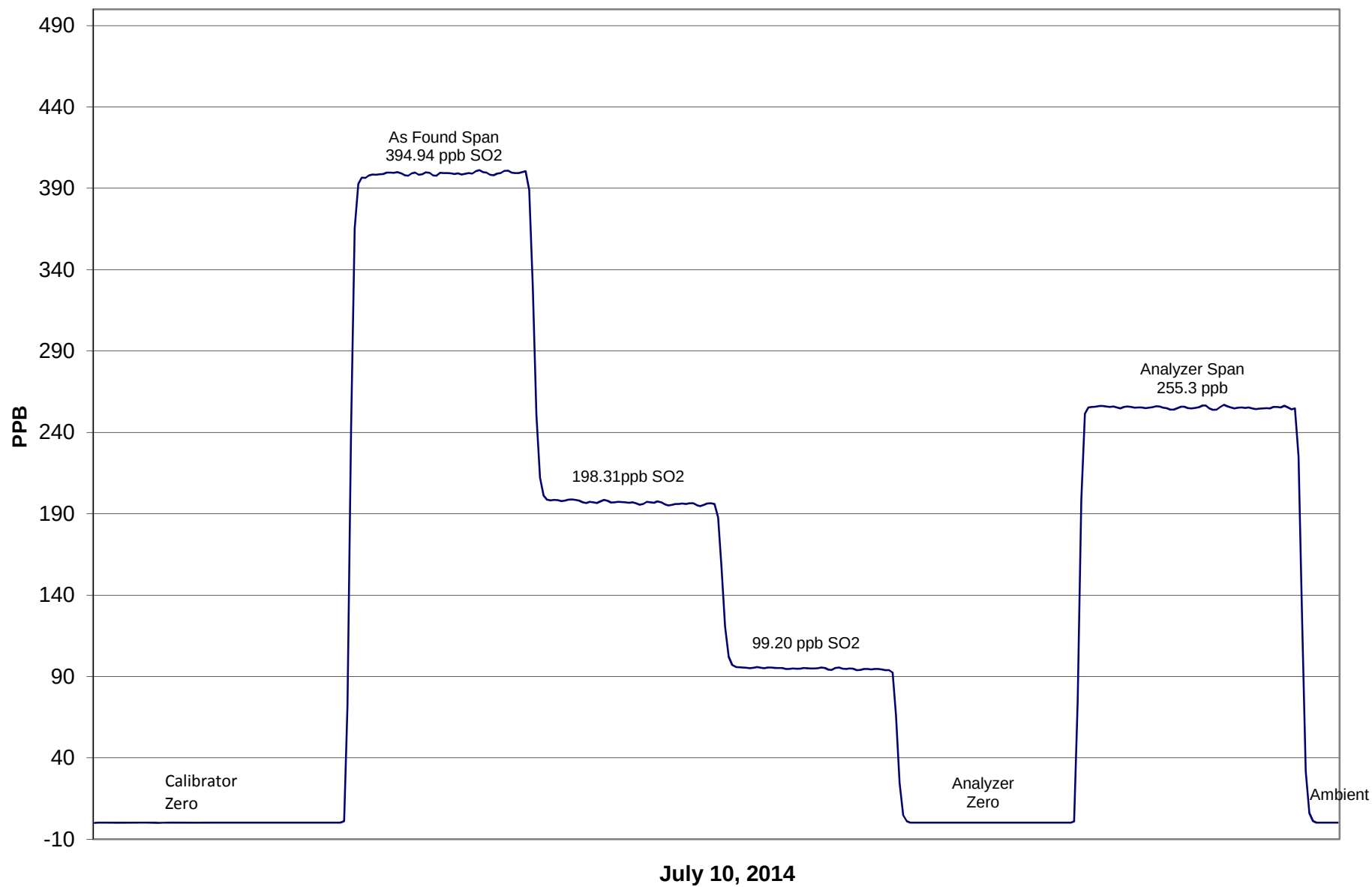
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999719
394.9	399.4	0.9889		
198.3	196.4	1.0098		
99.2	94.7	1.0470	Slope	0.985408
			Intercept	2.962567

SO2 Calibration Curve



Smokey Heights SO₂ Calibration



Calibration Report



Parameter TRS

Air Monitoring Network PAZA

Station Information

Calibration Date	July 10, 2014	Previous Calibration	June 6, 2014
Station Number	3	Station Location	Smokey Heights
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	10:55	End Time (MST)	15:05:00 PM
Barometric Pressure	0.935 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	2844
Cal Gas Conc	10.4 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.031783	Cal Gas Cylinder #	LL110781
DACS make	CR3000	DACS serial No.	5238
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	0.984828	Calculated slope	0.995059
Calculated intercept	0.606017	Calculated intercept	0.657011

Analyzer make	TEI Model 43C	Analyzer serial #	0436610005
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	before		after	
Concentration range	100	ppb	100	ppb
Background	19.5	ppb	19	ppb
coefficient	0.983		0.983	
Lamp Voltage	830	volts	829	volts
Chamber Temp	43.7	Deg C	43.8	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	581.7	mm Hg	606.2	mm Hg
Sample Flow	0.616	lpm	0.635	lpm
Lamp Intensity	35,337	mv	35,280	mv

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	-0.2	N/A
4995	39.91	82.44	82.3	1.0016
4995	19.93	41.33	40.8	1.0130
6995	9.97	14.80	13.7	1.0790
4995	9.97		2.8	Sox test
4995	0.0	0.00	-0.2	As Found Zero
4995	39.91	82.44	82.3	As Found Span
Average Correction Factor				1.0312

Calculated value of As Found Response: 81.87 ppm Percent Change of As Found: 0.7%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.4	ppm
Auto span	29.5	ppm	31.2	ppm

Notes: No adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



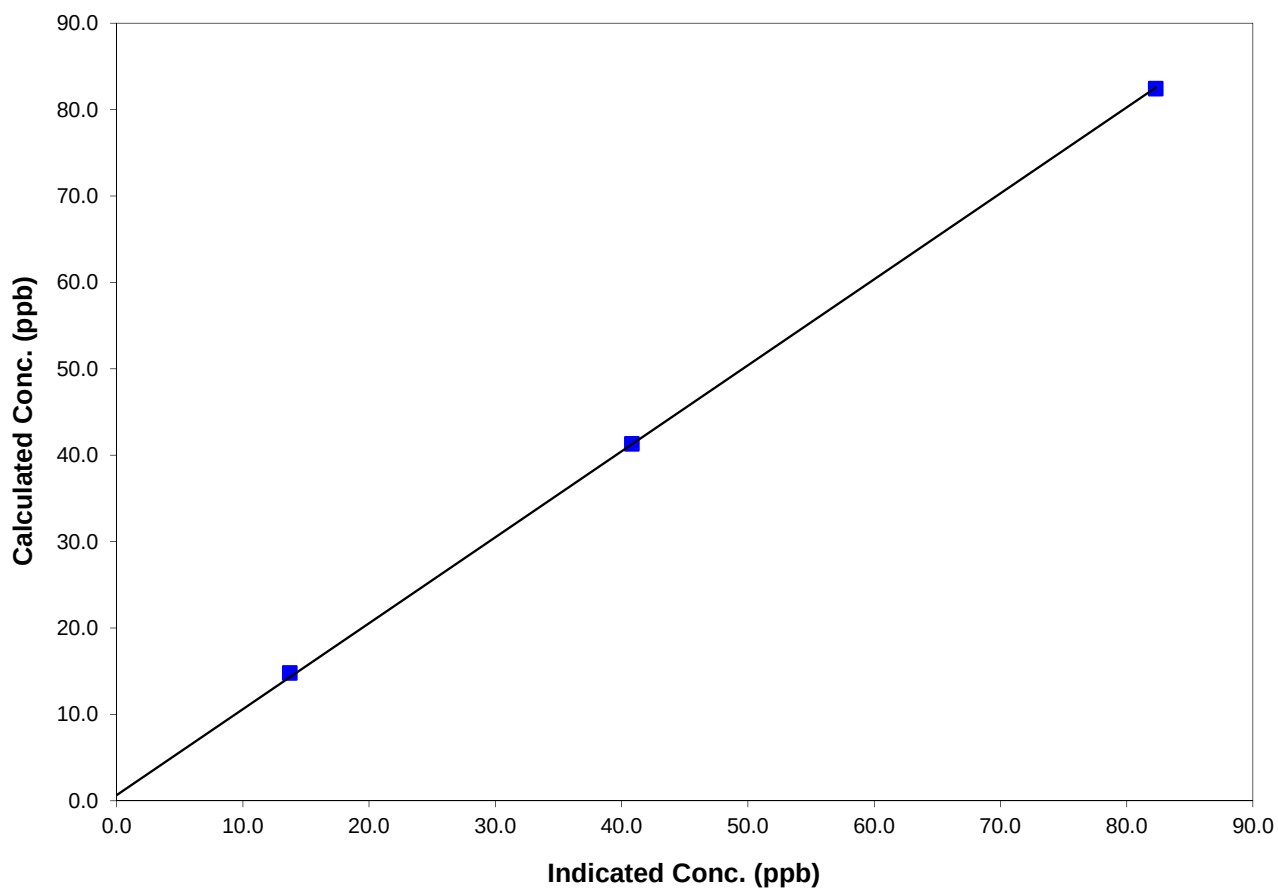
Station Information

Calibration Date	July 10, 2014	Previous Calibration	June 6, 2014
Station Number	3	Station Location	Smokey Heights
Start Time (MST)	10:55	End Time (MST)	15:05:00 PM
Analyzer make/model	TEI Model 43C	Analyzer serial #	0436610005

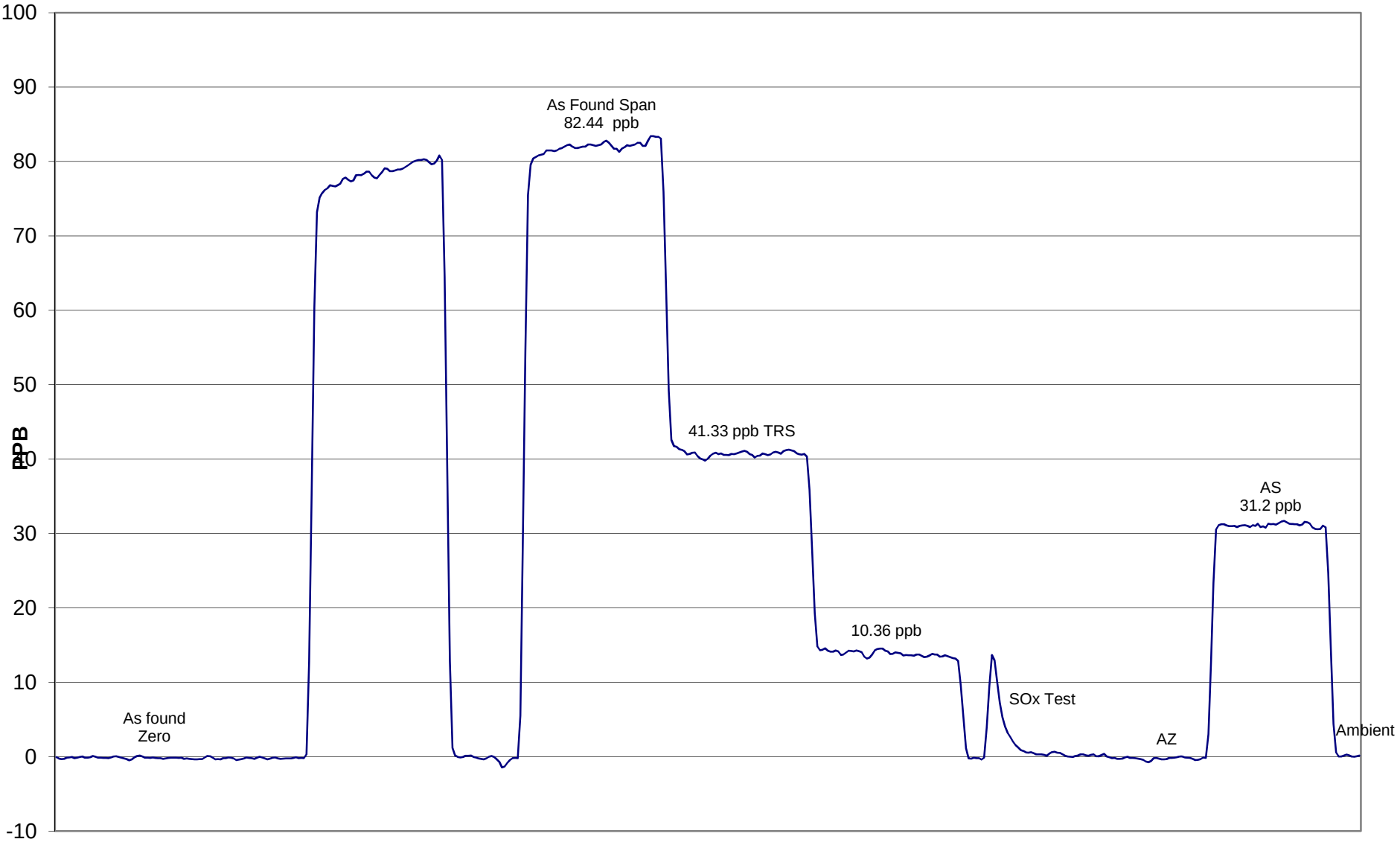
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.2	N/A	Correlation Coefficient	0.999881
82.4	82.3	1.0016		
41.3	40.8	1.0130		
14.8	13.7	1.0790	Slope	0.995059
			Intercept	0.657011

TRS Calibration Curve



Smokey Heights TRS Calibration



July 10, 2014

Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	July 8, 2014	Previous Calibration	June 10, 2014
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
		Other:	
Start Time (MST)	8:05	End Time (MST)	11:00
Barometric Pressure	0.908 atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	2844
Cal Gas Concentration	10.8 ppm	Cal Gas Expiry Date	28/09/2012
Gas Cert Reference	FF14871		
DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	5
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.995405	Calculated slope	0.985200
Calculated intercept	0.219002	Calculated intercept	0.322092
Analyzer make	TEI Model 43i-TLE	Analyzer serial #	713021137

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	2.7		2.7	
Coefficient	1.042		1.042	
PMT	-767.8	V	-768.1	V
UV Lamp Voltage	1062	V	1059	V
Chamber Temp	45.1	Deg C	45	Deg C
Pressure	666.7	mm Hg	666.1	mm Hg
Sample Flow	0.483	LPM	0.483	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)
4994	0.00	0.0	0.0	N/A
4994	39.92	85.6	86.7	0.9875
4994	19.96	43.0	43.2	0.9945
4994	9.96	21.5	21.1	1.0166
4994	0.00	0.0	0.0	As found zero
4994	39.92	85.6	86.7	As found span
Average Correction Factor				0.9995

Calculated value of As Found Response: 86.575 ppm Percent Change of As Found: -1.1%

	before calibration		after calibration	
Auto zero	0.2	ppb	0.3	ppb
Auto span	59.9	ppb	59.1	ppb

Notes: No adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



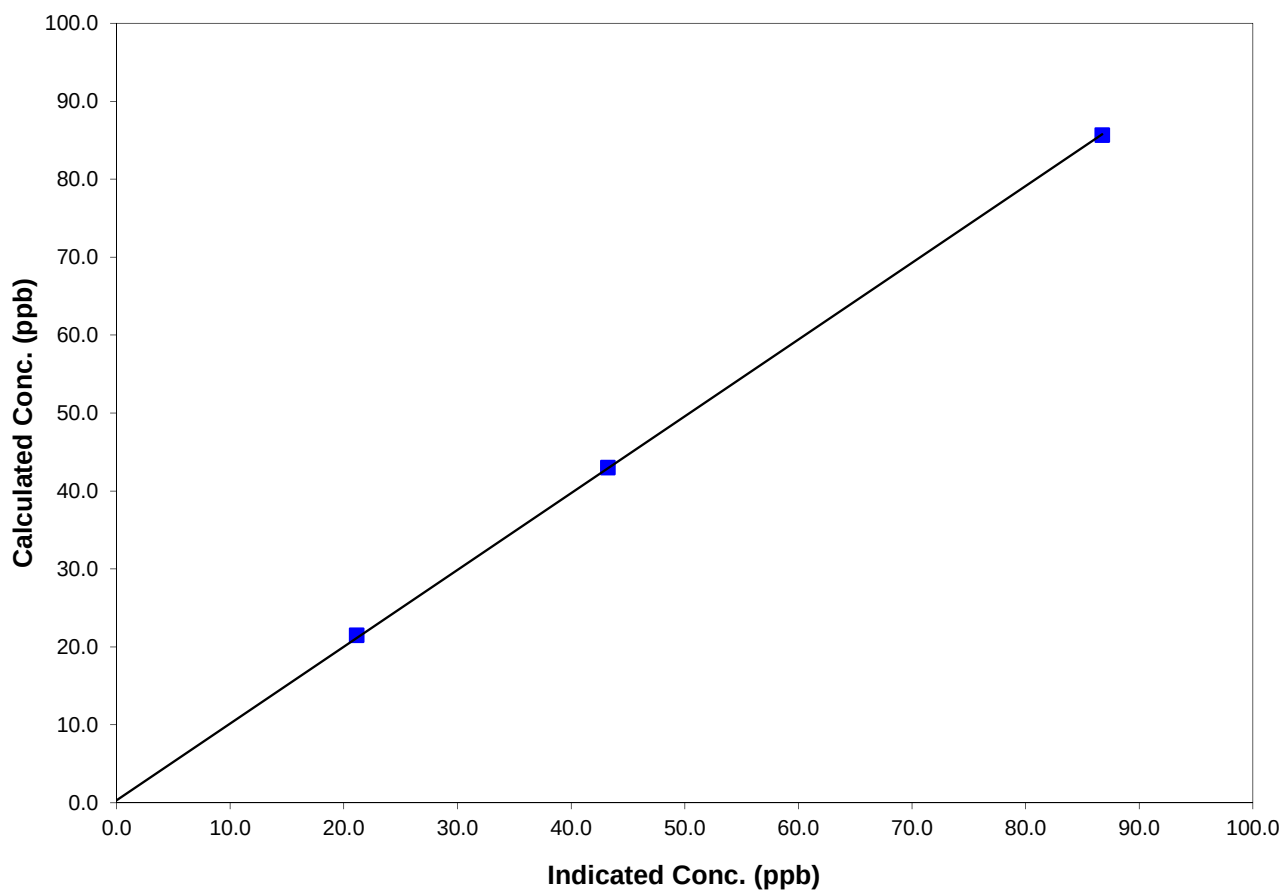
Station Information

Calibration Date	July 8, 2014	Previous Calibration	June 10, 2014
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:05	End Time (MST)	11:00
Analyzer make/model	TEI Model 43i-TLE	Analyzer serial #	713021137

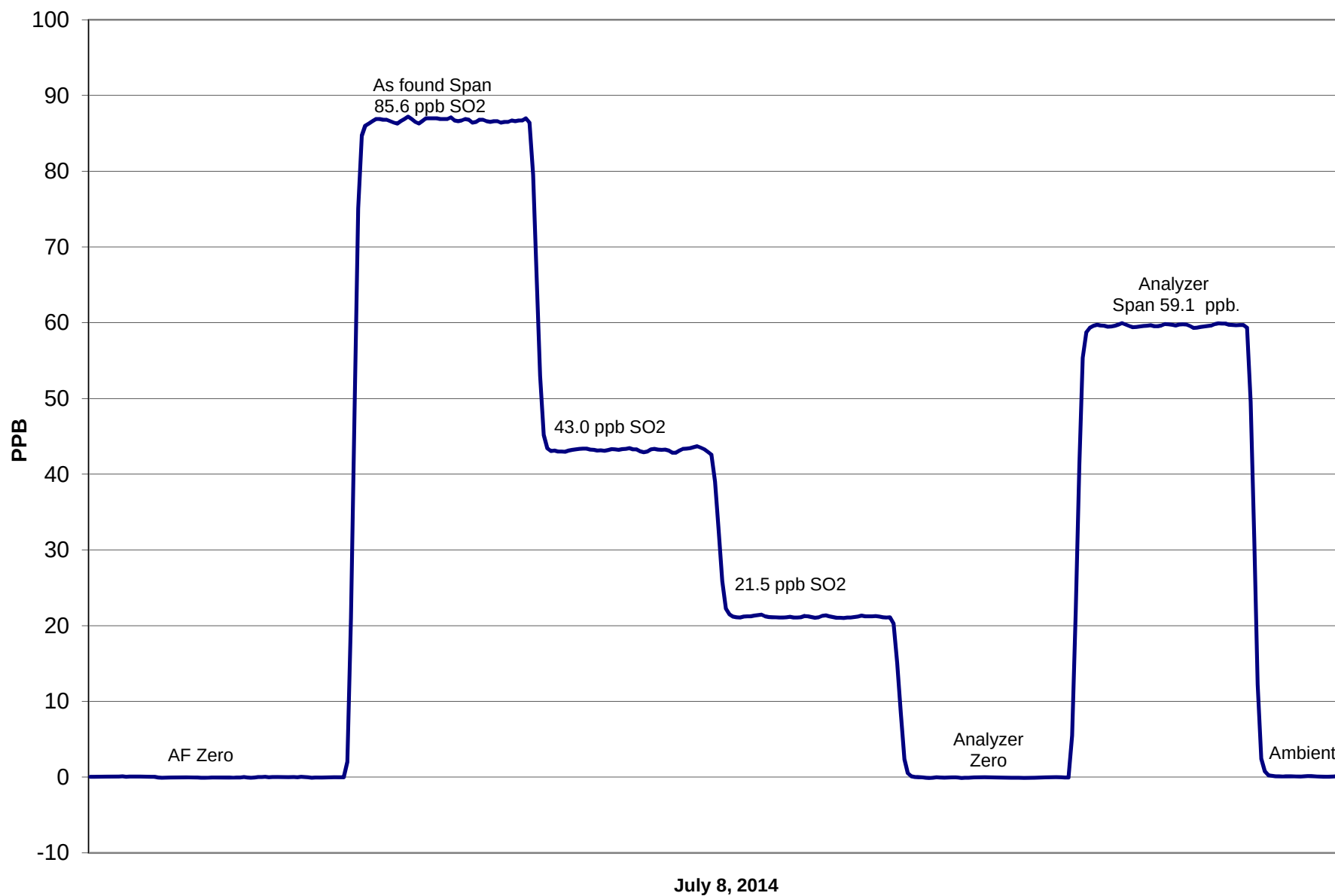
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999943
85.6	86.7	0.9875		
43.0	43.2	0.9945		
21.5	21.1	1.0166	Slope	0.985200
			Intercept	0.322092

SO2 Calibration Curve



SO2 Calibration



Parameter
Air Monitoring Network

NO_x-NO-NO₂

PAZA



Station Information

Calibration Date	July 7, 2014		Previous Calibration	June 10, 2014	
Station Number	4		Station Location	Beaverlodge	
Reason:	☒ Routine	☐ Installation	☐ Removal	Other:	
Start Time (MST)	8:25		End Time (MST)	14:40:00 PM	
Barometric Pressure	0.904	Atm	Station Temperature	20.0	Deg C
Calibrator	EnviroNics		Serial Number	3016	
NO Cal Gas Conc	52.1	ppm	Cal Gas Expiry Date	March 1, 2017	
NOx Cal Gas Conc	52.4	ppm	Cal Gas Serial #	LL105159	

DACS Information

DACS make		CR3000	DACS serial No.	5237
	Parameter	NO2	NOx	NO
Before	Data Slope	0.999131	0.998657	0.994858
	Data Offset	-0.339346	1.530935	1.915016
After	Data Slope	0.996708	1.000944	0.996469
	Data Offset	-0.128317	1.484190	1.745672
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	906535068	
Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	2.8	mV	3.1	mV
NOx bkgnd	3.0	mV	3.4	mV
NO coefficient	1.027		1.027	
NOx coefficient	1.000		1.000	
NO2 conv temp	323.2	Deg C	326.7	Deg C
PMT Temp	-2.9	Deg C	-2.9	Deg C
PMT Volt	-741.1	mV	-740.4	mV
R Cell Press	216.9	in Hg	217.5	in Hg
Sample Flow	0.673	LPM	0.678	LPM

Notes:	Span adjustment made
	After span is not linear, climbing gradually, analyzer needs new perm tube.

Calibration Report

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



Station Information

Calibration Date: July 7, 2014 Station Location: Beaverlodge

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.1	0.0	-0.1	N/A	N/A
1	4995	39.92	415.5	413.1	2.4	414.2	413.7	-0.3	1.0030	0.9985
2	4995	19.96	208.6	207.4	1.2	206.5	205.4	0.1	1.0101	1.0096
3	4995	9.93	104.0	103.4	0.6	100.5	100.3	0.1	1.0340	1.0311
AFZ	4995	0.00	0.0	0.0	0.0	0.2	0.0	0.1	0.0000	0.0000
AFS	4995	39.92	415.5	413.1	0.8	387.6	385.8	1.0	1.0718	1.0706
Average Correction Factor									1.0157	1.0131

As Found Concentrations: NO_x= 388.5 NO= 385.8 As Found Percent Change NO_x= -6.5% NO= -6.6%

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	0.0	0.0	0.0	0.1	0.0	-0.1	N/A	N/A	N/A	N/A
NO point	414.2	414.2	0.0	414.4	414.2	-0.6	0.9994	1.0000	N/A	N/A
300	414.2	116.6	297.6	416.1	116.6	298.8	0.9953	1.0000	0.9961	100.4%
200	414.2	216.0	198.1	415.6	216.0	198.6	0.9966	1.0000	0.9978	100.2%
100	414.2	311.4	102.7	415.7	311.4	103.7	0.9964	1.0000	0.9910	100.9%
Average Correction Factor							0.9961	1.0000	0.9949	100.5%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.0	0.0	-0.1	ppb	-0.2	-0.1	-0.2	ppb
Auto span	184.7	183.3	0.9	ppb	176.0	174.8	0.9	ppb

Calibration Performed By: Dmytro Dolotii, Grover Christiansen

Calibration Summary

Parameter NO₂

Air Monitoring Network PAZA



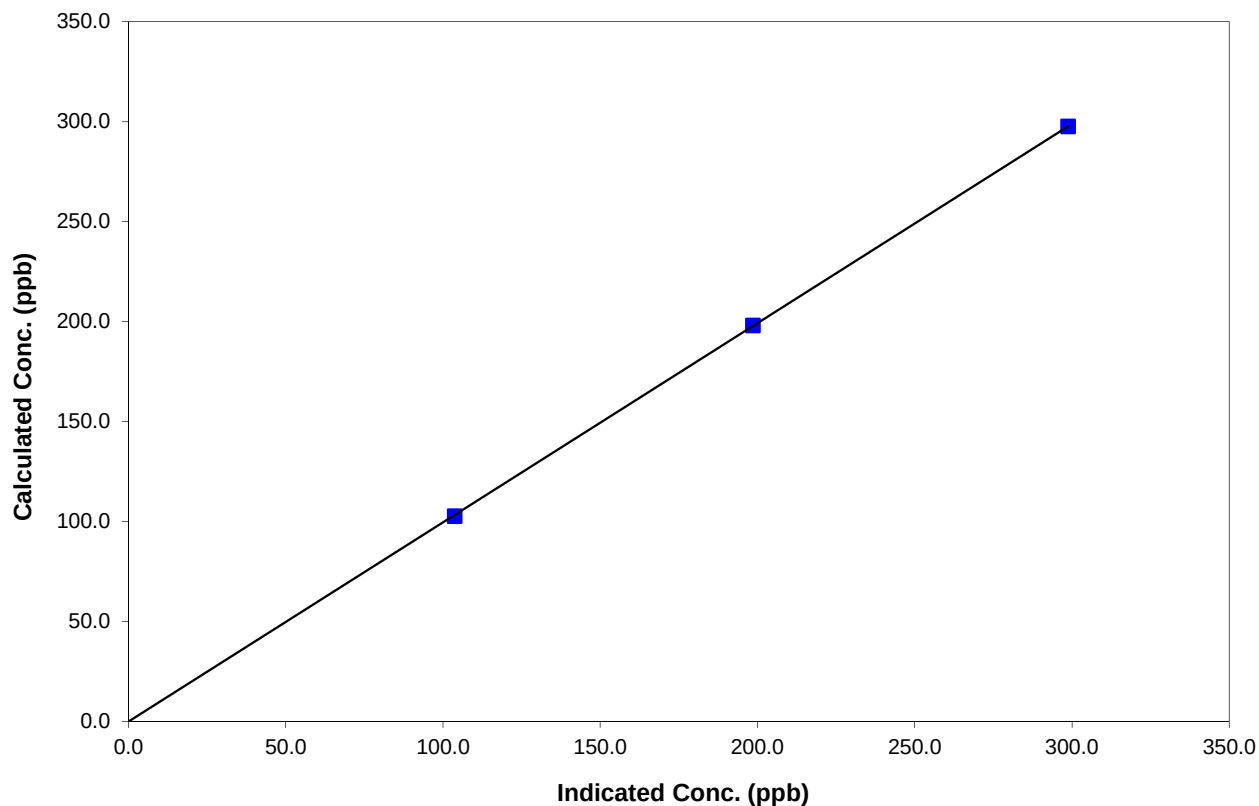
Station Information

Calibration Date	July 7, 2014	Previous Calibration	June 10, 2014
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:25	End Time (MST)	14:40:00 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	0.999992
297.6	298.8	0.9961		
198.1	198.6	0.9978		
102.7	103.7	0.9910	Slope	0.996708
			Intercept	-0.128317

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network PAZA



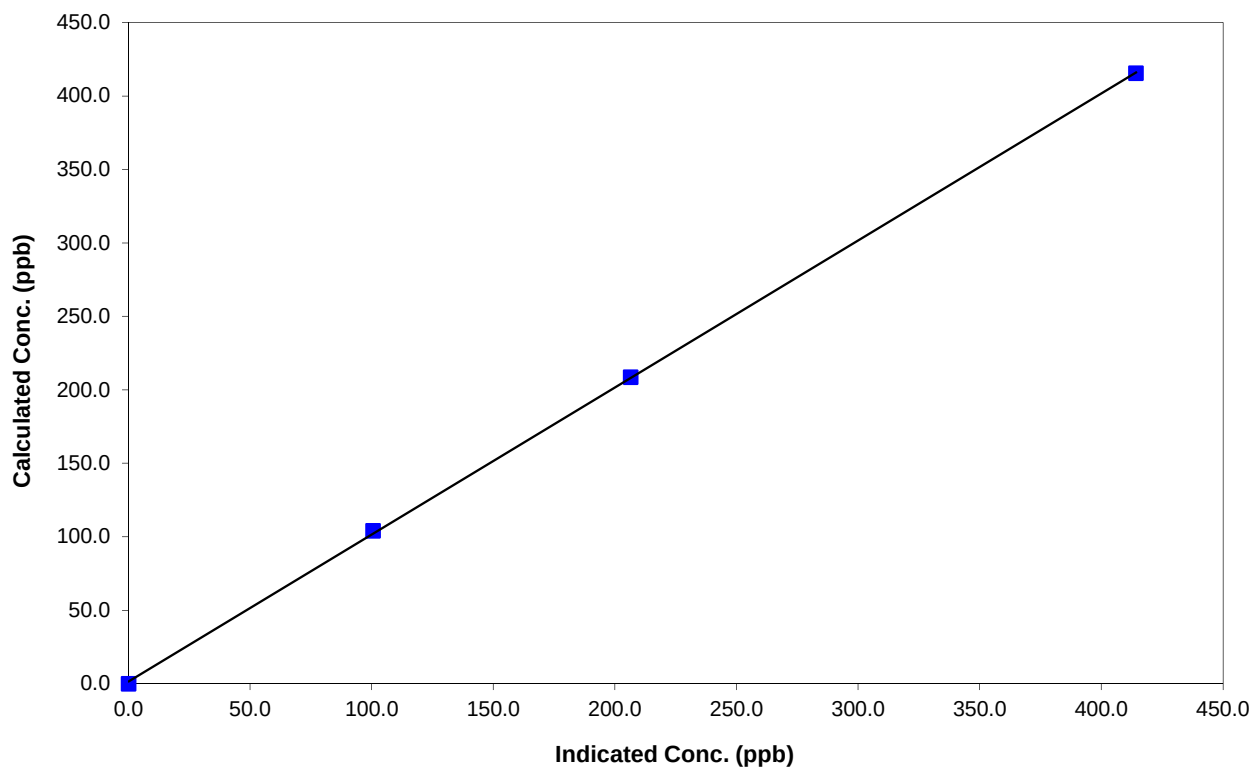
Station Information

Calibration Date	July 7, 2014	Previous Calibration	June 10, 2014
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:25	End Time (MST)	14:40:00 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	0.999931
415.5	414.2	1.0030		
208.6	206.5	1.0101		
104.0	100.5	1.0340	Slope	1.000944
			Intercept	1.484190

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network PAZA



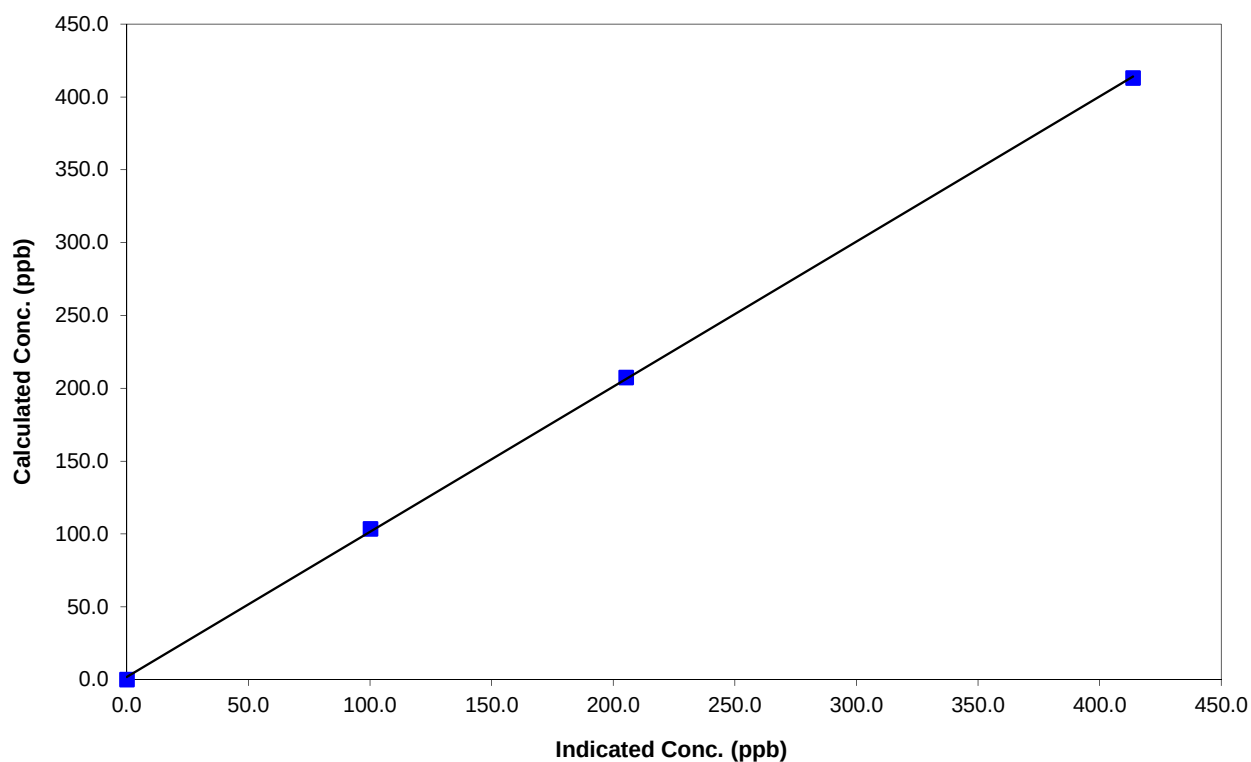
Station Information

Calibration Date	July 7, 2014	Previous Calibration	June 10, 2014
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	8:25	End Time (MST)	14:40:00 PM
Analyzer make	TEI 42i	Analyzer serial #	906535068

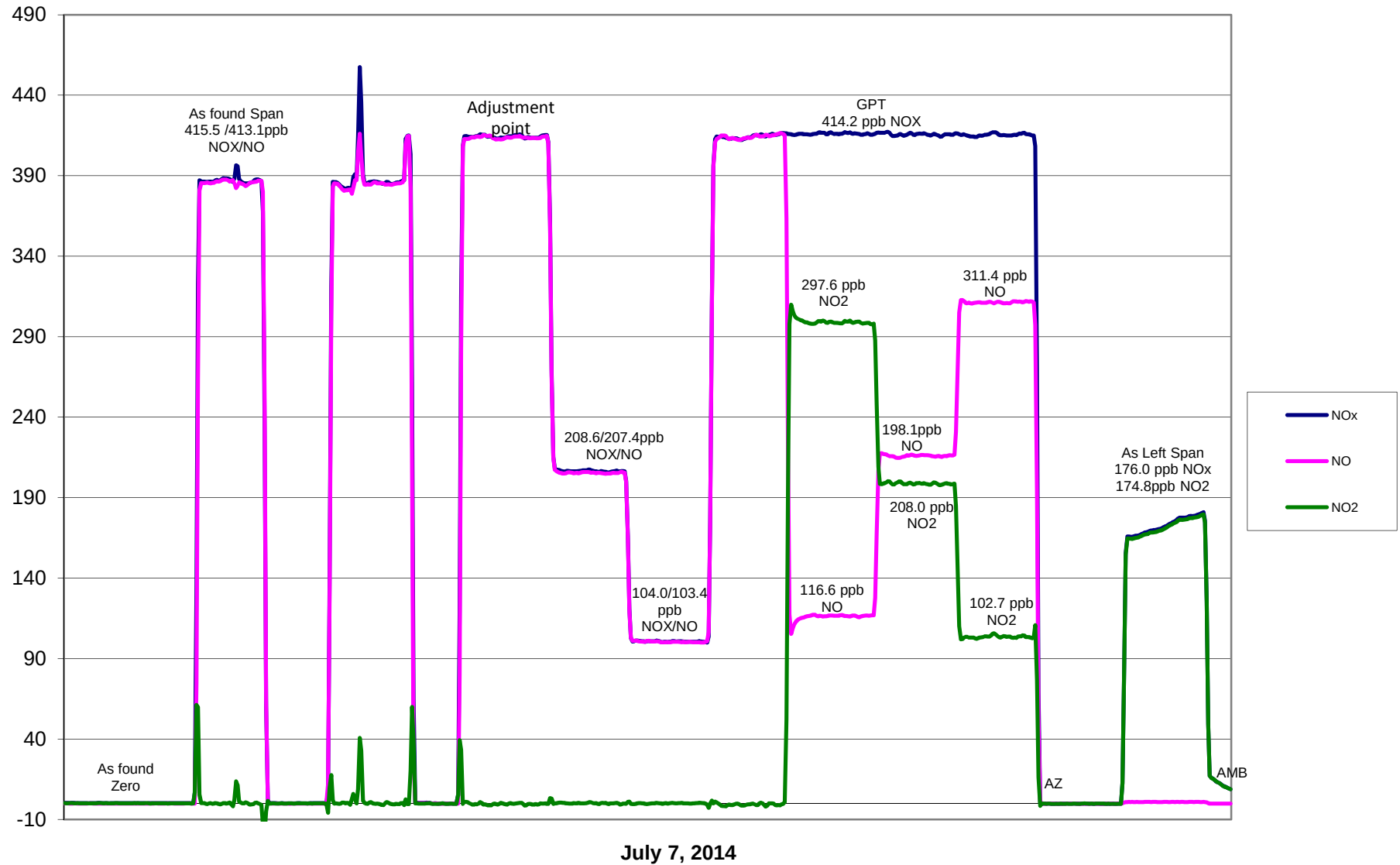
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A	Correlation Coefficient	0.999916
413.1	413.7	0.9985		
207.4	205.4	1.0096		
103.4	100.3	1.0311	Slope	0.996469
			Intercept	1.745672

NO Calibration Curve



NO_x Calibration



Calibration Report

Parameter 03

Air Monitoring Network PAZA



Station Information

Calibration Date	July 7, 2014	Previous Calibration	June 10, 2014
Station Number	4	Station Location	Beaverlodge
Reason:	Routine	Install	Removal
		Other:	

Start Time (MST)	13:26:00 PM	End Time (MST)	17:10:00 PM
Barometric Pressure	0.904 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics	Serial Number	3016
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	CR3000	DACS serial No.	5237
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
Calculated slope	1.001277	Calculated slope	0.995296
Calculated intercept	-0.389607	Calculated intercept	0.101175

Analyzer make	Teco 49i	Analyzer serial #	1136451236
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	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.60	ppb	-0.60	ppb
slope	1.028		1.028	
Lamp temp	53.9	mV	53.9	mV
Lamp Intensity A/B	81402/82430	mV	83130/84218	mV
Pressure	682	mm Hg	684.8	mm Hg
Flow A	0.761	LPM	0.763	LPM
Flow B	0.744	LPM	0.744	LPM

Calibration Data

Dilution air flow rate (cc/min)	Calibrator Setting	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5035	0.00	0.0	0.2	N/A
5035	0.30	308.5	310.4	0.9939
5035	0.20	208.0	208.1	0.9995
5035	0.10	107.6	107.9	0.9969
5035	0.00	0.0	0.2	As found zero
5035	0.30	308.5	310.4	As found span
Average Correction Factor				0.9968

Calculated value of As Found Response: 310.2 ppm Percent Change of As Found: 0.6%

	before calibration		after calibration	
Auto zero	-1.2	ppb	0.4	ppb
Auto span	277.9	ppb	273.9	ppb

Notes: NO adjustments made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



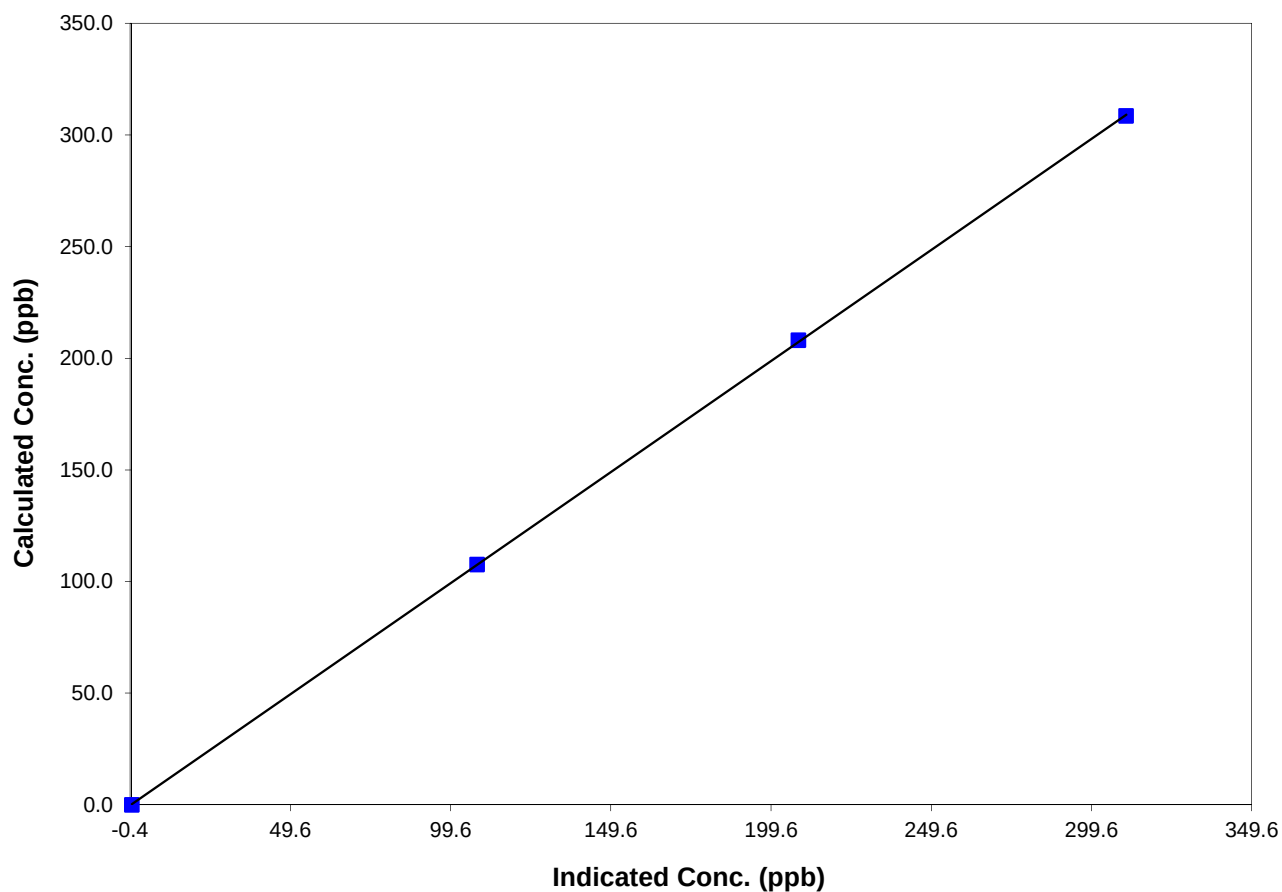
Station Information

Calibration Date	July 7, 2014	Previous Calibration	June 10, 2014
Station Number	4	Station Location	Beaverlodge
Start Time (MST)	13:26:00 PM	End Time (MST)	17:10:00 PM
Analyzer make/model	Teco 49i	Analyzer serial #	1136451236

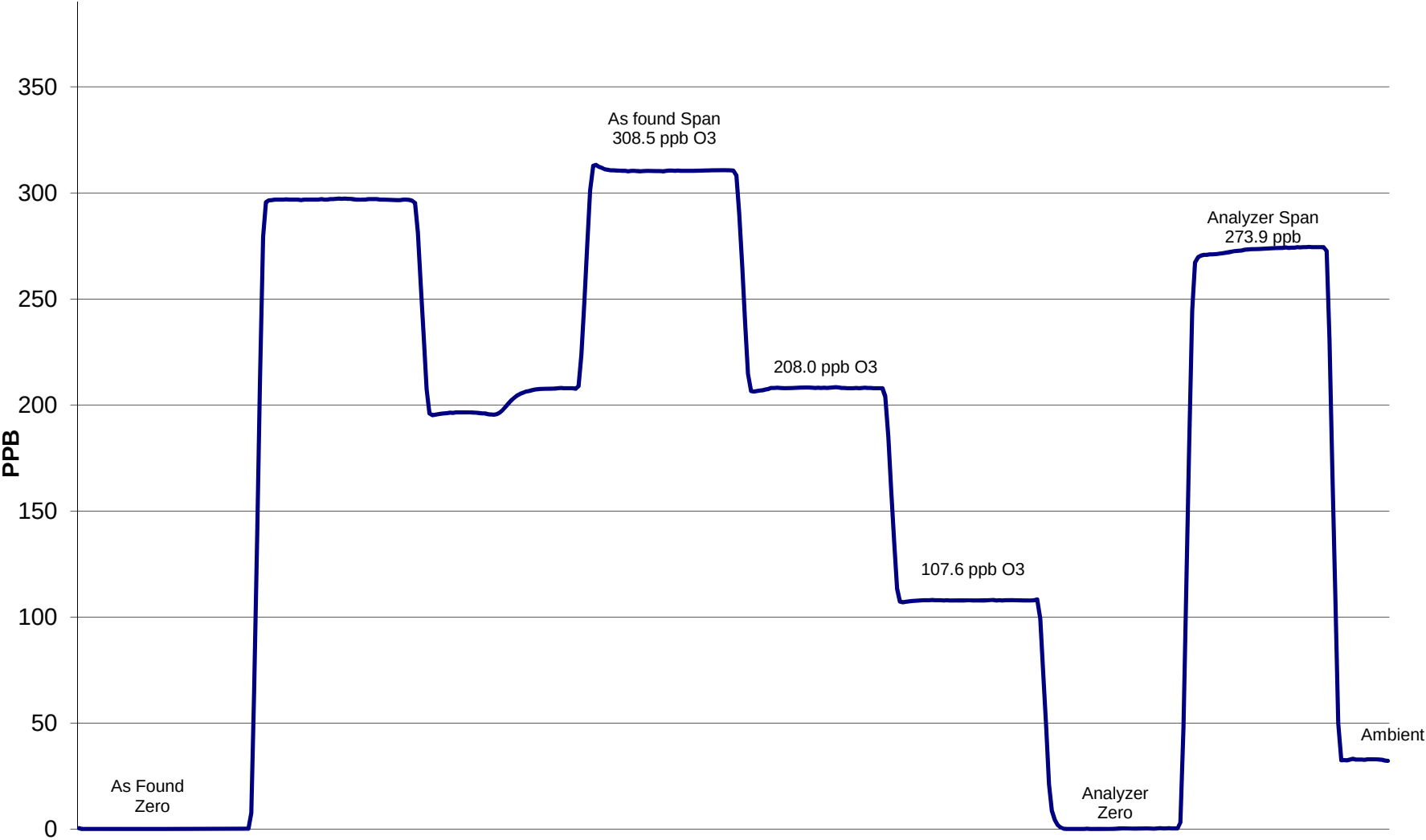
Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	NA	Correlation Coefficient	0.999981
308.5	310.4	0.9939		
208.0	208.1	0.9995		
107.6	107.9	0.9969	Slope	0.995296
			Intercept	0.101175

O3 Calibration Curve



O3 Calibration



July 7, 2014

Calibration Report

Parameter SO2
Air Monitoring Network PAZA



Station Information

Calibration Date	July 22 2014	Previous Calibration	June 2 2014
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	13:13:00 PM	End Time (MST)	16:58:00 PM
Barometric Pressure	702.00 mmHg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Concentration	49.8 ppm	Cal Gas Exp Date	February 25, 2021
Gas Cylinder Num.	LL105159		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	4
	Before		After
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.961726	Calculated slope	0.986981
Calculated intercept	1.450023	Calculated intercept	1.814780
Analyzer make	TEI 45C	Analyzer serial #	45C-57531-313

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	62.3		61.2	
Coefficient	1.02		0.997	
UV Lamp Voltage	837	LPM	834	LPM
Chamber Temp	44.1	V	44.1	V
Perm Gas Temp	37	C	37	C
Pressure	605.4	in Hg	604.2	in Hg
Sample Flow	0.529	LPM	0.530	LPM
Lamp Intensity	41626	Hz	41927	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.1	N/A
4995	39.91	394.7	399.0	0.9892
4995	19.97	198.3	198.2	1.0006
4995	9.95	99.0	96.5	1.0262
4995	0.00	0.0	0.7	As found zero
4995	39.91	394.7	416.3	As found span
Average Correction Factor				1.0053

Calculated value of As Found Response: 401.1 ppm Percent Change of As Found: -1.6%

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	150.2	ppm	158.8	ppm

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



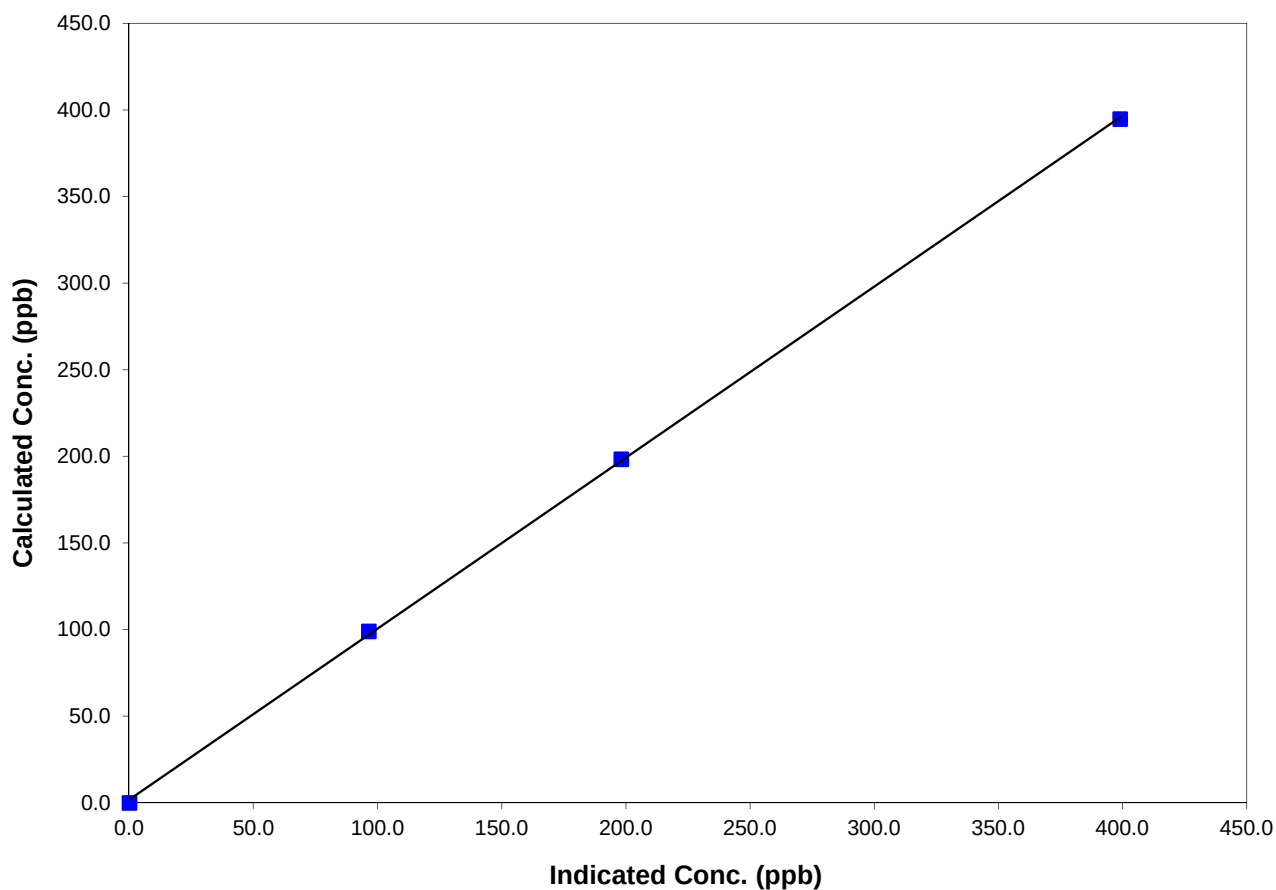
Station Information

Calibration Date	July 22 2014	Previous Calibration	June 2 2014
Station Number	6	Station Location	Valleyview
Start Time (MST)	13:13:00 PM	End Time (MST)	16:58:00 PM
Analyzer make/model	TEI 45C	Analyzer serial #	45C-57531-313

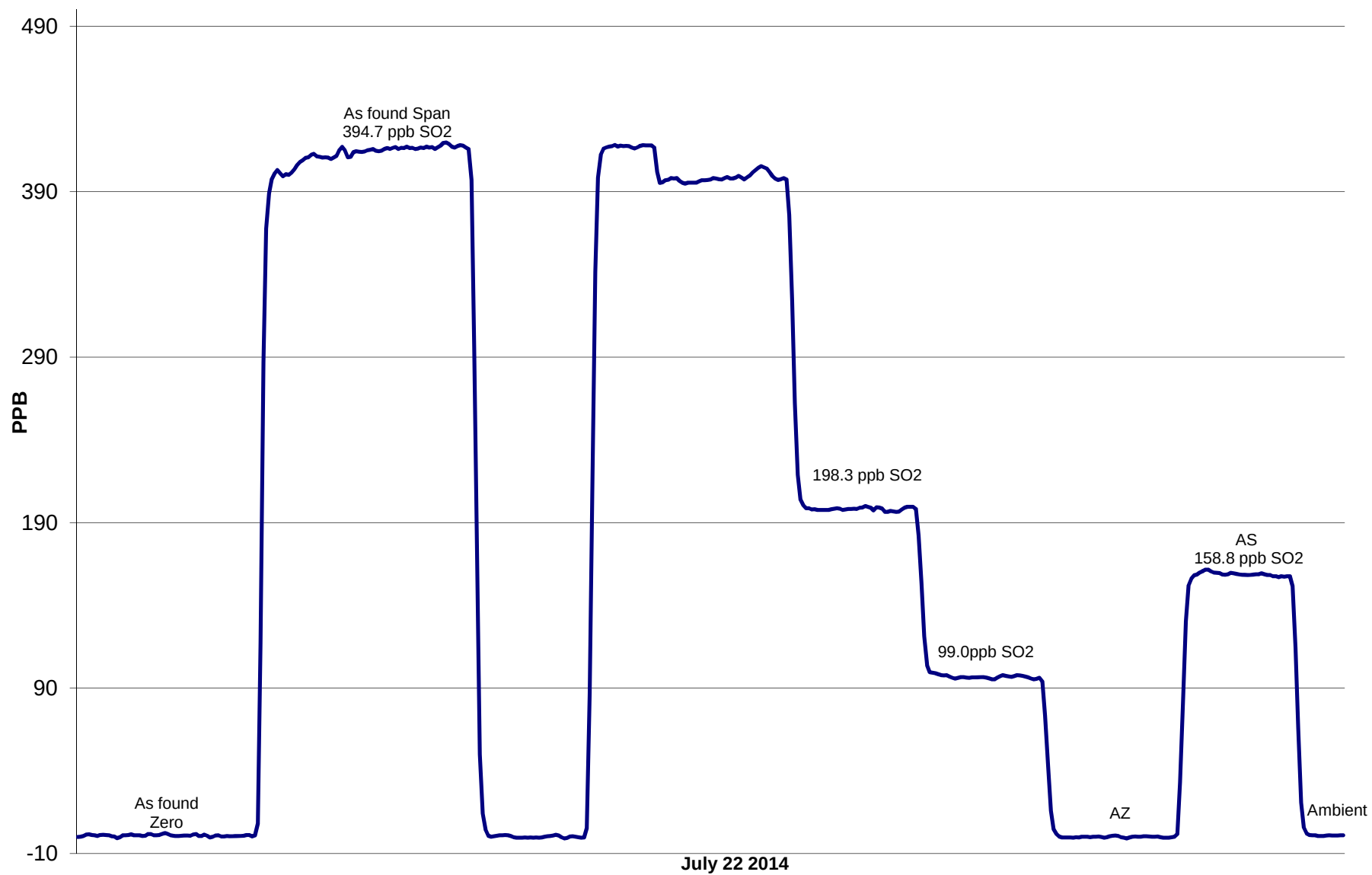
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.1	N/A	Correlation Coefficient	0.999891
394.7	399.0	0.9892		
198.3	198.2	1.0006		
99.0	96.5	1.0262	Slope	0.986981
			Intercept	1.814780

SO2 Calibration Curve



SO2 Calibration



Calibration Report

Parameter H2S
Air Monitoring Network PAZA



Station Information

Calibration Date	July 22 2014	Previous Calibration	June 2 2014
Station Number	6	Station Location	Valleyview
Reason:	Routine	Install	Removal
Start Time (MST)	10:05	End Time (MST)	14:35:00 PM
Barometric Pressure	702.00 mm	Station Temperature	23.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Concentration	10.4 ppm	Cal Gas Expiry Date	July 03 2016
Gas Cert Reference	LL110781		
DACS make	CR3000	DACS serial No.	5409
DACS voltage range	0 - 5 volt	DACS channel #	9
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.989497	Calculated slope	1.002090
Calculated intercept	0.375073	Calculated intercept	0.344082
Analyzer make	TEI Model 43i - APSCB	Analyzer serial #	701120010

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Back Ground	7.9	ppb	7.6	ppb
Coefficient	0.915		0.887	
Lamp Voltage	788	v	787	v
Chamber Temp	45.1	c	44.9	c
Perm Oven Temp	44.96	c	45.01	c
Pressure	580.20	mm Hg	578.70	mm Hg
Sample Flow	0.397	ccm	0.396	lpm
Lamp Intensity	91	%	91	%

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.2	N/A
4997	39.91	82.4	82.1	1.0037
4997	19.94	41.3	40.6	1.0173
6996	9.96	14.8	14.0	1.0576
4997	9.97	102.5	2.8	Sox Test
4997	0.00	0.0	-0.3	As found zero
4997	39.93	82.4	83.5	As found span
Average Correction Factor				1.0262

Calculated value of As Found Response: 83.32 ppm Percent Change of As Found: -1.1%

	before calibration		after calibration	
Auto zero	0.5	ppm	0.0	ppm
Auto span	67.3	ppm	64.1	ppm

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



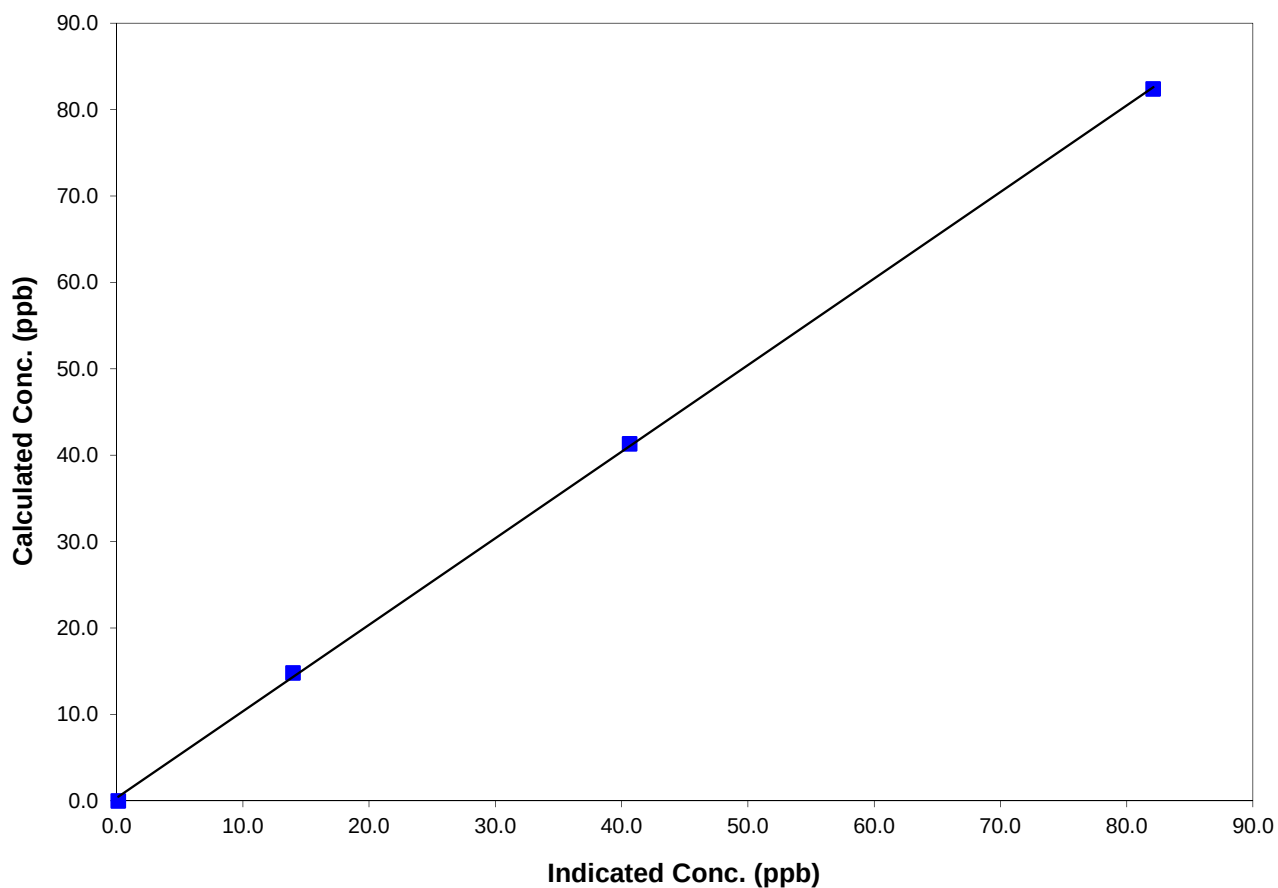
Station Information

Calibration Date	July 22 2014	Previous Calibration	June 2 2014
Station Number	6	Station Location	Valleyview
Start Time (MST)	10:05	End Time (MST)	14:35:00 PM
Analyzer make/model	TEI Model 43i - APSCB	Analyzer serial #	701120010

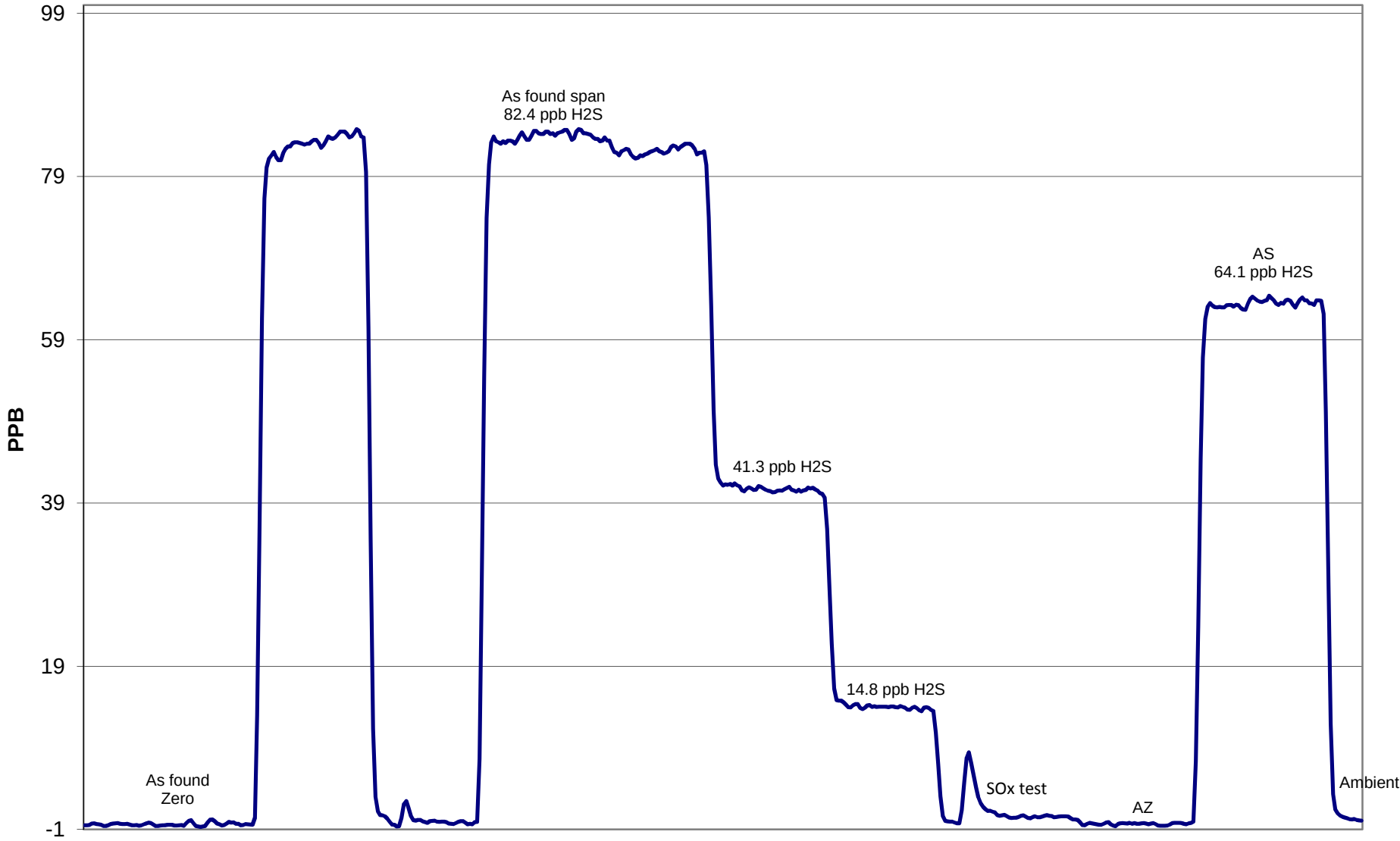
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999859
82.4	82.1	1.0037		
41.3	40.6	1.0173		
14.8	14.0	1.0576	Slope	1.002090
			Intercept	0.344082

H2S Calibration Curve



H2S Calibration



July 22 2014

Calibration Report



Parameter SO₂

Air Monitoring Network PAZA

Station Information

Calibration Date	July 24, 2014	Previous Calibration	June 12, 2014
Station Number	1	Station Location	Falher
Reason:	☒ Routine	☐ Install	☐ Removal
			☐ Other:
Start Time (MST)	12:55	End Time (MST)	15:15:00 PM
Barometric Pressure	0.931 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3474
Cal Gas Concentration	49.8 ppm	Cal Gas Expiry Date	01/02/2017
Correction factor	0.031647	Cal Gas Cylinder #	LL105159
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	6
	Before		After
Calculated slope	0.991830	Calculated slope	1.000404
Calculated intercept	2.231596	Calculated intercept	2.528839
Analyzer make	Teco 43i	Analyzer serial #	1207452008

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	7.4		7.4	
coefficient	0.922		0.922	
Lamp Voltage	829	volts	928	volts
Chamber Temp	45.3	Deg C	45	Deg C
Perm Gas Temp	45	Deg C	45	Deg C
Pressure	669.8	mm Hg	668.9	mm Hg
Sample Flow	0.407	ccm	0.406	ccm
Lamp Intensity	97	%	97	%

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.00	-0.6	N/A
4995	39.93	394.9	393.0	1.0048
4995	19.96	198.2	195.1	1.0159
4995	9.97	99.2	94.4	1.0511
4995	0.0	0.0	-0.6	As Found Zero
4995	39.93	394.9	393.0	As Found Span
Average Correction Factor				1.0240

Calculated value of As Found Response: 392.628 ppm Percent Change of As Found: 0.6%

	before calibration		after calibration	
Auto zero	0.5	ppm	-0.6	ppm
Auto span	359.4	ppm	349.6	ppm

Notes: No adjustments made

Calibration Performed By: Dmytro Dolotii, Grover Christiansen

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



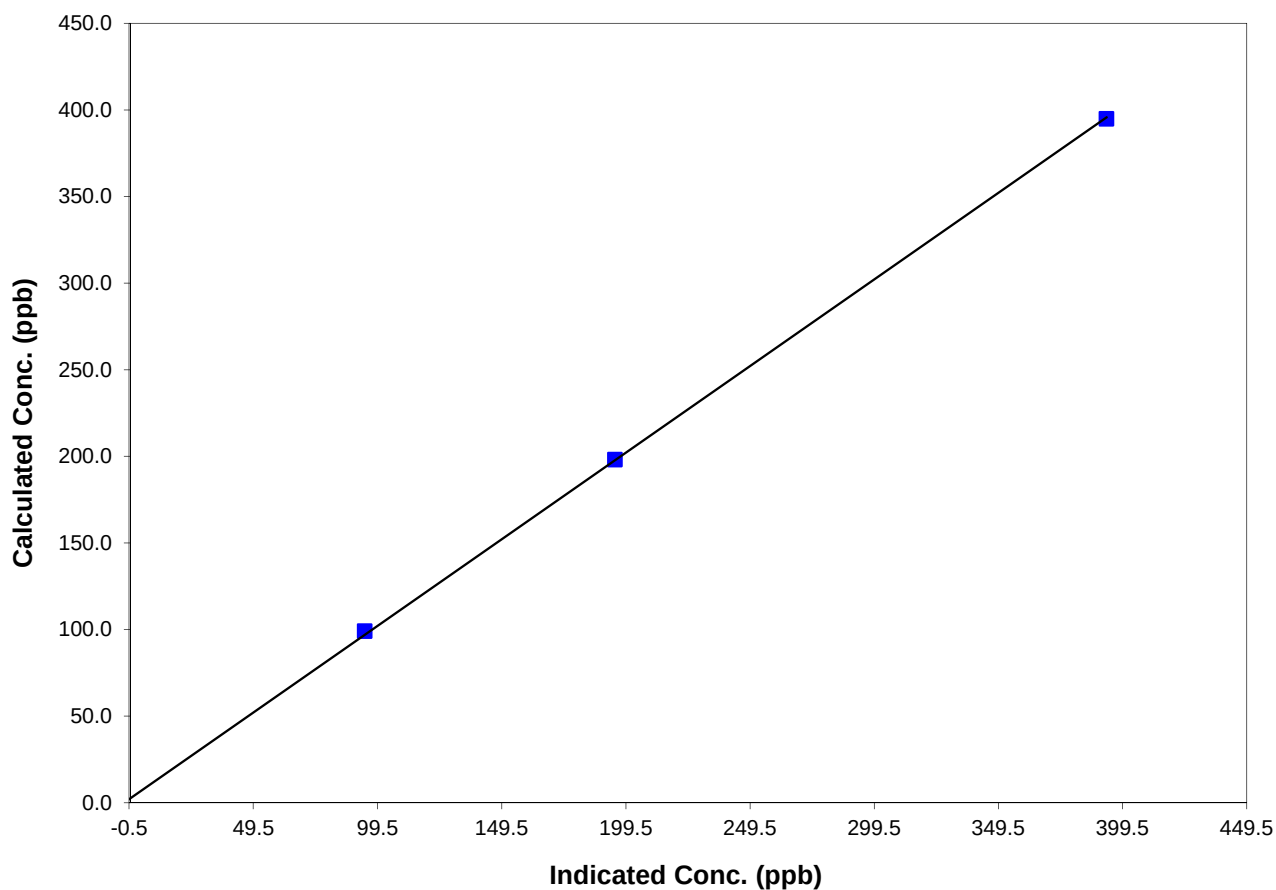
Station Information

Calibration Date	July 24, 2014	Previous Calibration	June 12, 2014
Station Number	1	Station Location	Falher
Start Time (MST)	12:55	End Time (MST)	15:15:00 PM
Analyzer make/model	Teco 43i	Analyzer serial #	1207452008

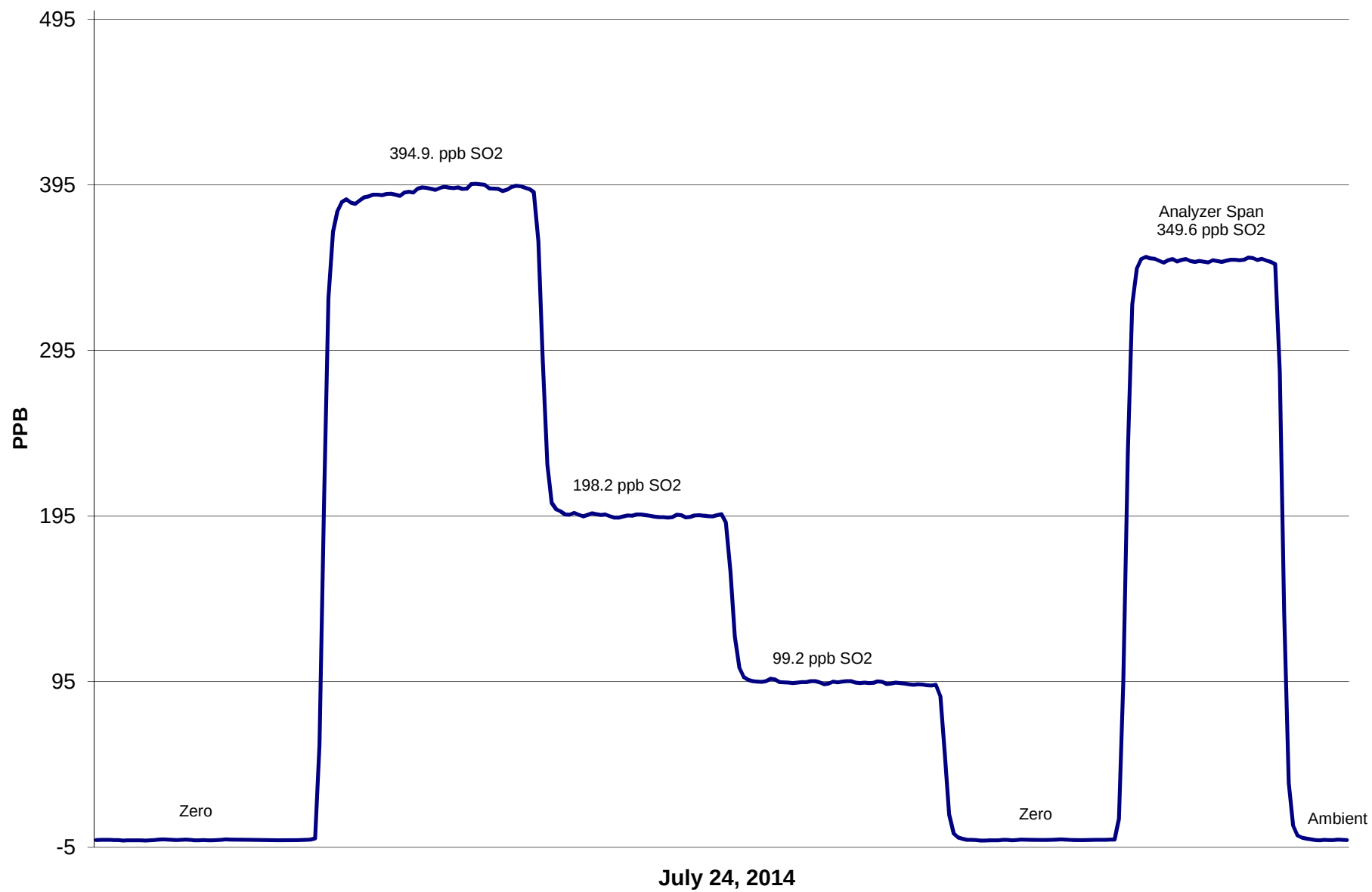
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.6	N/A	Correlation Coefficient	0.999885
394.9	393.0	1.0048		
198.2	195.1	1.0159		
99.2	94.4	1.0511	Slope	1.000404
			Intercept	2.528839

SO2 Calibration Curve



SO2 Calibration



Calibration Report



Parameter H2S

Air Monitoring Network PAZA

Station Information

Calibration Date	July 24, 2014	Previous Calibration	June 12, 2014
Station Number	1	Station Location	Falher
Reason:	☒ Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	9:25	End Time (MST)	13:50:00 PM
Barometric Pressure	0.931 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics	Serial Number	3016
Cal Gas Conc	10.4 ppm	Cal Gas Expiry Date	08/07/2016
Correction factor	0.031647	Cal Gas Cylinder #	LL110781
DACS make	CR1000	DACS serial No.	3980
DACS voltage range	0 - 5 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	1.005005	Calculated slope	0.995196
Calculated intercept	-0.346665	Calculated intercept	-0.298053

Analyzer make Thermo 450i Analyzer serial # 1207452006

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	13.2	ppb	14.2	ppb
coefficient	1.129		1.171	
Lamp Voltage	794	volts	795	volts
Chamber Temp	44.9	Deg C	45	Deg C
Perm Gas Temp	45.01	Deg C	45	Deg C
Pressure	558.2	mm Hg	551.9	mm Hg
Sample Flow	0.881	lpm	0.87	lpm
Lamp Intensity	91	mv	90	mv

Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.00	0.6	N/A
4995	39.93	82.48	83.2	0.9918
4995	19.96	41.39	42.0	0.9852
8994	8.97	10.36	10.3	1.0020
4995	0.00	0.00	1.3	As Found Zero
4995	39.93	82.48	78.0	As Found Span
Average Correction Factor				0.9930

Calculated value of As Found Response: 76.78 ppm Percent Change of As Found: **6.9%**

	before calibration		after calibration	
Auto zero	0.0	ppm	0.0	ppm
Auto span	51.2	ppm	56.5	ppm

Notes: Span and zero adjustment made

Calibration Performed By: Dmytro Dolotii, Grover Christiansen

Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



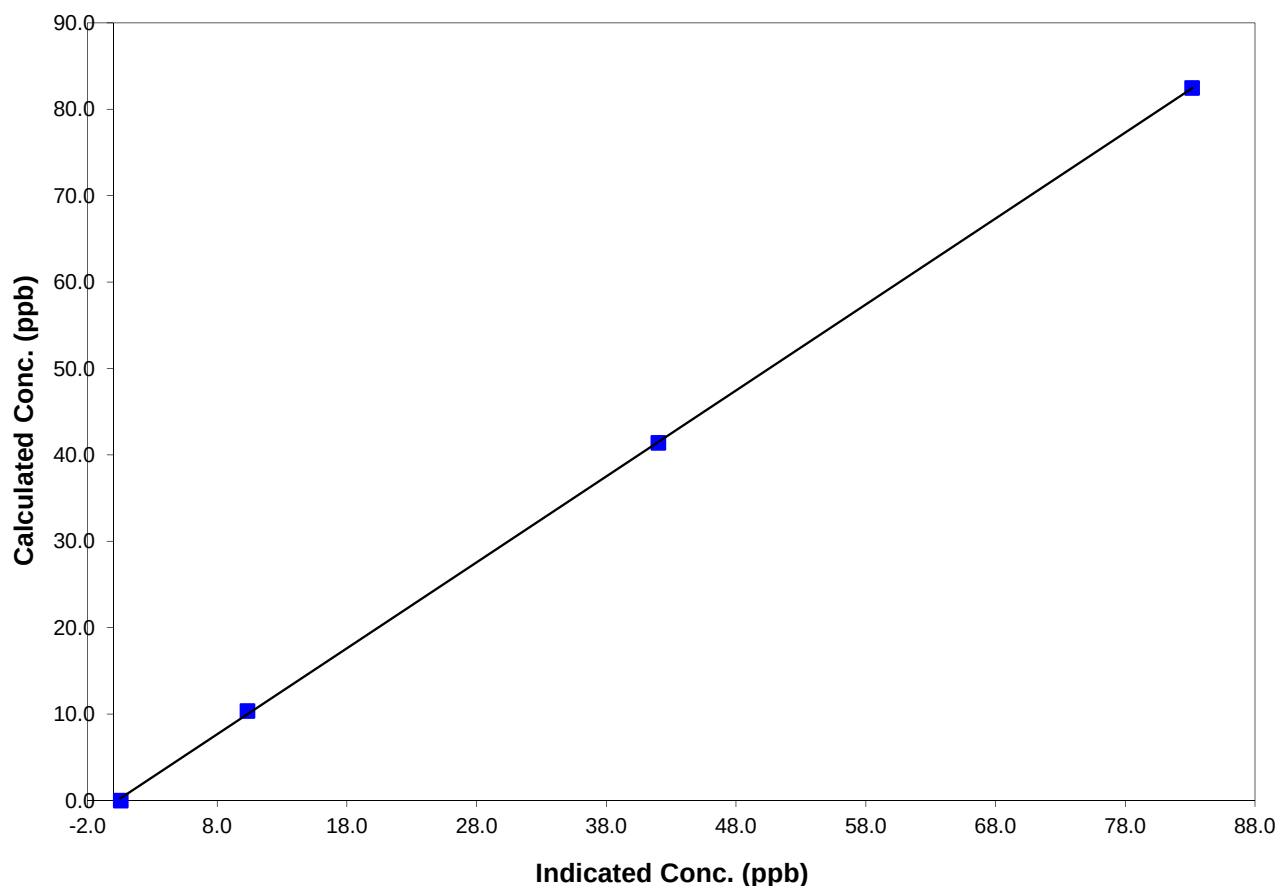
Station Information

Calibration Date	July 24, 2014	Previous Calibration	June 12, 2014
Station Number	1	Station Location	Falher
Start Time (MST)	9:25	End Time (MST)	13:50:00 PM
Analyzer make/model	Thermo 450i	Analyzer serial #	1207452006

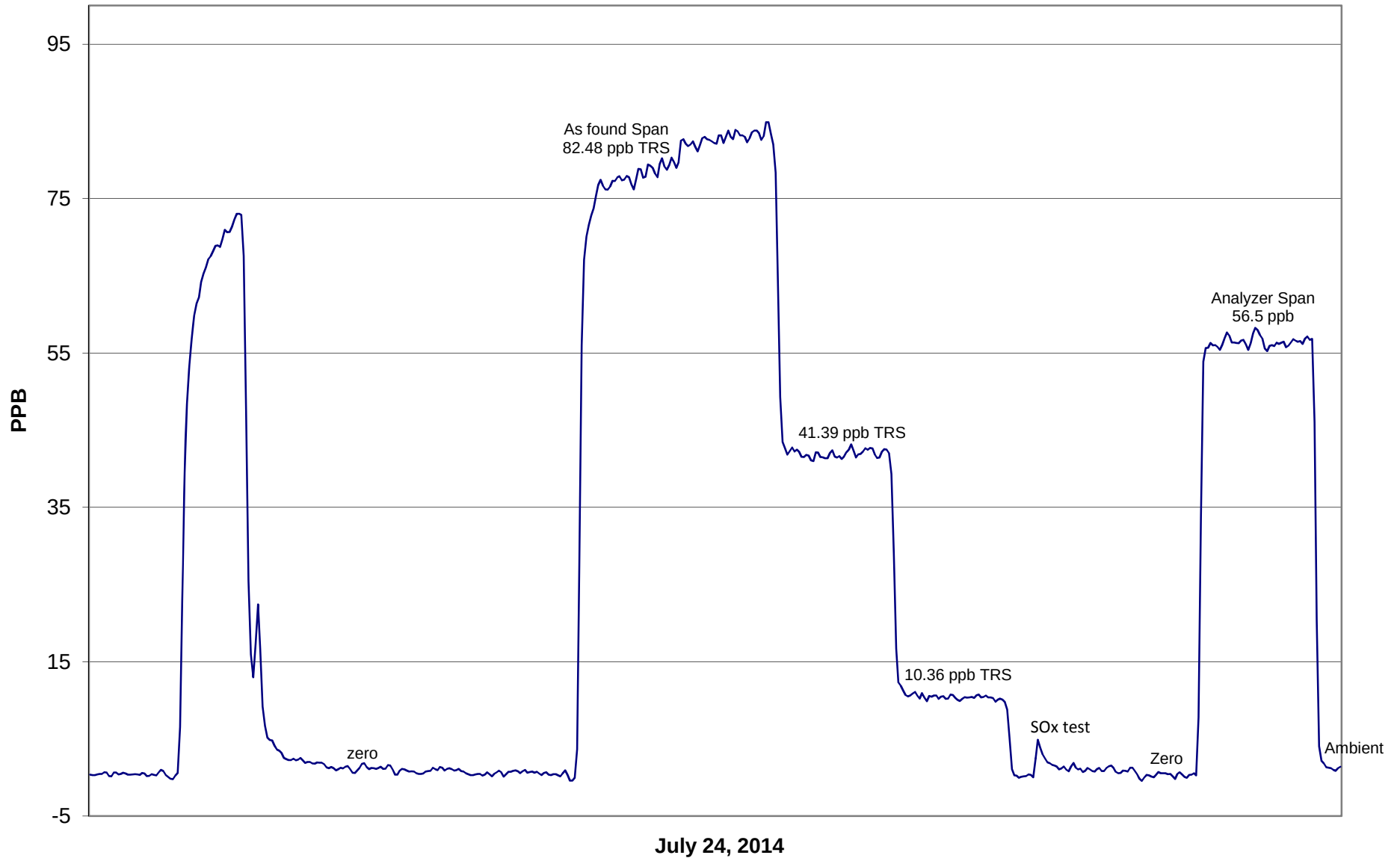
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A	Correlation Coefficient	0.999946
82.5	83.2	0.9918		
41.4	42.0	0.9852		
10.4	10.3	1.0020	Slope	0.995196
			Intercept	-0.298053

TRS Calibration Curve



H2S Calibration



Calibration Report

Parameter SO2

Air Monitoring Network PAZA



Station Information

Calibration Date	July 15, 2014	Previous Calibration	June 20, 2014
Station Number	10	Station Location	Clairmont
Reason:	Routine	☐ Install	☐ Removal
		☐ Other:	
Start Time (MST)	12:55	End Time (MST)	16:30:00 PM
Barometric Pressure	0.926 Atm	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Concentration	49.8 ppm	Cal Gas Expiry Date	01/03/2017
Gas Cert Reference	LL105159		
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volt	DACS channel #	2
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.983252	Calculated slope	0.985989
Calculated intercept	2.430027	Calculated intercept	2.835755
Analyzer make	TEI 43C	Analyzer serial #	436610005

	before		after	
Concentration range	0-500	ppb	0-500	ppb
Background	21.2		21.2	
Coefficient	1.059		1.059	
UV Lamp Voltage	863	V	863	V
Chamber Temp	44.5	C	44.9	C
Perm Gas Temp	45	C	45	C
Pressure	668.9	mm Hg	669.7	mm Hg
Sample Flow	0.464	LPM	0.464	LPM
Lamp Intesity	30679	Hz	30695	Hz

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.2	N/A
4995	39.93	394.9	399.1	0.9895
4995	19.97	198.3	196.8	1.0079
4995	9.97	99.2	94.8	1.0469
4995	0.00	0.0	0.2	As found zero
4995	39.93	394.9	399.1	As found span
Average Correction Factor				1.0148

Calculated value of As Found Response: 394.717 ppm Percent Change of As Found: 0.1%

	before calibration		after calibration	
Auto zero	0.3	ppm	0.3	ppm
Auto span	259.1	ppm	245.5	ppm

Notes: No adjustments made

Calibration Performed By: Dmytro Dolotii.

Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



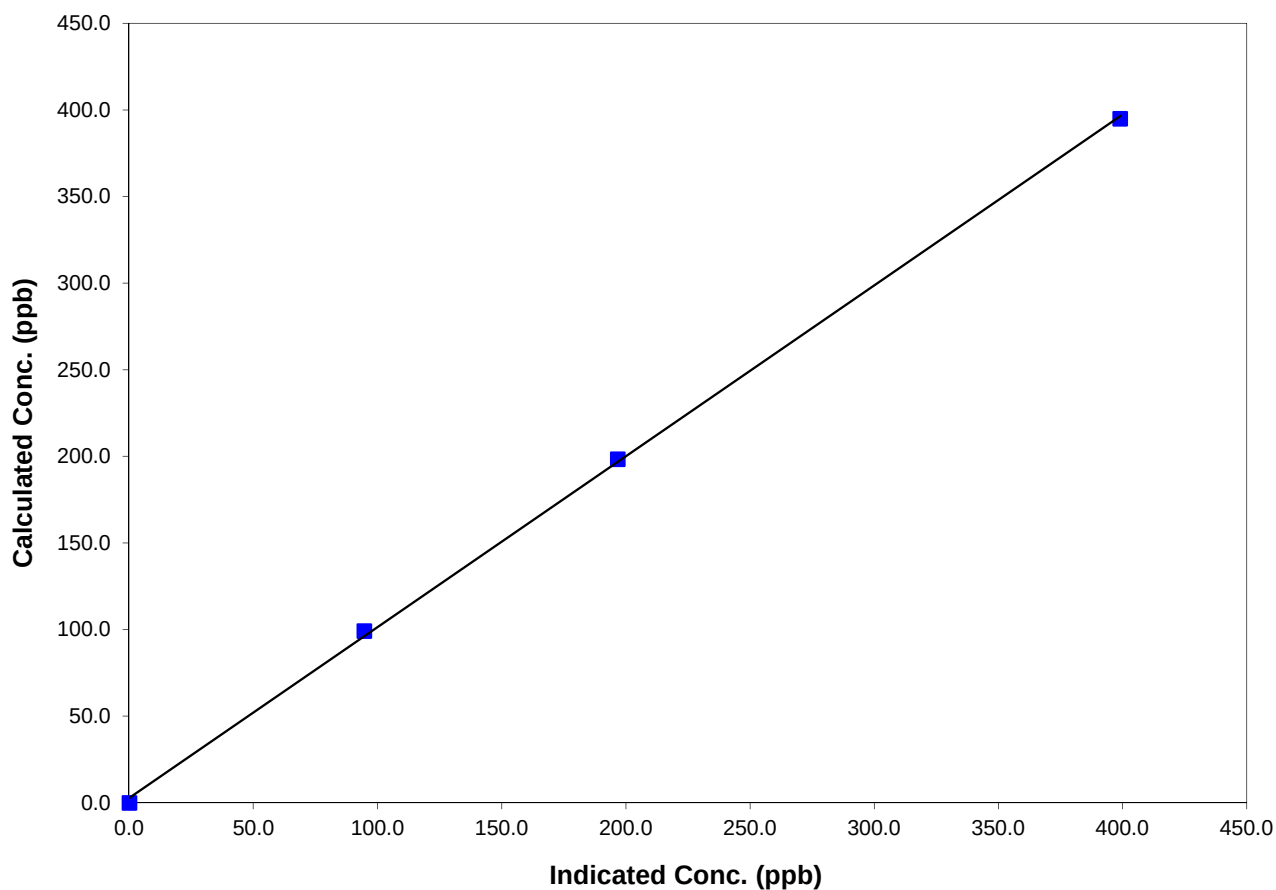
Station Information

Calibration Date	July 15, 2014	Previous Calibration	June 20, 2014
Station Number	10	Station Location	Clairmont
Start Time (MST)	12:55	End Time (MST)	16:30:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	436610005

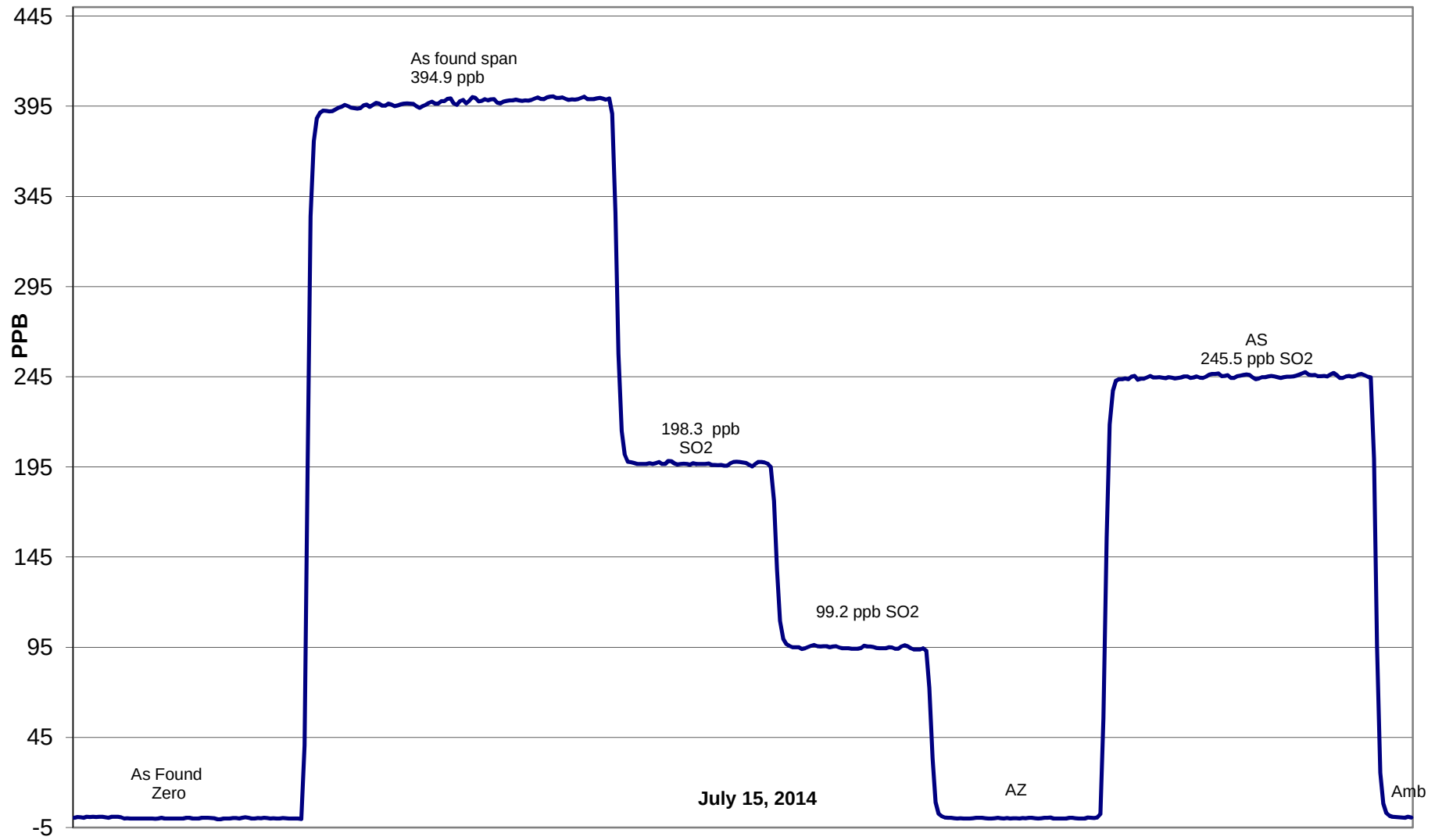
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999746
394.9	399.1	0.9895		
198.3	196.8	1.0079		
99.2	94.8	1.0469	Slope	0.985989
			Intercept	2.835755

SO2 Calibration Curve



SO2 Calibration



Parameter

Air Monitoring Network



Station Information

Calibration Date	July 15, 2014		Previous Calibration	June 20, 2014	
Station Number	10		Station Location	Clairmont	
Reason:	Routine Installation Removal		Other:		
Start Time (MST)	13:03:00 PM		End Time (MST)	17:45:00 PM	
Barometric Pressure	0.925	Atm	Station Temperature	20.0	Deg C
Calibrator	EnviroNics		Serial Number	3016	
NO Cal Gas Conc	52.1	ppm	Cal Gas Expiry Date	March 12, 2014	
NOx Cal Gas Conc	52.4	ppm	Cal Gas Serial #	LL105159	

DACS Information

DACS make		CR3000	DACS serial No.	5407
	Parameter	NO2	NOx	NO
Before	Data Slope	1.005498	1.001345	0.998323
	Data Offset	0.411797	2.334894	1.601071
After	Data Slope	1.003152	1.001211	0.997766
	Data Offset	0.228420	2.170560	1.973631
Channel #		8	6	7
Voltage Range		0 - 5 VDC	0 - 5 VDC	0 - 5 VDC

Analyzer Information

Analyzer make/model	TEI 42i	Analyzer serial #	0701120011	
Test Point	before		after	
Concentration range	0-500	ppb	0-500	ppb
NO offset	6.3	mV	6.7	mV
NOx bkgnd	7.5	mV	7.5	mV
NO coefficient	1.077		1.137	
NOx coefficient	1.000		0.999	
NO2 conv temp	323.2	Deg C	326.0	Deg C
PMT Temp	-2.9	Deg C	-2.9	Deg C
PMT Volt	-846.2	mV	-846.2	mV
R Cell Press	205.0	in Hg	207.1	in Hg
Sample Flow	0.700	LPM	0.705	LPM

Notes: Span adjustment made

Calibration Report

Parameter **NOX-NO-NO2**
Air Monitoring Network **0**



Station Information

Calibration Date: July 15, 2014 Station Location: Clairmont

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	0.4	0.2	0.3	N/A	N/A
1	4995	39.92	415.5	413.1	2.4	414.0	413.2	-0.7	1.0034	0.9998
2	4995	19.96	208.6	207.4	1.2	204.8	204.4	-0.4	1.0185	1.0143
3	4995	9.93	104.0	103.4	0.6	99.2	99.8	-0.3	1.0476	1.0363
AFZ	4995	0.00	0.0	0.0	0.0	0.4	0.2	0.3	0.0000	0.0000
AFS	4995	39.92	415.5	413.1	0.8	392.6	391.8	-0.7	1.0582	1.0544
Average Correction Factor									1.0232	1.0168

As Found Concentrations: NO_x= 395.1 NO= 392.5 As Found Percent Change NO_x= -4.9% NO= -5.0%

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	0.2	0.2	0.0	0.4	0.2	0.3	N/A	N/A	N/A	N/A
NO point	412.6	412.6	0.0	413.6	412.6	-0.9	0.9976	1.0000	N/A	N/A
300	412.6	118.4	294.3	413.5	118.4	293.6	0.9980	1.0000	1.0024	99.8%
200	412.6	213.2	199.4	413.2	213.2	198.2	0.9986	1.0000	1.0061	99.4%
100	412.6	308.7	103.9	413.3	308.7	102.8	0.9982	1.0000	1.0114	98.9%
Average Correction Factor							0.9983	1.0000	1.0066	99.3%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.8	0.9	0.0	ppb	0.9	0.6	0.4	ppb
Auto span	166.3	164.3	14.1	ppb	172.3	169.6	2.0	ppb

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter NO₂

Air Monitoring Network 0



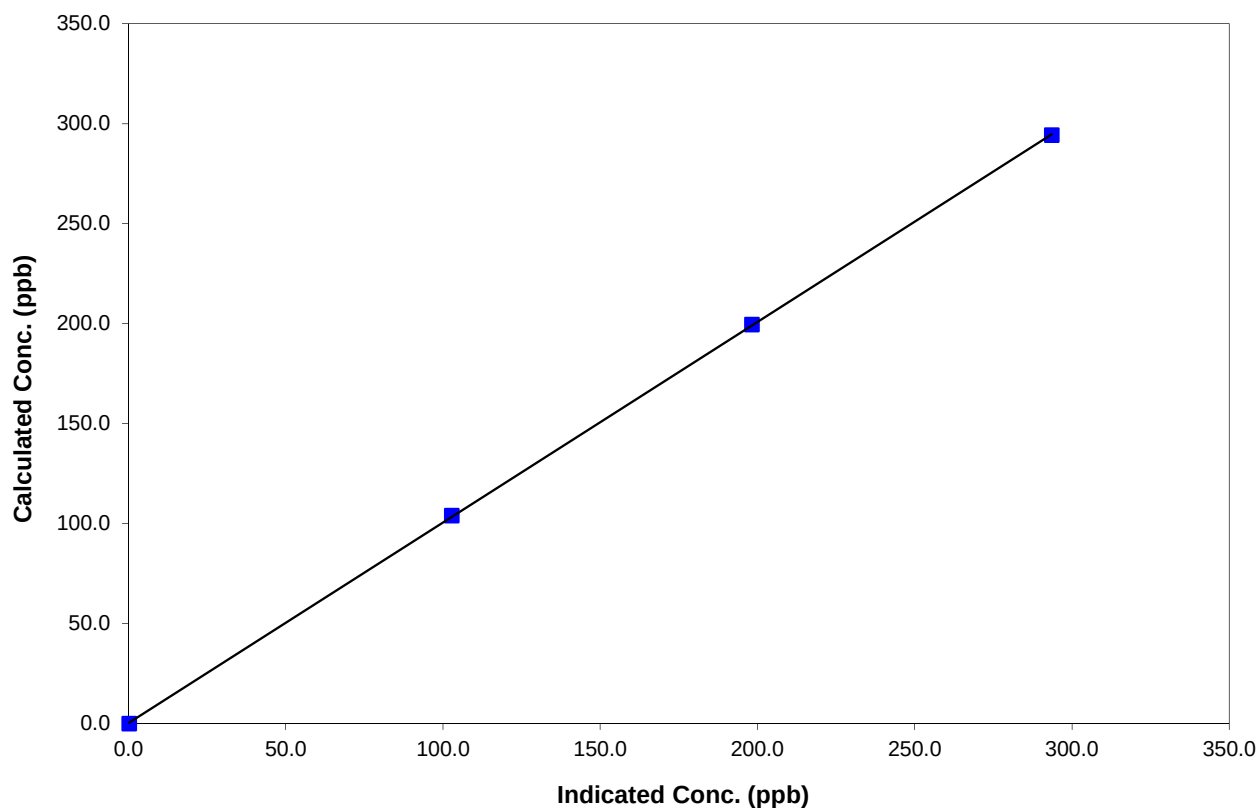
Station Information

Calibration Date	July 15, 2014	Previous Calibration	June 20, 2014
Station Number	10	Station Location	Clairmont
Start Time (MST)	13:03:00 PM	End Time (MST)	17:45:00 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	0.999980
294.3	293.6	1.0024		
199.4	198.2	1.0061		
103.9	102.8	1.0114	Slope	1.003152
			Intercept	0.228420

NO₂ Calibration Curve



Calibration Summary

Parameter NO_x

Air Monitoring Network 0



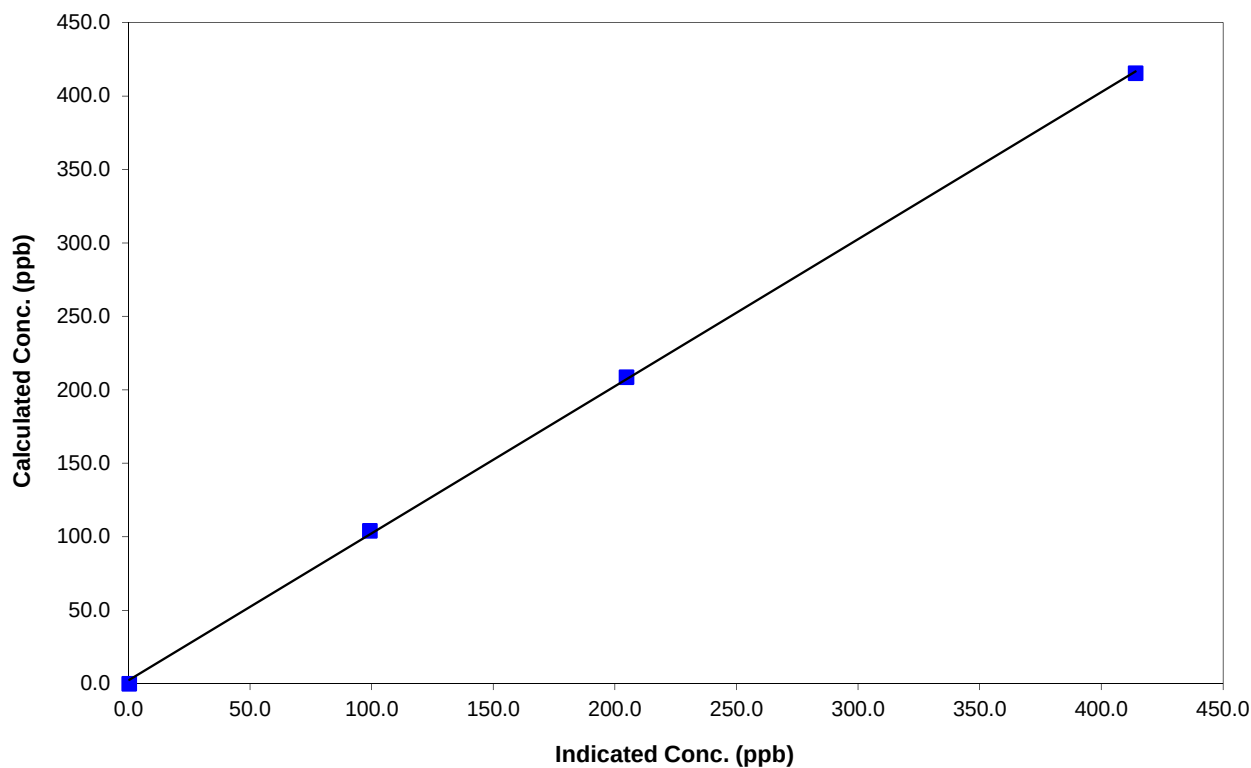
Station Information

Calibration Date	July 15, 2014	Previous Calibration	June 20, 2014
Station Number	10	Station Location	Clairmont
Start Time (MST)	13:03:00 PM	End Time (MST)	17:45:00 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	0.999832
415.5	414.0	1.0034		
208.6	204.8	1.0185		
104.0	99.2	1.0476	Slope	1.001211
			Intercept	2.170560

NO_x Calibration Curve



Calibration Summary

Parameter NO

Air Monitoring Network 0



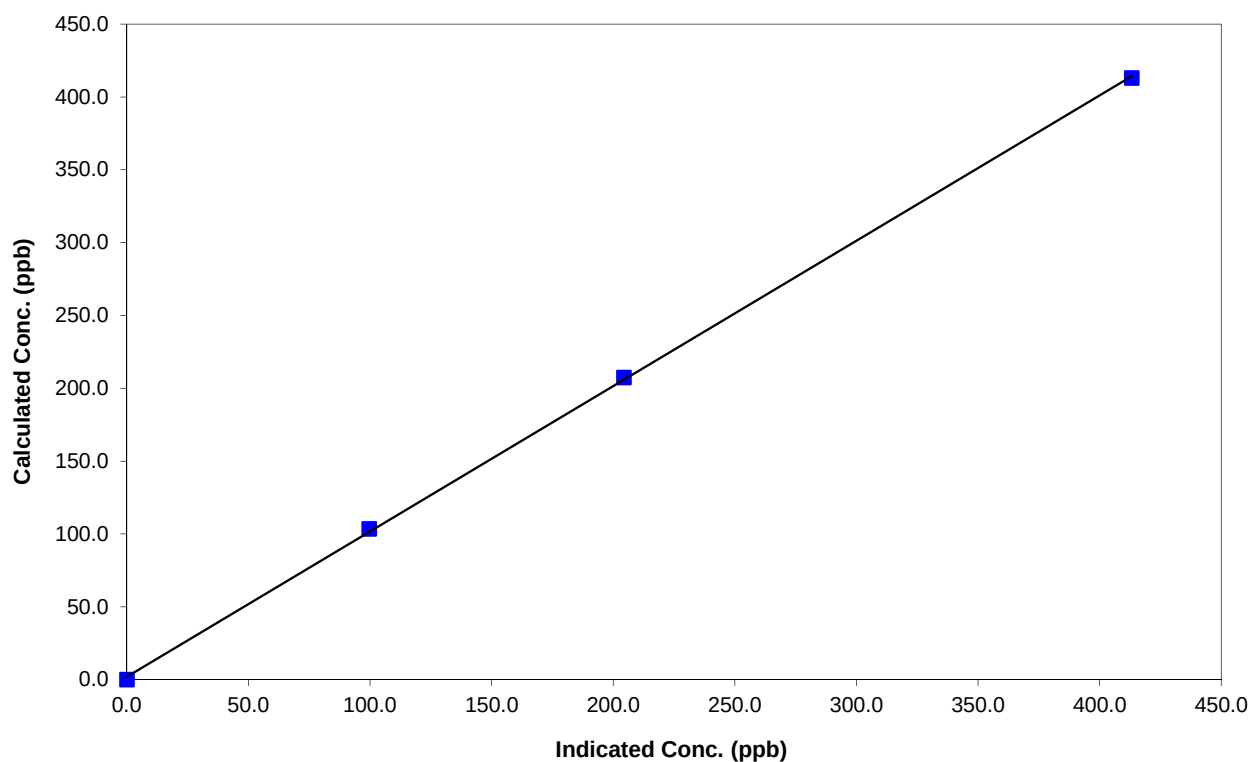
Station Information

Calibration Date	July 15, 2014	Previous Calibration	June 20, 2014
Station Number	10	Station Location	Clairmont
Start Time (MST)	13:03:00 PM	End Time (MST)	17:45:00 PM
Analyzer make	TEI 42i	Analyzer serial #	0701120011

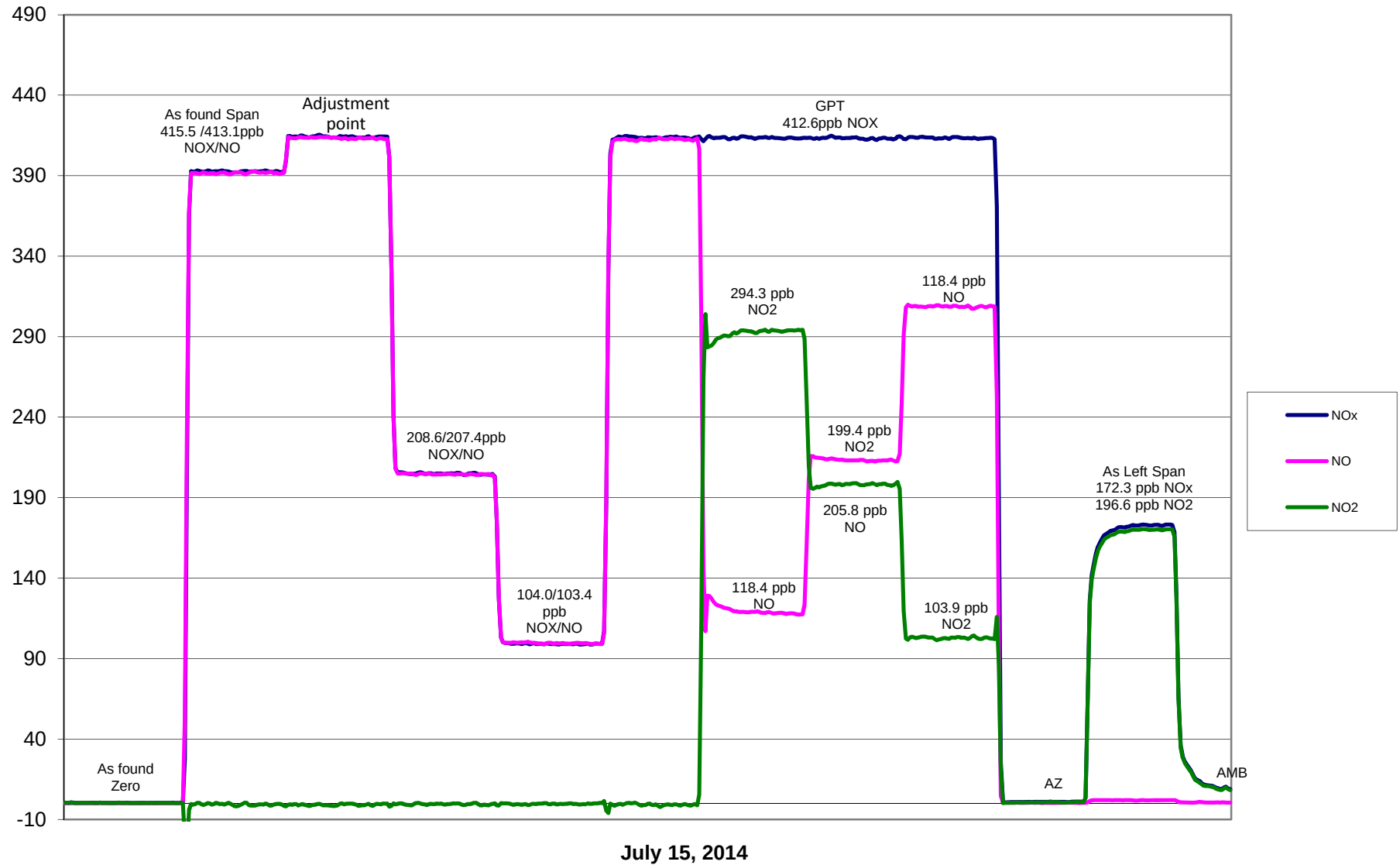
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A	Correlation Coefficient	0.999878
413.1	413.2	0.9998		
207.4	204.4	1.0143		
103.4	99.8	1.0363	Slope	0.997766
			Intercept	1.973631

NO Calibration Curve



NO_x Calibration



Calibration Report



Parameter 03

Air Monitoring Network PAZA

Station Information

Calibration Date	July 16 2014	Previous Calibration	June 20 2014
Station Number	10	Station Location	Clairmont
Reason:	Routine	☐ Install	☐ Removal remove ☐ Other:

Start Time (MST)	11:04	End Time (MST)	14:05:00 PM
Barometric Pressure	0.926 atm	Station Temperature	20.0 Deg C
Calibrator	Envionics 6100	Serial Number	3016

DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 5 Volts	DACS channel #	6
	Before		After
Calculated slope	1.008898	Calculated slope	0.997910
Calculated intercept	0.106076	Calculated intercept	0.346045

Analyzer make	TEI Model 49C	Analyzer serial #	49C-0609716240
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	before		after	
Concentration range	0-500	ppb	0-500	ppb
Offset	0	ppb	0	ppb
Span	0.984		0.953	
Cell A intensity	98306	Hz	99318	Hz
Cell B intensity	95790	Hz	96735	Hz
Pressure	668.00	in Hg	661.50	in Hg
CellA Flow	0.701	ccm	0.692	ccm
Cell B Flow	0.694	cmm	0.691	cmm

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
5035	0.00	0.0	0.2	N/A
5035	0.30	294.3	295.3	0.9967
5035	0.20	199.4	198.6	1.0039
5035	0.10	103.9	103.3	1.0054
5035	0.00	0.0	0.2	As found zero
5035	0.30	294.3	303.5	As found span
Average Correction Factor				1.0020

Calculated value of As Found Response: 306.1 ppm Percent Change of As Found: 4.0%

	before calibration		after calibration	
Auto zero	-0.1	ppb	0.4	ppb
Auto span	403.2	ppb	409.2	ppb

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii.

Calibration Summary

Parameter 03

Air Monitoring Network PAZA



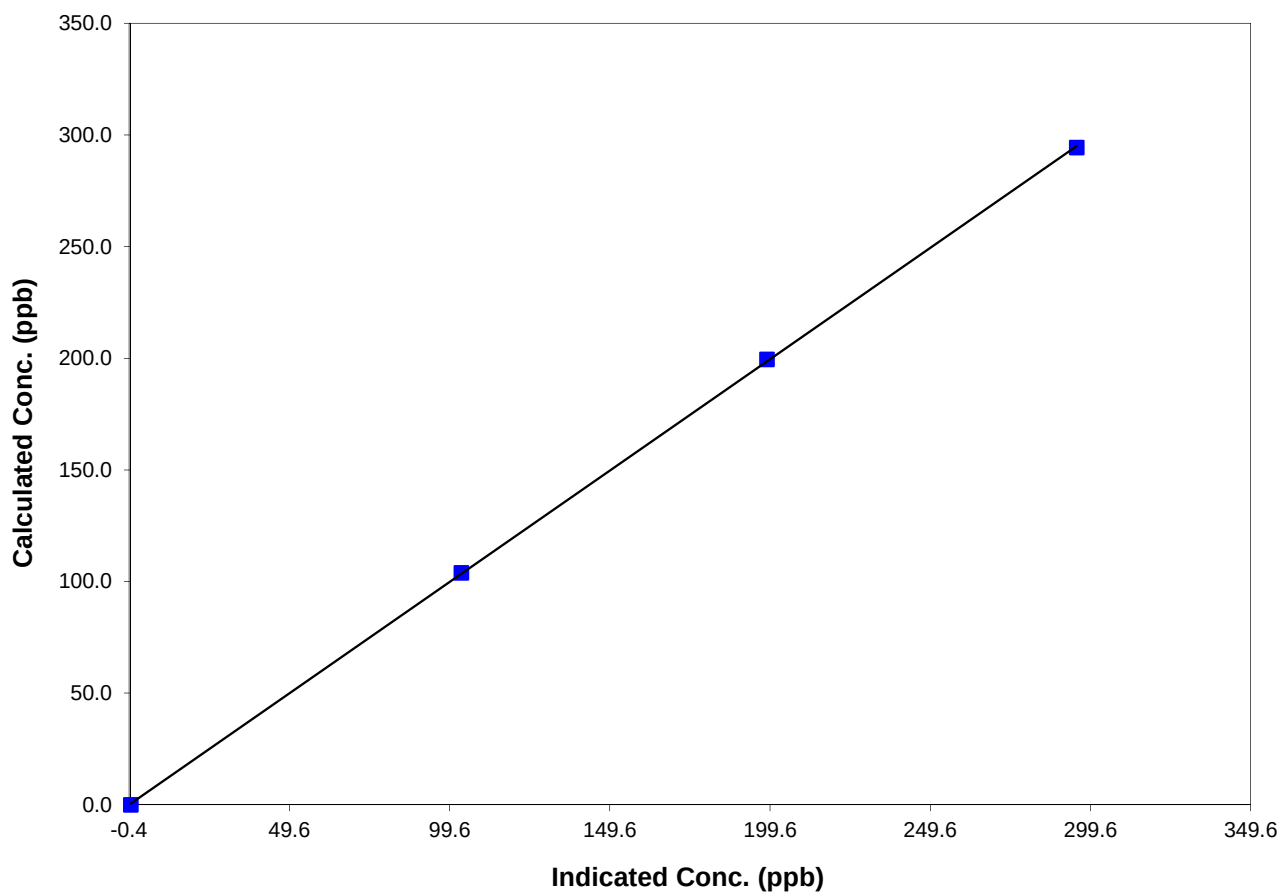
Station Information

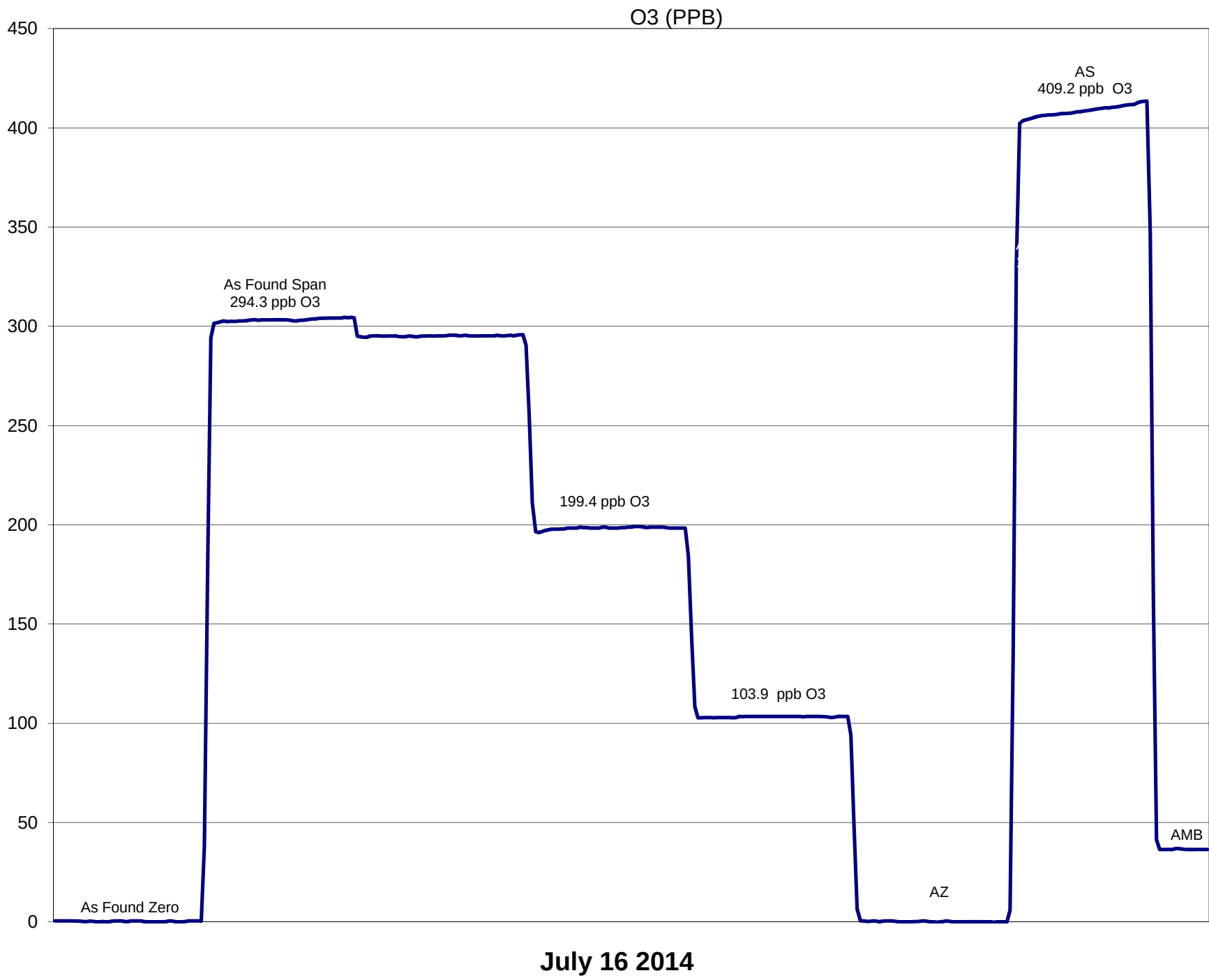
Calibration Date	July 16 2014	Previous Calibration	June 20 2014
Station Number	10	Station Location	Clairmont
Start Time (MST)	11:04	End Time (MST)	14:05:00 PM
Analyzer make/model	TEI Model 49C	Analyzer serial #	49C-0609716240

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	NA	Correlation Coefficient	0.999965
294.3	295.3	0.9967		
199.4	198.6	1.0039		
103.9	103.3	1.0054	Slope	0.997910
			Intercept	0.346045

O3 Calibration Curve





Calibration Report

Parameter THC

Air Monitoring Network PASZA



Station Information

Calibration Date	July 17, 2014	Previous Calibration	June 21, 2014
Station Number	10	Station Location	Clairmont
Reason:	☐ Routine ☒ Install ☐ Removal ☐ Other:		
Start Time (MST)	13:20:00 PM	End Time (MST)	17:24
Barometric Pressure	0.921 ATM	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3474
Cal Gas Concentration	404 ppm CH4/ 201 ppm C3H8	Cal Gas Expiry Date	28/03/2014
Cal Gas CH4 equiv	956.75 ppm	Cal Gas Cylinder #	LL34989
DACS make	CR3000	DACS serial No.	5407
DACS voltage range	0 - 1 volt	DACS channel #	12
	<u>Before</u>		<u>After</u>
Calculated slope	0.994022	Calculated slope	0.996799
Calculated intercept	0.057086	Calculated intercept	0.132563
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390
	<u>before</u>		<u>after</u>
Concentration range	0 - 25 ppm	0 - 25 ppm	
THC sample pressure	6.50 psi	6.52 psi	
THC span counts	2370 capture	2345 capture	
THC zero counts	908 capture	908 capture	

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2996	0.00	0.00	-0.01	N/A
2996	69.93	21.82	21.80	1.0010
2996	29.96	9.47	9.30	1.0182
2996	9.97	3.17	2.95	1.0745
2996	0.00	0.00	-0.01	As Found Zero
2996	69.93	21.82	22.17	As Found Span
Average Correction Factor				1.0312

Calculated value of As Found Response: 22.101 ppm Percent Change of As Found: -1.3%

	<u>before calibration</u>		<u>after calibration</u>	
Auto zero	0.10 ppm		0.13 ppm	
Auto span	21.83 ppm		22.28 ppm	

Notes: Analyzer was down due to faulty zero pressure adj regulator. 701 zero air supply was down due to bad pump, pressure adj regulator, pressure switch & 701 front pressure guage. Repair and calibrate.

Calibration Performed By: Dmytro Dolotii, Grover Christiansen

Calibration Summary

Parameter THC

Air Monitoring Network PASZA



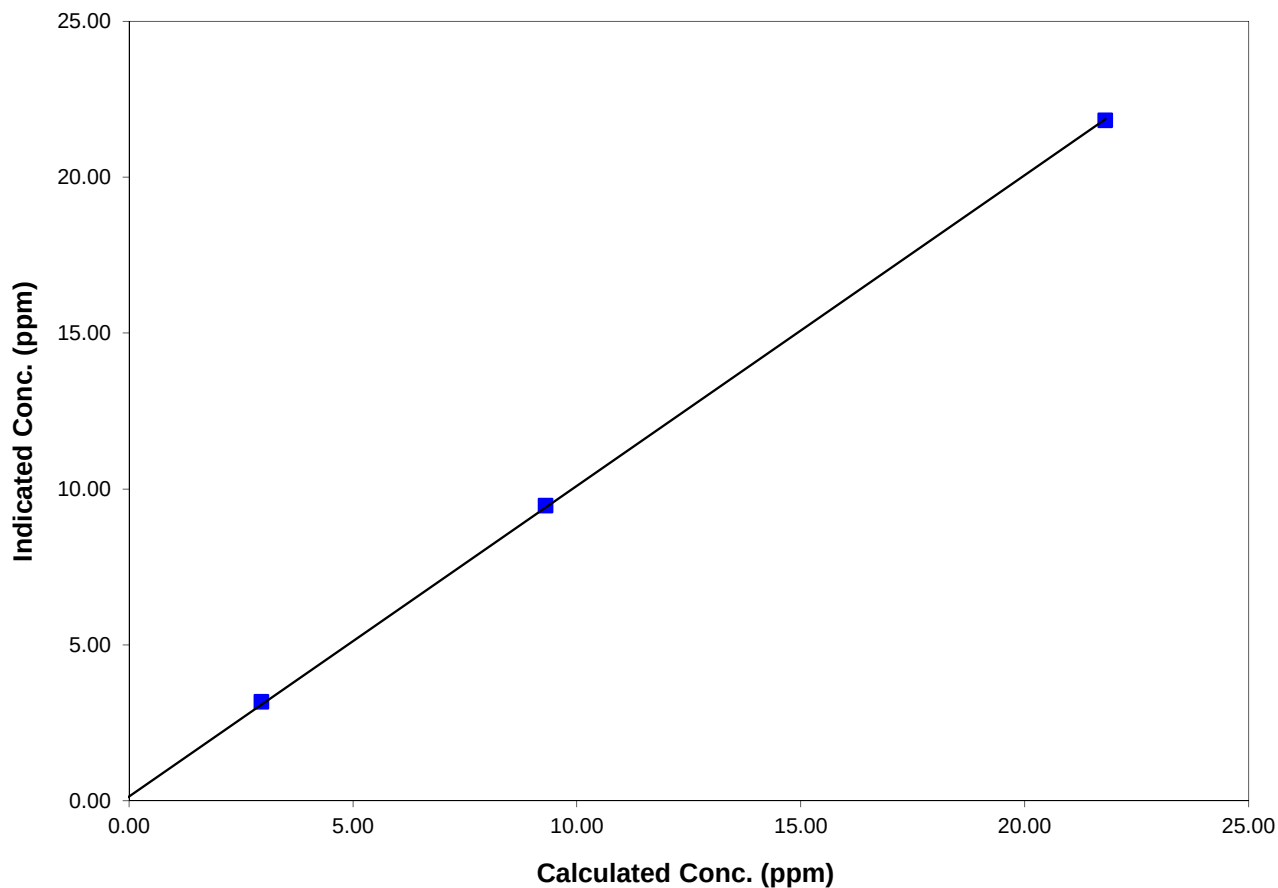
Station Information

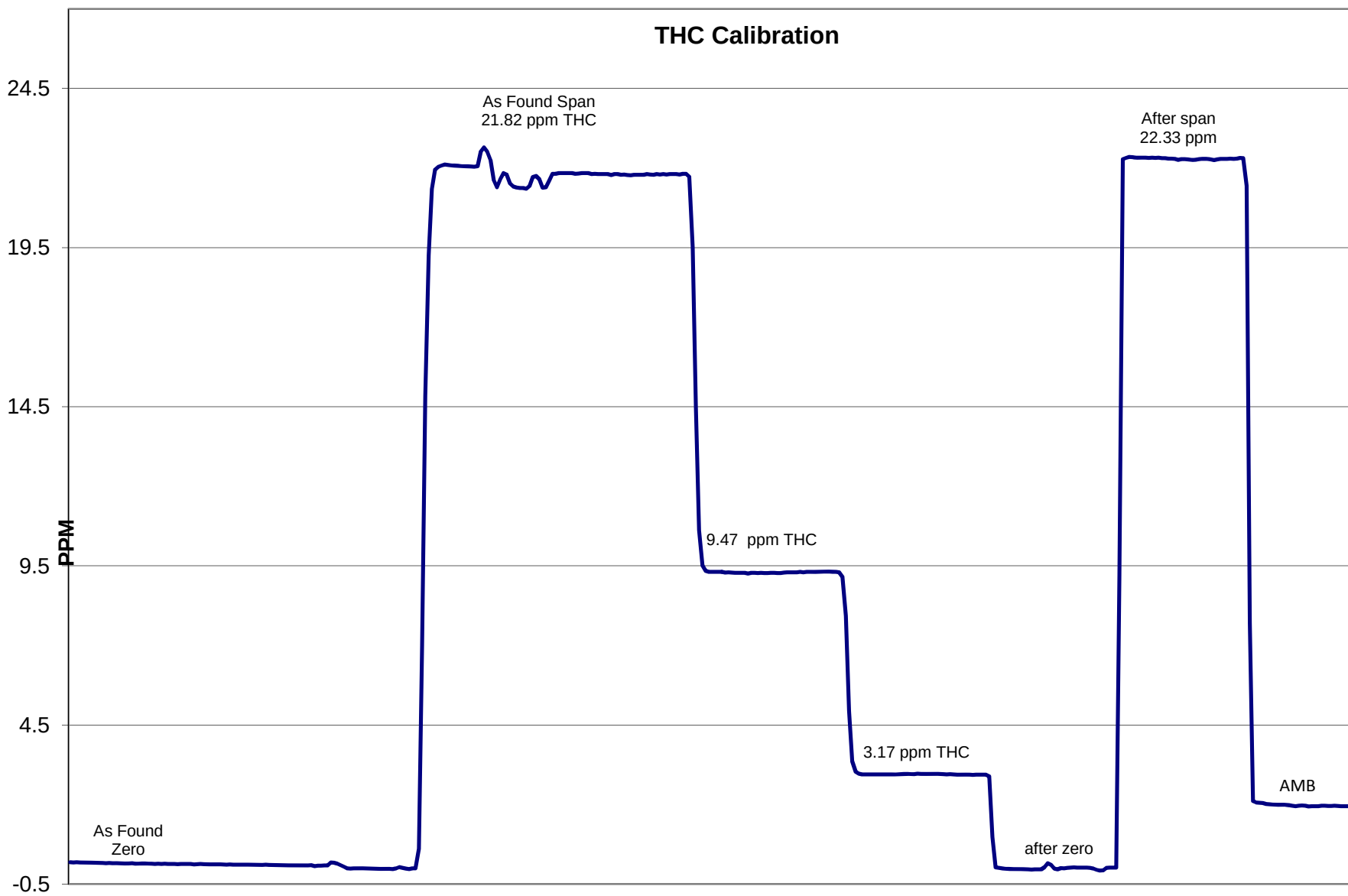
Calibration Date	July 17, 2014	Previous Calibration	June 21, 2014
Station Number	10	Station Location	Clairmont
Start Time (MST)	13:20:00 PM	End Time (MST)	17:24
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.011	N/A		
21.82	21.80	1.0010	Correlation Coefficient	0.999891
9.47	9.30	1.0182		
3.17	2.95	1.0745	Slope	0.996799
			Intercept	0.132563

THC Calibration Curve





July 17, 2014

Parameter	TRS
Air Monitoring Network	



	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
Background	27.5	ppb	26.8	ppb
Coefficient	0.972		0.998	
Lamp Voltage	788	V	788	V
Chamber Temp	43.9	C	44.1	C
Perm gas Temp	45	C	44.9	C
Pressure	659.5	mmHg	659.8	mmHg
Sample Flow	0.443	lpm	0.430	lpm
Lamp Intensity	44231	Hz	43408	Hz

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.0	0.0	-0.4	N/A
4995	39.93	82.8	82.8	0.9997
4995	19.97	41.6	41.0	1.0138
6995	9.97	14.9	13.9	1.0716
4995	9.97		1.9	Sox Test
4995	0.00	0.0	-1.9	As found zero
4995	39.93	82.8	74.7	As found span
Average Correction Factor				1.0284

	before calibration		after calibration	
Auto zero	0.1	ppm	0.2	ppm
Auto span	65.4	ppm	63.6	ppm

Calibration Performed By: Dmytro Dolotii

Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



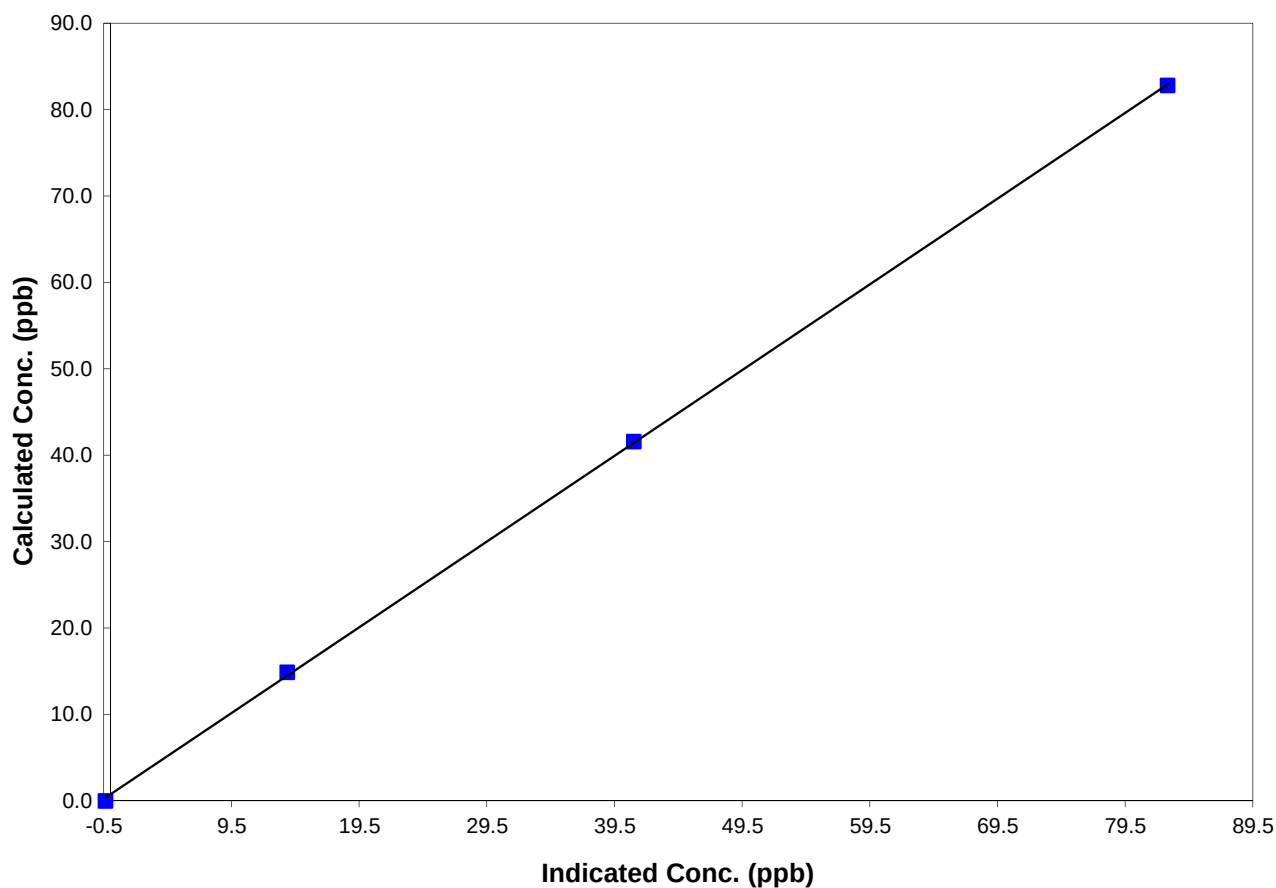
Station Information

Calibration Date	July 15 2014	Previous Calibration	June 21 2014
Station Number	PAZA Rover	Station Location	Clairmont
Start Time (MST)	7:45	End Time (MST)	14:10:00 PM
Analyzer make/model	TEI 43C	Analyzer serial #	609716238

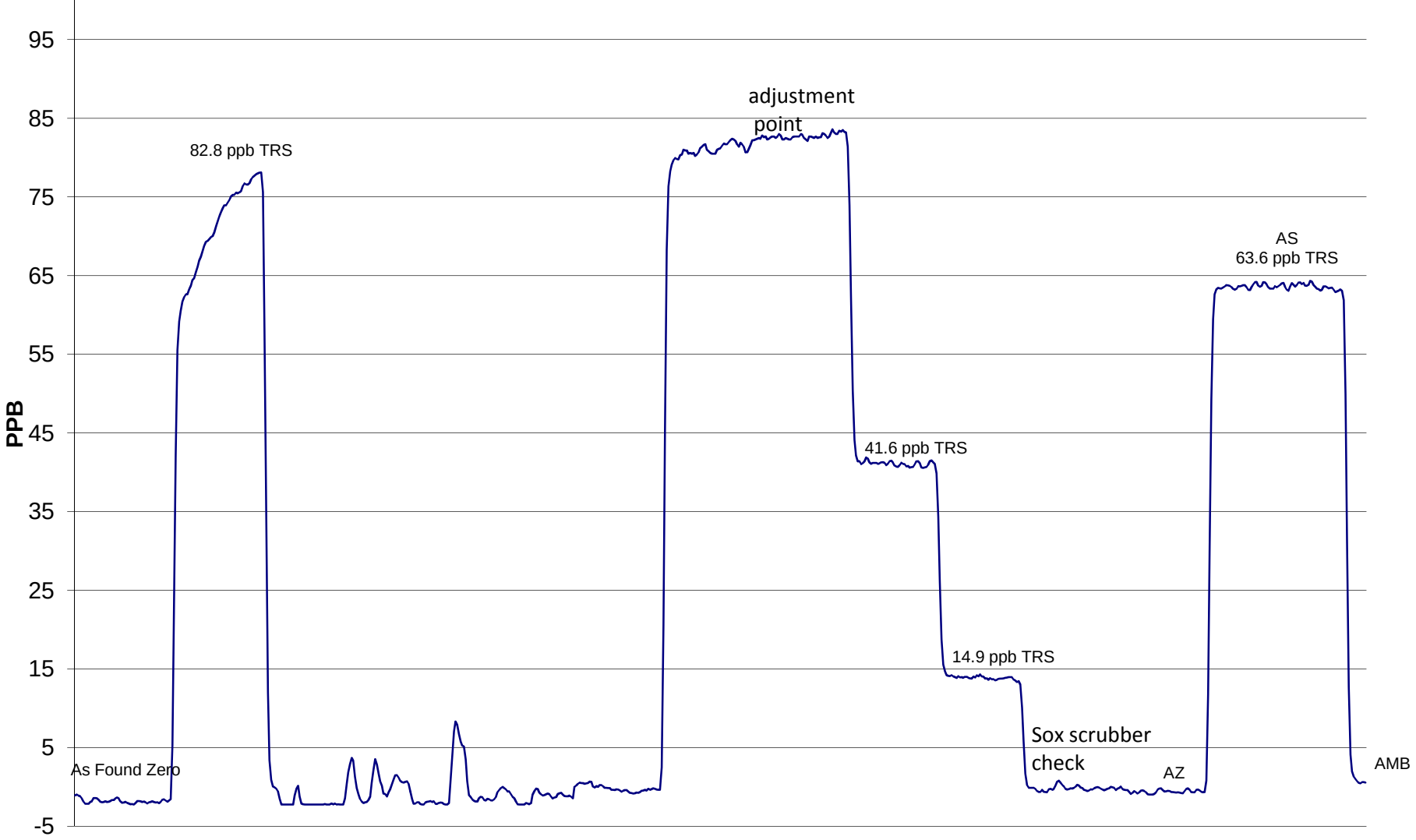
Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A		
82.8	82.8	0.9997	Correlation Coefficient	0.999923
41.6	41.0	1.0138		
14.9	13.9	1.0716	Slope	0.992380
			Intercept	0.738403

TRS Calibration Curve



TRS Calibration



July 15 2014